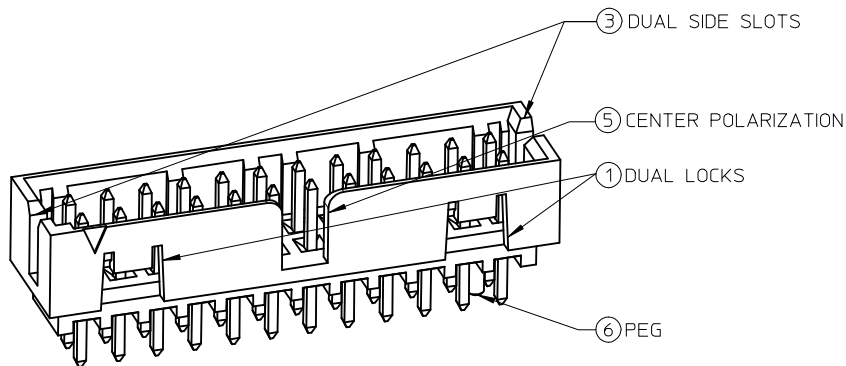
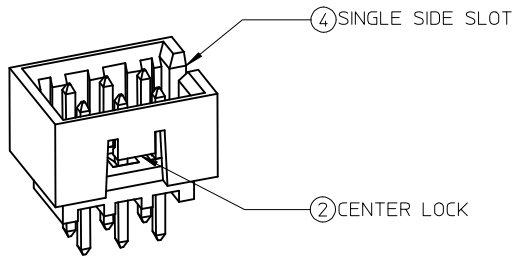


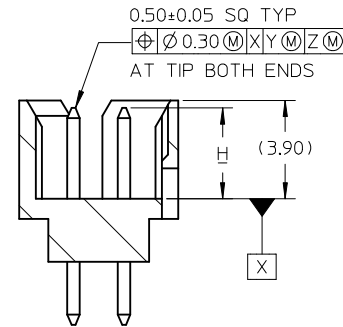
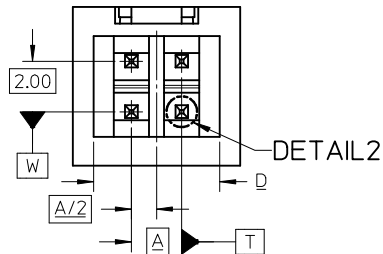
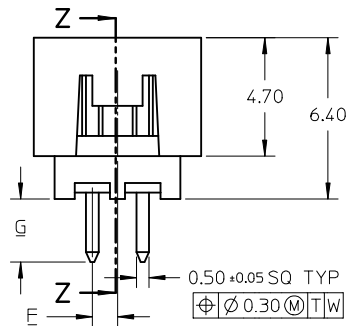
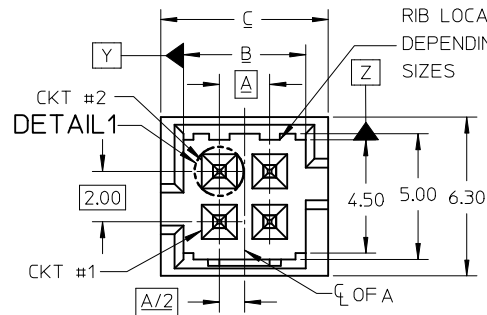
# FEATURES SELECTION GUIDE



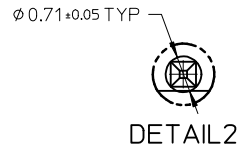
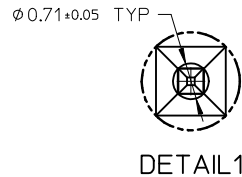
| 5               |        | 4              |        | 3          |     | 2                        |        | 1           |  |
|-----------------|--------|----------------|--------|------------|-----|--------------------------|--------|-------------|--|
| CIRCUIT<br>SIZE |        | FEATURES       |        |            |     |                          |        |             |  |
|                 |        | FRICTION LOCKS |        | SIDE SLOTS |     | 5 CENTER<br>POLARIZATION | 6 PEG  | SHEET<br>NO |  |
|                 |        |                |        |            |     |                          |        |             |  |
| 4               | 1 DUAL | 2 CENTER       | 3 DUAL | 4 SINGLE   |     |                          |        |             |  |
|                 | N.A    | N.A            | YES    | N.A        | N.A | N.A                      | 2 - 3  |             |  |
|                 | N.A    | YES            | YES    | N.A        | N.A | N.A                      |        |             |  |
| 6               | N.A    | YES            | N.A    | YES        | N.A | N.A                      |        | 4 - 5       |  |
|                 | N.A    | YES            | YES    | N.A        | N.A | N.A                      |        |             |  |
|                 | N.A    | YES            | YES    | N.A        | N.A | YES                      |        |             |  |
|                 | N.A    | YES            | YES    | N.A        | N.A | N.A                      |        |             |  |
|                 | N.A    | YES            | N.A    | YES        | N.A | YES                      |        |             |  |
|                 | N.A    | YES            | N.A    | YES        | N.A | YES                      |        |             |  |
|                 | N.A    | N.A            | YES    | N.A        | YES | N.A                      |        |             |  |
| 8 TO 12         | N.A    | N.A            | YES    | N.A        | YES | N.A                      | 6 - 8  |             |  |
|                 | N.A    | N.A            | YES    | N.A        | YES | YES                      |        |             |  |
|                 | N.A    | YES            | YES    | N.A        | N.A | N.A                      |        |             |  |
|                 | N.A    | YES            | YES    | N.A        | N.A | YES                      |        |             |  |
|                 | N.A    | YES            | N.A    | YES        | N.A | N.A                      |        |             |  |
|                 | N.A    | YES            | N.A    | YES        | N.A | YES                      |        |             |  |
| 14 TO 50        | YES    | N.A            | YES    | N.A        | YES | N.A                      | 9 - 13 |             |  |
|                 | YES    | N.A            | YES    | N.A        | YES | YES                      |        |             |  |

|                                                                                         |                                                       |                                                                                |                                                            |  |                            |                    |                                                                                                                                  |                        |                           |  |  |
|-----------------------------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------|--|----------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------|--|--|
| RELEASED<br>EC NO: S2015-1188<br>DRAWN:GMENARLY<br>CHK'D:CGOH<br>APPR:KHLIM<br>REV<br>A | DESCRIPTION<br>2015/04/15<br>2015/06/29<br>2015/06/29 | QUALITY SYMBOLS<br>F <sub>A</sub> =0<br>F <sub>C</sub> =0<br>F <sub>P</sub> =0 | GENERAL TOLERANCES (UNLESS SPECIFIED)                      |  | DIMENSION STYLE<br>MM ONLY |                    | SCALE<br>NTS                                                                                                                     | DESIGN UNITS<br>METRIC | THIRD ANGLE<br>PROJECTION |  |  |
|                                                                                         |                                                       |                                                                                |                                                            |  | DRAWN BY<br>GMENARLY       | DATE<br>2015/04/15 | TITLE<br>MILLIGRID<br>2MM PITCH, THROUGH HOLE<br>VERTICAL SHROUDED HEADER                                                        |                        |                           |  |  |
|                                                                                         |                                                       |                                                                                |                                                            |  | CHECKED BY                 | DATE               |                                                                                                                                  |                        |                           |  |  |
|                                                                                         |                                                       |                                                                                |                                                            |  | APPROVED BY<br>KHLIM       | DATE<br>2015/06/29 | molex                                                                                                                            |                        |                           |  |  |
|                                                                                         |                                                       |                                                                                |                                                            |  | MATERIAL NO.               |                    |                                                                                                                                  |                        |                           |  |  |
|                                                                                         |                                                       |                                                                                | ANGULAR ± 3 °                                              |  | SEE TABLE                  |                    | SD-87831-0001                                                                                                                    |                        |                           |  |  |
|                                                                                         |                                                       |                                                                                | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |  | SIZE<br>A3                 |                    | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                        |                           |  |  |

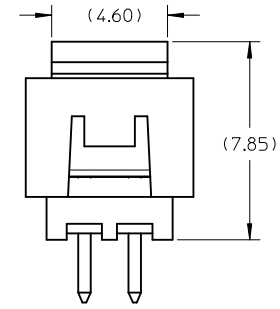
# 4 CIRCUITS



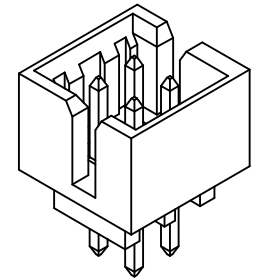
SECTION Z-Z



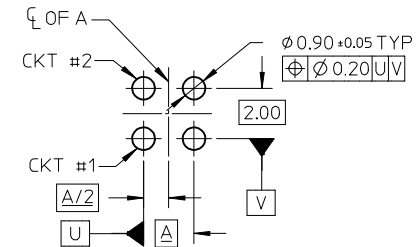
DETAIL2



VIEW FOR  
HEADER WITH CAP



VIEW FOR HEADER  
WITH ONLY DUAL SLOTS



RECOMMENDED PCB LAYOUT

## NOTES:

### 1. MATERIALS:

HOUSING: 30% GF, NYLON, UL94V-0, COLOR: BLACK

PIN: 0.50MM SQ PHOSPHOR BRONZE

### 2. FINISHES: REFER TO PLATING OPTIONS

### 3. PRODUCT SPECIFICATION: PS-87831-027

### 4. PACKAGING SPECIFICATION:

TUBE: PK-87831-001, TAPE AND REEL: PK-87831-300

### 5. MATES WITH: A. MOLEX CRIMP RECEPTACLE HOUSING: 51110 SERIES AND CRIMP TERMINAL: 50394 SERIES

B. MOLEX 2MM MILLIGRID DUAL ROW IDT: 87568 SERIES

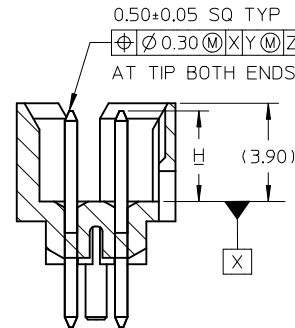
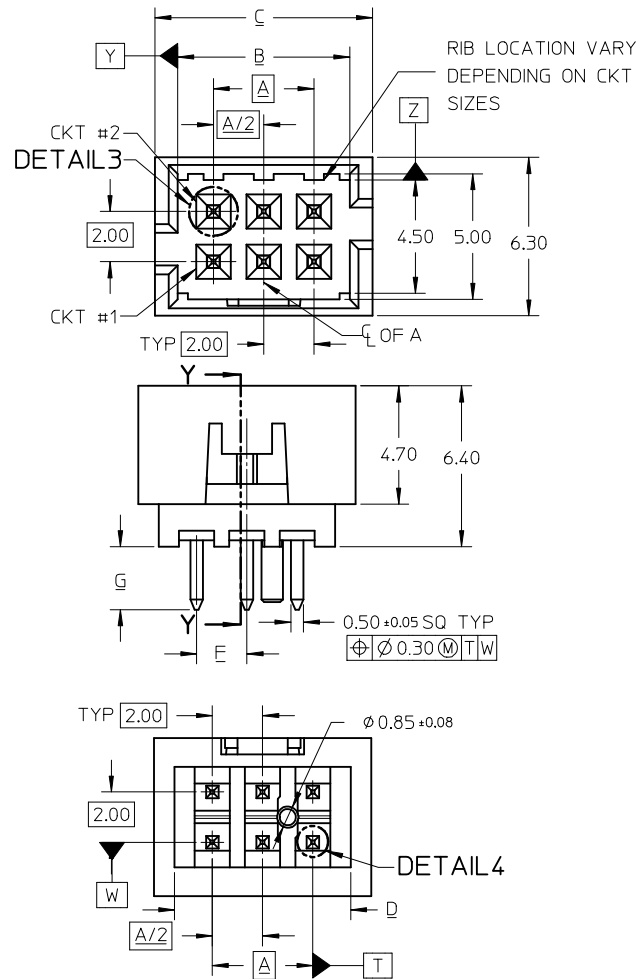
C. MOLEX 2MM MILLIGRID DUAL ROW RECEPTACLE:

79107 (GOLD PLATED), 78787 (TIN PLATED)

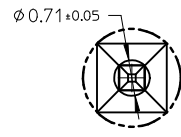
|                                                                                                                                                                                          |             |                                                                                                             |                                       |                                                                                                                               |                     |           |                                                                  |              |                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------|------------------------------------------------------------------|--------------|-----------------------------------|
| <div>RELEASED</div> <div>EC NO: S2015-1188</div> <div>DRWNG:GMENARLY</div> <div>CHK'D:CGOH</div> <div>APPR:KHLIM</div> <div>2015/04/15</div> <div>2015/06/29</div> <div>2015/06/29</div> | DESCRIPTION | <div>QUALITY SYMBOLS</div> <div>F<sub>A</sub>=0</div> <div>F<sub>G</sub>=0</div> <div>F<sub>P</sub>=0</div> | GENERAL TOLERANCES (UNLESS SPECIFIED) |                                                                                                                               | DIMENSION STYLE     |           | SCALE                                                            | DESIGN UNITS | <div>THIRD ANGLE PROJECTION</div> |
|                                                                                                                                                                                          |             |                                                                                                             |                                       |                                                                                                                               | MM ONLY             |           | NTS                                                              | METRIC       |                                   |
|                                                                                                                                                                                          |             |                                                                                                             |                                       |                                                                                                                               | DRAWN BY DATE       |           | TITLE                                                            |              |                                   |
|                                                                                                                                                                                          |             |                                                                                                             |                                       |                                                                                                                               | GMENARLY 2015/04/15 |           |                                                                  |              |                                   |
|                                                                                                                                                                                          |             |                                                                                                             |                                       |                                                                                                                               | CHECKED BY DATE     |           | MILLIGRID<br>2MM PITCH, THROUGH HOLE<br>VERTICAL SHROUDED HEADER |              |                                   |
|                                                                                                                                                                                          |             |                                                                                                             |                                       |                                                                                                                               | APPROVED BY DATE    |           |                                                                  |              |                                   |
|                                                                                                                                                                                          |             |                                                                                                             |                                       |                                                                                                                               | KHLIM 2015/06/29    |           |                                                                  |              |                                   |
|                                                                                                                                                                                          |             | MATERIAL NO.                                                                                                |                                       | DOCUMENT NO.                                                                                                                  |                     | SHEET NO. |                                                                  |              |                                   |
|                                                                                                                                                                                          |             | SEE TABLE                                                                                                   |                                       | SD-87831-0001                                                                                                                 |                     | 2 OF 13   |                                                                  |              |                                   |
|                                                                                                                                                                                          |             | SIZE                                                                                                        |                                       | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                     |           |                                                                  |              |                                   |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   |                                                                                                                                  |                                                  |                                                   |                                                            |                    |                                                                                  |                               |        |                        |     |           |      |      |      |     |      |      |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|---------------------------------------------------|------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------|-------------------------------|--------|------------------------|-----|-----------|------|------|------|-----|------|------|-----------|---|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------|-----|----------------------------|-----|--------------|------------------------|---------------------------|--|--------------------------------------------------------|--------------------------------------------------|---------------------------------------------------|----------------------|--------------------|----------------------------------------------------------------------------------|--|--|--|------------|------|----------------------|--|--------------------|-------------------------------|--|----------------------|--|------------------------------------------------------------|--|------------|--|----------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 10                                                                                | 9                                                                                                                                | 8                                                | 7                                                 | 6                                                          | 5                  | 4                                                                                | 3                             | 2      | 1                      |     |           |      |      |      |     |      |      |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 4 CIRCUITS                                                                        |                                                                                                                                  |                                                  |                                                   |                                                            |                    |                                                                                  |                               |        |                        |     |           |      |      |      |     |      |      |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | CKT<br>SIZE                                                                       | ASSY P/N<br>WITHOUT CAP<br>IN TUBE                                                                                               | ASSY P/N<br>WITH CAP<br>IN TUBE                  | ASSY P/N<br>WITH CAP<br>IN T&R                    | PLATING<br>OPTIONS                                         | FRICTION LOCKS     |                                                                                  | SIDE SLOTS                    |        | CENTER<br>POLARIZATION | PEG | DIMENSION |      |      |      |     |      | F    |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   |                                                                                                                                  |                                                  |                                                   |                                                            | DUAL               | CENTER                                                                           | DUAL                          | SINGLE |                        |     | A         | B    | C    | D    | E   | F    | G    | H         |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4                                                                                 | 87831-0419                                                                                                                       | N.A                                              | N.A                                               | 1                                                          | N.A                | N.A                                                                              | YES                           | N.A    | N.A                    | N.A | 2.00      | 4.85 | 6.65 | 5.00 | N.A | N.A  | 2.50 | 3.60±0.20 | E |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   | 87831-0420                                                                                                                       | N.A                                              | N.A                                               | 2                                                          |                    |                                                                                  |                               |        |                        |     |           |      |      |      |     |      |      |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   | 87831-0421                                                                                                                       | N.A                                              | N.A                                               | 3                                                          |                    |                                                                                  |                               |        |                        |     |           |      |      |      |     |      |      |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   | 87831-0436                                                                                                                       | N.A                                              | N.A                                               | 4                                                          |                    |                                                                                  |                               |        |                        |     |           |      |      |      |     |      |      |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   | 87831-0441                                                                                                                       | 87831-0456                                       | N.A                                               | 2                                                          | N.A                | YES                                                                              | YES                           | N.A    | N.A                    | N.A |           |      |      |      |     | 1.00 | 2.50 |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   | 87831-0442                                                                                                                       | N.A                                              | N.A                                               | 3                                                          |                    |                                                                                  |                               |        |                        |     |           |      |      |      |     |      | 3.50 |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   | 87831-5141                                                                                                                       | N.A                                              | N.A                                               | 2                                                          | N.A                | YES                                                                              | YES                           | N.A    | N.A                    | N.A |           |      |      |      |     |      | 2.80 |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   | 87831-5142                                                                                                                       | N.A                                              | N.A                                               | 3                                                          |                    |                                                                                  |                               |        |                        |     |           |      |      |      |     |      | 2.50 |           |   | 3.60 <sup>+0.15</sup> <sub>-0.10</sub>                                                                              |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   | 87831-6141                                                                                                                       | N.A                                              | N.A                                               | 2                                                          | N.A                | YES                                                                              | YES                           | N.A    | N.A                    | N.A |           |      |      |      |     | N.A  | N.A  | N.A       |   | N.A                                                                                                                 | N.A                                                                               | N.A                                      | N.A | N.A                        | N.A | N.A          |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   | 87831-6142                                                                                                                       | N.A                                              | N.A                                               | 3                                                          |                    |                                                                                  |                               |        |                        |     |           |      |      |      |     |      |      |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 87831-0443                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | N.A                                                                               | N.A                                                                                                                              | 2                                                | N.A                                               | YES                                                        | N.A                | YES                                                                              | N.A                           | N.A    | N.A                    | N.A | N.A       | N.A  | N.A  | N.A  | N.A | N.A  | N.A  | N.A       |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 87831-0444                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | N.A                                                                               | N.A                                                                                                                              | 3                                                |                                                   |                                                            |                    |                                                                                  |                               |        |                        |     |           |      |      |      |     |      |      |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                   |                                                                                                                                  |                                                  |                                                   |                                                            |                    |                                                                                  |                               |        |                        |     |           |      |      |      |     |      |      |           | D |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                   |                                                                                                                                  |                                                  |                                                   |                                                            |                    |                                                                                  |                               |        |                        |     |           |      |      |      |     |      |      |           | C |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                   |                                                                                                                                  |                                                  |                                                   |                                                            |                    |                                                                                  |                               |        |                        |     |           |      |      |      |     |      |      |           | B |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                   |                                                                                                                                  |                                                  |                                                   |                                                            |                    |                                                                                  |                               |        |                        |     |           |      |      |      |     |      |      |           | A |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <div>PLATING OPTIONS:<br/>1 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND<br/>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br/>1.27um/50uin MIN. NICKEL OVERALL.<br/>2 - 0.38um/15uin GOLD IN CONTACT AREA AND<br/>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br/>1.27um/50uin MIN. NICKEL OVERALL.<br/>3 - 0.76um/30uin GOLD IN CONTACT AREA AND<br/>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br/>1.27um/50uin MIN. NICKEL OVERALL.<br/>4 - 2.50um/100uin MIN. MATTE TIN OVER 1.25um/50uin MIN. NICKEL OVERALL.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                   |                                                                                                                                  |                                                  |                                                   |                                                            |                    |                                                                                  |                               |        |                        |     |           |      |      |      |     |      |      |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <table><tr><td rowspan="5">RELEASED<br/>EC NO: S2015-1188<br/>DRWG:GMENARLY<br/>CHKD:CGOH<br/>APPR:KHLIM<br/>2015/04/15<br/>2015/06/29<br/>2015/06/29</td><td rowspan="5">QUALITY<br/>SYMBOLS<br/>F<sub>A</sub>=0<br/>F<sub>G</sub>=0<br/>F<sub>P</sub>=0</td><td colspan="2">GENERAL TOLERANCES<br/>(UNLESS SPECIFIED)</td><td colspan="2">DIMENSION STYLE<br/>MM ONLY</td><td>SCALE<br/>NTS</td><td>DESIGN UNITS<br/>METRIC</td><td colspan="2">THIRD ANGLE<br/>PROJECTION</td></tr><tr><td rowspan="4">4 PLACES<br/>3 PLACES<br/>2 PLACES<br/>1 PLACE<br/>0 PLACE</td><td rowspan="4">mm<br/>± ---<br/>± ---<br/>± 0.20<br/>± ---<br/>± ---</td><td rowspan="4">INCH<br/>± ---<br/>± ---<br/>± ---<br/>± ---<br/>± ---</td><td>DRAWN BY<br/>GMENARLY</td><td>DATE<br/>2015/04/15</td><td colspan="4" rowspan="2">MILLIGRID<br/>2MM PITCH, THROUGH HOLE<br/>VERTICAL SHROUDED HEADER<br/><b>molex</b></td></tr><tr><td>CHECKED BY</td><td>DATE</td></tr><tr><td colspan="2">APPROVED BY<br/>KHLIM</td><td>DATE<br/>2015/06/29</td><td colspan="2" rowspan="2">DOCUMENT NO.<br/>SD-87831-0001</td><td colspan="2" rowspan="2">SHEET NO.<br/>3 OF 13</td></tr><tr><td colspan="2">DRAFT WHERE APPLICABLE<br/>MUST REMAIN<br/>WITHIN DIMENSIONS</td></tr><tr><td colspan="2">SIZE<br/>A3</td><td colspan="14">THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br/>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</td></tr></table> |                                                                                   |                                                                                                                                  |                                                  |                                                   |                                                            |                    |                                                                                  |                               |        |                        |     |           |      |      |      |     |      |      |           |   | RELEASED<br>EC NO: S2015-1188<br>DRWG:GMENARLY<br>CHKD:CGOH<br>APPR:KHLIM<br>2015/04/15<br>2015/06/29<br>2015/06/29 | QUALITY<br>SYMBOLS<br>F <sub>A</sub> =0<br>F <sub>G</sub> =0<br>F <sub>P</sub> =0 | GENERAL TOLERANCES<br>(UNLESS SPECIFIED) |     | DIMENSION STYLE<br>MM ONLY |     | SCALE<br>NTS | DESIGN UNITS<br>METRIC | THIRD ANGLE<br>PROJECTION |  | 4 PLACES<br>3 PLACES<br>2 PLACES<br>1 PLACE<br>0 PLACE | mm<br>± ---<br>± ---<br>± 0.20<br>± ---<br>± --- | INCH<br>± ---<br>± ---<br>± ---<br>± ---<br>± --- | DRAWN BY<br>GMENARLY | DATE<br>2015/04/15 | MILLIGRID<br>2MM PITCH, THROUGH HOLE<br>VERTICAL SHROUDED HEADER<br><b>molex</b> |  |  |  | CHECKED BY | DATE | APPROVED BY<br>KHLIM |  | DATE<br>2015/06/29 | DOCUMENT NO.<br>SD-87831-0001 |  | SHEET NO.<br>3 OF 13 |  | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |  | SIZE<br>A3 |  | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RELEASED<br>EC NO: S2015-1188<br>DRWG:GMENARLY<br>CHKD:CGOH<br>APPR:KHLIM<br>2015/04/15<br>2015/06/29<br>2015/06/29                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | QUALITY<br>SYMBOLS<br>F <sub>A</sub> =0<br>F <sub>G</sub> =0<br>F <sub>P</sub> =0 | GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                                                                                         |                                                  | DIMENSION STYLE<br>MM ONLY                        |                                                            | SCALE<br>NTS       | DESIGN UNITS<br>METRIC                                                           | THIRD ANGLE<br>PROJECTION     |        |                        |     |           |      |      |      |     |      |      |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   | 4 PLACES<br>3 PLACES<br>2 PLACES<br>1 PLACE<br>0 PLACE                                                                           | mm<br>± ---<br>± ---<br>± 0.20<br>± ---<br>± --- | INCH<br>± ---<br>± ---<br>± ---<br>± ---<br>± --- | DRAWN BY<br>GMENARLY                                       | DATE<br>2015/04/15 | MILLIGRID<br>2MM PITCH, THROUGH HOLE<br>VERTICAL SHROUDED HEADER<br><b>molex</b> |                               |        |                        |     |           |      |      |      |     |      |      |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   |                                                                                                                                  |                                                  |                                                   | CHECKED BY                                                 | DATE               |                                                                                  |                               |        |                        |     |           |      |      |      |     |      |      |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   |                                                                                                                                  |                                                  |                                                   | APPROVED BY<br>KHLIM                                       |                    | DATE<br>2015/06/29                                                               | DOCUMENT NO.<br>SD-87831-0001 |        | SHEET NO.<br>3 OF 13   |     |           |      |      |      |     |      |      |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   |                                                                                                                                  |                                                  |                                                   | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |                    |                                                                                  |                               |        |                        |     |           |      |      |      |     |      |      |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SIZE<br>A3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                   | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                                                  |                                                   |                                                            |                    |                                                                                  |                               |        |                        |     |           |      |      |      |     |      |      |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| fb_frame_A3_P_AM_T<br>Rev. G 2012/01/11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 9                                                                                 | 8                                                                                                                                | 7                                                | 6                                                 | 5                                                          | 4                  | 3                                                                                | 2                             | 1      |                        |     |           |      |      |      |     |      |      |           |   |                                                                                                                     |                                                                                   |                                          |     |                            |     |              |                        |                           |  |                                                        |                                                  |                                                   |                      |                    |                                                                                  |  |  |  |            |      |                      |  |                    |                               |  |                      |  |                                                            |  |            |  |                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |

# 6 CIRCUITS



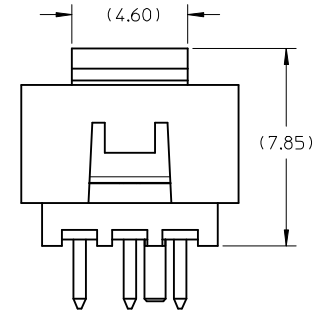
SECTION Y-Y



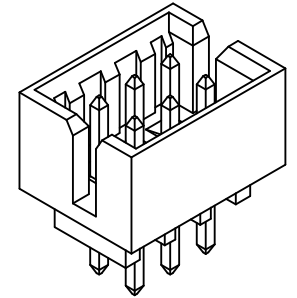
DETAIL3



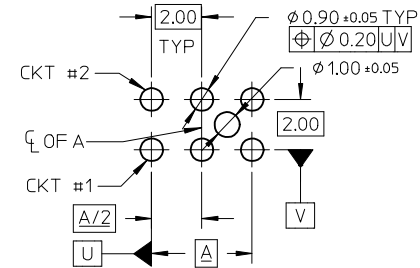
DETAIL4



VIEW FOR  
HEADER WITH CAP



VIEW FOR HEADER WITH  
ONLY DUAL SLOTS



RECOMMENDED PCB LAYOUT

## NOTES:

### 1. MATERIALS:

HOUSING: 30% GF, NYLON, UL94V-0, COLOR: BLACK

PIN: 0.50MM SQ PHOSPHOR BRONZE

### 2. FINISHES: REFER TO PLATING OPTIONS

### 3. PRODUCT SPECIFICATION: PS-87831-027

### 4. PACKAGING SPECIFICATION:

TUBE: PK-87831-001, TAPE AND REEL: PK-87831-300

### 5. MATES WITH: A. MOLEX CRIMP RECEPTACLE HOUSING: 51110 SERIES

AND CRIMP TERMINAL: 50394 SERIES

B. MOLEX 2MM MILLIGRID DUAL ROW IDT: 87568 SERIES

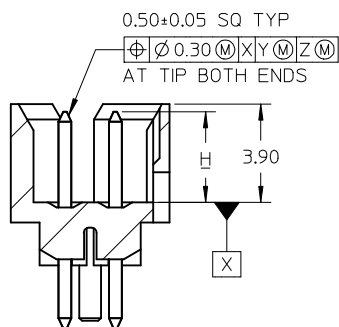
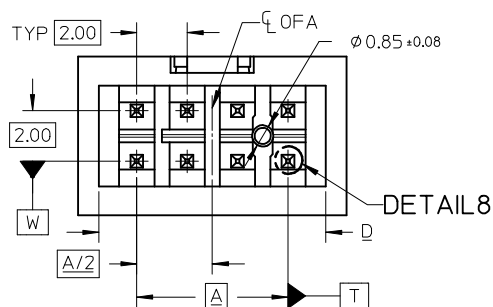
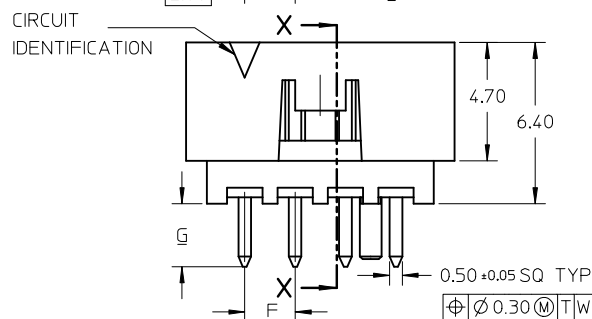
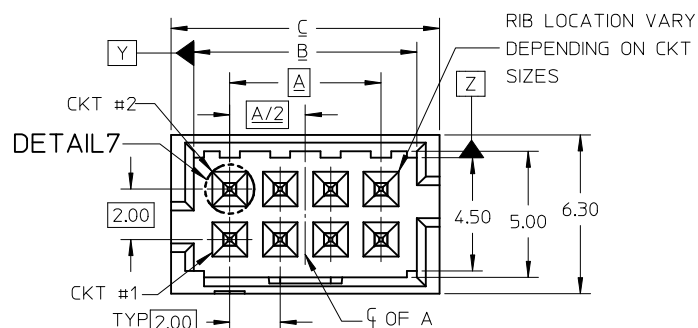
C. MOLEX 2MM MILLIGRID DUAL ROW RECEPTACLE:

79107 (GOLD PLATED), 78787 (TIN PLATED)

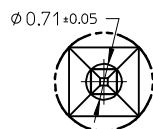
|                                                                                                                     |             |                                                                                                |                                                            |        |                            |                     |                    |                                                                                                                                  |                           |         |  |  |
|---------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------|--------|----------------------------|---------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------|--|--|
| RELEASED<br>EC NO: S2015-1188<br>DRAWN:GEMARLY<br>CHKD:CGOH<br>APPR:KHLIM<br>2015/04/15<br>2015/06/29<br>2015/06/29 | DESCRIPTION | <div>QUALITY SYMBOLS</div> <div><div><div>FA=0</div><div>FC=0</div><div>FP=0</div></div></div> | GENERAL TOLERANCES (UNLESS SPECIFIED)                      |        | DIMENSION STYLE<br>MM ONLY |                     | SCALE<br>NTS       | DESIGN UNITS<br>METRIC                                                                                                           | THIRD ANGLE<br>PROJECTION |         |  |  |
|                                                                                                                     |             |                                                                                                |                                                            | mm     | INCH                       | DRAWN BY<br>GEMARLY | DATE<br>2015/04/15 | TITLE<br>MILLIGRID<br>2MM PITCH, THROUGH HOLE<br>VERTICAL SHROUDED HEADER                                                        |                           |         |  |  |
|                                                                                                                     |             |                                                                                                | 4 PLACES                                                   | ± ---  | ± ---                      | CHECKED BY          | DATE               |                                                                                                                                  |                           |         |  |  |
|                                                                                                                     |             |                                                                                                | 3 PLACES                                                   | ± ---  | ± ---                      | APPROVED BY         | DATE               | molex                                                                                                                            |                           |         |  |  |
|                                                                                                                     |             |                                                                                                | 2 PLACES                                                   | ± 0.20 | ± ---                      | KHLIM               | 2015/06/29         |                                                                                                                                  |                           |         |  |  |
| 1 PLACE                                                                                                             | ± ---       | ± ---                                                                                          | MATERIAL NO.                                               |        | DOCUMENT NO.               |                     | SHEET NO.          |                                                                                                                                  |                           |         |  |  |
|                                                                                                                     |             |                                                                                                | 0 PLACE                                                    | ± ---  | ± ---                      | SEE TABLE           |                    | SD-87831-0001                                                                                                                    |                           | 4 OF 13 |  |  |
|                                                                                                                     |             |                                                                                                | ANGULAR ± 3 °                                              |        |                            |                     |                    |                                                                                                                                  |                           |         |  |  |
|                                                                                                                     |             |                                                                                                | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |        |                            | SIZE<br>A3          |                    | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                           |         |  |  |

|                                         | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 9                                  | 8                               | 7                              | 6                  | 5                                                                        | 4           | 3                                                          | 2                                        | 1                      |                                                                                                                                  |                    |                                                                           |                        |                           |       |                               |      |                                        |   |           |      |     |     |     |     |     |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------|--------------------------------|--------------------|--------------------------------------------------------------------------|-------------|------------------------------------------------------------|------------------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------|------------------------|---------------------------|-------|-------------------------------|------|----------------------------------------|---|-----------|------|-----|-----|-----|-----|-----|
|                                         | 6 CIRCUITS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                    |                                 |                                |                    |                                                                          |             |                                                            |                                          |                        |                                                                                                                                  |                    |                                                                           |                        |                           |       |                               |      |                                        |   |           |      |     |     |     |     |     |
| F                                       | CKT<br>SIZE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ASSY P/N<br>WITHOUT CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN T&R | PLATING<br>OPTIONS | FRICTION LOCKS                                                           |             | SIDE SLOTS                                                 |                                          | CENTER<br>POLARIZATION | PEG                                                                                                                              | DIMENSION          |                                                                           |                        |                           |       |                               | F    |                                        |   |           |      |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                    |                                 |                                |                    | DUAL                                                                     | CENTER      | DUAL                                                       | SINGLE                                   |                        |                                                                                                                                  | A                  | B                                                                         | C                      | D                         | E     | F                             |      | G                                      | H |           |      |     |     |     |     |     |
| E                                       | 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 87831-0619                         | N.A                             | N.A                            | 1                  | N.A                                                                      | N.A         | YES                                                        | N.A                                      | N.A                    | N.A                                                                                                                              | 4.00               | 6.85                                                                      | 8.65                   | 7.00                      | N.A   | N.A                           | 2.50 | 3.60±0.20                              | E |           |      |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 87831-0620                         | N.A                             | N.A                            | 2                  |                                                                          |             |                                                            |                                          |                        |                                                                                                                                  |                    |                                                                           |                        |                           |       |                               |      |                                        |   |           |      |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 87831-0621                         | N.A                             | N.A                            | 3                  |                                                                          |             |                                                            |                                          |                        |                                                                                                                                  |                    |                                                                           |                        |                           |       |                               |      |                                        |   |           |      |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 87831-0636                         | N.A                             | N.A                            | 4                  |                                                                          |             |                                                            |                                          |                        |                                                                                                                                  |                    |                                                                           |                        |                           |       |                               |      |                                        |   |           |      |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 87831-0628                         | N.A                             | N.A                            | 2                  | N.A                                                                      | N.A         | YES                                                        | N.A                                      | N.A                    | YES                                                                                                                              |                    |                                                                           |                        |                           |       | N.A                           | 2.50 |                                        |   |           |      |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 87831-0629                         | N.A                             | N.A                            | 3                  |                                                                          |             |                                                            |                                          |                        |                                                                                                                                  |                    |                                                                           |                        |                           |       |                               |      |                                        |   |           |      |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 87831-0641                         | N.A                             | N.A                            | 2                  |                                                                          |             |                                                            |                                          |                        |                                                                                                                                  |                    |                                                                           |                        |                           |       |                               |      |                                        |   |           |      |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 87831-0642                         | N.A                             | 87831-5552                     | 3                  | N.A                                                                      | YES         | YES                                                        | N.A                                      | N.A                    | N.A                                                                                                                              |                    |                                                                           |                        |                           |       | N.A                           | 2.50 |                                        |   | 3.60±0.20 |      |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 87831-5241                         | N.A                             | N.A                            | 2                  |                                                                          |             |                                                            |                                          |                        |                                                                                                                                  |                    |                                                                           |                        |                           |       |                               |      |                                        |   |           |      |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 87831-5242                         | N.A                             | N.A                            | 3                  |                                                                          |             |                                                            |                                          |                        |                                                                                                                                  |                    |                                                                           |                        |                           |       |                               |      |                                        |   |           |      |     |     |     |     |     |
| D                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 87831-6241                         | N.A                             | N.A                            | 2                  | N.A                                                                      | YES         | YES                                                        | N.A                                      | N.A                    | N.A                                                                                                                              | 4.00               | 6.85                                                                      | 8.65                   | 7.00                      | N.A   | 2.00                          | 2.80 | 3.60 <sup>+0.15</sup> <sub>-0.10</sub> | D |           |      |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 87831-6242                         | N.A                             | N.A                            | 3                  |                                                                          |             |                                                            |                                          |                        |                                                                                                                                  |                    |                                                                           |                        |                           |       |                               |      |                                        |   |           |      |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 87831-0643                         | N.A                             | N.A                            | 2                  | N.A                                                                      | YES         | N.A                                                        | YES                                      | N.A                    | N.A                                                                                                                              |                    |                                                                           |                        |                           |       |                               |      |                                        |   | N.A       | 2.50 |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 87831-0644                         | N.A                             | N.A                            | 3                  |                                                                          |             |                                                            |                                          |                        |                                                                                                                                  |                    |                                                                           |                        |                           |       |                               |      |                                        |   |           |      |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 87831-0645                         | N.A                             | N.A                            | 2                  | N.A                                                                      | YES         | N.A                                                        | YES                                      | N.A                    | N.A                                                                                                                              |                    |                                                                           |                        |                           |       | N.A                           | 2.50 |                                        |   |           |      |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 87831-0646                         | N.A                             | N.A                            | 3                  |                                                                          |             |                                                            |                                          |                        |                                                                                                                                  |                    |                                                                           |                        |                           |       |                               |      |                                        |   |           |      |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 87831-0632                         | N.A                             | N.A                            | 2                  | N.A                                                                      | YES         | YES                                                        | N.A                                      | N.A                    | N.A                                                                                                                              |                    |                                                                           |                        |                           |       | N.A                           | 2.50 |                                        |   |           |      |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 87831-5119                         | N.A                             | N.A                            | 1                  |                                                                          |             |                                                            |                                          |                        |                                                                                                                                  |                    |                                                                           |                        |                           |       |                               |      |                                        |   | N.A       | N.A  | YES | N.A | YES | N.A | N.A |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | C                                  |                                 |                                |                    |                                                                          |             |                                                            |                                          |                        |                                                                                                                                  |                    |                                                                           |                        |                           |       |                               |      |                                        |   |           |      |     | C   |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | B                                  |                                 |                                |                    |                                                                          |             |                                                            |                                          |                        |                                                                                                                                  |                    |                                                                           |                        |                           |       |                               |      |                                        |   |           |      |     | B   |     |     |     |
| A                                       | PLATING OPTIONS:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                    |                                 |                                |                    | RELEASED<br>EC NO: S2015-1188<br>DRW:GMENARLY<br>CHKD:CGOH<br>APPR:KHLIM | DESCRIPTION | QUALITY<br>SYMBOLS                                         | GENERAL TOLERANCES<br>(UNLESS SPECIFIED) |                        | DIMENSION STYLE<br>MM ONLY                                                                                                       |                    | SCALE<br>NTS                                                              | DESIGN UNITS<br>METRIC | THIRD ANGLE<br>PROJECTION |       | A                             |      |                                        |   |           |      |     |     |     |     |     |
|                                         | 1 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND<br>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27um/50uin MIN. NICKEL OVERALL.<br>2 - 0.38um/15uin GOLD IN CONTACT AREA AND<br>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27um/50uin MIN. NICKEL OVERALL.<br>3 - 0.76um/30uin GOLD IN CONTACT AREA AND<br>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27um/50uin MIN. NICKEL OVERALL.<br>4 - 2.50um/100uin MIN. MATTE TIN OVER 1.25um/50uin MIN. NICKEL OVERALL. |                                    |                                 |                                |                    |                                                                          |             |                                                            | mm INCH                                  |                        | DRAWN BY<br>GMENARLY                                                                                                             | DATE<br>2015/04/15 | TITLE<br>MILLIGRID<br>2MM PITCH, THROUGH HOLE<br>VERTICAL SHROUDED HEADER | APPROVED BY<br>KHLIM   | DATE<br>2015/06/29        | molex |                               |      |                                        |   |           |      |     |     |     |     |     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                    |                                 |                                |                    | A                                                                        | REV         | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |                                          | SIZE<br>A3             | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                    |                                                                           |                        |                           |       | DOCUMENT NO.<br>SD-87831-0001 |      | SHEET NO.<br>5 OF 13                   |   |           |      |     |     |     |     |     |
| 1b_frame_A3_P_AM_T<br>Rev. G 2012/01/11 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                    |                                 |                                |                    |                                                                          |             |                                                            |                                          |                        | 9                                                                                                                                | 8                  | 7                                                                         | 6                      | 5                         | 4     | 3                             | 2    | 1                                      |   |           |      |     |     |     |     |     |

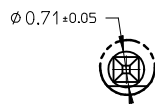
# 8 TO 12 CIRCUITS



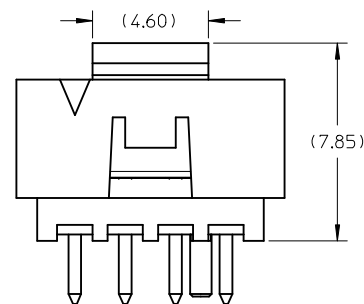
SECTION X-X



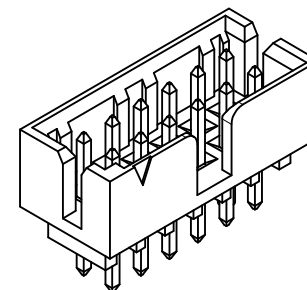
DETAIL7



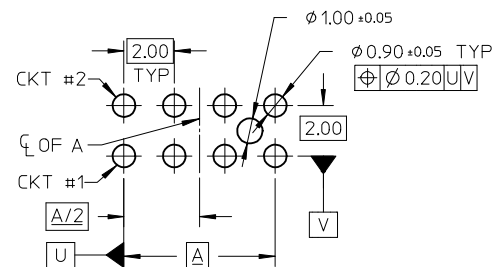
DETAIL8



VIEW FOR HEADER WITH CAP



VIEW FOR HEADER WITH CENTER POLARIZATION AND DUAL SIDE SLOTS



RECOMMENDED PCB LAYOUT

## NOTES:

### 1. MATERIALS:

HOUSING: 30% GF, NYLON, UL94V-0, COLOR: BLACK

PIN: 0.50MM SQ PHOSPHOR BRONZE

### 2. FINISHES: REFER TO PLATING OPTIONS

### 3. PRODUCT SPECIFICATION: PS-87831-027

### 4. PACKAGING SPECIFICATION:

TUBE: PK-87831-001, TAPE AND REEL: PK-87831-300

### 5. MATES WITH: A. MOLEX CRIMP RECEPTACLE HOUSING: 51110 SERIES AND CRIMP TERMINAL: 50394 SERIES

B. MOLEX 2MM MILLIGRID DUAL ROW IDT: 87568 SERIES

C. MOLEX 2MM MILLIGRID DUAL ROW RECEPTACLE:

79107 (GOLD PLATED), 78787 (TIN PLATED)

|                                                                                                                      |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RELEASED<br>EC NO: S2015-1188<br>DRAWN:GMENARLY<br>CHKD:CGOH<br>APPR:KHLIM<br>2015/04/15<br>2015/06/29<br>2015/06/29 | DESCRIPTION | QUALITY SYMBOLS<br><div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div>&lt;</div> |
|----------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|     |             | 10                                 | 9                               | 8                              | 7                  | 6              | 5      | 4          | 3      | 2                      | 1   |           |      |       |      |     |      |      |                    |   |     |      |      |                    |                    |                    |
|-----|-------------|------------------------------------|---------------------------------|--------------------------------|--------------------|----------------|--------|------------|--------|------------------------|-----|-----------|------|-------|------|-----|------|------|--------------------|---|-----|------|------|--------------------|--------------------|--------------------|
|     |             | 8 CIRCUITS                         |                                 |                                |                    |                |        |            |        |                        |     |           |      |       |      |     |      |      |                    |   |     |      |      |                    |                    |                    |
| F   | CKT<br>SIZE | ASSY P/N<br>WITHOUT CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN T&R | PLATING<br>OPTIONS | FRICTION LOCKS |        | SIDE SLOTS |        | CENTER<br>POLARIZATION | PEG | DIMENSION |      |       |      |     |      |      | F                  |   |     |      |      |                    |                    |                    |
|     |             |                                    |                                 |                                |                    | DUAL           | CENTER | DUAL       | SINGLE |                        |     | A         | B    | C     | D    | E   | F    | G    |                    | H |     |      |      |                    |                    |                    |
| E   | 8           | 87831-0819                         | N.A                             | N.A                            | 1                  | N.A            | N.A    | YES        | N.A    | YES                    | N.A | 6.00      | 8.85 | 10.65 | 9.00 | N.A | N.A  | 2.50 | 3.60±0.20          | E |     |      |      |                    |                    |                    |
|     |             | 87831-0820                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |      |       |      |     |      |      |                    |   |     |      |      |                    |                    |                    |
|     |             | 87831-0821                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |      |       |      |     |      |      |                    |   |     |      |      |                    |                    |                    |
|     |             | 87831-0836                         | N.A                             | N.A                            | 4                  |                |        |            |        |                        |     |           |      |       |      |     |      |      |                    |   |     |      |      |                    |                    |                    |
|     |             | 87831-0828                         | N.A                             | N.A                            | 2                  | N.A            | N.A    | YES        | N.A    | YES                    | YES |           |      |       |      |     | N.A  | N.A  |                    |   | N.A | 3.00 | 2.50 | 3.60±0.15<br>-0.10 |                    |                    |
|     |             | 87831-0829                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |      |       |      |     |      |      |                    |   |     |      |      |                    |                    |                    |
|     |             | 87831-0841                         | N.A                             | 87831-5551                     | 2                  |                |        |            |        |                        |     |           |      |       |      |     |      |      |                    |   |     |      |      |                    |                    |                    |
|     |             | 87831-0842                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |      |       |      |     |      |      |                    |   |     |      |      |                    |                    |                    |
|     |             | 87831-5441                         | N.A                             | N.A                            | 2                  | N.A            | YES    | YES        | N.A    | N.A                    | N.A |           |      |       |      |     | N.A  | N.A  |                    |   | N.A | N.A  | N.A  | 2.50               | 3.60±0.15<br>-0.10 |                    |
|     |             | 87831-5442                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |      |       |      |     |      |      |                    |   |     |      |      |                    |                    |                    |
| N.A | 87831-5541  | N.A                                | 2                               |                                |                    |                |        |            |        |                        |     |           |      |       |      |     |      |      |                    |   |     |      |      |                    |                    |                    |
| N.A | 87831-5542  | N.A                                | 3                               |                                |                    |                |        |            |        |                        |     |           |      |       |      |     |      |      |                    |   |     |      |      |                    |                    |                    |
| D   |             | 87831-5741                         | N.A                             | N.A                            | 2                  | N.A            | YES    | YES        | N.A    | N.A                    | N.A | 6.00      | 8.85 | 10.65 | 9.00 | N.A | 3.00 | 4.70 | 3.60±0.15<br>-0.10 | D |     |      |      |                    |                    |                    |
|     |             | 87831-5742                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |      |       |      |     |      |      |                    |   |     |      |      |                    |                    |                    |
|     |             | 87831-0832                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |      |       |      |     |      |      |                    |   |     |      |      |                    |                    |                    |
|     |             | 87831-0843                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |      |       |      |     |      |      |                    |   |     |      |      |                    |                    |                    |
|     |             | 87831-0844                         | N.A                             | N.A                            | 3                  | N.A            | YES    | N.A        | YES    | N.A                    | N.A |           |      |       |      |     |      | N.A  |                    |   | N.A | N.A  | N.A  | N.A                | 2.50               | 3.60±0.15<br>-0.10 |
|     |             | 87831-0845                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |      |       |      |     |      |      |                    |   |     |      |      |                    |                    |                    |
|     |             | 87831-0846                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |      |       |      |     |      |      |                    |   |     |      |      |                    |                    |                    |
|     |             |                                    |                                 |                                |                    |                |        |            |        |                        |     |           |      |       |      |     |      |      |                    |   |     |      |      |                    |                    |                    |

|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |                                                                                                                                  |  |                                                                                                                    |     |                                            |                                                                                                                                                                                             |                                                                                                                                |              |                        |                           |                                                                           |  |  |                      |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|----------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|--------------|------------------------|---------------------------|---------------------------------------------------------------------------|--|--|----------------------|
| A | PLATING OPTIONS:<br>1 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND<br>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27um/50uin MIN. NICKEL OVERALL.<br>2 - 0.38um/15uin GOLD IN CONTACT AREA AND<br>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27um/50uin MIN. NICKEL OVERALL.<br>3 - 0.76um/30uin GOLD IN CONTACT AREA AND<br>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27um/50uin MIN. NICKEL OVERALL.<br>4 - 2.50um/100uin MIN. MATTE TIN OVER 1.25um/50uin MIN. NICKEL OVERALL. |  |  |                                                                                                                                  |  | RELEASED<br>EC NO: S2015-1188<br>DRWNG:GMENARLY 2015/04/15<br>CHK'D:GGOH 2015/06/29<br>APPR:KHL IM 2015/06/29<br>A | REV | QUALITY<br>SYMBOLS<br>FA=0<br>FG=0<br>FP=0 | GENERAL TOLERANCES<br>(UNLESS SPECIFIED)<br>mm INCH<br>4 PLACES ± --- ± ---<br>3 PLACES ± --- ± ---<br>2 PLACES ± 0.20 ± ---<br>1 PLACE ± --- ± ---<br>0 PLACE ± --- ± ---<br>ANGULAR ± 3 ° | DIMENSION STYLE<br>MM ONLY<br>DRAWN BY DATE<br>GMENARLY 2015/04/15<br>CHECKED BY DATE<br>APPROVED BY DATE<br>KHL IM 2015/06/29 | SCALE<br>NTS | DESIGN UNITS<br>METRIC | THIRD ANGLE<br>PROJECTION | MILLIGRID<br>2MM PITCH, THROUGH HOLE<br>VERTICAL SHROUDED HEADER<br>molex |  |  | SHEET NO.<br>7 OF 13 |
|   | SEE TABLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |                                                                                                                                  |  |                                                                                                                    |     |                                            |                                                                                                                                                                                             |                                                                                                                                |              |                        |                           |                                                                           |  |  |                      |
|   | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |  |                                                                                                                    |     |                                            |                                                                                                                                                                                             |                                                                                                                                |              |                        |                           |                                                                           |  |  |                      |
|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |                                                                                                                                  |  |                                                                                                                    |     |                                            |                                                                                                                                                                                             |                                                                                                                                |              |                        |                           |                                                                           |  |  |                      |

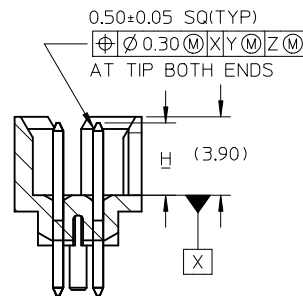
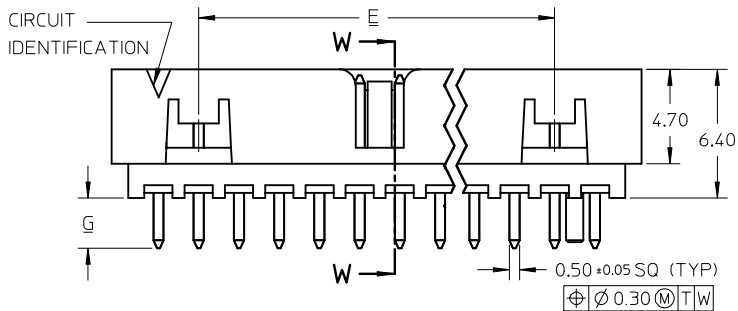
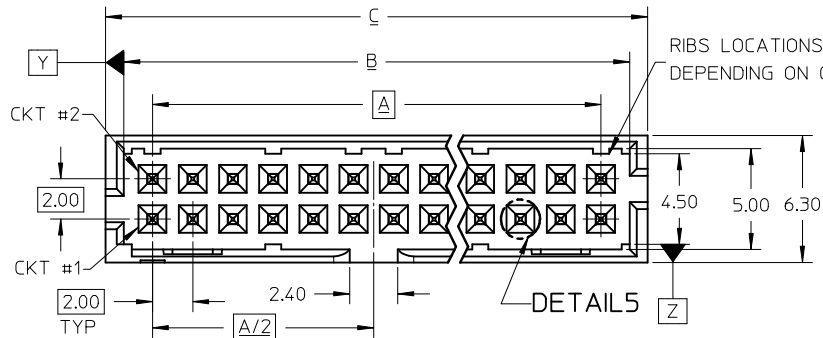
|  |  | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |  |
|--|--|---|---|---|---|---|---|---|---|---|--|--|
|--|--|---|---|---|---|---|---|---|---|---|--|--|

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                    |                                 |                                |                    |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------|--------------------------------|--------------------|----------------|--------|------------|--------|------------------------|-----|-----------|-------|-------|-------|-----|------|------|-----------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------|-----|----------------------------|-----|--------------|------------------------|---------------------------|--|---------------------------------------------------------------------------------------------------------------------------|--|--|
| 10                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 9                                  |                                 | 8                              |                    | 7              |        | 6          |        | 5                      |     | 4         |       | 3     |       | 2   |      | 1    |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
| 10 TO 12 CIRCUITS |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                    |                                 |                                |                    |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
| F                 | CKT<br>SIZE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ASSY P/N<br>WITHOUT CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN T&R | PLATING<br>OPTIONS | FRICTION LOCKS |        | SIDE SLOTS |        | CENTER<br>POLARIZATION | PEG | DIMENSION |       |       |       |     |      |      | F         |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                    |                                 |                                |                    | DUAL           | CENTER | DUAL       | SINGLE |                        |     | A         | B     | C     | D     | E   | F    | G    |           | H |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
| E                 | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 87831-1019                         | N.A                             | N.A                            | 1                  | N.A            | N.A    | YES        | N.A    | YES                    | N.A | 8.00      | 10.85 | 12.65 | 11.00 | N.A | N.A  | 2.50 | 3.60±0.20 | E |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1020                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1021                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1036                         | N.A                             | N.A                            | 4                  |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1010                         | N.A                             | N.A                            | 2                  | N.A            | N.A    | YES        | N.A    | YES                    | N.A |           |       |       |       |     |      | 3.50 |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1011                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1028                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1029                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1035                         | N.A                             | N.A                            | 3                  | N.A            | N.A    | YES        | N.A    | YES                    | YES |           |       |       |       |     | 3.50 |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1041                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1042                         | N.A                             | 87831-5553                     | 3                  |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1032                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |       |       |       |     |      | N.A  |           |   | YES                                                                                                                                                                                                | YES  | N.A                                                                                                   | N.A                                     | YES                                      |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
| 87831-1043        | N.A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | N.A                                | 2                               |                                |                    |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
| 87831-1044        | N.A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | N.A                                | 3                               |                                |                    |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
| 87831-1045        | N.A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | N.A                                | 2                               | N.A                            | YES                | N.A            | YES    | N.A        | YES    |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
| 87831-1046        | N.A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | N.A                                | 3                               |                                |                    |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
| D                 | 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 87831-1219                         | N.A                             | N.A                            | 1                  | N.A            | N.A    | YES        | N.A    | YES                    | N.A | 10.00     | 12.85 | 14.65 | 13.00 | N.A | N.A  | 2.50 | 3.60±0.20 | D |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1220                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1221                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1236                         | N.A                             | N.A                            | 4                  |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1228                         | N.A                             | N.A                            | 2                  | N.A            | N.A    | YES        | N.A    | YES                    | YES |           |       |       |       |     |      | 2.50 |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1229                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1241                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 87831-1242                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | C                                  | 87831-1255                      | 87831-1256                     | N.A                | 2              | N.A    | YES        | YES    | N.A                    | N.A |           |       |       |       |     | N.A  | N.A  |           |   | 5.00                                                                                                                                                                                               | 2.50 |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                    | 87831-1232                      | N.A                            | N.A                | 2              |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      | N.A                                                                                                   | YES                                     | YES                                      | N.A | N.A                        | YES |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                    | 87831-1243                      | N.A                            | N.A                | 2              |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                    | 87831-1244                      | N.A                            | N.A                | 3              |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
| 87831-1245        | N.A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                    | N.A                             | 2                              | N.A                | YES            | N.A    | YES        | N.A    | YES                    |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
| 87831-1246        | N.A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                    | N.A                             | 3                              |                    |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
| B                 | <div>PLATING OPTIONS:</div> <div>1 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND<br/>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br/>1.27um/50uin MIN. NICKEL OVERALL.</div> <div>2 - 0.38um/15uin GOLD IN CONTACT AREA AND<br/>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br/>1.27um/50uin MIN. NICKEL OVERALL.</div> <div>3 - 0.76um/30uin GOLD IN CONTACT AREA AND<br/>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br/>1.27um/50uin MIN. NICKEL OVERALL.</div> <div>4 - 2.50um/100uin MIN. MATTE TIN OVER 1.25um/50uin MIN. NICKEL OVERALL.</div> |                                    |                                 |                                |                    |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   |                                                                                                                                                                                                    |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                    |                                 |                                |                    |                |        |            |        |                        |     |           |       |       |       |     |      |      |           | A |                                                                                                                                                                                                    | REV  | RELEASED<br>EC NO: S2015-1188<br>DRWN:GMENARLY 2015/06/29<br>CHKD:CGOH<br>APPR:KHL IM 2015/06/29<br>A | QUALITY<br>SYMBOLS<br>▽=0<br>▽=0<br>▽=0 | GENERAL TOLERANCES<br>(UNLESS SPECIFIED) |     | DIMENSION STYLE<br>MM ONLY |     | SCALE<br>NTS | DESIGN UNITS<br>METRIC | THIRD ANGLE<br>PROJECTION |  | MILLIGRID<br>2MM PITCH, THROUGH HOLE<br>VERTICAL SHROUDED HEADER<br><b>molex</b><br>SD-87831-0001<br>SHEET NO.<br>8 OF 13 |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                    |                                 |                                |                    |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   | mm INCH                                                                                                                                                                                            |      |                                                                                                       |                                         | DRAWN BY DATE<br>GMENARLY 2015/04/15     |     | CHECKED BY DATE            |     |              |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                    |                                 |                                |                    |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   | 4 PLACES ± --- ± ---<br>3 PLACES ± --- ± ---<br>2 PLACES ± 0.20 ± ---<br>1 PLACE ± --- ± ---<br>0 PLACE ± --- ± ---<br>ANGULAR ± 3 °<br>DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |      |                                                                                                       |                                         | APPROVED BY DATE<br>KHL IM 2015/06/29    |     | MATERIAL NO.<br>SEE TABLE  |     | DOCUMENT NO. |                        |                           |  |                                                                                                                           |  |  |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                    |                                 |                                |                    |                |        |            |        |                        |     |           |       |       |       |     |      |      |           |   | SIZE<br>A3 THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION                                                        |      |                                                                                                       |                                         |                                          |     |                            |     |              |                        |                           |  |                                                                                                                           |  |  |

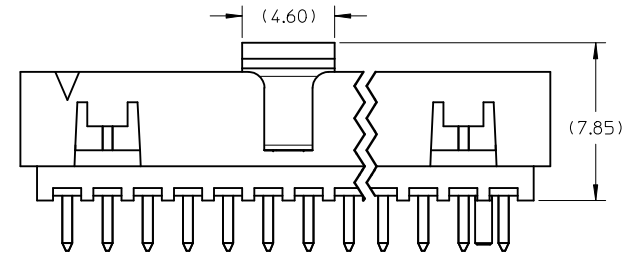
tb\_frame\_A3\_P\_AM.T  
Rev. G 2012/01/11

|   |  |   |  |   |  |   |  |   |  |   |  |   |  |   |  |   |  |
|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|
| 9 |  | 8 |  | 7 |  | 6 |  | 5 |  | 4 |  | 3 |  | 2 |  | 1 |  |
|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|

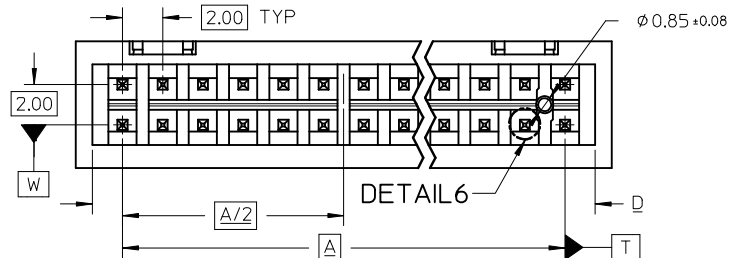
# 14 TO 50 CIRCUITS



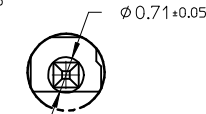
SECTION W-W



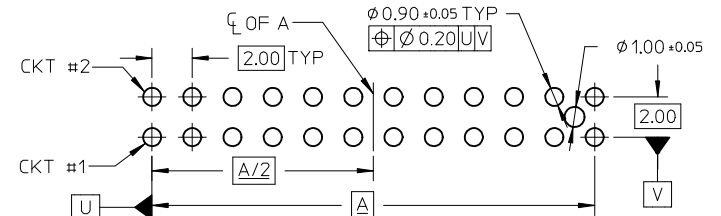
VIEW FOR HEADER WITH CAP



DETAIL5



DETAIL6



RECOMMENDED PCB LAYOUT

## NOTES:

- MATERIALS:  
HOUSING: 30% GF, NYLON, UL94V-0, COLOR: BLACK  
PIN: 0.50MM SQ PHOSPHOR BRONZE
- FINISHES: REFER TO PLATING OPTIONS
- PRODUCT SPECIFICATION: PS-87831-027
- PACKAGING SPECIFICATION:  
TUBE: PK-87831-001, TAPE AND REEL: PK-87831-300
- MATES WITH: A. MOLEX CRIMP RECEPTACLE HOUSING: 51110 SERIES AND CRIMP TERMINAL: 50394 SERIES  
B. MOLEX 2MM MILLIGRID DUAL ROW IDT: 87568 SERIES  
C. MOLEX 2MM MILLIGRID DUAL ROW RECEPTACLE: 79107 (GOLD PLATED), 78787 (TIN PLATED)

|                                                                                                                       |                         |                                                                                                     |                                                                                                                                             |        |       |                            |                    |                                                                           |                        |                           |         |  |           |  |
|-----------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|----------------------------|--------------------|---------------------------------------------------------------------------|------------------------|---------------------------|---------|--|-----------|--|
| RELEASED<br>EC NO: S2015-1188<br>DRAWN:GMENARLY<br>CHKD:CGOH<br>APPR:KHL IM<br>2015/04/15<br>2015/06/29<br>2015/06/29 | DESCRIPTION<br>REV<br>A | QUALITY SYMBOLS<br><div>F<sub>A</sub>=0</div> <div>F<sub>G</sub>=0</div> <div>F<sub>P</sub>=0</div> | GENERAL TOLERANCES (UNLESS SPECIFIED)                                                                                                       |        |       | DIMENSION STYLE<br>MM ONLY |                    | SCALE<br>NTS                                                              | DESIGN UNITS<br>METRIC | THIRD ANGLE<br>PROJECTION |         |  |           |  |
|                                                                                                                       |                         |                                                                                                     |                                                                                                                                             | mm     | INCH  | DRAWN BY<br>GMENARLY       | DATE<br>2015/04/15 | TITLE<br>MILLIGRID<br>2MM PITCH, THROUGH HOLE<br>VERTICAL SHROUDED HEADER |                        |                           |         |  |           |  |
|                                                                                                                       |                         |                                                                                                     | 4 PLACES                                                                                                                                    | ± ---  | ± --- | CHECKED BY                 | DATE               |                                                                           |                        |                           |         |  |           |  |
|                                                                                                                       |                         |                                                                                                     | 3 PLACES                                                                                                                                    | ± ---  | ± --- | APPROVED BY<br>KHL IM      |                    | DATE<br>2015/06/29                                                        |                        | <div>molex</div>          |         |  |           |  |
|                                                                                                                       |                         |                                                                                                     | 2 PLACES                                                                                                                                    | ± 0.20 | ± --- |                            |                    |                                                                           |                        |                           |         |  |           |  |
|                                                                                                                       |                         |                                                                                                     | 1 PLACE                                                                                                                                     | ± ---  | ± --- |                            |                    |                                                                           |                        |                           |         |  |           |  |
|                                                                                                                       |                         |                                                                                                     | 0 PLACE                                                                                                                                     | ± ---  | ± --- | MATERIAL NO.               |                    | DOCUMENT NO.                                                              |                        |                           |         |  | SHEET NO. |  |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS                                                            |                         |                                                                                                     | SEE TABLE                                                                                                                                   |        |       | SD-87831-0001              |                    |                                                                           |                        |                           | 9 OF 13 |  |           |  |
|                                                                                                                       |                         |                                                                                                     | SIZE<br>A3 THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |        |       |                            |                    |                                                                           |                        |                           |         |  |           |  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 10                                 | 9                               | 8                              | 7                  | 6              | 5      | 4          | 3      | 2                      | 1   |           |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------|---------------------------------|--------------------------------|--------------------|----------------|--------|------------|--------|------------------------|-----|-----------|-------|-------|-------|-------|-----|------|-----------|---|-------------------------------------------------------------------------------------------------------------------------------------|-------|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------|---|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 14 TO 20 CIRCUITS                  |                                 |                                |                    |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
| F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | CKT<br>SIZE | ASSY P/N<br>WITHOUT CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN T&R | PLATING<br>OPTIONS | FRICTION LOCKS |        | SIDE SLOTS |        | CENTER<br>POLARIZATION | PEG | DIMENSION |       |       |       |       |     |      |           | F |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |                                    |                                 |                                |                    | DUAL           | CENTER | DUAL       | SINGLE |                        |     | A         | B     | C     | D     | E     | F   | G    | H         |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
| E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 14          | 87831-1419                         | N.A                             | N.A                            | 1                  | YES            | N.A    | YES        | N.A    | YES                    | N.A | 12.00     | 14.85 | 16.65 | 15.00 | 8.00  | N.A | 2.50 | 3.60±0.20 | E |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-1420                         | N.A                             | 87831-5554                     | 2                  |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-1421                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-1436                         | N.A                             | N.A                            | 4                  | YES            | N.A    | YES        | N.A    | YES                    | YES |           |       |       |       |       |     | 2.50 |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-1428                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |       |       |       |       |     | 3.50 |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-1429                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |       |       |       |       |     | 3.50 |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-1435                         | N.A                             | N.A                            | 3                  | YES            | N.A    | YES        | N.A    | YES                    | N.A |           |       |       |       |       |     | 3.50 |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
| 87831-1410                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A         | N.A                                | 2                               |                                |                    |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
| 87831-1411                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A         | N.A                                | 3                               |                                |                    |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
| D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 16          | 87831-1619                         | N.A                             | N.A                            | 1                  | YES            | N.A    | YES        | N.A    | YES                    | N.A | 14.00     | 16.85 | 18.65 | 17.00 | 10.00 | N.A | 2.50 | 3.60±0.20 | D |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-1620                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-1621                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-1636                         | N.A                             | N.A                            | 4                  | YES            | N.A    | YES        | N.A    | YES                    | YES |           |       |       |       |       |     | 2.50 |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-1628                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |       |       |       |       |     | 3.50 |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-1629                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-1635                         | N.A                             | N.A                            | 3                  | YES            | N.A    | YES        | N.A    | YES                    | YES |           |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
| C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 18          | 87831-1819                         | N.A                             | N.A                            | 1                  | YES            | N.A    | YES        | N.A    | YES                    | N.A | 16.00     | 18.85 | 20.65 | 19.00 | 12.00 | N.A | 2.50 | 3.60±0.20 | C |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-1820                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-1821                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-1836                         | N.A                             | N.A                            | 4                  | YES            | N.A    | YES        | N.A    | YES                    | YES |           |       |       |       |       |     | 2.50 |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-1828                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |       |       |       |       |     | 3.50 |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-1829                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | A                                  | 20                              | 87831-2019                     | N.A                | N.A            | 1      | YES        | N.A    | YES                    | N.A |           |       |       |       |       |     | YES  |           |   | N.A                                                                                                                                 | 18.00 | 20.85                                   | 22.65                                                                                                                                                                                                                                                     | 21.00                                                                                                                                                       | 14.00                                                                                                                                                        | N.A                                                 | 2.50                                                                                                                             | 3.60±0.20 | A |
| 87831-2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A         |                                    |                                 | N.A                            | 2                  |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
| 87831-2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A         |                                    |                                 | N.A                            | 3                  |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
| 87831-2036                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A         |                                    |                                 | N.A                            | 4                  | YES            | N.A    | YES        | N.A    | YES                    | YES | 2.50      |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
| 87831-2028                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A         |                                    |                                 | N.A                            | 2                  |                |        |            |        |                        |     | 3.50      |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
| 87831-2029                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A         |                                    |                                 | N.A                            | 3                  |                |        |            |        |                        |     | 3.50      |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
| 87831-2035                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A         |                                    |                                 | N.A                            | 3                  | YES            | N.A    | YES        | N.A    | YES                    | N.A | 3.50      |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
| 87831-2010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A         | N.A                                | 2                               |                                |                    |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
| 87831-2011                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A         | N.A                                | 3                               | YES                            | N.A                | YES            | N.A    | YES        | N.A    |                        |     |           |       |       |       |       |     |      |           |   |                                                                                                                                     |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
| B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |                                    |                                 |                                |                    |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |   | B                                                                                                                                   |       |                                         |                                                                                                                                                                                                                                                           |                                                                                                                                                             |                                                                                                                                                              |                                                     |                                                                                                                                  |           |   |
| PLATING OPTIONS:<br>1 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND<br>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27um/50uin MIN. NICKEL OVERALL.<br>2 - 0.38um/15uin GOLD IN CONTACT AREA AND<br>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27um/50uin MIN. NICKEL OVERALL.<br>3 - 0.76um/30uin GOLD IN CONTACT AREA AND<br>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27um/50uin MIN. NICKEL OVERALL.<br>4 - 2.50um/100uin MIN. MATTE TIN OVER 1.25um/50uin MIN. NICKEL OVERALL. |             |                                    |                                 |                                |                    |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |   | RELEASED<br>EC NO: S2015-1188<br>DRWNG:GEMENARLY<br>CHK'D:CGOH<br>APPR:KHL IM<br>2015/04/15<br>2015/06/29<br>2015/06/29<br>REV<br>A |       | QUALITY<br>SYMBOLS<br>F=0<br>F=0<br>F=0 | GENERAL TOLERANCES<br>(UNLESS SPECIFIED)<br>mm INCH<br>4 PLACES ± --- ± ---<br>3 PLACES ± --- ± ---<br>2 PLACES ± 0.20 ± ---<br>1 PLACE ± --- ± ---<br>0 PLACE ± --- ± ---<br>ANGULAR ± 3 °<br>DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS | DIMENSION STYLE<br>MM ONLY<br>DRAWN BY DATE<br>GMENARLY 2015/04/15<br>CHECKED BY DATE<br>APPROVED BY DATE<br>KHL IM 2015/06/29<br>MATERIAL NO.<br>SEE TABLE | SCALE<br>NTS<br>TITLE<br>MILLIGRID<br>2MM PITCH, THROUGH HOLE<br>VERTICAL SHROUDED HEADER<br>molex<br>DOCUMENT NO.<br>SD-87831-0001<br>SHEET NO.<br>10 OF 13 | DESIGN UNITS<br>METRIC<br>THIRD ANGLE<br>PROJECTION | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |           |   |
| fb_frame_A3_P_AM.T<br>Rev. G 2012/01/11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |                                    |                                 |                                |                    |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |   | 9                                                                                                                                   | 8     | 7                                       | 6                                                                                                                                                                                                                                                         | 5                                                                                                                                                           | 4                                                                                                                                                            | 3                                                   | 2                                                                                                                                | 1         |   |

|                                                            |             |                                                                                                            |                                 |                                                                                                                                        |                    |                                                                                                                                                                                             |        |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
|------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------|-----|------------------------|-------|---------------------------|-------|---------------------------------------------------------------------------|-------|-----------------------|-----------|------|-----------|--|
|                                                            |             | 10                                                                                                         |                                 | 9                                                                                                                                      |                    | 8                                                                                                                                                                                           |        | 7                                                                                                                                             |        | 6                                                                       |     | 5                      |       | 4                         |       | 3                                                                         |       | 2                     |           | 1    |           |  |
| 22 TO 30 CIRCUITS                                          |             |                                                                                                            |                                 |                                                                                                                                        |                    |                                                                                                                                                                                             |        |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
| F                                                          | CKT<br>SIZE | ASSY P/N<br>WITHOUT CAP<br>IN TUBE                                                                         | ASSY P/N<br>WITH CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN T&R                                                                                                         | PLATING<br>OPTIONS | FRICTION LOCKS                                                                                                                                                                              |        | SIDE SLOTS                                                                                                                                    |        | CENTER<br>POLARIZATION                                                  | PEG | DIMENSION              |       |                           |       |                                                                           |       |                       |           | F    |           |  |
|                                                            |             |                                                                                                            |                                 |                                                                                                                                        |                    | DUAL                                                                                                                                                                                        | CENTER | DUAL                                                                                                                                          | SINGLE |                                                                         |     | A                      | B     | C                         | D     | E                                                                         | F     | G                     | H         |      |           |  |
|                                                            | 22          | 87831-2219                                                                                                 | N.A                             | N.A                                                                                                                                    | 1                  | YES                                                                                                                                                                                         | N.A    | YES                                                                                                                                           | N.A    | YES                                                                     | N.A | 20.00                  | 22.85 | 24.65                     | 23.00 | 16.00                                                                     | N.A   | 2.50                  | 3.60±0.20 |      |           |  |
|                                                            |             | 87831-2220                                                                                                 | N.A                             | N.A                                                                                                                                    | 2                  |                                                                                                                                                                                             |        |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
|                                                            |             | 87831-2221                                                                                                 | N.A                             | N.A                                                                                                                                    | 3                  |                                                                                                                                                                                             |        |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
|                                                            |             | 87831-2236                                                                                                 | N.A                             | N.A                                                                                                                                    | 4                  |                                                                                                                                                                                             |        |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
|                                                            |             | 87831-2228                                                                                                 | N.A                             | N.A                                                                                                                                    | 2                  |                                                                                                                                                                                             |        |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
|                                                            | 22          | 87831-2229                                                                                                 | N.A                             | N.A                                                                                                                                    | 3                  | YES                                                                                                                                                                                         | N.A    | YES                                                                                                                                           | N.A    | YES                                                                     | YES |                        |       |                           |       |                                                                           |       | 2.50                  |           |      |           |  |
|                                                            |             | E                                                                                                          | 24                              | 87831-2419                                                                                                                             | N.A                | N.A                                                                                                                                                                                         | 1      | YES                                                                                                                                           | N.A    | YES                                                                     | N.A | YES                    | N.A   | 22.00                     | 24.85 | 26.65                                                                     | 25.00 | 18.00                 | N.A       | 2.50 | 3.60±0.20 |  |
|                                                            |             |                                                                                                            |                                 | 87831-2420                                                                                                                             | N.A                | N.A                                                                                                                                                                                         | 2      |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
|                                                            |             |                                                                                                            |                                 | 87831-2421                                                                                                                             | N.A                | N.A                                                                                                                                                                                         | 3      |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
|                                                            |             |                                                                                                            |                                 | 87831-2436                                                                                                                             | N.A                | N.A                                                                                                                                                                                         | 4      |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
| 87831-2428                                                 | N.A         |                                                                                                            |                                 | N.A                                                                                                                                    | 2                  |                                                                                                                                                                                             |        |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
|                                                            | 24          | 87831-2429                                                                                                 | N.A                             | N.A                                                                                                                                    | 3                  | YES                                                                                                                                                                                         | N.A    | YES                                                                                                                                           | N.A    | YES                                                                     | YES |                        |       |                           |       |                                                                           |       | 2.50                  |           |      |           |  |
|                                                            |             | 87831-2435                                                                                                 | N.A                             | N.A                                                                                                                                    | 3                  | YES                                                                                                                                                                                         | N.A    | YES                                                                                                                                           | N.A    | YES                                                                     | YES |                        |       |                           |       |                                                                           |       | 3.50                  |           |      |           |  |
|                                                            |             | 87831-2410                                                                                                 | N.A                             | N.A                                                                                                                                    | 2                  | YES                                                                                                                                                                                         | N.A    | YES                                                                                                                                           | N.A    | YES                                                                     | N.A |                        |       |                           |       |                                                                           |       | 3.50                  |           |      |           |  |
|                                                            |             | D                                                                                                          | 26                              | 87831-2619                                                                                                                             | N.A                | N.A                                                                                                                                                                                         | 1      | YES                                                                                                                                           | N.A    | YES                                                                     | N.A | YES                    | N.A   | 24.00                     | 26.85 | 28.65                                                                     | 27.00 | 20.00                 | N.A       | 2.50 | 3.60±0.20 |  |
|                                                            |             |                                                                                                            |                                 | 87831-2620                                                                                                                             | N.A                | N.A                                                                                                                                                                                         | 2      |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
| 87831-2621                                                 | N.A         |                                                                                                            |                                 | N.A                                                                                                                                    | 3                  |                                                                                                                                                                                             |        |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
| 87831-2636                                                 | N.A         |                                                                                                            |                                 | N.A                                                                                                                                    | 4                  |                                                                                                                                                                                             |        |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
| 87831-2628                                                 | N.A         |                                                                                                            |                                 | N.A                                                                                                                                    | 2                  |                                                                                                                                                                                             |        |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
|                                                            | 26          | 87831-2629                                                                                                 | N.A                             | N.A                                                                                                                                    | 3                  | YES                                                                                                                                                                                         | N.A    | YES                                                                                                                                           | N.A    | YES                                                                     | YES |                        |       |                           |       |                                                                           |       | 2.50                  |           |      |           |  |
|                                                            |             | 87831-2610                                                                                                 | N.A                             | N.A                                                                                                                                    | 2                  | YES                                                                                                                                                                                         | N.A    | YES                                                                                                                                           | N.A    | YES                                                                     | N.A |                        |       |                           |       |                                                                           |       | 3.50                  |           |      |           |  |
|                                                            |             | C                                                                                                          | 28                              | 87831-2819                                                                                                                             | N.A                | N.A                                                                                                                                                                                         | 1      | YES                                                                                                                                           | N.A    | YES                                                                     | N.A | YES                    | N.A   | 26.00                     | 28.85 | 30.65                                                                     | 29.00 | 22.00                 | N.A       | 2.50 | 3.60±0.20 |  |
|                                                            |             |                                                                                                            |                                 | 87831-2820                                                                                                                             | N.A                | N.A                                                                                                                                                                                         | 2      |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
|                                                            |             |                                                                                                            |                                 | 87831-2821                                                                                                                             | N.A                | N.A                                                                                                                                                                                         | 3      |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
| 87831-2836                                                 | N.A         |                                                                                                            |                                 | N.A                                                                                                                                    | 4                  |                                                                                                                                                                                             |        |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
| 87831-2828                                                 | N.A         |                                                                                                            |                                 | N.A                                                                                                                                    | 2                  |                                                                                                                                                                                             |        |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
|                                                            | 28          | 87831-2829                                                                                                 | N.A                             | N.A                                                                                                                                    | 3                  | YES                                                                                                                                                                                         | N.A    | YES                                                                                                                                           | N.A    | YES                                                                     | YES |                        |       |                           |       |                                                                           |       | 2.50                  |           |      |           |  |
|                                                            |             | B                                                                                                          | 30                              | 87831-3019                                                                                                                             | N.A                | N.A                                                                                                                                                                                         | 1      | YES                                                                                                                                           | N.A    | YES                                                                     | N.A | YES                    | N.A   | 28.00                     | 30.85 | 32.65                                                                     | 31.00 | 24.00                 | N.A       | 2.50 | 3.60±0.20 |  |
|                                                            |             |                                                                                                            |                                 | 87831-3020                                                                                                                             | N.A                | N.A                                                                                                                                                                                         | 2      |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
|                                                            |             |                                                                                                            |                                 | 87831-3021                                                                                                                             | N.A                | N.A                                                                                                                                                                                         | 3      |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
|                                                            |             |                                                                                                            |                                 | 87831-3036                                                                                                                             | N.A                | N.A                                                                                                                                                                                         | 4      |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
| 87831-3028                                                 | N.A         |                                                                                                            |                                 | N.A                                                                                                                                    | 2                  |                                                                                                                                                                                             |        |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
|                                                            | 30          | 87831-3029                                                                                                 | N.A                             | N.A                                                                                                                                    | 3                  | YES                                                                                                                                                                                         | N.A    | YES                                                                                                                                           | N.A    | YES                                                                     | YES |                        |       |                           |       |                                                                           |       | 2.50                  |           |      |           |  |
|                                                            |             | 87831-3035                                                                                                 | N.A                             | N.A                                                                                                                                    | 3                  | YES                                                                                                                                                                                         | N.A    | YES                                                                                                                                           | N.A    | YES                                                                     | YES |                        |       |                           |       |                                                                           |       | 3.50                  |           |      |           |  |
|                                                            |             | 87831-3010                                                                                                 | 87831-3030                      | 87831-3050                                                                                                                             | 2                  | YES                                                                                                                                                                                         | N.A    | YES                                                                                                                                           | N.A    | YES                                                                     | N.A |                        |       |                           |       |                                                                           |       | 3.50                  |           |      |           |  |
|                                                            |             | PLATING OPTIONS:                                                                                           |                                 | 1 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL. |                    | 2 - 0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.                                                            |        | 3 - 0.76um/30uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.              |        | 4 - 2.50um/100uin MIN. MATTE TIN OVER 1.25um/50uin MIN. NICKEL OVERALL. |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
|                                                            |             | RELEASED<br>EC NO: S2015-1188<br>DRWN:GEMARLY 2015/04/15<br>CHKD:CGOH 2015/06/29<br>APPR:KHL IM 2015/06/29 |                                 | QUALITY<br>SYMBOLS<br>F=0<br>F=0<br>F=0                                                                                                |                    | GENERAL TOLERANCES<br>(UNLESS SPECIFIED)<br>mm INCH<br>4 PLACES ± --- ± ---<br>3 PLACES ± --- ± ---<br>2 PLACES ± 0.20 ± ---<br>1 PLACE ± --- ± ---<br>0 PLACE ± --- ± ---<br>ANGULAR ± 3 ° |        | DIMENSION STYLE<br>MM ONLY<br>DRAWN BY DATE<br>GEMARLY 2015/04/15<br>CHECKED BY DATE<br>APPROVED BY DATE<br>KHL IM 2015/06/29<br>MATERIAL NO. |        | SCALE<br>NTS                                                            |     | DESIGN UNITS<br>METRIC |       | THIRD ANGLE<br>PROJECTION |       | MILLIGRID<br>2MM PITCH, THROUGH HOLE<br>VERTICAL SHROUDED HEADER<br>molex |       | SHEET NO.<br>11 OF 13 |           |      |           |  |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |             | SEE TABLE                                                                                                  |                                 | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION       |                    |                                                                                                                                                                                             |        |                                                                                                                                               |        |                                                                         |     |                        |       |                           |       |                                                                           |       |                       |           |      |           |  |
| fb_frame_A3_P_AM_T<br>Rev. G 2012/01/11                    |             | 9                                                                                                          |                                 | 8                                                                                                                                      |                    | 7                                                                                                                                                                                           |        | 6                                                                                                                                             |        | 5                                                                       |     | 4                      |       | 3                         |       | 2                                                                         |       | 1                     |           |      |           |  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 10                                 | 9                               | 8                                                                                                                                | 7                                      | 6              | 5                                                                                 | 4                                                                                                                                                                                           | 3      | 2                                                                                     | 1   |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|-----|--------------|------------------------|---------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------|-----|------|-----------|---|-----|------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 32 TO 40 CIRCUITS                  |                                 |                                                                                                                                  |                                        |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
| F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | CKT<br>SIZE | ASSY P/N<br>WITHOUT CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN T&R                                                                                                   | PLATING<br>OPTIONS                     | FRICTION LOCKS |                                                                                   | SIDE SLOTS                                                                                                                                                                                  |        | CENTER<br>POLARIZATION                                                                | PEG | DIMENSION    |                        |                           |       |                                                                                                                                      |     |      | F         |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |                                    |                                 |                                                                                                                                  |                                        | DUAL           | CENTER                                                                            | DUAL                                                                                                                                                                                        | SINGLE |                                                                                       |     | A            | B                      | C                         | D     | E                                                                                                                                    | F   | G    |           | H |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 32          | 87831-3219                         | N.A                             | N.A                                                                                                                              | 1                                      | YES            | N.A                                                                               | YES                                                                                                                                                                                         | N.A    | YES                                                                                   | N.A | 30.00        | 32.85                  | 34.65                     | 33.00 | 26.00                                                                                                                                | N.A | 2.50 | 3.60±0.20 |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3220                         | N.A                             | N.A                                                                                                                              | 2                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3221                         | N.A                             | N.A                                                                                                                              | 3                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3236                         | N.A                             | N.A                                                                                                                              | 4                                      | YES            | N.A                                                                               | YES                                                                                                                                                                                         | N.A    | YES                                                                                   | YES |              |                        |                           |       |                                                                                                                                      |     | 2.50 |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3228                         | N.A                             | N.A                                                                                                                              | 2                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3229                         | N.A                             | N.A                                                                                                                              | 3                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
| E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 34          | 87831-3419                         | N.A                             | N.A                                                                                                                              | 1                                      | YES            | N.A                                                                               | YES                                                                                                                                                                                         | N.A    | YES                                                                                   | N.A | 32.00        | 34.85                  | 36.65                     | 35.00 | 28.00                                                                                                                                | N.A | 2.50 | 3.60±0.20 |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3420                         | N.A                             | N.A                                                                                                                              | 2                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3421                         | N.A                             | N.A                                                                                                                              | 3                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3436                         | N.A                             | N.A                                                                                                                              | 4                                      | YES            | N.A                                                                               | YES                                                                                                                                                                                         | N.A    | YES                                                                                   | YES |              |                        |                           |       |                                                                                                                                      |     | 2.50 |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3428                         | N.A                             | N.A                                                                                                                              | 2                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3429                         | N.A                             | N.A                                                                                                                              | 3                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |                                    |                                 | 87831-3435                                                                                                                       | N.A                                    | N.A            | 3                                                                                 | YES                                                                                                                                                                                         | N.A    | YES                                                                                   | N.A |              |                        |                           |       |                                                                                                                                      |     | YES  |           |   | YES | 3.50 |
| D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 36          | 87831-3619                         | N.A                             | N.A                                                                                                                              | 1                                      | YES            | N.A                                                                               | YES                                                                                                                                                                                         | N.A    | YES                                                                                   | N.A | 34.00        | 36.85                  | 38.65                     | 37.00 | 30.00                                                                                                                                | N.A | 2.50 | 3.60±0.20 |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3620                         | N.A                             | N.A                                                                                                                              | 2                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3621                         | N.A                             | N.A                                                                                                                              | 3                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3636                         | N.A                             | N.A                                                                                                                              | 4                                      | YES            | N.A                                                                               | YES                                                                                                                                                                                         | N.A    | YES                                                                                   | YES |              |                        |                           |       |                                                                                                                                      |     | 2.50 |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3628                         | N.A                             | N.A                                                                                                                              | 2                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3629                         | N.A                             | N.A                                                                                                                              | 3                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
| C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 38          | 87831-3819                         | N.A                             | N.A                                                                                                                              | 1                                      | YES            | N.A                                                                               | YES                                                                                                                                                                                         | N.A    | YES                                                                                   | N.A | 36.00        | 38.85                  | 40.65                     | 39.00 | 32.00                                                                                                                                | N.A | 2.50 | 3.60±0.20 |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3820                         | N.A                             | N.A                                                                                                                              | 2                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3821                         | N.A                             | N.A                                                                                                                              | 3                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3836                         | N.A                             | N.A                                                                                                                              | 4                                      | YES            | N.A                                                                               | YES                                                                                                                                                                                         | N.A    | YES                                                                                   | YES |              |                        |                           |       |                                                                                                                                      |     | 2.50 |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3828                         | N.A                             | N.A                                                                                                                              | 2                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-3829                         | N.A                             | N.A                                                                                                                              | 3                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 40          | 87831-4019                         | N.A                             | N.A                                                                                                                              | 1                                      | YES            | N.A                                                                               | YES                                                                                                                                                                                         | N.A    | YES                                                                                   | N.A | 38.00        | 40.85                  | 42.65                     | 41.00 | 34.00                                                                                                                                | N.A | 2.50 | 3.60±0.20 |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-4020                         | N.A                             | N.A                                                                                                                              | 2                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-4021                         | N.A                             | N.A                                                                                                                              | 3                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-4036                         | N.A                             | N.A                                                                                                                              | 4                                      | YES            | N.A                                                                               | YES                                                                                                                                                                                         | N.A    | YES                                                                                   | YES |              |                        |                           |       |                                                                                                                                      |     | 2.50 |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-4028                         | N.A                             | N.A                                                                                                                              | 2                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | 87831-4029                         | N.A                             | N.A                                                                                                                              | 3                                      |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |                                    |                                 | 87831-4010                                                                                                                       | N.A                                    | N.A            | 2                                                                                 | YES                                                                                                                                                                                         | N.A    | YES                                                                                   | N.A |              |                        |                           |       |                                                                                                                                      |     | YES  |           |   | N.A | 3.50 |
| B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |                                    |                                 |                                                                                                                                  |                                        |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   | B   |      |
| PLATING OPTIONS:<br>1 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND<br>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27um/50uin MIN. NICKEL OVERALL.<br>2 - 0.38um/15uin GOLD IN CONTACT AREA AND<br>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27um/50uin MIN. NICKEL OVERALL.<br>3 - 0.76um/30uin GOLD IN CONTACT AREA AND<br>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27um/50uin MIN. NICKEL OVERALL.<br>4 - 2.50um/100uin MIN. MATTE TIN OVER 1.25um/50uin MIN. NICKEL OVERALL. |             |                                    |                                 |                                                                                                                                  |                                        |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
| RELEASED<br>EC NO: S2015-1188<br>DRWN:GMENARLY<br>CHKD:GOH<br>APPR:KHL IM                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                                    |                                 |                                                                                                                                  | 2015/04/15<br>2015/06/29<br>2015/06/29 | DESCRIPTION    | QUALITY<br>SYMBOLS<br>F <sub>A</sub> =0<br>F <sub>G</sub> =0<br>F <sub>P</sub> =0 | GENERAL TOLERANCES<br>(UNLESS SPECIFIED)<br>mm INCH<br>4 PLACES ± --- ± ---<br>3 PLACES ± --- ± ---<br>2 PLACES ± 0.20 ± ---<br>1 PLACE ± --- ± ---<br>0 PLACE ± --- ± ---<br>ANGULAR ± 3 ° |        | DIMENSION STYLE<br>MM ONLY<br>DRAWN BY DATE<br>GMENARLY 2015/04/15<br>CHECKED BY DATE |     | SCALE<br>NTS | DESIGN UNITS<br>METRIC | THIRD ANGLE<br>PROJECTION |       | MILLIGRID<br>2MM PITCH, THROUGH HOLE<br>VERTICAL SHROUDED HEADER<br><b>molex</b><br>DOCUMENT NO. SD-87831-0001<br>SHEET NO. 12 OF 13 |     |      |           |   |     |      |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             | SEE TABLE                          |                                 | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                                        |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |                                    |                                 |                                                                                                                                  |                                        |                |                                                                                   |                                                                                                                                                                                             |        |                                                                                       |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |
| fb_frame_A3_P_AM.T<br>Rev. G 2012/01/11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             | 9                                  | 8                               | 7                                                                                                                                | 6                                      | 5              | 4                                                                                 | 3                                                                                                                                                                                           | 2      | 1                                                                                     |     |              |                        |                           |       |                                                                                                                                      |     |      |           |   |     |      |

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |                           |                          |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------------|--------------------------|-----------------|----------------|--------|------------|--------|---------------------|-------|-----------------------------------------------------------------------------------------------------------------|-------|-------|-------|-----|------|-----------|---|---|--|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------|------------------------|-----------------------------------------------------------------------------------------------------|--|-------------------------------|--|-----------------------|--|---|
|                   | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 9                            | 8                         | 7                        | 6               | 5              | 4      | 3          | 2      | 1                   |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
| 42 TO 50 CIRCUITS |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |                           |                          |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
| F                 | CKT SIZE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ASSY P/N WITHOUT CAP IN TUBE | ASSY P/N WITH CAP IN TUBE | ASSY P/N WITH CAP IN T&R | PLATING OPTIONS | FRICTION LOCKS |        | SIDE SLOTS |        | CENTER POLARIZATION | PEG   | DIMENSION                                                                                                       |       |       |       |     |      |           |   | F |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |                           |                          |                 | DUAL           | CENTER | DUAL       | SINGLE |                     |       | A                                                                                                               | B     | C     | D     | E   | F    | G         | H |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
| 42                | 87831-4219                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 1                        | YES             | N.A            | YES    | N.A        | YES    | N.A                 | 40.00 | 42.85                                                                                                           | 44.65 | 43.00 | 36.00 | N.A | 2.50 | 3.60±0.20 |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4220                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 2                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4221                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 3                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4236                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 4                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4228                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 2                        | YES             | N.A            | YES    | N.A        | YES    | YES                 |       |                                                                                                                 |       |       |       |     | 2.50 |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4229                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 3                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
| 44                | 87831-4419                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 1                        | YES             | N.A            | YES    | N.A        | YES    | N.A                 | 42.00 | 44.85                                                                                                           | 46.65 | 45.00 | 38.00 | N.A | 2.50 | 3.60±0.20 |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4420                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 2                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4421                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 3                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4436                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 4                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4428                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 2                        | YES             | N.A            | YES    | N.A        | YES    | YES                 |       |                                                                                                                 |       |       |       |     | 2.50 |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4429                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 3                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
| 87831-4435        | N.A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | N.A                          | 3                         | YES                      | N.A             | YES            | N.A    | YES        | YES    | 3.50                |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
| 46                | 87831-4619                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 1                        | YES             | N.A            | YES    | N.A        | YES    | N.A                 | 44.00 | 46.85                                                                                                           | 48.65 | 47.00 | 40.00 | N.A | 2.50 | 3.60±0.20 |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4620                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 2                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4621                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 3                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4636                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 4                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4628                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 2                        | YES             | N.A            | YES    | N.A        | YES    | YES                 |       |                                                                                                                 |       |       |       |     | 2.50 |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4629                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 3                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
| 48                | 87831-4819                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 1                        | YES             | N.A            | YES    | N.A        | YES    | N.A                 | 46.00 | 48.85                                                                                                           | 50.65 | 49.00 | 42.00 | N.A | 2.50 | 3.60±0.20 |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4820                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 2                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4821                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 3                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4836                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 4                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4828                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 2                        | YES             | N.A            | YES    | N.A        | YES    | YES                 |       |                                                                                                                 |       |       |       |     | 2.50 |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-4829                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 3                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
| 50                | 87831-5019                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 1                        | YES             | N.A            | YES    | N.A        | YES    | N.A                 | 48.00 | 50.85                                                                                                           | 52.65 | 51.00 | 44.00 | N.A | 2.50 | 3.60±0.20 |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-5020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 2                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-5021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 3                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-5036                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 4                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-5028                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 2                        | YES             | N.A            | YES    | N.A        | YES    | YES                 |       |                                                                                                                 |       |       |       |     | 2.50 |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
|                   | 87831-5029                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N.A                          | N.A                       | 3                        |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
| 87831-5035        | N.A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | N.A                          | 3                         | YES                      | N.A             | YES            | N.A    | YES        | YES    | 3.50                |       |                                                                                                                 |       |       |       |     |      |           |   |   |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
| B                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |                           |                          |                 |                |        |            |        |                     |       |                                                                                                                 |       |       |       |     |      |           |   | B |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |
| A                 | PLATING OPTIONS:<br>1 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND<br>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27um/50uin MIN. NICKEL OVERALL.<br>2 - 0.38um/15uin GOLD IN CONTACT AREA AND<br>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27um/50uin MIN. NICKEL OVERALL.<br>3 - 0.76um/30uin GOLD IN CONTACT AREA AND<br>1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27um/50uin MIN. NICKEL OVERALL.<br>4 - 2.50um/100uin MIN. MATTE TIN OVER 1.25um/50uin MIN. NICKEL OVERALL. |                              |                           |                          |                 |                |        |            |        |                     |       | RELEASED<br>EC NO: SZ015-1188<br>DRWN:GMEARLY 2015/04/15<br>CHKD:CGOH 2015/06/29<br>APPR:KHL IM 2015/06/29<br>A |       |       |       |     |      |           |   |   |  | QUALITY SYMBOLS<br>F A =0<br>F B =0<br>F F =0 | GENERAL TOLERANCES (UNLESS SPECIFIED)<br>mm INCH<br>4 PLACES ± --- ± ---<br>3 PLACES ± --- ± ---<br>2 PLACES ± 0.20 ± ---<br>1 PLACE ± --- ± ---<br>0 PLACE ± --- ± ---<br>ANGULAR ± 3 °<br>DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |  | DIMENSION STYLE<br>MM ONLY<br>DRAWN BY DATE<br>GMENARLY 2015/04/15<br>CHECKED BY DATE<br>APPROVED BY DATE<br>KHL IM 2015/06/29<br>MATERIAL NO.<br>SEE TABLE |  | SCALE<br>NTS | DESIGN UNITS<br>METRIC | THIRD ANGLE PROJECTION<br>MILLIGRID<br>2MM PITCH, THROUGH HOLE<br>VERTICAL SHROUDED HEADER<br>molex |  | DOCUMENT NO.<br>SD-87831-0001 |  | SHEET NO.<br>13 OF 13 |  | A |
|                   | tb_frame_A3_P_AM.T<br>Rev. G 2012/01/11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                              |                           |                          |                 |                |        |            |        |                     |       | 9                                                                                                               | 8     | 7     | 6     | 5   | 4    | 3         | 2 | 1 |  |                                               |                                                                                                                                                                                                                                                  |  |                                                                                                                                                             |  |              |                        |                                                                                                     |  |                               |  |                       |  |   |