

10091836 - X0J - XXXLF

4-COLUMN DIFFERENTIAL SIGNAL

LEAD-FREE DESIGNATION ONLY WITH APPLICABLE PLATING CODES

| LETTER | PERFORMANCE-BASED PLATING (SEE NOTE 2) | |
|--------|--|----------------|
| | TARGET APPLICATION | LEAD FREE (LF) |
| B | TELCORDIA CO | NO |
| C | TELCORDIA UE | NO |
| D | TELCORDIA CO | YES |
| E | TELCORDIA UE | YES |

| NUMBER | PIN STYLE, HEIGHT |
|--------|-------------------------------------|
| 0 | STANDARD GUIDE PIN MACHINED, 31.6mm |
| 4 | STANDARD GUIDE PIN MACHINED, 25.7mm |

| MODULE DESCRIPTION | LETTER DESIGNATION REPRESENTED IN DASH NUMBER | | | | | | | | | | BASE MODULE |
|--|---|----------|----------|----------|----------|----------|----------|----------|----------|--|-------------|
| LEFT POLARIZING GUIDANCE MODULE (SEE SHEET 3) | J | A | B | C | D | E | F | G | H | | |
| | | | | | | | | | | | |
| RIGHT POLARIZING GUIDANCE MODULE (SEE SHEET 4) | Y | P | Q | R | S | T | U | V | W | | |
| | | | | | | | | | | | |
| OPEN MODULE (TWO WALL) (SEE SHEET 2) | 0 (ZERO) | | | | | | | | | | |
| LEFT WALL MODULE (SEE SHEET 5) | L | | | | | | | | | | |
| RIGHT WALL MODULE (SEE SHEET 6) | M | | | | | | | | | | |
| FOUR WALL MODULE (SEE SHEET 7) | 1 | | | | | | | | | | |

| NUMBER | CONTACT MATING WIPE LENGTH | | COMPLIANT PIN DRILL SIZE |
|--------|----------------------------|-------------|--------------------------|
| | SIGNAL | WIDE GROUND | |
| 1 | 2 | 4 | Ø0.55 [0.0217"] |
| 2 | 3 | 4 | Ø0.55 [0.0217"] |
| 3 | 2 | 4 | Ø0.45 [0.0177"] |
| 4 | 3 | 4 | Ø0.45 [0.0177"] |
| 5 | 2 | 3 | Ø0.55 [0.0217"] |
| 6 | 3 | 3 | Ø0.55 [0.0217"] |
| 7 | 2 | 3 | Ø0.45 [0.0177"] |
| 8 | 3 | 3 | Ø0.45 [0.0177"] |

| | GROUNDED | UNGROUNDED |
|---------------|--------------|-------------|
| FINISHED | Ø2.35-2.55 | Ø2.35-2.55 |
| PAD | Ø5.50 | N/A |
| PLATED | YES | NO |
| DRILL (mm/in) | 2.58 / .1015 | 2.44 / .096 |

| SCREW P/N | DESCRIPTION | BOARD THICKNESS |
|----------------|--|-----------------|
| 10091790-002LF | #2-56 X .375" PHILLIPS PANHEAD W/SQ CONICAL WASHER | 1.60 - 5.00 |
| 10091790-003LF | #2-56 X .500" PHILLIPS PANHEAD W/SQ CONICAL WASHER | 5.00 - 10.00 |

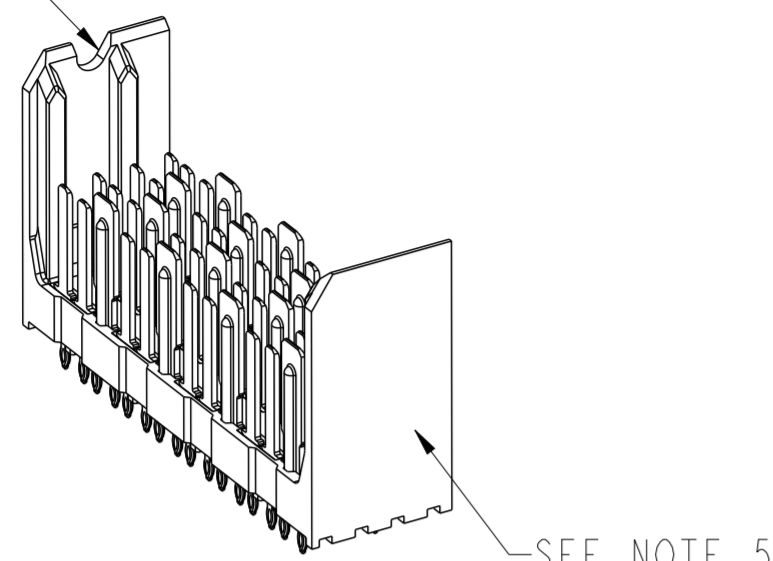
| | | | | | | | | | | | |
|---------------|------------|------|-----------------|------------|----------------|------------------------|------------|-----------|----------------|-----|---|
| spec ref | SEE NOTES | dr | Jim Swain | 2010/04/13 | projection | MM | size | A2 | scale | 4:1 | |
| tolerance std | ASME Y14.5 | eng | Michael Song | 2016/06/06 | chr | Heaven Cen | 2016/06/08 | ecn no | ELX-DG-24191-1 | | |
| surface | linear | appr | Pai-Ming Zheng | 2016/06/15 | product family | | | rel level | Released | | |
| ASME Y14.5 | angular | 0° | ±0.2 | ±0.10 | ±0.050 | Amphenol FCI | | cat. no. | 10091836 | rev | G |
| | | | MODULE ASSEMBLY | | | Product - Customer Drw | | | sheet 1 of 8 | | |

Amphenol FCI

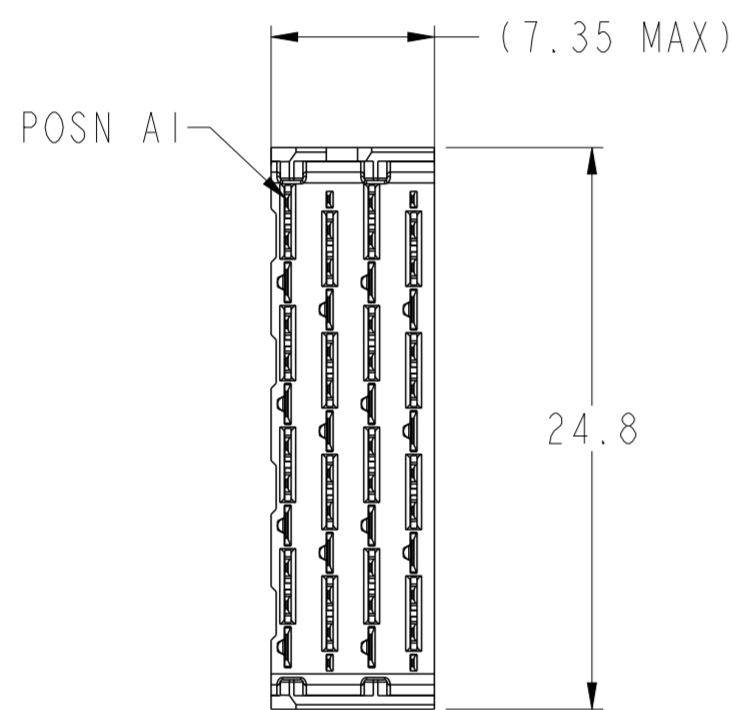
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OPEN (2-WALL) MODULE

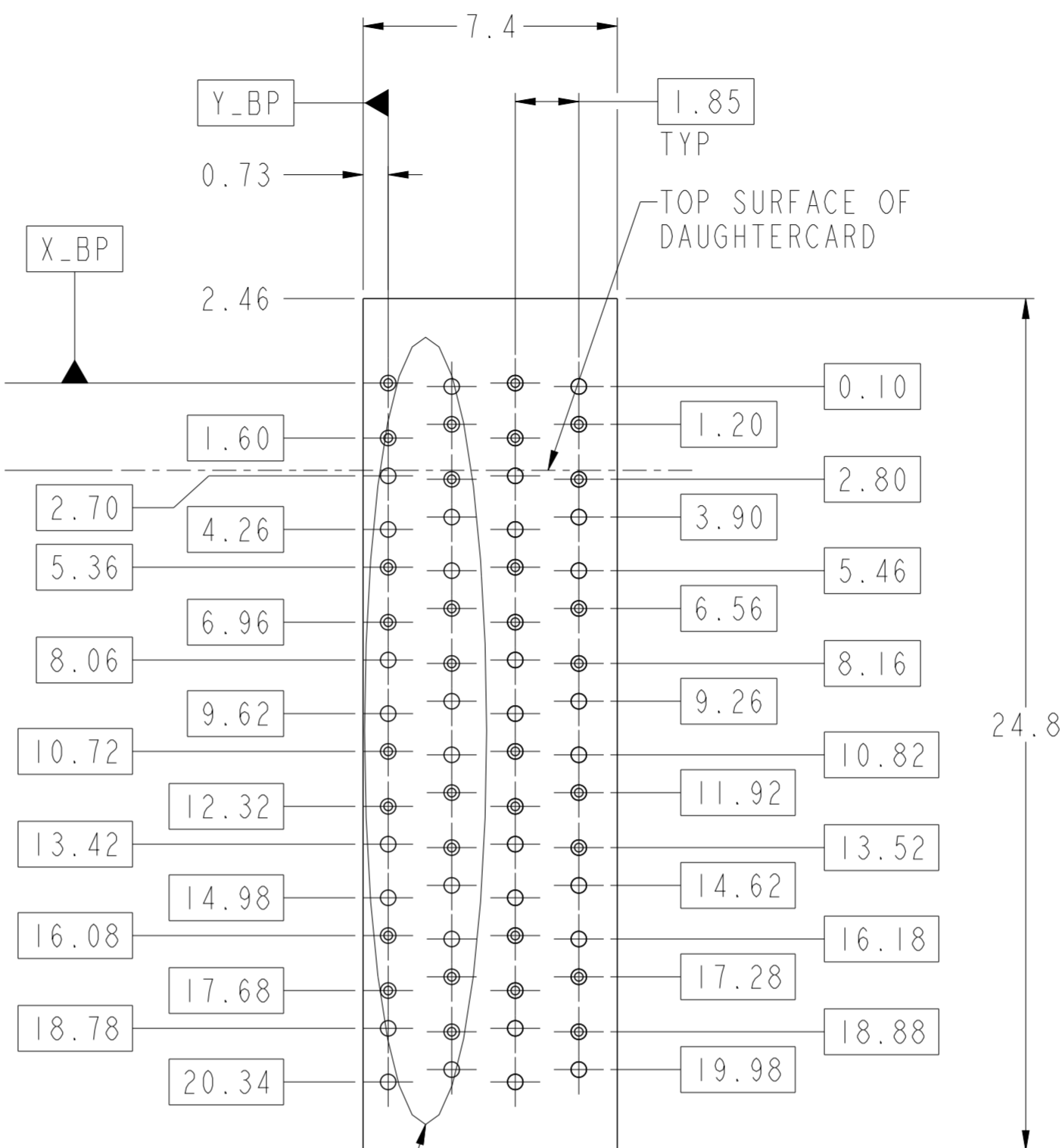
SEE NOTE 8



SEE NOTE 5



2.54
TO TOP SURFACE
OF DAUGHTERCARD

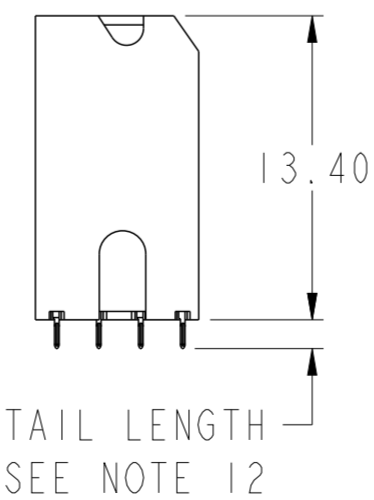
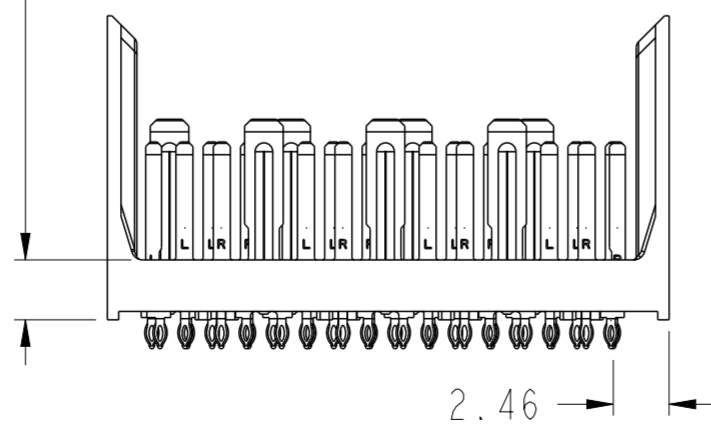
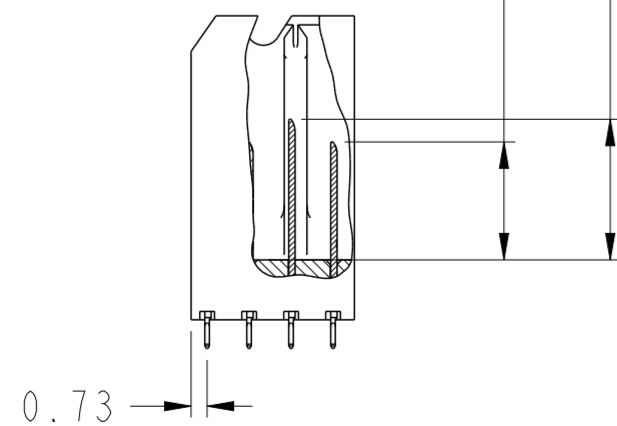


SEE DETAIL A
(SHEET 8)

PCB HOLE PATTERN
COMPONENT SIDE
SCALE 6:1

- 6.2 (4MM WIPE WIDE GROUNDS)
- 5.2 (3MM WIPE WIDE GROUNDS)
- 5.2 (3MM SMALL END GROUNDS)
- 5.2 (3MM WIPE SIGNALS)
- 4.2 (2MM WIPE SIGNALS)
- SEE P/N TREE

2.64±0.10 FROM STANDOFF
SURFACE TO MATING SURFACE



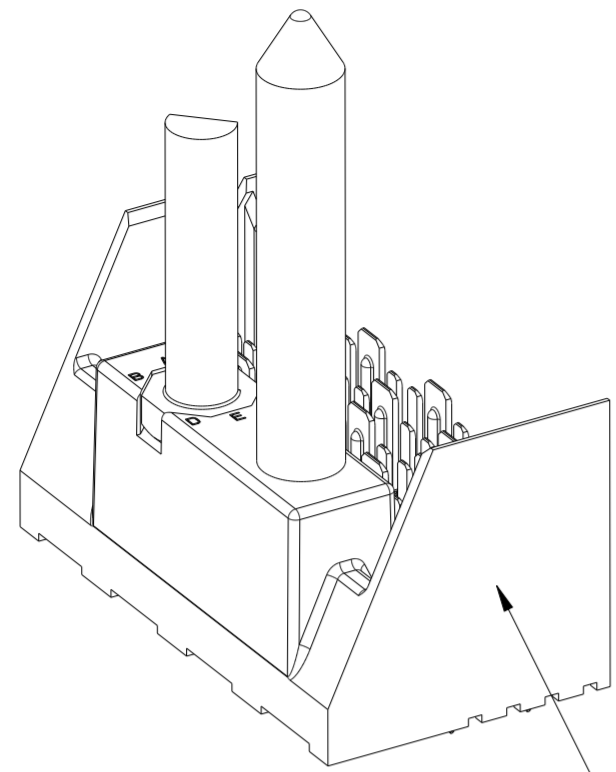
| | | | | | | | | | | |
|---------------|---------------------------------------|-------|--------------|------------|--|----------|------------------------|----------------|-----------|----------|
| spec ref | SEE NOTES | dr | Jim Swain | 2010/04/13 | projection | MM | size | A2 | scale | 4:1 |
| tolerance std | TOLERANCES UNLESS OTHERWISE SPECIFIED | eng | Michael Song | 2016/06/06 | | | ecn no | ELX-DG-24191-1 | rel level | Released |
| ASME Y14.5 | | chr | Heaven Cen | 2016/06/08 | | | | | | |
| surface | linear | 0.X | ±0.2 | | MODULE ASSEMBLY VERTICAL HEADER, 4-COLUMN, 4-PAIR | cat. no. | Product - Customer Drw | sheet 2 of 8 | rev G | |
| | | 0.XX | ±0.10 | | | | | | | |
| | | 0.XXX | ±0.050 | | | | | | | |
| ASME Y14.5 | angular | 0° | ±° | | | | | | | |

PDS: Rev :G

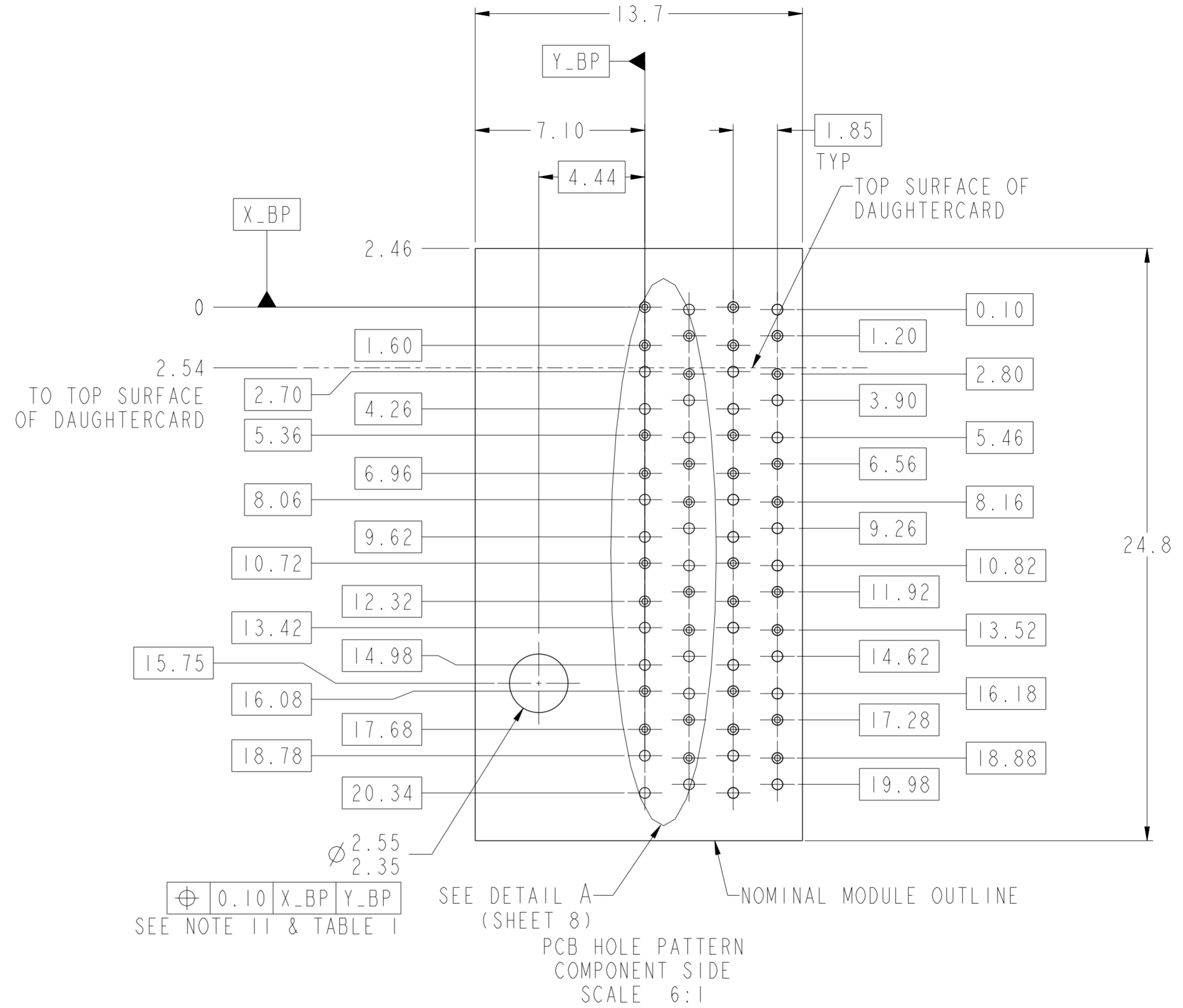
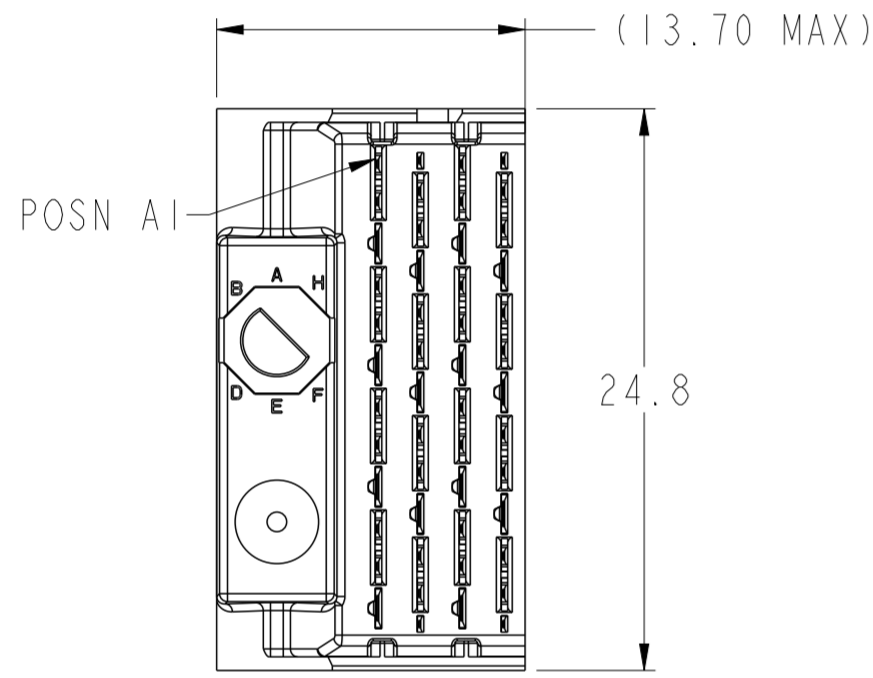
STATUS:Released

Printed: Jun 15, 2016

LEFT POLARIZING/GUIDE MODULE



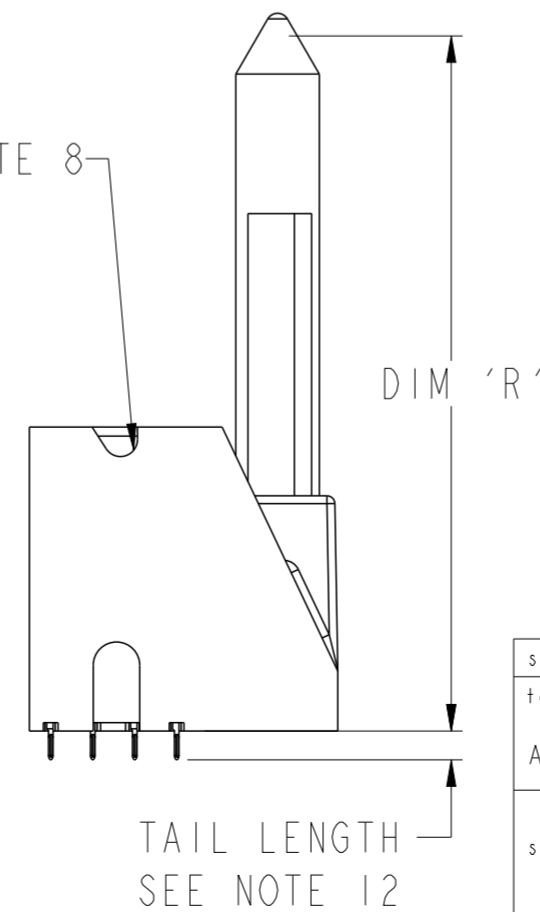
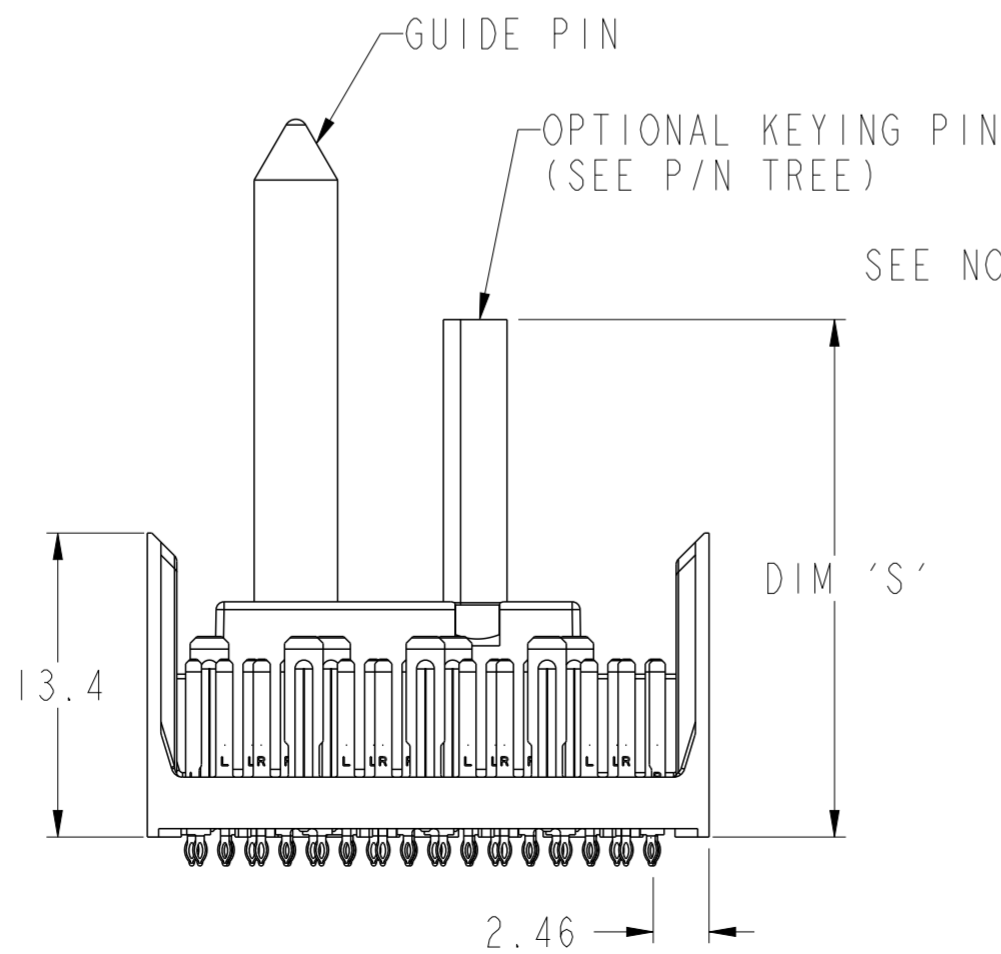
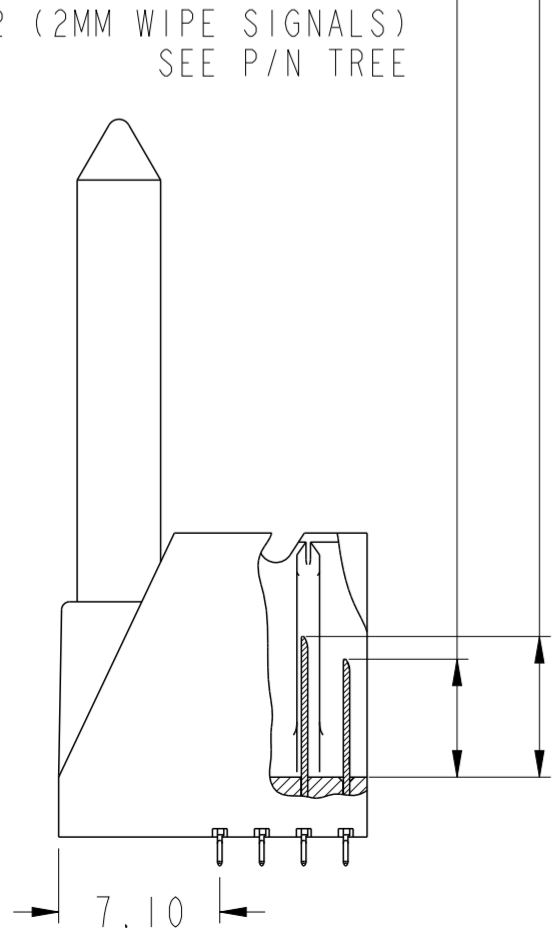
SEE NOTE 5



| | | |
|--------------------|------|------|
| \varnothing 0.10 | X_BP | Y_BP |
|--------------------|------|------|

SEE NOTE 11 & TABLE 1

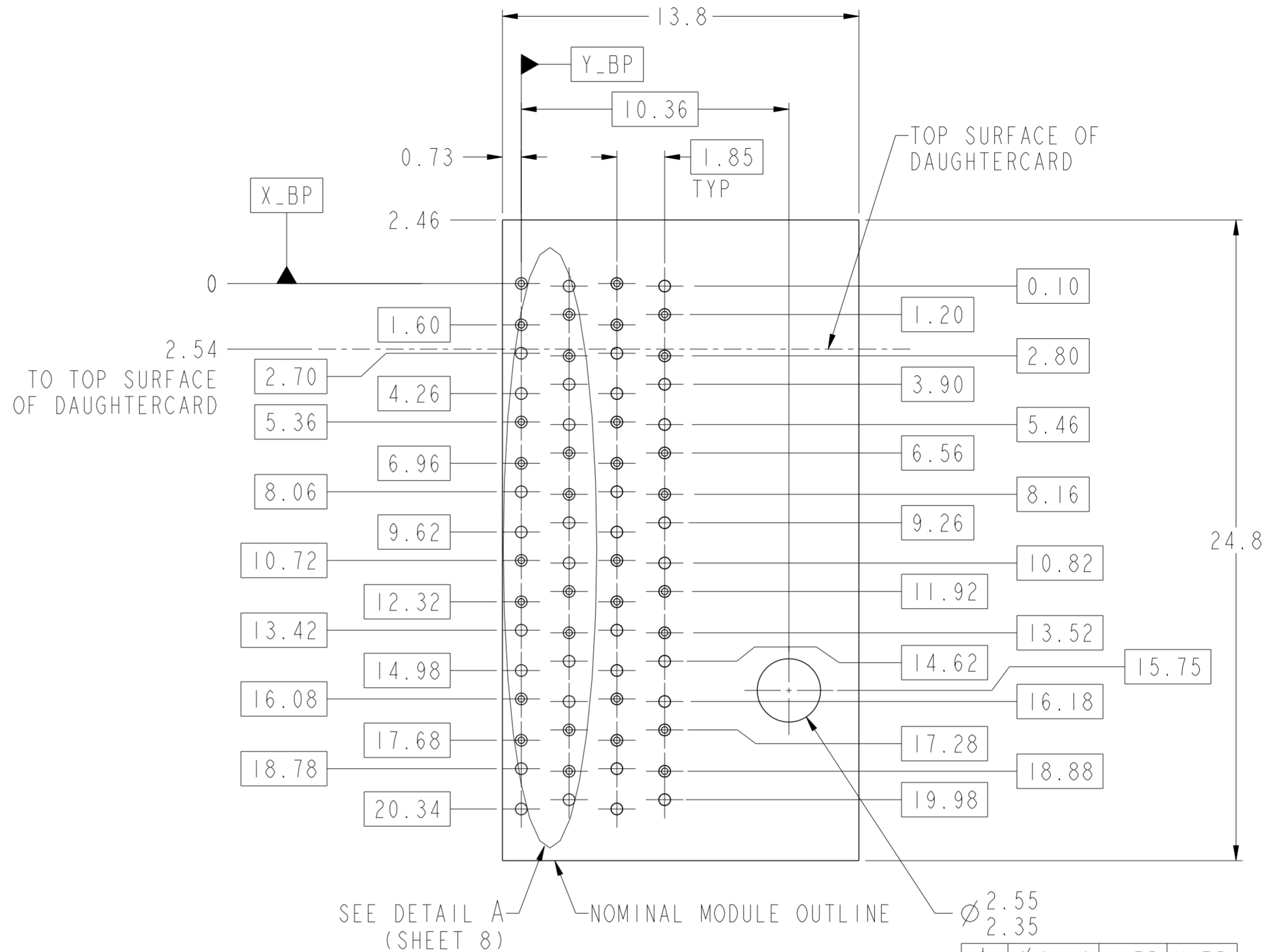
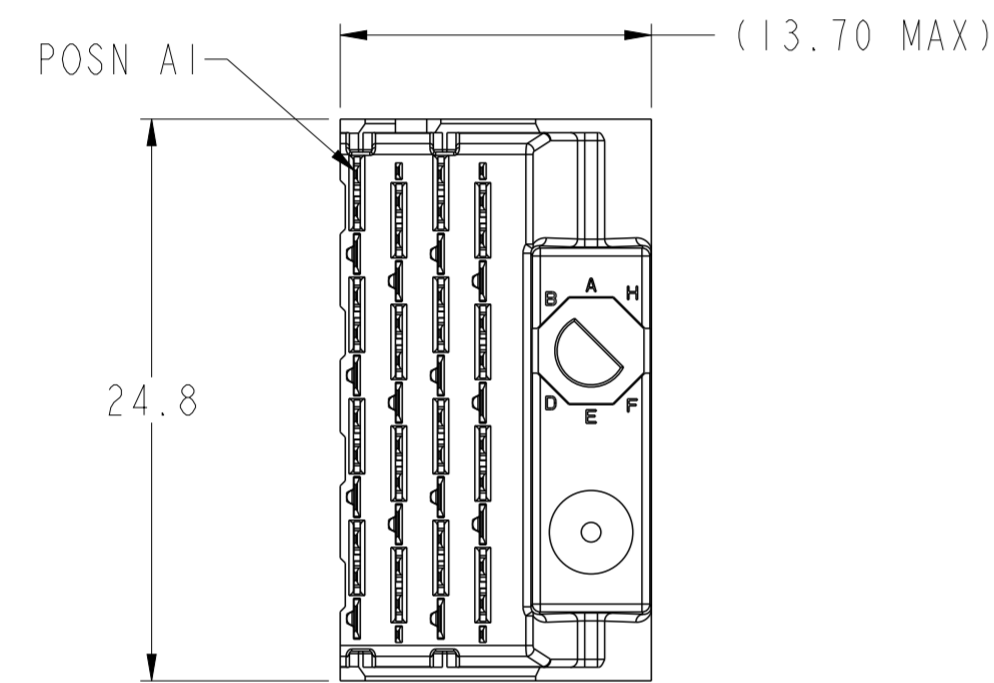
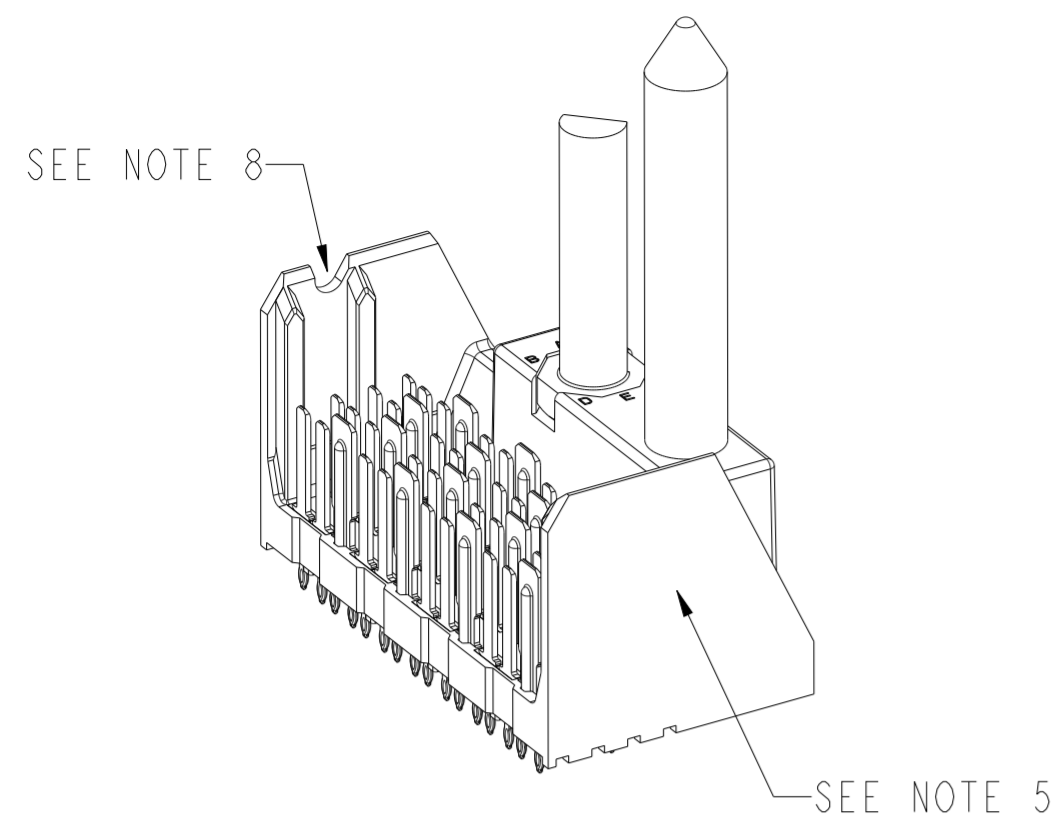
- 6.2 (4MM WIPE WIDE GROUNDS)
- 5.2 (3MM WIPE WIDE GROUNDS)
- 5.2 (3MM SMALL END GROUNDS)
- 5.2 (3MM WIPE SIGNALS)
- 4.2 (2MM WIPE SIGNALS)
- SEE P/N TREE



| ASSEMBLY BASE CONFIGURATION END DASH NO. | GUIDE PIN | POLARIZING KEY |
|--|-----------|----------------|
| | DIM 'R' | DIM 'S' |
| -X0X | 31.6mm | 22.8mm |
| -X4X | 25.7mm | 20.0mm |

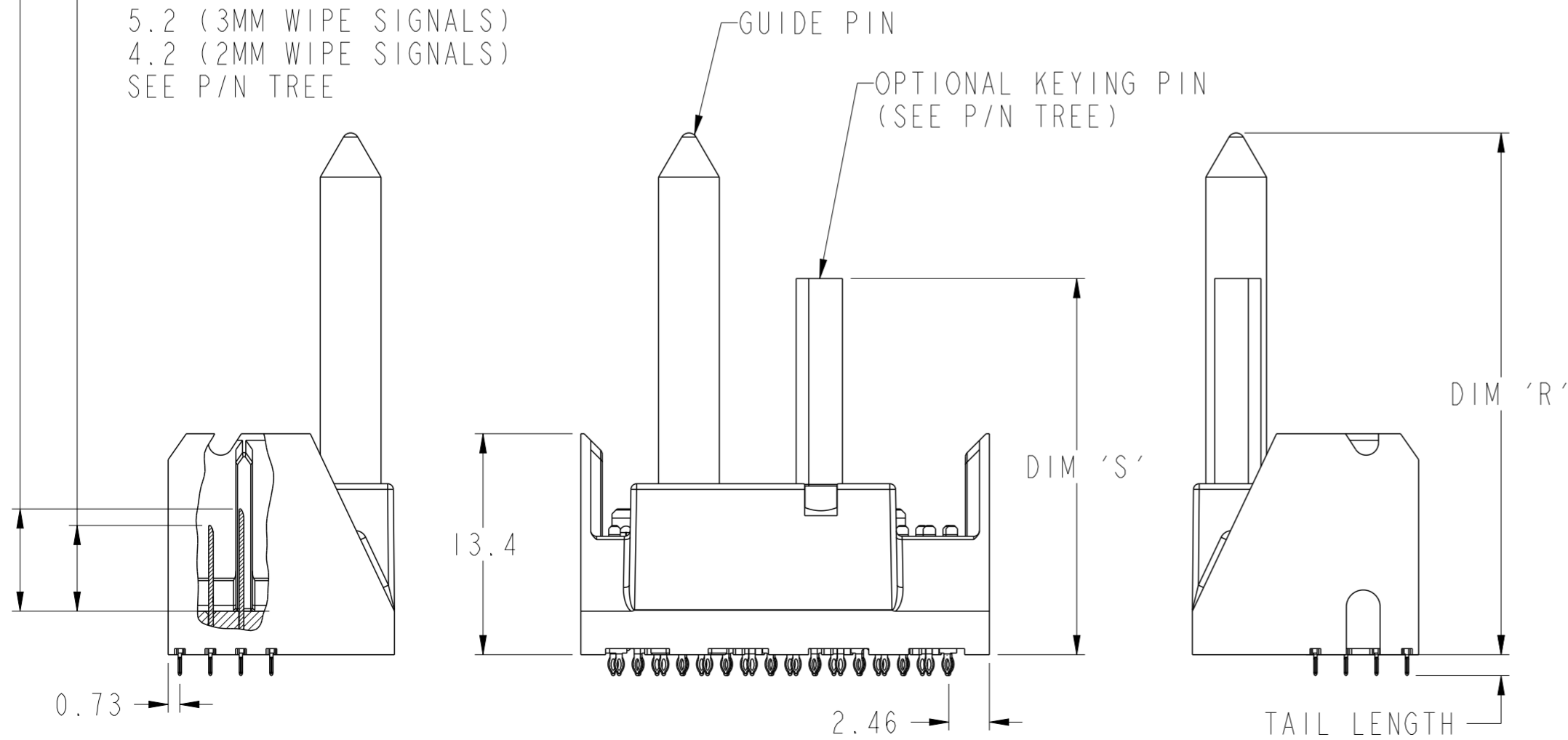
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|---------------|---------------------------------------|-------|--------------|------------|--|----------|-----------------------|------------------------|--------------|----------|
| spec ref | SEE NOTES | dr | Jim Swain | 2010/04/13 | projection | MM | size | A2 | scale | 3:1 |
| tolerance std | TOLERANCES UNLESS OTHERWISE SPECIFIED | eng | Michael Song | 2016/06/06 | | | ecn no | ELX-DG-24191-1 | | |
| ASME Y14.5 | | chr | Heaven Cen | 2016/06/08 | | | | rel level | Released | |
| surface | linear | 0.X | ±0.2 | | product family | XCode | cat. no. SEE P/N TREE | Product - Customer Drw | sheet 3 of 8 | rev G |
| | | 0.XX | ±0.10 | | MODULE ASSEMBLY VERTICAL HEADER, 4-COLUMN, 4-PAIR | 10091836 | | | | |
| ASME Y14.5 | angular | 0.XXX | ±0.050 | | | | | | | |

RIGHT POLARIZING/GUIDE MODULE



| | | | |
|---------------|--------------------|------|------|
| \varnothing | $\varnothing 0.10$ | X_BP | Y_BP |
|---------------|--------------------|------|------|

- 6.2 (4MM WIPE WIDE GROUNDS)
- 5.2 (3MM WIPE WIDE GROUNDS)
- 5.2 (3MM SMALL END GROUNDS)
- 5.2 (3MM WIPE SIGNALS)
- 4.2 (2MM WIPE SIGNALS)
- SEE P/N TREE

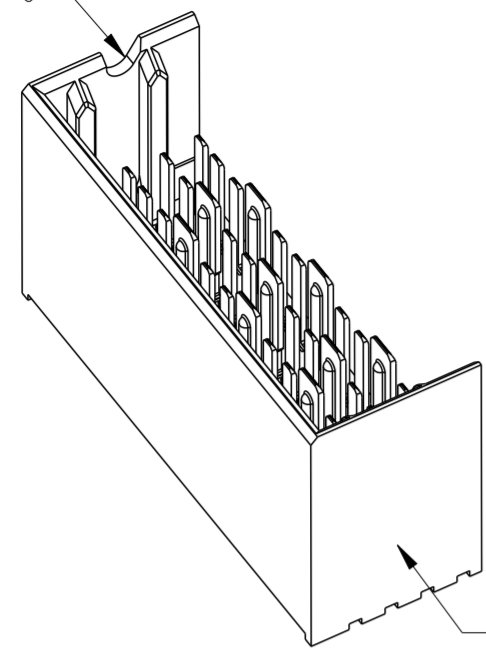


| ASSEMBLY BASE CONFIGURATION END DASH NO. | GUIDE PIN | POLARIZING KEY |
|--|-----------|----------------|
| | DIM 'R' | DIM 'S' |
| -X0X | 31.6mm | 22.8mm |
| -X4X | 25.7mm | 20.0mm |

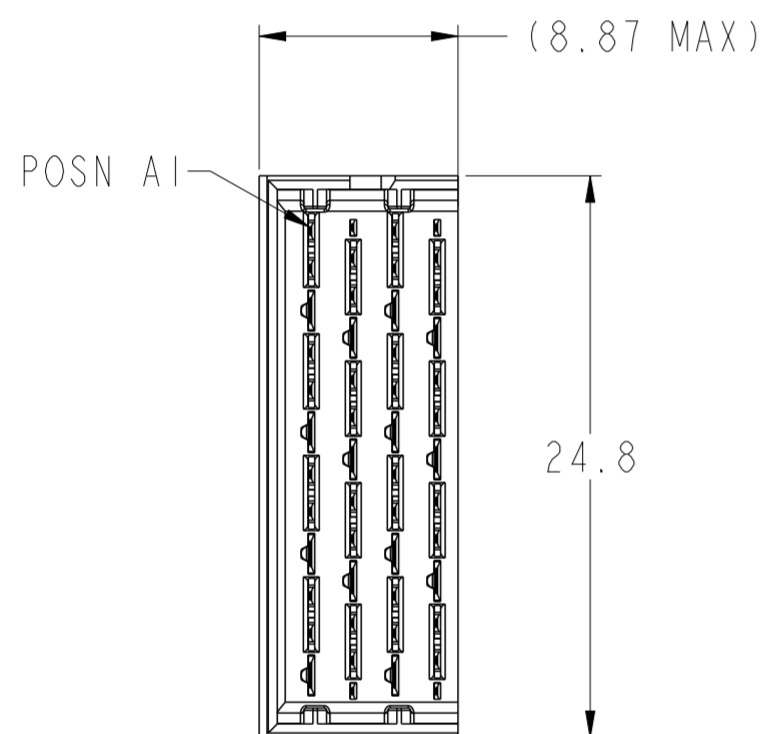
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|---------------|---------------------------------------|-------|--------------|---------------------|-----------------------------------|----------------|----------|-----------|----------|--------|----------------|
| spec ref | SEE NOTES | dr | Jim Swain | 2010/04/13 | projection | MM | size | A2 | scale | 3:1 | |
| tolerance std | TOLERANCES UNLESS OTHERWISE SPECIFIED | eng | Michael Song | 2016/06/06 | | Product family | XCede | rel level | Released | ecn no | ELX-DG-24191-1 |
| ASME Y14.5 | | chr | Heaven Cen | 2016/06/08 | | | | | | | cat. no. |
| surface | linear | 0.X | ±0.2 | Amphenol FCI | MODULE ASSEMBLY | | 10091836 | G | rev | | |
| | | 0.XX | ±0.10 | | VERTICAL HEADER, 4-COLUMN, 4-PAIR | | | | | | |
| | | 0.XXX | ±0.050 | | | | | | | | |
| ASME Y14.5 | angular | 0° | ±° | | | | | | | | |

LEFT WALL MODULE

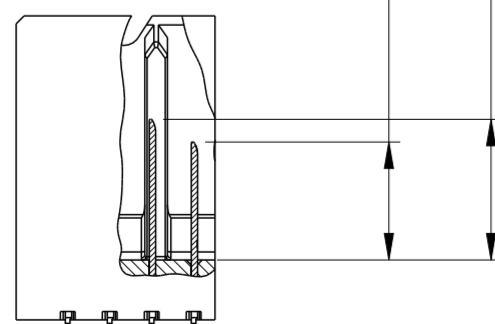
SEE NOTE 8



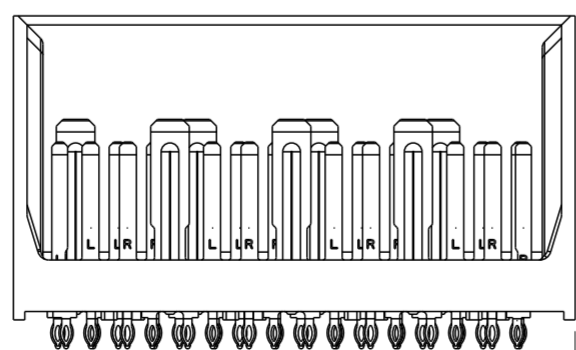
SEE NOTE 5



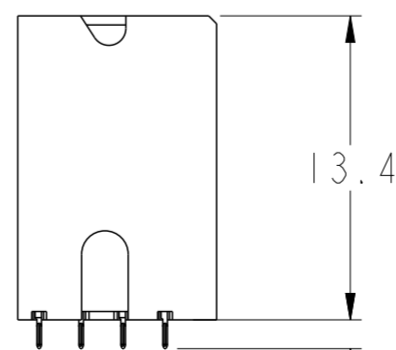
- 6.2 (4MM WIPE WIDE GROUNDS)
- 5.2 (3MM WIPE WIDE GROUNDS)
- 5.2 (3MM SMALL END GROUNDS)
- 5.2 (3MM WIPE SIGNALS)
- 4.2 (2MM WIPE SIGNALS)
- SEE P/N TREE



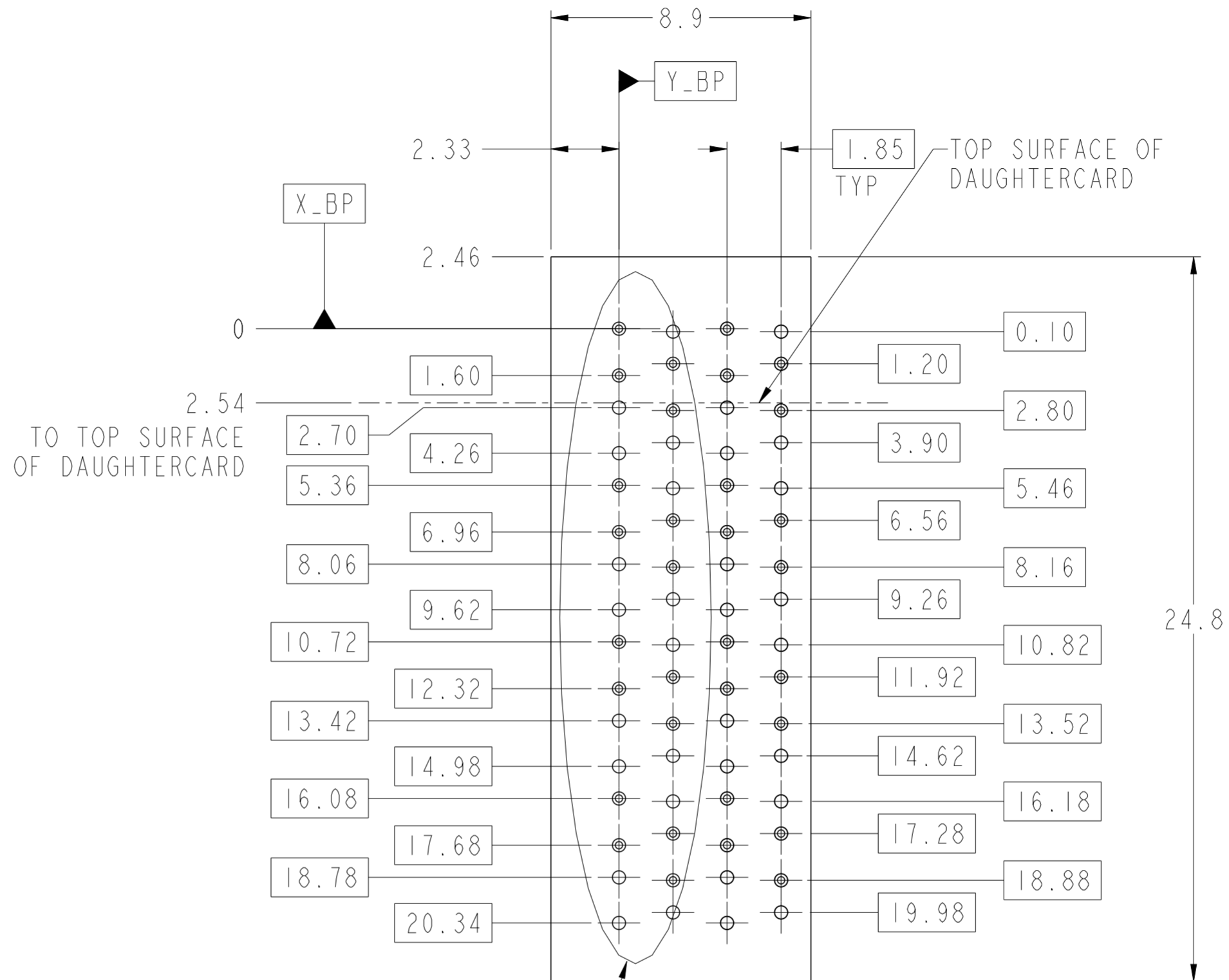
2.33



2.46



TAIL LENGTH
SEE NOTE 12



2.54
TO TOP SURFACE
OF DAUGHTERCARD

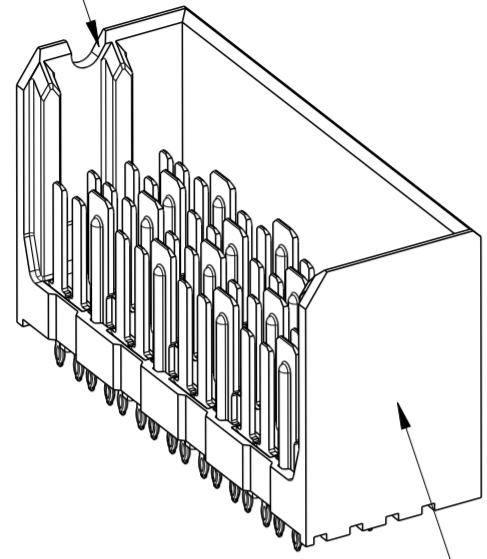
SEE DETAIL A
(SHEET 8)

PCB HOLE PATTERN
COMPONENT SIDE
SCALE 6:1

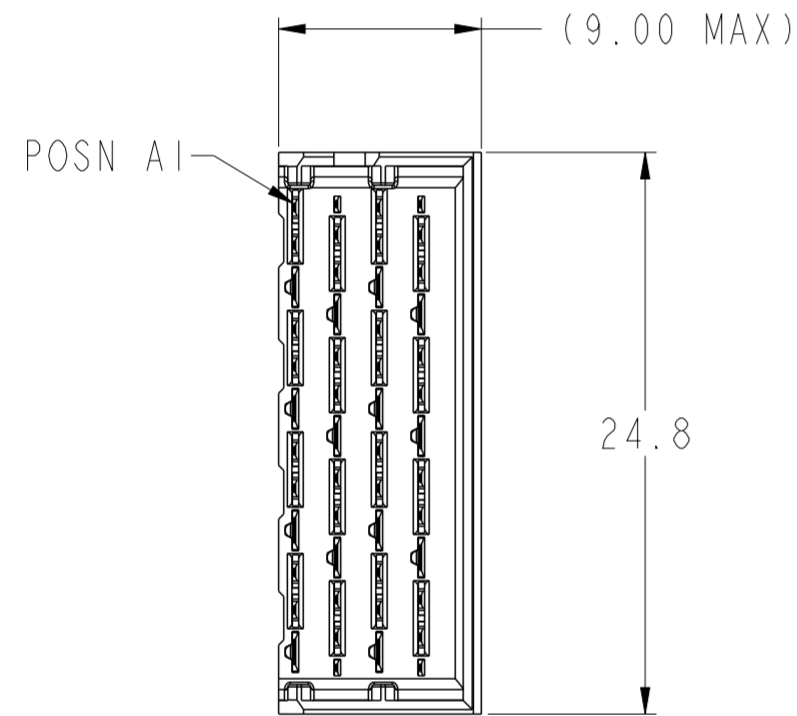
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|---------------------------------------|------------|--------|--|------------|------------|---------------------|----------------|--|------------------------------|------------------------|
| spec ref | SEE NOTES | dr | Jim Swain | 2010/04/13 | projection | MM | size | A2 | scale | 3:1 |
| tolerance std | ASME Y14.5 | eng | Michael Song | 2016/06/06 | | | ecn no | ELX-DG-24191-1 | rel level Released | |
| TOLERANCES UNLESS OTHERWISE SPECIFIED | | chr | Heaven Cen | 2016/06/08 | | | product family | XCede | | |
| | | appr | Pai-Ming Zheng | 2016/06/15 | | | cat. no. | SEE P/N TREE | | Product - Customer Drw |
| surface | ASME Y14.5 | linear | 0.X ±0.2 0.XX ±0.10 0.XXX ±0.050 | angular | 0° ±° | Amphenol FCI | | MODULE ASSEMBLY VERTICAL HEADER, 4-COLUMN, 4-PAIR | dwg no 10091836 | rev G |

RIGHT WALL MODULE

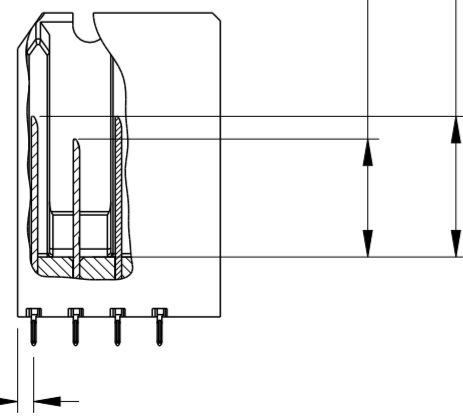
SEE NOTE 8



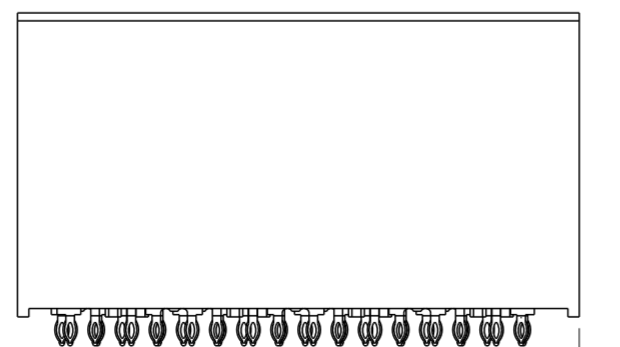
SEE NOTE 5



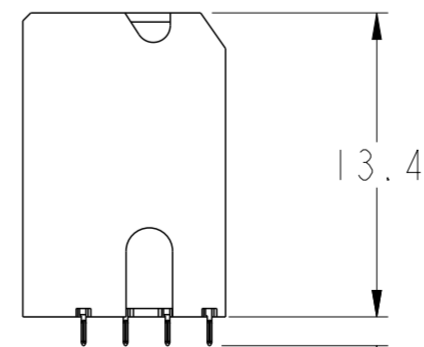
- 6.2 (4MM WIPE WIDE GROUNDS)
- 5.2 (3MM WIPE WIDE GROUNDS)
- 5.2 (3MM SMALL END GROUNDS)
- 5.2 (3MM WIPE SIGNALS)
- 4.2 (2MM WIPE SIGNALS)
- SEE P/N TREE



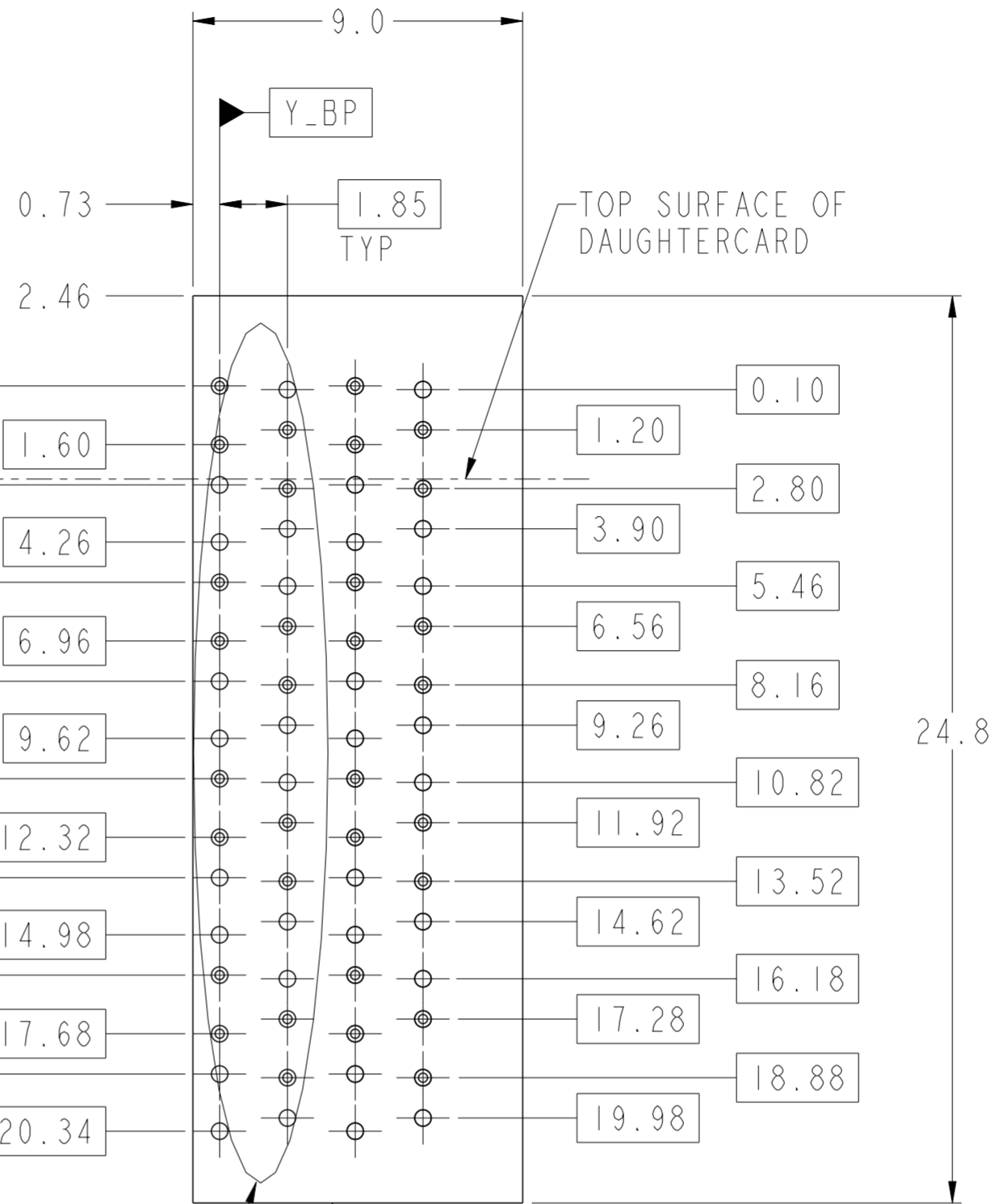
0.73



2.46



TAIL LENGTH
SEE NOTE 12



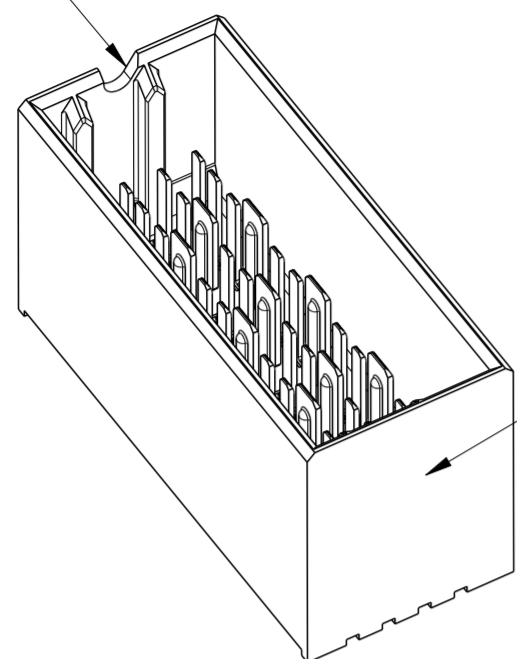
SEE DETAIL A (SHEET 8) NOMINAL MODULE OUTLINE

PCB HOLE PATTERN
COMPONENT SIDE
SCALE 6:1

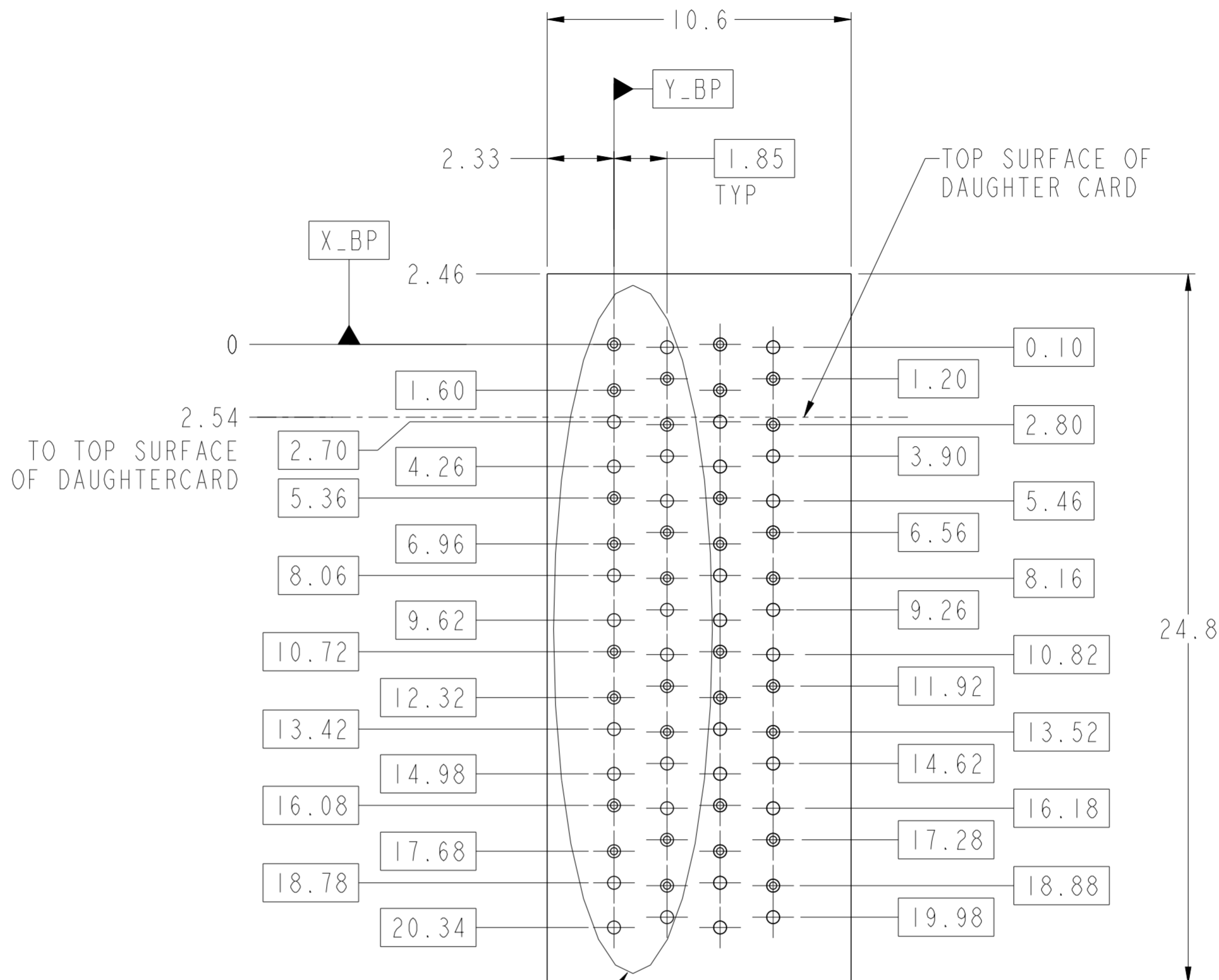
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|---------------------------------------|------------|----------|----------------|---|----------------|-------|-----------|----------------|-------|-----|
| spec ref | SEE NOTES | dr | Jim Swain | 2010/04/13 | projection | MM | size | A2 | scale | 3:1 |
| tolerance std | ASME Y14.5 | eng | Michael Song | 2016/06/06 | | | ecn no | ELX-DG-24191-1 | | |
| TOLERANCES UNLESS OTHERWISE SPECIFIED | | chr | Heaven Cen | 2016/06/08 | | | rel level | Released | | |
| surface | linear | appr | Pai-Ming Zheng | 2016/06/15 | product family | XCede | dwg no | 10091836 | | |
| ASME Y14.5 | angular | | | MODULE ASSEMBLY VERTICAL HEADER, 4-COLUMN, 4-PAIR | rev | G | | | | |
| | | cat. no. | SEE P/N TREE | Product - Customer Drw | sheet 6 of 8 | | | | | |

4-WALL MODULE

SEE NOTE 8

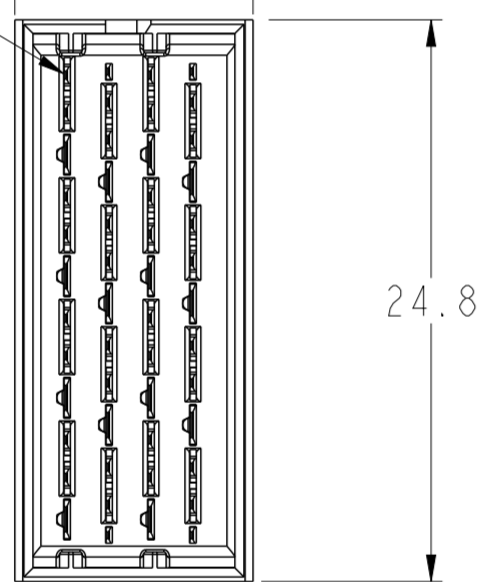


SEE NOTE 5



(10.50 MAX)

POSN A1



6.2 (4MM WIPE WIDE GROUNDS)

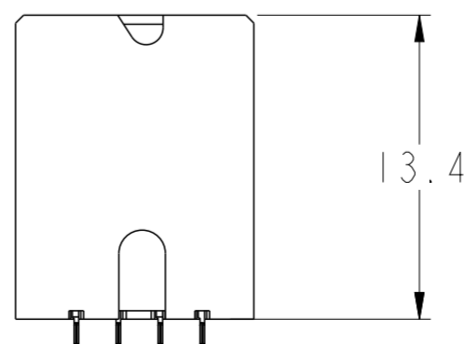
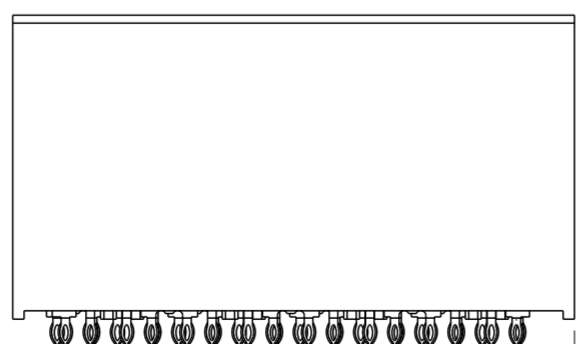
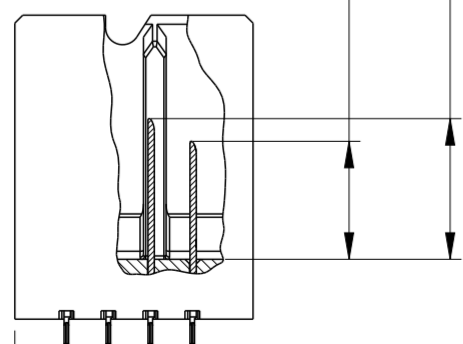
5.2 (3MM WIPE WIDE GROUNDS)

5.2 (3MM SMALL END GROUNDS)

5.2 (3MM WIPE SIGNALS)

4.2 (2MM WIPE SIGNALS)

SEE P/N TREE



| | | | | | | | | | | |
|---------------------------------------|------------|-------|--------------|------------|--|----------|------------------------|----------------|----------|-----|
| spec ref | SEE NOTES | dr | Jim Swain | 2010/04/13 | projection | MM | size | A2 | scale | 4:1 |
| tolerance std | ASME Y14.5 | eng | Michael Song | 2016/06/06 | | | ecn no | ELX-DG-24191-1 | | |
| TOLERANCES UNLESS OTHERWISE SPECIFIED | | chr | Heaven Cen | 2016/06/08 | | | | rel level | Released | |
| surface | linear | 0.X | ±0.2 | | MODULE ASSEMBLY VERTICAL HEADER, 4-COLUMN, 4-PAIR | cat. no. | Product - Customer Drw | sheet 7 of 8 | rev G | |
| | | 0.XX | ±0.10 | | | | | | | |
| | | 0.XXX | ±0.050 | | | | | | | |
| ASME Y14.5 | angular | 0° | ±° | | | | | | | |

NOTES:

1. CONNECTOR MATERIALS
SHROUD: HIGH-TEMP THERMOPLASTIC, GRAY, UL94V-0
CONTACTS: HIGH PERFORMANCE COPPER ALLOY
2. CONTACT PLATING:

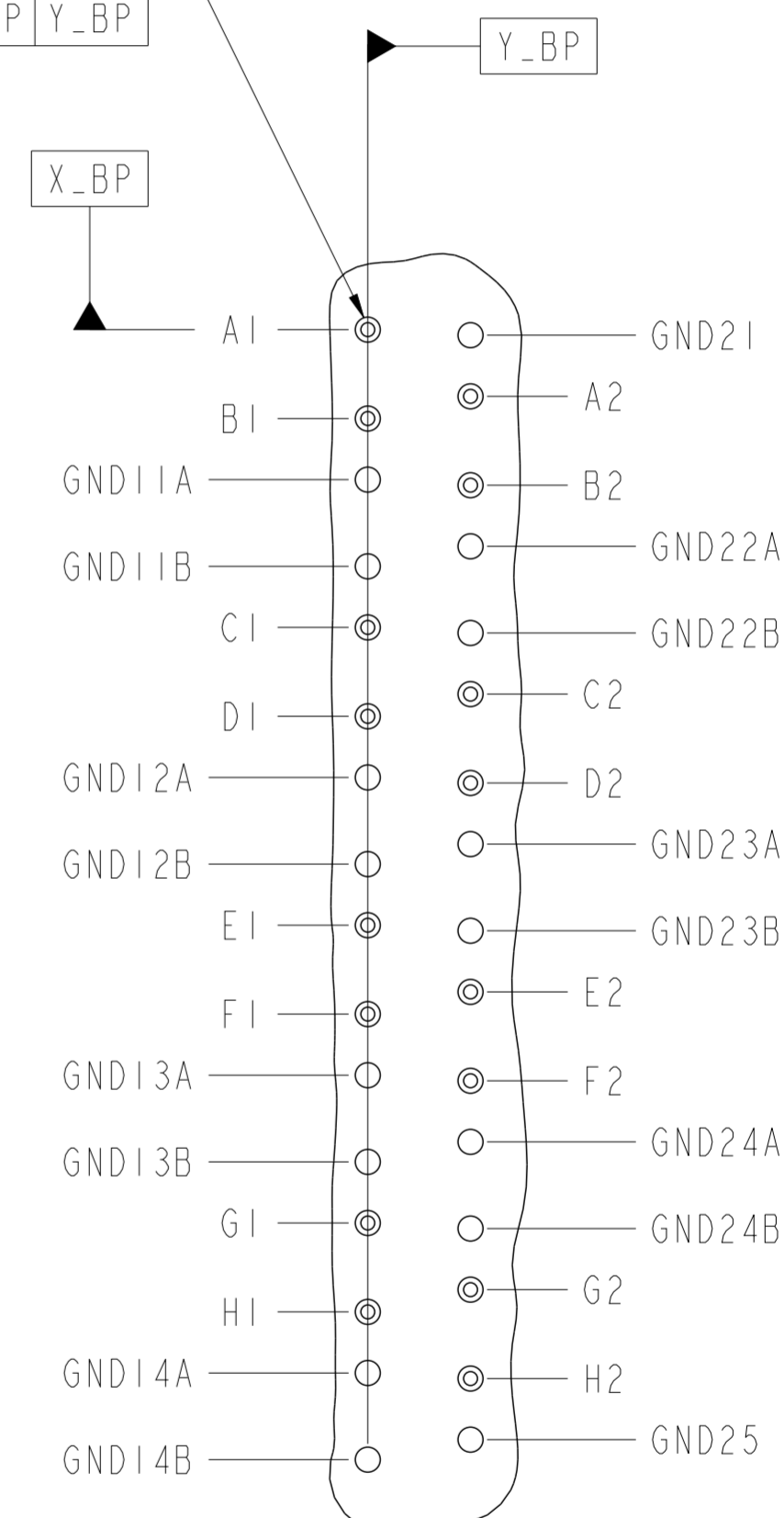
SEPARABLE INTERFACE: PERFORMANCE-BASED PLATING, QUALIFIED TO MEET THE REQUIREMENTS OF FCI PRODUCT SPECIFICATION GS-12-588, INCLUDING THE TELCORDIA GR-1217-CORE (NOVEMBER 1995) CENTRAL OFFICE (CO) OR UNCONTROLLED ENVIRONMENT (UE) TEST SEQUENCE AS NOTED IN P/N TREE.

PRESS-FIT TAILS: TIN OVER NICKEL (LF), OR TIN-LEAD ALLOY OVER NICKEL (NON-LF). SEE P/N TREE.
3. PRODUCT SPECIFICATION: GS-12-588
4. APPLICATION SPECIFICATION: GS-20-121
5. PRODUCT MARKING (PART NUMBER AND LOT CODE) ON THESE SURFACES.
6. HOUSING MUST WITHSTAND EXPOSURE TO 260°C PEAK TEMPERATURE FOR 40 SECONDS IN A CONVECTION, INFRA-RED, OR VAPOR-PHASE REFLOW OVEN.
7. PACKAGING MEETS GS-14-920 LEAD-FREE LABELING SPECIFICATION.
8. NOTCH INDICATES "ROW A" SIDE OF CONNECTOR.
9. SEE APPLICATION SPECIFICATION FOR ROUTING GUIDELINES, ADDITIONAL PTH GUIDELINES, MATED DIMENSIONS, GUIDE PN SELECTION, ETC.
10. SCREW IS OPTIONAL AND ENGAGES WITH BOTTOM OF GUIDE-PIN FROM BENEATH THE PCB FOR ADDITIONAL GUIDE-PIN SUPPORT.
11. OPTIONAL HOLE LOCATION FOR GROUNDED PIN OR ADDITIONAL GUIDE-PIN SUPPORT. SEE TABLE 1 ON SHEET 1 FOR ADDITIONAL DETAILS.
12. TAIL LENGTH=1.3mm FOR $\varnothing 0.55$ [0.0217"]COMPLIANT PIN DRILL
TAIL LENGTH=1.5mm FOR $\varnothing 0.45$ [0.0177"]COMPLIANT PIN DRILL

TABLE 3: PTH AND PAD SIZES WITH REFERENCE TO COMPLIANT PIN DRILL

| COMPLIANT PIN DRILL | PTH | PAD |
|------------------------------|-----------------------------|--------------------|
| $\varnothing 0.55$ [0.0217"] | $\varnothing 0.45 \pm 0.05$ | $\varnothing 0.85$ |
| $\varnothing 0.45$ [0.0177"] | $\varnothing 0.36 \pm 0.05$ | $\varnothing 0.75$ |

SEE TABLE 3 FOR PTH, DRILL & PAD SIZES



DETAIL A
SCALE 8:1

Amphenol FCI

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| | | | | | | | | | | |
|---------------|---------------------------------------|-------|----------------|---------------------|------------|--|--------|----------------|------------------------|--------------|
| spec ref | SEE NOTES | dr | Jim Swain | 2010/04/13 | projection | MM | size | A2 | scale | 4:1 |
| tolerance std | TOLERANCES UNLESS OTHERWISE SPECIFIED | eng | Michael Song | 2016/06/06 | | | ecn no | ELX-DG-24191-1 | rel level | Released |
| ASME Y14.5 | | chr | Heaven Cen | 2016/06/08 | | | | | | |
| | | appr | Pai-Ming Zheng | 2016/06/15 | | | | | | |
| surface | linear | 0.X | ±0.2 | Amphenol FCI | | MODULE ASSEMBLY VERTICAL HEADER, 4-COLUMN, 4-PAIR | | cat. no. | Product - Customer Drw | sheet 8 of 8 |
| | | 0.XX | ±0.10 | | | | | | | |
| ASME Y14.5 | angular | 0.XXX | ±0.050 | | | | | | | |