

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** **0459120009**  
**Status:** **Active**  
**Overview:**  
**Description:** 12.90mm (.508") Pitch EXTreme PowerEdge™, Mixed Power/Signal Card Edge Connector, Double Sided, 3 Segments (Power, Signal, Signal Sequence), Press-Fit

**Agency Certification**

|     |          |
|-----|----------|
| CSA | LR19980  |
| TUV | 30482572 |
| UL  | E29179   |

**General**

|                |                      |
|----------------|----------------------|
| Product Family | Edge Card Connectors |
| Series         | 45912                |
| Component Type | Edgecard to PCB      |
| Overview       | edge_card_connectors |
| Product Name   | EXTreme PowerEdge™   |

**Physical**

|                                |   |
|--------------------------------|---|
| Circuits (Loaded)              | 18  |
| Circuits (maximum)             | 18  |
| Circuits Detail                | 2 Power, 8 Signal, 8 Signal                   |
| Color - Resin                  | Black   |
| Durability (mating cycles max) | 250   |
| Entry Angle                    | Vertical (Top Entry)                          |
| Flammability                   | 94V-0   |
| Keying to Mating Part          | N/A   |
| Material - Metal               | High Performance Alloy (HPA), Phosphor Bronze |
| Material - Plating Mating      | Gold  |
| Material - Plating Termination | Tin   |
| Material - Resin               | High Temperature Thermoplastic                |
| PC Tail Length (in)            | 0.177 In                                      |
| PC Tail Length (mm)            | 4.50 mm                                       |
| PCB Thickness Recommended (in) | 0.093 In                                      |
| PCB Thickness Recommended (mm) | 2.40 mm                                       |
| Packaging Type                 | Tray  |
| Pitch - Mating Interface (in)  | 0.508 In                                      |
| Pitch - Mating Interface (mm)  | 12.90 mm                                      |
| Plating min: Mating (µin)      | 30  |
| Plating min: Mating (µm)       | 0.75  |
| Plating min: Termination (µin) | 150   |
| Plating min: Termination (µm)  | 3.75  |
| Temperature Range - Operating  | -40°C to +105°C                               |
| Termination Interface: Style   | Through Hole - Compliant Pin                  |

**Electrical**

|                               |         |
|-------------------------------|---------|
| Current - Maximum per Contact | 3A, 40A |
| Voltage - Maximum             | 250V    |

**Material Info**

**Reference - Drawing Numbers**

|                         |              |
|-------------------------|--------------|
| Packaging Specification | PK-45714-001 |
| Product Specification   | PS-45719-001 |
| Sales Drawing           | SD-45912-001 |

**EU RoHS**

**ELV and RoHS  
Compliant**

**REACH SVHC**

**Contains SVHC: No**

**Halogen-Free  
Status**

**Halogen-Free**

**China RoHS**



**Need more information on product  
environmental compliance?**

Email [productcompliance@molex.com](mailto:productcompliance@molex.com)  
 For a multiple part number RoHS Certificate of  
 Compliance, [click here](#)

Please visit the [Contact Us](#) section for any  
 non-product compliance questions.

**Search Parts in this Series**

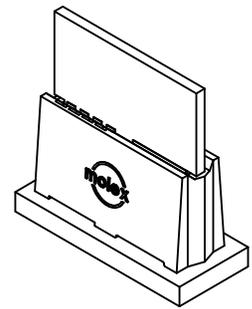
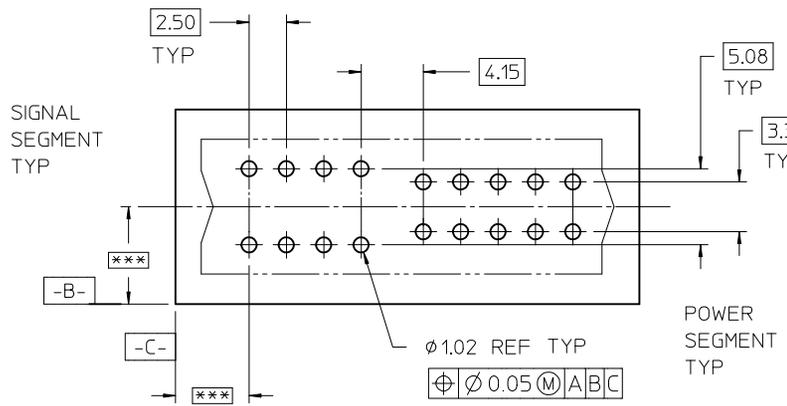
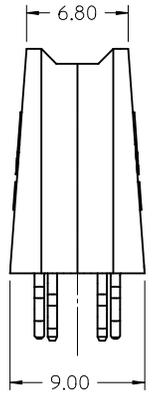
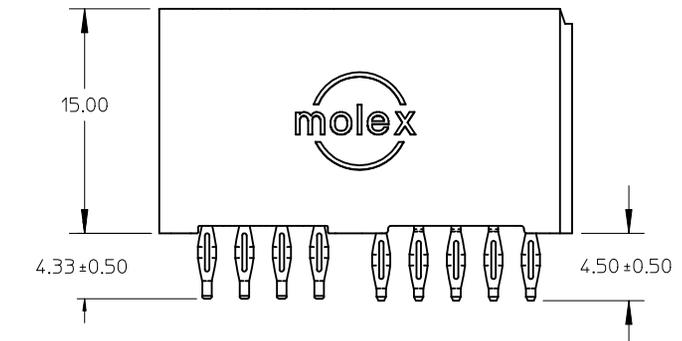
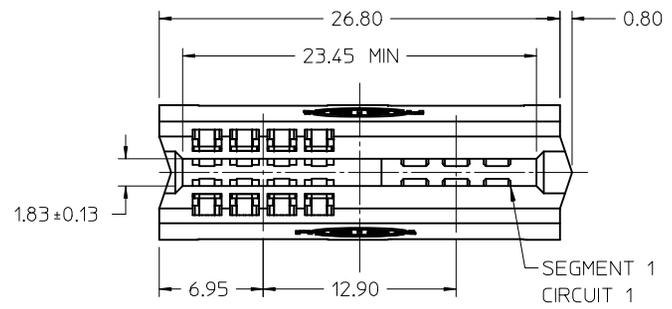
45912Series

**Mates With**

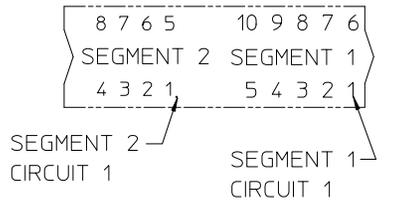
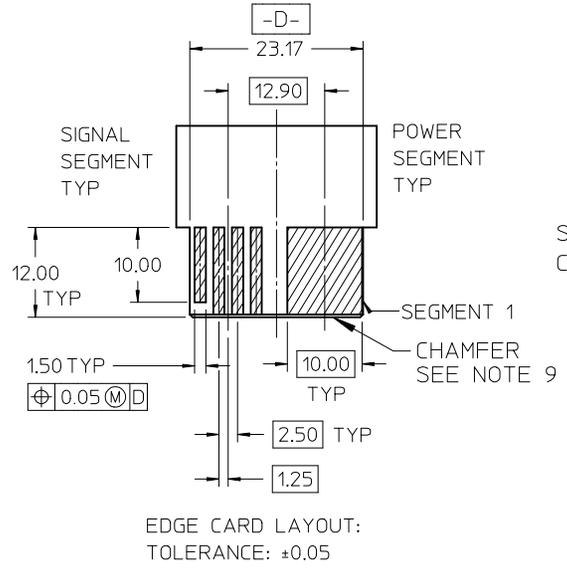
1.58mm (.062") double sided card edge

This document was generated on 06/04/2010

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- NOTES:
1. MATERIAL: HOUSING - LCP, UL94V-0, BLACK  
MATERIAL: TERMINAL - COPPER ALLOY
  2. FINISH: SELECT GOLD: 30 M.I. MIN IN CONTACT AREA  
SELECT TIN: 150 M.I. MIN IN PC TAIL AREA  
BOTH OVER NICKEL: 50 M.I. MIN
  3. PRODUCT SPECIFICATION: PS-45719-001.
  4. PACKAGING SPECIFICATION: PK-45714-001.
  5. PCB THICKNESS: SEE CHART
  6. EDGE CARD THICKNESS: 1.57±0.15
  7. DIMENSIONS GIVEN ACROSS CENTERLINES ARE SYMMETRICAL ABOUT THOSE CENTERLINES WITHIN HALF THE TOTAL TOLERANCE.
  8. PCB HOLE SPECIFICATION: SEE PS-45719-001
  9. 0.50 X 45° CHAMFER ON LEADING EDGE, TYP 4 SIDES
  10. PART IS RoHS COMPLIANT. SEE ES-45482-999 FOR LABEL REQUIREMENTS.
  11. SEE SHEET 4 FOR OPTIONAL END LATCH VERSION.



| MATERIAL NUMBER | SEGMENT | SEGMENT |
|-----------------|---------|---------|
| 45912-0001      | SIGNAL  | POWER   |
| 45912-0002      | POWER   | SIGNAL  |
| SEE 45845       | SIGNAL  | SIGNAL  |
| SEE 45714       | POWER   | POWER   |

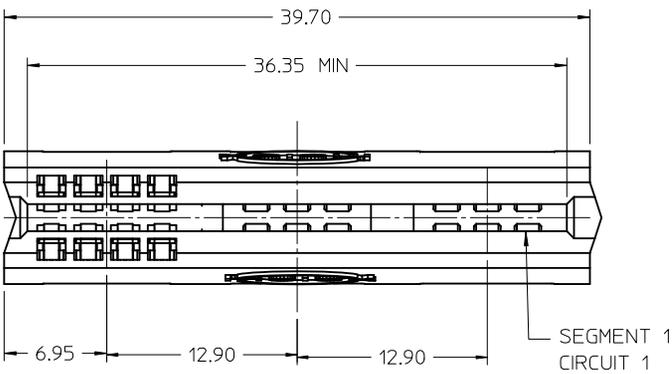
PCB LAYOUT: COMPONENT SIDE  
\*\*\* = TO BE DETERMINED BY CUSTOMER

|   |                                       |
|---|---------------------------------------|
| DELETE SHT 4<br>EC NO: UCP2010-2087<br>DRWN: JSCHAFFER 2010/02/17<br>CHKD: SAMIEC 2010/03/24<br>APPR: APATEL 2010/03/25 | DESCRIPTION                           |
|   | QUALITY SYMBOLS                       |
|   | GENERAL TOLERANCES (UNLESS SPECIFIED) |
|   | DIMENSION STYLE                       |
|   | SCALE                                 |

|  | GENERAL TOLERANCES (UNLESS SPECIFIED) |       |
|--|---------------------------------------|-------|
|  | mm                                    | INCH  |
| 4 PLACES   | ± ---                                 | ± --- |
| 3 PLACES   | ± ---                                 | ± --- |
| 2 PLACES   | ± 0.25                                | ± --- |
| 1 PLACE  | ± 0.25                                | ± --- |
| ANGULAR ±1/2°  |                                       |       |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |                                       |       |

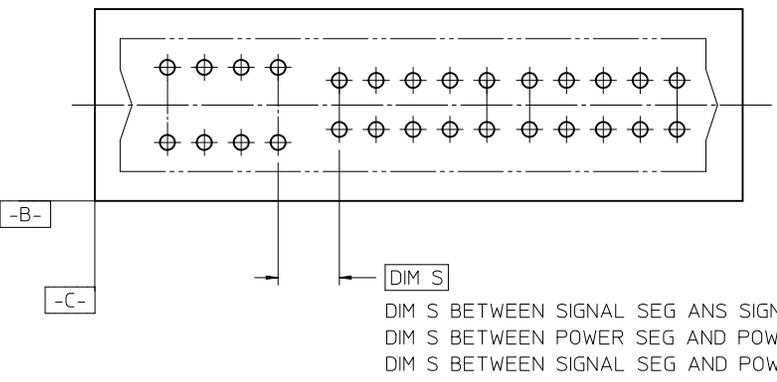
| DIMENSION STYLE |            |
|-----------------|------------|
| MM ONLY         |            |
| DRAWN BY        | DATE       |
| SAMIEC          | 2005/04/14 |
| CHECKED BY      | DATE       |
| SAMIEC          | 2005/04/14 |
| APPROVED BY     | DATE       |
| MARGULIS        | 2005/04/14 |
| MATERIAL NUMBER | SEE CHART  |
| SIZE            | A          |

| SCALE   | DESIGN UNITS | THIRD ANGLE PROJECTION |
|---|--------------|------------------------|
| 2:1   | METRIC       |                        |
| TITLE   |              |                        |
| POWER EDGE ASSEMBLY<br>POWER / SIGNAL MIXED<br>VERTICAL CPI   |              |                        |
| molex MOLEX INCORPORATED  |              |                        |
| MATERIAL NUMBER   | DOCUMENT NO. | SHEET NO.              |
| SEE CHART   | SD-45912-001 | 1 OF 4                 |
| THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |              |                        |



NOTE:  
 FINISH (FOR -1008 ONLY)  
 NICKEL (MATING AREA) 50-150 M.I.  
 Pd/Ni 100-200 M.I. IN MATING AREA  
 GOLD FLASH IN MATING AREA  
 TIN NICKEL (COMPLIANT OR TAIL AREA)  
 30-60 M.I. NICKEL UNDER 15-60 M.I. TIN

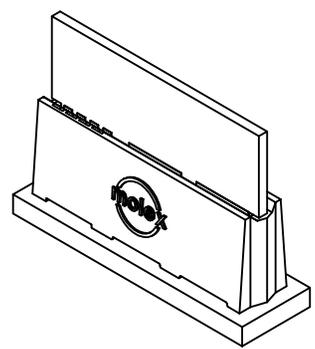
| SIGNAL SEGMENT | POWER SEGMENT | POWER SEGMENT |
|----------------|---------------|---------------|
| 8 7 6 5        | 10 9 8 7 6    | 10 9 8 7 6    |
| SEGMENT 3      | SEGMENT 2     | SEGMENT 1     |
| 4 3 2 1        | 5 4 3 2 1     | 5 4 3 2 1     |



PCB LAYOUT: COMPONENT SIDE

| MATERIAL NUMBER        | SEGMENT 3 | SEGMENT 2 | SEGMENT 1 | OPTIONAL VOID LOCATION |
|------------------------|-----------|-----------|-----------|------------------------|
| 45912-0007             | SIGNAL    | POWER     | POWER     |                        |
| 45912-0008             | POWER     | SIGNAL    | POWER     |                        |
| 45912-1008<br>SEE NOTE | POWER     | SIGNAL    | POWER     |                        |
| 45912-1108             | POWER     | SIGNAL    | POWER     | SIGNAL SEG PIN 3       |
| 45912-2108             | VOID      | SIGNAL    | POWER     | SIGNAL SEG PIN 3       |
| 45912-0009             | SIGNAL    | SIGNAL    | POWER     |                        |
| 45912-0010             | SIGNAL    | POWER     | SIGNAL    |                        |
| 45912-0011             | POWER     | SIGNAL    | SIGNAL    |                        |
| 45912-0012             | POWER     | POWER     | SIGNAL    |                        |
| SEE 45845              | SIGNAL    | SIGNAL    | SIGNAL    |                        |
| SEE 45714              | POWER     | POWER     | POWER     |                        |

MATERIAL NUMBER: 45911-0007 SHOWN  
 SEE SHEET ONE FOR OTHER NOTES AND DIMENSIONS



|   |                                       |                                       |                  |  |                                   |            |   |                               |                        |  |
|---|---------------------------------------|---------------------------------------|------------------|--|-----------------------------------|------------|---|-------------------------------|------------------------|--|
| EC NO: UCP2010-2087<br>DRWN: JSCHAFFER 2010/02/17<br>CHKD: SAMIEC 2010/03/24<br>APPR: APATEL 2010/03/25 | QUALITY SYMBOLS<br>DESCRIPTION<br>REV | GENERAL TOLERANCES (UNLESS SPECIFIED) |                  |  | DIMENSION STYLE<br><b>MM ONLY</b> |            | SCALE<br><b>2:1</b>   | DESIGN UNITS<br><b>METRIC</b> | THIRD ANGLE PROJECTION |  |
|   |                                       | 4 PLACES                              | ± ---            | ± ---  | DRAWN BY                          | DATE       | TITLE<br><b>POWER EDGE ASSEMBLY<br/>         POWER / SIGNAL MIXED<br/>         VERTICAL CPI</b> |                               |                        |  |
|   |                                       | 3 PLACES                              | ± ---            | ± ---  | SAMIEC                            | 2005/04/14 |   |                               |                        |  |
|   |                                       | 2 PLACES                              | ± 0.25           | ± ---  | CHECKED BY                        | DATE       | MOLEX INCORPORATED  |                               |                        |  |
|   |                                       | 1 PLACE                               | ± 0.25           | ± ---  | SAMIEC                            | 2005/04/14 |   |                               |                        |  |
| ANGULAR ±1/2°   |                                       |                                       | APPROVED BY      | DATE   | MATERIAL NUMBER<br>SEE CHART      |            | DOCUMENT NO.<br><b>SD-45912-001</b>   | SHEET NO.<br><b>2 OF 4</b>    |                        |  |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS  |                                       |                                       | SIZE<br><b>A</b> | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                                   |            |   |                               |                        |  |

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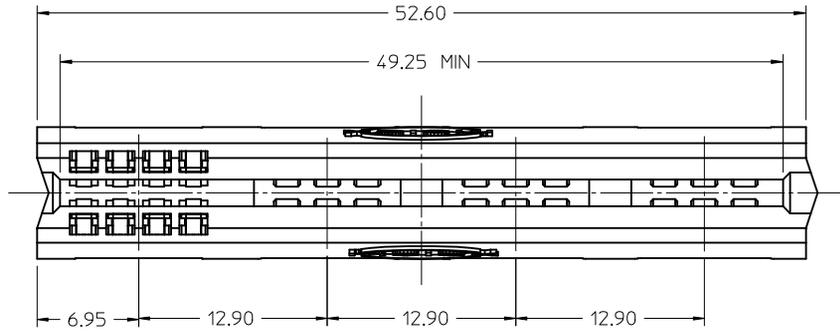
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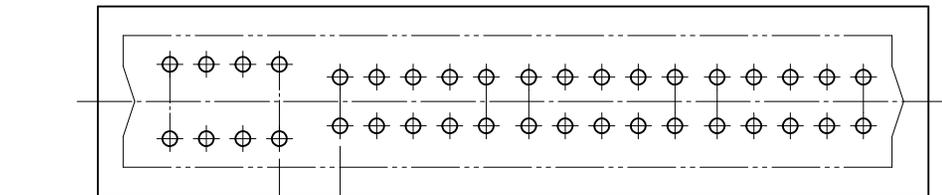
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MATERIAL NUMBER 45912-0025 SHOWN  
SEE SHEET ONE FOR OTHER NOTES AND DIM.

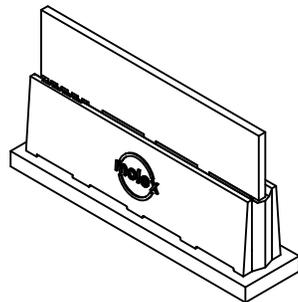
|           |            |            |            |
|-----------|------------|------------|------------|
| 8 7 6 5   | 10 9 8 7 6 | 10 9 8 7 6 | 10 9 8 7 6 |
| SEGMENT 4 | SEGMENT 3  | SEGMENT 2  | SEGMENT 1  |
| 4 3 2 1   | 5 4 3 2 1  | 5 4 3 2 1  | 5 4 3 2 1  |

| MATERIAL NUMBER | SEGMENT 4 | SEGMENT 3 | SEGMENT 2 | SEGMENT 1 |
|-----------------|-----------|-----------|-----------|-----------|
| 45912-0025      | SIGNAL    | POWER     | POWER     | POWER     |
| 45912-0026      | POWER     | SIGNAL    | POWER     | POWER     |
| 45912-0027      | SIGNAL    | SIGNAL    | POWER     | POWER     |
| 45912-0028      | SIGNAL    | POWER     | SIGNAL    | POWER     |
| 45912-0029      | POWER     | SIGNAL    | SIGNAL    | POWER     |
| 45912-0030      | POWER     | POWER     | SIGNAL    | POWER     |
| 45912-0031      | SIGNAL    | SIGNAL    | SIGNAL    | POWER     |
| 45912-0032      | SIGNAL    | POWER     | POWER     | SIGNAL    |
| 45912-0033      | POWER     | SIGNAL    | POWER     | SIGNAL    |
| 45912-0034      | SIGNAL    | SIGNAL    | POWER     | SIGNAL    |
| 45912-0035      | SIGNAL    | POWER     | SIGNAL    | SIGNAL    |
| 45912-0036      | POWER     | SIGNAL    | SIGNAL    | SIGNAL    |
| 45912-0037      | POWER     | POWER     | SIGNAL    | SIGNAL    |
| 45912-0038      | POWER     | POWER     | POWER     | SIGNAL    |



DIM S BETWEEN SIGNAL SEG AND SIGNAL SEG: 5.40  
DIM S BETWEEN POWER SEG AND POWER SEG: 2.90  
DIM S BETWEEN SIGNAL SEG AND POWER SEG: 4.15

PCB LAYOUT: COMPONENT SIDE



|   |                 |                                       |        |                 |  |                 |  |
|---|-----------------|---------------------------------------|--------|-----------------|--|-----------------|--|
| EC NO: UCP2010-2087<br>DRWN: JSCHAFFER 2010/02/17<br>CHKD: SAMIEC 2010/03/24<br>APPR: APATEL 2010/03/25 | QUALITY SYMBOLS | GENERAL TOLERANCES (UNLESS SPECIFIED) |        | DIMENSION STYLE | SCALE  | DESIGN UNITS    | THIRD ANGLE PROJECTION   |
|   |                 |                                       |        | MM ONLY         | 2:1  | METRIC          |  |
| N   | DESCRIPTION     | 4 PLACES                              | ± ---  | ± ---           | DRAWN BY   | DATE            | TITLE<br>POWER EDGE ASSEMBLY<br>POWER / SIGNAL MIXED<br>VERTICAL CPI<br>MOLEX INCORPORATED |
|   |                 | 3 PLACES                              | ± ---  | ± ---           | SAMIEC   | 2005/04/14      |  |
|   |                 | 2 PLACES                              | ± 0.25 | ± ---           | CHECKED BY   | DATE            |  |
|   |                 | 1 PLACE                               | ± 0.25 | ± ---           | SAMIEC   | 2005/04/14      |  |
|   |                 | ANGULAR ±1/2°                         |        | APPROVED BY     | DATE   | MATERIAL NUMBER |  |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS  |                 |                                       |        | MARGULIS        | 2005/04/14   | SEE CHART       | DOCUMENT NO.<br>SD-45912-001   |
|   |                 |                                       |        | SIZE            | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                 | SHEET NO.<br>3   |

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