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**Part Number:** [0740591003](#)  
**Status:** **Active**  
**Overview:** [vhdm](#)  
**Description:** 2.00mm (.079") Pitch VHDM® Board-to-Board Backplane Header, Vertical, 6-Row, Guide Pin Signal Module, Shield End Version, Pin End Version, 60 Circuits, Pin Length 4.25mm (.167")

**Documents:**  
[Drawing \(PDF\)](#)

[RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

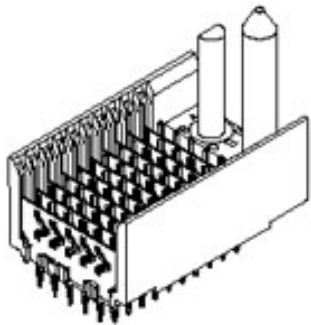
UL E29179

**General**

|                               |                                                                                                                                         |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Product Family                | Backplane Connectors                                                                                                                    |
| Series                        | <a href="#">74059</a>                                                                                                                   |
| Application                   | Backplane                                                                                                                               |
| Application Tooling Documents | <a href="http://www.molex.com/pdm_docs/ats/TM-622010999.pdf">http://www.molex.com/pdm_docs/ats/TM-622010999.pdf</a> >Tooling Manual</a> |
| Comments                      | No Keying Position                                                                                                                      |
| Component Type                | PCB Header                                                                                                                              |
| Overview                      | <a href="#">vhdm</a>                                                                                                                    |
| Product Name                  | VHDM®                                                                                                                                   |
| Style                         | N/A                                                                                                                                     |

**Physical**

|                                |                                                                 |
|--------------------------------|-----------------------------------------------------------------|
| Circuits (Loaded)              | 60                                                              |
| Circuits (maximum)             | 60                                                              |
| Color - Resin                  | Black                                                           |
| Durability (mating cycles max) | 200                                                             |
| First Mate / Last Break        | No                                                              |
| Flammability                   | 94V-0                                                           |
| Guide to Mating Part           | Yes                                                             |
| Keying to Mating Part          | None                                                            |
| Material - Metal               | Beryllium Copper, High Performance Alloy (HPA), Stainless Steel |
| Material - Plating Mating      | Gold                                                            |
| Material - Plating Termination | Tin-Lead                                                        |
| Material - Resin               | High Temperature Thermoplastic                                  |
| Number of Columns              | N/A                                                             |
| Number of Pairs                | Open Pin Field                                                  |
| Number of Rows                 | 6                                                               |
| Orientation                    | Vertical                                                        |
| PC Tail Length (in)            | 0.098 In                                                        |
| PC Tail Length (mm)            | 2.50 mm                                                         |
| PCB Locator                    | No                                                              |
| PCB Retention                  | None                                                            |
| PCB Thickness Recommended (in) | 0.070 In                                                        |
| PCB Thickness Recommended (mm) | 1.80 mm                                                         |
| Packaging Type                 | Tube                                                            |
| Pitch - Mating Interface (in)  | 0.079 In                                                        |
| Pitch - Mating Interface (mm)  | 2.00 mm                                                         |
| Pitch - Term. Interface (in)   | 0.039 In                                                        |
| Pitch - Term. Interface (mm)   | 2.00 mm                                                         |
| Plating min: Mating (µin)      | 30                                                              |
| Plating min: Mating (µm)       | 0.75                                                            |



Series

image - Reference only

**EU RoHS**

**Not RoHS Compliant**  
**REACH SVHC**  
**Not Reviewed**  
**Halogen-Free**  
**Status**  
**Not Reviewed**

**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**

[74059Series](#)

**Mates With**

74030 VHDM® Board-to-Board Daughtercard Receptacle

**Application Tooling | FAQ**

*Tooling specifications and manuals are found by selecting the products below. Crimp Height Specifications are then contained in the Application Tooling Specification document.*

**Global**

| Description                                                               | Product #                  |
|---------------------------------------------------------------------------|----------------------------|
| Flat Rock Tooling for                                                     | <a href="#">0622013700</a> |
| Pneumatic Press                                                           |                            |
| VHDM® Insertion                                                           | <a href="#">0622011101</a> |
| Module for Advanced Mate Signal Header, 6 Row by 11 Wide, 20.00mm (.787") |                            |
| VHDM® Signal Pin                                                          | <a href="#">0622015700</a> |
| Insert Repair Tool                                                        |                            |

|                                |                              |
|--------------------------------|------------------------------|
| Plating min: Termination (µin) | 30                           |
| Plating min: Termination (µm)  | 0.75                         |
| Polarized to PCB               | Yes                          |
| Stackable                      | No                           |
| Surface Mount Compatible (SMC) | Yes                          |
| Temperature Range - Operating  | -55°C to +105°C              |
| Termination Interface: Style   | Through Hole - Compliant Pin |

**Electrical**

|                               |                     |
|-------------------------------|---------------------|
| Current - Maximum per Contact | 1A                  |
| Data Rate                     | 3.125 Gbps          |
| Real Signals (per 25mm)       | 75                  |
| Shield Type                   | Ground Plane Shield |
| Shielded                      | Yes                 |
| Voltage - Maximum             | 120V AC (RMS)/DC    |

**Material Info**

**Reference - Drawing Numbers**

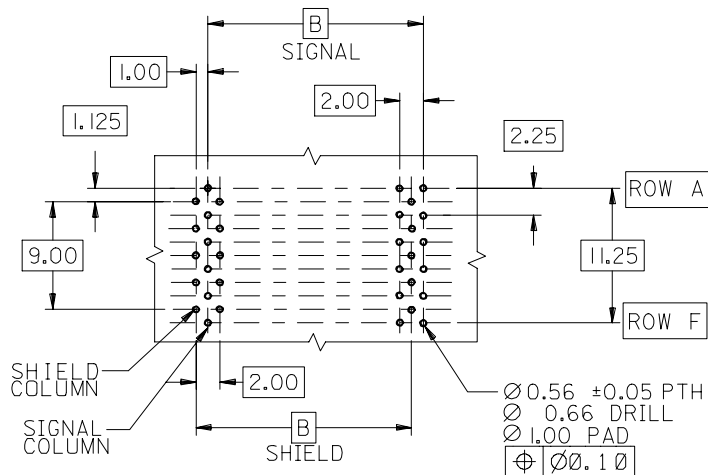
|               |              |
|---------------|--------------|
| Sales Drawing | SD-74059-002 |
|---------------|--------------|

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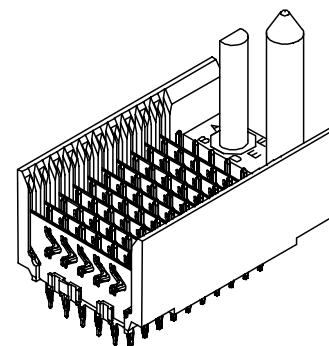
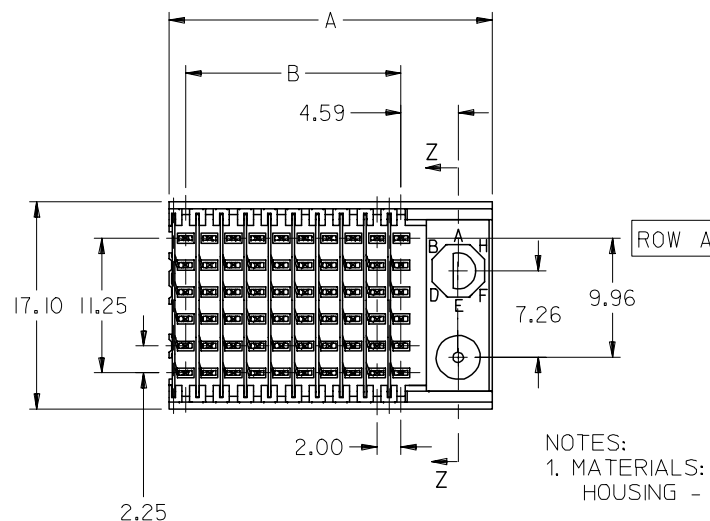
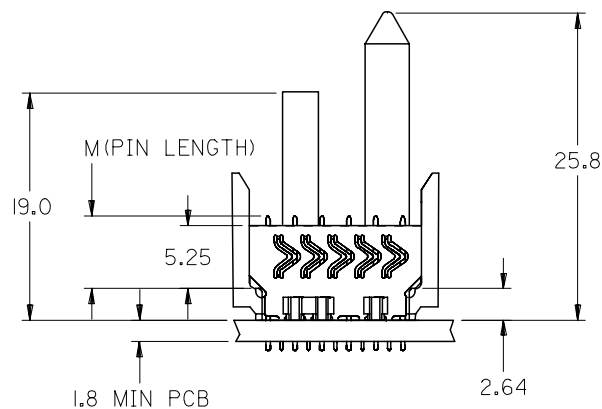
|                                                                                           |                            |
|-------------------------------------------------------------------------------------------|----------------------------|
| VHDM® 6 Row Pin and Shield Repair Tool                                                    | <a href="#">0622015800</a> |
| VHDM® 6 Row Shield Extraction Tool                                                        | <a href="#">0622016000</a> |
| VHDM® Insertion Module for Advanced Mate Signal Header, 6 Row by 10 Wide, 20.00mm (.787") | <a href="#">0622020203</a> |
| VHDM® Insertion Module for Advanced Mate Signal Header, 6 Row by 10 Wide, 20.00mm (.787") | <a href="#">0622020207</a> |

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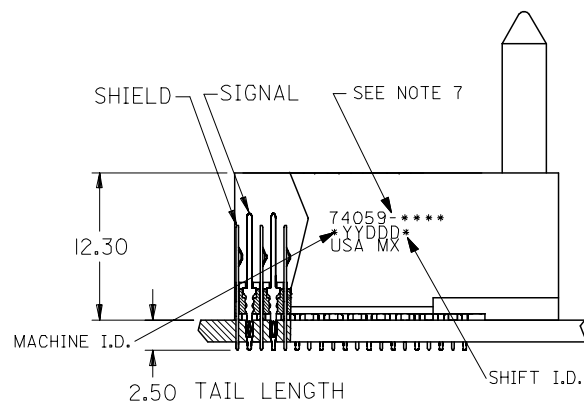


BACKPLANE HOLE PATTERN  
RECOMMENDED DIMENSIONS



NOTES:

1. MATERIALS:  
HOUSING - LIQUID CRYSTAL POLYMER (LCP),  
GLASS-FILLED, UL 94V-0, COLOR: BLACK  
SIGNAL PIN & SHIELD - COPPER ALLOY
2. FINISHES:  
CONTACT AREA: SELECTIVE GOLD (Au)  
PCB TAILS: SELECTIVE TIN/LEAD (Sn/Pb)  
OR SELECTIVE MATTE TIN (Sn)  
NICKEL (Ni) OVERALL.
3. THIS PART CONFORMS TO MOLEX PRODUCT  
SPECIFICATION PS-74031-999
4. FOR MIXED CONTACT LENGTHS CONSULT  
MOLEX FOR AVAILABILITY
5. FOR SPECIFIC MATERIAL NUMBERS & MATING  
INFORMATION REFER TO SHEET 2 AND 3
6. PACKAGE PER PK-74058-003
7. EITHER MARK PART WITH PART NUMBER & DATE  
CODE APPROXIMATELY WHERE SHOWN OR PLACE  
LABEL ON THE TUBE.



|                                                                                                                          |     |                                   |                                                            |        |                            |                                                                                                                                  |                    |                                                              |                        |  |  |                          |
|--------------------------------------------------------------------------------------------------------------------------|-----|-----------------------------------|------------------------------------------------------------|--------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------|------------------------|--|--|--------------------------|
| ADDED TOLERANCE<br>EC NO: UCP2006-2669<br>DRWN: JONIAK 2006/06/02<br>CHKD: JONIAK 2006/06/02<br>APPR: CBIXLER 2006/06/09 |     | QUALITY SYMBOLS<br><br>▽=0<br>▽=0 | GENERAL TOLERANCES (UNLESS SPECIFIED)                      |        | DIMENSION STYLE<br>MM ONLY |                                                                                                                                  | SCALE<br>2.5:1     | DESIGN UNITS<br>METRIC                                       | THIRD ANGLE PROJECTION |  |  |                          |
|                                                                                                                          |     |                                   |                                                            | mm     | INCH                       | DRAWN BY<br>MWANG                                                                                                                | DATE<br>1998/11/09 | TITLE<br>VHDM 6 ROW<br>SHIELD END BACKPLANE<br>SALES DRAWING |                        |  |  |                          |
| M                                                                                                                        | REV |                                   | 4 PLACES                                                   | ± ---  | ± ---                      | CHECKED BY<br>JLAURX                                                                                                             | DATE<br>1998/11/09 |                                                              |                        |  |  | MOLEX MOLEX INCORPORATED |
|                                                                                                                          |     |                                   | 3 PLACES                                                   | ± ---  | ± ---                      | APPROVED BY                                                                                                                      | DATE               |                                                              |                        |  |  |                          |
|                                                                                                                          |     |                                   | 2 PLACES                                                   | ± 0.15 | ± ---                      | CBIXLER                                                                                                                          | 1998/11/19         |                                                              |                        |  |  |                          |
|                                                                                                                          |     |                                   | 1 PLACE                                                    | ± 0.25 | ± ---                      | MATERIAL NO.                                                                                                                     | DOCUMENT NO.       | SHEET NO.                                                    |                        |  |  |                          |
|                                                                                                                          |     |                                   | ANGULAR ±1/2°                                              |        | SEE SHEET 2                |                                                                                                                                  | SD-74059-002       | 1 OF 3                                                       |                        |  |  |                          |
|                                                                                                                          |     |                                   | 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 |                    |                                                              |                        |  |  |                          |

10 9 8 7 6 5 4 3 2 1

M/N  
74059-( )

---0\*

---1\*

---2\*

---3\*

---4\*

---5\*

---6\*

---7\*

---8\*

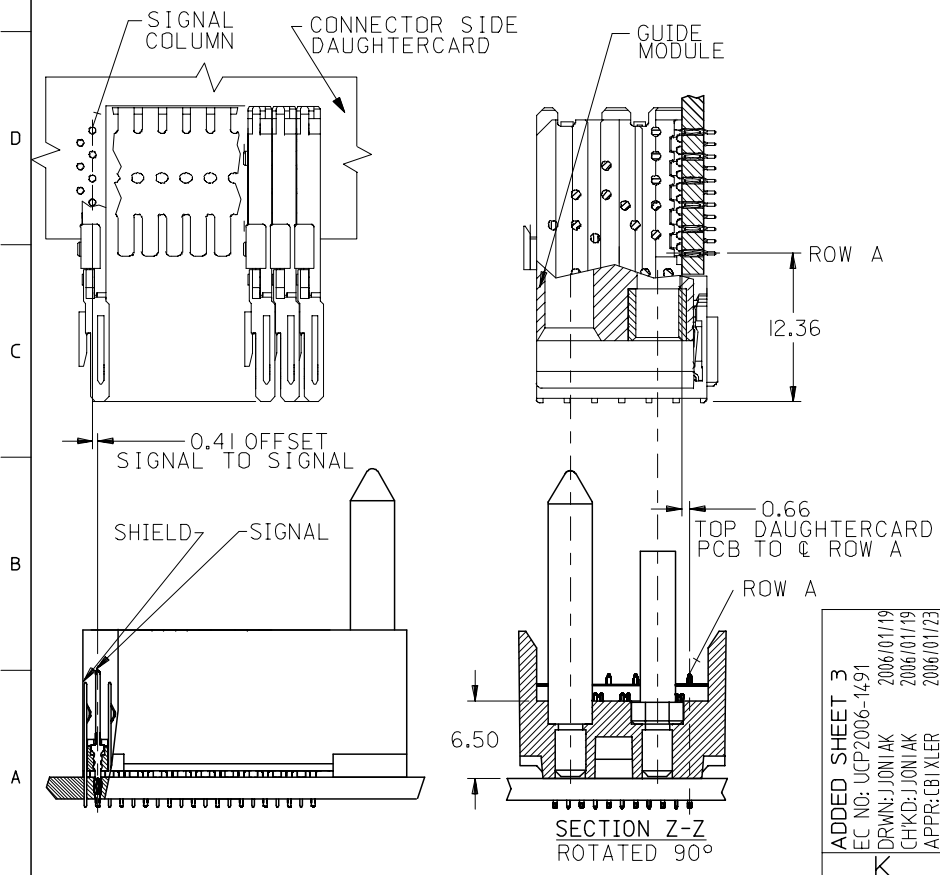
KEYING PIN  
ORIENTATION

74059- \* \* \* \*

NUMBER OF COLUMNS/PLATING  
10 = 10 COLUMN TIN/LEAD  
21 = 11 COLUMN TIN/LEAD\*  
25 = 25 COLUMN TIN/LEAD  
90 = 10 COLUMN MATTE TIN  
85 = 25 COLUMN MATTE TIN  
81 = 11 COLUMN MATTE TIN\*

CONTACT LOAD (PIN LENGTH)  
1 & 6 = 4.75  
2 & 7 = 6.25  
3 & 8 = 4.25  
4 & 9 = 5.15

\* - SEE SHEET 3 FOR 11 COLUMN P/N'S



| PART NUMBER | COLUMN | NUMBER OF SIGNAL PIN | NUMBER OF SHIELD | A     | B     | M    | Au (um) THICKNESS | Sn (um) THICKNESS |
|-------------|--------|----------------------|------------------|-------|-------|------|-------------------|-------------------|
| 74059-*0*1  | 10     | 60                   | 10               | 27.00 | 18.00 | 4.75 | 0.76              | 0.76-1.52         |
| 74059-*0*6  |        |                      |                  |       |       |      | 1.27              |                   |
| 74059-*5*1  | 25     | 150                  | 25               | 57.00 | 48.00 | 4.75 | 0.76              |                   |
| 74059-*5*6  |        |                      |                  |       |       |      | 1.27              |                   |
| 74059-*0*2  | 10     | 60                   | 10               | 27.00 | 18.00 | 6.25 | 0.76              |                   |
| 74059-*0*7  |        |                      |                  |       |       |      | 1.27              |                   |
| 74059-*5*2  | 25     | 150                  | 25               | 57.00 | 48.00 | 6.25 | 0.76              |                   |
| 74059-*5*7  |        |                      |                  |       |       |      | 1.27              |                   |
| 74059-*0*3  | 10     | 60                   | 10               | 27.00 | 18.00 | 4.25 | 0.76              |                   |
| 74059-*0*8  |        |                      |                  |       |       |      | 1.27              |                   |
| 74059-*5*3  | 25     | 150                  | 25               | 57.00 | 48.00 | 4.25 | 0.76              |                   |
| 74059-*5*8  |        |                      |                  |       |       |      | 1.27              |                   |
| 74059-*0*4  | 10     | 60                   | 10               | 27.00 | 18.00 | 5.15 | 0.76              |                   |
| 74059-*0*9  |        |                      |                  |       |       |      | 1.27              |                   |
| 74059-*5*4  | 25     | 150                  | 25               | 57.00 | 48.00 | 5.15 | 0.76              |                   |
| 74059-*5*9  |        |                      |                  |       |       |      | 1.27              |                   |

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