

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number:

0740591001

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, 60 Circuits, Pin Length 4.75mm (.187")

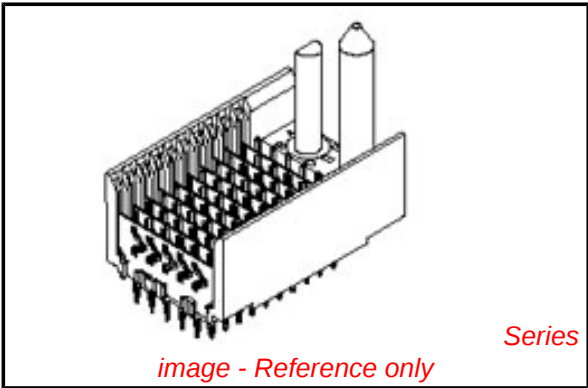
Documents:

[3D Model](#)

[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">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                                                                            |



EU RoHS

RoHS Compliant by Exemption

REACH SVHC

Contains SVHC: No

Halogen-Free

Status

Halogen-Free

China RoHS



Pb

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

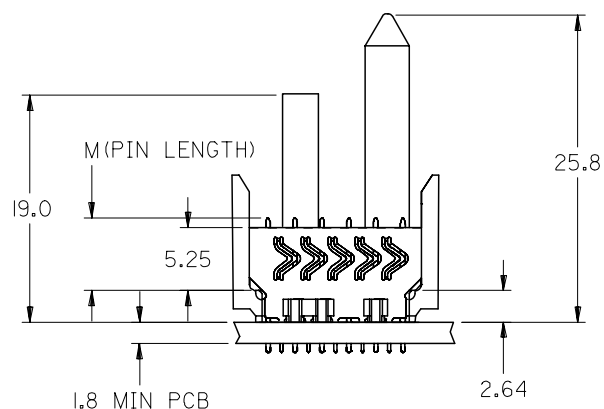
|                                                                          |                              |                                                                                           |                            |
|--------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------------------------|----------------------------|
| Plating min: Termination (µin)                                           | 30                           | VHDM® 6 Row Pin and Shield Repair Tool                                                    | <a href="#">0622015800</a> |
| Plating min: Termination (µm)                                            | 0.75                         | VHDM® 6 Row Shield Extraction Tool                                                        | <a href="#">0622016000</a> |
| Polarized to PCB                                                         | Yes                          | VHDM® Insertion Module for Advanced Mate Signal Header, 6 Row by 10 Wide, 20.00mm (.787") | <a href="#">0622020203</a> |
| Stackable                                                                | No                           | VHDM® Insertion Module for Advanced Mate Signal Header, 6 Row by 10 Wide, 20.00mm (.787") | <a href="#">0622020207</a> |
| Surface Mount Compatible (SMC)                                           | Yes                          |                                                                                           |                            |
| Temperature Range - Operating                                            | -55°C to +105°C              |                                                                                           |                            |
| Termination Interface: Style                                             | Through Hole - Compliant Pin |                                                                                           |                            |
| <b>Electrical</b>                                                        |                              |                                                                                           |                            |
| Current - Maximum per Contact                                            | 1A                           |                                                                                           |                            |
| Data Rate                                                                | 3.125 Gbps                   |                                                                                           |                            |
| Real Signals (per 25mm)                                                  | 72                           |                                                                                           |                            |
| Shield Type                                                              | Ground Plane Shield          |                                                                                           |                            |
| Shielded                                                                 | Yes                          |                                                                                           |                            |
| Voltage - Maximum                                                        | 120V AC (RMS)/DC             |                                                                                           |                            |
| <b>Material Info</b>                                                     |                              |                                                                                           |                            |
| <b>Reference - Drawing Numbers</b>                                       |                              |                                                                                           |                            |
| Sales Drawing                                                            | SD-74059-002                 |                                                                                           |                            |
| VHDM and Very High Density Metric are trademarks of Amphenol Corporation |                              |                                                                                           |                            |

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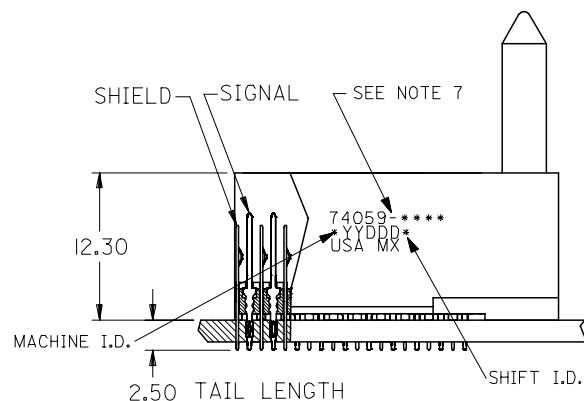
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BACKPLANE HOLE PATTERN  
RECOMMENDED DIMENSIONS



- 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     |  |  | QUALITY SYMBOLS |  |  | GENERAL TOLERANCES (UNLESS SPECIFIED)                      |  |  | DIMENSION STYLE |  |  | SCALE                                                                                                                            |  | DESIGN UNITS                                        |  | THIRD ANGLE PROJECTION |  |  |
| EC NO: UCP2006-2669 |  |  | 2006/06/02      |  |  |                                                            |  |  | MM ONLY         |  |  | 2.5:1                                                                                                                            |  | METRIC                                              |  |                        |  |  |
| DRW: JONI AK        |  |  | 2006/06/02      |  |  |                                                            |  |  | DRAWN BY        |  |  | DATE                                                                                                                             |  | TITLE                                               |  |                        |  |  |
| CHKD: JONI AK       |  |  | 2006/06/02      |  |  |                                                            |  |  | MWANG           |  |  | 1998/11/09                                                                                                                       |  |                                                     |  |                        |  |  |
| APPR: CBI XLER      |  |  | 2006/06/09      |  |  |                                                            |  |  | CHECKED BY      |  |  | DATE                                                                                                                             |  | VHDM 6 ROW<br>SHIELD END BACKPLANE<br>SALES DRAWING |  |                        |  |  |
|                     |  |  |                 |  |  |                                                            |  |  | JLAURX          |  |  | 1998/11/09                                                                                                                       |  |                                                     |  |                        |  |  |
|                     |  |  |                 |  |  |                                                            |  |  | APPROVED BY     |  |  | DATE                                                                                                                             |  | MOLEX INCORPORATED                                  |  |                        |  |  |
|                     |  |  |                 |  |  |                                                            |  |  | CBI XLER        |  |  | 1998/11/19                                                                                                                       |  |                                                     |  |                        |  |  |
|                     |  |  |                 |  |  |                                                            |  |  | MATERIAL NO.    |  |  | DOCUMENT NO.                                                                                                                     |  | SHEET NO.                                           |  |                        |  |  |
|                     |  |  |                 |  |  |                                                            |  |  | SEE SHEET 2     |  |  | SD-74059-002                                                                                                                     |  | 1 OF 3                                              |  |                        |  |  |
| M                   |  |  | REV             |  |  | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |  |  | SIZE            |  |  | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |  |                                                     |  |                        |  |  |
|                     |  |  |                 |  |  |                                                            |  |  | B               |  |  |                                                                                                                                  |  |                                                     |  |                        |  |  |

|                           |       |       |       |       |       |       |       |       |       |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| M/N<br>74059-( )          | -**0* | -**1* | -**2* | -**3* | -**4* | -**5* | -**6* | -**7* | -**8* |
| KEYING PIN<br>ORIENTATION | O     | A     | B     | C     | D     | E     | F     | G     | H     |

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 |      | 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 |      | 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 |      | 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 |      | 0.76              |                   |
| 74059-*5*9  |        |                      |                  |       |       |      | 1.27              |                   |

ADDED SHEET 3

EC NO: UCP2006-1491

DRW: JONIAK 2006/01/19

CHKD: JONIAK 2006/01/19

APPR: CBIXLER 2006/01/23

REV

QUALITY SYMBOLS

▽=0

▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

|          | mm    | INCH  |
|----------|-------|-------|
| 4 PLACES | ± --- | ± --- |
| 3 PLACES | ± --- | ± --- |
| 2 PLACES | ± --- | ± --- |
| 1 PLACE  | ± --- | ± --- |

ANGULAR ±1/2°

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE

MM ONLY

DRAWN BY DATE

DATE

CHECKED BY DATE

DATE

APPROVED BY DATE

DATE

MATERIAL NO.

SEE CHART

SIZE

B

SCALE

2.5:1

DESIGN UNITS

METRIC

THIRD ANGLE PROJECTION

VHDM 6 ROW SHIELD END BACKPLANE SALES DRAWING

MOLEX INCORPORATED

DOCUMENT NO.

SD-74059-002

SHEET NO.

2 OF 3

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