

PLEASE CHECK [WWW.MOLEX.COM](http://WWW.MOLEX.COM) FOR LATEST PART INFORMATION

**Part Number:** [0746511024](#)  
**Status:** **Active**  
**Overview:** [vhdm\\_\\_hsd](#)  
**Description:** 2.00mm (.079") Pitch 8-Row VHDM-HSD™ Backplane Header, Guide Pin Signal Module, Shield End Version, 60 Circuits, Pin Length 5.15mm (.203")

**Documents:**

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

**Agency Certification**

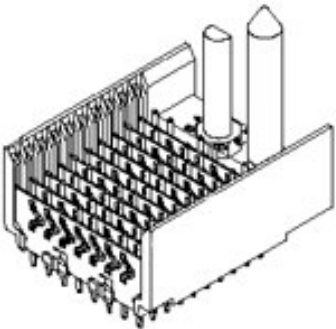
CSA LR19980  
UL E29179

**General**

Product Family Backplane Connectors  
Series [74651](#)  
Application Backplane  
Application Tooling Documents <a href="http://www.molex.com/pdm\_docs/ats/TM-622010999.pdf">Tooling Manual</a>  
Comments Keying Position B  
Component Type PCB Header  
Overview [vhdm\\_\\_hsd](#)  
Product Name VHDM-HSD™  
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 Yes  
Material - Metal Copper-Nickel-Silicon, High Performance Alloy (HPA), Stainless Steel  
  
Material - Plating Mating Gold  
Material - Plating Termination Tin-Lead  
Material - Resin High Temperature Thermoplastic  
Number of Columns 10  
Number of Pairs Open Pin Field  
Number of Rows 8  
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) 0.079 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**

**RoHS Compliant by Exemption**

**REACH SVHC**

**Contains SVHC: No**

**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**

[74651Series](#)

**Mates With**

HSD Daughtercards [74680](#) , [74686](#)

**Use With**

Daughtercard Modules

**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 #                  |
|---------------------------------------------------------------------------|----------------------------|
| VHDM® Signal Pin                                                          | <a href="#">0622015700</a> |
| Insert Repair Tool                                                        |                            |
| VHDM® Insertion                                                           | <a href="#">0622020205</a> |
| Module for Advanced Mate Signal Header, 8 Row by 10 Wide, 20.00mm (.787") |                            |

|                                |                              |
|--------------------------------|------------------------------|
| Plating min: Termination (μin) | 30                           |
| Plating min: Termination (μm)  | 0.75                         |
| Polarized to PCB               | No                           |
| 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                     | 5.0 Gbps            |
| Real Signals (per 25mm)       | 100                 |
| Shield Type                   | Ground Plane Shield |
| Shielded                      | Yes                 |
| Voltage - Maximum             | 120V AC (RMS)/DC    |

**Material Info**

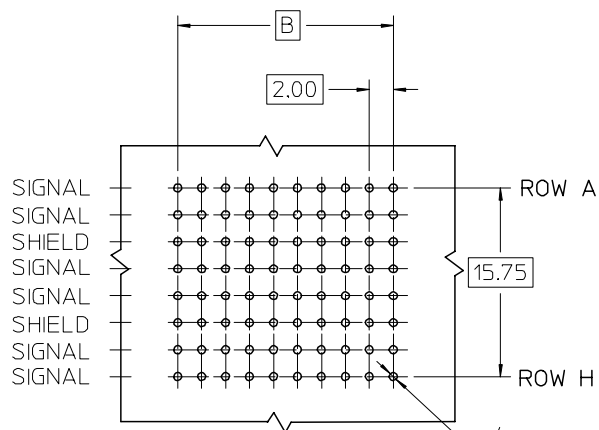
**Reference - Drawing Numbers**

|                         |              |
|-------------------------|--------------|
| Packaging Specification | PK-74061-003 |
| Sales Drawing           | SD-74651-002 |

VHDM-HSD is a trademark of Amphenol Corporation

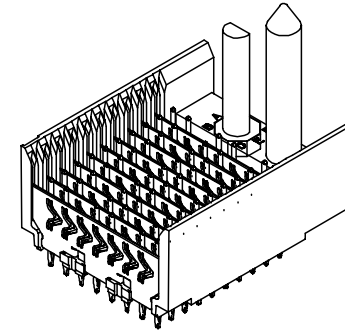
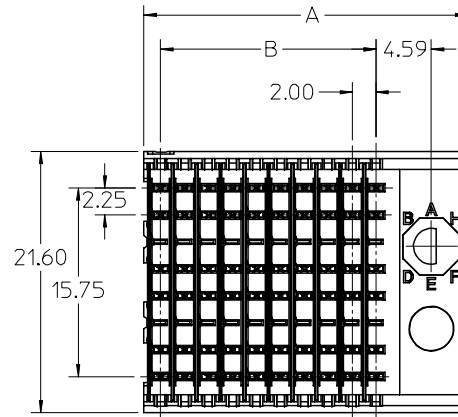
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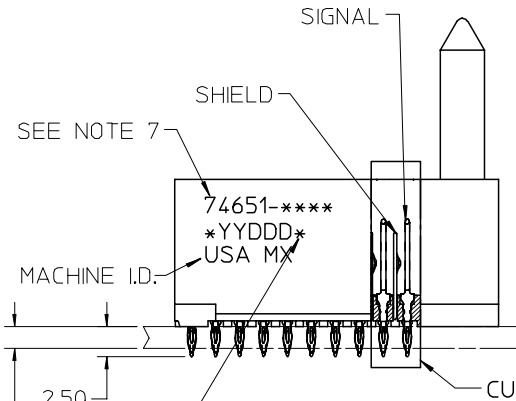
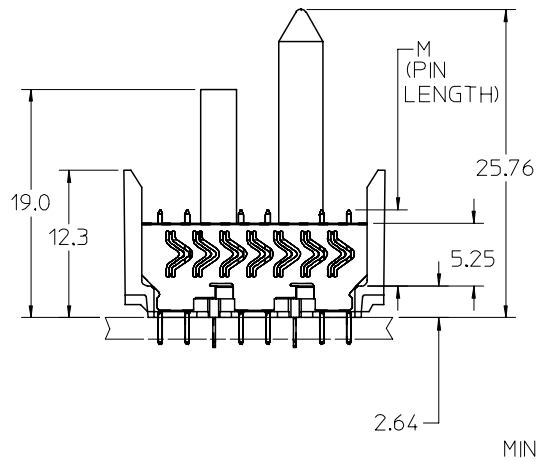
BACKPLANE HOLE PATTERN  
RECOMMENDED DIMENSION

Ø0.66 DRILL  
Ø0.56 ±0.05 PTH  
Ø1.00 PAD  
Ø0.10



#### NOTES:

1. MATERIAL: HOUSING -LIQUID CRYSTAL POLYMER (LCP) GLASS-FILLED.  
UL 94-0. COLOR BLACK. SIGNAL & SHIELD -HIGH  
PERFORMANCE 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 MATING LENGTHS CONSULT MOLEX FOR  
AVAILABILITY.
5. FOR SPECIFIC PART NUMBER AND MATING INFORMATION REFER TO  
SHEET 2.
6. PACKAGE PER PK-74061-003.
7. EITHER MARK PART NUMBER AND DATE CODE APPROXIMATELY  
WHERE SHOWN OR PLACE LABEL ON THE TUBE.



|                                                                                                                         |             |                                           |                                       |       |                                                                                                                               |                        |                        |                    |                                                     |           |  |
|-------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------------------|---------------------------------------|-------|-------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------|--------------------|-----------------------------------------------------|-----------|--|
| REVISED - PLATING NOTE<br>EC NO: UCP2006-0051<br>DRWN: KMULVEY 2005/07/13<br>CHKD: 2005/07/13<br>APPR: SREED 2005/07/15 | DESCRIPTION | QUALITY SYMBOLS<br><br>▽ = 0<br><br>▽ = 0 | GENERAL TOLERANCES (UNLESS SPECIFIED) |       | SCALE<br>2.5:1                                                                                                                | DESIGN UNITS<br>METRIC | THIRD ANGLE PROJECTION | REVISE ON CAD ONLY |                                                     |           |  |
|                                                                                                                         |             |                                           | mm                                    | INCH  | DIMENSION STYLE<br>MM ONLY                                                                                                    |                        |                        | TITLE              |                                                     |           |  |
|                                                                                                                         |             |                                           | 4 PLACES                              | ± --- | ± ---                                                                                                                         | DRAWN BY               |                        | DATE               | HSD SALES ASSEMBLY<br>8 ROW SHIELD END<br>BACKPLANE |           |  |
|                                                                                                                         |             |                                           | 3 PLACES                              | ± --- | ± ---                                                                                                                         | MQWANG                 |                        | 2001/03/26         |                                                     |           |  |
|                                                                                                                         |             |                                           | 2 PLACES                              | ± --- | ± ---                                                                                                                         | CHECKED BY             |                        | DATE               | MOLEX INCORPORATED                                  |           |  |
| 1 PLACE                                                                                                                 | ± ---       | ± ---                                     | JLAURX                                |       | 2001/04/01                                                                                                                    |                        |                        |                    |                                                     |           |  |
| D                                                                                                                       | REV         |                                           | ANGULAR ±1/2°                         |       | APPROVED BY                                                                                                                   |                        | DATE                   | MATERIAL NO.       | DOCUMENT NO.                                        | SHEET NO. |  |
|                                                                                                                         |             |                                           | DRAFT WHERE APPLICABLE                |       | CBIXLER                                                                                                                       |                        | 2001/04/01             | SEE SHEET 2        | SD-74651-002                                        | 1 OF 2    |  |
|                                                                                                                         |             |                                           | MUST REMAIN WITHIN DIMENSIONS         |       | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                        |                        |                    |                                                     |           |  |
| B                                                                                                                       |             |                                           |                                       |       |                                                                                                                               |                        |                        |                    |                                                     |           |  |

10 9 8 7 6 5 4 3 2 74651

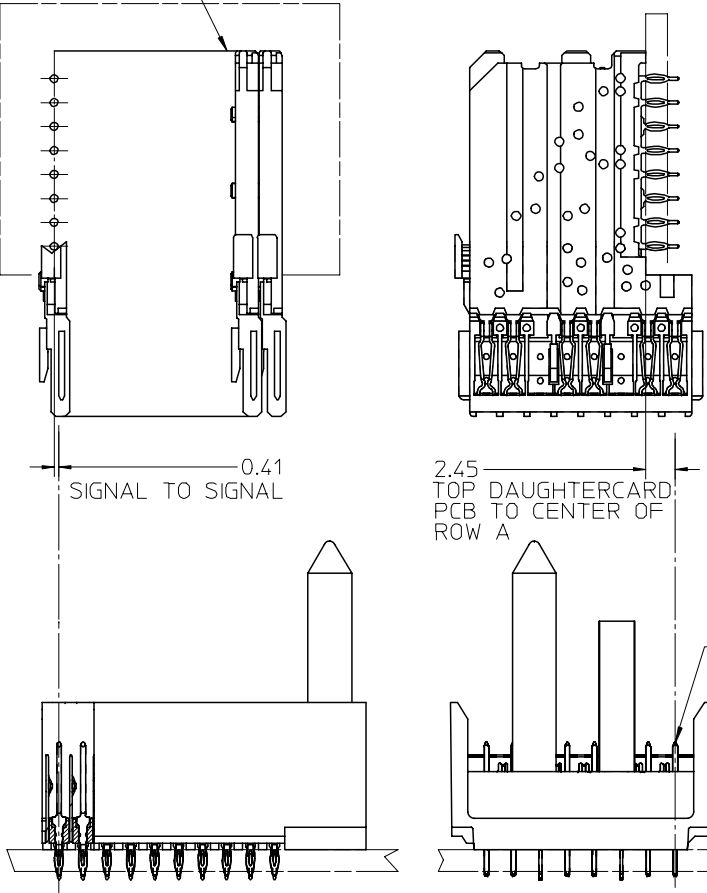
|                           |       |       |       |       |       |       |       |       |       |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| M/N<br>74651-( )          | -**0* | -**1* | -**2* | -**3* | -**4* | -**5* | -**6* | -**7* | -**8* |
| KEYING PIN<br>ORIENTATION | 0     | A     | B     | C     | D     | E     | F     | G     | H     |
|                           |       |       |       |       |       |       |       |       |       |

74651-\*\*\*

NUMBER OF COLUMNS/  
PLATING  
10 = 10 COLUMN TIN/LEAD  
25 = 25 COLUMN TIN/LEAD  
90 = 10 COLUMN MATTE TIN  
85 = 25 COLUMN MATTE TIN

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

DAUGHTERCARD  
CONNECTOR SIDE



| PART<br>NUMBER | COLUMN | NUMBER OF<br>SIGNAL PINS | NUMBER OF<br>SHIELDS | A     | B     | M    | Au (um) MIN<br>THICKNESS | Sn (um)<br>THICKNESS |
|----------------|--------|--------------------------|----------------------|-------|-------|------|--------------------------|----------------------|
| 74651-*0*1     | 10     | 60                       | 10                   | 27.00 | 18.00 | 4.75 | 0.76                     | 0.76-1.52            |
| 74651-*0*6     |        |                          |                      |       |       |      | 1.27                     |                      |
| 74651-*5*1     | 25     | 150                      | 25                   | 57.00 | 48.00 | 4.75 | 0.76                     |                      |
| 74651-*5*6     |        |                          |                      |       |       |      | 1.27                     |                      |
| 74651-*0*2     | 10     | 60                       | 10                   | 27.00 | 18.00 | 6.25 | 0.76                     |                      |
| 74651-*0*7     |        |                          |                      |       |       |      | 1.27                     |                      |
| 74651-*5*2     | 25     | 150                      | 25                   | 57.00 | 48.00 | 6.25 | 0.76                     |                      |
| 74651-*5*7     |        |                          |                      |       |       |      | 1.27                     |                      |
| 74651-*0*3     | 10     | 60                       | 10                   | 27.00 | 18.00 | 4.25 | 0.76                     |                      |
| 74651-*0*8     |        |                          |                      |       |       |      | 1.27                     |                      |
| 74651-*5*3     | 25     | 150                      | 25                   | 57.00 | 48.00 | 4.25 | 0.76                     |                      |
| 74651-*5*8     |        |                          |                      |       |       |      | 1.27                     |                      |
| 74651-*0*4     | 10     | 60                       | 10                   | 27.00 | 18.00 | 5.15 | 0.76                     |                      |
| 74651-*0*9     |        |                          |                      |       |       |      | 1.27                     |                      |
| 74651-*5*4     | 25     | 150                      | 25                   | 57.00 | 48.00 | 5.15 | 0.76                     |                      |
| 74651-*5*9     |        |                          |                      |       |       |      | 1.27                     |                      |

SEE SHEET 1  
EC NO: UCP2006-0051  
DRWN: KMULVEY 2005/07/13  
CHKD: 2005/07/13  
APPR: SREED 2005/07/15

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

SCALE  
2.5:1  
DESIGN UNITS  
METRIC  
DIMENSION STYLE  
MM ONLY  
DRAWN BY  
DATE  
MWANG 2001/03/26  
CHECKED BY  
DATE  
JLAURX 2001/04/01  
APPROVED BY  
DATE  
CBIXLER 2001/04/01

THIRD ANGLE  
PROJECTION  
REVISE ON CAD ONLY  
TITLE  
HSD SALES ASSEMBLY  
8 ROW SHIELD END  
BACKPLANE  
MOLEX INCORPORATED  
MATERIAL NO.  
SEE TABLE  
DOCUMENT NO.  
SD-74651-002  
SHEET NO.  
2 OF 2

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