

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

**Part Number:** [0746961001](#)  
**Status:** **Active**  
**Overview:** vhdm\_hsd  
**Description:** 2.00mm (.079") Pitch 5-Row VHDM-HSD™ Backplane Header, Guide Pin Signal Module, Pin End Version, 40 Circuits, Pin Length 4.75mm (.187")

**Documents:**

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

**Agency Certification**

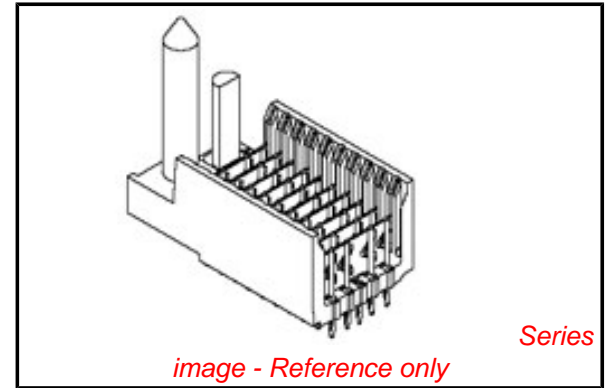
CSA LR19880

**General**

Product Family Backplane Connectors  
 Series [74696](#)  
 Application Backplane  
 Application Tooling Documents [http://www.molex.com/pdm\\_docs/ats/TM-622010999.pdf](http://www.molex.com/pdm_docs/ats/TM-622010999.pdf)>Tooling Manual</a>  
 Comments No Keying Position  
 Component Type PCB Header  
 Overview [vhdm\\_hsd](#)  
 Product Name VHDM-HSD™  
 Style N/A

**Physical**

Circuits (Loaded) 40  
 Circuits (maximum) 40  
 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 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 5  
 Orientation Vertical  
 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  
 Plating min: Mating (µin) 30  
 Plating min: Mating (µm) 0.75  
 Plating min: Termination (µin) 30  
 Plating min: Termination (µm) 0.75  
 Polarized to PCB Yes  
 Stackable Yes  
 Surface Mount Compatible (SMC) Yes  
 Temperature Range - Operating -55°C to +105°C  
 Termination Interface: Style Through Hole - Compliant Pin



**EU RoHS**

**RoHS Compliant by Exemption**  
**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**

[74696Series](#)

**Mates With**

[74670 HSD Daughtercard](#)

**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 Inserter Repair Tool	<a href="#">0622015700</a>
VHDM® 5 Row and Shield Repair Tool	<a href="#">0622015810</a>
VHDM® 5 Row Shield Extraction Tool	<a href="#">0622016010</a>
VHDM-HSD™ Signal Header, 5 Row by	<a href="#">0622020201</a>

10 Wide, 20.00mm  
(.787")

### **Electrical**

Current - Maximum per Contact	1A
Data Rate	5.0 Gbps
Real Signals (per 25mm)	48
Voltage - Maximum	120V AC (RMS)/DC

### **Material Info**

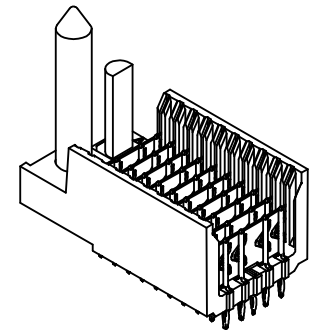
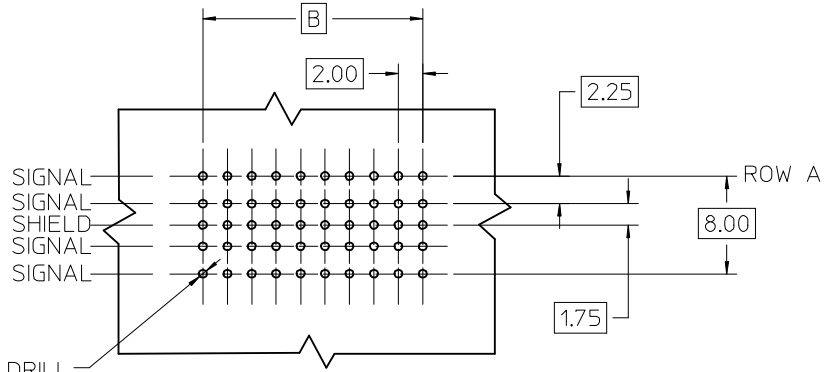
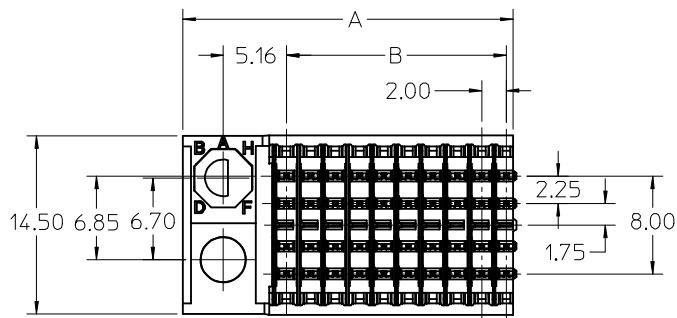
#### **Reference - Drawing Numbers**

Packaging Specification	PK-74696-003
Sales Drawing	SD-74696-002

VHDM-HSD is a trademark of Amphenol Corporation

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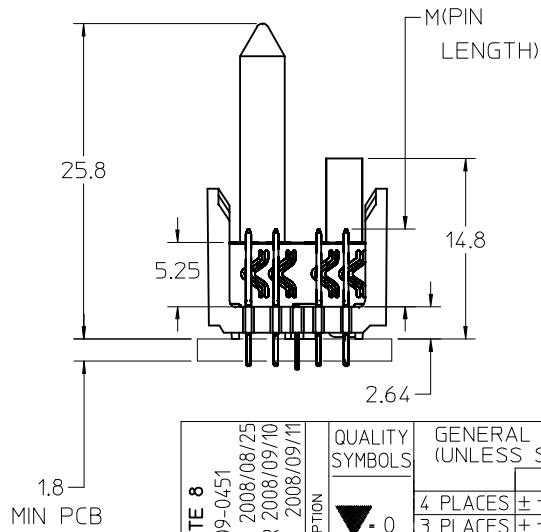
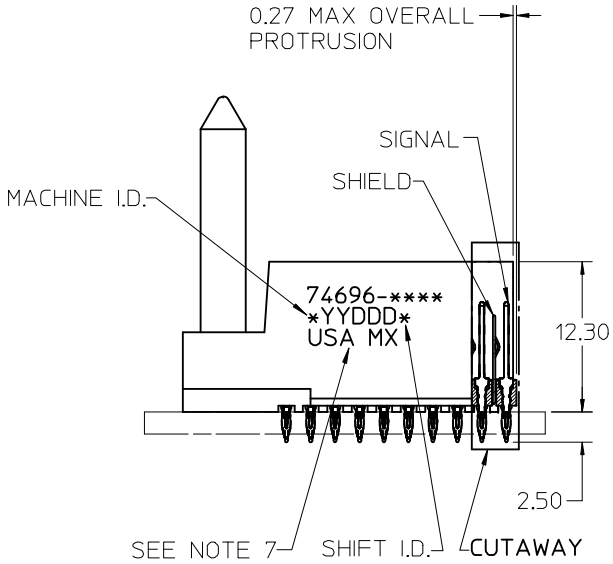
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- Ø 0.66 DRILL
- Ø 0.56 ± 0.05 PTH
- Ø 1.00 PAD
- ⊕ Ø 0.10

**BACKPLANE HOLE PATTERN**  
**RECOMMENDED DIMENSIONS**

0.27 MAX OVERALL PROTRUSION



**NOTES:**

1. MATERIAL: HOUSING -LIQUID CRYSTAL POLYMER (LCP) GLASS-FILLED, UL 94 V-0. COLOR BLACK. SIGNAL & SHIELD -COPPER ALLOY.
2. FINISHES: SELECTIVE GOLD (Au) ON CONTACT AREA. SELECTIVE TIN/LEAD (Sn/Pb) OR MATTE TIN ON PCB TAILS. 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-74696-003.
7. EITHER MARK PART NUMBER AND DATE CODE APPROXIMATELY WHERE SHOWN OR PLACE LABEL ON THE TUBE.
8. PRODUCT COMPLIES WITH COSMETIC SPECIFICATION PS-45499-002.

<p><b>ADD NOTE 8</b></p> <p>EC NO: UCP2009-0451                  DRWN:BSMART 2008/08/25                  CHKD:BBARKER 2008/09/10                  APPR:SWILLER 2008/09/11</p>	<p>QUALITY SYMBOLS</p> <p>▽ - 0</p> <p>∇ - 0</p>	GENERAL TOLERANCES (UNLESS SPECIFIED)		SCALE <b>2.5:1</b>	DESIGN UNITS <b>METRIC</b>	THIRD ANGLE PROJECTION	REVISE ON CAD ONLY	
		mm INCH		DIMENSION STYLE <b>MM ONLY</b>		TITLE <b>HSD SALES ASSEMBLY 5 ROW SIGNAL END BACKPLANE</b>		
		4 PLACES ± --- ± ---	3 PLACES ± --- ± ---	DRAWN BY MQWANG	DATE 2001/04/17	<b>MOLEX INCORPORATED</b>		
		2 PLACES ± --- ± ---	1 PLACE ± --- ± ---	CHECKED BY NMARTIN	DATE 2001/04/20			
ANGULAR ±1/2°		DRAFT WHERE APPLICABLE		APPROVED BY CBIXLER	DATE 2001/04/20	MATERIAL NO. <b>SEE TABLE</b>	DOCUMENT NO. <b>SD-74696-002</b>	SHEET NO. <b>1 OF 3</b>
MUST REMAIN WITHIN DIMENSIONS		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						

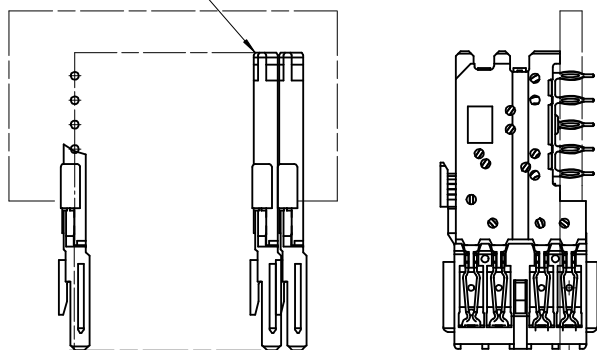
P/N 74696-( )	-**0*	-**1*	-**2*	-**3*	-**4*	-**5*	-**6*	-**7*	-**8*
	0	A	B	C	D	E	F	G	H
KEYING PIN ORIENTATION									

74696-\*\*\*\*

NUMBER OF COLUMN  
5, 10 OR 25  
LEADED OR LEAD FREE

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

DAUGHTERCARD  
CONNECTOR SIDE



0.41  
SIGNAL TO  
SIGNAL

0.75  
TOP  
DAUGHTERCARD  
PCB TO CENTER  
OF ROW A

ROW A

PART NUMBER	COLUMN	NUMBER OF SIGNAL PINS	NUMBER OF SHIELDS	A	B	M	Au (um) MIN THICKNESS	SnPb(um) THICKNESS
74696-10*1	10	40	10	27.00	18.00	4.75	0.76	0.76-1.52
74696-10*6							1.27	
74696-25*1	25	100	25	57.00	48.00	6.25	0.76	
74696-25*6							1.27	
74696-05*7	5	20	5	17.00	8.00	4.25	1.27	
74696-10*2	10	40	10	27.00	18.00		0.76	
74696-10*7	25	100	25	57.00	48.00	5.15	1.27	
74696-25*2							0.76	
74696-25*7							1.27	
74696-10*3	10	40	10	27.00	18.00	4.25	0.76	
74696-10*8							1.27	
74696-25*3	25	100	25	57.00	48.00	5.15	0.76	
74696-25*8							1.27	
74696-10*4	10	40	10	27.00	18.00	4.25	0.76	
74696-10*9							1.27	
74696-25*4	25	100	25	57.00	48.00	5.15	0.76	
74696-25*9							1.27	

SEE SHEET 1 EC NO: UCP2009-0451 DRWN:BSMART 2008/08/25 CHKD:BBARKER 2008/09/10 APPR:SWILLER 2008/09/11	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	SCALE 2.5:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	REVISE ON CAD ONLY	
	DESCRIPTION -0 -0	mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± --- ± --- 1 PLACE ± --- ± ---	DIMENSION STYLE MM ONLY	TITLE HSD SALES ASSEMBLY 5 ROW SIGNAL END BACKPLANE			
		ANGULAR ±1/2° DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	DRAWN BY MQWANG CHECKED BY NMARTIN APPROVED BY CBIXLER	DATE 2001/04/17 DATE 2001/04/20 DATE 2001/04/20	MOLEX INCORPORATED SEE TABLE SD-74696-002		
	MATERIAL NO. DOCUMENT NO. SHEET NO.	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					

10 9 8 7 6 5 4 3 2 1

PART NUMBER	COLUMN	NUMBER OF SIGNAL PINS	NUMBER OF SHIELDS	A	B	M	Au (um) MIN THICKNESS	Sn (um) THICKNESS
74696-90*1	10	40	10	27.00	18.00	4.75	0.76	0.76-1.52
74696-90*6							1.27	
74696-85*1	25	100	25	57.00	48.00		0.76	
74696-85*6							1.27	
74696-95*7	5	20	5	17.00	8.00	6.25	1.27	
74696-90*2	10	40	10	27.00	18.00		0.76	
74696-90*7							1.27	
74696-85*2	25	100	25	57.00	48.00		0.76	
74696-85*7						1.27		
74696-90*3	10	40	10	27.00	18.00	4.25	0.76	
74696-90*8							1.27	
74696-85*3	25	100	25	57.00	48.00		0.76	
74696-85*8							1.27	
74696-90*4	10	40	10	27.00	18.00	5.15	0.76	
74696-90*9							1.27	
74696-85*4	25	100	25	57.00	48.00		0.76	
74696-85*9							1.27	

LEAD FREE P/N CHART

SEE SHEET 1 EC NO: UCP2009-0451 DR: MWBSMART 2008/08/25 CHKD: BBARKER 2008/09/10 APPR: SMILLER 2008/09/11	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
	▽=0 ▽=0	mm	INCH	MM ONLY		1:1	METRIC	HSD SALES ASSEMBLY 5 ROW SIGNAL END BACKPLANE MOLEX INCORPORATED	
		4 PLACES	± ---	± ---	DRAWN BY	DATE	TITLE		
		3 PLACES	± ---	± ---	MQWANG	2001/04/17			
		2 PLACES	± ---	± ---	CHECKED BY	DATE			
1 PLACE	± ---	± ---	NMARTIN	2001/04/20					
	ANGULAR ±1/2°		APPROVED BY	DATE	MATERIAL NO.		DOCUMENT NO.	SHEET NO.	
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		CBIXLER	2001/04/20	SEE TABLE		SD-74696-002	3 OF 3	
	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION								

9 8 7 6 5 4 3 2 1