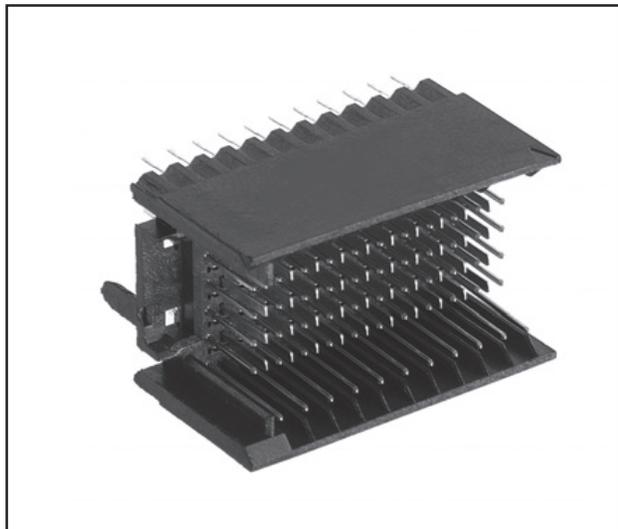


3M™ MetPak™ HSHM Press-Fit Header

2 mm Type CR, 55 Signal Contacts, 5 Rows, Straight

HSHM Series



- Up to 5 Gb/s data rates
- Low crosstalk at high frequencies
- 50/100 Ω (single-ended /differential) impedance
- Modular/scalable format IEC 61076-4-101
- 63 mated lines per linear inch
- End-to-end stackable with 5 row 3M™ MetPak™ CP2, HM and HSHM sockets
- See the Regulatory Information Appendix (RIA) in the “RoHS compliance” section of www.3mconnector.com for compliance information

Date Modified: November 9, 2010

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Physical

Insulation Material: High Temperature Thermoplastic (LCP)

Flammability: UL 94V-0

Contact

Material: Copper Alloy

Plating: See Ordering Information

Performance

Mechanical:

Normal Force (Nominal): 0.57 N [58 g] Signal, 0.74 N [75 g] Shield

Engagement Force (Nominal): 0.32 N [33 g] Signal, 0.22 N [22 g] Shield

Separation Force (Nominal): 0.20 N [20 g] Signal, 0.20 N [20 g] Shield

Wipe (Nominal, Shortest Contact): 2.67 mm [0.105 in] Signal, 1.57 mm [0.062 in] Shield

Mate/Unmate Cycles: 250

Application: This module is not suitable for stand-alone use. (Refer to IEC-61076-4-101)

Electrical:

Data Rate: 5 Gb/s

Characteristic Impedance: 50 Ω Single-ended, 100 Ω Differential

Current Rating (Fully Loaded): 1 A @ 70°C Signal

Insulation Resistance: 10^4 M Ω @ 100 V_{DC}

Withstanding Voltage: 750 V_{rms}

Environmental

Temperature Rating: -55° C to 125° C

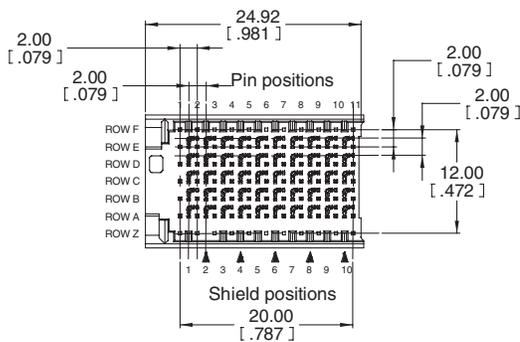
UL File No.: E68080

MetPak is a trademark of 3M Company.

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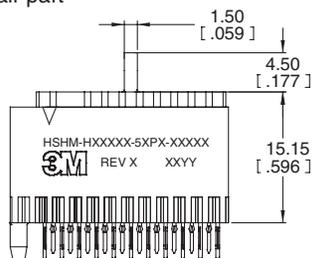


mm (Inch)

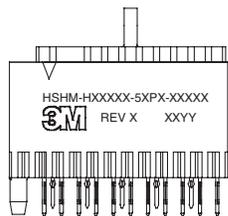
Tolerance Unless Noted		
	0	0.0
	±3	±0.3
		±0.13

[] Dimensions for Reference Only

▲ denotes shield column (tail only) omitted for the row differential pair part

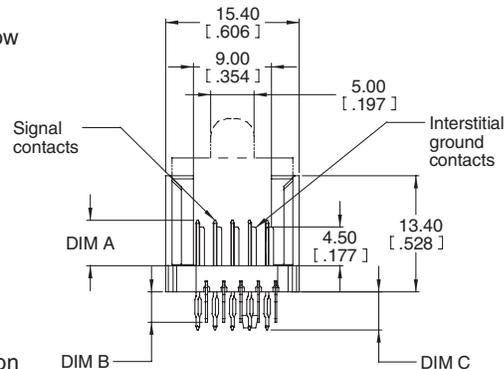


Coaxial, column differential and stripline configuration shown with protective caps*



Row differential configuration shown with protective caps*

* Caps to be removed after press-fit installation process



DIM A = Pin mating length
 DIM B = Shield tail length
 DIM C = Pin tail length

Standard Configuration
 DIM A = 5.3 mm for rows A through E
 For non-standard configurations, contact sales representative

Ordering Information

HSHM-H055CRX - 5CPX-XXXXX (rows F and Z not loaded)

High Speed Option:

- 4 = Coaxial, column differential and stripline (75 Ω) applications
- 5 = Row differential applications

Tail Length:

- 1 = 4.4 mm pin and 3.5 mm shield
- 2 = 2 mm pin and 2 mm shield

Plating μm [μ"]:

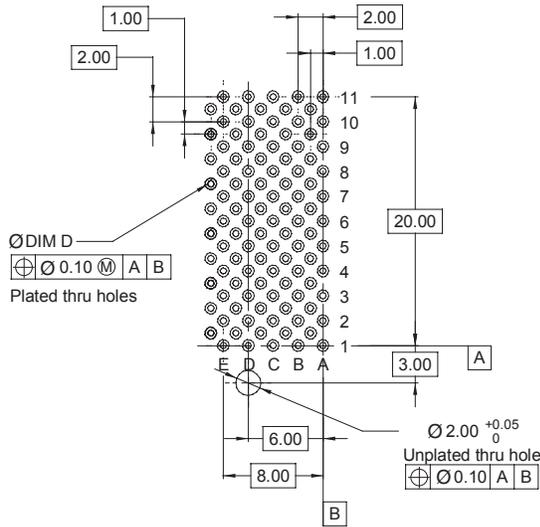
- TG30 = 0.76 [30] Min. Au Contact Area
 2.54 [100] Min. SnPb Terminal Area (RIA C2 & E2 apply)
 1.27 [50] Min. Ni All over
 Standard Option
- TG30L = 0.76 [30] Min. Au Contact Area, Lubricated
 2.54 [100] Min. SnPb Terminal Area (RIA C2 & E2 apply)
 1.27 [50] Min. Ni All over
 Typically higher make order quantities as compared to TG30.
- TG50 = 1.27 [50] Min. Au Contact Area, Lubricated
 2.54 [100] Min. SnPb Terminal Area (RIA C2 & E2 apply)
 1.27 [50] Min. Ni All over
 Non-Standard Option (Available with longer lead times and higher make order quantities, MOQ)

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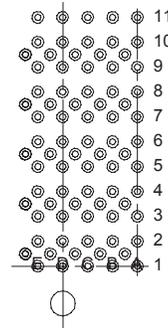
3M™ MetPak™ HSHM Press-Fit Header

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Recommended PCB hole mounting pattern for coaxial, column differential and stripline applications



Recommended PCB hole mounting pattern for row differential applications

Same geometry as left view without the ground vias

Hole Plating Table mm [in.]

Finished Hole Dia. "D"	Cu. Thickness	SnPb Thickness	Drilled Hole Dia.
0.457 - 0.559 [.0180 - .0220]	0.025 - 0.045 [.0010 - .0018]	0.008 - 0.018 [.0003 - .0007]	0.584 - 0.625 [.0230 - .0246]

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