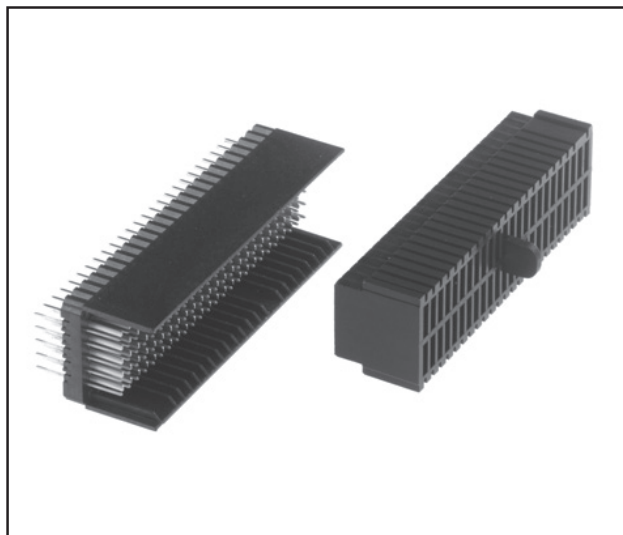


# 3M™ MetPak™ HSHM Press-Fit Header

2 mm Type A, 110 Signal Contacts, 5 Rows, Straight

HSHM Series



- Up to 5 Gb/s data rates
- Low crosstalk at high frequencies
- 50/100  $\Omega$  (single-ended /differential) impedance
- Modular/scalable format IEC 61076-4-101
- 63 mated lines per linear inch
- Multi-purpose center (MPC) for keying and guidance
- 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](http://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 suitable for stand-alone use. (Refer to IEC-61076-4-101)

### Electrical:

Data Rate: 5 Gb/s

Characteristic Impedance: 50  $\Omega$  Single-ended, 100  $\Omega$  Differential

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

Insulation Resistance:  $10^4$  M $\Omega$  @ 100 V<sub>DC</sub>

Withstanding Voltage: 750 V<sub>rms</sub>

## Environmental

**Temperature Rating:** -55° C to 125° C

UL File No.: E68080

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<http://www.3Mconnector.com>

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# 3M™ MetPak™ HSHM Press-Fit Header

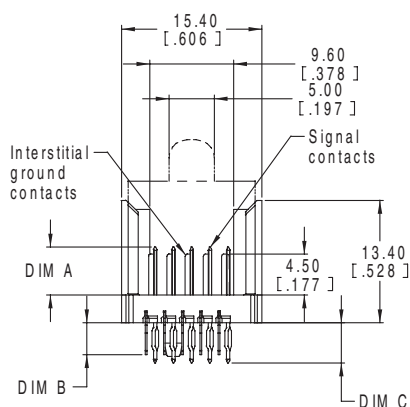
2 mm Type A, 110 Signal Contacts, 5 Rows, Straight

HSHM Series



mm (Inch)			
Tolerance Unless Noted			
	0	0.0	0.00
mm	±3	±0.3	±0.13

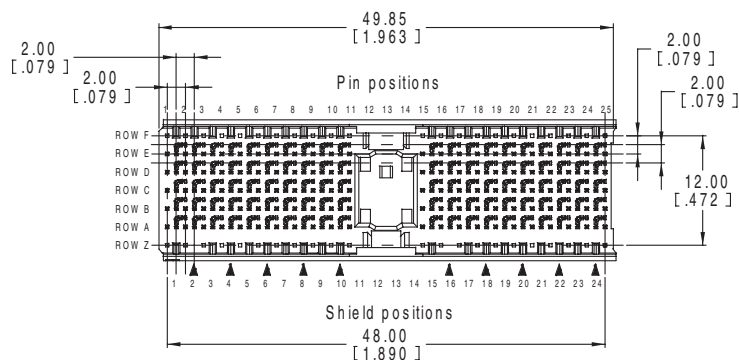
[ ] Dimensions for  
Reference Only



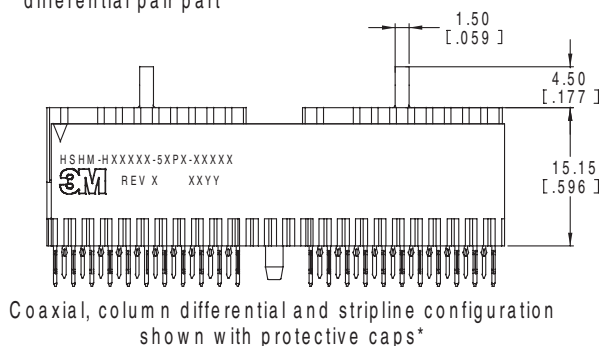
DIM A = Pin mating length  
DIM B = Shield tail length  
DIM C = Pin tail length

Standard Configuration

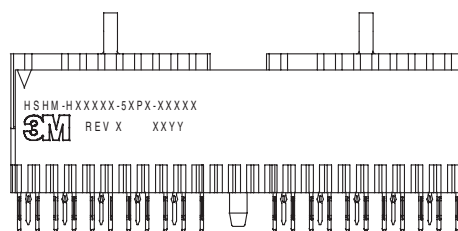
DIM A = 5.3 mm for rows A through E  
For non-standard configurations,  
contact sales representative



▲ 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

## Ordering Information

**HSHM-H110AX - 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  $\mu\text{m}$  [  $\mu\text{in}$  ]:

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  
Non-Standard Option (Available with longer lead times and  
higher make order quantities, MOQ)

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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Sheet 2 of 3



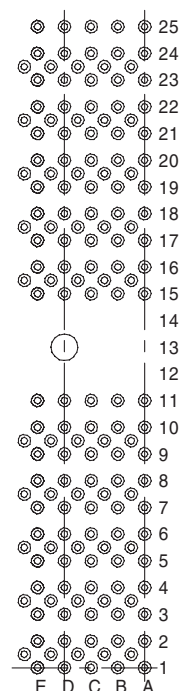
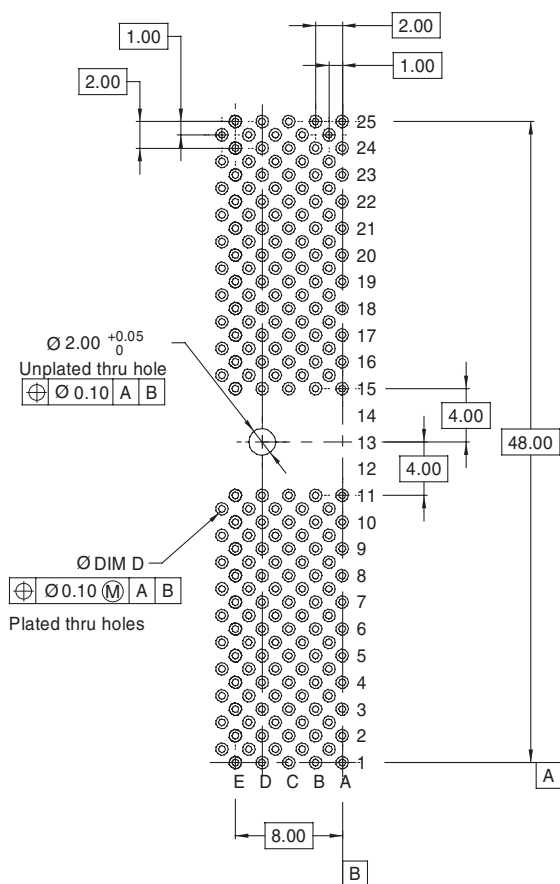
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# 3M™ MetPak™ HSHM Press-Fit Header

2 mm Type A, 110 Signal Contacts, 5 Rows, Straight

HSHM Series



(Same geometry as left view without the ground vias)

Hole Plating Table mm [in.]			
Finsihed 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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