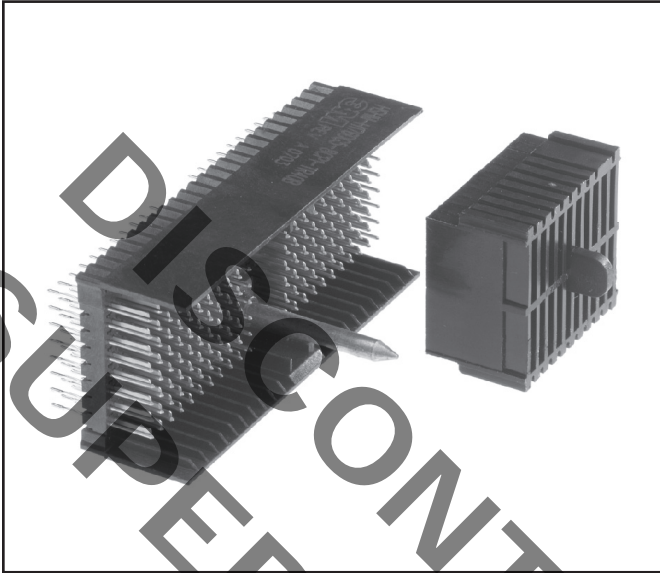


3M™ MetPak™ HSHM Press-Fit Header

2 mm Type DG, 176 Signal Contacts, 8 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
- 101 mated lines per linear inch
- Integrated guide pin
- End-to-end stackable with 8 row 3M™ MetPak™ CP2, HM and HSHM headers
- Mates with HSHM D sockets
- See the Regulatory Information Appendix (RIA) in the “RoHS compliance” section of www.3mconnector.com for compliance information

Date Modified: November 5, 2010

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Sheet 1 of 3

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: 10⁴ M Ω @ 100 V_{DC}
Withstanding Voltage: 750 V_{rms}

Environmental

Temperature Rating: -55° C to 125° C

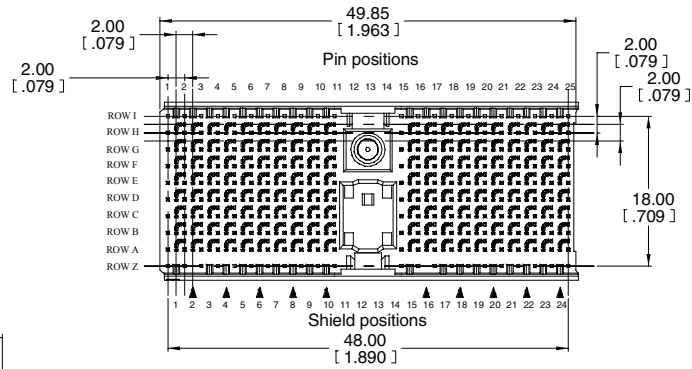
UL File No.: E68080

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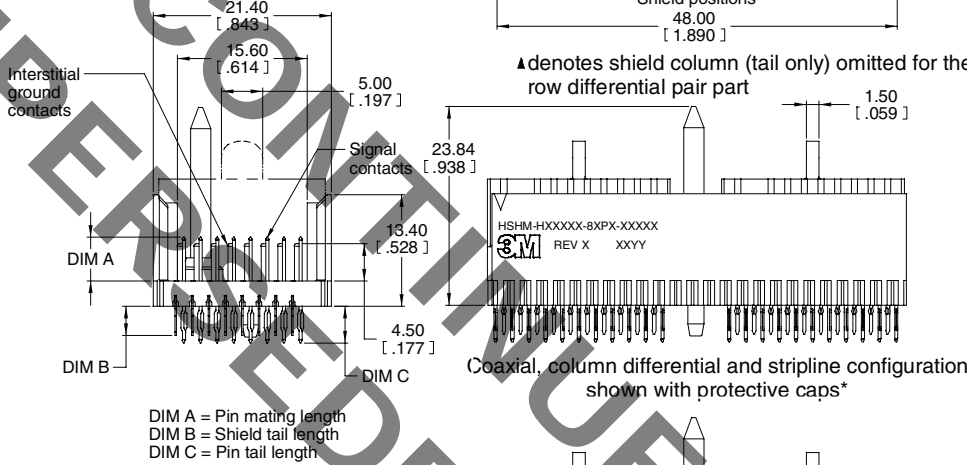
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2 mm Type DG, 176 Signal Contacts, 8 Rows, Straight

HSHM Series

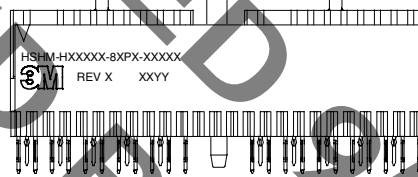


▲ denotes shield column (tail only) omitted for the row differential pair part



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

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

mm
(Inch)

Tolerance Unless Noted		
	0	0.0
mm	±3	±0.3
		±0.13

() Dimensions used for Reference Only

Ordering Information

HSHM-H176DGX-8CPX-XXXXX (rows I 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)

Standard Configuration

DIM A = 5.3 mm for rows A through H

For non--standard configurations contact sales representative

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3M

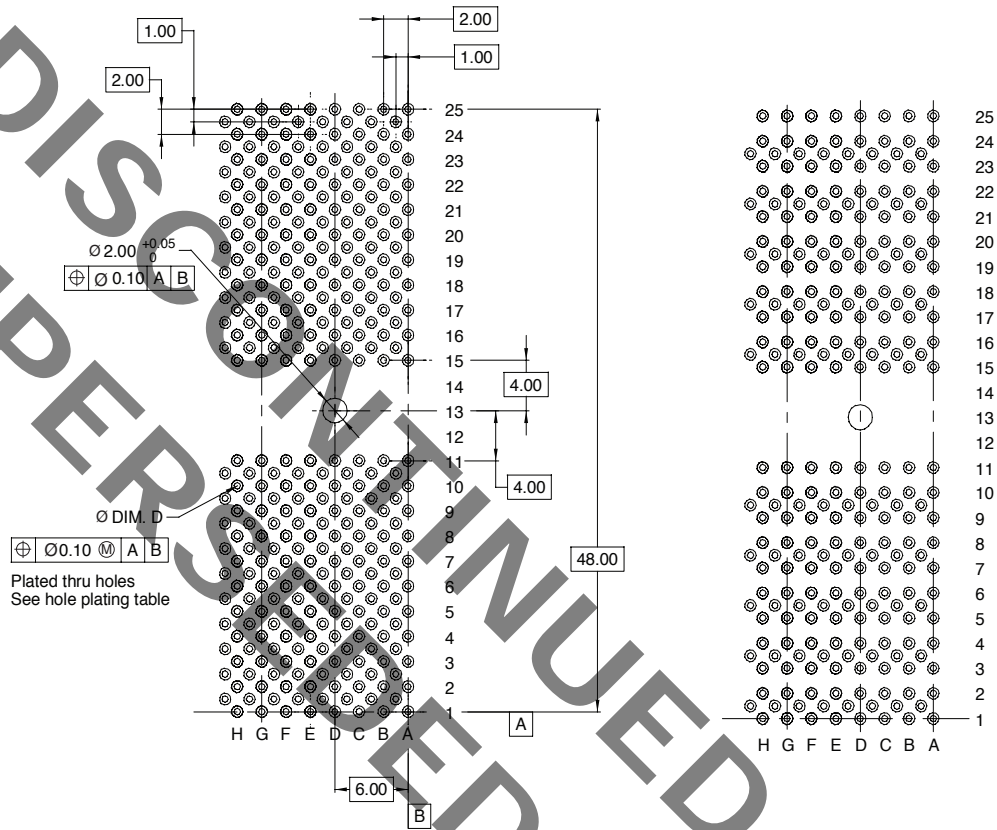
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3M™ MetPak™ HSHM Press-Fit Header

2 mm Type DG, 176 Signal Contacts, 8 Rows, Straight

HSHM Series



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

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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SUPERSEDED BY: T92506
9/17/9

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