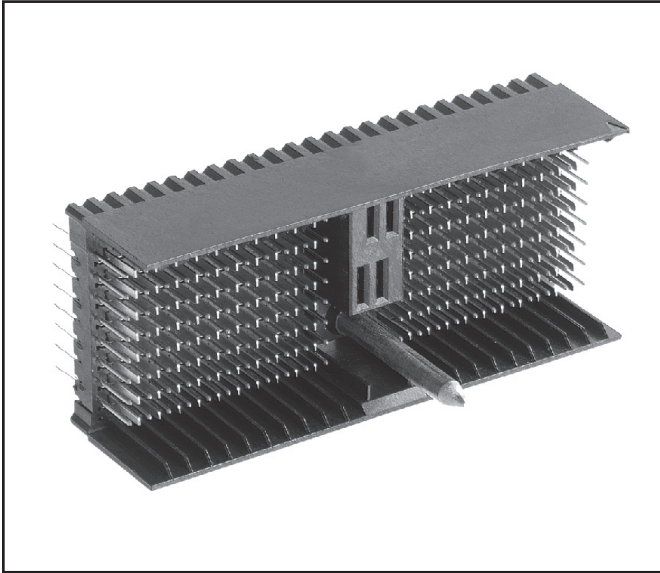


3M™ MetPak™ HSHM Press-Fit Power Header

2 mm Type D, 176 Signal/4 Power 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
- Four integrated 8.25 A power contacts
- Integrated guide pin
- End-to-end stackable with 8 row 3M™ MetPak™ HM and HSHM headers
- See the Regulatory Information Appendix (RIA) in the “RoHS compliance” section of www.3mconnector.com for compliance information

Date Modified: April 29, 2011

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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 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

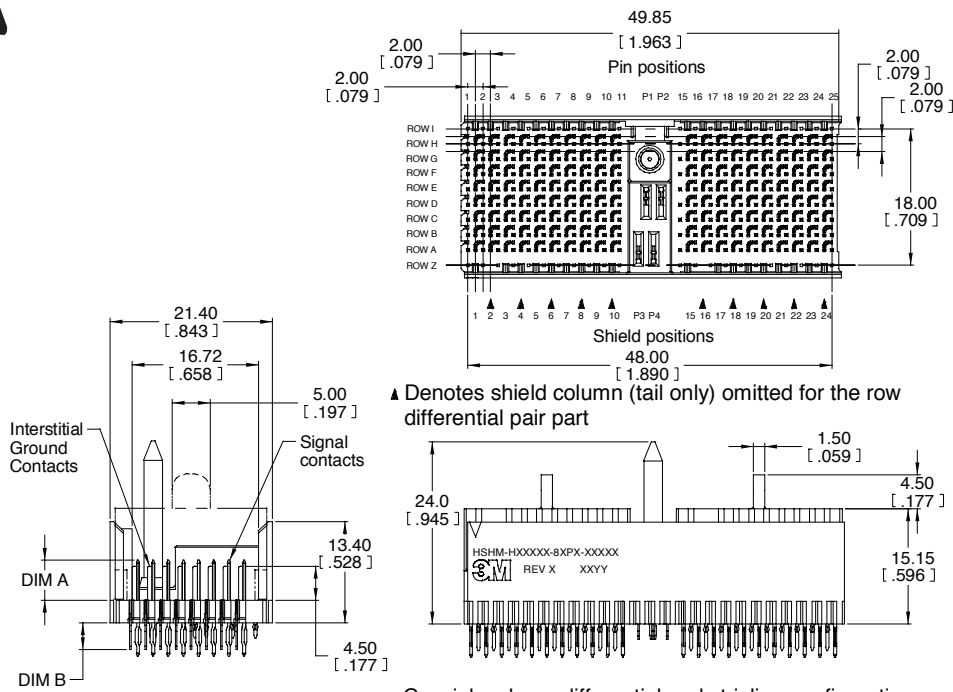
UL File No.: E68080

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3M™ MetPak™ HSHM Press-Fit Power Header

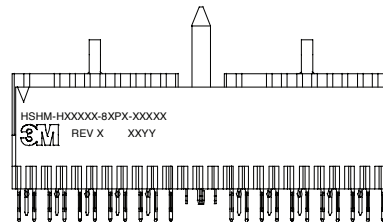
2 mm Type D, 176 Signal/4 Power Contacts, 8 Rows, Straight

HSHM Series



▲ 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

mm
(Inch)

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

() Dimensions used for Reference Only

Ordering Information

HSHM-H176DPWRX-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

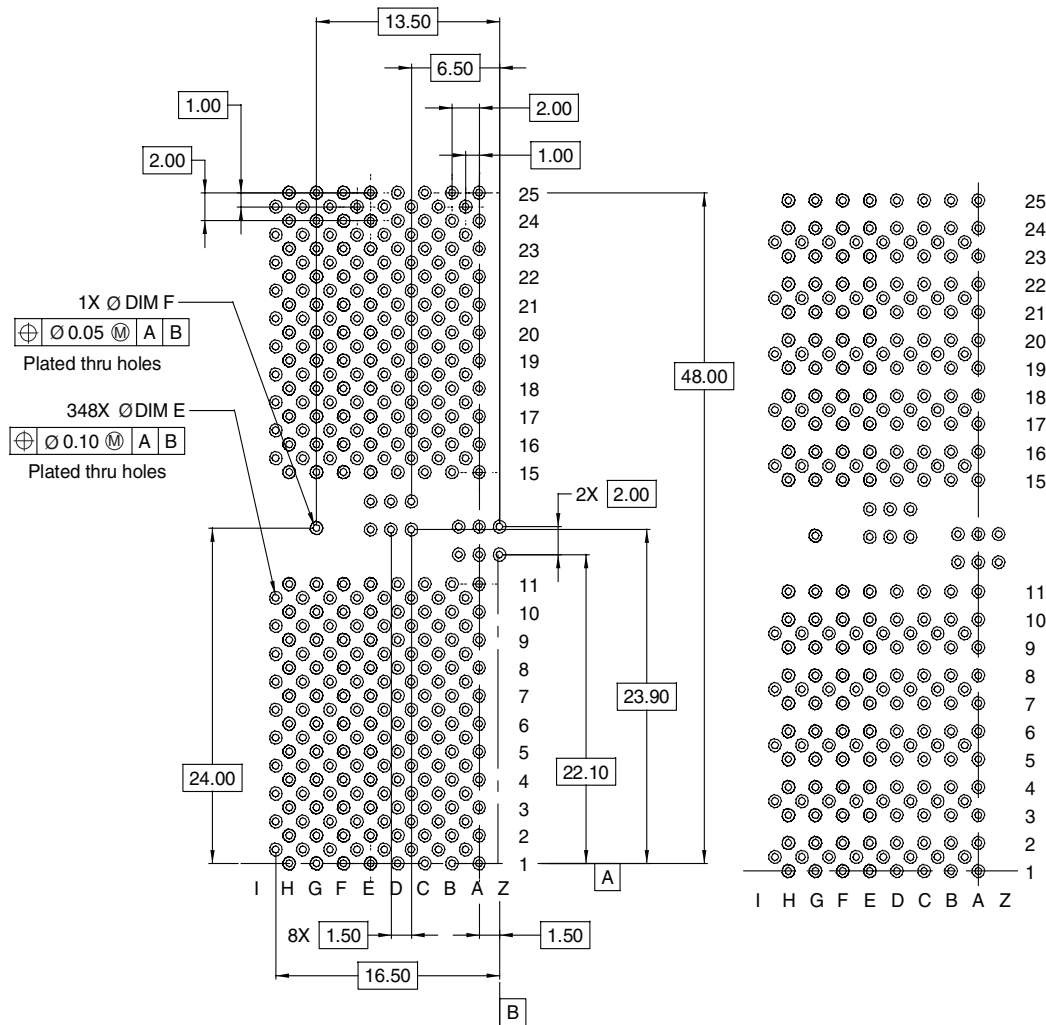
Electronic Solutions Division
Interconnect Solutions
<http://www.3Mconnector.com>

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800-225-5373

3M™ MetPak™ HSHM Press-Fit Power Header

2 mm Type D, 176 Signal/4 Power Contacts, 8 Rows, Straight

HSHM Series



Recommended PCB hole mounting pattern for power center and single ended applications

Recommended PCB hole mounting pattern for row differential applications

(Same geometry as left view without the ground vias)

Hole Plating Table mm [in.]

Dia.	Finished Hole Dia.	Cu. Thickness	SnPb Thickness	Drilled Hole Dia.
E	0.457 - 0.559 [.0180 - .0220]	0.025 - 0.045 [.0010 - .0018]	0.008 - 0.018 [.0003 - .0007]	0.584 - 0.625 [.0230 - .0246]
F	0.690 - 0.790 [.0270 - .0310]	0.025 - 0.045 [.0010 - .0018]	0.008 - 0.018 [.0003 - .0007]	0.810 - 0.860 [.0318 - .0339]

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