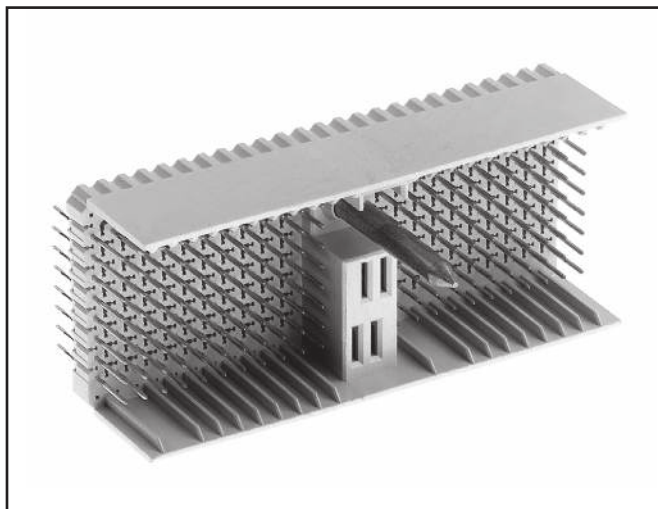


# 3M™ MetPak™ HM Power Header

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

HM Series



- Modular/scalable format IEC 61076-4-101
- Press-fit or solder tail versions
- 101 mated lines per linear inch
- Four integrated 8.25 A power contacts and guide pin
- Ships with protective cap, which also serves as an insertion tool
- Integrated guide pin
- End-to-end stackable with 8 row 3M™ MetPak™ HM and HSHM products
- See the Regulatory Information Appendix (RIA) in the “RoHS compliance” section of [www.3mconnector.com](http://www.3mconnector.com) for compliance information

Date Modified: April 29, 2011

TS-2020-C  
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## Physical

### Insulation:

Material: High Temperature Thermoplastic (LCP)  
Flammability: UL 94V-0

### Color:

Material: Copper Alloy  
Plating: See Ordering information

**Marking:** 3M Logo, Part Number, Revision, Date Code

## Performance

### Mechanical:

Normal Force (Nominal): 0.57 N [58 g] Signal, 0.98 N [100 g] Power  
Engagement Force (Nominal): 0.32 N [33 g] Signal, 1.42 N [145 g] Power  
Separation Force (Nominal): 0.20 N [20 g] Signal, 0.89 N [91 g] Power  
Wipe (Nominal, Shortest Contact): 2.67 mm [0.105 in] Signal, 1.93 N [0.076 in.] Power  
Mate/Unmate Cycles: 250  
Application: This module is suitable for stand-alone use.

### Electrical:

Current Rating (Fully Loaded): 1 A @ 70° C Signal, 8.25 A at 70°C Power  
Insulation Resistance:  $1 \times 10^4 \text{ M}\Omega$  @ 100 V<sub>DC</sub>  
Withstanding Voltage: 750 V<sub>rms</sub>

## Environmental

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

**Process Rating:** Maximum 260°C (per J-STD-020C)

**Withstanding Voltage:** (per J-STD-020C)

UL File No.: E68080

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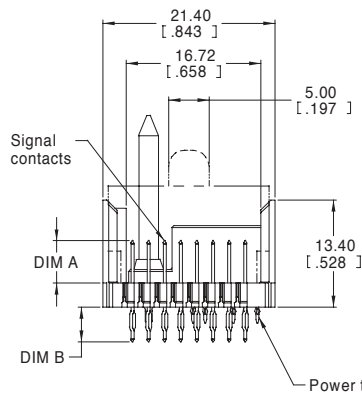
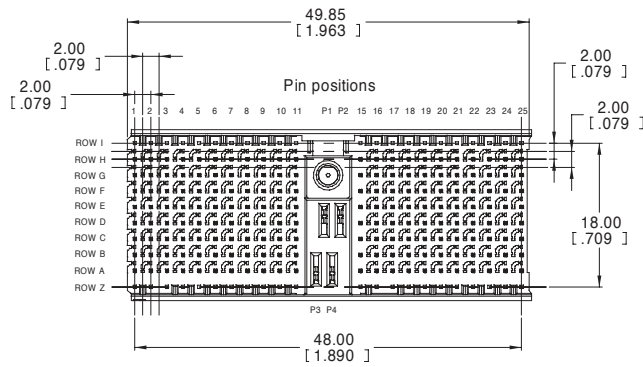
HM Series



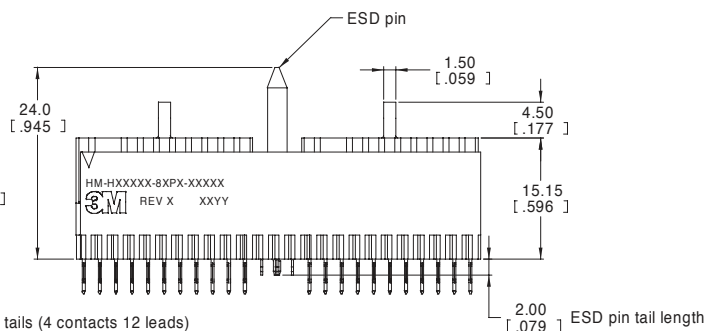
mm  
(Inch)

Tolerance Unless Noted		
	0	0.0
mm	±3	±0.3
	±0.00	±0.13

[ ] Dimensions for Reference Only



DIM A = Pin mating length  
DIM B = Tail length



Shown with protective caps\*

\* Caps to be removed after press-fit installation process

## Ordering Information

**HM-H176DPWR1 - 8CXX - XXXXX** (rows I and Z not loaded)

**HM-H220DPWR2 - 8BXX - XXXXX** (rows I and Z loaded 8.3 mm mate length)

Tail Style:

P = Press-fit tail

S = Solder tail

Tail Length (DIM B):

1 = 4.4 mm pin, 2.0 mm power and 2.0 mm ESD

2 = 4.4 mm pin, 4.4 mm power and 2.0 mm ESD

Plating  $\mu\text{m}$  [ $\mu\text{m}$ ]:

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**

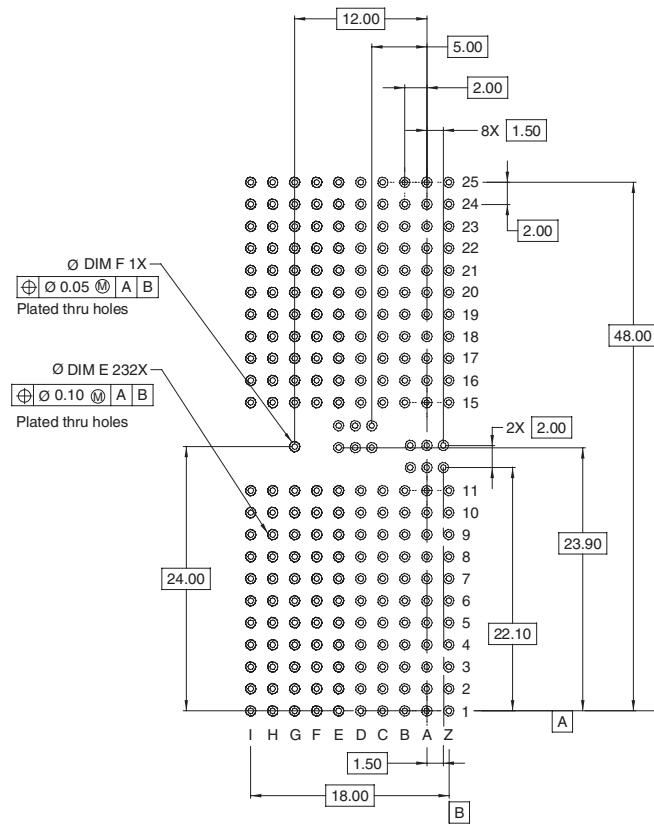
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HM Series



Recommended PCB hole mounting pattern

Hole Plating Table

DIM	Finished Hole Dia. "D"	Cu. Thickness	SnPb Thickness	Drilled Hole Dia.
"A"	0.550 - 0.650 [.0217 - .0256]	0.025 - 0.045 [.0010 - .0018]	0.008 - 0.018 [.0003 - .0007]	0.686 - 0.727 [.0270 - .0286]
"B"	0.690 - 0.790 [.0270 - .0310]	0.025 - 0.045 [.0010 - .0018]	0.008 - 0.018 [.0003 - .0007]	0.810 - 0.860 [.0320 - .0340]

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