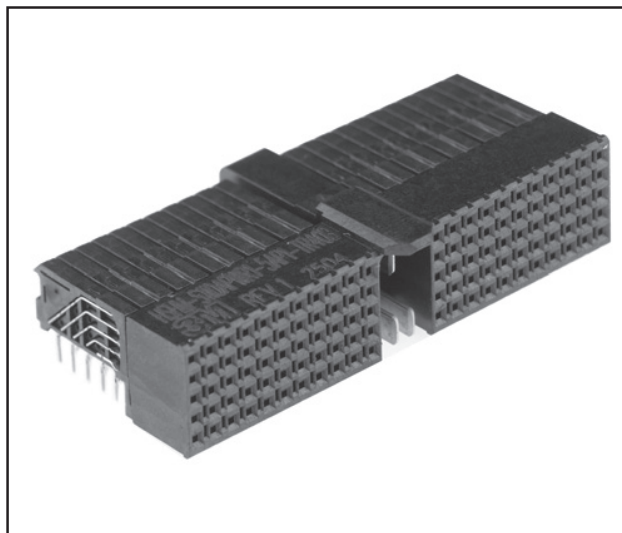


# 3M™ MetPak™ HSHM Press-Fit Power Socket

2 mm Type A, 110/4 Signal/Power Contacts, 5 Rows, Right Angle

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
- Mates with 3M™ MetPak™ HSHM headers
- Dual beam contact construction for high reliability
- Four integrated 8.25 A power blades
- 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: October 7, 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, 0.98 N [100 g] Power

Engagement Force (Nominal): 0.32 N [33 g] Signal, 0.22 N [22 g] Shield, 1.42 N [145 g] Power

Separation Force (Nominal): 0.20 N [20 g] Signal, 0.20 N [20 g] Shield, 0.89 N [91 g] Power

Wipe (Nominal, Shortest Contact): 2.67 mm [0.105 in] Signal, 1.57 mm [0.062 in] Shield, 1.93 mm [.076 in] Power

Mate/Unmate Cycles: 250

Application: This module is not suitable for stand-alone use. Limited capture of 0.75 mm in Longitudinal and 1.00 mm transverse directions. (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, 8.25 A @ 70° C Power

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

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

## Environmental

Temperature Rating: -55° C to 125° C

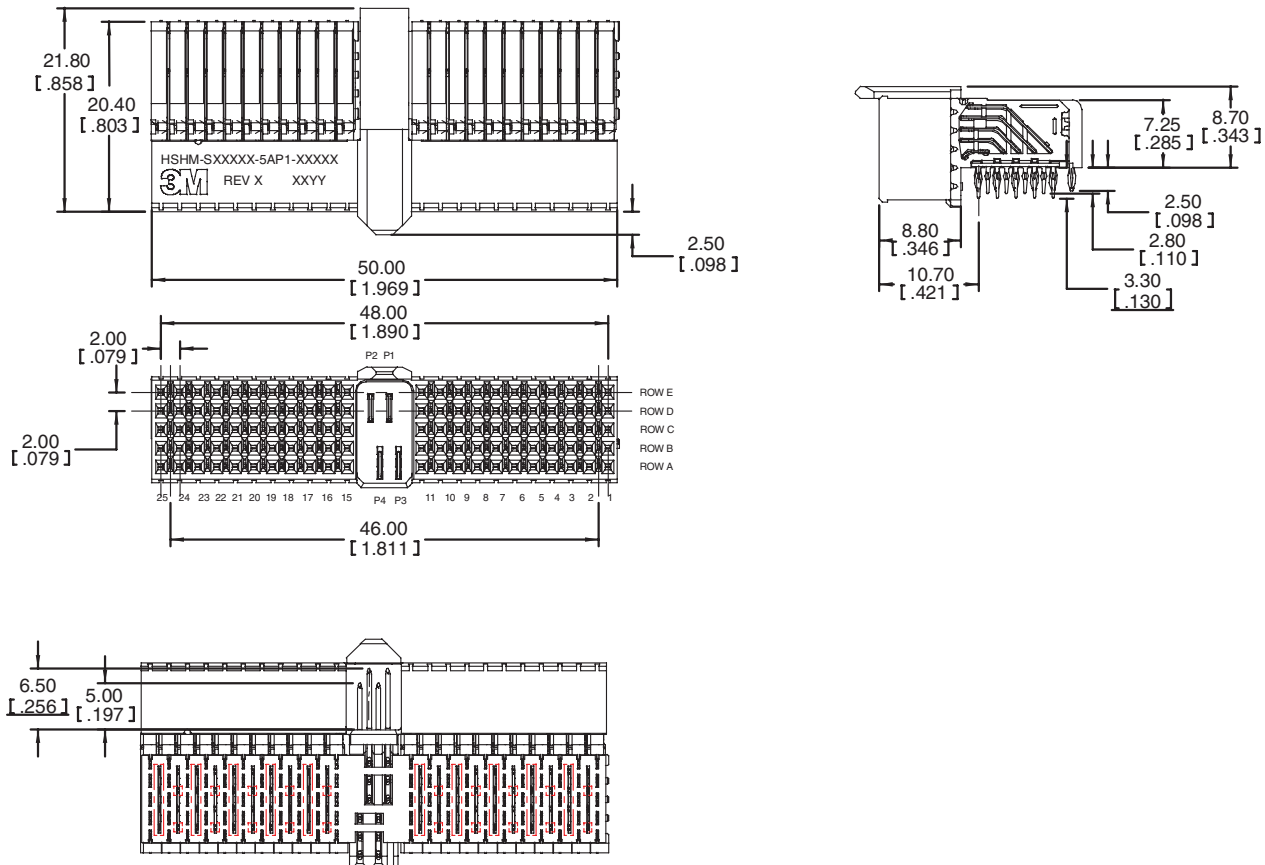
UL File No.: E68080

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Boxed leads are omitted on row differential pair connectors

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

[ ] Dimensions for Reference Only

## Ordering Information

### HSHM-S110APWRX-5AP1- XXXXX

High Speed Option: \_\_\_\_\_

- 1 = Row differential applications
- 4 = Coaxial and column differential applications

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

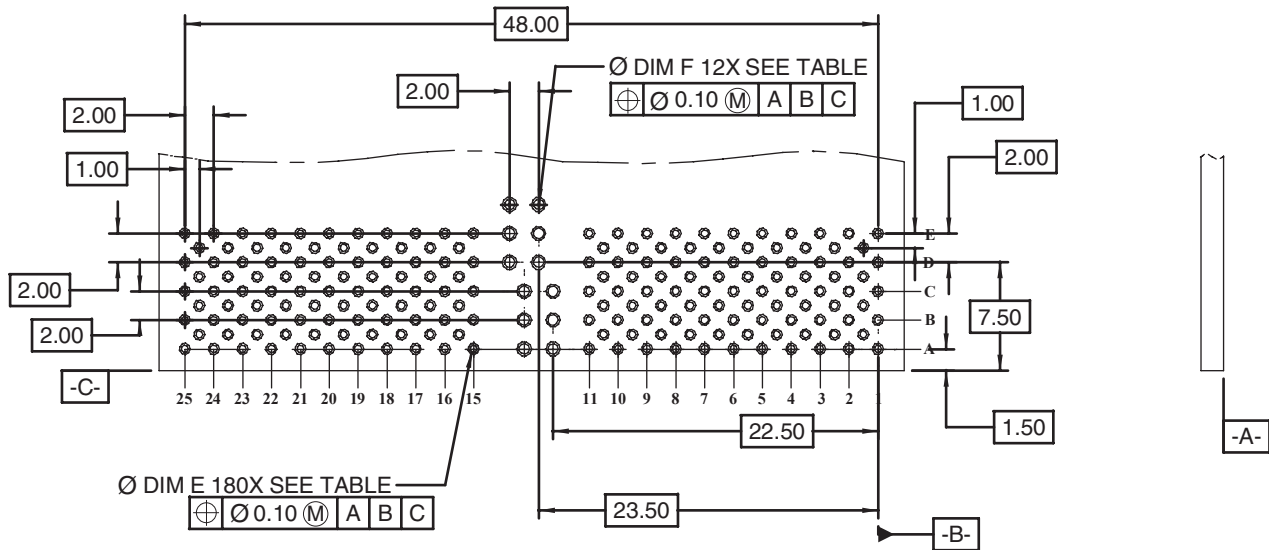
- TG30 = 0.76 [30] Min. Au Contact Area  
2.54 [100] Min. SnPb Terminal Area (RIA C2 & E2 apply)  
1.27 [50] Min. Ni All over  
Standard Option
- TG30L = 0.76 [30] Min. Au Contact Area, Lubricated  
2.54 [100] Min. SnPb Terminal Area (RIA C2 & E2 apply)  
1.27 [50] Min. Ni All over  
Typically higher 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)

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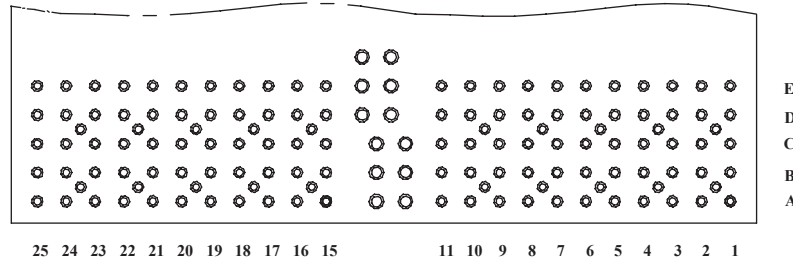
# 3M™ MetPak™ HSHM Press-Fit Power Socket

2 mm Type A, 110/4 Signal/Power Contacts, 5 Rows, Right Angle

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 above 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 [.0320 - .0340]

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