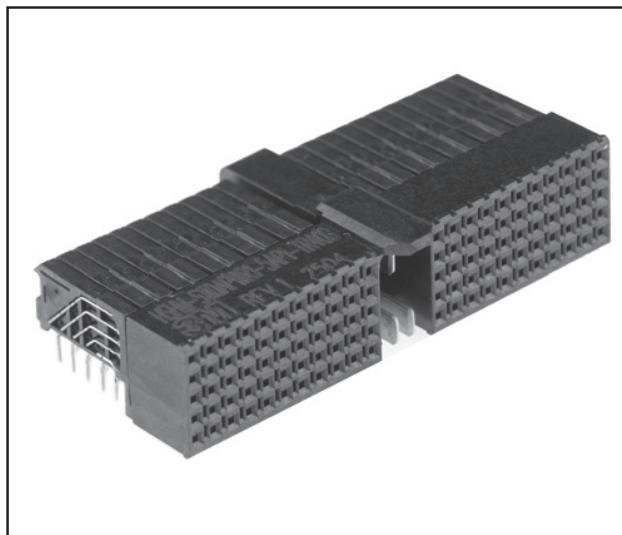


3M™ MetPak™ HSHM Press-Fit Power Socket

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 Ω (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 for compliance information

Date Modified: October 7, 2010

TS-2086-B
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, 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 Ω Single-ended, 100 Ω Differential

Current Rating (Fully Loaded): 1 A @ 70° C Signal, 8.25 A @ 70° C Power

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

MetPak is a trademark of 3M Company.



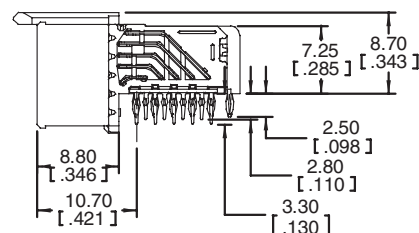
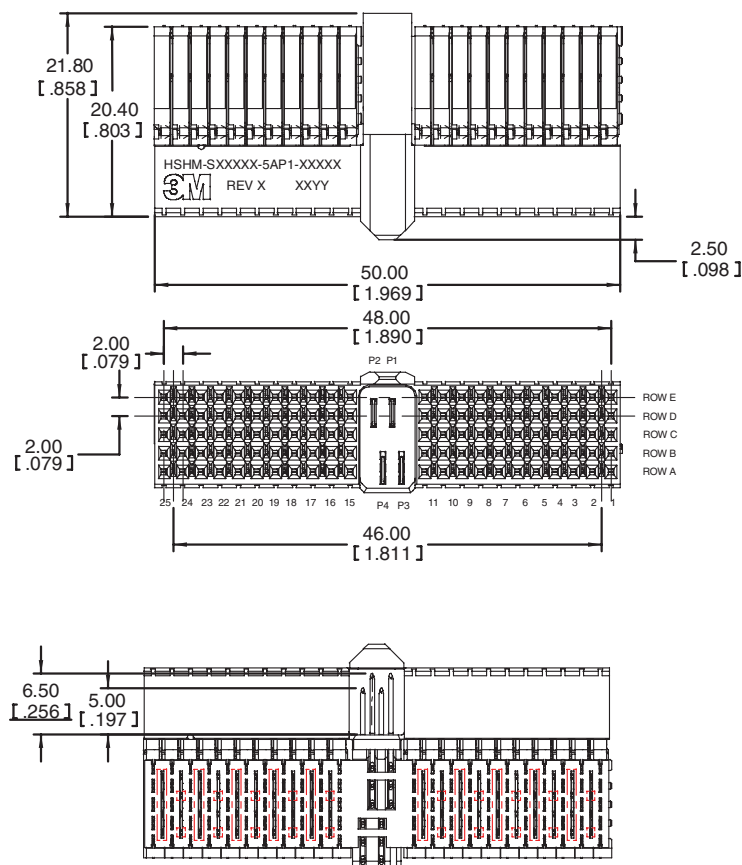
Electronic Solutions Division
Interconnect Solutions
<http://www.3Mconnector.com>

3M is a trademark of 3M Company.
For technical, sales or ordering information call
800-225-5373

3M™ MetPak™ HSHM Press-Fit Power Socket

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

HSHM Series



Boxed leads are omitted on row differential pair connectors

mm (Inch)			
Tolerance Unless Noted			
	0	0.0	0.00
mm	±3	±0.3	±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 μm [μin]:

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)

TS-2086-B
Sheet 2 of 3



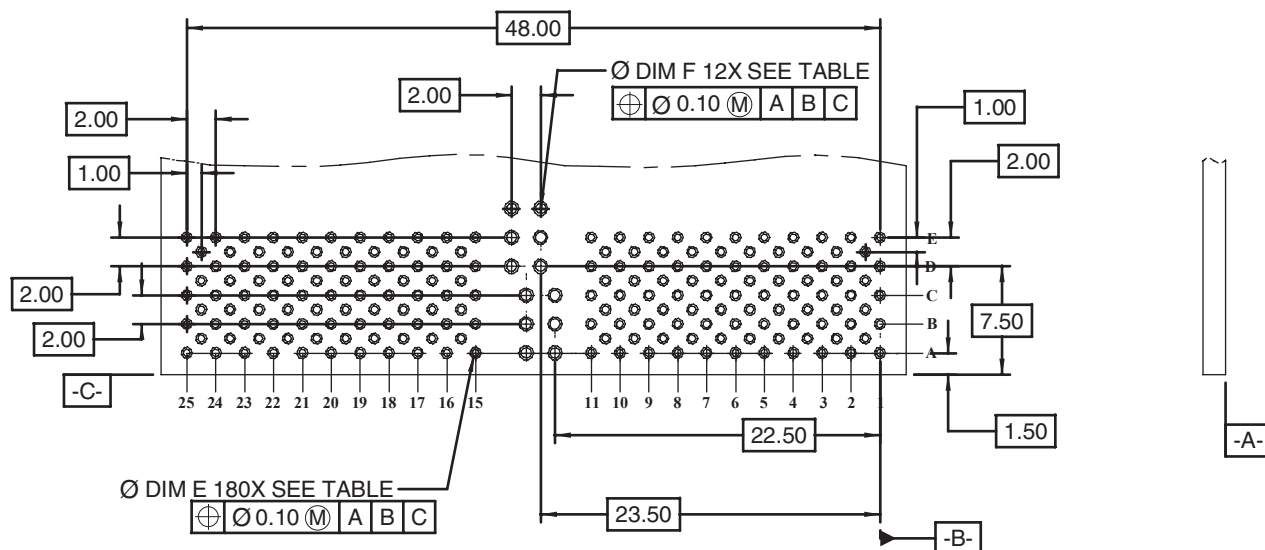
Electronic Solutions Division
Interconnect Solutions
<http://www.3Mconnector.com>

3M is a trademark of 3M Company.
For technical, sales or ordering information call
800-225-5373

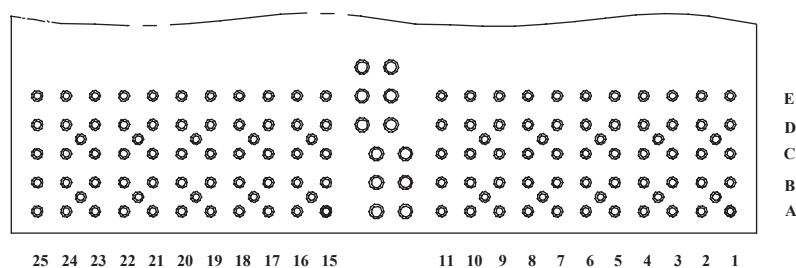
3M™ MetPak™ HSHM Press-Fit Power Socket

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	Finsihed 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]

TS-2086-B
Sheet 3 of 3



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

3M is a trademark of 3M Company.
For technical, sales or ordering information call
800-225-5373

Important Notice

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

Warranty; Limited Remedy; Limited Liability.

This product will be free from defects in material and manufacture for a period of one (1) year from the time of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. **Except where prohibited by law, 3M will not be liable for any indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.**



3M Electronics Solutions Division

6801 River Place Blvd.
Austin, TX 78726-9000
U.S.A.
1-800-225-5373
www.3Mconnector.com

Please recycle. Printed in USA.
© 3M 2010. All rights reserved.
RIA-2217B-E

3M is a trademark of 3M Company.