

3M™ MetPak™ HSHM Press-Fit Socket

2 mm Type B22, 110 Signal 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
- Press-fit headers and receptacles
- 63 mated lines per linear inch
- Dual beam contact construction for high reliability
- End-to-end stackable with 5 row 3M™ MetPak™ CP2, HM, and HSHM sockets
- Mates with 5 row 3M™ MetPak™ CP2, HM, and HSHM headers
- See the Regulatory Information Appendix (RIA) in the “RoHS compliance” section of www.3mconnector.com for compliance information

Date Modified: October 12, 2010

TS-2247-C
Sheet 1 of 3

Physical

Insulation:

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

Color:

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

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

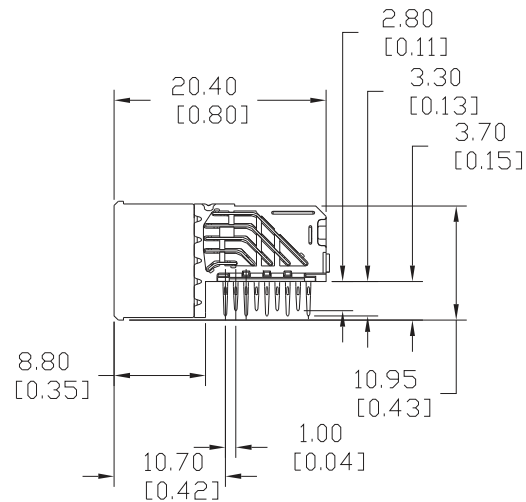
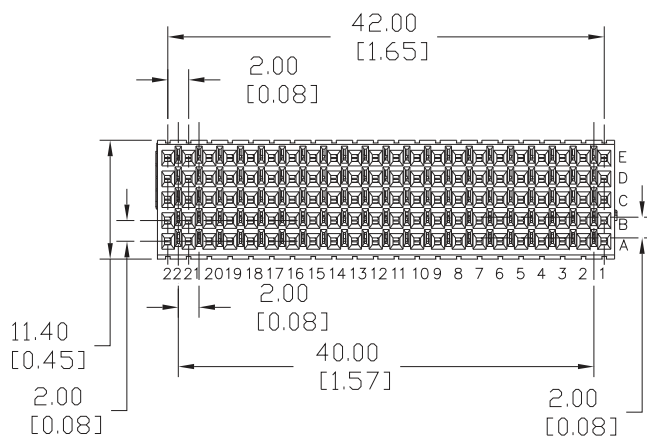
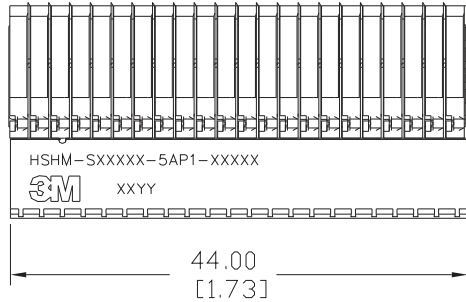
Temperature Rating: -55° C to 125° C

UL File No.: E68080

3M™ MetPak™ HSHM Press-Fit Socket

2 mm Type B22, 110 Signal Contacts, 5 Rows, Right Angle

HSHM Series



mm (Inch)	
Tolerance Unless Noted	
.0	.00
mm ±.1	±.10

() Dimensions used for Reference Only

Ordering Information

HSHM-S110BX-5AP1-XXXXX

High Speed Option:

- 1 = Row differential applications
- 3 = 6th Row and +2 Row Grounding Applications
- 4 = Coaxial and column differential applications

Plating μm [μin]:

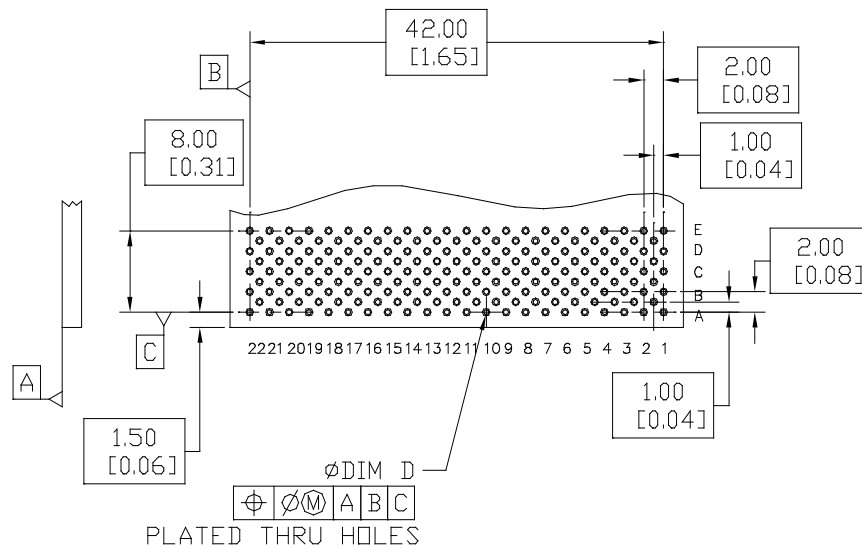
- TG30 = 0.76 [30] Min. Au Contact Area
2.54 [100] Min. SnPb Terminal Area (RIA C2 & E2 apply)
1.27 [50] Min. Ni All over
Standard Option
- TG30L = 0.76 [30] Min. Au Contact Area, Lubricated
2.54 [100] Min. SnPb Terminal Area (RIA C2 & E2 apply)
1.27 [50] Min. Ni All over
Typically higher make order 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-2247-C
Sheet 2 of 3

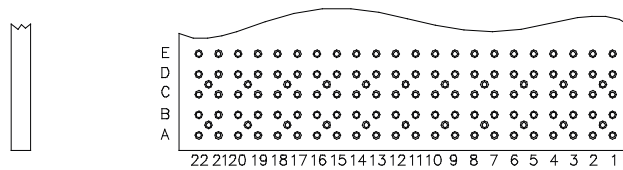
3M™ MetPak™ HSHM Press-Fit Socket

2 mm Type B22, 110 Signal 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.]

Finished Hole Dia. (D)	Cu. Thickness	SnPb Thickness	Drilled Hole Dia.
0.457 - 0.559 [0.180 - .0220]	0.025 - 0.045 [0.010 - .0018]	0.008 - 0.018 [0.0003 - .0007]	0.584 - 0.625 [0.0230 - .0246]

TS-2247-C
Sheet 3 of 3

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.