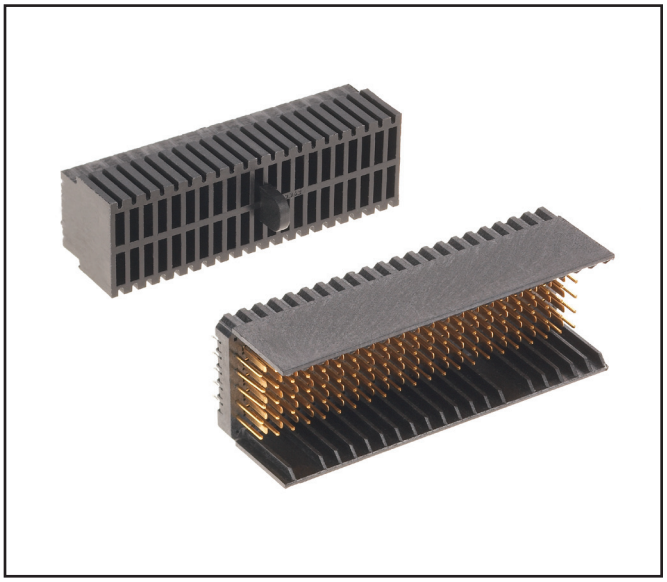
3M™ MetPak™ HSHM Press-Fit Header

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

Date Modified: November 10, 2010

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 (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:	10^4 MΩ @ 100 V_{DC}
Withstanding Voltage:	750 V_{RMS}

Environmental

Temperature Rating: -55° C to 125° C

UL File No.: E68080

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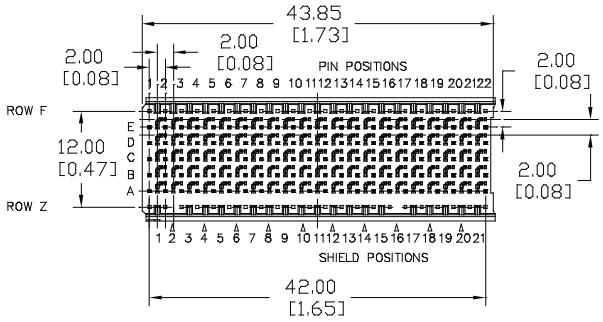
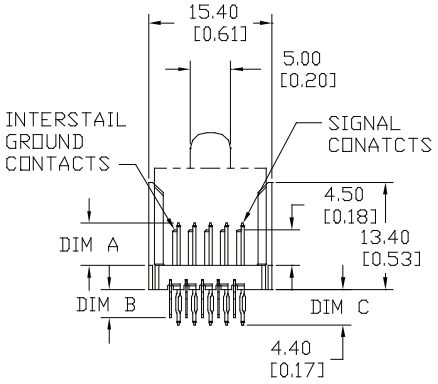
mm
(Inch)

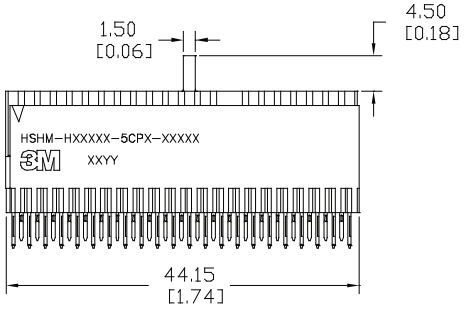
Tolerance Unless Noted			
	0	0.0	0.00
mm	±3	±0.3	±0.13

[ ] Dimensions for Reference Only



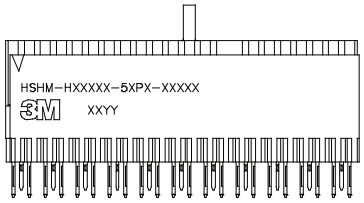
Δ Denotes shield column (tail only)
Omitted for the row differential part





Coaxial column differential and stripline configuration
Shown with protective cap

Dim. "A" = Pin mounting length
Dim. "B" = Shield tail length
Dim. "C" = Pin tail length



Row differential and stripline configuration
Shown with protective cap
Caps to be removed after press-fit installation process

Ordering Information

HSHM-H110BX-5CPX- XXXXX (rows F 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)

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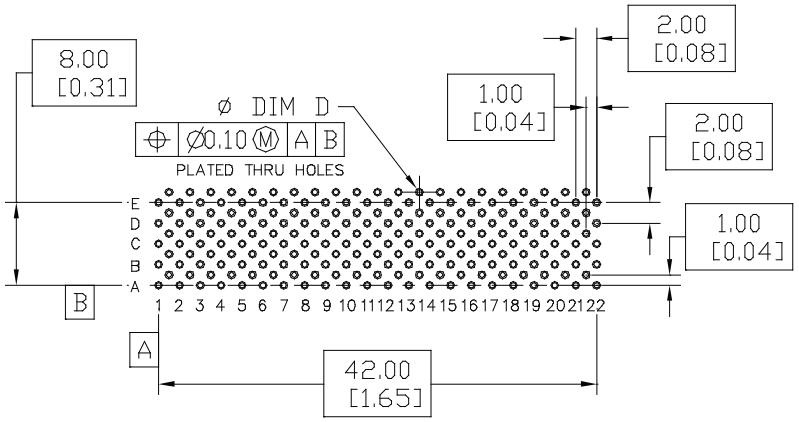
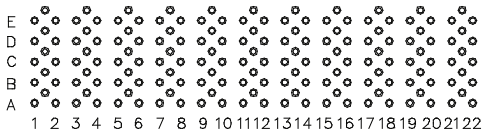


Recommended PCB hole mounting pattern for coaxial,
Column differential and stripline applications.



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 [.0180 - .0220]	0.025 - 0.045 [.0010 - .0018]	0.008 -0.018 [.0003 - .0007]	0.584 - 0.625 [.0230 - .0246]

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