

3M™ MetPak™ HSHM Press-Fit Socket

2 mm Type B19, 95 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
- 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 3M™ MetPak™ HSHM headers
- See the Regulatory Information Appendix (RIA) in the “RoHS compliance” section of 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

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: 10^4 M Ω @ 100 V_{DC}

Withstanding Voltage: 750 V_{RMS}

Environmental

Temperature Rating: -55° C to 125° C

UL File No.: E68080

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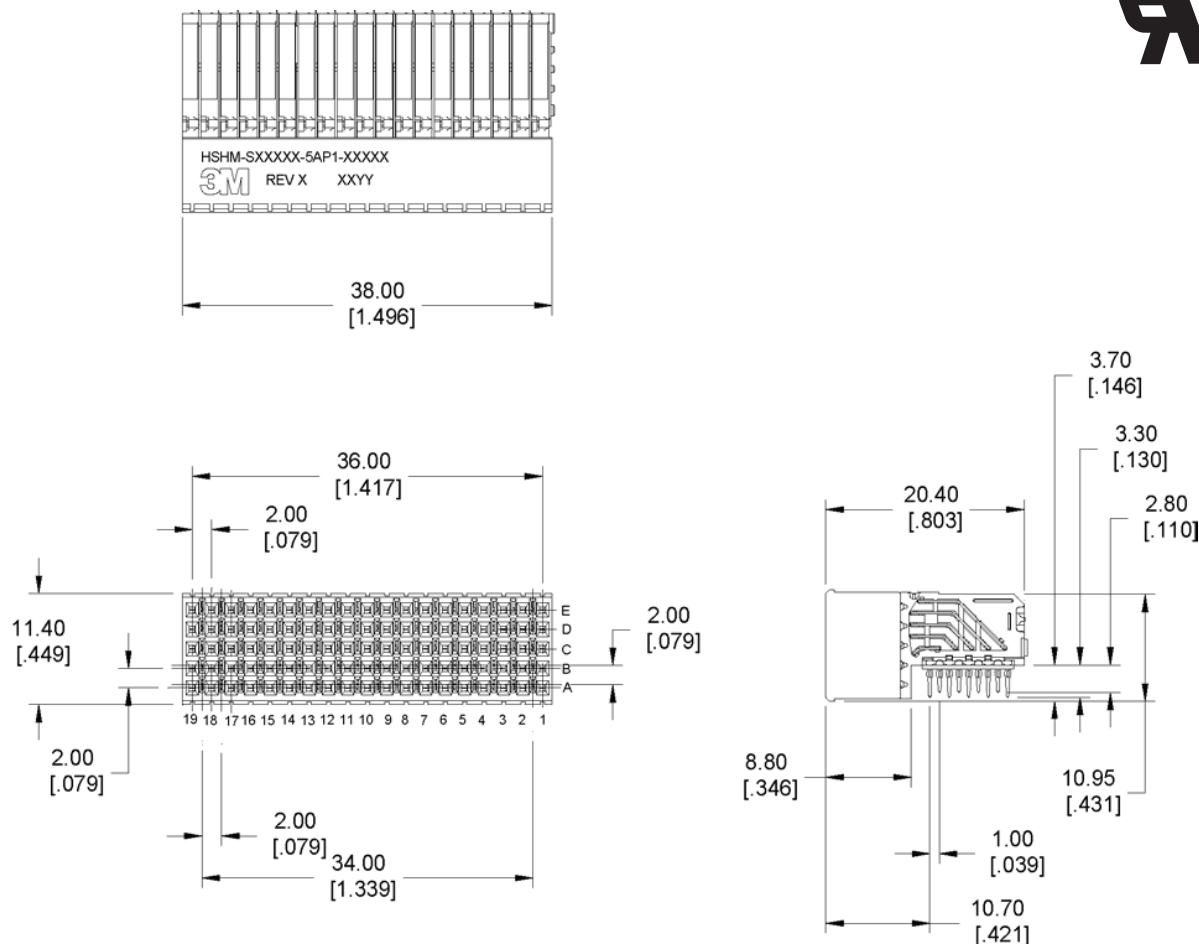
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mm (Inch)			
Tolerance Unless Noted			
	0	0.0	0.00
mm	±3	±0.3	±0.13

[] Dimensions for
Reference Only

Ordering Information

HSHM-S095BX - 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)

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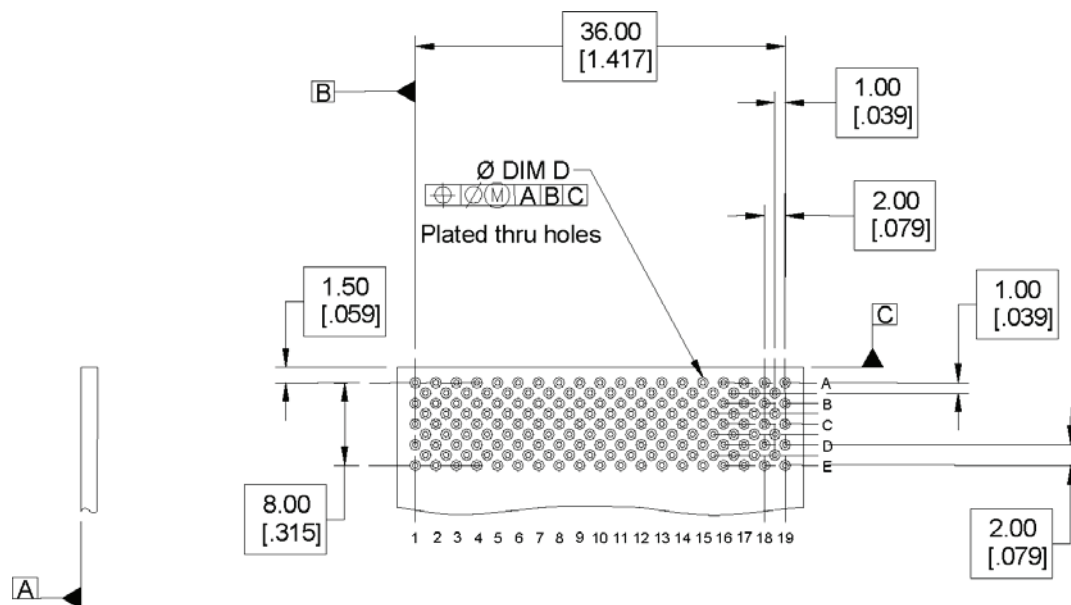
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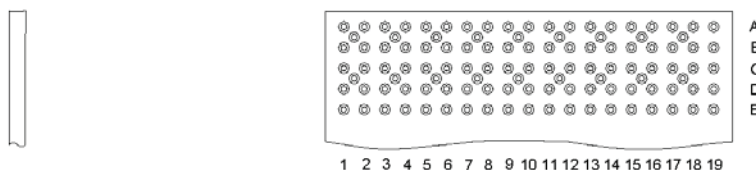
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Recommended PCB hole mounting pattern for coaxial, column differential and stripline applications



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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