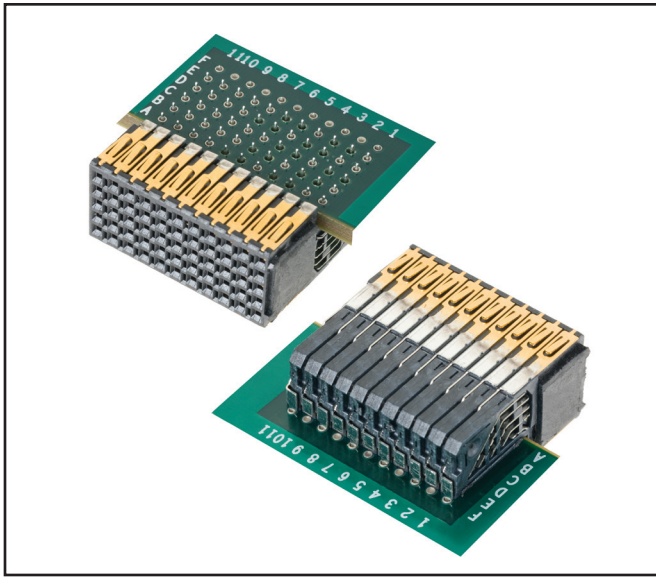


# 3M™ Ultra Hard Metric (UHM) Press-Fit Socket

2 mm, B Type: 55, 95, 110 & 125 Signal Contacts, 5+2 Rows, Right Angle

UHM Series



- 7+ Gbps data rates when mated to standard IEC 61076-4-101 headers.
- Low crosstalk at high frequencies
- 50/100  $\Omega$  (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™ CP2, HM, UHM and HSHM sockets
- Mates with 3M™ CP2, HM, UHM, HSHM headers, and cPCI™ type headers
- See the Regulatory Information Appendix (RIA) in the “RoHS compliance” section of [www.3M.com/Interconnects](http://www.3M.com/Interconnects) for compliance information (RIA E1 & C1 apply)

Date Modified: September 3, 2009

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## Physical

### Insulation:

Material: High Temperature Thermoplastic (LCP)

Flammability: UL 94V-0

### Contact:

Material: Copper Alloy

Plating: TG30, KR

## Performance

### Mechanical:

Normal Force (Nominal): 0.57 N [58 g] Signal, (0.74 N [75 g] Shield with HSHM & UHM headers)

Engagement Force (Nominal): 0.32 N [33 g] Signal, (0.22 N [22 g] Shield with HSHM & UHM headers)

Separation Force (Nominal): 0.20 N [20 g] Signal, (0.20 N [20 g] Shield with HSHM & UHM headers)

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

Application: This module is not suitable for stand-alone use, additional guide features recommended per IEC 61076-4-101

### Electrical:

Data Rate: 7+ Gbps data rates (when mated to standard IEC 61076-4-101 headers)

Characteristic Impedance: 50  $\Omega$  Single-ended, 100  $\Omega$  Differential

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

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

**3M**

Electronic Solutions Division  
Interconnect Solutions

<http://www.3M.com/interconnects/>

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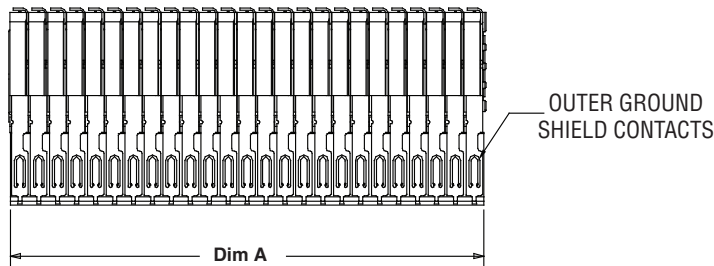
For technical, sales or ordering information call

**800-225-5373**

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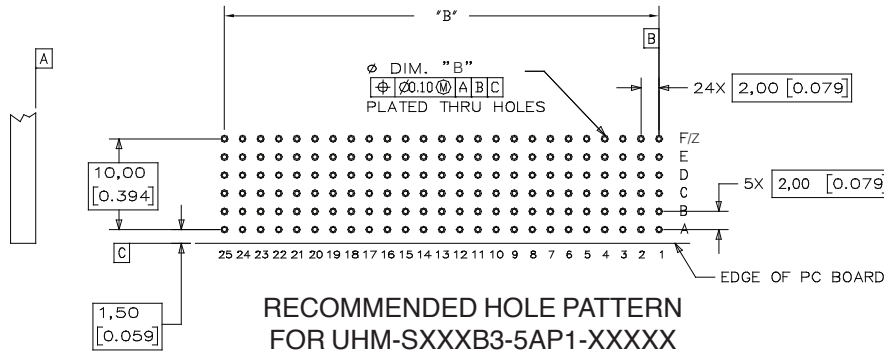
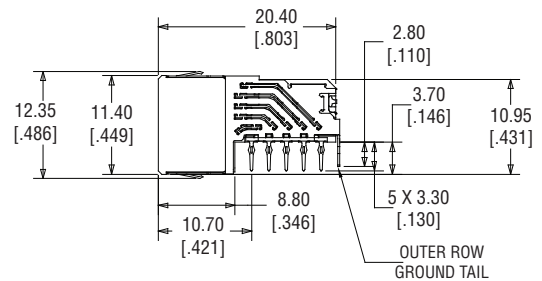
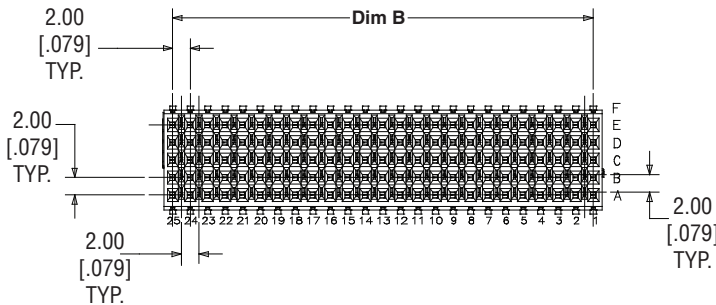


Signal Contact Quantity	Dimension A	Dimension B
55	22.00	20.00
95	38.00	36.00
110	44.00	42.00
125	50.00	48.00

mm  
[Inch]

Tolerance Unless Noted			
	0.	.0	.00
mm	1	0.3	0.13

[ ] Dimensions used for Reference Only



RECOMMENDED HOLE PATTERN FOR UHM-SXXXB3-5AP1-XXXX

Recommended hole pattern for UHM-SXXXB0-5AP1-XXXX contains no vias in even positions on Row F/Z."

Hole Plating Table mm [in.]			
Finished Hole Dia. (D)	Cu. Thickness	SnPb Thickness	Drilled Hole Dia.
0.550 - 0.650 [.0217 - .0256]	0.025 - 0.045 [.0010 - .0018]	0.008 - 0.018 [.0003 - .0007]	0.686 - 0.727 [.0270 - .0286]

## Ordering Information

### UHM-SXXXBX-5AP1- XXXXX

Number of Signal Contacts:  
055, 095, 110, 125

High Speed Option:

- 0 = 50Ω Coaxial single-ended and 100Ω Differential pair applications for connection to 5 \*2 row headers Outer Row Ground Tails in odd positions of Row F/Z
- 3 = 50Ω Coaxial single-ended and 100Ω Differential pair applications for connection to 5 \*2 row headers Outer Row Ground Tails in all positions of Row F/Z

Plating Options μm [μ"]:

- TG30 = 0.76 [30] Min. Au Contact Area  
2.54 [100] Min. SnPb Terminal Area  
1.27 [50] Min. Ni All over  
(RIA E2 & C2 apply)
- KR = 0.76 [30] Min. Au Contact Area  
5.08 [200] Min. Sn Terminal Area  
1.27 [50] Min. Ni All over  
(RIA E1 & C1 apply)

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