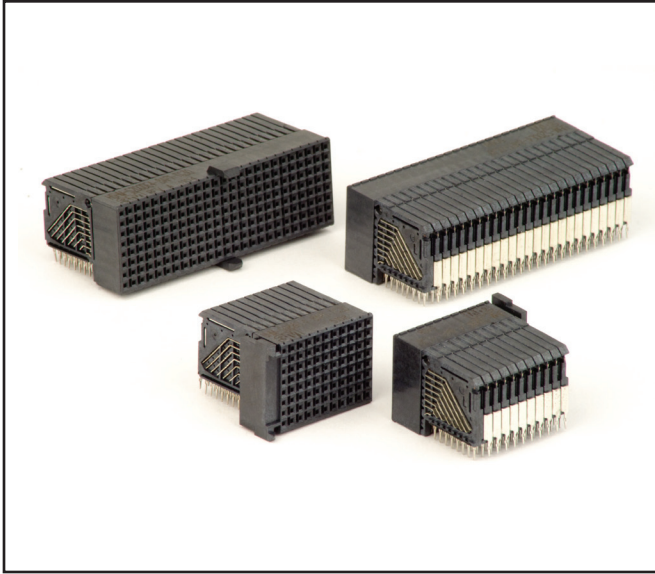


# 3M™ Ultra Hard Metric (UHM) Press-Fit Socket

2 mm, D, DPWR, DE, E, FL & FR Types: 176, 200 or 88 Signal Contacts, 8 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
- 101 mated lines per linear inch
- Dual beam contact construction for high reliability
- End-to-end stackable with 8-Row 3M™ CP2, HM, UHM and HSHM Sockets
- Mates with 3M™ CP2, HM, UHM, HSHM Headers
- See the Regulatory Information Appendix (RIA) in the “RoHS compliance” section of [www.3Mconnector.com](http://www.3Mconnector.com) for compliance information (RIA E1 & C1 apply)

Date Modified: February 15, 2010

TS-2326-B  
Sheet 1 of 5

## Physical

### Insulation:

Material: High Temperature Thermoplastic (LCP) - black or natural  
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 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: These modules are 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

UL File No.: E68080

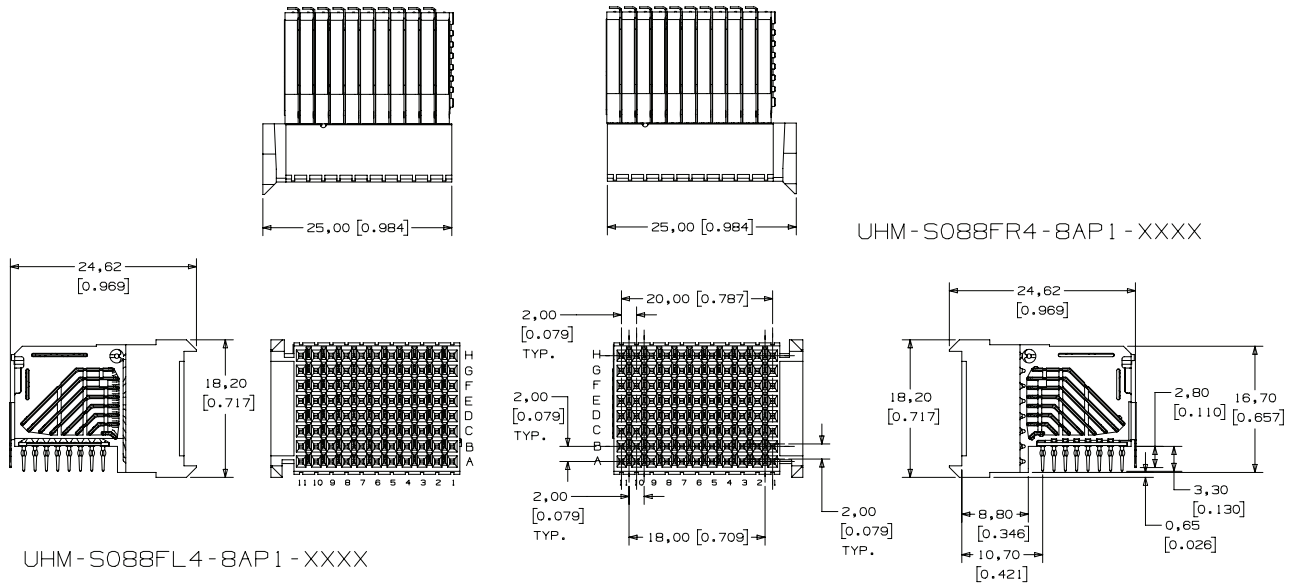
**3M**  
Electronic Solutions Division  
Interconnect Solutions  
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# 3M™ Ultra Hard Metric (UHM) Press-Fit Socket

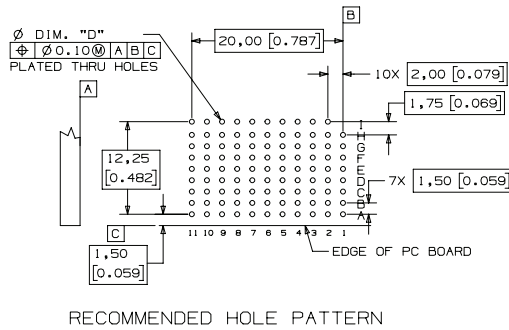
2 mm, D, DPWR, DE, E, FL & FR Types: 176, 200 or 88 Signal Contacts, 8 Rows, Right Angle

UHM Series



UHM-S088FL4-8AP1-XXXX

UHM-S088FR4-8AP1-XXXX



mm [Inch]			
Tolerance Unless Noted			
0.	.0	.00	
mm	1	0.3	0.13

[ ] Dimensions used for Reference Only

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-SXXXXX4-8AP1-XXXX

Number of Signal Contacts & Body Style: \_\_\_\_\_  
088FL, 088FR, 176D, 176DPWR, 200DE, 200E

High Speed Option: \_\_\_\_\_  
4 = 50 Ohm Coaxial single-ended and  
100 Ohm Differential pair  
applications

Tail Length:  
1 = 3.3 mm

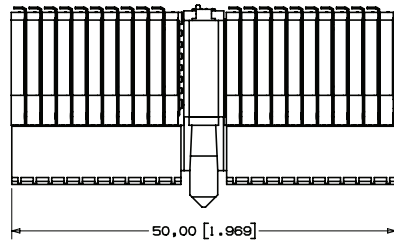
Plating um [u"]:  
TG30 = 0.76 [30] Min. Au Contact Area  
2.54 [100] Min. SnPb Terminal Area  
1.27 [50] Min. Ni All Over  
(RIA E2 & C2 apply)

TS-2326-B  
Sheet 2 of 5

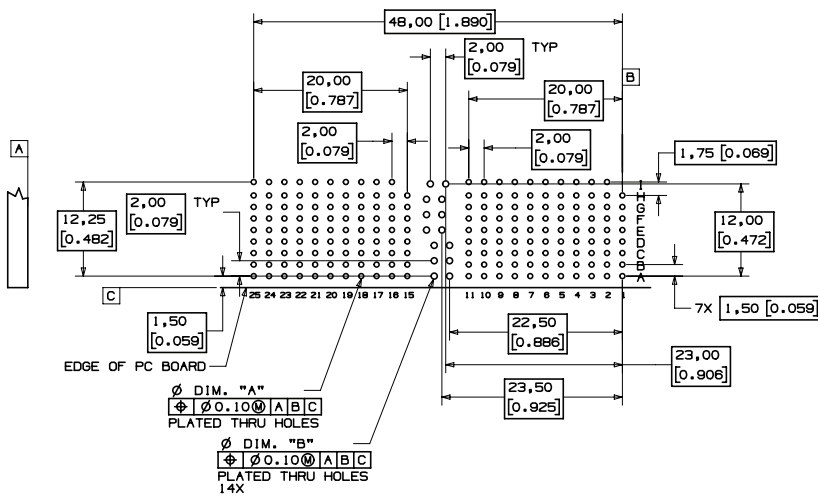
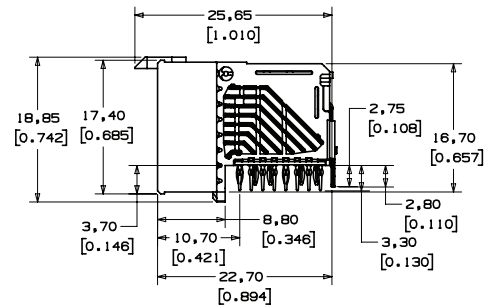
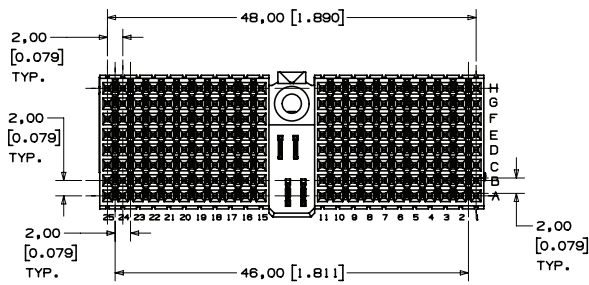
# 3M™ Ultra Hard Metric (UHM) Press-Fit Socket

2 mm, D, DPWR, DE, E, FL & FR Types: 176, 200 or 88 Signal Contacts, 8 Rows, Right Angle

UHM Series



UHM-S176DPWR4-8AP1-XXXX



RECOMMENDED HOLE PATTERN

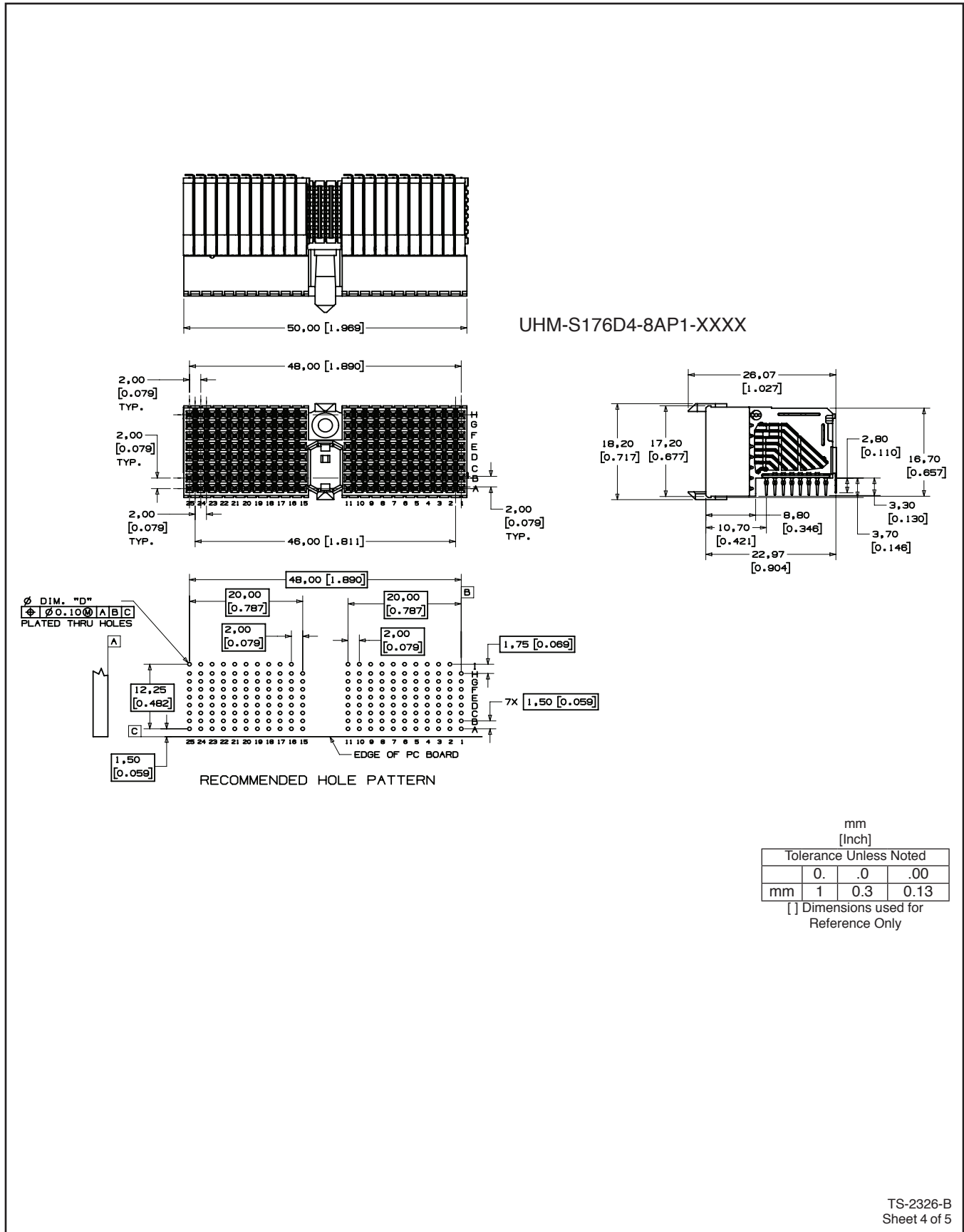
		mm [Inch]		
		Tolerance Unless Noted		
		0.	.0	.00
mm		1	0.3	0.13

[ ] Dimensions used for Reference Only

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

2 mm, D, DPWR, DE, E, FL & FR Types: 176, 200 or 88 Signal Contacts, 8 Rows, Right Angle

UHM Series

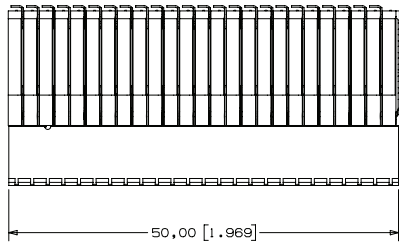


TS-2326-B  
Sheet 4 of 5

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

2 mm, D, DPWR, DE, E, FL & FR Types: 176, 200 or 88 Signal Contacts, 8 Rows, Right Angle

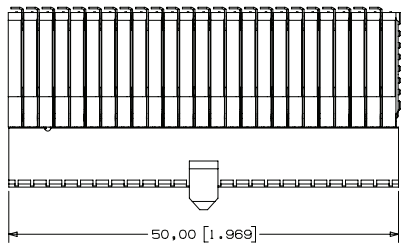
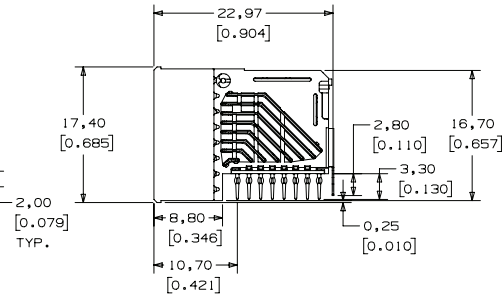
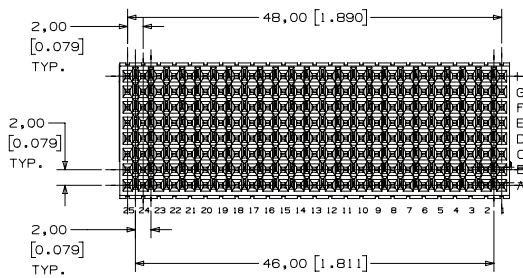
UHM Series



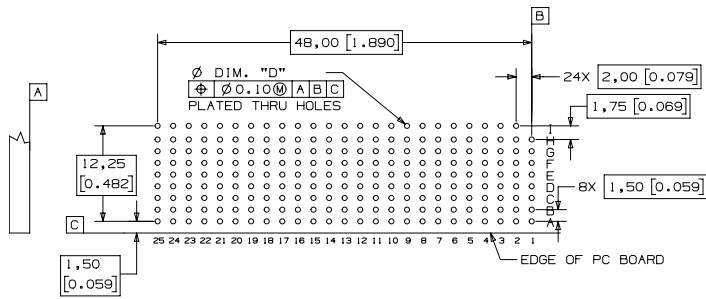
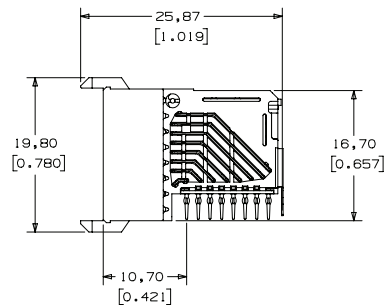
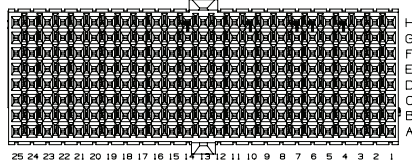
UHM-S200E4-8AP1-XXXX

mm [Inch]			
Tolerance Unless Noted			
0.	.0	.00	
mm	1	0.3	0.13

[ ] Dimensions used for Reference Only



UHM-S200DE4-8AP1-XXXX



RECOMMENDED HOLE PATTERN

TS-2326-B  
Sheet 5 of 5

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