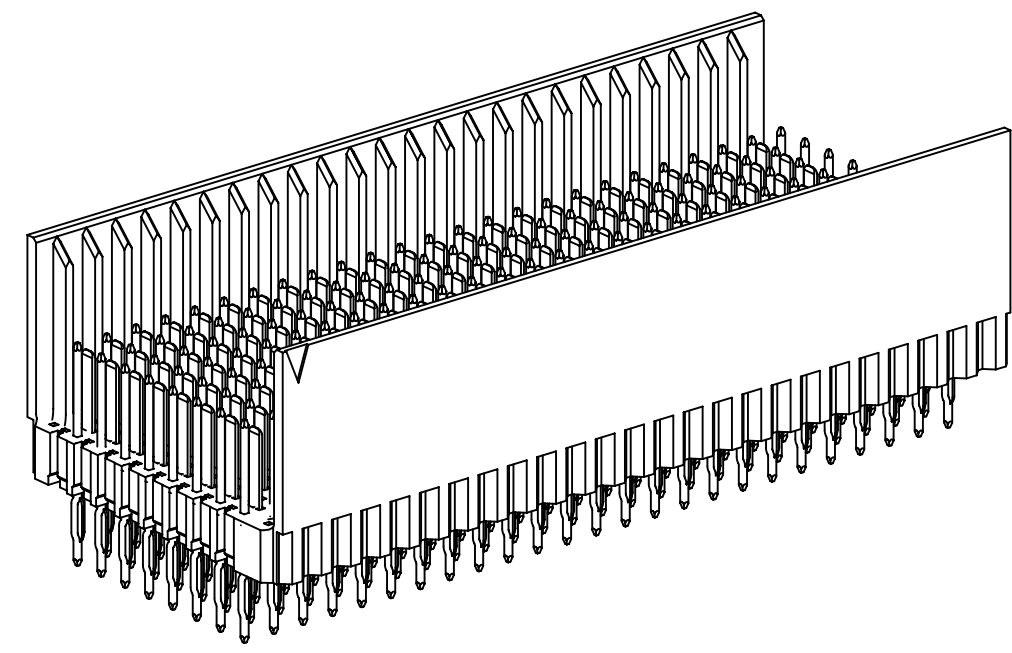
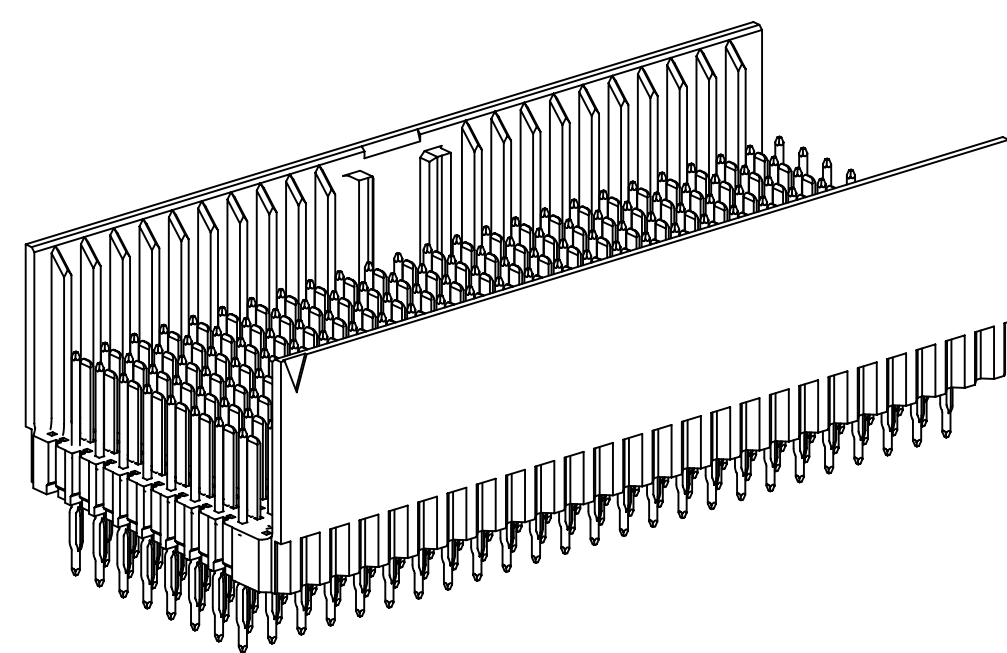


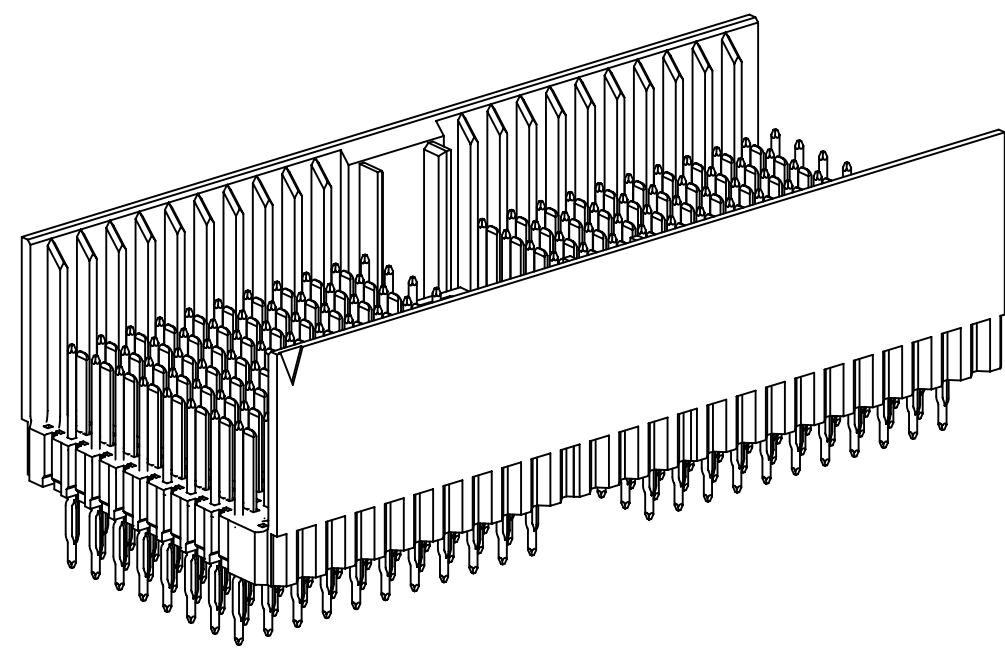
3M™ HSHM PRESS-FIT HEADER, 8-ROW, HSHM SERIES  
FOR HIGH SPEED HARD METRIC APPLICATIONS



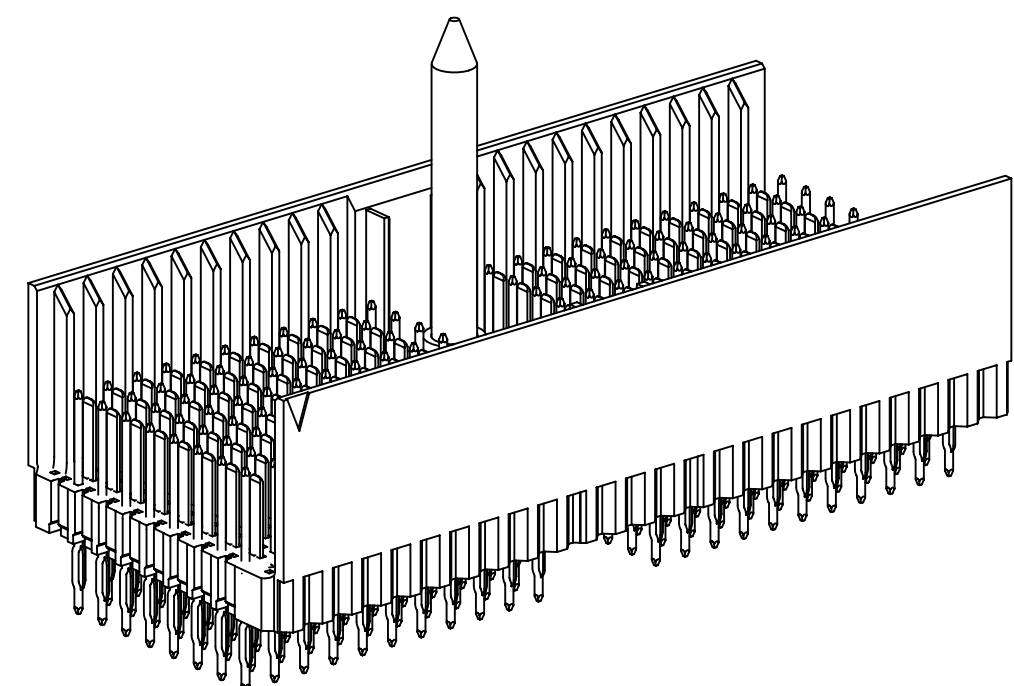
HSHM-H200EX-8CPX



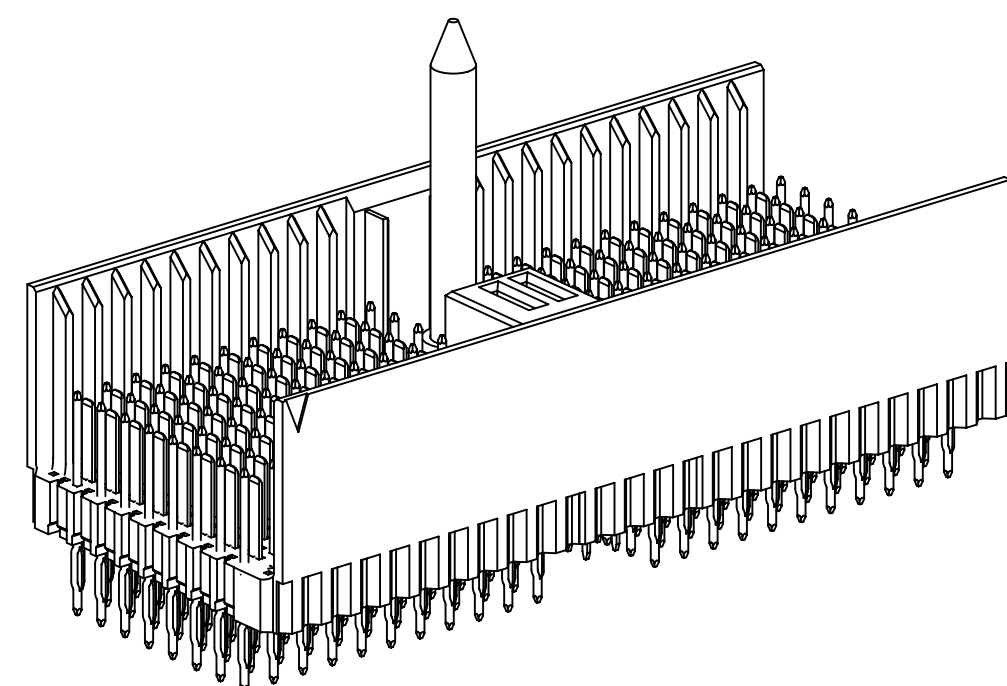
HSHM-H200DEX-8CPX



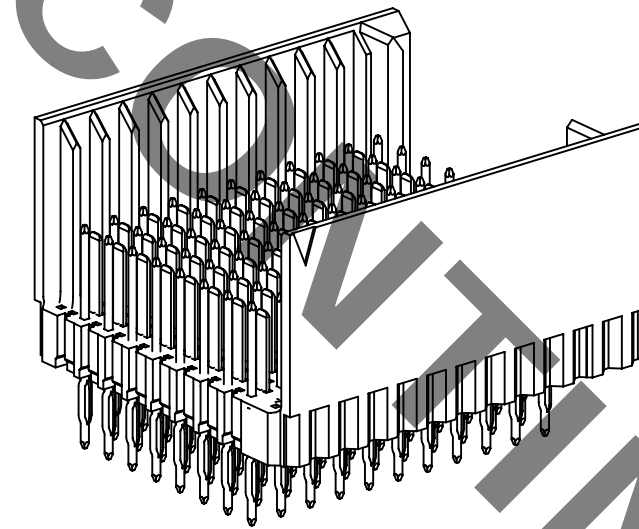
HSHM-H176DX-8CPX



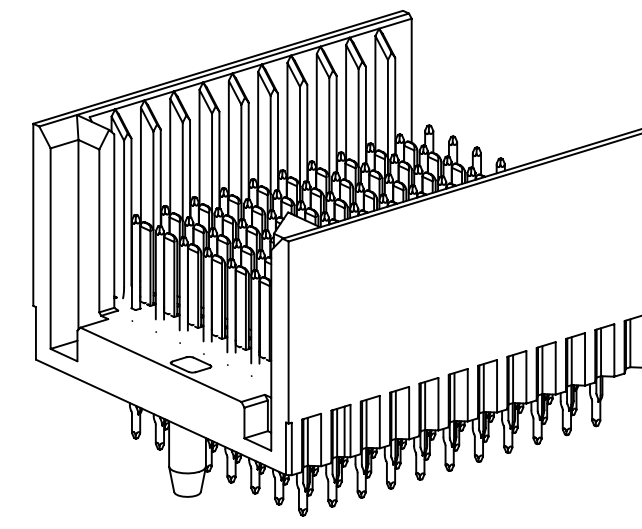
HSHM-H176DGX-8CPX



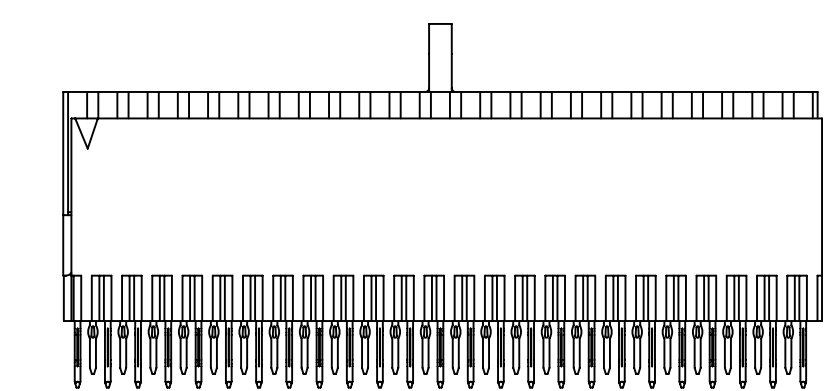
HSHM-H176DPWRX-8CPX



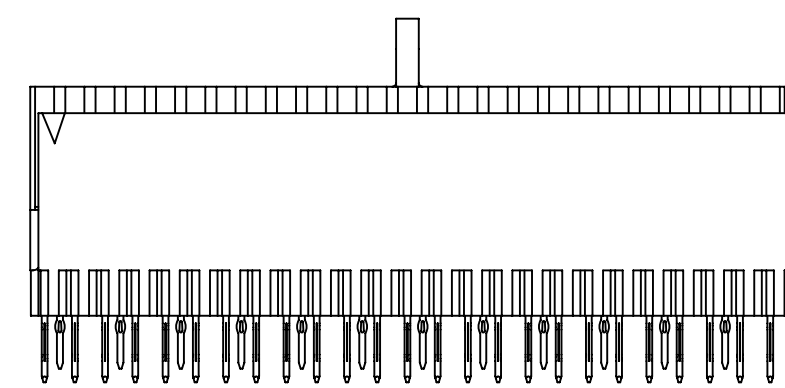
HSHM-H088FLX-8CPX



HSHM-H088FRX-8CPX



COAXIAL, COLUMN DIFFERENTIAL AND STRIPLINE CONFIGURATION



ROW DIFFERENTIAL CONFIGURATION

(UNLESS OTHERWISE SHOWN)  
ORDERING INFORMATION  
(ROWS 1 AND 2 NOT LOADED)

HSHM-HXXXXXX-8CPX-XXXXX

HEADER POSITION AND TYPE

PLATING

HIGH SPEED OPTION:  
4 = COAXIAL, COLUMN DIFFERENTIAL AND STRIPLINE (75Ω) APPLICATIONS  
5 = ROW DIFFERENTIAL APPLICATIONS

TAIL LENGTH:  
1 = 4.4 [.17] PIN AND 3.5 [.14] SHIELD  
2 = 2 [.08] PIN AND 2 [.08] SHIELD

PLATING SPECIFICATIONS:

TG30L = .76μm [30μIN] MIN. GOLD ON CONTACT AREA, LUBRICATED  
2.54μm [100μIN] MIN. TIN/LEAD ON TERMINAL AREA (RIA C2 & E2 APPLY)  
1.27μm [50μIN] MIN. NICKEL ALL OVER.  
TYPICALLY HIGHER MAKE ORDER QUANTITIES AS COMPARED TO TG30.

TG30 = .76μm [30μIN] MIN. GOLD ON CONTACT AREA  
2.54μm [100μIN] MIN. TIN/LEAD ON TERMINAL AREA (RIA C2 & E2 APPLY)  
1.27μm [50μIN] MIN. NICKEL ALL OVER.  
STANDARD OPTION.

TG50 = 1.27μm [50μIN] MIN. GOLD ON CONTACT AREA, LUBRICATED  
2.54μm [100μIN] MIN. TIN/LEAD ON TERMINAL AREA (RIA C2 & E2 APPLY)  
1.27μm [50μIN] MIN. NICKEL ALL OVER.  
NON-STANDARD OPTION (AVAILABLE WITH LONGER LEAD TIMES AND HIGHER MAKE ORDER QUANTITIES, MOQ)

- \* UP TO 5 Gb/s DATA RATES
- \* LOW CROSSTALK AT HIGH FREQUENCIES
- \* 50/100Ω (SINGLE-ENDED/DIFFERENTIAL) IMPEDANCE
- \* MODULAR/SCALABLE FORMAT IEC 61076-4-101
- \* 101 MATED LINES PER INCH
- \* SHIPS WITH PROTECTIVE CAP, WHICH ALSO SERVES AS AN INSERTION TOOL
- \* END-TO-END STACKABLE WITH 8 ROW 3M METPAK, CP2, HM AND HSHM HEADERS
- \* INTEGRATED GUIDE AND GUIDE PIN
- \* MULTI-PURPOSE CENTER (MPC) KEYING AND GUIDANCE
- \* FOUR INTEGRATED 8.25A POWER CONTACTS

- NOTES
- MATERIAL:  
PLASTIC: HIGH TEMP LCP, UL94V-0  
PINS: COPPER ALLOY.
  - REGULATORY INFORMATION:  
ROHS COMPLIANT. SEE THE REGULATORY INFORMATION APPENDIX (RIA) IN THE "ROHS COMPLIANCE" SECTION OF WWW.3MCONNECTORS.COM FOR COMPLIANCE INFORMATION (RIA E1 & C1 APPLY)
  - IN THE EVENT OF CONFLICT BETWEEN THIS DATA AND THAT CONTAINED IN THE PRODUCT SPECIFICATION, THE PRODUCT SPECIFICATION TAKES PRECEDENT.

MECHANICAL:

NORMAL FORCE (NOMINAL): .57N [58g] SIGNAL, .74N [75g] SHIELD  
ENGAGEMENT FORCE (NOMINAL): .32N [33g] SIGNAL, .22N [22g] SHIELD  
SEPARATION FORCE (NOMINAL): .20N [20g] SIGNAL, .20N [20g] SHIELD  
WIPE (NOMINAL, SHORTEST CONTACT): 2.67 [.105] SIGNAL, 1.57 [.062] 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: 50Ω SINGLE-ENDED, 100Ω DIFFERENTIAL  
CURRENT RATING (FULLY LOADED): 1A @ 70°C SIGNAL  
INSULATION RESISTANCE: 10<sup>4</sup> MΩ @ 100 V<sub>DC</sub>  
WITHSTANDING VOLTAGE: 750V<sub>RMS</sub>

ENVIRONMENTAL:

TEMPERATURE RATING: -55°C TO 125°C

3M ELECTRONIC SOLUTIONS DIVISION  
INTERCONNECT SOLUTIONS  
<http://www.3mconnectors.com>

3M IS A TRADEMARK OF 3M COMPANY.  
FOR TECHNICAL, SALES OR ORDERING INFORMATION CALL 800-225-5373

**CAUS**  
UL FILE NO: E68080

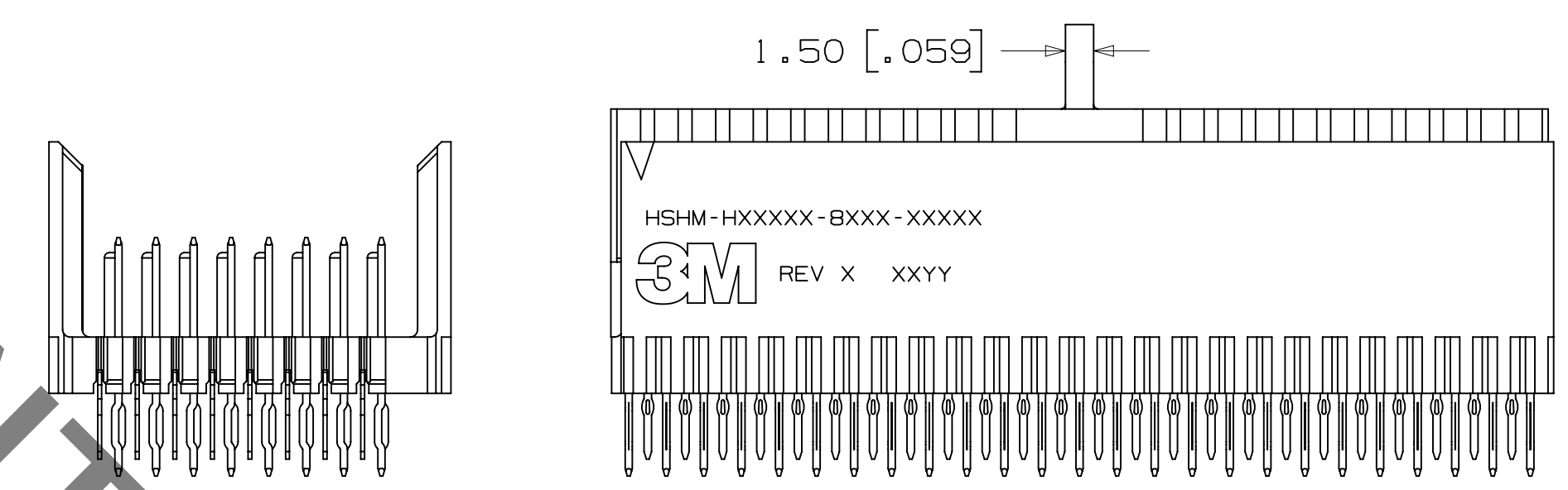
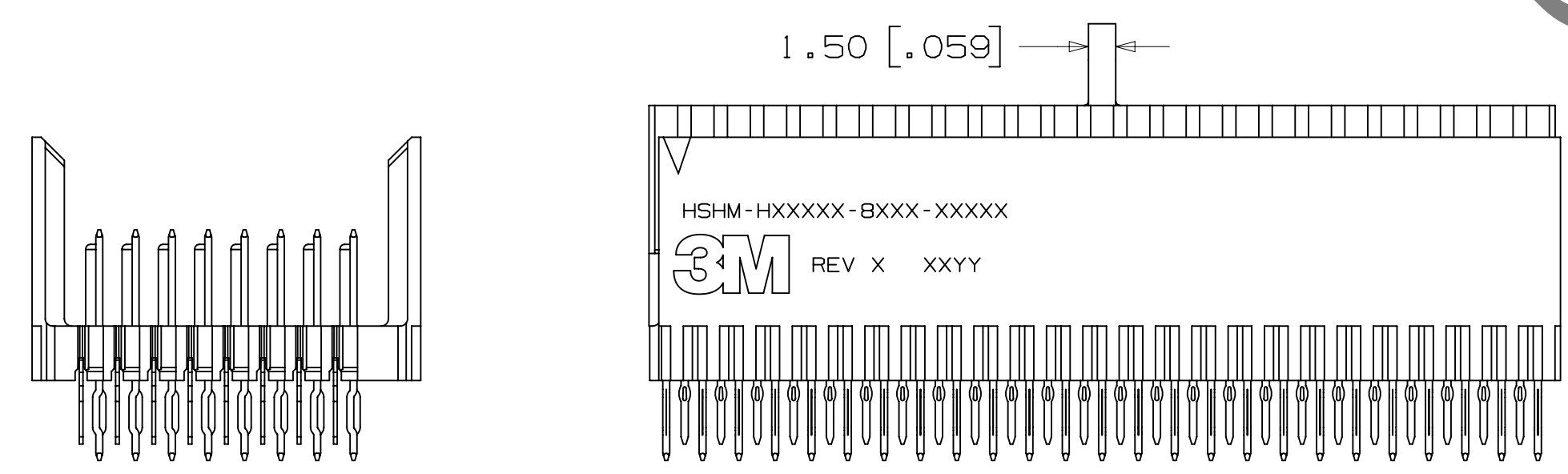
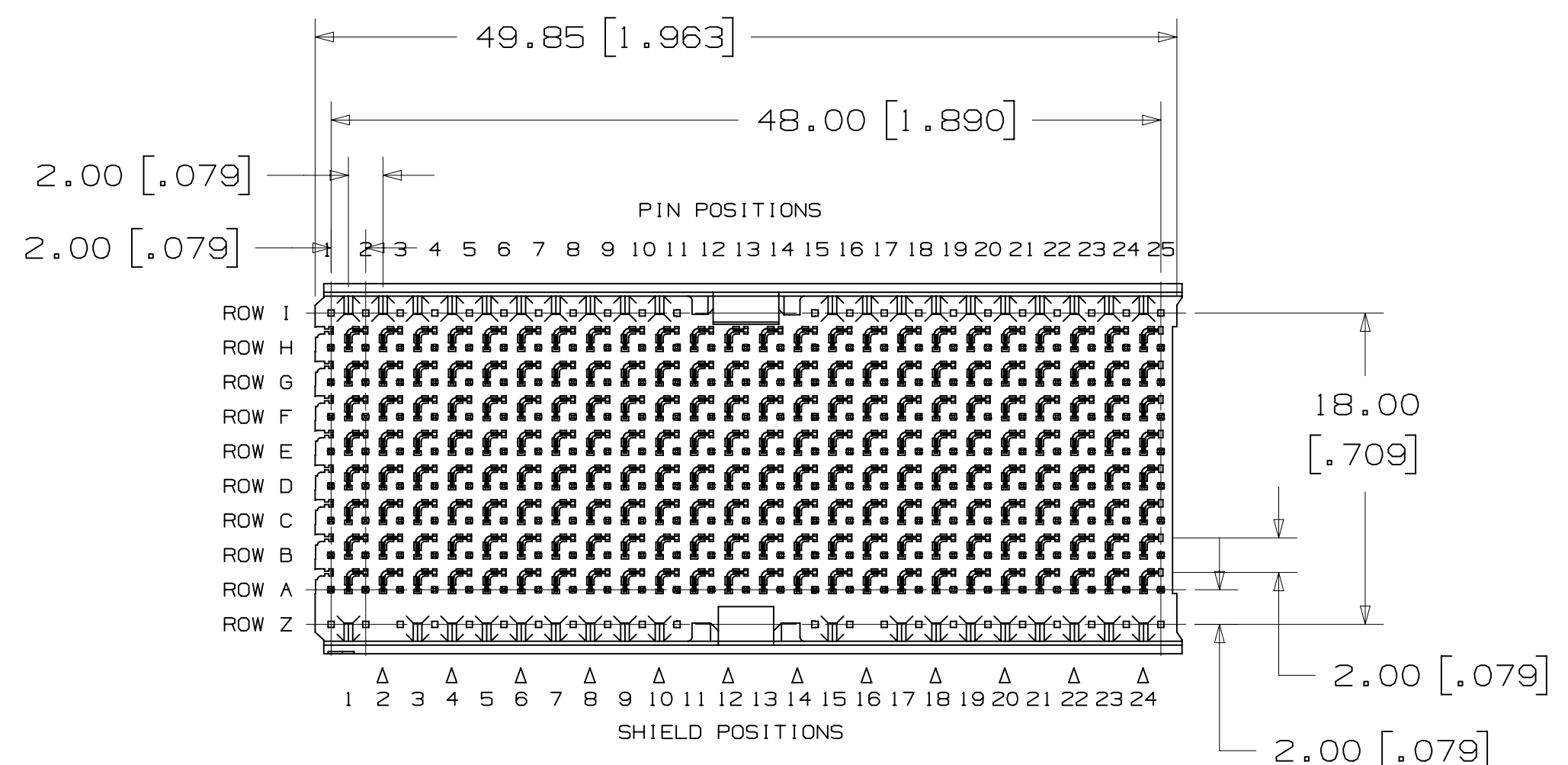
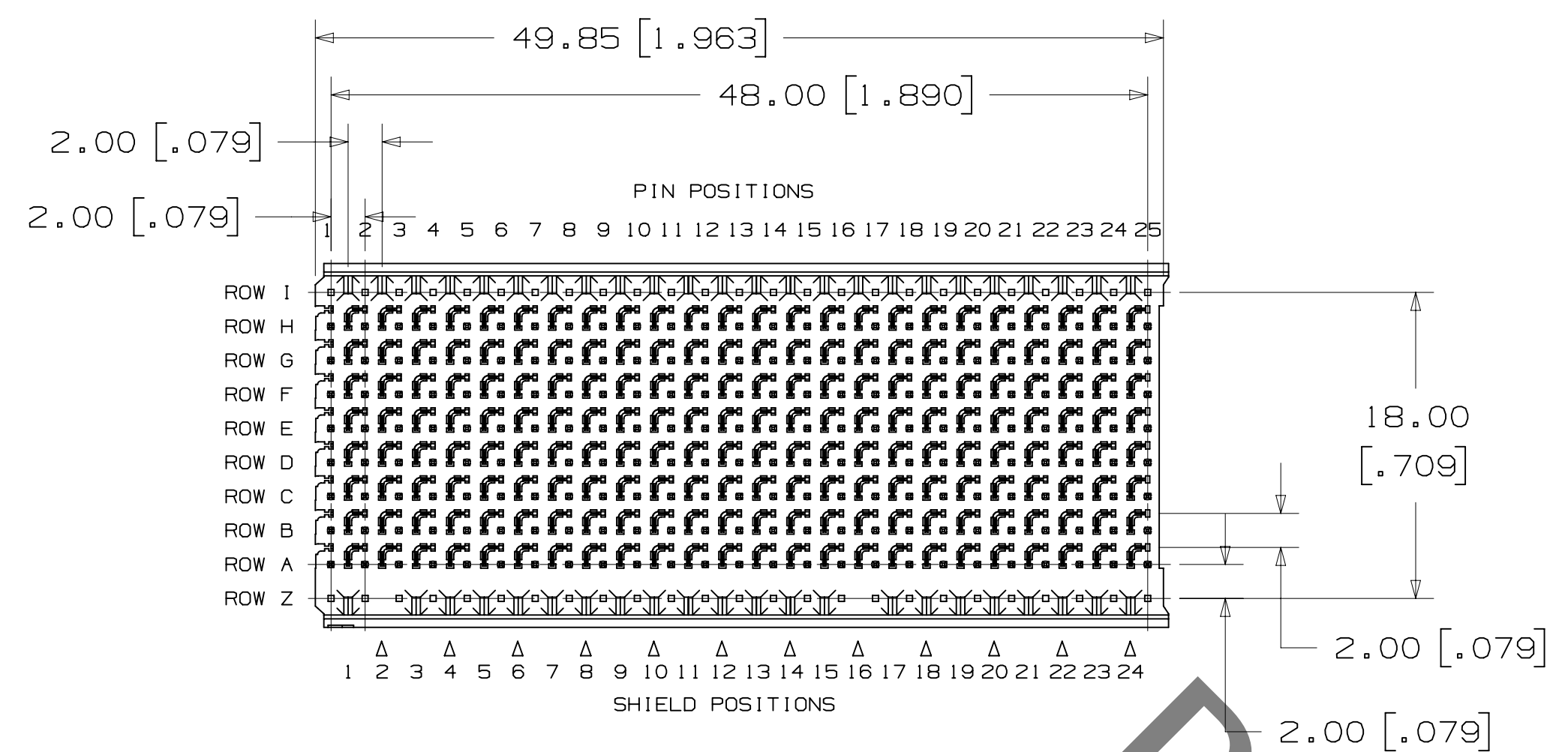
DIMENSIONS: MM [ INCHES ]

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
				AUG 31, 2012 PRODUCTION RELEASE		
DIVISION	DIVISION CODE	DATE	DATE	DATE	DATE	DATE
Interconnect Solutions	ISD	AUG 31, 2012	AUG 31, 2012	AUG 31, 2012	AUG 31, 2012	AUG 31, 2012
DO NOT SCALE DRAWING	SCALE 5/2	TOLERANCES EXCEPT AS NOTED				
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 1994	MILLIMETERS		TITLE HSHM PRESS-FIT HEADER, 8-ROW, HSHM SERIES		
MAX SURFACE ROUGHNESS	SMOOTH SURFACES	INCHES		CAGE NUMBER D 78-5100-2556-8		
MARKED ONLY	ANGLES	MODEL DET: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO SHT 1 OF 5		REV. A		

DISCONTINUED 9/19

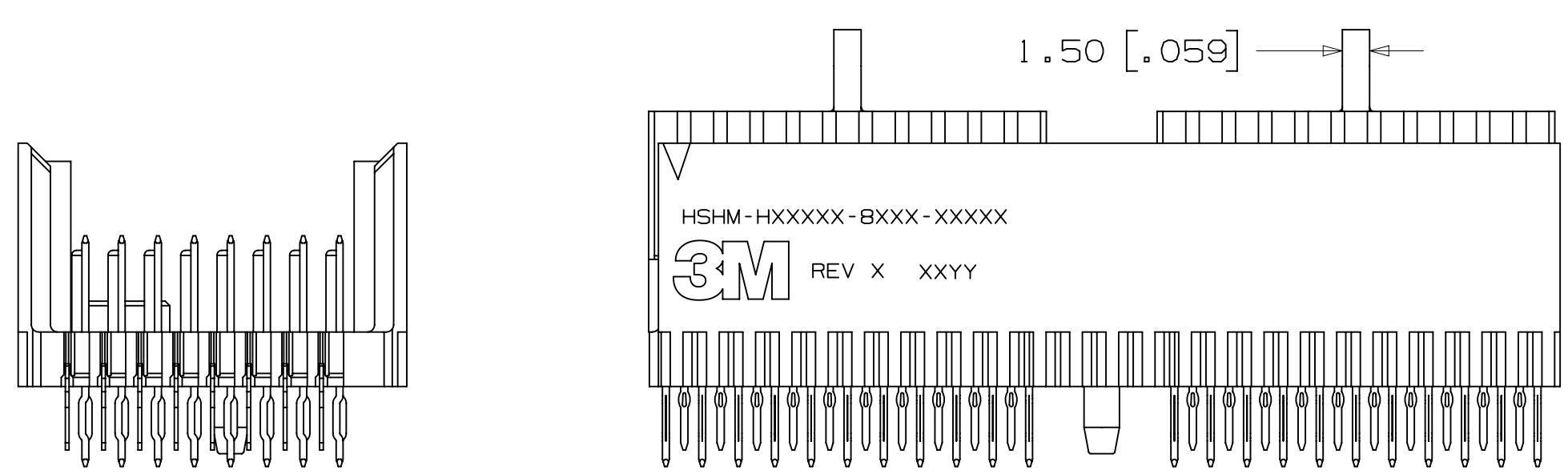
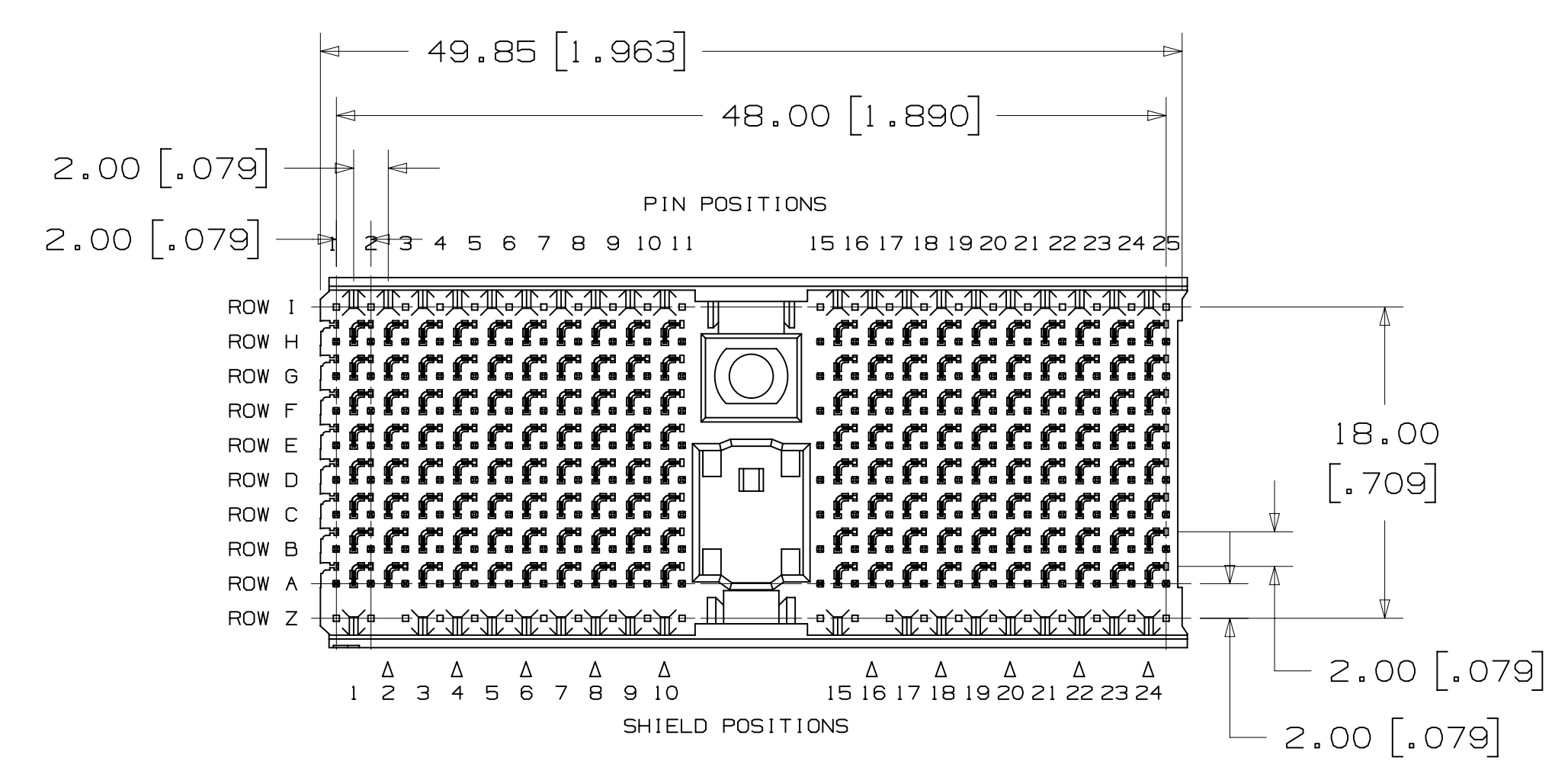
3M™ HSHM PRESS-FIT HEADER, 8-ROW, HSHM SERIES  
FOR HIGH SPEED HARD METRIC APPLICATIONS

- NOTES
1. CAPS TO BE REMOVED AFTER PRESS-FIT INSTALLATION PROCESS.
  2. ▲ DENOTES SHIELD COLUMN (TAIL ONLY) OMITTED FOR THE ROW DIFFERENTIAL PAIR PART.

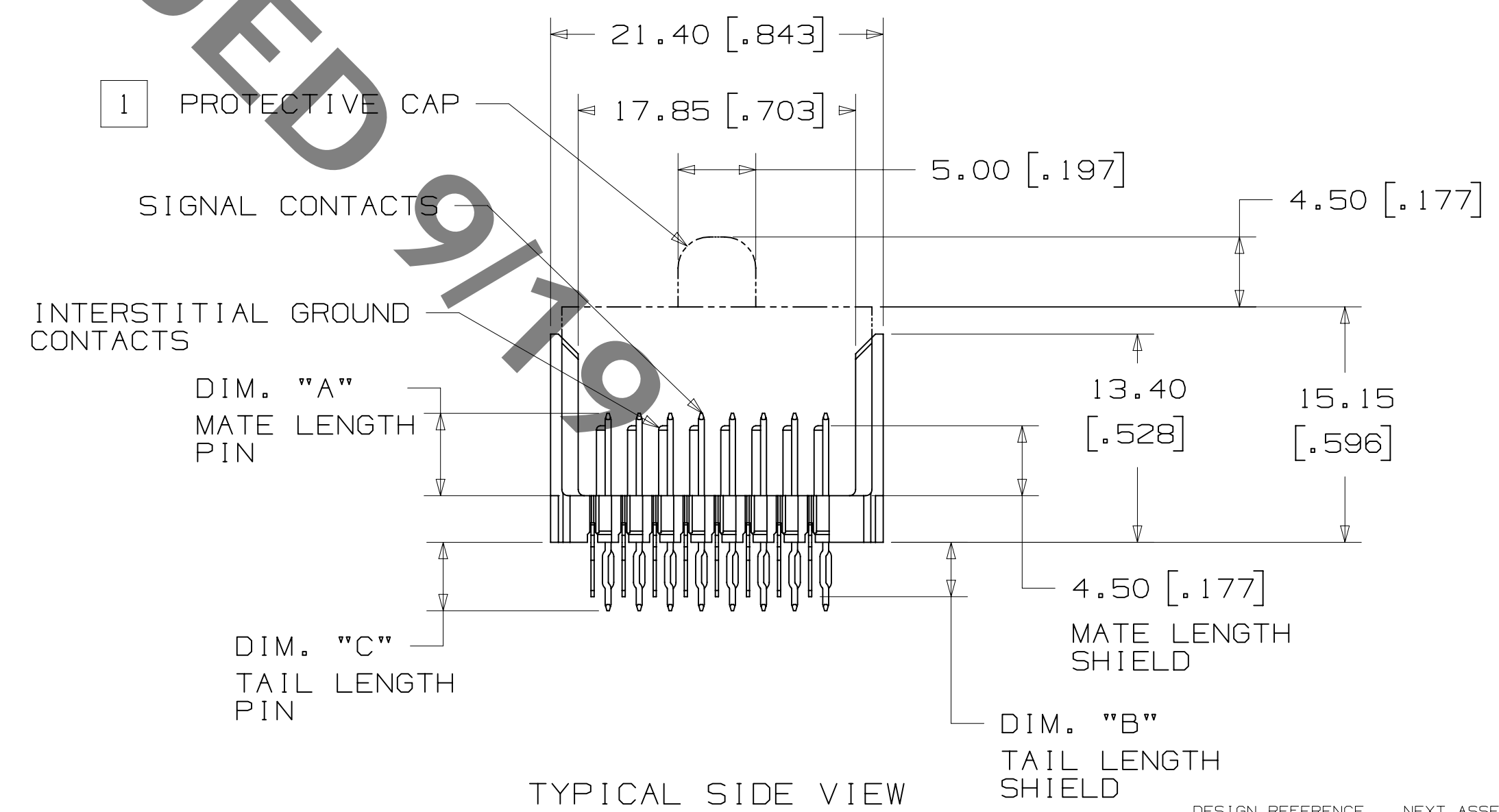


HSHM-H200EX-8CPX

HSHM-H200DEX-8CPX



HSHM-H176DX-8CPX



TYPICAL SIDE VIEW DIMENSIONS FOR THE HEADERS ON THIS DRAWING

STANDARD CONFIGURATION

DIM. "A"	5.3 [.21]	FOR ROWS A THRU H
DIM. "B"	TABULATED	SEE ORDERING INFO
DIM. "C"	TABULATED	SEE ORDERING INFO

FOR NON-STANDARD CONFIGURATIONS CONTACT A 3M SALES REPRESENTATIVE

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
				AUG 31, 2012		
DIVISION		INTERCONNECT SOLUTIONS		ISD		
DO NOT SCALE DRAWING	SCALE 3/1	TOLERANCES EXCEPT AS NOTED		INCHES		
THIRD ANGLE PROJECTION		INTERPRET PER ASME Y14.5 - 1994		MILLIMETERS		
MAX SURFACE ROUGHNESS		SURFACES		MARKED ONLY		
CAGE NUMBER		SIZE		DRAWING NO.		REV.
D78-5100-2556-8		A		SHT 2 OF 5		

DISCONTINUED 9/19

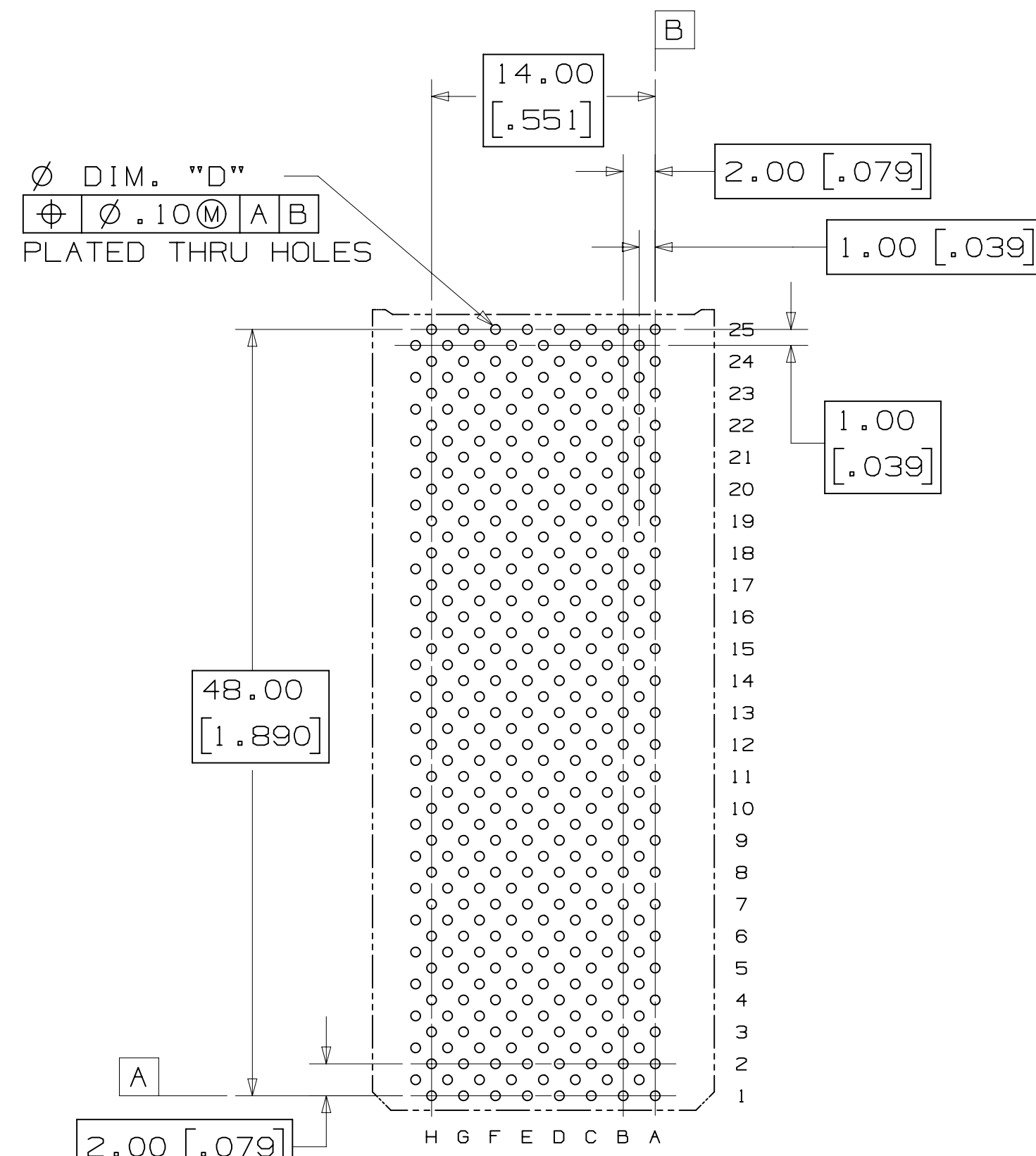
DRAWING NUMBER 78-5100-2556-8

REVISION A

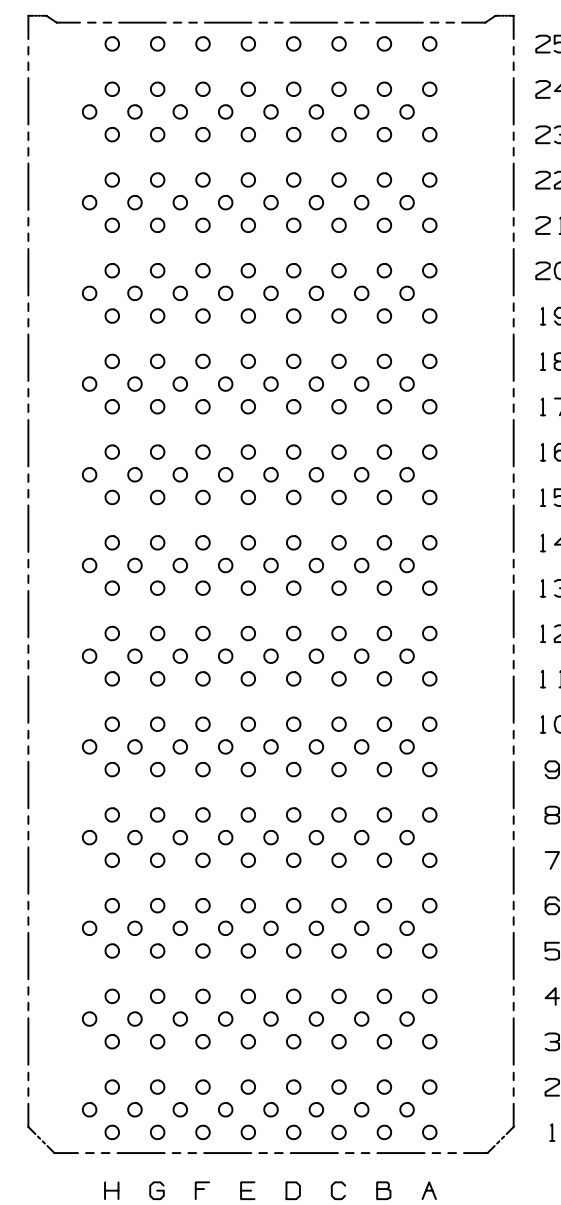


3M™ HSHM PRESS-FIT HEADER, 8-ROW, HSHM SERIES  
FOR HIGH SPEED HARD METRIC APPLICATIONS

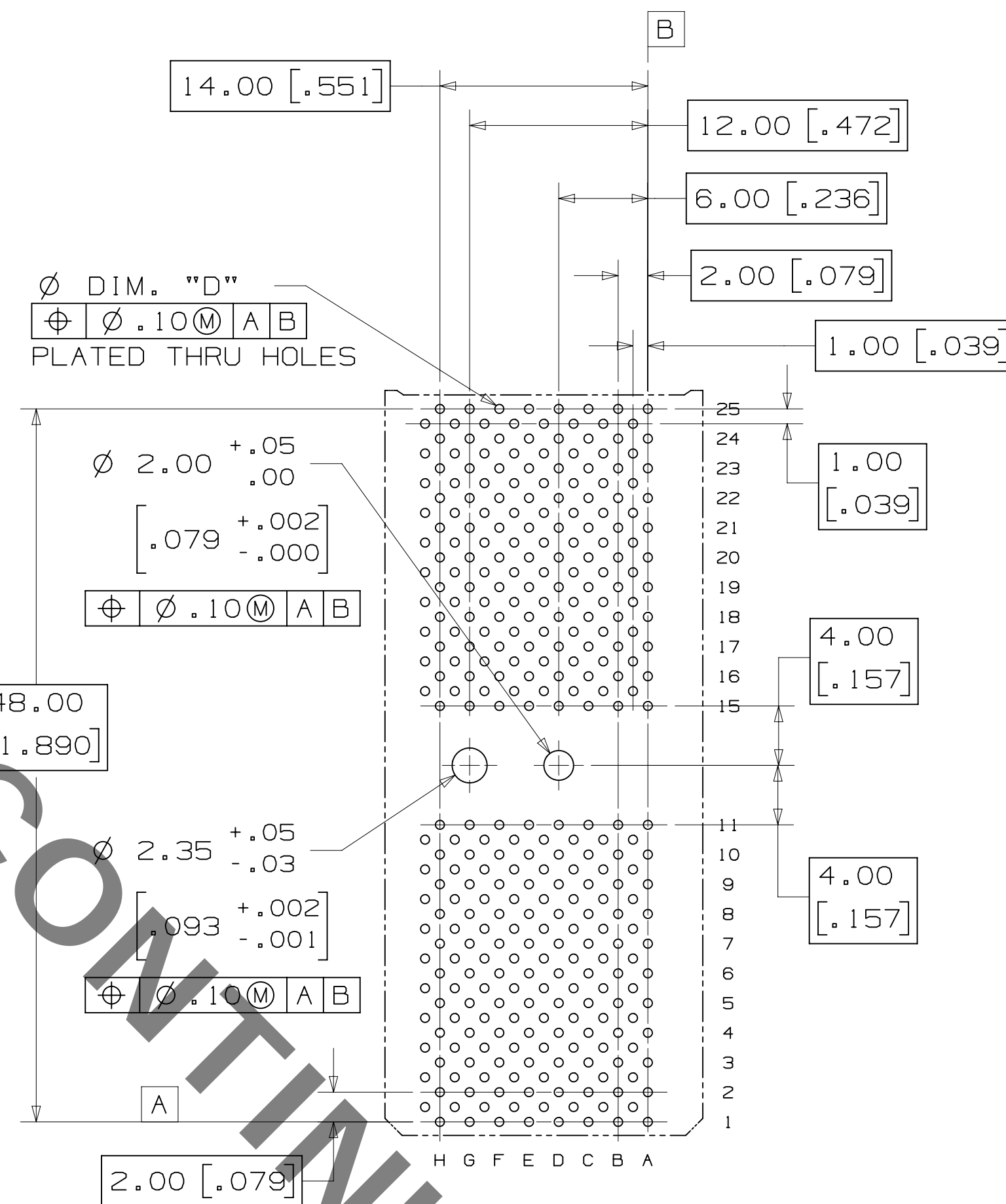
HOLE	HOLE PLATING TABLE			
	(FINISHED HOLE)	Cu THICKNESS	SnPb THICKNESS	DRILLED HOLE DIA.
DIM. "B"	.690-.790 [ .0270-.0310 ]	.025-.045 [ .0010-.0018 ]	.008-.018 [ .0003-.0007 ]	.810-.860 [ .0320-.0340 ]
DIM. "D"	.457-.559 [ .0180-.0220 ]	.025-.045 [ .0010-.0018 ]	.008-.018 [ .0003-.0007 ]	.584-.625 [ .0230-.0246 ]



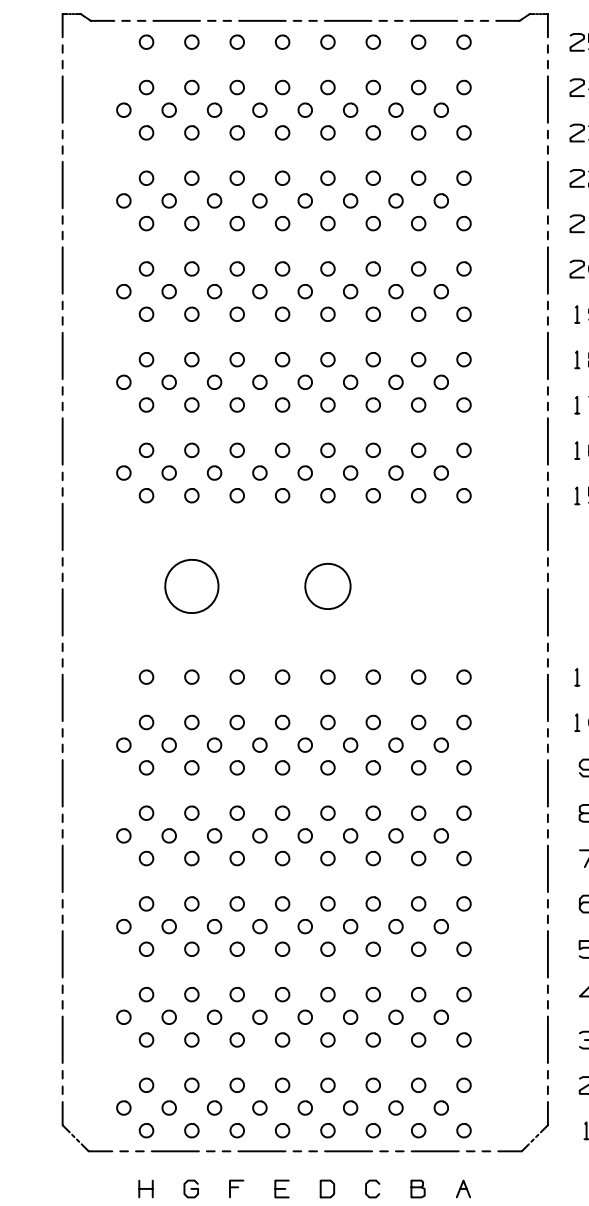
HSHM-H200E4-8CPX  
HSHM-H200DE4-8CPX  
COAXIAL, COLUMN DIFFERENTIAL  
AND STRIPLINE APPLICATIONS



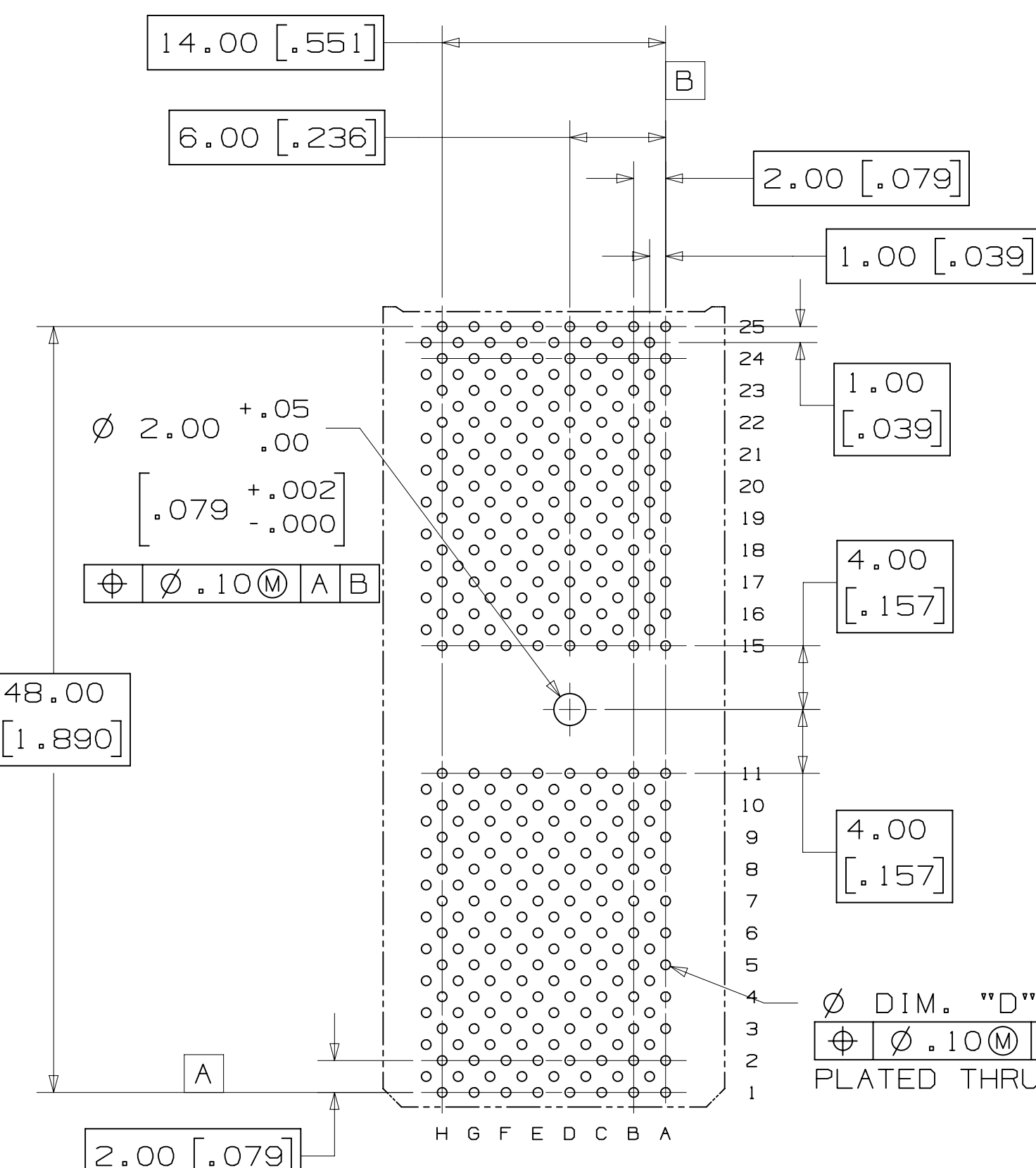
HSHM-H200E5-8CPX  
HSHM-H200DE5-8CPX  
ROW DIFFERENTIAL APPLICATIONS  
(SAME GEOMETRY AS LEFT VIEW  
WITHOUT THE GROUND VIAS)



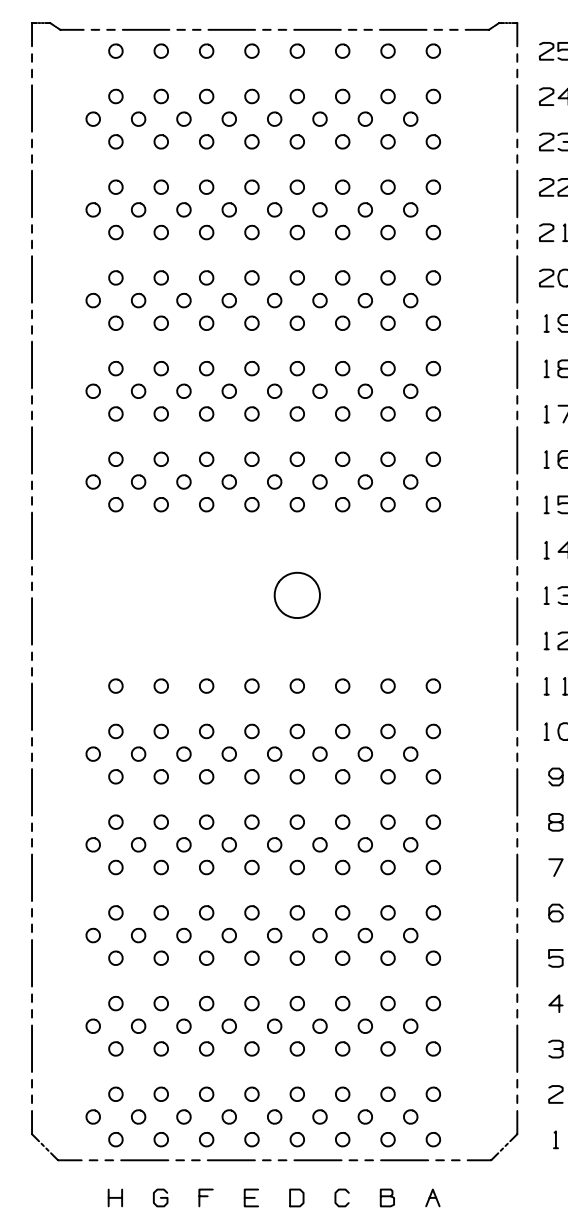
HSHM-H176D4-8CPX  
COAXIAL, COLUMN DIFFERENTIAL  
AND STRIPLINE APPLICATIONS



HSHM-H176D5-8CPX  
ROW DIFFERENTIAL APPLICATIONS  
(SAME GEOMETRY AS LEFT VIEW  
WITHOUT THE GROUND VIAS)



HSHM-H176DG4-8CPX  
COAXIAL, COLUMN DIFFERENTIAL  
AND STRIPLINE APPLICATIONS



HSHM-H176DG4-8CPX  
ROW DIFFERENTIAL APPLICATIONS  
(SAME GEOMETRY AS LEFT VIEW  
WITHOUT THE GROUND VIAS)

DISCONTINUED 9/1/19

RECOMMENDED PCB MOUNTING HOLE PATTERN  
(VIEWED FROM COMPONENT SIDE)

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
				AUG 31, 2012	JNC	TS
DIVISION		DIVISION CODE		DATE		
Interconnect Solutions		ISD		AUG 31, 2012		
DO NOT SCALE DRAWING	SCALE 3/1	TOLERANCES EXCEPT AS NOTED		DATE		
THIRD ANGLE PROJECTION		INCHES		DATE		
INTERPRET PER ASME Y14.5 - 1994		MILLIMETERS		DATE		
MAX SURFACE ROUGHNESS		.00 ± .01		DATE		
SURFACES		.000 ± .005		DATE		
MARKED ONLY		.000 ±		DATE		
		.00 ± .03		DATE		
		.00 ± .13		DATE		
		.000 ±		DATE		
		ANGLES		DATE		

A	43007	AUG 31, 2012	JNC	TS
REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
		AUG 31, 2012		
CHKD	COSTIGLIONE	DATE	APPR	DATE
		AUG 31, 2012	T. SUNIGA	AUG 31, 2012
DIVISION		DATE		
Interconnect Solutions		AUG 31, 2012		
SCALE 3/1		DATE		
THIRD ANGLE PROJECTION		DATE		
INTERPRET PER ASME Y14.5 - 1994		DATE		
MAX SURFACE ROUGHNESS		DATE		
SURFACES		DATE		
MARKED ONLY		DATE		

© 3M COPYRIGHT 2012  
This document and the information it contains are 3M property and may not be reproduced or further distributed without 3M permission, or used or disclosed other than for 3M authorized purposes. All rights reserved.

TITLE  
HSHM PRESS-FIT HEADER, 8-ROW, HSHM SERIES

CAGE NUMBER  
D 78-5100-2556-8

REV. A

MODEL  
SHT 4 OF 5

78-5100-2556-8

