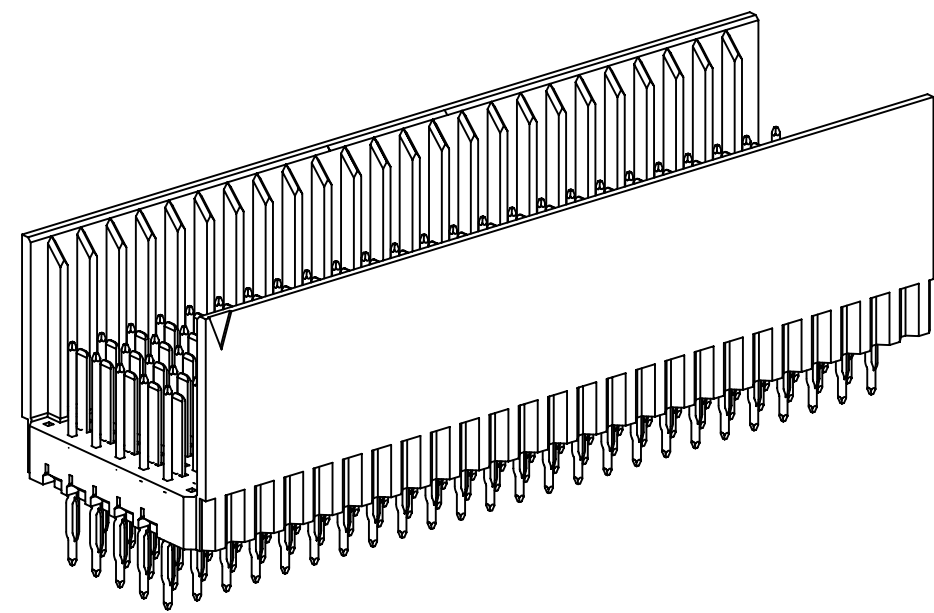
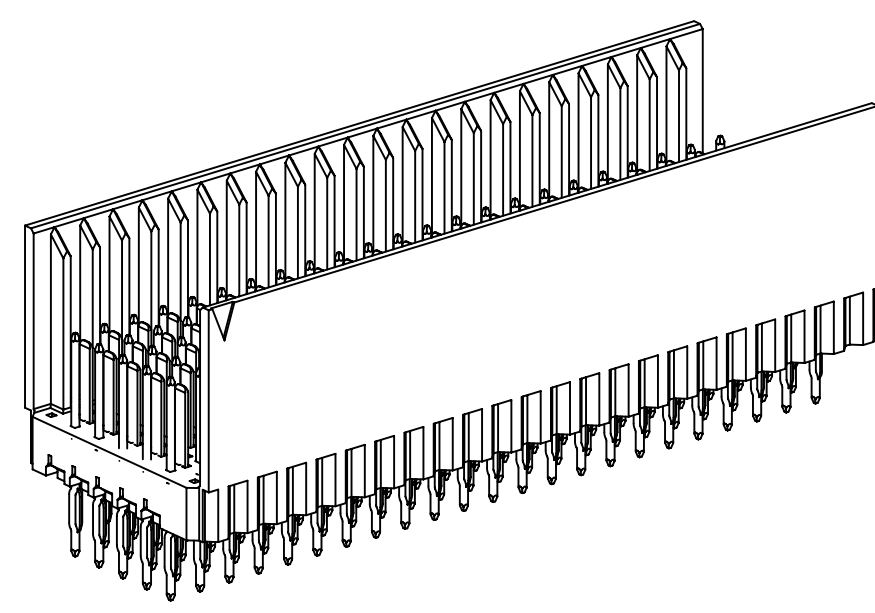


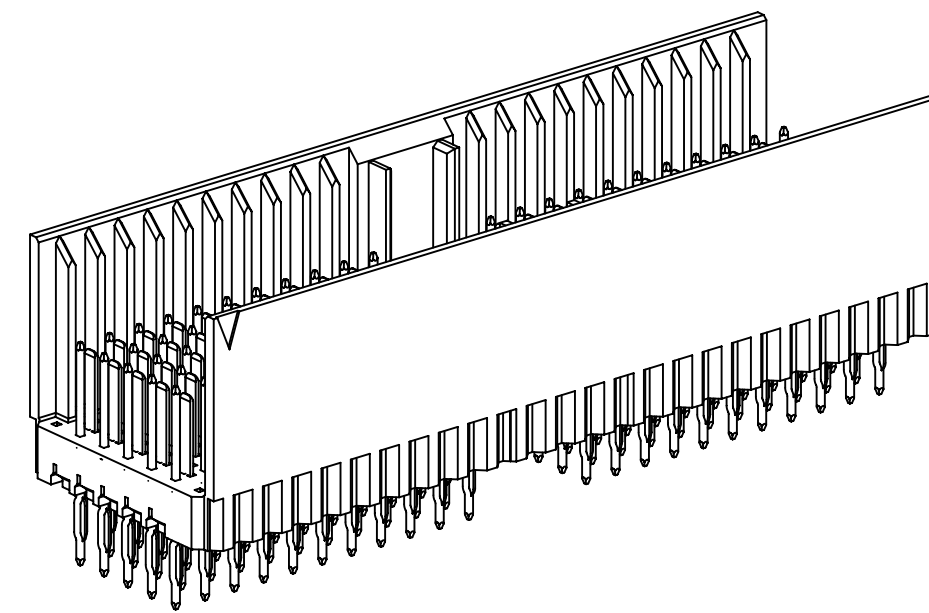
3M™ HSHM PRESS-FIT HEADER, 5-ROW, HSHM SERIES
FOR HIGH SPEED HARD METRIC APPLICATIONS



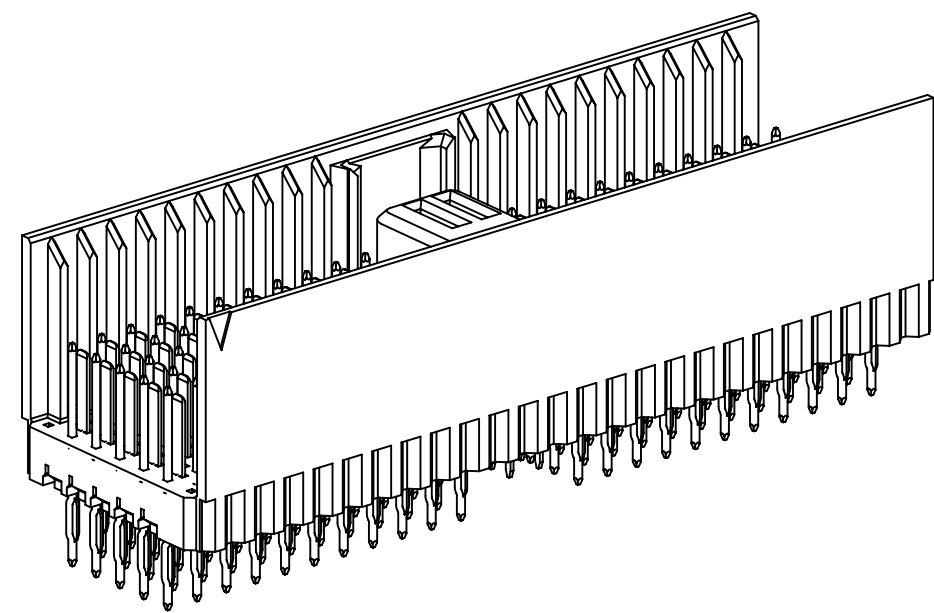
HSHM-H125BX-5CPX
TYPE B25, 125 SIGNAL CONTACTS



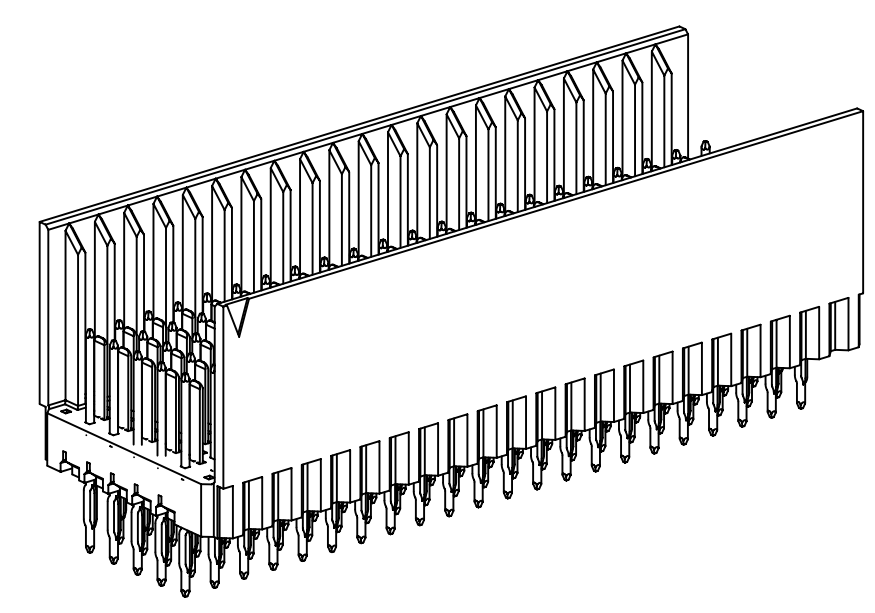
HSHM-H115BX-5CPX
TYPE B23, 115 SIGNAL CONTACTS



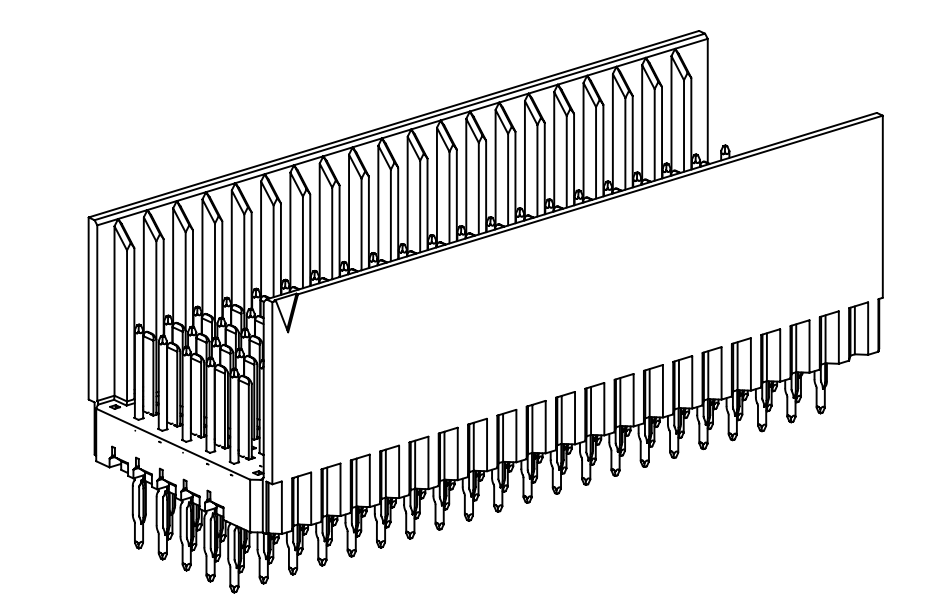
HSHM-H110AX-5CPX
TYPE A, 110 SIGNAL CONTACTS



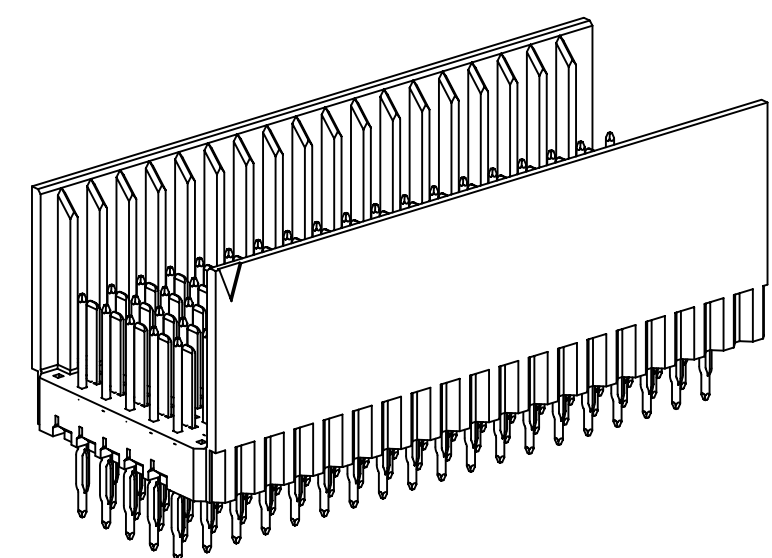
HSHM-H110APWRX-5CPX
TYPE A, 110 SIGNAL AND
4 POWER CONTACTS



HSHM-H110BX-5CPX
TYPE B22, 110 SIGNAL CONTACTS



HSHM-H105BX-5CPX
TYPE B21, 105 SIGNAL CONTACTS



HSHM-H095BX-5CPX
TYPE B19, 95 SIGNAL CONTACTS

- * 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
- * 63 MATED LINES PER INCH
- * SHIPS WITH PROTECTIVE CAP, WHICH ALSO SERVES AS AN INSERTION TOOL
- * END-TO-END STACKABLE WITH 5 ROW 3M METPAK, CP2, HM AND HSHM HEADERS
- * 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: 10⁴ MΩ @ 100 V_{DC}
 WITHSTANDING VOLTAGE: 750V_{RMS}

ENVIRONMENTAL:

TEMPERATURE RATING: -55°C TO 125°C

(UNLESS OTHERWISE SHOWN)
ORDERING INFORMATION
(ROWS F AND Z NOT LOADED)

HSHM-HXXXXXXXX-5CPX-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 & E3 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 & E3 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 & E3 APPLY)
1.27μM [50μIN] MIN. NICKEL ALL OVER.
NON-STANDARD OPTION (AVAILABLE WITH LONGER LEAD TIMES AND HIGHER MAKE ORDER QUANTITIES, MOQ)

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

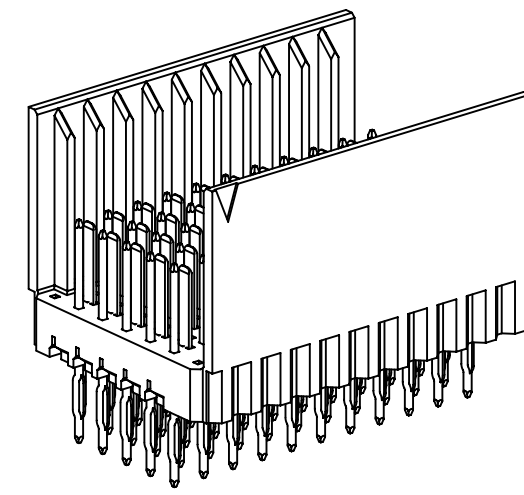
3M
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DIMENSIONS: MM [INCH]

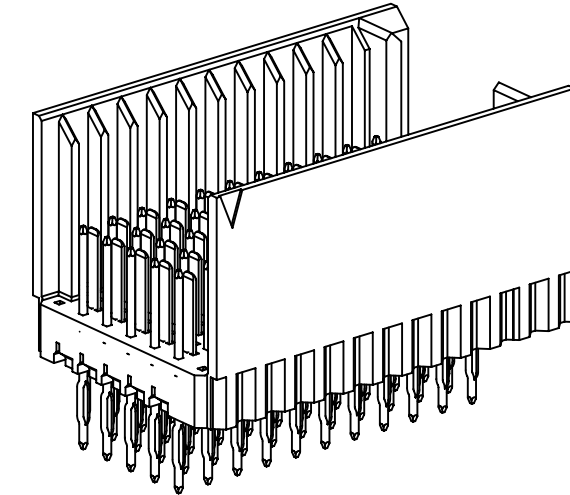
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				SEP 17, 2013		
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THIRD ANGLE PROJECTION		MILLIMETERS		INCHES .0 ± .01 .000 ± .005 .0000 ±		
INTERPRET PER ASME Y14.5 - 1994		MILLIMETERS		0 ± .3 .00 ± .13 .000 ±		
MAX SURFACE ROUGHNESS		SURFACES		.000 ±		
MARKED ONLY		ANGLES				
DIVISION		SCALE		TITILE HSHM PRESS-FIT HEADER, 2MM, 5-ROW, HSHM SERIES		
Interconnect Solutions		ISD		CAGE NUMBER D 78-5100-2633-5		
3M Center St. Paul, MN 55144		© 3M COPYRIGHT 2013 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.		MODEL I1S1s YES X NO SHT 1 OF 6		

78-5100-2633-5
 DRAWING NUMBER
 A.1 9/17/2013 3:13 PM UTC-05:00

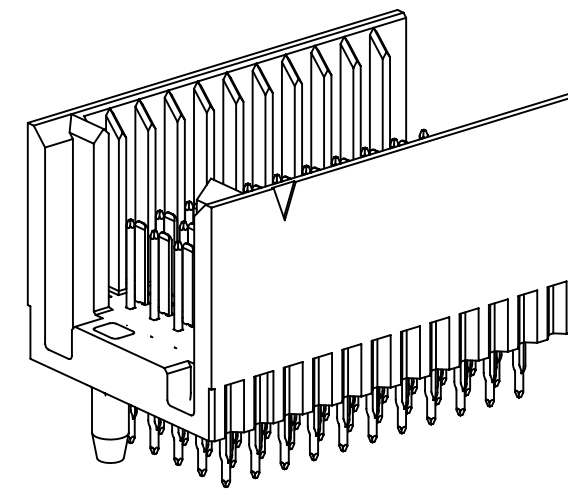
3M™ HSHM PRESS-FIT HEADER, 5-ROW, HSHM SERIES
FOR HIGH SPEED HARD METRIC APPLICATIONS



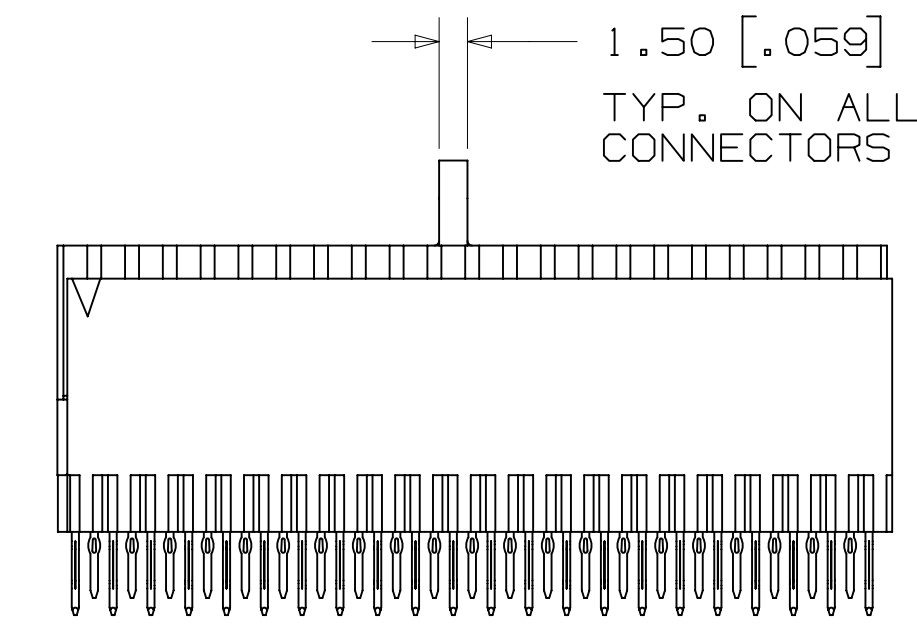
HSHM-H055BX-5CPX
TYPE B11, 55 SIGNAL CONTACTS



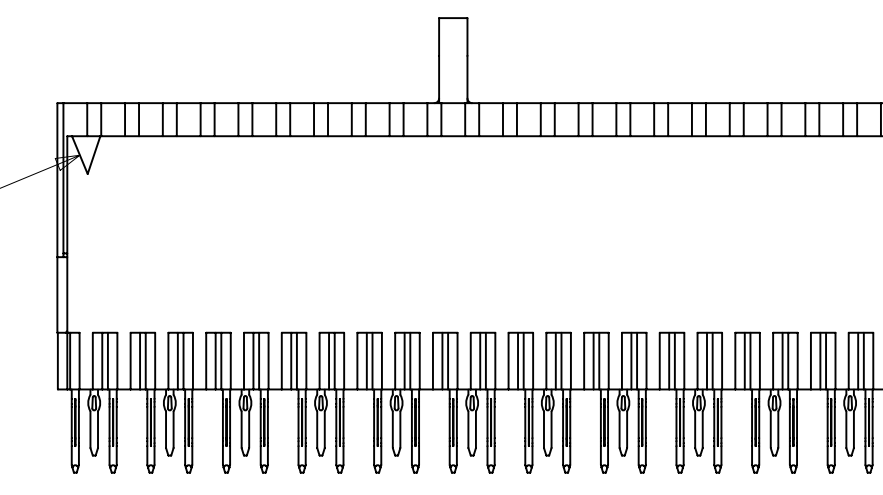
HSHM-H055CLX-5CPX
TYPE CL, 55 SIGNAL CONTACTS



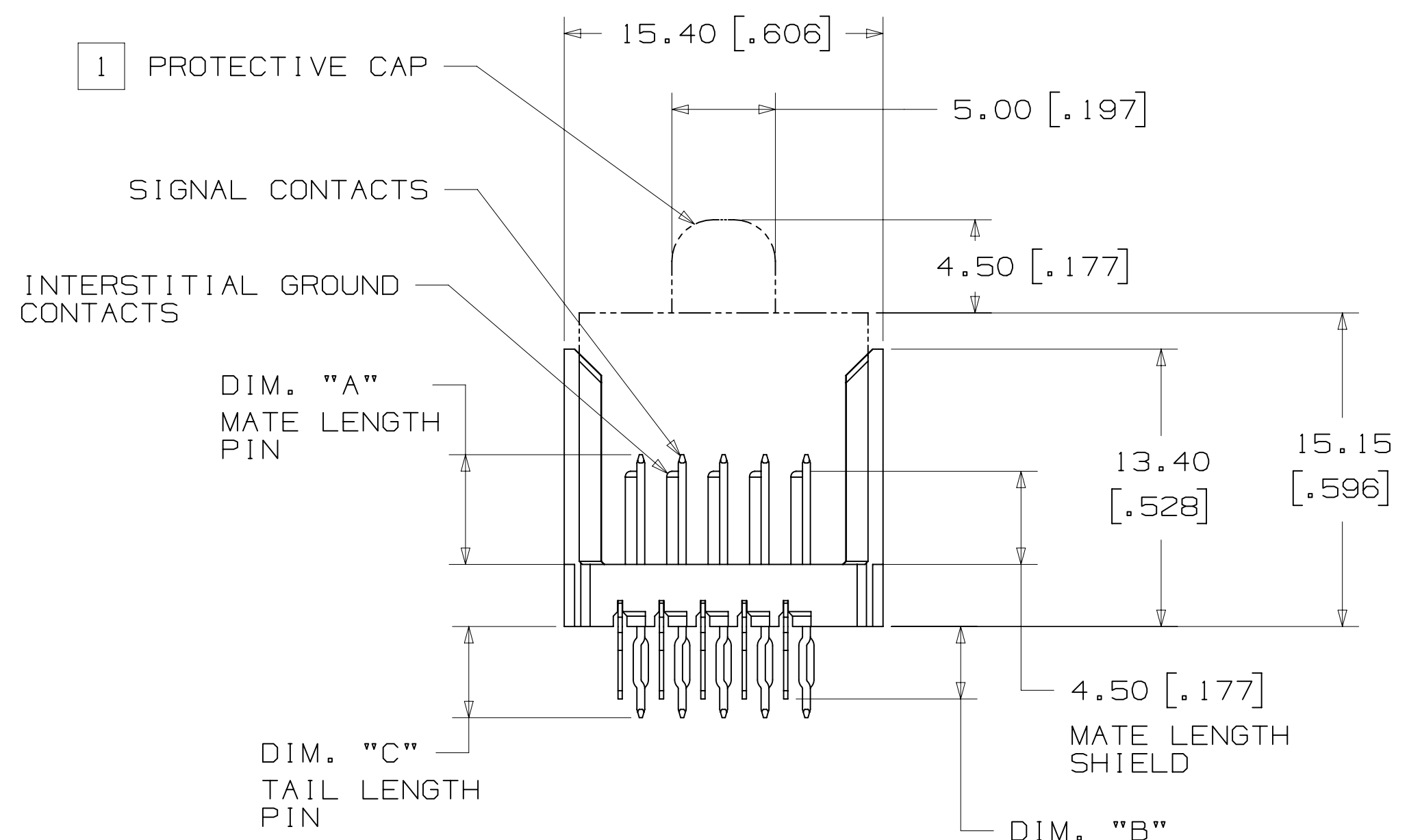
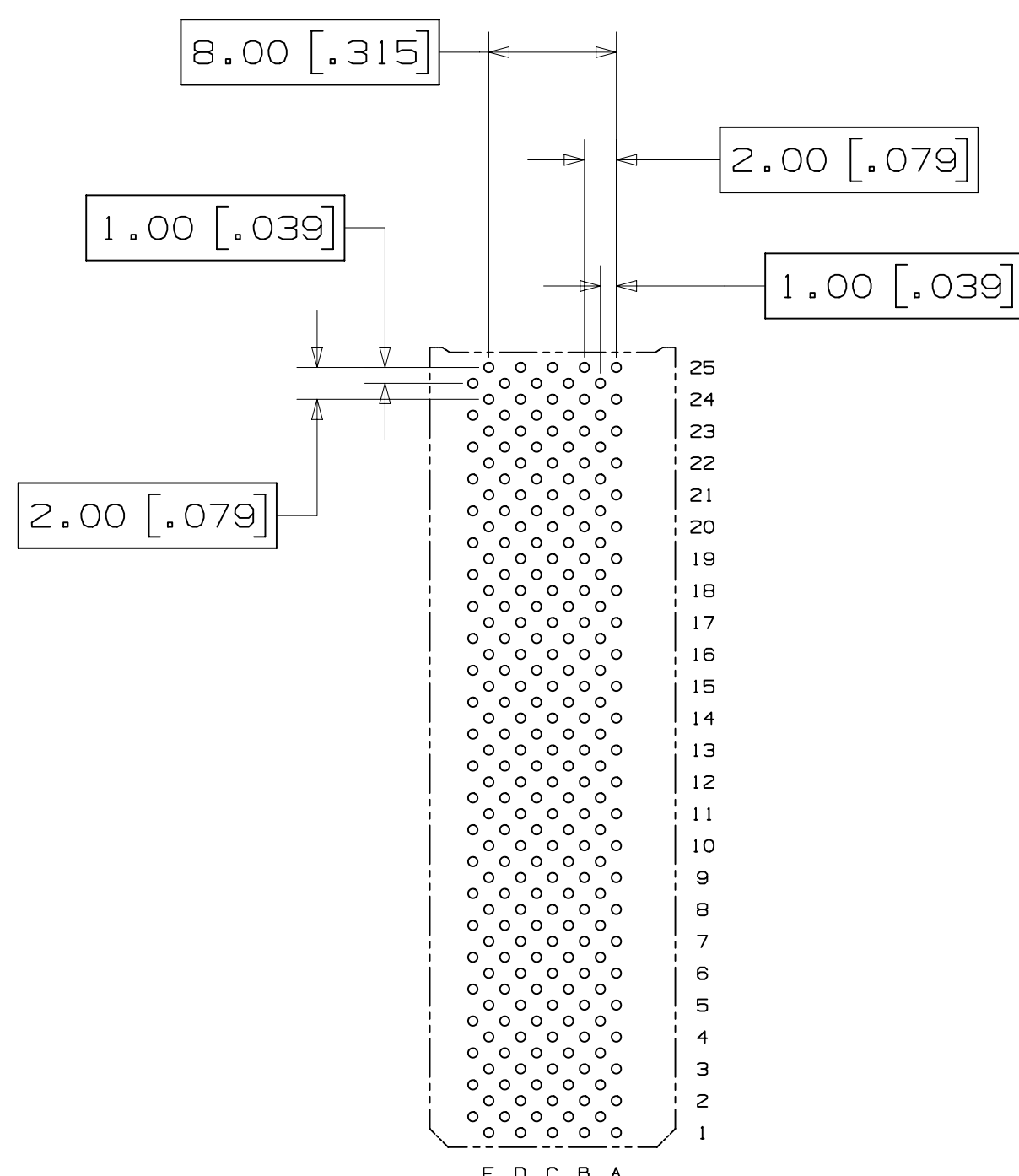
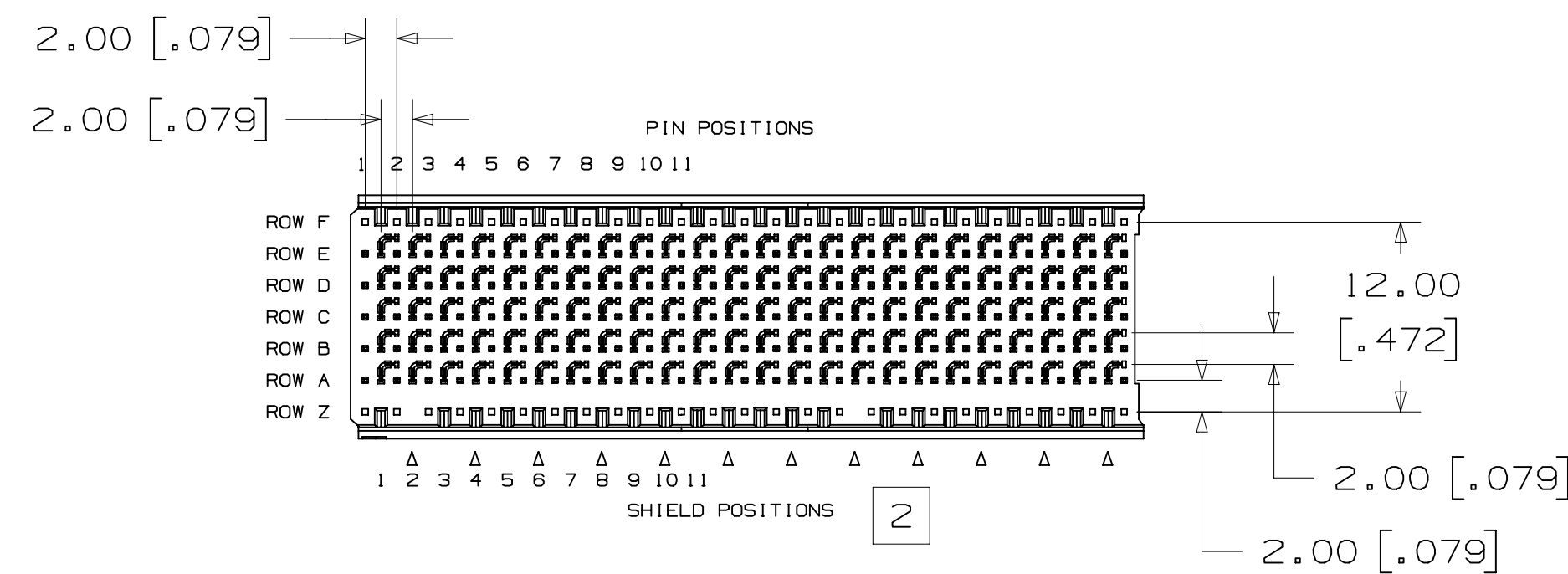
HSHM-H055CRX-5CPX
TYPE CR, 55 SIGNAL CONTACTS



1 COAXIAL, COLUMN DIFFERENTIAL AND STRIPLINE CONFIGURATION (SHOWN WITH PROTECTIVE CAPS)



1 ROW DIFFERENTIAL CONFIGURATION (SHOWN WITH PROTECTIVE CAPS)



STANDARD CONFIGURATION

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

FOR NON-STANDARD CONFIGURATIONS CONTACT A 3M SALES REPRESENTATIVE

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

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
				SEP 17, 2013		
DIVISION		DIVISION CODE		DATE		
Interconnect Solutions		ISD		SEP 17, 2013		
DO NOT SCALE DRAWING	SCALE 5/2	TOLERANCES EXCEPT AS NOTED		DATE		
THIRD ANGLE PROJECTION		INCHES		DATE		
INTERPRET PER ASME Y14.5 - 1994		MILLIMETERS		DATE		
MAX SURFACE ROUGHNESS		.00 ± .13		DATE		
SURFACES		.000 ±		DATE		
MARKED ONLY		ANGLES		DATE		

A	50065	SEP 17, 2013	JNC	TS
REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
		SEP 17, 2013		
CHKD	DATE	APPV	DATE	DATE
		T. SUNIGA	SEP 17, 2013	

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TITLE: HSHM PRESS-FIT HEADER, 2MM, 5-ROW, HSHM SERIES

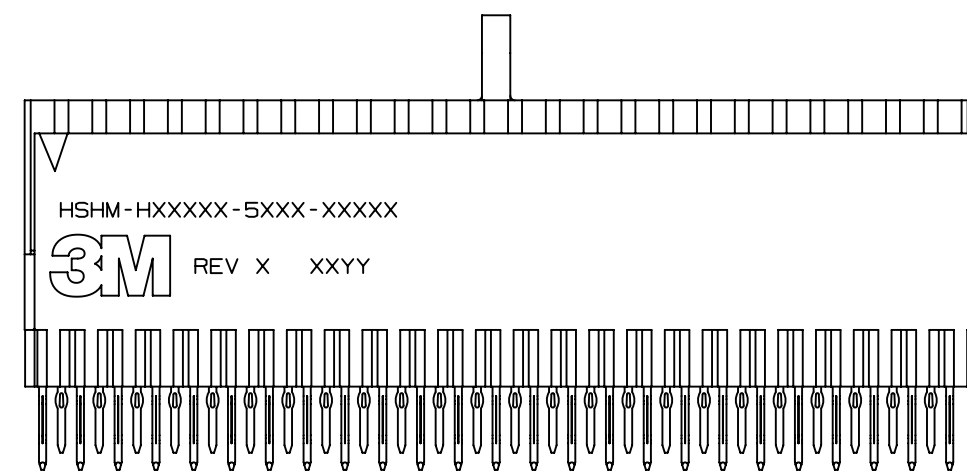
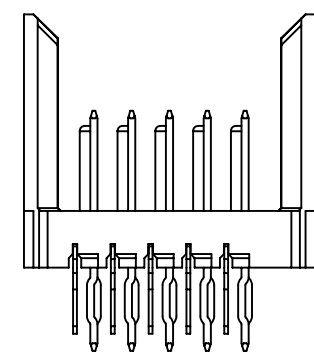
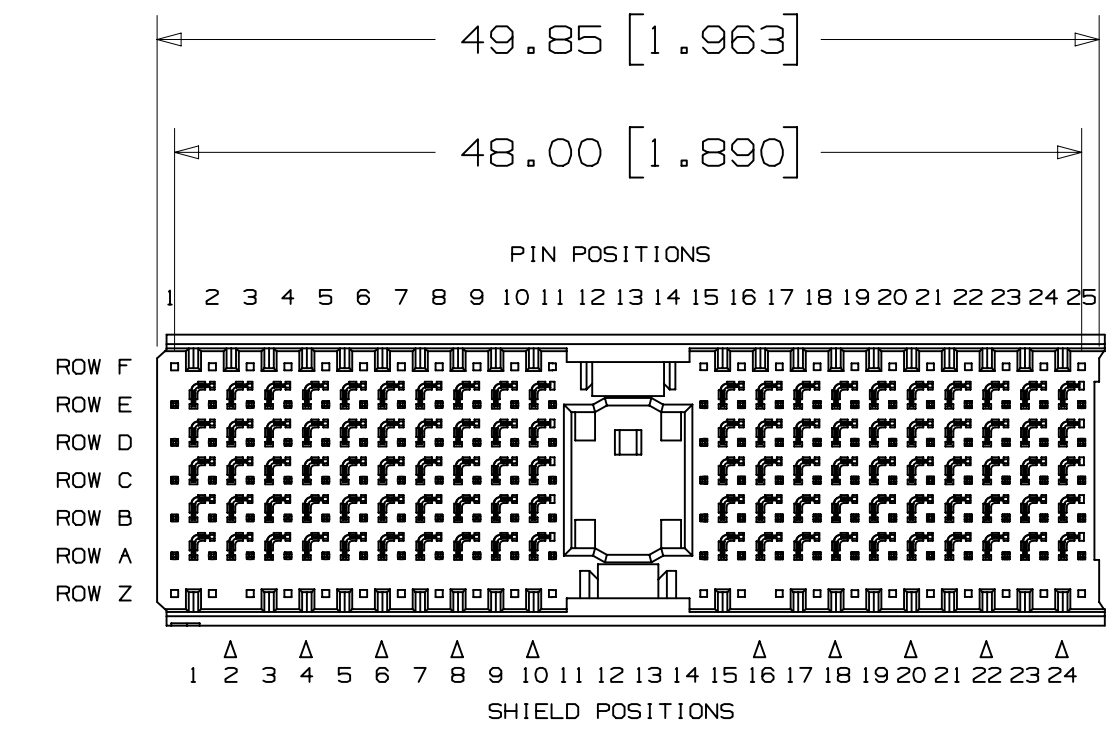
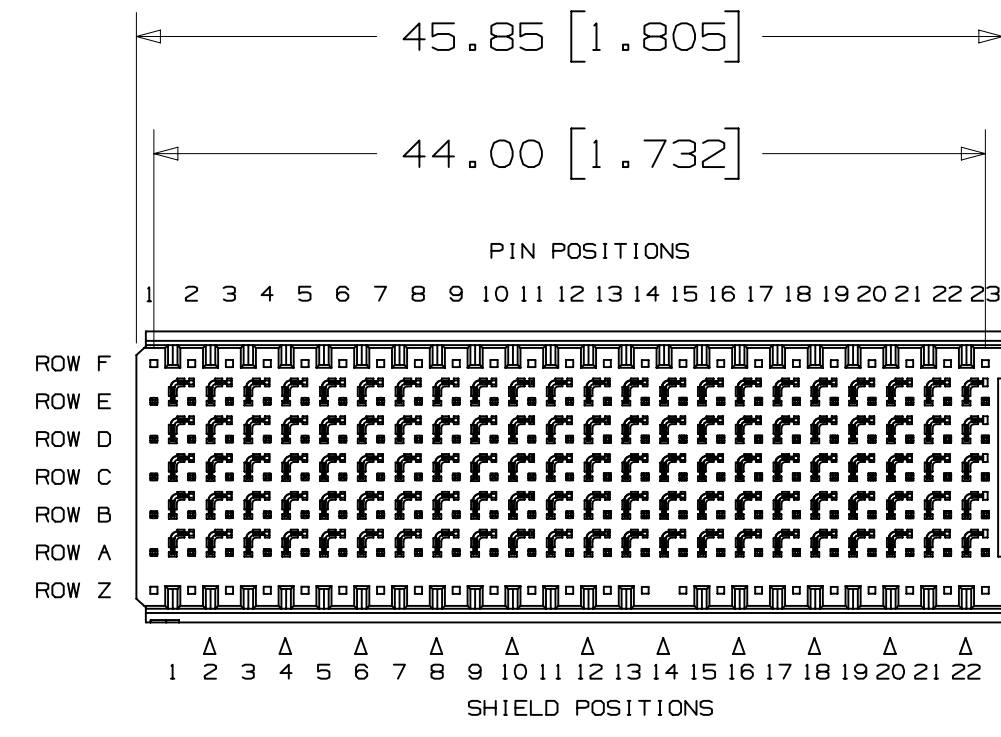
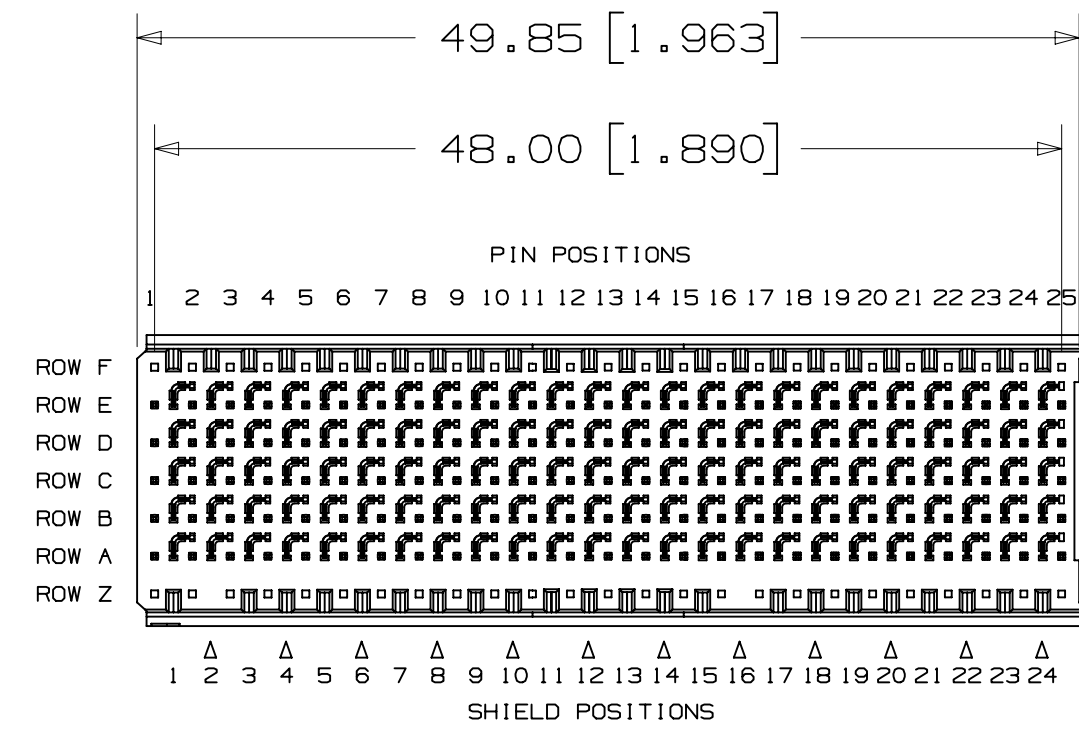
CAGE NUMBER: D78-5100-2633-5

REV. A

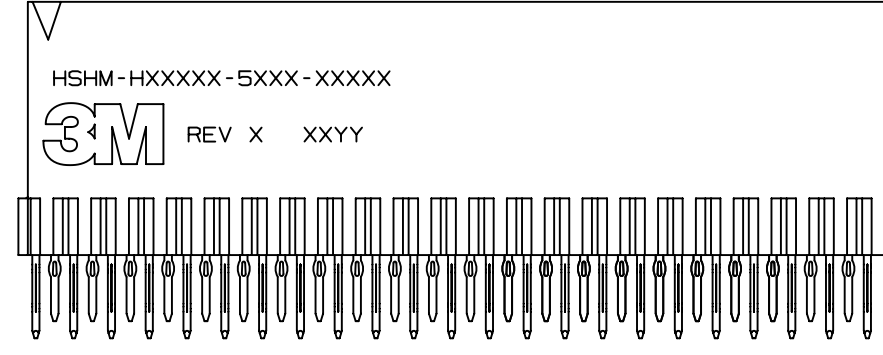
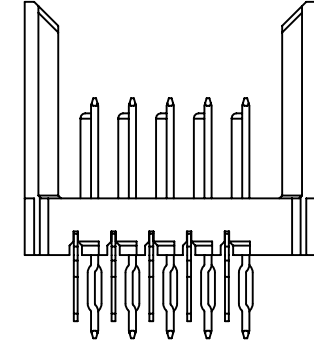
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78-5100-2633-5
 DRAWING NUMBER
 A.1 9/17/2013 3:13 PM UTC-05:00
 REVISION

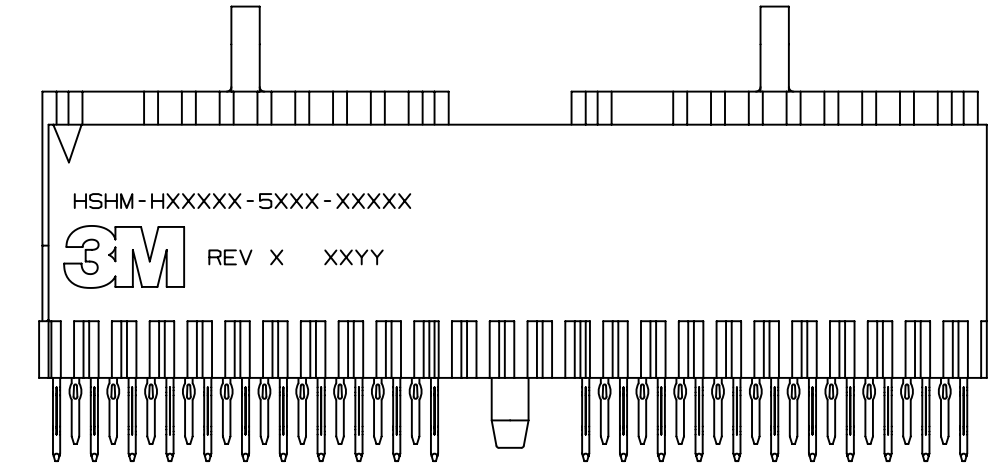
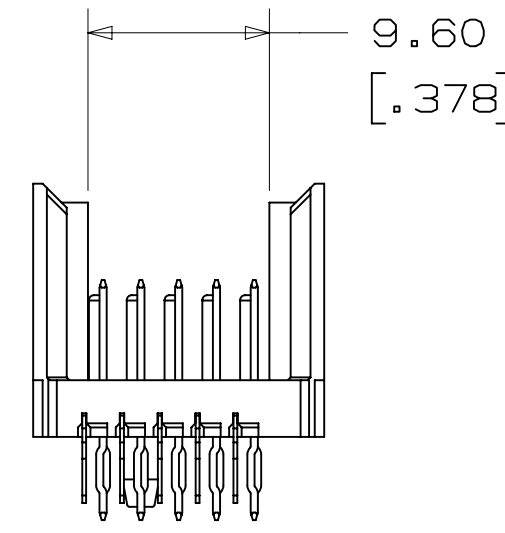
3M™ HSHM PRESS-FIT HEADER, 5-ROW, HSHM SERIES
FOR HIGH SPEED HARD METRIC APPLICATIONS



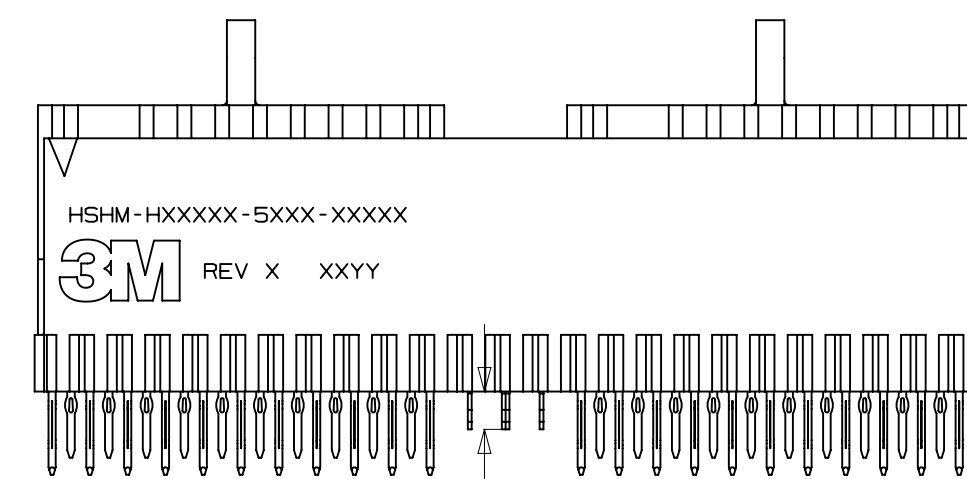
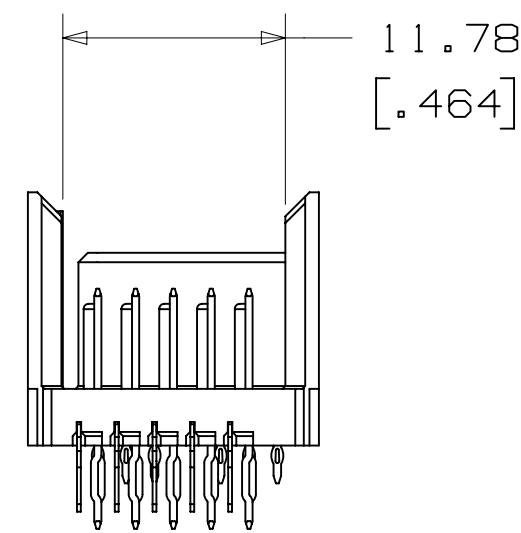
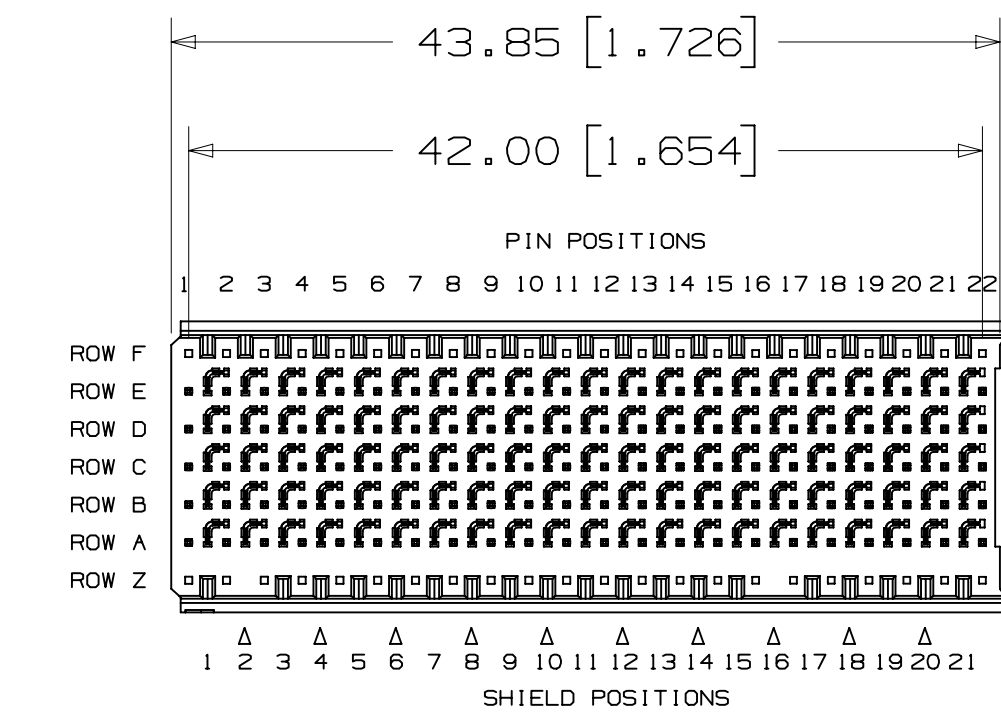
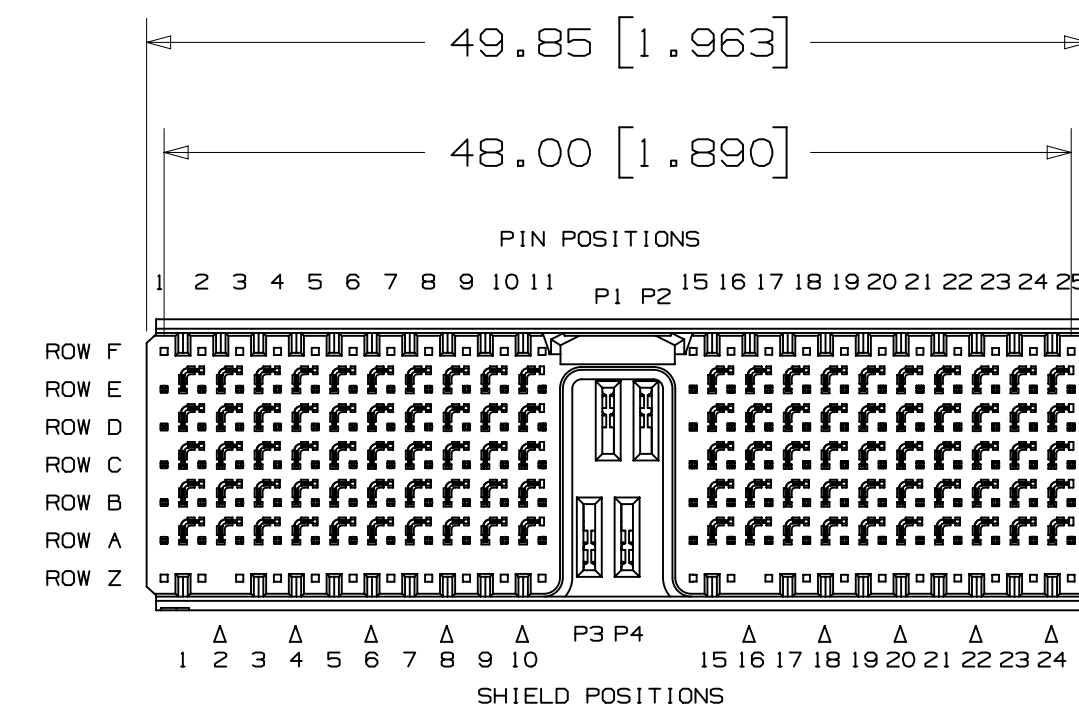
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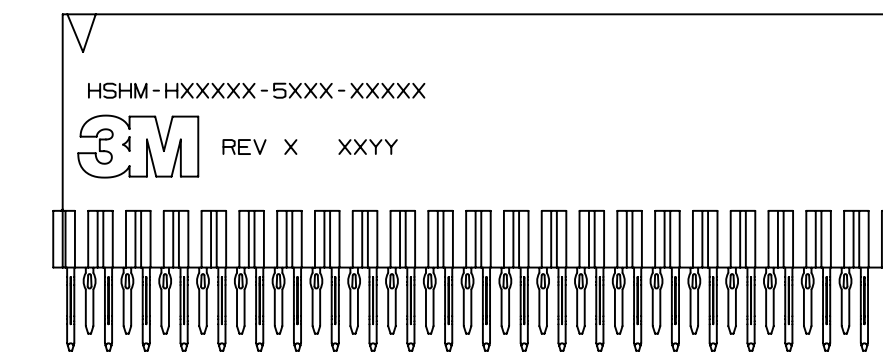
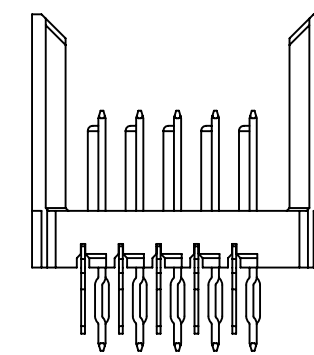
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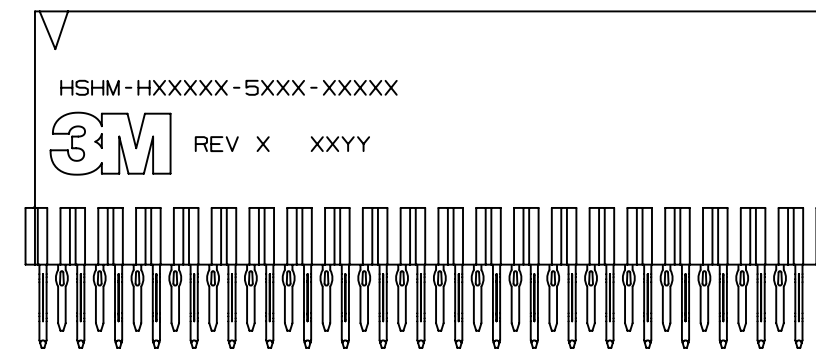
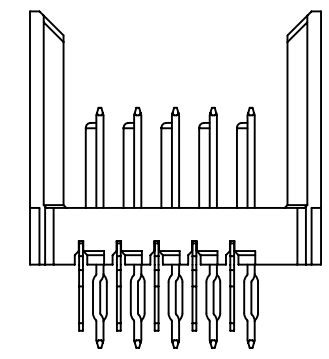
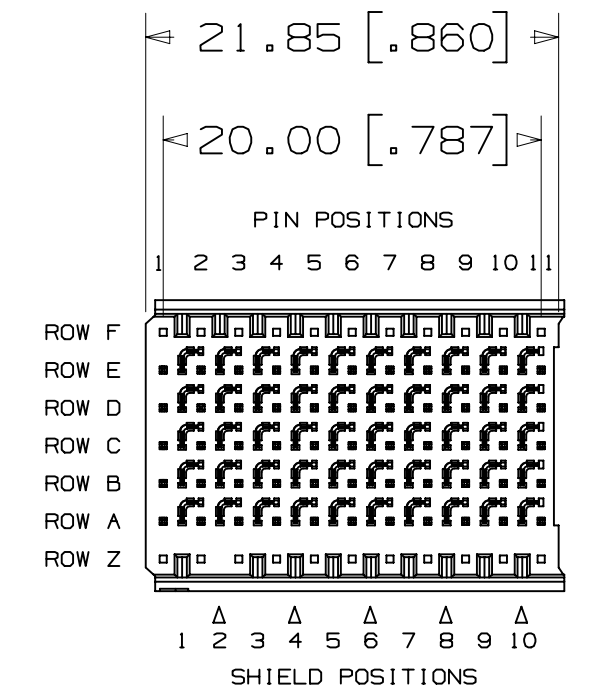
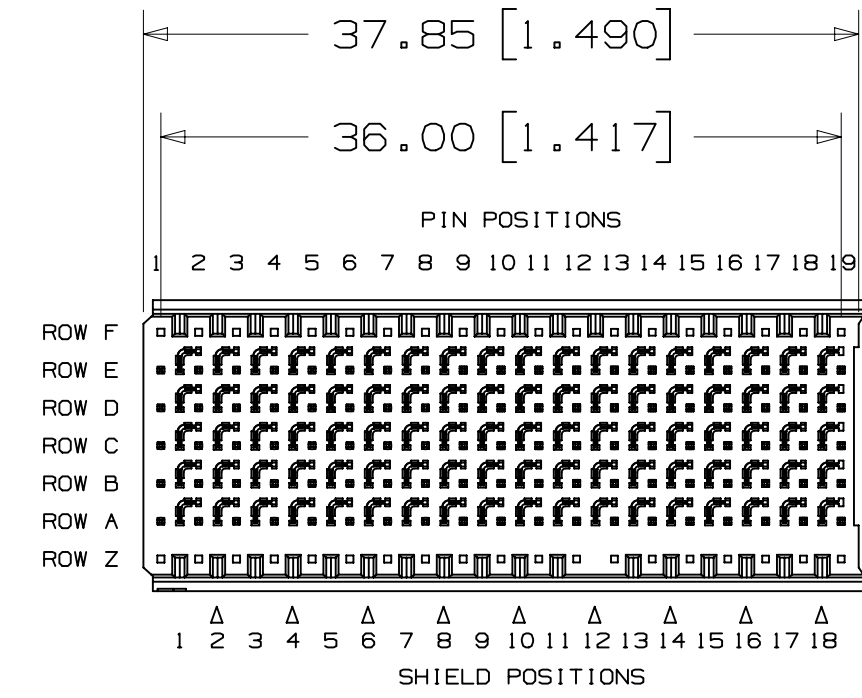
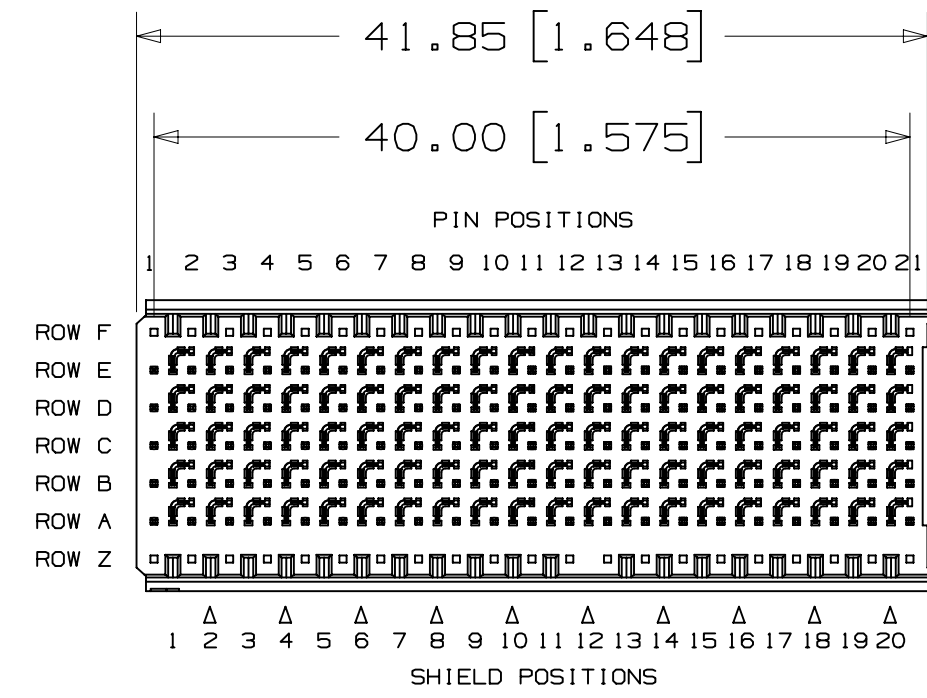


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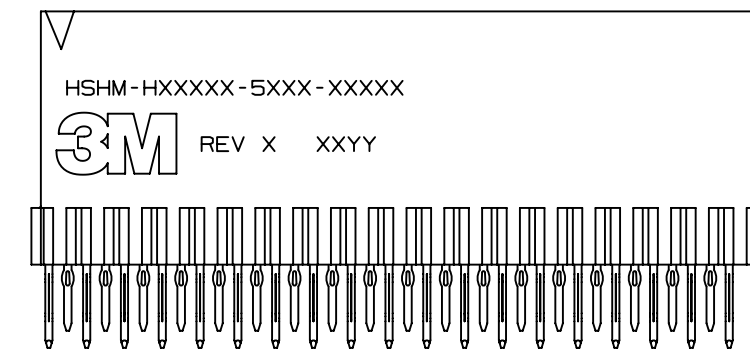
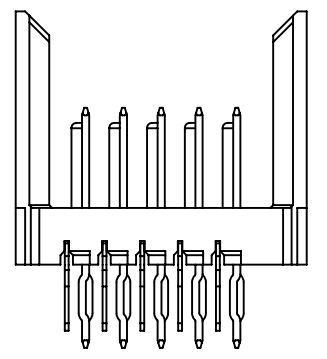
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				SEP 17, 2013	JNC	TS
DIVISION		DIVISION CODE		DATE		
Interconnect Solutions		ISD		SEP 17, 2013		
DO NOT SCALE DRAWING	SCALE 5/2	TOLERANCES EXCEPT AS NOTED		DATE		
THIRD ANGLE PROJECTION		INCHES		DATE		
INTERPRET PER ASME Y14.5 - 1994		MILLIMETERS		DATE		
MAX SURFACE ROUGHNESS		INCHES		DATE		
SURFACES		MILLIMETERS		DATE		
MARKED ONLY		ANGLES		DATE		
CAGE NUMBER		DRAWING NO.		REV.		
D78-5100-2633-5		A		A		
MODEL		SHT		3 OF 6		

A REVISION
 78-5100-2633-5 DRAWING NUMBER
 B
 A.1 9/17/2013 3:13 PM UTC-05:00
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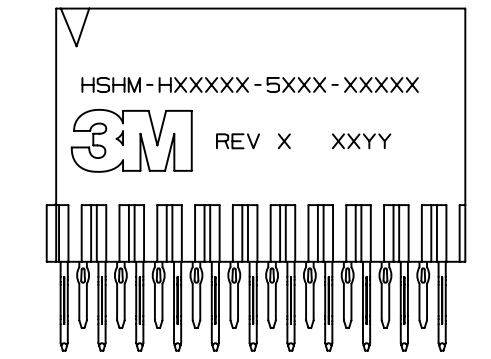
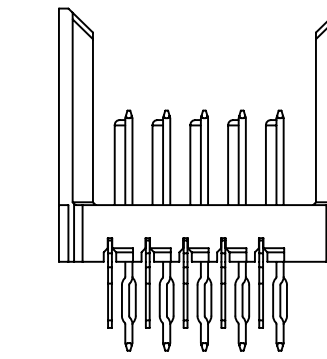
3M™ HSHM PRESS-FIT HEADER, 5-ROW, HSHM SERIES
FOR HIGH SPEED HARD METRIC APPLICATIONS



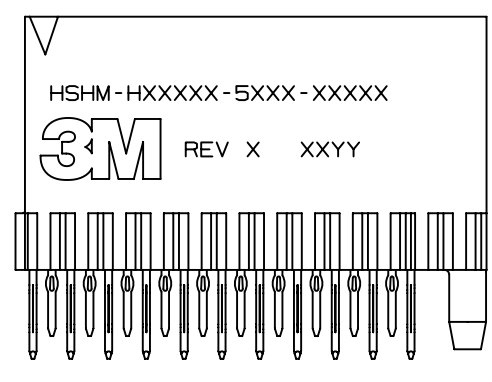
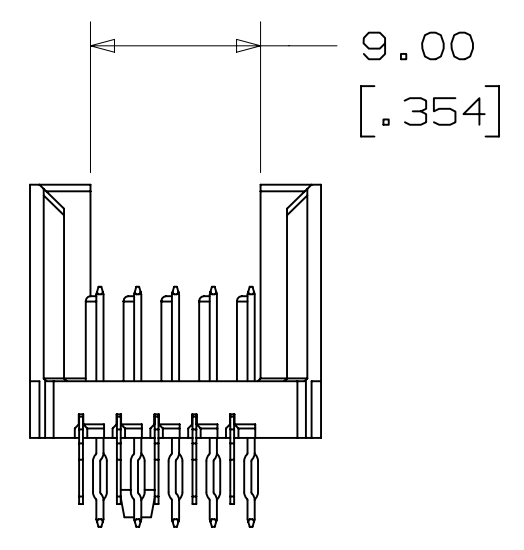
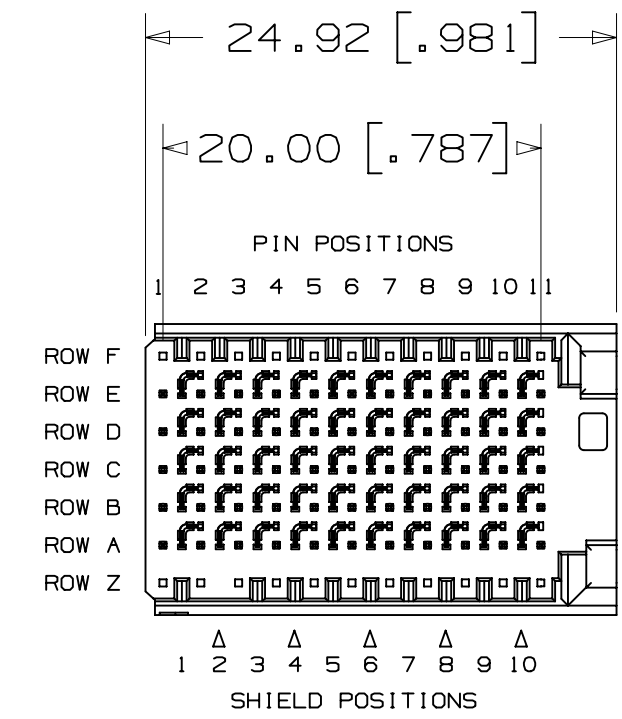
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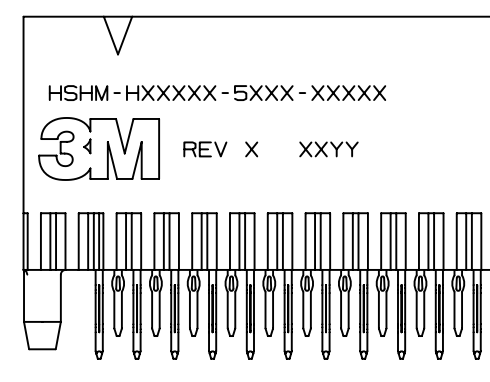
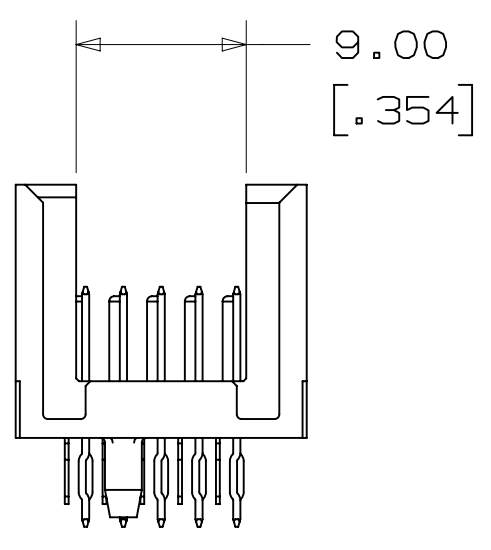
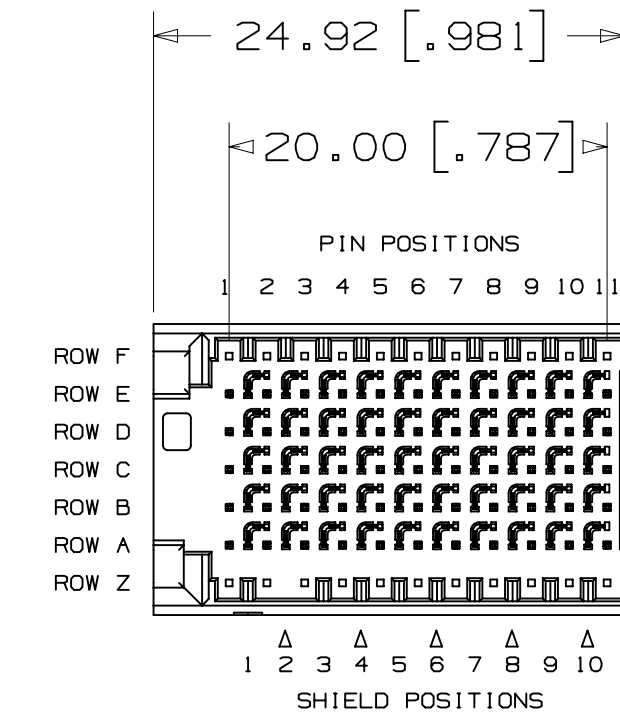
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HSHM-H055BX-5CPX



HSHM-H055CLX-5CPX



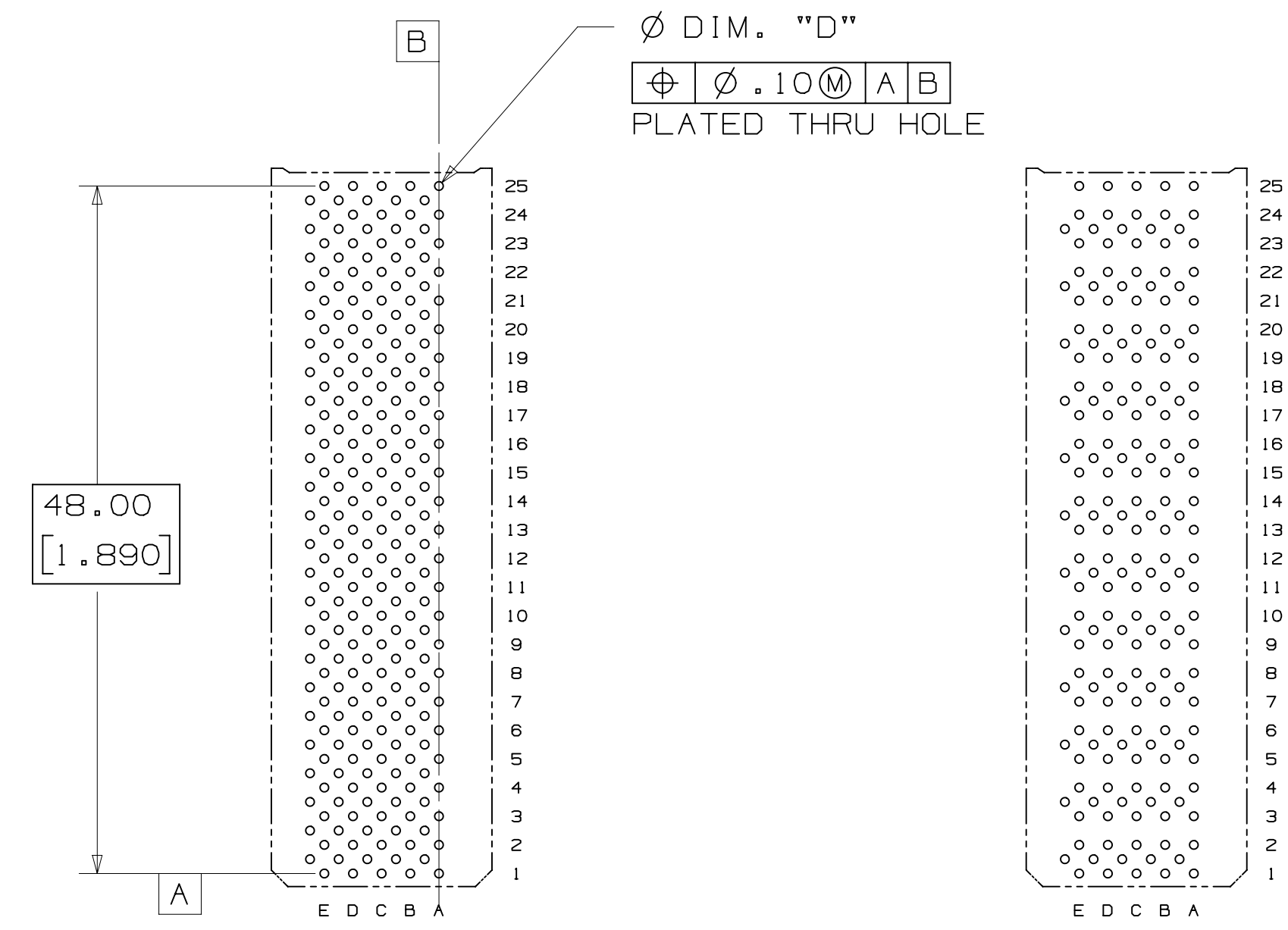
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DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
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DIVISION Interconnect Solutions		DIVISION CODE ISD		DATE SEP 17, 2013		
DO NOT SCALE DRAWING		SCALE 5/2		TOLERANCES EXCEPT AS NOTED		
THIRD ANGLE PROJECTION		INCHES 0 ± .01 .00 ± .005 .0000 ±		MILLIMETERS 0 ± .3 .00 ± .13 .000 ±		
INTERPRET PER ASME Y14.5 - 1994		MAX SURFACE ROUGHNESS DT SURFACES MARKED ONLY		TITLE HSHM PRESS-FIT HEADER, 2MM, 5-ROW, HSHM SERIES		
CAGE NUMBER D78-5100-2633-5		DRAWING NO. A		REV. A		
MODEL		SHEET 4 OF 6		DATE SEP 17, 2013		

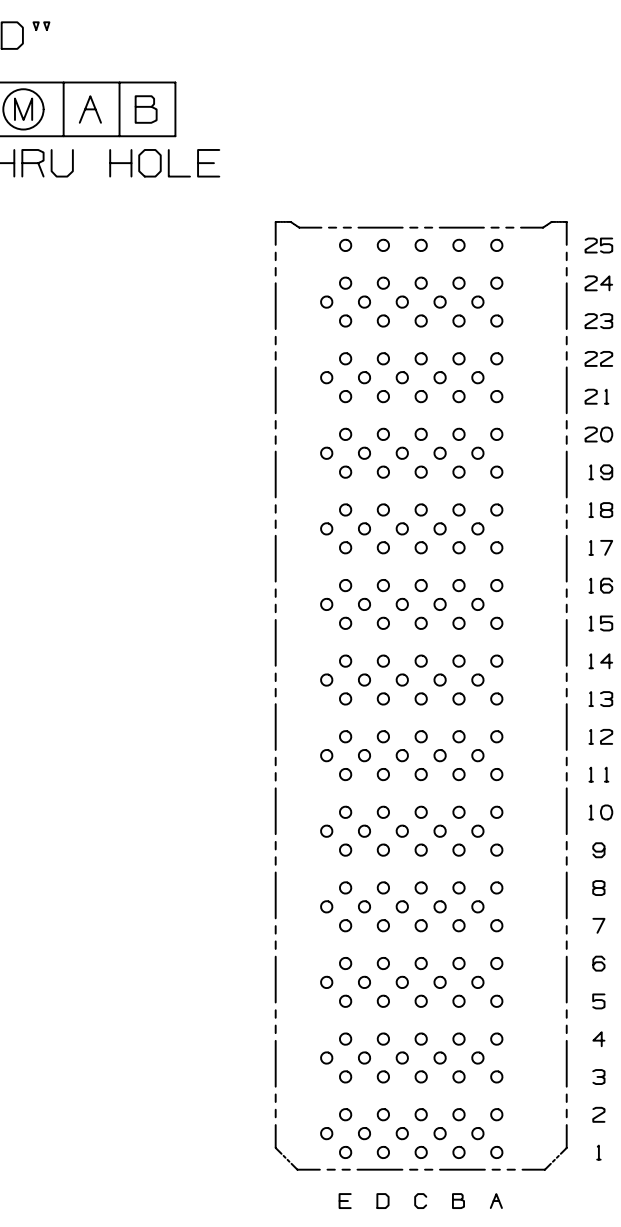
REVISION
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 DRAWING NUMBER
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 A.1 9/17/2013 3:13 PM UTC-05:00

3M™ HSHM PRESS-FIT HEADER, 5-ROW, HSHM SERIES
FOR HIGH SPEED HARD METRIC APPLICATIONS

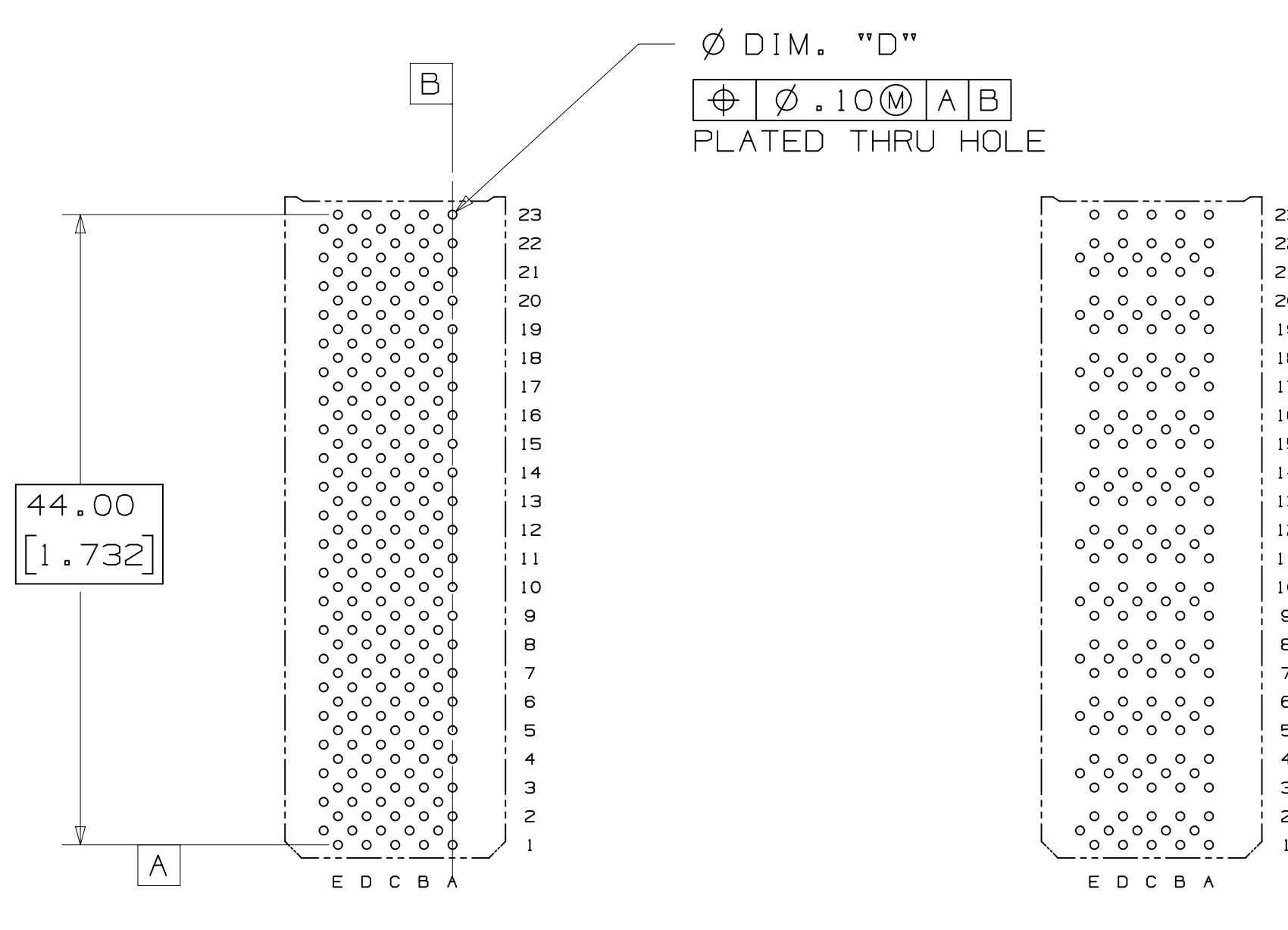
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DIM. "D"	.457-.559 [.0180-.0220]	.025-.045 [.0010-.0018]	.008-.018 [.0003-.0007]	.584-.625 [.0230-.0246]



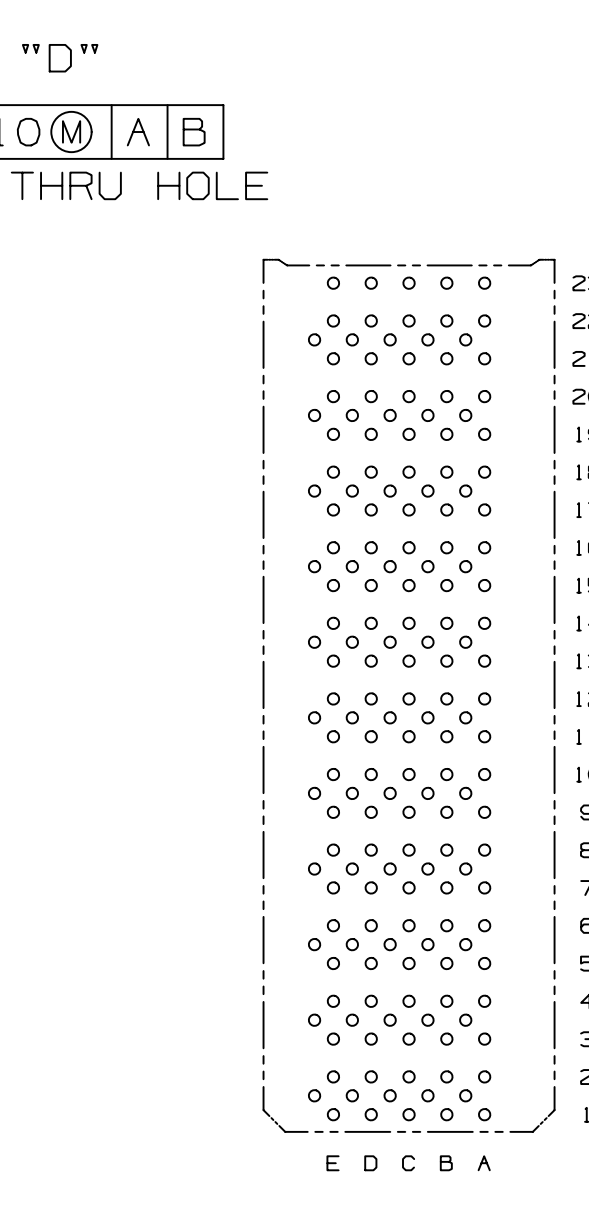
HSHM-H125B4-5CPX
COAXIAL, COLUMN DIFFERENTIAL
AND STRIPLINE APPLICATIONS



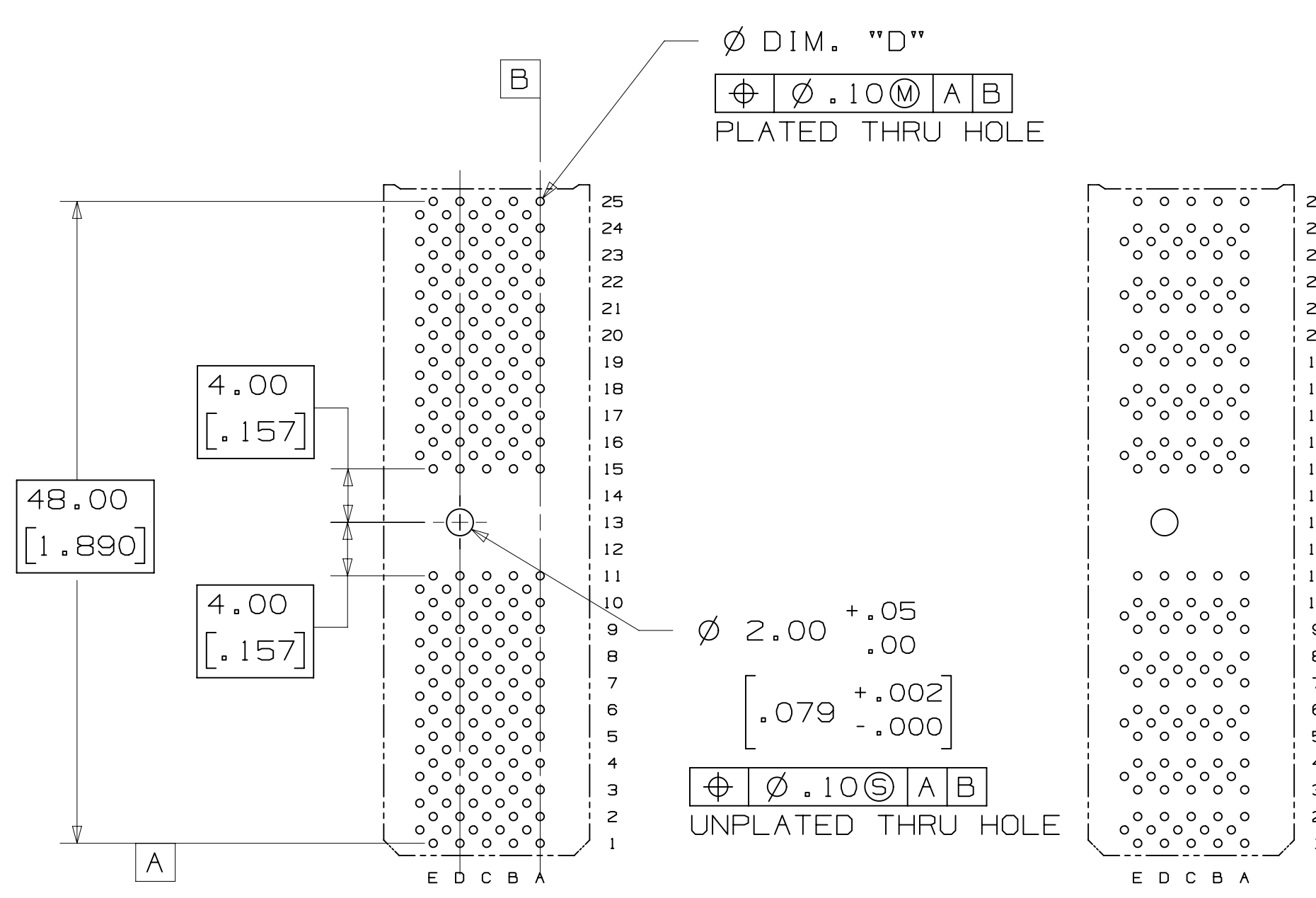
HSHM-H125B5-5CPX
ROW DIFFERENTIAL APPLICATIONS
(SAME GEOMETRY AS LEFT VIEW
WITHOUT THE GROUND VIAS)



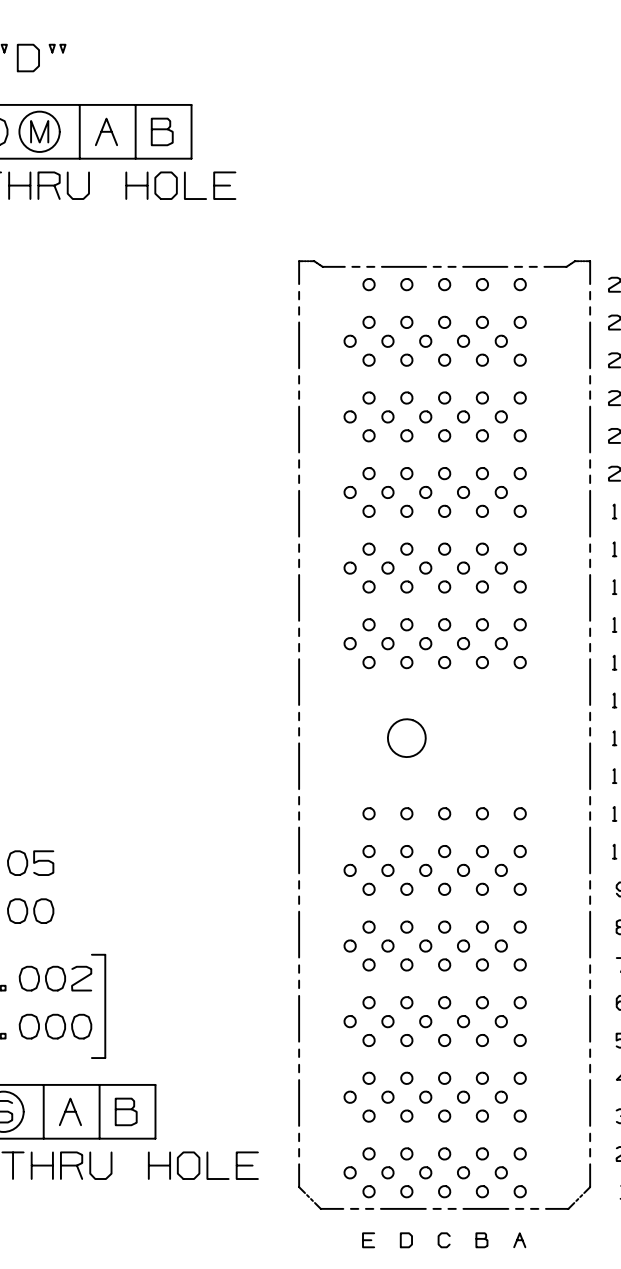
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COAXIAL, COLUMN DIFFERENTIAL
AND STRIPLINE APPLICATIONS



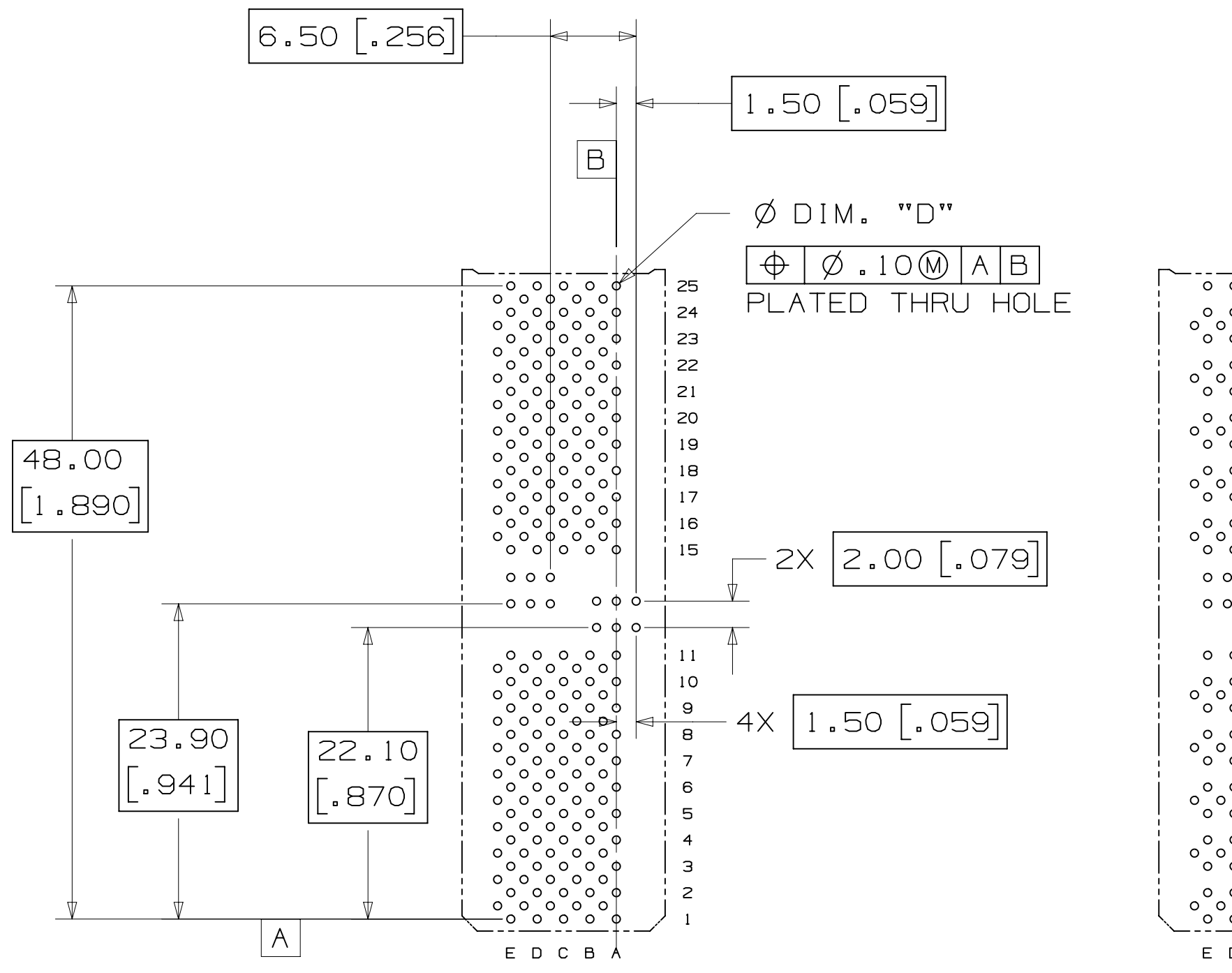
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ROW DIFFERENTIAL APPLICATIONS
(SAME GEOMETRY AS LEFT VIEW
WITHOUT THE GROUND VIAS)



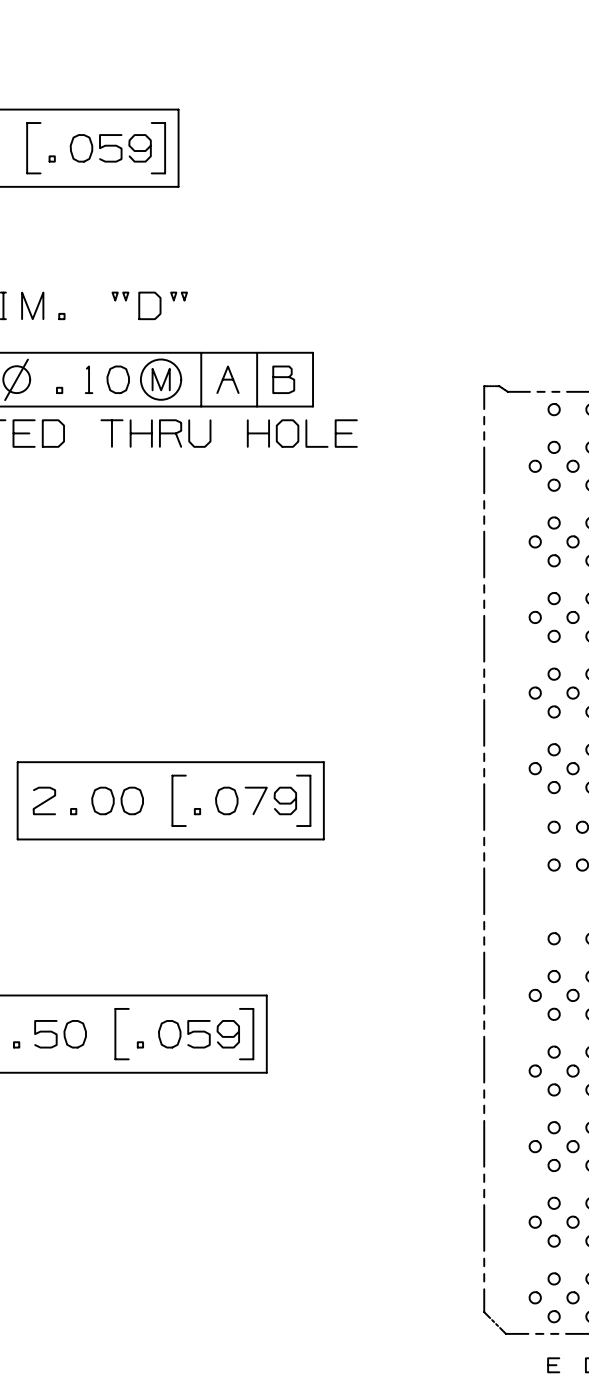
HSHM-H110A4-5CPX
COAXIAL, COLUMN DIFFERENTIAL
AND STRIPLINE APPLICATIONS



HSHM-H110A5-5CPX
ROW DIFFERENTIAL APPLICATIONS
(SAME GEOMETRY AS LEFT VIEW
WITHOUT THE GROUND VIAS)



HSHM-H110APWR4-5CPX
COAXIAL, COLUMN DIFFERENTIAL
AND STRIPLINE APPLICATIONS



HSHM-H110APWR5-5CPX
ROW DIFFERENTIAL APPLICATIONS
(SAME GEOMETRY AS LEFT VIEW
WITHOUT THE GROUND VIAS)

RECOMMENDED PCB MOUNTING HOLE PATTERN
(VIEWED FROM COMPONENT SIDE)

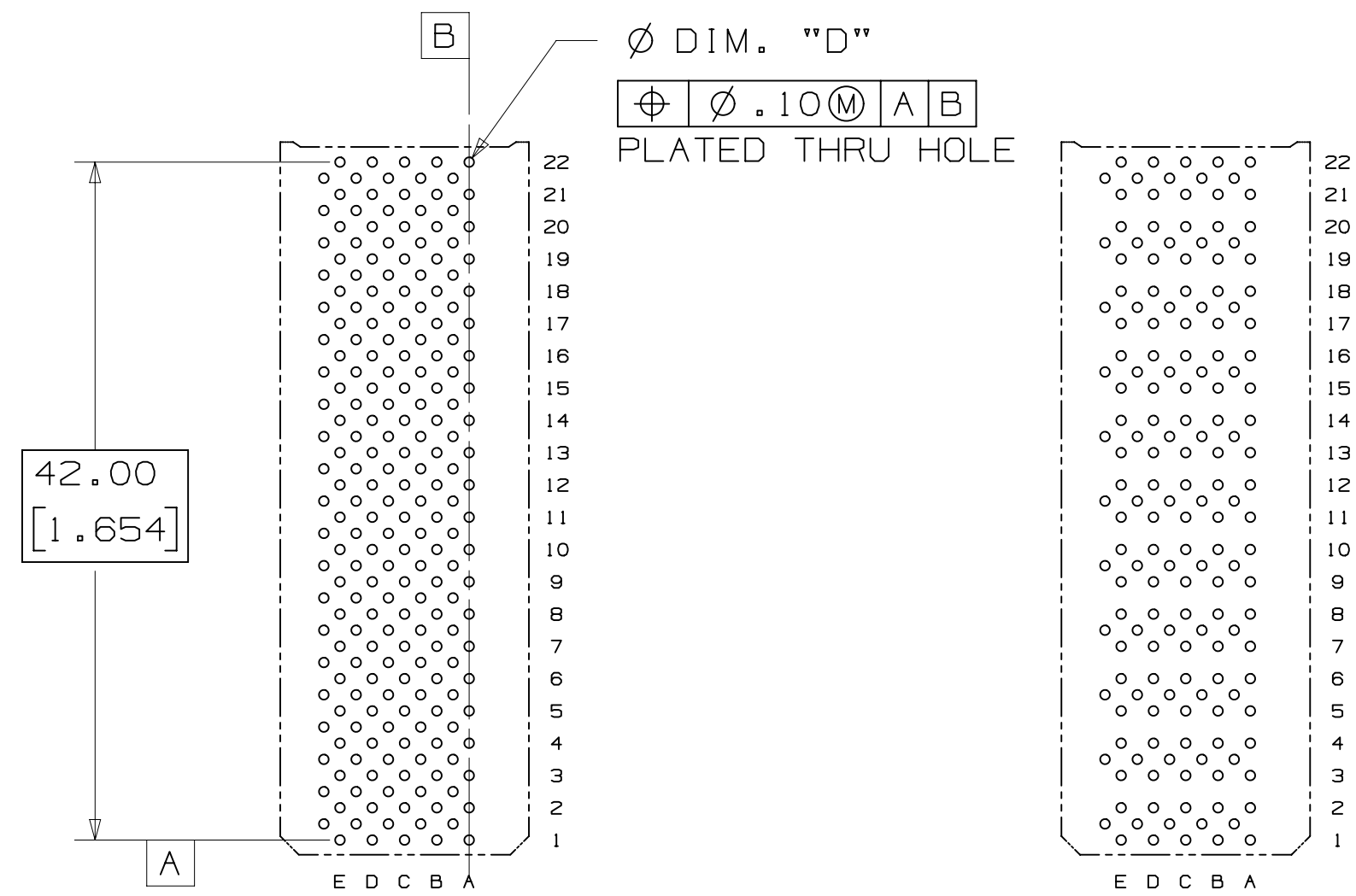
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				SEP 17, 2013		
DIVISION		DIVISION CODE		DATE		
Interconnect Solutions		ISD		SEP 17, 2013		
DO NOT SCALE DRAWING	SCALE 5/2	TOLERANCES EXCEPT AS NOTED		DATE		
THIRD ANGLE PROJECTION		INCHES		DATE		
INTERPRET PER ASME Y14.5 - 1994		MILLIMETERS		DATE		
MAX SURFACE ROUGHNESS		ANGLES		DATE		
MARKED SURFACES				DATE		
MARKED ONLY				DATE		

A	50065	SEP 17, 2013	JNC	TS
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		SEP 17, 2013		
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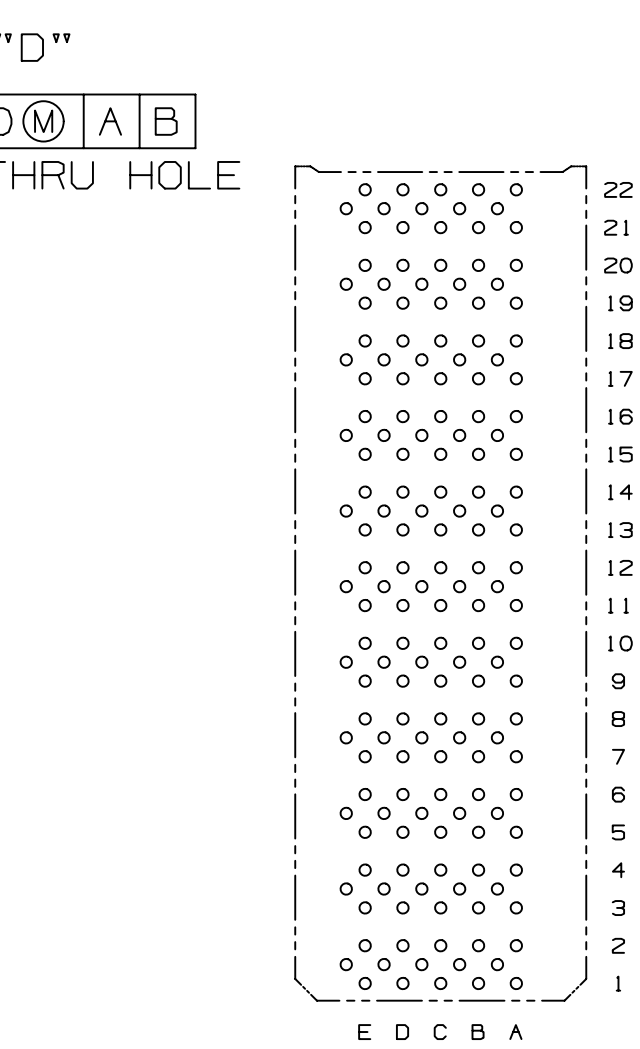
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MODEL		SHT		OF
		5		6

78-5100-2633-5
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 A.1 9/17/2013 3:13 PM UTC-05:00
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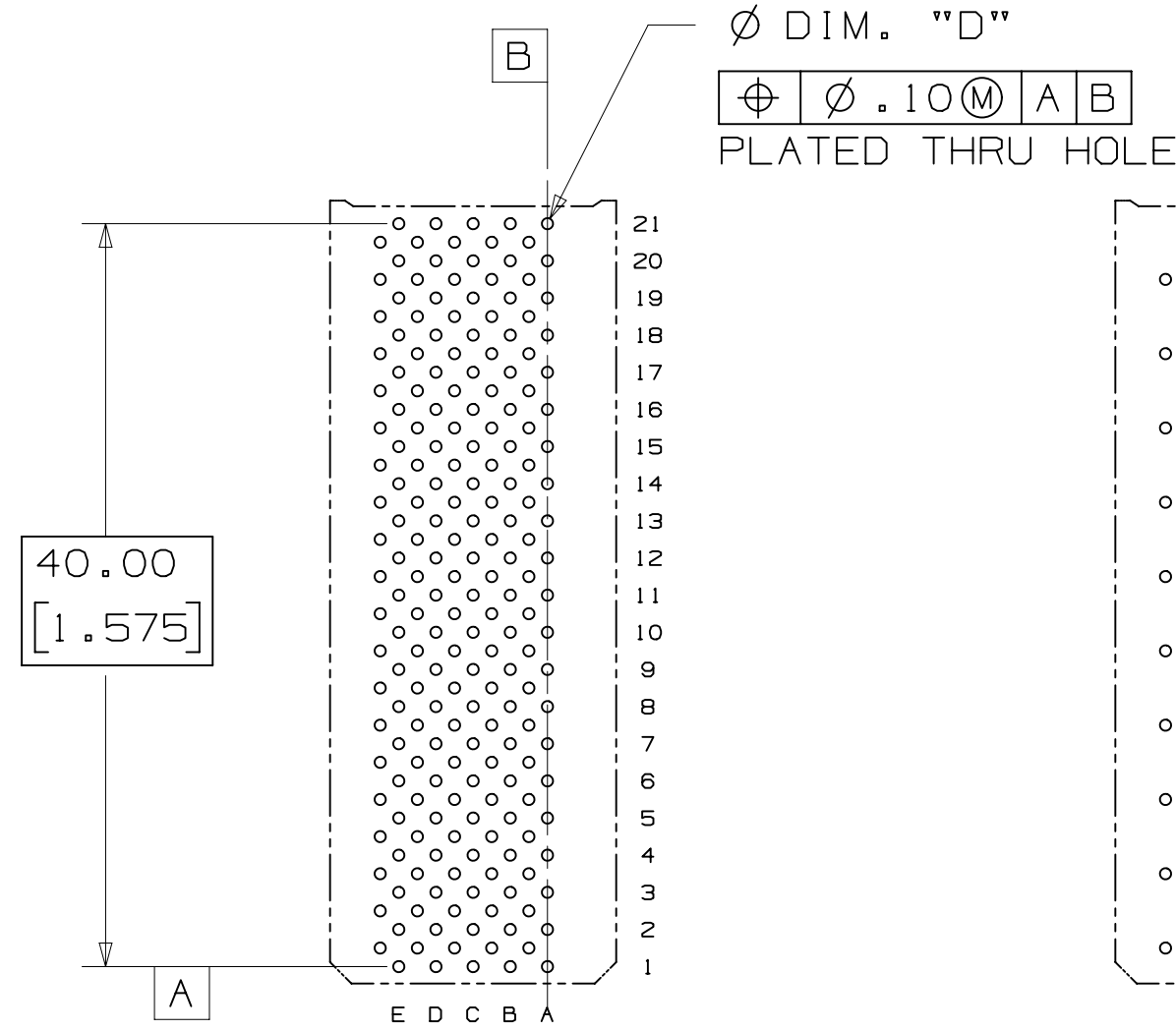
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FOR HIGH SPEED HARD METRIC APPLICATIONS



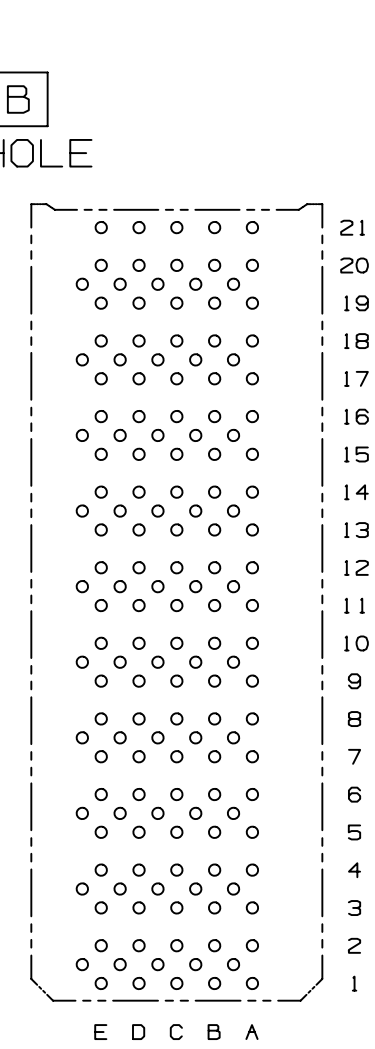
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COAXIAL, COLUMN DIFFERENTIAL
AND STRIPLINE APPLICATIONS



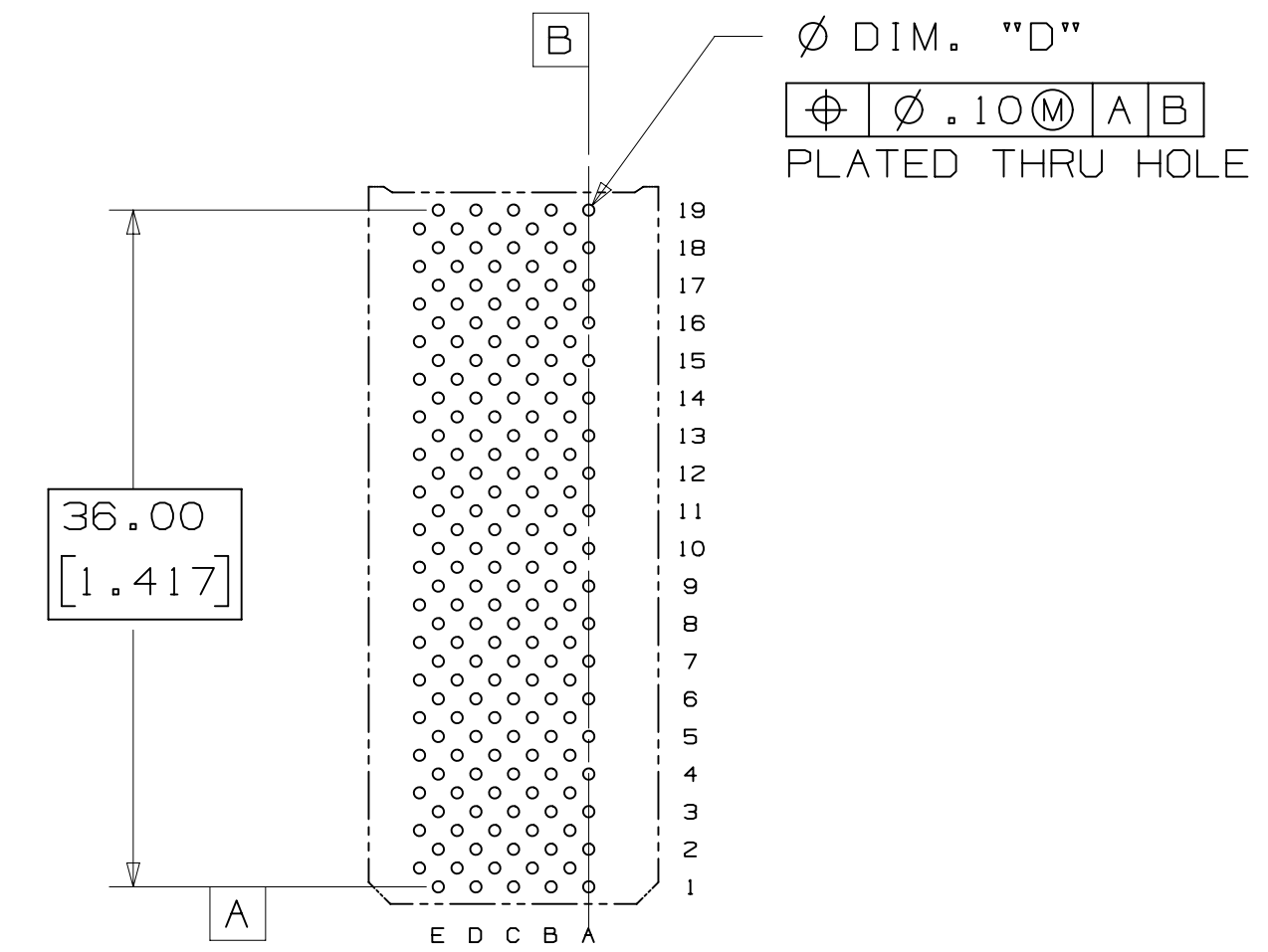
HSHM-H110B5-5CPX
ROW DIFFERENTIAL APPLICATIONS
(SAME GEOMETRY AS LEFT VIEW
WITHOUT THE GROUND VIAS)



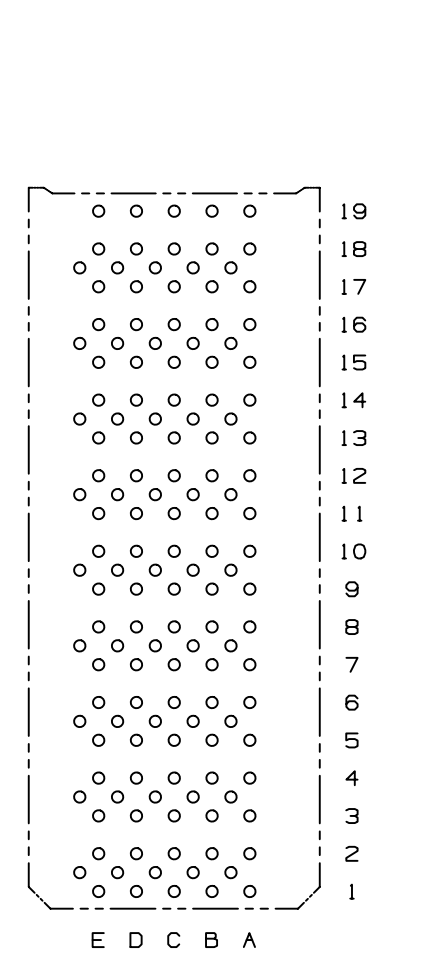
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COAXIAL, COLUMN DIFFERENTIAL
AND STRIPLINE APPLICATIONS



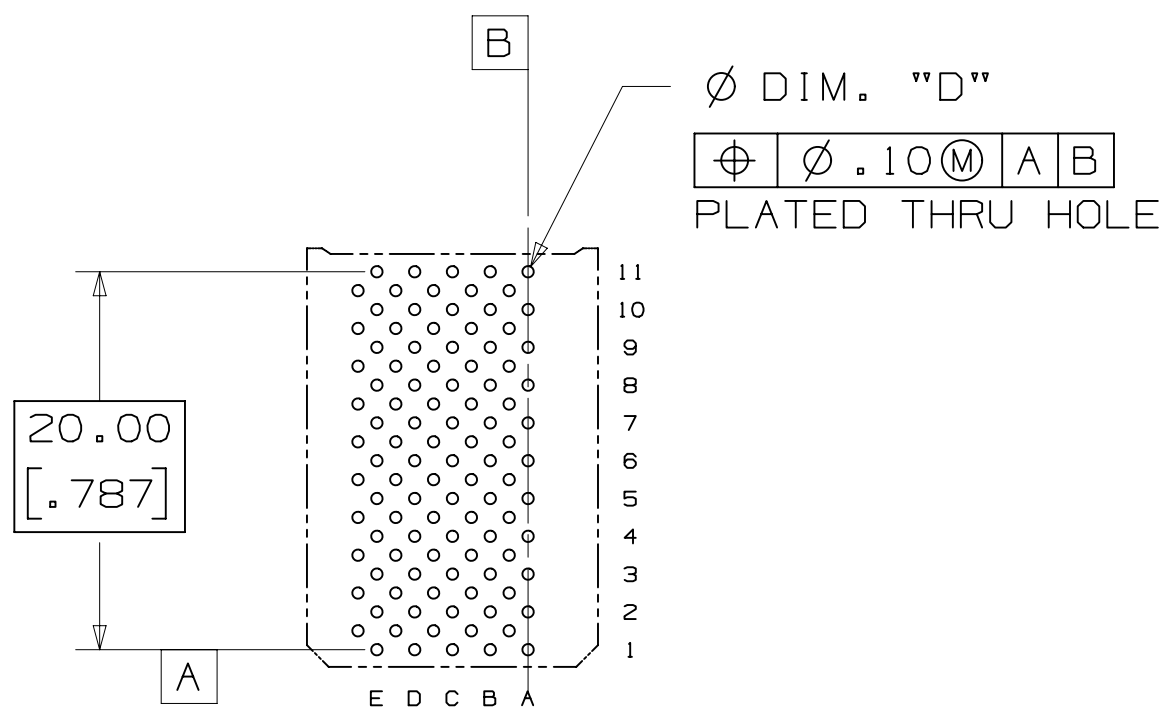
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ROW DIFFERENTIAL APPLICATIONS
(SAME GEOMETRY AS LEFT VIEW
WITHOUT THE GROUND VIAS)



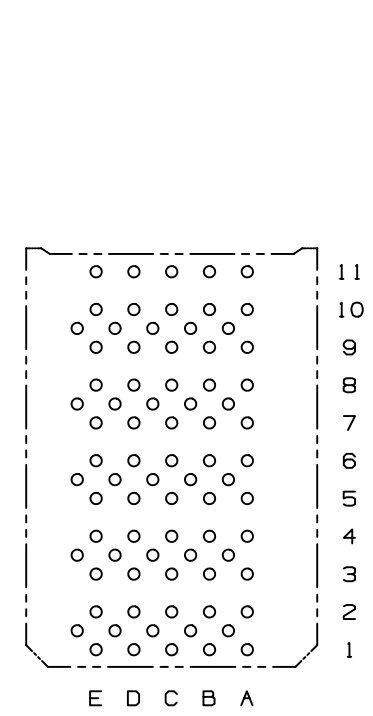
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COAXIAL, COLUMN DIFFERENTIAL
AND STRIPLINE APPLICATIONS



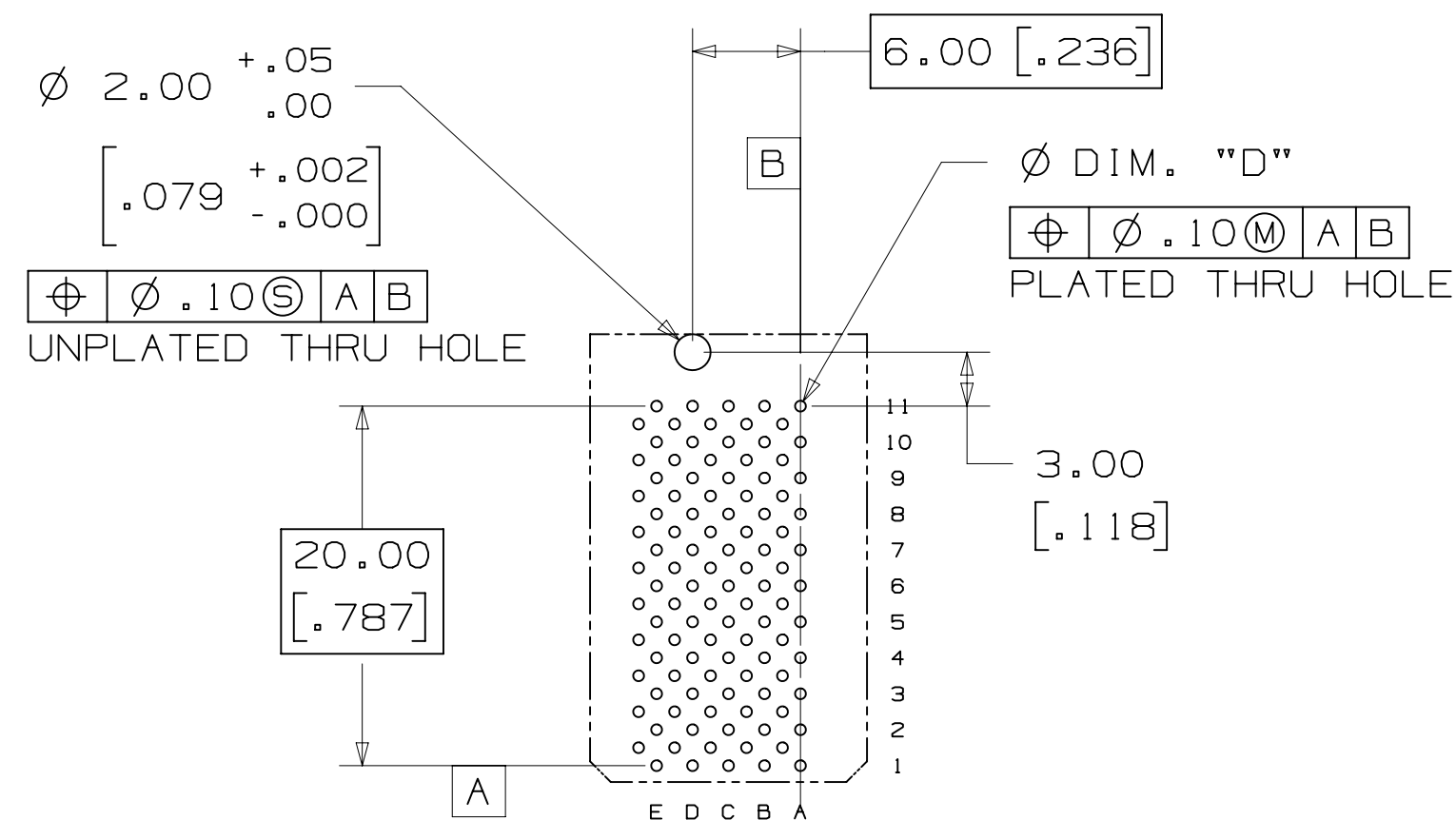
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ROW DIFFERENTIAL APPLICATIONS
(SAME GEOMETRY AS LEFT VIEW
WITHOUT THE GROUND VIAS)



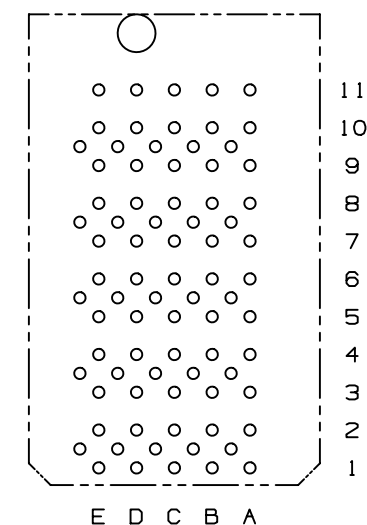
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COAXIAL, COLUMN DIFFERENTIAL
AND STRIPLINE APPLICATIONS



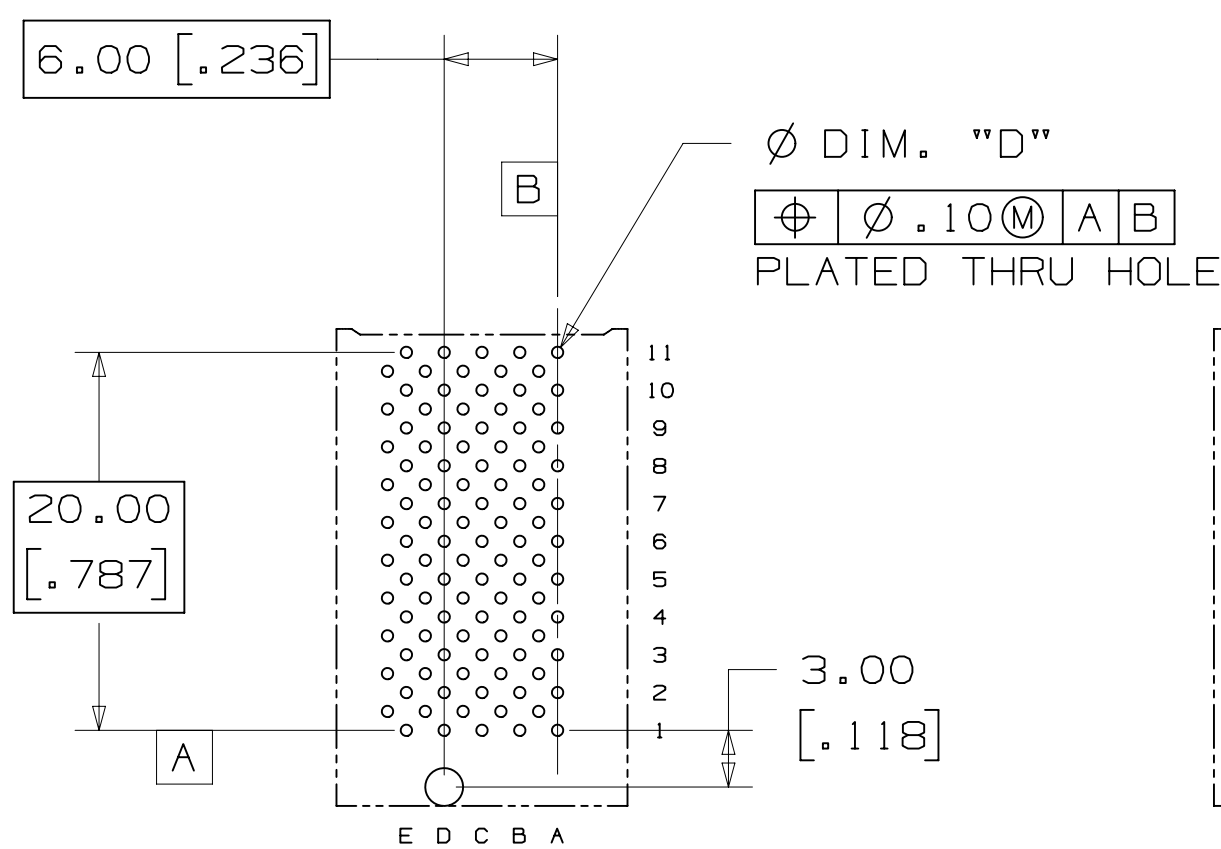
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ROW DIFFERENTIAL APPLICATIONS
(SAME GEOMETRY AS LEFT VIEW
WITHOUT THE GROUND VIAS)



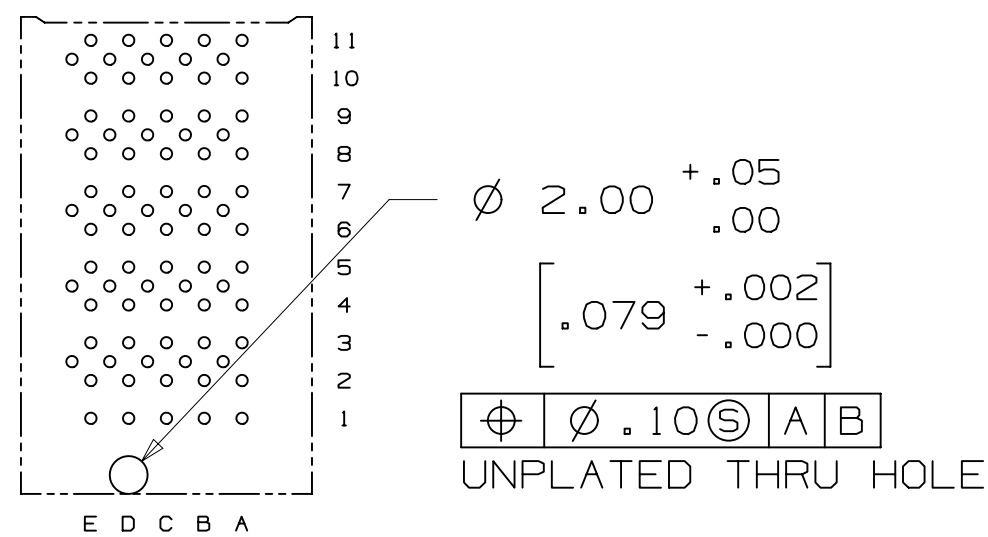
HSHM-H055CL4-5CPX
COAXIAL, COLUMN DIFFERENTIAL
AND STRIPLINE APPLICATIONS



HSHM-H055CL5-5CPX
ROW DIFFERENTIAL APPLICATIONS
(SAME GEOMETRY AS LEFT VIEW
WITHOUT THE GROUND VIAS)



HSHM-H055CR4-5CPX
COAXIAL, COLUMN DIFFERENTIAL
AND STRIPLINE APPLICATIONS



HSHM-H055CR5-5CPX
ROW DIFFERENTIAL APPLICATIONS
(SAME GEOMETRY AS LEFT VIEW
WITHOUT THE GROUND VIAS)

RECOMMENDED PCB MOUNTING HOLE PATTERN
(VIEWED FROM COMPONENT SIDE)

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD														
				SEP 17, 2013 PRODUCTION RELEASE	JNC	TS														
		CHKD	CASTIGLIONE	DATE	DATE	DATE														
				SEP 17, 2013		SEP 17, 2013														
DIVISION		DIVISION CODE		DATE																
Interconnect Solutions		ISD		MFG																
DO NOT SCALE DRAWING	SCALE 5/2	TOLERANCES EXCEPT AS NOTED		DATE																
THIRD ANGLE PROJECTION		INCHES		DATE																
INTERPRET PER ASME Y14.5 - 1994		MILLIMETERS		DATE																
MAX SURFACE ROUGHNESS		SURFACES		DATE																
MARKED ONLY		ANGLES		DATE																
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CAGE NUMBER	SIZE	DRAWING NO.	REV.																	
D		78-5100-2633-5	A																	
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MODEL	REV.	DATE	DATE	DATE	DATE	DATE														

78-5100-2633-5
 DRAWING NUMBER
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