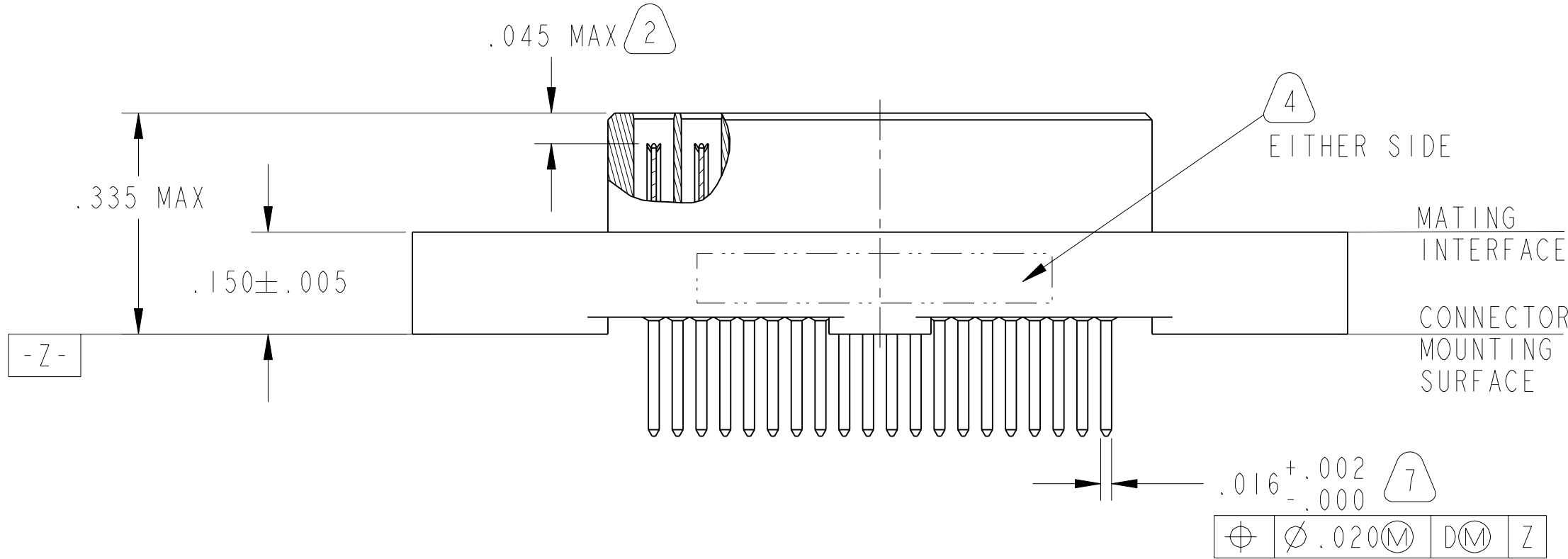
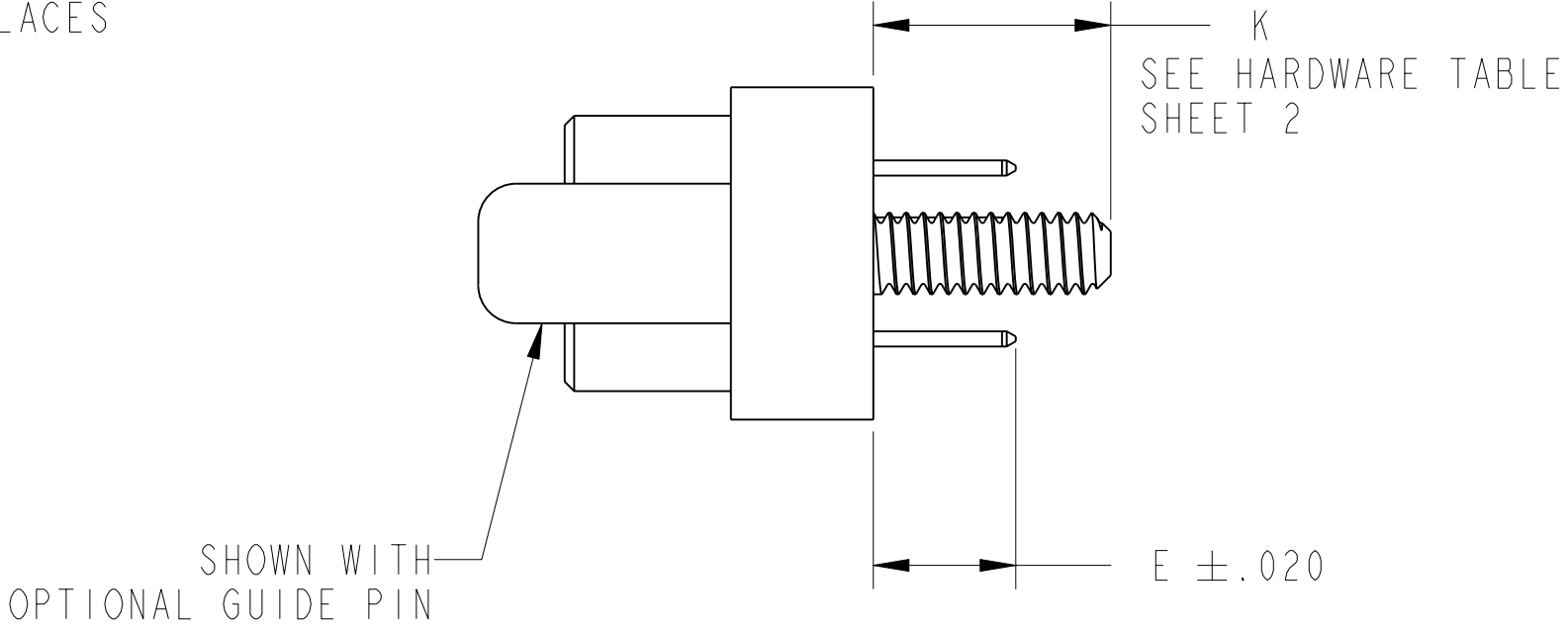
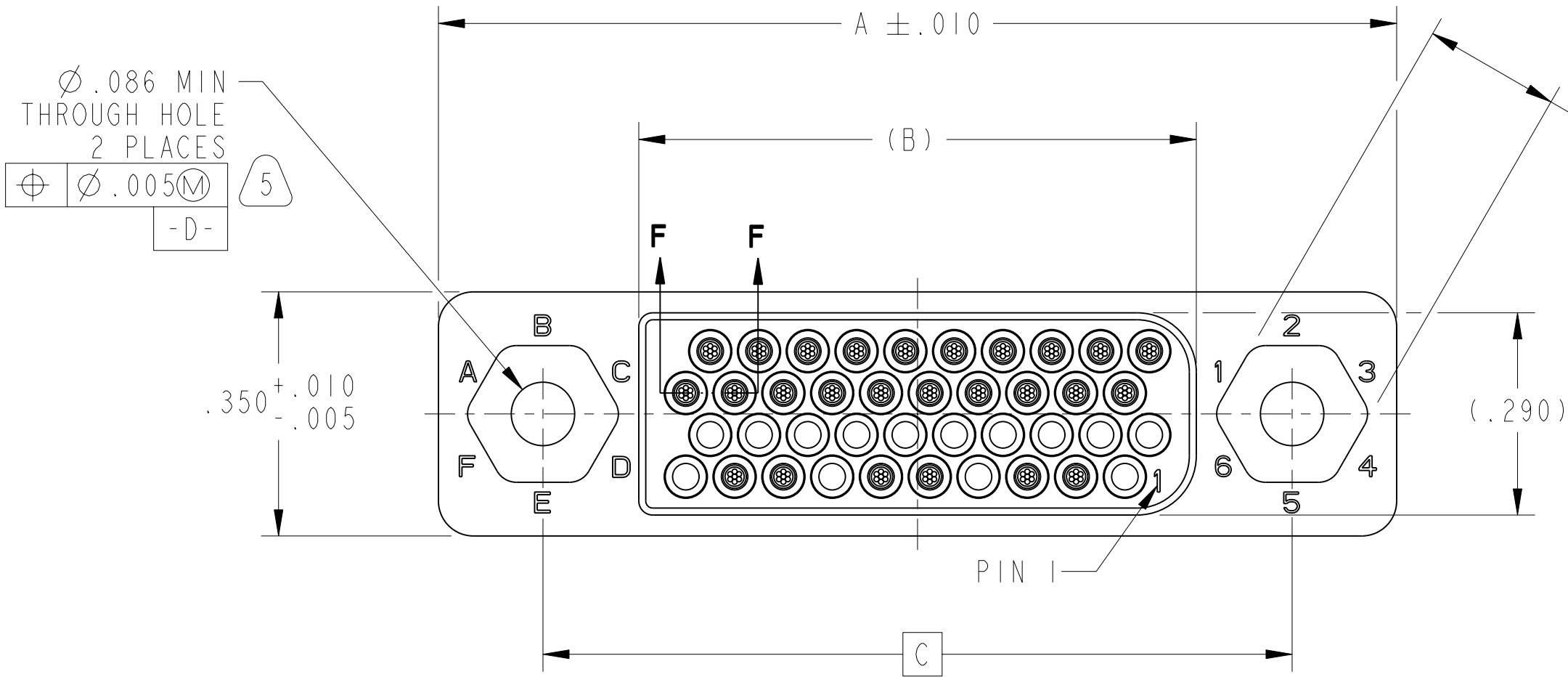


REV. A	DOCUMENT NO. HSB-M4-XXDXXXXX	SHEET 1 OF 5
REVISIONS		
LTR	DESCRIPTION	DATE
A	INITIAL RELEASE	11/15/2007




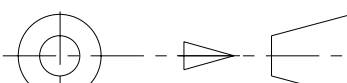
NOTES:

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N/A

NEXT ASSEMBLY

PRO/ENGINEER INFORMATION
Pro/e Model Used:
HSB-M4-XXDXXXXX.ASSEM
Drawing Name:
HSB-M4-XXDXXXXX

UNLESS OTHERWISE SPECIFIED		SPECIFICATIONS		POS	QTY	PART NUMBER	DESCRIPTION	NOTE			
<div>LINEAR DIMENSIONS ARE IN INCHES</div> <div>TOLERANCES:</div> <div><div>.XXXX = ±.0005</div><div>ANGLES= ±2°</div><div>.XXX = ±.010</div><div>.XX = ±.03</div><div>.X = ±.1</div></div> <div>-----</div> <div>DIM. & TOL. PER ASME Y14.5M;</div> <div>DRM PER MIL-DTL-31000;</div> <div>OTHER Amphenol Sdts. PER 9-3800</div> <div>LEGENDS:</div> <div>-FLAG NOTE CALL OUT</div> <div>REFERENCE ONLY</div> <div></div>		MATERIAL SPEC.		APPROVALS		DATE	<div>AMPHENOL CORPORATION</div> <div>40-60 DELAWARE AVENUE</div> <div>SIDNEY, N.Y. 13838</div> <div>3 DIFFERENTIAL PAIR W/ 20 BRUSH</div> <div>MOTHER BOARD CONNECTOR</div> <div>HSB3 SERIES</div>				
		N/A		PREPARED BY		DMORSE			19-SEP-07		
		PROCESS SPEC.		ENGINEER IN CHARGE		BCHUBB					
				DESIGN MANAGER		EHICKEY					
				DESIGN ACTIVITY GROUP		BLP					
				THIRD ANGLE PROJECTION		SIZE		CAGE CODE	DOCUMENT NO.	REV.	
		9-3895				C		77820	HSB-M4-XXDXXXXX	A	
		9-3856-5									
						SCALE: 5.0		REF. HDB-M4-XXXXXXXXXX		SHEET 1 OF 5	

4

3

2

REV. A

SHEET 2 OF 5

DOCUMENT NO. HSB-M4-XXDXXXXX

DOCUMENT NO. HSB-M4-XXDXXXXX

SHEET 2 OF 5

REV. A

EXAMPLE: HSB-M4-03D M 20 2 X

CONTACT TERMINATION FINISH

2	GOLD PLATED IN ACCORDANCE WITH MIL-G-45204, TYPEII, .000030 MIN THICK GOLD OVER .000050 MIN THICK NICKEL
5	TIN PLATED IN ACCORDANCE WITH ASTM B545, .00010 MIN THICK MATTE TIN OVER .00010 MIN THICK NICKEL.
6	TIN-LEAD PLATED IN ACCORDANCE WITH SAE-AMS-P-81728, .00010 MIN THICK TIN-LEAD OVER .00010 MIN THICK COPPER.

TERMINATION

	TYPE	STICKOUT (DIM E)
20	PCB, STRAIGHT, .016 DIA.	.060
21	PCB, STRAIGHT, .016 DIA.	.090
22	PCB, STRAIGHT, .016 DIA.	.120
23	PCB, STRAIGHT, .016 DIA.	.150
24	PCB, STRAIGHT, .016 DIA.	.180
25	PCB, STRAIGHT, .016 DIA.	.210
26	PCB, STRAIGHT, .016 DIA.	.240
27	PCB, STRAIGHT, .016 DIA.	.270
28	PCB, STRAIGHT, .016 DIA.	.300
29	PCB, STRAIGHT, .016 DIA.	.360
30	PCB, STRAIGHT, .016 DIA.	.420

BRUSH WIRE PLATING (CONTACT INTERFACE)

M	0.000050 Au MIN THK OVER NICKEL
C	0.000020 Au MIN THK OVER NICKEL

DIFFERENTIAL SIGNAL

CONNECTOR DIMENSIONS

NUMBER DIFF SIGNALS	NUMBER OF CONTACTS	DIMENSION A	DIMENSION B	DIMENSION C
03	26	1.375	.800	1.075
07	54	2.075	1.500	1.775
10	80	2.775	2.200	2.475
13	106	3.475	2.900	3.175

HIGHSPEED/HIGH DENSITY BRUSH

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SIZE C

CAGE CODE 77820

DOCUMENT NO. HSB-M4-XXDXXXXX

REV. A

SCALE: 5.0

REF: HDB-M4-XXXXXXXXX

SHEET 2 OF 5

DOCUMENT NO. HSB-M4-XXDXXXXX

SHEET 2 OF 5

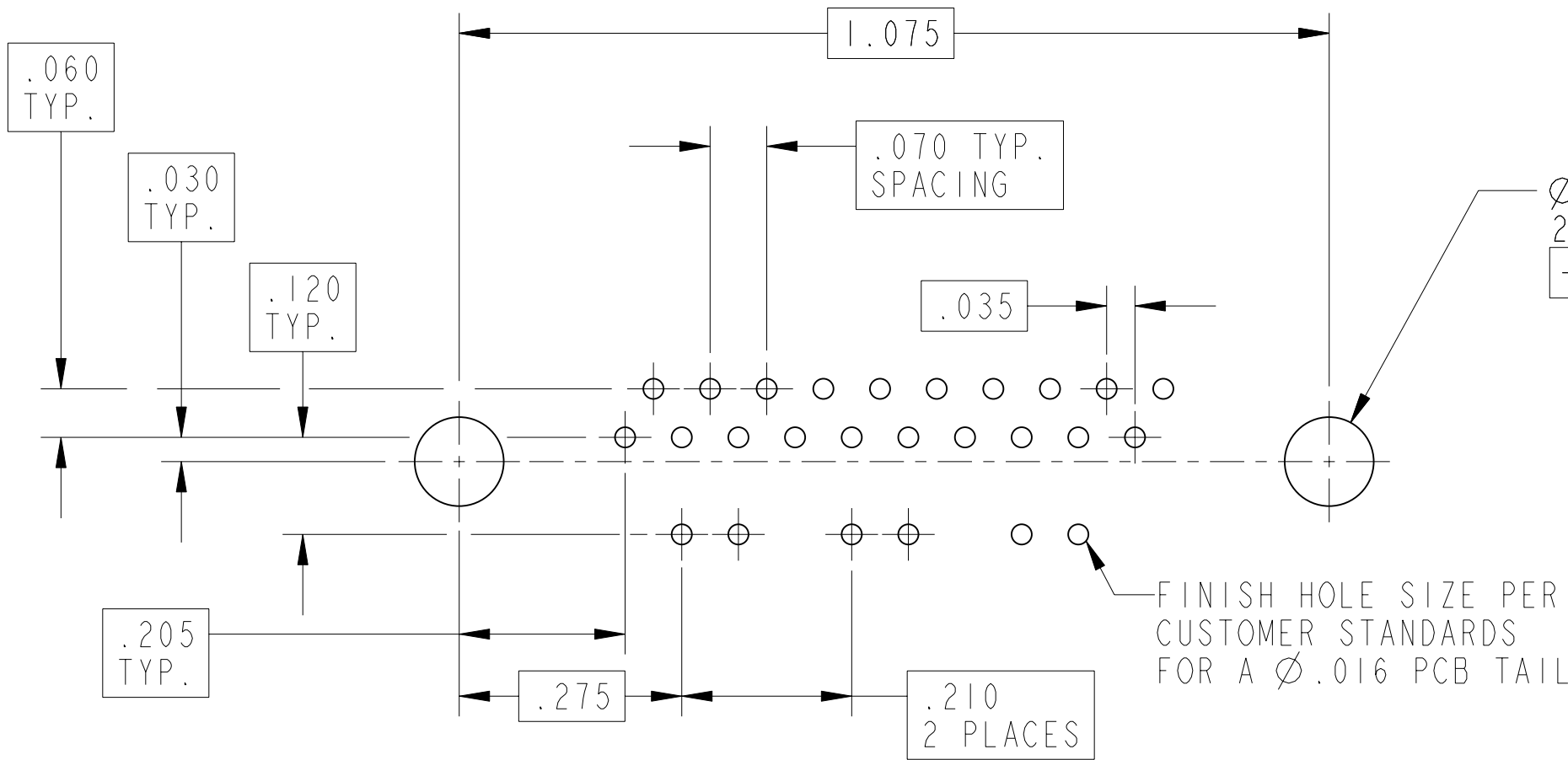
REV. A

RELEASED / Feb . 08 2008, 10:34 AM

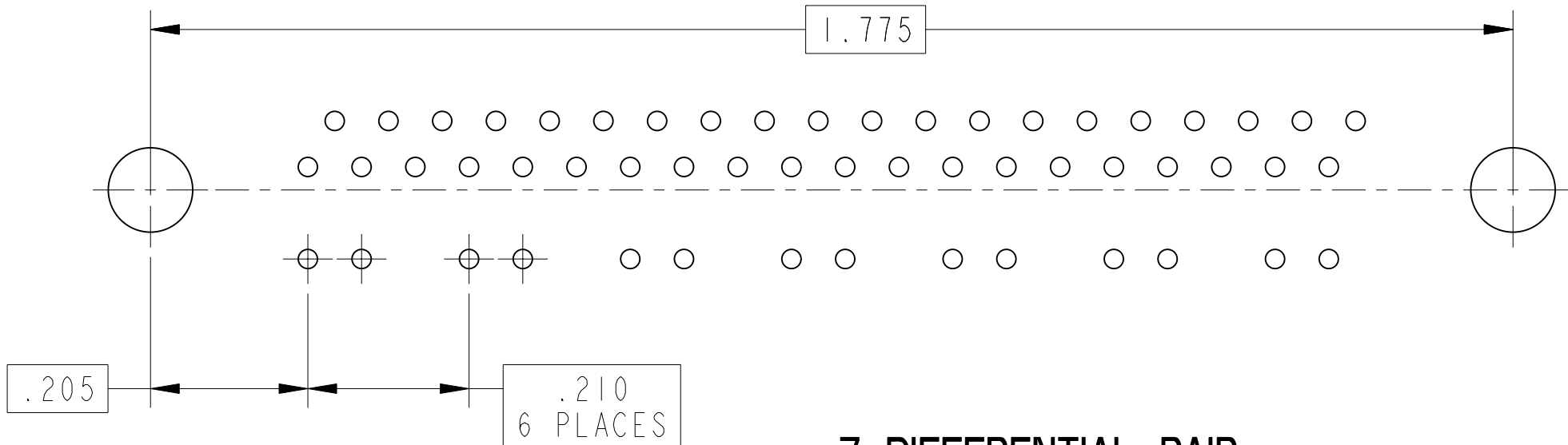
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1

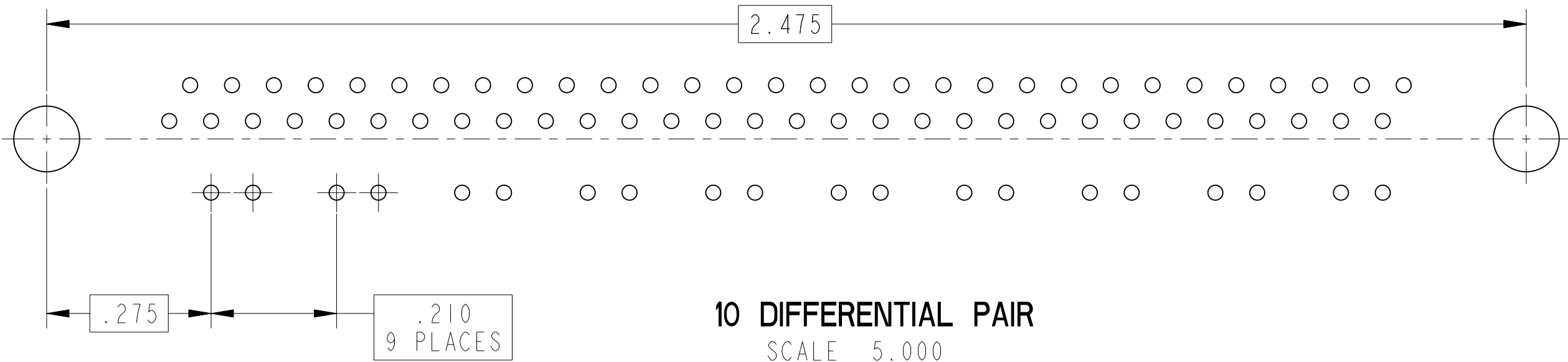
SUGGESTED MOTHER BOARD LAYOUT
FOR 3, 7, 10 AND 13 DIFFERENTIAL PAIR.
COMPONENT SIDE



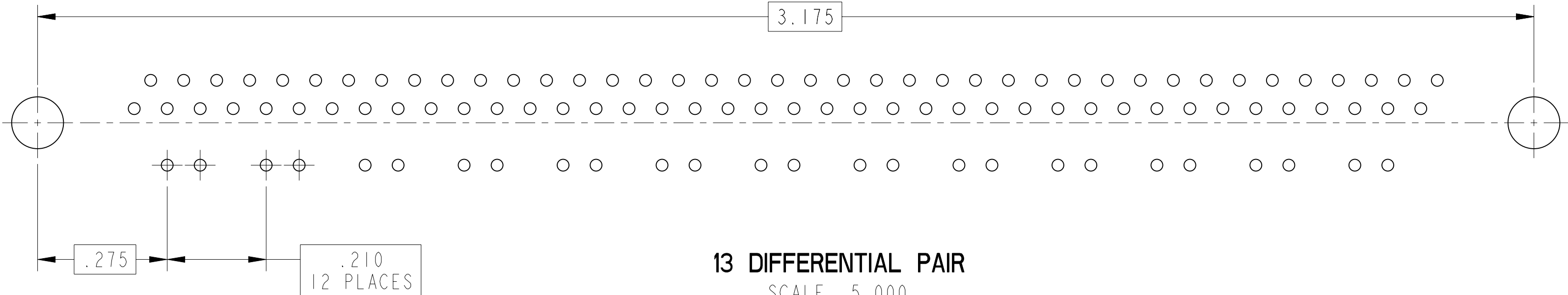
3 DIFFERENTIAL PAIR
SCALE 5.000



7 DIFFERENTIAL PAIR
SCALE 5.000



10 DIFFERENTIAL PAIR
SCALE 5.000



13 DIFFERENTIAL PAIR
SCALE 5.000

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HSB-M4-XXDXXXXX

SHEET 3 OF 5

REV. A

C

B

A

FORMAT: C-U-E-I

D

C

6

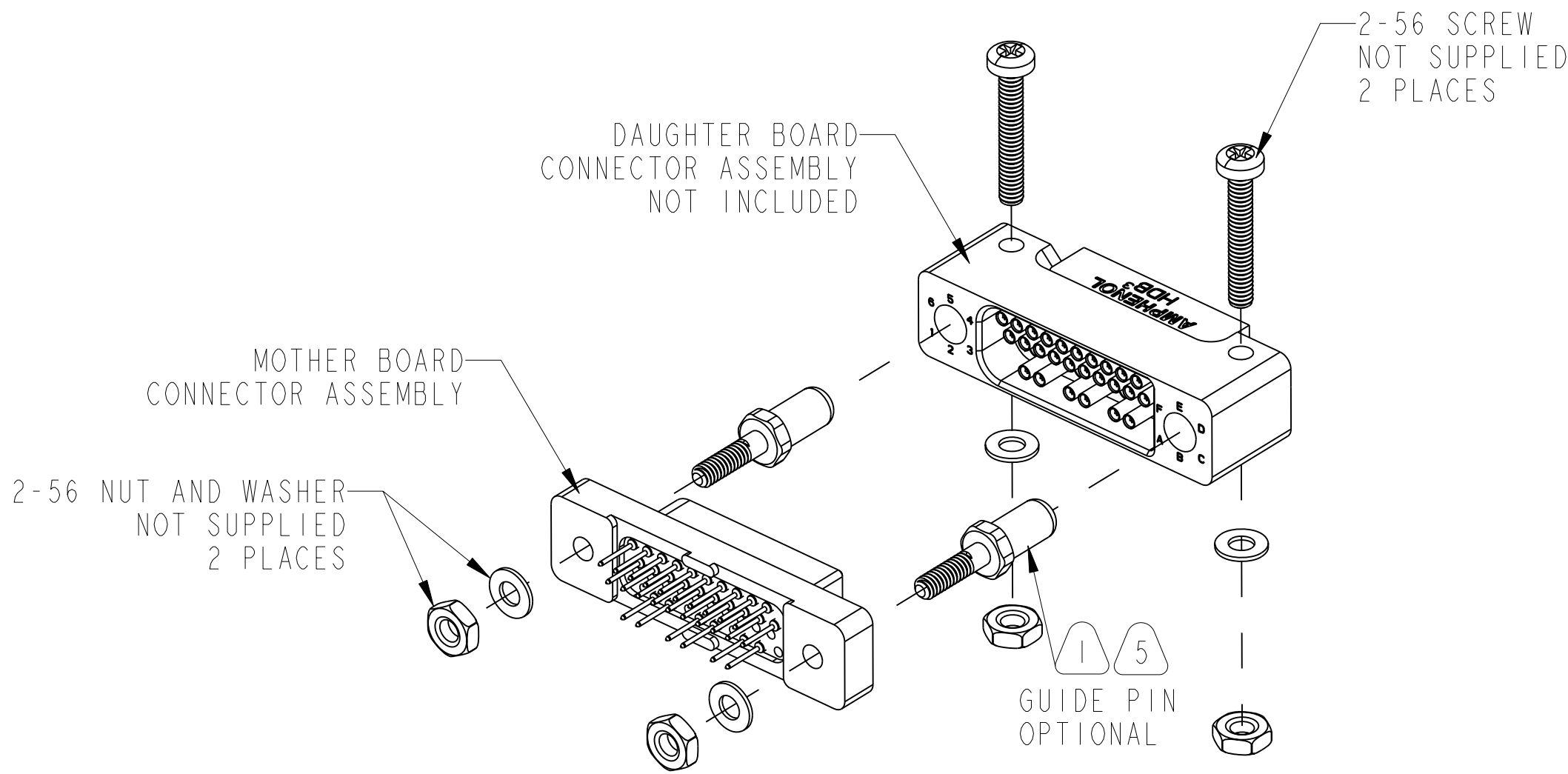
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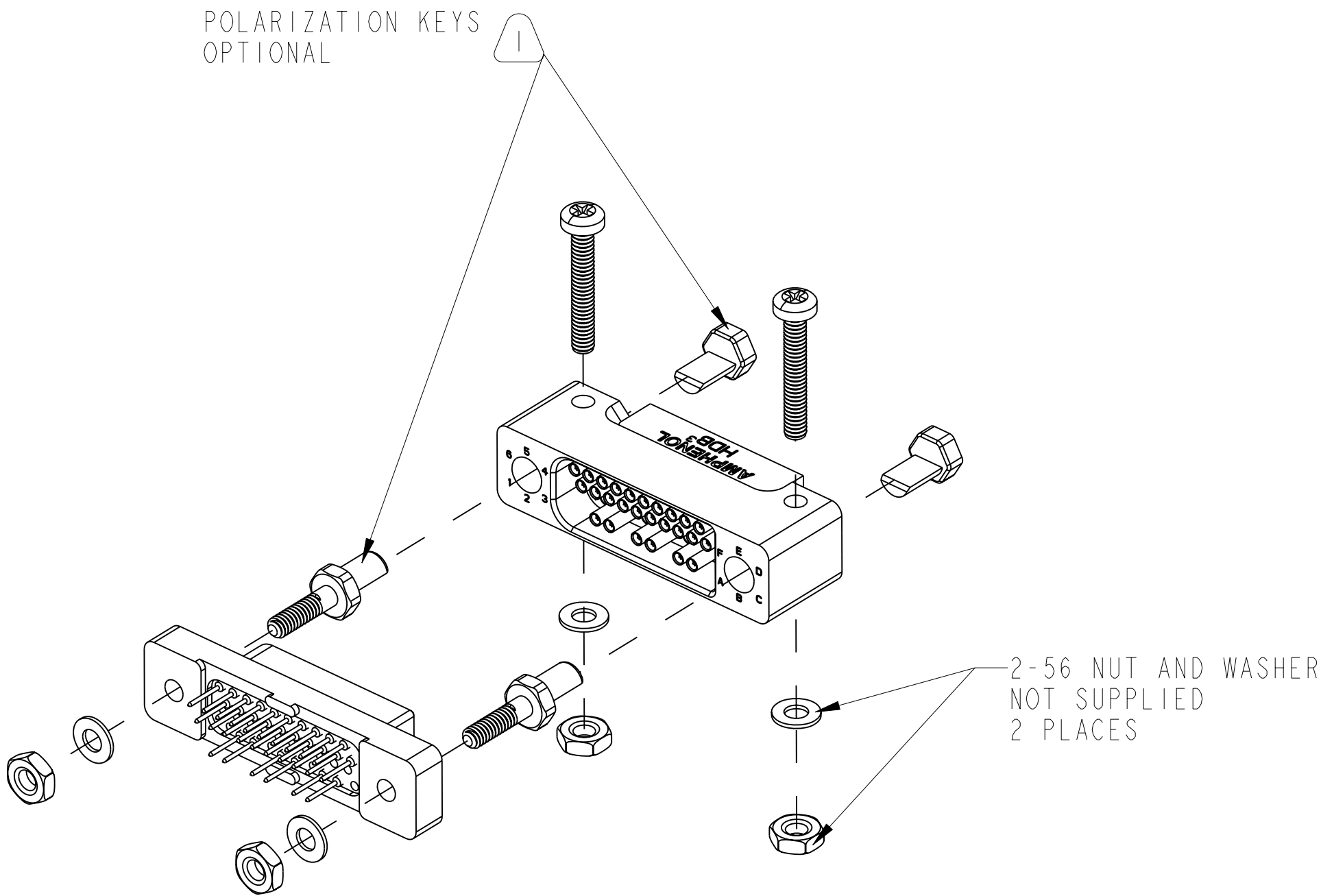
REV.

SHEET 3 OF 5

HSB-M4-XXDXXXXX



EXPLODED ISOMETRIC VIEW
SHOWN WITH OPTIONAL
GUIDE PIN



EXPLODED ISOMETRIC VIEW
SHOWN WITH OPTIONAL KEYING

7. CONTACT ASSEMBLIES ARE NON-REPLACEABLE.
6. RoHS COMPLIANT FOR TERMINATION FINISH TIN PLATE OVER NICKEL.
5. WHEN NOT USING OPTIONAL GUIDE PIN OR POLARIZATION KEYS USE A 2-56 HEX HEAD SCREW FOR MOUNTING. (NOT SUPPLIED)
4. INK STAMP "AMPHENOL" 77820, PART NUMBER AND DATE CODE ON INDICATED SURFACE PER 9-3856-5. DATE CODE PER 9-3895, CHARACTERS TO BE .062 ±.020 HIGH.
3. FOR MATING DAUGHTER CONNECTOR ASSEMBLY SEE DRAWING HSB-D4-XXDXXXXX.
2. INDICATED DIMENSION IS TO POINT OF MINIMUM ELECTRICAL ENGAGEMENT.
1. POLARIZATION KEYS OR GUIDE PINS ARE OPTIONAL.
WHEN USING, A QUANTITY OF 2 ARE REQUIRED PER CONNECTOR.
(WHEN USING KEYS, MATING CONNECTOR MUST ALSO USE KEYS.)

NOTES:

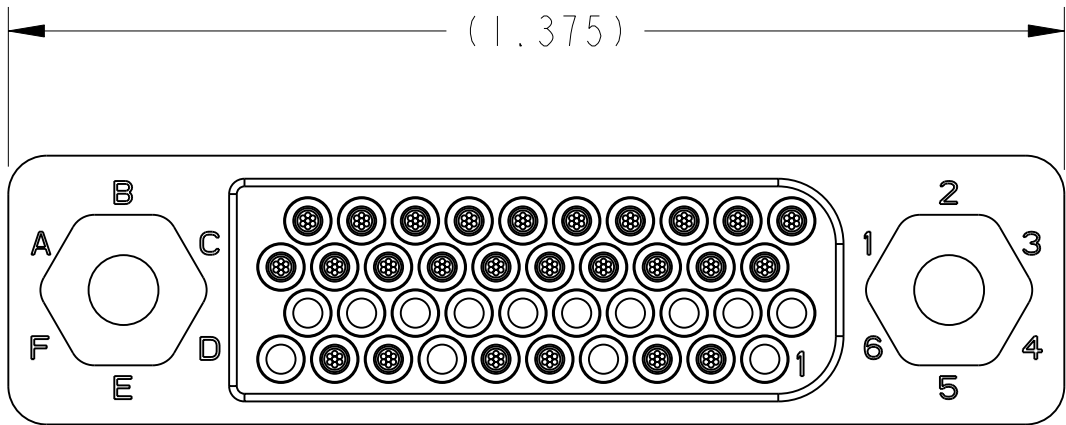
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REPLACEMENT KEYS/GUIDE PINS			
HW ID	TYPE	STICKOUT (DIM K)	PART NUMBER
G	POLARIZATION KEY (QTY 2)	.250	HDB-508803-001
H	POLARIZATION KEY (QTY 2)	.500	HDB-508803-002
J	POLARIZATION KEY (QTY 2)	.750	HDB-508803-003
T	GUIDE PIN (QTY 2)	.250	HDB-508802-001
U	GUIDE PIN (QTY 2)	.500	HDB-508802-002
V	GUIDE PIN (QTY 2)	.750	HDB-508802-003
W	GUIDE PIN (QTY 2)	.200	HDB-508802-004

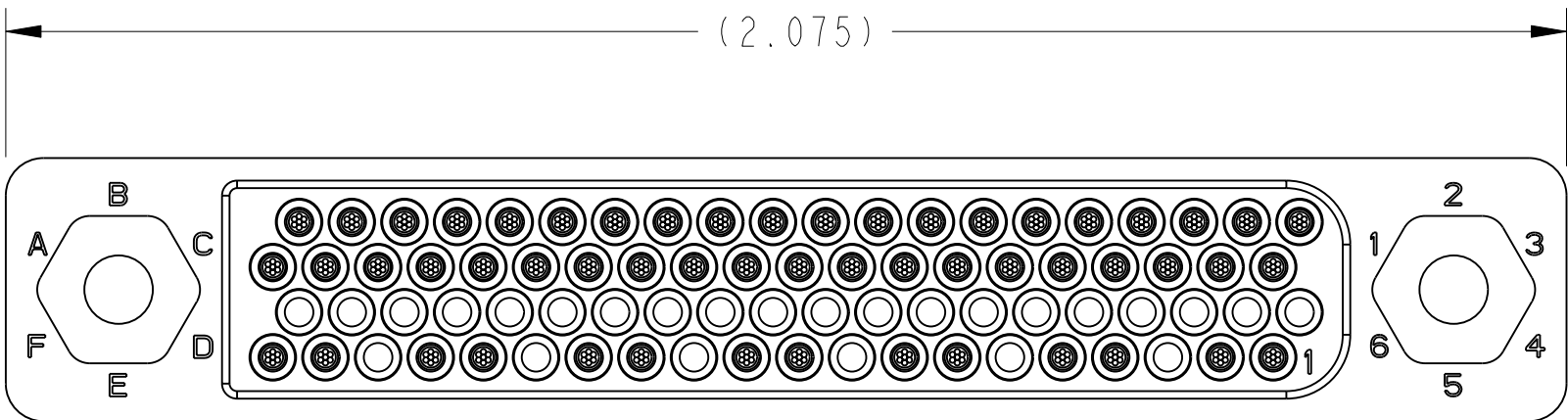
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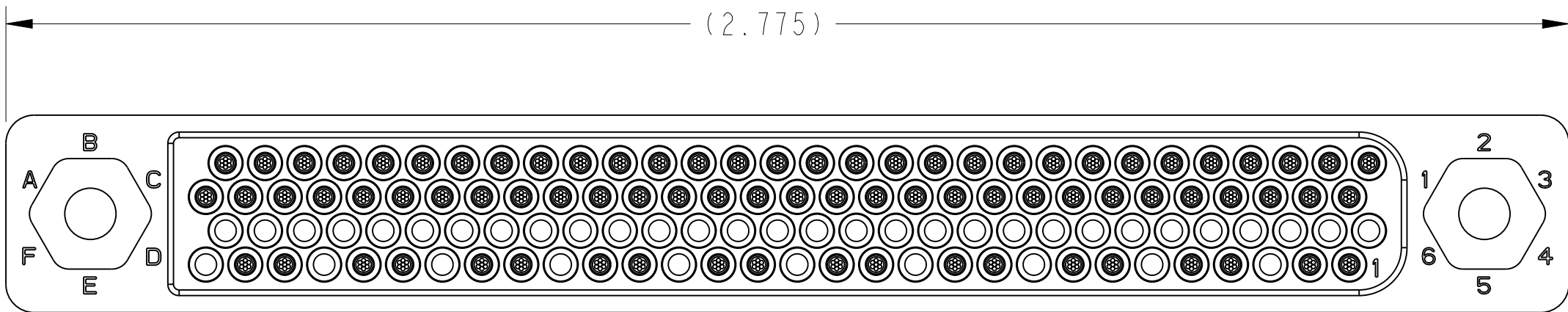
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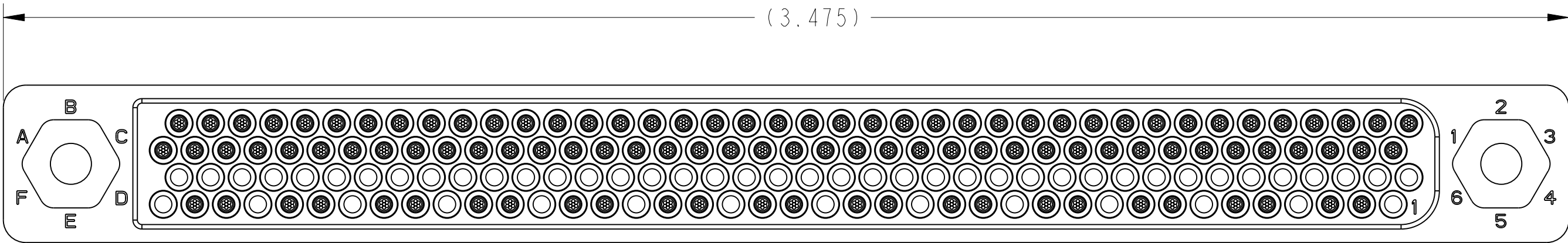
3 DIFFERENTIAL PAIR
SCALE 4.000



7 DIFFERENTIAL PAIR
SCALE 4.000



10 DIFFERENTIAL PAIR
SCALE 4.000



13 DIFFERENTIAL PAIR
SCALE 4.000

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