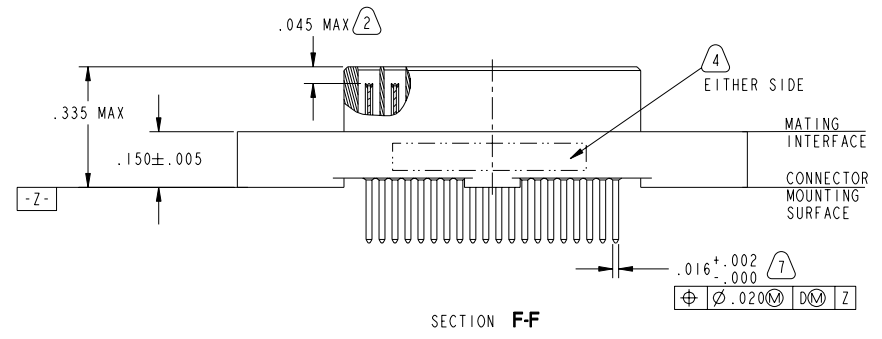
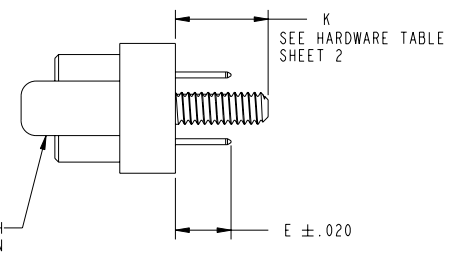
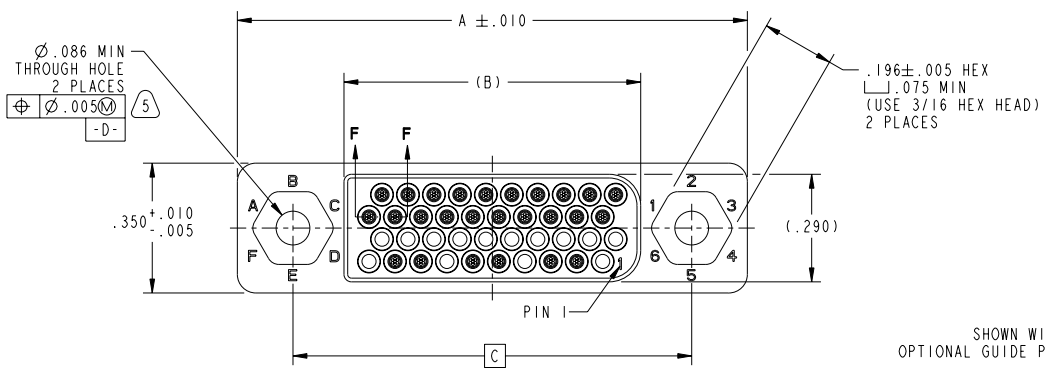


HSB-M4-XXDXXXXX
 SHEET 1 OF 5
 A

A		HSB-M4-XXDXXXXX	
REVISIONS			
LTR	DESCRIPTION	DATE	
A	INITIAL RELEASE	11/15/2007	



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 HSB-M4-XXDXXXXX SHEET 1 OF 5 A

N/A
 NEXT ASSEMBLY
 PRO/ENGINEER INFORMATION
 Pro/E Model Used:
 HSB-M4-XXDXXXXX.ASSEMB
 Drawing Name:
 HSB-M4-33022114

UNLESS OTHERWISE SPECIFIED	SPECIFICATIONS	POS	QTY	PART NUMBER	DESCRIPTION	NOTE
LINEAR DIMENSIONS ARE IN INCHES TOLERANCES: .XXX : $\pm .005$ ANGLES: $\pm 2^\circ$.XX : $\pm .010$.X : $\pm .03$ X : $\pm .1$ DIM. & TOL. PER ASME Y14.5M; DRW PER MIL-DTL-31000; OTHER AMPHENOL STDS. PER 9-3800 LEGENDS: *FLAG NOTE CALL OUT REFERENCE ONLY	MATERIAL SPEC. N/A				PARTS LIST AMPHENOL CORPORATION <small>4000 BALDWIN AVENUE BIRMINGHAM, AL 35209</small> 3 DIFFERENTIAL PAIR W/ 20 BRUSH MOTHER BOARD CONNECTOR HSB3 SERIES	
	PROCESS SPEC. 9-3895 9-3856-5				APPROVALS PREPARED BY: DMORSE CHECKED BY: BCHUBB DESIGN MANAGER: EHICKEY DESIGN REVIEW: BLP DATE: 19-SEP-07	
					THIRD ANGLE PROJECTION 	
					SIZE C CHG CODE 77820 SCALE: 5.0 HSB-M4-XXDXXXXX SHEET 1 OF 5	

RELEASED / Feb . 08 2008, 10:34 AM

HSB-M4-XXD X XX X X

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

CONTACT TERMINATION FINISH	
2	GOLD PLATED IN ACCORDANCE WITH MIL-G-45204, TYPE I1, .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
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

HARDWARE (SUPPLIED UNASSEMBLED)		
	TYPE	STICKOUT (DIM. K)
X	NO HARDWARE	N/A
G	POLARIZATION KEY (QTY 2)	.250
H	POLARIZATION KEY (QTY 2)	.500
J	POLARIZATION KEY (QTY 2)	.750
T	GUIDE PIN (QTY 2)	.250
U	GUIDE PIN (QTY 2)	.500
V	GUIDE PIN (QTY 2)	.750
W	GUIDE PIN (QTY 2)	.200

HIGHSPEED/HIGH DENSITY BRUSH

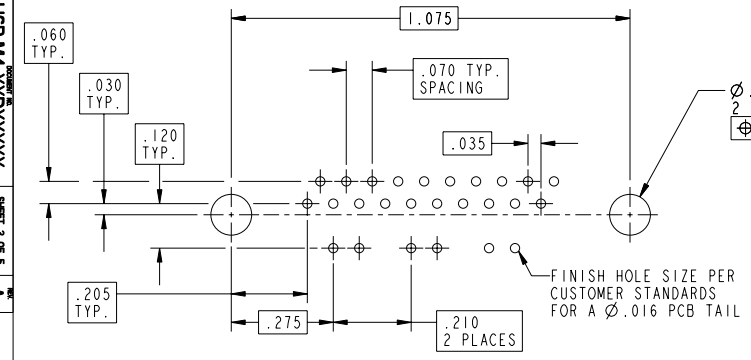
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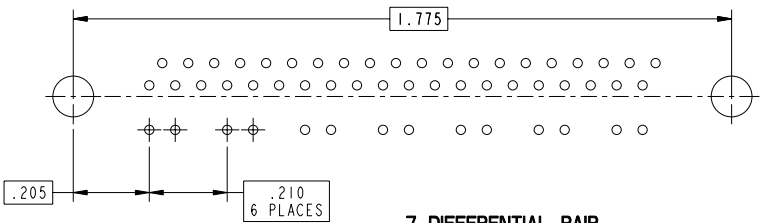
HSB-M4-XXDXXXXX SHEET 2 OF 5 A

HSB-M4-XXDXXXXX SHEET 2 OF 5 A

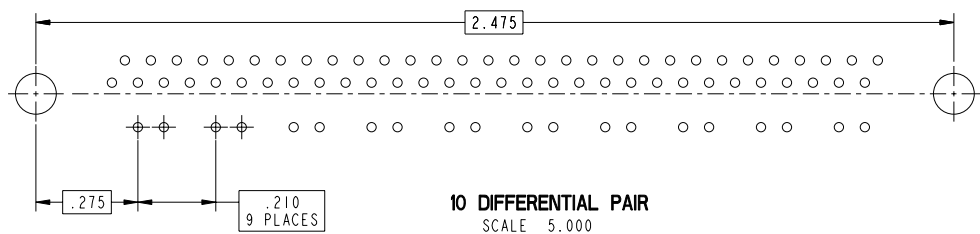
**SUGGESTED MOTHER BOARD LAYOUT
FOR 3, 7, 10 AND 13 DIFFERENTIAL PAIR.
COMPONENT SIDE**



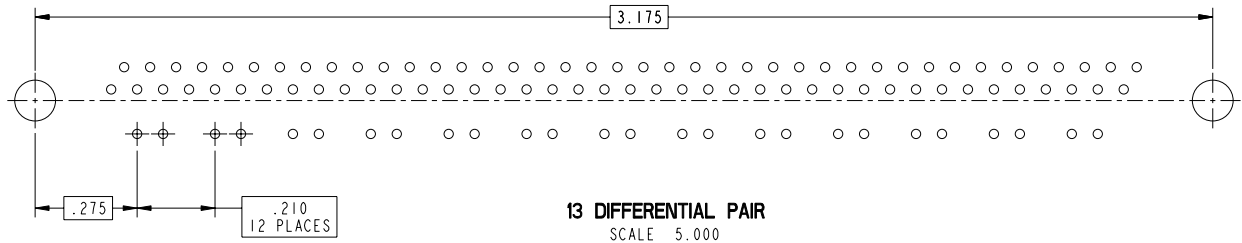
3 DIFFERENTIAL PAIR
SCALE 5.000



7 DIFFERENTIAL PAIR
SCALE 5.000



10 DIFFERENTIAL PAIR
SCALE 5.000



13 DIFFERENTIAL PAIR
SCALE 5.000

NOTES:

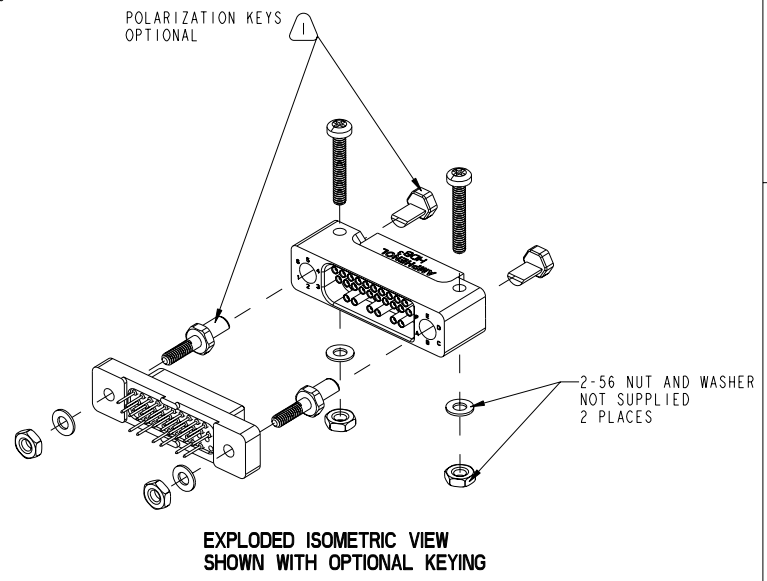
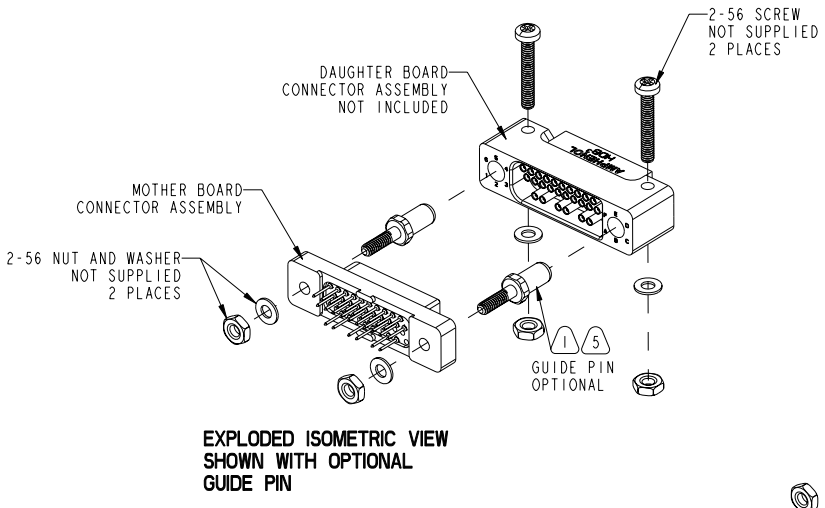
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DOCUMENT NO. HSB-M4-XXDXXXXX SHEET 3 OF 5 REV. A

SIZE C	QWG CODE 77820	DOCUMENT NO. HSB-M4-XXDXXXXX	REV. A
SCALE: 5.0		REV. HDB-M4-XXXXXXXXXX	SHEET 3 OF 5

HSB-M4-XXDXXXXX SHEET 3 OF 5 REV. A

HSB-M4-XXDXXXXX SHEET 3 OF 5 REV. A



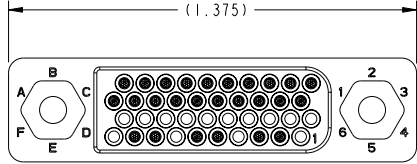
7. CONTACT ASSEMBLIES ARE NON-REPLACEABLE.
6. RoHS COMPLIANT FOR TERMINATION FINISH TIN PLATE OVER NICKEL.
5. WHEN NOT USING OPTIONAL GUIDE PIN OR POLARIZATION KEYS USE A 2-56 HEX HEAD SCREW FOR MOUNTING. (NOT SUPPLIED)
4. INK STAMP "AMPHENOL" 77820, PART NUMBER AND DATE CODE ON INDICATED SURFACE PER 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:

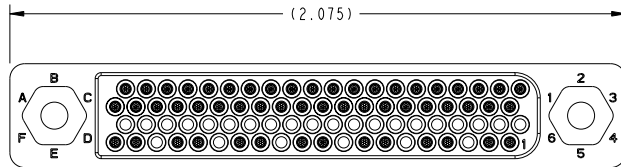
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REPLACEMENT KEYS/GUIDE PINS			
HW ID	TYPE	STICKOUT (DIM K)	PART NUMBER
G	POLARIZATION KEY (QTY 2)	.250	HDB-508803-001
H	POLARIZATION KEY (QTY 2)	.500	HDB-508803-002
J	POLARIZATION KEY (QTY 2)	.750	HDB-508803-003
T	GUIDE PIN (QTY 2)	.250	HDB-508802-001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

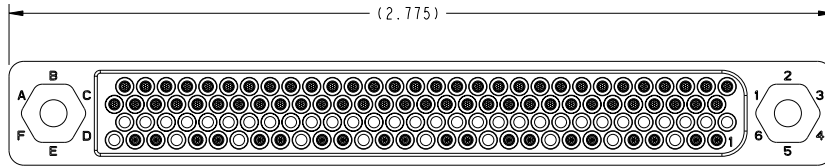
REV. C	QTY CODE 77820	DOCUMENT NO. HSB-M4-XXDXXXXX	REV. A
SCALE: 1:0		REV. HDB-M4-XXXXXXX	SHEET 4 OF 5



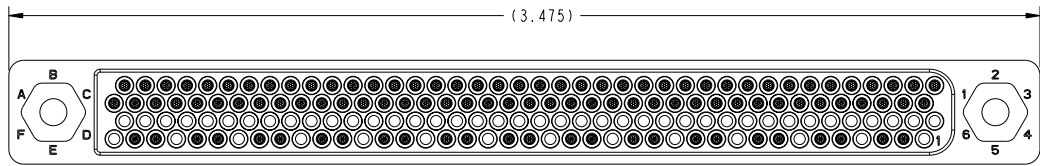
3 DIFFERENTIAL PAIR
SCALE 4.000



7 DIFFERENTIAL PAIR
SCALE 4.000



10 DIFFERENTIAL PAIR
SCALE 4.000



13 DIFFERENTIAL PAIR
SCALE 4.000

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DOCUMENT NO. HSB-M4-XXDXXXXX SHEET 5 OF 5 REV. A

SIZE C	ORIG CODE 77820	DOCUMENT NO. HSB-M4-XXDXXXXX	REV. A
SCALE: 1.0		REV. HDB-M4-XXXXXXXXXX	SHEET 5 OF 5

HSB-M4-XXDXXXXX SHEET 5 OF 5 REV. A

HSB-M4-XXDXXXXX SHEET 5 OF 5 REV. A