

10091836 - X0J - XXXLF

4-COLUMN DIFFERENTIAL SIGNAL

LEAD-FREE DESIGNATION ONLY WITH APPLICABLE PLATING CODES

LETTER	PERFORMANCE-BASED PLATING (SEE NOTE 2)	
	TARGET APPLICATION	LEAD FREE (LF)
B	TELCORDIA CO	NO
C	TELCORDIA UE	NO
D	TELCORDIA CO	YES
E	TELCORDIA UE	YES

NUMBER	PIN STYLE, HEIGHT
0	STANDARD GUIDE PIN MACHINED, 31.6mm
4	STANDARD GUIDE PIN MACHINED, 25.7mm

MODULE DESCRIPTION	LETTER DESIGNATION REPRESENTED IN DASH NUMBER										BASE MODULE	
LEFT POLARIZING GUIDANCE MODULE (SEE SHEET 3)	<b>J</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>			
RIGHT POLARIZING GUIDANCE MODULE (SEE SHEET 4)	<b>Y</b>	<b>P</b>	<b>Q</b>	<b>R</b>	<b>S</b>	<b>T</b>	<b>U</b>	<b>V</b>	<b>W</b>			
OPEN MODULE (TWO WALL) (SEE SHEET 2)	<b>0 (ZERO)</b>											
LEFT WALL MODULE (SEE SHEET 5)	<b>L</b>											
RIGHT WALL MODULE (SEE SHEET 6)	<b>M</b>											
FOUR WALL MODULE (SEE SHEET 7)	<b>1</b>											

NUMBER	CONTACT MATING WIPE LENGTH		COMPLIANT PIN DRILL SIZE
	SIGNAL	WIDE GROUND	
1	2	4	Ø0.55 [0.0217"]
2	3	4	Ø0.55 [0.0217"]
3	2	4	Ø0.45 [0.0177"]
4	3	4	Ø0.45 [0.0177"]
5	2	3	Ø0.55 [0.0217"]
6	3	3	Ø0.55 [0.0217"]
7	2	3	Ø0.45 [0.0177"]
8	3	3	Ø0.45 [0.0177"]

	GROUNDED	UNGROUNDED
FINISHED	Ø2.35-2.55	Ø2.35-2.55
PAD	Ø5.50	N/A
PLATED	YES	NO
DRILL (mm/in)	2.58 / .1015	2.44 / .096

SCREW P/N	DESCRIPTION	BOARD THICKNESS
10091790-002LF	#2-56 X .375" PHILLIPS PANHEAD W/SQ CONICAL WASHER	1.60 - 5.00
10091790-003LF	#2-56 X .500" PHILLIPS PANHEAD W/SQ CONICAL WASHER	5.00 - 10.00

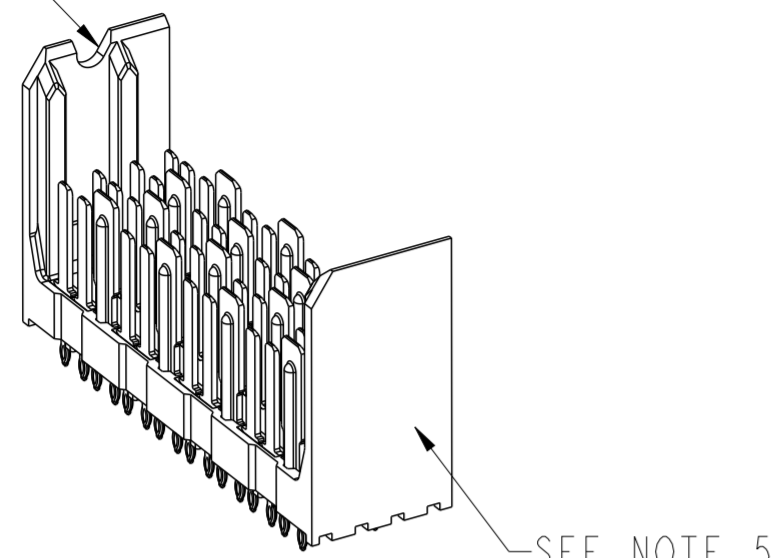
spec ref	SEE NOTES	dr	Jim Swain	2010/04/13	projection	MM	size	A2	scale	4:1	
tolerance std	ASME Y14.5	eng	Michael Song	2016/06/06	chr	Heaven Cen	2016/06/08	ecn no	ELX-DG-24191-1		
surface	linear	appr	Pai-Ming Zheng	2016/06/15	product family			rel level	Released		
ASME Y14.5	angular	0°	±0.2	±0.10	±0.050	Amphenol FCI		cat. no.	10091836	rev	G
MODULE ASSEMBLY								cat. no.	Product - Customer Draw		sheet 1 of 8

Amphenol FCI

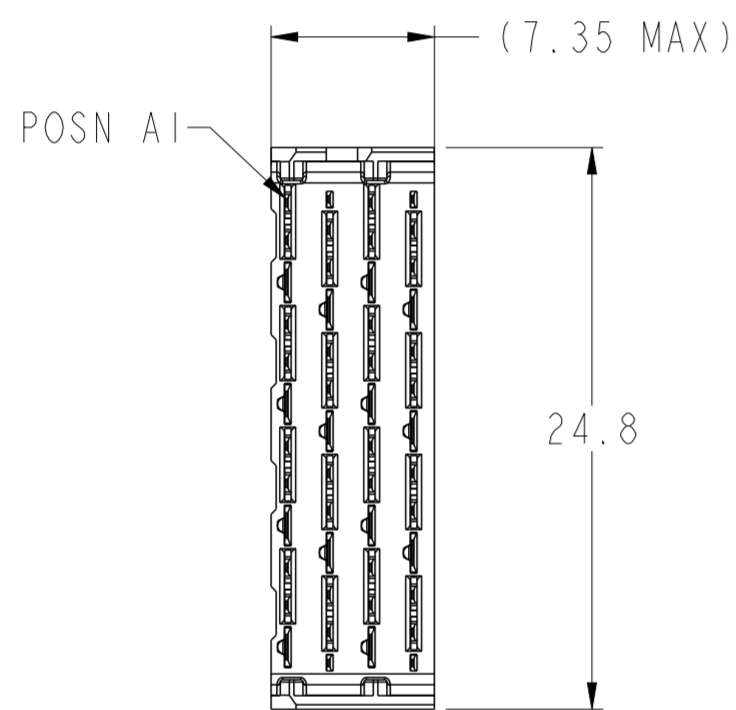
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# OPEN (2-WALL) MODULE

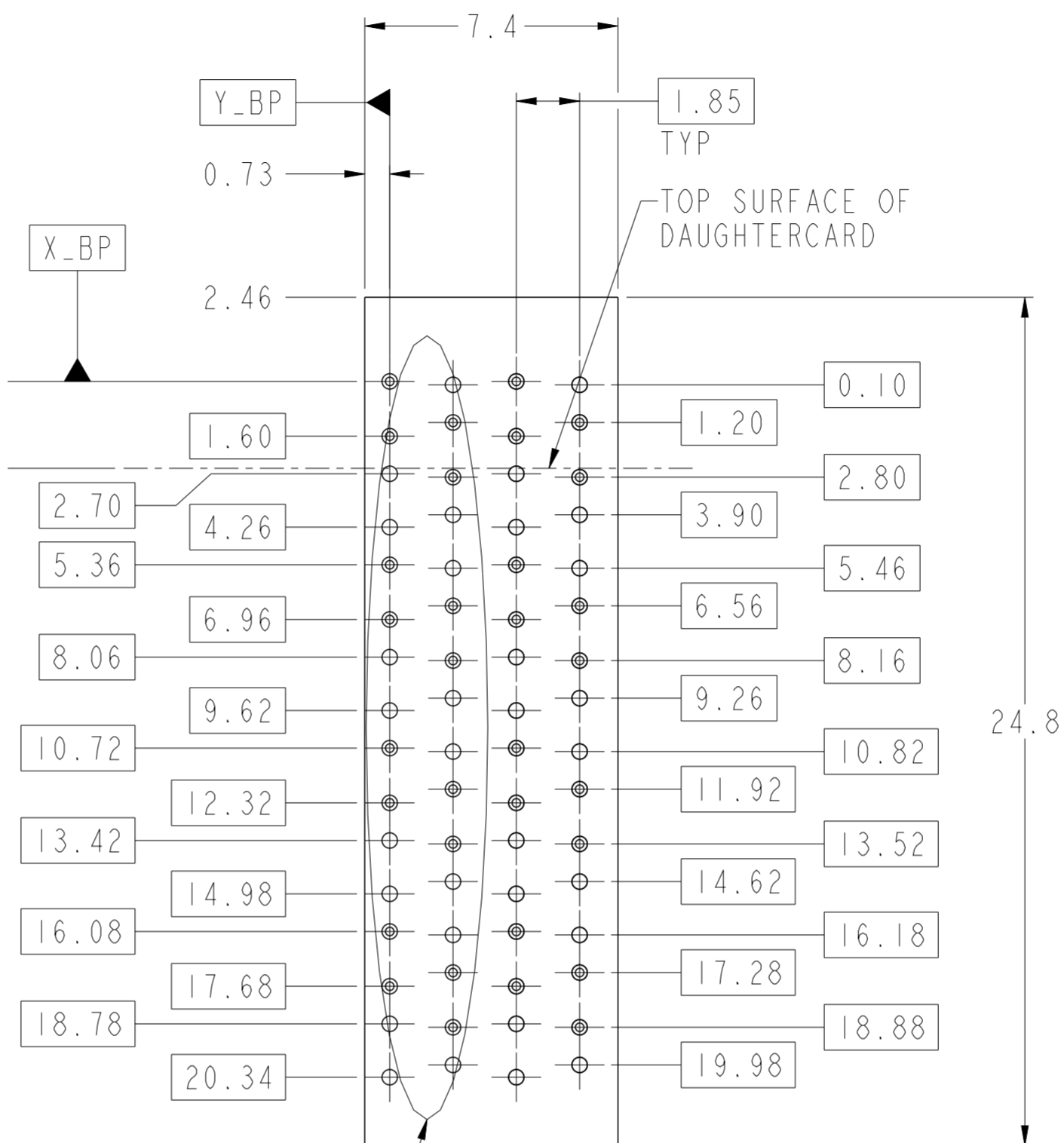
SEE NOTE 8



SEE NOTE 5



2.54  
TO TOP SURFACE  
OF DAUGHTERCARD

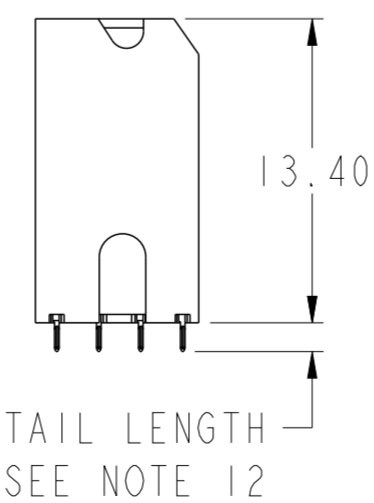
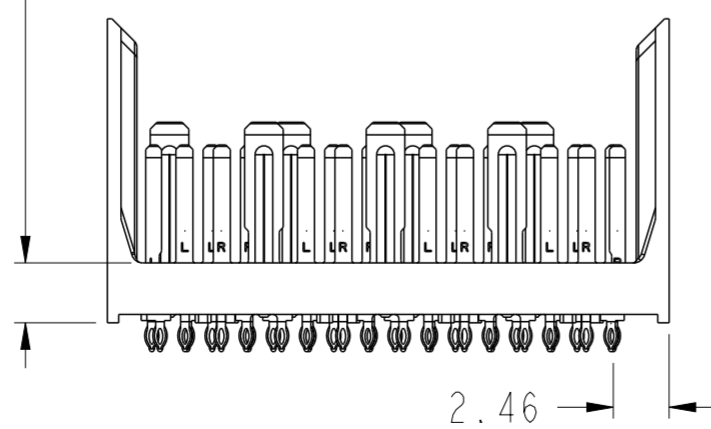
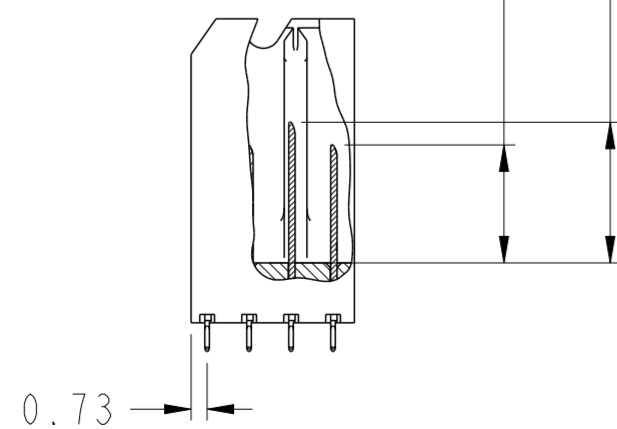


SEE DETAIL A  
(SHEET 8)

PCB HOLE PATTERN  
COMPONENT SIDE  
SCALE 6:1

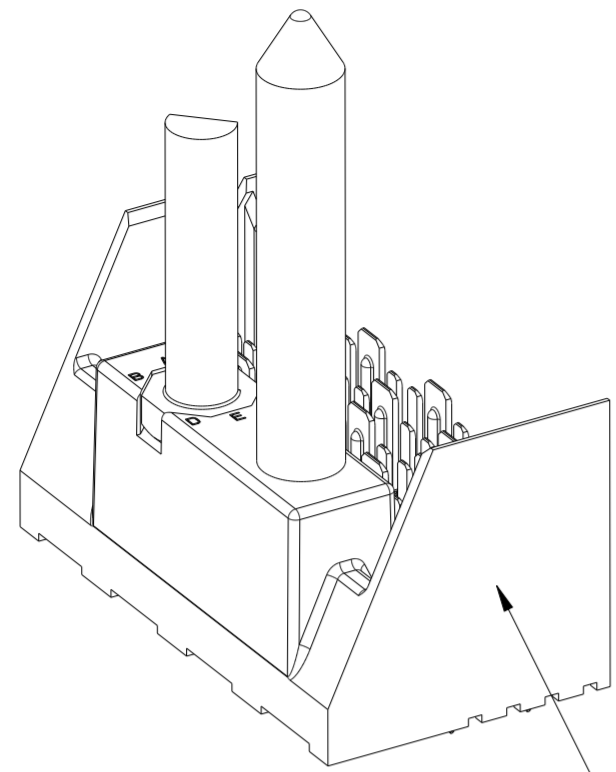
- 6.2 (4MM WIPE WIDE GROUNDS)
- 5.2 (3MM WIPE WIDE GROUNDS)
- 5.2 (3MM SMALL END GROUNDS)
- 5.2 (3MM WIPE SIGNALS)
- 4.2 (2MM WIPE SIGNALS)
- SEE P/N TREE

2.64±0.10 FROM STANDOFF  
SURFACE TO MATING SURFACE

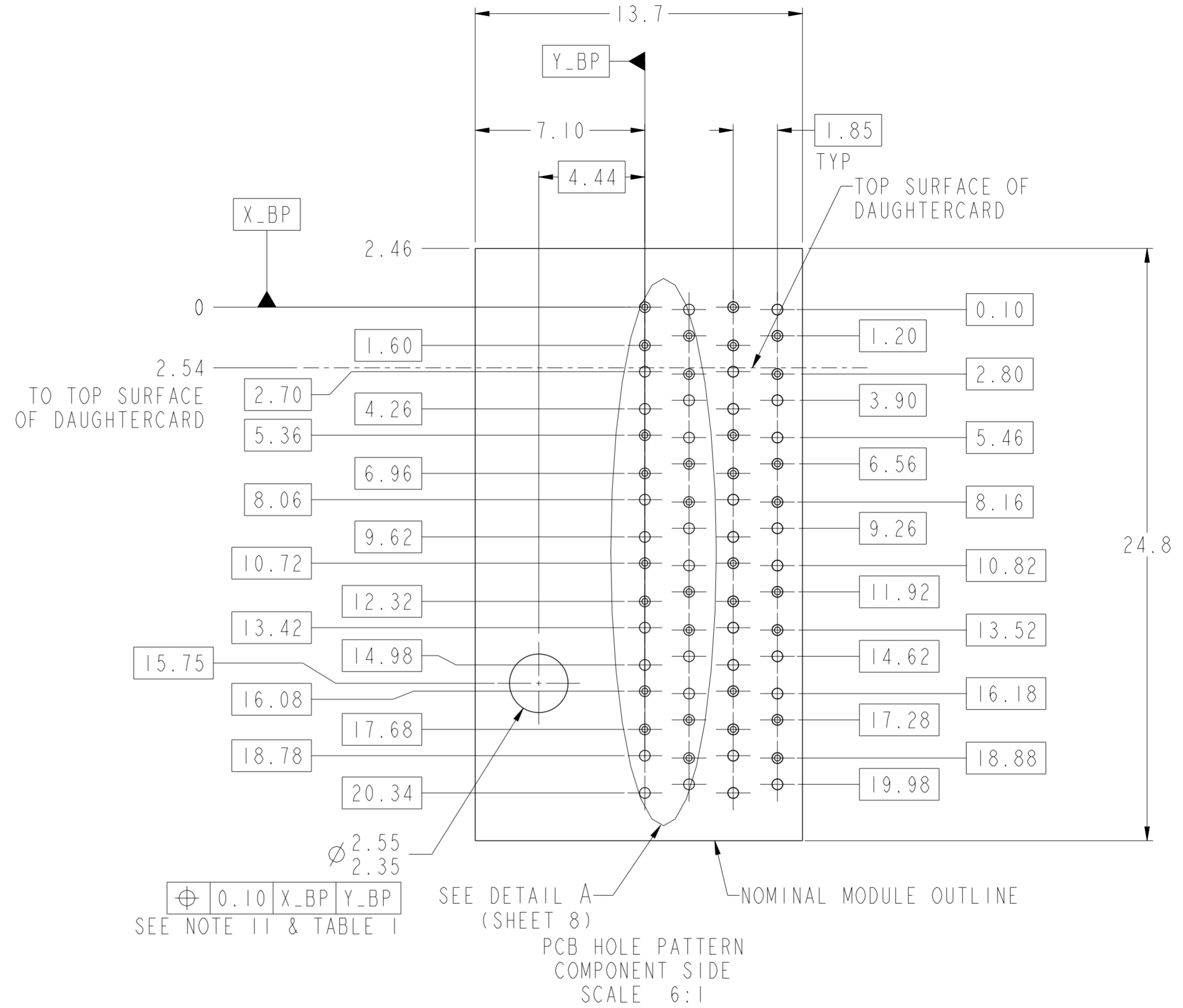
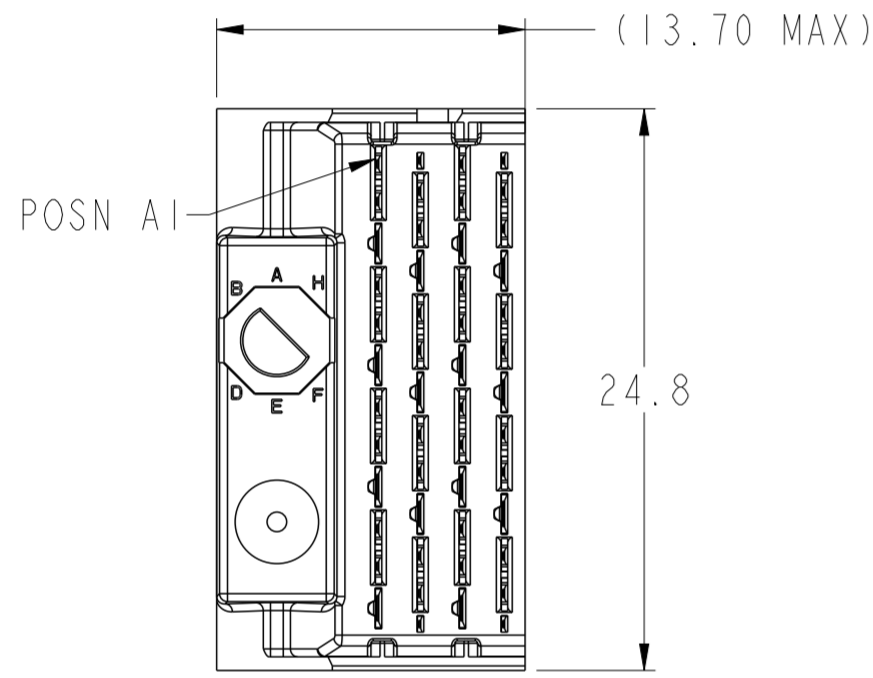


spec ref	SEE NOTES	dr	Jim Swain	2010/04/13	projection	MM	size	A2	scale	4:1
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Michael Song	2016/06/06			ecn no	ELX-DG-24191-1	rel level	Released
ASME Y14.5		chr	Heaven Cen	2016/06/08						
surface	linear	0.X	±0.2		MODULE ASSEMBLY VERTICAL HEADER, 4-COLUMN, 4-PAIR	cat. no.	Product - Customer Drw	sheet 2 of 8	rev G	
		0.XX	±0.10							
		0.XXX	±0.050							
ASME Y14.5	angular	0°	±°							

# LEFT POLARIZING/GUIDE MODULE



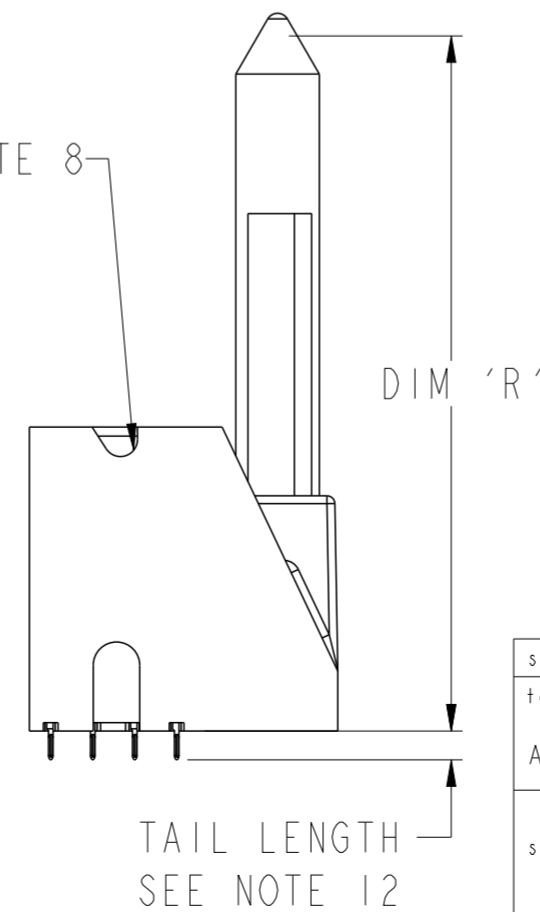
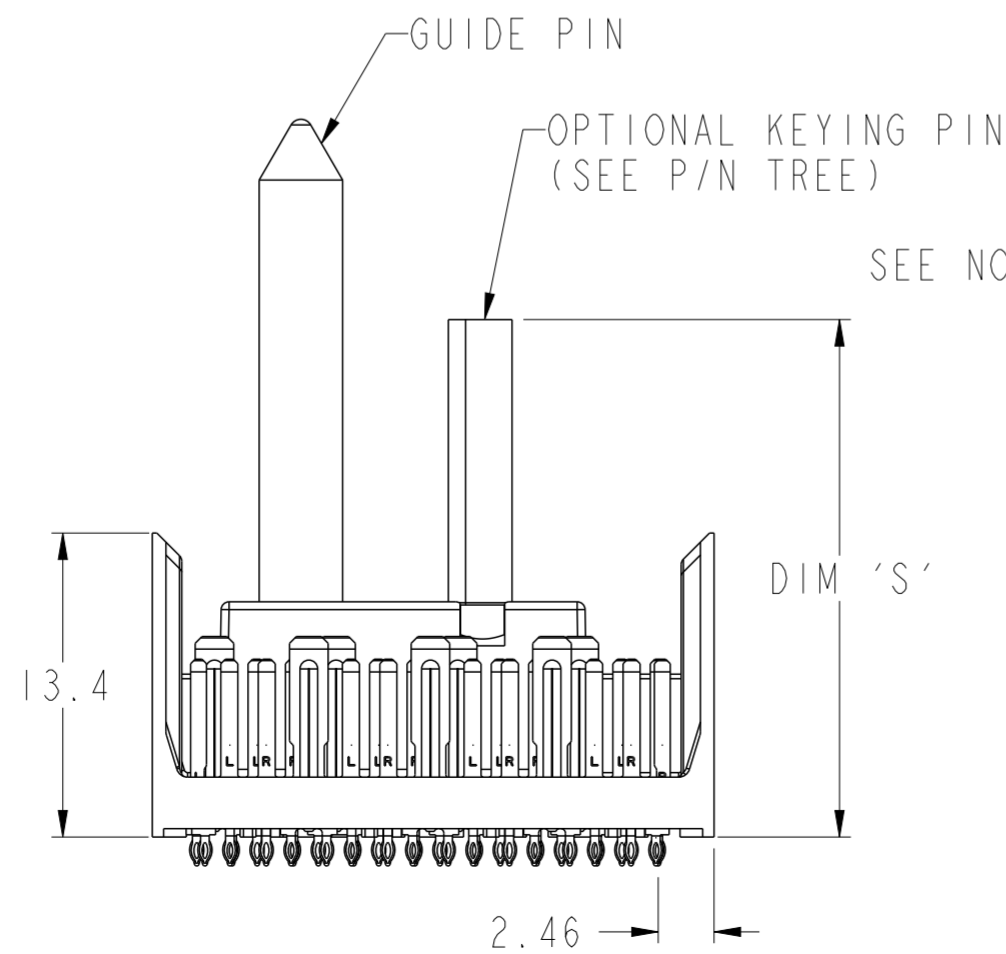
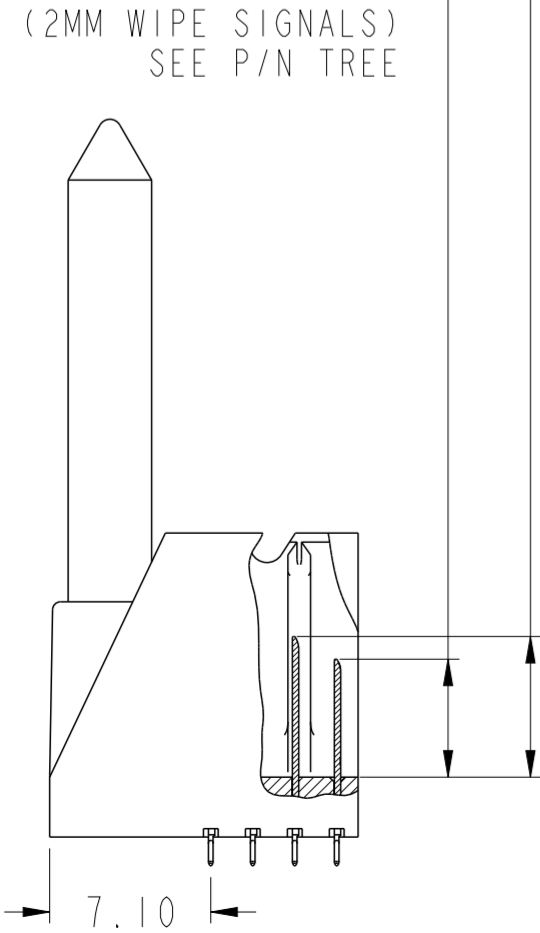
SEE NOTE 5



$\varnothing$ 0.10	X_BP	Y_BP
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SEE NOTE 11 & TABLE 1

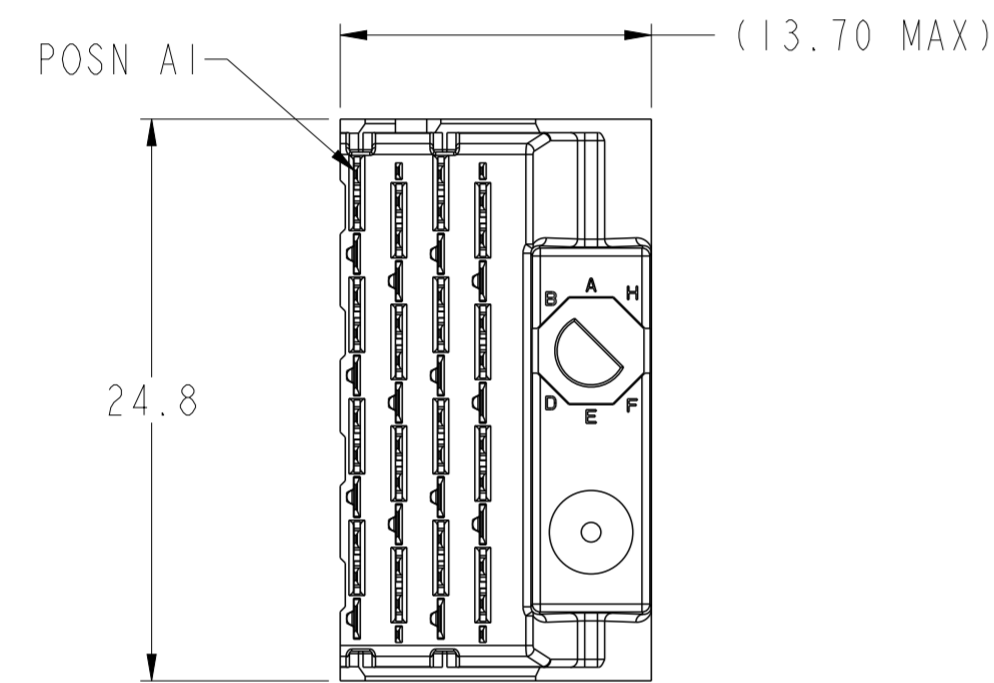
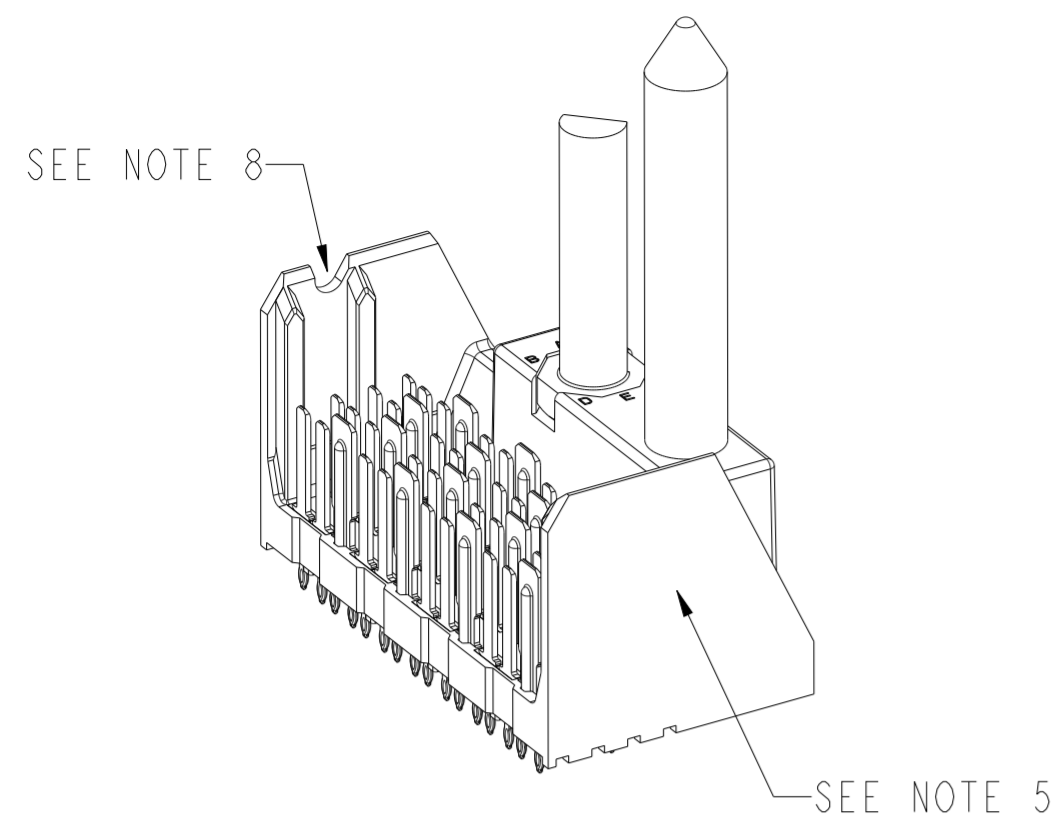
- 6.2 (4MM WIPE WIDE GROUNDS)
- 5.2 (3MM WIPE WIDE GROUNDS)
- 5.2 (3MM SMALL END GROUNDS)
- 5.2 (3MM WIPE SIGNALS)
- 4.2 (2MM WIPE SIGNALS)
- SEE P/N TREE



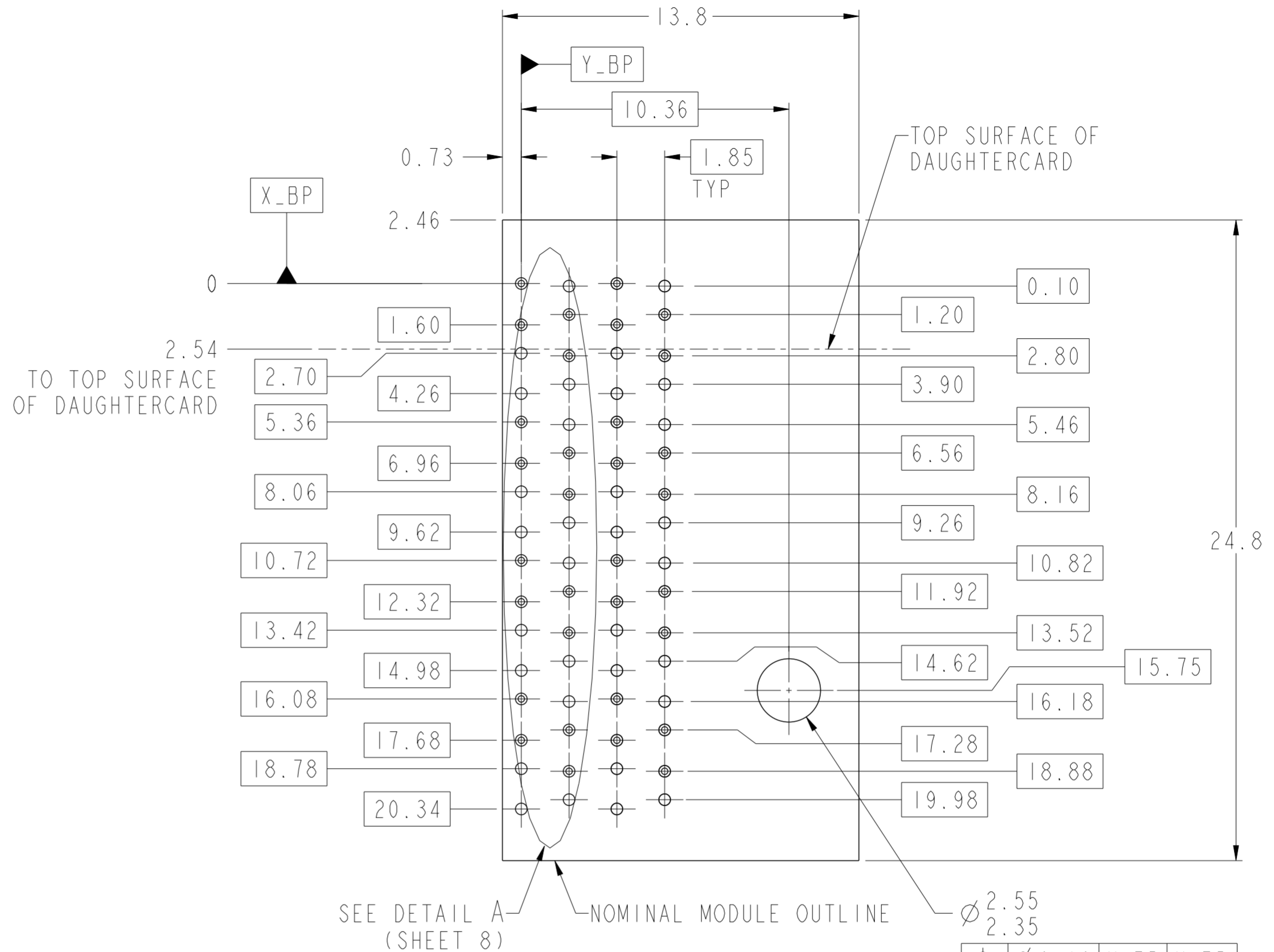
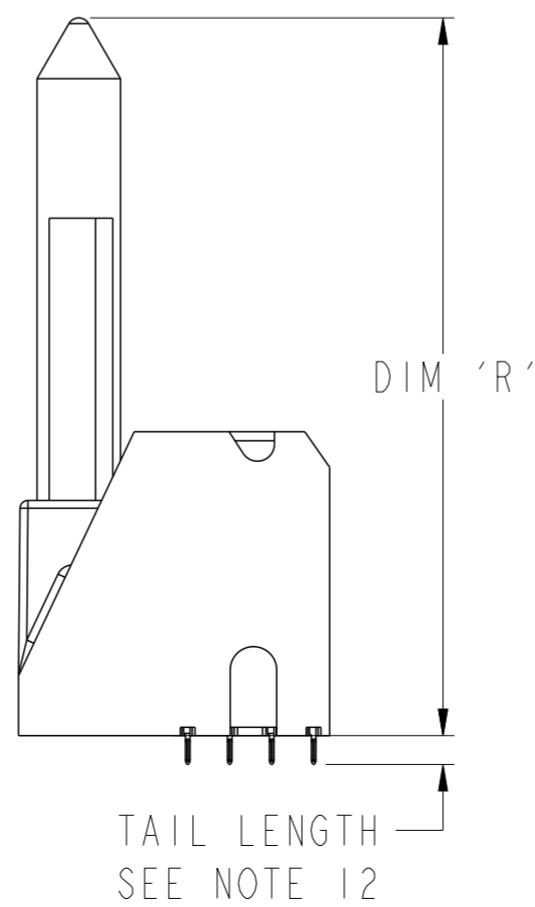
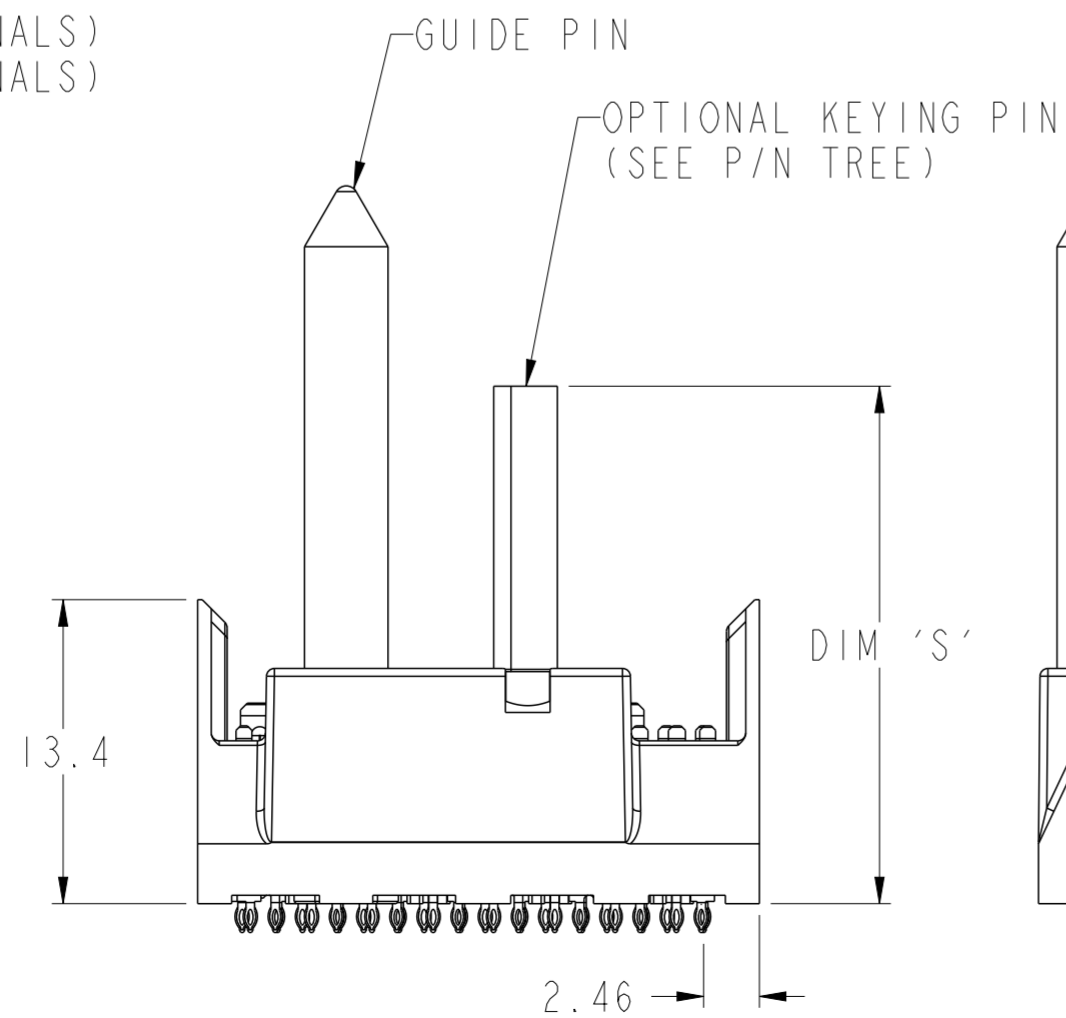
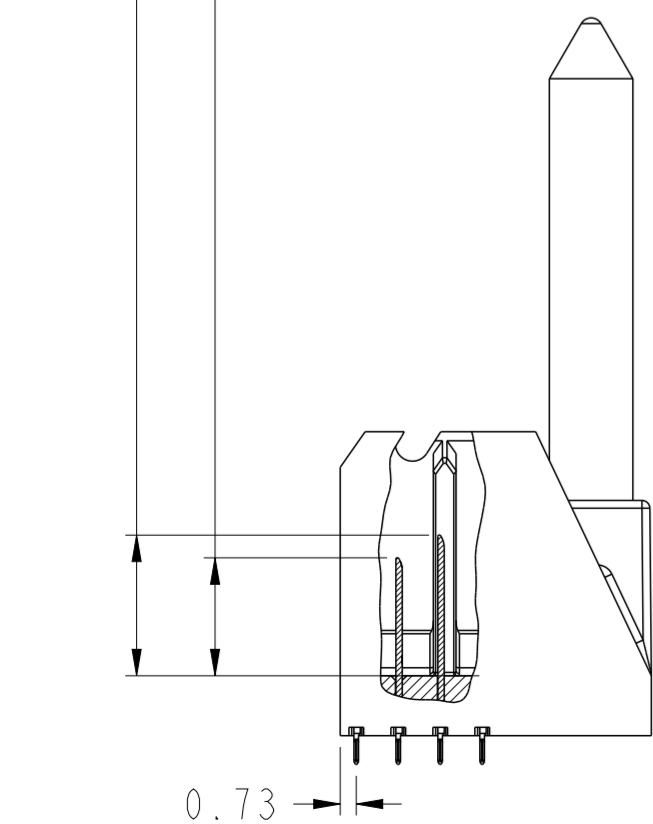
ASSEMBLY BASE CONFIGURATION END DASH NO.	GUIDE PIN	POLARIZING KEY
	DIM 'R'	DIM 'S'
-X0X	31.6mm	22.8mm
-X4X	25.7mm	20.0mm

spec ref	SEE NOTES	dr	Jim Swain	2010/04/13	projection	MM	size	A2	scale	3:1		
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Michael Song	2016/06/06		Product family	XCede	rel level	Released	ecn no	ELX-DG-24191-1	
ASME Y14.5		chr	Heaven Cen	2016/06/08							cat. no.	SEE P/N TREE
surface	linear	0.X	±0.2	<b>Amphenol FCI</b>	MODULE ASSEMBLY	VERTICAL HEADER, 4-COLUMN, 4-PAIR	10091836	rev	G	apppr	Pel-Ming Zheng	2016/06/15
		0.XX	±0.10									
ASME Y14.5	angular	0.XXX	±0.050								0°	±°

# RIGHT POLARIZING/GUIDE MODULE



- 6.2 (4MM WIPE WIDE GROUNDS)
- 5.2 (3MM WIPE WIDE GROUNDS)
- 5.2 (3MM SMALL END GROUNDS)
- 5.2 (3MM WIPE SIGNALS)
- 4.2 (2MM WIPE SIGNALS)
- SEE P/N TREE



PCB HOLE PATTERN  
COMPONENT SIDE  
SCALE 6:1

$\varnothing$ 0.10	X_BP	Y_BP
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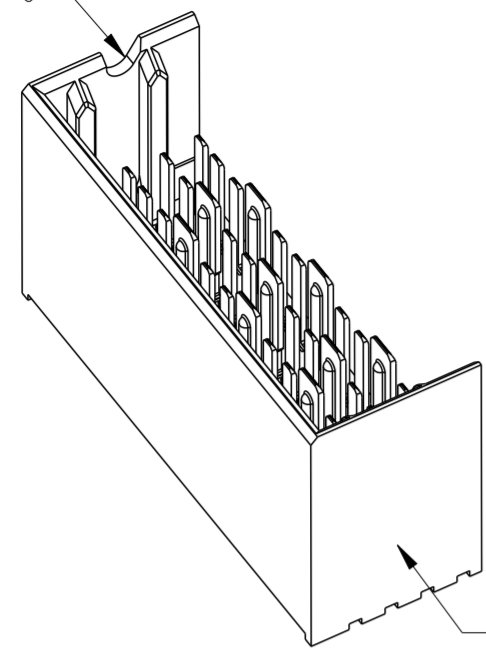
SEE NOTE 11 & TABLE 1

ASSEMBLY BASE CONFIGURATION END DASH NO.	GUIDE PIN	POLARIZING KEY
	DIM 'R'	DIM 'S'
-X0X	31.6mm	22.8mm
-X4X	25.7mm	20.0mm

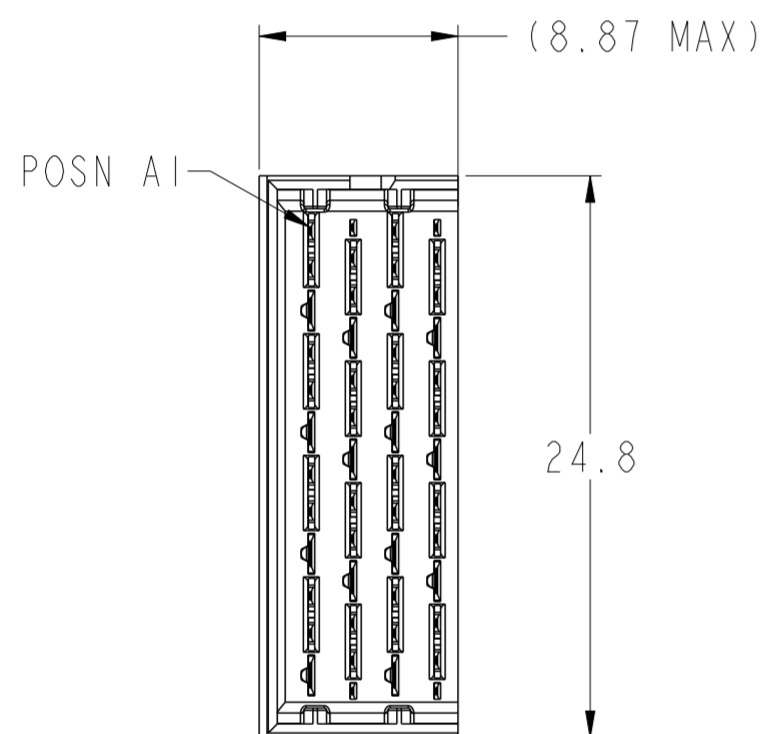
spec ref	SEE NOTES	dr	Jim Swain	2010/04/13	projection	MM	size	A2	scale	3:1	
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Michael Song	2016/06/06		Product family	XCede	rel level	Released	ecn no	ELX-DG-24191-1
ASME Y14.5		chr	Heaven Cen	2016/06/08							cat. no.
surface	linear	0.X	±0.2	<b>Amphenol FCI</b>	MODULE ASSEMBLY		10091836	G	rev		
		0.XX	±0.10		VERTICAL HEADER, 4-COLUMN, 4-PAIR						
		0.XXX	±0.050								
ASME Y14.5	angular	0°	±°								

# LEFT WALL MODULE

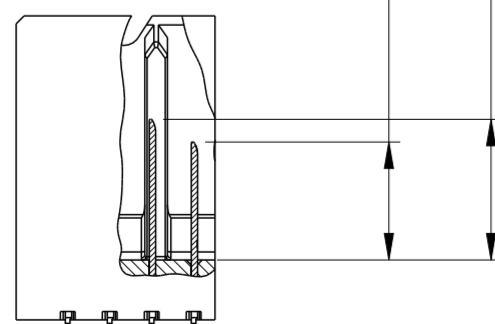
SEE NOTE 8



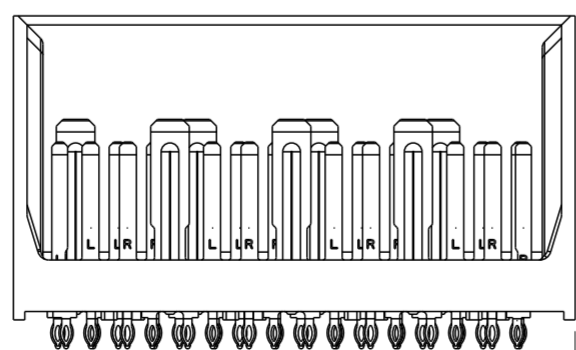
SEE NOTE 5



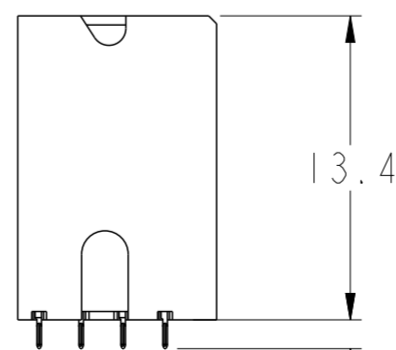
- 6.2 (4MM WIPE WIDE GROUNDS)
- 5.2 (3MM WIPE WIDE GROUNDS)
- 5.2 (3MM SMALL END GROUNDS)
- 5.2 (3MM WIPE SIGNALS)
- 4.2 (2MM WIPE SIGNALS)
- SEE P/N TREE



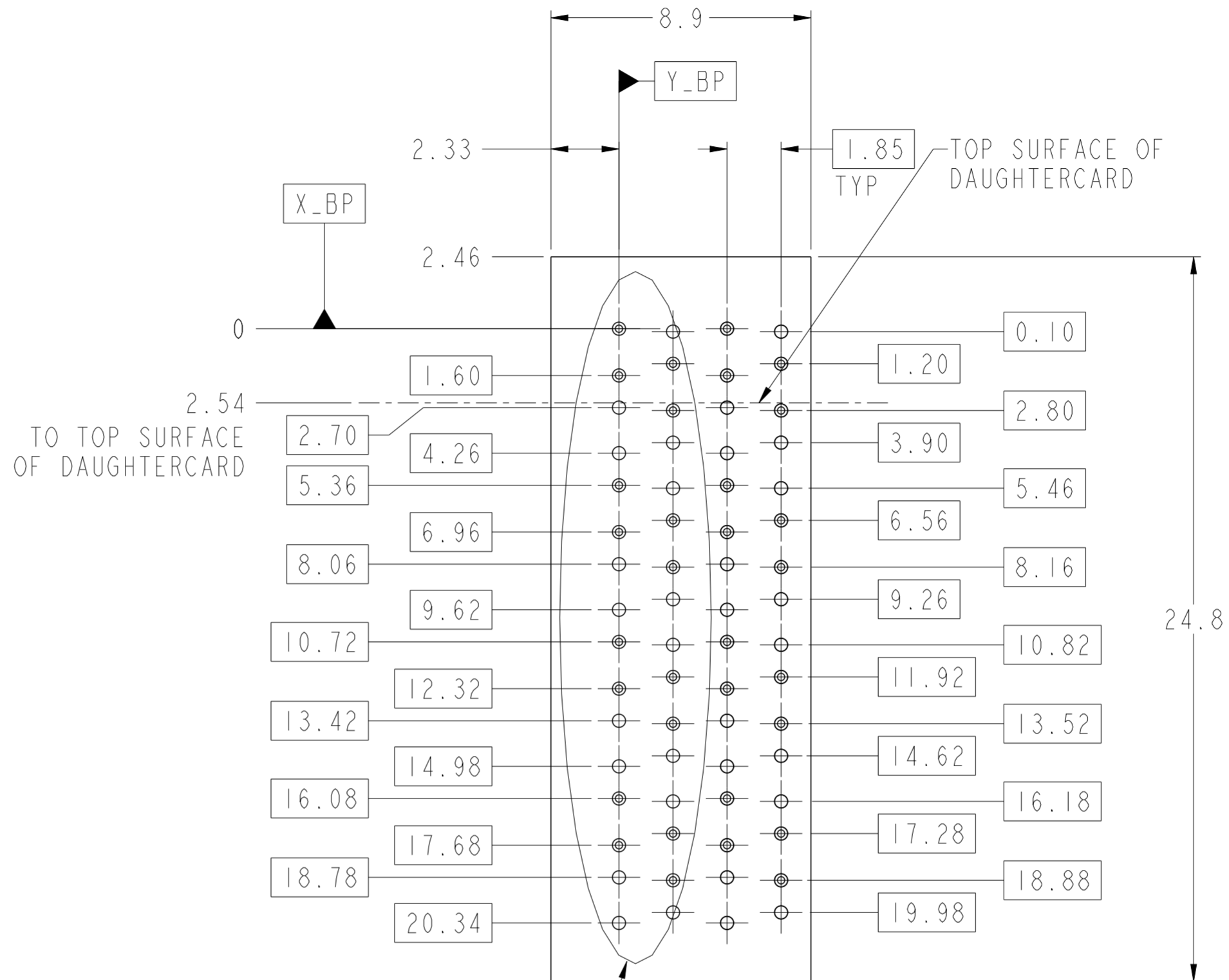
2.33



2.46



TAIL LENGTH  
SEE NOTE 12



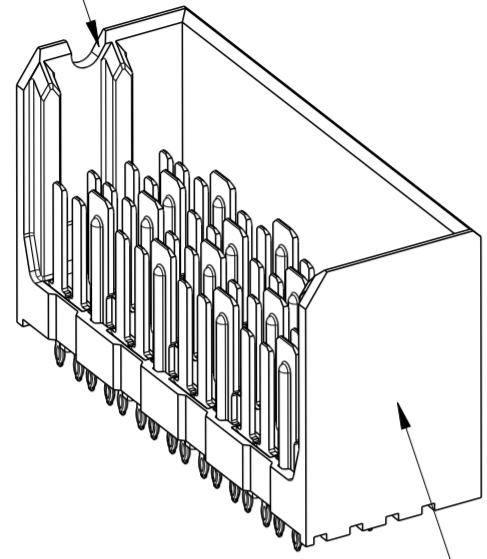
SEE DETAIL A (SHEET 8)

PCB HOLE PATTERN  
COMPONENT SIDE  
SCALE 6:1

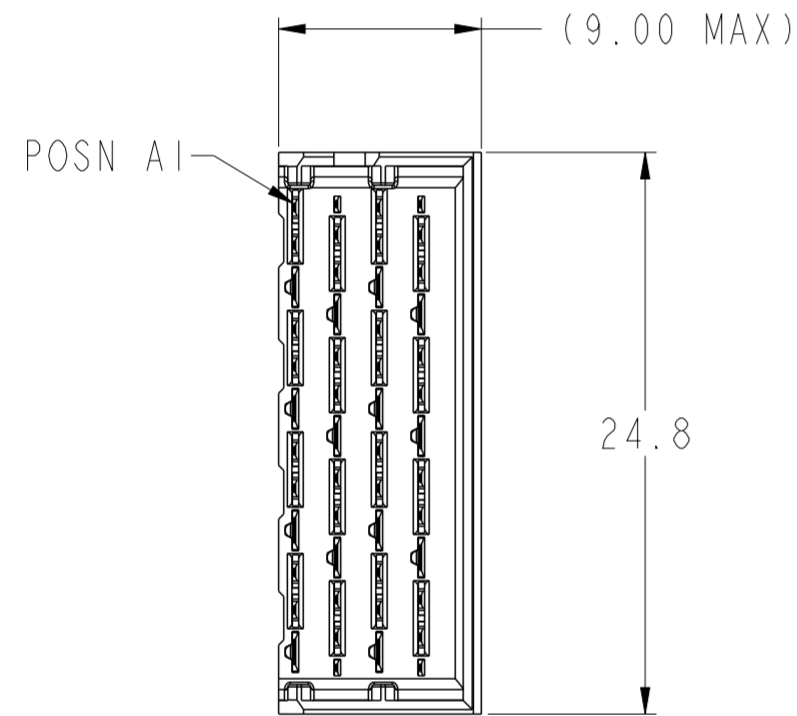
spec ref	SEE NOTES	dr	Jim Swain	2010/04/13	projection	MM	size	A2	scale	3:1	
tolerance std	ASME Y14.5	eng	Michael Song	2016/06/06			ecn no	ELX-DG-24191-1	rel level	Released	
surface	linear 0.X ±0.2 0.XX ±0.10 0.XXX ±0.050	chr	Heaven Cen	2016/06/08			product family	XCede		rel level	Released
		appr	Pai-Ming Zheng	2016/06/15			cat. no.	SEE P/N TREE		Product - Customer Drw	sheet 5 of 8
ASME Y14.5	angular	0°	±°	<b>Amphenol FCI</b>		MODULE ASSEMBLY VERTICAL HEADER, 4-COLUMN, 4-PAIR	dwg no 10091836	rev G			

# RIGHT WALL MODULE

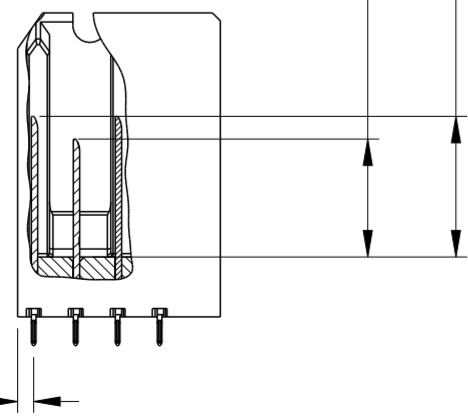
SEE NOTE 8



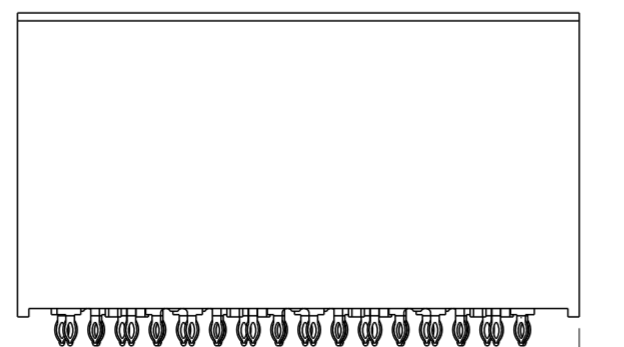
SEE NOTE 5



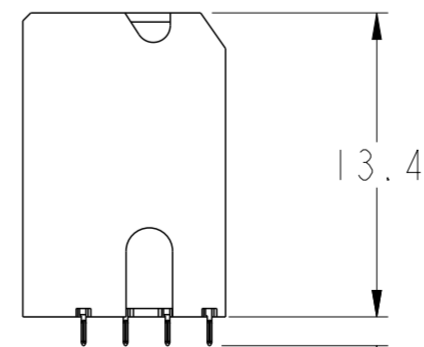
- 6.2 (4MM WIPE WIDE GROUNDS)
- 5.2 (3MM WIPE WIDE GROUNDS)
- 5.2 (3MM SMALL END GROUNDS)
- 5.2 (3MM WIPE SIGNALS)
- 4.2 (2MM WIPE SIGNALS)
- SEE P/N TREE



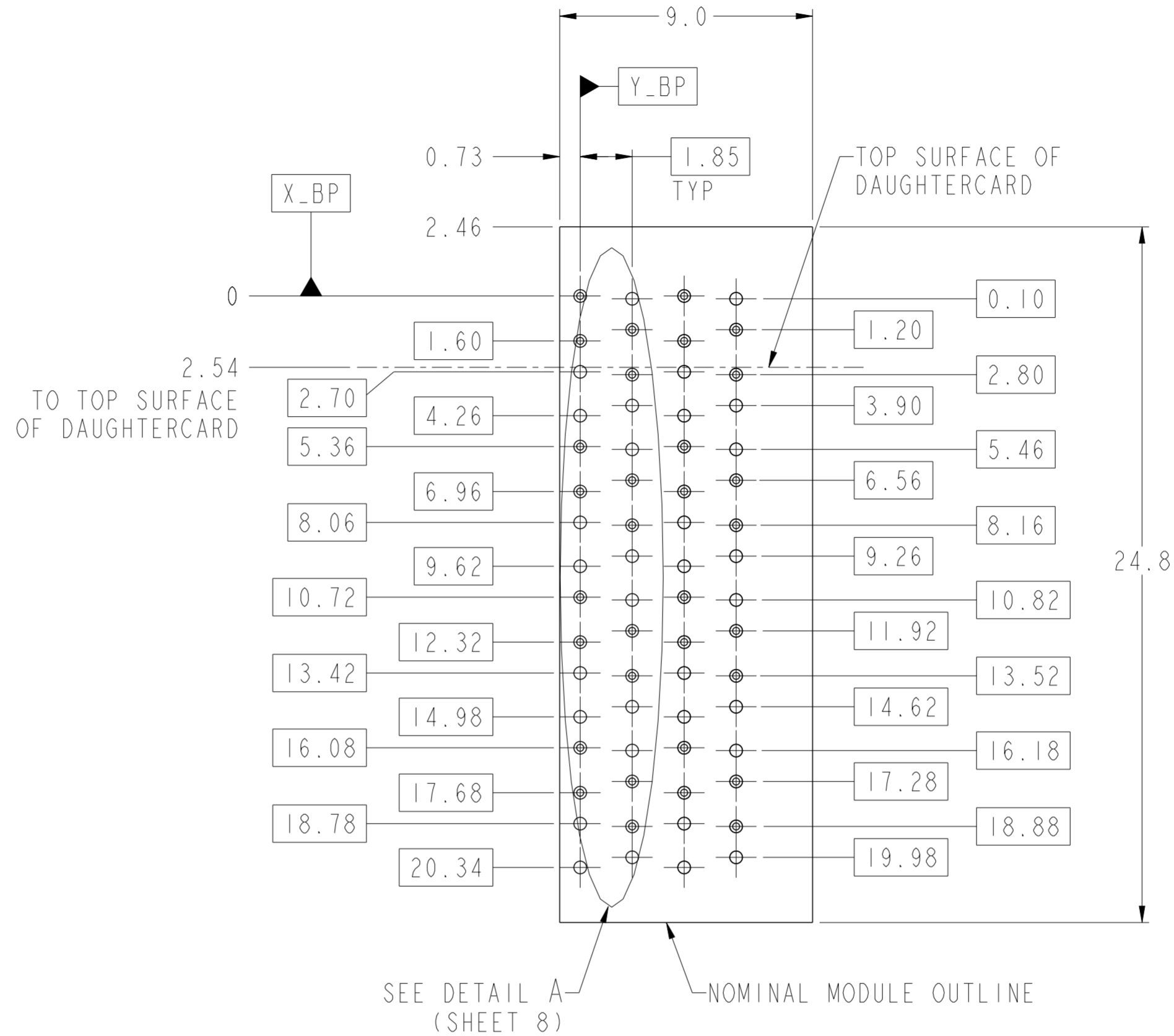
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2.46



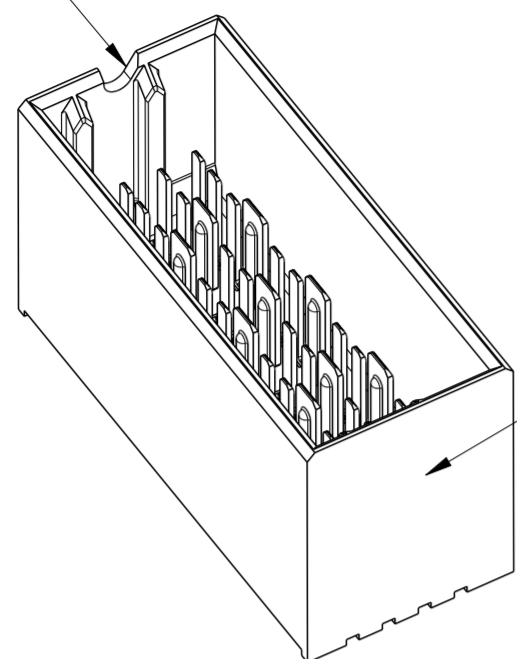
TAIL LENGTH  
SEE NOTE 12



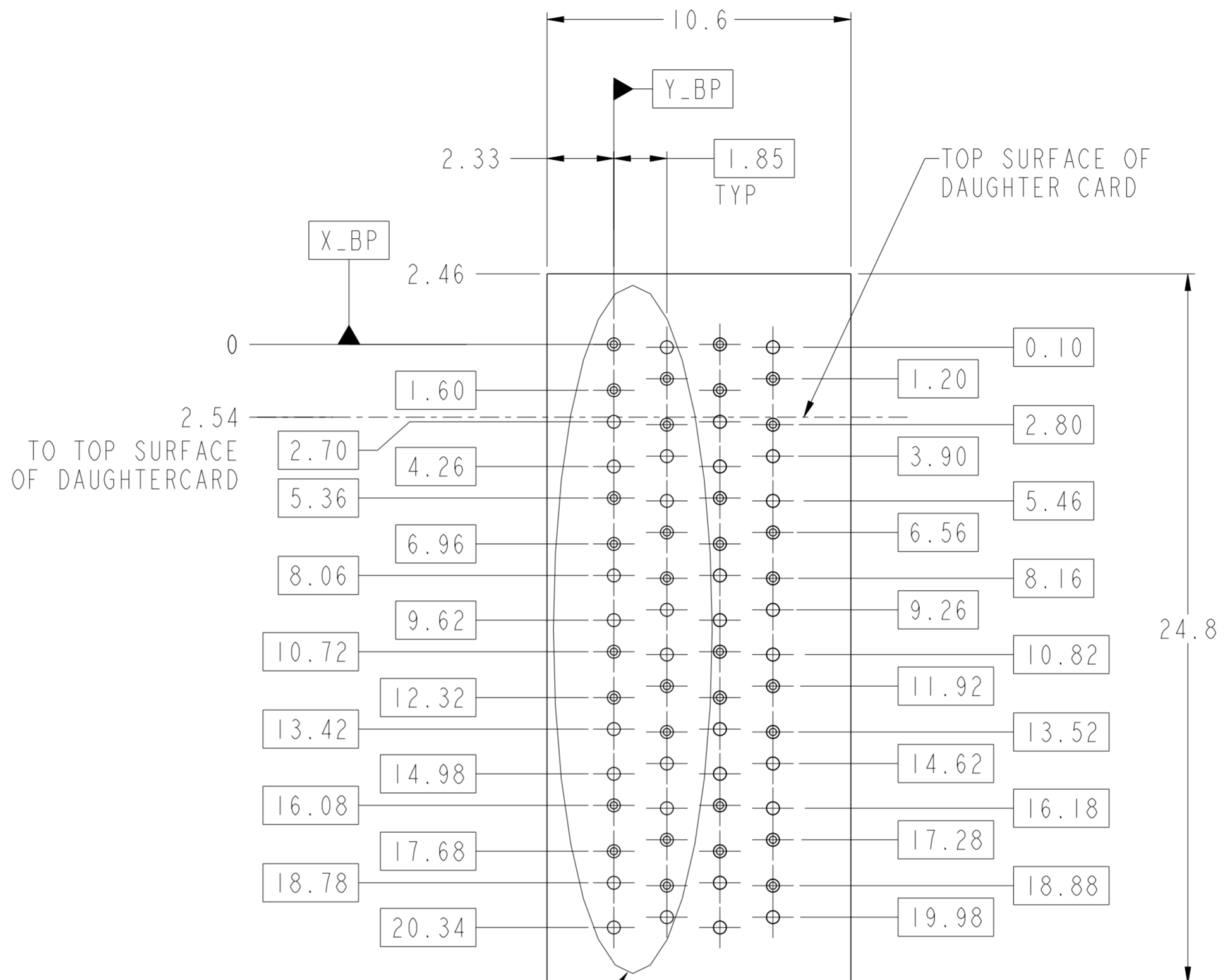
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tolerance std	ASME Y14.5	eng	Michael Song	2016/06/06			ecn no	ELX-DG-24191-1		
TOLERANCES UNLESS OTHERWISE SPECIFIED		chr	Heaven Cen	2016/06/08			rel level	Released		
surface	linear	appr	Pai-Ming Zheng	2016/06/15	product family	XCede	rel level	Released		
ASME Y14.5	angular	0°	±°	0.X ±0.2			cat. no.	SEE P/N TREE	Product - Customer Drw	sheet 6 of 8
				0.XX ±0.10	<b>MODULE ASSEMBLY</b> VERTICAL HEADER, 4-COLUMN, 4-PAIR		dwg no	10091836		
				0.XXX ±0.050	Product - Customer Drw		rev	G		

# 4-WALL MODULE

SEE NOTE 8



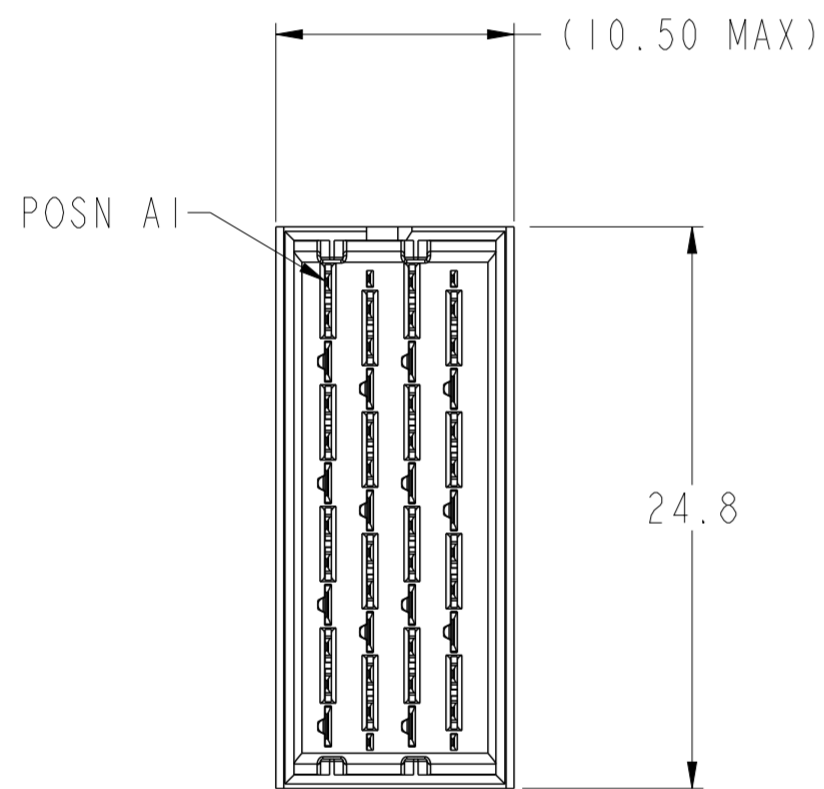
SEE NOTE 5



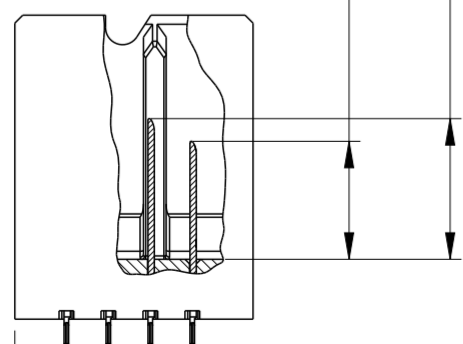
SEE DETAIL A (SHEET 8)

PCB HOLE PATTERN  
COMPONENT SIDE  
SCALE 6:1

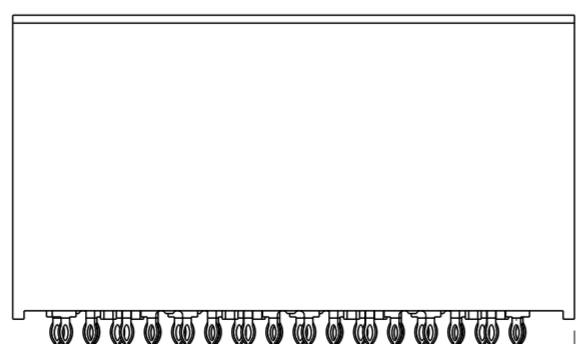
NOMINAL MODULE OUTLINE



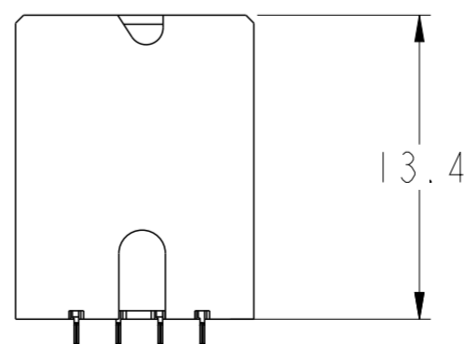
- 6.2 (4MM WIPE WIDE GROUNDS)
- 5.2 (3MM WIPE WIDE GROUNDS)
- 5.2 (3MM SMALL END GROUNDS)
- 5.2 (3MM WIPE SIGNALS)
- 4.2 (2MM WIPE SIGNALS)
- SEE P/N TREE



2.33



2.46



TAIL LENGTH  
SEE NOTE 12

spec ref	SEE NOTES	dr	Jim Swain	2010/04/13	projection	MM	size	A2	scale	4:1
tolerance std	ASME Y14.5	eng	Michael Song	2016/06/06			ecn no	ELX-DG-24191-1		
TOLERANCES UNLESS OTHERWISE SPECIFIED		chr	Heaven Cen	2016/06/08			rel level	Released		
surface	linear	0.X	±0.2		product family	-				
		0.XX	±0.10		MODULE ASSEMBLY VERTICAL HEADER, 4-COLUMN, 4-PAIR	cat. no.	-			
	angular	0°	±°			Product - Customer Drw	sheet 7 of 8			
ASME Y14.5					dwg no	10091836			rev	G

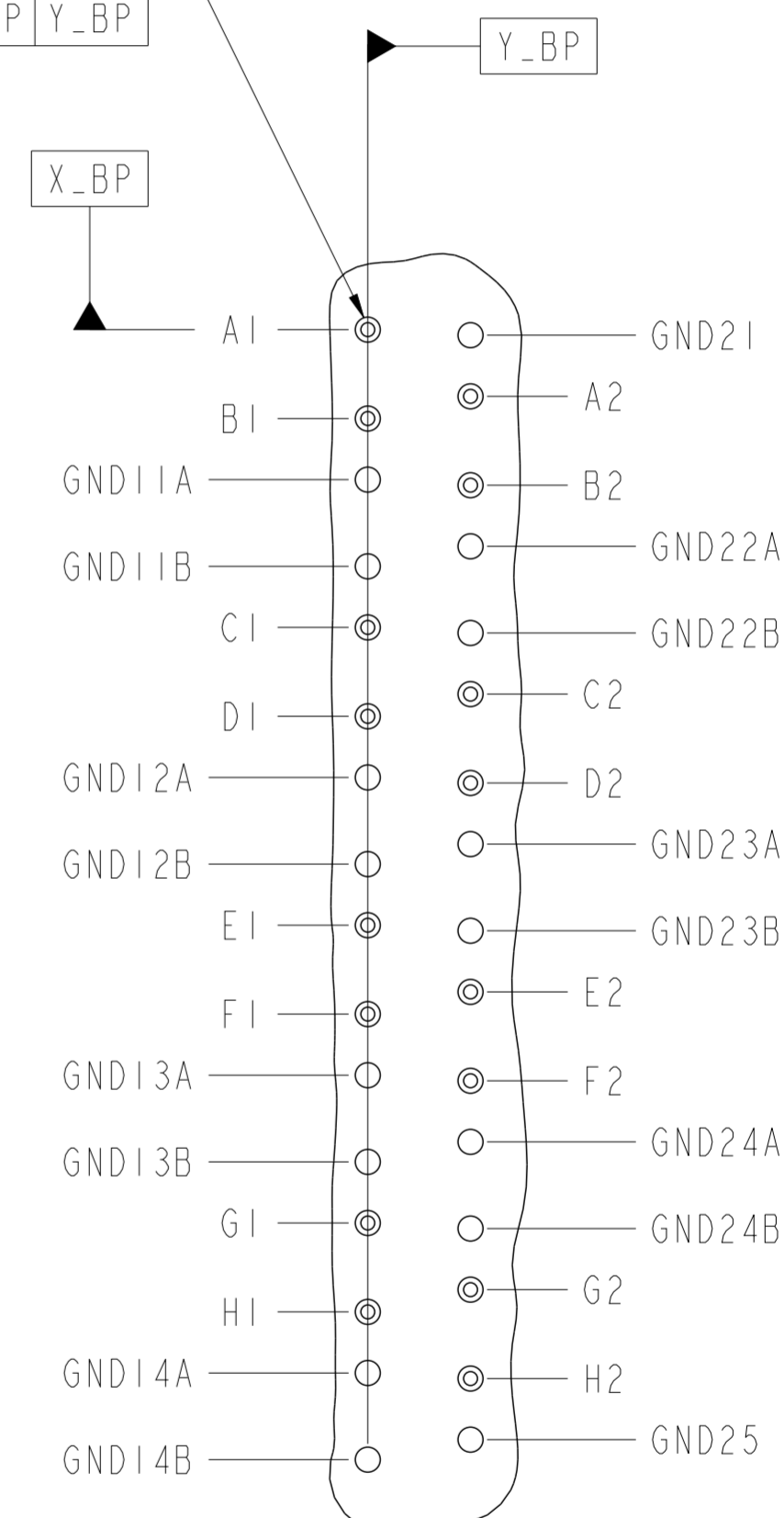
NOTES:

1. CONNECTOR MATERIALS  
SHROUD: HIGH-TEMP THERMOPLASTIC, GRAY, UL94V-0  
CONTACTS: HIGH PERFORMANCE COPPER ALLOY
2. CONTACT PLATING:  
  
SEPARABLE INTERFACE: PERFORMANCE-BASED PLATING, QUALIFIED TO MEET THE REQUIREMENTS OF FCI PRODUCT SPECIFICATION GS-12-588, INCLUDING THE TELCORDIA GR-1217-CORE (NOVEMBER 1995) CENTRAL OFFICE (CO) OR UNCONTROLLED ENVIRONMENT (UE) TEST SEQUENCE AS NOTED IN P/N TREE.  
  
PRESS-FIT TAILS: TIN OVER NICKEL (LF), OR TIN-LEAD ALLOY OVER NICKEL (NON-LF). SEE P/N TREE.
3. PRODUCT SPECIFICATION: GS-12-588
4. APPLICATION SPECIFICATION: GS-20-121
5. PRODUCT MARKING (PART NUMBER AND LOT CODE) ON THESE SURFACES.
6. HOUSING MUST WITHSTAND EXPOSURE TO 260°C PEAK TEMPERATURE FOR 40 SECONDS IN A CONVECTION, INFRA-RED, OR VAPOR-PHASE REFLOW OVEN.
7. PACKAGING MEETS GS-14-920 LEAD-FREE LABELING SPECIFICATION.
8. NOTCH INDICATES "ROW A" SIDE OF CONNECTOR.
9. SEE APPLICATION SPECIFICATION FOR ROUTING GUIDELINES, ADDITIONAL PTH GUIDELINES, MATED DIMENSIONS, GUIDE PN SELECTION, ETC.
10. SCREW IS OPTIONAL AND ENGAGES WITH BOTTOM OF GUIDE-PIN FROM BENEATH THE PCB FOR ADDITIONAL GUIDE-PIN SUPPORT.
11. OPTIONAL HOLE LOCATION FOR GROUNDED PIN OR ADDITIONAL GUIDE-PIN SUPPORT. SEE TABLE 1 ON SHEET 1 FOR ADDITIONAL DETAILS.
12. TAIL LENGTH=1.3mm FOR  $\varnothing 0.55$ [0.0217"]COMPLIANT PIN DRILL  
TAIL LENGTH=1.5mm FOR  $\varnothing 0.45$ [0.0177"]COMPLIANT PIN DRILL

TABLE 3: PTH AND PAD SIZES WITH REFERENCE TO COMPLIANT PIN DRILL

COMPLIANT PIN DRILL	PTH	PAD
$\varnothing 0.55$ [0.0217"]	$\varnothing 0.45 \pm 0.05$	$\varnothing 0.85$
$\varnothing 0.45$ [0.0177"]	$\varnothing 0.36 \pm 0.05$	$\varnothing 0.75$

SEE TABLE 3 FOR PTH, DRILL & PAD SIZES



DETAIL A  
SCALE 8:1

Amphenol FCI

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spec ref	SEE NOTES	dr	Jim Swain	2010/04/13	projection	MM	size	A2	scale	4:1
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Michael Song	2016/06/06			ecn no	ELX-DG-24191-1	rel level	Released
ASME Y14.5		chr	Heaven Cen	2016/06/08						
		appr	Pai-Ming Zheng	2016/06/15						
surface	linear	0.X	±0.2	<b>Amphenol FCI</b>		MODULE ASSEMBLY VERTICAL HEADER, 4-COLUMN, 4-PAIR		cat. no.	Product - Customer Drw	sheet 8 of 8
		0.XX	±0.10							
ASME Y14.5	angular	0°	±°							