

10091836 - X 0 J - X X X L F

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)	J	A	B	C	D	E	F	G	H		
RIGHT POLARIZING GUIDANCE MODULE (SEE SHEET 4)	Y	P	Q	R	S	T	U	V	W		
OPEN MODULE (TWO WALL) (SEE SHEET 2)	0 (ZERO)										
LEFT WALL MODULE (SEE SHEET 5)	L										
RIGHT WALL MODULE (SEE SHEET 6)	M										
FOUR WALL MODULE (SEE SHEET 7)	1										

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

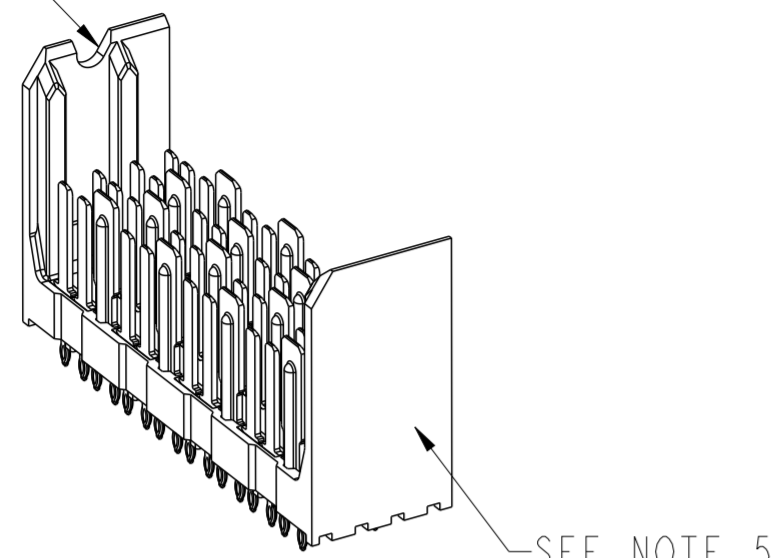
SCREW P/N	DESCRIPTION	BOARD THICKNESS
10091790-002LF	#2-56 X .375" PHILLIPS PANHEAD W/SQ CONICAL WASHER	1.60 - 5.00
10091790-003LF	#2-56 X .500" PHILLIPS PANHEAD W/SQ CONICAL WASHER	5.00 - 10.00

spec ref	SEE NOTES	dr	Jim Swain	2010/04/12	projection	MM	size	A2	scale	4:1
tolerance std	ASME Y14.5	eng	Sandar Soe	2015/06/29	chr	-	ecn no	ELX-S-21214-1	rel level	Released
surface	linear	appr	Chen-Hong Tan	2015/09/30	product family	XCede	cat. no.	SEE P/N TREE	Product - Customer Drw	sheet 1 of 8
ASME Y14.5	angular	0°	±°	0.X	±0.2	0.XX	±0.10	0.XXX	±0.050	

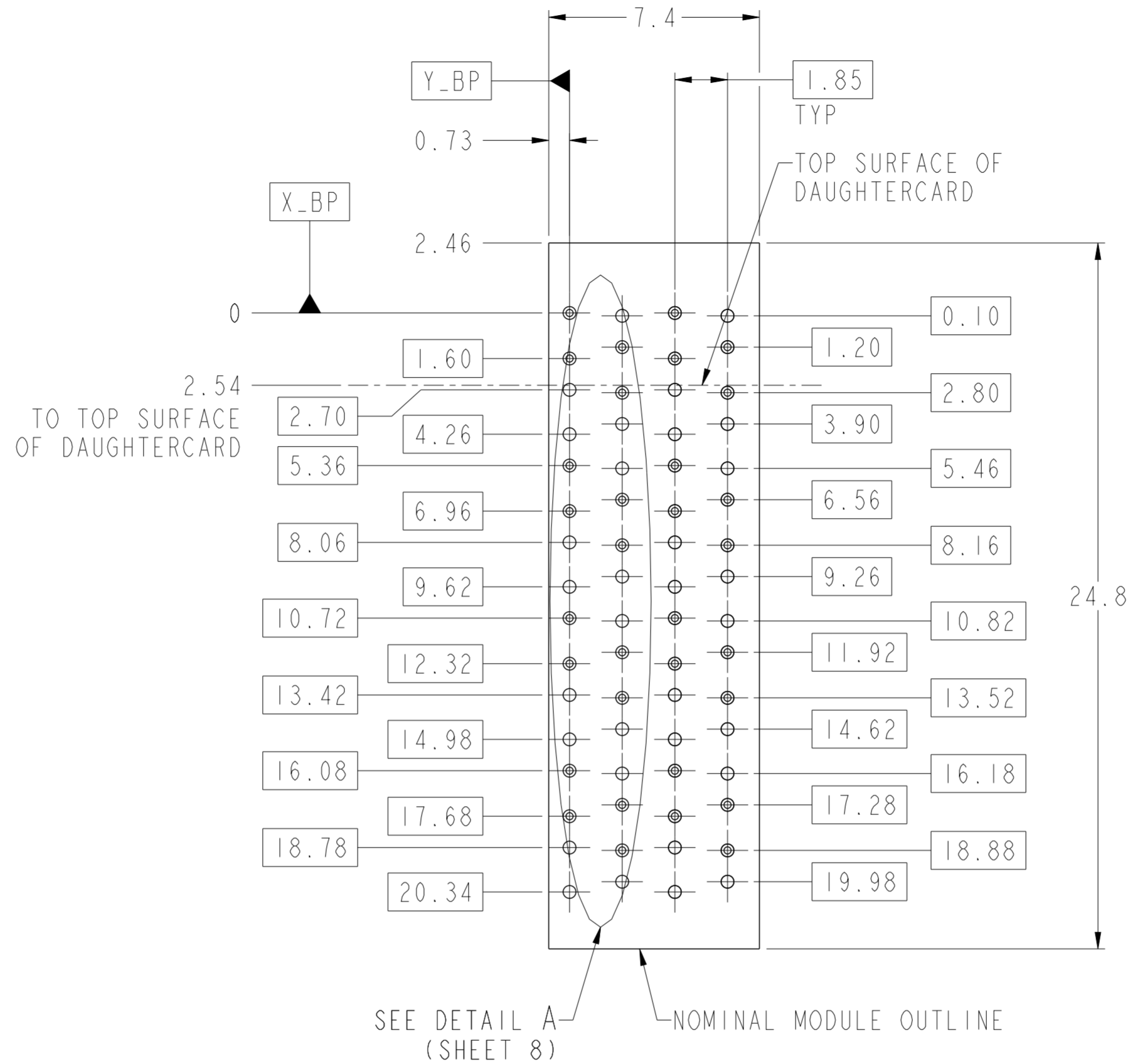
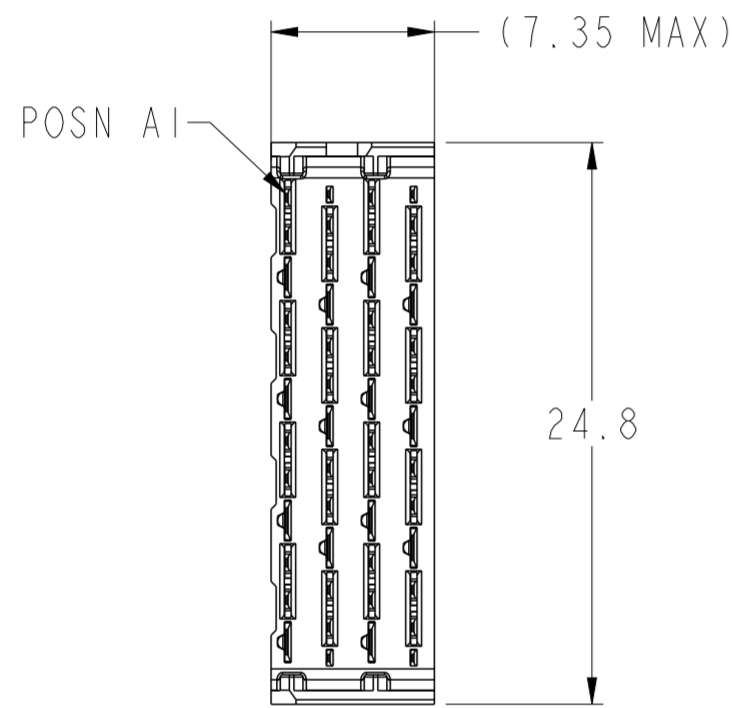
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OPEN (2-WALL) MODULE

SEE NOTE 8

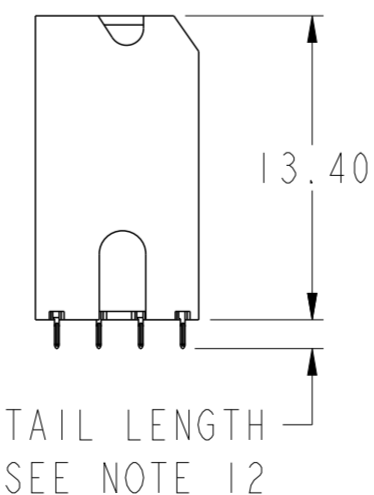
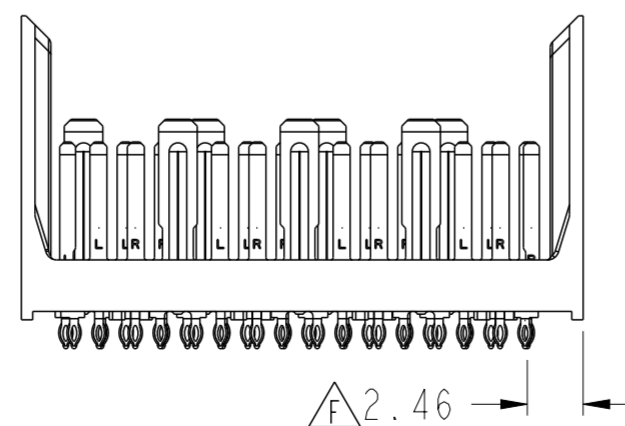
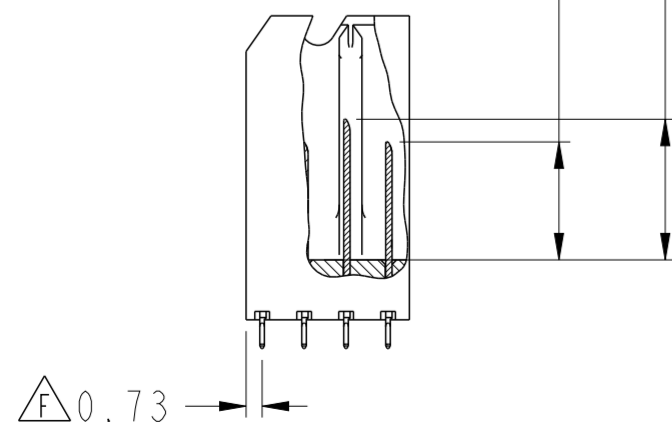


SEE NOTE 5



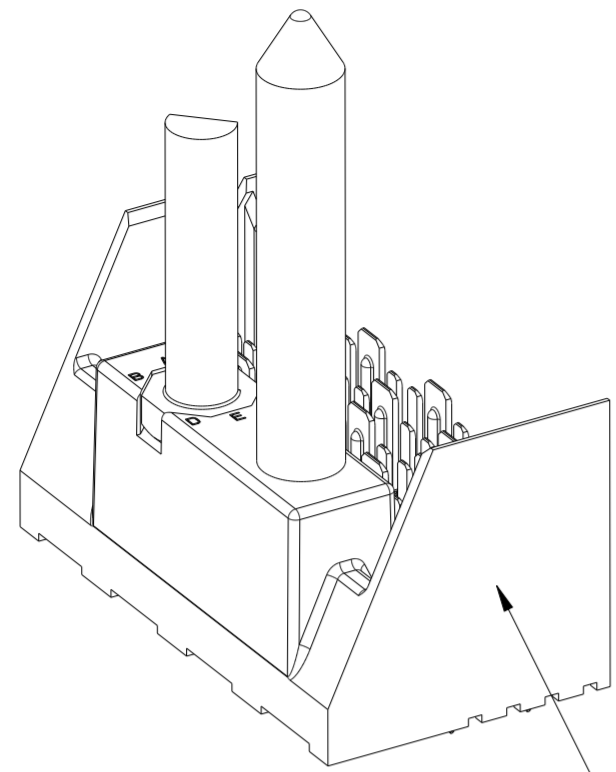
PCB HOLE PATTERN
COMPONENT SIDE
SCALE 6:1

- 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

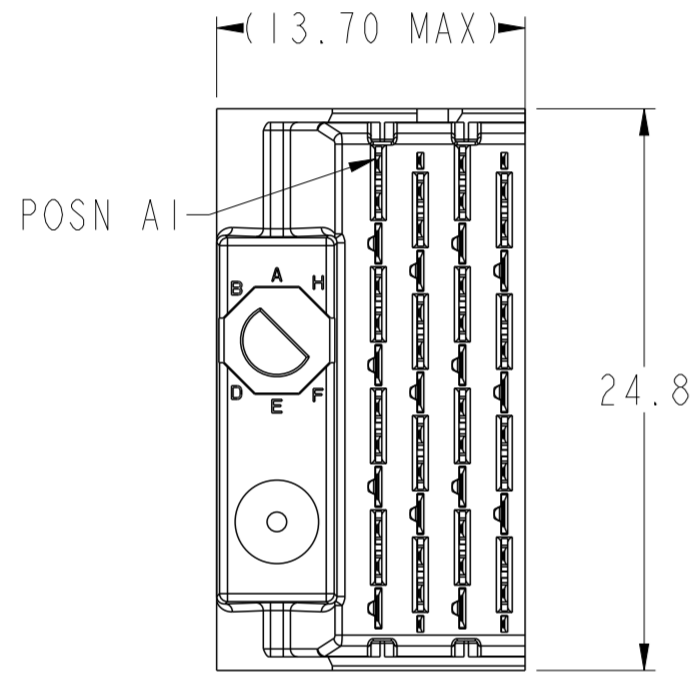


spec ref	SEE NOTES	dr	Jim Swain	2010/04/12	projection	MM	size	A2	scale	4:1									
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Sandar Soe	2015/06/29			ecn no	ELX-S-21214-1	rel level	Released									
ASME Y14.5		chr	-	appr							Chen-Hong Tan	2015/09/30	product family	XCede					
surface	<table border="1"> <tr> <td>linear</td> <td>0.X</td> <td>±0.2</td> </tr> <tr> <td></td> <td>0.XX</td> <td>±0.10</td> </tr> <tr> <td></td> <td>0.XXX</td> <td>±0.050</td> </tr> <tr> <td>angular</td> <td>0°</td> <td>±°</td> </tr> </table>	linear	0.X	±0.2		0.XX	±0.10		0.XXX	±0.050	angular	0°	±°			MODULE ASSEMBLY VERTICAL HEADER, 4-COLUMN, 4-PAIR		title 10091836	rev F
linear	0.X	±0.2																	
	0.XX	±0.10																	
	0.XXX	±0.050																	
angular	0°	±°																	
ASME Y14.5		www.fci.com		cat. no.	SEE P/N TREE	Product - Customer Drw	sheet 2 of 8												

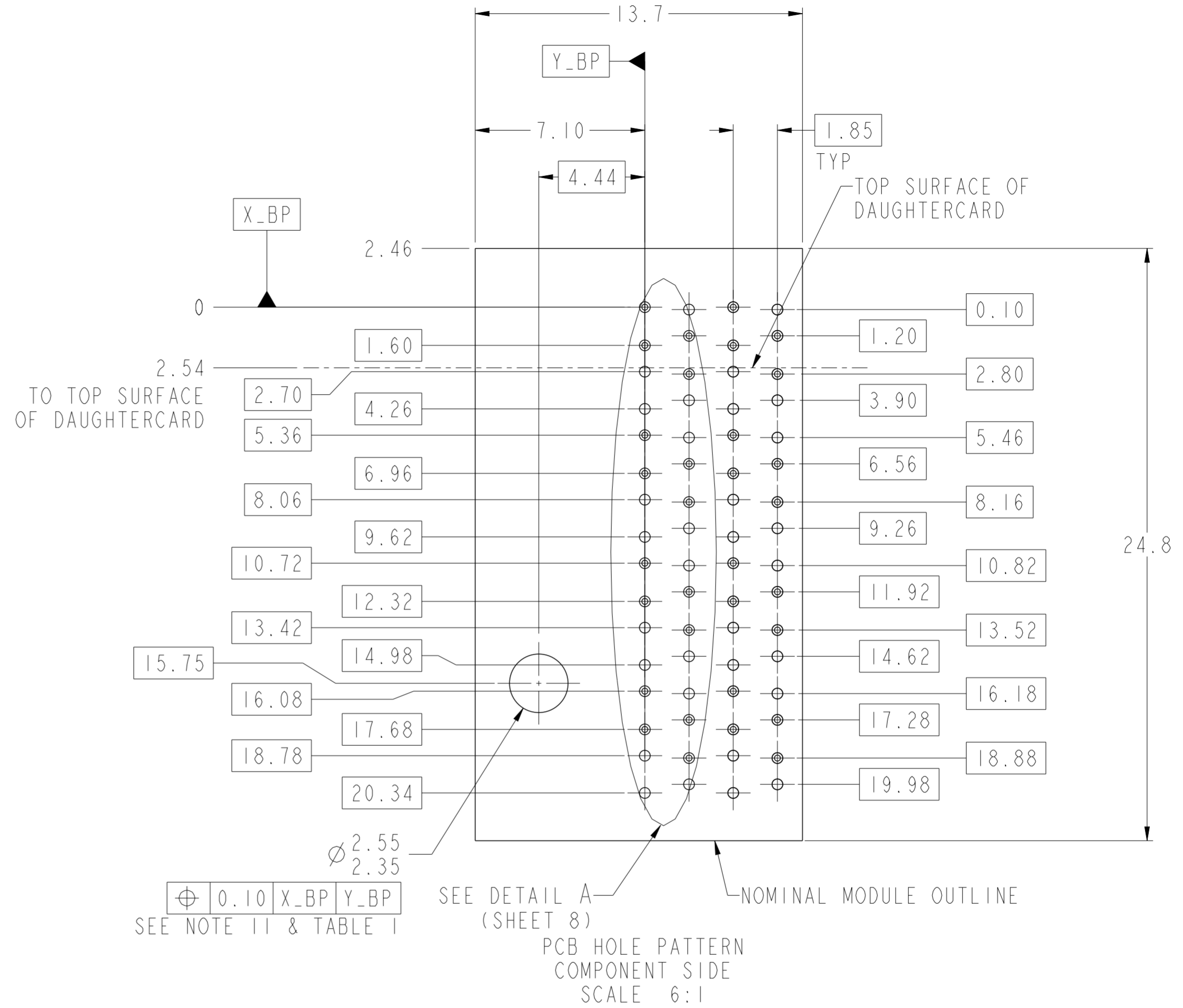
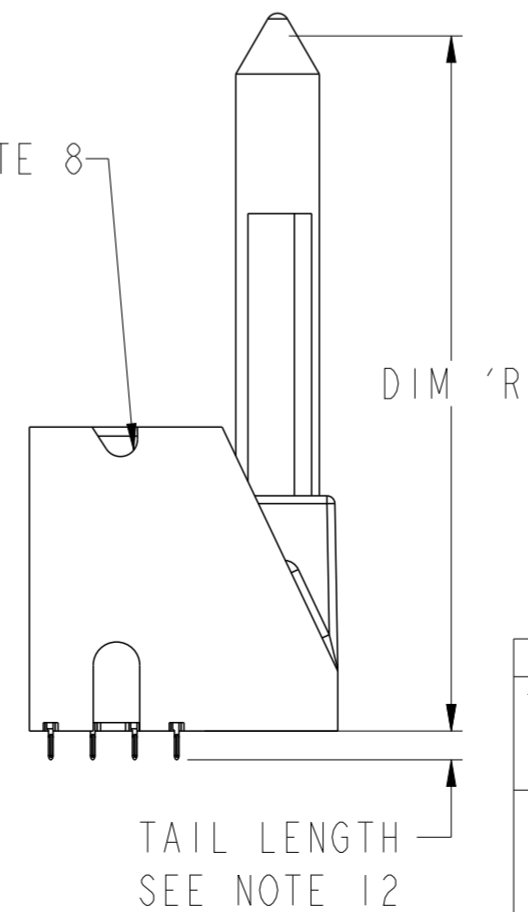
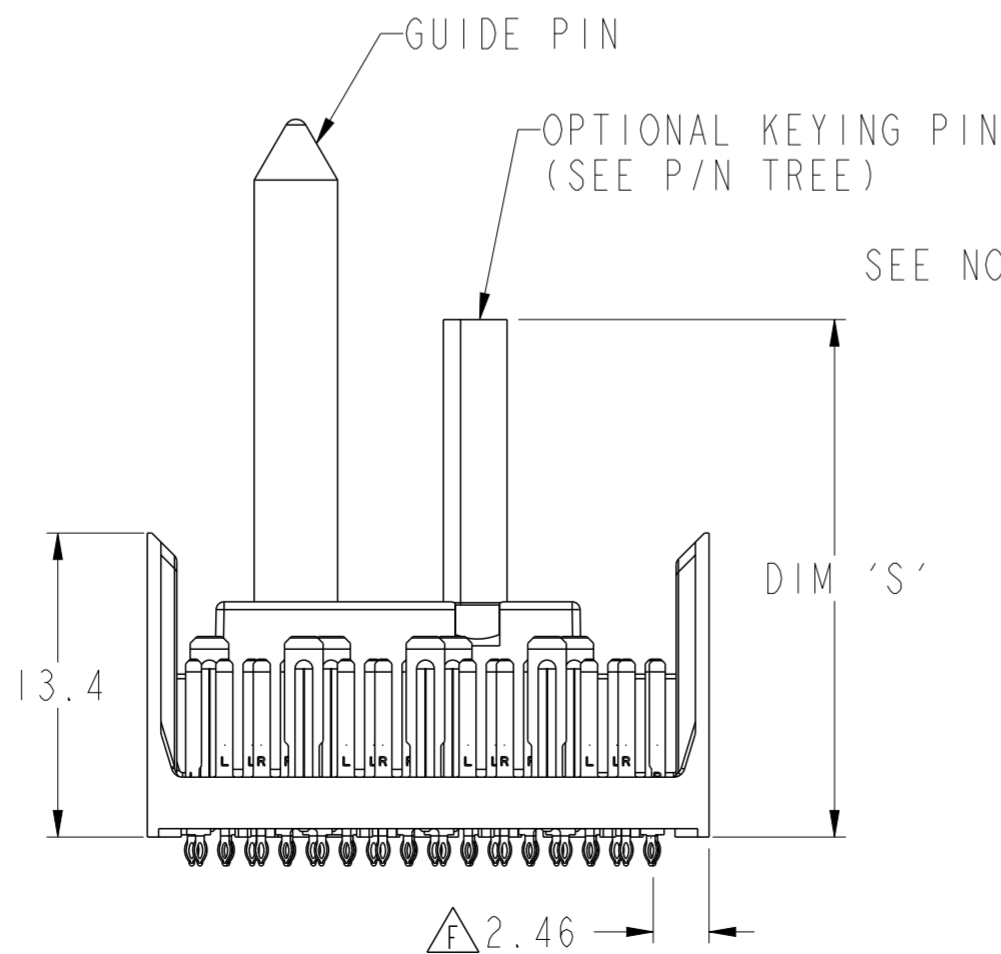
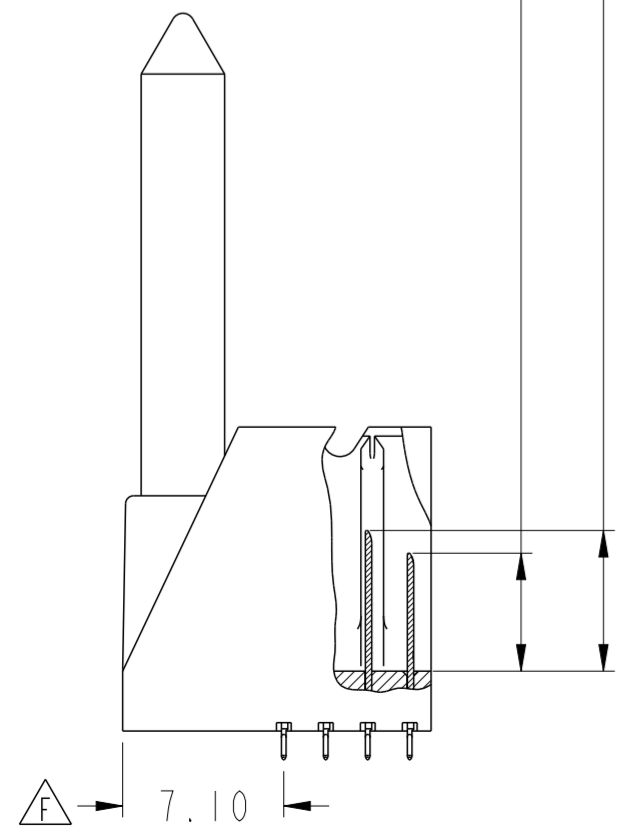
LEFT POLARIZING/GUIDE MODULE



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



\varnothing 0.10	X_BP	Y_BP
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SEE NOTE 11 & TABLE 1

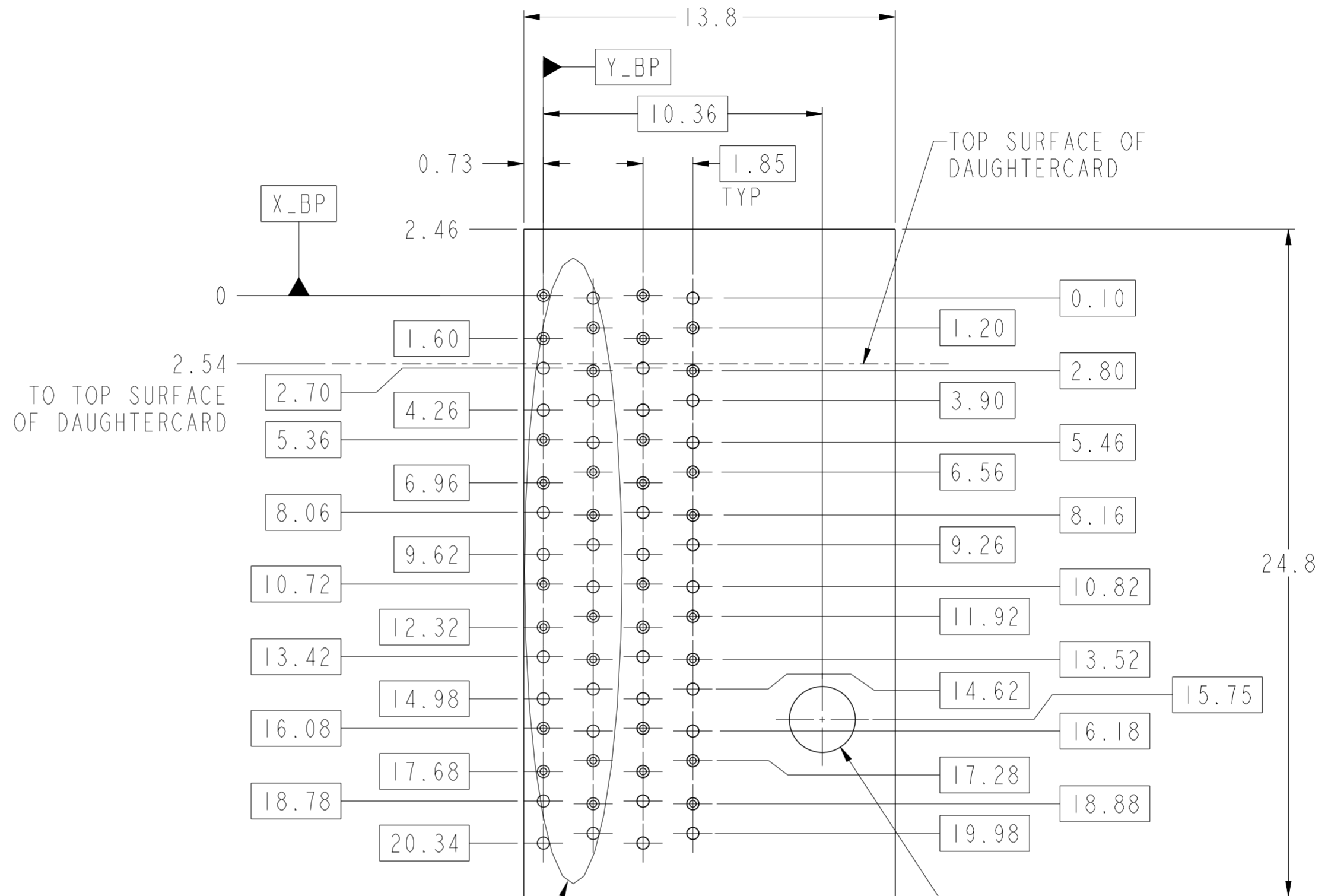
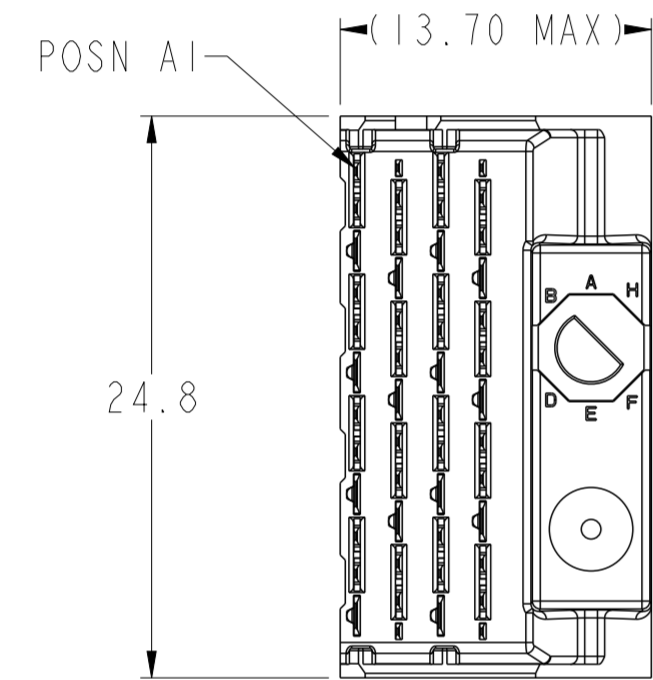
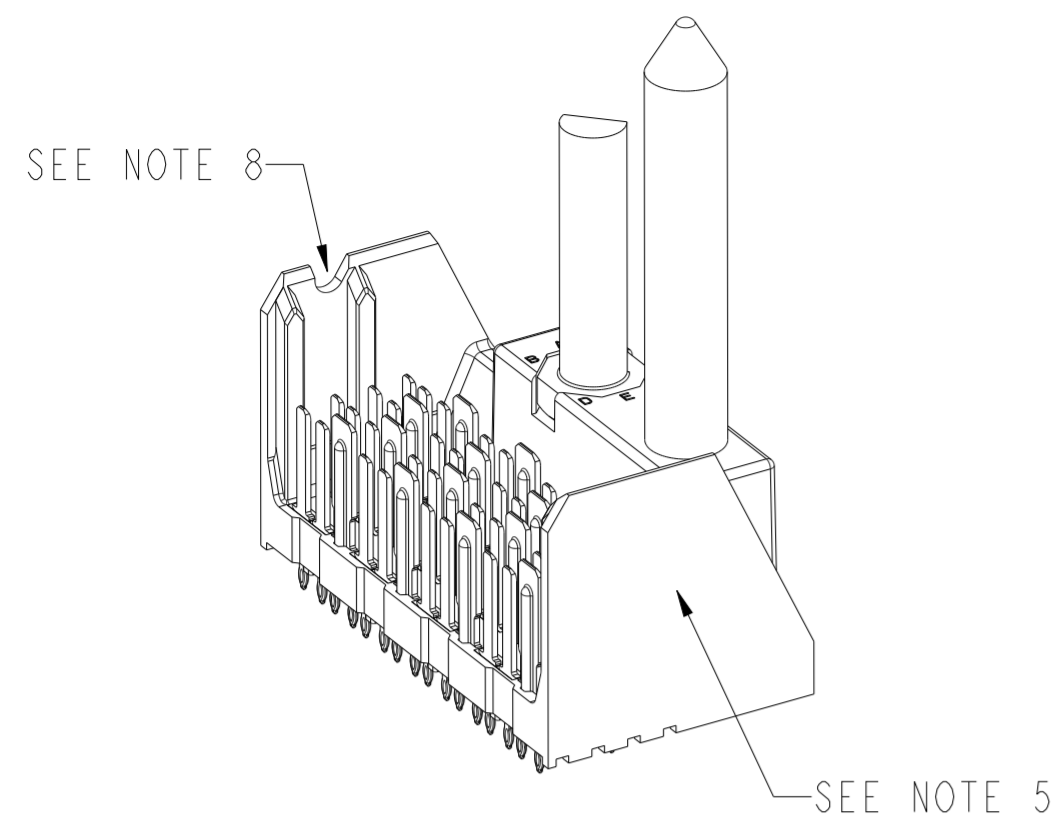
SEE DETAIL A (SHEET 8)

PCB HOLE PATTERN
COMPONENT SIDE
SCALE 6:1

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

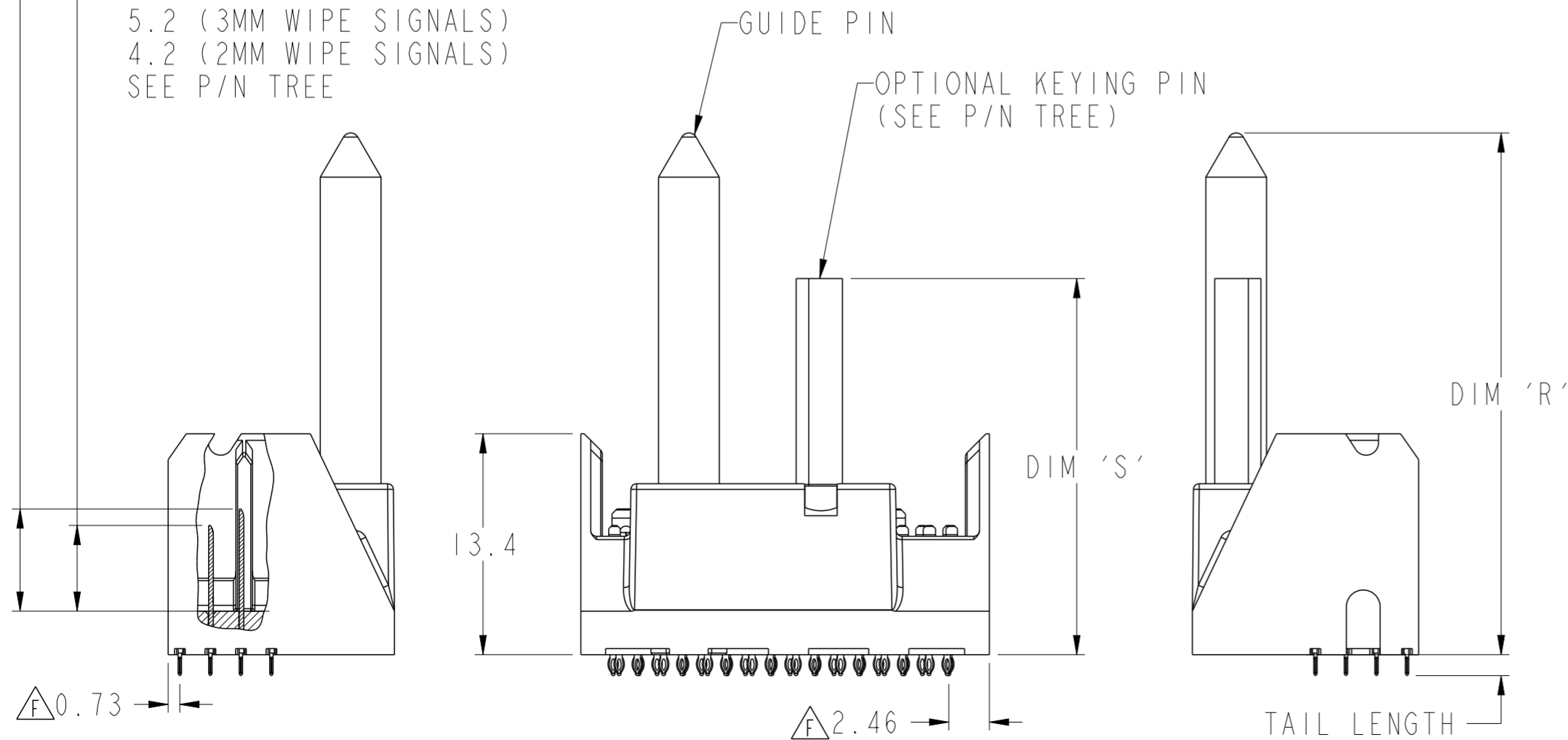
spec ref	SEE NOTES	dr	Jim Swain	2010/04/12	projection	MM	size	A2	scale	4:1																		
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Sander Soe	2015/06/29			ecn no	ELX-S-21214-1	rel level	Released																		
ASME Y14.5		chr		apppr							Chen-Hong Tan	2015/09/30	product family	XCede														
surface	<table border="1"> <tr> <td>linear</td> <td>0.X</td> <td>±0.2</td> </tr> <tr> <td></td> <td>0.XX</td> <td>±0.10</td> </tr> <tr> <td></td> <td>0.XXX</td> <td>±0.050</td> </tr> <tr> <td>angular</td> <td>0°</td> <td>±°</td> </tr> </table>	linear	0.X	±0.2		0.XX	±0.10		0.XXX	±0.050	angular	0°	±°			<table border="1"> <tr> <td>title</td> <td>MODULE ASSEMBLY</td> <td>dwg no</td> <td>10091836</td> <td>rev</td> <td>F</td> </tr> <tr> <td>ASME Y14.5</td> <td></td> <td>cat. no.</td> <td>SEE P/N TREE</td> <td>Product - Customer Drw</td> <td>sheet 3 of 8</td> </tr> </table>	title	MODULE ASSEMBLY	dwg no	10091836	rev	F	ASME Y14.5		cat. no.	SEE P/N TREE	Product - Customer Drw	sheet 3 of 8
linear	0.X	±0.2																										
	0.XX	±0.10																										
	0.XXX	±0.050																										
angular	0°	±°																										
title	MODULE ASSEMBLY	dwg no	10091836	rev	F																							
ASME Y14.5		cat. no.	SEE P/N TREE	Product - Customer Drw	sheet 3 of 8																							

RIGHT POLARIZING/GUIDE MODULE



SEE DETAIL A (SHEET 8) NOMINAL MODULE OUTLINE
 PCB HOLE PATTERN COMPONENT SIDE SCALE 6:1
 Ø 2.55 / 2.35
 ⊕ Ø0.10 X_BP Y_BP
 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



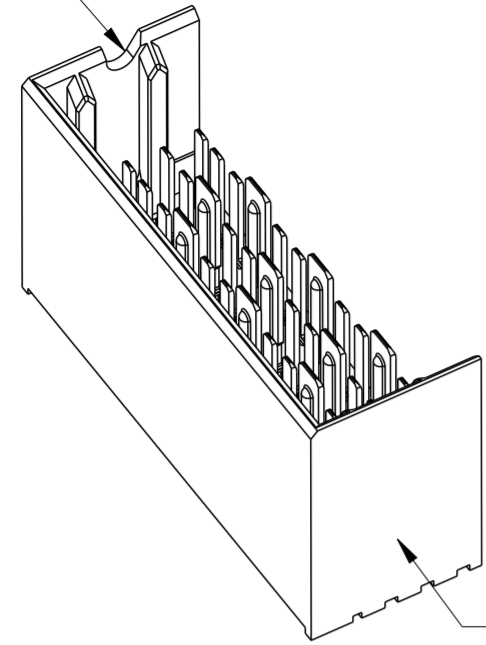
ASSEMBLY BASE CONFIGURATION END DASH NO.	GUIDE PIN	POLARIZING KEY
	DIM 'R'	DIM 'S'
-X0X	31.6mm	22.8mm
-X4X	25.7mm	20.0mm

spec ref	SEE NOTES	dr	Jim Swain	2010/04/12	projection	MM	size	A2	scale	4:1
tolerance std	ASME Y14.5	eng	Sandar Soe	2015/06/29	chr		ecn no	ELX-S-21214-1	rel level	Released
surface	✓	appr	Chen-Hong Tan	2015/09/30	product family	XCede	cat. no.	10091836	rev	F
ASME Y14.5	linear	0.X	±0.2	0.XX	±0.10	0.XXX	±0.050	angular	0°	±°

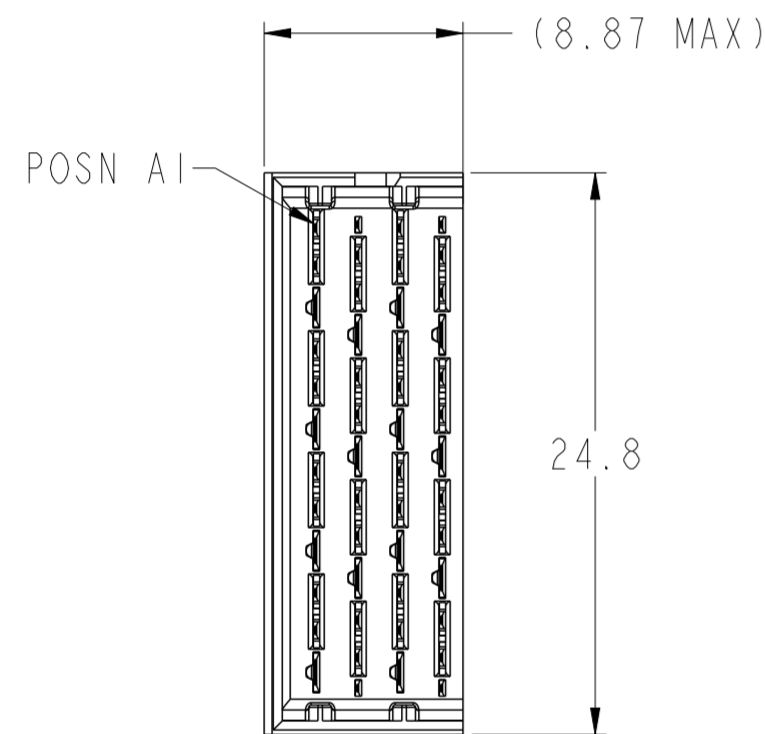


LEFT WALL MODULE

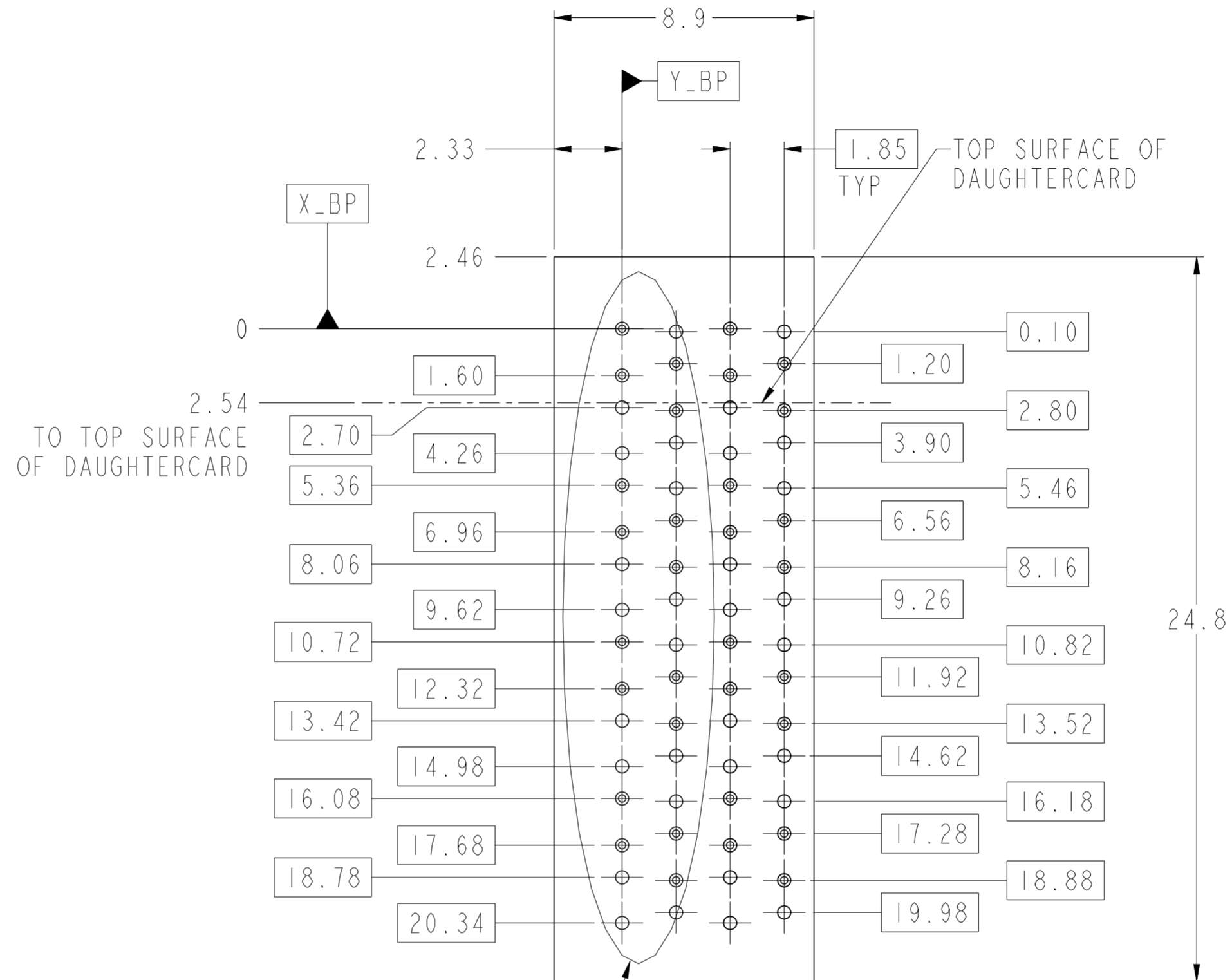
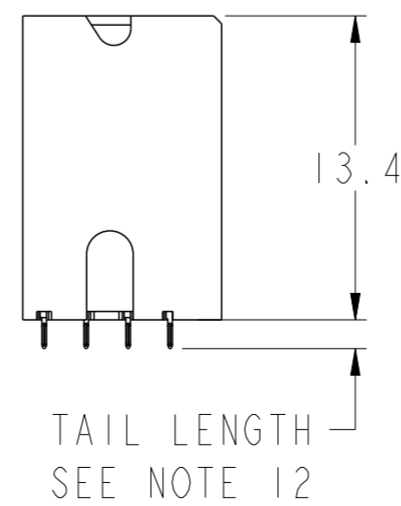
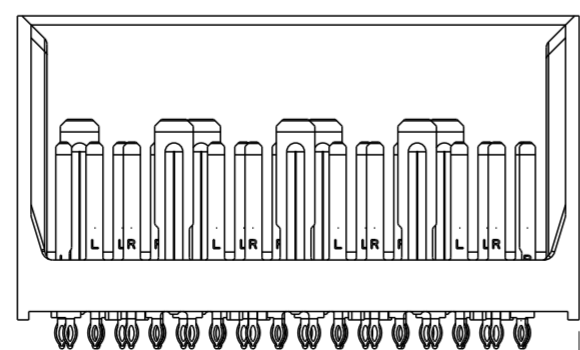
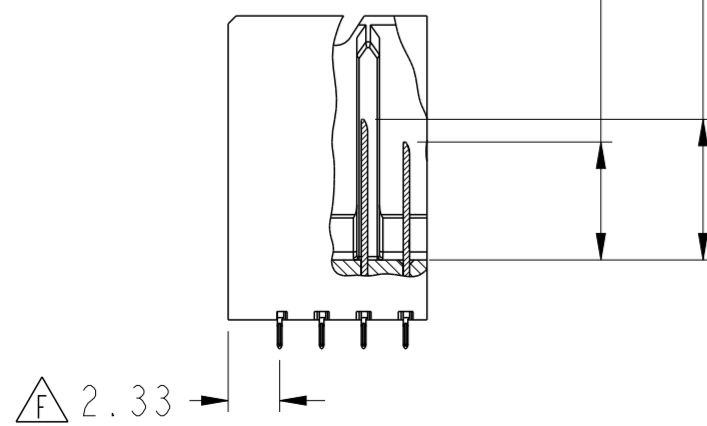
SEE NOTE 8



SEE NOTE 5



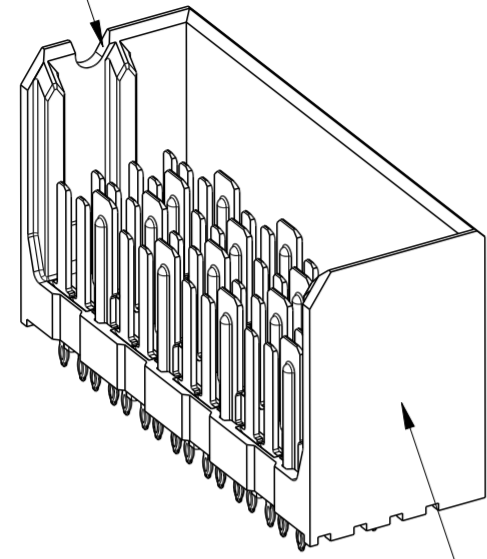
- 6.2 (4MM WIPE WIDE GROUNDS)
- 5.2 (3MM WIPE WIDE GROUNDS)
- 5.2 (3MM SMALL END GROUNDS)
- 5.2 (3MM WIPE SIGNALS)
- 4.2 (2MM WIPE SIGNALS)
- SEE P/N TREE



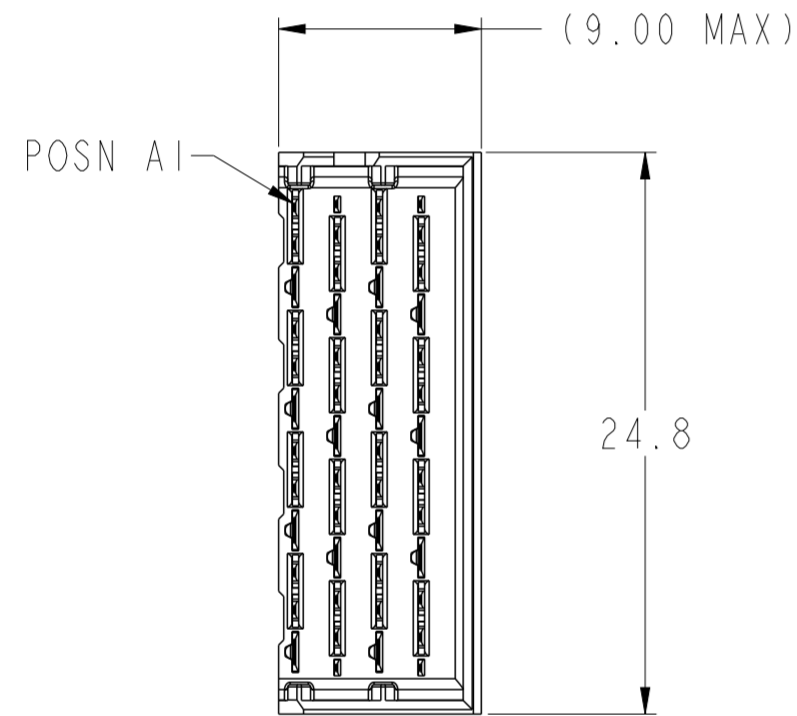
spec ref	SEE NOTES	dr	Jim Swain	2010/04/12	projection	MM	size	A2	scale	4:1			
tolerance std	ASME Y14.5	eng	Sandar Soe	2015/06/29			ecn no	ELX-S-21214-1	rel level	Released			
TOLERANCES UNLESS OTHERWISE SPECIFIED		chr	-	apppr							Chen-Hong Tan	2015/09/30	product family
surface	✓	linear	0.X	±0.2			title	MODULE ASSEMBLY		dwg no	10091836	rev	F
ASME Y14.5	angular	0°	±°	www.fci.com	cat. no.	SEE P/N TREE	Product - Customer Drw	sheet 5 of 8					

RIGHT WALL MODULE

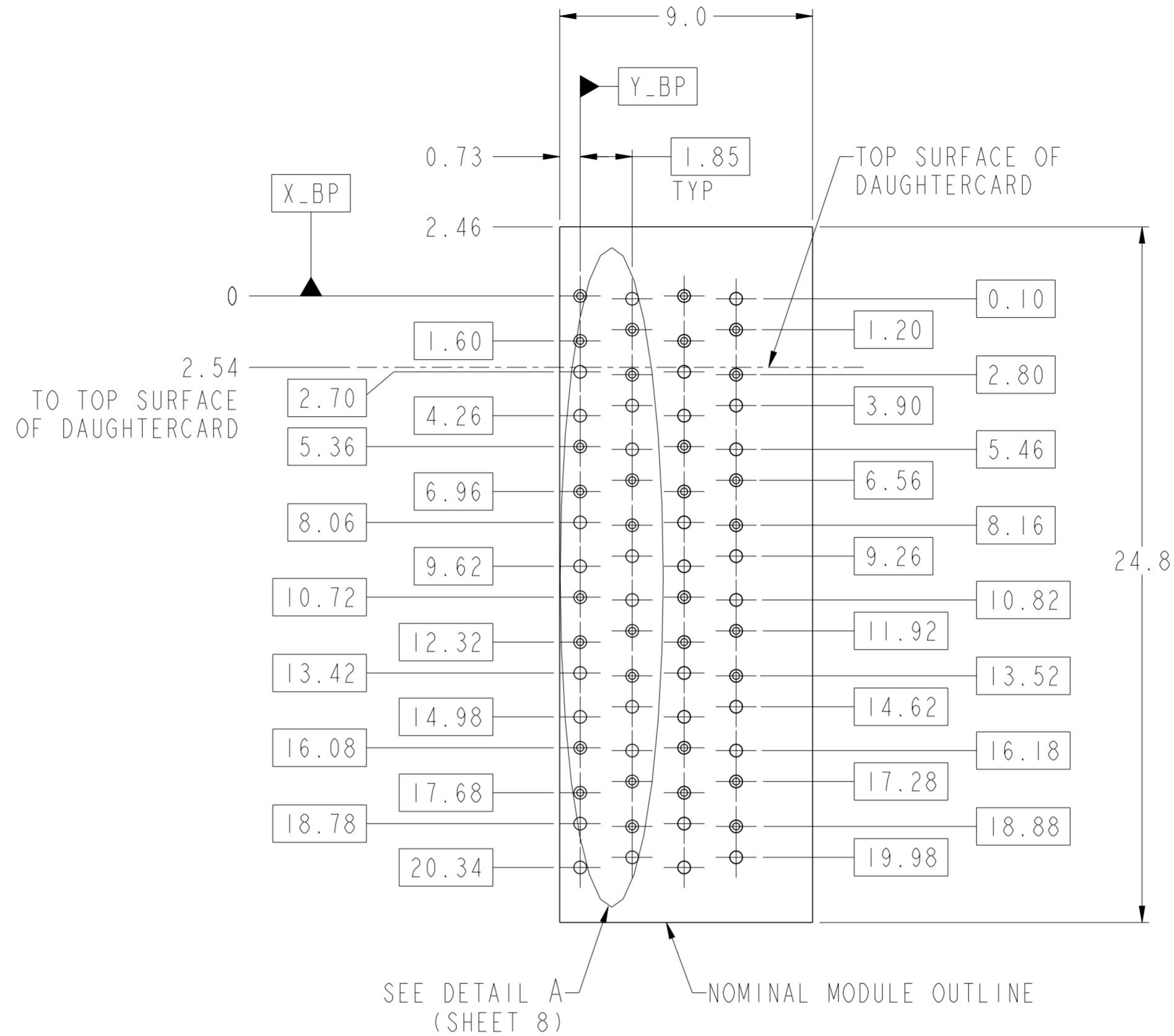
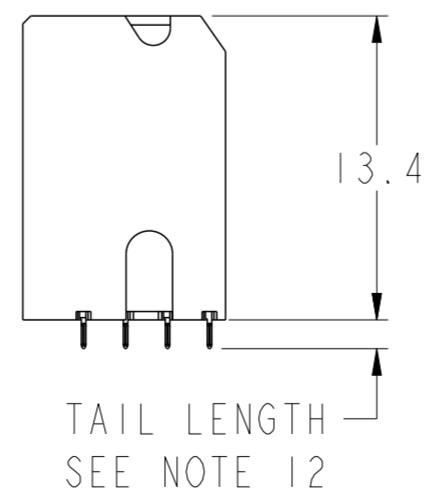
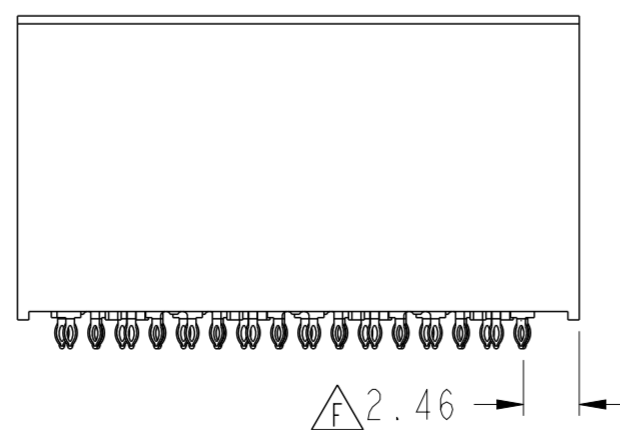
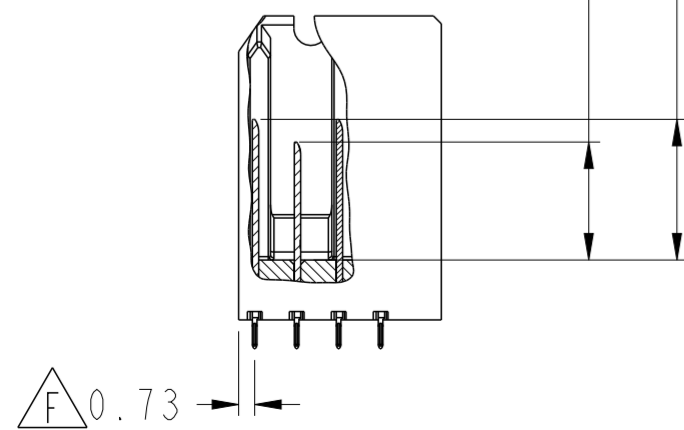
SEE NOTE 8



SEE NOTE 5



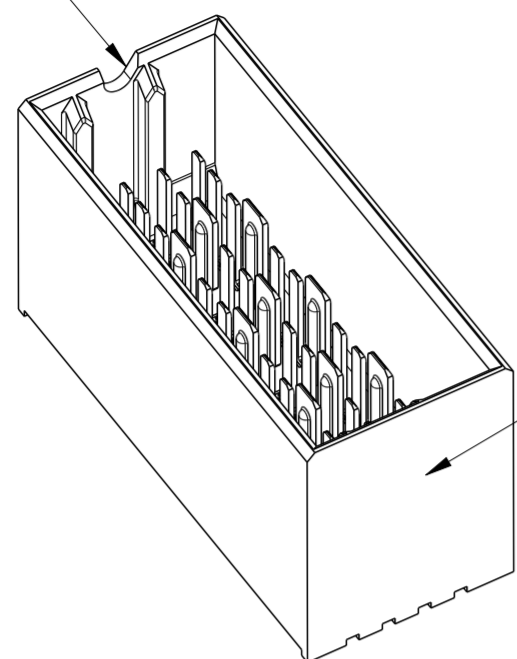
- 6.2 (4MM WIPE WIDE GROUNDS)
- 5.2 (3MM WIPE WIDE GROUNDS)
- 5.2 (3MM SMALL END GROUNDS)
- 5.2 (3MM WIPE SIGNALS)
- 4.2 (2MM WIPE SIGNALS)
- SEE P/N TREE



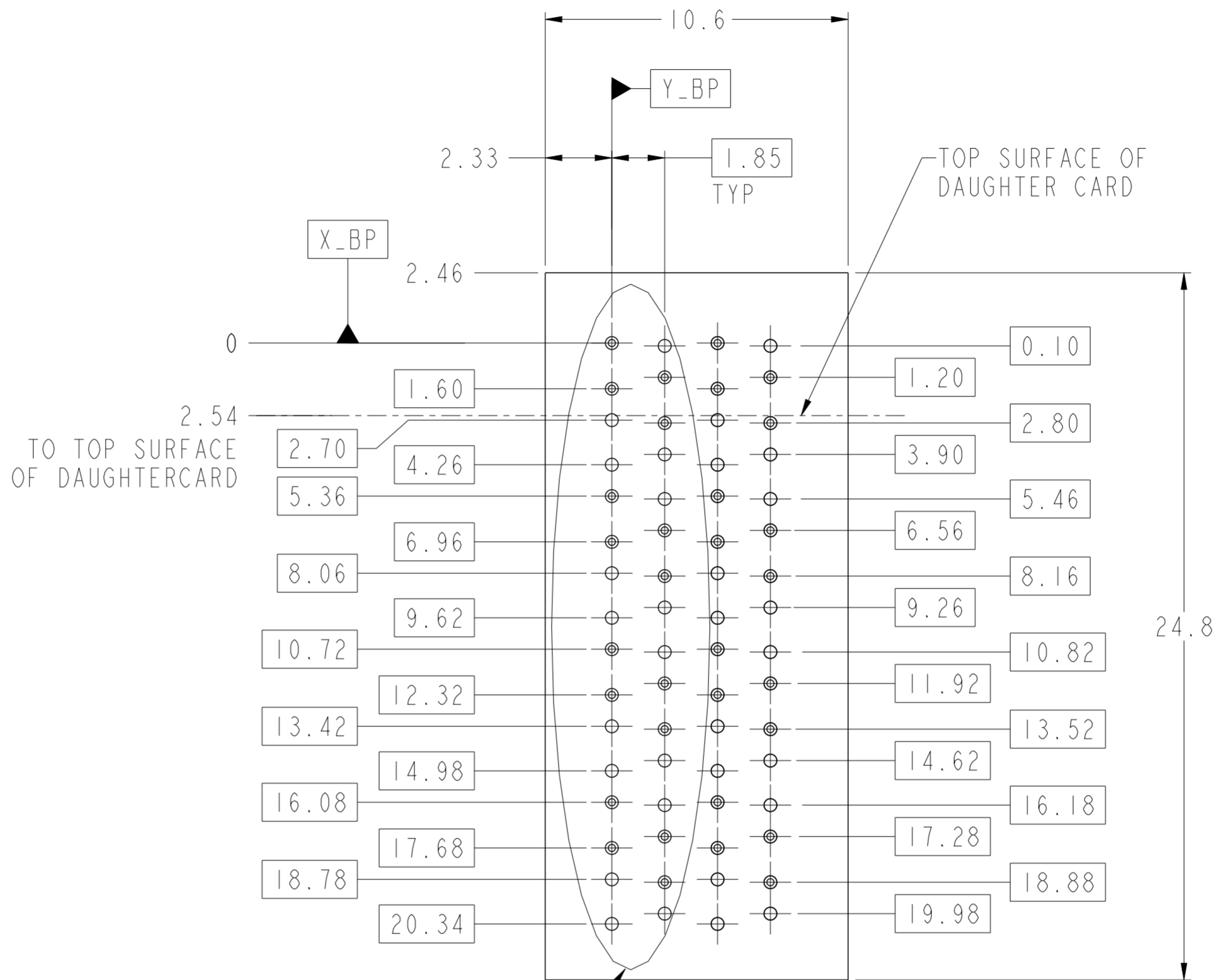
spec ref	SEE NOTES	dr	Jim Swain	2010/04/12	projection	MM	size	A2	scale	4:1
tolerance std	ASME Y14.5	eng	Sandar Soe	2015/06/29			ecn no	ELX-S-21214-1		
TOLERANCES UNLESS OTHERWISE SPECIFIED		chr	-				rel level	Released		
surface	ASME Y14.5	appr	Chen-Hong Tan	2015/09/30	product family	XCede	rel level	Released		
linear	0.X ±0.2 0.XX ±0.10 0.XXX ±0.050			title	MODULE ASSEMBLY			dwg no	10091836	
angular	0° ±°	www.fci.com		cat. no.	SEE P/N TREE	Product - Customer	rev	F		

4-WALL MODULE

SEE NOTE 8



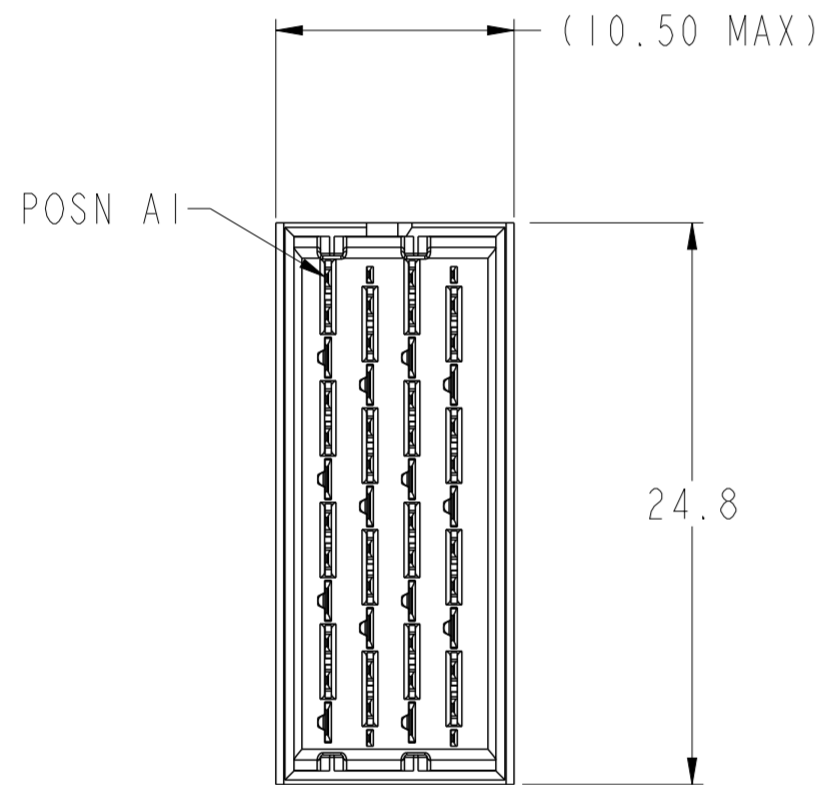
SEE NOTE 5



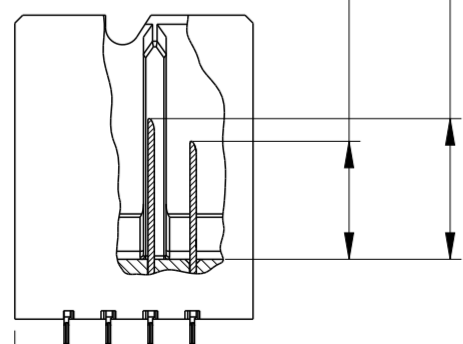
SEE DETAIL A (SHEET 8)

NOMINAL MODULE OUTLINE

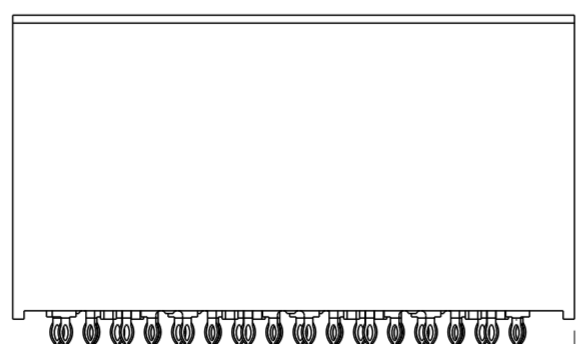
PCB HOLE PATTERN
COMPONENT SIDE
SCALE 6:1



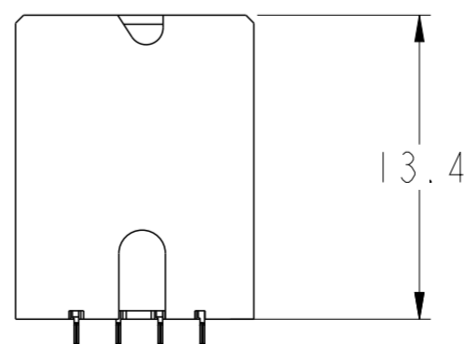
- 6.2 (4MM WIPE WIDE GROUNDS)
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- 5.2 (3MM SMALL END GROUNDS)
- 5.2 (3MM WIPE SIGNALS)
- 4.2 (2MM WIPE SIGNALS)
- SEE P/N TREE



2.33



2.46



TAIL LENGTH
SEE NOTE 12

spec ref	SEE NOTES	dr	Jim Swain	2010/04/12	projection	MM	size	A2	scale	3:1			
tolerance std	ASME Y14.5	eng	Sandar Soe	2015/06/29			ecn no	ELX-S-21214-1	rel level	Released			
TOLERANCES UNLESS OTHERWISE SPECIFIED		chr	-	appr			Chen-Hong Tan	2015/09/30		product family	XCede		
surface	✓	linear	0.X	±0.2			title	MODULE ASSEMBLY		dwg no	10091836	rev	F
ASME Y14.5	angular	0°	±°	www.fci.com	cat. no.	SEE P/N TREE	Product - Customer	Drw	sheet 7 of 8				

NOTES:

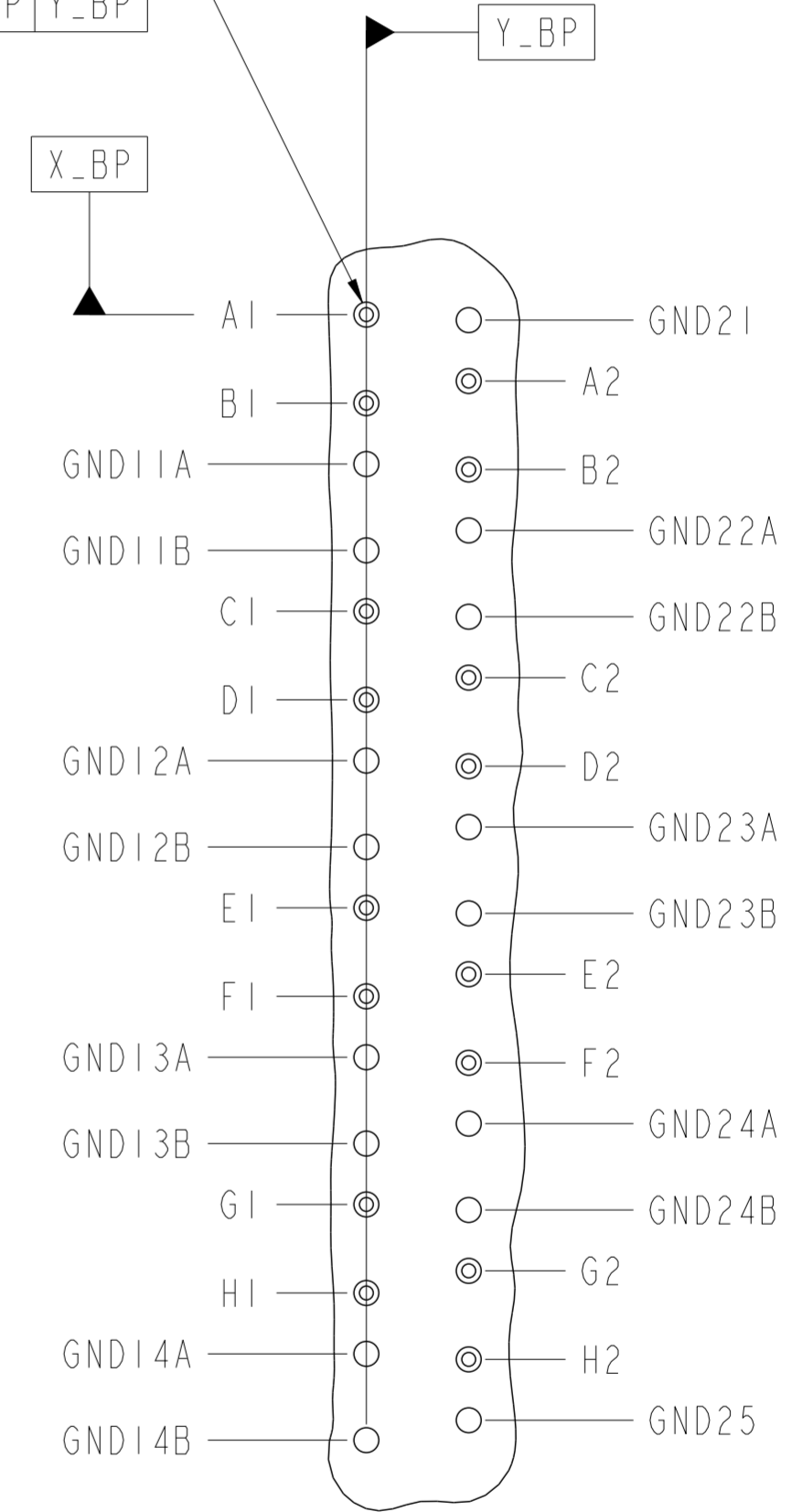
1. CONNECTOR MATERIALS
SHROUD: HIGH-TEMP THERMOPLASTIC, GRAY, UL94V-0
CONTACTS: HIGH PERFORMANCE COPPER ALLOY
2. CONTACT PLATING:

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
13. A $\triangle F$ SYMBOL WILL BE NEXT TO ANY DIMENSION, VIEW OR NOTE THAT HAS BEEN MODIFIED WITH THE CURRENT DRAWING REVISION.

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

spec ref	SEE NOTES	dr	Jim Swain	2010/04/12	projection	MM	size	A2	scale	4:1
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Sandar Soe	2015/06/29			ecn no	ELX-S-21214-1		
ASME Y14.5		chr		rel level			Released			
		appr	Chen-Hong Tan	2015/09/30			product family	XCede		
surface	linear	0.X	±0.2		MODULE ASSEMBLY VERTICAL HEADER, 4-COLUMN, 4-PAIR	cat. no.	SEE P/N TREE	Product - Customer Drw	diag no	10091836
		0.XX	±0.10						rev	F
ASME Y14.5	angular	0°	±°						www.fci.com	sheet 8 of 8