

PRODUCT NUMBER
SEE TABLE

EVEN COLUMN CONTACT ROW ID

ODD COLUMN CONTACT ROW ID
ODD & EVEN COLUMNS ARE OFFSET

HOUSING

SEE NOTE 6

IMLA

ORGANIZER

6X 3.6
SIGNAL CENTERS

6X 1
SIG PAIR CENTERS

6X 3.6
GROUND CENTERS

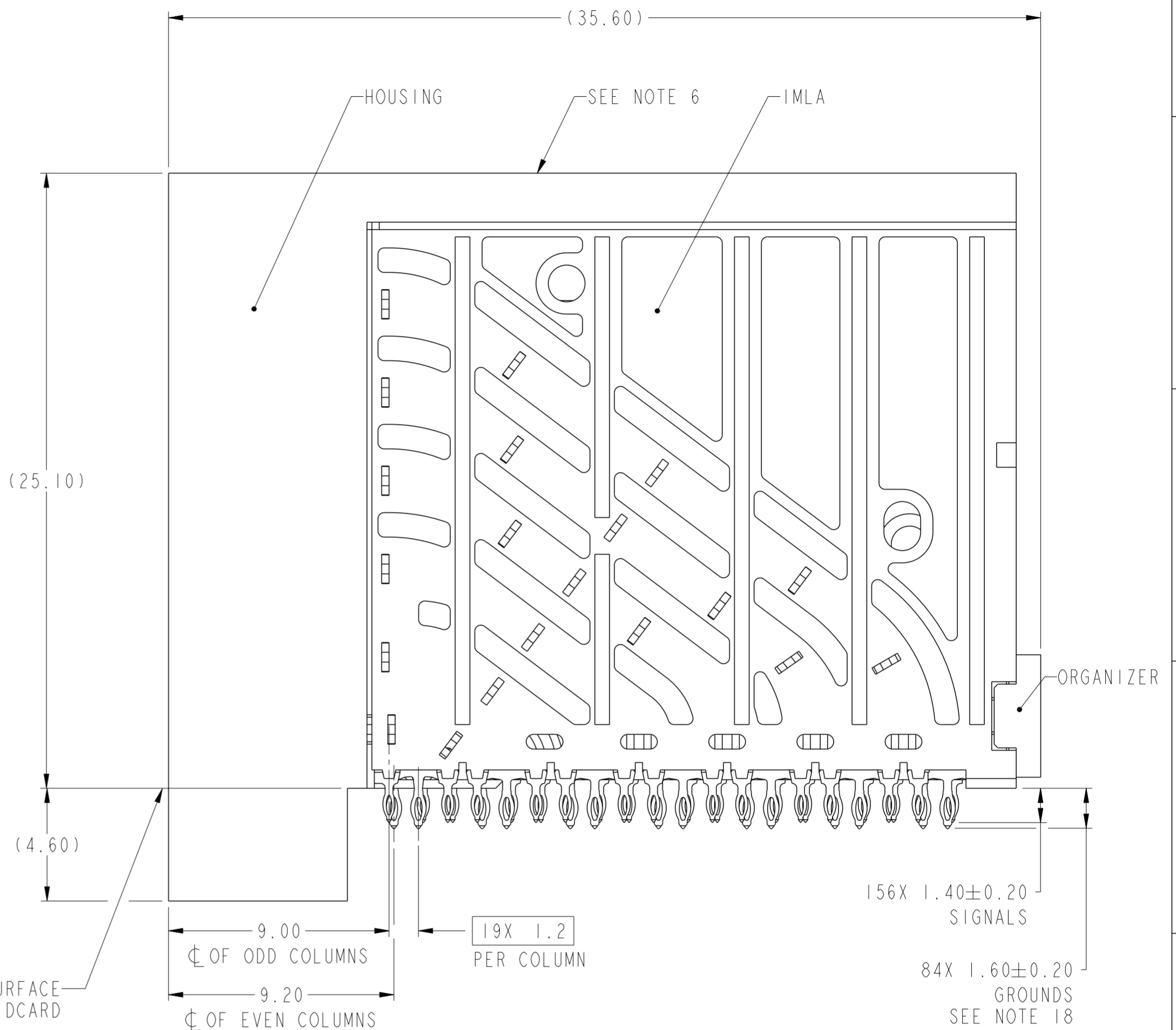
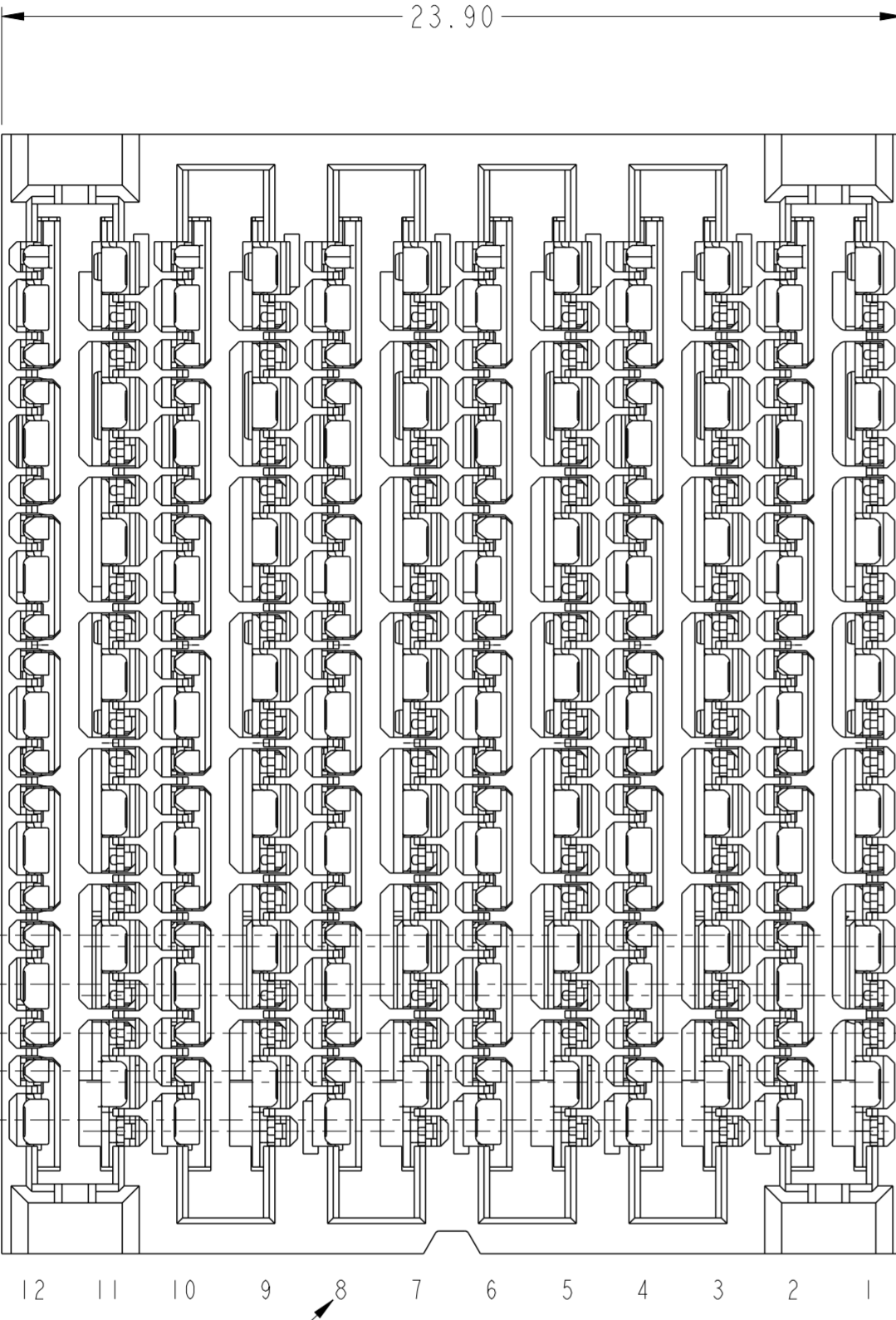
1.3
ROW A TO FIRST SIG

6X 1
SIG PAIR CENTERS

6X 3.6
GROUND CENTERS

6X 3.6
SIGNAL CENTERS

1.3
ROW A TO FIRST GND



10123159-101LF
STANDARD MATE RECEPTACLE
SCALE 6:1

Amphenol FCI

© 2016 AFCI

spec ref	SEE NOTES	dr	Stu Stoner	2012/11/10	projection	MM	size	A2	scale	6:1
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Peng-Bing Fu	2017/10/31			ecn no ELX-DG-28235-1	rel level Released	title ExaMAX R.A. RECEPTACLE ASSY 6 PR, 12 IMLA, 240 POS, 24mm	rev B
ASME Y14.5M		chr	Justin Chen	2017/11/29						
		appr	Heaven Cen	2017/11/30						
surface	linear 0.X ±.3 0.XX ±.10 0.XXX ±.050 angular 0° ±°	Amphenol FCI		cat. no. SEE TABLE	product family ExaMAX	dwg no 10123159	sheet 1 of 11			

PDS: Rev :B

STATUS:Released

Printed: Dec 01, 2017

1 2 3 4 5 6 7 8

A

B

C

D

E

F

A

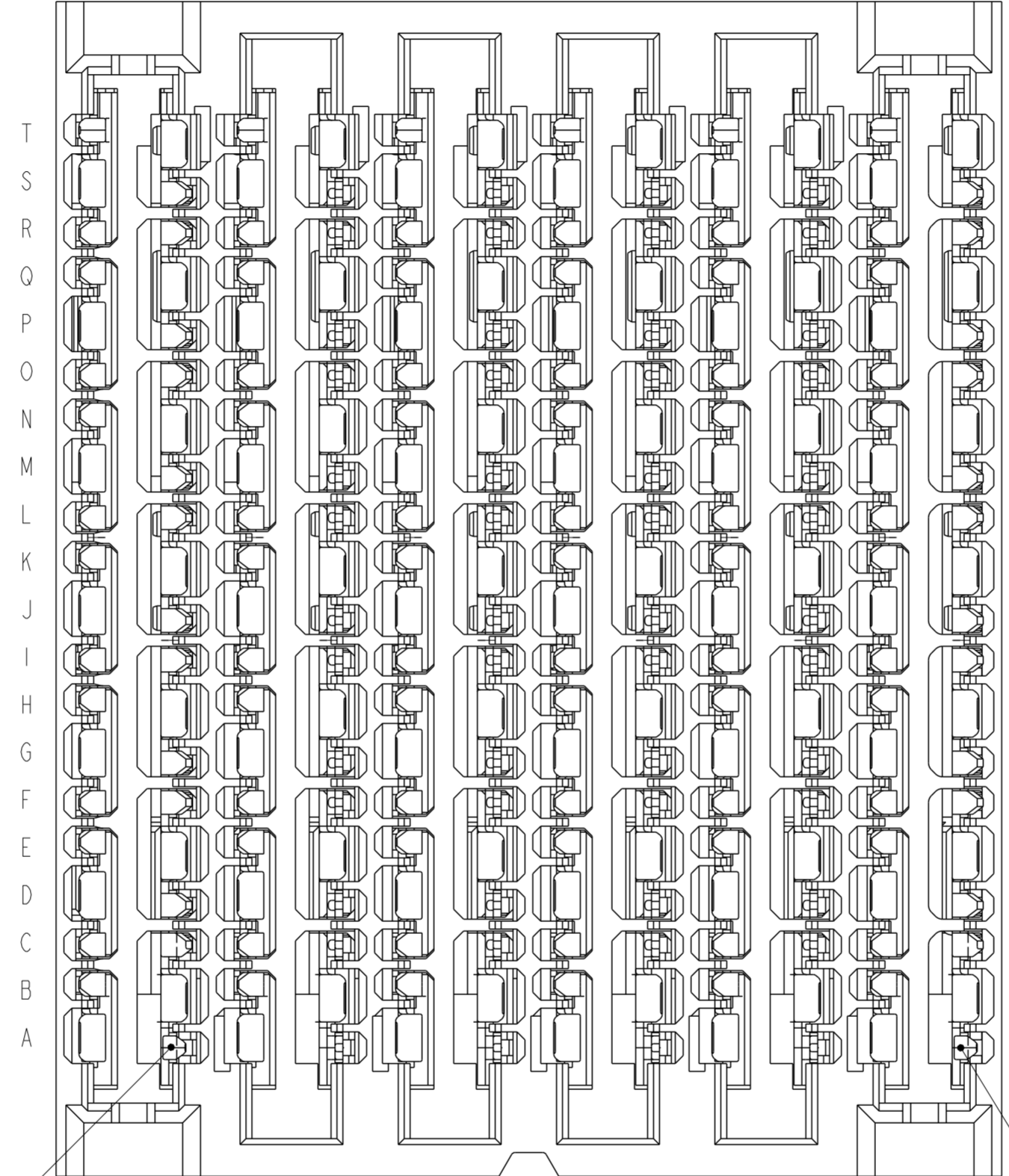
B

C

D

E

F



ADVANCED MATE POSITION A11 SEE NOTE 13

ADVANCED MATE POSITION A1 SEE NOTE 13

10123159-201LF
ADVANCED MATE RECEPTACLE
 ADVANCED MATE POSITIONS ARE A1 AND A11 ONLY
 FOR ALL DIMENSIONS SEE 10123159-101LF ON SHEET 1
 SCALE 7:1

Amphenol
FCi

© 2016 AFci

spec ref	SEE NOTES	dr	Stu Stoner	2012/11/10	projection	MM	size	A2	scale	7:1												
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Peng-Bing Fu	2017/10/31			ecn no	ELX-DG-28235-1														
ASME Y14.5M		chr	Justin Chen	2017/11/29			product family	ExaMAX	rel level	Released												
		appr	Heaven Cen	2017/11/30			title		ExaMAX R.A. RECEPTACLE ASSY	dwg no	10123159	rev	B									
surface	<table border="1"> <tr> <td rowspan="3">-</td> <td rowspan="3">linear</td> <td>0.X</td> <td>±.3</td> </tr> <tr> <td>0.XX</td> <td>±.10</td> </tr> <tr> <td>0.XXX</td> <td>±.050</td> </tr> <tr> <td></td> <td>angular</td> <td>0°</td> <td>±°</td> </tr> </table>	-	linear	0.X	±.3	0.XX	±.10	0.XXX	±.050		angular	0°	±°			6 PR, 12 IMLA, 240 POS, 24mm		cat. no. SEE TABLE		Product - Customer Drw		sheet 2 of 11
-	linear			0.X	±.3																	
				0.XX	±.10																	
		0.XXX	±.050																			
	angular	0°	±°																			

PDS: Rev :B

STATUS:Released

Printed: Dec 01, 2017

1 2 3 4 5 6 7 8

A

B

C

D

E

F

A

B

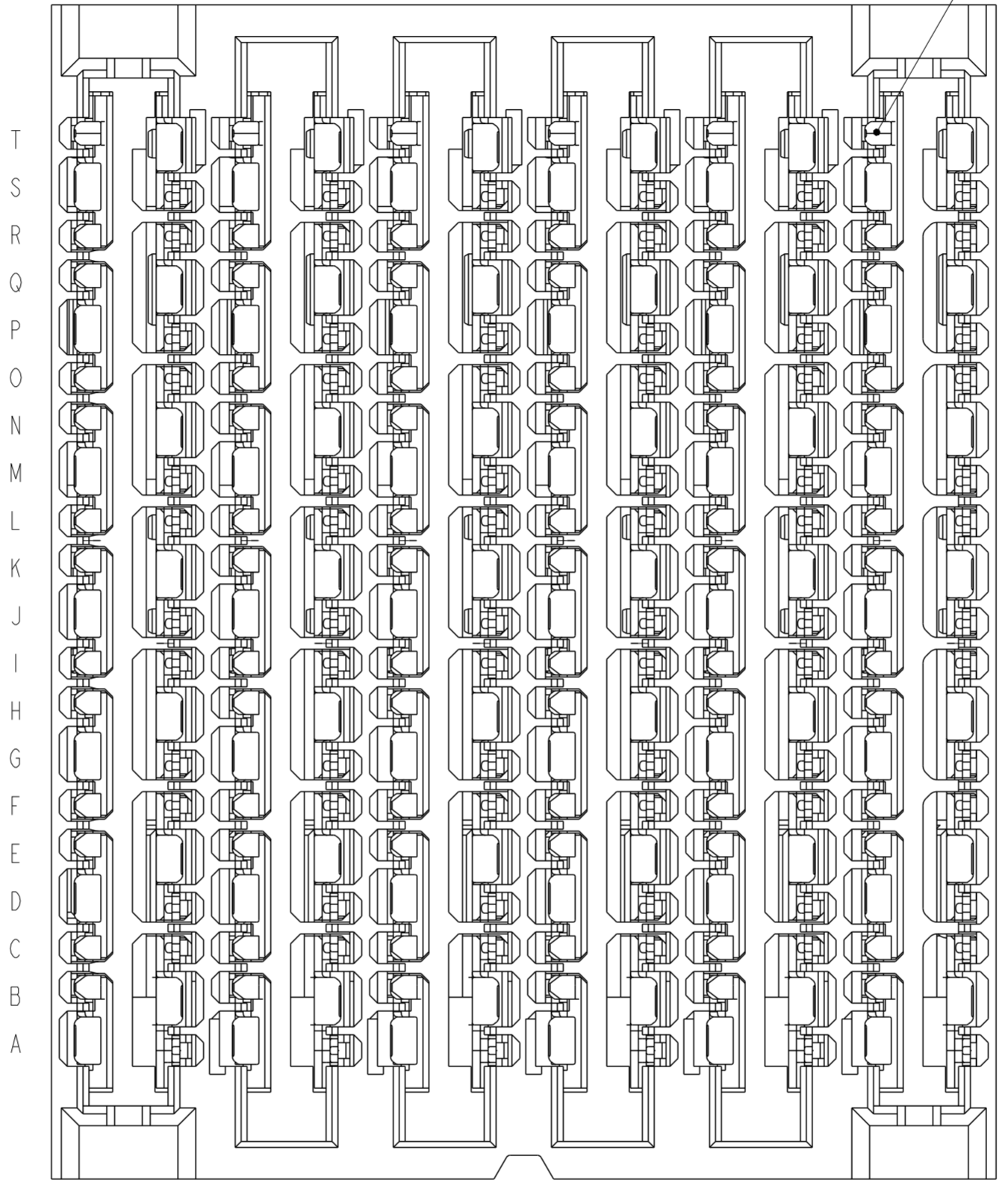
C

D

E

F

SHORT DETECT
POSITION T2
SEE NOTE 14



12 11 10 9 8 7 6 5 4 3 2 1

10123159-301LF
SHORT DETECT RECEPTACLE
SHORT DETECT POSITION IS T2
FOR ALL DIMENSIONS SEE 10123159-101LF ON SHEET 1
SCALE 7:1

**Amphenol
FCi**

© 2016 AFci

spec ref	SEE NOTES	dr	Stu Stoner	2012/11/10	projection	MM	size	A2	scale	7:1
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Peng-Bing Fu	2017/10/31			ecn no	ELX-DG-28235-1		
ASME Y14.5M		chr	Justin Chen	2017/11/29			rel level	Released		
surface		linear	0.X	±.3	product family	ExaMAX		rel level	Released	
			0.XX	±.10		title ExaMAX R.A. RECEPTACLE ASSY 6 PR, 12 IMLA, 240 POS, 24mm	dwg no 10123159	rev B		
			0.XXX	±.050					cat. no.	SEE TABLE
		angular	0°	±°						

A

B

C

D

E

F

A

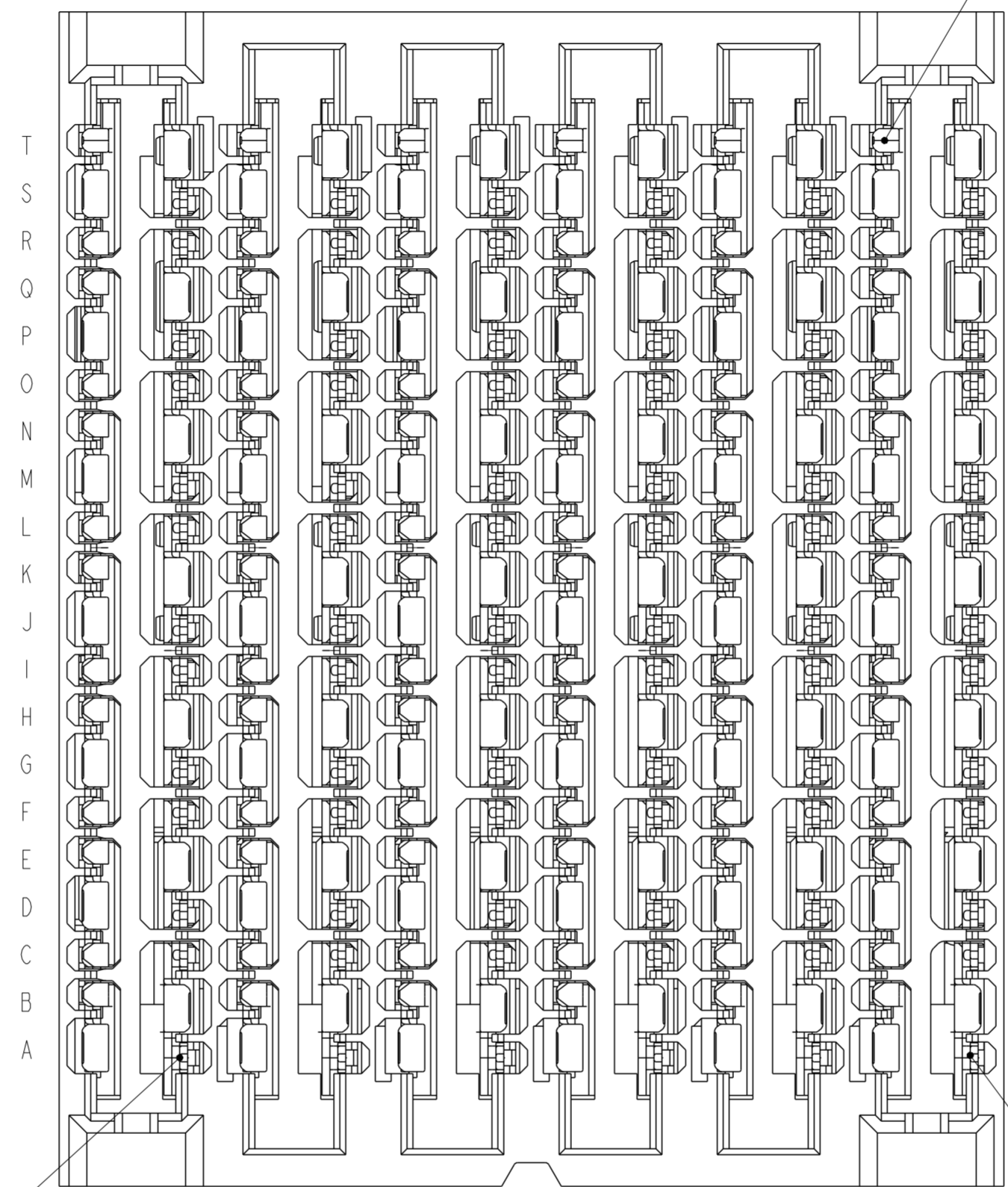
B

C

D

E

F



SHORT DETECT
POSITION T2
SEE NOTE 15

ADVANCED MATE
POSITION A11
SEE NOTE 15

ADVANCED MATE
POSITION A1
SEE NOTE 15

10123159-401LF
ADVANCED MATE/SHORT DETECT RECEPTACLE
ADVANCED MATE POSITIONS ARE POSITIONS A1 AND A11 ONLY
SHORT DETECT POSITION IS T2
FOR ALL DIMENSIONS SEE 10123159-101LF ON SHEET 1
SCALE 7:1

**Amphenol
FCi**

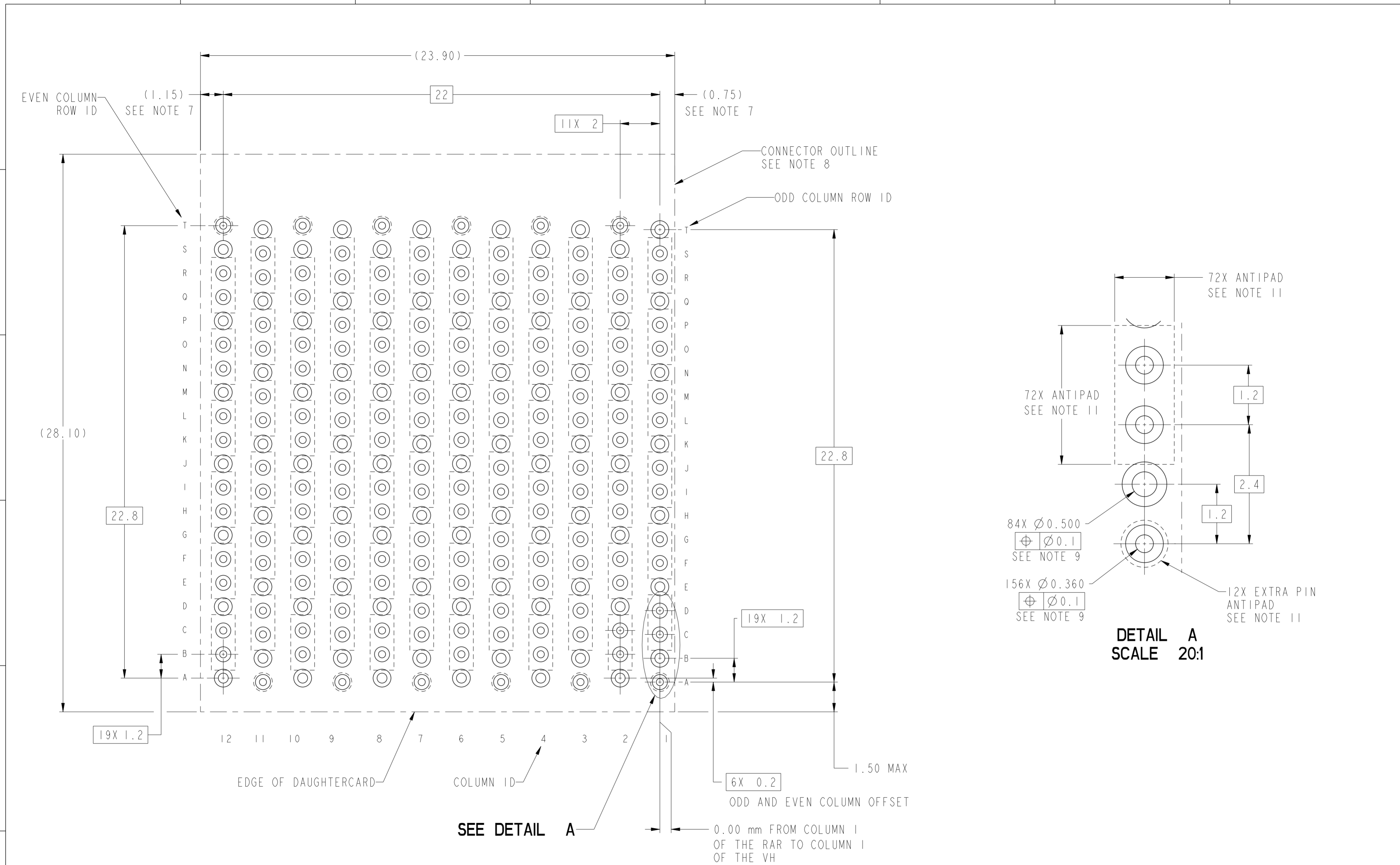
© 2016 AFci

spec ref	SEE NOTES	dr	Stu Stoner	2012/11/10	projection	MM	size	A2	scale	7:1											
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Peng-Bing Fu	2017/10/31			ecn no	ELX-DG-28235-1													
ASME Y14.5M		chr	Justin Chen	2017/11/29			product family	ExaMAX	rel level	Released											
		appr	Heaven Cen	2017/11/30			title	ExaMAX R.A. RECEPTACLE ASSY	dwg no	10123159	rev	B									
surface	<table border="1"> <tr> <td>linear</td> <td>0.X</td> <td>±.3</td> </tr> <tr> <td></td> <td>0.XX</td> <td>±.10</td> </tr> <tr> <td></td> <td>0.XXX</td> <td>±.050</td> </tr> <tr> <td>angular</td> <td>0°</td> <td>±°</td> </tr> </table>	linear	0.X	±.3		0.XX	±.10		0.XXX	±.050	angular	0°	±°	Amphenol FCi	6 PR, 12 IMLA, 240 POS, 24mm		cat. no.	SEE TABLE	Product - Customer Drw	sheet 4 of 11	
linear	0.X	±.3																			
	0.XX	±.10																			
	0.XXX	±.050																			
angular	0°	±°																			

PDS: Rev :B

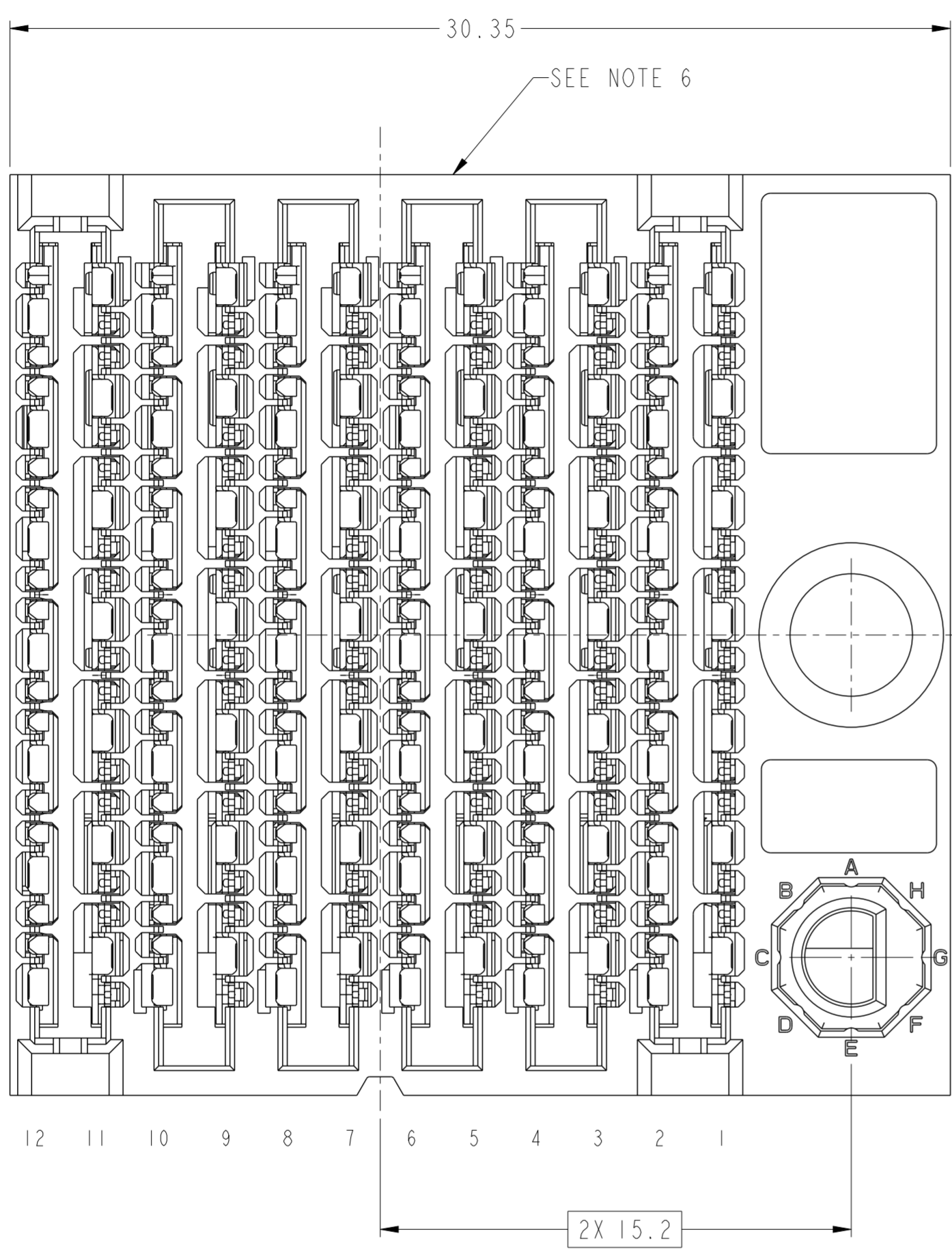
STATUS:Released

Printed: Dec 01, 2017



10123159-X01
RECOMMENDED PCB LAYOUT
COMPONENT SIDE
NOTES 7, 8, 9, & 11
SCALE 8:1

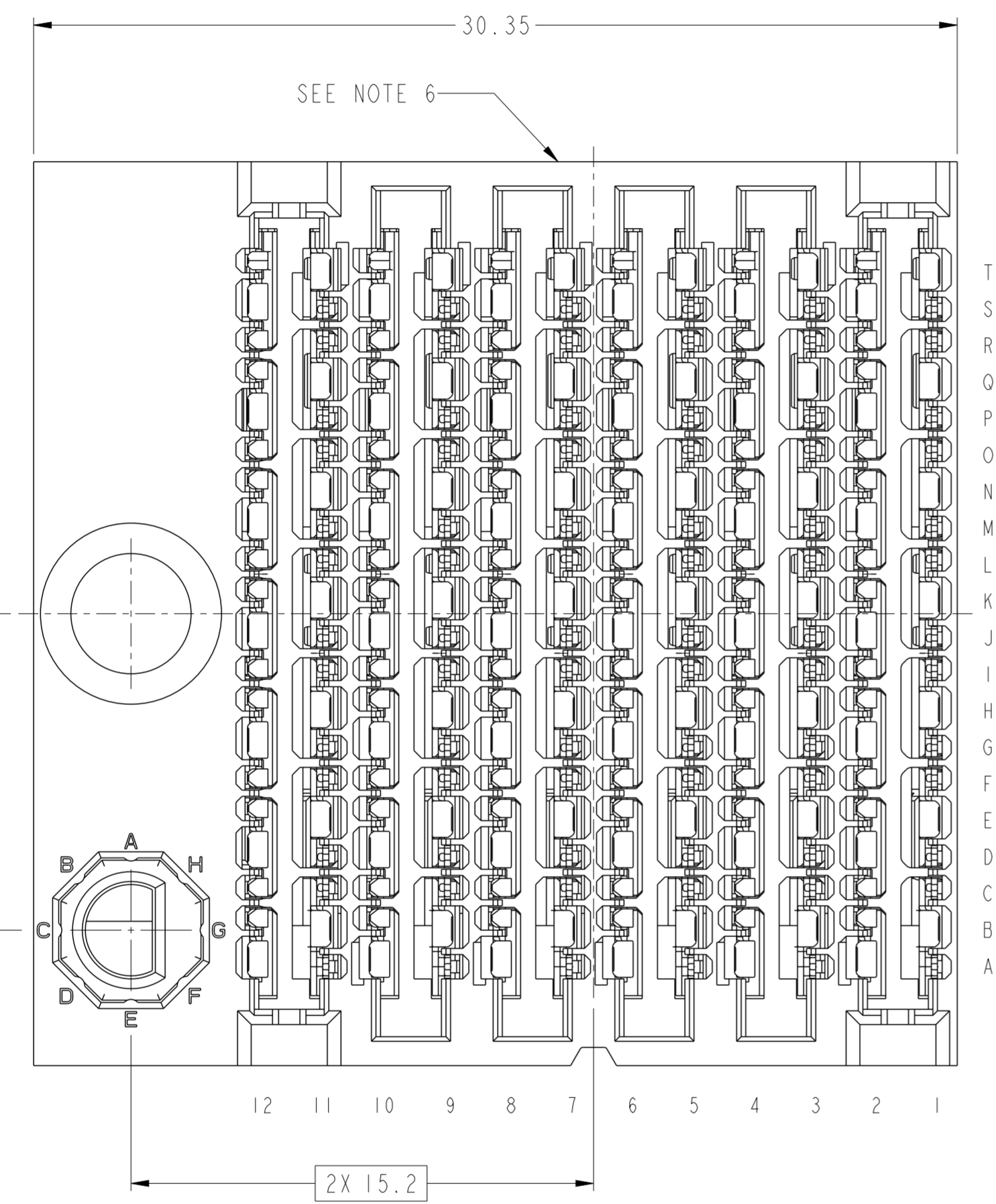
spec ref	SEE NOTES	dr	Stu Stoner	2012/11/10	projection	MM	size	A2	scale	8:1		
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Peng-Bing Fu	2017/10/31			ecn no	ELX-DG-28235-1	rel level	Released		
ASME Y14.5M		chr	Justin Chen	2017/11/29								
		appr	Heaven Cen	2017/11/30								
surface	linear	0.X	±.3		product family		-	rel level	Released			
		0.XX	±.10		title					ExaMAX R.A. RECEPTACLE ASSY 6 PR, 12 IMLA, 240 POS, 24mm	drg no 10123159	rev B
		0.XXX	±.050		cat. no.							
	angular	0°	±°	PDS: Rev :B		STATUS:Released		Printed: Dec 01, 2017				



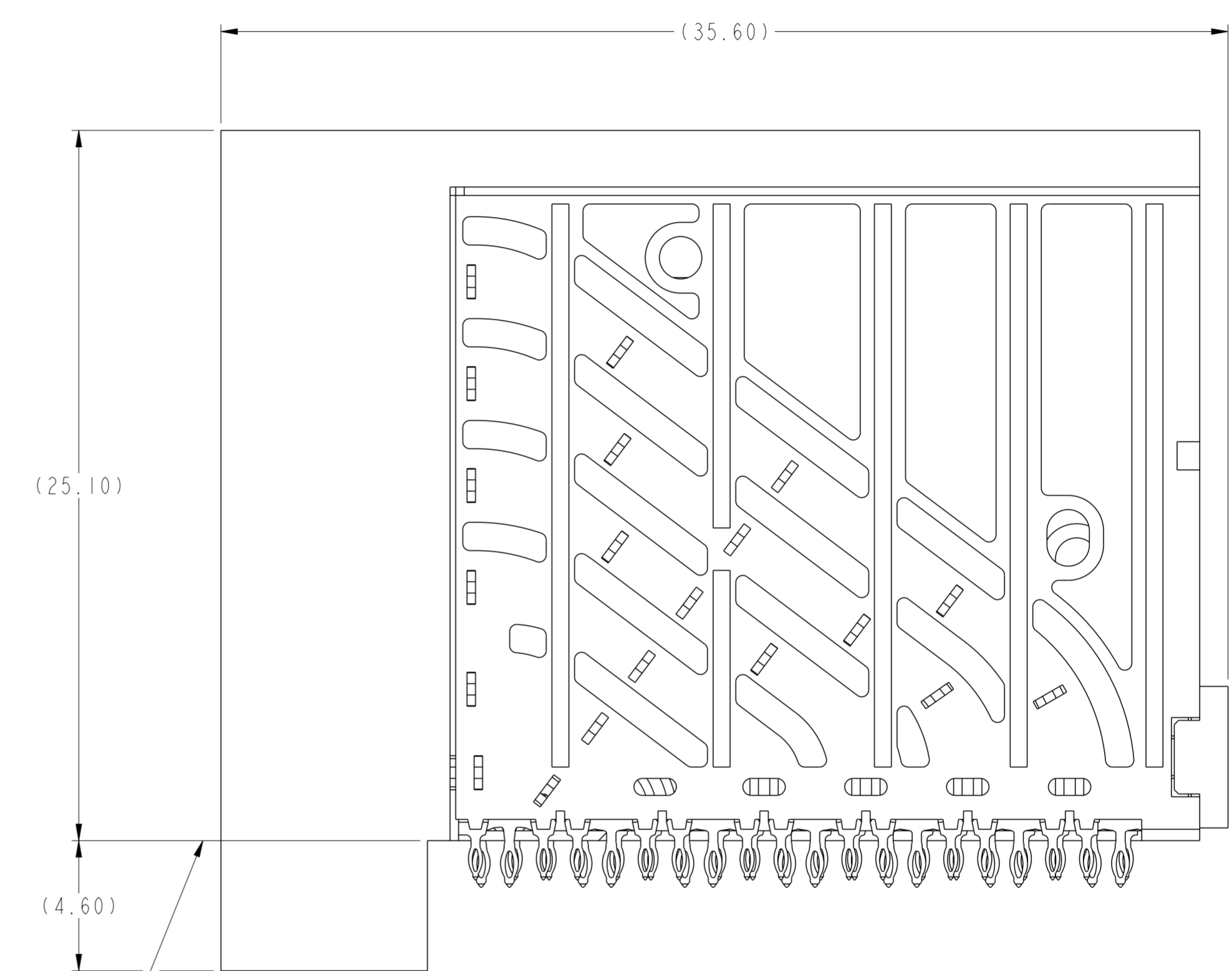
TOP SURFACE
OF DAUGHTER CARD

10123159-X1ALF THRU 10123159-X1JLF
RIGHT GUIDANCE (SEE NOTE 17)
FOR ALL OTHER DIMENSIONS SEE 10123159-101LF ON SHEET 1
SCALE 6:1

spec ref	SEE NOTES	dr	Stu Stoner	2012/11/10	projection	MM	size	A2	scale	6:1											
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Peng-Bing Fu	2017/10/31			ecn no	ELX-DG-28235-1	rel level	Released											
ASME Y14.5M		chr	Justin Chen	2017/11/29			product family	ExaMAX													
		appr	Heaven Cen	2017/11/30			title	ExaMAX R.A. RECEPTACLE ASSY		dwg no	10123159	rev	B								
surface	<table border="1"> <tr> <td>linear</td> <td>0.X</td> <td>±.3</td> </tr> <tr> <td></td> <td>0.XX</td> <td>±.10</td> </tr> <tr> <td></td> <td>0.XXX</td> <td>±.050</td> </tr> <tr> <td>angular</td> <td>0°</td> <td>±°</td> </tr> </table>	linear	0.X	±.3		0.XX	±.10		0.XXX	±.050	angular	0°	±°	Amphenol FCi	<table border="1"> <tr> <td>cat. no.</td> <td>SEE TABLE</td> </tr> </table>		cat. no.	SEE TABLE	Product - Customer Drw		sheet 6 of 11
linear	0.X	±.3																			
	0.XX	±.10																			
	0.XXX	±.050																			
angular	0°	±°																			
cat. no.	SEE TABLE																				

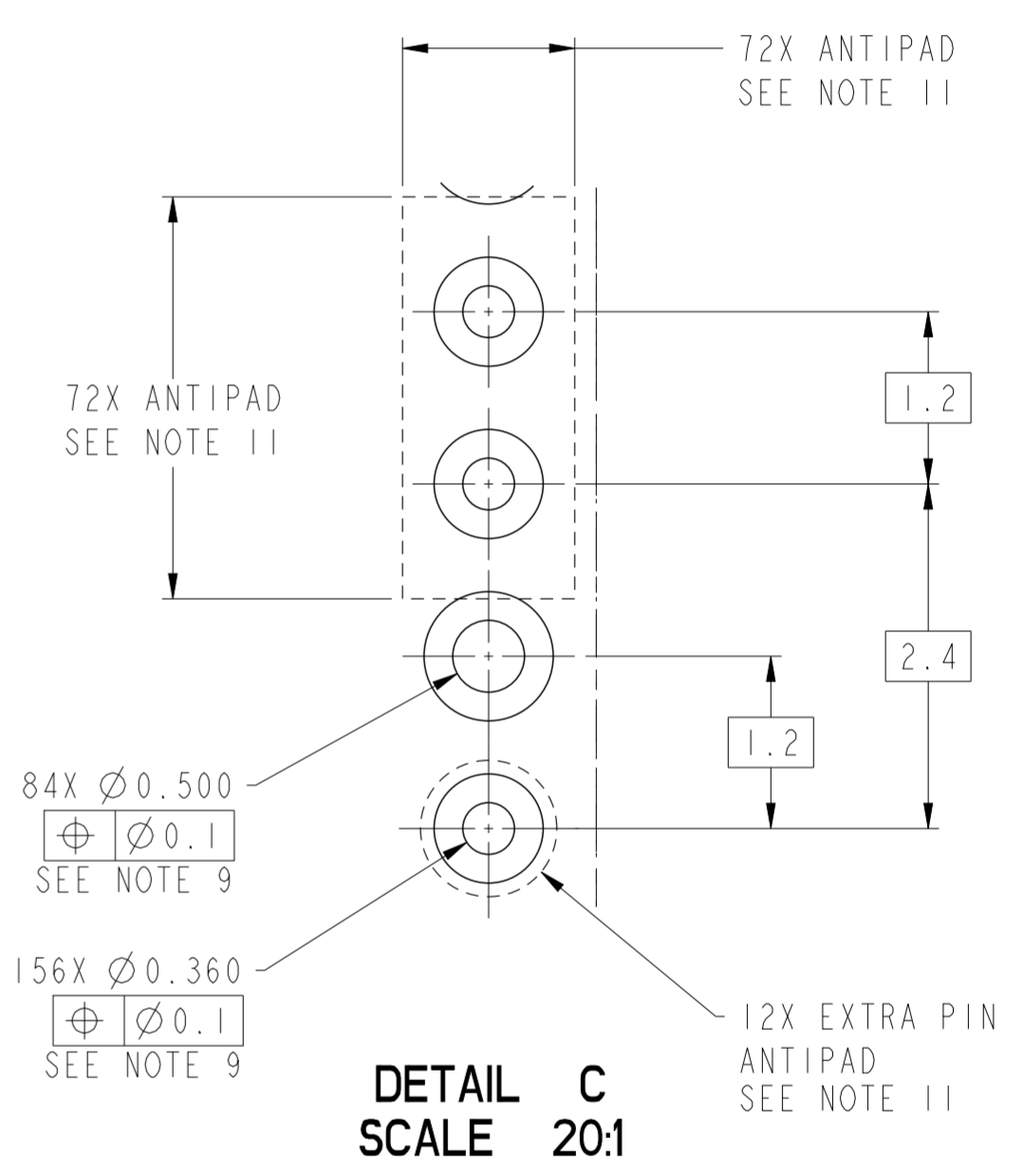
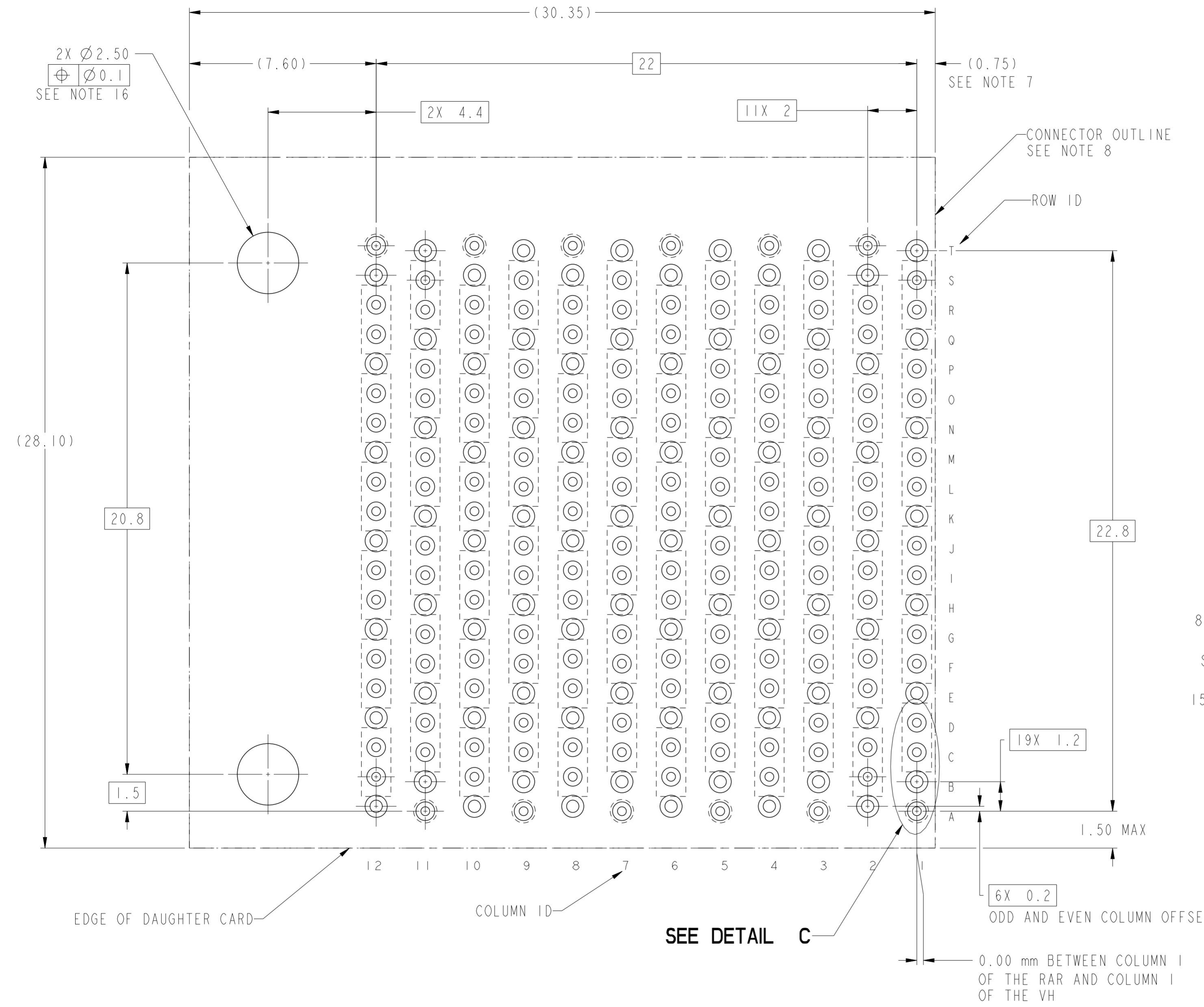


TOP SURFACE OF DAUGHTER CARD



10123159-X2ALF THRU 10123159-X2JLF
LEFT GUIDANCE (SEE NOTE 17)
FOR ALL OTHER DIMENSIONS SEE 10123159-101LF ON SHEET 1
SCALE 6:1

spec ref	SEE NOTES	dr	Stu Stoner	2012/11/10	projection	MM	size	A2	scale	6:1										
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Peng-Bing Fu	2017/10/31			ecn no	ELX-DG-28235-1	rel level	Released										
ASME Y14.5M		chr	Justin Chen	2017/11/29			product family	ExaMAX												
		appr	Heaven Cen	2017/11/30			title	ExaMAX R.A. RECEPTACLE ASSY		dwg no	10123159	rev	B							
surface	<table border="1"> <tr> <td>linear</td> <td>0.X</td> <td>±.3</td> </tr> <tr> <td></td> <td>0.XX</td> <td>±.10</td> </tr> <tr> <td></td> <td>0.XXX</td> <td>±.050</td> </tr> <tr> <td>angular</td> <td>0°</td> <td>±°</td> </tr> </table>	linear	0.X	±.3		0.XX	±.10		0.XXX	±.050	angular	0°	±°	Amphenol FCi	6 PR, 12 IMLA, 240 POS, 24mm		cat. no.	SEE TABLE	Product - Customer Drw	sheet 8 of 11
linear	0.X	±.3																		
	0.XX	±.10																		
	0.XXX	±.050																		
angular	0°	±°																		

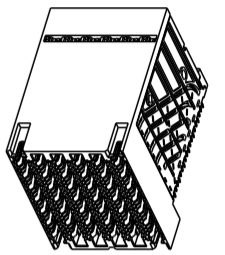
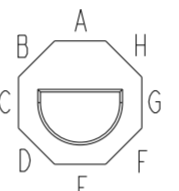
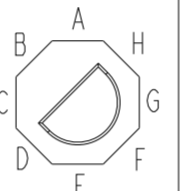
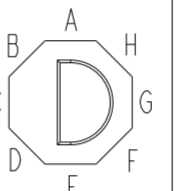
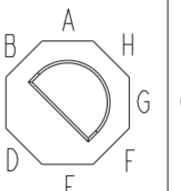
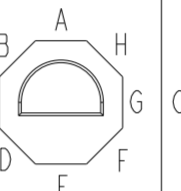
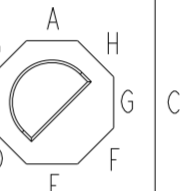
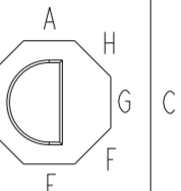
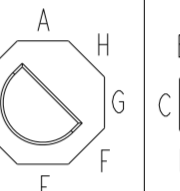
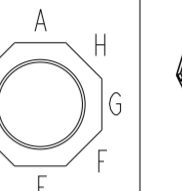
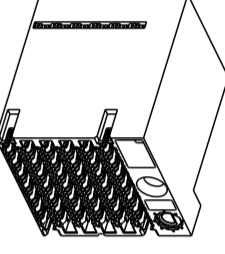
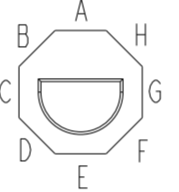
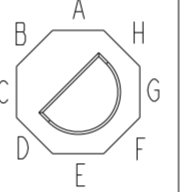
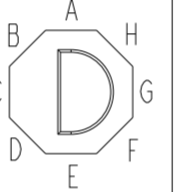
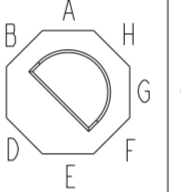
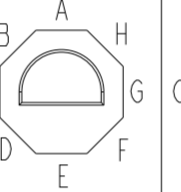
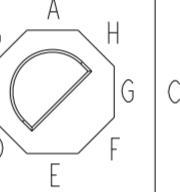
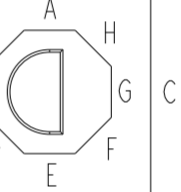
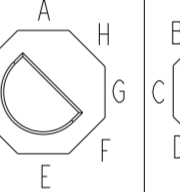
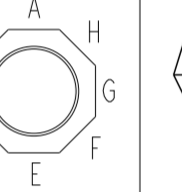
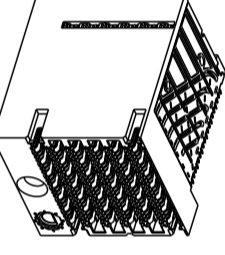


10123159-X2ALF THRU -X2JLF
RECOMMENDED PCB LAYOUT
COMPONENT SIDE
NOTES 7, 8, 9, 11 & 16
SCALE 8:1

spec ref	SEE NOTES	dr	Stu Stoner	2012/11/10	projection	MM	size	A2	scale	8:1		
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Peng-Bing Fu	2017/10/31			ecn no	ELX-DG-28235-1	rel level	Released		
ASME Y14.5M		chr	Justin Chen	2017/11/29								
		appr	Heaven Cen	2017/11/30								
surface	linear	0.X	±.3		title ExaMAX R.A. RECEPTACLE ASSY 6 PR, 12 IMLA, 240 POS, 24mm	product family -	dwg no 10123159	rev B	angular 0° ±°	cat. no. -	Product - Customer Drw	sheet 9 of 11
		0.XX	±.10									
		0.XXX	±.050									

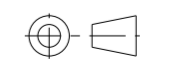

1 0 | 2 3 | 5 9 - Y Y Y L F

ASSEMBLY PART NUMBER	DESCRIPTION
10123159-1YYLF	STANDARD MATE
10123159-2YYLF	ADVANCED MATE
10123159-3YYLF	SHORT DETECT
10123159-4YYLF	ADVANCED MATE & SHORT DETECT

MODULE DESCRIPTION	DESIGNATION REPRESENTED IN DASH NUMBER									BASE MODEL
	1A	1B	1C	1D	1E	1F	1G	1H	1J (NO KEY)	
WITHOUT END GUIDES MODULE (SEE SHEET 1)	01									
RIGHT GUIDANCE MODULE (SEE SHEET 6)										
										
LEFT GUIDANCE MODULE (SEE SHEET 8)										

Amphenol FCI

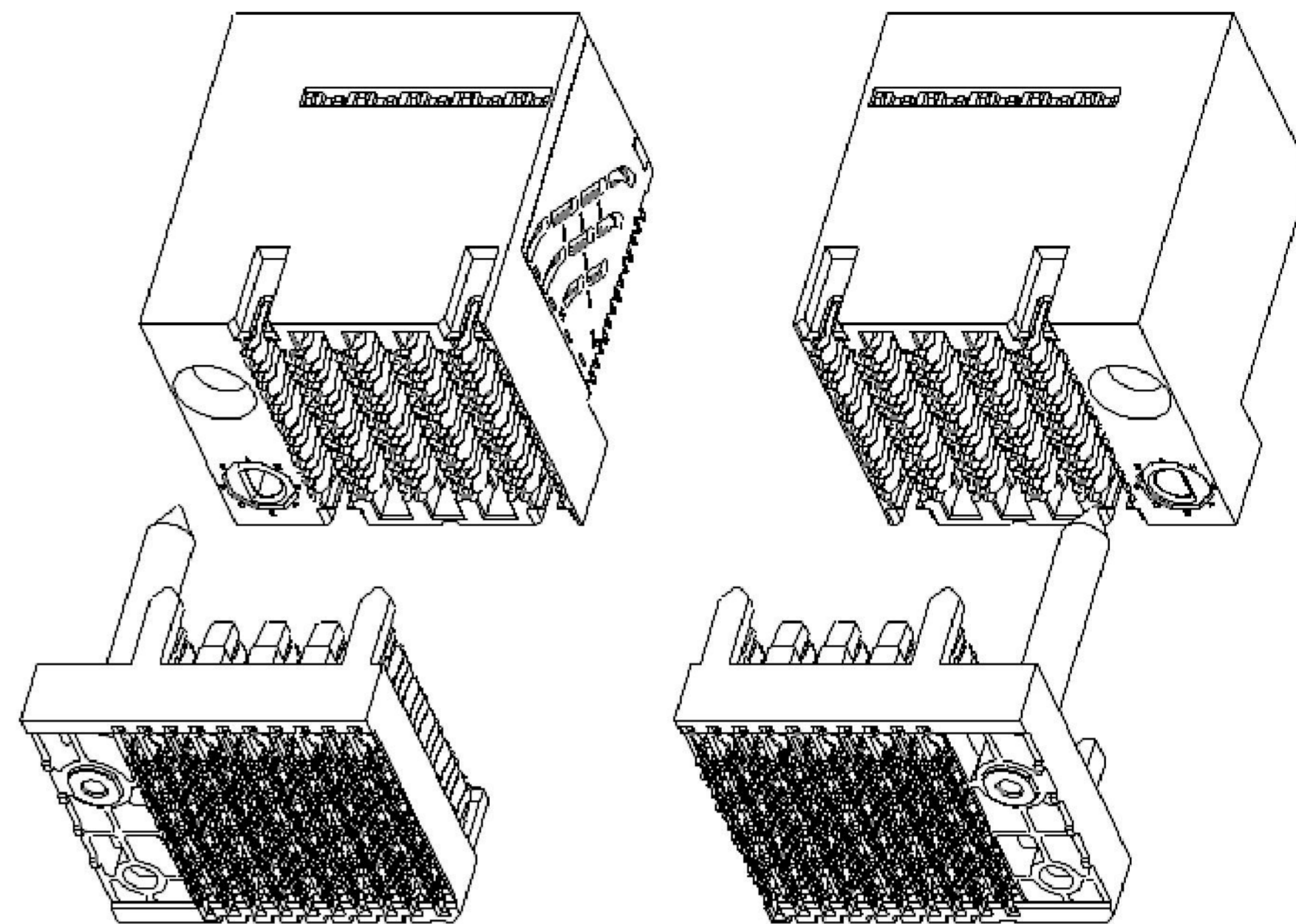
© 2016 APCI

spec ref	SEE NOTES	dr	Stu Stoner	2012/11/10	projection	MM	size	A2	scale	1:1
tolerance std	ASME Y14.5M	eng	Peng-Bing Fu	2017/10/31		←→	ecn no	ELX-DG-28235-1	rel level	Released
TOLERANCES UNLESS OTHERWISE SPECIFIED		chr	Justin Chen	2017/11/29						
		appr	Heaven Cen	2017/11/30						
surface	linear	0.X	±.3		product family		-		-	
		0.XX	±.10		title		ExaMAX R.A. RECEPTACLE ASSY		-	
		0.XXX	±.050		6 PR, 12 IMLA, 240 POS, 24mm		-		-	
	angular	0°	±°	cat. no.		-		-		Product - Customer Drw
				PDS: Rev :B		STATUS:Released		Printed: Dec 01, 2017		sheet 10 of 11

NOTES:

- ① - CONNECTOR MATERIALS:
HOUSING: HIGH TEMP THERMOPLASTIC, BLACK, UL94-V0
IMLA PLASTIC: HIGH TEMP THERMOPLASTIC, BLACK, UL94-V0
CONTACT: COPPER ALLOY
ORGANIZER: HIGH-TEMP THERMOPLASTIC, UL94-V0
- 2 - CONTACT PLATING:
SEPARABLE INTERFACE:
PERFORMANCE-BASED PLATING, QUALIFIED TO MEET THE REQUIREMENTS OF FCI PRODUCT SPECIFICATION GS-12-1096 INCLUDING TELCORDIA GR-1217-CORE (NOVEMBER 1995) CENTRAL OFFICE TEST SEQUENCE

PRESS-FIT TAILS: TIN OVER NICKEL (LEAD FREE)
- 3 - PRODUCT SPECIFICATION: GS-12-1096
- 4 - APPLICATION SPECIFICATION GS-20-0361.
- 5 - PACKAGING MEETS GS-14-920 LEAD FREE LABELING SPECIFICATION.
- ⑥ - PRODUCT MARKING, (PART NUMBER & LOT CODE), ON THIS SURFACE.
- ⑦ - THE MINIMUM VIA SPACING BETWEEN STACKED CONNECTORS IS 2.0 mm FOR THIS RAR AND THE MATING HEADER. REFER TO THE APPLICATION SPECIFICATION FOR DETAILS.
- ⑧ - CONNECTOR OUTLINE MAY BE SCREEN PRINTED ONTO CUSTOMER PCB TO BE USED AS A GUIDE FOR MANUAL CONNECTOR PLACEMENT.
- ⑨ - REFER TO CUSTOMER DRAWING 10119933 FOR INFORMATION ON PCB HOLE DIAMETERS AND PLATING OPTIONS
- 10 - THIS PRODUCT MEETS THE EUROPEAN UNION DIRECTIVES & OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS-47-0004.
- ⑪ - REFER TO ROUTING GUIDE GS-20-0511 FOR RECOMMENDATIONS ON OPTIMIZATION OF FOOTPRINT AND TRACE ROUTING LAYOUT.
- 12 - THE HOUSING WILL WITHSTAND EXPOSURE TO 260° C PEAK TEMPERATURE FOR 10-30 SECONDS IN A CONVECTION, INFRA-RED OR VAPOR PHASE REFLOW OVEN.
- ⑬ - THE ADVANCED MATE RECEPTACLE, 10123159-2XXLF, WHEN MATED WITH AN ADVANCED MATE VERTICAL HEADER OR AN ADVANCED MATE RIGHT-ANGLE HEADER WILL PROVIDE 2 PAIRS OF MATING CONTACTS THAT MATE 0.75mm BEFORE THE REMAINDER OF THE SIGNAL AND GROUND CONTACTS.
- ⑭ - THE SHORT DETECT RECEPTACLE, 10123159-3XXLF, WHEN MATED WITH A STANDARD MATE VERTICAL HEADER OR A STANDARD MATE RIGHT-ANGLE HEADER WILL PROVIDE 1 PAIR OF MATING CONTACTS THAT MATE 1.00mm AFTER THE REMAINDER OF THE SIGNAL AND GROUND CONTACTS.
- ⑮ - THE ADVANCE MATE/SHORT DETECT RECEPTACLE, 10123159-4XXLF, WHEN MATED WITH AN ADVANCED MATE VERTICAL HEADER OR AN ADVANCED MATE RIGHT-ANGLE HEADER WILL PROVIDE 2 PAIRS OF MATING CONTACTS THAT MATE 0.75 mm BEFORE THE REMAINDER OF THE SIGNAL AND GROUND CONTACTS AND 1 PAIR OF MATING CONTACTS THAT MATE 1.00mm AFTER THE REMAINDER OF THE SIGNAL AND GROUND CONTACTS.
- ⑯ - FOR CONNECTORS WITH EITHER A RIGHT OR LEFT GUIDE MODULE, TWO PHILLIPS PAN HEAD M2 HOLD DOWN SCREWS MUST BE USED TO SECURE THE CONNECTOR TO THE PCB. THE SCREW LENGTH SHALL BE 2.0-6.0mm PLUS THE THICKNESS OF THE BOARD. SCREWS ARE NOT PROVIDED WITH CONNECTOR.
- ⑰ - LEFT / RIGHT INTEGRATED GUIDE ORIENTATION IS DETERMINED BY THE LOCATION OF THE GUIDE FEATURES WHEN LOOKING AT THE MATING FACE OF THE RIGHT ANGLE RECEPTACLE. THE LEFT / RIGHT DESIGNATION OF THE MATING HEADER IS DEFINED BY THE RIGHT ANGLE RECEPTACLE THAT IT MATES WITH (i.e. A RIGHT GUIDE VERTICAL HEADER MATES WITH A RIGHT GUIDE RIGHT ANGLE RECEPTACLE.)
- ⑱ - ALL GROUND CONTACTS WITHIN A COLUMN ARE COMMONED.



LEFT GUIDE

RIGHT GUIDE

ExaMAX INTEGRATED GUIDE ORIENTATION
4 PAIR 10 IMLA CONNECTORS SHOWN FOR REFERENCE ONLY
SEE NOTE 17

spec ref	SEE NOTES	dr	Stu Stoner	2012/11/10	projection	MM	size	A2	scale	6:1												
tolerance std	TOLERANCES UNLESS OTHERWISE SPECIFIED	eng	Peng-Bing Fu	2017/10/31			ecn no	ELX-DG-28235-1	rel level	Released												
ASME Y14.5M		chr	Justin Chen	2017/11/29			product family	ExaMAX														
surface	<table border="1"> <tr> <td>linear</td> <td>0.X</td> <td>±.3</td> </tr> <tr> <td></td> <td>0.XX</td> <td>±.10</td> </tr> <tr> <td></td> <td>0.XXX</td> <td>±.050</td> </tr> <tr> <td>angular</td> <td>0°</td> <td>±°</td> </tr> </table>	linear	0.X	±.3		0.XX	±.10		0.XXX	±.050	angular	0°	±°	appr	Heaven Cen	2017/11/30	title	ExaMAX R.A. RECEPTACLE ASSY	dwg no	10123159	rev	B
linear	0.X	±.3																				
	0.XX	±.10																				
	0.XXX	±.050																				
angular	0°	±°																				
					cat. no.	SEE TABLE	Product - Customer Drw	sheet 11 of 11														