

2-2170747-2 AS SHOWN

1. COMPONENTS
CAGE ASSEMBLY: NICKEL-SILVER ALLOY
HEAT SINK: ALUMINUM/BLACK ANODIZE
HEAT SINK CLIP: STAINLESS STEEL
EMI SPRING: COPPER ALLOY/NICKEL PLATE
LIGHT PIPE: CLEAR POLYCARBONATE
ORGANIZER: POLYESTER WITH UL 94 V-0

2. REFERENCE APPLICATION SPECIFICATION 114-23023
FOR RECOMMENDED DRILL HOLE DIAMETER AND
PLATING THICKNESS

3. DATUM AND BASIC DIMENSION ESTABLISHED BY CUSTOMER

4. DIMENSION OF HEAT SINK APPLIES WITH MODULE INSERTED IN CAGE.

5. HEAT SINKS, HEAT SINK CLIPS AND LIGHT PIPES
ARE SHIPPED ASSEMBLED ON CAGE

6. MINIMUM PC BOARD THICKNESS: SINGLE SIDED: 1.57 MIN
DOUBLE SIDED: 2.20 MIN

7. DATUM -A- IS TOP SURFACE OF THE HOST BOARD.

8. THESE HOLES ARE OPTIONAL WHEN THE REAR PINS ARE REMOVED.

9. MATES WITH QSFP28 MSA COMPATIBLE TRANSCEIVER.

10. DATE CODE (YYWWD) MARKED APPROXIMATELY AS SHOWN.

11. NOTED DIMENSIONS ONLY APPLY TO CAGE ASSEMBLY WITH LIGHT PIPE.

12. THE CUSTOMIZED HEAT SINK HAVE NO SURFACE FINISH ONLY FOR 2170747-7/-8/-9.

13. CAGE ASSEMBLY WITH HS AND LIGHT PIPE ARE UNASSEMBLED,
AND PACKAGED INDIVIDUALLY IN TRAYS. ONLY APPLICABLE TO 2170747-7.

Isometric view of the 1x4 cage assembly. Labels include: LIGHT PIPE, HEAT SINK, HEAT SINK CLIP, and 1X4 CAGE ASSEMBLY. A datum triangle 10 is indicated at the front edge of the assembly.

Top view of the 1x4 cage assembly. Dimensions include: 76.50 REF, 4X 18.75±0.10, 4X 8.90±0.10, 7.88, 3X 19.00, 2X 19.00, 18.50, and REAR PINS OPTIONAL. Scale 2:1.

Side view of the 1x4 cage assembly. Dimensions include: 67.75 REF, 9.65 REF, 13.40, 2.05 TYP, 15.11 REF LIGHT PIPE HEIGHT ON CAGE, and A MAX 4 HEAT SINK HEIGHT ON CAGE. Datum triangle 4 is shown. Scale 2:1.

DETAIL C
SCALE 6:1

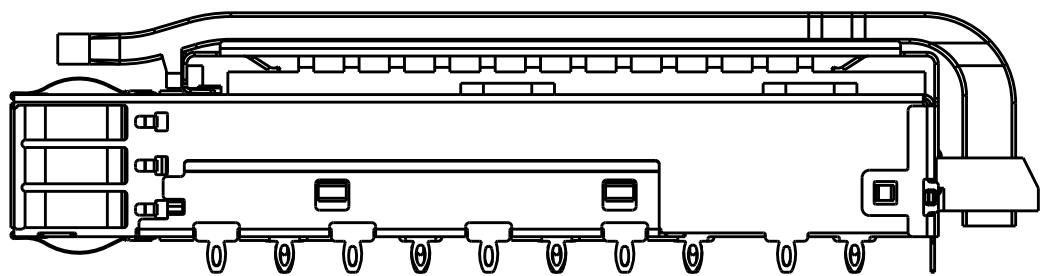
3.0 MAX

THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN 04JUN2014 JASON YANG	TE Connectivity	
		CHK 07JUN2014 SEAN HAN		
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	0 PLC ±-	PRODUCT SPEC	RECEPTACLE CAGE ASSEMBLY WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, 1X4, QSFP28, SPRING	
	1 PLC ±0.25	108-19428	SIZE CAGE CODE DRAWING NO	
	2 PLC ±0.2	APPLICATION SPEC	RESTRICTED TO	
MATERIAL SEE NOTES	FINISH SEE NOTES	114-32023	A200779C-2170747	
		WEIGHT -	SCALE 1:1 SHEET 1 OF 13 REV C	
		CUSTOMER DRAWING		

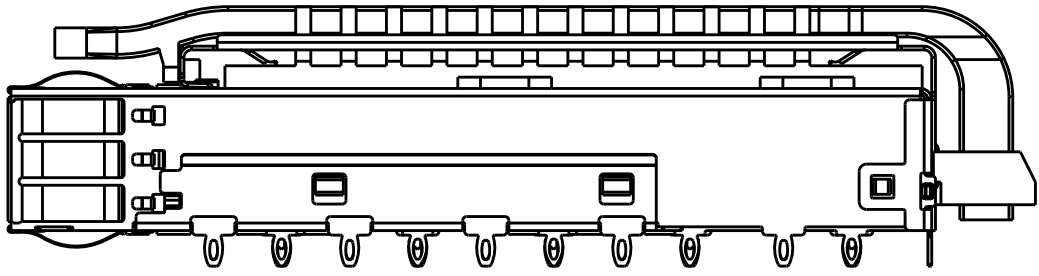
1471-9 (3/13)

REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
-	-	SEE SHEET 1	-	-	-

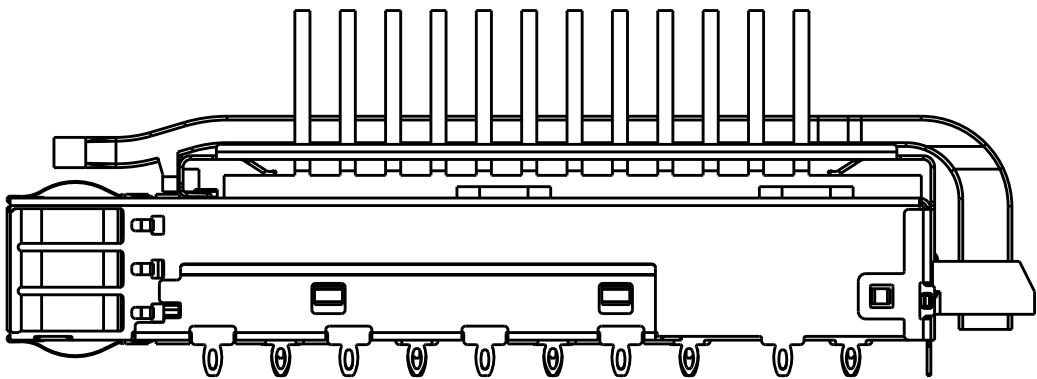
HEAT SINK OPTION



PCI HEAT SINK
SCALE 2:1

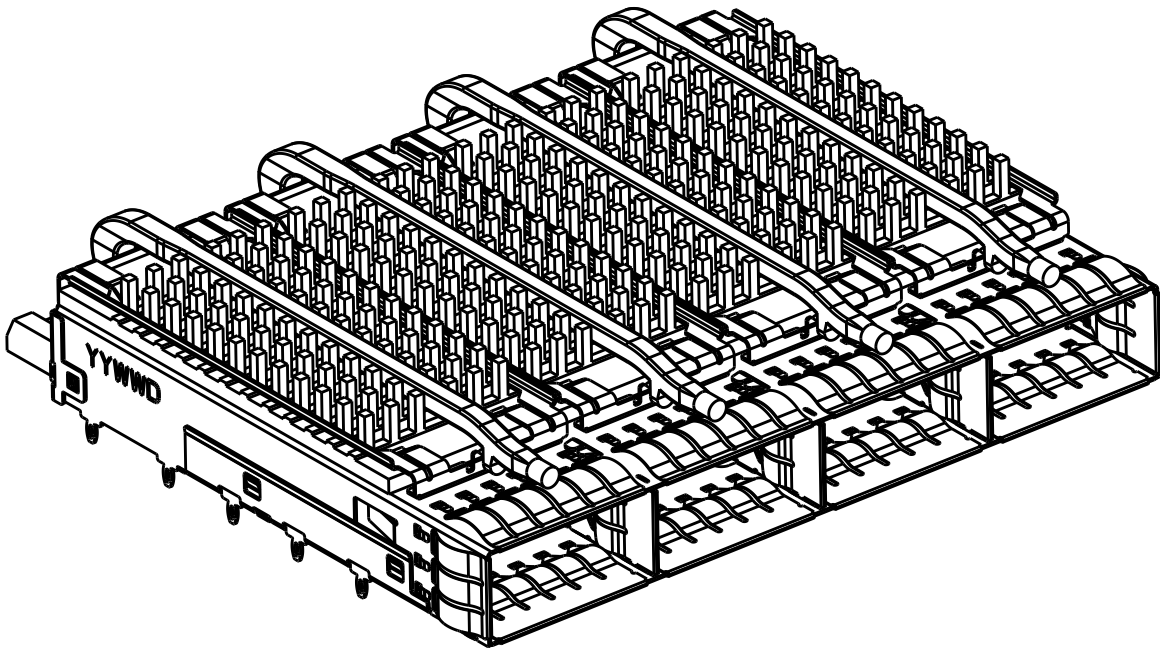


SAN HEAT SINK
SCALE 2:1

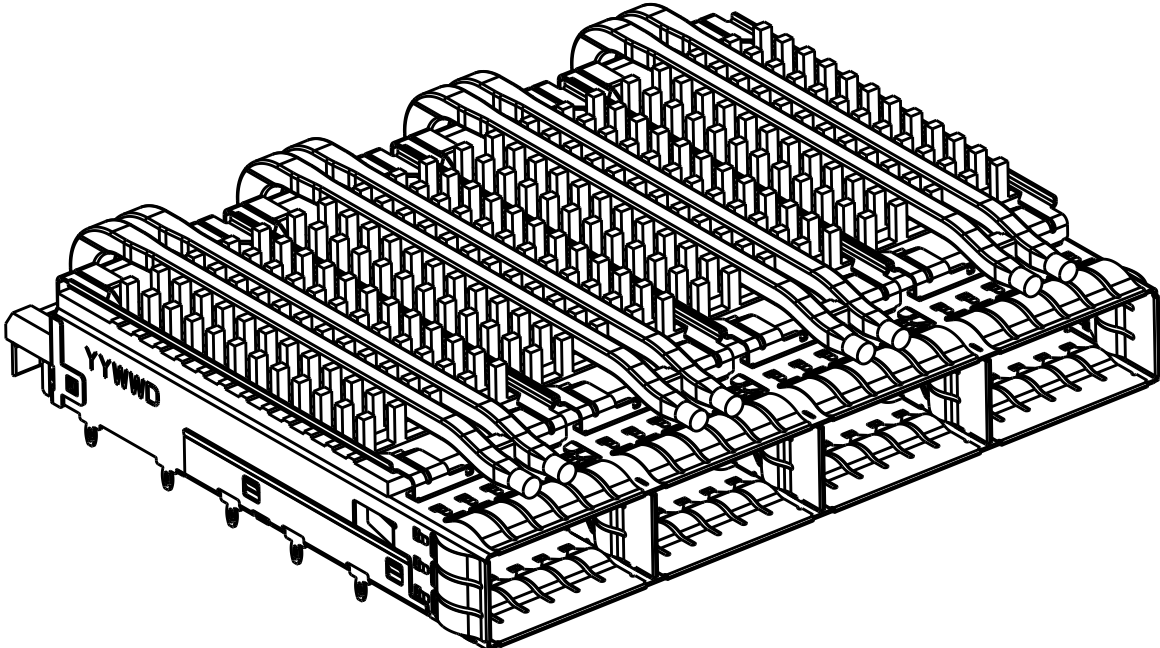


NETWORKING HEAT SINK
SCALE 2:1

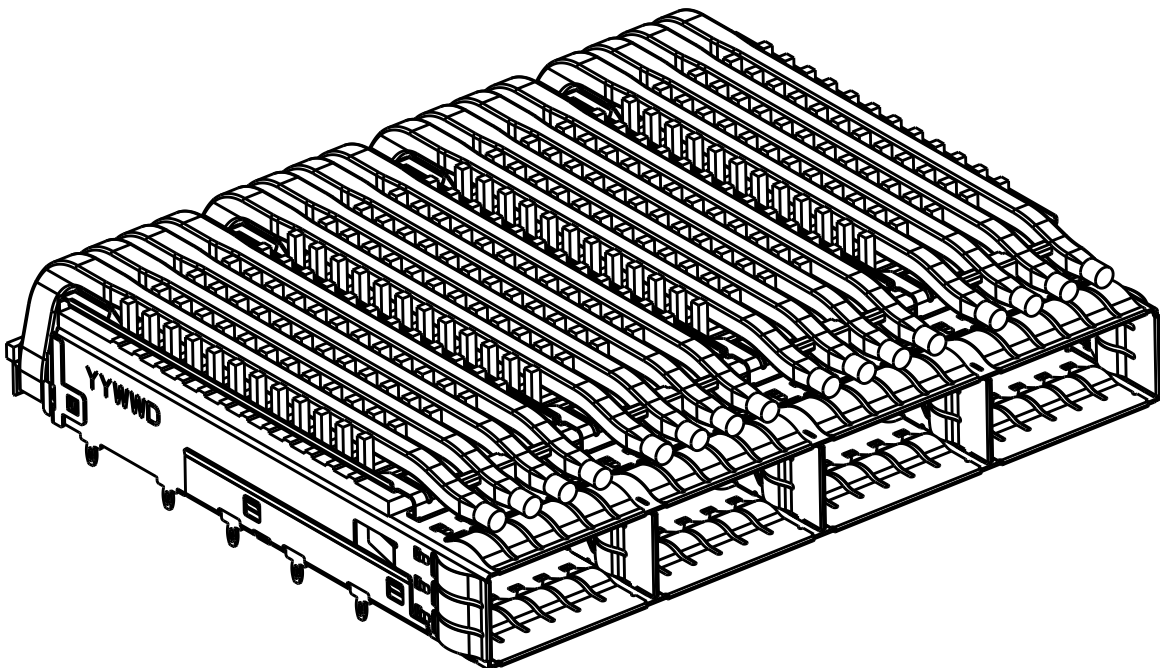
LIGHT PIPE OPTION



SINGLE LIGHT PIPE
SCALE 3:2

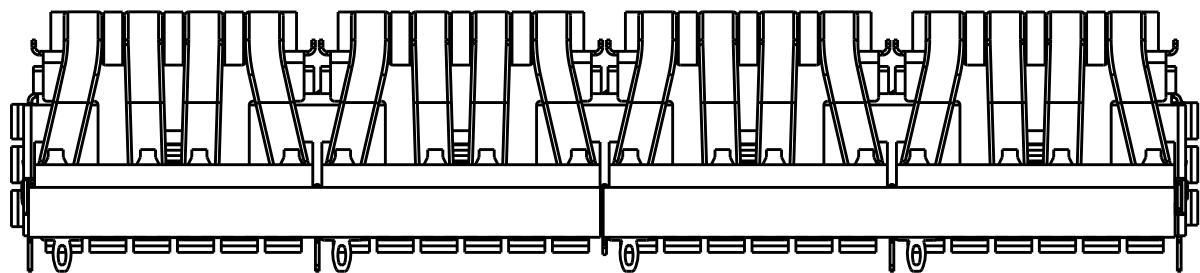


DUAL LIGHT PIPE
SCALE 3:2

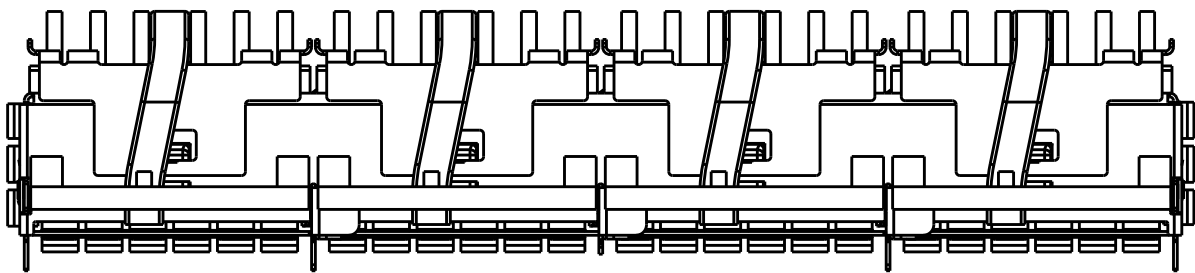


QUAD LIGHT PIPE
SCALE 3:2

OF REAR PIN OPTION



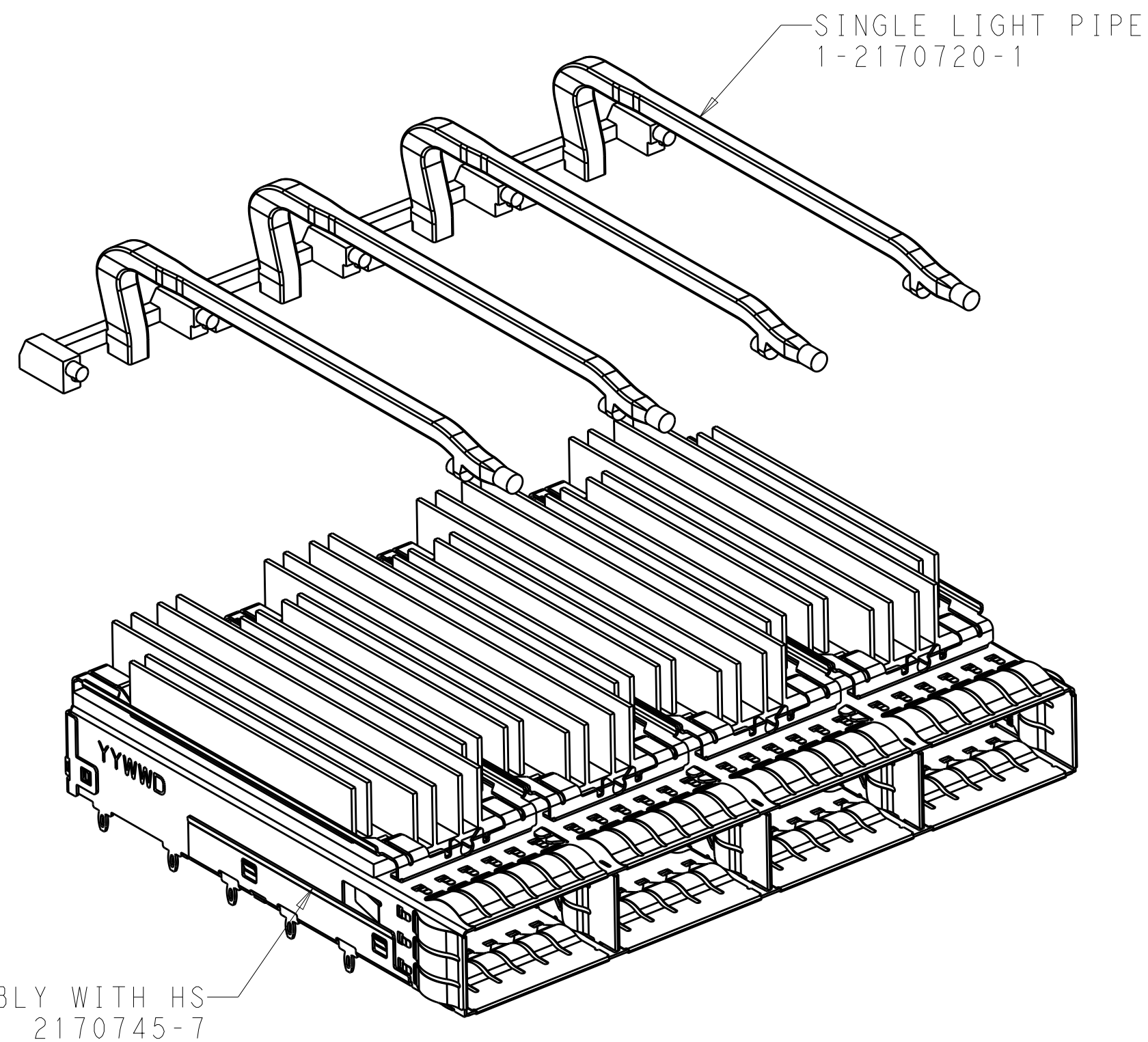
1 REAR PIN
SCALE 2:1



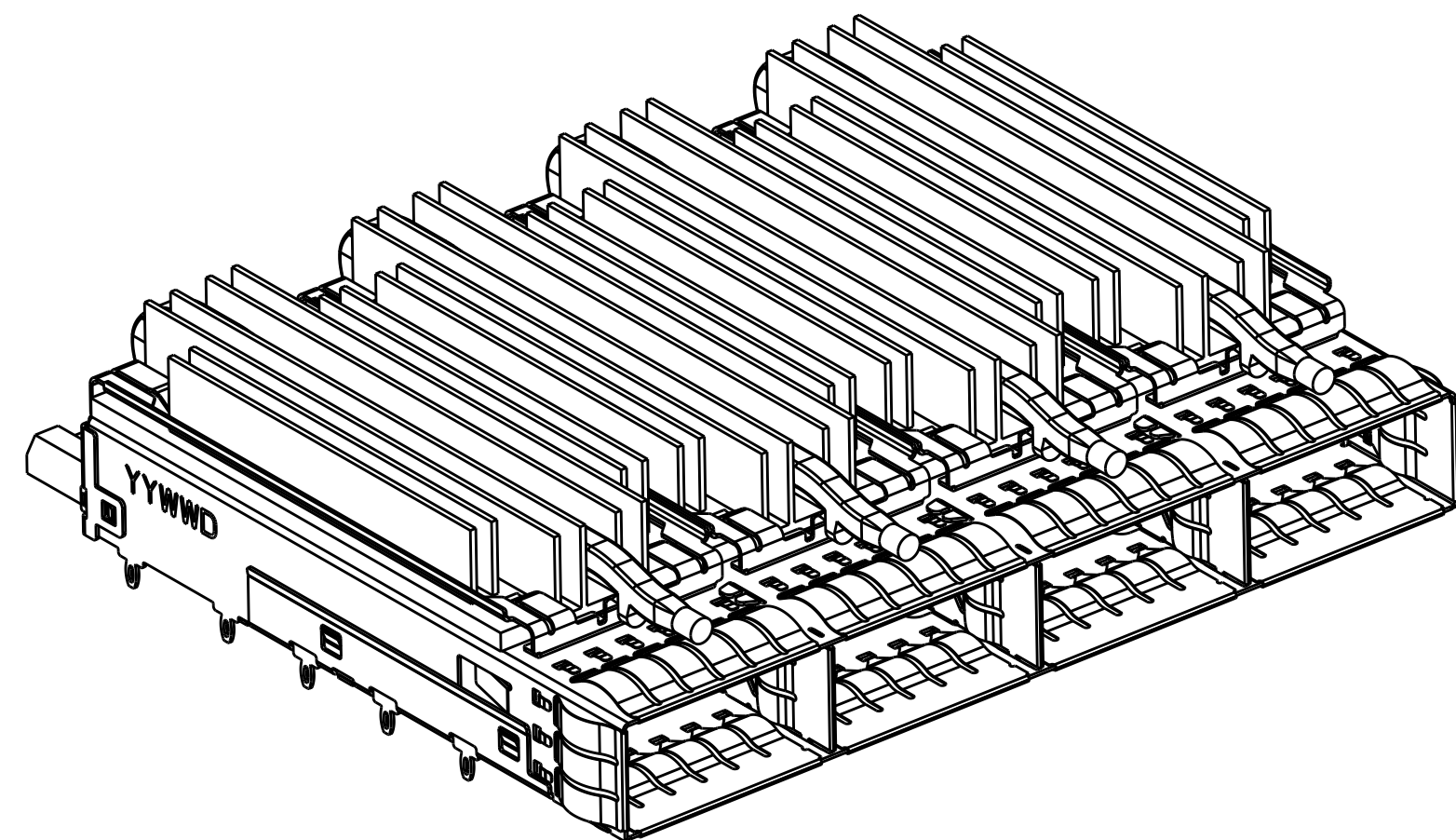
0 REAR PIN
SCALE 2:1

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DIMENSIONS:		APVD -	PRODUCT SPEC		NAME	
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			APPLICATION SPEC		SIZE	CAGE CODE
			114-32023		A200779	DRAWING NO
MATERIAL			WEIGHT		RESTRICTED TO	
SEE NOTES			CUSTOMER DRAWING		-	
					SCALE 1:1	SHEET 2 OF 13
					REV C	

REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-



2170747-7 UNASSEMBLED
CAGE ASSY WITH HS AND LIGHT PIPE ARE UNASSEMBLED,
AND PACKAGED INDIVIDUALLY.
CUSTOMIZED HEAT SINK
SCALE 2:1



2170747-8 ASSEMBLED
ASSEMBLED AND PAKCAGED TOGETHER, CUSTOMIZED HEAT SINK
SCALE 2:1

THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN JASON YANG 04JUN2014	 TE Connectivity			
		CHK SEAN HAN 07JUN2014				
DIMENSIONS: mm		APVD -	NAME RECEPTACLE CAGE ASSEMBLY WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, 1X4, QSFP28, SPRING			
		PRODUCT SPEC 108-19428				
		APPLICATION SPEC 114-32023	SIZE A2	CAGE CODE 00779	DRAWING NO C-2170747	RESTRICTED TO -
		WEIGHT -				
MATERIAL SEE NOTES -		CUSTOMER DRAWING		SCALE 1:1	SHEET 3 OF 13	REV C
TOLERANCES UNLESS OTHERWISE SPECIFIED: 0 PLC ± 1 PLC ±0.25 2 PLC ±0.2 3 PLC ± 4 PLC ± ANGLES ± FINISH						

D

C

B

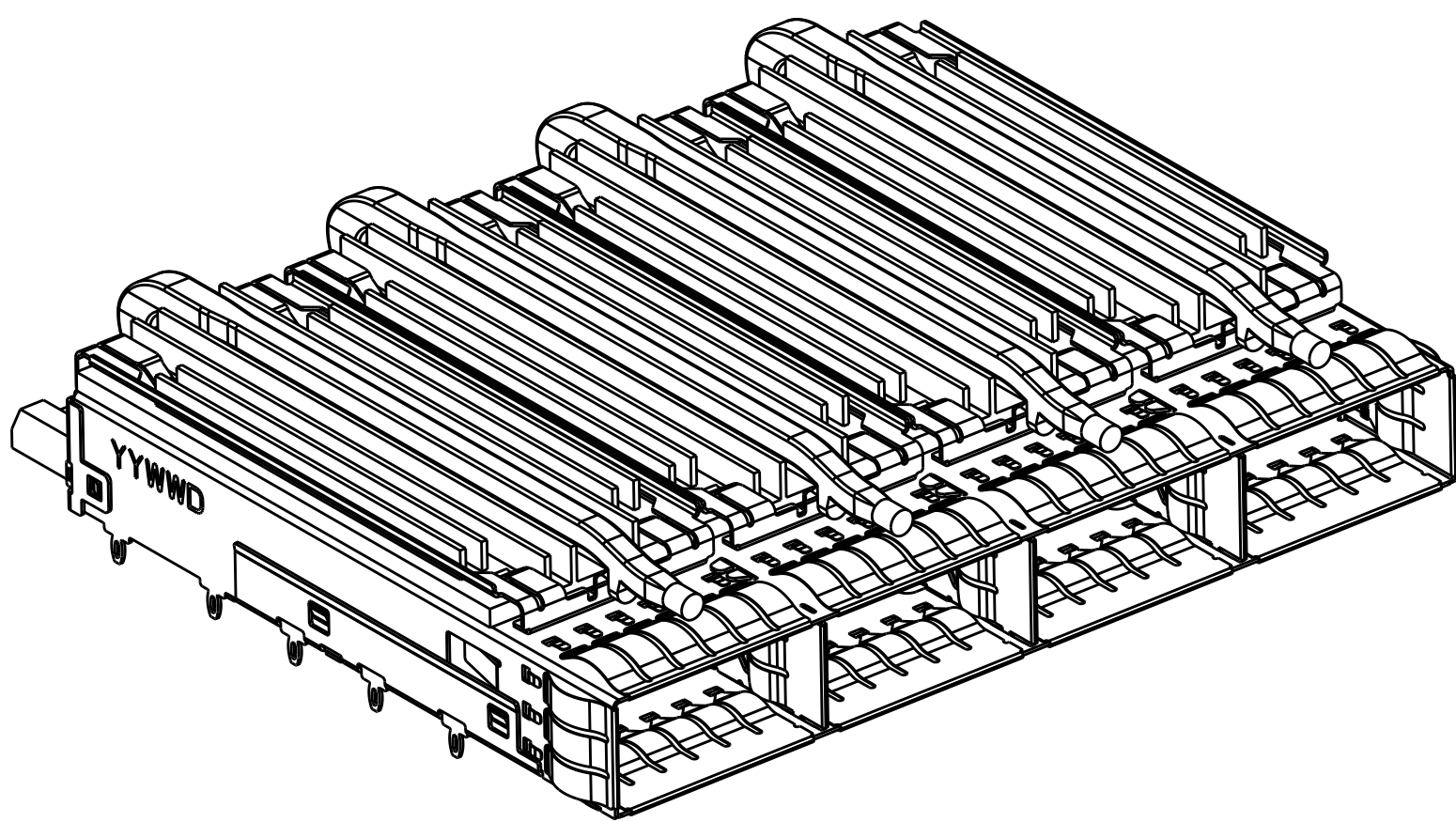
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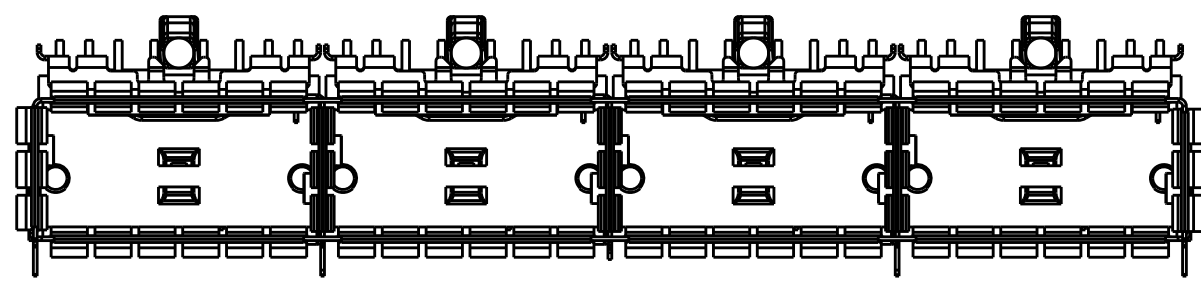
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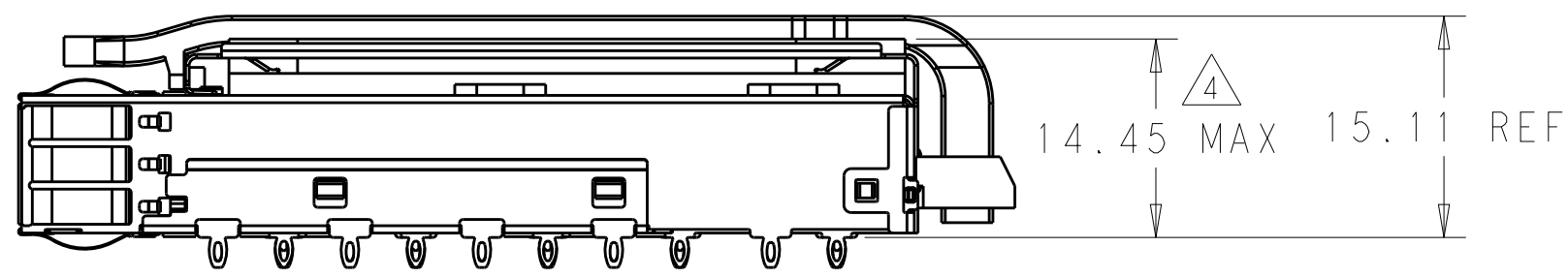
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2170747-9 AS SHOWN
WITH CUSTOMIZED HEAT SINK
SCALE 2:1



SCALE 2:1



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DWN04JUN2014
JASON YANG

CHK07JUN2014
SEAN HAN

APVD-

PRODUCT SPEC

108-19428

APPLICATION SPEC

114-32023

WEIGHT-

CUSTOMER DRAWING

TE

TE Connectivity

NAME

RECEPTACLE CAGE ASSEMBLY
WITH HEAT SINKS AND LIGHT PIPES,
THRU BEZEL, 1X4, QSFP28, SPRING

SIZE

A2

CAGE CODE

00779

DRAWING NO

C-2170747

RESTRICTED TO

-

SCALE

1:1

SHEET

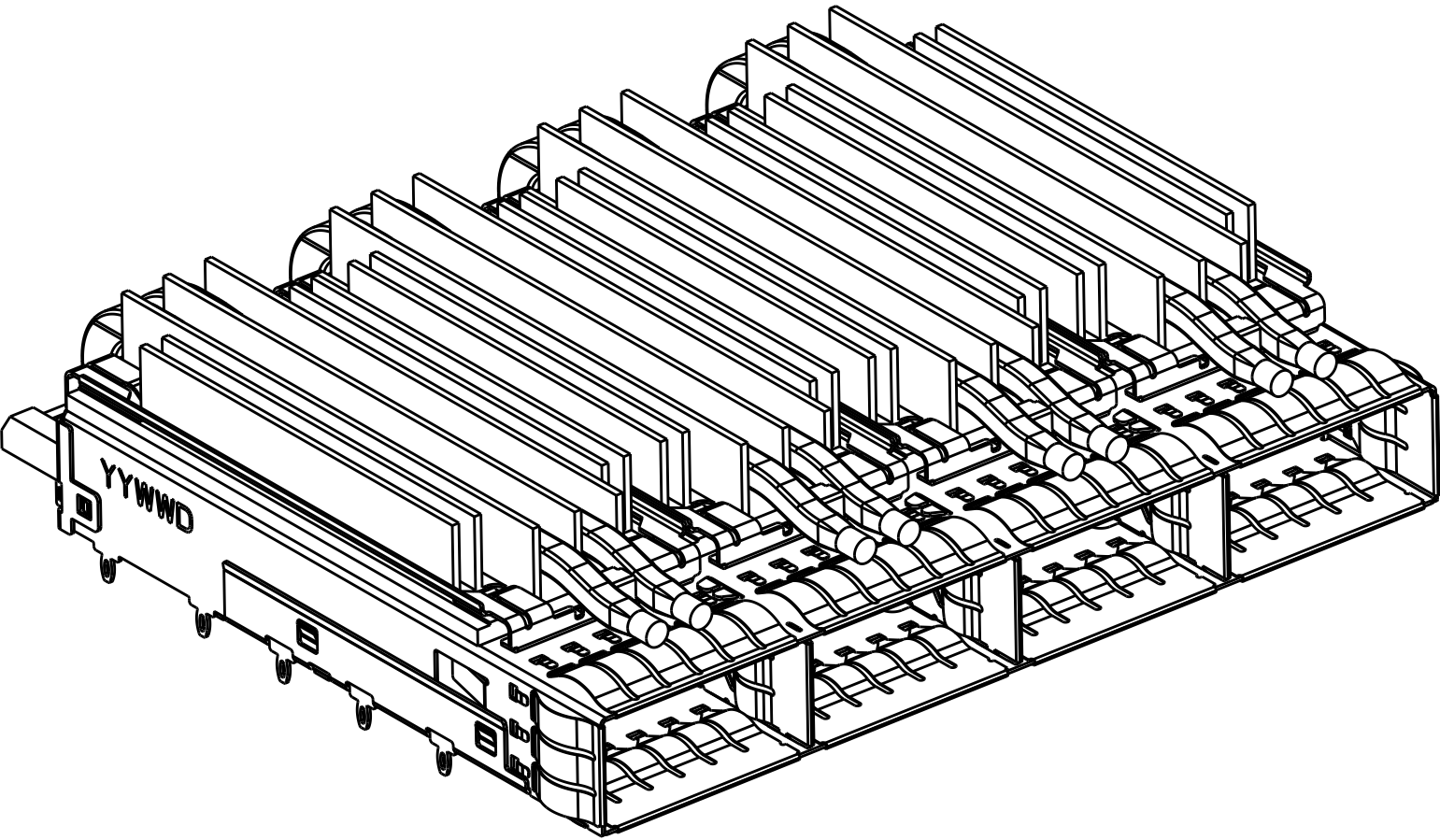
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REV

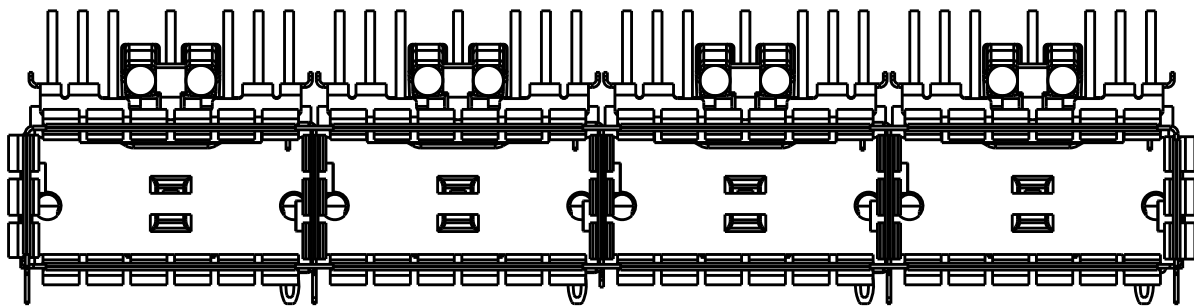
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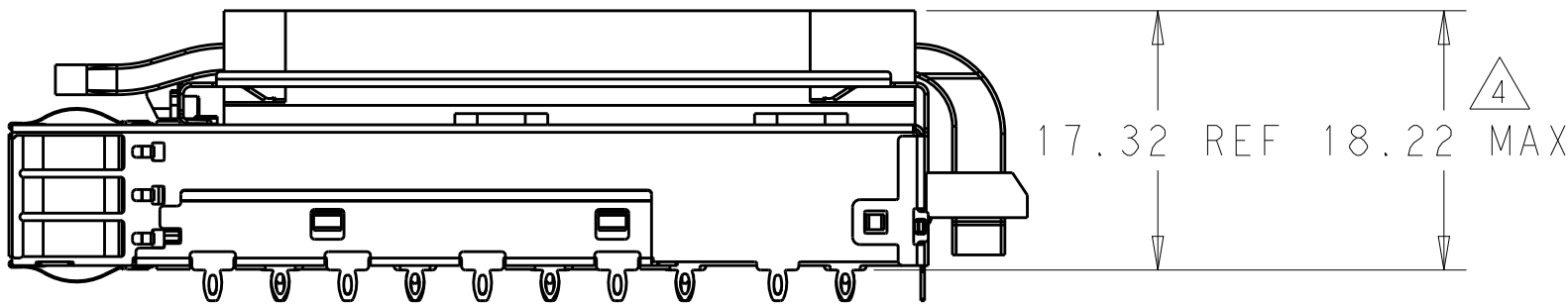
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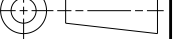


2-2170747-7 AS SHOWN
WITH CUSTOMIZED HEAT SINK
SCALE 2:1

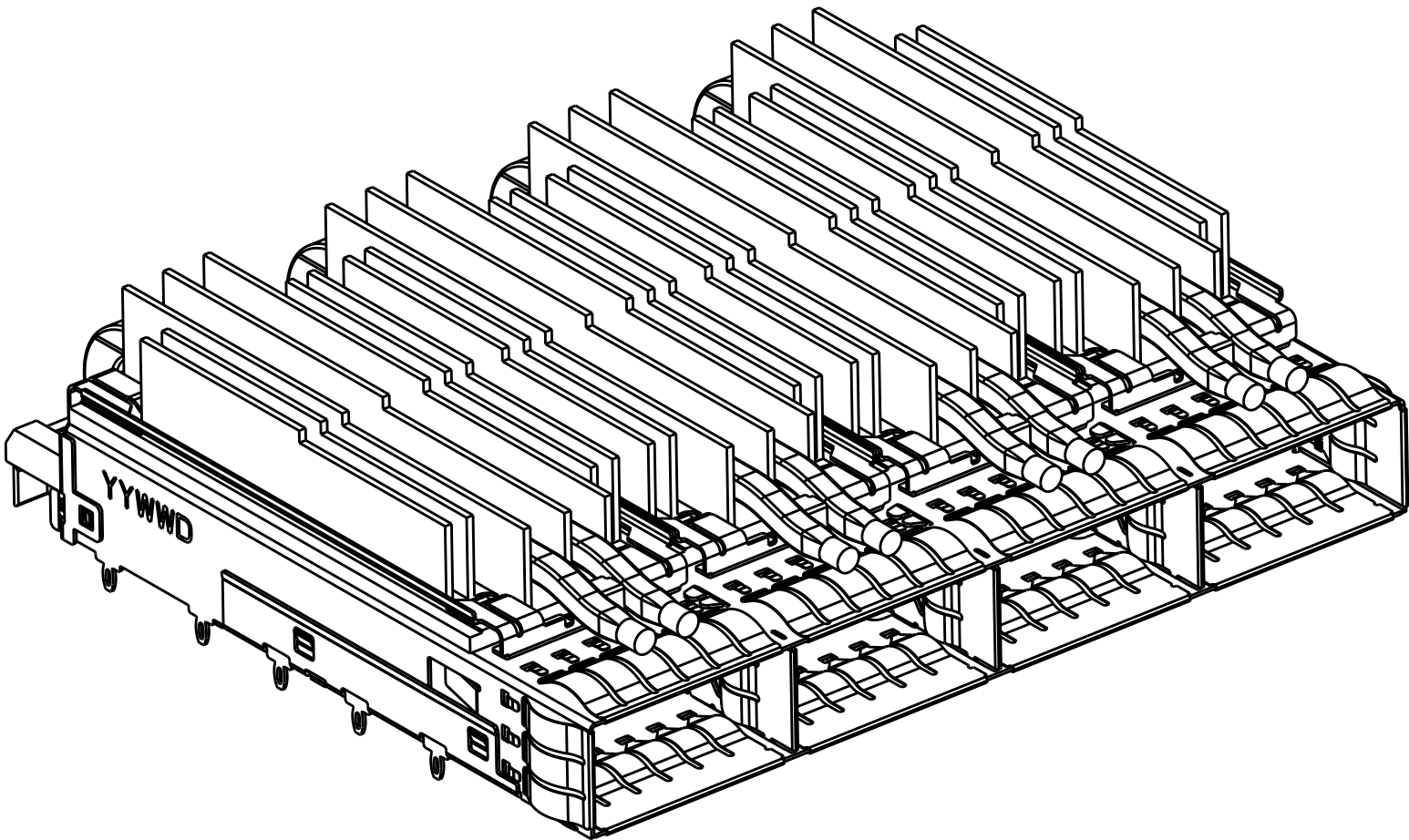


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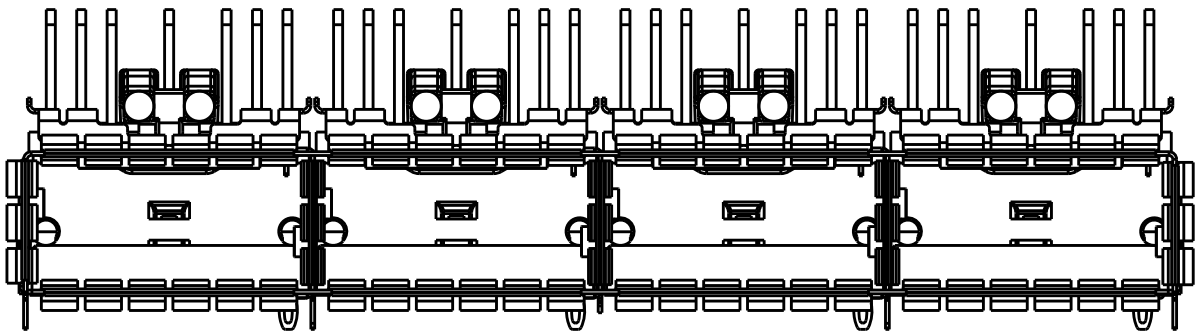


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		CHK 07JUN2014 SEAN HAN							
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mm		APVD -							
		PRODUCT SPEC 108-19428		SIZE CAGE CODE DRAWING NO RESTRICTED TO					
		APPLICATION SPEC 114-32023							
		WEIGHT -					A200779C-2170747		
		MATERIAL SEE NOTES							
		FINISH SEE NOTES							
		CUSTOMER DRAWING		SCALE 1:1 SHEET 5 OF 13 REV C					

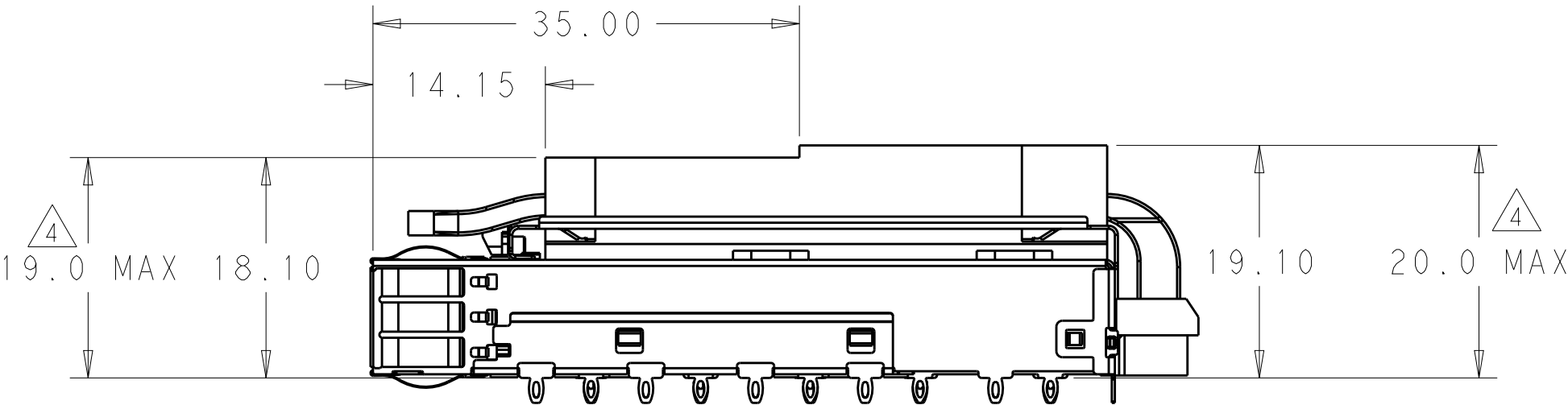
REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-



2-2170747-8 AS SHOWN
WITH CUSTOMIZED HEAT SINK
SCALE 2:1



SCALE 2:1



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		CHK 07JUN2014 SEAN HAN				
DIMENSIONS:		APVD -	NAME RECEPTACLE CAGE ASSEMBLY WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, 1X4, QSFP28, SPRING			
mm		PRODUCT SPEC				
		108-19428	SIZE		CAGE CODE	
		APPLICATION SPEC	114-32023		DRAWING NO	
		WEIGHT	-		RESTRICTED TO	
		CUSTOMER DRAWING	SCALE 1:1		SHEET 6 OF 13	
TOLERANCES UNLESS OTHERWISE SPECIFIED:			A200779		REV C	
0 PLC ±-						
1 PLC ±0.25						
2 PLC ±0.2						
3 PLC ±-						
4 PLC ±-						
ANGLES ±-						
FINISH						
SEE NOTES						
-						

4

3

2

1

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REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-

1	16.0	SAN	COATED QUAD LP	5-2170747-2
0	23.0	NETWORKING	QUAD LP	4-2170747-6
0	16.0	SAN	QUAD LP	4-2170747-5
0	13.7	PCI	QUAD LP	4-2170747-4
1	23.0	NETWORKING	QUAD LP	4-2170747-3
1	16.0	SAN	QUAD LP	4-2170747-2
1	13.7	PCI	QUAD LP	4-2170747-1
1	20.3	CUSTOMIZED	DUAL LP	2-2170747-8
1	18.22	CUSTOMIZED	DUAL LP	2-2170747-7
0	23.0	NETWORKING	DUAL LP	2-2170747-6
0	16.0	SAN	DUAL LP	2-2170747-5
0	13.7	PCI	DUAL LP	2-2170747-4
1	23.0	NETWORKING	DUAL LP	2-2170747-3
1	16.0	SAN	DUAL LP	2-2170747-2
1	13.7	PCI	DUAL LP	2-2170747-1
0	14.45	CUSTOMIZED	SINGLE LP	2170747-9
0	18.05	CUSTOMIZED	SINGLE LP	2170747-8
0	18.05	CUSTOMIZED	SINGLE LP	2170747-7 ¹³
0	23.0	NETWORKING	SINGLE LP	2170747-6
0	16.0	SAN	SINGLE LP	2170747-5
0	13.7	PCI	SINGLE LP	2170747-4
1	23.0	NETWORKING	SINGLE LP	2170747-3
1	16.0	SAN	SINGLE LP	2170747-2
1	13.7	PCI	SINGLE LP	2170747-1
# OF REAR PIN	DIM A	APPLICATION	LIGHT PIPE OPTION	PART NUMBER

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DIMENSIONS:

mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:

0 PLC ±-

1 PLC ±0.25

2 PLC ±0.2

3 PLC ±-

4 PLC ±-

ANGLES ±-

FINISH

MATERIAL

SEE NOTES

-

DWN 04JUN2014

CHK JASON YANG

SEAN HAN

APVD -

PRODUCT SPEC

108-19428

APPLICATION SPEC

114-32023

WEIGHT

-

CUSTOMER DRAWING

TE Connectivity

NAME

RECEPTACLE CAGE ASSEMBLY WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, 1X4, QSFP28, SPRING

SIZE

CAGE CODE

DRAWING NO

RESTRICTED TO

A200779

C-2170747

-

SCALE

1:1

SHEET

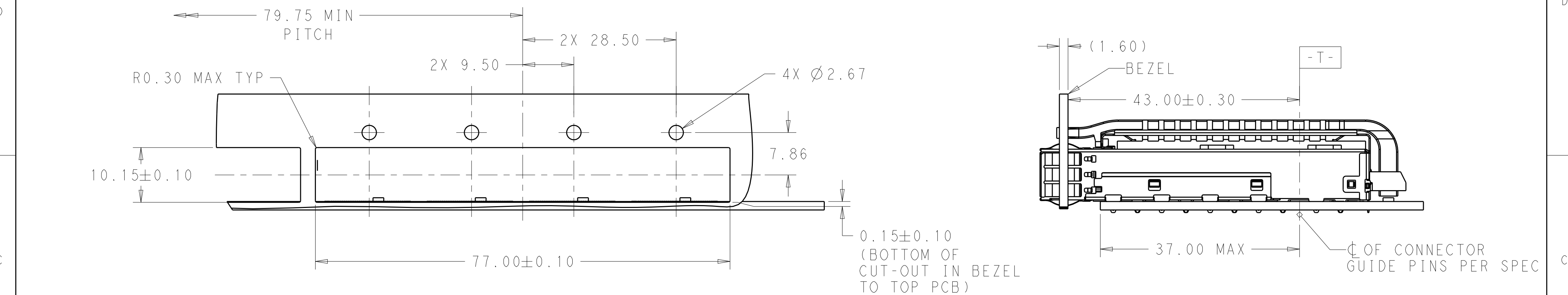
7 OF 13

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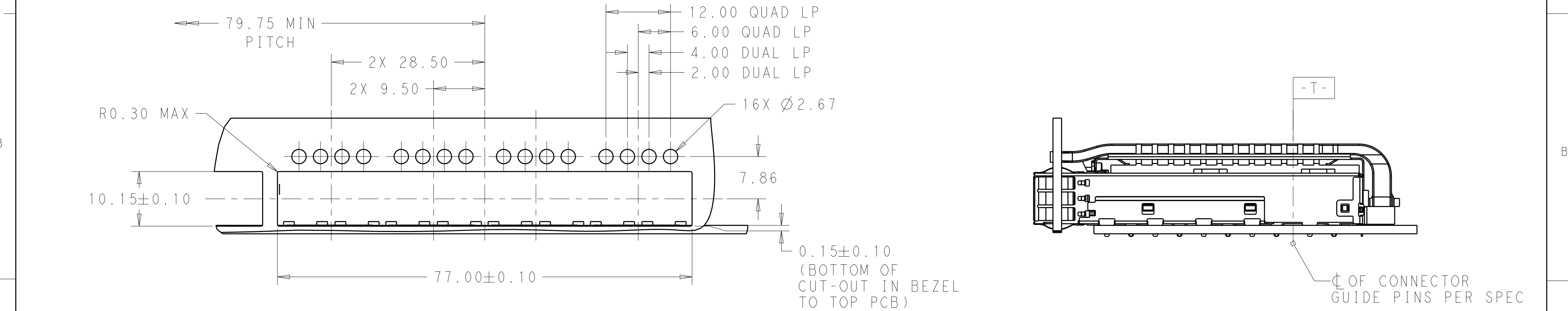
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1471-9 (3/13)

REVISIONS					
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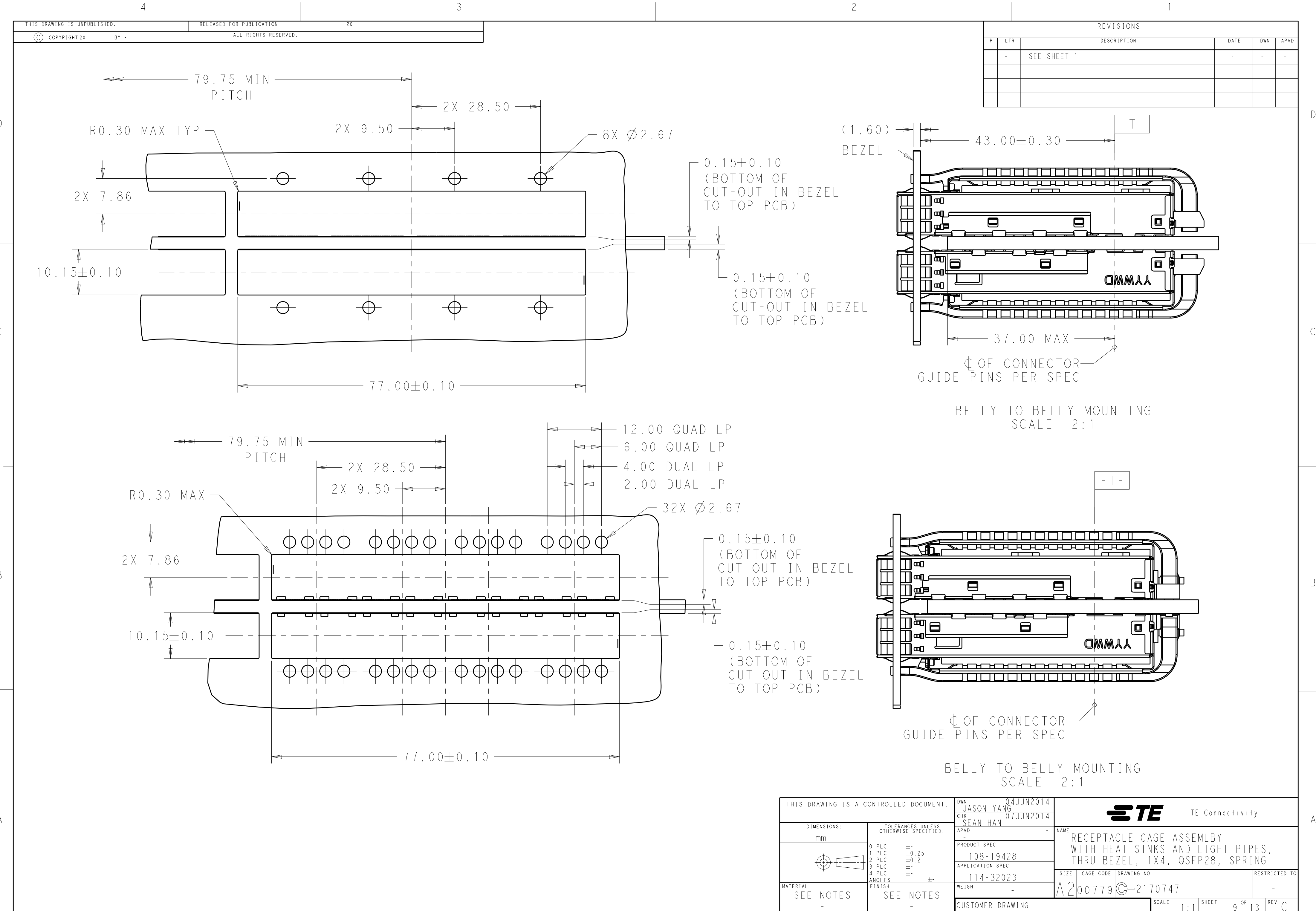


SINGLE SIDE MOUNTING
SCALE 2:1

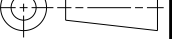


SINGLE SIDE MOUNTING
SCALE 2:1

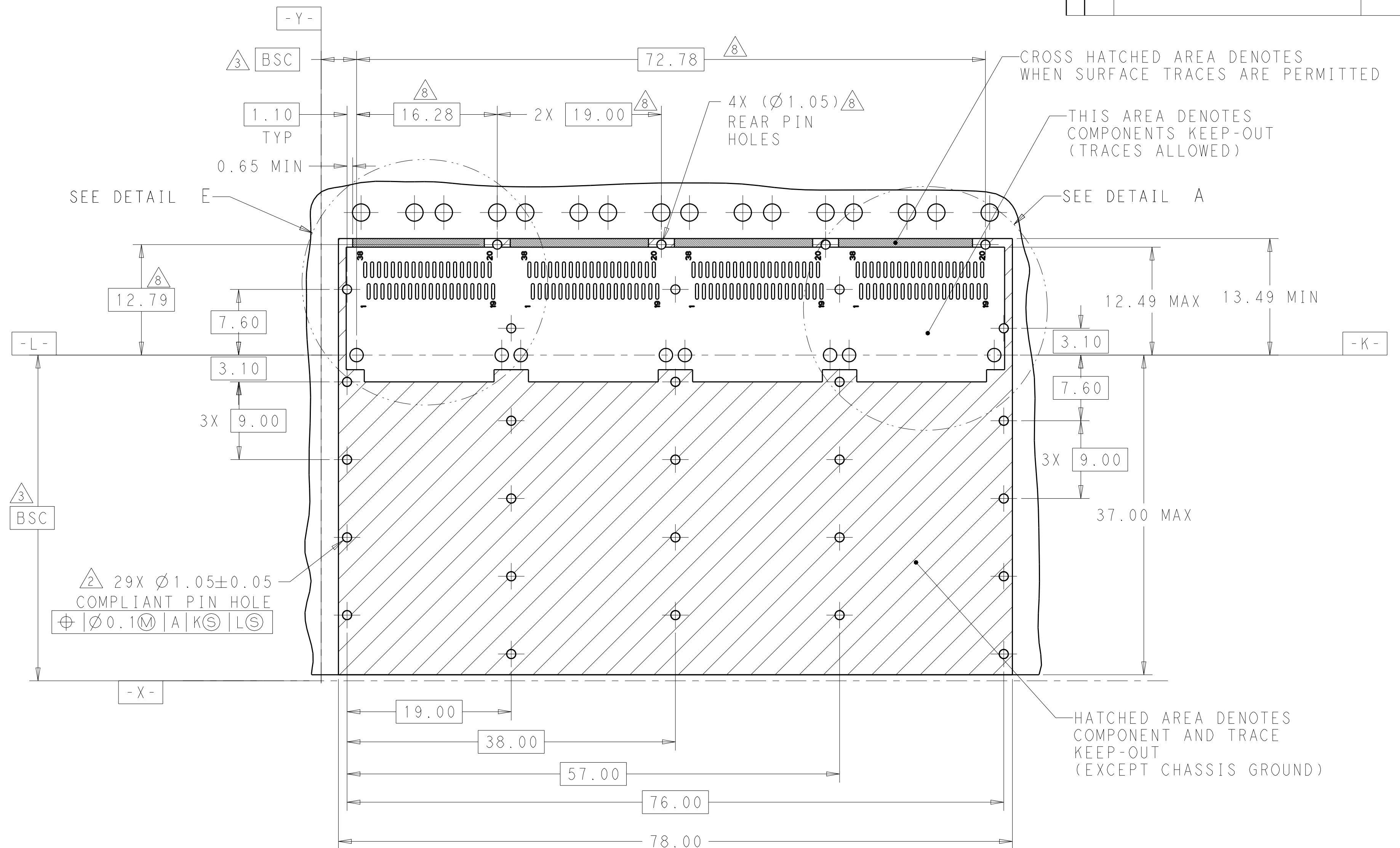
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DIMENSIONS:		CHK 07JUN2014 SEAN HAN			
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	0 PLC ±-	PRODUCT SPEC	SIZE	CAGE CODE	DRAWING NO
	1 PLC ±0.25	108-19428	A200779	C-2170747	RESTRICTED TO
MATERIAL	FINISH	APPLICATION SPEC	114-32023	SCALE	1:1
SEE NOTES	SEE NOTES	WEIGHT	-	SHEET	8 OF 13
-	-	CUSTOMER DRAWING	-	REV	C



REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
-	-	SEE SHEET 1	-	-	-

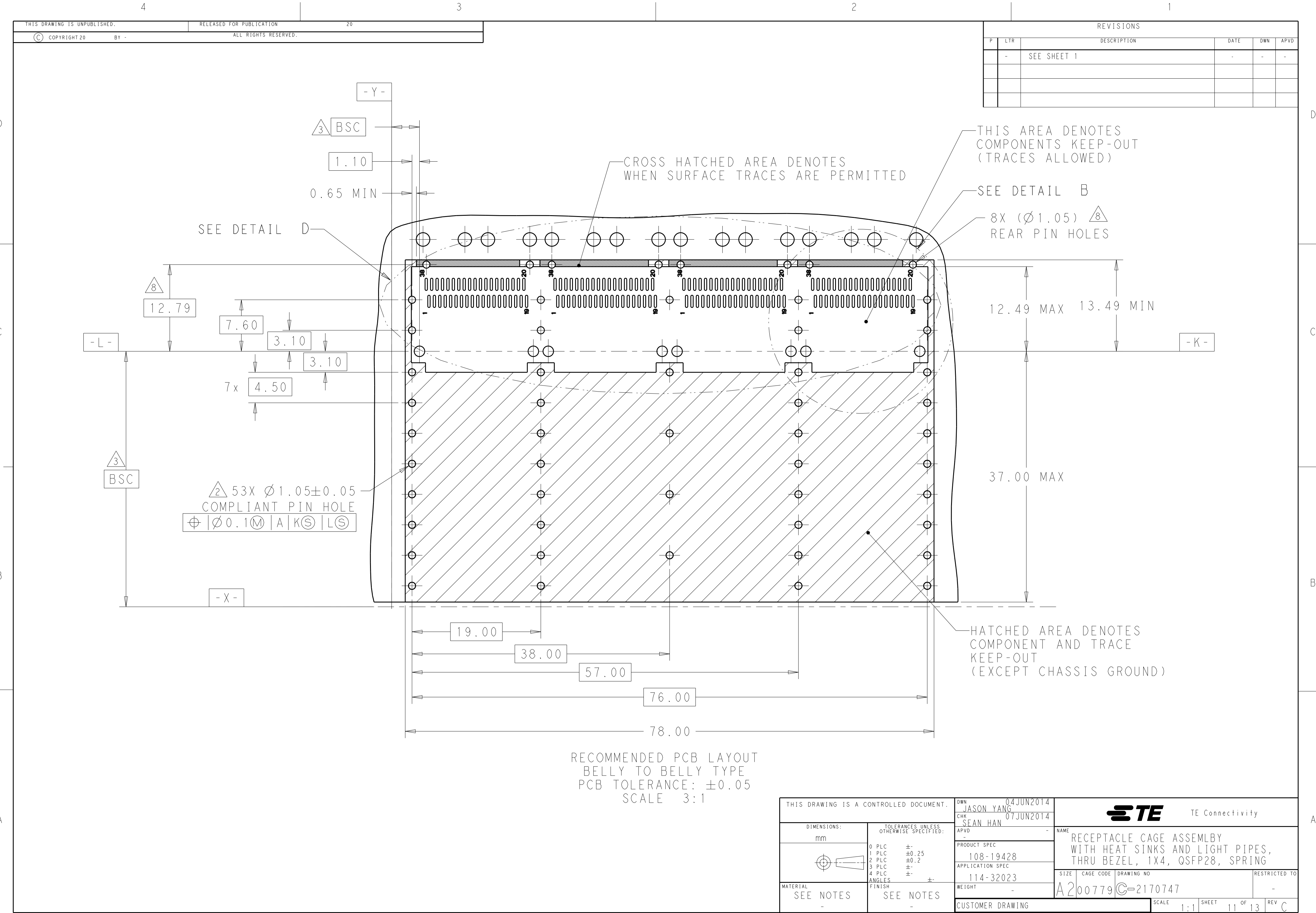
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DIMENSIONS: mm		TOLERANCES UNLESS OTHERWISE SPECIFIED: 0 PLC ± 1 PLC ±0.25 2 PLC ±0.2 3 PLC ± 4 PLC ± ANGLES ± FINISH		NAME RECEPTACLE CAGE ASSEMBLY WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, 1X4, QSFP28, SPRING		
		APVD -		PRODUCT SPEC 108-19428		
		APPLICATION SPEC 114-32023		SIZE A200779		
MATERIAL SEE NOTES		WEIGHT -		DRAWING NO C-2170747		
SEE NOTES		CUSTOMER DRAWING		RESTRICTED TO -		
				SCALE 1:1 SHEET 9 OF 13 REV C		

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-



RECOMMENDED PCB LAYOUT
SINGLE TYPE
PCB TOLERANCE: ± 0.05
SCALE 3:1

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DIMENSIONS: mm		TOLERANCES UNLESS OTHERWISE SPECIFIED: 0 PLC $\pm$ 1 PLC ± 0.25 2 PLC ± 0.2 3 PLC $\pm$ 4 PLC $\pm$ ANGLES $\pm$		NAME RECEPTACLE CAGE ASSEMBLY WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, 1X4, QSFP28, SPRING	
		PRODUCT SPEC 108-19428		SIZE A2	
MATERIAL SEE NOTES		APPLICATION SPEC 114-32023		CAGE CODE 00779	
FINISH SEE NOTES		WEIGHT -		DRAWING NO C-2170747	
		CUSTOMER DRAWING		RESTRICTED TO -	
				SCALE 1:1 SHEET 10 OF 13 REV C	



REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-

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C

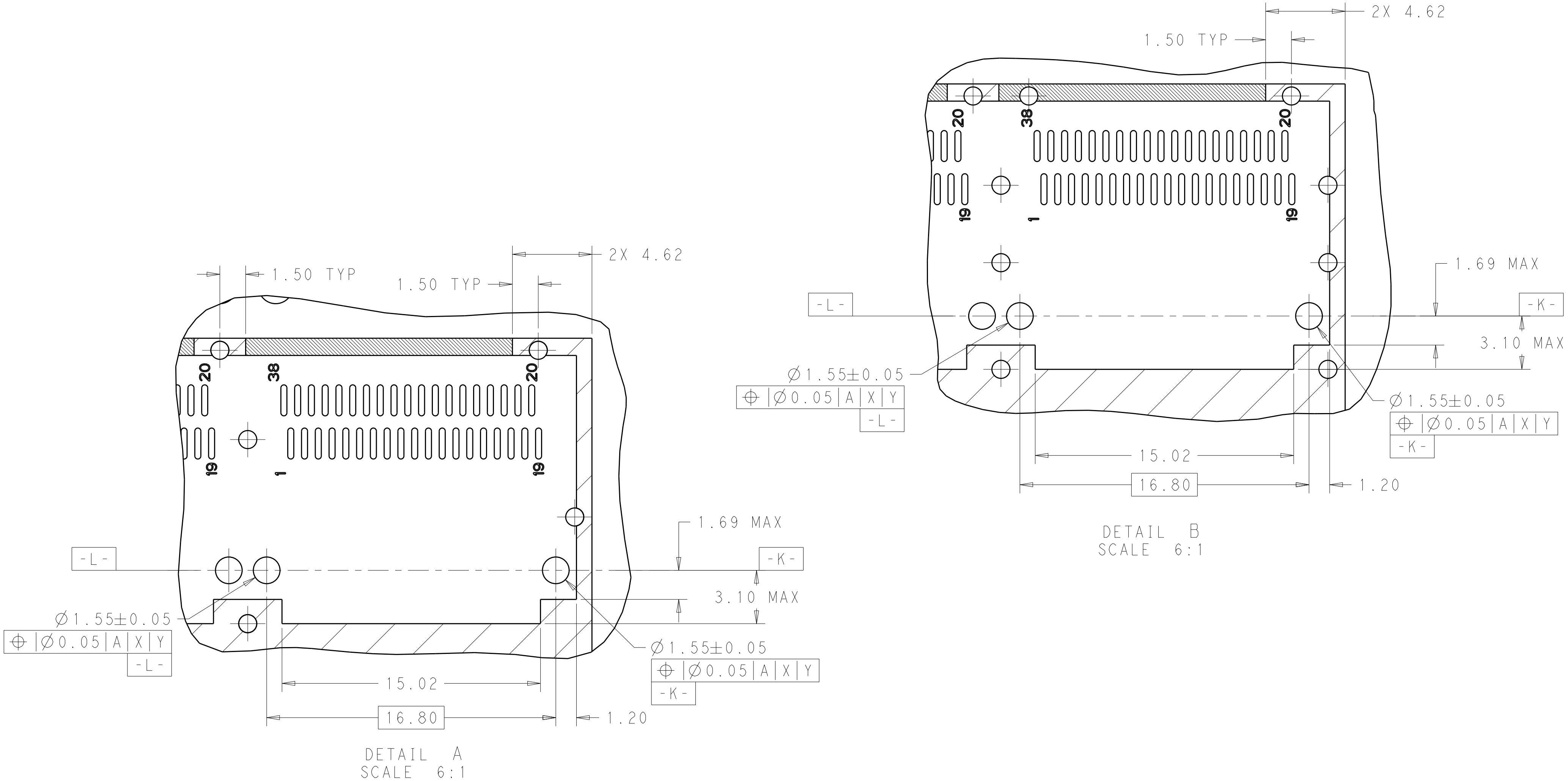
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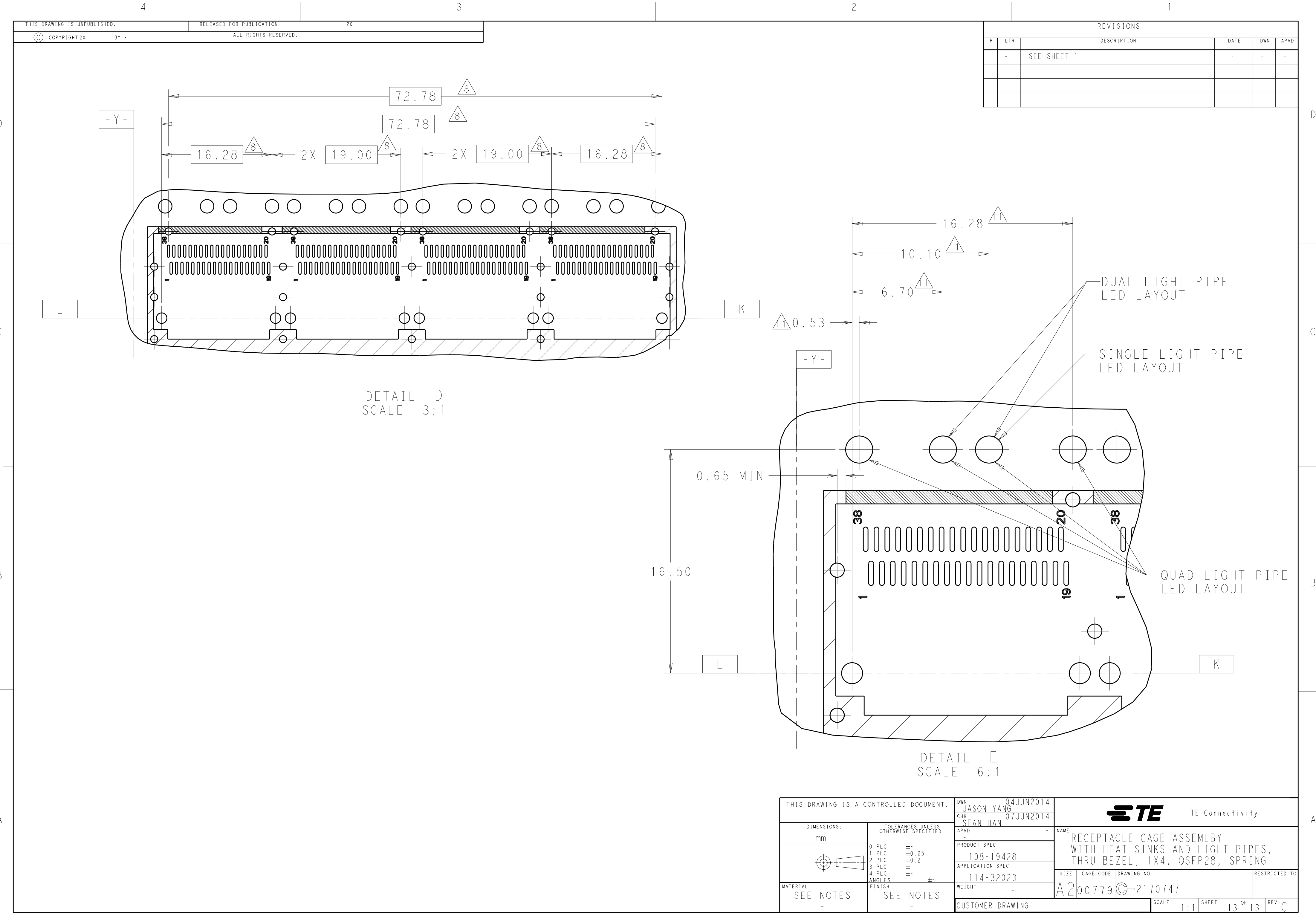
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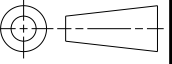
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		CHK 07JUN2014 SEAN HAN			
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mm		PRODUCT SPEC 108-19428			
		APPLICATION SPEC 114-32023	SIZE A200779	CAGE CODE C-2170747	DRAWING NO
MATERIAL SEE NOTES		WEIGHT -	RESTRICTED TO -		
		CUSTOMER DRAWING	SCALE 1:1	SHEET 12 OF 13	REV C



REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
-	-	SEE SHEET 1	-	-	-

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		CHK SEAN HAN 07JUN2014													
DIMENSIONS: mm		TOLERANCES UNLESS OTHERWISE SPECIFIED:		NAME		RECEPTACLE CAGE ASSEMBLY WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, 1X4, QSFP28, SPRING									
		APVD -		PRODUCT SPEC											
		1 PLC ± 1 PLC ±0.25 2 PLC ±0.2 3 PLC ± 4 PLC ±		108-19428											
		ANGLES FINISH		APPLICATION SPEC											
		MATERIAL		114-32023											
SEE NOTES		SEE NOTES		WEIGHT		SIZE		CAGE CODE		DRAWING NO		RESTRICTED TO			
-		-		-		A200779		C-2170747				-			
CUSTOMER DRAWING						SCALE		1:1		SHEET		13 OF 13		REV C	