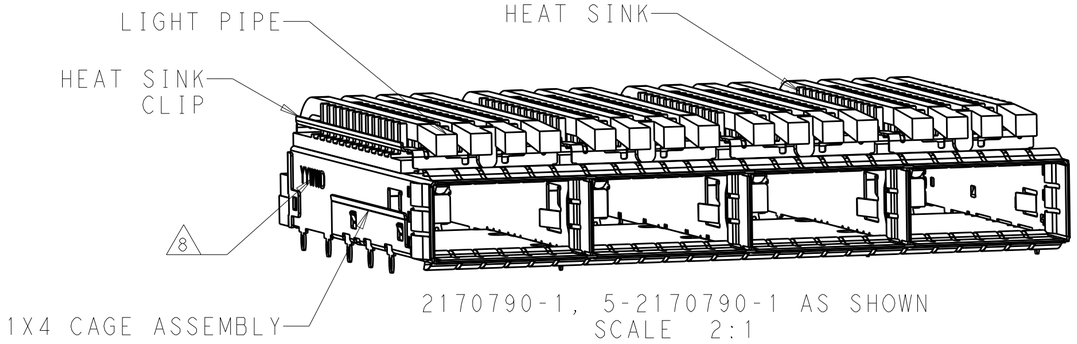
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REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	A	RELEASE	31OCT2016	JY	SH
	B	REVISED PER ECO-17-008540	07JUN2017	JY	SH



2170790-1, 5-2170790-1 AS SHOWN
SCALE 2:1

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 WITH UL 94 V_0
   ORGANIZER: POLYESTER WITH UL 94 V_0

△2 REFERENCE APPLICATION SPECIFICATION 114-32023 FOR RECOMMENDED DRILL HOLE DIAMETER AND PLATING THICKNESS

△3 DATUM AND BASIC DIMENSION ESTABLISHED BY CUSTOMER

△4 DIMENSION APPLIES WITH MODULE INSERTED IN CAGE

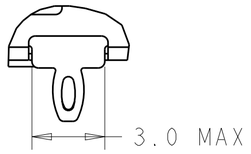
5. HEAT SINKS, HEAT SINK CLIPS AND LIGHT PIPES ARE SHIPPED ASSEMBLED ON CAGE

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

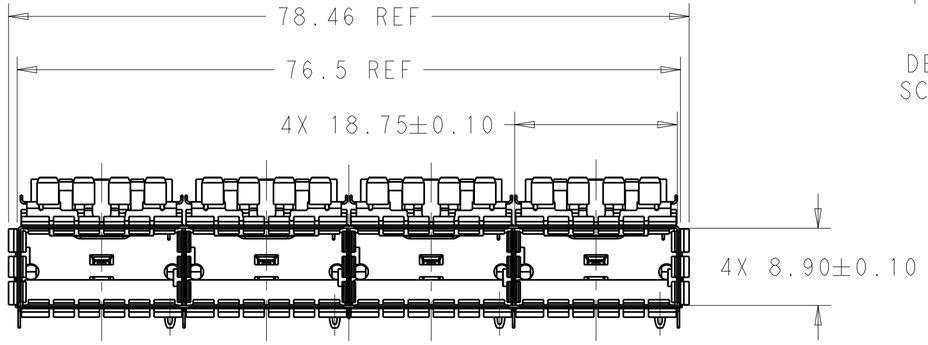
7. MATES WITH QSFP28 MSA COMPATIBLE TRANSCEIVER.

△8 DATE CODE (YYWWD) MARKED APPROXIMATELY AS SHOWN.

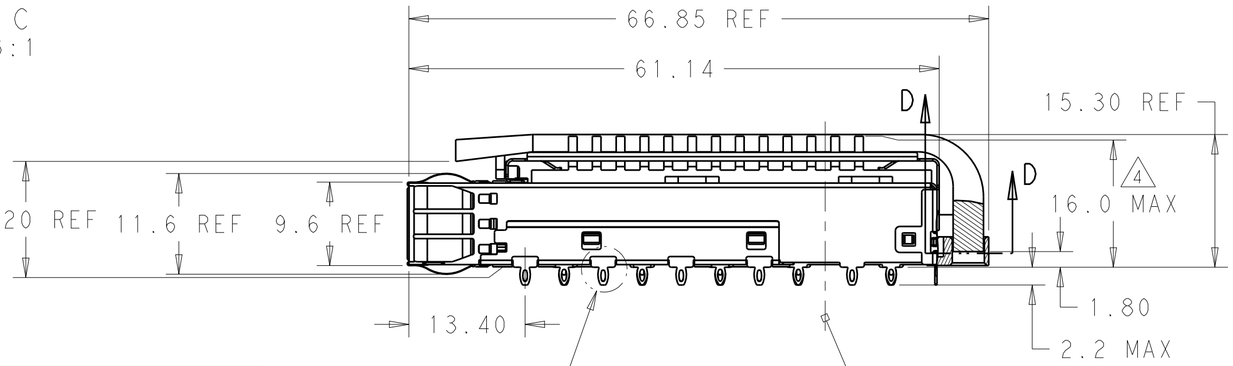
△9 THESE SPEC ARE OPTIONAL WHEN THE LIGHT PIPES ARE REMOVED.



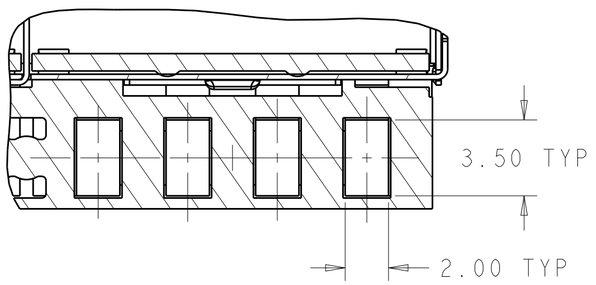
DETAIL C
SCALE 6:1



SCALE 2:1



SECTION A-A



SURFACE OF LIGHT INPUT
SECTION D-D
SCALE 5:1

W/ COATING	CUSTOMERIZED HS	5-2170790-5
W/ COATING	CUSTOMERIZED HS	5-2170790-4
W/ COATING	CUSTOMERIZED HS	5-2170790-3
W/ COATING	CUSTOMERIZED HS	5-2170790-2
W/ COATING	SAN HS	5-2170790-1
N/A	CUSTOMERIZED HS	2170790-7
N/A	CUSTOMERIZED HS	2170790-6
W/O COATING	CUSTOMERIZED HS	2170790-5
W/O COATING	CUSTOMERIZED HS	2170790-4
W/O COATING	CUSTOMERIZED HS	2170790-3
W/O COATING	CUSTOMERIZED HS	2170790-2
W/O COATING	SAN HS	2170790-1
LP OPTION	HS 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 ±-

MATERIAL SEE NOTES -

FINISH SEE NOTES -

DWN JASON YANG 30JUN2014
CHK SEAN HAN 19FEB2016
APVD -
PRODUCT SPEC 108-19428
APPLICATION SPEC 114-32023
WEIGHT -

CUSTOMER DRAWING

TE Connectivity

NAME CAGE ASSEMLBY, QSFP28, 1X4 WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, SPRING

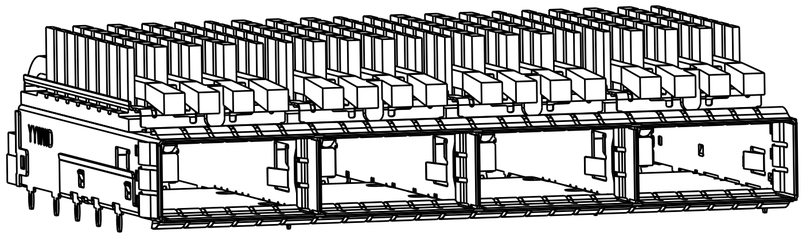
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A2	00779	C-2170790	-

SCALE 3:1 SHEET 1 OF 11 REV B

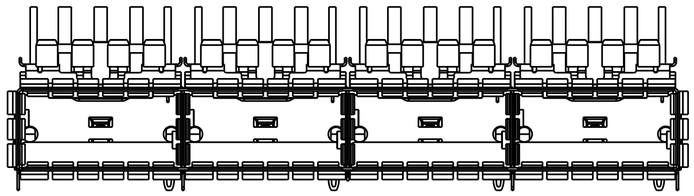
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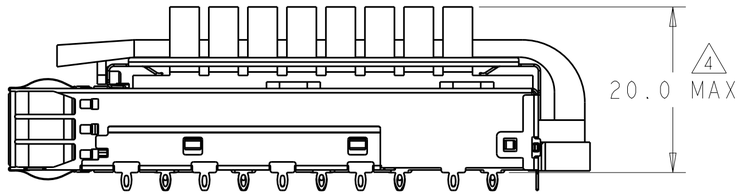
REVISIONS

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



2170790-2, 5-2170790-2 AS SHOWN
CUSTOMERIZED HEAT SINK
SCALE 2:1





2170790-2, 5-2170790-2
UNSPECIFIED DIMENSIONS ARE SAME AS 2170790-1
SCALE 2:1

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±-
1 PLC ±0.25
2 PLC ±0.2
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL SEE NOTES -
FINISH SEE NOTES -

DWN JASON YANG 30JUN2014
CHK SEAN HAN 19FEB2016
APVD - -
PRODUCT SPEC 108-19428
APPLICATION SPEC 114-32023
WEIGHT -

CUSTOMER DRAWING

TE Connectivity

NAME CAGE ASSEMLBY, QSFP28, 1X4 WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, SPRING

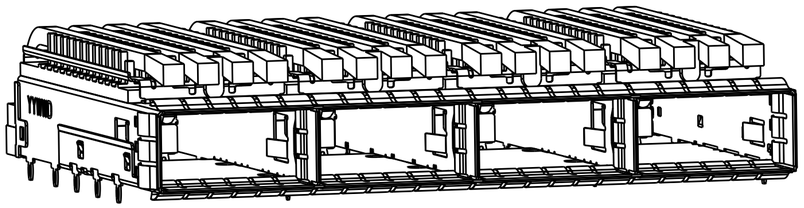
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SCALE 3:1 SHEET 2 OF 11 REV B

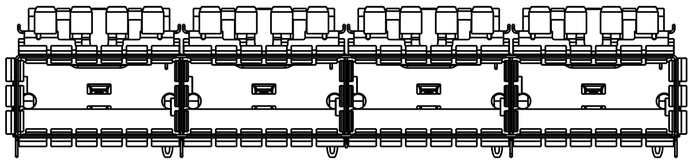
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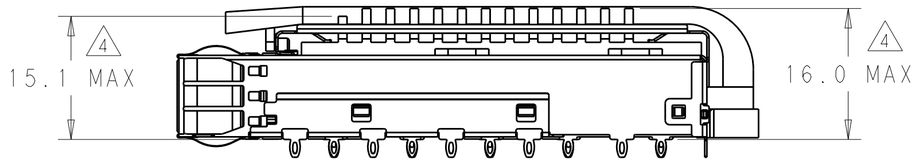
REVISIONS

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



2170790-3, 5-2170790-3 AS SHOWN
CUSTOMERIZED HEAT SINK
SCALE 2:1





2170790-3, 5-2170790-3
UNSPECIFIED DIMENSIONS ARE SAME AS 2170790-1
SCALE 2:1

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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 ±-

MATERIAL SEE NOTES -
FINISH SEE NOTES -

DWN JASON YANG 30JUN2014
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APVD - -
PRODUCT SPEC 108-19428
APPLICATION SPEC 114-32023
WEIGHT -

TE Connectivity

NAME CAGE ASSEMLBY, QSFP28, 1X4 WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, SPRING

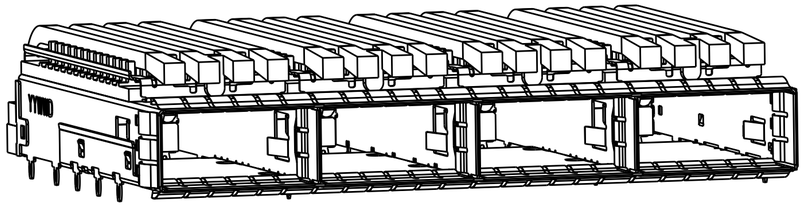
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CUSTOMER DRAWING | SCALE 3:1 | SHEET 3 OF 11 | REV B

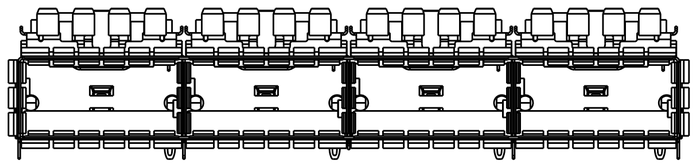
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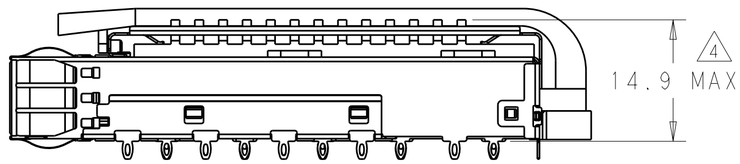
REVISIONS

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



2170790-4, 5-2170790-4 AS SHOWN
CUSTOMERIZED HEAT SINK
SCALE 2:1





2170790-4, 5-2170790-4
UNSPECIFIED DIMENSIONS ARE SAME AS 2170790-1
SCALE 2:1

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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 ±-

MATERIAL SEE NOTES -

FINISH SEE NOTES -

DWN JASON YANG 30JUN2014
CHK SEAN HAN 19FEB2016
APVD - -
PRODUCT SPEC 108-19428
APPLICATION SPEC 114-32023
WEIGHT -

CUSTOMER DRAWING

TE Connectivity

NAME CAGE ASSEMLBY, QSFP28, 1X4 WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, SPRING

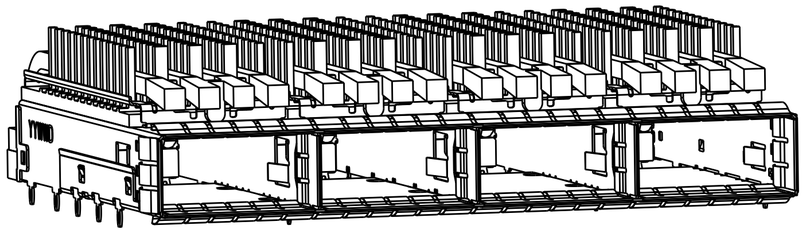
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SCALE 3:1 SHEET 4 OF 11 REV B

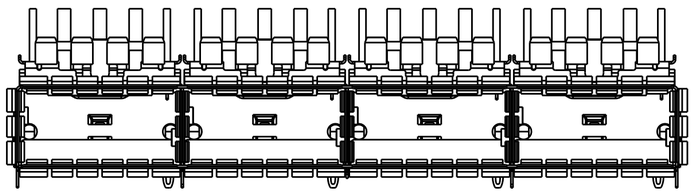
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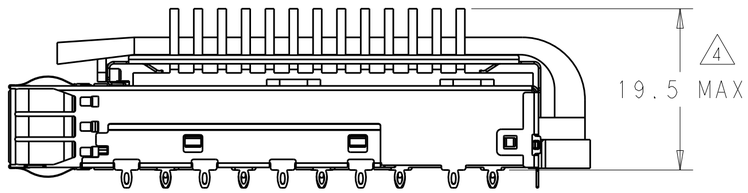
REVISIONS

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



2170790-5, 5-2170790-5 AS SHOWN
CUSTOMERIZED HEAT SINK
SCALE 2:1





2170790-5, 5-2170790-5
UNSPECIFIED DIMENSIONS ARE SAME AS 2170790-1
SCALE 2:1

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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 ±-

MATERIAL SEE NOTES -
FINISH SEE NOTES -

DWN JASON YANG 30JUN2014
CHK SEAN HAN 19FEB2016
APVD - -
PRODUCT SPEC 108-19428
APPLICATION SPEC 114-32023
WEIGHT -

TE Connectivity

NAME CAGE ASSEMLBY, QSFP28, 1X4 WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, SPRING

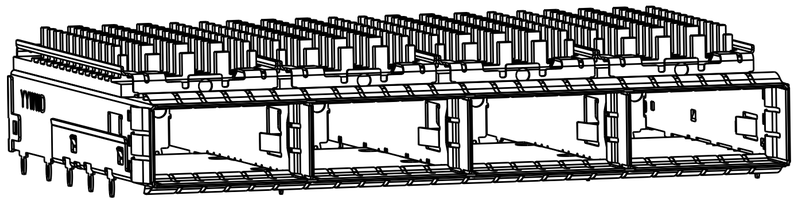
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CUSTOMER DRAWING | SCALE 3:1 | SHEET 5 OF 11 | REV B

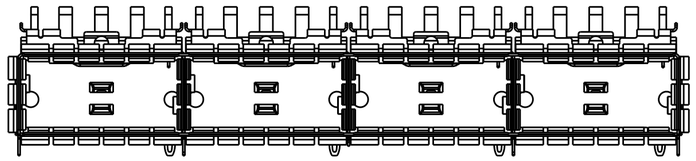
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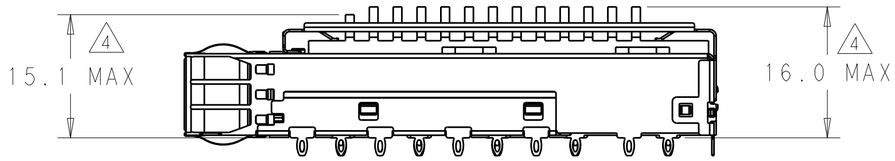
REVISIONS

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



2170790-6 AS SHOWN
CUSTOMERIZED HEAT SINK
NO LIGHT PIPE AND ORGANIZER.
SCALE 2:1





2170790-6
UNSPECIFIED DIMENSIONS ARE SAME AS 2170790-3
SCALE 2:1

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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 ±-

MATERIAL SEE NOTES -
FINISH SEE NOTES -

DWN JASON YANG 30JUN2014
CHK SEAN HAN 19FEB2016
APVD - -
PRODUCT SPEC 108-19428
APPLICATION SPEC 114-32023
WEIGHT -

TE Connectivity

NAME CAGE ASSEMLBY, QSFP28, 1X4 WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, SPRING

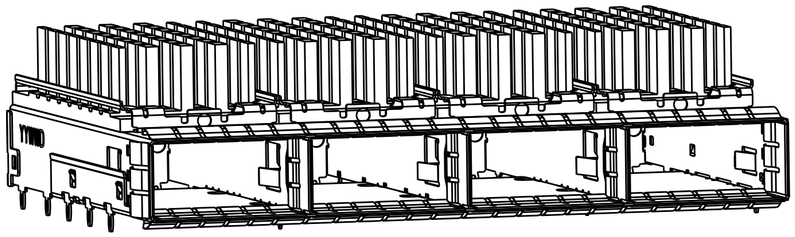
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CUSTOMER DRAWING | SCALE 3:1 | SHEET 6 OF 11 | REV B

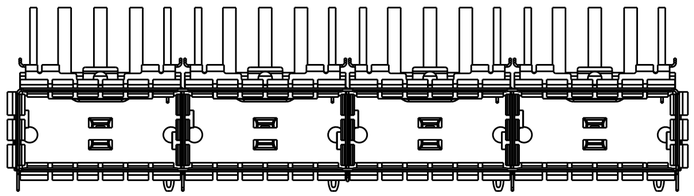
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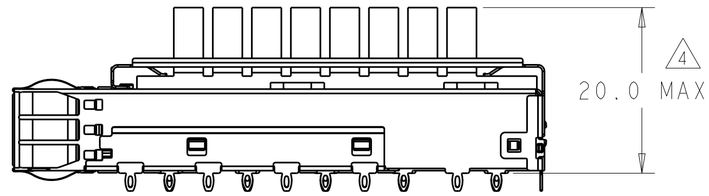
REVISIONS

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



2170790-7 AS SHOWN
CUSTOMERIZED HEAT SINK
NO LIGHT PIPE AND ORGANIZER
SCALE 2:1





2170790-7
UNSPECIFIED DIMENSIONS ARE SAME AS 2170790-2
SCALE 2:1

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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 ±-

MATERIAL SEE NOTES -

FINISH SEE NOTES -

DWN JASON YANG 30JUN2014
CHK SEAN HAN 19FEB2016
APVD - -
PRODUCT SPEC 108-19428
APPLICATION SPEC 114-32023
WEIGHT -

CUSTOMER DRAWING

TE Connectivity

NAME CAGE ASSEMLBY, QSFP28, 1X4 WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, SPRING

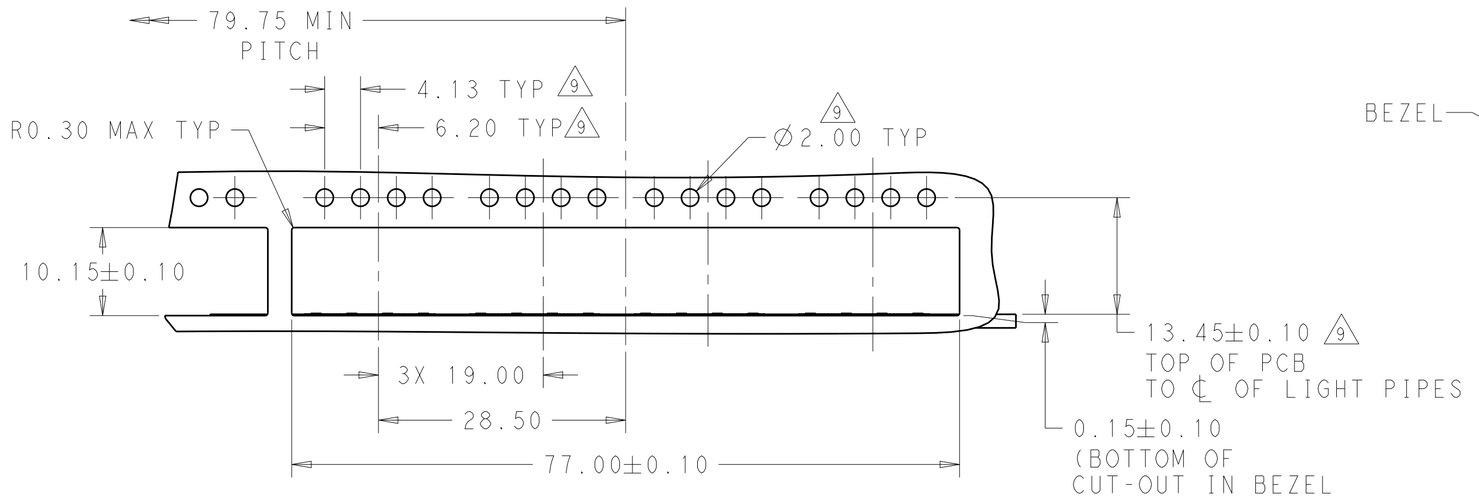
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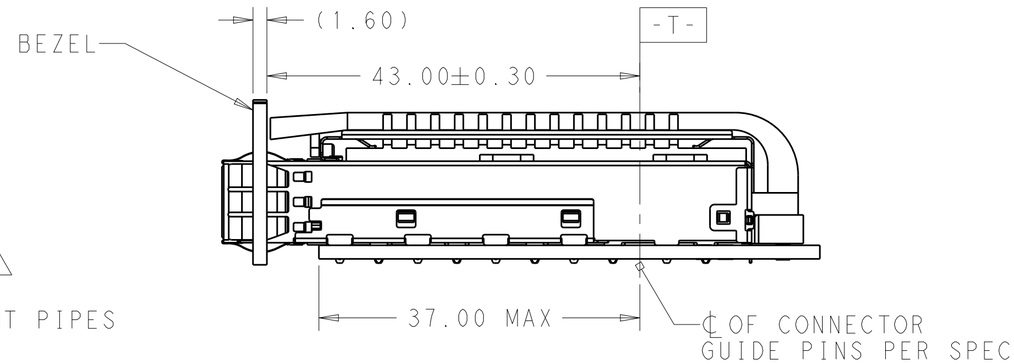
SCALE 3:1 SHEET 7 OF 11 REV B

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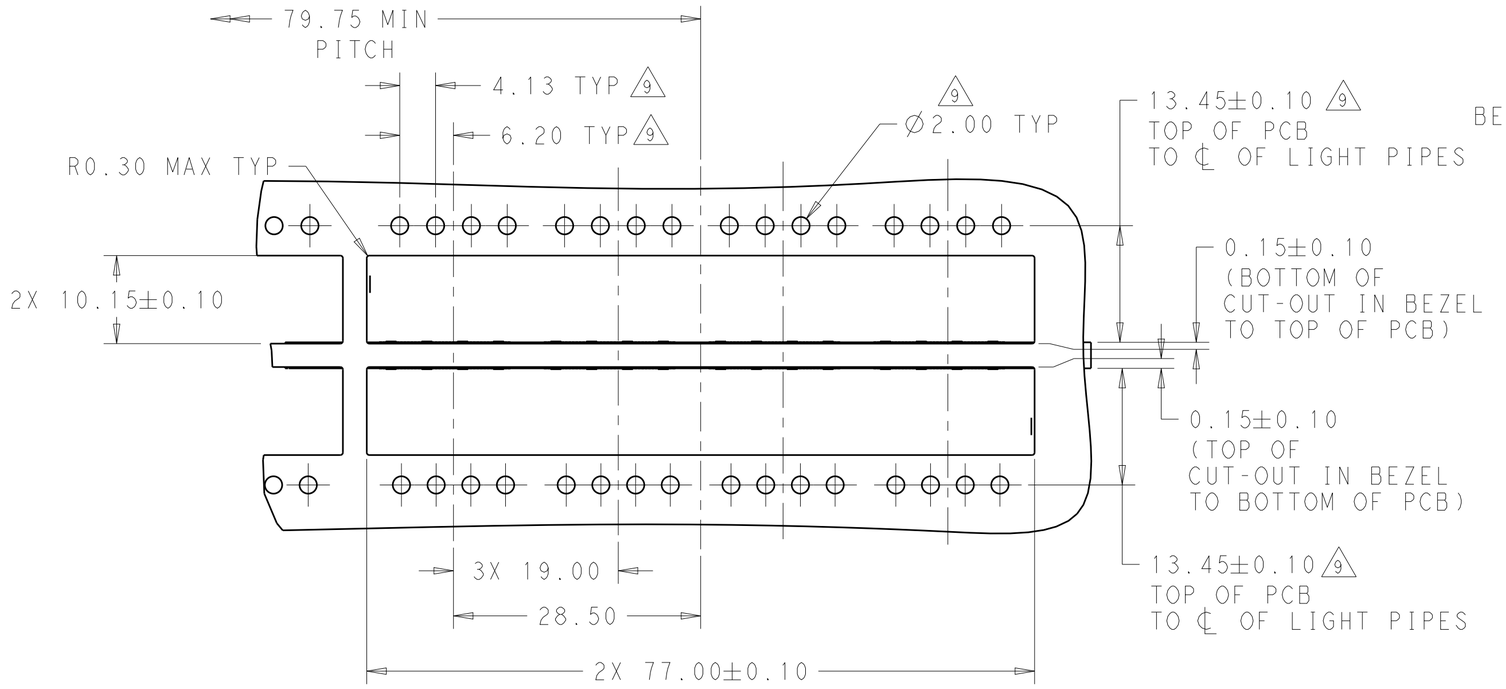
REVISIONS

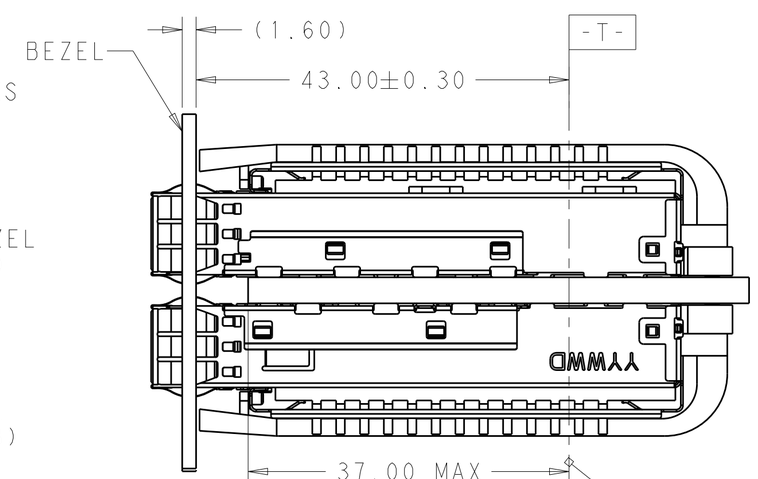
P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-





SINGLE SIDE MOUNTING
SCALE 2:1



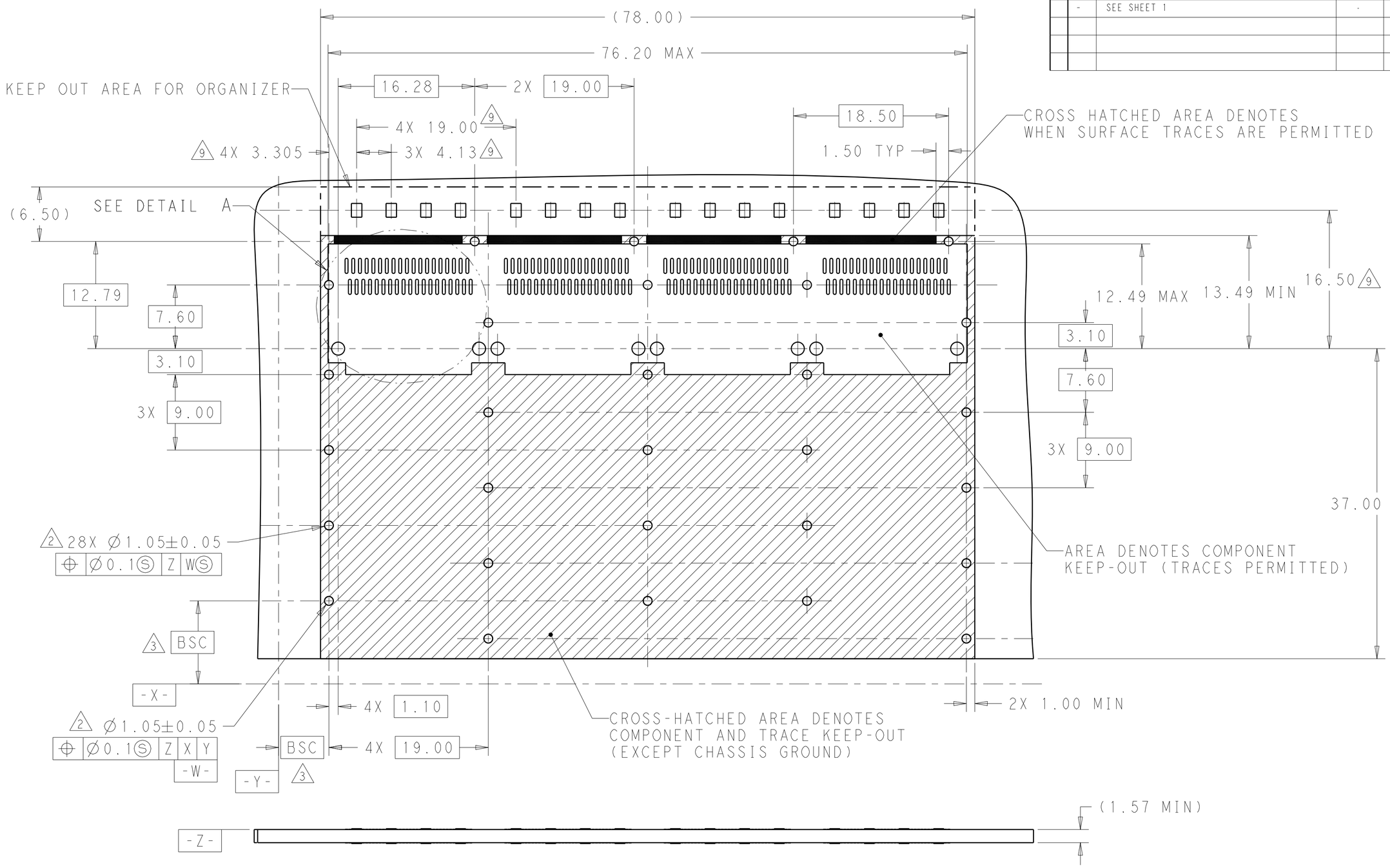


BELLY TO BELLY MOUNTING
SCALE 2:1

THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN 30JUN2014 JASON YANG CHK 19FEB2016 SEAN HAN APVD - PRODUCT SPEC 108-19428 APPLICATION SPEC 114-32023 WEIGHT -	TE Connectivity
DIMENSIONS: mm	TOLERANCES UNLESS OTHERWISE SPECIFIED: 0 PLC ±- 1 PLC ±0.25 2 PLC ±0.2 3 PLC ±- 4 PLC ±- ANGLES ±-		NAME CAGE ASSEMLBY, QSFP28, 1X4 WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, SPRING
MATERIAL SEE NOTES -	FINISH SEE NOTES -		SIZE A2 · CAGE CODE 00779 · DRAWING NO C-2170790 · RESTRICTED TO -
		CUSTOMER DRAWING	SCALE 3:1 · SHEET 8 OF 11 · REV B

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



RECOMMENDED PCB LAYOUT
SINGLE SIDE MOUNTED CONFIGURATION
PCB TOLERANCE: ±0.05
SCALE 3:1

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±-
1 PLC ±0.25
2 PLC ±0.2
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL SEE NOTES -

FINISH SEE NOTES -

DWN JASON YANG 30JUN2014
CHK SEAN HAN 19FEB2016
APVD - -
PRODUCT SPEC 108-19428
APPLICATION SPEC 114-32023
WEIGHT -

CUSTOMER DRAWING

TE Connectivity

NAME CAGE ASSEMLBY, QSFP28, 1X4 WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, SPRING

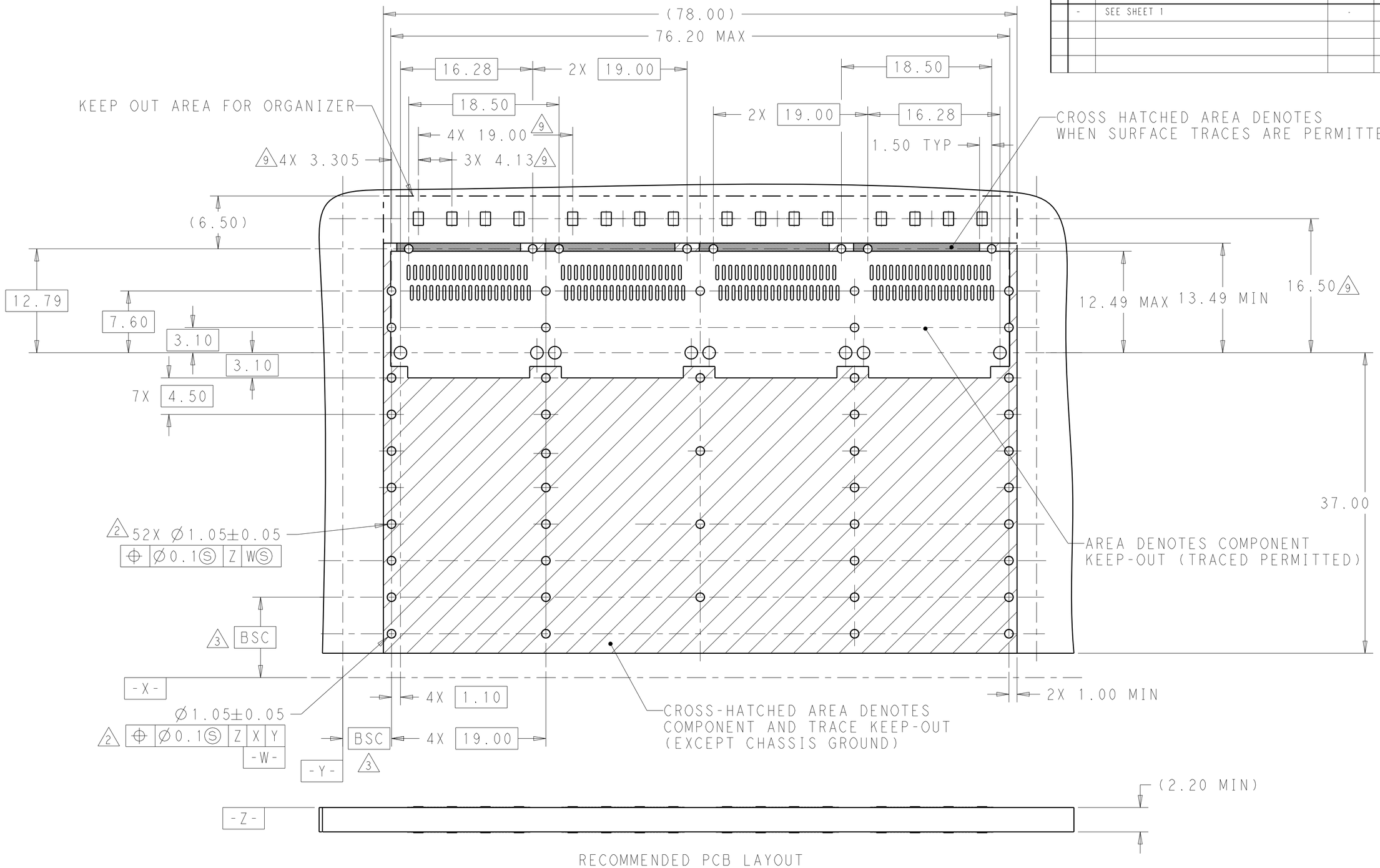
SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	00779	C-2170790	-

SCALE 1:1 SHEET 9 OF 11 REV B

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REVISIONS

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



RECOMMENDED PCB LAYOUT
BELLY TO BELLY MOUNTED CONFIGURATION
PCB TOLERANCE: ±0.05
SCALE 3:1

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±-
1 PLC ±0.25
2 PLC ±0.2
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL SEE NOTES -

FINISH SEE NOTES -

DWN JASON YANG 30JUN2014
CHK SEAN HAN 19FEB2016
APVD - -
PRODUCT SPEC 108-19428
APPLICATION SPEC 114-32023
WEIGHT -

CUSTOMER DRAWING

TE Connectivity

NAME CAGE ASSEMLBY, QSFP28, 1X4 WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, SPRING

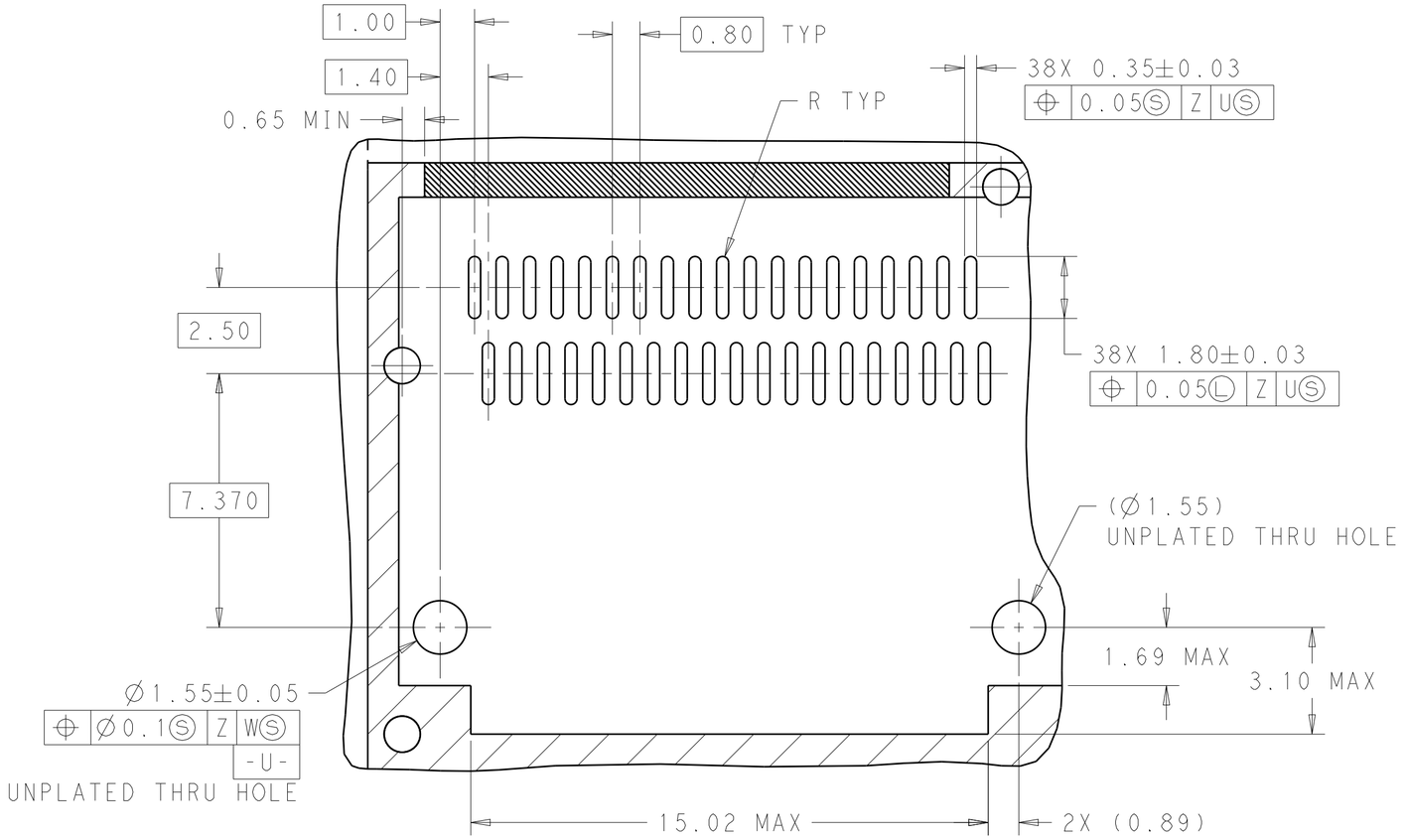
SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	00779	C-2170790	-

SCALE 1:1 SHEET 10 OF 11 REV B

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REVISIONS

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



DETAIL A
RECOMMENDED CONNECTOR LAYOUT
(APPLIES TO ALL PCB LAYOUTS)
4X INDIVIDUALLY
SCALE 8:1

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±-
1 PLC ±0.25
2 PLC ±0.2
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL SEE NOTES -

FINISH SEE NOTES -

DWN JASON YANG 30JUN2014
CHK SEAN HAN 19FEB2016
APVD - -
PRODUCT SPEC 108-19428
APPLICATION SPEC 114-32023
WEIGHT -

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