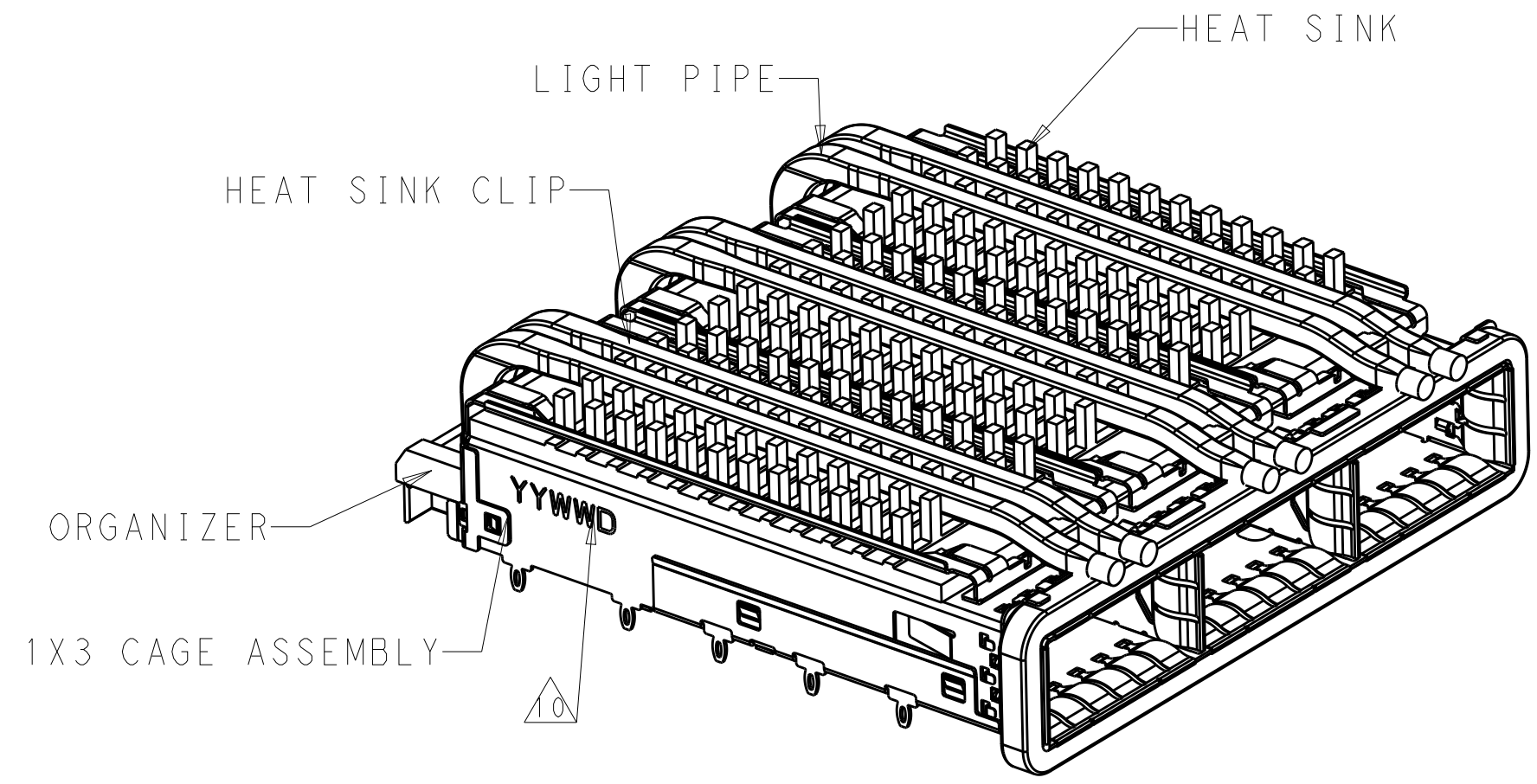


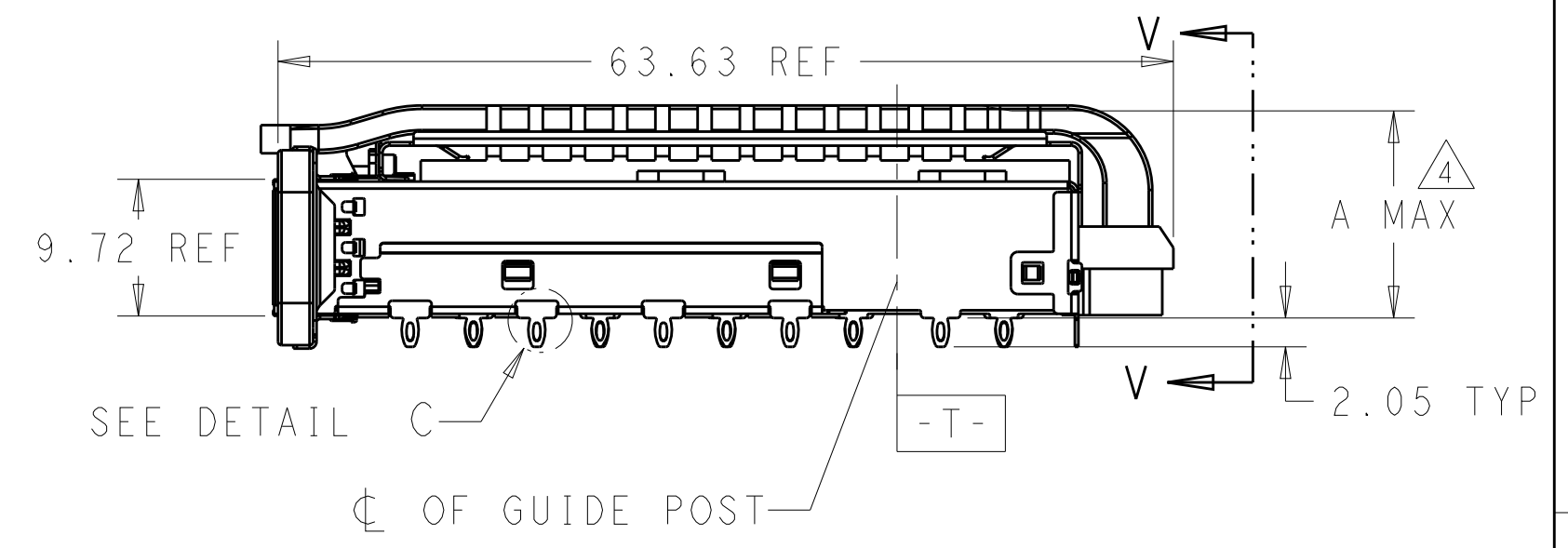
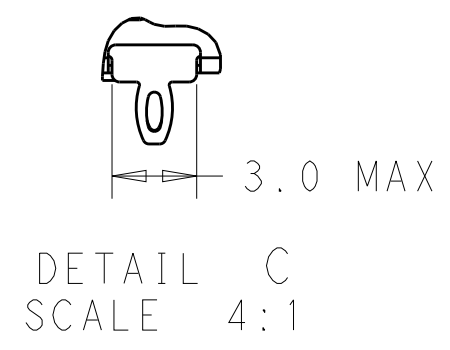
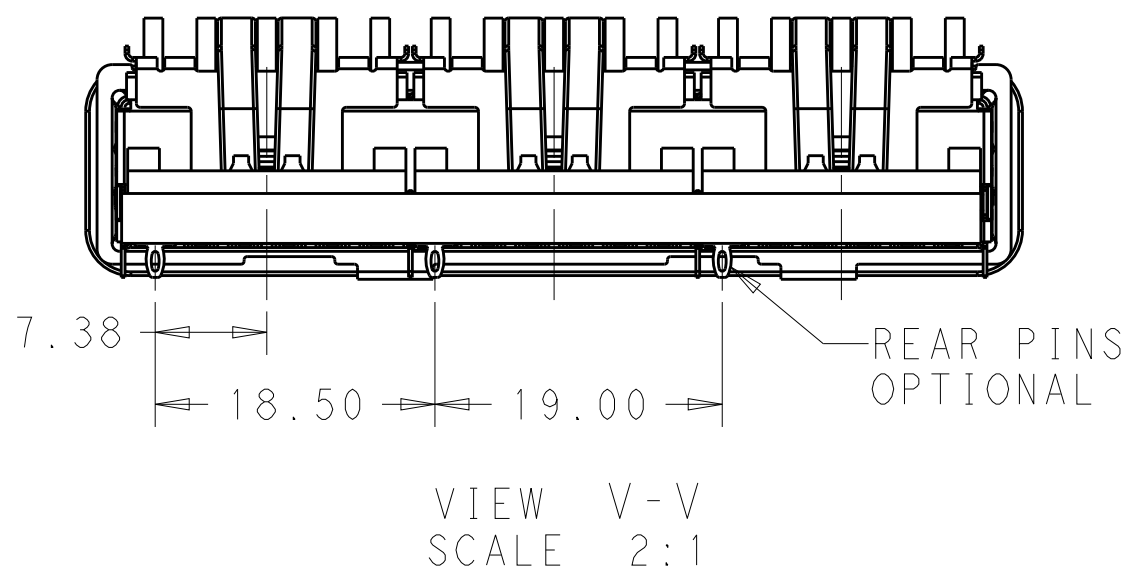
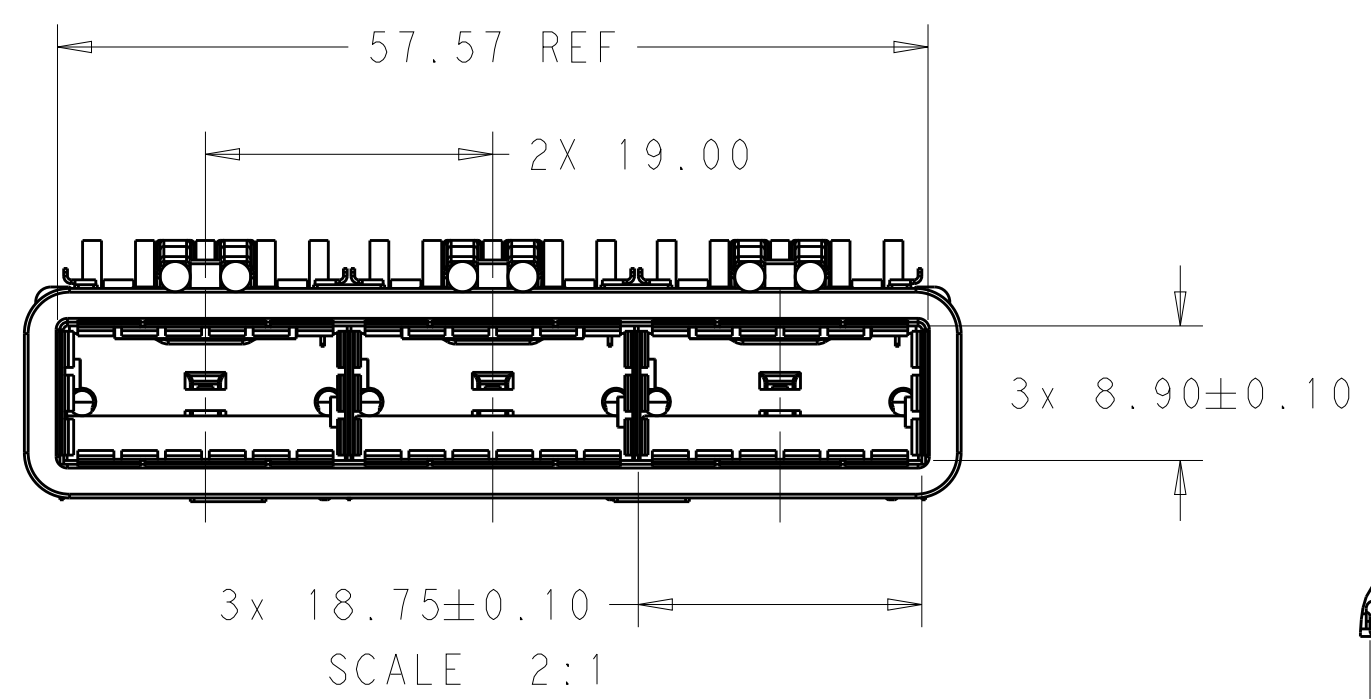
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| GP  | 00   | P         | LTR | DESCRIPTION               | DATE      | DWN | APVD |
|     |      | A         |     | RELEASE                   | 31DEC2015 | JY  | SH   |
|     |      | A1        |     | REVISED PER ECO-19-016043 | 21OCT2019 | SH  | SH   |



2-2170769-2 AS SHOWN  
SCALE 2:1

- 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
- REFERENCE APPLICATION SPECIFICATION 114-32023 FOR RECOMMENDED DRILL HOLE DIAMETER AND PLATING THICKNESS
- DATUM AND BASIC DIMENSION ESTABLISHED BY CUSTOMER
- DIMENSION APPLIES WITH MODULE INSERTED IN CAGE
- HEAT SINKS, HEAT SINK CLIPS AND LIGHT PIPES ARE SHIPPED ASSEMBLED ON CAGE
- MINIMUM PC BOARD THICKNESS:  
 SINGLE SIDED: 1.57 MIN  
 DOUBLE SIDED: 3.00 MIN
- DATUM **-A-** IS TOP SURFACE OF THE HOST BOARD.
- THESE HOLES ARE OPTIONAL WHEN THE REAR PINS ARE REMOVED.
- MATES WITH QSFP28 MSA COMPATIBLE TRANSCEIVER.
- DATE CODE (YYWWD) MARKED APPROXIMATELY AS SHOWN.
- NOTED DIMENSIONS ONLY APPLY TO CAGE ASSEMBLY WITH LIGHT PIPE.

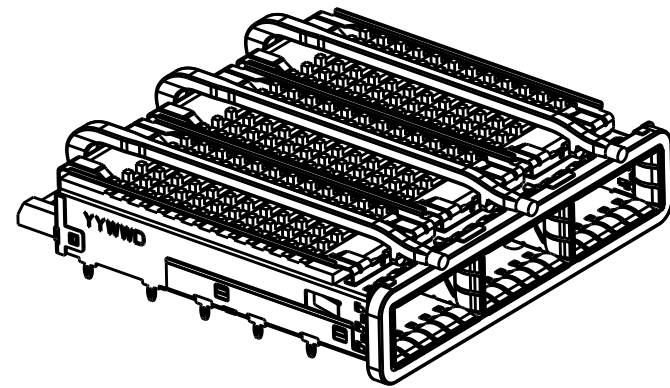


|  |  |                            |  |
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| THIS DRAWING IS A CONTROLLED DOCUMENT. |  | DWN BING LIU 23APR2014     | TE Connectivity  |
| DIMENSIONS: mm                         |  | CHK JASON YANG 23APR2014   |  |
| TOLERANCES UNLESS OTHERWISE SPECIFIED: |  | APVD SEAN HAN 31DEC2015    | NAME RECEPTACLE CAGE ASSEMBLY WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, 1X3, QSFP28 |
| 0 PLC ±                                |  | PRODUCT SPEC 108-19428     | SIZE CAGE CODE DRAWING NO RESTRICTED TO  |
| 1 PLC ±0.25                            |  | APPLICATION SPEC 114-32023 | A200779 C-2170769  |
| 2 PLC ±0.2                             |  | WEIGHT -                   | SCALE 3:1 SHEET 1 OF 9 REV A1  |
| 3 PLC ±                                |  | CUSTOMER DRAWING           |  |
| 4 PLC ±                                |  |                            |  |
| ANGLES ±                               |  |                            |  |
| FINISH ±                               |  |                            |  |
| SEE NOTES                              |  | SEE NOTES                  |  |

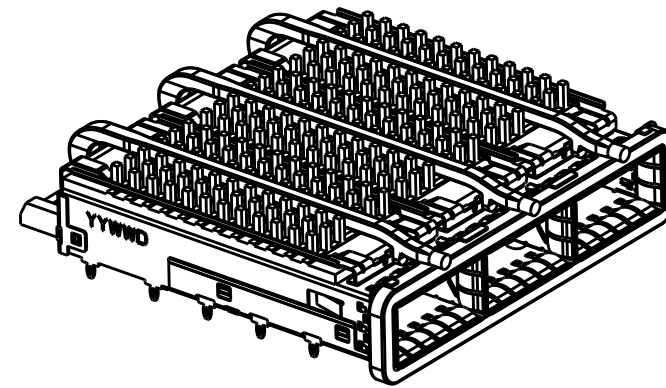
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| -   |     | SEE SHEET 1 |  | -         | -   | -    |  |
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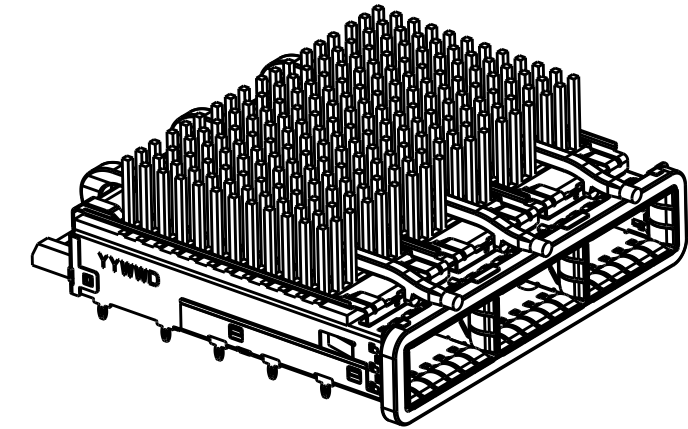
### HEAT SINK OPTION



SCALE 1:1

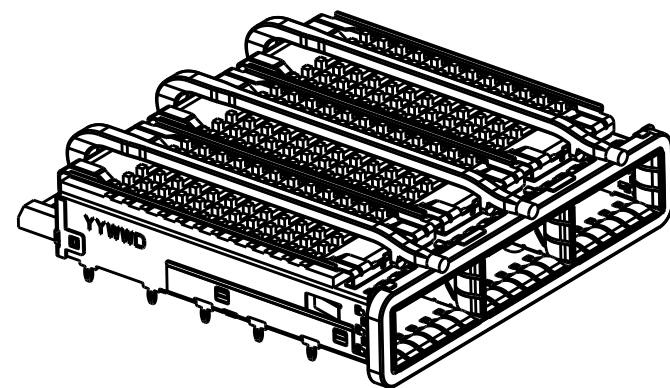


SCALE 1:1

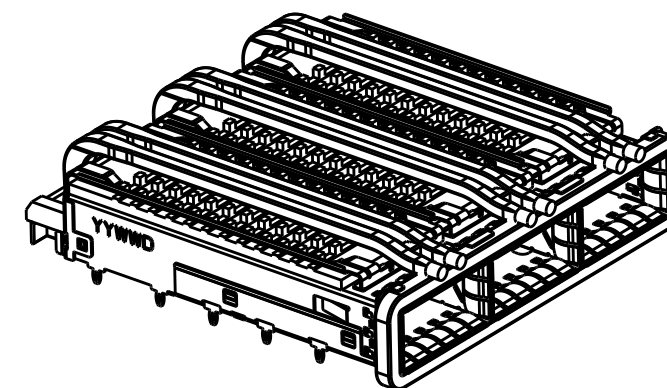


SCALE 1:1

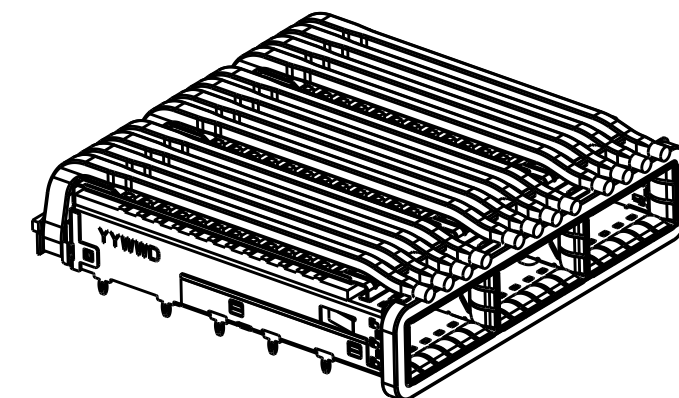
### LIGHT PIPE OPTION



SCALE 1:1

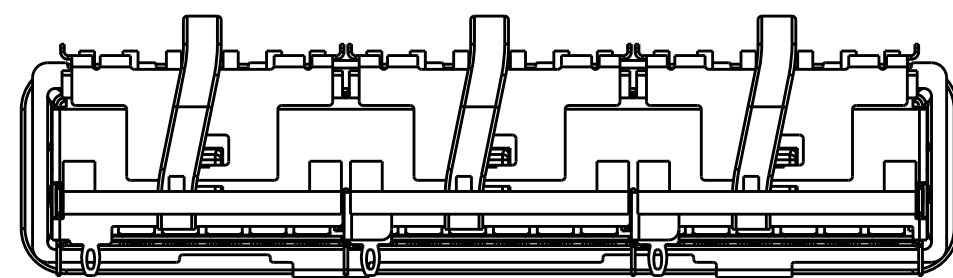


SCALE 1:1

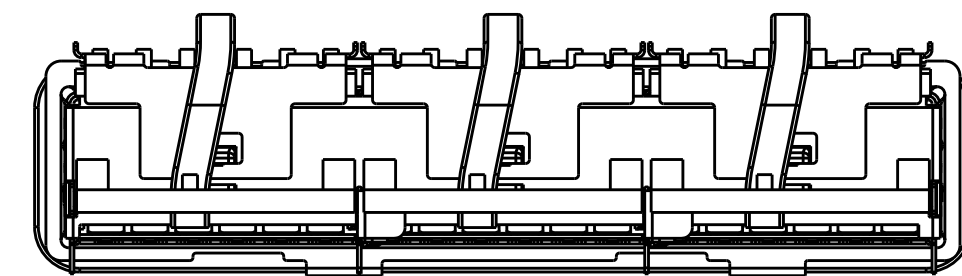


SCALE 1:1

### # OF REAR PIN OPTION



1 REAR PIN  
SCALE 2:1




0 REAR PIN  
SCALE 2:1

|  |  |                                |   |
|--|--|--------------------------------|---|
| THIS DRAWING IS A CONTROLLED DOCUMENT.   |  | DWN<br>BING LIU<br>23APR2014   | <b>STE</b> TE Connectivity  |
|  |  | CHK<br>JASON YANG<br>23APR2014 |   |
| DIMENSIONS:<br>mm  |  | APVD<br>SEAN HAN<br>31DEC2015  | NAME<br>RECEPTACLE CAGE ASSEMBLY<br>WITH HEAT SINKS AND LIGHT PIPES,<br>THRU BEZEL, 1X3, QSFP28 |
| TOLERANCES UNLESS OTHERWISE SPECIFIED:<br>0 PLC ±<br>1 PLC ±0.25<br>2 PLC ±0.2<br>3 PLC ±<br>4 PLC ±<br>ANGLES ±<br>FINISH |  | PRODUCT SPEC<br>108-19428      | SIZE<br>A2  |
| MATERIAL<br>SEE NOTES<br>material_2  |  | APPLICATION SPEC<br>114-32023  | CAGE CODE<br>00779  |
| FINISH<br>SEE NOTES<br>finish_spec_2   |  | WEIGHT<br>-                    | DRAWING NO<br>C-2170769   |
|  |  | CUSTOMER DRAWING               | RESTRICTED TO<br>-  |
|  |  | SCALE 3:1                      | SHEET 1 OF 9 REV A1   |

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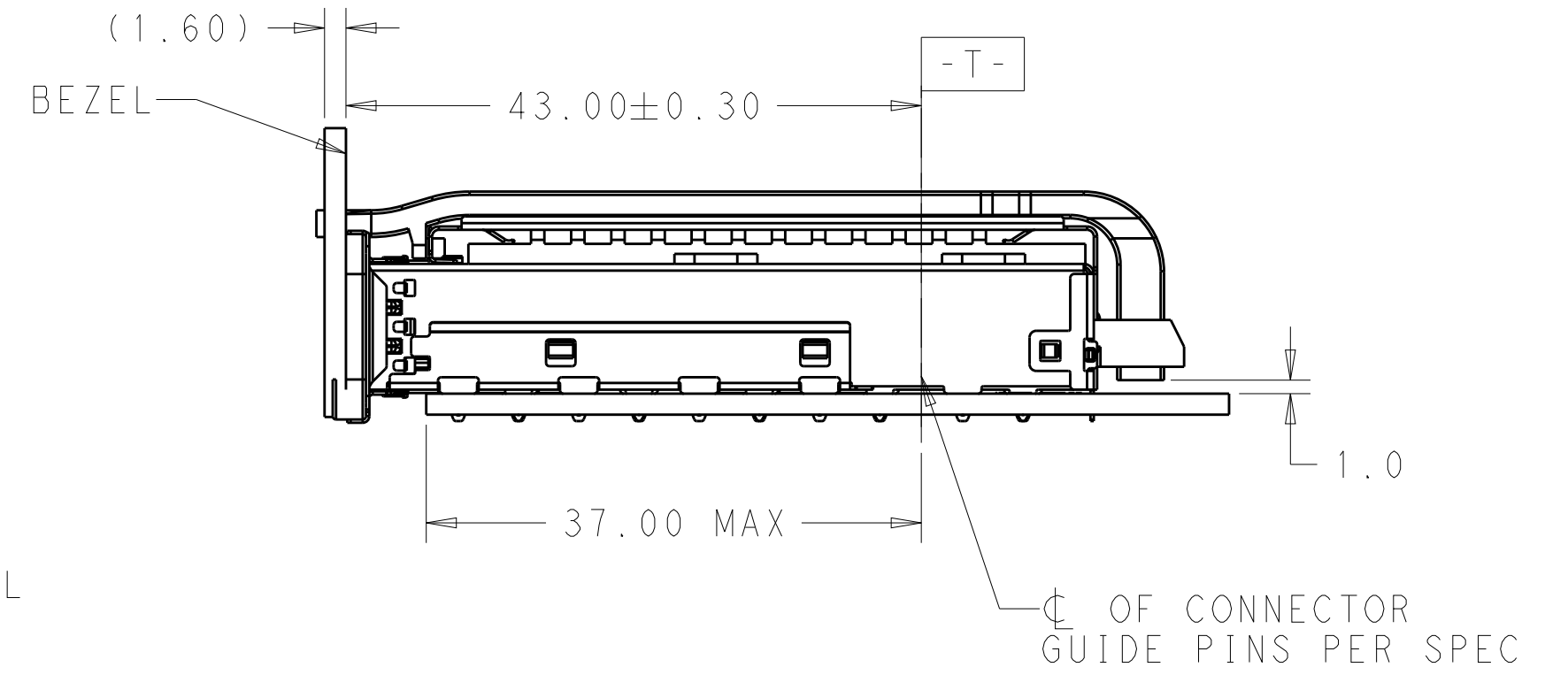
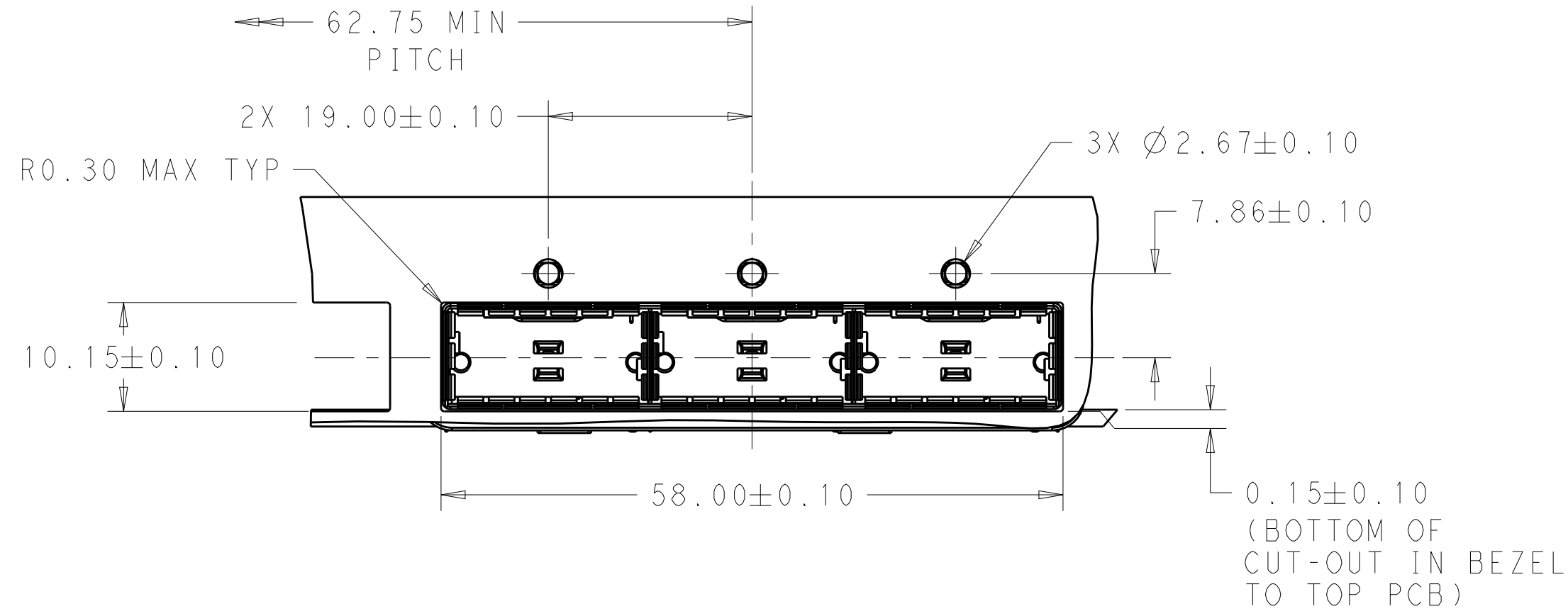
| LOC | DIST | REVISIONS   |      |     |      |
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|     | -    | SEE SHEET 1 | -    | -   | -    |
|     |      |             |      |     |      |
|     |      |             |      |     |      |

|               |       |                   |             |             |
|---------------|-------|-------------------|-------------|-------------|
| 0             | 23.0  | QUAD              | NETWORKING  | 4-2170769-6 |
| 0             | 16.0  | QUAD              | SAN         | 4-2170769-5 |
| 0             | 13.7  | QUAD              | PCI         | 4-2170769-4 |
| 1             | 23.0  | QUAD              | NETWORKING  | 4-2170769-3 |
| 1             | 16.0  | QUAD              | SAN         | 4-2170769-2 |
| 1             | 13.7  | QUAD              | PCI         | 4-2170769-1 |
| 0             | 23.0  | DUAL              | NETWORKING  | 2-2170769-6 |
| 0             | 16.0  | DUAL              | SAN         | 2-2170769-5 |
| 0             | 13.7  | DUAL              | PCI         | 2-2170769-4 |
| 1             | 23.0  | DUAL              | NETWORKING  | 2-2170769-3 |
| 1             | 16.0  | DUAL              | SAN         | 2-2170769-2 |
| 1             | 13.7  | DUAL              | PCI         | 2-2170769-1 |
| 0             | 16.0  | SINGLE            | W/O HS      | 2170769-7   |
| 0             | 23.0  | SINGLE            | NETWORKING  | 2170769-6   |
| 0             | 16.0  | SINGLE            | SAN         | 2170769-5   |
| 0             | 13.7  | SINGLE            | PCI         | 2170769-4   |
| 1             | 23.0  | SINGLE            | NETWORKING  | 2170769-3   |
| 1             | 16.0  | SINGLE            | SAN         | 2170769-2   |
| 1             | 13.7  | SINGLE            | PCI         | 2170769-1   |
| # OF REAR PIN | DIM A | LIGHT PIPE OPTION | APPLICATION | PART NUMBER |

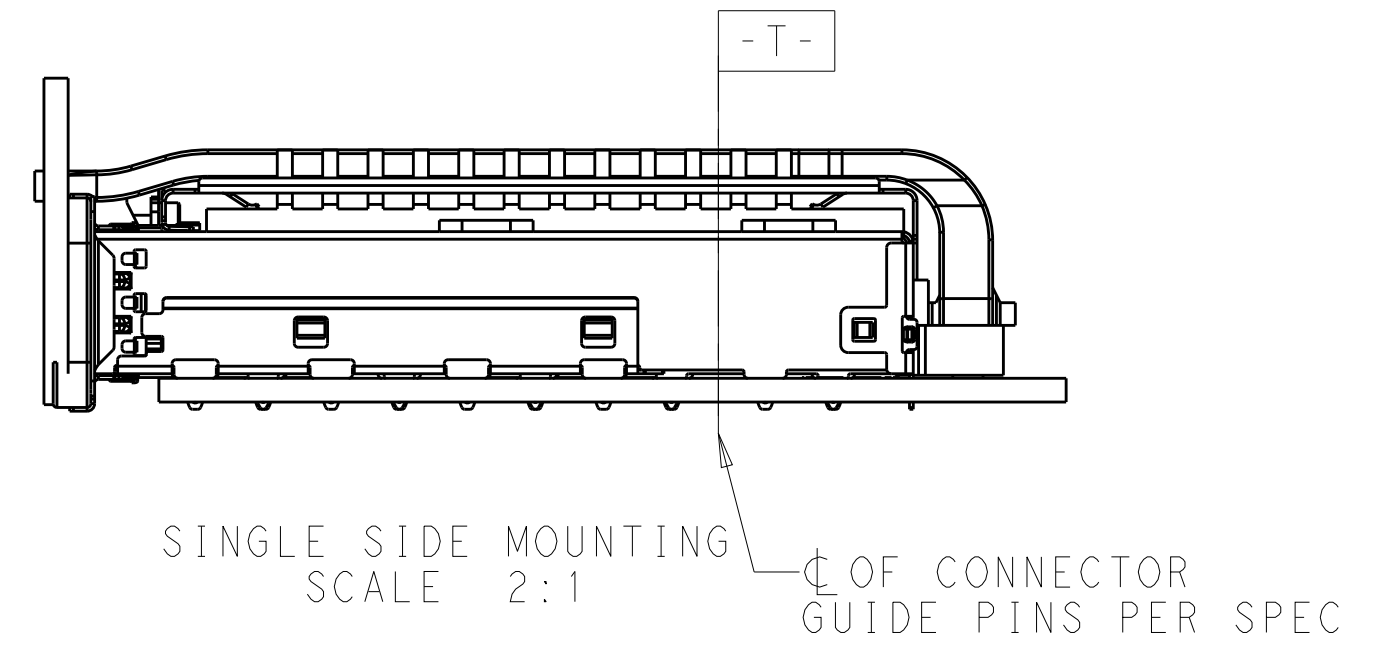
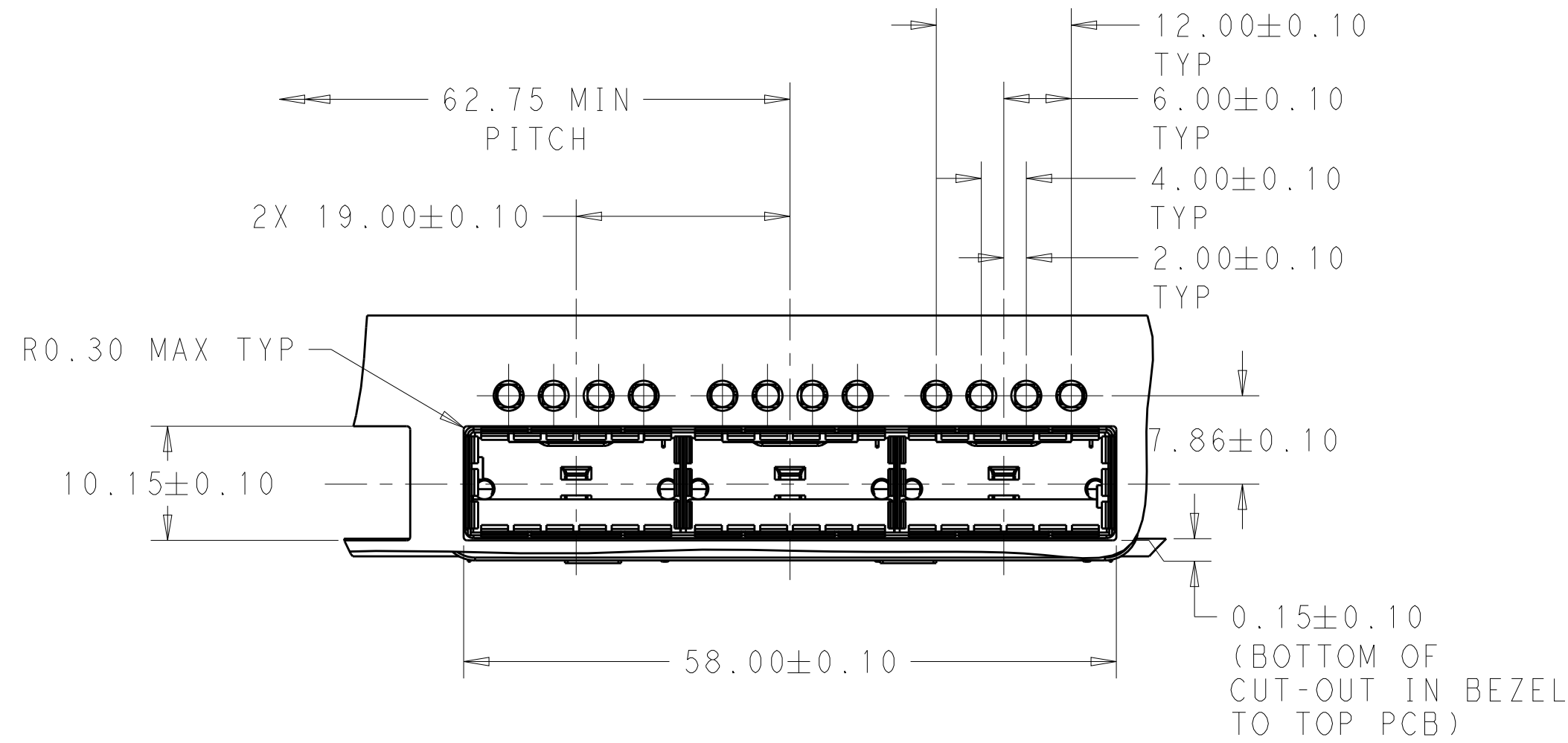
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|  |  | CHK<br>JASON YANG 23APR2014   |   |                         |
| DIMENSIONS:<br>mm  |  | APVD<br>SEAN HAN 31DEC2015    | NAME<br>RECEPTACLE CAGE ASSEMBLY WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, 1X3, QSFP28             |                         |
| TOLERANCES UNLESS OTHERWISE SPECIFIED:<br>0 PLC ±<br>1 PLC ±0.25<br>2 PLC ±0.2<br>3 PLC ±<br>4 PLC ±<br>ANGLES ± |  | PRODUCT SPEC<br>108-19428     | RESTRICTED TO   |                         |
| MATERIAL<br>SEE NOTES material_2   |  | APPLICATION SPEC<br>114-32023 | SIZE<br>A200779   | DRAWING NO<br>C-2170769 |
| FINISH<br>SEE NOTES finish_spec_2  |  | WEIGHT<br>-                   | SCALE<br>3:1  | SHEET<br>1 OF 9         |
|  |  | CUSTOMER DRAWING              | REV A1  |                         |

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| -   | -   | SEE SHEET 1 |  | -         | -   | -    |  |
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SINGLE SIDE MOUNTING  
SCALE 2:1

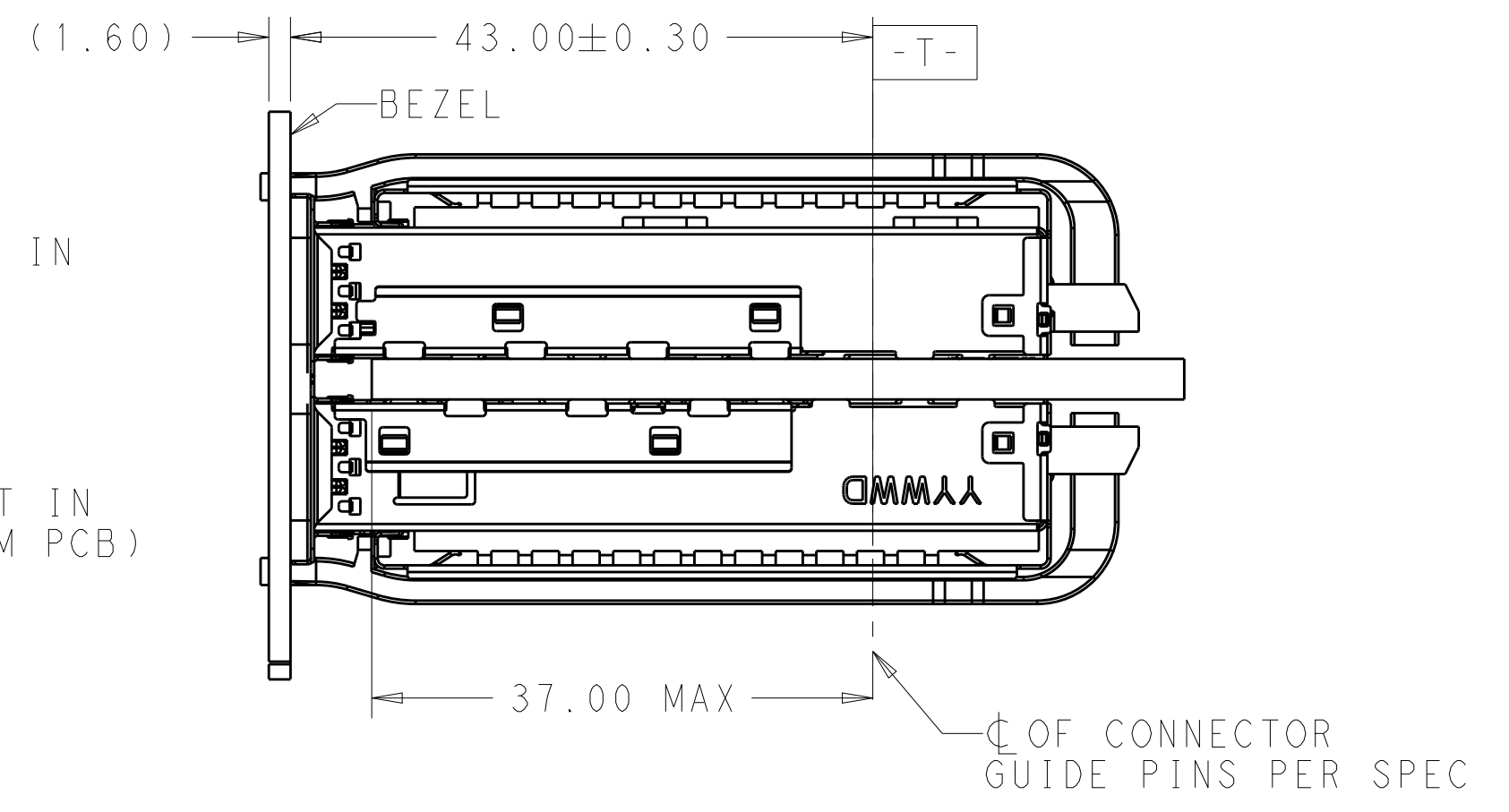
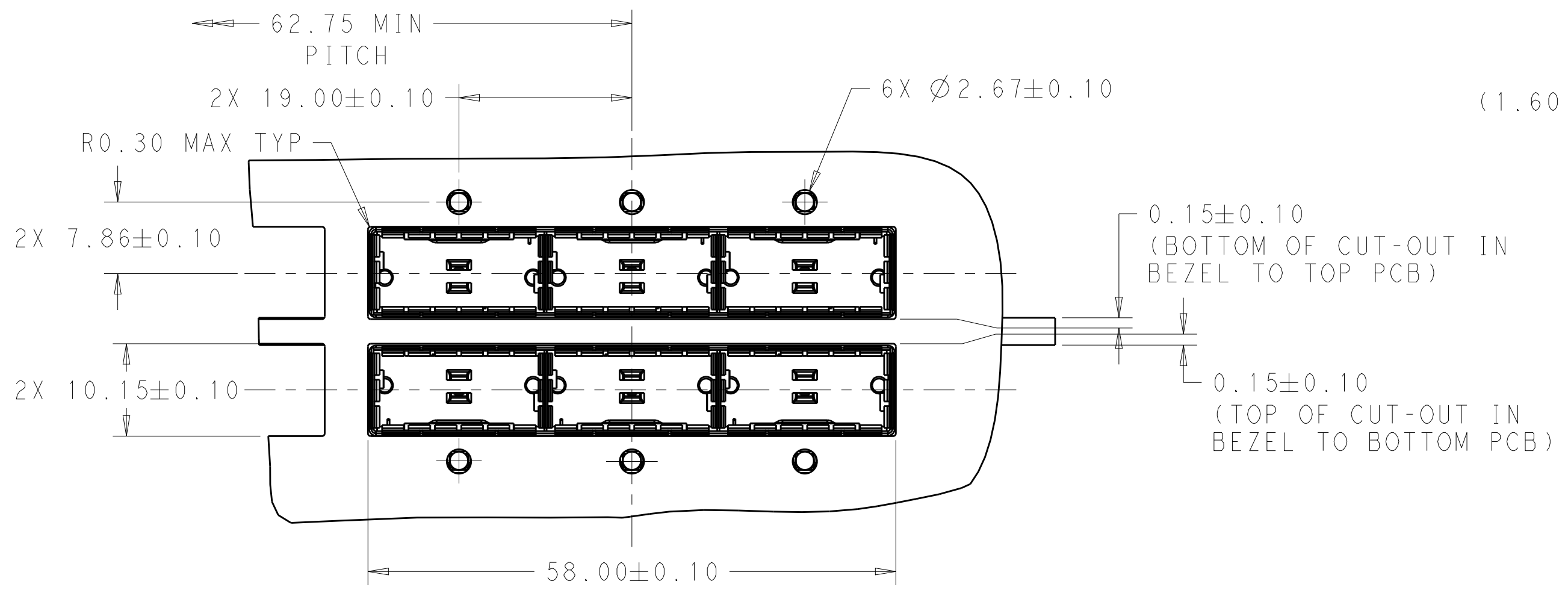


SINGLE SIDE MOUNTING  
SCALE 2:1

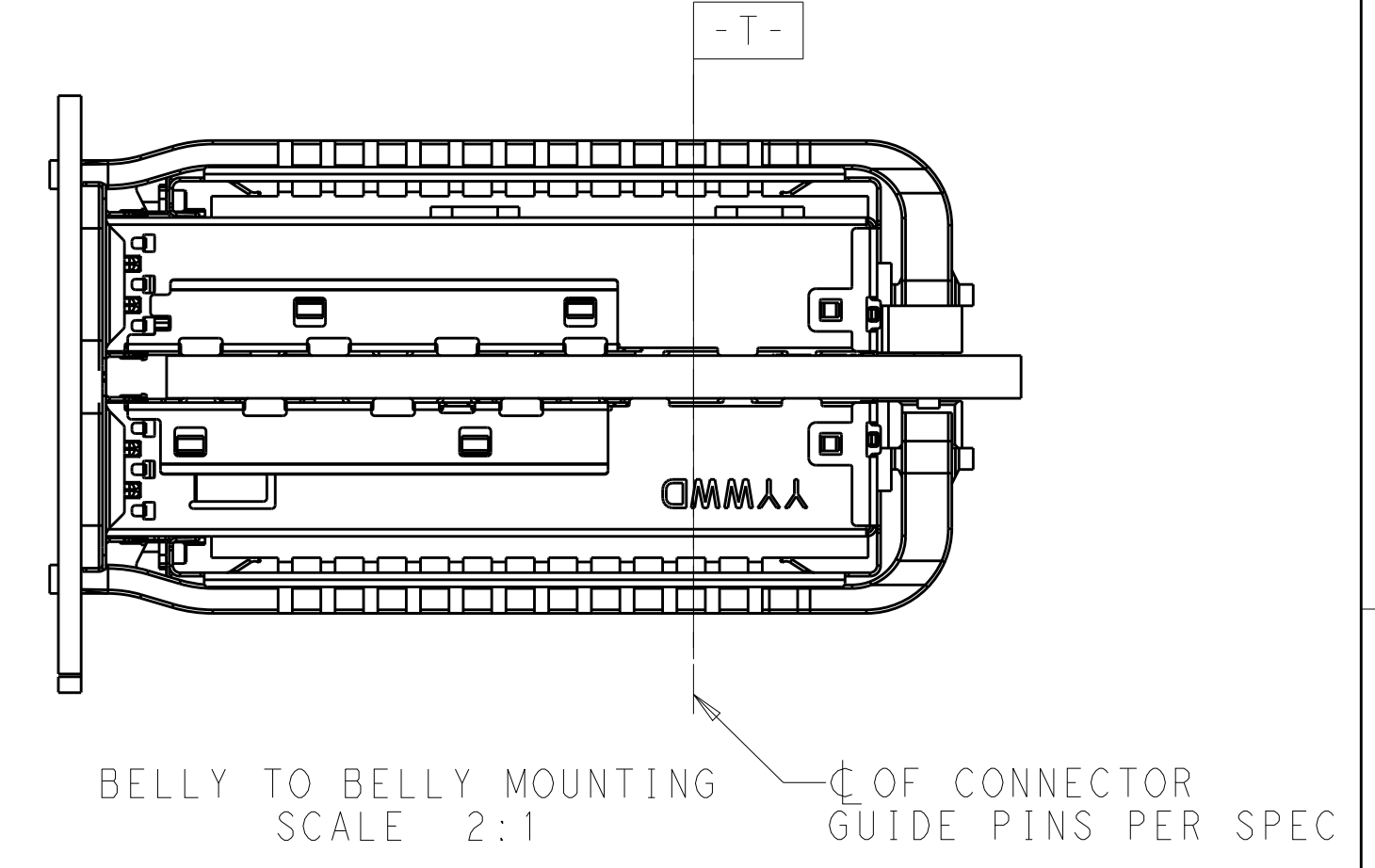
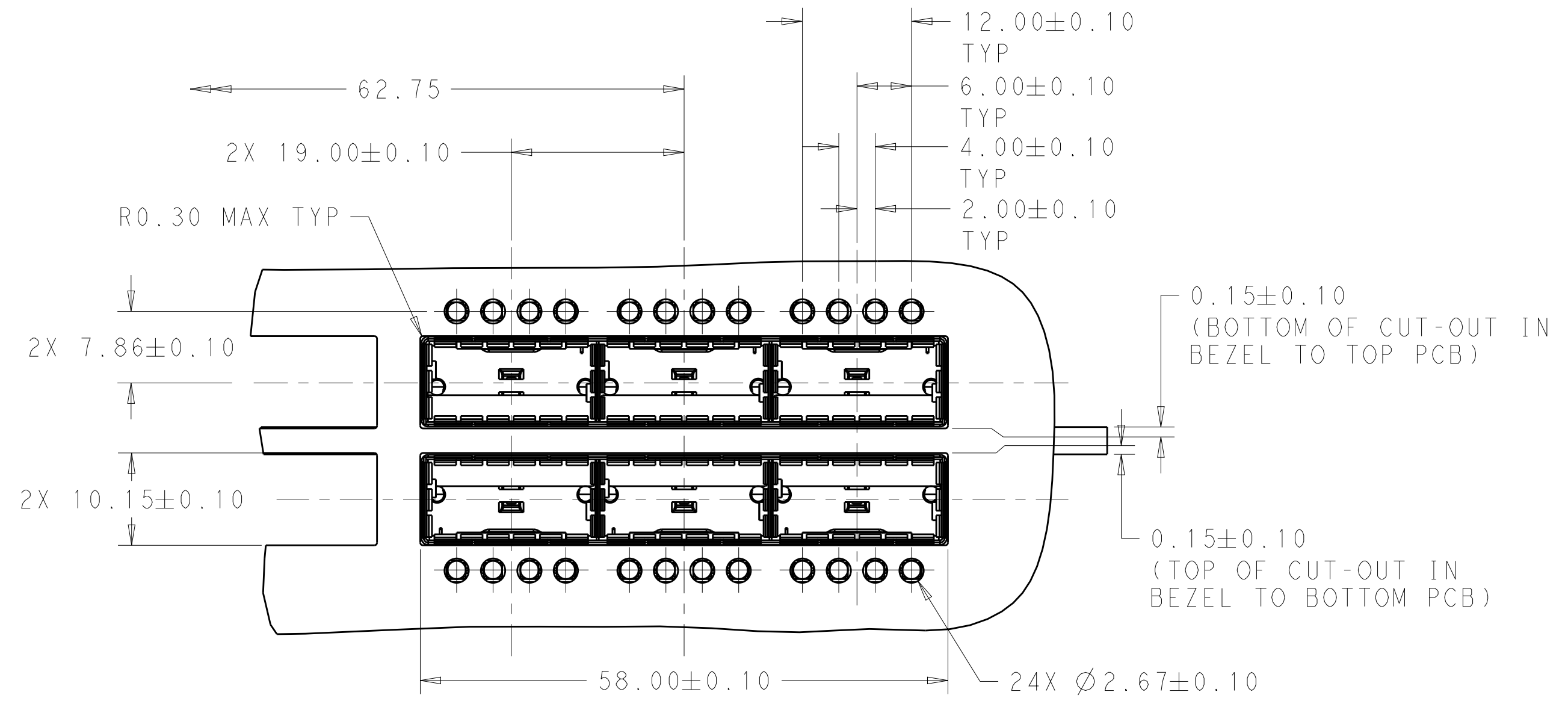
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| THIS DRAWING IS A CONTROLLED DOCUMENT. |  | DWN<br>BING LIU<br>23APR2014   | TE Connectivity   |  |
| DIMENSIONS:<br>mm                      |  | CHK<br>JASON YANG<br>23APR2014 |   |  |
| TOLERANCES UNLESS OTHERWISE SPECIFIED: |  | APVD<br>SEAN HAN<br>31DEC2015  | NAME<br>RECEPTACLE CAGE ASSEMBLY<br>WITH HEAT SINKS AND LIGHT PIPES,<br>THRU BEZEL, 1X3, QSFP28 |  |
|  |  | PRODUCT SPEC<br>108-19428      | SIZE<br>A200779   |  |
| MATERIAL<br>SEE NOTES<br>material_2    |  | APPLICATION SPEC<br>114-32023  | DRAWING NO<br>C-2170769   |  |
| FINISH<br>SEE NOTES<br>finish_spec_2   |  | WEIGHT<br>-                    | RESTRICTED TO<br>-  |  |
| CUSTOMER DRAWING                       |  | SCALE<br>3:1                   | SHEET<br>1 OF 9<br>REV<br>A1  |  |

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| -   | -   | SEE SHEET 1 | -    | -         | -    |  |  |



BELLY TO BELLY MOUNTING SCALE 2:1

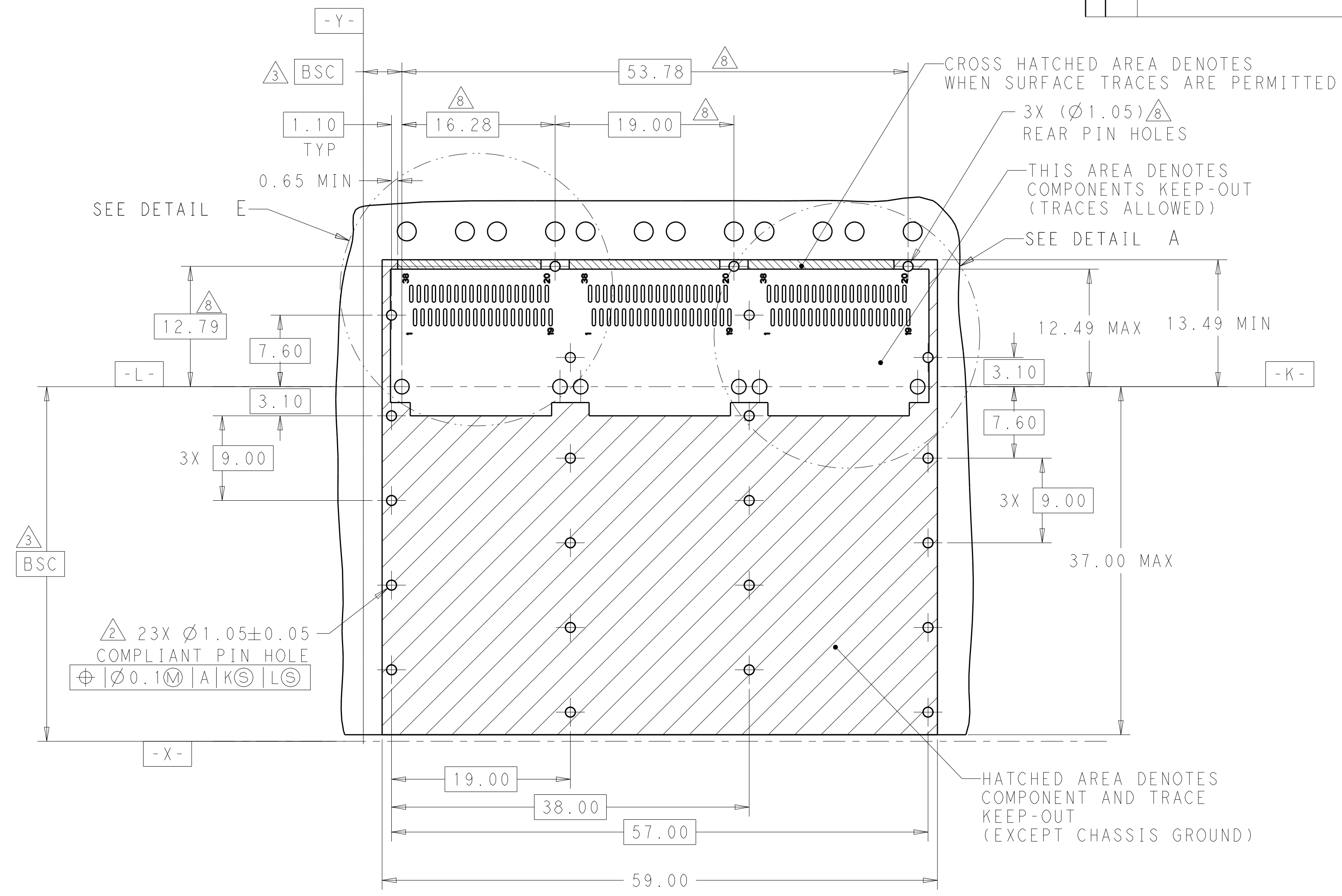


BELLY TO BELLY MOUNTING SCALE 2:1

|  |  |                            |  |  |
|--|--|----------------------------|--|--|
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|  |  | CHK JASON YANG 23APR2014   |  |  |
| DIMENSIONS: mm                         |  | APVD SEAN HAN 31DEC2015    | NAME RECEPTACLE CAGE ASSEMBLY WITH HEAT SINKS AND LIGHT PIPES, THRU BEZEL, 1X3, QSFP28 |  |
| TOLERANCES UNLESS OTHERWISE SPECIFIED: |  | PRODUCT SPEC 108-19428     | SIZE CAGE CODE DRAWING NO  |  |
| 0 PLC ±                                |  | APPLICATION SPEC 114-32023 | A200779 C-2170769  |  |
| 1 PLC ±0.25                            |  | WEIGHT -                   | RESTRICTED TO  |  |
| 2 PLC ±0.2                             |  | CUSTOMER DRAWING           | SCALE 3:1 SHEET 1 OF 9 REV A1  |  |
| 3 PLC ±                                |  |                            |  |  |
| 4 PLC ±                                |  |                            |  |  |
| ANGLES ±                               |  |                            |  |  |
| FINISH                                 |  |                            |  |  |
| MATERIAL SEE NOTES material_2          |  |                            |  |  |
| SEE NOTES finish_spec_2                |  |                            |  |  |

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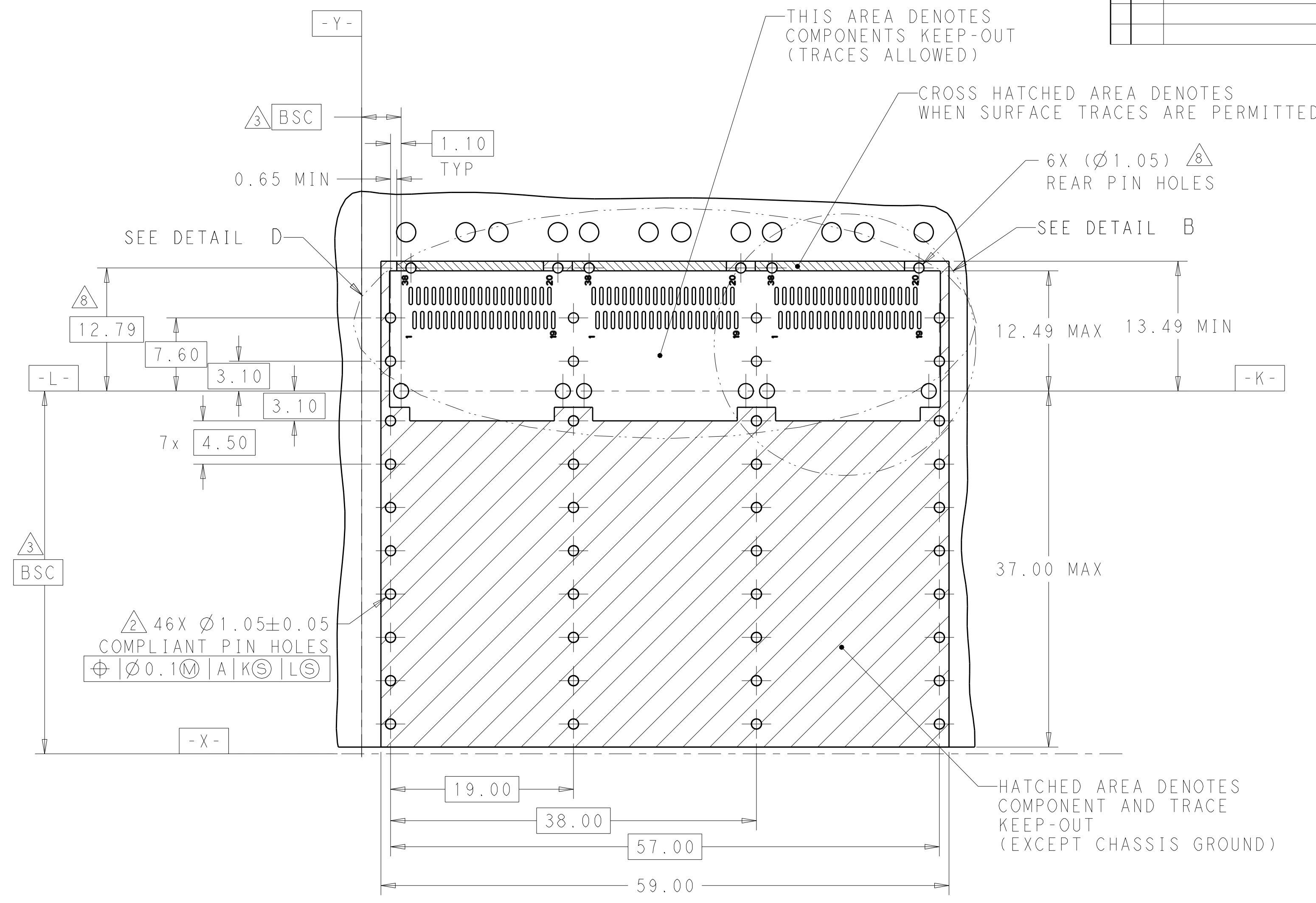


RECOMMENDED PCB LAYOUT  
 SINGLE TYPE  
 PCB TOLERANCE: ±0.05  
 SCALE 3:1

|  |  |                                |   |                         |
|--|--|--------------------------------|---|-------------------------|
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| DIMENSIONS:<br>mm  |  | CHK<br>JASON YANG<br>23APR2014 |   |                         |
| TOLERANCES UNLESS OTHERWISE SPECIFIED:                     |  | APVD<br>SEAN HAN<br>31DEC2015  | NAME<br>RECEPTACLE CAGE ASSEMBLY<br>WITH HEAT SINKS AND LIGHT PIPES,<br>THRU BEZEL, 1X3, QSFP28 |                         |
| 0 PLC ±<br>1 PLC ±0.25<br>2 PLC ±0.2<br>3 PLC ±<br>4 PLC ± |  | PRODUCT SPEC<br>108-19428      | SIZE<br>A2  |                         |
| MATERIAL<br>SEE NOTES<br>material_2                        |  | APPLICATION SPEC<br>114-32023  | CAGE CODE<br>00779  | DRAWING NO<br>C-2170769 |
| ANGLES<br>FINISH<br>SEE NOTES<br>finish_spec_2             |  | WEIGHT<br>-                    | RESTRICTED TO<br>-  |                         |
| CUSTOMER DRAWING   |  | SCALE<br>3:1                   | SHEET<br>1  | OF 9<br>REV A1          |

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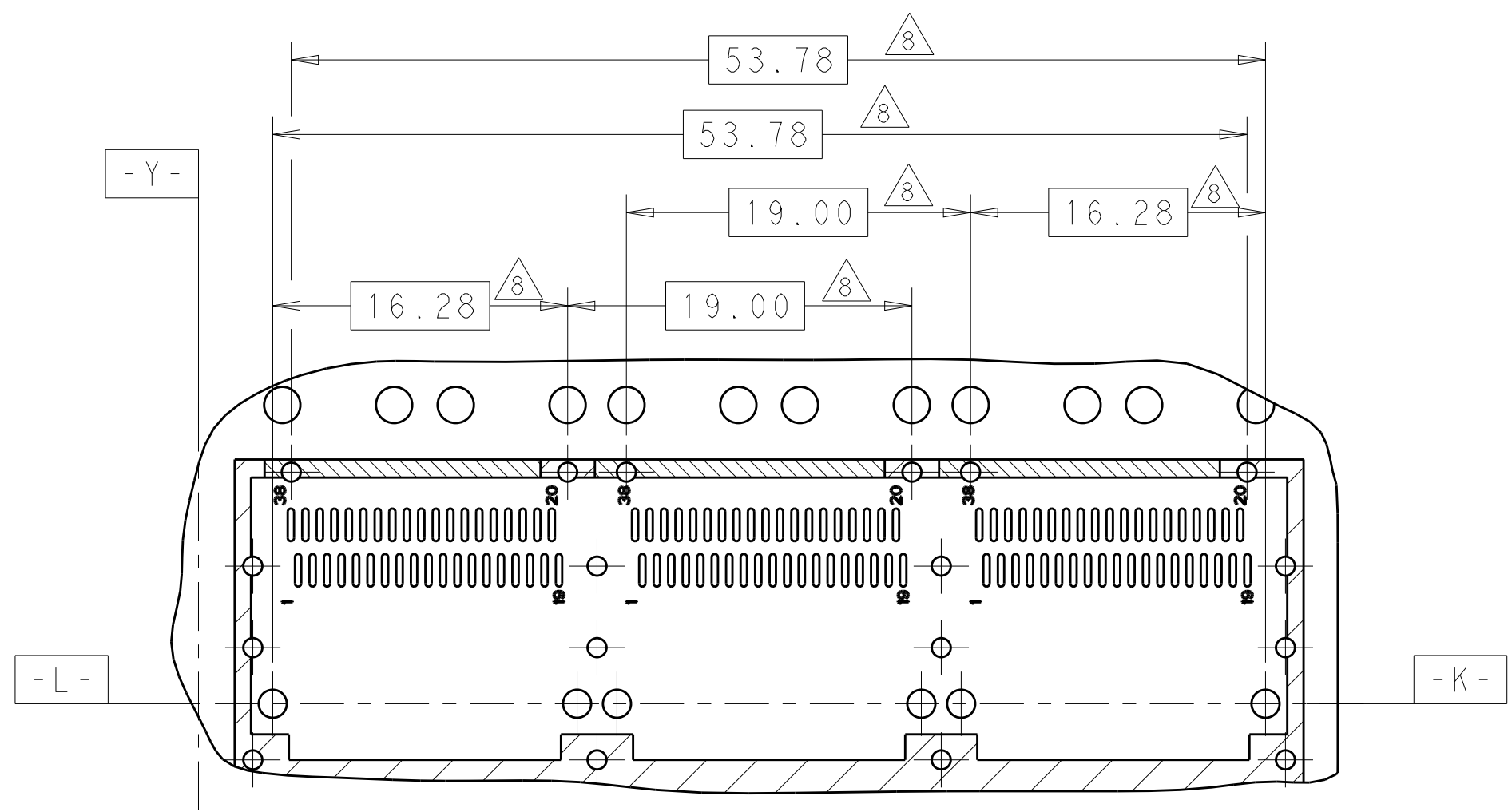


RECOMMENDED PCB LAYOUT  
 BELLY TO BELLY TYPE  
 PCB TOLERANCE: ±0.05  
 SCALE 3:1

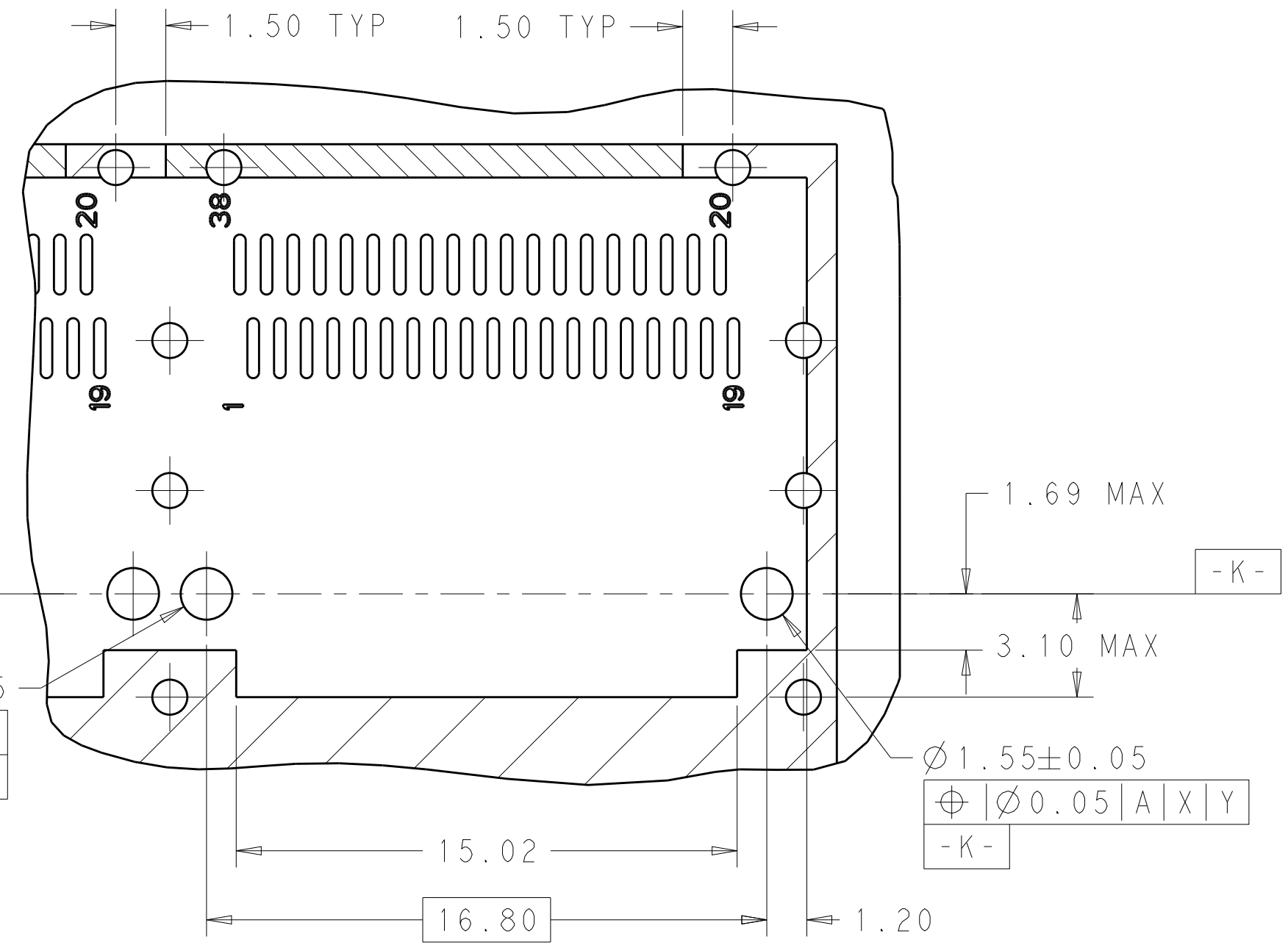
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| DIMENSIONS:<br>mm   |       | CHK<br>JASON YANG<br>23APR2014 |   |           |       |       |      |       |   |       |   |        |   |                           |                 |  |
| TOLERANCES UNLESS OTHERWISE SPECIFIED:  |       | APVD<br>SEAN HAN<br>31DEC2015  | NAME<br>RECEPTACLE CAGE ASSEMBLY<br>WITH HEAT SINKS AND LIGHT PIPES,<br>THRU BEZEL, 1X3, QSFP28 |           |       |       |      |       |   |       |   |        |   |                           |                 |  |
| <table border="0"> <tr><td>0 PLC</td><td>±</td></tr> <tr><td>1 PLC</td><td>±0.25</td></tr> <tr><td>2 PLC</td><td>±0.2</td></tr> <tr><td>3 PLC</td><td>±</td></tr> <tr><td>4 PLC</td><td>±</td></tr> <tr><td>ANGLES</td><td>±</td></tr> </table> |       | 0 PLC                          | ±   | 1 PLC     | ±0.25 | 2 PLC | ±0.2 | 3 PLC | ± | 4 PLC | ± | ANGLES | ± | PRODUCT SPEC<br>108-19428 | SIZE<br>A200779 |  |
| 0 PLC   | ±     |                                |   |           |       |       |      |       |   |       |   |        |   |                           |                 |  |
| 1 PLC   | ±0.25 |                                |   |           |       |       |      |       |   |       |   |        |   |                           |                 |  |
| 2 PLC   | ±0.2  |                                |   |           |       |       |      |       |   |       |   |        |   |                           |                 |  |
| 3 PLC   | ±     |                                |   |           |       |       |      |       |   |       |   |        |   |                           |                 |  |
| 4 PLC   | ±     |                                |   |           |       |       |      |       |   |       |   |        |   |                           |                 |  |
| ANGLES  | ±     |                                |   |           |       |       |      |       |   |       |   |        |   |                           |                 |  |
| MATERIAL<br>SEE NOTES<br>material_2   |       | APPLICATION SPEC<br>114-32023  | DRAWING NO<br>C-2170769   |           |       |       |      |       |   |       |   |        |   |                           |                 |  |
| FINISH<br>SEE NOTES<br>finish_spec_2  |       | WEIGHT<br>-                    | RESTRICTED TO<br>-  |           |       |       |      |       |   |       |   |        |   |                           |                 |  |
| CUSTOMER DRAWING  |       | SCALE<br>3:1                   | SHEET<br>1 OF 9   |           |       |       |      |       |   |       |   |        |   |                           |                 |  |
|   |       |                                |   | REV<br>A1 |       |       |      |       |   |       |   |        |   |                           |                 |  |

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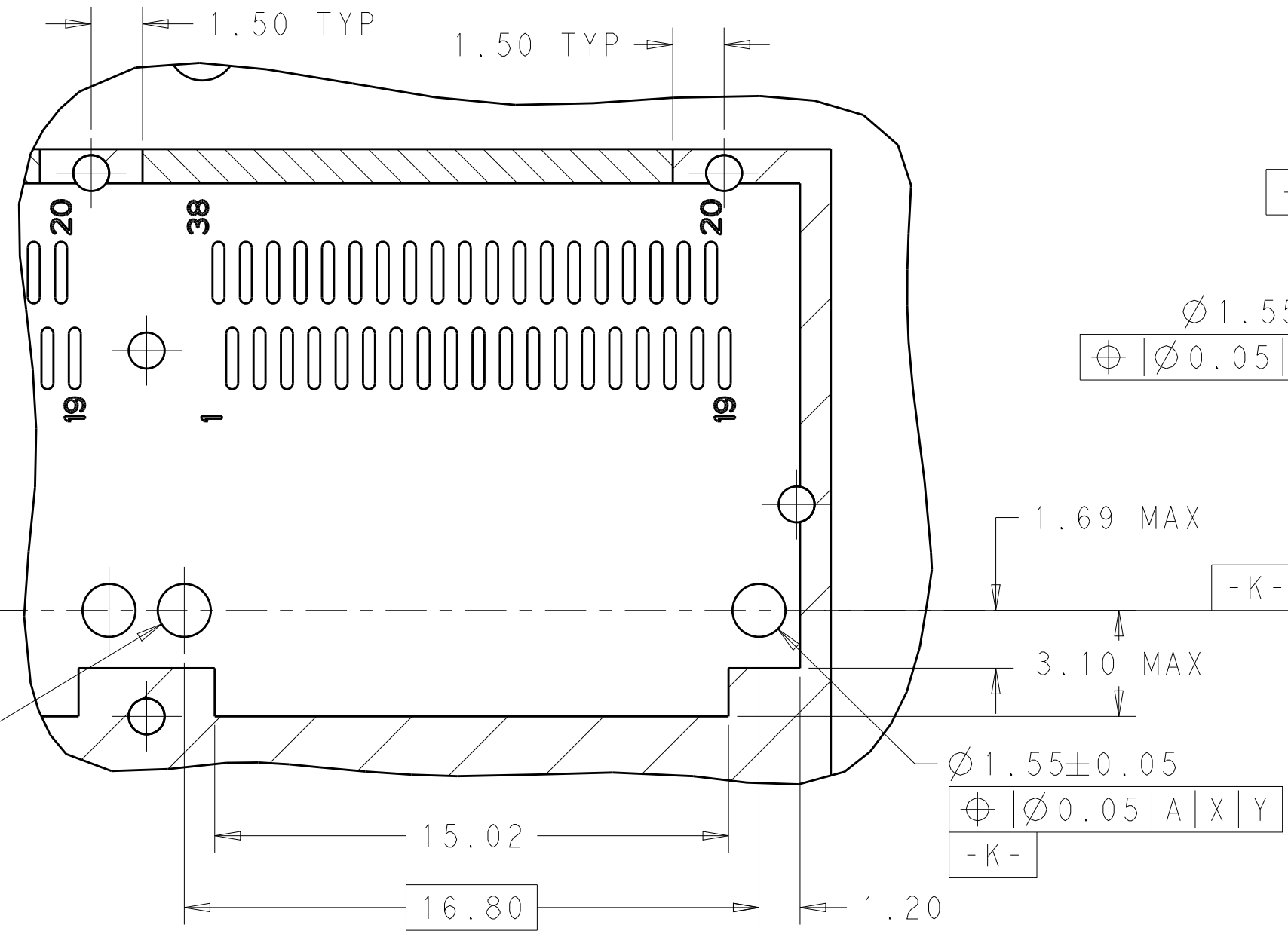
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| P   | LTR | DESCRIPTION | DATE | DWN       | APVD |  |  |
| -   | -   | SEE SHEET 1 | -    | -         | -    |  |  |



DETAIL D  
SCALE 3:1



DETAIL B  
SCALE 6:1



DETAIL A  
SCALE 6:1

|  |                                      |                                |   |
|--|--------------------------------------|--------------------------------|---|
| THIS DRAWING IS A CONTROLLED DOCUMENT. |                                      | DWN<br>BING LIU<br>23APR2014   | TE Connectivity   |
| DIMENSIONS:<br>mm                      |                                      | CHK<br>JASON YANG<br>23APR2014 |   |
| TOLERANCES UNLESS OTHERWISE SPECIFIED: |                                      | APVD<br>SEAN HAN<br>31DEC2015  | NAME<br>RECEPTACLE CAGE ASSEMBLY<br>WITH HEAT SINKS AND LIGHT PIPES,<br>THRU BEZEL, 1X3, QSFP28 |
| 0 PLC ±                                | 1 PLC ±0.25                          | PRODUCT SPEC<br>108-19428      | SIZE<br>A200779   |
| 2 PLC ±0.2                             | 3 PLC ±                              | APPLICATION SPEC<br>114-32023  | CAGE CODE<br>C-2170769  |
| 4 PLC ±                                | ANGLES ±                             | WEIGHT<br>-                    | DRAWING NO<br>-   |
| MATERIAL<br>SEE NOTES<br>material_2    | FINISH<br>SEE NOTES<br>finish_spec_2 | CUSTOMER DRAWING               | RESTRICTED TO<br>-  |
| SCALE 3:1                              |                                      |                                | SHEET 1 OF 9  |
|  |                                      |                                | REV A1  |