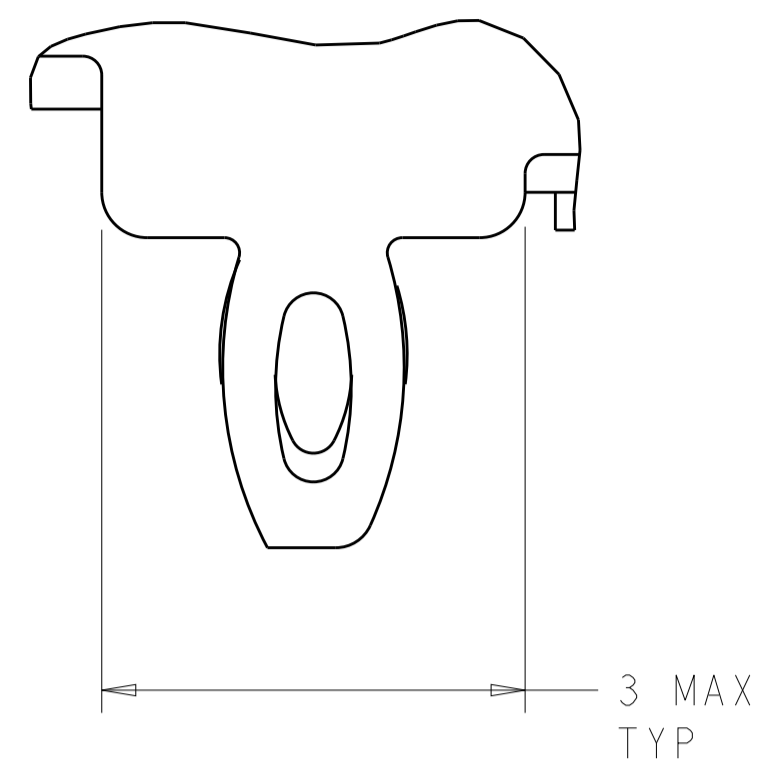


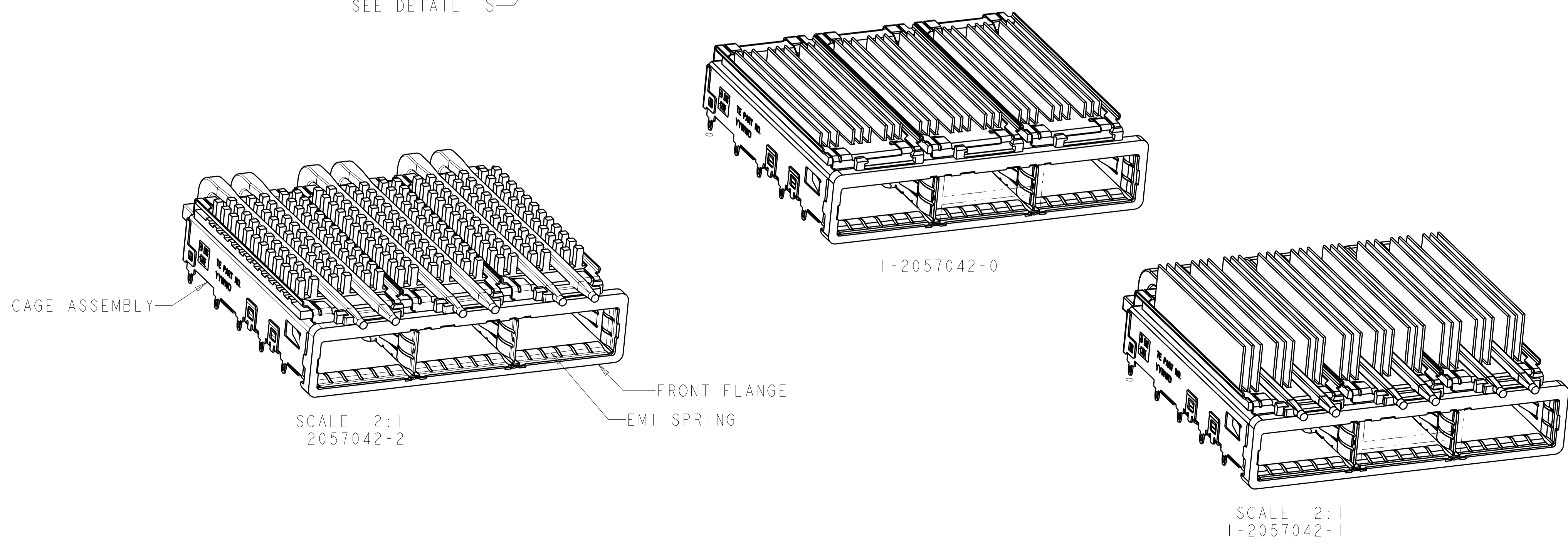
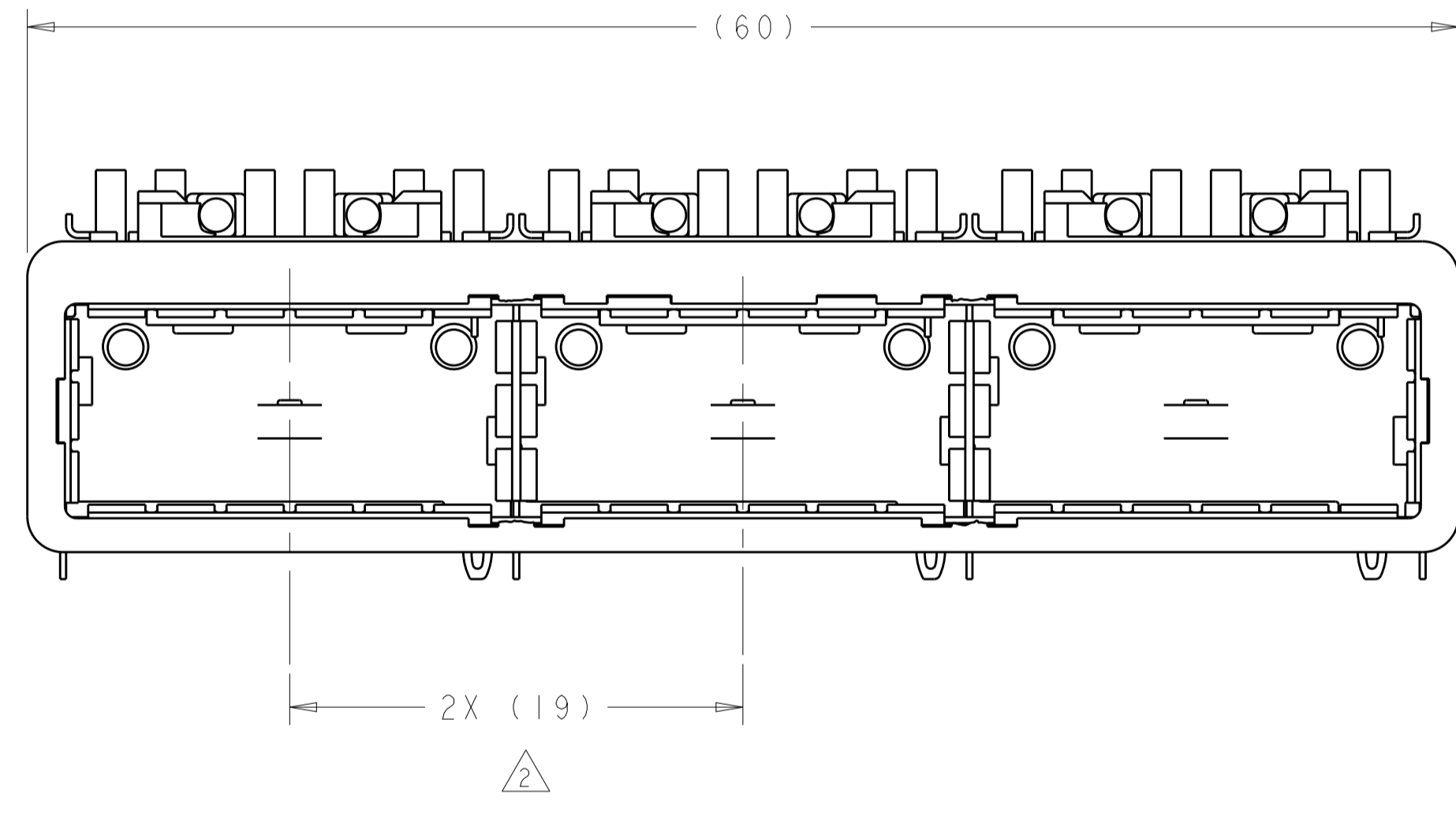
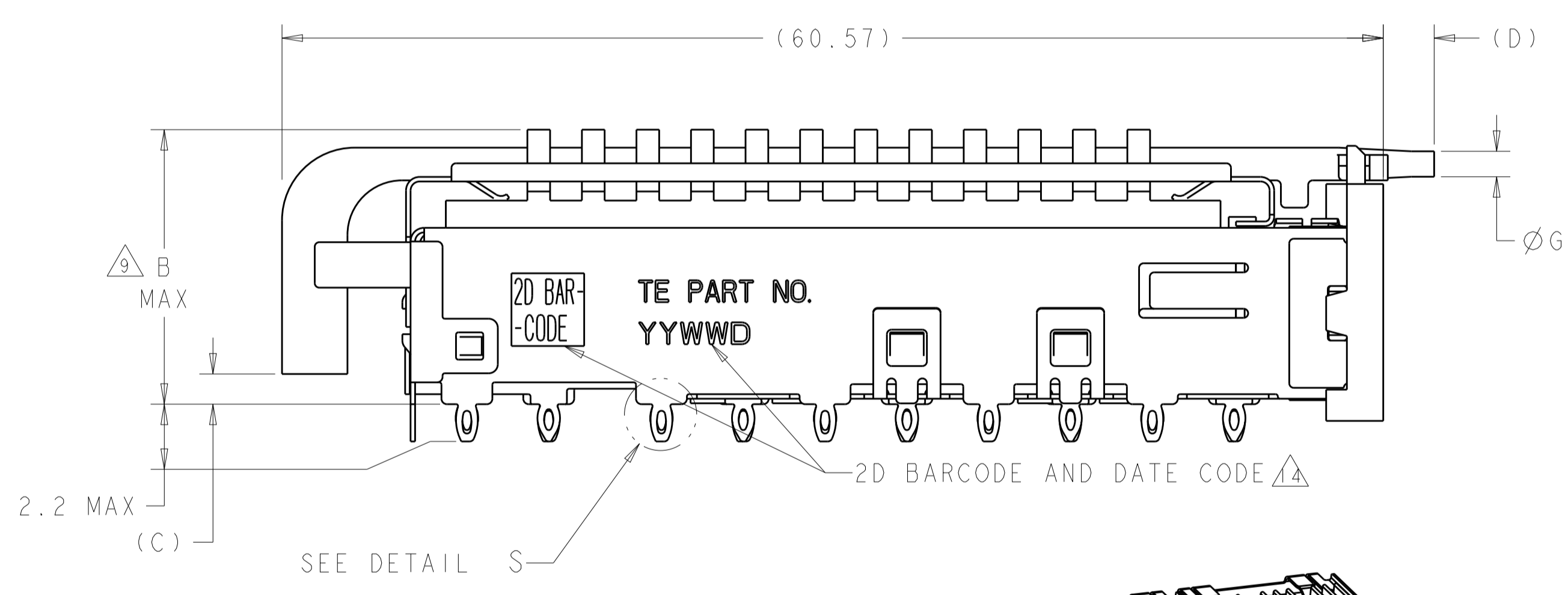
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| GP  | 00   |           |                         |           |        |
|     |      | C1        | REVIS PER ECO-11-004835 | 11MAR2011 | RK HMR |
|     |      | D         | REVIS PER ECO-12-005533 | 31MAR2012 | JY AC  |
|     |      | E         | REVIS PER ECO-13-009872 | 26NOV2013 | RG MC  |
|     |      | F         | REVIS PER ECO-14-016878 | 30EC2014  | RG MC  |



DETAIL S  $\Delta 12$   
 SCALE 20:1

- $\Delta 1$  CAGE ASSEMBLY MATERIAL: NICKEL SILVER, 0.25 THICK  
 HEAT SINK MATERIAL: ALUMINUM  
 HEAT SINK CLIP MATERIAL: STAINLESS STEEL  
 EMI SPRINGS MATERIAL: COPPER ALLOY  
 FRONT FLANGE MATERIAL: ZINC ALLOY  
 LIGHT PIPE MATERIAL: CLEAR POLYCARBONATE
- $\Delta 2$  PITCH BETWEEN PORTS OF ONE 1X3 CAGE ASSEMBLY.
- $\Delta 3$  SPACING BETWEEN CAGES ON THE SAME PC BOARD, TO BE SPECIFIED BY CUSTOMER, MUST COMPLY WITH MINIMUM DIMENSIONS SHOWN.
- $\Delta 4$  REFERENCE APPLICATION SPEC 114-13218 FOR RECOMMENDED DRILL HOLE DIAMETER AND PLATING THICKNESS.
- $\Delta 5$  DATUMS AND BASIC DIMENSIONS ESTABLISHED BY CUSTOMER.
- $\Delta 6$  DIMENSION F IS THE NOMINAL THICKNESS OF CUSTOMER SUPPLIED PC BOARD, SINGLE SIDED PC BOARD MINIMUM THICKNESS = 1.45mm, DOUBLE SIDED PC BOARD MINIMUM THICKNESS = 2.2mm PER QSFP
- $\Delta 7$  HEAT SINKS, LIGHT PIPES, AND HEAT SINK CLIPS SHIPPED ASSEMBLED TO CAGE ASSEMBLY. CAGE ASSEMBLY MAY BE PRESSED INTO THE PCB AS SHIPPED.
- $\Delta 8$  DATUM -A- IS TOP SURFACE OF PC BOARD.
- $\Delta 9$  DIMENSION APPLIES WITH MODULE INSERTED IN CAGE.
- $\Delta 10$  UNPLATED THRU HOLE.
- 11. MATES WITH QSFP MSA COMPATIBLE TRANSCEIVER.
- $\Delta 12$  SURFACE TRACES PERMITTED WITHIN THIS AREA EXCEPT WHERE CAGE STANDOFFS, SHOWN IN DETAIL S, CONTACT PC BOARD.
- $\Delta 13$  BASELINE FOR THESE DIMENSIONS IS THE CENTER OF COMPLIANT PIN HOLE.
- $\Delta 14$  2D BARCODE AND DATE CODE (YYWW) MARKED ON SIDE OF CAGE ASSEMBLY.

- $\Delta 15$  REFERENCE APP SPEC 114-13218 FOR GASKET THICKNESS CALCULATION.
- $\Delta 16$  EMI SPRING FINISH: 2 $\mu$ m MIN TIN  
 FRONT FLANGE FINISH: 3 $\mu$ m MIN TIN OVER 1.27 $\mu$ m MIN NICKEL OVER 5.08 $\mu$ m MIN COPPER.  
 HEAT SINK FINISH: BLACK ANODIZED.
- $\Delta 17$  HEAT SINKS AND CLIPS SHIPPED ASSEMBLED TO CAGE ASSEMBLY. CAGE ASSEMBLY MAY BE PRESSED IN TO THE PCB AS SHIPPED. LIGHT PIPES, SHIPPED UNATTACHED, MUST BE ASSEMBLED BY CUSTOMER AFTER THE CAGE IS SEATED IN THE PCB.



|             |     |         |     |      |      |                   |             |
|-------------|-----|---------|-----|------|------|-------------------|-------------|
| $\Delta 1$  | 1.4 | 0.8-1.1 | 2.0 | 1.70 | 21.0 | FIN TYPE          | 1-2057042-1 |
|             | N/A | N/A     | N/A | N/A  | 15.0 | FIN TYPE          | 1-2057042-0 |
| $\Delta 1$  | 2.0 | 0.8-1.1 | 3.5 | 1.70 | 16.8 | CUSTOMERIZED      | 2057042-9   |
| $\Delta 1$  | 1.4 | 0.8-1.1 | 2.0 | 1.70 | 23.0 | NETWORKING        | 2057042-8   |
| $\Delta 1$  | 1.4 | 0.8-1.1 | 2.0 | 1.70 | 16.0 | SAN               | 2057042-7   |
| $\Delta 17$ | 1.4 | 0.8-1.1 | 2.0 | 1.70 | 13.7 | PCI               | 2057042-6   |
| $\Delta 1$  | 1.4 | 1.3-1.4 | 5.7 | 2.15 | 16.0 | SAN               | 2057042-5   |
| $\Delta 17$ | 1.4 | 1.3-1.4 | 5.7 | 2.15 | 13.7 | PCI               | 2057042-4   |
| $\Delta 1$  | 1.4 | 0.8-1.1 | 2.8 | 1.70 | 23.0 | NETWORKING        | 2057042-3   |
| $\Delta 1$  | 1.4 | 0.8-1.1 | 2.8 | 1.70 | 16.0 | SAN               | 2057042-2   |
| $\Delta 17$ | 1.4 | 0.8-1.1 | 2.8 | 1.70 | 13.7 | PCI               | 2057042-1   |
|             | G   | E       | D   | C    | B    | HEAT SINK PROFILE | PART NUMBER |

THIS DRAWING IS A CONTROLLED DOCUMENT. DWN: C. VALENTINI 28FEB2008  
 CHK: E. BRIGHT 28FEB2008  
 APVD: E. BRIGHT 28FEB2008

TE Connectivity

NAME: 1X3 CAGE ASSEMBLY, BEHIND BEZEL, W/ LIGHT PIPES AND HEAT SINKS, QSFP

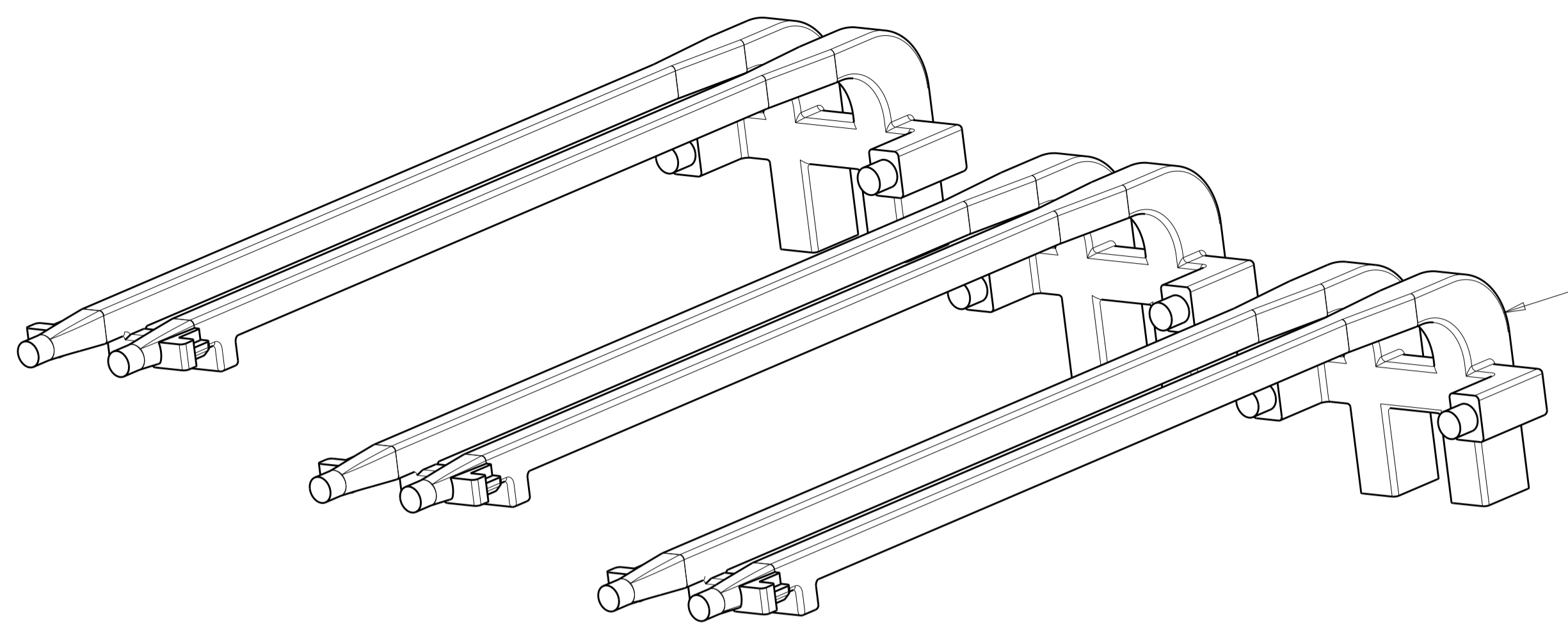
PRODUCT SPEC: 108-2286  
 APPLICATION SPEC: 114-13218

SIZE: A1 CAGE CODE: 00779C DRAWING NO: 2057042

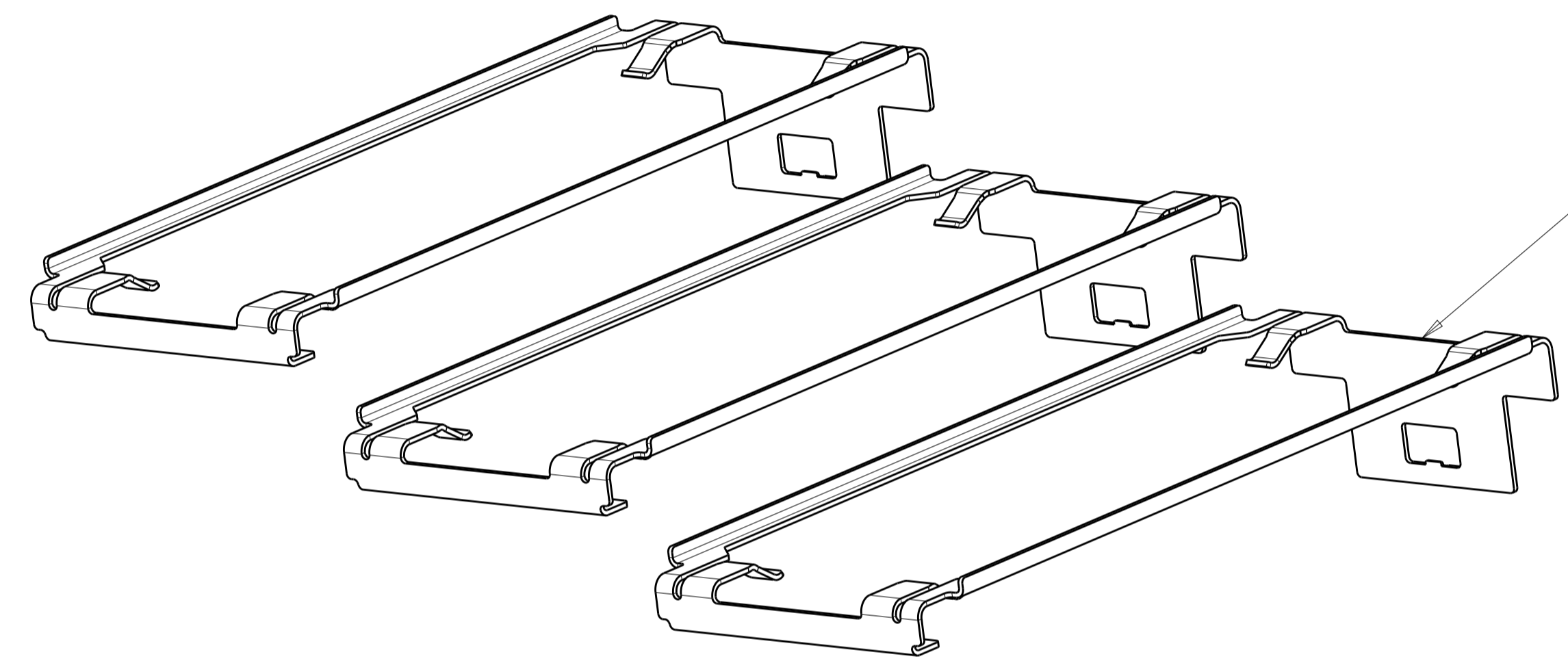
RESTRICTED TO: -

CUSTOMER DRAWING SCALE: 4:1 SHEET: 1 OF 5 REV: F

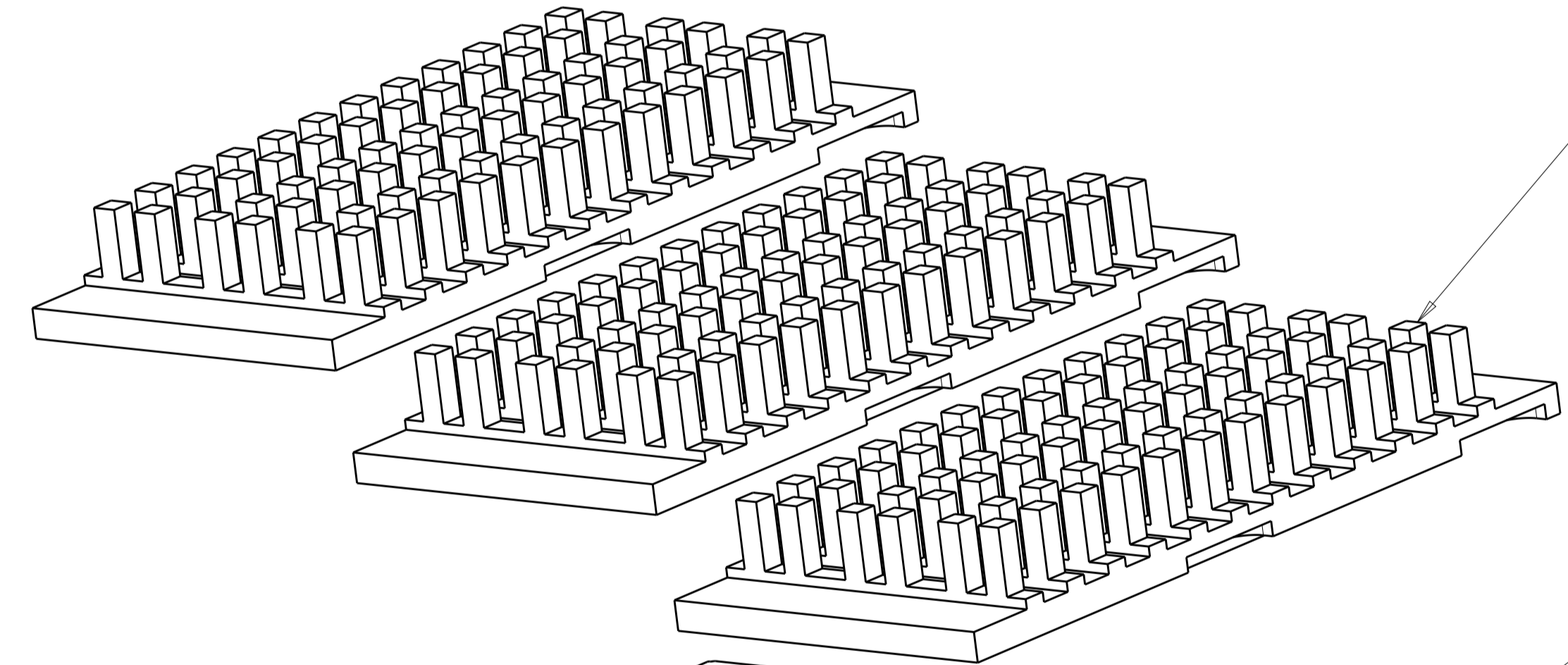
| LOC | DIST | REVISIONS   |      |     |      |
|-----|------|-------------|------|-----|------|
| P   | LYR  | DESCRIPTION | DATE | DMN | APVD |
| GP  | 00   | SEE SHEET 1 | -    | -   | -    |
|     |      |             |      |     |      |
|     |      |             |      |     |      |



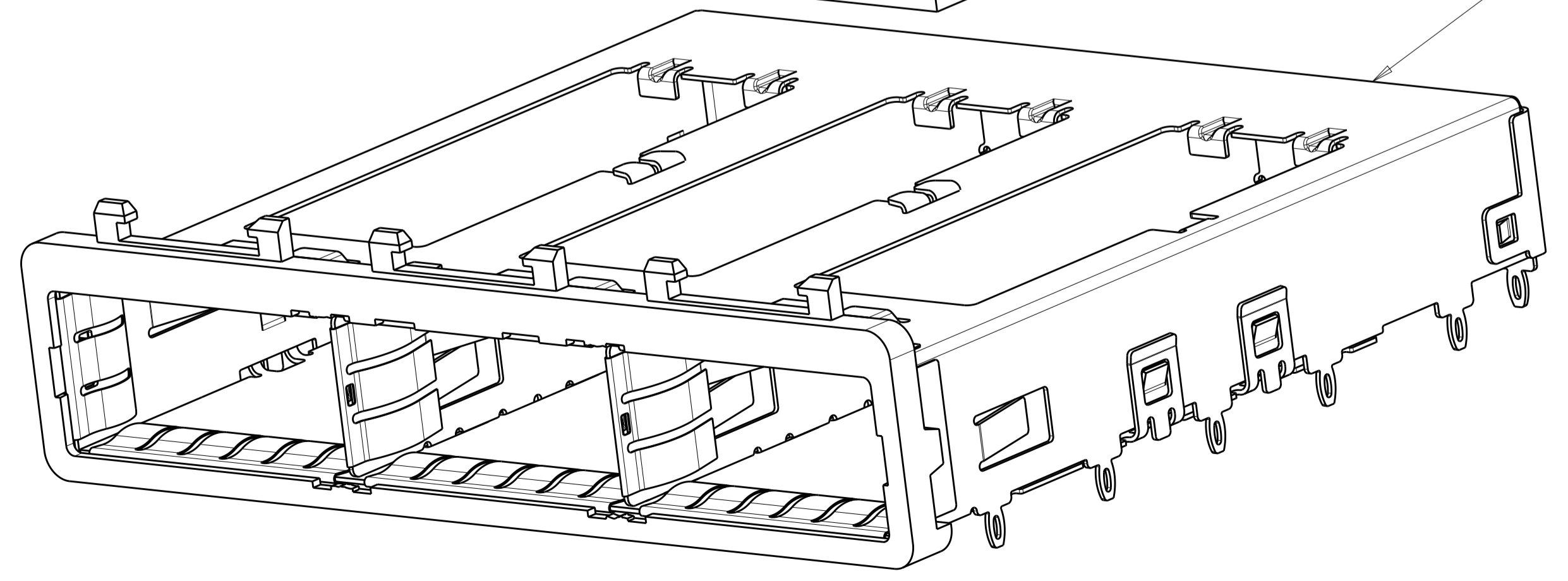
DOUBLE LIGHT PIPES  
 QUANTITY: 3



HEAT SINK CLIPS  
 QUANTITY: 3



72 PIN HEAT SINKS  
 QUANTITY: 3

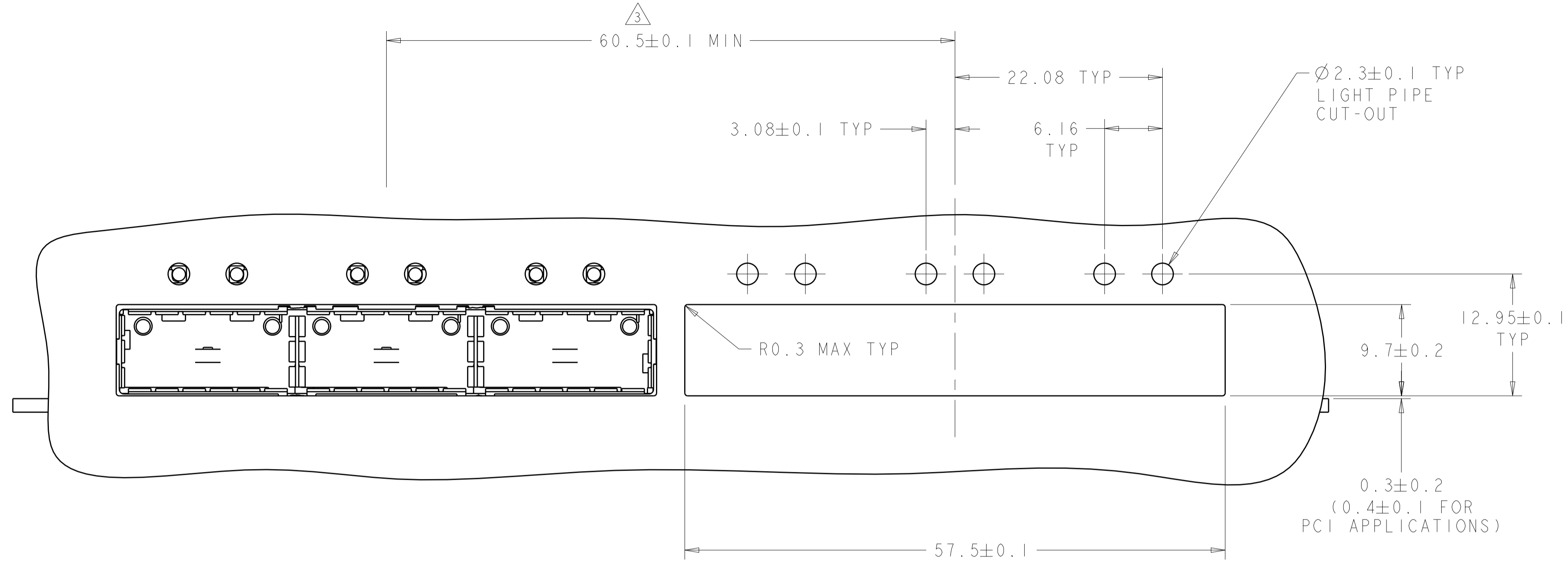


1X3 BEHIND BEZEL QSFP  
 CAGE ASSEMBLY  
 QUANTITY: 1

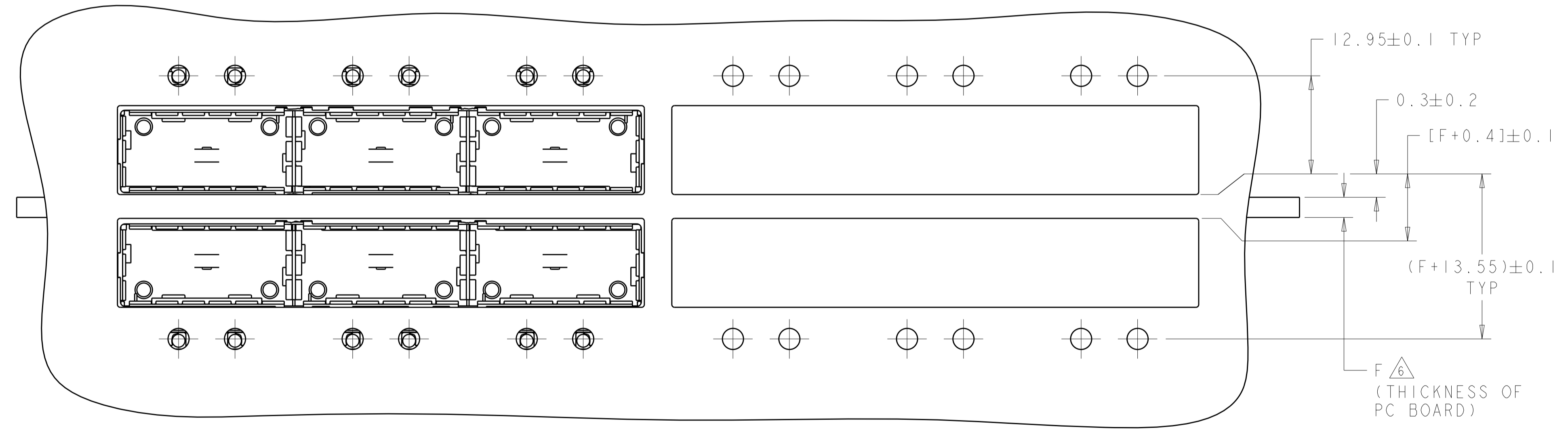
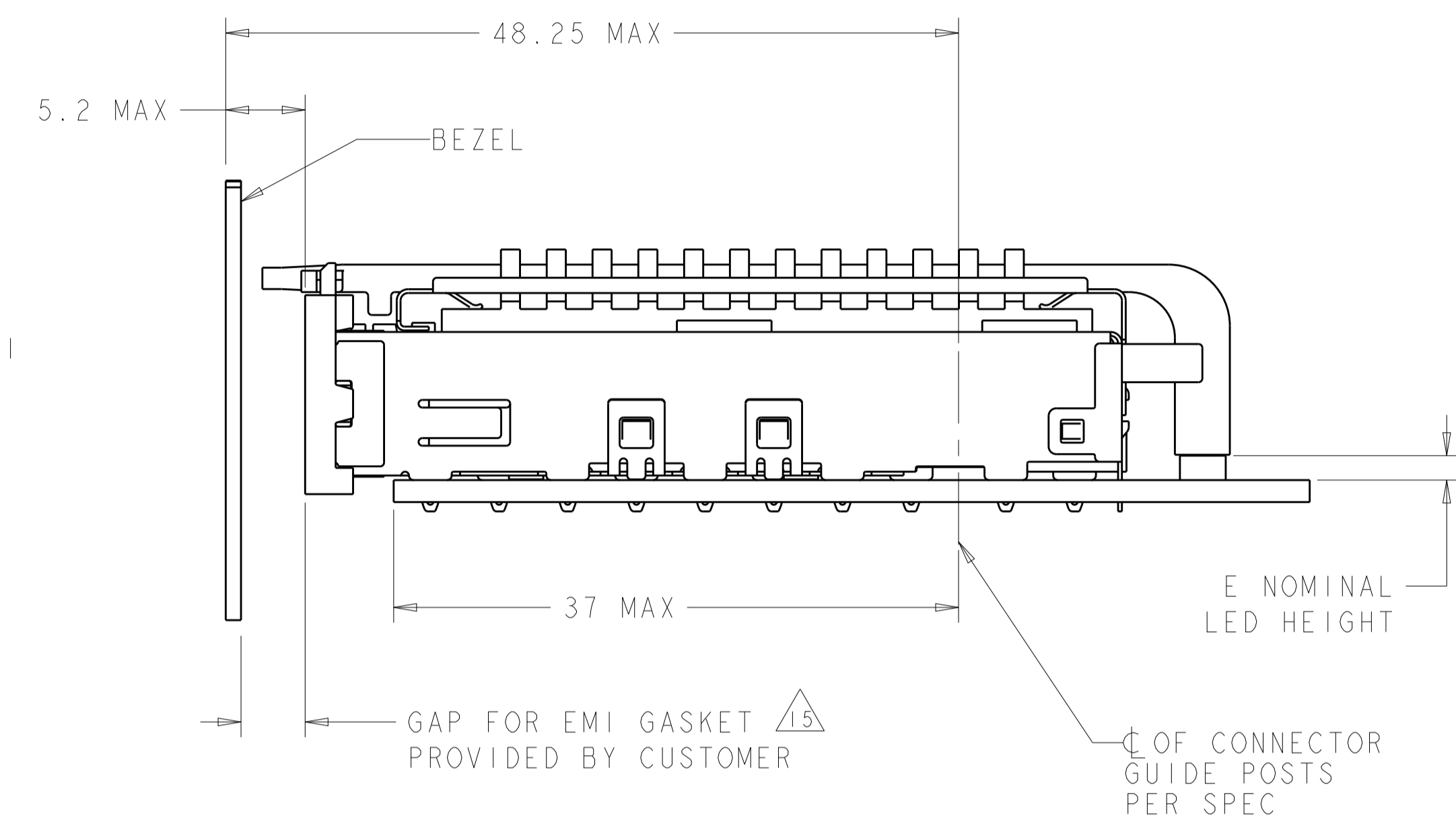
THIS PRODUCT HAS NOT COMPLETED  
 VALIDATION/QUALIFICATION TESTING

|  |      |                                 |  |       |      |       |      |       |   |       |   |        |   |                          |                 |
|--|------|---------------------------------|--|-------|------|-------|------|-------|---|-------|---|--------|---|--------------------------|-----------------|
| THIS DRAWING IS A CONTROLLED DOCUMENT.   |      | DMN<br>C. VALENTIN<br>28FEB2008 | TE Connectivity  |       |      |       |      |       |   |       |   |        |   |                          |                 |
| DIMENSIONS:<br>mm  |      | CHK<br>E. BRIGHT<br>28FEB2008   |  |       |      |       |      |       |   |       |   |        |   |                          |                 |
| TOLERANCES UNLESS OTHERWISE SPECIFIED:   |      | APVD<br>E. BRIGHT<br>28FEB2008  | NAME<br>1X3 CAGE ASSEMBLY, BEHIND BEZEL,<br>W/ LIGHT PIPES AND HEAT SINKS,<br>QSFP |       |      |       |      |       |   |       |   |        |   |                          |                 |
| <table border="1"> <tr> <td>0 PLC</td> <td>±</td> </tr> <tr> <td>1 PLC</td> <td>±0.1</td> </tr> <tr> <td>2 PLC</td> <td>±0.1</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 | ±0.1 | 2 PLC | ±0.1 | 3 PLC | ± | 4 PLC | ± | ANGLES | ± | PRODUCT SPEC<br>108-2286 | SIZE<br>A100779 |
| 0 PLC  | ±    |                                 |  |       |      |       |      |       |   |       |   |        |   |                          |                 |
| 1 PLC  | ±0.1 |                                 |  |       |      |       |      |       |   |       |   |        |   |                          |                 |
| 2 PLC  | ±0.1 |                                 |  |       |      |       |      |       |   |       |   |        |   |                          |                 |
| 3 PLC  | ±    |                                 |  |       |      |       |      |       |   |       |   |        |   |                          |                 |
| 4 PLC  | ±    |                                 |  |       |      |       |      |       |   |       |   |        |   |                          |                 |
| ANGLES   | ±    |                                 |  |       |      |       |      |       |   |       |   |        |   |                          |                 |
| MATERIAL   |      | APPLICATION SPEC<br>114-13218   | CAGE CODE DRAWING NO<br>C=2057042  |       |      |       |      |       |   |       |   |        |   |                          |                 |
| FINISH   |      | WEIGHT                          | RESTRICTED TO  |       |      |       |      |       |   |       |   |        |   |                          |                 |
| CUSTOMER DRAWING   |      | SCALE<br>4:1                    | SHEET<br>2 OF 5  |       |      |       |      |       |   |       |   |        |   |                          |                 |
|  |      | REV<br>F                        |  |       |      |       |      |       |   |       |   |        |   |                          |                 |

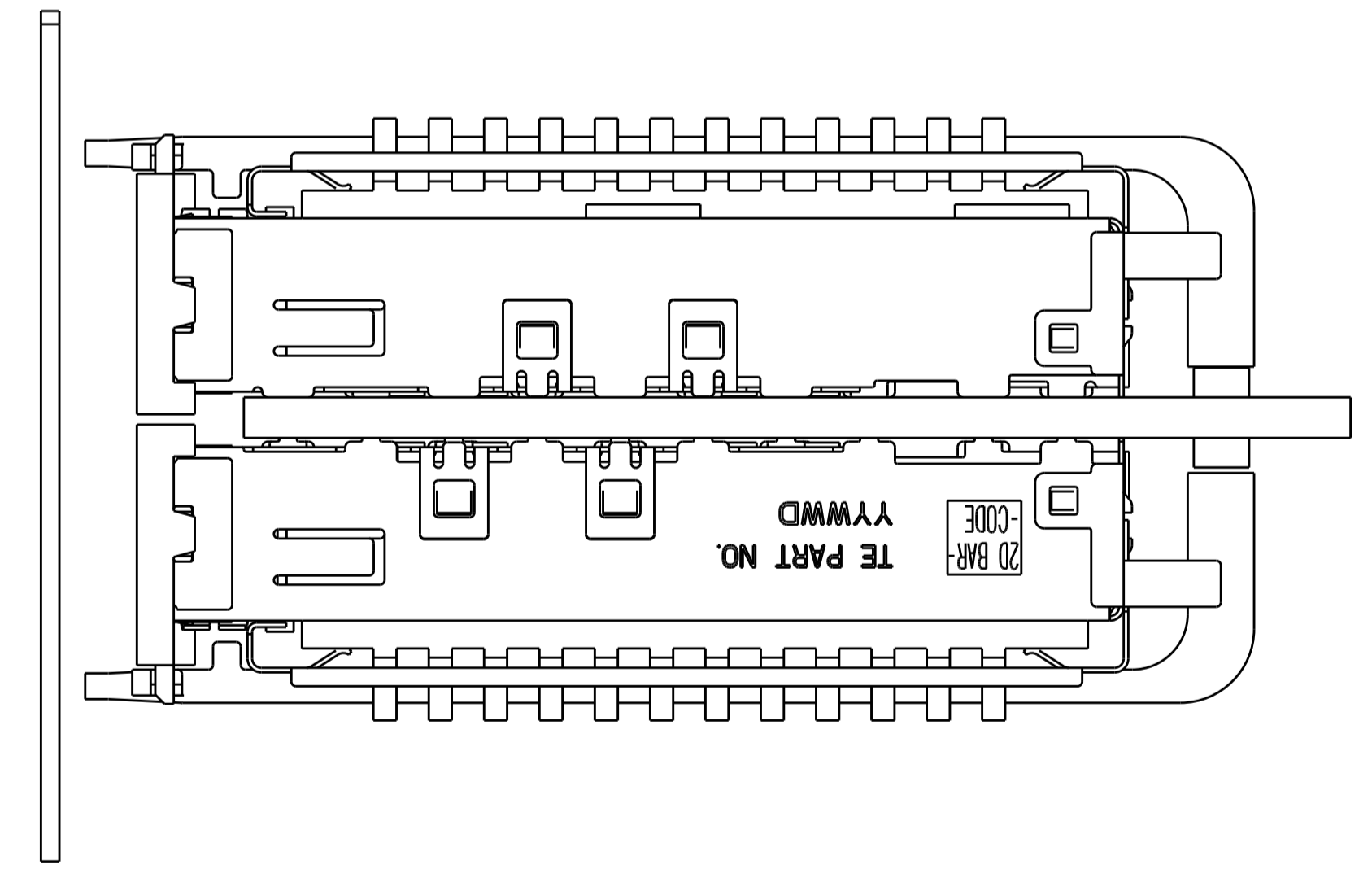
| LOC | DIST | REVISIONS |     |             |      |     |      |
|-----|------|-----------|-----|-------------|------|-----|------|
| GP  | 00   | P         | LTN | DESCRIPTION | DATE | OWN | APVD |
| -   | -    | -         | -   | SEE SHEET 1 | -    | -   | -    |



ONE SIDED CONFIGURATION  
 SCALE 3:1



BELLY TO BELLY CONFIGURATION SIMILAR  
 TO ONE SIDED EXCEPT WHERE NOTED  
 SCALE 3:1

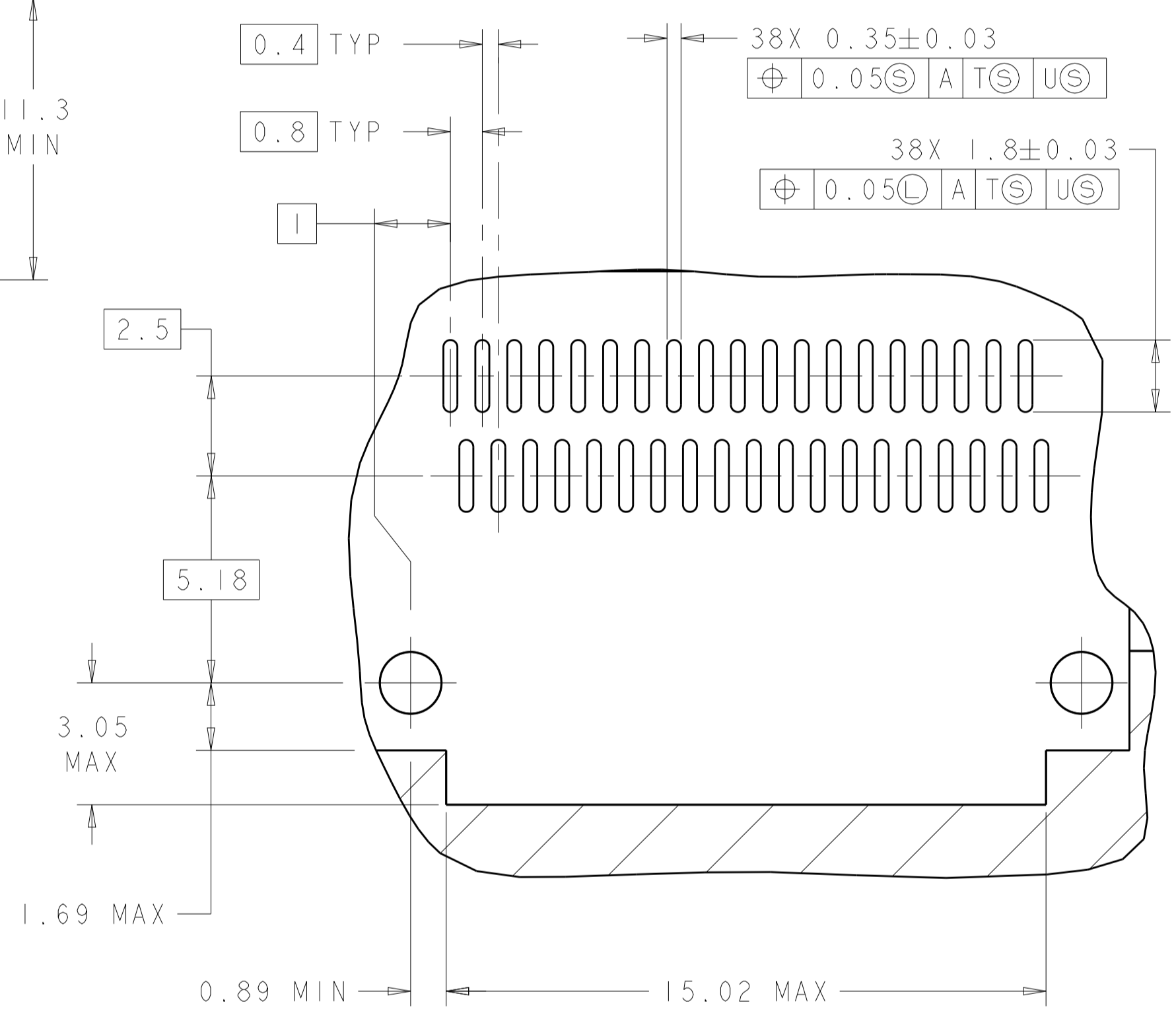
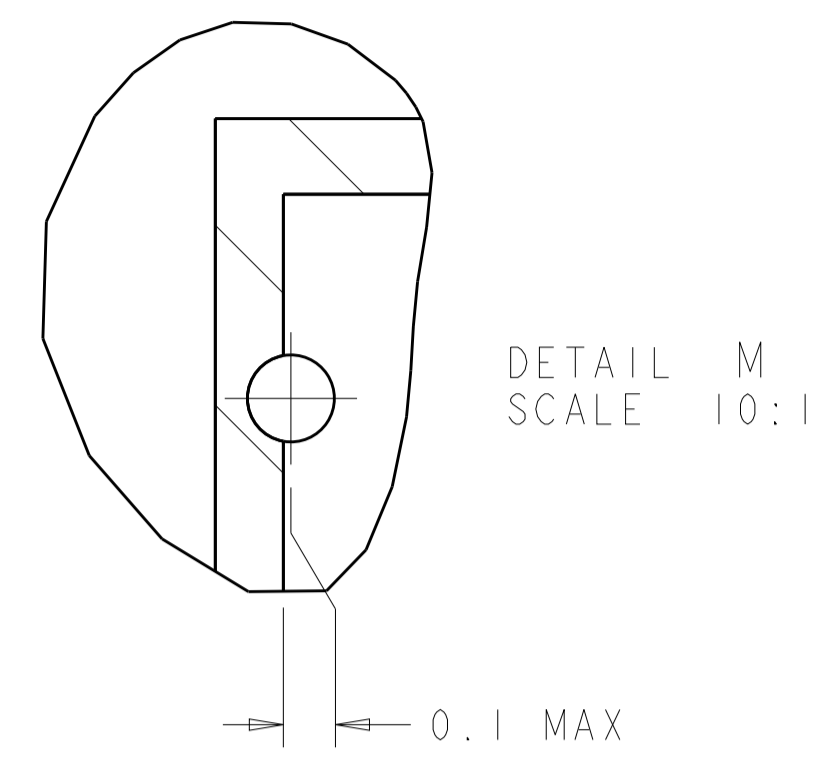
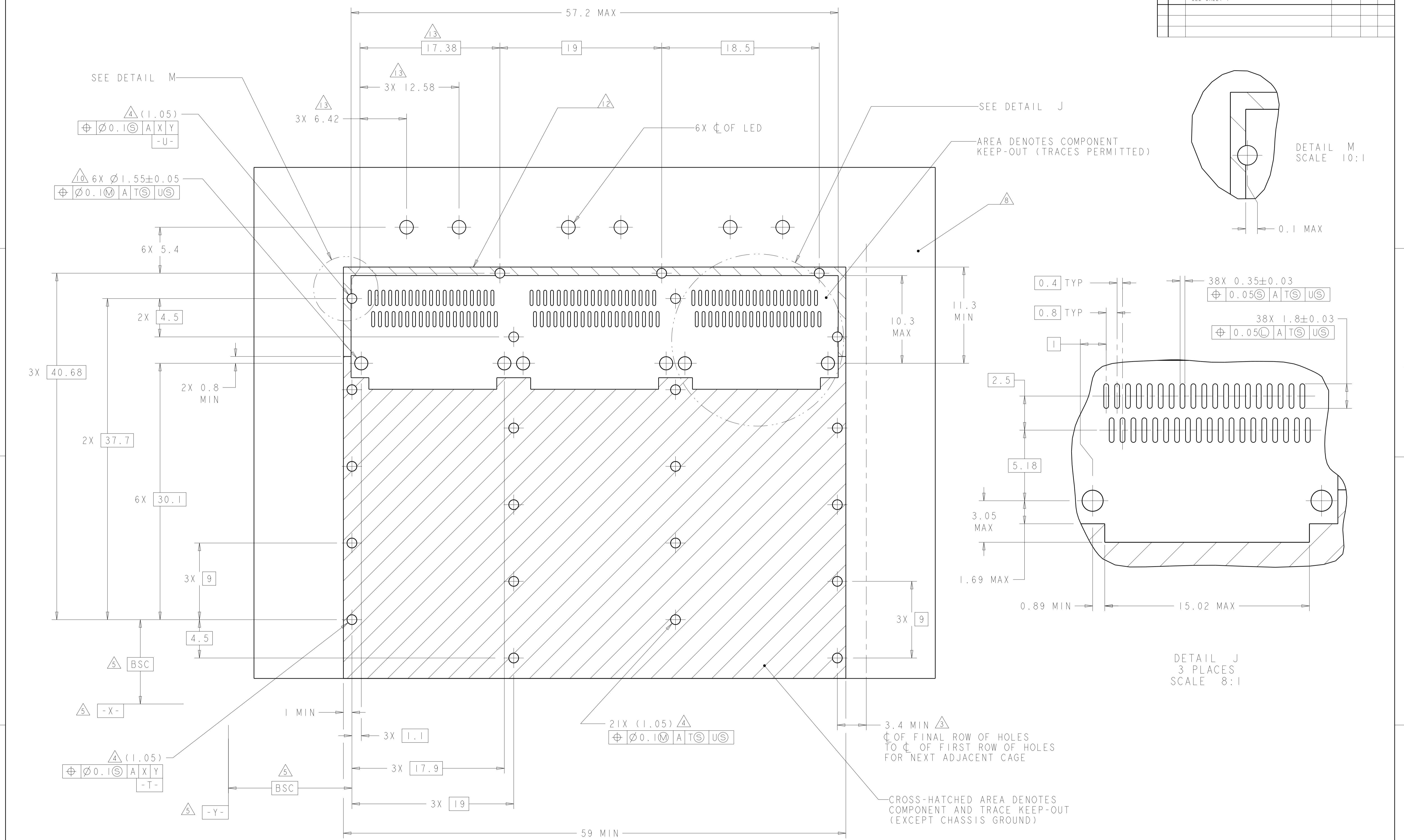


THIS PRODUCT HAS NOT COMPLETED VALIDATION/QUALIFICATION TESTING

|  |   |                                  |  |
|--|---|----------------------------------|--|
| THIS DRAWING IS A CONTROLLED DOCUMENT. |   | OWN<br>C. VALENTINE<br>28FEB2008 |  |
| DIMENSIONS:                            |   | CHK<br>E. BRIGHT<br>28FEB2008    |  |
| TOLERANCES UNLESS OTHERWISE SPECIFIED: |   | APVD<br>E. BRIGHT<br>28FEB2008   | NAME<br>1X3 CAGE ASSEMBLY, BEHIND BEZEL,<br>W/ LIGHT PIPES AND HEAT SINKS,<br>QSFP |
| mm                                     | 0 PLC ±<br>1 PLC ±0.1<br>2 PLC ±0.1<br>3 PLC ±<br>4 PLC ± | PRODUCT SPEC<br>108-2286         | SIZE<br>A100779  |
| MATERIAL                               |   | APPLICATION SPEC<br>114-13218    | RESTRICTED TO  |
| FINISH                                 |   | WEIGHT                           | SCALE 4:1 SHEET 3 OF 5 REV F   |
| CUSTOMER DRAWING                       |   | SCALE 4:1                        |  |

| LOC | DIST | REV | DATE | BY | APPD |
|-----|------|-----|------|----|------|
| GP  | 00   |     |      |    |      |

| REVISIONS |             |      |    |
|-----------|-------------|------|----|
| NO.       | DESCRIPTION | DATE | BY |
| 1         | SEE SHEET 1 |      |    |



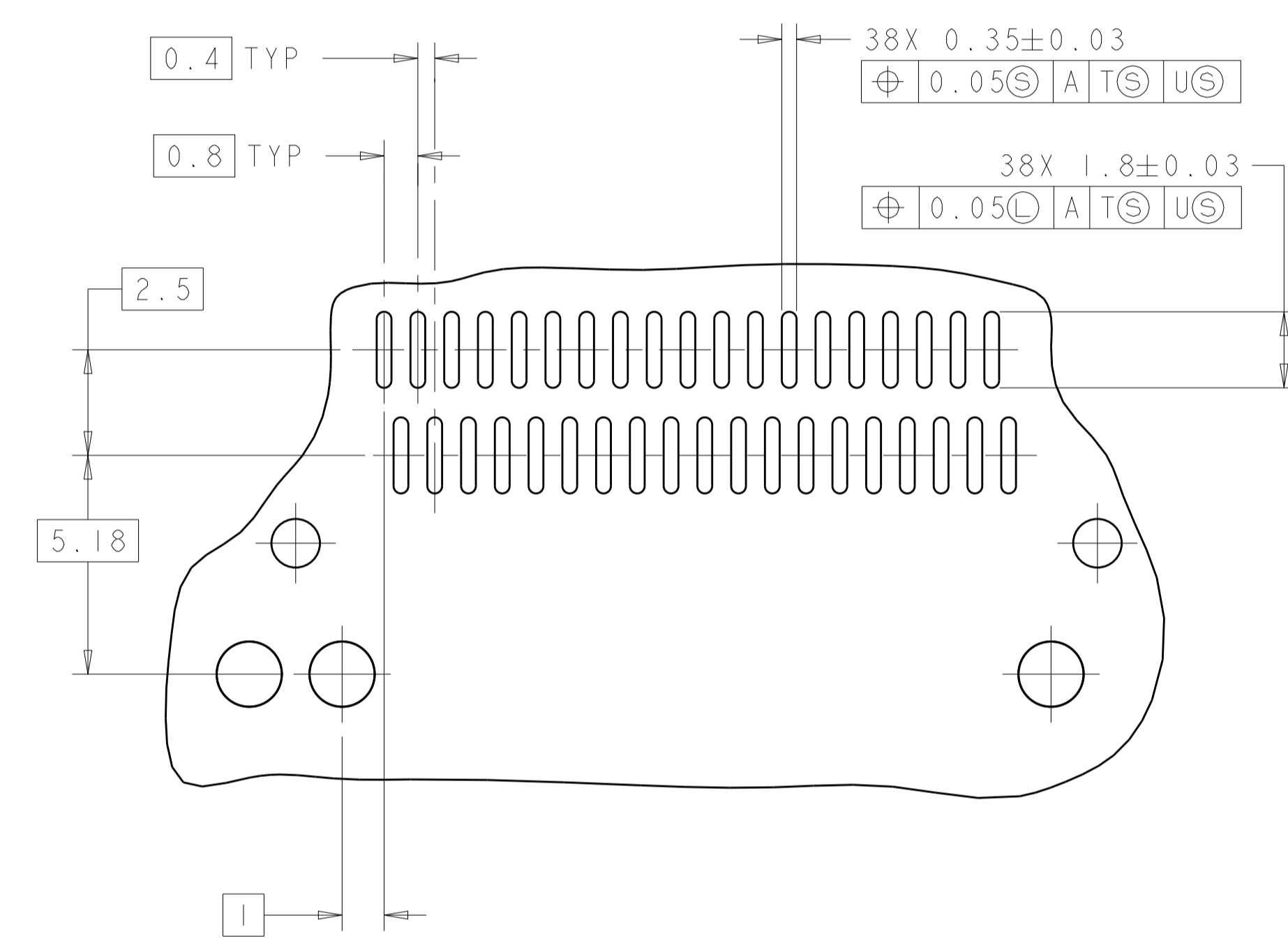
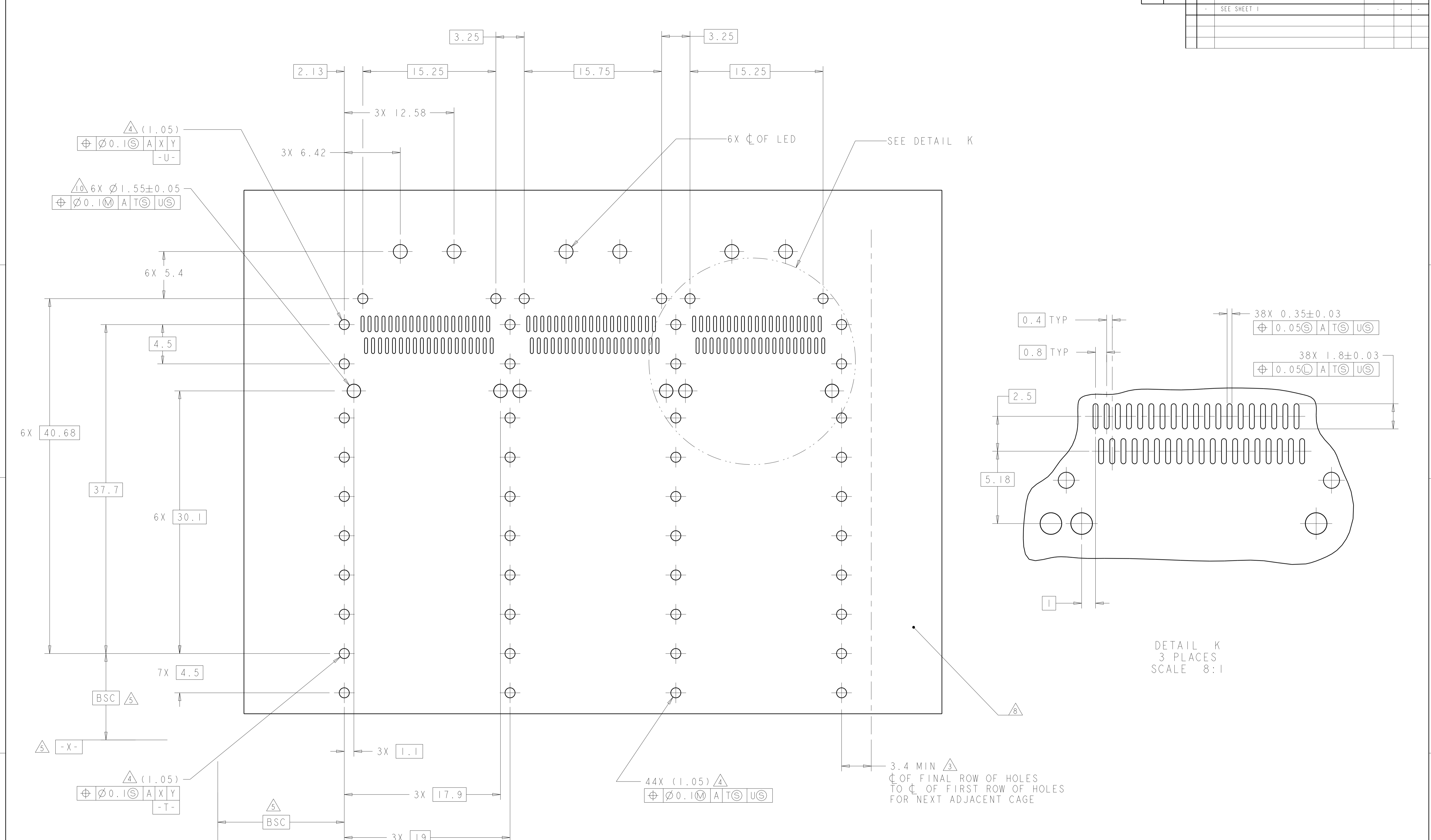
RECOMMENDED PC BOARD LAYOUT  
 SINGLE SIDE MOUNT CONFIGURATION  
 SCALE 5:1

THIS PRODUCT HAS NOT COMPLETED VALIDATION/QUALIFICATION TESTING

CROSS-HATCHED AREA DENOTES  
 COMPONENT AND TRACE KEEP-OUT  
 (EXCEPT CHASSIS GROUND)

|  |            |                             |  |
|--|------------|-----------------------------|--|
| THIS DRAWING IS A CONTROLLED DOCUMENT. |            | OWN: C. VALENTINE 28FEB2008 | TE Connectivity  |
| DIMENSIONS: mm                         |            | CHK: E. BRIGHT 28FEB2008    |  |
| TOLERANCES UNLESS OTHERWISE SPECIFIED: |            | APVD: E. BRIGHT 28FEB2008   | NAME: 1X3 CAGE ASSEMBLY, BEHIND BEZEL, W/ LIGHT PIPES AND HEAT SINKS, QSFP |
| 0 PLC ±                                | 1 PLC ±0.1 | PRODUCT SPEC: 108-2286      | SIZE: A100779C=2057042   |
| 2 PLC ±0.1                             | 3 PLC ±    | APPLICATION SPEC: 114-13218 | RESTRICTED TO: -   |
| 4 PLC ±                                | 5 PLC ±    | WEIGHT: -                   | SCALE: 4:1 SHEET 4 OF 5 REV F  |
| ANGLES ±                               | FINISH ±   | CUSTOMER DRAWING            |  |

| LOC |    | DIST |     | REVISIONS   |      |     |      |  |
|-----|----|------|-----|-------------|------|-----|------|--|
| GP  | 00 | P    | LTN | DESCRIPTION | DATE | DWN | APVD |  |
|     |    | -    |     | SEE SHEET 1 |      |     |      |  |



DETAIL K  
 3 PLACES  
 SCALE 8:1

RECOMMENDED PCB BOARD LAYOUT  
 BELLY TO BELLY CONFIGURATION  
 SEE SHEET 4 FOR COMPONENT  
 AND TRACE KEEP-OUTS  
 SCALE 5:1

THIS PRODUCT HAS NOT COMPLETED VALIDATION/QUALIFICATION TESTING

|   |  |                                  |   |
|---|--|----------------------------------|---|
| THIS DRAWING IS A CONTROLLED DOCUMENT.                                |  | DWN<br>C. VALENTINE<br>28FEB2008 | TE Connectivity<br>NAME<br>1X3 CAGE ASSEMBLY, BEHIND BEZEL,<br>W/ LIGHT PIPES AND HEAT SINKS,<br>QSFP |
| DIMENSIONS:<br>mm   |  | CHK<br>E. BRIGHT<br>28FEB2008    |   |
| TOLERANCES UNLESS OTHERWISE SPECIFIED:                                |  | APVD<br>E. BRIGHT<br>28FEB2008   | PRODUCT SPEC  |
| 0 PLC ±<br>1 PLC ±0.1<br>2 PLC ±0.1<br>3 PLC ±<br>4 PLC ±<br>ANGLES ± |  | 108-2286                         | APPLICATION SPEC  |
| MATERIAL  |  | 114-13218                        | WEIGHT  |
| FINISH  |  |                                  | RESTRICTED TO   |
|   |  | CUSTOMER DRAWING                 | SCALE 4:1 SHEET 5 OF 5 REV F  |

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