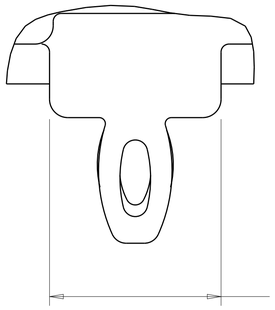
| LOC | DIST |
|---|---|
| GP | 00 |

REVISIONS

| P | LTR | DESCRIPTION | DATE | DWN | APVD |
|---|---|---|---|---|---|
| | 1 | PRELIMINARY | 01MAR2012 | KS | AC |
| | 2 | PRELIMINARY | 13MAR2012 | KS | AC |
| | 3 | UPDATE VIEW | 18APR2012 | KS | AC |
| | 4 | REVISED PER ECO-15-005721 | 4AUG2015 | RG | SH |




DETAIL S (12)
SCALE 20:1

(1) CAGE ASSEMBLY MATERIAL: NICKEL SILVER, 0.25 THICK
HEAT SINK MATERIAL: ALUMINUM
HEAT SINK CLIP MATERIAL: STAINLESS STEEL
EMI SPRING MATERIAL: COPPER ALLOY
FRONT FLANGE MATERIAL: ZINC ALLOY
LIGHT PIPE MATERIAL: CLEAR POLYCARBONATE
CONDUCTIVE GASKET MATERIAL: BURRER FOAM

(2) PITCH BETWEEN PORTS OF ONE 1X4 CAGE ASSEMBLY.

(3) SPACING BETWEEN CAGES ON THE SAME PC BOARD, TO BE SPECIFIED BY CUSTOMER, MUST COMPLY WITH MINIMUM DIMENSIONS SHOWN.

(4) REFERENCE APPLICATION SPEC 114-13218 FOR RECOMMENDED DRILL HOLE DIAMETER AND PLATING THICKNESS.

(5) DATUMS AND BASIC DIMENSIONS ESTABLISHED BY CUSTOMER.

(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.

(7) HEAT SINKS AND HEAT SINK CLIPS SHIPPED ASSEMBLED TO CAGE ASSEMBLY. CAGE ASSEMBLY MAY BE PRESSED INTO THE PCB AS SHIPPED.

(8) DATUM [-A-] IS TOP SURFACE OF PC BOARD.

(9) DIMENSION APPLIES WITH MODULE INSERTED IN CAGE.

(10) UNPLATED THRU HOLE.

11. MATES WITH QSFP MSA COMPATIBLE TRANSCEIVER.

(12) SURFACE TRACES PERMITTED WITHIN THIS AREA EXCEPT WHERE CAGE STANDOFFS, SHOWN IN DETAIL S, CONTACT PC BOARD.

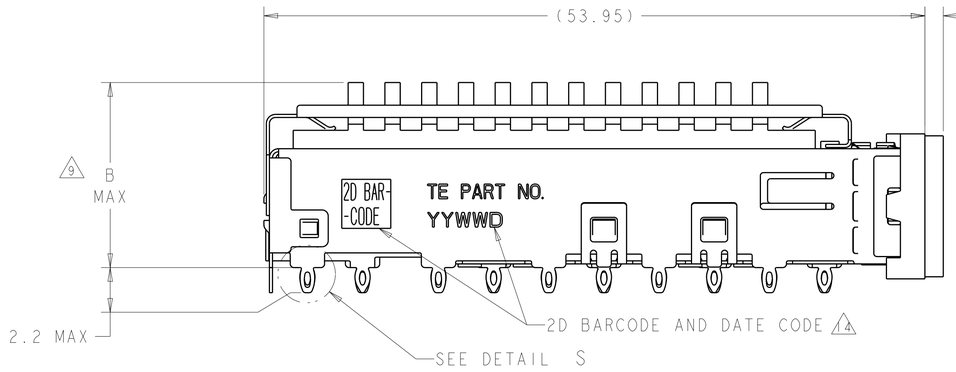
(13) BASELINE FOR THESE DIMENSIONS IS THE CENTER OF COMPLIANT PIN HOLE.

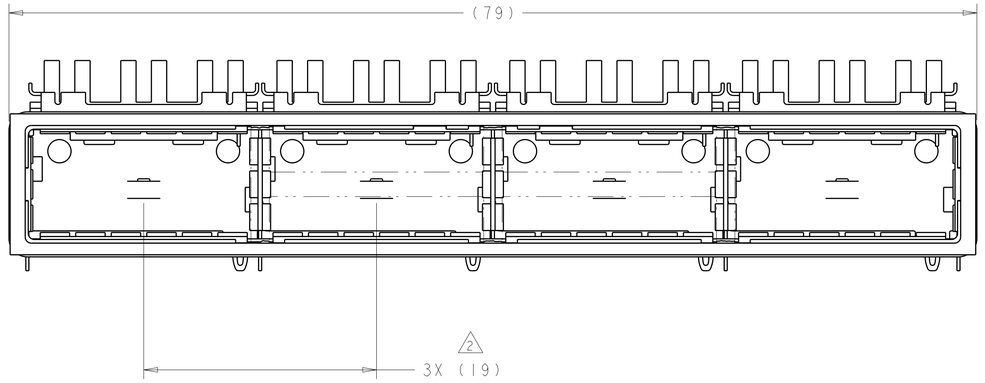
(14) 2D BARCODE AND DATE CODE (YYWWD) MARKED ON REAR OF CAGE.

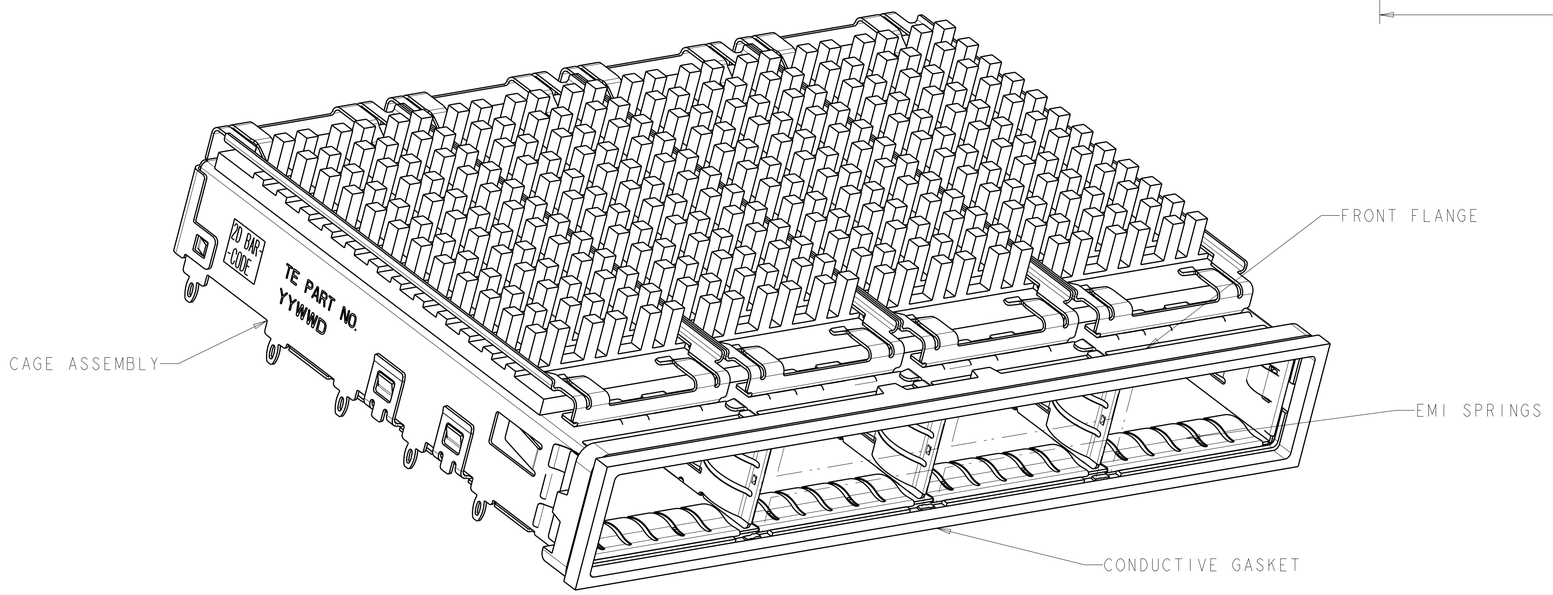
(15) REFERENCE APP SPEC 114-13218 FOR GASKET THICKNESS CALCULATION.

(16) EMI SPRING FINISH: 2µm MINIMUM TIN
FRONT FLANGE FINISH: 3µm MINIMUM TIN OVER 1.27µm MINIMUM NICKEL OVER 5.08µm MINIMUM COPPER.
HEAT SINK FINISH: NICKEL

(17) RECOMMENDED GAP FOR GASKET SHOULD BE 0.6mm-1.1mm.




DESIGN APPROVED THIS PRINT IS
**PRELIMINARY**
TO FIRST PIECE APPROVAL
CONTACT PRODUCT ENGINEERING
BEFORE USING THIS PRINT

| | | |
|---|---|---|
| 23.0 | NETWORKING | 2170290-3 |
| 16.0 | SAN | 2170290-2 |
| 13.7 | PCI | 2170290-1 |
| B | HEAT SINK PROFILE | PART NUMBER |

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±
1 PLC ±0.1
2 PLC ±0.01
3 PLC ±0.013
4 PLC ±0.0001
ANGLES ±

MATERIAL - (1)
FINISH (16)

DWN KINSEN SUN 29FEB2012
CHK DENNY ZHU 29FEB2012
APVD ALEX CAI 29FEB2012
PRODUCT SPEC 108-2286
APPLICATION SPEC 114-13218
WEIGHT -

TE Connectivity



NAME 1X4 CAGE ASSEMBLY, BUFFIND BEZEL, W/ FOAM GASKET AND HEAT SINK, QSFP

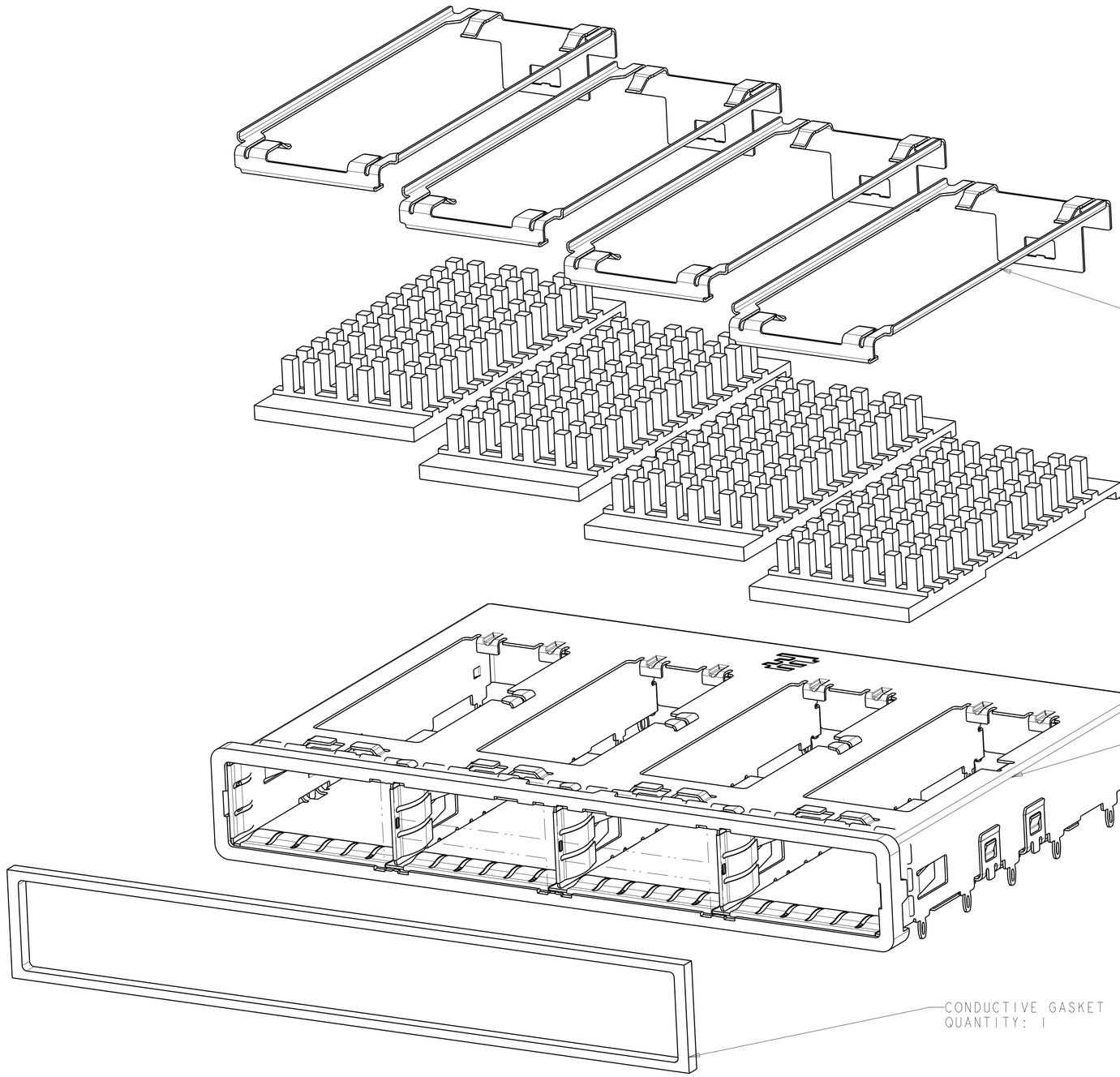
| SIZE | CAGE CODE | DRAWING NO | RESTRICTED TO |
|---|---|---|---|
| A1 | 00779 | C-2170290 | - |

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

| LOC | DIST |
|---|---|
| GP | 00 |

REVISIONS

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




DESIGN APPROVED THIS PRINT IS

**PRELIMINARY**

TO FIRST PIECE APPROVAL
CONTACT PRODUCT ENGINEERING
BEFORE USING THIS PRINT

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±-
1 PLC ±0.1
2 PLC ±0.1
3 PLC ±0.013
4 PLC ±0.0001
ANGLES ±-

MATERIAL -

FINISH -

| | | |
|---|---|---|
| DWN | KINSEN SUN | 29FEB2012 |
| CHK | DENNY ZHU | 29FEB2012 |
| APVD | ALEX CAI | 29FEB2012 |
| PRODUCT SPEC | 108-2286 | |
| APPLICATION SPEC | 114-13218 | |
| WEIGHT | - | |

TE Connectivity

NAME: 1X4 CAGE ASSEMBLY, BEHIND BEZEL, W/ FOAM GASKET AND HEAT SINK, QSFP

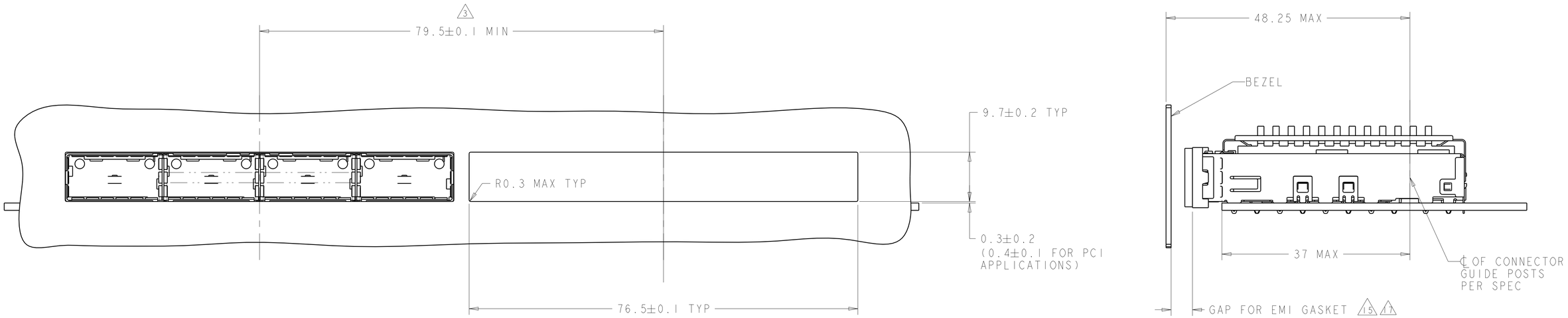
| SIZE | CAGE CODE | DRAWING NO | RESTRICTED TO |
|---|---|---|---|
| A1 | 00779 | C-2170290 | - |

CUSTOMER DRAWING | SCALE 4:1 | SHEET 2 OF 5 | REV 4

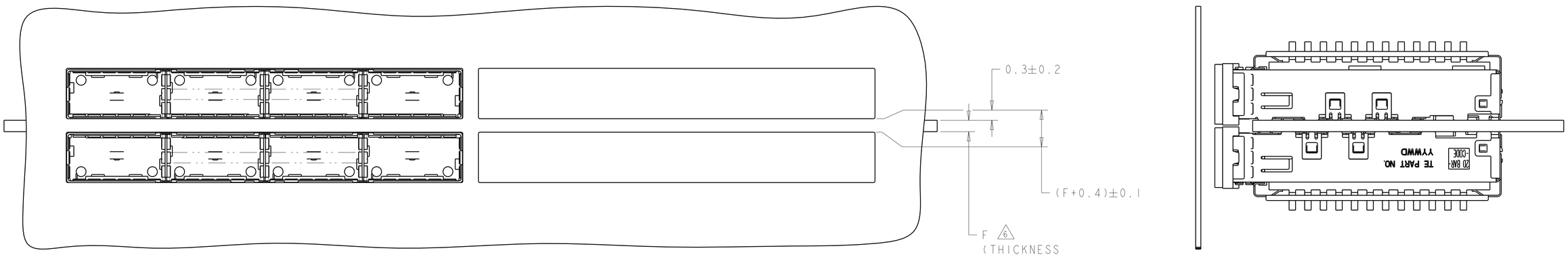
| LOC | DIST |
|---|---|
| GP | 00 |

REVISIONS

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




ONE SIDED CONFIGURATION
SCALE 5:2



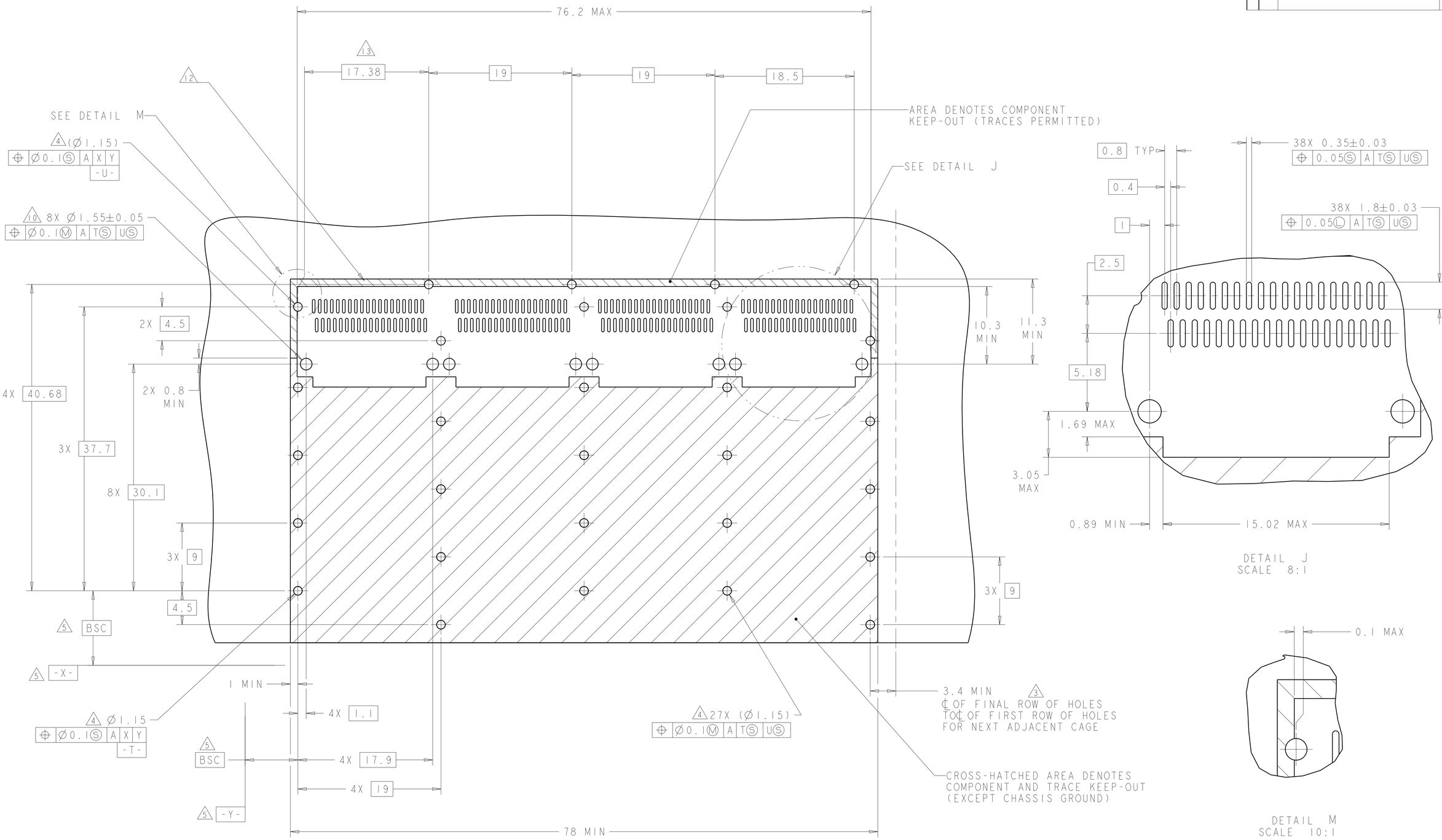

BELLY TO BELLY CONFIGURATION
SIMILAR TO ONE SIDED
EXCEPT WHERE NOTED
SCALE 5:2

| | | | |
|---|---|---|---|
| THIS DRAWING IS A CONTROLLED DOCUMENT. | DWN KINSEN SUN 29FEB2012 | TE Connectivity | |
| DIMENSIONS: mm | CHK DENNY ZHU 29FEB2012 | NAME | 1X4 CAGE ASSEMBLY, BEHIND BEZEL, W/ FOAM GASKET AND HEAT SINK QSFP |
| TOLERANCES UNLESS OTHERWISE SPECIFIED: 0 PLC ±- 1 PLC ±0.1 2 PLC ±0.1 3 PLC ±0.013 4 PLC ±0.0001 ANGLES ±- | APVD ALEX CAI 29FEB2012 | PRODUCT SPEC 108-2286 | |
| | | APPLICATION SPEC 114-13218 | |
| MATERIAL - - | FINISH - - | WEIGHT - | SIZE A1 · CAGE CODE 00779 · DRAWING NO C-2170290 · RESTRICTED TO - |
| | | CUSTOMER DRAWING | SCALE 4:1 · SHEET 3 OF 5 · REV 4 |

| LOC | DIST |
|---|---|
| GP | 00 |

REVISIONS

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




RECOMMENDED PC BOARD LAYOUT
SINGLE SIDE MOUNT CONFIGURATION
SCALE 4:1




DETAIL J
SCALE 8:1




DETAIL M
SCALE 10:1

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±
1 PLC ±0.1
2 PLC ±0.1
3 PLC ±0.013
4 PLC ±0.0001
ANGLES ±

MATERIAL - -
FINISH - -

DWN KINSEN SUN 29FEB2012
CHK DENNY ZHU 29FEB2012
APVD ALEX CAI 29FEB2012
PRODUCT SPEC 108-2286
APPLICATION SPEC 114-13218
WEIGHT -

TE Connectivity

NAME 1X4 CAGE ASSEMBLY, BEHIND BEZEL, W/ FOAM GASKET AND HEAT SINK QSFP

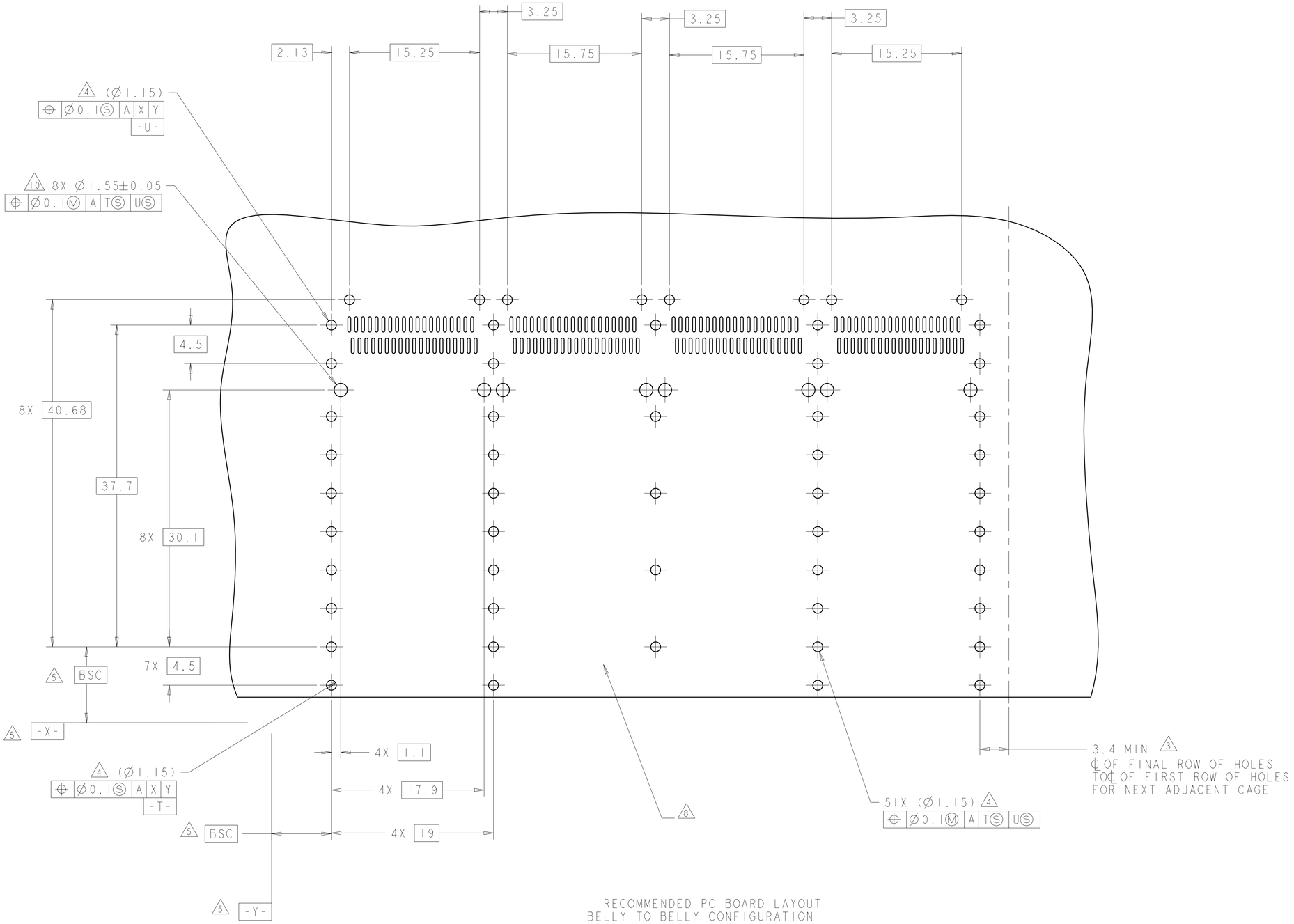
| SIZE | CAGE CODE | DRAWING NO | RESTRICTED TO |
|---|---|---|---|
| A1 | 00779 | C-2170290 | - |

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

| LOC | DIST |
|---|---|
| GP | 00 |

REVISIONS

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




RECOMMENDED PC BOARD LAYOUT
BELLY TO BELLY CONFIGURATION
SEE SHEET 4 FOR COMPONENT
AND TRACE KEEP-OUTS

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±.
1 PLC ±0.1
2 PLC ±0.1
3 PLC ±0.013
4 PLC ±0.0001
ANGLES ±.

MATERIAL -
FINISH -

DWN KINSEN SUN 29FEB2012
CHK DENNY ZHU 29FEB2012
APVD ALEX CAI 29FEB2012
PRODUCT SPEC 108-2286
APPLICATION SPEC 114-13218
WEIGHT -

TE Connectivity

NAME 1X4 CAGE ASSEMBLY, BEHIND BEZEL, W/ FOAM GASKET AND HEAT SINK QSFP

| SIZE | CAGE CODE | DRAWING NO | RESTRICTED TO |
|---|---|---|---|
| A1 | 00779 | C-2170290 | - |

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