REVISION M

**DESIGNED AND DIMENSIONED IN MILLIMETERS[INCHES]**
**ALL DIMENSIONS REFERENCE EXCEPT AS SHOWN**

**THIS PRODUCT MANUFACTURED WITH LEAD-FREE PROCESSING**

# FQSFP-XX-XX.X-X-XX-X

LEAD STYLE
-01: 10 LS, 8 PAIR HS

CABLE LENGTH (INCHES)
04.0 TO XX.X
(SEE NOTE 7)

END OPTION
-1: DCH-PF 1 x8 PAIR
-2: DCH-PF 2 x4 PAIR
-3: ECUE (SEE FIG 5, SHT 4) (SEE NOTE 3)
-4: ARC6-08-LU (SEE FIG 16, SHT 5)

FQSFP CONTACT TYPE
-PF: PRESS FIT

PLATING SPECIFICATION
-L: 10µ" Au OVER 50µ" Ni IN CONTACT AREA, TIN ON TAIL
-S: 30µ" Au OVER 50µ" Ni IN CONTACT AREA, TIN ON TAIL

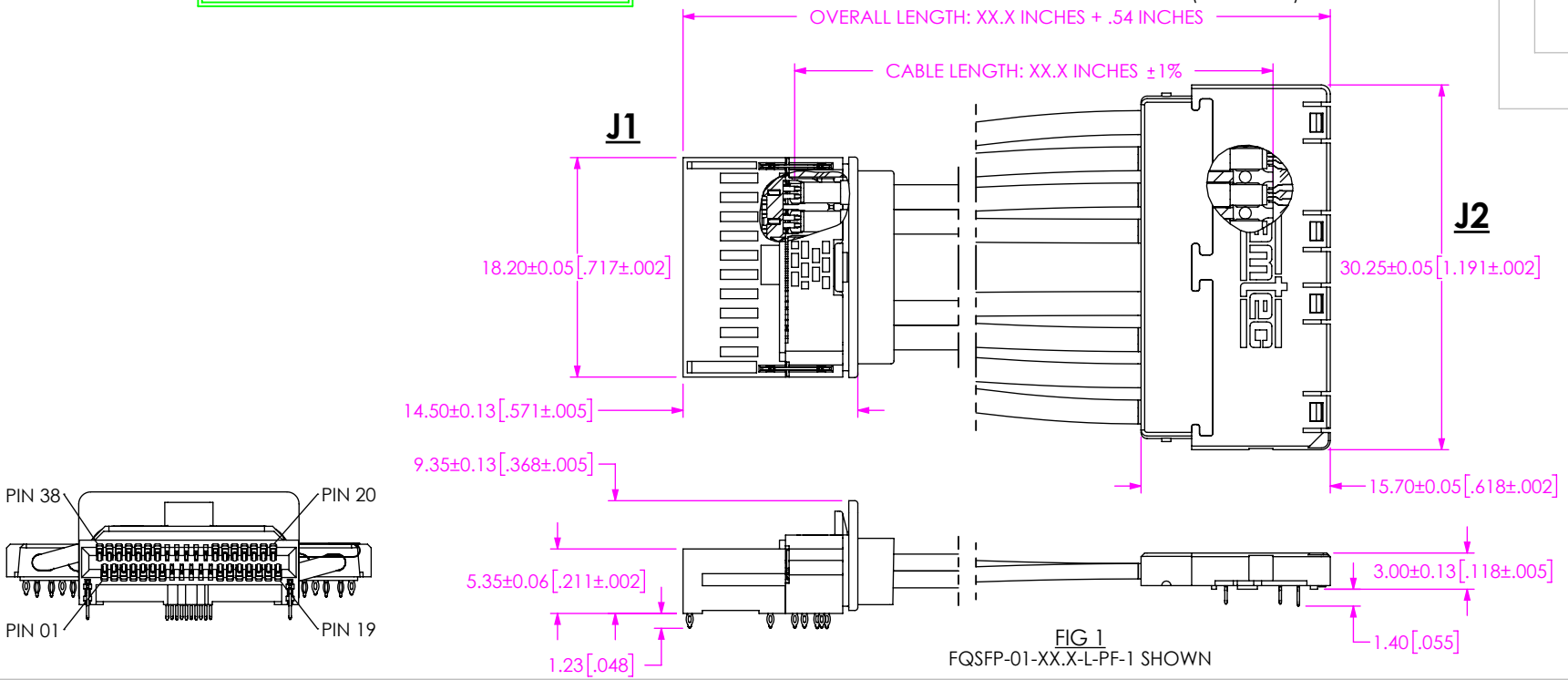



FIG 1
FQSFP-01-XX.X-L-PF-1 SHOWN

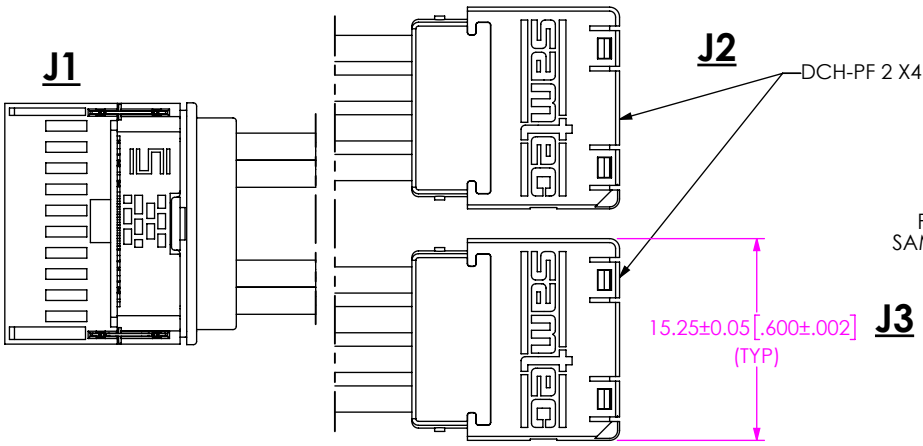



FIG 2
FQSFP-01-XX.X-L-PF-2 SHOWN
SAME AS FIG 1 EXCEPT AS SHOWN

NOTES:
1. ALL HIGH SPEED CONTACTS TO BE 100% HI-POT TESTED AT 300V.
2. ALL HIGH SPEED CONTACTS TO BE 100% ELECTRICALLY TESTED FOR SHORTS AND OPENS.
3. FOR -3 END OPTIONS OVER 16Gbs MATE TO UEC5-XXX-2-XXX-D-RA-X-XX.
   FOR -3 END OPTION UNDER 16Gbs MATE TO UEC5-XXX-1-X-D-RA-X-A-XX.
4. LABEL TO BE CENTERED ON CABLE FOR ALL END OPTIONS SHOWING PART NUMBER, ORDER NUMBER, DATE CODE.
5. FQSFP END TO BE PACKAGED WITH CAP-FQSFP AND DCH END TO BE PACKAGED WITH DCH-CAP-XX.
6. FQSFP MUST BE USED WITH QSFPC-X-X-X-XX-X AND HS-QSFP-XX-XX-XX.
7. CABLE LENGTHS OVER 19.68" NOT SUPPORTED BY SI.


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PHONE: 812-944-6733 FAX: 812-948-5047
e-Mail info@SAMTEC.com code 55322


DESCRIPTION:
QSFP FLYOVER CABLE ASSEMBLY

DWG. NO.
FQSFP-XX-XX.X-X-XX-X

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BY: D.SCHMELZ 03/20-2015 SHEET 1 OF 8

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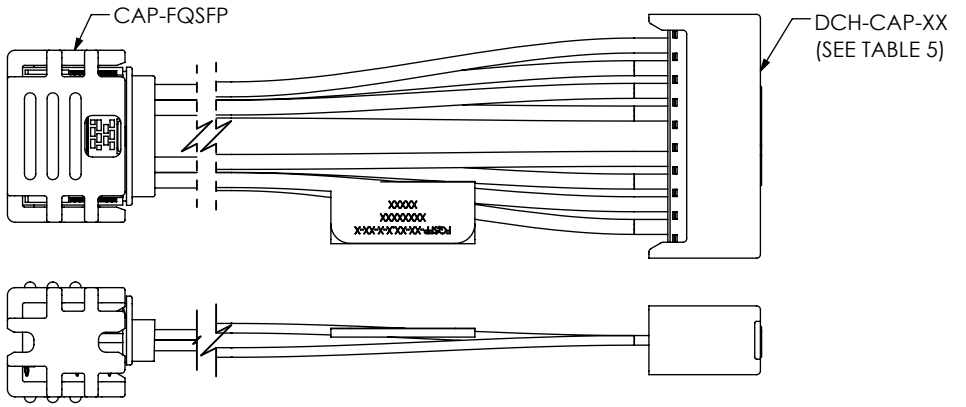
| TABLE 1 SIGNAL MAPPING | | |
|---|---|---|
| J1 | NAME | J2 |
| 1 | GND1 | GND1 |
| 2 | TX2n | 14 |
| 3 | TX2p | 13 |
| 4 | GND1 | GND1 |
| 5 | TX4n | 10 |
| 6 | TX4p | 9 |
| 7 | GND1 | GND1 |
| 13 | GND2 | GND2 |
| 14 | RX3p | 6 |
| 15 | RX3n | 5 |
| 16 | GND2 | GND2 |
| 17 | RX1p | 2 |
| 18 | RX1n | 1 |
| 19 | GND2 | GND2 |
| 20 | GND2 | GND2 |
| 21 | RX2n | 3 |
| 22 | RX2p | 4 |
| 23 | GND2 | GND2 |
| 24 | RX4n | 7 |
| 25 | RX4p | 8 |
| 26 | GND2 | GND2 |
| 32 | GND1 | GND1 |
| 33 | TX3p | 11 |
| 34 | TX3n | 12 |
| 35 | GND1 | GND1 |
| 36 | TX1p | 15 |
| 37 | TX1n | 16 |
| 38 | GND1 | GND1 |

WITHIN THIS CABLE ASSEMBLY, POSITIONS LABELED WITH A SPECIFIC GND# ARE COMMON AND TIED TO TWINAX SHIELD

ON THE MATING BOARD ASSEMBLY, SAMTEC RECOMMENDS IMPLEMENTING A COMMON GND REFERENCE TYING ALL GND#'s TOGETHER

| J1 | NAME | J2 |
|---|---|---|
| 8 | ModselL | NC |
| 9 | ResetL | NC |
| 10 | VccRx | NC |
| 11 | SCL | NC |
| 12 | SDA | NC |
| 27 | ModPrsL | NC |
| 28 | IntL | NC |
| 29 | VxxTx | NC |
| 30 | Vcc1 | NC |
| 31 | LPMode | NC |

ALL NC ARE ROUTED VIA COMPLIANT TAILS TO THE PCB




PACKAGING VIEW

| TABLE 5 | | |
|---|---|---|
| END OPTION | PART NUMBER | QTY |
| 1 | DCH-CAP-08 | 1 |
| 2 | DCH-CAP-04 | 2 |

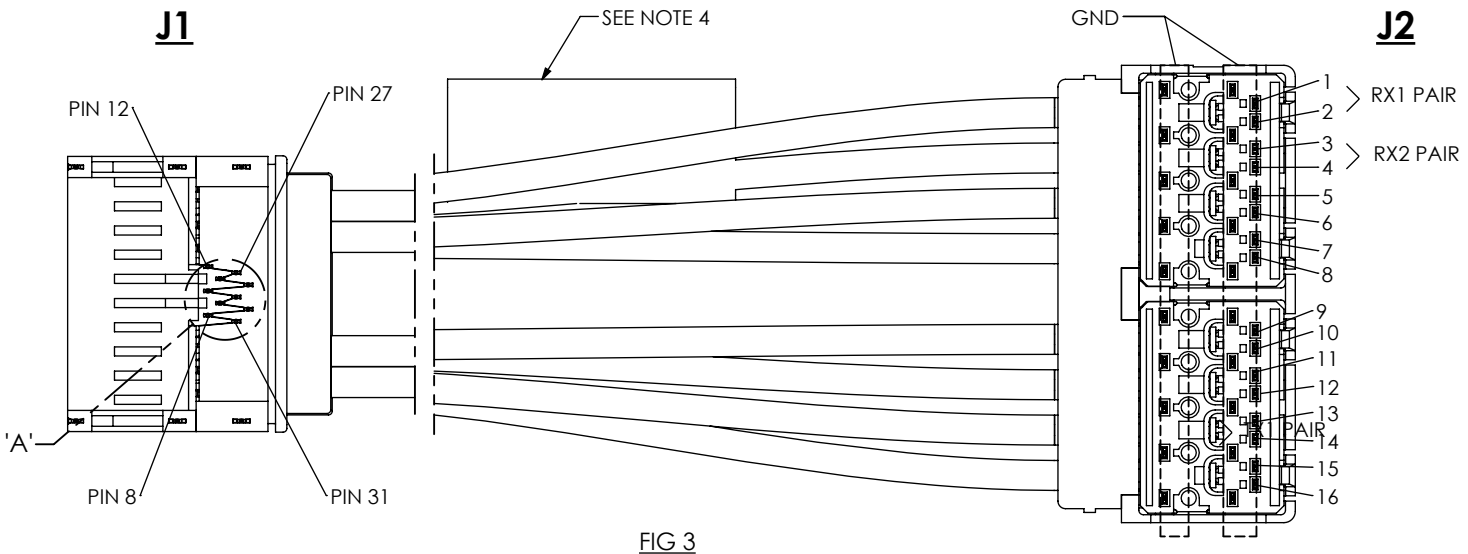
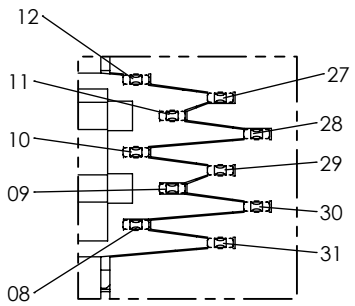



FIG 3
SIGNAL MAP
BOTTOM VIEW SHOWN




DETAIL 'A'
SCALE 6 : 1

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SHEET SCALE: 2:1


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DESCRIPTION: QSFP FLYOVER CABLE ASSEMBLY

DWG. NO. FQSFP-XX-XX.X-X-XX-X

BY: D.SCHMELZ 03/20-2015

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| TABLE 2 SIGNAL MAPPING | | | | | |
|---|---|---|---|---|---|
| **J1** | **NAME** | **J2** | **J1** | **NAME** | **J3** |
| 13 | GND2 | GND2 | 1 | GND1 | GND1 |
| 14 | RX3p | 6 | 2 | TX2n | 6 |
| 15 | RX3n | 5 | 3 | TX2p | 5 |
| 16 | GND2 | GND2 | 4 | GND1 | GND1 |
| 17 | RX1p | 2 | 5 | TX4n | 2 |
| 18 | RX1n | 1 | 6 | TX4p | 1 |
| 19 | GND2 | GND2 | 7 | GND1 | GND1 |
| 20 | GND2 | GND2 | 32 | GND1 | GND1 |
| 21 | RX2n | 3 | 33 | TX3p | 3 |
| 22 | RX2p | 4 | 34 | TX3n | 4 |
| 23 | GND2 | GND2 | 35 | GND1 | GND1 |
| 24 | RX4n | 7 | 36 | TX1p | 7 |
| 25 | RX4p | 8 | 37 | TX1n | 8 |
| 26 | GND2 | GND2 | 38 | GND1 | GND1 |
| WITHIN THIS CABLE ASSEMBLY, POSITIONS LABELED WITH A SPECIFIC GND# ARE COMMON AND TIED TO TWINAX SHIELD | | | | | |
| ON THE MATING BOARD ASSEMBLY, SAMTEC RECOMMENDS IMPLEMENTING A COMMON GND REFERENCE TYING ALL GND#'s TOGETHER | | | | | |
| **J1** | **NAME** | **J2** | **J1** | **NAME** | **J3** |
| 27 | ModPRsL | NC | 8 | ModeselL | NC |
| 28 | IntL | NC | 9 | ResetL | NC |
| 29 | VxxTx | NC | 10 | VccRx | NC |
| 30 | Vcc1 | NC | 11 | SCL | NC |
| 31 | LPMode | NC | 12 | SDA | NC |
| ALL NC ARE ROUTED VIA COMPLIANT TAILS TO THE PCB | | | | | |

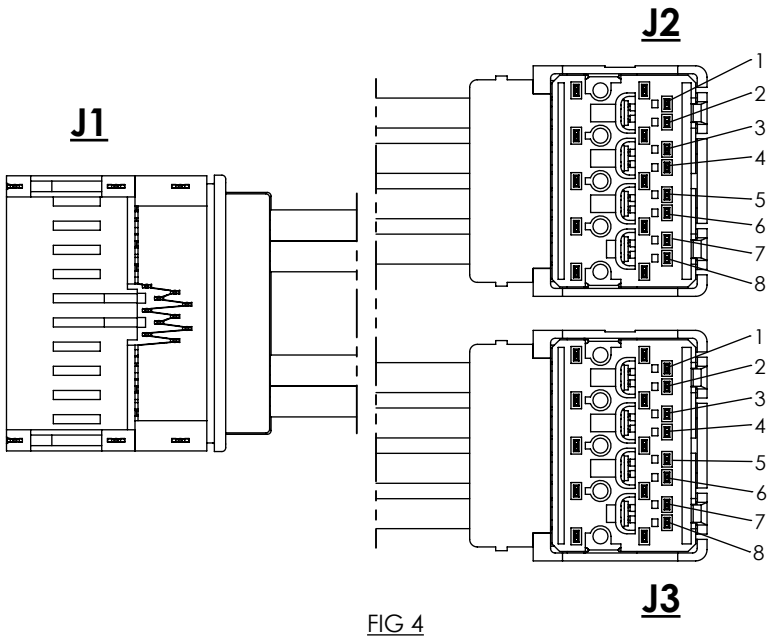



FIG 4
SIGNAL MAP
BOTTOM VIEW SHOWN
SAME AS FIG 3 EXCEPT AS SHOWN


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e-Mail info@SAMTEC.com code 55322


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SHEET SCALE: 2:1

DESCRIPTION: QSFP FLYOVER CABLE ASSEMBLY

DWG. NO. FQSFP-XX-XX.X-X-XX-X

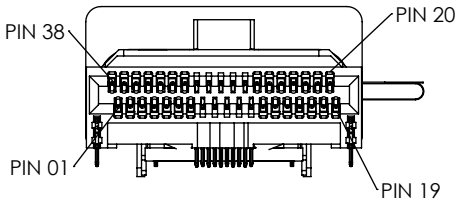
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| TABLE 3 | | |
|---|---|---|
| SIGNAL MAPPING | | |
| J1 | NAME | J2 |
| 1 | GND | GND |
| 2 | TX2n | B2 |
| 3 | TX2p | B3 |
| 4 | GND | GND |
| 5 | TX4n | B5 |
| 6 | TX4p | B6 |
| 7 | GND | GND |
| 13 | GND | GND |
| 14 | RX3p | B14 |
| 15 | RX3n | B15 |
| 16 | GND | GND |
| 17 | RX1p | B17 |
| 18 | RX1n | B18 |
| 19 | GND | GND |
| 20 | GND | GND |
| 21 | RX2n | A18 |
| 22 | RX2p | A17 |
| 23 | GND | GND |
| 24 | RX4n | A15 |
| 25 | RX4p | A14 |
| 26 | GND | GND |
| 32 | GND | GND |
| 33 | TX3p | A6 |
| 34 | TX3n | A5 |
| 35 | GND | GND |
| 36 | TX1p | A3 |
| 37 | TX1n | A2 |
| 38 | GND | GND |
| ALL GROUNDS COMMON AND TIED TO CABLE | | |
| ALL OMMITTED J2 PIN NUMBERS ARE TIED TO GROUND | | |

| J1 | NAME | J2 |
|---|---|---|
| 8 | ModselL | NC |
| 9 | ResetL | NC |
| 10 | VccRx | NC |
| 11 | SCL | NC |
| 12 | SDA | NC |
| 27 | ModPrsL | NC |
| 28 | IntL | NC |
| 29 | VxxTx | NC |
| 30 | Vcc1 | NC |
| 31 | LPMode | NC |
| ALL NC ARE ROUTED VIA COMPLIANT TAILS TO THE PCB | | |



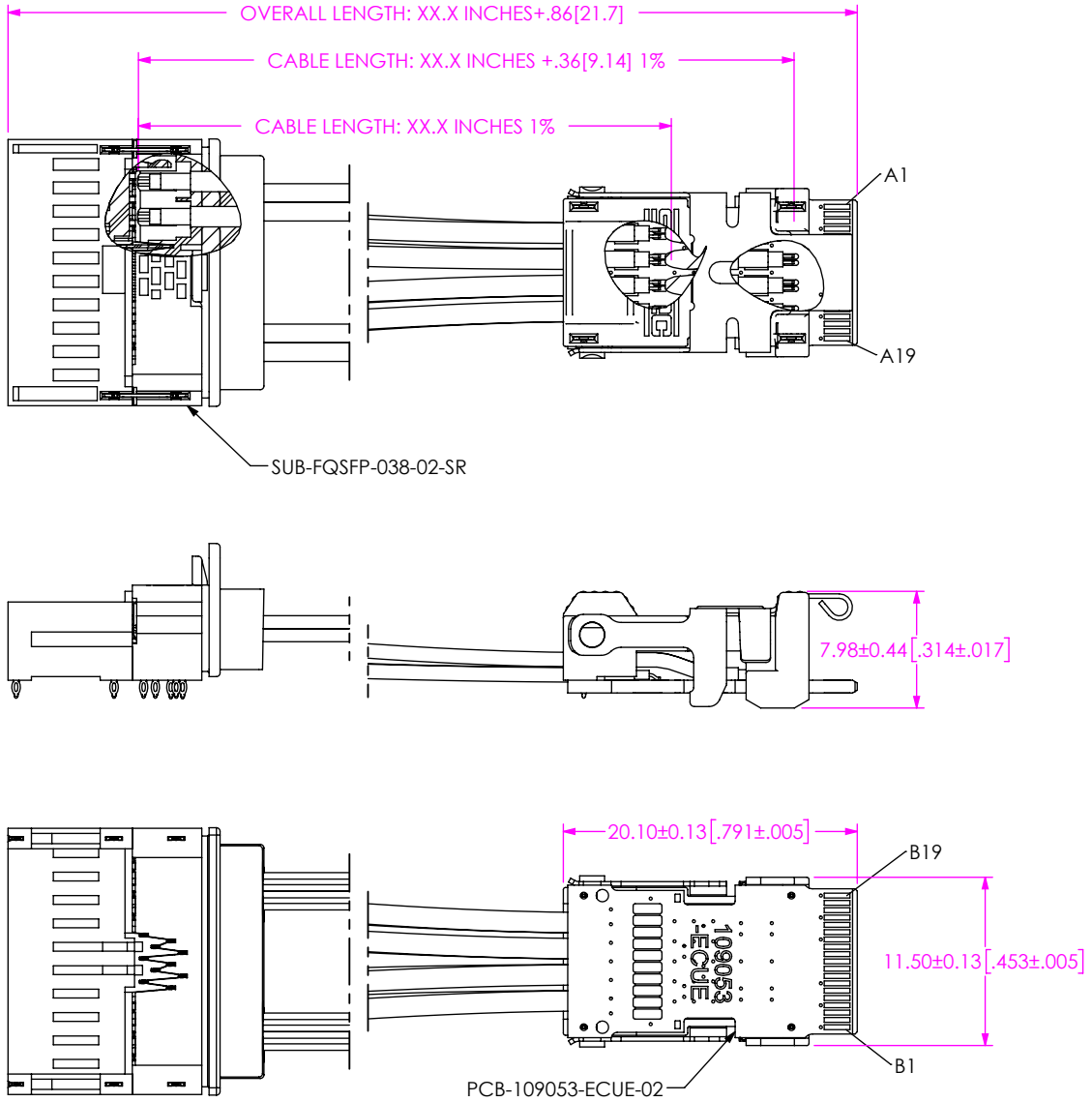




FIG 5
FQSFP-01-XX.X-L-PF-3 SHOWN
(SAME AS FIG 1 & 3 EXCEPT AS SHOWN)


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SHEET SCALE: 2:1

DESCRIPTION: QSFP FLYOVER CABLE ASSEMBLY

DWG. NO. FQSFP-XX-XX.X-X-XX-X

BY: D.SCHMELZ 03/20-2015



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| TABLE 4 SIGNAL MAPPING | | |
|---|---|---|
| **J1** | **NAME** | **J2** |
| 1 | GND1 | GND1 |
| 2 | TX2n | 12 |
| 3 | TX2p | 10 |
| 4 | GND1 | GND1 |
| 5 | TX4n | 6 |
| 6 | TX4p | 4 |
| 7 | GND1 | GND1 |
| 13 | GND2 | GND2 |
| 14 | RX3p | 11 |
| 15 | RX3n | 9 |
| 16 | GND2 | GND2 |
| 17 | RX1p | 5 |
| 18 | RX1n | 3 |
| 19 | GND2 | GND2 |
| 20 | GND2 | GND2 |
| 21 | RX2n | 15 |
| 22 | RX2p | 17 |
| 23 | GND2 | GND2 |
| 24 | RX4n | 21 |
| 25 | RX4p | 23 |
| 26 | GND2 | GND2 |
| 32 | GND1 | GND1 |
| 33 | TX3p | 16 |
| 34 | TX3n | 18 |
| 35 | GND1 | GND1 |
| 36 | TX1p | 22 |
| 37 | TX1n | 24 |
| 38 | GND1 | GND1 |
| WITHIN THIS CABLE ASSEMBLY, POSITIONS LABELED WITH A SPECIFIC GND# ARE COMMON AND TIED TO TWINAX SHIELD | | |
| ON THE MATING BOARD ASSEMBLY, SAMTEC RECOMMENDS IMPLEMENTING A COMMON GND REFERENCE TYING ALL GND#'s TOGETHER | | |
| **J1** | **NAME** | **J2** |
| 8 | ModselL | NC |
| 9 | ResetL | NC |
| 10 | VccRx | NC |
| 11 | SCL | NC |
| 12 | SDA | NC |
| 27 | ModPrsL | NC |
| 28 | IntL | NC |
| 29 | VxxTx | NC |
| 30 | Vcc1 | NC |
| 31 | LPMode | NC |
| ALL NC ARE ROUTED VIA COMPLIANT TAILS TO THE PCB | | |

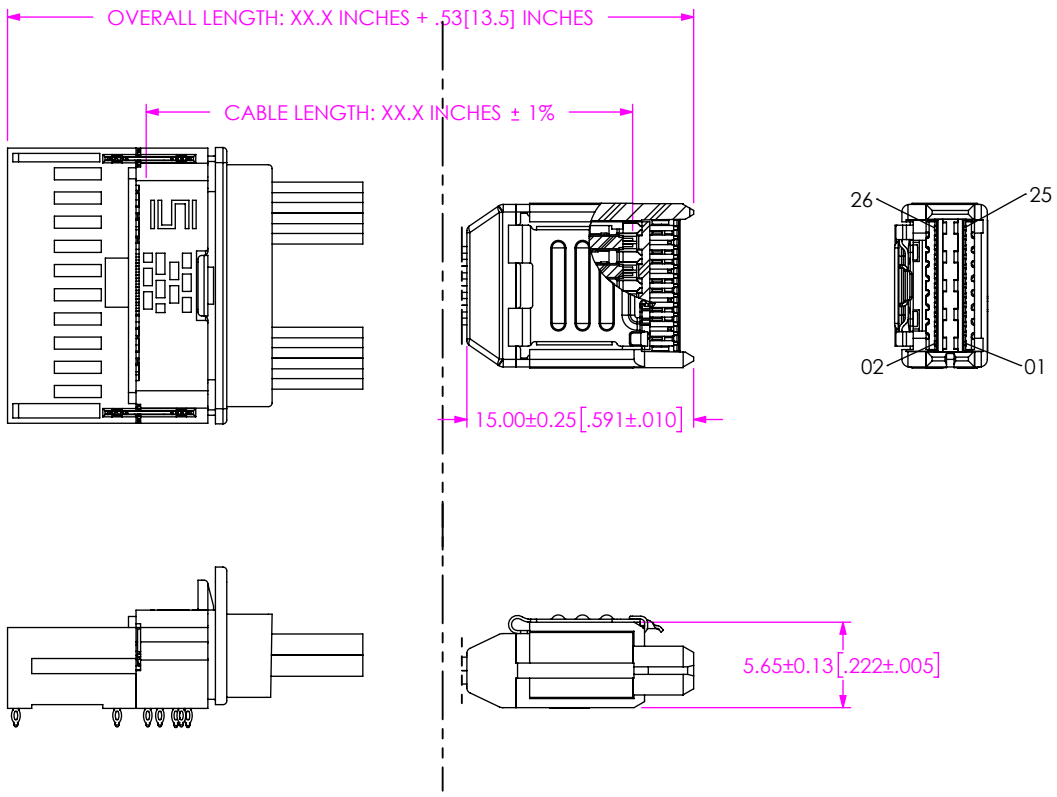



FIG 16
FQSFP-01-XX.X-L-PF-4 SHOWN
(SAME AS FIG 1 & 3 EXCEPT AS SHOWN)


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e-Mail info@SAMTEC.com code 55322


DESCRIPTION: QSFP FLYOVER CABLE ASSEMBLY

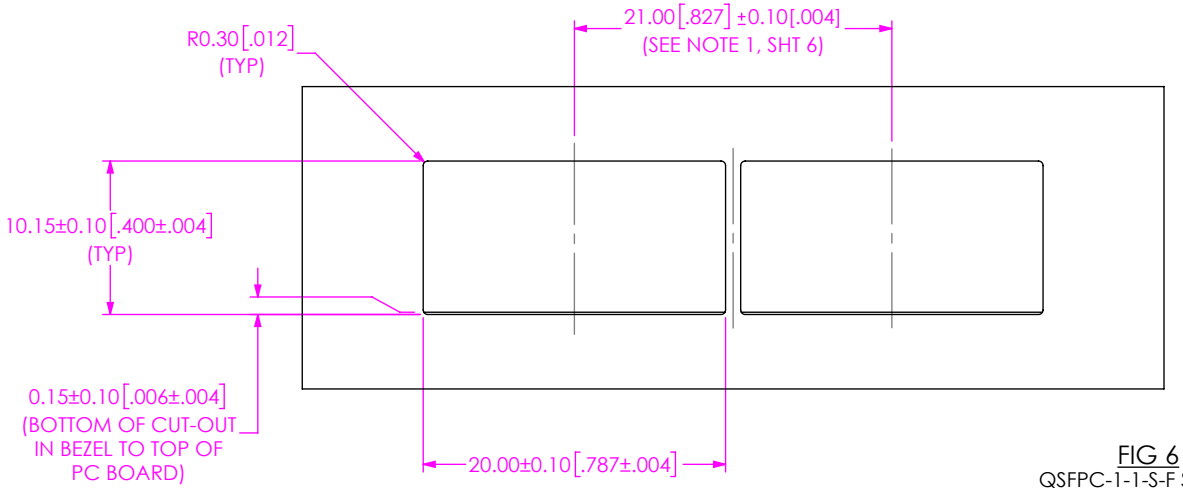
DWG. NO. FQSFP-XX-XX.X-X-XX-X

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REVISION M

# RECOMMENDED PANEL OPENING FOR QSFPC-X-X-X-XX-F



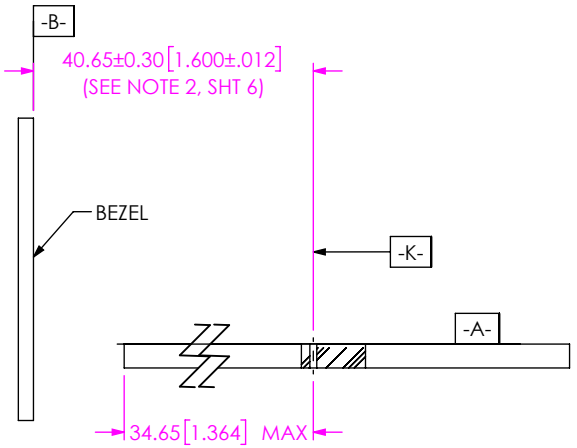




FIG 6
QSFPC-1-1-S-F SHOWN

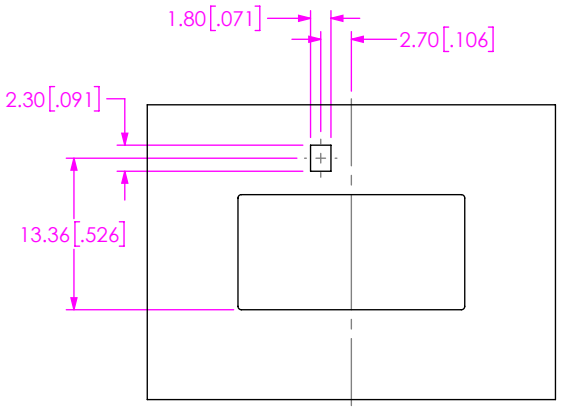



FIG 7
QSFPC-1-X-S-LP-F WITH FQSFP-LP-01 SHOWN
(1 LIGHTPIPE)
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 6)

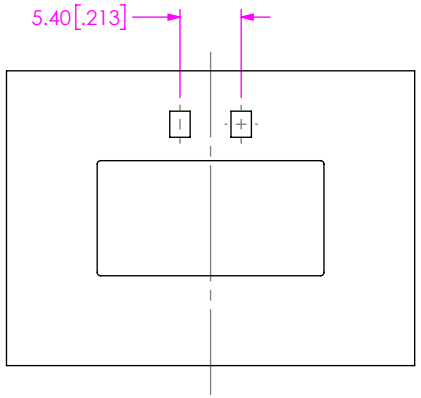



FIG 8
QSFPC-1-X-S-LP-F WITH FQSFP-LP-02 SHOWN
(2 LIGHTPIPES)
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 7)

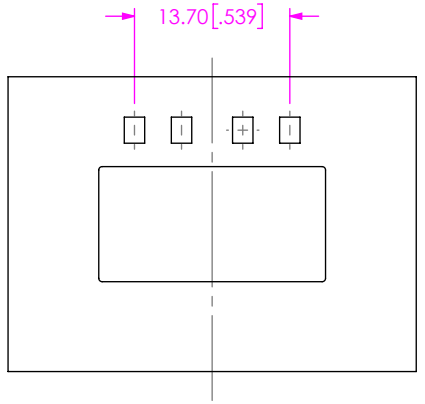



FIG 9
QSFPC-1-X-S-LP-F WITH FQSFP-LP-04 SHOWN
(4 LIGHTPIPES)
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 8)

PANEL NOTES:
1. MINIMUM PITCH DIMENSION FOR INDIVIDUAL GAGES.
2. DIMENSION BASELINE IS DATUM -K-.
3. NOT RECOMMENDED FOR PCI APPLICATIONS.


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# APPLICATION VIEWS FOR FQSFP

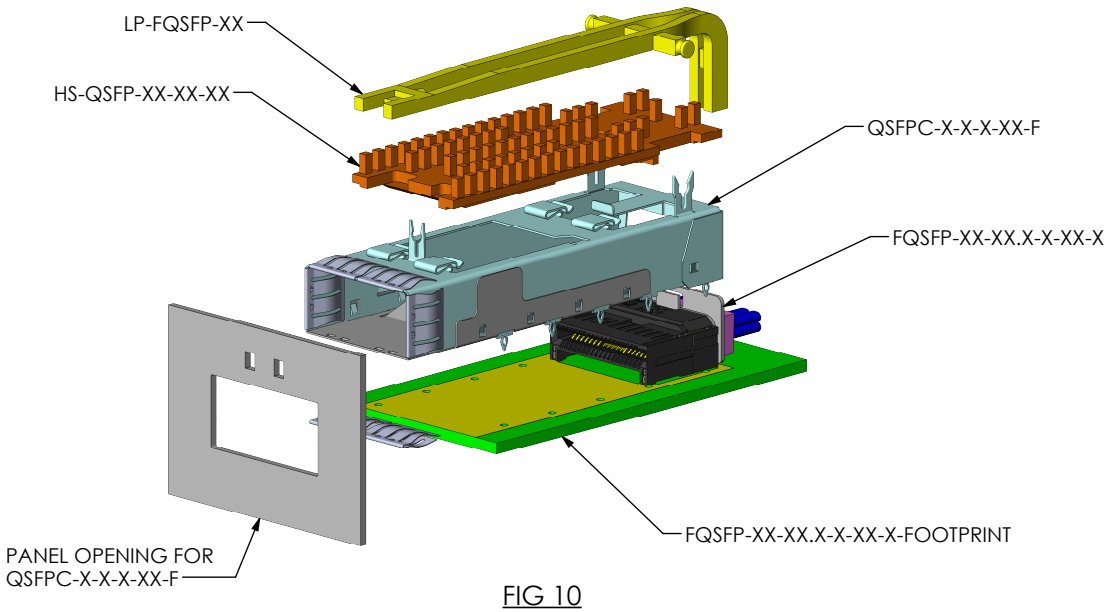



FIG 10
EXPLODED VIEW

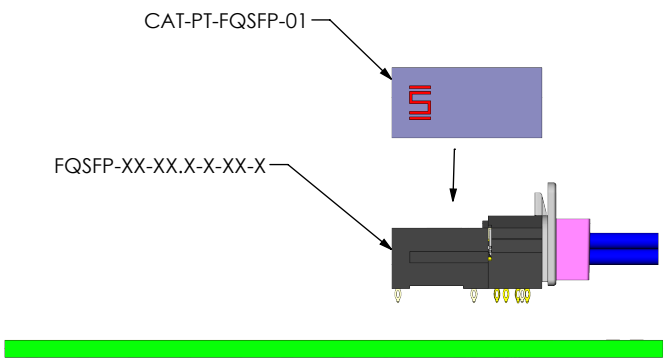



FIG 11
CONNECTOR PRESS STEP

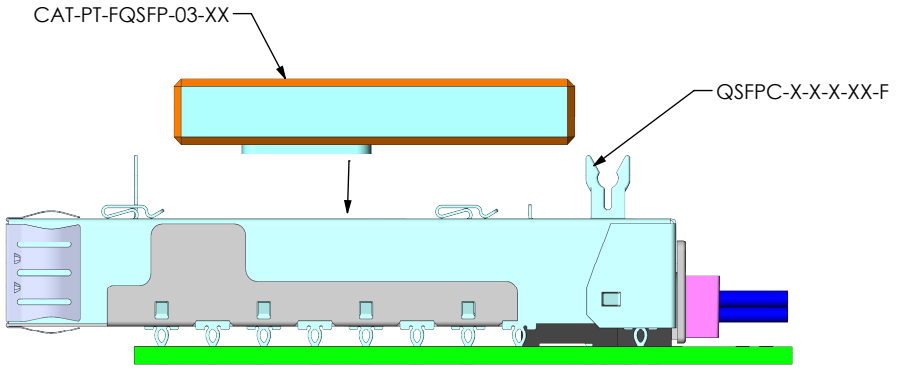



FIG 12
CAGE PRESS STEP

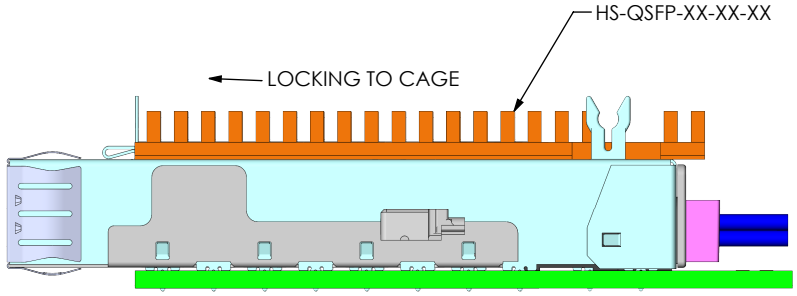



FIG 13
PRESS AND LOCK HEATSINK TO CAGE

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# APPLICATION VIEWS FOR FQSFP

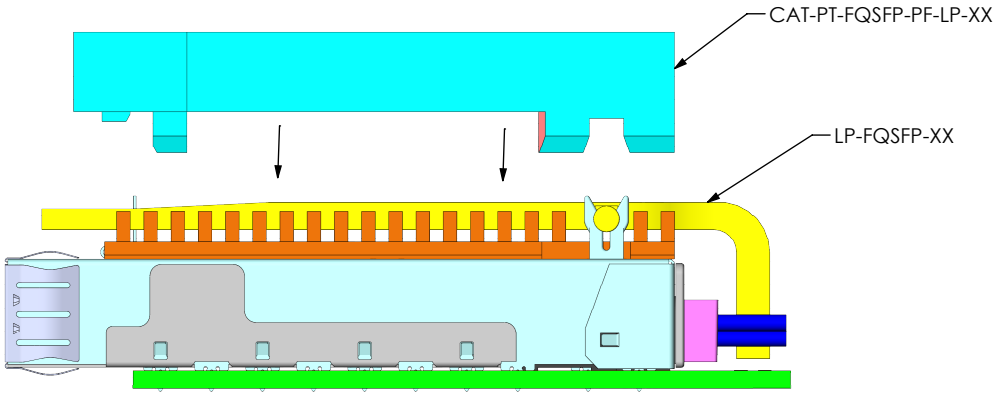
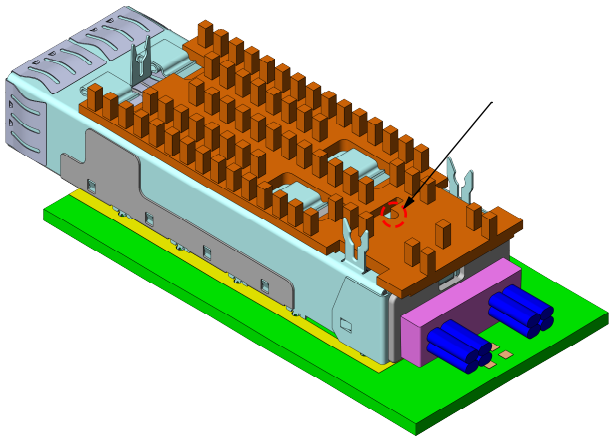
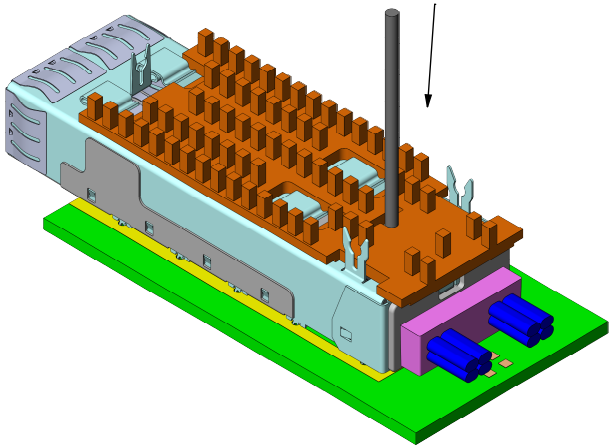


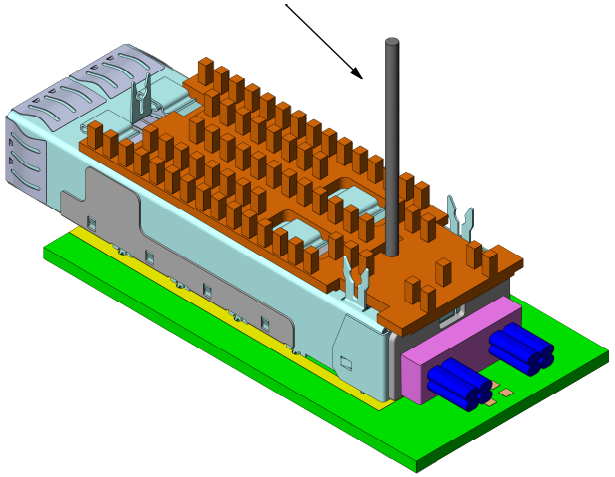

FIG 14
PRESSING LIGHT PIPE TO CAGE



STEP 1
LOCATE HEATSINK LATCH HOLE



STEP 2
INSERT PIN TO RELEASE LATCH



STEP 3
SLIDE HEATSINK REARWARD TO REMOVE

FIG 15
HEAT SINK REMOVAL

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