

**51740-10402404CALF -
PwrBlade® : 4P 24S 4P PF
Vertical Receptacle**



www.fci.com

Specifications

General

| | |
|---|--|
| First Make Last Break (FMLB) | Request Select Load Worksheet 51698 for FMLB Options |
| Gender | Receptacle |
| Guided Mating | Guide Pin |
| Number of contacts (Total - Power) | 8 |
| Number of contacts (Total - Signal) | 24 |
| Orientation | Vertical |
| Polarization | Yes |
| Receptacle Pin Pattern (Right to Left) | Power/Signal/Power |
| Tail Options | 0.135 in. Press-Fit |
| Mating half | PwrBlade® Right Angle Headers |
| Number of rows (Power) | 1 |
| Number of rows (Signal) | 4 |

Dimensional

| | |
|---------------------------------------|--------------------|
| Spacing (Center line - Power) | 6.35 mm (0.25 in.) |
| Spacing (Center line - Signal) | 2.54 mm (0.1 in.) |

Electrical

| | |
|--------------------------------|---|
| Current rating | 48A max. for One Powered Contact, 30A max. for Ten Contacts Powered |
| Resistance (Contact) | Maximum for mated pair is 2 milli ohms |
| Resistance (Insulation) | >= 10,000 M-ohms after Environmental Test Conditions |
| Voltage rating | 1000V per Signal Contact, 2500V per Power Contact |

Mechanical

| | |
|-----------------------------------|---|
| Durability (Mating cycles) | 200 |
| Insertion force | Maximum 25 oz. per Power Contact and 3.5 oz. per Signal Contact |
| Wipe (Power) | 0.227 in. min., Post mate 0.177 in. min. |
| Wipe (Signal) | 0.152 in. min., Post mate 0.102 in. min. |

Mounting

| | |
|----------------------------------|--|
| Retention feature (Board) | Board Lock |
| Solder process | High Temp Solder Process |
| Footprint note | Ordering data shown is for our standard product offering. For non-standard or custom products, contact your Authorized FCI |

Representative.

Physical

| | |
|--|---|
| Color (Housing) | Black |
| Material (Housing) | Glass - Filled High - Temp Thermoplastic (UL-94 V-0) |
| Plating (Contact area) | 0.76 μm (30 $\mu\text{in.}$) Precious metal |
| Plating (Tail - Power) | 2.54 - 5.08 μm (100-200 $\mu\text{in.}$) Tin-Lead |
| Plating (Tail - Signal) | 2.54 μm (100 $\mu\text{in.}$) Tin-Lead |
| Temperature (Operating - range) | -20°C to +105°C |

Approvals / Certifications

| | |
|-----------------------------------|---------------------|
| Approvals / Certifications | UL and CSA Approved |
|-----------------------------------|---------------------|

Other Features

| | |
|---------------------------|------------------|
| Packaging (Type) | Trays |
| System Application | Standard Product |

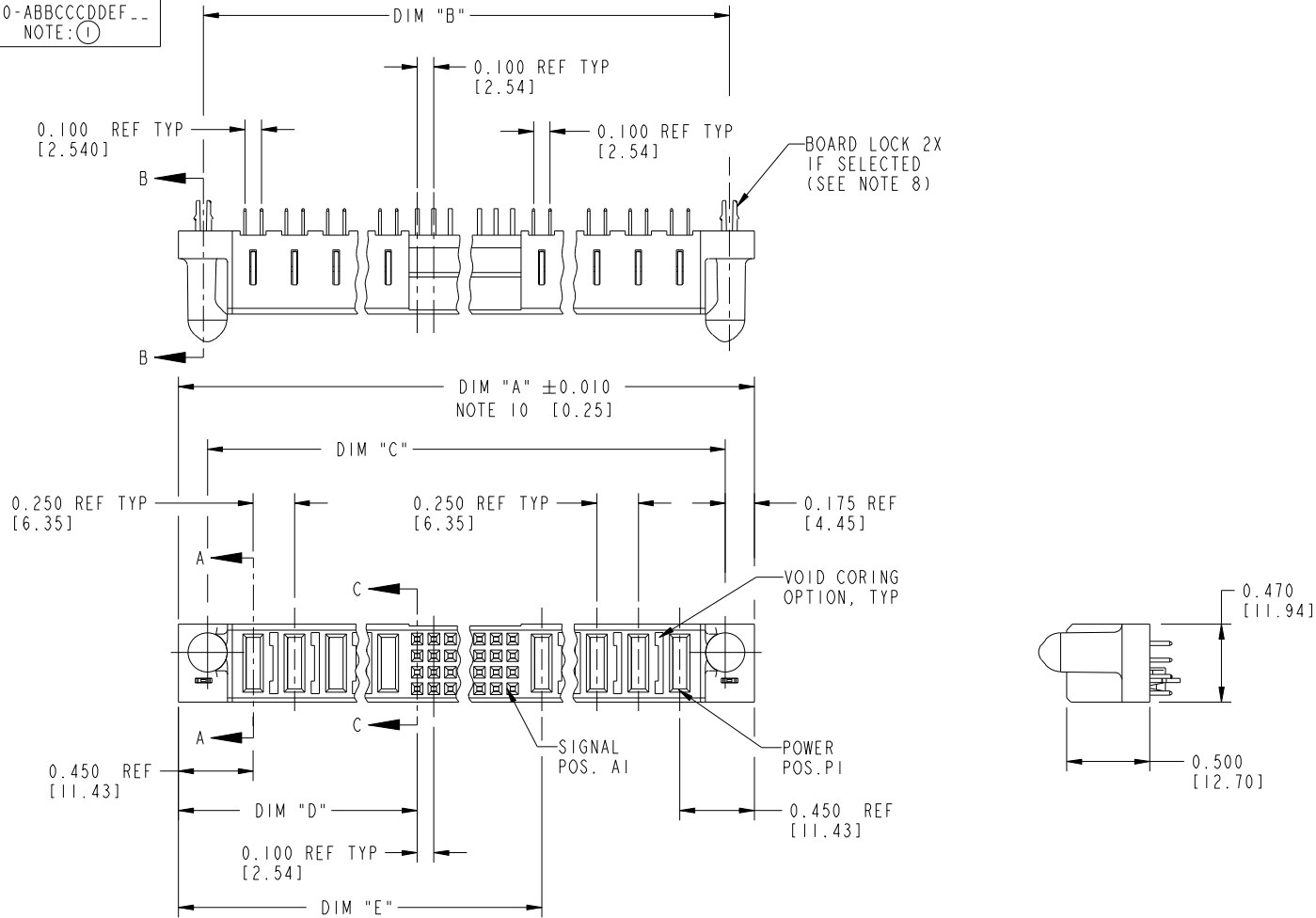
| | |
|-----------------|---|
| Comments | In order to complete the Part Number selection process you will need the product drawing. To download the drawing click on the "View Drawing" button at the top of this page. |
|-----------------|---|

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PRODUCT NUMBER
51740-ABBCCDDEF...
NOTE: ①



| | | | | | | | | | | | |
|-------------|----------------|-------|----------|------------|----------------------|---------------------------------------|---------|----------|---|-----|--|
| mat'l code | | | | SEE NOTE 2 | | tolerances unless otherwise specified | | CUSTOMER | | FCI | |
| ltr | ecn no. | dr | date | linear | .XX±.01/0.X±0.3 | projection | COPY | | www.fciconnect.com | | |
| K | DG05-0132 | SJ | 06/06/05 | | .XXX±.005/0.XXX±0.13 | | title | | VERTICAL RECEPTACLE w/GUIDE PIN POWER / SIGNAL / POWER | | |
| L | DG05-0153 | SJ | 06/10/05 | angles | .XXX±.0020/.XXX±.051 | | INCH/MM | | product family PwrBlade code 213 | | |
| M | DG05-0485 | GUOJM | 11/21/05 | | 0°±2° | | scale | | size dwg no 51740 sheet 1 of 3 | | |
| N | DG06-0362 | JULIA | 08/30/06 | dr | D. EATON 05-25-99 | | 1:1 | | cage code 22526 | | |
| P | DG08-0239 | JC | 09/11/08 | enr | RYAN YUAN 11/08/06 | | | | | | |
| R | DG10-0318 | AL | 09/03/10 | chr | J. BROWN 05-24-99 | | | | | | |
| | | | | appd | J. BROWN 05-24-99 | | | | | | |
| sheet index | revision sheet | R | R | R | | | | | | | |
| | | 1 | 2 | 3 | | | | | | | |

Pro/E

cage code 22526

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| |
|-------------------------------|
| PRODUCT NUMBER |
| 51740-ABBCCDDDEF-- NOTE: ① |

| DIM | LENGTH FORMULAS (SEE NOTE 10) |
|---------|--|
| DIM "A" | .250 [6.35] x DD + .100 [2.54] x (CCC/4) + .250 [6.35] x BB + .650 [16.51] (NOTE 10) |
| DIM "B" | .250 [6.35] x DD + .100 [2.54] x (CCC/4) + .250 [6.35] x BB + .350 [8.89] |
| DIM "C" | .250 [6.35] x DD + .100 [2.54] x (CCC/4) + .250 [6.35] x BB + .300 [7.62] |
| DIM "D" | .250 [6.35] x DD + .375 [9.53] |
| DIM "E" | .250 [6.35] x DD + .100 [2.54] x (CCC/4) + .450 [11.43] |
| DIM "F" | .250 [6.35] x DD + .100 [2.54] x (CCC/4) + .250 [6.35] x BB + .680 [17.27] |
| DIM "G" | .250 [6.35] x DD + .225 [5.72] |
| DIM "H" | .250 [6.35] x DD + .100 [2.54] x (CCC/4) + .250 [6.35] |

CONNECTOR NOTES

- PRODUCT NUMBER CODE:
51740 - A BB CCC DD E F LF

NO THIS SUFFIX: 100u"/2.54um SnPb ON PCB INTERFACE
ADD THIS SUFFIX: 78u"/2.00um Sn ON PCB INTERFACE
RETENTION TO PCB (NOTE 8)
TAIL OPTIONS (NOTE 7)
NUMBER OF LEFT END POWER CONTACTS (NOTE 6)
NUMBER OF SIGNAL CONTACTS (NOTE 5)
NUMBER OF RIGHT POWER CONTACTS (NOTE 4)
PLATING (NOTE 3)
BASE NUMBER
 - HOUSING MATERIAL: GLASS FILLED V-O HIGH TEMP THERMO PLASTIC.
SIGNAL CONTACT MATERIAL: COPPER ALLOY
POWER CONTACT MATERIAL: COPPER ALLOY
 - PLATING OPTION:
I = SEE PRINT 10064183 FOR PLATING SPEC OF 51740-IBBCCDDDEF; 51740-IBBCCDDDEF LF
 - RIGHT END POWER CONTACT, 01 TO 20 AVAILABLE.
MAXIMUM OF 20 POWER CONTACTS PER CONNECTOR.
 - SIGNAL CONTACTS, 004 TO 148 AVAILABLE.
 - LEFT END POWER CONTACTS, 01 TO 20 AVAILABLE.
MAXIMUM OF 20 POWER CONTACTS PER CONNECTOR.
 - TAIL OPTIONS:
A = .135 ± 0.010 [3.43 ± 0.25] SOLDER TO BOARD
C = .135 ± 0.010 [3.43 ± 0.25] PRESS FIT
 - RETENTION TO PCB OPTIONS:
A = BOARD LOCK (REQUIRES .098 + .002, -.001 [2.49 + 0.05, -0.03] THRU HOLE IN PCB) RECOMMENDED ON SYMMETRIC CONNECTORS. BOARD LOCK TO BE USED IN CONJUNCTION WITH AN .092 PCB OR THICKER.
C = NO RETENTION FEATURE.
 - MANUFACTURE'S NAME, P/N, AND DATE CODE TO APPEAR ON THIS SURFACE.
 - THE MAXIMUM OVERALL LENGTH (DIM A) OF A PART IS 8.00 [203.2].
 - PRODUCT SPECIFICATION GS-12-149.
 - REFERENCE 51698 FOR SPECIALS WORKSHEET.
- PCB NOTES:
- ALL DIMENSIONS ARE BASIC UNLESS OTHERWISE SPECIFIED.
 - ALL THROUGH HOLES ARE LOCATED WITH A TRUE POSITION OF .004 [0.01]
 - ALL HOLE DIAMETERS ARE FINISHED HOLE SIZE.
 - 0.0453 ± .001 [1.151 ± .02] DRILLED HOLES PLATED WITH 0.0003 [0.007] MIN SnPb OVER 0.001 [1.03] TO .003 [0.08] PLATING TO ACHIEVE A .040 ± .003 [1.02 ± .08] HOLE.
 - A Δ SYMBOL WILL BE NEXT TO ANY DIMENSION, VIEW, OR NOTE WHICH HAS BEEN MODIFIED WITH THE CURRENT DRAWING REVISION.

| | | | | | | | | | | | |
|-------------|----------------|------------|------|---------------------------------------|----------------------------|------------|------|---------------------------------|----------|--------------------|--------|
| mat'l code | | SEE NOTE 2 | | tolerances unless otherwise specified | | CUSTOMER | | FCI | | www.fciconnect.com | |
| ltr | ecn no. | dr | date | linear | .XX ± .01 / 0.XX ± 0.3 | projection | COPY | title | | | |
| R | | | | | .XXX ± .005 / 0.XX ± 0.13 | | | VERTICAL RECEPTACLE w/GUIDE PIN | | | |
| | | | | angles | .XXX ± .0020 / .XXX ± .051 | | | POWER / SIGNAL / POWER | | | |
| | | | | dr | 0° ± 2° | | | product family | PwrBlade | code | 213 |
| | | | | enr | D. EATON 05-25-99 | | | size | dwg no | sheet | 2 of 3 |
| | | | | chr | RYAN YUAN 11/08/06 | | | scale | 51740 | | |
| | | | | appd | J. BROWN 05-24-99 | | | A | | | |
| sheet index | revision sheet | | | | | | | | | | |

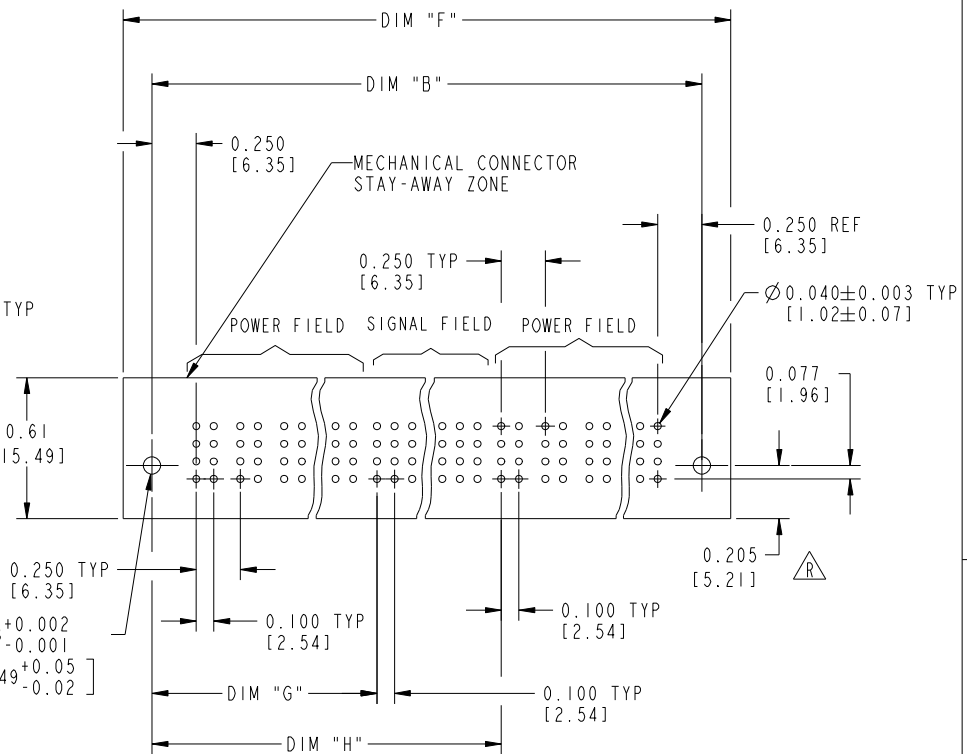
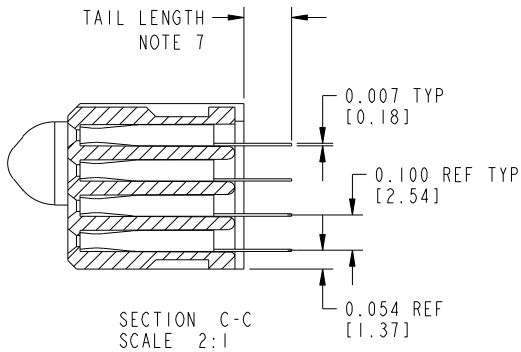
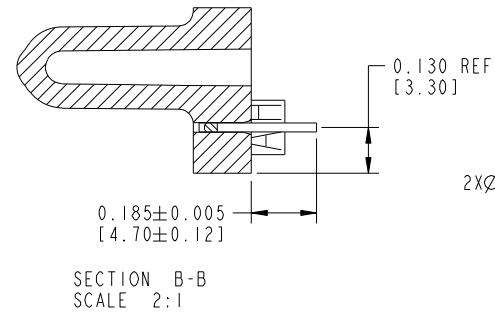
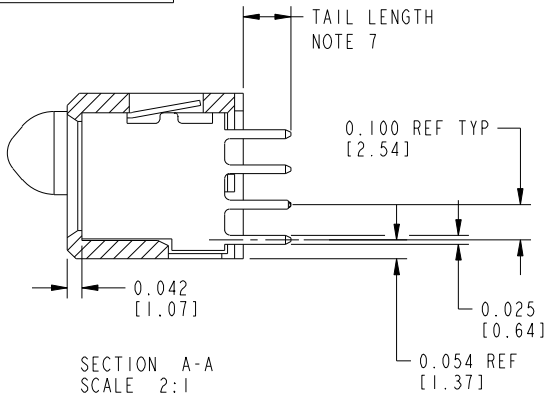
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| | | | | dr | .XXX±.0020/.XXX±.051 | | | product family | | code | |
| | | | | enr | 0°±2° | INCH/MM | | PwrBlade | | 213 | |
| | | | | chr | | scale | | size | | sheet | |
| | | | | appd | | 1:1 | | dwg no | | 3 of 3 | |
| sheet index | | revision sheet | | | | | | A | | 51740 | |

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