

# HPCE® BOARD-TO-BOARD CONNECTOR

## OVERVIEW

The HPCE® BTB is a board to board high power connector for demanding applications requiring high linear current density and small connector size. It is part of FCI's HPCE® series family together with HPCE and HPCE cable assembly.

The HPCE® BTB incorporates an innovative power contact and housing design that permits a more compact and lower profile package for demanding AC and DC power distribution applications. Both header and receptacle have an extremely low profile height (7.5mm) and are based on very cost-effective and highly reliable stamped-and-formed power contact technology similar to other power connectors from FCI. The low contact resistance (Power: 0.6 m  $\Omega$  max.) also greatly reduces power loss in the transmission.

HPCE® BTB is ideal for next generation 1U/2U servers, storage enclosures, telecommunications equipment and datacom/networking equipment.



## FEATURES & BENEFITS

- Current rating of 9A/beam for high power contact without exceeding a 30°C temperature rise in still air
- Low profile height (7.5mm) maximizes airflow for effective system cooling
- Highly vented housing design maximizes heat dissipation
- Signal contacts are available for power control number and placement of power and signal contacts are highly configurable for custom power needs
- Integrated guide features make it ideal for Blind mate applications for two-piece solution
- Robust design includes touch-proof safety features that are UL/IEC 60950 compliant  
UL/VDE approval pending

## TARGET MARKETS / APPLICATIONS

- AC/DC pluggable power supplies in data, telecom & datacom/networking equipment
- Servers, Switch, and storage;
- Industrial PCs
- Industrial controls & instrumentation



## TECHNICAL INFORMATION

### MATERIALS

- Contacts: high performance copper alloy
- Plating of contact area : GXT(TM) over Nickel
- Plating of Solder tail area : Matted tin over nickel
- Housings: High temperature thermoplastic, UL 94-V0

### ELECTRICAL PERFORMANCE

- Electrical withstanding voltage : 1800V DC for power contact and 500V DC for signal contact. Per EIA 364-20
- Insulation resistance : 5000 M $\Omega$  for power contact, 500 M $\Omega$  for signal
- Contact resistance :
  - Signal: 25 m  $\Omega$  max initial, 10 m  $\Omega$  after test
  - Power: 0.6 m  $\Omega$  max

### ENVIRONMENTAL

- Operating temperature -40°C to + 125°C
- RoHS information, this product is compatible according to the European Union Directive 2002/95/IEC

### PART NUMBERS

| Description              | Part Number      |
|--------------------------|------------------|
| R/A STB Header 40P24S    | 10124292-11000LF |
| R/A STB REC Universal    | 10125112         |
| VER PF/STB REC Universal | 10125023         |

\*Other part numbers, please consult FCI

### MECHANICAL PERFORMANCE

- Mating/Un-mating force (single beam):
  - 0.98/0.36N for power contact
  - 0.22/0.06 N for signal contact
- Vibration : 10~500 Hz, acceleration 4.9 RMS G, 1.5 hour per axis, no more than 1 $\mu$  sec discontinuity
- Shock : acceleration 50G, 3 shocks per axis, no more than 1  $\mu$  sec discontinuity
- Durability cycling : 200 cycles

### SPECIFICATIONS

- Product specification:GS-12-1125
- Application specification: GS-20-0388

### APPROVALS AND CERTIFICATIONS

- UL and CSA Approval is pending

### PACKAGING

- Soft tray

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