HIGH POWER CARD EDGE (HPCE®)

Next Generation Power Card Edge Connector

OVERVIEW

The High Power Card Edge (HPCE®) connector is a next generation power card edge connector for demanding applica-tions requiring high linear current density and low power loss. HPCE offers a low profile height (7.50mm) and is based on very cost effective and highly reliable stamped-and-formed power contact technology similar to other power solutions from FCI.

HPCE® incorporates an innovative power contact and housing design that permits a more compact and lower profile package for demanding AC and DC power supply and/or add-in card applications. HPCE's low profile height (for maximized airflow), significantly increased linear current density and low contact resistance characteristics are ideal for next generation 1U/2U servers, storage enclosures, telecommunications equipment and datacom/networking equipment.

HPCE® is available with power and signal contacts integrated into a single molded housing for power distribution and power control. Similar to other FCI power solutions, HPCE® is modularly tooled making the product highly configurable in terms of the number and placement of the power and signal contacts for custom power needs.

HPCE® is rated to 9A per power contact beam (with multiple power contacts fully energized) without exceeding a 30°C temperature rise in still air. The innovative design minimizes the connector footprint and the robust housing includes touch-proof safety features as well as polarization to ensure proper mating. Vertical and right angle and straddle mount options are available to accommodate various system architectures.



FEATURES & BENEFITS

- Current rating to 9A/power contact beam (with multiple power contacts fully energized) without exceeding a 30°C temperature rise in still air
- Low profile height (2.8mm for straddle mount; 7.50mm for right angle) maximizes airflow for effective system cooling
- One-piece assembly enables cost-effective power delivery for 1U and 2U power supplies or power distribution applications
- Highly vented housing design maximizes heat dissipation
- Vertical, right angle and straddle mount options are available with both power contacts for power distribution and signal contacts for power control
- Number and placement of power and signal contacts are highly configurable for custom power needs
- Polarized housing option ensures proper mating board orientation
- Plastic housing features and mounting ear options are available for polarization to the host PCB as well as to secure the connector during the wave solder process

TARGET MARKETS/APPLICATIONS

- AC/DC pluggable power supplies in data, telecom & datacom/networking equipment
- Industrial PCs
- Industrial controls & instrumentation
- Medical

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TECHNICAL INFORMATION

MATERIALS

- Housing: High-temperature thermoplastic, black
- Flammability rating: UL94V-0
- Contact material: High-conductivity copper alloy
- Contact finish:
  - Separable interface: 30µin (0.76µm) performance-based plating over nickel
  - Board connector solder tail area: Matte tin over nickel

ELECTRICAL PERFORMANCE

- Current rating: 9A/power contact beam at 30°C T-rise in still air (multiple power contacts fully energized)
- Operating voltage
  - Power contacts: 250V max. (fully loaded)
  - Signal contacts: 30V max. (fully loaded)
- Dielectric withstanding voltage
  - Power contacts: 1,000V
  - Power contacts: 500V
- Insulation resistance
  - Power contacts: > 5,000MΩ initially as well as after environmental exposure
  - Signal contacts: > 500MΩ initially as well as after environmental exposure
- Contact resistance
  - Power contacts: > 0.6mΩ initially as well as after environmental exposure
  - Signal contacts: 20mΩ initially as well as after environmental exposure

ENVIRONMENTAL

- Operating temperature: -55°C to 105°C

MECHANICAL PERFORMANCE

- Contact wipe distance
  - Power contacts: 5.27mm
  - Signal contacts: 4.00mm
- Durability: 200 mating cycles

SPECIFICATIONS

- Production specification: GS-12-604
- Application specification: GS-20-128

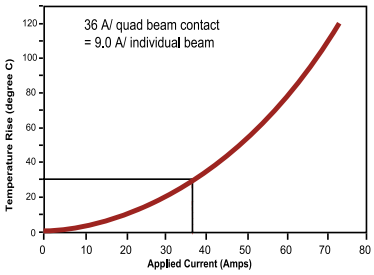
APPROVAL & CERTIFICATIONS

- UL
- CSA
- TUV
- RoHS information, this product is compatible according to the European Union Directive 2002 (95IEC)

PACKAGING

- Trays

TEMPERATURE RISE CURVE



Current rating information is in still air (no air flow) with multiple contacts energized unless otherwise noted

PART NUMBERS

Description				Part Number
Vertical Solution	Orientation Key			
56 P + 12 S	No			10088418-002LF
Right Angle Solution	Hold Down	Orientation Key		
56 P + 12 S	No	No		10096926-002LF
56 P + 12 S		No		10096926-004LF
Straddle Mount Solution	Mounting Ears	Front Orientation Key	Rear	
36 P + 24 S		No	No	10096926-002LF

PWRHPCE0613EA4

For more information,
please contact: Communications@fci.com
or visit us at www.fci.com

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