



**THE DATASHEET OF  
10121506-480020ALF**



# 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 applications 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

## 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

## 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 Orientation Key	
36 P + 24 S		No	No	10096926-002LF

### 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

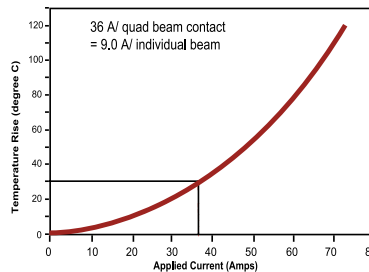
### APPROVAL & CERTIFICATIONS

- 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

PWRHPCE0613EA4

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