

PwrBlade® Mini Cable-to-Board Connector

LOW PROFILE POWER & SIGNAL HYBRID CABLE CONNECTOR

PwrBlade® Mini Cable-to-Board strengthens the PwrBlade® cable portfolio even further. Mini cable-to-board serves as an I/O cable configuration to meet the ever-increasing demand for higher current density in low profile applications. Mini cable-to-board is capable of carrying up to 25A/contact (50A/column) with 4 adjacent contacts powered. The available cable range includes 12AWG for power contacts and 26AWG–22AWG for signal contacts. Squeeze-to-release latching and slide-latching CPA (Connector Position Assurance) options are offered to ensure a higher mated retention force and a reliable connection. This connector series has modular tooling enabling a large number of power and signal contact combinations. This allows it to accommodate a wide range of power applications. PwrBlade® Mini Cable-to-Board is a power dense cable connector solution that enhances flexibility in space-constrained applications.

- Lowest profile power and signal cable-to-board connectors available
- Modular tooling to accommodate a wide range of system requirements
- Optional board retention features
- Solder-tail and press-fit terminations available on the board side



TARGET MARKETS



FEATURES

- Rated up to 25A per power contact (50A/column) without exceeding 30°C temperature rise in still air
- Modular tooling design
- 12AWG for power contacts and 26AWG–22AWG available for signal contacts
- Patented GCS® plating for power contacts, GXT® for signal contacts
- Squeeze-to-release latches and slide-latching CPA options available
- Solder-tail or press-fit tail board termination

BENEFITS

- Provides high power density in a low profile
- The number and placement of power and signal contacts can be customized
- Multiple wire gauge options allows for flexibility in system designs
- Lower contact resistance
- Ensures higher mated retention force and reliable connection in all applications
- Termination flexibility for different PCB layouts

TECHNICAL INFORMATION

MATERIAL

- Power Contacts – High Conductivity Copper Alloy underplated with Nickel and plated with GCS® or AGT®
- Signal Contacts – Copper Alloy
- Retention Clips – Copper Alloy plated with Nickel
- Housing – Glass filled, halogen-free polyamide or other high-performance resin rated flame retardant 94V-0 in accordance with UL-94

MECHANICAL PERFORMANCE

- Mating/Un-mating Force: Power contacts 5.5N max. mating force, 1.1N max. unmating force
- Signal contacts 2.0M max. mating force, 0.2N max. unmating force
- Durability: 200 mating cycles

ELECTRICAL PERFORMANCE

- Power Contacts:
 - Up to 25A/contact (50A/column) without exceeding 30°C temperature rise in still air
 - High Power contacts on a 7.00mm horizontal pitch x 2.50mm vertical pitch for contacts in a 2x2 grid array
 - High Power on 7.0mm pitch cable to R/A Plug – 55VDC
 - High Power on 7.0mm pitch cable to Vertical Plug – 49VDC
 - Signal Contact on 2.50mm pitch – 55VDC
- Dielectric Withstanding Voltage
 - Power Contacts – 2500VDC
- Contact Resistance:
 - End-of-life contact resistance of 1.5mΩ

ENVIRONMENTAL

- Operating Temperature Range: -40°C to +105°C

APPROVALS & CERTIFICATION

- UL Approved
- EIA 364
- UL94V-0 Flammability

PACKAGING

- Tray for board-side
- Bags for cable assembly

SPECIFICATIONS

- Product Specification: GS-12-1744
- Application Specification: GS-20-0771

TARGET MARKETS/APPLICATIONS



EV Charging



Telecom



Server/Storage Applications
IT&D



Industrial and Automation
ESS/UPS