Product Data Sheet

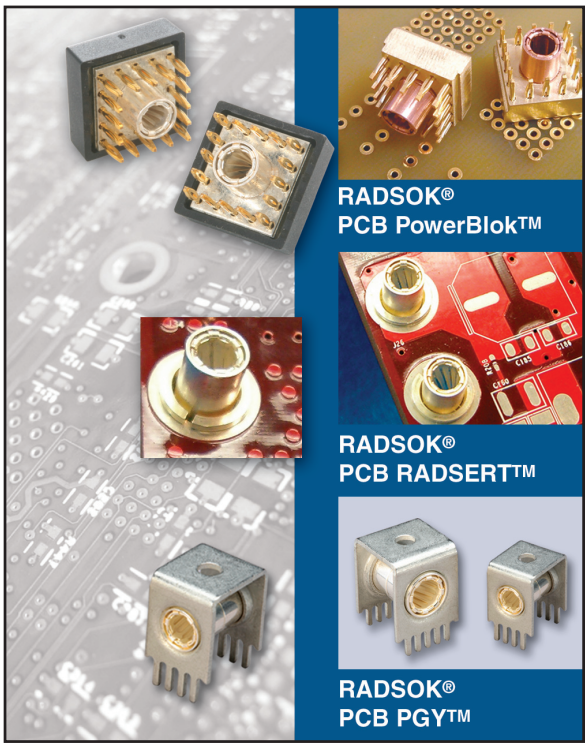
Amphenol® Industrial RADSOK® Products for Printed Circuit Boards

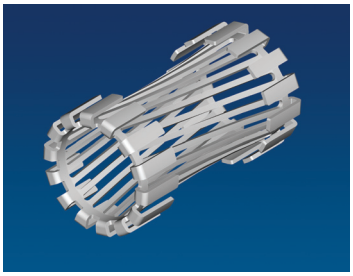
No. 205

PROBLEM: With conventional interconnects, users often cannot handle the higher power requirements of modern electronics board applications. A common solution to increase amperage to the board is to increase the thickness of the copper layers (i.e. traces) in the PCB or backplane. This is usually costly and traps heat within the PCB. Other options are to bring in additional wires either attached to or plugged into the board creating a cumbersome wire bundle. The bundle of wire often takes up excessive space behind the board and doesn't allow proper air flow, which may cause failures of heat-sensitive components like processors. This method can be labor intensive and may require special crimping and assembly tools as well.

THE AMPHENOL® RADSOK® SOLUTION TO BRING MORE POWER TO THE BOARD . . . . Three high amperage products: PowerBlok, RADSERT, PGY

Amphenol's RADSOK® solution offers many options for high current single-point connections to printed circuit boards. The compact footprint design can supply up to 120 Amp to the board which preserves surface area and provides more flexibility in board design.





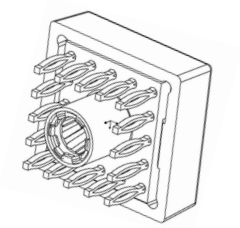
The RADSOK® hyperbolic grid contact design gives more surface area with many points of contact for heat dissipation at the pin and socket interface.
This lowers temperature rise and reduces potential failures.
RADSOK® PCB products are designed to be applied manually (press-fit) or by a reflow solder process, which eliminates the need for additional wires and/or special crimp tools.

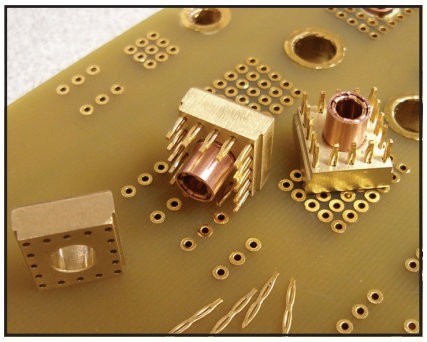
Amphe-Power with RADSOK® Sockets Contact Ratings	
Size 12	35 Amps
Size 8	70 Amps
Size 4	120 Amps
Size 0	250 Amps

RADSOK® PCB PowerBlok™

RADSOK® PowerBlok provides a high current single-point connection to the PCB with the proven reliability of compliant pin signals. The PowerBlok is designed to bring up to 70 Amps to the board, utilizing our custom 3.0mm RADSOK® design. The compliant pins are press-fit into the board to secure a solid connection and even signal flow.

- High power to board interconnect in a small package
- Compact footprint 0.618" x 0.618"
- 3.0mm RADSOK® carries up to 70 amperes
- Backplane power interface with compliant pins for signals
- Touchproof cover
- Radial design ensures many points of contact
- Reduces failure modes, eliminates burn outs
- No threaded fasteners
- No special crimp tools required
- Eliminates possible stress fractures in board
- Faster through-put
- RoHs compliant





High power density in a small footprint (approx. 1/2" x 1/2")
Tooled to 3.0mm (70 amp) size

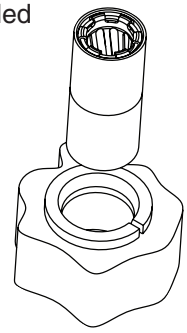
Sample part number: C10-639323-000 designates a 3.0mm PowerBlok with compliant pins.

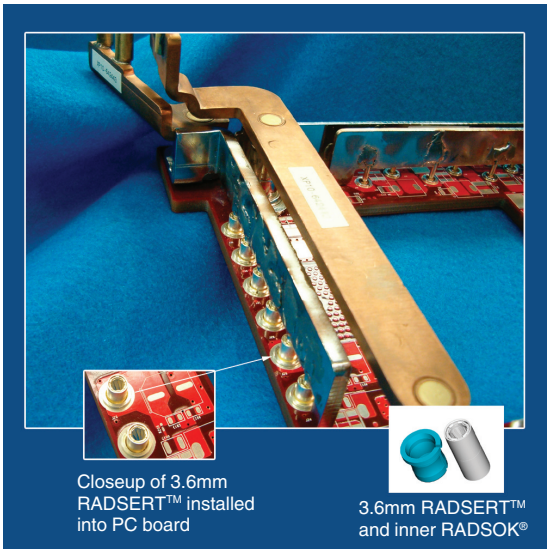
RADSOK® PCB RADSERT™

Choose the Amphenol® RADSERT™ design when you need the most power in a single-point connection to the PCB. The RADSERT allows the board designer to bring power to the board from busbars suspended above the board and all of the board components. Pins from the busbar plug into the RADSOK's which are installed by press fitting the RADSOK into the RADSERT.

The RADSERT is press-fit into plated-through holes in the PCB. It provides the smallest footprint and is available in 2.4mm and 3.6mm for board thicknesses of .250" +/– .025". Other sizes may be custom designed to meet your specific application requirements.

- High power to board interconnect in a small package
- Hyperbolic socket design ensures many points of contact
- Solder version or pre-loaded RADSERTS are installed during board fabrication
- 2.4mm RADSERT carries up to 35 Amps
- 3.6mm RADSERT carries up to 70 Amps
- No special crimp tools required
- No threaded fasteners
- Eliminates risk of PTH cracking or delamination in board
- Faster through-put
- RoHs compliant



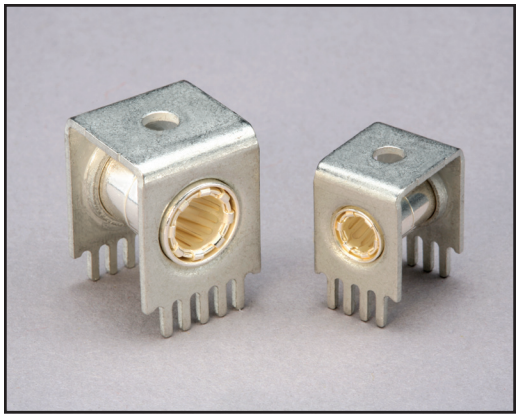


Sample part numbers:
C10-642495-241 designates 2.4mm RADSERT (solder)
C10-639772-001 designates 2.4mm RADSERT (one piece pre-loaded)
C10-642865-001 designates 3.6mm RADSERT (solder, short)
C10-642449-001 designates 3.6mm RADSERT (one piece, pre-loaded, short)

Thickness of board: .250" +/.025"

RADSOK® PCB PGY™

The RADSOK® PGY™ is an orthogonal card edge connector series, available in 3.6mm and 5.7mm contact sizes. The 5.7mm RADSOK® PGY is Amphenol's highest current board level product rated to 120 amperes. The RADSOK® PGY connects to the board through a solder reflow process. The busbar pin will mate horizontally with the RADSOK® slightly above the board.



- Orthogonal connection between card edge and busbar/backplane
- Compact footprint
- Legs of the PGY dissipate high power evenly
- 5.7mm carries up to 120 Amps
- 3.6mm carries up to 70 Amps
- No threaded fasteners
- No special crimp tools required
- RADSOK's highest power to board level product
- Faster through-put
- RoHs compliant

Sample part numbers:
C10-639800-001 designates 5.7mm PCB mount RADSOK®, horizontal, solder, silver plated
Dimensions: .563" (L) x .551" (D) x .791" (OAH) - (.653" above board and .138" into PCB)

C10-639801-001 designates PCB mount RADSOK®, horizontal, solder, silver plated
Dimensions: .480" (L) x .400" (D) x .630" (OAH) - (.492" above board and .138 into PCB)