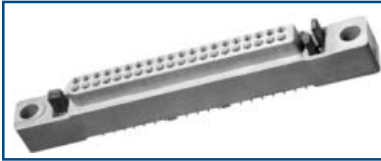


Rectangular Printed Circuit Board Interconnects

Low Mating Force Rectangular Connectors with Bristle Brush Contacts

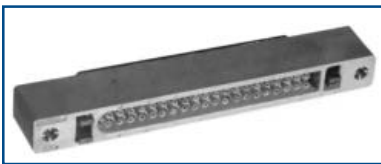
Reference Catalog 12-035



Mother Board Series



Daughter Board Series



Input/Output Series



PC Series

APPLICATION

Military designation: M55302.
Proprietary designations: MB, DB, I/O, PC.
Rectangular connectors for attachment to printed circuit boards. Offers high contact density capability. Contain Bristle Brush contacts, consisting of multiple strands of high tensile strength wire that are bundled together to form a "brush-like" contact.

STANDARDS/ REQUIREMENTS

Military versions meet MIL-C-55302/166 through /172.

COUPLING/ MOUNTING

For mounting to printed circuit boards or discrete wires. Body styles offered:
 • Mother board
 • Daughter board
 • Input/Output
 • PC
 Flexibility in mating:
 • Perpendicular boards
 • End to end boards
 • Parallel boards
 • Wire to boards
 • Card extenders.
 Polarization keys provide up to 256 possible positions.

CONTACT TERMINATION/ ARRANGEMENTS

Brush contact termination. (Also called B3 contacts).
 Termination Styles:
 • PCB through-hole solder
 • Wire wrap (MB only)
 • Crimp to discrete wires (Input/Output only)
 • Solderless complaint into 0.040 plated through holes (MB only)
 Arrangements:
 • 2, 3 or 4 row arrangements with 10 to 100 contacts per row in one contact per row increments.
 • 0.100 inch center to center square grid contact spacing.

PERFORMANCE ENVIRON./ELECT.

Operating temp. from -65°C to +125°C.
 Connector bodies are high performance glass-filled thermoplastic moldings. Connector configurations are capable of supporting data rates up to 400 Mbps.
 Bristle Brush contacts (See illustration on page 43) provide:
 • Low mating/unmating forces - 70% to 90% reduction from conventional pin and socket contacts.
 • Proven durability and long contact life - over 20,000 cycles of mating and unmating without performance degradation.
 • Multiple points (14-17) of contact per mated contact.
 • Intermittency-free performance.
 • Redundant current paths (stable, low resistance).
 • Proven electrical and gas tight contact sites.



Variety of Rectangular Brush Connectors including smaller styles that have only 10 contacts and are available in color coded moldings.

OPTIONAL FEATURES

- Locking screws and bushings are available for attaching connectors to boards.
- Contact styles available: straight, 90 degree, PCB stub, wire wrap and crimp.
- Small 10-contact arrangement styles are available with option of multi-colored moldings for color coding applications.

MARKETS

- Medical Equipment
- IC Chip Testers
- GPS Systems
- Telecommunications
- Factory Automation
- Military and Commercial Aviation
- Military Vehicles
- Space applications

Hybrid Rectangular Connectors with Brush/Power/Coax/Fiber Optic Combinations

Reference Catalog 12-035



Power/Coax/Brush Contact Combinations



Fiber Optics/Brush Contact Combinations

APPLICATION

Rectangular connectors for attachment to printed circuit boards. Offers versatility of combining contact types- power, coax, twinax, fiber optics and Brush contacts in one high density package.

STANDARDS/ REQUIREMENTS

M55302 type rectangular connectors with hybrid contact arrangements. Power contacts and shielded coax or twinax contacts meet M39029 standards. Fiber optic termini meet M29504/4 & /5 standards.

COUPLING/ MOUNTING

Same as shown above for Low Mating Force rectangular connectors.

CONTACT TERMINATION/ ARRANGEMENTS

Combinations of termination styles:
 • Brush contacts (as described above)
 • Power contacts - (standard M39029 size 16 or 12; same as used in MIL-DTL-38999 Series II)
 • Coax or twinax contacts - (M39029, size 16 and 12)
 • Fiber optic termini (multi-mode size 16; same as used in MIL-DTL-38999 Series III)

PERFORMANCE ENVIRON./ELECT.

Connector performance and brush contact performance is the same as shown above for Low Mating Force Rectangular connectors. Optical performances of fiber optic termini are the same as termini used in multi-channel cylindrical connectors. (See page 36).

OPTIONAL FEATURES

- Hybrid configurations are available with fiber optics and brush contacts. (See photo above and Fiber Optic section of this catalog).
- Hybrid configurations are available with power and/or shielded (coax or twinax contacts). (See photo shown above).

MARKETS

- All markets of Rectangular Low Mating Force Connectors, as shown above.