



Material and Performance Specifications, MICTOR Connectors

Material Specifications

Material

Housing: Liquid crystal polymer, black

Contacts: Beryllium copper

Ground Bus: Phosphor bronze

Finish (Gold Plating)

Contacts and Ground Bus: Duplex plated 0.00076 [.000030] min. gold in mating area, 0.00361 [.000150] min. tin-lead on leads, with entire contact and ground bus underplated 0.00178 [.000070] min. nickel

Finish (Palladium-Nickel Plating)

Contacts and Ground Bus: Duplex plated 0.00013 [.000005] min. gold over 0.00075 [.000030] min. palladium-nickel in mating area, 0.00361 [.000150] min. tin-lead on leads, with entire contact and ground bus underplated 0.00178 [.000070] min. nickel

Performance Specifications

Ratings

Voltage: 30 vac

Current: Signal; 1.0 amperes, fully derated*
Ground; 7.6 amperes, fully derated*

Temperature: -55°C to +125°C

*Consult AMP for details on current rating.

Electrical Characteristics

Characteristic Impedance: 50±5 ohms at 1 ns

Termination Resistance: ΔR 10 milliohms max.; AMP Specification 109-6-1

Insulation Resistance: ≥0.000 megohms min.; AMP Specification 109-208-1

Dielectric Withstanding Voltage: 500 vac at sea level; AMP Specification 109-29 1

Mechanical Characteristics

Solderability: Solderable area shall have a 95% min. solder coverage; AMP Specification 109-11-1

Vibration (Random): No discontinuities of 1 μs or longer duration; AMP Specification 109-21-5

Physical Shock: No discontinuities of 1 μs or longer duration; AMP Specification 109-26-1

Durability (Tested to): Mated and unmated samples at a rate of 600 cycles max. per hour, 25 cycles, gold plating; 500 cycles, palladium-nickel plating; AMP Specification 109-27

Contact Retention: 1 lb min.; AMP Specification 109-30

Mating Force: 152 oz max. per 1/2 inch of connector (1 module). Each module equals 38 signal contacts and 1 ground bus; AMP Specification 109-42

Unmating Force: 19 oz min. per 1/2 inch of connector (1 module). Each module equals 38 signal contacts and 1 ground bus; AMP Specification 109-42

Environmental Characteristics

Thermal Shock: Subject mated samples to 5 cycles between -55°C and +125°C; AMP Specification 109-22

Humidity - Temperature Cycling: Subject mated samples to 10 cycles between +25°C and +65°C at 35% RH. AMP Specification 109-23-3 Condition B

Temperature Cycling: Subject mated samples to 1024 cycles between -40°C and +60°C at 2 hours per cycle; AMP Specification 109-75-1

Temperature Life: Subject mated samples to temperature life at +118°C for 792 hours; AMP Specification 109-43

Mixed Flowing Gas: Subject mated samples to environmental class II for 14 days; AMP Specification 109-85-2