The microQUAD connector line is designed to meet requirements for Signal Integrity IEEE 1394 Ethernet applications, while still delivering reliability customers have come to expect from AirBorn.

MicroQUAD provides design flexibility by offering vertical and right-angle board mounts plus cable I/O configurations. MicroQUAD is designed to handle high-speed LVDS like Ethernet 100 Ω differential Quadrex. The MIL-DTL-83513 (Micro-D) qualified contact system and metal shells ensure ruggedness and durability. MicroQUAD ranges from 1-10 high-speed modules and up to 50 signal contacts.

Features & Benefits

- 9 sideband connections included
- Balanced lengths within pairs limit skew
- Field-tested: four independent tine, gold-plated contact system offers superior performance and reliability
- Rugged metal shells and hoods
- Shell-to-shell EMI interface gasket
- Shell ground independent of signal pair grounds
- Versatile product offering includes both genders of vertical, right-angle board, and cable

Materials

Differential Impedance Per Quad Module ........................................................................................................ 100 Ω and 110 Ω
Wire Size: for both Quad and Signal .................................................................................................................. Stranded 24 AWG, 26 AWG, 28 AWG, or 30 AWG
Signal Contact Rating ........................................................................................................................................ 3-amperes maximum
Test Voltage .......................................................................................................................................................... 600 V, RMS, 60 Hz
Operating Temperature ....................................................................................................................................... -55°C to +125°C
Insulation Resistance ......................................................................................................................................... 5000 megohms minimum @ 500 VDC
Durability ............................................................................................................................................................. 500 connector mating cycles
Vibration ................................................................................................................................................................. Tested in accordance with MIL-STD-1344, Method 2005, Condition IV
Shock ..................................................................................................................................................................... Tested in accordance with MIL-STD-1344, Method 2004, Condition E
Salt Spray .............................................................................................................................................................. Mated connectors tested in accordance with MIL-STD-1344, Method 1001, Test Condition B
Humidity ............................................................................................................................................................... Mated connectors tested in accordance with MIL-STD-1344, Method 1002, Type II (except steps 7a and 7b)
Thermal Shock ..................................................................................................................................................... Tested to the temperature extremes of MIL-STD-1344, Method 1003, Test Condition A (except step 3, temperature shall be 125°C)
Contact Resistance ............................................................................................................................................. 0.065 Volt maximum drop @ 2.5 amps (0.026)
Contact Engaging Force ...................................................................................................................................... 6.0 ounce maximum, with 0.0221 diameter test sleeve
Contact Separating Force .................................................................................................................................... 0.5 ounce minimum, with 0.023 diameter test sleeve
Contact Separating Force .................................................................................................................................... 0.5 ounce minimum, with 0.023 diameter test sleeve
SI Performance for Mated Pairs

1 meter long Vertical to Vertical Cable Ass. Insertion Loss

Impedance Profile

5 Parameters

Typical PCB Footprint for Vertical Connector

Typical PCB Footprint for Right-Angle Connector