

SuperSpeed USB 3.0

Omnetics Connector Corporation is a QPL manufacturer of Micro and Nano high reliability interconnects for the Military, Aerospace, and Medical industries. Our introduction of the Quick Lock USB 3.0 comes as demand for higher signal speeds and uninterrupted performance for field electronics is becoming a critical system requirement.

This product line meets the electrical parameters outlined in the newest USB 3.0 standard in a package that allows for rapid mate and de-mates of the connector without tools. Once mated, the high speed connector is secure and waterproof to IP68 standards.

Unlike ruggedized USB connectors packaged in the MIL-DTL-38999 circular standard, the rectangular Quick Lock USB 3.0 form factor is 32% smaller than a panel area footprint. The male plug comes pre-wired in a tough environmentally sealed over-mold. The female board and panel mount connectors are available in dual row surface mount or through hole terminations for convenient direct to board assemblies or wired for convenient routing to other areas in the system.



Electrical-Mechanical Specifications

■ Data Rate	Up to 5 Gbps
■ Impedance	90 ± 15 ohms
■ Insertion Loss	-2.8 dB Max to 2.5 GHz*
■ Operating Temperature	-55°C to 85°C
■ Dielectric Withstanding Voltage	100 VAC
■ Contact Resistance	
Pin 1 & Pin 4	30 milliohms (54mV) max @ 1.8 AMPS
Other Pins	50 milliohms (12.5mV) max @0.25 AMPS
■ Current Rating	
Pin 1 & Pin 4	1.8 AMPS
Other Pins	0.25 AMPS
■ Durability	500 mating cycles
■ Insulation Resistance	100 megohms @ 250 VDC
■ Shock	50 g's with no discontinuities > 1 microsecond
■ Vibration	20 g's with no discontinuities > 1 microsecond

Material Specifications

■ Contact	Copper Alloy
■ Contact Finish	Gold Over Nickel Underplate
■ Insulator	High Temperature Thermoplastic Material UL 94V-0
■ Shell	Aluminum Alloy per SAE AMS-QQ-A-200/8
■ Plating	Electroless Nickel per SAE-AMS-2404
■ Finish	Black Electroless Nickel
■ Flammability	UL 94 V-0

Shell Options

■ Aluminum with Black Chrome	Alloy 6061 per SAE AMS-QQ-A-200/8 Electroless Nickel per SAE-AMS-2404 Black Chrome per MIL-DTL-14538
■ Aluminum with Nickel Plating	Alloy 6061 per SAE AMS-QQ-A-200/8 Electroless Nickel per SAE-AMS-2404
■ Stainless Steel	300 Series, Passivated per SAE-AMS-2700

* When tested with a one foot cable with a board mount-mated pair on each side