

# USB 3.1 Gen 1 Circular



## Electrical-Mechanical Specifications

■ Performance:	Product family tested to and passed or exceeded the performance specifications of Table VIII of MIL-DTL-32139
■ Contact Resistance (Nano):	71 Milliohm Max (71mV Drop Max) @ 1.0 Amps per MIL-DTL-32139
■ Contact Resistance (Micro):	26 Milliohm Max (65 mV Drop Max) @ 2.5 Amps per MIL-DTL-32139
■ Current Rating (Nano):	1 Amp per MIL-DTL-32139
■ Current Rating (Micro):	3 Amps per MIL-DTL-83513
■ Operating Temperature:	-55°C to 85°C
■ Durability:	>2000 mating cycles min
■ Insulation Resistance:	5000 megohms @ 500 VDC
■ Shock:	50 g's with no discontinuities > 10 nanosecond
■ Vibration:	20 g's with no discontinuities > 10 nanosecond
■ Thermal Vacuum Outgassing (Space Class):	1.0% max TML, 0.03% max CVCM
■ Mating/Unmating Force:	2.5 oz (71 g) typical per contact

## Material Specifications

■ Contact:	Copper Alloy Per MIL-DTL-32139
■ Contact Finish:	Gold per ASTM B488, Type II, Class 1.27, Code C Over Nickel Underplate
■ Insulator:	Thermoplastic per MIL-M-24519
■ Overmold:	Black Thermoplastic Polyurethane
■ O-Ring:	BUNA-N
■ Cable (Shielded):	30 AWG (7-38) SPC, FEP / 26 AWG (19-38) SPC, FEP color coded, Black Polyurethane Jacket
■ Shield:	Foil wrap with braid - 38 AWG tin plated copper

## Shell Options

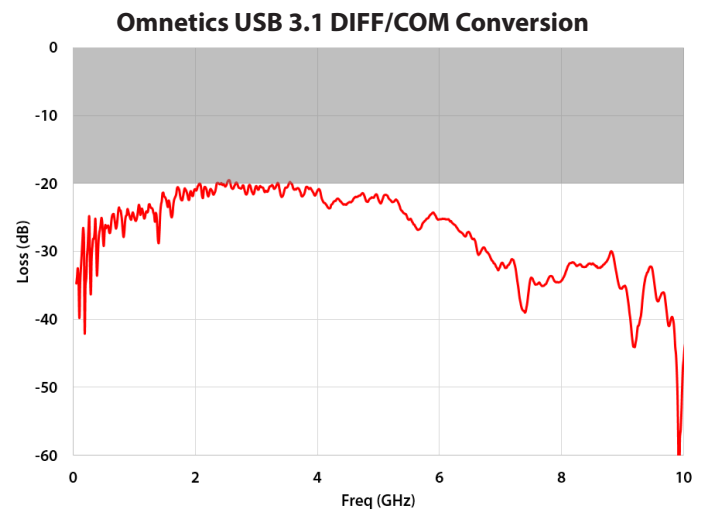
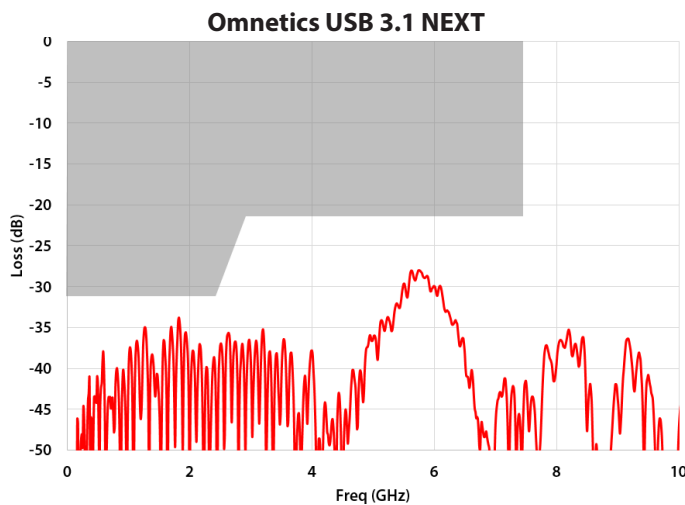
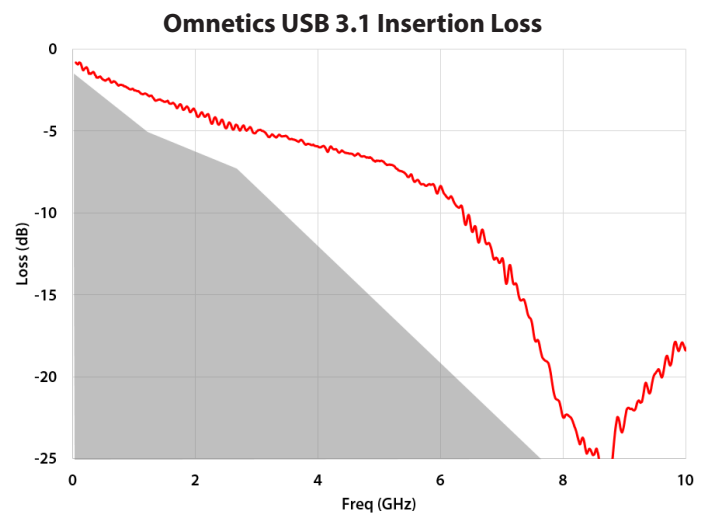
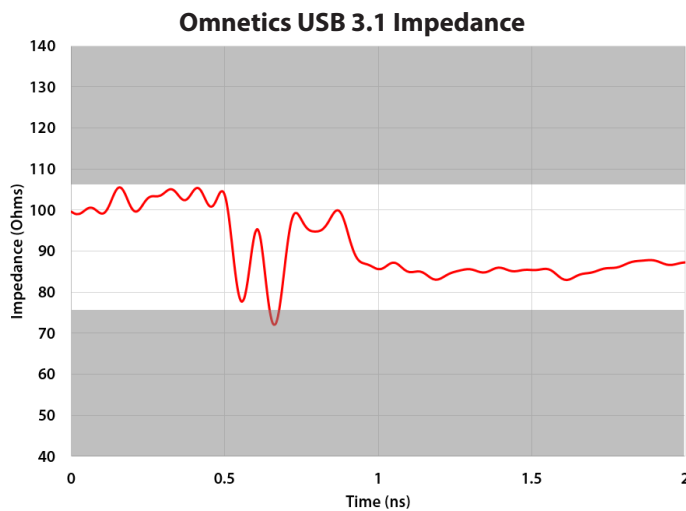
■ Brass Alloy 360 1/2 Hard:	Electroless Nickel per SAE-AMS-2404 Black Nickel per MIL-P-18317
■ Stainless Steel, 300 Series:	Passivated per SAE-AMS-2700 Black Oxide Finish per MIL-DTL-13924, Class 4*, Passivated per SAE-AMS-2700

\* less resistance to salt spray test.

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## Electrical Specifications

Parameter		Spec	1-Meter
Connector Differential Impedance	$Z_{MIN}$	75 $\Omega$	72 $\Omega$
	$Z_{MAX}$	105 $\Omega$	100 $\Omega$
Differential Insertion Loss	Loss @ 7.5 GHz	< 25 dB	16 dB
Differential Far-End Crosstalk	FEXT @ 7.5 GHz	< -23 dB	-28 dB
Diff-to-Common Mode Conversion	DCM @ 7.5 GHz	< -20 dB	-20 dB



Various cable options are available. Measurements shown above with cables manufactured in Asia.



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