



RJ45 ETHERNET, USB, HDMI, AND DISPLAY PORT Introduction and Technical Reference



Performance specifications for USB 2.0, 3.0 and 3.2 Gen 2 connectors

A

USB 2.0/3.0/3.2 Gen 2 Performance Specifications			
Property	MIL-DTL-38999 Series III Type	Series ITS 5015 Intermountable	Series IPT MIL-DTL-26482 Type
Material and Finish			
Shell/Coupling and Plating	Complete list of options available in the Material and Finish Options portion of this section		
Contacts	PC tails, solder cup, and crimp contacts: copper alloy, gold plated		
Grommet, Peripheral Seal, Interfacial Seal, O-ring	Blended fluorosilicone/silicone elastomer, 30% silicone per ZZ-R-765, 70% fluorosilicone per MIL-R-25988		
USB Insulator	LCP	PPS	
Shell Sizes	15 and 17 Consult factory for other shell size options	16	16
Electrical Specifications			
Power Usage	Up to 7.5W		
Current Rating	1.5 Amps,		
D.W.V.	500 VAC (USB 2.0), 100 VAC (USB 3.0)		
I.R.	1000 MegOhms minimum (USB 2.0), 100 MegOhms minimum (USB 3.0)		
Shielding	Continuous through coupler or continuous coupler to shell	USB housing ground to shell full shielding	
Environmental/Mechanical Performance			
Sealing	IP68 mated condition, IP67 unmated condition		
Outgassing	Mod Code 186S meets outgassing requirements per ASTM E 595 and meets NASA level 3 screening for standard reliability Mod Code 928 meets outgassing requirements per UL 94 V-0		
Operating Temperature	40°C to 120°C (USB 2.0), -40°C to +85°C (USB 3.0)		
Vibration	20g's, 3 Axis, 10 - 2000Hz	10G sine 10Hz - 2000Hz	10G sine 10Hz - 2000Hz
Mechanical Shock	300 g's	50G - 11ms	50G - 11ms
Backshell Interface	MIL-DTL-38999 Designator H	Consult Factory	Designator A
Mating System	Triple-start stub ACME	Reverse Bayonet	3-Pin Bayonet
Mating Cycles	500		
USB Protocol Specific Performance (regardless of connector)			
Property	USB 2.0	USB 3.0	USB 3.2 Gen 2
Data Rate	480 MBps	5 Gbps	10 Gbps
Cabling Length	5.0 meters max.	3.0 meters max.	1.0 meter max.
Connector Compatibility	Type A	Type A	Type C



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USB 2.0/3.0/3.2 Gen 2 Performance Specifications		
Property	MIL-DTL-28840 Type	Series 801, 804 and 805 Mighty Mouse

Material and Finish		
Shell/Coupling and Plating	Complete list of options available in the Material and Finish Options portion of this section	
Contacts	PC tails, solder cup, and crimp contacts: copper alloy	
Grommet, Peripheral Seal, Interfacial Seal, O-ring	Blended fluorosilicone/silicone elastomer, 30% silicone per ZZ-R-765, 70% fluorosilicone per MIL-R-25988	
USB Insulator	PPS	LCP
Shell Sizes	15	Micro USB: Series 801 & 804 Shell Size 8 Series 805 shell Size 10 Standard USB: Series 801 Shell Size 16, Series 804 Shell Size 14, Series 805 Shell Size 18

Electrical Specifications		
Power Usage	Up to 7.5W	
Current Rating	1.5 Amps (USB 2.0 and 3.0)	
D.W.V.	500 VAC (USB 2.0), 100 VAC (USB 3.0)	500 VAC Standard USB 2.0 100 VAC Micro USB 2.0 Mighty Mouse 100 VAC Standard USB 3.0
I.R.	1000 MegOhms minimum (USB 2.0), 100 MegOhms minimum (USB 3.0)	
Shielding	Continuous through coupler or continuous coupler to shell	

Environmental/Mechanical Performance		
Sealing	IP68 mated condition, IP67 unmated condition	
Outgassing	Mod Code 186S meets outgassing requirements per ASTM E 595 and meets NASA level 3 screening for standard reliability Mod Code 928 meets outgassing requirements per UL 94 V-0	
Operating Temperature	-40°C to 85°C (USB 3.0) -40°C to 120°C (USB 2.0)	-40° to +120°C (Standard) -20°C to +85°C (Micro)
Vibration	20g's, 3 Axis, 10 - 2000Hz	20g, 3 axis, 10-2000 Hz (Standard) 37.8g, 3 axis, 50-2000 Hz (Micro)
Mechanical Shock	300 g's	300g (Standard and Micro)
Backshell Interface	M28840, Connector Designator G	Consult Factory
Mating System	Threaded	801 - Double-Start Stub ACME 804 - Push/Pull 805 - Triple Start
Mating Cycles	100	2,000 (801 and 804) 500 (805)

USB Protocol Specific Performance (regardless of connector)			
Property	USB 2.0	USB 3.0	USB 3.2 Gen 2
Data Rate	480 MBps	5 Gbps	10 Gbps
Cabling Length	5.0 meters max.	3.0 meters max.	1.0 meter max.
Connector Compatibility	Type A	Type A	Type C