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SPECIFICATION AND PERFORMANCE

Series	217B-BB10	File	217B-BB10_SPEC_1	Date	2025/02/26

Scope:

This specification covers the requirements for product performance, test methods and quality assurance provisions of below:

P/N	Descriptions
217B-BB10	USB Type C Receptacle, 16 Pin Singel Row SMT Type, 3u", IPX8 Waterproof, w/ Oring

Performance and Descriptions:

The product is designed to meet the electrical, mechanical and environmental performance requirements specification. Unless otherwise specified, all tests are performed at ambient environmental conditions.

RoHS:

All material in according with the RoHS environment related substances list controlled.

MATERIALS		
NO.	**PART NAME**	**DESCRIPTION**
1	HOUSING	PA9T, UL94-V0, black
2	CONTACT	Copper Nickel Silicon Alloy, 3u" Gold plating over Nickel
3	SHELL	Stainless steel, 50u" Nickel plating
4	ORING	Silicone

RATING	
Rated Voltage	5V
Rated Current	3A
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Durability	10,000 cycles

ELECTRICAL		
Item	**Requirement**	**Test Condition**
Low Level Contact Resistance	Initial: 40mΩ Max. After: 50mΩ Max.	Solder connectors to PCB and insert dummy card, measure by applying closed circuit current of 10mA maximum at open circuit voltage of 20mV (max). (Per EIA-364-23)
Dielectric Withstanding Voltage	No Broken	100V AC (rms.) between two adjacent for 1 minute. (Trip current:1mA) (Per EIA-364-20)

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Insulation Resistance	100MΩ Min.	Apply 250V DC between adjacent contacts, or contact and ground. (EIA-364-21)

MECHANICAL		
Item	**Requirement**	**Test Condition**
Durability	Contact impedance: 150 mΩ MAX。 Operating force: 30% initial value. Insulation resistance: 50MΩ min. Withstand voltage: AC 100 V(50Hz or60 Hz)shall be no breakdown.	10,000 cycles of operation at a rate of 15-18 cycles per minute with unloading. Insertion force ：5N-20N Extraction force : 8N-20N After 10000 cycles Durability : 6N-20N
Terminal strength	There shall be no sign of damage Mechanically and electrically	The static force of 500gf being applied in one direction on the tip of the terminal for 1 mimute

ENVIRONMENTAL		
Item	**Requirement**	**Test Condition**
Heat test	(1) Contact resistance: 150mΩ max (2) Insulation resistance: 50MΩmin.	80±2℃ for 96 hours, test after keeping in normal condition for 30 minutes.
Humidity test	Insulation resistance: 50MΩ min. There shall be no sign of damage mechanically and electrically.	40±2℃ 90-95%RH for 96 hours, test after, keeping in normal condition for 30 min.
Cold test	Insulation resistance: 50MΩ min. There shall be no sign of damage mechanically and electrically.	At -40±3℃ for 96 hours, test after Keeping in normal condition for 30 min.
Temperature cycling test	Contact resistance: 150mΩ max. Insulation resistance: 50M Ω min. There shall be no sign of damage mechanically and electrically.	In FIG. For 5 cycles, test after keeping in normal condition for 30 min.

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		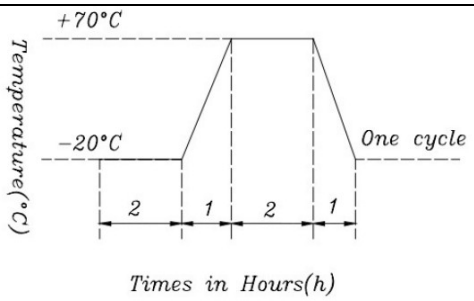
Salt spray	Appearance: no damage. Contact Resistance: 50mΩ Max	Mated connectors and expose to the follow Lowing salt mist conditions. Upon Completion of the exposure period, salt deposits shall be removed by a gentle Wash or dip in running water, after which the specified measurement shall Be performed. NaCl solution: Concentration: 5±1% Spray time: 48 hours ambient Temperature: 35±2℃ EIA-364-26B
The waterproof Level test of IPX8	No water enters Into enclosure through Type C interface	The product is 1.5 meters away from the water surface for 30 minutes without water seepage

SOLDER ABILITY		
Item	**Requirement**	**Test Condition**
Solder ability	95% of immersed area must show no voids, pin holes	The termination should be 95% covered with new continuous solder coating Solder temperature: 245±5°C Test time: 3±0.5 seconds, (Per EIA-364-71)
Resistance to soldering heat	No melting, cracks or functional damage allowed	Preheating temperature: 150 ~ 200°C, 60~120 seconds Liquidus temperature (TL): 217°C, 60~150 seconds Peak temperature: 260°C Time within 5 °C of peak temperature (Tc): 255°C, 30seconds

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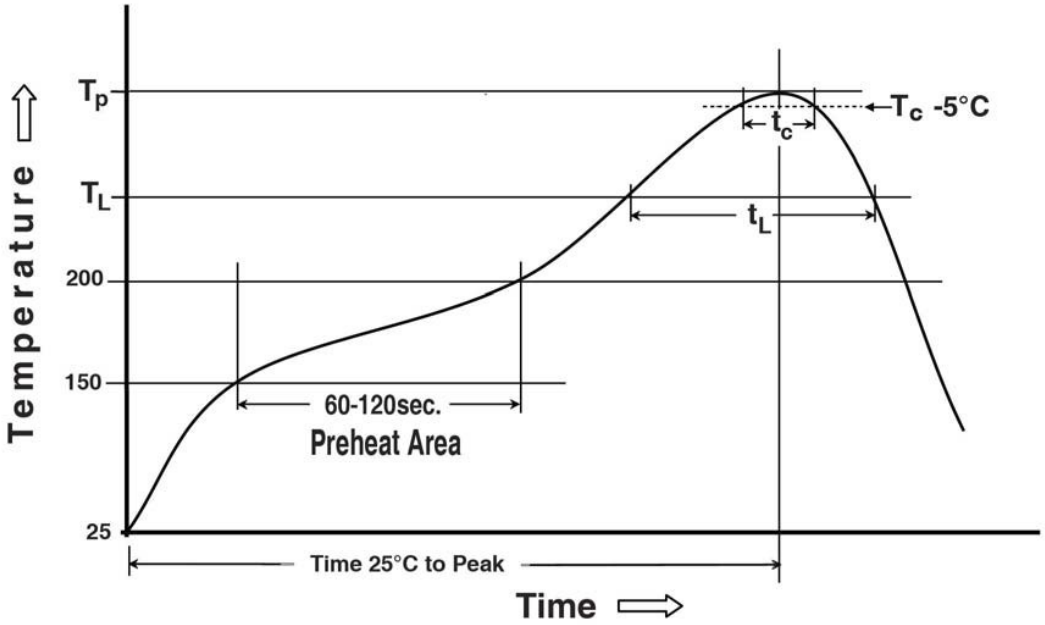
Reflow Profile



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