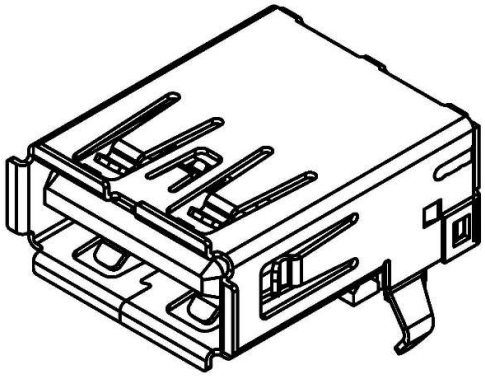
PRODUCT SPECIFICATION

Part Number	USB1075		**Rev**	A		**Date**	25/04/12
Product Description	USB3.0 Receptacle, Type A, 9 Pin, Through hole, Horizontal, Top Mount, with Kinked Shell Stakes					**Page**	1
Doc Number	USB1075	**Prepared**	**AE**	**Checked**	**AO**	**Approved**	**LH**



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1.0 SCOPE.

This specification covers performance, tests and quality requirements for the USB3.0 Receptacle USB1075 (Type A, 9-Pin, Through Hole, Horizontal).

2.0 PRODUCT NAME AND PART NUMBER.

USB3.0 Receptacle, 9-Pin, Type A: USB1075.

3.0 PRODUCT SHAPE, DIMENSIONS AND MATERIAL.

Please refer to drawings.

4.0 RATINGS.

4.1 Current rating ……. 0.5A (Signal Pins), 1.8A (Power Pins) or 1.0A (for all)

4.2 Voltage rating …… 100 VAC

4.3 Operating Temperature Range …… -55°C to +85°C

5.0 TEST AND MEASUREMENT CONDITIONS.

Product is designed to meet electrical, mechanical and environmental performance requirements specified in Paragraph 6.0. All tests are performed in ambient conditions unless otherwise specified.

6.0 PERFORMANCE.

Item	Test Condition	Requirement
Examination of Product	Visual, dimensional and functional inspection as per quality plan.	Product shall meet requirements of product drawing and specification.

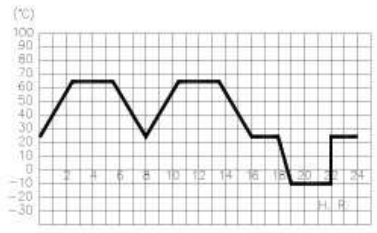
6.1 Electrical Performance.

Item	Test Condition	Requirement
Low-signal Level Contact Resistance	Mate connectors, measure by dry circuit, 20mV Max., 100mA Max. In accordance with EIA-364-23.	30mΩ Max.
Insulation Resistance	Unmated connectors, apply 100 V DC between adjacent terminals. In accordance with EIA-364-21.	1000 M Ω Min.
Dielectric Withstanding Voltage	Test between adjacent contacts of unmated connectors. In accordance with EIA-364-20.	100 VAC Min. at sea level for 1minute. No discharge, flashover or breakdown.
Temperature Rise	Mate connector: measure the temperature rise when the maximum AC rated current is passed. In accordance with EIA-364-70.	30°C Max. Change allowed.

6.2 Mechanical Performance.

Item	Test Condition	Requirement
Mating / Unmating Force	Mated and unmated at rate of 12.5mm cycles per minute. In accordance with EIA-364-13.	Initial: Mating force: 35N Max. Un-mating force: 10N Min.
Durability	Insertion and withdrawal are repeated with card at the frequency of 500 Cycles (automatically) & 200 Cycles (manually) / hour max. Mating force of 35N Max. & Unmating force 8N Min. In accordance with EIA-364-09.	5,000 cycles. No Breakdown
Vibration	Duration 15 minutes in each of three mutually perpendicular planes. Subjected to 3.10 GRMS. In accordance with ANSI/EIA-364-28 Method 7D.	No Damage Discontinuity: 1μ second Max.

6.3 Environmental Performance and Others.

Item	Test Condition	Requirement
Thermal Shock	Mate module and subject to follow condition for 10 cycles. At -55°C to +85°C. In accordance with EIA-364-32, test condition I.	No Damage 10mΩ Max. change allowed.
Mechanical Shock	Mated USB connectors are subjected to 11ms duration 30Gs half-sine shock pules. Three shocks in each direction applied along three mutually perpendicular planes for 18 shocks. In accordance with EIA-364-27, test condition H.	No Damage Discontinuity: 1.0 microsecond Max.
Humidity & Temperature Cycling Test	Mate Connector and expose to temperature of 25~65°C±3, 50~80%RH±3, Ramp times should be 0.5 hour & dwell should be 1 hour, 1 cycle 24H. Dwell times start when the temperature is stabilized within the specified levels. In accordance with EIA-364-31, Test condition A. 	No Damage 10mΩ Max. change allowed.
Temperature Life	Subject mated connectors to temperature life at 105°C for 120 hours. Measure Signal. In accordance with EIA-364-17, Test condition A.	No Damage 10mΩ Max. change allowed.
Solderability	Dip solder-tails in flux then immerse in solder bath at 255±5 °C up to 0.5mm from the bottom of the housing for 5 seconds. In accordance with EIA-364-52 Category 2.	95% of immersed area must show no voids, pin holes.

Item	Test Condition	Requirement
Resistance to Solder Heat (Wave Soldering)	Heat: 260±5°C, 10+2/-0 sec. In accordance with EIA-364-56	Without deformation of case or excessive looseness of the terminals/pin (DIP only).
Resistance to Solder Heat (Reflow Soldering)	For procedures other than specified below, refer to IEC PUB, 68-2-20. Test Tb Method 1A or 2 Solder bath method solder temperature: 260±5°C Immersion time: 10±1 second. Thickness of PCB: 0.8mm. In accordance with EIA-364-56	Without deformation of case or excessive looseness of the terminals/pin (SMT only).
Resistance to Solder Heat (Hand Soldering)	Solder iron method solder temperature: 350±10°C Immersion time: 3±1 seconds, however excessive pressure shall not be applied to the terminal	Without deformation of case or excessive looseness of the terminals/pin.

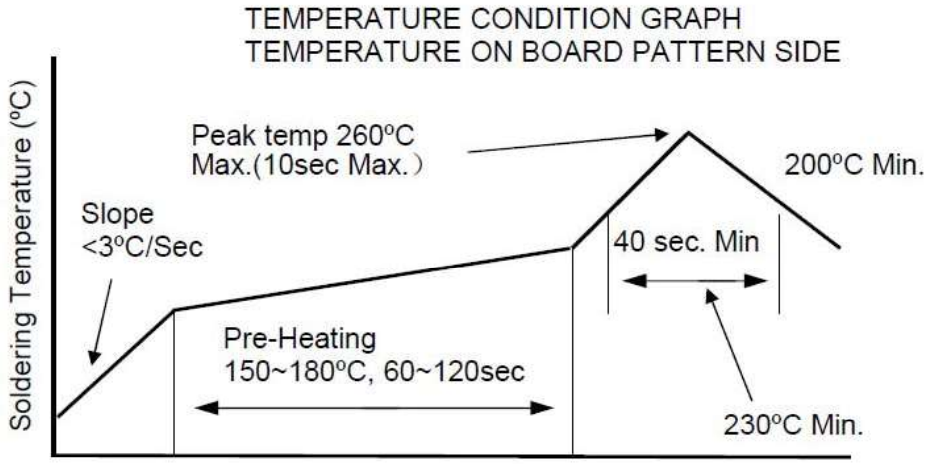


Fig 1 – Temperature profile of Reflow Soldering at 260°C Max.

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7.0 PRODUCT QUALIFICATION AND TEST SEQUENCE

Test Item	Test Group								
	A	B	C	D	E	F	G	H	I
Examination of Product	1, 3	1, 10	1, 6	1, 7	1, 6	1, 4	1, 4	1, 3	1, 3
Low-signal Contact Resistance		2, 9	2, 5	2, 4, 6	2, 9	2, 5			
Insulation Resistance					5				
Dielectric Withstanding Voltage		3, 8							
Temperature Rise	2								
Mating / Unmating Force		4, 7							
Durability		5							
Vibration			3						
Thermal Shock			4						
Mechanical Shock				5					
Humidity & Temperature Cycling		6							
Temperature Life				3					
Solderability							2		
Resistance to Wave Soldering Heat								2	
Resistance to Reflow Soldering Heat									2
Resistance to Hand Soldering Heat							3		
Sample Size	5	5	5	5	5	5	5	5	5