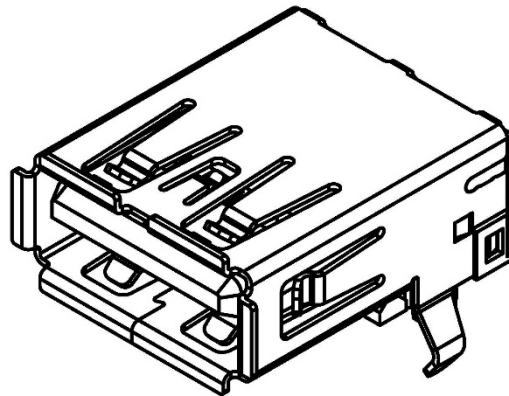


# PRODUCT SPECIFICATION

<b>Part Number</b>	USB1075	<b>Rev</b>	A	<b>Date</b>	25/04/12		
<b>Product Description</b>	USB3.0 Receptacle, Type A, 9 Pin, Through hole, Horizontal, Top Mount, with Kinked Shell Stakes			<b>Page</b>	1		
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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.

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## 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.

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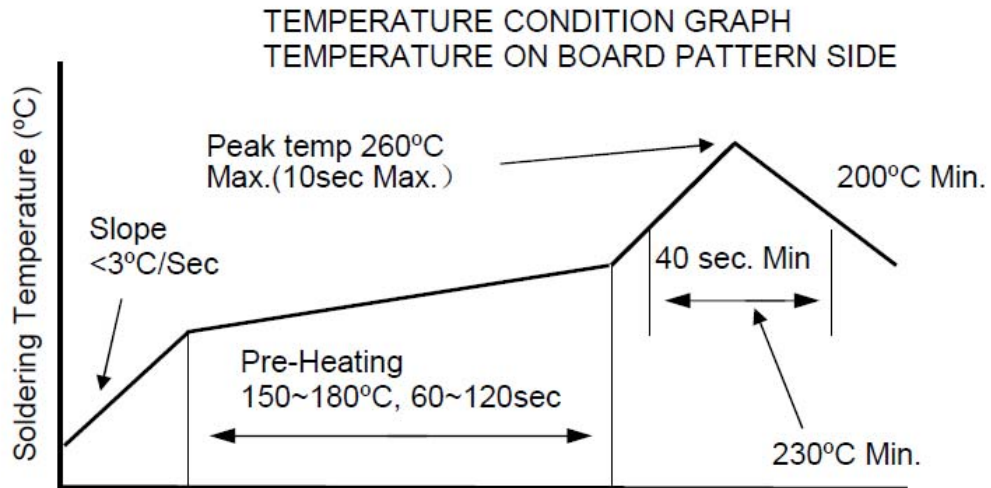
## 6.3 Environmental Performance and Others.

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 pulses. 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.  <div style="text-align: center;"> <p style="font-size: small;">(°C)</p> <table border="1" style="display: none;"> <caption>Temperature Cycling Test Profile Data</caption> <thead> <tr> <th>Time (Hours)</th> <th>Temperature (°C)</th> </tr> </thead> <tbody> <tr><td>0</td><td>25</td></tr> <tr><td>2</td><td>65</td></tr> <tr><td>4</td><td>25</td></tr> <tr><td>6</td><td>65</td></tr> <tr><td>8</td><td>25</td></tr> <tr><td>10</td><td>65</td></tr> <tr><td>12</td><td>25</td></tr> <tr><td>14</td><td>30</td></tr> <tr><td>16</td><td>-20</td></tr> <tr><td>18</td><td>30</td></tr> <tr><td>20</td><td>30</td></tr> <tr><td>22</td><td>-20</td></tr> <tr><td>24</td><td>30</td></tr> </tbody> </table> </div>	Time (Hours)	Temperature (°C)	0	25	2	65	4	25	6	65	8	25	10	65	12	25	14	30	16	-20	18	30	20	30	22	-20	24	30	No Damage 10mΩ Max. change allowed.
Time (Hours)	Temperature (°C)																													
0	25																													
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14	30																													
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18	30																													
20	30																													
22	-20																													
24	30																													
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.																												

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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