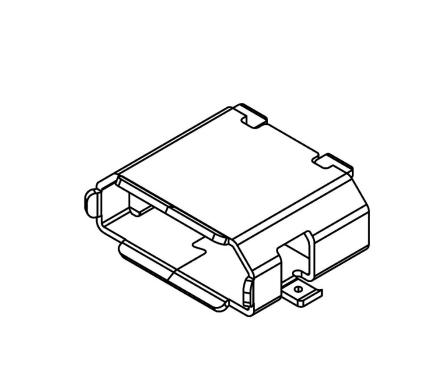
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1.0 SCOPE.

This specification covers performance, tests and quality requirements for the Micro USB Receptacle USB3100 (Type B, 5-Pin, SMT, Horizontal).

### 2.0 PRODUCT NAME AND PART NUMBER.

Micro USB Receptacle, 5 Pin, Type B: USB3100.

### 3.0 PRODUCT SHAPE, DIMENSIONS AND MATERIAL.

Please refer to drawings.

#### 4.0 RATINGS.

4.1 Current rating: Signal (Pins 2, 3, 4)	1.0A
Power (Pins1, 5)	1.8A
4.2 Voltage rating	30V AC
4.3 Operating Temperature Range	-30°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, 20 mV Max. In accordance with EIA-364-23.	30 mΩ Max.
Insulation Resistance	Mate/Un-mate connectors, apply 100V DC for 1 minute at sea level between adjacent terminal or ground. In accordance with EIA-364-21.	1000 MΩ Min.
Dielectric Strength	Mate/Un-mate connectors, apply 100V AC for 1 minute at sea level. In accordance with EIA-364-20.	No Breakdown.

### 6.2 Mechanical Performance.

Item	Test Condition	Requirement
Mating/Un-mating Force (initial)	Mate/Un-mated at a rate of 12.5mm/min. In accordance with EIA-364-13.	Mating force: 35N Max. Un-Mating force: 8N Min. to 25N Max.
Durability	Cycle rate, 500 cycles per hour if done automatically and 200 if manual cycles. In accordance with EIA-364-09.	10,000 cycles. Low Level Contact Resistance: 30mΩ Max.
Vibration	Mate connectors and subject to 5.35 Gs RMS. For a period of 15 minutes in each of the 3 mutually perpendicular axes. In accordance with EIA-364-28 Test condition V test letter A.	Appearance: No Damage. Contact Resistance: 50 mΩ Max. Discontinuity: 1.0 μ second Max.
Mechanical Shock	Mate connectors and subject to the following shock conditions, 3 shocks shall be applied along 3 mutually perpendicular axis, passing 100 mA current during the test. (Total of 18 shocks) Test Pulse: Half Sine Peak Value: 294 m/s <sup>2</sup> (30G) Duration: 11ms. In accordance with EIA-364-27. Test condition H.	Appearance: No Damage. Contact Resistance: 10 mΩ Max. change allowed. Discontinuity: 1.0 μ second Max.



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### 6.3 Environmental Performance and Others.

Item	Test Condition	Requirement
Humidity Test	Subject mated connectors to Duration: 168 hours temperature between -25°C to +65°C with 90 to 95% RH. In accordance with EIA-364-31. Test condition A method III	Appearance: No Damage. Contact Resistance: 10 mΩ Max. change allowed. Insulation Resistance: 1000 MΩ Min. Dielectric Strength: No Breakdown
Salt Spray	Subject mated/unmated connectors to 5% salt-solution concentration, 35°C for 48 hours. In accordance with EIA-364-26, Test Condition B.	Low Level Contact Resistance: 50mΩ Max. No visible rust
Temperature Life	Subject mated connectors to temperature life at +85°C for 96hours. In accordance with EIA-364-17. Test condition 2 Method A.	Contact Resistance: 10 mΩ Max. change allowed. Insulation Resist.: 1000 MΩ Min. Shall meet visual requirement and show no physical damage.
Temperature Rise	Mate connector and measure the temperature rise of contact when the maximum rated current is passed and in accordance with EIA-364-70.	+30°C Max. Change allowed.
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. Insulation Resist: 1000 MΩ Min. Dielectric Strength: No Breakdown
Solderability	Dip solder-tails in flux then immerse in solder bath at 245 ±5°C up to 0.5mm from the bottom of the housing for 4~5 seconds. In accordance with EIA-364-52, category 2.	95% of immersed area must show no voids, pin holes.
Resistance to Soldering Heat (Reflow Soldering)	Sample mounted on PCB and subject to solder bath method, Temperature:260°C for 10±1 sec (High Temp. Thermoplastic). In accordance with EIA-364-56.	Without deformation of shell or excessive looseness of the terminals (pin.)
Resistance to Soldering Heat (Hand Soldering)	Sample mounted on PCB and subject to hand iron soldering, Temperature:350±10°C for 3±1 sec (High Temp. Thermoplastic).	Without deformation of shell or excessive looseness of the terminals (pin.)



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Doc Number	USB3100		<sup>2</sup> Prepared	1	ASE	Ch	ecked	\ \	/J	Appr	oved	RM
Number												
	TANCE TO INFRARE ree Process: Reflow so Temp 260°C Peak temp 2 MAX.(10sec	olderii 260°C	ng cycl TE	les lir	mited ERAT	to two	o time ON B			TERI		E
<3ºC/Sec				->			\ 230	°C Mi	n			
<3ºC/Sec	Pre-heat Hol Max. is 60~1	20seo	С.			CE	230	°C Mi	n			
<3ºC/Sec	Pre-heat Hol Max. is 60~1 UCT QUALIFICATION	20seo AND	c. TEST	SEQ	UEN	Те	st Gro	oup				
<3°C/Sec 8.0 PROD	Pre-heat Hol Max. is 60~1 UCT QUALIFICATION Test Item	20seo AND	c. TEST	SEQ c	UEN	Te: E	st Gro	oup G	Н	1	J	K
<3°C/Sec 8.0 PROD	Pre-heat Hole Max. is 60~1 UCT QUALIFICATION Test Item	20seo AND A 15	c. TEST	SEQ C 1 5	D 1 4	<b>Te</b> E 1 4	<b>st Gro</b> F 1 6	<b>500</b> G 1 4	H 14	I 1 3	J 1 3	K 1 3
<3°C/Sec 8.0 PROD Examina Low-sign	Pre-heat Hol Max. is 60~1 UCT QUALIFICATION Test Item tion of Product al Level Contact Resistance	20sec AND A 1 5 2	c. TEST	SEQ c	UEN	Te: E	<b>st Gro</b> F 1 6 2 7	oup G	Н	I 13		
<3°C/Sec 8.0 PROD Examina Low-sign Insulation	Pre-heat Hole Max. is 60~1 UCT QUALIFICATION Test Item tion of Product al Level Contact Resistance	20sec AND A 15 2 3	c. TEST	SEQ C 1 5	D 1 4	<b>Te</b> E 1 4	<b>st Gro</b> F 1 6 2 7 3 8	<b>500</b> G 1 4	H 14	I 13		
<3°C/Sec 8.0 PROD Examina Low-sign Insulation Dielectric	Pre-heat Hole Max. is 60~1 UCT QUALIFICATION Test Item tion of Product al Level Contact Resistance Resistance Withstanding Voltage	20sec AND A 1 5 2	C. TEST B 14 25	SEQ C 1 5	D 1 4	<b>Te</b> E 1 4	<b>st Gro</b> F 1 6 2 7	<b>500</b> G 1 4	H 14	I 13		
<3°C/Sec 8.0 PROD Examina Low-sign Insulation Dielectric Mating /	Pre-heat Hole Max. is 60~1 UCT QUALIFICATION Test Item tion of Product al Level Contact Resistance Resistance Withstanding Voltage Unmating Forces	20sec AND A 15 2 3	c. TEST	SEQ C 15 26	D 1 4	<b>Te</b> E 1 4	<b>st Gro</b> F 1 6 2 7 3 8	<b>500</b> G 1 4	H 14	I 13		
<3°C/Sec 8.0 PROD Examina Low-sign Insulation Dielectric Mating / Durability	Pre-heat Hole Max. is 60~1 UCT QUALIFICATION Test Item tion of Product al Level Contact Resistance r Resistance Withstanding Voltage Unmating Forces	20sec AND A 15 2 3	C. TEST B 14 25	SEQ C 15 26 3	D 1 4	<b>Te</b> E 1 4	<b>st Gro</b> F 1 6 2 7 3 8	<b>500</b> G 1 4	H 14	I 13		
<3°C/Sec 8.0 PROD Examina Low-sign Insulation Dielectric Mating / Durability Vibration	Pre-heat Hol Max. is 60~1 UCT QUALIFICATION Test Item tion of Product al Level Contact Resistance n Resistance Withstanding Voltage Unmating Forces	20sec AND A 15 2 3	C. TEST B 14 25	SEQ C 15 26	D 14 25	<b>Te</b> E 1 4	<b>st Gro</b> F 1 6 2 7 3 8	<b>500</b> G 1 4	H 14	I 13		
<3°C/Sec 8.0 PROD Examina Low-sign Insulation Dielectric Mating / Durability Vibration Mechanic	Pre-heat Hole Max. is 60~1 UCT QUALIFICATION Test Item tion of Product al Level Contact Resistance resistance Withstanding Voltage Unmating Forces	20sec AND A 15 2 3	C. TEST B 14 25	SEQ C 15 26 3	D 1 4	<b>Te</b> : E 14 25	<b>st Gro</b> F 1 6 2 7 3 8	<b>500</b> G 1 4	H 14			
<3°C/Sec 8.0 PROD Examina Low-sign Insulation Dielectric Mating / Durability Vibration Mechanic Humidity	Pre-heat Hole Max. is 60~1 UCT QUALIFICATION Test Item tion of Product al Level Contact Resistance Resistance Withstanding Voltage Unmating Forces	20sec AND A 15 2 3	C. TEST B 14 25	SEQ C 15 26 3	D 14 25	<b>Te</b> E 1 4	st Gro F 16 27 38 49	<b>500</b> G 1 4	H 14			
<3°C/Sec 8.0 PROD Examina Low-sign Insulation Dielectric Mating / Durability Vibration Mechanic Humidity Salt Spra	Pre-heat Hole Max. is 60~1 UCT QUALIFICATION Test Item tion of Product al Level Contact Resistance resistance Withstanding Voltage Unmating Forces	20sec AND A 15 2 3	C. TEST B 14 25	SEQ C 15 26 3	D 14 25	<b>Te</b> : E 14 25	<b>st Gro</b> F 1 6 2 7 3 8	0 <b>up</b> G 14 25	H 14			
<3°C/Sec 8.0 PROD Examina Low-sign Insulation Dielectric Mating / Durability Vibration Mechanii Humidity Salt Spra Tempera	Pre-heat Hole Max. is 60~1 UCT QUALIFICATION Test Item tion of Product al Level Contact Resistance resistance Withstanding Voltage Unmating Forces / cal Shock	20sec AND A 15 2 3	C. TEST B 14 25	SEQ C 15 26 3	D 14 25	<b>Te</b> : E 14 25	st Gro F 16 27 38 49	<b>500</b> G 1 4	H 14 25			
<3°C/Sec 8.0 PROD Examina Low-sign Insulation Dielectric Mating / Durability Vibration Mechania Humidity Salt Spra Tempera Tempera	Pre-heat Hole Max. is 60~1 UCT QUALIFICATION Test Item tion of Product al Level Contact Resistance n Resistance Withstanding Voltage Unmating Forces	20sec AND A 15 2 3	C. TEST B 14 25 3 3	SEQ C 15 26 3	D 14 25	<b>Te</b> : E 14 25	st Gro F 16 27 38 49	0 <b>up</b> G 14 25	H 14			
<3°C/Sec 8.0 PROD Examina Low-sign Insulation Dielectric Mating / Durability Vibration Mechanic Humidity Salt Spra Tempera Tempera Thermal	Pre-heat Hole Max. is 60~1 UCT QUALIFICATION Test Item tion of Product al Level Contact Resistance resistance Withstanding Voltage Unmating Forces // cal Shock	20sec AND A 15 2 3	C. TEST B 14 25	SEQ C 15 26 3	D 14 25	<b>Te</b> : E 14 25	st Gro F 16 27 38 49	0 <b>up</b> G 14 25	H 14 25			
<3°C/Sec 8.0 PROD Examina Low-sign Insulation Dielectric Mating / Durability Vibration Mechania Humidity Salt Spra Tempera Thermal Solderab	Pre-heat Hole Max. is 60~1 UCT QUALIFICATION Test Item tion of Product al Level Contact Resistance n Resistance Withstanding Voltage Unmating Forces // cal Shock	20sec AND A 15 2 3	C. TEST B 14 25 3 3	SEQ C 15 26 3	D 14 25	<b>Te</b> : E 14 25	st Gro F 16 27 38 49	0 <b>up</b> G 14 25	H 14 25			
<3°C/Sec 8.0 PROD Examina Low-sign Insulation Dielectric Mating / Durability Vibration Mechanic Humidity Salt Spra Tempera Thermal Solderab Resistan	Pre-heat Hole Max. is 60~1 UCT QUALIFICATION Test Item tion of Product al Level Contact Resistance resistance Withstanding Voltage Unmating Forces // cal Shock	20sec AND A 15 2 3	C. TEST B 14 25 3 3	SEQ C 15 26 3	D 14 25	<b>Te</b> : E 14 25	st Gro F 16 27 38 49	0 <b>up</b> G 14 25	H 14 25			



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Revision	Information	Page	Release Date
А	Specification released.	-	02/07/12
В	Thermal Shock & Mating/Umating Additional Info.	3, 4	10/06/13



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