

Micro SD CARD Connector Product Specification	Approved by	L.M. J	Reported by	Z. ping
	Report No.	Spec-023	VER	A
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	ISSUD DATE	2017.12.10		
	REVISED DATE			

1. Scope

This product specification is applied for Moarconn Electronics CO., LTD. Micro SD CARD Connector.

2. Rating

- (1)Maximum rating voltage: 3.3V/ 5V (AC/DC)
- (2)Maximum rating current: 0.5A
- (3)Temperature range: -25~+85°C.

3. Environmental condition

All performance test. Unless otherwise specified. Is taken as per following environmental condition.

Ambient temperature: 15~35°C.

Ambient humidity: 50~85%RH.

However, if doubts arise concerning judgments, perform under the following standard conditions.

Temperature: 23±1°C.

Humidity: 50%±2% RH.

Air Pressure: 86~106kPa

4. Configurations dimensions and

materials See the product drawing attached.

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5. RATINGS

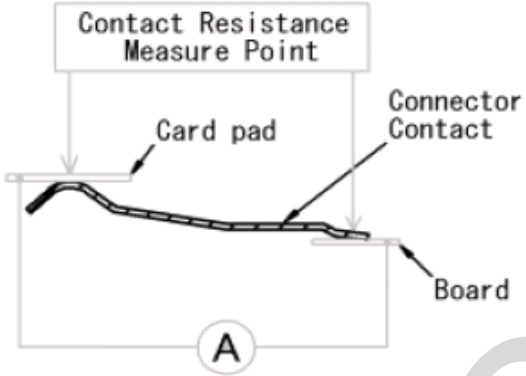
ITEM	RATINGS
Rated current	0.5 A per contact
Dielectric withstanding voltage	AC 500V r.m.s
Insulation Resistance	1000 MΩ Min.
Contact Resistance	100 MΩ Max.
Operating Temperature	-25°C~60°C
Storage Temperature	-40°C~85°C
Humidity	95% RH MAX.
Flammability	Insulator Material UL94V-0

6. Revision History

Date	Version	Change compared to previous Issue
April 20,2017	A	The first release

7. Performance

7-1. Electronics performance

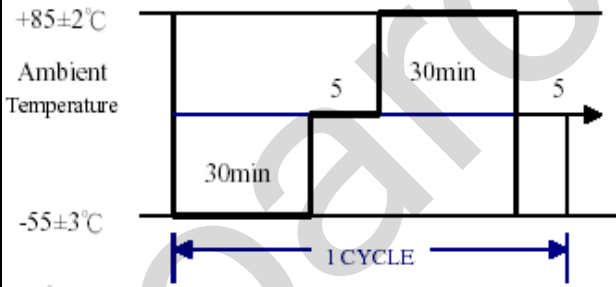
No	Items	Test Conditions	Specifications
1	Contact Resistance	<p>It shall be measured by the dry electric circuit specified as follow: 1mA.20mV, 1kHz frequency Measured in accordance with IEC 512-2-2A</p>  <p>The diagram illustrates the measurement point for contact resistance. It shows a cross-section of a card pad on a board, with a connector contact. A box labeled 'Contact Resistance Measure Point' is positioned above the contact area. An ammeter symbol 'A' is shown below the board, indicating the measurement setup.</p>	<p>Initial: 100mΩ Max After each test: 40mΩ max change</p>
2	Dielectric Withstandin g Voltage	<p>It shall be measured when AC 500 V shall be applied for one minute to between next terminals. Measured in accordance with IEC 512-2-4A MIL-STD-202 method 301.</p>	Should not have any changes
3	Insulation Resistance	<p>It shall be measured when 500 V DC is applied for one minute to between next terminals. Measured in accordance with IEC 512-2-3A MIL-STD-202 method 302.</p>	<p>Initial: 1000MΩ Min After each test: 100MΩ Min</p>
4	Appearance	Visual.	<p>Should not have any flaw Scratch discoloration and crushed</p>

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7-2. Functional performance

No	Items	Test Conditions	Specifications
1	Insertion / Extraction force	The contact and card shall be mated and unmated at a rate of 25mm/minute and measured the insertion and extraction force.	Insertion: 40N Max Extraction: 0.5~40N
2	Durability Test	The contact and card shall be mated and unmated total 5,000 times at a rate of 400 to 600 times per hour and measured the contact resistance after the test.	(1) Contact Resistance: See 7-1.1 (2) Insertion & Extraction Force: See 7-2.1
3	Vibration test	Vibration Wave: Sine wave Mechanical frequency range: 10...2000 Hz. Acceleration: 2 g. Measured in accordance with IEC 512 part 2 and 4 / IEC 512-4-6D.	Function and performance shall be as specified. Not to change for Physical appearance. b. Contact Resistance: See 7-1.1 c. Discontinuity: 100ns Max
4	Shock test	Acceleration: 50 g. Standard holding time: 11ms Shock Wave: Semi-sine wave. Impact frequency: Apply impact three times on each surface along the three axes (a total of 18 times) Measured in accordance with SD Memory Card / Multi Media Card Test Standard / IEC 512 4-6C.	Function and performance shall be as specified. Not to change for Physical appearance. b. Contact Resistance: See 7-1.1 c. Discontinuity: 100ns Max

7-3. Environmental performance

No	Items	Test Conditions	Specifications
1	High Temperature	The contact and card is exposed in the heat chamber 85°C for 96 hours. Measured in accordance with Multi Media Card Test Standard.	Contact Resistance: See 7-1.1
2	Low Temperature	The contact and card is exposed in the cold chamber -25°C for 96 hours. Measured in accordance with Multi Media Card Test Standard.	Contact Resistance: See 7-1.1
3	Thermal shock test.	-55°C to +85°C. 5 cycles (1 cycles=1 hour) with connectors engaged. Measured in accordance with IEC-512-6-11D. 	(1) Function and performance shall be as specified. Not to change for physical appearance. (2) Contact Resistance: See 7-1.1
4	Humidity resistance	Steady State 40°C, 90 to 95% RH for 96hours or more. Then inspect appearance and measure contact resistance and insulation resistance.	(1) Contact Resistance: See 7-1.1 (2) Insulation Resistance: See 7-1.3
5	Salty spray test	mated connectors to 35+/-1 °C, PH value:6.5~7.2 and 5+/-1% salt condition for 48hours. After test, rinse the sample with water and recondition the room temperature for 1~2 hours test CR and IR. EIA-364-26B.	(1) Appearance shall no rust, oxidation, corrosion and other undesirable phenomena (2) Contact Resistance: See 7-1.1 (3) Insulation Resistance: See 7-1.3

7-4. Other performance

No	Items	Test Conditions	Specifications
1	Solder ability	The contact of terminal shall be put into the flux and dipped solder bath $260\pm 5^{\circ}\text{C}$, 5 ± 0.5 sec.	Solder shall be covered 95% or more of the area that is dipped into the solder bath
2	Resistance to soldering heat	The contact of terminal shall be tested resistance to soldering heat in the following conditions. In case of solder iron (2 time) Temperature: $+350^{\circ}\text{C}\pm 5^{\circ}\text{C}$ Time: $5\text{s}\pm 1\text{s}$	Should not have any flaw scratch and crack.
3.	IR-reflow	MIL-STD-202G method 210F Peak temperature: 260°C minimum Temperature time ($250\pm 5^{\circ}\text{C}$): 10 sec or more. Duration: 2 cycles Lead-Free Solder: Sn96.5Ag3Cu0.5 T-peak 260°C 10 seconds or more 130~180 60~120 seconds 30-60 seconds	(1) Should not have any flaw scratch and crack. (2) No visual damage to insulator.

