SD Connector Product Specification	Approved by	L.M.J	Reported by	Z.ping
	Report No.	Spec-024	VER	B
	PAGE	7		
	ISSUD DATE	2018.05.25		
	REVISED DATE	2023.02.01		

1. Scope

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

2. Rating

(1)Maximum rating voltage：5V (AC)
(2)Maximum rating current：0.5A
(3)Temperature range：-25~+85℃.

3. Environmental condition

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

Ambient temperature：15~35℃.
Ambient humidity：50~85%RH.

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

Temperature：23±1℃.
Humidity：50%±2% RH.
Air Pressure：86~106kPa

4.Configurations dimensions and materials

See the product drawing attached.

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℃~85℃
Storage Temperature	-40℃~85℃
Humidity	95% RH MAX.
Flammability	Insulator Material UL94V-0

6. Revision History

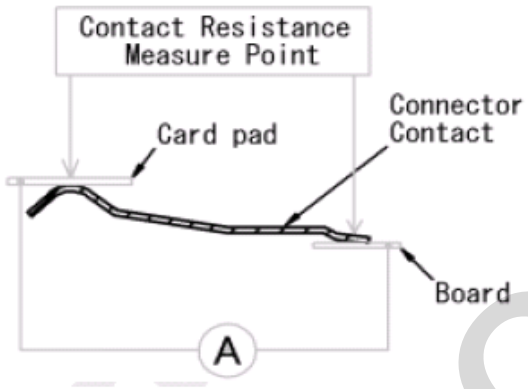
Date	Version	Change compared to previous Issue
2018.05.25	A	The first release
2023.2.1	B	Insertion / Extraction force change，Meet SD standards

7.0 PERFORMANCE AND TEST DESCRIPTION

7.1 EXAMINATION

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Examination of product.	Specimens were subjected to Low Level Contact Resistance measurement in accordance with EIA-364-18A	No physical damaged. It shall be met the requirements of product drawing

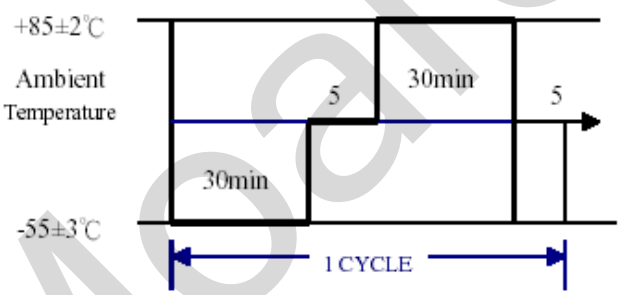
7-1. Electronics performance

No	Items	Test Conditions	REQUIREMENT
2	Contact Resistance	It shall be measured by the dry electric circuit specified as follow: 1mA.20mV, 1kHz,frequenc Measured in accordance with IEC 512-2-2A 	Initial：100mΩ Max After each test： 40mΩ max change
3	Dielectric Withstanding Voltage	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.	Should not have any changes
4	Insulation Resistance	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.	Initial：1000MΩ Min After each test：100MΩ Min

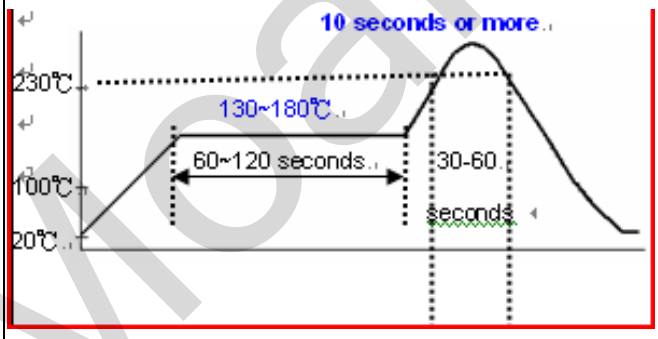
7-2. Functional performance

No	Items	Test Conditions	REQUIREMENT
5	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：10N Max. Extraction：2N Min.
6	Durability Test	The contact and card shall be mated and mated total 10,000 times at a rate of 400 to 600 times per hour and measured the contact resistance after the test.	Initial：100mΩ Max After each test： 40mΩ max change
7	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:40mΩ max change c.Discontinuity：100ns Max
8	Shock test	Acceleration：50 g. Standard holding time： 11 ms 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:40mΩ max change c.Discontinuity：100ns Max

7-3. Environmental performance

No	Items	Test Conditions	REQUIREMENT
9	High Temperature	The contact and card is exposed in the heat chamber 85℃ for 96 hours. Measured in accordance with Multi Media Card test Standard.	Initial：100mΩ Max After each test：40mΩ max change
10	Low Temperature	The contact and card is exposed in the cold chamber -25℃ for96 hours. Measured in accordance with Multi Media Card test Standard.	Initial：100mΩ Max After each test：40mΩ max change
11	Thermal shock test.	-55℃ to +85℃. 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: 40mΩ max change
12	Humidity resistance	Steady State 40℃, 90 to 95% RH for 96hours or more. Then inspect appearance and measure contact resistance and insulation resistance.	(1) Contact Resistance: Initial: 100mΩ Max After each test: 40mΩ max change (2) Insulation Resistance: 40mΩ max change
13	Salty spray test	mated connectors to 35+/-1 ℃, PH value:6.5~7.2 and 5+/-1% salt condition for 24hours. After test, rinse the sample with water and recondition the room temperature for 1~2 hours test CR and IR. EIA-364-26B.	(1) Contact Resistance: Initial：100mΩ Max After each test：40mΩ max change (2) Insulation Resistance: 40mΩ max change

7-4. Other performance

No	Items	Test Conditions	REQUIREMENT
14	Solder ability	The contact of terminal shall be put into the flux and dipped solder bath 260±5℃,5±0.5 sec.	Solder shall be covered 95% or more of the area that is dipped into the solder bath
15	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℃+/-5℃ Time:5s+/-1s	Should not have any flaw scratch and crack.
16	IR-reflow	MIL-STD-202G method 210F Peak temperature: 250±5℃ minimum Peak temperature time (250±5℃): 10 sec or more. Duration： 2 cycles Lead-Free Solder： Sn96.5Ag3Cu0.5 T-peak 260℃ 	(1) Should not have any flaw scratch and crack. (2) No visual damage to insulator.

8. Test Sequences

Test or examination		Test group									
		A	B	C	D	E	F	G	H	I	
1	Examination of Product	1,9	1,5	1,5	1,5	1,9	1,5	1,6	1,3	1,4	
2	Contact Resistance	2,7	2,4	2,4	2,4	2,6	2,4	2,5			
3	Insulation Resistance	3,8				3,7					
4	Dielectric Withstanding Voltage					4,8					
5	Insertion force	4									
6	Extraction force	5									
7	Durability Test	6									
8	Vibration test							3			
9	Shock test							4			
10	Thermal shock test		3								
11	High temperature			3							
12	Low temperature				3						
13	Humidity Test					5					
14	Salty spray test						3				
15	Solder ability								2		
16	Resistance to soldering heat									3	
17	IR-reflow									2	