TITLE:	
	MEMORY STICK CONNECTOR

1. SCOPE

This specification covers performance, tests and quality requirements for the memory stick connector.

2. Applicable Documents

The following documents form a part of this specification to the extent specified herein. In the event of conflict between requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between requirements of this specification and referenced documents, this specification shall take precedence.

3. MECHANICAL Requirements

3.1 DESIGN AND CONSTRUCTION

Product shall be of design, construction and physical dimensions specified on applicable product drawing.

3.2 MATERIAL AND FINISH

See Sales Drawing

3.3 RATING

3.3.1. Voltage: 125V AC.

3.3.2. Current: 0.5 Ampere max.

3.3.3. Operating temperature: -55°C to +85°C.

Relative humidity: 95% max. (non-condensing)

4. TEST CONDITION

The product is designed to meet the electrical, mechanical and environmental performance requirements specified. All the tests shall be performed in the room temperature(5°C~35°C), relative humidity(45~85%), air pressure(85~106Kpa), unless otherwise specified.

5. TEST REQUIREMENTS AND PROCEDURES SUMMARY

no	test description	requirement	procedured
1	Examination of product	Meets the requirements of product drawing	Visually, dimensionally and functionally inspected per applicable inspection plan.
	Electrical		
2	LOW LEVEL CONTACT RESISTANCE	70 mΩ Max initial 80 mΩ Max final	Mate connectors measure by dry circuit. 20 mV Max. 10 mA.
3	Dielectric Withstanding Voltage	500VAC initial and 250 VAC final at sea level for 1 minute. No discharge, flashover or breakdown. Current leakage: 1mA max	Test between adjacent contacts of mated/unmated connectors. MIL-STD-1344A, Method 3001.1 Test Condition I
4	Insulation Resistance	1000MΩ min	Mate connectors. Apply 500 V DC between adjacent contact and ground EIA-364-21
5.	Temperature Rising	Base upon 30℃ Max. Rise above ambient temperature	Carry rated current load.
	MECHANICAL		
6	Card Insertion Force	10N max	Insert connectors at the speed rate of 25±3 mm/min.
7	Card Extraction Force	1.4N min	Insert connectors at the speed rate of 25±3 mm/min.
8	Contact retention force	2N min	Apply axial pull out force at 25±3 mm/min on the assembly in the housing.
9	Durability	12000 cycles After test, insulation resistance, dielectric strength, contact resistance shall be satisfied.	Mate and Un-mate the connector for a total of 12000 cycles (Operation speed: 1 cycles/sec) The card shall be changed new one in each 5000 times.

10	Mechanical Shock	No electrical discontinuity of 1 Microsecond or longer duration. △R=10mΩ maximum No physical damage allowed	Accelerated Velocity:50G Wave form: Half-sine, Duration: 11msec. Three shocks in each direction shall be applied along the three mutually perpendicular axes of the test specimen (18 shocks). MIL-STD-202,method 213,Condition B.
ENVIRONMENTAL			
11	Heat Resistance	△R=10mΩ maximum No physical damage allowed	Mated connector,85℃±3ºC , 250 Hrs. EIA 364-17
12	Cool Resistance	△R=10mΩ maximum No physical damage allowed	Mated connector,-55℃±3ºC , 96 Hrs. EIA 364-17
13	Humidity	△R=10mΩ maximum No physical damage allowed	Mated connector,90~95%R.H.40℃±2ºC , 96 Hrs. EIA-364-31B&IEC-60512-11-3.
14	Vibration	No electrical discontinuity of 1 Microsecond or longer duration. △R=10mΩ maximum No physical damage allowed	Amplitude : 1.5mm P-P, Sweep time :10-55-10 Hz in 1min. Duration : 1.5 hours in each of 3 mutually perpendicular planes. MIL-STD-1344A,Method 2005.1, Condition V Test Condition letter A.
15	Gas (H_2S)	Contact resistance:80mΩ Max.	Mated connector, 3PPM H_2S, 40ºC, 80% RH, 96 hours.
16	Resistance to IR reflow	No physical damage allowed	Temperature:100~150℃ for 60s Min, 210 ℃for 30s Max, peak:230℃, MIL-STD-202,Method 210
17	Solder ability	Wet solder coverage: 95% min.	Solder temperature: 230±2ºC Immersion duration: 3 seconds max.
18	Temperature Cycling	△ R=10mΩ maximum No physical damage allowed	Mated connector -55±3ºC/30 min, room temp: 10~15 min 85±2ºC/30 min, room temp: 10~15 min making this a cycle, repeat 5 cycles

19	Salt Spray	By visual inspection, without noticeable rust	48±4 Hrs exposure to a salt spray from the 5±1% solution at 35±2ºC

6. Product Qualification and Requalification test sequence

Test of Examination		Test Group											
		1	2	3	4	5	6	7	8	9	10	11	12
		Test Sequence											
1	Examination of product	1,9	1,9	1,9	1,5	1,5	1,9	1,3	1,6	1,3	1,9	1,4	1,5
2	Low Level Contact Resistance	2,6	2,6	2,6	2,4	2,4	2,6		2.5		2,6		2,4
3	Dielectric Withstanding Voltage	4,8	4,8	4,8			4,8				4,8		
4	Insulation Resistance	3,7	3,7	3,7			3,7				3,7		
5	Temperature Rising												3
6	Card Insertion Force (max.)											2	
7	Card Extraction Force (min)											3	
8	Contact retention Force(min)					6							
9	Durability										5		
10	Mechanical Shock								4				
11	Heat Resistance	5											
12	Cool Resistance		5										
13	Humidity			5									
14	Vibration								3				
15	Gas (H_2S)				3								
16	Resistance to IR reflow									2			
17	Solderability							2					
18	Temperature Cycling						5						
19	Salt Spray					3							

Figure 2

7. Sample Selection:

Sample shall be prepared in accordance with applicable manufactures instructions and shall be selected at random form current production

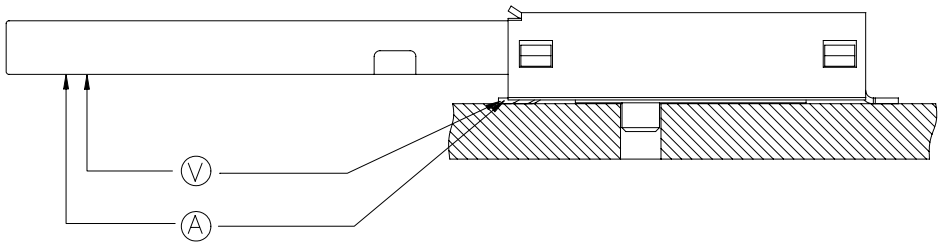

Figure 3: Low-level Termination Resistance Measurement