PRODUCT SPECIFICATION

SIM Card Connector push push type

1.0 SCOPE

This specification defines the performance for the ***SIM Card*** connector push push type with detect pin.

2.0 PRODUCT DESCRIPTION

The ***SIM Card*** connector designed for mobile phone.
Material checklist as following form:

Name	Material	Plating
Housing	High temperature thermoplastic	/
Cam	High temperature thermoplastic	/
Shell	Stainless steel	Nickel under plated and gold flash plated on solder pad
Terminal	Copper alloy	Nickel under plated Gold plated on contact area Gold flash plated on solder area
Detect pin (for detect revision)	Copper alloy	Nickel under plated Gold plated on contact area Gold flash plated on solder area
Cam Pin	Stainless steel	/
Spring	SWP	/

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

In cases where the specification differs from the product drawings, the product drawings take precedence.

4.0 RATINGS

	Item	Rating
4.1	Rated Current	0.5 A DC MAX.
4.2	Rated Voltage	50 V DC MAX.
4.3	Operating temperature range	-40℃ to +85℃ (Including terminal temperature rise)
4.4	Storage temperature range	-40℃ to +85℃(Storage area is to be free of dew formation)
4.5	Ambient Humidity Range	95% R.H. MAX.

5.0 ELECTICAL PERFORMANCE

Test Ref.	Item	Test Condition	Requirements
5.1	Contact Resistance	Mate connector with dry circuit of 20mV, 10mA Max. (Contact resistance should remove the resistance of Memory Stick Duo) Per EIA-364-23	100 mΩ maximum
5.2	Insulation Resistance (I.R.)	Unmated connector with 500VDC between adjacent terminals or terminal and ground for 1 minute Per EIA-364-21	100 MΩ minimum
5.3	Dielectric Withstanding Voltage	Apply 500V AC for 1 minute between adjacent terminals or terminal and ground. Per EIA-364-20	No Breakdown
5.4	Temperature Rise	Mate card and measure the temperature rise of contact, when rated current is passed. Per EIA-364-70 method 1	30°C Max.

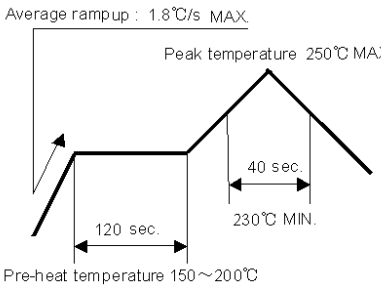
6.0 MECHANICAL PERFORMANCE

Test Ref.	Item	Test Condition	Requirements
6.1	Insertion force	Push card at the speed rate of 25±3 mm/min.	15 N Max.
6.2	Durability	Insertion and withdrawal are repeated 5,000 cycles with card at the speed rate of 400~600 cycles/hour. Per EIA-364-09	Contact Resistance: Δ=40 mΩ Maximum
6.3	Vibration	Mate card and subjected to the following vibration conditions, for a period of 2 hours in each of 3 mutually perpendicular axes, with passing DC 1mA during the test. Amplitude : 1.52mm P-P or 19.6m/s2{2G} Frequency : 10-55-10Hz shall be traversed in 1 minute. Per EIA-364-28	Appearance: no damage <1microsecond discontinuity

6.4	Mechanical Shock	Mate card and subjected to the following shock conditions. 3 mutually perpendicular axis, passing DC 1mA current during the test. (Total of 18 shocks) Test pulse ： Half Sine Peak value ： 490m/s2{50G} Duration ： 11ms Per EIA-364-27	Appearance: no damage <1microsecond discontinuity

7.0 ENVIRONMENTAL

Test Ref.	Item	Test Condition	Requirements
7.1	High Relative Humidity Exposure	The card shall be mated and exposed to the condition of 60±2℃ @ 90~95% Humidity for 96 hours. Recovery time 1~2 hours Per EIA-364-31	Appearance: no damage Contact Resistance: Δ=40 mΩ maximum
7.2	Low Temperature Exposure	The card shall be mated and exposed to the condition of -40±3℃ for 96 hours. Recovery time 1~2 hours	Appearance: no damage Contact resistance: Δ=40 mΩ maximum
7.3	High Temperature Exposure	The card shall be mated and exposed to the condition of +85±2℃for 96 hours, less than 25% relative humidity. Recovery time 1~2 hours	Appearance: no damage Contact resistance: Δ=40 mΩ maximum
7.4	Thermal Shock	The card shall be mated and exposed to the following condition for 25 cycles. 1 cycle: a) -55±3℃ for 30 minutes b) +85±2℃ for 30 minutes Transit time shall be within 3 minutes, Recovery time 1~2 hours Per EIA-364-32	Appearance: no damage Contact resistance: Δ=40 mΩ maximum
7.5	Salt Spray Test	The card shall be mated and exposed to the following salt mist conditions. At the completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water, after which the specified measurements shall be performed. NaCl solution: Concentration ： 5±1% Spray time ： 48 hours	Appearance: no damage Contact resistance: Δ=40 mΩ maximum

		Temperature : 35±2°C Per EIA-364-26 condition A	
7.6	SO_2 Gas	The card shall be mated and exposed to 50 ± 5ppm SO2 gas, ambient temperature 40±2℃, relative humidity 75% for 24 hours.	Appearance: no damage Contact resistance: Δ=40 mΩ maximum
7.7	Solderability	Dip solder tails into the molten solder (held at 250±5℃) up to 0.5mm from the tip of tails for 3±0.5 seconds.	Contact solder Pad shall have a Min. 95% solder coverage
7.8	Resistance to Soldering reflow Heat	 Infrared reflow condition TEMPERATURE CONDITION GRAPH (TEMPERATURE ON BOARD PATTERN SIDE)	No damage After 2 times of reflow
7.9	Resistance to Soldering Heat	soldering iron method solder time:10s max solder temperature: 330 ℃ 1mm away from plastic	no damage

8.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage. No Styrofoam shall be used in any packing that comes in direct contact with the connectors.

9.0 Test Sequences : (Sample Group Size: 5pcs)

Group Number	1	2	3	4	5	6	7	8	9	10
Contact Resistance	1,6	1,3,5		1,5,7	1,3,5	1,3	1,3			
Insulation Resistance	2,7			2,8						
Dielectric Withstanding Voltage	3,8			3,9						
Temperature Rise			1							
Insertion force	4,9									
Durability	5									
Vibration		2								
Mechanical Shock		4								
High Relative Humidity Exposure				6						
Low Temperature Exposure					2					
High Temperature Exposure					4					
Thermal Shock				4						
Salt Spray Test						2				
SO2 Gas							2			
Solderability								1		
Resistance to Soldering reflow Heat									1	
Resistance to Soldering Heat										1