PRODUCT SPECIFICATION

Part Number	SIM8065		**Rev**	A		**Date**	18/02/20
Product Description	Nano SIM Card Connector, Push-Push Type, SMT, 6Pin, 1.37mm Profile					**Page**	1
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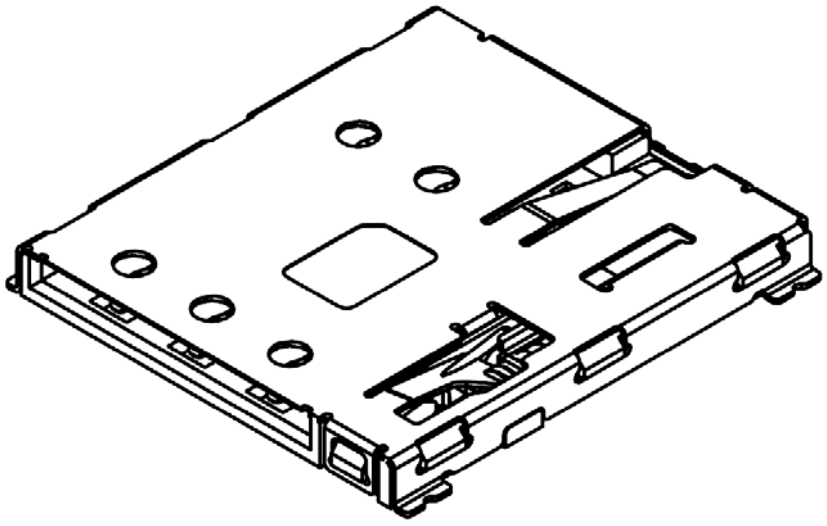

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1.0 SCOPE.

This specification covers performance, tests and quality requirements for the Nano SIM Card Connector SIM8065 (Push-Push Type, SMT, 6 Pin, 1.37mm Profile).

2.0 PRODUCT NAME AND PART NUMBER.

Nano SIM Card Connector, Push-Push Type, SMT, 6 Pin, 1.37mm Profile: SIM8065.

3.0 PRODUCTSHAPE, DIMENSIONS AND MATERIAL.

Please refer to drawings.

4.0 RATINGS.

Current Rating ……. 1A AC/DC Max.

Voltage Rating …… 30V AC/DC

Operating Temperature Range …… -40°C to +85°C

Storage Temperature …… -40°C to +70°C

Storage Humidity…… Relative Humidity: ≤80%

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 at ambient environmental 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.

6.1 Electrical Performance.

Item	Test Condition	Requirement
Contact Resistance	Measure and record contact resistance of mated connector using test current of 10mA max and 20 mV open circuit voltage in accordance with EIA-364-23.	Signal pin: 100mΩ max CD to GND:200mΩ max
Insulation Resistance	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. In accordance with EIA-364-21.	1000 MΩ minimum @100V DC for 1 minute
Dielectric Strength	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. In accordance with EIA-364-20.	No Breakdown

6.2 Mechanical Performance.

Item	**Test Condition**	Requirement
Durability	Mate & Unmate Nano SIM card at vertical direction to the position equal to inserting a 0.67mm thick Nano SIM card for 5000 cycles. In accordance with EIA-364-09.	Signal pin: 100mΩ max CD to GND:200mΩ max Dielectric Strength: No breakdown Insulation Resistance: 1000 MΩ min.
Card Insertion Force	Push the Nano SIM card at a rate of 25.4mm/min. In accordance with EIA-364-13B.	10N Max.
Card Withdrawal Force	Pull the Nano SIM card at a rate of 25.4mm/min. In accordance with EIA-364-13B.	0.5N Min.
Mechanical shock	Subject the part to a 490 m/s2 half sine wave acceleration for 11 ms. Three shocks to be applied in each of the X, Y and Z planes and in both directions. A total of 18 shocks 10mA Max. Applied. In accordance with EIA-364-27.	Appearance: No Damage. Discontinuity: 1.0 μ second Max. Contact Resistance: Signal pin: 100mΩ max CD to GND:200mΩ max
Vibration	Insert SIM card into connector and expose to 10 to 55 to 10 Hz frequency span over 1 minute at a 1.52mm amplitude for a total of 2Hours. Test to be conducted on 3 mutually perpendicular planes. 10mA Max. Applied. In accordance with EIA-364-28.	Appearance: No Damage. Discontinuity: 1.0 μ second Max. Contact Resistance: Signal pin: 100mΩ max CD to GND:200mΩ max

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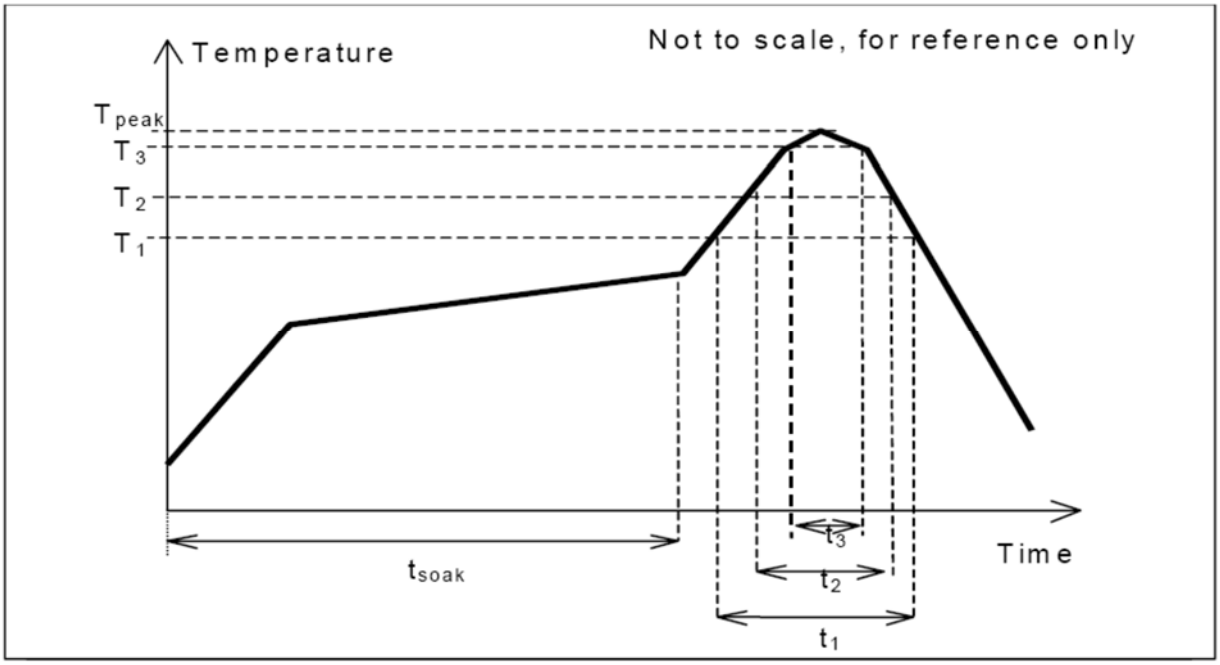
6.3 Environmental Performance and Others.

Item	Test Condition	Requirement
Thermal Shock	The card shall be mated and exposed to the following condition for 10 cycles. 1 cycle) -55±3 for 30 minutes b)+85±2 for 30 minutes transit time shall be within 3 minutes Recovery time 1~2 hours. In accordance with EIA-364-32	No damage Contact Resistance: Signal pin: 100mΩ max CD to GND:200mΩ max
Humidity Test	Mate Connector and expose to temperature of 25~65°C±3, 50~80%RH±3, Ramp times should be 0.5 hour & dwell should be 1 hour, 1 cycle 24H. 10cycles In accordance with EIA-364-31.	No damage Contact Resistance: Signal pin: 100mΩ max CD to GND:200mΩ max
Salt Water Spray	5±1% salt concentration 24 hours 35±2°C In accordance with EIA-364-26.	No rusty Contact Resistance: Signal pin: 100mΩ max CD to GND:200mΩ max
Temperature Life (High)	Subject product to 85±2°C for 96 hours continuously. MIL-STD-202, Method 108.	No damage Contact Resistance: Signal pin: 100mΩ max CD to GND:200mΩ max
Low Temperature	Mate dummy card and exposed to -40 +2°C with 90~95% RH for 96 hours. Upon completion of the exposure period, the test specimens shall be conditions at ambient room conditions for 1 to 2 hours, after which the specified measurement shall be performed. In accordance with EIA 364-59	No damage Contact Resistance: Signal pin: 100mΩ max CD to GND:200mΩ max
Temperature Rise	Mate card and measure the temperature rise of contact, when rated current is passed. In accordance with EIA-364-70 Method 1.	30°C Max
Solderability	Dip solders tails into molten solder, held at a temperature of 250±5°C up to 0.5mm from the tip of the tails for 3±0.5 seconds.	Contact solder pad has a min. 95% solder coverage
Resistance to Reflow Soldering Heat.	Mount connector, place in reflow oven and expose to the temperature profile shown in fig 1.0	No evidence of physical damage or abnormalities adversely affecting performance.

6.4 REFLOW SOLDERING PROFILE

Pb-free reflow profile requirements

Parameter	Reference	Specification
Average temperature gradient in preheating		2.5°C/s
Soak time	tsoak	2-3 minutes
Time above 217°C	t1	60 s
Time above 230°C	t2	50 s
Time above 250°C	t3	5 s
Peak temperature in reflow	Tpeak	255°C (–0/+5°C)
Temperature gradient in cooling		Max -5°C/s



This profile is the minimum requirement for evaluating soldering heat resistance of components. Heat transfer method used for reflow soldering is hot air convection. The actual air temperatures used to achieve the specified profile is higher and largely dependent on the reflow equipment.

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7.0 PRODUCT QUALIFICATION AND TEST SEQUENCE

Test Item	Group										
	A	B	C	D	E	F	G	H	I	J	K
Examination of Product	1,9	1,3	1,3	1,3	1,4	1,6	1,5	1,3	1,5	1,5	1,3
Contact Resistance	2,6					2,5	2,4		2,4	2,4	
Insulation Resistance	3,7										
Dielectric Withstanding Voltage	4,8										
Durability	5										
Temperature Rise		2									
Solderability			2								
Resistance to Soldering Heat				2							
Card Insertion Force					2						
Card Withdrawal Force					3						
Mechanical shock						3					
Vibration						4					
Temperature life (High)							3				
Low Temperature								2			
Thermal Shock									3		
Humidity Test										3	
Salt Water Spray											2

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Revision details

Revision	Information	Page	Release Date
A	Specification Released	-	18/02/2020