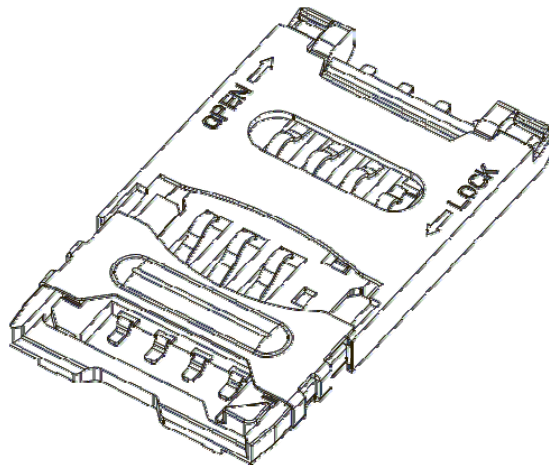


# PRODUCT SPECIFICATION

<b>Part Number</b>	SIM5055	<b>Rev</b>	B	<b>Date</b>	04/04/14		
<b>Product Description</b>	SIM Card Connector, Hinged Type, 6Pin, SMT, 2.5mm Profile, With Card Detection Switch			<b>Page</b>	1		
<b>Doc Number</b>	SIM5055	<b>Prepared</b>	<b>AE</b>	<b>Checked</b>	<b>VJ</b>	<b>Approved</b>	<b>ST</b>



# PRODUCT SPECIFICATION

<b>Part Number</b>	SIM5055	<b>Rev</b>	B	<b>Date</b>	04/04/14
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## 1.0 SCOPE.

This specification covers performance, tests and quality requirements for the SIM Card Connector SIM 5055 (Hinged Type, 6-Pin, SMT, 2.5mm Profile).

## 2.0 PRODUCT NAME AND PART NUMBER.

SIM Card Connector, 6 Pin, Receiver Type: SIM5055.

## 3.0 PRODUCT SHAPE, DIMENSIONS AND MATERIAL.

Please refer to drawings.

## 4.0 RATINGS.

Current rating ..... 1.0 Amp Max  
 Voltage rating ..... 50 Volts DC Max.  
 Operating Temperature Range ..... -40°C to +85°C  
 Storage Temperature ..... -40°C to +85°C

## 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.

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## 6.1 Electrical Performance.

Item	Test Condition	Requirement
Contact Resistance	Insert SIM card into connector, measure and record contact resistance using test a current of 10mA max and 20mV open circuit voltage in accordance with EIA-364-23A.	50 mΩ Max initial 100 mΩ Max after test.
Insulation Resistance	Apply 500Volts DC between adjacent contacts of mated SIM card and connector for one minute in accordance with EIA-364-21C.	100 MΩ minimum / 500 VDC
Dielectric Strength	Insert SIM card into connector and apply 500 VAC for 1 minute between adjacent terminal or ground, in accordance with EIA-364-20A.	No creeping discharge or flash over.

## 6.2 Mechanical Performance.

Item	Test Condition	Requirement
Contact Force	Measure normal force at SIM contact point terminal in the housing	0.6N Min.
Durability	The SIM card should be mated and unmated for 5000 cycles at a rate of 400~600 cycles/ hour in accordance with EIA-364-09.	No evidence of physical damage.  Contact Resistance $\leq 100\text{m}\Omega$ at end of test .
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 15 minutes. Test to be conducted on 3 mutually perpendicular planes. 100mA Max. Applied. In accordance with EIA-364-28.	No evidence of physical damage  Contact Resistance $\leq 100\text{m}\Omega$ Discontinuity $\leq 1 \mu\text{s}$
Mechanical Shock	Apply 1mA to all contacts and subject the part to a 490 m/s <sup>2</sup> 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 and in accordance with EIA-364-27.	No evidence of physical damage  Contact Resistance $\leq 100\text{m}\Omega$ Discontinuity $\leq 1 \mu\text{s}$
Cover Open/Close Force	Apply a force to Open/Close Cover.	2 – 7N

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## 6.3 Environmental Performance and Others.

Item	Test Condition	Requirement
Thermal Shock	Insert SIM card into connector and perform the following thermal cycle :- -55±3°C for 30 minutes, +85±2°C for 30 minutes, Transit time will no longer than 3 minutes Repeat for 5 cycles in accordance with EIA-364-32C.	No evidence of physical damage  Contact Resistance ≤100mΩ
Humidity Test	Insert SIM card into connector and expose to temperature of 40±2°C with 95% RH for 96 hours then place in ambient temperature for 1 to 2 hrs. In accordance with EIA-364-31.	No evidence of physical damage  Contact Resistance ≤100mΩ
Salt Water Spray	Insert SIM card into connector and expose to 35±2°C and 5±1% NaCl (salt condition) for 48hours. Test in accordance with EIA-364-26A.	No evidence of physical damage  Contact Resistance ≤100mΩ
Temperature Life (High)	Insert SIM card into connector and expose to 85±2°C for 96 hours. Recovery time 1-2 hours.	No evidence of physical damage  Contact Resistance ≤100mΩ
Temperature Life (Low)	Insert SIM card into connector and expose to to -40±3°C for 96 hours. Recovery time 1-2 hours.	No evidence of physical damage  Contact Resistance ≤100mΩ
Temperature Rise	Insert SIM card into connector 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 up to a depth of 0.5mm, held at a temperature of 250±5°C for 3±0.5 second.	95% of immersed area must show no voids of pin holes.
Resistance to Hand Soldering Heat	Soldering Iron Method, Solder time 3 Seconds Max. at a temperature of 360°C, with a distance of 1mm away from plastic.	No evidence of physical damage or abnormalities adversely affecting performance.
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 after 2 cycles.

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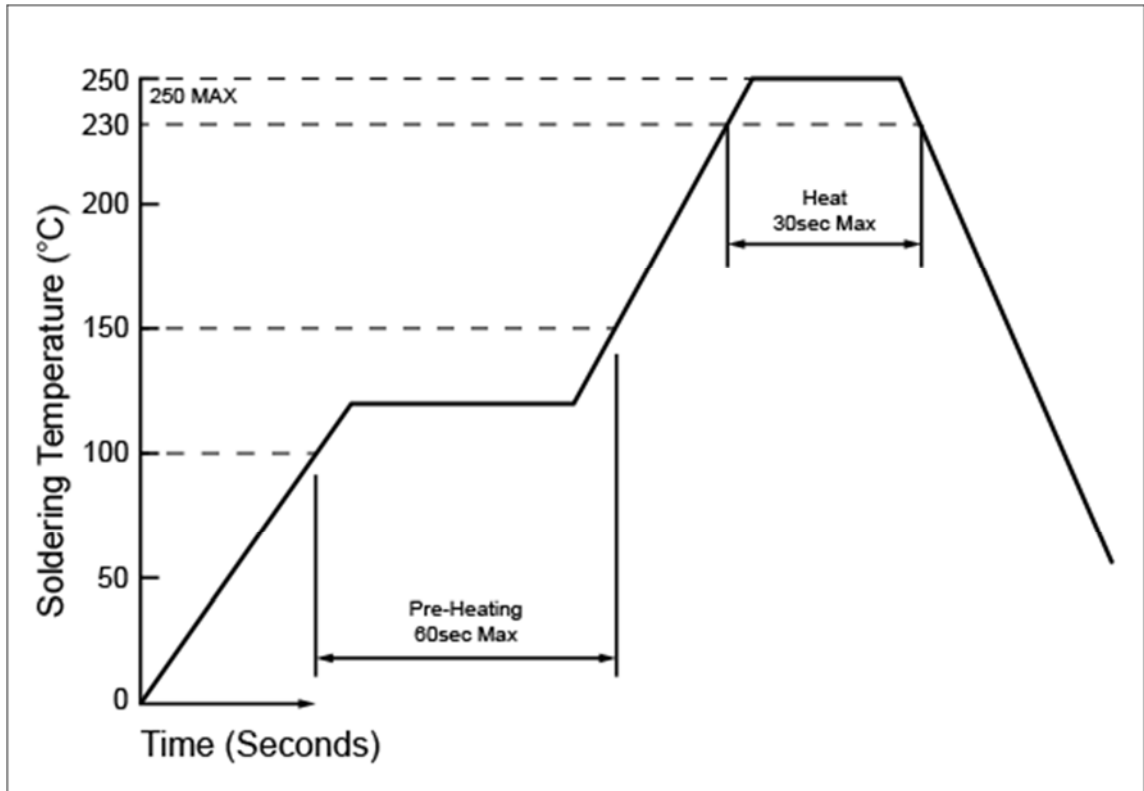


Fig. 1. Recommended Reflow Temp. Profile

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## 7.0 PRODUCT QUALIFICATION AND TEST SEQUENCE

Test Item	Group								
	A	B	C	D	E	F	G	H	I
Examination of Product	1,6	1,5		1,6	1,3	1,9	1,6	1,3	1,3
Contact Resistance	2,5	2,4		2,5		5,13	2,5		
Insulation Resistance						6,14			
Dielectric Withstanding Voltage						7,15			
Contact Force						4,12			
Contact Height						2,10			
Durability						8			
Vibration							3		
Mechanical Shock							4		
Lock/Unlock Force						3,11			
Thermal Shock	3								
Humidity	4								
Salt Water Spray		3							
Temperature Life (High)				3					
Temperature Life (Low)				4					
Temperature Rise			1						
Solderability								2	
Resistance to Reflow Soldering Heat.					2				
Resistance to Hand Soldering Heat.									2
Sample QTY.	5	5	5	5	5	5	5	5	6

**Notes:**

Numbers indicate sequence in which tests are performed.

Precondition samples with 10 cycle's durability.

**SAMPLE SELECTION**

Samples shall be prepared in accordance with applicable manufactures' instructions and shall be randomly selected from current production. Test groups A,B,C,D,E,F &G shall consist of a minimum of five connectors. A minimum of 30 contacts shall be selected and identified.

Unless otherwise specified, these contacts shall be used for all measurements.

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