



# PRODUCT SPECIFICATION

## TITLE

### 1.0 SCOPE

This Product Specification covers the 2.54 mm pitch Mega SIM card connector.

### 2.0 PRODUCT DESCRIPTION

#### 2.1 PRODUCT NAME AND SERIES NUMBER (S)

Scalable SIM card connector 47494 series

### 3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

See sales drawings and other sections of this specification for the relevant reference documents. In cases where the specification differs from the drawings, the drawings take precedence.

### 4.0 RATINGS

#### 4.1 VOLTAGE

MAX 15V DC

#### 4.2 CURRENT

MAX 0.5A per contact

#### 4.3 TEMPERATURE

Operating: - 40°C to + 85°C

Storage: - 40°C to + 85°C

### 5.0 Mechanical interface

#### 5.1 Card interface:

SIM card interface: GSM 11.11 specification.

#### 5.2 PWB interface

Plating on PWB pads: OSP plated copper.

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<b>DOCUMENT NUMBER:</b> PS-47494-001	<b>WRITTEN BY:</b> CYZHU	<b>CHECKED BY:</b> XIXU	<b>APPROVED BY:</b> JNCHEN	<b>FILE NAME</b>



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## 6.0 PERFORMANCE

### 6.1 ELECTRICAL REQUIREMENTS

TEST REF.	DESCRIPTION	Test Condition	Requirement
6.1	Contact Resistance	Mate connectors with dry circuit (20mV, 100mA Max) at minimum deflection Per EIA-364-23	50 milliohms Maximum [Initial] Value includes bulk resistance of terminal.
6.2	Insulation Resistance	Unmated connectors: apply a voltage of 500 VDC between adjacent contact for 1 minute Per EIA-364-21	1000 Mega ohms Minimum
6.3	Dielectric Withstanding Voltage	Unmated connectors: apply a voltage of 500 VAC for 1 minute between adjacent contact. Per EIA-364-20	No voltage breakdown;
6.4	Temperature Rise	Mated connectors: measure the temperature rise at the rated current 0.5A after: 96 hours Per EIA-364-70 method 1	Temperature rise: +30°C MAXIMUM

## 7 ENVIRONMENTAL PERFORMANCE

TEST REF.	ITEM	TEST CONDITION	REQUIREMENTS
7.1	High Relative Humidity Exposure	Upper air temp 25-55°C and 90-100%RH for 6 cycles of 24hrs. Cycle is: temp change 25°C->55°C in 3 hours; then maintain at 55°C for 9hours Temp change: 55°C->25°C in 3 hours; then maintain at 25°C for 9hours. Recovery at 25°C and 75%RH for 2 hours.	No mechanical damage. No change to performance Contact resistance 100 milliohms MAXIMUM Insulation resistance in spec.
7.2	Low Temperature Exposure	At -40°C for 96 hours Recovery: 2hours	No mechanical damage. No change to performance of connector. Contact resistance 100 milliohms MAXIMUM

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7.3	High Temperature Exposure	At +85°C for 96 hours Recovery: 2hours	No mechanical damage. No change to performance of connector. Contact resistance 100 milliohms MAXIMUM
7.4	Thermal Shock	50 cycle at Ta=-55°C for 0.5 hours, then change of temp=25°C Maximum 5min, then Tb=+85°C for 0.5 hours, then cool to ambient Recovery: 2hours at ambient atmosphere Per EIA-364-32	No mechanical damage. No change to performance of connector. Contact resistance 100 milliohms MAXIMUM
7.5	Salt Spray IEC60068-2-11 Test Ka	48 hours spray, at temp 35+/-2°C, R/H 90-95%, Salt NaCl mist 5% after test wash parts and return to room ambient for 1-2hours	No mechanical damage. No change to performance of connector. Contact resistance 100 milliohms
7.6	Solderability	Dip solder tails into the molten solder (held at 250 ± 5 °C) up to 0.5mm from the tip of tails for 3 ± 0.5 seconds.	Contact solder Pad shall have a Min. 95% solder coverage
7.7	Resistance to Soldering reflow Heat	Infrared reflow condition  TEMPERATURE CONDITION GRAPH (TEMPERATURE ON BOARD PATTERN SIDE)	No damage After 2 times of reflow

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## 8 MECHANICAL PERFORMANCE

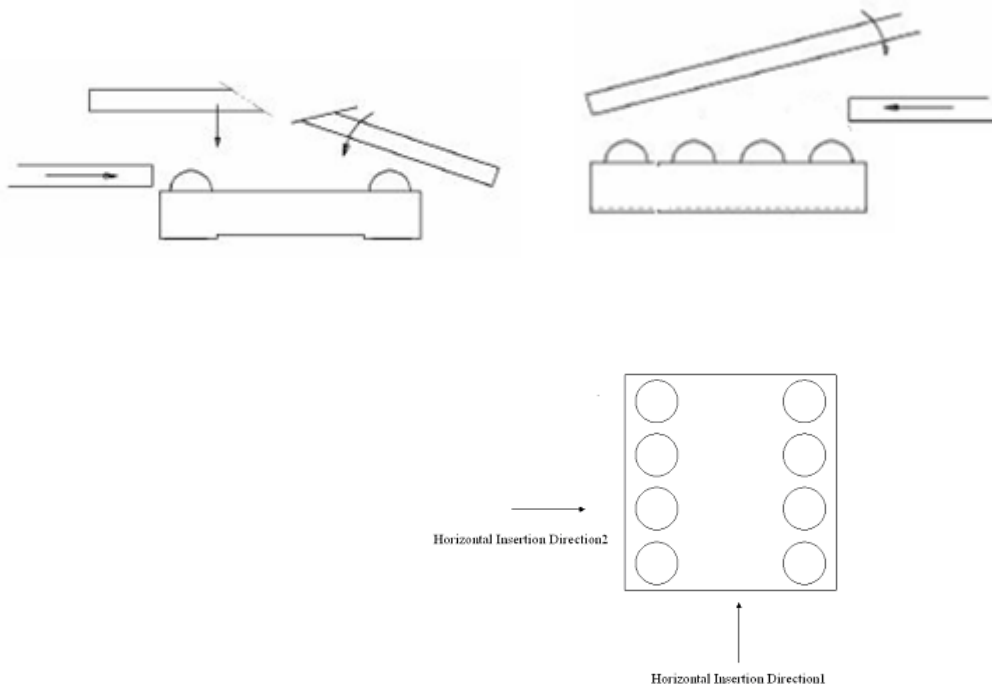
TEST REF.	DESCRIPTION	Test Condition	Requirement
8.1	Terminal Normal force	Measure normal force: Displaced to 0.20mm above the housing surface at 2.54mm/min.	0.5~0.7N
8.2	Terminal Retention Force	Axial pullout force on the terminal in the housing at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	3 N MINIMUM per contact
8.3	Durability (Horizontal Direction 1)	Mate connectors at 400-600 cycles/hour to 500 cycles. Horizontal insertion for maximum deflection case.	No mechanical damage. Contact resistance 100 milliohms MAX Normal force within spec.
8.4	Durability (Horizontal Direction 2)	Mate connectors at 400-600 cycles/hour to 500 cycles. Horizontal insertion for maximum deflection case.	No mechanical damage. Contact resistance 100 milliohms MAX Normal force within spec.
8.5	Durability (Vertical)	Mate connectors at 2.54cm/minute to 500cycles.Vertical insertion for maximum deflection case	Normal force within spec. No mechanical damage. Contact resistance 100 milliohms MAX
8.5	Mechanical Shock	Pulse shape=half sine Peak acceleration=490m/s <sup>2</sup> (50G) Duration of pulse=11ms Apply 3 successive shocks in each direction along the 3 mutually perpendicular axes Per EIA-364-27B	No mechanical damage. No change to performance of connector. Contact resistance 100 milliohms Maximum Discontinuity < 1 microsecond
8.6	Vibration	Frequency: 10~100 HZ, 0.0132 g <sup>2</sup> /Hz; Frequency: 100~500 Hz, -3dB/Oct. Applied for 1 hours in each 3 mutually perpendicular axes	No mechanical damage. No change to performance of connector. Contact resistance 100 milliohms Maximum Discontinuity < 1 microsecond

Card insertion directions

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## 8.0 PACKAGING

See packaging specification and pack assembly drawing. Parts shall be packaged to protect against damage during handling, transit and storage.

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<small>TEMPLATE FILENAME: PRODUCT_SPEC[SIZE_A4](V.1).DOC</small>					



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## 9.0 TEST SEQUENCES FOR MS DUO : ( SAMPLE GROUP SIZE: 5PCS)

GROUP NUMBER	1	2	3	4	5	6	7
Contact resistance	1,4	2,5	2,5		1,6	1,3	1,4
Insulation resistance					2,7		
Dielectric withstanding voltage					3,8		
Temperature Rise							
High Relative Humidity Exposure					5		
Low Temperature Exposure							2
High Temperature Exposure							3
Thermal Shock					4		
Salt Spray Test						2	
Solderability							
Resistance to Soldering reflow Heat							
Normal force		1,4	1,4				
Terminal Retention Force				1			
Durability (Horizontal Direction 1&2)			3				
Durability (Vertical)		3					
Mechanical Shock	2						
Vibration	3						

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