PRODUCT SPECIFICATION

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REVISION:	ECR/ECN INFORMATION:		PRODUCT NO	SCM13 SERIES	SHEET No
A	EC No: / DATE:	NEW SPEC. 2016/11/22	PRODUCT NAME	2.54mm PITCH HINGED SIM CARD READER	1 of 5

DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
PS-SCM-0017	LINDA	JERRY.TUNG	KIMI.HSU

PRODUCT SPECIFICATION

1.0 SCOPE

This specification defines The performance for the 2.54mm HINGED SIM Card Connector

2.0 PRODUCT DESCRIPTION

The SIM connector consists of a plastic housing, fitted with 6 terminals and top shell.
For materials, plating & markings, see product drawing SCM13 series

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

See product drawing (according to the newest revised edition) and other sections of this specification for the relevant reference documents and specifications. In cases where the specification differs from the product drawings, the product drawings take precedence.

4.0 RATINGS

4.1	Current	10mA Max. per contact
4.2	Voltage	5V per contact (MAX.)
4.3	Operating temperature range	-40°C~ +85°C .
4.4	Storage temperature range	-40°C~ +85°C .

5.0 ELECTRICAL PERFORMANCE

Test Ref.	Item	Test Condition	Requirements
5.1	**Contact Resistance (LLCR)**	Mate connector with circuit of 20mV, 100mA Max. EIA 364-23;	50 milliohms Max(Initial)
5.2	**Insulation Resistance**	Unmate & mate connectors: apply a voltage of 500 VDC between adjacent terminals and between terminals to ground for 1 minute. EIA 364-21	100 Mega Ohm Min.
5.3	**Dielectric Strength**	Unmate connector with 1000 VAC EIA 364-20	No breakdown;

6.0 MECHANICAL PERFORMANCE

Test Ref.	Item	Test Condition	Requirements
6.1	Durability	Mate contacts 3000 cycles.One cycles sonsists of closing locking,unlocking and opening the reader lid with the data card in place EIA 364-09C	Appearance - no damage. Without degradation of electrical characteristics
6.2	Normal Force	Measure normal force at SIM contact point terminal in housing as per Appendix 1. EIA-364-04	0.2 N at MIN. deflection 0.5 N at MAX. deflection
6.3	Terminal vs. Housing retention force	Apply an axial load to terminal assembled in the housing at a speed of 25-50 mm/MIN..	Retention force 0.8N MIN.

7.0 ENVIRONMENTAL PERFORMANCE

Test Ref.	Item	Test Condition	Requirements
7.1	Salt Spray	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 2hours EIA 364-26A	Appearance - no damage. DR=10MΩ the mechanical and other electrical characteristics
7.2	Cyclic Humidity	Precondition at 50 °C for 1 hour then place in chamber. Cycle the parts between 25 °C±3 °C at 80%±3%RH and 65°C ±3°C at 50%±3%RH. Ramp time should be 0.5 hour and dwell time should be 1.0 hour. Dwell time start when the temperature and humidity have stabilized within the specified levels. Perform 24 cycles. Allow the parts to dry at ambient room temperature for 4 hours prior to measurements. EIA 364-31	Appearance - no damage. DR=10 mΩ Still meet the mechanical and other electrical characteristics
7.3	Thermal Shock	5 cycles, each consisting of 30 min dwell @ -55°C, 5 min Maximum transition to 105°C, 30 min dwell @105°C, then 5 min Maximum transition to -55°C Recovery: 2hours at ambient atmosphere	Appearance - no damage. Still meet the mechanical and other electrical characteristics

7.4	**Random Vibration**	Random Vibration 3 mutually perpend. planes 15g peak, 10-2000Hz ,0.4g2/Hz 20 min per plane	Appearance - no damage<25msecond discontinuity Still meet the mechanical and electrical characteristics
7.5	**Mechanical Shock**	100 g's 6ms duration 1/2sine pulse 3 shocks in each direction,3 mutually perpend planes 18 shocks total	Appearance - no damage <25msecond discontinuity Still meet the mechanical and electrical characteristics
7.6	**Temperature life (steady state)**	+85°C for 120 hours Recovery: 2hours	Appearance - no damage. DR=10MΩ Still meet the mechanical and other electrical characteristics
7.7	**Solderability test**	Dip solder tails into the molten solder(held at 245±5˚C for 3±0.5 sec. EIA 364-52	Contact solder tails shall have a min. 95% solder coverage

8.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage.

9.0 RECOMMENDED REFLOW PROFILE

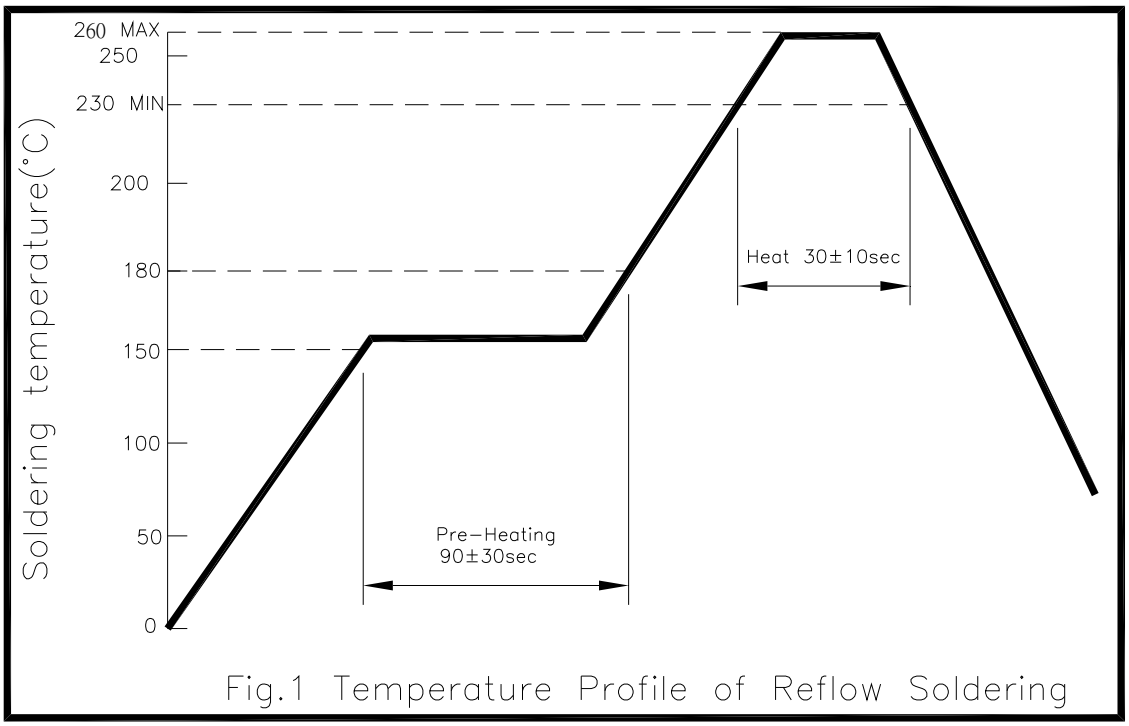
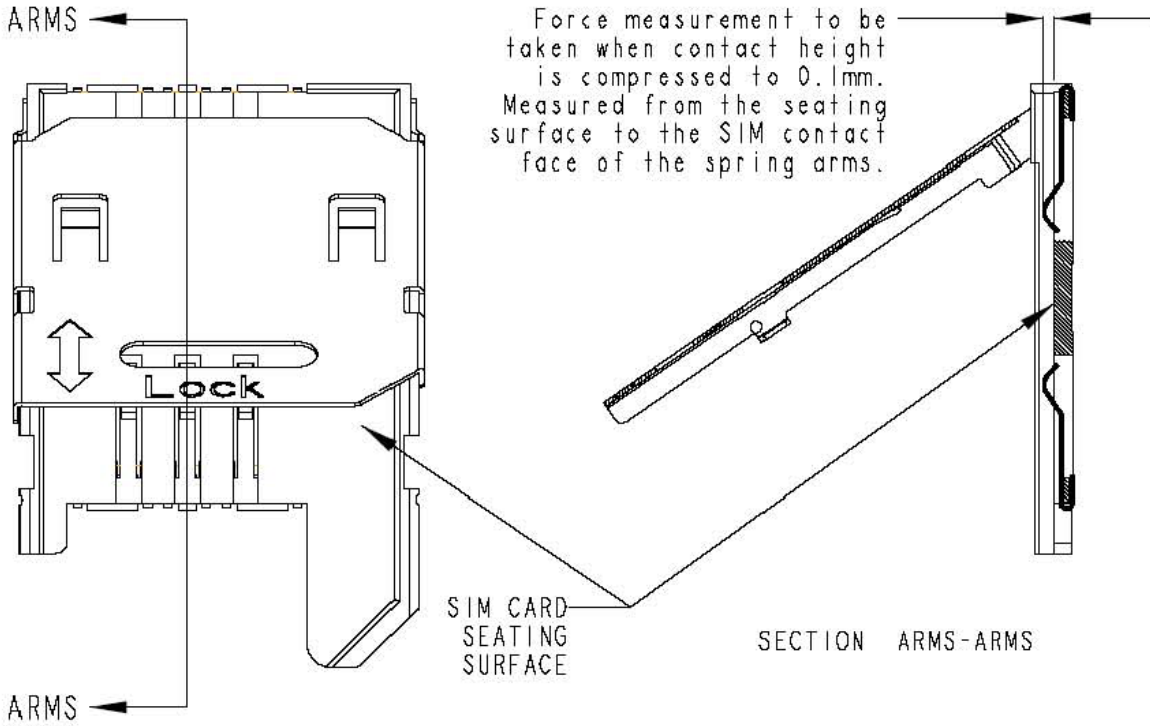


Fig.1 Temperature Profile of Reflow Soldering

10.0 TEST GROUP

Test Group					
Test Items	Test Sequence				
	A	B	C	D	E
Contact Resistance	*1,4*	*2,4,7,9*	*1,3*	*2,4*	
Insulation Resistance					
Dielectric Strength					
Durability		*3*			
Normal Force	*5*	*1,5*		*1,5*	
Terminal vs. Housing retention force					*1*
Salt Spray			*2*		
Cyclic Humidity		*8*			
Thermal Shock		*6*			
Random Vibration	*3*				
Mechanical Shock	*2*				
Temperature life				*3*	
Solderability Test					*1*
Sample(Pcs)	3	3	3	3	3

Appendix 1



AcRoN 文件制訂、修訂、廢止申請單

A

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申請部門	業務部	申請人	Sunny	日 期	11/23
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☑制訂 ☐修訂 ☐廢止原因說明

之前未建立Spec.

相關單位審查

Andrea 11/23 2016

Edmond 11/23

Frank 11/23

Tian 11/23

核准