立威科技股份有限公司 Attend Technology Inc.
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SPECIFICATION AND PERFORMANCE

Series	115V	File	115V-Spec	Date	2019/08/13

Scope:

This specification covers the requirements for product performance, test methods and quality assurance provisions of below

P/N	Descriptions
115V-AD00	Nano SIM Socket, Hinge Type, 6Pin 10u" Reel

Performance and Descriptions:

The product is designed to meet the electrical, mechanical and environmental performance requirements specification. Unless otherwise specified, all tests are performed at ambient environmental conditions.

RoHS:

All material in according with the RoHS environment related substances list controlled.

MATERIALS		
NO.	PART NAME	DESCRIPTION
1	Insulator	LCP S475, UL94V0, black
2	Contact	Copper alloy C5210, 0.15t, Gold plating on contact area (see P/N description), Gold flash on solder area, under plating 50u" Min. Nickel
3	Cover	Stainless Steel SUS304, 0.20t
4	Ground	Stainless Steel SUS304, 0.20t, Gold flash on solder area, under plating 50u" Min. Nickel

RATING	
Rated Voltage	10V
Rated Current	0.5A
Operating Temperature	-40°C to +105°C
Storage Temperature	-40°C to +105°C
Durability	100 cycles

ELECTRICAL		
Item	Requirement	Test Condition
Low Level Contact Resistance	Initial 50mΩ Max. After test 100mΩ Max.	Solder connectors to PCB and insert dummy card into shell, measure by applying closed circuit current of 10mA maximum at open circuit voltage of 20mV (max). (Per EIA-364-23)

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Dielectric Withstanding Voltage	No Broken	500V AC (rms.) between two adjacent for 1 minute. (Trip current:1mA) (Per EIA-364-20)
Insulation Resistance	1000MΩ Min.	Apply 500V DC between adjacent contacts, or contact and ground. (EIA-364-21)

MECHANICAL		
Item	Requirement	Test Condition
Contact Normal Force	0.3N Min./Pin	Solder connectors to PCB, unlock the shell and open it to full level, measure contact normal force at the speed rate of 1 mm/min.
Terminal Durability	5000 cycles, Final Contact Normal Force 0.3N min.	Solder connectors to PCB, insert the card into the shell and close the shell, press the shell to 5000 times, press rate 10 times/min. max.
Open & Lock Force	1.5N~20N with card	Solder connectors to PCB, parallel to push on the shell surface for open & lock
Open & Lock Durability	100 Cycles, Final Lock Force: 1.5N Min. with card	Solder connectors to PCB, insert the card into the shell and close the shell. Operate loop of shell, 1)unlock 2) open it to full level 3)close it 4) press and lock

ENVIRONMENTAL		
Item	Requirement	Test Condition
Vibration	Discontinuity < 1 ms	EN60721-3-5 Class 5M3 Random vibration Test (3.38Grms) 10~500Hz, 3.38Grms, 1hr/per axis Test PSD: 10~200HZ: $3m^2/S^3$, 200~500Hz, $1m^2/S^3$ or EIA-364-28, Condition II
Shock	Discontinuity < 1 ms	EN60721-3-5 Class 5M3 Shock Test-Level II (100G/6ms) or EIA-364-27, Condition C
Temperature Life	Contact resistance 100 mΩ Max.	105±2°C Test procedure method B: with electrical load for connectors, duration 96 hours (EIA-364-17, method B, condition 4)
Cold Resistance	Contact resistance 100 mΩ Max.	-40°C/96Hr (EIA-364-59)
Humidity	Meets ELECTRICAL requirements	Temperature : 70±2°C Relative humidity : 90~95% Duration : 96 hours
Salt Water Spray	No oxidation Contact resistance 100 mΩ Max.	Temperature : 35±2°C Salt water density : 5±1% Duration : 48 hours

SOLDER ABILITY

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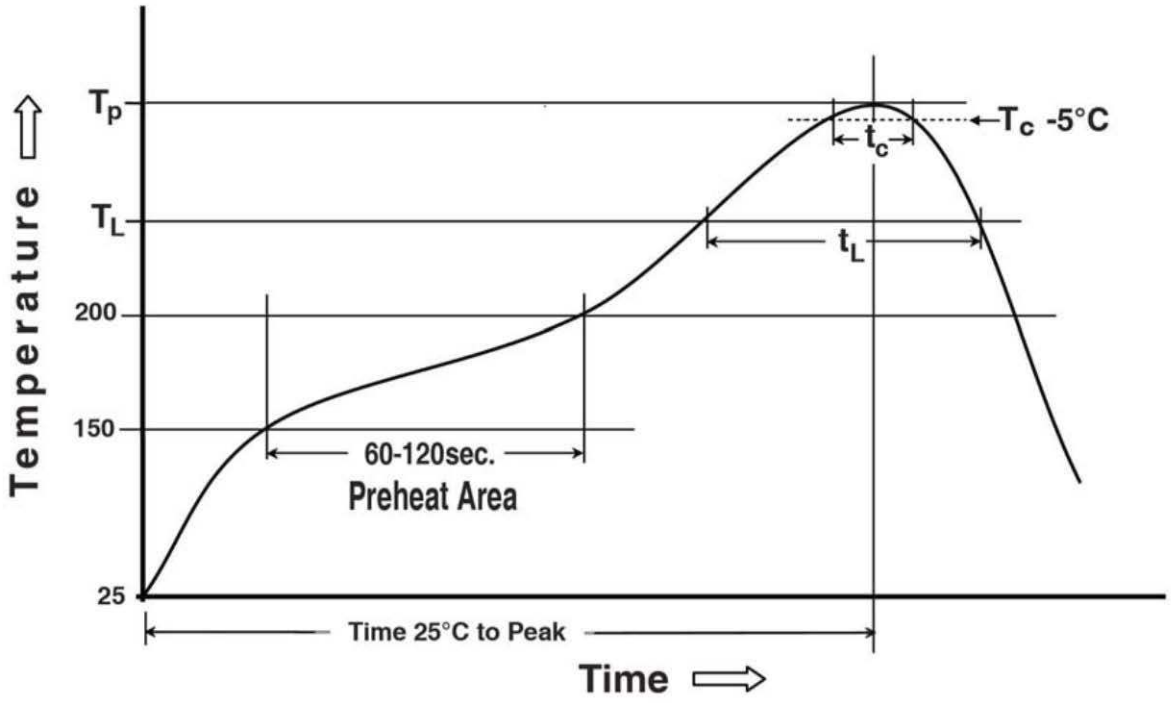
Item	Requirement	Test Condition
Solder ability	95% of immersed area must show no voids, pin holes	The termination should be 95% covered with new continuous solder coating Solder temperature: 255±5°C Test time: 5±1 seconds, (Per EIA-364-71)
Resistance to soldering heat	No melting, cracks or functional damage allowed	Preheating temperature: 150 ~ 200°C, 60~120 seconds Liquidus temperature (TL): 217°C, 60~150 seconds Peak temperature: 260°C Time within 5 °C of peak temperature (Tc): 255°C, 30seconds

Reflow Profile



Preheating temperature: 150 ~ 200°C, 60~120 seconds
Liquidus temperature (TL): 217°C, 60~150 seconds
Peak temperature: 260°C
Time within 5 °C of peak temperature (Tc): 255°C, 30seconds

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Test Group & Sequence:

NO.	TEST ITEM	TEST GROUP & SEQUENCE								
		A	B	C	D	E	F	G	H	I
1	Examination of Product	1,3,9	1,3,7	1,3,7	1,3,7	1,3,7	1,3,7	1,3,9	1,3	1,3
2	Low Level Contact Resistance	4,8		4,6	4,6	4,6	4,6			
3	Dielectric Withstanding Voltage							4,7		
4	Insulation Resistance							5,8		
5	Contact Normal Force	5,7								
6	Terminal Durability	6								
7	Cover Open & Lock Force		4,6							
8	Cover Open & Lock Durability		5							
9	Vibration			5						
10	Mechanical Shock				5					
11	Temperature Life					5				
12	Cold Resistance						5			
13	Humidity							6		
14	Salt Water Spray								2	
15	Solder Ability									2
16	Reflow Soldering Heat Resistance	2	2	2	2	2	2	2		
	Quantities of Samples	4	4	4	4	4	4	4	4	4

Test Results:

Group A

No.	Test item	Sample 1	Sample 2	Sample 3	Sample 4
1	Examination of Product	OK	OK	OK	OK
2	Reflow Soldering Heat Resistance	No damage	No damage	No damage	No damage
3	Examination of Product	OK	OK	OK	OK
4	Low Level Contact Resistance	8.7~9Ω	8.5~9.5Ω	8.8~9.2Ω	8.4~8.8Ω
5	Contact Normal Force	1.17~1.36N	1.22~1.29N	1.22~1.28N	1.19~1.26N
6	Terminal Durability	No damage	No damage	No damage	No damage
7	Contact Normal Force	1.08~1.2N	1.1~1.15N	1.1~1.15N	1.07~1.15N
8	Low Level Contact Resistance	11.4~11.8Ω	11.2~12Ω	11.8~12.1Ω	11.6~11.7Ω
9	Examination of Product	OK	OK	OK	OK

Group B

No.	Test item	Sample 1	Sample 2	Sample 3	Sample 4
1	Examination of Product	OK	OK	OK	OK
2	Reflow Soldering Heat Resistance	No damage	No damage	No damage	No damage
3	Examination of Product	OK	OK	OK	OK
4	Cover Open & Lock Force	Open 5.8N	Open 5.6N	Open 5.7N	Open 5.7N

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		Lock 4.7N	Lock 4.3N	Lock 4.2N	Lock 4.3N
5	Cover Open & Lock Durability	No damage	No damage	No damage	No damage
6	Cover Open & Lock Force	Open 5N Lock 4.5N	Open 4.4N Lock 4.1N	Open 4.5N Lock 4.0N	Open 4.7N Lock 4.2N
7	Examination of Product	OK	OK	OK	OK

Group C

No.	Test item	Sample 1	Sample 2	Sample 3	Sample 4
1	Examination of Product	OK	OK	OK	OK
2	Reflow Soldering Heat Resistance	No damage	No damage	No damage	No damage
3	Examination of Product	OK	OK	OK	OK
4	Low Level Contact Resistance	C1C5: 11.7Ω C2C6: 11.42Ω C3C7: 20.16Ω	C1C5: 14.79Ω C2C6: 12.93Ω C3C7: 11.4Ω	C1C5: 20.43Ω C2C6: 18.81Ω C3C7: 16.94Ω	C1C5: 18.17Ω C2C6: 16.86Ω C3C7: 9.37Ω
5	Vibration	Pass	Pass	Pass	Pass
6	Low Level Contact Resistance	C1C5: 12.9Ω C2C6: 9.79Ω C3C7: 10.31Ω	C1C5: 18.86Ω C2C6: 16.7Ω C3C7: 21.04Ω	C1C5: 16.08Ω C2C6: 16.53Ω C3C7: 11.18Ω	C1C5: 29.6Ω C2C6: 15.71Ω C3C7: 13.02Ω
7	Examination of Product	OK	OK	OK	OK

Group D

No.	Test item	Sample 1	Sample 2	Sample 3	Sample 4
1	Examination of Product	OK	OK	OK	OK
2	Reflow Soldering Heat Resistance	No damage	No damage	No damage	No damage
3	Examination of Product	OK	OK	OK	OK
4	Low Level Contact Resistance	C1C5: 21.15Ω C2C6: 18.85Ω C3C7: 10.89Ω	C1C5: 9.5Ω C2C6: 17.56Ω C3C7: 23.74Ω	C1C5: 12.75Ω C2C6: 12.73Ω C3C7: 17.46Ω	C1C5: 21.37Ω C2C6: 18.12Ω C3C7: 14.75Ω
5	Mechanical Shock	Pass	Pass	Pass	Pass
6	Low Level Contact Resistance	C1C5: 5.09Ω C2C6: 21.3Ω C3C7: 11.28Ω	C1C5: 16.74Ω C2C6: 15.4Ω C3C7: 13.68Ω	C1C5: 10.53Ω C2C6: 13.83Ω C3C7: 14.71Ω	C1C5: 9.66Ω C2C6: 11.35Ω C3C7: 7.54Ω
7	Examination of Product	OK	OK	OK	OK

Group E

No.	Test item	Sample 1	Sample 2	Sample 3	Sample 4
1	Examination of Product	OK	OK	OK	OK
2	Reflow Soldering Heat Resistance	No damage	No damage	No damage	No damage
3	Examination of Product	OK	OK	OK	OK
4	Low Level Contact Resistance	C7-C3: 21Ω	C7-C3: 18.24Ω	C7-C3: 19.64Ω	C7-C3: 20.45Ω
		C6-C2: 18.83Ω	C6-C2: 17.23Ω	C6-C2: 21.61Ω	C6-C2: 18.76Ω
		C5-C1: 19.13Ω	C5-C1: 18.35Ω	C5-C1: 21.01Ω	C5-C1: 18.67Ω
		GND: 35.7Ω	GND: 36.03Ω	GND: 36.59Ω	GND: 35.38Ω
5	Temperature Life	Pass	Pass	Pass	Pass
6	Low Level Contact Resistance	C7-C3: 18.9Ω	C7-C3: 18.6Ω	C7-C3: 20.8Ω	C7-C3: 27.89Ω
		C6-C2: 17.12Ω	C6-C2: 17.48Ω	C6-C2: 22.32Ω	C6-C2: 23.84Ω
		C5-C1: 17.37Ω	C5-C1: 18.47Ω	C5-C1: 21.42Ω	C5-C1: 21.69Ω
		GND: 35.9Ω	GND: 35.94Ω	GND: 37.41Ω	GND: 37.24Ω
7	Examination of Product	OK	OK	OK	OK

Group F

No.	Test item	Sample 1	Sample 2	Sample 3	Sample 4
1	Examination of Product	OK	OK	OK	OK
2	Reflow Soldering Heat Resistance	No damage	No damage	No damage	No damage
3	Examination of Product	OK	OK	OK	OK

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4	Low Level Contact Resistance	C7-C3: 17.81Ω	C7-C3: 19.44Ω	C7-C3: 18.72Ω	C7-C3: 18.62Ω
		C6-C2: 17.51Ω	C6-C2: 18.45Ω	C6-C2: 21.79Ω	C6-C2: 19.41Ω
		C5-C1: 16.82Ω	C5-C1: 18.62Ω	C5-C1: 20.89Ω	C5-C1: 17.92Ω
		GND: 36.15Ω	GND: 35.24Ω	GND: 35.54Ω	GND: 35.25Ω
5	Cold Resistance	Pass	Pass	Pass	Pass
6	Low Level Contact Resistance	C7-C3: 24.71Ω	C7-C3: 19.2Ω	C7-C3: 22.36Ω	C7-C3: 19Ω
		C6-C2: 18.74Ω	C6-C2: 18.55Ω	C6-C2: 26.69Ω	C6-C2: 19.1Ω
		C5-C1: 20.44Ω	C5-C1: 18.41Ω	C5-C1: 35.92Ω	C5-C1: 19.03Ω
		GND: 36.76Ω	GND: 37.08Ω	GND: 35.89Ω	GND: 36.49Ω
7	Examination of Product	OK	OK	OK	OK

Group G

No.	Test item	Sample 1	Sample 2	Sample 3	Sample 4
1	Examination of Product	OK	OK	OK	OK
2	Reflow Soldering Heat Resistance	No damage	No damage	No damage	No damage
3	Examination of Product	OK	OK	OK	OK
4	Dielectric Withstanding Voltage	No breakdown of flicker in the sample	No breakdown of flicker in the sample	No breakdown of flicker in the sample	No breakdown of flicker in the sample
5	Insulation Resistance	> 50GΩ	> 50GΩ	> 50GΩ	> 50GΩ
6	Humidity	Pass	Pass	Pass	Pass
7	Dielectric Withstanding Voltage	No breakdown of flicker in the sample	No breakdown of flicker in the sample	No breakdown of flicker in the sample	No breakdown of flicker in the sample
8	Insulation Resistance	> 8GΩ	> 8GΩ	> 8GΩ	> 8GΩ
9	Examination of Product	OK	OK	OK	OK

Group H

No.	Test item	Sample 1	Sample 2	Sample 3	Sample 4
1	Examination of Product	OK	OK	OK	OK
2	Salt Water Spray	No oxidation & damage	No oxidation & damage	No oxidation & damage	No oxidation & damage
3	Examination of Product	OK	OK	OK	OK

Group I

No.	Test item	Sample 1	Sample 2	Sample 3	Sample 4
1	Examination of Product	OK	OK	OK	OK
2	Solder Ability	> 95% covered	> 95% covered	> 95% covered	> 95% covered
3	Examination of Product	OK	OK	OK	OK