立威科技股份有限公司 Attend Technology Inc.
新北市汐止區新台五路一段81號10樓之六
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SPECIFICATION AND PERFORMANCE

Series	115S-BS00	File	115S-BS00_SPEC_2	Date	2021/04/21

Scope:

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

P/N	Description
115S-BS00	Nano SIM Socket, Dual Card Tray Eject Type, 30u"
115S-BT02	Nano SIM Tray, Dual Card, SUS316, Natural color, 16.9mm, Reel, with card clip

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 E471i, UL94V-0, Black
2	CONTACT	Phosphor Bronze C7025-TM03 0.15t, contact area: 30u" Gold plating, solder area: Gold flash, under plating 50u" MIN. Nickel
3	SHELL	Stainless Steel SUS304 0.2t, solder area: Gold flash, under plating 12u" MIN. Nickel
4	PUSH BAR	Stainless Steel SUS304 0.25t
5	CAM	Stainless Steel SUS304 0.4t

RATING	
Current Rating	0.5A max.
Voltage Rating	10VAC/DC
Operating Temperature	-40°C to +105°C
Storage Temperature	-40°C to +105°C
Durability	2,000 cycles

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ELECTRICAL

Item	Requirement	Test Condition
Contact Resistance	Initial: 50 mΩ (Max) After test: 30 mΩ Max change	Solder connectors on PCB and mate them together, measure by applying closed circuit current of 10mA maximum at open circuit voltage of 20mV (max). (Per EIA-364-23)
Insulation Resistance	Initial: 1,000 MΩ (Min).	Apply 500V DC between adjacent contacts, or contact and ground. (Per EIA-364-21)
Dielectric Withstanding Voltage	No breakdown	500V AC (rms.) between two adjacent for 1 minute. (Trip current:1mA) (Per EIA-364-20)

MECHANICAL

Item	Requirement	Test Condition
Tray Insertion Force	10 N Max. (1.0Kgf Max)	Push the Tray at the speed rate of 25±3 mm / minute.
Removal Force	3N Min. (0.3Kgf Min)	Push the Tray at the speed rate of 25±3 mm / minute.
Eject-Bar Push Force	4N~15N (0.4 Kgf~1.5 Kgf)	Push the Tray at the speed rate of 25±3 mm / minute.
Contact Normal Force	0.20N Min./PIN (0.02kgf Min)	Measure contact normal force at the speed rate of 25±3 mm /minute. (Nano SIM card 0.60t)
Durability	Contact Resistance: 30mΩ(Max) change No Damage.	Insertion and extraction are repeated 2,000 cycles (Tray) at the speed rate of 4 - 10 cycles / minute by hand.

ENVIRONMENTAL

Item	Requirement	Test Condition
Vibration	Finish 1. No electrical discontinuity more than 1μs. 2. No Damage 3. Contact Resistance: 30mΩ change max.	Mate card and subjected to the Following vibration conditions, for a Period of 2 hours in each of 3 mutually perpendicular axes, with Passing DC 1mA during the test. Amplitude:1.52mm P-P or 19.6m/s2{2G} Frequency:10-55-10Hz Shall be traversed in 1 minute. (Per EIA-364-28)

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<table>
<tr><td>Mechanical Shock</td><td>Finish:
1. No electrical discontinuity more than 1μs.
2. No Damage
3. Contact Resistance: 30mΩ(Max) change</td><td>Mate card and subjected to the following shock conditions.
3 Mutually perpendicular axis, passing DC 1mA current during the test.
(Total of 18 shocks)
Test pulse: Half Sine
Peak value:490m/s²{50G}
Duration:11ms
(Per EIA-364-27)</td></tr>
<tr><td>Thermal Shock</td><td>1 Contact Resistance: 30mΩ(Max) change
2 Insulation Resistance: 100MΩ(Min)</td><td><table><tr><th>Stage</th><th>Temp. (°C)</th><th>Time (Minute)</th></tr><tr><td>t1</td><td>-40</td><td>30</td></tr><tr><td>t2</td><td>-40~105</td><td>3</td></tr><tr><td>t3</td><td>105</td><td>30</td></tr><tr><td>t4</td><td>105~-40</td><td>3</td></tr></table>Test time: 5 cycles
(EIA-364-32D)</td></tr>
<tr><td>High Temperature Life</td><td>1 Contact Resistance: 30mΩ(Max) change
2 Insulation Resistance: 100MΩ(Min)</td><td>Temperature: 105±2°C
Test time: 96hour
(EIA-364-17B)</td></tr>
<tr><td>Cold Resistance</td><td>1 Contact Resistance: 30mΩ(Max) change
2 Insulation Resistance: 100MΩ(Min)</td><td>Temperature: -40±2°C
Test time: 96hours
(Per EIA-364-59A)</td></tr>
<tr><td>Humidity</td><td>1 Contact Resistance: 30mΩ(Max) change
2 Insulation Resistance: 100MΩ(Min)</td><td>There shall be no any excessive corrosion on the every part of connector.
Temperature: 40±2°C
Humidity: 90~95%RH
Test time: 120hours
(EIA-364-31A)</td></tr>
<tr><td>Salt spray</td><td>Finish:
1. No Damage
2. Contact Resistance: 30mΩ(Max) change</td><td>5±1% salt solutions, at 35±2°C
duration 24 hours.
Connectors detached
(EIA-364-26A)</td></tr>
</table>

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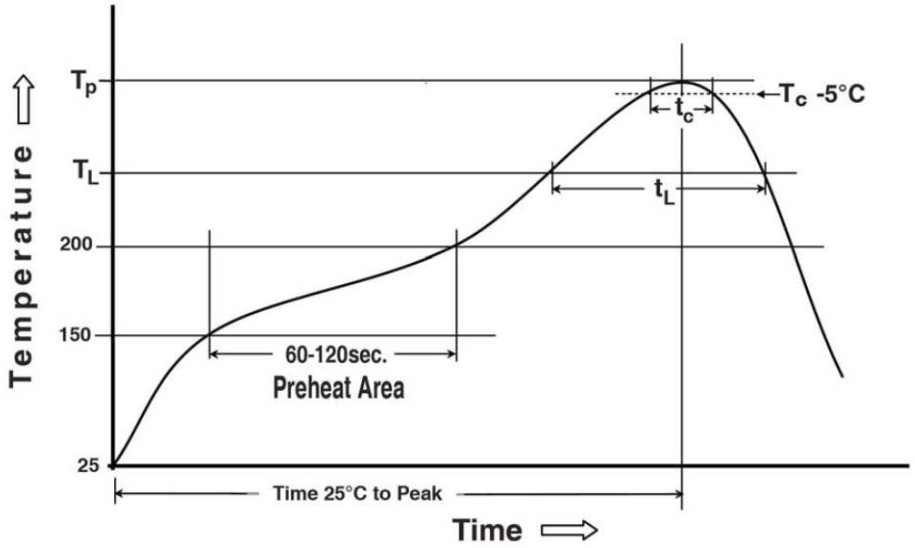
SOLDER ABILITY		
Item	**Requirement**	**Test Condition**
Solder ability	95% of immersed area must show no voids , pin holes.	The termination should be 95% covered with new continuous solder coating Solder temperature: 245±5°C Test time: 3±0.5 seconds (Per EIA-364-71)
Resistance to soldering heat	No melting, cracks or functional damage allowed	When exposed to the following re-flow soldering condition, there shell be no any excessive thermal damage on the every part of connector.

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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Table: Products Qualification Test Sequence

No.	Test item	Test Group and Sequence										
		A	B	C	D	E	F	G	H	I	J	K
1	Contact Resistance	1,7	1,3	1,3		1,4	1,4	1,4	1,4		1,3	
2	Insulation Resistance					2,5	2,5	2,5	2,5			
3	Dielectric Withstanding Voltage	2										
4	Tray Insertion Force	3										
5	Removal Force	6										
6	Eject Bar Push Force	4										
7	Contact Normal Force				1							
8	Durability	5										
9	Vibration		2									
10	Mechanical Shock			2								
11	Thermal Shock					3						
12	High Temperature Life						3					
13	Cold Resistance							3				
14	Humidity								3			
15	Solder Ability									1		
16	Salt Spray										2	
17	Resistance to Soldering Heat											1
Sample Quantity		4	4	4	4	4	4	4	4	4	4	4