

SPECIFICATION AND PERFORMANCE

Series	115U-A101	File	115U-A101	Date	2022/07/27
--------	-----------	------	-----------	------	------------

Scope:

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

Connector: (This part is a connector only, it should be used together with Nano SIM Tray P/N: 115U-T001)

P/N	Descriptions
115U-A101	Nano SIM Socket, 6 Pin, Tray-Push Push, Lock, G/F, 700 Reel

Nano SIM tray:

P/N	Descriptions
115U-T001	Card Tray, Used for Nano SIM Card Socket Push-Push, Lock, PC+ABS, Black, 700 PCS/Bag

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	Housing	LCP E130i, UL94-V0, black or equivalent
2	Contact	Phosphor Bronze C5210 0.1t, 1u" min. Gold plating on contact area, 120u" min. matte-Tin plating on solder area, under plating 50u" min. Nickel over all
3	Slider	LCP E130i, UL94-V0, black
4	Shell	Stainless Steel SUS304, 0.10t, 50u" min. Nickel over all
5	Crank	Stainless Steel SUS304
6	Spring	SWP-B Dia. 0.18mm, 50u" min. Nickel plating over all

RATING

Rated Voltage	10V
Rated Current	0.5A
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Durability	5,000 cycles

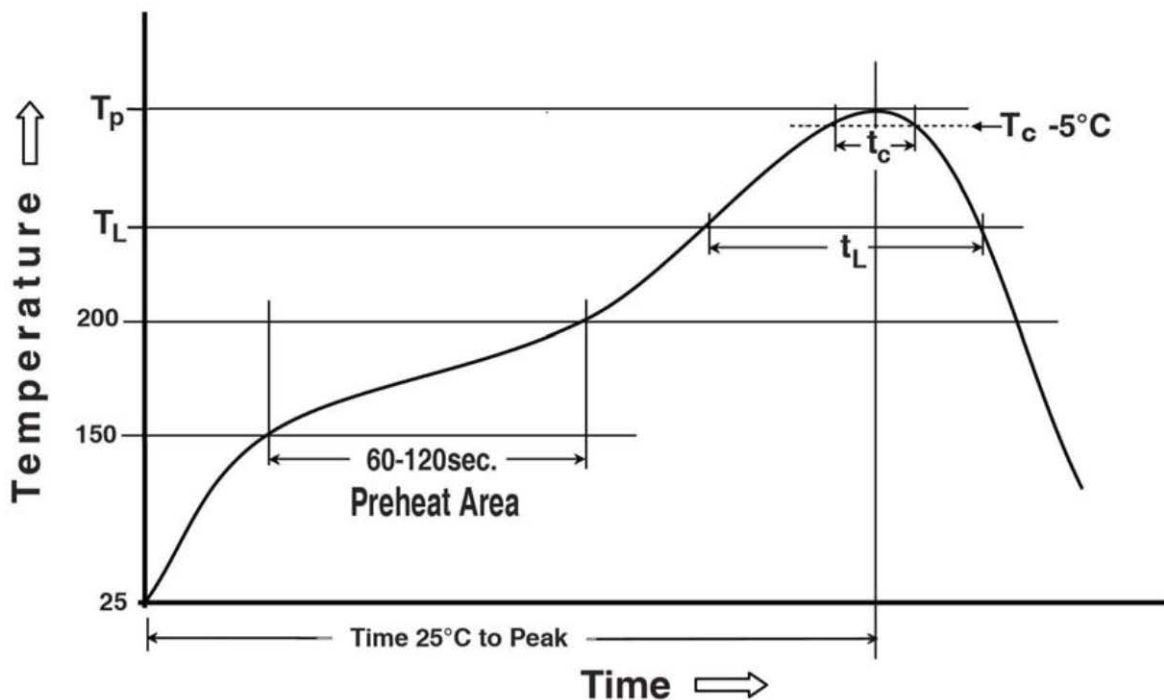
ELECTRICAL		
Item	Requirement	Test Condition
Low Level Contact Resistance	Initial 50mΩ Max. After test 100mΩ Max.	Solder connectors to PCB and insert dummy card, measure by applying closed circuit current of 10mA maximum at open circuit voltage of 20mV (max). (Per EIA-364-23)
Dielectric Withstanding 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)
Temperature Rise	30°C max.	EIA-364-70 Mate connectors, measure the temperature rise at rated current after 0.5A/Power contact. The temperature rise above ambient shall not exceed 30°C the ambient condition is still air at 25°C.

MECHANICAL		
Item	Requirement	Test Condition
Contact Normal Force	0.3N Min. per Pin	Take contact insert molding semi-finished products, no other parts, and solder on PCB, measure contact normal force at the speed rate of 25 mm/min. (use 0.6mm card thickness)
Durability	5000 cycles, Push-Push function is normal, the card can be withdrawn smoothly. Final Contact Normal Force 0.3N Min.	Use manual operation, Solder connectors to PCB, 400 to 600 cycles per hours (EIA364-09)
Tray Insertion Force (with card)	10N max.	Measure the force required to mate connector. Operation Speed : 25 mm/min. (EIA-364-13B)
Tray Withdrawal Force (with card)	2N min.	Measure the force required to mate connector. Operation Speed : 25 mm/min. (EIA-364-13B)

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
Mechanical Shock	Discontinuity < 1 ms	EN60721-3-5 Class 5M3 Shock Test-Level II (100G/6ms)
Temperature Life	Contact resistance 100 mΩ Max.	85±2°C Mated, series between samples, loading 5VDC/60mA, duration 96 hours (EIA-364-17, method B, condition 3)
Thermal Shock	Max. Change from initial contact Resistance 40mΩ Max No physical damage to connector shall occur.	Temperature Range: -55 to 85°C No. of Cycles: 5 cycles for 30 minutes (EIA364-32)
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		
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: $255 \pm 5^\circ\text{C}$ Test time: 5 ± 1 seconds, (Per EIA-364-71)
Resistance to soldering heat	No melting, cracks or functional damage allowed	Preheating temperature: $150 \sim 200^\circ\text{C}$, 60~120 seconds Liquidus temperature (TL): 217°C , 60~150 seconds Peak temperature: 260°C Time within 5°C of peak temperature (T_c): 255°C , 30seconds

Reflow Profile



Preheating temperature: $150 \sim 200^\circ\text{C}$, 60~120 seconds

Liquidus temperature (TL): 217°C , 60~150 seconds

Peak temperature: 260°C

Time within 5°C of peak temperature (T_c): 255°C , 30seconds

Test Group & Sequence:

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