

## SPECIFICATION AND PERFORMANCE

Series	115V-AA01	File	115V-AA01_SPEC	Date	2020/02/15
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### Scope:

This specification covers the requirements for product performance, test methods and quality assurance provisions of **115V-AA01**

### 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, UL94V-0, Black
2	CONTACT	C5191, G/F on contact & solder area, under plating nickel plating over all
3	SHELL	SUS 304

### RATING

Rated Voltage	10 VDC
Rated Current	0.5 A per pin
Operating Temperature	-40 °C to 85 °C
Durability	100 cycles

### ELECTRICAL

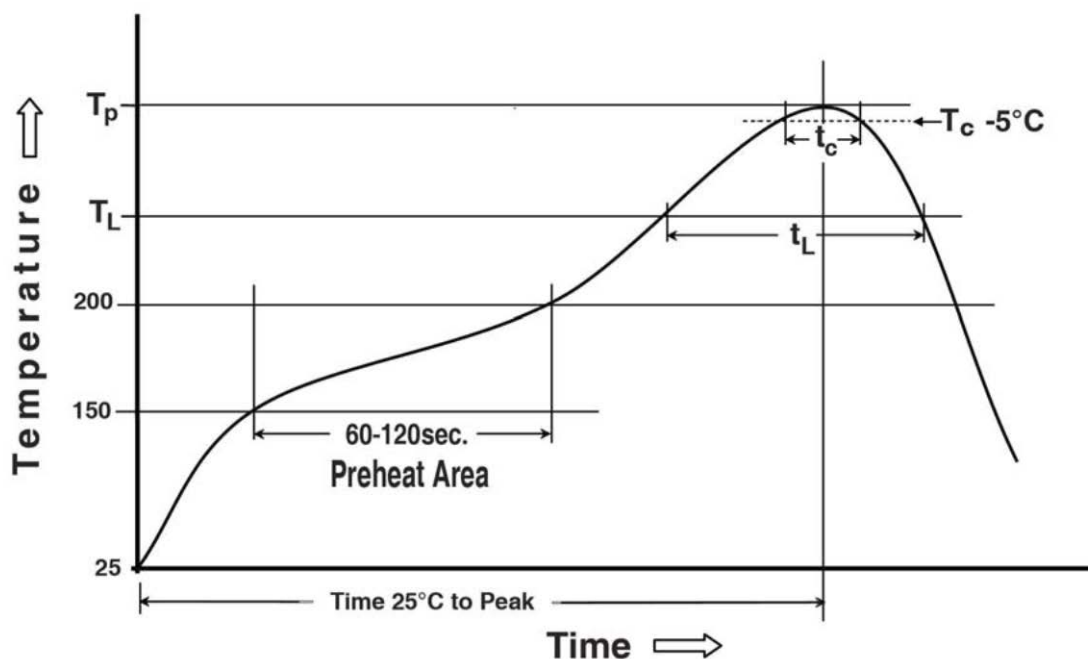
Item	Requirement	Test Condition
Low Level Contact Resistance	100 m Ohm Max	Solder connectors to PCB and insert dummy card into shell, measure by applying closed circuit current of 10mA maximum at open circuit voltage of 20mV (max). (EIA-364-23)
Dielectric Withstanding Voltage	No Broken	500V AC (rms.) between two adjacent for 1 minute. (EIA-364-20)
Insulation Resistance	1000 MΩ min. initial	Impressed voltage 250V DC for 1 minute. Test between adjacent circuit. (EIA364-21)

<b>MECHANICAL</b>		
<b>Item</b>	<b>Requirement</b>	<b>Test Condition</b>
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 Durability	Durability: 100 Cycles Final Force: 150g Min.	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
Open & Lock Force	1.5N~20N with card	Solder connectors to PCB, parallel to push on the shell surface for open & lock
Vibration	No electrical discontinuity greater than 0.1or 1μsec shall occur.	Frequency Range: 10-55-10 Total Amplitude: 1.52 mm p-p or 9.81m/sec <sup>2</sup> . Duration: 2 hours tree axes( 6 hours in total ) (EIA364-28)
Mechanical Shock	No electrical discontinuity greater than 0.1or 1μsec shall occur.	Accelerated Velocity: 50 G (490 m/sec <sup>2</sup> ) Waveform: Semi Sine Duration: 11 m sec. No of Shocks: 6/dir., 3 axis,( total of 18 Shocks) (EIA364-27)

<b>ENVIRONMENTAL</b>		
<b>Item</b>	<b>Requirement</b>	<b>Test Condition</b>
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)
Humidity-Thermal Cycling	Max. Change from initial contact Resistance 40mΩ Max Insulation Resistance: 1000 MΩ Min. initial 100 MΩ Min. after test No physical damage to connector shall occur.	Ambient Temp.: 25 to 65 °C Relative humidity: 90 to 95 % Duration: 10 cycles (EIA364-31)
Temperature Life	Max. Change from initial contact Resistance 40mΩ Max No physical damage to connector shall occur.	Chamber Temperature: 85±2 °C Duration: 96 hours (EIA364-17)
Salt Spray Test	Max. Change from initial contact Resistance 40mΩ Max No physical damage to	Salt Solution: 5±1.0% Length of Test: 12 hours Dummy card engaged during test (EIA364-26)

connector shall occur.		
<b>SOLDER ABILITY</b>		
Item	Requirement	Test Condition
Solder ability	Wet Solder Coverage: 95% Min.	Solder Temperature: $245 \pm 3^{\circ}\text{C}$ Immersion Duration: $5 \pm 0.5$ sec. (J-STD-002B)
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): $217^{\circ}\text{C}$ , 60~150 seconds Peak temperature: $260^{\circ}\text{C}$ Time within $5^{\circ}\text{C}$ of peak temperature ( $T_c$ ): $255^{\circ}\text{C}$ , 30seconds

## Reflow Profile



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

Liquidus temperature ( $T_L$ ):  $217^{\circ}\text{C}$ , 60~150 seconds

Peak temperature:  $260^{\circ}\text{C}$

Time within  $5^{\circ}\text{C}$  of peak temperature ( $T_c$ ):  $255^{\circ}\text{C}$ , 30seconds