

SPECIFICATION AND PERFORMANCE

Series	217E-BA01	File	217E-BA01_spec_1	Date	2020/11/11
---------------	-----------	-------------	------------------	-------------	------------

Scope:

This specification covers the requirements for product performance, test methods and quality assurance provisions of 217E-BA01

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	Copper alloy C18150, gold plating on contact area, gold flash on solder area, nickel under plating over all
3	MID PLATE	Stainless steel SUS301
4	SHELL	Stainless steel SUS304, nickel plating

RATING

Rating	5A/20V
Temperature Range	-40°C to +85°C
Durability	10,000 cycles

ELECTRICAL

Item	Requirement	Test Condition
Low level contact resistance	40 mΩ Max initial for VBUS, GND and all other contacts. 50 mΩ Max. after test	The low level contact resistance (LLCR) measurement is made across the plug and receptacle mated contacts and does not include any internal paddle cards or substrates of the plug or receptacle. The test boards shall be provided with the connectors to be tested. Measure at 20 mV (max) open circuit at 100 mA. EIA-364-23
Insulation resistance	100MΩ Min.	Mated or un-mated connector, apply 100 Volts DC between adjacent terminal or ground. EIA-364-21
Dielectric withstanding voltage	100VAC no disruptive discharge	Mated connector, apply 100V AC(RMS) for 1minute between adjacent terminal or ground, Leakage current: 5mA Max. EIA-364-20

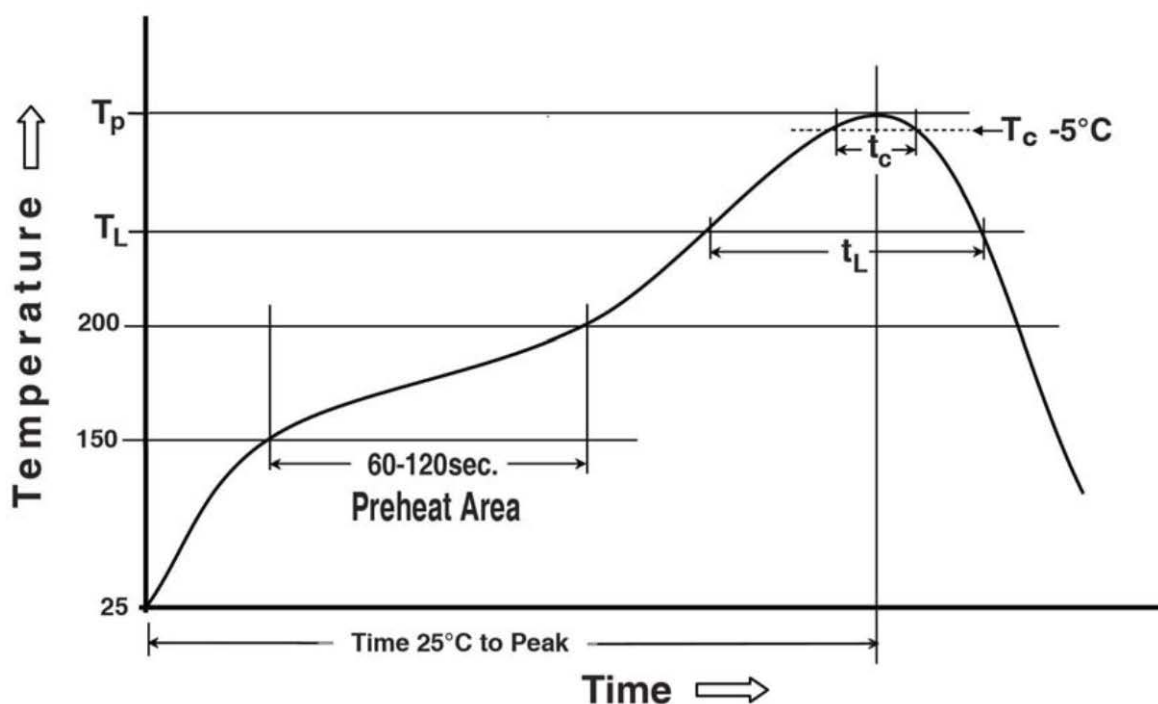
MECHANICAL		
Item	Requirement	Test Condition
Durability	No evidence of physical damage.	Mate and un-mate samples for 10,000 cycles at maximum rate of 200 cycles per hour. EIA-364-09
Insertion force and extraction force	Insertion force : 5N~20N Extraction force : 8N~20N after the durability test (10,000 cycles): 6N~20N.	Measure the force required to mate connector, At a maximum rate of 12.5mm (0.492") per minute. EIA-364-13
Vibration	1. No evidence of physical damage. 2. No discontinuities of 1μ sec or longer duration when mated connector during test.	The connector must be mated test. The entire frequency range, from 50 to 2000Hz and return to 50Hz, 12 times in each (total of 36 times) X, Y, Z axes. Amplitude: 1.52mm Max. EIA-364-28

ENVIRONMENTAL		
Item	Requirement	Test Condition
Temperature life	1. No evidence of damage. 2. The electrical performances should meet the spec specified.	The specimens shall be subjected to a temperature of 105°C for 120 hours, then placed in ambient temperature for 3 hours. EIA-364-17
Thermal shock	1. No evidence of damage. 2. The electrical performances should meet the spec specified.	The specimens shall be subjected to a temperature of 10 cycles, -55°C for 30 minutes, 85°C for 30 minutes, then placed in ambient temperature for more than 1~2 hours EIA-364-32
Mixed flowing gas	1. No evidence of damage. 2. The electrical performances should meet the spec specified.	Samples should be placed in an environmentally controlled test chamber that is monitored by a gas analyzing system for controlled concentrations of the specified gas mixture. test duration is 7 days. EIA-364-65
Salt spray	1. No evidence of damage. 2. The electrical performances should meet the spec specified.	Subject mated and unmated connectors should be tested according to the condition listed below: Temperature: 35±1°C Humidity: 95 ~ 98% (R.H.) PH Value: 6.5 ~ 7.2 Duration: 48 hours EIA-364-26

SOLDER ABILITY		
Item	Requirement	Test Condition
Solder ability	95% of immersed area must show no voids, pin	The termination should be 95% covered with new continuous solder coating

	holes	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: $150 \sim 200^{\circ}\text{C}$, 60~180 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: $150 \sim 200^{\circ}\text{C}$, 60~180 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