

## SPECIFICATION AND PERFORMANCE

|               |           |             |                |             |            |
|---------------|-----------|-------------|----------------|-------------|------------|
| <b>Series</b> | 217B-BA08 | <b>File</b> | 217B-BA08-SPEC | <b>Date</b> | 2024/05/30 |
|---------------|-----------|-------------|----------------|-------------|------------|

### Scope:

This specification covers the requirements for product performance, test methods and quality assurance provisions of **217B-BA08**

### 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 E480i, UL94V-0, black or equal  |
| 2   | CONTACT     | Bronze-Beryllium Bronze C18150, 1u" min. gold plating on contact area, 80u" min. matte-tin plating on solder tails, 50u" min. nickel under plating over all |
| 3   | INNER SHELL | Stainless Steel SUS304  |
| 4   | OUTER SHELL | Stainless Steel SUS304, 50u" min. nickel plating over all   |
| 5   | MID PLATE   | Stainless Steel SUS301, 50u" min. nickel plating over all   |

## RATING

|                       |                |
|-----------------------|----------------|
| Rated Voltage         | 48V            |
| Rated Current         | 5A             |
| Operating Temperature | -40°C to +85°C |
| Storage Temperature   | -40°C to +85°C |
| Durability            | 10,000cycles   |

## ELECTRICAL

| Item                         | Requirement  | Test Condition   |
|------------------------------|--|--|
| Low level contact resistance | 40 mΩ Max initial for VBUS, GND and all other contacts.<br>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 250 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

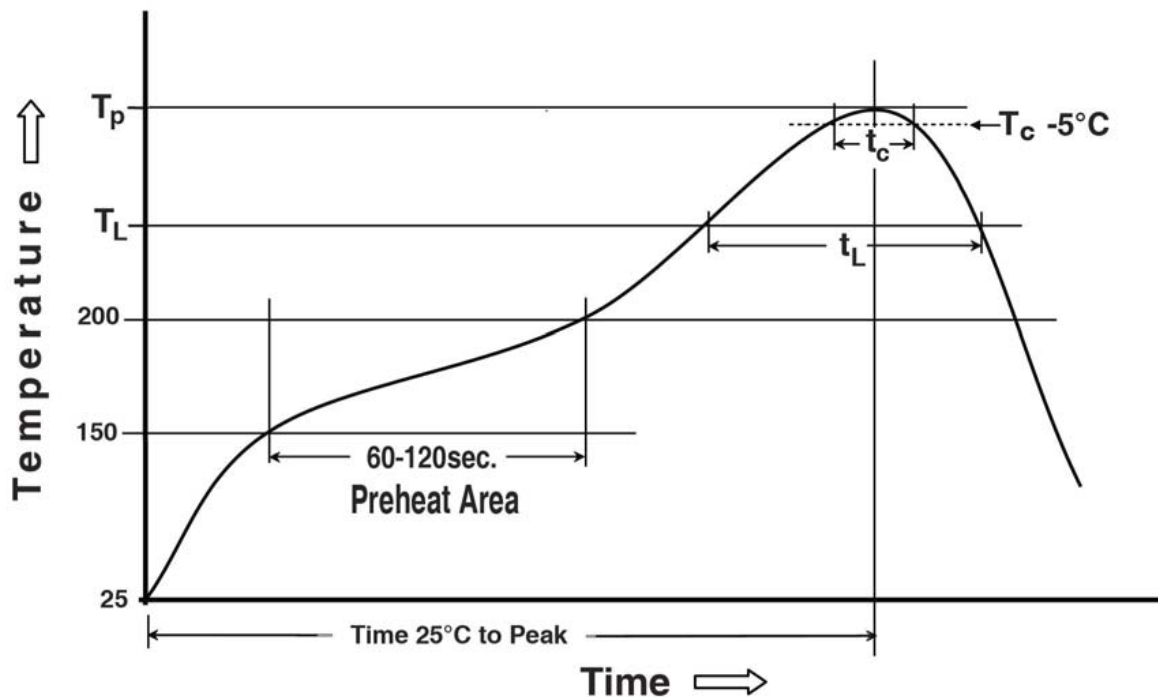
| Item                                 | Requirement  | Test Condition  |
|--------------------------------------|--|---|
| Durability                           | 1. No evidence of physical damage.<br>2. The electrical performances should meet the spec specified.                 | Mate and un-mate samples for 10,000 cycles at maximum rate of 500 cycles per hour. EIA-364-09             |
| Insertion force and extraction force | 1. Insertion force : 5N~20N<br>2. Extraction force : 8N~20N<br>3. 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 |

### ENVIRONMENTAL

| Item             | Requirement   | Test Condition  |
|------------------|---|---|
| Humidity test    | 1. No evidence of damage.<br>2. The electrical performances should meet the spec specified. | 25~65°C in temperature and 90~95%RH for 48 hours. After test connector shall be left alone for 1 to 2 hours in a room ambient   |
| Temperature life | 1. No evidence of damage.<br>2. The electrical performances should meet the spec specified. | The specimens shall be subjected to a temperature of 85°C for 120 hours, then placed in ambient temperature for 3 hours. EIA-364-17   |
| Thermal shock    | 1. No evidence of damage.<br>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<br>EIA-364-32   |
| Salt spray       | 1. No evidence of damage.<br>2. The electrical performances should meet the spec specified. | Subject mated and unmated connectors should be tested according to the condition listed below:<br>Salt concentration: 5%<br>Temperature: 35±1°C<br>Humidity: 95 ~ 98% ( R.H. )<br>PH Value: 6.5 ~ 7.2<br>Duration: 48 hours<br>EIA-364-26 |

| 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<br>Solder temperature: 255±5°C<br>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, 60~180 seconds<br>Liquidus temperature (TL): 217°C, 60~150 seconds<br>Peak temperature: 260°C<br>Time within 5°C of peak temperature (Tc): 255°C, 30seconds |

## Reflow Profile



Preheating temperature: 150 ~ 200°C, 60~180 seconds  
 Liquidus temperature (TL): 217°C, 60~150 seconds  
 Peak temperature: 260°C  
 Time within 5 °C of peak temperature (Tc): 255°C, 30seconds