立威科技股份有限公司 Attend Technology Inc.
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# SPECIFICATION AND PERFORMANCE

| Series | 217B-BA06 | File | 217B-BA06_SPEC_1 | Date | 2025/03/10 |
|---|---|---|---|---|---|

## Scope:

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

| Part Name | Description |
|---|---|
| 217B-BA06 | USB Type C Receptacle, Dual Row SMT Type, G/F, IP67 Waterproof, w/ Oring |

## 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 | PA46, UL94V-0, BLACK |
| 2 | CONTACT | C5210, gold flash on contact area, gold flash on solder tails, 80u" min. nickel under plating over all. |
| 3 | SHELL | SUS304, 50u" min. nickel under plating over all |
| 4 | ORING | Silicone |

| RATING | |
|---|---|
| Rated Current | 3A |
| Rated Voltage | 20V |
| Operating & Temperature | -25°C~+105°C |
| Durability | 10,000 |

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| ELECTRICAL | | |
|---|---|---|
| **Item** | **Requirement** | **Test Condition** |
| Low Level Contact Resistance | Before test: 40mΩ max.<br>After test: 50mΩ max. | 1. The test method complies with EIA-364-23B<br>2. Maximum applied voltage 20mV at a current of 100mA per. Current leakage is 0.5mA |
| Dielectric Withstanding Voltage | No damage or deformation | 1. Test method complies with EIA-364-20.<br>2. Mated connectors, apply 100VAC for 1 minute between adjacent terminal or ground . |
| Insulation Resistance | 100 MΩ min. | 1. Test method complies with EIA-364-21.<br>2. Apply 100VDC for immediately between adjacent terminals |

| MECHANICAL | | |
|---|---|---|
| **Item** | **Requirement** | **Test Condition** |
| Insertion Force | 5N to 20N | EIA 364-13B Measure the force required to mate and unmate the connector.<br>speed:12.5±3mm/minute. |
| Extraction Force | 8 N to 20 N. (Initial~3300 cycles)<br>6 N to 20 N. (3300~10000 cycles) | EIA 364-13B Measure the force required to mate and unmate the connector.<br>speed:12.5±3mm/minute. |
| Durability | Contact resistance:<br>40 mΩ Max Initial 50mΩ Max Final<br><br>Appearance: no damage | 1. The test method complies with EIA-364-09<br>2. Standard Durability Class :10000 cycles<br>Rate: 500 cycle per hour |
| Mechanical Shock | No discontinuities of 1 microsecond or long duration. | EIA-364-27B<br>Subject mated connector to 30G's half-sine shock pulses of 11msec duration. Three shocks in each direction applied along three mutual perpendicular planed for a total of 18 shocks. |
| Vibration | No discontinuities of 1 microsecond or long duration. | EIA-364-28D<br>Subject mated connectors to 10~55~10Hz traversed in 1 minute at 1.52mm amplitude 2 hours each of 3 mutually perpendicular planes. |

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| ENVIRONMENTAL | | |
|---|---|---|
| **Item** | **Requirement** | **Test Condition** |
| Thermal Shock | 1.Contact resistance: 40 mΩ Max Initial 50mΩ Max Final<br>2. Insulation Resistance:100 MΩ Min<br>3.Dielectric Strength: test ok<br>4.Appearance: no damage | EIA 364-32<br>10 cycles –55 °C and +85 °C. The USB connectors under test must be mated. The object of this test is to determine the resistance of a USB TYPE C connector to exposure at extremes of high and low temperatures and to the shock of alternate exposures to these extremes, simulating the worst case conditions for storage, transportation, and application. |
| Humidity | 1. Contact resistance: 40 mΩ Max Initial 50mΩ Max Final<br>2. Insulation Resistance:100 MΩ Min<br>3. Dielectric Strength: test ok<br>4. Appearance: no damage | EIA 364-31<br>The object of this test procedure is to detail a standard test method for the evaluation of the properties of materials used in USB TYPE C connectors as they are influenced by the effects of high humidity and heat.<br>1. 96 hours minimum (4 complete cycles).<br>2. Mated connector 25~65°C, 90~95% RH,<br>3. conditions for 1 to 2 hours, after which the specified measurements shall be performed. |
| Salt Spray | 1. Contact resistance: 40 mΩ Max Initial 50mΩ Max Final<br>2. Appearance: no damage | Subject mated samples. 35°C ±2° C ,5% Salt condition, 24 hours<br>EIA 364-26B condition A |
| Temperature Life | 1. Contact resistance: 40 mΩ Max Initial 50mΩ Max Final<br>2. Appearance: no damage | EIA-364-17B<br>1. Mated connector to 105±2°C for 120 hours upon completion of the exposure period, test exposure period the test specimens shall be conditioned at ambient room,<br>2. Conditions for 1 to 2 hours, after which the specified measurements shall be performed. |

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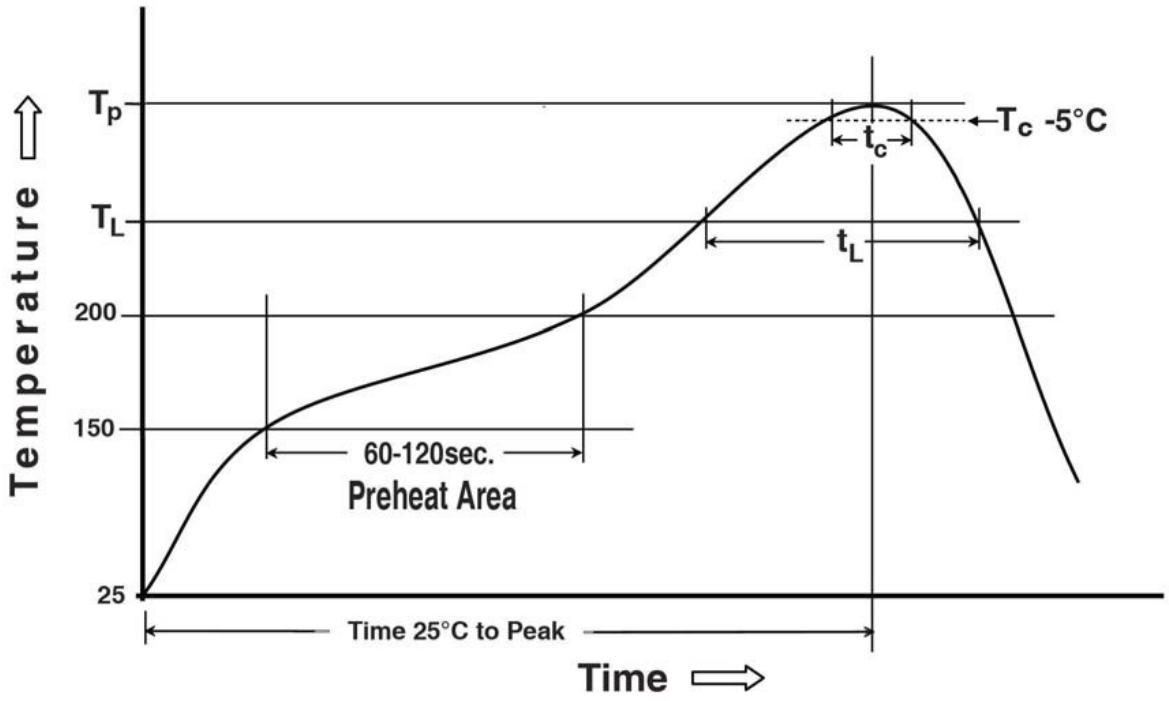
| SOLDER ABILITY | | |
|---|---|---|
| **Item** | **Requirement** | **Test Condition** |
| Solder ability | 95% of immersed area must show no voids, pin holes | The termination should be 95% covered with new continuous solder coating<br>Solder temperature: 245±5°C<br>Test time: 3±0.5 seconds, (Per EIA-364-71) |
| Resistance to soldering heat | No melting, cracks or functional damage allowed | Preheating temperature: 150 ~ 200°C, 60~120 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, 60~120 seconds
Liquidus temperature (TL): 217°C, 60~150 seconds
Peak temperature: 260°C
Time within 5 °C of peak temperature (Tc): 255°C, 30seconds