

SPECIFICATION AND PERFORMANCE

| | | | | | |
|---------------|------------------|-------------|------------------|-------------|-------------------|
| Series | 115U-B200 | File | 115U-B200 | Date | 2024/01/08 |
|---------------|------------------|-------------|------------------|-------------|-------------------|

Scope:

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

Connector:

| P/N | Descriptions |
|-----------|--|
| 115U-B200 | Micro SD and Nano SIM Socket, Stack Type, Tray Push-Push, w/Lock and Switch, 10u", C7025, Reel |

Card tray:

| P/N | Descriptions |
|-----------|--|
| 115U-T009 | Card Tray, Micro SD & Nano SIM, PBT, Black, Bag, 19.6mm |
| 115U-T010 | Card Tray, Micro SD & Micro SIM, PBT, Black, Bag, 19.6mm |
| 115U-T012 | Card Tray, Micro SD & Nano SIM, PBT, Black, Bag, 21.6mm |
| 115U-T013 | Card Tray, Micro SD & Micro SIM, PBT, Black, Bag, 21.6mm |

Performance and Descriptions:

The product is designed to meet the specifications for electrical, mechanical, and environmental performance requirements. Unless otherwise specified, all tests are conducted under 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 | Cu-Ni-Si Copper alloy C7025 0.12t, 10u" 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 or equivalent |
| 4 | SHELL | Stainless steel SUS304, 0.15t, 50u" Min. nickel plating over all |
| 5 | CRANK | Stainless steel SUS130M, Dia.0.3mm or equivalent |
| 6 | SPRING | SWP-B Dia. 0.2mm, 50u" Min. nickel plating over all |

CARD TRAY:

| | | |
|---|------|--|
| 1 | BODY | PBT 4130, UL94V-0, black or equivalent |
|---|------|--|

| RATING | |
|-----------------------|-----------------|
| Rated Voltage | 10V |
| Rated Current | 0.5A |
| Operating Temperature | -40°C to +105°C |
| Storage Temperature | -40°C to +85°C |
| Durability | 5,000 cycles |

| ELECTRICAL | | |
|---------------------------------|--------------------|---|
| Item | Requirement | Test Condition |
| Low Level Contact Resistance | 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. |

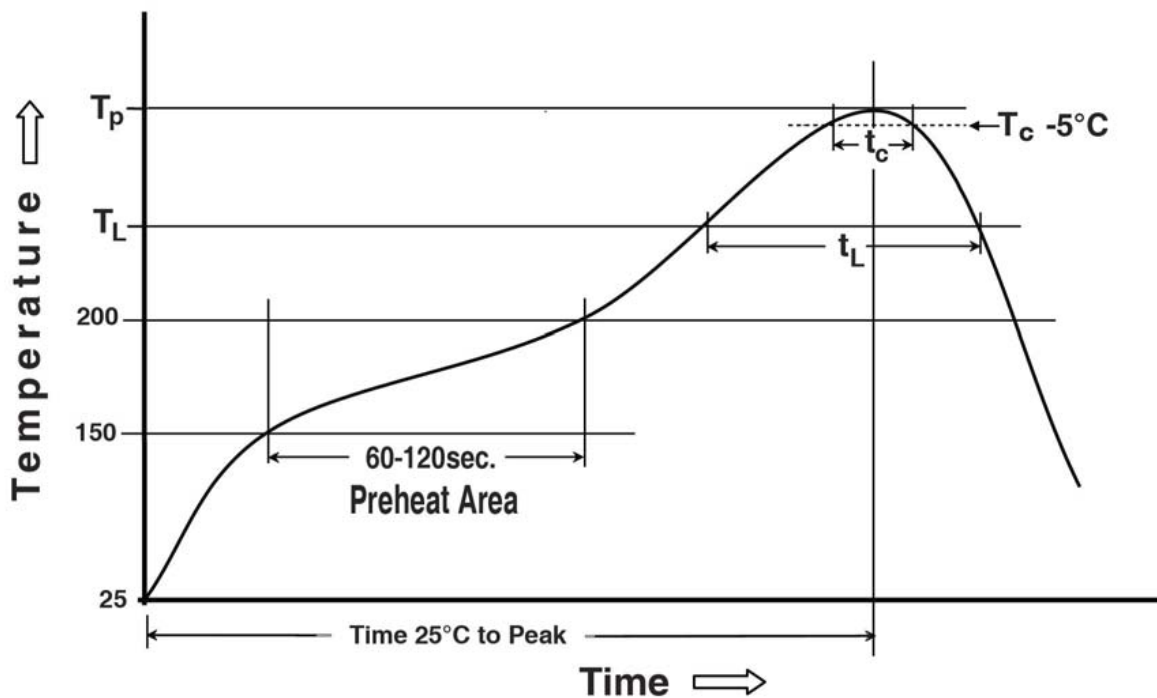
| MECHANICAL | | |
|----------------------------------|--|---|
| Item | Requirement | Test Condition |
| Contact Normal Force | 0.3N Min. per Pin | Take contact insert molding semi-finished products, no other parts, fixed in jig, measure contact normal force at the speed rate of 25 mm/min. |
| Durability | 5000 cycles, Push-Push function is normal, the card can be withdrawn smoothly. LLCR 100 mΩ Max. | Use manual operation, Solder connectors to PCB, 400 to 600 cycles per hours (EIA364-09) |
| Tray Push-Push Force | 20N max. | Solder the connector to the PCB, install two cards on the tray and mate connector. measure the force required to push/push. Operation Speed : 25 mm/min. (EIA-364-13B) |
| Tray Lock Force (with dual card) | 3N min. | Solder the connector to the PCB, install two cards on the tray and press in the lock position, measure the force required to pull out the tray. 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. | 105±2°C Mated, series between samples, loading 5V DC/60 mA, duration 96 hours (EIA-364-17, method B, condition 4) |
| 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 1 hours (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: 245±5°C 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 Liquidus temperature (TL): 217°C, 60~150 seconds Peak temperature: 260°C 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

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 | Tray Push-Push Force | 6 | | | | | | | | | |
| 9 | Tray Lock 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 | Solder ability | | | | | | | | | | 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 |