

SPEC. NO.: PS-52706-XXXXX-XXX

REVISION: 1

PRODUCT NAME: 0.80MM PITCH EDGE CARD CONN.

PRODUCT NO: 52706 SERIES

| | | |
|--|---|---|
| PREPARED: Xu,Zhonglin DATE:2019/08/15 | CHECKED: Lu,jing quan DATE: 2019/08/15 | APPROVED: Hsieh,fu yu DATE: 2019/08/15 |
|--|---|---|

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1 Revision History

| Rev. | ECN # | Revision Description | Prepared | Date |
|------|-------------|----------------------|------------|-----------|
| 1 | ECN-1903039 | NEW SPEC | XUZHONGLIN | 2019/3/22 |
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2 SCOPE

This specification covers performance, tests and quality requirements for 0.80mm PITCH EDGE CARD Connector

3 APPLICABLE DOCUMENTS

EIA-364: ELECTRONIC INDUSTRIES ASSOCIATION
TS-1000: ENVIRONMENTAL TEST METHODOLOGY
PCI Express Card Electromechanical Specification Revision 4.0

4 REQUIREMENTS

4.1 Design and Construction

- 4.1.1 Product shall be of design, construction and physical dimensions specified on applicable product drawing.
- 4.1.2 All materials conform to R.o.H.S. and the standard on TQ-WI-140101

4.2 Materials and Finish

- 4.2.1 Contact: High performance copper alloy (Phosphor Bronze)
Finish: (a) Contact Area: [Refer to the drawing.](#)
(b) Under plate: [Refer to the drawing.](#)
(c) Solder area: [Refer to the drawing.](#)
- 4.2.2 Housing: Thermoplastic High Temp., Resin, UL94V-0
- 4.2.1 Fit Nail: High performance copper alloy (Brass)
Finish: (a) Under plate: [Refer to the drawing.](#)
(b) Solder area: [Refer to the drawing.](#)

4.3 Ratings

- 4.3.1 Voltage: [600 Volts AC](#)
- 4.3.2 Current Rating : [2.6A](#)
- 4.3.3 Storage and Operating Temperature : [-55°C to +125°C](#)

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5.1 Test Requirements and Procedures Summary

| Item | Requirement | Standard |
|---------------------------------|--|---|
| Examination of Product | Product shall meet requirements of applicable product drawing and specification. | Visual, dimensional and functional per applicable quality inspection plan. |
| ELECTRICAL | | |
| Item | Requirement | Standard |
| Contact Resistance | 40 m Ω Max. initial | Mate connectors, apply max. voltage of 30mV and a current of 100mA (EIA-364-23) |
| Insulation Resistance | Initial 6,000 M Ω Min | Unmated connectors, apply 250 V DC between adjacent Terminals. (EIA-364-21)) |
| Dielectric Withstanding Voltage | No discharge, flashover or breakdown. Current leakage: 0.2 mA max. | 600 V AC Min. at sea level for 1 Minute Test between adjacent contacts of Unmated connectors. (EIA-364-20) |
| Temperature rise | 30°C Max. Change allowed | Mate connector: measure the temperature rise at rated current until temperature stable. The ambient condition is still air at 25°C (EIA-364-70,METHOD2) |

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| Item | Requirement | Standard |
|------------------------------------|---|---|
| Mating Force Un-mating Force | Mating Force: 1.25N per pin Max. Un-mating Force: 0.1 N per pin Min. | Operation Speed : 25.4 ± 3 mm/min. Measure the force required to mate connector. The thickness of test card:1.57mm (EIA-364-13 METHOD A) |
| Normal Force-Initial | 0.50 N / P. Min. | Exert axial pressure from carrying The plastics under the sub radian Highest point at the speed of 25.4 ± 3 mm/minute |
| Contact & Fit Nail Retention Force | 1.0 N/Pin Min. | Measure the retention force of Contact and Fit Nail in the housing Operation Speed : 25.4 ± 3 mm/minute |
| Durability | Contact Resistance: 50 m Ω Max. after testing | Mate connectors 500 cycles (EIA-364-09) |
| Vibration | No electrical discontinuity greater Than 1μs shall occur , Contact Resistance : 50 m Ω Max. | Subject mated connector to 50-2000-50 Hz traversed in 1 minute at 5 G's accelerated speed, 2 hours each of 3 mutually perpendicular plane,10Ma potential applied. |
| Shock (Mechanical) | No discontinuity longer than 1 Microsecond allowed. Contact Resistance : 50 m Ω Max. | Subject mated connectors to 30 G's (peak value) half-sine shock pulses of 11 milliseconds duration. Three shocks in each direction shall be applied along the three mutually perpendicular axes of the test specimen (18 shocks). The electrical load condition shall be 100mA maximum for all contacts. (EIA-364-27) |

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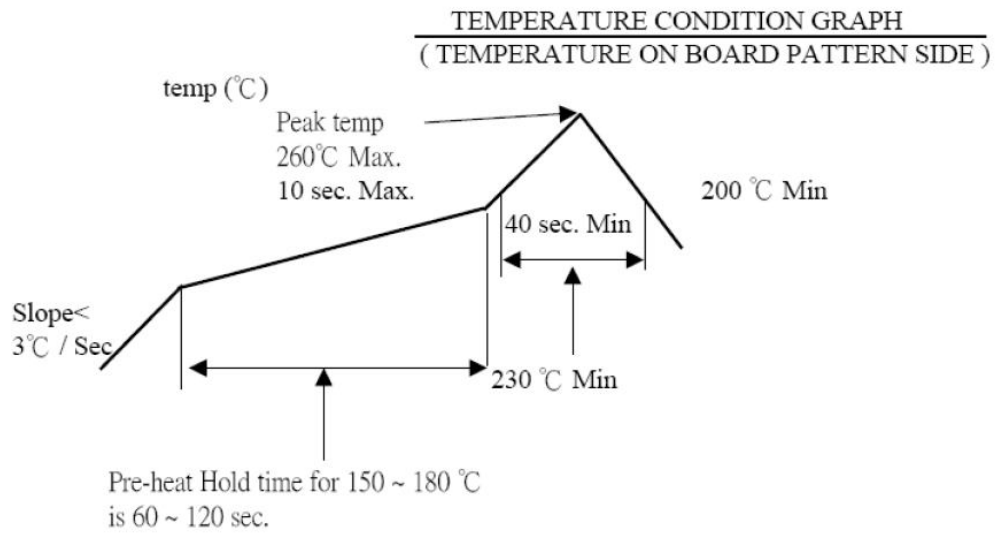
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| Item | Requirement | Standard |
|-----------------------|---|--|
| Thermal Shock | After testing, no damage , Contact Resistance 50 m Ω Max. Dielectric Strength should be OK, Insulation Resistance should be 5000MΩ MIN | Mate connectors, expose to 100 cycles. From -55 +0/-3 °C , 30 minutes to +125 +3/-0 °C , 30 minutes. Change time is no more than 30 seconds. (EIA-364-32, test condition III) |
| Humidity | After testing, no damage , Contact Resistance 50 m Ω Max. Dielectric Strength should be OK, Insulation Resistance should be 5000MΩ MIN | Mate module and subject to follow condition for 24 cycles. 1 cycles: -25 +0/-3 °C 80% RH, 30 minutes +65 +3/-0 °C , 80% RH 30 minutes (EIA-364-32, Test condition I) |
| HIGH Temperature life | After testing, no damage , Contact Resistance 50 m Ω Max. Dielectric Strength should be OK, Insulation Resistance should be 9000 MΩ MIN | Mate connectors to temperature life at 125°C for 250 hours . (EIA-364-17, Test condition A) |
| Salt Spray | After testing, no damage , Contact Resistance 50m Ω Max. Dielectric Strength should be OK, Insulation Resistance should be 6000 MΩ MIN | Subject mated/unmated connectors to 5% salt-solution concentration, 35°C for 48 hours . (EIA-364-26) |
| Solder-ability | Appearance of the specimen shall be inspected after the test with the assistance of a magnifier capable of giving a magnification of 10 X for any damage such as pinholes, void or rough surface Tin Lead & others: 95% of immersed area must show no voids, pin holes | Soldering time :4 to 6 sec Temperature: 260 \pm5°C |
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6 INFRARED REFLOW CONDITION



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7 PRODUCT QUALIFICATION AND TEST SEQUENCE

| Test or Examination | Test Group | | | | | | | | | | 11 | 12 |
|-------------------------------------|---------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| | Test Sequence | | | | | | | | | | | |
| Examination of Product | 1,7 | 1 | 1 | 1,7 | 1,9 | 1,9 | 1,9 | 1,9 | 1,3 | 1 | | |
| Contact Resistance | 2,6 | | | 2,4,6 | 2,8 | 2,8 | 2,8 | 2,8 | | | | |
| Insulation Resistance | | | | | 3,7 | 3,7 | 3,7 | 3,7 | | | | |
| Dielectric Withstanding Voltage | | | | | 4,6 | 4,6 | 4,6 | 4,6 | | | | |
| Temperature rise | | | | | | | | | | 2 | | |
| Mating/ Unmating Forces | 3,5 | | | | | | | | | | | |
| Normal Forces-Initial | | 2 | | | | | | | | | | |
| Contact & Fit Nail Retention Forces | | | 2 | | | | | | | | | |
| Durability | 4 | | | | | | | | | | | |
| Vibration | | | | 3 | | | | | | | | |
| Shock (Mechanical) | | | | 5 | | | | | | | | |
| Thermal Shock | | | | | 5 | | | | | | | |
| Humidity | | | | | | 5 | | | | | | |
| High Temperature life | | | | | | | 5 | | | | | |
| Salt Spray | | | | | | | | 5 | | | | |
| Solder-ability | | | | | | | | | 2 | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Sample Size | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | |