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| Product Specification : | ISSUED BY: Engineering Dept | |
| Subject : 2.00mm Pitch SCT2001 Series Connector Specification | Date Issued | 2013/05/21 |
| | Date Revised | 2014/05/18 |

This specification is referred to the 2.00mm series wire to board connector

INDEX

1. Scope
2. Spec and Part number
3. Disposal of Material and surface
4. Ratings and applicable wires
5. Performance
 - 5-1. Electrical Performance.
 - 5-2. Mechanical Performance
 - 5-3. Environmental Performance and Others
6. Insertion/Withdrawal Force



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1. Scope

This Specification Covers the 2.00mm Pitch SCT2001 Series Connector Specification.

2. Spec and Part number

| Specification | Production No. | Picture of Product |
|---------------|--|--------------------|
| Terminal | SCT2001TPS105 | NONE |
| Housing | SCT2001H-xxBWT105 | NONE |
| Wafer | SCT2001WR-xxB0WT108 SCT2001WV-xxB0WT108 SCT2001WRS-xxE1BE102 SCT2001WVS-xxE1BE102 | NONE |

3. Disposal of Material and surface

| Specification | Materials | Disposal of Surface |
|---------------|-----------------|--|
| Terminal | Phosphor Bronze | Tin Plated: Over 70μ" .Nickel: Over 30μ" . |
| Housing | PA66 | UL 94V-0 |
| Wafer | Base | High Temperature Plastic |
| | PIN | Brass |
| | | Over Tin 70μ" /Over 30μ" Nickel |

(Please Refer to the Project drawing for the above Specification)

4. Ratings and applicable wires

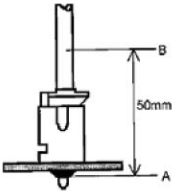
| Item | Standard | |
|--------------------------------|--|---------|
| Rated Voltage (Max.) | 100V | [AC/DC] |
| Rated Current (Max.) | 2.0A | |
| Ambient temperature Range | -25℃~+85℃ | |
| Applicable wire insulation O.D | AWG 24#~30# Insulation O.D. 1.50mm(Max.) | |

*Including terminal temperature rise.

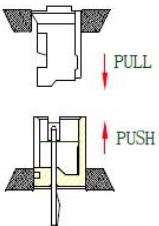
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5. PERFORMANCE

5-1. Electrical Performance.

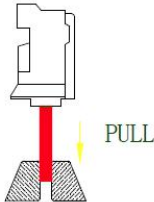
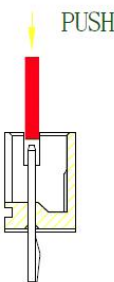
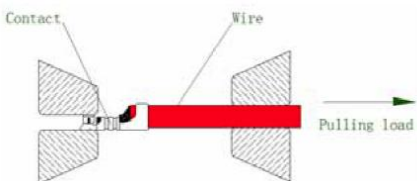
| Item | | Test Condition | Requirement |
|-------|---------------------------------------|---|---|
| 5-1-1 | Contact Resistance | Mate connectors, measure by dry circuit, 20mV MAX, 10mA. (Based upon EIA-364-06A). | Initial: 10 milliohms Max. After Test: 20 milliohms Max. |
| | |  | |
| 5-1-2 | Insulation Resistance | Mate connectors, apply 500V DC between adjacent terminal or ground. (Based upon EIA-364-21B/MIL-STD-202 Method 302 Cond.B) | 1000 Megohms Min. |
| 5-1-3 | Dielectric Strength | Mate connectors, apply 500V AC for 1 minute between adjacent terminal or ground. (Based upon EIA-364-20A/MIL-STD-202 Method 301) | No Breakdown and Flashover |
| 5-1-4 | Contact resistance on crimped portion | Crimp the applicable wire on to the terminal measure by dry circuit 20mV MAX, 10mA. | 10 milliohms Max. |

5-1. Electrical Performance

| Item | Test Condition | Requirement |
|-------|---|----------------------|
| 5-2-1 | Insertion & Retention Force | Refer to paragraph 6 |
| | <p>Insert and withdraw Connectors at the speed rate of 25.4±3mm/minute.</p>  | |

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5-2. Mechanical Performance.

| Item | Test Condition | Requirement | | | | | | | | | | |
|---|---|--|------|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|
| 5-2-2 Terminal /Housing Retention Force | Apply axial pull out force at the rate of 25.4±3mm/minute terminal assembled in the housing.  | 14.7N {1.5kgf} Min. | | | | | | | | | | |
| 5-2-3 Terminal Insertion Force | Insert the crimped terminal into the housing. | 9.8N {1.0kgf} Max. | | | | | | | | | | |
| 5-2-4 Pin Retention Force | Apply axial push force at the speed of 25.4±3mm/minute.  | 9.8N {1.00kgf} Min. | | | | | | | | | | |
| 5-2-5 Tensile strength (Crimped connections) | Fix the crimped terminal, apply axial pull out force on the wire. (Do not crimp insulation part). | <table border="1"> <tr> <td>AWG#</td> <td>#24</td> <td>#26</td> <td>#28</td> <td>#30</td> </tr> <tr> <td>Spec. kgf. Min.</td> <td>3.0</td> <td>2.0</td> <td>1.5</td> <td>0.8</td> </tr> </table> | AWG# | #24 | #26 | #28 | #30 | Spec. kgf. Min. | 3.0 | 2.0 | 1.5 | 0.8 |
| | AWG# | #24 | #26 | #28 | #30 | | | | | | | |
| Spec. kgf. Min. | 3.0 | 2.0 | 1.5 | 0.8 | | | | | | | | |
|  | Note> As for unspecified wire sizes in this specification define values with clients | | | | | | | | | | | |

| Item | Test Condition | Requirement |
|---|--|---|
| 5-3-1 Repeated Insertion/ Withdrawal | When mated up to 50 cycles repeatedly by the rate of 10 cycles per minute. | Contact Resistance 20 milliohms Max. |

5-3. Environmental Performance and Others.



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| Item | | Test Condition | Requirement | |
|-------|---------------------|---|-----------------------|---------------------|
| 5-3-2 | Temperature Rise | Carrying rated current load. (UL 1977) | Temperature rise | 30°C Max. |
| 5-3-3 | Vibration | Amplitude: 1.5mm P-P Sweep time: 10~55~10 HZ in 1 minute Duration: 2 hours in each X.Y.Z axials. (Based upon EIA-364-28B/MIL-STD-202 Method 213B Cond.A) | Appearance | No Damage |
| | | | Contact Resistance | 20 milliohms Max. |
| | | | Discontinuity | 1 micro-second Max. |
| 5-3-4 | Shock | 490m/s ² {50G}, 3 strokes in each X.Y.Z. axes. (Based upon EIA-364-27B/MIL-STD-202 Method 213B Cond.A) | Appearance | No Damage |
| | | | Contact Resistance | 20 milliohms Max. |
| | | | Discontinuity | 1 micro-second Max. |
| 5-3-5 | Heat Resistance | 85±2°C,96 hours. (Based upon MIL-STD-202 Method 108A Cond.A) | Appearance | No Damage |
| | | | Contact Resistanc | 20milliohms Max. |
| 5-3-6 | Cold Resistance | -25±5°C,96 hours. (Based upon EIA-364-105) | Appearance | No Damage |
| | | | Contact Resistanc | 20milliohms Max. |
| 5-3-7 | Humidity | Temperature: 40±2°C Relative Humidity: 90~95% Duration: 96 hours (Based upon EIA-364-31A/MIL-STD-202 Method 103B Cond.B) | Appearance | No Damage |
| | | | Contact Resistance | 20milliohms Max. |
| | | | Dielectric Strength | Must meet 5-1-3 |
| | | | Insulation Resistance | 500Megohms Min. |
| 5-3-8 | Temperature Cycling | 5 cycles of: a) -55°C 30 minutes. b) +85°C 30 minutes. (Based upon EIA-364-32B) | Appearance | No Damage |
| | | | Contact Resistance | 20milliohms Max. |



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| Item | | Test Condition | Requirement | |
|--------|-------------------|--|--------------------|---|
| 5-3-9 | Salt Spray | 24±1 hours exposure to a salt spray from the 5±1% solution at 35±2°C. (Based upon EIA-364-26A/MIL-STD-202 Method 101D Cond.B). | Appearance | No Damage |
| | | | Contact Resistance | 20milliohms Max. |
| 5-3-10 | Solder-ability | Soldering Time: 5±0.5second. Solder Temperature: 245±5°C. (Based upon EIA-364-52) | Solder Wetting | 95% of immersed area must show no voids, pin holes. |
| 5-3-11 | Solder-Resistance | Soldering time:5~10 sec solder. Temperature:250+5/-5°C. (Based upon EIA-364-56A) | Appearance | No Damage |

6. INSERTION/WITHDRAWAL FORCE <Connector mating force>

| No. of CKT | First Insertion (kgf Max.) | 30 th Withdrawal (kgf Min.) | No. of CKT | First Insertion (kgf Max.) | 30 th Withdrawal (kgf Min.) |
|------------|----------------------------|--|------------|----------------------------|--|
| Single | 1.00 | 0.10 | 9 | 6.0 | 1.20 |
| 2 | 2.50 | 0.60 | 10 | 6.5 | 1.40 |
| 3 | 3.00 | 0.60 | 11 | 7.0 | 1.40 |
| 4 | 3.50 | 0.80 | 12 | 7.5 | 1.60 |
| 5 | 4.00 | 0.80 | 13 | 8.0 | 1.80 |
| 6 | 4.50 | 1.00 | 14 | 8.0 | 1.80 |
| 7 | 5.00 | 1.00 | 15 | 8.0 | 1.80 |
| 8 | 5.50 | 1.20 | 16 | 9.5 | 2.20 |

Note:Insertion and Withdrawal for 30Cycles