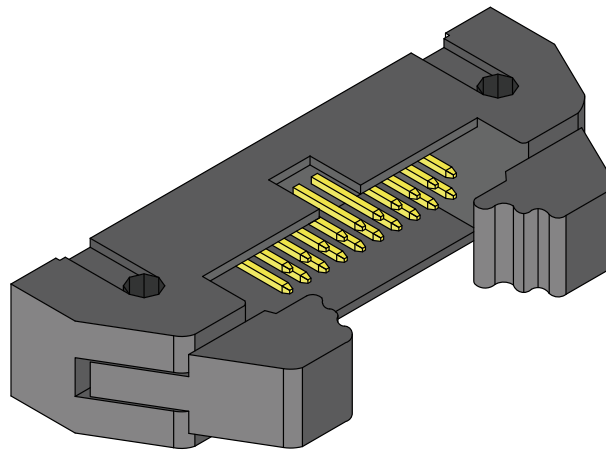




Product Specification

IDC Connector - Shrouded Header

SHTSLR-5



Written by: NLW

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Revision: A

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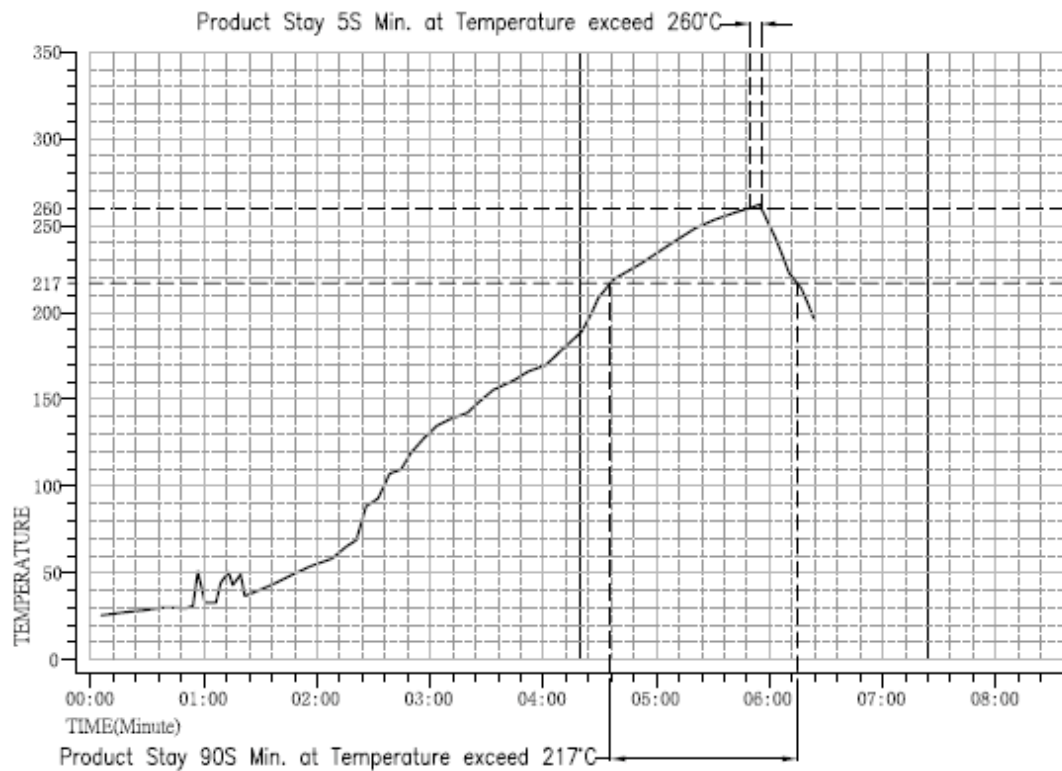
| | | | |
|---|---------------------------------|--|---|
| 1.0 Scope: | | | |
| This specification covers the requirements for product performance, test methods and quality assurance provisions of the .050" x .050" Shrouded Header specified above. | | | |
| 2.0 Reference Documents: | | | |
| The following documents form a part of this specification to the extent specified herein. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. | | | |
| 3.0 Material of Components: | | | |
| Item | Component | Material | Finish |
| 1 | Housing | Thermoplastic PA46+30% G.F. UL94V-0 | None |
| 2 | Contact | Brass | See drawing |
| 4.0 Design and Construction: | | | |
| Product shall be of the design, construction and physical dimensions specified in the applicable product drawing. | | | |
| 5.0 Performance and Test Descriptions: | | | |
| The product is designed to meet the electrical, mechanical and environmental performance requirements specified below. All tests are performed at ambient temperature unless otherwise specified. | | | |
| 5.1 Electrical Performance: | | | |
| Item | Test Items | Test Procedures & Condition | Requirements |
| 1 | Contact Resistance | EIA 364-23 Subject mated contacts assembled in housing to closed circuit current of 100 mA maximum at open at 50 mV maximum. | 1. Initial value: 20mΩ max. 2. Final value: 30mΩ max. |
| 2 | Insulation Resistance | EIA 364-21 Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector assemblies Test Voltage: 500 V DC Test Duration: 1 Minute | Not less than 1000 MΩ |
| 3 | Dielectric Withstanding Voltage | EIA 364-20 Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector assemblies. Test Potential: 500Vac at sea level Test Duration: 1 Minute | 1. No disruptive discharge, leakage or deterioration. 2. Current leakage: < 0.5 mA |

| 5.2 Mechanical Performance | | | |
|-----------------------------------|-------------------|---|---|
| Item | Test Items | Test Procedures & Condition | Requirement |
| 1 | Contact Retention | EIA 364-29 Subject unmated connector shall be mounted in a position of axial alignment of the contacts with the plunger of the test gauge to measure the withstand ability of the contact retaining system. | Minimum 500 gf (Per Pin) |
| 2 | Durability | EIA 364-09 Mate and unmate connector assemblies at maximum rate of 500 cycles per hour. Test Cycles: 300 cycles min. | 1. No evidence of damage. 2. The electrical performances meet the specification specified in section 5.1 |
| 3 | Solderability | EIA 364-52 Category 3 Subject unmated connectors should be tested according to the condition listed below: Steam Aging Temperature: 90~96°C Steam Aging Duration: 8 hours±5 min. Soldering Temperature: 245±5°C Soldering Time: 4~5 Seconds | Continuous solder coating with a minimum 95% coverage. |
| 4 | Vibration | EIA 364-28 Condition V Test Letter A Subject mated connectors should be tested according to the condition listed below: Test condition: Random Frequency: 50~2000 Hz PSD Value: 3.13 Grms minimum Duration: 15 minutes/axis Times: Each of three mutually perpendicular planes. | 1. No evidence of damage. 2. No discontinuities of 1μs or longer duration. 3. The electrical performances meet the specification specified in section 5.1 |
| 5 | Physical Shock | EIA 364-27 Condition H Subject mated connectors should be tested according to the condition listed below: Wave Form: Half-sine Peak acceleration: 30 G's Duration: 11ms Times: 3 Shocks in each direction applied along three mutually perpendicular planes, total 18 shocks. | 1. No evidence of damage. 2. No discontinuities of 1μs or longer duration. 3. The electrical performances meet the specification specified in section 5.1 |

| 5.3 Environment Performance | | | |
|------------------------------------|------------------------------|--|---|
| Item | Test Items | Test Procedures & Condition | Requirement |
| 1 | Humidity (temp. cycling) | EIA 364-31 Method III Test Condition A Subject mated connectors should be tested according to the condition listed below: Temperature: 25~65°C Humidity: 90~95% (R.H.) Duration: 96 hours | 1. No evidence of damage. 2. The electrical performances meet the specification specified in section 5.1 |
| 2 | Thermal Shock | EIA 364-32 Test Condition I Subject mated connectors should be tested according to the condition listed below: Temperature: -55~85°C Cycles: 5 Exposure time at temperature extremes: 30 minutes | 1. No evidence of damage. 2. The electrical performances meet the specification specified in section 5.1 |
| 3 | Salt Spray | EIA 364-26 Test Condition A Subject mated and unmated connectors should be tested according to the condition listed below: Temperature: 35±1.1°C Humidity: 95~98% (R.H) PH Value: 6.5~7.2 Duration: 8 hours | 1. No evidence of damage. 2. The electrical performances meet the specification specified in section 5.1 |
| 4 | Temperature Life | EIA 364-17 Test Condition 3 Method A Subject mated connectors should be tested according to the condition listed below: Temperature: 85±2°C Duration: 96 hours | 1. No evidence of damage. 2. The electrical performances meet the specification specified in section 5.1 |
| 5 | Resistance to Soldering Heat | EIA 364-56 Procedure 3 Test Condition C 1. PA46 Thermoplastic can withstand 260±5°C Temperature IR Stove. Time: 5~10 seconds 2. PBT Thermoplastic can withstand 235±5°C Temperature of Tin Pass Wavecrest Under PCB board temperature: 260±5°C Time: 5~10 seconds | 1. No evidence of damage. 2. The electrical performances meet the specification specified in section 5.1 3. The mechanical performances meet the specification specified in section 5.2 |

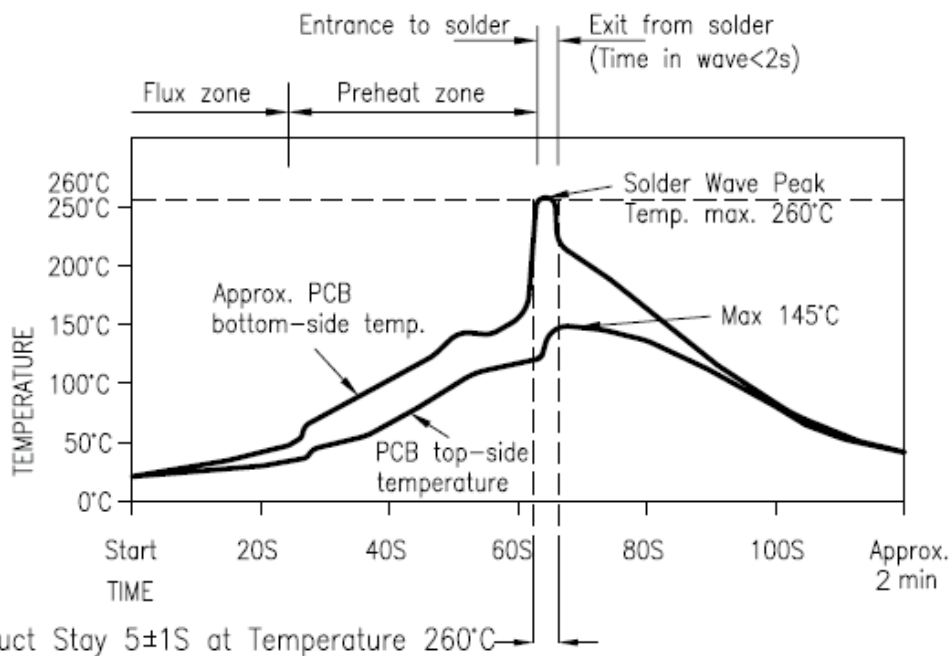
| | | | |
|---|---|--|--|
| 6 | SMT Type Product Pass IR Reflow Test | <p>Temperature: 220°C~225°C~230°C~240°C~265°C</p> <p>Speed: 8mm/Seconds</p> <p>Temperature exceed 217°C, product needs to stay in IR Reflow stove for 90 seconds at least</p> <p>Temperature exceed 260°C, product needs to stay in IR Reflow stove for 5 seconds at least</p> | <p>1. No evidence of damage.</p> <p>2. The electrical performances meet the specification specified in section 5.1</p> <p>3. The mechanical performances meet the specification specified in section 5.2</p> |
|---|---|--|--|

SMT Type Product Pass IR Reflow Graph



| | | | |
|---|---------------------------------------|--|--|
| 7 | DIP Type Product Pass Wavesolder Test | Test Condition: Temperature: 260°C Duration: 5 Seconds±1 | <p>1. No evidence of damage.</p> <p>2. The electrical performances meet the specification specified in section 5.1</p> <p>3. The mechanical performances meet the specification specified in section 5.2</p> |
|---|---------------------------------------|--|--|

DIP Type Product Pass Wavesolder Graph



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