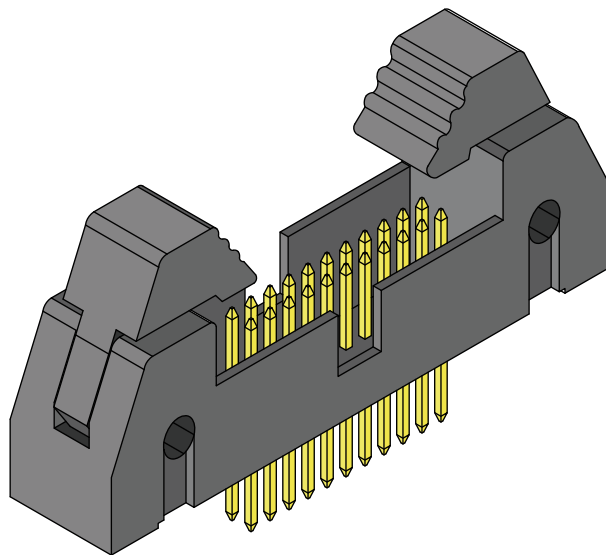




## Product Specification

IDC Connector - Shrouded Header

SHTSL-5



Written by: NLW

Date: 04/23/2010

Revision: A

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# Product Specification

## SHTSL-5

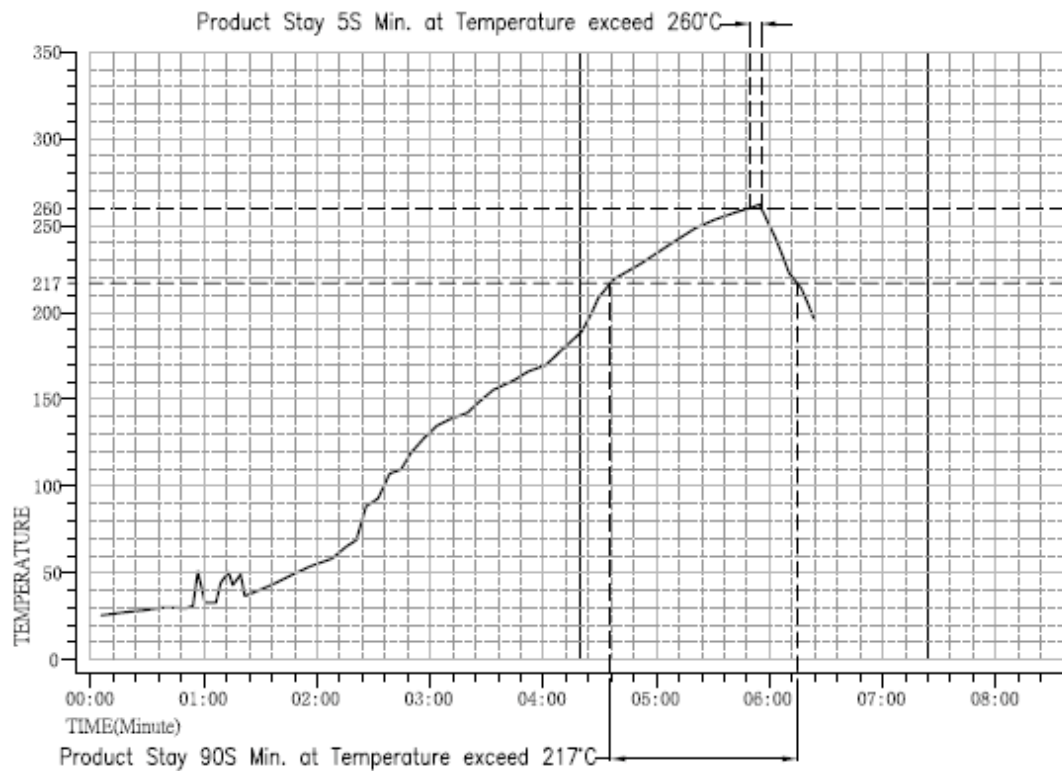
<b>1.0 Scope:</b>			
This specification covers the requirements for product performance, test methods and quality assurance provisions of the .050" x .050" Shrouded Header specified above.			
<b>2.0 Reference Documents:</b>			
The following documents form a part of this specification to the extent specified herein. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence.			
<b>3.0 Material of Components:</b>			
Item	Component	Material	Finish
1	Housing	Thermoplastic PA46+30% G.F. UL94V-0	None
2	Contact	Brass	See drawing
<b>4.0 Design and Construction:</b>			
Product shall be of the design, construction and physical dimensions specified in the applicable product drawing.			
<b>5.0 Performance and Test Descriptions:</b>			
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.			
<b>5.1 Electrical Performance:</b>			
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

<b>5.2 Mechanical Performance</b>			
<b>Item</b>	<b>Test Items</b>	<b>Test Procedures &amp; Condition</b>	<b>Requirement</b>
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

<b>5.3 Environment Performance</b>			
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

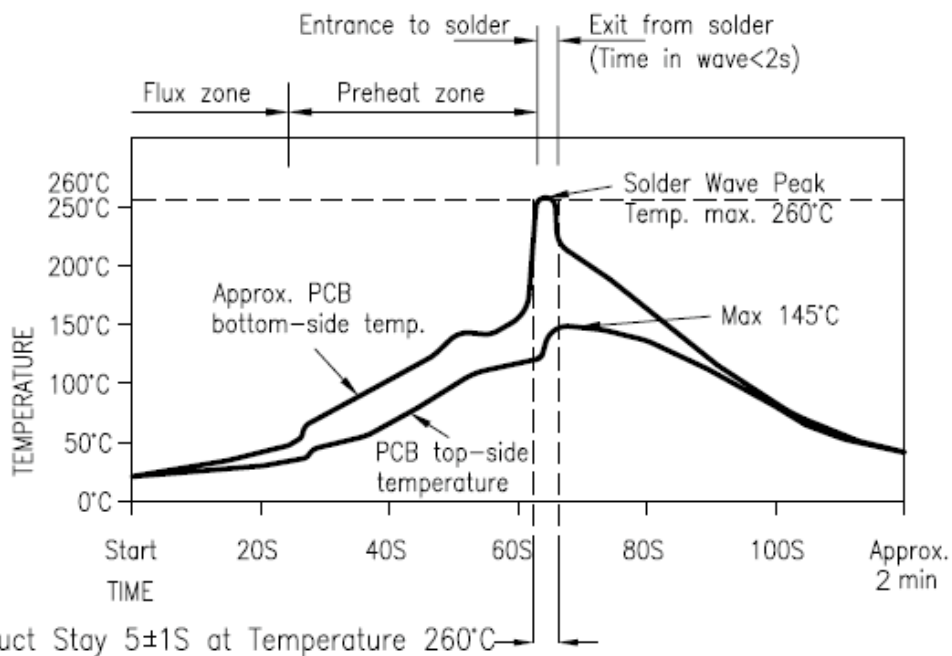
6	SMT Type Product Pass IR Reflow Test	<p>Temperature: 220°C~225°C~230°C~240°C~265°C</p> <p>Speed: 8mm/Seconds</p> <p>Temperature exceed 217°C, product needs to stay in IR Reflow stove for 90 seconds at least</p> <p>Temperature exceed 260°C, product needs to stay in IR Reflow stove for 5 seconds at least</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>
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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>
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DIP Type Product Pass Wavesolder Graph



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