

#### **AND**

#### **PERFORMANCE**

#### TYPE OF PRODUCT

#### 2.54mm BOX HEADER

### 1. Scope:

This specification covers the requirements for product performance, test methods and quality assurance provisions of 2.54mm Box Header.

### 2. 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. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

The Test Sequence and Test Procedures for Electrical Connectors and Sockets.

# 3. Material of Components:

	component	Material	Finish
1	Housing	(UL94V-0) PA6T	None
2	Contact	Brass	Refer to Ordering Informatin

# 4. Design and Construction:

Product shall be of the design, construction and physical dimensions specified in the

applicable product drawing.

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## 4. Performance and Tesst 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:

	Test Items	Test Procedures & Condition	Requirements
1	Contact Resistance	Subject mated contacts assembled in housing to closed circuit current of 100 mA maximum at open circuit at 50 mV maximum.	<ol> <li>Initial value:</li> <li>20 mΩ max.</li> <li>Final value:</li> <li>30 mΩ max.</li> </ol>
2	Insulation Resistance	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector assemblies.  Test Voltage: 1000 V DC.	Not less than 1000 MΩ
3	Dielectric Withstanding Voltage	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector assemblies.  Test Potential: 1000Vac at sea level  Test Duration: 60 seconds	<ol> <li>No disruptive discharge, leakage or deterioration.</li> <li>Current leakage:         &lt;0.5 mA</li> </ol>

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## 5.2 Mechanical Performance:

	Test Items	Test Procedures & Condition	Requirements
1	Contact Retention	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.	IR前≥1.0Kgf/Pin
2	Durability	Mate and Unmate connector assemblies at maximum rate of 200 cycles per hour. Test Cycles: 300 cycles Min	<ol> <li>No evidence of damage.</li> <li>The electrical performances meet the spec. specified in paragraph 5.1</li> </ol>
3	Solderability	Subject unmated connectors should be tested according to the condition listed below: Steam Aging Temperature: 90 ~ 96° C Steam Aging Duration: 8 hoursr5 min. Soldering Temperature: 260±5° C Soldering Time: 4 ~ 5 seconds	Continuous solder coating with a minimum 95% coverage.

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	Test Items	Test Procedures & Condition	Requirements
4	Vibration	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 1 ps or longer duration. 3. The electrical performances meet the spec. specified in paragraph 5.1
5	Physical Shock	Subject mated connectors should be tested according to the condition listed below:  Wave form: Half-sine Peak acceleration: 30 G's Duration: 11 ms 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 spec. specified in paragraph 5.1

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## 5.3 Environmental Performance:

	Test Items	Test Procedures & Condition	Requirements
1	Humidity (Temperature Cycling)	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 spec. specified in paragraph 5.1
2	Thermal Shock	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	<ol> <li>No evidence of damage.</li> <li>The electrical performances meet the spec. specified in paragraph 5.1</li> </ol>
3	Salt Spray	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: 12 hours	<ol> <li>No evidence of damage.</li> <li>The electrical performances meet the spec. specified in paragraph 5.1</li> </ol>

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	Test Items	Test Procedures & Condition	Requirements
4	Temperature Life	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 spec. specified in paragraph 5.1
5	Resistance to Soldering Heat	<ol> <li>PA4T Thermoplastic Canbe withstand245±5° C Temperature IR Stove.         Time: 5~10 seconds</li> <li>PBT/PA66 Thermoplastic Canbe withstand 220±10° C Temperature of Tin Pass Wavecrest</li> <li>Under PCB board Temperature:245±5° C         Time: 5~10 seconds</li> </ol>	1. No evidence of damage. 2. The electrical performances meet the spec. specified in paragraph 5.1 3. The mechanical performances meet the spec. specified in paragraph 5.2

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