1. Scope :

1.1 Contents

This specification covers the requirements for product performance, test methods and quality assurance provisions of Spring Finger 1.1H.

2. Applicable 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.

2.1 AMP Specifications :

A. 109-5000 : Test Specification, General Requirements for Test Methods

B. 501-61071 : Test Report

2.2 Commercial Standards and Specifications

A. MIL STD. 202

3. Requirements :

3.1 Design and Construction :

Product shall be of the design, construction and physical dimensions specified on the applicable product drawing.

3.2 Materials :

A. Contact

Material : Copper alloy, Au plating on contact area Ni under plating all over.

3.3 Ratings :

A. Temperature Rating: - 40 °C to 85 °C

B. Voltage: 12 Volts AC

C. Current: 0.5A

3.4 Performance Requirements and Test Descriptions :

The product shall be designed to meet the electrical, mechanical and environmental performance requirements specified in Fig. 1. All tests shall be performed in the Room Temperature, unless otherwise specified.

3.5 Test Requirements and Procedures Summary

Para.	Test Items	Requirements	Procedures
3.5.1	Examination of Product	No physical damage	Visual inspection No physical damage
		Electrical Requirements	
3.5.2	Contact Resistance （Low Level）	Initial, 50mΩ Max.	Mate pad with dry circuit(20mV Max., 10mA Max.) at 50% WP. (Spring height: 0.875mm) 4-wire measurement is required. Measuring condition shown as Fig.4
		Mechanical Requirements	
3.5.3	Normal Force	Normal force at 0.875mm spring Height: 0.4N Min	Stroke the spring top to 0.875mm product height. Measuring condition shown as Fig.5
3.5.4	Durability	Contact height should be under 20% from initial height after test No physical damage and shall meet requirements of subsequent tests.	Speed: 600cycle/hour, Total 10000cycle Stroke: 80% of Working position (Spring height 0.74mm)
3.5.5	Solderability	Solderable area shall have a minimum of 95% solder coverage. For lead free solder pot temperature shall be 240℃±5℃	Peak Temperature : 240℃±5℃, Reflow Time(230℃ Min) : 45~60 seconds.
		Environmental Requirements	
3.5.6	Damp heat	Contact height should be under 20% from initial height after test No physical damage and shall meet requirement of subsequent test.	120 hours at Temp. 85℃ ±2℃, R/H 85 ± 5% It should be tested at 100% WP (Spring height 0.65mm)
3.5.7	Thermal Shock	Contact height should be under 20% from initial height after test No physical damage and shall meet requirement of subsequent test.	Ta= - 40℃ for 2hour ;Tb= +85℃ for 2hour Total 15cycles. It should be tested at 100% WP (Spring height: 0.65mm)
3.5.8	Salt spray	No physical damage and shall meet requirement of subsequent test.	48 hours spray, At temp. 35±2 ℃ R/H 90~95%, Salt NaCl mist 5% After test wash parts and return to room ambient for 2 hours.

3.5.9	Resistance to Soldering heat	No physical damage and shall meet requirement of subsequent test.	Reflow condition shown as Fig.3 Peak Temerature: 245℃

Fig 1. (END)

The meaning of text “Physical damage” in the table above is :

- No dimension change
- No pinhole corrosion of plating
- No general corrosion of plating
- No adhesion problem of plating
- No blistering of plating
- No flaking of plating
- No loosen parts
- No cracks on any parts

4. Product Qualification Test Sequence

Para.	Test Examination	Test Group				
		1	2	3	4	5
		Test Sequence (a)				
3.5.1	Examination of Product	1,10	1,3	1,7	1,7	1,5
3.5.2	Contact Height mesaurement	3,7		2,5	2,5	
3.5.3	Contact resistance	4,8		3,6	3,6	2,4
3.5.4	Normal force	5,9				
3.5.5	Durability	6				
3.5.6	Solderability		2			
3.5.7	Damp heat			4		
3.5.8	Thermal Shock				4	
3.5.9	Salt spray					3
3.5.10	Resistance to Soldering heat	2				

(a) Numbers indicate sequence in which the tests are performed.

Fig. 2

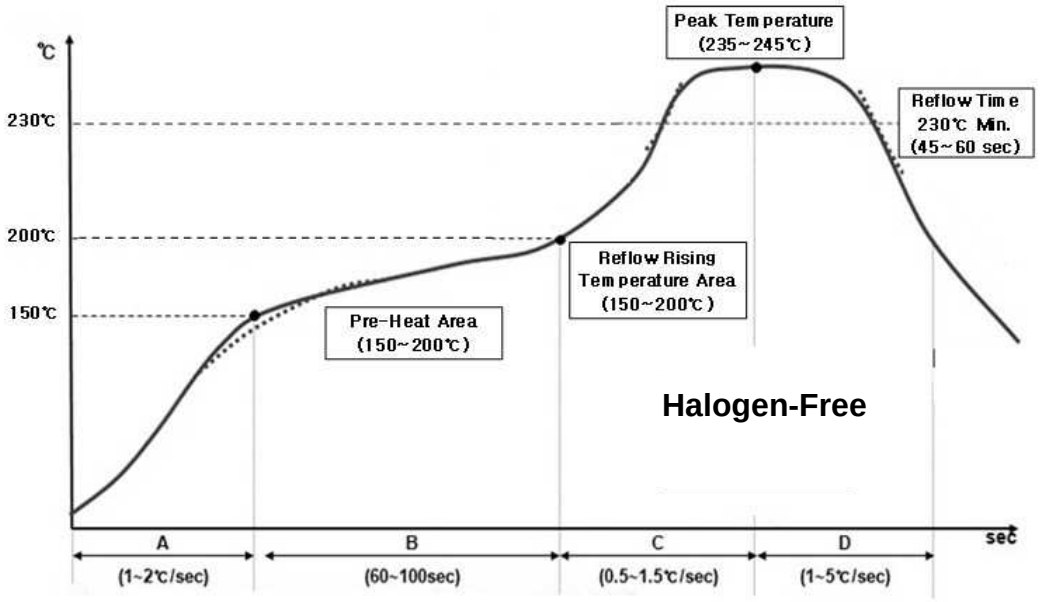

Fig.3 Reflow temperature profile

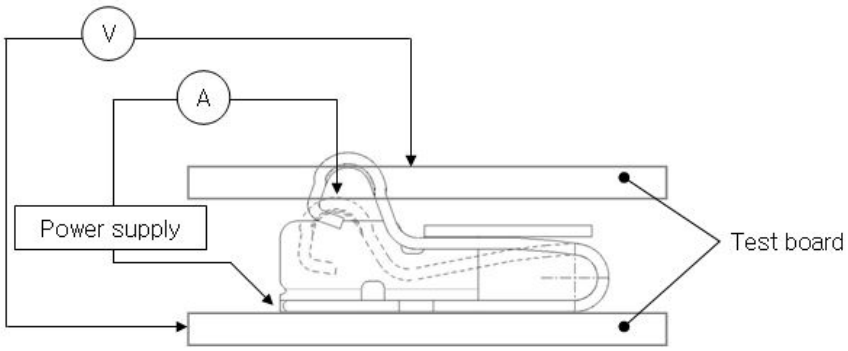

Fig.4 Contact Resistance Measuring Points

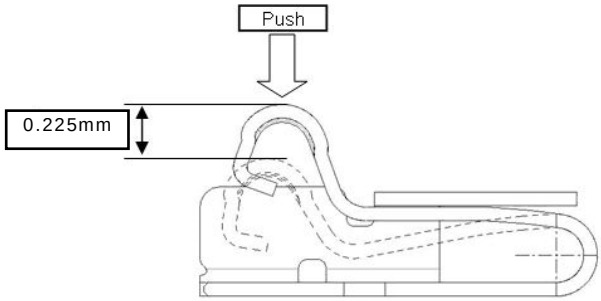

Fig.5 Contact Normal Force