
RAST 2.5 Tab Headers

1. Scope

1.1 Contents

This specification covers performance, tests and quality requirements for the TE Connectivity **RAST 2.5 Tab Headers**. The assembly is designed with locking and keying to the RAST 2.5 Specification and is available in vertical and right angle versions as well as a standard RAST 2.5 tab header version.

1.2 Qualification

When tests are performed on the subject product line, the procedures specified in TE 109 series specifications shall be used. All inspections shall be performed using the applicable inspection plan and product drawing.

2. Applicable Documents

The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies. 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 TE Connectivity Document

- A. 109-1: General Requirements for Test Specifications
- B. 109 series: Test Specification as indicated in figure 2 (Comply with EIA-364)
- C. 501-: Test Report

2.2 International Standards

- EIA-364: Electrical Connector/Socket Test Procedures Including Environment Classifications.
- IEC 60695-2-11: Fire Hazard Testing - Part 2-11: Glowing/hot-wire Based Test Methods -Glow-wire Flammability Test Method for End-products
- IEC 60695-2-13: Fire Hazard Testing - Part 2-13: Glowing/hot-wire Based Test Methods -Glow-wire Ignitability Test Method for Materials

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. Housing: Thermoplastic or Thermoplastic High Temp., UL94V-0 and GWFI 850 °C, GWIT 775°C.
- B. Contact: Copper Alloy, Tin or Silver plating on contact over Nickel under-plating overall.

3.3 Ratings :

- A. Voltage Rating: 50VAC/250VAC
- B. Current Rating: 2 amperes/6 amperes
- C. Temperature Range: -40°C to +120°C ¹⁾

3.4 Performance Requirements and Test Descriptions

Product is designed to meet the electrical, mechanical and environmental performance requirements specified in Figure 1. Unless otherwise specified, all tests shall be performed at ambient environmental conditions per AMP Specification 109-1 unless otherwise specified.

Note: 1). UL certified RTI 140°C max

3.5 Test Requirements and Procedures Summary (Fig 1)

NO.	TEST ITEMS	REQUIREMENTS	PROCEDURES
3.5.1	Examination of Product	Meets requirements of product drawing. No physical damage.	Visually, dimensionally and functionally inspected per applicable inspection plan. EIA-364-18B
ELECTRICAL REQUIREMENTS			
3.5.2.1	Insulation Resistance	5000M ohms min. (Initial) 5000M ohms min (Final)	Measure by applying test potential between adjacent contacts. EIA-364-21B
3.5.2.2	Dielectric Strength	Tab headers must withstand test potential of 1500VAC for 1 min. Current leakage limit to 0.5mA max.	Measure by applying test potential between adjacent contacts. EIA-364-20A, Method A
MECHANICAL REQUIREMENTS			
3.5.3.1	Contact Retention Force	20 N [4.49 lbf] minimum.	EIA-364-13. Measure force necessary to remove contact tab from housing at a maximum rate of 12.7 mm [.5 in] per minute.
NO.	TEST ITEMS	REQUIREMENTS	PROCEDURES
3.5.3.2	Glow wire ignition temperature	Tested part shall have rating of 750° C or greater with no flame. Part does not require testing if housing material has rating of 775 ° C or greater at thickness of 1 mm [.039 in] (housing thickness) and no flame.	IEC 60695-2-11 for part or IEC 60695-2-13 for housing material.
ENVIRONMENTAL REQUIREMENTS			
3.5.4.1	Temperature Life	No Physical damage	Subject connectors to temperature life at 85°C±2°C for 96 hours. EIA 364-17 condition III
3.5.4.2	Humidity-Temperature Cycling	No Physical damage	Subject connectors to steady state humidity at 40°C±2°C and 90-95% R.H for 96hrs. EIA-364-31A, Method III, condition B
3.5.4.3	Solder ability	The inspected area of each lead must have 95% solder coverage minimum.	Temperature: 245±5 ° C, 3±0.5sec. EIA-364-52, class I. category 1.
3.5.4.4	Resistance to Soldering Heat	No Physical damage	For through hole product: EIA-364-56, Procedure 3, Condition B. Subject connectors to solder bath at 260±5°C for 5±1 seconds (Flow soldering). The distance between the mounting surface and solder surface shall be 1.5 mm to 2.54mm For SMT product: EIA-364-56A, Procedure 5, Level 3.

3.5.4.5	Cold	No physical damage	Acc. IEC 512 Part6, test 11 T: -40 ° C, duration time: 2 hours.
3.5.4.6	Dry heat	No physical damage	Acc. IEC 512 Part6, test 11 T: 120 ° C, duration time: 7 days

Fig. 1 (End)

*** Notes**

A) Product must be without rust, corrosion transformation, crack and discoloration.

B) Shall meet visual requirements, show no physical damage, and meet requirements of additional tests as specified in the Product Qualification and Requalification.

3.6 Product Qualification Test Sequence (Fig 2)

Test or Examination	Test Group						
	1	2	3	4	5	6	7
	Test Sequence (a)						
Examination of product	1	1,3	1,3	1,3	1,8	1,9	1,4
Insulation Resistance					2,6	2,7	
Dielectric withstanding Voltage					3,7	3,8	
Contact Retention Force	2						
Glow wire ignition temperature				2			
Temperature Life					5	5	
Humidity-Temperature Cycling					4	4	
Solder ability		2					
Resistance to Soldering Heat			2				
Condensed water/changing climate with air containing SO2						6	
Cold							2
Dry Heat							3

*** Notes:**

- (a) Numbers indicate the sequence in which the tests are performed.
- (b) Group 6 is for silver plated product.

4. Quality Assurance Provisions**4.1 Test Conditions**

Unless otherwise specified, all the tests shall be performed in any combination of the following test conditions.

Temperature :	15~35°C
Relative Humidity :	45~75 %
Atmospheric Pressure :	86.6~106.6 Kpa

Fig. 3**4.2 Tests****4.2.1 Test Specimens**

Specimens shall be prepared in accordance with applicable Instruction Sheets and shall be selected at random from current production. Test group 1 shall consist of a minimum of 10 specimens. Test groups 2, 3, 4, 5, 6 and 7 shall each consist of a minimum of 5 specimens.

4.2.2 Test sequence

Qualification inspection shall be verified by testing specimens as specified in fig2

4.3 Acceptance

Acceptance is based on verification that the product meets the requirements of Figure 1. Failures attributed to equipment, test setup or operator deficiencies shall not disqualify the product. If product failure occurs, corrective action shall be taken and specimens resubmitted for qualification. Testing to confirm corrective action is required before resubmittal.

4.4 Quality Conformance Inspection

The applicable quality inspection plan shall specify the sampling acceptable quality level to be used. Dimensional and functional requirements shall be in accordance with the applicable product drawing and this specification.

The applicable product description and part numbers please see the customer drawings: C-1971817, C-1971819, C-1971921.

LTR	REVISION RECORD	DR	CHK	APRD	DATE
A	Release	Richard Chen	Hapye Wu	Eric Kong	10APR2012
B	ECR-12-008565	Bob Yang	Hapye Wu	Yuhong Mao	4MAY2012
B1	---	Winter Wang	Hapye Wu	Yuhong Mao	18SEP2012
B2	---	Winter Wang	Hapye Wu	Yuhong Mao	12NOV2012
B3	---	Winter Wang	Hapye Wu	Yuhong Mao	22JAN2013
B4	---	Winter Wang	Hapye Wu	Yuhong Mao	29JAN2013