
AMP-IN* Miniature Contact

1. SCOPE

1.1. Content

This specification covers performance, tests and quality requirements for AMP-IN* miniature contacts. These contacts are designed to facilitate lead preparation for printed circuit boards prior to wave soldering. Through their use, support is gained in wire insulation area assuring reliable solder connection with resistance to wire flexing and vibration.

1.2. Qualification

When tests are performed on subject product line, procedures specified in 109-Series Test Specifications shall be used. All inspections shall be performed using applicable inspection plan and product drawing.

2. APPLICABLE DOCUMENTS

The following documents form a part of this specification to the extent specified herein. In the event of conflict between requirements of this specification and product drawing, product drawing shall take precedence. In the event of conflict between requirements of this specification and referenced documents, this specification shall take precedence.

2.1. TE Connectivity (TE) Documents

- A. 109-1: General Requirements for Test Specifications
- B. 109 Series: Test Specifications as indicated in Figure 1.
- C. 114-1016: Application Specification
- D. 501-176: Test Report

3. REQUIREMENTS

3.1. Design and Construction

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

3.2. Material

Contact: Phosphor bronze, pre-tin plated

3.3. Performance and Test Description

Product is designed to meet mechanical performance requirements specified in Figure 1. All tests are performed at ambient environmental conditions per Test Specification 109-1 unless otherwise specified.

3.4. Test Requirements and Procedures Summary

Test Description	Requirement	Procedure
Examination of product.	Meets requirements of product drawing and Application Specification 114-1016	Visual, dimensional and functional per applicable quality inspection plan.
MECHANICAL		
Contact insertion force.	7 pounds maximum per contact.	Measure force to insert contact into printed circuit board with nominal hole size as specified on customer print Test Specification 109-41.
Contact retention.	.5 pound minimum	Apply axial load to contact assembled in printed circuit board with nominal hole size as specified on customer print. Test Specification 109-30.
Solderability.	Applicable portion of contact shall have minimum of 95% solder coverage.	Subject contacts to solderability. Test Specification 109-11-3.
Crimp tensile.	2 pounds minimum.	Determine crimp tensile of wire at rate of 1 inch per minute. Test Specification 109-16.

Figure 1

3.5. Contact Qualification and Requalification Test Sequence

Test or Examination	Test Group (a)		
	1	2	3
Test Sequence (b)			
Examination of product	1	1	1
Contact insertion force	2		
Contact retention	3		
Solderability		2	
Crimp tensile			2

NOTE (a) See Paragraph 4.1.A.
 (b) Numbers indicate sequence in which tests are performed.

Figure 2

4. QUALITY ASSURANCE PROVISIONS

4.1. Qualification Testing

A. Sample Selection

Contacts shall be prepared in accordance with applicable Instruction Sheets and shall be selected at random from current production. All test groups shall consist of 15 contacts of each type being qualified. All contacts shall be crimped to appropriate PN 103501 and 103502 tin plated test conductors in accordance with Application Specification 114-1016.

B. Test Sequence

Qualification inspection shall be verified by testing samples as specified in Figure 2.

4.2. Requalification Testing

If changes significantly affecting form, fit or function are made to product or manufacturing process, product assurance shall coordinate requalification testing, consisting of all or part of original testing sequence as determined by development/product, quality and reliability engineering.

4.3. Acceptance

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

4.4. Quality Conformance Inspection

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