

PRODUCT SPECIFICATION

1. SCOPE

1.1. Content

This specification covers the performance, tests and quality requirements for the AMP EDGE* terminal. These terminals provide quick connect/disconnect for printed circuit boards. Their use in specially slotted boards provide a high force, friction interface, to interconnect the printed circuit boards and wires which interconnect the systems components.

1.2. Qualification

When tests are performed on the subject product line, the procedures specified in AMP 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. 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. 109-1: General Requirements for Test Specifications
- B. 109 Series: Test Specifications as indicated in Figure 1
(Comply with MIL-STD-202, MIL-STD-1344 and EIA RS-364)

3. REQUIREMENTS

3.1. Design and Construction

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

3.2. Materials

Terminals: Brass, phosphor bronze or beryllium copper, tin plated

3.3. Ratings

See Para 3.5.(a)

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	A	Change per ECN	<i>PK</i>	7/26	SHEET 1 OF 5			
		AG-473		<i>84</i>				
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3.4. Performance and Test Description

Terminals shall be designed to meet the electrical, mechanical and environmental performance requirements specified in Figure 1.

3.5. Test requirements and Procedures Summary

Test Description	Requirement	Procedure
Examination of Product	Meets requirements of product drawing.	Visual, dimensional and functional per applicable inspection plan.
ELECTRICAL		
Termination Resistance, Dry Circuit (Low Level)	8.0 milliohms maximum initial.	Subject mated contacts assembled in housing to 50 mv open circuit at 50 ma maximum, see Figure 3; AMP Spec 109-6, cond C.
MECHANICAL		
Mating Force	9.0 pounds maximum initial.	Measure force necessary to mate terminal with printed circuit board, incorporating free floating fixtures at a rate of 0.5 inch/minute; AMP Spec 109-42, cond A, calculate force per contact.
Unmating Force	1.0 pounds minimum final.	Measure force necessary to unmate terminal and printed circuit board at a rate of 0.5 inch/minute; AMP Spec 109-42, cond A, calculate force per contact.
Crimp Tensile	Wire Size, Crimp Tensile <u>AWG</u> <u>pounds minimum</u> 22 15 20 20	Determine crimp tensile at a rate of 1 inch/minute; AMP Spec 109-16.
Durability	Mating-unmating; 15 milliohms maximum termination resistance, dry circuit.	Mate and unmate connector assemblies for 10 cycles; AMP Spec 109-27.

Figure 1 (cont)

AMP		AMP INCORPORATED Harrisburg, Pa.		SHEET <u>2</u> OF <u>5</u>	
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NAME TERMINAL, AMP EDGE					

Test Description	Requirement	Procedure
ENVIRONMENTAL		
Thermal Shock (b)	15 milliohms maximum termination resistance, dry circuit.	Subject mated connectors to 5 cycles between -55° and 85°C; AMP Spec 109-22.
Humidity, Steady State (b)	15 milliohms maximum termination resistance, dry circuit.	Subject mated connectors to steady state humidity at 40°C and 90 - 95% RH; AMP Spec 109-23, method II, cond A.

(a) Maximum rated current that can be carried by this product is limited by maximum operating temperature of housings, which is 105°C, and temperature rise of contacts, which is 30°C. Variables which shall be considered for each application are: wire size, connector size, contact material, ambient temperature, and printed circuit board design.

(b) Shall remain mated and show no evidence of damage, cracking or chipping.

Figure 1 (end)

3.6. Terminal Tests and Sequences

Test or Examination	Test Group (a)				
	1	2	3	4	5
	Test Sequence (b)				
Examination of Product	1				
Termination Resistance, Dry Circuit		2, 4	1, 3	1, 3	
Mating Force		1			
Unmating Force		5			
Crimp Tensile					1
Durability		3			
Thermal Shock			2		
Humidity, Steady State				2	

(a) See Para 4.1.A.

(b) Numbers indicate sequence in which tests are performed.

Figure 2

SHEET <u>3</u> OF <u>5</u>	AMP		AMP INCORPORATED Harrisburg, Pa.	
	LOC B	NO A	NO 108-1011	REV A
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4. QUALITY ASSURANCE PROVISIONS

4.1. Qualification Testing

A. Sample Section

Connector housings and contacts shall be prepared in accordance with applicable Instruction Sheets. They shall be selected at random from current production. Test group 1 shall consist of 2 terminals. Test group 2 through 5 shall consist of 15 terminals for each wire size to be qualified. All contacts shall be crimped to appropriate PN 103501 and 103502 tin plated test connectors in accordance with appropriate AMP Specifications.

B. Test Sequence

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

C. Acceptance

- (1) Requirements put on test samples, as indicated in the requirements portion of Figure 1, exist as either the upper or lower statistical tolerance limit (95% confidence, 99% reliability). All samples tested in accordance with this specification shall meet the stated tolerance limit.
- (2) Failures attributed to equipment, test setup, or operator deficiencies shall not disqualify the product. When product failure occurs, corrective action shall be taken and samples resubmitted for qualification.

4.2. Quality Conformance Inspection

The applicable AMP inspection plan will 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.

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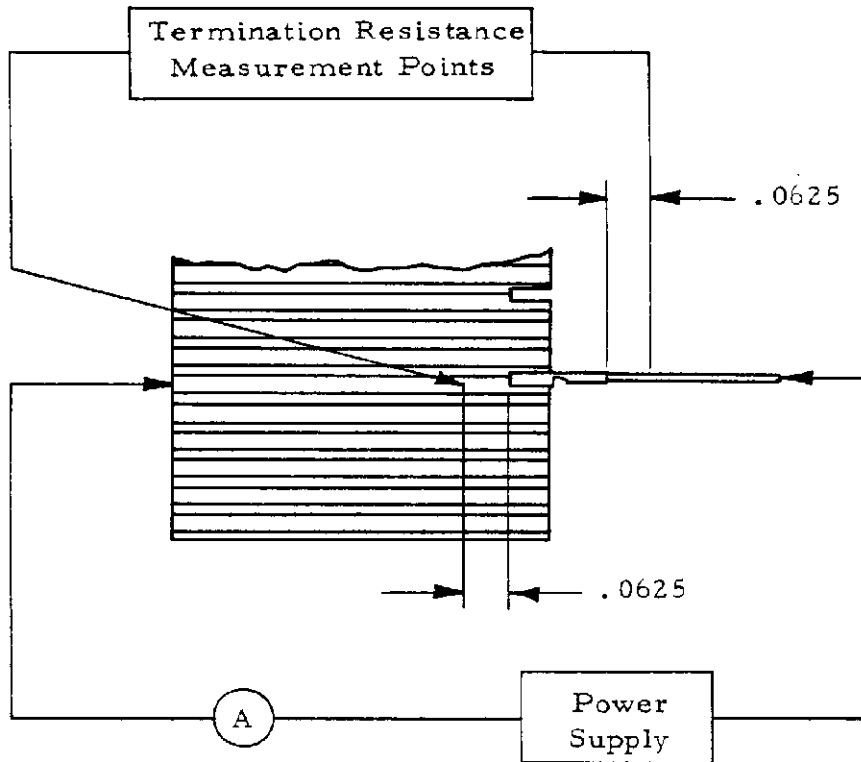


Figure 3
Resistance and Temperature Measurements Points

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