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**Standard MAG-MATE Poke-In Tab Terminals**

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**1. SCOPE**

## 1.1. Content

This specification covers the performance, tests and quality requirements for the \*MAG-MATE\* poke-in tab. These terminals are designed for general use with standard MAG-MATE terminals poke-in.

## 1.2. Qualification

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

## 1.3. Qualification Test Results

Successful qualification testing on the subject product line has not been completed. The Qualification Test Report number will be issued upon successful qualification testing.

**2. APPLICABLE DOCUMENTS AND FORMS**

The following documents and forms constitute 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, the specification shall take precedence.

## 2.1. TE Documents

- ◆ 109-1: General Requirements for Test Specifications
- ◆ 109 Series: Test Specifications as indicated in Figure 1
- ◆ 114-2046: Application Specification (Terminal, MAG-MATE, Standard, Application of)

**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

- Terminal: Brass, Pre-Tin Plated

## 3.3. Performance and Test Description

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

## 3.4. Test Requirements and Procedures Summary

TEST DESCRIPTION	REQUIREMENT	PROCEDURE	
Initial examination of product	Meets requirements of product drawing and Specification 114-2046	Visual, dimensional and functional per applicable inspection plan	
<b>ELECTRICAL</b>			
Termination Resistance Dry Circuit	See Figure 3	Subject terminals assembled in housing to 50mV open circuit at 100 mA maximum, see Figure 4; Spec. 109-6-7	
Current Cycling	Termination resistance at stated test current, see Figures 3 and 4	Subject termination to 480 cycles, 15 minutes 'ON' and 15 minutes 'OFF'. See Figure 3 for test current; Spec. 109-51, method 2, read initially and after 96, 192, 384 and final	
<b>MECHANICAL</b>			
Crimp Tensile	Wire Size	Crimp Tensile (N.Min.)	Determine crimp tensile at a rate of 50mm/minute, Spec. 109-16
	0.35 mm <sup>2</sup>	60	
	0.75 mm <sup>2</sup>	100	
	18 AWG	90	
	16 AWG	135	
	14 AWG	225	
<b>ENVIRONMENTAL</b>			
Thermal Shock	Termination resistance, dry circuit See Figures 3 and 4	Subject terminations to 25 cycles between -65°C and 125°C; Spec. 109-22. Measure termination resistance initially and every 5 cycles	
Humidity-Temperature Cycling	Termination resistance, dry circuit See Figures 3 and 4	Subject terminations to 10 humidity-temperature cycles between 25°C and 65°C at 95% RH; Spec. 109-23, method III, cond. B, less steps 7a and 7b. Measure termination resistance initially; 2, 5, 8 and 10 cycles	
Temperature Life, Heat Age	Termination resistance, dry circuit See Figures 3 and 4	Subject terminations to 118°C for 33 days; Spec. 109-43, test level 9, test duration I. Measure termination resistance initially after 2, 4, 8, 16 and 33 days	

Figure 1


**NOTE**

Shall meet visual requirements, show no physical damage, and meet requirements of additional tests as specified in the Product Qualification and Requalification Test Sequence shown in Figure 2.

3.5. Product Qualification and Requalification Test Sequence

TEST OR EXAMINATION	TEST GROUP (a)		
	1	2	3
	TEST SEQUENCE (b)		
Initial examination of product	1	1	1
Termination resistance, dry circuit	2		
Current cycling		2	
Thermal shock	5		
Humidity-Temperature cycling	4		
Temperature life	3		
Crimp tensile			2

Figure 2

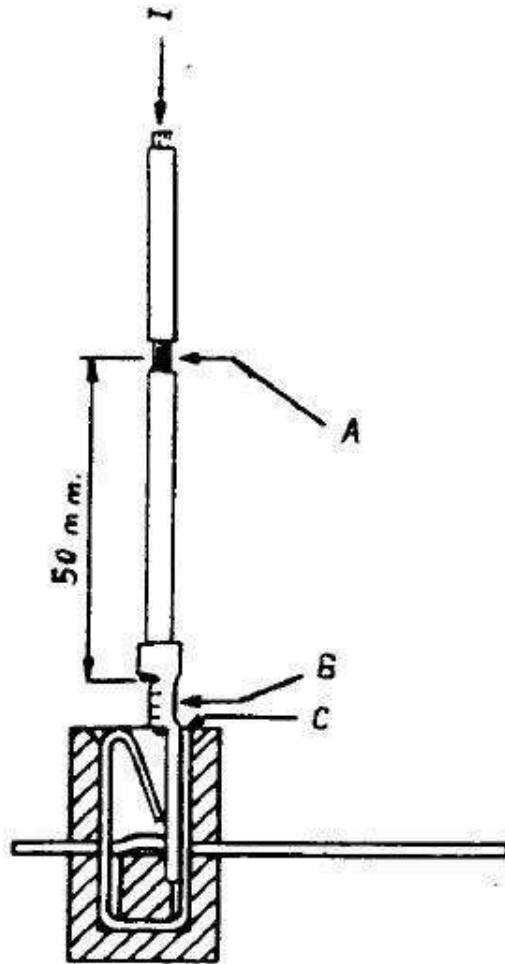


**NOTE**

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

	Test Current Amperes	After Current Cycling, Temperature Life, Humidity-Temperature and Thermal Shock
Crimp		Resistance Milliohms max. Final
0.35 mm <sup>2</sup>	3	4.0
0.75 mm <sup>2</sup>	8	3.5
18 AWG	7	3.5
16 AWG	10	3.0
14 AWG	15	2.5
Connection	-	2.5

Figure 3  
Resistance Values



**A, B CRIMPING**  
**B, C CONNECTION**

**Figure 4**  
**Resistance and Temperature Measurement Points**

## 4. QUALITY ASSURANCE PROVISIONS

### 4.1. Qualification Testing

#### A. Sample Selection

Connector housings and contacts shall be prepared in accordance with applicable Instruction Sheets. They shall be selected at random from current production. Each group shall consist of 12 MAG-MATE tab assembly with standard MAG-MATE. All terminals shall be terminated in accordance with specification 114-2046.

#### 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. Requalification Testing

Requalification shall be established by the cognizant divisional engineering function and may consist of all or any part of the overall qualification program provided that it is conducted within the required time period.

### 4.3. Quality conformance inspection

The applicable quality 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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