

108-5092

NUMBER:

Customer Release

SECURITY CLASSIFICATION:

DESIGN OBJECTIVES

The product described in this document has not been fully tested to ensure conformance to the requirements outlined below. Therefore, AMP (Japan), Ltd makes no representation or warranty, express or implied, that the product will comply with these requirements. Further, AMP (Japan), Ltd. may change these requirements based on the results of additional testing and evaluation. Contact AMP Engineering for further details.

In case when "product specification" is referred to in this document, it should be read as "design objectives" for all times as applicable.

Design Objectives

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312 Series Flag F-F Receptacle

1. Scope :

1.1 Contents

This specification covers the requirements for product performance, test methods and quality assurance provisions of 312 Series Flag F-F Receptacle.


Applicable product descriptions and part numbers are as shown in Appendix 1.

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

PRINT	DWT.					DR.	SHEET 1 OF 5	 AMP (Japan), Ltd. Kawasaki, Japan		
						CHK.				
LTR	REVISION RECORD					APP.	NAME 312 Series Flag F-F Receptacle			
		DR	CHK	DATE						

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4/27/95

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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 : Contacts shall be made of brass conforming to Alloy No. 260 of ASTM B36.

3.3 Performance Requirements and Test Descriptions :

The product shall be designed to meet the electrical, mechanical and environmental performance requirements specified in Fig. 2. All tests shall be performed in the room temperature, unless otherwise specified.

3.4 Test Requirements and Procedures Summary :

Para.	Test Items	Requirements			Procedures	
3.4.1	Confirmation of Product	Product shall be conforming to the requirements of applicable product drawing and Application Specification.			Visually, dimensionally and functionally inspected per applicable quality inspection plan.	
Electrical Requirements						
3.4.2	Termination Resistance (Low Level)	3 mΩ Max.			Subject mated contacts assembled in housing to 20 mV Max. open circuit at 10 mA. Fig. 1. AMP Spec. 109-5311-1	
3.4.3	Termination Resistance (Specified Current)	Wire Size		Test (A) Current	Resistance mV/A	Measure millivolt drop of contact test circuit in mated connectors, Fig. 1. AMP Spec. 109-5311-2
		mm ²	(AWG)			
		0.8	(#18)	7	28	
		1.25	(#16)	10	40	
		2	(#14)	15	60	
		3	(#12)	20	80	

(to be continued)

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Para.	Test Items	Requirements			Procedures
3.4.4	Temperature Rising	Wire Size		Test (A) Current	Temp. Rising deg
		mm ²	(AWG)		
		0.8	(#18)	7	20
		1.25	(#16)	10	30
		2	(#14)	15	30
		3	(#12)	20	30
					Measure temperature rising by energized current. Fig. 1 AMP Spec. 109-5310 method
3.4.5	Crimp Tensile Strength	Wire Size		Crimp Tensil (min.)	
		mm ²	(AWG)	N (kgf)	
		0.8	(#18)	78.5 (8)	
		1.25	(#16)	127 (13)	
		2	(#14)	177 (18)	
		3	(#12)	206 (21)	
					Apply an axial pull-off load to crimped wire of contact secured on the tester. Operation Speed : 100 mm / min. AMP Spec. 109-5205 Condition
3.4.6	Contact Mating Force	44.1 N (4.5 kgf) Max.			Operation Speed : 100 mm / min. Measure the force required to mate connectors. AMP Spec. 109-5206 Condition
3.4.7	Contact Unmating Force	16.7 N (1.7 kgf) Min.			Operation Speed : 100 mm / min. Measure the force required to unmate connectors. AMP Spec. 109-5206 Condition

(End)

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The applicable product descriptions and part numbers are as shown Appendix 1.

Product Part No.	Description
170191	Receptacle Contact (0.8~1.25 mm ²)
179192	Receptacle Contact (2~3 mm ²)

Appendix 1

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4. Quality Assurance provisions :

4.1 Test Specimens :

The test specimens to be used for the tests shall be prepared in accordance with Fig. 1. Application Specification, Crimping, & mating Tab Contact used performance evaluation testing shall have the design as specified Fig. 2.

4.2 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 : 86.7~107 kPa (650~800 mmHg)

Notes 1 : Tab Material ; JIS G4404, SKS-3

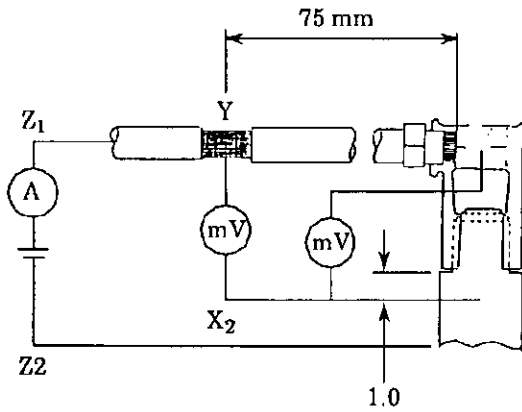


Fig. 1

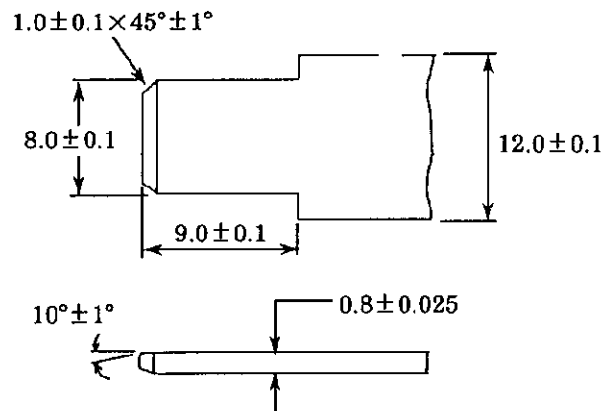


Fig. 2

Wire Size mm ² (AWG)		
	(mm)	
0.8 (#18)	0.32	11
1.25 (#16)	0.32	16
2.0 (#14)	0.32	26
3.0 (#12)	0.32	41

Fig. 3

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