

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.

Ignition Plug Contact (for 2.0 mm Diameter)

1. Applicable Product:

This specification applies to the "Ignition Plug Contact (for 1.2 mm diameter)",

Product Description	Product Part No.	Remarks
Receptacle Contact	175065-□	AWG #22 ~ 18

2. Material Used:

2.1 Receptacle Contact: Stainless Steel (austenitic)

3. Performance Rating:


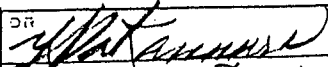
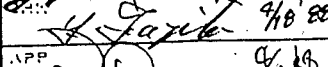
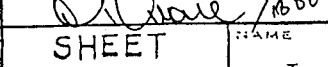
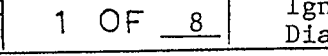
3.1 Voltage Rating; 23 KV (max.)

3.2 Current Rating; 320 mA (max.)

3.3 Operating Temperature Range; -20°C ~ +200°C

3.4 Applicable Wire Range;

Product Part No.	175065-□
Wire	(AWG)
Wire Size (mm <sup>2</sup> )	0.3 - 0.89 (#22 ~ 18)
Insulation Diameter (mm)	3.5 - 5.5

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A2	Design Objectives	RFA 1905	Y.M	24 FEB -95			REV
A1	Revised	RFA-1481		7-26-88			A2
A	Revised	RFA-1335		7/88			
0	Released	RFA-1303		1/88			
LTR	REVISION RECORD		CR	CHK	DATE		
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4. Quality Assurance Provisions:

4.1 Test Conditions:

Performance shall be tested under the following conditions, unless otherwise specified.


Temperature : 15 ~ 35°C  
 Relative Humidity : 45 ~ 75%  
 Atmospheric Pressure: 650 ~ 800 mmHg

4.2 Test Samples:

All the samples to be tested shall conform to the applicable product drawing(s), and have a wire shown in Para. 3.4 crimped according to the Application Specification 114-5130.  
 No sample shall be reused in the test, unless otherwise specified.

5. Performance Requirements:

Item	Test Item	Specified Requirement	Test Conditions & Method	
5.1	Appearance	There shall be no scratch, crack, deformation, blister, fouling, burrs, etc. significantly detrimental to the functions and commercial value of the contact.	Visual inspection	
5.2	Crimp Tensile Strength	Wire Size	Each sample shall have an applicable wire approximately 100 mm long crimped, and the crimp tensile strength shall be measured by pulling it in the direction of its working axis at a rate of 100 mm/min. A minimum tensile load causing the wire to break or come off from the contact shall be taken as the crimp tensile strength. No insulated area of the wire shall be crimped.	
		mm <sup>2</sup> (AWG)		Tensile Strength kg (min.)
		0.3 (#22)		5
		0.5 (#20)		7
		0.75 (#18)	12	

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Item	Test Item	Specified Requirement	Test Conditions & Method
5.3	Contact Insertion Force Contact Extraction Force	Insertion Force: 5.0 kg (max.) Initial Extraction Force: 1.0 ~ 5.0 kg Extraction Forth at 10th Time: 1.0 ~ 5.0 kg	Securing plug side, apply a load to insert and extract the contact on tensile testing machine, by operating the head to travel at a rate of 100mm a minute.
5.4	Low Level Termination Resistance	100 mΩ max.  the circuit shown in Fig.1. The open circuit voltage shall be 50 mV max. and closed circuit current 50 mA max. Termination resistance shall be found by subtracting the resistance of the 75-mm wire and 55-mm plug from the measured reading.	Engage a contact with the plug, and measure termination resistance using

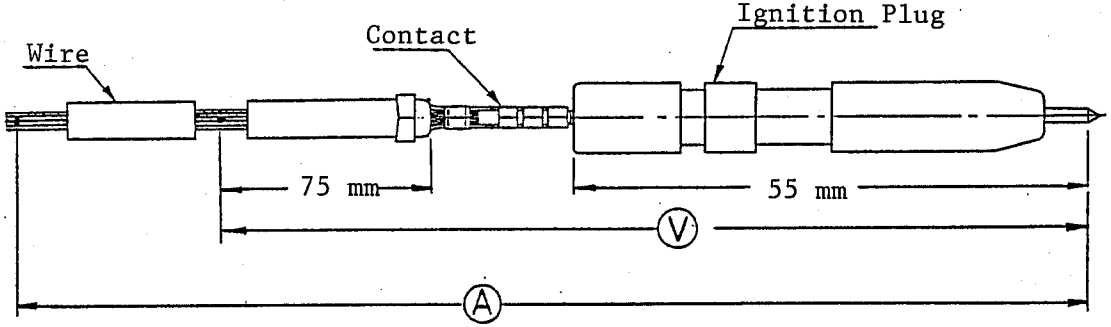


Fig. 1

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Item	Test Item	Specified Requirement	Test Conditions & Method
5.5	Low Frequency Vibration	Low Level Termination Resistance: 150 mΩ max.	Engage a contact with the plug, secure them on a vibration tester as shown in Fig.2 and test under the following conditions prescribed by Test Method 201 of MIL-STD-202. Sweeping Frequency: 10-55-10 Hz cycle/min. Amplitude (both sides): 1.5 mm Test Duration: 2 hours each in directions of working axes X, Y and Z The sample must meet the requirement of the low level termination resistance after the test.

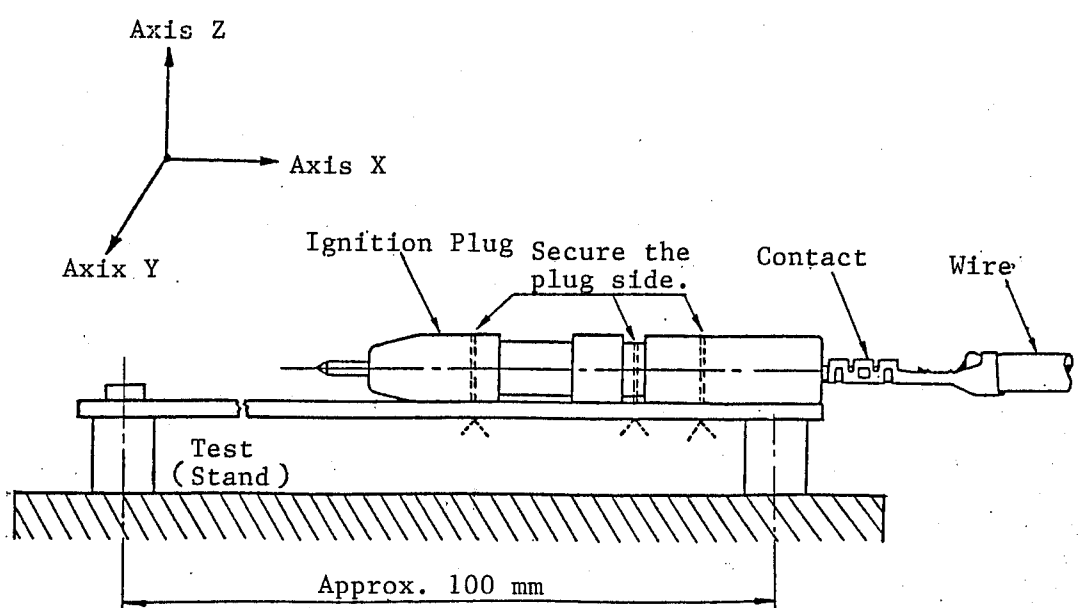




Fig. 2

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Item	Test Item	Specified Requirement	Test Conditions & Method	
5.6	Humidity Resistance	Low Level Termination Resistance: 150 mΩ max.	Engage a contact with the plug, and test under the following conditions prescribed by Test Method 103 of MIL-STD-202. Temperature: 40°C Humidity : 90 ~ 95% Duration : 96 hrs. The sample must meet the requirement of the low level termination resistance after the test.	
5.7	Thermal Shock	Low Level Termination Resistance: 150 mΩ max.	Engage a contact with the plug and test 25 cycles continuously under the following conditions prescribed by Test Method 107 of MIL-STD-202. The sample must meet the requirement of the low level termination resistance after the test.	
			Sequence of Test	Test Conditions
			1	200 <sup>+3</sup> <sub>-0</sub> °C, 30 min.
			2	Room temperature, less than 5 min.
			3	-20 <sup>+0</sup> <sub>-3</sub> °C, 30 min.
4	Room temperature, less than 5 min.			

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Item	Test Item	Specified Requirement	Test Conditions & Method
5.8	Salt Spray	Low Level Termination Resistance: 150 mΩ max.	Engage a contact with the plug and test under the following conditions prescribed by Test Condition B, Test Method 101 of MIL-STD-202. Salt concentration: 5% Temperature: 35°C Duration : 48 hrs. After the test, rinse the sample in water, sit it for one (1) hour for drying at room temperature, and measure the low level termination resistance. The sample must meet the requirement.
5.9	Heat Resistivity	Low Level Termination Resistance: 150 mΩ max.	Engage a contact with the plug and test under the following conditions prescribed by Test Method 108 of MIL-STD-202. Temperature: 200°C Duration : 96 hrs. The sample must meet the requirement of the low level termination resistance after the test.

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6. Sequence of Test:

The performance shall be tested according to the test groups and sequence of test listed below.

Classification		Sequence of Test							
Item	Group	Item No.	I	II	III				
Appearance		5.1	1	1	1				13
Crimp Tensile Strength		5.2	2						
Contact Insertion Force		5.3		2					
Contact Extraction Force		5.3		3					
Low Level Termination Resistance		5.4			2	4	6	8	10 12
Low Frequency Vibration		5.5			3				
Humidity Resistance		5.6				5			
Thermal Shock		5.7					7		
Salt Spray		5.8						9	
Heat Resistivity		5.9							11

AMP SECURITY CLASSIFICATION  
 Customer Release  
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7. Mating Plug:

The mating plug shown in Fig. 3 shall be used in the performance test.

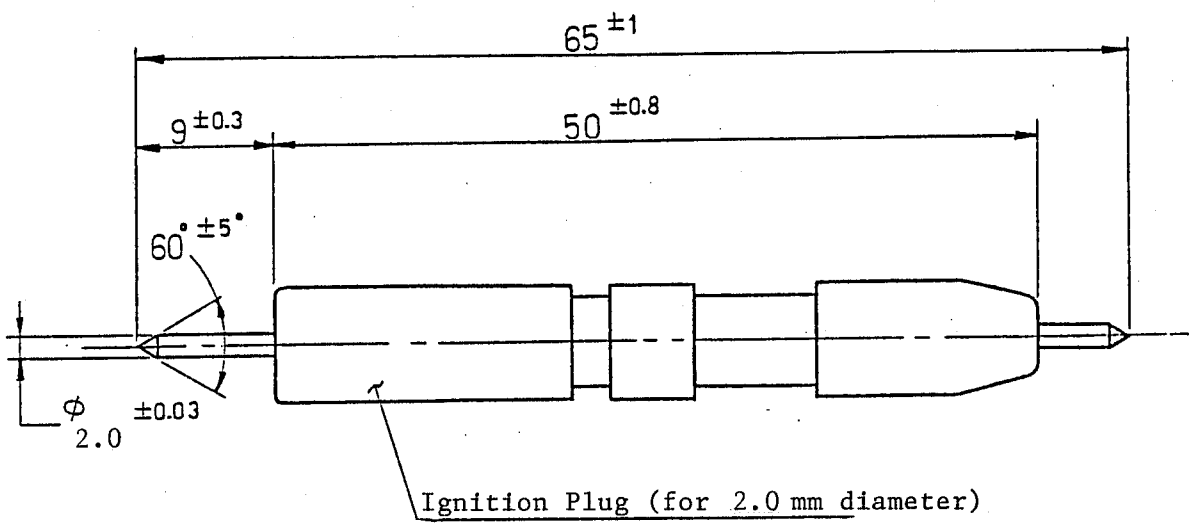


Fig. 3

(Notes)

1. The plug material shall be high temperature resistance alloy (YSS-YSTT).
2. Unplated plug shall be used.

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