

Modular Jacks

1. SCOPE

1.1. CONTENT

This specification covers performance, tests and quality requirements for Modular Jack Connector.

1.2. QUALIFICATION

When tests are performed on the subject product line, 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 SPECIFICATIONS

Xmultiple Documents

A. PS-2000 Test specifications as indicated in Figure 1.

B. TR-2000 Test report.

Federal

QQ-B-626 Brass; bar, plate, rod, strip, flat wire and special shaped sections

QQ-B-750 Bronze, phosphor; bar, plate, rod, sheet, strip, flat, wire, and structural and Special shaped sections

QQ-N-290 Plating, nickel (electrodeposited)

Military

MIL-STD-105E Sampling procedures for inspection by attributes

MIL-STD-1344A Test methods for electrical connectors

MIL-C-39012C General specification for connectors, coaxial, radio frequency

MIL-G-45204 Gold plating (electrodeposited)

Underwriters' Laboratories, Inc.

UL-std-94 Tests for flammability of plastic material for parts in devices and appliances.

Others

FCC Rules for Registration of Telephone Equipment Part 68, Subpart F, connectors.

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: Phosphor Bronze, contact area Gold plating, Solder tails Gold plating, Nickel under plated all over.
- B. Housing: High temp. thermoplastic, UL94V-0, Black.

3.3 RATINGS

- A. Relative Humidity: 70%±10%RH
- B. Operating Temperature: -40°C to 85°C
- C. Current Rating: 1A Max
- D. Voltage Rating: 150 VAC Max.

3.4 PERFORMANCE AND TEST DESCRIPTION

The product is designed to meet the electrical, mechanical and environmental performance requirements specified in Figure 1.

3.5 TEST REQUIREMENTS AND PROCEDURES SUMMARY

NO.	TEST DESCRIPTION	REQUIREMENT
1	Visual & Mechanical Examination	Mechanical Structure & Appearance & Cosmetics Specs and Drawing.
ELECTRICAL		
2	Termination Resistance.	40 mΩ Max. initial. 50 mΩ Max. final.
3	Dielectric Withstanding Voltage.	AC 1KVrms at 60Hz , 1 minute between adjacent contacts. AC 1.5KVrms at 60Hz , 1 minute between shield and contacts.
4	Insulation Resistance	500 MΩ Min. initial. 200 MΩ Min. final. 100 VDC min. between adjacent contacts.
MECHANICAL		
5	Contact Normal Force	100g Min.
6	Durability	Mate and unmate for 500 cycles at a rate of 20~30 cycles per minute without load.
7	Mating Force	2 contacts ----1.6Kgf Max. 4 contacts ----1.8Kgf Max. 6 contacts ----2.1Kgf Max. 8 contacts ----2.3Kgf Max. 10 contacts ----2.5Kgf Max.
ENVIRONMENTAL		
8	Humidity test	At a temperature of 40°C±2°C and relative humidity of 90%to 95% for 96 hours.
9	Temperature Life	Exposing in a heat chamber at a temperature of 65°C±2°C for 96 hours.

Figure 1.

3.6 CONNECTOR TESTS AND SEQUENCES

Items	Test Group				
	A	B	C	D	E
1	1, 7	1, 5	1, 5	1, 7	
2	2, 6	2, 4	2, 4		
3				2, 5	
4				3, 6	
5					1
6	4				
7	3, 5				
8		3		4	
9			3		

3.7 TEST SAMPLES

The test samples consisted of 25 pcs which were divided into 5 groups (A,B,C,D and E) with 5 pcs in each group for each corresponding test group defined in section 3.6 CONNECTOR TESTS AND SEQUENCES.

4. QUALITY ASSURANCE PROVISIONS**4.1 SAMPLE SELECTION**

Modular jack test samples shall be selected at random from current production lots. They shall be prepared for testing in accordance with current application specifications and instruction sheets.

4.2 ACCEPTANCE

Acceptance is based on verification that the product meets the requirements of figure 1. 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. Testing to confirm corrective action is required before resubmittal.

5. VALIDATIONApproved by: AlbertApproved by: Michael Chang