



PRODUCT SPECIFICATION

RJ-45 MODULAR PLUGS FOR PROPOSED CATEGORY 6 APPLICATIONS

1.0 SCOPE

This specification covers the performance requirements for the RJ-45 modular plugs for proposed Category 6 applications. These plugs are shielded or unshielded.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

RJ-45 Modular Plug

44915

DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See the appropriate sales drawings (SD-44915-001) for information on dimensions, materials, plating and markings.

2.2 SAFETY AGENCY APPROVALS

UL File Number.....E107635

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

FCC Rules and Regulations, Part 68, Subpart F

REA Bulletin 345-81, PE-76; Specification for modular telephone set hardware

ANSI/EIA/TIA-568

IEC-60603-7

UL 1863

MIL-STD-202; General requirements for test specifications

4.0 RATINGS

4.1 VOLTAGE

56.5 V DC

150 V_{RMS} AC (Ringing voltage only)

4.2 CURRENT

1.5 Amps @ 25°C

4.3 TEMPERATURE

Operating: - 40°C to + 85°C

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DOCUMENT NUMBER: PS-44915-003	CREATED / REVISED BY: LSCHMIDT 2005/11/04	CHECKED BY: AELHAG 2005/11/07	APPROVED BY: FSMITH 2005/11/09



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5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

	DESCRIPTION	TEST CONDITION	REQUIREMENT
	Contact Resistance (Low Level)	Mate connectors: apply a maximum voltage of 20 mV and a current of 100 mA . (Measurement locations in Section 7.0)	20 milliohms MAXIMUM [initial]
	Insulation Resistance	Unmated connector, mounted to a PCB: apply a voltage of 100 VDC between adjacent terminals and between terminals to ground.	500 Megohms MINIMUM
	Dielectric Withstanding Voltage	Mate connectors: apply a voltage of 1000 VAC for 1 minute between adjacent terminals and 1500 VAC between terminals to ground.	No breakdown; current leakage < 5 mA

5.1.1 TRANSMISSION PERFORMANCE

Plug performance meets the proposed TIA/EIA-568-B specification for modular test plugs used to qualify category 6 modular jacks. When used with a category 6 jack, the resulting connecting interface meets category 6 connecting hardware specifications as defined in TIA/EIA-568-B.

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5.2 MECHANICAL REQUIREMENTS

	DESCRIPTION	TEST CONDITION	REQUIREMENT
	Durability	Mate connectors up to 500 cycles at a maximum rate of 10 cycles per minute prior to Environmental Tests.	10 milliohms MAXIMUM (change from initial)
	Vibration (Random)	Amplitude: 1.50mm (.060") peak to peak Sweep: 10-55-10 Hz in one minute Duration: 15 minutes $\pm X, \pm Y, \pm Z$ axis (45 minutes total)	10 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond
	Plug Retention Force	Apply an axial pullout force on the plug at a rate of 25 \pm 6 mm (1 \pm 1/4 inch).	89 N (20 lbf) MINIMUM retention force
	Shock (Mechanical)	Mate connectors and shock at 50 g's with three saw tooth wave form shocks in the $\pm X, \pm Y, \pm Z$ axis (18 shocks total).	10 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond

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5.3 ENVIRONMENTAL REQUIREMENTS

	DESCRIPTION	TEST CONDITION	REQUIREMENT
	Shock (Thermal)	Mate connectors; expose to 10 cycles of: -40°C to +85°C 30 minutes dwell	10 milliohms MAXIMUM (change from initial) & Visual: No Damage
	Thermal Aging	Mate connectors; expose to: 240 hours at 85±2°C	10 milliohms MAXIMUM (change from initial) & Visual: No Damage
	Humidity (Cyclic)	Mate connectors: expose to 10 cycles at 90-95% relative humidity with temperatures at +25°C and +65°C per MIL-STD-202F method 106F (without -10°C dip)	10 milliohms MAXIMUM (change from initial) & Dielectric Withstanding Voltage: No Breakdown at 500 VAC & Insulation Resistance: 200 Megohms MINIMUM & Visual: No Damage

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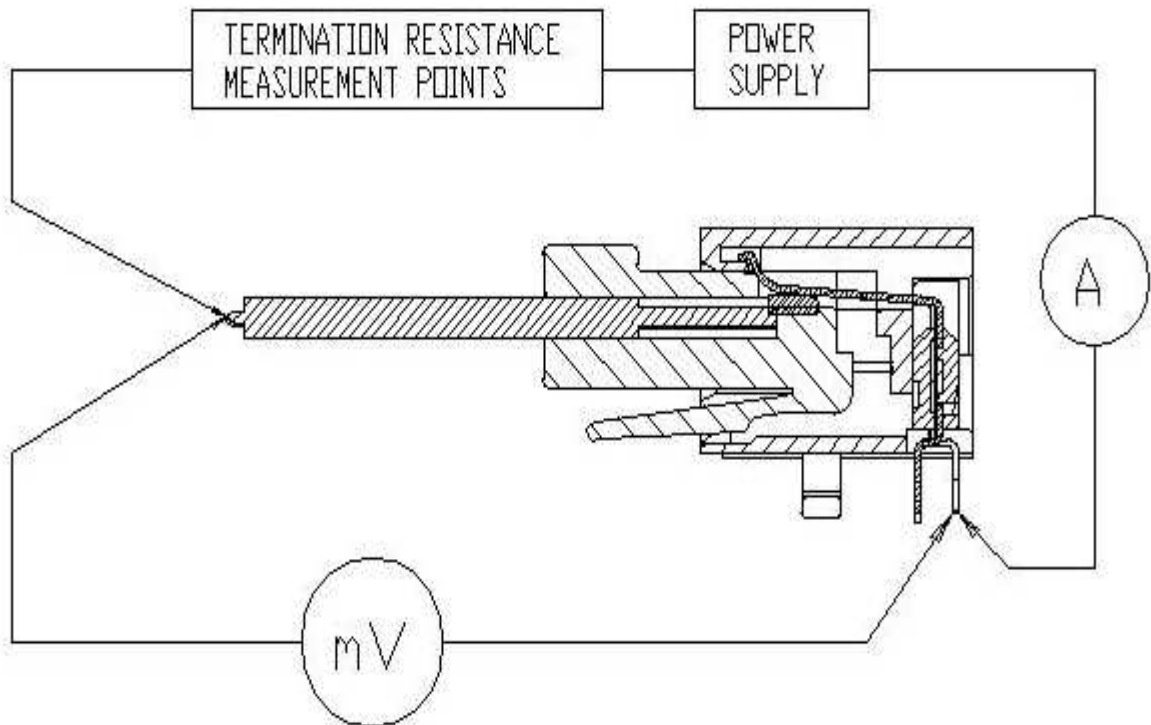


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6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage. See appropriate sales drawings on Sheet 1 for packaging descriptions.

7.0 GAGES AND FIXTURES



TERMINATION RESISTANCE MEASUREMENT POINTS

Connector and plug terminals and wire conductor bulk resistance to be subtracted from measurements

8.0 OTHER INFORMATION

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