



PRODUCT SPECIFICATION

VERTICAL MODULAR JACKS

1.0 SCOPE

This Product Specification covers the 1.27 mm (.050 inch) centerline (pitch) printed circuit board (PCB) modular jack connector series with selective gold and tin plating.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

Low Profile Vertical Modular Jacks 42410

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See the appropriate sales drawings (SDA-42410-****) for information on dimensions, materials, plating and markings.

2.3 SAFETY AGENCY APPROVALS

UL File Number.....E107635
CSA File Number.....LR19980

3.0 REFERENCE DOCUMENTS

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
Nonoperating:* - 40°C to + 85°C
*Packaging materials should not exceed + 50°C

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DOCUMENT NUMBER: PS-42410	CREATED / REVISED BY: JKLOSTERMEIER	CHECKED BY: JBELL	APPROVED BY: FSMITH



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5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	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)	45 milliohms Maximum including wire leads; 20 milliohms MAXIMUM Measured at Plug. [initial]
2	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
3	Dielectric Withstanding Voltage	Mate connectors: apply a voltage of 1000 VAC for 1 minute between adjacent terminals and between terminals to ground.	No breakdown; current leakage < 5 mA
4	Temperature Rise	Mate connectors: measure the temperature rise at the rated current after: 96 hours	Temperature rise; +30°C MAXIMUM

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5.2 MECHANICAL REQUIREMENTS

	DESCRIPTION	TEST CONDITION	REQUIREMENT
5	Insertion and Withdrawal Forces	Mate & un-mate connector at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	22 N (5 lbf) MAXIMUM insertion force 22 N (5lbf) MAXIMUM withdrawal force
6	Durability (Preconditioning)	Mate connectors up to 50 cycles at a maximum rate of 20 cycles per minute prior to Environmental Tests.	10 milliohms MAXIMUM (change from initial)
7	Reseating	Mate connectors 3 cycles manually.	10 milliohms MAXIMUM (change from Initial)
8	Vibration (Random)	Mate connectors and vibrate per EIA-364-28 Test Condition D.	10 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond
9	Shock (Mechanical)	Mate connectors and shock at 30 g's with half sine wave (11 millisecond) shocks in the ±X, ±Y, ±Z axis (30 shocks total)	10 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond
10	PCB Separation Forces	Apply a load normal to the plane of the PCB on the plug at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	4.5 N (1 lbf) MINIMUM withdrawal force before soldering 45 N (10 lbf) MINIMUM withdrawal force after soldering
11	Effectiveness of Connector Coupling Device	Apply an axial pullout force on the plug of 50N (11lb) for 60 seconds at a rate of 10 lb/second maximum.	Discontinuity < 1 microsecond

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5.3 ENVIRONMENTAL REQUIREMENTS

	DESCRIPTION	TEST CONDITION	REQUIREMENT
12	Shock (Thermal)	Mate connectors; expose to 10 cycles of: -55°C to +85°C 30 minutes dwell	10 milliohms MAXIMUM (Change from Initial) & Visual: No Damage
13	Humidity (Steady State)	Mate connectors; expose to temperature of 40±2°C with a relative humidity of 93% for 21 days. Note: Remove surface moisture & air dry for 1 hour prior to measurements.	10 milliohms MAXIMUM (Change from Initial) & Dielectric Withstanding Voltage: No Breakdown at 1000 VAC & Insulation Resistance: 500 Megohms MINIMUM & Visual: No Damage
14	Temperature Life	Mate connectors; expose to 90°C±2°C for 456 hours.	10 milliohms MAXIMUM (Change from Initial) & Visual: No Damage
15	Climatic Sequence	Test performed with mated connectors: A: Dry Heat 85°C for 16 hrs. B: Damp Heat (24 Cycles) Increase from 25°C 80% relative humidity to 65°C 50% relative humidity (30 min.), dwell at 65°C (1 hour), and lower to 25°C (30 min.), dwell at 25°C (1 hour). C: Cold -40°C for 2 hours D: Damp heat (24 cycles) Repeat step B	10 milliohms MAXIMUM (change from initial) & Dielectric Withstanding Voltage: No Breakdown at 1000 VAC & Insulation Resistance: 500 Megohms MINIMUM & Visual: No Damage
16	Solderability	Dip solder tails in flux and immerse in solder bath at 235±5°C for 5±0.5 seconds	Solder Wetting Visual: 95% of immersed area must show no voids, pin holes.

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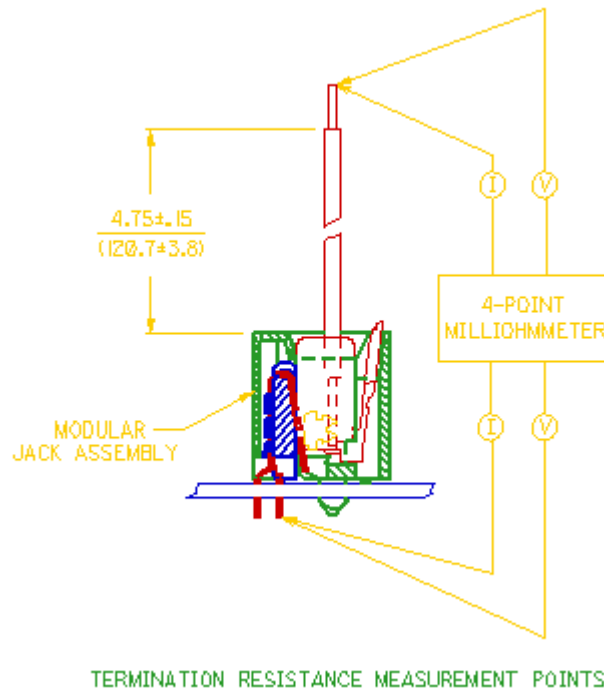


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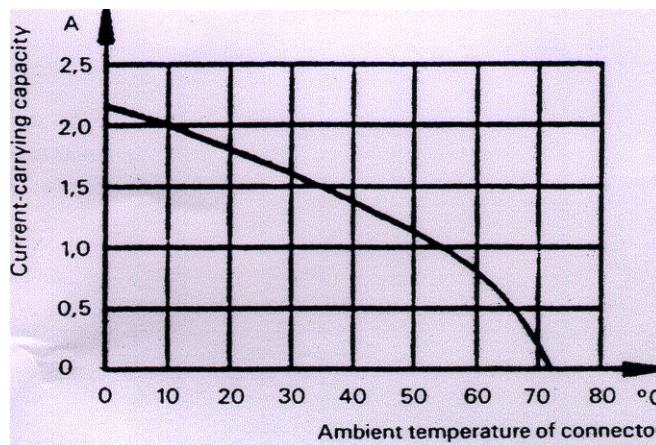
6.0 PACKAGING

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

7.0 GAGES AND FIXTURES



8.0 OTHER INFORMATION



Connector De-Rating Curve

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