

PRODUCT SPECIFICATION FOR SMT SHIELDED JACKS W.E. TYPE SYSTEM

1.0 SCOPE

This specification covers the Molex shielded W.E. type product line which comprises a shield plug (male) and a jack (female) I/O type connector. This system is shielded to provide EMI/RFI protection to assist the end-user in complying with the FCC regulations. Where applicable, tests are in accordance with, or in excess of, all the requirements specified in REA Bulletin 345-81, PE-76

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME.

SMT R/A Shielded	ack with side solder tabs.	95540-****
SMT R/A Shielded	ack with through/hole solder pegs.	95540-****

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See the appropriate Sales Drawings for information on materials, platings and markings.

2.3 SAFETY AGENCY APPROVALS

Plugs and Jacks shall comply with the mechanical specification as in Part 68, Subpart F of the FCC Rules and Regulations.

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

See the appropriate Sales Drawings and the other sections of this Specification for the necessary referenced Documents and Specifications.

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5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

ITEM	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)	20 milliohms MAXIMUM [initial]
2	Insulation Resistance	Mate connectors with a voltage of 500 VDC between adjacent terminals and between terminals to ground.	500 Megohms MINIMUM
3	Dielectric Withstanding Voltage	Mate connectors: apply a voltage of {two times the rated voltage plus 1000 volts} VAC for 1 minute between adjacent terminals and between terminals to ground.	No breakdown
4	Capacitance	Measure between adjacent terminals at 1 MHz.	2 picofarads MAXIMUM
5	Shielding Effectiveness	Measure at frequency from 30 to 150 Mhz.	20 dB Min
6	Data Rate	Measure to achieve the shielding capabilities	2 Megabauds.

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5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
8	Connector Insertion and Withdrawal Forces	Insert and withdraw a plug at a rate of 25 \pm 6 mm (1 \pm ¹ / ₄ inch) per minute.	MAXIMUM insertion force & MINIMUM withdrawal force 30 N MAX
9	Module Retention Force (in Housing)	Axial pullout force on the terminal in the housing at a rate of 25 ± 6 mm ($1 \pm 1\frac{1}{4}$ Inch) per minute.	2 daN(4.4 lbf) MINIMUM retention force
10	Jack Retention Force on P.C. Board	Axial pullout force on the Jack on the P.C. Board at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch) per minute.	Min. Retention Force 10 daN (22 lb)
11	Durability	Mate connectors up to 500 cycles at a maximum rate of 10 cycles per minute.	Contact Resistance: 10 milliohms MAXIMUM (change from initial)
12	Vibration	Amplitude: 1.50 mm/(0.60") peak to peak Sweep: 10-55-10 Hz in one minute. Duration: 2 hours in each x-y-z axis (6 hours total).	Contact Resistance: 10 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond
13	Shock (Mechanical)	50 g's with 3 saw tooth waveform shocks in each $\pm X, \pm Y, \pm Z$ axes (18 shocks total).	Contact Resistance: 10 milliohms MAXIMUM (change from initial]) & Discontinuity < 1 microsecond

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5.3 ENVIRONMENTAL REQUIREMENTS ICYCLE (12 HOURS) 40 30 TEMPERATURE 20-(°C) 10 0 0 2 3 4 5 6 7 8 9 10 11 12 TIME (HOUR) ITEM DESCRIPTION **TEST CONDITION** REQUIREMENT Mate connectors exposed for 10 cycles at Appearance: No Damage 90 to 95% relative humidity with a Contact resistance:10 transition time of 2 hours when increasing milliohms max change from Humidity and of 3 hours when decreasing the initial. 14 (Cyclic) temperature. Dielectric withstanding voltage: Temperature Duration no breakdown +5°C 3 hours Insulation resistance: 100 +30℃ 4 hours Megaohms min. 10 milliohms MAXIMUM (change from initial) Duration: 96 hours; 15 **Cold Resistance** Temperature: -40 ± 3°C & Visual: No Damage Solder coverage: 95% of the immersed area Solder time 5± 0.5 seconds. 16 Solderability Solder temperature: 260 ± 5℃ must show no voids, pin holes.

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6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage. (Refer to sales drawings).

7.0 GAUGES AND FIXTURES



System resistance equals millivolt drop (mV) divided by test current (A) (Conductor resistance will be deducted from measurement.)

8.0 QUALITY ASSURANCE PROVISIONS

The applicable Molex inspection plan specifies the sampling acceptable quality level to be used. Dimensioned and functional requirements shall be in accordance with applicable product drawings and this specification.

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