



PRODUCT SPECIFICATION

MINI-FIT JR. CONNECTOR SYSTEM TEST PLUG (WIRE TO WIRE)

1.0 SCOPE

This specification covers the 4.20 mm / (.165 in.) centerline (pitch) Mini-Fit Jr. dual row Test Plug connector in wire to wire applications.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND PART NUMBER

<u>Product Name</u>	<u>Part Number</u>
Female Terminal	5556-****
Receptacle (dual row)	5557-****
BMI Receptacle (dual row)	42474-****
BMI Receptacle (dual row)	44516-****
Mini-Fit Jr. Test Plug	44281-****

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

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

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

See sales drawings and the other sections of this specification for the necessary referenced documents and specifications

3.1 AGENCY APPROVALS

UL File #E29179
CSA Certificate #LR 19980

4.0 RATINGS

4.1 VOLTAGE

UL / CSA 600 Volts AC (RMS) / DC

4.2 TEMPERATURE

Operating: -40 °C to +105 °C

<u>REVISION:</u> 2	<u>ECR/ECN INFORMATION:</u> EC No: UCP2012-3941 DATE: 2012/06/15	<u>TITLE:</u> PRODUCT SPECIFICATION MINI-FIT JR. CONNECTOR SYSTEM TEST PLUG	<u>SHEET No.</u> 1 of 3
<u>DOCUMENT NUMBER:</u> PS-44281-001	<u>CREATED / REVISED BY:</u> NNGUYEN	<u>CHECKED BY:</u> JBELL	<u>APPROVED BY:</u> FSMITH



PRODUCT SPECIFICATION

5.0 PERFORMANCE

5.1 ELECTRICAL PERFORMANCE

SECTION	DESCRIPTION	TEST CONDITION	REQUIREMENT
5.1.1	Initial Contact Resistance (Low Level)	Mate connectors, measure by dry circuit, 20 mV max, 100 mA . Wire resistance shall be removed from measured value.	10 mΩ max
5.1.2	Insulation Resistance	Mate connectors, apply 500V DC between adjacent terminal or ground.	1000 MΩ min
5.1.3	Dielectric Strength	Mate connectors, apply of 1500 V AC for 1 minute between adjacent terminals or ground.	No breakdown

5.2 MECHANICAL PERFORMANCE

SECTION	DESCRIPTION	TEST CONDITION	REQUIREMENT
5.2.1	Connector Insertion and Withdrawal	Insert and withdraw a connector at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	142 g/ckt MAXIMUM insertion force
5.2.2	Vibration	Amplitude: 1.50mm (.060") peak to peak Sweep: 10-50-10 Hz in one minute Duration: 2 hours in each ±X,±Y,±Z axis (6 hours total)	Contact Res. Change = 20 mΩ MAXIMUM Discontinuity not greater than 1 μ second
5.2.3	Mechanical Shock	50 g's with three saw tooth wave form shocks in the ±X,±Y,±Z axis (18 shocks total).	Contact Res. Change = 20 mΩ MAXIMUM Discontinuity not greater than 1 μ second

<u>REVISION:</u> 2	<u>ECR/ECN INFORMATION:</u> EC No: UCP2012-3941 DATE: 2012/06/15	<u>TITLE:</u> PRODUCT SPECIFICATION MINI-FIT JR. CONNECTOR SYSTEM TEST PLUG	<u>SHEET No.</u> 2 of 3
<u>DOCUMENT NUMBER:</u> PS-44281-001	<u>CREATED / REVISED BY:</u> NNGUYEN	<u>CHECKED BY:</u> JBELL	<u>APPROVED BY:</u> FSMITH



PRODUCT SPECIFICATION

5.3 ENVIRONMENTAL PERFORMANCE

SECTION	DESCRIPTION	TEST CONDITION	REQUIREMENT
5.3.1	Cold Resistance	-40 +/- 3°C for 96 hrs.	Appearance: No damage Contact Res. Change =20 mΩ max.
5.3.2	Thermal Shock	Mate connectors; expose to 10 cycles of: -55+0/-3 °C for 30 minutes +105 +/-10°C for 5 minutes max	Appearance: No damage Contact Res. Change =20 mΩ max.
5.3.3	Thermal Aging	Mate connectors; expose to: 240 hours at 105±2°C	Appearance: No damage Contact Res. Change =1.0 mΩ max.
5.3.4	Humidity (Steady State)	Mate connectors: expose to a temperature of +60+/-2°C at 90-95% relative humidity for 96 hours.	Appearance: No damage Contact Res. change = 20 mΩ max Dielectric withstanding voltage: No breakdown Insul. res: 1000 MΩ min.
5.3.5	Solderability	Per SMES-152	Solder coverage: 95% Minimum (per SMES-152)
5.3.6	Reflow Process Resistance	Convection reflow solder process 235°C max per ES-40000-5013	Appearance: No damage Dimensional: Conformance to sales drawing requirements
5.3.7	Wave Solder Resistance	Solder time: 5 +/- 0.5 seconds maximum Solder temp: 260 +/- 5°C	Appearance: No damage

6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage.

<u>REVISION:</u> 2	<u>ECR/ECN INFORMATION:</u> EC No: UCP2012-3941 DATE: 2012/06/15	<u>TITLE:</u> PRODUCT SPECIFICATION MINI-FIT JR. CONNECTOR SYSTEM TEST PLUG	<u>SHEET No.</u> 3 of 3
<u>DOCUMENT NUMBER:</u> PS-44281-001	<u>CREATED / REVISED BY:</u> NNGUYEN	<u>CHECKED BY:</u> JBELL	<u>APPROVED BY:</u> FSMITH