

PRODUCT SPECIFICATION

PSA-DI-19M(F)2-XX&XX

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Title: Din connector, Plug & Receptacle,

Part Number: DI-19M2-XX, DI-19F2-XX

Description: Din, 19Pin, Solder type

Revision Control

Rev.	ECN Number	Originator	Approval	Issue Date
A	Initial Release	Hulk Chang	Fido Weng	02/02/2009'

Product Specification Origination

Originator Date	Checked by Date	Approved By Date

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1. SCOPE

This specification covers performance, tests and quality requirements for Din, 19Pin, Solder type

2. APPLICABLE DOCUMENTS

The following document of the latest issue in effect at the time of performance of the qualification tests, shall form a part of this specification to the extent specified herewith.

Military

MIL-STD-202 Test methods for electrical connectors

Underwriters' Laboratories, Inc.

UL-STD-94 Tests for flammability of plastic materials for in devices and appliances.

UL-STD-1581 Reference standard for electrical wires, cables and Flexible cords.

3. Material & Finish

3.1 Plug (DI-19M2-XX)

Part Name	Material/Finish
Insulator	PBT 15%GF , UL94V-0, Black
Contact	Brass , Gold Flash Plated Over Nickel
Shell A	Brass, Nickel plated
Shell B	Brass, Nickel plated
Shell C	Brass, Nickel plated

3.2 Receptacle (DI-19F2-XX)

Part Name	Material/Finish
Insulator	PBT 30%GF , UL94V-0, Black
Contact	PHOSPHOR BRONZE , 30μ" Silver Plated Over Nickel
Shell A	Brass, Nickel plated
Shell B	Brass, Nickel plated
Shell C	SWC , Nickel plated
Shell D	Brass, Nickel plated
Shell E	Brass, Nickel plated

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4. RATINGS

Rated current	2A
Operating Temperature	-20°C~+85°C

5. REQUIREMENTS

ELECTRICAL PERFORMANCE

No.	Test Item	Requirement	Test Condition
1	Contact resistance	Initial : 10mΩ(Max.) Final : 20mΩ(Max.)	Mated connectors, Contact: measure by dry circuit, 20 m Volts maximum., 10mA. (ANSI/EIA-364-06B)
2	Insulation resistance	Initial : 1000MΩ(Min.) Final : 500MΩ(Min.)	Mate the plug and receptacle connector together, then apply 500V DC between the neighboring contacts in accordance with (ANSI/EIA 364-21C)
3	Dielectric Withstanding Voltage	No Breakdown on appearance	500V AC (rms) applied for 1minute in accordance with (ANS/EIA-364-20C, Method A)

MECHANICAL PERFORMANCE

No.	Test Item	Requirement	Test Condition
1	Contact Mating force	5kgf Max	Measure of initial and mating/ un-mating 30 th cycles at a speed 25±3mm/min. along – the mating axis.
2	Contact UN-mating force	1.5kgf Min	

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3	Contact retention force per pin	Plug: 8kgf Min. Receptacle: 8kgf Min.	Mating/ un-mating speed of 25±3mm/min. Measure the force when the contact dislodges the connector.
4	Durability	Contact resistance: 20mΩ Max.	Repeat mating and unmating 2000cycle at a speed 25±3mm/min. along the mating axis.

ENVIRONMENTAL PERFORMANCE

No.	Test Item	Requirement	Test Condition
1	Thermal shock	Contact resistance: 20mΩ Max.	Mated receptacle & plug connector, Then apply the following environment in accordance with MIL-STD-202, Method 107. Condition B Test cycles: 5 cycles Temperature: -55°C (30min.) → 85°C (30min.) Transition time: 5min. (Max.)
2	High Temperature life	Contact resistance: 20mΩ Max. Insulation resistance: 500MΩ Min	Mated receptacle & plug connector, Then apply the following High Temperature life in accordance with MIL-STD-202, Method 108. Condition B Temperature : 85±2 °C Duration : 96hours
3	Humidity (steady state)	Contact resistance: 20mΩ Max. Insulation resistance: 500MΩ Min.	Mated receptacle & plug connector, Then apply the following Humidity in accordance with MIL-STD-202, Method 103. Condition A Temperature : 40±2 °C Relative humidity : 90~95% Duration : 96hours

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4	Humidity (cycling)	Contact resistance: 20mΩ Max. Insulation resistance: 500MΩ Min.	Mated receptacle & plug connector, Then apply the following humidity in accordance with MIL-STD-202, Method 106. Temperature : 25°C~65°C Humidity : 90~98%RH No of cycles : 4 cycles (96 hours)
5	Salt water spray	Contact resistance: 20mΩ Max.	Mated receptacle & plug connector, Then apply the following environment in accordance with MIL-STD-202, Method 101, condition B. Temperature : 35°C Salt water density : 5±1% Duration : 48hours
6	Solder ability	More than 95%of the dipped surface shell be evenly wet.	Dip the solder tine of the contact in the solder bath at 245±5°C for 5±0.5 sec. After Immersing the tine in the flux of RAM or R type for 5 to 10 seconds in accordance with MIL-STD-202, Method 208.