

# PRODUCT SPECIFICATION

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

Rev.A Sheet 10F5

**Title:** Din connector, Plug & Receptacle,

**Part Number:** DI-13M2-XX, DI-13F2-XX

**Description:** Din, 13Pin, 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

# PRODUCT SPECIFICATION

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

Rev.A Sheet 2OF5

## 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-13M2-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-13F2-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

# PRODUCT SPECIFICATION

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

Rev.A Sheet 30F5

## 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 <sup>th</sup> cycles at a speed 25±3mm/min. along – the mating axis.
2	Contact UN-mating force	1.5kgf Min	

# PRODUCT SPECIFICATION

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

Rev.A Sheet 4OF5

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℃ (30min.) → 85℃ (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

# PRODUCT SPECIFICATION

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

Rev.A Sheet 50F5

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.