Product specification

1. Scope

This specification applies to theMicro-D Mixed Power series connectors Product, specifying the product's performance indicators, test methods and test requirements.

Applicable Product Models: Micro-D Mixed Power(FMDP) series

2. Applicable Standards

The following documents form a part of this specification. In the event of conflict between the requirementsof this specification and the product drawing, the product drawing shall take precedence. In the event ofconflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

3. Parameter Range

Parameter Name	Value & Unit
Rated Current	Signal Conductor 3A [AC(rms)/DC] Current Conductor 20A [AC(rms)/DC]
Rated Voltage	500V[AC(rms)/DC]

Type	Signal Conductor	Current Conductor
Operating Temperature Range	-55 ℃ ~+125 ℃	
Applicable Wire Gauge	0.1~0.15mm²	2.0~3.0mm²
Applicable PCB Thickness	0.6~2.0mm	

4. Appearance and Dimensions

4.1 Appearance：Product surface without defect、dirt、crack、and mechanical damage, Contact without rust plating not oxides and not peeled

4.2 Appearance and dimensions shall comply with the requirements of product drawings.

4.3 Exchangeable: Exchangeable with same specification products.

5. Materials

Component		Material Specification	Color
Pulg/Socket	Shell	Aluminium alloy/Nickel Plated	-
	Contact	Copper Alloy /Gold Plated	-
	Insulation	High-temperature plastic/PPS	Natural/Black
WIRE		AFR250-0.1~0.15mm² AFR250-2.0~3.0mm²	White
Screw/Nut		STainless Steel	-

6. Mechanical Performance

Serial No.	Item	Test Method	Technical Requirements
6.1	Appearance	Checking by eye	No mechanical damage、Coating peelingor Deformation
6.2	Random Vibration	Mated connectors subjected to vibration conditions: 10~55~2000Hz, amplitude 0.75mm, 2h per axis, 100mA current applied Power spectral density 0.4G^2/Hz, total acceleration root mean square value 23.1G	Appearance: No damage; Current Discontinuity ≤1μs; Contact Resistance ≤10mΩ
6.3	Shock	Mated connectors shocked 3 times per 6 directions, 100mA current applied; Shock strength 735m/s², duration 11ms100mA	Appearance: No damage; Current Discontinuity ≤1μs
6.4	Durability	500 cycles mating and unmating test at the speed 10 cycles per minute	Appearance: No damage; Contact Resistance≤10mΩ

7. Electrical Performance

Serial No.	Item	Test Method	Technical Requirements
7.1	Contact Resistance	Mate connectors with dry circuit to test Contact Resistance	≤10mΩ
7.2	Insulation Resistance	Apply a voltage of 500V DC between adjacent contacts and between contacts to ground	≥5000MΩ
7.3	Withstand Voltage	Apply a voltage of AC 800 V for 1 minute between adjacent contacts and between contacts to ground, leakage current 1mA	No breakdown and arcing

8. Environmental Performance

Serial No.	Item	Test Method	Technical Requirements
8.1	Heat Resistance	Mate connector exposed to the condition of 125±2℃for 96 hours, recovery time 1~2 hours	Appearance: No damage; Contact Resistance ≤10mΩ; Insulation Resistance ≥5000MΩ; Withstand Voltage ≥500V
8.2	Cold Resistance	Mated connectors exposed to the condition of -55±2℃ for 96 hours, recovery time 1~2 hours	Appearance: No damage; Contact Resistance ≤10mΩ; Insulation Resistance ≥5000MΩ; Withstand Voltage ≥500V
8.3	Salt Spray	Sample suspended, 5±1% NaCl mist at 35±2℃ for 48h, rinsed with distilled water, recovery 1~2h	Appearance: No damage; Slight corrosion on cutting surface of pre-plated profiles acceptable; Contact Resistance ≤10mΩ