Product specification

1. Scope

This specification applies to the Micro USB 5Circuits connectors, specifying the product's performance indicators, test methods and test requirements.

Applicable Product Model: FUS485-FSBBKM

2. Applicable Standards

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

3. Parameter Range

Parameter Name	Value & Unit
Rated Voltage	30V AC/DC
Rated Current	1.8A Max (Pin1,5) , 1.0A Max (Pin2,3,4)
Operating Temperature	-30℃~+80℃(including terminal temperature rise)

4. Appearance and Dimensions

4.1 Appearance: Product surface without defect、dirt、crack、and mechanical damage, Contacts without rust; plating without oxidation and peeling.

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

5. Materials

Component	Material Specification	Color
Housing	LCP (UL94V-0)	Black
Terminal	Copper Alloy (Gold flash, nickel under plated overall)	-
Shell	Copper Alloy (Matte Tin-Plated, nickel under plated overall)	-

6. TEST CONDITION

The test and measurement, unless otherwise specified, shall be carried out at a temperature of 15 to 35℃, Relative humidity of 25 to 85% ,and atmospheric pressure of 86 to 106KPa. However, when any doubt arises on the judgment value under it ,the test and measurement shall be carry out at a temperature of 20±2℃, relative humidity of 60 to 70%, and atmospheric pressure of 86 to 106KPa.

7. Test Requirements and Procedures Summary

Serial No.	Item	Test Method	Technical Requirements
1	Examination of Product	Visual inspection	Meet the drawing requirements, no damage or abnormality in visual appearance
Electrical Requirement			

2	Dielectric Withstanding Voltage	Apply 100V AC for 1 minute and the leakage current shall not exceed 0.5mA to the adjacent terminal and ground of the mate connectors	No flashover or insulation breakdown
3	Contact Resistance	Mate the connector, test with a low-power circuit (open-circuit voltage ≤20mV, short-circuit current ≤100mA)	Contact Resistance :30 mΩ Max
4	Insulation Resistance	Apply 100 V DC voltage between adjacent circuits of the unmate connector for 1 min to test insulation resistance	Insulation Resistance：100 MΩ Min
Mechanical Characteristics			
5	Insertion Force	Insert the standard gauge at the speed rate of 12.5mm per minute, Mate applicable micro USB plug.	3.57kgf Max.
6	Withdrawal Force	Withdraw the standard gauge at the speed rate of 12.5mm per minute, Mate applicable micro USB plug.	1.00kgf Min.
7	Terminal Retention Force	Apply axial pull out force on the terminal assembled in the housing. Operation speed:12.5mm/minute	0.30kgf Min. Per Circuits
8	Durability	MICRO USB Receptacle Mate applicable micro USB plug up to 5,000 cycles repeatedly. (EIA 364-09A)	Appearance: no damage; contact Insertion Force: 3.57kgf Max. Withdrawal Force: 0.81~2.05kgf
9	Vibration	Amplitude: 1.5mm P-P Sweep time: 10~55~10 HZ in 1 minute Duration: 2 hours in each X.Y.Z axis. (EIA 364-28A)	Appearance: no damage; Contact resistance: 30 mΩ Max; Discontinuity: 1 μs Max
10	Mechanical Shock	The connector is soldered on the printed circuit board; acceleration: 50 G; shock time: 11 ms（half-sine wave）; cycle times: 3 times for each X, Y, Z axis, total 9 times （JIS C0041/MIL-STD-202 Method 213）	

Environmental Performance			
11	Temperature Rising	Mating connectors shall be energized at rating current until thermal stability is achieved, and then measured the temperature rise. (EIA364-70,Method 1)	Temperature rise: 30 ℃ Max
12	Thermal Shock	Temperature range: -40~+85 ℃; start from -40 ℃, keep constant temperature for 30 min, then switch to +85 ℃, transition time ≤30 s; total cycle times: 5 times	Appearance: no damage; Contact resistance: 30 mΩ Max Insulation Resistance: 100 MΩ Min
13	Humidity-Temperature Cycle	Temperature (40±2) ℃, relative humidity 90~95% for 96 h; after the test, place the connector at room temperature for 1~2 h before testing (EIA-364-31A,Method Ⅱ,ConditionA)	
14	Heat Resistance	The connector is in the mated state and placed at 85 ℃ for 96 h	
15	Cold Resistance	The connector is in the mated state and placed at -40 ℃ for 96 h	
16	Salt Spray	Salt concentration: 5%, temperature: (35±2) ℃, test time: (12±2) h; after the test, rinse residual salt with clean water, wipe dry before measurement (EIA-364-26A Condition A)	Appearance: no damage; Contact resistance: 30 mΩ Max
17	Solder Ability	Immerse the tip of the solder tail and positioning pin into molten solder at (245±5) ℃, immersion depth to 0.1 mm from the bottom of the housing, for (3±0.5) s	Wettability: more than 90% of the immersed area has no voids, pinholes and missing solder
18	Resistance To Solder Heat	No mechanical defect on housing or other parts.	Refer to paragraph 8.

8. Reference infrared reflow condition