

Product specification

1. Scope

This specification applies to the 1mm pitch FPC/FFC series connectors, specifying the product's performance indicators, test methods and test requirements.

Applicable Product Model: FFC10062 series

2. Applicable Standards

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	50V AC
Rated Current	0.5A
Operating Temperature	-40°C~+105°C(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)	Natural
Terminal	Copper Alloy (Tin-Plated)	-
Solder Tab	Copper Alloy (Tin-Plated)	-

6. TEST CONDITION

The test and measurement, unless otherwise specified, shall be carried out at a temperature of 15 to 35°C, 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°C, 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 200 V AC voltage between adjacent circuits of the unmated connector for 1 min	No flashover or insulation breakdown
3	Contact Resistance	Mate applicable FPC and measure by dry circuit 20mV Max,10mA	Contact Resistance: 55 mΩ Max
4	Insulation Resistance	Apply 200 V DC voltage between adjacent circuits of the unmate connector for 1 min to test insulation resistance	Insulation Resistance: 500 MΩ Min
Mechanical Characteristics			
5	Termina Retention Force	Apply axial pulling force to the terminal assembled in the housing at a rate of (25±3) mm/min	Retention Force:2N Min
6	Locking and Withdrawal Force	After closing the Actuator and connecting with FPC, test the FPC pulling force at a speed of (25±3) mm/min	Locking Force:1.96N/PIN Max Withdrawal Force:0.5N/PIN Min

7	Durability	Operation speed: maximum 10 times/min; durability cycle times: 20 times	Contact Resistance: 55 mΩ Max
8	Vibration	Amplitude: 1.5m; Frequency; 10~55~10HZ; Vibration time:2 hours for 3 axis total 6 hours.	Appearance: no damage; contact resistance: 55 mΩ Max; power-off time: 1 μs Max
9	Mechanical Shock	490m/s ² {50G}' 3 strokes in each X.Y.Z.axes.	Appearance: no damage; power-off time: 1 μs Max
Environmental Performance			
10	Temperature Rising	Connect the sample to the corresponding FPC, measure the temperature rise of the contact point when passing the maximum rated mating current (UL 498)	Temperature rise: 30 °C Max
11	Solder Ability	Soldering Time. 2± 0.5 sec. Soldering Temperature. 245±5°C 0.2mm from terminal tip	Wettability: more than 95% of the immersed area has no voids, pinholes and missing solder
12	Resistance to Reflow Soldering Heat	Preheating: 150~180 °C for (90±30) s; heating: minimum 230 °C for (30±10) s; peak temperature: (260±0/-5) °C, duration ≤10 s; cycle times: 2 times	Appearance: no component deformation affecting performance
13	Humidity-Te mperature Cycle	Temperature (40±2) °C, relative humidity 90~95% for 96 h; after the test, place the connector at room temperature for 1~2 h before testing	Appearance: no damage; contact resistance: 55 mΩ Max; insulation resistance:500 MΩ Min

14	Temperature Life	The connector is in the mated state and placed at 105 °C for 96 h	Contact resistance: 55 mΩ Max
15	Cold Resistance	The connector is in the mated state and placed at -40±2°C for 96 h; then return to room temperature and store for 1 to 2 hours.	Appearance: no damage; contact resistance: 55 mΩ Max
16	So2 Gas	24 hours exposure to 50±5ppm. SO2 gas at 40 ±2°C	Contact resistance: 55 mΩ Max
17	Salt Spray	Salt concentration: 5%, temperature: (35±2) °C, test time: (24±2) h; after the test, rinse residual salt with clean water, wipe dry before measurement	Appearance: no damage; contact resistance: 55 mΩ Max
18	NH3 Gas	40 minutes exposure to NH3 gas evaporating from 28% Ammonia solution	Appearance: no damage; contact resistance: 55 mΩ Max
19	Temperature Cycling	Thermal shock test: -40±3°C 30min → Room temp 10-15min → 105±3°C 30min → Room temp 10-15min, total 5 cycles	Appearance: no damage; contact resistance: 55 mΩ Max