

1. Scope

This specification covers the performance, tests and quality requirements for the pitch 0.35mm board to board connectors.

Applicable Product Models:FBB03503 series.

2. Applicable documents

The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies. 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. Ordering information

Refer to the drawing.

4. Connector dimensions

Refer to the drawing.

5. Material

Housing: Thermoplastic (UL94V-0)

Terminal: Copper Alloy

Plating: Gold plated

6. Accommodated P.C.B layout

Refer to the drawing.

7. Rating

Operating voltage(Max.):50V DC

Current rating(Max.) :0.3A allowable current to be applied

Temperature range-operating: -40°C -- +85°C

8. Performance

Serial Number	Test item	Procedure	Requirement
1	Examination Of Product	Visual inspection.	Meets requirements of product Drawing. No physical damage.

ELECTRICAL REQUIREMENT

2	Contact Resistance	Mate The sample connectors, measure by dry circuit, 20mV Max., 100mA Max. (EIA-364-23)	35mΩ Max.
3	Insulation Resistance	Impressed Voltage 100V AC Test between adjacent circuits of unmated connectors. (EIA-364-20D)	100 MΩ min. Initial
4	Dielectric withstanding Voltage	Unmated The sample connectors, Apply 100 V AC for 1minute Test between adjacent circuit of unmated connector. (EIA-364-20)	No Breakdown

MECHANICAL REQUIREMENT

5	Mating and Unmating force	Mate The sample connectors shall be soldered on a board and inserted and separated at speed of 12.5±3mm/min. (EIA-364-13)	Mating Force:30N MAX Unmating Force:3N MIN
6	Durability	Mate Thesample connectors should be mounted in the testerand fullymated andunmated the number of 30cycles specified at the rate of 25±3 mm/min.	Appearance: Nodamage

		(EIA-364-09)	After test: Signal Pin: 45mΩ Max Power Pin:15mΩ Max
7	SMT Retention force	The product is welded to the PCB board and pushed horizontally and vertically to remove the product from the PCB at a speed of 12.5mm per minute	Horizontal direction:30N Min Vertical direction: 30N Min
8	Vibration	half-sine wave, apply 0.1 ADC current. frequency:10-55-10Hz; amplitude: 1.50mm sweep time:1minute the connectors condition is PCB mounting and the plugs mated with receptacles , they must be tested 1hours in each of the 3 axis(X,Y,Z),total 6 hours. (MIL-STD-202F)	Shall meet visual requirement, show no physical damage.
			No discontinuities of 1μsec or longer duration.
9	Physical Shock	half-sine wave, apply 0.1ADC current Acceleration:50G(490m/s ²) duration: 11ms. the connectors condition is PCB mounting and the plugs mated with receptacles , shocking apply to 3 times in each of the 6 direction of 3 axis.18 total shock. (EIA-364-27)	Shall meet visual requirement, show no physical damage.
			No discontinuities of 1μsec or longer duration.

ENVIRONMENT PERFORMANCE AND OTHERS

10	Humidity	The specimens shall be separated and left in the chamber of25°C~65°Ctemperature and 90~95%	Appearance shall not be distinct damage.
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		humidity for 96hrs. After test drying in ambient condition for 1 hours. (EIA-364-31)	After test: Signal Pin: 45mΩ Max Power Pin:15mΩ Max
11	Temperature shock	-55 + 3 °C: →85 + 2 °C for 30 minutes, 30 minutes.Cycle 5 times	Appearance shall not be distinct damage. After test: Signal Pin: 45mΩ Max Power Pin:15mΩ Max
12	Resistance to high storage temperature	Make the samples be separated and Leave them in the chamber of temperature +85°C+/-3°C for 96hr, then it shall be subjected to standard atmospheric condition for 1~2h.	Appearance shall not be distinct damage. After test: Signal Pin: 45mΩ Max Power Pin:15mΩ Max
13	Resistance to low storage temperature	Make the samples be separated and Leave them in the chamber of temperature -40°C+/-2°C for 96hr, then it shall be subjected to standard atmospheric condition for 1~2h.	Appearance shall not be distinct damage. After test: Signal Pin: 45mΩ Max Power Pin:15mΩ Max
14	Salt Spray	tested as below: Temperature: (35±2)°C Humidity:(95-98)%(R.H.) PH: 6.5-7.2 Duration:X≤1u" :8H; 1u" < X < 3u" :12H; 3u" ≤ X < 15u" :24H; 15u" ≤ X < 30u" :36H; X=30u" :48H; X=50u" :72H; It shall be subjected to standard atmospheric condition 1 hour after removing the salt deposits. It should meet the contact resistance. Object non-contact area: Temperature:(35±2)°C Salt-solution (5±1)% . (EIA-364-26B)	Appearance: No damage After test: Signal Pin: 45mΩ Max Power Pin:15mΩ Max

15	Solder ability	Tip of solder tails and fitting mails into the molten solder (held at $245\pm 5^{\circ}\text{C}$) up to 0.1mm from the Housing for 3~5sec onds. (EIA-364-52)	Solder Wetting: 95% of immersed area must show no voids, pin holes.
16	Resistance to Reflow Soldering Heat	Soldering iron method 0.2mm from terminal tip and fitting nail tip. Soldering time: 3 seconds Max. Solder temperature : 260°C	Appearance: No damage

9. Recommended temperature profile (SMT)

