

1. Scope

This specification covers the performance, tests and quality requirements for the pitch 0.5mm board to board connectors.

Applicable Product Models:FBB05021 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

Hold down:Copper Alloy/Tin plating

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: -55°C -- +125°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)	50mΩ Max.
3	Insulation Resistance	Impressed Voltage 500V AC Test between adjacent circuits of unmated connectors. (EIA-364-21)	500 MΩ min. Initial
4	Dielectric withstanding Voltage	Unmated The sample connectors, Apply 150 V AC for 1minute Test between adjacent circuit of unmated connector. (EIA-364-20)	No Breakdown
5	TemperatureRise	The temperature rise shall not exceed 30 °C when measured usingthermocouple under the following . a) Current applied: 0.3A DC; b) Special preparation: The connector shall be connected in series. c) Points of measurement: At a terminal located at or near themiddle of the connector. (EIA-364-70,Method1,Condition1)	The temperature rise shall not exceed 30°C (Current applied: 0.3A DC)

MECHANICAL REQUIREMENT

6	Vibration Test	Frequency: 10 to 55 Hz, single amplitude of 0.75mm, 2 hours along each X,Y,Z, total 6 hours, No electrical discontinuity of 1 us or more. (EIA-364-28D, Condition I/MIL-STD-202 Method 201)	Discontinuity: 1 u sec Max.
			Contact Resistance: 50mΩ Max.
7	Physical Shock	There shall be no evidence of physical or mechanical damage, or disassociation of parts, and no evidence of discontinuity greater than 1 microsecond when the mated connector is subjected to mechanical shock. The contact resistance shall not exceed 50 mΩ after the test. a) Test condition: 490 m/s ² (50G), 11ms, half-sine wave. b) Number of Shock: 18 total shocks Three shocks in each direction shall be applied along the three mutually perpendicular axes of the test specimen . c) Test Current: 0.1 A (EIA-364-27, Test Condition A)	Discontinuity: 1 sec Max.
			Contact Resistance: 50mΩ Max.
8	Mating and Unmating force	Mate The sample connectors shall be soldered on a board and inserted and separated at speed of 25.4±3mm/min. (EIA-364-13)	0.875N maximum. per pin 0.105N minimum. per pin
9	Durability	Mate The sample connectors should be mounted in the tester and fully mated and unmated the number of 50 cycles specified at the rate of 25±3 mm/min.	Appearance: No damage

		(EIA-364-09)	Contact Resistance: 50mΩ Max.
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ENVIRONMENT PERFORMANCE AND OTHERS

10	Humidity	1.Temperature Setting: High Temperature 65°C, Low Temperature -10°C,relative humidity90% to 95%. 2.Dwell Time per Temperature Stage: 0.5 Hour 3.Number of Cycles: 10 Cycles	Contact Resistance: 50mΩ Max.
			Appearance: Nodamage
11	Temperature Cycling	Temperature: -55°C-+5°C to 35°C-+125°C-+5°C to +35°C Time: 30/3/30/3 (Minutes)Mate applicable connector and subject to the following conditions for5 cycles. Upon completion of the exposure period, the test specimens shall beconditioned at ambient room conditions for 1 to 2 hours, after whichthe specified measurements shall be performed 1 cycleTransit time shall be within 3 minutes) (EIA-364-32)	Contact Resistance: 50mΩ Max.
			Appearance: Nodamage
12	Salt Spray	ested 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:	Appearance: Nodamage

		Temperature:(35±2)°C Salt-solution (5±1)% . (EIA-364-26B)	Contact Resistance: 50mΩ Max.
13	Solder ability	Tip of solder tails and fitting mails into the molten solder (held at 250±5°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.
14	Resistance to Reflow Soldering Heat	Soldering iron method 0.2mm from terminal tip and fitting nail tip. Soldering time: 3 seconds Max. Solder temperature : 350°C	Appearance: No damage

9. Recommended temperature profile (SMT)

