

## **1. Scope**

This specification covers the performance, tests and quality requirements for the pitch 0.4mm board to board connectors.

Applicable Product Models:FBB04013 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.):30V 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.<br>(EIA-364-23)                                     | 90mΩ Max.          |
| 3 | Insulation Resistance           | Impressed Voltage 100V AC Test between adjacent circuits of unmated connectors.<br>(EIA-364-21)                               | 50 MΩ min. Initial |
| 4 | Dielectric withstanding Voltage | Unmated The sample connectors, Apply 100 V AC for 1minute Test between adjacent circuit of unmated connector.<br>(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 25.4±3mm/min.<br>(EIA-364-13)                    | 0.875N maximum. per pin<br>0.105N minimum. per pin |
| 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) | Contact Resistance: 90mΩ<br>Max. |
|--|--|--------------|----------------------------------|

## ENVIRONMENT PERFORMANCE AND OTHERS

|   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                          |
|---|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| 7 | Humidity            | The sample shall be stored for 96 hours in an environment with temperature ranging from 25°C to 65°C and relative humidity of 90% to 95% RH.                                                                                                                                                                                                                                                                             | Contact Resistance: 90mΩ<br>Max.<br>Appearance: Nodamage |
| 8 | Temperature Cycling | Temperature:<br>-55°C-+5°C to 35°C-+125°C-+5°C to +35°C<br>Time: 30/3/30/3(Minutes)Mate applicable connector and subject to the following conditions for5 cycles.<br>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)<br>(EIA-364-32) | Contact Resistance: 90mΩ<br>Max.<br>Appearance: Nodamage |
| 9 | Salt Spray          | ested as below: Temperature: (35±2)°C<br>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:<br>Temperature:(35±2)°C Salt-solution (5±1)% .<br>(EIA-364-26B)     | Appearance: Nodamage<br>Contact Resistance: 90mΩ<br>Max. |

|    |                                        |                                                                                                                                                                  |                                                                     |
|----|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| 10 | Solder ability                         | Tip of solder tails and fitting mails into the molten solder (held at $250\pm 5^{\circ}\text{C}$ ) up to 0.1mm from the Housing for 3~5sec onds.<br>(EIA-364-52) | Solder Wetting: 95% of immersed area must show no voids, pin holes. |
| 11 | Resistance to Reflow<br>Soldering Heat | Soldering iron method<br>0.2mm from terminal tip and fitting nail tip.<br>Soldering time: 3 seconds Max.<br>Solder temperature : $350^{\circ}\text{C}$           | Appearance: No damage                                               |

## 9. Recommended temperature profile (SMT)

