1. Scope

This specification covers the performance, tests and quality requirements for the Blade battery connector

Applicable Product Models:FBA20009 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. Rating

Operating voltage(Max.):30V AC

Current rating(Max.) :5A allowable current to be applied

Temperature range-operating: -40°C -- +105°C

7. Performance

Serial Number	Test item	Procedure	Requirement
1	Examination Of Product	Visual inspection. (EIA-364-18)	Meets requirements of product Drawing. No physical damage.

ELECTRICAL REQUIREMENT

2	Contact Resistance	Subject mated contacts assembled housing to 20 mV maximum 100 mA .Measured from plug side to PCB side. (EIA-364-23)	Inital value:30mΩ MAX. After environmental tests:40mΩ MAX
3	Insulation Resistance	Mated connectors with 500±10% VDC between adjacent contacts or ground. (EIA-364-21)	Minimum initial resistance: 1000 MΩ
4	Dielectric withstanding Voltage	Mate applicable female header, apply 1000V AC for 1 minute between adjacent terminal or ground. (EIA-364-20)	No Breakdown

MECHANICAL REQUIREMENT

5	Mating and Un-mating Force	Mating connectors at maximum rate 25.4millimeters/minute and measure the Insertion and Extraction force . (EIA -364-13D)	Insertion Force：≤0.038kgf per pin Withdrawal Force： ≥ 0.027kgf per pin
6	Terminal/ Housing Retention Force	Pull out the terminal from the housing at speed 25±3mm per minute.	0.30kg MINIMUM

ENVIRONMENT PERFORMANCE AND OTHERS

7	Heat Resistance	Place the sample under an ambient temperature of 105±5° C for a test duration of 96 hours.Subsequently, condition the sample at room temperature for 1–2 hours before testing. (EIA-364-17)	Appearance: Nodamage
			Contact Resistance: 40mΩ Max.
8	Cold Resistance	Place the sample under an ambient temperature of - 40± 5°C for a test duration of 96 hours.Subsequently, condition the sample at room temperature for 1–2 hours prior to testing. (EIA-364-17)	Appearance: Nodamage
			Contact Resistance: 40mΩ Max.
9	Humidity	Place the connected sample under an ambient temperature of 40±2°C and relative humidity of 90–95% for a test duration of 96 hours.Subsequently, condition the sample at room temperature for 1–2 hours before conducting the test.	Contact Resistance: 40mΩ Max.
			Dielectric StrengthL:No Breakdown
			Appearance: Nodamage
			Insulation Resistance:1000MΩ Min.
10	Salt Spray	Salt Mist Concentration: 5%±2; pH Value: 6.5~7.2; Spray Rate: 1.0~2.0 (ml/80 cm²/h);	Appearance: Nodamage

		Relative Humidity (RH): ≥85%; Test Duration: 48 hours. (EIA-364-26B)	Contact Resistance: 40mΩ Max.
11	Solder ability	Dip terminal and pin into the molten solder (held at 250±5°C) up to 1.6mm from the standard surface for 5±0.5 seconds.	Solder Wetting: 85% of immersed area must show no voids , pin holes
12	Resistance to Soldering Heat	Dip terminal and pin into the molten solder (held at 255±5°C) up to 1.6mm from the standard surface for 5±0.5 seconds.	Appearance: Nodamage
13	Product temperature	The product into the oven(temperature 260+5°C)time to 10+1 seconds.	Appearance: Nodamage
14	Temperature Shock	Mate the connectors properly. Perform thermal cyclingbetween -40°C and 85°C, with an exposure time of 30minutes per cycle and 5 cycles total. Allow a transitiontime of 3 minutes between temperature changes. Aftercompletion, recover the test specimens at ambient	Appearance: Nodamage