Product specification

1. Scope

This specification applies to the pitch 0.60mm single row series connectors, specifying the product's performance indicators, test methods and test requirements.

Applicable Product Model: FWF06001/FHG06001 series

2. Applicable Standards

The following documents form a part of this specification. 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.

2.1 GB/T2421 Testing method for Environmental of Electrical ConnectorsClass1:General Principles
2.2 GB/T2423 Testing method for Environmental of Electrical Connectors
2.3 GB/T2424 Testing method for Environmental of Electrical Connectors
2.4 EIA-364 Test method for electrical connectors

3. Parameter Range

Parameter Name	Value & Unit
Rated Voltage	30V AC/DC
Rated Current	0.3A(AWG#34);0.2A(AWG#36)
Operating Temperature	-25℃~+85℃(including terminal temperature rise)
Applicable Wire Gauge	34 AWG~36 AWG

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
Wafer	Housing	LCP (UL94V-0)	Black
	Contact	Brass (Glod flash, nickel under plated overall)	-
	Solder Tab	Brass (Tin-Plated, nickel under plated overall)	-
Housing	Housing	LCP (UL94V-0)	Blcak
	Contact	Phosphor Bronze (Glod flash, nickel under plated overall)	-

6. Test Requirements and Procedures Summary

Serial No.	Item	Test Method	Technical Requirements
1	Examination	Visual inspection	Meet the drawing requirements,

	of Product		no damage or abnormality in visual appearance
Electrical Requirement			
2	Dielectric Withstanding Voltage	Apply 200V AC(rms)for 1 minute and the leakage current shall not exceed 0.5mA to the adjacent terminal and ground of the mate connectors	No flashover or insulation breakdown
3	Contact Resistance	Mate the connector, test with a low-power circuit (open-circuit voltage ≤20mV, short-circuit current ≤10mA)	30mΩ Max
4	Insulation Resistance	Apply 500 V DC voltage between adjacent circuits of the unmate connector for 1 min to test insulation resistance	Insulation Resistance：100 MΩ Min
Mechanical Characteristics			
5	Pin Retention Force	Fix the connector or dynamometer, apply thrust to the terminal in the socket along the connector axis, test speed 25±3 mm/min	Retention Force ≥0.07kgf
6	Insertion & Retention Force	Mate/unmate the socket with the housing equipped with terminals along the connector axis, test speed 25±3 mm/min	Refer to Appendix Table
7	Durability	Operation speed: maximum 10 times/min; durability cycle times: 30 times	Contact Resistance： 30 mΩ Max
8	Vibration	Amplitude: 1.5mm P-P Sweep time: 10~55~10 HZ in 1 minute Duration: 2 hours in each X.Y.Z axis. (Based upon EIA-364-28B/MIL-STD-202 Method 213B Condition A)	Appearance: no damage; contact resistance: 30 mΩ Max; power-off time: 1 μs Max
Environmental Performance			
9	Temperature Rising	Mating connectors shall be energized at rating current until thermal stability is achieved, and then measured the temperature rise. （EIA364-70,Method 1）	Temperature rise: 30 ℃ Max

10	Thermal Shock	Temperature range: -25~+85 ℃; start from -25 ℃, keep constant temperature for 30 min, then switch to +85 ℃, transition time ≤30 s; total cycle times: 5 times	Appearance: no damage; Contact resistance: 30 mΩ Max; Insulation resistance:100 MΩ Min
11	Humidity-Temperature Cycle	Temperature (40±2) ℃, relative humidity 90~95% for 96 h; after the test, place the connector at room temperature for 1~2 h before testing (EIA-364-31A,Method Ⅱ,ConditionA)	Appearance: no damage; Contact resistance: 30 mΩ Max; Insulation resistance:100 MΩ Min
12	Heat Resistance	The connector is in the mated state and placed at 85 ℃ for 96 h	Appearance: no damage; Contact resistance: 30 mΩ Max; Insulation resistance:100 MΩ Min
13	Salt Spray	Salt concentration: 5%, temperature: (35±2) ℃, test time: 12 h; after the test, rinse residual salt with clean water, wipe dry before measurement (EIA-364-26A Condition A)	Appearance: no damage; Contact resistance: 30 mΩ Max; Insulation resistance:100 MΩ Min
14	Solder Ability	Immerse the tip of the solder tail and positioning pin into molten solder at (245±5) ℃, immersion depth to 0.1 mm from the bottom of the housing, for (3±0.5) s	Wettability: more than 95% of the immersed area has no voids, pinholes and missing solder
15	Resistance To Soldering Heat	By soldering iron 330~350 ± 5℃ 3±0.5 Seconds. By Reflow Soldering Refer to Appendix Temperature Profile	No deformation or damage.

Appendix: Insertion and Extraction Force of Finished Product

Circuits (n)	Initial		After 30th cycle
	Insertion Force (Max.)	Withdrawal Force (Min.)	Withdrawal Force (Min.)
4	1.4Kgf	0.2Kgf	0.15Kgf
5	1.4Kgf	0.2Kgf	0.15Kgf
6	1.4Kgf	0.2Kgf	0.15Kgf
7	1.4Kgf	0.2Kgf	0.15Kgf
8	2.0Kgf	0.35Kgf	0.25Kgf
10	2.0Kgf	0.35Kgf	0.25Kgf
12	2.0Kgf	0.35Kgf	0.25Kgf

Appendix: Temperature Profile

Temperature Profile(溫度曲線圖)：

