1. **Scope**

Wafer Connector pitch 3mm series
This specification covers the Wafer Connector FWF30001/FWF30002/FWF30003 Series

2. **Ordering information**

Refer to the drawing.

3. **Connector dimensions**

Refer to the drawing.

4. **Material**

Housing: Thermoplastic (UL 94V-0)
Color: Black
Terminal: Copper alloy
Plating: Tin plated
Solder tab: Copper alloy
Plating: Tin plated

5. **Accommodated P.C.B layout**

Refer to the drawing.

6. **Rating**

Operating voltage(Max.)	250V AC/DC
Current rating(Max.)	5.0A AC/DC
Temperature range-operating	-25°C -- +85°C(Including terminal temperature rese)

7. **Performance**

Test item	Requirement	Test Condition
Electrical Performance		
Contact Resistance	10mΩ Max.	Mate connectors, measure by dry circuit, 20mV Max., 10mA. Mated Length : 50mm (AWG. #24) (Based upon JIS C5402 5.4)
Insulation Resistance	1000 MΩ Min.	Mate connectors, apply 500V DC between adjacent terminals or ground. (Based upon JIS C5402 5.2/MIL-STD-202 method 302 Cond.B)
Dielectric Strength	No breakdown and flashove	Mate connectors, apply 1500V AC (virtual value) for 1 minute between adjacent terminal or ground. (Based upon JIS C5402 5.1/MIL-STD-202 Method 301)

Test item	Requirement		Test Condition
Mechanical Performance			
Terminal Insertion Force	1.5kgf Max.		Insert the crimped terminal into the housing at the speed rate of 25±3mm/min.
Terminal Withdrawal Force	2.0kgf Min.		Pull the terminal at the speed rate of 25±3mm/min.
Pin Retention Force	1.5kgf Min.		Apply axial push force at the speed rate of 25±3mm/minute on the contact pin assembled in the base wafer.
Environmental Performance and others			
Repeated Insertion and Withdrawal	Contact Resistance	20mΩ Max.	Insertion and withdrawal actuator up to 30 cycles at the speed rate of less than 10 cycles/min.
Heat resistance	Appearance	No Damage	Mated connector shall be placed in an oven for 96±4 hours at +85±2°C. (Based upon JIS C5402 7.8)
	Contact Resistance	10mΩ Max.	
Cold resistance	Appearance	No Damage	Mated connector shall be placed in a temperature chamber for 96±4 hours at -25±2°C (Based upon JIS C5402 7.9)
	Contact Resistance	10mΩ Max.	
Humidity	Appearance	No Damage	Mated connector shall be placed in a humidity chamber on the following conditions. Temperature: 40±2°C Relative humidity: 90~95% Duration : 96 Hours (Based upon MIL-STD-202 Method 103 cond.A)
	Contact Resistance	20mΩ Max.	
	Dielectric Strength	1500V,AC/min	
	Insulation Resistance	100MΩ Min.	
Vibration	Appearance	No Damage	Amplitude: 1.52mm P.P Sweep time: 10-55-10Hz/minute Duration: 2 hours in each X、Y、Z axlals. (Based upon MIL-STD-202 method 201A)
	Contact Resistance	10mΩ Max.	
	Discontinuity	1μ sec Max.	
Temperature cycling	Appearance	No Damage	Mated connector shall be set to temperature cycling for 5 cycles of which 1 cycle consists of: 1>.+25°C ~ 3 minutes 2>.-25°C ~ 30 minutes 3>.+25°C ~ 3 minutes 4>.+85°C ~ 30 minutes (Based upon JIS C5402 7.2)
	Contact Resistance	20mΩ Max.	
	Dielectric Strength	800V,AC/min	
	Insulation Resistance	500MΩ Min.	

Test item	Requirement		Test Condition
Temperature Rise	30°C Max.		Carrying rated current load. (UL 498)
Salt Spray	Appearance	No Damage	Mated connector shall be placed in a salt spray chamber on the following conditions. Salt Solution Density : 5±1% Temperature : 35±2°C Duration : 8±2Hours Remarks : we make sure the important area
	Contact Resistance	20mΩ Max.	
Solderability	95% of immersed area must show no voids nor pin holes.		Soldering Time：3±0.5 sec. Soldering Temperature：245±5℃ 0.2 mm from pin tip
Resistance to soldering heat	No Damage in appearance		Soldering Time：3±0.5 sec. Soldering Temperature：250℃ Max. 0.2 mm from terminal tip

8. **Reference infrared reflow condition**