1. **Scope**

This specification covers the Wire to Board pitch 1.25mm series connectors.

Product name	Wafer		Housing	Terminal
Series number	FWF12513	FWF12514	FHG12507	FT12508

2. **Applicable documents**

The following documents form a part of this specification to the extent specified herewith. In the event of conflict between the requirements of the specification and the product drawing, the product drawing shall take precedence.
In the event of conflict between the requirements of the 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 (UL 94V-0/UL 94V-2)

Color :Refer to the drawing.

Contacts terminal: Copper alloy

Plating:Tin plated

6. **Accommodated P.C.B layout**

Refer to the drawing.

7. **Rating and applicable wires**

Operating voltage(Max.)	50V AC/DC (rms)
Current rating(Max.)	1.0A (AWG.#26) DC
Temperature range-operating	-25°C -- +85°C (Including terminal temperature rise)
Applicable wires	AWG. #30 ~ #26
Insulation O.D	Ø0.8~Ø1.0mm

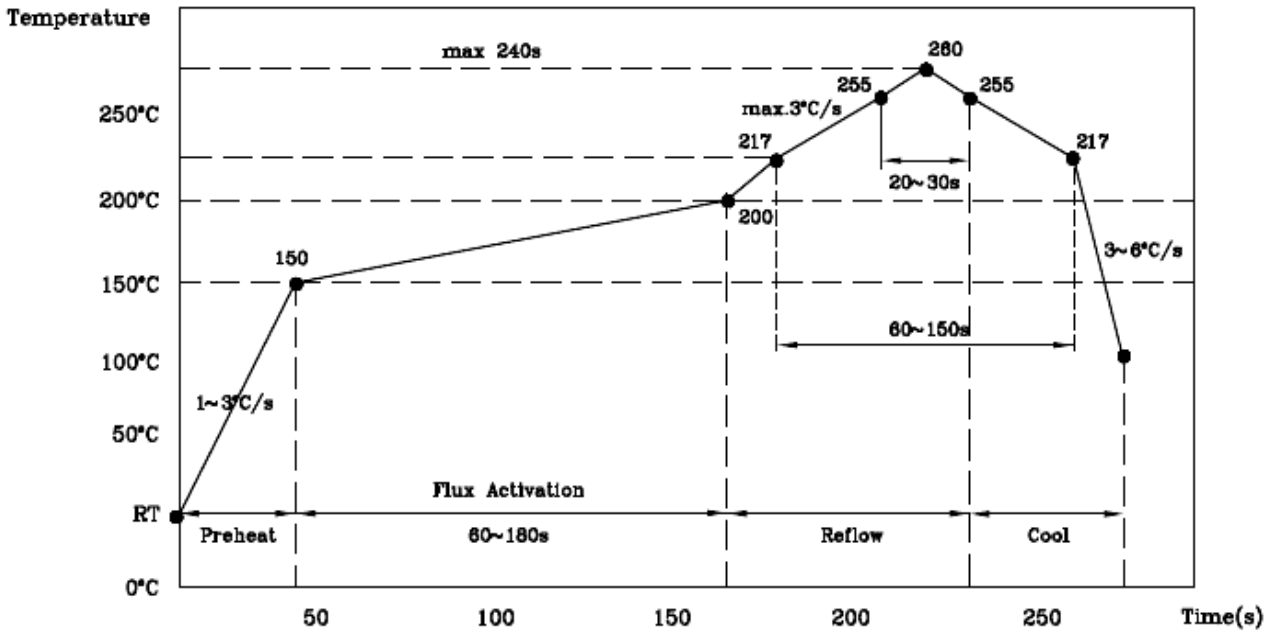
8. **Performance**

Test item	Requirement	Test Condition
Electrical Performance		
Contact Resistance	30 mΩ (Max.)	Mate connectors, measure by dry circuit, 20mV Max., 10mA. Mated Length : 50mm (AWG. #26) (Based upon JIS C5402 5.4)
Insulation Resistance	100 MΩ (Min.)	Mate connectors, apply 100V DC between adjacent terminals or ground. (Based upon JIS C5402 5.2/MIL-STD-202 method 302 Cond.B)

Test item	Requirement		Test Condition
Dielectric strength	No breakdown and flashover		Mate connectors, apply 500V AC for 1 minute between adjacent terminal or ground. (Based upon JIS C5402 5.1/MIL-STD-202 Method 301)
Contact resistance on crimped portion	30 mΩ (Max.)		Crimp the maximum applicable wire on to the terminal, measure by dry circuit, 20mV Max., 10mA. Wire Length : 50mm (AWG.#26)
Mechanical Performance			
Insertion and Withdrawal Force	Refer to paragraph 9		Mate and unmate connectors at the speed rate of 25 ±3 mm/minute
Crimping pull out Force	AWG.#26	1.9kgf Min.	Fix the crimped terminal, apply axial pull out force on the wire at the speed rate of 25±3 mm/minute (Based upon JIS C5402 6.22)
	AWG.#28	1.0kgf Min.	
	AWG.#30	0.8kgf Min.	
Terminal Insertion Force	0.5kgf (Max.)		Insert the crimped terminal into the housing at the speed rate of 25±3 mm/min.
Terminal/Housing Retention Force	0.5kgf (Min.)		Apply axial pull out force at the speed rate of 25±3 mm/minute on the terminal assembled In the housing.
Pin retention force	0.3kgf (Min.)		Apply axial push force at the speed rate of 25±3 mm/minute on the contact pin assembled in the base wafer.
Environmental Performance and others			
Repeated insertion/ withdrawal	Contact Resistance	50 mΩ Max.	Mate connector up to 30 cycles repeatedly at a rate of 10 cycles/minute. After which test the contact resistance
Temperature Rise	30 °C Max.		Apply rated current load on mated connector in series-connection. Measure change of temperature on contact using thermocouples for 4 hours. (Based upon UL 1977)
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	50 mΩ Max.	
Cold resistance	Appearance	No Damage	Mated connector shall be placed in a temperature chamber for 96±4 hours at -25±3°C (Based upon JIS C5402 7.9)
	Contact Resistance	50 mΩ Max.	

Test item	Requirement		Test Condition
Vibration	Appearance	No Damage	Amplitude: 0.75mm Sweep time: 10-55-10Hz/minute Duration: 2 hours in each X、Y、Z axlals. (Based upon MIL-STD-202 method 201A)
	Contact Resistance	50 mΩ Max.	
	Discontinuity	1μ sec Max.	
Shock	Appearance	No Damage	50G, 3 strokes in each X、Y、Z. axlals. (Based upon JIS C0041/MIL-STD-202 method 213B Cond.A)
	Contact Resistance	50 mΩ Max.	
	Discontinuity	1μ sec 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 JIS C0022/MIL-STD-202 Method 103B Cond.B)
	Contact Resistance	50 mΩ Max.	
	Dielectric Strength	500 V AC/min	
	Insulation Resistance	50 MΩ Min.	
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	50mΩ Max.	
	Dielectric Strength	500 V AC/min	
	Insulation Resistance	50MΩ Min.	
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 : 24±4 Hours (Based upon JIS C5402 7.1/MIL-STD-202 Method 101 Cond. B) Remarks: We make sure the important area
	Contact Resistance	50 mΩ Max.	
Solderability	95% of immersed area must show no voids nor pin holes.		Immerse fluxed soldered section of contact pin into a solder bath for 3±0.5 sec Temperature: 230±5 °C
Resistance to soldering heat	Appearance	No Damage	Mated connector shall be dipped on solder bath for 5 ±0.5 sec Temperature: 260±5°C

Reference infrared reflow condition (Lead free)



9. **Insertion force and withdrawal force**

(Unit:kgf)

Circuits	Insertion (Max.)	Withdrawal (Min.)		
	Initial	Initial	10th	30th
Single	0.25	0.07	0.06	0.05