

1. Scope

FPC Connector pitch 0.5mm series
 This specification covers the FFC05036 series

2. Ordering information

Refer to the drawing.

3. Connector dimensions

Refer to the drawing.

4. Material

Housing: Thermoplastic (UL 94V-0)
 Color :Natural ;Flammability rating (UL 94V-0)
 Actuator: Thermoplastic (UL 94V-0)
 Color: Black;Flammability rating (UL 94V-0)
 Contacts terminal: Phosphor bronze
 Plating:Gold plated
 Stopper: Copper alloy
 Plating:Tin plated

5. Accommodated P.C.B layout

Refer to the drawing.

6. Rating

Operating voltage(Max.) 50V AC
 Current rating(Max.) 0.5A DC
 Temperature range-operating -25°C -- +85°C(Including terminal temperature rese)

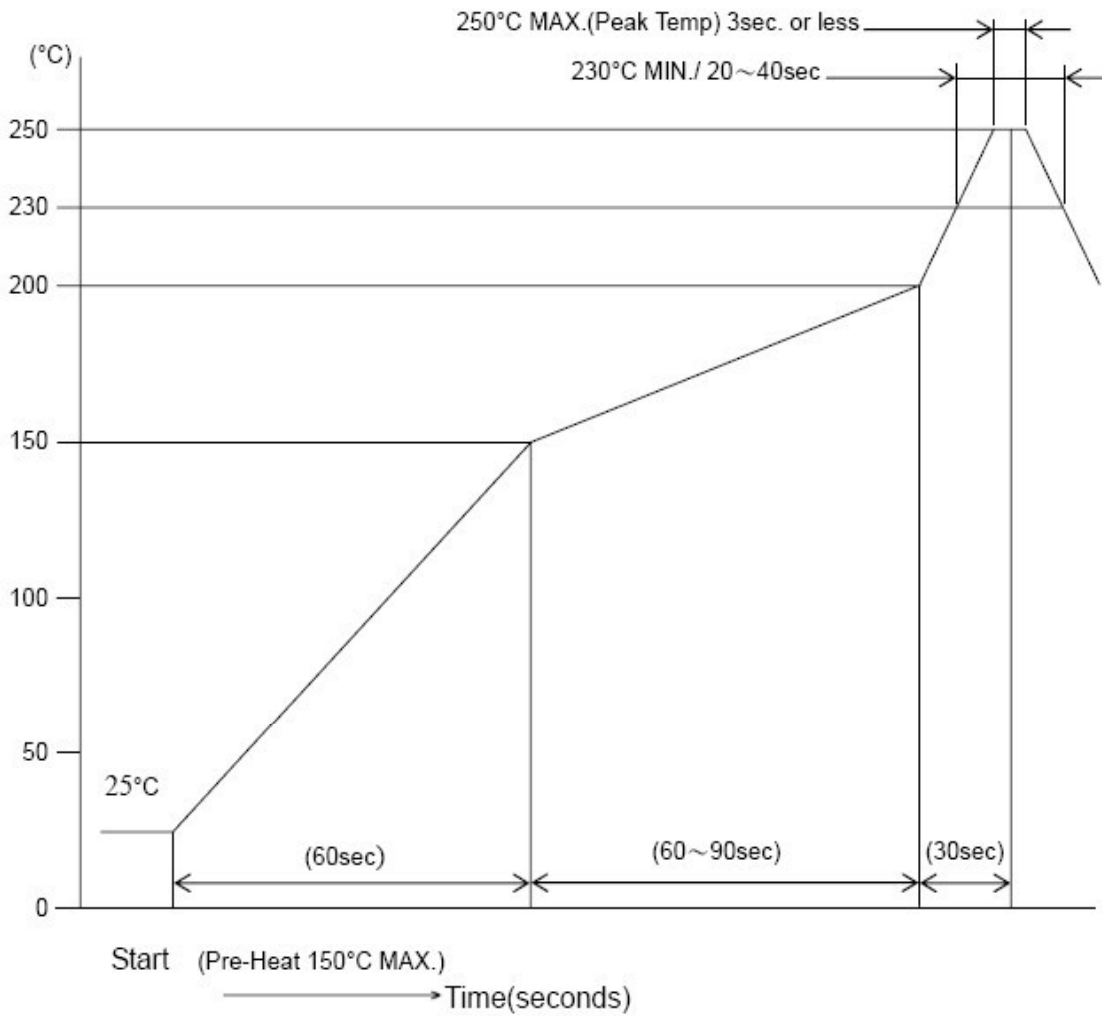
7. Performance

Test item	Requirement	Test Condition
Electrical Performance		
Contact Resistance	30mΩ Max.	Mate applicable FPC and measure by dry circuit.20mV Max. 10mA. (JIS C5402 5.4)
Insulation Resistance	500 MΩ Min.	Mate applicable FPC and apply 500V DC between adjacent terminal or ground. (JIS C5402 5.2/MIL-STD-202 Method 302)
Dielectric Strength	No breakdown and flashove	Mate applicable FPC,apply 200V AC(rms) for 1 minute between adjacent terminal or ground. (JIS C5402 5.2/MIL-STD-202 Method 301)

Test item	Requirement	Test Condition	
Mechanical Performance			
Terminal Retention Force	0.08kgf/Circuit (Min)	Apply axial pull out force at the rate of 25±3mm/minute on the terminal assembled in the housing.	
FPC Retention Force	0.015kgf/Circuit (Min)	Apply axial pull out force at the rate of 25±3mm/minute on the line assembled in the connector.	
Environmental Performance and others			
Temperature Rise	30°C Max.	Mate applicable FPC and Measure the temperature rise of contact when the maximum AC rated current is passed (UL498)	
Vibration	Appearance	No Damage	Mate connectors and subject to the following vibration conditions,for period of 2 hours in each of 3 mutually perpendicular axes,passing DC 1mA during the test. Amplitude:1.5mm P-P Frequency:10-55-10Hz in 1 munute Duration:2 hours in each of X.Y.Z axe (MIL-STD-202 Method 201)
	Contact Resistance	60mΩ Max.	
	Discontinuity	1μ sec Max.	
Shock	Appearance	No Damage	Mate applicable FPC and subject to the following shock conditions.3 times of shocks shall be applied for each 6 directions along 3 mutually perpendicular axes ,passing DC 1mA current during the test. (Total of 18 shocks) Peak value:490m/s (50G) (JIS C0041/MIL-STD-202 Method 213)
	Contact Resistance	60mΩ Max.	
	Discontinuity	1μ sec Max.	
Heat resistance	Appearance	No Damage	Mate applicable FPC and expose to 85±2°C for 96 hours.upon completion of the exposure period the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours ,After which the specified measurements shall be performed. (JIS C0021/MIL-STD-202 Method 108)
	Contact Resistance	60mΩ Max.	
Cold resistance	Appearance	No Damage	Mate applicable FPC and expose to -40±2°C for 96 hours ,upon completion of the exposure period,the test specimens shall be comditioned at ambient room conditions for 1 to 2 hours ,after which the specified measurements shall be performed. (JIS C0020)
	Contact Resistance	60mΩ Max.	
Humidity	Appearance	No Damage	Mate applicable FPC and expose to 60±2°C,relative humidity 90 to 95% for 96 hours,upon completion of the exposure period ,the test specimens shall be comditioned at ambient room conditions for 1 to 2 hours ,after which the specified measurements shall be performed. (JIS C0022/MIL-STD-202 Method 103)
	Contact Resistance	60mΩ Max.	
	Dielectric Strength	Meet the withstand voltage test	
	Insulation Resistance	500MΩ Min.	

Test item	Requirement		Test Condition
Temperature cycling	Appearance	No Damage	Mate applicable FPC and subject to the following conditions for 5 cycles upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. Cycle a)-55±3°C 30minutes b)+85±3°C 30minutes (JIS C0025)
	Contact Resistance	60mΩ Max.	
	Dielectric Strength	Meet the withstand voltage test	
	Insulation Resistance	500MΩ 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: 48 Hours (JIS C0023/MIL-STD-202 Method 101)
	Contact Resistance	60mΩ Max.	
Solderability	Solder Wetting	75% of immersed area must show no voids, pin holes	Tip of solder tails and fitting nails into the molten solder (held at 245±5°C) up to 0.1mm from the bottom of the housing for 3±0.5 seconds.
Resistance to soldering heat	Appearance	No Damage	Soldering in on method 0.2mm from terminal tip and fitting nail tip. Soldering time :3±0.5 seconds Solder temperature :250±5°C

8. Reference infrared reflow condition



Temperature condition graph
Temperature on board pattern side