1. **Scope**

FPC Connector pitch 0.5mm series
This specification covers the FFC05012 series

2. **Ordering information**

Refer to the drawing.

3. **Connector dimensions**

Refer to the drawing.

4. **Material**

Housing: PA6T (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:Tin or gold plated
Stopper: Copper alloy
Plating:Tin plated

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

Refer to the drawing.

6. **Rating**

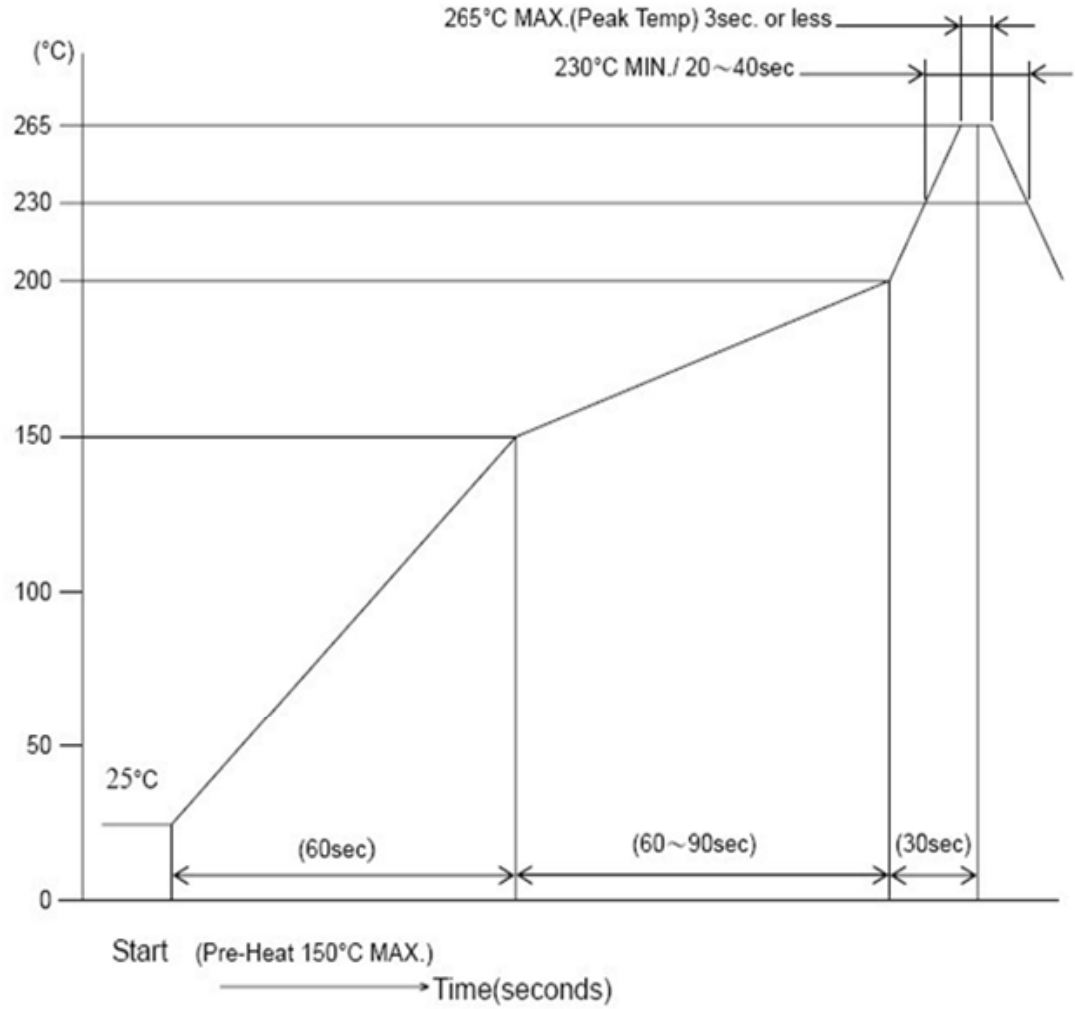
Operating voltage(Max.)	50V AC
Current rating(Max.)	0.5A DC
Temperature range-operating	-40°C -- +85°C(Including terminal temperature rese)

7. **Performance**

Test item	Requirement	Test Condition
Electrical Performance		
Contact Resistance	20mΩ 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			
Retention Force	0.05kgf/Circuit (Min)		Apply axial pull out force at the rate of 25±3mm/minute on the line assembled in the connector.
Terminal Retention Force	0.2kgf/Circuit (Min)		Apply axial pull out force at the rate of 25±3mm/minute on the terminal assembled in the housing.
Lock Button Retention Force	0.3kgf~3.5kgf		Apply axial pull out force at the rate of 25±3mm/minute on the terminal assembled in the connector.
Environmental Performance and others			
Heat resistance	Appearance	No Damage	Duration: 96 hours Temperature: 85±3°C (JIS C5402 7.8)
	Contact Resistance	40mΩ Max.	
Cold resistance	Appearance	No Damage	Duration: 96 hours Temperature: -25±3°C (JIS C5402 7.9)
	Contact Resistance	40mΩ Max.	
Humidity	Appearance	No Damage	Temperature: 60±2°C Relative humidity: 90~95% Duration: 96 hours (MIL-STD-202 Method 103 conditions A)
	Contact Resistance	40mΩ Max.	
	Dielectric Strength	Meet the Dielectric Strength test	
Temperature cycling	Appearance	No Damage	5 cycles of which 1 cycle consists of: a) +25°C 3minutes b) -40°C 30minutes 3) +25°C 3minutes 4) +85°C 30minutes (JIS C5402 7.2)
	Contact Resistance	40mΩ Max.	
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±1°C Duration: 12 Hours (JIS C0023/MIL-STD-202 Method 101)
	Contact Resistance	40mΩ Max.	
Solderability	95% of immersed area must show no voids nor pin holes.		Duration: 3±0.5 seconds, Temperature: 250±5°C
Resistance to soldering heat	Appearance	No Damage	Duration :5±1 seconds Temperature :265±5°C

8. **Reference infrared reflow condition**



Temperature condition graph

Temperature on board pattern side