1. **Scope**

Wafer Connector FWF08001/FWF08002 Series

This specification covers the Wafer Connector FWF08001/FWF08002 Series

2. **Connector Dimensions**

Refer to the drawing.

3. **Material**

Refer to the drawing.

Housing:PA9T UL94V-0

Color :Natural

Contacts Terminal:Brass

Plating:Tin-Plated all/Gold Plated

4. **Accommodated P.C.B Layout**

Refer to the drawing.

5. **Rating**

| | |
|---|---|
| Operating Voltage(Max.) | 30V AC/DC |
| Current Rating(Max.) | 0.2A DC/AC (AWG 36) |
| | 0.5A DC/AC (AWG 32) |
| Operating Temperature | -25°C -- +85°C(Including terminal temperature rese) |

6. **Performance**

**Electrical Performance**

| | | |
|---|---|---|
| Contact Resistance | 20mΩ Max | Mate connectors,Measure by dry circuit.20mV Max. 10mA |
| Insulation Resistance | 100MΩ Min | Mate applicable connectors and apply 100V DC between adjacent terminal or ground |
| Dielectric Strength | No Breakdown | Mate applicable connectors,apply 200V AC(rms)for 1 minute between adjacent terminal or ground |
| Contact resistance on Crimped Portion | 5mΩ Max | Crimp the applicable wire on to the terminal,measure by dry circuit,20mV MAX,10mA |

**Mechanical Performance**

| | | |
|---|---|---|
| Insert and withdrawal force | Refer to paragraph 7 | Insert and withdraw connectors at the speed rate of 25±3mm/minute. |
| Terminal retention force | 0.4kgf(Min) | Fix the crimped terminal,apply axial pull out force on the wire at the speed rate of 25±3mm/minute. |

**Environmental Performance and others**

| | | | |
|---|---|---|---|
| Repeated insertion/withdrawal | When mated up to 30 cycles repeatedly by the rate of 10 cycles per minute | Contact Resistance | 40 mΩ Max |
| Temperature Rise | Mate applicable connectors and Measure the temperature rise of contact when the maximum AC rated current is passed | Temperature rise | 30°C Max |
| Vibration | 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 .<br>Amplitude:1.5mm P-P<br>Frequency:10-55-10Hz in 1 munute<br>Duration:2 hours in each of X.Y.Z axe | Appearance | No Damage |
| | | Contact Resistance | 40mΩ Max |
| | | Discontinuity | 1μsec Max |
| Shock | Mate applicable connectors 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.<br>(Total of 18 shocks)<br>Peak value:490m/$S^2$(50G) | Appearance | No Damage |
| | | Contact Resistance | 40mΩ Max |
| | | Discontinuity | 1μsec Max |

| | | | |
|---|---|---|---|
| Heat Resistance | Mate applicable connectors 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. | Appearance | No Damage |
| | | Contact Resistance | 40mΩ Max |
| Cold Resistance | Mate applicable connectors 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. | Appearance | No Damage |
| | | Contact Resistance | 40mΩ Max |
| Humidity | Mate applicable connectors 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 sh | Appearance | No Damage |
| | | Contact Resistance | 40mΩ Max |
| | | Dielectric strength | No Breakdown |
| | | Insulation Resistance | 500MΩ Min |
| Temperature Cycling | Mate applicable connectors and subjectto the following conditions for 5 cycles.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 per | Appearance | No Damage |
| | | Contact Resistance | 40mΩ Max |
| Salt Spray | Mated connector shall be placed in a salt spray chamber on the following conditions .<br>Salt solution density:5±1%<br>Temperature:35±2°C<br>Duration:22 Hours | Appearance | No Damage |
| | | Contact Resistance | 40mΩ Max |

| | | | |
|---|---|---|---|
| $SO_2$ Gas | Mate applicable connectors and exposethem to the following $SO_2$ gas atmosphere<br>Temperature 40±2°C<br>Gas Density 50±5 ppm<br>Duration 24 hours | Appearance | No Damage |
| | | Contact Resistance | 40mΩ Max |
| $NH_3$ Gas | 40 minutes exposure to NH3 gas evaporating from 28% Ammonia solution. | Appearance | No Damage |
| | | Contact Resistance | 40mΩ Max |
| Solderability | Tip of solder tails and fitting nails into the molten solder (held at 245±5°C) up to 0.1mm form the bottom of the housing for 3 ±0.5 seconds. | Solder Wetting | 95% ofimmersed area must show no voids ,pin holes |
| Resistance to Soldering Heat | When reflowing Refer to paragraph 8.<br>Soldering inon method 0.2mm from terminal tip and fitting nail tip.<br>Soldering time :5 seconds Max Solder temperature :370-400°C | Appearance | No Damage |

7. **Insertion/Withdrawal Force**

| No of CKT | Unit | Insertion Force (MAX.) | Extraction Force(MIN.) |
|---|---|---|---|
| 2 | kgf | 0.51 | 0.10 |
| 3 | kgf | 0.77 | 0.15 |
| 4 | kgf | 1.02 | 0.20 |
| 5 | kgf | 1.28 | 0.26 |
| 6 | kgf | 1.53 | 0.31 |
| 7 | kgf | 1.79 | 0.36 |
| 8 | kgf | 2.04 | 0.41 |
| 9 | kgf | 2.30 | 0.46 |
| 10 | kgf | 2.55 | 0.51 |
| 11 | kgf | 2.81 | 0.56 |
| 12 | kgf | 3.06 | 0.61 |
| 13 | kgf | 3.32 | 0.66 |
| 14 | kgf | 3.57 | 0.71 |
| 15 | kgf | 3.83 | 0.77 |