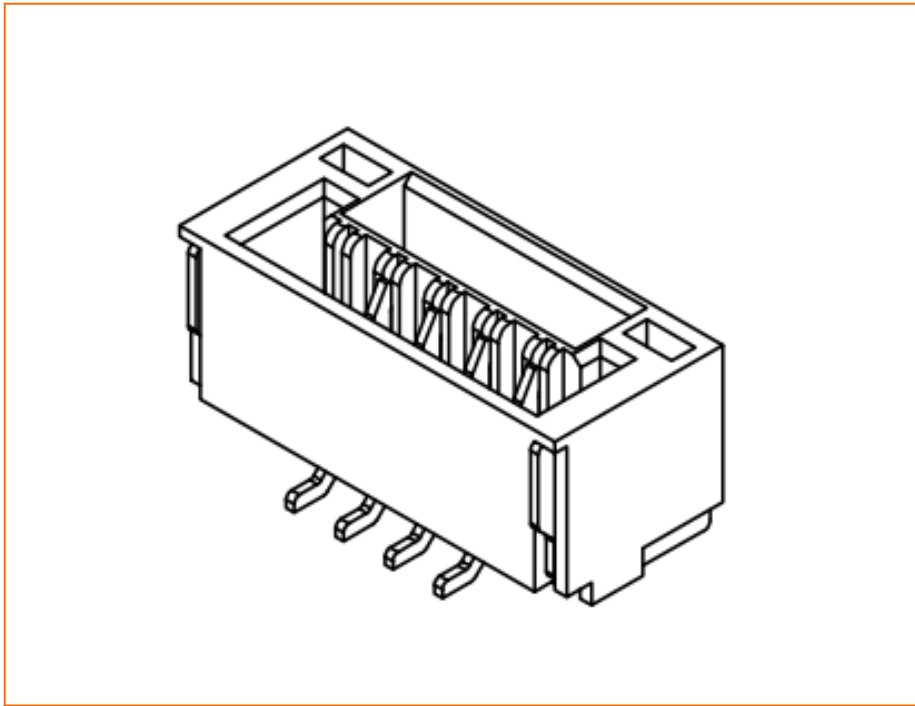


Product Specification



深圳市臺華達科技有限公司

SHENZHEN SHI THD Electronics Co., Ltd.



Product.No

THD1253-xxWV-SN

Pitch=1.25mm,Wafer Connector (Front-Flip Lower Contact)

| | |
|------|-------------|
| A | Release |
| Rev. | Description |

Approved Signatures

| | |
|--------------------|-------------------|
| ■Prepared By : JIM | ■Date: 2016.06.28 |
| ■Checked By : JIM | ■Date: 2016.06.28 |
| ■Approved By : 黄德进 | ■Date: 2016.06.28 |

Scope

This specification covers the 1.25 mm Pitch wafer Connector THD1253 series.

Ordering information

THD1253 - XX - WV - SN

① ② ③ ④

| | | | |
|---|--|---|---|
| ① | Series name: THD1253 | ④ | Plating : GF= 1μ"~3μ" Gold Flash G3= 3μ" Gold over Nickel G5= 5μ" Gold over Nickel SN= Tin(Lead Free) over Nickel |
| ② | Number of contacts : 2 TO 20 | | |
| ③ | Contact type : WR:Right Angle SMT WV:Vertical Angle SMT | | |

Rating

| Item | Standard |
|-----------------------------|---|
| Voltage Rating (Max.) | 50V AC |
| Current Rating (Max.) | 1A DC |
| Operating Temperature Range | -25°C ~ +85°C (Including terminal temperature rise) |

Material

| Housing | Actuator | Terminal | Solder pin | Plating |
|-----------------|----------|--------------|--------------|--------------------------------|
| LCP (UL94V-0) | | Copper alloy | Copper alloy | SN= Tin(Lead Free) over Nickel |
| Color : Natural | | | | |

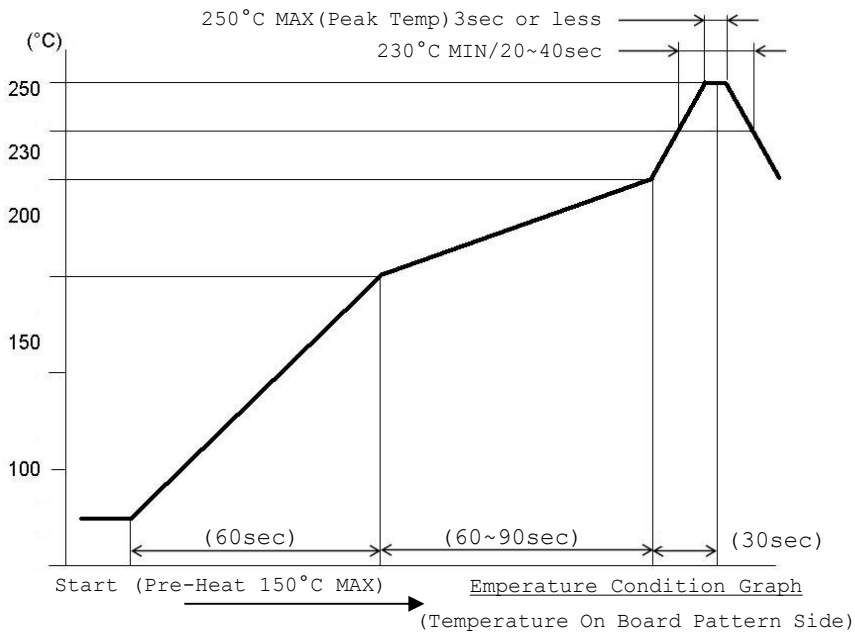
Performance

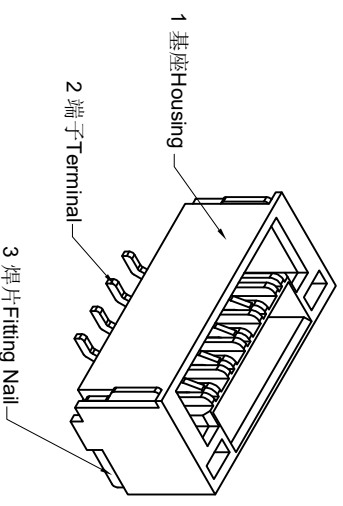
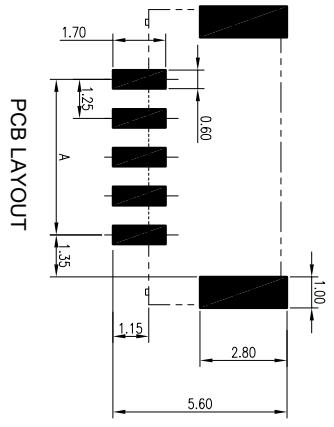
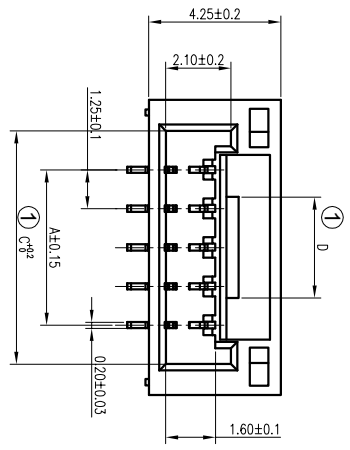
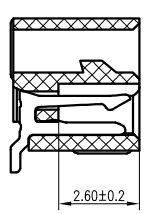
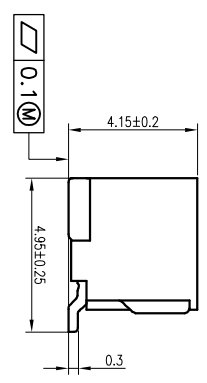
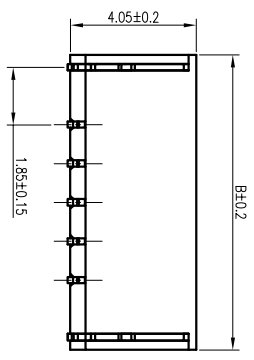
| Item | Test Condition | Specification | |
|--------------------------|--|-----------------------------|-------------|
| Contact Resistance | Mate applicable FPC and measure by dry circuit, 20mV Max, 1mA. | 20 mΩ Max. | |
| Insulation Resistance | Mate applicable FPC and apply 500V DC between adjacent terminal or ground. | 100 MΩ Min. | |
| Dielectric Strength | Mate applicable FPC, apply 250V AC(rms) for 1 minute between adjacent terminal or ground. | No Breakdown | |
| FPC Retention Force | Insert the actuator, pull the FPC at a rate of 25±3mm per minute. | Per pin x 0.6N Min. | |
| Terminal Retention Force | Apply axial pull out force at the rate of 25±3mm/minute on the terminal assembled in the housing. | Per pin x 0.15Kgf {6N} Min. | |
| 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. Amplitude : 1.5mm P-P Frequency : 10~55~10 Hz in 1 minute. Duration : 2 hours in each of X,Y,Z axes. | Appearance | No Damage |
| | | Contact Resistance | 100 mΩ Max. |
| | | Discontinuity | 1 μsec Max. |
| Shock | 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 1 mA current during the test. Peak value : 490m/s ² {50G} | Appearance | No Damage |
| | | Contact Resistance | 100 mΩ Max. |
| | | Discontinuity | 1 μsec Max. |
| Salt Spray | Mate applicable FPC and expose to the following salt mist conditions. Upon completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water, after which the specified measurements shall be performed. | Appearance | No Damage |

| | | | |
|--|--|--------------------|-------------|
| | NaCl solution Concentration : 5 ± 1% Spray time : 48 ± 4 hours Ambient temperature : 35 ± 2°C | Contact Resistance | 100 mΩ Max. |
|--|--|--------------------|-------------|

| Item | Test Condition | Specification | |
|-------------------------|---|-----------------------|---|
| Heat Resistance | 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. | Appearance | No Damage |
| | | Contact Resistance | 100 mΩ Max. |
| Cold Resistance | Mate applicable FPC and expose to -40±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 | 100 mΩ Max. |
| Humidity | 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 conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. | Appearance | No Damage |
| | | Contact Resistance | 100 mΩ Max. |
| | | Dielectric Strength | No Breakdown |
| | | Insulation Resistance | 50 MΩ Min. |
| Temperature Rise | Mate applicable FPC and measure the temperature rise of contact when the maximum AC rated current is passed. | Temperature rise | 30°C Max. |
| Temperature Cycling | 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. 1 cycle a) -55±3°C 30minutes b) +85±3°C 30minutes (Transit time shall be with in 3 minutes) | Appearance | No Damage |
| | | Contact Resistance | 100 mΩ Max. |
| Solderability | 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. | Solder Wetting | 95% of immersed area must show no voids, pin holes. |
| Resistance to Soldering | When reflowing refer to Infrared reflow condition <u>Soldering iron method</u> 0.2mm from terminal tip and fitting nail tip. Soldering time : 5 seconds Max. Solder temperature : 370~400°C | Appearance | No Damage |

■ Recommended Temperature Profile





- 技术要求Notes:
- 外观质量Appearance quality:
 - 金属表面镀层不能有明显损伤; Coating on metal surface can not be damaged obviously;
 - 塑壳表面不能有明显的变形或开裂; No obvious deformation or cracking can be observed on the surface of the Housing;
 - 产品表面应保持清洁; Product surface should be kept clean;
 - 工作温度 Working temperature: -25℃~+85℃;
 - 额定电压 Voltage Rating : Max 50V [A/C(Effective value rms)/DC];
 - 额定电流 Current Rating : Max 1A [A/C(Effective value rms)/DC];
 - 接触电阻 Contact resistance: Max 20 mΩ
 - 绝缘电阻 Insulation resistance: Min 100MΩ;
 - 耐压 Withstanding voltage: 500V AC(50 Hz, Effective value: 1 min);
 - 环保要求应符合RoHS标准 Environmental requirements should meet RoHS standards.

表1 Table 1

| | | | | |
|-----------------|-------|-------|-------|-------|
| 16 | 18.75 | 23.25 | 21.25 | 6.5 |
| 15 | 17.50 | 22.00 | 20.00 | 6.5 |
| 14 | 16.25 | 20.75 | 18.75 | 6.5 |
| 13 | 15.00 | 19.50 | 17.50 | 6.5 |
| 12 | 13.75 | 18.25 | 16.25 | 6.5 |
| 11 | 12.50 | 17.00 | 15.00 | 6.5 |
| 10 | 11.25 | 15.75 | 13.75 | 6.5 |
| 9 | 10.00 | 14.50 | 12.50 | 4.5 |
| 8 | 8.75 | 13.25 | 11.25 | 4.5 |
| 7 | 7.50 | 12.00 | 10.00 | 4.5 |
| 6 | 6.25 | 10.75 | 8.75 | 4.5 |
| 5 | 5.00 | 9.50 | 7.50 | 3.25 |
| 4 | 3.75 | 8.25 | 6.25 | 2.00 |
| 3 | 2.50 | 7.00 | 5.00 | 1.75 |
| 2 | 1.25 | 5.75 | 3.75 | 0.5 |
| PIN数 CKT NO. | DIM A | DIM B | DIM C | DIM D |

表2 Table 2

| | | | | | | |
|--------|----------------|-----------------|--------------------|--------|------------------|--|
| 3 | THD1253 | 焊片 Fitting Nail | 磷铜 Phosphor copper | 2 | 镀锡 Tin-plated | |
| 2 | THD1253 | 端子 Terminal | 磷铜 Phosphor copper | N | 镀锡 Tin-plated | |
| 1 | THD1253 | 基座 Housing | LCP UL94-V0 | 1 | 本色 Natural color | |
| 序号 No. | 产品料号 PARTS NO. | 名称 Part Name | 材料 Material | 数量 Qty | 备注 Remark | |

| REV. | REVISIONS | CHK | DATE |
|------|-----------|-----|------|
| | | | |
| | | | |
| | | | |
| | | | |

CUSTOMER

SHENZHENSHI THD TECHNOLOGY CO., LTD.

深圳市壹華達科技有限公司

THD1253xW-SN

SCALE: 1:1

SIZE: A4

REV: X1

DATE: 2016.06.28

SCALE: 1:1

SIZE: A4

REV: X1

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