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## 承 认 书

## SPECIFICATION FOR APPROVAL

客 户 Customer:

产品名称 Project:

FPC

规格型号 Part No:

1.0-4P CTSJ-H2.5 119

贵公司承认印 Approval signatures

| 料 号/Part No. | 签 章/Signatures |
|--------------|----------------|
|              |                |

日期 Date:

|             |     |                                                                                      |
|-------------|-----|--------------------------------------------------------------------------------------|
| 拟制/Drawn    | 李春风 |  |
| 审核/Check    | 钟华华 |                                                                                      |
| 批准/Approved | 罗孝金 |                                                                                      |

# 产 品 规 格 书

## PRODUCT SPECIFICATION

### 【1】适用范围 SCOPE

本规格书适用于：1.0间距柔性扁平电缆连接器

This specification covers the 1.0mm Pitch FPC/FFC Connectors

### 【2】产品名称及型号 PRODUCT NAME AND PART NUMBER

| 产品名称 Product Name | 产品型号 Part Number |
|-------------------|------------------|
| FFC/FPC 扁平电缆连接器   |                  |
|                   |                  |

### 【3】定格 RATINGS

| 项目 Item                             | 规格 Requirement                |
|-------------------------------------|-------------------------------|
| 最大容许电压<br>Rated Voltage(MAX)        | 50V<br>[AC/DC(有效值             |
| 最大容许电流<br>Rated Current(MAX)        | 0. 5A<br>Virtual value) 50Hz] |
| 使用温度范围<br>Ambient temperature Range | -25℃ ~ +85℃                   |

### 【4】性能 PERFORMANCE

#### 4.1 电气性能 Electrical Performance

| 项目 Item |                               | 条 件 Test Condition                                                                                                                                              | 规格 Requirement        |
|---------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 4.1.1   | 接触电阻<br>Contact Resistance    | 适合 FPC/FFC 嵌合；开放电压 20mV 以下；短路电流 10mA 的状态下测定。<br>Mate applicable FPC/FFC and measure by dry circuit, 20mV MAX, 10mA.                                             | 30 m $\Omega$ MAX     |
| 4.1.2   | 绝缘电阻<br>Insulation Resistance | 适合 FPC/FFC 嵌合；相邻端子间或端子与地面间加 DC 500V 下测定。<br>Mate applicable FPC/FFC and apply 500V DC between adjacent terminal or ground.                                      | 500M $\Omega$ MIN     |
| 4.1.3   | 耐电压<br>Dielectric             | 适合 FPC/FFC 嵌合；相邻端子间或端子与地面间加 AC 250V（有效值）历时 1 分钟下测定。<br>Mate applicable FPC/FFC and apply 250V AC（virtual value）for 1minute between adjacent terminal or ground. | 无击穿现象<br>No Breakdown |

## 4.2 机械性能 Mechanical Performance

| 项目 Item |                                            | 条 件 Test Condition                                                                                                                  | 规格 Requirement                                                            |
|---------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| 4.2.1   | 锁紧力及拔出力<br>Locking and Withdrawal Force    | 适合 0.3mm 厚的 FFC；用每分钟 $25 \pm 3$ mm 的速度；平行地插入、锁紧、拔出。<br>Insert and extract applicable FFC at the speed rate of $25 \pm 3$ mm/minute. | 锁紧力 Locking<br>$1.96 * n$ (N) MAX<br>拔出力 Withdrawal<br>$0.49 * n$ (N) MIN |
| 4.2.2   | 端子保持力<br>Terminal /Housing Retention Force | 以用每分钟 $25 \pm 3$ mm 的速度平行向外拉<br>Pull the terminal at the speed rate of $25 \pm 3$ mm per minute                                     | 0.25N MIN                                                                 |

## 4.3 环境和其他性能 Environmental Performance and Others

| 项目 Item |                                           | 条 件 Test Condition                                                                                                             | 规格 Requirement             |                     |
|---------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------|
| 4.3.1   | 重复插拔<br>Repeated Insertion and Withdrawal | 无通电状态；以 10 次/分钟的速度插拔 20 次<br>Insertion and withdrawal actuator up to 20 cycles at the speed rate of less than 10 cycles/minute | 接触抵抗<br>Contact Resistance | 60 m $\Omega$ MAX   |
| 4.3.2   | 温度上升<br>Temperature Rise                  | 适合 FPC/FFC 嵌合；最大容许电流通电，温度测定。（UL 498）<br>Carrying rated current load.（UL 498）                                                   | 温度上升<br>Temperature Rise   | 30 $^{\circ}$ C MAX |

| 项目 Item |      | 条 件 Test Condition                       | 规格 Requirement   |                  |
|---------|------|------------------------------------------|------------------|------------------|
| 4.3.3   | 耐振动性 | DC 1mA 通电状态下；嵌合轴沿 XYZ 三个方向振动；振幅 1.5mm；频率 | 外观<br>Appearance | 无损坏<br>No Damage |

|         |                             |                                                                                                                                            |                               |                                    |
|---------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------|
|         | Vibration                   | 10-55-10Hz/分；历时 2 小时<br>Amplitude: 1.5mm P-P<br>Sweep time: 10-55-10Hz in 1 minute<br>Duration: 2 hours in each X.Y.Z. axes                | 接触抵抗<br>Contact Resistance    | 60 m Ω<br>MAX                      |
|         |                             |                                                                                                                                            | 瞬断<br>Discontinuity           | 1 ms MAX.                          |
| 4.3.4   | 耐冲击性<br>Shock               | DC 1mA 通电状态下；嵌合轴沿相互垂直的 6 个方向；以 490m/s2 {50G}冲击；各 3 次<br>490m/s2 {50G}，3 strokes in each X.Y.Z. axes.                                       | 外观<br>Appearance              | 无损坏<br>No Damage                   |
|         |                             |                                                                                                                                            | 瞬断<br>Discontinuity           | 1 ms MAX.                          |
| 4.3.5   | 耐热性<br>Heat Resistance      | 适合 FPC/FFC 嵌合；85±2℃的空气中；放置 96 小时；再回到室温中放置 1-2 小时<br>85±2℃，96 hour                                                                          | 外观<br>Appearance              | 无损坏<br>No Damage                   |
|         |                             |                                                                                                                                            | 接触抵抗<br>Contact Resistance    | 60 m Ω<br>MAX                      |
| 4.3.6   | 耐寒性<br>Cold Resistance      | 适合 FPC/FFC 嵌合；-40±2℃的空气中；放置 96 小时；再回到室温中放置 1-2 小时<br>-40±2℃，96 hour                                                                        | 外观<br>Appearance              | 无损坏<br>No Damage                   |
|         |                             |                                                                                                                                            | 接触抵抗<br>Contact Resistance    | 60 m Ω<br>MAX                      |
| 4.3.7   | 耐湿性<br>Humidity             | 适合 FPC/FFC 嵌合；40±2℃、相对湿度 90-95%的空气中；放置 96 小时；再回到室温中 0.5 小时内测定<br><br>Temperature: 40±2℃<br>Relative Humidity: 90-95%<br>Duration: 96 Hours | 外观<br>Appearance              | 无损坏<br>No Damage                   |
|         |                             |                                                                                                                                            | 接触抵抗<br>Contact Resistance    | 60 m Ω<br>MAX                      |
|         |                             |                                                                                                                                            | 耐电压<br>Dielectric Strength    | 必须满足<br>4. 1. 3<br>Must meet 4.1.3 |
|         |                             |                                                                                                                                            | 绝缘抵抗<br>Insulation Resistance | 20 M Ω<br>MIN                      |
| 4.3.8   | 温度循环<br>Temperature Cycling | 适合 FPC/FFC 嵌合；-55±3℃ 30 分钟；常温常湿 10-15 分钟；85±2℃ 30 分钟；常温常湿 10-15 分钟，循环 5 次。<br>5 cycles of:<br>a) -55±3℃ 30 minutes<br>b) 85±2℃ 30 minutes  | 外观<br>Appearance              | 无损坏<br>No Damage                   |
|         |                             |                                                                                                                                            | 接触抵抗<br>Contact Resistance    | 60 m Ω<br>MAX                      |
| 项目 Item |                             | 条 件 Test Condition                                                                                                                         | 规格 Requirement                |                                    |
| 4.3.9   | 耐盐雾性<br>Salt Spray          | 适合 FPC/FFC 嵌合；35±2℃、5±1% 的盐水喷雾 2 4 小时；试验后常温水洗；再室温干燥。<br>24±4 hours exposure to a salt spray from the 5±1% solution at 35±2℃.               | 外观<br>Appearance              | 无损坏、腐蚀<br>No Damage                |
|         |                             |                                                                                                                                            | 接触抵抗<br>Contact Resistance    | 60 m Ω<br>MAX                      |

|        |                                      |                                                                                                                                         |                            |                     |
|--------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------|
| 4.3.10 | 耐亚硫酸<br>SO <sub>2</sub> Gas          | 适合 FPC/FFC 嵌合; 40±2℃、50±5ppm 的亚硫酸中放置 24 小时<br>24 hours exposure to 50 ± 5ppm. SO <sub>2</sub> gas at 40±2℃.                             | 接触抵抗<br>Contact Resistance | 60 m Ω<br>MAX       |
| 4.3.11 | 耐氨性<br>NH <sub>3</sub> Gas           | 适合 FPC/FFC 嵌合; 浓度为 28% 的氨水容器中; 放置 40 分钟。<br>40 minutes exposure to NH <sub>3</sub> gas evaporating from 28% Ammonia solution            | 外观<br>Appearance           | 无损坏<br>No Damage    |
|        |                                      |                                                                                                                                         | 接触抵抗<br>Contact Resistance | 60 m Ω<br>MAX       |
| 4.3.12 | 可焊性<br>Solder ability                | 端子前端基准面 0.2mm 处浸入 245±5℃ 的锡槽中; 历时 2±0.5 sec。<br>Soldering Time: 2±0.5 sec.<br>Soldering Temperature: 245±5℃<br>0.2 mm from terminal tip | 沾敷性<br>Solder Wetting      | 沾敷面积<br>95%以上       |
| 4.3.13 | 耐焊接热<br>Resistance to Soldering heat | 在 245±5℃ 热风炉中经 30±5sec 条件下, 至少进行 5 次。<br>Soldering Time: 30±5 sec.<br>Soldering Temperature: 245±5℃                                     | 外观<br>Appearance           | 无损坏、变形<br>No Damage |

( ) : 参考规格 Reference Standard

{ } : 参考单位 Reference Unit

## 【5】外观形状、寸法及材质 PRODUCT SHAPE, DIMENSIONS AND MATERIALS

图面参照 Refer to the drawing.

| 名 称 NAME        | 材 质 MATERIALS       |
|-----------------|---------------------|
| 主体 Main body    | LCP UL 94V-0        |
| 锁扣 Housing Lock | LCP UL 94V-0        |
| 端子 Sit uip      | 磷青铜 Phosphor Bronze |
| 焊片 Contact      | 磷青铜 Phosphor Bronze |
| 备注 Remark       | 金属表面镀锡              |