



| No. of Contacts | A     | B     | C     | D     | E | F |
|-----------------|-------|-------|-------|-------|---|---|
| 50              | 29.40 | 24.50 | 28.50 | 25.60 |   |   |
| 49              | 28.90 | 24.00 | 28.00 | 25.10 |   |   |
| 48              | 28.40 | 23.50 | 27.50 | 24.60 |   |   |
| 47              | 27.90 | 23.00 | 27.00 | 24.10 |   |   |
| 46              | 27.40 | 22.50 | 26.50 | 23.60 |   |   |
| 45              | 26.90 | 22.00 | 26.00 | 23.10 |   |   |
| 44              | 26.40 | 21.50 | 25.50 | 22.60 |   |   |
| 43              | 25.90 | 21.00 | 25.00 | 22.10 |   |   |
| 42              | 25.40 | 20.50 | 24.50 | 21.60 |   |   |
| 41              | 24.90 | 20.00 | 24.00 | 21.10 |   |   |
| 40              | 24.40 | 19.50 | 23.50 | 20.60 |   |   |
| 39              | 23.90 | 19.00 | 23.00 | 20.10 |   |   |
| 38              | 23.40 | 18.50 | 22.50 | 19.60 |   |   |
| 37              | 22.90 | 18.00 | 22.00 | 19.10 |   |   |
| 36              | 22.40 | 17.50 | 21.50 | 18.60 |   |   |
| 35              | 21.90 | 17.00 | 21.00 | 18.10 |   |   |
| 34              | 21.40 | 16.50 | 20.50 | 17.60 |   |   |
| 33              | 20.90 | 16.00 | 20.00 | 17.10 |   |   |
| 32              | 20.40 | 15.50 | 19.50 | 16.60 |   |   |
| 31              | 19.90 | 15.00 | 19.00 | 16.10 |   |   |
| 30              | 19.40 | 14.50 | 18.50 | 15.60 |   |   |
| 29              | 18.90 | 14.00 | 18.00 | 15.10 |   |   |
| 28              | 18.40 | 13.50 | 17.50 | 14.60 |   |   |
| 27              | 17.90 | 13.00 | 17.00 | 14.10 |   |   |
| 26              | 17.40 | 12.50 | 16.50 | 13.60 |   |   |
| 25              | 16.90 | 12.00 | 16.00 | 13.10 |   |   |
| 24              | 16.40 | 11.50 | 15.50 | 12.60 |   |   |
| 23              | 15.90 | 11.00 | 15.00 | 12.10 |   |   |
| 22              | 15.40 | 10.50 | 14.50 | 11.60 |   |   |
| 21              | 14.90 | 10.00 | 14.00 | 11.10 |   |   |
| 20              | 14.40 | 9.50  | 13.50 | 10.60 |   |   |
| 19              | 13.90 | 9.00  | 13.00 | 10.10 |   |   |
| 18              | 13.40 | 8.50  | 12.50 | 9.60  |   |   |
| 17              | 12.90 | 8.00  | 12.00 | 9.10  |   |   |
| 16              | 12.40 | 7.50  | 11.50 | 8.60  |   |   |
| 15              | 11.90 | 7.00  | 11.00 | 8.10  |   |   |
| 14              | 11.40 | 6.50  | 10.50 | 7.60  |   |   |
| 13              | 10.90 | 6.00  | 10.00 | 7.10  |   |   |
| 12              | 10.40 | 5.50  | 9.50  | 6.60  |   |   |
| 11              | 9.90  | 5.00  | 9.00  | 6.10  |   |   |
| 10              | 9.40  | 4.50  | 8.50  | 5.60  |   |   |
| 9               | 8.90  | 4.00  | 8.00  | 5.10  |   |   |
| 8               | 8.40  | 3.50  | 7.50  | 4.60  |   |   |
| 7               | 7.90  | 3.00  | 7.00  | 4.10  |   |   |
| 6               | 7.40  | 2.50  | 6.50  | 3.60  |   |   |
| 5               | 6.90  | 2.00  | 6.00  | 3.10  |   |   |
| 4               | 6.40  | 1.50  | 5.50  | 2.60  |   |   |

APPLICABLE FPC/FFC  
RECOMMENDED DIMENSION  
(THICKNESS:0.30±0.03)

P.C.B LAYOUT REF  
1.5+0.5(N-1)±0.10

1. MATERIAL:
- 1.1 HOUSING: LCP,UL94V-0; COLOR: NATURE.
  - 1.2 ACTUATOR: LCP,UL94V-0; COLOR: BLACK.
  - 1.3 CONTACT: C5191,T=0.20±0.01mm
  - 1.4 SOLDER PAD: C2680,T=0.20±0.01mm
2. FINISH:
- 2.1 CONTACT:100u" MIN. TIN PLATED IN SOLDER AREA  
50u" MIN. NICKEL UNDERPLATED OVERALL.
  - 2.2 SOLDER PAD: 50u" MIN. NICKEL PLATED OVERALL.  
100u" MIN. TIN PLATED OVERALL.

|            |        |     |
|------------|--------|-----|
| X. ± 0.30  | APPD:  | 罗孝金 |
| .X ± 0.25  | CHKD:  | 钟德华 |
| .XX ± 0.20 | DR:    | 李春风 |
| .XXX ±     | UNITS: | mm  |
| .X* ± 1"   | SCALE: | 1:1 |
| .X* ± 0.5" |        |     |

|                    |   |   |   |
|--------------------|---|---|---|
| TITLE:             |   |   |   |
| 0.5-40P XJH2.0 043 |   |   |   |
| Dimension          |   |   |   |
| A                  | B | C | D |

深圳市首韩科技有限公司

|     |             |            |
|-----|-------------|------------|
| REV | DESCRIPTION | DATE       |
| A   | 初版发行        | 2018/07/24 |



深圳市首韩科技有限公司

SHENZHEN SHOUHAN TECHNOLOGY CO., LTD

Tel: 0755-27597601 Fax: 0755-27597491

# 承 认 书

## SPECIFICATION FOR APPROVAL

客 户 Customer:

\_\_\_\_\_

产品名称 Project:

FPC

规格型号 Part No:

0.5-40P XJH2.0 043

### 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：0.5间距柔性扁平电缆连接器

This specification covers the 0.5 mm 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)        | 30V  | [AC/DC(有效值<br>Virtual value)50Hz] |
| 最大容许电流<br>Rated Current(MAX)        | 0.2A |                                   |
| 使用温度范围<br>Ambient temperature Range |      | -55℃ ~ +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.   | $\leq 100 \text{ m}\Omega$ 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 $25 \pm 3\text{mm}$ 的速度；平行地插入、锁紧、拔出。<br>Insert and extract applicable FFC at the speed rate of $25 \pm 3\text{mm}/\text{minute}$ . | 锁紧力 Locking<br>$1.96*n \text{ (N) MAX}$<br>拔出力 Withdrawal<br>$0.49*n \text{ (N) MIN}$ |
| 4.2.2   | 端子保持力<br>Terminal/Housing Retention Force | 以用每分钟 $25 \pm 3\text{mm}$ 的速度平行向外拉<br>Pull the terminal at the speed rate of $25 \pm 3\text{mm per minute}$   | 0.4N 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 | $60 \text{ m}\Omega$ 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   | $30 \text{ }^\circ\text{C MAX}$ |

| 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/s <sup>2</sup> {50G}冲击; 各 3 次<br>490m/s <sup>2</sup> {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<br>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 48 小时; 试验后常温水洗; 再室温干燥。<br>48 ± 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>SO2 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. SO2 gas at 40±2℃.   | 接触抵抗<br>Contact Resistance | 60 m Ω<br>MAX       |
| 4.3.11 | 耐氨性<br>NH3 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 NH3 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              |

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