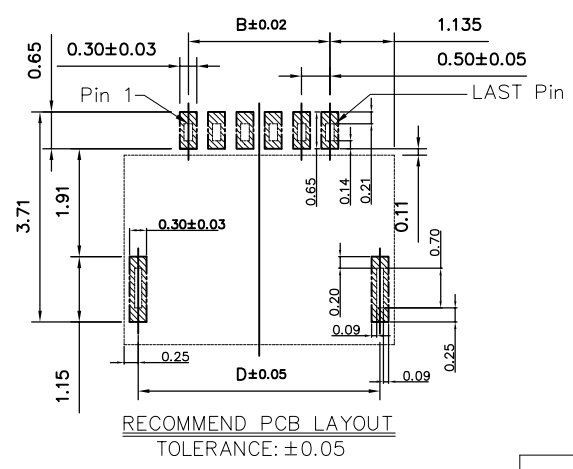
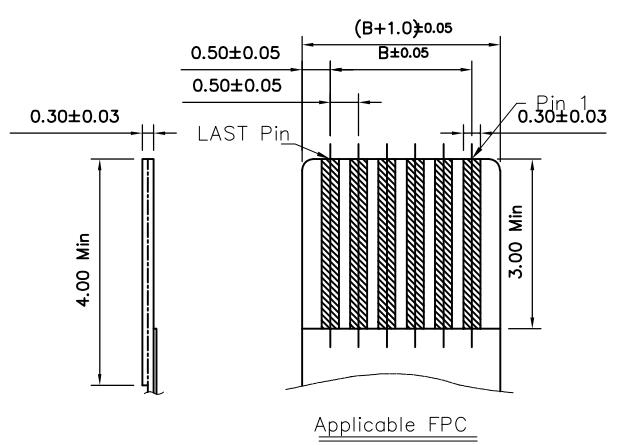
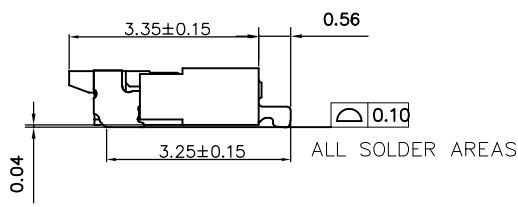
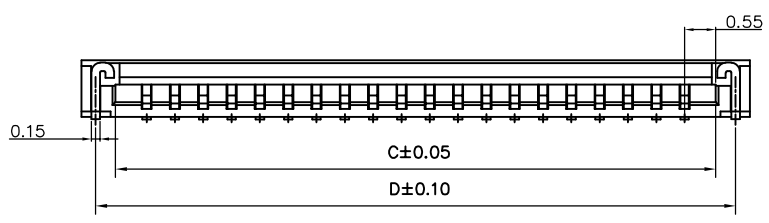
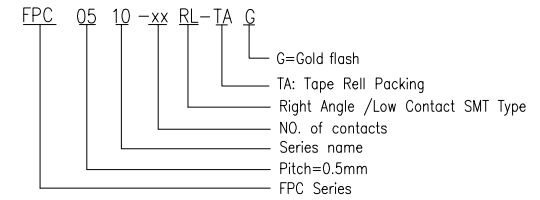


NOTES:

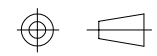
- MATERIAL:
HOUSING: LCP (UL94-V0), COLOR: NATURAL.
COVER: LCP OR PA (UL94-V0), COLOR: BLACK.
CONTACT: COPPER ALLOY;
LEG: COPPER ALLOY;
- PLATING:
CONTACT: GOLD OR TIN PLATED ON NICKEL OVERALL.
LEG: TIN PLATED ON NICKEL OVERALL.
- RATING:
CURRENT RATING: 0.4A AC/DC
VOLTAGE RATING: 50V AC/DC
TEMPERATURE RANGE: -55°C~+85°C;
- PART NO:



| PIN NO. | DIM. A | DIM. B | DIM. C | DIM. D |
|---------|------------|-----------|-----------|------------|
| 4 | 3.80 | 1.50 | 2.60 | 3.30 |
| 5 | 4.30 | 2.00 | 3.10 | 3.80 |
| 6 | 4.80 | 2.50 | 3.60 | 4.30 |
| 7 | 5.30 | 3.00 | 4.10 | 4.80 |
| 8 | 5.80 | 3.50 | 4.60 | 5.30 |
| 9 | 6.30 | 4.00 | 5.10 | 5.80 |
| 10 | 6.80 | 4.50 | 5.60 | 6.30 |
| 11 | 7.30 | 5.00 | 6.10 | 6.80 |
| 12 | 7.80 | 5.50 | 6.60 | 7.30 |
| 13 | 8.30 | 6.00 | 7.10 | 7.80 |
| 14 | 8.80 | 6.50 | 7.60 | 8.30 |
| 15 | 9.30 | 7.00 | 8.10 | 8.80 |
| 16 | 9.80 | 7.50 | 8.60 | 9.30 |
| 17 | 10.30 | 8.00 | 9.10 | 9.80 |
| 18 | 10.80 | 8.50 | 9.60 | 10.30 |
| 20 | 11.80 | 9.50 | 10.60 | 11.30 |
| 22 | 12.80 | 10.50 | 11.60 | 12.30 |
| 24 | 13.80 | 11.50 | 12.60 | 13.30 |
| 26 | 14.80 | 12.50 | 13.60 | 14.30 |
| 28 | 15.80 | 13.50 | 14.60 | 15.30 |
| 30 | 16.80 | 14.50 | 15.60 | 16.30 |
| 40 | 21.80 | 19.50 | 20.60 | 21.30 |
| n | n*0.5+1.80 | (n-1)*0.5 | n*0.5+0.6 | n*0.5+1.30 |



深圳市山谷道电子有限公司



TITLE:
品名: 0.5Pitch 1.0H ZIF/前掀式

一般公差 (TOLERANCE)

APPD:
核准:
CHECK:
校對:
DRAW:
繪圖:

DWG NO:
產品料號: FPC0510-xxRL-TAG
DATE SCALE UNIT PAGE
1:1 mm 1/1

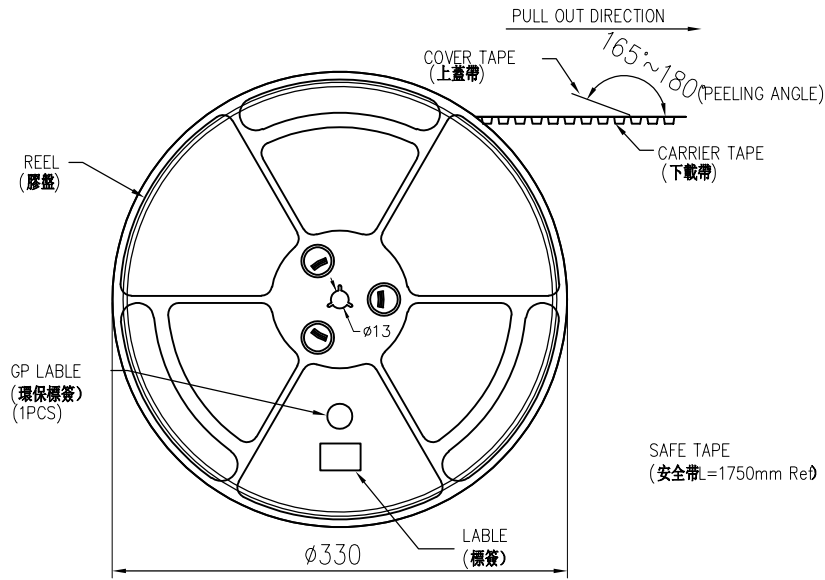
本产品需符合 RoHS SONY00259 HF 其他
※禁止使用本公司所禁用有毒物质

| | | |
|---|---------------------|----------|
| 4 | 新增7P/9P/11P/13P/17P | 26.04.13 |
| 5 | 变更摘要 | 日期 |

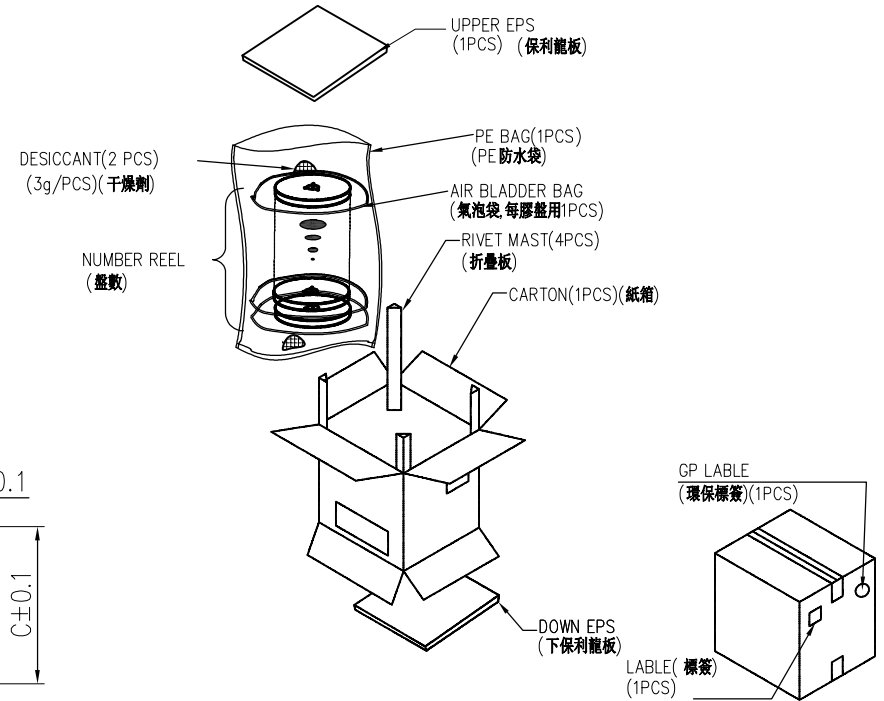
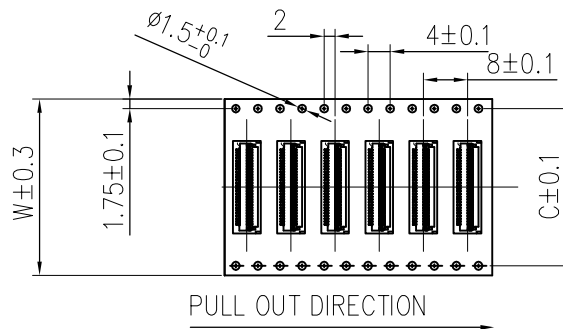
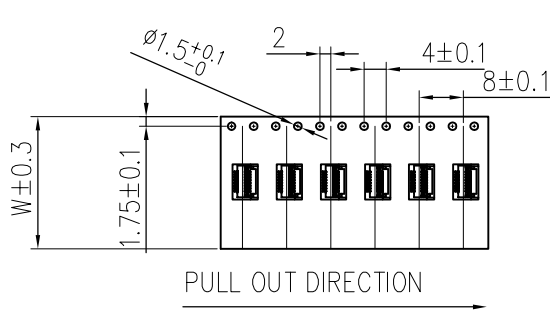
| | | | |
|------|---------|-------|-------|
| X.X | : ±0.30 | X.X' | : ±5' |
| X.XX | : ±0.20 | X.XX' | : ±2' |

NOTE:

- 1.10 Sprocket hole pitch cumulative tolerance ± 0.20 .
2. Carrier camber is within 1mm in 100mm.
3. Material: black conductive polystyrene alloy.
4. Material Thickness: 0.3 ± 0.05 mm.
5. All dimensions meet EIA-481-B requirements.
6. 5000pcs Pef Reel.
7. For tape width(dim W)16 and 24mm pilot holes are provided on one sides.
For tape width(dim W)32, 44 and 56mm pilot holes are provided on both sides.



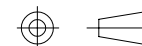
SCALE 1:4



| PIN NO. | W | C | PCS /REEL | REEL /CARTON | SUM(PCS) |
|-------------|----|---|-----------|--------------|----------|
| 04PIN~12PIN | 16 | - | 5000 | 13 | 65000 |
| 13PIN~30PIN | 24 | - | 5000 | 10 | 50000 |
| 32Pin~36PIN | 32 | - | 5000 | 7 | 35000 |
| 40PIN | 44 | - | 5000 | 6 | 30000 |

山谷道

深圳市山谷道电子有限公司



TITLE: 0.5Pitch 1.0H ZIF/前 掀式
品名:

一般公差 (TOLERANCE)

APPD:
核准:
CHECK:
校對:
DRAW:
繪圖:

DWG NO:
產品料號: FPC0510-xxRL-TAG

| | |
|-------------------|-------------------------|
| X.X : ± 0.30 | X.X' : $\pm 5^{\circ}$ |
| X.XX : ± 0.20 | X.XX' : $\pm 2^{\circ}$ |

| DATE | SCALE | UNIT | PAGE |
|------|-------|------|------|
| | 1:1 | mm | 1/1 |

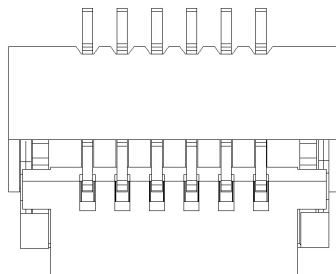
本产品需符合 RoHS SONY00259 HF 其他
※禁止使用本公司所禁用有毒物质

FPC Connector
0.5mmPitch A

Product Specification

Issued Date

2019-05-25



FPC 0.5 Pitch Right Angle
ZIF SMT TYPE Connector

Update List:

| Item | Update Description | Rev. | IssuedDate | Revisor |
|------|--------------------|------|------------|---------|
| 1 | New Edit | A | 2012/05/25 | HZX |

Prepared By: HZX

Rechecked By: HZX

Approved By: WY

| | | |
|-------------------------------|------------------------------|-------------|
| FPC Connector 0.5mmPitch A | Product Specification | Issued Date |
| | | 2019-05-25 |

1. SCOPE

This specification covers the CFPC0510 Series Connector.

2. ORDERING INFORMATION

PART NO.: **FPC** **05** **10** - **xx** **R** - **TA** **X**

1
2
3
4
5
6
7

| | | |
|----------|---------------------|------------------------------|
| 1 | Series name | FPC Connector |
| 2 | Pitch between | 0.5 mm Pitch |
| 3 | Series Number | 10 |
| 4 | Number of terminals | 4~40 |
| 5 | Assembly style | Right Angle /Low Contact SMT |
| 6 | Packaging | TA :Tape Reel |
| 7 | Plating | G:Gold flash 0:Matte Tin |

3. CONNECTOR DIMENSIONS

See attached drawings.

4. MATERIAL

| | |
|-----------------|----------------------------------|
| Housing : | LCP Color : White |
| | Flammability Rating (UL94V-0) HF |
| Actuator | LCP Color : Black. |
| | Flammability Rating (UL94V-0) |
| Contact : | COPPER ALLOY |
| | |
| Leg : | COPPER ALLOY |
| | |
| Contact Plating | Gold Flash |
| | 50u"-100u" Nickel Underplating |
| Leg Plating: | Tin over Nickel |

5. ACCOMMODATED P.C.B. LAYOUT

See attached drawings.

| | | |
|-------------------------------|------------------------------|-------------|
| FPC Connector 0.5mmPitch A | Product Specification | Issued Date |
| | | 2019-05-25 |

6. RATING.

| ITEM | STANDARD |
|---------------------------|---|
| Operating Voltage (Max.) | 50V AC |
| Current Rating (Max.) | 0.4A DC |
| Operating Temperature | -55°C ~ +85°C (Including terminal temperature rise) |
| Operating Humidity range | Relative humidity 90%Max |
| Storage temperature range | -10°C ~ +50°C |
| Storage Humidity range | Relative humidity 90%Max. |

7. PERFORMANCE

| 项目 ITEM | 测试条件 TEST CONDITION | 规格 REQUIREMENT |
|--------------------------------------|---|--|
| 电气特性 (ELECTRICAL PERFORMANCE) | | |
| 接触阻抗 Contact Resistance | 将样品与适合之 FPC 连接, 测试电压 20mV, 限电流 10mA 下进行阻抗测试。 (JIS C5402 5.4) Mate applicable FPC and measure by dry circuit, 20mV Max, 10mA. (JIS C5402 5.4) | 40 mΩ 以下. 40 mΩ Max. |
| 绝缘阻抗 Insulation Resistance | 将样品与适合之 FPC 连接, 提供相邻端子间测试电压 500V DC 进行绝缘阻抗测试。 (JIS C5402 5.2 / MIL-STD-202 Method 302) Mate applicable FPC and apply 500V DC between adjacent terminal or ground. (JIS C5402 5.2 / MIL-STD-202 Method 302) | 50 MΩ 以上. 50 MΩ Min. |
| 耐电压 Dielectric Strength | 将样品与适合之 FPC 连接, 相邻端子间需可承受 250V AC(rms) 1 分钟。 (JIS C5402 5.1 / MIL-STD-202 Method 301) Mate applicable FPC, apply 250V AC(rms) for 1 minute between adjacent terminal or ground. (JIS C5402 5.1 / MIL-STD-202 Method 301) | 目视外观无任何损坏异状 No Breakdown |
| 机械特性 (MECHANICAL PERFORMANCE) | | |
| FPC 保持力 FPC Retention Force | 将盖子盖上, 与 FPC 连接, 以操作速度每分钟位移 25±3mm 进行 FPC 保持力测试。 Insert the actuator, pull the FPC at a rate of 25±3mm per minute. | Pos. x 0.2 N 以上 Pos. x 0.2 N Min. |
| 端子保持力 Terminal Retention Force | 端子与 Housing 组装后, 以操作速度每分钟位移 25±3mm 将端子拔出 Housing, 进行端子保持力测试。 Apply axial pull out force at the rate of 25±3 mm/minute on the terminal assembled in the housing. | Pos. x 0.08Kgf {0.8N} 以上 Pos. x 0.08Kgf {0.8N} Min. |

| | | |
|-------------------------------|------------------------------|-------------|
| FPC Connector 0.5mmPitch A | Product Specification | Issued Date |
| | | 2019-05-25 |

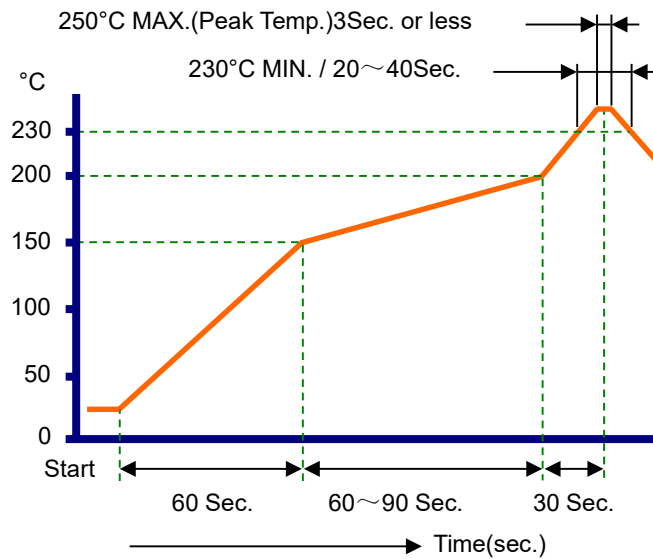
| 项目 ITEM | 测试条件 TEST CONDITION | 规格 REQUIREMENT | |
|--|---|-------------------------------|----------------------------------|
| 盖子往返操作测试 Repeated Actuator Insertion/ Withdrawal | 将盖子与 FPC 反复连接 以每分钟小于 10 cycles 连续操作 20 次。 Insert and withdraw actuator up to 20 cycles at the speed rate of less than 10 cycles/minute. | 接触阻抗 Contact Resistance | 60 mΩ 以下. 60 mΩ Max. |
| 温升 Temperature Rise | 量测通过 FPC 最大容许电流时, 样品接触点之温升。 (UL498) Mate applicable FPC and measure the temperature rise of contact when the maximum AC rated current is passed. (UL498) | 温升 Temperature rise | 30°C 以下. 30°C Max. |
| 耐振性 Vibration | 通过 DC 电流 1mA, 位移相对距离 1.5mm, 振动周期10~ 55~ 10 Hz 在 1 分钟内, 持续 2 小时, 方向在 X,Y,Z轴做测试。 (MIL-STD-202 Method 201) 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. | 外观 Appearance | 目视外观无 任何损坏异 状 No Damage |
| | | 接 触 阻 抗 Contact Resistance | 60 mΩ 以下. 60 mΩ Max. |
| | | 瞬间断电 Discontinuity | 1 μsec 以下. 1 μsec Max. |
| 耐冲击性 Shock | Duration : 2 hours in each of X,Y,Z axes. (MIL-STD-202 Method 201) 将样品与适合之 FPC 连接, 通过 DC 1 mA 测试条件, 连续测试 3 次。在 X、Y、Z 3 轴 6 个垂直方向施予重力加速度.490m/s ² {50G} 冲击。 (JIS C0041/MIL-STD-202 Method 213) 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. (JIS C0021 / MIL-STD-202 Method 108) | 外观 Appearance | 目视外观无 任何损坏异 状 No Damage |
| | | 接 触 阻 抗 Contact Resistance | 60 mΩ 以下. 60 mΩ Max. |
| | | 瞬间断电 Discontinuity | 1 μsec 以下. 1 μsec Max. |
| 耐热性 Heat Resistance | 将样品与适合之 FPC 连接置于环境温度 85±2°C 测试时间 96 小时, 再置放于室温下 1~2 小时。 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. (JIS C0021 / MIL-STD-202 Method 108) | 外观 Appearance | 目视外观无 任何损坏异 状 No Damage |
| | | 接 触 阻 抗 Contact Resistance | 60 mΩ 以下. 60 mΩ Max. |
| 耐寒性 Cold Resistance | 将样品与适合之 FPC 连接, 置于环境温度-40±2°C, 测试时间 96 小时, 再置放于室温下 1~2 小时。 (JIS C0020) 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.(JIS C0020) | 外观 Appearance | 目视外观无 任何损坏异 状 No Damage |
| | | 接 触 阻 抗 Contact Resistance | 60 mΩ 以下. 60 mΩ Max. |

| | | |
|-------------------------------|------------------------------|---------------------------|
| FPC Connector 0.5mmPitch A | Product Specification | Issued Date 2019-05-25 |
|-------------------------------|------------------------------|---------------------------|

| 项目 ITEM | 测试条件 TEST CONDITION | 规格 REQUIREMENT | |
|-----------------------------|--|-------------------------------|---------------------------|
| 耐湿性 Humidity | <p>将样品与适合之 FPC 连接, 置于环境温度 $60\pm 2^{\circ}\text{C}$, 相对湿度 90~95%, 测试时间 96 小时, 再置放于室温下 1~2 小时。</p> <p>(JIS C0022 / MIL-STD-202 Method 103) Mate applicable FPC and expose to $60 \pm 2^{\circ}\text{C}$, 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. (JIS C0022 / MIL-STD-202 Method 103)</p> | 外观 Appearance | 目视外观无任何损坏异状 No Damage |
| | | 接触阻抗 Contact Resistance | 60 mΩ 以下. 60 mΩ Max. |
| | | 耐电压 Dielectric Strength | 需能符合耐电压测试 No Breakdown |
| | | 绝缘阻抗 Insulation Resistance | 50 MΩ 以上. 50 MΩ Min. |
| 冷热冲击 Temperature Cycling | <p>将样品与适合之 FPC 连接 承受 5 cycles 冷热冲击后, 置放于室温下 1~2 小时。</p> <p>1 cycle time 如下</p> <p>a) $-55\pm 3^{\circ}\text{C}$ 30 分钟 b) $+85\pm 3^{\circ}\text{C}$ 30 分钟</p> <p>(JIS C0025) 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.</p> <p>1 cycle</p> <p>a) $-55\pm 3^{\circ}\text{C}$ 30minutes b) $+85\pm 3^{\circ}\text{C}$ 30minutes (Transit time shall be with in 3 minutes) (JIS C0025)</p> | 外观 Appearance | 目视外观无任何损坏异状 No Damage |
| | | 接触阻抗 Contact Resistance | 60 mΩ 以下. 60 mΩ Max. |
| 盐水喷雾 Salt Spray | <p>将样品与适合之 FPC 连接, 使用 $5\pm 1\%$浓度盐水, 测试温度 $35\pm 2^{\circ}\text{C}$, 测试时间 24 ± 1 小时, 后于室温下使用清水 冲洗后再干燥。</p> <p>(JIS C0023 / MIL-STD-202 Method 101) 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 NaCl solution</p> <p>Concentration : $5 \pm 1\%$ Spray time : 24 ± 1 hoursAmbient temperature:$35 \pm 2^{\circ}\text{C}$ (JIS C0023 / MIL-STD-202 Method 101)</p> | 外观 Appearance | 目视外观无任何损坏异状 |
| | | 接触阻抗 Contact Resistance | 60 mΩ 以下. 60 mΩ Max. |

| | | |
|-------------------------------|------------------------------|---------------------------|
| FPC Connector 0.5mmPitch A | Product Specification | Issued Date 2019-05-25 |
|-------------------------------|------------------------------|---------------------------|

8. INFRARED REFLOW CONDITION

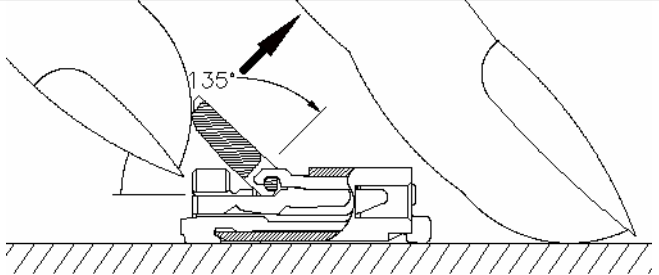
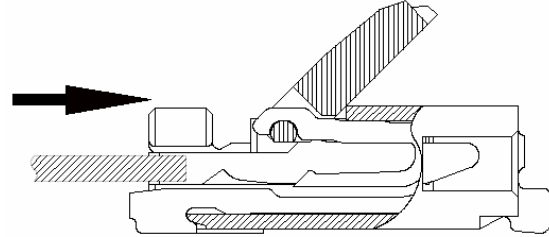
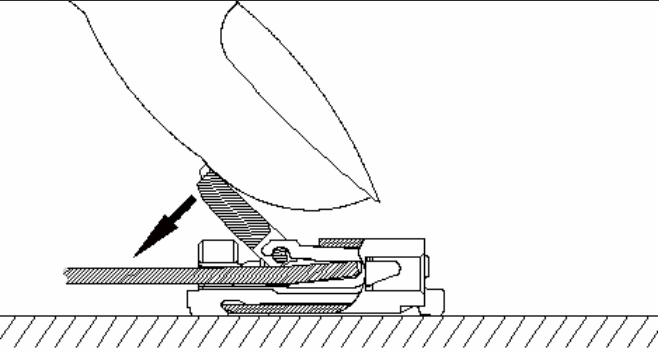
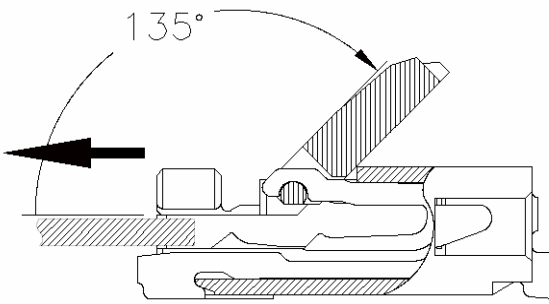
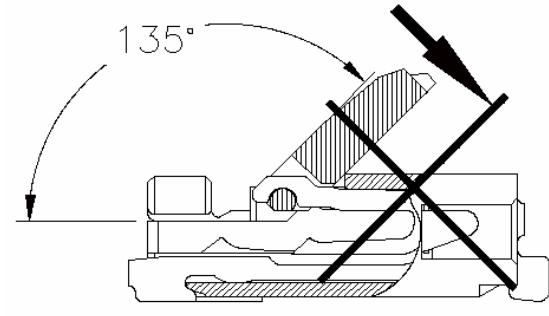


NOTE: Please check the re-flow soldering condition by your own devices beforehand .
 Because the condition changes by the soldering devices, p.c. boards, and so on.

9. TAPE AND REEL PACKAGE SPECIFICATION

9-1. Tape and Reel Dimensions: See attached drawings.

10.操作指示 Instruction upon usage

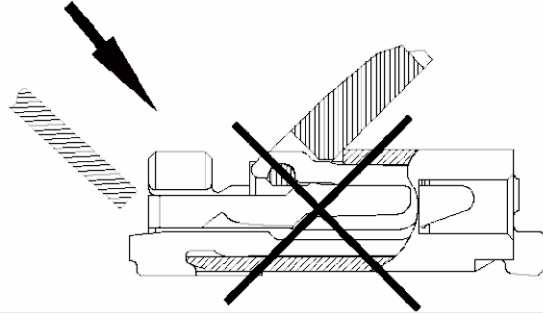
| | |
|---|--|
| <p>步骤 1: Joining step 1: 使用拇指或食指, 将上盖往上掀开。 Use the thumb or the forefinger, raise the top cover up.</p> |  |
| <p>步骤 2: Joining step 2: FPC 导电处朝下, 平行的插入连接器中。 FPC gets along with conductivity down. The parallel one inserts it in the connector .</p> |  |
| <p>步骤 3: Joining step 3: 轻压上盖中间往下旋转至定位, 直到 FPC 完全插入且没有移动。 Press the top cover lightly and rotate down to make a reservation , until FPC is totally inserted and not moved .</p> |  |
| <p>步骤 4: Joining step 4: FPC removal FPC 退出 小心掀起上盖, 将 FPC 退出。 Lift the top cover carefully, withdraw FPC from .</p> |  |
| <p>警告 Warning!! 旋转的角度不可大于 135 度。 The whirling angle can't be greater than 135 degrees.</p> |  |

警告

Warning!!

当 FPC 插入的角度偏斜时可能会引起导通不良

When the angle that FPC inserts in is askew,
may cause and lead openly and badly .

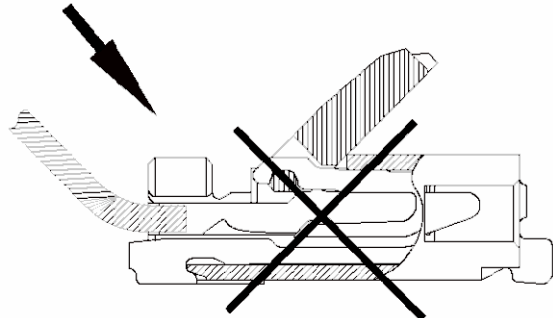


警告

Warning!!

当 FPC 插入的角度偏斜时可能会引起导通不良

When the angle that FPC inserts in is askew,
may cause and lead openly and badly .

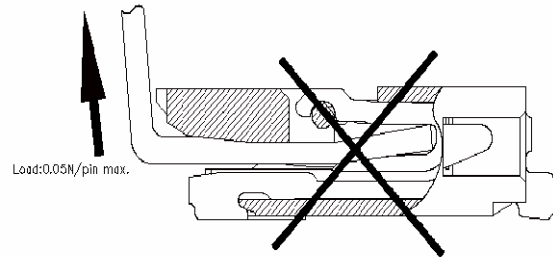


警告

Warning!!

向上拉扯的力量不要超过 0.05N/pin max.

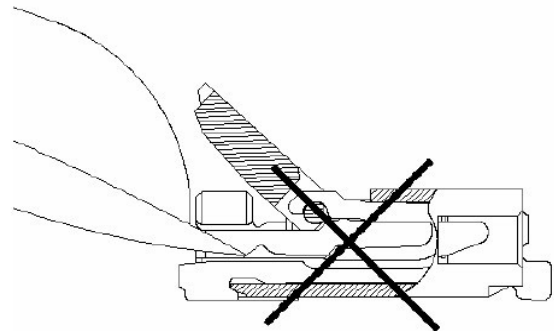
The strength of dragging upwards don't exceed
0.05N/pin max .



警告

Warning!! 开启连接器掀盖时，不要使用过度的力量及避免接触到端子。

covering , don't use excessive strength and
avoid touching the end son .

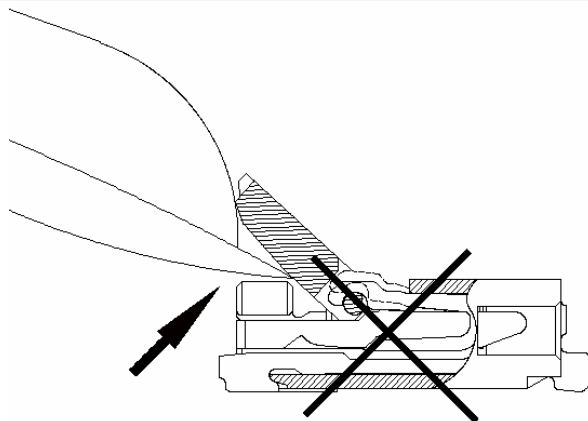


警告

Warning!!

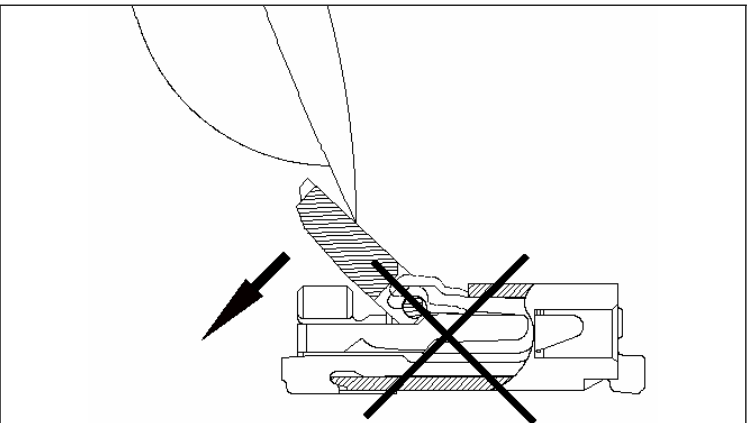
当在开启 FPC 时，不要使用过度的力量及避免接触到端子。

Don't use excessive strength and avoid
touching the end son when open FPC.

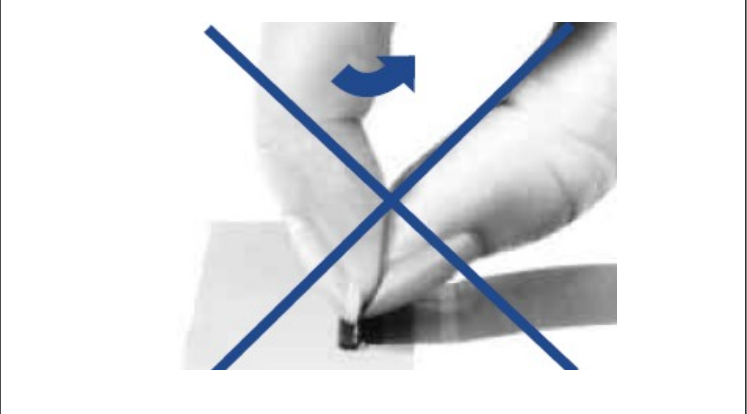


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| <p>FPC Connector 0.5mmPitch A</p> | <p>Product Specification</p> | <p>Issued Date 2012-10-18</p> |
|---------------------------------------|------------------------------|-----------------------------------|

警告
Warning!!
施压的力量，应该要平均。
The strength of exerting pressure should be average.
如图所示，不要试着做移动或重新确定盖子位置。
As illustrated, do not attempt removal or re-positioning of the actuator.



警告
Warning!!
掀盖的面积，应该要平均。
Lift the area overlaid, should be average.
如图所示，不要试着做移动或重新确定盖子的位置。
As illustrated, do not attempt removal or re-positioning of the actuator.



警告
Warning!!
PCB 板平整度必须在 0.1mm max.
The roughness of PCB board must be in 0.1mm max.

