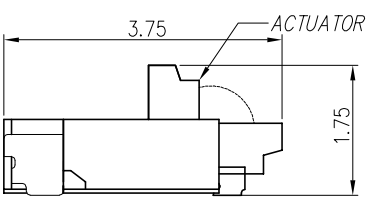
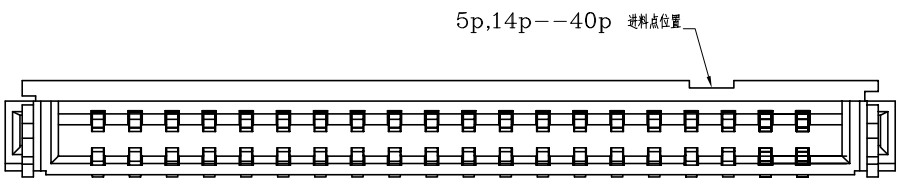
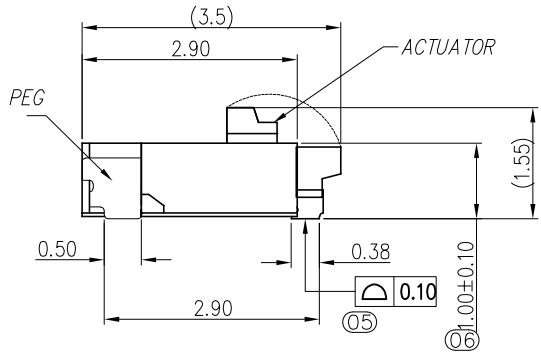
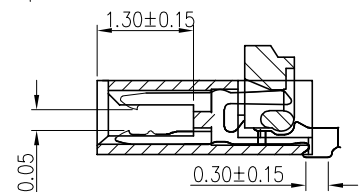
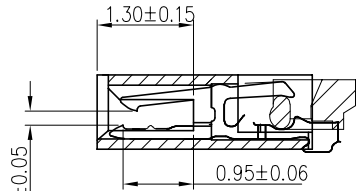
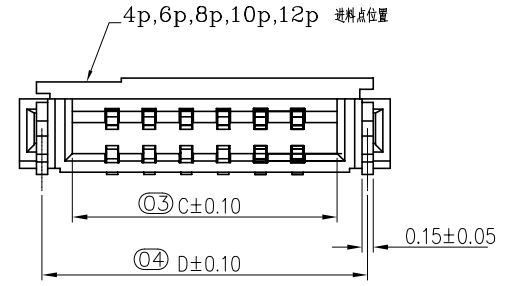
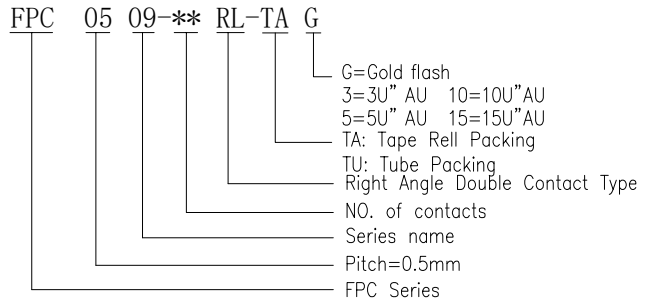


NOTE:
 1. MATERIAL:
 HOUSING: LCP (UL94V-0), COLOR: NATURAL/BLACK
 CONTACTS: COPPER ALLOY.
 PEG: COPPER ALLOY.
 ACTUATOR: LCP (UL94-V0). COLOR: BLACK
 2. RATING:
 OPERATING VOLTAGE: 50Vrms AC.
 CURRENT RATING: 0.5A.
 OPERATING TEMPERATURE: -55°C~+85°C.
 OPERATING HUMIDITY RANGE: RELATIVE HUMIDITY 90% MAX.(NO CONDENSATION)
 STORAGE TEMPERATURE RANGE: -10°C~+50°C.
 STORAGE HUMIDITY RANGE: RELATIVE HUMIDITY 90% MAX.(NO CONDENSATION)

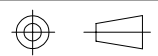
3.Pater Number:



Long coverre type



深圳市山谷道电子有限公司



TITLE: 0.5Pitch 1.0H
品名: ZIF/前插后掀式

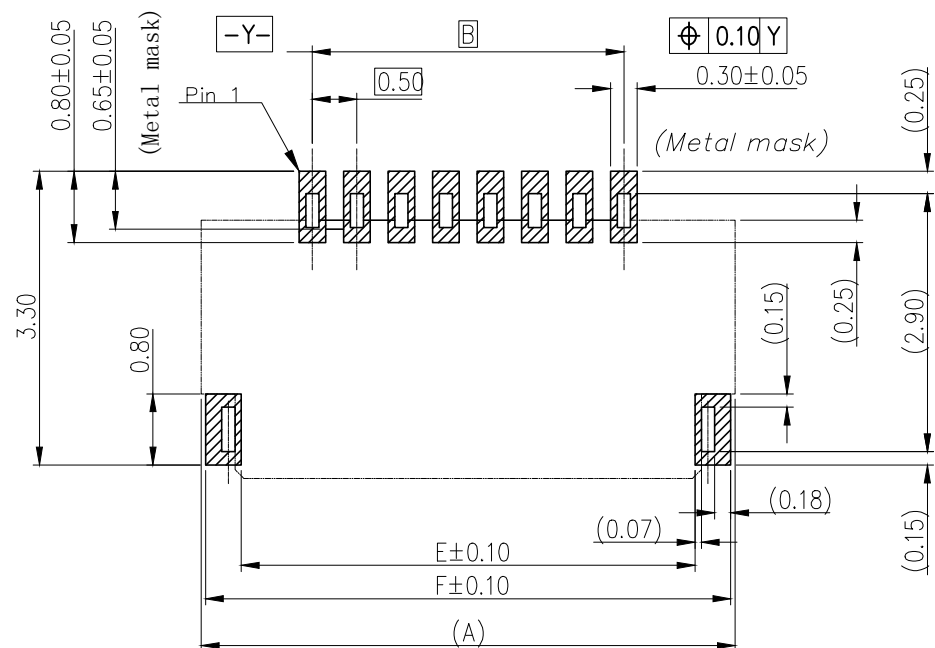
APPD: ZHONGJIAN
 核准: ZHONGJIAN
 CHECK: LIWEI
 校對: LIWEI
 DRAW: WANGHAO
 繪圖: WANGHAO

DWG NO: FPC0509-xxRL-TAG
產品料號: FPC0509-xxRL-TAG

DATE	SCALE	UNIT	PAGE
20130618	1:1	mm	1/1

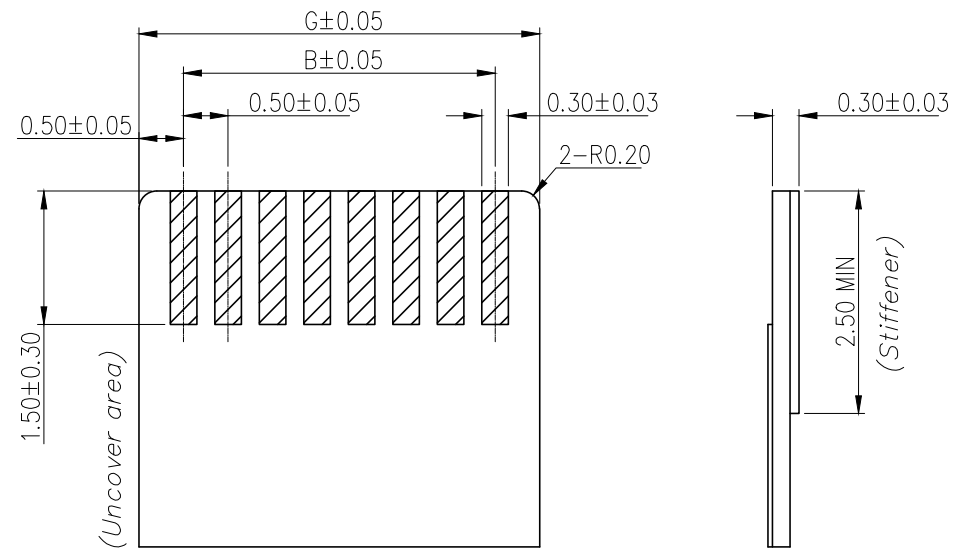
新增11P/13P/15P/36P/45P/50P	26.04.13	X.X : ±0.30	X.X* : ±5*
变更摘要	日期	X.XX : ±0.20	X.XX* : ±2*

本产品需符合 RoHS HF
 ※禁止使用本公司所禁用有毒物质



Recommended PCB mounting pattern and metal mask dimensions

Recommended metal mask thickness: $t=0.1$



Recommended FPC/FFC Dimensions

50	27.00	24.50	25.57	26.39	26.10	26.90	25.50
45	24.50	22.00	23.07	23.89	23.60	24.40	23.00
40	22.00	19.50	20.57	21.39	21.10	21.90	20.50
36	20.00	17.50	18.57	19.39	19.10	19.90	18.50
34	19.00	16.50	17.57	18.39	18.10	18.90	17.50
32	18.00	15.50	16.57	17.39	17.10	17.90	16.50
30	17.00	14.50	15.57	16.39	16.10	16.90	15.50
28	16.00	13.50	14.57	15.39	15.10	15.90	14.50
26	15.00	12.50	13.57	14.39	14.10	14.90	13.50
24	14.00	11.50	12.57	13.39	13.10	13.90	12.50
22	13.00	10.50	11.57	12.39	12.10	12.90	11.50
20	12.00	9.50	10.57	11.39	11.10	11.90	10.50
18	11.00	8.50	9.57	10.39	10.10	10.90	9.50
16	10.00	7.50	8.57	9.39	9.10	9.90	8.50
15	9.50	7.00	8.07	8.89	8.60	9.40	8.00
14	9.00	6.50	7.57	8.39	8.10	8.90	7.50
13	8.50	6.00	7.07	7.89	7.60	8.40	7.00
12	8.00	5.50	6.57	7.39	7.10	7.90	6.50
11	7.50	5.00	6.07	6.89	6.60	7.40	6.00
10	7.00	4.50	5.57	6.39	6.10	6.90	5.50
9	6.5	4.00	5.07	5.89	5.60	6.40	5.00
8	6.00	3.50	4.57	5.39	5.10	5.90	4.50
7	5.5	3.00	4.07	4.89	4.60	5.40	4.00
6	5.00	2.50	3.57	4.39	4.10	4.90	3.50
5	4.5	2.00	3.07	3.89	3.60	4.40	3.00
4	4.00	1.50	2.57	3.39	3.10	3.90	2.50
Number of Contacts	DIM A	DIM B	DIM C	DIM D	DIM E	DIM F	DIM G

Long covre type

山谷道

深圳市山谷道电子有限公司



TITLE: 0.5Pitch 1.0H
品名: ZIF/前插后掀式

一般公差 (TOLERANCE)

APPD: ZHONGJIAN

DWG NO: FPC0509-xxRL-TAG
產品料號:

X.X : ±0.30

X.X° : ±5°

CHECK: LiWEI

DATE SCALE UNIT PAGE

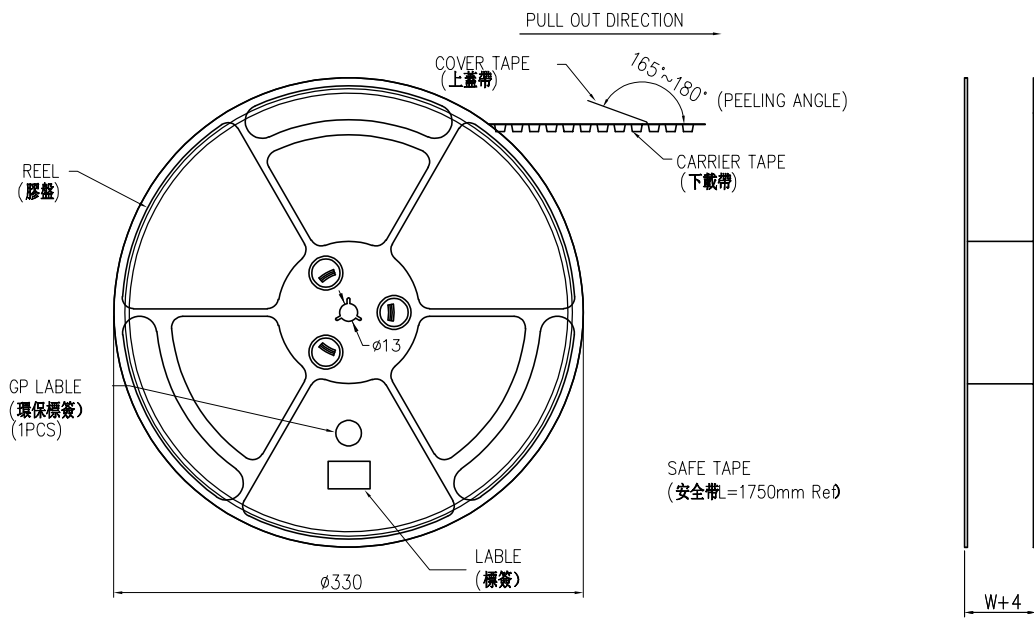
X.XX : ±0.20

X.XX° : ±2°

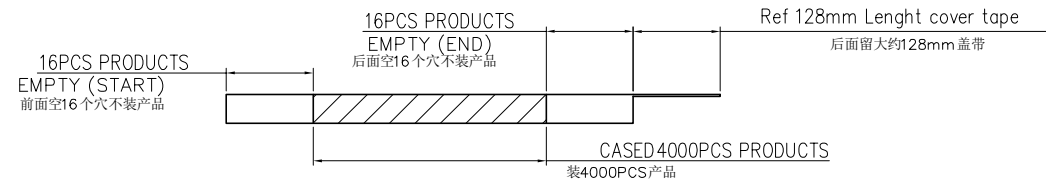
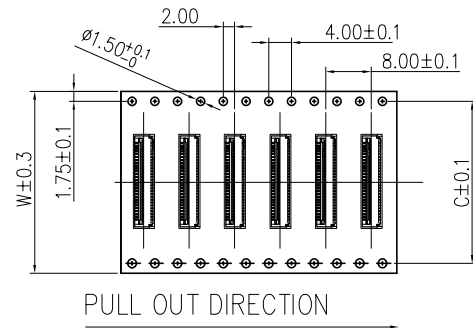
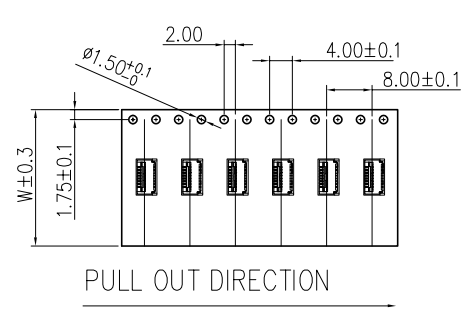
DRAW: WANGHAO

20130618 1:1 mm 1/1

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※禁止使用本公司所禁用有毒物质

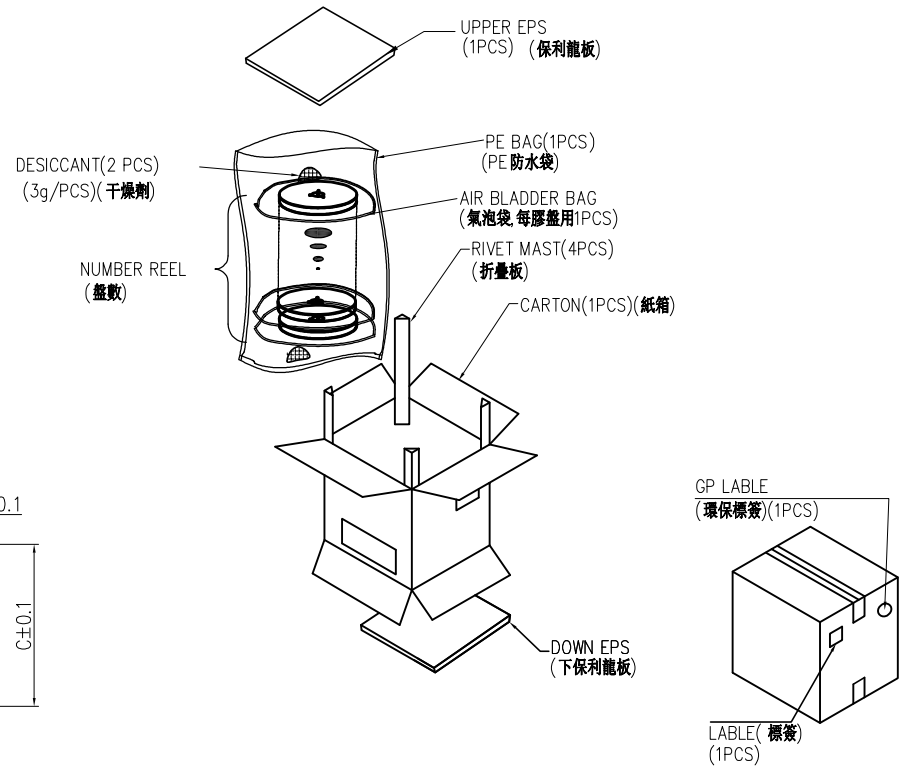


SCALE 1:4



NOTE:

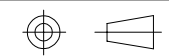
- 1.10 Sprocket hole pitch cumulative tolerance ± 0.20 .
2. Carrier camber is within 1mm in 100mm.
3. Material: black conductive polystyrene alloy.
4. Material Thickness: 0.3 ± 0.05 mm.
5. All dimensions meet EIA-481-B requirements.
6. 4000pcs Pef Reel.
7. For tape width(dim W)16 and 24mm pilot holes are provided on one sides. For tape width(dim W)32, 44 and 56mm pilot holes are provided on both sides.



PIN NO.	W	C	PCS /REEL	REEL/CARTON	SUM(PCS)
04PIN~12PIN	16	-	4000	15	60000
14PIN~28PIN	24	-	4000	10	40000
30PIN~34PIN	32	28.4	4000	8	32000
40PIN~50PIN	44	40.4	4000	6	24000

山谷道

深圳市山谷道电子有限公司



TITLE: 0.5Pitch 1.0H
品名: ZIF/前插后掀式

一般公差 (TOLERANCE)

APPD: ZHONGJIAN
核准:

DWG NO: FPC0509-xxRL-TAG
產品料號:

X.X : ± 0.30

X.X* : $\pm 5^*$

CHECK: LiWEI
校對:

DATE SCALE UNIT PAGE

X.XX : ± 0.20

X.XX* : $\pm 2^*$

DRAW: WANGHAO
繪圖:

20130618 1:1 mm 1/1

本产品需符合 RoHS HF
※禁止使用本公司所禁用有毒物质

FPC Connector 0.5mmPitch A	Product Specification	Issued Date
		2021-05-21

1. SCOPE

This specification covers the CFPC0509 Series Connector.

2. ORDERING INFORMATION

PART NO.: **FPC** **05** **09** - **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	09
4	Number of terminals	4~50
5	Assembly style	Right Angle /Low and top 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.

6. RATING.

FPC Connector 0.5mmPitch A	Product Specification	Issued Date
		2021-05-21

ITEM	STANDARD
Operating Voltage (Max.)	50Vrms AC
Current Rating (Max.)	0.5A
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)	40mΩ 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 0.15N 以上 Pos. x 0.15N 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
		2021-05-21

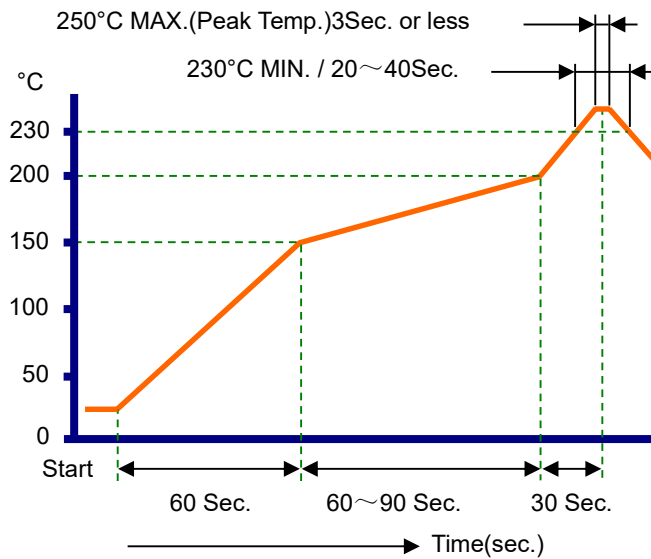
项目 ITEM	测试条件 TEST CONDITION	规格 REQUIREMENT	
温升 Temperature Rise	量测通过 FPC 最大容许电流时，样品接触点之温升。 (UL498) Mate applicable FPC and measure the temperature rise of contact when the maximum AC rated current is passed. (UL498)	温升 Temperature rise	30°C 以下. 30°C Max.
耐振性 Vibration	通过 DC 电流 1mA，位移相对距离 1.5mm，振动周期10~ 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 2021-05-21
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项目 ITEM	测试条件 TEST CONDITION	规格 REQUIREMENT	
耐湿性 Humidity	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。 (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)	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	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。 1 cycle time 如下 a) $-55\pm 3^{\circ}\text{C}$ 30 分钟 b) $+85\pm 3^{\circ}\text{C}$ 30 分钟 (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. 1 cycle 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)	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	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 48 ± 1 小时, 后于室温下使用清水 冲洗后再干燥。 (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 Concentration : $5 \pm 1\%$ Spray time : 48 ± 1 hours Ambient temperature : $35 \pm 2^{\circ}\text{C}$ (JIS C0023 / MIL-STD-202 Method 101)	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 2021-05-21
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8. INFRARED REFLOW CONDITION



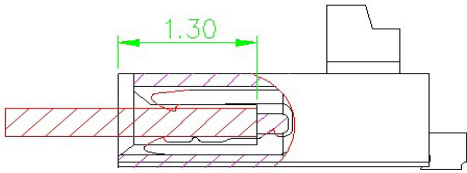
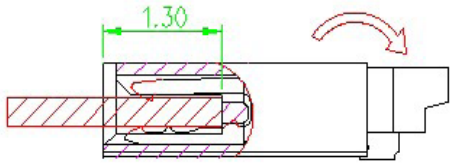
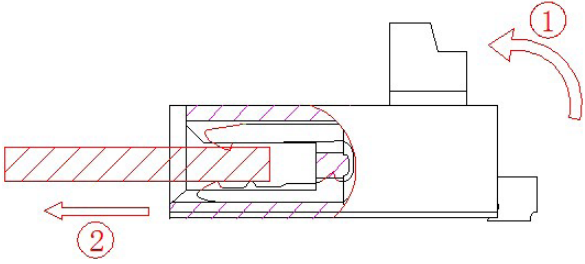
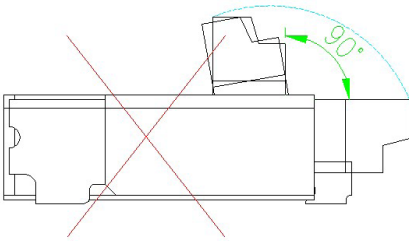
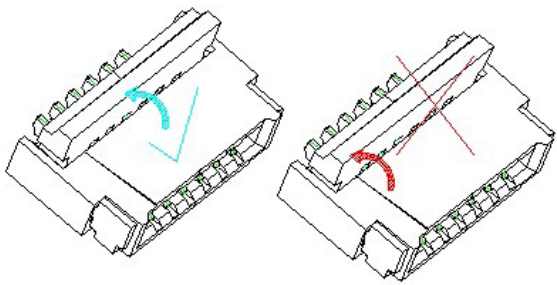
NOTE: Please check the re-flow soldering condition by your own devices beforehand .
Because the condition changes by the soldering devices, p.c. boards, and so on.

9. TAPE AND REEL PACKAGE SPECIFICATION

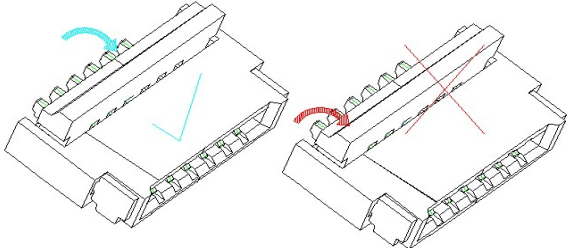

9-1. Tape and Reel Dimensions: See attached drawings.

FPC Connector	Product Specification	Issued Date
0.5mmPitch A		2021-05-21

10. 操作指示 Instruction upon usage

<p>步骤 1:</p> <p>Joining step 1 当上盖呈打开状态时, 将FPC插入连接器中。 Insert the FPC with the actuator opened.</p>	
<p>步骤 2:</p> <p>Joining step 2 FPC 完全插入且没有移动, 压上盖往下旋转至定位。 FPC is totally inserted and not moved, press the actuator and rotate down to make a reservation.</p>	
<p>步骤 3:</p> <p>Joining step 3 FPC removal FPC退出。 掀起上盖, 将FPC退出 Lift the actuator, withdraw FPC.</p>	
<p>警告</p> <p>Warning!! 旋转的角度不可大于 90 度。 The whirling angle can't be greater than 90 degrees.</p>	
<p>警告</p> <p>Warning!! 施压的力量应该要平均且要压盖的中心部位 The strength of exerting pressure should be average and pushing actuator at the center.</p>	

<p>FPC Connector 0.5mmPitch A</p>	<h2>Product Specification</h2>	<p>Issued Date 2021-05-21</p>
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<p>警告 Warning!! 掀盖要掀盖的中心部位。 To lift actuator at the center.</p>	
<p>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.</p>	
<p>警告 Warning!! 产品不能不插FPC时翻转盖子。 Products not inserted flip lid.</p>	