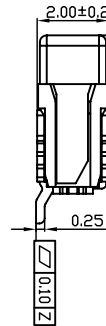
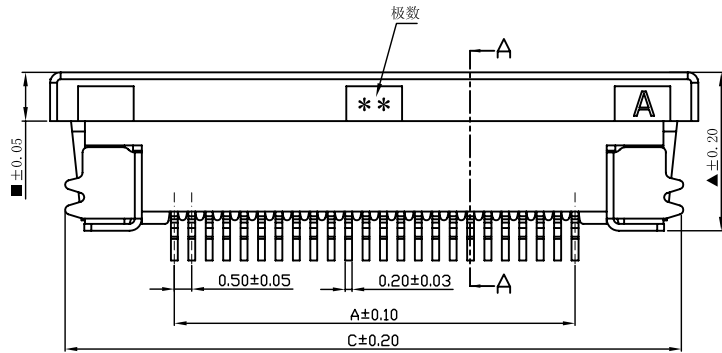
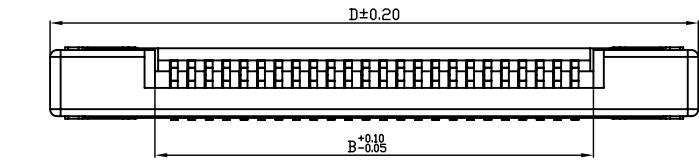


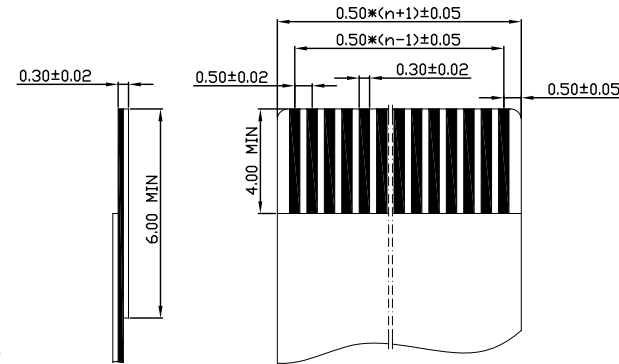
ACAD GENERATED DRAWING. DON'T CHANGE BY HAND

PITCH 0.5mm FPC CONNECTOR SMT TYPE

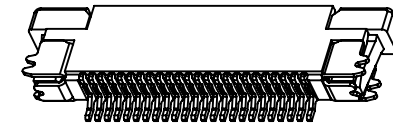
REV	DATE	ECN NO.	MODIFICATION	APPROVER
B	2010/12/15	RD00310121501	版本升级	HYQ
C	2012/04/13	RD00312021301	重新整理图面	Jason_Lee



SECTION A-A



适用扁平电缆



NO.	A	B	C	D
4	1.50	2.60	7.74	8.60
5	2.00	3.10	8.24	9.10
6	2.50	3.60	8.74	9.60
7	3.00	4.10	9.24	10.10
8	3.50	4.60	9.74	10.60
9	4.00	5.10	10.24	11.10
10	4.50	5.60	10.74	11.60
11	5.00	6.10	11.24	12.10
12	5.50	6.60	11.74	12.60
13	6.00	7.10	12.24	13.10
14	6.50	7.60	12.74	13.60
15	7.00	8.10	13.24	14.10
16	7.50	8.60	13.74	14.60
17	8.00	9.10	14.24	15.10
18	8.50	9.60	14.74	15.60
19	9.00	10.10	15.24	16.10
20	9.50	10.60	15.74	16.60
21	10.00	11.10	16.24	17.10
22	10.50	11.60	16.74	17.60
23	11.00	12.10	17.24	18.10
24	11.50	12.60	17.74	18.60
25	12.00	13.10	18.24	19.10
26	12.50	13.60	18.74	19.60
27	13.00	14.10	19.24	20.10
28	13.50	14.60	19.74	20.60
29	14.00	15.10	20.24	21.10
30	14.50	15.60	20.74	21.60
31	15.00	16.10	21.24	22.10
32	15.50	16.60	21.74	22.60
33	16.00	17.10	22.24	23.10
34	16.50	17.60	22.74	23.60
35	17.00	18.10	23.24	24.10
36	17.50	18.60	23.74	24.60
37	18.00	19.10	24.24	25.10
38	18.50	19.60	24.74	25.60
39	19.00	20.10	25.24	26.10
40	19.50	20.60	25.74	26.60
41	20.00	21.10	26.24	27.10
42	20.50	21.60	26.74	27.60
43	21.00	22.10	27.24	28.10
44	21.50	22.60	27.74	28.60
45	22.00	23.10	28.24	29.10
46	22.50	23.60	28.74	29.60
47	23.00	24.10	29.24	30.10
48	23.50	24.60	29.74	30.60
49	24.00	25.10	30.24	31.10
50	24.50	25.60	30.74	31.60
51	25.00	26.10	31.24	32.10
52	25.50	26.60	31.74	32.60
53	26.00	27.10	32.24	33.10
54	26.50	27.60	32.74	33.60
55	27.00	28.10	33.24	34.10
56	27.50	28.60	33.74	34.60
57	28.00	29.10	34.24	35.10
58	28.50	29.60	34.74	35.60
59	29.00	30.10	35.24	36.10
60	29.50	30.60	35.74	36.60

SPECIFICATION

1.Material:

Housing: Thermoplastic, UL94V-0,color:Natural .
Lock: Thermoplastic, UL94V-0,color:black.
Contacts: Copper Alloy,
Tin/Gold plated over nickel plated (50 u" min)
Solder tab: Copper Alloy,
Tin/Gold plated over nickel plated (50 u" min)

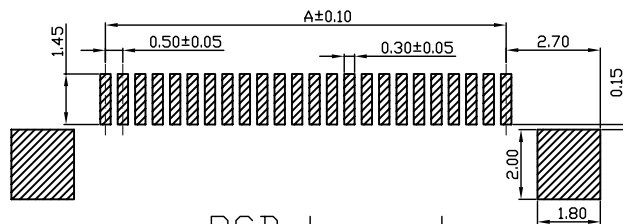
2.Electrical Characteristics:

Voltage rating: 50V(max).
Current rating : 0.5A(max).
Operating Temperature: -25°C~+85°C.
Insulation resistance: 500M ohms min. at 500VDC
Dielectric withstanding voltage: 250 VAC/1minute.
Contact resistance: 20m ohms max.


NOTES:

"▲"Dimension:
4Pin~29Pin: 4.55mm;
30Pin~45Pin: 4.75mm;
46Pin~60Pin: 5.15mm;

"■"Dimension:
4Pin~29Pin: 1.40mm;
30Pin~45Pin: 1.60mm;
46Pin~60Pin: 2.00mm;



PCB Layout

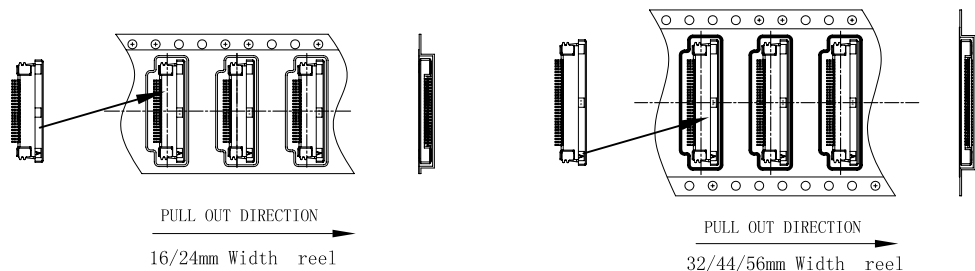
GENERAL TOLERANCE				UNITS <small>mm</small>		NAME: 0.5mm FPC Connector(半包)		ATOM® 深圳市爱特姆科技有限公司 SHENZHEN ATOM TECHNOLOGY CO.,LTD.			
SELECT	✓			MAT'L		PART NO: FPC050**~07***		TITLE: 0.5mm FPC 半包卧式上接 (H=2.0mm)			
TOL	1	2	3								
DN.				FINISH		APPD: Jason_Lee		DWG NO. ATOM-A01465			
X.XXX	±0.10	±0.05	±0.15								
X.XX	±0.15	±0.13	±0.25	Q'TY		CHKD: Vicky		<div></div> <div>SCALE</div> <div>SHEET</div> <div>REV</div>			
X.X	±0.20	±0.25	±0.5								
X.	±0.30	±0.38	±1.00			DR: Aimee		1:11/1C			
ANGLE	±2°										

文件名称

0.5mm FPC 卧式半包卷带包装规范

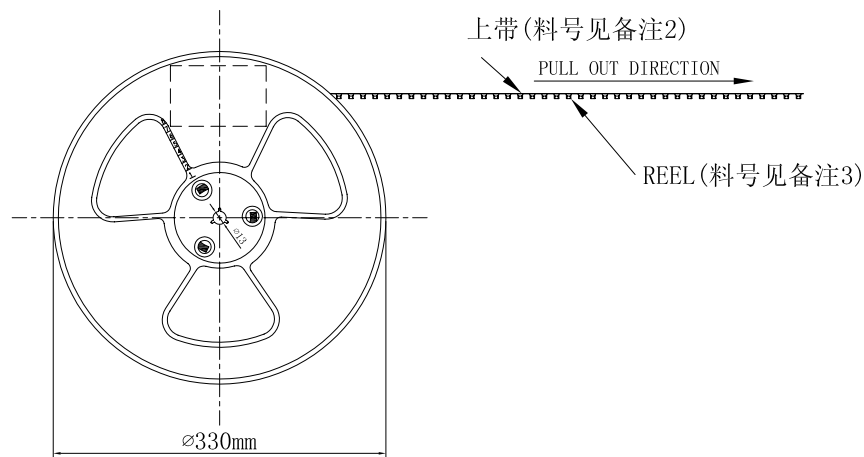
一.

- 1) 將成品一一放入REEL包裝盤內, 依同一方向放入 .
- 2) 包裝時, 如圖所示 .
- 3) 一個REEL包裝盤放置 2000 個成品 .
- 4) 如果在卷带宽度 (尺寸“A”处) 为16mm和24mm的情况下, 则卷带为单边带定位孔 如果在卷带宽度 (尺寸“A”处) 为32mm、44mm、56mm的情况下, 则卷带为两边带定位孔.



二.

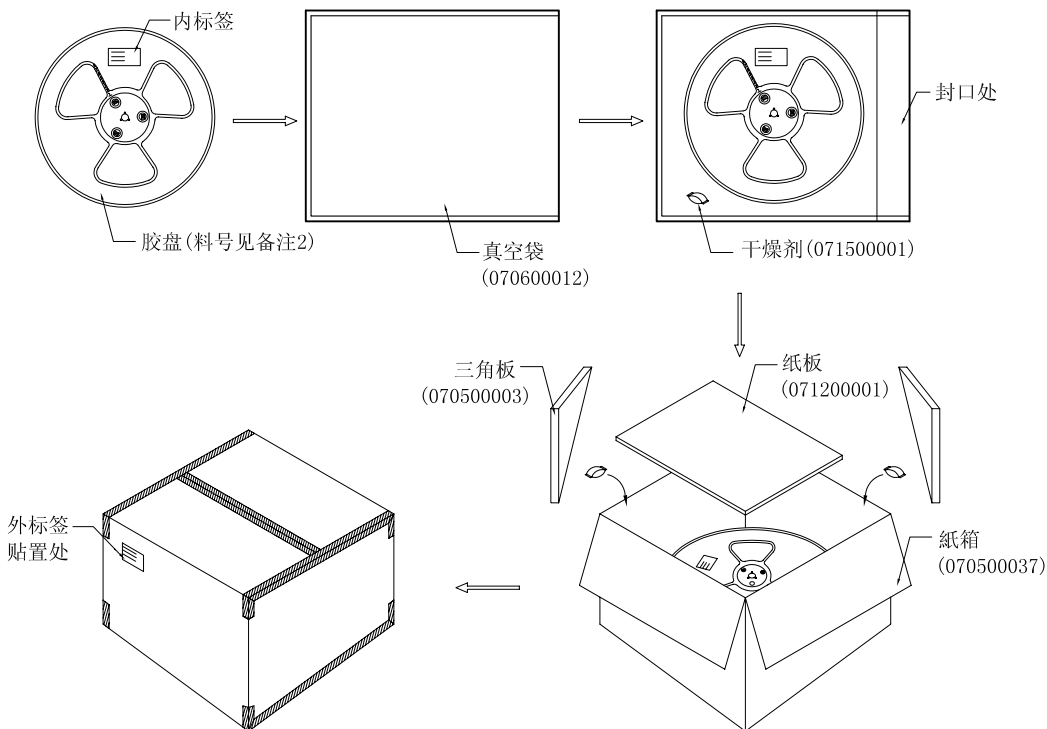
- 1) 装盘前先把前面空800mm, 然后再开始装盘, 尾端也需空出400mm.
- 2) 装满成品的REEL包装盘如下图所示.



三.

- 1) 每盘产品贴一张内标签, 然后将胶盘放入真空包装袋, 袋内放一包干燥剂, 再使用真空包装机抽气封口.
- 2) 纸箱上下各放一块纸板, 将每盘产品依次放入箱内, 四周用三角板固定. 每箱内放二包干燥剂, 最后用透明胶纸将纸箱四周封实, 箱外贴上外标签. 每箱包装详细数量见下表格.

pin数 (PIN NO.)	一盘装数量 (PCS)	一箱装数量 (PCS)
4-6	2000	26000
7-23	2000	18000
24-33	2000	14000
34-50	2000	10000
51-60	2000	8000





深圳市愛特姆科技有限公司

SHENZHEN ATOM TECHNOLOGY CO., LTD.

文件编号

ATOM-WI-RD-027

版本版次

A/2

页次

2/2

文件名称

0.5mm FPC 卧式半包卷带包装规范

3) 纸箱规格.

QTY. : PCS

N. W: KGS

G. W: KGS

MEAS: 34. 0X34. 0X28. 5 CM

C/NO:

備註 (REMARK)

1. 若有未裝滿之零數箱, 必須以緩衝材塞滿.
2. reel规格备注表:

产品PIN数 PIN No.	部品名称 Part Number	尺寸:A DIM :A (mm)	尺寸:B DIM :B (mm)	尺寸:C DIM :C (mm)	轮盘料号 规格	冷封上带料号 规格
4 6	0.5mm FPC 卧式 (H=2.0) 4pin 0.5mm FPC 卧式 (H=2.0) 6pin	16	7.5	—	070900001 330mm*21.5mm	070800022 13.3mm width
7 23	0.5mm FPC 卧式 (H=2.0) 7pin 0.5mm FPC 卧式 (H=2.0) 23pin	24	11.5	—	070900011 330mm*29.5mm	070800020 21.3mm width
24 33	0.5mm FPC 卧式 (H=2.0) 24pin 0.5mm FPC 卧式 (H=2.0) 33pin	32	14.2	28.4	070900017 330mm*37.5mm	070800019 25.5mm width
34 50	0.5mm FPC 卧式 (H=2.0) 34pin 0.5mm FPC 卧式 (H=2.0) 50pin	44	20.2	40.4	070900007 330mm*49.5mm	070800021 37.5mm width
51 60	0.5mm FPC 卧式 (H=2.0) 51pin 0.5mm FPC 卧式 (H=2.0) 60pin	56	26.2	52.4	070900022 330mm*61.5mm	070800023 49.5mm width

核准

审核

制定

发行编号

PRODUCT SPECIFICATION

【1】适用范围 SCOPE

本规格书适用于：0.5 间距电缆连接器

This specification covers the 0.5mm Pitch FPC/FFC Connectors

【2】产品外形及尺寸 Product appearance and dimensions

参照图面 Refer to the drawing.

【3】定格 RATINGS

项 目 Item	规 格 Standard
最大容许电压 Rated Voltage(MAX)	50V [AC/DC(有效值 Virtual value)50Hz]
最大容许电流 Rated Current(MAX)	
使用温度范围 Operating 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 Standard
4.1.1 接触阻抗 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。 Mate applicable FPC/FFC and measure by dry circuit, 20mV MAX, 10mA.	20 mΩ MAX
4.1.2 绝缘电阻 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。 Mate applicable FPC/FFC and apply 500V DC between adjacent terminal or between terminal and ground.	500 MΩ MIN
4.1.3 耐电压 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。 Mate applicable FPC/FFC and apply 250V AC (virtual value) for 1minute between adjacent terminal or ground.	无击穿现象 No Breakdown

4.2 机械性能 Mechanical Performance

项 目 Item	条 件 Test Condition	规 格 Standard
4.2.1 锁紧力及拔出力 Latch insertion force and extraction Force	适合 0.3mm 厚的 FFC；用每分钟 25±3mm 的速度；平行地插入、锁紧、拔出。 Insert and extract applicable FFC at the speed rate of 25±3mm/minute.	锁紧力 Locking 1.96*n (N) MAX 拔出力 Withdrawal 0.49*n (N) MIN
4.2.2 端子/焊片保持力 Terminal / Solder_tab Retention Force	以用每分钟 25±3mm 的速度平行向外拉 Pull the terminal/ Solder_tab at the speed rate of 25±3mm per minute	Terminal:2.0N/Pin MIN Solder_tab:2.94N MIN

Product Description	0.5mm FPC conn. 系列	Product NO:			
		REVISION	DATE	SHEET NO	
APPROVED BY	CHECKED BY	CHARTED BY	A/3	2013.08.14	1/4
Jason_lee	Vicky	Ivy Wang	DOCUMENT NO	FPC-050A-006	

PRODUCT SPECIFICATION

4.3 环境和其他性能 Environmental Performance and Others

项 目 Item		条 件 Test Condition	规 格 Standard	
4.3.1	重复插拔 Repeated Insertion and Withdrawal	无通电状态；以 10 次/分钟的速度插拔 20 次 Insertion and withdrawal actuator up to 20 cycles at the speed rate of less than 10 cycles/minute	接触阻抗 Contact Resistance	60 mΩMAX
4.3.2	温度上升 Temperature Rise	适合 FPC/FFC 嵌合；最大容许电流通电，温度测定。（UL 498） Carrying rated current load. (UL 498)	温度上升 Temperature Rise	30 °C MAX
4.3.3	耐振动性 Vibration	DC 1mA 通电状态下；嵌合轴沿 XYZ 三个方向振动；振幅 1.5mm；频率 10-55-10Hz/分；历时 2 小时 Amplitude: 1.5mm P-P Sweep time: 10-55-10Hz in 1 minute Duration: 2 hours in each X.Y.Z. axes	外观 Appearance	无损坏 No Damage
			接触阻抗 Contact Resistance	60 mΩMAX
			瞬断 Discontinuity	1 ms MAX.
4.3.4	耐冲击性 Shock	DC 1mA 通电状态下；嵌合轴沿相互垂直的 6 个方向；以 490m/s ² {50G}冲击；各 3 次 490m/s ² {50G}，3 strokes in each X.Y.Z. axes.	外观 Appearance	无损坏 No Damage
			瞬断 Discontinuity	1 ms MAX.
4.3.5	耐热性 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 85±2℃，96 hour	外观 Appearance	无损坏 No Damage
			接触阻抗 Contact Resistance	60 mΩMAX
4.3.6	耐寒性 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 -40±2℃，96 hour	外观 Appearance	无损坏 No Damage
			接触阻抗 Contact Resistance	60 mΩMAX
4.3.7	温度循环 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。 5 cycles of: a) -55±3℃ 30 minutes b) 85±2℃ 30 minutes	外观 Appearance	无损坏 No Damage
			接触阻抗 Contact Resistance	60 mΩMAX

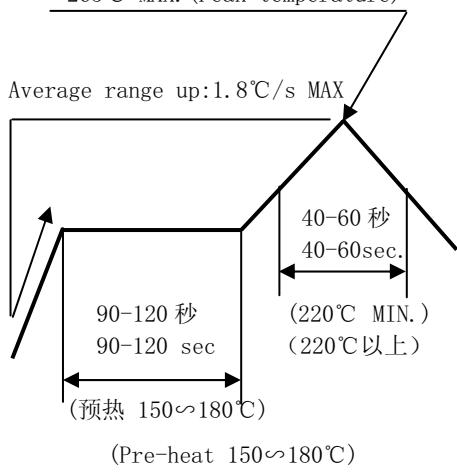
Product Description	0.5mm FPC conn. 系列		Product NO:		
			REVISION	DATE	SHEET NO
APPROVED BY	CHECKED BY	MADE BY	A/3	2013.08.14	2/4
Jason_lee	Vicky	Ivy Wang	DOCUMENT NO	FPC-050A-006	

PRODUCT SPECIFICATION

项 目 Item		条 件 Test Condition	规 格 Standard	
4.3.8	耐湿性 Humidity	适合 FPC/FFC 嵌合; 40±2℃、相对湿度 90-95% 的空气中; 放置 96 小时; 再回到室温中放置 1~2 小时, 再测定其值 Temperature: 40±2℃ Relative Humidity: 90-95% Duration: 96 Hours Recovery time 1~2 hours	外观 Appearance	无损坏 No Damage
			接触阻抗 Contact Resistance	60 mΩMAX
			耐电压 Dielectric Strength	必须满足 4.1.3 Must meet 4.1.3
			绝缘阻抗 Insulation Resistance	20 MΩ MIN
4.3.9	耐盐雾性 Salt Spray	适合 FPC/FFC 嵌合; 35±2℃、5±1% 的盐水喷雾 1. 镀锡区至少 12 小时 2. 镀金区 1-3u" 至少 24 小时 3. 镀金区 5u" 以上至少 48 小时 试验后常温水洗; 再室温干燥。 Suitable for FPC/FFC mating, 35±2℃、5±1% salt spray 1. Sn plated area at least 12 hours 2. Au plated area 1-3u" for at least 24 hours 3. Au plated area 5u" for at least 48 hours Clean by normal-temperature water after test and then dry under room temperature.	外观 Appearance	无损坏、腐蚀 No Damage
			接触阻抗 Contact Resistance	60 mΩ MAX
4.3.10	可焊性 Solderability	端子前端基准面 0.2mm 处浸入 240±5℃ 的锡槽中; 历时 3~5 sec。 Soldering Time: 3~5 sec. Soldering Temperature: 240±5℃ 0.2 mm from terminal tip	沾敷性 Solder Wetting	沾敷面积 95% 以上

Product Description	0.5mm FPC conn. 系列		Product NO:		
			REVISION	DATE	SHEET NO
APPROVED BY	CHECKED BY	CHARTED BY	A/3	2013.08.14	3/4
Jason_lee	Vicky	Ivy Wang	DOCUMENT NO	FPC-050A-006	

PRODUCT SPECIFICATION

项 目 Item		条 件 Test Condition	规 格 Standard	
4.3.11	耐焊接热 Resistance to soldering heat	<p>1). Reflow part 260±5℃ Peak 220℃ MIN. 60sec.MAX.</p> <p>2). Pre-heat part 180℃, 0~120sec.</p> <p>* Refer to reflow temperature profile.</p>  <p>Average range up: 1.8℃/s MAX</p> <p>265℃ MAX. (Peak temperature)</p> <p>40-60 秒 40-60sec.</p> <p>(220℃ MIN.) (220℃ 以上)</p> <p>90-120 秒 90-120 sec</p> <p>(预热 150~180℃) (Pre-heat 150~180℃)</p>	外观 Appearance	经过两次回流 焊, 无损坏、变 形 No Damage after 2 times of reflow

() : 参考规格 Reference Standard

{ } : 参考单位 Reference Unit

【5】产品材质 PRODUCT MATERIALS

图面参照 Refer to the drawing.

【6】适用品名料号

品 名 Product Name	料 号 Part NO.
0.5mmFPC 全包 立贴式(正脚)H=2.0mm	FPC050**-01***
0.5mmFPC 全包 立贴式(反脚)H=2.0mm	FPC050**-02***
0.5mmFPC 全包 卧式 上接 H=2.0mm	FPC050**-03***
0.5mmFPC 全包 卧式 下接 H=2.0mm	FPC050**-04***
0.5mm FPC 半包立贴式(正脚) (H=2.0mm)	FPC050**-05***
0.5mm FPC 半包立贴式(反脚) (H=2.0mm)	FPC050**-06***
0.5mm FPC 半包卧式上接 (H=2.0mm)	FPC050**-07***
0.5mm FPC 半包卧式下接 (H=2.0mm)	FPC050**-08***
0.5mm FPC 掀盖式 (H=2.0mm)	FPC050**-09***

*:图面参照 Refer to the drawing

Product Description	0.5mm FPC conn. 系列		Product NO:		
			REVISION	DATE	SHEET NO
APPROVED BY	CHECKED BY	MADE BY	A/3	2013.08.14	4/4
Jason_lee	Vicky	Ivy Wang	DOCUMENT NO	FPC-050A-006	