

深圳市灿科盟实业有限公司

SHENZHEN CANKEMENG INDUSTRIAL CO. LTD

承 认 书

SPECIFICATION FOR APPROVAL

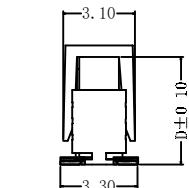
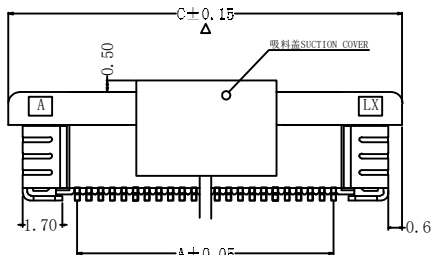
客户名称 CUSTOMER	
品名 DESCRIPTION	FPC0.5-XP 立贴加盖正脚系列连接器
料号 CUSTOMER PART NO	F-FPCONXXP-D310
日期 DATE	

客户确认 (APPROVED SIGNATURES)

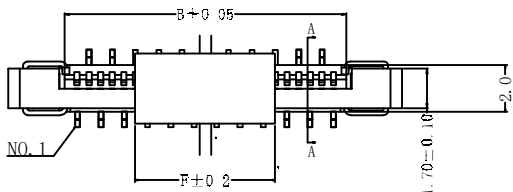
核准 (APPROVAL)	工程 (ENGINEERING)	品管 (QC)
承认结果： <input type="checkbox"/> 承认 <input type="checkbox"/> 不承认 <input type="checkbox"/> 重新送样		

深圳市灿科盟实业有限公司
SHENZHEN CANKEMENG INDUSTRY CO. LTD
公司地址 (Company address): 深圳市光明区新湖街道荔湖社区
楼二工四路36号5栋
联系电话 (Contact phone number): 13316859588
传真 (Fax): 0755-83425987
邮箱 (mailbox): ckmtw168@163.com, ckm-scb@ckmtw.com.cn

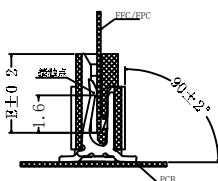
生产基地:
江西灿科盟电子有限公司
JIANGXI CANKEMENG ELECTRONICS CO. LTD
公司地址 (Company address): 江西省九江市修水县渣津镇朴田
工业区



备注1: “D”处尺寸, 4~36P为4.6MM;
37 60P为5.2MM

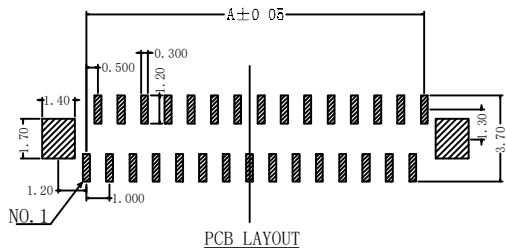
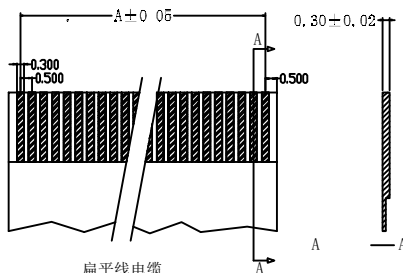


备注3:吸料盖长度F(6~7P, F=3.0MM;
8 11P, F=4.0MM; 12 60P, F=6.0MM)

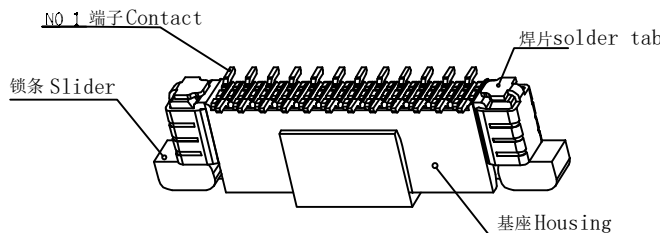


【A-A 撤台状态】

备注2: “E”处尺寸, 4~36P为3.4MM;
37 60P为4.0MM



PCB LAYOUT



技术参数 SPECIFICATIONS

间距(PITCH):0.5

极数(POLES):4~60

额定电压(VOLTAGE RATING):50V DC/AC

额定电流(CURRENT RATING):0.5A DC/AC

耐压值(WITHSTAND VOLTAGE):500V

工作温度(WORKING TEMPERATURE):-25℃~+85℃

绝缘电阻(INSULATION RESISTANCE):≥500MΩ

接触电阻(CONTACT RESISTANCE):≤30MΩ

单面接触(SINGLE CONTACT)

材料 MATERIAL

接触件 (CONTACT):磷青铜 T=0.2MM镀亚锡(底层镍NI:30~80μ, 表层锡SN:80~200μ)
焊片 (SOLDER TAB):磷青铜T=0.2MM 镀亚锡(底层镍NI:30~80μ, 表层锡SN:80~200μ)
塑胶主体 (HOUSING):LCP NC 耐热树脂 (UL94V-0) HEAT RESISTANCE PLASTIC (UL94V-0)
锁条 (SLIDER):LCP BK 耐热树脂 (UL94V-0) HEAT RESISTANCE PLASTIC (UL94V-0)

PART.NO	芯数	A	B	C
F-FPCON04P-D310	04	1.50	2.6	7.3
F-FPCON05P-D310	05	2.00	3.1	7.8
F-FPCON06P-D310	06	2.50	3.6	8.3
F-FPCON07P-D310	07	3.00	4.1	8.8
F-FPCON08P-D310	08	3.50	4.6	9.3
F-FPCON09P-D310	09	4.00	5.1	9.8
F-FPCON10P-D310	10	4.50	5.6	10.3
F-FPCON11P-D310	11	5.00	6.1	10.8
F-FPCON12P-D310	12	5.50	6.6	11.3
F-FPCON13P-D310	13	6.00	7.1	11.8
F-FPCON14P-D310	14	6.50	7.6	12.3
F-FPCON15P-D310	15	7.00	8.1	12.8
F-FPCON16P-D310	16	7.50	8.6	13.3
F-FPCON17P-D310	17	8.00	9.1	13.8
F-FPCON18P-D310	18	8.50	9.6	14.3
F-FPCON19P-D310	19	9.00	10.1	14.8
F-FPCON20P-D310	20	9.50	10.6	15.3
F-FPCON21P-D310	21	10.00	11.1	15.8
F-FPCON22P-D310	22	10.50	11.6	16.3
F-FPCON23P-D310	23	11.00	12.1	16.8
F-FPCON24P-D310	24	11.50	12.6	17.3
F-FPCON25P-D310	25	12.00	13.1	17.8
F-FPCON26P-D310	26	12.50	13.6	18.3
F-FPCON27P-D310	27	13.00	14.1	18.8
F-FPCON28P-D310	28	13.50	14.6	19.3
F-FPCON29P-D310	29	14.00	15.1	19.8
F-FPCON30P-D310	30	14.50	15.6	20.3
F-FPCON31P-D310	31	15.00	16.1	20.8
F-FPCON32P-D310	32	15.50	16.6	21.3
F-FPCON33P-D310	33	16.00	17.1	21.8
F-FPCON34P-D310	34	16.50	17.6	22.3
F-FPCON35P-D310	35	17.00	18.1	22.8
F-FPCON36P-D310	36	17.50	18.6	23.3
F-FPCON37P-D310	37	18.00	19.1	23.8
F-FPCON38P-D310	38	18.50	19.6	24.3
F-FPCON39P-D310	39	19.00	20.1	24.8
F-FPCON40P-D310	40	19.50	20.6	25.3
F-FPCON41P-D310	41	20.00	21.1	25.8
F-FPCON42P-D310	42	20.50	21.6	26.3
F-FPCON43P-D310	43	21.00	22.1	26.8
F-FPCON44P-D310	44	21.50	22.6	27.3
F-FPCON45P-D310	45	22.00	23.1	27.8
F-FPCON46P-D310	46	22.50	23.6	28.3
F-FPCON47P-D310	47	23.00	24.1	28.8
F-FPCON48P-D310	48	23.50	24.6	29.3
F-FPCON49P-D310	49	24.00	25.1	29.8
F-FPCON50P-D310	50	24.50	25.6	30.3
F-FPCON51P-D310	51	25.00	26.1	30.8
F-FPCON52P-D310	52	25.50	26.6	31.3
F-FPCON53P-D310	53	26.00	27.1	31.8
F-FPCON54P-D310	54	26.50	27.6	32.3
F-FPCON55P-D310	55	27.00	28.1	32.8
F-FPCON56P-D310	56	27.50	28.6	33.3
F-FPCON57P-D310	57	28.00	29.1	33.8
F-FPCON58P-D310	58	28.50	29.6	34.3
F-FPCON59P-D310	59	29.00	30.1	34.8
F-FPCON60P-D310	60	29.50	30.6	35.3

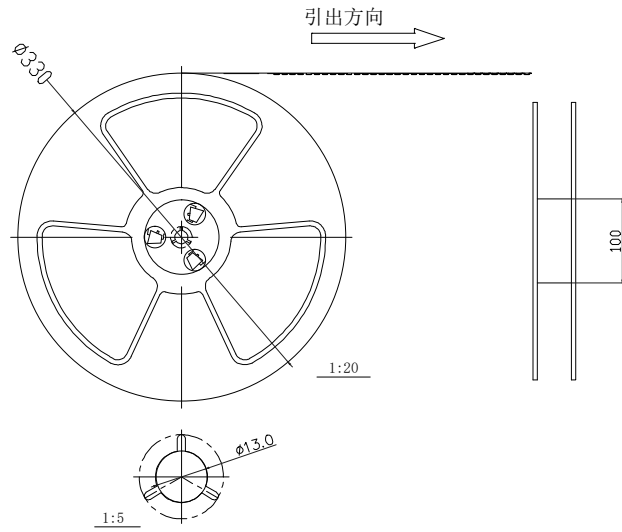
APPROVED:	DATE:	深圳市灿科盟实业有限公司 CHANKEMENG INDUSTRY CO., LTD				
CHECKED:	DATE:					TITLE:
DRAWN: LYF	DATE: 2024-06-28	PART. NO.		/		
		UNIT	mm	SCALE	free	
		FILE NO.	Ckmtw-FPC-00115	REV.	A	

TOLERANCE TABLE

.0	±0.30
.00	±0.20
.000	±0.05

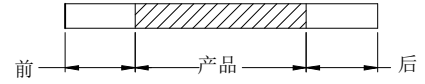
包装方式

环保执行标准: RoHS

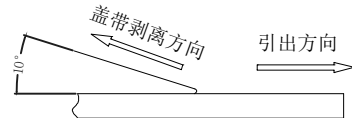


1. 包装数量: 2000PCS/每盘

2. 前空30PCS; 后空30PCS



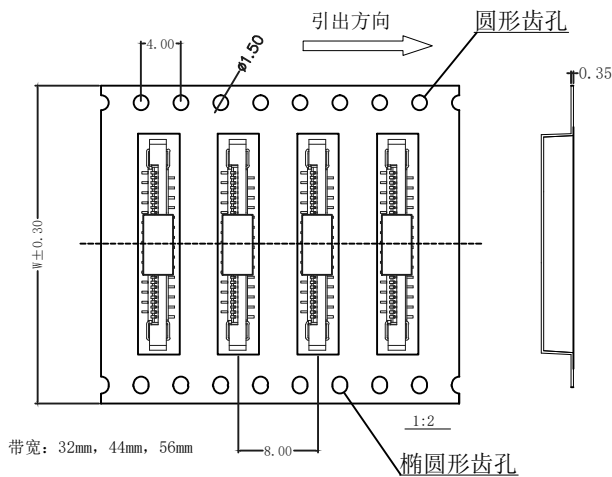
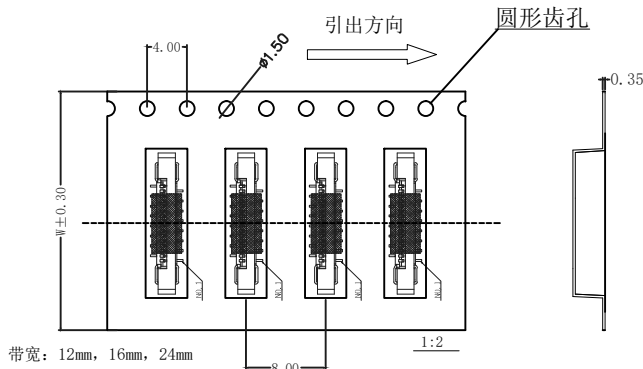
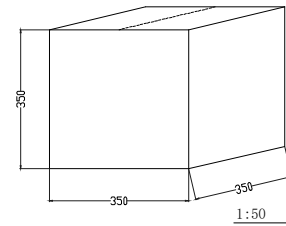
3. 盖带剥离力: 10~130g



4. 材质:

载带: 聚对苯二甲酸乙二醇酯
 盖带: PET 聚对苯二甲酸乙二醇酯
 透明薄膜 t=0.05mm
 胶盘: PS 聚苯乙烯 蓝色
 纸箱: 双瓦楞

纸箱规格: 350mm*350mm*350mm
 (长*宽*高)



载带全尺寸符合:
 EIA-481-D标准要求

Pin位	带宽W	颜色	备注
4~16	24	雾透	
18	32	雾透	
20	32	雾透	
20	24	雾透	热封
22~28	32	雾透	
30~50	44	雾透	

深圳市灿科盟实业有限公司

编号 NO. CKM-FPC-D310

版本 REV. A00

产品规格书

PRODUCT SPECIFICATION

1. 适用范围 SCOPE

本规格书适用于 FPC0.5-XP 立贴加盖正脚 连接器系列.

This specification covers the FPC0.5-XP 立贴加盖正脚 connectors series.

2. 外观尺寸 CONNECTOR DIMENSIONS

请参照图面 See attached drawings.

P.C.B LAYOUT 请参照图面 See attached drawings.

3. 材质 MATERIAL

A. 绝缘胶体 Housing: LCP

颜色 Color: 本色 natural colour

耐燃等级 (UL94V-0) Flammability Rating (UL94V-0).

B. 锁条 Locking bar: LCP

颜色 Color: 黑色 Black

耐燃等级 (UL94V-0) Flammability Rating (UL94V-0).

C. 端子 Terminal: 磷青铜 Phosphor Bronze.

D. 固定扣 Fitting Nail: 磷青铜 Phosphor Bronze.

4. 等级 RATING

项目 ITEM	规格 SPECIFICATIONS
额定电压 (Voltage rating)	50V AC/DC
额定电流 (Current rating)	0.5A DC/AC
使用温度 Operating Temperature range	-25° C ~ +85° C
使用湿度 Operating humidity range	相对湿度 80% 以下 Relative humidity 80% max.

5. 性能 PERFORMANCE

5.1 电气特性 ELECTRICAL PERFORMANCE

项目 ITEM	测试条件 TEST CONDITION	规格 REQUIREMENT
接触阻抗 Contact Resistance	将样品与适合之 FFC/FPC 连接, 测试电压 20mV, 限电流 10mA 下进行阻抗测试。(EIA-364-23) Mate applicable FFC/FPC and measure by dry	30 mΩ 最大. 30 mΩ Max.

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	circuit, 20mV Max, 10mA. (EIA-364-23)	
绝缘阻抗 Insulation Resistance	<p>将样品与适合之 FFC/FPC 连接，提供相邻端子间测试电压 500V DC 进行绝缘阻抗测试(EIA-364-21)</p> <p>Mate applicable FFC/FPC and apply 500V DC Between adjacent terminal or ground. (EIA-364-21)</p>	500 MΩ 最小. 500 MΩ Min.
耐电压 Dielectric Strength	<p>将样品与适合之 FFC/FPC 连接，相邻端子间需可承受 500V AC(m) 1 分钟。(EIA-364-20)</p> <p>Mate applicable FFC/FPC, apply 500V AC(m) for 1 Minute between Adjacent Terminal or ground.(EIA-364-20)</p>	目视外观无任何损坏 异状 No Breakdown

5.2 机械特性 MECHANICAL PERFORMANCE

项目 ITEM	测试条件 TEST CONDITION	规格 REQUIRMENT
插入力/拔出力 Insertion / Drawal Force	<p>使用 FFC/FPC 扁线以每分钟 25 ± 3mm 速度进行插入力与拔出力测试</p> <p>Insert the actuator, pull the FFC/FPC at a rate of 25 ± 3mm per minute.</p>	<p>锁条锁入力最大: Pin*2N Insertion Force Locking bar :Pin*2N Max FFC 拔出力最小: Pin*0.5N FFC Withdrawal Force: Pin*0.5N Min</p>
端子保持力 Terminal Retention Force	<p>端子与基座组装后，以每分钟 25 ± 3mm 速度将端子垂直拔出。</p> <p>Apply axial pull out force at the rate of 25 ± 3 mm/minute on the terminal assembled in the housing.</p>	2N 最小 2N Min
焊片保持力 Fitting Nail Retention Force	<p>焊片与基座组装后，以每分钟 25 ± 3mm 速度将端子垂直拔出。</p> <p>Apply axial pull out force at the rate of 25 ± 3 mm/minute on the Fitting Nail assembled in the housing.</p>	2N 最小 2N Min

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5.3 环境特性及其它性能 ENVIRONMENTAL PERFORMANCE AND OTHERS

项目 ITEM	测试条件 TEST CONDITION	规格 REQUIREMENT	
耐久性 Durability	与 FFC/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	50mΩ 最大. 50mΩ 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。(EIA-364-28 Condition 1) 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 : 10~55~10Hz in 1 minute. Duration : 2 hours in each of X,Y,Z axes. (EIA-364-28 Condition 1)	外观 Appearance	目视外观无任何损坏异状 No Damage
		接触阻抗 Contact Resistance	60mΩ 最大. 60mΩ Max.
		瞬间断电 Discontinuity	1 μ sec 最大 1 μ sec Max.
温度上升 Temperature Rise	量测通过 FFC/FPC 最大容许电流时，样品接触点之温升 (EIA-364-70METHOD 2) Mate applicable FFC/FPC and measure the temperature rise of contact when the maximum AC rated current is passed.	温升 Temperature rise	30° C 最大. 30° C Max.

项目 ITEM	测试条件 TEST CONDITION	规格 REQUIREMENT	
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 96hours.Upon	外观 Appearance	目视外观无任何损坏异状 No Damage

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	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.	接触阻抗 Contact Resistance	50mΩ 最大. 50mΩ Max.
耐寒性 Cold Resistance	将样品与适合之 FFC/FPC 连接, 置于环境温度 $-40 \pm 2^{\circ} \text{C}$, 测试时间 96 小时, 再置放于室温下 1~2 小时。 Mate applicable FFC/FPC and expose to $-40 \pm 2^{\circ} \text{C}$ 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.	外观 Appearance	目视外观无任何损坏异状 No Damage
		接触阻抗 Contact Resistance	60mΩ 最大. 60mΩ Max.
耐湿性 Humidity	将样品与适合之 FFC/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。 Mate applicable FFC/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.	外观 Appearance	目视外观无任何损坏异状 No Damage
		接触阻抗 Contact Resistance	60mΩ 最大. 60mΩ Max.
		耐电压 Dielectric Strength	需能符合耐电压测试 No Breakdown
		绝缘阻抗 Insulation Resistance	20 MΩ 最小. 20 MΩ Min

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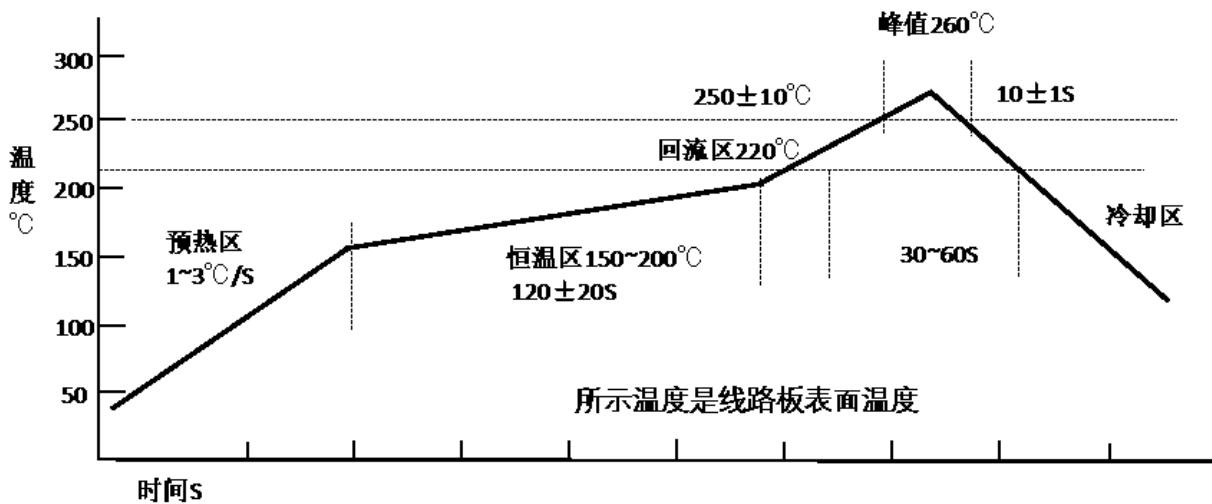
项目 ITEM	测试条件 TEST CONDITION	规格 REQUIREMENT	
盐水喷雾 Salt Spray	<p style="text-align: center;">将样品与 FFC 扁线连接，使用 5 ± 1%浓度盐水，测试温度 35 ± 2° C，测试时间 24 ± 2 小时.后于室温下使用清 水冲洗后再干燥。</p> <p style="text-align: center;">Mate applicable FPC and expose to the following salt mist conditions.Upon completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water,after which the</p> <p style="text-align: center;">Specified measurements shall be performed.NaCl solution Concentration: 5 ± 1% Spray time: 24 ± 2 hours Ambient temperature:35 ± 2° C</p>	外观 Appearance	目视外观无任 何损坏异状 No Damage
		接触阻抗 Contact Resistance	50mΩ 最大. 50mΩ Max.
冷热冲击 Temperature Cycling	<p style="text-align: center;">将样品与适合之 FFC/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 ± 3° C 30 分钟 b) +85 ± 3° C 30 分钟</p> <p style="text-align: center;">Mate applicable FFC/FPC and subject to the following conditions for 5 cycles.Upon completion of the exposure period, The test</p> <p style="text-align: center;">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 ± 3° C 30minutes b) +85 ± 3° C 30minutes</p>	外观 Appearance	目视外观无任 何损坏异状 No Damage
		接触阻抗 Contact Resistance	60mΩ 最大. 60mΩ Max.

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项目 ITEM	测试条件 TEST CONDITION	规格 REQUIREMENT	
耐冲击性 Shock	<p>将样品与适合之 FFC/FPC 连接，通过 DC1 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/s² {50G} 冲击。 (EIA-364-27, test condition A)</p> <p>Mate applicable FFC/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 1mA current during the test. (Total of 18 shocks) Peak value : 490m/s² {50G}(EIA-364-27, test condition A)</p>	外观 Appearance	目视外观无任何损坏异状 No Damage
		接触阻抗 Contact Resistance	60mΩ 最大. 60mΩ Max.
		瞬间断电 Discontinuity	1 μ sec 最大 1 μ sec Max.
焊锡性 Solderability	<p>锡温 245 ± 5° C，将导电端子浸入锡炉液面至 Housing 距离锡面 0.1mm 位置，焊锡时间 3 ± 0.5 秒。</p> <p>Tip of solder tails and fitting nails into the molten solder (held at 245 ± 5° C) up to 0.1mm from the bottom of the housing for 3 ± 0.5 seconds.</p>	润湿性 Solder Wetting	润湿面积 95% 以上，并不得有漏焊针孔现象 95% of immersed area must show no voids, pin holes.
焊锡耐热性 Resistance to Soldering Heat	<p style="text-align: center;">使用回焊时请参考第 6.</p> <p>When reflowing Refer to paragraph 6.</p> <p style="text-align: center;">使用烙铁手焊时须可符合下述焊锡条件</p> <p>Soldering iron method 0.2mm from terminal tip and fitting nail tip.</p> <p>Soldering time : 5 seconds Max.</p> <p>Solder temperature : 370 ~ 400° C</p>	外观 Appearance	目视外观无任何损坏异状 No Damage

6.回焊温度曲线 INFRARED REFLOW CONDITION

无铅回流焊，峰值260℃，建议温度条件。



7.包装、运输、贮存

7.1.包装 Packing

该系列产品包装按照客户要求，有编带、管装等方式。

This series of products are packaged in accordance with customer requirements, such as tape, tube and so on

7.2.运输 Transportation

允许用任何方式运输，但需避雨、雪直淋和受机械性损伤

Any vehicle can be adopted for the transportation, but moisture-proof and no mechanical damage.

7.3.贮存 Storage

7.3.1.包装完毕的连接器应在环境温度为-10℃~+40℃，相对湿度不大于80%，周围空气中没有酸性，碱性及其它腐蚀性气体的库房中贮存。

Temperature: -10℃~+40℃

Relative humidity: ≤80%

Not to storage in corrosive environments

7.3.2.贮存期为3个月，超过3个月需重新检查。

Re-qualification test shall be conducted immediately while the storage duration exceed 3 months