

Dongguan Kuantuo Electronics Technology Co.,Ltd		Page: 1/7
WI-G0139	FPC P0.5mm PRODUCT SPECIFICATION	Date:2013/05/17

Issue Dept.: R&D Dept.

Distribution Dept.: QA Dept. R&D Dept. Manufacture Dept.

REV	Issue Date	Issue/Change Note
A	2013/05/17	New issued

Approved:

Checked:

Written: 黄梅

Dongguan Kuantuo Electronics Technology Co.,Ltd		Page: 2/7
WI-G0139	FPC P0.5mm PRODUCT SPECIFICATION	Date:2013/05/17

1. 范围(Scope):

此作业规范仅适用于 FPC P0.5mm 系列产品

(This specification covers the 0.5mm PITCH FPC CONNECTOR series.)

2. 参考文件(Reference Document): :

下列文件是指定规格书的一部份,如果规格书要求与产品图纸相矛盾,应以产品图纸为准,如果规格书与参考文件矛盾,应以规格书为准.

A. SONY SS-00259 技术规范

B. UL STD-94 : 关于塑材设备零配件及器材阻燃性测试规范.

(This specification has refer SONY SS-00259 and UL STD-94. If this specification has come into conflict with drawing, Pleases refer to drawing. If this specification has come into conflict with reference document, Pleases refer to this specification.)

3. 要求(Required):

3.1 材料组成(Material Assembly):

A. 塑胶本体(Housing): Heat Resistance Plastic (UL 94V-0).

B. 塑胶锁扣(Autuator): Heat Resistance Plastic (UL 94V-0).

C. 端子(Terminal): Copper Alloy, Plating Au

D. 固定脚(Fitting Nial) Copper Alloy, Plating Tin

3.2 设计及结构(Design and Configuration):

产品设计,结构及尺寸如产品图纸所示.

(Product shall be of the design, construction and physical dimensions specified in the product drawing)

3.3 性能(Performance):

1) 标准状态(Predicament Criterion):

A 常温温度(Normal Temperature): 15~35℃

B 常湿湿度(Normal Humidity): 25-85%

C 常压气压(Normal Air pressure): 860~1060hPa;

2) 电 压(Voltage): 50V AC rms max

3) 电 流(Current): 0.5 A

4) 温 度(Temperature) : -45℃~85℃

5) 测试条件(Testing Qualification):

本产品设计符合电性的、机械的及环境性能要求. 如图表所示

Refer to below sheet.

4. 测试要求及基本程序(Testing Requirement Process):

一、电气特性
ELECTRICAL PERFORMANCE

项目 Item	测试条件 (Test Condition)	要求 (Requirement)
1	接触阻抗 Contact Resistance 同一根端子测试, 电流: 10mA(DC),电压: 20mV 以下, 使用电线: 适配 FFC 标准线。 Mate applicable FPC, measure by dry circuit , 20mV MAXIMUM, 10mA MAXIMUM.	30mΩ Max
2	绝缘阻抗 Insulation Resistance 相邻端子间 DC 500V, 1 分钟。 Mate applicable FPC together and apply 500V DC between adjacent terminal and ground. Test Duration: 60 seconds	500MΩ Min
3	耐压测试 Dielectric Strength 相邻端子间 AC 500V,感度电流 2mA,1 分钟。 Mate applicable FPC, apply 500V AC for 1 minute between adjacent terminal or ground. Test Duration: 60 seconds.	无击穿, 无短路 No Breakdown No Short

二、机械性能
Mechanical Performance

1	端子 保持力 Terminal Retention Force 端子以 25±3mm/分的速度, 均速垂直拔出 Pull the terminal at the speed rate of 25+3/-3mm per minute.	1.5N/Pin Min
2	插拔力 Actuator Insertion/ Withdrawal Force 以 25~100mm/分均速度使 FFC 垂直插入 FPC; Mate applicable FPC and insert and withdraw actuator at the speed rate of 25 +3/-3mm/min.	Actuator Insertion Force: 1N/Pin MAX Actuator Withdrawal Force: 0.6N/Pin Min
3	FFC/FPC 保持力 FFC/FPC Retention Force FFC 插入 FPC 后, 以 25~100mm/分均速垂直拉出; Insert the actuator, pull the FPC at the speed rate of 25+3/-3mm per minute.	0.3N/Pin Min
4	插拔寿命 Repeated Actuator Insertion / Withdrawal 将 FFC 插入 FPC 后, 循环 30 次 Insert and withdraw actuator up to 30 cycles,	1) 端子无变形, 裂痕 2) 杯口尺寸与实验前相同 Terminal: No Distortion. The electrical performances should meet the spec. Specified

三、耐久性能 Enduringly Performance			
1	耐震性 Vibration	震幅 1.5mm.,频率 10-50-10Hz,X/Y/Z 方向各 2 小时, 共计 6 小时. Amplitude: 1.5mm P-P Sweep time: 10~55~10 Hz in 1 minute Duration: 2 hours in each X.Y.Z. axes, Total 6 hours.	无变形、损伤 No Damage
2	焊锡耐热性 Resistance to Soldering Heat	1. SMT 型产品参阅回流焊设置温度 2. 手工焊锡温度 365±5℃; 时间 5 +/- 0.5S 1. If the product's type is SMT, Refer to SMT profile. 2. Handiwork soldering: Solder Time: 5+/-0.5 second Solder Temperature: 365±5℃	无变, 无损伤 No Damage
3	高温实验 Heat Resistance	温度 85 ± 2℃, 时间 96H Temperature: 85+2/-2℃. Duration: 96H	1. 接触阻抗: 60mΩ Max 2. 绝缘阻抗: 500 MΩ Min 3. 耐电压: 无击穿, 短路 4. 外观: 无异常 1. Contact Resistance: 60mΩ Max 2. Insulation Resistance 500 MΩ Min 3. Dielectric Strength 4. Appearance: No Defect
4	恒温恒湿 Constant Temperature /Humidity	温度 40±5℃; 湿度 90~95% RH,时间 96H Temperature:40±5℃, Humidity: 90~95% RH Duration:96H	
5	盐雾试验 Salt Spray	温度 35±2℃; 盐水比重 5±1%喷雾试验 48H NaCl solutionConcentration : 5+1/-1 % Spray time : 48+/-4 hours Ambient temperature : 35+2/-2 degree C	
6	冷热冲击 Temperature Cycling	-55±3℃; 85±2℃的温度下各放置 30 分钟, 共进行 25 次循环; 常温 25℃ and subject to the following conditions for 10 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.25 cycle of a) -55 degree C 30 minutes b) +85 degree C 30 minutes	
7	蒸气老化 Steam Life	温度 95±5℃, 时间 48H Temperature : 95±5℃ Duration: 48 hours	
8	沾锡性 Solder Ability	沾锡温度 260±5℃ (Sn: Pb=97: 3); 时间 5 ± 0.5S Solder Temperature: 260±5℃ (Sn: Pb=97: 3) Solder Time: 5 ± 0.5second	

备注: 产品测试后,应符合目视外观要求,无损伤,且需符合章 6 测试顺序规定的附加要求.

Note : Shall meet visual requirements ,show no physical damage ,and shall meet requirements of additional tests as specified in Test Sequence in paragraph 6

5.产品认证及再认证顺序(Product Qualifications and Qualification Test Sequence):

A. 样品选择(Sample Selection):

样品选择应按照结构栏要求符合随意性原则.

Test samples shall be prepared in accordance with applicable Instruction Sheets and shall be selected at random from current production

B. 测试顺序(Test Sequence):

下列是检测顺序的范例:

在测试群组 A3 中

- | | |
|---------|-----------|
| 首先测试: | 1. 产品检查; |
| 接着执行测试: | 2. 耐高温测试; |
| 再执行测试: | 3. 产品检查. |

The following is an example of how the test sequence works: In Test Group 8, the first test is (1), examination of product, followed by test (2), Temperature Life , followed by test (3), examination of product .Six samples are tested in this test group.

测试认证顺序 Test Description Sequence		测试项目 Test Group							
		A1	A2	A3	A4	A5	A6	A7	A8
1	产品检验(Product Inspection)	1	1/3	1/3	1/3	1/3	1/3	1/3	1/3
2	接触阻抗测试(Contact Resistance)	2	4			4	4	4	4
3	绝缘阻抗测试(Dielectric Strength)	3		4	4	5	5	5	5
4	耐电压测试(Dielectric Strength)	4		5	5	6	6	6	6
5	插拔力测试(Insertion/ Withdrawal Force)	5			6				
6	保持力测试(Terminal Retention Force)	6			7				
7	插拔寿命测试(Repeated Insertion/ Withdrawal)		2						
8	耐高温测试(Heat Resistance)			2					
9	焊锡耐热性测试(Resistance to Soldering Heat)				2		7		
10	恒温恒湿测试(Constant Temperature /Humidity)					2			
11	盐水喷雾试验(Salt Spray)						2		
12	蒸气老化测试(Steam Life)							2	
13	冷热冲击测试(Temperature Cycling)								2
	每组测试之样品 (Samples)	B1	B2	B3	B4	B5	B6	B7	B8

Dongguan Kuantuo Electronics Technology Co.,Ltd		Page: 6/7
WI-G0139	FPC P0.5mm PRODUCT SPECIFICATION	Date:2013/05/17

6. 品质保证的规定(Quality Assurance Provisions):

除非特别规定,在合约或采购不合格中,我们将承遵守提交客户的品质,我们将按照已控制的制程作业过程,以保证产品符合规格的要求,不良批次再将提交退货或其它矫正措施. 另外组成材料不会替用或变更,当有变更时,一定将使用材料预先提交客户批准再执行.

Unless otherwise specified , in the contract or purchase order , we will be responsible for the quality of the part as it is delivered to client . We will be responsible for having controlled processes to ensure product is in total compliance with this specification .Failing lots shall be subject to return or other corrective action .Further , KT will not substitute components of the assembly (connector , cable , etc) without prior written approval from client .Any such substitute shall be submitted to client for approval prior to implementation . Substitution shall be deemed as any change in LM different than those previously submitted to and approved by client .

6.1 二次承认检查(Re-qualification Testing):

如果制造过程有较大的变更影响到产品形式或功能等,产品品质保证.将按组成配件的测试顺序做再认证测试,产品测试将按照开发产品品质及可靠性工程的要求再认证.

If changes significantly affecting form , fit or function are made to the product or manufacturing process , product assurance shall coordinate qualification testing , consisting of all or part of the original testing sequence as determined by development / product , quality and reliability engineering .

6.2 品质要求(Quality Acceptance):

由于设备测试设置或操作不当等导致不良判定,可再送样认证. 当产品不良发生时,应采取矫正措施及再送样,再送样前应测试确认矫正措施.

Acceptance is based on verification that the product meets the requirement of paragraph 5 . Failures attributed to equipment , test setup or operator deficiencies shall not disqualify the product . When product failure occurs , corrective action shall be taken and samples resubmitted for qualification . Test to confirm corrective action is required before resubmittal

6.3 检验数据(Inspection Data):

检查测试数据应记录,评估,并作为以上条款的证据.

Inspection and test data shall be recorded , evaluated , and maintained as evidence of performance to these provisions

6.4 质量测试确认(Quality Conformance Inspection):

适用 KT 品质检验,将其定义使用的可接受的品质标准的样品,尺寸及功能要求,按照适用的产品图纸及规格要求进行检测.

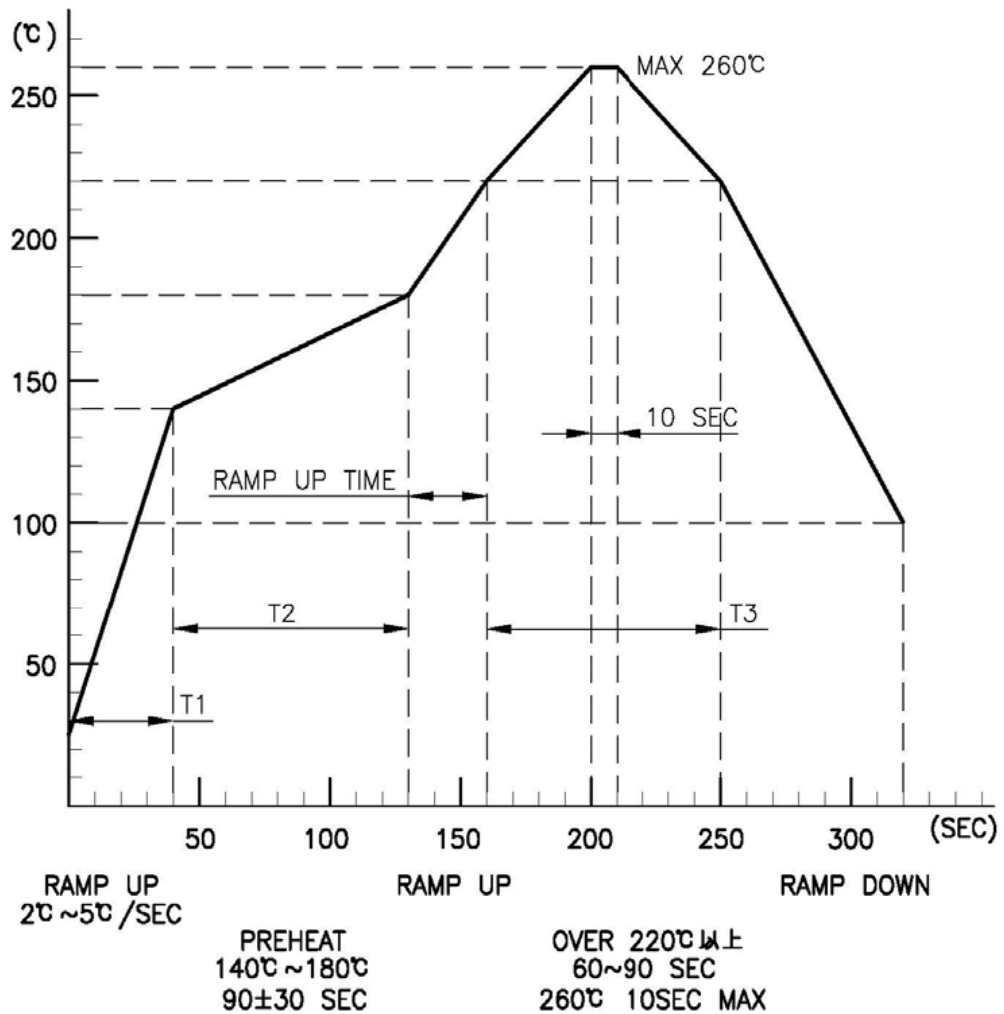
Applicable KT quality inspection plan will specify the sampling acceptable quality level to be used . Dimensional and functional requirements shall be in accordance with the applicable product drawing and this specification

6.5 出货准备(Preparation for Shipment):

所有包装应予充分保护,以免运输过程中产品受损伤,从而影响产品外观及功能.

Overall packaging shall be sufficient to protect against damage or loss during shipment from KT to destination specified in the purchase order.

INFRARED REFLOW CONDITION



T1:	Temperature Ramp Up Rate	2°C ~ 5°C / SEC
T2:	Preheat: 140°C ~ 180°C	90 ± 30 SEC
T3:	Time Over 220°C	60 ~ 90 SEC
T4:	Ramp Down Rate During Cooling	4°C ~ 8°C / SEC
	Peak Temperature	260°C Max