



Kunshan Jiahua Electronics Co., Ltd.

文件名称 System Name:	产品品名 Description:	文件编号 Document No.:			
Product specification	1.3Pitch 0.9H FTB CONNECTOR	PS-0083			
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1. 概述 Scope:

1.1 说明 Content

此份产品规格书是针对由昆山嘉华电子有限公司设计和制造的 **1.3Pitch 0.9H FTB CONNECTOR** 产品所定义的产品性能和测试方法。

This product specification defines the product performance and the test methods to ensure the performance of the **1.3Pitch 0.9H FTB CONNECTOR**, which is designed and manufactured by Kunshan Jiahua Electronics Co., Ltd.

1.2 限制 Qualification

所有的测试和检验必须依照本文件中所要求的规格、方法进行。一旦产品的重要制程发生变更，必须立即进行品质验证和测试。

Tests and inspection shall be performed in accordance with the requirements, tests and methods contained herein. A re-qualification test shall be conducted immediately following all major process changes.

2. 参考文件 Referenced Documents:

EIA-364
MIL-STD-202F
MIL-P-81728A
MIL-T-10727B
JIS C 0040
JIS C 0041

若某些项目被发现本规格书中的内容与以上参考文件要求不一致时，一律依本规格书中的内容为测试依据。

In case of any contradiction between this document and referenced documents, this document will take precedence.

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3. 规格要求 Requirements:

3.1 应用条件 Application Condition:

3.1.1 额定电流: 3.0Amps per contact
CURRENT RATING : 3.0Amps per contact

3.1.2 额定电压: 30 Volt DC/AC.
VOLTAGE RATING : 30 Volt DC/ AC

3.1.3 使用环境 Operating Environment:

温度: -25°C to +85°C。

Temperature:-25°C to +85°C.

3.1.4 储存环境 Storage Environment:

温度: -40°C to +85°C,相对湿度:15%~70%或更低,此条件下功能不可失效。

Temperature:-40°C to +85°C, Relative Humidity: 15%~70% or Less, Without loss of function.

3.2 绿色环保要求 Health, Safety and Environment

此产品中所有涉及环保有关的有害物质管控标准请参考嘉华系统文件:[JH-GP-213](#)

Hazardous substances (Environment related to be controlled substances) contained in this product should comply with the regulations specified by FAF's [JH-GP-213](#).

3.3 测试说明 Test Description

此产品性能须满足本文件第 4 节中的各项规格要求。除非有特别申明,所有的测试和量测必须在以下条件中进行:

The product is designed to meet the requirements specified in section 3.4. Unless otherwise specified, all tests and measurements are to be performed under the following conditions:

温度 Temperature: 5 °C to 35°C

相对湿度 Relative Humidity: 45% to 85%

大气压 Atmospheric Pressure: 86kPa~106kPa.

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4.测试规范和方法 Test Requirements and Methods

4.1 外观 Appearance		
项目 Items	规格要求 Requirements	测试方法 Test Methods
4.1 产品外观和尺寸检查 Appearance	所有零件必须组装完好,不能出现毛边,变形,刮伤,以及任何外观破坏等异常; All components shall be properly assembled and free of burrs, warps, scratches, broken chips, and other abnormalities	依照相应的文件和规格书进行外观,功能,及尺寸的检验量测. Visual, functional, and dimensional inspection complies with applicable specification and document.
4.2 电气性能 Electrical Performance :		
4.2.1 接触阻抗 Low level contact resistance	初始接触阻抗: 20mΩ Max; 试验后接触阻抗: 40mΩ Max; Initial: 20mΩ Max; After test: 40mΩ Max;	测量接触阻抗, 测试电流小于 10mA Measure contact resistance of product and test card PCB with less than current of 10 mA (exception for the conductor resistance)
4.2.2 绝缘阻抗 Insulation resistance	初始绝缘阻抗: 1000 MΩ Min 试验后绝缘阻抗: 1000 MΩ Min Initial:1000 MΩ Min After test:1000 MΩ Min	测试电压: 直流 200V, 测试时间: 2 分钟, 测试相邻两端子之间的绝缘阻抗 Give DC 200V Voltage for 2 minutes and then measure insulation resistance of contact and contact
4.2.3 耐电压 Dielectric withstanding voltage	产品既无电火花也无气体产生 漏电流最大 2mA After the test, Neither creeping discharge nor flashover shall occur. Leakage current 2 mA Max	两相邻端子之间加载交流 500V 电压 1 分钟;温度冲击和恒温恒湿后为交流 300V Give AC 500 V in near contact and insulator for 1 minute After tests:300V AC(Thermal shock& Humidity)
4.2.4 温度上升 Temperature rise	额定电流状态下, 使用热电偶方式测量, 只串联电源 Pin The power source terminal shall be connected in a direct series.The temperature rise shall be measured by thermocouple when the temperature of terminal reaches to rated current with resistive load.	温度上升 30K Max. Temperature rise: 30K Max.
4.3 机械性能 Mechanical Performance :		

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4.3.1 插拔力 Insertion force& Withdrawal force	1.Plug 端插入力:: 40N Max. 2. Plug 端拔出力 : 3NMin . 1. Plug Mating force: 40N Max 2. Plug withdrawal force : 3N Min	产品焊板后, 测量 Plug 端的插拔力, 测试速度: 1~5mm/sec 测试时 plug 端须以插入轴向上下插拔 After Soldering of testing product at PCB, Measure insertion and withdrawal force of Plug at 1~5mm/sec to mating axis
4.3.2 耐久 Durability	1. 试验后接触阻抗: 40mΩ Max; 2. 产品无断裂、无破损; 3. 拔出力: 3N Min; 1.Aftertesting,contact resistance : 20mΩMax; 2.No have fracture, crack, terminal contact point deflection and shake of product 3.Withdrawal force:3N Min;	产品焊板后, 重复插拔 Plug 端, 耐久 10 次; After Soldering of testing product at PCB, Repeat insert/ withdrawal of plug as 10 cycle;
4.3.3 振动 Vibration	1. 试验后接触阻抗: 20m Ω Max; 2. 没有物理损坏, 端子无变形 3. 不产生超过 1 微秒的瞬断 1.After testing, contact resistance : 20mΩ Max; 2.No have fracture , crack, terminal contact point shake of product 3. No electrical discontinuity longer than 1 u sec.	产品焊板后测试, 测试频率: 10-55-10HZ, 振幅: 1.52mm,X,Y,Z 三个方向每个方向振动两个小时, (sweep time:30s) After attach at vibration plate and Soldering at test PCB, it test follow conditions : As condition of frequency:10-55-10HZ,amplitude1.52mm,it test for two hours about each of X,Y,Z, axis(sweep time:30s)
4.3.4 物理冲击 Physical shock	不产生超过 0.1 微秒的瞬断, 产品没有物理破坏以及零件脱落,端子接触阻抗满足规格要求. No electrical discontinuity longer than 0.1 microsecond. No mechanical damage or looseness.Contact resistance specifications remain satisfied.	参考测试标准: EIA-364-27. 波形:半正弦波; 加速度: 50G, 沿 X,Y,X 三个方向进行, 每个方向完成正反各 3 次冲击(总计 18 次冲击) Comply with method EIA-364-27B, Shock Waveform: Half sine-wave, Acceleration: 50G, Total impacts delivered 3. each along X. Y. and Z axes.(Total:18 impacts)
4.3.5 端子保持力 Contact retention force	至少 0.5N; 0.5N Min;	端子在塑胶退出时的保持力. 退出速度为 25±3mm/min. Measured withdrawal force that resin grips and supports terminal. Velocity of withdrawal:25±3mm/min .

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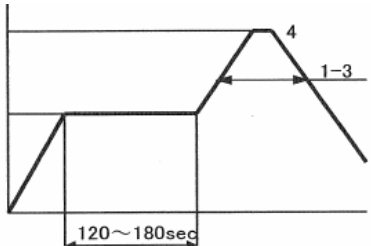
项目 Items	规格要求 Requirements	测试方法 Test Methods
4.4 环境性能 Environmental Performance :		
4.4.1 耐高温 High temperature	1 产品无损坏, 端子无变形 2.试验后接触阻抗: 40mΩ Max; 1.No have fracture crack ,terminal contact point deflection and shake of product 2.After testing contact resistance: 20mΩ Max;	配合后的产品在以下条件下测试: 温度: 85±2°C 时间: 96h Mated connectors shall be subjected to the following condition: temperature: 85±2°C Duration: 96h
4.4.2 耐低温 Low temperature	1 产品无损坏, 端子无变形 2.试验后接触阻抗: 40mΩ Max; 1.No have fracture crack ,terminal contact point deflection and shake of product 2.After testing contact resistance: 40mΩ Max;	配合后的产品在以下条件下测试: 温度: -40±3°C 时间: 96h Mated connectors shall be subjected to the following condition: temperature: -40±3°C Duration: 96h
4.4.3 耐硫化性 Resistance to sulfuration	1. 试验后接触阻抗: 40mΩ Max; 2. 无外观异常 1.After testing contact resistance: 40mΩ Max; 2.Without distinct damage in appearance	配合后的产品在以下条件下测试: 浓度: 10±3ppm 温度: 40±2°C 相对湿度: 70±5% 时间: 96h Mated connectors shall be subjected to the following condition: Concentration: 10±3ppm Temperature: 40±2°C Relative humidity: 70±5% Period: 96 hours
4.4.4 热冲击 Thermal shock	测试后满足相应机械及电气规格; 测试后接触阻抗: 40mΩ Max; After test: 40mΩ Max;	参考测试标准: EIA-364-32; -55°C和+85°C各 30 分钟, 总计 25 个循环. Comply with method EIA-364-32. -55°C for 30 minutes and +85°C for 30 minutes for 25 cycles.

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<p>4.4.5 恒温恒湿 Humidity</p>	<p>1. 产品无损坏, 端子无变形 2. 试验后接触阻抗: 40mΩ Max; 3. 试验后绝缘阻抗: 1000MΩ Min. 4. 试验后耐电压: 无损坏 1.No have fracture crack ,terminal contact point deflection and shake of product 2. After testing contact resistance: 40mΩ Max; 3. After testing insulation resistance: more than 1000 MΩ 4. After testing Dielectric withstanding voltage: Without damage</p>	<p>配合后的产品在以下条件下测试: 温度: 60±3°C; 相对湿度: 90~95% 时间: 96 hours Mated connectors shall be subjected to the following condition: Temperature: 60±3°C Relative humidity: 90 to 95% Period: 96 hours</p>
<p>4.4.6 盐雾测试 Salt Spray Test</p>	<p>1.产品无损坏, 端子无变形 2. 试验后接触阻抗: 40mΩ Max; 1. No have fracture crack ,terminal contact point deflection and shake of product 2. After testing contact resistance: 40mΩ Max;</p>	<p>盐水浓度: 5±1% 时间: 48 小时 温度: 35±2°C Mated connector shall be subjected to the following condition Concentration : 5±1% Spray time : 48hours Temperature : 35±2°C</p>
<p>4.4.7 耐 Reflow 高温 Resistance to Reflow Soldering Heat</p>	<p>1.无损坏, 端子无变形; 2.产品结构无破坏; 1.No have fracture crack ,terminal contact point deflection and shake of product 2.No have break down outer feature/structure</p>	<p>根据下图温度条件测试产品的耐焊接热 The connector shall be tested resistance to soldering heat in the following conditions, The temperature shall be measured on the surface of PCB</p> 
<p>4.4.8 吃锡性测试 Solder ability</p>	<p>焊脚吃锡面积 95%以上 More than 95% of area dipped in molten solder should be coated by solder</p>	<p>温度: 245°C ±5°C 粘锡时间: 3±0.5 秒 Solder Temperature : 245°C ±5°C Immersion Duration : 3 ±0.5 seconds</p>

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4.5 Test Sequence

Test, Measurement or Examination	A	B	C	D	E	F	G	H	I	J	K	L
	Sample size	Sample size	Sample size	Sample size	Sample size	Sample size	Sample size	Sample size	Sample size	Sample size	Sample size	Sample size
	5	5	5	5	5	5	5	5	5	5	5	5
1. Visual examination 产品外观	1, 9	1, 9	1, 6	1, 3	1	1, 7	1, 7	1, 5	1, 5	1, 7	1, 3	1, 3
2. Low Level Contact Resistance 低功率接触阻抗	2, 6	2, 8	2, 5			2, 5	2, 5	2, 4	2, 4	2, 5		
3. Insulation Resistance 绝缘阻抗	3, 7					3, 6	3, 6			3, 6		
4. Dielectric Withstanding Voltage 耐电压	4, 8											
5. Temperature rise 温度上升				2								
6. Mating and Unmating Force 插拔力		3, 6 4, 7										
7. Durability 耐久插拔		5										
8. Vibration 振动			3									
9. Mechanical Shock 机械冲击			4									
10. Terminal retention forces 端子保持力					2							
11. Cold Resistance 低温测试						4						
12. Temperature life 温度寿命							4					
13. Resistance to sulfuration 耐硫化性								3				
14. Thermal shock 温度冲击									3			
15. Humidity 耐湿性能	5											
16. Salt Spray 盐雾实验										4		
17. Resistance to Reflow Soldering Heat Reflow 耐高温											2	
18. Solder-ability 可焊性												2

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