

产品规格书

PRODUCT SPECIFICATION

1.0 适用范围 (SCOPE)

此规格书适用于 0.50mm 间距后压式 H=1.00 mm 系列.

This specification covers the 0.50mm Pitch Easy-on Back Flip Conn. SMT H=1.00mm series.

本规范涵盖了产品性能要求和试验方法.

This specification covers product performance requirements and test methods.

FPC/FFC适合厚度: $0.3 \pm 0.03\text{mm}$.

FPC/FFC suitable thickness: $0.3 \pm 0.03\text{mm}$.

2.0 关联规范 (Related specification)

2.1 EIA-364 电子连接器及接插件测试程序.

EIA-364 test procedure for electronic connectors and connectors.

2.2 UL STD-94 关于塑材设备零配件及器材阻燃性测试规范.

UL STD-94 specification for testing flame retardancy of plastics equipment parts and Equipment.

3.0 产品构造、尺寸、材料 (Product structure, size, material)

结构及尺寸参见产品图纸, 材料参见下表

Please refer to the product drawings for structure and size, and the following table for materials

No	部件 (Parts)	材质 (Material)	表面处理/防火等级 (Surface finish/Fire rating)
1	主体 (Housing)	LCP (High temperature material)	本色 (Natural) UL94V-0
2	推杆 (Slider)	LCP (High temperature material)	黑色 (Black) UL94-V0
3	端子 (Terminal)	铜合金 (Copper alloy)	gold plating
4	固定片 (Stator)	铜合金 (Copper alloy)	Tin plating

4.0 额定标准 (Rated standard)

项目 (Item)	规格 (Standard)	
额定电压 (Rated voltage max)	50 V	AC (rms)/DC
额定电流*1 (Rated current max)	0.5 A	AC (rms)/DC
使用温度范围 (Operating temperature range)	$-25^{\circ}\text{C} \sim +85^{\circ}\text{C}^{*2*3}$	
保管条件 (Storage Condition)	温度 (Temperature)	$-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$
	湿度 (Humidity)	85% R.H. MAX (无冷凝) (85% R.H. MAX. (No Condensation))
	期限 (Time limit)	a.出货后 6 个月内 (未拆包装) (For 6 months after shipping (unopened package)) b.独立包装拆包后 48H 内用完 (Use up within 48 hours after independent packaging and unpacking)

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Chin-Ban Electronic Technology Co.,LTD	产品名称 (Product name)	0.5mm Pitch FPC Connector H=1.00 mm SMT		
文件编号 (Document number)	料号 (Material no)	F2D20U-A1G5-HR1	1/7	
日期 (Date)	2022-8-10	版本(Rev.) A	编制 (WRITTEN BY) HENRY	审核 (CHECKED BY) TIAN HAI
				核准 (APPROVED BY) CYKIN

*1 回流焊后的无通电状态适用于使用温度范围.

Non-operating connectors after reflow must follow the operating temperature range condition.

*2 此包括导电所产生的终端温升.

This includes the terminal temperature rise generated by conducting electricity.

*3 适用的FPC(电线和电缆)也必须满足规定的温度范围.

Applicable FPC (wires and cables) must also meet the specified temperature range.

5.0 性能 (Performance)

5.1 构造 (Structure)

No.	项 目 (Item)	测试方法(test method)	规格要求(specifications)
1	外观 (Appearance)	目视, 量测(Visual, Measurement)	满足图面及 SIP 要求 (Drawing and SIP requirements)

5.2 电气性能 (Electrical Performance)

No	项 目 (Item)	测试条件(Test Condition)	规格要求(Requirement)
5.2.1	接触阻抗 (Contact Resistance)	适配 FPC, 开放电压 20mv 以下, 在短路电流 10mA 以下进行测量. (Mate applicable FPC, measure by dry circuit, 20mV Max, 10mA Max) . (EIA-364-06A)	100 毫欧姆 最大 (100 mΩ Max)
5.2.2	绝缘阻抗 (Insulation Resistance)	安装合适的 FPC, 在相邻的终端之间和终端、地线之间施加 DC250V 时间: 1 分钟. (Mate applicable FPC and apply 250V DC between adjacent terminal or ground. Time:1 minute) . (EIA-364-21B)	500 兆欧姆 最小 (500 MΩ Min)
5.2.3	耐电压 (Dielectric Strength)	适配 FPC, 在相邻的终端之间以及终端、地线之间, AC250V(实际值) 1 分钟. (Mate applicable FPC, apply 250V AC (rms) for 1 minute between adjacent terminal or .ground) (EIA-364-20A)	无异常 (No Breakdown)

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5.3 机械性能 (Mechanical Performance)

No	项 目 (Item)	测试条件(Test Condition)	规格要求(Requirement)
5.3.1	FFC/FPC 保持力 (FFC/FPC retention)	FFC 插入 FPC 连接品后, 以 25~100mm/分匀速垂直拔出,此动作重复三次后,第四次才作测量资料的记录. (After the FFC is inserted into the FPC connector, it is pulled out vertically at a constant speed of 25~100mm/min. This action is repeated three times, and the measurement data is recorded on the fourth time.)	0.15N/Pin 最小. 0.15N/Pin Min.
5.3.2	端子保持力 (Terminal holding force)	将端子以 25~100mm/分匀速垂直从胶芯槽内拔出. (Remove the terminal vertically from the core slot at a constant speed of 25-100 mm/ min.) (EIA-364-29)	0.8N 最小. 0.8N Min.
5.3.3	固定片保持力 (The retaining force)	将固定片以 25~100mm/分匀速垂直从胶芯槽内拔出. (Pull the fixed piece out vertically from the core groove at a constant speed of 25~ 100mm/ min.) (EIA-364-29)	0.8N 最小. 0.8N Min.
5.3.4	插拔耐久性 (Insertion and removal durability)	将盖子与 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. (EIA-364-22)	接触阻抗: 100 mΩ Max. 无变形 (Contact impedance 100 mΩ Max. No deformation)

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5.4 环境性能 (Environmental performance)

No	项 目 (Item)	测试条件(Test Condition)	规格要求(Requirement)	
5.4.1	耐振动性 (Vibration resistance)	端子以电流 0.1A DC 串联导通, 振幅 1.5mm, 频率 10-55-10Hz,X,Y,Z方向各2小时, 共6小时. (The terminal was conducted in series with current 0.1AD.C.,amplitude 1.5mm,frequency 10-55-10Hz,X,Y and Z directions for 2 hours, A total of 6 hours.) (EIA-364-28E)	外观 Appearance	无损坏 No Damage
			接触阻抗 Contact Resistance	100 毫欧最大 100 mΩ Max
			瞬断 Discontinuity	1 微秒最大 1.0micro second Max
5.4.2	耐冲击性 (Resistance to impact)	端子以电流0.1A DC串联导通, 加速度490m/s ² , X,Y,Z方向各11ms, 各3回, 共18回. (The terminal is connected in series with the current 0.1A D.C., the acceleration is 490m/ S ² , and the X,Y and Z directions are 11ms, 3 cycles each, for A total of 18 cycles) (EIA-364-27B)	外观 Appearance	无损坏 No Damage
			接触阻抗 Contact Resistance	100 毫欧最大 100 mΩ Max
			瞬断 Discontinuity	1 微秒最大 1.0micro second Max
5.4.3	耐热性 (Heat resistance)	温度 85 ± 2°C中放置时间 96H. (The temperature is 85 ± 2°C and the time is 96H.) (EIA-364-32D)	1.接触阻抗: 100 mΩ Max. 2.外观: 无异常 1.Contact impedance: 100 mΩMax. 2.Appearance: normal	
5.4.4	耐寒性 (Cold tolerance)	温度-25±3°C中放置时间 48H. (The temperature is -25±3°C and the time is 48H.) (EIA-364-105)		
5.4.5	耐湿性 (Wet resistance)	温度40±3°C; 湿度90~95% RH中放置时间 96H. (40 + 3 °C temperature; Humidity 90 to 95% RH for 96 hours.) (EIA-364-31A)		
5.4.6	冷热冲击 (Cold and hot shock)	-55±3°C; 85±2°C的温度下各放置30分钟, 共进行5次循环 (- 55 + 3 °C; The samples were placed at 85±2°C for 30 minutes each, and a total of 5 cycles were carried out) (EIA-364-32B)		
5.4.7	沾锡性 (Wetting property)	沾锡温度245±5°C (Sn: Lead Free) ; 时间3 ± 0.5S. (Tin temperature 245±5°C (Sn: Lead Free); The time is 3 ± 0.5S.) (EIA-364-52)	浸锡面积需95%以上 (The area of the tin immersion should be more than 95%)	

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5.4 环境性能 (Environmental performance)

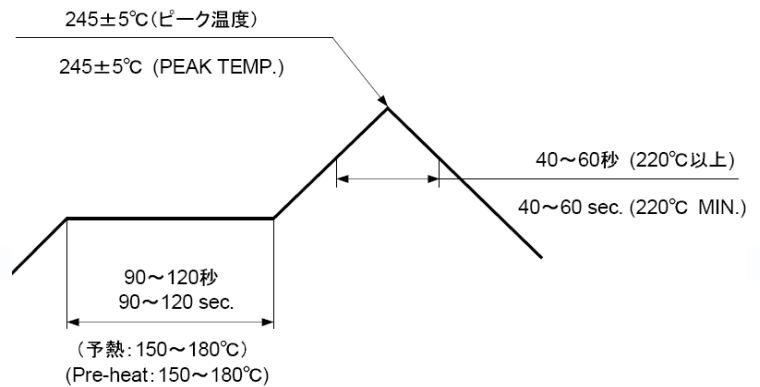
项 目 (Item)		测试条件(Test Condition)	规格要求(Requirement)
5.4.8	Reflow 耐热性 (Reflow heat resistance)	预备加热时间: 150℃ 80s, 180℃~230℃ 40s, MAX 230℃~240℃ 25s, 进行两次. (Preparation heating time: 150℃ 80s, 180℃~230℃ 40s, MAX 230℃~240℃ 25s, two times.) (EIA-364-56C)	产品主体无变形起泡,产品的锡脚与接地片平整 0.10mm Max. (There is no deformation foaming in the product body, and the flatness between the tin pin and the ground lug is 0.10mm Max.)
5.4.9	温升测试 (Temperature Rise)	端子在额定电压·电流下工作时测量端子上升的温度. (Measure the terminal temperature when the terminal is working at rated voltage current.) (EIA-364-70B)	30 °C max
5.4.10	盐雾试验 (Salt spray test)	温度35±2℃; 盐水比重5±1%喷雾试验12H (Temperature 35 plus or minus 2 °C; Saline specific gravity 5± 1% spray test 12H) (EIA-364-26B)	1.接触阻抗: 60mΩ Max. 2.绝缘阻抗: 50 MΩ Min. 3.耐电压: 无击穿, 短路 4.外观: 无异常 1.Contact impedance: 60 mΩMax. 2. Insulation resistance :50 MΩ Min. 3.Voltage resistance: no breakdown, short circuit 4. Appearance: normal

6.0 包装 (Packing)

见包装规范 (See packaging specifications)

7.0 回流焊条件 (Reflow soldering condition)

参见右图 (See picture on right)



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8.0 测试顺序: (The test sequence)

项目 project	描述 (describe)	A	B	C	D	E	F	G	H	I	J	K
	产品检查(Product inspection)	1 7	1 6	1 5	1 9	1 6	1 3	1 3	1 3	1 3	1 3	1 5
1	接触阻抗 (Contact Resistance)	2 6	2 5	2 4	2 8	2 4						2 4
2	绝缘阻抗 (Insulation Resistance)				3 7							
3	绝缘耐压 (Insulation Resistance)				4 6							
4	FFC/FPC保持力 (FFC/FPC retention)	3 5										
5	端子保持力(Terminal holding force)						2					
6	固定片保持力(The retaining force)							2				
7	插拔耐久性 (Insertion and removal durability)	4										
8	耐振动性 (Vibration resistance)		3									
9	耐冲击性 (Resistance to impact)		4									
10	耐热性 (Heat resistance)					3						
11	耐寒性 (Cold tolerance)					5						
12	耐湿性 (Wet resistance)				5							
13	冷热冲击 (Cold and hot shock)			3								
14	沾锡性 (Wetting property)								2			
15	Reflow耐热性 (Reflow heat resistance)									2		
16	温升测试 (Temperature Rise)										2	
17	盐雾试验(Salt spray test)											3
	数量 (quantity)	5	5	5	5	5	5	5	5	5	5	5

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9.0 修改内容(Modify the content)

标识 mark	改正日期 Correct date	改正内容 Correct content	作 成 Modify	审 查 Review

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