

RECOMMENDED PCB LAYOUT  
PCB图仅供参考

Note:

1.Material:

- 1.1 Housing: High temperature thermoplastic with g.f,UL94v-0
- 1.2 Contact: copper alloy,t=0.15mm
- 1.3 Shell: copper alloy,t=0.25mm

2.Specification:

- 2.1 Current rating:1,5PIN 1.8A Max/2,3,4PIN 1A Max.
- 2.2 Dielectric withstanding voltage: 100 V(ac) for 1 min.
- 2.3 Contact resistance: 30 mΩ Max.
- 2.4 Insulation resistance: 100 MΩ Min.
- 2.5 Total mating force: 3.57 Kg Max.
- 2.6 Total unmating force: 1.0 Kg Min.
- 2.7 Temperature range: -30°C~80°C

HAOFU ELECTRONICS TECHNOLOGY CO.,LTD

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PART NAME		Micro USB 5S BType —垫高0.9前贴后四脚脚长1.3无边		DRAWING	Y,C,ZHANG	DWG.No.	SBICL
PART NO.		A01SB241B01-134		CHECK	G.C.Chen	REV.	A1
UNIT : mm	TOLERANCE	UP TO 5	±0.2	APPROVAL		DATE	14-03-2013
	OTHERWISE	ABOVE 5~30	±0.3			SCALE	2:1
		ABOVE 30	±0.5				
		ANGLE	±3°				

# 产品规格书

LANGUAGE  
语言

ENGLISH/CHINESE  
英/中

## 1.SCOPE[适用范围]

This specification covers the MICRO USB CONNECTOR TYPE  
[本规范适用于 MICRO USB CONNECTOR TYPE ]

## 2.PRODUCT NUMBER AND PART NAME[产品料号及产品名称]

Product Name[产品品名]	Product Number[产品料号]
MICRO USB CONNECTOR TYPE	Micro USB 5S BTv0e 一垫高0.9前贴后四脚插脚长1.3无边

## 3.CONSTRUCTION & COMPONENTS[构造&组成零件]

Based on construction drawing[依照工程图]

## 4.RATINGS[标准额定值]

Item[项目]	Standard[规格]
Rated voltage[额定电压]	30V AC rms Max.
Rated current[额定电流]	1A Max
Operating temperature[使用温湿度环境]	-30℃ ~ +80℃, 85% RH Max
Storage temperature[储存温湿度环境]	-40℃ ~ +60℃, 85% RH Max

## 5.TEST CONDITION[试验条件]

The test and measurement, unless otherwise specified, shall be carry out at a temperature of 15 to 35℃,

Relative humidity of 25 to 85%,and atmospheric of 86 to 106kPa.

However,when any doubt arises on the judgment value it,the test and measurement

shall be carry out at a temperature of 20±2℃,relative humidity of 60 to

70%,and atmospheric pressure of 86 to 106Pa.

[除非特别说明之外,一般试验及测理将于温度 15~35℃,相对湿度 25~85%,大气压力 86~106kPa 之条件下完成,但若于上述条件下有任何影响判定值的疑虑,可考量在温度 20±2℃,相对湿度 60~70%,大气压力 86~106kPa 之条件下完成试验

Appearance:By looking,there shall not be any abnormality such as deformity,exfoliation of plating,ETC,which can reduce performance,No defect such as cracks scratches or blemishes.

[外观:经目视观察,外观不可有变形,电镀脱落等会降低其功能的异常现象,也不可有严重破裂,刮伤或污损之缺点.

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SHEET 页码	1/4	REV./版本	A0

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## 6.ELECTRICAL EFFICIENCY[电气特性]

NO. 编	Item/项目	Test Method/试验方法	Requirement /性能要求
6.1	Contact Current Rating [额定电流]	Measured at an ambient temperature of 25 °C, applied 250V AC test. [于室温 25 °C 下施加 250V AC 电压测试]	1A Max.
6.2	Applied Voltage Rating [额定电压]	30V AC(RMS.) continuous maximum, on any signal pin with respect to the shield. [在任一端子与端子, 端子与外壳间施加最大电压 30V AC 测试]	No Breakdown 无击穿
6.3	Contact Resistance [接触阻抗]	Mate connectors, Measure by dry circuit, 20mV Max, 100mA [公母对插后测试]	30mΩ Max
6.4	Insulation Resistance [绝缘阻抗]	Unmated connectors, apply 500V DC between adjacent terminal or ground. [公母不对插, 对相邻端子施加 500V DC 电压测试]	100MΩ Min
6.5	Withstanding Voltage [耐电压]	Unmated connectors, apply 100V AC for 1 minute between adjacent terminal or ground. [公母对插前对各端子施加 100V AC 电压持续 1 分钟测试.]	No Breakdown and Current loss: 1mA Max. 无击穿且漏电流 ≤ 1mA

## 7.MECHANICAL EFFICIENCY[机械特性]

7.1	Insertion force [插入力]	Measure mating force necessary to mate connector. Operation speed: 12.5mm/minute [测试一组公母对插之连接器所需之插入力, 测试速度 12.5mm/分钟]	35N Max
7.2	Withdrawal force [拔出力]	Measure unmating force necessary to mate connector. Operation speed: 12.5mm/minute [测试一组公母对插之连接器所需之拔出力, 测试速度 12.5mm/分钟]	10N Min
7.3	Contact retention [端子保持力]	Apply axial pull out force on the terminal assembled in the housing Operation speed: 12.5mm/minute [测试将端子由本体中拉出之保持力, 测试速度 12.5mm/分钟]	1kgf Min
7.4	Durability [耐久性]	Mated and unmated connectors up to 1500 cycles at a maximum rate of 200 cycles per hour [测试连接器在最大 200 次/小时的插拔速度下必须承受 1500 次的插拔循环]	Contact Resistance 接触阻抗 Change from initial: 30mΩ

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## 8. ENVIRONMENTAL EFFICIENCY AND OTHERS [环境及其它特性]

NO. 编	Item/项目	Test Method/试验方法	Requirement /性能要求	
8.1	Humidity Test [耐湿性测试]	Temperature: 40±2℃, Relative Humidity: 90 ~ 95% Duration: 7 cycles (168 hours) Upon completion of the test, specimens shall be conditioned at ambient room conditions for 1 ~ 2 hours [温度在 40±2℃, 相对湿度 90 ~ 95%, 持续 168 小时, 经试验后, 连接器于室温中放置 1 ~ 2 小时再测试其它值]	Appearance 外观	NO damage 不可破坏
			Contact Resistance 接触阻抗	Change from initial: 30mΩ
			Withstanding Voltage 耐电压	No breakdown 无击穿
8.2	Salt mist spray [盐水喷雾测试]	Salt concentration: 5%; Temperature: 35±1℃; Testing time: 24 hours, After salt is removed by running water and a drop is removed, it is measured. [盐水平重: 5%, 温度: 35±1℃, 试验时间 24 小时, 试验后用清水将残留盐份清洗, 并将水滴清除后, 方可再测试其它值]	Appearance 外观	NO damage 不可破坏
			Contact Resistance 接触阻抗	Change from initial: 30mΩ
8.3	Vibration [振动测试]	Amplitude: 1.52mm. Sweep time: 50 ~ 2000 ~ 50Hz Duration: 15 minutes in each (total of 45 minutes) X, Y, Z axes. Electrical load: DC 100mA [振幅: 1.52mm, 振动频率: 50 ~ 2000 ~ 50Hz, 振动时间: X、Y、Z 轴各 15 分钟共计 45 分钟, 载入电流: DC 100mA]	Appearance 外观	NO damage 不可破坏
			Contact Resistance 接触阻抗	Change from initial: 30mΩ
			Discontinuity 瞬断	1 μ Sec. Max
8.4	Thermal shock [冷热冲击测试]	Mate connectors together and perform the test as follows. 10 cycle of: A) -40℃ for 30 minutes; B) +85℃ for 30 minutes [将连接器做 10 个循环, 每个循环条件为: -40℃, 30 分钟; +85℃, 30 分钟]	Appearance 外观	NO damage 不可破坏
			Contact Resistance 接触阻抗	Change from initial: 30mΩ
8.5	Heat test [耐热性测试]	The connector is exposed to 85±2℃ atmosphere for 48 hours. After testing it shall be left alone for 1 to 2 hours in room ambient. [将连接器置于 85±2℃ 的温度环境下, 时间 48 小时; 结束后将其放置于室温下 1 ~ 2 小时再测试其他值]	Appearance 外观	NO damage 不可破坏
			Contact Resistance 接触阻抗	Change from initial: 30mΩ

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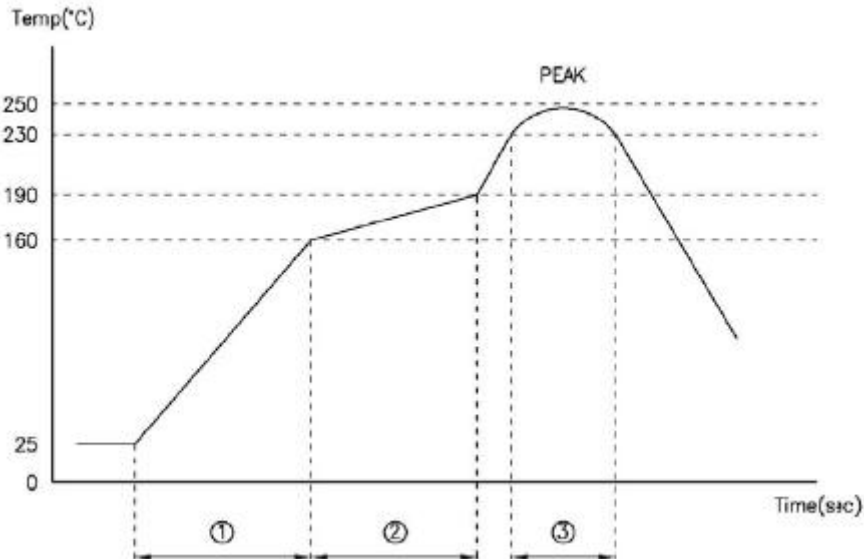
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## 8. ENVIRONMENTAL EFFICIENCY AND OTHERS [环境及其它特性]

NO. 编	Item/项目	Test Method/试验方法	Requirement /性能要求	
8.6	Cold test [耐寒性测试]	The connector is exposed to $-40\pm 2^{\circ}\text{C}$ atmosphere for 48 hours. After testing it shall be left alone for 1 to 2 hours in room ambient. [将连接器置于 $-40\pm 2^{\circ}\text{C}$ 的温度环境下, 时间 48 小时; 结束后将其放置于室温下 1~2 小时再测试其他值]	Appearance 外观	NO damage 不可破坏
			Contact Resistance 接触阻抗	Change from initial: $30\text{m}\Omega$
8.7	Solderability [焊锡性测试]	Soldering time: 4 ~ 5 second (Use flux) Solder Temperature: $260\pm 5^{\circ}\text{C}$ [焊锡时间: $3\pm 0.5$ 秒(使用助焊剂), 焊锡温度: $260\pm 5^{\circ}\text{C}$ ]	95% min. of solder area [焊锡面积最小 95%]	
8.8	Resistance to Soldering Heat [焊锡耐热性]	Soldering Iron method Using the soldering iron, and the cored solder wire. It is applied to termination for 3+1/-0s at $350\pm 5^{\circ}\text{C}$ . [手工焊接] [使用烙铁和芯线, 焊锡温度为 $350\pm 5^{\circ}\text{C}$ , 时间为 3+1/-0s]	Appearance 外观	NO damage 不可破坏
		IR-reflow Soldering method Test connector on PCB. Pre-heat: $160 \sim 190^{\circ}\text{C}$ ; 120seconds Heat: $230^{\circ}\text{C}$ Min; 40seconds Heat Peak: $250^{\circ}\text{C}$ Max [回流焊接] [组装在 PCB 上做测试, 预热: $160 \sim 190^{\circ}\text{C}$ ; 120 秒; 加热: $230^{\circ}\text{C}$ 以上; 40 秒 最高温度: $250^{\circ}\text{C}$ 以下]	Appearance 外观	NO damage 不可破坏

Temperature Profile IR-Reflow Soldering:



Pre-Heating Zone ①; Temperature rise  $1 \sim 4^{\circ}\text{C}/\text{sec}$

Pre-Heating Zone ②;  $160 \sim 190^{\circ}\text{C}$  120sec

Soldering Zone ③; Forty seconds over  $230^{\circ}\text{C}$

PEAK temperature; Below  $250^{\circ}\text{C}$

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