

产品规格书

LANGUAGE
语言

ENGLISH/CHINESE
英/中

1.SCOPE[适用范围]

This specification covers the USB CONNECTOR TYPE
[本规范适用于 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]
USB CONNECTOR TYPE	A01SB241B01-283

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 Min
Operating temperature[使用温湿度环境]	-30℃ ~ +85℃, 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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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]	1.A Min.
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]	1000MΩ Min
6.5	Withstanding Voltage [耐电压]	Unmated connectors, apply 500V AC for 1 minute between adjacent terminal or ground. [公母对插前对各端子施加 500V 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]	3.57kgf 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]	1.02kgf 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]	1.2kgf 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. [盐比重: 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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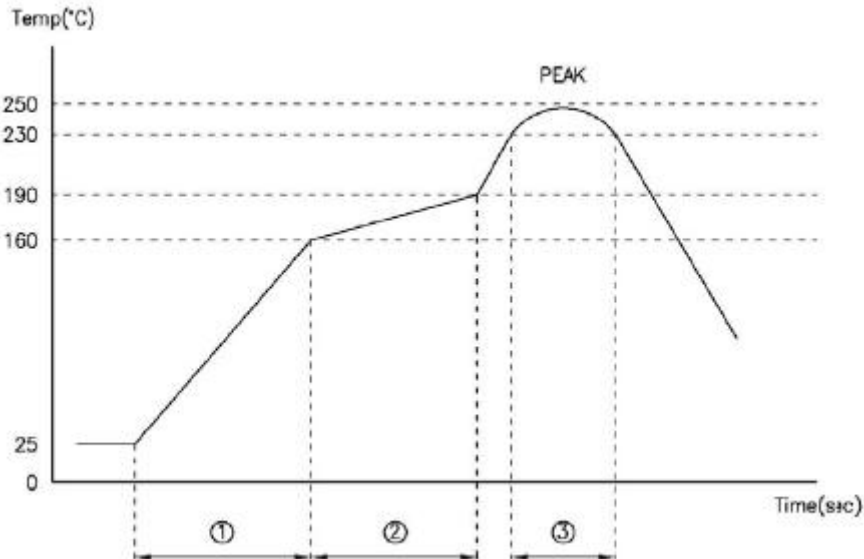
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8. ENVIRONMENTAL EFFICIENCY AND OTHERS [环境及其它特性]

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: $230\pm 5^{\circ}\text{C}$ [焊锡时间: 3 ± 0.5 秒(使用助焊剂), 焊锡温度: $230\pm 5^{\circ}\text{C}$]	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°C Min; 40seconds Heat Peak: 250°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°C 以上; 40 秒 最高温度: 250°C 以下]	Appearance 外观	NO damage 不可破坏

Temperature Profile IR-Reflow Soldering:



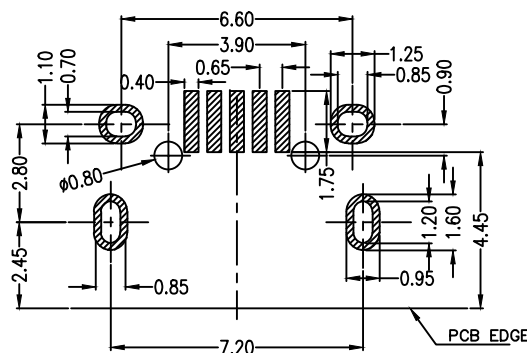
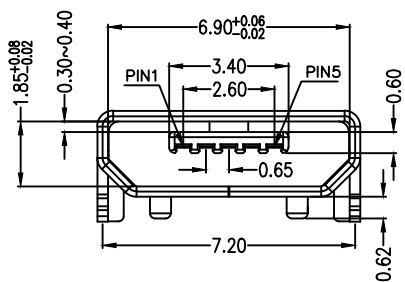
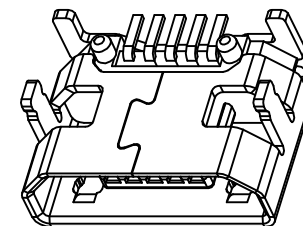
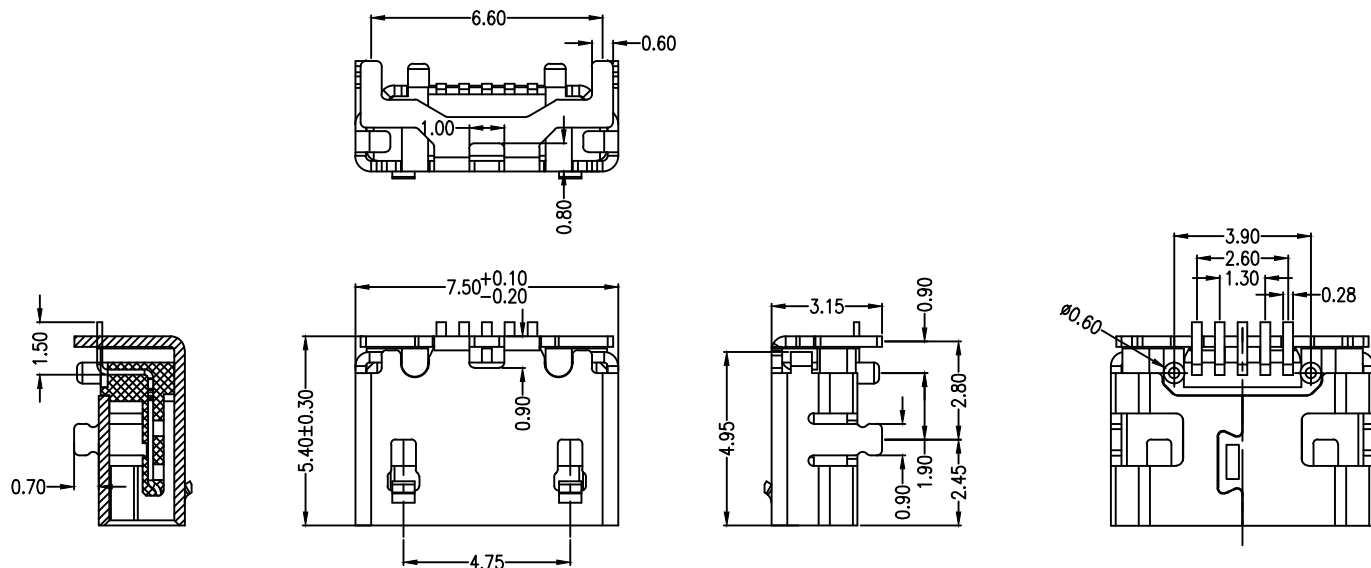
Pre-Heating Zone ①; Temperature rise $1 \sim 4^{\circ}\text{C}/\text{sec}$

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

Soldering Zone ③; Forty seconds over 230°C

PEAK temperature; Below 250°C

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PCB图仅供参考
RECOMMEND PCB LAYOUT

Note:

1.Material:

- 1.1 Housing: LCP High temperature thermoplastic with g.f,UL94v-0
- 1.2 Contact: copper alloy,t=0.15mm
- 1.3 Shell: SUS304,t=0.30mm

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 Kgf Max.
- 2.6 Total unmating force: 1.0 Kgf Min.
- 2.7 Temperature range: -30°C~80°C

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PART NAME		MICRO USB 5S B TYPE牛角型全插6.60有柱长针无导位		DRAWING		Y,C,ZHANG		DWG.No.		SBICL	
PART NO.		A01SB241B01-283		CHECK		G.C.Chen		REV.		A1	
UNIT :	TOLERANCE OTHERWISE	UP TO 5 ABOVE 5~30 ABOVE 30 ANGLE	±0.2 ±0.3 ±0.5 ±3°	ANGLE	APPROVAL		DATE		14-03-2013		
					SCALE		PAGE		1 OF 1		
mm				SCALE		2:1		PAGE		1 OF 1	