



**标准&定制开关连接器产品制造商**  
DONG GUAN XI BANG ELECTRONICS CO., LTD.

# 规格书

## SPECIFICATION

CUSTOMER NAME 客户名称: \_\_\_\_\_  
 CUSTOMER NO. 客户编号: \_\_\_\_\_  
 SERIES 系列: 防水USB TYPEC插座  
 MODEL NO. 型号: XB-USB-C series  
 DRAWING NO. 图形号: Waterproof USB TYPE C socket

If specification of this product meets your request, please confirm all the items of it and return to us with signature and stamp, it will be basis of our production and record. Thanks your cooperation in advance!

若此产品规格符合贵司要求, 敬请确认此规格书内所有项目  
 并签名和盖章后回传给我司, 以作我司产品制作之  
 依据和存档之用, 多谢合作!

### EXAMINE & APPROVAL 审批

APPROVE 接受	NOT APPROVE 不接受
SIGNATURE 签署      STAMP 盖章      DATE 日期	

PREPARED BY. 制表人	CHECKED BY. 校对	APPROVED BY. 审核	APPROVAL BY. 批准
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Quality core! Afterburner for Made in China!

# 规格书

## SPECIFICATIONS

MODEL TYPE: 系列类型	XB-USB-C series	编写 WRTN	审核CHECKED BY:	批准APPROVED BY:
PART NO: 型号	XB-USB-C series	谢冰芯	贺龙飞	庞东
VERSION版本:	A0			
DATE日期:	2024. 7. 6			

### 1. Scope适用范围

This product specification defines the product performance, tests and quality requirements for “USB 2.0 Type-C Receptacle” series products. 本产品规范阐述了“防水Type-C插座”系列产品的性能、测试和品质要求。

### 2. APPLICABLE DOCUMENTS 适用文件

In the event of conflict between the requirements of the specification and product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of the specification and the referenced documents, the specification shall take precedence. 如果产品规范和产品图发生冲突时，以产品图为准；如果产品规范和相关参考文件发生冲突时，以产品规范为准。

### 3. REQUIREMENTS 要求

#### 3.1 Design And Construction 设计和结构

Product shall be conformed the design, construction and physical dimensions specified on the applicable product drawing.

产品需符合产品图面规定的设计，结构和尺寸要求。

3.2 Material and Plating 材料和电镀 Refer to respective Getwell product drawings for information on materials, plating and marking; Solder component shall be met lead-free soldering requirements and the connectors shall be RoHS compliant.

相关的材料、电镀及标记等信息请参照产品图面；焊接件需满足无铅焊接要求，产品需符合RoHS标准

### 4. PRODUCT DESCRIPTION 产品描述

#### 4.1 Rating: 工作能力

Rated Voltage 额定电压: Normal 5V AC, Maximum 20V AC.

Rated Current 额定电流: 5A Vbus Pin (1.5A/Pin), 5A GND Pin (1.25A /Pin Max).

INSULATION RESISTANCE :100M $\Omega$  MIN AT 250 VDC DIELECTRIC WITHSTANDING VOLTAGE 100VAC MIN

LOW LEVEL CONTACT RESISTANCE INITIAL 40m $\Omega$  MAX; AFTER 50m $\Omega$  MAX

0.25A/Pin, OTHER Pin. Operating Temperature Range 工作温度范围: -40 $^{\circ}$ C ~ +80 $^{\circ}$ C. Operating

Relative Humidity 工作相对湿度: 95% Maximum (non-condensing).

#### 4.2 Test Condition: 测试条件

All tests shall be performed as bellow conditions unless otherwise specified.

除非另有要求，所有测试需在以下条件下进行。

Temperature range 温度范围: 25 $^{\circ}$  C  $\pm$ 10 $^{\circ}$  C. Relative Humidity range 相对湿度范围: 25% to 85%.

Atmospheric pressure 大气压强:

86kPa~106kPa(650mm ~ 800mmHg).

### 5. TEST REQUIREMENTS AND PROCEDURES SUMMARY 测试要求和程序概要

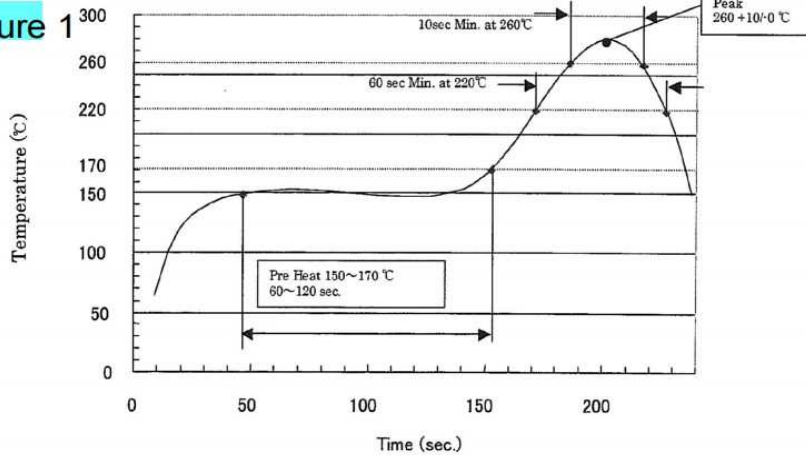
The product shall be designed to meet the electrical, mechanical and environmental performance requirements specified as belows.

产品的设计应满足如下电气，机械，及环境特性需求。

Test items 测试项目	Requirments 规格要求	Condition and Test method 条件和测试方法格
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5.1 Examination of product 产品检查			
5.1	Visual Examination 目视检查	Appearance shall no physical damage. 外观无损伤。	Visual examination shall be performed by the unaided eye, corrected to normal vision. 目视检查应通过肉眼在正常视力下进行。
6.1	Low Level Contact 低电平接触电阻	Pre test: 100mΩ Max. 测试前: 100mΩ 以下 Post test: 100mΩ Max. 测试后: 100mΩ 以下	Measured from receptacle terminal to plug terminal of mated connectors at 20mV Max. open circuit at 100mA Max., by Kelvin 4-wire method. 从配对的插座引脚到插头引脚, 在最大20mV开路电压和最大100mA电流下通过开尔文四线法测量。
6.2	Dielectric Withstanding Voltage	(1)No flashover or insulation breakdown 无跳火或绝缘体击穿现象 (2)Leakage current: 0.5mA Maximum. 漏电流不超过0.5mA	Between adjacent contacts of unmated and mated connectors, apply 100V AC(RMS) for 1 minute. 单独及配对的连接器, 在相邻端子之间施加交流100V(RMS)电压, 并持续1分钟
6.3	Insulation Resistance 绝缘阻抗	100MΩ Min. 100MΩ 以上	Between adjacent contacts of unmated and mated connectors, apply 100V DC for 2 minutes. 全体Vbus端子共加载5A电流, GND pins各加载1.25A电流, 其它各端子各加载0.25A电流。
SPECIFICATIONS			
Item 项目		Test condition 测试条件	Performance规格
6. Durability 耐焊性			
7.1	Soldering test 可焊性试验	The tip of the terminals shall be dipped 2mm in the solder bath at a temperature of 245±5°C for 4±0.5 sec. 将端子顶部浸入焊锡池2mm深, 温度245±5°C时间4±0.5秒。	One new uniform coating of solder shall cover a minimum of 95% of the surface being immersed. 浸入部分95%以上表面被锡覆盖。
7.2	Resistance to Reflow Soldering Heat 耐回流焊热	Pre-Heat 预热150~170° C: 60~120sec Heat 加热220+/-10° C: 60sec. Min. Heat Peak 峰值260+/-5° C: 10sec. Max. (See Figure 1)	No evidence deformation or fusion of housing. 无明显变形或塑胶熔化。

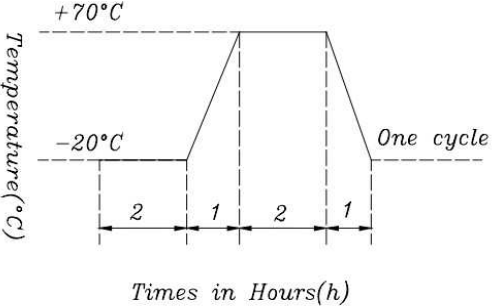
**Figure 1**



7.3	Insertion extraction force 插入力 & 拔出力	Measured at a maximum speed of 12.5 mm per minute. 测试速度最大为 12.5mm/分钟.	Insertion force 插入力: 5N-20N Extraction force 拔出力: 8N-20N
7.4	Lift test 寿命试验	The sort of SMT TYPE-C 母座 : 10000 cycles of operation at a rate of 15-18 cycles per minute with unloading. 在无负载条件下,以每分钟15-18次的速度插拔 10000 次 Insertion force 插入力: 5N-20N Extraction force 拔出力: Initial 初始值: 8N-20N After Durability 耐久后: 6N-20N	接触阻抗: 150毫欧以下。 (2) Operating force: 30% initial value. 动作力: 变化范围初始值30%。 (3) Insulation resistance: 50MΩ min. 绝缘阻抗: 50兆欧以上。 (4) Withstand voltage: AC 100 V (50Hz or 60 Hz) shall be no breakdown. 耐电压: AC 100 V (50Hz or 60 Hz) 无击穿现象出现。 (5) Item 项目-5.2 (6) Item 项目-5.3 (7) Item 项目-6.2
7.5	Heat test 耐热试验	80±2°C for 96 hours, test after keeping in normal condition for 30 minutes. 在80±2°C环境中放96小时,再放在正常环境中,30分钟后进行测试。	(1) Contact resistance: 150mΩ max 接触电阻: 150毫欧以下。 (2) Insulation resistance: 50MΩ min.

### SPECIFICATIONS

Item 项目	Test condition 测试条件	Performance 规格
7.6	Humidity test 耐湿试验 40±2°C 90-95%RH for 96 hours, test after, keeping in normal condition for 30 min. 在40±2°C 90-95%RH 环境中放96小时,再放在正常环境中30分钟后进行测试。	绝缘电阻: 50兆欧以上。 (3) There shall be no sign of damage mechanically and

7.7	Cold test 耐冷试验	At $-40\pm 3^{\circ}\text{C}$ for 96 hours, test after keeping in normal condition for 30 min. 在负 $40\pm 3^{\circ}\text{C}$ 环境中放96小时，再放在正常环境中30分钟后进行测试。	electrically. 无任何迹象显示机械及电气性能损坏。
7.8	Temperature cycling test 温度交变试验	<p>In FIG. For 5 cycles, test after keeping in normal condition for 30 min. 如图示之环境中，循环5次后，再置于正常环境中30分钟后进行测试。</p> 	<p>(1) Contact resistance: <math>150\text{m}\Omega</math> max. 接触电阻: 150毫欧以下。 (2) Insulation resistance: <math>50\text{M}\Omega</math> min. 绝缘电阻: 50兆欧以上。 (3) There shall be no sign of damage mechanically and electrically. 无任何迹象显示机械及电气性能损坏。</p>
7.9	盐雾测试 Salt spray	<p>对插产品测试环境: 温度: <math>35\pm 2^{\circ}\text{C}</math>, 盐水浓度: 重量比 <math>5\pm 1\%</math>, 时间: 24 小时。 测试后常温水洗, 干燥。 EIA-364-26B</p>	<p>外观: 无损伤; 接触阻抗最大: <math>80\text{m}\Omega</math></p>
		<p>Mated connectors and expose to the following salt mist conditions. Upon completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water, after which the specified measurement shall be performed. NaCl solution: Concentration: <math>5\pm 1\%</math> Spray time: 24 hours ambient Temperature: <math>35\pm 2^{\circ}\text{C}</math> EIA-364-26B</p>	<p>Appearance: no damage. Contact Resistance: <math>80\text{m}\Omega</math> Max</p>
7.1	The waterproof Level test of IPX8 IPX8防水等级测试 No water enters into enclosure through TYPE C interface	<p>The product is 1.5 meters away from the water surface for 30 minutes without water seepage. 产品距离水面1.5米, 连续30分钟, 不漏水</p>	<p>No water enters into enclosure through TYPE C interface 水不会通过TYPE C进入到产品壳内</p>

When the amendment of this specification comes into necessity, the amendment must be made by the mutual consultation and agreement between manufacturer and customer