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|  <b>Xibang Electronics<br/>Switch Connector</b> | Doc. No.     | PJ-A0162-75 | Page No.    | 1/10      |
|   | Date Issued  | 2015-04-06  | Prepared by | Josephine |
|   | Date revised | 2018-11-23  | checked by  | Jay       |
| <b>Product Specification</b>  | Rev. No.     | 07          | Approved by | Mei Chen  |
| <b>Title : Audio Jack Socket Conn 耳机插座</b>  |              |             |             |           |

## 1. SCOPE (适用范围)

This specification covers the performance, tests and quality requirements for the Audio jack Socket Connector. (本规范涵盖了Audio jack插座连接器的性能、测试和质量要求。)

## 2. PRODUCT DESCRIPTION (产品描述)

| DESCRIPTION (描述)         | Part Number (料号) |
|--------------------------|------------------|
| 3.5音频连接器 6脚4级焊接 立式黑色耳机插座 | PJ-378B          |
|                          |                  |
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## 3. APPLICABLE DOCUMENT (适用文件)

Xibang Electronics Switch Connector The following documents form a part of this specification to the extent specified here in. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence. (下列文件构成本规范的一部分，在此规定的范围内。本规范要求与产品图纸有冲突时，以产品图纸为准。如果本规范的要求与参考文件发生冲突，应以本规范为准。)

- MIL-STD-202/1344
- EIA 364-09
- EIAJ RC5325/RC5320A
- JIS C 6560


## 4. REQUIREMENTS (要求)

### 4.1. Design and Structure (设计和结构)

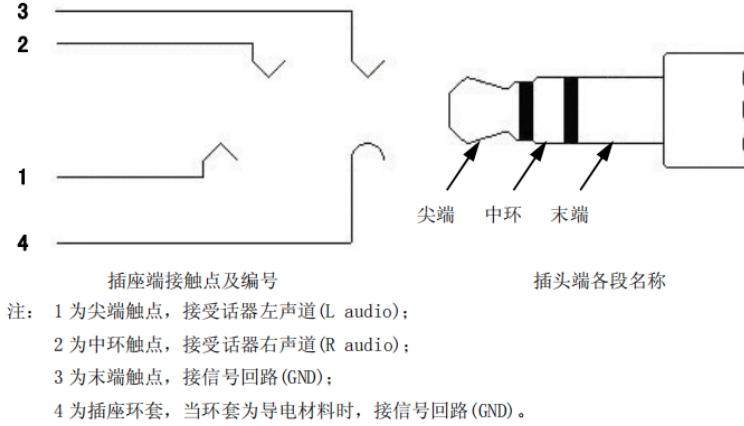
Product shall be of the design, structure and physical dimensions specified on the applicable product drawing. ( Xibang Electronics Switch Connector产品的设计、结构和物理尺寸参考所适用的产品图纸)

### 4.2. Materials/ Finish (材料/表面处理)

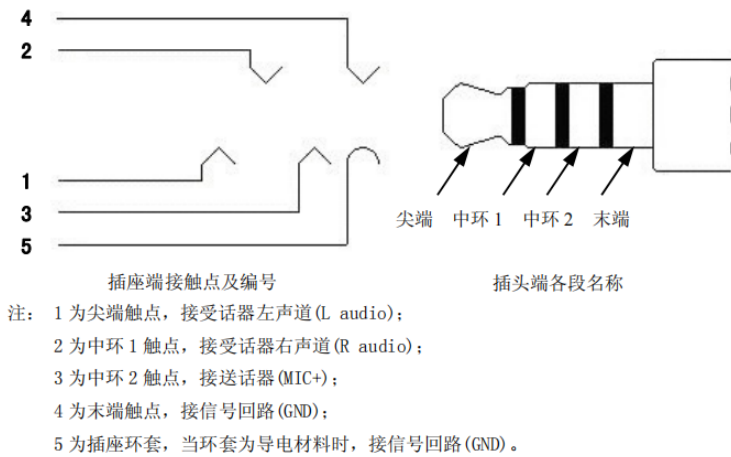
Materials used in the structure of product shall be as specified on the applicable product drawing. (产品结构中使用的材料参考所适用的产品图纸)

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#### 4.3. 3 Pole Connector PIN definition description (3段连接器PIN脚定义说明)



#### 4.4. 4 Pole Connector PIN definition description (4段连接器PIN脚定义说明)




#### 4.5. Ratings (额定功率)

| Xibang Switch Connector Item (项目) | Standard (标准)                                    |    |
|-----------------------------------|--|----|
| Rated Voltage (Maximum)额定电压       | 30 V   | DC |
| Rated Current (Maximum)额定电流       | 0.5A   |    |
| Operating temperature range工作温度范围 | -20°C~+70°C<br>From -20 to +70 degree centigrade |    |
| Storage Temperature Range储存温度范围   | -40°C~+85°C<br>From -40 to +85 degree centigrade |    |

#### 5. TEST STANDARD (测试标准)

Unless otherwise specified, the standard range of atmospheric conditions for making measurements and tests are as follows (除另有说明外, 用以进行测量和测试的标准环境

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条件范围如下)

5.1 Ambient temperature(环境温度): 5°C to 35°C

5.2 Relative humidity (相对湿度): 45% to 85%


5.3 Air pressure (气压): 86Kpa to 106Kpa

**6. HOWEVER, IF DOUBTS ARISE CONCERNING JUDGMENTS. PERFORM UNDER THE FOLLOWING STANDARD CONDITIONS.(但是, 如果对判决产生疑问, 按照下列标准条件执行)**

Temperature(温度) : 23±1°C.

Humidity(湿度) : 50%±2% RH.

Air Pressure(气压) : 86~106kPa

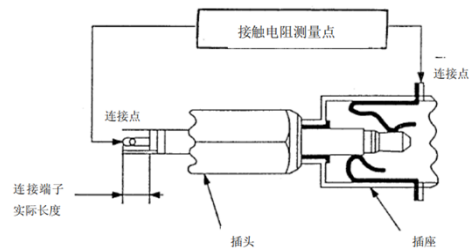
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## 7. PERFORMANCE AND TEST DESCRIPTION (性能和测试类型)

### 7.1 APPRARANCE (外观)

| ITEM | DESCRIPTION (类型)       | TEST CONDITION (测试条件) | REQUIREMENT (要求)   |
|------|------------------------|-----------------------|--|
| 1    | <b>Appearance (外观)</b> | <b>Visual. (目视)</b>   | <b>Should not have any flaw Scratch discoloration and crushed (无任何裂痕、刮伤、污染和变形)</b> |

### 7.2 ELECTRICAL (电气)

| ITEM | DESCRIPTION (类型)                            | TEST CONDITION (测试条件)  | REQUIREMENT (要求)  |
|------|---|--|---|
| 1    | <b>Low level contact resistance. (接触电阻)</b> | <p><b>Subject mated contacts assembled in housing to 20mV Max open circuit at 10mA Max</b></p> <p><b>Test method complies with EIA-364-06C. (依EIA-364-06C, 开路电压为20mV最大, 电流为1mA最大)</b></p>  | <p><b>Contact terminals接触端子: 100 mΩ Max.</b></p> <p><b>Change of 40 mΩ Max. after testing. (测试后变化量40 mΩ Max.)</b></p> |
| 2    | <b>Insulation Resistance. (绝缘电阻)</b>        | <p><b>After 100 VDC for 1 minute, measure the insulation resistance between the adjacent contacts of mated and unmated connector assemblies. (使用100V交流電測試1分鐘, 测量相邻两端的绝缘电阻)</b></p>   | <b>100 MΩ min.</b>  |
| 3    | <b>Dielectric strength. (耐电压)</b>           | <p><b>Apply ac 500V for 1minute 0.5mA between adjacent terminal or ground. Test method complies with EIA-364-20C (依EIA-364-20C, 相邻两端使用500V交流电测试1分钟, 电流0.5mA)</b></p>   | <p><b>Without damage to parts arcing or breakdown etc. (无短路或其他损坏)</b></p>   |




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**7.3 MECHANICAL (机械)**

| ITEM | DESCRIPTION (类型)                               | TEST CONDITION (测试条件)  | REQUIREMENT (要求)  |
|------|--|--|---|
| 1    | <b>Insertion/Extraction force.</b><br>(插入/拔出力) | <b>Measure the module insertion extraction force at 25±3mm/min. (插入拔出速度为25 ± 3mm/分钟)</b><br>EIA364-13  | <b>2.2N~22.2N</b>   |
| 2    | <b>Durability (耐久)</b>                         | <b>Number of test cycle is 5000 minimum and cycles rate is 100 ± 50 cycles per hour. (插拔周期次数最少为5000次, 周期率为100 ± 50次/小时)</b><br>EIA 364-B   | <b>Contact resistance接触电阻:100 mΩ Max. Change of 40 mΩ Max. after testing. (测试后变化量40 mΩ Max.)</b><br><b>Insulation Resistance绝缘电阻: 100 MΩ min.</b><br><b>No physical damage to Connector shall occur. (不可对连接器造成物理损伤)</b> |
| 3    | <b>Contact retention force (保持力)</b>           | <b>Apply axial pull out force on the Terminal assembled in the housing at A rate of 25±3mm min. (对组装在胶壳内的端子施加轴向拉出力, 速度至少为25 ± 3毫米)</b>   | <b>4.9N</b>   |
| 4    | <b>Mechanical Shock (机械冲击)</b>                 | <b>Accelerated Velocity(加速度): 50 G (490 m/s<sup>2</sup>)</b><br><b>Waveform (波形) : Semi Sine (半正弦)</b><br><b>Duration (持续时间) : 11 m sec.</b><br><b>No of Shocks (冲击频率) : 6/dir., 3 axis, (6个面, 3个轴)</b><br><b>( Total of 18 Shocks共18次冲击)</b><br>EIA364-27 | <b>(1) contact Resistance接触电阻: 100 mΩ Max .</b><br><b>(2) contact Resistance绝缘电阻: 500 MΩ MIN .</b><br><b>(3) No electrical discontinuity greater than 100nsec. shall occur (电气连续性不超过100秒)</b>                           |
| 5    | <b>Vibration (振动)</b>                          | <b>Frequency Range(频率范围): 10-2000</b><br><b>Total Amplitude(总振幅):2m/s<sup>2</sup>.</b><br><b>Duration(时间): 2.5 hours 3 axes</b><br>IEC 60512-6-4   | <b>(1) contact Resistance接触电阻: 100 mΩ Max .</b><br><b>(2) contact Resistance绝缘电阻: 500 MΩ MIN .</b><br><b>(3) No electrical discontinuity greater than 100nsec. shall occur (电气连续性不超过100秒)</b>                           |

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#### 7.4 ENVIRONMENTAL (环境)


| ITEM | DESCRIPTION (类型)            | TEST CONDITION (测试条件)   | REQUIREMENT (要求)  |
|------|-----------------------------|---|---|
| 1    | High Temperature<br>(高温)    | <p>The contact and card is exposed in the heat chamber 90°C for 96 hours.<br/>After test stored at room temperature for 1 hours test CR and IR. (触点和卡片在90 ° c 的热室中暴露96小时, 测试后放置室温1小时测试接触电阻与绝缘阻抗)</p> <p>IEC 60512-11-3</p>  | <p>(1) contact Resistance接触电阻: 100 mΩ Max .<br/>(2) contact Resistance绝缘电阻: 500 MΩ MIN .<br/>□2□ Shall occur Function and performance shall be as specified. Not to change for physical appearance. (功能各外观须正常, 不得有任何损坏)</p> |
| 2    | Low Temperature<br>(低温)     | <p>The contact and card is exposed in the cold chamber -25°C for 96 hours.<br/>After test stored at room temperature for 1 hours test CR and IR. (触点和卡片在-25° c 的冷室中暴露96小时, 测试后放置室温1小时测试接触电阻与绝缘阻抗)</p> <p>IEC 60512-11-3</p> | <p>(1) contact Resistance接触电阻: 100 mΩ Max .<br/>(2) contact Resistance绝缘电阻: 500 MΩ MIN .<br/>(3) Shall occur Function and performance shall be as specified. Not to change for physical appearance. (功能各外观须正常, 不得有任何损坏)</p> |
| 3    | Humidity resistance<br>(高湿) | <p>Steady state 40°C,90~95%RH for 96H with mate connectors , After test stored at room temperature for 1 hours test CR and IR. (配对连接器在40° C 90~95%RH的稳定状态下测试96小时, 测试后放置室温1小时测试接触阻抗与绝缘阻抗)</p> <p>IEC 60512-11-3</p>          | <p>(1) contact Resistance接触电阻: 100 mΩ Max .<br/>(2) contact Resistance绝缘电阻: 500 MΩ MIN .<br/>(3) Shall occur Function and performance shall be as specified. Not to change for physical appearance. (功能各外观须正常, 不得有任何损坏)</p> |

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|---|--|---|--|
| 4 | Xibang Electronics<br>Switch Connector<br>Salt Spray Test (盐雾测试) | <p>Mated connectors to 35+/-2°C. Humidity: 85% (R.H). PH value: 6.5~7.2 and 5+/-1% salt condition for 24 hours.</p> <p>After test, rinse the sample with water and recondition the room temperature for 1 hour test CR and IR.</p> <p>(配对连接器放置在35±2°C, 温度为85% PH值6.5~7.2和5%浓度的实验箱内测试24小时, 测试后用水清洗样品, 放置室温1小时测试接触阻抗与绝缘阻抗) EIA-364-26B.</p> | <p>(1) contact Resistance 接触电阻: 100 mΩ Max .</p> <p>(2) contact Resistance 绝缘电阻: 500 MΩ MIN .</p> <p>(3) Appearance shall no rust, oxidation, corrosion and other undesirable phenomena. (外观须无生锈、氧化、腐蚀等不良现象)</p> |
| 5 | Solder ability (沾锡性)   | <p>Solder Temperature (焊接温度): 245+/-3°C</p> <p>Immersion Duration (浸泡时间): 3 ±0.5 sec.</p> <p>Flux (助焊剂): RMA 25%</p>  | <p>Wet Solder Coverage: 95 % Min. (沾锡面积须95%最小)</p>   |
| 6 | Resistance to soldering heat (焊锡耐热性)                             | <p>The contact of terminal shall be tested resistance to soldering heat in the following conditions. After Resistance to soldering heat test Contact Resistance. (端子应在下列条件下做耐吃锡性试验, 焊锡耐热性后试接触阻抗)</p> <p>In case of solder iron (2 time) 电烙铁(两次)</p> <p>Temperature 温度: ≤350°C</p> <p>Time 时间: 5s+/-1s</p>                                 | <p>Should not have any flaw scratch and crack. (无任何裂痕、刮伤和破裂)</p>   |
| 7 | IR-reflow (回流焊)  | <p>MIL-STD-202G method 210F</p> <p>Peak temperature time 260°C Max, 10 sec or more. (峰值温度时间最高260°C, 10秒或更长的时间)</p> <p>Duration: 2 cycles (过炉2次)</p> <p>Lead-Free Solder (无铅锡膏): Sn96.5Ag3Cu0.5</p> <p>Refer to section 8.0 (请参阅第8.0条)</p>   | <p>Should not have any flaw scratch and crack (无任何裂痕、刮伤和破裂)</p> <p>No visual damage to insulator. (绝缘体不得有严重变形)</p>   |

## 8. Product Qualification and TEST GROUP (产品验证和测试分组)

|  |                   |   |   |   |   |   |   |   |   |   |   |
|--|-------------------|---|---|---|---|---|---|---|---|---|---|
| Xibang Electronics<br>Switch Connector<br>TEST ITEM (测试项目) | TEST GROUP (测试分组) |   |   |   |   |   |   |   |   |   |   |
|  | A                 | B | C | D | E | F | G | H | I | J | K |
|  | TEST SEQUENCE     |   |   |   |   |   |   |   |   |   |   |

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|----|---|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|
| 1  | Appearance (外观)                         | 1,4 | 1,7 | 1,6 | 1,3 | 1,6 | 1,7  | 1,5 | 1,5 | 1,5 | 1,4 | 1,4 |
| 2  | Low Level Contact Resistance (接触电阻)     |     | 3,6 | 3,7 |     |     | 3,8  | 3,6 | 3,6 | 3,6 |     | 2,5 |
| 3  | Dielectric withstanding Voltage (耐电压)   |     |     |     |     | 4,8 | 5,9  |     |     |     |     |     |
| 4  | Insulation Resistance(绝缘电阻)             |     |     |     |     | 3,7 | 4,10 |     |     |     |     |     |
| 5  | Temperature Rising (升温)                 | 3   |     |     |     |     |      |     |     |     |     |     |
| 6  | Durability(耐久)                          |     | 5   |     |     |     |      |     |     |     |     |     |
| 7  | Vibration (振动)                          |     |     | 4   |     |     |      |     |     |     |     |     |
| 8  | Mechanical Shock (机械冲击)                 |     |     | 5   |     |     |      |     |     |     |     |     |
| 9  | Insertion/Extraction force (插入/拔出力)     |     | 4   |     |     |     |      |     |     |     |     |     |
| 10 | Contact retention force (保持力)           |     |     |     | 2   |     |      |     |     |     |     |     |
| 11 | High Temperature (高温)                   |     |     |     |     | 5   |      |     |     |     |     |     |
| 12 | Low Temperature (低温)                    |     |     |     |     |     | 6    |     |     |     |     |     |
| 13 | Humidity resistance (高湿)                |     |     |     |     |     |      | 4   |     |     |     |     |
| 14 | Salt Spray(盐雾)                          |     |     |     |     |     |      |     | 4   |     |     |     |
| 15 | Solder ability(沾锡性)                     |     |     |     |     |     |      |     |     |     | 3   |     |
| 16 | Reflow Soldering Heat Resistance(焊锡耐热性) |     |     |     |     |     |      |     |     |     |     | 3   |
| 17 | IR-reflow(回流焊)                          | 2   | 2   | 2   |     | 2   | 2    | 2   | 2   | 2   | 2   |     |
|    | Number of Samples Required (所需样本数目)     | 5   |     |     |     |     |      |     |     |     |     |     |

### 9. WAVE SOLDERING (波峰焊)

DIP Suggestions solder temperature at 235°C±5°C(455°F) max.5 seconds . (DIP型推荐焊接焊锡温度为235°C±5°C(455°F) 最多5秒)

### 10. REFLOW PROFILE ( Xibang Electronics Switch Connector回流焊炉温图)

