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	Date Issued	2018-12-10	Prepared by	Shanzha
	Date revised	2024-08-01	checked by	Sangshen
Product Specification	Rev. No.	A1	Approved by	Willy
Title : Audio Jack Socket Connector 耳机插座				

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 圆形4级 黑色耳机插座 音频转接头用	PJ-38647-B
3.5音频连接器 圆形4级 白色耳机插座 音频转接头用	PJ-38647-W

3. APPLICABLE DOCUMENT (适用文件)

XKB Connection The following documents form a part of this specification to the extent specified herein. 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)

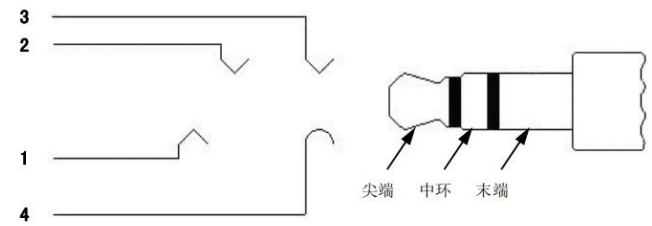
Product shall be of the design, structure and physical dimensions specified on the applicable product drawing. (XKB Connection 产品的设计、结构和物理尺寸参考所适用的产品图纸)

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)

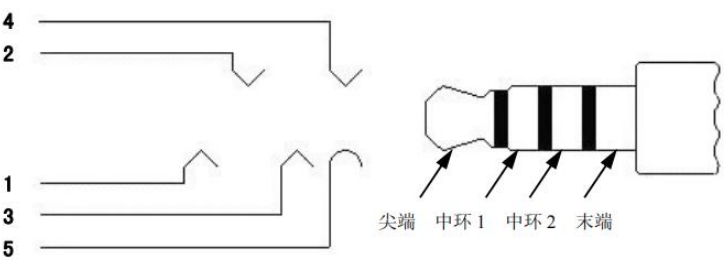
4.3. 3 Pole Connector PIN definition description (3 段连接器 PIN 脚定义说明)

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插座端接触点及编号
注： 1 为尖端触点，接受话器左声道 (L audio)；
2 为中环触点，接受话器右声道 (R audio)；
3 为末端触点，接信号回路 (GND)；
4 为插座环套，当环套为导电材料时，接信号回路 (GND)。

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



插座端接触点及编号
注： 1 为尖端触点，接受话器左声道 (L audio)；
2 为中环 1 触点，接受话器右声道 (R audio)；
3 为中环 2 触点，接送话器 (MIC+)；
4 为末端触点，接信号回路 (GND)；
5 为插座环套，当环套为导电材料时，接信号回路 (GND)。

4.5. Ratings (额定功率)

XKB Connectivity 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	-30 ° C/+80 ° C From -30 to +80 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条件范围如下)

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

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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℃.

Humidity (湿度) : 50%±2% RH.

Air Pressure (气压) : 86~106kPa

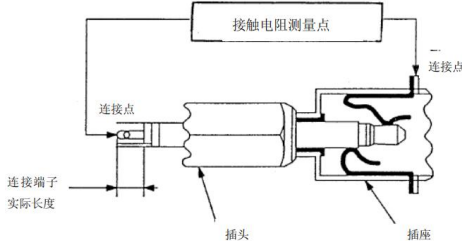
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7. PERFORMANCE AND TEST DESCRIPTION (性能和测试类型)

7.1 APPRARANANCE (外观)

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

7.2 ELECTRICAL (电气)

ITEM	DESCRIPTION (类型)	TEST CONDITION (测试条件)	REQUIREMENT (要求)
1	Low level contact resistance. (接触电阻)	<p>Subject mated contacts assembled in housing to 20mV Max open circuit at 10mA Max</p> <p>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)</p> 	<p>Contact terminals接触阻抗:</p> <p>50 mΩ Max.</p> <p>Change of 20 mΩ Max. after testing. (测试后变化量 20 mΩ Max.)</p>
2	Insulation Resistance. (绝缘电阻)	<p>After 100 VDC for 1 minute, measure the insulation resistance between the adjacent contacts of mated and unmated connector assemblies. (使用100 V交流电测试1分钟, 测量相邻两端的绝缘电阻)</p>	100 MΩ Min.
3	Dielectric strength. (耐电压)	<p>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500 V交流电测试1分钟, 电流0.5mA)</p>	Without damage to parts arcing or breakdown etc. (无短路或其他损坏)

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7.3 MECHANICAL (机械)

ITEM	DESCRIPTION (类型)	TEST CONDITION (测试条件)	REQUIREMENT (要求)
1	Insertion/Extraction force. (插入/拔出力)	Measure the module insertion extraction force at 25±3mm/min. (插入拔出速度为 25 ± 3mm/分钟) EIA364-13	3N~30N
2	Durability (耐久)	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) EIA 364-B	Contact resistance 接触电阻: 70 mΩ Max. Insulation Resistance 绝缘电阻: 100 MΩ min. No physical damage to Connector shall occur. (不可对连接器造成物理损伤)
3	Contact retention force (保持力)	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)	25N Min.
4	Mechanical Shock (机械冲击)	Accelerated Velocity (加速度): 50 G (490 m/s2) Waveform (波形): Semi Sine (半正弦) Duration (持续时间): 11 m sec. No of Shocks (冲击频率): 6/dir., 3 axis, (6 个面, 3 个轴) (Total of 18 Shocks 共 18 次冲击) EIA364-27	contact Resistance 接触电阻: 70 mΩ Max . Insulation Resistance 绝缘电阻: 100 MΩ MIN . No electrical discontinuity greater than 100nsec. shall occur (电气连续性不超过 100 秒)
5	Vibration (振动)	Frequency Range (频率范围): 10-2000 Total Amplitude (总振幅): 2m/s2. Duration (时间): 2.5 hours 3 axes IEC 60512-6-4	contact Resistance 接触电阻: 70 mΩ Max . Insulation Resistance 绝缘电阻: 100 MΩ MIN . No electrical discontinuity greater than 100nsec. shall occur (电气连续性不超过100秒)

7.4 ENVIRONMENTAL (环境)

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ITEM	DESCRIPTION (类型)	TEST CONDITION (测试条件)	REQUIREMENT (要求)
1	High Temperature (高温)	<p>The contact and card is exposed in the heat chamber 90°C for 96 hours.</p> <p>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>contact Resistance 接触电阻: 70 mΩ Max .</p> <p>Insulation Resistance 绝缘电阻: 100 MΩ MIN .</p> <p>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 (低温)	<p>The contact and card is exposed in the cold chamber -25°C for 96 hours.</p> <p>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>contact Resistance 接触电阻: 70 mΩ Max .</p> <p>Insulation Resistance 绝缘电阻: 100 MΩ MIN .</p> <p>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 (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>contact Resistance 接触电阻: 70 mΩ Max .</p> <p>contact Resistance 绝缘电阻: 100 MΩ MIN .</p> <p>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	XKB Connectivity Salt Spray Test (盐雾测试)	Mated connectors to 35+/-2 °C.Humidity:85%(R.H). PH value:6.5~7.2 and 5+/-1% salt condition for 24hours. After test, rinse the sample with water and recondition the room temperature for 1 hour test CR and IR. (配对连接器放置在 35±2℃, 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.	contact Resistance 接触电阻: 70 mΩ Max . contact Resistance 绝缘电阻: 100 MΩ MIN . 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)
5	Solder ability (沾锡性)	Solder Temperature (焊接温度): 245+/-3°C Immersion Duration (浸泡时间): 3 ±0.5 sec. Flux (助焊剂): RMA 25%	Wet Solder Coverage: 95 % Min. (沾锡面积须95%最小)
6	Resistance to soldering heat (焊锡耐热性)	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) In case of solder iron (2 time) 电烙铁(两次) Temperature 温度: ≤350°C Time 时间: 5s+/-1s	Should not have any flaw scratch and crack. (无任何裂痕、刮伤和破裂)
7	IR-reflow (回流焊)	MIL-STD-202G method 210F 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) Duration: 2 cycles (过炉 2 次) Lead-Free Solder (无铅锡膏): Sn96.5Ag3Cu0.5 Refer to section 8.0 (请参阅第 8.0 条)	Should not have any flaw scratch and crack (无任何裂痕、刮伤和破裂) No visual damage to insulator. (绝缘体不得有严重变形)

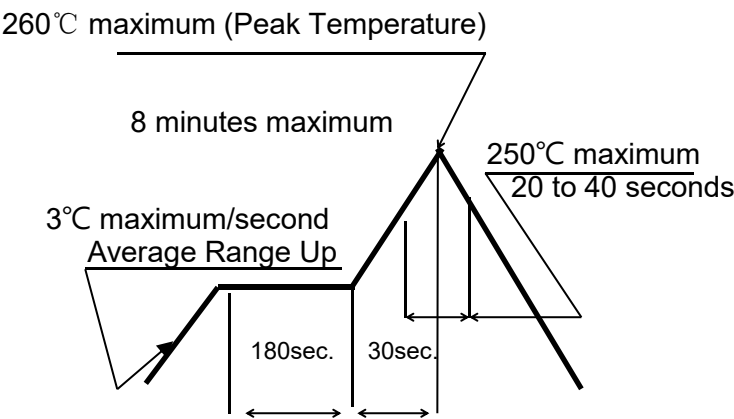
8. Product Qualification and TEST GROUP (产品验证和测试分组)

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9. WAVE SOLDERING (波峰焊)

DIP Suggestions solder temperature at 260℃(500°F) max.5 seconds . (DIP 型推荐焊接焊锡温度为 260℃ (500°F) 最多 5 秒)

10. REFLOW PROFILE (XKB CONNECTIVITY 回流焊炉温图)



(Preheat Temperature预热温度: 150~200°C Maximum.)
Temperature Condition Graph.温度状态图
(Temperature on Board Pattern Side)

Requirement要求: No physical damaged or plastic melting.: 无物理损伤或塑料熔化

Rev.	Description	Date revised	Created/ Revised by
A0	New Release	2024/08/06	Shanzha