



### 技术特性：

1. 使用温度: -25~70° C
2. 额定电负额: DC 30V 1.0A
3. 接触电阻: ≤30mΩ
4. 绝缘电阻: ≥100MΩ
5. 耐压: AC500V
6. 插拔力: 3~25N
7. 寿命: 5000次

1

3

2

电路参考图

借(通)用件登记

F	QS2016003001-06	芯 针	铁 $\varnothing=2.0$	锡 锡	
E	QS2016003001-05	侧 片	铁 T=0.3	锡 锡	
D	QS2016003001-04	后 片	铁 T=0.3	锡 锡	
C	QS2016003001-03	弹 片	不锈钢T=0.2	锡 锡	
B	QS2016003001-02	后 塞	PBT	黑 色	
A	QS2016003001-01	基 座	PBT	黑 色	
序号	材料料号	名称	材 料	电镀/ 颜色	备 注

旧底图总号					视角	未注 X. ±0.30 X°. ±2° 明公 .X±0.20 .X°. ±1° 差 .XX±0.15 .XX°. ±0.5°	DC插座 DC005-2.0芯							
标记	处数	更改文件号	签 字	日期										
底图总号		设 计	肖长洪		图 样	标 记	重 量	比 例	MRK-DC11-005-0010					
审核		唐元林												
工 艺				共 1 页		第 1 页								
签 字	日期			深圳市迈睿康科技有限公司										
		标 准 化												
		批 准		唐平										

# SPECIFICATION 规格书

Model Type: 类型型号:		WRITTEN 制作	CHECKED 审核	APPROVED 批准
Part No.: 料号:				

## 1. Scope / 适用范围

This specification is applied to DC POWER JACK which is used for electronic products.

本规格书适用于电子产品上的电源插座连接器。

## 2. Ration / 额定值

2-1. Practical temperature range: -25° C to +70° C

适用温度范围: -25° C to +70° C

Humidity range: 85% RH.MAX.

湿度范围: 85% RH.MAX.

2-2. Preservation temperature range: -40° C to +80° C

保存温度范围: -40° C to +80° C

Humidity range: 85% RH.MAX.

湿度范围: 85% RH.MAX.

2-3. Rated voltage and current: 30V DC , 1 A

额定电压和额定电流: 30V DC , 1 A

2-4. Appearance : No scratches、soil、rust or discoloration shall be observed.

外观: 表面无划伤、脏污、生锈或变色等现象。

## 3. Construction / 说明

3-1. Outline And Dimension / 外观和尺寸

Outline and dimension of the jack should match with the attached assembled drawing.

插座的外观和尺寸应与附件图纸相符。

3-2. Part And Material 部件和材料

The parts and materials and should be identical with the lists and certifications of material.

部件和材料应与材料清单规格一致。

## 4. Electrical efficiency / 电气特性

Item 项目	Property 特性	Test condition 测试条件	Performance 判定
4-1	Withstand voltage 耐电压	The Jack shall be withstanded 500V (AC 50/60Hz RMS) between mutually insulated pin contacts for one minute. 在相互绝缘的接触角之间，插座能承受500V电压(AC 50/60Hz RMS)并持续1分钟。	No dielectric breakdown shall occur. 无击穿现象发生
4-2	Insulation resistance 绝缘阻抗	Using a 500 volts DC insulation resistance meter between mutually insulated terminals or metallic parts. 在相互绝缘的端子之间或金属部件之间，插座应能承受施加的500V直流电压。	100 MΩ MIN. 最小100 兆欧
4-3	Contact resistance 接触阻抗	Between terminals of the jack to be made a closed circuit. 插座两个端子之间组成一个闭合的回路	30 mΩ MAX. 最大30 毫欧

# SPECIFICATION 规格书

Model Type: 类型型号:	

## 5. Mechanical efficiency 机械特性

Item 项目	Property 特性	Test condition 测试条件	Performance 判定
5-1	Insertion and extraction force 插入和拔出力	Measured with a load cell or an equivalent. the mating plug shall be inserted into the jack and extracted from the jack slowly. 用一测压元件或对等物测试。用相匹配的插头慢慢地插入插座和慢慢地从插座里拔出。	3N(About 0.3kgf) to 25 N(About 2.5kgf) 3N(大约 0.3kgf) to 25N(大约 2.5kgf)
5-2	Terminal strength 端子强度	Every terminal shall be capable of withstanding a force of 20N (About 2kgf) for 10 seconds. 每个端子都应能承受20N(大约2kgf)的力，并持续10秒。	Without loosing and breakdown, but deformation of terminal is accepted. 无松脱、破损等现象，但是端子变形可以接受。

## 6.Durability / 耐久性能

Item 项目	Property 特性	Test condition 测试条件	Performance 判定
6-1	Life test 寿命测试	The life test shall consist of 5000 cycles of insertion and extraction with a gauge plug, at a rate of 20 to 30 cycles per minute under no load. 在没有负载的条件下，以每分钟20-30次的频率，均速，用相匹配的插头进行插拔5000次。	The jack shall comply with items 4-1 and 5-2. After life test, Insertion and extraction force: 3N(About 0.3kgf) to 25 N(About 2.5kgf) Insulation resistance: 100 MΩ or more Contact resistance: less than 60 mΩ  能满足项目4-1和5-2。 寿命测试后， 插拔力： 3N(大约0.3kgf)至25N(大约2.5kgf) 绝缘电阻：最小100兆欧 接触电阻：不超出60毫欧

# SPECIFICATION 规格书

Model Type: 类型型号:	

## 7. Solderability / 焊锡试验

Item 项目	Property 特性	Test condition 测试条件	Performance 性能
7-1	Resistance to soldering heat test 耐焊性试验	The jack terminal shall be dipped in solder under the conditions as specified below: Temperature of solder: $260 \pm 5^\circ C$ . Dip time: $5 \pm 1$ seconds.  端子浸入锡炉里, 按以下条件测试: 焊锡温度: $260 \pm 5^\circ C$ 浸入时间: $5 \pm 1$ 秒	The jack shall comply with items 4-1 and 5. Insulation resistance: $100 M\Omega$ or more Contact resistance: less than $30 m\Omega$  能满足项目4-1和5。 绝缘电阻: 最小100兆欧 接触电阻: 最大30毫欧
7-2	Soldering test 可焊性试验	Temperature of solder: $260 \pm 5^\circ C$ . Time of dip: $3 \pm 0.5$ seconds. Length of dip: 2.5 mm( from top of terminal).  焊锡温度: $260 \pm 5^\circ C$ . 浸入时间: $3 \pm 0.5$ 秒  浸入深度: 2.5 mm(从端子顶部开始).	Areas of soldering shall be capable of 75% or more of dip terminal area.  端子顶端沾锡面积要求达到75%以上.

## 8. Environment test / 环境试验

Item 项目	Property 特性	Test condition 测试条件	Performance 性能
8-1	Cold test 低温测试	The jack shall be subjected to temperature of $-25 \pm 2^\circ C$ for a period of 96 hours ,then shall be allowed to remain in room ambient conditions for 30 minutes.  将插座放置在 $-25 \pm 2^\circ C$ 低温条件下持续96小时, 然后在室温条件下静置30分钟。	The jack shall comply with items 4-1 and 5. Insulation resistance: $100 M\Omega$ or more Contact resistance: less than $30 m\Omega$  能满足项目4-1和5。 绝缘电阻: 最小100兆欧 接触电阻: 最大30毫欧
8-2	Heat test 高温试验	The jack shall be subjected to temperature of $70 \pm 2^\circ C$ for a period of 96 hours ,then shall be allowed to remain in room ambient conditions for 30 minutes.  将插座放置在 $70 \pm 2^\circ C$ 高温条件下持续96小时, 然后在室温条件下静置30分钟。	

# SPECIFICATION 规格书

Model Type: 类型型号:	

Item 项目	Property 特性	Test condition 测试条件	Performance 性能
8-3	Humidity test 耐湿试验	<p>The jack shall be subjected to temperature of <math>40 \pm 2^\circ C</math> and relative humidity of 90% to 95% for a period of 96 hours.Upon completion of the exposure, dew drops shall be blown out and removed from the jack, after which the jack shall be conditioned in room ambient conditions for 30 minutes.</p> <p>将插座放置在温度为<math>40 \pm 2^\circ C</math>，相对湿度为90~95%的环境下持续96小时。完成以上事项后，除去插座上的水珠，然后在室温条件下静置30分钟。</p>	<p>The jack shall comply with items 4-1 and 5.</p> <p>Insulation resistance: <math>50 M\Omega</math> or more</p> <p>Contact resistance: less than <math>30 m\Omega</math></p> <p>能满足项目4-1和5。</p> <p>绝缘电阻：最小50兆欧</p> <p>接触电阻：最大30毫欧</p>
8-4	Temperature cycling test 温度循环试验	<p>The jack shall be subjected to conditions as shown in below, and then shall be returned and allowed to remain in room ambient conditions for 30 minutes.</p> <p>将插座置于如下所示条件下进行试验，然后在室温条件下放置30分钟。</p> <p>(TEMPERATURE) 温度</p> <p>+70° C</p> <p>-25° C</p> <p>(five cycles) (5次)</p> <p>0h 2h 4h 6h 8h (TIME) 时间</p>	<p>The jack shall comply with items 4-1 and 5.</p> <p>Insulation resistance: <math>100 M\Omega</math> or more</p> <p>Contact resistance: less than <math>30 m\Omega</math></p> <p>能满足项目4-1和5。</p> <p>绝缘电阻：最小100兆欧</p> <p>接触电阻：最大30毫欧</p>

# SPECIFICATION 规格书

Model Type: 类型型号:	

Item 项目	Property 特性	Test condition 测试条件	Performance 性能
8-5	Salt mist test 盐雾试验	<p>Testing bath: The temperature shall be <math>35^{\circ}\text{C} \pm 2^{\circ}\text{C}</math> in the ambient of the jack during the test.</p> <p>Spray apparatus: The apparatus shall be capable of enduring fine dense mist uniformly.</p> <p>Salt water: The concentration of the salt water shall be adjusted at <math>5 \pm 1\%</math> weight ratio at <math>35^{\circ}\text{C} \pm 2^{\circ}\text{C}</math>.</p> <p>Testing time: <math>8 \pm 0.5</math> hours.</p> <p>试验室： 在温度为<math>35 \pm 2^{\circ}\text{C}</math>条件下进行测试</p> <p>喷雾设备： 设备应能承受均一浓度的盐雾</p> <p>盐水浓度： 在温度为<math>35 \pm 2^{\circ}\text{C}</math>条件下，盐水浓度为<math>5 \pm 1\%</math></p> <p>测试时间：<math>8 \pm 0.5</math>小时</p>	<p>Appearance shall not be extremely rust.</p> <p>Contact resistance: between contact and contact: MAX.<math>60\text{m}\Omega</math></p> <p>between plug and contact: MAX.<math>100\text{m}\Omega</math></p> <p>Dielectric withstanding voltage: 500VAC/min(Between terminals)</p> <p>外观没有明显的生锈现象。</p> <p>接触电阻： 接触脚与接触脚之间：最大60毫欧 匹配的插头与接触脚之间：最大100毫欧</p> <p>耐电压： 500VAC/min(端子之间)</p>

# SPECIFICATION 规格书

Model Type: 类型型号:	

## 9. Test condition / 测试条件

The test and measurement,unless otherwise specified,shall be carried out at a temperature of 5° C~35° C, relative humidity of 45%~85%, and atmospheric pressure of 86kPa~106kPa.

However,when any doubt arises on the judgment value under it,the test and measurement shall be carried out at a temperature of 20± 2° C,relative humidity of 60% ~70%, and atmospheric pressure of 86kPa~106kPa.

除非另有指定，否则测试和测量温度在5° C~35° C，相对湿度在45%~85%，气压在86kPa~106kPa条件下进行。

当在这个条件下判定出现疑问时，测试和测量在20± 2° C，相对湿度60%~70%，气压在86kPa~106kPa条件下进行。

## 10. Amendment / 变更修正

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

当有必要对规格书进行变更修正时，应该在制造商和客户共同商议及同意后才可以进行。

※ This specification is stated in Chinese & English, Chinese is preferential when any doubt occurs in the translation.

规格书同时记入中英文，但发生疑义的场合以中文优先。