1. SCOPE（适用范围）

This specification covers the performance, tests and quality requirements for the DC Socket .
本规范涵盖了 DC Socket 的性能、测试和质量要求。)

2. PRODUCT DESCRIPTION（ 产品描述）

DESCRIPTION（描述）	Part Number（料号）
DC连接器 W9.0xD6.0xH5.0,内芯1.3,3.5A 24V	DC-003A-2A-1.3

3. APPLICABLE DOCUMENT（适用文件）

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。)

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.（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. Ratings （额定功率）

Item（项目）	Standard（标准）
Rated Voltage (Maximum)额定电压	12V DC
Rated Current (Maximum)额定电流	2A
Operating temperature range工作温度范围	-20℃～+70℃ From -20 to +70 egree centigrade
Storage Temperature Range储存温度范围	-20℃～+70℃ From -20 to +70 degree centigrade

5.0 TEST STANDARD （测试条件）

5.1 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）

Ambient temperature（环境温度）: 5℃ to 35℃

Normal humidity （正常湿度）: 45% to 85%

Air pressure （气压）: 86Kpa to 106Kpa

5.2 However if doubt arises on the decision based on the measured Values under the above-mentioned Conditions.The following conditions shall be employed: （但是在对判定产生疑问时,按下述状态实施）

Temperature （温度）：20±2℃

Relative humidity （相对湿度）：65±5%

Air pressure （气压）: 86Kpa to 106Kpa

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

6.1 APPEARANCE（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

6.2 ELECTRICAL（电气）

ITEM	DESCRIPTION（类型）	TEST CONDITION （测试条件）	REQUIREMENT（要求）
1	**Contact resistance.** 接触电阻	**Measured at low current (100mA or less).**（在低电流（≤100mA）条件下测试.）	**30 mΩ Max.**
2	**Insulation Resistance.** 绝缘电阻	**Apply a voltage of 100V DC for 1 MIN to following portions after which measurement shall be made** 输入DC 100V，一分钟，按以下接触方法测试： **(1). Between body and conductor.** 插座体与排脚之间 **(2). Between conductors not to be contact.** 不接触的排脚之间 **(3). Between conductors not to be when plug is inserted DC 100V 1 MIN.** 插头插入时不接触的排脚之间	**100 MΩ min.**

3	**Dielectric strength. (耐电压)**	**AC 500V ims(50~60Hz)for 1 MIN trip current: 0.5mA** 输入 AC 250V(50~60Hz)/min 电压一分钟，漏电电流为：0.5mA **(1). Between body and conductor.** 插座体与排脚之间 **(2). Between conductors not to be contact.** 不接触的排脚之间 **(3). Between conductors not to be when plug is inserted DC 500V 1 MIN.** 插头插入时不接触的排脚之间	**There shall be no breakdown.** 无击穿、闪烁现象

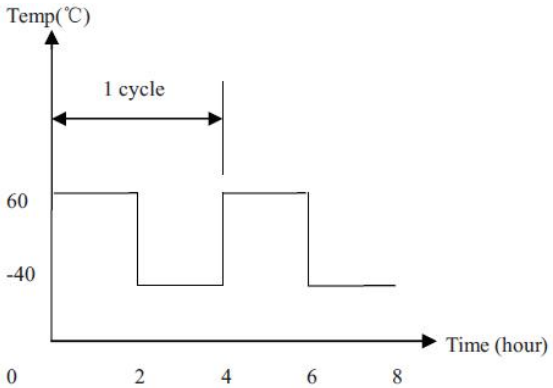
6.3 MECHANICAL （机械）

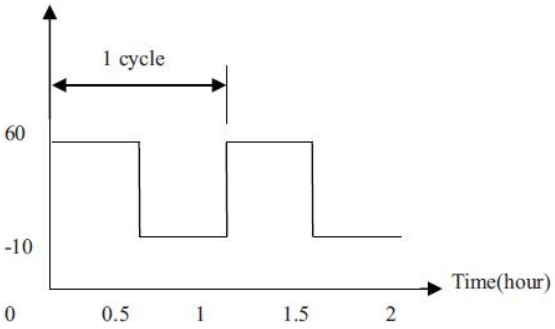
ITEM	DESCRIPTION（类型）	TEST CONDITION （测试条件）	REQUIREMENT（要求）
1	**Insertion Force** （插入力）	**Measurement shall be made after connecting and disconnecting using stand plug gauge 3 times .** 依据标准的 PLUG GAUGE 做第 3 次插拔后测试	**3~30N**
2	**Extraction Force** （拔出力）	**Measurement shall be made after connecting and disconnecting using stand plug gauge 3 times .**依据标准的 PLUG GAUGE 做第 3 次插拔后测试	**3~30N**
3	**Terminal Strength** （端子强度）	**A static load of 5N(0.5kgf)/m shall be applied to the tip of the terminal for 1 MIN in any direction.** 向排脚先端的任意一个方向施加 1 分钟 5N(0.5kgf)的力度	**There shall be no damage to the terminal such as cracks,Looseness or play electrical ,And mechanical characteristics shall be satisfied.**在排脚中没有裂开，松动等异常，满足于机械，电气性能

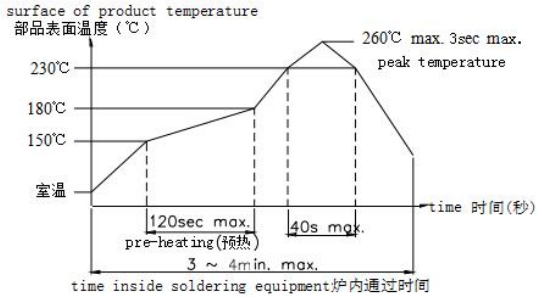
4	**Life Test** （寿命测试）	**Without load** 无负荷 ： **Connection and disconnection shall be made with the mating plug and jack for 5'000 cycles at a speed of 10 to 25 cycles/MIN.** 将结合了的标准 Plug（尽量要近于中心的）在 1 分钟以 10~25 的速度，进行 5'000 次的插入，拔出 **Load** 负荷 ： **At rating condition (Non-Inductive Load) connection and disconnection shall be made 1,000 cycles at a speed 10 to 20 cycles / MIN.** 以定格状态（无诱导负荷）在 1 分钟内以 10~20 次的速度进行 1,000 次插入，拔出	**Contact resistance** 接触电阻：**30 mΩ Max.** **Extraction Force** 拔出力：**3~30N** **Mechanical and electrical characteristics shall be satisfied.** 满足于机械和电气性能

6.4 ENVIRONMENTAL (环境)

ITEM	DESCRIPTION（类型）	TEST CONDITION（测试条件）	REQUIREMENT（要求）
1	**Solder ability** （可焊性 ）	**Immerse the solder pin of the connector in solder bath at 245±5℃ for 3±0.5sec.** **After dipped the pin in the flux 5sec.** 将端子脚浸入助焊剂中5秒，然后将端子脚浸入245±5℃的锡炉中3±0.5秒	**Solder wetting: 95% of immersed area must show voids, Pin holes.** 锡附着的面积应超过浸入表面积的95%以上
2	**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℃+/-5℃** **Time** 时间: **5s+/-1s**	**Should not have any flaw scratch and crack.** 无任何裂痕、刮伤和破裂

3	**Humidity Test** **（耐湿测试）**	**The jack shall be stored at a temperature of 40±2℃ and a humidity of 90% to 96% for 96 Hr,Then the jack shall be maintained at stand atmospheric condition for 1 Hr for other procedures.** 放置于 40±2℃的相应湿度为 90~96% Hr 环境中 96 小时后，再将样品放在正常环境中 1 小时后进行测试	**There shall be no damage on appearance. Mechanical and electrical characteristics shall be satisfied.** 外观无异常，满足于机械和电气性能
4	**Heat Resistance Test** **（耐热测试）**	**The jack shall be stored at a temperature of 70±2℃ for 96 Hours,And then the jack shall be maintained at stand atmospheric condition for 1 Hr for other procedures.** 放置于70±2℃ 中96小时后，再将样品放在正常环境中1小时后进行测试	
5	**Cold Resistance Test** **（耐寒测试）**	**The jack shall be stored at a temperature of -25±3℃ for 96 hours and then it shall be subjected to the controlled recovery conditions for 1 hour after which.** 放置于-25±3℃ 中 96 小时后，再将样品放在正常环境中 1 小时后进行测试	**There shall be no damage on appearance. Mechanical and electrical characteristics shall be satisfied.** 外观无异常，满足于机械和电气性能
6	**Temperature Cycling Test （温度循环测试）**	**The jack shall be subjected to 5 cycles of the following conditions showed in the figure,And shall returned allowed to remain in room ambient condition for 30 minutes.** 将插座以下列条件作 **10** 个循环，然后放回室内环境 **60** 分钟 	**There shall be no deformation or cracks in molded part.** 产品不能变形与破裂 **Insertion&extraction force : 3 to 30N.** **Contact resistance**接触电阻: **30 mΩ Max.** **Insulation Resistance** 绝缘电阻: **100 MΩ min.** **Dielectric strength voltage** 耐电压:**500V AC/MIN**（**Between terminals** 端子之间）

7	**Salt Spray Test** （盐雾试验）	**1. Testing bath 测试容器 ：The temperature shall 35±2℃ in the ambient of the specimen during the test.** 在测试过程中，产品周围环境温度 35±2℃ 2. **Spray apparatus 喷雾设备 : The apparatus shall capable of producing fine dense mist uniformly.**盐雾均匀喷出 3. **Salt water 盐水 :The concentration of the salt water shall adjusted at 5±1% weight ratio at 35±2℃ .** 盐水要在 35±2℃温度条件下，调整在 5±1%比例范围内 **4. Testing time 测试时间 ： 24±0.5 hours. After washed in water . The sample shall left alone for 1 or 2 hours in a room ambient .** 清洗后，样品在室内要单独放置 1 至 2 个小时	**Appearance shall no extremely rust. And contacting portions should such that they will work without hindrance for practical.** 表面不能有严重的腐蚀，接触部分要不防碍正常使用
8	**Heat Shock Test** （热冲击测试）	**The jack shall be subjected to 6 cycles of the following conditions showed in the figure. And then shall returned and allowed to remain in room ambient for 30 minutes.** 将插座以下列条件作 **5** 个循环，然后放回室内环境 **30** 分钟。  	**There shall be no deformation or cracks in molded part.** 产品不能变形与破裂 **Insertion&extraction force : 3 to 30N.** **Contact resistance**接触电阻: **30 mΩ Max.** **Insulation Resistance** 绝缘电阻: **100 MΩ min.** **Dielectric strength voltage** 耐电压:**500V AC/MIN**（**Between terminals** 端子之间）

9	**Automatic Flow Soldering** （自动焊接）	**For the product of SMT , type solder according to the following conditions** **对于 SMT 产品，请按以下条件进行焊接**  **Caution: the condition mentioned above is a temperature on the PWB surface on which parts are mounted. There are cases where PWB temperature greatly differs from switch's surface temperature depending on PWB material, size, thickness, etc. The switch's surface temperature shall not allowed to exceed 260℃ 注意：以上提及的条件是零部件上 PWB 表面的温度，由于 PWB 的材料、尺寸、厚度等不同，PWB 从开关表面获得的温度也会有很大产不同，因此，千万小心不要让开关表面温度超过 260℃**	**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**

7. OTHER PRECAUTIONS 其他注意事项：

7.1. Following the soldering process, do not try to clean the switch with a solvent or the like.
进行焊接过程中，不可以用溶剂或类似品清洗开关

7.2. Safeguard the switch assembly against flux penetration from its topside.
防止助焊剂从开关的顶端渗入

7.3. Please have the products keep in close status and the storage time is 90 days guaranty after delivering the goods at most. 交货后保证开关处于封密状态并库存时间 90 天以下

8. REEL PACKAGING 盘装

8.1. Scope 范围: This specification covers the requirements of the reel packaging for SMT standard type of tact switches. 该规范包含 SMT 标准型拨动开关的绕带封装的要求

8.2. Packaging Material 包装材料

ITEM 项目	**DESCRIPTION** 说明
Package 包装	Cartons 卡通箱
Reel 转轴	Delete Cartons 可降解箱
Carrier Tape 载带	Polypropylene 聚丙烯

8.3. Packaging Quantity 封装数量

Please refer to the packing drawing. 请参考产品包装图纸

Rev.	**Description**	**Date revised**	**Created/ Revised by**
01	New Release	2021/04/30	Josephine Lin