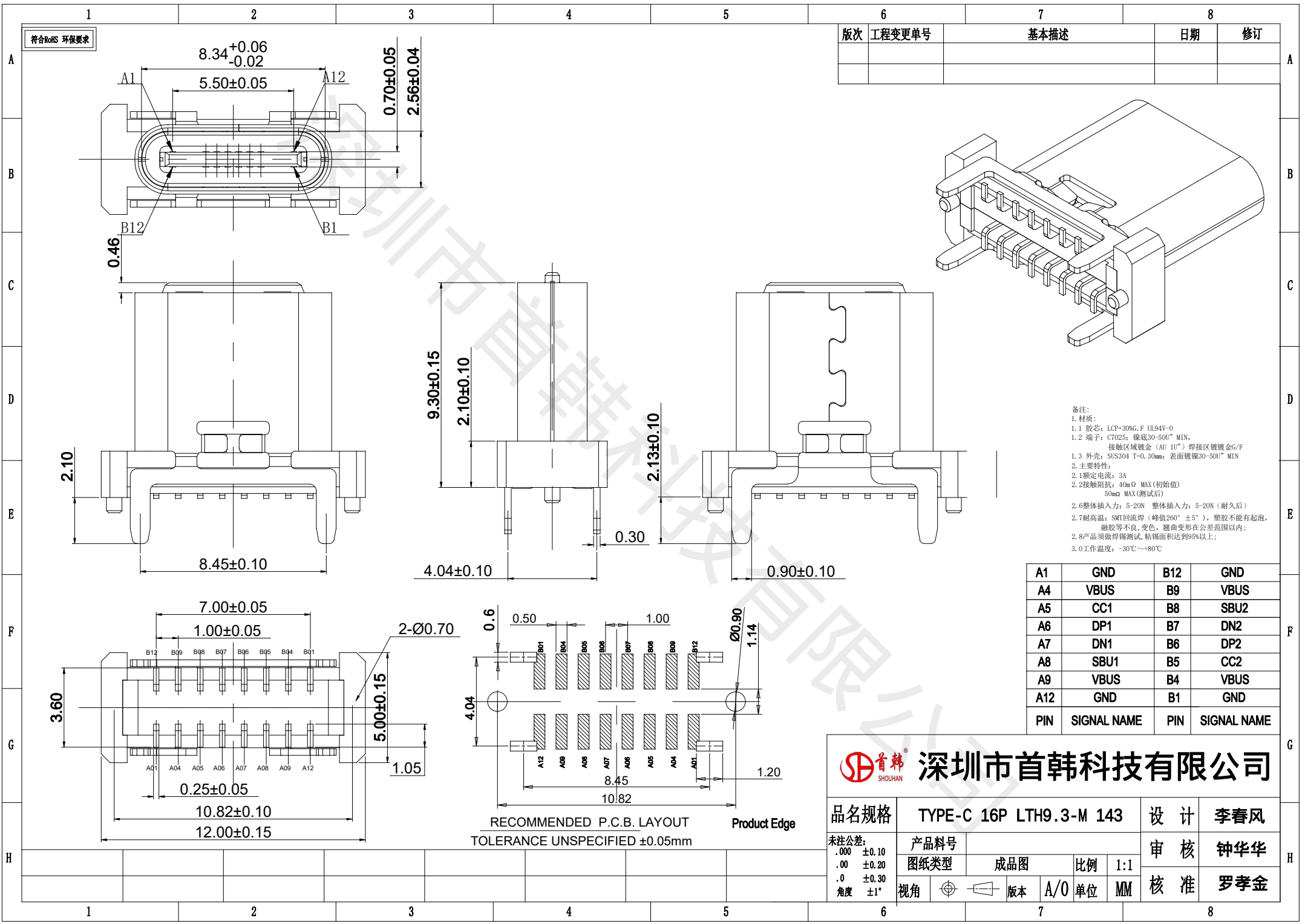
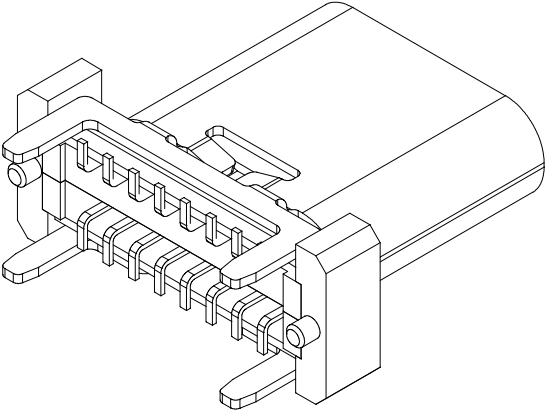




| 版次 | 工程变更单号 | 基本描述 | 日期 | 修订 |
|----|--------|------|----|----|
|    |        |      |    |    |
|    |        |      |    |    |



备注:  
1. 材质:  
1.1 胶芯: LCP+30%G, F UL94V-0  
1.2 端子: C7025; 镀底30-50U" MIN,  
接触区域镀金 (AU 1U") 焊接区镀金5/F  
1.3 外壳: SUS304 T=0.30mm; 表面镀镍30-50U" MIN  
2. 主要特性:  
2.1 额定电流: 3A  
2.2 接触阻抗: 40mΩ MAX (初始值)  
50mΩ MAX (测试后)  
2.6 整体插入力: 5-20N 整体插入力: 5-20N (耐久后)  
2.7 耐高温: SMT回流焊 (峰值260° ±5°), 塑胶不能有起泡,  
融胶等不良, 变色, 翘曲变形在公差范围以内;  
2.8 产品须做焊锡测试, 粘锡面积达到95%以上;  
3. 0 工作温度: -30℃ ~ +80℃

|     |             |     |             |
|-----|-------------|-----|-------------|
| A1  | GND         | B12 | GND         |
| A4  | VBUS        | B9  | VBUS        |
| A5  | CC1         | B8  | SBU2        |
| A6  | DP1         | B7  | DN2         |
| A7  | DN1         | B6  | DP2         |
| A8  | SBU1        | B5  | CC2         |
| A9  | VBUS        | B4  | VBUS        |
| A12 | GND         | B1  | GND         |
| PIN | SIGNAL NAME | PIN | SIGNAL NAME |

 深圳市首韩科技有限公司

|                                                        |                         |                                                                                       |     |     |     |     |     |
|--------------------------------------------------------|-------------------------|---------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|
| 品名规格                                                   | TYPE-C 16P LTH9.3-M 143 |                                                                                       |     |     |     | 设 计 | 李春风 |
| 未注公差:<br>.000 ±0.10<br>.00 ±0.20<br>.0 ±0.30<br>角度 ±1° | 产品料号                    |                                                                                       |     |     |     | 审 核 | 钟华华 |
|                                                        | 图纸类型                    |                                                                                       | 成品图 | 比例  | 1:1 |     |     |
|                                                        | 视角                      |  | 版本  | A/0 | 单位  | MM  | 核 准 |



深圳市首韩科技有限公司

SHENZHEN SHOUHAN TECHNOLOGY CO., LTD

Tel: 0755-27597601 Fax: 0755-27597491

## 承 认 书

### SPECIFICATION FOR APPROVAL

产品编码  
material code:

\_\_\_\_\_

产品名称 Project:

TYPE-C

\_\_\_\_\_

规格型号 Part No:

TYPE-C 16P LTH9.3-M 143

\_\_\_\_\_

贵公司承认印 Approval signatures

| 料 号/Part No. | 签 章/Signatures |
|--------------|----------------|
|              |                |

日期 Date:

|             |     |                                                                                      |
|-------------|-----|--------------------------------------------------------------------------------------|
| 拟制/Drawn    | 李春风 |  |
| 审核/Check    | 钟华华 |                                                                                      |
| 批准/Approved | 罗孝金 |                                                                                      |

|                                          |                                 |                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                        |
|------------------------------------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RATING（额定值）                              |                                 | 20V 3A                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                        |
| PRACTICAL TEMPERATURE RANGE<br>使用温度范围    |                                 | -30℃~80℃<br>在-30℃~80℃温度内使用                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                        |
| STANDARD ATMOSPHEIC CONDITIONS<br>测试标准状况 |                                 | UNLESS OTHERWISE SPECIFIED<br>THE STANDARD RANGE OF ATMOSPHERIC CONDITIONS FOR MAKING MEASUREMENTS AND TESTS ARE AS FOLLOWS:<br>(1) BETWEEN BODY AND CONDUCTOR: 5. C TO 35℃<br>(2) BETWEEN CONDUCTORS NOT TO BE CONTACT: 45% TO 85%<br>(3) PRESSURE: 86Kpa TO 106Kpa<br>在没有指定的情况下测试温度、湿度、气压如下：<br>(1) 温度为 5℃~35℃<br>(2) 湿度为 45%~85%<br>(3) 气压为 86 Kpa~106Kpa |                                                                                                                                                                        |
| MECHANICAL（机械性能）                         |                                 |                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                        |
| ITEM 项目                                  |                                 | TEST CONDITIONS 测试条件                                                                                                                                                                                                                                                                                                                                         | PERFORMANCE 规格                                                                                                                                                         |
| 1                                        | CONNECTION FORCE<br>插入力度        | MEASUREMENT SHALL BE MADE AFTER CONNECTING AND DISCONNECTING USING STANDARD PLUG GAUGE 3 TIMES。<br>依据标准的 PLUG GAUGE 做第 3 次拔插后测定                                                                                                                                                                                                                              | 5~20N                                                                                                                                                                  |
|                                          | DISCONNECTI ON<br>FORCE<br>拔出力度 | MEASUREMENT SHALL BE MADE AFTER CONNECTING AND DISCONNECTING USING STANDARD PLUG GAUGE 3 TIMES。<br>依据标准的 PLUG GAUGE 做第 3 次拔插后测定                                                                                                                                                                                                                              | 6~20N                                                                                                                                                                  |
| 2                                        | TERMINAL STRENGTH<br>端子强度       | A STATIC LOAD OF 0.1N/m(1kgf/cm)SHALL BE APPLIED TO THE TIP OF THE TERMINAL FOR 1 MIN<br>IN ANY DIRECTION<br>向排脚先端的任意一个方向加 1 分钟 0.1N/m(1kgf/cm)的力度.                                                                                                                                                                                                          | THERE SHALL BE NO DAMAGE TO THE TERMINAL SUCH AS CRACKS, LOOSENESS OR PLAY ELECTRICAL ,AND MECHANICAL CHARACTERISTICS SHALL BE SATISFIED<br>在排脚中没有裂开、松动等异常， 满足于机械、电气性能 |
| ELECTRICAL（电气性能）                         |                                 |                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                        |
| ITEM 项目                                  |                                 | TEST CONDITIONS 测试条件                                                                                                                                                                                                                                                                                                                                         | PERFORMANCE 规格                                                                                                                                                         |
| 3.1                                      | CONTACT RESISTANCE<br>接触电阻      | MEASURED AT SMALL CURRENT （100mA OR LESS）<br>1000Hz<br>在微小电流（100 mA）以下测试                                                                                                                                                                                                                                                                                     | 40mΩ MAX                                                                                                                                                               |
| 3.2                                      | INSULATION RESISTANCE<br>绝缘电阻   | APPLY A VOLTAGE OF 100V DC FOR 1 MIN<br>TO FOLLOWING PORTIONS AFTER WHICH MEASUREMENT SHALL BE MADE:<br>(1) BETWEEN BODY AND CONDUCTOR<br>(2) BETWEEN CONDUCTORS NOT TO BE CONTACT<br>(3) BETWEEN CONDUCTORS NOT TO BE WHEN PLUG IS INSERTED DC100V 1 MIN<br>输入 100V DC 电压 1 分钟，按以下接触方法测试：<br>(1) 插座体与排脚之间<br>(2) 不接触的排脚之间<br>(3) 插头插入时不接触排脚之间               | 100MΩ MIN                                                                                                                                                              |

|                 |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |
|-----------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 3.3             | DIELECTRIC STRENGTH<br>耐电压                 | <p>AC 100V 5ms(50~60Hz)FOR 1 MIN TRIP CURRENT:0.5mA</p> <p>(1) BETWEEN BODY AND CONDUCTOR</p> <p>(2) BETWEEN CONDUCTORS NOT TO BE CONTACT</p> <p>(3) BETWEEN CONDUCTORS NOT TO BE WHEN PLUG IS INSERTED DC 100V 1 MIN</p> <p>输入 AC 100V (50Hz) /min 电压 1 分钟感度电流为 0.5mA, 按以下接触方法测试:</p> <p>(1) 插座体与排脚之间</p> <p>(2) 不接触的排脚之间</p> <p>(3) 插头插入时不接触排脚之间</p>                                                                                                                                                                                                                                                                                                  | <p>WITHOUT DAMAGE TO PARTS ARCING OR BREAKDOWN ETC</p> <p>没有绝缘破坏等异常</p>                                                                          |
| URABILITY (耐久性) |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |
|                 | ITEM 项目                                    | TEST CONDITIONS 测试条件                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | PERFORMANCE 规格                                                                                                                                   |
| 4.1             | SOLDERABILITY TEST<br>可焊性试验                | <p>THE TOP OF THE TERMINALS SHALL BE DIPPED 1mm IN THE SOLDER BATH OF <math>250 \pm 5^{\circ}\text{C}</math> FOR <math>5 \pm 0.5</math> SECONDS</p> <p>端子顶部被浸入锡池中 1mm 深,温度为 <math>250 \pm 5^{\circ}\text{C}</math>,时间为 <math>5 \pm 0.5</math> 秒</p>                                                                                                                                                                                                                                                                                                                                                                                                     | <p>(1) SOLDER WETTING TIME SHALL BE 3 SEC OR LESS</p> <p>焊接时间应少于 3 秒</p> <p>(2) THE AREA OF SOLDERING SHOULD BE OVER 75%</p> <p>焊接面积应有 75%以上</p> |
| 4.2             | RESISTANCE TO SOLDERING HEAT TEST<br>耐焊性试验 | <p>REFLOW SOLDERING CONDITIONS:</p> <p>PREHEAT:TEMPERATURE ON THE COPPER FOIL SURFACE SHOULD REACH <math>180^{\circ}\text{C}</math>.120S AFTER THE P.C.B ENTERED INTO THE SOLDERING EQUIPMENT.</p> <p>HIGHEST TEMPERATURE:TEMPERATURE ON THE COPPER FOIL SURFACE SHOULD REACH THE PEAK TEMPERATURE OF <math>260 \pm 5^{\circ}\text{C}</math>WITH IN 20 SECONDS.</p> <p>过回流焊条件:</p> <p>预热: 电镀层表面的温度应达到 <math>180^{\circ}\text{C}</math>,120s 后电路板进入回流焊设备。</p> <p>最高温度: 电镀层表面温度最高为 <math>260 \pm 5^{\circ}\text{C}</math> 且停留不超过 20 秒。</p>  <p>Temperature Profile</p> | <p>WITHOUT DEFORMATION OF CASE OR EXCESSIVE LOOSENESS OF TERMINALS ELECTRICAL CHARACTERISTICS SHALL BE SATISFIED</p> <p>本体无变形, 满足于机械、电气性能</p>    |

|      |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                |
|------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4. 2 | RESISTANCE TO SOLDERING HEAT TEST<br>耐焊性试验 | SOLDERING IRON METHOD:<br>BIT TEMPERATURE $330 \pm 5^{\circ}\text{C}$ APPLICATION<br>TIME OF SOLDERING IRON $3 \pm 0.5$ SEC<br>HOWEVER EXCESSIVE PRESSURE SHALL NOT BE APPLIED TO THE TERMINAL<br>手焊接的时候温度需控制在 $330 \pm 5^{\circ}\text{C}$ , 时间为 $3 \pm 0.5$ 秒, 但不能在排脚上施加异常压力。                                                                                                                                  | WITHOUT DEFORMATION OF CASE OR EXCESSIVE LOOSENESS OF TEMINALS ELECTRICAL CHARACTERISTICS SHALL BE SATISFIED<br>本体无变形, 满足于机械、电气性能                                                                                                              |
| 4. 3 | HUMIDITY TEST<br>潮湿试验                      | THE JACK SHALL BE STORED ATA TEMPERATURE OF $40 \pm 2^{\circ}\text{C}$ AND A HUMIDITY OF 90% TO 96% FOR 96 Hr, THEN THE JACK SHALL BE MAINTAINED AT STANDARD ATMOSPHERIC CONDITION FOR 1 Hr FOR OTHER PROCEDURES<br>放置 $40 \pm 2^{\circ}\text{C}$ 的相应湿度为 90~96% Hr 环境中 96 小时后, 再将样板放在正常环境中 1 小时后进行测试                                                                                                            | THERE SHALL BE NO DAMAGE ON APPEARANCE.<br>MECHANICAL AND ELECTRICAL CHARACTERISTICS SHALL BE SATISFIED<br>外观无异常, 满足于机械、电气性能。                                                                                                                  |
| 4.4  | HEAT TEST<br>耐热试验                          | THE JACK SHALL BE STORED ATA TEMPERATURE OF $70 \pm 2^{\circ}\text{C}$ FOR 96 HOURS, AND THEN IT SHALL BE SUBJECTED TO THE CONTROLLED RECOVERY MBASURBM<br>放置在温度 $70 \pm 2^{\circ}\text{C}$ 中测试 96 小时后, 再放置正常室温中 1 小时来测定                                                                                                                                                                                        |                                                                                                                                                                                                                                                |
| 4. 5 | COLD TEST<br>耐寒试验                          | THE JACK SHALL BE STORED ATA TEMPERATURE OF $-25 \pm 3^{\circ}\text{C}$ FOR 96 HOURS AND THEN IT SHALL BE SUBJECTED TO THE CONTROLLED RECOVERY CONDITIONS FOR 1 HOUR AFTER WHICH<br>放置在温度 $-25 \pm 3^{\circ}\text{C}$ 中 96 小时后, 再放置常温常湿中 1 小时来测定                                                                                                                                                                | THERE SHALL BE NO DAMAGE ON APPEARANCE<br>MECHANICAL AND ELECTRICAL CHARACTERISTICS SHALL BE SATISFIED<br>外观无异常, 满足于机械、电气性能                                                                                                                    |
| 4. 6 | LIFE TEST<br>寿命试验                          | WITHOUT LOAD<br>CONNECTION AND DISCONNECTION SHALL BE MADE WITH THE MATING PLUGS AND JACKS FOR 5000 CYCLES AT A SPEED OF 10 TO 25 CYCLES/MIN<br>无负荷<br>将结合了的标准Plug(尽量要近于中心的)在1分钟内以10-25的速度, 进行 5000 次插入, 拔出<br>LOAD:<br>AT RATING CONDITION (NON-INDUCTIVE LOAD)<br>CONNECTION AND DISCONNECTION SHALL BE MADE 5000 CYCLES AT A SPEED 10 TO 20 CYCLES / MIN<br>负荷<br>以定格状态(无诱导负荷)在1 分钟内以10-20次的速度进行 5000 次插入、拔出 | (1) CONTACT RESISTANCE SHALL BE $\leq 0.1 \Omega$<br>(2) DISCONNECTION FORCE SHALL BE 0.8 TO 2.0N<br>(3) MECHANICAL AND ELECTRICAL CHARACTERISTICS SHALL BE SATISFIED<br>(1) 接触电阻 $\leq 0.1 \Omega$<br>(2) 拔出力是 0.8~2.0N<br>(3) 其它: 满足于机械、电气性能 |

|     |                                               |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                       |
|-----|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.7 | <p>TEMPERATURE CYCLING TEST</p> <p>温度循环测试</p> | <p>THE JACK SHALL BE SUB JECTED TO 5 CYCLES OF THE FOLLOWING CONDITIONS SHOWED IN THE FIGURE,AND THEN SHALL RETURNED ALLOWED TO REMAIN IN ROOM AMBIENT CONDITION FOR 30 MINUTES</p> <p>将插座以下列条件作 5 个循环， 然后放回室内环境 30 分钟</p> <p>Temp(°C)</p>        | <p>THERE SHALL BE NO DEFORMATION OR CRACKS IN MOLDED PART.</p> <p>INSERTION &amp; EXTRACTION FORCE:3 TO 20N</p> <p>CONTACT RESISTANCE:MAX.30M Ω</p> <p>INSULATION RESISTANCE: MIN.100 M Ω</p> <p>DIELECTRIC WITHSTANDING VOLTAGE: 100VAC/MIN(BETWEEN TERMINALS)</p> <p>产品不能变形与破裂</p> <p>插拔力: 3N 至 20N</p> <p>接触电阻: 最大 30m Ω</p> <p>绝缘电阻: 最小 100 M Ω</p> <p>绝缘耐压: 最小 100VAC (端子之间)</p> |
| 4.8 | <p>COLD&amp;HEAT SHOCK TEST</p> <p>冷热冲击测试</p> | <p>THE JACK SHALL BE SUBJECTED TO 5 CYCLES OF THE FOLLOWING CONDITIONS SHOWED IN THE FIGURE,AND THEN SHALL RETURNED AND ALLOWED TO REMAIN IN ROOM AMBIENT CONDITION FOR 30 MINUTES</p> <p>将插座以下列条件作 5 个循环， 然后放回室内环境 30 分钟</p> <p>TEMP (°C)</p>  | <p>THERE SHALL BE NO DEFORMATION OR CRACKS IN MOLDED PART.</p> <p>INSERTION &amp; EXTRACTION FORCE:3 TO 25N</p> <p>CONTACT RESISTANCE:MAX.30M Ω</p> <p>INSULATION RESISTANCE: MIN.100 M Ω</p> <p>DIELECTRIC WITHSTANDING VOLTAGE: 500VAC/MIN(BETWEEN TERMINALS)</p> <p>产品不能变形与破裂</p> <p>插拔力: 3N 至 25N</p> <p>接触电阻: 最大 30m Ω</p> <p>绝缘电阻: 最小 100 M Ω</p> <p>绝缘耐压: 最小 500VAC (端子之间)</p> |