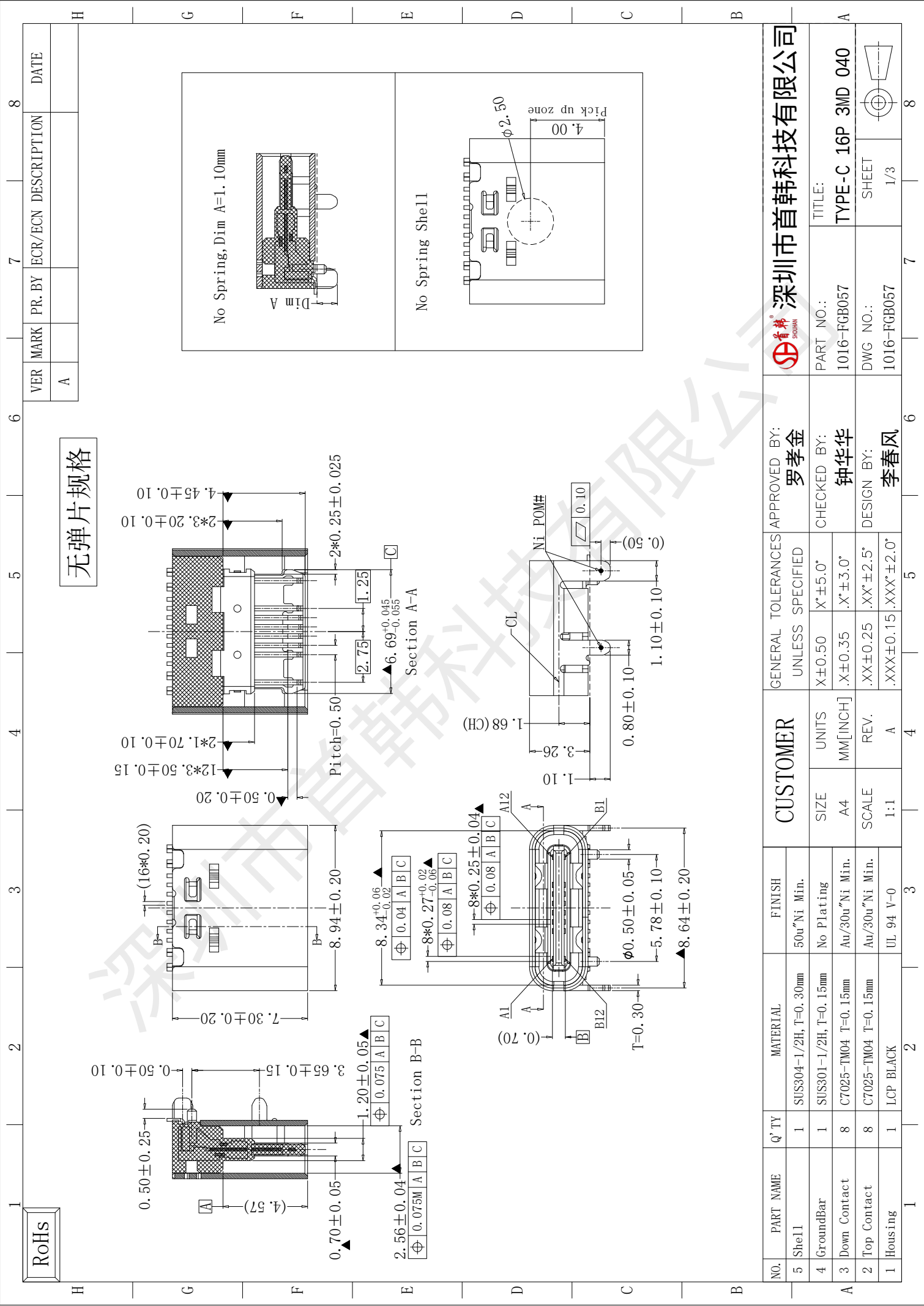
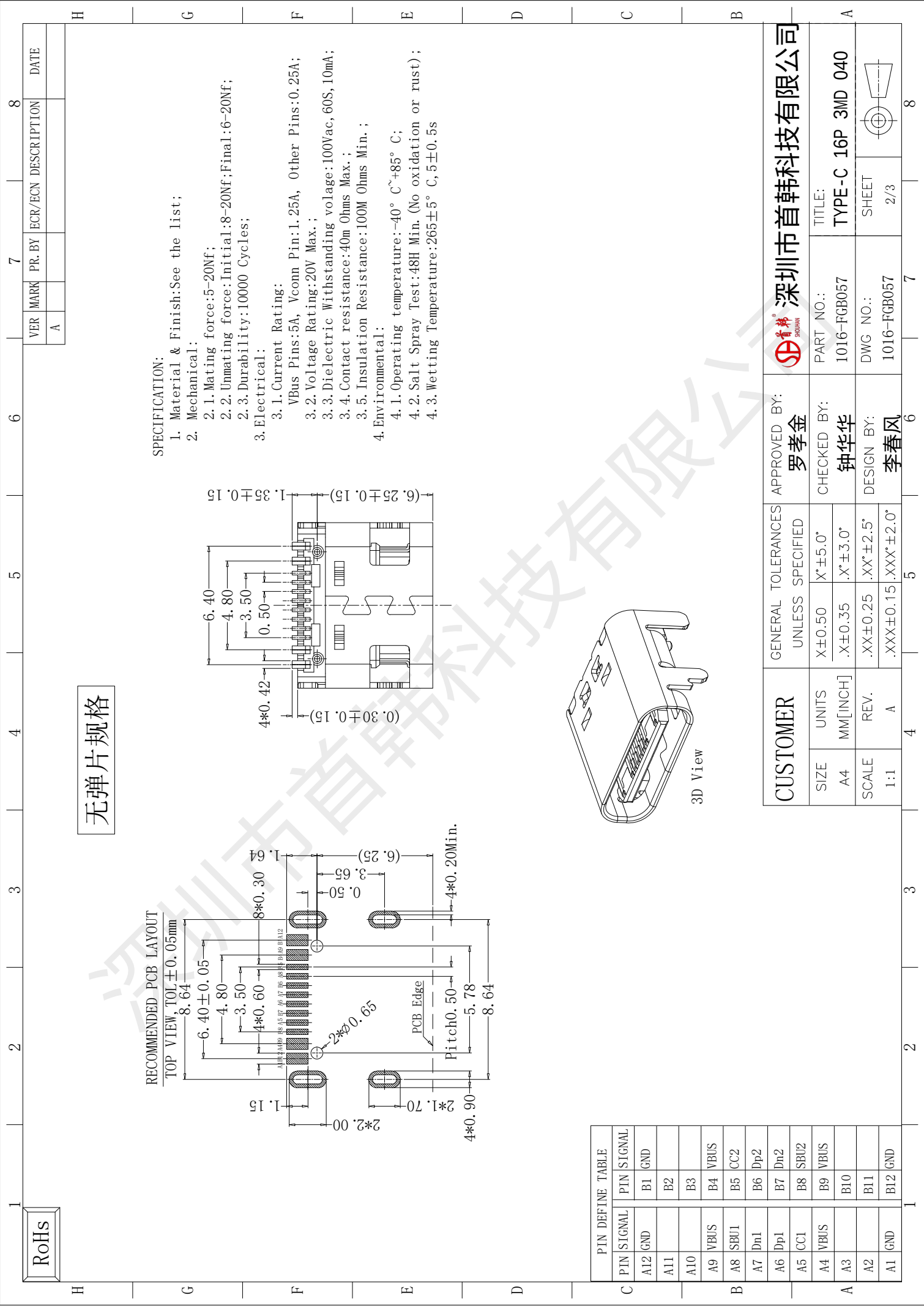




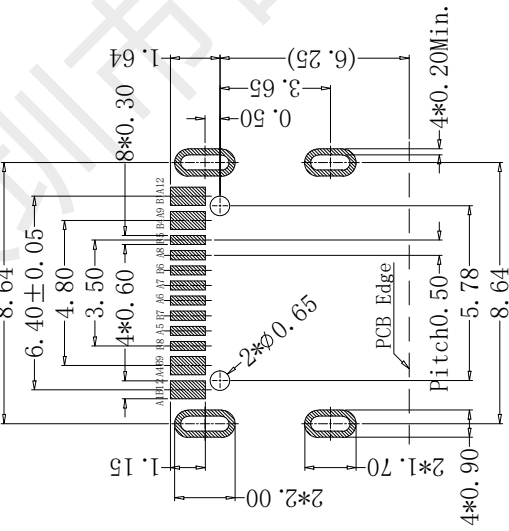


RoHS

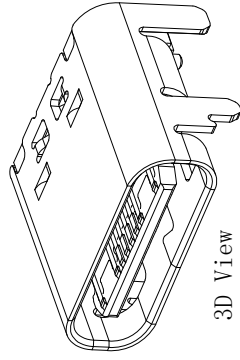
无弹片规格

RECOMMENDED PCB LAYOUT

TOP VIEW, TOL ±0.05mm



| PIN DEFINE TABLE |        |     |        |
|------------------|--------|-----|--------|
| PIN              | SIGNAL | PIN | SIGNAL |
| A12              | GND    | B1  | GND    |
| A11              |        | B2  |        |
| A10              |        | B3  |        |
| A9               | VBUS   | B4  | VBUS   |
| A8               | SBU1   | B5  | CC2    |
| A7               | Dn1    | B6  | Dp2    |
| A6               | Dp1    | B7  | Dn2    |
| A5               | CC1    | B8  | SBU2   |
| A4               | VBUS   | B9  | VBUS   |
| A3               |        | B10 |        |
| A2               |        | B11 |        |
| A1               | GND    | B12 | GND    |



| CUSTOMER |          | GENERAL TOLERANCES UNLESS SPECIFIED |            | APPROVED BY: |  |
|----------|----------|-------------------------------------|------------|--------------|--|
| SIZE     | UNITS    | X±0.50                              | X*±5.0°    | 罗孝金          |  |
| A4       | MM[INCH] | .X±0.35                             | .X*±3.0°   | 钟德华          |  |
| SCALE    | REV.     | .XX±0.25                            | .XX*±2.5°  | 李春风          |  |
| 1:1      | A        | .XXX±0.15                           | .XXX*±2.0° |              |  |

| SPECIFICATION:                                   |                                  | PART NO.:   |  | TITLE:             |  |
|--------------------------------------------------|----------------------------------|-------------|--|--------------------|--|
| 1. Material & Finish:                            | See the list;                    | 1016-FGB057 |  | TYPE-C 16P 3MD 040 |  |
| 2. Mechanical:                                   |                                  | DWG NO.:    |  | SHEET              |  |
| 2.1. Mating force:                               | 5-20Nf;                          | 1016-FGB057 |  | 2/3                |  |
| 2.2. Unmating force:                             | Initial:8-20Nf;Final:6-20Nf;     |             |  |                    |  |
| 2.3. Durability:                                 | 10000 Cycles;                    |             |  |                    |  |
| 3. Electrical:                                   |                                  |             |  |                    |  |
| 3.1. Current Rating:                             |                                  |             |  |                    |  |
| VBUS Pins:5A, Vconn Pin:1.25A, Other Pins:0.25A; |                                  |             |  |                    |  |
| 3.2. Voltage Rating:                             | 20V Max.;                        |             |  |                    |  |
| 3.3. Dielectric Withstanding voltage:            | 100Vac, 60S, 10mA;               |             |  |                    |  |
| 3.4. Contact resistance:                         | 40m Ohms Max.;                   |             |  |                    |  |
| 3.5. Insulation Resistance:                      | 100M Ohms Min.;                  |             |  |                    |  |
| 4. Environmental:                                |                                  |             |  |                    |  |
| 4.1. Operating temperature:                      | -40° C~+85° C;                   |             |  |                    |  |
| 4.2. Salt Spray Test:                            | 48H Min. (No oxidation or rust); |             |  |                    |  |
| 4.3. Wetting Temperature:                        | 265±5° C, 5±0.5s                 |             |  |                    |  |

| CUSTOMER |          | GENERAL TOLERANCES UNLESS SPECIFIED |            | APPROVED BY: |  |
|----------|----------|-------------------------------------|------------|--------------|--|
| SIZE     | UNITS    | X±0.50                              | X*±5.0°    | 罗孝金          |  |
| A4       | MM[INCH] | .X±0.35                             | .X*±3.0°   | 钟德华          |  |
| SCALE    | REV.     | .XX±0.25                            | .XX*±2.5°  | 李春风          |  |
| 1:1      | A        | .XXX±0.15                           | .XXX*±2.0° |              |  |



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

客 户 Customer:

产品名称 Project:

TYPE-C

规格型号 Part No:

TYPE-C 16P 3MD 040

贵公司承认印 Approval signatures

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

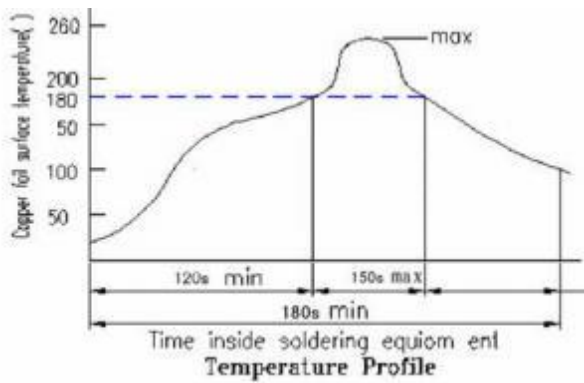
日期 Date:

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

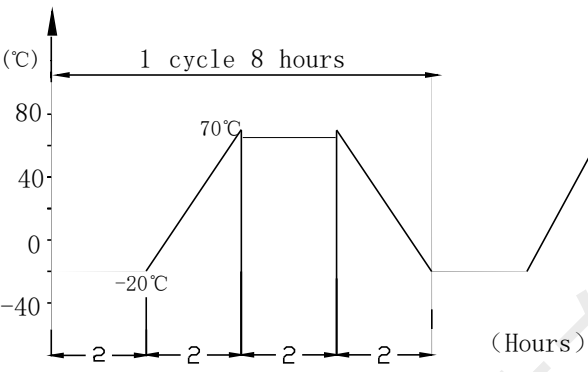
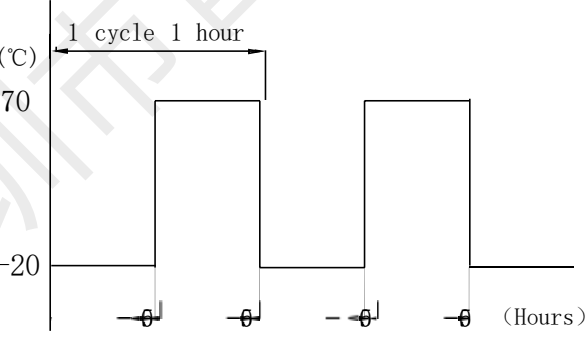


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|                                          |                                 |                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                         |
|------------------------------------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RATING（额定值）                              |                                 | 2 0 V 5 A                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                         |
| PRACTICAL TEMPERATURE RANGE<br>使用温度范围    |                                 | -30℃~85℃<br>在-30℃~85℃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                                                                                                                                                                                                                              | 8~20N                                                                                                                                                                   |
| 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 m A）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<br>MEASUREMENT<br>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<br>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                 | AC 100V 5ms(50~60Hz)FOR 1 MIN TRIP CURRENT:0.5mA<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 DC 100V 1 MIN<br>输入 AC 100V (50Hz) /min 电压 1 分钟感度电流为 0.5mA,<br>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                                                                                                                                                                                                                                 | WITHOUT DAMAGE TO PARTS ARCING OR BREAKDOWN ETC<br>没有绝缘破坏等异常                                                                      |
| 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                | THE TOP OF THE TERMINALS SHALL BE DIPPED 1mm IN THE SOLDER BATH OF $250 \pm 5^{\circ}\text{C}$ FOR $5 \pm 0.5$ SECONDS<br>端子顶部被浸入锡池中 1mm 深,温度为 $250 \pm 5^{\circ}\text{C}$ ,时间为 $5 \pm 0.5$ 秒                                                                                                                                                                                                                                                                                                                                                          | (1) SOLDER WETTING TIME SHALL BE 3 SEC OR LESS<br>焊接时间应少于 3 秒<br>(2) THE AREA OF SOLDERING SHOULD BE OVER 75%<br>焊接面积应有 75%以上     |
| 4.2             | RESISTANCE TO SOLDERING HEAT TEST<br>耐焊性试验 | REFLOW SOLDERING CONDITIONS:<br>PREHEAT:TEMPERATURE ON THE COPPER FOIL SURFACE SHOULD REACH $180^{\circ}\text{C}$ .120S AFTER THE P.C.B ENTERED INTO THE SOLDERING EQUIPMENT.<br>TALLEST TEMPERATURE:TEMPERATURE ON THE COPPER FOIL SURFACE SHOULD REACH THE PEAK TEMPERATURE OF $260 \pm 5^{\circ}\text{C}$ WITH IN 20 SECONDS.<br>过回流焊条件:<br>预热:电镀层表面的温度应达到 $180^{\circ}\text{C}$ ,120s 后电路板进入回流焊设备。<br>最高温度:电镀层表面温度最高为 $260 \pm 5^{\circ}\text{C}$ 且停留不超过 20 秒。  | WITHOUT DEFORMATION OF CASE OR EXCESSIVE LOOSENESS OF TERMINALS ELECTRICAL CHARACTERISTICS SHALL BE SATISFIED<br>本体无变形,满足于机械、电气性能 |

|      |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                 |
|------|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4. 2 | RESISTANCE<br>TO<br>SOLDERING<br>HEAT TEST<br>耐焊性试验 | <p>SOLDERING IRON METHOD:<br/>BIT TEMPERATURE <math>330 \pm 5^{\circ}\text{C}</math> APPLICATION<br/>TIME OF SOLDERING IRON <math>3 \pm 0.5</math> SEC<br/>HOWEVER EXCESSIVE PRESSURE SHALL<br/>NOT BE APPLIED TO THE TERMINAL<br/>手焊接的时候温度需控制在 <math>330 \pm 5^{\circ}\text{C}</math> ,时间<br/>为 <math>3 \pm 0.5</math> 秒,但不能在排脚上施加异常压力。</p>                                                                                                                    | <p>WITHOUT DEFORMATION OF CASE OR<br/>EXCESSIVE LOOSENESS OF TEMINALS<br/>ELECTRICAL CHARACTERISTICS SHALL<br/>BE SATISFIED<br/>本体无变形, 满足于机械、电气性能</p>                                                                                                                           |
| 4. 3 | HUMIDITY<br>TEST<br>潮湿试验                            | <p>THE JACK SHALL BE STORED ATA TEMPERATURE<br/>OF <math>40 \pm 2^{\circ}\text{C}</math> AND A HUMIDITY OF 90%TO 96% FOR<br/>96 Hr, THEN THE JACK SHALL BE MAINTAINED<br/>AT STANDARD ATMOSPHERIC CONDITION FOR 1 Hr<br/>FOR OTHER PROCEDURES<br/>放置 <math>40 \pm 2^{\circ}\text{C}</math> 的相应湿度为 90~96% Hr 环境中 96 小时后,<br/>再将样板放在正常环境中 1 小时后进行测试</p>                                                                                                           | <p>THERE SHALL BE NO DAMAGE ON<br/>APPEARANCE。<br/>MECHANICAL AND ELECTRICAL<br/>CHARACTERISTICS SHALL BE<br/>SATISFIED<br/>外观无异常, 满足于机械、电气性能。</p>                                                                                                                              |
| 4.4  | HEAT TEST<br>耐热试验                                   | <p>THE JACK SHALL BE STORED ATA TEMPERATURE<br/>OF <math>70 \pm 2^{\circ}\text{C}</math> FOR 96 HOURS, AND THEN IT SHALL<br/>BE SUBJECTED TO THE CONTROLLED RECOVERY<br/>MBASURBM<br/>放置在温度 <math>70 \pm 2^{\circ}\text{C}</math> 中测试 96 小时后, 再放置正常室温中 1<br/>小时来测定</p>                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                 |
| 4. 5 | COLD TEST<br>耐寒试验                                   | <p>THE JACK SHALL BE STORED ATA TEMPERATURE<br/>OF <math>-25 \pm 3^{\circ}\text{C}</math> FOR 96 HOURS AND THEN IT SHALL<br/>BE SUBJECTED TO THE CONTROLLED RECOVERY<br/>CONDITIONS FOR 1 HOUR AFTER WHICH<br/>放置在温度 <math>-25 \pm 3^{\circ}\text{C}</math> 中 96 小时后, 再放置常温常湿中 1 小<br/>时来测定</p>                                                                                                                                                                 | <p>THERE SHALL BE NO DAMAGE ON<br/>APPEARANCE<br/>MECHANICAL AND ELECTRICAL<br/>CHARACTERISTICS SHALL BE<br/>SATISFIED<br/>外观无异常, 满足于机械、电气性能</p>                                                                                                                                |
| 4. 6 | LIFE TEST<br>寿命试验                                   | <p>WITHOUT LOAD<br/>CONNECTION AND DISCONNECTION SHALL<br/>BE MADE WITH THE MATING PLUGS AND<br/>JACKS FOR 10000 CYCLES AT A SPEED<br/>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<br/>内以10-25的速度, 进行10000 次插入, 拔出<br/>LOAD:<br/>AT RATING CONDITION (NON-INDUCTIVE LOAD)<br/>CONNECTION AND DISCONNECTION SHALL<br/>BE MADE 10000 CYCLES AT A SPEED<br/>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<br/>的速度进行 10000 次插入、拔出</p> | <p>(1) CONTACT RESISTANCE SHALL BE <math>\leq 0.1 \Omega</math><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 <math>\leq 0.1 \Omega</math><br/>(2) 拔出力是 0.8~2.0N<br/>(3) 其它:满足于机械、电气性能</p> |

|     |                                               |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                       |
|-----|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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> |