

| REV. | ECN | DESCRIPTION | MD'F'D | DATE |
|------|-----|-------------|--------|------|
|      |     | 新订图面        |        |      |

备注(NOTE):

1材质:

1.1胶芯: LCP UL94 V-0

1.2端子: C2680, T=0.2mm; 镍底, 镀金

1.3外壳: 不锈钢201-II 表面镀镍

2.电气特性:

2.1.接触区: 接触电阻40mΩ Max, 允许10mA交流化量. 测试条件: 20mv, 100mA下测量.

2.2.接触电流: 3A VBUS引脚; 1.25A用于GND引脚; 其他引脚为0.25A.

2.3.额定电压: 20V.

2.4.耐电电压: 100VAC.

2.5.绝缘电阻: 至少100兆欧.

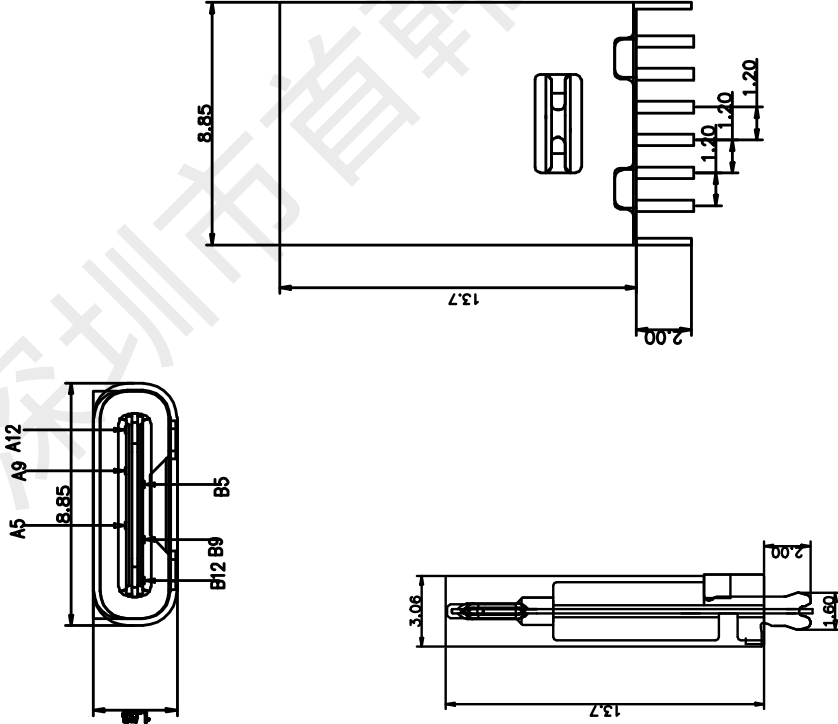
3.机械性能:

3.1.插入力: 0.5-2.0N

3.2.拔出力: 0.6-2.0N

3.3.插拔次数: 5000次.

4.工作环境: -30℃ to +80℃.



USB TYPE C PIN ASSIGNMENTS

| PIN NUMBER | SIGNAL NAME | PIN NUMBER | SIGNAL NAME |
|------------|-------------|------------|-------------|
| B12        | GND         |            |             |
| B9         | VBUS        |            |             |
| A5         | CC1         | B5         | CC2         |
| A9         | VBUS        |            |             |
| A12        | GND         |            |             |

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TABLE:

| NO | PART            | QTY | Material                           |
|----|-----------------|-----|------------------------------------|
| 1  | SHELL           | 1   | ZINC ALLOY, NI30u"Min PLATED       |
| 2  | CONTACT         | 6   | C2680, TIN80u"/Au1u"/Ni30u" PLATED |
| 3  | IMD HOUSING     | 1   | LCP UL94 V-0 BLACK                 |
| 4  | CAP             | 1   | LCP UL94 V-0 BLACK                 |
| 5  | WATERPROOF RING | 1   | SILICONE UL94 V-0 BLACK            |

|              |                       |
|--------------|-----------------------|
| 品名 (ITEM NO) | TYPE-C 6P LCH13.7 108 |
| 料号 (PART NO) |                       |
| 图号 (DWG NO)  | A1                    |

|               |          |                 |
|---------------|----------|-----------------|
| 页码 (SHEET)    | 1        | 单位 (UNIT): 個    |
| 版本 (VER)      | A1       | 比例 (SCALE): 1:1 |
| 日期 (DATE)     | 2022.9.3 | 设计 (DESIGN)     |
| 设计 (DESIGN)   | 李春凤      | 审核 (CHECKED)    |
| 审核 (CHECKED)  | 钟华华      | 批准 (APPROVED)   |
| 批准 (APPROVED) | 罗孝金      |                 |

未注公差

|       |
|-------|
| ±0.25 |
| ±0.13 |
| ±0.10 |
| ±0.08 |
| ±0.05 |



深圳市首韩科技有限公司

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## 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 6P LCH13.7 108

\_\_\_\_\_

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 |                                                                                      |



# 深圳市首韩科技有限公司

|                                          |                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                        |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RATING（额定值）                              |                                                                                                                                                                                                                                                                                                                                                                    | 2 0 V    3 A                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                        |
| 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                                                                                                                                                                                                                | 0.5~2.0Kgf                                                                                                                                                             |
|                                          | 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                                                                                                                                                                                                                | 0.6~2.04Kgf                                                                                                                                                            |
| 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 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                 | 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 DEFOR MATION 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. 2 | RESISTANCE<br>TO<br>SOLDERING<br>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<br>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<br>为 $3 \pm 0.5$ 秒,但不能在排脚上施加异常压力。                                                                                                                                                 | 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                                                                                                                  |
| 4. 3 | HUMIDITY<br>TEST<br>潮湿试验                            | THE JACK SHALL BE STORED ATA TEMPERATURE<br>OF $40 \pm 2^{\circ}\text{C}$ 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 $40 \pm 2^{\circ}\text{C}$ 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                                                                                                                  | 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。                                                                                                                      |
| 4.4  | HEAT TEST<br>耐热试验                                   | THE JACK SHALL BE STORED ATA TEMPERATURE<br>OF $70 \pm 2^{\circ}\text{C}$ FOR 96 HOURS, AND THEN IT SHALL<br>BE SUBJECTED TO THE CONTROLLED RECOVERY<br>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<br>小时来测定                                                                                                                                                                                                |                                                                                                                                                                                                                                                             |
| 4. 5 | COLD TEST<br>耐寒试验                                   | THE JACK SHALL BE STORED ATA TEMPERATURE<br>OF $-25 \pm 3^{\circ}\text{C}$ 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 $-25 \pm 3^{\circ}\text{C}$ 中 96 小时后, 再放置常温常湿中 1 小<br>时来测定                                                                                                                                                                       | 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                                                                                                                        |
| 4. 6 | LIFE TEST<br>寿命试验                                   | WITHOUT LOAD<br>CONNECTION AND DISCONNECTION SHALL<br>BE MADE WITH THE MATING PLUGS AND<br>JACKS FOR 5000 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<br>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<br>BE MADE 5000 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 5000次插入、拔出 | (1) CONTACT RESISTANCE SHALL BE $\leq$<br>0.1 $\Omega$<br>(2) DISCONNECTION FORCE SHALL BE<br>0.8 TO 2.0N<br>(3) MECHANICAL AND ELECTRICAL<br>CHARACTERISTICS SHALL BE<br>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> |