| 编号 | SCTF202305028 |
|---|---|
| 日期 | 2023/4/21 |
| 版本 | B01 |

RoHS compliant

# 承 认 书

# SPECIFICATION FOR APPROVAL

| | |
|---|---|
| 客户名称 Customer Name： | Customer |
| 供应商物料名称 Part Name： | 石英晶体振荡器 |
| 产品描述 Description： | SMD7050 25.000MHz/3.3V |
| 供应商物料料号 Part NO.： | S7D25.000000B20F30T |
| 供应商名称 Supplier Name ： | 深圳市星通时频电子有限公司 |

PLEASECONFIRMOURSPECIFICATION。敬请确认规格书之内容。

| CUSTOMER APPROVAL 客户审批 | | |
|---|---|---|
| 物料代号 PART NO. _____<br>使用于机型 USED IN MODEL: _____ | | |
| 工程部 | 品质部 | 采购部 |
| | | |

(敬请承认后返回一份，谢谢！)

| SUPPLIER APPROVAL 供应商审批 | | |
|---|---|---|
| DGN.制表人 | CKD. 校对 | APPD. 审核、签章 |
| 吴丽红 | 李良 | 胡华才 |

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# RoHS Compliant

| Revision Record | | | | |
|---|---|---|---|---|
| Rev. | Revise page<br>修订页 | Revise contents<br>修订内容 | Rev. Date<br>修订日期 | Reviser<br>修订人 |
| A02 | N/A | Initial released. | 2013/1/1 | Martin.Hu |
| A03 | N/A | The version is upgraded and the content remains unchanged. | 2018/2/25 | Martin.Hu |
| B01 | Page2 | The version is upgraded and add revision record page. | 2021/2/24 | Martin.Hu |
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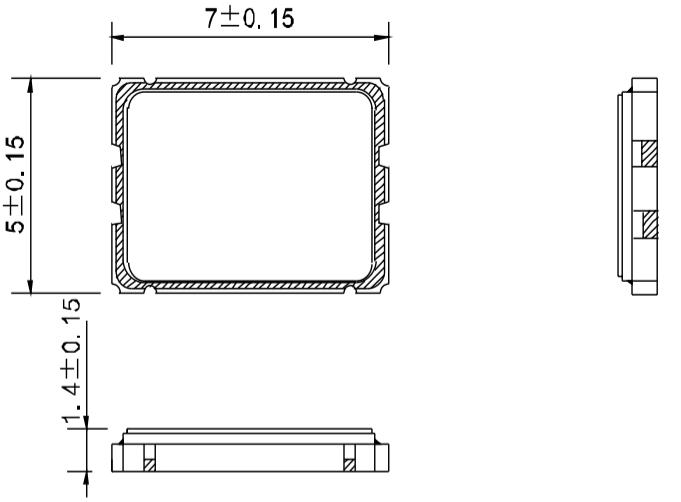
## ■ Electrical Specification 电气参数

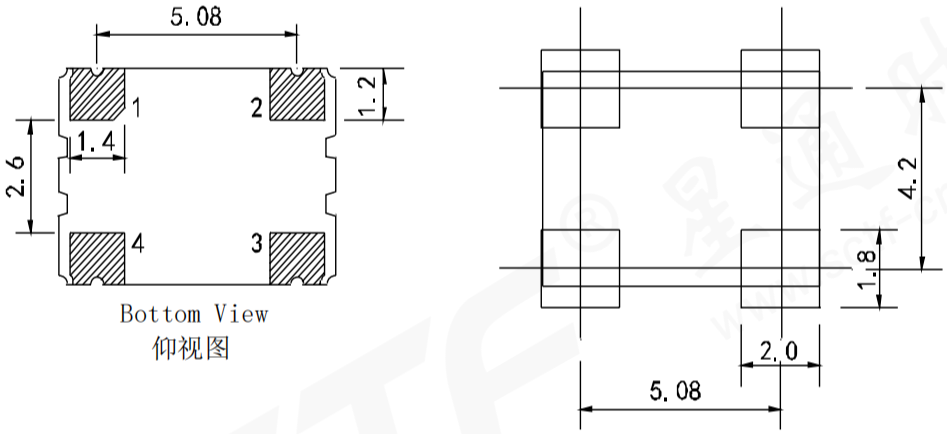
| N0. | Item | Electrical Spec. | Notes |
|---|---|---|---|
| 1 | Holder Type<br>封装 | SMD7050 | |
| 2 | Nominal Frequency<br>标称频率 | 25.000000 MHz | |
| 3 | Frequency stability<br>常温频差 | ±20ppm | at 25℃±2℃ |
| 4 | Temperature Drift<br>温度频差 | ±30ppm | at -40～85℃ |
| 5 | Operating voltage<br>工作电压 | 3.3V | ±10% max. |
| 6 | Output<br>输出模式 | CMOS | |
| 7 | Output load condition<br>负载 | 15pF | |
| 8 | Current consumption<br>消耗电流 | 10 mA max. | |
| 9 | Operating temperature Range<br>工作温度范围 | -40～85℃ | |
| 10 | Storage Temperature Range<br>存储温度范围 | -55～125℃ | |
| 11 | Duty Cycle<br>占空比 | 45%-55% | |
| 12 | Rise / Fall Time<br>上升/下降沿时间 | 5 nS max. | |
| 13 | High output voltage<br>高电平 | 0.9Vdd min. | |
| 14 | Low output voltage<br>低电平 | 0.1Vdd max. | |
| 15 | Start-up Time<br>起振时间 | 5mS max. | To 90% of Final Amplitude |
| 16 | Enable Voltage High (Logic 1)<br>使能高电平 | 70%Vdd min. | Output will be enable if OE is Logic 1 or open ;<br>Output will be disable if OE is Logic 0.<br>输出使能OE是高电平1或者悬空，频率输出；输出使能OE是低电平0，则无频率输出。 |
| 17 | Enable Voltage Low (Logic 0)<br>使能低电平 | 30%Vdd max. | |
| 18 | Enable Delay Time<br>使能延迟 | 150 uS max. | |
| 19 | Aging<br>老化 | ±3ppm | 1st. Year at 25℃ |

## ■ DIMENSIONS 产品尺寸

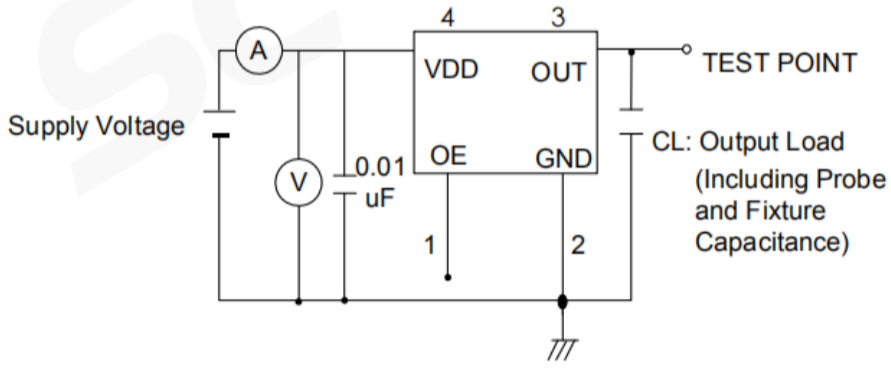
Units (单位)：mm(毫米)

Pad Functions:
1. ENABLE CONTROL
2. GND
3. OUT PUT
4. VDD



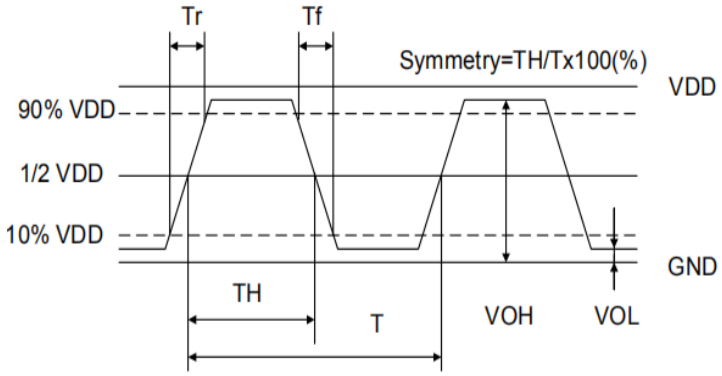

## ■ TESTING CIRCUIT测试电路




※ Notes: PIN 1 connected to Vdd or floating, the product is working properly;connected to GND,stops working.

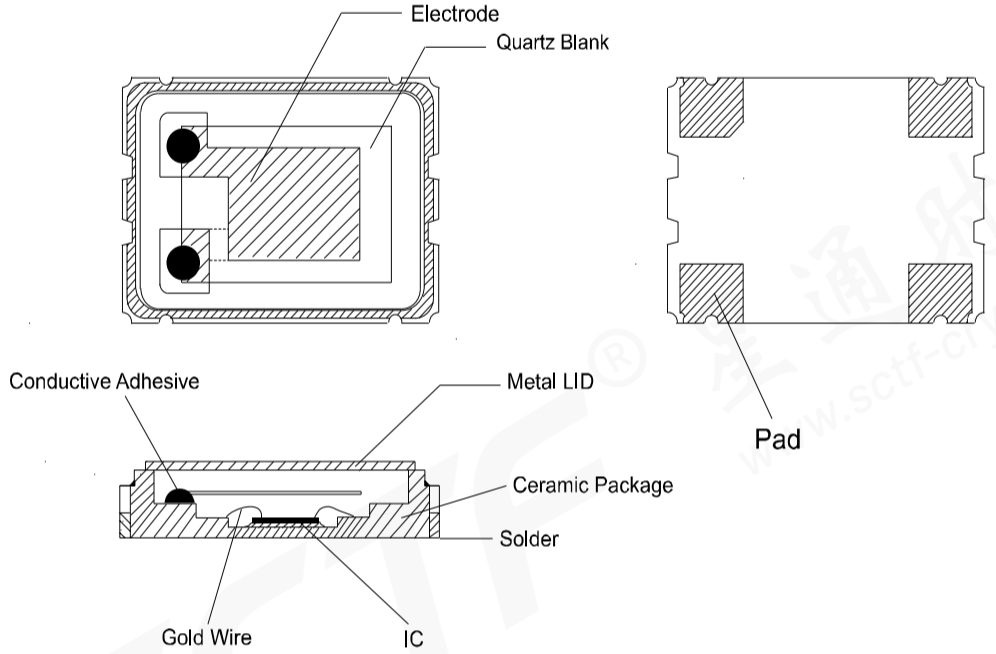
| SHENZHEN SCTF ELECTRONICS CO. , LTD | | |
|---|---|---|
| DATE | Specification of quartz crystal oscillator<br>石英晶体振荡器规格书 | Page: |
| 2023/4/21 | P/N: S7D25.000000B20F30T<br>Spec.NO.: SCTF202305028 | 4 |

## ■ WAVEFORM CONDITIONS 输出波形

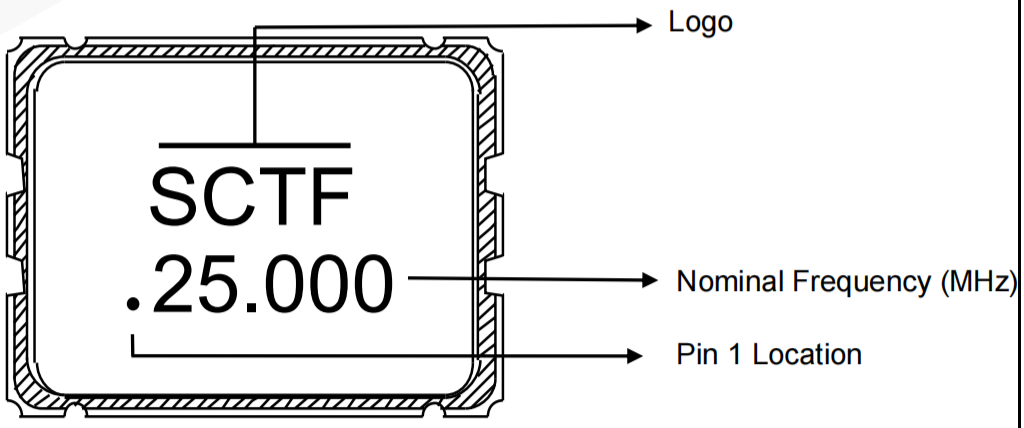



Waveform measurement system should have a min. bandwidth of 5 times the frequency being tested.

## ◆ Product Structure产品结构

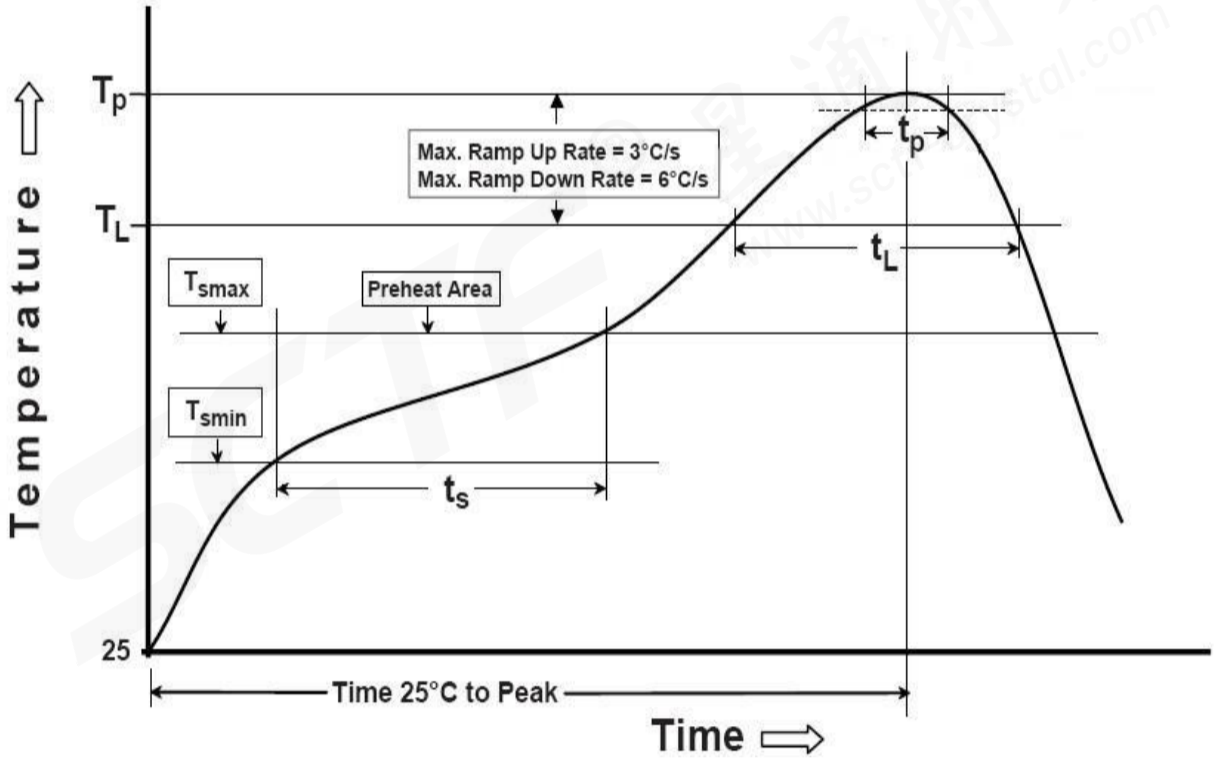



## ◆ Marking印字



## ◆ REFLOW PROFILES 回流焊条件

| Profile Feature | Sn-Pb Eutectic Assembly | Pb-Free Assembly |
|---|---|---|
| Preheat/Soak<br>●Temperature Min(Ts min)<br>●Temperature Max (Ts max)<br>●Time (Ts min to Ts max) | <br>100 °C<br>150 °C<br>60-120 seconds | <br>150 °C<br>200 °C<br>60-120 seconds |
| Ramp-up rate (TL to Tp) | 3 °C/second max. | 3 °C/second max. |
| Time maintained above<br>●Liquidous temperature (TL)<br>●Time (tL) maintained above TL | <br>183 °C<br>60-150 seconds | <br>217 °C<br>60-150 seconds |
| Peak package body temperature (Tp) | 235℃ | 260℃ |
| Time within 5 °C of the specified classification temperature (Tp) | 20 seconds | 30 seconds |
| Ramp-down rate (Tp to TL) | 6 °C/second max. | 6 °C/second max. |
| Time 25 °C to peak temperature | 6 minutes max. | 8 minutes max. |
| **Suggust reflow times** | **3 Times max.** | |

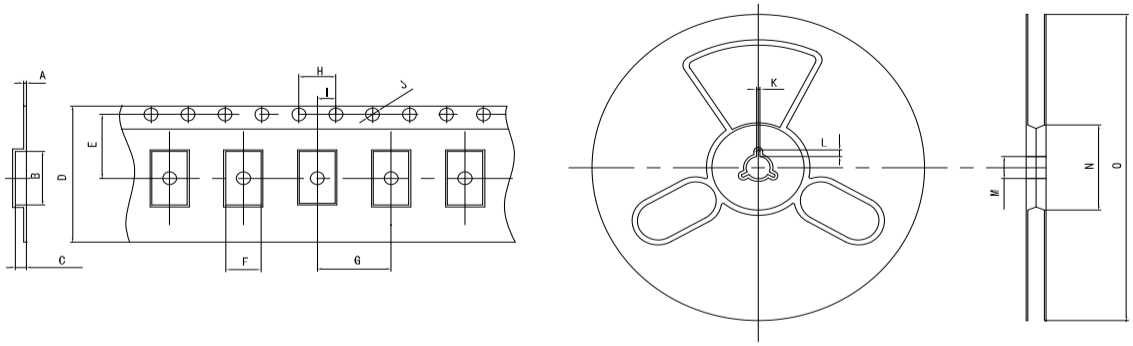


## ◆ RELIABILITY SPECIFICATION可靠性参数

| 序号<br>NO. | 项目<br>ITEM | 条件<br>CONDITIONS | 合格标准<br>BASIS OF VERDICT |
|---|---|---|---|
| 1 | 跌落<br>DROP | 100cm高处自由跌落到3cm厚木板上,3次<br>High:100cm;Thickness:3cm;3 times. | △FL≤±5ppm |
| 2 | 振动<br>VIBRATION | 频率 Frequency:10~57.7Hz:幅度 Amplitude:±0.75mm<br>频率Frequency:57.7Hz~500Hz:加速度幅度acceleration rate:98m/s2<br>周期 Cycle time:10-500-10Hz：15min<br>振动方向 Direction:X,Y, Z<br>振动时间 Duration: 每个方向2小时 2 h/direction. | △FL≤±5ppm |
| 3 | 温度变化<br>TEMPERATURE SHOCK | -40℃±2℃（30min）←→85℃±2℃（30min）;循环10次<br>-40℃±2℃（30min）←→85℃±2℃（30min）;For 10 cycles | △FL≤±5ppm |
| 4 | 湿热<br>HUMIDITY | 温度:40℃±2℃;湿度90-95%;时间:96小时<br>Temp:40℃±2℃;Humidity:90-95%;Times:96h | △FL≤±5ppm |
| 5 | 低温<br>COLD RESISTANCE | 温度:-40℃±2℃;时间:96小时<br>Temp:-40℃±2℃;Times:96h | △FL≤±5ppm |
| 6 | 高温1<br>HEAT RESISTANCE 1 | 温度:100℃±2℃;时间:96小时<br>Temp:100℃±2℃;Times:96h | △FL≤±5ppm |
| 7 | 高温2<br>HEAT RESISTANCE 2 | 温度:155℃±2℃;时间:2小时<br>Temp:155℃±2℃;Times:2h | △FL≤±5ppm |
| 8 | 高温3<br>HEAT RESISTANCE 3 | 温度:85℃±2℃;电压:3.3V/5.0V;时间:96小时<br>Temp:85℃±2℃;Voltage:3.3V/5.0V;Times:96h | △FL≤±5ppm |
| 9 | 回流焊<br>REFLOW | 150℃±5℃保持120s后升到270℃±5℃保持10s，升温和保温时间小于200s，常温放置1～2h后测定<br>Keep 150 ℃ ± 5 ℃ 120s and then rose to 270 ℃ ± 5 ℃ for 10s, warming and holding time is less than the 200s, placed at room temperature 1 ~ 2h after test | △FL≤±5ppm |
| 10 | 盐雾<br>SALT SPRAY | 盐雾浓度:5%;温度:35℃;时间:24小时<br>Salt density:5%;Temp:35℃;Times:24h | 目测无明显腐蚀现象<br>Visual no significant corrosion. |
| 11 | 老化<br>AGING | 温度:85℃;时间:30天<br>Temp:85℃;Times:30days | △FL≤±5ppm |
| 12 | 气密性<br>LEAKAGE | 氦气(0.6~0.65MPa):10分钟<br>He(0.6~0.65MPa):10min | ≤3*10-9Pa.m3/s |
| 13 | 焊接<br>SOLDER | 温度:260℃±5℃<br>Temp:260℃±5℃ | 浸锡率大于90%<br>Soldering tin rate greater than 90% |

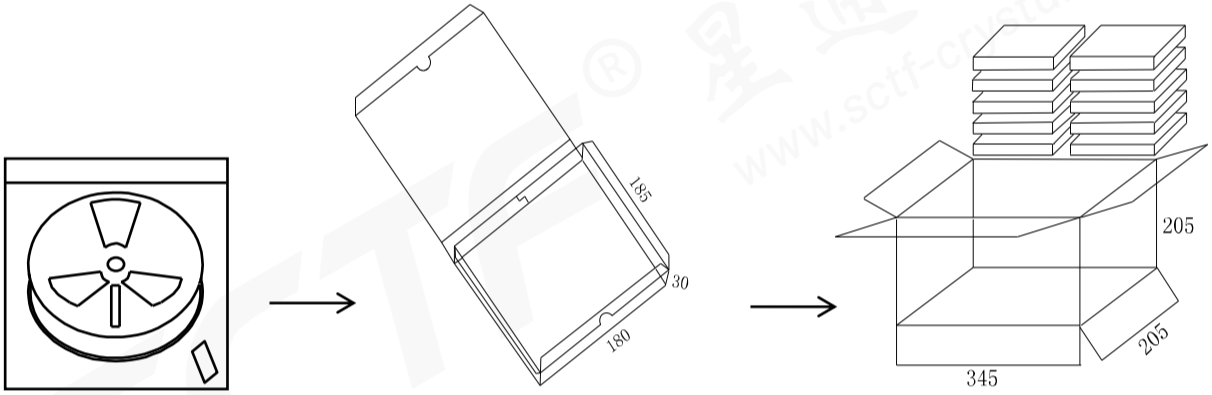
## ◆ Taping Specifications编带规格

UNIT(单位):mm(毫米)




| TEYE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5×7 SMD | 0.3 | 7.5 | 2.0 | 16.0 | 7.5 | 5.5 | 8.0 | 4.0 | 2.0 | 1.5 | 2.0 | 4.0 | 13.0 | 60.0 | 180.0 |

## ◆ Packaging specifications包装规格




自封袋(Bag)
1000只 = 1 轮
1000pcs = 1 Reel

内包装(Inside package)
1 轮=1 盒
1 Reel=1 box

外包装(Outside Package )
10 盒=1 箱
10 box=1 carton

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