

|    |               |
|----|---------------|
| 编号 | SCTF2022LC920 |
| 日期 | 2022-9-19     |
| 版本 | B01           |

# 承认书

## SPECIFICATION FOR APPROVAL

客户名称 Customer Name : 立创商城  
\_\_\_\_\_  
供应商物料名称 Part Name : 差分石英晶体振荡器  
\_\_\_\_\_  
产品描述 Description : OSC3225 155.520MHz 3.3V LVDS ±20ppm  
\_\_\_\_\_  
供应商物料料号 Part NO. : SX3M155.520B20F30DNN  
\_\_\_\_\_  
供应商名称 Supplier Name : 深圳市星通时频电子有限公司  
\_\_\_\_\_

PLEASE CONFIRM OUR SPECIFICATION。敬请确认规格书之内容。

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

(敬请确认后返回一份, 谢谢!)

|                         |         |  |
|-------------------------|---------|--|
| SUPPLIER APPROVAL 供应商审批 |         |  |
| DGN. 制表人                | CKD. 校对 | APPR. 审核/印章  |
| 吴丽红                     | 李良      |  |

地址: 深圳市南山区龙珠四路方大城T2栋10楼

Add: 10 / F, Building T2, Fangdacheng, Longzhu 4th Road, Nanshan District, Shenzhen, China.

Website: www.sctf-crystal.com

Email: info@sctf-crystal.com

TEL: 0755-86097430

FAX: 0755-86097259



**产品规格书**  
**SPECIFICATION FOR APPROVAL**

|    |   |         |
|----|---|---------|
| 1  | Cover 封面.....                                 | Page 1  |
| 2  | Contents 目录.....                              | Page 2  |
| 3  | Revised Page 修改页.....                         | Page 3  |
| 4  | Specifications of Oscillator 规格书.....         | Page 4  |
| 5  | Test Circuit & Output Waveform 测试电路与输出波形..... | Page 5  |
| 6  | Dimensions 尺寸图.....                           | Page 6  |
| 7  | Product Structure & Marking 结构与印字.....        | Page 7  |
| 8  | Reflow Profiles 回流焊.....                      | Page 8  |
| 9  | Reliability Specification 可靠性测试.....          | Page 9  |
| 10 | Package 包装.....                               | Page 10 |

| SHENZHEN SCTF ELECTRONICS CO. , LTD |  |      |
|-------------------------------------|--|------|
| DATE                                | Specification of Quartz Crystal Oscillator<br>石英晶体振荡器规格书 | PAGE |
| 2022-9-19                           | P/N: SX3M155.520B20F30DNN<br>Spec. NO. : SCTF2022LC920   | 2    |

### 3 Revised Page

| Rev. | Revise page | Revise Contents  | Date      | Ref. No. | Reviser |
|------|-------------|------------------|-----------|----------|---------|
| 1    | N/A         | Initial released | 2022-9-19 | N/A      | 吴丽红     |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |
|      |             |                  |           |          |         |

| SHENZHEN SCTF ELECTRONICS CO. , LTD |  |      |
|-------------------------------------|--|------|
| DATE                                | Specification of Quartz Crystal Oscillator<br>石英晶体振荡器规格书 | PAGE |
| 2022-9-19                           | P/N: SX3M155.520B20F30DNN<br>Spec. NO. : SCTF2022LC920   | 3    |

# 4 QUARTZ CRYSTAL UNIT SPECIFICATION

## ■ Electrical Specification 电气参数

| No. | Item                                   | Symb.           | Electrical Spec.            | Unit | Notes  |
|-----|--|-----------------|-----------------------------|------|--|
| 1   | Holder Type<br>封装                      |                 | SMD 3225                    |      |  |
| 2   | Nominal Frequency<br>标称频率              | Fo              | 155.520000                  | MHz  |  |
| 3   | Frequency Stability<br>常温频差            | Fo_tol          | ± 20                        | ppm  | T_use = + 25°C   |
| 4   | Temperature Drift<br>温度频差              | Fo_Tc           | ± 30                        | ppm  | T_use = - 40°C ~ +85 °C  |
| 5   | Operating Voltage<br>工作电压              | V <sub>DD</sub> | 3.3                         | V    | ± 5% max.  |
| 6   | Output<br>输出模式                         |                 | LVDS                        |      |  |
| 7   | Output Load<br>负载                      |                 | 100                         | Ω    |  |
| 8   | Current Consumption<br>消耗电流            | I <sub>cc</sub> | 100<br>Max.                 | mA   | At maximum supply voltage  |
| 9   | Operating Temperature Range<br>工作温度范围  | T_use           | -40~+85                     | °C   |  |
| 10  | Storage Temperature Range<br>保存温度范围    | T_stg           | -55~+125                    | °C   |  |
| 11  | Duty Cycle<br>占空比                      | TH/T            | 45 ~ 55                     | %    |  |
| 12  | Rise / Fall Time<br>上升/下降沿时间           | Tr/Tf           | 1.0<br>Max.                 | ns   |  |
| 13  | Low Output Voltage<br>低电平              | VoL             | 0.9<br>Min.                 | V    |  |
| 14  | High Output Voltage<br>高电平             | VoH             | 1.6<br>Max.                 | V    |  |
| 15  | Start-up Time<br>启动时间                  | S_T             | 3.0<br>Max.                 | ms   |  |
| 16  | Enable Voltage High (Logic 1)<br>使能高电平 | V <sub>hi</sub> | 70% V <sub>dd</sub><br>Min. | V    | Logic "1" Or Floating input, Outputs enable;<br>Logic "0", Outputs disable<br>输出使能OE是高电平1或者悬空,频率输出<br>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  | V <sub>lo</sub> | 30% V <sub>dd</sub><br>Max. | V    |  |
| 18  | RMS Phase Jitter<br>抖动                 |                 | 0.5<br>Max.                 | pSec | Period Jitter(12KHz-20MHz)   |
| 19  | Aging<br>老化                            | f_age           | ± 3.0                       | ppm  | First year at 25°C   |

## SHENZHEN SCTF ELECTRONICS CO., LTD

DATE

Specification of Quartz Crystal Oscillator  
石英晶体振荡器规格书

PAGE

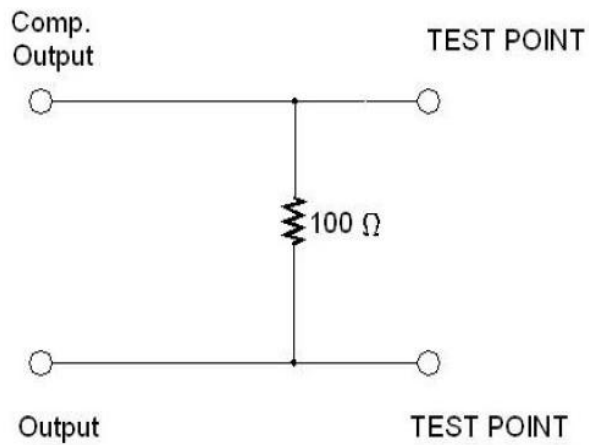
2022-9-19

P/N: SX3M155.520B20F30DNN  
Spec. NO. : SCTF2022LC920

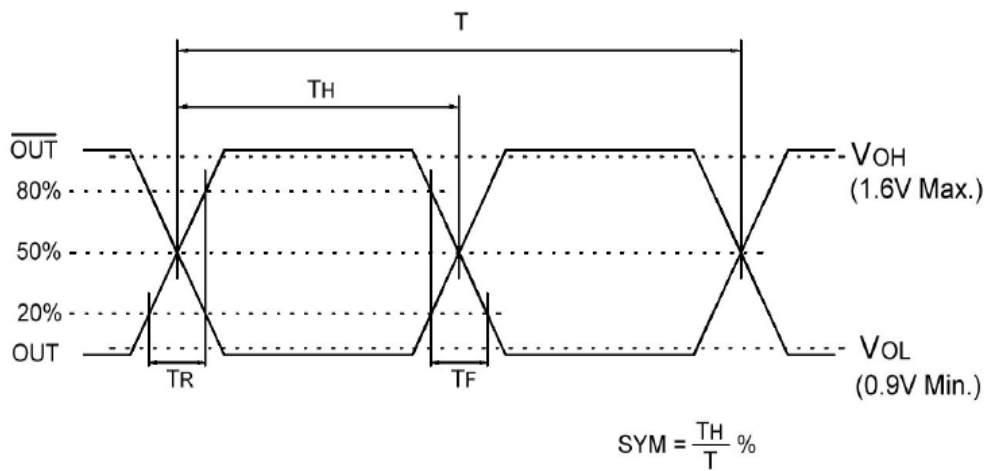
4

## 5 TEST CIRCUIT & OUTPUT WAVEFORM

### ■ TESTING CIRCUIT 测试电路



### ■ WAVEFORM CONDITIONS 输出波形



SHENZHEN SCTF ELECTRONICS CO. , LTD

DATE

Specification of Quartz Crystal Oscillator  
石英晶体振荡器规格书

PAGE

2022-9-19

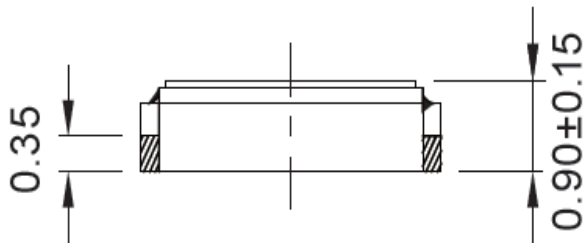
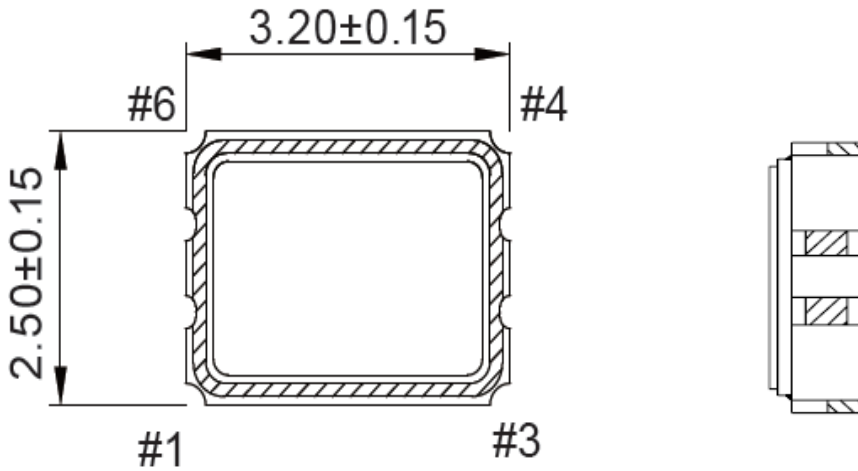
P/N: SX3M155.520B20F30DNN  
Spec. NO. : SCTF2022LC920

5

## 6 DIMENSIONS

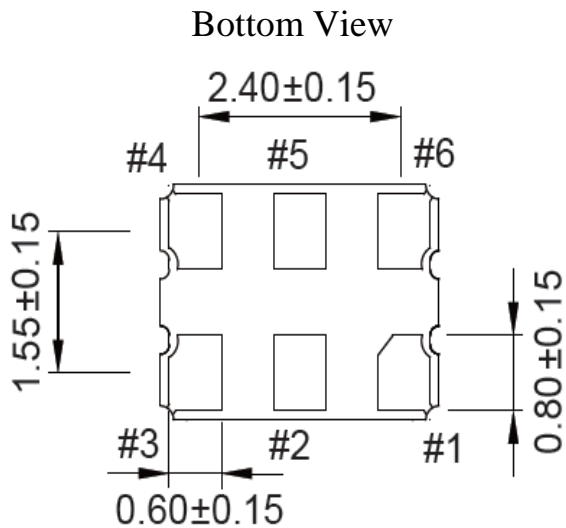
### ■ DIMENSIONS 产品尺寸

Units (单位): mm(毫米)

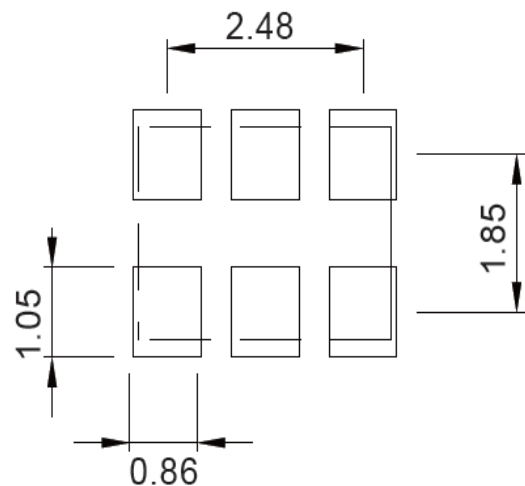


| Pin | Function        |
|-----|-----------------|
| #1  | Tri-State       |
| #2  | N.C             |
| #3  | GND.            |
| #4  | Output          |
| #5  | Comp. Output    |
| #6  | V <sub>DD</sub> |

### ■ Pad size 焊盘尺寸



### Suggested solder pad layout



SHENZHEN SCTF ELECTRONICS CO., LTD

DATE

Specification of Quartz Crystal Oscillator  
石英晶体振荡器规格书

PAGE

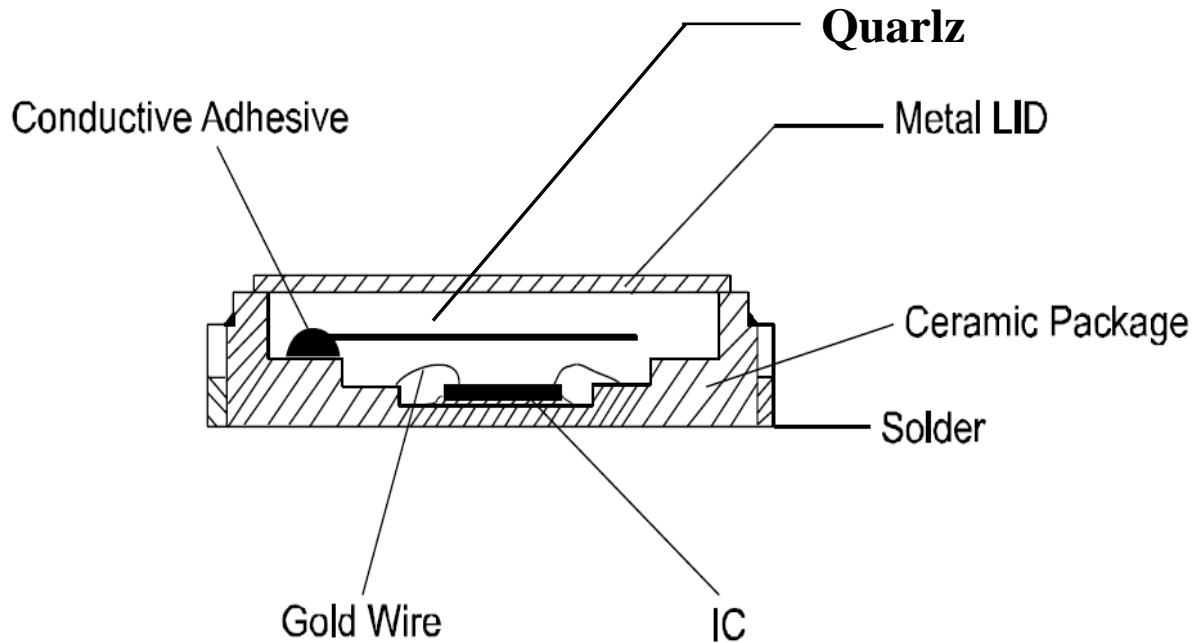
2022-9-19

P/N: SX3M155.520B20F30DNN  
Spec. NO. : SCTF2022LC920

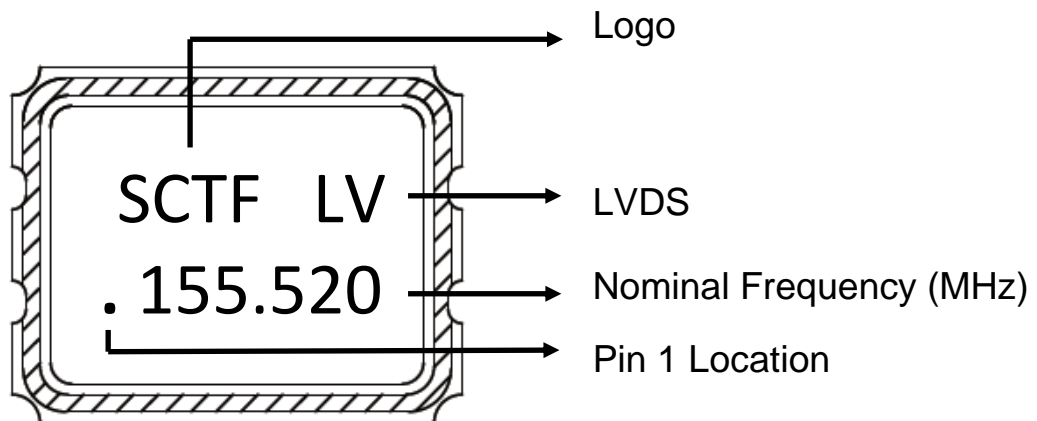
6

## 7 PRODUCT STRUCTURE & MARKING

### ■ Product Structure 产品结构



### ■ Marking 印字

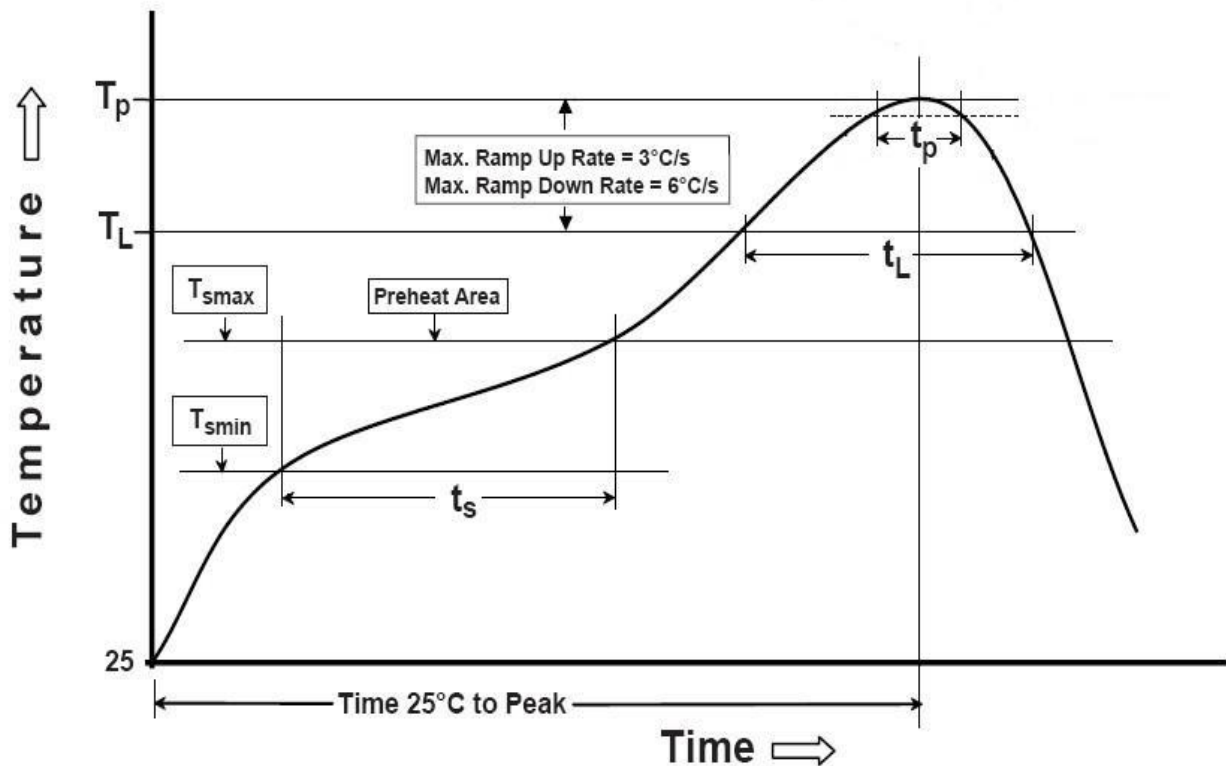


| SHENZHEN SCTF ELECTRONICS CO., LTD |  |      |
|------------------------------------|--|------|
| DATE                               | Specification of Quartz Crystal Oscillator<br>石英晶体振荡器规格书 | PAGE |
| 2022-9-19                          | P/N: SX3M155.520B20F30DNN<br>Spec. NO. : SCTF2022LC920   | 7    |

# 8 REFLOW PROFILES

## REFLOW PROFILES 回流焊条件

| Profile Feature                         | Sn-Pb Eutectic Assembly | Pb-Free Assembly |
|---|-------------------------|------------------|
| Preheat/Soak                            |                         |                  |
| ● Temperature Min( $T_s$ min)           | 100 °C                  | 150 °C           |
| ● Temperature Max ( $T_s$ max)          | 150 °C                  | 200 °C           |
| ● Time ( $T_s$ min to $T_s$ max)        | 60-120 seconds          | 60-120 seconds   |
| Ramp-up rate (TL to $T_p$ )             | 3 °C/second max.        | 3 °C/second max. |
| Time maintained above                   |                         |                  |
| ● Liquidous temperature (TL)            | 183 °C                  | 217 °C           |
| ● Time ( $t_L$ ) maintained above TL    | 60-150 seconds          | 60-150 seconds   |
| Peak package body temperature ( $T_p$ ) | 235°C                   | 260°C            |
| Time within 5 °C of the specified       | 20 seconds              | 30 seconds       |
| Ramp-down rate ( $T_p$ to TL)           | 6 °C/second max.        | 6 °C/second max. |
| Time 25 °C to peak temperature          | 6 minutes max.          | 8 minutes max.   |
| Suggest reflow times                    | <b>2 Times max.</b>     |                  |



SHENZHEN SCTF ELECTRONICS CO., LTD

|           |  |      |
|-----------|--|------|
| DATE      | Specification of Quartz Crystal Oscillator<br>石英晶体振荡器规格书 | PAGE |
| 2022-9-19 | P/N: SX3M155.520B20F30DNN<br>Spec. NO. : SCTF2022LC920   | 8    |



## 9 RELIABILITY SPECIFICATION

### ■ Environmental and mechanical characteristics 可靠性参数

| 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.  | $\Delta FL \leq \pm 5PPM$              |
| 2   | 振动<br>VIBRATION           | 频率 Frequency:10~57.7Hz:幅度 Amplitude: $\pm 0.75mm$<br>频率Frequency:57.7Hz~500Hz:加速度幅度acceleration<br>rate:98m/s <sup>2</sup><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.   | $\Delta FL \leq \pm 5PPM$              |
| 3   | 温度变化<br>TEMPERATURE SHOCK | -40°C $\pm 2^\circ C$ (30min) $\leftrightarrow$ 85°C $\pm 2^\circ C$ (30min);循环10次<br>-40°C $\pm 2^\circ C$ (30min) $\leftrightarrow$ 85°C $\pm 2^\circ C$ (30min);For 10  | $\Delta FL \leq \pm 5PPM$              |
| 4   | 湿热<br>HUMIDITY            | cycles 温度:40°C $\pm 2^\circ C$ ;湿度90-95%;时间:96小时<br>Temp:40°C $\pm 2^\circ C$ ;Humidity:90-95%;Times:96h   | $\Delta FL \leq \pm 5PPM$              |
| 5   | 低温<br>COLD RESISTANCE     | 温度:-40°C $\pm 2^\circ C$ ;时间:96小时<br>Temp:-40°C $\pm 2^\circ C$ ;Times:96h   | $\Delta FL \leq \pm 5PPM$              |
| 6   | 高温1<br>HEAT RESISTANCE 1  | 温度:100°C $\pm 2^\circ C$ ;时间:96小时<br>Temp:100°C $\pm 2^\circ C$ ;Times:96h   | $\Delta FL \leq \pm 5PPM$              |
| 7   | 高温2<br>HEAT RESISTANCE 2  | 温度:155°C $\pm 2^\circ C$ ;时间:2小时<br>Temp:155°C $\pm 2^\circ C$ ;Times:2h   | $\Delta FL \leq \pm 5PPM$              |
| 8   | 高温3<br>HEAT RESISTANCE 3  | 温度:85°C $\pm 2^\circ C$ ;电压:3.3V/5.0V;时间:96小时<br>Temp:85°C $\pm 2^\circ C$ ;Voltage:3.3V/5.0V;Times:96h  | $\Delta FL \leq \pm 5PPM$              |
| 9   | 回流焊<br>REFLOW             | 150°C $\pm 5^\circ C$ 保持120s后升到270°C $\pm 5^\circ C$ 保持10s, 升温<br>和保温时间小于200s, 常温放置1~2h后测定<br>Keep 150 °C $\pm$ 5 °C 120s and then rose to 270 °C $\pm$ 5 °C<br>for 10s, warming and holding time is less than the 200s,<br>placed at room temperature 1 ~ 2h after test | $\Delta FL \leq \pm 5PPM$              |
| 10  | 盐雾<br>SALT SPRAY          | 盐雾浓度:5%;温度:35°C;时间:24小时<br>Salt density:5%;Temp:35°C;Times:24h   | 目测无明显腐蚀现象<br>Visual no<br>significant  |
| 11  | 老化<br>AGING               | 温度:85°C;时间:30天<br>Temp:85°C;Times:30days   | $\Delta FL \leq \pm 5PPM$              |
| 12  | 气密性<br>LEAKAGE            | 氦气(0.6~0.65MPa):10分钟<br>He(0.6~0.65MPa):10min  | $\leq 3 \times 10^{-9} Pa \cdot m^3/s$ |
| 13  | 焊接<br>SOLDER              | 温度:260°C $\pm 5^\circ C$<br>Temp:260°C $\pm 5^\circ C$   | 浸锡率大于90%<br>Soldering tin              |

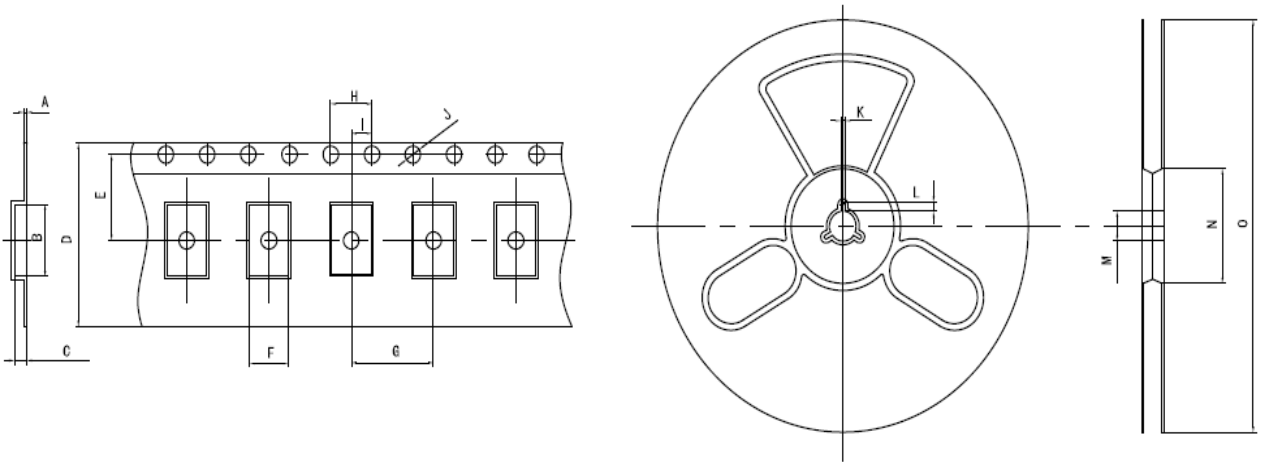
### SHENZHEN SCTF ELECTRONICS CO., LTD

|           |  |      |
|-----------|--|------|
| DATE      | Specification of Quartz Crystal Oscillator<br>石英晶体振荡器规格书 | PAGE |
| 2022-9-19 | P/N: SX3M155.520B20F30DNN<br>Spec. NO. : SCTF2022LC920   | 9    |

# 10 PACKAGE

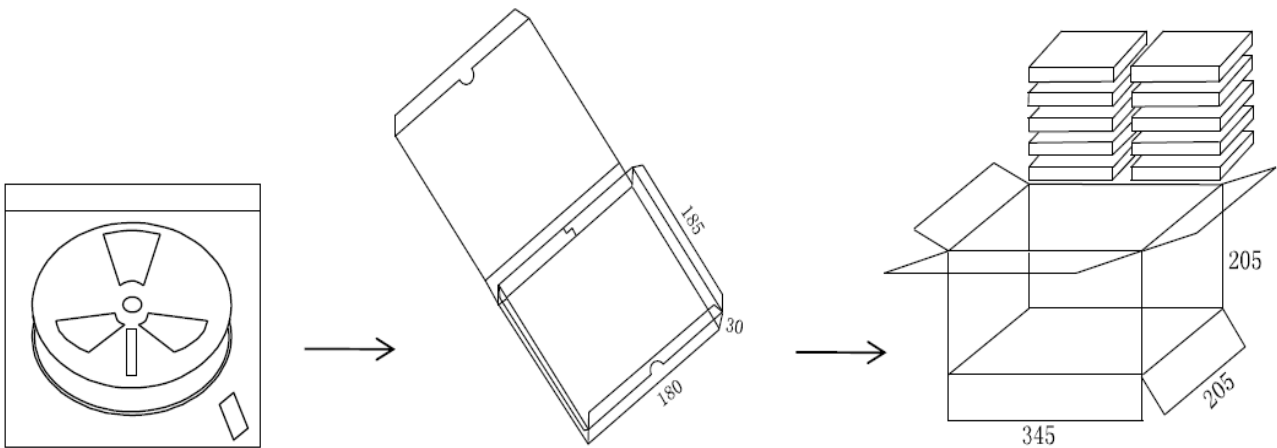
## ■ Taping Specifications 编带

UNIT(单位):mm(毫米)



| TEYE        | A    | B    | C    | D    | E    | F    | G    | H    | I    | J    | K    | L    | M     | N     | O      |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|--------|
| 3.2×2.5 SMD | 0.25 | 3.60 | 1.30 | 8.00 | 3.50 | 2.90 | 4.00 | 4.00 | 2.00 | 1.50 | 2.00 | 4.00 | 13.00 | 60.00 | 180.00 |

## ■ Packaging specifications 包装



自封袋(Bag)

3000只 = 1 轮

3000pcs = 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

SHENZHEN SCTF ELECTRONICS CO. , LTD

DATE

Specification of Quartz Crystal Oscillator  
石英晶体振荡器规格书

PAGE

2022-9-19

P/N: SX3M155.520B20F30DNN  
Spec. NO. : SCTF2022LC920

10

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Standard Clock Oscillators](#) category:*

*Click to view products by [SCTF](#) manufacturer:*

Other Similar products are found below :

[601252](#) [F335-25](#) [F535L-33.333](#) [F535L-50](#) [NBXHBA019LN1TAG](#) [SiT1602BI-22-33E-50.000000E](#) [SiT8209AI-32-33E-125.000000](#)  
[SIT8918AA-11-33S-50.000000G](#) [SM4420TEV-40.0M-T1K](#) [F335-24](#) [F335-40](#) [F535L-10](#) [F535L-12](#) [F535L-24](#) [F535L-27](#) [PE7744DW-](#)  
[100.0M](#) [ASF1-3.686MHZ-N-K-S](#) [ASV-4.000MHZ-LCS-T](#) [XLH735025.000JU4I8](#) [XLP725125.000JU6I8](#) [XO57CTECNA3M6864](#) [601251](#)  
[SiT8503AI-18-33E-0.200000X](#) [SIT8918AA-11-33S-16.000000G](#) [SIT9122AI2C233E300.000000X](#) [XO37CTECNA20M](#) [9120AC-2D2-](#)  
[33E212.500000](#) [9102AI-243N25E100.000000](#) [8208AC-82-18E-25.000000](#) [8008AI-72-XXE-24.545454E](#) [8004AC-13-33E-133.33000X](#) [ASFL1-](#)  
[48.000MHZ-LC-T](#) [632L3I004M00000](#) [SIT8920AM-31-33E-25.0000](#) [9121AC-2C3-25E100.000000](#) [9102AI-233N33E100.00000X](#) [9102AI-](#)  
[233N25E200.000000](#) [9102AI-232H25S125.000000](#) [9102AI-133N25E200.000000](#) [9102AC-283N25E200.000000](#) [9001AC-33-33E1-30.000](#)  
[8103AC-13-33E-12.00000X](#) [3921AI-2CF-33NZ125.000000](#) [5730-1SF](#) [XUN736000.032768I](#) [EC3925ETTTS-100.000M TR](#) [SIT1602BC-83-](#)  
[33E-10.000000Y](#) [8003AI-12-33S-40.00000Y](#) [1602BI-13-33S-19.200000E](#) [8208AI-2F-18E-25.000000X](#)