
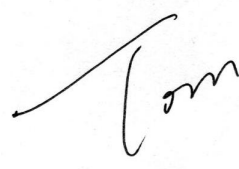
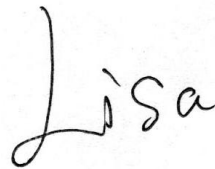


|                        |                    |
|------------------------|--------------------|
| <b>Customer</b>        |                    |
| <b>Production Name</b> | <b>OSC 3.2*2.5</b> |
| <b>Customer P/N</b>    | <b>N/A</b>         |
| <b>TROQ P/N</b>        | <b>R027000037</b>  |
| <b>Revision</b>        | <b>A</b>           |
| <b>Print Date</b>      | <b>2023/5/11</b>   |

| <b>Drawn</b>  | <b>Checked</b>  | <b>Approved</b>   |
|---|---|---|
|  |  |  |



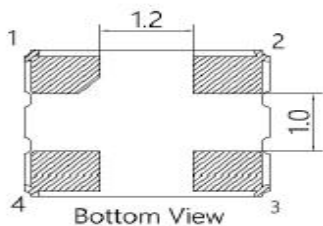
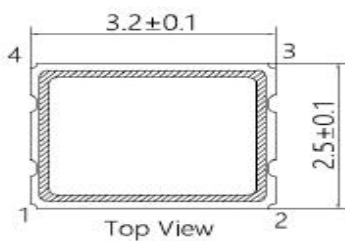
RoHS Compliant

Pb used in sealing glass material is exempt from EU directive

● ELECTRICAL PARAMETERS

| 产品技术指标                             | Min   | Max     | Units    |
|------------------------------------|---|---------|----------|
| 1.Holder Type                      | OSC 3.2*2.5                                 |         |          |
| 2.Mode of Oscillation              | Fundamental                                 |         |          |
| 3.Frequency                        | 27.000000                                   |         | MHZ      |
| 4.Load Capacitance (CL)            | 15  |         | pF       |
| 5.Frequency Tolerance              | -20   | 20      | ppm      |
| 6.Operating Temperature Range      | -40   | 85      | °C       |
| 7.Storage Temperature Range        | -40   | 85      | °C       |
| 8.Supply Voltage(VDD)              | 1.8-3.3                                     |         | V        |
| 9.“0”Level (VOL)                   |   | VDD×0.1 | V        |
| 10.“1”Level(VOH)                   | VDD×0.9                                     |         | V        |
| 11.Enable High Voltage(ELH)        | VDD×0.7                                     |         | V        |
| 12.Enable Low Voltage(ELL)         |   | VDD×0.3 | V        |
| 13.Symmetry of Wave From(Symmetry) | 45-55                                       |         | %        |
| 14.Current Consumption(IDD)        |   | 10.0    | m A      |
| 15.Rise and Fall Time(Tr,Tf)       |   | 5.0     | nSec     |
| 16.Start time(tosc)                |   | 10.0    | mSec     |
| 17.Aging                           | ± 5   |         | ppm/year |
| 18.Output waveform                 | CMOS  |         |          |
| 19.Other                           | Moisture Sensitivity Level (零件湿敏等级) Level 1 |         |          |

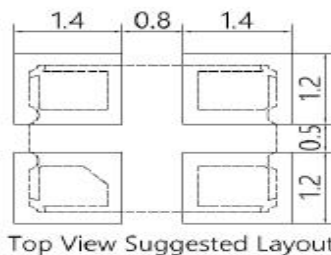
OUTLINE DIMENSIONS(UNIT:mm) 外形尺寸 (单位: mm)



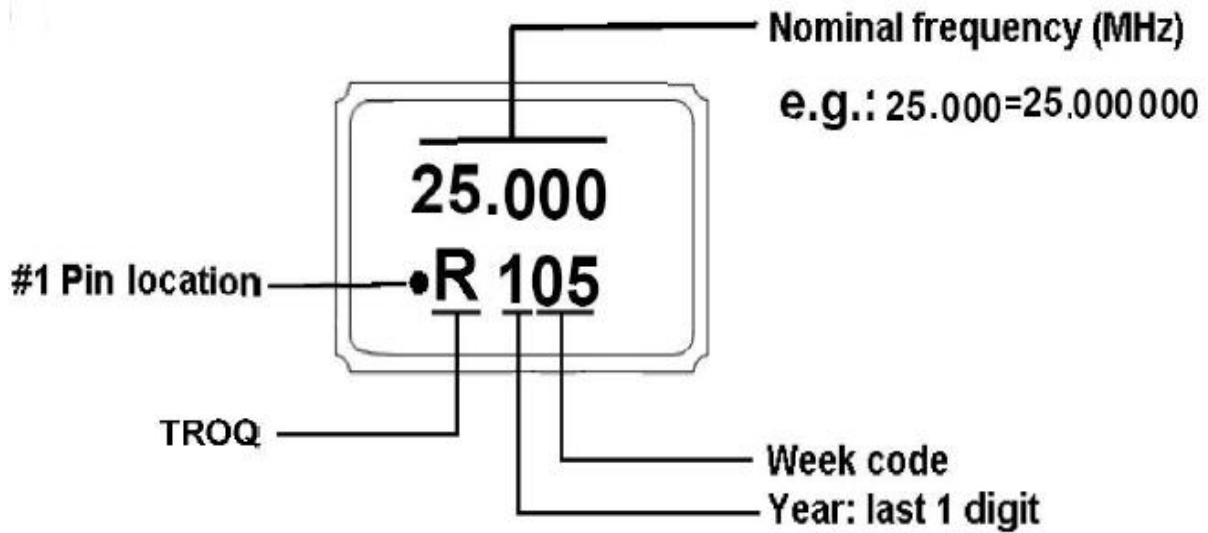
PAD FUNCTION  
 1: ENABLE CONTROL  
 2: GND  
 3: OUT  
 4: VDD

Enable Control

| Pad 1 Input        | Pad 3 Output     |
|--------------------|------------------|
| Level High or Open | Normal Operation |
| Level Low          | Stopped          |



● **Marking (标记)**

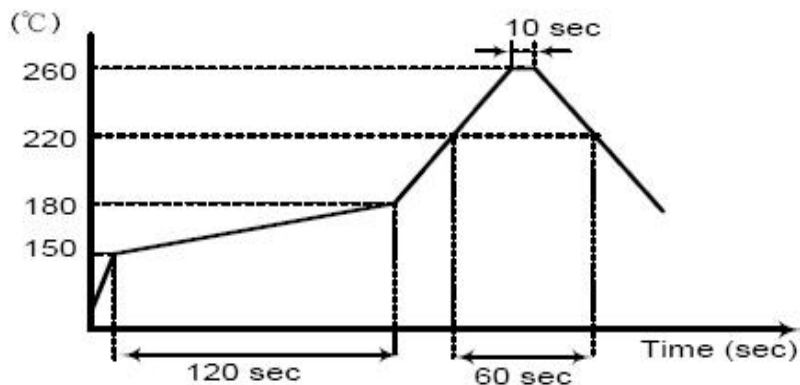


● **SUGGESTED REFLOW PROFILE** (回流焊曲线图)

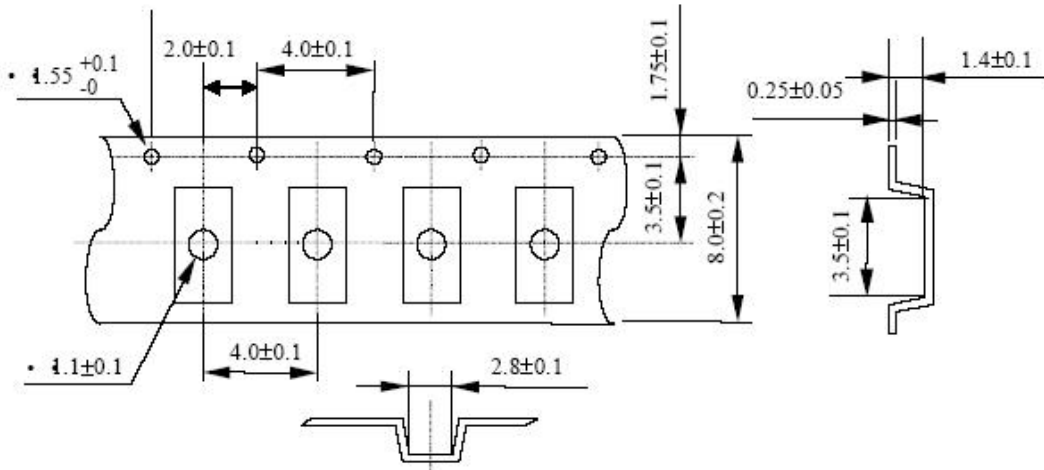
**Total time:200sec.Max.** (总时间: 200秒 最大)

**Solder melting point:220°C** (熔点220 °C)

| Profiles Feature (特性)                          |               | Pb-Free Assembly |
|--|---------------|------------------|
| Average Ramp-up Rate(Ts max to Tp)             | 平均升温速度        | 3°C/second Max   |
| Preheat  | 预热            |                  |
| ■ Temperature Min (Ts min)                     | 最低温度          | 125°C            |
| ■ Temperature Max (Ts max)                     | 最高温度          | 200°C            |
| ■ Time (ts min to ts max )                     | 从最低到最高时间      | (60~180) seconds |
| Time maintained above                          | 维持上述时间        |                  |
| ■ Temperature(T1)                              | 温度            | 217°C            |
| ■ Time(tp)                                     | 时间            | (60~150) seconds |
| Peak/Classification Temperature(Tp)            | 最高点温度         | 260 °C           |
| Time within 5°C of actual Peak Temperature(tp) | 高温维持时间        | (20~40) seconds  |
| Ramp-down rate                                 | 降温速度          | 6°C/second max   |
| Time 25°C to Peak Temperature                  | 从25°C到最高温度的时间 | 8 minutes max    |
| Suggest reflow times                           | 建议 reflow次数   | 3 Times max      |



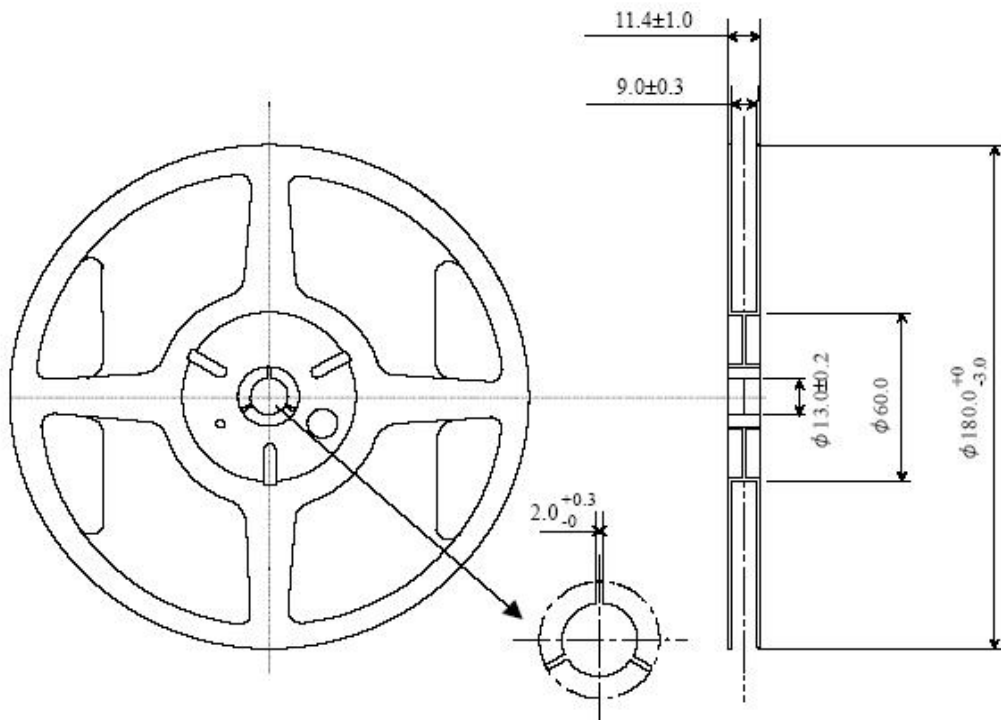
- PACKING (包装) 3Kpcs/REEL



[Size in mm]

### 8.3. Reel dimension & Outline drawing

Material of the Reel : PS



● RELIABILITY SPECIFICATIONS (信赖度试验)

| No | Test Item (测试项目)                                  | Test Conditions (测试条件)  | Reference (参考)                         |
|----|---|---|--|
| 1  | High Temperature High Humidity Storage (高温、高湿、储存) | Temperature: 85°C±3°C<br>温度: 85°C±3°C<br>Relative Humidity:85%RH<br>相对湿度: 85%RH<br>Time: 96 Hours<br>时间: 96小时   | JIS C5023                              |
| 2  | High Temperature Storage (高温储存)                   | Temperature: 125°C±3°C<br>温度:125°C±3°C<br>Time: 96 Hours<br>时间:96 小时  | MIL-STD-883E<br>Method 1005.8          |
| 3  | Low Temperature Storage (低温储存)                    | Temperature: -40°C±3°C<br>温度: -40°C±3°C<br>Time: 96Hours<br>时间: 96小时  | MIL-STD-883E<br>Method 1013            |
| 4  | Thermal Shock (温度冲击)                              | Temperature1:-55°C±5°C<br>温度1:-55°C±5°C<br>Temperature2:85°C±5°C<br>温度2: 85°C±5°C<br>Temperature change between T1 and T2 5 min<br>T1和T2温度在5分钟内改变<br>10cycles maintain T1 and T2 for 30 minutes each mone cycle<br>每次循环30分钟共10次 | MIL-STD-202F<br>Method 107 Condition A |
| 5  | RESISTANCE TO SOLDER HEAT (耐焊接热)                  | Solder Temperature: 260°C±5°C<br>焊槽温度:260°C±5°C<br>Time: 10±1 Seconds<br>时间: 10±1秒  | MIL-STD-202F<br>Method 210E            |
| 6  | Solderability(可焊性)                                | The solder pot temperature is 245±5°C , dwell time 5±0.5<br>245±5°C焊锡槽浸润5±0.5秒  | J-STD-002B                             |
| 7  | Drop Test (落下试验)                                  | 3 Times Free Fall from 75cm height table to 3cm thickness hard wood board<br>从75cm高度3次跌落到3cm厚硬质木板上  | JIS C6701                              |
| 8  | MECHANICAL SHOCK (机械冲击)                           | Half sine wave,1000 G<br>半正弦波,加速度1000G<br>3 Times for all 3 directions<br>X、Y、Z 三个相互垂直方向各三次   | MIL-STD-202F<br>Method 213B            |
| 9  | Vibration (机械振动)                                  | Frequency Range: 10Hz~55Hz<br>频率范围: 10Hz~55Hz<br>Amplitude: 0.75mm<br>振幅: 0.75mm<br>2 Hours in each direction, total 6 Hours<br>X、Y、Z 三个相互垂直方向各振动2小时  | MIL-STD-883E<br>Method 2007.3          |
| 10 | Leakage Test (气密性)                                | Take measurements with a helium Leakage detector<br>氦质检漏<br>Leakage Rate≤1×10 <sup>-3</sup> Pa cm <sup>3</sup> /s<br>漏率≤1×10 <sup>-3</sup> Pa cm <sup>3</sup> /s  | MIL-STD-883E                           |

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