

# 深圳市晶科鑫实业有限公司



## 样品承认书

|           |                                                                                                                                                                                     |  |  |       |              |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-------|--------------|
| 客户代码:     |                                                                                                                                                                                     |  |  |       |              |
| 物料名称:     | 温度补偿晶体振荡器TCXO                                                                                                                                                                       |  |  |       |              |
| 规格型号:     | SMD3225 4pin 24.000MHz 3.3V ±2.5PPM -40~85℃                                                                                                                                         |  |  |       |              |
| P N/ SJK: | 8W24000P33XCA                                                                                                                                                                       |  |  |       |              |
| 环保属性:     | <input checked="" type="checkbox"/> RoHS <input checked="" type="checkbox"/> REACH <input checked="" type="checkbox"/> HF <input type="checkbox"/> PAHS <input type="checkbox"/> 其它 |  |  |       |              |
| 版 次:      | A1 2025-7-29 初版                                                                                                                                                                     |  |  | 最小包装: | 3000pcs/real |
| 湿敏等级:     | 一级                                                                                                                                                                                  |  |  |       |              |

| 承 认 签 章    |     |     |                                                                |     |     |
|------------|-----|-----|----------------------------------------------------------------|-----|-----|
| 供 应 商 承 认  |     |     | (        ) 公 司 承                                               |     |     |
| 制 定        | 审 核 | 核 准 | 工 程 师                                                          | 审 核 | 批 准 |
| 贺丹斌        | 李相同 | 刘惠光 |                                                                |     |     |
| SJK 支持     |     |     | 盖章签署                                                           |     |     |
| FAE_EMAIL  |     |     | 日        期                                                     |     |     |
| 日        期 |     |     | 批示： <input type="checkbox"/> 接受 <input type="checkbox"/> 有条件接受 |     |     |
| 备注:        |     |     |                                                                |     |     |

## ELECTRICAL SPECIFICATIONS

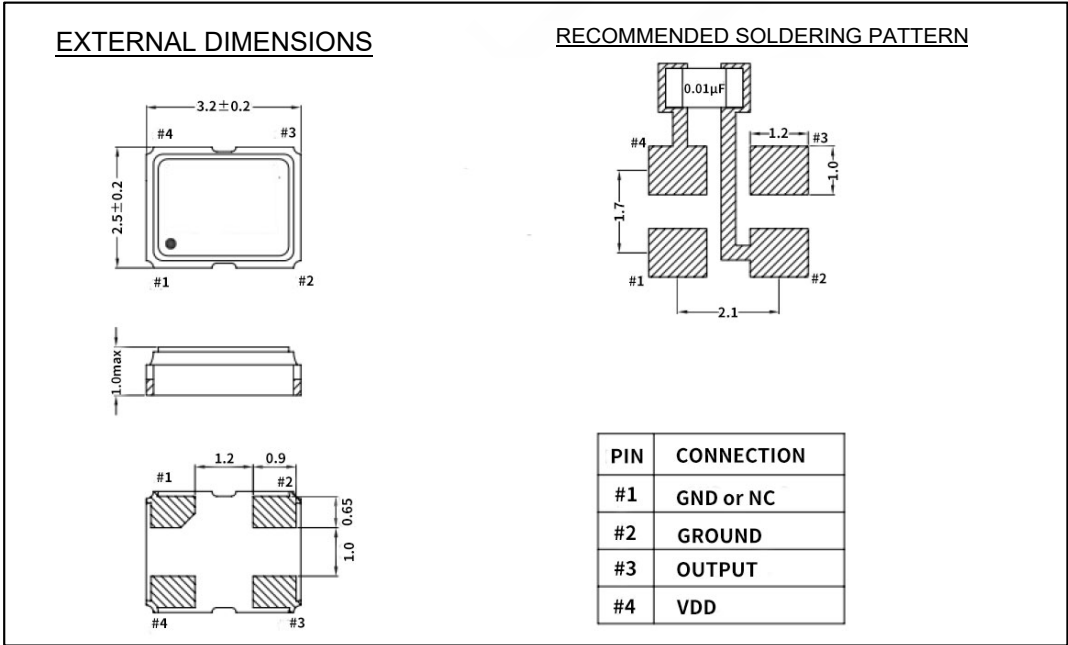
| Parameters                  |                   | Condition           | Electrical Specifications |     |       |           |
|-----------------------------|-------------------|---------------------|---------------------------|-----|-------|-----------|
|                             |                   |                     | MIN                       | TYP | MAX   | UNITS     |
| Nominal Frequency           |                   |                     | 24.000                    |     |       | MHZ       |
| Operating Temperature Range |                   |                     | -40                       |     | 85    | °C        |
| Supply Voltage              |                   |                     | 3.135                     | 3.3 | 3.465 | V         |
| Current Drain               |                   |                     |                           |     | 2     | MA        |
| Output Level                |                   |                     | 0.8                       |     |       | Vp-p      |
| Output Type                 |                   |                     | Clipped sine wave         |     |       |           |
| Output Load                 |                   | Resistance          |                           | 10  |       | kΩ        |
|                             |                   | Capacitance         |                           | 10  |       | Pf        |
| Frequency Tolerance         |                   | After 2times reflow |                           |     | ±1.5  | ppm       |
| Frequency Stability         | vs:Temperature    | -40 ~ 85 °C         |                           |     | ±2.5  | ppm       |
|                             | vs:Load           | 10kΩ/10pF ±10%      |                           |     | ±0.2  | ppm       |
|                             | vs:Supply Voltage | VDD±5%              |                           |     | ±0.2  | ppm       |
| Storage Temperature         |                   |                     | -40                       |     | 85    | °C        |
| Start-up Time               |                   |                     |                           |     | 3.0   | ms        |
| Aging                       |                   |                     |                           |     | ±1.0  | ppm/5year |
| Harmonics                   |                   |                     |                           |     | -5    | dBc       |
| Phase noise at 1KHz offset  |                   |                     |                           |     | -130  | dBc/Hz    |

# Crystal oscillator

## SMD TCXO Module 3.2×2.5×1.0 8W Series



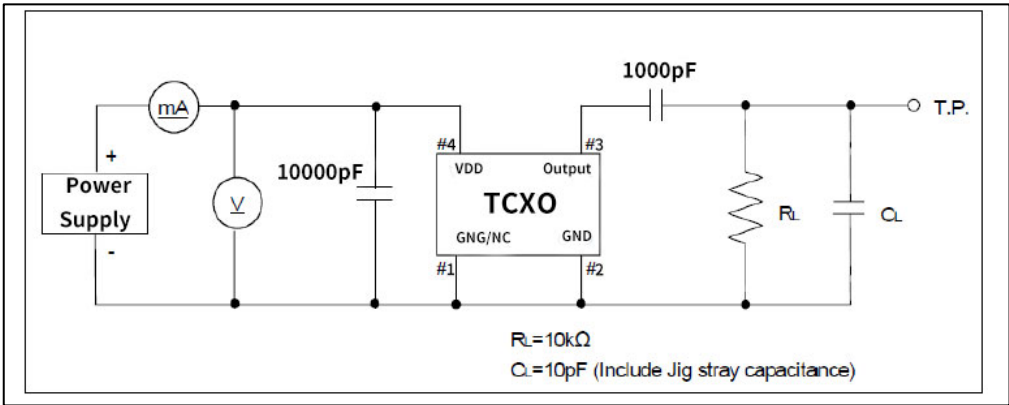
### DIMENSION (Unit: mm)



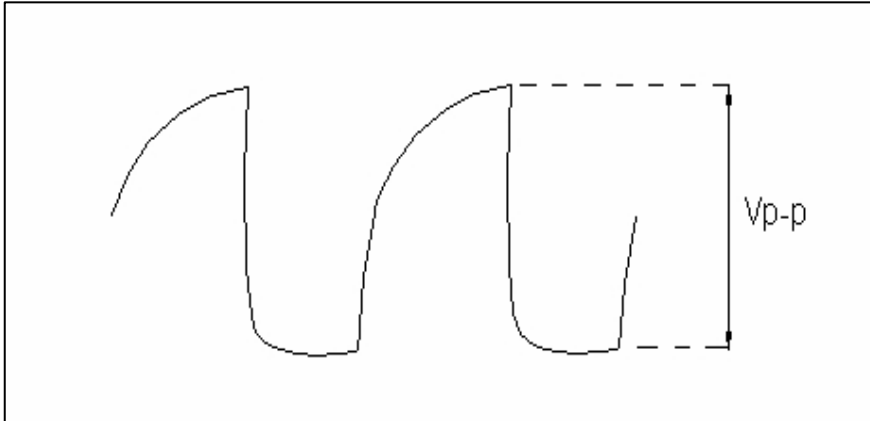
### MARK



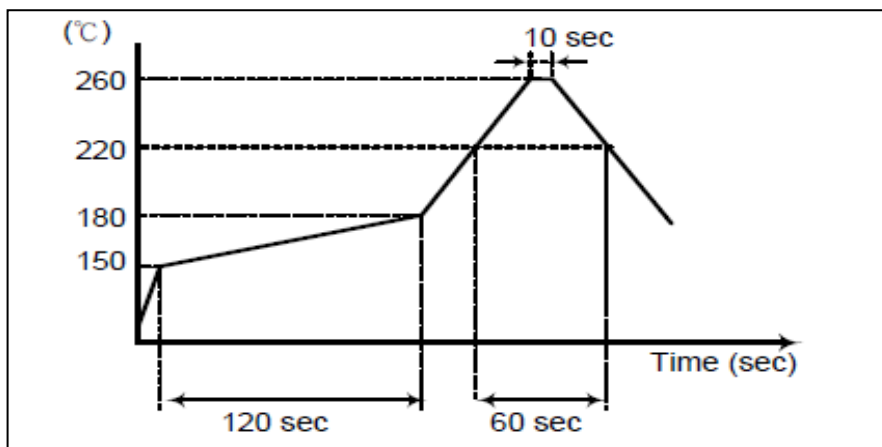
### MEASUREMENT CIRCUIT



## WAVEFORM CONDITIONS

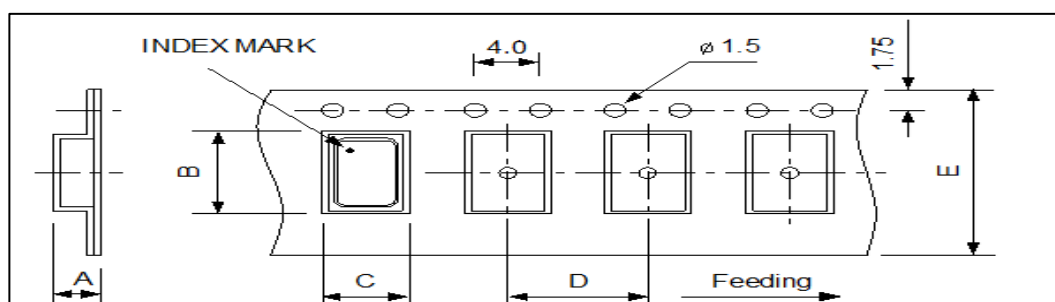


## REFLOW CONDITION

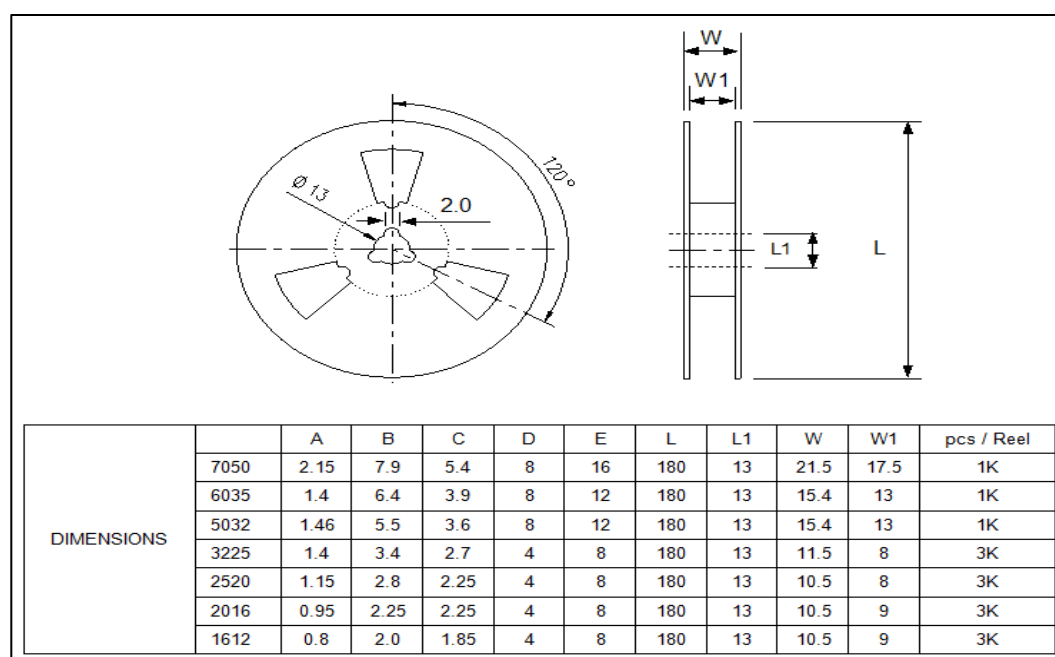


The reflow temperature profile may vary depending on the product model, specifications and frequency range. Refer to the individual product specifications for details

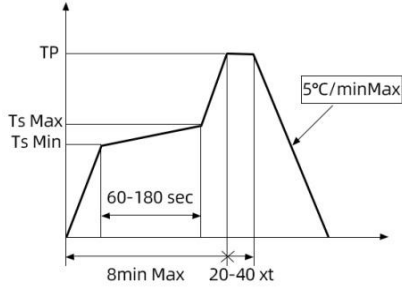
## CARRIER TYPE



## REEL



## RELIABILITY TEST SPECIFICATIONS

| Test item                                  | Equipment                              | Condition                                                                                                                       | Specification                  |
|--------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| 1.SOLDERABILITY TEST                       | SJK-REL001、RC-328A                     | TP:260℃ TsMax: 200℃ TsMin: 150℃<br>2 time<br> | MIL-STD-883E<br>Method 2003.7  |
| 2. HERMETICITY TEST                        | HELIOT-306S                            | Pressurized 0.4~0.5Mpa ethanol sealed tank for 10 minutes                                                                       | MIL-STD-883E<br>Method 1014.10 |
| 3. VIBRATION TEST                          | HG-V4、S&A 250B                         | Enable Crystal(10g) from 10-55-10Hz,X、Y、Z horizontal,1 Minute vibration/time, 1time/ 2 hours.                                   | MIL-STD-883E<br>Method 2007.3  |
| 4. MECHANICAL SHOCK                        | HPC-200、S&A 250B                       | Enable Crystal 50G(490m/s <sup>2</sup> ) time=11 ms speed=3.4 m/s half sine wave oscillation                                    | JIS C6701                      |
| 5. DROP TEST                               | HARD BOARD.S&A250B                     | 75cm High,3 times on hard board                                                                                                 | MIL-STD-202F<br>Method 213B    |
| 6. HIGH&LOW TEMP STORAGE TEST(Static test) | H-PTH-80CK & HM101-3ABN, S&A 350B/250B | High temperature: 125℃±2℃,1000hr; Low temperature:-40℃±3℃,1000hrs                                                               | MIL-STD883C,<br>METHOD 1011.8  |
| 7. TEMP & HUM CYCLING TEST                 | H-PTH-80CK CHAMBE, S&A 350B/250B       | Temperature:-10℃±2℃~65℃±2℃,Humidity:93±3%,1 cycle need 24 hrs. 5cycles.                                                         | MIL-STD-883E<br>Method 1005.8  |
| 8. HIGH TEM. & HUM.STORAGE TEST            | H-PTH-80CK CHAMBE, S&A350B/250B        | Temperature:85℃±2, Humidity:85+3,-2%,Store 96 hrs                                                                               | JIS C6701                      |
| 9. AGING TEST                              | H-PTH-80CK CHAMBE, S&A350B/250         | Temperature:85℃±2, Store 1000 hrs                                                                                               | JIS C5023                      |