

TCXO (Temperature-Compensated Crystal Oscillator)

Surface Mount Type

NTC22

[2.5×2.0×0.85 mm]

NTC32

[3.2×2.5×1.00 mm]

TCXO

Output

LVC MOS

Supply Voltage

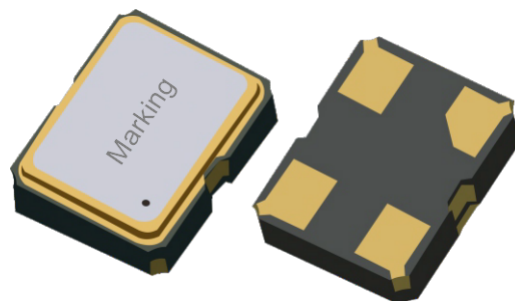
1.8V~3.3V

Frequency Range

10 MHz~60 MHz

Features

- Ultra smallest size Surface mount package size 2.5×2.0 (2520), 3.2×2.5 (3225), mm×mm
- Temperature Compensated Crystal Oscillators (TCXO)
- LVC MOS output, low voltage operation 1.8V to 3.3V
- Low phase noise
- RoHS Compliant
- Tri-state enable /disable
- Wide frequency range from 10MHz to 60MHz
- Applications: Mobile phone, GPS, Wireless communications, IoT, LTE, WiMAX, Smart grid, Industrial control, and more



Standard Specifications

| Item / Type | | NTC22 (SMD 2520 TCXO) | NTC32 (SMD 3225 TCXO) |
|--------------------------------|------------------|------------------------------|------------------------------|
| Dimensions | | 2.5×2.0×0.70 mm | 3.2×2.5×1.00 mm |
| Output mode | | LVC MOS | |
| Output load | | 15pF | |
| Output frequency range | | 10 MHz~60 MHz | 10 MHz~60 MHz |
| Supply voltage | | 1.8 V ~ 3.3 V | |
| Frequency stability | Tolerance | ±2.0 ppm max. | |
| | Temperature | ±2.5 ppm ~ ±10 ppm max. | |
| | Supply voltage | ±0.1 ppm max. (Vcc±5%) | |
| | Load coefficient | ±0.1 ppm max. | |
| Operating temperature | | -40~+85°C, or specify | |
| Supply consumption | | 10 mA max. | |
| Rise /Fall time | | 5ms max. | |
| Voltage Voh (min.) /Vol (max.) | | 90% Vdd min. /10% Vdd max. | |
| RMS phase jitter | | 1ps max. | |
| Symmetry | | 45% to 55% | |
| Start-up time | | 5.0ms max. | |
| Storage temperature | | -40~+85°C | |
| Phase noise @ Offset 1kHz | | -130dBc/Hz | |

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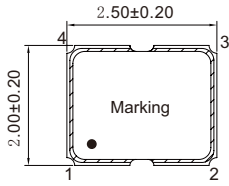
1.8V~3.3V

Frequency Range

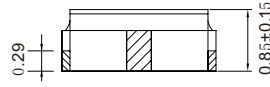
10 MHz~60 MHz

Outline Dimensions (Unit: mm)

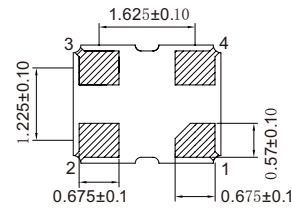
NTC22 (SMD 2520 TCXO)



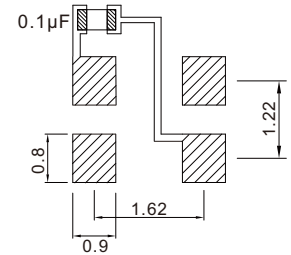
Top View



Side View

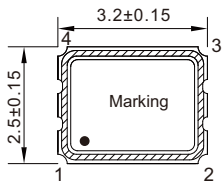


Bottom View

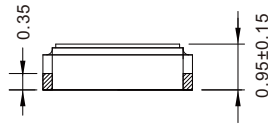


Top View Suggested Layout

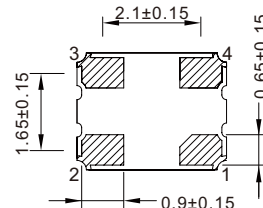
NTC32 (SMD 3225 TCXO)



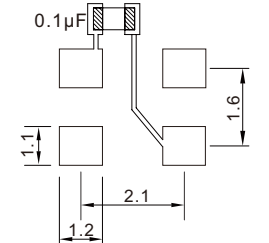
Top View



Side View



Bottom View



Top View Suggested Layout

Pin Map

| Pin | Connection | Function |
|-----|-----------------|--------------------------|
| 1 | Tri-state / GND | GND / Tri-state function |
| 2 | GND | Vcc power supply ground |
| 3 | Output | Oscillator output |
| 4 | Vcc | Power supply voltage |