

# TEMPERATURE-COMPENSATED CRYSTAL OSCILLATOR

## STO-1612, STV-1612



### Applications

- GPS / WiMAX / LTE / Wifi
- Communication Equipment

### Features

- Ultra-thin / Dimensions (1.65 × 1.25 × 0.55)
- Low phase noise / Low power consumption
- Seam sealed
- High stability  $\pm 0.5\text{ppm} / -40 \sim +85^\circ\text{C}$

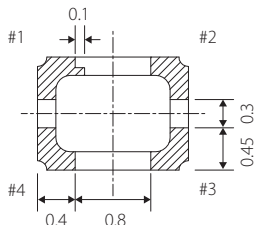
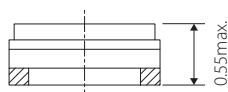
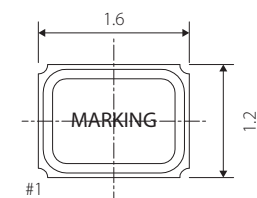
### Specifications



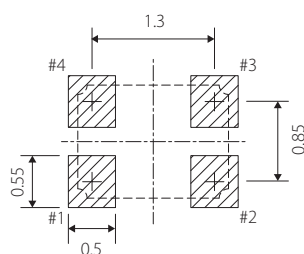
| Model                      |                           | STO-1612                                                                                                   | STV-1612                                                            |
|----------------------------|---------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Frequency range            |                           | 16~52MHz                                                                                                   |                                                                     |
| Nominal frequency (MHz)    |                           | 19.2, 26, 38.4, 52                                                                                         |                                                                     |
| Frequency stability        | Tolerance at 25°C         | $\pm 2.0 \times 10^{-6}$ (Sixty minutes after reflow)                                                      |                                                                     |
|                            | Temperature (Ref.to+25°C) | $\pm 0.5 \times 10^{-6} / -40 \sim +85^\circ\text{C}$                                                      |                                                                     |
|                            | Supply voltage change     | $\pm 0.2 \times 10^{-6} / V_{dd} \pm 5\%$                                                                  |                                                                     |
|                            | Load change               | $\pm 0.2 \times 10^{-6} / Z_L \pm 10\%$                                                                    |                                                                     |
| Aging (at 25°C)            |                           | $\pm 1.0 \times 10^{-6} / \text{year at } +25^\circ\text{C}$                                               |                                                                     |
| Storage temperature range  |                           | $-40 \sim +85^\circ\text{C}$                                                                               |                                                                     |
| Power supply voltage (Vcc) |                           | $+1.8\text{V} \sim +3.3\text{V DC } \pm 5\%$                                                               |                                                                     |
| Current consumption        |                           | 1.5mA max. ( $\sim 26\text{MHz}$ ), 2.0mA max. ( $\sim 32\text{MHz}$ ), 2.5mA max. ( $\sim 52\text{MHz}$ ) |                                                                     |
| Output                     | Load (ZL)                 | 10k $\Omega$ // 10pF                                                                                       |                                                                     |
|                            | Voltage                   | 0.8V p-p min.                                                                                              |                                                                     |
|                            | Waveform                  | Clipped Sine Wave (DC-coupled output)                                                                      |                                                                     |
| External controlfunction   | Frequency tuning range    | -                                                                                                          | $\pm 8.0 \times 10^{-6}$ min. (Positive)                            |
|                            | External control voltage  | -                                                                                                          | $+1.5\text{V} \pm 1.0\text{V DC} / +0.9\text{V} \pm 0.9\text{V DC}$ |
|                            | Input impedance (Zvin)    | -                                                                                                          | 500k $\Omega$ min. (770k $\Omega$ typ.)                             |
| Aging                      |                           | -135dBc typ. at 1kHz offset                                                                                |                                                                     |

Package quantity: 3,000pcs max./Reel.

### Outline and Dimensions [unit:mm]



Land Pattern(REFERENCE)



| Terminal | Connection |          |
|----------|------------|----------|
|          | STO-1612   | STV-1612 |
| #1       | GND        | VC       |
| #2       | GND        | GND      |
| #3       | OUTPUT     | OUTPUT   |
| #4       | Vcc        | Vcc      |