

# TEMPERATURE-COMPENSATED CRYSTAL OSCILLATOR

## TX091, VTX91



### Applications

- GPS / LTE / Femtocell

### Features

- Ultra-thin / Dimensions (2.5×2.0×0.8)
- Seam sealed
- Low phase noise / Low power consumption
- High stability  $\pm 0.5\text{ppm} / -40 \sim +85^\circ\text{C}$

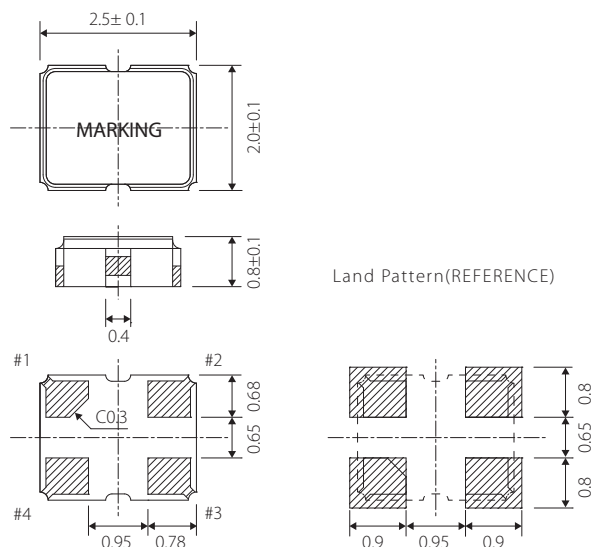
### Specifications



| Model                      | TX091   | VTX91   |   |
|----------------------------|---|---|---|
| Frequency range            | 10~52MHz  |   |   |
| 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   | $\pm 0.2 \times 10^{-6} / V_{\text{dd}} \pm 5\%$      |   |
|                            | 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~+85°C   |   |   |
| Power supply voltage (Vcc) | +1.8V~+3.3V DC $\pm 5\%$                                      |   |   |
| Current consumption        | 1.5mA max. (~26MHz), 2.0mA max. (~32MHz), 2.5mA max. (~52MHz) |   |   |
| 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                                      | -   | +1.5V $\pm 1.0$ V DC / +0.9V $\pm 0.9$ V DC |
|                            | Input impedance (Zvin)  | -   | 500k $\Omega$ min. (770k $\Omega$ typ.)     |
| Phase noise                | -135dBc typ. at 1kHz offset                                   |   |   |

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

### Outline and Dimensions [unit:mm]



| Terminal | Connection |        |
|----------|------------|--------|
|          | TX091      | VTX91  |
| #1       | GND        | VC     |
| #2       | GND        | GND    |
| #3       | OUTPUT     | OUTPUT |
| #4       | Vcc        | Vcc    |