

# HCMOS TCXO

## STO-3225B



### Applications

- Communication Equipment

### Features

- HCMOS output with Tri-state function
- Ceramic package, Dimensions(3.2×2.5×1.0)
- High stability  $\pm 2.5\text{ppm} / -30^{\circ}\text{C} \sim +75^{\circ}\text{C}$
- Low current consumption
- Low phase noise, Low jitter

### Specifications



| Model                       |                           | STO-3225B                                                              |
|-----------------------------|---------------------------|------------------------------------------------------------------------|
| Frequency range             |                           | 4.0~55.0MHz                                                            |
| Nominal frequency (MHz)     |                           | 5, 10, 12, 16, 20, 24, 32, 40, 54                                      |
| Storage temperature range   |                           | -40~+125 °C                                                            |
| Operating temperature range |                           | -30~+75 °C                                                             |
| Frequency stability         | Tolerance at 25°C         | $\pm 2.0 \times 10^{-6}$ (Sixty minutes after reflow)                  |
|                             | Temperature (+25°C basis) | $\pm 2.5 \times 10^{-6} / -30 \sim +75^{\circ}\text{C}$                |
|                             | 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                       |                           | $\pm 1.0 \times 10^{-6} / \text{year at } +25^{\circ}\text{C}$         |
| Power supply voltage (Vdd)  |                           | +2.5V, +2.8V, +3.3V DC $\pm 5\%$                                       |
| Current consumption         |                           | *note / 10uA max (Standby)                                             |
| Output level                |                           | C-MOS                                                                  |
| Load                        |                           | 15pF                                                                   |
| Output voltage level        |                           | Vol:10%Vdd max. / VoH:90%Vdd min.                                      |
| Rise & Fall time            |                           | 5ns max. / 10%Vdd ~ 90%Vdd                                             |
| Duty cycle                  |                           | 45% ~ 55% at 1/2Vdd                                                    |
| Phase Noise / Jitter        |                           | -145dBc / Hz Typ. at 10kHz offset / 1 $\sigma$ 3ps typ.                |
| Tri-state Function          |                           | #1: Floating, or "H" → Output enable / #1: "L" → Output disable (Hi-Z) |

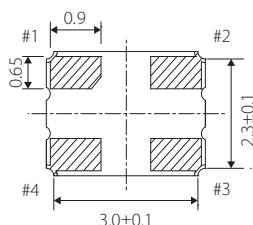
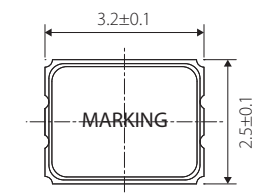
\*Reference / Idd Spec

(mA max.)

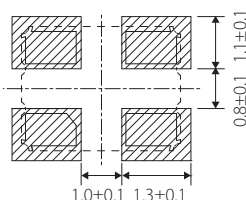
| Frequency | 4~10MHz | ~20MHz | ~30MHz | ~40MHz | ~54MHz |
|-----------|---------|--------|--------|--------|--------|
| 2.5V      | 3.1     | 3.7    | 4.2    | 4.6    | 5.5    |
| 2.8V      | 3.4     | 4.1    | 4.7    | 5.2    | 6.0    |
| 3.3V      | 4.0     | 4.8    | 5.5    | 6.0    | 7.0    |

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

### Outline and Dimensions [unit:mm]



Land Pattern (REFERENCE)



| Terminal | Connection |
|----------|------------|
| #1       | Tri-state  |
| #2       | GND        |
| #3       | Output     |
| #4       | Vcc        |

| Tri-state Function |              |
|--------------------|--------------|
| Tri-state pin      | Output       |
| High or Floating   | Active       |
| Low                | Hi-Impedance |