

## ROX3827T3

The ROX3827T3 OCXO is the cost effective highly stable oscillator for telecom applications. The performance over temperature range is comparable to the current ROX-T2. Its total stability is down to less than 50 ppb per year across all causes. Frequencies available are from 5MHz to 40MHz, and power supply options are 3.3V, 5V & 12V. These 38 x 27 mm package series of oscillators are designed with an embedded post-compensation system with a micro-controller. They are optimized designs for the Stratum 3E and up to Stratum 2.

### Features

- Hold over below 7  $\mu$ s /15  $\mu$ s over 24 hours, including temperature changes
- Standard frequencies: 10, 12.8, 13, 20, 24.576, 26 and 40 MHz
- Small form factor
- Temperature sensor output
- 2 packages height : 11.7 mm and 17 mm

### Applications

- IEEE 1588: G.8263, G.8273.x
- Stratum 3E timing modules
- Stratum 2 stability
- Time and frequency references
- Wireless Base Stations
- LTE-TDD Base Stations

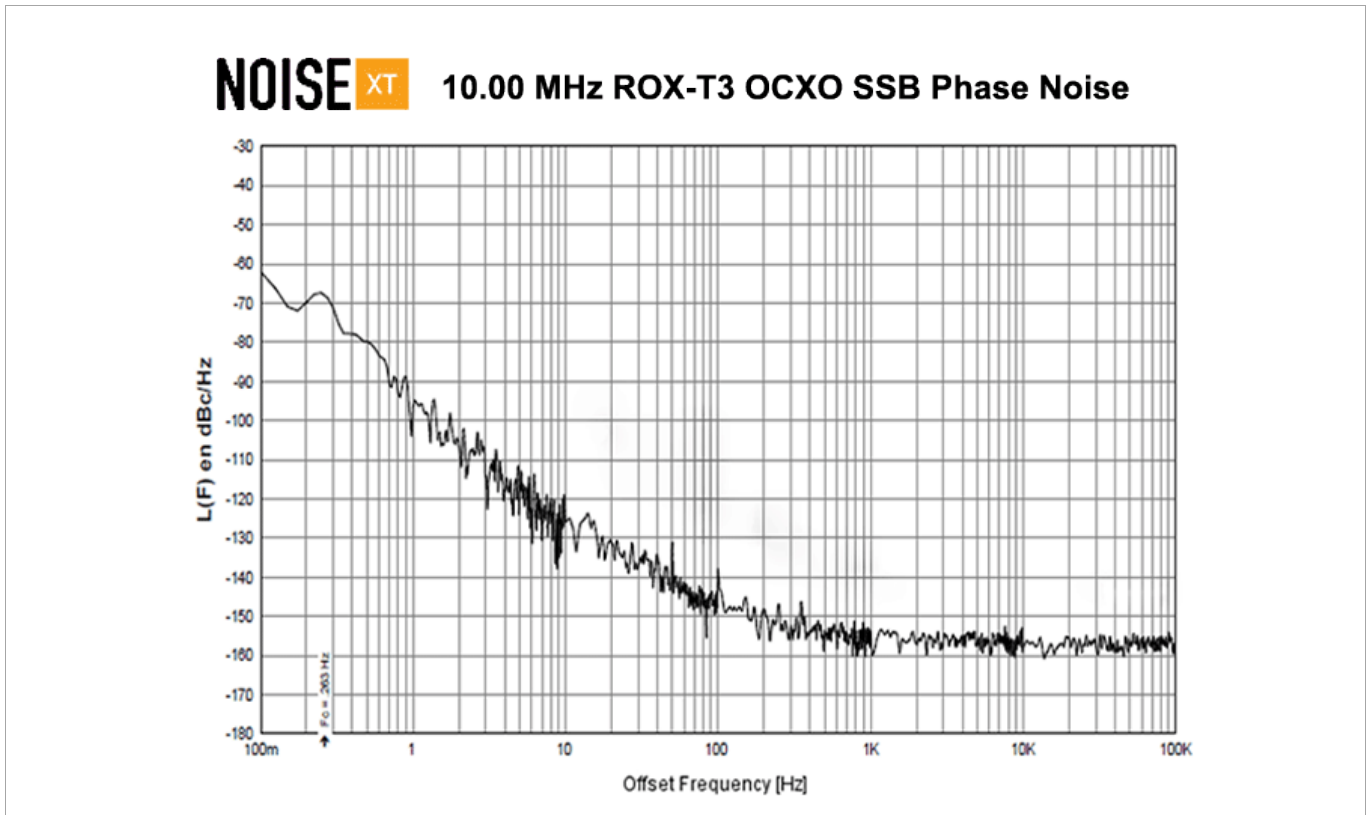
### 38 x 27 mm



## Standard Specifications

Parameter	Min.	Typ.	Max.	Unit	Test Condition / Description
Nominal frequency		5 - 40		MHz	Standard frequencies: 10, 12.8, 13, 20, 24.576, 26 and 40MHz
Operating temperature range	-40		85	°C	
Frequency stability over temperature			1	ppb	Peak to peak. Calm air
Temperature slope		8		ppt/°C	0.5°C/minute
Free-run accuracy over 20 years			±1	ppm	Telcordia GR-1244 requirement is ± 4.6 ppm
Supply voltage stability			±1	ppb	±5% at 25°C
24 hours holdover performance, H = 11.7 mm H = 17 mm			±15 ±7	$\mu$ s $\mu$ s	After 3 days of continuous power on, constant load and 1% supply change and 50°C window in operating temperature range, temperature gradient ( 10 °C / hour)
Hysteresis effect			0.3	ppb	Over -40 to +85°C, gradient 10°C / hour
Long term stability (Ageing)			±0.3 ±10 ±50	ppb/day ppb/month ppb/year	H = 11.7 mm. After 1 week operation
Long term stability (Ageing)			±0.1 ±3 ±15	ppb/day ppb/month ppb/year	H = 17 mm. After 1 week operation
Short term 1s to 10s integration time			±0.005	ppb	
Retrace effect at 25°C			±5	ppb	After 24 hours off and 1 hour on
Supply voltage (V <sub>CC</sub> )		5		V	±5%. Standard options 3.3V and 12V
Power consumption			3.5 1.5	W W	During warm-up Steady state at 25°C calm air
Warm-up time			±5	mn	Within 10 ppb of prior steady state output frequency at time of power-off. 24 hours on min. + 24 hours off max.
Harmonics (Sinewave)			-35	dBc	
Start-up time			1	sec	
Oscillator output - Sinewave	5		9	dBm	Signal level with 50 $\Omega$ load
Oscillator output – Compatible CMOS Output voltage level high (V <sub>OH</sub> ) Output voltage level low (V <sub>OL</sub> ) Rise & fall time	2.4		0.4 5	V V ns	
Environmental Vibration Shocks (3 directions) Storage temperature			10 50 90	g g °C	IEC 68-2-06 test Fc-Severity 500/10 IEC 68–2-27 test Ea severity 50A

## SSB Phase Noise: ROX-T3 OCXO (Typical value at 25°C)



## Model Outline: ROX3827T3 OCXO

