

## ROX5242T2

The ROX5242T2 belongs to a range of super single oven OCXOs designed as a compact and smart frequency source and time keeping reference for all synchronization systems, including precision positioning system bases equipment. These 52 x 42 mm package series of oscillators are designed with 2 circuits: 1 circuit with the crystal enclosed in a hermetic oven and 1 circuit with the amplifier stage. This structure enables an excellent stability versus temperature ( $\pm 0.2$  ppb). This high end OCXO is capable of replacing expensive Rubidium clocks in SDH/SONET Stratum 2 applications.

### Features

- Hold over below 5  $\mu$ s over 24 hours, including temperature change
- Standard frequencies: 10, 12.8, 13 and 15 MHz
- 2 packages height : 14 mm and 19 mm

### Applications

- Stratum 2 timing modules
- Time and frequency references
- Wireless Base Stations (GSM, UMTS, CDMA, LTE)
- Instrumentation and broadcasting

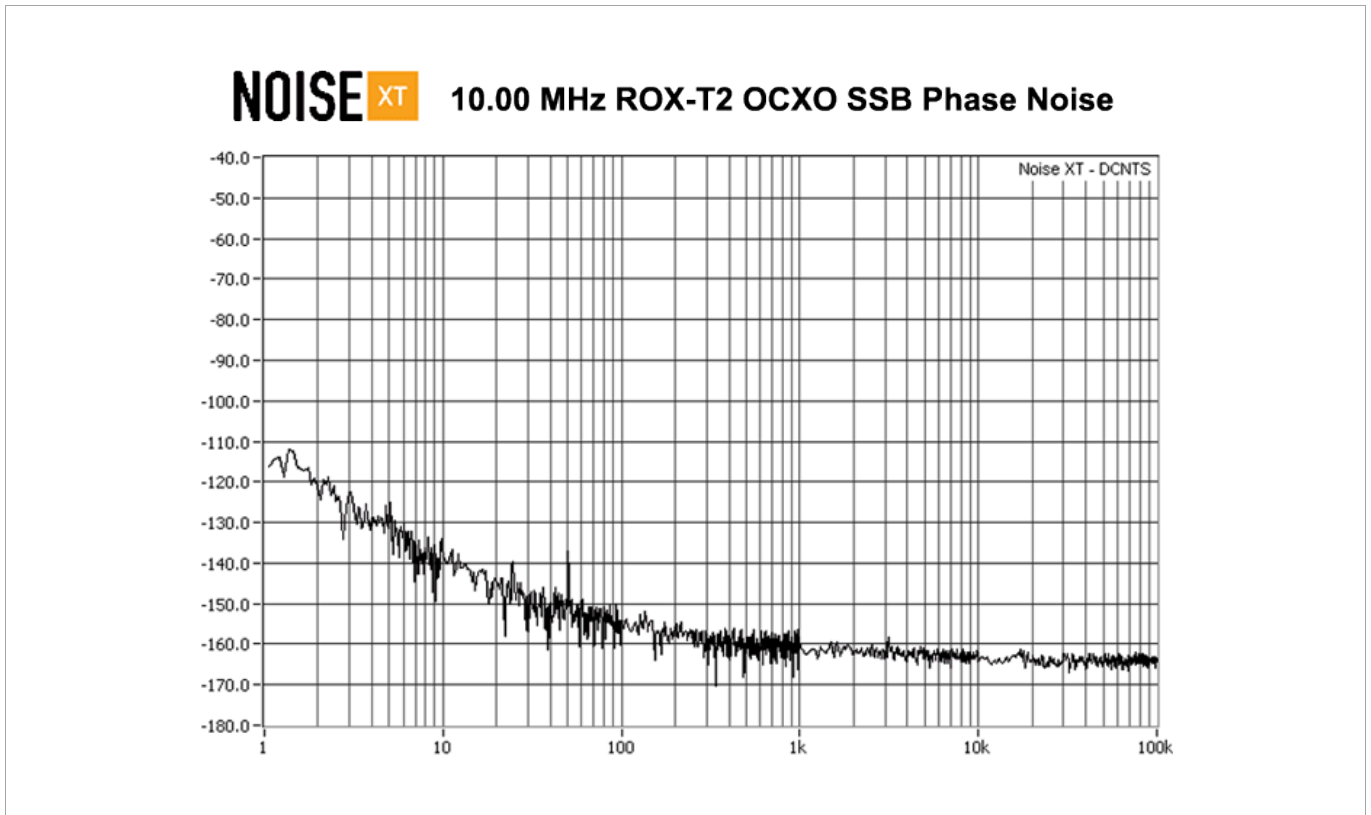
### 52 x 42 mm



### Standard Specifications

Parameter	Min.	Typ.	Max.	Unit	Test Condition / Description
Nominal frequency		5 - 15		MHz	Standard frequencies: 10, 12.8, 13 and 15 MHz
Operating temperature range	-40		85	°C	
Frequency stability over temperature			$\pm 0.2$	ppb	
Free-run accuracy over 20 years			$\pm 0.04$	ppm	Telcordia GR-1244 requirement is $\pm 4.6$ ppm
Supply voltage stability			$\pm 0.05$	ppb	$\pm 5\%$ at 25°C
24 hours holdover performance			$\pm 5$	$\mu$ s	After 3 days of continuous power on, constant load and no supply change and 50°C window in operating temperature range, temperature gradient ( 10 °C / hour)
Hysteresis effect			0.1	ppb	Over -40 to +85°C, gradient 10°C / hour
Long term stability (Ageing)			$\pm 0.05$ $\pm 8$ $\pm 40$	ppb/day ppb/year ppb/20 years	After 1 week operation
Short term 1s to 10s integration time			$\pm 0.002$	ppb	
Retrace effect at 25°C			$\pm 5$	ppb	After 24 hours off and 1 hour on
Supply voltage (V <sub>CC</sub> )		5		V	$\pm 5\%$ . Other option 12V
Power consumption			8 3.5	W W	During warm-up Steady state at 25°C calm air
Warm-up time			$\pm 8$	minutes	Within 10 ppb of prior steady state output frequency at time of power-off. 24 hours on min. + 24 hours off max.
Harmonics		-40		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> )	2.4			V	
Output voltage level low (V <sub>OL</sub> )			0.4	V	
Rise & fall time			5	ns	
Environmental					
Vibration			10	g	IEC 68-2-06 test Fc-Severity 500/10
Shocks (3 directions)			50	g	IEC 68-2-27 test Ea severity 50A
Storage temperature	-55		90	°C	

## SSB Phase Noise: ROX-T2 OCXO (Typical value at 25°C)



## Model Outline: ROX5242T2 OCXO

