

## ROX5242T1

The ROX5242T1 is a <0.1ppb stability class Oven Controlled Crystal Oscillator (OCXO). It is a master clock OCXO that provides ultimate frequency stability versus all operational conditions.

### Features

- Holdover below 1  $\mu$ s over 24 hours, including temperature change
- Standard frequencies: 5, 10, 12.8 MHz

### Applications

- Instrumentation
- Stratum 2 timing modules
- Base stations

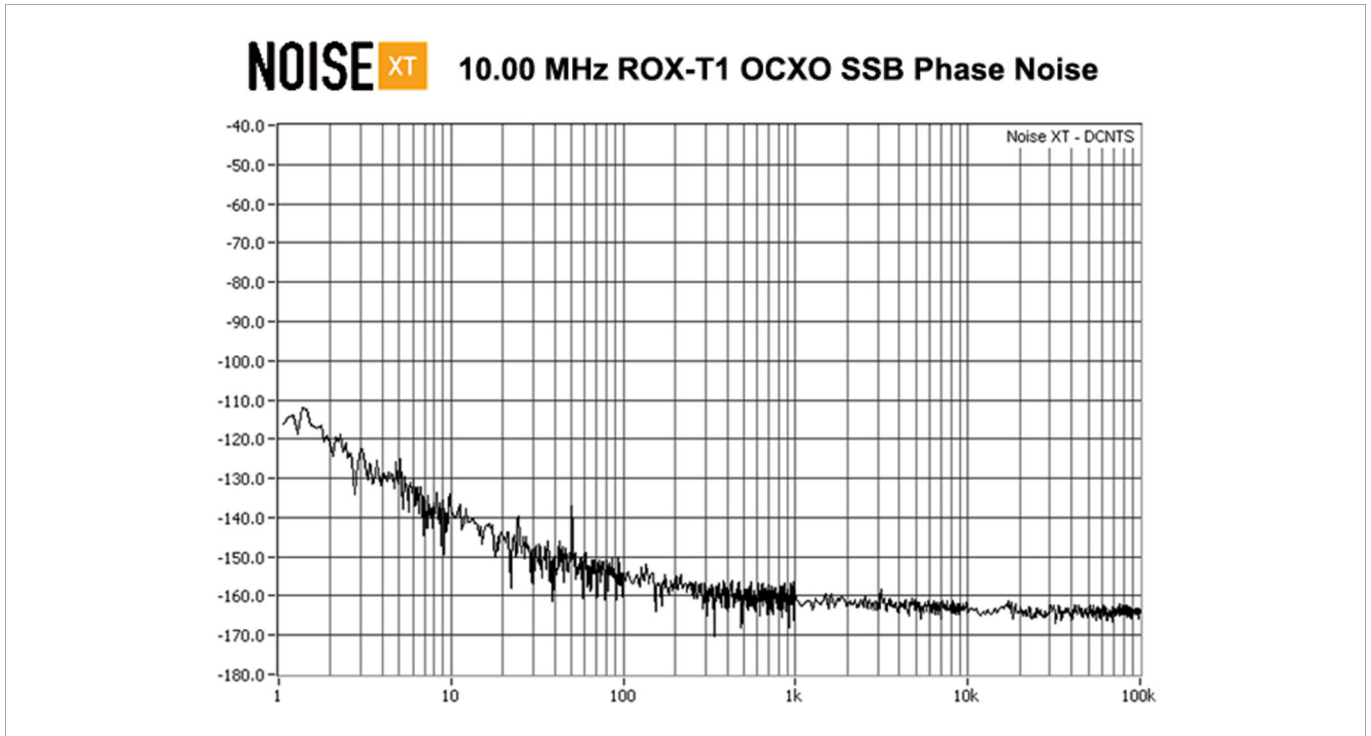
52 x 42 mm



### Standard Specifications

Parameter	Min.	Typ.	Max.	Unit	Test Condition / Description
Nominal frequency		5 – 12.8		MHz	Standard frequencies: 5,10, 12.8 MHz
Operating temperature range	-20		70	°C	
Frequency stability over temperature			$\pm 0.1$	ppb	
Free-run accuracy over 20 years			$\pm 0.02$	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			$\pm 3$	$\mu$ s	After 3 days of continuous power on, constant load, no supply variation, 50°C window in operating temperature range, temperature gradient ( 10 °C / hour)
Hysteresis effect			0.1	ppb	Over -20 to +70°C, gradient 10°C / hour
Long term stability (Ageing)			$\pm 0.02$ $\pm 3$ $\pm 20$	ppb/day ppb/year ppb/20 years	After 1 week of 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> )		12		V	$\pm 5\%$ .
Power consumption			7 2.5	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
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-T1 OCXO (Typical value at 25°C)



## Model Outline: ROX5252T1 OCXO

