

ROX2522S3

The ROX2522S3 OCXO is a cost effective highly stable oscillator for telecommunication applications. Its total stability is down to less than 50 ppb per year across all causes. Frequencies available are from 10 to 40 MHz. The power supply option is 3.3 V. This 25 x 22 mm package series of oscillators is designed with an embedded post-compensation system with a micro-controller to provide holdover capability. These designs are optimized for the Stratum 3E, LTE-TDD 5G Basestations and up to Stratum 2.

Features

- Holdover below 15 μ s over 24 hours, with 50°C up/down temperature ramp at 10°C/hour (typical)
- Standard frequencies: 10, 12.8, 20 and 40 MHz
- Small form factor
- I²C Temperature sensor output (optional)

Applications

- IEEE 1588: G.8263, G.8273.x
- Stratum 3E timing modules
- Stratum 2 stability
- Time and frequency references
- Wireless Basestations
- LTE-TDD 5G Basestations

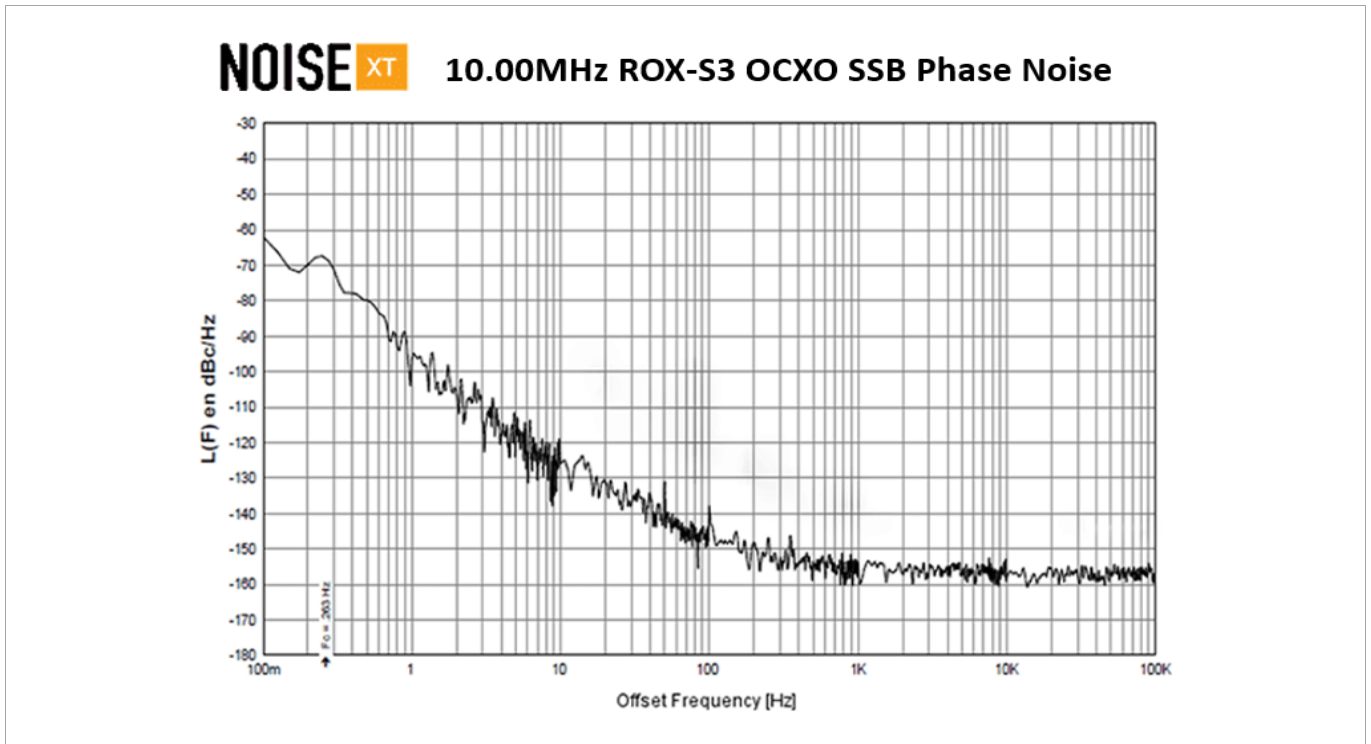
25.4 x 22 x 12.1 mm



Standard Specifications

Parameter	Min.	Typ.	Max.	Unit	Test Condition / Description
Nominal frequency		10 - 40		MHz	Standard frequencies: 10, 12.8, 20, and 40 MHz
Operating temperature range	-40		85	°C	
Frequency stability over temperature			1	ppb	Peak to peak. Calm air
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
8 hours holdover performance			±1.5	μ s	After 3 days of continuous power on, constant temperature, calm air
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	After 1 week of 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 _{CC})		3.3		V	±5%. Standard options 5.0V
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 the time of power-off. 24 hours on min. + 24 hours off max.
Harmonics (Sinewave)			-35	dBc	
Start-up time			1.5	sec	
Oscillator output - Sinewave	5		9	dBm	Signal level with 50 Ω load
Oscillator output – Compatible CMOS					
Output voltage level high (V _{OH})	2.4			V	
Output voltage level low (V _{OL})			0.4	V	
Rise & fall time			5	ns	
Environmental					Qualification – not operational
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-S3 OCXO (Typical value at 25°C)



Model Outline: ROX2522S3 OCXO

