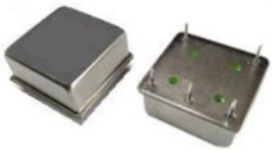
EUROQUARTZ

Oven Controlled Oscillators

EOC13T & EOC13E OCXOs — 5.00MHz to 40.00MHz

- **25.4 x 25.4 x 12.7mm package**
- **Through-hole metal package**
- **+3.3V, +5.0V supply voltage options**
- **Electronic Frequency Tuning as standard**

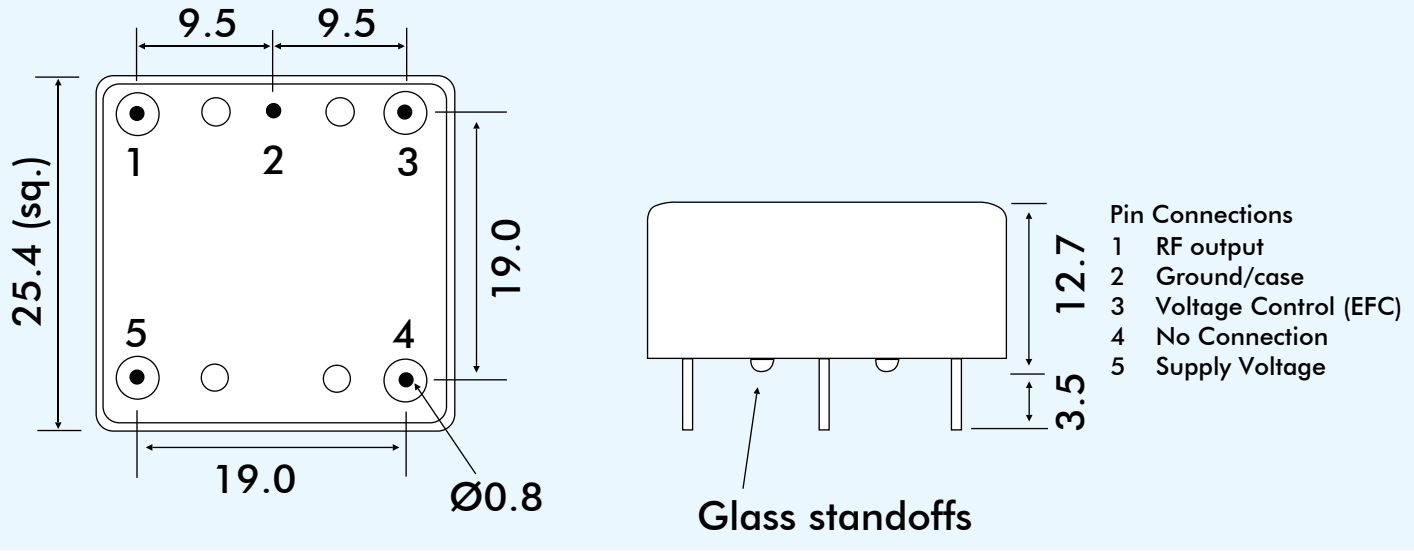


RoHS COMPLIANCE — REACH COMPLIANCE

GENERAL SPECIFICATION

Output Waveform		Square Wave		True Sine Wave	
Supply Voltage		+3.3V±5%	+5.0V±5%	+3.3V±5%	+5.0V±5%
Frequency Range		5.0 ~ 40.0MHz		5.0 ~ 40.0MHz	
Initial Calibration Tolerance		±100ppb (max.)		±100ppb (max.)	
		Vcon = +1.65V	Vcon = +2.5V	Vcon = +1.65V	Vcon = +2.5V
Crystal Cut		SC-cut or IT-cut			
Frequency Stability	vs Temperature	±3ppb max. over 0°C to +70°C			
		±5ppb max. over -30°C to +70°C			
		±5ppb max. over -40°C to 85°C			
	vs Voltage Change	±1.0ppb max. for ±5% voltage change			
	vs Warm-up Time (+25°C)	10 min. max., within ±10ppb of its reference frequency			
	vs Aging	±0.5ppb max. after 30 days, ±50ppb max. first year, ±300ppb max. over 10 years			
Voltage Control (EFC)	Frequency Deviation Range	±0.5ppm min., ±5ppm max., reference to Fo at +25°C and over temp. range			
	Control Voltage Range	+1.65±1.65V	+2.5±2.5V	+1.65±1.65V	+2.5±2.5V
	Transfer Function	Positive: Increasing control voltage increases output frequency			
	Input Impedance	50k Ω min.			
	EFC Linearity	±10% max.			
Power Dissipation (at +25°C)		1.3W max. at steady state; 1,000mA max. at turn-on			
Output	Output Level	---		+8dBm typ., +10dBm max. into 50Ω load	
	Harmonics	---		-30dBc min.	
	Spurious	---		-60dBc min.	
	Load	15pF		50Ω	
	Output Logic High	+2.4V min.		---	
	Output Logic Low	+0.4V max.		---	
	Duty Cycle	50±5% at +1.4V		---	
	Rise and Fall Time	7nsec. max (20% ~ 80% of waveform)		---	
	Phase Noise Offset (typ. at 10.0MHz)	10Hz	100Hz	1kHz	10kHz
		-120dBc	-135dBc	-145dBc	-150dBc

PACKAGE OUTLINE



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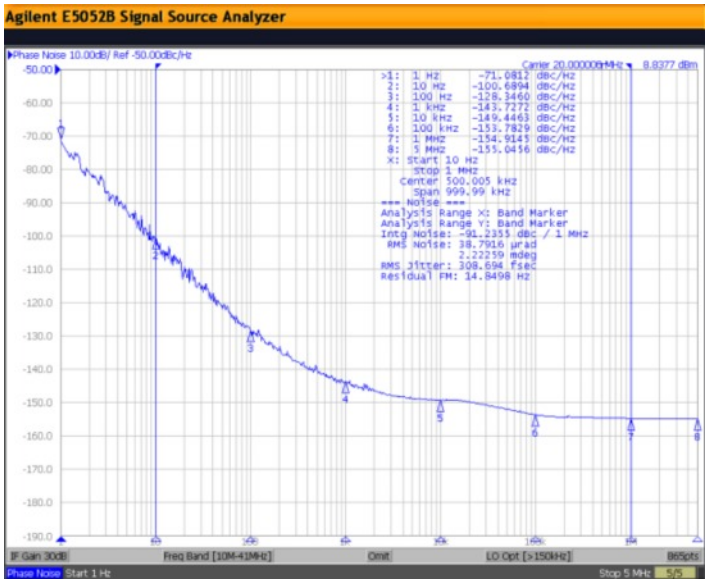
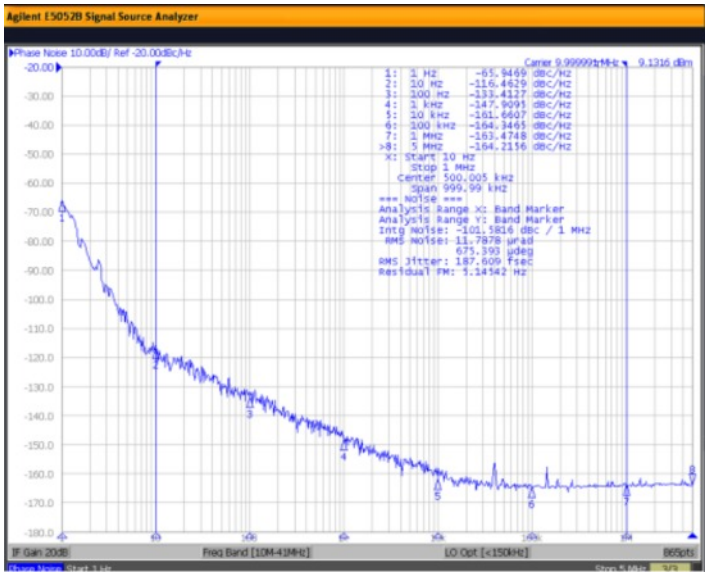
SSB Phase Noise, Sine Wave



SSB Phase Noise, Square Wave



ORDERING/PART NUMBER GENERATION

Example: EOC13E3 - 25.000MHz - 100/0+70

Series Designation
EOC13

Output Waveform
T = CMOS
E = Sine Wave

Supply Voltage
3.3V = 3
5.0V = 5

Frequency

Freqeuncy Stability

Operating Temperature Range

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