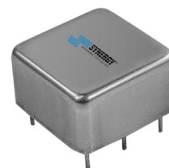


OVEN CONTROLLED CRYSTAL OSCILLATOR

PLUG-IN MODEL: OXO100-1-395

FEATURES:

- ▶ Exceptionally Low Phase Noise
- ▶ Fast Warm-up Time
- ▶ Low Power Consumption
- ▶ Tight Frequency Stability
- ▶ Excellent Long-Term Stability
- ▶ Electrical Frequency Tuning Input
- ▶ Reference Voltage Output



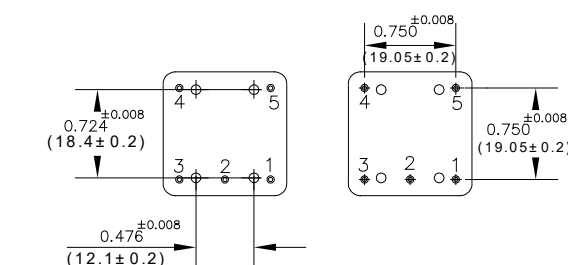
SPECIFICATIONS (Rev. B 04/15/25)

Nominal Frequency F _N		100.000 MHz	
Initial Frequency Tolerance			
T _A = +25 °C, after power on for 30 min.		≤ ± 3 x 10 ⁻⁷	
Frequency Stability			
Within operating range (-20 °C ... +70 °C)		≤ ± 5 x 10 ⁻⁸	
vs. supply voltage changes V _s ± 5%		≤ ± 5 x 10 ⁻⁹	
vs. load changes 50 Ohm ± 10%		≤ ± 5 x 10 ⁻⁹	
Aging (after 30 days of continuous operation)			
Per day		≤ ± 5 x 10 ⁻⁹	
1st Year		≤ ± 5 x 10 ⁻⁷	
For 15 Years		≤ ± 2 x 10 ⁻⁶	
Frequency Tuning Range		≥ ± 3 ppm	
Tuning Voltage Range V _c		0 to 10 V	
Reference Voltage Output V _{REF}		+10 V ± 5%	
Supply Voltage V _s		+12.0 V ± 5%	
Supply Current I _s			
Steady State @ +25 °C		≤ 135 mA	
During Warm-up		≤ 320 mA	
Warm Up Time			
To dF/F ₀ < ± 1 x 10 ⁻⁷ referred to F ₀ after 1 hour		≤ 5 min.	
Alan Deviation for τ = 1 sec.		≤ ±5x10 ⁻¹¹	
G-Sensitivity (all three axis)		≤ 1x10 ⁻⁹ / g	
Output signal type		Sine wave	
Initial output level		≥ 10 dBm	
Output load impedance:		50 Ohm ± 10%	
Harmonics:		≤ -30 dBc	
Spurious (100 Hz to 5 MHz)		≤ -100 dBc	
Typical Phase Noise (dBc/Hz)			
Option L	Option M	Option H	
10 Hz	≤ -93	-97	-100
100 Hz	≤ -125	-130	-135
1 kHz	≤ -157	-159	-159
10 kHz	≤ -173	-173	-170
100 kHz	≤ -177	-175	-172
1 MHz	≤ -180	-178	-175
Temperature Ranges			
Operating		-20 °C ... +70 °C	
Storage		-40 °C ... +85 °C	

* Specify option "M" or "H" in the part number.

* Specify option "M" or "H" in the part number.

Package # 395



DIMENSIONS: INCHES (MILLIMETERS)

Port Configuration

RF Output	Ground Case	Frequency Control Voltage	Reference Voltage Output	V_s
1	2	3	4	5

Weight: < 20 grams

OVEN CONTROLLED CRYSTAL OSCILLATOR

PLUG-IN MODEL: OXO100-1-395

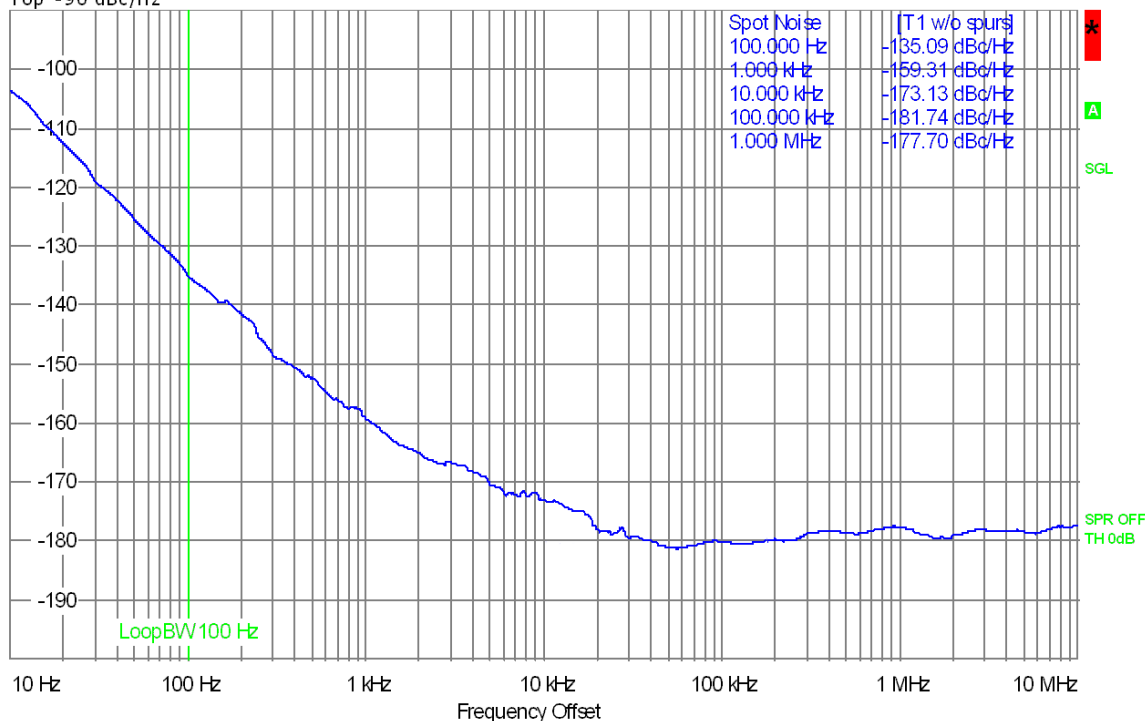
RS	R&S FSUP 26 Signal Source Analyzer				LOCKED			
	Settings		Residual Noise [T1 w/o spurs]		Phase Detector +40 dB			
Signal Frequency:	100.000001 MHz		Int PHN (10.0 .. 10.0 M) -96.2 dBc					
Signal Level:	13.61 dBm		Residual PM 1.261 m°					
Cross Corr Mode	Harmonic 1		Residual FM 33.07 Hz					
Internal Ref Tuned	Internal Phase Det		RMS Jitter 0.0350 ps					

Phase Noise [dBc/Hz]

RF Atten 10 dB manual

Top -90 dBc/Hz

1 CLRWR
SMTH 3%



PERFORMANCE PLOTS