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. A 08/15/14)

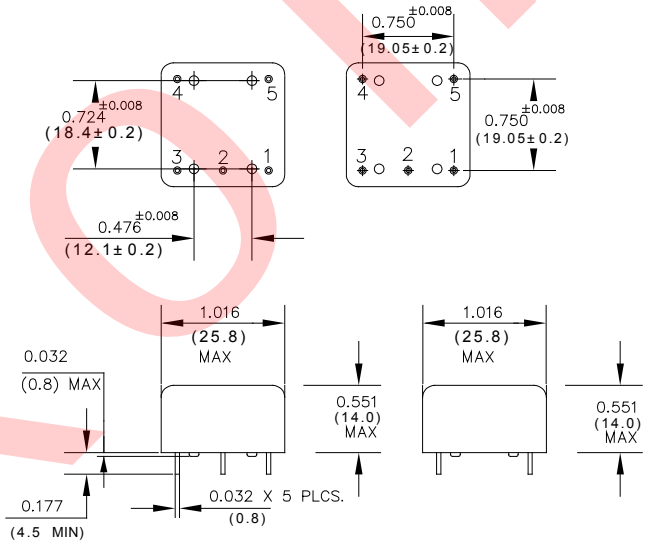
Nominal Frequency F_N	100.000 MHz
Initial Frequency Tolerance	
T_A = +25 °C, after power on for 30 min.	≤ ± 3 x 10^{-7}
Frequency Stability	
Within operating range (-20 °C ... +70 °C)	≤ ± 5 x 10^{-8}
vs. supply voltage changes V_S ± 5%	≤ ± 5 x 10^{-9}
vs. load changes 50 Ohm ± 10%	≤ ± 5 x 10^{-9}
Aging (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 ºC	≤ 120 mA
During Warm-up	≤ 300 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.*

Package #	395



DIMENSIONS: INCHES (MILLIMETERS)

Port Configuration				
RF Output	Ground Case	Frequency Control Voltage	Reference Voltage Output	Vs
1	2	3	4	5

Weight: < 20 grams

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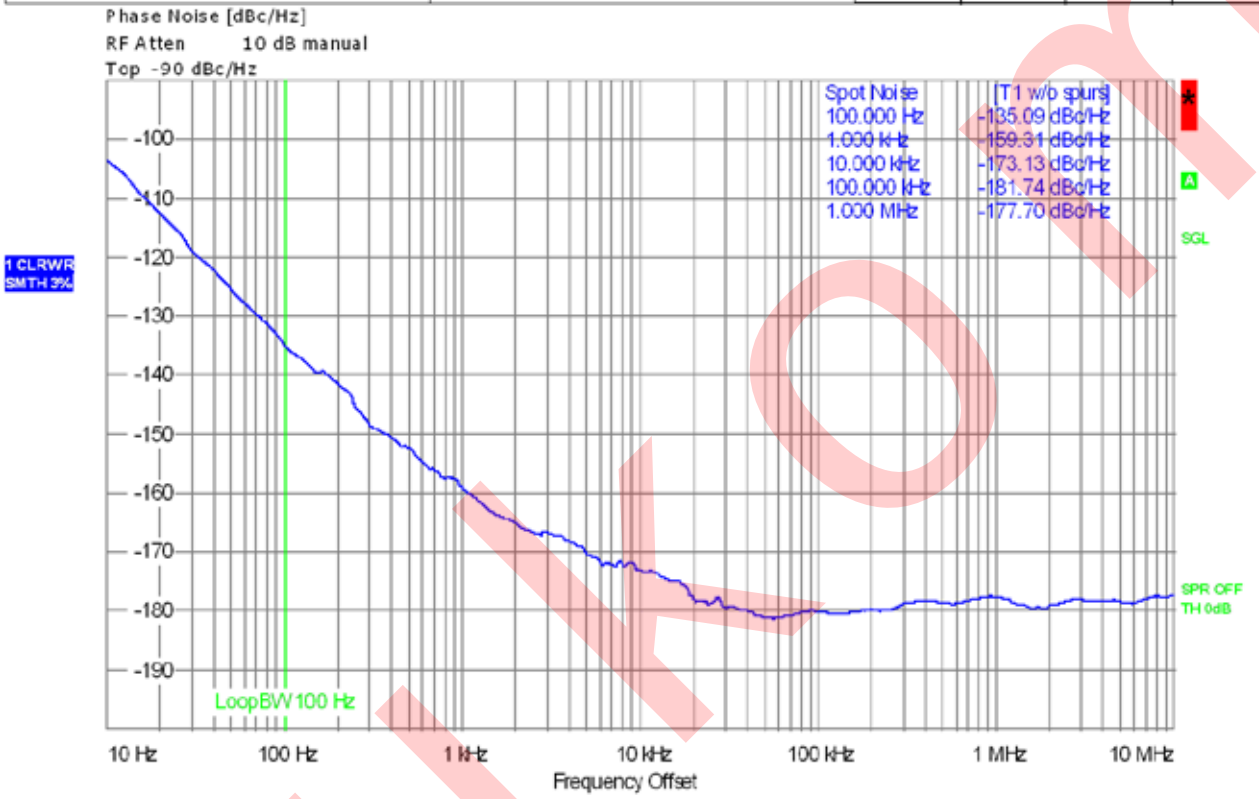
SYNERGY® MICROWAVE CORPORATION

OVEN CONTROLLED CRYSTAL OSCILLATOR
PLUG-IN MODEL: OXO100-1-395

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	



PERFORMANCE PLOTS

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