

OVEN CONTROLLED CRYSTAL OSCILLATOR

PLUG-IN MODEL: OXO120-1-349

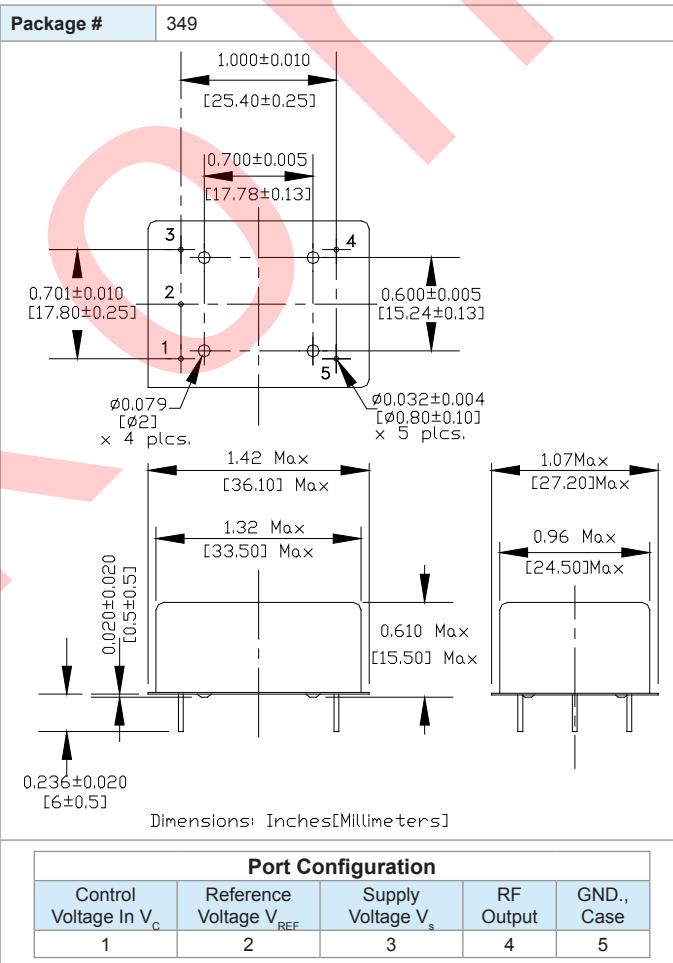
FEATURES:

- ▶ Exceptionally Low Phase Noise
- ▶ Fast Warm-up Time
- ▶ Low Power Consumption
- ▶ Tight Frequency Stability
- ▶ Excellent Long-Term Stability
- ▶ El. Frequency Tuning Input
- ▶ Reference Voltage Output
- ▶ Small CO-8 package



SPECIFICATIONS

Nominal Frequency F_N	120.000 MHz
Initial Frequency Tolerance	
$T_A = +25^\circ\text{C}$, after power on for 30 min.	$\leq \pm 2 \times 10^{-7}$
Frequency Stability	
Within operating range	$\leq \pm 2 \times 10^{-7}$
vs. supply voltage changes $V_S \pm 5\%$	$\leq \pm 1 \times 10^{-8}$
vs. load changes 50 Ohm $\pm 5\%$	$\leq \pm 2 \times 10^{-9}$
Aging (after 30 days of continuous operation)	
Per day	$\leq \pm 3 \times 10^{-9}$
Per Year	$\leq \pm 3 \times 10^{-7}$
15 Years	$\leq \pm 1.5 \text{ ppm}$
Frequency Tuning Range	$\geq \pm 2 \text{ ppm}$
Tuning Voltage Range V_C	0 to 10 V
Reference Voltage Output V_{REF}	$+10 \text{ V} \pm 5\%$
Supply Voltage V_S	$+12.0 \text{ V} \pm 5\%$
Supply Current I_S	
Steady State @ $+25^\circ\text{C}$	$\leq 150 \text{ mA}$
During Warm-up	$\leq 350 \text{ mA}$
Warm Up Time	
To $dF/F_0 < \pm 1 \times 10^{-7}$ referred to F_0 after 1 hour	$\leq 10 \text{ min}$
Output signal type	Sine wave
Initial output level	$\geq 7 \text{ dBm}$
Output load impedance:	50 Ohm $\pm 5\%$
Harmonics:	$\leq -25 \text{ dBc}$
Typical Phase Noise	
100 Hz	-125 dBc/Hz
1 kHz	-150 dBc/Hz
10 kHz	-160 dBc/Hz
100 kHz	-168 dBc/Hz
1 MHz	-170 dBc/Hz
Temperature Ranges	
Operating	$-20^\circ\text{C} \dots +70^\circ\text{C}$
Storage	$-40^\circ\text{C} \dots +85^\circ\text{C}$

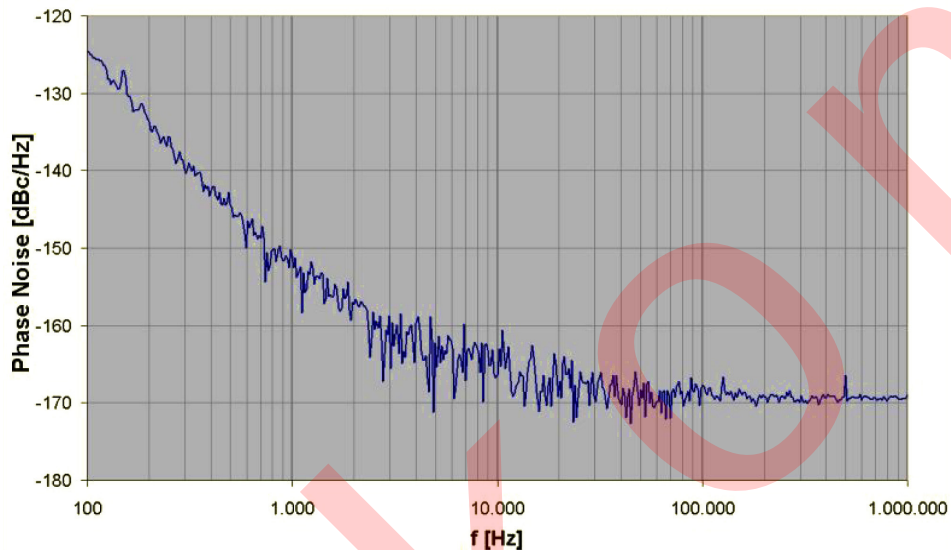


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PERFORMANCE PLOTS

Phase Noise O.30.800784-LF - 120.000 MHz



Typ. Freq. vs. Temp. Charact.

