

OVEN CONTROLLED CRYSTAL OSCILLATOR

PLUG-IN MODEL: OXO100-1-349

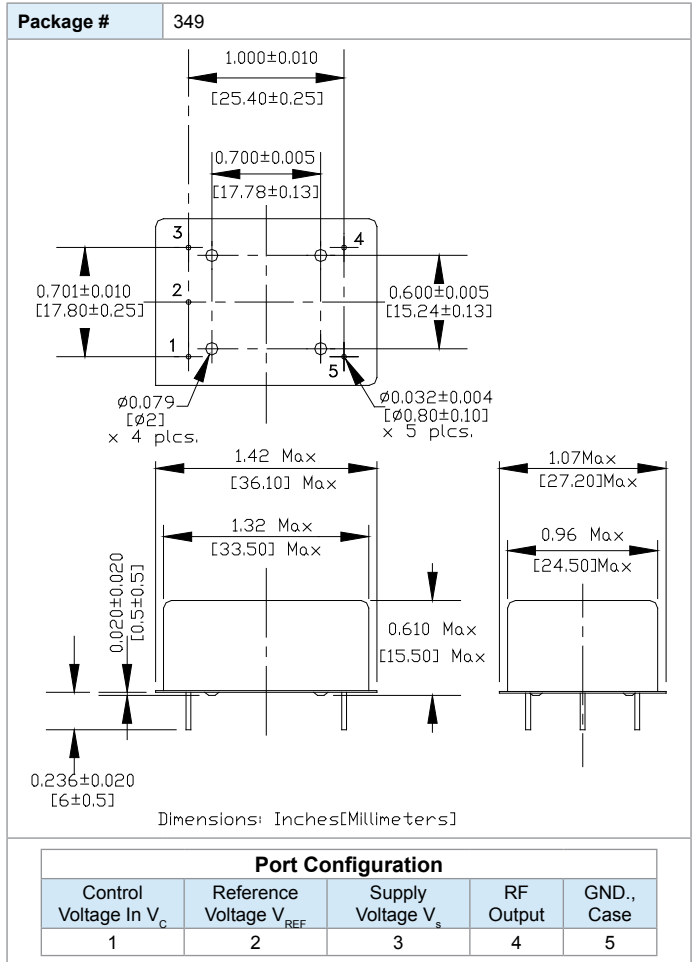
FEATURES:

- ▶ 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	100.000 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	$\leq \pm 5 \times 10^{-8}$
vs. supply voltage changes $V_s \pm 5\%$	$\leq \pm 1 \times 10^{-8}$
vs. load changes 50 Ohm $\pm 5\%$	$\leq \pm 5 \times 10^{-9}$
Aging (after 30 days of continuous operation)	
Per day	$\leq \pm 2 \times 10^{-9}$
Per Year	$\leq \pm 1 \times 10^{-7}$
15 Years	$\leq \pm 7 \times 10^{-7}$
Frequency Tuning Range	
	$\geq \pm 1.5$ ppm
Tuning Voltage Range V_c	
	0 to 10 V
Reference Voltage Output V_{REF}	
	+10 V $\pm 5\%$
Supply Voltage V_s	
	+12.0 V $\pm 5\%$
Supply Current I_s	
Steady State @ +25 °C	≤ 150 mA
During Warm-up	≤ 400 mA
Warm Up Time	
To $dF/F_0 < \pm 1 \times 10^{-7}$ referred to F_0 after 1 hour	≤ 5 min.
Output signal type	
	Sine wave
Initial output level	
	≥ 7 dBm
Output load impedance:	
	50 Ohm $\pm 10\%$
Harmonics:	
	≤ -30 dBc
Spurious (100 Hz to 5 MHz)	
	≤ -100 dBc
Typical Phase Noise	
10 Hz	≤ -100 dBc/Hz
100 Hz	≤ -130 dBc/Hz
1 kHz	≤ -153 dBc/Hz
10 kHz	≤ -165 dBc/Hz
100 kHz	≤ -170 dBc/Hz
Temperature Ranges	
Operating	-20 °C ... +70 °C
Storage	-40 °C ... +85 °C

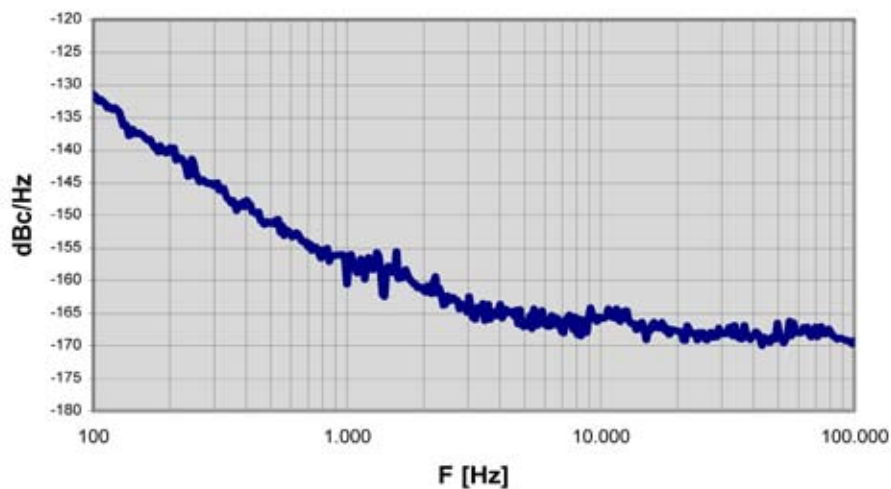


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PERFORMANCE PLOTS

Phase Noise 100.000 MHz OCXO



Frequency vs. Temp. 100.000 MHz OCXO

