

OVEN CONTROLLED CRYSTAL OSCILLATOR

SURFACE MOUNT MODEL: OXO10-1-348

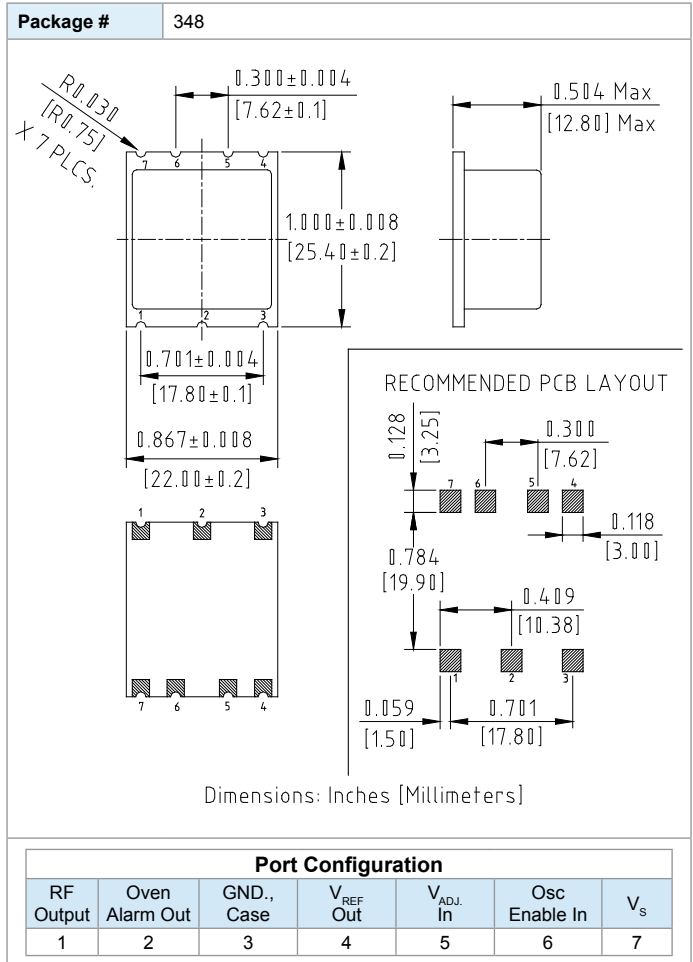
FEATURES:

- ▶ 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 SMD package



SPECIFICATIONS

Nominal Frequency F_N	10.000 MHz
Frequency Stability	
Within operating range	$\leq \pm 5 \times 10^{-9}$
vs. supply voltage changes $V_S \pm 5\%$	$\leq \pm 5 \times 10^{-10}$
vs. load changes 50 Ohm $\pm 5\%$	$\leq \pm 5 \times 10^{-10}$
Aging (after 30 days of continuous operation)	
Per day	$\leq \pm 5 \times 10^{-10}$
Per month	$\leq \pm 5 \times 10^{-9}$
15 Years	$\leq \pm 5 \times 10^{-7}$
Frequency Tuning Range	± 0.5 ppm to ± 1.5 ppm
Tuning Voltage Range V_C	0 to 5 V
Reference Voltage Output V_{REF}	$+5$ V $\pm 1.5\%$
Supply Voltage V_S	$+12.0$ V $\pm 5\%$
Supply Current I_S	
Steady State @ $+25$ °C	≤ 200 mA
During Warm-up	≤ 350 mA
Warm Up Time	
To $dF/F_0 < \pm 5 \times 10^{-8}$ referred to F_0 after 1 hour	≤ 10 min
Output signal type	Sine wave
Initial output level	$+7.5$ dBm ± 2.5 dBm
Output load impedance:	50 Ohm
Harmonics:	≤ -20 dBc
Spurious (100 Hz to 1 MHz from carrier)	≤ -90 dBc
Typical Phase Noise	
1 Hz	≤ -100 dBc/Hz
10 Hz	≤ -130 dBc/Hz
100 Hz	≤ -150 dBc/Hz
1 kHz	≤ -160 dBc/Hz
10 kHz	≤ -165 dBc/Hz
100 kHz	≤ -170 dBc/Hz
Temperature Ranges	
Operating	-20 °C ... $+70$ °C
Storage	-40 °C ... $+80$ °C



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PERFORMANCE PLOTS

