



# Model XO5083-059R

## Oven Controlled Crystal Oscillator

### RoHS Compliant

#### Electrical Specifications (typical)

**Nominal Frequency (F<sub>0</sub>):** 10.0MHz

#### Frequency Stability

Over Temperature:  $\leq \pm 5$ ppb

Aging (after 7-days power on)

Daily Aging:  $\leq \pm 1$ ppb typical

Yearly Aging:  $\leq \pm 200$ ppb typical

vs Supply ( $\pm 5\%$  change in V<sub>S</sub>):  $\leq \pm 2$ ppb

vs Load ( $\pm 10\%$  change in Load):  $\leq \pm 2$ ppb

STS (Root Allan Variance,  $\tau=1$ -sec):  $1 \times 10^{-11}$  typical

#### Frequency Adjustment

Method: External 20K $\Omega$  Potentiometer

Range: Sufficient for 20-years correction for all causes

V<sub>REF</sub> (Pin 13): +4.1V<sub>DC</sub> typical

Linearity:  $< 10\%$

Slope: Positive

#### Output (Sinewave)

Level: +3dBm  $\pm 2$ dB

Load: 50 $\Omega \pm 10\%$

**Harmonics:**  $\leq -25$ dBc

**Spurious:**  $\leq -80$ dBc

#### SSB Phase Noise (static conditions, typical)

-125dBc/Hz @ 10Hz offset

-145dBc/Hz @ 100Hz offset

-155dBc/Hz @ 1kHz offset

-160dBc/Hz @ 10kHz offset

#### Warm Up Time @ 25°C

To within  $1 \times 10^{-7}$  of the frequency at 1-hour :  $< 3$ -min.

#### Power

Supply Voltage (V<sub>S</sub>): +5.4V<sub>DC</sub>,  $\pm 5\%$

Power Consumption @ 25°C Steady-State:  $< 1.2$ W

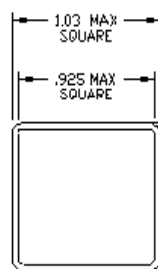
Power Consumption at Turn-on:  $< 3.5$ W

#### Environmental

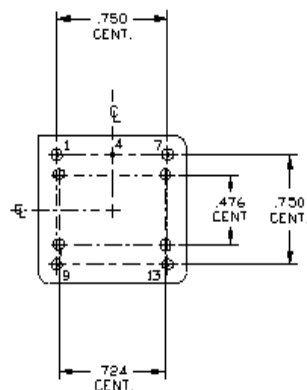
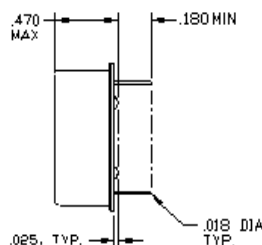
Temperature Range

Operating: 0°C to +50°C

Storage: -40°C to +85°C



PIN NO'S. SHOWN FOR REFERENCE ONLY.



PIN ASSIGNMENTS

1	RF OUTPUT
4	CASE GROUND
7	V TUNE
13	V REF
19	SUPPLY VOLTAGE