



# Model XO5083-081R

## Oven Controlled Crystal Oscillator

Full RoHS-6 Compliance

### Electrical Specifications

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

#### Frequency Stability

Over Temperature:  $\leq \pm 10$ ppb  
 Aging (after 30-days continuous operation)  
 Daily:  $\leq \pm 0.50$  ppb  
 Yearly:  $\leq \pm 0.1$ ppm  
 vs Supply ( $\pm 5\%$  change):  $\leq \pm 2$ ppb  
 Short Term Stability:  $\leq 0.01$ ppb/second

#### Frequency Adjustment

Method: External Voltage (V<sub>S</sub>), 0V<sub>DC</sub> to +10.0V<sub>DC</sub>  
 Range:  $\pm 1.2$ ppm typical, Sufficient for 10 years aging  
 Modulation Bandwidth:  $\geq 1$ KHz  
 Linearity:  $\leq 10\%$   
 Input Resistance:  $> 100K\Omega$   
 Slope: Positive

#### Output (Sinewave)

Level:  $\geq +8.5$ dBm  
 Load:  $50\Omega \pm 10\%$

**Harmonics:**  $\leq -30$  dBc

**G-Sensitivity (0-2000Hz):** 1ppb/g typical

#### Warm Up Time @ 25°C

(Relative to 2 hrs after turn-on following 24 hrs off)

To within 0.1ppm of final frequency: 3.0 minutes

#### SSB Phase Noise (typical)

-125dBc/Hz @ 10Hz offset  
 -152dBc/Hz @ 100Hz offset  
 -160dBc/Hz @ 1kHz offset  
 -165dBc/Hz @ 10kHz offset  
 -165dBc/Hz @ 100kHz offset

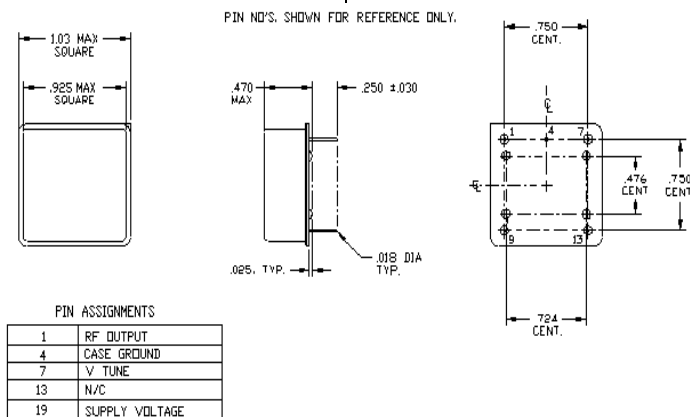
#### Power

Supply Voltage: +12.0V<sub>DC</sub>  $\pm 5\%$   
 Consumption @ 25°C Steady State: 1.0W typical  
 Consumption at Turn-on (all temperatures:  $\leq 4.6$ W)

**Operating Temperature Range:** -40°C to +85°C

#### Absolute Maximum Ratings

Operable and Storage: -55°C to +95°C



Date	Rev.	Orig.	Details of Revision
09/30/15	A	DPD	Changes to operating temperature to -40C to 85C from -40C to 80C
08/26/14	O	DPD	Original Release

The information contained herein is proprietary to MtronPTI and is submitted in confidence.  
 This information may not be copied or divulged without the express written permission of MtronPTI

**MtronPTI, Inc. - 2525 Shader Road – Orlando – Florida – 32804-2780**  
**Telephone: 407-298-2000 Fax: 407-293-2979 E-mail: Sales@mtronpti.com**