



# Model XO5083-114R

## 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):**  $< 1$ ppb/g

**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

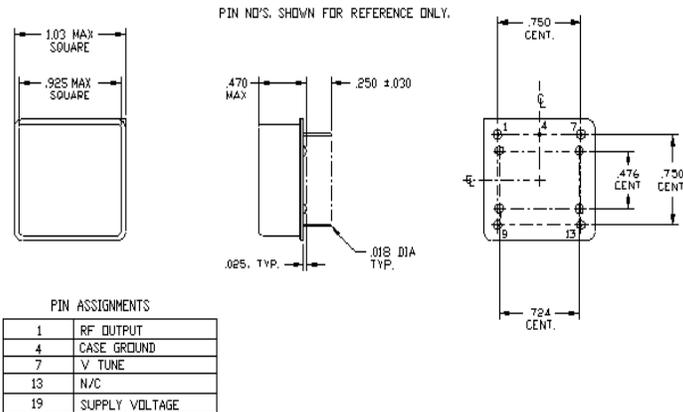
**Power**

- Supply Voltage: +12.0V<sub>DC</sub>  $\pm 5\%$
- Consumption @ 25°C Steady State: 1.0W typical
- Consumption at Turn-on (all temperatures):  $\leq 3.6$ W

**Operating Temperature Range:** -40°C to +80°C

**Absolute Maximum Ratings**

- Operable Temperature Range: -55°C to +85°C
- Storage: -55°C to +125°C
- Output Load: 25Ω minimum
- Supply Voltage: +15 V<sub>DC</sub>



**Data Sheet Revision Table:**

Date	Rev.	Orig.	Details of Revision
08-16-18	A	DPD	Original Release

Factory notes: Same as -046

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