

**OUTPUT****Frequency**

10 MHz

**Level**

+10 dBm ±3 dB into 50 ohms

**STABILITY****Aging**±5 x 10<sup>-10</sup> per day after 30 days  
operating, typical±5 x 10<sup>-8</sup> per year after 180 days  
operating, typical**Phase Noise L(f) -- Static****-01, -02, -03, -04**

10 Hz -125 dBc/Hz

100 Hz -150 dBc/Hz

1 kHz -160 dBc/Hz

10 kHz -165 dBc/Hz

100 kHz -165 dBc/Hz

**Temperature**±5 x 10<sup>-8</sup>, -20°C to +70°C (Ref +25°C)±2 x 10<sup>-7</sup>, -40°C to +85°C (Ref +25°C)**MECHANICAL****Dimensions**

≤ 1.03" x 1.03" x 0.515"

**Connectors**

Solder pins on base

**Packaging**

Solder sealed steel can

**POWER REQUIREMENTS****Warm-Up Power**

&lt;4W for 3 min

**Total Power**< 1.5W at +25°C steady state,  
typical**Supply Voltage**

+12 VDC, ±5%

**ADJUSTMENT****Electrical Tuning**±1 x 10<sup>-6</sup>, 0 - 10 VDC

Positive slope

**CRYSTAL****Type**

10 MHz SC-cut

**CRYSTAL****Type**

SC-cut, low-g:

**-01** 3e-10/g typical**-02** 3e-10/g per axis, guaranteed**-03** 2e-10/g per axis, guaranteed**-04** 1e-10/g per axis, guaranteed**ENVIRONMENTAL****Temperature-Altitude**

40,000 feet at -40°C, operating

**Storage**

-54° to +85°C

**Vibration, typical**10 to 1000 Hz, 0.06 g<sup>2</sup>/Hz

1000 Hz to 2000 Hz, -6dB/Octave

10 gs RMS

**Shock**

12 gs for 11 msec, three axes

Secure when mounting using

MIL-Grade epoxy

**Humidity**

95 to 100 percent relative humidity,

+28° to +85°C

**TEST DATA**

Output Level at +25°C

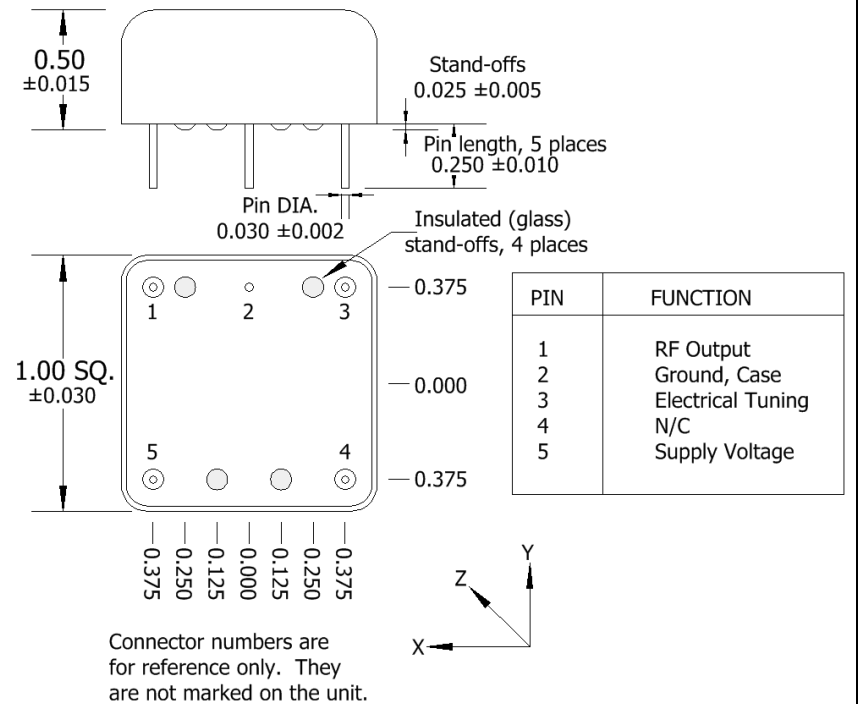
Static and Dynamic Phase Noise

Temperature Stability

Power – Warm-up and Total at +25°C

**-01** Phase Noise under vibration at  
0.06 g<sup>2</sup>/Hz at 100 Hz, one axis**-02** Phase Noise under vibration data,  
0.06 g<sup>2</sup>/Hz at 100 Hz, three axes**-03** Phase Noise under vibration data,  
0.06 g<sup>2</sup>/Hz at 100 Hz, three axes**-04** Phase Noise under vibration data,  
0.06 g<sup>2</sup>/Hz at 100 Hz, three axes

| REV | DATE     | REVISION RECORD | DWN | AUTH |
|-----|----------|-----------------|-----|------|
| -   | 03-28-13 | Initial Release | Liz |      |
| A   | 09-30-13 | Added -04       | Liz |      |
| B   | 03-07-14 | Static          | Liz |      |
|     |          |                 |     |      |
|     |          |                 |     |      |

**Wenzel Associates, Inc.**

Austin, Texas

Title:

**Rugged 10 MHz-SC Onyx IV Crystal Oscillator**

P/N:

**501-26709-XX**

Rev:

**B**

Date:

**09-30-13**

Drawn:

Ref:

Tolerances:  
(except as noted)  
Dimensions are in inches

0.XX Dec:

**±0.030"**

0.XXX Dec:

**±0.010"**

FSCM:

**62821**

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