

## OUTPUT

### Frequency

10 MHz

### Level

+10 dBm  $\pm 3$  dB into 50 ohms

## STABILITY

### Aging

$\pm 5 \times 10^{-10}$  per day after 30 days  
operating, typical

$\pm 5 \times 10^{-8}$  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

$\pm 5 \times 10^{-8}$ , -20°C to +70°C (Ref +25°C)

$\pm 2 \times 10^{-7}$ , -40°C to +85°C (Ref +25°C)

## MECHANICAL

### Dimensions

$\leq 1.03" \times 1.03" \times 0.515"$

### Connectors

Solder pins on base

### Packaging

Solder sealed steel can

## POWER REQUIREMENTS

### Warm-Up Power

<4W for 3 min

### Total Power

<1.5W at +25°C steady state,  
typical

### Supply Voltage

+12 VDC,  $\pm 5\%$

## ADJUSTMENT

### Electrical Tuning

$\pm 1 \times 10^{-6}$ , 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,  $0.06 \text{ g}^2/\text{Hz}$

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

$0.06 \text{ g}^2/\text{Hz}$  at 100 Hz, one axis

-02 Phase Noise under vibration data,

$0.06 \text{ g}^2/\text{Hz}$  at 100 Hz, three axes

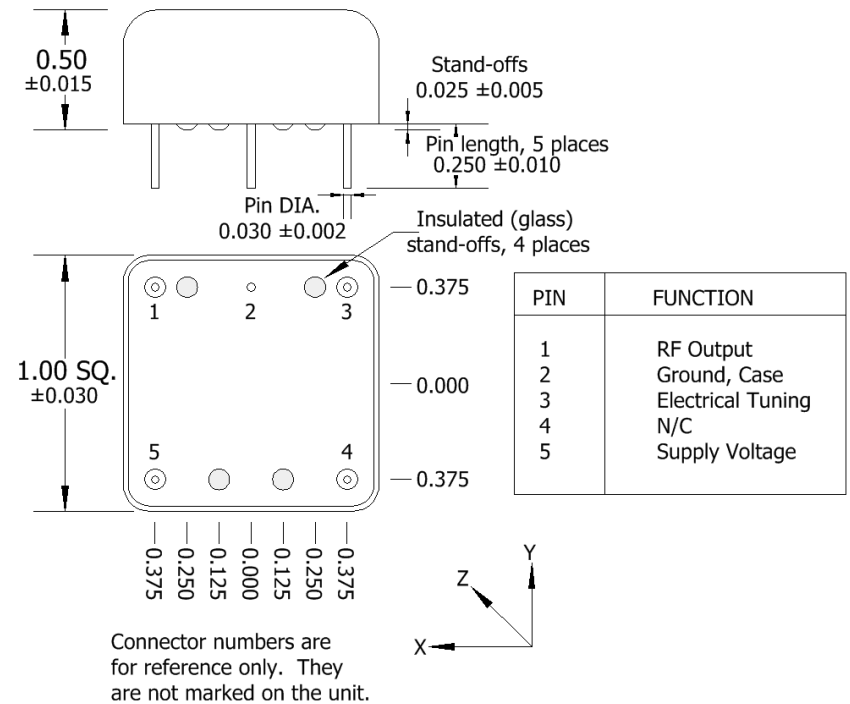
-03 Phase Noise under vibration data,

$0.06 \text{ g}^2/\text{Hz}$  at 100 Hz, three axes

-04 Phase Noise under vibration data,

$0.06 \text{ g}^2/\text{Hz}$  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:

**$\pm 0.030$**

0.XXX Dec:

**$\pm 0.010$**

FSCM:

**62821**

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