

## OUTPUT

### Frequency

1 GHz

### Level

+13 dBm  $\pm 2$  dB into 50 ohms

## STABILITY

### Aging

$1 \times 10^{-6}$  first year

after 30 days operating, typical

$5 \times 10^{-7}$  second year, typical

$3 \times 10^{-7}$  per year thereafter, typical

### Phase Noise L(f), typical

100 Hz -109 dBc/Hz

1 KHz -136 dBc/Hz

10 KHz -153 dBc/Hz

100 KHz -154 dBc/Hz

1 MHz -160 dBc/Hz

10 MHz -165 dBc/Hz

### Temperature Stability

$\pm 5 \times 10^{-7}$ , 0° to +50°C (Ref +25°C)

### Harmonics

$\leq -25$  dBc

### Sub-Harmonics

$\leq -60$  dBc

### Spurious

$\leq -80$  dBc, excluding power  
supply line related spurs

## MECHANICAL

### Dimensions

3.21 x 4 x 1"

### Connectors

SMA(f) and solder pins

### Packaging

Nickel-plated machined  
aluminum housing – J2

### Mounting

Threaded inserts on base,  
#2-56, 6 places

## POWER REQUIREMENTS

### Warm-Up Power

$\leq 13$  Watts for 5 minutes

### Total Power

$\leq 10$  Watts at +25°C

### Supply Voltage

+12 VDC  $\pm 5\%$

## ADJUSTMENT

### Mechanical Tuning

$\pm 4 \times 10^{-6}$

### Electrical Tuning

$\pm 5 \times 10^{-7}$ ,  $\pm 5$  VDC

Negative slope

## CRYSTAL

### Type

100 MHz SC-cut (x10)

## OTHER

### Design

Includes a SAW filter for improving the  
phase noise beyond the ~300 kHz offset.

### Label

Use conventional label with the  
following information:

501-26483 (Current Rev.)

1 GHz MXO-FR

+12 VDC

Serial # - Date Code

(Mark connectors with function)

### Test Data

Output Level

Phase Noise

Temperature Stability

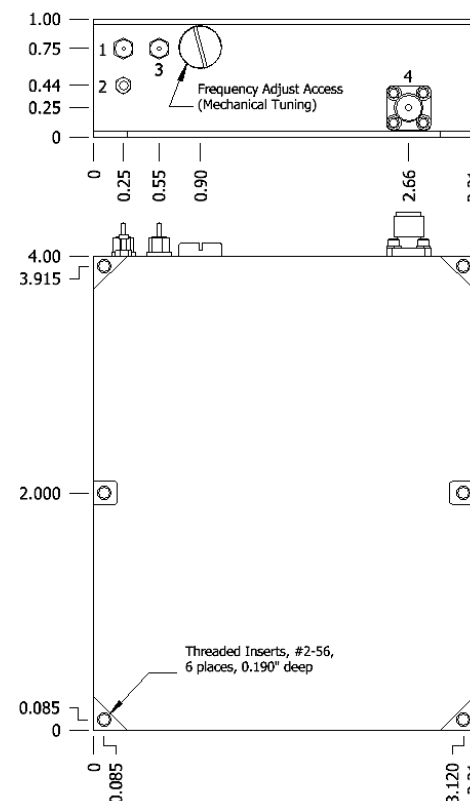
Harmonics, Subs, Spurious

Power – Warm-up and Total

Tuning – MT and ET

REV	DATE	REVISION RECORD	DWN	AUTH
-	12-11-12	Initial Release	PAC	

J2 MXO Connections	
Connector	Function
1	Supply Voltage
2	Ground, Case
3	Electrical Tuning
4	RF Output



**Wenzel Associates, Inc.**

Austin, Texas

Title:

**1 GHz Multiplied Crystal Oscillator (MXO-FR)**

P/N:

**501-26483**

Rev:

**-**

Date:

**12-11-12**

Drawn:

Ref:

23202a

Tolerances:  
(except as noted)  
Dimensions are in inches

0.XX Dec:

**$\pm 0.030$ "**

0.XXX Dec:

**$\pm 0.010$ "**

FSCM:

**62821**

Page 1 of 1