

## OUTPUT

### Frequency

12 GHz

### Level

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

## STABILITY

### Aging (free-running)

$1 \times 10^{-6}$  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 -85 dBc/Hz

1 KHz -111 dBc/Hz

10 KHz -126 dBc/Hz

100 KHz -127 dBc/Hz

## Temperature Stability

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

## Harmonics

-25 dBc

## Sub-Harmonics

-60 dBc

## Spurious

-80 dBc, excluding power  
supply line related spurs

## MECHANICAL

### Dimensions

4.16 x 4.00 x 1"

### Connectors

SMA(f)'s and solder pins on side

### Packaging

Nickel-plated machined  
aluminum housing – J3

### Mounting

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

## POWER REQUIREMENTS

### Warm-Up Power

$\leq 17$  Watts for 5 minutes

### Total Power

$\leq 14$  Watts at +25°C

### Supply Voltage

+15 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 (x120)

## OTHER

### Label

Use conventional label with the  
following information:

501-24244 (Current Rev.)

12 GHz MXO-FR

+15 VDC

Serial # - Date Code

(Mark connectors with function)

### Test Data

Output Level

Phase Noise – free-running

Temperature Stability – free-running

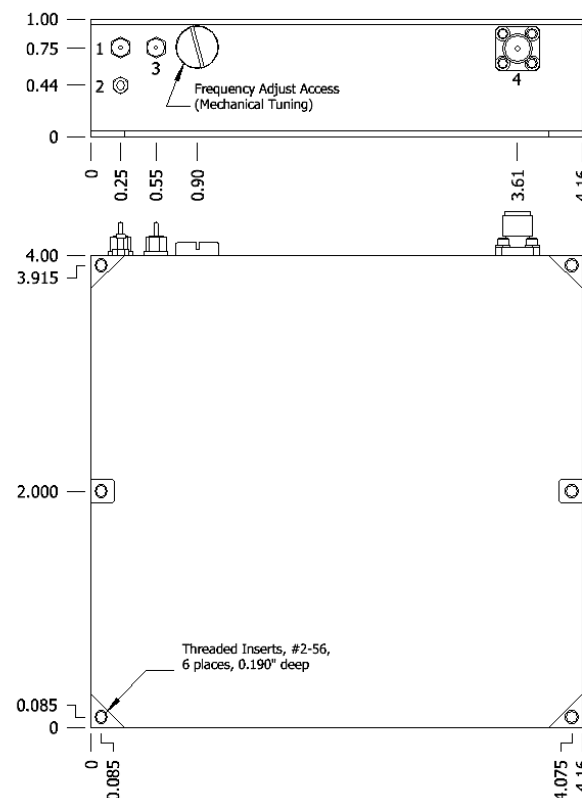
Harmonics, Subs, Spurious

Power – Warm-up and Total

Tuning – MT and ET

REV	DATE	REVISION RECORD	DWN	AUTH
-	07-13-11	Initial Release	PAC	JR
A	04-30-12	Phase Noise Floor	PAC	

J3 MXO Connections	
Connector	Function
1	Supply Voltage
2	Ground, Case
3	Electrical Tuning
4	RF Output



**Wenzel Associates, Inc.**

Austin, Texas

Title:

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

P/N:

**501-24244**

Rev:

**A**

Date:

**04-30-12**

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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