

**OUTPUT**

**Frequency**  
10.24 GHz

**Level**  
+13 dBm ±2 dB into 50 ohms

**STABILITY****Aging (free-running)**

1 x 10<sup>-6</sup> first year  
after 30 days operating, typical  
5 x 10<sup>-7</sup> second year, typical  
3 x 10<sup>-7</sup> per year thereafter, typical

**Phase Noise L(f), typical**

100 Hz -87 dBc/Hz  
1 KHz -112 dBc/Hz  
10 KHz -129 dBc/Hz  
100 KHz -130 dBc/Hz

**Temperature Stability**

±5 x 10<sup>-7</sup>, 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**

≤ 17 Watts for 5 minutes

**Total Power**

≤ 13.5 Watts at +25°C

**Supply Voltage**

+15 VDC ±5%

**ADJUSTMENT****Mechanical Tuning**

±4 x 10<sup>-6</sup>

**Electrical Tuning**

±5 x 10<sup>-7</sup>, ±5 VDC

Negative slope

**CRYSTAL****Type**

80 MHz SC-cut (x128)

**OTHER****Label**

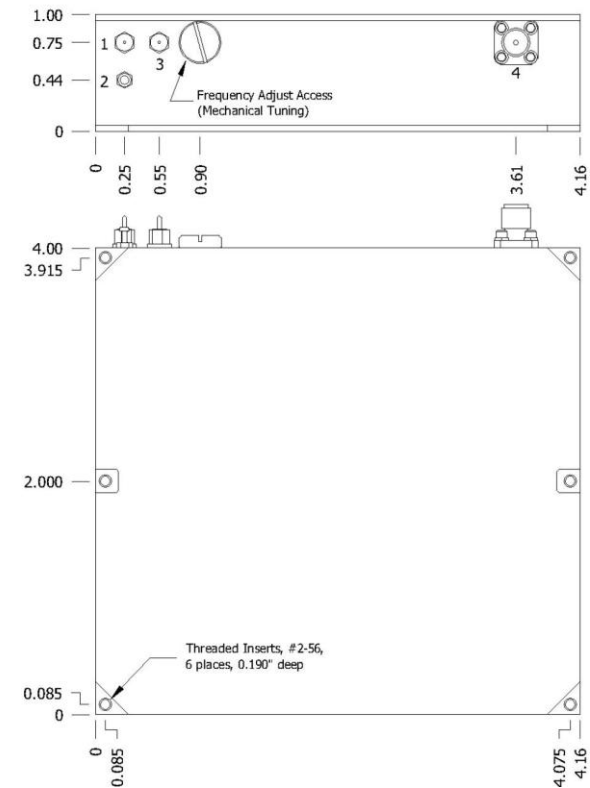
Use conventional label with the  
following information:  
501-25412 (Current Rev.)  
10.24 GHz MXO-FR  
+15 VDC  
Serial # - Date Code  
(Mark connectors with function)

**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 |
|-----|----------|-----------------|-----|------|
| -   | 01-26-12 | Initial Release | PAC |      |
|     |          |                 |     |      |
|     |          |                 |     |      |
|     |          |                 |     |      |
|     |          |                 |     |      |

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



**Wenzel Associates, Inc.**

Austin, Texas

Title:

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

P/N:

**501-25412**

Rev:

**-**

Date:

**01-26-12**

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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