

INPUT**Frequency**

10 MHz

Level

+7 dBm ±6 dB into 50 ohms

OUTPUT**Frequency**

13.2 GHz

Level

+13 dBm ±2 dB into 50 ohms

STABILITY**Aging (free-running)**1 x 10⁻⁶ first year

after 30 days operating, typical

5 x 10⁻⁷ second year, typical3 x 10⁻⁷ per year thereafter, typical**Phase Noise L(f), typical, (free-running)**

100 Hz -73 dBc/Hz

1 KHz -103 dBc/Hz

10 KHz -127 dBc/Hz

100 KHz -128 dBc/Hz

1 MHz -128 dBc/Hz

Temperature Stability±5 x 10⁻⁷ free-running from 0 to +50°C
(Ref. +25°C)**Harmonics**

-25 dBc

Sub-Harmonics

-60 dBc

PLL Divider Products

-60 dBc

Spurious-80 dBc, excluding power
supply line related spurs**Phase Lock Alarm**

TTL

Locked: +3.5 VDC to +5.2 VDC (Hi)

Out-of-Lock: +0.8 VDC max (Lo)

Phase Lock Voltage Monitor

Voltage monitor pin supplied

MECHANICAL**Dimensions**

5.36 x 4 x 1"

Connectors

RF Input/Output: SMA(f)

Power, Monitoring: Feed Thru Terminals

GND: Ground Turret

PackagingNickel-plated machined
aluminum housing – J3P**Mounting**Threaded inserts on base,
#2-56, 6 places**POWER REQUIREMENTS****Warm-Up Power**

≤ 18.5 Watts for 5 minutes

Total Power

≤ 15 Watts at +25°C

Supply Voltage

+15 VDC ±5%

ADJUSTMENT**Loop BW**Target Bandwidth: ≤ 10 Hz
Type 2 Loop**CRYSTAL****Type**

110 MHz SC-cut (x120)

OTHER**Label**Use conventional label with the
following information:

501-31376 (Current Rev.)

13.2 GHz MXO-PLD

+15 VDC

Serial # - Date Code

(Mark connectors with function)

Test Data

- Output Level

- Phase Noise – free-running

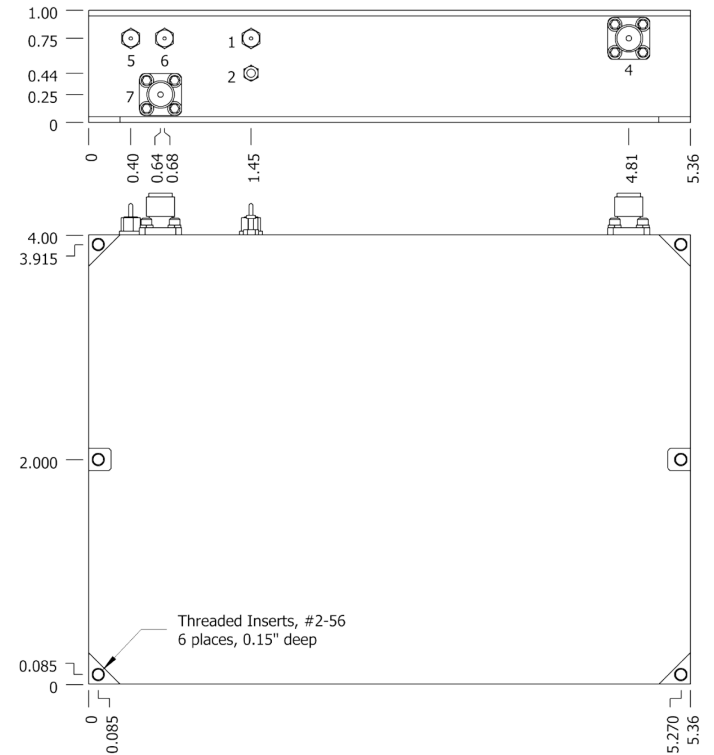
- Temperature Stability – free-running

- Harmonics, Subs, Products, Spurious

- Power – Warm-up and Total

REV	DATE	REVISION RECORD	DWN	AUTH
-	12-15-17	Initial Release	CB	
A	03-01-18	Adjusted 100 Hz and LBW	CB	

J3P MXO Connections	
Connector	Function
1	Supply Voltage
2	Ground, Case
4	RF Output
5	Phase Lock Voltage
6	Phase Lock Alarm
7	External Reference Input

**Wenzel Associates, Inc.**

Austin, Texas

Title:

13.2 GHz Multiplied Crystal Oscillator (MXO-PLD)

P/N:

501-31376

Rev:

A

Date:

03-01-18

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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