

**INPUT****Frequency**

10 MHz

**Level**

+7 dBm ±6 dB into 50 ohms

**OUTPUT****Frequency**

1.28 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, typical3 x 10<sup>-7</sup> per year thereafter, typical**Phase Noise L(f), typical, (free-running)**

100 Hz -106 dBc/Hz

1 KHz -131 dBc/Hz

10 KHz -148 dBc/Hz

100 KHz -149 dBc/Hz

**Temperature Stability**±5 x 10<sup>-7</sup> 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**

4.4 x 4 x 1"

**Connectors**

RF Input/Output: SMA(f)

Power, Monitoring: Feed Thru Terminals

GND: Ground Turret

**Packaging**Nickel-plated machined  
aluminum housing – J2P**Mounting**Threaded inserts on base,  
#2-56, 6 places**POWER REQUIREMENTS****Warm-Up Power**

≤ 12.5 Watts for 5 minutes

**Total Power**

≤ 9 Watts at +25°C

**Supply Voltage**

+15 VDC ±5%

**ADJUSTMENT****Loop BW**

Target Bandwidth: ≤ 10 Hz

Type 2 Loop

**CRYSTAL****Type**

80 MHz SC-cut (x16)

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

501-24798 (Current Rev.)

1.28 GHz MXO-PLD

+15 VDC

Serial # - Date Code

(Mark connectors with function)

**Test Data**

- Output Level

- Phase Noise – free-running

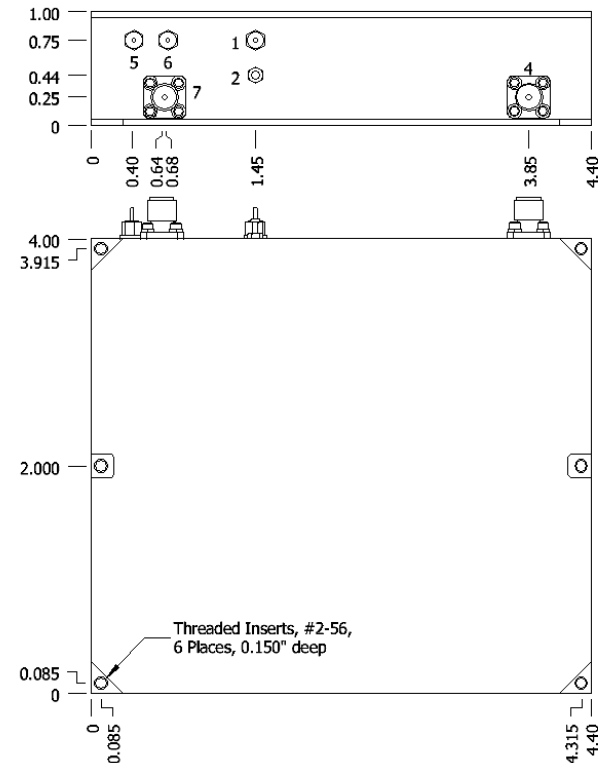
- Temperature Stability – free-running

- Harmonics, Subs, Products, Spurious

- Power – Warm-up and Total

REV	DATE	REVISION RECORD	DWN	AUTH
-	07-28-11	Initial Release	PAC	JR

J2P 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:

**1.28 GHz Multiplied Crystal Oscillator (MXO-PLD)**

P/N:

**501-24798**

Rev:

-

Date:

**07-28-11**

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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