

INPUT

Frequency

10 MHz

Level

+7 dBm \pm 6 dB into 50 ohms

OUTPUT

Frequency

1 GHz

Level

+13 dBm \pm 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, typical

3 x 10⁻⁷ per year thereafter, typical

Phase Noise L(f), (free-running)

100 Hz -109 dBc/Hz

1 KHz -136 dBc/Hz

10 KHz -153 dBc/Hz

100 KHz -154 dBc/Hz

Temperature Stability

\pm 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

3.45 x 4.00 x 1"

Connectors

RF Input/Output: SMA(f)

Power, Monitoring: Feed Thru Terminals

GND: Ground Turret

Packaging

Nickel-plated machined
aluminum housing – J1P

Mounting

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

POWER REQUIREMENTS

Warm-Up Power

\leq 11 Watts for 5 minutes

Total Power

\leq 7.5 Watts at +25°C

Supply Voltage

+15 VDC \pm 5%

ADJUSTMENT

Loop BW

Target Bandwidth: \leq 10 Hz

Type 2 Loop

CRYSTAL

Type

100 MHz SC-cut (x10)

OTHER

Label

Use conventional label with the
following information:

501-21081 (Current Rev.)

1 GHz MXO-PLD

+15 VDC

Serial # - Date Code

(Mark connectors with function)

Test Data

- Output Level

- Phase Noise – free-running

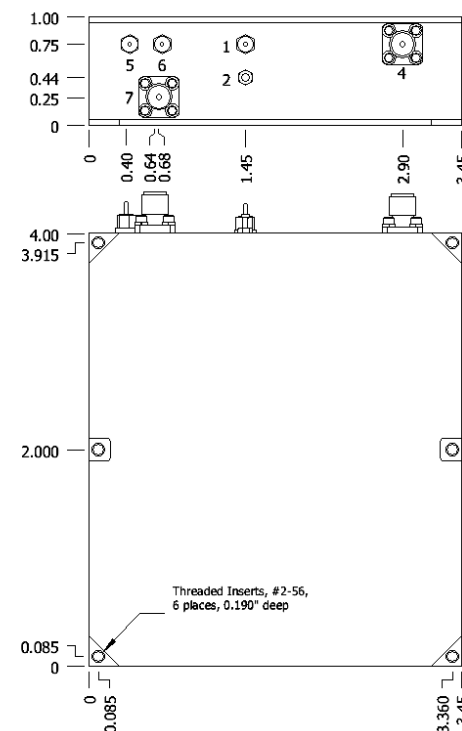
- Temperature Stability – free-running

- Harmonics, Subs, Products, Spurious

- Power – Warm-up and Total

| REV | DATE | REVISION RECORD | DWN | AUTH |
|-----|----------|---|-----|------|
| - | 06-10-09 | Initial Release | VG | |
| A | 03-10-10 | Revised harmonic spec, mechanical tolerance. Added PLLDP spec. | VG | |
| B | 08-02-10 | Revised mechanical outline | VG | JH |
| C | 01-16-12 | Spectral Purity; Input Level | PAC | |
| | | | | |

| J1P 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 GHz Multiplied Crystal Oscillator (MXO-PLD)

P/N:

501-21081

Rev:

C

Date:

01-16-12

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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