

## INPUT

### Frequency

10 MHz

### Level

+7 dBm  $\pm 6$  dB into 50 ohms

## OUTPUT

### Frequency

12.5 GHz

### Level

+13 dBm  $\pm 2$  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

### Output Phase Noise L(f)

#### (Free-Running, typical)

10 Hz -57 dBc/Hz

100 Hz -87 dBc/Hz

1 KHz -113 dBc/Hz

10 KHz -135 dBc/Hz

100 KHz -136 dBc/Hz

1 MHz -136 dBc/Hz

10 MHz -136 dBc/Hz

### Temperature Stability

$\pm 5 \times 10^{-7}$  free-running from 0 to +50°C

(Ref. +25°C)

### Harmonics

$\leq -25$  dBc

### Sub-Harmonics

$\leq -60$  dBc

### PLL Divider Products

$\leq -60$  dBc

### Spurious

$\leq -80$  dBc, excluding power  
supply line related spurs

## MECHANICAL

### Dimensions

6.36 x 4 x 1"

### Connectors

RF Outputs: SMA(f)

Power, ET: Feed Thru Terminals

GND: Ground Turret

## Packaging

Nickel-plated machined  
aluminum housing – G3P

## Mounting

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

## POWER REQUIREMENTS

### Warm-Up Power

$\leq 22$  Watts for 5 minutes

### Total Power

$\leq 18$  Watts at +25°C

### Supply Voltage

+15 VDC  $\pm 5\%$

## ADJUSTMENT

### Loop BW

Target Bandwidth: < 10 Hz

Type 2 Loop

## PHASE LOCK STATUS

### 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

Electrical tuning monitor pin supplied

## CRYSTAL

### Type

125 MHz SC-cut (x100)

### Label

Use conventional label with the  
following information:

501-29569 (Current Rev.)

12.5 GHz GMXO-PLD

+15 VDC

Serial # - Date Code

(Mark connectors with function)

## Test Data

Output Level

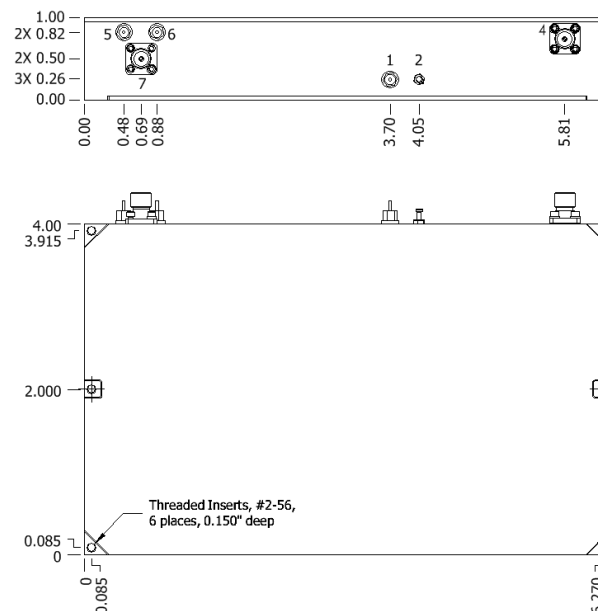
Temperature Stability (free-running)

Harmonics, Subs, Products, Spurious

Power – Warm-up and Total

REV	DATE	REVISION RECORD	DWN	AUTH
-	05-13-15	Initial Release	CB	
A	11-13-15	Adjusted Power	CB	

G3P 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:

**12.5 GHz Golden Multiplied Crystal Oscillator  
(GMXO-PLD)**

P/N:

**501-29569**

Rev:

**A**

Date:

**11-13-15**

Drawn:

Ref:

Tolerances:  
(except as noted)  
Dimensions are in inches

0.XX Dec:

**$\pm 0.030$ "**

0.XXX Dec:

**$\pm 0.010$ "**

FSCM:

**62821**

Page 1 of 1