

## INPUT

### Frequency

10 MHz

### Level

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

## OUTPUT

### Frequency

5 GHz

### Level

+17 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

### Phase Noise L(f), typical

10 Hz -71 dBc/Hz

100 Hz -98 dBc/Hz

1 KHz -119 dBc/Hz

10 KHz -135 dBc/Hz

30 KHz -136 dBc/Hz

100 KHz -138 dBc/Hz

1 MHz -154 dBc/Hz

3 MHz -156 dBc/Hz

10 MHz -156 dBc/Hz

### Temperature Stability

$\pm$ 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

$\leq$  14.5 Watts for 5 minutes

### Total Power

$\leq$  11 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 (x50)

## OTHER

### Design

Includes a SAW filter for improving the  
phase noise beyond the ~300 kHz offset.

### Label

Use conventional label with the  
following information:

501-29480 (Current Rev.)

5 GHz GQMXO-PLD

+15 VDC

Serial # - Date Code

(Mark connectors with function)

### Test Data

- Output Level

- Phase Noise – free-running

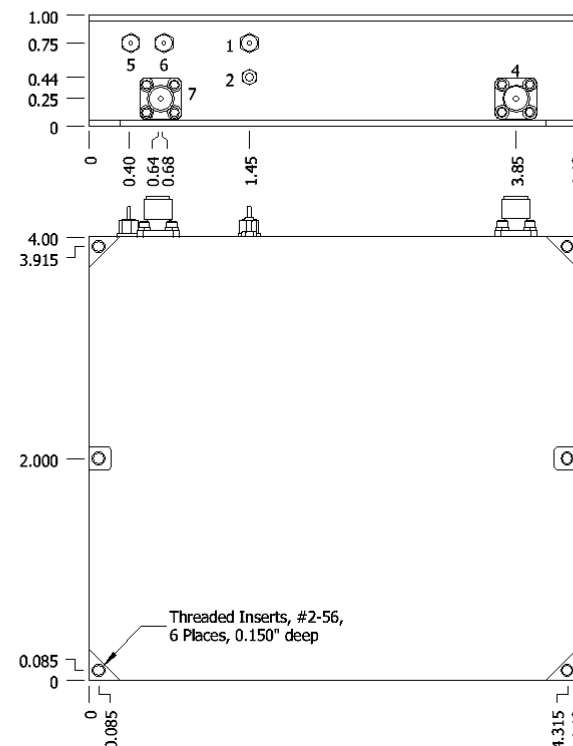
- Temperature Stability – free-running

- Harmonics, Subs, Products, Spurious

- Power – Warm-up and Total

REV	DATE	REVISION RECORD	DWN	AUTH
-	10-18-15	Initial Release	Liz	

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:

## 5 GHz Golden-Q Multiplied Crystal Oscillator (GQMXO-PLD)

P/N: <b>501-29480</b>	Rev: <b>-</b>	Date: <b>10-18-15</b>	Drawn:	Ref: 25722
Tolerances: (except as noted) Dimensions are in inches	0.XX Dec: <b><math>\pm</math>0.030"</b>	0.XXX Dec: <b><math>\pm</math>0.010"</b>	FSCM: <b>62821</b>	Page 1 of 1