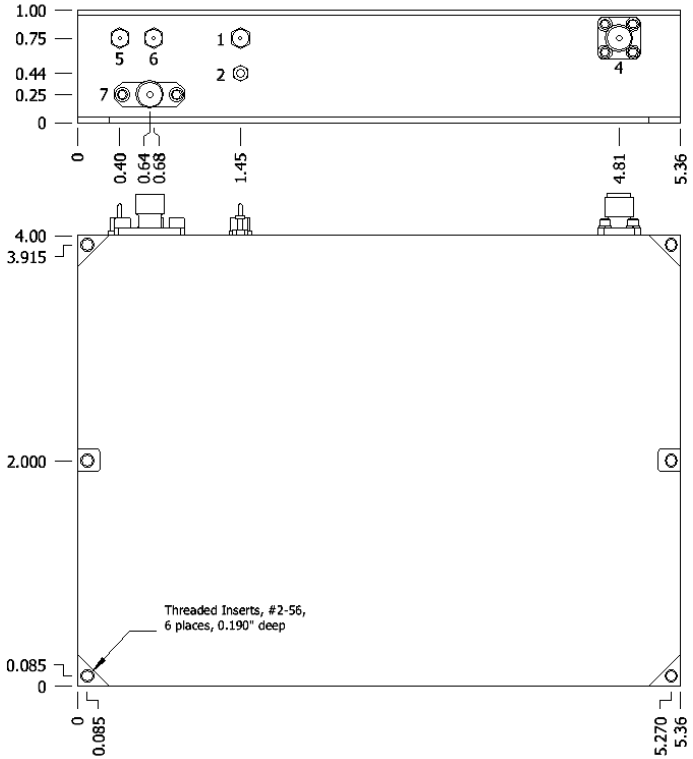
INPUT
Frequency
10 MHz
Level
+7 dBm ±6 dB into 50 ohms
OUTPUT
Frequency
12 GHz
Level
+13 dBm ±2 dB into 50 ohms
STABILITY
Aging (free-running)
1×10^{-6} first year
after 30 days operating, typical
5×10^{-7} second year, typical
3×10^{-7} per year thereafter, typical
Phase Noise L(f), typical, (free-running)
100 Hz -83 dBc/Hz
1 KHz -109 dBc/Hz
10 KHz -127 dBc/Hz
100 KHz -132 dBc/Hz
Temperature Stability
$\pm 5 \times 10^{-7}$ 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

Packaging
Nickel-plated machined
aluminum housing – J3P
Mounting
Threaded inserts on base,
#2-56, 6 places
POWER REQUIREMENTS
Warm-Up Power
≤ 17 Watts for 5 minutes
Total Power
≤ 13.5 Watts at +25°C
Supply Voltage
+15 VDC ±5%
ADJUSTMENT
Loop BW
Target Bandwidth: < 10 Hz
Type 2 Loop
CRYSTAL
Type
120 MHz SC-cut (x100)
OTHER
Label
Use conventional label with the
following information:
501-26905 (Current Rev.)
12 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, Spurious
Power – Warm-up and Total

REV	DATE	REVISION RECORD	DWN	AUTH
-	06-09-13	Initial Release	Liz	

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:
12 GHz Multiplied Crystal Oscillator (MXO-PLD)

P/N:	Rev:	Date:	Drawn:	Ref:
501-26905	**-**	**06-09-13**		

Tolerances: (except as noted) Dimensions are in inches	0.XX Dec:	0.XXX Dec:	FSCM:	Page 1 of 1
	±0.030”	±0.010”	62821	