INPUT

Frequency

10 MHz

Level

+7 dBm ±6 dB into 50 ohms

OUTPUTS

RF Output	Frequency	Output Level (into 50 ohms)
A	300 MHz	+13 dBm ±2 dB
B	1.2 GHz	+13 dBm ±2 dB

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), dBc/Hz, typical, (free-running)

	300 MHz	1.2 GHz
10 Hz	-89	-76
100 Hz	-119	-106
1 kHz	-147	-133
10 kHz	-164	-150
100 kHz	-165	-151
1 MHz	-165	-151
10 MHz	-165	-151

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

4.4 x 4 x 1”

Connectors

RF Input/Outputs: SMA(f)

Power, Monitoring: Feed Thru Terminals

GND: Ground Turret

Packaging

Nickel-plated machined aluminum housing – J2P-13

Mounting

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

POWER REQUIREMENTS

Warm-Up Power

≤ 13 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

100 MHz SC-cut (x3, x2, x2)

OTHER

Label

Use conventional label with the following information:

501-28588 (Current Rev.)

300M/1.2G MXO-PLD

+15 VDC

Serial # - Date Code

(Mark connectors with function)

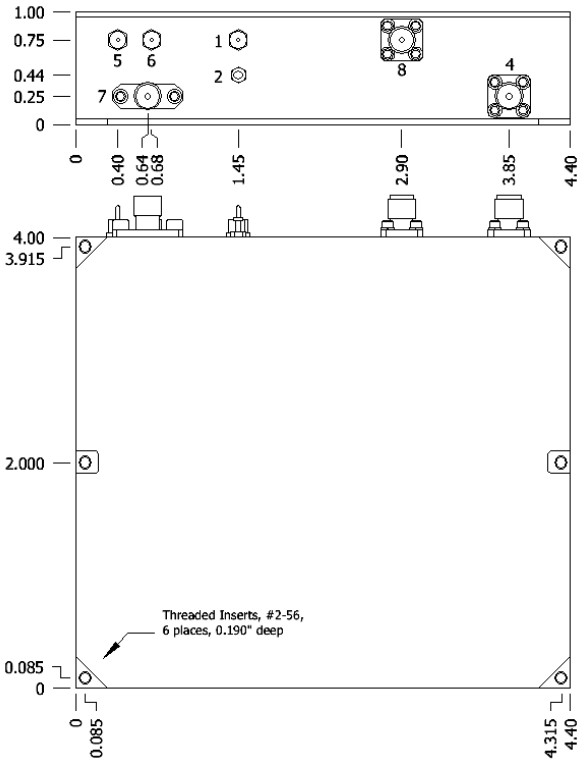
Test Data

- 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
-	11-17-14	Initial Release	CB	

J2P-13 MXO Connections

Connector	Function
1	Supply Voltage
2	Ground, Case
4	RF Output B
5	Phase Lock Voltage
6	Phase Lock Alarm
7	External Reference Input
8	RF Output A



Wenzel Associates, Inc.

Austin, Texas

Title:

300 MHz & 1.2 GHz

Multiplied Crystal Oscillator (MXO-PLD)

P/N:	Rev:	Date:	Drawn:	Ref:
501-28588	-	11-17-14		

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