

INPUT

Frequency

10 MHz

Level

+7 dBm \pm 6 dB into 50 ohms

OUTPUTS

Output	Frequency	Level (into 50 Ω)
A	100 MHz	+13 \pm 2 dBm
B	1 GHz	+13 \pm 2 dBm
C	2 GHz	+13 \pm 2 dBm

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)

	100 MHz	1 GHz	2 GHz
10 Hz	-100	-79	-72
100 Hz	-130	-109	-102
1 kHz	-158	-136	-129
10 kHz	-175	-153	-146
100 kHz	-176	-154	-147

Temperature Stability

$\pm 5 \times 10^{-7}$, 0 to +50°C (Ref. +25°C),
free-running

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-023

Mounting

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

POWER REQUIREMENTS

Warm-Up Power

≤ 13 Watts for 5 minutes

Total Power

≤ 9.5 Watts at +25°C

Supply Voltage

+15 VDC \pm 5%

ADJUSTMENT

Loop BW

Target Bandwidth: ≤ 10 Hz

Type 2 Loop

CRYSTAL

Type

100 MHz SC-cut (x20)

OTHER

Label

Use conventional label with the
following information:

501-30073 (Current Rev.)

100M/1G/2G MXO-PLD

+15 VDC

Serial # - Date Code

(Mark connectors with function)

Test Data

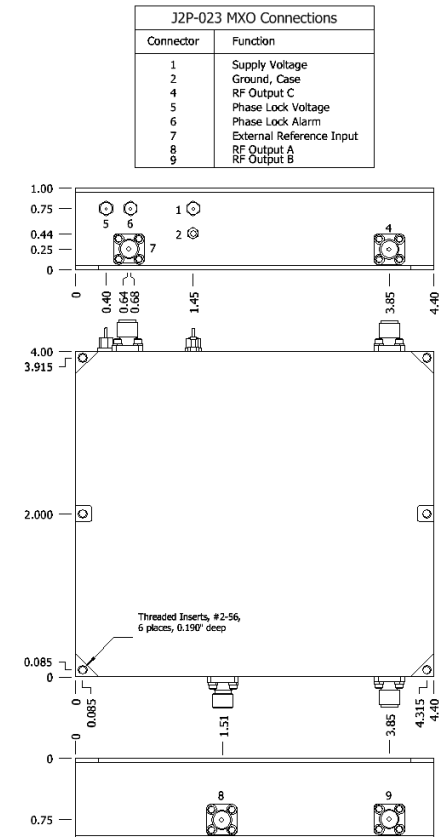
- Output Level

- Phase Noise – free-running

- Harmonics, Subs, Products, Spurious

- Power – Warm-up and Total

REV	DATE	REVISION RECORD	DWN	AUTH
-	05-26-16	Initial Release	CB	
A	05-26-16	Updated Drawing	CB	



Wenzel Associates, Inc.

Austin, Texas

Title:

**100 MHz, 1 and 2 GHz
Multiplied Crystal Oscillator (MXO-PLD)**

P/N: 501-30073	Rev.: A	Date: 05-26-16	Drawn:	Ref:
Tolerances: (except as noted) Dimensions are in inches	0.XX Dec: ± 0.030"	0.XXX Dec: ± 0.010"	FSCM: 62821	Page 1 of 1