

INPUT

Frequency Reference Input

10 MHz

Level

+7 dBm \pm 6 dB into 50 ohms

OUTPUTS

RF Output	Frequency	Output Level (into 50 ohms)
A	500 MHz	+13 dBm \pm 2 dB
B	1 GHz	+13 dBm \pm 2 dB
C	2.5 GHz	+13 dBm \pm 2 dB
RF Input	Frequency	Output Level (into 50 ohms)
A	500 MHz with loop- back cable	+13 dBm \pm 2 dB

STABILITY

Aging (free-running)

- 1 x 10⁻⁶ first year
- after 30 days operating, typical
- 5 x 10⁻⁷ second year, typical
- 3 x 10⁻⁷ per year thereafter, typical

Phase Noise L(f), dBc/Hz, typical, (free-running)

	500 MHz	1 GHz	2.5 GHz
10 Hz	-85	-79	-70
100 Hz	-115	-109	-100
1 kHz	-143	-136	-128
10 kHz	-159	-153	-144
100 kHz	-160	-154	-145
1 MHz	-160	-154	-145
10 MHz	-160	-154	-145

Temperature Stability

\pm 5 x 10⁻⁷ free-running from 0 to +50 °C
(Ref. +25 °C)

Harmonics, Sub-Harmonics

-25 dBc, -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/Outputs: SMA(f)
Power, Monitoring: Feed Thru Terminals
GND: Ground Turret

Packaging

Nickel-plated machined
aluminum housing – J2P-13XX

Mounting

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

POWER REQUIREMENTS

Warm-Up Power

\leq 13 Watts for 5 minutes

Total Power

\leq 9 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 (x5, x2, 500 MHz x 5)

OTHER

Label

Use conventional label with the
following information:

501-28265 (Current Rev.)

500M/1G/2.5G MXO-PLD

+15 VDC

Serial # - Date Code

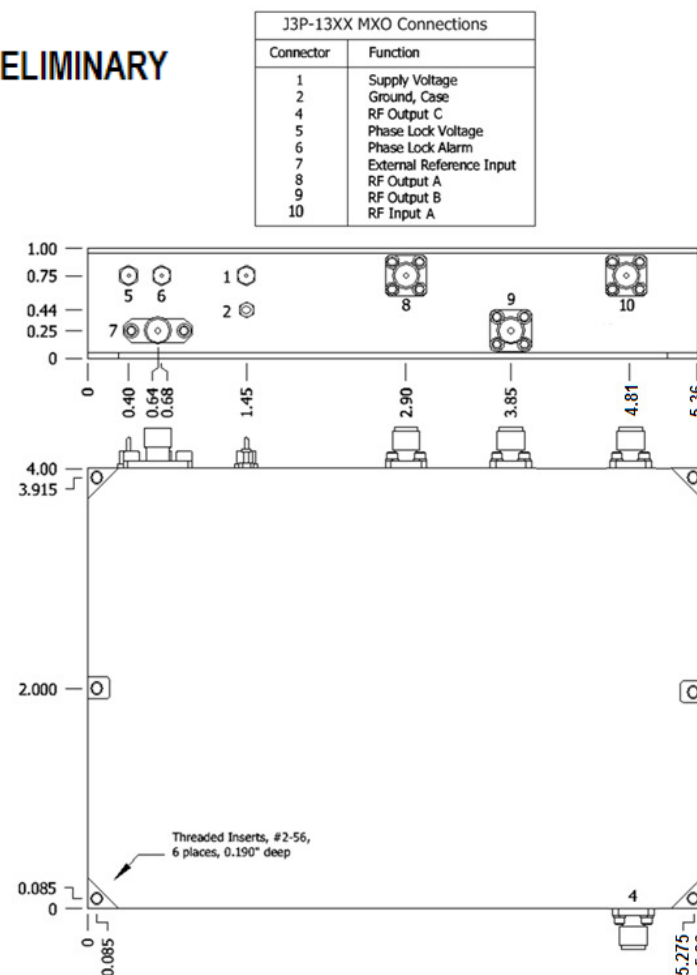
(Mark connectors with function)

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
-	07-16-14	Initial Release	LR/PAC	

PRELIMINARY



Wenzel Associates, Inc.

Austin, Texas

Title:

**500 MHz, 1 GHz & 2.5 GHz
Multiplied Crystal Oscillator (MXO-PLD)**

P/N:

501-28265

Rev:

-

Date:

07-16-14

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