REV	DATE	REVISION RECORD	DWN	AUTH
-	05-17-12	Initial Release	PAC	

OUTPUTS

Output	Frequency	Level (into 50Ω)
A	10 MHz	+13 ±2 dBm
B	1 GHz	+13 ±2 dBm

STABILITY

Aging

1×10^{-7} first year
after 30 days operating, typical
5×10^{-8} second year, typical
2×10^{-8} per year thereafter, typical

Phase Noise L(f), dBc/Hz, typical

	10 MHz	1 GHz
10 Hz	-140	-99
100 Hz	-160	-117
300 Hz	-165	-122
1 kHz	-172	-135
10 kHz	-174	-152
100 kHz	-175	-154

Temperature Stability

$\pm 5 \times 10^{-9}$, 0 to +50°C (Ref. +25°C)

Harmonics

≤ -25 dBc

Sub-Harmonics

≤ -60 dBc

PLL Reference 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

6.51 x 4 x 1”

Connectors

RF Outputs: SMA(f)
Power, Monitoring: Feed Thru Terminals
GND: Ground Turret

Packaging

Nickel-plated machined aluminum housing – J2PMX

Mounting

Threaded inserts on base, #2-56, 11 places

POWER REQUIREMENTS

Warm-Up Power

≤ 19 Watts for 5 minutes

Total Power

≤ 12 Watts at +25°C

Supply Voltage

+15 VDC ±5%

ADJUSTMENT

Mechanical Tuning (Internal 10 MHz)

$\pm 1 \times 10^{-6}$

Loop BW (Internal 100 MHz PLL)

Target Bandwidth: ~250 Hz
Type 2 Loop

CRYSTAL

Type

100 MHz SC-cut (x10)

OTHER

Label

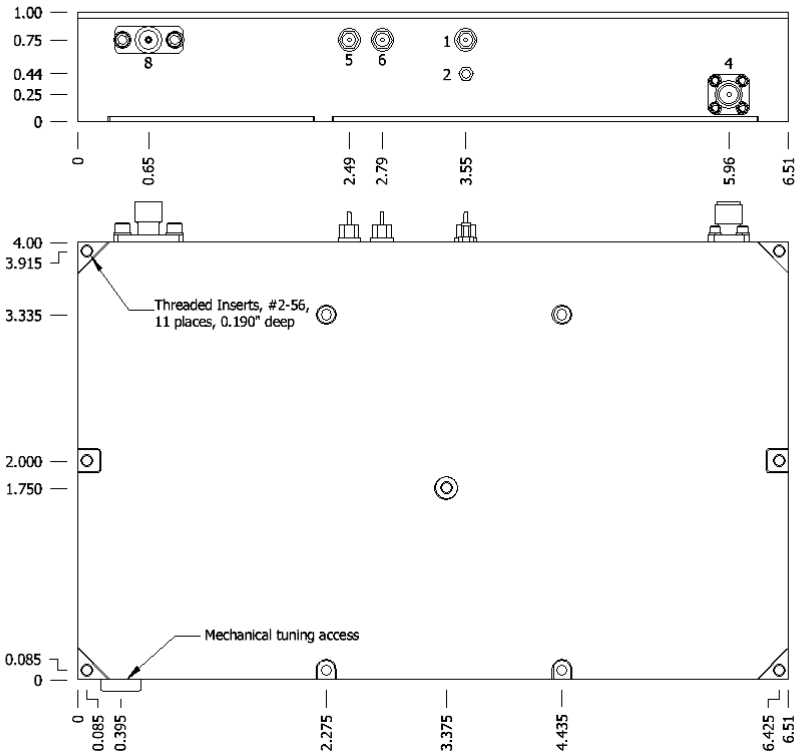
Use conventional label with the following information:
501-25497 (Current Rev.)
10M/1GHz MXO-PLMX
+15 VDC
Serial # - Date Code
(Mark connectors with function)

Test Data

- Output Level
- Phase Noise
- Temperature Stability
- Harmonics, Subs, Products, Spurs
- Power – Warm-up and Total

J2PMX MXO Connections

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



Wenzel Associates, Inc.
Austin, Texas

Title:
10 MHz & 1 GHz Multiplied Crystal Oscillator (MXO-PLMX)

P/N:	Rev:	Date:	Drawn:	Ref:
501-25497	-	05-17-12		

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