

## INPUT

### Frequency

10 MHz

### Level

+13 dBm  $\pm$ 1 dB into 50 ohms

## OUTPUTS

RF Output	Frequency	Output Level (into 50 ohms)
A	100 MHz	+13 dBm $\pm$ 2 dB
B	10 GHz	+13 dBm $\pm$ 2 dB

## STABILITY

### Aging (free-running)

1 x 10<sup>-6</sup> first year

after 30 days operating, typical

5 x 10<sup>-7</sup> second year, typical

3 x 10<sup>-7</sup> per year thereafter, typical

### Phase Noise L(f), typical, (free-running)

	100 MHz	10 GHz
100 Hz	-130	-87
1 kHz	-158	-113
10 kHz	-175	-131
100 kHz	-176	-132

### Temperature Stability

$\pm$ 5 x 10<sup>-7</sup> free-running from 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

6.31 x 4 x 1"

### Connectors

RF Input/Output: SMA(f)

Power, Monitoring: Feed Thru Terminals

GND: Ground Turret

### Packaging

Nickel-plated machined  
aluminum housing – J3PM-05

### Mounting

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

## POWER REQUIREMENTS

### Warm-Up Power

$\leq$  20 Watts for 5 minutes

### Total Power

$\leq$  16.5 Watts at +25°C

### Supply Voltage

+15 VDC  $\pm$ 5%

## ADJUSTMENT

### Loop BW

Target Bandwidth: ~200 Hz

Type 2 Loop

## CRYSTAL

### Type

100 MHz SC-cut (x100)

## OTHER

### Label

Use conventional label with the  
following information:

501-25493 (Current Rev.)

100M/10G MXO-PLM

+15 VDC

Serial # - Date Code

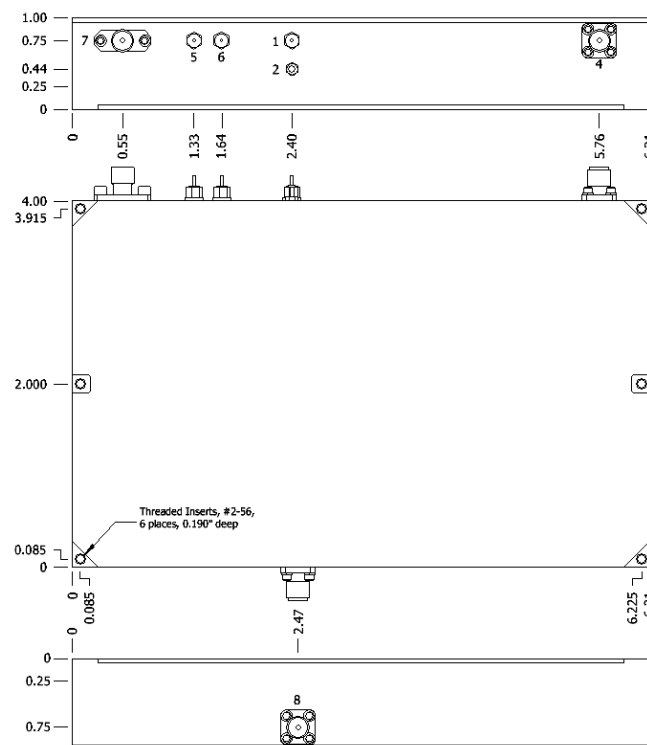
(Mark connectors with function)

### Test Data

- Output Level
- Phase Noise – free-running
- Harmonics, Subs, Products, Spurious
- Power – Warm-up and Total

REV	DATE	REVISION RECORD	DWN	AUTH
-	01-27-14	Initial Release	PAC	

J3PM-05 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:

### 100 MHz & 10 GHz Multiplied Crystal Oscillator (MXO-PLM)

P/N: <b>501-25493</b>	Rev: <b>-</b>	Date: <b>01-27-14</b>	Drawn:	Ref:
Tolerances: (except as noted) Dimensions are in inches		0.XX Dec: <b><math>\pm</math>0.030"</b>	0.XXX Dec: <b><math>\pm</math>0.010"</b>	FSCM: <b>62821</b>