INPUT

Frequency
5 MHz

Level
+13 dBm ±1 dB into 50 ohms

OUTPUT

Frequency
9 GHz

Level
+13 dBm ±2 dB into 50 ohms

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), typical, (free-running)

100 Hz	-88 dBc/Hz
1 KHz	-114 dBc/Hz
10 KHz	-131 dBc/Hz
100 KHz	-132 dBc/Hz

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 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

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

POWER REQUIREMENTS

Warm-Up Power
≤ 21 Watts for 5 minutes

Total Power
≤ 17 Watts at +25°C

Supply Voltage
+15 VDC ±10%

ADJUSTMENT

Loop BW
Target Bandwidth: <300 Hz
Type 2 Loop

CRYSTAL

Type
100 MHz SC-cut (x90)

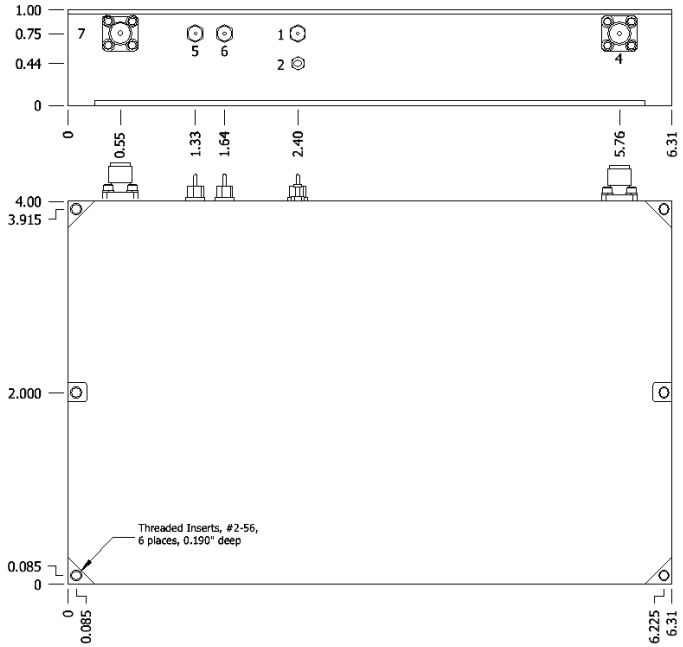
OTHER

Label
Use conventional label with the
following information:
501-29519 (Current Rev.)
9 GHz 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
-	10-30-15	Initial Release	CB	
A	03-10-16	Voltage to ± 10%	CB	

J3PM MXO Connections	
Connector	Function
1	Supply Voltage
2	Ground, Case
4	RF Output
5	Phase Lock Voltage
6	Phase Lock Alarm
7	External Reference Input



Wenzel Associates, Inc.
Austin, Texas

Title:
9 GHz Multiplied Crystal Oscillator (MXO-PLM)

P/N:	Rev:	Date:	Drawn:	Ref:
501-29519	**A**	**03-10-16**		28931

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