

INPUT**Frequency**

10 MHz

Level

+7 dBm ±5 dB into 50 ohms

OUTPUT**Frequency**

1 GHz

Level

+13 dBm ±2 dB into 50 ohms

STABILITY**Aging (free-running)**1 x 10⁻⁶ per year after 30 days operating,
typical**Phase Noise L(f), (free-running)**

100 Hz -108 dBc/Hz

1 KHz -136 dBc/Hz

10 KHz -152 dBc/Hz

100 KHz -152 dBc/Hz

Temperature Stability±5 x 10⁻⁷ free-running from 0 to +50°C
(Ref. +25°C)**Harmonics**

≤-25 dBc

Sub-Harmonics and Products

≤-50 dBc

Phase Lock Loop Divider Products

≤-60 dBc

Spurious (Excluding power supply line related)

≤-70 dBc

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**

3.45 x 4.00 x 1"

Connectors

SMA(f)'s and solder pins on side

Feed-thru terminals for lock alarm, supply
and phase lock voltage monitor**Packaging**

Machined aluminum housing – J1P

MountingThreaded inserts on base, 6
places**POWER REQUIREMENTS****Warm-Up Power**

≤ 14 Watts for 5 minutes

Total Power

≤ 11.5 Watts at +25°C

Supply Voltage

+15 VDC ±5%

ADJUSTMENT**Loop BW**

Target Bandwidth: < 10 Hz

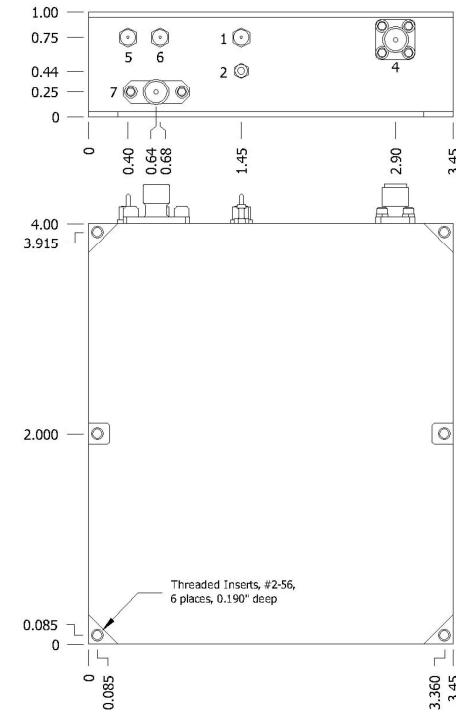
Type 2 Loop

CRYSTAL**Type**

100 MHz SC-cut with a x10 stage

REV	DATE	REVISION RECORD	DWN	AUTH
-	06-10-09	Initial Release	VG	
A	03-10-10	Revised harmonic spec, mechanical tolerance. Added PLLDP spec.	VG	
B	08-02-10	Revised mechanical outline	VG	JH

J1P 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:

1 GHz Phase Lock Multiplied Crystal Oscillator (MXO)

P/N:

501-21081

Rev:

B

Date:

08-02-10

Drawn:

Ref:

Tolerances:
(except as noted)
Dimensions are in inches

0.XX Dec:

±0.030"

0.XXX Dec:

±0.010"

FSCM:

62821

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