

REV	DATE	REVISION RECORD	DWN	AUTH
-	07-22-11	Initial Release	PAC	

INPUT

Frequency

10 MHz, $\pm 1 \times 10^{-7}$

Level

+7 dBm ± 5 dB into 50 ohms

OUTPUT

Frequency

50 MHz

Level

+13 dBm ± 2 dB into 50 ohms

STABILITY

**Output Phase Noise L(f)
(Free-Running)**

10 Hz	-101 dBc/Hz
100 Hz	-136 dBc/Hz
1 kHz	-164 dBc/Hz
10 kHz	-176 dBc/Hz
100 kHz	-176 dBc/Hz

Aging

$\pm 1 \times 10^{-6}$ per year after 30 days operating, typical

Temperature Stability

$\pm 5 \times 10^{-7}$ free-running from 0 to +50°C, (Ref. +25°C)

Harmonics

-30 dBc

PLL Divider Products

-70 dBc

Non-Harmonic 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

2.5 x 3.5 x 0.8"

Connectors

SMA(f)'s and solder pins on side
Feed-thru terminals for lock alarm, supply and phase lock voltage monitor

Packaging

Nickel-plated machined aluminum housing

Mounting

Through holes, 4 places

Threaded inserts on base, 4 places

POWER REQUIREMENTS

Supply Voltage

+15 VDC $\pm 5\%$

Warm-Up Power

8 Watts at start-up for 5 minutes at +25° C

Total Power

5 Watts at steady state +25°C

ADJUSTMENT

Loop BW

Target Bandwidth: < 10 Hz
Type 2 Loop

CRYSTAL

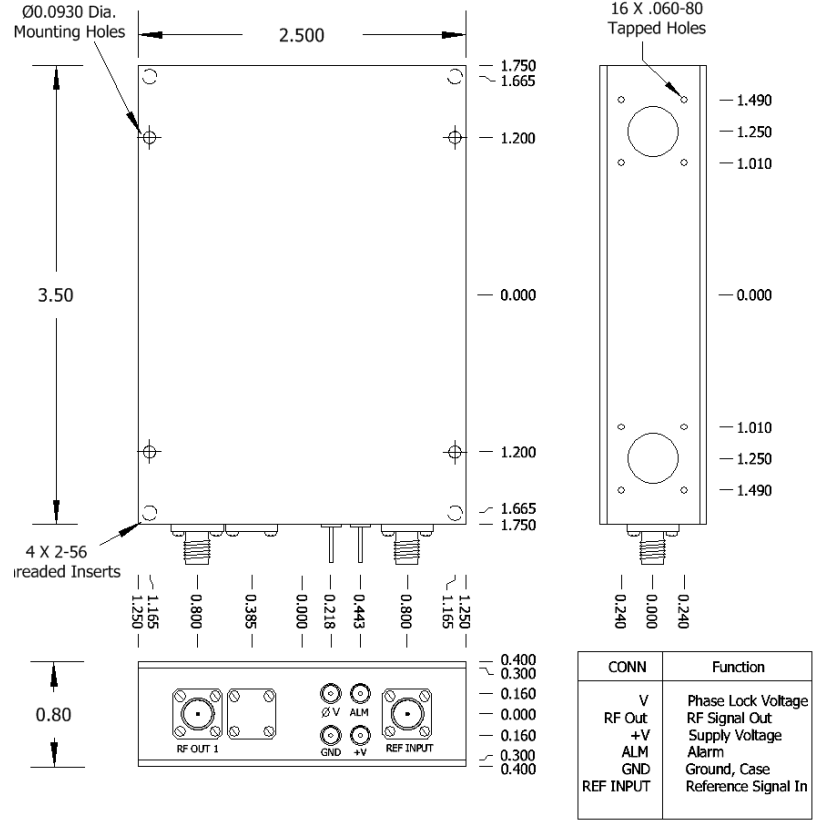
Type

50 MHz SC-cut

OTHER

Test Data

Output Level
Phase Noise (free-running)
Temperature Stability (free-running)
Harmonics, PLL Products, Spurious



WA Wenzel Associates, Inc.
Austin, Texas

Title: **50 MHz-SC ULN Phase Lock Crystal Oscillator**

P/N: 501-24780	Rev.: -	Date: 07-22-11	Drawn:	Ref: ULN
Tolerances: (except as noted) Dimensions are in inches		0.XX Dec: ± 0.030"	0.XXX Dec: ± 0.010"	FSCM: 62821

Page 1 of 1