

REV	DATE	REVISION RECORD	DWN	AUTH
-	02-25-10	Initial Release	PAC	

**INPUT**

**Frequency**

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

**Level**

+7 dBm  $\pm 5$  dB into 50 ohms

**OUTPUT**

**Frequency**

100 MHz

**Level**

+13 dBm  $\pm 2$  dB into 50 ohms

**STABILITY**

**Output Phase Noise L(f)**

**(Free-Running)**

10 Hz	-100 dBc/Hz
100 Hz	-130 dBc/Hz
1 kHz	-158 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**

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**

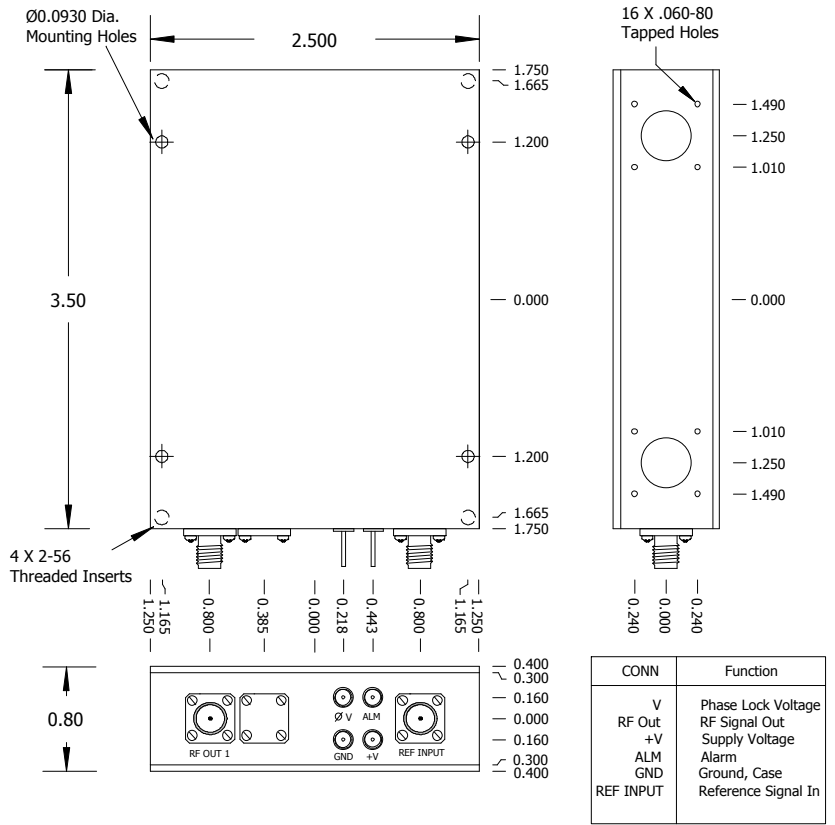
**Type**

100 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: **100 MHz-SC ULN Phase Lock Crystal Oscillator**

P/N: <b>501-22114</b>	Rev.: -	Date: <b>02-25-10</b>	Drawn:	Ref:
Tolerances: (except as noted) Dimensions are in inches		0.XX Dec: <b><math>\pm 0.030</math>"</b>	0.XXX Dec: <b><math>\pm 0.010</math>"</b>	FSCM: <b>62821</b>

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