

OUTPUT

Frequency

100 MHz

Level

+13 dBm ± 1.5 dB into 50 ohms

STABILITY

Aging

$\pm 1 \times 10^{-6}$ per year

after 30 days operating, typical

Phase Noise L(f) excluding Resonance

	Static	Dynamic (goal)
10 Hz	-95 dBc/Hz	-82dBc/Hz
31 Hz		-97dBc/Hz
100 Hz	-125 dBc/Hz	-112 dBc/Hz
1000 Hz	-152 dBc/Hz	-122 dBc/Hz
10 kHz	-164 dBc/Hz	-164 dBc/Hz
20 kHz	-165 dBc/Hz	-165 dBc/Hz
1 MHz	-165 dBc/Hz	-165 dBc/Hz

Temperature Stability

$\pm 5 \times 10^{-7}$, 0° to +60°C (Ref +25°C)

Harmonics

-30 dBc

Spurious

-80 dBc max, excluding supply induced 60 Hz

MECHANICAL

Dimensions

5 x 6 x 3.5"

Connectors

SMA for RF In & Out

Male DB 9 Connector for DC & Tuning

Packaging

Machined Aluminum case

Yellow Alodine finish

POWER REQUIREMENTS

Warm-Up Power

<22.5 Watts for 10 minutes

(>250 msec after DC power application)

Total Steady-State Power

<8.5 Watts, 10 minutes after turn-on at +25°C

Supply Voltage

+15 VDC $\pm 5\%$

ADJUSTMENT

Electrical Tuning Sensitivity

$\pm 5 \times 10^{-6}$ min, 0 to +8 VDC

Electrical Tuning Bandwidth

1 kHz min

OTHER

Vibration Profile

Vibe Freq (Hz) Acceleration (g^2 /Hz)

10	0.04
31	0.04
100	0.004
500	0.004
2000	.0026

Temperature BIT

Case temperature monitor

TTL "1", within normal operating temperature

TTL "0", outside normal operating temperature

Design

Vibration isolation system for best noise under vibration

Utilizes Bootstrap Technology

Test Data

Current (warm-up)

Current (steady-state)

RF Output Power

RF Output Harmonics

RF Output Spurious

RF Output Frequency Offset

Temperature Stability

Phase Noise Under Vibration

Marking

Marking on all I/O

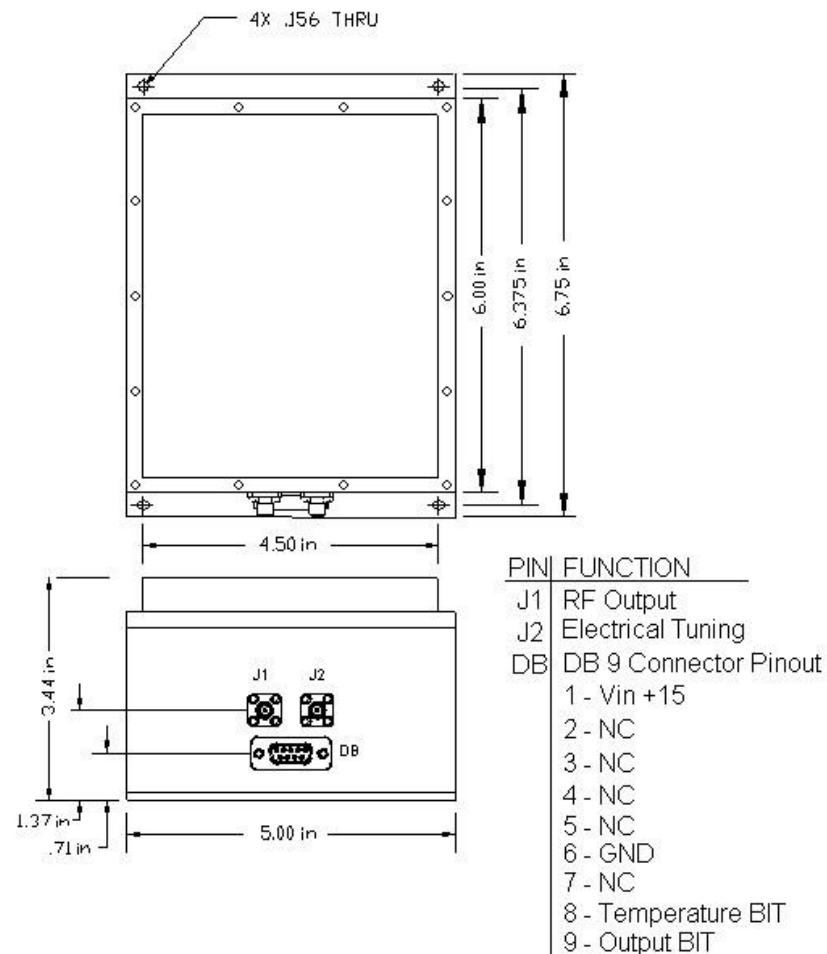
RF Out, +15 VDC, GND, BIT, ET

CRYSTAL

Type

100 MHz SC-cut

REV	DATE	REVISION RECORD	DWN	AUTH
-	02-18-14	Draft	Liz/PAC	



Wenzel Associates, Inc.

Austin, Texas

Title:

100 MHz Bootstrap Low Vibration Oscillator

P/N:

501-27852

Rev:

-

Date:

02-18-14

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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