

OUTPUT

Frequency

160 MHz

(<1 second after DC power application)

Level

+20 dBm ± 1.5 dB into 50 ohms

BIT

High Threshold

Set to TTL "1" for RF output $\geq +17.5 \pm 0.5$ dBm

Low Threshold

Set to TTL "0" for RF output $\leq +16 \pm 0.5$ dBm

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	-78 dBc/Hz
20 Hz		-75 dBc/Hz
100 Hz	-125 dBc/Hz	-110 dBc/Hz
1000 Hz	-152 dBc/Hz	-146 dBc/Hz
10 kHz	-164 dBc/Hz	-164 dBc/Hz
20 kHz	-165 dBc/Hz	-165 dBc/Hz
1 MHz	-168 dBc/Hz	-168 dBc/Hz

Temperature Stability

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

Harmonics

-33 dBc max from 320 MHz to 480 MHz

Spurious

-90 dBc max, ± 5 MHz offset and

-75 dBc max, ± 5 MHz to ± 20 MHz offset

MECHANICAL

Dimensions

5 x 6 x 3.44"

Connectors

SMA for RF Out & Electrical Tuning,

Male DB 9 Connector for DC & BIT

Packaging

Machined Aluminum case

Yellow Alodine finish per MIL-C-5541

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 $\pm 5\%$

Ripple

1.0mV RMS, 50mV peak to peak from

50 Hz to 2 MHz

ADJUSTMENT

Electrical Tuning Sensitivity

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

Electrical Tuning Bandwidth

1 kHz min

OTHER

VSWR

1.5:1 max at 160 MHz into a 50 ohm system

Vibration Profile

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

20 0.023

30 0.075

40 0.075

169 0.001

2000 0.001

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

Wire

All internal wiring MIL-W-22759 compliant

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

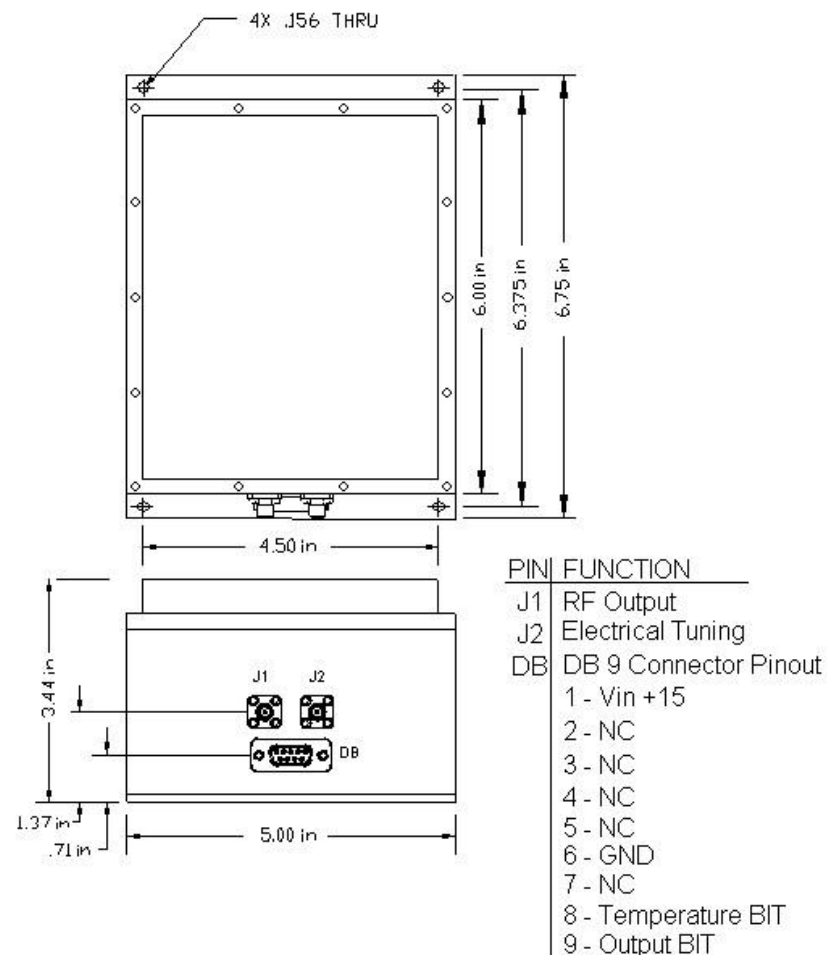
RF Out, +15 VDC, GND, BIT, ET

CRYSTAL

Type

80 MHz SC-cut

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



Wenzel Associates, Inc.

Austin, Texas

Title:

160 MHz Bootstrap Low Vibration Oscillator

P/N:

501-27853

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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