

OUTPUT

Frequency

100 MHz

Sine

+13 dBm ± 2 dB into 50 ohms

STABILITY

Aging

$\pm 5 \times 10^{-7}$ per year, Year 1

$\pm 2 \times 10^{-7}$ per year, Year 2

$\pm 1 \times 10^{-7}$ per year, thereafter

Phase Noise L(f)

Static, Sine Output

1 Hz -70 dBc/Hz

10 Hz -100 dBc/Hz

100 Hz -130 dBc/Hz

1 kHz -160 dBc/Hz

10 kHz -173 dBc/Hz

100 kHz -180 dBc/Hz

G-Sensitivity

2e-11 per axis from 2 Hz to 300 Hz

Temperature Stability, typical

$\leq \pm 5 \times 10^{-8}$, +20° to +40°C (Ref +33°C)

Normal operating temp, +30°C

Harmonics,

-30 dBc

Spurious

-110 dBc ± 100 kHz, Measured to -90 dBc

Load Sensitivity, typical

± 10 e-9 for 5% change

Line Sensitivity, typical

± 10 e-9 for 5% change

MECHANICAL

Dimensions

4 x 4.5 x 0.9", plus brackets

Connectors

SMA for RF

Male DB 9 Connector for DC

Packaging

Machined Aluminum enclosure

Weight

0.8 LBS, typical

POWER REQUIREMENTS

Warm-Up Power

≤ 7 Watts for 10 minutes, typical

Total Steady-State Power

5 Watts, typical

Supply Voltage

+12 VDC $\pm 5\%$

ADJUSTMENT

Electrical Tuning Sensitivity

$\geq 6 \times 10^{-7}$ min, 0 to +10 VDC,

Electrical Tuning Bandwidth

>100 Hz, Lock below 1 Hz for best performance under vibration

OTHER

Vibration Profile

Vibe Freq Hz (g^2 /Hz) 0.52 grms

2 .001

4 .001

4 .002

60 .002

70 .0001

200 .0001

300 1e-5

10000 1e-6

Design

Vibration isolation/compensation

system for best noise under vibration

Utilizes Bootstrap Technology

Test Data

- Output Level

- Phase Noise

- G-sensitivity in 3 axes

- Temperature Stability

- Short-Term 1 second

- Harmonics, Subs, Products, Spurs

- Power – Warm-up and Total

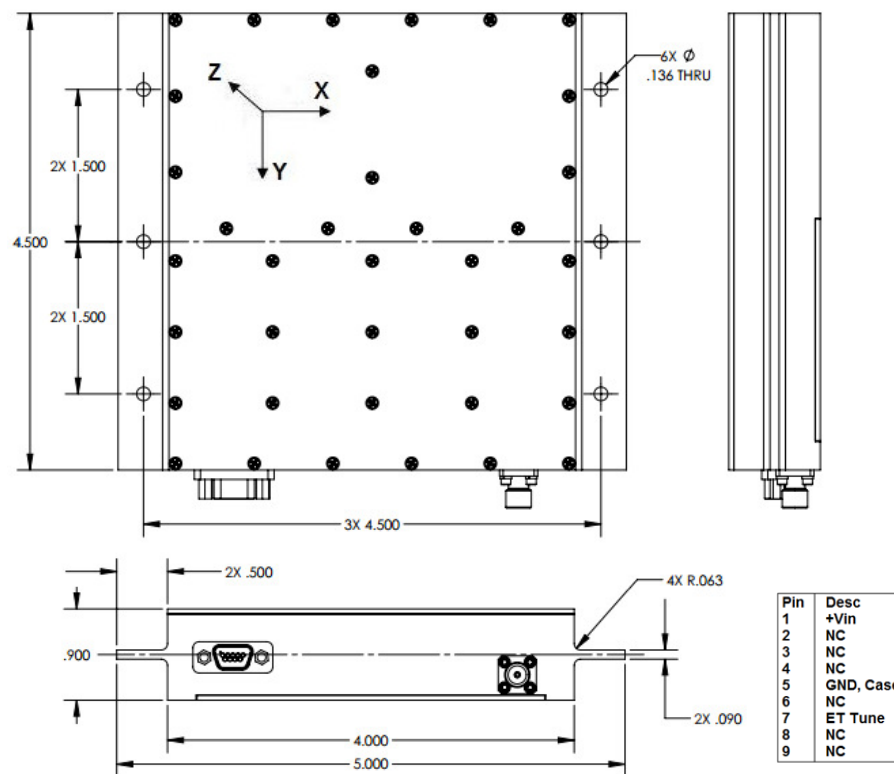
CRYSTAL

Type

Very low-g sensitivity

100 MHz SC

REV	DATE	REVISION RECORD	DWN	AUTH
-	04-02-15	Draft	Liz	
A	4-03-15	100 MHz	Liz	



Wenzel Associates, Inc.

Austin, Texas

Title:

100 MHz Bootstrap Low Vibration Oscillator

P/N:

501-28978

Rev:

A

Date:

4-03-15

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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