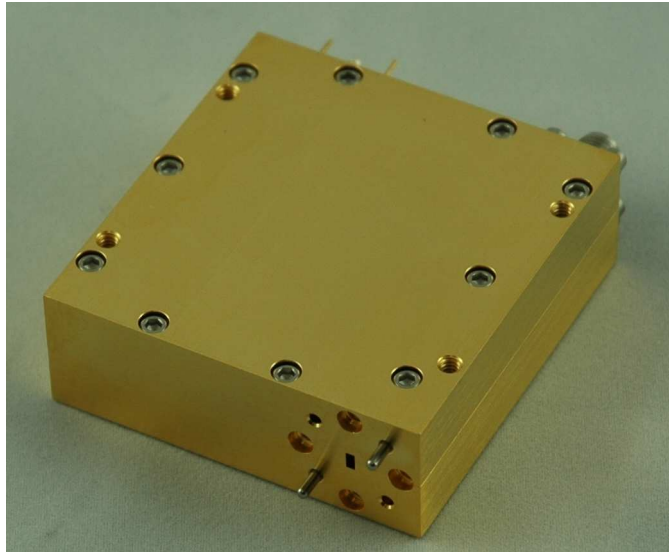


SERIES VCO

VOLTAGE-CONTROLLED OSCILLATOR (NON-ITAR)



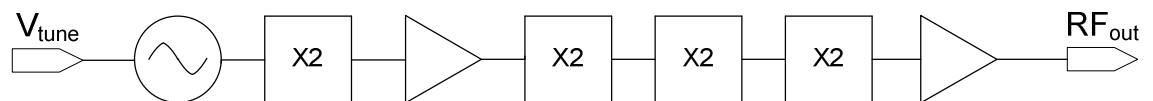
FEATURES:

- 92 – 96 GHz operation
- High output power
- Selectable sensitivity and input tuning voltage
- Excellent linearity

APPLICATIONS:

- Frequency synthesizers
- AFC Oscillator
- Compact LO line

DIAGRAM



DESCRIPTION

Millitech series VCO voltage-controlled oscillators provide optimal electrical tuning capabilities for a number of harmonic oscillator applications in the 92 – 96 GHz range. The high output power provided by the VCO minimizes the need for additional amplification components.

The VCO is also highly stable over temperature, typically varying <math><0.05\text{ dB/C}</math> and 12 MHz/C allowing it to be used in a number of varying environmental conditions.

Millitech also offers the ability to choose the tuning sensitivity of the VCO. Offered is a range of sensitivities from 350 – 3200 MHz/V. For any sensitivity less than the maximum, the applicable tuning voltage range may also be chosen within the normal maximum range. This selection is made during the ordering process.

ELECTRICAL SPECIFICATIONS

SPECIFICATION	PERFORMANCE	UNITS
Output frequency range	92 – 96	GHz
RF output power (typ at 25°C)	15	dBm
Vtune range (max)	4 – 12	V
Vtune range (min)	5 – 6.5 / 10 – 11.5 ⁽¹⁾	V
Output frequency sensitivity (max)	100 ± 10	MHz / V
Output frequency sensitivity (min)	3200 ± 90	MHz / V
Operating temperature	0 - 50	C
Freq – Temp sensitivity (typ)	12	MHz / C
Output Power – Temp sensitivity (typ)	0.05	dB / C
DC bias	7 – 11	V
Current (typ)	850	mA

(1) Tuning voltage may be selected to any 1.5V range within the two shown.

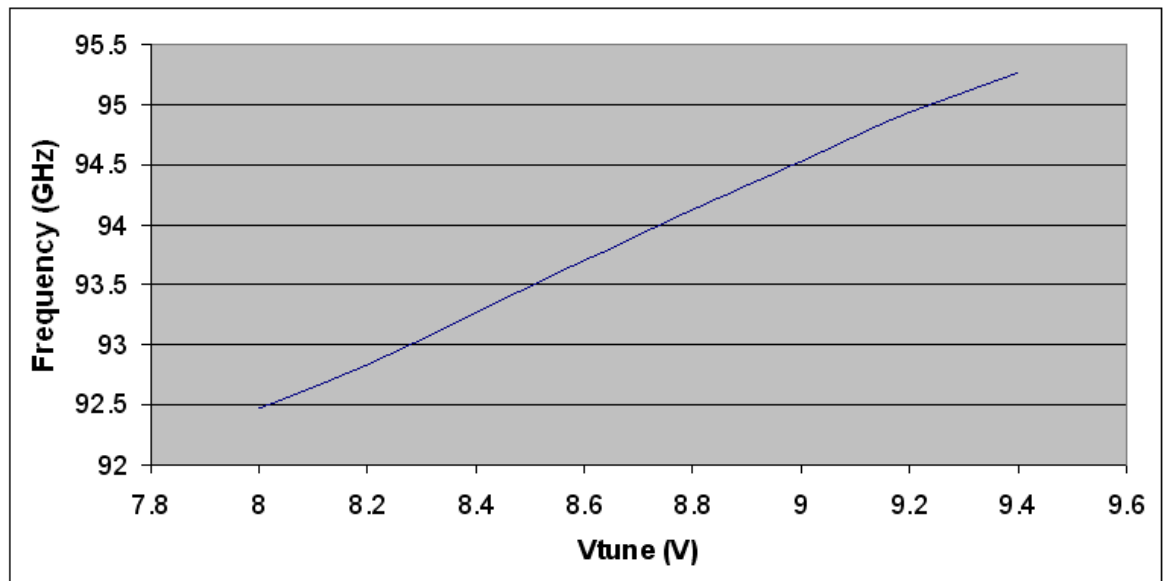


Figure 1 - VCO Linearity

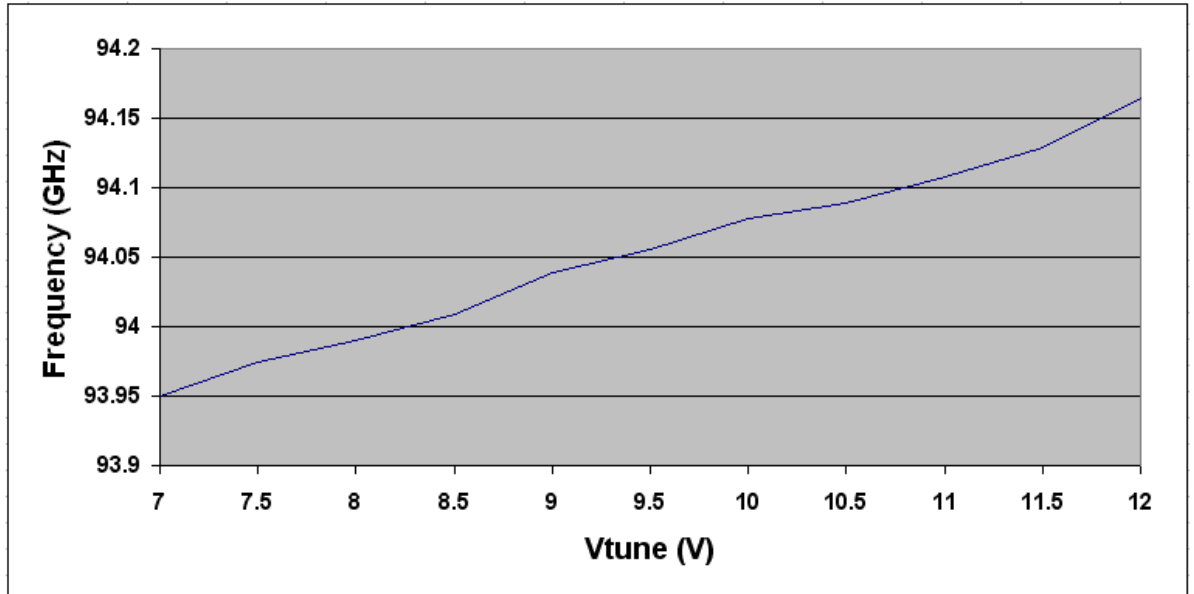


Figure 2 – Max Sensitivity Setting

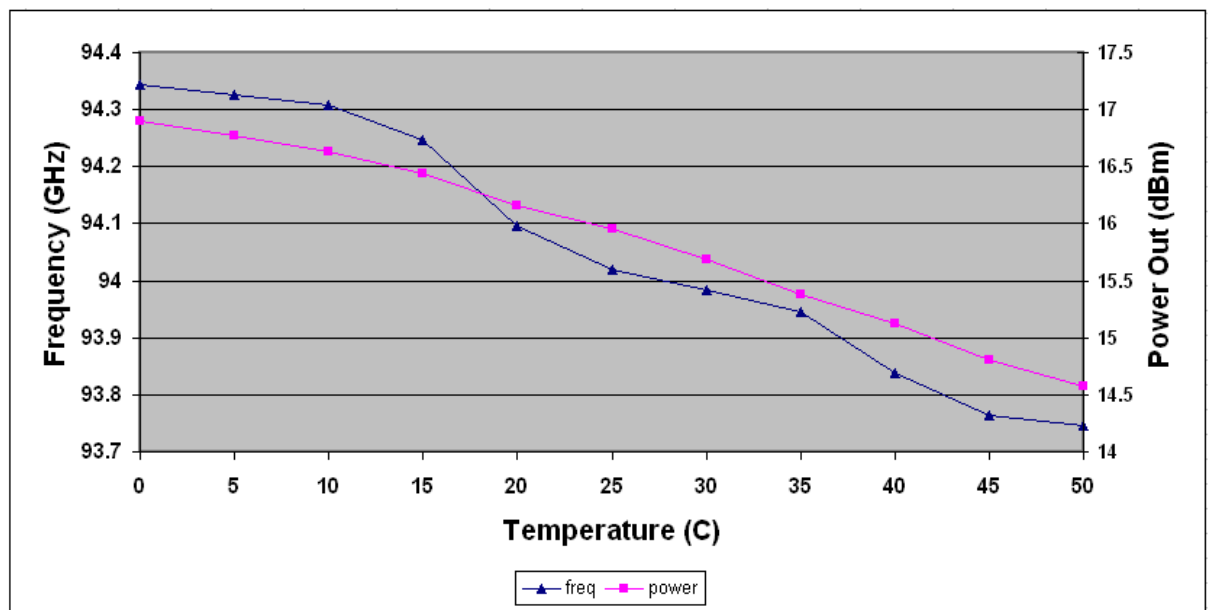


Figure 3 – Frequency and Power Drift vs. Temperature (max sensitivity setting)

OUTLINE DRAWING

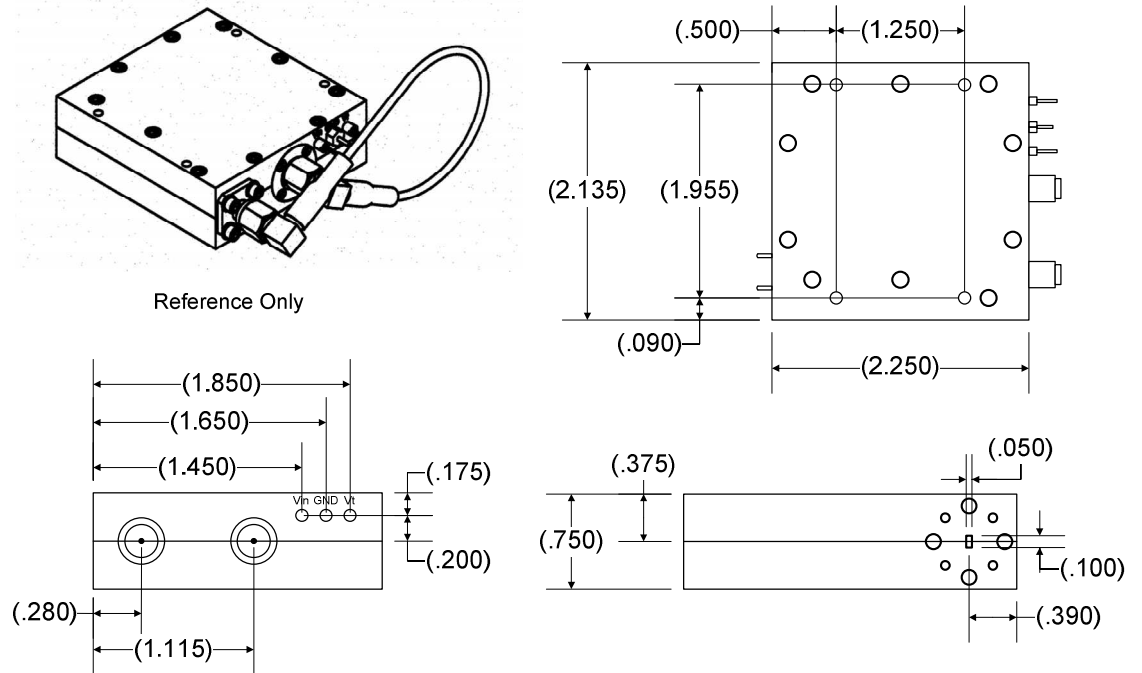


Figure 4

HOW TO ORDER

Specify Model Number
VCO-10-4016C

Note: Please specify desired output sensitivity and Vtune range when ordering.