

Features and Benefits

100 MHz
 +9 dBm min. Ultra-Low noise sine output
 Overall. stability less than +/- 30 ppm
 -40C to +85C operation
 +5.0V supply ; 30 mA max.

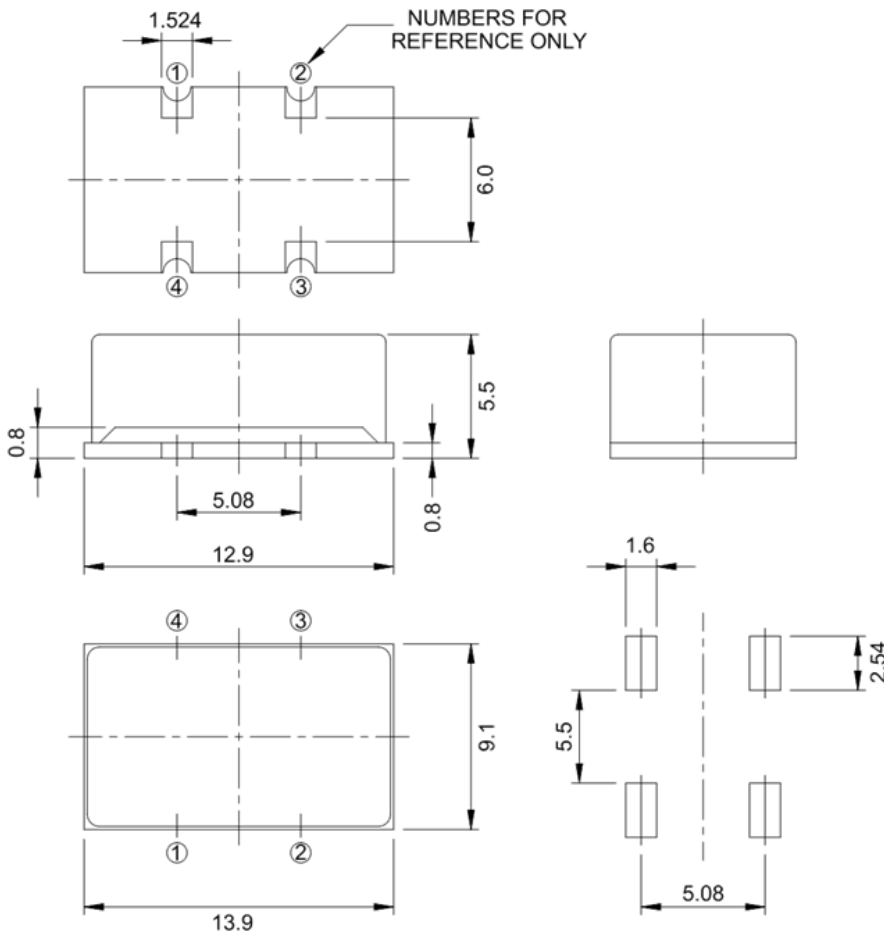
Typical Applications

Signal Analyzer Reference for internal synthesizers
 SATCOM SYSTEMS
 Very Low Jitter data communications ref. source

Description

The VCXO914T family utilizes a low noise discrete oscillator circuit topology along with a discrete output amplifier specially impedance matched to 50 ohms for achievement of an ultimate noise floor that is better than -170 dBc/Hz.

Mechanical Drawing & Pin Connections



PIN NO.	CONNECTIONS
1	Vcon
3	Ground
4	Output
6	VDD

Units = mm

Specification

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency Range	F _{nom}			100.000		MHz	
Sine	Output Level		+9.0			dBm	
	Harmonics				-25.0	dBc	
	Output Load		45	50	55	ohms	
Power Supply							
Voltage	V _{cc}		4.75	5.00	5.25	V	
Current Consumption					30	mA	
Frequency Control* (Electronic)							
Control voltage range (Pad # 1)	V _c		0.0	2.5	5.0	V	Tuning Slope Positive
Control Voltage Input Impedance			1000K			ohm	
Frequency Tuning range			+/- 30			ppm	
Modulation Bandwidth			1			KHz	
Frequency Stability in Total all causes							
Drift over Operating Temperature		-40°C to 85°C, ref 25°C	-30.0		+30.0	ppm	Over all causes
Tolerance at 25°C							
Versus 5% change in supply voltage							
Versus 10% change in load							
Aging over 15 years							
SSB Phase noise (worst case) @100 MHz with +9.0 dBm output		10 Hz			-90.0	dBc/Hz	
		100 Hz			-123.0		
		1000 Hz			-145.0		
		10 KHz			-165.0		
		100 KHz			-170.0		
Environmental Conditions							
Operating temperature range		-40°C to 85°C					
Storage temperature range		-45°C to 95°C					