



Features and Benefits

Frequency 100.000000 MHz
+13 dBm min. ultra low noise sine wave output
+/- 100.0 ppb max. from 0°C to +80°C
+/- 2 ppm min. electronic frequency adjust from 0.0 V to +10.0 V
-130 dBc/Hz or BETTER @ 100 Hz offset
-160 dBc/Hz or BETTER @ 1000 Hz offset

Typical Applications

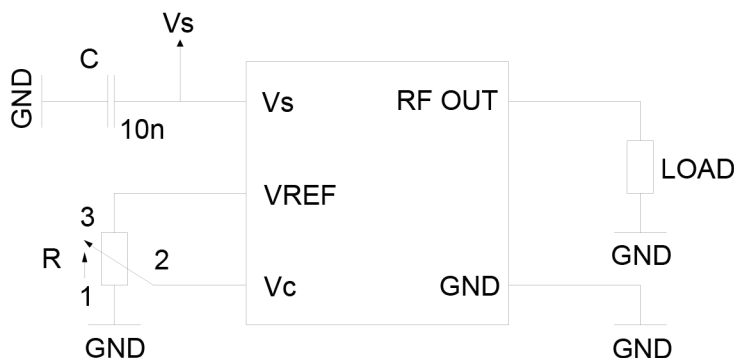
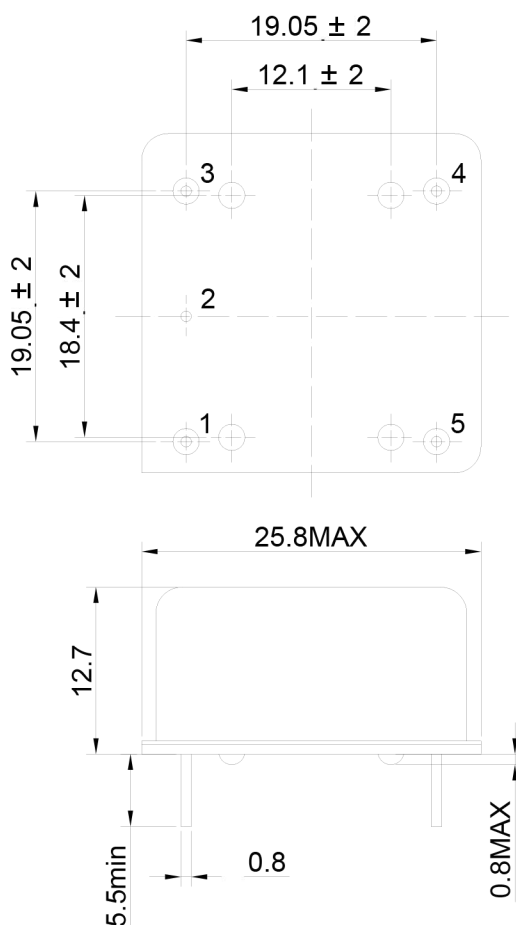
Ref. for microwave comm. System
Signal Analyzer Reference for internal synthesizers
SATCOM Systems

Description

The OCXO2525L-100MHz-LG-XX family offers a specially designed vibration isolated package with a 100 MHz SC-cut crystal impedance matched to the oscillator and amplifier circuits to deliver consistent world class phase noise on all production shipments.

Mechanical Drawing & Pin Connections

Drawing No:MD150074-1



Pin connections

	A	B	C
1	PIN #	Symbol	Function
2	1	RF OUT	RF Output
3	2	GND	Ground
4	3	Vc	Control Voltage(EFC)
5	4	VREF	Reference Voltage
6	5	Vs	Supply Voltage

Unit = mm

**Specifications**

OCXO Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Nominal Frequency	F ₀		100.000			MHz	
RF Output							
Signal waveform	L		Sine wave				
Load	RL	+/-5%		50		Ohm	
Output Level			+13	+14		dBm	
Harmonics					-35	dBc	
Spurious					-90	dBc	
Sub-harmonics			None				
Reference voltage VREF output				10.0		V	
Power Supply							
Voltage	Vs		11.0	11.5	12.0	V	
Power Consumption		Steady-state@+25°C			150	mA	
		Warm-up			350	mA	
Warm-up Time		To Δf/f<+/-0.1ppm, at 25°C Ref. to frequency after 15min.		3		min	
Frequency Control							
Electronic Frequency Control (EFC)			+/-2	+/-3		ppm	
EFC Control Voltage	Vc		0	5.0	10	V	
EFC slope(Δ f/ Δ Vc)			positive				
EFC input impedance			100			Kohm	
Frequency Stability							
Initial tolerance @ +25°C					+/-300	ppb	Ref 25°C
Vs. Operating Temperature Range		Steady state			+/-100	ppb	
Vs. Supply Voltage Change		Vs+/-5%			+/-5	ppb	
Vs. load change (pulling)		RL+/-5%			+/-5	ppb	
Aging	Per Day	After 30 days of operation		+/-2	+/-5	ppb	
	Per Year				+/-250	ppb	
	10 Years				+/-1.5	ppm	
Root-Allan Variance (Short-term stability)				5E-11 for tau = 1 second			
Phase Noise							
Phase Noise		@10Hz			-100	dBc/Hz	
		@100Hz			-130		
		@1 KHz			-160		
		@10 KHz			-170		
		@100 KHz			-172		
Environmental							
Operating Temperature Range		0°C to +80°C					
Ordering Options							
XX = 05		for less than 0.5 ppb per g worst case axis					
XX = 10		for less than 1.0 ppb per g worst case axis					



Typical Phase Noise Performance @ 100 MHz

