



### Features and Benefits

- Ultra-Low phase noise
- Low vibration sensitivity
- Sine wave output
- Frequency Tuning Input
- 50x50x30mm

### Description

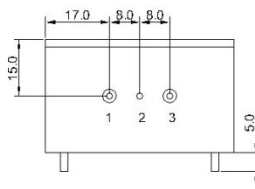
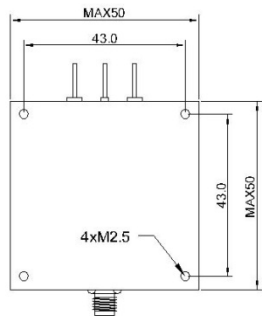
OCXO5050L-100MHz-D-V is ultra-low phase noise OCXO in vibration-isolated package.

### Typical Applications

- Signal Analyzer Reference for internal synthesizers
- SATCOM Systems
- Harsh Environment Applications

### Mechanical Drawing & Pin Connections

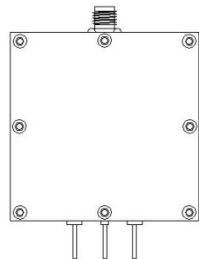
Drawing No: MD140049-2



Pin Connection:

Pin#	Symbol	Function
1	Vs	Supply Voltage
2	GND	Ground
3	Vc	Control Voltage(EFC)
SMA	RF OUT	RF Output

Unit : mm



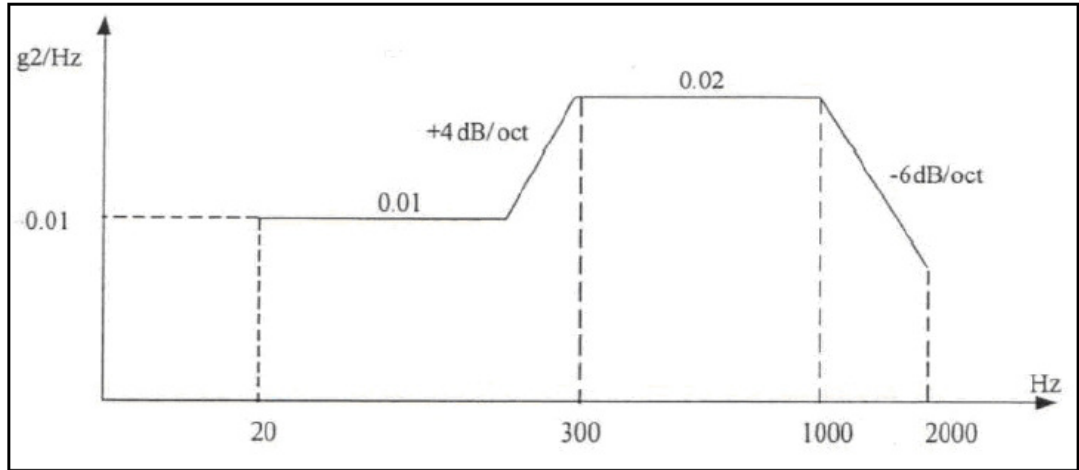


**Specifications**

OCXO Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency Range	F <sub>0</sub>			100		MHz	
Standard Frequencies				100.000		MHz	
<b>RF Output</b>							
Output Waveform			Sine wave				
Load	RL	+/-5%		50		Ohm	
Output Level			+7			dBm	
Harmonics				-40	-30	dBc	
Spurious At Rest					-90	dBc	
<b>Power Supply</b>							
Voltage	Vcc		11.400	12.000	12.6000	V	Other supply voltage on request
Current Consumption		Warm-up			500	mA	
		Steady-state@+25°C			300	mA	
Warm-up Time@+25°C		$\Delta f_{final}/f_0 < +/-0.1\text{ppm}$			5	min	
<b>Frequency Control*</b>							
Frequency Adjust Range			+/-1	+/-2		ppm	Tuning Slope: Positive
Control Voltage			1	5	9	V	
Internal Resistance			100			Kohm	
<b>Frequency Stability</b>							
Initial Tolerance @+25°C		Vc=5V			+/-300	ppb	
Vs. Operating Temperature Range		-40 °C to +85°C Steady state		+/-100	+/-200	ppb	Other stability and temperature range on request
Vs. Supply Voltage Change		Vs +/-5%			+/-10	ppb	
Long Term Per Day		After 30days operation			+/-2	ppb	
Long Term Per Year		After 30days operation			+/-100	ppb	
<b>Phase Noise</b>							
10Hz					-90	dBc/Hz	
100Hz					-125		
1KHz					-155		
10KHz					-165		
100KHz					-175		
<b>Vibration Sensitivity</b>							
Phase noise @1KHz					-140	dBc/Hz	
<b>Environmental</b>							
Operating Temperature Range		-40°C to +85°C					
Storage Temperature Range		-55°C to +125°C					
Size		50.0 x 50.0 x 30.0mm Max.					
Weight		200g Max.					



### Vibration Profiles



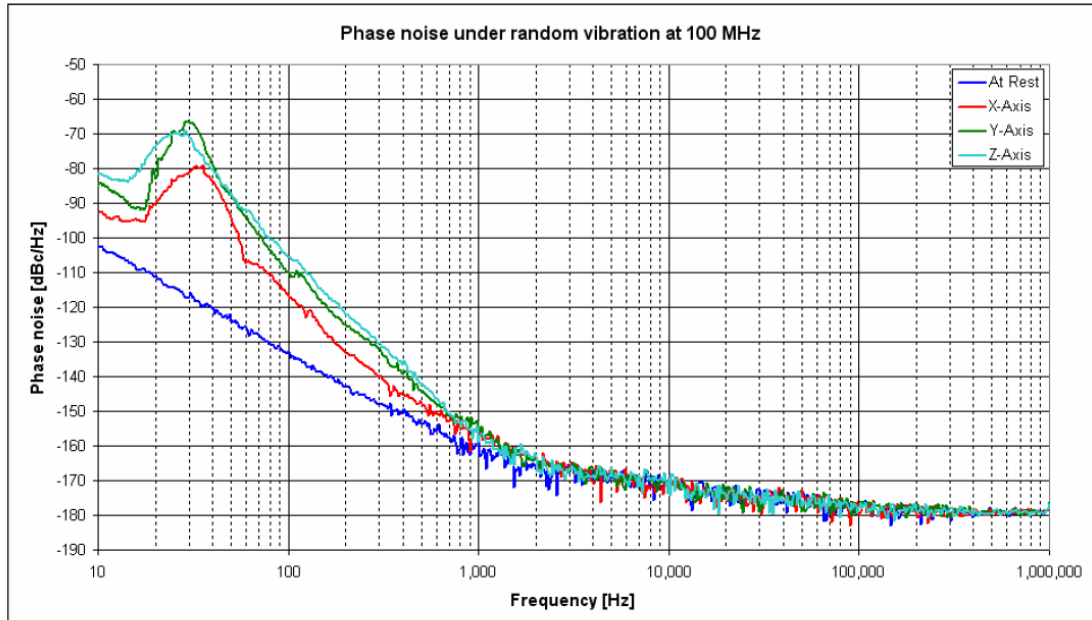
PSD = 0.02 g<sup>2</sup>/Hz according to RTCA/DO160E Curve C

Functional test: 1 hour each direction

Endurance test: 3 hours each direction at 2 times the PSD level of the functional test

- Notes:**
- Other vibration profiles on request
  - Enclosure height depends on vibration profile

### Phase noise response under random vibration



Typical phase noise response for vibration sensitivity option "155"