Dynamic Engineers Inc.
2550 Gray Falls Dr., Suite#128, Houston, TX, 77077 USA
TEL: 1-281-870-8822 EMAIL:Sales@DynamicEng.com

OCXO5050Z-10MHz-A-V
Ultra Low Noise Sine Wave OCXO

Features and Benefits

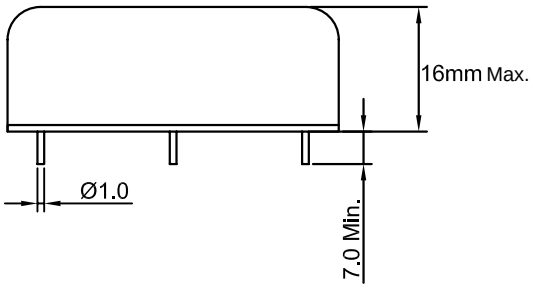
High stability vs. temperature (up to ±0.2 ppb)
Wide operating temperature range: -40°C to +85°C
-161 dBc/Hz at 1 KHz phase noise
-108 dBc/Hz at 1 Hz phase noise
Allan deviation (ADEV) less than $6E^{-13}$

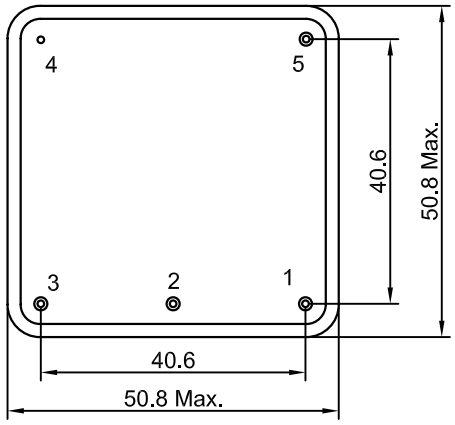
Typical Applications

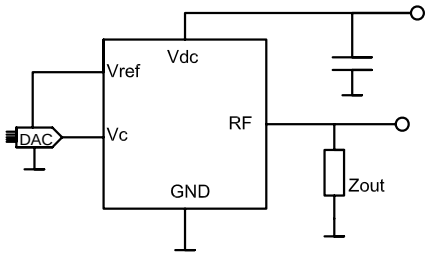
Base Station
LTE 4G & 3G
Local clock reference of timing module

Mechanical Drawing & Pin Connections

Drawing No:MD170010-1







Zout=50 Ohm
Connection Circuit

Pin Connections:

Pin#	Symbol	Function
1	Vc	Control Voltage
2	Vref	Reference Output
3	RF Out	RF Output
4	GND	Ground
5	Vdc	Supply Voltage

Unit : mm
1mm=0.0394inch

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Specifications

OCXO Specification	Sym	Condition	Value Min.	Value Typ.	Value Max.	Unit	Note
Frequency Range	F_0			10		MHz	
RF Output							
Output Waveform				Sine wave			
Load		±5%		50		Ohm	
Output Level			+8.5	+9.0	+9.5	dBm	>300mv(rms)@+5V supply voltage
Harmonics			30			dBc	Optional: >50 dBc
Power Supply							
Voltage	Vdc		11.4	12.0	12.6	V	Optional: +5V
Current Consumption		Steady State @+25°C			250	mA	<500mA@+5V supply voltage
Warm-up Time		<20ppb @+25°C			3.0	Min.	
Reference Voltage	Vref			5.0		V	4.5V@+5V supply voltage
Frequency Control							
Control Voltage	Vc		0		5	V	0 to 4.5V @+5V supply voltage
Frequency Pulling Range			±0.4			ppm	
Frequency Stability							
Vs. Operating Temperature Range		From -40°C to +85°C			±0.2	ppb	
Vs. Supply Voltage Change		+/-5% change			±0.5	ppb	Optional: ±0.2ppb
Vs. Load Change		+/-5% change			±0.5	ppb	Optional: ±0.2ppb
Short Term Stability (Allan deviation)		Per 1sec.				$6x10^{-13}$	With one second duration between time interval measurements
Aging First Year		After 30 Days Operation			±20	ppb	
Phase Noise							
Phase Noise		@1Hz			-108	dBc/Hz	
		@10Hz			-137	dBc/Hz	
		@100Hz			-157	dBc/Hz	
		@1KHz			-161	dBc/Hz	
		@10KHz			-162	dBc/Hz	
Environmental							
Operating Temperature Range	-40°C to +85°C						
Storage Temperature Range	-55°C to +85°C						
Vibration	Acceleration: 5g; 10 Hz up to 200 Hz and down to 10 Hz; all 3 axes						
Shock	75 g, half-sine, 3 ms						