



### Features and Benefits

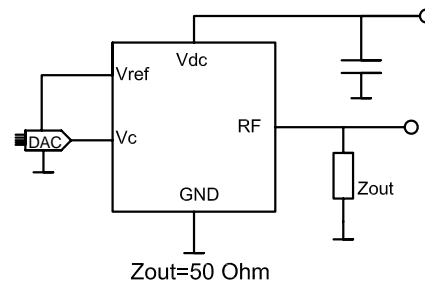
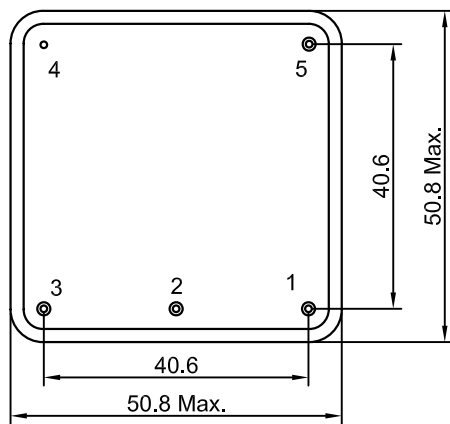
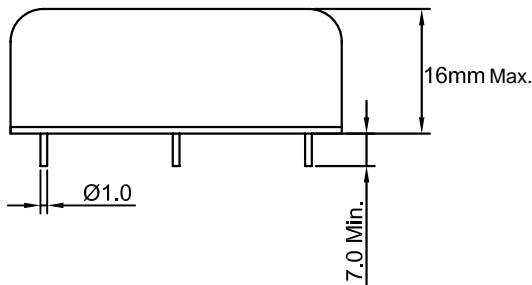
- High stability vs. temperature (up to  $\pm 0.2$  ppb)
- Wide operating temperature range:  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- 161 dBc/Hz at 1 KHz phase noise
- 108 dBc/Hz at 1 Hz phase noise
- Short term stability less than 0.0006ppb

### 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



**Specifications**

OCXO Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency Range	F <sub>0</sub>			10		MHz	
<b>RF Output</b>							
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
<b>Power Supply</b>							
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
<b>Frequency Control</b>							
Control Voltage	Vc		0		5	V	0 to 4.5V @+5V supply voltage
Frequency Pulling Range			±0.4			ppm	Positive slope
<b>Frequency Stability</b>							
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 Frequency Stability		Per 1sec			6x10 <sup>-13</sup>	ppb/s	
Aging	First Year	After 30 Days Operation			±20	ppb	
<b>Phase Noise</b>							
Phase Noise		@1Hz			-108	dBc/Hz	
		@10Hz			-137	dBc/Hz	
		@100Hz			-157	dBc/Hz	
		@1KHz			-161	dBc/Hz	
		@10KHz			-162	dBc/Hz	
<b>Environmental</b>							
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						