



### Features and Benefits

- 10 MHz ; +5V
- 14-pin DIP Compatible footprint
- 8.8 mm max. Height
- Less than +/- 5 ppb over -20°C to +85°C
- Less than +/- 50 ppb per year aging
- Less than 0.18 Watts typ. @+25°C after 60 second warmup
- +5 dBm min. Output
- Less than 1 ppb/G; 0.5 ppb/G is ordering option

### Typical Applications

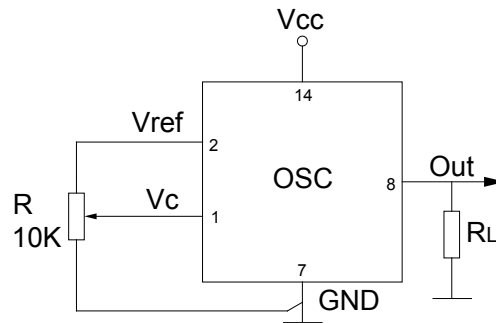
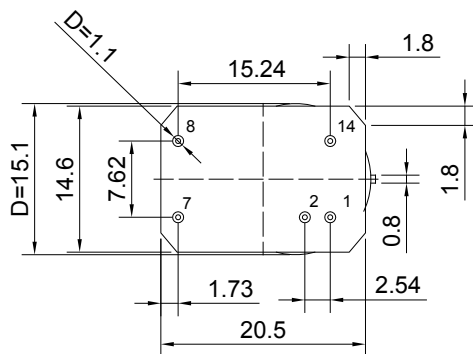
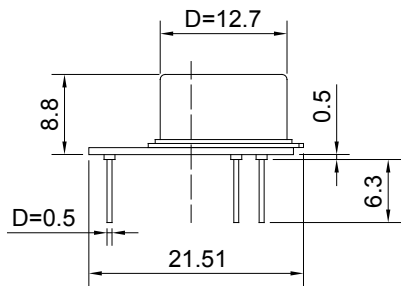
Specially designed for SATCOM earth station, manpack, and portable transceiver platforms.

### Description

The OCXO3307C incorporates internal heating resonator technology with the entire oven control mechanical structure packaged inside the TO-8 vacuum holder. This design offers a drastic reduction in volume, power consumption, and warm-up time while still maintaining outstanding frequency stability and phase noise performance normally associated with devices in much larger enclosures.

### Mechanical Drawing & Pin Connections

Drawing No: MD140076-1



Pin	Signal
1	Electrical tuning
2	Reference voltage
7	GND
8	RF Out
14	+V Supply

Unit: mm  
1mm=0.039inch



## Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency	F <sub>0</sub>			10		MHz	
<b>RF Output</b>							
Waveform :				Sine-wave			
Level		V <sub>cc</sub> =5V	+5	+8		dBm	
Load				50		Ohm	
Harmonics					-25	dBc	
Sub-harmonics level			None				
<b>Frequency control</b>							
Control voltage range	V <sub>c</sub>		0		4.2	V	
Frequency Turning Range			+/-0.5		-	ppm	
Reference Voltage	V <sub>ref</sub>			4.2		V	
<b>Power Supply</b>							
Voltage	V <sub>cc</sub>		4.75	5	5.25	V	
Power consumption		Warm-up state		1.0		W	
		@ +25°C steady state after 60s		0.18			
Warm-up Time:	T <sub>up</sub>	to Δf/f = 1e <sup>-7</sup> at +25°C ref. to frequency after 15 min		60		s	
<b>Frequency Stability</b>							
Vs. Temperature		-20°C to +85°C, ref. 25°C			+/-5	ppb	
Vs. Supply Voltage		Ref V <sub>cc</sub> typ.		+/-2		ppb	
vs. Acceleration		worst direction			+/-1	ppb/G	0.5ppb/G optionally
Aging	per day	after 30days of operation		+/-0.5		ppb	
	first year			+/-50		ppb	
Phase noise@10MHz		1 Hz		-100		dBc/Hz	
		10 Hz		-135			
		100 Hz		-159			
		1 KHz		-166			
		10KHz		-170			
		100 KHz		-170			
<b>Environmental Conditions</b>							
Storage temperature range	-60°C to 90°C						
Operating temperature range	-20°C to 85°C						
Humidity	Non-condensing 95%						
Mechanical Shock	MIL-STD-202, 30G half sine pulse, 11 ms						
Vibration	MIL-STD-202, 5G swept sine, 10 to 2000 Hz						
Washing Conditions	Washing with water or alcohol based detergent allowed only with final enough drying stage						
Soldering Conditions	Hand solder only – not reflow compatible 260°C 10s(on pins)						