



### Features and Benefits

- 10 MHz; +5V
- 14-pin DIP Compatible footprint
- 9.5 mm max. Height
- Less than +/- 3 ppb over -40°C to +85°C
- Less than +/- 20 ppb per year aging
- Less than 0.2 Watts typ. @+25°C after 60 second warmup
- +6 dBm min. Output

### Typical Applications

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

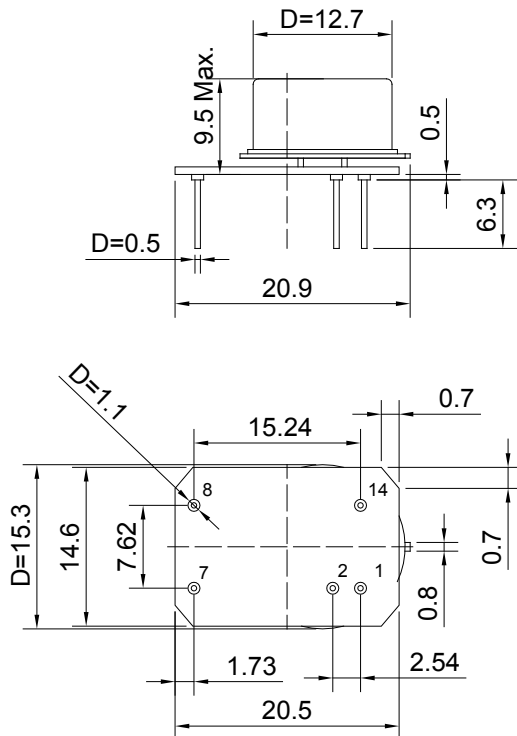
### Description

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

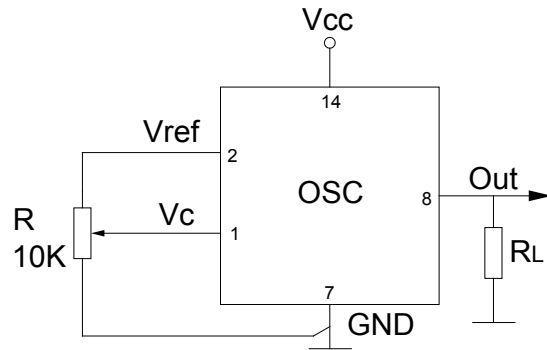
Drawing No: MD140076-1

#### Physical dimensions



Unit : mm  
1mm=0.0394inch

#### Schematic connections



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



## Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency Range	F <sub>0</sub>			10		MHz	
<b>RF Output</b>							
Waveform :				Sine-wave			
Level		V <sub>cc</sub> =5V	+6			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	
Preset control voltage	V <sub>pc</sub>			2.1		V	
<b>Power Supply</b>							
Voltage	V <sub>cc</sub>		4.75	5	5.25	V	
Power consumption		Warm-up state	0.6		1.1	W	
		@ +25°C steady state after 60s	0.18		0.2		
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		-40°C to +85°C , ref. 25°C			+/-3	ppb	
Vs. Supply Voltage		Ref V <sub>cc</sub> typ.			+/-1	ppb	
Vs. Load Change		5% change			+/-1	ppb	
Aging	per day	after 30days of operation		+/-0.2		ppb	
	first year			+/-20		ppb	
Phase noise@10MHz		1 Hz		-95		dBc/Hz	
		10 Hz		-125			
		100 Hz		-155			
		1 KHz		-160			
		10KHz		-168			
		100 KHz		-168			
<b>Environmental Conditions</b>							
Storage temperature range	-60°C to 90°C						
Operating temperature range	-40°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)						