



**Features and Benefits**

- Very low power consumption (to 0.18W at +25°C)
- DIP14 compatible 9.3mm height packaging
- High frequency stability (up to ±3 ppb over -40°C to +85°C)
- Very fast warm-up 60s typical (to 15s optionally)
- Very low phase noise (-173 dBc/Hz floor at 100MHz)
- Low aging (0.2 ppb/day; 0.02 ppm/year)
- Wide frequency range (8 – 150MHz)

**Typical Applications**

- UHF Synthesizers
- SATCOM System
- Portable Microwave Applications

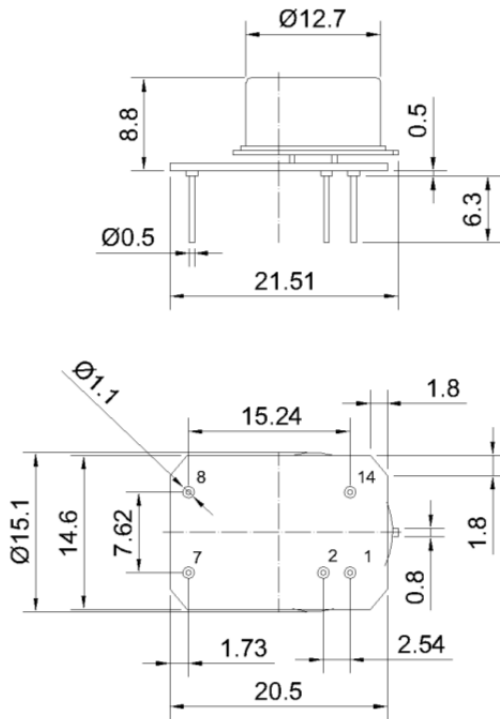
**Description**

OCXO3307C series offers wide temperature operation from -40°C to +85°C with outstanding frequency stability and low phase noise performance all with very fast warm-up and less than 0.18W power dissipation at +25°C.

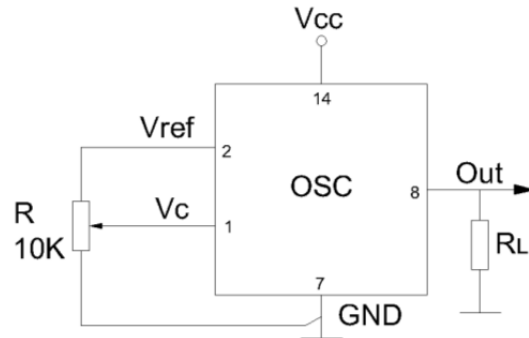
**Mechanical Drawing & Pin Connections**

**Drawing No:** MD140076-1

**Physical dimensions**



**Schematic connections**



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

Unit : mm



**Specifications**

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency Range	F <sub>nom</sub>		8		150	MHz	
HCMOS	Load		10			KOhm	
	H-Level Voltage	V <sub>H</sub>	3.8		10/5	pF	
	L-Level Voltage	V <sub>L</sub>			0.4	V	
	Duty Cycle		45		55	%	
	Rise/Fall Time				10/3	ns	10MHz/100MHz op. freq.
Sine wave	Level	L	+5	+8		dBm	
	Load	R <sub>L</sub>		50		Ohm	
	Harmonics Level				-25	dBc	
Sub-harmonics Level			None				
<b>Power Supply</b>							
Voltage	V <sub>cc</sub>		4.75	5.0	5.25	V	3.3V available
Current Consumption		Steady-state at +25°C		0.18		W	
		Warm-up		1.0		W	
Warm-up Time:		To Δf/f = 1e-7, at +25°C Ref. to frequency after 15 min.			60	s	15s - optional
<b>Frequency Control*</b>							
Control voltage range	V <sub>c</sub>	V <sub>cc</sub> = 5V	0		4.2	V	Tuning Slope Positive
		V <sub>cc</sub> = 3.3V	0		2.8	V	
Tuning range			±0.5	±1		ppm	
Reference voltage	V <sub>ref</sub>	V <sub>cc</sub> = 5V	4.1	4.2	4.5	V	
		V <sub>cc</sub> = 3.3V	2.7	2.8	2.9	V	
<b>Frequency Stability</b>							
Vs. Operating Temperature Range		-40°C to 85°C			±3	ppb	ref 25°C
Vs. Supply Voltage Change		Ref. V <sub>cc</sub> typ.		±2		ppb	
Vs. Acceleration		Worst direction			±1	ppb/G	
Aging Per Day		After 30 days of operation			±0.2	ppb	
Aging Per Year						±0.02	ppm
Phase noise		1 Hz		-100/--		dBc/Hz	
		10 Hz		-135/-97			
		100 Hz		-159/-128			
		1000 Hz		-166/-155			
		10 KHz		-170/-170			
	100 KHz		-170/-173				
<b>Environmental Conditions</b>							
Operating temperature range		-40°C to +85°C					
Storage temperature range		-60°C to +90°C					
Humidity		Non-condensing 95%					
Mechanical Shock		Per MIL-STD-202, 30G half sine pulse, 11ms					
Vibration		Per MIL-STD-202, 10G swept sine 10 to 2000Hz					
Soldering Conditions		Hand solder only – not reflow compatible 260°C 10s (on pins)					