



### Features and Benefits

- 14DIP Compatible 8mm Height Packaging
- Very Low Power Consumption: 0.15W at +25°C
- Fast Warming-up: 60 s typical
- Low Aging: +/-1.0 ppb/day, +/-100 ppb/year

### Typical Applications

- Portable Wireless Communications
- Mobile Test equipment
- Synthesizers
- Battery Powered Application

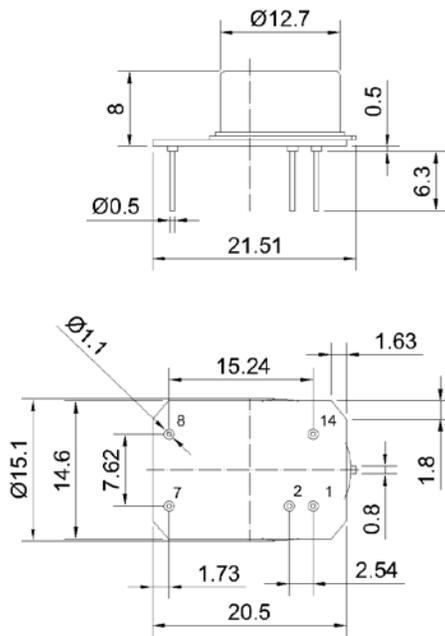
### Description

The OCXO3307LP-10MHz-A-V utilizes the internal heating resonator (IHR) technology incorporating the whole oven system together with the crystal plate inside the TO-8 vacuum holder. Such an OCXO concept results in radical reduction of its volume, power consumption and warm-up time. In spite of the miniature sizes and extremely low power consumption such oscillators exhibit excellent temperature stability, low phase-noise and aging rate being at the level of high-end OCXOs using conventional oven designs.

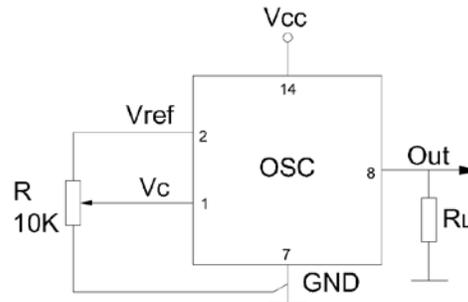
### Mechanical Drawing & Pin Connections

Drawing No: MD140075-1

#### 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	F <sub>nom</sub>			10.000000		MHz	
Initial tolerance		at +25°C, Vc=Vcc	-0.2		+0.2	ppm	
<b>RF Output</b>							
Waveform : LVCMOS				HCMOS			
Load		5 pF in parallel with 10K		5//10K		pF//K	
H-level voltage		Vcc=3.3V	2.4			V	
L-level voltage					0.4	V	
Duty cycle			45		55	%	
Rise/Fall time					10	ns	
Sub-harmonics level				none			
<b>Frequency control</b>							
Control voltage range	V <sub>c</sub>		0		2.8	V	
Frequency Turning Range			+/-0.5	+/-1	-	ppm	+
Reference Voltage	V <sub>ref</sub>			2.8		V	
<b>Power Supply</b>							
Voltage	V <sub>cc</sub>			3.3		V	
Power consumption		Warm-up state		0.7		W	
		@ +25°C steady state		0.15			
Warm-up Time:	T <sub>up</sub>	to Δf/f = 1e <sup>-7</sup> at +25°C		60		s	ref. to frequency after 15 min
<b>Frequency Stability</b>							
Vs. Temperature		Ref. 25°C			+/- 10	ppb	
Vs. Supply Voltage		Ref Vcc typ.		+/-2		ppb	
vs. direction		worst direction			+/-1	ppb/g	
Aging	per day	after 30days of operation			+/-1	ppb	
	first year				+/-100	ppb	
SSB Phase noise		1 Hz		-90		dBc/Hz	
		10 Hz		-120			
		100 Hz		-145			
		1 KHz		-155			
		10KHz		-165			
		100 KHz		-165			
<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)						