



## Features and Benefits

Frequency range: 10MHz  
Supply voltage: 3.3V  
Steady current: 50mA Max  
Output waveform: Sinewave  
Frequency stability vs. operating temperature:  $\pm 50$ ppb  
Aging:  $\pm 0.05$ ppm per year  
Operating temperature:  $-30^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$   
Size: 20.5x15.3x9.5mm  
Package type: Through hole

## Typical Applications

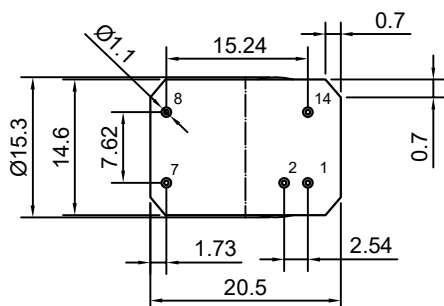
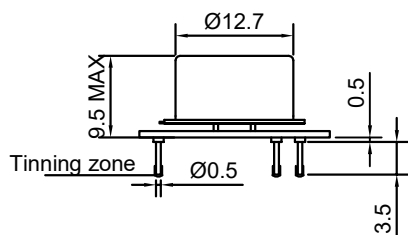
Portable Wireless Communications Mobile  
Test equipment  
Synthesizers  
Battery Powered Application

## Description

OCXO3307CV-10MHz-B-V offers high frequency stability, good long-term aging and low phase noise, all in a compact package to suit the different communication needs.

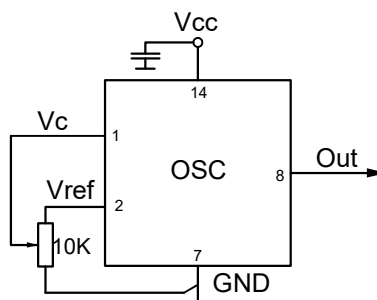
## Mechanical Drawing & Pin Connections

Drawing No: MD250004-1



Unit in mm  
1mm = 0.0394 inches

### Schematic connections



Pin	Signal
1	Control Voltage
2	Reference voltage
7	GND
8	RF Out
14	Supply Voltage



## Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	f <sub>0</sub>			10		MHz	
RF Output							
Signal Waveform			Sinewave				
Level			+4			dBm	note
Harmonics					-25	dBc	
Load			45	50	55	ohm	
Power Supply							
Reference Voltage	Vref		2.7	2.8	2.9	V	
Supply Voltage	Vcc		3.15	3.3	3.45	V	
Warm-up current		V <sub>CC</sub> =3.3V	140		240	mA	
Continuous current		at +25°C, V <sub>CC</sub> =3.3V			50	mA	
Frequency warm-up time		to df/f=1e-7 at +25°C ref at 15 min		60	90	sec	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)	(f <sub>L</sub> -f)/f	Vc=0 V		-1	-0.5	ppm	note
	(f-f)/f	Vc=V <sub>C0</sub>		0		ppm	
	(f <sub>H</sub> -f)/f	Vc=Vref	+0.5	+1		ppm	note
EFC voltage	Vc		0		2.8	V	
Input impedance	Rin			11		Kohm	
Preset control voltage	V <sub>C0</sub>	disconnected Vc pin	1.2	1.4	1.6	V	
Output resistance of Vref				91		ohm	
Slope				positive			
Frequency Stability							
Versus Operating Temperature Range		ref +25°C			±50	ppb	note
Initial Tolerance @+25°C	(f-f <sub>0</sub> )/f <sub>0</sub>	V <sub>C</sub> = V <sub>C0</sub>	-0.1		+0.1	ppm	note
Versus supply voltage		ref V <sub>CC</sub> typ.		±2		ppb	
G-sensitivity		worst axis, 0-1KHz vibration BW		±1		ppb/G	
Retrace		24h work after 24h off			±20	ppb	
Allan deviation		1 s. 100 kHz BW		±20		e-12	
SSB Phase noise (Static. Values are for reference only and are subject to change.)		1Hz		-95		dBc/Hz	
		10Hz		-125			
		100Hz		-150			
		1KHz		-160			
		10KHz		-165			
		100KHz		-168			
Aging Per Day		After 30 days of operation			±0.5	ppb	
Aging 1 <sup>st</sup> Year					±0.05	ppm	
Maximum ratings, environmental, mechanical conditions							
Operating temperature range	-30°C to +70°C						
Storage temperature range	-60°C to +85°C						
Power voltage	-0.5 to 4.0 V						
Control voltage	-1.0 to 4.0 V						
Air flow velocity	0.5 m/s maximum						
Humidity	Non-condensing 95%						
Mechanical shock	Per MIL-STD-202, 200G, 1ms						
Vibration	Per MIL-STD-202, 10G to 2000Hz						
Soldering conditions	Hand solder only – not reflow compatible 260°C 10s (on pins)						
Washing conditions	Washing with water or alcohol based detergent allowed only with final enough drying stage						

Note: Included in the test data