



**Features and Benefits**

- Low power consumption (up to 0.18W at +25°C)
- High frequency stability (up to ±100ppb over -40°C to +55°C)
- Low aging (0.3 ppb / day, 30 ppb/year)
- Outstanding fast warming-up (up to 30s)
- Low Phase Noise: -172 dBc/Hz
- DIP14 compatible 9.5mm height packaging

**Typical Applications**

- Mobile Test Equipment
- Portable Wireless Communication
- Battery Powered Applications
- Synthesizers

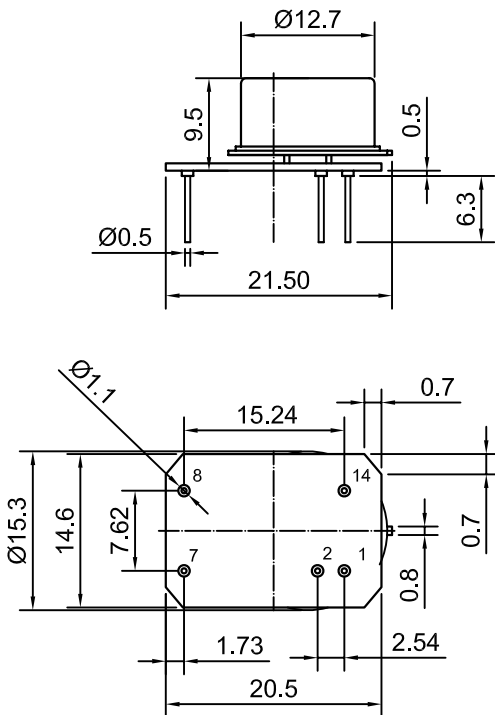
**Description**

OCXO3307C-10MHz-E-V offers improved oscillator circuitry which allows low power consumption and better temperature stability, along with reliable long term aging, all within a compact package.

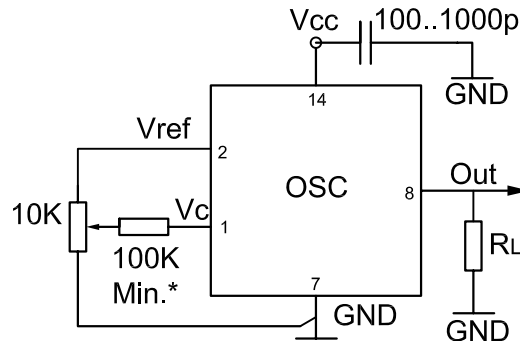
**Mechanical Drawing & Pin Connections**

Drawing No: MD140076-5

**DIP Package**



**Schematic connections**



\* Required for some versions

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

Unit in mm  
1mm = 0.0394 inches



**Specifications**

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Nominal Frequency	F <sub>nom</sub>			10		MHz	
Output Waveform			Sine wave				
Output Level	L	V <sub>CC</sub> = 5V	+10			dBm	
Output 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	5.00	5.25	V	
Power Consumption		Warm-up time		700	1200	mW	10 MHz, -40°C to +85°C
		Steady-state, +25°C		180			
Warm-up Time:	T <sub>up</sub>	At +25°C to Δf/f = 1e-7 At +25°C to Δf/f = 1e-8	30	60 120		sec	ref. to frequency after 15 min operation.
<b>Frequency Control</b>							
Control Voltage range	V <sub>c</sub>	V <sub>CC</sub> = 5V	0		4.2	V	
Tuning Range		Compliance with 10 years of aging	±0.3	±1.0		ppm	Positive slope
Reference Voltage	V <sub>ref</sub>	V <sub>CC</sub> = 5V	4.0		4.3	V	
<b>Frequency Stability</b>							
Initial Tolerance	(f-f <sub>0</sub> )/f <sub>0</sub>	+25°C, V <sub>C</sub> = 0.5*V <sub>ref</sub>		±0.1		ppm	
Versus Temperature		ref 25°C, air flow 0.5 m/s max		±100		ppb	
Versus Supply Voltage		Ref V <sub>CC</sub> typ		±2		ppb	
Versus G - sensitivity		Worst direction, 0 – 1 kHz vibration BW	±0.3		±1.0	ppb/G	Consult DEI for 0-2 kHz BW
Retrace		24h work after 24h off			±10	ppb	
SSB Phase noise		10 Hz offset			<-120	dBc/Hz	
		100 Hz offset			<-140		
		1 KHz offset			<-150		
		10 KHz offset			<-165		
Allan Variance		1s	5		30	e-12	
Aging	Per Day	After 30 days of operation		±0.100		ppb	
	Per Year			±0.015		ppm	
<b>Environmental Conditions</b>							
Operating temperature range		-40°C to +85°C					
Storage temperature range		-60°C to +85°C					
Airflow Velocity		0.5 m/s maximum					
Power Voltage		-0.5V to V <sub>CC</sub> + 20%					
Control Voltage		-0.5V to 6V					
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 2000 Hz					
Soldering Condition		Hand solder only – not reflow compatible 260°C 10s (on pins)					
Washing Condition		Washing with water or alcohol based detergent allowed only with final enough drying stage					