



**Features and Benefits**

High stability:  $\pm 100$ ppb over  $-40$  to  $+85^{\circ}\text{C}$   
 Frequency: 25MHz  
 Low aging:  $\pm 1$ ppb/day,  $\pm 0.1$ ppm/year  
 Output: HCMOS  
 Voltage supply: +3.3V

**Typical Applications**

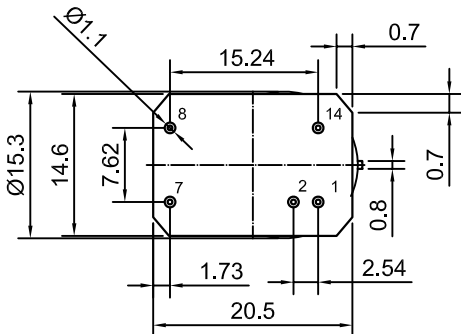
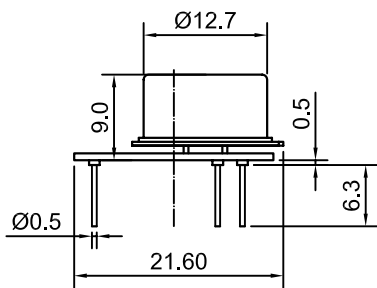
Portable Wireless Communications Mobile  
 Test equipment  
 Synthesizers  
 Battery Powered Application

**Description**

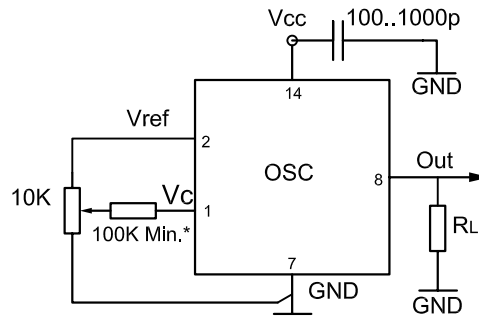
OCXO3307C-25MHz-A-V offers high frequency stability, low long-term aging and low phase noise, all in a compact package to suit the different communication needs.

**Mechanical Drawing & Pin Connections**

**Drawing No:** MD140076-4



**Schematic connections**



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.		
Operational Frequency	F <sub>nom</sub>			25		MHz	
<b>RF Output</b>							
Signal Waveform			HCMOS				
Level	H level		2.4			V	
	L level				0.4	V	
Load				10Kohm// 15pF			
Duty Cycle			45		55	%	
Rise/Fall time					10	nS	
<b>Power Supply</b>							
Reference Voltage VREF Output			2.5		3.1	V	
Supply Voltage	V <sub>s</sub>		3.15	3.3	3.45	V	
Warm-up Time	T <sub>up</sub>	At +25°C to Δf/f=1e-7	30	60		s	ref to freq after 15 min of operation
		At +25°C to Δf/f=1e-8		120		s	
Power Consumption		Steady state, +25°C			180	mW	
		Warm-up			1200	mW	
<b>Frequency Adjustment Range</b>							
Electronic Frequency Control (EFC)		Compliance with 10 years aging	±0.3	±1		ppm	
EFC voltage	V <sub>c</sub>		0		3	V	
EFC Slope			positive				
<b>Frequency Stability</b>							
Versus Operating Temperature Range		-40C to +85C		±100		ppb	
Initial Tolerance @+25°C		V <sub>c</sub> @ VREF / 2		±0.1		ppm	
Versus supply voltage	V <sub>s</sub>	Ref Vcc typ		±2		ppb	
G-Sensitivity		Worst direction	±0.3	±1.0		ppb/G	
Aging Per Day		After 30 days of operation		±1		ppb	
Aging 1 <sup>st</sup> Year					±0.1		ppm
Phase Noise		100Hz		-145		dBc/Hz	
		1kHz		-155		dBc/Hz	
		10kHz		-165		dBc/Hz	
		100kHz		-165		dBc/Hz	
<b>Environmental,Mechanical Conditions</b>							
Operating temperature range	-40°C to 85°C						
Storage temperature range	-60°C to 85°C						
Power voltage	-0.5V to Vcc+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 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						