



Features and Benefits

Very low power consumption (up to 180mW at +25°C)
 High frequency stability to ±100ppb over -40°C to 85°C
 3.3V with min. +8 dBm sine wave output
 Outstanding fast warming-up (up to 30s)
 Low aging to ± 5x10⁻¹⁰/day, ± 5x10⁻⁸/year
 Miniature DIP8 sizes

Typical Applications

Mobile Test Equipment
 Portable Wireless Communication
 Battery Powered Applications
 Beacon and Rescue Systems

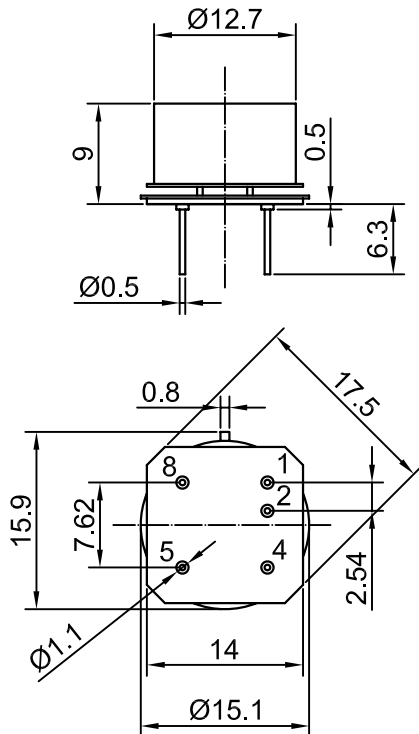
Description

OCXO3312C-10MHz-F-V offers state-of-the-art design which allows low power consumption and high frequency stability, along with reliable long term aging, all within a compact package.

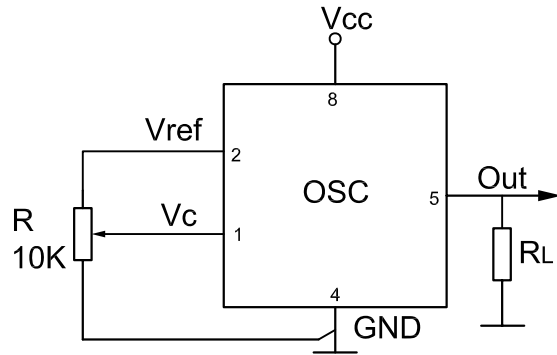
Mechanical Drawing & Pin Connections

Drawing No: MD1(00++-'

Physical dimensions



Schematic connections



Pin	Signal
1	Electrical tuning
2	Reference voltage
4	GND
5	RF Out
8	+V Supply

Unit in mm
 1mm = 0.0394 inches



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Nominal Frequency	F _{nom}			10		MHz	
Output Waveform			Sine wave				
Output Level	L	V _{CC} = 3.3V	+6	+8	+10	dBm	
Output Load	R _L			50		Ohm	
Harmonics Level					-25	dBc	
Sub-harmonics Level			none				
Power Supply							
Voltage	V _{CC}		3.15	3.30	3.45	V	
Power Consumption		Warm-up state		0.7		W	
		Steady-state, +25°C		0.18			
Warm-up Time:	T _{up}	At +25°C to Δf/f = 1e-7	15	60		sec	ref. to frequency after 10 min operation.
Frequency Control							
Control Voltage range	V _c		0		2.8	V	Positive slope
Tuning Range			±0.5	±1.0		ppm	
Reference Voltage	V _{ref}		2.7	2.8	2.9	V	
Frequency Stability							
Versus Temperature		-40°C to +85°C, ref 25°C			±100	ppb	
Versus Supply Voltage		Ref V _{CC} typ.		±2		ppb	
Versus acceleration		Worst direction	±0.5		±1	ppb/G	
Retrace		24h work after 24h off			±10	ppb	
SSB Phase noise		1 Hz		-95		dBc/Hz	
		10 Hz		-125			
		100 Hz		-145			
		1 KHz offset		-160			
		10 KHz offset		-165			
		100 KHz offset		-168			
Allan Variance		1s	10	20		e-12	
Aging	per day	after 30 days of operation			±0.5	ppb	
	first year				±0.05	ppm	
Environmental Conditions							
Operating temperature range		-40°C to +85°C					
Storage temperature range		-60°C to +85°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 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					