

Features and Benefits

- 150 MHz low noise precision crystal
- Very Low Power (0.15W steady-state)
- Very Fast Warm-up time (15 to 45 seconds)
- Ultra-low phase noise (Less than -168 dBc/Hz @ 10 KHz offset)

Description

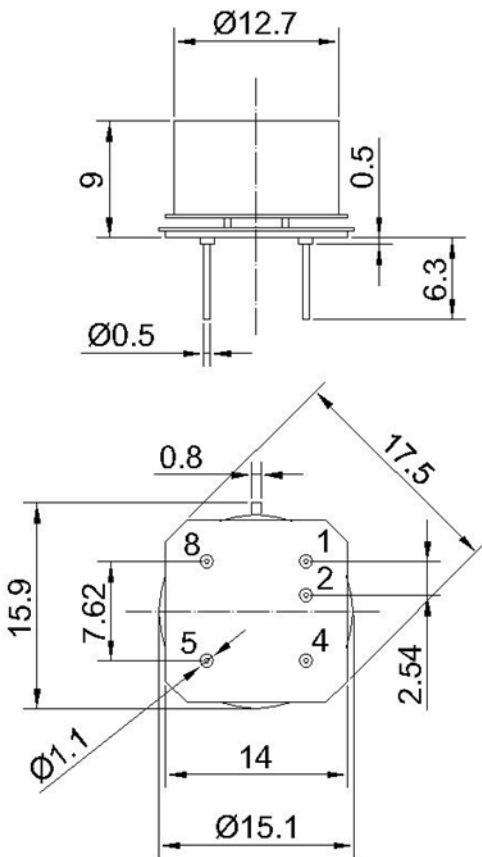
The OCXO3309C is an Ultra-low power OCXO technology with outstanding phase noise up to 150 MHz operating frequency.

Typical Applications

- Portable Wireless Communications
- Mobile Test equipment
- Beacons & Rescue systems
- Battery Powered Applications

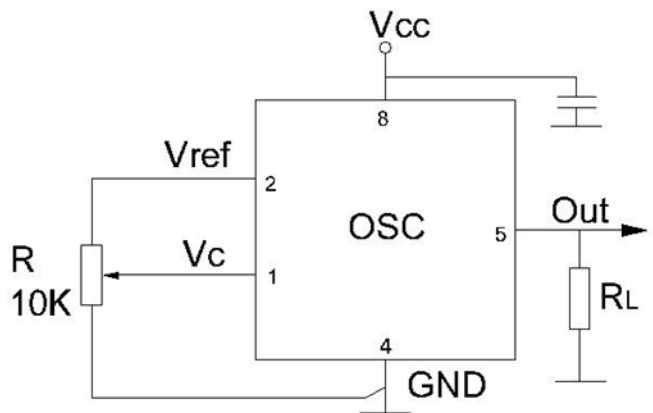
Mechanical Drawing & Pin Connections

Physical dimensions



Drawing No: MD14007-2

Schematic connections



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

Unit : mm

Specifications

OCXO Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency Range	F ₀			150.000000		MHz	
RF Output							
Sine Wave	Level	L	+6	+8	+10	dBm	
	Load	R _L		50		Ohm	
	Harmonics Level				-25	dBc	
Sub-harmonics level				None			
Power supply							
Voltage	V _{cc}		4.75	5.0	5.25	V	
Power Consumption	Power	Warm-up state		0.7		W	
		Steady state, +25°C		0.15		W	
Warm-up Time	t _{up}	Δf/f ₀ = 1e-7 at 25°C	15	45		s	ref. to frequency after 10 min
Frequency control							
Control Voltage Range	V _c	@ V _{cc} = 5V	0		4.2	V	Tuning slope – positive
Tuning Range			+/-1.5			ppm	
Reference Voltage	V _{ref}	@ V _{cc} = 5V	4.1	4.2	4.3	V	
Frequency Stability							
vs. Temperature		-10°C to +60°C, ref. 25°C			+/-300	ppb	
vs. Supply Voltage		Ref. V _{cc} typ.		+/-2		ppb	
vs. Acceleration		Worst direction	+/-0.5		+/-1	ppb/G	
Aging	Per day	After 30 days of operation		+/-5		ppb	
	First year		+/-0.5		ppm		
Phase noise							
Phase Noise		1 KHz		-145		dBc/Hz	
		10 KHz		-168			
		100 KHz		-170			
Environmental							
Operating Temperature Range	-10°C to +60°C						
Storage Temperature Range	-60°C to +90°C						
Humidity	Non-condensing 95%						
Mechanical Shock	Per MIL-STD-202, 30G half sine pulse, 11ms (500G, 1ms-special option)						
Vibration	Per MIL-STD-202, 10G swept sine 10 to 2000Hz						
Soldering Conditions	Hand solder only – not reflow compatible. 260°C 10s (on pins)						