

Features and Benefits

Low power consumption (to 0.25W Max. at +25 °C)
 Frequency stability (+/-50ppb over -30°C to +70°C)
 Sine wave output

Description

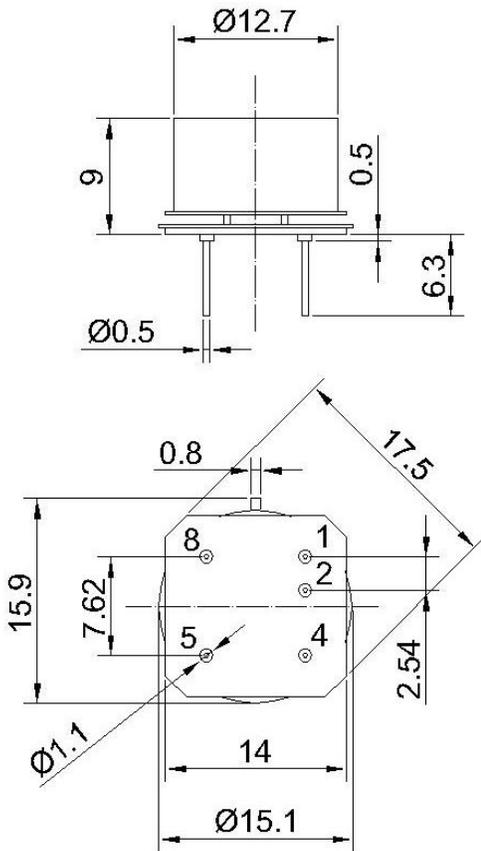
The OCXO3309C series utilizes the internal heating resonator technology (IHR) with arrangement of the oven system together with the crystal plate inside the TO-8 vacuum holder.

Typical Applications

Portable Wireless Communications
 Mobile Test equipment
 Beacons & Rescue systems

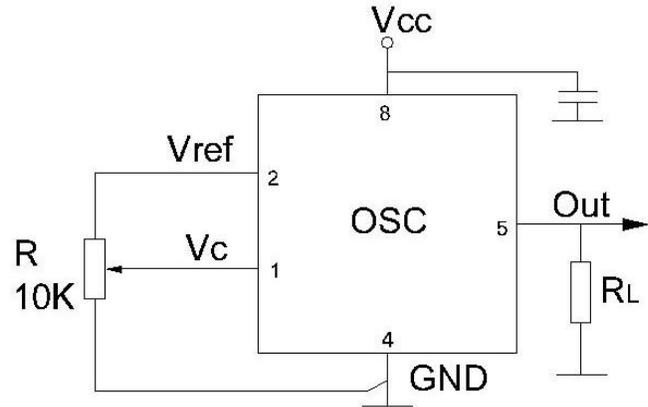
Mechanical Drawing & Pin Connections

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			10.000000		MHz	
RF Output							
Output waveform			Sine wave				
Load	R _L		45	50	55	Ohm	
Output Level			+6	+8	+10	dBm	
Harmonics					-25	dBc	
Power Supply							
Supply Voltage	V _{cc}		4.75	5.0	5.25	V	
Current Consumption(Steady state)	I _{Steady}	@ +25°C		35	50	mA	
Current Consumption(Warm-up)			120		220	mA	
Warm-up time@+25°C		To Δf/f=1e-7			90	sec	
Frequency Control*							
Input Resistance				11		Kohm	
EFC Voltage	V _c		0		4.2	V	Positive
Preset Control Voltage		Disconnected V _c Pin	2.0	2.1	2.2	V	
Electronic Frequency Control(EFC)	(f _L -f)/f	V _c =0V			-1	ppm	
	(f-f)/f	V _c = V _{c0}		0		ppm	
	(f _H -f)/f	V _c = V _{ref}	1			ppm	
Reference Voltage			4.1	4.2	4.3	V	
Frequency Stability							
Initial Tolerance @+25°C		V _c = V _{c0}			+/-0.1	ppm	
Vs. Operating Temperature Range		From -30°C to +70°C			+/-50	ppb	
Vs. Supply Voltage		Ref. V _{cc} typ.			+/-2	ppb	
Aging	Long term per day	After 30days operation			+/-1.5	ppb	
	Long term per year				+/-0.15	ppm	
Phase Noise							
Phase Noise		1Hz		-90		dBc/Hz	
		10 Hz		-120			
		100 Hz		-135			
		1 KHz		-155			
		10 KHz		-165			
		100 KHz		-168			
Maximum Ratings, Eviromental and Mechanical Conditions							
Operating Temperature Range	-30°C to +70°C						
Storage Temperature Range	-60°C to +90°C						
Humidity	Non-condensing 95%						
Mechanical Shock	Per MIL-STD-202, 30G, 11ms						
Vibration	Per MIL-STD-202, 5G 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.						