



Features and Benefits

- Very low power consumption (to 0.18W at +25°C)
- DIP14 compatible 9.3mm height packaging
- High frequency stability (up to ±3 ppb over -40°C to +85°C)
- Very fast warming-up 60s typical (to 15s optionally)
- Very low phase noise (-173 dBc/Hz floor at 100MHz)
- Low aging (±0.2 ppb/day; ±0.02 ppm/year)
- Wide frequency range (8 – 150MHz)

Description

OCXO3308C series offers wide temperature operation from -40°C to +85°C with outstanding frequency stability and low phase noise performance all with very fast warm-up and less than 0.18W power dissipation at 25°C.

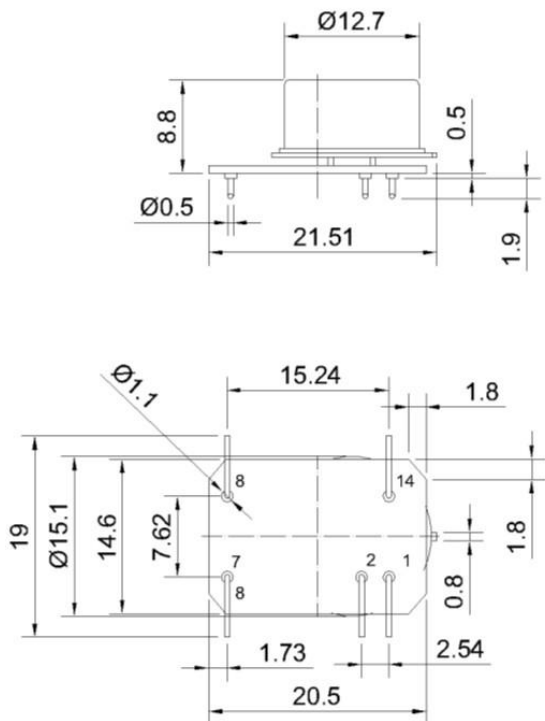
Typical Applications

- UHF Synthesizers
- SATCOM System
- Portable Microwave Applications

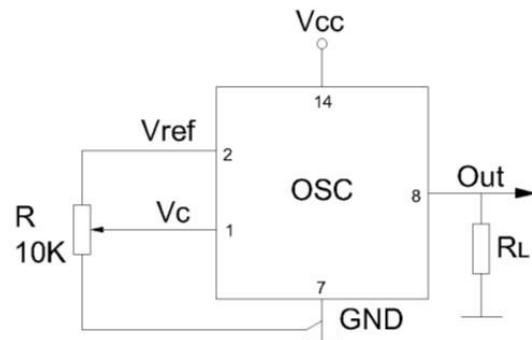
Mechanical Drawing & Pin Connections

Drawing No: MD140076-2

Physical dimensions



Schematic connections



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

Unit : mm



Specifications

HPXO Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency Range	F ₀		8		150	MHz	
RF Output							
HCMOS	Load		10			Kohm	
					10/5	pF	
	H-Level Voltage	V _H	3.8			V	
	L-Level Voltage	V _L			0.4	V	
	Duty Cycle		45		55	%	
	Rise/Fall Time				10/3	ns	10MHz/100MHz op. freq.
Sine wave	Level	L	+5	+8		dBm	
	Load	RL		50		Ohm	
	Harmonics Level				-25	dBc	
Sub-harmonics Level			None				
Power Supply							
Voltage	V _{cc}		4.75	5.0	5.25	V	3.3V available
Power Consumption		Steady-state@+25°C		0.18		W	
		Warm-up		1.0		W	
Warm-up Time		ToΔf/f=1e-7, at 25°C Ref. to frequency after 15min.			60	s	15s-optional
Frequency Control							
Control Voltage	V _c	V _{cc} =5V	0		4.2	V	Tuning slop-postive
		V _{cc} =3.3V	0		2.8	V	
Tuning Range			+/-0.5	+/-1		ppm	
Reference Voltage	V _{ref}	V _{cc} =5V	4.1	4.2	4.5	V	
		V _{cc} =3.3V	2.7	2.8	2.9	V	
Frequency Stability							
Vs. Operating Temperature Range		-40°C to +85°C			+/-3	ppb	Ref 25°C
Vs. Supply Voltage Change		Ref. V _{cc} typ.		+/-2		ppb	
Vs. Acceleration		Worst direction			+/-1	ppb/G	
Aging	Per day	After 30 days of operation			+/-0.2	ppb	
	Per year				+/-0.02	ppm	
Phase Noise							
Phase Noise		@1Hz		-100/--		dBc/Hz	Utmost phase noise level: 10MHz/100MHz op. freq.
		@10Hz		-135/-97			
		@100Hz		-159/-128			
		@1KHz		-166/-155			
		@10KHz		-170/-170			
		@100KHz		-170/-173			
Environmental							
Operating Temperature Range	-40°C to +85°C						
Storage Temperature Range	-60°C to +90°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 2000Hz						
Soldering Conditions	Hand solder only – not reflow compatible 260°C 10s(on pins)						