



Features and Benefits

- Very low power consumption (to 0.15W at +25°C)
- DIP14 compatible 8mm height packaging
- High frequency stability (up to ±5ppb over -30°C to +70°C)
- Fast warm-up 30s
- Very low phase noise (-170 dBc/Hz floor at 100MHz)
- Low aging (0.5ppb/day; 0.05ppm/year)
- Wide frequency range (8 – 120MHz)

Typical Applications

- UHF Synthesizers
- SATCOM System
- Portable Microwave Applications

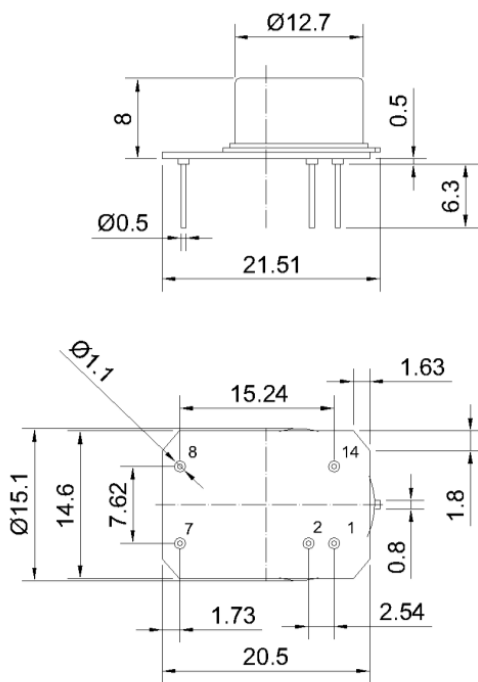
Description

OCXO3306C series offers a wide frequency range and outstanding frequency stability and low phase noise performance all with very fast warm-up and less than 0.15W power dissipation at 25°C.

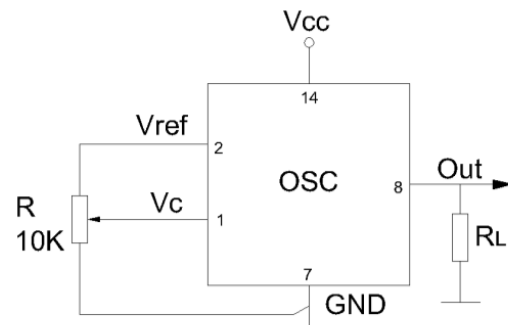
Mechanical Drawing & Pin Connections

Drawing No: MD140075-1

Physical dimensions



Schematic connections



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

Unit : mm



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency Range	F _{nom}		8		120	MHz	
HCMOS	Load		10			KOhm	10MHz/100MHz op. freq.
					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.	
Sub-harmonics Level			None				
Power Supply							
Voltage	V _{cc}		4.75	5.0	5.25	V	3.3V available
Power Consumption		Steady-state at +25°C		0.15		W	
		Warm-up		0.8		W	
Warm-up Time:		To $\Delta f/f_0 = 1e-7$, at 25°C			60	s	Ref. to frequency after 15min.
Frequency Control*							
Control voltage range	V _c	V _{cc} = 5V	0		4.2	V	Tuning Slope Positive
		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		-30°C to +70°C		±50		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			±0.5	ppb	
Aging Per Year					±0.05	ppm	
Phase noise		1 Hz		-97/--		dBc/Hz	Utmost phase noise level: 10MHz/100MHz op. freq.
		10 Hz		-127/-95			
		100 Hz		-152/-127			
		1000 Hz		-162/-153			
		10 KHz		-166/-165			
100 KHz		-166/-170					
Environmental 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 half sine pulse, 11ms					
Vibration		Per MIL-STD-202, 10G swept sine 10 to 2000Hz					
Soldering Conditions		260°C 10s					