

Features and Benefits

- Special Extended temperature operation to -55°C
- Less than -155dBc/Hz@ 1KHz offset
- Fast Warm-up: 60s-typical
- Low Aging: ±2ppb/day, ±0.2ppm/year

Typical Applications

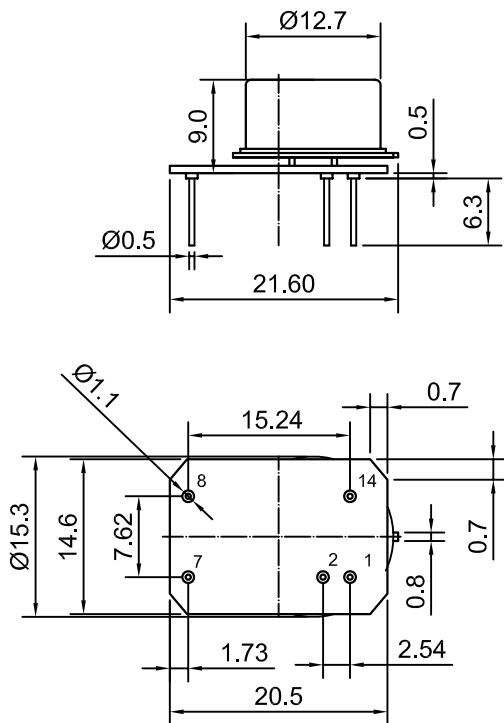
- Synthesizers
- Portable Wireless Communication
- Battery Powered Applications
- Mobile Test Equipment

Description

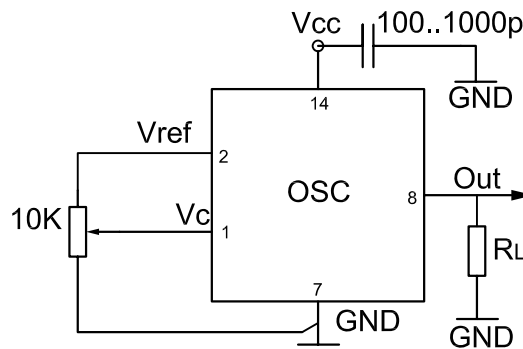
OCXO3307C-ET-80MHz-A-V utilizes the internal heating resonator (IHR) technology incorporating the whole oven system together with the crystal plate inside the vacuum holder. Such OCXO concept results in radical reduction of its volume, power consumption and warm-up time. The OCXO3307C-ET-80MHz-A-V incorporates improved oscillator circuitry providing essentially better temperature stability at the same miniature sizes, extremely low power consumption and low phase-noise level.

Mechanical Drawing & Pin Connections

Drawing No:MD140076-4

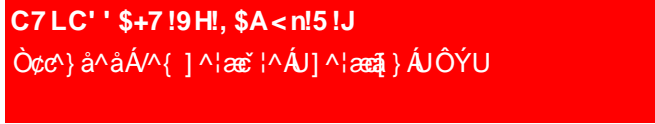


Schematic connections



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

Unit : mm
 1mm=0.0394inch



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ	Max.		
Frequency Range	F ₀			80		MHz	
RF Output							
Output Wave Form			Sine wave				
Level	L _S	V _{CC} =5V	+7	+9		dBm	
Load	R _L		45	50	55	Ohm	
Harmonics Level	L _H				-25	dBc	
Power Supply							
Input Voltage	V _{CC}		4.75	5.00	5.25	V	
Warm-up Current	I _{ST}	V _{CC} =5V	120		220	mA	
Continuous Current	I _{CC}	At +25°C, V _{CC} =5V		35	50	mA	
Frequency Warm-up Time	t _F	@+25°C to Δf/f=1e-7		60	90	s	
Frequency Control							
Input Impedance	R _{in}			11 5		kOhm pF	
Voltage Range	V _C		0		4.2	V	
Preset Control Voltage	V _{C0}	Disconnected V _C pin	1.9	2.1	2.3	V	
Frequency Tuning Range	(f _L -f)/f	V _c =0V			-1	ppm	
	(f-f)/f	V _c =V _{c0}	0				
	(f _H -f)/f	V _c =V _{ref}	1				
Reference Voltage	V _{ref}		4.1	4.2	4.3	V	
Output Resistance of Vref				91		Ohm	
Frequency Stability							
VS. Tolerance	(f-f ₀)/f ₀	+25°C, V _c =V _{c0}	-0.15		0.15	ppm	
VS. Temperature	df/dT	Ref. +25°C			±100	ppb	
VS Supply voltage	df/dV	Ref V _{CC} typ			±5	ppb	
VS Load	df/dZ	5% change			±5	ppb	
Phase Noise							
SSB Phase noise (Static)	L _{PH}	10Hz			-95	dBc/Hz	
		100 Hz			-125		
		1 kHz			-155		
		10 kHz			-165		
		100 kHz			-168		
Aging	Per day	df/day	After 30 days of operation			±2.0	ppb
	First Year	df/year				±0.2	ppm
Environmental Conditions							
Parameter		Reference Std.					
Operating temperature range		-55°C to +85°C					
Storage temperature range		-60°C to +90°C					
Power Voltage		-0.5V to 6.0V					
Control Voltage		-1.0V to 9.0V					
Humidity		Non-condensing 95%					
Mechanical Shock		Per MIL-STD-202, 30G, 11ms					
Vibration		Per MIL-STD-202, 10G to 2000 Hz					
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					