



Features and Benefits

- Frequency range: 10MHz
- Supply voltage: 3.3V
- Steady current: 50mA Max
- Output waveform: Sinewave
- Frequency stability vs. operating temperature: ± 50 ppb
- Aging: ± 0.05 ppm per year
- Operating temperature: -30°C to $+70^{\circ}\text{C}$
- Size: 20.9x15.3x9.5mm

Typical Applications

- Portable Wireless Communications Mobile
- Test equipment
- Synthesizers
- Battery Powered Application

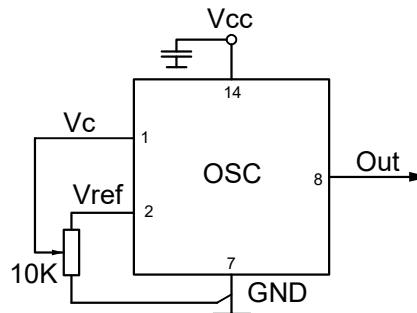
Description

OCXO3315CV-10MHz-A-V offers high frequency stability, low long term aging and low phase noise, all in a compact package to suit the different communication needs.

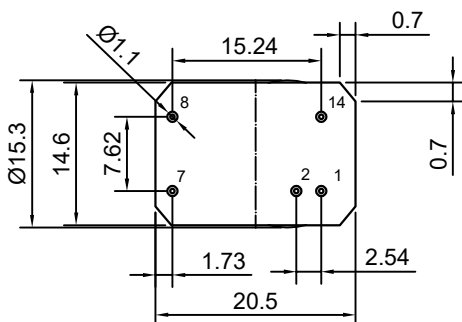
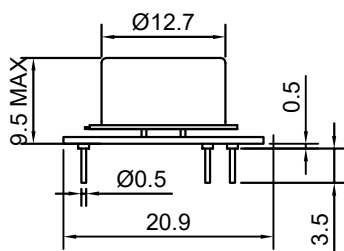
Mechanical Drawing & Pin Connections

Drawing No: MD240054-1

Schematic connections



Pin	Signal
1	Control Voltage
2	Reference voltage
7	GND
8	RF Out
14	Supply Voltage



Unit in mm
1mm = 0.0394 inches



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	f_0			10		MHz	
RF Output							
Signal Waveform			Sinewave				
Level			+3.0	+5.0		dBm	note
Harmonics					-25	dBc	
Load			45	50	55	ohm	
Power Supply							
Reference Voltage	Vref		2.7	2.8	2.9	V	
Output resistance of Vref				91		ohm	
Supply Voltage	Vcc		3.15	3.3	3.45	V	
Warm-up current		V _{CC} =3.3V	140		240	mA	
Continuous current		at +25°C, V _{CC} =3.3V		40	50	mA	
Frequency warm-up time		to df/f=1e-7 at +25°C ref at 15min		60	90	sec	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)	$(f_i-f)/f$	V _C =0 V		-1	-0.5	ppm	note
	$(f-f)/f$	V _C =V _{C0}		0		ppm	
	$(f_H-f)/f$	V _C =Vref	+0.5	+1		ppm	note
EFC voltage	V _C		0		2.8	V	
Input impedance				11kohm/5pF			
Input BW		-3dB level		160		Hz	
Preset control voltage	V _{C0}	disconnected V _C pin	1.3	1.4	1.5	V	
Slope				Positive			
Linearity					10	%	
Sensitivity f vs. V _C		30min. work after 24h off		0.65		ppm/V	
Frequency Stability							
Versus Operating Temperature Range		ref +25°C			±50	ppb	note
Initial Tolerance @+25°C	$(f-f_0)/f_0$	V _C = V _{C0}	-0.1		+0.1	ppm	note
Versus supply voltage		ref V _{CC} typ.		±2		ppb	
Versus load		5% change			±5	ppb	
G-sensitivity		worst axis		±1		ppb/G	
Retrace		30min. work after 24h off			±20	ppb	
Allan deviation		1 s. 100 kHz BW		20		e-12	
SSB Phase noise (Static)		10Hz		-120	-115	dBc/Hz	
		100Hz		-145	-140	dBc/Hz	
		1KHz		-155	-150	dBc/Hz	
		10KHz		-160	-155	dBc/Hz	
		100KHz		-168	-160	dBc/Hz	
Aging Per Day		After 30 days of operation			±0.5	ppb	
Aging 1 st Year					±0.05	ppm	
Maximum ratings, environmental, mechanical conditions							
Operating temperature range	-30°C to +70°C						
Storage temperature range	-60°C to +85°C						
Power voltage	-0.5 to 4.0 V						
Control voltage	-1.0 to 4.0 V						
Air flow velocity	0.5 m/s maximum						
Humidity	Non-condensing 95%						
Mechanical shock	Per MIL-STD-202, 200G, half sine, 11ms						
Vibration	Per MIL-STD-202, 10G 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						

Note: Included in the test data