OCXO3311C-100MHz-A-V-ET
Low G High Stability 100MHz OCXO_Oven Controlled Crystal Oscillator

Features and Benefits

Frequency range: 100MHz
Supply voltage: 5.0V
Steady current: 50mA Max
Output waveform: Sinewave
Frequency stability vs. operating temperature: ±100ppb
Aging: ±0.3ppm per year
Operating temperature: -55°C to +85°C
Size: 20.5x15.3x9.0mm
Package type: Through hole

Typical Applications

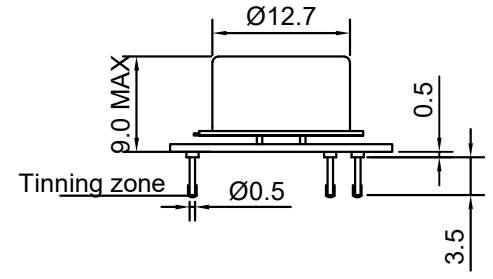
Portable Wireless Communications Mobile
Test equipment
Synthesizers
Battery Powered Application

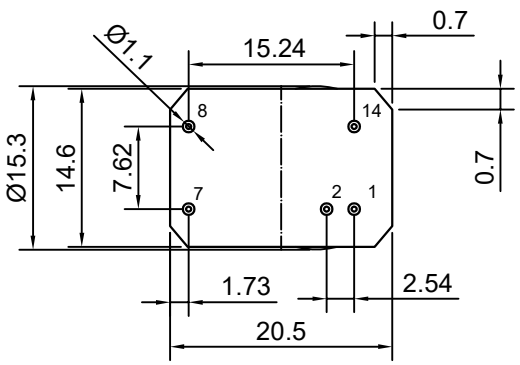
Description

OCXO3311C-100MHz-A-V-ET offers high frequency stability, low long-term aging and low phase noise, all in a compact package to suit the different communication needs.

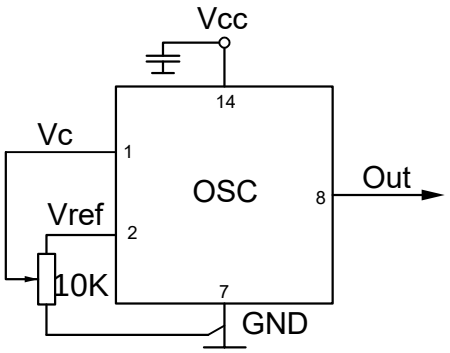
Mechanical Drawing & Pin Connections

Drawing No: MD240063-1





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			100		MHz	
RF Output							
Signal Waveform				Sinewave			
Level			+5.0		+8.0	dBm	note
Harmonics					-25	dBc	
Spurious		$f_S=f_0\pm2MHz$			-80	dBc	
Power Supply							
Reference Voltage	Vref		4.1	4.2	4.3	V	
Supply Voltage	Vcc		4.75	5.0	5.25	V	
Warm-up current		V_{CC}=5.0V			220	mA	
Continuous current		at +25°C, V_{CC}=5.0V			50	mA	
Frequency warm-up time		to df/f=1e-7 at +25°C		75		sec	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)	$(f_L-f)/f$	Vc=0 V		-1.0	-0.5	ppm	note
	$(f-f)/f$	$Vc=Vc_0$				ppm	
	$(f_H-f)/f$	Vc=Vref	+0.5	+1.0		ppm	note
EFC voltage	Vc		0		4.2	V	
Input impedance				11		Kohm	
Preset control voltage	V_{C0}	disconnected Vc pin	1.9	2.1	2.3	V	
EFC Slope				positive			
Frequency Stability							
Versus Operating Temperature Range		ref +25°C			±100	ppb	note
Initial Tolerance @+25°C	$(f-f_0)/f_0$	$V_C= V_{C0}$	-0.2		+0.2	ppm	note
Versus supply voltage		ref V_{CC} typ.		±2		ppb	
G-sensitivity		worst axis			±1.0	ppb/G	
SSB Phase noise (Static. Values are for reference only and are subject to change.)		10Hz		-95		dBc/Hz	
		100Hz		-125			
		1KHz		-153			
		10KHz		-163			
		100KHz		-165			
Aging Per Day		After 30 days of operation			±3	ppb	
Aging 1st Year					±0.3	ppm	
Maximum ratings, environmental, mechanical conditions							
Operating temperature range	-55°C to +85°C						
Storage temperature range	-60°C to +85°C						
Power voltage	-0.5 to 6.0 V						
Control voltage	-1.0 to 6.0 V						
Air flow velocity	0.5 m/s maximum						
Humidity	Non-condensing 95%						
Mechanical shock	Per MIL-STD-202, 500G, 1ms						
Vibration	Per MIL-STD-202, 30G swept sine 10 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