



Features and Benefits

Frequency range: 100MHz
Supply voltage: 5.0V
Steady current: 40mA Max
Output waveform: Sinewave
Frequency stability vs. operating temperature: ± 100 ppb
Aging: ± 0.2 ppm per year
Operating temperature: -40°C to $+85^{\circ}\text{C}$
Size: 16x15.3x11.6mm
Package type: Through hole

Typical Applications

Portable Wireless Communications Mobile
Test equipment
Synthesizers
Battery Powered Application

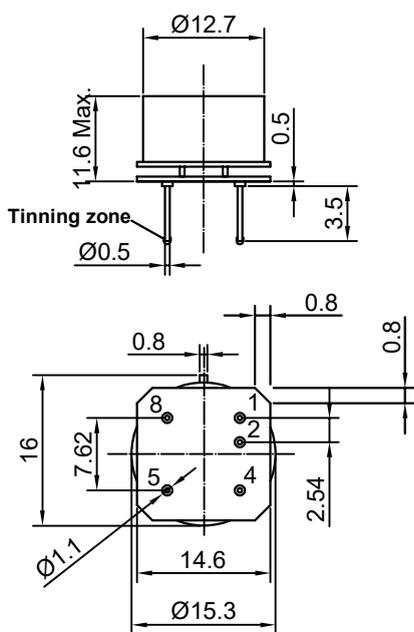
Description

OCXO3317AW-100MHz-6-7-7-2-2 offers high frequency stability, good long-term aging and low phase noise, all in a compact package to suit the different communication needs.

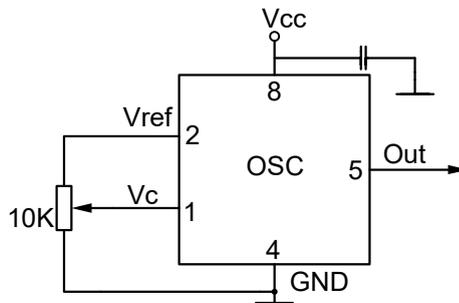
Mechanical Drawing & Pin Connections

Drawing No: MD240073-1

Physical dimensions



Schematic connections



Pin	Signal
1	Electrical tuning
2	Reference voltage
4	GND
5	RF Out
8	+V Supply

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	+7.0		dBm	note
Harmonics					-25	dBc	
Load			45	50	55	ohm	
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		$V_{CC}=5.0V$	140		220	mA	
Continuous current		at +25°C, $V_{CC}=5.0V$		35	40	mA	
Frequency warm-up time		to $df/f=1e-7$ at +25°C ref at 1 hour		60	90	sec	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)	$(f_L-f)/f$	$V_C=0V$			-1.0	ppm	note
	$(f-f)/f$	$V_C=V_{C0}$				ppm	
	$(f_H-f)/f$	$V_C=V_{ref}$	+0.5	+1.0		ppm	note
EFC voltage	V_C		0		4.2	V	
Input BW		-3dB level		160		Hz	
Input impedance	Rin			11		Kohm	
	Cin			5		pF	
Preset control voltage	V_{C0}	disconnected V_C pin	1.9	2.1	2.3	V	
Output resistance of Vref				91		ohm	
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.			±5	ppb	
Versus supply load		5% change			±5	ppb	
SSB Phase noise (Static. Values are for reference only and are subject to change.)		10Hz		-95		dBc/Hz	
		100Hz		-125			
		1KHz		-150			
		10KHz		-165			
Aging Per Day		After 30 days of operation			±2	ppb	
	Aging 1 st Year				±0.2	ppm	
Maximum ratings, environmental, mechanical conditions							
Operating temperature range	-40°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, 30G, 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)						
Washing conditions	Washing with water or alcohol-based detergent allowed only with final enough drying stage						

Note: Included in the test data