



Features and Benefits

Frequency range: 106.3742MHz
Supply voltage: 5.0V
Steady current: 50mA Max
Output waveform: Sinewave
Frequency stability vs. operating temperature: ± 50 ppb
Aging: ± 0.05 ppm per year
Operating temperature: 10°C to +70°C
Size: 20.9x15.3x9.5mm

Typical Applications

Portable Wireless Communications Mobile
Test equipment
Synthesizers
Battery Powered Application

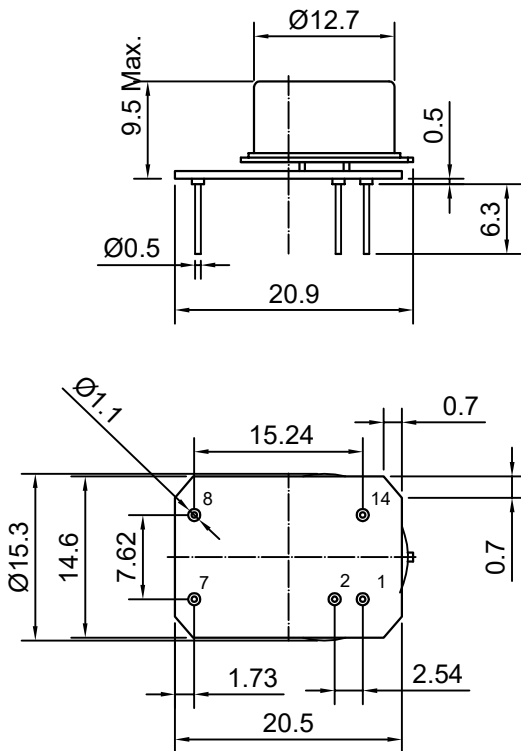
Description

OCXO3319AW-106.3742MHz-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: MD140076-6

DIP Package



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

Unit in mm
1mm = 0.0394 inches



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	f_0			106.3742		MHz	
RF Output							
Signal Waveform			Sinewave				
Level			+7.0			dBm	
Harmonics					-25	dBc	
Load			45	50	55	ohm	
Sub-harmonics level		$f_{SH}=f_0 \pm (n \cdot f_0 / 5)$ $n=1,2,3...$			-40	dBc	
Spurious level		$f_s=f_0 \pm 2\text{MHz}$			-120	dBc	
Power Supply							
Reference Voltage	Vref		4.1	4.2	4.3	V	
Output resistance of Vref				91		ohm	
Supply Voltage	Vcc		4.75	5.0	5.25	V	
Warm-up current		$V_{CC}=5.0\text{V}$	140		220	mA	
Continuous current		at +25°C, $V_{CC}=5.0\text{V}$		35	50	mA	
Frequency warm-up time		to $df/f=1e-7$ at +25°C ref at 1h		60	90	sec	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)	$(f_L-f)/f$	$V_C=0\text{V}$			-1	ppm	
	$(f-f)/f$	$V_C=V_{C0}$		0		ppm	
	$(f_H-f)/f$	$V_C=V_{ref}$	+1			ppm	
EFC voltage	V_C		0		4.2	V	
Input impedance				11kohm//5pF			
Input BW		-3dB level		160		Hz	
Preset control voltage	V_{C0}	disconnected V_C pin	2.0	2.1	2.2	V	
EFC Slope				positive			
Frequency Stability							
Versus Operating Temperature Range		10°C to +70°C			±50	ppb	ref +25°C
Initial Tolerance @+25°C	$(f-f_0)/f_0$	$V_C=V_{C0}$	-0.1		+0.1	ppm	
Versus supply voltage		ref V_{CC} typ.			±5	ppb	
Versus load		5% change			±5	ppb	
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	10°C to +70°C						
Storage temperature range	-60°C to +85°C						
Power voltage	-0.5 to 6.0 V						
Control voltage	-1.0 to 9.0 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 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						