



Features and Benefits

Frequency range: 100MHz
 Supply voltage: 5.0V
 Steady power: 180mW Typ
 Output waveform: Sinewave
 Frequency stability vs. operating temperature: ±100ppb
 Aging: ±0.2ppm per year
 Phase noise@100KHz: -165dBc/Hz
 Operating temperature: -55°C to +85°C
 Size: 16x15x9.5mm

Typical Applications

Portable Wireless Communications Mobile
 Test equipment
 Synthesizers
 Battery Powered Application

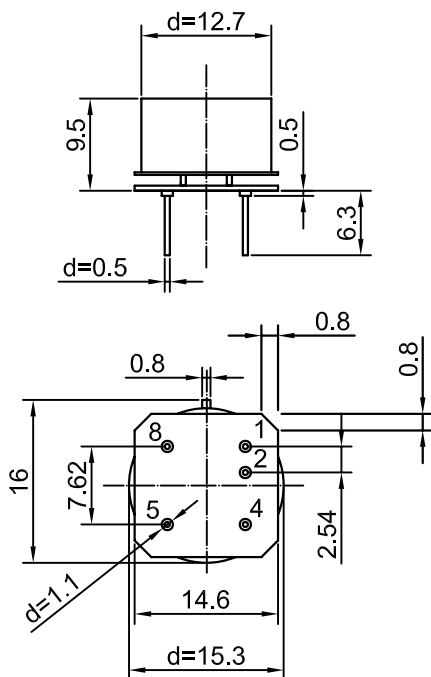
Description

OCXO3312AW-100MHz-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.

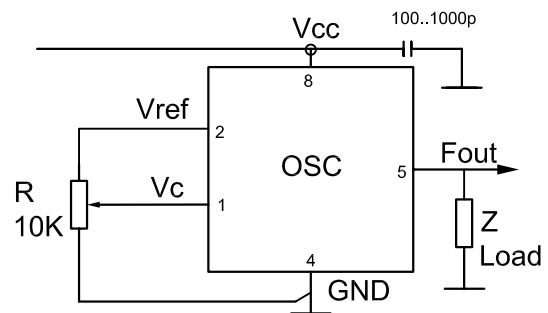
Mechanical Drawing & Pin Connections

Drawing No: MD170001-3

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 _{nom}			100		MHz	
RF Output							
Signal Waveform			Sinewave				
Level			7.0			dBm	
Harmonics					-25	dBc	
Load				50		ohm	
Power Supply							
Reference Voltage VREF Output			4.1	4.2	4.3	V	
Supply Voltage	V _s		4.75	5.0	5.25	V	
Power Consumption		Steady state, +25°C		180		mW	
		Warm-up			1200	mW	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)		Compliance with 10 years aging	±0.3	±1.0		ppm	
EFC voltage	V _c		0		4.2	V	
EFC Slope				positive			
Frequency Stability							
Versus Operating Temperature Range		-55°C to +85°C			±100	ppb	Air flow 0.5m/s max
Initial Tolerance @+25°C		V _c @ VREF / 2		±0.1		ppm	
Versus supply voltage	V _s	Ref V _{cc} typ		±2.0		ppb	
Retrace		24h work after 24h off			±10	ppb	
Aging Per Day		After 30 days of operation			±2.0	ppb	
Aging 1 st Year					±0.2	ppm	
Phase noise		10Hz		-90		dBc	
		100Hz		-120		dBc	
		1kHz		-145		dBc	
		10kHz		-153		dBc	
		100kHz		-165		dBc	
Environmental, Mechanical Conditions							
Operating temperature range		-55°C to +85°C					
Storage temperature range		-60°C to +85°C					
Humidity		Non-condensing 95%					
Mechanical shock		Per MIL-STD-202, 30G half sine pulse, 11ms					
Vibration		Per MIL-STD-202, 10G swept sine 0 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					