



Features and Benefits

- Frequency range: 10MHz
- Supply voltage: 3.3V
- Steady current: 50mA Max
- Output waveform: HCMOS
- Frequency stability vs. operating temperature: ± 10 ppb
- Aging: ± 0.02 ppm per year
- Operating temperature: -10°C to $+60^{\circ}\text{C}$
- Size: 20.5x15.3x9.5mm
- Package type: Through hole



Typical Applications

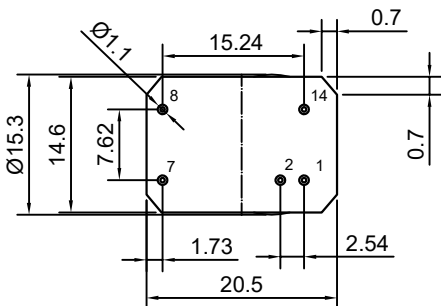
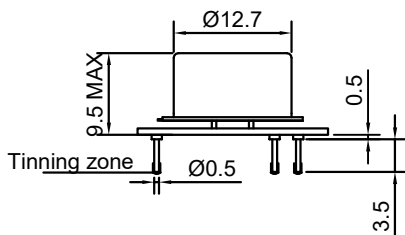
- Portable Wireless Communications Mobile
- Test equipment
- Synthesizers
- Battery Powered Application

Description

OCXO3307AW-10MHz-252112 offers high frequency stability, good long-term aging and low phase noise, all in a compact package to suit the different communication needs.

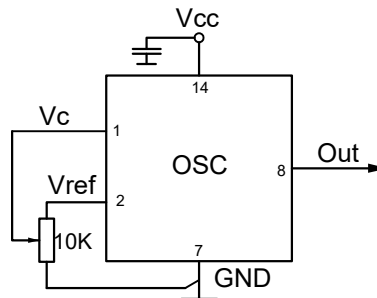
Mechanical Drawing & Pin Connections

Drawing No: MD&) 00\$4-%



Unit in mm
1mm = 0.0394 inches

Schematic connections



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



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	f_0			10		MHz	
RF Output							
Signal Waveform			HCMOS 2.8V				
High level			2.4			V	
Low level					0.4	V	
Rise/Fall Time		10-90%			10	nS	
Load			10			Kohm	
Load					15	pF	
Duty cycle			45	50	55	%	
Power Supply							
Reference Voltage	Vref		2.7	2.8	2.9	V	
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, $V_{CC}=3.3V$		35	50	mA	
Frequency warm-up time		to $df/f=1e-7$ at +25°C ref at 15 min		60		sec	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)	$(f_L-f)/f$	$V_C=0V$			-0.3	ppm	note
	$(f-f)/f$	$V_C=V_{C0}$		0		ppm	
	$(f_H-f)/f$	$V_C=V_{ref}$	+0.3			ppm	note
EFC voltage	V_C		0		2.8	V	
Input impedance	R_{in}			11		Kohm	
	C_{in}			5		pF	
Preset control voltage	V_{C0}	disconnected V_C pin	1.2	1.4	1.6	V	
Output resistance of Vref				91		ohm	
Slope				positive			
Frequency Stability							
Versus Operating Temperature Range		ref +25°C			±10	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			±2	ppb	
SSB Phase noise (Static. Values are for reference only and are subject to change.)		1Hz		-90		dBc/Hz	
		10Hz		-120			
		100Hz		-145			
		1KHz		-155			
		10KHz		-160			
		100KHz		-163			
Aging Per Day		After 30 days of operation			±0.2	ppb	
Aging 1 st Year					±0.02	ppm	
Maximum ratings, environmental, mechanical conditions							
Operating temperature range	-10°C to +60°C						
Storage temperature range	-60°C to +85°C						
Power voltage	-0.5 to 4 V						
Control voltage	-1.0 to 4 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						

Note: Included in the test data