



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: ± 0.5 ppb/day
Phase noise@100KHz: -165dBc/Hz
Operating temperature: -40°C to +85°C
Size: 20.9x15.3x9.5mm

Typical Applications

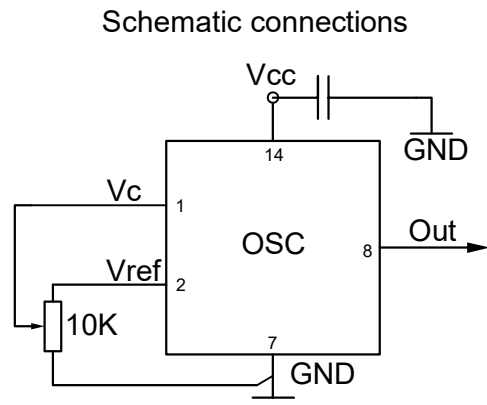
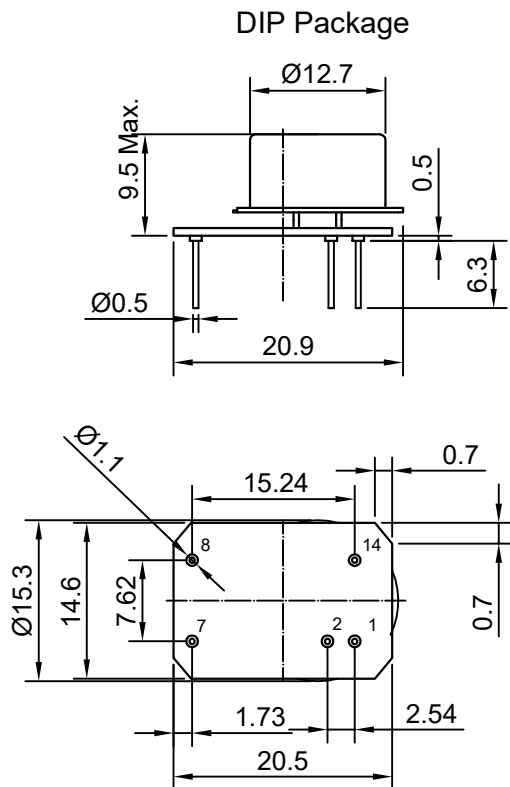
Portable and Low Power Wireless
Mobile Test Equipment
Battery Powered Applications
Beacons and Rescue Systems

Description

The OCXO3307AW-10MHz-H-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: MD140076-7



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			10		MHz	
Initial Tolerance	$(f-f_0)/f_0$	@+25°C, $V_c=V_{c0}$	-0.1		0.1	ppm	+
RF Output							
Waveform			HCMOS				
Load	R_L		10			KOhm	
	C_L				15	pF	
High-Voltage	V_H		2.4			V	
Low-Voltage	V_L				0.4	V	
Duty Cycle	T_S		45	50	55	%	
Frequency Control							
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	
Control Voltage Range	V_c		0		2.8	V	
Tuning Range	$(f_L-f)/f$	$V_c=0V$			-0.3	ppm	+
	$(f-f)/f$	$V_c=V_{c0}$		0		ppm	
	$(f_H-f)/f$	$V_c=V_{ref}$	0.3			ppm	+
Output Resistance of V_{ref}				91		Ohm	
Reference Voltage	V_{ref}		2.7	2.8	2.9	V	
Power Supply							
Voltage	V_{cc}		3.15	3.3	3.45	V	
Power Consumption		Warm-up			240	mA	$V_{cc}=3.3V$
		Steady-state, @+25°C		35	50	mA	$V_{cc}=3.3V$
Warm-up Time:	T_F	@+25°C, to $df/f=1e-7$		90	120	s	
Frequency Stability							
Versus Temperature		ref 25°C			±10	ppb	+
Versus Supply Voltage		Ref V_{cc} typ.			±2	ppb	
Versus Load		5% change			±2	ppb	
Aging	Per day	After 30 days of operation			±0.5	ppb	
	First Year				±0.05	ppm	
SSB Phase noise (Static Values are for reference only and are subject to change)		1 Hz		-95		dBc/Hz	
		10 Hz		-125			
		100 Hz		-145			
		1 KHz		-160			
		10 KHz		-165			
		100 KHz		-165			
Environmental Conditions							
Operating Temperature Range		-40°C to +85°C					
Storage Temperature range		-60°C to +85 °C					
Air Flow Velocity		0.5m/s maximum					
Humidity		Non-condensing 95%					
Mechanical Shock		Per MIL-STD-202, 30G, 11ms					
Vibration		Per MIL-STD-202, 10G to 2000 Hz					
Soldering Conditions		Hand solder only – not reflow compatible 260°C 10s (on pins)					
Soldering Conditions		Washing with water or alcohol based detergent allowed only with final enough drying stage					

Note: "+" included in the test data