



Features and Benefits

Frequency range: 100MHz
Supply voltage: 5V
Steady current: 350mA
Output waveform: Sine wave
Frequency stability vs. operating temperature: ± 0.2 ppb
Aging: ± 0.03 ppm/year
Phase noise@100KHz: -152dBc/Hz
Operating temperature: -20°C to +70°C
Size: 35.4x26.7x15.8mm

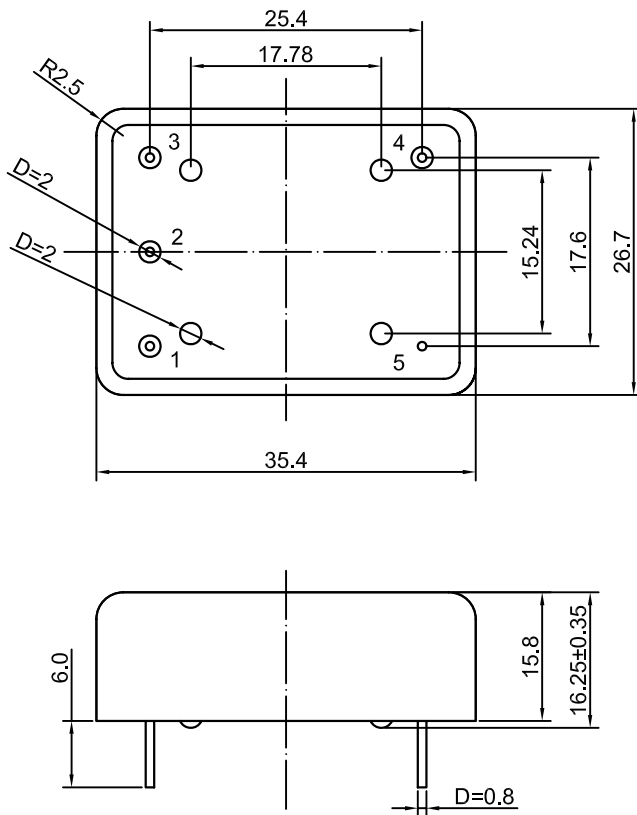
Typical Applications

Rubidium Standard Replacement
GPS Receivers
Instrumentation
Stratum 2 Clock Systems

Description

The DOCXO3627AW-100MHz-A-V operate in 100 MHz frequency, the module concept of the OCXOs design allowed realization of same performance in a variety of small packages on customer choice under various models.

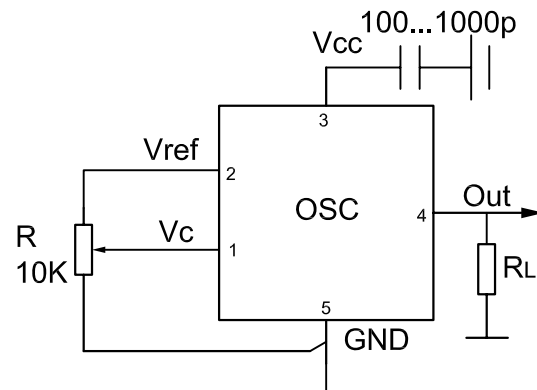
Mechanical Drawing & Pin Connections



Drawing No: MD140079-2

Pin	Signal
1	Electrical tuning
2	Reference voltage
3	+V Supply
4	RF OUT
5	GND

Unit in mm
1mm = 0.0394 inches





Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency	f0			100		MHz	
RF Output							
Signal Waveform			Sinewave				
Level			+7			dBm	
Load			45	50	55	ohm	
Harmonics					-25	dBc	
Sub-harmonics level		$f_{SH}=f0\pm(n*f0/5)$ $n=1,2,3...$			-35	dBc	
Power Supply							
Supply Voltage	V _{cc}		4.75	5.0	5.25	V	
Warm-up Time		$\Delta f/f=1e-8$,at +25°C			300	sec	ref. to freq. after 15 min. of operation
Power Consumption		Steady state, +25°C			350	mA	
		Warm-up	900		1300	mA	
Frequency Adjustment Range							
Frequency turning range	(fL-f)/f	V _c =0 V			-0.35	ppm	
	(f-f)/f	V _c =V _{c0}		0		ppm	
	(fH-f)/f	V _c =V _{ref}	+0.35			ppm	
EFC voltage	V _c		0		4.3	V	
Input impedance				11		kohm	
Preset control voltage	V _{c0}	disconnected V _c pin	1.8	2.1	2.4	V	
Reference voltage	V _{ref}		4.0	4.2	4.3	V	
Output resistance of V _{ref}				91		ohm	
Frequency Stability							
Versus Operating Temperature Range		ref. 25°C			±0.2	ppb	
Initial Tolerance	(f-f0)/f0	+25°C, V _c =V _{c0}	-0.1		+0.1	ppm	
Versus supply voltage		ref V _{cc} typ			±0.2	ppb	
Versus load		5% change			±0.2	ppb	
Aging Per Day		after 30 days of operation			±0.3	ppb	
Aging 1 st Year			±0.03	ppm			
SSB phase noise		10Hz		-100		dBc/Hz	
		100Hz		-130		dBc/Hz	
		1kHz		-145		dBc/Hz	
		10kHz		-150		dBc/Hz	
		100kHz		-152		dBc/Hz	
Maximum ratings, Environmental, Mechanical Conditions							
Airflow velocity	0.5 m/s maximum						
Operating temperature range	-20°C to +70°C						
Storage temperature range	-60°C to +90°C						
Mechanical shock	Per MIL-STD-202, 30G, 11ms						
Soldering conditions	Hand solder only – not reflow compatible 260°C 10s (on pins)						
Humidity	Hermetically sealed						
Power Voltage	-0.5V to 6V						
Control Voltage	-1.0V to 6V						
Vibration	Per MIL-STD-202, 5G to 500Hz						
Washing Conditions	Washing with water or alcohol based detergent allowed only with final enough drying stage						