



### Features and Benefits

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

### Typical Applications

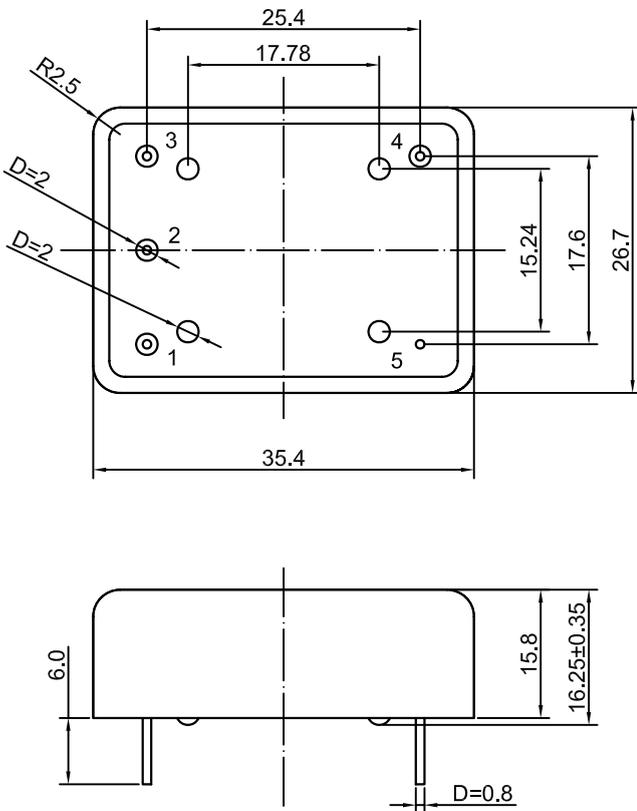
Rubidium Standard Replacement  
GPS Receivers  
Instrumentation  
Stratum 2 Clock Systems

### 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.

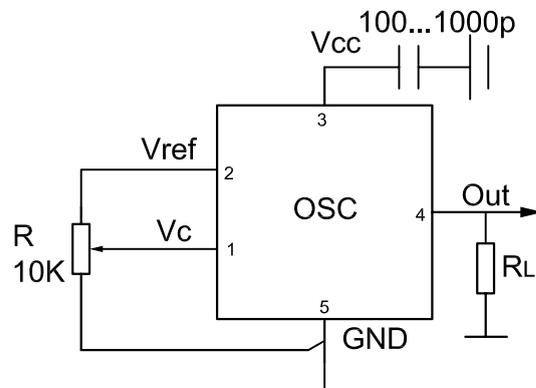
### Mechanical Drawing & Pin Connections

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	
<b>RF Output</b>							
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	
<b>Power Supply</b>							
Supply Voltage	V <sub>cc</sub>		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	
<b>Frequency Adjustment Range</b>							
Frequency turning range	(fL-f)/f	Vc=0 V			-0.35	ppm	
	(f-f)/f	Vc=Vc0		0		ppm	
	(fH-f)/f	Vc=Vref	+0.35			ppm	
EFC voltage	V <sub>c</sub>		0		4.3	V	
Input impedance				11		kohm	
Preset control voltage	Vc0	disconnected Vc pin	1.8	2.1	2.4	V	
Reference voltage	Vref		4.0	4.2	4.3	V	
Output resistance of Vref				91		ohm	
<b>Frequency Stability</b>							
Versus Operating Temperature Range		ref. 25°C			±0.2	ppb	
Initial Tolerance	(f-f0)/f0	+25°C, Vc=Vc0	-0.1		+0.1	ppm	
Versus supply voltage		ref V <sub>cc</sub> typ			±0.2	ppb	
Versus load		5% change			±0.2	ppb	
Aging Per Day		after 30 days of operation			±0.3	ppb	
Aging 1 <sup>st</sup> 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	
<b>Maximum ratings, Environmental, Mechanical Conditions</b>							
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						