



Features and Benefits

Frequency range: 100MHz
Supply voltage: 3.3V
Steady current: 550mCE
Output waveform: HCMOS
Frequency stability vs. operating temperature: ± 0.05 ppb
Aging: ± 0.05 ppm/year
Phase noise@100KHz: -152dBc/Hz
Operating temperature: 0°C to +50°C
Size: 35.4x26.7x15.8mm

Typical Applications

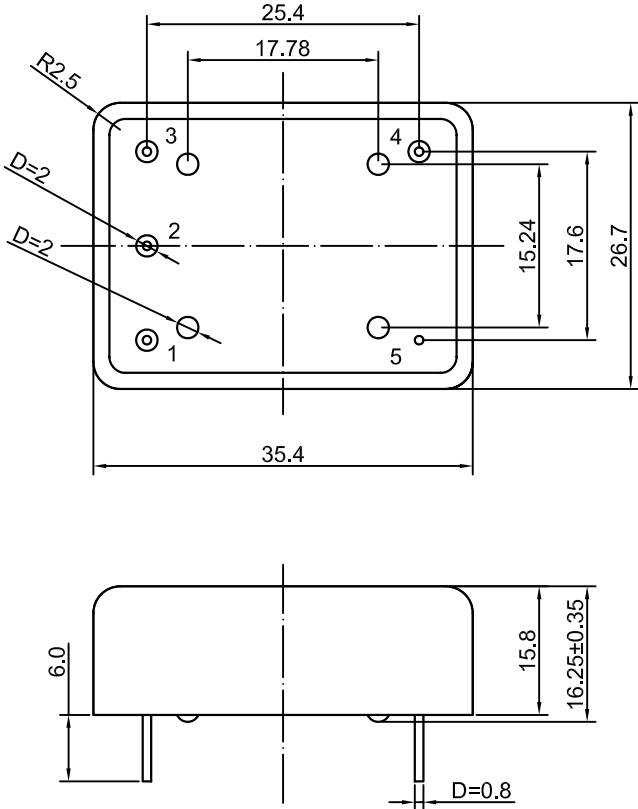
Rubidium Standard Replacement
GPS Receivers
Instrumentation
Stratum 2 Clock Systems

Description

The DOCXO3627AW-100MHz-B-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.

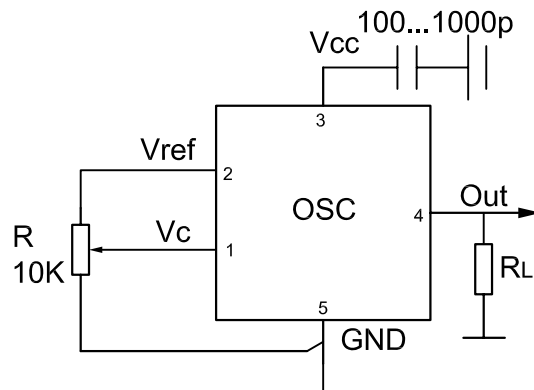
Mechanical Drawing & Pin Connections

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	f ₀			100		MHz	
RF Output							
Signal Waveform			HCMOS				
Level High			2.4			V	
Level Low					0.4	V	
Load	RL		10			kohm	
Load	CL				5	pF	
Sub-harmonics level		f _{SH} =f ₀ ±(n*f ₀ /5) n=1,2,3...			-40	dBc	
Duty Cycle			45	50	55	%	
Rise & Fall time		10, 90 %			2	nS	
Power Supply							
Supply Voltage	V _{cc}		3.15	3.3	3.45	V	
Warm-up Time		Δf/f=1e-8 , at +25°C			300	sec	ref. to freq. after 30 min. of operation
Power Consumption		Steady state, +25°C			550	mA	
		Warm-up	1300		1700	mA	
Frequency Adjustment Range							
Frequency turning range	(fL-f)/f	V _c =0 V			-0.4	ppm	
	(f-f)/f	V _c =V _{c0}		0		ppm	
	(fH-f)/f	V _c =V _{ref}	+0.4			ppm	
EFC voltage	V _c		0		2.9	V	
Input impedance				11		kohm	
Preset control voltage	V _{c0}	disconnected V _c pin	1.2	1.4	1.6	V	
Reference voltage	V _{ref}		2.7	2.8	2.9	V	
Output resistance of V _{ref}				91		ohm	
Frequency Stability							
Versus Operating Temperature Range		ref. 25°C			±0.05	ppb	
Initial Tolerance	(f-f ₀)/f ₀	+25°C, V _c =V _{c0}	-0.1		+0.1	ppm	
Versus supply voltage		ref V _{cc} typ			±0.05	ppb	
Versus load		5% change			±0.05	ppb	
Aging Per Day		after 30 days of operation			±0.5	ppb	
Aging 1 st Year						±0.05	ppm
SSB phase noise		10Hz		-95		dBc/Hz	
		100Hz		-125		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	0°C to +50°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 4V						
Control Voltage	-1.0V to 4V						
Vibration	Per MIL-STD-202, 5G to 500Hz						
Washing Conditions	Washing with water or alcohol based detergent allowed only with final enough drying stage						