



Features and Benefits

High stability: ± 0.2 ppb over -40 to $+85^\circ\text{C}$
Frequency: 10MHz
Low aging: ± 0.2 ppb/day, ± 30 ppb/year
Output: HCMOS
Voltage supply: +5V

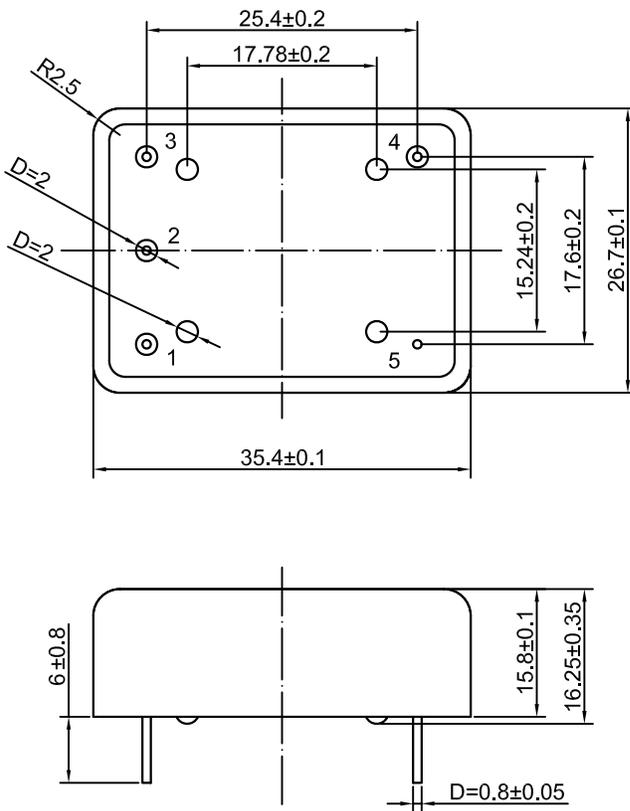
Typical Applications

Portable Wireless Communications Mobile
Test equipment
Synthesizers

Description

DOCXO3627C-10MHz-A-V offers high frequency stability, low long term aging and low phase noise, all in a compact package to suit the different communication needs.

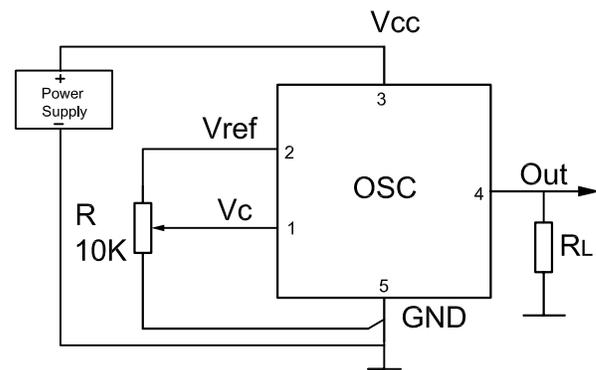
Mechanical Drawing & Pin Connections



Drawing No: 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.		
Operational Frequency	F _{nom}			10		MHz	
RF Output							
Signal Waveform			HCMOS				
H - Voltage			3.8			V	
L - Voltage					0.4	V	
Load	RL		10			kohm	
	CL				15	pF	
Subharmonics level				none		dBc	
Duty Cycle			45	50	55	%	
Power Supply							
Reference Voltage VREF Output			4.0	4.1	4.3	V	
Output resistance of Vref				91		ohm	
Supply Voltage	V _S		4.75	5	5.25	V	
Warm-up time		Δf/f=1e-8, at +25°C,			5	min	ref. to 1h of operation
Power Consumption		Steady state, +25°C			350	mA	Still air
		Warm-up	900		1300	mA	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)	(fL- f)/f	Vc=0 V			-0.3	ppm	
	(f-f)/f	Vc=Vc0		0		ppm	
	(fH- f)/f	Vc= Vref	+0.3			ppm	
Input resistance				11		kohm	
EFC voltage	V _c		0		2.8	V	
Preset control voltage		disconnected Vc pin	1.7	2.1	2.5	V	
EFC Slope			positive				
Frequency Stability							
Versus Operating Temperature Range		-40°C to 85°C			±0.2	ppb	ref 25°C
Initial Tolerance @+25°C		(f- f0)/f0	-0.1		+0.1	ppm	
Versus supply voltage	V _S	Ref Vcc typ			±0.2	ppb	
Aging Per Day		After 30 days of operation			±0.2	ppb	
Aging 1 st Year					±30	ppb	
Phase Noise		1Hz			-108	dBc/Hz	
		10Hz			-137	dBc/Hz	
		100Hz			-153	dBc/Hz	
		1kHz			-161	dBc/Hz	
		10kHz			-162	dBc/Hz	
Maximum ratings,Environmental,Mechanical Conditions							
Operating temperature range	-40°C to 85°C						
Storage temperature range	-60°C to 90°C						
Power voltage	-0.5V to 6V						
Control voltage	-1V to 6V						
Humidity	Hermetically sealed						
Mechanical shock	Per MIL-STD-202, 30G, 11ms						
Vibration	Per MIL-STD-202, 5G to 500 Hz						
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						