DOCXO3627CV-32MHz-A-V
High Stability 32MHz OCXO_Oven Controlled Crystal Oscillator

Features and Benefits

Frequency range: 32MHz
Supply voltage: 12V
Steady current: 160mA Max
Output waveform: Sinewave
Frequency stability vs. operating temperature: ±0.05ppb
Aging: ±0.05ppm per year
Operating temperature: -30°C to +70°C
Size: 35.4x26.7x15.8mm
Package type: Through hole

Typical Applications

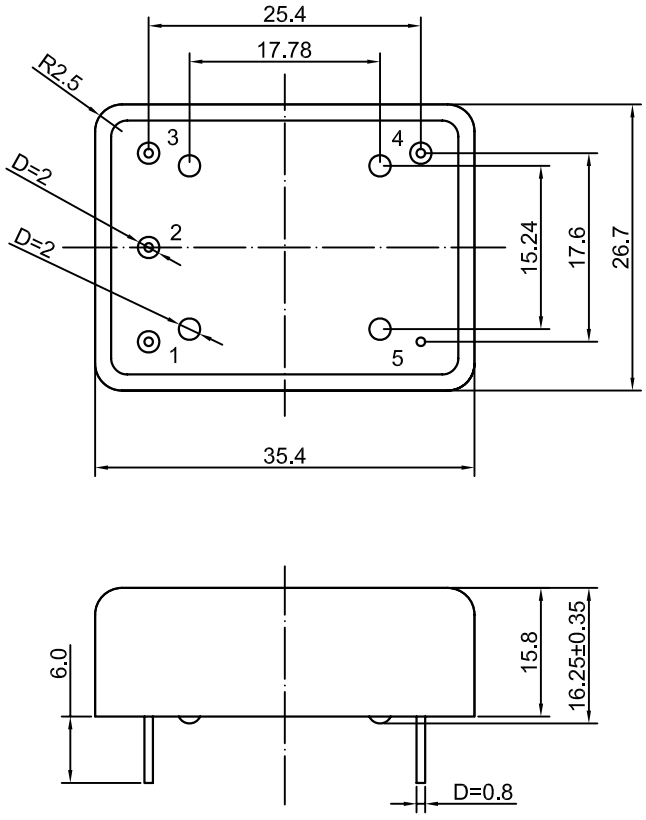
Wireless Communications
Test equipment
Synthesizers

Description

DOCXO3627CV-32MHz-A-V offers high frequency stability, good long-term aging and low phase noise, all in a compact package to suit the different communication needs.

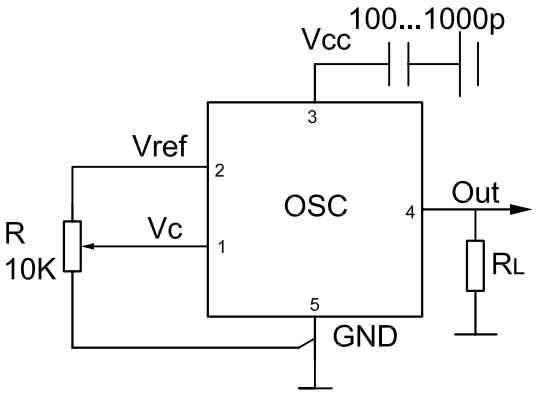
Mechanical Drawing & Pin Connections

Drawing No: MD250010-1



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_0			32		MHz	
RF Output							
Signal Waveform				Sinewave			
Level			+7			dBm	note
Harmonics					-25	dBc	
Load			45	50	55	ohm	
Sub-harmonics level		$f_{SH}=f_0\pm(n*f_0/3)$ n=1,2,3...			-40	dBc	
Power Supply							
Reference Voltage	Vref		4	4.2	4.3	V	
Supply Voltage	Vcc		11.4	12	12.6	V	
Warm-up current		V_{CC}=12V	350		520	mA	
Continuous current		at +25°C, V_{CC}=12V			160	mA	
Frequency warm-up time		to df/f=1e-8 at+25°C ref at 0.5 hour			300	sec	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)	$(f_L-f)/f$	Vc=0 V			-0.3	ppm	note
	$(f-f)/f$	Vc=Vc_0		0		ppm	
	$(f_H-f)/f$	Vc=Vref	+0.3			ppm	note
EFC voltage	Vc		0		4.3	V	
Input impedance	Rin			11		Kohm	
Preset control voltage	V_{C0}	disconnected Vc pin	1.8	2.1	2.4	V	
Output resistance of Vref				91		ohm	
Frequency Stability							
Versus Operating Temperature Range		ref +25°C			±0.05	ppb	note
Initial Tolerance @+25°C	$(f-f_0)/f_0$	V_C= V_{C0}	-0.1		+0.1	ppm	note
Versus supply voltage		ref V_{CC} typ.			±0.05	ppb	
Versus load		5% change			±0.05	ppb	
SSB Phase noise (Static. Values are for reference only and are subject to change.)		10Hz		-115		dBc/Hz	
		100Hz		-135			
		1KHz		-145			
		10KHz		-150			
		100KHz		-152			
Aging Per Day		After 30 days of operation			±0.5	ppb	
Aging 1st Year					±0.05	ppm	

Maximum ratings, environmental, mechanical conditions	
Operating temperature range	-30°C to +70°C
Storage temperature range	-60°C to +90°C
Power voltage	-0.5 to 14.4 V
Control voltage	-1.0 to 6.0 V
Air flow velocity	0.5 m/s maximum
Humidity	Hermetically sealed
Mechanical shock	Per MIL-STD-202, 30G, 11ms
Vibration	Per MIL-STD-202, 5G to 500Hz
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

Note: Included in the test data