Dynamic Engineers Inc.
2550 Gray Falls Dr., Suite#128, Houston, TX, 77077 USA
TEL: 1-281-870-8822 EMAIL:Sales@DynamicEng.com

OCXO3627D_series
High stability Low phase noise OCXO

Features and Benefits

5-100MHz Frequency Range
3.3V,5V,12V Supply voltage
CMOS, TTL, Sinewave Output waveform
Various Temperature Stability Available
36x27x13mm Size
-145dBc/Hz @1KHz phase noise value

Typical Applications

Cellular Base Stations
Instrumentation
Microwave Applications
Radar reference

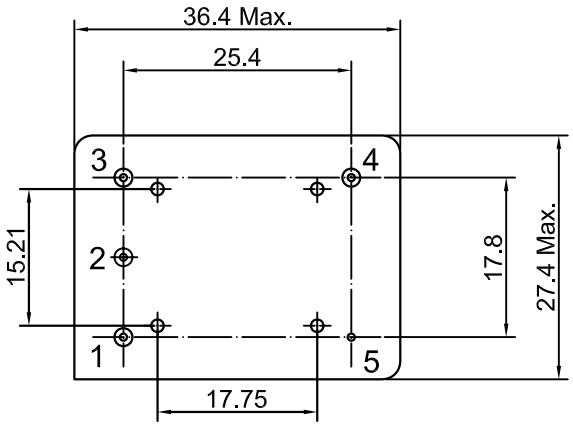
Description

The OCXO3627D_series are designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and short-term stability. These characteristics make it an excellent choice for timing applications.

Mechanical Drawing & Pin Connections

Drawing No: **MD150087-2**

Bottom View

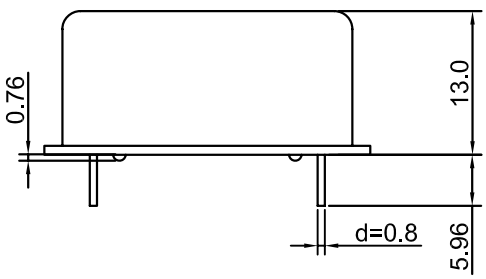


Pin Connections:

Pin	Symbol	Function
1	Vc	Control Voltage(EFC)
2	N.C.	No Connection
3	Vs	Supply Voltage
4	RF OUT	RF Output
5	GND	Ground

Unit in mm
1mm = 0.0394 inches

Side View



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Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency Range	F_{nom}		5		100	MHz	
RF Output							
Signal Waveform				CMOS/TTL			
Load	R_L			15		pF	
H-Level Voltage	V_H		90%Vcc			V	
L- Level Voltage	V_L				10%Vcc	V	
Duty Cycle			45	50	55	%	
Rise/Fall time					10	ns	
Signal Waveform				Sinewave			
Level				+7		dBm	
VSWR		Into 50ohm		1.5:1			
Load			45	50	55	ohm	
Harmonics					-30	dBc	
Power Supply							
Supply Voltage	V_{cc}		11.4	12	12.6	V	
			4.75	5.0	5.25		
			3.13	3.3	3.47		
Warm-up Time	T_{up}	To initial tolerance			180	sec	
Power Consumption		Steady state, +25°C		2		W	
		Warm-up			7	W	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)			±0.5 and ±1			ppm	
EFC voltage	V_c		0		Vcc	V	
Center voltage				Vcc/2		V	
Input Impedance				100		kΩ	
Linearity				10		%	
EFC Slope				positive			
Frequency Stability							
Versus Operating Temperature Range		ref. 25ºC	±20		±100	ppb	See ordering information
Initial Tolerance		+25ºC			±0.25	ppm	
Versus supply voltage	V_S	±5% change		±2		ppb	
Versus load		±5% change		±2		ppb	
Aging Per Day		after 30 days of operation			±1.0	ppb	
Aging 1st Year					±100	ppb	
Allan Variance		1s		5		e-12	
SSB Phase noise (10MHz)				Sine/CMOS			
		1Hz		-90/-90		dBc/Hz	At 25°C
		10Hz		-120/-120		dBc/Hz	
		100Hz		-140/-140		dBc/Hz	
		1kHz		-145/-145		dBc/Hz	
		10kHz		-150/-150		dBc/Hz	
		100kHz		-155/-155		dBc/Hz	
Environmental,Mechanical Conditions							
Operating temperature range	See ordering information						
Storage temperature range	-55°C to +100°C						
Mechanical shock	MIL-STD-202 Method 213 Test Condition J						
Seal	MIL-STD-202 Method 112 Test Condition D						
Vibration	MIL-STD-202 Method 201						

Note: Values typical under 10MHz

Ordering Information

OCXO3627D	-	10MHz	-	x	x	x	x	x
Group				01	02	03	04	05

For example, DOCXO3627D-10MHz-1-1-2-2-2 denotes the OCXO has the following specifications:

Frequency:	10MHz
Temperature Range:	-20°C to +70°C
Stability Over Temperature:	±20ppb
EFC:	±0.5ppm
Supply Voltage:	5V
Output:	Sinewave

01	**Temperature Range**
Code	Specification
1	-20°C to +70°C
2	-40°C to +85°C

02	**Frequency Stability**
Code	Spec
1	±20ppb
2	±50ppb
3	±100ppb

03	**EFC**
Code	Specification
1	N/A
2	±0.5ppm
3	±1ppm

04	**Supply Voltage**
Code	Specification
1	3.3V
2	5V
3	12V

05	**Output**
Code	Specification
1	CMOS/TTL
2	Sinewave