Features and Benefits

10-40MHz Frequency Range 5V,12V Supply voltage HCMOS, Sinewave Output waveform Various Temperature Stability Available 36x27x16mm Size -150dBc/Hz @1KHz phase noise value

Typical Applications

SatCom Test equipment Network clock Base station

Description

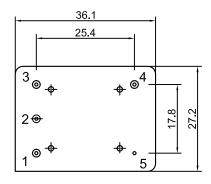
The OCXO3627AN_series are designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and short-term stability. These characteristics make it an excellent choice for timing applications.

Mechanical Drawing & Pin Connections

Drawing No:

MD1) \$\$, '!(

Bottom View



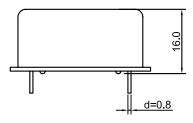
Pin Connections:

Pin	Symbol	Function
1	Vc	Control Voltage(EFC)
2	VREF	Reference Voltage
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	Sym	Condition		Value		Unit	Note
Specification		Condition	Min.	Тур.	Max.		11010
Frequency Range	F _{nom}		10		40	MHz	
RF Output Signal Waveform	1	1		HCM	00		l
Load	RL		HCMOS 10kohm//30pf				
H-Level Voltage	V _H		4	TOKOHIII//30	ы	V	
L- Level Voltage	V _H				0.4	V	
Duty Factor	V L		45		55	%	
Signal Waveform			-10	Sinew		70	
Level			225		1410	mV	
Load		±5%		50		ohm	
Harmonics					-30	dBc	
Power Supply					9.0	4.2	
		Vcc=5V			600	mA	
Peak warm-up current		Vcc=12V			300	mA	
011		Vcc=5V			200	mA	
Steady state current @ 25°C		Vcc=12V			80	mA	
Deference Valtage		Vcc=5V		4.5		V	
Reference Voltage		Vcc=12V		5.0		V	
Warm-up Time	T _{up}	at +25°C to Δf/f=1e-			180	sec	
•	I up	7			100	Sec	
Frequency Adjustment Range							
FFC voltage	V _c	Vcc=5V	0		4.5	V	with Potentiometer 20 kOhm
EFC voltage		Vcc=12V	0		5.0	V	with Potentiometer 20 kOhm
EFC Slope				positive			
Electronic Frequency Control (EFC)		Vcc=5V	±0.5			ppm	
, , ,		Vcc=12V	±0.5			ppm	
Frequency Stability				<u>, </u>			
Versus Operating Temperature Range						ppb	See ordering information
Versus supply voltage		±5% change			±5	ppb	
Versus load		±5% change			±5	ppb	
Aging Per Day						ppb	Contact DEI
Aging 1 st Year						ppm	See ordering information
		1s,10-13MHz			1	e-11	
Allan Variance		1s,13-20MHz			2	e-11	
		1s,20-40MHz			3	e-11	
Phase noise						dBc/H	z See at the end of this datasheet
Environmental, Mechanical Conditions							
Vibration Frequency	10-500 H	Z					
Vibration Acceleration	10gs						
Shock Acceleration	100gs						
Shock Duration	3±1mS						
Storage Temperature	-55°C to -	+85°C					
RoHs	Option						

Contact DEI for extended environmental conditions.

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Ordering Information

OCXO3627AN	-	10MHz	-	Х	Х	Х	Х	Х
Group				01	02	03	04	05

For example, OCXO3627AN-10MHz-1-1-2-2-2 denotes the OCXO has the following specifications:

Temperature Range: 0°C to +55°C
Stability Over Temperature: ±50ppb
Aging / per year: ±0.1ppm
Supply Voltage: 5V
Output: Sinewave
Frequency: 10MHz

<u> Frequer</u>	ncy:	10MHZ						
option 01	Temperature Range	option02	Frequency Stability					
Code	Specification	Code	1	2	3	4		
			±50ppb	±20ppb	±10ppb	±7.5ppb		
1	0°C to +55°C		Α	Α	Α	С		
2	-10°C to +60°C		Α	Α	Α	С		
3	-20°C to +70°C		Α	Α	Α	С		
4	-40°C to +70°C		Α	Α	С	N		
5	-40°C to +85°C		А	С	С	N		
	A= Available C=Contact factory. N=Not available.							

option	Availability of certain aging		Standard Frequencies (MHz)							
03	values for certain frequencies	10	12.8	13	16.384	20	25.6	26	32.768	
Code										
1	±2x10 ⁻⁷ /year	Α	Α	Α	Α	Α	Α	Α	Α	
2	±1x10 ⁻⁷ /year	Α	Α	Α	Α	Α	Α	Α	Α	
3	±5x10 ⁻⁸ /year	Α	Α	Α	С	Α	Α	Α	С	
4	±3x10 ⁻⁸ /year	Α	С	С	N	Α	С	С	N	
	A= Available C=Contact factory. N=Not available.									

option 04	Supply Voltage
Code	Specification
1	12V
2	5V

option 05	Output
Code	Specification
1	HCMOS
2	Sinewave

Additional Notes:

- 1) Advise RoHs requirement.
- 2) Contact factory for daily aging values.
- 3) Contact factory for non-standard temperature range
- 4) Temperature ranges from -60°C to +85°C available. Please Contact DEI.



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Phase Noise (dBc/Hz)

Eroguepov offeet		HCMOS		Sinewave			
Frequency offset	10-13MHz	>13-20MHz	>20-40MHz	10-13MHz	>13-20MHz	>20-40MHz	
1Hz	-90	-75	-70	-90	-75	-70	
10Hz	-120	-105	-100	-120	-105	-100	
100Hz	-140	-135	-125	-140	-135	-125	
1KHz	-145	-145	-135	-150	-150	-140	
10KHz	-150	-150	-140	-155	-150	-145	
Contact factory for lower phase noise performance							