

Dynamic Engineers Inc.

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

Features and Benefits

10MHz Frequency 3.3V Supply voltage HCMOS Output waveform ±0.5ppb Stability Vs -30C --+70C 36x27mm Size -148dBc/Hz @1KHz phase noise value

Typical Applications

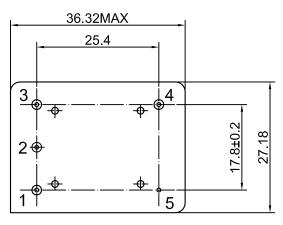
SATCOM System Cellular Base Stations Radar Applications

Description

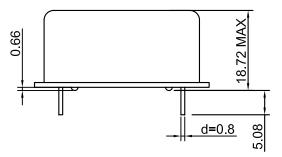
DOCXO3627S-10MHz_series are designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and short term stability. These characteristics make it an excellent choice for timing applications requiring holdover of < 10 uS for 24 hours.

Mechanical Drawing & Pin Connections

Bottom View



Side View



DOCXO3627S-10MHz_series
Double Oven Controlled Crystal Oscillator

Drawing No:

MD1500, '-1

Pin Connections:	
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Pin	Symbol	Function
1	Vc	Control Voltage(EFC) or N.C.
		Reference Voltage
		or
2	Vref	Oven Monitor
		or
		N.C.
3	Vs	Supply Voltage
4	RF OUT	RF Output
5	GND	Ground

Unit in mm 1mm = 0.0394 inches

Rev.1

Dynamic Engineers reserves the right to make changes to the company datasheet(s) along with other information contained inside; such as data tables and graphs without notification to potential customers who may have earlier revisions in their possession.



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Specifications

Oscillator	0	Openalities	Value Unit		Nete		
Specification	Sym	Condition	Min.	Тур.	Max.	Unit	Note
Operational Frequency	Fnom			10		MHz	
RF Output	1	T	T				
Signal Waveform					MOS	1	
Load	R∟			15pf	1		
H-Level Voltage	V _H		2.4			V	
L- Level Voltage	VL	-	-		0.3	V	
Duty Cycle		@+1.65V	45	50	55	%	
Spurious					-60	dBc	
Power Supply					0.01		
Reference Voltage			2.66	2.8	2.94	V	
Reference Voltage Load			9			kohm	
Reference Voltage Temp			-0.0005		+0.0005	V	
Stability							
Supply Voltage	Vs	0.07.400	3.135	3.3	3.465	V	
Warm-up Time	Tup	@ +25 ±1°C, referenced to		5		min	Under ±20ppb
	-	1 hour					
Power Consumption		Steady state @+25°C			2.5	W	power
		Warm-up			2.5	Α	current
Frequency Adjustment Range	}						
		Vco	0.0		0.05		
Electronic Frequency Control		@Min Voltage Vco	-0.8		-0.35	ppm	
(EFC)		@Max Voltage	+0.35		+0.8	ppm	
EFC voltage	Vc		0		2.8	V	
		When not					
Center Voltage		connected,Vco		1.4		V	
Conter Voltage		input is internally		1.4		v	
		held at this voltage					
Linearity			-10		+10	%	
Input Impedance			50			kohm	
EFC Slope				positive	;		
Frequency Stability	1	1	1			I	
Versus Operating		-30°C to +70°C		±0.5		ppb	See ordering
Temperature Range							information
Initial Tolerance @+25°C after		V _c @ center	-0.1		+0.1	ppm	
turn on 30±5 min		voltage± 0.001V					
Versus supply voltage	Vs	±5%change	-0.2		+0.2	ppb	A <i>i i i</i>
		After 60 minutes					At constant
		from turn on,					temperature
Retrace		following 24 hours minimum on time,	-5		+5	ppb	and voltage. Referenced to
		and 24 hours					frequency at
		maximum off time					off time
							See ordering
Aging Per Day		After 30days		±0.1		ppb	information
A sing Ast V				. 00			See ordering
Aging 1 st Year				±20		ppb	information
Aging 10st Voor				10.1		n ~~	See ordering
Aging 10 st Year				±0.1		ppm	information

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Allan Variance	1s		0.007	ppb	
Allah vallahce	10s		0.01	ppb	
	1Hz		-90	dBc	
SSB Phase noise	10Hz		-120	dBc	
SSB Phase hoise	100Hz		-138	dBc	
Γ	1kHz		-148	dBc	

Ordering Information

DOCXO3627S	-	10MHz	1	Х	Х	Х
Group				01	02	03

For example, DOCXO3627S-10MHz-1-1-2 denotes the OCXO has the following specifications:

Temperature Range: Stability Over Temperature: Aging per day / per year/10year: -30°C to +70°C ±0.5ppb ±0.3ppb/±50ppb/±0.2ppm

01	Temperature Range
Code	Specification
1	-30°C to +70°C
2	0°C to +70°C

02	Frequency Stability
Code	Specification
1	±0.5 ppb
2	±0.2 ppb

03	Aging per day/per year/10year
Code	Specification
1	±0.1ppb/±20ppb/±0.1ppm
2	±0.3ppb/±50ppb/±0.2ppm