DOCXO3627BM-10MHz-422

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

Features and Benefits

Frequency range: 10MHz Supply voltage: 5.0V Steady current: 2.5W Max. Output waveform: HCMOS

Frequency stability vs. operating temperature: ±0.3ppb

Aging: ±20ppb per year

Phase noise@100KHz: -160dBc/Hz Operating temperature: -40°C to +85°C

Size: 36x27x18mm

Typical Applications

SATCOM System Cellular Base Stations Radar Applications

Description

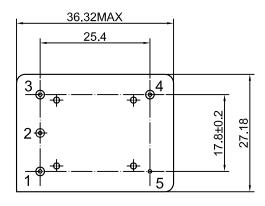
DOCXO3627BM-10MHz-422 is designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and short-term stability. These characteristics make it an excellent choice for timing applications requiring holdover of < 10 us for 24 hours.

Mechanical Drawing & Pin Connections

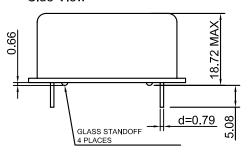
Drawing No:

MD150083-5

Bottom View



Side View



Pin Connections:

Pin	Function				
	Control Voltage				
1	or				
	N.C.				
2	Reference Voltage				
	or				
	Oven Monitor				
	or				
	N.C.				
3	Supply Voltage				
4	RF Output				
5	Ground				

Unit in mm

1mm = 0.0394 inches



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DOCXO3627BM-10MHz-422 Double Oven Controlled Crystal Oscillator

Specifications

Specifications				Value			
Oscillator Specification	Sym	Condition	Min.	Value	Max.	Unit	Note
Operational Frequency	Fnom		IVIIII.	Typ. 10	IVIAX.	MHz	
RF Output	I nom			10		IVII IZ	
Signal Waveform				HCN	//OS		
Load	R∟			15pf	100		
H-Level Voltage	VH		4.4	lopi		V	
L- Level Voltage	VL				0.3	V	
Duty Cycle		@+2.5V	45	50	55	%	
Spurious			-		-60	dBc	
Power Supply		_		•		,	•
Reference Voltage			2.716	2.8	2.884	V	
Reference Voltage Load			9			kohm	
Reference Voltage Temp			-0.5		+0.5	mV	
Stability							
Supply Voltage	Vs		4.75	5.0	5.25	V	
Power Consumption		Steady state @+25°C			2.5	W	power
		Warm-up@ turn on			1.75	Α	current
Frequency Adjustment Range	;						
Electronic Frequency Control		Vco@Min Voltage	-0.25		-0.15	ppm	Ref to freq at nominal center
(EFC)		Vco@Max Voltage	+0.15		+0.25	ppm V	voltage
EFC voltage	Vc	Mhannat	0		2.8	V	
Center Voltage		When not connected, Vco input is internally held at this voltage		1.4		V	
Linearity			-10		+10	%	
Input Impedance			50			kohm	
EFC Slope				positive			
Frequency Stability	ı		T	T		1	•
Versus Operating Temperature Range		-40°C to +85°C			±0.3	ppb	
Initial Tolerance @+25°C after turn on 30±5 min		≤ 90 days following date code; VCO Input at Center Voltage ±0.001V	-0.1		+0.1	ppm	
Versus supply voltage	Vs	±5 %change	-0.1		+0.1	ppb	
Warm-up		In 5 min@+25±1°C Refer to 1 hour	-20		+20	ppb	
Retrace		After 60 minutes from turn on, following 24 hours minimum on time, and 24 hours maximum off time	-5		+5	ppb	At constant temperature and voltage. Referenced to frequency at off time
Aging Per Day					±0.1	ppb	
Aging 1st Year		After 30days			±20	ppb	
Aging 10st Year					±100	ppb	
Allan Variance		1s			0.005	ppb	
Alian variance		10s			0.01	ppb	
		1Hz			-90	dBc	
		10Hz			-120	dBc	
SSB Phase noise		100Hz			-135	dBc	
3331 11400 110100		1kHz			-145	dBc	
		10kHz			-155	dBc	
		100kHz			-160	dBc	



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Environmental, Mechanical Conditions				
Storage temperature range	-40°C to +85°C			
Shock (non-operating)	Per MIL-STD-202, Method 213, test condition J; 30G, half sine,11ms			
Vibration (non-operating)	Per MIL-STD-202, Method 201;0.06" total p-p,10 to 55Hz			