

Dynamic Engineers Inc.

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

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Features and Benefits

Frequency range: 10MHz Supply voltage: 5.0V Steady Power: 1.5W Typ. Output waveform: Sinewave

Frequency stability vs. operating temperature: ±20ppb

Aging: ±1.0ppb/day

Phase noise@100KHz: -155dBc/Hz Operating temperature: -20°C to +70°C

Size: 20.6x20.6x12.7mm

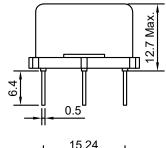
Typical Applications

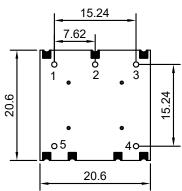
SATCOM System Cellular Base Stations Communication System Time Synchronization

Mechanical Drawing & Pin Connections

Drawing No:

MD230016-1





PIN Function

Pin	Function
1	Supply Voltage
2	RF Output
3	GND
4	EFC/N.C.
5	N.C.

Unit in mm 1mm = 0.039 inches



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OCXO2020AX-10MHz-B-V High Stability 10MHz OCXO

Specifications

Min. Typ. Max.	Oscillator Specification		Sym	Condition	Value			1114	Nede
Initial Tolerance					Min.	Тур.	Max.	Unit	Note
Sinewave	Operational Frequency f ₀						MHz		
Waveform				@+25°C±1°C			±100	ppb	
Load	RF Out	out							
Dutput Power Spurious Spuri					Sinewave				
Spurious			R∟		45	50	55	Ohm	
Harmonics						+9.0		dBm	
Input Impedance	Spuriou	S					-70	dBc	
Input Impedance									
Control Voltage Range	Freque	ncy Control							
Control Voltage Range	Input Im	pedance	Rin			100		KOhm	
Tuning Range			Vc		0	2.5	5.0	V	
Slope					-0.5		+0.5	ppm	
Linearity									
Power Supply								%	
Voltage									
Name			Vcc		4.75	5.0	5.25	V	
Steady-state				Warm-up				W	
Warm-up Time To Initial Tolerance 3 min Frequency Stability	Power C	Consumption				1.5		W	
Frequency Stability Versus Temperature ±20 ppb Versus Supply Voltage ±5% change ±2 ppb Versus Load ±5% change ±2 ppb ADEV (Short term stability) T=1Sec 5E- stability T=1Sec 11 Aging Per day After 30 days of operation ±1.0 ppb First Year operation ±100 ppb Phase Noise (@+25°C) 10 Hz -140 155 Phase Noise (@+25°C) 1 KHz -145 dBc/Hz 10 KHz -155 dBc/Hz 10 KHz -155 Environmental Conditions 0perating Temperature Range -20°C to +70°C 55°C to +100°C 55°C to +100°C Seal MIL-STD-202, Method 112, Test condition D Mechanical Shock MIL-STD-202, Method 213, Test condition C Vibration MIL-STD-202, Method 201 10MHz Output Vibration Profile: 1.0ppb/g	Warm-u	Warm-up Time					3		
Versus Temperature ±20 ppb Versus Supply Voltage ±5% change ±2 ppb Versus Load ±5% change ±2 ppb ADEV (Short term T=1Sec 5E- stability T1 T1 Aging Per day After 30 days of operation ±1.0 ppb ppb T1 T1 T2 T2 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>									
Versus Supply Voltage ±5% change ±2 ppb Versus Load ±5% change ±2 ppb ADEV (Short term stability) T=1Sec 5E- stability Aging Per day After 30 days of operation ±1.0 ppb First Year operation ±100 ppb 10 Hz -120 stronge 100 Hz 10 KHz -145 stronge dBc/Hz 10 KHz -155 stronge 100 KHz 100 KHz -155 stronge -155 stronge Seal MIL-STD-202, Method 112, Test condition D Mechanical Shock MIL-STD-202, Method 213, Test condition C Vibration MIL-STD-202, Method 201 Acceleration Sensitivity Vibration Profile: 1.0ppb/g						±20		daa	
Versus Load ±5% change ±2 ppb ADEV (Short term stability) T=1Sec 5E- 11 Aging Per day First Year After 30 days of operation ±1.0 ppb Phase Noise (@+25°C) 10 Hz 100 Hz 140 145 165 165 165 165 165 165 165 165 165 16				±5% change					
ADEV (Short term stability)									
Stability Aging Per day After 30 days of ±1.0 ppb operation ±100 ppb						5E-		1.1.	
Aging Per day First Year After 30 days of operation ±1.0 ppb operation Phase Noise (@+25°C) 10 Hz 100 Hz 1				I=1Sec					
Phase Noise (@+25°C)				After 30 days of			±1.0	dqq	
10 Hz	Aging								
100 Hz						-120			
10 KHz								dBc/Hz	
10 KHz				1 KHz		-145			
Too KHz In the second strict of the second strict				10 KHz		-155			
Environmental Conditions Operating Temperature Range -20°C to +70°C Storage Temperature range -55°C to +100 °C Seal MIL-STD-202, Method 112, Test condition D Mechanical Shock MIL-STD-202, Method 213, Test condition C Vibration MIL-STD-202, Method 201 10MHz Output Acceleration Sensitivity Vibration Profile: 1.0ppb/g									
Operating Temperature Range Storage Temperature range -55°C to +100 °C Seal MIL-STD-202, Method 112, Test condition D Mechanical Shock MIL-STD-202, Method 213, Test condition C Vibration MIL-STD-202, Method 201 10MHz Output Acceleration Sensitivity Vibration Profile: 1.0ppb/g	Environ	mental Conditions	S						
Storage Temperature range Seal MIL-STD-202, Method 112, Test condition D Mechanical Shock MIL-STD-202, Method 213, Test condition C Vibration MIL-STD-202, Method 201 10MHz Output Acceleration Sensitivity Vibration Profile: 1.0ppb/g				-20°C to +70°C					
Seal MIL-STD-202, Method 112, Test condition D Mechanical Shock MIL-STD-202, Method 213, Test condition C Vibration MIL-STD-202, Method 201 10MHz Output Acceleration Sensitivity Vibration Profile: 1.0ppb/g									
Mechanical Shock MIL-STD-202, Method 213, Test condition C Vibration MIL-STD-202, Method 201 10MHz Output 10MHz Output Acceleration Sensitivity Vibration Profile: 1.0ppb/g									
Vibration MIL-STD-202, Method 201 10MHz Output Acceleration Sensitivity Vibration Profile: 1.0ppb/g									
10MHz Output Acceleration Sensitivity Vibration Profile: 1.0ppb/g				, ,					
Acceleration Sensitivity Vibration Profile: 1.0ppb/g									
	Accelera	ation Sensitivity		Vibration Profile: 1.0ppb/g					
			0.001G ² /Hz 10Hz to 2KHz						