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

OCXO2525BM-FD-10MHz_Sine-2122
25.4x25.4x12.7mm 10MHz OCXO

Features and Benefits

Frequency range: 10MHz
Supply voltage: 5.0V
Steady state: 1.3W Max
Output waveform: Sinewave
Frequency stability vs. operating temperature: ±5.0ppb
Aging: ±50ppb per year
Phase noise@10KHz: -152dBc/Hz
Operating temperature: -30°C to +70°C
Size:25.4x25.4x12.7mm

Typical Applications

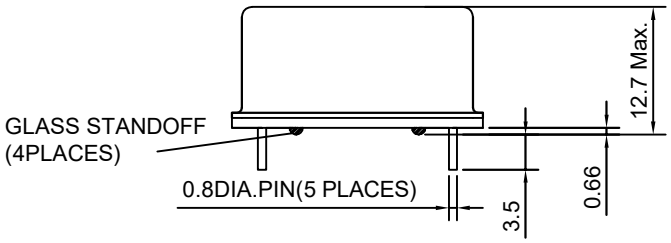
Small Cell, Portable Telecommunication Device
Test and Instrumentation
Synthesizer, Digital switch, Reference Timing Circuit
Packet Timing Protocol ATCOM System

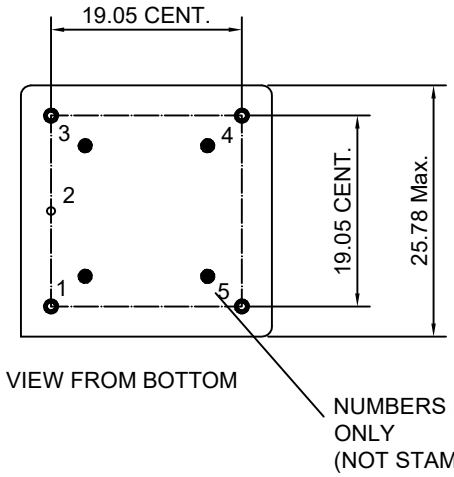
Description

OCXO2525BM-FD-10MHz_Sine-2122 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.

Mechanical Drawing & Pin Connections

Drawing No: MD160042-4





PIN Function

Pin	Function
1	R.F. OUTPUT
2	GND
3	Control Votage
4	Reference Voltage
5	Supply Voltage

Unit in mm
1mm = 0.039 inches

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Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F_{nom}			10		MHz	
RF Output							
Waveform				Sinewave			
Level			+6	+8	+10	dBm	
Load				50		ohm	
Harmonics					-30	dBc	
Spurious					-60	dBc	
Electrical Frequency Adjustment (PIN = "VCO INPUT")							
Tuning Range		VCO @ Min. Voltage			-0.5	ppm	Referenced to frequency at nominal Center Voltage
		VCO @ Max. Voltage	+0.5			ppm	
Control Voltage			0		4.0	V	
Slope				positive			
Center Voltage				+2.0		V	
Linearity			-10		+10	%	
Input Impedance			100			Kohm	
Power Supply							
Supply Voltage	V_S		4.75	5.0	5.25	V	
Steady state		+25°C			1.3	W	
Current		@ turn on			800	mA	
Reference Voltage (PIN=Reference Voltage)							
Voltage			3.8	4.0	4.2	V	
Load			9			Kohm	
Frequency Stability							
Versus Operating Temperature Range		ref to +25℃			±5.0	ppb	
Initial Frequency Accuracy		@ +25 ±1℃; after turn on power 15 ±1 minutes; <=90 days following date code; VCO Input voltage @ Center Voltage ±0.001V			±0.1	ppm	
Versus supply voltage		±5% change			±0.5	ppb	
Versus Load		±5% change			±0.5	ppb	
Short Term					0.05	ppb/s	Root Allan variance
Aging		Per day, at time of shipment			±0.5	ppb	
Aging Per Day		after 30 days			±0.5	ppb	
Aging 1st Year					±50	ppb	
Aging 10 Years					±0.3	ppm	
Warm-up		In 10 minutes @25±1°C			±10	ppb	Reference to 1 hour
Phase Noise		1Hz		-95	-90	dBc/Hz	
		10Hz		-125	-120	dBc/Hz	
		100Hz		-140	-135	dBc/Hz	
		1kHz		-148	-145	dBc/Hz	
		10kHz		-152	-150	dBc/Hz	
Environmental, Mechanical Conditions							
Operating temperature range	-30°C to +70°C						
Storage temperature range	-55°C to +105°C						
Humidity	MIL-STD-202, Method 103 Test Condition A; 95% RH @ +40°C, non-condensing,240 hours						
Vibration (non-operating)	MIL-STD-202, Method 201; 0.06'' total p-p, 10-55Hz						
Shock (non-operating)	MIL-STD-202, Method 213, test condition J; 30g,11ms, half-sine						