



Dynamic Engineers Inc.

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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: ±5ppb
- Aging: ±50ppb per year
- Phase noise@10KHz: -152dBc/Hz
- Operating temperature: -30°C to +70°C
- Size:25.4x25.4x12.7mm

Typical Applications

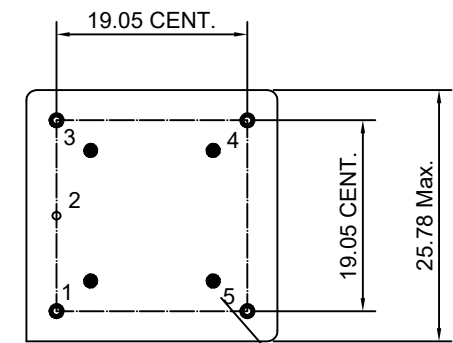
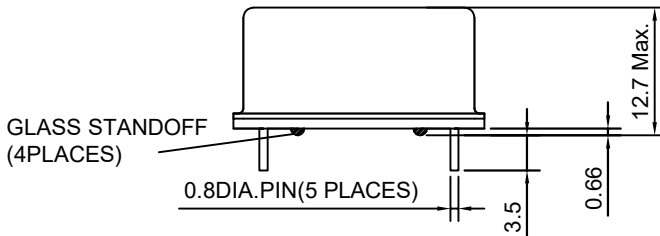
- Small Cell, Portable Telecommunication Device
- Test and Instrumentation
- Synthesizer, Digital switch, Reference Timing Circuit
- Packet Timing Protocol ATCOM System

Description

OCXO2525BM-FD-10MHz_Sine-2111 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-'



VIEW FROM BOTTOM
NUMBERS FOR REFERENCE ONLY
(NOT STAMPED ON UNIT)

PIN Function

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

Unit in mm
1mm = 0.039 inches

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



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		5.0	V	
Slope			positive				
Center Voltage				+2.5		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	
Frequency Stability							
Versus Operating Temperature Range		ref to +25°C			±5.0	ppb	
Initial Frequency Accuracy		@ +25 ±1°C; 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 1 st 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					