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

OCXO2525BM-100MHz-A-V
25.7x25.7x12.7mm 100MHz OCXO

Features and Benefits

Frequency range: 100MHz
Supply voltage: 5.0V
Steady state: 2.1W Max
Output waveform: Sinewave
Frequency stability vs. operating temperature: ±200ppb
Aging: ±0.2ppm per year
Phase noise@10KHz: -180dBc/Hz
Operating temperature: -40°C to +85°C
Size:25.7x25.7x12.7mm

Typical Applications

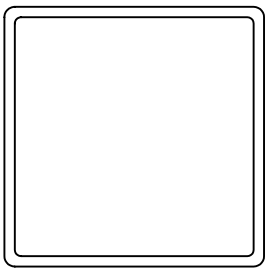
Small Cell, Portable Telecommunication Device
Test and Instrumentation
Synthesizer, Digital switch, Reference Timing Circuit
Packet Timing Protocol ATCOM System

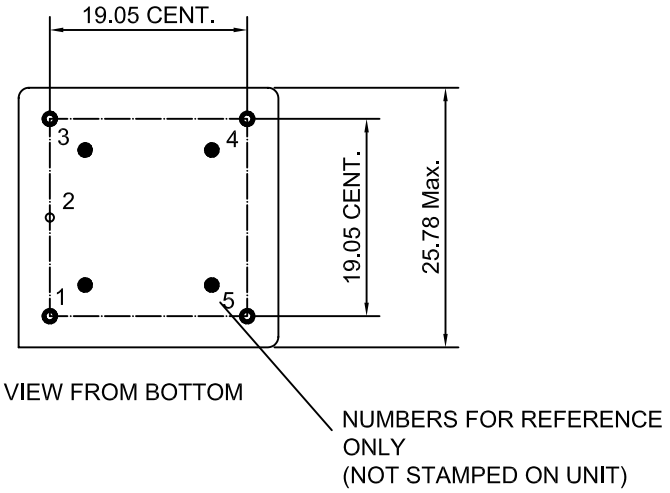
Description

OCXO2525BM-100MHz-A-V 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.

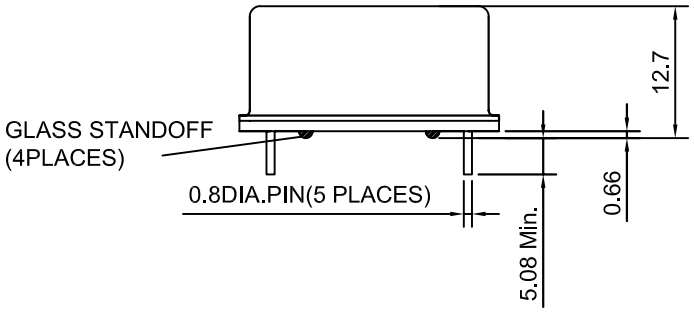
Mechanical Drawing & Pin Connections

Drawing No: MD160042-1


VIEW FROM TOP



VIEW FROM BOTTOM



Pin	Signal
1	R.F. OUTPUT
2	GND
3	Control Votage
4	Not Connected
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}			100		MHz	
RF Output							
Waveform				Sinewave			
Level			+15			dBm	
Load		±10%		50		ohm	
Harmonics					-30	dBc	
Spurious					-100	dBc	
Power Supply							
Supply Voltage	V_{cc}		+4.75	+5.0	+5.25	V	
Steady state		+25±1°C			2.1	W	
Current		@ turn on			950	mA	
Electrical Frequency Adjustment (PIN = "Vc INPUT")							
Tuning Range		Referenced to frequency at nominal Center Voltage	±2.5			ppm	
Control Voltage	V_c		0		+10	V	
Slope				positive			
Center Voltage	V_{c0}			+5.0		V	
Linearity			-10		+10	%	
Frequency Stability							
Versus Operating Temperature Range		-40°C to +85°C, ref to +25°C	-200		+200	ppb	
Initial Frequency Accuracy		@ +25 ±1°C; after turning on power 30 minutes; V_{c0} Input voltage @center voltage ±0.001V	-0.3		+0.3	ppm	
Versus supply voltage		±5% change	-5		+5	ppb	
Versus Load		±10% change	-5		+5	ppb	
Short Term		1 sec		0.05		ppb/s	Root Allan variance
Aging Per Day		after 30 days	-5.0		+5.0	ppb	
Aging 1st Year			-0.2		+0.2	ppm	
Aging 15 Years			-2		+2	ppm	
Warm-up		In 5 minutes @25±1°C	-50		+50	ppb	Reference to 1 hour
G-sensitivity					1	ppb/g	Each axis
Phase Noise		10Hz			-105	dBc/Hz	
		100Hz			-135	dBc/Hz	
		1KHz			-162	dBc/Hz	
		10KHz			-180	dBc/Hz	
		100KHz			-185	dBc/Hz	
		1MHz			-185	dBc/Hz	
Environmental, Mechanical Conditions							
Operating temperature range	-40°C to +85°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 to 55 Hz						
Shock (non-operating)	MIL-STD-202, Method 213, Test Condition J. 30g, 11ms, half-sine						