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

OCXO2525BM-40MHz-D-V
25.7x25.7x12.7mm 40MHz OCXO

Features and Benefits

Frequency range: 40MHz
Supply voltage: 12.0V
Steady state: 1.5W Max
Output waveform: Sinewave
Frequency stability vs. operating temperature: ±10.0ppb
Aging: ±100ppb per year
Phase noise@100Hz: -130dBc/Hz
Operating temperature: -30°C to +70°C
Size:25.7x25.7x12.7mm

Typical Applications

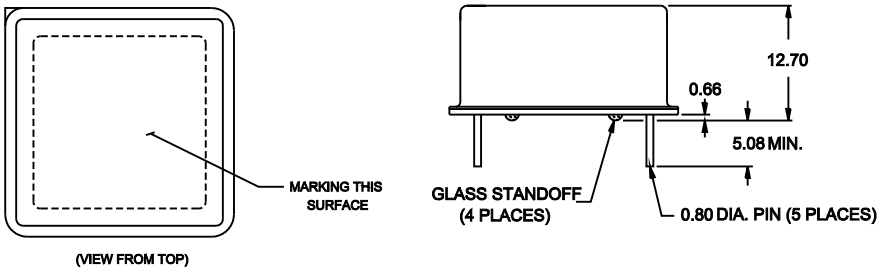
Small Cell, Portable Telecommunication Device
Test and Instrumentation
Synthesizer, Digital switch, Reference Timing Circuit
Packet Timing Protocol ATCOM System

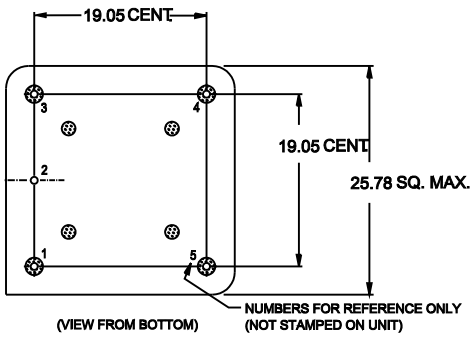
Description

OCXO2525BM-40MHz-D-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: MD210013-1





PIN CONNECTIONS	
PIN	FUNCTION
1	Output
2	0 Volts & Case
3 (See Note 1)	VC Input or N.C.
4 (See Note 1)	Reference Voltage or N.C. or Oven Monitor
5	Supply Voltage

Note 1. If the specification does not specify parameters for either PIN3 or PIN4 then that respective PIN is NOT internally CONNECTED.

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Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F_{nom}			40		MHz	
RF Output							
Waveform				Sinewave			
Level			+5			dBm	
Load				50		ohm	
Harmonics					-30	dBc	
Spurious					-70	dBc	
Power Supply							
Supply Voltage	V_{cc}		+11.4	+12.0	+12.6	V	
Steady state		+25°C			1.5	W	
Current		@ turn on			400	mA	
Electrical Frequency Adjustment (PIN = "Vc INPUT")							
Tuning Range		Referenced to frequency at nominal Center Voltage	±0.8			ppm	
Control Voltage	Vc		0		+5	V	
Slope				positive			
Center Voltage				+2.5		V	
Linearity			-10		+10	%	
Input Impedance			10			Kohm	
Reference Voltage			4.9	5.0	5.1	V	
Frequency Stability							
Versus Operating Temperature Range		-30°C to +70°C,ref to +25°C	-10		+10	ppb	
Initial Frequency Accuracy		@ +25 ±1°C; after turning on power 15 ±1 minutes; <=90 days following date code，Vc Input voltage @ +2.5 ±0.001V	-0.2		+0.2	ppm	
Versus supply voltage		±5% change	-10		+10	ppb	
Versus Load		±5% change	-10		+10	ppb	
Short Term		1 sec		0.02		ppb/s	Root Allan variance
		10 sec		0.04		ppb/10s	
Aging Per Day		after 30 days	-1.0		+1.0	ppb	
Aging 1st Year			-100		+100	ppb	
Aging 10 Years			-0.6		+0.6	ppm	
Warm-up		In 5 minutes @25±1°C	-50		+50	ppb	Reference to 1 hour
Phase Noise		100Hz		-130		dBc/Hz	
		1KHz&over		-150		dBc/Hz	
Environmental, Mechanical Conditions							
Operating temperature range	-30°C to +70°C						
Storage temperature range	-55°C to +125°C						
Humidity	MIL-STD-202, Method 103, Test Condition B. 95% RH @ +40°C, non-condensing, 96 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						