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

OCXO5050BJ-VB-100MHz-A-V
Anti-Vibration 100MHz OCXO

Features and Benefits

Frequency range: 100MHz
Supply voltage: 12V
Steady current: 200mA/Max
Output waveform: Sinewave
Frequency stability vs. operating temperature: ±500ppb
Aging: ±300ppb per year
Phase noise@100KHz: -175dBc/Hz
Operating temperature: -40°C to +85°C
Size: 80x80x50mm

Typical Applications

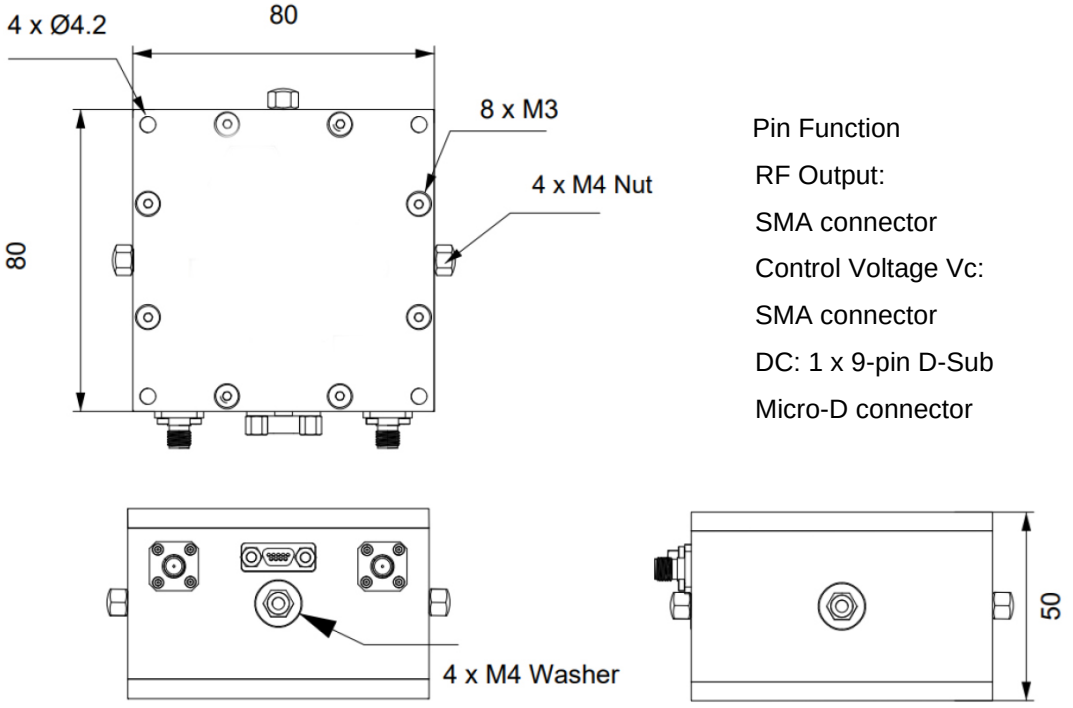
Military Applications
Airborne, Aircraft, Helicopter
Radar Systems
Cargo

Description

OCXO5050BJ-VB-100MHz-A-V offers a solution for applications with high dynamic phase noise requirements. In order to have better phase noise performance under vibration, a passive isolation is implemented. It has a good damping effect on vibration beyond the resonant frequency.

Mechanical Drawing & Pin Connections

Drawing No: MD240039-1



Pin Function
RF Output:
SMA connector
Control Voltage Vc:
SMA connector
DC: 1 x 9-pin D-Sub
Micro-D connector

Unit in mm
1mm = 0.0394 inches

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Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F_0			100		MHz	
RF Output							
Signal Waveform				Sine wave			
Output Level			+7			dBm	
Load		±10%		50		ohm	
Harmonics level					-30	dBc	
Non-Harmonics level					-80	dBc	
Spurious		100 Hz to 5 MHz from carrier			-100	dBc	
Power Supply							
Supply Voltage	V_{cc}	±5%		12.0		V	
Warm-up Time	T_{up}	$dF/F_0 \leqslant \pm 100$ ppb referred to F_0 after 1 hour			5	min	
Power Consumption		Steady state, +25°C			200	mA	
		Warm-up			400	mA	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)			±2.0			ppm	
EFC voltage	V_c		0		5.0	V	
Modulation bandwidth		3 dB cut off frequency	50			Hz	
Slope				Positive			
Frequency Stability							
Versus Operating Temperature Range		-40°C to +85°C			±500	ppb	
Initial Tolerance		after power on for 30 min			±200	ppb	
Versus supply voltage		±5% change			±10	ppb	
Versus load		±10% change			±5.0	ppb	
Aging Per Day		After 30 days of continuous operation			±5.0	ppb	
Aging 1st Year					±300	ppb	
Aging 10 Years					±1.5	ppm	
SSB Phase noise			Static		Dynamic 10Hz-2KHz $0.01g^2/Hz$		
		10Hz	-105			dBc	
		100Hz	-135		-120	dBc	
		1kHz	-165		-153	dBc	
		10kHz	-174		-174	dBc	
		100kHz	-175		-175	dBc	
		1MHz	-175		-175	dBc	
Environmental,Mechanical Conditions							
Operating temperature range	-40°C to +85°C						
Storage temperature range	-40°C to +85°C						

Test conditions: Vcc = +12 V; T_A = +25± 3°C; Vc = +5 V unless otherwise identified