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

TCXO7500BM-49.152MHz-A-V
49.152MHz CMOS Output TCXO

Features and Benefits

Frequency range: 49.152MHz
Supply voltage: 3.3V
Steady current: 8.0mA Max
Output waveform: CMOS
Frequency stability vs. operating temperature: ±1.0PPM
Phase noise@10KHz: -148dBc/Hz
Operating temperature: -40°C to +85°C
Size: 7.0x5.0x1.9mm

Typical Applications

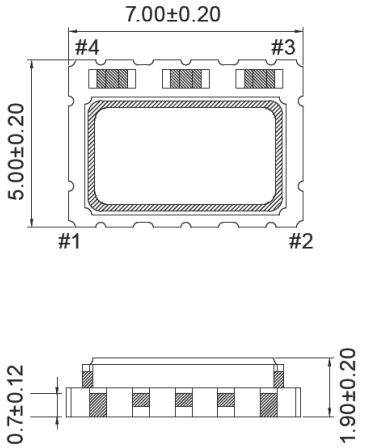
SATCOM System
Cellular Base Stations
Radar Applications

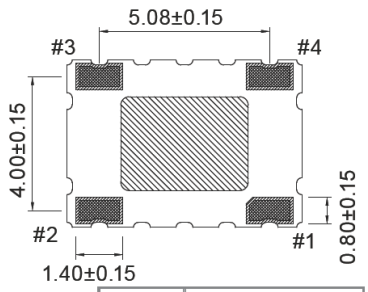
Description

TCXO7500BM-49.152MHz-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: MD240058-1





Pin#	Function
1	Vcon:VC-TCXO GND/NC:TCXO
2	GND
3	OUTPUT
4	VDD

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

TCXO7500BM-49.152MHz-A-V
49.152MHz CMOS Output TCXO

Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F_{nom}			49.152		MHz	
RF Output							
Signal Waveform				CMOS			
Load	R_L				15	pF	
H-Level Voltage	V_H		2.97			V	
L- Level Voltage	V_L				0.33	V	
Duty Cycle		Measured at 50% Vcc trigger level	45	50	55	%	
Rise and fall time		CMOS logic output at 10% to 90%			6	nS	
Start time					5	mS	
Power Supply							
Supply Voltage	V_{cc}		3.135	3.3	3.465	V	
Current		At maximum supply voltage			8	mA	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)		Referenced to Vc at 1.5V	±5			ppm	
EFC voltage	V_c		0.5	1.5	2.5	V	
Linearity					+10	%	
Vc Input Impedance		Measured between Vc and GND pin	100			kohm	
Frequency Stability							
Versus Operating Temperature Range		Referenced to the frequency at 25°C.	-1.0		+1.0	ppm	
Nominal Frequency Tolerance		Frequency at 25°C, 1hour after reflow.	-2.0		+2.0	ppm	
Versus supply voltage		±5% change at 25°C	-0.3		+0.3	ppm	
Versus load		±10% change	-0.2		+0.2	ppm	
Aging 1st Year		at 25°C	-1.0		+1.0	ppm	
SSB Phase noise		10Hz		-80		dBc	
		100Hz		-107		dBc	
		1KHz		-128		dBc	
		10KHz		-148		dBc	
		100KHz		-155		dBc	

Environmental,Mechanical Conditions	
Operating temperature range	-40°C to +85°C
Storage temperature range	-40°C to +85°C
Thermal Shock	MIL-STD-883H 1010.8 Condition B, -55°C, 125°C; soak time is 10 mins, with total 200 cycles
Damp Heat	JESD22-A101, 85°C /85% RH for 500 hrs
Low Temp Storage	IEC 60068-2-1, -55°C for 500 hrs
Drop Test	IEC 60068-2-32, 70, 80, 100cm,each height for 3 times on hardboard
Vibration Test	MIL-STD-883H 2007.3 Condition A, 10~2000Hz, 1.52mm, 20g, each axis for 4 hrs
Mechanical Shock	MIL-STD-883H 2002.5 Condition B, 1500g, half-sine, 0.5ms, each axis for 3 times.