



Features and Benefits

Frequency range: 10-250MHz
Supply voltage: 2.5/3.3V
Steady current: 50mA Max
Output waveform: CMOS
Frequency tolerance: ±25ppm
Pulling range: ±50ppm
Phase noise@1KHz: -105dBc/Hz
Operating temperature: -40°C to +85°C
Size: 7.0x5.0x1.45mm

Typical Applications

High-speed ethernet
Fiber channel
HDTV
ATM,
Set-top box
WiMAX
Server
SAS
SATA

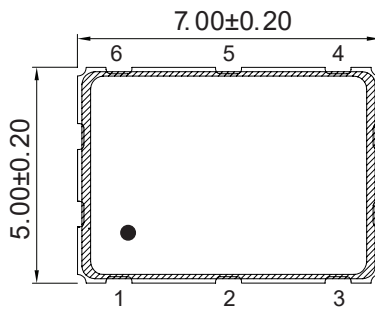
Description

The VCXO7500AL-CMOS is designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and frequency stability. These characteristics make it an excellent choice for timing applications.

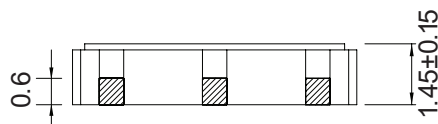
Mechanical Drawing & Pin Connections

Drawing No: MD240047-1

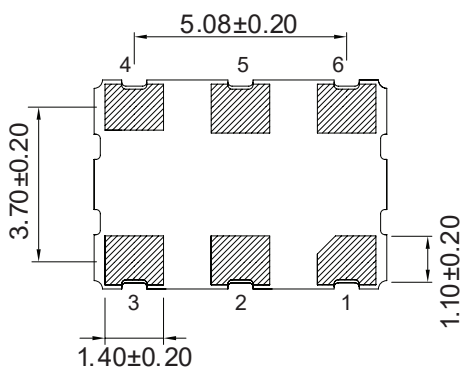
Top View



Side View



Bottom View



PIN	Function
#1	Control Voltage
#2	OE/Tri-State
#3	GND
#4	Output
#5	N.C.
#6	Supply Voltage

Unit in mm
1mm = 0.0394 inches



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency Range	F _{nom}		10		250	MHz	
RF Output							
Signal Waveform			CMOS				
Load	R _L		15			pF	
H-Level Voltage	V _H		90% V _{cc}			V	
L- Level Voltage	V _L				10% V _{cc}	V	
Duty Cycle			45		55	%	
Rise/Fall time					5	nS	
Power Supply							
Supply Voltage	V _{cc}			2.5 3.3		V	
Start up Time	T _{up}				2	mS	
Current					50	mA	
Frequency Adjustment Range							
EFC voltage		3.3V	0.3		3.0	V	
		2.5V	0.25		2.25	V	
Electronic Frequency Control (EFC)			±50			ppm	
Input Impedance			1			MΩ	
Linearity					10	%	
Modulation Bandwidth (BW)			10			KHz	
Frequency Stability							
Frequency Tolerance				±25 or ±50		ppm	See ordering information
RMS phase jitter		12KHz-20MHz			1	pS	
Phase noise		1KHz			-105	dBc/Hz	
Environmental, Mechanical Conditions							
Operating temperature range	See ordering information						
Storage temperature range	-55°C to +125°C						

Ordering Information

VCXO7500AL-CMOS	-	10MHz	-	x	x	x
Group				01	02	03

For example, VCXO7500AL-CMOS-10MHz-1-1-2 denotes the VCXO has the following specifications:

Frequency: 10MHz
 Temperature Range: -20°C to +70°C
 Frequency Tolerance: ±25ppm
 Supply Voltage: 2.5V

01	Temperature Range
Code	Specification
1	-20°C to +70°C
2	-40°C to +85°C

02	Frequency Tolerance
Code	Spec
1	±25ppm
2	±50ppm

03	Supply Voltage
Code	Specification
1	3.3V
2	2.5V