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

XO1612BM-LP
Low Power Crystal Oscillator

Features and Benefits

Frequency range: 3MHz to 60MHz
Supply voltage: 1.8V/2.5V/3.3V
Current: 15mA Max.
Frequency stability vs. temperature: ±20PPM-100PPM
Aging: ±3PPM per year
Operating temperature: -40°C to +105°C
Size: 1.6x1.2x0.8 mm

Typical Applications

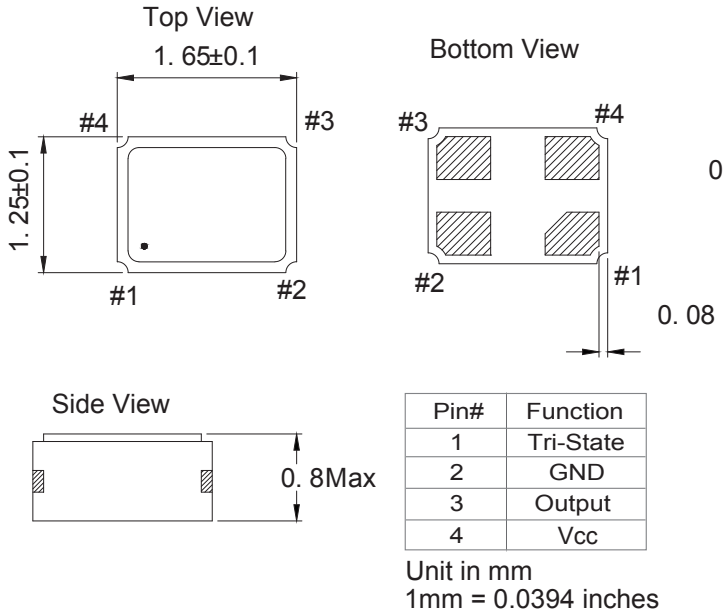
WLAN
Mobile Phone
DSC, Set-top Box, HDTV

Description

XO1612BM-LP is the low power crystal oscillator. The power consumption can less than 15mA. It can be widely used in the low power consumption applications.

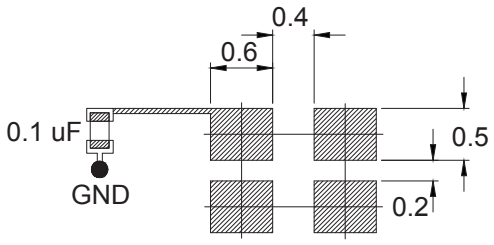
Mechanical Drawing & Pin Connections

Drawing No: MD230013-1



Pin#	Function
1	Tri-State
2	GND
3	Output
4	Vcc

Unit in mm
1mm = 0.0394 inches



To ensure optimal oscillator performance, place a by-pass capacitor of 0.1uF as close to the part as possible between Vcc and GND PAD

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Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	f_0		3		60	MHz	
RF Output							
Output Waveform				CMOS			
Load					15	pF	
Output Level		Output High	0.9V_{cc}			V	
		Output Low			0.1V_{cc}	V	
Duty Cycle			45		55	%	
Rise & Fall Time		20%-80%			10	ns	
Tri-State (Input to Pin1)		Enable	0.7 V_{cc}			V	
		Disable			0.3 V_{cc}	V	
Startup Time					2	ms	
Power Supply							
Voltage	V_{cc}			1.8/2.5/3.3		V	See ordering section
Current					15	mA	
Stand by Current					10	uA	
Frequency Stability							
Versus Temperature		@-40°C to +85°C with reference to +25°C			±20	ppm	See ordering section
Aging@+25°C		1st year			±3.0	ppm	
Period Jitter (Pk-Pk)					40	ps	
RMS Phase Jitter		Integrated 12kHz to 20MHz			1	ps	
Environmental Conditions							
Operating temperature range		-40°C to +105°C (See ordering section)					
Storage temperature range		-55°C to +125 °C					

Ordering Information

XO1612BM-LP	-	01	02	03
Group		Code		

For example, XO1612BM-LP-121 denotes the XO has the following specifications:

Temperature Range: -20°C to +70°C
Stability Over Temperature: ±25 ppm
Supply Voltage: 1.8V

01	Temperature Range
Code	Specification
1	-20°C to +70°C
2	-30°C to +85°C
3	-40°C to +85°C
4	-40°C to +105°C

02	Frequency Stability
Code	Specification
1	±20 ppm
2	±25 ppm
3	±50 ppm
4	±100 ppm

03	Supply Voltage
Code	Specification
1	1.8V±5%
2	2.5V±10%
3	3.3V±10%

Frequency Stability vs. Temperature

Temperature Range [°C]	Frequency Stability			
	±20 ppm	±25 ppm	±50 ppm	±100 ppm
-20°C to +70°C	Available	Available	Available	Available
-30°C to +85°C	On Request	Available	Available	Available
-40°C to +85°C	On Request	Available	Available	Available
-40°C to +105°C	Not Available	Not Available	Available	Available