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

XO2016BM-ULJ_LVPECL
2.0x1.6mm LVPECL Crystal Oscillator

Features and Benefits

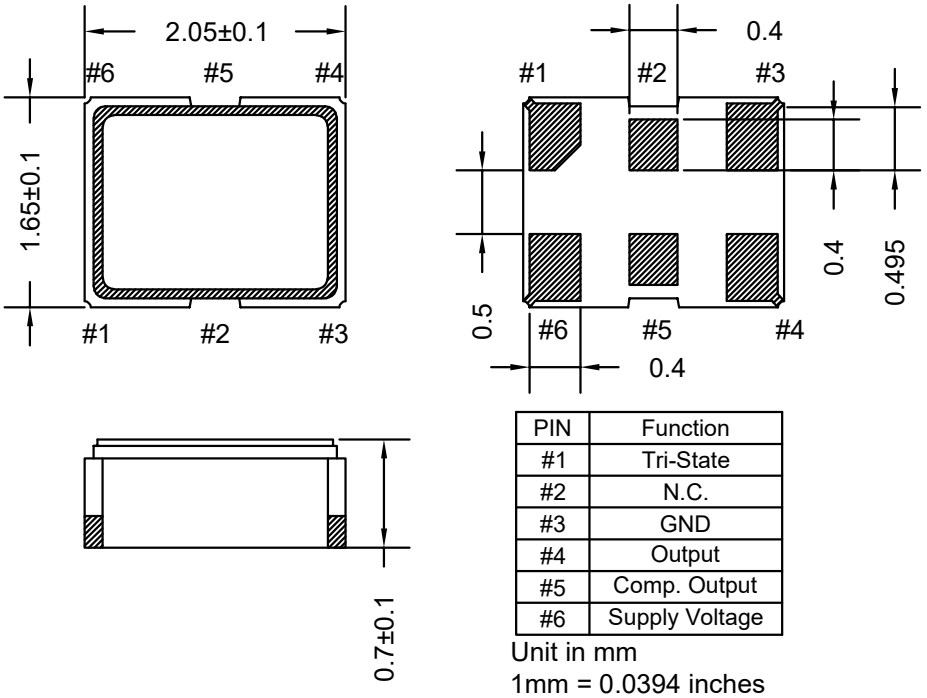
Frequency range: 100-220MHz
Output: LVPECL
Supply voltage: 2.5/3.3V
Current: 60mA Max.
Frequency stability vs. temperature: ±20PPM
Aging: ±3PPM per year
Operating temperature: -40°C to +125°C
Size: 2.0x1.6x0.7 mm

Typical Applications

400Gbit/800Gbit/1.6Tbit Ethernet, MAN, SONET
Fiber Channel
Test Instrumentation

Mechanical Drawing & Pin Connections

Drawing No: MD240059-1



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

Unit in mm
1mm = 0.0394 inches

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

XO2016BM-ULJ_LVPECL
2.0x1.6mm LVPECL Crystal Oscillator

Specifications

Specification	Condition	3.3V			2.5V			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	
Supply Voltage Variation (Vcc)		Vcc - 10%	Vcc	Vcc+10%	Vcc - 10%	Vcc	Vcc+10%	V
Frequency Range		100		220	100		220	MHz
Standard Frequency	100,125,156.25							MHz
Supply Current	OE=Vcc Terminated to Vcc-2V		38	60		38	60	mA
Duty Cycle		45		55	45		55	%
Output Level	Output High	Vcc -1.085	Vcc -0.95	Vcc -0.88	Vcc -1.085	Vcc -0.95	Vcc -0.88	V
	Output Low	Vcc -1.81	Vcc -1.7	Vcc -1.62	Vcc -1.81	Vcc -1.7	Vcc -1.62	
Differential Output Swing		0.8		2.0	0.8		2.0	V
Output Amplitude (Single-ended output signal)		0.4	0.75	0.95	0.4	0.75	0.95	V
Transition Rise/Fall Time 20%-80%			0.2	0.4		0.2	0.4	nSec
Start-up Time	Start from t=0 to 90% Vcc			5			5	mSec
OE (Tri-State)	Enable	0.7x Vcc			0.7x Vcc			V
	Disable			0.3x Vcc			0.3x Vcc	
Standby Current	OE=GND		60	300		60	300	uA
Output Load	Terminated to Vcc-2V	50						ohm
RMS Phase Jitter (Integrated 12kHz – 20MHz Offset)	F0=156.25MHz		50	100		50	100	fs
Aging / First Year	@+25°C			±3			±3	PPM
Phase Noise, Fout=156.25MHz	@10KHz		-151			-151		dBc/Hz
	@100KHz		-158			-158		dBc/Hz
	@1MHz		-159			-159		dBc/Hz
Operating Temperature		-40		+125	-40		+125	°C
Storage Temperature		-55		+150	-55		+150	°C

Note: not all combination of options is available. Other specifications may be available upon request.
Specifications subject to change with notice.

Frequency Stability vs. Temperature

	±20PPM	±25PPM	±50PPM	±100PPM
-20°C to +70°C	Available	Available	Available	Available
-40°C to +85°C	Conditional	Available	Available	Available
-40°C to +105°C	Not Available	Not Available	Available	Available
-40°C to +125°C	Not Available	Not Available	Conditional	Available

Inclusive of Calibration @ 25°C, Operating Temperature Range, Input Voltage Variation, Load Variation, Aging (1st year), Shock, and Vibration

Ordering Information

XO2016BM-ULJ_LVPECL	-	100MHz	-	x	x	x
Group				01	02	03

For example, XO2016BM-ULJ_LVPECL-100MHz-1-1-1 denotes the XO has the following specifications:

Temperature Range: -20°C to +70°C
Stability Over Temperature: ±20PPM
Supply Voltage: 3.3V
Frequency: 100MHz

01	**Temperature Range**
Code	Specification
1	-20°C to +70°C
2	-40°C to +85°C
3	-40°C to +105°C
4	-40°C to +125°C

02		**Frequency Stability**
Code	Spec	Temperature range code available
1	±20PPM	1
2	±25PPM	1,2,
3	±50PPM	1,2,3
4	±100PPM	1,2,3,4

03	**Supply Voltage**
Code	Specification
1	3.3V
2	2.5V