



Features and Benefits

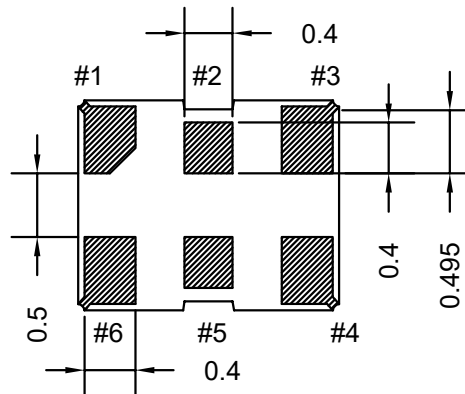
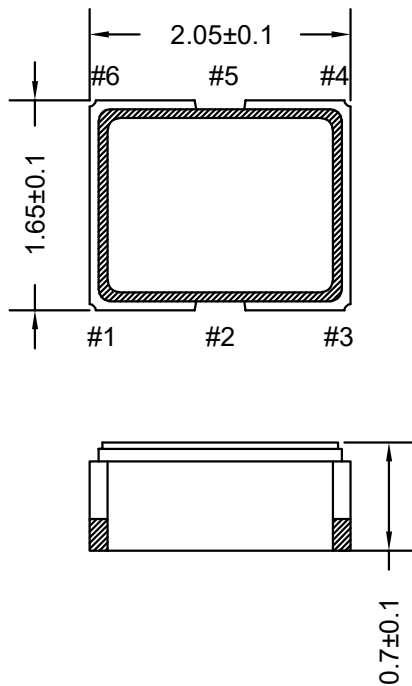
Frequency range: 100-175MHz
Output: LVDS
Supply voltage: 1.8/2.5/3.3V
Current: 35mA Max.
Frequency stability vs. temperature: ±20PPM
Aging: ±3PPM per year
Operating temperature: -40°C to +125°C
Size: 2.0x1.6x0.7 mm

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



Specifications

Specification	Condition	3.3V			2.5V			1.8V			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Supply Voltage Variation (Vcc)		Vcc - 10%	Vcc	Vcc+10%	Vcc - 10%	Vcc	Vcc+10%	Vcc - 5%	Vcc	Vcc+5%	V
Frequency Range		100		175	100		175	100		175	MHz
Standard Frequency		100,125,156.25									MHz
Supply Current	OE=Vcc		15	35		15	35		15	30	mA
Duty Cycle		45		55	45		55	45		55	%
Output Level (single ended)	Output High		1.43	1.6		1.43	1.6		1.43	1.6	V
	Output Low	0.9	1.1		0.9	1.1		0.9	1.1		
Differential Output Voltage (Out_H-Out_L)	Vcc=OUT (High)-OUTN(Low)	247	330	454	247	330	454	247	330	454	mV
Differential Output Voltage Error				50			50			50	mV
Differential Output Amplitude		0.494		0.9	0.494		0.9	0.494		0.9	V
Offset Voltage		1.125	1.25	1.375	1.125	1.25	1.375	1.125	1.25	1.375	V
Offset Voltage Error				50			50			50	mV
Rise Time	Transition Time 20%-80%		0.2	0.3		0.2	0.3		0.2	0.4	nSec
Fall Time	Transition Time 20%-80%		0.2	0.3		0.2	0.3		0.2	0.4	nSec
Start-up Time	Start from t=0 to 90% Vcc			5			5			5	mSec
Tri-State	Enable	0.7x Vcc			0.7x Vcc			0.7x Vcc			V
	Disable			0.3x Vcc			0.3x Vcc			0.3x Vcc	
Standby Current	OE=GND			300			300			300	uA
Output Load	Connect between OUT and OUTn	100									ohm
RMS Phase Jitter (Integrated 12kHz – 20MHz Offset)	F0=156.25 MHz		50	100		0	100		60	100	fs
Aging / First Year	@+25°C			±3			±3			±3	PPM
Phase Noise, Fout=156.25M Hz	@10KHz		-147			-147			-146		dBc/Hz
	@100KHz		-156			-156			-155		dBc/Hz
	@1MHz		-158			-158			-158		dBc/Hz
Operating Temperature		-40		+125	-40		+125	-40		+125	°C
Storage Temperature		-55		+150	-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_LVDS	-	100MHz	-	x	x	x
Group				01	02	03

For example, XO2016BM-ULJ_LVDS-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
3	1.8V