XO5300ZL8 1
LVDS SMD Clock Oscillator

Features and Benefits

Low jitter < 0.5 ps
Wide range of output frequency up to 212.5 MHz
SMD small package size: 5.0 x 3.2 x 1.3 mm

Typical Applications

10 Gigabit Ethernet
SDH SONET, Fiber Channel broadband access
DSL, GPON and switching system

Description

XO5300ZLD1 offers wide frequency range and low jitter, all in a miniature SMD package, ideal for various broadband access and switching systems.

Mechanical Drawing & Pin Connections

Drawing No: MD150016-2
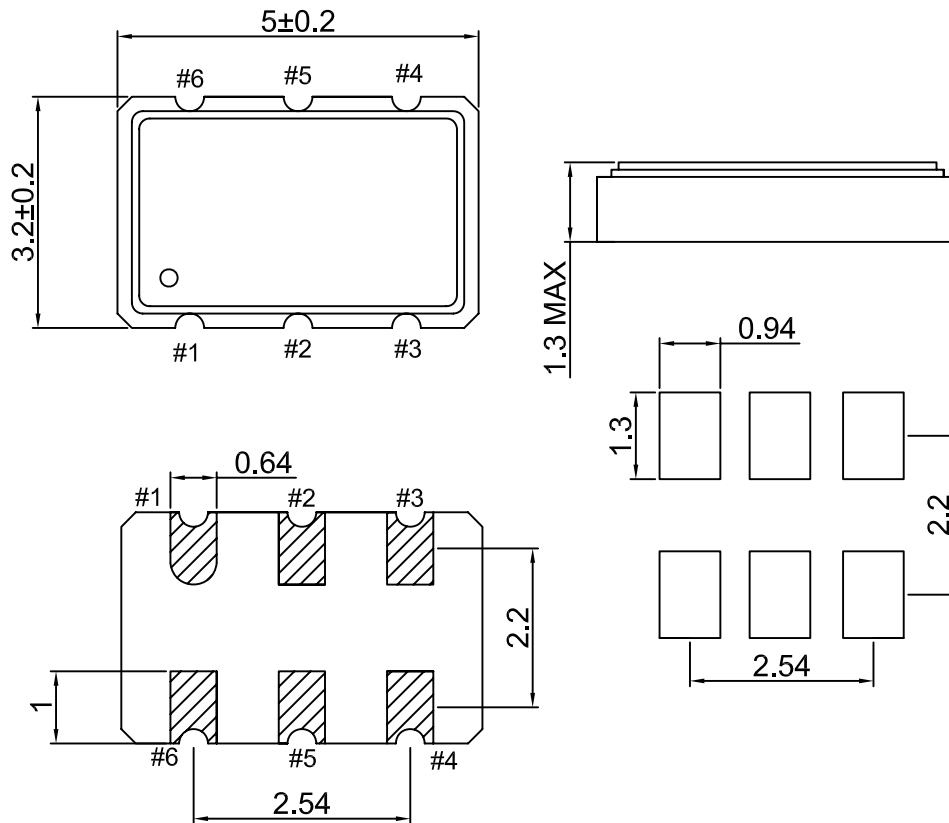
Pin Connection

Pad 1	Tri-state or N.C.
Pad 2	N.C.
Pad 3	Ground
Pad 4	Output
Pad 5	Complementary Output
Pad 6	Supply Voltage

Unit in mm
1mm = 0.0394 inches

Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency Range	F		20.0		212.5	MHz	
Standard Frequencies			106.2500, 120.0000, 122.8800, 125.0000, 153.6000, 155.5200, 156.2500, 159.3750, 161.1328, 200.0000, 212.5000			MHz	
Output Waveform			LVDS				
Output Voltage			$V_{OH} \leq$ 1.6 V $V_{OL} \geq$ 0.9 V			V	
Output Load			100			Ω	
Jitter		@ 12 KHz ~ 20 MHz from carrier frequency	< 0.5			ps	
Symmetry		@ ½Vdc	45		55	%	
Rise / Fall Time		20 to 80% of amplitude	< 1.0			ns	
Tri-state function		Pin #4 & 5→ signal Pin #4 & 5→ high impedance	Pin #1 = high or open Pin #1 = low				
Power Supply							
Voltage	V_{cc}	±5%		+2.5		V	
Supply Current			30		70	mA	
Frequency Stability							
Frequency Stability vs. Temperature Tolerance Aging Supply and Load Variation		Over -20°C to +70°C Over -40°C to +85°C		±25 ±50		ppm	
Environmental Conditions							
Operating temperature range		-20°C to +70°C for commercial applications -40°C to +85°C for industrial applications					
Storage temperature range		-55°C to +125°C					

Ordering Options: Operating Temperature and Frequency Stability

Operating Temperature (w)		Frequency Stability (z)
Code	T (°C)	Stability [ppm]
1	-20 to +70	±25
2	-40 to +85	±50

Ordering Codes

Model	Frequency in MHz (up to 4 digits)	Operating Temperature vs Frequency Stability
XO5300ZLD1	xx.yyyy	w

Example:XO5300ZLD1-125.0000-2 has the following specifications

Operating Frequency = 125.0000 MHz
Operating Temperature = -40°C to +85°C
Frequency Stability = ±50 ppm

Example for IR reflow soldering temperature