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

XO7500L-G2
40 to 200 MHz LVDS Lowest Jitter Clock

Features

40 to 200 MHz
7.0 mm x 5.0 mm x 1.8 mm ceramic SMD
Compact and lightweight
Differential LVDS Outputs
2.5 or 3.3 v supply
0.3 ps integrated phase jitter typ.

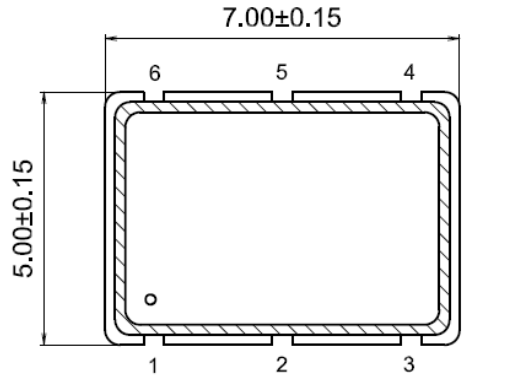
Picture of Part

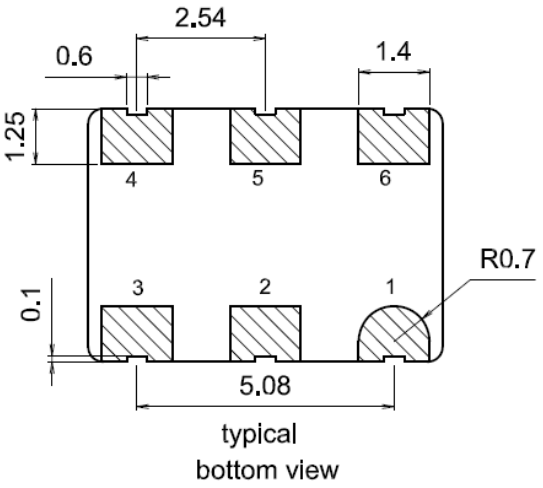
Description

The XO7500L-G2 features the use of high frequency fundamental crystals in non-PLL based circuitry to achieve the lowest possible jitter and phase noise performance. LVDS outputs exceed the requirements for SONET, XDSL, and other telecommunication standards.

Physical Dimensions & Pin Connections

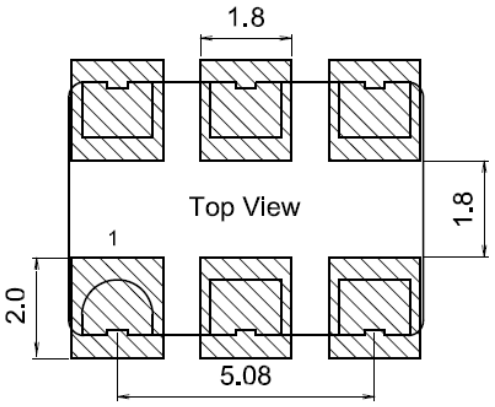
unit: mm





Pad1	Tri-state	Pad4	LVDS Output
Pad2	No Connection	Pad5	$\overline{\text{LVDS Output}}$
Pad3	Ground	Pad6	Supply Voltage

Rounded pad is pad No.1



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Specification

LVDS XO (Next Generation)		Sym.	Condition	Value Min.	Value Typ.	Value Max.	Unit	Note
Frequency Range		f0		40		200	MHz	
LVDS Outputs	Output High Voltage				1.430	1.600	V	
	Output Low Voltage			0.900	1.100		V	
	Output		Voltage	250	350	450	mV	millivolts
	Duty Cycle		Measured at 50% of	45	50	55	%	
	Rise / Fall Time				0.20	0.40	nS	**measured at 20 to 80% of
								waveform
			Start up Time		3.0	10	mS	
Power supply								
Voltage		Vc		3.150	3.300	3.450	V	2.5V +/- 5% available
Current consumption		Icc	Current Drain is a function of frequency		16.0	27.0	mA	
Pad 1 Enable Disable Function								
			Voltage applied to pad 1	70% Vcc			volts	In the disabled mode, both outputs are enabled when Pad 1 is taken
								Above 70% of Vcc ref to
								Ground (threshold)
Pad 1 Enable Disable Function								
			Voltage applied to pad 1			30%	volts	Both outputs are disabled
			Oscillator circuit is always					Pad 1 is taken below 30%
			Only buffer circuit is turned OFF					
Typical Phase Noise as a Function of Operating Frequency			Freq. OFFSET	1KHz	10KHz	100KHz		
			125 MHz	-120	-136	-142		
			Frequency Domain Phase Jitter		0.300		PS	Integrated from 12KHz to 20MHz Max.
Environmental, mechanical conditions.								
Operating temperature range			**-40°C to +85°C maximum range available that is standard**					
Storage temperature range			**-55°C to 125°C**					
Humidity			85% RH ; 85C ; 48 hours of exposure					
Vibration			Mil-Std 202F , Method 204, 35G's, 50 to 2000 Hz					
Shock			Mil-Std 202F, Method 213B, test condition E, 1000 GG half sine wave					
Reflow			**+260°C for 10 seconds**					
Frequency Stability vs. Temperature								

XO Specification		Sym.	Condition	Value Min.	Value Typ.	Value Max.	Unit	Note
		f0						
Frequency Versus Operating Temperature	Commercial		-40°C to +85°C, ref 25°C	-25.0		+25.0	PPM	**Best Stability available
			OR	-50.0		+50.0	PPM	
	Industrial		-10°C to +70°C, ref 25°C	-100.0		+100.0	PPM	
Frequency Versus Time			Frequency versus Time PER YR	-3.0		+3.0	PPM	