



Features and Benefits

- 10.0 MHz to 220 MHz operating frequency range for 3.3V supply
- 16 mA typical
- Less than +/- 25 ppm over -40°C to +85°C
- LVDS outputs
- 7.0 x 5.0 x 1.8 mm smd
- 3.3V supply voltage
- 200 fs typical integrated phase jitter (12KHz to 20 MHz)

Typical Applications

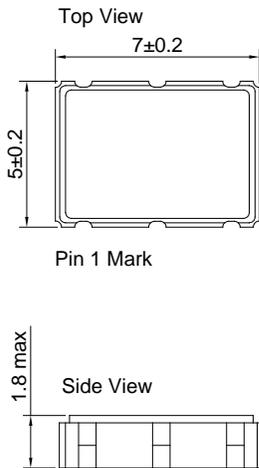
- Telecom Networks
- Data Communications

Description

The XO7500R series with LVDS outputs utilizes a fundamental crystal design that has no internal multiplication circuits to deliver the lowest possible phase jitter.

Mechanical Drawing & Pin Connections

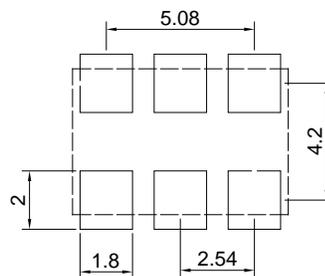
Drawing No: MD150071-1



PIN	Function
PAD #1	Tri-State
PAD #2	N/C
PAD #3	GND
PAD #4	Output
PAD #5	Complimentary
PAD #6	Supply Voltage

Unit : mm

Recommended Soldering Pattern





Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note	
			Min.	Typ.	Max.			
Nominal Frequency	F _{nom}			125		MHz		
Output Wave Form			LVDS					
Output Voltage Level "1"		RL=100 ohm	1.4		1.6	V		
Output Voltage Level "0"		RL=100 ohm	0.9		1.1	V		
Output Load		Between output and complimentary output		100		Ohm		
Duty Cycle			45	50	55	%		
Rise and Fall Times		20%<-->80% of the PECL wave form		0.2	0.4	nSec		
Start Time				5	10	mSec		
Output Voltage Swing		RL=100 ohm	250	350	450	mV		
Tri-State Function	No Connection	Differential LVDS and complimentary LVDS outputs						
	Disable	Both outputs are disabled (high impedance) when the Tri-state pad taken below 0.45*V _{CC} referenced to ground oscillator is always on. Only buffer stage is disabled. Disable current: 50uA max. (at 0V), Disable time: 10ns (Max.)						
	Enable	At disabled mode, both outputs are enabled when Tri-state pas is taken above 0.45*V _{CC} referenced to ground; Enable time: 10ns+ one period of the output frequency(max.)						
Power Supply								
Supply Voltage	V _{CC}		3.135	3.3	3.465	V		
Supply Current		15pF load		16	27	mA		
Frequency Stability								
Vs. Temperature		From -40°C to +85°C			+/-25	ppm		
Integrated Phase Jitter		12KHz to 20MHz		0.2	0.5	ps		
Aging		First year			+/-3	ppm		
		Per year thereafter			+/-2	ppm		
Phase Noise								
Phase Noise		@10Hz		-50		dBc/Hz		
		@100Hz		-80		dBc/Hz		
		@1KHz		-115		dBc/Hz		
		@10KHz		-135		dBc/Hz		
		@100KHz		-142		dBc/Hz		
		@1MHz		-147		dBc/Hz		
		@10MHz		-152		dBc/Hz		
Environmental Conditions								
Parameter	Reference Std.			Test Condition				
Operating Temperature range	-40°C to +85°C							
Storage Temperature range	-55°C to +150°C							