

## Dynamic Engineers Inc.

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

## Features and Benefits

Frequency range: 100MHz Supply voltage: 3.3V Steady current: 47mA Typ. Output waveform: LVDS Frequency stability vs. operating temperature: 20ppm Operating temperature: -40°C to +85°C Size: 3.2x2.5x0.75mm

## **Typical Applications**

10GB Ethernet, SONET, SATA, SAS, Fiber Channel, PCI-Express Telecom, networking, instrumentation, storage, servers

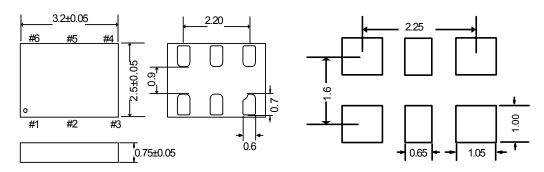
#### Description

XO3225AL-LVDS-100MHz-A offers 100MHz frequency, High precision and high frequency stability, allowing for high density surface mounting, ideally suited designed for use in Portable Applications.

### **Mechanical Drawing & Pin Connections**

Drawing No:

MD210008-1



#### **Pin Description**

Pin	Мар	Functionality			
1	OE	Input	H or Open: specified frequency output L: output is high impedance		
	ST	Input	H or Open: specified frequency output L: Device goes to sleep mode. Supply current reduces to I_std.		
2	NC	NA	No Connect; Leave it floating or connect to GND for better heat dissipation		
3	GND	Power	VDD Power Supply Ground		
4	OUT+	Output	Oscillator output		
5	OUT-	Output	Complementary oscillator output		
6	VDD	Power	Power supply voltage		

Unit in mm

1mm = 0.0394 inches



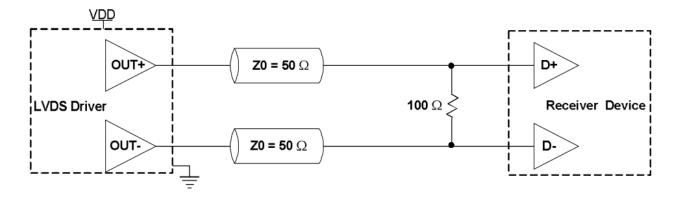
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# **Specifications**

Oscillator	Sym	Condition	Value			Unit	Note		
Specification	Sym	Condition	Min.	Тур.	Max.	Unit	NOLE		
Frequency	F			100		MHz			
Output				LVDS					
Rise Time / Fall Time Tr / Tf		20-80%		495	600	psec			
Output Voltage High			90%Vdd			V			
Output Voltage Low					10%Vdd				
		Measured from the time Vdd		<u> </u>			1		
Startup Time		reaches its rated minimum value		6	10	msec			
Resume Time		Measured from the time ST pin		6	10				
Resume Time		crosses 50% threshold		0	10	msec			
		Pin1, OE logic high or logic low,		100	250	Kohm			
Input pull up Impedance		or ST logic high		100	200	-			
		Pin1,ST logic low	2			Mohm			
Symmetry (Duty ratio)		All Vdds	45		55	%			
Power Supply									
Supply Voltage	$V_{dd}$		2.25	3.3	3.63	V			
Current Consumption		Excluding Load Termination		47	55	mA			
		Current, Vdd =3.3 or 2.5V		47	55	IIIA			
OE Disable Supply Current		OE = Low			35	mA			
Differential Output Voltage	VOD	See below figure	250	350	450	mV			
VOD Magnitude Change		See below figure			50	mV			
Offset Voltage	VOS	See below figure	1.125	1.2	1.375	V			
VOS Magnitude Change		See below figure			50	mV			
Output Disable Leakage									
Current		OE = Low			1	uA			
Standby Current		ST = Low, for all Vdds			100	uA			
Input High Voltage		Pin 1, OE or ST	70% Vdd			V			
Input Low Voltage		Pin 1, OE or ST			30%Vdd	V			
Frequency Stability									
Frequency Stability				±20		ppm			
Aging		@+25°C 1st year	-2		+2	ppm			
Aging		@+25°C 10 years	-5		+5	ppm			
0 0		f = 200.00 MHz, VDD = 3.3V or		4.0	47				
RMS Period Jitter		2.5V		1.2	1.7	psec			
Environmental Conditions									
Operating temperature range		-40°C to +85°C							
Storage temperature range		-55°C to +125°C							
Mechanic shock		MIL-STD-883F, method 2002							
Mechanic vibration		MIL-STD-883F, method 2007							
Temperature cycle		JESD22, method A104							
Solderability		MIL-STD-883F, method 2003							
Moisture sensitivity level		MSL1@260°C							

# **Termination Diagrams LVDS**



Dynamic Engineers, Inc.

Dynamic Engineers reserves the right to make changes to the company datasheet(s) along with other information contained inside; such as data tables and araphs without notification to potential customers who may have earlier revisions in their possession.