

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: 13.5-50MHz,65-220MHz Supply voltage: 2.5V,3.3V Steady current: 35mA Max. Output waveform: LVDS Frequency stability vs. operating temperature: ±25ppm RMS jitter: 98fs Operating temperature: -40°C to + 85°C Size: 7x5x1.8mm

Typical Applications

SatCom Test equipment Network clock Base station

Description

5.0±0.2

The XO7500AJ_LVDS series are designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and short term stability. These characteristics make it an excellent choice for timing applications.

Mechanical Drawing & Pin Connections



Drawing No:

OE N.C. Ground Output Complementary Supply Voltage

MD160041-4

Unit in mm 1mm = 0.0394 inches

Land Pattern

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8±0.

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.



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Specifications

Oscillator	Sym	Condition	Value			Unit	Nete
Specification			Min.	Тур.	Max.	Unit	NOLE
Frequency Range	F		13.5		50	MHz	
	I nom		65		220	MHz	
RF Output	-						
Signal Waveform				LVE	DS		
l evel		Logic " High " , " 1 "		1.4	1.6	V	
		Logic " Low " , " 0 "	0.9	1.1		V	
Load		between output and	100		0		
		complimentary			Ω		
Duty Cycle		ouipui		50% + 5%			
Output Voltage Swing		Single end	250	50%±5%	[mV	
Rise Time / Fall Time		20%↔80%	200	0.2	0.4	ns	
		2070(70070	70%(r	nin)of Vdd to	enable	110	
		Enable	output				
			Enable time:10msec(max.)				
			30%(max.)of Vdd to disable				
Output Enable/Disable Function				output			
		Disable	Disabl	e current:10u/	A(max.)		
		Disable	(OE<=	(OE<=0.3V),			
			Disab	le time:0.2use	c(max.)		
Devee Ormalia							
Power Supply	Vdd	. 100/		2.5	1	N N	
Supply Voltage	Vdd	± 10%		2.3		V	
Current consumption	vuu	± 10 %		15	35	mA	
Start-up Time				1	5	ms	
Frequency Stability					, v		
							See ordering
Versus Operating Temperature Range						ppm	information
Aging 1 st Year		at 25°C			±3	ppm	
		100Hz(50MHz)		-104		dBc/Hz	
		(156.25MHz)		-93		dBc/Hz	
		1KHz(50MHz)		-134		dBc/Hz	
		(156.25MHz)		-123		dBc/Hz	
		10KHz(50MHz)		-147		dBc/Hz	
Phase Noise		(156.25MHz)		-140		dBc/Hz	
		100KHz(50MHz)		-153		dBc/Hz	
		(156.25MHz)		-149		dBc/Hz	
		1MHz(50MHz)		-152		dBc/Hz	
		(156.25MHz)		-152		dBc/Hz	
		10MHz(50MHz)		-157		dBc/Hz	
		(156.25MHz)		-157		dBc/Hz	
RMS litter (12 KHz to 20 MHz)		<100MHz	350 fs	350 fsec typ. (50MHz,3.3V,LVDS)		DS)	
		>100MHz	98 fsec typ. (156.25MHz,3.3V,LVDS)				
Environmental, Mechanical Conditions							
Storage Temperature	-55°C to +	- 150°C					



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Ordering Information

XO7500AJ_LVDS	-	20MHz	-	Х	Х	х
Group				01	02	03

For example, XO7500AJ_LVDS-20MHz-1-1-1 denotes the XO has the following specifications:

Temperature Range:
Stability Over Temperature:
Supply Voltage:
Frequency:

-10°C to +70°C ±25ppm 2.5V 20MHz

option 01	Temperature Range
Code	Specification
1	-10°C to +70°C
2	-40°C to +85°C

option02	Frequency Stability (If non-standard, please contact DE	
Code	Specification	
1	±25ppm	
2	±50ppm	
3	±100ppm	

option 03	Supply Voltage	
Code	Specification	
1	2.5V	
2	3.3V	