



### Features and Benefits

Frequency range: 10-220MHz  
Supply voltage: 2.5/3.3V  
Current: 27mA Max.  
Frequency stability vs. temperature: ±25PPM  
Aging: ±3PPM 1<sup>st</sup> year  
Operating temperature: -40°C to +85°C  
Size: 5.0x3.2x1.3 mm

### Typical Applications

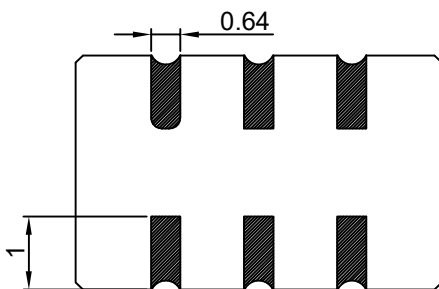
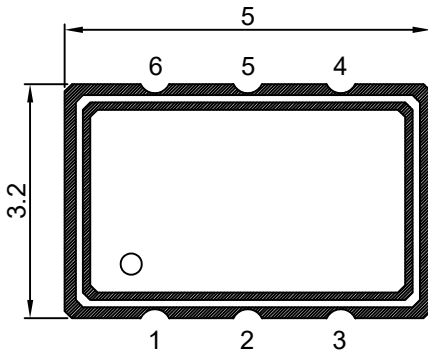
Cellular Base Stations  
Instrumentation  
Microwave Applications  
Radar reference

### Description

The XO5300AX-LVDS is 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: MD2( 00( &-1



#### Pin Connections

Pin	Function
1	OE
2	N.C.
3	GND
4	Output
5	Output: Complimentary
6	Supply Voltage

Unit in mm  
1mm = 0.0394 inches



## Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency Range	F <sub>nom</sub>		10		220	MHz	
<b>RF Output</b>							
Signal Waveform			LVDS-Differential				
Load	R <sub>L</sub>			100		ohm	
H-Level Voltage	V <sub>H</sub>		1.43	1.60		V	
L- Level Voltage	V <sub>L</sub>			0.9	1.1	V	
Duty Cycle			45	50	55	%	
Rise/Fall time		20%-80%		0.2	0.4	ns	
Output Control		Enable – High Disable -- Low	30%Vcc		70%Vcc		
<b>Power Supply</b>							
Supply Voltage	Vcc			2.5		V	See ordering information
Start up Time	T <sub>up</sub>			3	10	ms	
Current Consumption				16	27	mA	
<b>Frequency Stability</b>							
Versus Operating Temperature Range		Reference to +25°C		±25		ppm	See ordering information
Perturbation		Per 1°C			±3.0	ppm	
Aging 1 <sup>st</sup> Year					±3.0	ppm	
SSB Phase noise (125MHz)		100Hz		-88		dBc/Hz	@+25°C
		1kHz		-110		dBc/Hz	
		10kHz		-118		dBc/Hz	
		100kHz		-125		dBc/Hz	
		1MHz		-138		dBc/Hz	
<b>Environmental, Mechanical Conditions</b>							
Operating temperature range			-20°C to +70°C, -40°C to +85°C				

## Ordering Information

XO5300AX-	-	10MHz	-	x	x	x
LVDS						
Group				01	02	03

For example, XO5300AX-LVDS-10MHz-1-1-2 denotes the XO has the following specifications:  
 Temperature Range: -20°C to +70°C  
 Stability Over Temperature: ±25ppm  
 Supply Voltage: 3.3V

01	Temperature Range
Code	Specification
1	-20°C to +70°C
2	-40°C to +85°C

02	Frequency Stability
Code	Specification
1	±25ppm
2	±50ppm
3	±100ppm

03	Supply Voltage
Code	Specification
1	2.5V
2	3.3V