



### Features

Standard 7.0 x 5.0 x 1.5 mm ceramic 6-pad  
Low phase jitter (0.7 ps max.)  
Output frequency up to 320 MHz  
Complementary Outputs

### Typical Applications

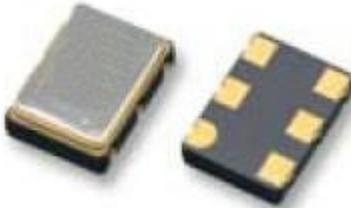
WLAN / WiMAX / WIFI  
SONET / SDH / ATM  
10 Gigabit Ethernet, Fiber Channel  
xDSL

### Description

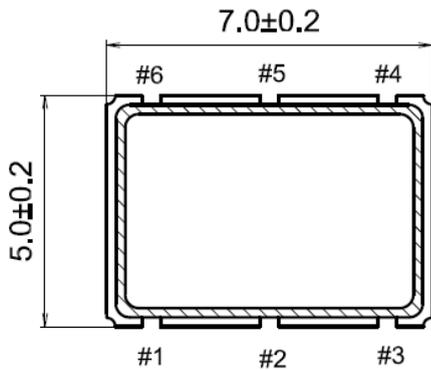
The XO3001 family offers ultra-low jitter PECL or LVDS outputs required of ever demanding data communications protocols around the world.

### Mechanical Drawing and PIN Connections

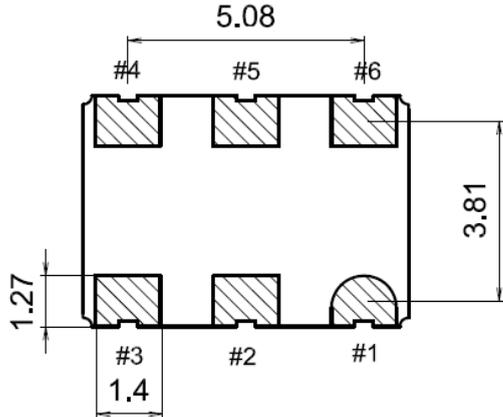
### Part Picture



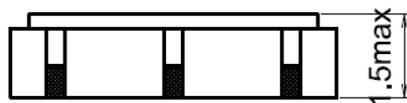
[ TOP VIEW ]



[ BOTTOM VIEW ]



[ SIDE VIEW ]



Pad	Function	
#1	NC	Tri-State
#2	Tri-State	NC
#3	GND	
#4	Output	
#5	Comp.Output	
#6	Vcc	



**Specification**

XO Specification		Sym.	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
<b>Operational Frequency Range</b>		F0		19.44		320.00	MHz	
LVDS	H-level voltage	VH				1.6	V	
	L-level voltage	VL		0.9			V	
	Rise & Fall time		10% to 90%			1.0	ns	
LVPECL	H- level voltage	VH		2.275				
	L-level voltage	VL				1.680		
	Rise & Fall time							
<b>Power supply</b>								
Voltage		Vcc		3.135	3.300	3.465	V	2.5V option available
Current Consumption		Icc	19.44MHz≤F0<160MHz			75	mA	PECL
			160 MHz ≤F0<250MHz			100		
			250 MHz≤F0≤320MHz			100		
			19.44MHz≤F0<160MHz			50	mV	LVDS
			160 MHz ≤F0<250MHz			50		
			250 MHz ≤F0≤320MHz			65		
Tri-state Enable/Disable			Outputs Active	0.75* Vcc				The customer chooses either Pin 1 or Pin 2 for Tri-state
Pin 1 or Pin 2			Outputs NOT Active			0.15* Vcc		
<b>Frequency stability</b>								
VS. Temperature			-40°C to +85°C, ref 25°C	-20.0		+20.0	ppm	
Integrated phase jitter 12 KHz to 20 MHz			Fo≤100MHz			0.7	ps	
			100<Fo≤125MHz			0.5		
			Fo>125MHz			0.3		
Aging	Per Year		Projected yearly aging after 30days operation	-3.0		+3.0	ppm	
<b>Environmental, mechanical conditions</b>								
Operating temperature range			<b>-40°C to +85°C maximum range available</b>					
Storage temperature range			<b>-55°C to 125°C</b>					



## Ordering Information

XO3001-XXX.XXXXXX-W -Y-Z

1. Field "XXX.XXXXXX" is the Output Frequency to six decimals in MHz
2. Field "W" is Operating Temperature Range and Freq. Stability :
  - a. "1" for -20°C to +70°C and +/- 20 ppm; +/- 30 ppm totally
  - b. "2" for -40°C to +85°C and +/- 20 ppm; +/- 30 ppm totally

\*\*\*NOTE: Inclusive of 25°C tolerance, drift over temperature, aging, Variation with load and voltage, shock, vibration, and reflow.
3. Field "Y" is Operating Temperature Range and Freq. Stability :
  - a. "1" for PECL Outputs
  - b. "2" for LVDS Outputs
4. Field "Z" is Operating Temperature Range and Freq. Stability :
  - a. "1" for Pin 1 Enable / Disable Function
  - b. "2" for Pin 2 Enable / Disable Function

## Part Number Example

XO3001-125.000000-2-1-1  
125.000000 MHz Operating Frequency  
Operating Temperature of -40 °C to +85 °C  
± 20 ppm Frequency Stability  
PECL Outputs  
Pin 1 for Enable / Disable (Pin 2 is NO CONNECT )