

WOC-LB Series Low Phase Noise OCXO  
Product Data Sheet

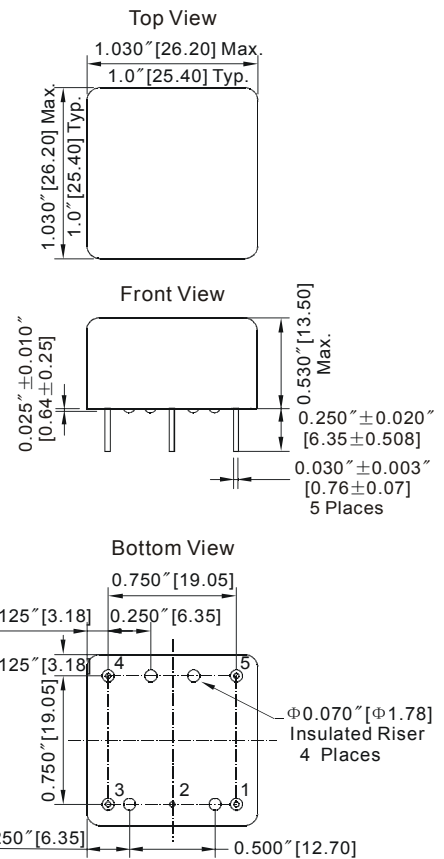
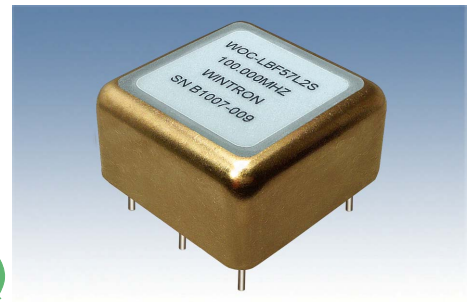
INNOVATION BEYOND IMAGINATION

**Features**

- SC-Cut Crystal
- High Stability(up to  $\pm 5 \times 10^{-9}$ )
- Low Aging( $1 \times 10^{-9}$ /Day,  $1 \times 10^{-7}$ /Year)
- Low Phase Noise
- Sinewave Output
- 4.8 MHz to 250 MHz Frequencies Available

**Applications**

- Telecommunications Systems, PCS Base Stations
- Data Communications, Synthesizers.
- GPS
- Instrumentation
- SARSAT Beacons, Microwave Sources, Synthesizers
- Navigation, Space, Wireless communications
- Battery Powered Systems and Equipment, Instrumentation



**Pin Function:**

Pin Functions:	
Pin No	FUNCTION
1	Output
2	Case Ground
3	Voltage Control
4	NC or Vref
5	Vcc

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Specification

Parameter	Symb	Condition	Min.	Typ.	Max.	Unit	Note
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*Absolute Maximum Ratings*

Input Break Down Voltage	Vcc		-0.5		+13.0	V	
Storage Temp.	Ts		-55		+125	°C	
Control Voltage	Vc		-1		+6.0	V	

*Electrical*

Frequency Range	F		4.8		250	MHz	
Nominal Freq.	Fn			100.000		MHz	Custom
Frequency Accur.	ΔF/F	25°C			±0.1	ppm	
Frequency Stability	ΔF/F	Vs. temp.1	±0.005		±0.5	ppm	See chart below
		Vs. temp.2					
		Vs. supply variation			±0.02	ppm	Vcc(±5%)
		Vs. load variation			±0.02	ppm	Load(±5%)
Operating Temp.	To		-55		+85	°C	
Aging		Per day Per year			2E-9 3E-7		After 30 days 1E-9 available
Allan Variance		For 1s			5E-11		
Output Waveform			Sinewave,50Ω				
Output Level			+7	+9	+12	dBm	
Load				50		Ω	
Harmonics Att.					-30	dBc	
Spurious Att.					-100	dBc	No spurious
SSB Phase Noise		100Hz / 10Hz 10KHz / 1KHz 1000KHz / 100KHz	-135/-105 -170/-160 -175/-172		-125/-95 -160/-150 -172/-170	dBc/Hz	
Retrace		After 30 minutes			±20	ppb	24 hours off
G-Sensitivity		Worst direction			±1.0	ppb/G	
Supply Voltage	Vcc		11.4	12.0	12.6	V	5V±5% Optional
Power Consumption	P	Steady state,25°C Warm-up, 25°C			1.5 3.5	W	
Warm-up Time		To ±0.1ppm accur.			5	minutes	
Frequency Adjustment	Vcon	EFC Voltage	0	2.5	5.0	V	At 12V
		EFC Range	±1.0			ppm	10KΩ input imped.
		Linearity			10	%	
		Deviation Slope				ppm/V	
		Input impedance	100			KΩ	
		Pin 1-Output; Pin 2- GND; Pin 3 -Voltage Control; Pin 4 -NC or Vref ; Pin 5 -Vcc					
Package		DIP(26.2×26.2×13.5)				mm	

All parameters for 100.000MHz

*Environmental and Mechanical*

Temperaure Cycle	Per MIL-STD-883E, Method 1010.7, Cond. B(-55°C to +125°C, 10-100 Cycles)
Mechanical Shock	Per MIL-STD-883E, Method 2002.4, Cond .B, 50G, 11mS, 3 cycles each plane
Vibration	Per MIL-STD-883E, Method 2007.3, Cond .A,10G, 10Hz to 2000Hz, 6 hours
Solvent Resistance	Per MIL-STD-883E, Method 2015.8
Lead Integrity	Per MIL-STD-883E, Method 2004
Leak Testing	Per MIL-STD-883E, Method 1014
Solderability	Per MIL-STD-883E, Method 2003
Soldering Condition	Leads temperature 260°C for 10s max,230°C for 30s max, SMD profile

Creating a Part Number

