BOVXK-XXXMXX-XXXB – 20x20 OCXO

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Oven Controlled Oscillator

FEATURES

- ✓ Surface Mountable Design
- ✓ High Stability vs. Temperature
- ✓ Quick Warm-Up Time
- ✓ Low Age Rates
- ✓ Low Phase Noise
- ✓ 20x20mm Package

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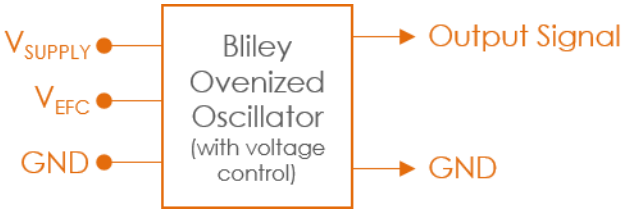
Description

Bliley high performance OXCO product offering is a result of 85 years in the Frequency Control Industry. Modern layout topologies enable Bliley to engineer and produce robust designs for all applications.

Block Diagram



Part Number Configuration

BOV__K-__M___-____B

Mounting	Center Frequency	Supply Voltage	EFC	Frequency vs. Temperature	Operating Range	Output Type
T: Through Hole S: SMT	5MHz to 100MHz	D: 3.3V E: 5V	N: N/A A: ±1ppm	D: ±20ppb E: ±50ppb	B: -20 to 70°C C: -40 to 85°C	A: Sine C: CMOS/TTL

*Not all combinations of options may be possible
**Other options may be available

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Performance Specifications

Parameter	Conditions	Values			Unit
		MIN	TYP	MAX	
Frequency Range		5		100	MHz
Initial Tolerance	@ +25°C±1°C			±100	ppb
Warm Up Time	To initial tolerance			3	Min
Frequency Stability					
vs. Temperature	See Options (Max) Referenced to +25°C		±20, ±50		ppb
vs. Load	± 5% Δ in Load		±2		ppb
vs. Supply Voltage	± 5% Δ in supply		±2		ppb
ADEV (Short Term Stability)	T = 1 second		5E-12		
Aging	After 30 Days Operation				
Per Day				±1.0	ppb
1st Year				±100	ppb
Supply Voltage (Vdd)	Option D	3.13	3.3	3.47	Vdc
	Option E	4.75	5	5.25	Vdc
Power Dissipation					
Start Up	@ +25°C			3	W
Steady State	@ +25°C		1.5		W
Electronic Frequency Control					
Voltage Range		0		Vdd	Vdc
Center Voltage			Vdd/2		Vdc
Frequency Range	See Options (Min)	±1			ppm
Slope			positive		
Input Impedance			100		kΩ
Linearity			10		%

Note: Values typical of 10MHz units

Performance Specifications

Parameter	Conditions	Values			Unit
Output Characteristics (CMOS/TTL)		MIN	TYP	MAX	
High Output Level	Logic "1"	90% Vdd			Vdc
Low Output Level	Logic "0"			10% Vdd	Vdc
Rise/Fall Time				10	nSec
Duty Cycle		45	50	55	%
Load			15		pF
Output Characteristics (Sinusoid)		MIN	TYP	MAX	
Output Level			9.0		dBm
VSWR	Into 50 Ω		1.5:1		
Harmonics				-30	dBc
Load		45	50	55	Ω

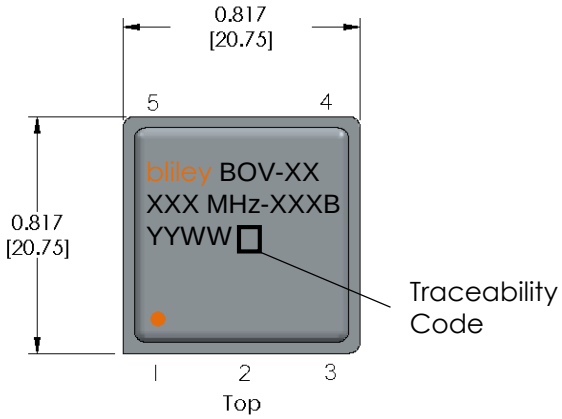
Parameter	Conditions	Values		Unit
Phase Noise		TYP	TYP	
Phase Noise (10 MHz)	Tested at +25°C	Sinusoid	CMOS	
	1Hz	-80	-80	dBc/Hz
	10Hz	-120	-120	dBc/Hz
	100Hz	-140	-140	dBc/Hz
	1kHz	-145	-145	dBc/Hz
	10kHz	-150	-150	dBc/Hz
	100kHz	-155	-155	dBc/Hz

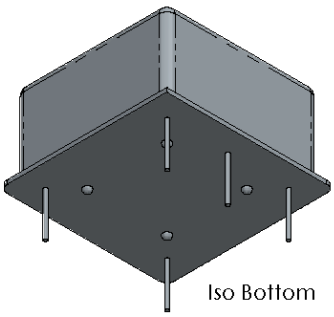
Note: Values typical of 10MHz units

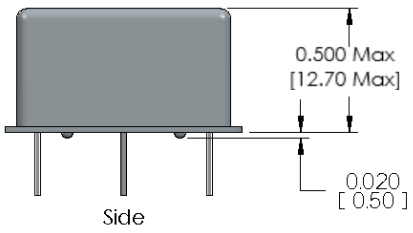
Environmental Compliance

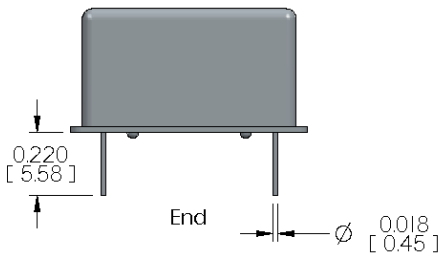
Parameter	Conditions	Values			Unit
		MIN	TYP	MAX	
Operating Temperature	Option B	-20		+70	°C
	Option C	-40		+85	°C
Storage Temperature		-40		+100	°C
Seal	MIL-STD-202 Method 112 Test Condition D				
Mechanical Shock	MIL-STD-202, Method 213, Test Condition J				
Vibration	MIL-STD-202, Method 201				

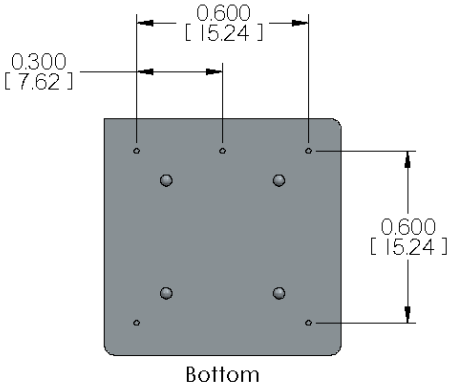
Physical Specifications (Through Hole)









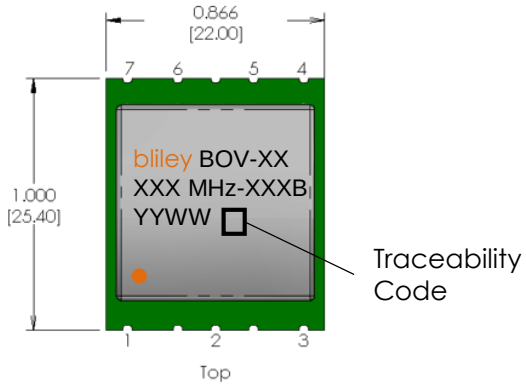


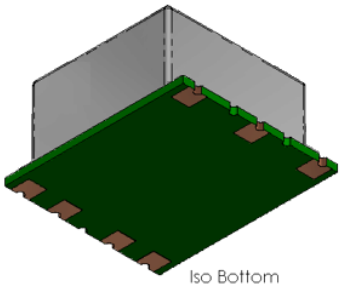
Tolerances (mm) .X = ± 0.5, .XX = ±0.2 unless otherwise specified

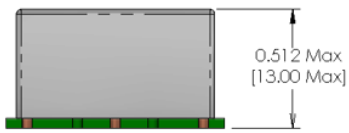
PIN	FUNCTION
1	Supply Voltage
2	RF Output
3	Ground
4	EFC/N.C.
5	N.C.

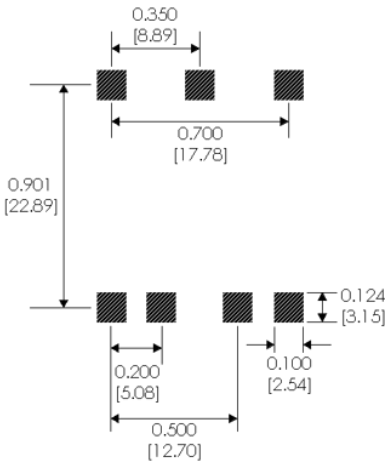
Notes:
- Non-RoHS available upon request

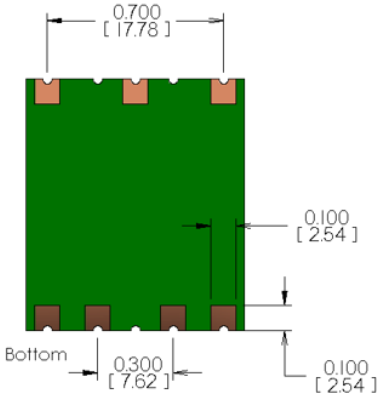
Physical Specifications (Surface Mount)











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