BVCT4-XXMXN-XXXXT – 14-pin DIP VCXO

bliley technologies

FEATURES

- ✓ Wide Operating Temperature Range
- ✓ Standard 14-Pin DIP Package
- ✓ Rugged Hermetically Sealed Package
- ✓ Mil-Std-202 Compliant

Voltage Controlled Oscillator

#blileytakesyoufurther

Description

Voltage Controlled Oscillators are designed to meet the rigorous demands of Military Standards as well as provide long life to OEM equipment manufacturers. Bliley Engineers Concurrent Design philosophy provides robust designs which are economical as well as reliable for long-term life. Applications consist of SATCOM, TELECOM, Military and Instrumentation.

Block Diagram

Part Number Configuration

BVCT4 – ___ M __ N – ___ ___ ___ __ T

Center Frequency	Supply Voltage	Frequency vs. Temperature	Operating Temperature	Output Type	EFC
1MHz to 200MHz	D: 3.3V E: 5V	B: ±50ppm D: ±20ppm E: ±10ppm	B: -20°C to 70°C C: -40°C to 85°C E: -55°C to 85°C	A: Sine C: CMOS/TTL	A: ±25ppm B: ±50ppm C: ±100ppm

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

Bliley Technologies, Inc. • 2545 W. Grandview Blvd, Erie, PA 16506 • 1-814-838-3571 • bliley.com • info@bliley.com

Performance Specifications

Parameter	Conditions	Values			Unit
		MIN	TYP	MAX	
Frequency Range		1		200	MHz
Frequency Stability					
vs. Temperature	See Options (Max) Referenced to +25°C		±10, ±20, ±50		ppm
vs. Load	5% Change			±1	ppm
vs. Supply Voltage	5% Change			±1	ppm
Perturbation	1°C Steps			±3	ppm
Aging	1st Year			±3	ppm
Supply Voltage	Option D	3.13	3.3	3.47	Vdc
	Option E	4.75	5	5.25	Vdc
Current Consumption	1MHz			20	mA
	50MHz			30	mA
	200MHz			50	mA
Electronic Frequency Control					
Voltage Range		0		Vdd	Vdc
Center Voltage			Vdd/2		
Frequency Range	See Options (Min)		±25, ±50, ±100		ppm
Slope			positive		
Input Impedance			100		kΩ
Linearity			10		%

Performance Specifications

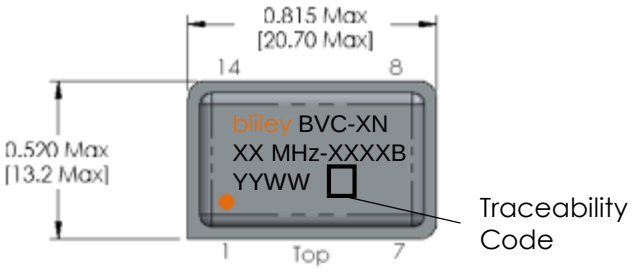
Parameter	Conditions	Values			Unit
Output Characteristics (CMOS)		MIN	TYP	MAX	
High Output Level	Logic "1"	90% Vdd			dBm
Low Output Level	Logic "0"			10% Vdd	dBm
Rise/Fall Time				10	nSec
Duty Cycle		40	50	60	%
Load				30	pF
Output Characteristics (Sine)		MIN	TYP	MAX	
Output Level	@3.3V		0		dBm
	@5V		10		dBm
Load			50		Ω

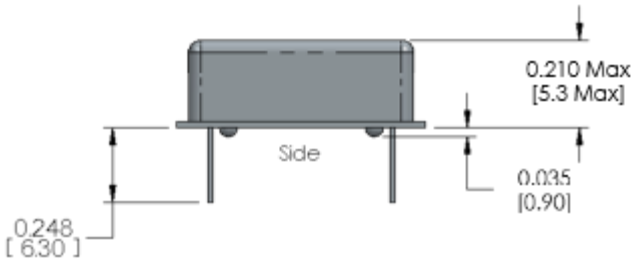
Parameter	Conditions	Values			Unit
Phase Noise		MIN	TYP	MAX	
Phase Noise (20MHz)	Offset				
	10Hz		-80		dBc/Hz
	100Hz		-115		dBc/Hz
	1kHz		-135		dBc/Hz
	10kHz		-140		dBc/Hz
	100kHz		-145		dBc/Hz

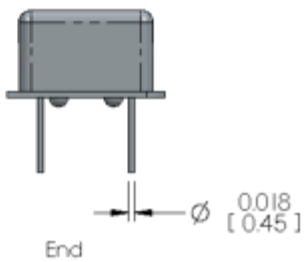
Environmental Compliance

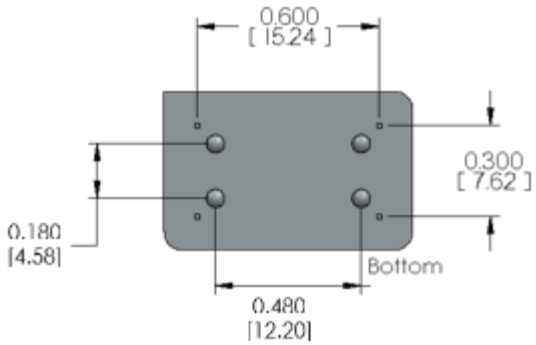
Parameter	Conditions	Values			Unit
		MIN	TYP	MAX	
Operating Temperature	Option B	-20		+70	°C
	Option C	-40		+85	°C
	Option D	-55		+85	°C
Storage Temperature		-55		+125	°C
Solderability	MIL-STD-202 Method 208				
Shock	MIL-STD-202 Method 213 Test Condition A				
Vibration	MIL-STD-202 Method 204 Test Condition C				
Seal	MIL-STD-202 Method 112 Test Condition C & D				

Physical Specifications









PIN	FUNCTION
1	EFC
7	Ground
8	RF Output
14	Supply Voltage

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

Notes
1) None