BOCT4-XXMXX-XXXB – Crystal Oscillator

bliley technologies

FEATURES

✓ Standard 14-pin DIP Package
✓ Mil-Std-202 Compliant

Avionics Grade Crystal Oscillator

#blileytakesyoufurther

Description

Bliley Crystal Oscillator are designed to meet the rigorous demands of QPL 55310. Bliley's single vertically integrated factory of Crystal and Oscillator Engineering allows quick-turn samples of custom frequencies to support short-term design cycle-times. Applications consisting of: Military, Instrumentation, SATCOM, and Telecommunications.

Block Diagram

Part Number Configuration

BOCT4 – ____ M __ __ – __ __ __ B

Center Frequency	Supply Voltage	Output Control	Frequency vs. Temperature	Operating Temperature	Output Type
1MHz to 800MHz	D: 3.3V E: 5V	N: N/A E: Enable T: Tri-state	A: ±25ppm B: ±50ppm C: ±100ppm	B: -20°C to +70°C C: -40°C to +85°C D: -55°C to +125°C	C: CMOS D: HCMOS

*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
General		MIN	TYP	MAX	
Frequency Range		1		800	MHz
Frequency Stability					
Vs. Temperature(1°C Steps)	See Options (Max) Referenced to +25°C		±25, ±50, ±100		ppm
Perturbation*				±3	ppm
Aging	1st Year			±3	ppm
Supply Voltage(Vdd)	Option D	2.97	3.3	3.63	Vdc
	Option E	4.75	5	5.25	Vdc
Current Consumption	1MHz			25	mA
	50MHz			50	mA
	800MHz			100	mA
Output Control	Enabled-High Disabled-Low				
Startup Time				5	mSec
Moisture Sensitivity Level	1				

*Frequency variation from the fitted curve

Performance Specifications

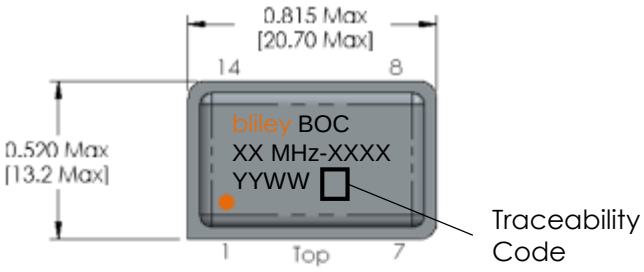
Parameter	Conditions	Values			Unit
Output Characteristics (CMOS)		MIN	TYP	MAX	
High Output Level	Logic "1"	90% Vdd			Vdc
Low Output Level	Logic "0"			10% Vdd	Vdc
Rise/Fall Time	10% ↔ 90%			10	nSec
Duty Cycle		40	50	60	%
Load			15	50	pF

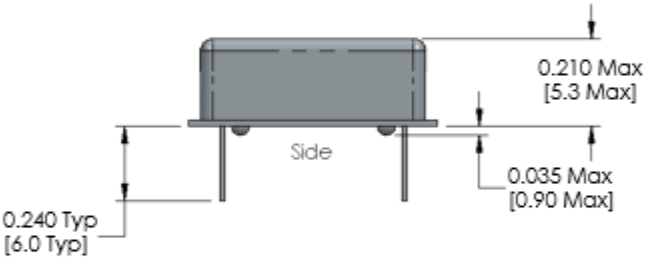
Parameter	Conditions	Values			Unit
Phase Noise (100MHz)		MIN	TYP	MAX	
Phase Noise	Tested at +25°C				
	10Hz		-75		dBc/Hz
	100Hz		-90		dBc/Hz
	1KHz		-110		dBc/Hz
	10kHz		-118		dBc/Hz
	100kHz		-125		dBc/Hz
	1MHz		-138		dBc/Hz
Phase Jitter (RMS)	12KHz-20MHz		1		pSec

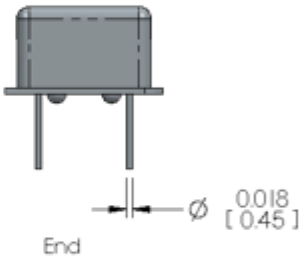
Environmental Compliance

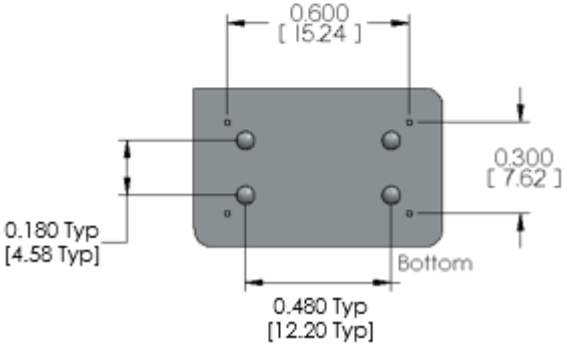
Parameter	Conditions	Values			Unit
		MIN	TYP	MAX	
Operating Temperature	Option B	-20		+70	°C
	Option C	-40		+85	°C
Storage Temperature		-55		+125	°C
Solderability	MIL-STD-202 Method 208				
Solvent Resistance	MIL-STD-202 Method 215				
Shock	MIL-STD-202 Method 213 Test Condition A				
Vibration	MIL-STD-202 Method 204 Test Condition B				
Temperature Cycling	MIL-STD-202 Method 107 Test Condition A				
Seal	MIL-STD-202 Method 112 Test Condition C & D				

Physical Specifications









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

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

Notes