

**FEATURES**

- ✓ Stratum 3 level frequency stability
- ✓ Low Phase Noise Performance
- ✓ SMD Construction
- ✓ Standard 5x7mm Package
- ✓ Tape and Reel Compatibility

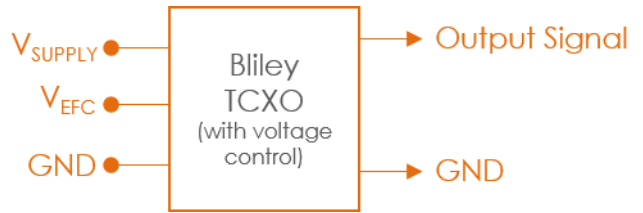
Temperature Controlled Crystal Oscillator

#blileytakesyoufurther

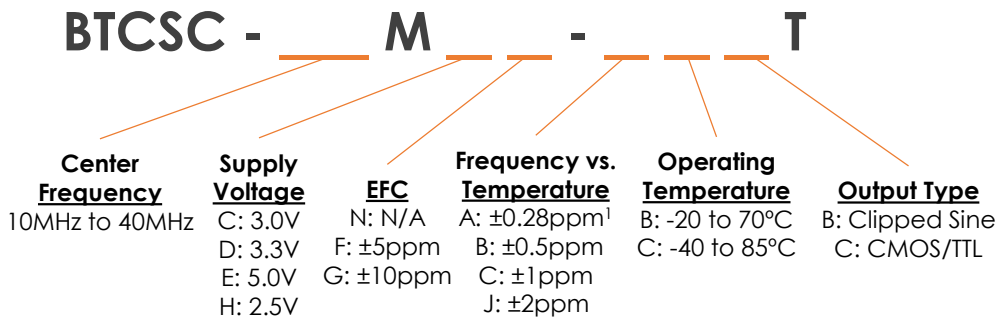
**Description**

Bliley TCVCXO's are capable of meeting Frequency vs. Temperature stabilities which rival traditional "Ovenized Oscillator" Technology. This coupled with design topologies meeting the harshest Mil-Standards makes Bliley TCXO's the choice of many system designers for mobile equipment.

**Block Diagram**



**Part Number Configuration**



\*Not all combinations of options may be possible  
 \*\*Other options may be available      1: 0.28ppm only available for temp range B

## Performance Specifications

Parameter	Conditions	Values			Unit
		MIN	TYP	MAX	
Frequency Range		10		40	MHz
Initial Frequency Tolerance <sup>1</sup>	Tested at +25°C			±2	ppm
Frequency Stability	Overall			±4.6	ppm
vs. Temperature	See Options (Max) Referenced to +25°C	±0.28, ±0.5, ±1, ±2			ppm
vs. Load	10% Change			±0.3	ppm
vs. Supply Voltage	5% Change			±0.3	ppm
Aging	1 <sup>st</sup> Year			±1.0	ppm
Supply Voltage	Option H	2.37	2.5	2.63	Vdc
	Option C	2.85	3.0	3.15	Vdc
	Option D	3.13	3.3	3.47	Vdc
	Option E	4.75	5.0	5.25	Vdc
Current Consumption (CMOS)	< 40MHz			6	mA
	> 40MHz			40	
Current Consumption(Clipped Sine)	9.6 to 15MHz		1.5		mA
	15.01 to 26MHz		2.0		
	26.01 to 40MHz		2.5		
Tristate	Enable High Disable Low				
Start-up Time			5	10	mSec
Electronic Frequency Control					
Voltage Range		0.5	1.5	2.5	Vdc
Frequency Range	See Options (Min)		±5, ±10		ppm
Slope			positive		
Input Impedance			100		kΩ
Linearity			10		%
Moisture Sensitivity Level	1				

1: Initial tolerance only applicable to parts without EFC/voltage control

**DISCLAIMER:** Bliley Technologies, Inc. reserves the right to make changes to the product(s) and or information contained herein without notice. No liability is assumed as a result of their use or application. No intellectual property rights accompany the sale or delivery of any such product(s) or information.

## Performance Specifications

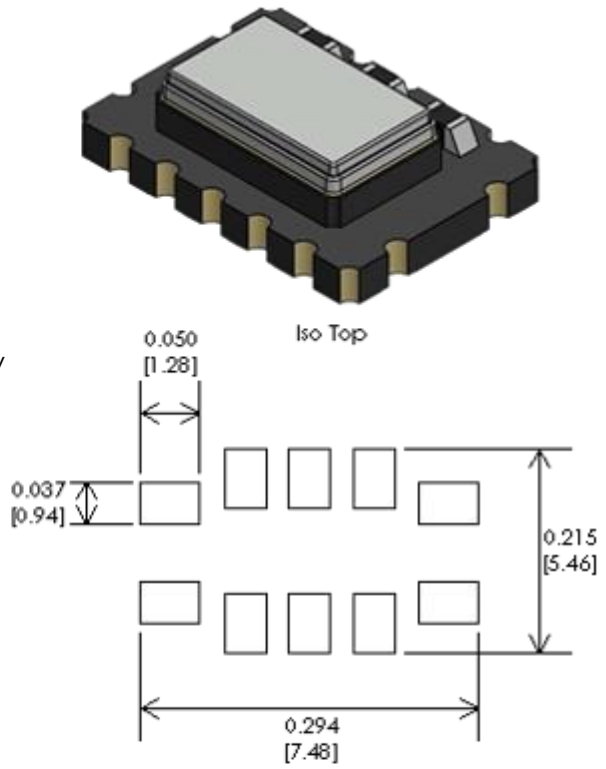
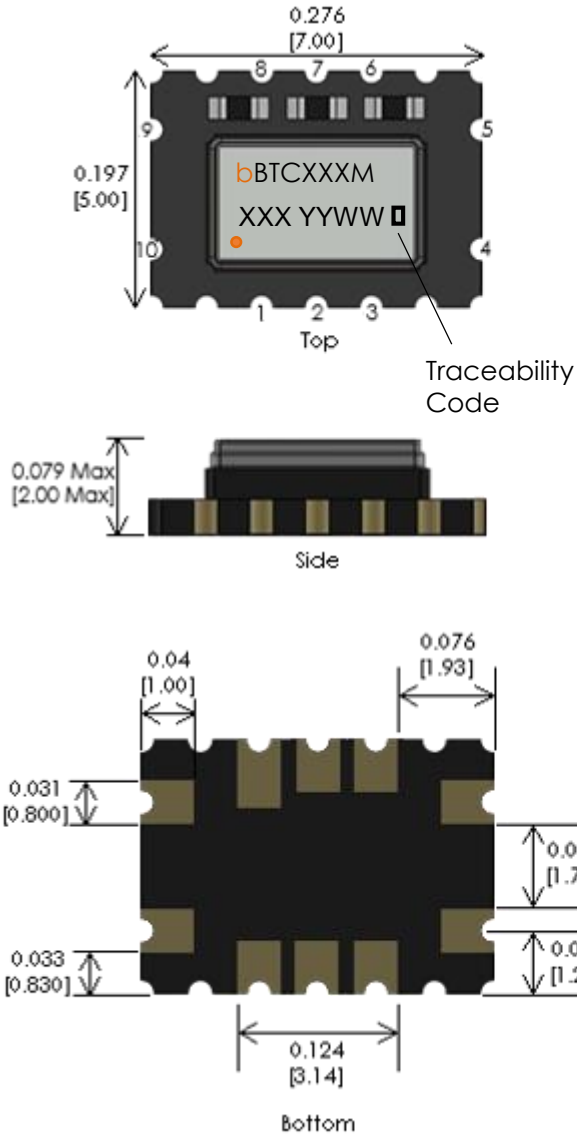
Parameter	Conditions	Values			Unit
		MIN	TYP	MAX	
Output Characteristics (CMOS/TTL)					
High Output Level	Logic "1"	90% Vdd			Vdc
Low Output Level	Logic "0"	10% Vdd			Vdc
Rise/Fall Time		10			nSec
Duty Cycle		45	50	55	%
Load		15			pF
Output Characteristics (Clipped-Sine)					
Output Level		0.8			Vp-p
Load	±10%	10 KΩ//10 pf			

Parameter	Conditions	Values			Unit
		MIN	TYP	MAX	
Phase Noise					
Phase Noise (10 MHz)	Tested at +25°C	TYP			
	10Hz	-90			dBc/Hz
	100Hz	-120			dBc/Hz
	1kHz	-140			dBc/Hz
	10kHz	-155			dBc/Hz
	100kHz	-155			dBc/Hz

## 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 I				
Vibration	MIL-STD-202 Method 204 Test Condition C				
Thermal Shock	MIL-STD-202 Method 107 Test Condition B-1				
Seal	MIL-STD-202 Method 112 Test Condition C & D				

# Physical Specifications



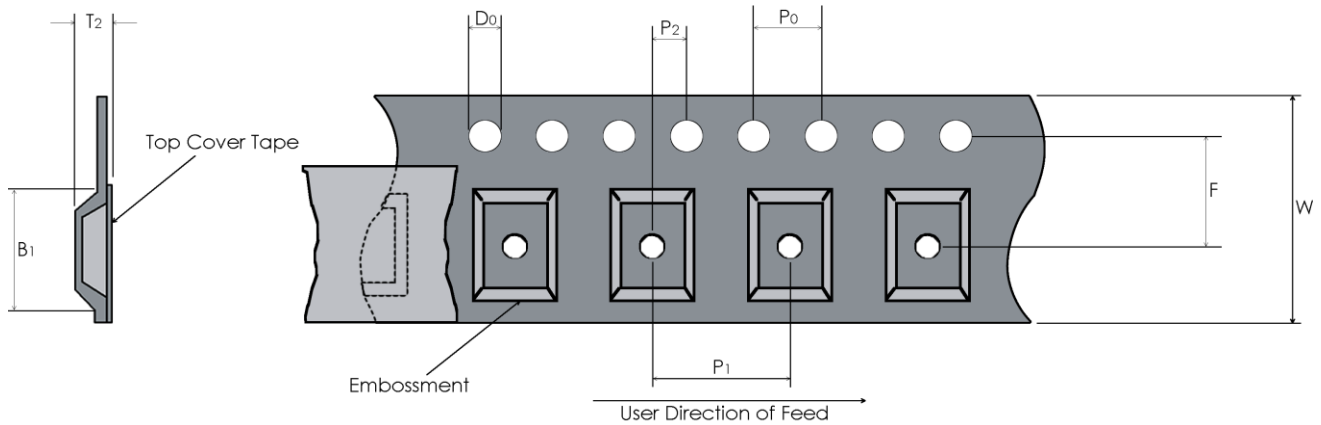
PIN	FUNCTION
1,2,3,6,7	N.C.
4	Ground
5	RF Output
8	Tri-state/N.C.
9	Supply Voltage
10	EFC/N.C./Ground

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

Notes:  
 Connection Pads: Gold(10-40 μ in.) over Nickel (100-250 μ in.)

## Tape and Reel

Embossed Carrier Dimensions (8mm, 12mm, 16mm, 24mm Tape Only)



Tape Dimensions (mm)				Reel Dimensions (mm)					
W	F	Do	Po	P1	P2	B1	T2	Outside Dia.	Parts / Reel
16	7.5	1.5	4.0	8	2.0	7.6	2.4	180	1,000

## Recommended Reflow Profile

**Reflow Profile:** in accordance to IPC/JEDEC J-STD-020 (Latest Revision)

**Additional Notes:**

- This part has been designed for pick and place reflow soldering
- This part may be reflowed once
- This part should not be reflowed in the inverted position

## Packaging

**Packaging:** All packaging must conform to ESD Controls detailed in ANSI/ESD S20.20 (Latest Revision)