

**FEATURES**

- ✓ High Stability vs Temperature
- ✓ Standard 5.0x7.0mm Package
- ✓ SMD Construction
- ✓ Tape and Reel Compatibility

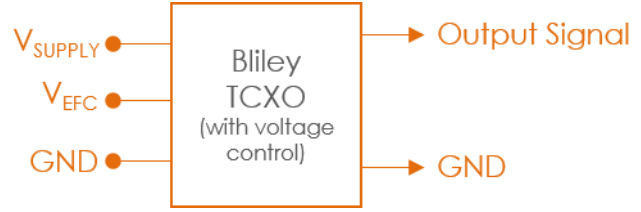
**Temperature Controlled Crystal Oscillator**

**#blileytakesyoufurther**

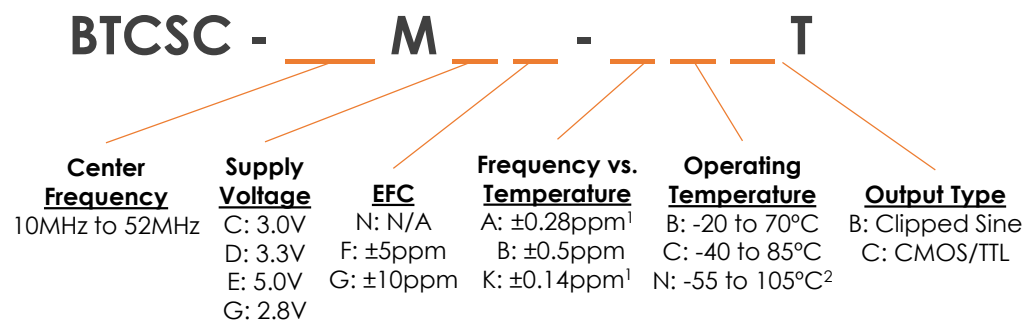
**Description**

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: Not available for temp range N    2: -55 to -40 has wider stability

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## Performance Specifications

Parameter	Conditions	Values			Unit
		MIN	TYP	MAX	
Frequency Range	Fundamental	10		52	MHz
Initial Frequency Tolerance <sup>1</sup>	Tested at +25°C			±2	ppm
Frequency Stability	Overall			±4.6	ppm
vs. Temperature	See Options (Max) (Max+Min)/2	±0.28, ±0.5, ±0.14			ppm
	-55°C to -40°C <sup>2</sup>			±3	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 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
	Option G	2.66	2.8	2.94	Vdc
Current Consumption (CMOS)				5	mA
Current Consumption (Clipped Sine)				10	mA
Tristate	Enable High Disable Low				
Start-up Time			2.5	5	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

2: Applies to operating range N

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## Performance Specifications

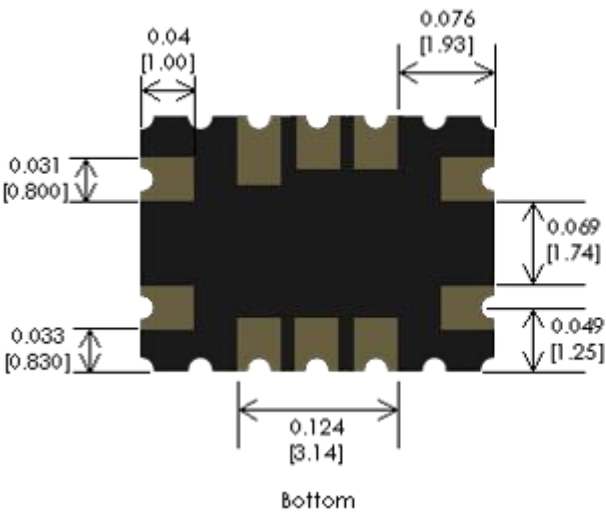
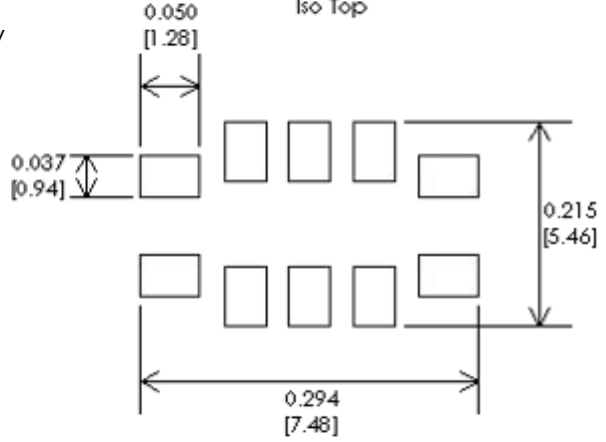
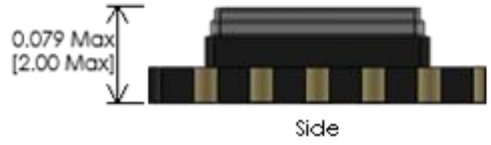
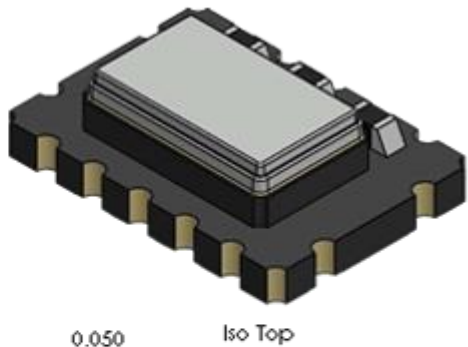
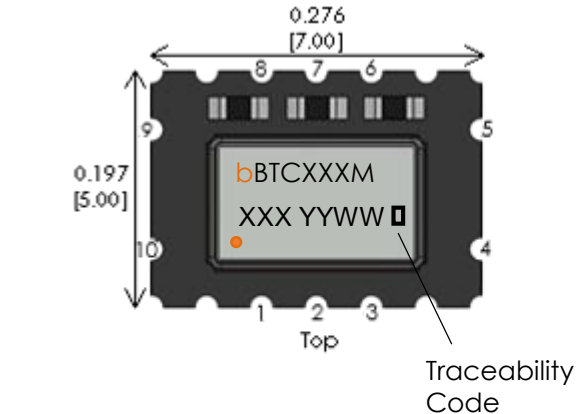
Parameter	Conditions	Values			Unit
		MIN	TYP	MAX	
Output Characteristics (CMOS/TTL)					
High Output Level	Logic "1"	90% Vdd			Vdc
Low Output Level	Logic "0"	10% Vdd			Vdc
Rise/Fall Time		10			mSec
Duty Cycle		45	50	55	%
Load		15			pF
Output Characteristics (Clipped-Sine)					
Output Level		0.8			Vp-p
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	-80			dBc/Hz
	100Hz	-110			dBc/Hz
	1kHz	-130			dBc/Hz
	10kHz	-145			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 N	-55		+105	°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



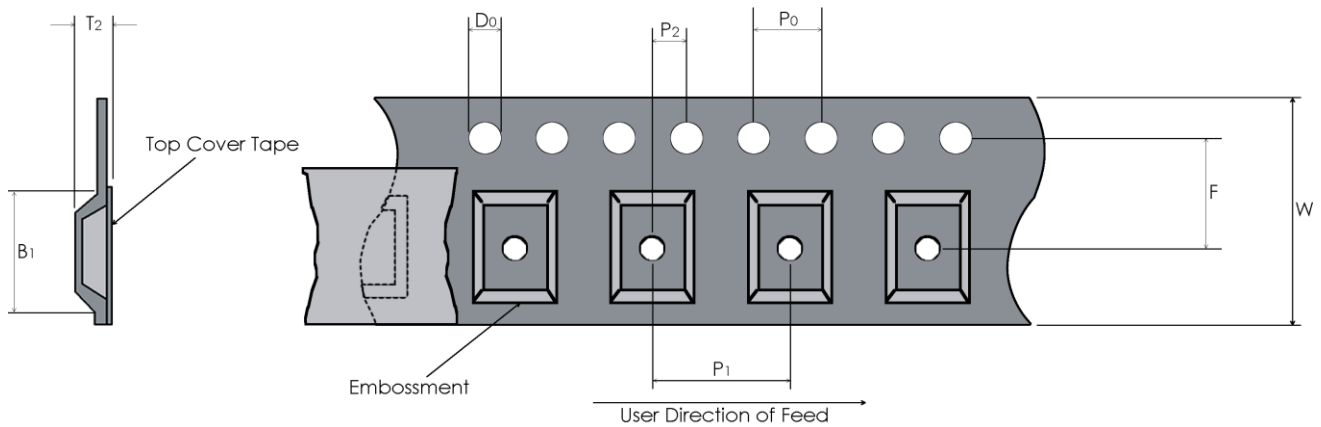
PIN	FUNCTION
1,2,3,6,7	N.C.
4	Ground
5	RF Output
8	Tri-state/N.C.
9	Supply Voltage
10	EFC/N.C./Ground

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 twice

# Packaging

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