

FEATURES

- ✓ SMD Construction
- ✓ Standard 3.2 x 2.5mm Package Size
- ✓ Mil-Std-202 Compliant

Avionics Grade Crystal Oscillator

#blileytakesyoufurther

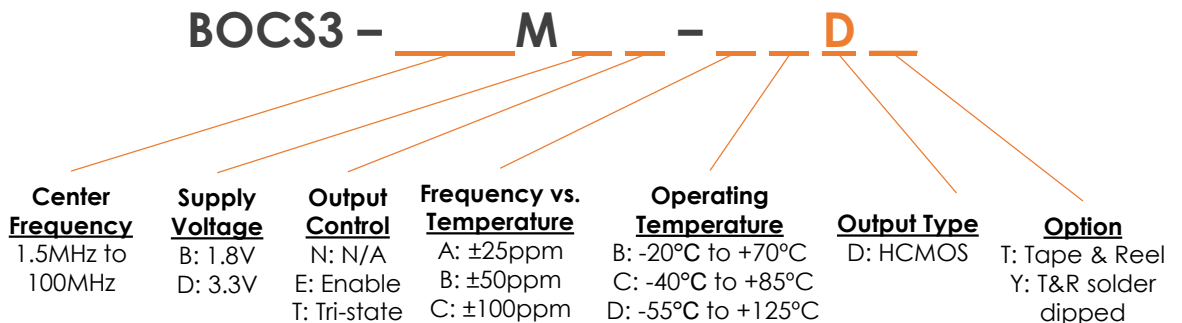
Description

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



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

Performance Specifications

Parameter	Conditions	Values			Unit
		MIN	TYP	MAX	
General		MIN	TYP	MAX	
Frequency Range		1.5		100.0	MHz
Frequency Stability					
Vs. Temperature(1°C Steps)	See Options (Max) Referenced to +25°C		±25, ±50, ±100		ppm
Perturbation*				±3	ppm
Aging	1 st Year			±3	ppm
Supply Voltage(Vdd)	Option B	1.62	1.8	1.98	Vdc
	Option D	2.97	3.3	3.63	Vdc
Current Consumption	1.5 – 10MHz			10	mA
	10 – 39MHz			20	mA
	40 – 60MHz			30	mA
	60 – 100MHz			40	mA
Output Control	Enabled-High Disabled-Low				
Phase Jitter (RMS)	12KHz-20MHz			1	pSec
Startup Time				5	mSec
Moisture Sensitivity Level	1				

*Frequency variation from the fitted curve

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Performance Specifications

Parameter	Conditions	Values			Unit
		MIN	TYP	MAX	
Output Characteristics (HCMOS)					
High Output Level	Logic "1"	90% Vdd			Vdc
Low Output Level	Logic "0"	10% Vdd			Vdc
Rise/Fall Time	10% ↔ 90%	4			nSec
Duty Cycle		45	50	55	%
Load		15			pF

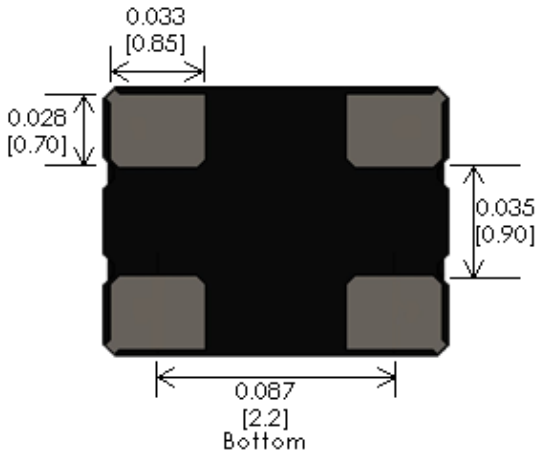
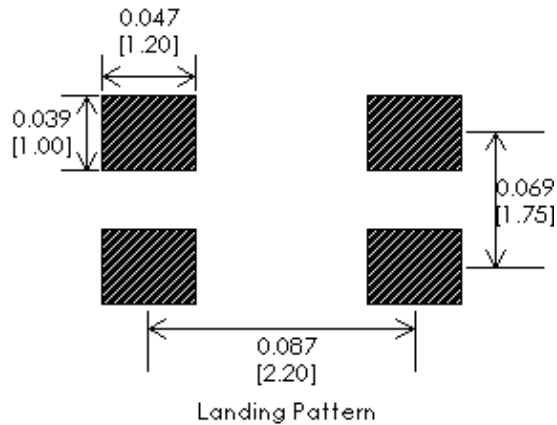
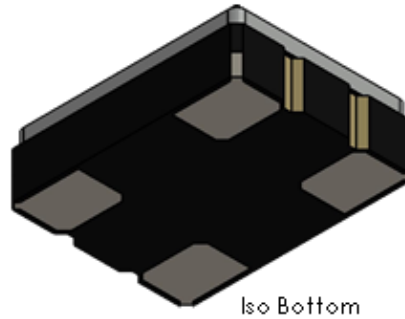
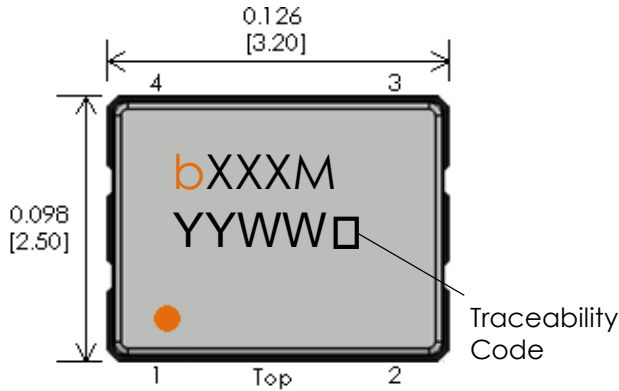
Parameter	Conditions	Values			Unit
		MIN	TYP	MAX	
Phase Noise (100MHz)					
Phase Noise	Tested at +25°C				
	1Hz	-45			dBc/Hz
	10Hz	-75			dBc/Hz
	100Hz	-105			dBc/Hz
	1KHz	-125			dBc/Hz
	10kHz	-135			dBc/Hz
	100kHz	-140			dBc/Hz
Phase Jitter (RMS)	12KHz-20MHz	1			pSec

Environmental Compliance

Parameter	Conditions	Values			Unit
		MIN	TYP	MAX	
Operating Temperature	Option B	-20		+70	°C
	Option C	-40		+85	°C
	Option D	-55		+125	°C
Storage Temperature		-55		+125	°C
Solderability	MIL-STD-202 Method 208				
Solvents Resistance	MIL-STD-202 Method 215				
Shock	MIL-STD-202 Method 213 Test Condition I				
Vibration	MIL-STD-202 Method 204 Test Condition C & D				
Thermal Shock	MIL-STD-202 Method 107 Test Condition B-1				
Seal	MIL-STD-202 Method 112 Test Condition C & D				
Powered Burn In	MIL-STD-883 Method 1015 Test Condition B +125C for 168 hrs				

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Physical Specifications



PIN	FUNCTION
1	Output Control
2	Ground
3	RF Output
4	Supply Voltage

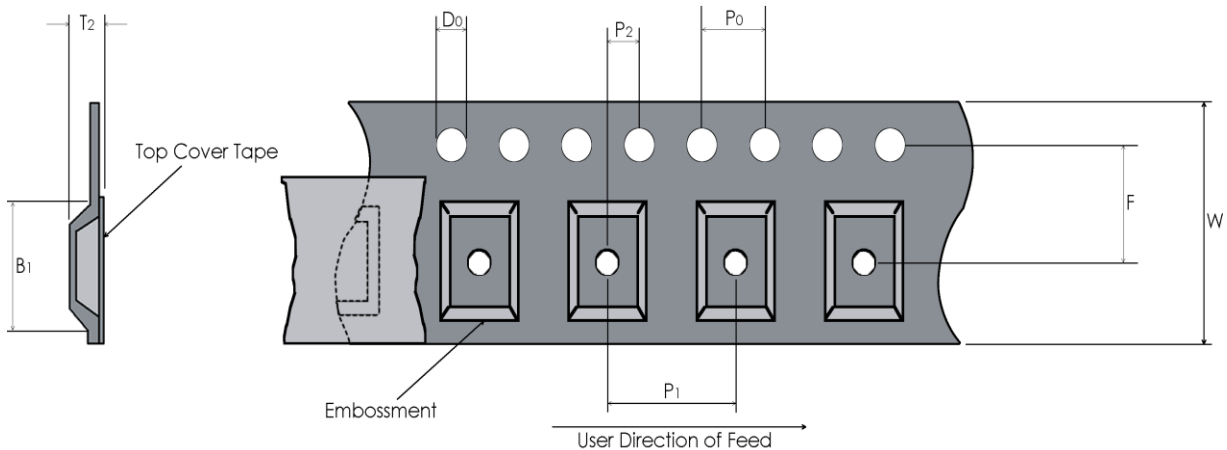
Tolerances (mm) .X = ± 0.5, .XX = ± 0.2 unless otherwise specified



Notes
 Connection Pads:
 • Gold(10-40 μ in.) over Nickel (100-250 μ in.)
 • Solder dipped (Sn60/Pb40 3% lead min) upon request

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
8	5.25	1.5	4.0	4.0	2.0	3.5	1.8	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)

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