



**FEATURES**

- ✓ SMD Construction
- ✓ Standard 1.6x1.2mm Package Size
- ✓ High Stability Over Temp

Crystals

#blileytakesyoufurther

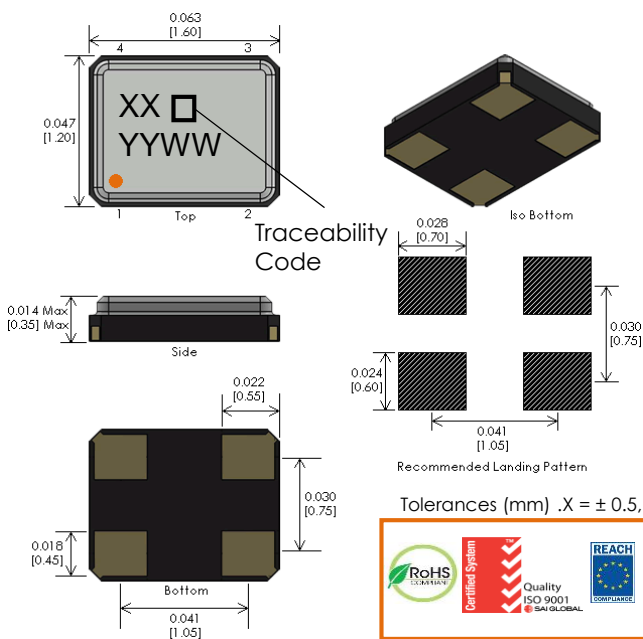
**Part Number Configuration**

BQCSN - M - T

<b>Center Frequency</b> 24MHz to 54MHz	<b>Mode</b> F: Fund	<b>Frequency Stability</b> B: ±50ppm D: ±20ppm F: ±15ppm	<b>Operating Temperature</b> B: -20°C to +70°C C: -40°C to +85°C	<b>Setting Tolerance</b> B: ±10ppm D: ±20ppm S: Specify	<b>Load Capacitance</b> A: 8pF F: 18pF G: 20pF S: Specify
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\*Not all combinations of options may be possible  
\*\*Other options may be available

**Physical Specifications**



PIN	FUNCTION
1	Crystal
2	Ground
3	Crystal
4	Ground

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



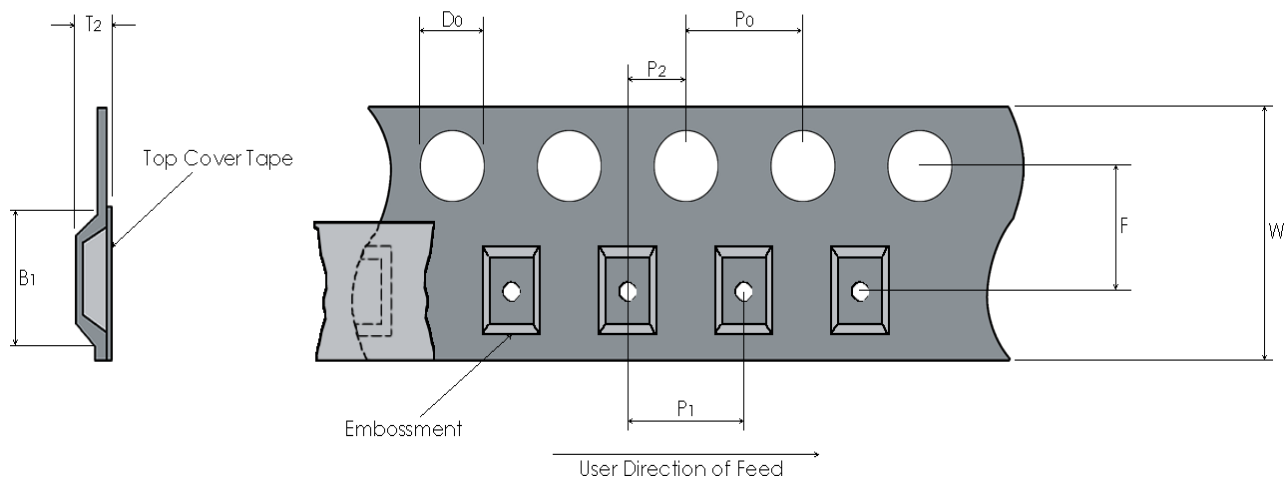
- Notes
- 1) Connection Pads: Gold(10-40 μ in.) over Nickel (100-250 μ in.)
  - 2) Weight = 1.5gms typical

## Performance Specifications

Parameter	Conditions	Values	Unit
Frequency Range		24.0 – 54.0	MHz
Frequency Tolerance	@ + 25°C	±50 Max (see options)	ppm
Frequency Stability		±100 Max (see options)	ppm
Aging	Max 1 <sup>st</sup> Year	±3.0	ppm
Equivalent Series Resistance (max)	24.0 – 30.0 MHz	150	Ω
	30.0 – 39.0 MHz	100	Ω
	40.0 – 54.0 MHz	80	Ω
Insulative Resistance	Min @ 100Vdc ±15Vdc	500	MΩ
Drive Level		10 Typ, 100 Max	μW
C0 (Shunt Capacitance)	Max	5.0	pF
CL (Load Capacitance)	Per Option (typical)	6-20 (see options)	pF
DLD	50nW to 100μW	±10 Max	ppm
RLD	50nW to 100μW	20% Max	Ω
Operating Temp Range		-20 to +70 / -40 to +85	°C
Storage Temp Range		-55 to +125	°C
Sealing Method		Seam Weld	
Moisture Sensitivity Level	1		

## Tape and Reel

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



Tape Dimensions (mm)							Reel Dimensions (mm)		
W	F	$D_0$	$P_0$	$P_1$	$P_2$	$B_1$	$T_2$	Outside Dia.	Parts / Reel
8	3.5	1.5	4.0	4	2.0	1.8	0.6	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)