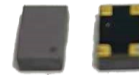


## Features

- Ultra Stable
- Wide Temperature Range
- SMD Package(5.2x3.4mm)
- Provide Stratum III Level Frequency Stability

## Applications

- Base Stations
- Instrumentations
- Synthesizer
- SDH/SONET
- Medical Electronics



## BT0503D Specifications

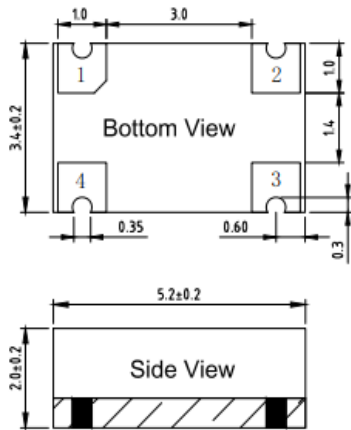
Parameter	Value			Unit	Conditions	
	Min.	Typ.	Max.			
Supply Voltage	-	3.3	-	V		
	-	5	-	V		
Supply Current	3	-	6	mA		
Frequency Range	10~52			MHz		
Nominal Frequency	10, 16.384, 19.2, 20, 24.576, 25, 26, 30.72, 40, 50			MHz		
Initial Frequency Tolerance	±0.5	-	±1.5	ppm	At shipment, nominal EFC, +25°C	
Freq. Stability Vs. Temp.	±0.2	-	±1.5	ppm	-20°C~+70°C	
	±0.28	-	±1.5	ppm	-40°C~+85°C	
	±1.0	-	±2.5	ppm	-50°C~+90°C (Current:10mA)	
	±2.5	-	±3.5	ppm	-55°C~+95°C (Current:10mA)	
Clipped Sine Wave	Output Level	0.8	-	Vp-p		
	Load	10kΩ/10pF				
HCMOS	V <sub>OH</sub>	2.4	-	-	V	HCMOS Output, Load=15pf
	V <sub>OL</sub>	-	-	0.4	V	HCMOS Output, Load=15pf
	Duty Cycle	45	-	55	%	(V <sub>OH</sub> - V <sub>OL</sub> )/2
	Rise/Fall Edge	-	-	6	ns	HCMOS Output, Load=15pf
	Load	-	-	15	pf	
RMS Jitter(By E5052B)	-	-	1.3	ps	12KHz~5MHz	
Supply Sensitivity	-	-	±0.1	ppm	V <sub>cc</sub> ±5%	
Load Sensitivity	-	-	±0.2		Load±5%	
Aging/ First Year	-	-	±1.0		Standard	
	±0.3	-	±0.8		Customized	
SSB Phase Noise @10MHz	-	-	-75	dBc/Hz	Offset 10Hz	At +25°C
	-	-	-105		Offset 100Hz	
	-	-	-125		Offset 1kHz	
	-	-	-140		Offset 10kHz	
	-	-	-145		Offset 100kHz	
Tuning Slope	positive					
Non-linearity	-	-	10	%		
Phase Noise @1KHz						
Frequency Range	<-125dBc	<-130dBc	<-135dBc	<-140dBc	O=Available X= Not Available	
10MHz	O	O	O	O		
12.8~20MHz	O	O	O	X		
20.48~38.4MHz	O	O	X	X		
40MHz	O	X	X	X		

### Environmental Conditions

Operating Temperature Range	-40°C ~ +85°C
Storage Temperature Range	-55°C ~ +125°C

### Outline Dimension & Pin Connections

Package D:



Pin Connections

Pin1	Vcont
Pin2	GND
Pin3	Output
Pin4	Vcc

**Note:** Leave pin 1 unconnected if Vcon is not used.

### Maximum Ratings

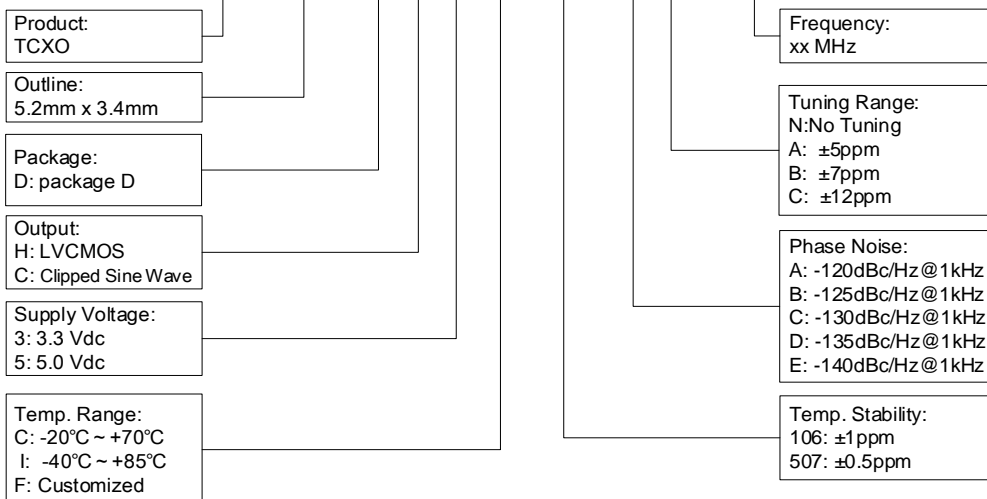
Parameter	Symbol	Rating
Supply Voltage	Vdd	-0.5V / 6V
Control Voltage	Vcon	0V / 3V
ESD, HBM/CDM/MM		4KV/ 2KV/ 200V

### Reliability

Parameter	Condition
Temperature Stress Test	IEC60068, GJB360B
Mechanical Stress Test	IEC60068, GJB360B
EMC Test (ESD)	IEC61000, JESD22
Solderability	EIA/JESD22-B102-C
Contact Pads	Gold over Nickel
RoHS	RoHS Directive 2011/65/EU Annex II Recasting 2002/95/EC

### Ordering Guide

**BT 0503 X X X X XXX X X XX.XX**



**Example:** BT0503DH3C106CA30.72