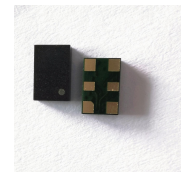


**Features**

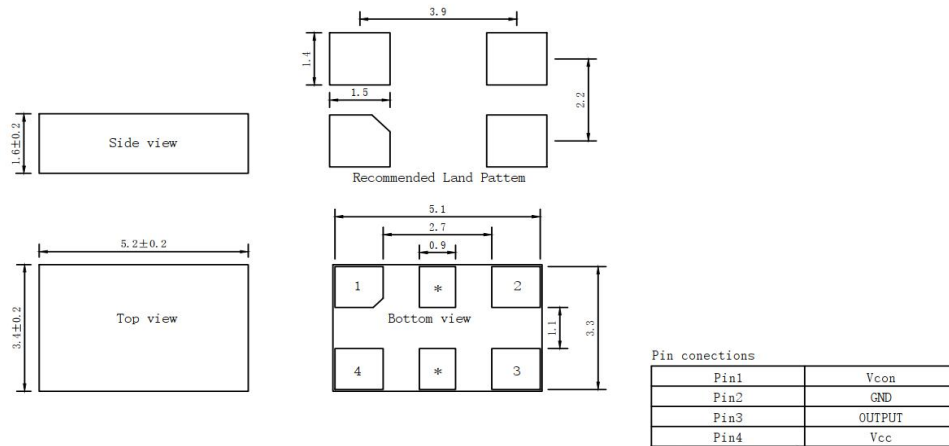
- Ultra Stable
- Wide Temperature Range
- SMD Package (5.2×3.4mm)
- Provide Stratum III Level Frequency Stability

**Applications**

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


**BT0503 Specifications**

Parameter	Value			Unit	Conditions	
	Min.	Typ.	Max.			
Supply Voltage	–	3.3	–	V		
	–	5	–	V		
Supply Current	3.5	–	10	mA		
Frequency Range	10 ~ 52			MHz		
Nominal Frequency	10, 12.8, 13, 15.36, 16, 16.32, 16.384, 19.2, 20, 24.576, 25, 26, 30.72, 40, 50			MHz		
Initial Frequency Tolerance	±0.3	±0.5	±1	ppm	At shipment, nominal EFC, +25°C	
Freq. Stability Vs. Temp.	±0.05	–	±0.5	ppm	-20°C~+70°C	
	±0.1	–	±0.5	ppm	-40°C~+85°C	
	±0.2	–	±1.0	ppm	-50°C~+90°C	
	±0.5	–	±1.0	ppm	-55°C~+95°C (except for 10MHz)	
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)	0.4	–	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	
SSB Phase Noise @10MHz	–	–	-92	dBc/Hz	Offset 10Hz	At +25°C
	–	–	-120		Offset 100Hz	
	–	–	-140		Offset 1kHz	
	–	–	-145		Offset 10kHz	
	–	–	-150		Offset 100kHz	
Control Voltage Range	1.5 ± 1.0			V		
Frequency Turning Range	±5	–	±12	ppm		
Tuning Slope	positive					
Non-linearity	–	–	10	%		

**Outline Dimension & Pin Connections**


1. The pins with "\*" are for factory test.
2. Leave pin 1 unconnected if Vcon is not used.

**Environmental Conditions**

Operating Temperature Range	-55°C ~ +95°C
Storage Temperature Range	-55°C ~ +125°C

**Maximum Ratings**

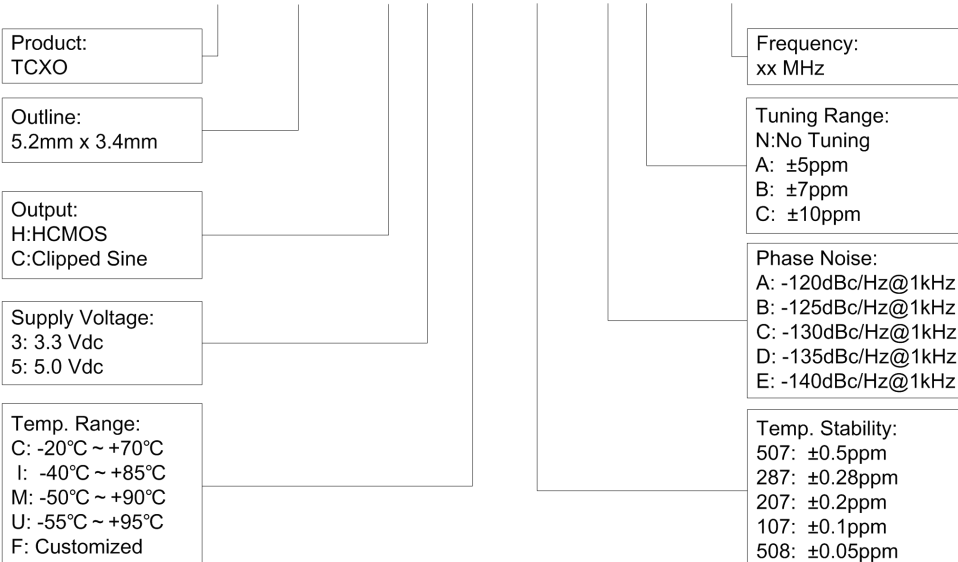
Parameter	Symbol	Rating
Supply Voltage	Vdd	-0.5V / 6V
Control Voltage	Vcon	0V / 3V
ESD, HBM/CDM/MM		4KV/ 2KV/ 200V

**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 0503C X X X XXX X X XX.XX**



**Example:** BT0503CH3M287DN50