

**Features**

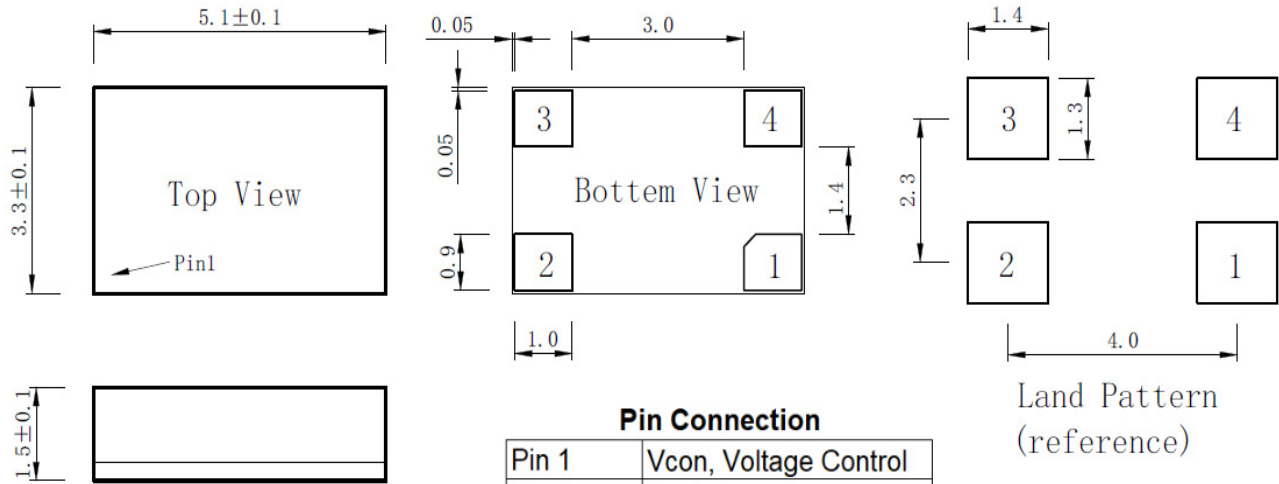
- Ultra Stable
- Wide Temperature Range
- SMD Package (5.0x3.2mm)

**Applications**

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


**BT0503B Specifications**

Parameter	Value			Unit	Conditions	
	Min.	Typ.	Max.			
Supply Voltage	–	3.3	–	V		
Supply Current	1.5	–	2.5	mA		
Frequency Range	10~ 52			MHz		
Nominal Frequency	10, 19.2, 20, 25, 26, 30.72, 40			MHz		
Initial Frequency Tolerance	-	–	±1.0	ppm	At shipment, nominal EFC, +25°C	
Freq. Stability Vs. Temp.	±0.5	–	±1.0	ppm	-40°C ~ +85°C	
Clipped Sine Wave	Output Level	0.8	–	Vp-p		
	Load	10kΩ//10pF				
LVCMOS	V <sub>OH</sub>	0.8V <sub>dd</sub>	–	V	LVCMOS Output, Load=15pf	
	V <sub>OL</sub>	–	–	0.2V <sub>dd</sub>	LVCMOS Output, Load=15pf	
	Duty Cycle	45	–	55	%	(V <sub>OH</sub> - V <sub>OL</sub> )/2
	Rise/Fall Edge	–	–	6	ns	LVCMOS Output, Load=15pf
	Load	–	–	15	pf	
Supply Sensitivity	–	–	±0.2	ppm	V <sub>cc</sub> ±5%	
Load Sensitivity	–	–	±0.2		Load±10%	
Aging/ First Year	–	–	±1.0		Standard	
	-	–	±1.0		Customized	
SSB Phase Noise @10MHz	–	–	-80	dBc/Hz	Offset 10Hz	
	–	–	-115		Offset 100Hz	
	–	–	-135		Offset 1kHz	
	–	–	-148		Offset 10kHz	
	–	–	-148		Offset 100kHz	
Control Voltage Range	1.5 ± 1.0V					
Frequency Turning Range	±5	–	±10	ppm		
Tuning Slope	Positive					
Non-linearity	–	–	10	%		

**Outline Dimension & Pin Connections**
**Outline Dimensions ( Unit : mm )**

**Pin Connection**

Pin 1	Vcon, Voltage Control
Pin 2	Gnd, Ground
Pin 3	F0, Output
Pin 4	Vdd, Supply Voltage

**Environmental Conditions**

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

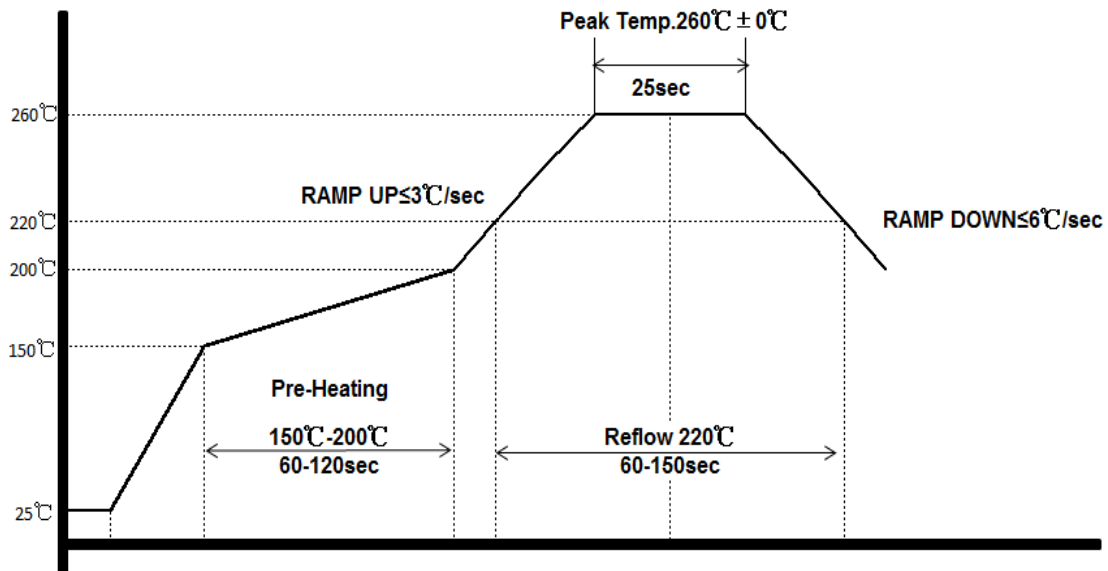
**Maximum Ratings**

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

**Reliability**

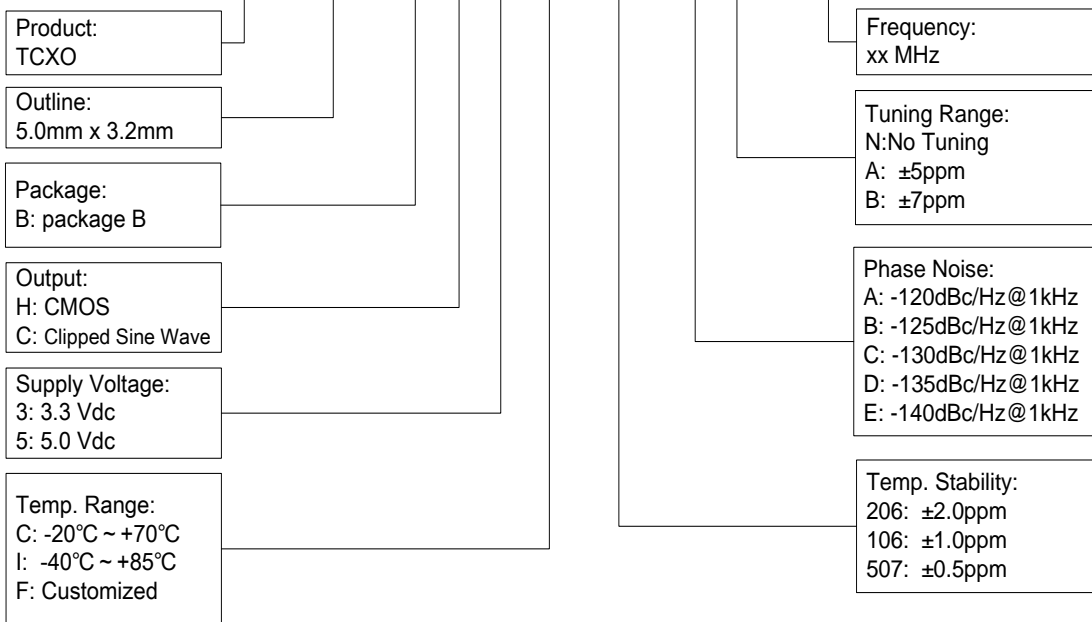
Parameter	Condition
Temperature Stress Test	IEC60068, GJB360B
Mechanical Stress Test	IEC60068, GJB360B
EMC Test (ESD)	IEC61000, JESD22
Solderability	EIA/JESD22-B102-C
Moisture Sensitive Level	MSL3
Contact Pads	Gold over Nickel
RoHS	RoHS Directive 2011/65/EU Annex II Recasting 2002/95/EC

IR Reflow Profile



Ordering Guide

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



**Example:** BT0507BH3C106DN10

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