

Features	Applications
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- Ultra Stable
- Wide Temperature Range
- Fast Warming-up
- SMD Package (5.2x3.4mm)

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



BT0503C Specifications					
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Parameter	Value			Unit	Conditions	
	Min.	Typ.	Max.			
Supply Voltage	-	3.3	-	V	V _{cc} ±5%	
	-	5	-	V	V _{cc} ±5%	
Supply current	-	-	8	mA	10MHz~26MHz (Including26MHz)	
	-	-	12	mA	26MHz~60MHz	
Frequency Range	10~52			MHz		
Nominal Frequency	10, 12.8, 16.384, 19.2, 20, 24.576, 25, 26, 30.72, 40, 50			MHz		
Initial Frequency Tolerance	±0.3	-	±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 (except for 10MHz)	
	±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 _{OH}	2.4	-	-	V	HCMOS Output, Load=15pf
	V _{OL}	-	-	0.4	V	HCMOS Output, Load=15pf
	Duty Cycle	45	-	55	%	(V _{OH} - V _{OL})/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 _{cc} ±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 Tuning Range	±5	-	±12	ppm		
Tuning Slope	positive					
Non-linearity	-	-	10	%		

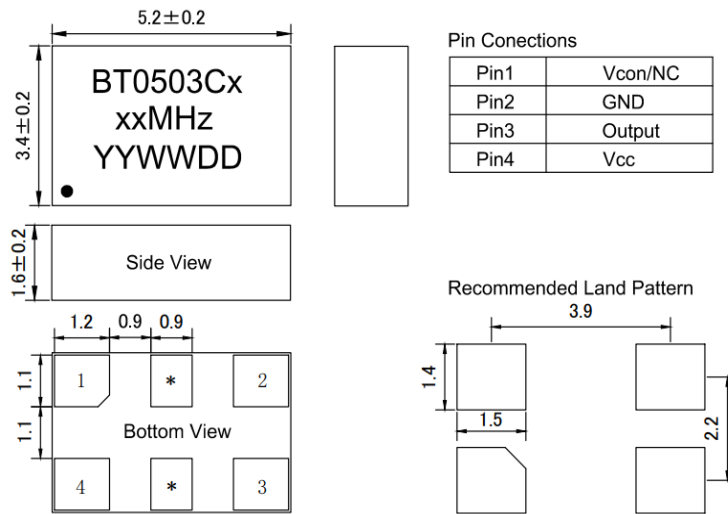
Phase Noise @1KHz					
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Frequency Range	<-125dBc	<-130dBc	<-135dBc	<-140dBc	○=Available X= Not Available
10MHz	○	○	○	○	
12.8MHz~20MHz	○	○	○	X	
20.48MHz~38.4MHz	○	○	X	X	
≥40MHz	○	X	X	X	

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

Outline Dimension & Pin Connections



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

Maximum Ratings

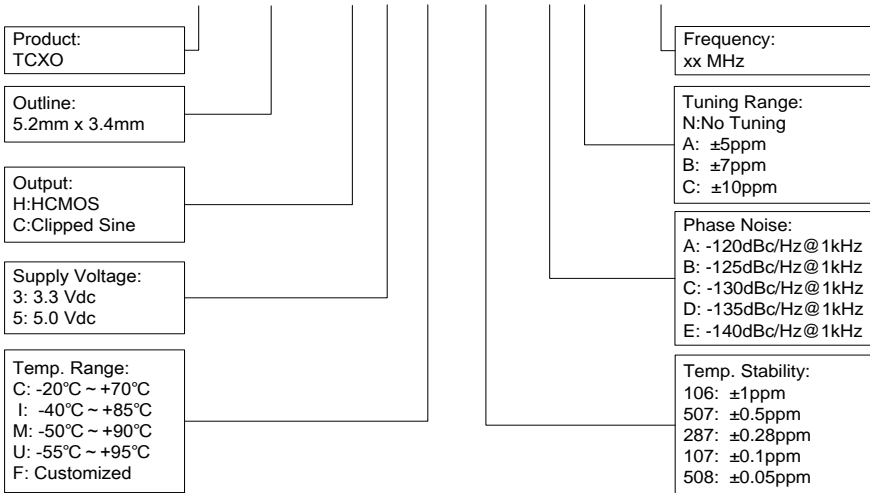
Parameter	Symbol	Rating
Supply Voltage	Vdd	-0.5V / 6V
Control Voltage	Vcon	0V / 3V
ESD, HBM/CDM/MM		4KV/ 2KV/ 200V

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 0503C X X X XXX X X XX.XX



Example: BT0503CH3M287BN50

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