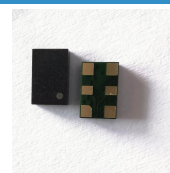


Features

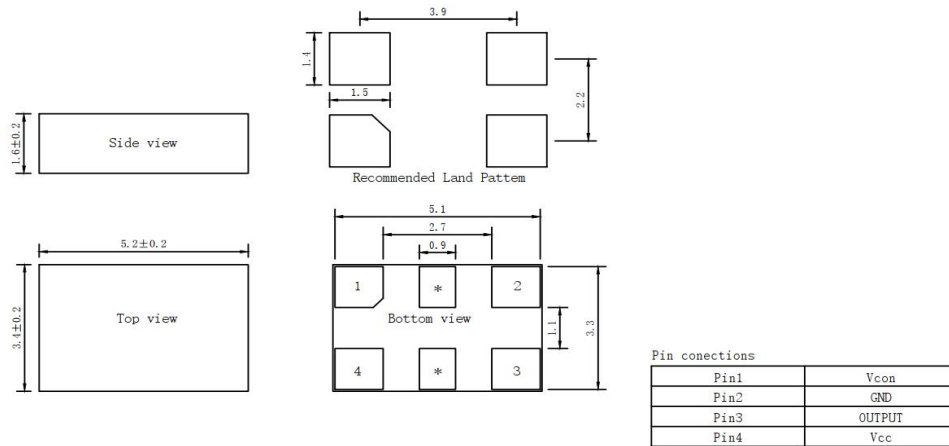
- Ultra Stable
- Wide Temperature Range
- SMD Package (5.2×3.4mm)
- Provide Stratum III Level Frequency Stability

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℃	
Freq. Stability Vs. Temp.		±0.05	—	±0.5	ppm	-20℃~+70℃	
		±0.1	—	±0.5	ppm	-40℃~+85℃	
		±0.2	—	±1.0	ppm	-50℃~+90℃	
		±0.5	—	±1.0	ppm	-55℃~+95℃（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	Vcc±5%	
Load Sensitivity		—	—	±0.2		Load±5%	
Aging/ First Year		—	—	±1.0		Standard	
SSB Phase Noise @10MHz		—	—	-92	dBc/Hz	Offset 10Hz	At +25℃
		—	—	-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

Product:
TCXO

Outline:
5.2mm x 3.4mm

Output:
H:HCMOS
C:Clipped Sine

Supply Voltage:
3: 3.3 Vdc
5: 5.0 Vdc

Temp. Range:
C: -20°C ~ +70°C
I: -40°C ~ +85°C
M: -50°C ~ +90°C
U: -55°C ~ +95°C
F: Customized

Frequency:
xx MHz

Tuning Range:
N:No Tuning
A: ±5ppm
B: ±7ppm
C: ±10ppm

Phase Noise:
A: -120dBc/Hz@1kHz
B: -125dBc/Hz@1kHz
C: -130dBc/Hz@1kHz
D: -135dBc/Hz@1kHz
E: -140dBc/Hz@1kHz

Temp. Stability:
507: ±0.5ppm
287: ±0.28ppm
207: ±0.2ppm
107: ±0.1ppm
508: ±0.05ppm

Example: BT0503CH3M287DN50