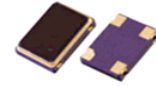


Features

- Wide Frequency Range
- Small SMD Package (5.0×3.2mm)
- Provide Stratum III Level Frequency Stability

Applications

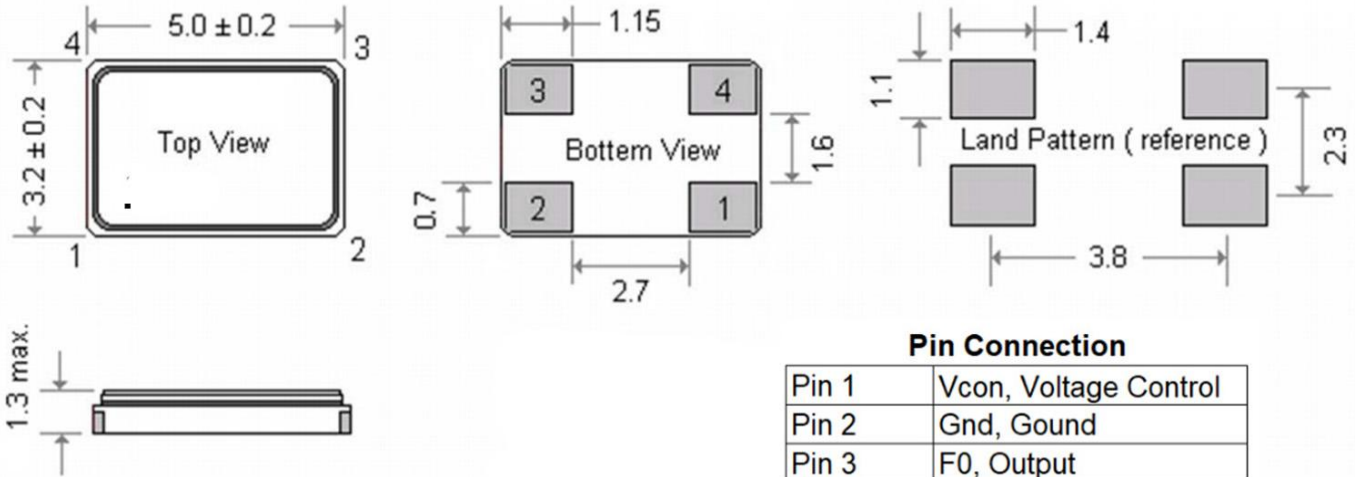
- Hand-held Instrument
- GPS/Navigation
- Synthesizer/SDH/SONET
- WiFi/WiMAX/WLAN
- Medical Electronics


BT0503D Specifications

Parameter	Value			Unit	Conditions
	Min.	Typ.	Max.		
Supply Voltage	2.5/3.0/3.3/5.0			V	
Supply Current	6	-	27	mA	
Frequency Range	6.4 ~ 40			MHz	
Nominal Frequency	10, 16.384, 19.2, 20, 25			MHz	
Initial Frequency Tolerance	-	-	±1.0	ppm	At shipment, nominal EFC, +25°C
Freq. Stability Vs. Temp.	±0.5	-	±3	ppm	-20°C ~ +70°C
	±1	-	±3	ppm	-40°C ~ +85°C
Clipped Sine Wave	Output Level	0.8	-	Vp-p	
	Load	10kΩ/10pF			
CMOS	V _{OH}	VDD-0.4V	-	V	CMOS Output, Load=15pf
	V _{OL}	-	0.4	V	CMOS Output, Load=15pf
	Duty Cycle	40	-	%	(V _{OH} - V _{OL})/2
	Rise/Fall Edge	-	-	ns	CMOS Output, Load=15pf
	Load	-	-	15	pf
Supply Sensitivity	-	-	±0.3	ppm	V _{cc} ±5%
Load Sensitivity	-	-	±0.3		Load±10%
Aging/ First Year	-	-	±1.0		Standard
SSB Phase Noise @10MHz	-	-90	-	dBc/Hz	Offset 10Hz
	-	-115	-		Offset 100Hz
	-	-135	-		Offset 1kHz
	-	-145	-		Offset 10kHz
	-	-150	-		Offset 100kHz
					At +25°C
Control Voltage Range	1.5 ± 1.0			V	2.5/3.0/3.3/5V V _{dd}
Frequency Turning Range	±5	-	-	ppm	
Tuning Slope	Positive				
Non-linearity	-	-	10	%	
Environmental Conditions					
Operating Temperature Range	-40°C ~ +85°C				
Storage Temperature Range	-55°C ~ +125°C				

Outline Dimension & Pin Connections

Outline Dimensions (Unit : mm)



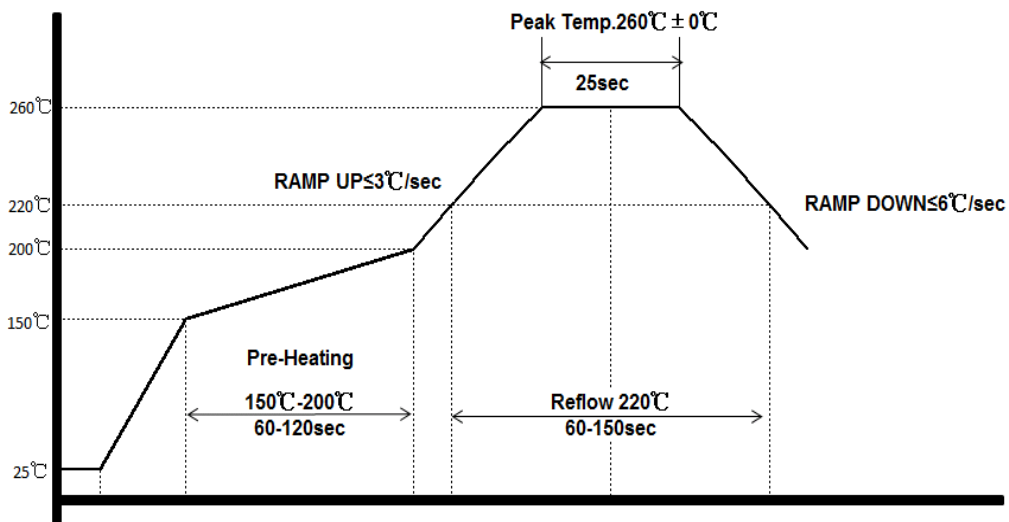
Pin Connection

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

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

IR Reflow Profile



Ordering Guide

BT 0503 D X X X XXX X X XX.XX

Product:
TCXO

Outline:
5.0mm x 3.2mm

Package:
D: Package D

Output:
C: Clipped sine
H: CMOS

Supply Voltage:
2: 2.5 V
3: 3/3.3V
5: 5V

Temp. Range:
C: -20°C ~ +70°C
I: -40°C ~ +85°C
F: Customized

Frequency:
xx MHz

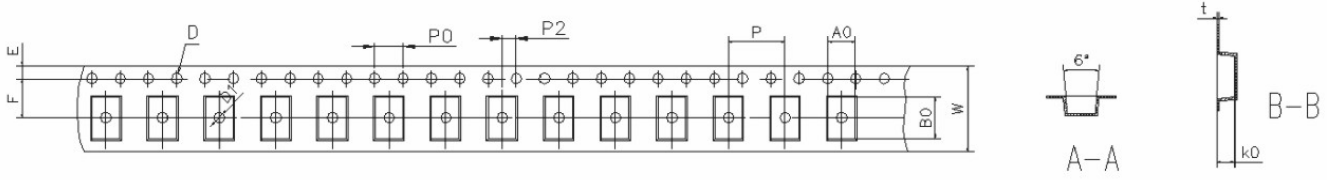
Tuning Range:
N: No Tuning
A: ±5ppm

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

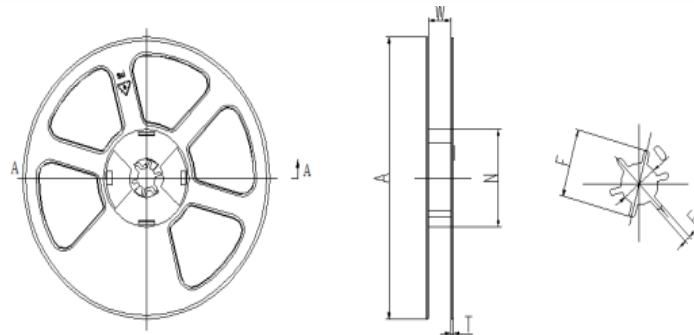
Temp. Stability:
306: ±3.0ppm
206: ±2.0ppm
106: ±1.0ppm
507: ±0.5ppm

Example: BT0503DC3C106DN10

Tape & Reel



ITEM	W	A0	B0	K0	P	F	E	D	D1	P0	P2	t	7"
DIM	16.0	3.7	5.6	2.0	8.00	7.50	1.75	1.50	1.50	4.00	2.00	0.3	L/R QTY/PCS
TOLE	+0.30 -0.30	+0.15 -0.15	+0.15 -0.15	+0.15 -0.15	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.00	+0.10 -0.00	+0.10 -0.10	+0.10 -0.10	+0.05 -0.05	4M 500PCS



Item	W	A	N	T	E	F	D
Size	16.4	178	62	1.8	2	21.8	13.5
TOL	±0.3	±0.5	±0.4	±0.2	±0.5	±0.8	±0.3

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