

Features

- Ultra Stable
- Wide Temperature Range
- SMD Package (7.0×5.0mm)
- Provide Stratum III Level Frequency Stability

Applications

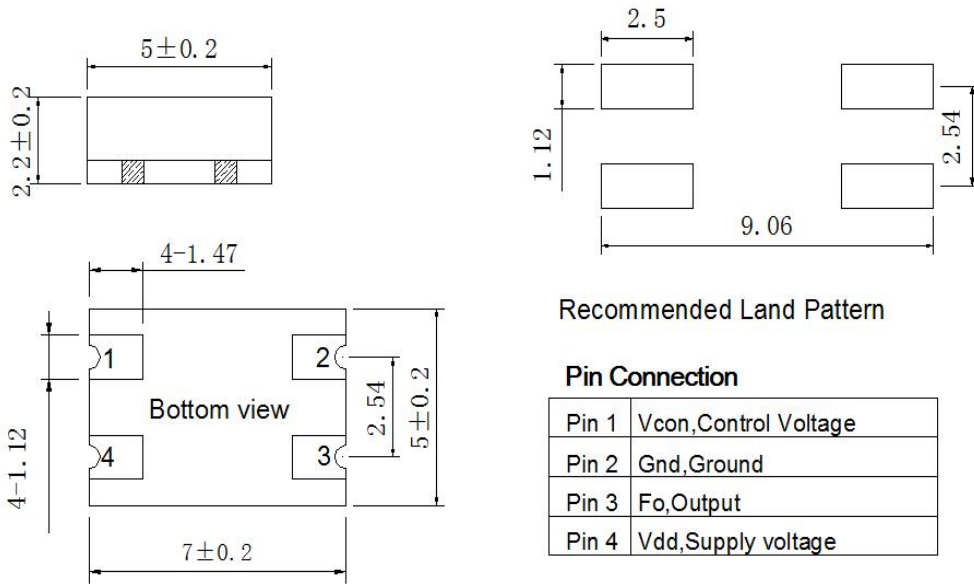
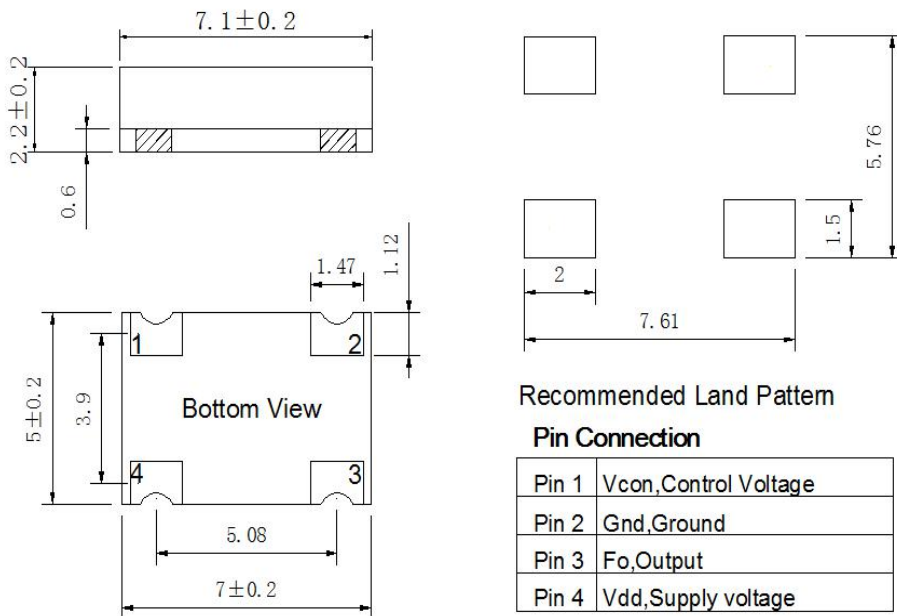
- Base Stations
- Instrumentations
- Synthesizer
- SDH/SONET
- Medical Electronics


BT0507C/D Specifications

Parameter	Value			Unit	Conditions	
	Min.	Typ.	Max.			
Supply Voltage	–	3.3	–	V		
	–	5	–	V		
Supply Current	3	–	6	mA		
Frequency Range	10 ~ 51.2			MHz		
Nominal Frequency	10, 12.8, 16.384, 19.2, 19.44, 20,			MHz		
Initial Frequency Tolerance	±0.5	–	±1.0	ppm	At shipment, nominal EFC, +25°C	
Freq. Stability Vs. Temp.	±0.5	–	±1.0	ppm	-20°C~+70°C	
	±0.5	–	±1.0	ppm	-40°C~+85°C	
Clipped Sine Wave	Output Level	0.8	–	Vp-p		
	Load	10kΩ//10pF				
CMOS	V _{OH}	2.4	–	V	CMOS Output, Load=15pf	
	V _{OL}	–	–	0.4	V	CMOS Output, Load=15pf
	Duty Cycle	45	–	55	%	(V _{OH} - V _{OL})/2
	Rise/Fall Edge	–	–	6	ns	CMOS Output, Load=15pf
	Load	–	–	15	pf	
RMS Jitter(By E5052B)	–	–	1.3	ps	12KHz~5MHz	
Supply Sensitivity	–	–	±0.1	ppm	Vcc±5%	
Load Sensitivity	–	–	±0.2		Load±5%	
Aging/ First Year	–	–	±1.0		Standard	
	±0.3	–	±0.8		Customized	
SSB Phase Noise @10MHz	–	–	-95	dBc/Hz	Offset 10Hz	
	–	–	-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	%		

Phase Noise @1KHz

Freq. Range	<-125dBc	<-130dBc	<-135dBc	<-140dBc	A=Available N/A=Not Available
10MHz				A	
12.8~20MHz			A	N/A	
20.48~38.4MHz		A	N/A	N/A	
40MHz	A	N/A	N/A	N/A	

Outline Dimension & Pin Connections
Package C:

Package D:


Note: Leave pin 1 unconnected If Vcon is not used.

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
Contact Pads	Gold over Nickel
RoHS	RoHS Directive 2011/65/EU Annex II Recasting 2002/95/EC

Ordering Guide

BT 0507 X X X X XXX X X XX.XX

Product:
TCXO

Outline:
7.0mm x 5.0mm

Package:
C: Package C
D: package D

Output:
H: LVCMOS
C: Clipped Sine Wave

Supply Voltage:
3: 3.3 Vdc
5: 5.0 Vdc

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

Frequency:
xx MHz

Tuning Range:
N: No Tuning
A: ±5ppm
B: ±7ppm
C: ±12ppm

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

Temp. Stability:
106: ±1ppm
507: ±0.5ppm

Example: BT0507CH3C106CA30.72