

Features

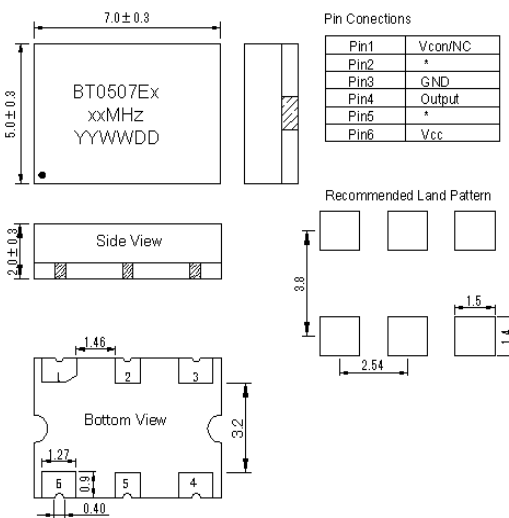
- Low Phase Noise
- Wide Temperature Range
- SMD Package (7.0x5.0mm)

Applications

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


BT0507E Specifications

Parameter	Value			Unit	Conditions	
	Min.	Typ.	Max.			
Supply Voltage	-	3.3	-	V		
	-	5	-	V		
Supply Current	3	-	8	mA		
Frequency Range	10 ~ 52			MHz		
Nominal Frequency	10, 12.8, 13, 15.36, 16, 16.32, 16.384, 19.2, 19.44, 20, 24.576, 25, 26, 30.72, 38.4, 38.88, 40, 50			MHz		
Initial Frequency Tolerance	±0.05	-	±0.5	ppm	At shipment, nominal EFC, +25°C	
Freq. Stability Vs. Temp.	±0.05	-	±0.5	ppm	-20°C ~ +70°C	
	±0.05	-	±0.5	ppm	-40°C ~ +85°C	
	±0.2	-	±1.0	ppm	-50°C ~ +90°C	
	±0.5	-	±1.0	ppm	-55°C ~ +95°C	
Clipped Sine Wave	Output Level	0.8	-	Vp-p		
	Load	10kΩ//10pF				
CMOS	V _{OH}	2.4	-	V	LVC MOS Output, Load=15pf	
	V _{OL}	-	-	0.4	V	LVC MOS Output, Load=15pf
	Duty Cycle	45	-	55	%	(V _{OH} - V _{OL})/2
	Rise/Fall Edge	-	-	6	ns	LVC MOS 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	
	±0.3	-	±0.8		Customized	
SSB Phase Noise @10MHz	-	-	-105	dBc/Hz	Offset 10Hz	
	-	-	-130		Offset 100Hz	
	-	-	-150		Offset 1kHz	
	-	-	-155		Offset 10kHz	
	-	-	-158		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	<-140dBc	<-145dBc	<-147dBc	<-150dBc	○=Available X=Not Available	
10MHz				○		
12.8~20MHz			○	X		
20.48~40MHz		○	X	X		
50MHz	○	X	X	X		

Environmental Conditions													
Operating Temperature Range	-55°C ~ +95°C												
Storage Temperature Range	-55°C ~ +125°C												
Outline Dimension & Pin Connections													
													
<table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Pin Connections</caption> <tr><td>Pin1</td><td>Vcon/NC</td></tr> <tr><td>Pin2</td><td>*</td></tr> <tr><td>Pin3</td><td>GND</td></tr> <tr><td>Pin4</td><td>Output</td></tr> <tr><td>Pin5</td><td>*</td></tr> <tr><td>Pin6</td><td>Vcc</td></tr> </table>		Pin1	Vcon/NC	Pin2	*	Pin3	GND	Pin4	Output	Pin5	*	Pin6	Vcc
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Pin2	*												
Pin3	GND												
Pin4	Output												
Pin5	*												
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<p>Note:</p> <ol style="list-style-type: none"> The pins with "*" are for factory test. 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 0507 X X X X XXX X X XX.XX													
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<p>Example: BT0507EH3I207EN40</p>													