

Features

- Ultra Stable
- Wide Temperature Range
- SMD Package (7.0x5.0mm)
- Provide Stratum III Level Frequency Stability

Applications

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


BT0507B Specifications

| Parameter | Value | | | Unit | Conditions | |
|-----------------------------|---|-----------|------|--------|---------------------------------|--|
| | Min. | Typ. | Max. | | | |
| Supply Voltage | - | 3.3 | - | V | | |
| | - | 5 | - | V | | |
| Supply Current | - | - | 8 | mA | 10MHz~26MHz (Including 26MHz) | |
| | - | - | 12 | mA | 26MHz~60MHz | |
| 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 | - | - | ±0.5 | 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 | |
| | ±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 | - | - | -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 | % | | |

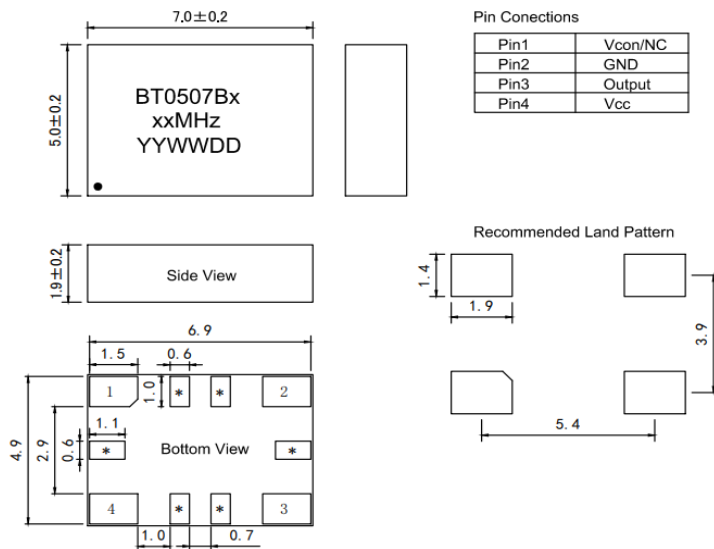
Phase Noise @1KHz

| Frequency Range | <-125dBc | <-130dBc | <-135dBc | <-140dBc | |
|-----------------|----------|----------|----------|----------|---------------------------------|
| 10MHz | ○ | ○ | ○ | ○ | ○=Available X= Not Available |
| 12.8~20MHz | ○ | ○ | ○ | X | |
| 20.48~38.4MHz | ○ | ○ | X | X | |
| ≥40MHz | ○ | X | X | X | |
| | | | | | |

Environmental Conditions

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

Outline Dimension & Pin Connections

Package B

Note:

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

Maximum Ratings

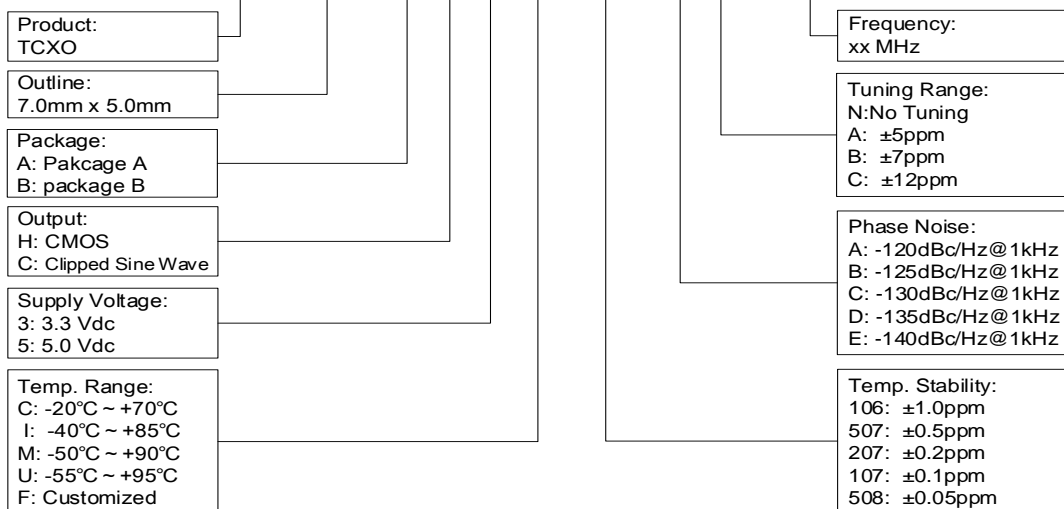
| Parameter | Symbol | Rating |
|-----------------|--------|----------------|
| Supply Voltage | Vdd | -0.5V / 6V |
| Control Voltage | Vcon | 0V / 3V |
| ESD, HBM/CDM/MM | | 4KV/ 2KV/ 200V |

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 0507 X X X X XXX X X XX.XX



Example: BT0507BH3M287DN16.384