

Features

- Low Current Consumption
- Wide Frequency Range
- Low Jitter
- SMD Package (7×5mm)

Applications

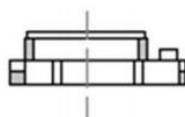
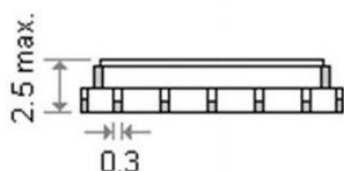
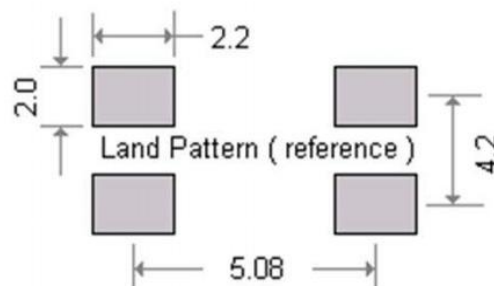
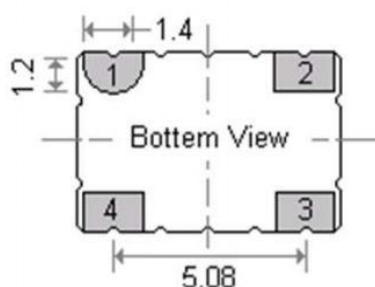
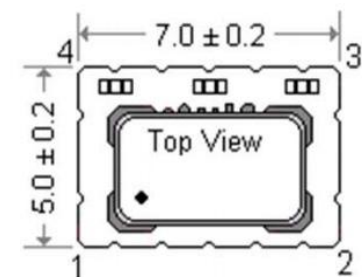
- Gigabit Ethernet / SDH/SONET
- Network Router/Switch
- Fibre Channel
- SAS, PCI Express Server
- Optical Transmission Equipment

BT0507G-RTC Specifications

Parameter		Value			Unit	Conditions
		Min.	Typ.	Max.		
Supply Voltage		3.3			V	
Supply Current		–	–	8	mA	32.768KHz 3.3V
		–	–	12	mA	50KHz 3.3V
Frequency Range		20~ 52.7			KHz	
Nominal Frequency		32.768			KHz	
Initial Frequency Tolerance		±1.0	–	±2.0	ppm	At shipment, nominal EFC, +25℃
Freq. Stability Vs. Temp.		±0.5	–	±3.0	ppm	0℃~+50℃
		±1.0	–	±3.0	ppm	-10℃~+60℃
		±1.0	–	±3.0	ppm	-30℃~+75℃
		±1.5	–	±3.0	ppm	-40℃~+85℃
CMOS	V _{OH}	2.97	–	–	V	CMOS Output, Load=15pf
	V _{OL}	–	–	0.33	V	CMOS Output, Load=15pf
	Duty Cycle	45	–	55	%	(V _{OH} - V _{OL})/2
	Rise/Fall Edge	–	–	10	ns	CMOS Output, Load=15pf
	Load	–	–	10	pf	
Supply Sensitivity		–	–	±0.3	ppm	Vcc±5%
Load Sensitivity		–	–	±0.3		Load±10%
Aging/ First Year		–	–	±1.0		Standard
Control Voltage Range		1.5 ± 1.0V				
Frequency Turning Range		±3	–	±5	ppm	
Tuning Slope		Positive				
Non-linearity		–	–	10	%	
Input Impedance		1	–	–	MΩ	CMOS
Environmental Conditions						
Operating Temperature Range		-40℃~+85℃				
Storage Temperature Range		-55℃ ~ +125℃				

Outline Dimension & Pin Connections

Outline Dimensions: mm



Pin Connection

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

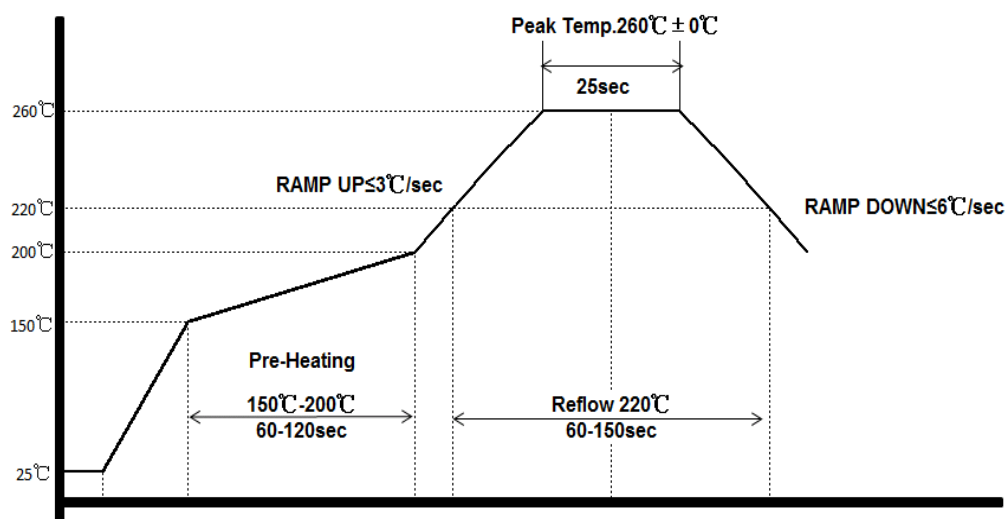
Maximum Ratings

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

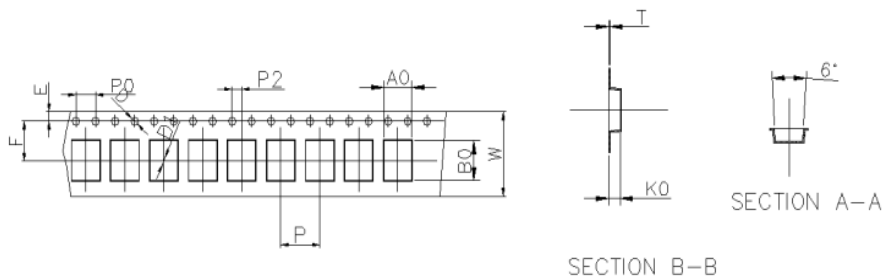
Reliability

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

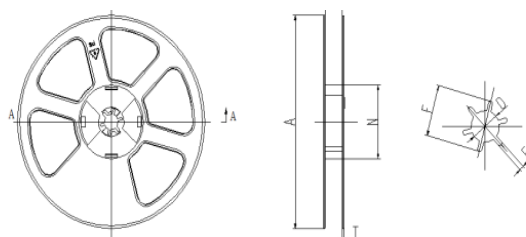
IR Reflow Profile



Tape & Reel



ITEM	W	A0	B0	K0	P	F	E	D	P0	P2	t	7'	
DIM	16.0	5.7	7.6	2.4	8	7.5	1.75	1.50	4.00	2.00	0.30	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 -0.10	+0.10 -0.10	+0.05 -0.05	5M/R	500 PCS



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

Ordering Guide

BT 0507 G X X X XXX X XXX.XX K

Product:
TCXO

Outline:
7.0mm x 5.0mm

Package:
G: Package G

Output:
H: CMOS

Supply Voltage:
3: 3.3 Vdc

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

Frequency:
xx KHz

Tuning Range:
N: No Tuning
A: ±3/±5ppm

Phase Noise:
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: BT0507GH3C287DN16.384

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