

Features

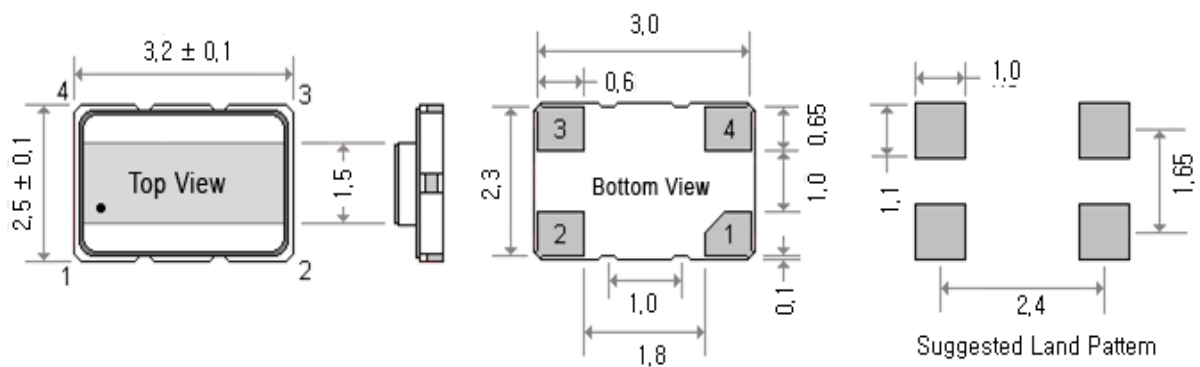
- CMOS32.768KHz with a max. Stability of ± 5 ppm
- Temp. Compensation Technique build-in
- Ultra Low Power Consumption
- Small SMD Package (3.2x2.5mm)

Applications

- RTCs
- Smart Metering/Data Loggers
- Timing Synchronization
- GPS Receivers/Telematics
- Portable Instruments


BT3225_RTC Specifications

Parameter	Value			Unit	Conditions	
	Min.	Typ.	Max.			
Supply Voltage	1.8/2.5/3.0/3.3/5			V		
Supply Current	-	-	3.7	uA		
Frequency	32.768			KHz		
Initial Frequency Tolerance	-	-	± 1.5	ppm	+25°C ± 3 °C	
Freq. Stability Vs. Temp.	-	-	± 5	ppm	-40°C ~ +85°C	
Reflow	-	-	± 1	ppm	1 reflow and measured 24 hours afterwards	
Timing error over time [± 5 ppm (-40°C to +85°C)]	± 0.432 sec/day ; ± 12.960 sec/month ; ± 2.628 minutes / year , w.r.t fo at +25°C.					
CMOS	V _{OH}	VDD-0.4	-	-	V	LVC MOS Output, Load=15pf
	V _{OL}	-	-	0.4	V	LVC MOS Output, Load=15pf
	Duty Cycle	40	-	60	%	Measured at 50% of VDD Over -40°C to +85°C.
	Rise/Fall Edge	-	-	100	ns	Measured at 20% \leftrightarrow 80% of the waveform , 15 pF load.
	Load	-	-	15	pf	
Pad 1 OE Thresholds	V _{ih} = 0.8 * VDD , V _{il} = 0.2 * VDD ; Open connection prohibit					
Supply Sensitivity	-	-	± 0.2	ppm	V _{cc} $\pm 5\%$	
Load Sensitivity	-	-	± 0.2		Load $\pm 10\%$	
Aging/ First Year	-	-	± 3		first year at +25° C	
All Range of VDD ($\Delta f / V$)	-	-	0.25	V	$\Delta V / \Delta t = 1 V / \mu s$	
Supply Voltage Variation (ΔVDD)	-	-	± 1	ppm / V	VDD = 1.7 V to 5.5 V	
Start - up Time	1 sec. (max.) at +25°C ; 3 sec. (max.) over -40°C to +85°C					

Outline Dimension & Pin Connections


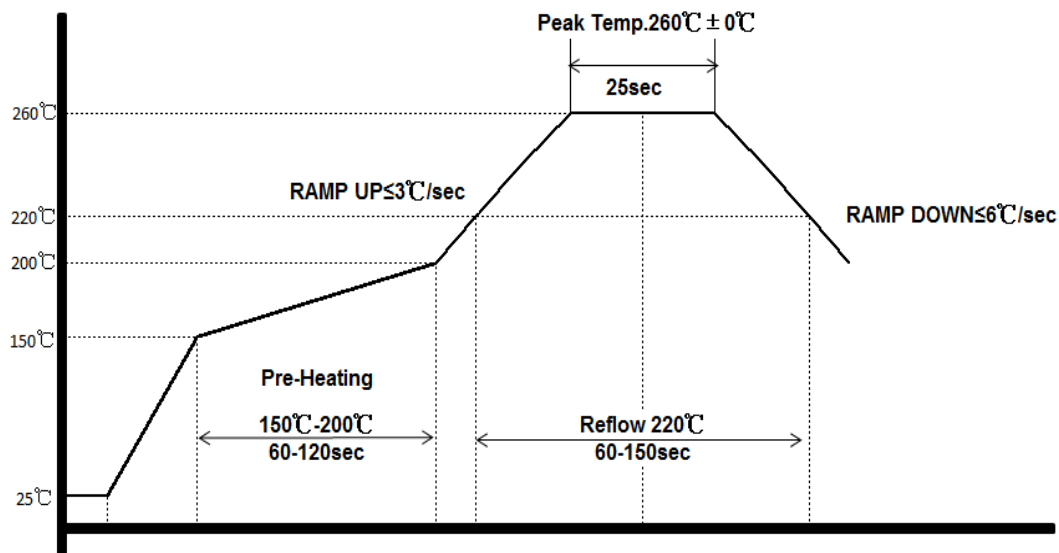
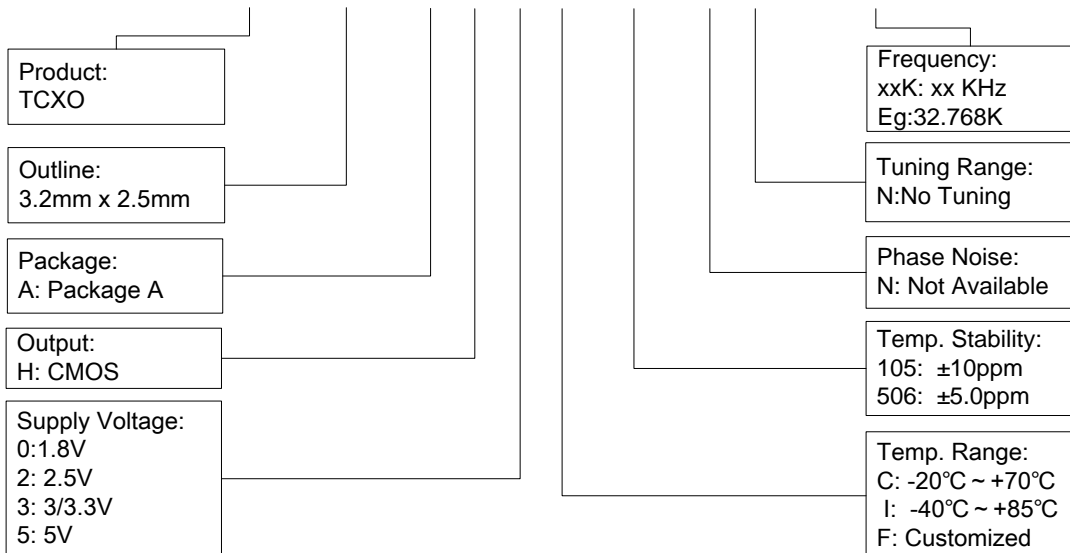
Pad Connections:
 Pad 1 : Output Enable
 Pad 2 : Ground
 Pad 3 : Frequency Output
 Pad 4 : Supply Voltage

Environmental Conditions

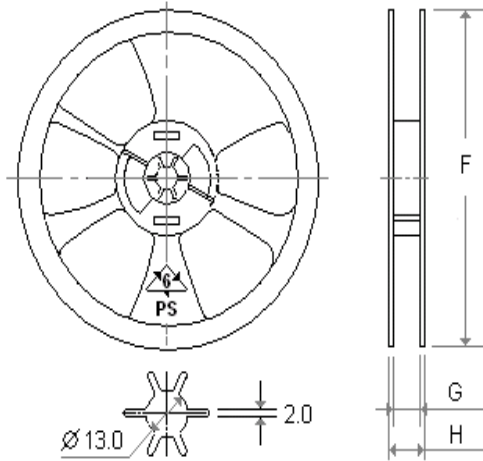
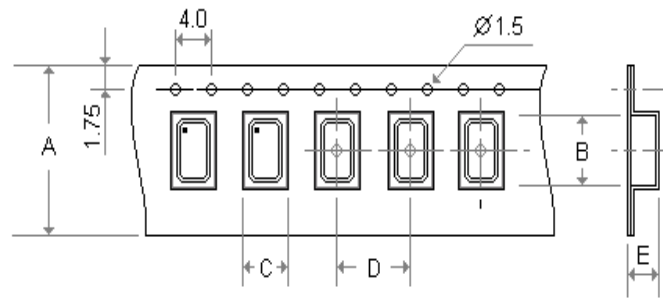
Operating Temperature Range	-40°C ~ +85°C
Storage Temperature Range	-50°C ~ +105°C

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 3225 A H X X XXX N N 32.768K

Example: BT3225AH3C506NN32.768K

Tape & Reel



Dimensions : (Unit : mm)

A	B	C	D	E
8.0	3.8	2.8	4	1.4

F	G	H
178	12.4	15.8

Remark :

1. Standard reel quantity is 3000 pcs per reel .
2. 10 sprocket hold pitch cumulative tolerance is ± 0.1 mm .
3. E measured from a place on the inside bottom of the pocket to the top surface of the carrier .

Disclaimer

Xtaltq Technologies Co., Limited reserves the right to make changes to the product(s) and/or information contained herein without notice. No liability is assumed as a result of their use or application. No rights under any patent accompany the sale of any such product(s) or information.