



**THE DATASHEET OF  
9H03200033**



## Features

- Frequency range : 32.768 kHz
- SMD : Ceramic package
- External dimensions (mm)  
L : 3.2 x W : 1.5 x H : 0.75
- RoHS compliant & Pb free

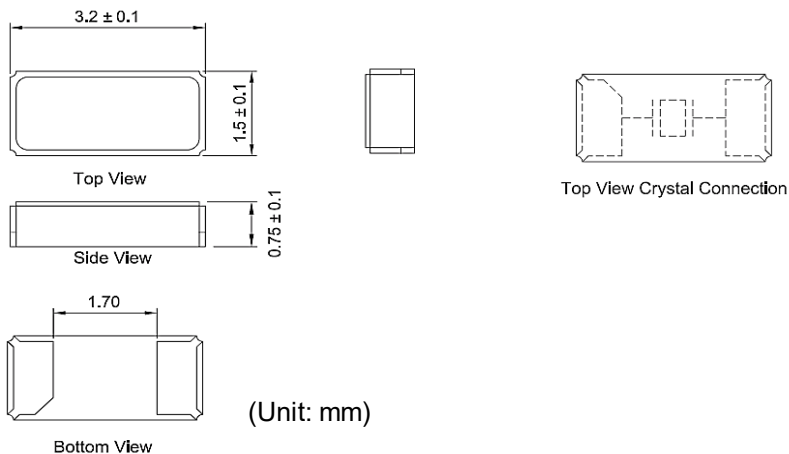
## Applications

- Small mobile devices
- Communication devices
- Consumer products
- Commercial & industrial applications

## Electrical Characteristics

Item	Symbol	9HT10	Conditions
Nominal Frequency	$f_0$	32.768 kHz	
Frequency Tolerance	$\Delta f/f_0$	$\pm 10\text{ppm}$ , $\pm 20\text{ppm}$ , $\pm 30\text{ppm}$ , $\pm 50\text{ppm}$	at 25°C
Load Capacitance	$C_L$	6pF, 7pF, 9pF, 12.5pF	
Operating Temperature Range	$T_{OTR}$	-40°C ~ +85°C	
		-40°C ~ +125°C	
Storage Temperature Range	$T_{STR}$	-55°C ~ +125°C	
Turnover Temperature	$T_M$	25°C $\pm$ 5°C	
Temperature Coefficient	$\beta$	-0.04 ppm/°C <sup>2</sup> Max.	
Motional Capacitance	$C_1$	3.1 fF Typ.	
Motional Resistance (ESR)	$R_1$	70 kΩ Max.	at 25°C
Drive Level	$D_L$	0.1μW Typ. / 1.0μW Max.	
Aging	$\Delta f/f_0$	$\pm 3$ ppm Max.	at 25°C $\pm$ 3°C, first year
Shunt Capacitance	$C_0$	1.0 pF Typ.	

## Dimensions



## Ordering Information

**9HT10 - 32.768K D Z F - T**

Frequency Tolerance (at 25°C)		Packaging Method	
B	± 50 ppm	T	Tape & Reel
A	± 30 ppm		
D	± 20 ppm		
E	± 10 ppm		
Operating Temperature Range		Load Capacitance	
Z	-40°C ~ +85°C	B	6 pF
W	-40°C ~ +125°C	Y	7 pF
		C	9 pF
		F	12.5 pF

## Packing

Note:1 Po  
 Note:2 P2  
 Note:2 F  
 Note:2 W  
 Note:2 5'(max)  
 Note:2 Ao  
 Note:2 5'(max)  
 Note:2 2.5<sup>+0.5</sup>  
 Note:2 13.2±0.5  
 Note:2 5'(max)  
 Note:2 Ko  
 Note:2 B-B SECTION  
 Note:2 W  
 Note:2 W1  
 Note:2 L1  
 Note:2 L

Ao = 1.8 ± 0.10 mm  
 Bo = 3.5 ± 0.10 mm  
 Ko = 1.0 ± 0.10 mm

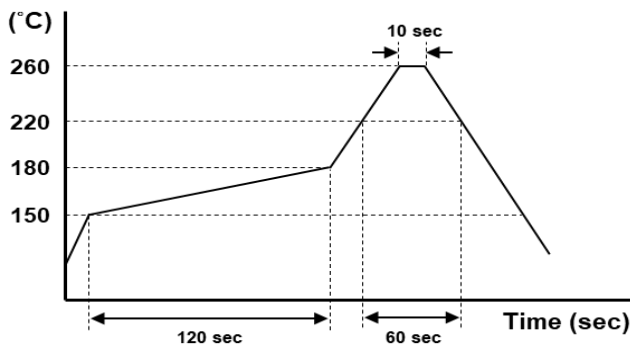
**A-A SECTION**

CARRIER TAPE DIMENSIONS	K1	P0	P1	P2	D0	D1	E	F	10P0	W	T
	-	4	4	2	1.55	1.1	1.75	5.5	40	12	0.25

REEL DIMENSIONS	W	W1	L	L1
	16±1.4	13±0.3	180+0/-3	60.2±0.5

(Unit: mm)



## Reflow Profile









Total time : Max. 200 sec.  
Solder melting point : 220°C

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View 9H03200033 on WIN SOURCE](#)
-  [TXC CORPORATION](#) Information

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-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
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