

Features

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

Applications

- > Power sensitive designs
- > Communication devices
- > Measuring equipments
- > Consumer products
- > Commercial & industrial applications

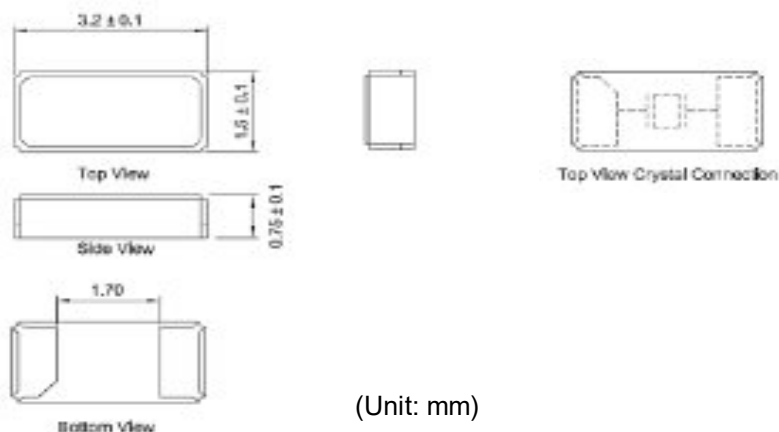
Electrical Characteristics

Item	Symbol	9HT10L	Conditions
Nominal Frequency	f_0	32.768 kHz	
Frequency Tolerance	$\Delta f/f_0$	$\pm 10\text{ppm}$, $\pm 20\text{ppm}$	at 25°C, Note [1]
Load Capacitance	C_L	6pF, 7pF, 9pF, 12.5pF	
Operating Temperature Range	T_{OTR}	-40°C ~ +85°C	
Storage Temperature Range	T_{STR}	-55°C ~ +125°C	
Turnover Temperature	T_M	25°C $\pm$ 5°C	
Temperature Coefficient	β	-0.04 ppm/°C ² Max.	
Motional Capacitance	C_1	3.1 fF Typ.	
Motional Resistance (ESR)	R_1	50 kΩ Max.	at 25°C
Drive Level	D_L	0.1μW Typ. / 1.0μW Max.	
Aging	$\Delta f/f_0$	± 3 ppm Max.	at 25°C $\pm$ 3°C, first year
Shunt Capacitance	C_0	1.0 pF Typ.	

Notes:

[1] Frequency Tolerance ($\Delta f/f_0$) $\pm 10\text{ppm}$ for Load Capacitance (C_L) 6pF, 9pF, 12.5pF only.

Dimensions



Ordering Information

9HT10L - 32.768K D Z F - T

Frequency Tolerance (at 25°C)

D	± 20 ppm
E	± 10 ppm

Frequency Stability (over Temp.)

Z	Standard for kHz
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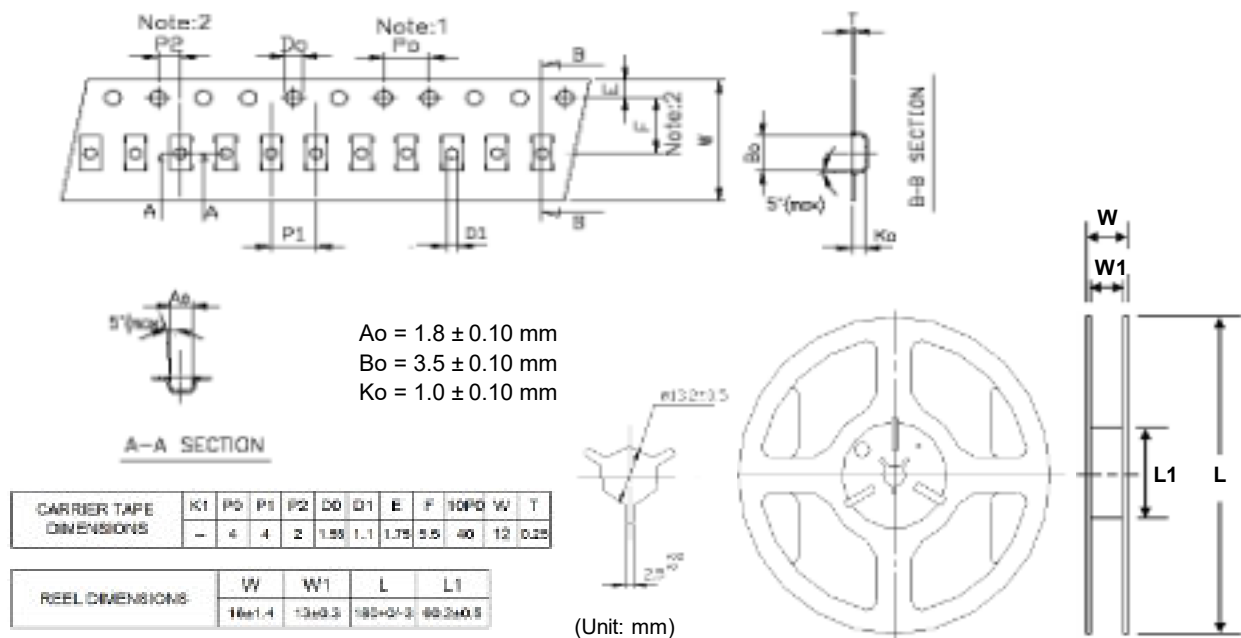
Packaging Method

T	Tape & Reel
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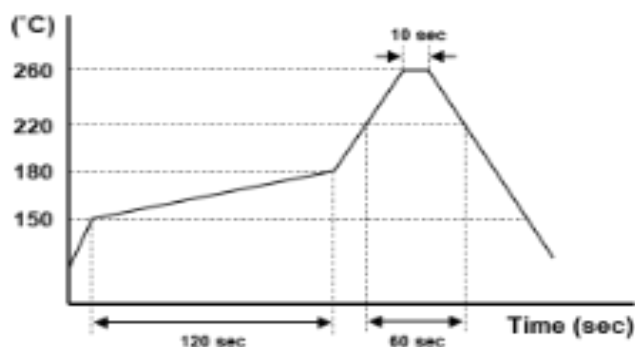
Load Capacitance

B	6 pF
Y	7 pF
C	9 pF
F	12.5 pF

Packing



Reflow Profile



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