

# 32.768 kHz SMD LOW PROFILE CRYSTAL

ABS10

ABS10



RoHS  
Compliant



4.9 x 1.8 x 1.0 mm

ABS10 is not recommended for new designs. Please consider the ABS04W or ABS05.

## FEATURES:

- Low frequency in small size SMD
- 1.0mm height ideal for high density circuit boards
- Ceramic package offers excellent environmental & heat resistance
- Extended temperature -40°C to +85°C for industrial applications

## APPLICATIONS:

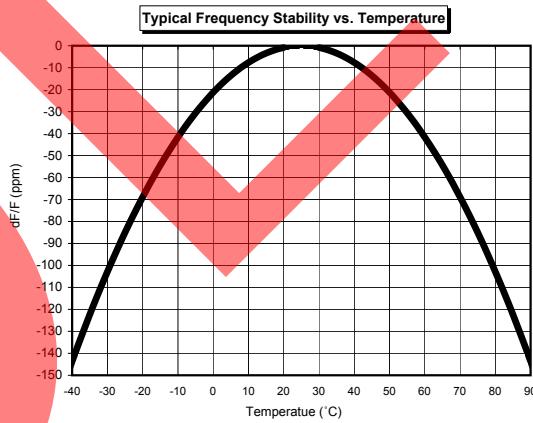
- Wide range in communication & measuring equipment
- Commercial & Industrial applications
- Wireless communications
- PDA and Palm Pilots

## STANDARD SPECIFICATIONS:

### PARAMETERS

ABRACON P/N	ABS10 Series
Nominal Frequency	32.768 kHz
Operating Temperature	-40°C to +85°C
Turn-over Temperature	+25°C to ±5°C
Storage Temperature	-55°C to +125°C
Frequency Tolerance	±20 ppm max. (see option)
Temperature Coefficient ( $\beta$ )	-0.034±0.006 ppm/T <sup>2</sup>
Equivalent Series Resistance	70 kohms max.
Load Capacitance CL	12.5 pF (see option)
Drive Level	1.0 $\mu$ W max.
Aging (first year)	25°C first year
± 5 ppm max.	
Insulation Resistance	500 M $\Omega$ with 100 Vdc ±15V
Shunt capacitance Co	1.0pF typ.
Motional capacitance C1	2.0fF typ.

### TUNING FORK CRYSTAL TEMPERATURE CURVE



## OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)

ABS10 - 32.768kHz - □ - □ - □

### Load Capacitance

Blank: 12.5pF
9: 9pF
7: 7pF

\*Contact ABRACON for  
non-standard load capacitances.

### Freq. Tolerance

Blank: ± 20 ppm
1: ± 10 ppm
4: ± 30 ppm

### Packaging

Blank: Bulk
T: Tape & Reel

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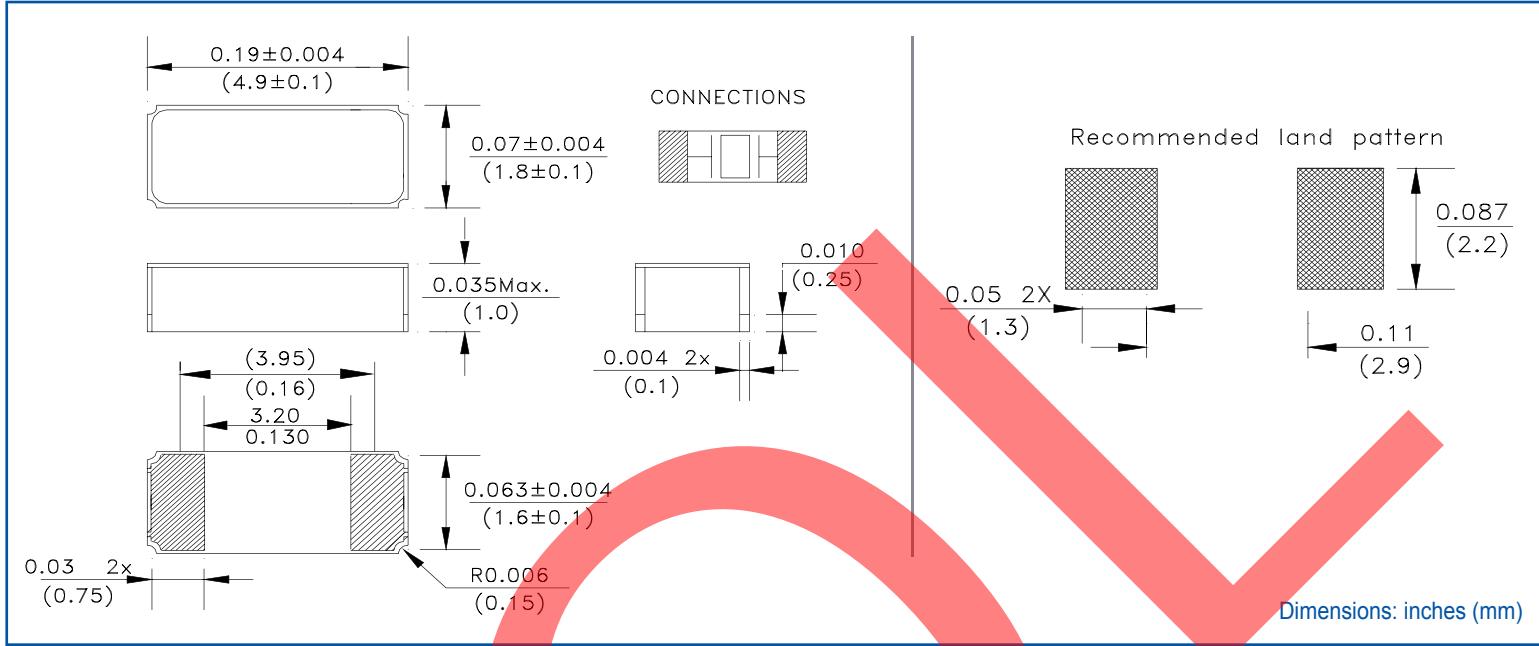
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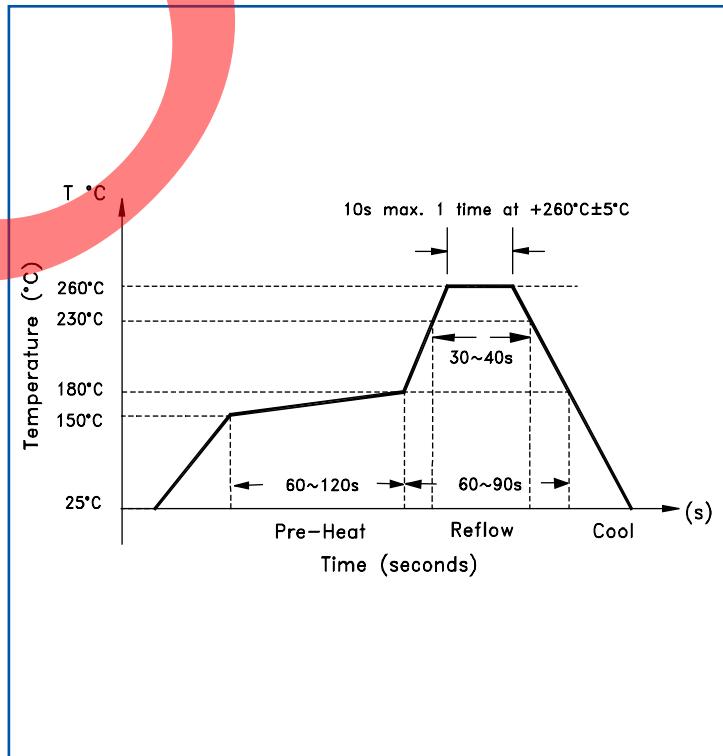
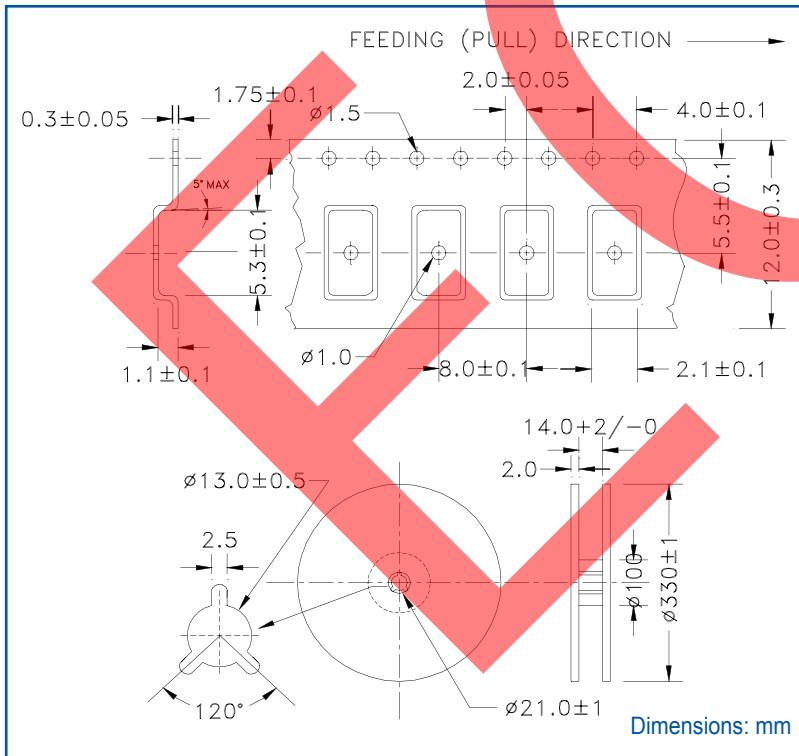
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## ► OUTLINE DRAWING:



► **TAPE & REEL:** T = Tape and reel 3,000pcs/reel

## REFLOW PROFILE



**ATTENTION:** Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.



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ABRACON IS  
ISO9001-2015  
CERTIFIED