



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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# 32.768 kHz SMD LOW PROFILE CRYSTAL

ABS10



ABS10



4.9 x 1.8 x 1.0 mm

*ABS10 is not recommended for new designs. Please consider our reduced size ABS07 or ABS06.*

## 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:

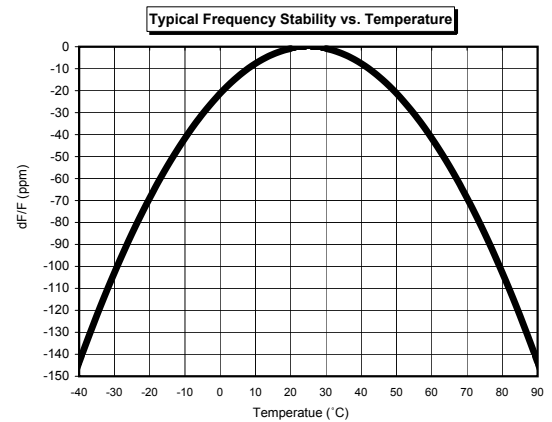
- Wide range in communication & measuring equipment
- Commercial & Industrial applications
- Wireless communications
- PDA and Palm Pilots

## 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

Freq. Tolerance
Blank: ± 20 ppm
1: ± 10 ppm
4: ± 30 ppm

Packaging
Blank: Bulk
T: Tape & Reel

\*Contact ABRACON for non-standard load capacitances.

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# 32.768kHz SMD LOW PROFILE CRYSTAL

ABS10

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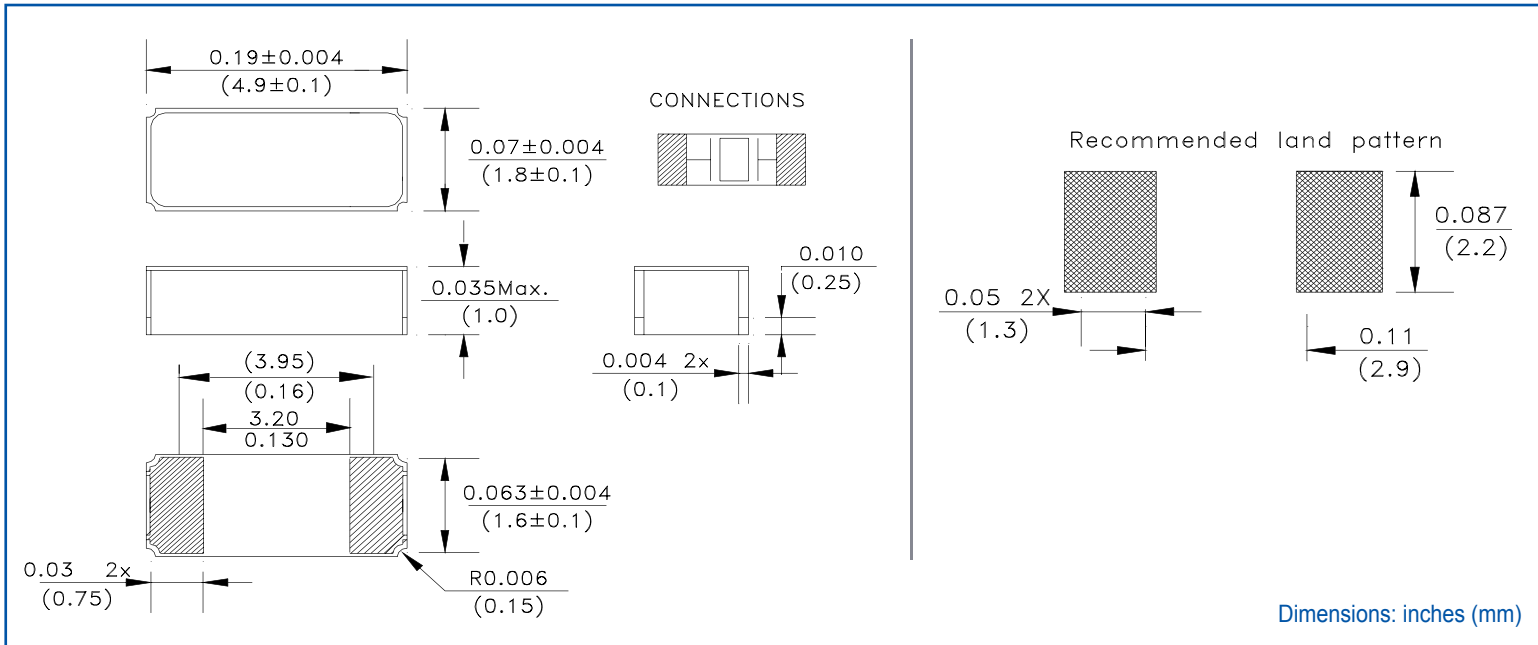


RoHS  
Compliant



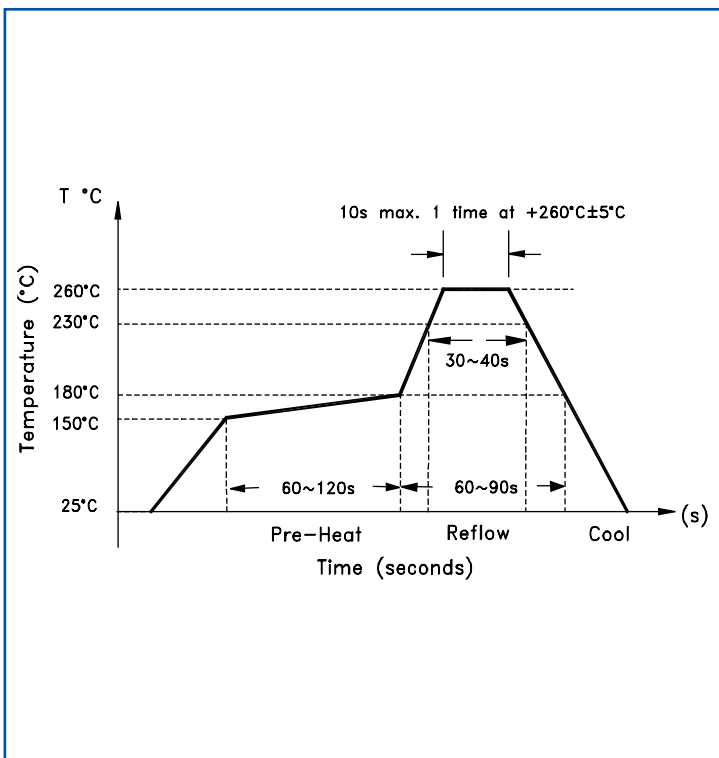
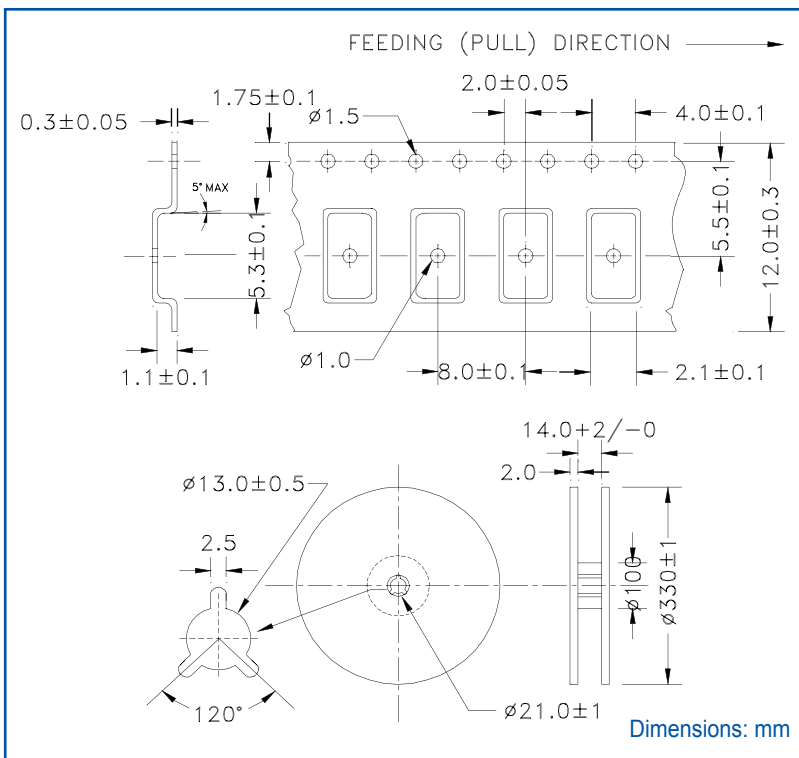
4.9 x 1.8 x 1.0 mm

## OUTLINE DRAWING:



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

## REFLOW PROFILE



Need a test socket for the ABS10 Series? To view compatible **PRECISION TEST & BURN-IN SOCKETS** for these parts, [click here: P/N AXS-4918-02-11](#)

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