

# 32.768kHz SMD LOW PROFILE CRYSTAL

ABS10



RoHS  
Compliant

ABS10



4.9 x 1.8 x 1.0 mm

## 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:

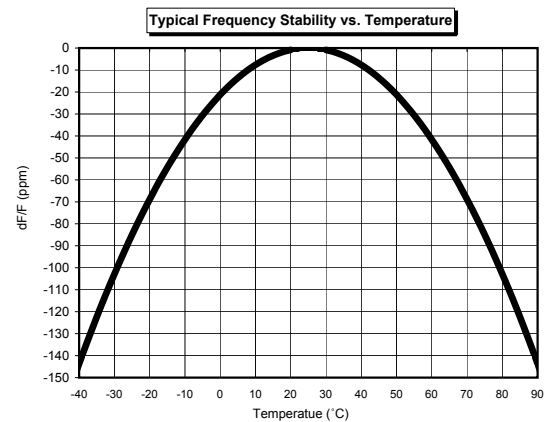
- Wide range in communication & measuring equipment
- Commercial & Industrial applications
- Automotive electronics applications
- Wireless communications
- PDA and Palm Pilots

## STANDARD SPECIFICATIONS:

### PARAMETERS

ABRACON P/N	ABS10
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	± 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



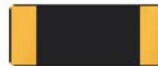
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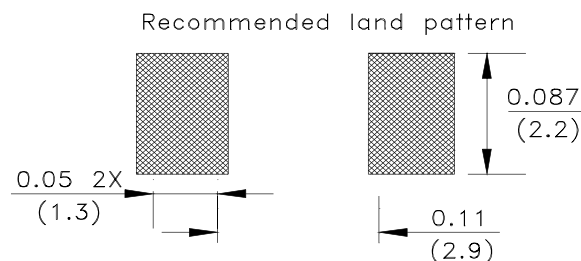
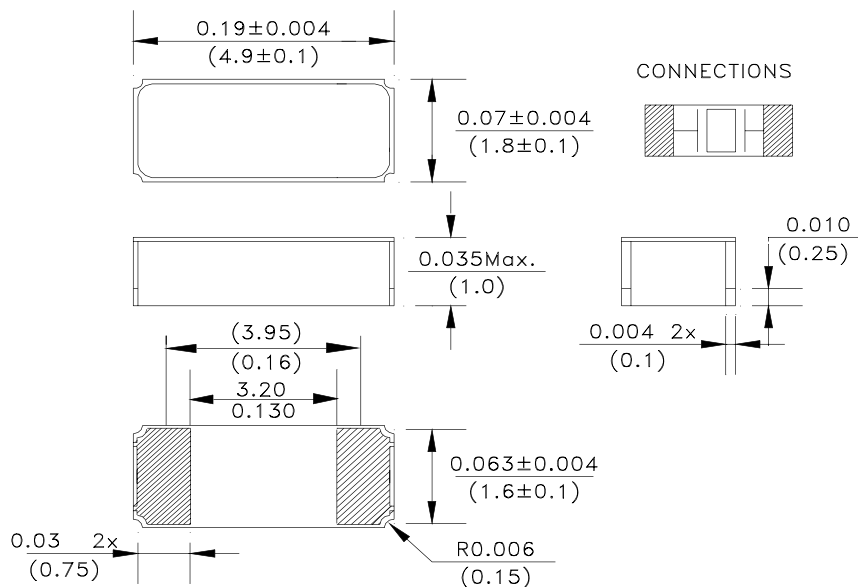
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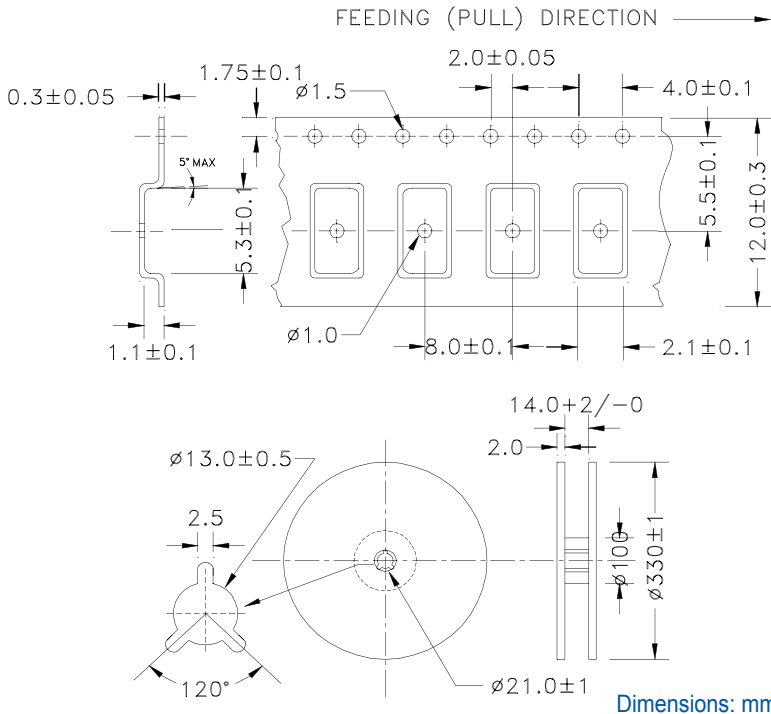
## OUTLINE DRAWING:



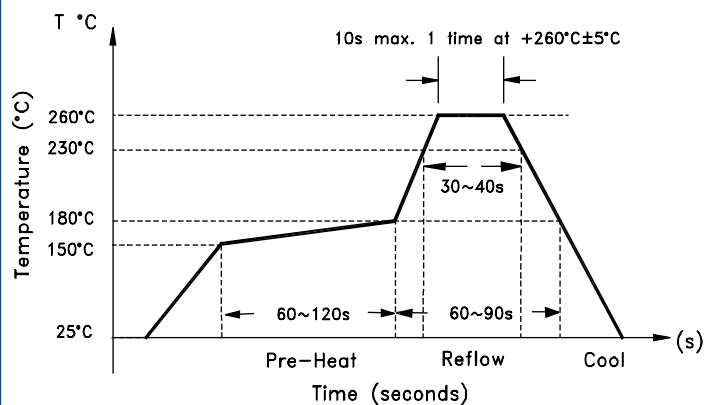
Dimensions: inches (mm)

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

## REFLOW PROFILE



Dimensions: mm



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**

**NOTE:** Abracon manufactured products are intended for general commercial and industrial use. For applications requiring high reliability and/or presenting extreme operating environment, written consent & authorization from Abracon is required.

ABRACON IS  
ISO 9001 / QS 9000  
CERTIFIED



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CORPORATION

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