

# 32.768 kHz SMD LOW PROFILE CRYSTAL

ABS10



RoHS  
Compliant

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:

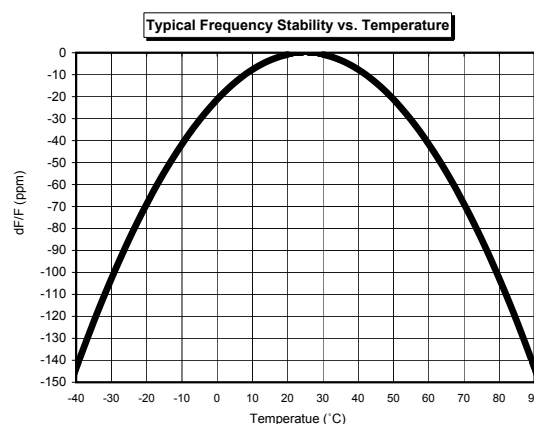
- Wide range in communication & measuring equipment
- Commercial & Industrial applications
- Wireless communications
- PDA and Palm Pilots

## 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           |

\*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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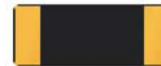
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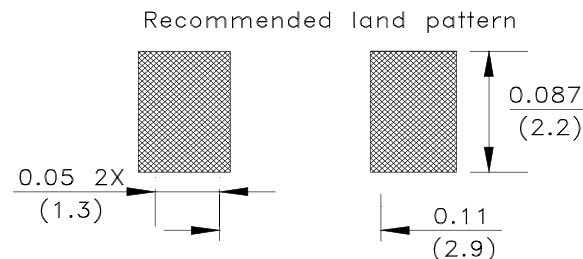
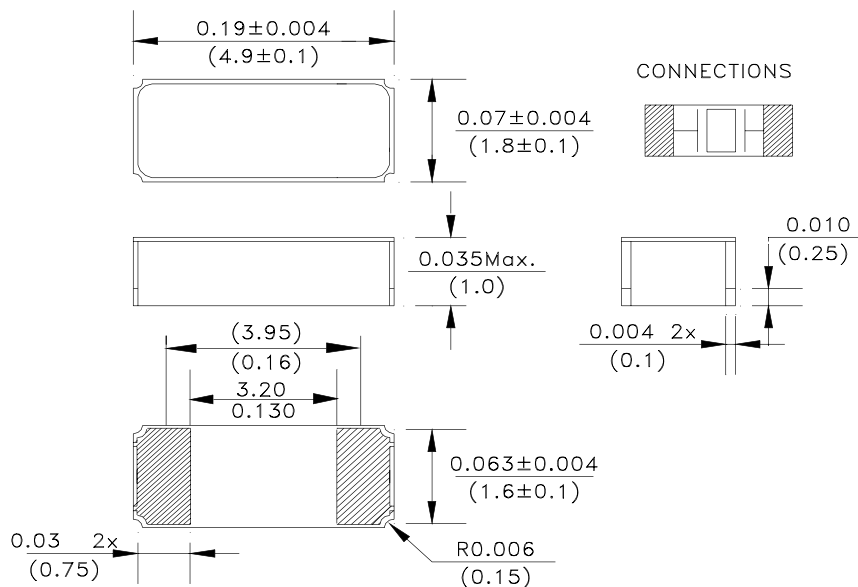
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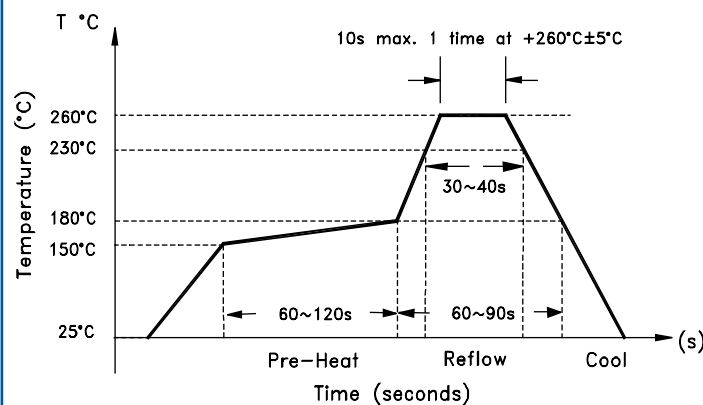
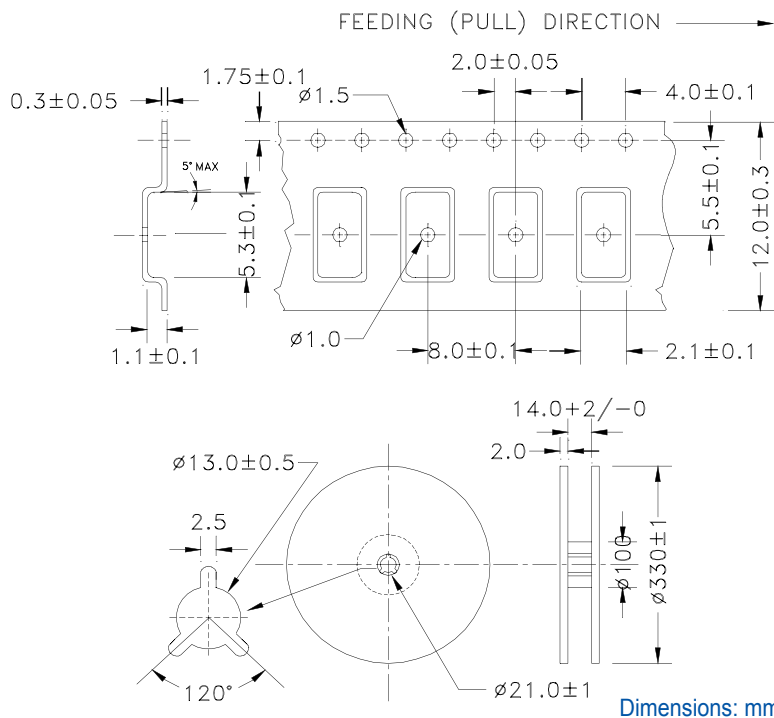
## OUTLINE DRAWING:



Dimensions: inches (mm)

## 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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