

# 32.768 kHz SMD LOW PROFILE CRYSTAL

ABS09

ABS09



RoHS  
Compliant



4.1 x 1.5 x 0.9 mm

*ABS09 is not recommended for new designs. Please consider our reduced size ABS07 or ABS06.*

## FEATURES:

- Low frequency in small size SMD
- 0.9mm 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:

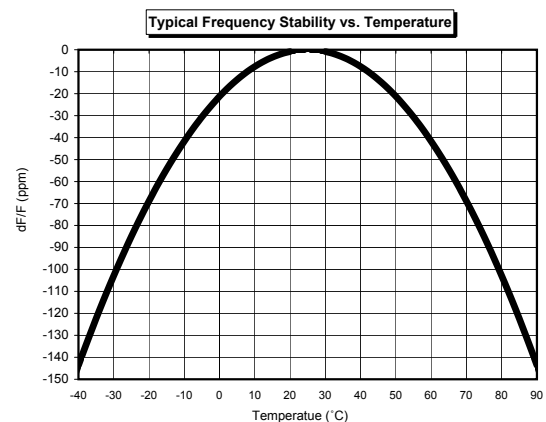
- Wide range in communication & measuring equipment
- Commercial & Industrial applications
- Wireless communications
- PDA and Palm Pilots

## STANDARD SPECIFICATIONS:

### PARAMETERS

ABRACON P/N	ABS09
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.
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)

ABS09-32.768kHz-□ - □ - □

Load Capacitance		Freq. Tolerance		Packaging	
Blank	12.5pF	1	± 10 ppm	Blank	Bulk
9	9pF	4	± 30 ppm	T	Tape and Reel
7	7pF				

\*Contact ABRACON for non-standard load capacitance

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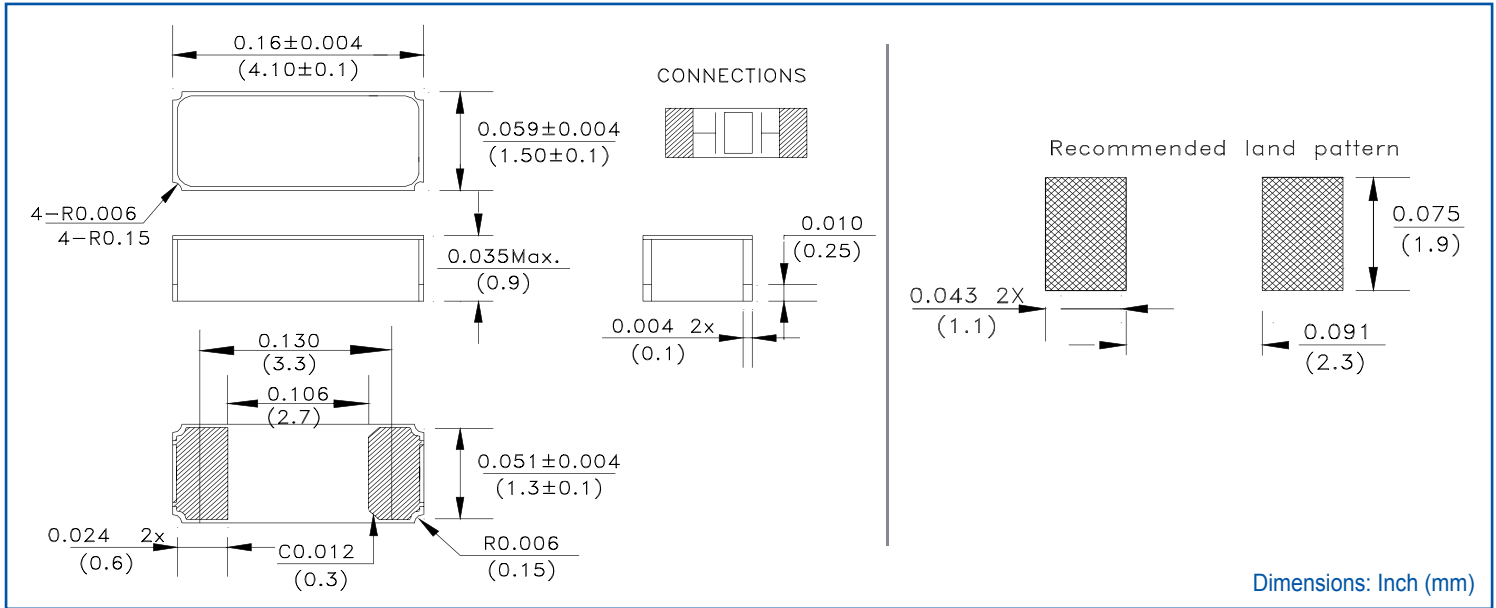


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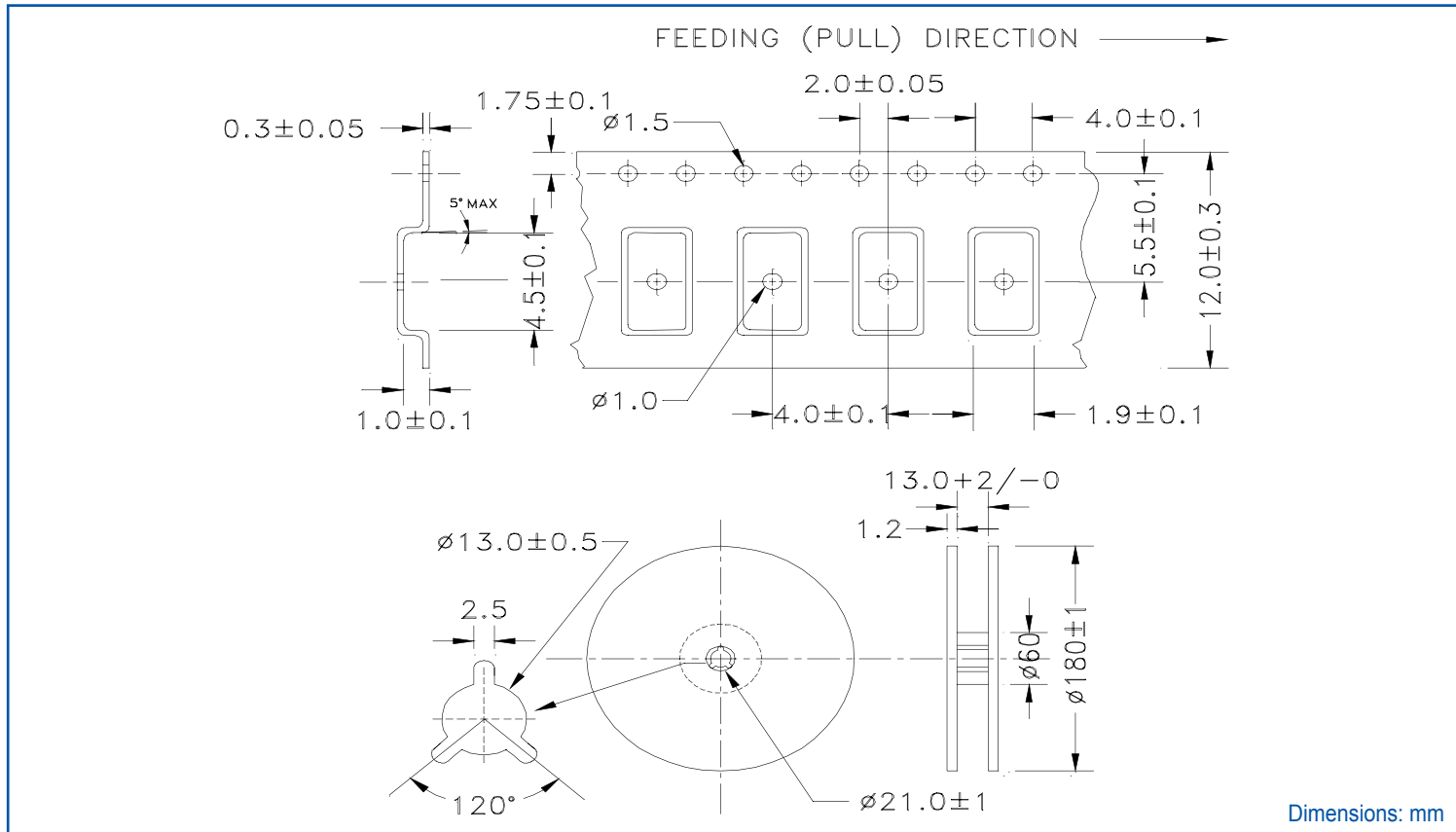


4.1 x 1.5 x 0.9 mm

## OUTLINE DRAWING:



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



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