# 32.768 kHz SMD LOW PROFILE CRYSTAL

ABS09





ABS09 is not recommended for new designs. Please consider the ABS04W or ABS05.

### > 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

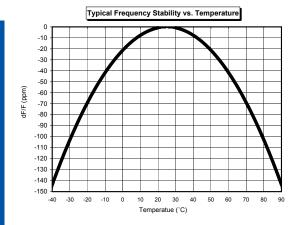
### > APPLICATIONS:

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

## > STANDARD SPECIFICATIONS:

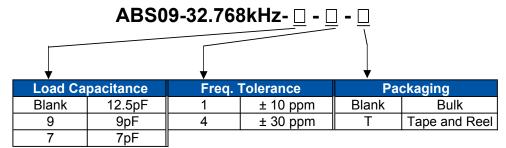
PARAMETERS	
ABRACON P/N	ABS09
Nominal Frequency	32.768 kHz
Operating Temperature	-40°C to + 85°C
Turn-over Temperature	+25°C to ±5°C
Storage Temperature	-55°C to +125°C
Frequency Tolerance	±20 ppm max.
Temperature Coefficient (β)	- 0.034±0.006 ppm/T <sup>2</sup>
Equivalent Series Resistance	70 kohms max.
Load Capacitance CL	12.5 pF (see option)
Drive Level	1.0 μW max.
Aging (first year) 25°C	± 5 ppm max.
Insulation Resistance	500 MΩ 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)



\*Contact ABRACON for non-standard load capacitance



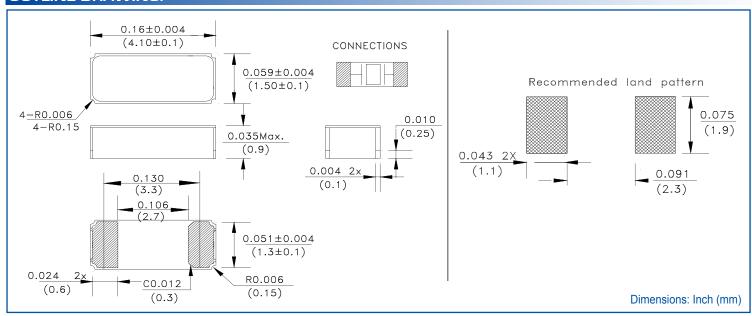
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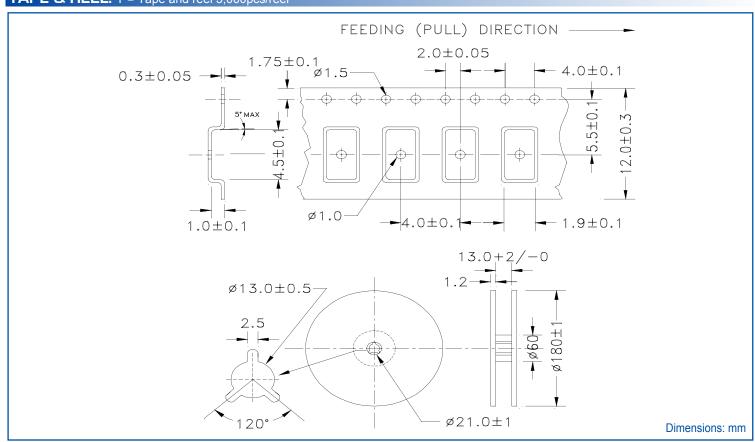




## **OUTLINE DRAWING:**



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



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