

# 32.768kHz SMD LOW PROFILE CRYSTAL

ABS07



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**Moisture Sensitivity Level (MSL) – This product is Hermetically Sealed and not Moisture Sensitive – MSL = N/A: Not Applicable**



RoHS/RoHS II

3.2 x 1.5 x 0.9 mm

## ► FEATURES:

- Low frequency in small size SMD
- 0.9mm height ideal for high density circuit boards
- Seam sealed ceramic package offers excellent environmental & heat resistance
- Extended temperature -55°C to +125°C for industrial applications

## ► APPLICATIONS:

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

## ► STANDARD SPECIFICATIONS

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency		32.768		kHz	
Operation Mode		Flexural Mode (Tuning Fork)			
Operating Temperature	-40		+85	°C	See options
Storage Temperature	-55		+125	°C	
Frequency Tolerance @+25°C	-20		+20	ppm	See options
Temperature Coefficient:	-0.040	-0.036		ppm/T <sup>2</sup>	
Turn-over temperature:	+20	+25	+30	°C	
Equivalent series resistance (R1)			70	kΩ	
Shunt capacitance (C0)		0.9 ~ 1.2		pF	
Load capacitance (CL)		12.5		pF	See options
Drive Level		0.1	0.5	μW	
Q value	10000	30000			
Aging@25°C±3°C	-3		3	ppm	First year
Insulation Resistance	500			MΩ	@ 100Vdc ± 15V

## ► OPTIONS AND PART IDENTIFICATION (left blank if standard)

ABS07□- 32.768 kHz - □- □- □ - □

Height
Blank: 0.9mm max.
1: 0.65mm max.

Load Capacitance
Blank: 12.5pF
9: 9pF
7: 7pF
6: 6pF
4P*: 4pF

Operating Temp. Range
Blank: -40 ~ +85°C
H: -40 ~ +125°C
W: -55 ~ +125°C

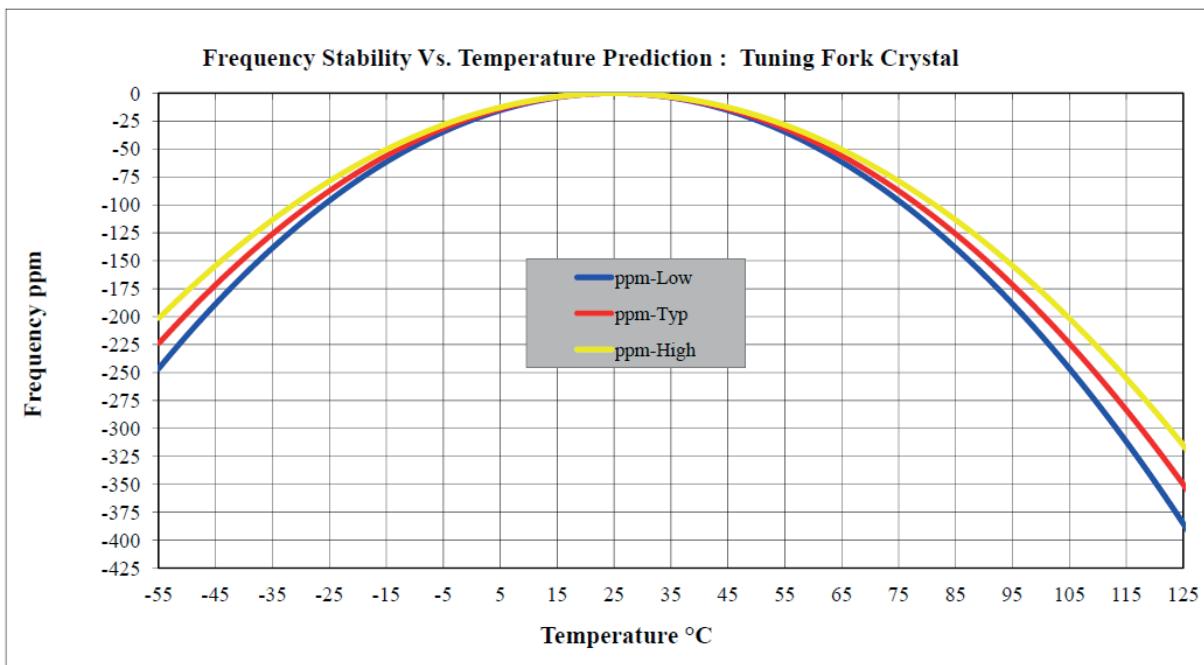
Freq. Tolerance
Blank: ±20ppm
1: ±10ppm
4: ±30ppm

Packaging
Blank: Bulk
T: Tape & Reel (3000pcs/reel)

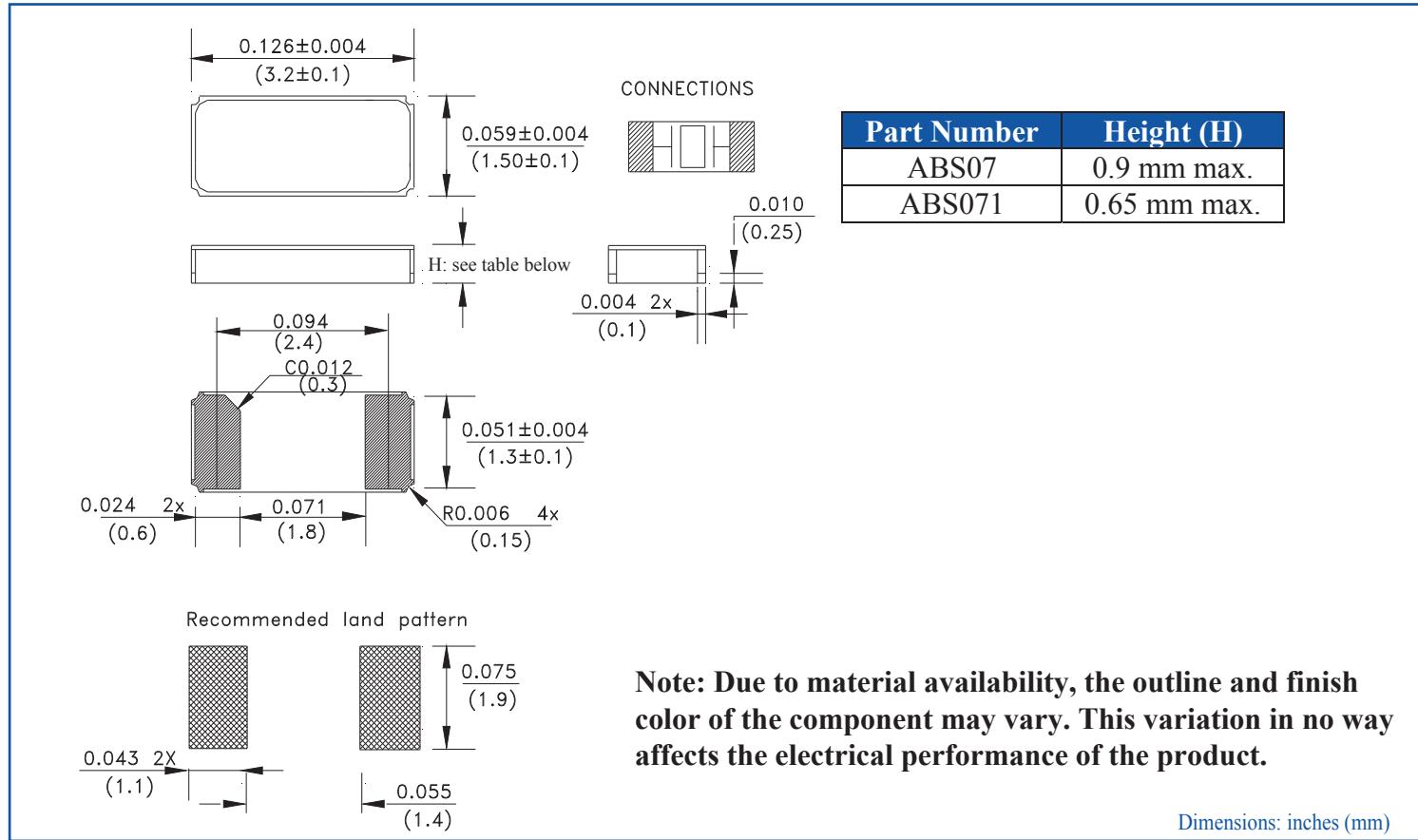
Note: \*Option “4P” is only available with standard height (0.9mm max).



## ► FREQUENCY VS. TEMPERATURE CHARACTERISTICS



## ► OUTLINE DIMENSIONS:



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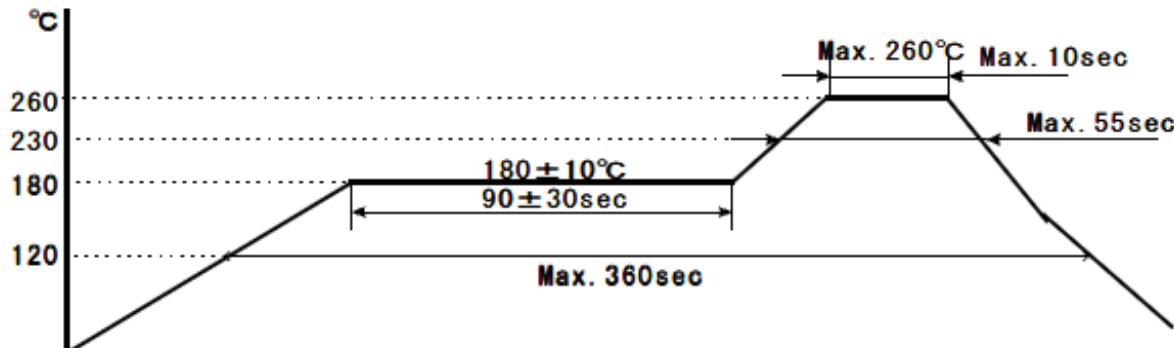
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RoHS/RoHS II

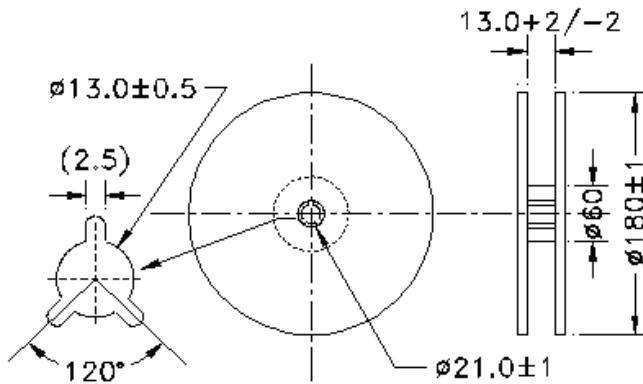
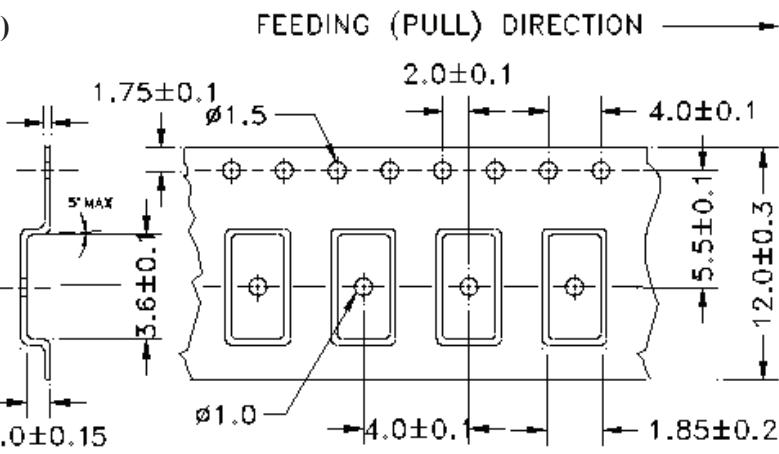
3.2 x 1.5 x 0.9 mm

## REFLOW PROFILE



## TAPE & REEL

T=Tape and reel (3,000pcs/reel)



Dimensions: mm

**ATTENTION:** Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.