

ECN/PCN No.: 3818

For Manufacturer			
<b>Product Description:</b> 32.768kHz SMD Crystal		<b>Abrakon Part Number / Part Series:</b> ABS10	
<b>Affected Revision:</b> K		<b>New Revision:</b> EOL	
		<input type="checkbox"/> Documentation only <input checked="" type="checkbox"/> Series <input type="checkbox"/> ECN <input type="checkbox"/> Part Number <input checked="" type="checkbox"/> EOL	
		<b>Application:</b> <input type="checkbox"/> Safety <input checked="" type="checkbox"/> Non-Safety	
<b>Prior to Change:</b> ABS10 Rev. K			
<b>After Change:</b>  EOL			
<b>Cause/Reason for Change:</b> Discontinuation of this older product package type and associated manufacturing capability.			
Change Plan			
<b>Effective Date:</b> 05/7/2021		<b>Additional Remarks:</b>	
<b>Change Declaration:</b>			
<b>Issued Date:</b> 05/7/2021		<b>Issued By:</b> Stephanie Lopez	
		<b>Issued Department:</b> Engineering	
<b>Approval:</b> Thomas Culhane Engineering Director		<b>Approval:</b> Reuben Quintanilla Quality Director	
		<b>Approval:</b> Ying Huang Purchasing Director	
For Abracon EOL only			
<b>Last Time Buy (if applicable):</b> 06/30/2021		<b>Alternate Part Number / Part Series:</b> None	
<b>Additional Approval:</b>		<b>Additional Approval:</b>	
<b>Customer Approval (If Applicable)</b>			
<b>Qualification Status:</b>  <input type="checkbox"/> Approved <input type="checkbox"/> Not accepted Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.			
<b>Customer Part Number:</b>		<b>Customer Project:</b>	
<b>Company Name:</b>		<b>Company Representative:</b>	
		<b>Representative Signature:</b>	
<b>Customer Remarks:</b>			

# 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 the ABS04W or ABS05.**

## 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:

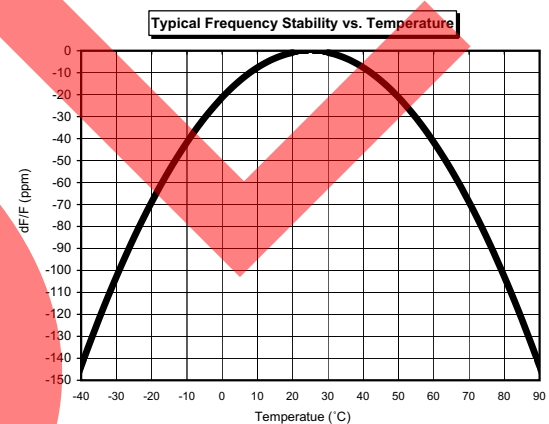
- Wide range in communication & measuring equipment
- Commercial & Industrial applications
- Wireless communications
- PDA and Palm Pilots

## 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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ABS10



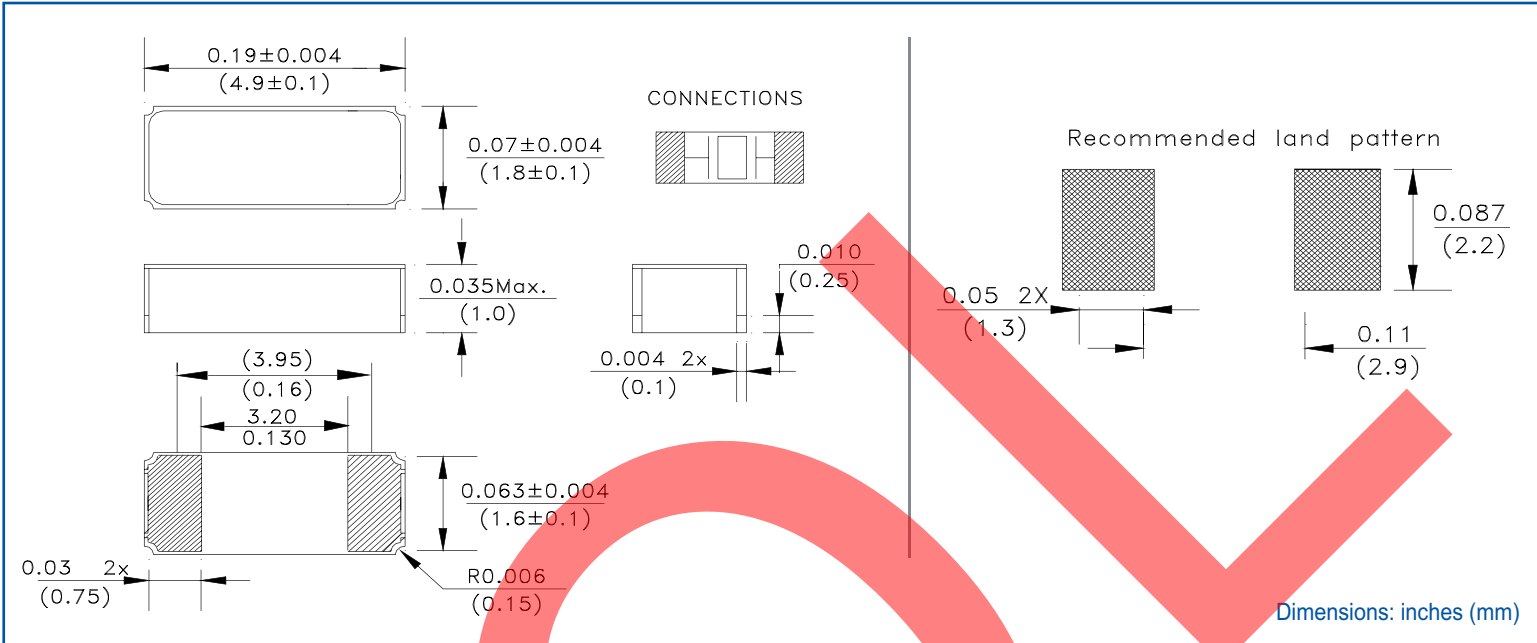
RoHS  
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ABS10



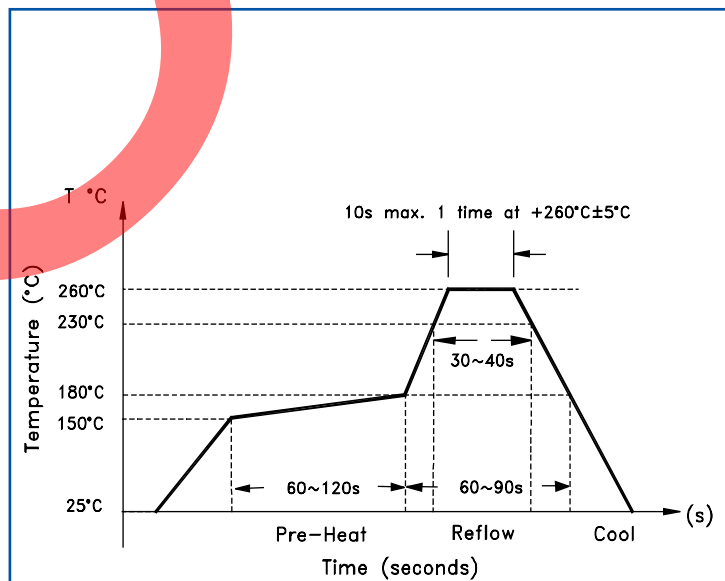
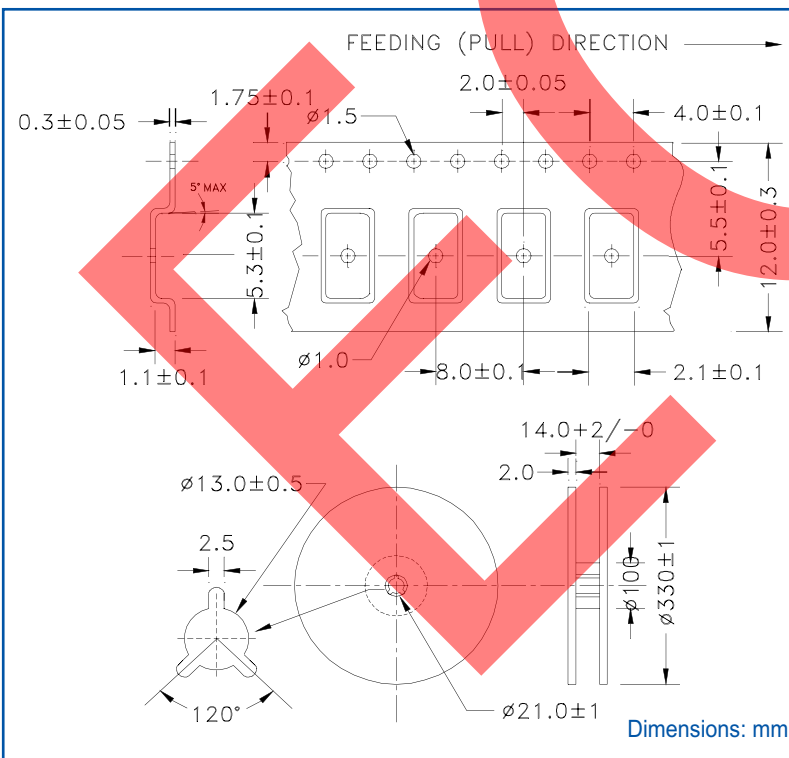
4.9 x 1.8 x 1.0 mm

## OUTLINE DRAWING:



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

## REFLOW PROFILE



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