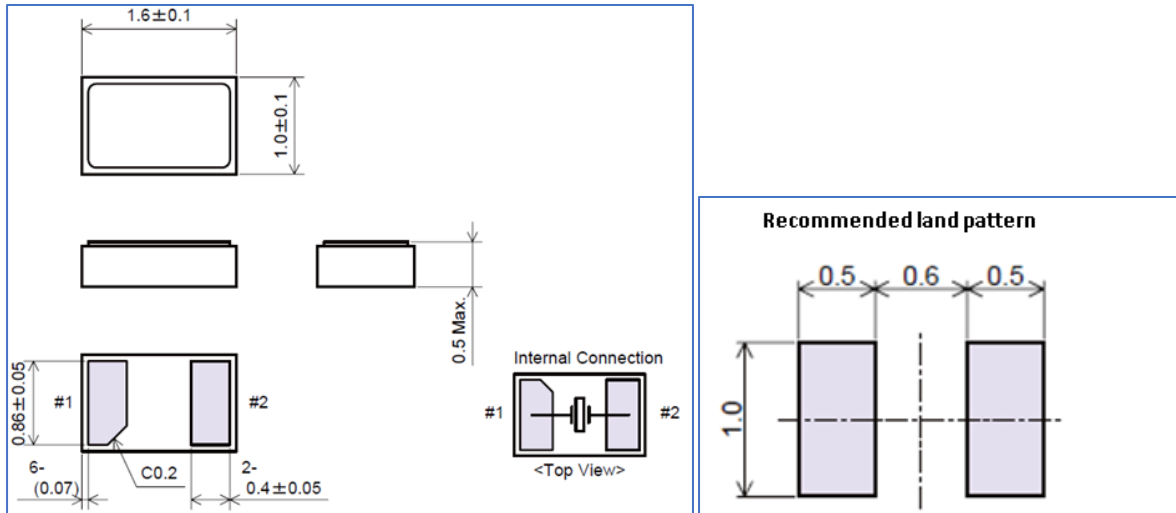


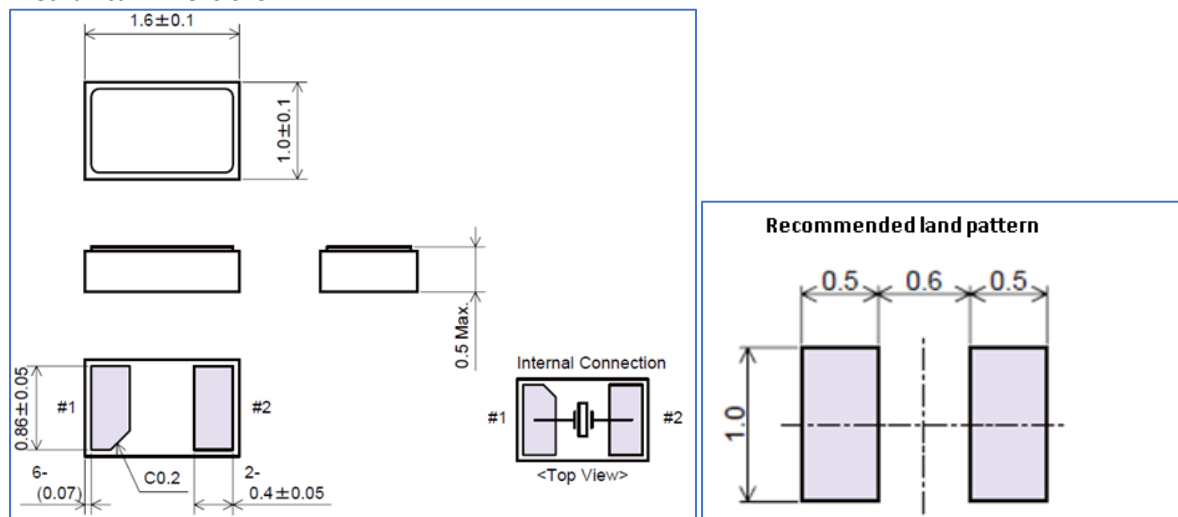
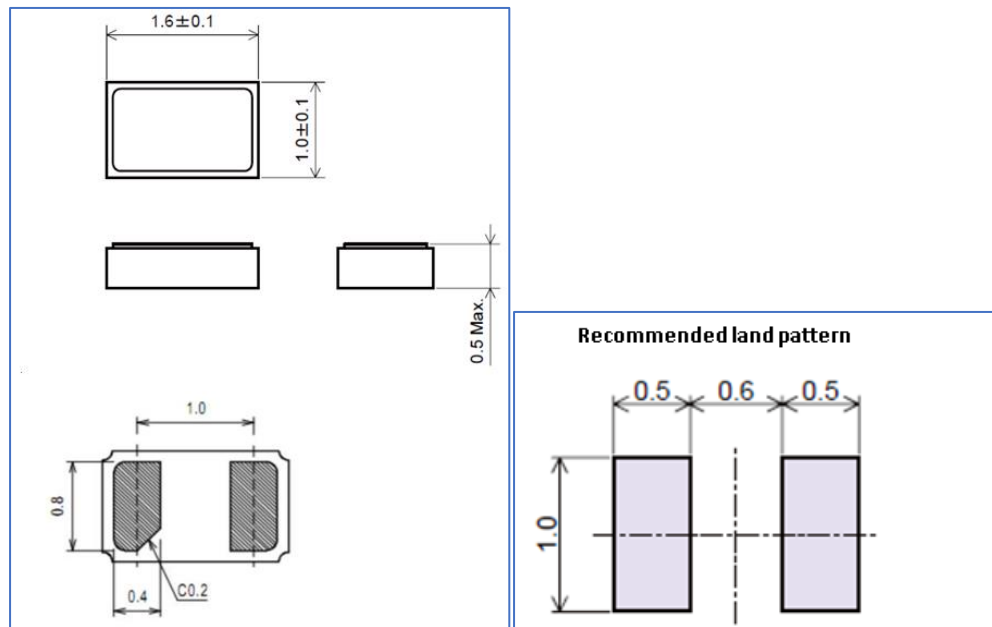
ECN/PCN No.: 3872

For Manufacturer			
Product Description: 32.768kHz SMD Low Profile Crystal	Abracon Part Number / Part Series: ABS05	<input type="checkbox"/> Documentation only <input checked="" type="checkbox"/> ECN <input type="checkbox"/> EOL	<input checked="" type="checkbox"/> Series <input type="checkbox"/> Part Number
Affected Revision: E	New Revision: F	Application:	<input type="checkbox"/> Safety <input checked="" type="checkbox"/> Non-Safety

Prior to Change:

Mechanical Dimensions:



After Change:
Mechanical Dimensions:

Alternative Mechanical Dimensions #1

Cause/Reason for Change:

Abracon introduced additional manufacturing sources to ensure product availability and to be in a better position to meet long term customer demand. Additional package dimensions included to reflect the product produced by all manufacturing sources.

Change Plan

Effective Date:

07/07/2021

Additional Remarks:

N/A

Change Declaration:

- Mechanical Dimensions and Tolerances:
 - The package mechanical dimension revisions do not impact the electrical performance of the device.
- PCB Landing Pattern:
 - There is no impact on the PCB layout/landing pattern for customer's existing boards.

Issued Date: 07/07/2021	Issued By: Brooke Cushman Product Engineer	Issued Department: Engineering
Approval: Thomas Culhane Engineering Director	Approval: Reuben Quintanilla Quality Director	Approval: Ying Huang Purchasing Director
For Abracon EOL only		
Last Time Buy (if applicable): N/A	Alternate Part Number / Part Series: N/A	
Additional Approval: N/A	Additional Approval: N/A	Additional Approval: N/A
Customer Approval (If Applicable)		
Qualification Status: <input type="checkbox"/> Approved <input type="checkbox"/> Not accepted <i>Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.</i>		
Customer Part Number:		Customer Project:
Company Name:	Company Representative:	Representative Signature:
Customer Remarks:		

brand	affected part numbers	series	eco#	datasheet link	ecn notification link
abracon	ABS05-32.768KHZ	ABS05	3872	https://abracon.com/Resonators/ABS05.pdf	https://abracon.com/downloads/ECN-PCN/ECN-PCN-3872-ABS05.pdf
abracon	ABS05-32.768KHZ-1	ABS05	3872	https://abracon.com/Resonators/ABS05.pdf	https://abracon.com/downloads/ECN-PCN/ECN-PCN-3872-ABS05.pdf
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32.768kHz SMD LOW PROFILE CRYSTAL

ABS05

1.6 x 1.0 x 0.5mm

ABS05



RoHS/RoHS II compliant

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

FEATURES:

- 0.5mm 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:

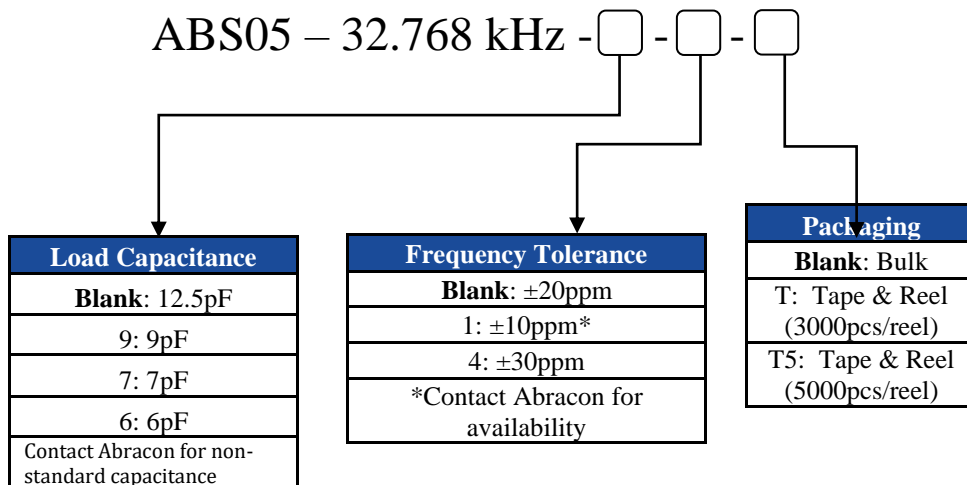
- Smart Display Credit Cards
- Wide range in communication & measuring equipment
- Commercial & Industrial applications
- Wireless communications
- PDA and Palm Pilots

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency	32.768			kHz	
Operation Mode	Flexural Mode (Tuning Fork)				
Operating Temperature	-40		+85	°C	
Storage Temperature	-55		+125	°C	
Frequency Tolerance @+25°C	-20		+20	ppm	Standard (See options if other than STD)
Temperature Coefficient:	-0.04	-0.03	-0.02	ppm/T ²	
Turn-over temperature:	+20	+25	+30	°C	
Equivalent series resistance (ESR)			90	kΩ	
Shunt capacitance (C0)		1.3		pF	
Load capacitance	12.5			pF	Standard (See options if other than STD)
Drive Level			0.5	μW	
Aging @ +25°C±3°C	-3		+3	ppm	First Year
Insulation Resistance	500			MΩ	@ 100Vdc ± 15V

OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)

ABS05 – 32.768 kHz - [] - [] - []



32.768kHz SMD LOW PROFILE CRYSTAL

ABS05

ABS05



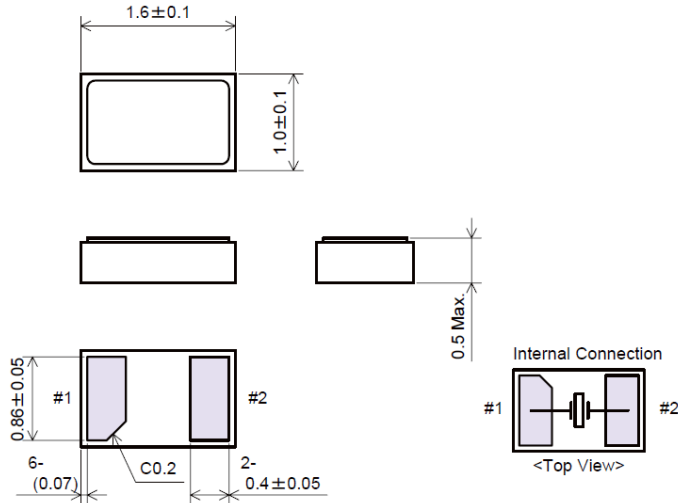
RoHS/RoHS II compliant

1.6 x 1.0 x 0.5mm

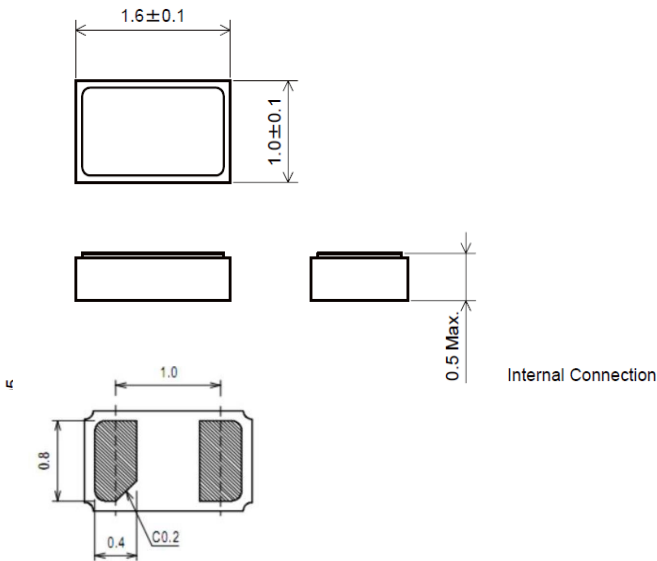
OUTLINE DRAWING:

TAPE & REEL:

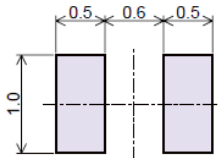
Mechanical Dimensions



Alternative Mechanical Dimensions #1

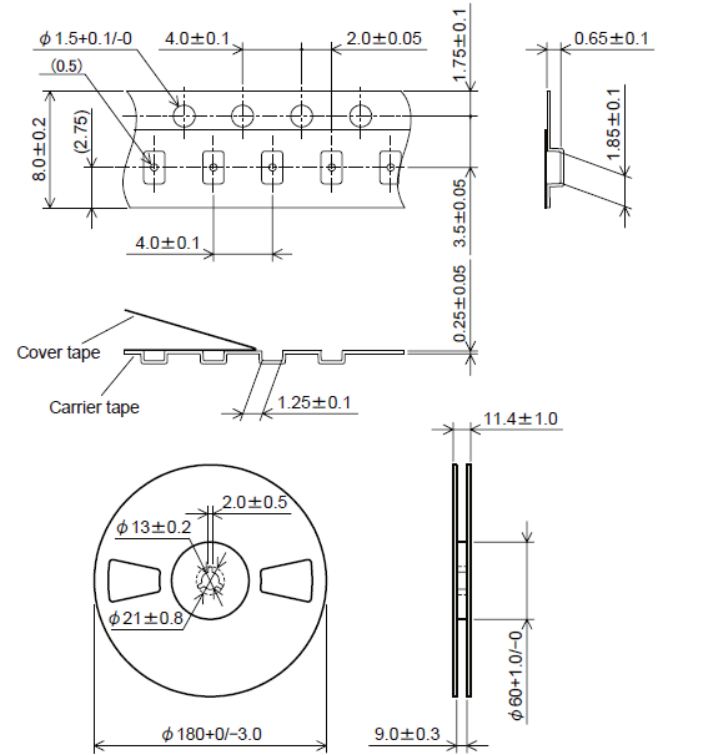


Recommended land pattern



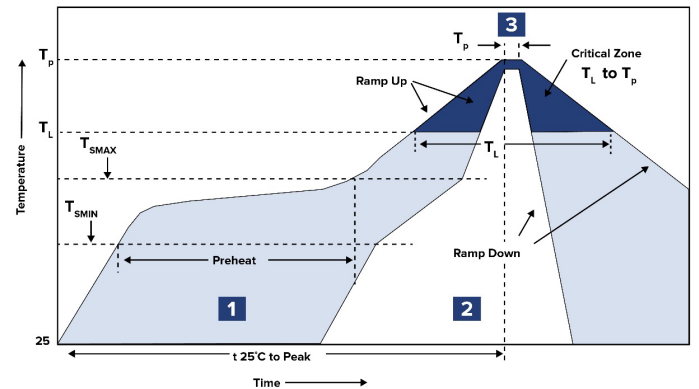
Dimensions: mm

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



Dimensions: mm

REFLOW PROFILE:



Zone	Description	Temperature	Time
1	Preheat	T _{SMIN} ~ T _{SMAX} 150°C ~ 180°C	60 ~ 120 sec.
2	Reflow	T _L 230°C	30 ~ 40 sec.
3	Peak heat	T _P 260°C±5°C	10 sec. MAX

ATTENTION: Abracon LLC'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-dependent 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 LLC is required. Please contact Abracon LLC for more information



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www.abracon.com

REVISED: 07-19-2021

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