



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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# 32.768kHz SMD LOW PROFILE CRYSTAL

ABS13

ABS13

RoHS/RoHS II compliant.  
Pb in high temperature solder

6.9 x 1.4 x 1.3 mm

Moisture Sensitivity Level: Level 1

(exempt 7(a) per RoHS II 2011/65/EU Annex)

## FEATURES:

- Low frequency
- Plastic package with embedded heat resistant crystal in cylinder package
- Extended temperature -40°C to +85°C for industrial applications
- Suitable to RoHS compliant reflow

## APPLICATIONS:

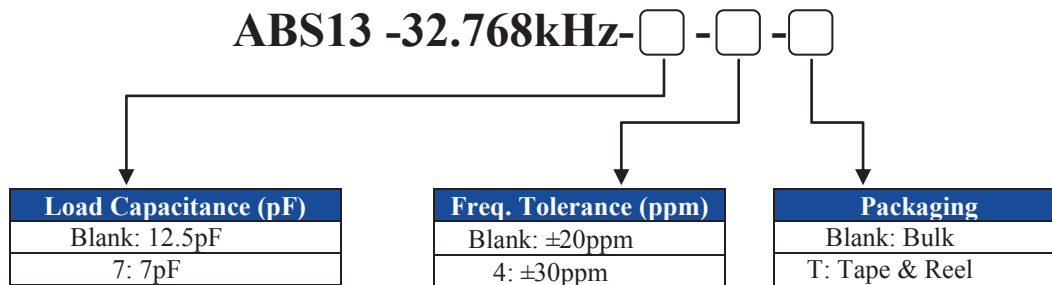
- Commercial & Industrial applications
- Wireless communications
- PDA and Palm Pilots

## STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Nominal Frequency	-----	32.768	-----	kHz	
Operating Temperature	-40	-----	+85	°C	
Turnover Temperature	+20	+25	+30	°C	
Storage Temperature	-55	-----	+125	°C	
Frequency Tolerance @+25°C	-20	-----	+20	ppm	See options
Frequency Coefficient (β)	-0.040	-0.034	-0.028	ppm/T <sup>2</sup>	
Equivalent series resistance (R1)	-----	-----	65	kΩ	
Load capacitance (CL)	-----	12.5	-----	pF	See options
Drive Level	-----	-----	1	μW	
Aging	-3	-----	+3	ppm	@25°C±3°C First year
Insulation Resistance	500	-----	-----	MΩ	@ 100Vdc ± 15V

## OPTIONS AND PART IDENTIFICATION:

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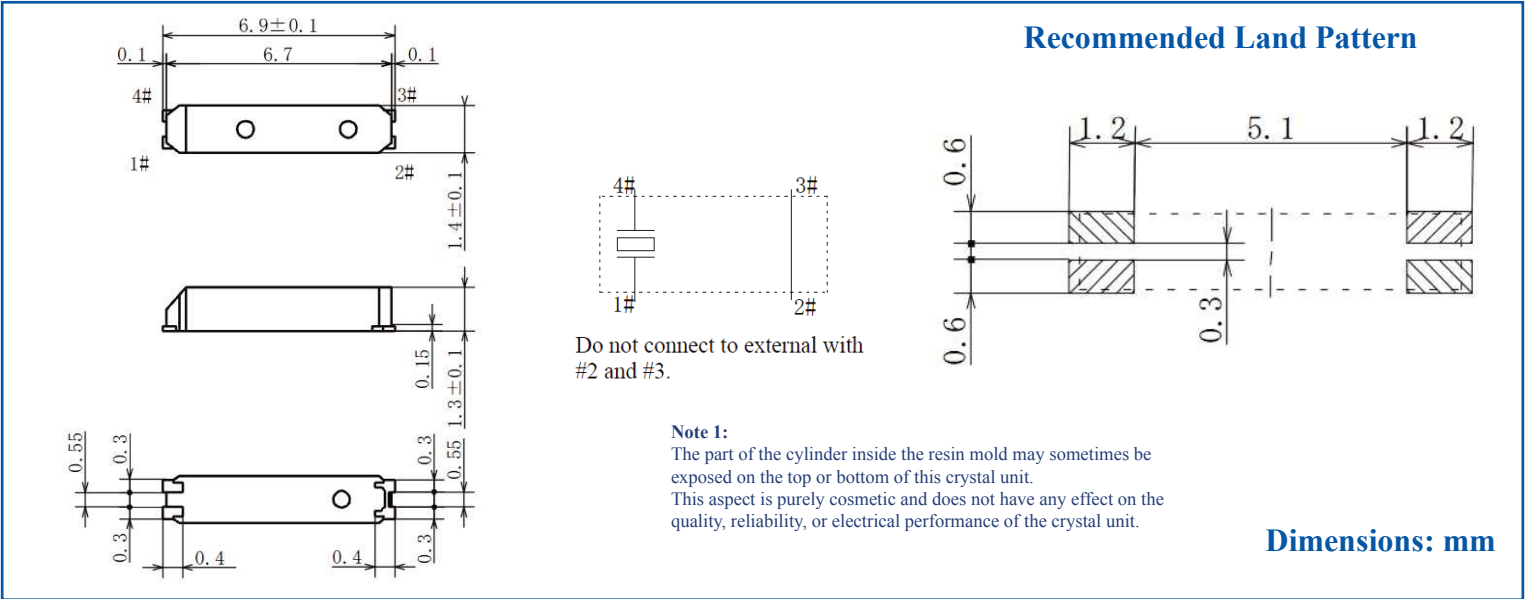
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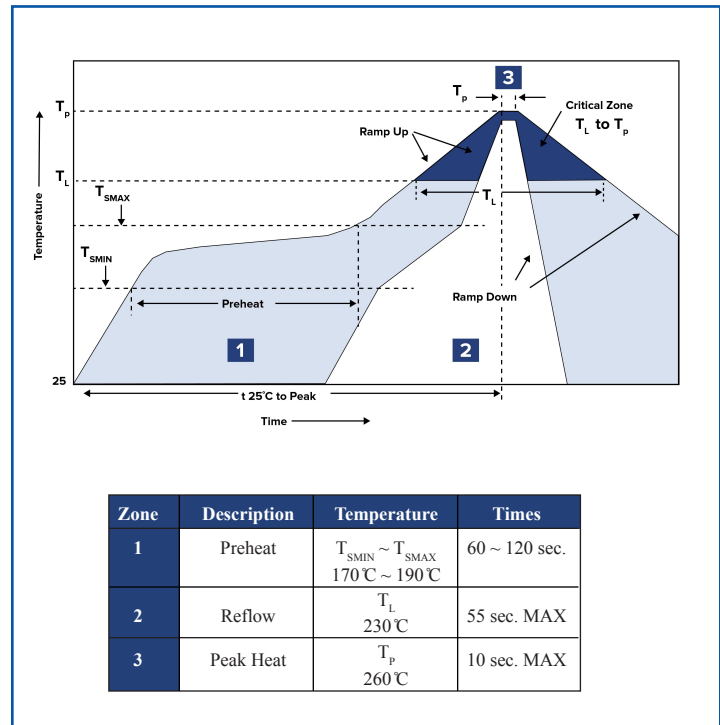
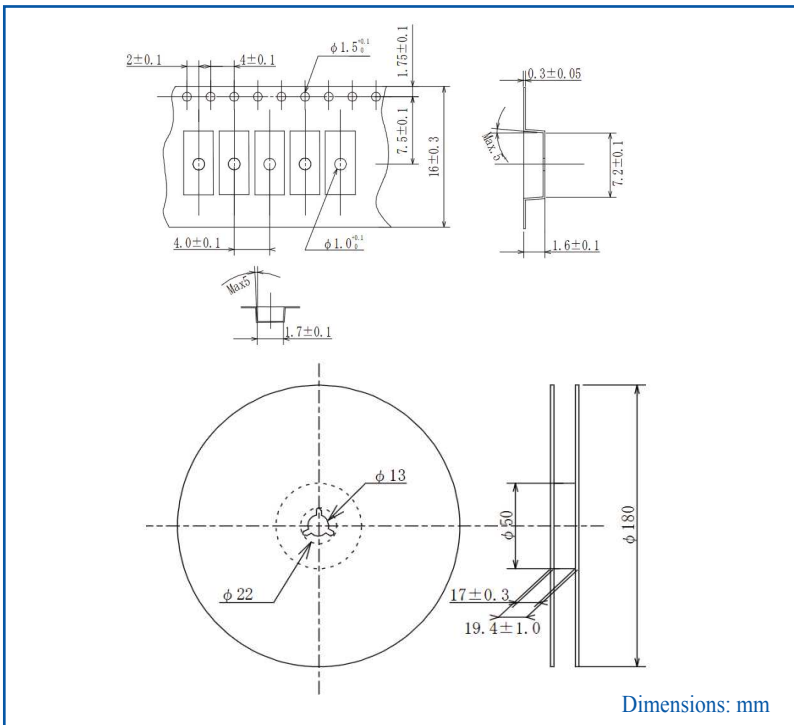
(exempt 7(a) per RoHS II 2011/65/EU Annex)

## OUTLINE DRAWING:



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

## REFLOW PROFILE



**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-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 LLC is required. Please contact Abracon LLC for more information.