

# LOW FREQUENCY CYLINDRICAL WATCH CRYSTAL

AB38T

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**RoHS**  
Compliant

8.3 x ø3.2mm

## FEATURES:

- Commercial grade 32.768kHz crystal

## APPLICATIONS:

- Real time clock
- Measuring instruments.
- Clock source for communication or A/V equipment.

## STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Center Frequency	-----	32.768	-----	kHz	
Operating Temperature	-10	-----	+60	°C	See options
Turnover Temperature	+20	+25	+30	°C	
Storage Temperature	-40	-----	+85	°C	
Frequency Tolerance @+25°C	-20	-----	+20	ppm	See options
Frequency Coefficient (β)		-0.035±0.01		ppm/°C <sup>2</sup>	
Equivalent series resistance (R1)	-----	-----	30	kΩ	
Shunt capacitance (C0)	-----	1.60	-----	pF	
Motional capacitance (C1)	-----	0.0035	-----	pF	
Capacitance ratio (C0/C1)	-----	460	-----	-----	
Load capacitance (CL)	-----	12.5	-----	pF	See options
Drive Level	-----	-----	1	μW	
Quality Factor	-----	90,000	-----		
Aging @25°C±3°C (First year)	-3		+3	ppm	
Insulation Resistance	500	-----	-----	MΩ	@ 100Vdc ± 15V

## OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

AB38T-32.768kHz -  -  -

### Load Capacitance (pF)

Blank: 12.5pF  
Please specify custom load cap. in pF (ex. 6 for 6pF)

### Operating Temperature

E: 0 to +70 °C  
B: -20 to +70 °C

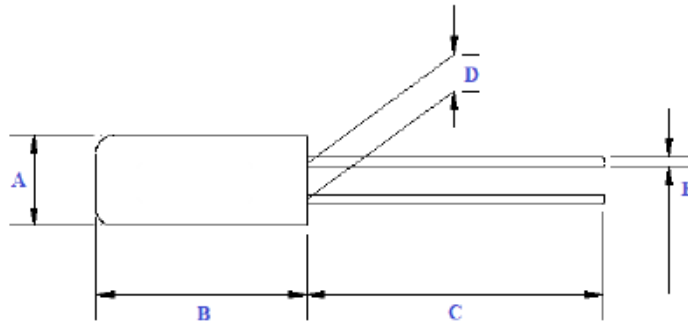
### Freq. Tolerance

1: ± 10 ppm \*  
7: ± 15 ppm

\* Please contact Abracon for availability



## OUTLINE DRAWING:



Dimension Table	
A	Ø 3.2 MAX
B	8.3 MAX
C	8.0 MIN
D	0.8 ± 0.3
E	Ø 0.34 ± 0.2

Dimensions: mm

## Soldering

- (1) Do not apply excessive soldering heat – Recommended Maximum Temperature is 380°C using a hand soldering iron for a Maximum Duration of 3 seconds.
- (2) When dip soldering/wave soldering, the soldering condition is to be 260°C Maximum Temperature for a Maximum Duration of 10seconds. Beware not to heat the whole crystal unit in the dip mounting process. It is recommended that the crystal be mounted in an upright position. (To prevent heat conduction directly to the body of a crystal unit.)
- (3) When soldering, do not apply the heat to the case body of the component as exposure to soldering heat would deteriorate the performance of the product.

**Packaging:** 1,000pcs/bag, 10,000pcs/box

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