

# LOW FREQUENCY, 32.768kHz CYLINDRICAL TYPE TUNING FORK CRYSTALS AB38T and AB26T



## FEATURES:

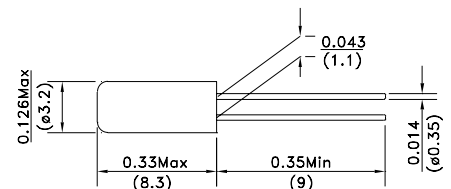
- Watch frequency.
- Frequency range from 30kHz to 200kHz.
- Excellent heat resistance.

## APPLICATIONS:

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

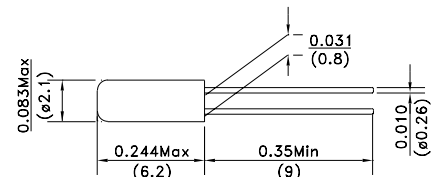
## STANDARD SPECIFICATIONS

PARAMETERS	AB38T	AB26T
Frequency Range	32.768kHz	32.768kHz 30kHz to 200kHz
Operating Temperature	-10°C to +60°C (See Options)	
Storage Temperature	-40°C to +85°C	
Turnover Temperature	25°C to ±5°C	
Frequency Tolerance @ 25°C	±20ppm max.	±20ppm max.(32.768kHz) & ±30ppm max.(others)
Frequency Stability over Temp	-0.034 ±0.006ppm / (25-T) <sup>2</sup> **	
Equivalent Series Resistance (ESR)	30kΩ max.	35kΩ max.(32.768kHz) 35kΩ ~ 50KΩ (others)
Shunt Capacitance C <sub>0</sub>	1.6pF typical	0.8 to 1.7pF typical
Load Capacitance C <sub>L</sub> (See Note)	12.5pF typical (See Options)	
Motion Capacitance C <sub>1</sub>	0.0035pF typ.	0.001 ~ 0.004pF typ.
Drive Level	1μW max.	
Quality Factor Q	90,000 typical	70,000 typical
Capacitance Ratio C <sub>0</sub> / C <sub>1</sub>	460 typical	425 - 800 typical
Insulation Resistance	500 MΩ min. at 100 Vdc ±15 V	
Aging @ 25°C First year	±3ppm max.	±3ppm (32.768kHz) ±5ppm (others)



AB38T

Dimensions: Inches (mm)



AB26T

**Note :** Custom C<sub>L</sub> upon request at 6 pF. Check with us for other C<sub>L</sub> value.

\*\* Example: Stability at -20°C is: -0.035 x [25-(-20)]<sup>2</sup> = -71ppm.

Environmental, and mechanical specifications, see appendix C. Group 3.

Marking, see appendix G.

Recommended handling, see appendix F.

Application notes, see appendix A.

## ORDERING OPTIONS

ABXXT - Frequency - CL - Temperature - Tolerance

38 or 26

Load cap. in pF  
or  
-S for Series

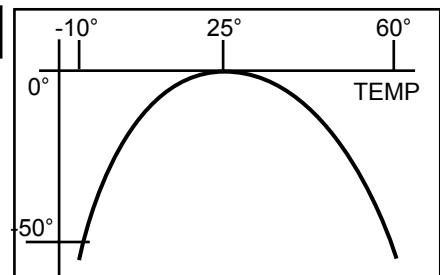
XX.XXXX kHz

-E for 0°C to + 70°C  
-B for -20°C to + 70°C  
-C for -30°C to + 70°C  
-N for -30°C to + 85°C  
-D for -40°C to + 85°C

-1 for ± 10ppm\*  
-7 for ± 15ppm

\* Please call for availability.

## TYPICAL FREQUENCY -vs- TEMPERATURE CURVE



ABRACON IS  
ISO 9001 / QS 9000  
CERTIFIED

NOTE: Left blank if standard • All specifications and markings subject to change without notice

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