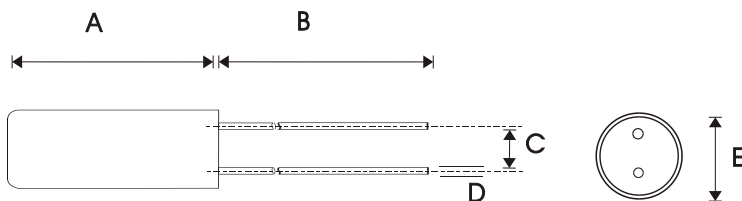


# Specify AEL

## Cylindrical Watch Crystals



Quartz Crystal Resonators



Package Style	A	B	C	D	E
3x8	8.2	9.0	1.10	0.35	3.10
2x6	6.2	9.0	0.70	0.26	2.10
1x5	5.1	4.0	0.45	0.15	1.50

### FEATURES

- Range of Sizes
- Low Cost
- High Shock Resistance
- Extensive UK Stocks

### APPLICATIONS

- Time Keeping
- Datacommunications
- Consumer Electronics
- Automotive Electronics

### STANDARD SPECIFICATION

Frequency Range: 32.768 kHz  
 Adjustment Tolerance at 25°C: 20PPM  
 Frequency Stability: -0.038PPM/°C<sup>2</sup>  
 Operating Temperature Range: -10°C to +60°C  
 Load Capacity: 12.5pF  
 E.S.R: 35 kOhm  
 Drive level: 1MicroWatt  
 Ageing: 1PPM 1st Year Typ.

### Frequency Range E.S.R

20.0 kHz ~ 29.9 kHz	55 k
30.0 kHz ~ 39.9 kHz	45 k
40.0 kHz ~ 59.9 kHz	20 k
60.0 kHz ~ 69.9 kHz	15 k
70.0 kHz ~ 119.9 kHz	12 k
120.0 kHz ~ 164.9 kHz	10 k
307.20 kHz	6 k

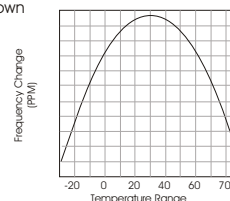
### AVAILABLE OPTIONS

Frequency Range: 20 kHz to 165 kHz & 307.2kHz  
 Adjustment Tolerance 20PPM 50PPM 100PPM  
 Load Capacity: 6pF ~  
 Shunt Capacity (C0): 4.0pF Max

Also available from stock is a 32.768 kHz crystal specifically designed for the Dallas Semiconductor RTC™

### Frequency Stability vs Operating Temperature Range

Tuning fork crystals exhibit a parabolic temperature coefficient with a response curve typically as shown



### Handling Note

Crystals utilising a tuning fork element should not be subjected to ultrasonic cleaning. This is because the blank can be damaged due to the frequency of the ultrasonic bath being in resonance with the crystal itself.



[www.aelcrystals.co.uk](http://www.aelcrystals.co.uk)

quartz based frequency control components

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