

ISSUE 15; July 2016

### Description

- Industry standard leaded package  
Resistance welded, hermetically sealed in an inert atmosphere, glass to metal seals on leads  
Variants available include but are not limited to:-  
3L = a centre mounted third leg grounds the can
- 3L 3 Lead

### Frequency Parameters

- Frequency 3.2MHz to 100.0MHz
- Frequency Tolerance  $\pm 10.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Tolerance Condition @ 25°C  $\pm 2^\circ\text{C}$
- Frequency Stability  $\pm 15.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Ageing  $\pm 5\text{ppm}$  typical per year @ 25°C
- Ageing:  $\pm 1\text{ppm}$  available on request

### Electrical Parameters

- Load Capacitance (CL) 10.0pF to 75.0pF
- Shunt Capacitance (C0) 7pF max
- Drive Level 500 $\mu\text{W}$  max

### Operating Temperature Ranges

- 0 to 50°C
- 10 to 60°C
- 20 to 70°C
- 30 to 80°C
- 40 to 85°C
- 55 to 105°C

### Environmental Parameters

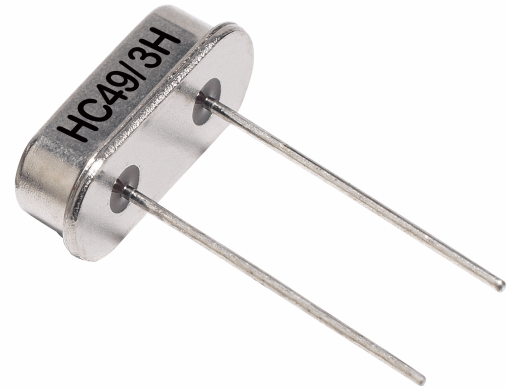
- Storage Temperature Range: -55 to 125°C
- Shock: 981m/s<sup>2</sup>, 6ms, 3 times in each of 3 mutually perpendicular planes
- Vibration: 10Hz-60Hz, 0.75mm amplitude, 60Hz-500Hz, 98.1m/s<sup>2</sup>, 30mins in each of 3 mutually perpendicular planes

### Ordering Information

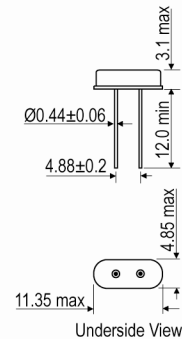
- Frequency\*
- Model\*
- Frequency Tolerance (@ 25°C)\*
- Frequency Stability (over operating temperature range)\*
- Operating Temperature Range\*
- Load Capacitance\*
- Overtone\*
- (\*minimum required)
- Example:  
10.0MHz HC49/3H  
50/50/-40 to 85C/10 FUND

### Compliance

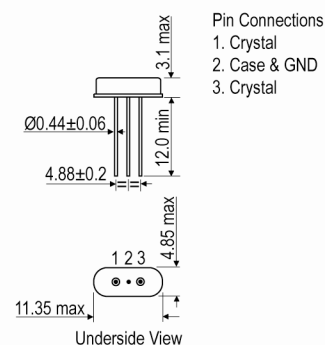
- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable



### Outline (mm)



### Outline (mm) -3L = 3 Lead



### Sales Office Contact Details:

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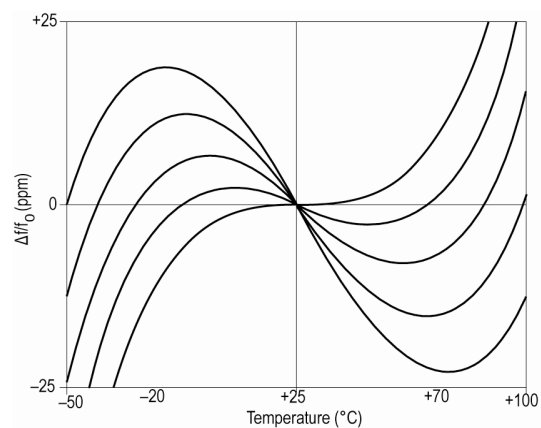
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Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)

#### Packaging Details

- Pack Style: Reel      Tape & reel in accordance with EIA-468-C  
    Pack Size: 1,000
- Pack Style: Bulk      Loose in bulk pack  
    Pack Size: 100

**Typical Frequency vs Temperature Curves for various angles of AT-cut crystals**



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Electrical Specification - maximum limiting values

| Frequency Min | Frequency Max | Temperature Range   | Stability (Min)                         | Over Tone Order | ESR |
|---------------|---------------|---|---|-----------------|-----|
|               |               | °C  | ppm                                     |                 | Ω   |
| 3.2MHz        | 3.999999MHz   | 0 to 50<br>-10 to 60<br>-20 to 70<br>-30 to 80<br>-40 to 85<br>-55 to 105 | ±15<br>±20<br>±20<br>±25<br>±30<br>±100 | Fundamental     | 300 |
| 4.0MHz        | 5.499999MHz   | 0 to 50<br>-10 to 60<br>-20 to 70<br>-30 to 80<br>-40 to 85<br>-55 to 105 | ±15<br>±20<br>±20<br>±25<br>±30<br>±100 | Fundamental     | 130 |
| 5.5MHz        | 7.999999MHz   | 0 to 50<br>-10 to 60<br>-20 to 70<br>-30 to 80<br>-40 to 85<br>-55 to 105 | ±15<br>±20<br>±20<br>±25<br>±30<br>±100 | Fundamental     | 60  |
| 8.0MHz        | 40.0MHz       | 0 to 50<br>-10 to 60<br>-20 to 70<br>-30 to 80<br>-40 to 85<br>-55 to 105 | ±15<br>±20<br>±20<br>±25<br>±30<br>±100 | Fundamental     | 40  |
| 26.0MHz       | 100.0MHz      | 0 to 50<br>-10 to 60<br>-20 to 70<br>-30 to 80<br>-40 to 85<br>-55 to 105 | ±15<br>±20<br>±20<br>±25<br>±30<br>±100 | 3rd Overtone    | 100 |

\*Stability Maximum values ±100ppm

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