

ISSUE 15; September 2019

**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  
Low profile versions available please contact our sales offices for details  
Please see our HC49/4HSMX for a SMD alternative

**Frequency Parameters**

- Frequency 3.2MHz to 100.0MHz
- Frequency Tolerance  $\pm 10.00\text{ppm}$  to  $\pm 100.00\text{ppm}$   
@ 25°C
- Tolerance Condition @ 25°C
- Frequency Stability  $\pm 15.00\text{ppm}$  to  $\pm 500.00\text{ppm}$
- Ageing  $\pm 5\text{ppm}$  typical per year at 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 500µW 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**

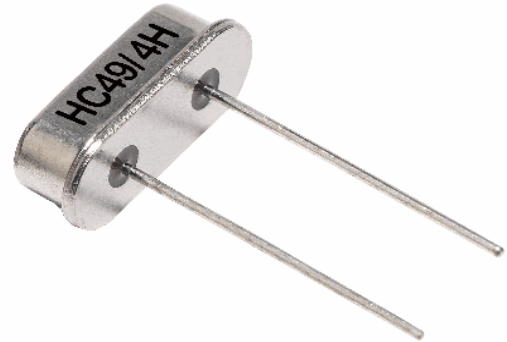
- Storage Temperature Range: -55 to 125°C
- Shock: 981m/s<sup>2</sup>, 6ms, 3 times in each of 3 mutually perpendicular planes
- Vibration: 10Hz-60Hz, 0.75mm amplitude, 60Hz-500Hz, 98.1m/s<sup>2</sup>, 30mins in 3 mutually perpendicular planes

**Ordering Information**

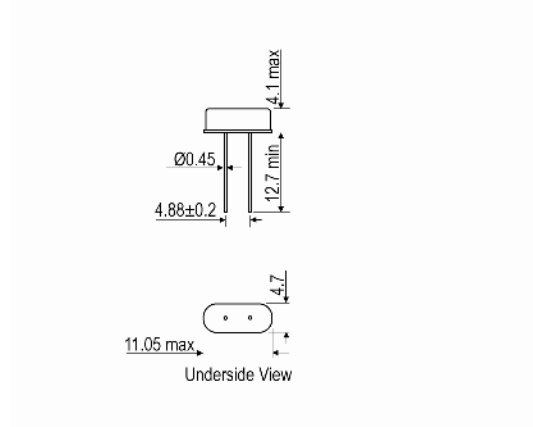
- Frequency\*  
Model\*  
Frequency Tolerance (@ 25°C)\*  
Frequency Stability (over operating temperature range)\*  
Operating Temperature Range\*  
Load Capacitance\*  
Overtone\*  
(\*minimum required)
- Example  
10.0MHz HC49/4H  
50/50/-40 to 85C/10 FUND

**Compliance**

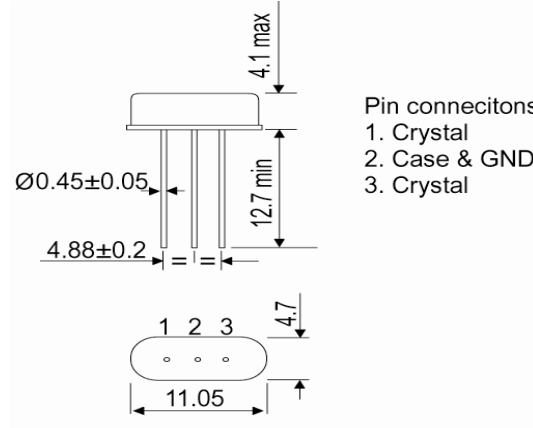
- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable



**Outline (mm)**



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



Pin connections  
1. Crystal  
2. Case & GND  
3. Crystal

**Sales Office Contact Details:**

UK: +44 (0)1460 270200  
Germany: 0800 1808 443

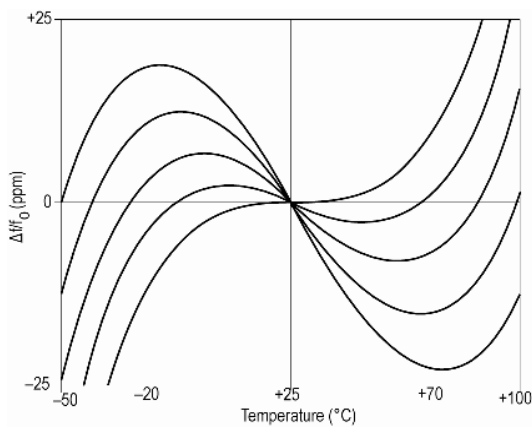
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USA: +1.760.318.2824

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)  
Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)

### Packaging Details

- Pack Style: Cutt      In tape, cut from a reel  
Pack Size: 100
- Pack Style: Bulk      Loose in Bulk pack  
Pack Size: 100
- Pack Style: Reel      Tape & reel in accordance with EIA-468-C  
Pack Size: 1,000
- Pack Style: R500      Tape & reel in accordance with EIA-468-C  
Pack Size: 500
- Pack Style: R250      Tape & reel in accordance with EIA-481-D  
Pack Size: 250

### Typical Frequency vs Temperature Curves



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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 -10 to 60 -20 to 70 -30 to 80 -40 to 85 -55 to 105	±15 ±20 ±20 ±25 ±30 ±100	Fundamental	300
4.0MHz	5.499999MHz	0 to 50 -10 to 60 -20 to 70 -30 to 80 -40 to 85 -55 to 105	±15 ±20 ±20 ±25 ±30 ±100	Fundamental	130
5.5MHz	7.999999MHz	0 to 50 -10 to 60 -20 to 70 -30 to 80 -40 to 85 -55 to 105	±15 ±20 ±20 ±25 ±30 ±100	Fundamental	60
8.0MHz	40.0MHz	0 to 50 -10 to 60 -20 to 70 -30 to 80 -40 to 85 -55 to 105	±15 ±20 ±20 ±25 ±30 ±100	Fundamental	40
26.0MHz	100.0MHz	0 to 50 -10 to 60 -20 to 70 -30 to 80 -40 to 85 -55 to 105	±15 ±20 ±20 ±25 ±30 ±100	3rd Overtone	100

\*Stability Maximum values ±500ppm

This document was correct at the time of printing; please contact your local sales office for the latest version.  
[Click to view latest version on our website.](#)

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