



ISSUE 15; September 2014 - RoHS 2011/65/EU

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
- -3L 3 Lead
- A 3rd leg is added to facilitate grounding of the metal can
- 2 Leg design

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
- 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

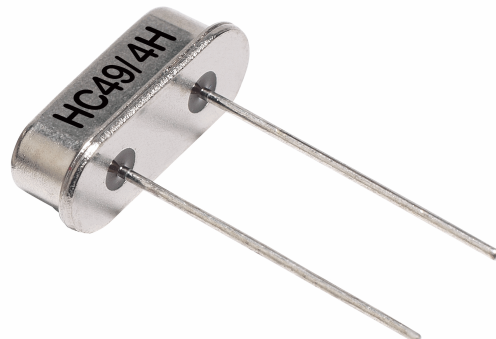
- 0 to 50°C
- -10 to 60°C
- -20 to 70°C
- -30 to 80°C
- -40 to 85°C
- -55 to 105°C

Environmental Parameters

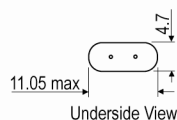
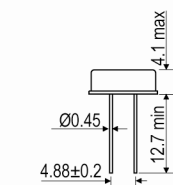
- Storage Temperature Range: -55 to 125°C
- Shock: 981m/s², 6ms, 3 times in each of 3 mutually perpendicular planes
- Vibration: 10Hz-60Hz, 0.75mm amplitude, 60Hz-500Hz, 98.1m/s², 30mins in 3 mutually perpendicular planes

Ordering Information

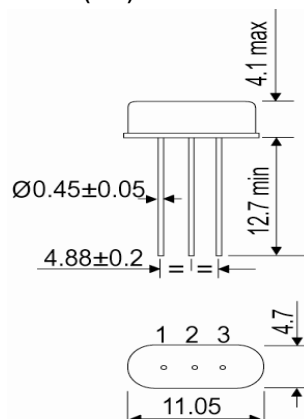
- Frequency*
Model*
Frequency Tolerance (@ 25°C)*
Frequency Stability (over operating temperature range)*
Operating Temperature Range*
Load Capacitance*
Overtone*
(*minimum required)
- Example
10.0MHz HC49/4H
50/50/-40 to 85C/10 FUND



Outline (mm)



Outline (mm) -3L = 3 Lead



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

Sales Office Contact Details:

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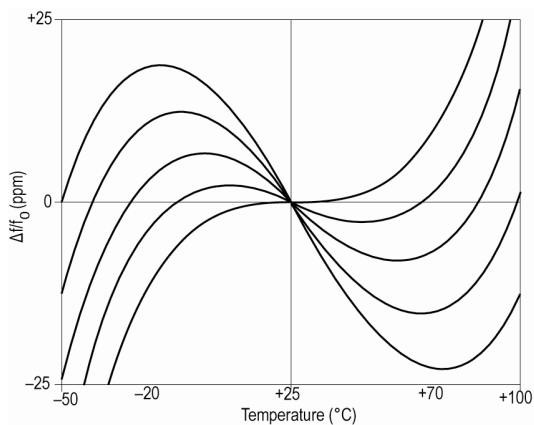
Compliance

- RoHS Status Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Reel Tape & reel in accordance with EIA-468-C
Pack Size: 1,000
- Pack Style: R250 Tape & reel in accordance with EIA-481-D
Pack Size: 250
- Pack Style: Bulk Loose in Bulk pack
Pack Size: 100
- Pack Style: Cutt In tape, cut from a reel
Pack Size: 10

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

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