

Model: HC49/4H

Outline (mm)

-3L = 3 Lead

# ISSUE 15; April 2012 - 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

#### **Frequency Range**

Frequency	3.2000 to 100.0Mhz
Frequency Tolerance	±10ppm to ±100ppm
General Specification	

Load Capacitance (CL)

Shunt Capacitance (C0)

**Frequency Parameters** 

**Environmental Parameters** 

0 to 50°C -10 to 60°C

-20 to 70°C -30 to 80°C -40 to 85°C -55 to 105°C

**Operating Temperature Ranges** 

Drive Level 500µW max Ageing ±5ppm typical per year at 25°C



# Ø0.45±0.05 4.88±0.2 11.05 max

Underside View

10.0pF to 75.0pF or Series

7pF max

- Shock: 981m/s<sup>2</sup>, 6ms, 3 times in each of 3 mutually perpendicular planes
- Storage Temperature Range: -55 to 125°C

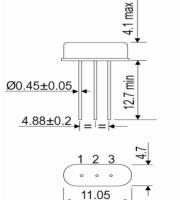
Ageing: ±1ppm available on request

Vibration: 10Hz-60Hz, 0.75mm amplitude, 60Hz-500Hz, 98.1m/s<sup>2</sup>, 30mins in 3 mutually perpendicular planes

#### **Ordering Information**

(\*minimum required)

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



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

Sales Office Contact Details: UK: +44 (0)1460 270200 Germany: +49 (0)7264 9145-0

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### **Packing Details**

Pack Style: Bulk Pack Size

Pack Style: Reel

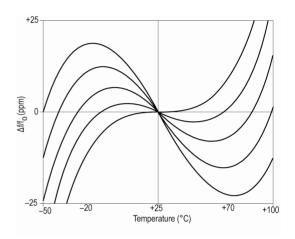
Pack Size

Loose in Bulk pack 100

Tape and reel in accordance with EIA-468-C

1,000 Alternative packing options available

### Typical Frequency vs Temperature Curves



### Electrical Specification - maximum limiting values

Frequency Range	Frequency Tolerance @ 25°C	Stability		Temperature	ESR	Vibration
		Min	Max	Range	Max	Mode
3.2 to <4.0MHz	±10ppm to ±100ppm	±15ppm	±500ppm	0 to 50°C	300Ω	Fundamenta
		±20ppm		-10 to 60°C		
		±20ppm		-20 to 70°C		
		±25ppm		-30 to 80°C		
		±30ppm		-40 to 85°C		
		±100ppm		-55 to 105°C		
4.0 to <5.5MHz ±10ppm to ±1	±10ppm to ±100ppm	±15ppm	±500ppm	0 to 50°C	130Ω	Fundamenta
		±20ppm		-10 to 60°C		
		±20ppm		-20 to 70°C		
		±25ppm		-30 to 80°C		
		±30ppm		-40 to 85°C		
	±100ppm		-55 to 105°C			
5.5 to <8.0MHz	±10ppm to ±100ppm	±15ppm	±500ppm	0 to 50°C	60Ω	Fundamenta
		±20ppm		-10 to 60°C		
		±20ppm		-20 to 70°C		
		±25ppm		-30 to 80°C		
	±30ppm		-40 to 85°C			
		±100ppm		-55 to 105°C		
8.0 to <40.0MHz ±10ppm to ±100ppm	±10ppm to ±100ppm	±15ppm	±500ppm	0 to 50°C	40Ω	Fundamenta
		±20ppm		-10 to 60°C		
		±20ppm		-20 to 70°C		
	±25ppm		-30 to 80°C			
		±30ppm		-40 to 85°C		
		±100ppm		-55 to 105°C		
26.0 to <100.0MHz ±10pp	±10ppm to ±100ppm	±15ppm	±500ppm	0 to 50°C	100Ω	3RD Overtor
		±20ppm		-10 to 60°C		

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# Electrical Specification - maximum limiting values

Frequency Range	Frequency Tolerance @ 25°C	Stability		Temperature	ESR	Vibration
		Min	Max	Range	Max	Mode
		±20ppm		-20 to 70°C		
		±25ppm		-30 to 80°C		
		±30ppm		-40 to 85°C		
		±100ppm		-55 to 105°C		

This document was correct at the time of printing; please contact your local sales office for the latest version

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