

Crystal Specification

Model: HC49

ISSUE 15; September 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 = an additional centre mounted leg grounds the can

TW = an additional top mounted leg grounds the can

T = a truncated height of 11.1mm

Please see our HC49 Gull-Wing for a SMD alternative

Please contact our sales offices for more options

Frequency Range

■ Frequency 1.8432 to 270.0000MHz

■ Frequency Stability ±5.00ppm

■ Frequency Tolerance ±5ppm to ±100ppm

General Specification

■ Load Capacitance (CL) 10.0pF to 75.0pF or Series

■ Drive Level 1mW max

■ Ageing ±3ppm typical per year

■ Shunt Capacitance (C0) 7pF 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

■ -55 to 125°C

Environmental Parameters

- 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
- Storage Temperature Range: -55 to 125°C

Ordering Information

■ Frequency*

Model*

Frequency Tolerance (@25°C)*

Frequency Stability (over operating temperature range)*

Operating Temperature Range*

Load Capacitance*

Overtone*

■ Example:

10.0MHz HC49

50/50/-40 to 85C/10 FUND

Packing Details

■ Pack Style: **Bulk** Loose in bulk pack

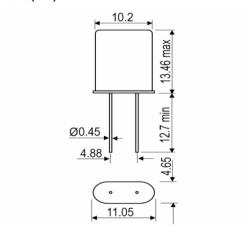
Pack Size 100

■ Pack Style: Reel Tape and reel in accordance with EIA-468-C

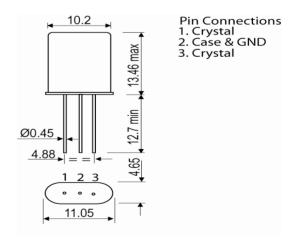
Pack Size 1,000
■ Alternative packing options available

HCAO

Outline (mm)



-3L = 3 Lead



Sales Office Contact Details:

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Electrical Specification - maximum limiting values

Frequency Range	Frequency Tolerance	Stability		Temperature Range	ESR Max	Vibration Mode
		Min	Max	-		Mode
1.8432 to <2.0MHz	±5ppm to ±100ppm	±15ppm	±200ppm	0 to 50°C	800Ω	Fundamenta
		±20ppm		-10 to 60°C		
		±20ppm		-20 to 70°C		
		±25ppm		-30 to 80°C		
		±30ppm		-40 to 85°C		
		±50ppm		-55 to 105°C		
		±100ppm		-55 to 125°C		
2.0000 to <3.0MHz	±5ppm to ±100ppm	±15ppm	±200ppm	0 to 50°C	600Ω	Fundamenta
		±20ppm		-10 to 60°C		
		±20ppm		-20 to 70°C		
		±25ppm		-30 to 80°C		
		±30ppm		-40 to 85°C		
		±50ppm		-55 to 105°C		
		±100ppm		-55 to 125°C		
3.0000 to <4.0MHz	±5ppm to ±100ppm	±15ppm	±200ppm	0 to 50°C	150Ω	Fundamenta
		±20ppm		-10 to 60°C		
		±20ppm		-20 to 70°C		
		±25ppm		-30 to 80°C		
		±30ppm		-40 to 85°C		
		±50ppm		-55 to 105°C		
		±100ppm		-55 to 125°C		
4.0000 to <7.0MHz	±5ppm to ±100ppm	±15ppm	±200ppm	0 to 50°C	100Ω	Fundamenta
		±20ppm		-10 to 60°C		
		±20ppm		-20 to 70°C		
		±25ppm		-30 to 80°C		
		±30ppm		-40 to 85°C		
		±50ppm		-55 to 105°C		
		±100ppm		-55 to 125°C		
7.0000 to <10.0MHz	±5ppm to ±100ppm	±15ppm	±200ppm	0 to 50°C	50Ω	Fundamenta
7.0000 (0 *10.011112	''	±20ppm		-10 to 60°C		
		±20ppm		-20 to 70°C		
		±25ppm		-30 to 80°C		
		±30ppm		-40 to 85°C		
		±50ppm		-55 to 105°C		
		±100ppm		-55 to 125°C		
10.0000 to <36.0MHz	±5ppm to ±100ppm	±15ppm	±200ppm	0 to 50°C	35Ω	Fundamenta
		±20ppm		-10 to 60°C		
		±20ppm		-20 to 70°C		
		±25ppm		-30 to 80°C		
		±30ppm		-40 to 85°C		
		±50ppm		-55 to 105°C		
		±100ppm		-55 to 125°C		
21.0000 to <90.0MHz	±5ppm to ±100ppm	±15ppm	±200ppm	0 to 50°C	40Ω	3RD Overton
		±20ppm	P. P. C.	-10 to 60°C		
		±20ppm		-20 to 70°C		
		±25ppm		-30 to 80°C		
		±30ppm		-40 to 85°C		

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Frequency Range	Frequency Tolerance	Stability		Temperature Range	ESR Max	Vibration Mode
		Min	Max			
		±50ppm		-55 to 105°C		
		±100ppm		-55 to 125°C		
60.0000 to <150.0MHz	±5ppm to ±100ppm	±10ppm	±200ppm	0 to 50°C	70Ω	5TH Overtone
		±15ppm		-10 to 60°C		
		±15ppm		-20 to 70°C		
		±20ppm		-30 to 80°C		
		±25ppm		-40 to 85°C		
		±50ppm		-55 to 105°C		
		±50ppm		-55 to 125°C		
85.0000 to <210.0MHz	±5ppm to ±100ppm	±5ppm	±200ppm	0 to 50°C	100Ω	7TH Overtone
		±5ppm		-10 to 60°C		
		±10ppm		-20 to 70°C		
		±20ppm		-30 to 80°C		
		±25ppm		-40 to 85°C		
		±50ppm		-55 to 105°C		
		±50ppm		-55 to 125°C		
110.0000 to <270.0MHz	±5ppm to ±100ppm	±5ppm	±200ppm	0 to 50°C	150Ω	9TH Overtone
		±5ppm		-10 to 60°C		
		±10ppm		-20 to 70°C		
		±20ppm		-30 to 80°C		
		±25ppm		-40 to 85°C		
		±50ppm		-55 to 105°C		
		±50ppm		-55 to 125°C		

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

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