

# HC49-4H and HC49-4HL Crystals

- Low-cost, industry-standard crystal unit
- AT-Cut strip crystal with hermetically sealed can
- Available in two can heights, 3.5mm or 2.5mm
- Frequency range 3.2MHz to 70MHz
- High frequency fundamental mode avaiable with BT-Cut

#### DESCRIPTION

HC49-4H crystals share the same base outline as the industrystandard HC49 crystal. The crystal uses at AT-cut strip crystal with an hermetically sealed can. HC49-4H crystals provide a low cost source of system clock frequency.

### SPECIFICATION

Frequency Range:	3.2MHz to 70.0MHz	
Oscillation Mode		
AT-Cut Fundamental:	3.2MHz to 30.0MHz	
BT-Cut Fundamental:	24.0MHz to 48.0MHz	
AT-Cut 3rd Overtone:	27.0MHz to 70.0MHz	
Calibration Tolerance at 25°C		
AT-Cut:	±30ppm (tolerance to ±10ppm	
	is available.)	
BT-Cut:	±30ppm	
Frequency Stability		
AT-Cut:	±30ppm over -10° to +60°C	
	(Stability to ±10ppm is available)	
BT-Cut:	±100ppm pver -10 to +60°C	
Load Capacitance (CL):	Series or from 8pF to 32pF	
Ageing at 25°C:	5°C: ±3ppm maximum, 1st year,	
	±1ppm per year thereafter.	
Drive Level:	100μW typical., 500μW max.	
Storage Temperature Range:	-50° to +105°C	
Crystal Holder:	Resistance-weld hermetic seal	
RoHS Status:	Compliant	
Supply format:	Bulk pack (Radial tape and reel	
	is available)	
	·	

# **ESR & OSCILLATION MODE**

Frequency Range MHz	Crystal Cut Osc. Mode	ESR Ohms Max.
3.2 ~ 3.4	AT-Fund	300
3.5 ~ 6.0	AT-Fund	120
6.1 ~ 10.0	AT-Fund	60
10.1 ~ 30.0	AT-Fund	40
24.0 ~ 48.0	BT-Fund	40
27.0 ~ 30.0	AT-3rd OT	150
30.1 ~ 50.0	AT-3rd OT	100
50.1 ~ 70.0	AT-3rd OT	80

#### PART NUMBERING

Part numbers for HC49-4H crystals are generated as follows:

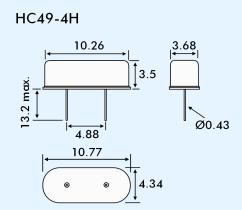
Example:

8.000MHz HC49-4H/30/50/-20+70/30pF/R30 Frequency Package Calibration Tolerance (±ppm) Temperature Stability (±ppm) Operating Temp. Range (°C, Lower Limit/Upper Limit) Circuit Condition (CL in pF or 'SR' for Series) Max. ESR (Ω) Optional

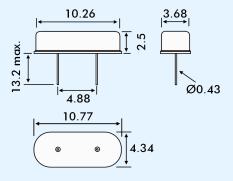




## **Outline and Dimensions**



# HC49-4HL



HC49-4H-3L (3 Wire Base - Centre Earth)

