

HC49-4H and HC49-4HL Crystals

- Low-cost, industry-standard crystal unit
- AT-Cut strip crystal with hermetically sealed can
- Frequency range 1.0MHz to 70MHz
- Package height options available

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.

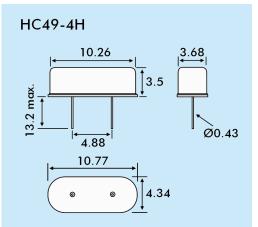
SPECIFICATION

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	27.0000121070.000012	
AT-Cut:	1.20 mm (talana a ta 1.10 mm	
AI-Cut:	± 30 ppm (tolerance to ± 10 ppm	
	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:	±3ppm maximum, 1st year,	
	±1ppm per year thereafter.	
Drive Level:		
Drive Level: Storage Temperature Range:	±1ppm per year thereafter.	
	±1ppm per year thereafter. 100μWatts typ., 500μWatts max.	
Storage Temperature Range:	±1ppm per year thereafter. 100μWatts typ., 500μWatts max. -50° to +105°C	
Storage Temperature Range: Crystal Holder:	±1ppm per year thereafter. 100μWatts typ., 500μWatts max. -50° to +105°C Resistance-weld hermetic seal	
Storage Temperature Range: Crystal Holder: RoHS Status:	±1ppm per year thereafter. 100μWatts typ., 500μWatts max. -50° to +105°C Resistance-weld hermetic seal Compliant	

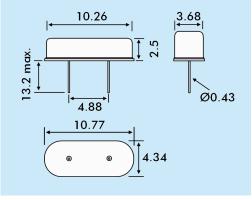
ESR and OSCILLATION MODE

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 NUMBER GENERATION

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

Example:

8.000MHz HC49-4H/30/50/-20+70/30pF/30R

Frequency / holder /calibration tolerance /stability over op. temp. /op. temp. range / circuit condition /ESR or operating mode

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