HC49/4H Crystals

ISSUE 12; 29 SEPTEMBER 2004

Delivery Options

- Common frequencies may be available from stock
- Lower height holders available please contact sales office

Holder Style

- HC49/4H crystals are resistance welded, hermetically sealed in an inert atmosphere with glass to metal seals securing the lead wires
- Holders suffixed '-3L have a centre third wire which grounds the case

General Specifications

- Load Capacitance (C_L): 10pF to 75pF or Series
- Drive Level: 500µW max.
- Static Capacitance (C₀): 7pF max.
- Ageing: ±5ppm typical per year, ±1ppm available on request

Standard Frequency Tolerances and Stabilities

 ±10ppm, ±20ppm, ±30ppm, ±50ppm, ±100ppm, tighter tolerances and stabilities available on request.

Operating Temperature Ranges

Storage Temperature Range

■ -55 to 125°C

Environmental Specification

- Shock: 981m/s² for 6ms, three shocks in each direction along three mutually perpendicular planes
- Vibration: 10 to 60Hz 0.75mm displacement, 60 to 500Hz 98.1m/s² acceleration, 30 minutes in each of three mutually perpendicular planes

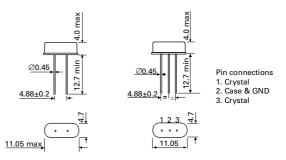
Marking

■ Frequency only

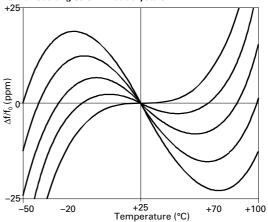
Minimum Order Information Required

Frequency + Holder + Frequency Tolerance @ 25°C +
Frequency Stability + Operating Temperature Range +
Circuit Condition + Overtone Order + Tape & Reel
Packaging Available

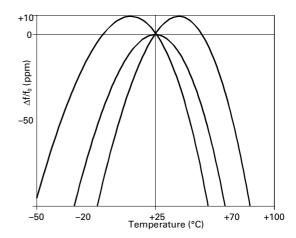
Outline in mm - HC49/4H & HC49/4H-3L



Typical Frequency vs Temperature Curves for various angles of AT-cut crystals



Typical Frequency vs Temperature Curves for various angles of BT-cut crystals



Electrical Specifications - maximum limiting values

Frequency Range	Frequency Tolerance @ 25°C ±2°C	Operating Temperature Range	Frequency Stability Available Over Operating Temperature		ESR max.	Vibration Mode
			Minimum	Maximum	iliax.	
3.2 to <4.0MHz	±10ppm to ±100ppm	0 to 50°C	±15ppm	±100ppm	300Ω	Fundamental
		-10 to 60°C	±20ppm	±100ppm		AT cut
		-20 to 70°C	±20ppm	±100ppm		
		-30 to 80°C	±25ppm	±100ppm		
		-40 to 90°C	±30ppm	±100ppm		
		-55 to105°C	±100ppm	±500ppm		
4.0 to <5.5MHz	±10ppm to ±100ppm	0 to 50°C	±15ppm	±100ppm	130Ω	Fundamental
		-10 to 60°C	±20ppm	±100ppm		AT cut
		-20 to 70°C	±20ppm	±100ppm		
		-30 to 80°C	±25ppm	±100ppm		
		-40 to 90°C	±30ppm	±100ppm		
		-55 to105°C	±100ppm	±500ppm		
5.5 to <6.0MHz	±10ppm to ±100ppm	0 to 50°C	±15ppm	±100ppm	100Ω	Fundamental
		-10 to 60°C	±20ppm	±100ppm		AT cut
		-20 to 70°C	±20ppm	±100ppm		
		-30 to 80°C	±25ppm	±100ppm		
		-40 to 90°C	±30ppm	±100ppm		
		-55 to105°C	±100ppm	±500ppm		
6.0 to <9.0MHz	±10ppm to ±100ppm	0 to 50°C	±15ppm	±100ppm	80Ω	Fundamental AT cut
		-10 to 60°C	±20ppm	±100ppm		
		-20 to 70°C	±20ppm	±100ppm		
		-30 to 80°C	±25ppm	±100ppm		
		-40 to 90°C	±30ppm	±100ppm		
		-55 to105°C	±100ppm	±500ppm		
9.0 to <13.0MHz	±10ppm to ±100ppm	0 to 50°C	±15ppm	±100ppm	60Ω	Fundamental
		-10 to 60°C	±20ppm	±100ppm		AT cut
		-20 to 70°C	±20ppm	±100ppm		
		-30 to 80°C	±25ppm	±100ppm		
		-40 to 90°C	±30ppm	±100ppm		
		-55 to105°C	±100ppm	±500ppm		
13.0 to <20.0MHz	±10ppm to ±100ppm	0 to 50°C	±15ppm	±100ppm	40Ω	Fundamental
		-10 to 60°C	±20ppm	±100ppm		AT cut
		-20 to 70°C	±20ppm	±100ppm		
		-30 to 80°C	±25ppm	±100ppm		
		-40 to 90°C	±30ppm	±100ppm		
		-55 to105°C	±100ppm	±500ppm		
20.0 to <30.0MHz	±10ppm to ±100ppm	0 to 50°C	±15ppm	±100ppm	30Ω	Fundamental AT cut
		-10 to 60°C	±20ppm	±100ppm		
		-20 to 70°C	±20ppm	±100ppm		
		-30 to 80°C	±25ppm	±100ppm		
		-40 to 90°C	±30ppm	±100ppm		
		-55 to105°C	±100ppm	±500ppm		

Frequency Range	Frequency Tolerance @ 25°C ±2°C	Operating Temperature Range	Frequency Stability Available over Operating Temperature		ESR max.	Vibration Mode
			Minimum	Maximum		
27.0 to 50.0MHz	Inclusive with Frequency Stability	0 to 50°C	±50ppm	±100ppm	40Ω	Fundamental BT cut
		-10 to 60°C	±70ppm	±100ppm		
		-20 to 70°C	±100ppm	±100ppm		
28.0 to 100.0MHz	±10ppm to 100ppm	0 to 50°C	±15ppm	±100ppm	100Ω	3rd Overtone AT cut
		-10 to 60°C	±20ppm	±100ppm		
		-20 to 70°C	±20ppm	±100ppm		
		-30 to 80°C	±25ppm	±100ppm		
		-40 to 90°C	±50ppm	±100ppm		
		-55 to 105°C	±50ppm	±100ppm		

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Crystals category:

Click to view products by IQD manufacturer:

Other Similar products are found below:

CS325S24000000ABJT 718-13.2-1 MC405 32.0000K-R3:PURE SN FC-135R 32.7680KF-A3 7A-40.000MAAE-T 7B-27.000MBBK-T FL2000085 9B-15.360MBBK-B 9C-7.680MBBK-T ASH7K-32.768KHZ AT-41.600MAGQ-T BTD1062E05A-513 LFXTAL066198Cutt 9C-14.31818MBBK-T FA-238 50.0000MB30X-K3 FC-12M 32.7680KA-AC3 SSPT7F-9PF20-R FX325BS-38.88EEM1201 LFXTAL065253Cutt LFXTAL066431Cutt XT9S20ANA14M7456 XT9SNLANA16M 646G-24-2 7A-24.576MBBK-T 7B-30.000MBBK-T WX26-32.768K-6PF 9B-14.31818MBBK-B CD1AM 7B-25.000MAAE-T 7A-14.31818MBBK-T 6504-202-1501 6526-202-1501 FA-118T 27.1200MB50P-K0 FC-135R 32.7680KA-A3 ABM12-104-37.400MHZT ABLS-10.000MHZ-D3W-T BTJ112E01E-513 BTJ722K01C-7067 BTL-20-513 TSX-3225 24.0000MF15X-AC TSX-3225 16.0000MF18X-AC BTJ120E02C BTL-12-513 7A-10.000MBBK-T 7A-11.0592MBBK-T ABM12-103-24.000MHZT CS325S25000000ABJT ABM3B-25.000MHZ-B2-X-T FC-135 32.7680KA-A5 FX0800015