

ISSUE 17; July 2022

### Description

- Industry standard low cost SMD version of the HC49/4H crystal  
Resistance welded, hermetically sealed in an inert atmosphere, glass to metal seals on leads  
Lead wires are mounted onto a plastic former to create a gull wing mount  
Low profile versions available please contact our sales offices for details  
Stock parts available

### Frequency Parameters

- Frequency 3.2MHz to 100.0MHz
- Frequency Tolerance  $\pm 10.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Tolerance Condition @  $25^\circ\text{C} \pm 2^\circ\text{C}$
- Frequency Stability  $\pm 15.00\text{ppm}$  to  $\pm 500.00\text{ppm}$
- Ageing  $\pm 5\text{ppm}$  typ per year @  $25^\circ\text{C}$

### Electrical Parameters

- Load Capacitance (CL) 10.0pF to 75.0pF
- Shunt Capacitance (C0) 7pF max
- Drive Level 500 $\mu\text{W}$  max

### Operating Temperature Ranges

- 0 to  $50^\circ\text{C}$
- 10 to  $60^\circ\text{C}$
- 20 to  $70^\circ\text{C}$
- 30 to  $80^\circ\text{C}$
- 40 to  $85^\circ\text{C}$
- 55 to  $105^\circ\text{C}$

### Environmental Parameters

- Shock: 981m/s<sup>2</sup>, 6ms, 3 times in each of 3 mutually perpendicular planes
- Vibration: 10Hz-60Hz, 0.75mm amplitude, 60Hz-500Hz, 98.1m/s<sup>2</sup>, 30mins in 3 mutually perpendicular planes
- Storage Temperature Range: -55 to  $125^\circ\text{C}$

### Manufacturing Details

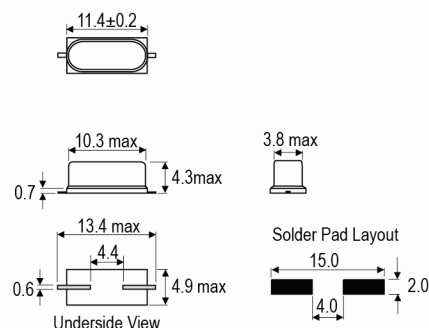
- RoHS Reflow 260 $^\circ\text{C}$  max for 10s max

### Ordering Information

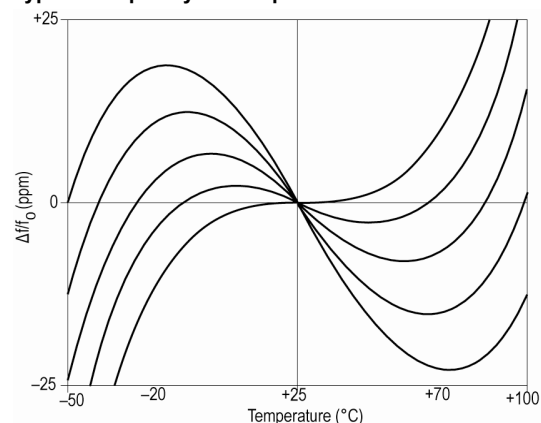
- Frequency\*
- Model\*
- Frequency Tolerance (@  $25^\circ\text{C}$ )\*
- Frequency Stability (over operating temperature range)\*
- Operating Temperature Range\*
- Load Capacitance\*
- Overtone\*
- (\*minimum required)
- Example  
10.00MHz HC49/4HSMX  
50/50/-40 to 85C/10 FUND



### Outline (mm)



### Typical Frequency vs Temperature Curves



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**Compliance**

- RoHS Status (2015/863/EU)      Compliant
- REACH Status                      Compliant
- MSL Rating (JDEC-STD-033):    Not Applicable

**Packaging Details**

- Pack Style: Reel      Tape & reel in accordance with EIA-481-D  
                                  Pack Size: 1,000
- Pack Style: Cutt      In tape, cut from a reel  
                                  Pack Size: 100

**Electrical Specification - maximum limiting values**

Frequency Min	Frequency Max	Temperature Range	Stability (min)*	Over Tone Order	ESR
		°C	ppm		Ω
3.2MHz	3.999999MHz	0 to 50	±15	Fundamental	300
		-10 to 60	±20		300
		-20 to 70	±20		300
		-30 to 80	±25		300
		-40 to 85	±30		300
		-55 to 105	±100		300
4.0MHz	5.499999MHz	0 to 50	±15	Fundamental	130
		-10 to 60	±20		130
		-20 to 70	±20		130
		-30 to 80	±25		130
		-40 to 85	±30		130
		-55 to 105	±100		130
5.5MHz	7.999999MHz	0 to 50	±15	Fundamental	60
		-10 to 60	±20		60
		-20 to 70	±20		60
		-30 to 80	±25		60
		-40 to 85	±30		60
		-55 to 105	±100		60
8.0MHz	39.999999MHz	0 to 50	±15	Fundamental	40
		-10 to 60	±20		40
		-20 to 70	±20		40
		-30 to 80	±25		40
		-40 to 85	±30		40
		-55 to 105	±100		40
26.0MHz	100.0MHz	0 to 50	±15	3rd Overtone	100
		-10 to 60	±20		100
		-20 to 70	±20		100
		-30 to 80	±25		100
		-40 to 85	±30		100
		-55 to 105	±100		100

\*Stability Maximum values ±500ppm

*This document was correct at the time of printing; please contact your local sales office for the latest version.*  
[Click to view latest version on our website.](#)

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