## ISSUE 17; October 2015

## 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
- Frequency Tolerance
- Tolerance Condition
- Frequency Stability
- Ageing


## Electrical Parameters

- Load Capacitance (CL)
- Shunt Capacitance (CO)
- Drive Level
3.2 MHz to 100.0 MHz
$\pm 10.00 \mathrm{ppm}$ to $\pm 100.00 \mathrm{ppm}$
@ $25^{\circ} \mathrm{C} \pm 2^{\circ} \mathrm{C}$
$\pm 15.00 \mathrm{ppm}$ to $\pm 500.00 \mathrm{ppm}$
$\pm 5 p p m$ typ per year @ $25^{\circ} \mathrm{C}$
10.0pF to 75.0 pF

7 pF max
$500 \mu \mathrm{~W}$ max

## Operating Temperature Ranges

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


## Environmental Parameters

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


## Ordering Information

- Frequency*

Model*
Frequency Tolerance (@ $25^{\circ} \mathrm{C}$ )*
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

## Compliance

- RoHS Status (2011/65/EU)


## Compliant

- REACh Status

Compliant

- MSL Rating (JDEC-STD-033):

Not Applicable


Outline (mm)


Solder Pad Layout


Typical Frequency vs Temperature Curves


## Packaging Details

- Pack Style: R250 Tape \& reel of 250pcs

Pack Size: 250

- Pack Style: R500

Tape \& reel of 500pcs
Pack Size: 500

- Pack Style: Bulk

Loose in bulk pack
Pack Size: 100

- Pack Style: Cutt

In tape, cut from a reel
Pack Size: 100

- Pack Style: Reel Tape \& reel in accordance with EIA-481-D

Pack Size: 1,000

Electrical Specification - maximum limiting values

| Frequency Min | Frequency Max | Temperature Range | Stability (min)* | Over Tone Order | ESR |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | ${ }^{\circ} \mathrm{C}$ | ppm |  | $\Omega$ |
| 3.2 MHz | 3.999999 MHz | $\begin{gathered} 0 \text { to } 50 \\ -10 \text { to } 60 \\ -20 \text { to } 70 \\ -30 \text { to } 80 \\ -40 \text { to } 85 \\ -55 \text { to } 105 \end{gathered}$ | $\begin{gathered} \pm 15 \\ \pm 20 \\ \pm 20 \\ \pm 25 \\ \pm 30 \\ \pm 100 \end{gathered}$ | Fundamental | 300 |
| 4.0 MHz | 5.499999 MHz | $\begin{gathered} 0 \text { to } 50 \\ -10 \text { to } 60 \\ -20 \text { to } 70 \\ -30 \text { to } 80 \\ -40 \text { to } 85 \\ -55 \text { to } 105 \end{gathered}$ | $\begin{gathered} \pm 15 \\ \pm 20 \\ \pm 20 \\ \pm 25 \\ \pm 30 \\ \pm 100 \end{gathered}$ | Fundamental | 130 |
| 5.5 MHz | 7.999999 MHz | $\begin{gathered} 0 \text { to } 50 \\ -10 \text { to } 60 \\ -20 \text { to } 70 \\ -30 \text { to } 80 \\ -40 \text { to } 85 \\ -55 \text { to } 105 \end{gathered}$ | $\begin{gathered} \pm 15 \\ \pm 20 \\ \pm 20 \\ \pm 25 \\ \pm 30 \\ \pm 100 \end{gathered}$ | Fundamental | 60 |
| 8.0 MHz | 39.999999 MHz | $\begin{gathered} 0 \text { to } 50 \\ -10 \text { to } 60 \\ -20 \text { to } 70 \\ -30 \text { to } 80 \\ -40 \text { to } 85 \\ -55 \text { to } 105 \end{gathered}$ | $\begin{gathered} \pm 15 \\ \pm 20 \\ \pm 20 \\ \pm 25 \\ \pm 30 \\ \pm 100 \end{gathered}$ | Fundamental | 40 |
| 26.0 MHz | 100.0MHz | $\begin{gathered} 0 \text { to } 50 \\ -10 \text { to } 60 \\ -20 \text { to } 70 \\ -30 \text { to } 80 \\ -40 \text { to } 85 \\ -55 \text { to } 105 \end{gathered}$ | $\begin{gathered} \pm 15 \\ \pm 20 \\ \pm 20 \\ \pm 25 \\ \pm 30 \\ \pm 100 \end{gathered}$ | 3rd Overtone | 100 |

*Stability Maximum values $\pm 500$ ppm
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Click to view latest version on our website.

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