

## General specification for HC49 family crystals

- Low-cost, industry-standard crystal unit
- Available to close tolerances
- Frequency range 1.0MHz to 250MHz
- Package options



### DESCRIPTION

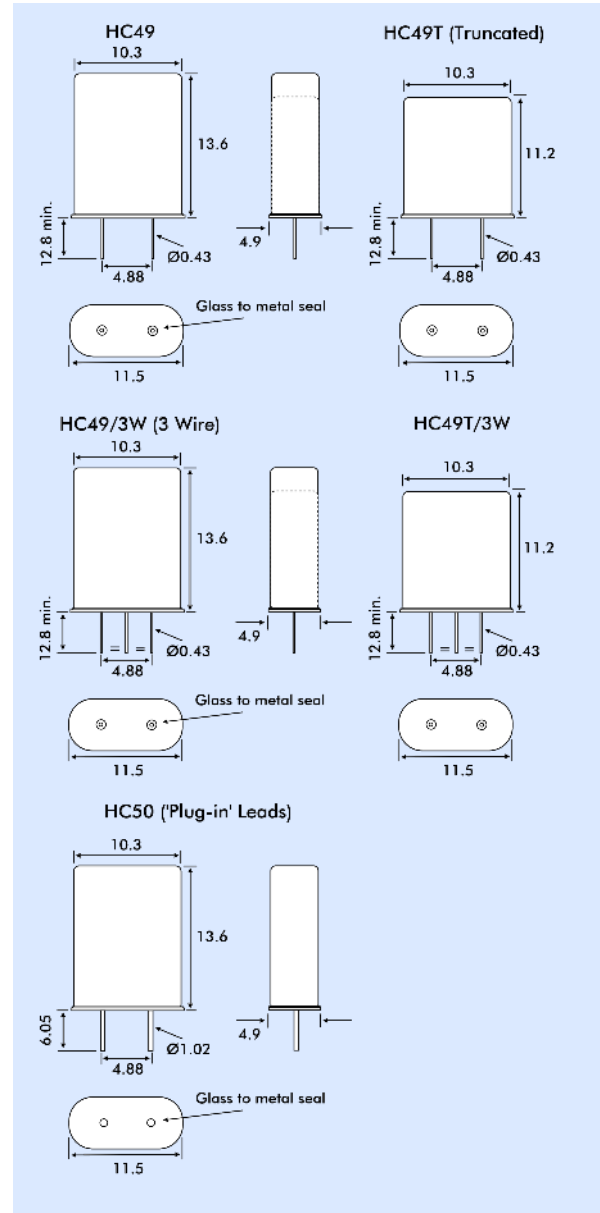
HC49 crystals are long-established, industry-standard crystals. Standard HC49 crystals provide a very low cost source of system clock frequency and due to the dimensions of the crystal blank employed, they are also able to be produced to very close tolerances where required. Supply in several holder variants is available

### SPECIFICATION

|                                |  |
|--------------------------------|--|
| Frequency Range:               | 1.0MHz to 250MHz                                       |
| Oscillation Mode:              | See table  |
| Calibration Tolerance at 25°C: | from ±3ppm to ±50ppm                                   |
| Frequency Stability:           | from ±3ppm to ±50ppm<br>(see table)                    |
| Shunt Capacitance (C0):        | 7pF maximum  |
| Load Capacitance (CL):         | Series or from 8pF to 32pF<br>(Customer specified CL)  |
| Ageing:                        | ±3ppm maximum, 1st year,<br>±1ppm per year thereafter. |
| Drive Level:                   | 100µW typical, 500µW maximum                           |
| Crystal Holder:                | Resistance-weld hermetic seal                          |
| Supply format:                 | Bulk pack  |

### ESR and OSCILLATION MODE

| Frequency Range MHz | Crystal Cut Osc. Mode | ESR Ω Max. |
|---------------------|-----------------------|------------|
| 1.0 ~ 1.3           | SL Fund.              | 5000       |
| 2.01 ~ 3.0          | AT Fund.              | 400        |
| 3.01 ~ 3.2          | AT Fund.              | 200        |
| 3.21 ~ 3.5          | AT Fund.              | 150        |
| 3.51 ~ 3.9          | AT Fund.              | 120        |
| 3.91 ~ 5.0          | AT Fund.              | 100        |
| 5.01 ~ 7.0          | AT Fund.              | 50         |
| 7.01 ~ 10.0         | AT Fund.              | 35         |
| 10.0 ~ 30.0         | AT Fund.              | 25         |
| 30.1 ~ 45.0         | AT Fund.              | 20         |
| 24.0 ~ 100          | AT 3rd OT             | 40         |
| 80.0 ~ 160          | AT 5th OT             | 70         |
| 110 ~ 250           | AT 7th OT             | 120        |



### PART NUMBERS

Part numbers for HC49 family crystals are generated as follows:

Example:

**16.000MHz HC49/30/50/-20+70/30pF/30R**

