

Current part - suitable for new designs

Standard Specifications

| Parameter | Symbol | Specification | Remarks |
|-----------------------------|------------------|---|---|
| Frequency Range | f_0 | 3.00 to 100.00 MHz | |
| Frequency Tolerance | $\Delta f/f$ | $\pm 5\text{PPM} \sim \pm 50\text{PPM}$ | at 25°C with 100 μW |
| Frequency Stability | Over OTR | $\pm 50\text{PPM}$ (Standard) | From $\pm 5\text{PPM}$ (depending on OTR) |
| Operating Temperature Range | T_{OPR} | -10°C to +60°C | See Table |
| Storage Temperature Range | T_{STG} | -55°C to +125°C | |
| Load Capacity | C_L | 30pF (Std value) | Please specify |
| Drive-Level | D_L | 100.0 μW Typ. | 0.5mW Max |
| Shunt Capacitance | C_0 | 7.0pF Typ. | |
| Dynamic Capacitance | C_1 | 20.0fF Typ. | |
| Ageing | Fa | $\pm 5.0\text{PPM}$ | at 25°C $\pm 3^\circ\text{C}$ 1st Year |

Additional Specifications

| Freq Range | Mode | ESR |
|--------------------|----------------|--------------|
| 3.00 to 3.49 MHz | Fundamental | 300 Ω |
| 3.50 to 3.79 MHz | Fundamental | 150 Ω |
| 3.80 to 4.09 MHz | Fundamental | 120 Ω |
| 4.10 to 4.99 MHz | Fundamental | 100 Ω |
| 5.00 to 5.99 MHz | Fundamental | 80 Ω |
| 6.00 to 7.99 MHz | Fundamental | 70 Ω |
| 8.00 to 9.99 MHz | Fundamental | 60 Ω |
| 10.00 to 11.99 MHz | Fundamental | 50 Ω |
| 12.00 to 27.99 MHz | Fundamental | 40 Ω |
| 28.00 to 33.49 MHz | Fundamental | 50 Ω |
| 26.00 to 99.99 MHz | 3rd Overtone | 100 Ω |
| 20.00 to 40.00 MHz | BT Fundamental | 40 Ω |

Temperature Stability Options

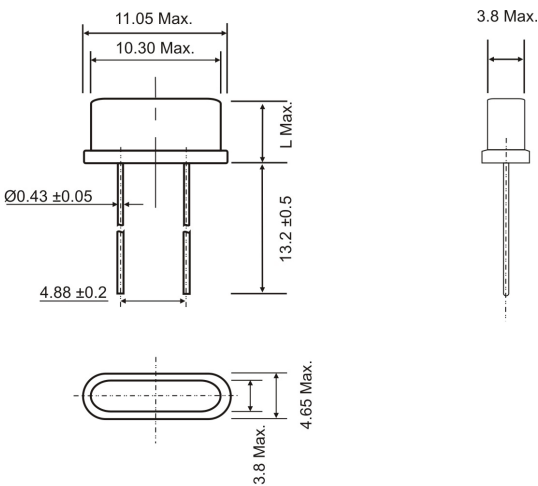
| OTR | Temperature Stability (PPM) | | | | |
|----------------|-----------------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| | ± 5 | ± 10 | ± 15 | ± 20 | ± 50 |
| 0°C to +50°C | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| -10°C to +60°C | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| -20°C to +70°C | | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| -30°C to +80°C | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| -40°C to +85°C | | | | | <input type="checkbox"/> |

= Available

= Recommended

BT - Cut will exhibit parabolic Freq/Temp curve with $\pm 100\text{PPM}$ -10°C to +60°C

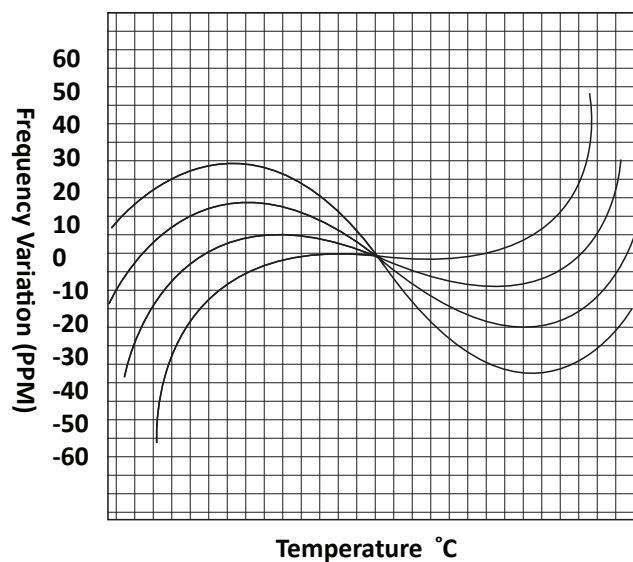
Dimensions (mm)



| Holder Style | L |
|--------------|-------|
| HC-49/S(3.5) | 3.5mm |
| HC-49/S(2.7) | 2.7mm |

AT-Cut Temperature Characteristics

Typical AT-Cut Frequency/Temperature Curves





Global Suppliers of FREQUENCY CONTROL COMPONENTS

| AEL PRODUCTS | |
|----------------------------|--|
| Resonators | |
| Crystal | |
| Piezo-Ceramic | |
| SAW Resonators | |
| Oscillators | |
| Real Time Clock (RTC) | |
| SPXO | |
| MEMS Oscillator | |
| VCXO | |
| VC-TCXO | |
| VCO | |
| Filters | |
| Monolithic Crystal Filters | |
| Ceramic Filters | |
| SAW Filters | |
| Dielectric Filters | |
| Antenna Products | |
| Multilayer Chip Antenna | |
| GPS Antenna Elements | |

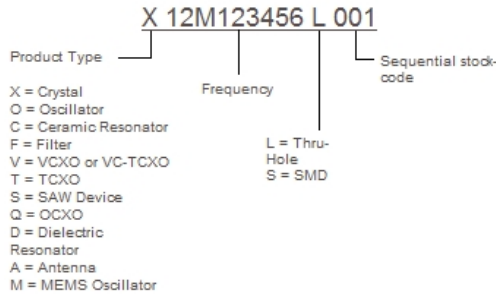
Buyers Guide

Quartz Crystal Specification

To ensure that all products supplied are to the customers requirements it is important that all the relevant information is supplied when a purchase order is placed.

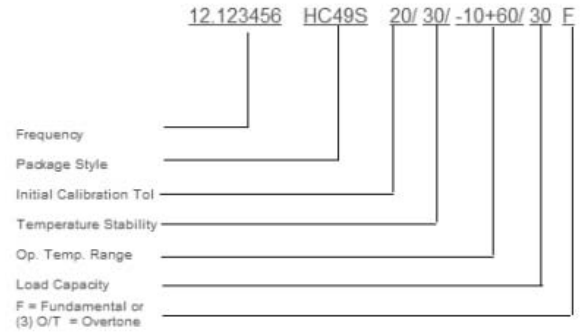
AEL use two methods to correctly specify parts. First is an AEL Crystals specific part number which can be quoted, in addition an industry standard "short-code" is used

The AEL part number is structured as follows



The industry standard short-code shows the minimum amount of information that AEL Crystals would need to have in order to commence manufacture of this part. Additional information may be required for certain applications, please discuss this with one of our technical staff who will be able to advise you on any specific requirements.

The Short-Code is structured as follows



Page 2



RF Comms



Automotive



Telecomm



Security



Audio-Visual



Buyer's Guide



Technical

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