Quartz Crystal Resonators

Through-Hole Mounted Quartz Crystal

HC-49/S Low profile Resistance Welded Quartz Crystal

Current part - suitable for new designs

RoHS compliant 2002/95/EC

Standard Specifications

Parameter	Symbol	Specification	Remarks
Frequency Range	f_0	3.00 to 100.00 MHz	
Frequency Tolerance	Δ f/f	±5PPM ~ ±50PPM	at 25°C with 100µW
Frequency Stability	Over OTR	±50PPM (Standard)	From ±5PPM (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	100.0µW Typ.	0.5mW Max
Shunt Capacitance	C_0	7.0pF Typ.	
Dynamic Capacitance	C_1	20.0fF Typ.	
Ageing	Fa	±5.0PPM	at 25°C ±3°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

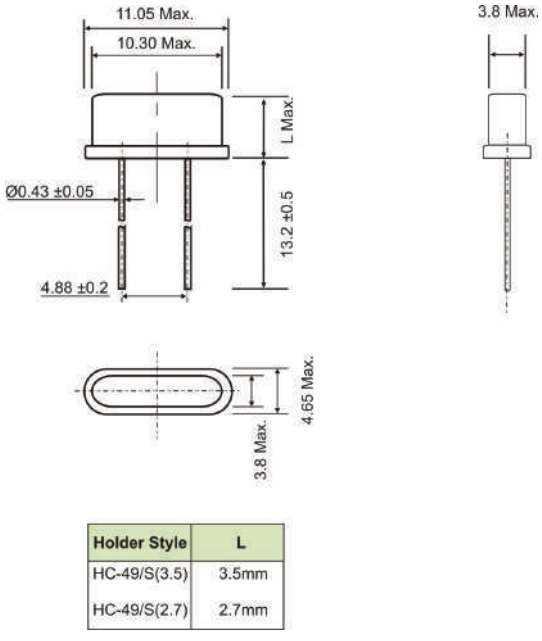
OTR	Temperature Stability (PPM)				
	±5	±10	±15	±20	±50
0°C to +50°C	☐	☐	☐	☐	☐
-10°C to +60°C		☐	☐	■	☐
-20°C to +70°C			☐	☐	■
-30°C to +80°C			☐	☐	☐
-40°C to +85°C					☐

☐ = Available

■ = Recommended

BT - Cut will exhibit parabolic Freq/Temp curve with ±100PPM -10°C to +60°C

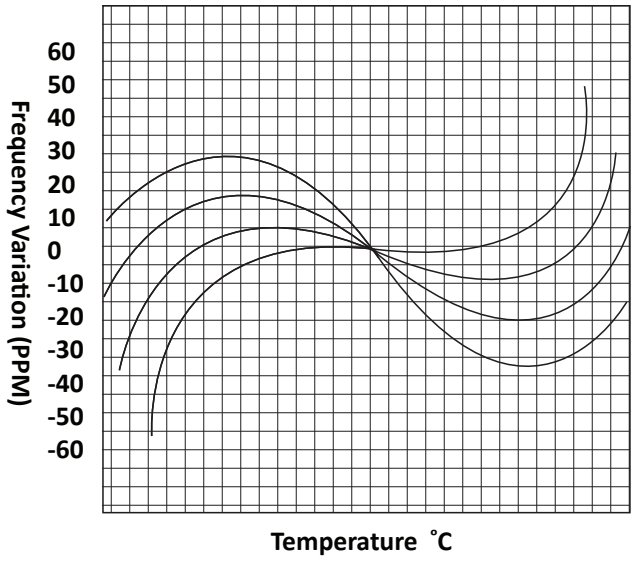
Dimensions (mm)



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

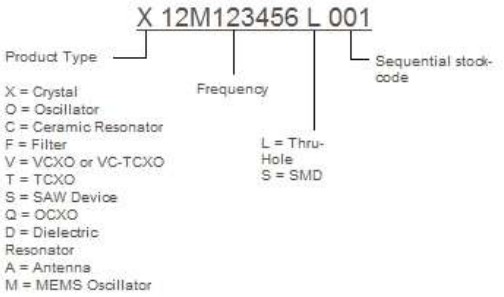
Buyers Guide

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.

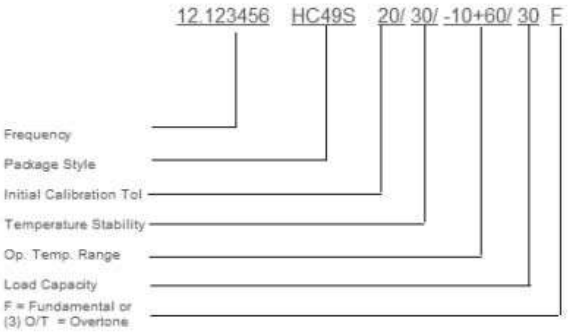
AEL use two methods to correctly specify parts. First is an AEL Crystals specific part number which can be quoted, in addition an industry standard “short-code” is used

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



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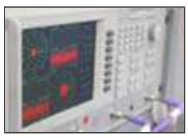
RF Comms


Automotive


Telecomm


Security


Audio-Visual


Buyer's Guide


Technical

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