

49MJ CRYSTALS

Surface-mount HC49

DESCRIPTION

49MJ crystals are standard HC49 crystals with formed leads, fitted with a clip to enable surface-mount PCB assembly. The crystal therefore offers the ease of surface-mount assembly with the technical benefit of close-tolerance crystal parameters achievable by the use of circular AT-Cut crystal blanks in the HC49 crystal.

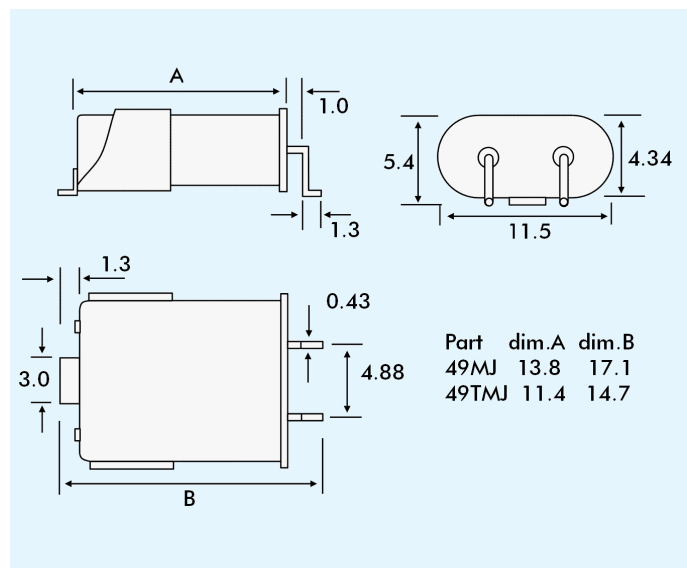
FEATURES

- Surface mount version of HC49
- Available with close tolerances
- Fully customisable for application requirements
- Customised parts readily available
- Industry-standard package
- Low installed cost

GENERAL SPECIFICATION

Frequency Range:	1.0MHz to 200MHz
Oscillation Mode:	See table
Calibration Tolerance at 25°C	
SL-Cut (<1.3MHz):	from ±50ppm
AT-Cut (>1.3MHz):	from ±3ppm
Frequency stability over temp	
SL-Cut (<1.3MHz):	from ±100ppm -10° to +60°C
AT-Cut (>1.3MHz):	from ±3ppm 0° to +50°C
	See table for details
Shunt Capacitance (C0):	4pF typical, 7pF maximum
Load Capacitance (CL):	Series or from 8pF to 32pF (Customer to specify CL)
Ageing:	±3ppm max 1st year, ±1ppm max per year after
Drive level:	1mW maximum
Holder:	Resistance-weld, hermetic seal
Holder Variants:	H49MJ or 49TMJ (See outline drawing)
Supply format:	Bulk pack (standard) or tape (Ammo-Pak)

OUTLINES AND DIMENSIONS



FREQUENCY STABILITY OVER TEMPERATURE

Operating Temp. °C	Temperature Stability (ppm)						
	±3	±5	±7.5	±10	±15	±20	±30
0° to +50°	ü	ü	ü	ü	ü	ü	ü
-10° to +60°	ü	ü	ü	ü	ü	ü	ü
-20° to +70°	X	ü	ü	ü	ü	ü	ü
-30° to +80°	X	X	X	ü	ü	ü	ü
-40° to +90°	X	X	X	X	ü	ü	ü
-55° to +105°	X	X	X	X	X	ü	ü

OSCILLATION MODE & ESR

Frequency (MHz)	Crystal Cut Oscillation Mode	ESR (max) (Ohms)
1.0 ~ 1.3	SL	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
30.01 ~ 45.0	AT Fund.	20
24.0 ~ 100	AT 3rd OT	40
80.0 ~ 160	AT 5th OT	70
110 ~ 200	AT 7th OT	120

PART NUMBER GENERATION

49MJ crystals part numbers are derived as follows:

Example: **16.000MHz 49MJ/10/20/10/30pF/ATF**

