



GENERAL CRYSTAL SPECIFICATION : HC-49U

Frequency Range : 1.843 200 to 200.000 000 MHz (See table 1, below).
Operating Mode : See table 1, below, AT-Cut.

Frequency Tolerances

Calibration at + 25.0 °C (Maximum) : ± 5.0 ppm, ± 10.0 ppm, ± 30.0 ppm, ± 50.0 ppm.
 Over Temperature Range (Maximum) : ± 5.0 ppm, ± 10.0 ppm, ± 30.0 ppm, ± 50.0 ppm.
 Aging (Maximum per year at + 25.0 °C) : ± 5.0 ppm (± 3.0 ppm option).

Temperature Range

Operating : - 10 to + 60 °C (- 40 to + 85 °C option).
 Storage : - 40 to + 85 °C.

Frequency Range MHz	Operating Mode	Load Capacitance (CL)	ESR Ω (Maximum)	Shunt Capacitance (C0) pF (Maximum)	Drive Level μW (Typical)	Insulation Resistance
1.843 200 to 1.999 999	Fundamental	10.0 pF to Series	500	7.0	100.0	500 MΩ Minimum at 100 V _{DC}
2.000 000 to 2.499 999			400			
2.500 000 to 2.999 999			250			
3.000 000 to 3.499 999			180			
3.500 000 to 3.999 999			100			
4.000 000 to 4.499 999			80			
4.500 000 to 4.999 999			60			
5.000 000 to 5.999 999			50			
6.000 000 to 6.999 999			40			
7.000 000 to 8.999 999			30			
9.000 000 to 12.999 999			25			
13.000 000 to 32.000 000			20			
20.000 000 to 120.000 000			3 rd Overtone			
80.000 000 to 200.000 000	5 th Overtone	80				

Table 1 - Frequency Range vs Operating Mode vs Motional Parameters.

Package Style : HC-49/U.
 Number of Legs : 2 (3 option).
 Package Type : Through Hole (SMD option).

Marking

Line 1 : **PDI**
 Line 2 : Frequency
 Line 3 : Spec. code

Notes

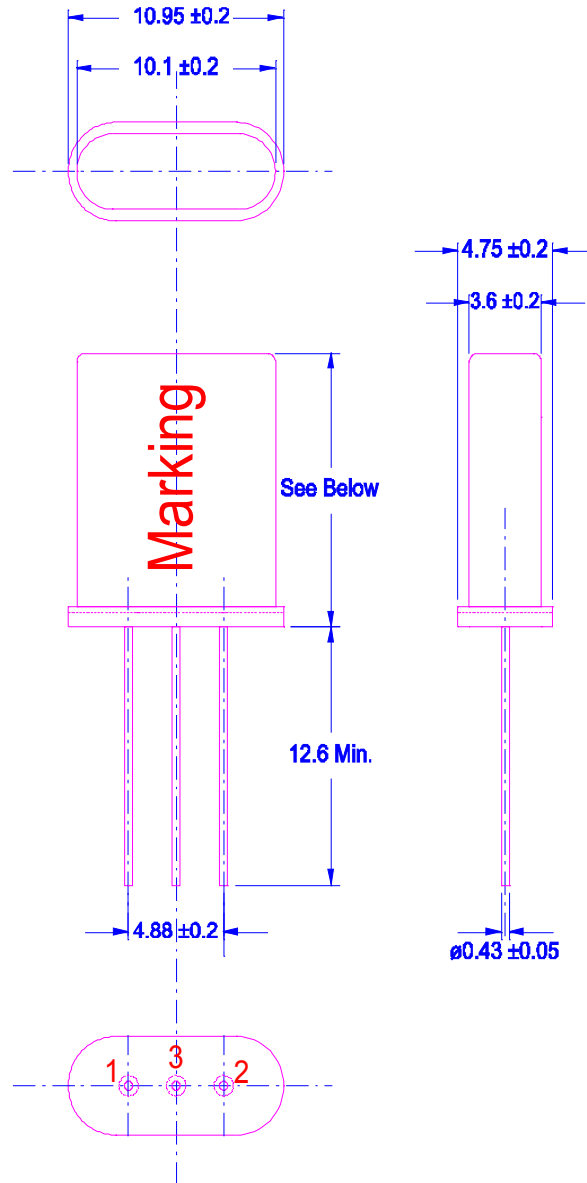
Terminals are SnCu (Au option).
 Other options are available, please contact factory.
 All product is supplied RoHS and REACH compliant.
 Product can be supplied on Tape and Reel, on reels of 1,000 units.
 Not all Frequency / Temperature combinations are available.
 Specifications subject to change without notice, last updated 16th May 2011.



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Package Drawing (Through Hole Version)



Package Height

11.20 or 13.46 mm. Stated at time of ordering.

All Dimensions and Tolerances are in mm

Pin Connections

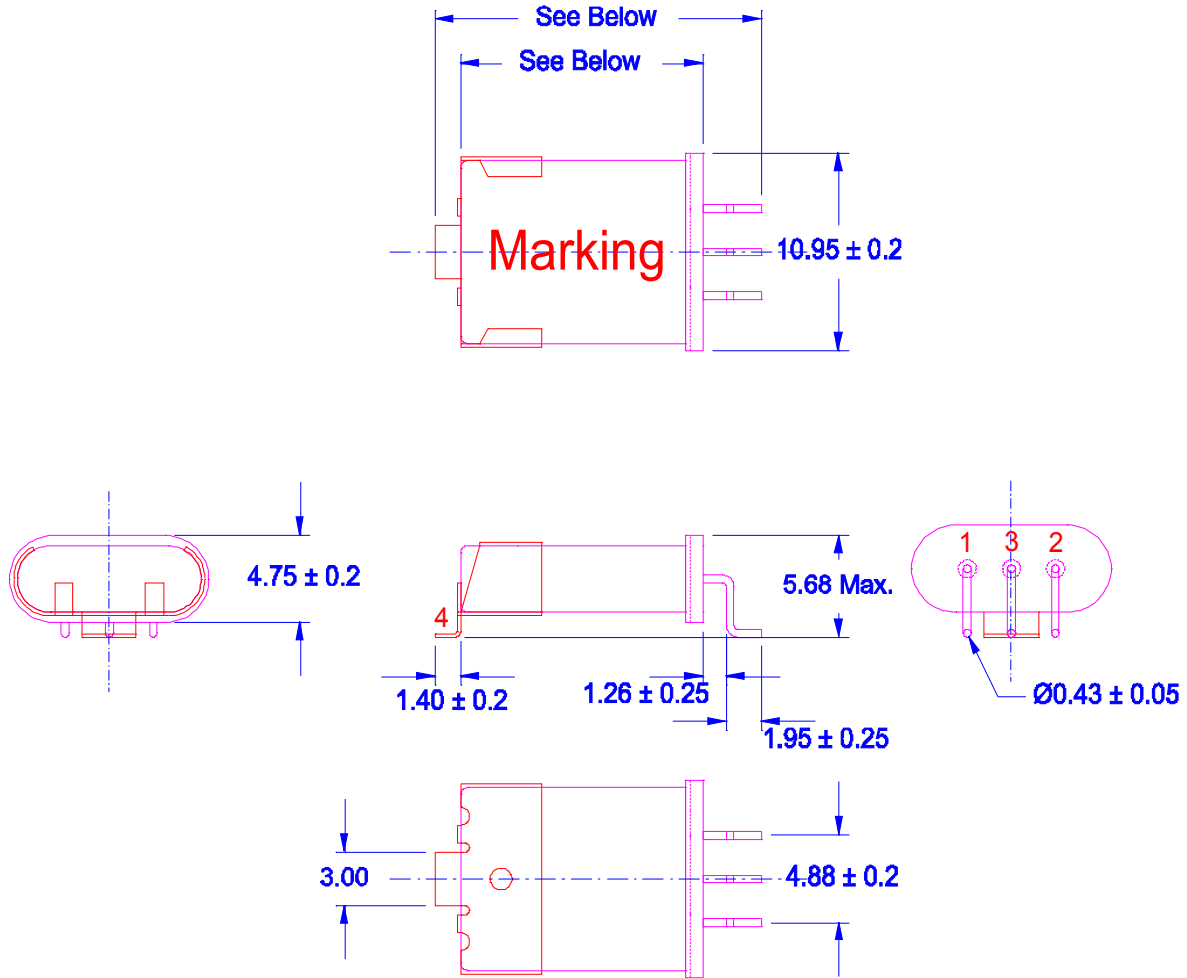
- 1 Xtal
- 2 Xtal
- 3 Ground / Case (option)



GENERAL CRYSTAL SPECIFICATION : HC-49U



Package Drawing (SMD Version)



Package Length

All Dimensions and Tolerances are in mm

16.70 or 18.96 mm. Stated at time of ordering.
 Actual xtal length is 5.50 mm shorter than overall length.
 E.g. 16.70 mm = 11.20 mm xtal length
 18.96 mm = 13.46 mm xtal length

Pin Connections

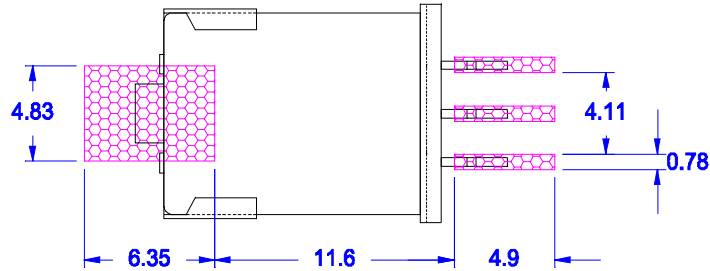
- 1 Xtal
- 2 Xtal
- 3 Ground / Case (option)
- 4 Ground / Case



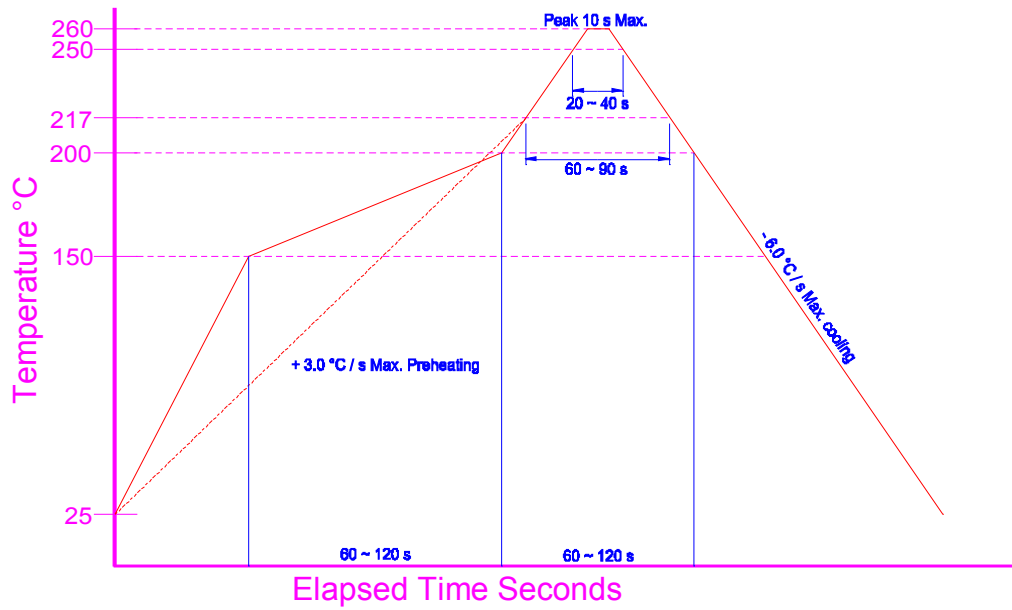
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Solder Pattern (SMD Version) (Reference purposes only)



Reflow Solder Profile

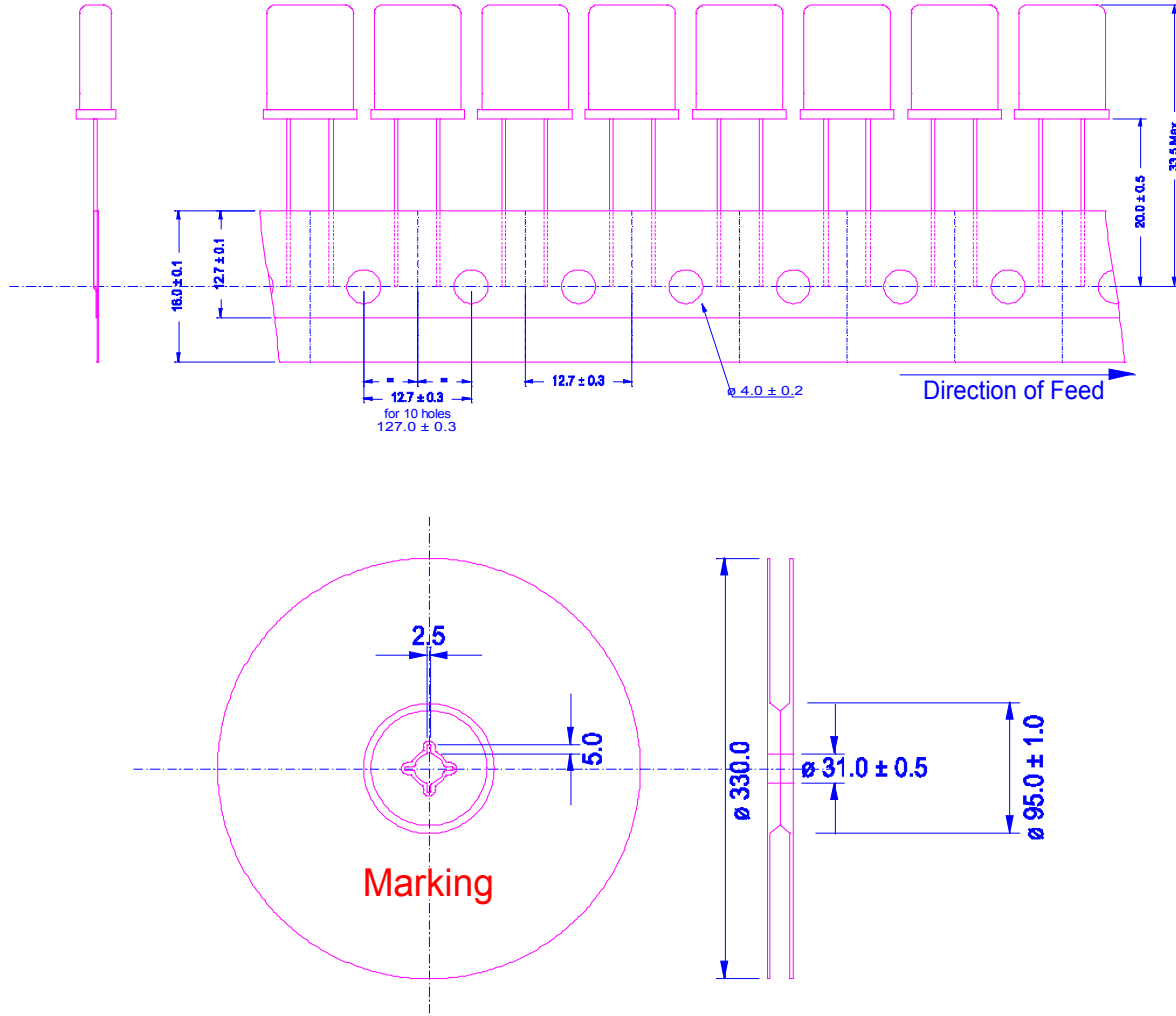




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Tape & Reel Dimensions (Through Hole Version)



There may be small variations in pocket size and material thickness from reel to reel.

Empty Pockets

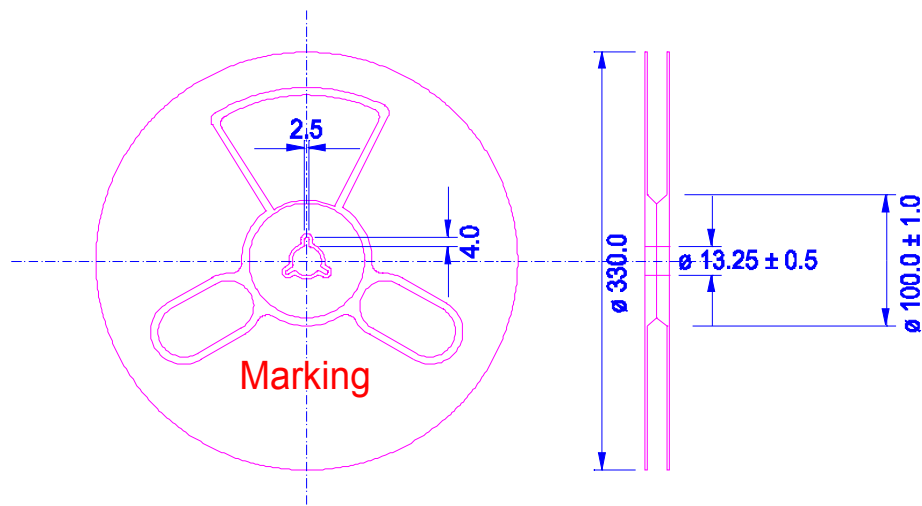
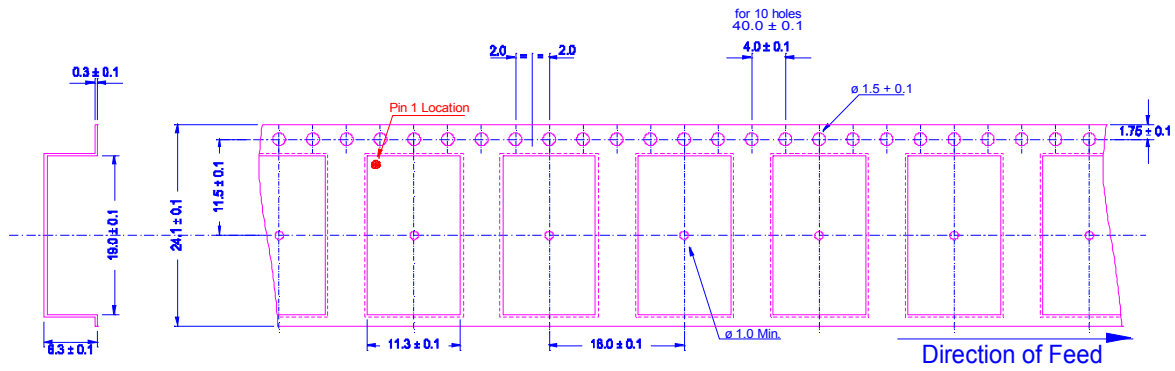
- Trailing end (Minimum) : 200 mm.
- Leading end (Minimum) : 400 mm.



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Tape & Reel Dimensions (SMD Version)



There may be small variations in pocket size and material thickness from reel to reel.

Empty Pockets

Trailing end (Minimum)	:	200 mm.
Leading end (Minimum)	:	400 mm.