

# HC/49US (AT49) MICROPROCESSOR CRYSTAL

## ABL3 Series



RoHS  
Compliant



### FEATURES:

- Reduced height at 2.0mm
- High reliability & Low Cost
- Tight stability & extended temperature
- Proven resistance welded metal package

### APPLICATIONS:

- Home electronics
- Computers, modems, and communications
- High-precision TCXO and clock applications
- Microprocessors

### STANDARD SPECIFICATIONS:

#### PARAMETERS

ABRACON P/N	ABL3 Series
Frequency	3.579545 MHz to 70 MHz
Operation Mode	AT cut (Fundamental or 3rd OT) or BT cut (See options) 3.579545MHz - 24.0MHz (Fundamental) (Standard) 24.01 - 70.00MHz (3rd- Overtone) (Standard) 24.01MHz - 50.00MHz (Fund. AT or BT) (See options)
Operating Temperature	0°C to + 70°C (see options)
Storage Temperature	- 55°C to + 125°C
Frequency Tolerance at +25°C	± 50 ppm max. (see options)
Frequency Stability over the Operating Temp. (Ref to +25°C)	± 50 ppm max. (see options)
Equivalent Series Resistance	See Table 1
Shunt Capacitance $C_0$	7pF max.
Load Capacitance $C_L$	18pF (see options)
Drive Level	1 mW max., 100µW typical
Aging at 25°C ± 3°C Per Year	± 5ppm max.
Insulation Resistance	500 MΩ min at 100Vdc ± 15V
Drive level dependency (DLD), minimum 7 points tested	1µW to 500µW Change in frequency (Maximum - Minimum) over DLD range < ±10ppm Change in ESR (Maximum - Minimum) over DLD range < 25% of Max ESR value Maximum ESR over DLD range < Max ESR value

TABLE 1: ESR

FREQUENCY (MHz)	ESR ( )
3.579 - 4.999 (Fund.)	180
5.000 - 5.999 (Fund.)	120
6.000 - 7.999 (Fund.)	100
8.000 - 8.999 (Fund.)	80
9.000 - 9.999 (Fund.)	60
10.000 - 15.999 (Fund.)	50
16.000 - 50.000 (Fund.)	40
24.01 - 31.999 (3rd O/T)	100
32.000 - 70.00 (3rd O/T)	80



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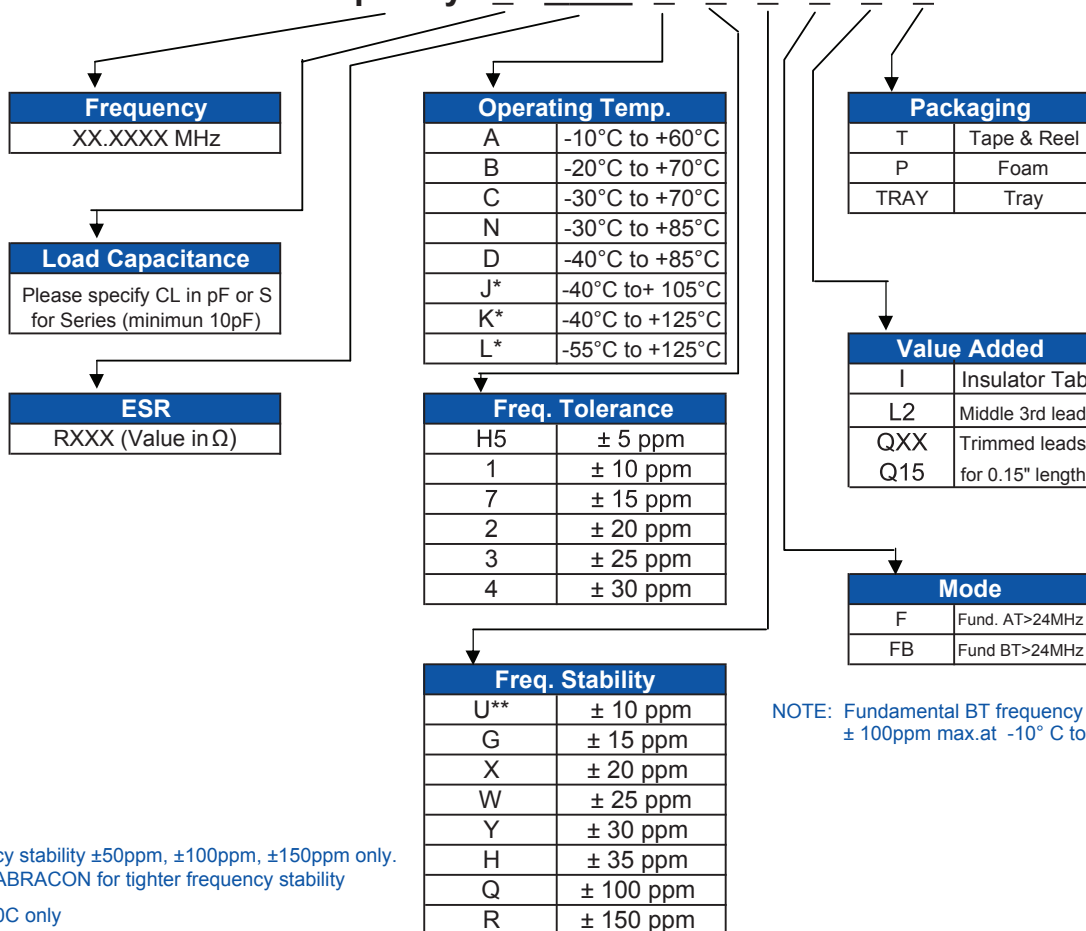
ABL3

11.5 x 5.0 x 2.0 mm

## OPTIONS AND PART IDENTIFICATION:

[Left blank if standard]

**ABL3- Frequency -  - R -  -  -  -  -  -  -**

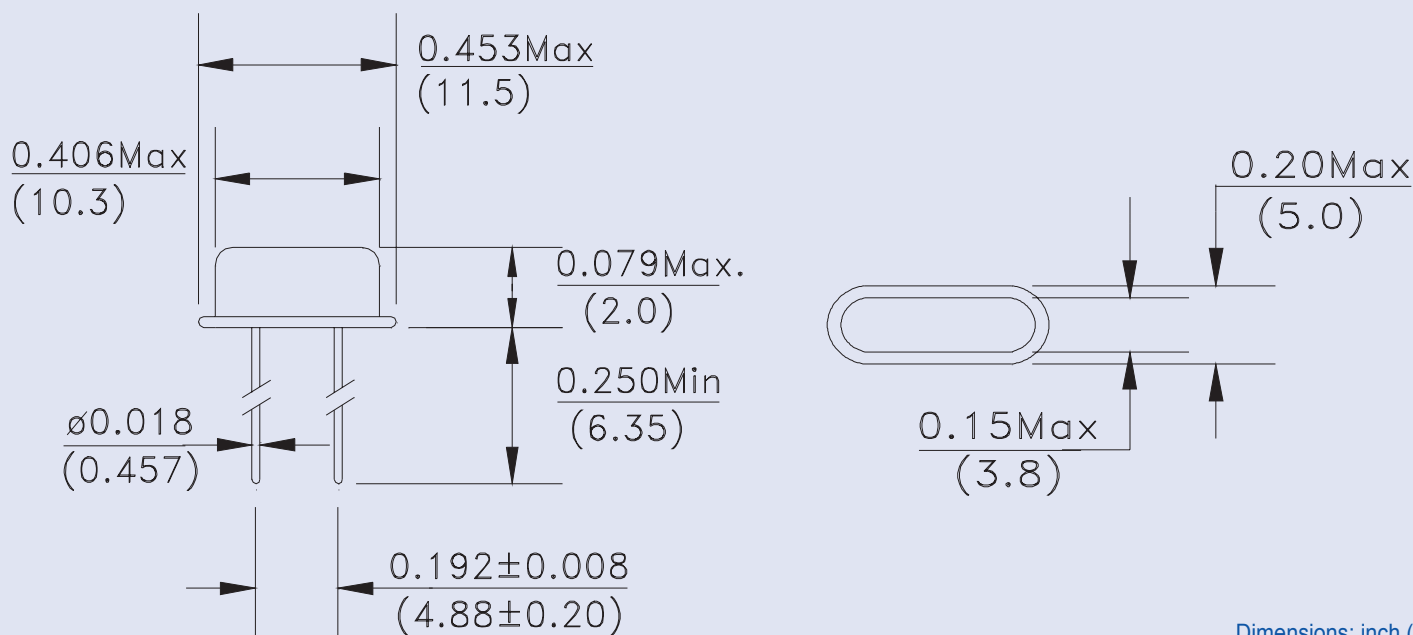


NOTE: Fundamental BT frequency stability  $\pm 100$ ppm max.at -10° C to +60° C only

\* Frequency stability  $\pm 50$ ppm,  $\pm 100$ ppm,  $\pm 150$ ppm only.  
Contact ABRACON for tighter frequency stability

\*\* -10 to +60C only

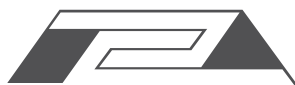
## OUTLINE DRAWING:



Dimensions: inch (mm)

ABRACON IS  
ISO 9001 / QS 9000  
CERTIFIED

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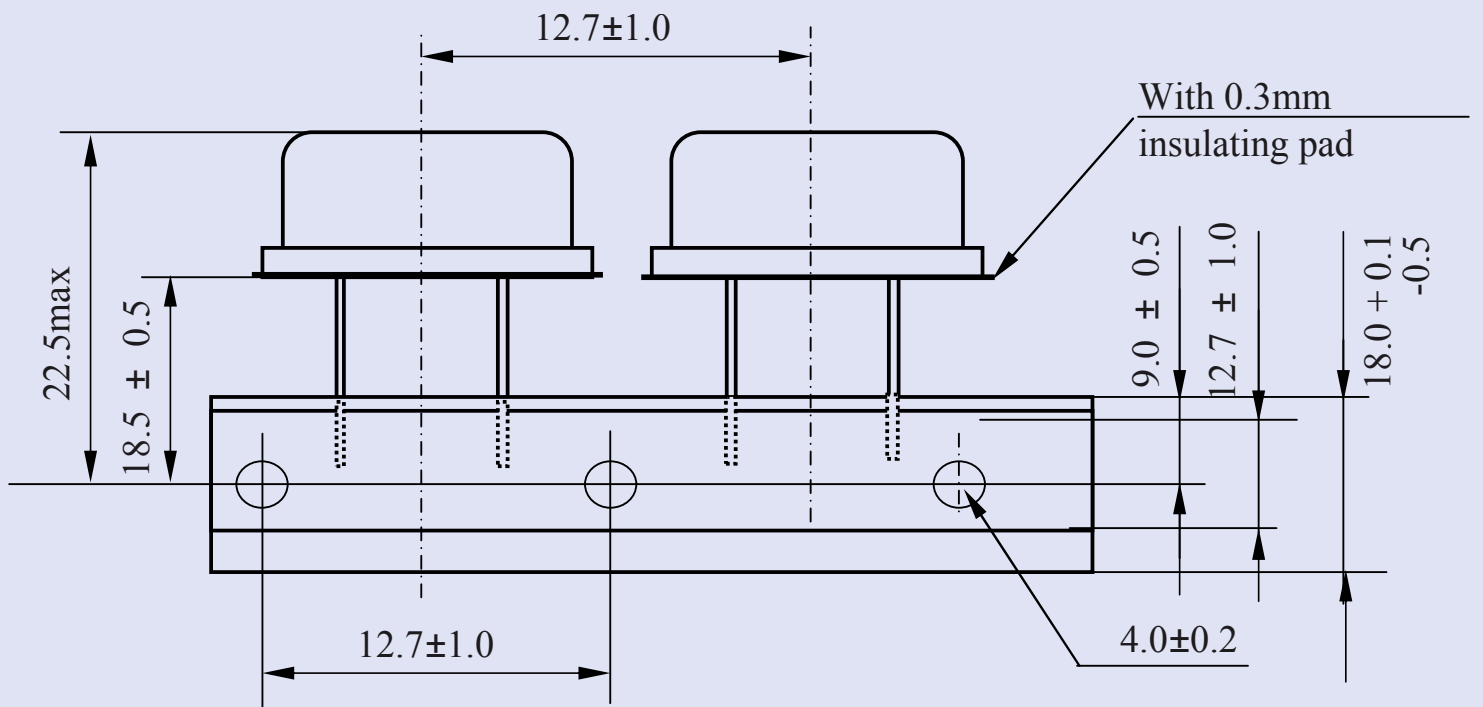


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11.5 x 5.0 x 2.0 mm

➤ **TAPE & REEL:** T = Tape and reel 1,000pcs/reel



Dimensions: mm

**ATTENTION:** Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.

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