

HC/49US (AT49) MICROPROCESSOR CRYSTAL

ABL Series



Moisture Sensitivity Level (MSL) – This product is Hermetically Sealed and not Moisture Sensitive - MSL = N/A: Not Applicable

FEATURES:

- 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	Minimum	Typical	Maximum	Units	Notes
Frequency Range	3.579545		70		
Operation mode	3.579545		33.999	MHz	Fundamental AT-cut (Standard)
	34.00		70.00		3 rd OT AT-cut (Standard)
	24.01		50.00		Fundamental AT-cut (See options)
Operating Temperature	0		+70	°C	See options
Storage Temperature	-55		+125	°C	
Frequency Tolerance	-50		+50	ppm	See options
Frequency Stability over the Operating Temperature (ref. to +25°C)	-50		+50	ppm	See options
Equivalent series resistance (R1)	See table 1 below			Ω	
Shunt capacitance (C0)			7	pF	
Load capacitance (CL)		18		pF	See options
Drive Level		100	1000	μW	
Aging @ 25°C per year			±5	ppm	
Insulation Resistance	500			MΩ	@ 100Vdc ± 15V
Drive Level Dependency (DLD, Minimum 7 points tested: from 1μW to 500μW)			±10	ppm	Δfrequency (Max – Min)
			25% of Max ESR	Ω	ΔESR (Max – Min)
			Max ESR in Table 1	Ω	Max ESR over DLD range

Table 1

Frequency (MHz)	ESR(Ω) max.
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
34.000 - 70.00 (3rd O/T)	80

REVISED: 03.27.2018



5101 Hidden Creek Lane Spicewood TX 78669
 Phone: 512-371-6159 | Fax: 512-351-8858
 For terms and conditions of sale please visit:
www.abracon.com

ABRACON IS
 ISO9001-2008
 CERTIFIED

HC/49US (AT49) MICROPROCESSOR CRYSTAL

ABL Series



11.5 x 5.0 x 3.5 mm

OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)

ABL - MHz - - - - - -

Frequency in MHz
Please specify the frequency in xx.xxxxMHz.
e.g. 14.3181MHz

Load Capacitance (pF)
Please specify CL (Minimum 10pF) in pF or S for series

Custom ESR if other than standard
R
□: Specify a value in Ω (e.g.: R40)

Packaging
Blank: Bulk
T: Tape & Reel
TRAY: Tray

Value Added

I	Insulator Tab
L2	Middle 3rd lead
QXX	Trimmed leads
Q15	for 0.15" length

Oscillation Mode
F: Fund. AT>24MHz

Operating Temp.

A: -10°C ~ +60°C
B: -20°C ~ +70°C
C: -30°C ~ +70°C
N: -30°C ~ +85°C
D: -40°C ~ +85°C
J*: -40°C ~ +105°C
K*: -40°C ~ +125°C
L*: -55°C ~ +125°C

Freq. Tolerance

H5: ± 5 ppm
1: ± 10 ppm
7: ± 15 ppm
2: ± 20 ppm
3: ± 25 ppm
4: ± 30 ppm

Freq. Stability

U**: ± 10 ppm
G: ± 15 ppm
X: ± 20 ppm
W: ± 25 ppm
Y: ± 30 ppm
H: ± 35 ppm
Q: ± 100 ppm
R: ± 150 ppm

NOTE:

* Frequency stability ±50ppm, ±100ppm, ±150ppm only. Contact ABRACON for tighter frequency stability.

** Contact ABRACON for availability of ±10ppm with other operating temperature options.



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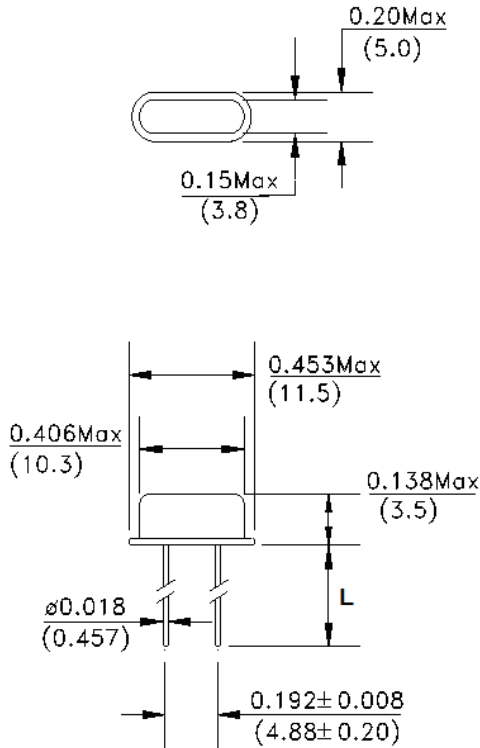
HC/49US (AT49) MICROPROCESSOR CRYSTAL

ABL Series

 RoHS/RoHS II



OUTLINE DRAWING:

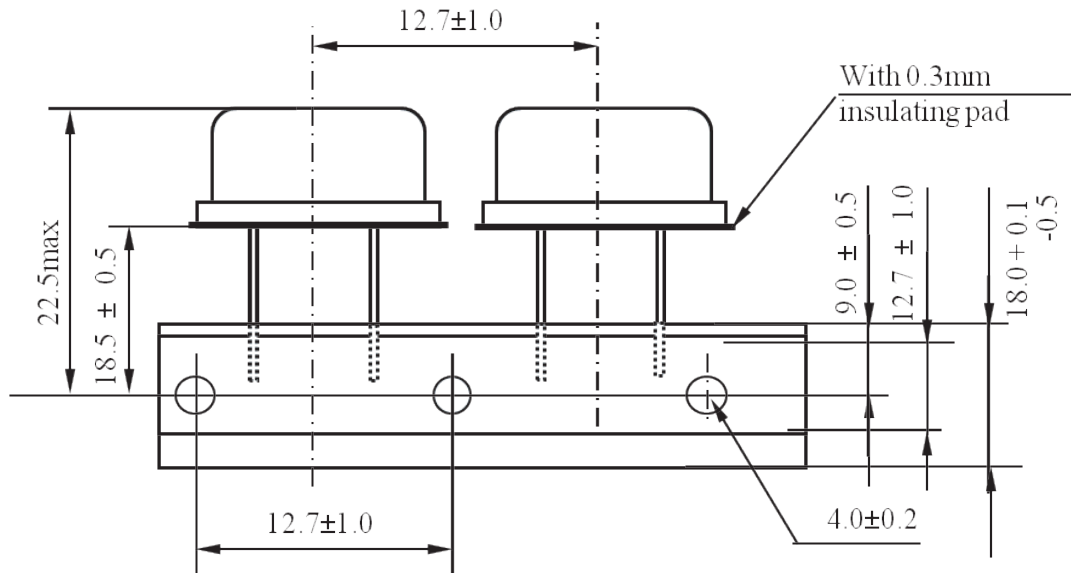


L	Packaging
5.5mm Min	Bulk
20.0 ± 0.5mm	Tape & Reel

Dimensions: inch (mm)

TAPE & REEL:

T= Tape and reel (1,000pcs/reel)



Dimensions: mm

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

ABRACON:

[ABL-3.579545MHZ-B2](#) [ABL-24.576MHZ-B2F](#) [ABL-25.000MHZ-B2F](#) [ABL-22.1184MHZ-B2](#) [ABL-12.288MHZ-B2](#)
[ABL-48.000MHZ-B2](#) [ABL-8.192MHZ-B2](#) [ABL-16.384MHZ-B2](#) [ABL-9.8304MHZ-B2](#) [ABL-3.6864MHZ-B2](#) [ABL-](#)
[7.3728MHZ-B2](#) [ABL-19.6608MHZ-B2](#) [ABL-27.000MHZ-B2F](#) [ABL-4.9152MHZ-B2](#) [ABL-14.31818MHZ-B2](#) [ABL-](#)
[18.432MHZ-B2](#) [ABL-32.000MHZ-B2](#) [ABL-4.096MHZ-B2](#) [ABL-6.000MHZ-B2](#) [ABL-16.128MHZ-B2](#) [ABL-8.000MHZ-B2](#)
[ABL-12.000MHZ-B2](#) [ABL-40.000MHZ-B2](#) [ABL-20.000MHZ-B2](#) [ABL-14.7456MHZ-B2](#) [ABL-11.0592MHZ-B2](#) [ABL-](#)
[10.000MHZ-B2](#) [ABL-24.000MHZ-B2](#) [ABL-4.000MHZ-B2](#) [ABL-16.000MHZ-B2](#) [ABL-32.000MHZ-B2F](#) [ABL-40.000MHZ-](#)
[B2F](#) [ABL-12.000MHZ-20-D4HFI](#) [ABL-11.0592MHz-B1U](#) [ABL-27.000MHz-B1U](#) [ABL-4.9152MHz-B4Y](#) [ABL-](#)
[25.000MHz-B1UFB](#) [ABL-14.31818MHz-B1U](#) [ABL-16.384MHz-B1U](#) [ABL-12.000MHz-B4Y](#) [ABL-18.432MHz-B1U](#) [ABL-](#)
[30.000MHz-B1U](#) [ABL-28.63636MHz-B1U](#) [ABL-24.000MHz-B1U](#) [ABL-19.200MHz-B4Y](#) [ABL-11.0592MHz-B4Y](#) [ABL-](#)
[3.579545MHz-B4Y](#) [ABL-13.560MHz-B4Y](#) [ABL-50.000MHz-B1U](#) [ABL-12.000MHz-B1U](#) [ABL-35.328MHz-B4Y](#) [ABL-](#)
[13.560MHz-B1U](#) [ABL-12.288MHz-B1U](#) [ABL-24.576MHz-B4Y](#) [ABL-7.3728MHz-B4Y](#) [ABL-8.912MHz-B4Y](#) [ABL-](#)
[22.000MHz-B1U](#) [ABL-60.000MHz-B4Y](#) [ABL-22.000MHz-B4Y](#) [ABL-22.1184MHz-B4Y](#) [ABL-64.000MHz-B4Y](#) [ABL-](#)
[15.360MHz-B4Y](#) [ABL-4.096MHz-B4Y](#) [ABL-3.6864MHz-B4Y](#) [ABL-6.000MHz-B4Y](#) [ABL-8.192MHz-B1U](#) [ABL-](#)
[36.000MHz-B4Y](#) [ABL-19.200MHz-B1U](#) [ABL-12.288MHz-B4Y](#) [ABL-16.000MHz-B1U](#) [ABL-14.4756MHZ-B2](#) [ABL-](#)
[48.000MHz-B1U](#) [ABL-4.000MHz-B4Y](#) [ABL-8.000MHz-B4Y](#) [ABL-20.000MHz-B4Y](#) [ABL-14.7456MHz-B1U](#) [ABL-](#)
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[50.000MHz-B4Y](#) [ABL-11.2896MHz-B4Y](#) [ABL-35.328MHz-B1U](#) [ABL-48.000MHz-B4Y](#) [ABL-28.63636MHz-B4Y](#) [ABL-](#)
[16.000MHz-B4Y](#) [ABL-16.384MHz-B4Y](#) [ABL-8.192MHz-B4Y](#) [ABL-14.31818MHz-B4Y](#) [ABL-20.000MHz-B1U](#) [ABL-](#)
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