

HC/49US (AT49) MICROPROCESSOR CRYSTAL



11.5 x 5.0 x 2.5 mm

ABL2 Series



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

FEATURES:

- Reduced height at 2.5mm
- 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		24.0	MHz	Fundamental AT-cut (Standard)
	24.01		70.00		3 rd OT AT-cut (Standard)
	24.01		50.00		Fundamental AT-cut or BT-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

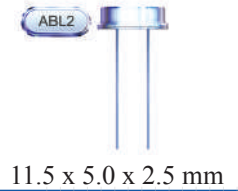
Table 1

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
24.01 - 31.999 (3rd O/T)	100
32.000 - 70.00 (3rd O/T)	80



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OPTIONS AND PART IDENTIFICATION:

ABL2 - MHz - - - - - -

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

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

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

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

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

Oscillation Mode
F: Fund. AT>24MHz
FB: Fund. BT>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

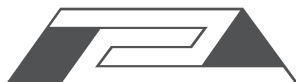
Freq. Tolerance
H5: ± 5 ppm
1: ± 10 ppm
7: ± 15 ppm
2: ± 20 ppm
3: ± 25 ppm
4: ± 30 ppm

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:

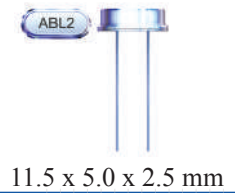
* Frequency stability ±50ppm, ±100ppm, ±150ppm only. Contact ABRACON for tighter frequency stability.

** -10 to +60C only.

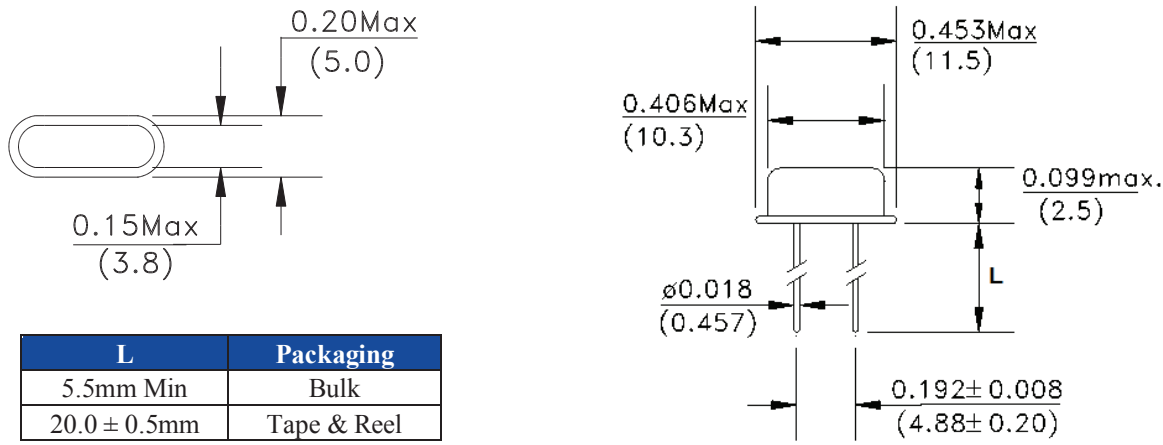


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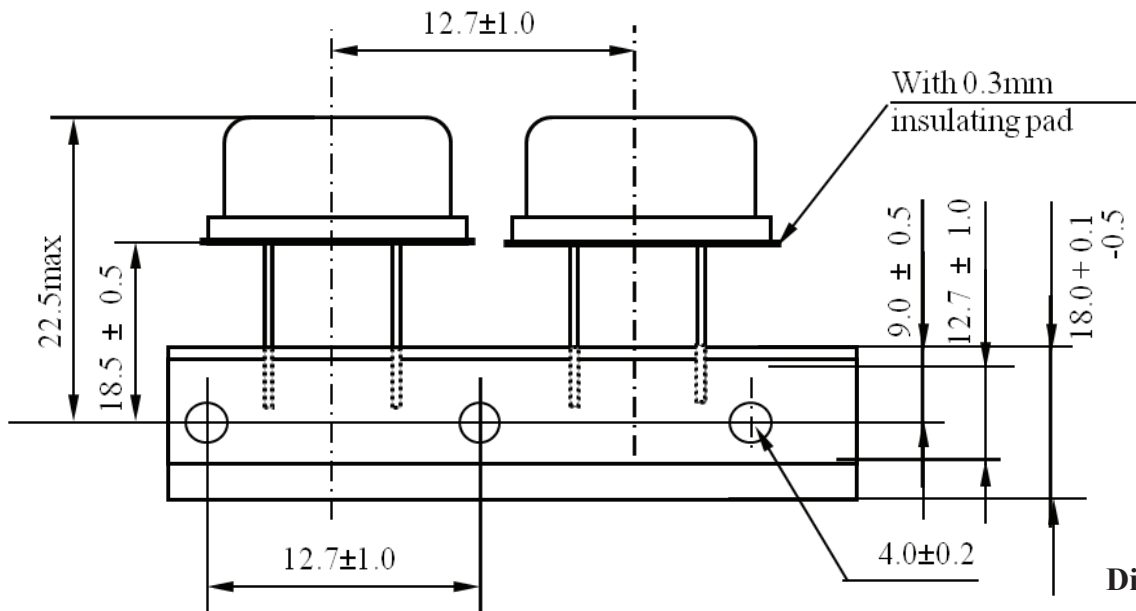
OUTLINE DIMENSIONS:



Dimensions: inch (mm)

TAPE & REEL:

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



Dimensions: mm

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ABRACON IS
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Revised: 01.08.13