HC49/US (AT49) LOW PROFILE SMD MICROPROCESSOR CRYSTAL

ABLS3



11.4 x 4.7 x 2.5/2.6mm

Pb RoHS Compliant

FEATURES:

- Suitable for RoHS compliant reflow
- Low height reduced to 2.5/2.6mm
- Tight stability & extended temperature options

APPLICATIONS:

- Computers, Modems, Microprocessors
- Automotive and Industrial
- Wireless Applications

STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency Range	3.579545	-----	24.000000	MHz	Fundamental AT (Standard)
	24.000001	-----	50.000000		Fundamental AT or BT (See options)
	24.000001	-----	70.000000		3rd Overtone (Standard)
Operation Mode	Fundamental or 3rd Overtone				
Operating Temperature	0	-----	+70	ºC	See options
Storage Temperature	-55	-----	+125	ºC	
Frequency Tolerance @+25ºC	-50	-----	+50	ppm	See options
Frequency Stability over the Operating Temperature (ref. to +25ºC)	-50	-----	+50	ppm	See options (For BT cut, ±100ppm max.at -10° C to +60° C only)
Equivalent series resistance (R1)	See table 1 below			Ω	
Shunt capacitance (C0)	-----	-----	7	pF	
Load capacitance (CL)	-----	18	-----	pF	Standard (See options if other than STD)
Drive Level	-----	100	1000	µW	
Aging	-5	-----	+5	ppm	@25ºC±3ºC First year
Insulation Resistance	500	-----	-----	MΩ	@ 100Vdc ± 15V
Drive level dependency (DLD)	Minimum 7 points tested: from 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 (Ω)
3.579545 - 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

30332 Esperanza, Rancho Santa Margarita, California 92688
tel 949-546-8000 | fax 949-546-8001 | w www.abracon.com

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OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

ABLS3 - [ ] MHz - [ ] - [ ] - [ ][ ][ ] - [ ] - [ ]

Frequency in MHz
Please specify the frequency in MHz. e.g. 14.31818MHz

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

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

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

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

Packaging
Blank: Bulk
T: Tape & Reel

NOTE: Fundamental BT frequency stability ± 100ppm max. at -10° C to +60° C only.
* Frequency stability ±50ppm, ±100ppm, ±150ppm only.
** -10 to +60C only.
Contact ABRACON for tighter frequency stability.

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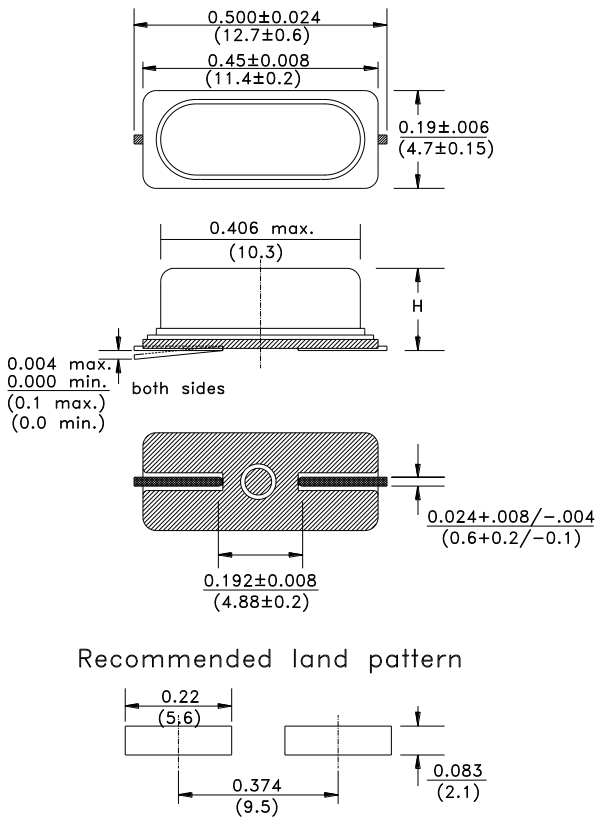
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OUTLINE DRAWING:

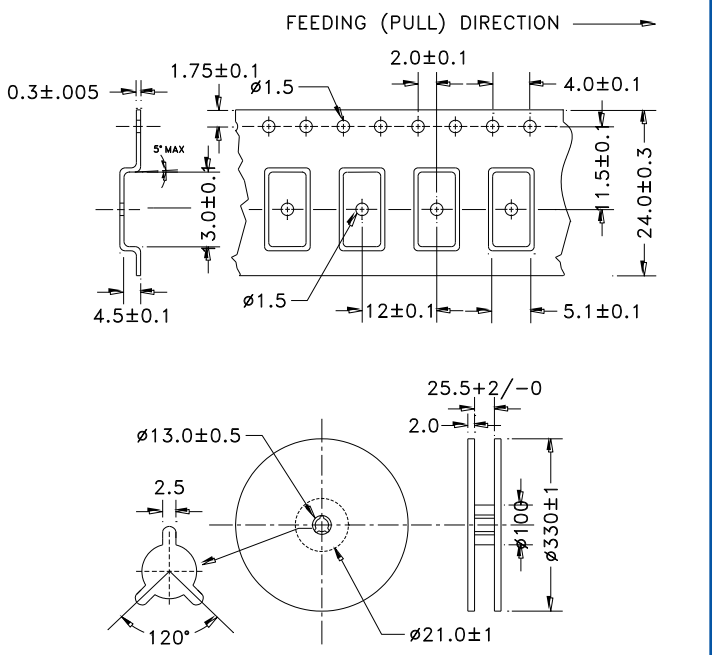


H: 2.5mm max for frequency 6MHz or higher
2.6mm max for frequency lower than 6MHz

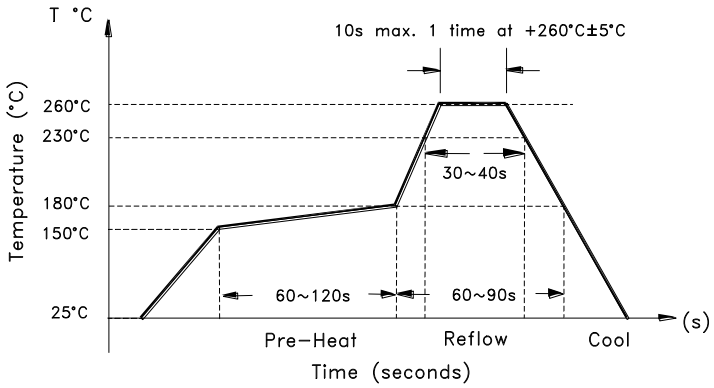
Dimensions: inches (mm)

TAPE & REEL:

T = tape and reel (1000pcs/reel)



REFLOW PROFILE:



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