

HC/49US (AT49) ULTRA LOW ESR SMD LOW PROFILE CRYSTAL

ABLS-LR



RoHS
Compliant



11.5 x 4.8 x 4.2 mm

FEATURES:

- Ultra low ESR as low as 20 ohms for 4MHz, 85% lower than typical SMD Low Profile HC49S Crystals
- Low negative resistance(-R) IC design can ensure high oscillation margin
- Tight stability and automotive grade temperature available
- Hermetically resistance weld sealed

APPLICATIONS:

- Low negative resistance u-controller design for low frequency
- Wide range of automotive applications
- Industrial applications

STANDARD SPECIFICATIONS:

PARAMETERS

ABRACON P/N	ABLS-LR Series
Frequency	3.0 MHz to 36 MHz
Operation Mode	AT cut (Fundamental)
Operating Temperature	0°C to +70°C (see options)
Storage Temperature	-55°C to +125°C
Frequency Tolerance	± 50 ppm max. (see options)
Frequency Stability over the Operating Temp. (Ref to +25°C)	3.0 ~ 3.579545MHz: ± 100 ppm max. (Standard only*) *Please contact ABRACON for other stability specs. 3.579545 ~ 36MHz: ± 50 ppm max. (see options)
Equivalent Series Resistance (R1)	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 Per Year	± 5ppm max.
Insulation Resistance	500 MΩ min at 100Vdc ± 15V
Spurious Responses	-3dB max.
Drive level dependency (DLD)	from 1µW to 500µW (minimum 7 points tested)

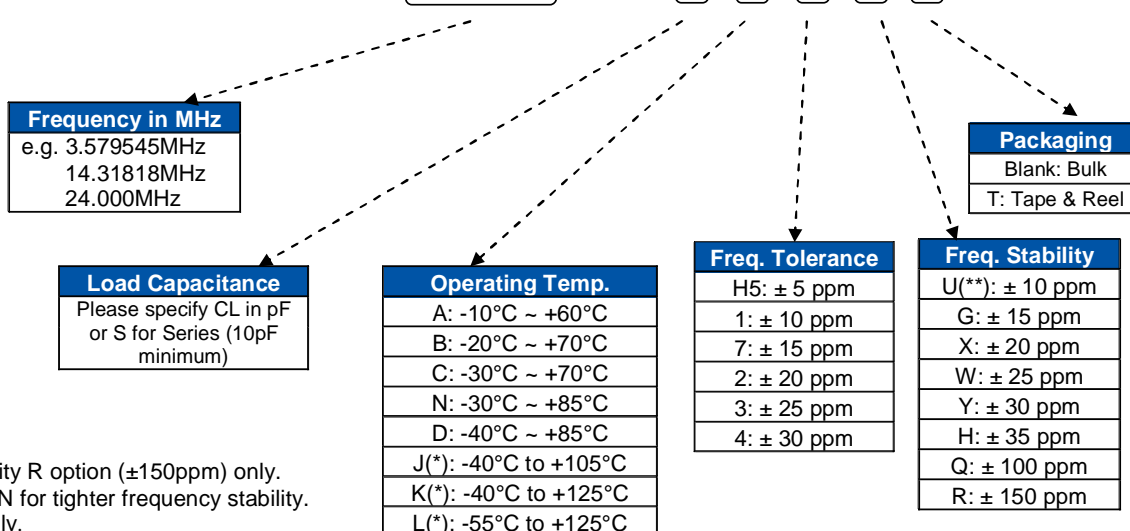
TABLE 1: ESR

FREQUENCY (MHz)	ESR (?) Max.
3.000000	100
3.072000	100
3.276800	75
3.500000 - 4.000000	40
4.000001 - 4.500000	25
4.500001 - 6.999999	20
7.000000 - 12.999999	15
13.000000 - 30.000000	10

OPTIONS & PART IDENTIFICATION:

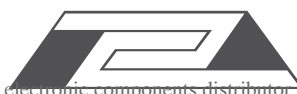
[Left blank if standard]

ABLS - LR - MHz - - - - -



* Frequency stability R option (±150ppm) only.
Contact ABRACON for tighter frequency stability.
** -10 to +60°C only.

ABRACON IS
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ABLS-LR

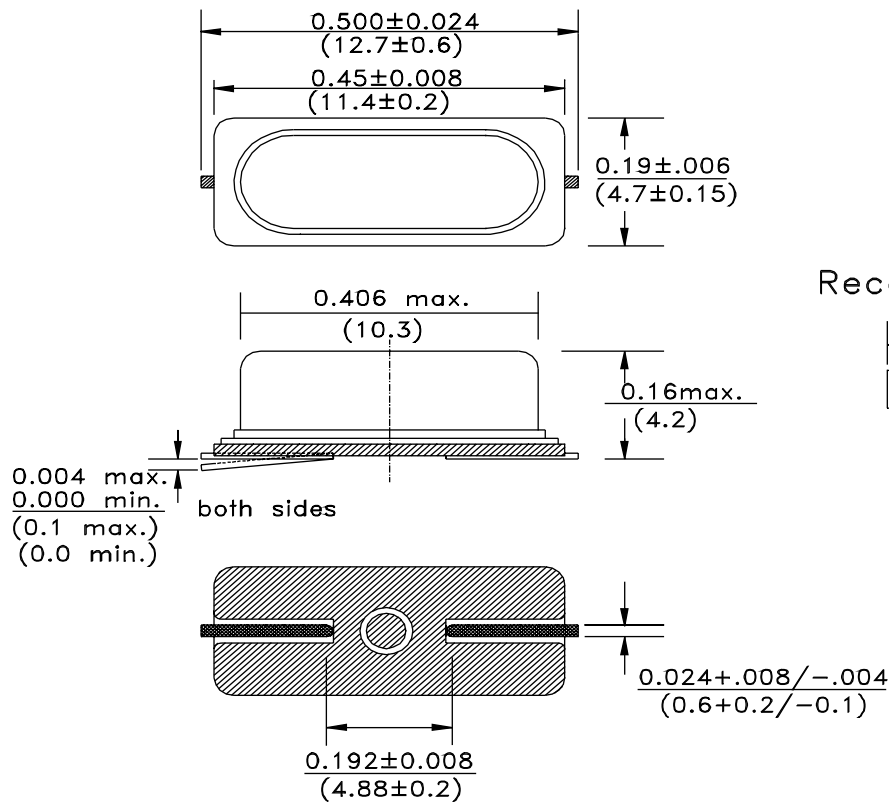


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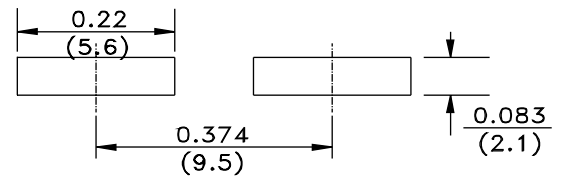


11.5 x 4.8 x 4.2 mm

OUTLINE DRAWING:



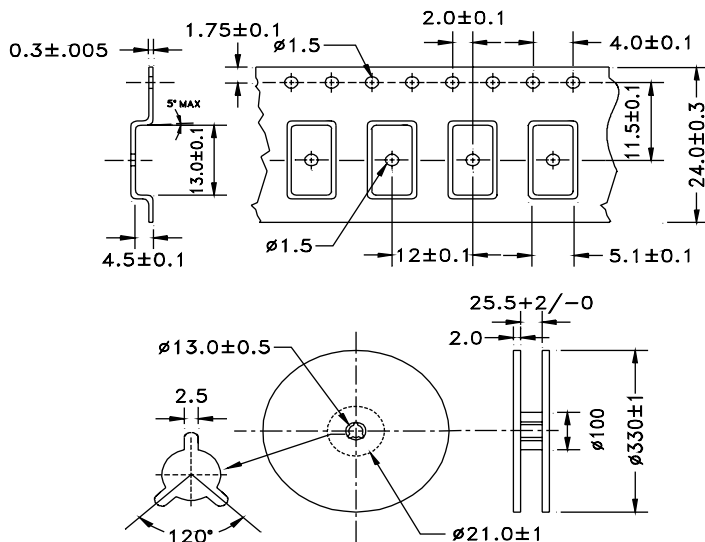
Recommended land pattern



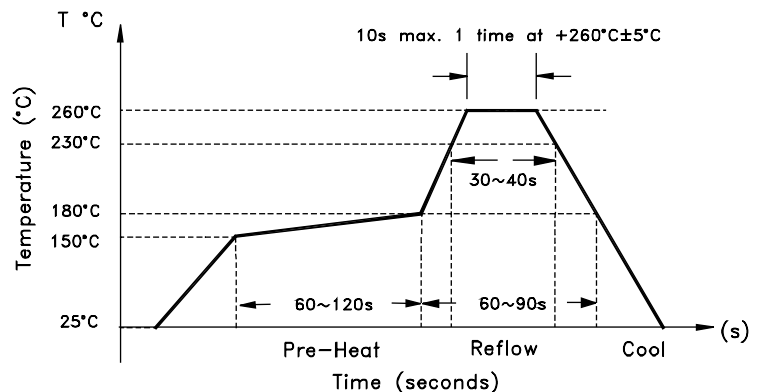
Dimensions: Inches (mm)

TAPE & REEL: T= tape and reel (1,000pcs/reel)

REFLOW PROFILE:

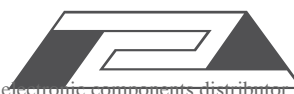


Dimensions: mm



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