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



RoHS Compliant

> APPLICATIONS:

for low frequency

Industrial applications

11.5 x 4.8 x 4.2 mm

FEATURES:

ABLS-LR

- 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

STANDARD SPECIFICATIONS:

DAMETEDO

| 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 M $\mathbf{\Omega}$ min at 100Vdc ± 15V |
| Spurious Responses | -3dB max. |
| Drive level dependency (DLD) | from $1\mu W$ to $500\mu W$ (minimum 7 points tested) |

TABLE 1: ESR

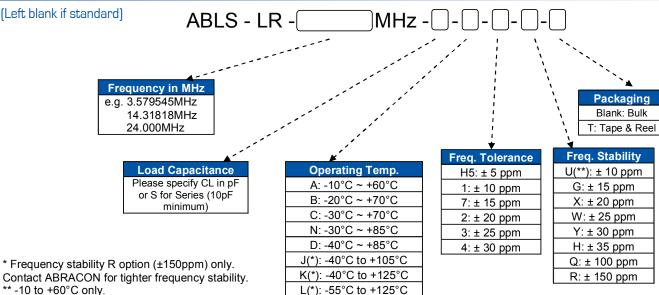
• Low negative resistance u-controller design

Wide range of automotive applications

| FREQUENCY (MHz) | ESR (Ω) 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)



ABRACON IS ISO9001.2008 CERTIFIED



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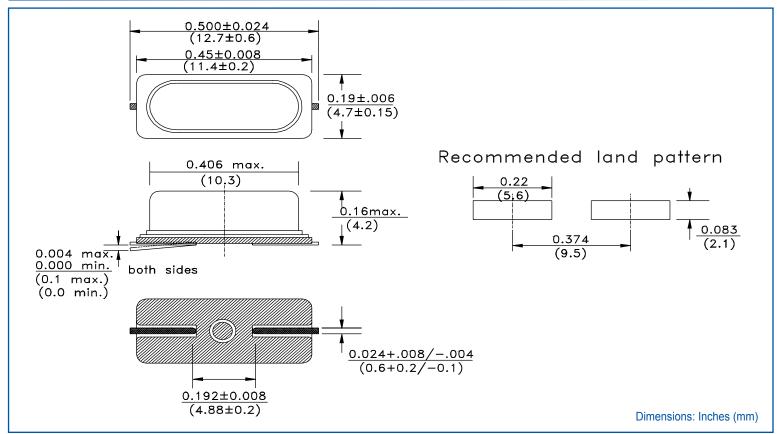
Rohs

Compliant

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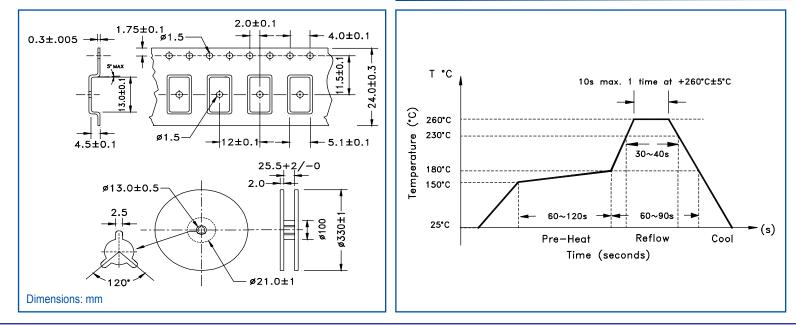
OUTLINE DRAWING:

ABLS-LR



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

REFLOW PROFILE:



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