

# HC/49US (AT49) SMD LOW PROFILE CRYSTAL



11.5 x 4.7 x 4.2 mm

**ABLS**



**RoHS**  
Compliant

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

**FEATURES:**

- Suitable for RoHS reflow
- Available for tight stability & extended temperature range

**APPLICATIONS:**

- Computers, Modems, Microprocessors
- Wireless Applications

**STANDARD SPECIFICATIONS:**

**PARAMETERS**

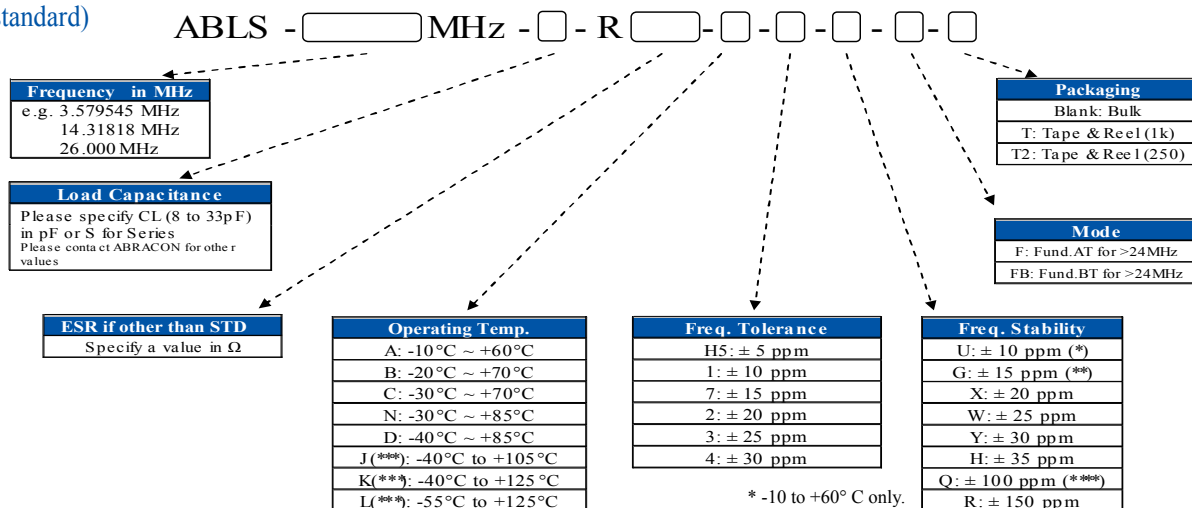
|   |   |
|---|---|
| ABRACON P/N   | ABLS Series   |
| Frequency   | 3.579545 MHz to 75 MHz  |
| Operation Mode  | AT cut (Fundamental or 3rd OT) or BT cut (See options)<br>3.579545MHz - 24.0MHz (Fundamental: Standard)<br>24.01MHz - 75.00MHz (3rd- Overtone: Standard)<br>24.01MHz - 50.00MHz (Fund. AT or BT: See options) |
| Operating Temperature                                       | 0°C to + 70°C (see options)   |
| Storage Temperature   | - 55°C to + 125° C  |
| Frequency Tolerance at +25°C                                | ± 50 ppm max. (see options)   |
| Frequency Stability over the Operating Temp. (Ref to +25°C) | ± 50 ppm max. (see options)   |
| Equivalent Series Resistance                                | See Table 1   |
| Shunt Capacitance C <sub>0</sub>                            | 7pF max.  |
| Load Capacitance C <sub>L</sub>                             | 18pF (see options)  |
| Drive Level   | 1 mW max., 100 μW typical   |
| Aging at 25°C (first year)                                  | ± 5ppm max.   |
| Insulation Resistance                                       | 500 MΩ min at 100Vdc ± 15V  |
| Spurious Responses  | -3dB max.   |
| Drive level dependency (DLD)                                | from 1 μW to 500 μW (minimum 7 points tested)   |

**TABLE 1: STANDARD ESR**

| 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 - 75.00 (3rd O/T) | 80          |

**OPTIONS & PART IDENTIFICATION:**

(Left blank if standard)



\* -10 to +60° C only.  
\*\* Option A, B, and 0 to +70° C only.  
\*\*\* Frequency stability ±50ppm, ±100ppm, or ±150ppm only.  
Contact ABRACON for tighter frequency stability.  
\*\*\*\* For Fundamental BT, frequency stability ± 100ppm max. at -10° C to +60° C only.

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Revised: 04.07.11

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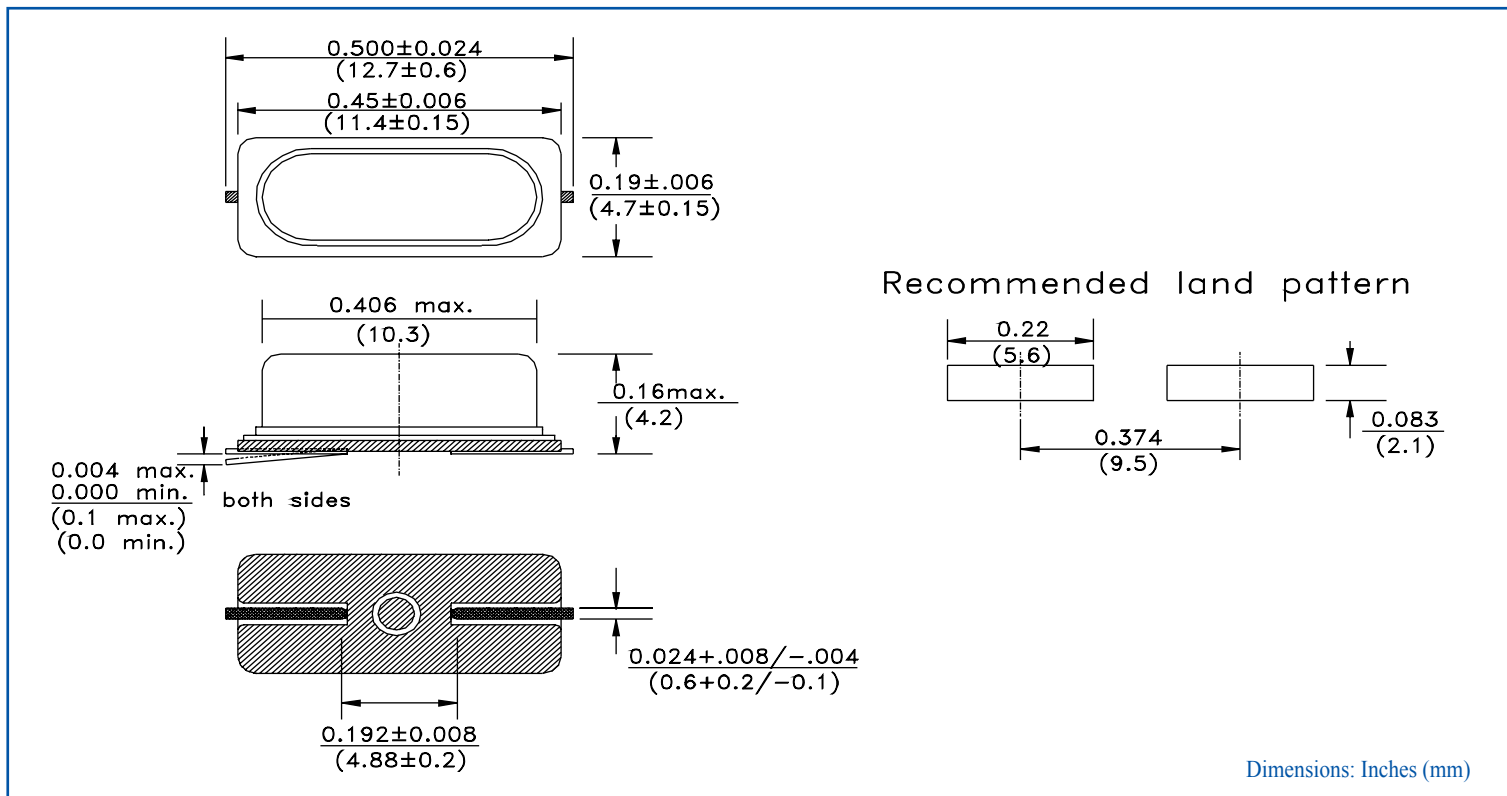
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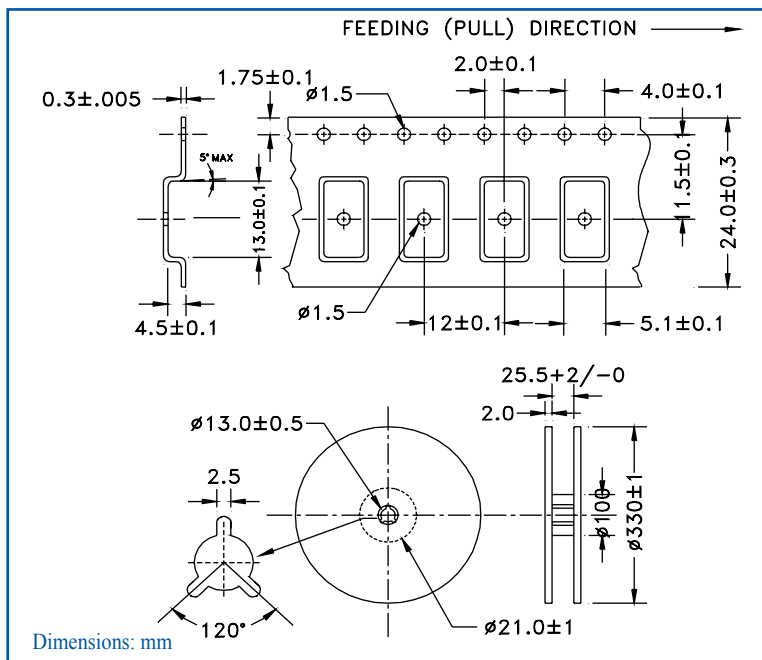


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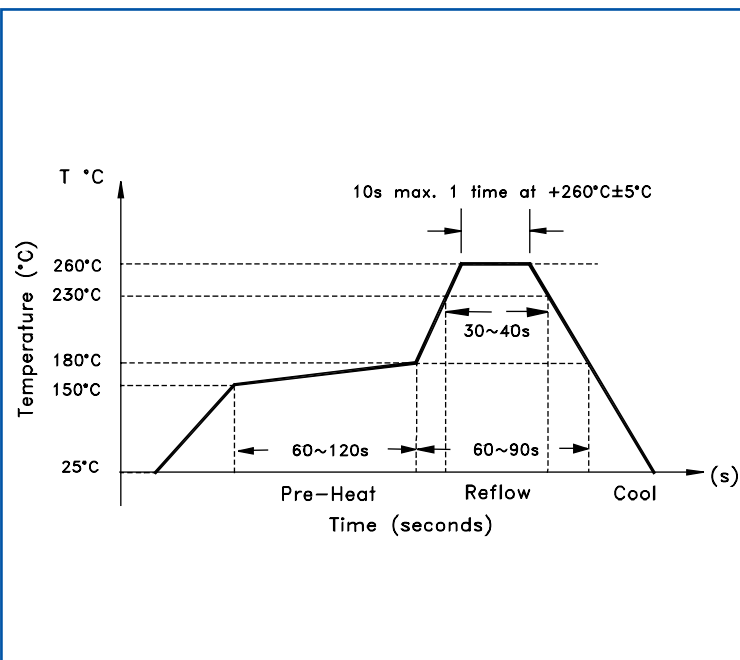
## OUTLINE DRAWING:



## TAPE & REEL:



## REFLOW PROFILE:



**Need a test socket for the ABLS series? To view compatible PRECISION TEST & BURN-IN SOCKETS for these parts, click here P/N: AXS-1147-02-02**

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