

HC/49US (AT49) SMD LOW PROFILE CRYSTAL



11.5 x 4.7 x 4.2 mm

ABLS

Pb **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:

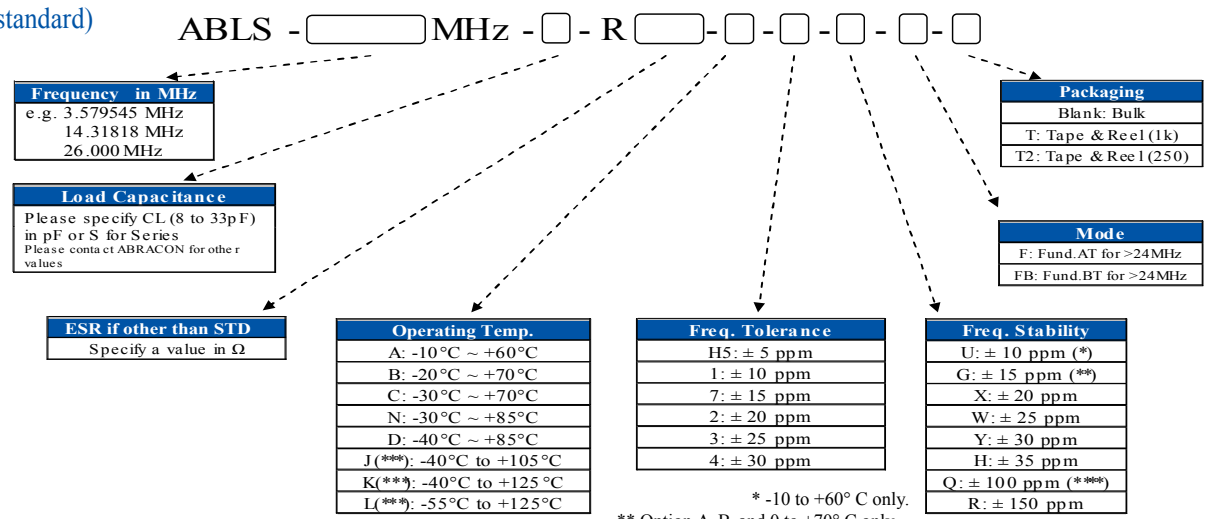
PARAMETERS	
ABRACON P/N	ABLS Series
Frequency	3.579545 MHz to 75 MHz
Operation Mode	AT cut (Fundamental or 3rd OT) or BT cut (See options) 3.579545MHz - 24.0MHz (Fundamental: Standard) 24.01MHz - 75.00MHz (3rd- Overtone: Standard) 24.01MHz - 50.00MHz (Fund. AT or BT: See options)
Operating Temperature	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 ₀	7pF max.
Load Capacitance C _L	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)



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Revised: 04.07.11

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Technical drawing of a 1.5mm pitch BGA package showing top, side, and cross-sectional views with dimensions in inches and mm.

Top View Dimensions:

- Overall width: 0.500 ± 0.024 (12.7 $\pm$ 0.6)
- Inner width: 0.45 ± 0.006 (11.4 $\pm$ 0.15)
- Height: 0.19 ± 0.006 (4.7 $\pm$ 0.15)

Side View Dimensions:

- Top width: 0.406 max. (10.3)
- Height: 0.16 max. (4.2)
- Bottom thickness: 0.004 max. / 0.000 min. (0.1 max. / 0.0 min.) both sides

Cross-sectional View Dimensions:

- Width: 0.192 ± 0.008 (4.88 $\pm$ 0.2)
- Height: $0.024 + .008 / -.004$ (0.6 + 0.2 / -0.1)

Recommended land pattern:

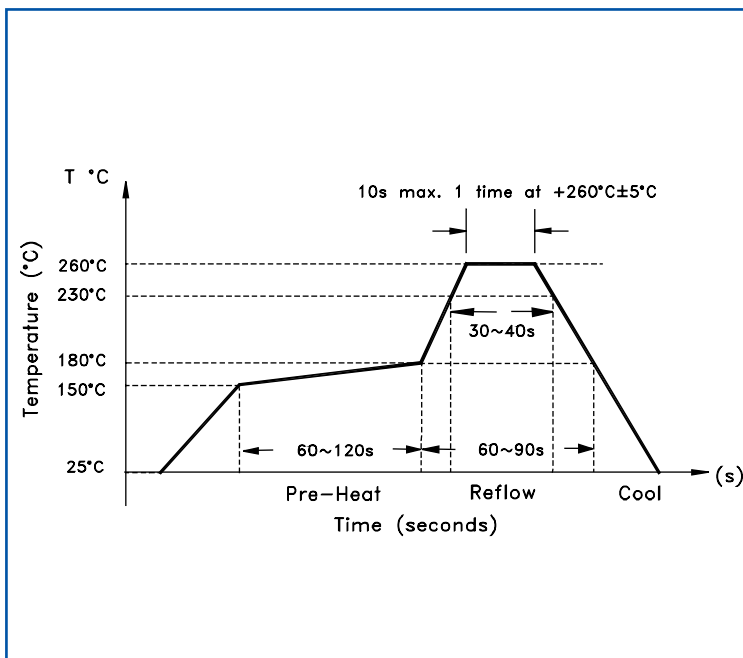
- Land width: 0.22 (5.6)
- Land spacing: 0.374 (9.5)
- Land height: 0.083 (2.1)

Dimensions: Inches (mm)

The technical drawing illustrates a mechanical component with three primary views:

- Front View (Top):** Shows a rectangular body with four internal slots. Key dimensions include:
 - Total width: 24.0 ± 0.3
 - Slot width: 1.5 ± 0.1
 - Distance between slot centers: 12 ± 0.1
 - Overall length: 4.5 ± 0.1
 - Feeding direction indicated by an arrow at the top.
- Top View (Bottom Left):** A circular cross-section with:
 - Outer diameter: $\phi 21.0 \pm 1$
 - Inner hole diameter: $\phi 13.0 \pm 0.5$
 - A central feature with a radius of 2.5 and a 120° angle.
- Side View (Bottom Right):** Shows the profile of the component with:
 - Height: 100 ± 1
 - Top flange thickness: 2.0
 - Top flange outer diameter: $25.5 + 2 / -0$

Dimensions: mm



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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