



# THE DATASHEET OF ABLSG-10.000MHZ-D2Y-T

# HC/49US (AT49) 3RD LEAD CASE-GROUNDED SMD LOW PROFILE CRYSTAL



ABLSG



RoHS  
Compliant

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

## FEATURES:

- 3rd Lead is Grounded, Ideal for EMI Sensitive Applications
- IR-reflow capable
- Low height reduced to 4.2mm
- Tight stability & extended temperature available

## APPLICATIONS:

- EMI sensitive applications
- Computers, Modems, Microprocessors
- Medical Electronics
- Wireless Applications

## STANDARD SPECIFICATIONS:

### PARAMETERS

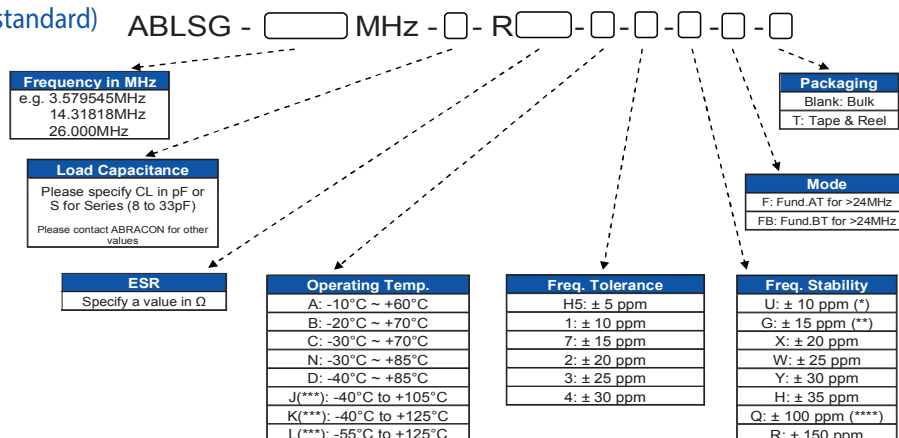
| ABRACON P/N                                                 | ABLSG Series                                                                                                                                                                                                    |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Frequency                                                   | 3.579545 MHz to 75 MHz                                                                                                                                                                                          |
| Operation Mode                                              | AT cut (Fundamental or 3rd OT) or BT cut<br>3.579545MHz - 24.0MHz (Fundamental: Standard)<br>24.01 - 75.00MHz (3rd- Overtone: Standard)<br>24.01MHz - 50.00MHz<br>(Fund. AT or BT: Please specify. See options) |
| 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) | ± 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., 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 (Ω) |
|--------------------------|---------|
| 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 - 70.00 (3rd O/T) | 80      |

## OPTIONS & PART IDENTIFICATION:

(Left blank if standard)



\* 10 to +60°C only.

\*\* Option A, E, B, and 0 to +70°C only.

\*\*\* Frequency stability ±50ppm, ±100ppm, ±150ppm only.  
Contact ABRACON for tighter frequency or stability requirement.

\*\*\*\* For Fundamental BT, frequency stability ±100ppm max. at 10°C to +60°C only.



# HC/49US (AT49) 3RD LEAD CASE-GROUNDED SMD LOW PROFILE CRYSTAL

ABLSG

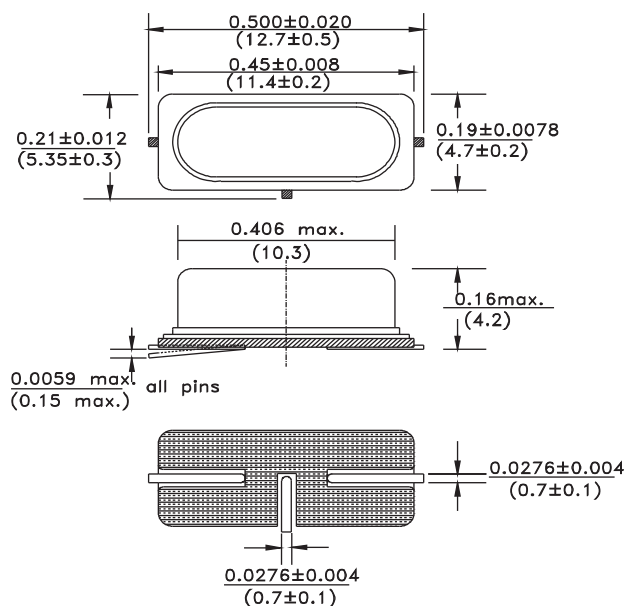


**RoHS**  
Compliant



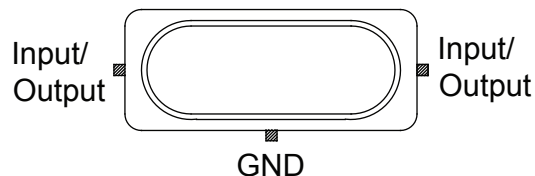
11.4 x 4.7 x 4.2mm

## OUTLINE DRAWING:

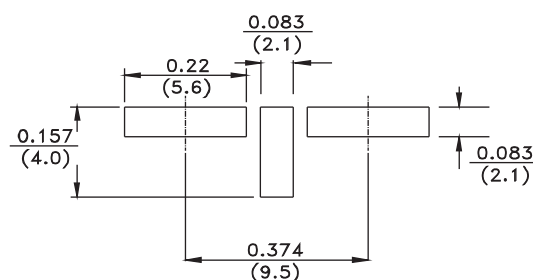


Dimensions: Inches (mm)

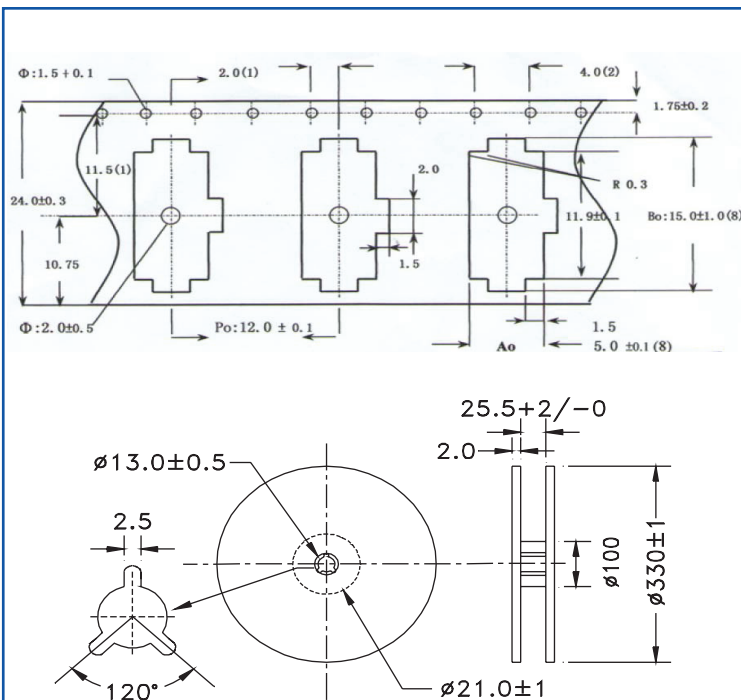
## Pin Configuration



## Recommended land pattern

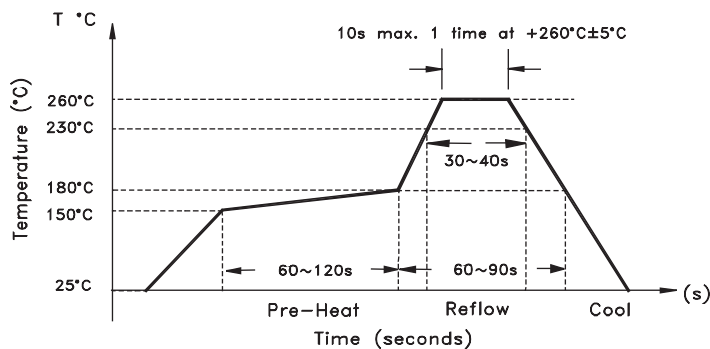


## TAPE & REEL:



Dimensions: mm

## REFLOW PROFILE:



**ATTENTION:** Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.

ABRACON IS  
ISO9001:2008  
CERTIFIED



**ABRACON**  
CORPORATION

Visit [www.abracon.com](http://www.abracon.com) for Terms & Conditions of Sale **Revised: 08.20.10**  
 30332 Esperanza, Rancho Santa Margarita, California 92688  
 tel 949-546-8000 | fax 949-546-8001 | [www.abracon.com](http://www.abracon.com)