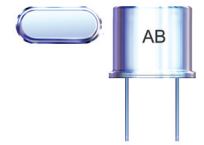


# HC49/U, HC51/U CRYSTAL

AB



**RoHS**  
Compliant



11.5 x 5.0 x 13.5 mm

## FEATURES:

- High precision availability
- Resistance welded
- Ideal for large pullability application
- Wide frequency range

## APPLICATIONS:

- CPU, Memory
- Computer, printer
- Data communication (1MHz)
- Data input - output machine (1MHz)

## STANDARD SPECIFICATIONS:

### PARAMETERS

ABRACON P/N:	AB Series
Frequency range:	1.8432 MHz to 60 MHz (HC49/U) 850 kHz to 1.800 MHz (HC51/U)
Operation mode: (see options)	850 kHz - 24.000MHz (Fundamental), 24.01MHz - 66.00MHz (3rd OT), 66.01MHz - 122.00MHz (5th OT), 122.01MHz - 160.00MHz (7th OT)
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 temperature (Ref to +25° C):	± 100 ppm max. (see options)
Equivalent series resistance (R1):	see table 1
Shunt capacitance C0:	7 pF max.
Load capacitance CL:	18 pF (see options)
Drive level:	1 mW max., 100µW Typical
Aging @ 25° C per a year :	± 5 ppm max.
Insulation resistance:	500 M Ω min. at 100Vdc ± 15V
Drive level dependency (DLD), minimum 7 points tested:	from 1µW to 500µW. Change in frequency (Maximum - Minimum) over DLD range < ±10ppm Change in ESR (Maximum - Minimum) over DLD range < 25% of Max ESR value. Maximum ESR over DLD range < Max ESR value.

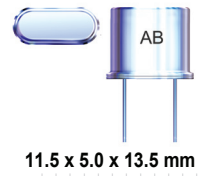
TABLE 1: ESR

FREQUENCY (MHz)	Operation Mode	ESR (Ω) max	
1.000 - 1.799	HC49/U Fund	2000	
1.800 - 1.999		750	
2.000 - 2.399		550	
2.400 - 2.999		350	
3.000 - 3.699		200	
3.700 - 4.199		100	
4.200 - 4.899		70	
4.900 - 5.999		50	
6.000 - 7.999		40	
8.000 - 9.999		35	
10.000 - 12.499		30	
12.50 - 50.00		25	
24.00 - 66.00		HC49/U (3rd OT)	40
66.01 - 122.0		HC49/U (5th OT)	80
122.01 - 160	HC49/U (7th OT)	120	
850 kHz - 899 kHz Fund	HC51/U	1000	
900 kHz - 1.5 MHz Fund		800	



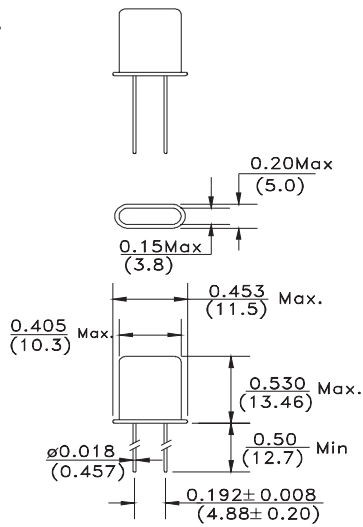
# HC49/U, HC51/U CRYSTAL

AB

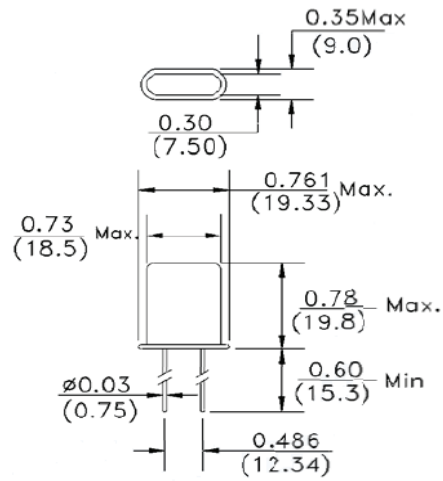


## OUTLINE DIMENSIONS

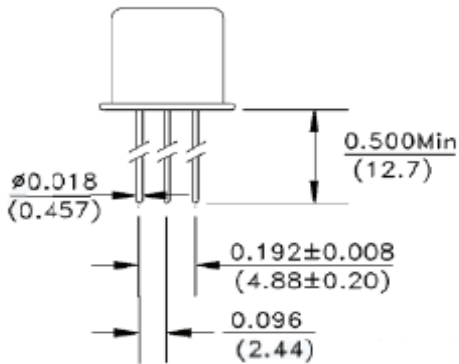
### HC49U:



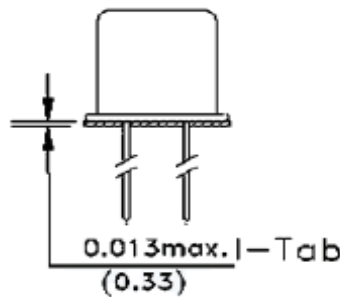
### HC51U:



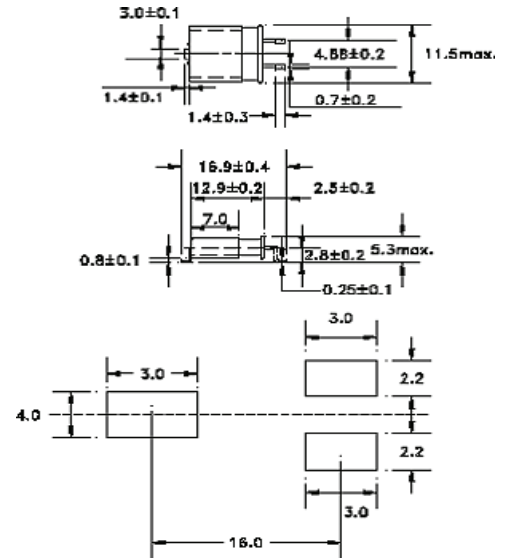
### Middle Third Lead For Option L2



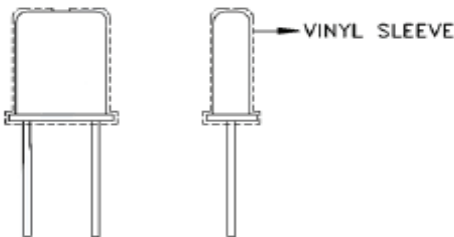
### Insulator Tab For Option I



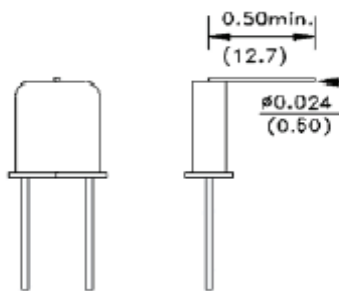
### Metal Jacket Formed Leads Option MJ



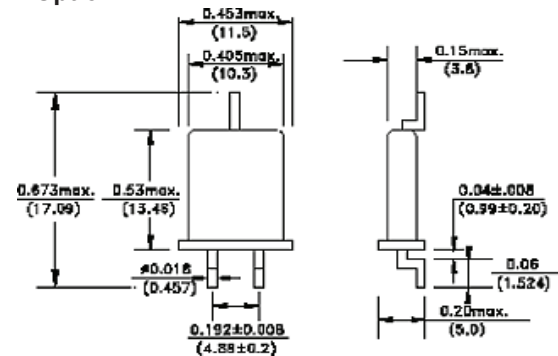
### Vinyl Sleeve For Option V



### Third-Lead For Option Land L1



### Formed Leads Option M



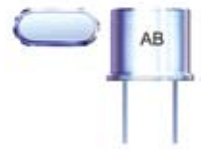
Dimension : inch (mm)

# HC49/U, HC51/U CRYSTAL

AB

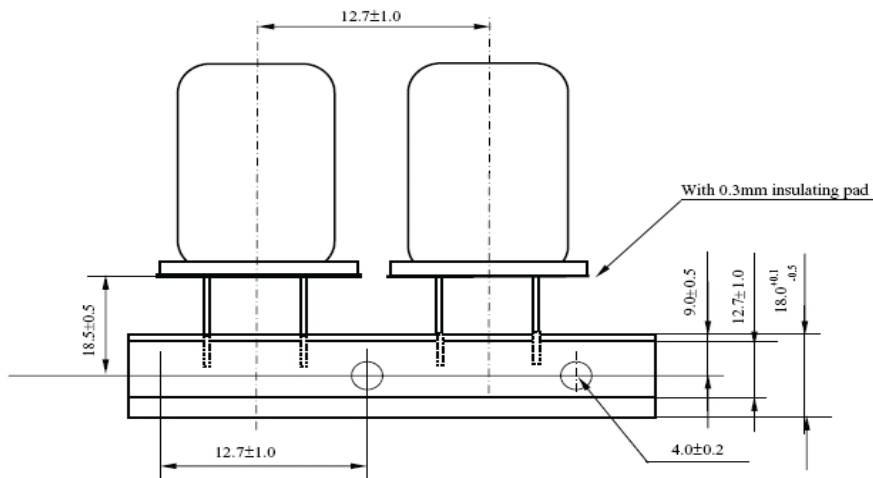
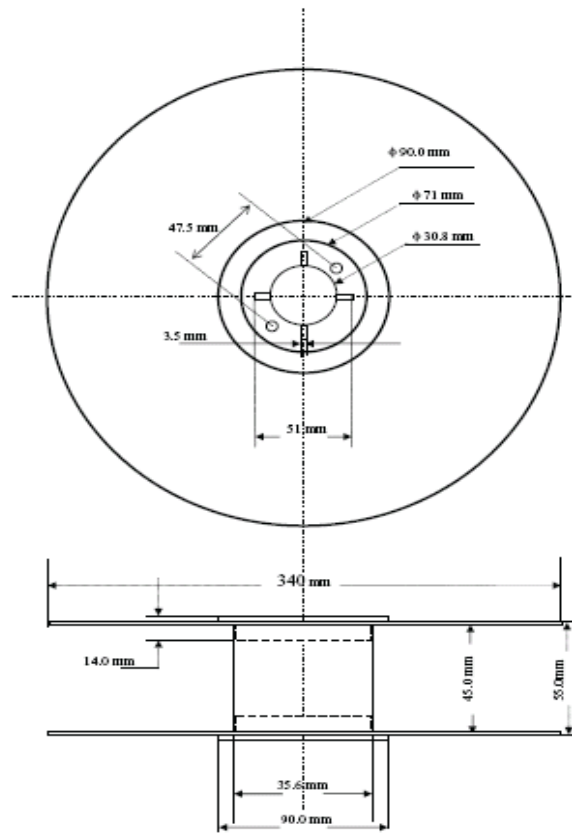


RoHS  
Compliant



11.5 x 5.0 x 13.5 mm

TAPE & REEL: 1000pcs/reel



Dimension : mm

**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  
ISO 9001 / QS 9000  
CERTIFIED



Visit [www.abracon.com](http://www.abracon.com) for Terms & Conditions of Sale **Revised: 09.02.10**  
30332 Esperanza, Rancho Santa Margarita, California 92688  
tel 949-546-8000 | fax 949-546-8001 | [www.abracon.com](http://www.abracon.com)