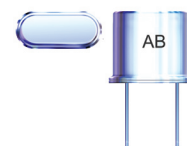


HC49/U CRYSTAL

AB



RoHS/RoHS II Compliant



11.5 x 5.0 x 13.46mm

Moisture Sensitivity Level (MSL) – This product is not Moisture Sensitive - MSL = 1

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)

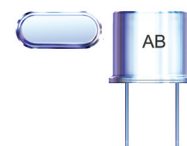
STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency Range	1.8432		160.000	MHz	
Operation Mode	Fundamental				1.8432MHz – 24.000MHz
	3 rd Overtone				24.01MHz – 66.00MHz
	5 th Overtone				66.01MHz – 122.00MHz
	7 th Overtone				122.01MHz – 160.00MHz
Operating Temperature	0		+70	°C	See options
Storage Temperature	-55		+125	°C	
Frequency Tolerance @+25°C	-50		+50	ppm	See options
Frequency Stability over the operating temperature (ref. to +25°C)	-100		+100	ppm	See options
Equivalent series resistance (R1)	See table 1 below			Ω	
Shunt capacitance (C0)			7	pF	
Load capacitance (CL)		18		pF	See options
Drive Level		100	1000	μW	
Aging@25°C±3°C			±5	ppm	First year
Insulation Resistance	500			M Ω	@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

FREQUENCY (MHz)	Operation Mode	ESR (Ω) max
1.8432-1.999	HC49/U Fundamental	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
66.01-122.00	HC49/U (5th OT)	80
122.01-160.00	HC49/U (7th OT)	120





11.5 x 5.0 x 13.46mm

OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)

AB - MHz - - - - - - -

Frequency in MHz

Please specify the frequency in xx.xxxxMHz.
e.g. 14.3181MHz

Load Capacitance (pF)

Please specify CL (Minimum 10pF) in pF or S for series

Custom ESR if other than standard

R□
□: Specify a value in Ω (e.g.: R40)

Packaging

T: Tape & Reel

Quality Factor***

QXXXk	Minimum Value
-------	---------------

Value Added

I	Insulator Tab
V	Vinyl Sleeve
QXX	Trimmed leads See Table 2
MJ	Metal jacket

Operation Mode

F	Fund. AT > 24MHz
FB	Fund. BT > 24MHz
O	3 rd OT > 66MHz

Freq. Stability

Options for AT-Cut only*

U**:	± 10 ppm
G:	± 15 ppm
X:	± 20 ppm
W:	± 25 ppm
Y:	± 30 ppm
H:	± 35 ppm
Z:	± 50 ppm

NOTE:

*: Frequency Stability ±100 ppm max at -10 to +60°C only for BT cut.

**:-10 to +60°C only.

***: Quality factor must be accompanied by a k value

Operating Temp.

A:	-10°C ~ +60°C
B:	-20°C ~ +70°C
C:	-30°C ~ +70°C
N:	-30°C ~ +85°C
D:	-40°C ~ +85°C

Freq. Tolerance

1:	± 10 ppm
7:	± 15 ppm
2:	± 20 ppm
3:	± 25 ppm
4:	± 30 ppm

Table 2

CODES	TRIMMED L in(mm)
Q45	0.45 (11.43)
Q40	0.40 (10.16)
Q35	0.35 (8.89)
Q30	0.30 (7.62)
Q25	0.25 (6.35)
Q20	0.20 (5.08)
Q15	0.15 (3.81)
Q10	0.10 (2.54)
Q115	0.115 (2.92)

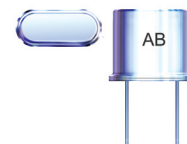
NOTE: Use appropriate code numbers for other trimmed lengths not listed.
(e.g. Q14 for 0.14 inch (3.55 mm))

HC49/U CRYSTAL

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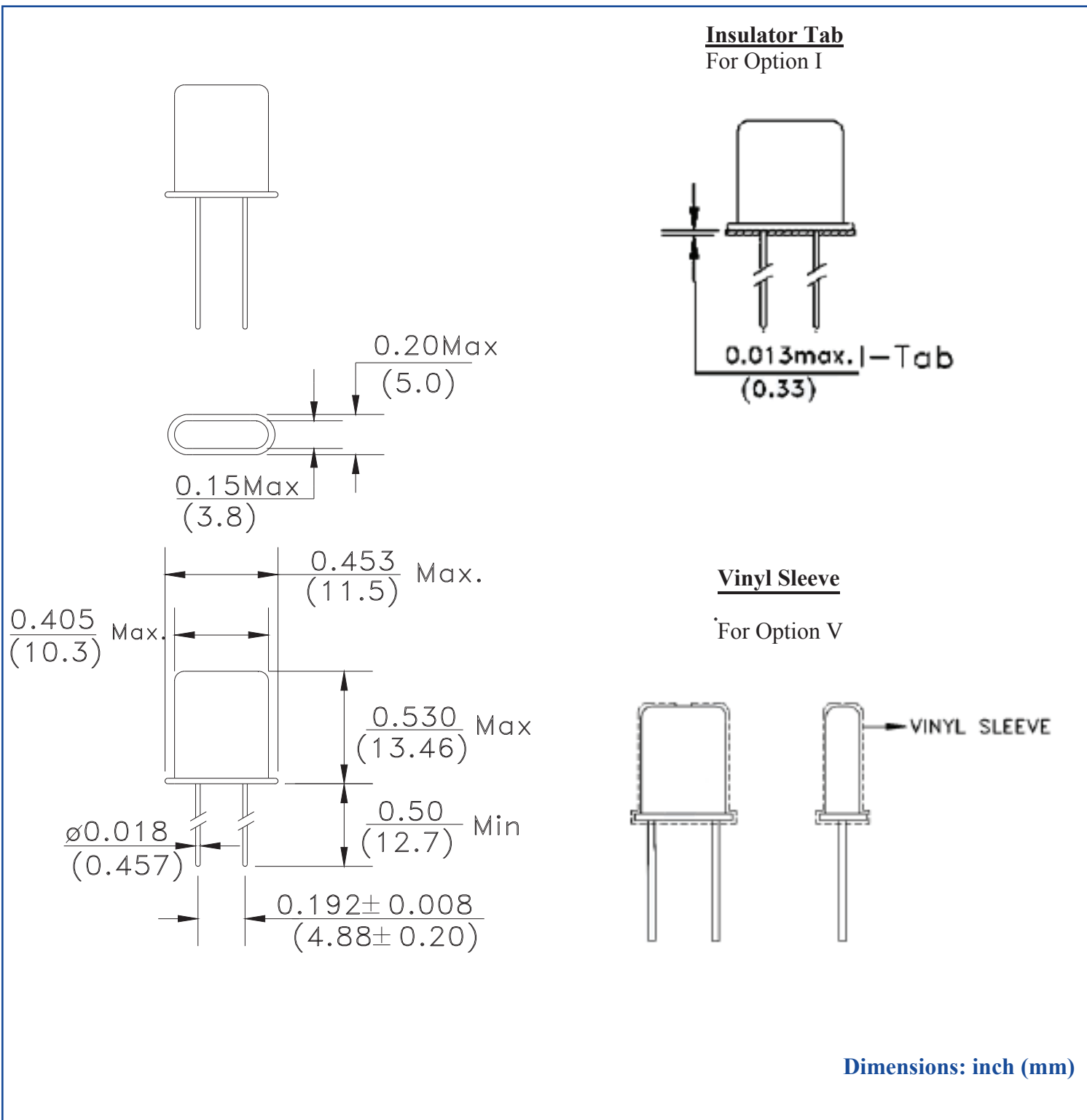


RoHS/RoHS II Compliant



11.5 x 5.0 x 13.46mm

➤ OUTLINE DRAWING:

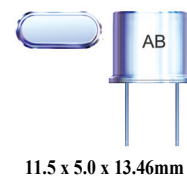


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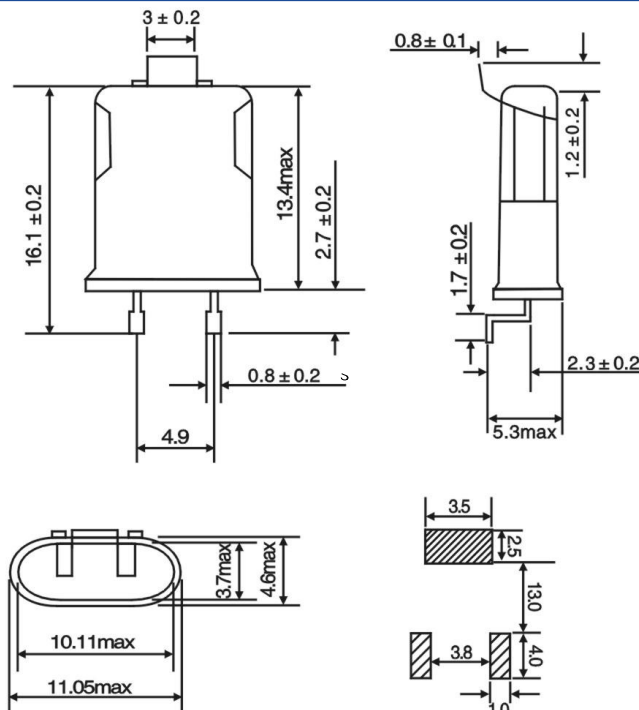


11.5 x 5.0 x 13.46mm

OUTLINE DIMENSION CONTD...

Metal Jacket Formed Leads

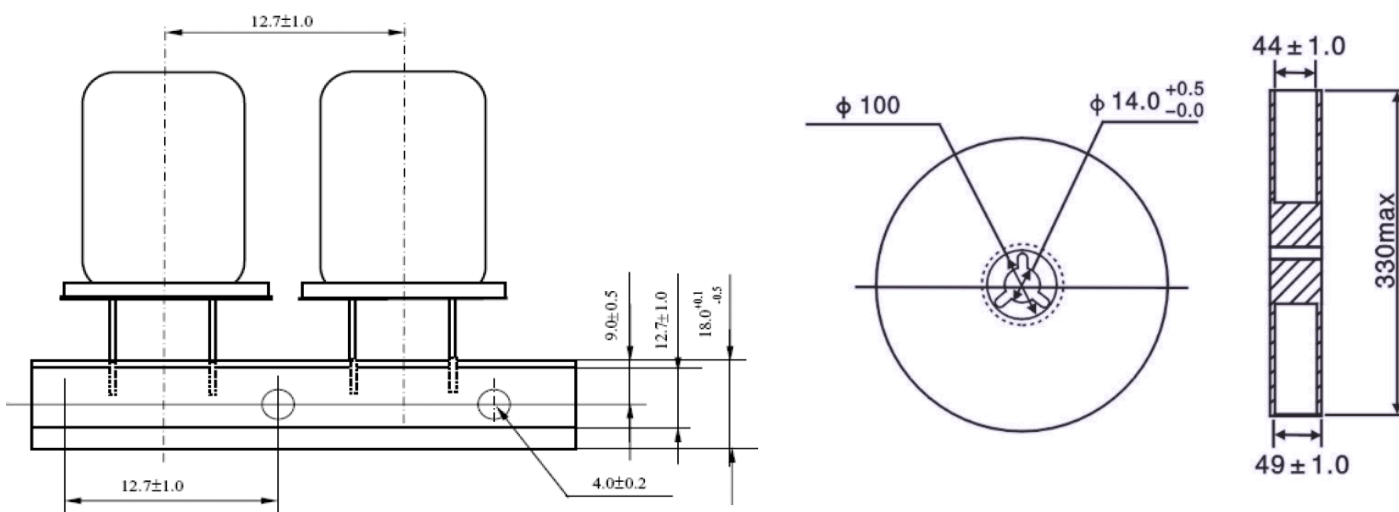
For Option MJ



Dimensions: mm

TAPE & REEL:

T: 1,000 pcs/reel



Dimensions: 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 9001:2008
CERTIFIED



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