

# THRU-HOLE MICROPROCESSOR CRYSTAL

ABL6M



RoHS / RoHS II Compliant



6.0 x 3.0 x 1.4mm

## FEATURES:

- Reduced footprint from the standard HC/49US package
- Low profile: 1.4mm typ. height
- Tight stability & extended temperature options
- High reliability & Cost effective
- Resistance welded metal package

## APPLICATIONS:

- Wireless Applications
- Home electronics
- Computers, modems, and communications
- Microprocessors

## STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency Range*	12.0		30.0	MHz	
Standard Frequencies	12.0, 16.0			MHz	
Operation Mode	Fundamental (AT-cut)				
Operating Temperature	0		+70	°C	See options
Storage Temperature	-40		+125	°C	
Frequency Tolerance @+25°C	-50		+50	ppm	See options
Frequency Stability over the Operating Temperature ( ref. to +25°C)	-50		+50	ppm	See options
Equivalent series resistance (ESR)			60	Ω	@+25°C
Shunt capacitance (C0)			5	pF	
Load capacitance (CL)	18			pF	Standard (See options if other than STD)
Drive Level		50	100	μW	
Aging	-5		+5	ppm	@25°C±3°C First year
Insulation Resistance	500			MΩ	@ 100Vdc ± 15V
Drive level dependency (DLD)	10nw ~ 100uw, 12 points Change in ESR (Maximum - Minimum) over DLD range < 30% ESR max.				

\* Please contact Abracon for other frequencies.



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## PART IDENTIFICATIONS: (Left blank if standard)

ABL6M - [ ] MHz - [ ] - [ ] - [ ] [ ] [ ]

**Frequency in MHz**  
Please specify the frequency in MHz. e.g.  
12.000MHz  
14.31818MHz

**Load Capacitance (pF)**  
Please specify CL (Minimum 8pF) in pF or S for series

**Custom ESR if other than standard**  
R[ ]  
□: Specify a value in Ω (e.g.: R40)

**Operating Temp.**  
Blank: 0°C ~ +70°C  
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  
J: -40°C ~ +105°C  
K: -40°C ~ +125°C

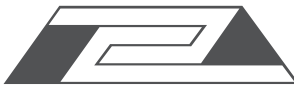
**Freq. Tolerance**  
Blank: ± 50 ppm  
1: ± 10 ppm  
7: ± 15 ppm  
2: ± 20 ppm  
3: ± 25 ppm  
4: ± 30 ppm

**Freq. Stability (See Table 1 for details)**  
Blank: ± 50 ppm  
U: ± 10 ppm  
G: ± 15 ppm  
X: ± 20 ppm  
W: ± 25 ppm  
Y: ± 30 ppm  
H: ± 35 ppm  
Q: ± 100 ppm

Table 1 Available Combinations of Operating Temp. and Freq. Stability

Operating Temp.	Freq. Stability							
	U:±10ppm	G:±15ppm	X:±20ppm	W:±25ppm	Y:±30ppm	H:±35ppm	Std.:±50ppm	Q:±100ppm
A: -10°C ~ +60°C	√	√	√	√	√	√	√	√
Std.: 0°C ~ +70°C	√	√	√	√	√	√	√	√
B: -20°C ~ +70°C		√	√	√	√	√	√	√
C: -30°C ~ +70°C			√	√	√	√	√	√
N: -30°C ~ +85°C					√	√	√	√
D: -40°C ~ +85°C					√	√	√	√
J: -40°C ~ +105°C							√	√
K: -40°C ~ +125°C								√

Note: Please contact Abracon for other frequency stability and operating temperature range options.



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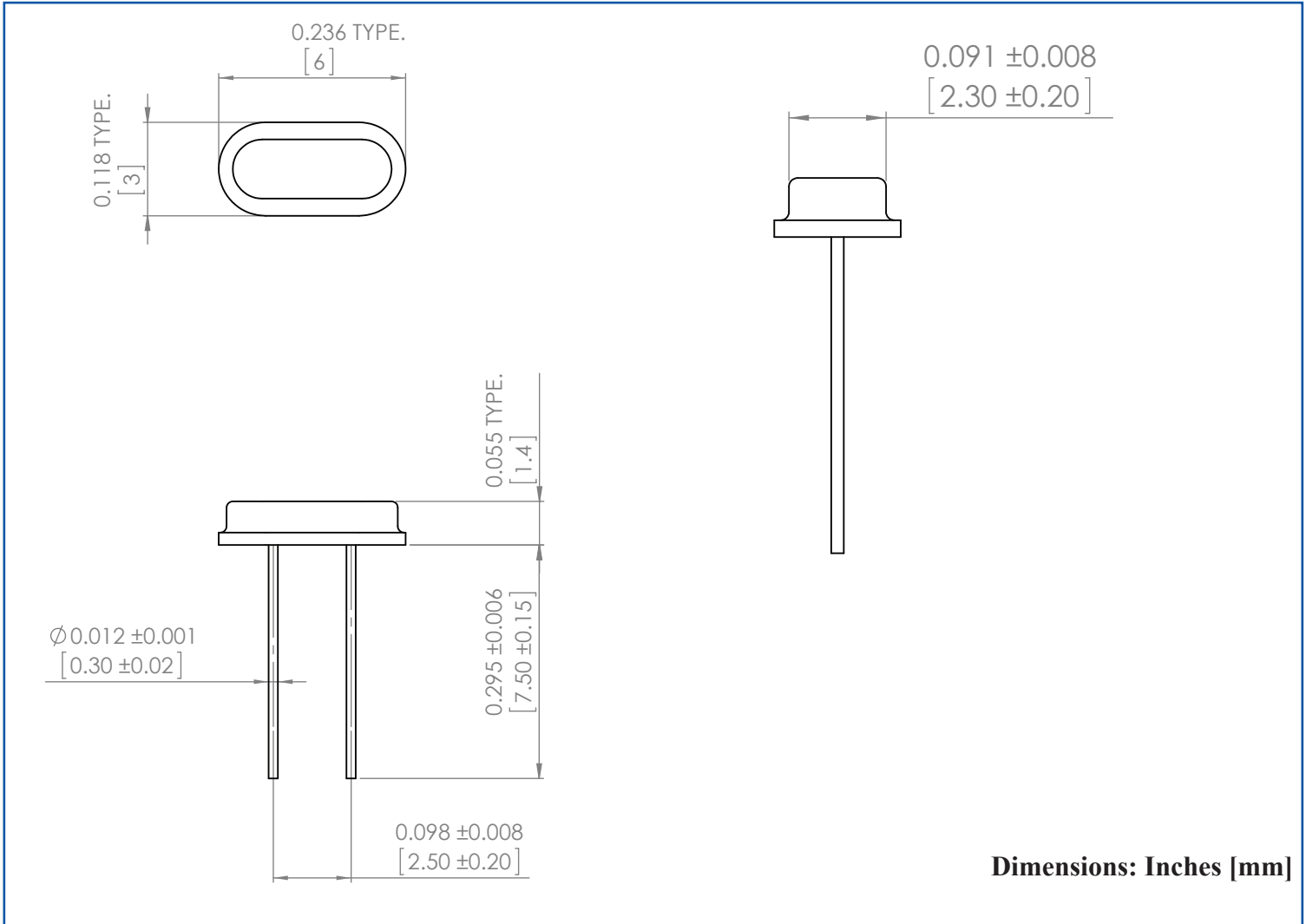


RoHS / RoHS II Compliant



6.0 x 3.0 x 1.4mm

## OUTLINE DIMENSION:



**Packing**  
500pcs/bag

**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



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Revised: 07.25.14