

# SMD MICROPROCESSOR CRYSTAL



ABMC2

ABMC2



RoHS  
Compliant

11.0 x 5.0 x 2.0 mm

## FEATURES:

- 2.0 mm height
- Hermetically sealed package offers high reliability.
- AT cut offers tighter stability
- Resistance welded
- Extended temperature available
- Low frequency in SMD package
- IR Reflow capable

## APPLICATIONS:

- PCMCIA applications
- Microprocessors
- Communication equipment, Networking, Thin equipment

## STANDARD SPECIFICATIONS:

|   |   |
|---|---|
| ABRACON P/N:  | ABMC2 Series  |
| Frequency:  | 3.579545 MHz to 70 MHz  |
| Operation mode:   | AT-strip or BT-strip<br>3.5 MHz - 32.00 MHz (Fundamental AT-cut: Standard)<br>32.00 MHz - 70.00 MHz (3rd OT AT-cut: Standard)<br>32.00 MHz - 41.00 MHz (Fundamental AT-cut: See options)<br>22.00 MHz - 46.00 MHz (Fundamental BT-cut: See options) |
| Operating temperature:  | - 10°C to + 60°C (see options)  |
| Storage temperature:  | - 40°C to + 85° C   |
| Frequency tolerance:  | ± 50 ppm max. (see options)   |
| Frequency stability over the operating temperature (Ref to +25° C): | ± 100 ppm max. (see options)<br>± 100 ppm max. over - 40°C to + 85° C only for BT-cut   |
| Equivalent series resistance (max.):                                | See Table 1   |
| Shunt capacitance C0:   | 7.0pF max.  |
| Load capacitance CL:  | 18.0pF (see option)   |
| Drive level:  | 100 µW max.   |
| Aging (per year) @ 25° C:   | ± 5 ppm max.  |
| Insulation resistance:  | 500 MΩ min. at 100 Vdc ± 15 Vdc   |

Table 1 Standard ESR

| Frequency (MHz)               | ESR(Ω) max. |
|-------------------------------|-------------|
| 3.500 - 3.999 (AT cut fund.)  | 180         |
| 4.000 - 4.999 (AT cut fund.)  | 150         |
| 5.000 - 5.999 (AT cut fund.)  | 120         |
| 6.000 - 6.999 (AT cut fund.)  | 100         |
| 7.000 - 8.999 (AT cut fund.)  | 80          |
| 9.000 - 12.999 (AT cut fund.) | 60          |
| 13.00 - 19.999 (AT cut fund.) | 50          |
| 20.00 - 41.00 (AT cut fund.)  | 40          |
| 22.00 - 46.00 (BT cut)        | 60          |
| 32.00 - 70.00 (3rd O/T)       | 80          |



## OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)

ABMC2 - [ ] MHz - [ ] - R [ ] - [ ] - [ ] - [ ] - [ ]

**Frequency in MHz**  
e.g. 24.576MHz  
14.31818MHz  
26.000MHz

**Load Capacitance**  
Please specify CL in pF or S for Series (minimum 7pF)

**ESR**  
Specify a value in  $\Omega$

**Operating Temp.**  
E: 0°C ~ +70°C  
B: -20°C ~ +70°C  
C: -30°C ~ +70°C  
N: -30°C ~ +85°C  
D\*\*: -40°C ~ +85°C

\*\*\*  $\pm 100$  ppm max. over -40°C to +85°C only for BT-cut

**Freq. Tolerance**  
1:  $\pm 10$  ppm  
7:  $\pm 15$  ppm  
2:  $\pm 20$  ppm  
3:  $\pm 25$  ppm  
4:  $\pm 30$  ppm

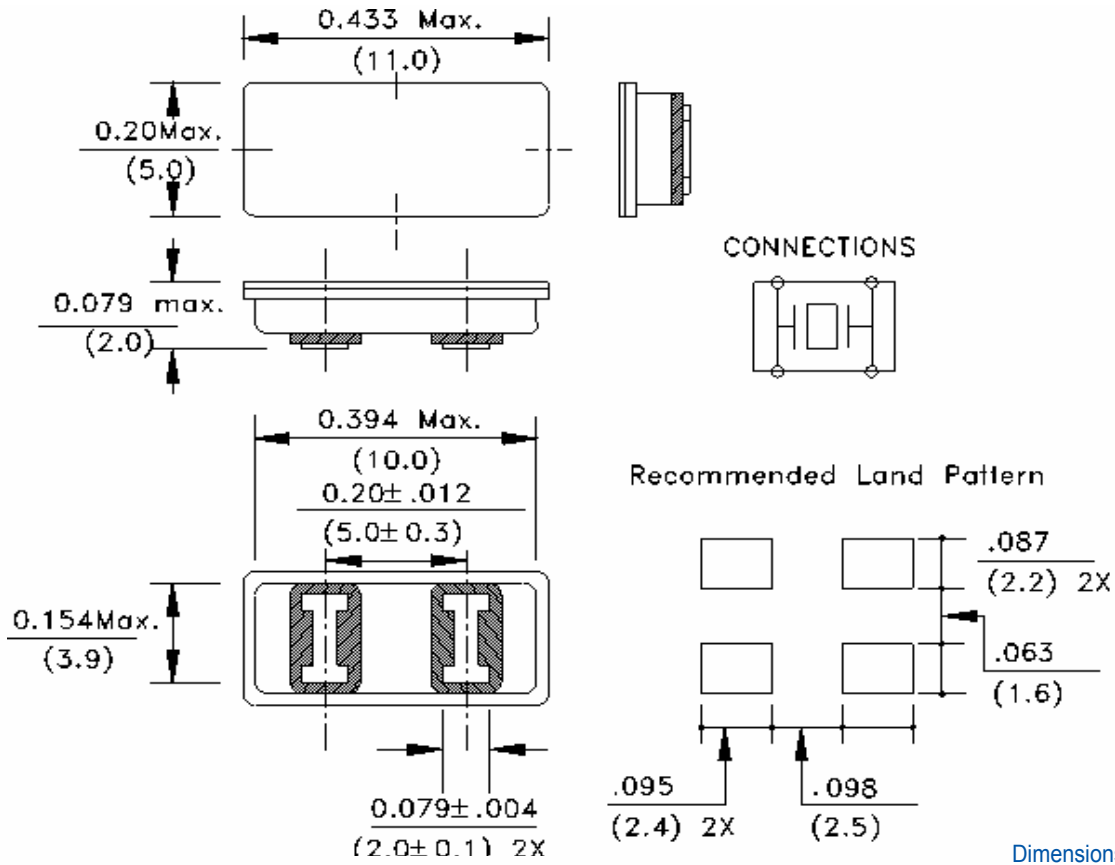
**Freq. Stability**  
U:  $\pm 10$  ppm(\*)  
G:  $\pm 15$  ppm(\*\*)  
X:  $\pm 20$  ppm  
W:  $\pm 25$  ppm  
Y:  $\pm 30$  ppm  
H:  $\pm 35$  ppm  
Z:  $\pm 50$  ppm

\* -10°C to 60°C only  
\*\* Temp option E, B, C, and N only

**Packaging**  
Blank: Bulk  
T: Tape & Reel

**Mode**  
F: Fund.AT for 32~41MHz  
FB: Fund.BT for 22~46MHz

## OUTLINE DRAWING:



# SMD MICROPROCESSOR CRYSTAL

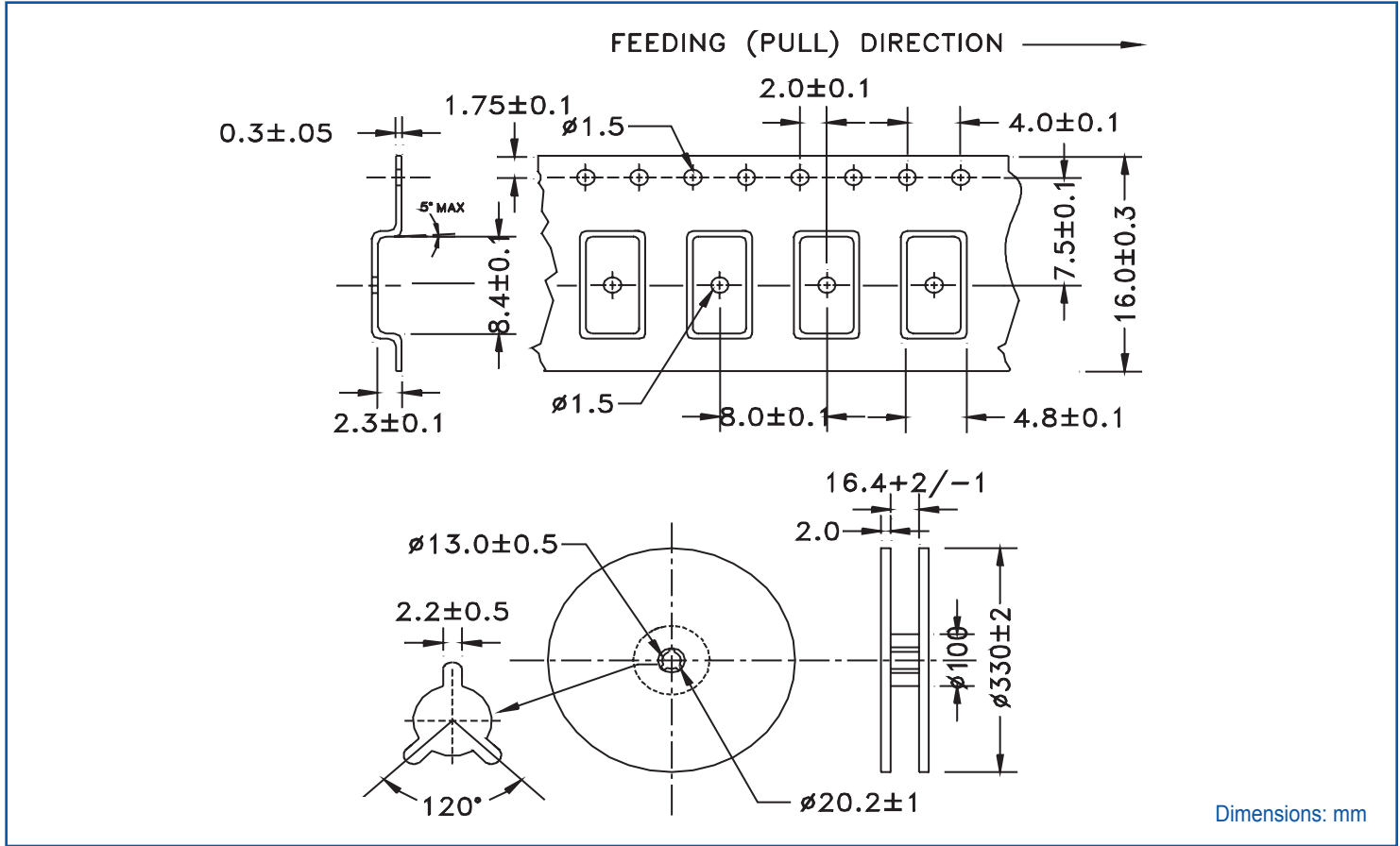


ABMC2

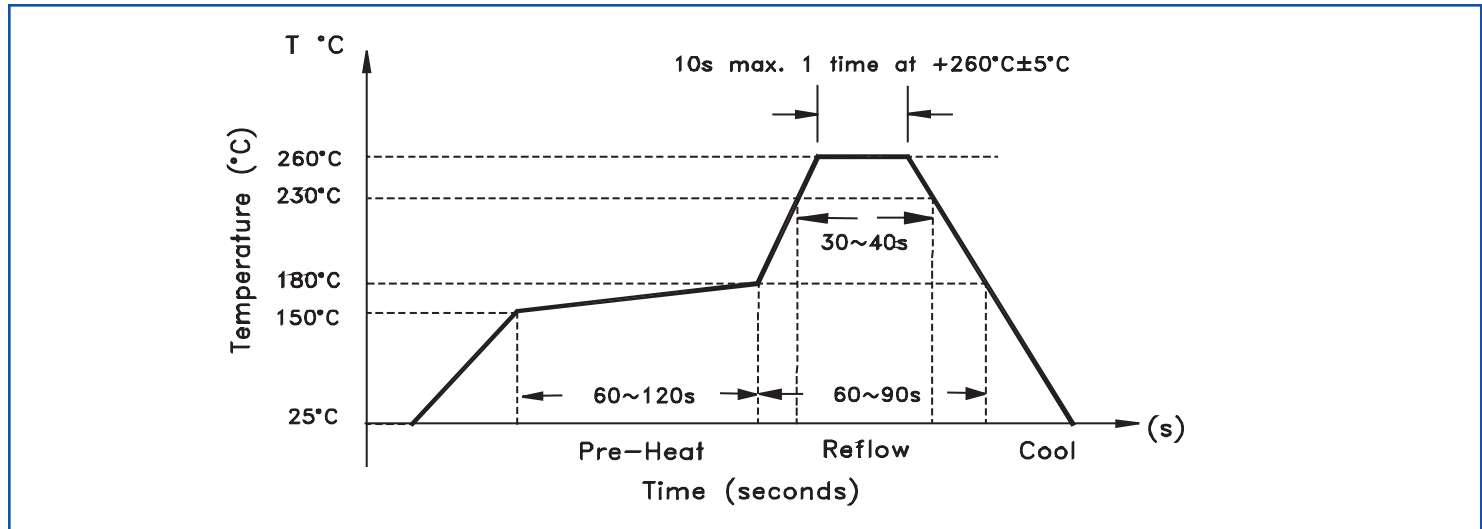
**Pb** RoHS Compliant

11.0 x 5.0 x 2.0 mm

➤ **TAPE & REEL:** T = Tape and reel 1,000pcs/reel



➤ **REFLOW PROFILE:**



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