

# CERAMIC SMD CRYSTAL

ABM3B

ABM3B

5.0 X 3.2 X 1.1mm



RoHS  
Compliant



## FEATURES:

- Fundamental mode.
- Suitable for reflow.
- Tight Stability available.
- Ceramic package and metal lid assures high precision and reliability.
- Seam sealing.

## APPLICATIONS:

- Cellular telephones, Pagers.
- Communication and Test equipment.
- High Density applications.
- PCMCIA and wireless applications.

## STANDARD SPECIFICATIONS:

### PARAMETERS

|                                                                          |                                                                   |
|--------------------------------------------------------------------------|-------------------------------------------------------------------|
| ABRACON P/N                                                              | ABM3B Series                                                      |
| Frequency Range                                                          | 8.0MHz - 50.0MHz (Fundamental)<br>50.1MHz - 125MHz (3rd overtone) |
| Operation Mode                                                           | <b>Fundamental or 3rd overtone</b>                                |
| Operating Temperature                                                    | - 10°C to + 60°C (see options)                                    |
| Storage Temperature                                                      | - 40°C to + 85°C                                                  |
| Frequency Tolerance @ 25°C                                               | ± 50 ppm max. (see options)                                       |
| Frequency Stability over the<br>Operating Temperature<br>(Ref to + 25°C) | ± 50 ppm max. (see options)                                       |
| Equivalent Series Resistance                                             | See table 1                                                       |
| Shunt Capacitance C0                                                     | 7 pF max.                                                         |
| Load Capacitance CL                                                      | 18 pF (see options)                                               |
| Drive Level                                                              | 100 µW max., 10 µW typical                                        |
| Aging (First Year) @ 25°C ± 3°C                                          | ± 5ppm max.                                                       |
| Insulation Resistance                                                    | 500 MΩ min at 100Vdc ± 15 V                                       |

TABLE 1- Standard ESR

| Frequency (MHz)         | ESR(Ω) max | Frequency (MHz)           | ESR( Ω max) |
|-------------------------|------------|---------------------------|-------------|
| 8.000 - 9.999 (Fund.)   | 200        | 16.000 - 50.000 (Fund.)   | 50          |
| 10.000 -11.999 (Fund.)  | 100        | 50.001 - 80.000 (3rd OT)  | 60          |
| 12.000 - 15.999 (Fund.) | 70         | 80.001 - 125.000 (3rd OT) | 80          |

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## OPTIONS AND PART IDENTIFICATION: (Left blank if standard)

ABM3B  -  MHz -  -  -  -  -

**Height (mm)**  
Blank: 1.1mm max  
1: 0.8mm max

**Frequency in MHz**  
e.g. 8.000MHz  
14.31818MHz  
26.000MHz  
125.000MHz

**Load Capacitance**  
Please specify CL(6 to 32pF) in pF or S for Series  
Please contact ABRACON for values under 6pF

**Custom ESR if other than standard**  
R  
☐ Specify a value in  $\Omega$  (e.g.: R40)

**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  
J\*\*\*\*: -40°C ~ +105°C  
K\*\*\*\*: -40°C ~ +125°C  
L\*: -55°C ~ +125°C

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

**Packaging**  
Blank: Bulk  
T: 1k pcs per reel  
T2: 250 pcs per reel

**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:  $\pm 100$  ppm

(\*) Option Z only  
(\*\*) Standard temp or options E and B only  
(\*\*\*) Standard temp or options E, B, C and N only  
(\*\*\*\*) Freq. stability  $\pm 50$ ppm and  $\pm 100$ ppm only. Contact ABRACON for tighter freq. stability.

## OUTLINE DIMENSIONS:

Please see Table 2 below for height and chamfer information.



Chamfer on PIN 1  
(Default)

Chamfer on PIN 4  
(See Note)

Recommended land pattern

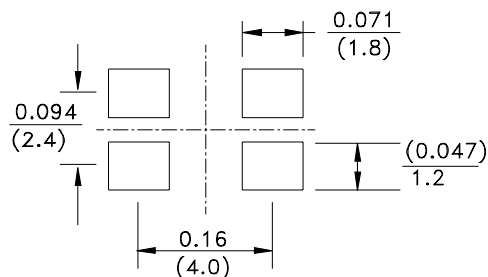


Table 2

|        | Height (mm) | Chamfer PIN #               |
|--------|-------------|-----------------------------|
| ABM3B  | 1.1mm max   | #1 (Default), #4 (See Note) |
| ABM3B1 | 0.8mm max   | #1 (Default), #4 (See Note) |

Note: Due to the availability of raw materials, this part may be manufactured with the chamfer on pin 4. Be advised that this does not affect the electrical characteristics of the crystal in any way.

Dimension : Inches (mm)

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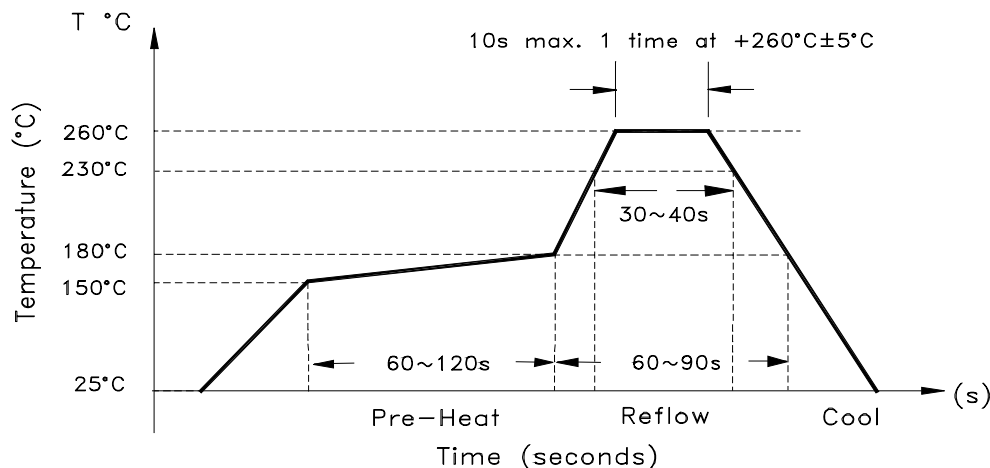
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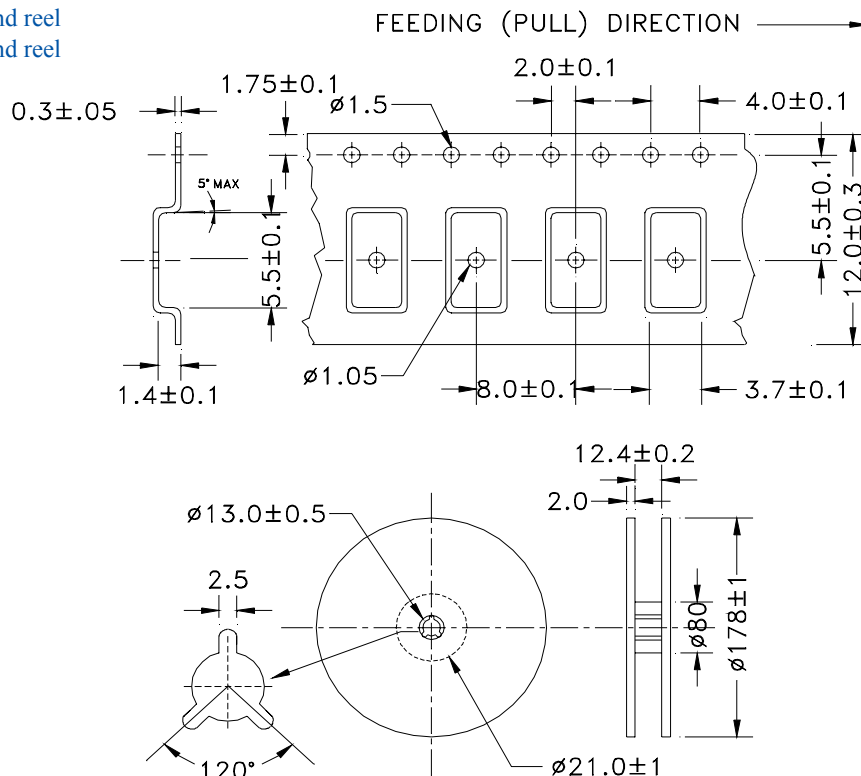
5.0 X 3.2 X 1.1mm

## REFLOW PROFILE:



## TAPE & REEL:

T=1000pcsTape and reel  
T2=250pcsTape and reel



Dimension : mm

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