## 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

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

### TABLE 1- Standard ESR

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>ESR(Ω) max</th>
<th>Frequency (MHz)</th>
<th>ESR(Ω) max</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.000 - 9.999 (Fund.)</td>
<td>200</td>
<td>16.000 - 50.000 (Fund.)</td>
<td>50</td>
</tr>
<tr>
<td>10.000 - 11.999 (Fund.)</td>
<td>100</td>
<td>50.001 - 80.000 (3rd OT)</td>
<td>60</td>
</tr>
<tr>
<td>12.000 - 15.999 (Fund.)</td>
<td>70</td>
<td>80.001 - 125.000 (3rd OT)</td>
<td>80</td>
</tr>
</tbody>
</table>
ABM3B – MHz – Blank: Bulk
T: 1k pcs per reel
T2: 250 pcs per reel
Height (mm)
Blank: 1.1mm max
1: 0.8mm max
Frequency in MHz
e.g. 8.000MHz
14.31818MHz
26.0000MHz
125.000MHz
Freq. Tolerance
1: ± 10 ppm
7: ± 15 ppm
2: ± 20 ppm
3: ± 25 ppm
4: ± 30 ppm
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
K: -40°C ~ +105°C
L*: -55°C ~ +125°C
Freq. Stability
U**: ± 10 ppm
G***: ± 15 ppm
X: ± 20 ppm
W: ± 25 ppm
Y: ± 30 ppm
H: ± 35 ppm
Z: ± 100 ppm
Load Capacitance
Please specify CL (6 to 32pF) in pF or S for Series
Custom ESR if other than standard
R: Specify a value in Ω (e.g.: R40)
(*): Option Z only
(**): Standard temp or options E and B only
(***): Standard temp or options E, B, C and N only
(****): Freq. stability ±50 ppm and ±100 ppm only. Contact ABRACON for tighter freq. stability.
OUTLINE DIMENSIONS:
Please see Table 2 below for height and chamfer information.

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.
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.

REFLOW PROFILE:

- Temperature (°C): 25°C to 260°C
- Time (seconds): Pre-Heat 60~120s, Reflow 30~40s, Cool 60~90s
- 10s max. 1 time at +260°C±5°C

TAPE & REEL:

- T=1000pcs Tape and reel
- T2=250pcs Tape and reel

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