MINIATURE CERAMIC SMD CRYSTAL

Smaller package alternative for ABM7 series

Moisture Sensitivity Level (MSL) – This product is Hermetically Sealed and not Moisture Sensitive - MSL = N/A: Not Applicable

FEATURES:
- AT-cut fundamental or 3rd OT mode
- Suitable for RoHS reflow profile
- Tight Stability available ±10
- Ceramic package hermetically glass sealed assures high precision and reliability.

APPLICATIONS:
- Cellular telephones, pagers
- Communication and test equipment
- PCMCIA and wireless applications

STANDARD SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
<th>Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>8.000</td>
<td>54.000</td>
<td>80.000</td>
<td>MHz</td>
<td>Fundamental</td>
</tr>
<tr>
<td></td>
<td>54.100</td>
<td></td>
<td></td>
<td></td>
<td>3rd Overtone</td>
</tr>
<tr>
<td>Operation Mode</td>
<td>Fundamental or 3rd Overtone</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-10</td>
<td>+60</td>
<td></td>
<td>ºC</td>
<td>See options</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40</td>
<td>+90</td>
<td></td>
<td>ºC</td>
<td></td>
</tr>
<tr>
<td>Frequency Tolerance @+25°C</td>
<td>-50</td>
<td>+50</td>
<td>ppm</td>
<td></td>
<td>See options</td>
</tr>
<tr>
<td>Frequency Stability over the Operating Temperature</td>
<td>-50</td>
<td>+50</td>
<td>ppm</td>
<td></td>
<td>See options</td>
</tr>
<tr>
<td>(ref. to +25°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equivalent series resistance (R1)</td>
<td>140</td>
<td></td>
<td></td>
<td>Ω</td>
<td>8.000 ≤ F &lt; 9.000 (Fund)</td>
</tr>
<tr>
<td></td>
<td>120</td>
<td></td>
<td></td>
<td></td>
<td>9.000 ≤ F &lt; 10.000 (Fund)</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td>10.000 ≤ F &lt; 16.000 (Fund)</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td>16.000 ≤ F &lt; 20.000 (Fund)</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td>20.000 ≤ F &lt; 30.000 (Fund)</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td>30.000 ≤ F ≤ 54.000 (Fund)</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td>54.000 ≤ F ≤ 80.000 (3rd OT)</td>
</tr>
<tr>
<td>Shunt capacitance (C0)</td>
<td>7</td>
<td></td>
<td></td>
<td>pF</td>
<td></td>
</tr>
<tr>
<td>Load capacitance (CL)</td>
<td>18</td>
<td></td>
<td></td>
<td>pF</td>
<td>Standard (See options if other than STD)</td>
</tr>
<tr>
<td>Drive Level</td>
<td>10</td>
<td>100</td>
<td></td>
<td>µW</td>
<td></td>
</tr>
<tr>
<td>Aging</td>
<td>-5</td>
<td>+5</td>
<td>ppm</td>
<td></td>
<td>@25°C±3°C First year</td>
</tr>
<tr>
<td>Insulation Resistance</td>
<td>500</td>
<td></td>
<td></td>
<td>MΩ</td>
<td>@ 100Vdc ± 15V</td>
</tr>
</tbody>
</table>
MINIATURE CERAMIC SMD CRYSTAL

ABM3

Pb in Glass, exemption 7C-I per RoHS II Directive
2011/65/EU Annex
RoHS/RoHS II Compliant.

5.0 X 3.2 X 1.3mm

OPTIONS AND PART IDENTIFICATION: (Left blank if standard)

ABM3 - MHz - - - - -

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

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

Custom ESR if other than standard
R: Specify a value in Ω
e.g.: R40

Operating Temp.
(See Table 1 for details)
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

Freq. Tolerance
7: ± 15 ppm
2: ± 20 ppm
3: ± 25 ppm
4: ± 30 ppm

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

Packaging
Blank: Bulk
T: Tape & Reel

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

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Std: -10°C ~ +60°C</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>E: 0°C ~ +70°C</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>B: -20°C ~ +70°C</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>C: -30°C ~ +70°C</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>N: -30°C ~ +85°C</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>D: -40°C ~ +85°C</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>J: -40°C ~ +105°C</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>K: -40°C ~ +125°C</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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ABACON IS ISO9001-2015 CERTIFIED

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For terms and conditions of sales visit: www.abracon.com

REVISED: 07/19/2018
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Pb in Glass, exemption 7C-I per RoHS II Directive 2011/65/EU Annex | RoHS/RoHS II Compliant.

5.0 X 3.2 X 1.3 mm

### OUTLINE DRAWING:

- **Dimensions:** mm
- **Alternative bottom packaging 1:**
  - Pin 1: 0.03 (0.8)
  - Pin 2: 0.079 (2.0)
- **Connection:**
  - 0.051 max (0.13 max)

### TAPE & REEL:

Tape and reel (1,000 pcs/reel)

- **Dimensions:** mm

### REFLOW PROFILE

- **Dimensions:** inch (mm)

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Need a test socket for the ABM3 Series? To view compatible **PRECISION TEST & BURN-IN SOCKETS** for these parts, click here. P/N: AXS-5032-02-06

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