CERAMIC SURFACE MOUNT
LOW PROFILE QUARTZ CRYSTALS

ABMM2

RoHS/RoHS II Compliant

6.0 x 3.6 x 1.2 mm

FEATURES:
• Suitable for RoHS compliant reflow
• Low height 1.2 mm max
• Seam sealed ceramic package assures high reliability
• Available tight tolerance and stability

APPLICATIONS:
• Computers, Modems, Microprocessors
• Communication, Test equipment
• PCMCIA

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>7.3728</td>
<td></td>
<td>110.00</td>
<td>MHz</td>
<td></td>
</tr>
<tr>
<td>Operation Mode</td>
<td>7.3728 - 30.00MHz</td>
<td>Fundamental</td>
<td></td>
<td></td>
<td>Standard</td>
</tr>
<tr>
<td></td>
<td>30.01 - 100.00MHz</td>
<td>3rd Overtone</td>
<td></td>
<td></td>
<td>Standard</td>
</tr>
<tr>
<td></td>
<td>100.01 - 110.00MHz</td>
<td>5th Overtone</td>
<td></td>
<td></td>
<td>Standard</td>
</tr>
<tr>
<td></td>
<td>30.01 - 50.00MHz</td>
<td>Fundamental</td>
<td></td>
<td></td>
<td>See options</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-10</td>
<td>+60</td>
<td></td>
<td>°C</td>
<td>See options</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40</td>
<td>+85</td>
<td></td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Frequency Tolerance @+25°C</td>
<td>-20</td>
<td>+20</td>
<td></td>
<td>ppm</td>
<td>See options</td>
</tr>
<tr>
<td>Frequency Stability over the Operating Temperature (ref. to +25°C)</td>
<td>-20</td>
<td>+20</td>
<td>ppm</td>
<td>See options</td>
<td></td>
</tr>
<tr>
<td>Equivalent series resistance (R1)</td>
<td>See table 1 below</td>
<td></td>
<td></td>
<td>Ω</td>
<td></td>
</tr>
<tr>
<td>Shunt capacitance (C0)</td>
<td></td>
<td>7.0</td>
<td></td>
<td>pF</td>
<td>Standard (See options if other than STD)</td>
</tr>
<tr>
<td>Load capacitance (CL)</td>
<td></td>
<td>18.0</td>
<td></td>
<td>pF</td>
<td></td>
</tr>
<tr>
<td>Drive Level</td>
<td></td>
<td>100</td>
<td>500</td>
<td>µW</td>
<td>@25°C±3°C First year</td>
</tr>
<tr>
<td>Aging</td>
<td>-2</td>
<td>+2</td>
<td></td>
<td>ppm</td>
<td>@100Vdc ±15V</td>
</tr>
<tr>
<td>Insulation Resistance</td>
<td></td>
<td>500</td>
<td></td>
<td>MΩ</td>
<td></td>
</tr>
</tbody>
</table>

TABLE 1- Standard ESR

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>ESR(Ω) max</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3728 - 7.999999 (Fund)</td>
<td>150</td>
</tr>
<tr>
<td>8.000 - 9.999999 (Fund)</td>
<td>72</td>
</tr>
<tr>
<td>10.000 - 50.000 (Fund)</td>
<td>50</td>
</tr>
<tr>
<td>30.000 - 100.000 (3rd OT)</td>
<td>60</td>
</tr>
<tr>
<td>100.001 - 110.000 (5th OT)</td>
<td>80</td>
</tr>
</tbody>
</table>

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tel 949-546-8000 | fax 949-546-8001 | www.abracon.com
ABMM2 - MHz - - - - -

**Frequency in MHz**
Please specify the frequency in MHz.
e.g. 16.000MHz

**Load Capacitance (pF)**
Please specify CL in pF
(8 to 33pF) or S for series
Please contact Abracon for other values

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

**Freq. Tolerance**
1: ± 10 ppm
7: ± 15 ppm

**Freq. Stability**
Blank: Standard
F; fund. AT for F>30MHz

**Packaging**
Blank: Bulk
T: 1000pcs / reel
T2: 250pcs / reel

**Operating Temp.**
±10 ppm
±20 ppm
±50 ppm
±100 ppm

- 0°C ~ +50°C
- -10°C ~ +50°C
- -20°C ~ +70°C
- -40°C ~ +85°C
- -40°C ~ +105°C
- -40°C ~ +125°C

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OUTLINE DRAWING:

TAPE & REEL:

T: Tape and reel (1,000 pcs/reel)
T2: Tape and reel (250 pcs/reel)

REFLOW PROFILE

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.

Dimensions: inches (mm)

Note 1: A chamfer of 0.3 mm may appear on pad 1 or 4
Note 2: A rounded pad may appear on pad 1
Note 3: Pin 2 and 4 are connected to the metal lid.
Please connect to GND

Dimensions: mm

Dimensions: inch (mm)