ABM11

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

FEATURES:
- 2.0 x 1.6 x 0.59mm ultra miniature package.
- Suitable for RoHS compliant reflow.
- Sealed ceramic package with metal lid assures high precision and reliability.

APPLICATIONS:
- Cellular telephones, Pagers.
- Communication and Test equipment.
- High Density applications
- 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>16.000</td>
<td></td>
<td>50.000</td>
<td>MHz</td>
<td></td>
</tr>
<tr>
<td>Operation Mode</td>
<td></td>
<td></td>
<td>Fundamental</td>
<td></td>
<td></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>-30</td>
<td>+30</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>-50</td>
<td>+50</td>
<td></td>
<td>ppm</td>
<td>See options</td>
</tr>
<tr>
<td>Equivalent series resistance (R1)</td>
<td></td>
<td></td>
<td></td>
<td>Ω</td>
<td></td>
</tr>
<tr>
<td>Shunt capacitance (C0)</td>
<td></td>
<td></td>
<td></td>
<td>pF</td>
<td></td>
</tr>
<tr>
<td>Load capacitance (CL)</td>
<td></td>
<td></td>
<td></td>
<td>pF</td>
<td>Standard (See options if other than STD)</td>
</tr>
<tr>
<td>Drive Level</td>
<td></td>
<td></td>
<td></td>
<td>μW</td>
<td>@25°C±3°C First year</td>
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<tr>
<td>Aging</td>
<td></td>
<td></td>
<td></td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>Insulation Resistance</td>
<td>500</td>
<td></td>
<td></td>
<td>MΩ</td>
<td>@ 100Vdc ± 15V</td>
</tr>
</tbody>
</table>

OPTIONS AND PART IDENTIFICATION: (Left blank if standard)

ABM11 - [ ] MHz - [ ] - [ ] - [ ] - [ ]

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

Load Capacitance (pF)
Please specify CL (min 6pF) in pF or S for series

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

Operating Temp.
- I: 0°C ~ +50°C
- 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

Frequent Tolerance
- 1: ± 10 ppm
- 2: ± 15 ppm
- 3: ± 20 ppm
- 4: ± 20 ppm
- 5: ± 50 ppm

Freq. Stability
- U: ± 10 ppm (*)
- G: ± 15 ppm (**) 
- X: ± 20 ppm
- W: ± 25 ppm
- Y: ± 30 ppm
- Q: ± 100 ppm

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

Packaging
Blank: Bulk
T: 1kpcs / reel
T3: 3kpcs / reel

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CERAMICS SMD ULTRA MINIATURE
QUARTZ CRYSTAL

ABM11

OUTLINE DRAWING:

Dimensions: inch (mm)

Dimensions: mm

Note: Due to the availability of raw materials, this part may also be manufactured with the chamfer on pin 1 or 4. Be advised that this does not affect the electrical characteristics of the crystal in any way.

TAPE & REEL:

Option "T": Tape and reel (1,000pcs/reel)
Option "T3": Tape and reel (3,000pcs/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.