SMD Ultra Low Profile Crystal

ABS07L - 32.768 kHz

Moisture Sensitivity Level (MSL) = Level 1

FEATURES:
- Lowest height kHz package for 32.768kHz Crystals
- 0.38mm height ideal for high density circuit boards
- Ceramic package offers excellent environmental & heat resistance
- Excellent shock and vibration resistance

APPLICATIONS:
- Wide range in communication & measuring equipment
- Commercial & Industrial applications
- Wireless communications
- PDA and Palm Pilots
- Credit Cards with Security Technology

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</td>
<td>32.768</td>
<td></td>
<td></td>
<td>kHz</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40</td>
<td></td>
<td>+85</td>
<td>ºC</td>
<td></td>
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<tr>
<td>Storage Temperature</td>
<td>-55</td>
<td></td>
<td>+125</td>
<td>ºC</td>
<td></td>
</tr>
<tr>
<td>Frequency Tolerance @+25ºC</td>
<td>-20</td>
<td></td>
<td>+20</td>
<td>ppm</td>
<td>See options</td>
</tr>
<tr>
<td>Temperature Coefficient</td>
<td>-0.035±10%</td>
<td></td>
<td></td>
<td>ppm/°C²</td>
<td></td>
</tr>
<tr>
<td>Turn-over temperature</td>
<td>+20</td>
<td>+25</td>
<td>+30</td>
<td>ºC</td>
<td></td>
</tr>
<tr>
<td>Equivalent series resistance (R1)</td>
<td>55</td>
<td>80</td>
<td>kΩ</td>
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<tr>
<td>Shunt capacitance (C0)</td>
<td>1.4</td>
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<td></td>
<td>pF</td>
<td></td>
</tr>
<tr>
<td>Motional capacitance (C1)</td>
<td>3.5</td>
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<td></td>
<td>fF</td>
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<tr>
<td>Load capacitance (CL)</td>
<td>12.5</td>
<td></td>
<td></td>
<td>pF</td>
<td>See options</td>
</tr>
<tr>
<td>Drive Level</td>
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<td>0.5</td>
<td>µW</td>
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<td>Aging@25ºC</td>
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<td>3</td>
<td>ppm</td>
<td>First year</td>
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<td>Insulation Resistance</td>
<td>500</td>
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<td></td>
<td>MΩ</td>
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</table>

OPTIONS & PART IDENTIFICATION:
(Left blank if standard)

ABS07L - 32.768 kHz - [ ] - [ ] - [ ]

Load Capacitance
- Blank: 12.5pF
- 9: 9pF
- 7: 7pF

Freq. Tolerance
- Blank: ±20ppm
- 4: ±30ppm

Packaging
- Blank: Bulk
- T: Tape & Reel (3000pcs/reel)

Note: Please contact Abracon for tighter Freq. tolerance
SMD Ultra Low Profile Crystal

ABS07L

RoHS/RoHS II Compliant

Recommended Land Pattern

Dimensions: mm
All Dimensions are typical values.

RECOMMENDED REFLOW PROFILE:

360 seconds Max.
240°C±5°C Max.

183°C

120 seconds Min.

125°C

Ramp Up
3°C/second Max.

Ramp Up
3°C/minute Max.

Cooling Rate
6°C/second Max.

Soak Zone
60-150 seconds

≤ 20 sec.
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.