32.768 kHz SMD LOW PROFILE CRYSTAL

ABS05

ESD Sensitive
RoHS/RoHS II compliant

1.6 x 1.0 x 0.5mm

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

FEATURES:

• Smallest 32.768KHz package available
• 0.5mm height ideal for high density circuit boards
• Ceramic package offers excellent environmental & heat resistance
• Extended temperature -40°C to +85°C for industrial applications

APPLICATIONS:

• Smart Display Credit Cards
• Wide range in communication & measuring equipment
• Commercial & Industrial applications
• Wireless communications
• PDA and Palm Pilots

STANDARD SPECIFICATIONS:

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<tr>
<th>Parameters</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
<th>Units</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>Frequency</td>
<td>32.768</td>
<td></td>
<td></td>
<td>kHz</td>
<td></td>
</tr>
<tr>
<td>Operation Mode</td>
<td>Flexural Mode (Tuning Fork)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40</td>
<td></td>
<td>+85</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40</td>
<td></td>
<td>+85</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Frequency Tolerance @+25°C</td>
<td>-20</td>
<td></td>
<td>+20</td>
<td>ppm</td>
<td>See options</td>
</tr>
<tr>
<td>Temperature Coefficient:</td>
<td>-0.04</td>
<td>-0.03</td>
<td>-0.02</td>
<td>ppm/T²</td>
<td></td>
</tr>
<tr>
<td>Turn-over temperature:</td>
<td>+20</td>
<td>+25</td>
<td>+30</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Equivalent series resistance (ESR)</td>
<td></td>
<td></td>
<td>90</td>
<td>kΩ</td>
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</tr>
<tr>
<td>Load capacitance</td>
<td>12.5</td>
<td></td>
<td></td>
<td>pF</td>
<td>See options</td>
</tr>
<tr>
<td>Drive Level</td>
<td></td>
<td>0.5</td>
<td></td>
<td>µW</td>
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</tr>
</tbody>
</table>

OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)

ABS05 – 32.768 kHz - [ ] - [ ] - [ ]

Load Capacitance
Blank: 12.5pF
9: 9pF
Contact Abracon for non-standard capacitance

Frequency Tolerance
Blank: ±20ppm
1: ±10ppm
4: ±30ppm

Packaging
Blank: Bulk
T: Tape & Reel (3000pcs/reel)
32.768kHz SMD LOW PROFILE CRYSTAL

ABS05

Need a test socket for the ABS05 Series? To view compatible PRECISION TEST & BURN-IN SOCKETS for these parts, [click here]. P/N AXS-2012-02-04

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ABRACON IS ISO 9001:2008 CERTIFIED

RoHS/RoHS II compliant

1.6 x 1.0 x 0.5mm

OUTLINE DRAWING:

Tape & Reel:

T= Tape and reel (3,000pcs/reel)

Dimensions: mm

REFLOW PROFILE:

Recommended land pattern

Dimensions: mm

10s max, 1 time at +260°C±5°C

260°C

230°C

180°C

150°C

25°C

Time (seconds)

Pre-Heat

Reflow

Cool

60~120s

30~40s

60~90s

Temperature (°C)