ASDK Series

2.5 x 2.0 x 0.95 mm 32.768kHz CERAMIC SURFACE MOUNT CRYSTAL OSCILLATOR

FEATURES:
- 32.768kHz in 2.5 x 2.0 x 0.95mm package
- Seam sealed assure high reliability performance
- Low current consumption 1.0mA (Vdd=1.8V)
- Suitable for RoHS compliant reflow
- Extend temperature range available

APPLICATIONS:
- Laptop
- Digital camera
- Wireless LAN
- Bluetooth and mobile communication
- LCD
- PDA and MP3 player
- Electricity, gas and water metering

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>32.768</td>
<td>32.768</td>
<td>32.768</td>
<td>kHz</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0</td>
<td>0</td>
<td>+70</td>
<td>°C</td>
<td>See options</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-55</td>
<td>-55</td>
<td>+125</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Overall Frequency Stability</td>
<td>-100</td>
<td>2.97</td>
<td>3.66</td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>Supply Voltage (Vdd)</td>
<td>2.375</td>
<td>2.5</td>
<td>2.625</td>
<td>V</td>
<td>Option 1</td>
</tr>
<tr>
<td>Supply Current (Idd)</td>
<td>1.71</td>
<td>1.0</td>
<td>1.5</td>
<td>mA</td>
<td>Vdd=1.8V Option 2</td>
</tr>
<tr>
<td>Output Load</td>
<td>1.2</td>
<td>2.2</td>
<td>3.5</td>
<td>pF</td>
<td>CMOS</td>
</tr>
<tr>
<td>Output Voltage V_{OH}</td>
<td>0.9*Vdd</td>
<td>0.9*Vdd</td>
<td>0.9*Vdd</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>V_{OL}</td>
<td>0.1*Vdd</td>
<td>0.1*Vdd</td>
<td>0.1*Vdd</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Tri-state function</td>
<td>&quot;1&quot; (V_{Hi}&gt;0.7*Vdd)</td>
<td>Open: Oscillation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symmetry @1/2Vdd</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>%</td>
<td>Standard</td>
</tr>
<tr>
<td>Start-up Time</td>
<td>45</td>
<td>50</td>
<td>55</td>
<td>ms</td>
<td>Option S</td>
</tr>
<tr>
<td>Rise/Fall Time (Tr/Tf)</td>
<td>43</td>
<td>50</td>
<td>50</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>Disable Current</td>
<td>10</td>
<td></td>
<td>10</td>
<td>µA</td>
<td></td>
</tr>
</tbody>
</table>

OPTIONS AND PART IDENTIFICATION (Left blank if standard)

- Supply Voltage
  - Blank: 3.3V±10%
  - 1: 2.5 V±5%
  - 2: 1.8 V±5%

- Operating Temp.
  - Blank: 0°C ~ +70°C
  - E: -20°C ~ +70°C
  - F: -30°C ~ +70°C
  - N: -30°C ~ +85°C
  - L: -40°C ~ +85°C

- Overall Freq. Stability
  - Blank: ±100ppm
  - J: ±20ppm (**)
  - R: ±25ppm
  - K: ±30ppm
  - C: ±50ppm

- Symmetry
  - Blank: 40/60%
  - S: 45/55%

- Packaging
  - Blank: Bulk
  - T: Tape & Reel

*Contact ABRACON for extended temperature rang
** For Temp option E, F, N and 0°C to +70°C only

ABRACON LLC
5101 Hidden Creek Lane Spicewood
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sale please visit: www.abracon.com
ABRACON IS ISO9001-2008 CERTIFIED

REVISED: 06.13.2017
**2.5 x 2.0 x 0.95 mm 32.768kHz CERAMIC SURFACE MOUNT CRYSTAL OSCILLATOR**

**ASDK Series**

**TAPE & REEL:** (1,000pcs/reel)

**REFLOW PROFILE**

---

**OUTLINE DRAWING:**

- **Dimensions:** inches (mm)

---

**Recommended Land Pattern**

<table>
<thead>
<tr>
<th>PIN</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tri-state</td>
</tr>
<tr>
<td>2</td>
<td>GND</td>
</tr>
<tr>
<td>3</td>
<td>Output</td>
</tr>
<tr>
<td>4</td>
<td>Vdd</td>
</tr>
</tbody>
</table>

Note: Recommend using an approximately 0.01uF bypass capacitor between PIN 2 and 4.

**Dimensions:** mm

---

**ATTENTION:** Abracon 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 is required. Please contact Abracon for more information.

---

**Need a test socket for the ASDK Series?** To view compatible PRECISION TEST & BURN-IN SOCKETS for these parts, click here. AXS-2520-04-07

---

5101 Hidden Creek Lane Spicewood
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sale please visit: www.abracon.com

REVISED: 06.13.2017

ABRACON IS
ISO9001-2008
CERTIFIED

---