4.7 x 4.1mm BUILT-IN CAPACITANCE CERAMIC RESONATOR

AWSCR-MTD

FEATURES:
- Low resonant impedance
- Built-in load capacitors
- IR reflow capable

APPLICATIONS:
- Remote controls, Microprocessor clocks, Mobile phones, DVD & CD-Roms, Electric appliances,
  Industrial controllers
- Consumer electronics

STANDARD SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Item</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>6.00MHz to 50.00MHz</td>
</tr>
<tr>
<td>Resonant Impedance</td>
<td>See Table 2.1</td>
</tr>
<tr>
<td>Frequency Tolerance</td>
<td>± 0.5%</td>
</tr>
<tr>
<td>Frequency Stability max.</td>
<td>±0.4% (6.00 MHz~13.00 MHz)*</td>
</tr>
<tr>
<td>max. (-25°C to +85°C)</td>
<td>±0.3% (13.01 MHz~50.00 MHz)</td>
</tr>
<tr>
<td>Withstanding Voltage (V)</td>
<td>50 (DC , 1 min)</td>
</tr>
<tr>
<td>Rating Voltage (1) D.C.Voltage</td>
<td>6 V.D.C. max</td>
</tr>
<tr>
<td>(2) A.C. Voltage</td>
<td>15 Vp-p. max</td>
</tr>
<tr>
<td>Built-in Capacitance</td>
<td>See Table 2.1</td>
</tr>
<tr>
<td>Insulation Resistance</td>
<td>100MΩ min. (10V, 1min)</td>
</tr>
<tr>
<td>Operation Temperature</td>
<td>-25°C to +85°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-55°C to +85°C</td>
</tr>
<tr>
<td>Aging Rate (Fosc)</td>
<td>±0.3% max. (10 years)</td>
</tr>
</tbody>
</table>

TEST CIRCUIT:

Parts shall be measured under a condition (Temp.: 20±15°C, Humidity: 65±20% R.H.)
unless the standard condition (Temp: 25±3°C, Humidity: 65±10% R.H.)
is regulated to measure

OPTIONS AND PART IDENTIFICATION:

AWSCR - XX.XXMTD - C□ - □

- Frequency
  Frequency in MHz

- Load Capacitance
  Contact ABRACON for Load Capacitance options

- Packaging
  T for Tape and Reel (1,000pcs/reel)

* Please contact ABRACON for tighter stability and/or wider temperature range

Pb in ceramic (exempt per RoHS 2002/95/EC Annex (7))

RoHS Compliant

Parts shall be measured under a condition
(Temp.: 20±15°C, Humidity: 65±20% R.H.)
unless the standard condition
(Temp: 25±3°C, Humidity: 65±10% R.H.)
is regulated to measure
**OUTLINE DRAWING:**

**RECOMMENDED LAND PATTERN**

![Recommnended Land Pattern Diagram]

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

<table>
<thead>
<tr>
<th>φ A</th>
<th>φ B</th>
<th>W</th>
<th>T</th>
<th>Pieces per reel</th>
<th>Carrier tape size</th>
</tr>
</thead>
<tbody>
<tr>
<td>180±3</td>
<td>60min</td>
<td>12.4min</td>
<td>19.4max</td>
<td>1000typ.</td>
<td>12</td>
</tr>
</tbody>
</table>

**Dimension:** mm
REFLOW PROFILE:

- Do not apply excess mechanical stress to the component body or terminations. Do not attempt to re-form or bend the components as this will cause damage to the component.
- This component is not hermetically sealed. Do not clean or wash the component.
- Reflow soldering: Do not use strong acidity flux, such as flux with chlorine content of greater than 0.2wt% during reflow Soldering.
- Do not expose the component to open flame.
- This specification applies to the functionality of the component as a single unit. Customers are advised to insure that the component is thoroughly evaluated in the particular application.
- Shelf life: The warranted shelf life of this product is six months after the delivery date under the conditions of sealed, unopened, original packaging.
- Storage conditions: If the product is to be stored for a period greater than six months after the delivery date, it is recommended that customers confirm the solderability and characteristics for the product prior to use.
- This product is not recommended for use in the following applications: Automotive, Medical, Military, Safety, or any other high-reliability, life-dependant application. Contact Abracon Corporation prior to using this product when in doubt.

CAUTION

- Peak: 260°C max
- 10s max
- 250°C
- Pre-heating
- 230°C
- 150°C
- 100°C

30s min within 80-120s.

20-40s

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.