High Gain 7.29dBi Ceramic Chip Antenna (2450MHz)

ACAG0801-2450-T

FEATURES
- High gain of 7.29 dBi
- Made using LTCC (low temperature co-fired ceramic) technology
- Compact 8.0 x 1.0 x 1.0mm
- High efficiency
- Omni-directional

APPLICATIONS
- Wifi
- Bluetooth
- ZigBee
- ISM applications
- IoT and wearable
- Remote Technology
- M2M

ELECTRICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Item</th>
<th>Spec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centre Frequency (No matching)</td>
<td>2857 MHz</td>
</tr>
<tr>
<td>Centre Frequency (After matching)</td>
<td>2450 MHz</td>
</tr>
<tr>
<td>Bandwidth</td>
<td>180 MHz typ</td>
</tr>
<tr>
<td>VSWR</td>
<td>&lt;2.0</td>
</tr>
<tr>
<td>Impedance</td>
<td>50Ω</td>
</tr>
<tr>
<td>Gain</td>
<td>7.29 dBi</td>
</tr>
<tr>
<td>Azimuth</td>
<td>Omni-directional</td>
</tr>
<tr>
<td>Polarization</td>
<td>Linear</td>
</tr>
<tr>
<td>Operating Temperature range</td>
<td>-40°C ~+ 85°C</td>
</tr>
</tbody>
</table>

MECHANICAL DIMENSIONS

Antenna Dimensions

Layout Dimensions

Dimensions (mm)
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EVALUATION BOARD AND MATCHING CIRCUITS

ANTENNA RESPONSE – SMITH CHART AND RETURN LOSS S11
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RADIATION PATTERNS

Coordinates

X-Z Plane

Y-Z Plane

X-Y Plane

8.0 x 1.0 x 1.0mm
RoHS/RoHS II Compliant
MSL = 1

For terms and conditions of sale, please visit: www.abracon.com

ABRACON IS
ISO9001-2015
CERTIFIED
High Gain 7.29dBi Ceramic Chip Antenna (2450MHz)

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3D PATTERNS

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>2400</th>
<th>2450</th>
<th>2500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. Gain (dBi)</td>
<td>-1.30</td>
<td>-1.15</td>
<td>-1.26</td>
</tr>
<tr>
<td>Peak Gain (dBi)</td>
<td>6.67</td>
<td>7.29</td>
<td>6.69</td>
</tr>
<tr>
<td>Efficiency (%)</td>
<td>72.6</td>
<td>74.5</td>
<td>72.8</td>
</tr>
</tbody>
</table>

REFLOW SOLDERING STANDARD CONDITION

![3D Patterns](image)

Temp (°C) over Time (s)

- 250°C ± 10°C
- 220°C
- 180°C
- 0°C

5 sec (Peak 265°C)

60–120 sec

30–40 sec
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PACKAGING

<table>
<thead>
<tr>
<th>Package Type</th>
<th>Quantity/Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner Box</td>
<td>1500 pcs/reel</td>
</tr>
<tr>
<td>Centre Frequency (After matching)</td>
<td>15000 pcs/carton</td>
</tr>
<tr>
<td>Carton</td>
<td>330 x 210 x 210 mm</td>
</tr>
</tbody>
</table>

Storage Temperature Range: <30 degree C, Humidity: <60%RH
MSL - 1
Oxidizable, 12 months in a vacuum sealed bag.
Once opened, please repack the unused items within 168 hours by re-seal package treatment.

CAUTIONS

1. Static voltage
   Static voltage between signal & ground may cause deterioration & destruction of the component. Please avoid static voltage.

2. Ultrasonic cleaning
   Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning.

3. Soldering
   Only leads of the component may be soldered. Please avoid soldering to any other part of the component, such as on the patterns as this will change the performance of the antenna.