5.5 GHz Ceramic Chip Antenna

ACAG0301-5500-T

FEATURES

- Gain of 4.5dBi
- VSWR ≤ 2.0
- Made using LTCC (low temperature co-fired ceramic) technology
- Small form factor 3.2 x 1.6 x 1.2mm
- Omni-directional

APPLICATIONS

- IoT and wearables
- WiFi/WLAN
- ISM band

ELECTRICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Item</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency (No matching)</td>
<td>5785 MHz</td>
</tr>
<tr>
<td>Frequency (after matching)</td>
<td>5500 MHz</td>
</tr>
<tr>
<td>Bandwidth</td>
<td>800 MHz typ</td>
</tr>
<tr>
<td>VSWR</td>
<td>≤2.0</td>
</tr>
<tr>
<td>Impedance</td>
<td>50 Ω</td>
</tr>
<tr>
<td>Peak Gain</td>
<td>4.5 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 (mm)

Antenna Dimensions

Layout Dimensions

5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

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ABRACON LLC
The Power of Living Together

ABRACON IS
ISO9001-2015
CERTIFIED
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EVALUATION BOARD AND MATCHING CIRCUITS

ANTENNA RESPONSE – SMITH CHART AND RETURN LOSS S11
5.5 GHz Ceramic Chip Antenna

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RADIATION PATTERNS

Coordinates

X-Z Plane

Y-Z Plane

X-Y Plane

3.2 x 1.6 x 1.2mm

RoHS/RoHS II Compliant

MSL = 1

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3D PATTERNS

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>5150</th>
<th>5500</th>
<th>5850</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. Gain (dBi)</td>
<td>-2.36</td>
<td>-2.05</td>
<td>-3.01</td>
</tr>
<tr>
<td>Peak Gain (dBi)</td>
<td>3.98</td>
<td>4.5</td>
<td>4.06</td>
</tr>
<tr>
<td>Efficiency (%)</td>
<td>60</td>
<td>72</td>
<td>63</td>
</tr>
</tbody>
</table>

REFLOW SOLDERING STANDARD CONDITION

![Temp vs Time Graph](image)

Temp( °C )

250 °C ± 10 °C

220 °C

180 °C

0 °C

Time(s)

60~120sec

30~40sec

5ssec (Peak 265 °C)
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PACKAGING

Reel (3000 pcs/Reel)
Size of the carton: 330 x 210 x 210 mm

Tape Dimensions: mm

Reel Dimensions: mm

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.
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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.