Surface Mount WLAN / Bluetooth Chip Antenna (2450MHz)

AMCA31-2R450G-S1F-T

Moisture Sensitivity Level (MSL) – MSL = 1

FEATURES:
• 2450MHz, Bandwidth ≥90MHz
• Suitable for RoHS compliant reflow
• Gain 0.5dBi (Peak) / -1dBi (Average)
• VSWR <2:1
• Small size – 3.2 x 1.6 x 1.2mm (0.125 x 0.62 x 0.047 inch)
• Non Ground Mounting type.
• Power Handling 3W Max
• Matched to 50 Ohm.

APPLICATIONS:
• Wireless application - Bluetooth / WiFi (2.445GHz)
• High density applications
• Bluetooth headsets or ear pieces
• Computer mouse and keyboards
• PROFINET – Industrial automation
• Video Game systems
• Alternative to larger PCB solution

STANDARD SPECIFICATIONS

Maximum Ratings

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature Range</td>
<td>-40°C to + 85°C</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>-10°C ~ +40 and RH °C 70% (Max.)</td>
</tr>
</tbody>
</table>

Electrical Characteristics

<table>
<thead>
<tr>
<th>Item</th>
<th>Spec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>2450MHz</td>
</tr>
<tr>
<td>Bandwidth</td>
<td>≥90MHz</td>
</tr>
<tr>
<td>Peak Gain</td>
<td>0.5 dBi typ.</td>
</tr>
<tr>
<td>Average Gain</td>
<td>-1 dBi typ</td>
</tr>
<tr>
<td>VSWR</td>
<td>&lt;2:1</td>
</tr>
<tr>
<td>Impedance</td>
<td>50 Ohm</td>
</tr>
<tr>
<td>Power Capability</td>
<td>3W max</td>
</tr>
</tbody>
</table>

PART IDENTIFICATION:

AMCA31-2R450G-S1F-T3

Packaging
Blank: Bulk or Cut Tape
T3 : T/R 3000pcs per reel
Surface Mount WLAN / Bluetooth Chip Antenna (2450MHz)

**OUTLINE DIMENSIONS:**

<table>
<thead>
<tr>
<th>Series</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMCA31</td>
<td>3.2±0.2</td>
<td>1.6±0.2</td>
<td>1.2±0.2</td>
<td>0.5±0.2</td>
<td>1.6±0.2</td>
<td>0.8±0.2</td>
<td>0.8±0.2</td>
<td>2.6±0.2</td>
<td>3.5±0.2</td>
</tr>
</tbody>
</table>

(Dimensions: mm)

**REFLOW PROFILE:**

- Preheat condition: 150 ~200 /60~120°C  sec.
- Allowed time above 217°C: 60~90sec.
- Max temp: 260°C
- Max time at max temp: 10sec.
- Solder paste: Sn/30Ag/0.5Cu
- Allowed Reflow time: 2x max

[Note: The reflow profile in the above table is only for qualification and is not meant to specify board assembly profiles. Actual board assembly profiles must be based on the customer's specific board design, solder paste and process, and should not exceed the parameters as the Reflow profile shows.]

**MANUAL SOLDERING**

Pre-heating Temperature: 120°C, 60°C ~ 300 sec.

- Iron soldering power: Max.30W.
- Pre-heating: 150 / 60 sec. °C.
- Soldering Tip temperature: 350 Max. °C.
- Soldering time: 3 sec Max.
- Solder paste: Sn/30Ag/0.5Cu.
- Max 1 times for iron soldering.
- Soldering Temperature: 340°C±5°C, 5sec max per each terminal.

[Note: Take care not to apply the tip of the soldering iron to the terminal electrodes.]
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**AMCA31-2R450G-S1F-T**

- RoHS / RoHS II Compliant
- Dimensions: 3.2 x 1.6 x 1.2mm

**TAPE & REEL:**

**Packaging:** 3000 Units per reel

<table>
<thead>
<tr>
<th>W</th>
<th>8.0±0.10</th>
<th>D0</th>
<th>1.50 +0.10 / -0.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>4.0±0.10</td>
<td>P0</td>
<td>4.0±0.10</td>
</tr>
<tr>
<td>E</td>
<td>1.75±0.10</td>
<td>K0</td>
<td>1.50±0.10</td>
</tr>
<tr>
<td>F</td>
<td>3.50±0.15</td>
<td>A0</td>
<td>1.80±0.10</td>
</tr>
<tr>
<td>B0</td>
<td>3.50±0.10</td>
<td>t</td>
<td>0.22±0.10</td>
</tr>
</tbody>
</table>

**Reel Dimensions**

**Mounting Direction of Tape on Reel**

Note: The sprocket holes are to the right as the tape is pulled toward the user.

( Dimensions: mm)
Mouser Electronics

Authorized Distributor

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**ABRACON:**  
AMCA31-2R450G-S1F-T3  AMCA31-2R450G-S1F-T