## Compact 2.4GHz WiFi/Bluetooth Patch Antenna

### Features
- Compact 13.0 x 13.0mm size
- High gain of 5 dBi
- Linear polarization
- Low VSWR
- Surface mount patch antenna

### Applications
- WiFi
- Bluetooth
- ZigBee
- ISM
- Wearables
- Mobile and portable

### Electrical Specifications

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Units</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving Frequency Range</td>
<td>2412</td>
<td>2484</td>
<td>MHz</td>
<td>(On a 70*70mm Ground Plane)</td>
<td></td>
</tr>
<tr>
<td>Bandwidth</td>
<td>40</td>
<td></td>
<td>MHz</td>
<td>Min (@ -5dB)</td>
<td></td>
</tr>
<tr>
<td>Return Loss</td>
<td>&lt; -10</td>
<td>@ CF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak Gain</td>
<td>5.0</td>
<td></td>
<td>dBi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polarization Model</td>
<td>Linear</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impedance</td>
<td>50</td>
<td></td>
<td>Ω</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency Temperature Coefficient</td>
<td>20</td>
<td></td>
<td>ppm/°C</td>
<td>Max</td>
<td></td>
</tr>
</tbody>
</table>

(*) Application environment, including size of the ground plane, proximity to adjacent components, etc., will affect stated performance. Fine tuning might be required when installed on end-customer’s PCB. Abracon offers Antenna Optimization Service, please contact Abracon.

### Test Conditions and Test Setup

Parts shall be measured under a condition (Temp.:20°C±15°C, Humidity: 65%±20% R.H.).
Compact 2.4GHz WiFi/Bluetooth Patch Antenna

APAKN1304-S2450-T

Return Loss Characteristic

Radiation Patterns

2D Patterns

X-Z PLANE

RoHS/RoHS II Compliant
MSL - 1

13.0 x 13.0 x 4.0mm

Return Loss Characteristic

Radiation Patterns

2D Patterns

X-Z PLANE
Radiation Patterns

Y-Z PLANE

X-Y PLANE
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APAKN1304-S2450-T

Outline Dimensions

Top View

Side View

Bottom View

General Tolerance: ±0.3mm
Unit: mm

Recommended Reflow Soldering Profile

Solder Paste: Sn/Ag/Cu: 96.5/3.0/0.5
Recommended reflow condition:

REVISED: 08.15.2018

RoHS/RoHS II Compliant
MSL - 1

13.0 x 13.0 x 4.0mm

Pb
Compact 2.4GHz WiFi/Bluetooth Patch Antenna

APAKN1304-S2450-T

Packaging

Carton has 10 inner boxes; each inner box has 1 reel (each reel for plastic bag).
Quantity:
Per package: 10 inner boxes (5,000 pieces)
Per inner box: 1 reel
Per plastic reel: 500 pieces

Carton Dimensions (mm)

Reel Dimensions (mm)

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>W1</td>
</tr>
<tr>
<td>±5.0</td>
<td>±5.0</td>
<td>±5.0</td>
<td>±1.0</td>
<td>±5.0</td>
<td>±2.0</td>
</tr>
<tr>
<td>Φ330</td>
<td>Φ80</td>
<td>Φ13.5</td>
<td>Φ21</td>
<td>2.0</td>
<td>24</td>
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</table>
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**Packaging**

Dimensions of Carrier Tape (mm)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>24.00±0.3</td>
</tr>
<tr>
<td>E1</td>
<td>1.75±0.1</td>
</tr>
<tr>
<td>F</td>
<td>11.50±0.1</td>
</tr>
<tr>
<td>P0</td>
<td>4.00±0.1</td>
</tr>
<tr>
<td>P1</td>
<td>20.00±0.1</td>
</tr>
<tr>
<td>A0</td>
<td>13.40±0.1</td>
</tr>
<tr>
<td>B0</td>
<td>13.40±0.1</td>
</tr>
<tr>
<td>K0</td>
<td>4.20±0.1</td>
</tr>
</tbody>
</table>

RoHS/RoHS II Compliant

MSL - 1

13.0 x 13.0 x 4.0mm
Mouser Electronics

Authorized Distributor

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