Mini 2.45 GHz Antenna

P/N 2450AT18A100

General Specifications

<table>
<thead>
<tr>
<th>Part Number</th>
<th>2450AT18A100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>2400 - 2500 Mhz</td>
</tr>
<tr>
<td>Peak Gain</td>
<td>0.5  dBi typ. (XZ-V)</td>
</tr>
<tr>
<td>Average Gain</td>
<td>-0.5  dBi typ. (XZ-V)</td>
</tr>
<tr>
<td>Return Loss</td>
<td>9.5 dB min.</td>
</tr>
<tr>
<td>Input Power</td>
<td>2W max. (CW)</td>
</tr>
<tr>
<td>Impedance</td>
<td>50 Ω</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40 to +125°C</td>
</tr>
<tr>
<td>Reel Quantity</td>
<td>3,000</td>
</tr>
</tbody>
</table>

Mechanical Dimensions

<table>
<thead>
<tr>
<th>In</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>0.126 ± 0.008 3.20 ± 0.20</td>
</tr>
<tr>
<td>W</td>
<td>0.063 ± 0.008 1.60 ± 0.20</td>
</tr>
<tr>
<td>T</td>
<td>0.051 +.004/-0.008 1.30 +0.1/-0.2</td>
</tr>
<tr>
<td>a</td>
<td>0.020 ± 0.012 0.50 ± 0.30</td>
</tr>
</tbody>
</table>

Mounting Considerations

a) Without Matching Circuits

b) With Matching Circuits

Note: It is recommended that the designer leave available slots for a “pi” (or shunt-series-shunt) network. The antenna matching network values here are used when antenna is mounted on Johanson’s evaluation board. The matching values and topology on client’s PCB will be different.

Need our help tuning the antenna on your board? Contact our RF Applications Eng Team at: www.johansontechnology.com/component/techquestion

Antenna Tuning services:
www.johansontechnology.com/ipcantennaservices


Johanson Technology, Inc. reserves the right to make design changes without notice.
All sales are subject to Johanson Technology, Inc. terms and conditions.
Typical Electrical Characteristics (T=25°C)

Test Board:
P/N: 2450AT18A100-EB1SMA (orderable item)

The antenna matching network values here are used when antenna is mounted on Johanson’s evaluation board. The matching values on client’s PCB will be different. Go to: www.johansontechnology.com/ipcantennaservices and see how to obtain the new values. If you need further help, contact our RF Applications Eng Team at: www.johansontechnology.com/component/techquestion

Return Loss with matching circuit @ +25C VSWR with matching circuit @ +25C and +125C

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Typical Radiation Patterns at 2.45GHz (+25C)

- **XY-V/XY-H**
  - Scanning direction: XY-cut
  - 180°, 270°, 0°, 90°
  - Vertical and Horizontal patterns

- **XZ-V/XZ-H**
  - Scanning direction: XZ-cut
  - 180°, 270°, 0°, 90°
  - Vertical and Horizontal patterns

- **YZ-V/YZ-H**
  - Scanning direction: YZ-cut
  - 180°, 270°, 0°, 90°
  - Vertical and Horizontal patterns

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Min 2.45 GHz Antenna

Detail Specification: 7/18/2014

Part Number Explanation

<table>
<thead>
<tr>
<th>P/N Suffix</th>
<th>Packaging Style</th>
<th>Suffix = S</th>
<th>Eg. 2450AT18A100S</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>T &amp; R</td>
<td>Suffix = E</td>
<td>Eg. 2450AT18A100E</td>
</tr>
<tr>
<td></td>
<td>T &amp; R (Reverse)</td>
<td>Suffix = R</td>
<td>Eg. 2450AT18A100R (MOQ Applies)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Termination style</th>
<th>Suffix = S/E/R</th>
<th>Eg. 2450AT18A100(S, E, R)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% Tin (RoHS)</td>
<td>Tin / Lead</td>
<td>Please consult Factory</td>
</tr>
</tbody>
</table>

Evaluation Board(s) (1-port SMA antenna test boards)

2450AT18A100-EB1SMA (Page 2) Orderable item!

AEC-Q2000 qualification available after special p/n: 2450AT18A100-AEC order. MOQ of 24K PCS applies for AEC and allow 16 weeks for AEC report leadtime.

Would you like Johanson Technology's RF team to help you design and tune our antenna on your board? Click on the link below:

**Antenna layout review, tuning, and characterization services**

[www.johansontechnology.com/ipcantennaservices](http://www.johansontechnology.com/ipcantennaservices)

**Packaging information**

[www.johansontechnology.com/ipcpackaging.html](http://www.johansontechnology.com/ipcpackaging.html)

**Soldering Information**

[www.johansontechnology.com/ipcsoldering-profile](http://www.johansontechnology.com/ipcsoldering-profile)

**RoHS Compliance**


**MSL Info**


**Recommended Storage Condition and Max Shelf Life**

[www.johansontechnology.com/ipcstorage-shelflife](http://www.johansontechnology.com/ipcstorage-shelflife)

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