

# High Frequency Ceramic Solutions

## 2.45 GHz SMD Antenna, EIA 1210, Detuning resilient, Edge Mount Design

P/N 2450AT18D0100

Detail Specification:

Model name of the antenna

Page 1 of 7

Let us help you with the antenna design, optimization, and tuning!

### General Specifications

|                                  |               |
|----------------------------------|---------------|
| Part Number                      | 2450AT18D0100 |
| Frequency (GHz)                  | 2.45          |
| Peak Gain (dBi)                  | 1.5 dBi       |
| Average Power (W)                | 2 max. (CW)   |
| Radiated Efficiency <sup>1</sup> | 72%           |
| Return Loss (dB)                 | 10 min.       |
| Impedance (Ω)                    | 50            |
| Input Power (W)                  | 2 max. (CW)   |
| Operating Temperature            | -40 to +125°C |



Recommended Storage Conditions and Period for unused T&R Product

+5 to +35°C  
Humidity 45 - 75% RH  
18 months max.

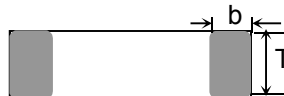
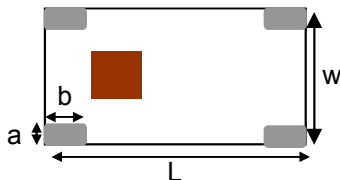
<sup>1</sup>Efficiency measured on Johanson's evaluation board PN 2450AT18D0100-EB1SMA

### Part Number Explanation

| P/N Suffix | Packing Style    | Bulk (loose)         | Suffix = S      | e.g. 2450AT18D0100S        |
|------------|------------------|----------------------|-----------------|----------------------------|
|            |                  | T&R                  | Suffix = E      | e.g. 2450AT18D0100E        |
|            |                  | 100% Tin             | Suffix = E or S | e.g. 2450AT18D0100(E or S) |
|            | Evaluation Board | 2450AT18D0100-EB1SMA |                 |                            |

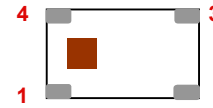
### Mechanical Dimensions

|   | In                    | mm               |
|---|-----------------------|------------------|
| L | 0.126 ± 0.008         | 3.20 ± 0.2       |
| W | 0.063 ± 0.008         | 1.60 ± 0.2       |
| T | 0.047 ± 0.004         | 1.20 ± 0.1       |
| a | 0.012 +0.004 / -0.008 | 0.30 +0.1 / -0.2 |
| b | 0.020 ± 0.008         | 0.50 ± 0.2       |



### Terminal Configuration

| No. | Function 1 | Function 2 |
|-----|------------|------------|
| 1   | FEED       | GND        |
| 2   | GND        | GND        |
| 3   | GND        | GND        |
| 4   | GND        | FEED       |



Function 1: Antenna fed from left  
Function 2: Antenna fed from right

Johanson Technology, Inc. reserves the right to make design changes without notice.  
All sales are subject to Johanson Technology, Inc. terms and conditions.



<https://www.johansontechnology.com>  
4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821  
Ver. 4.2 2019 Johanson Technology, Inc. All Rights Reserved

Name and address of the manufacturer

# High Frequency Ceramic Solutions

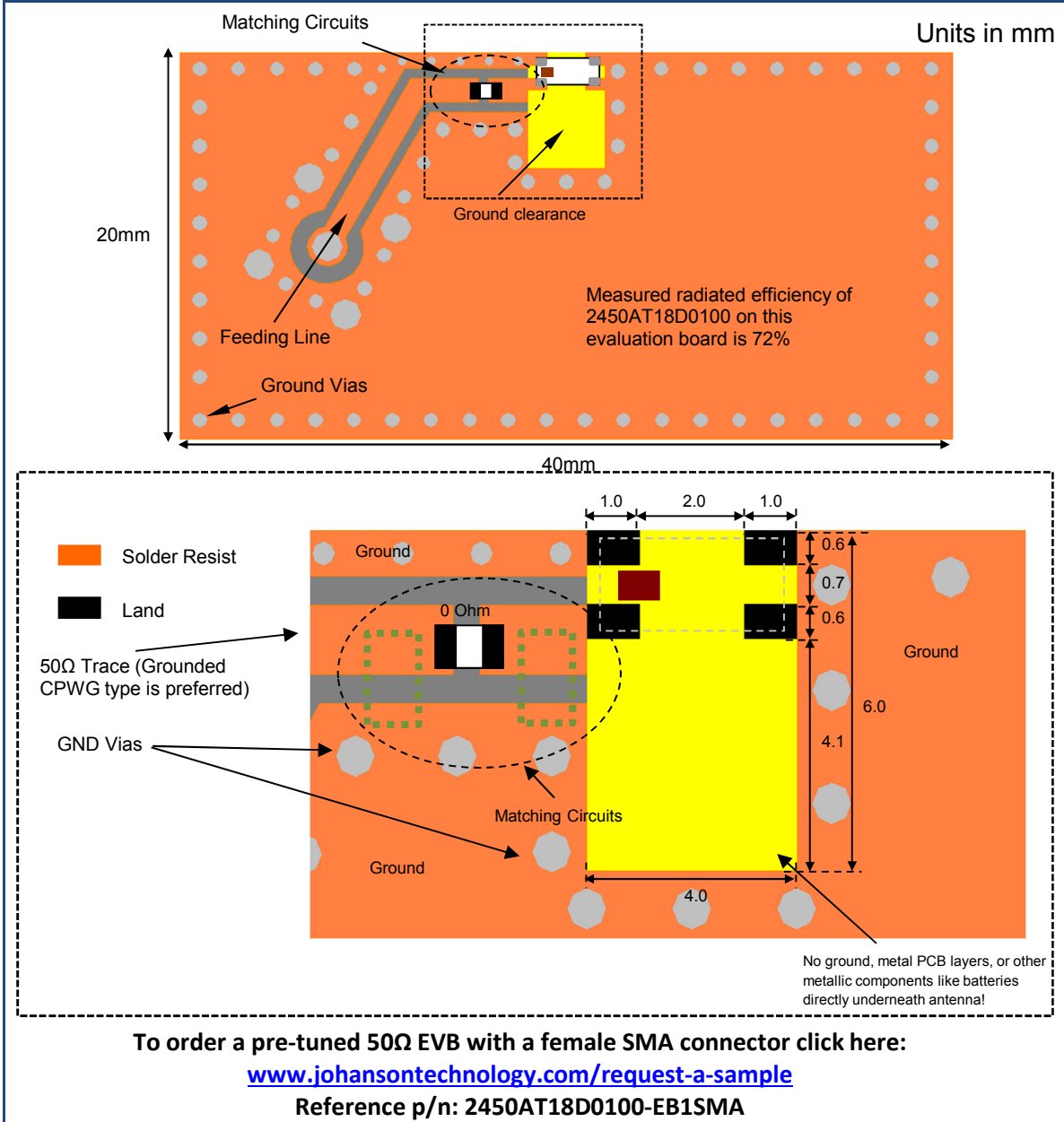
## 2.45 GHz SMD Antenna, EIA 1210, Detuning resilient, Edge Mount Design

P/N 2450AT18D0100

Detail Specification: 3/26/2019

Page 2 of 7

### Mounting Considerations 1: Evaluation Board (Standard Layout)



Johanson Technology, Inc. reserves the right to make design changes without notice.  
All sales are subject to Johanson Technology, Inc. terms and conditions.



<http://www.johansontechnology.com>  
4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821  
Ver. 4.2

2019 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

**2.45 GHz SMD Antenna, EIA 1210, Detuning resilient, Edge Mount Design**

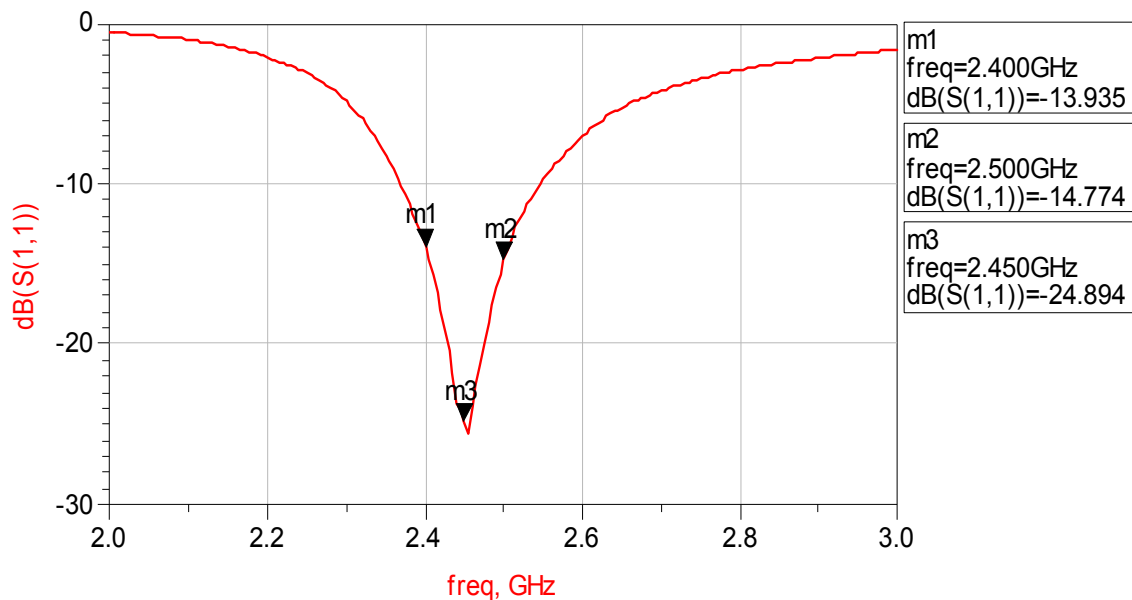
**P/N 2450AT18D0100**

Detail Specification: 3/26/2019

Page 3 of 7

## Mounting Considerations 1: Electrical Performance @25°C

Measured Return Loss



Would you like the antenna layout? Have antenna tuning issues?  
Please contact us if you have any questions regarding the implementation of this antenna in your PCB's layout. We'll be happy to guide you to maximize the antenna's performance.

Contact our applications engineers at:

[www.johansontechnology.com/ask-a-question](http://www.johansontechnology.com/ask-a-question)

Johanson Technology, Inc. reserves the right to make design changes without notice.

All sales are subject to Johanson Technology, Inc. terms and conditions.



<https://www.johansontechnology.com>

4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821

Ver. 4.2

2019 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

2.45 GHz SMD Antenna, EIA 1210, Detuning resilient, Edge Mount Design

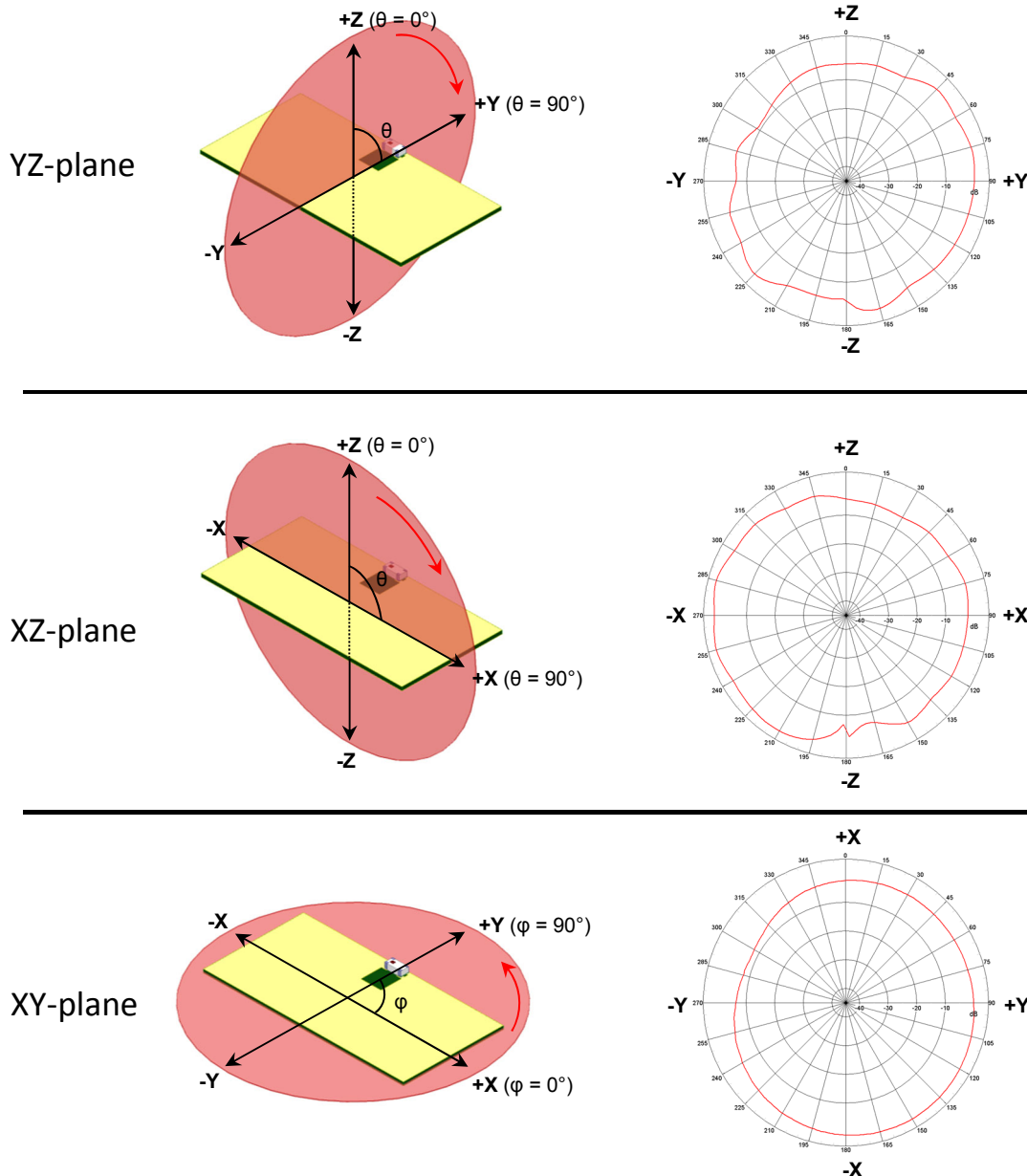
P/N 2450AT18D0100

Detail Specification: 3/26/2019

2D-antenna pattern of the antenna

Page 4 of 7

## Mounting Considerations 1: Typical 2D radiation patterns @ 2.44GHz



Johanson Technology, Inc. reserves the right to make design changes without notice.  
All sales are subject to Johanson Technology, Inc. terms and conditions.



# High Frequency Ceramic Solutions

2.45 GHz SMD Antenna, EIA 1210, Detuning resilient, Edge Mount  
Design

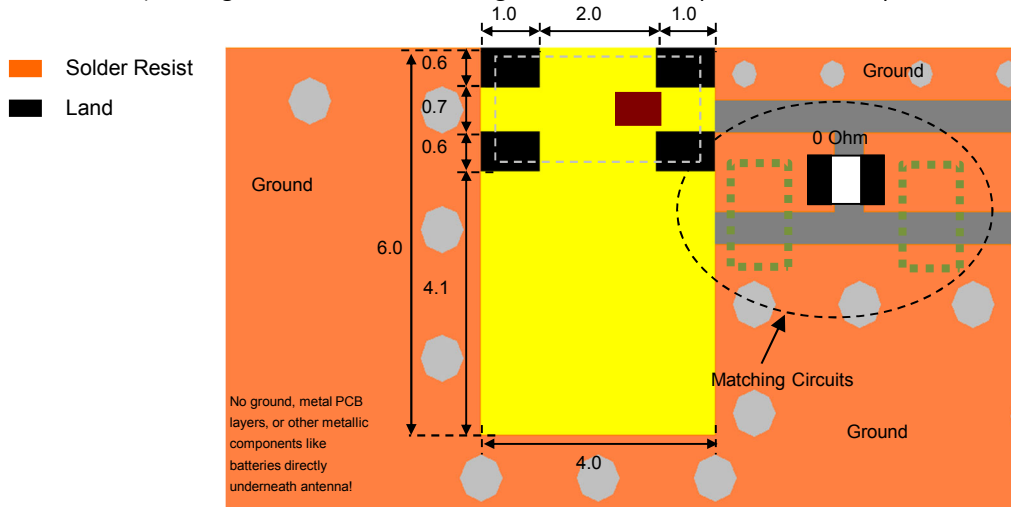
P/N 2450AT18D0100

Detail Specification: 3/26/2019

Page 6 of 7

## Mounting Considerations 4: Fed from Right Side\*

(Feeding the antenna from the right will have no impact on antenna performance)



Units in mm

\*Evaluation board not available

Would you like the layout file of the above? Have antenna tuning issues?  
Please contact us if you have any questions regarding the implementation of this antenna in your PCB's layout. We'll be happy to guide you to maximize the antenna's performance.

Contact our applications engineers at:

[www.johansontechnology.com/ask-a-question](http://www.johansontechnology.com/ask-a-question)

Johanson Technology, Inc. reserves the right to make design changes without notice.  
All sales are subject to Johanson Technology, Inc. terms and conditions.



<https://www.johansontechnology.com>  
4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821  
Ver. 4.2 2019 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

2.45 GHz SMD Antenna, EIA 1210, Detuning resilient, Edge Mount Design

P/N 2450AT18D0100

Detail Specification: 3/26/2019

Page 7 of 7

## Antenna tuning, optimization, and validation services:

<https://www.johansontechnology.com/ipc-antenna-services>

## For more antennas and to download measured S-parameters, go to:

<https://www.johansontechnology.com/antennas>

## Soldering Information

<https://www.johansontechnology.com/ipcsoldering-profile>

## MSL Info

<https://www.johansontechnology.com/msl-rating>

## Packaging Information

<https://www.johansontechnology.com/tape-reel-packaging>

## For layout review contact our applications team at:

<https://www.johansontechnology.com/ask-a-question>

## RoHS Compliance

<https://www.johansontechnology.com/rohs-compliance>

Need help designing the antenna in? Use our antenna design services!

<https://www.johansontechnology.com/ipc-antenna-services>

We provide 2 free layout reviews and if you need us to tune and characterize the antenna on your product (inside anechoic chamber) we can do that too. Small lab fee may apply for the latter.

Johanson Technology, Inc. reserves the right to make design changes without notice.  
All sales are subject to Johanson Technology, Inc. terms and conditions.



<https://www.johansontechnology.com>  
4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821  
Ver. 4.2 2019 Johanson Technology, Inc. All Rights Reserved

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Johanson:

2450AT18D0100E