

High Frequency Ceramic Solutions

**2.45 GHz SMD Antenna, EIA 1206, Detuning resilient,
Edge Mount Design, AEC-Q200 Qualified**

P/N 2450AT18D0100E-AEC

Detail Specification: 5/26/2021

Page 1 of 7

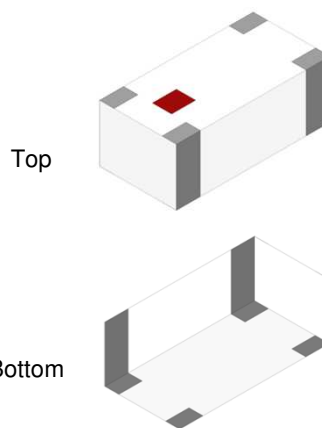
Let us help you with the antenna design, optimization, and tuning!

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

General Specifications

Part Number	2450AT18D0100E-AEC
Frequency (GHz)	2.4 - 2.5
Peak Gain (dBi)	1.5 typ. (XZ-total)
Average Gain (dBi)	-1.0 typ. (XZ-total)
Radiated Efficiency ¹	72%
Return Loss (dB)	10 min.
Impedance (Ω)	50
Input Power (W)	3 max. (CW)
Operating Temperature	-40 to +125°C
Recommended Storage Conditions and Period for unused Product on T&R	+5 to +35°C Humidity 45 - 75% RH 18 months max.
Reel Quantity (pcs./reel)	3,000

¹Efficiency measured on Johanson's evaluation board PN 2450AT18D0100-EB1SMA

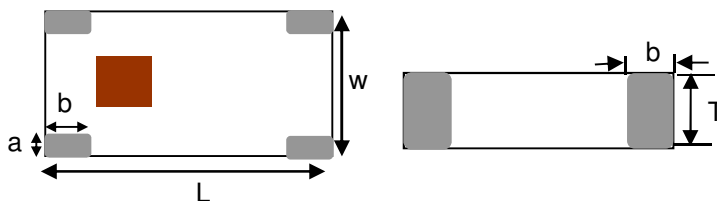


Part Number Explanation

P/N Suffix	Packing Style	Bulk (loose pcs.)	Suffix = S	e.g. 2450AT18D0100S-AEC
		T & R	Suffix = E	e.g. 2450AT18D0100E-AEC
		100% Tin	Suffix = None	e.g. 2450AT18D0100(E or S)-AEC
	Evaluation Board	2450AT18D0100-EB1SMA		

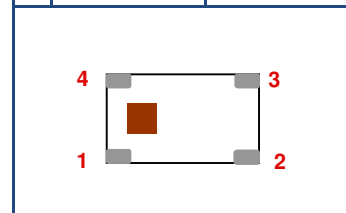
Mechanical Dimensions

	In	mm
L	0.126 $\pm$ 0.008	3.20 $\pm$ 0.2
W	0.063 $\pm$ 0.008	1.60 $\pm$ 0.2
T	0.047 $\pm$ 0.004	1.20 $\pm$ 0.1
a	0.012 +0.004 / -0.008	0.30 +0.1 / -0.2
b	0.020 $\pm$ 0.008	0.50 $\pm$ 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. 4.4

2021 Johanson Technology, Inc. All Rights Reserved

High Frequency Ceramic Solutions

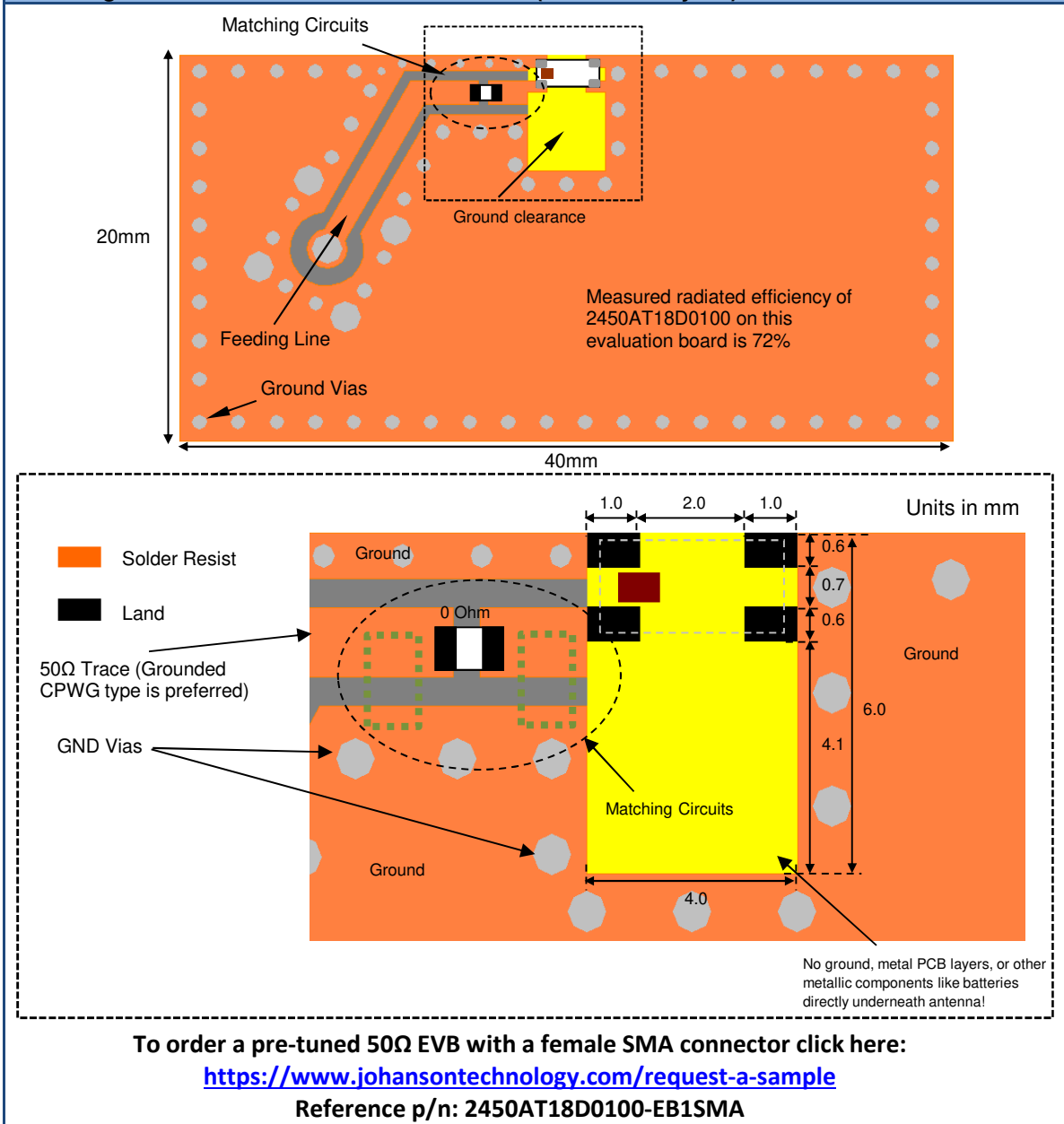
2.45 GHz SMD Antenna, EIA 1206, Detuning resilient,
Edge Mount Design, AEC-Q200 Qualified

P/N 2450AT18D0100E-AEC

Detail Specification: 5/26/2021

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.



<https://www.johansontechnology.com>
4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821
Ver. 4.4 2021 Johanson Technology, Inc. All Rights Reserved

High Frequency Ceramic Solutions

2.45 GHz SMD Antenna, EIA 1206, Detuning resilient,
Edge Mount Design, AEC-Q200 Qualified

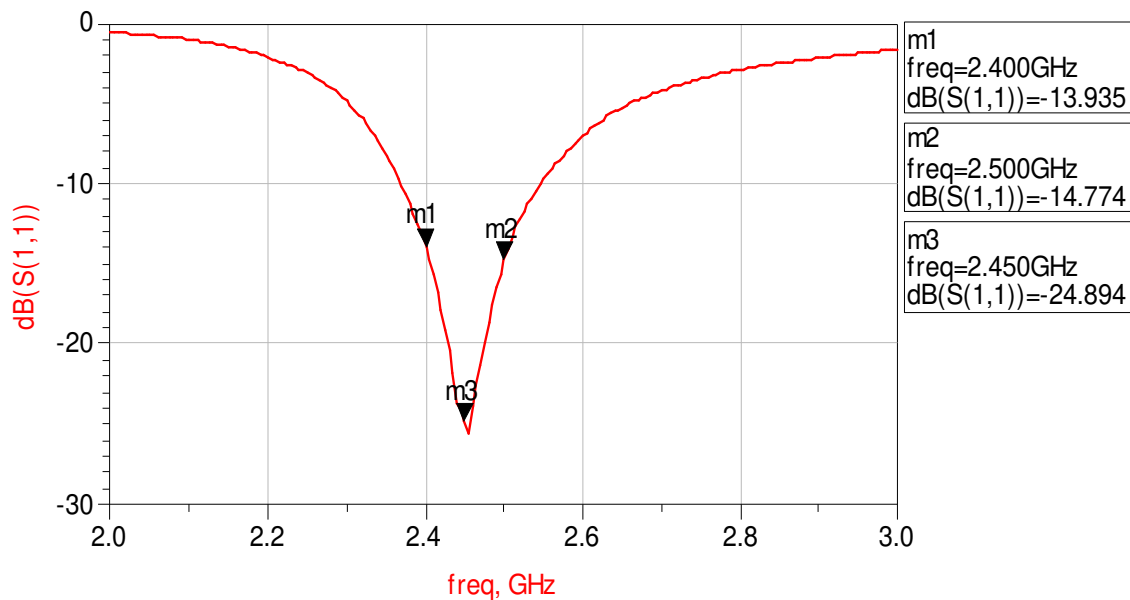
P/N 2450AT18D0100E-AEC

Detail Specification: 5/26/2021

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:

<https://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. 4.4

2021 Johanson Technology, Inc. All Rights Reserved

High Frequency Ceramic Solutions

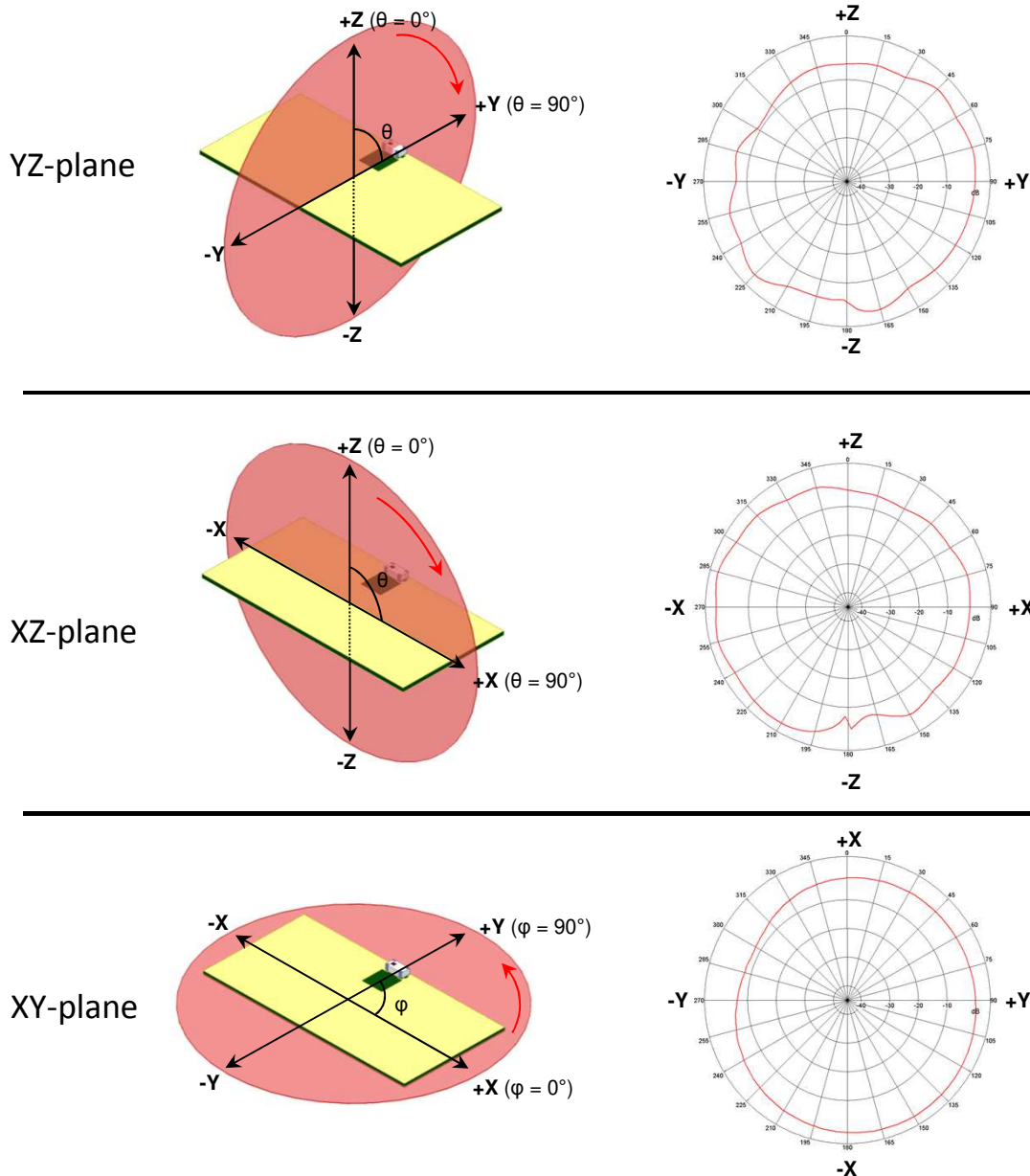
2.45 GHz SMD Antenna, EIA 1206, Detuning resilient,
Edge Mount Design, AEC-Q200 Qualified

P/N 2450AT18D0100E-AEC

Detail Specification: 5/26/2021

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.



Ver. 4.4

<https://www.johansontechnology.com>

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

2021 Johanson Technology, Inc. All Rights Reserved

High Frequency Ceramic Solutions

**2.45 GHz SMD Antenna, EIA 1206, Detuning resilient,
Edge Mount Design, AEC-Q200 Qualified**

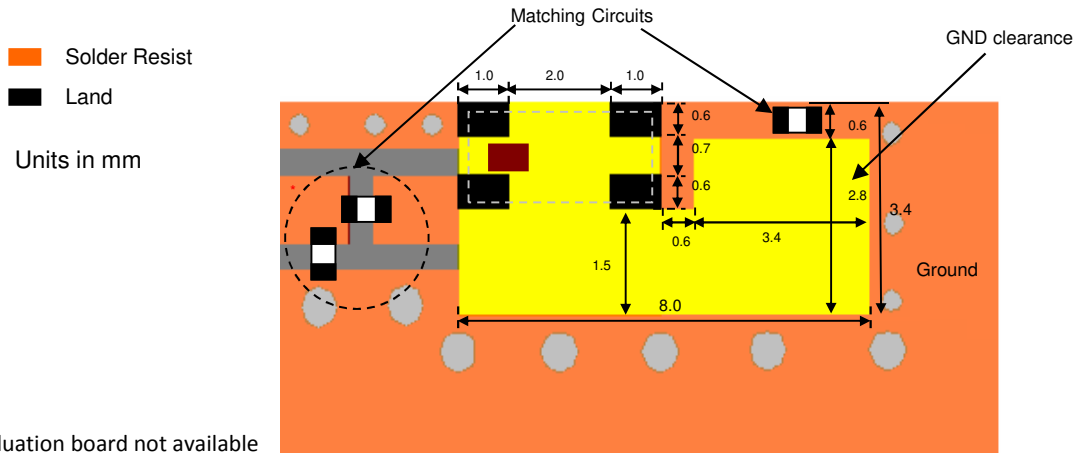
P/N 2450AT18D0100E-AEC

Detail Specification: 5/26/2021

Page 5 of 7

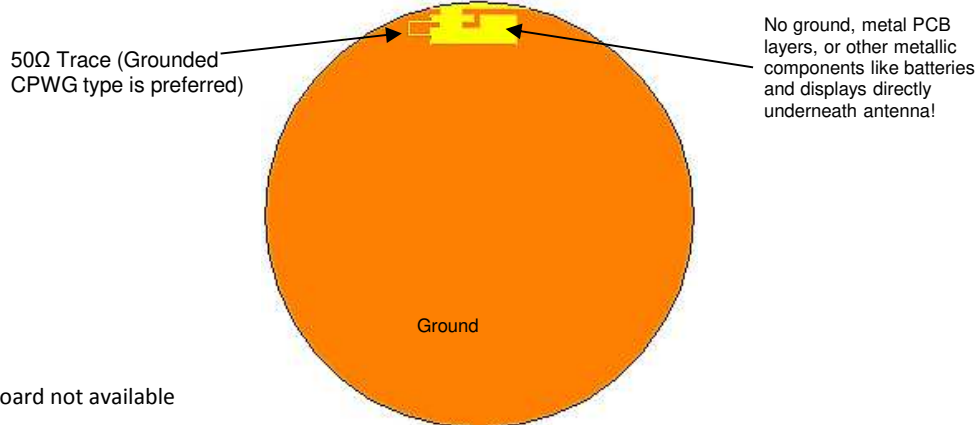
Mounting Considerations 2: Small Clearance or "Thin edge" Applications*

Frequency (GHz)	Peak Gain (dBi)	Average Gain (dBi)	Radiated Efficiency (%)
2.45	0.3 (XZ-plane)	-3.6 (XZ-plane)	66



Want the layout file of this example? Send us a message at:
<https://www.johansontechnology.com/ask-a-question>

Mounting Considerations 3: "Thin edge" application on circular PCB



Want the layout file of this example? Send us a message at:
<https://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. 4.4 2021 Johanson Technology, Inc. All Rights Reserved

High Frequency Ceramic Solutions

2.45 GHz SMD Antenna, EIA 1206, Detuning resilient,
Edge Mount Design, AEC-Q200 Qualified

P/N 2450AT18D0100E-AEC

Detail Specification: 5/26/2021

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>

Recommended Storage Condition and Max Shelf Life

<https://www.johansontechnology.com/recommended-storage-conditions>

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. 4.4 2021 Johanson Technology, Inc. All Rights Reserved