

# High Frequency Ceramic Solutions

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

P/N 2450AT18D0100

Detail Specification: 3/26/2019

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

### General Specifications

Part Number	2450AT18D0100
Frequency (GHz)	2.4 - 2.48
Peak Gain (dBi)	1.5 dBi
Average Gain (dBi)	-1.0 dBi
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.

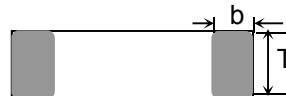
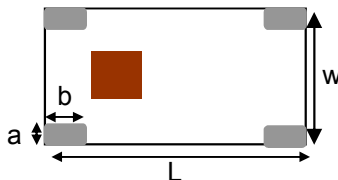
<sup>1</sup>Efficiency measured on Johanson's evaluation board PN 2450AT18D0100-EB1SMA

### 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		

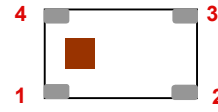
### Mechanical Dimensions

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

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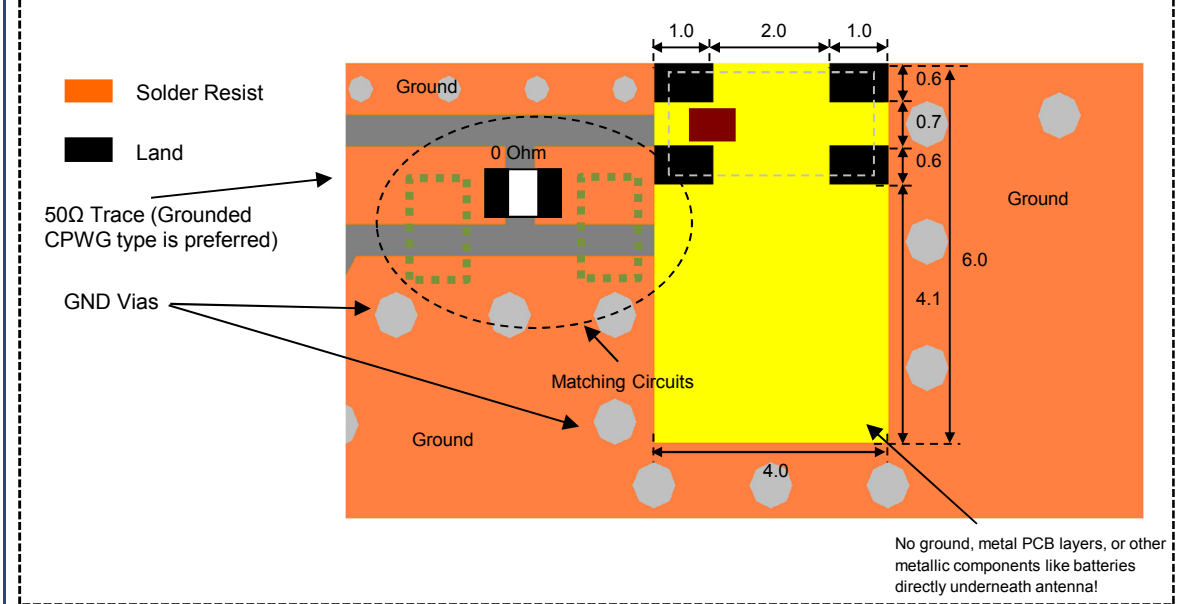
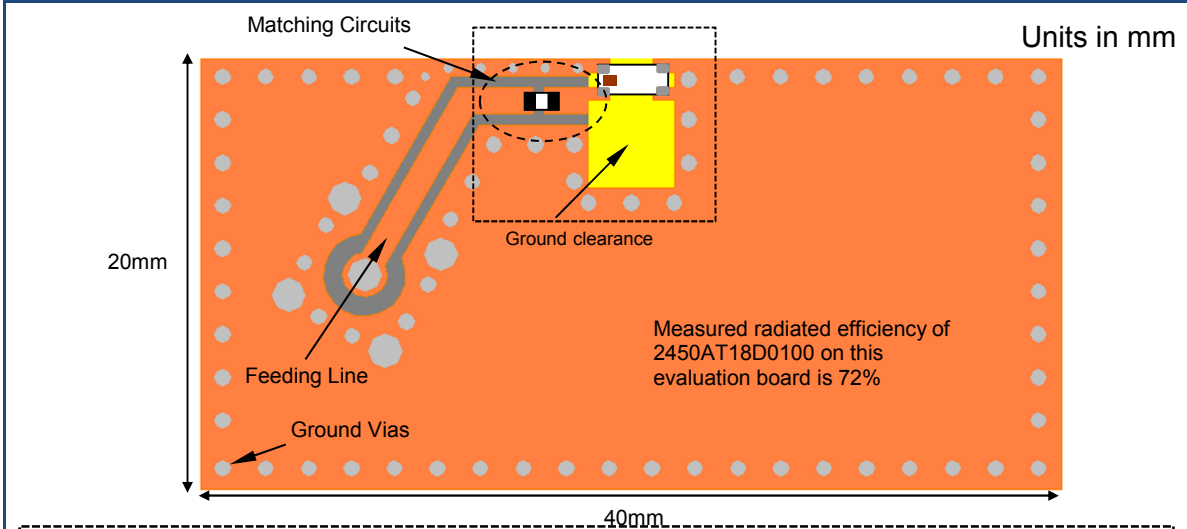
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## Mounting Considerations 1: Evaluation Board (Standard Layout)



To order a pre-tuned 50Ω EVB with a female SMA connector click here:

[www.johansontechnology.com/request-a-sample](http://www.johansontechnology.com/request-a-sample)

Reference p/n: 2450AT18D0100-EB1SMA

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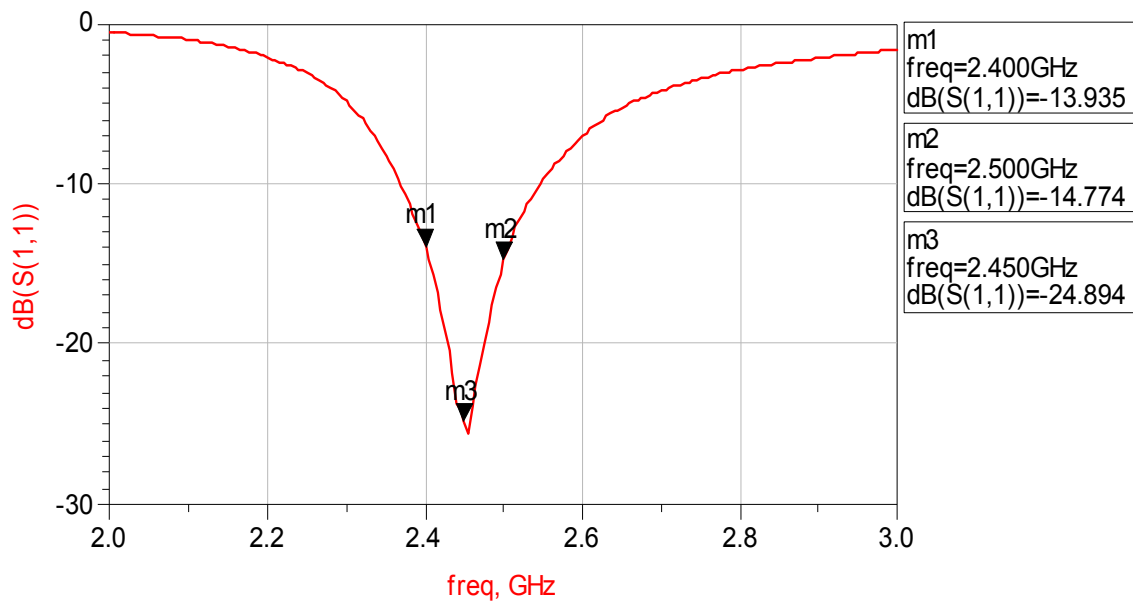
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## Mounting Considerations 1: Electrical Performance @25°C

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)

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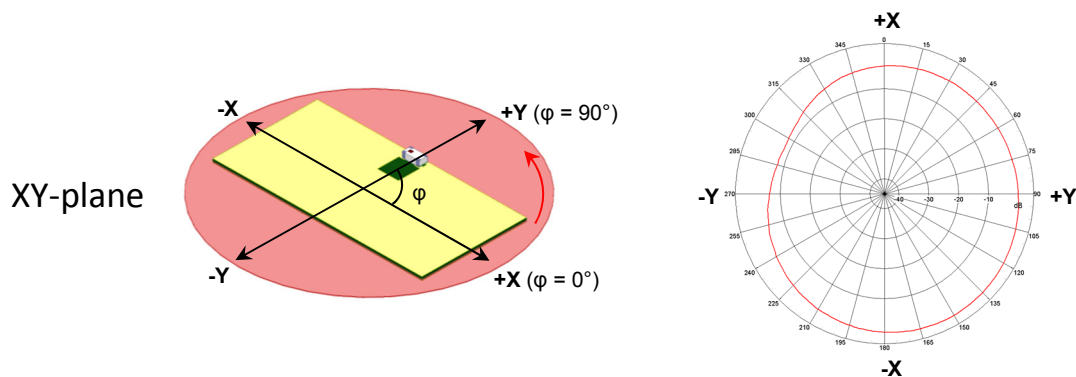
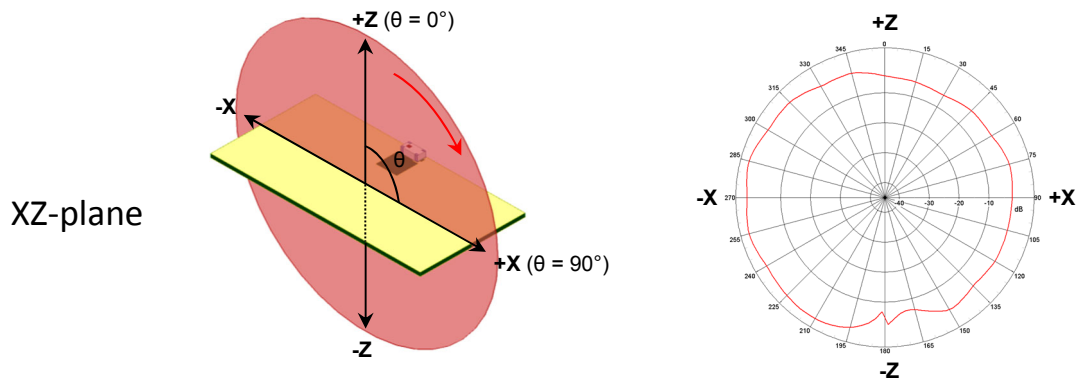
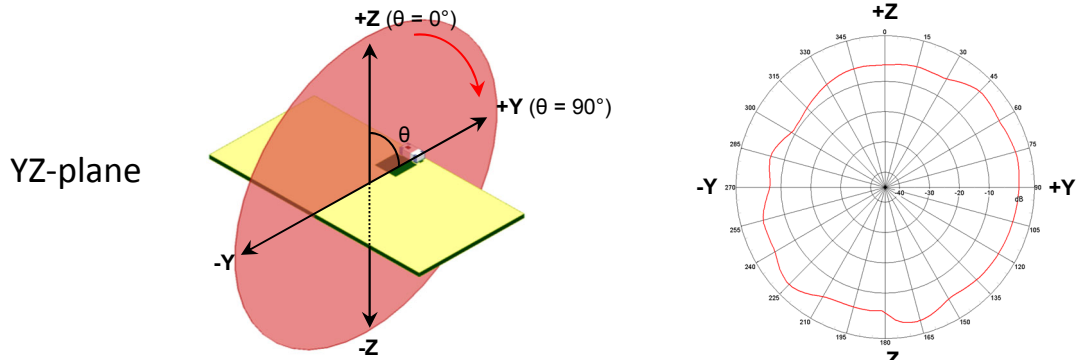
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## Mounting Considerations 1: Typical 2D radiation patterns @ 2.44GHz



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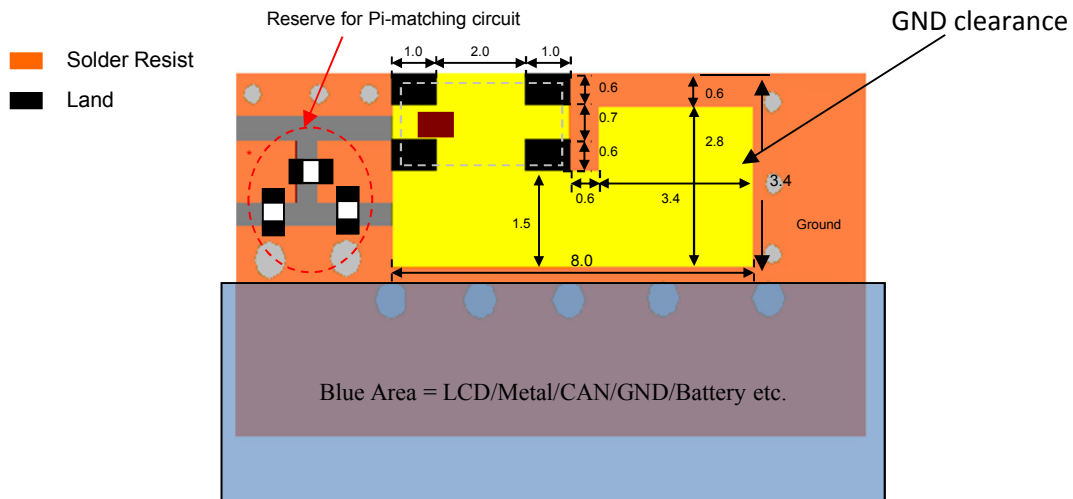
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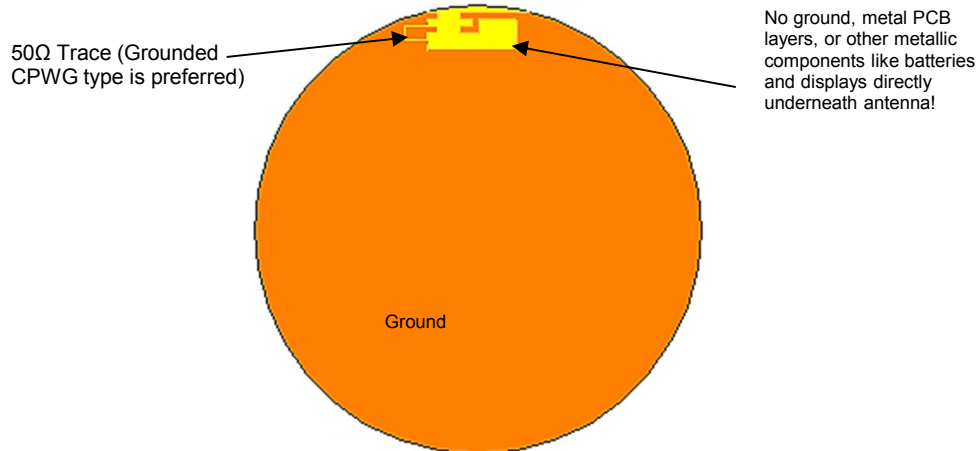
## Mounting Considerations 2: Small Clearance or "Thin edge" Applications\*



Units in mm

\*Evaluation board not available

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



Want the layout file of this example? Send us a message at:

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

\*Evaluation board not available

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Design

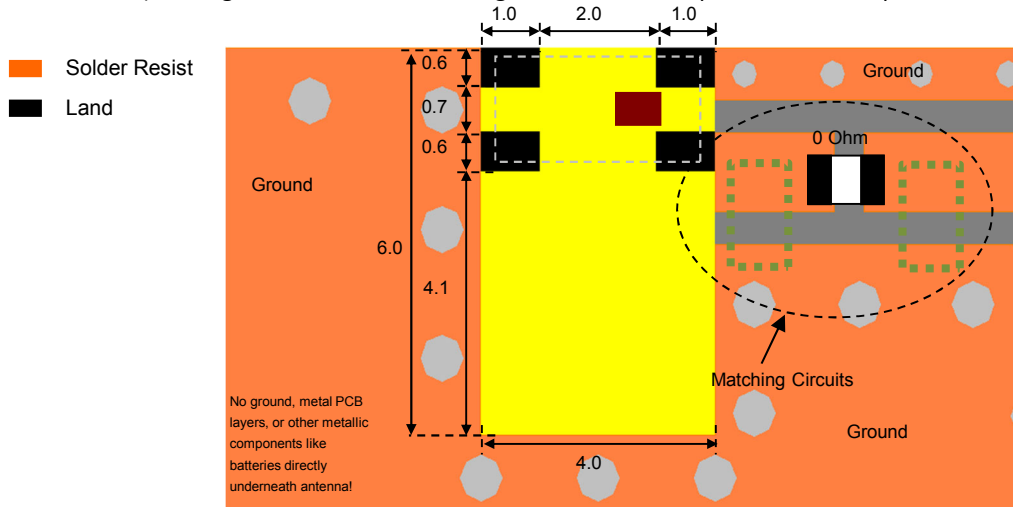
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## Mounting Considerations 4: Fed from Right Side\*

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



Units in mm

\*Evaluation board not available

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## 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.

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- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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