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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# "High Frequency Ceramic Solutions"

## 2.45 GHz SMD Antenna, EIA 1210, Detuning resilient, Edge Mount Design P/N 2450AT18D0100

Detail Specification: 5/16/2018

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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



<b>Recommended Storage Conditions and Period for unused T&amp;R Product</b>	+5 to +35°C Humidity 45 - 75% RH 18 months max.
-----------------------------------------------------------------------------	-------------------------------------------------------

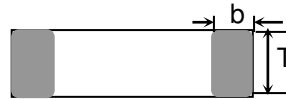
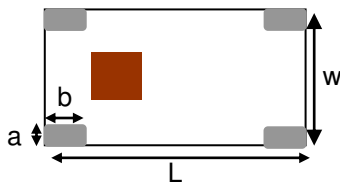
<sup>1</sup>Efficiency measured on Johanson's evaluation board PN 2450AT18D0100-EB1SMA

### Part Number Explanation

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

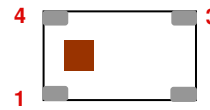
### Mechanical Dimensions

	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

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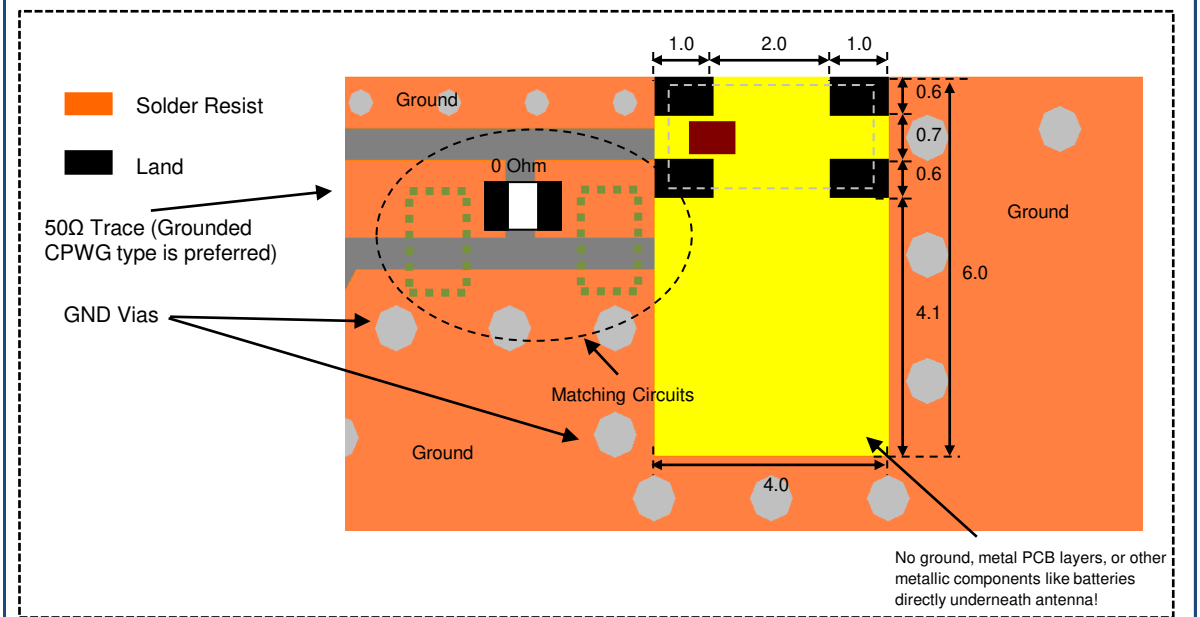
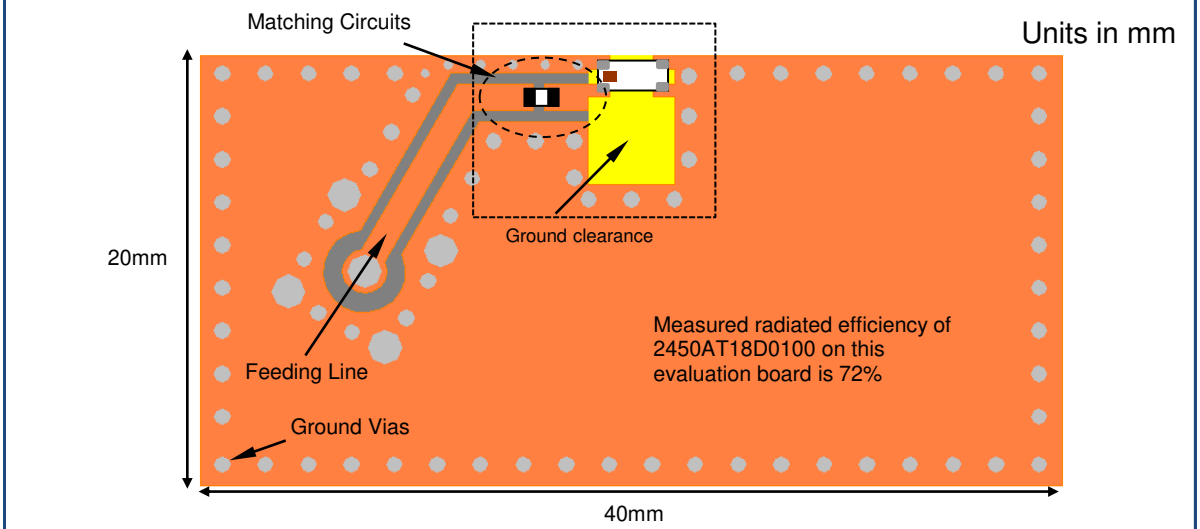
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## Mounting Considerations 1: Evaluation Board (Standard Layout)



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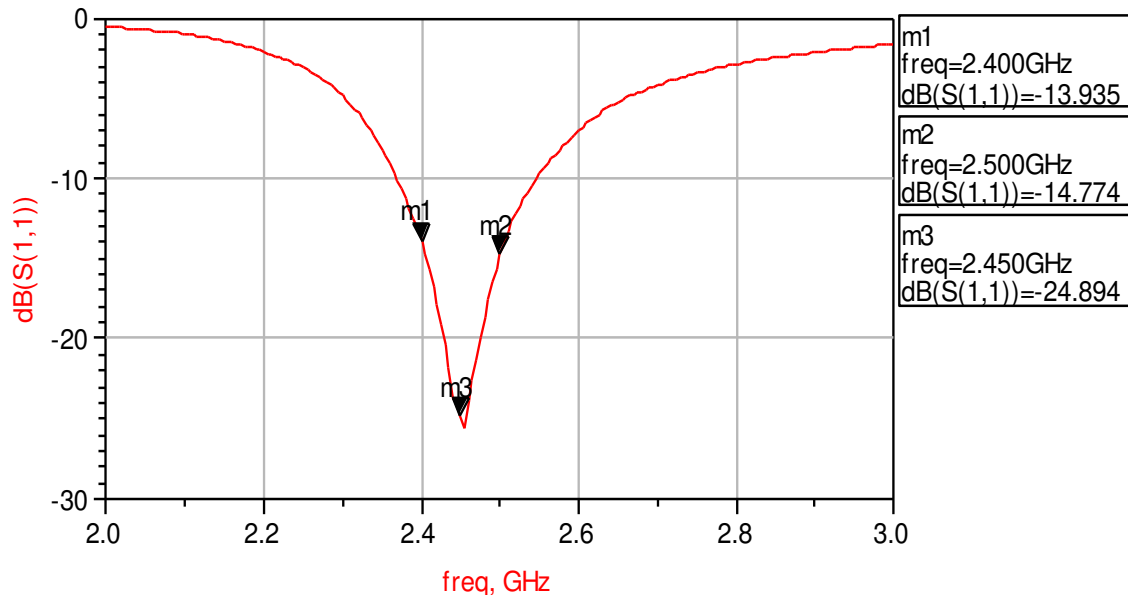
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## Mounting Considerations 1: Electrical Performance @25°C

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:

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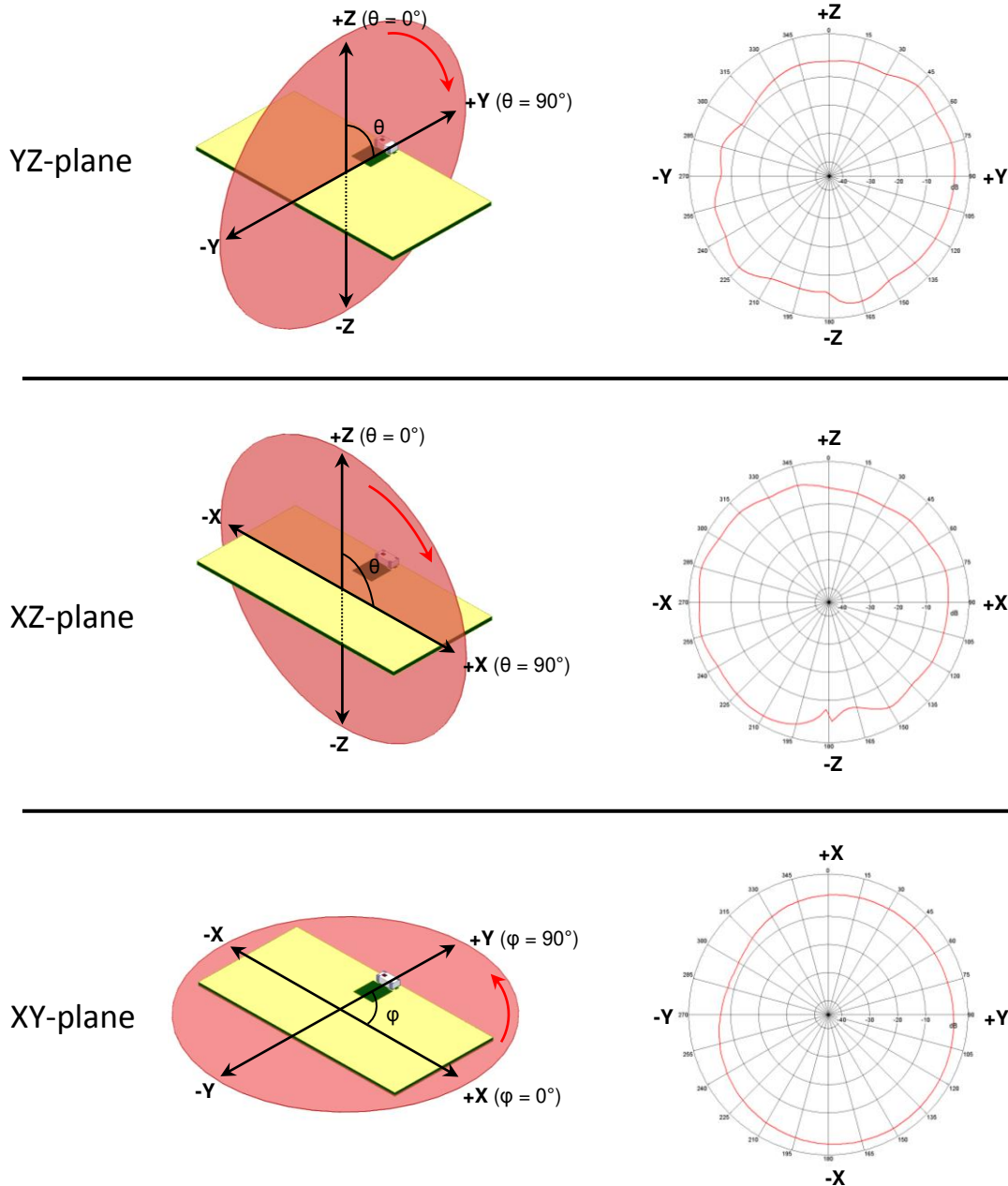
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## Mounting Considerations 1: Typical 2D radiation patterns @ 2.44GHz



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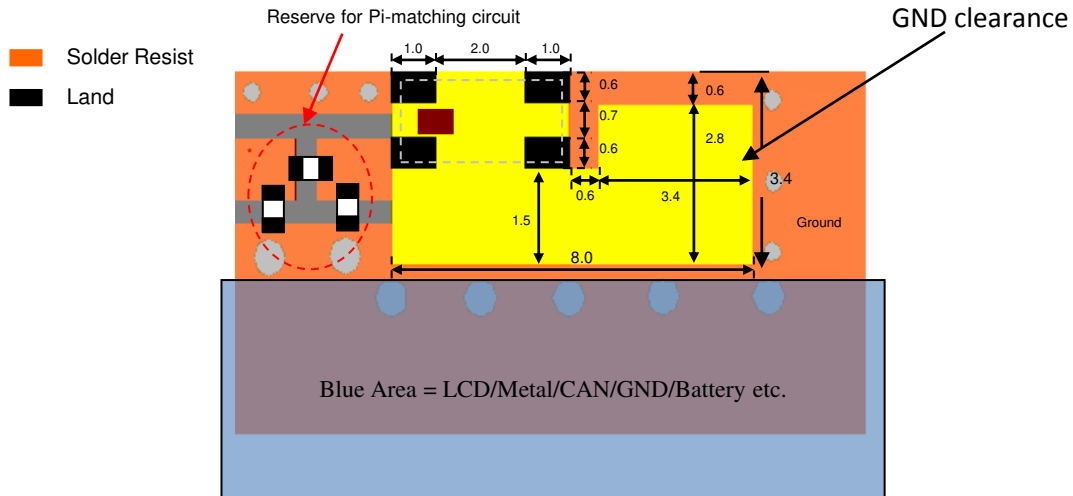
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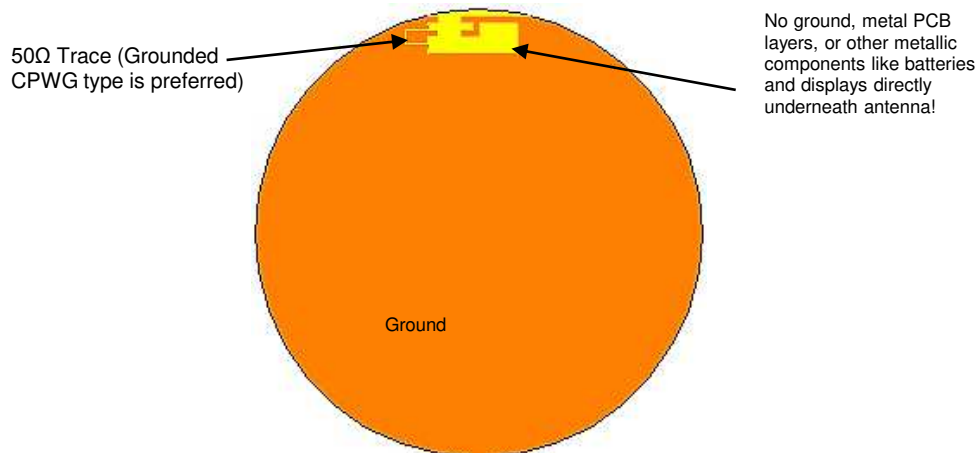
## Mounting Considerations 2: Small Clearance or "Thin edge" Applications\*



\*Evaluation board not available

Units in mm

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



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

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\*Evaluation board not available

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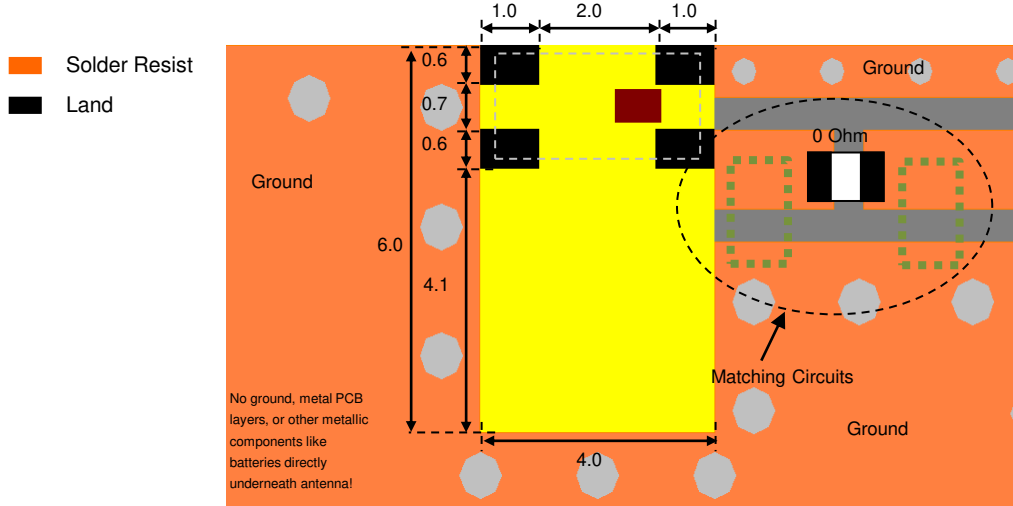
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## Mounting Considerations 4: Fed from Right Side\*

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



Units in mm

\*Evaluation board not available

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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.

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## Antenna tuning, optimization, and validation services:

[www.johansontechnology.com/ipc-antenna-services](http://www.johansontechnology.com/ipc-antenna-services)

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

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

## Soldering Information

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

## MSL Info

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[www.johansontechnology.com/ipc-antenna-services](http://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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