

High Frequency Ceramic Solutions

2.45 GHz SMD Antenna, EIA 1206, Detuning resilient, Edge Mount Design

P/N 2450AT18D0100

Detail Specification: 2/11/2021

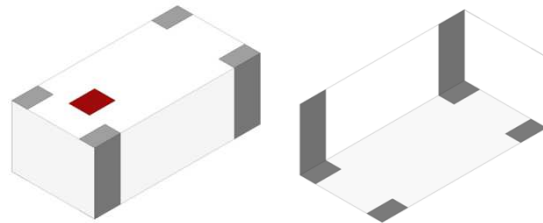
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Let us help you with the antenna design, optimization, and tuning!

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

General Specifications

Part Number	2450AT18D0100		
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.	Recommended Storage Conditions and Period for unused Product on T&R	+5 to +35°C Humidity 45 - 75% RH 18 months max.
Impedance (Ω)	50		
Input Power (W)	3 max. (CW)	Quantity/Reel (pcs.)	3,000
Operating Temperature	-40 to +125°C		



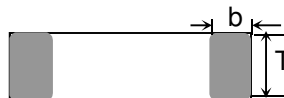
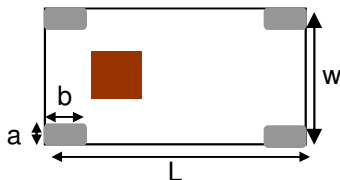
¹Efficiency measured on Johanson's evaluation board PN 2450AT18D0100-EB1SMA

Part Number Explanation

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

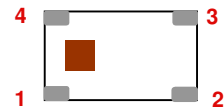
Mechanical Dimensions

	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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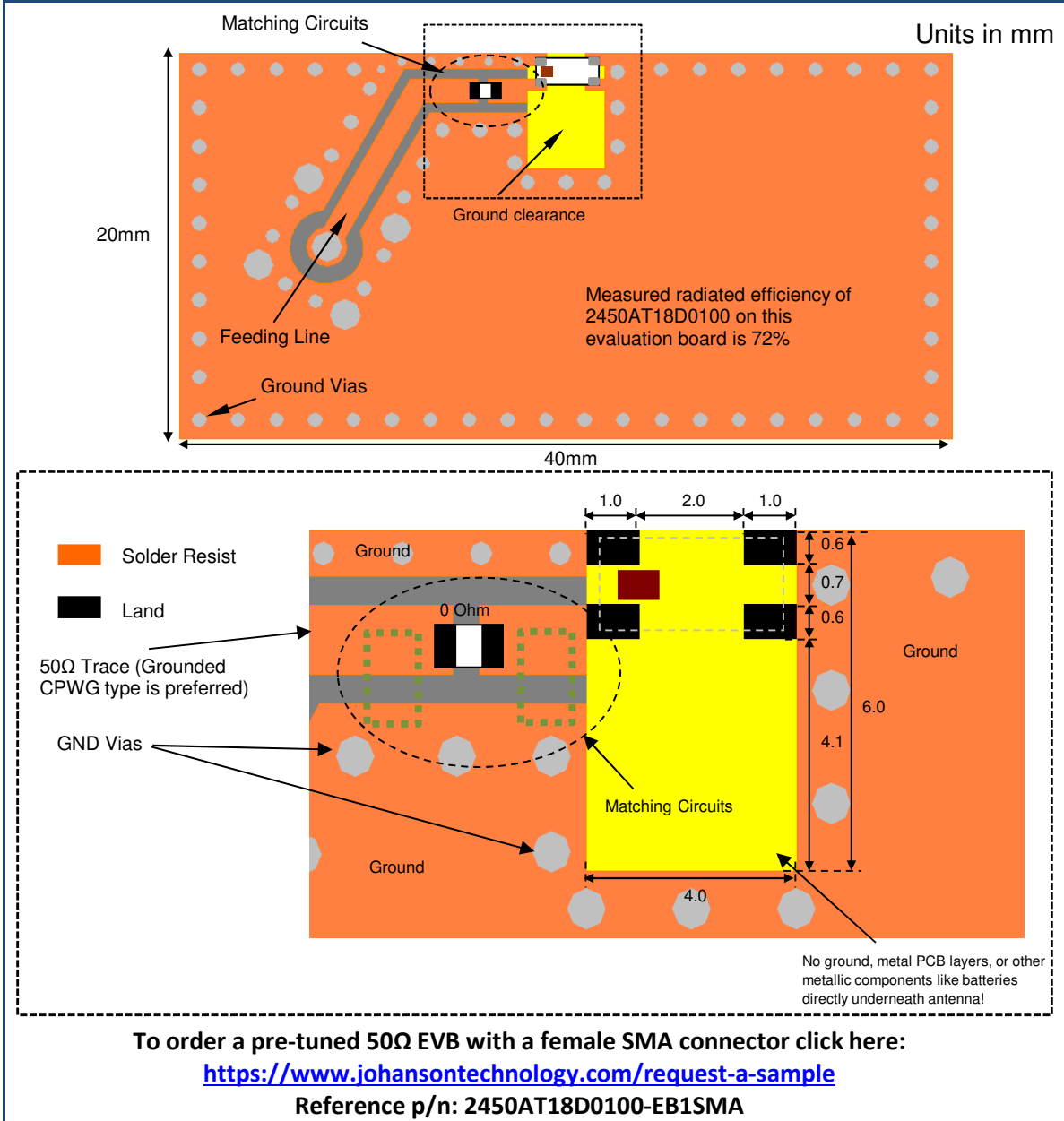
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Mounting Considerations 1: Evaluation Board (Standard Layout)



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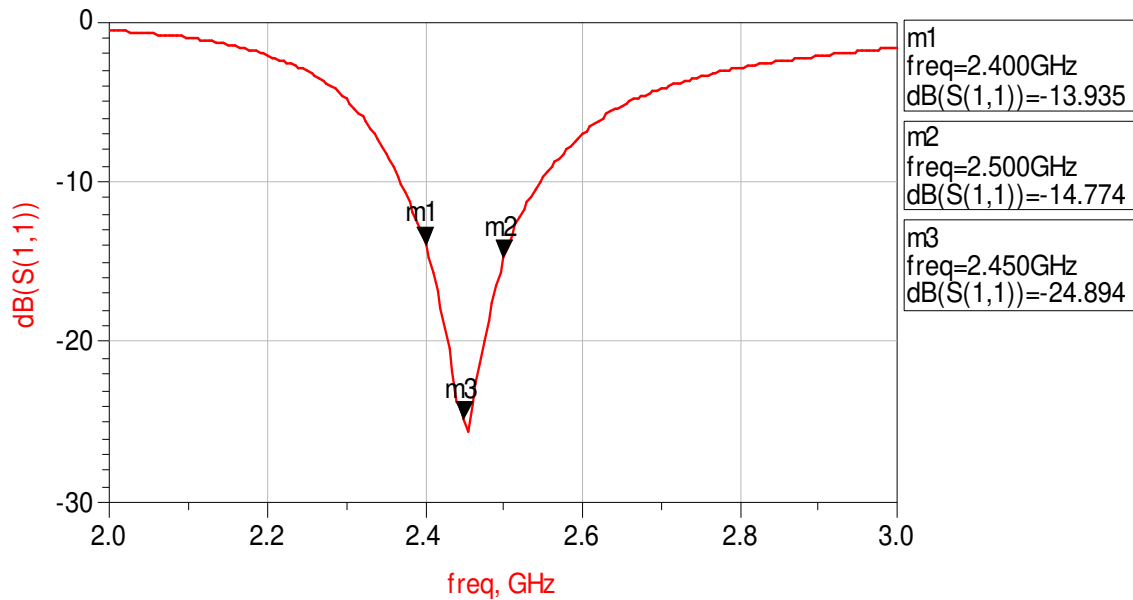
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Mounting Considerations 1: Electrical Performance @25°C

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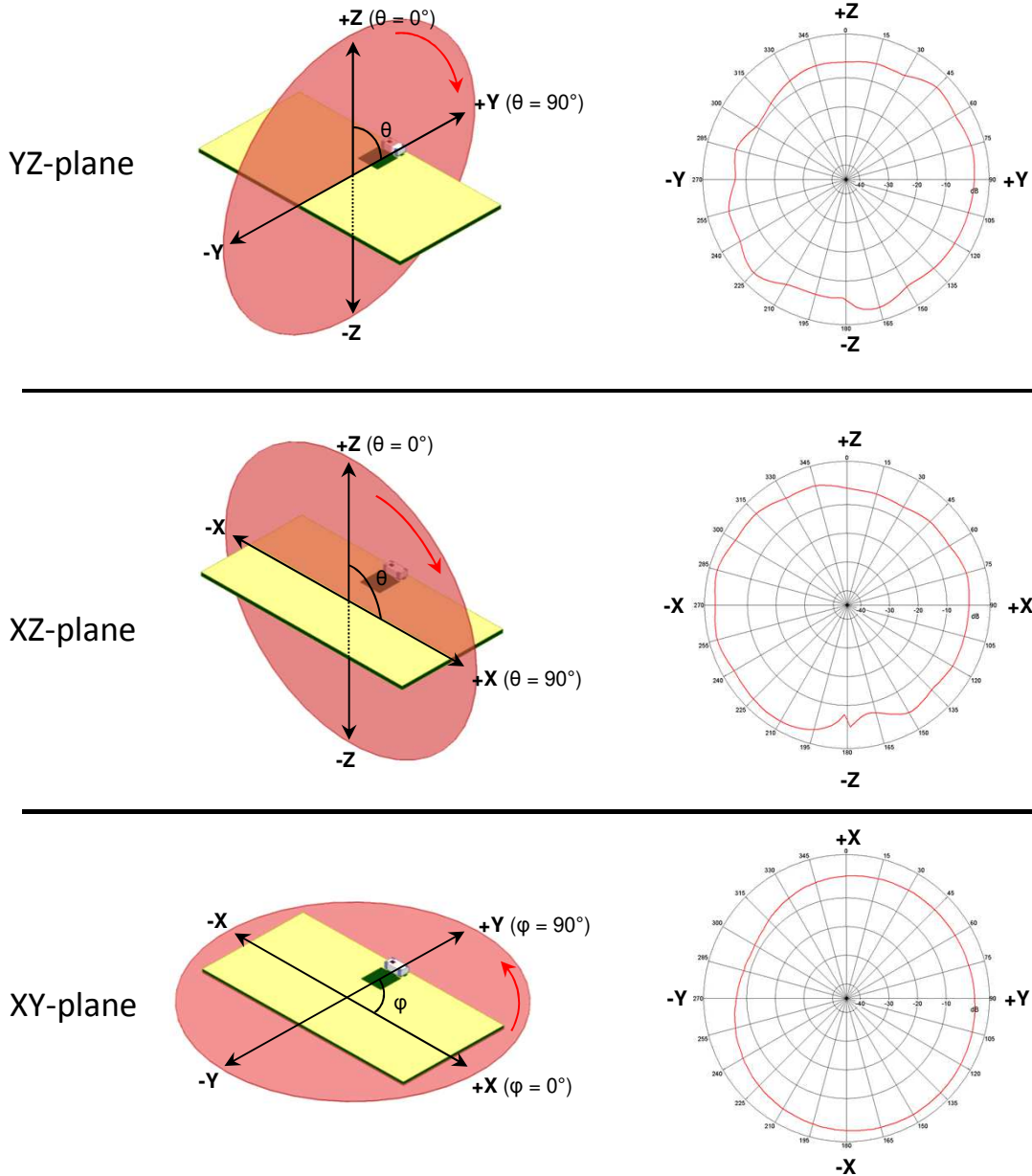
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Mounting Considerations 1: Typical 2D radiation patterns @ 2.44GHz



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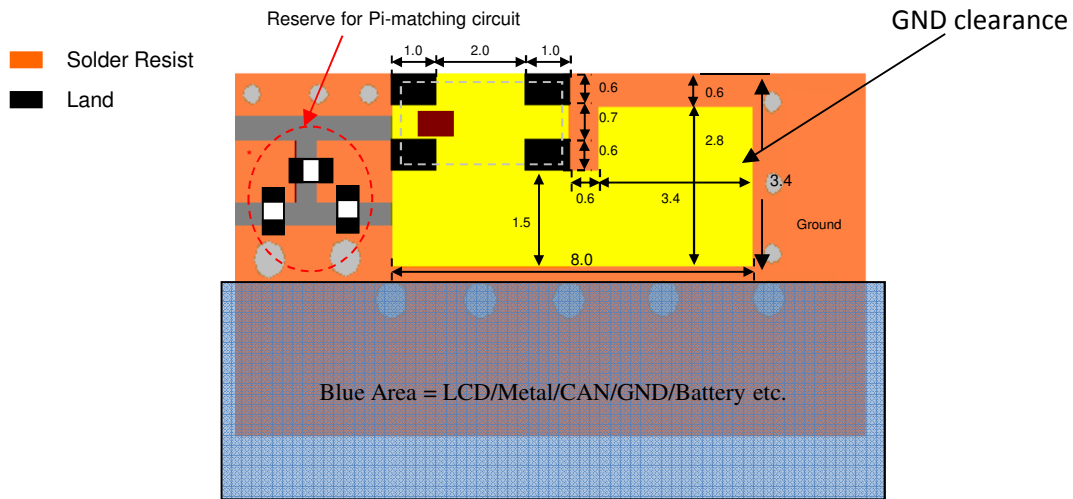
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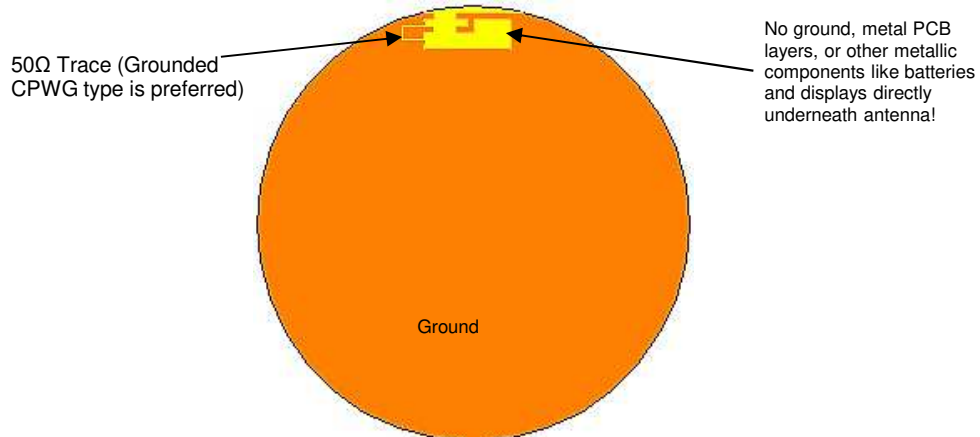
Mounting Considerations 2: Small Clearance or "Thin edge" Applications*



*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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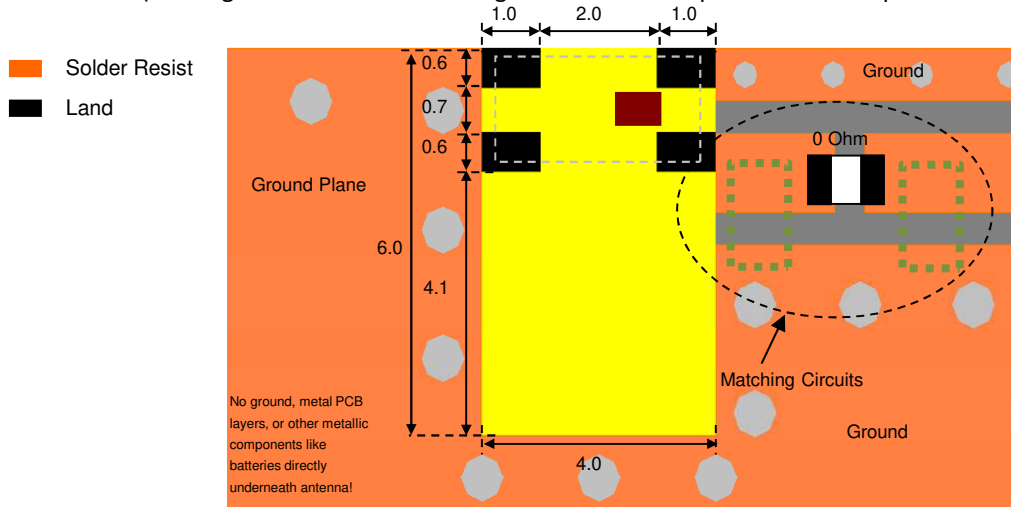
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Mounting Considerations 4: Fed from Right Side*

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



Units in mm

*Evaluation board not available

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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>

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RoHS Compliance

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

Recommended Storage Condition and Max Shelf Life

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

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