

High Frequency Ceramic Solutions

AEC-Q200 Qualification Available

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

P/N 2450AT18D0100

Detail Specification: 5/26/2021

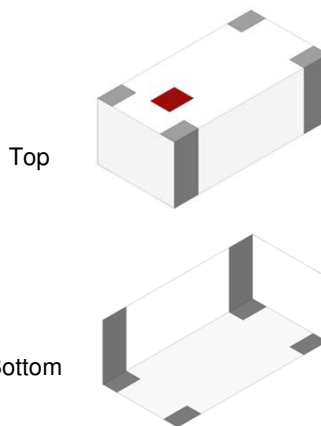
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Let us help you with the antenna design, optimization, and tuning!

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

General Specifications

Part Number	2450AT18D0100E
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



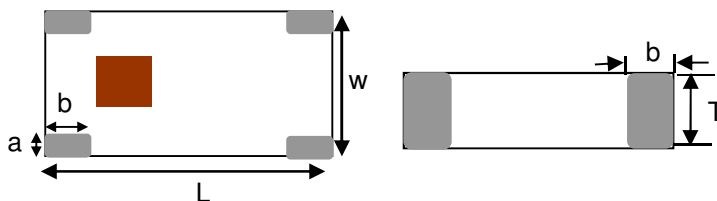
¹Efficiency measured on Johanson's evaluation board PN 2450AT18D0100-EB1SMA

Part Number Explanation

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

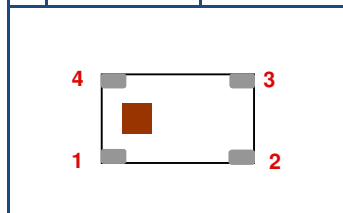
Mechanical Dimensions

	In	mm
L	0.126 $\pm$ 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

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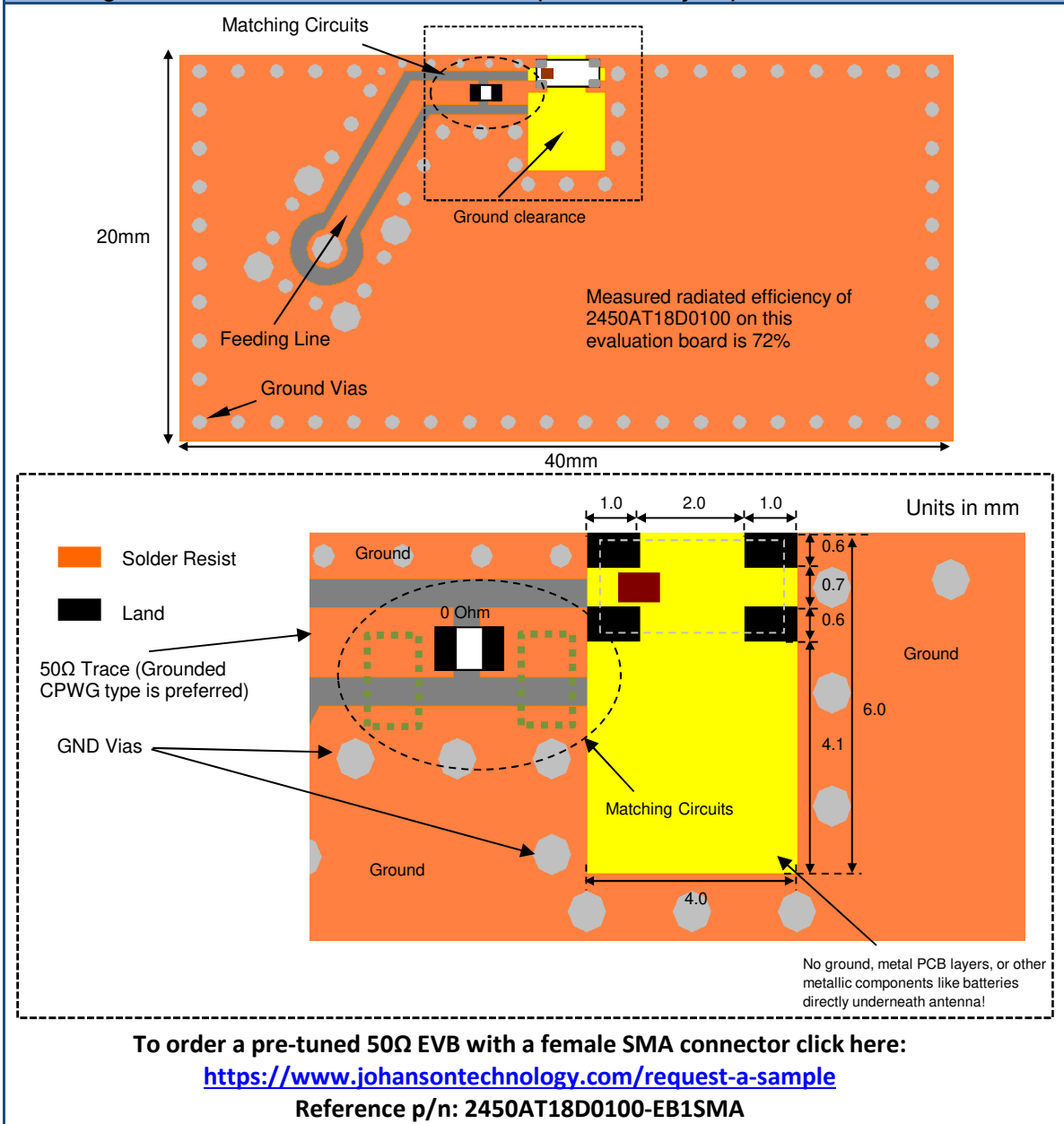
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Mounting Considerations 1: Evaluation Board (Standard Layout)



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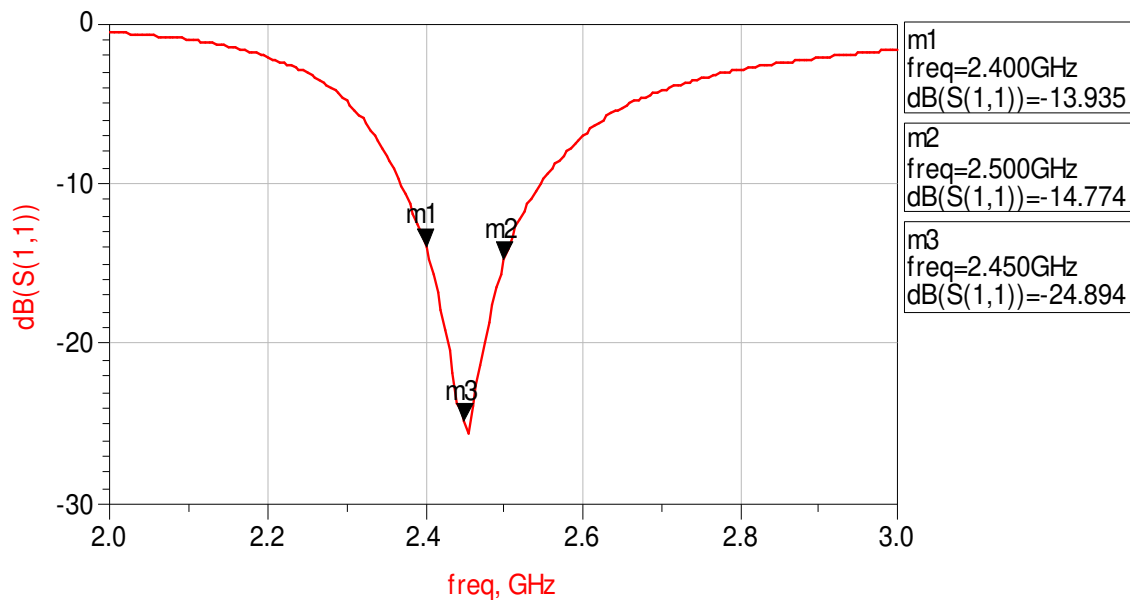
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Mounting Considerations 1: Electrical Performance @25°C

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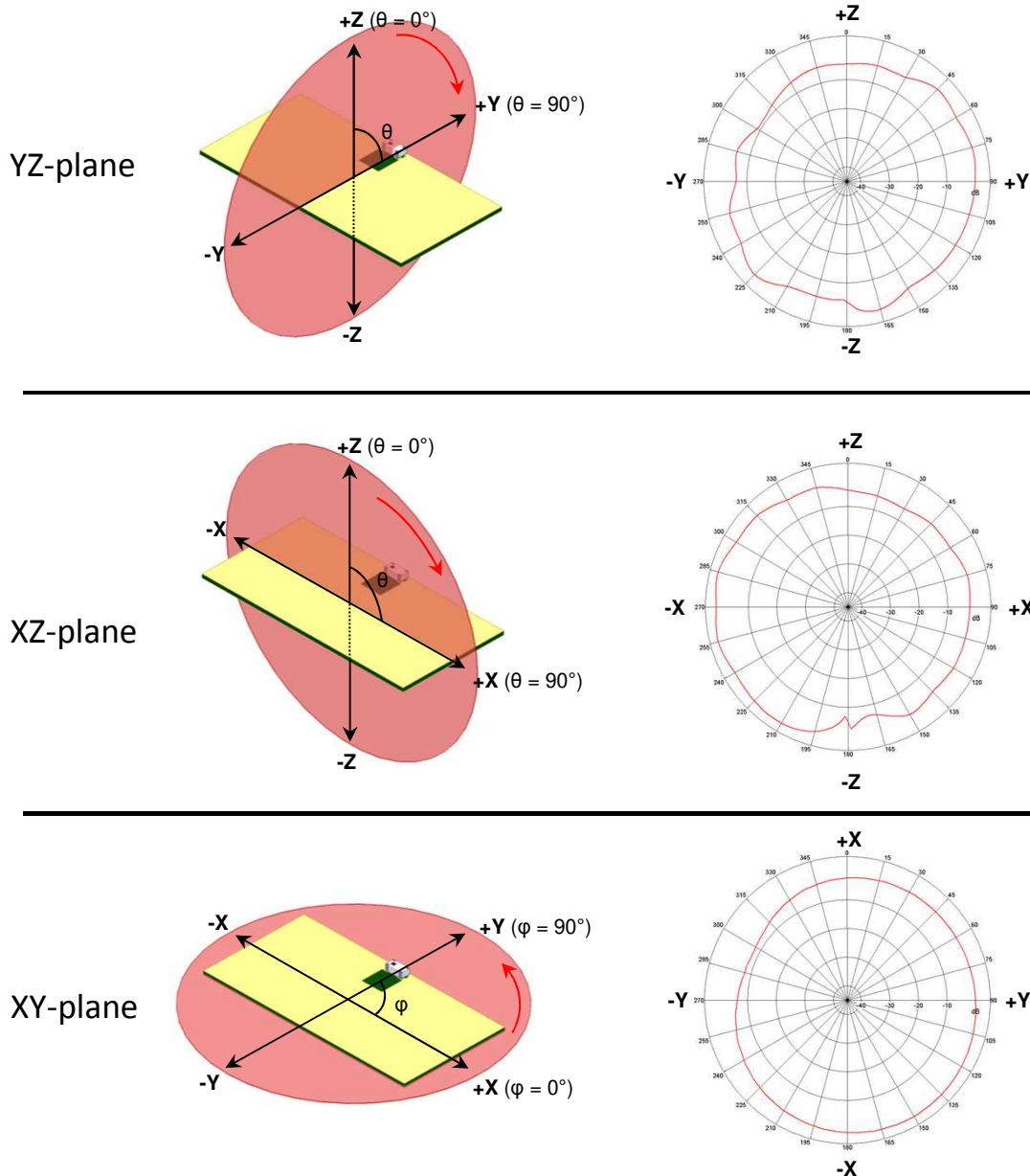
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Mounting Considerations 1: Typical 2D radiation patterns @ 2.44GHz



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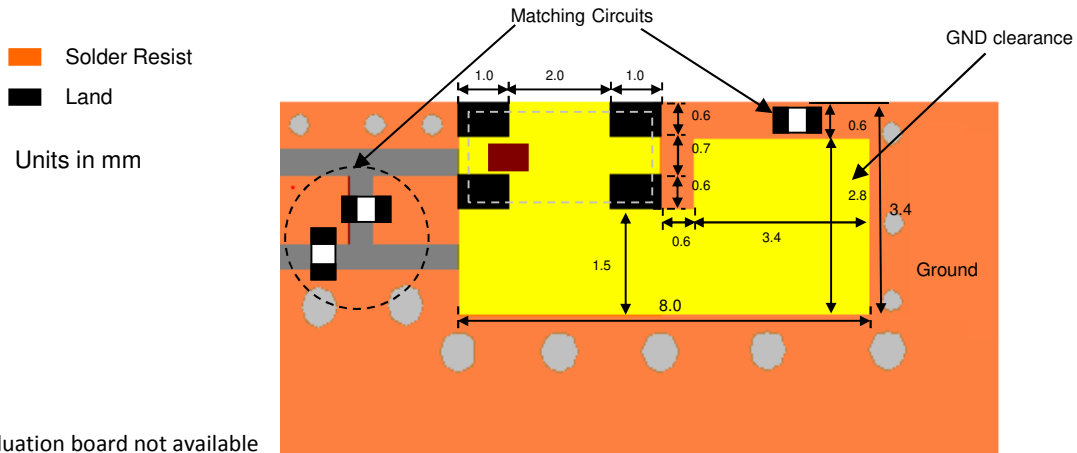
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Mounting Considerations 2: Small Clearance or "Thin edge" Applications*

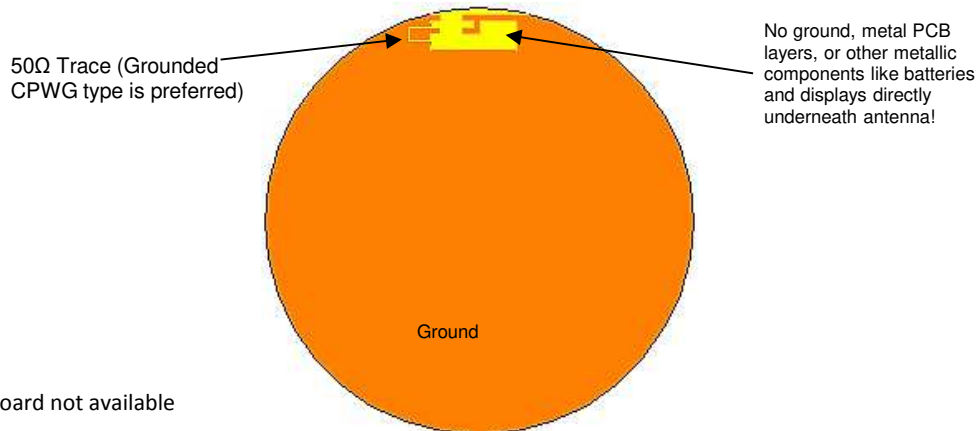
Frequency (GHz)	Peak Gain (dBi)	Average Gain (dBi)	Radiated Efficiency (%)
2.45	0.3 (XZ-plane)	-3.6 (XZ-plane)	66



*Evaluation board not available

Want the layout file of this example? Send us a message at:
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Mounting Considerations 3: "Thin edge" application on circular PCB



*Evaluation board not available

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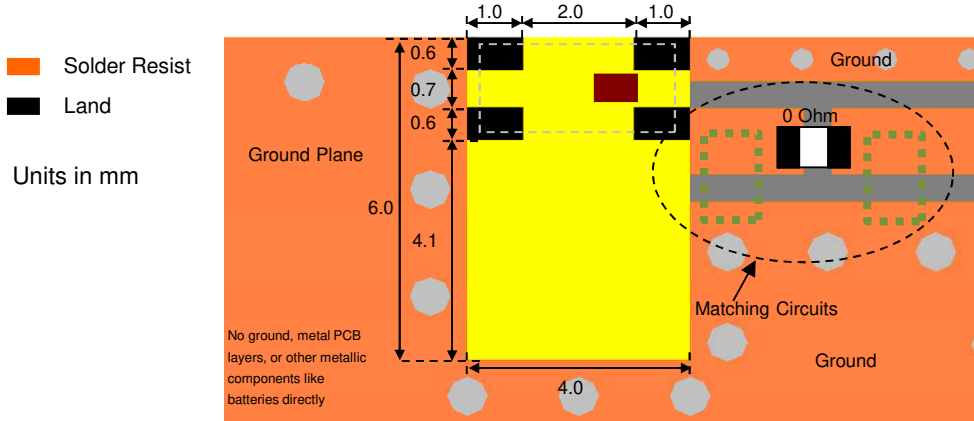
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Mounting Considerations 4: Fed from Right Side*

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



*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

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Recommended Storage Condition and Max Shelf Life

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

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