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

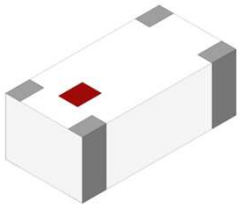
Let us help you with the antenna design, optimization, and tuning!

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

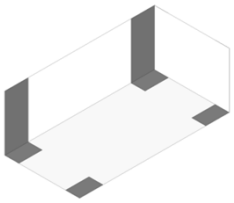
General Specifications

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

Top



Bottom



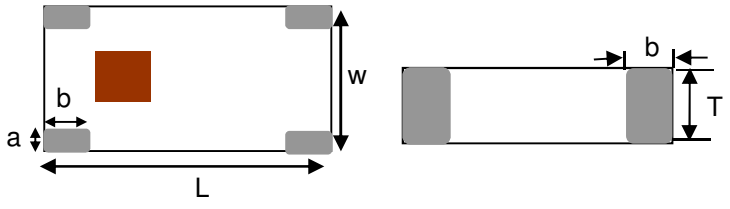
[1]Efficiency measured on Johanson's evaluation board PN 2450AT18D0100-EB1SMA

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		

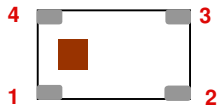
Mechanical Dimensions

	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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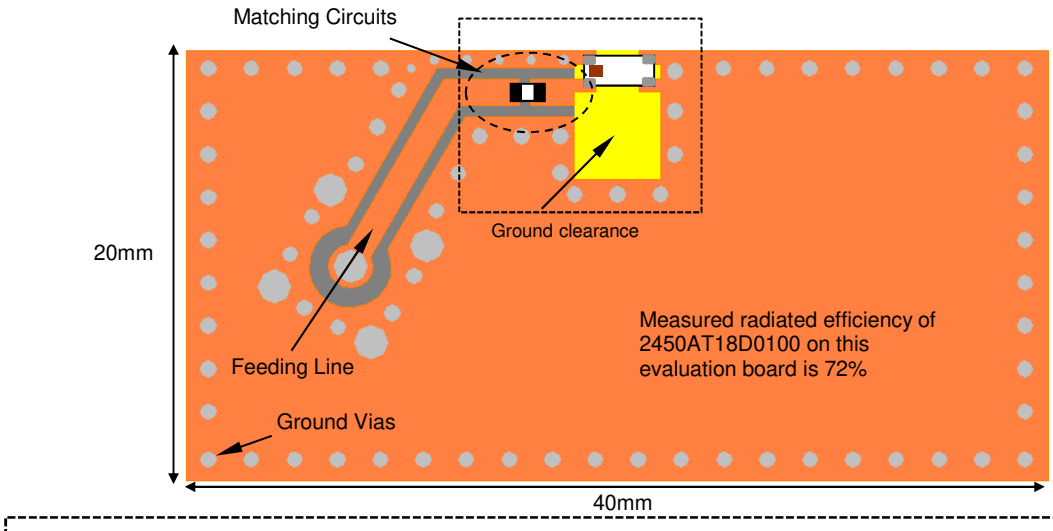
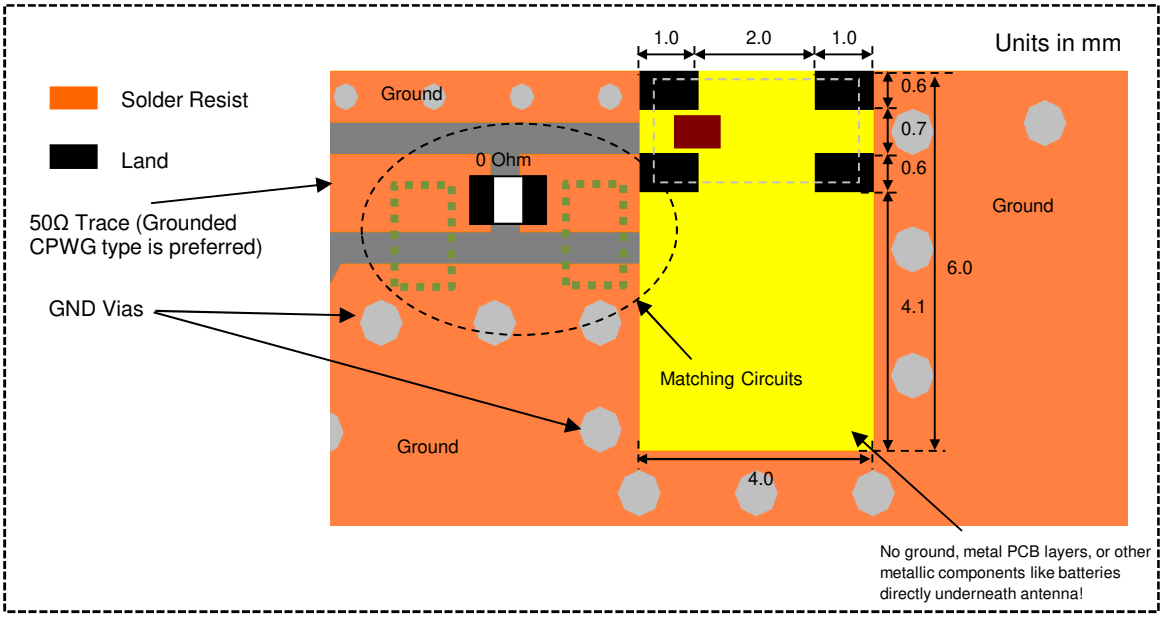
Mounting Considerations 1: Evaluation Board (Standard Layout)

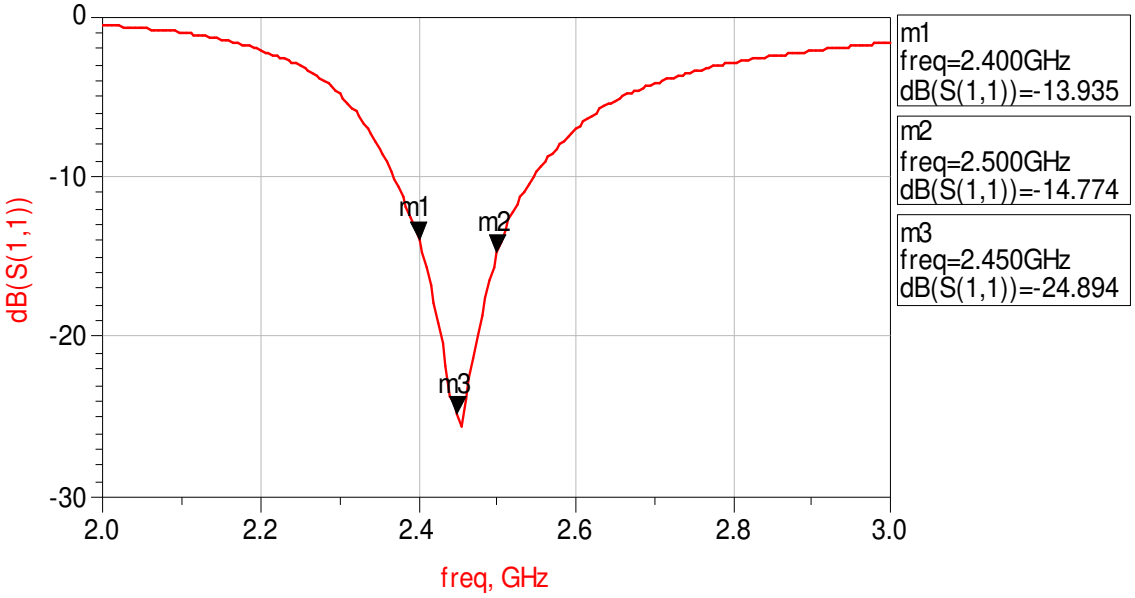




To order a pre-tuned 50Ω EVB with a female SMA connector click here:
https://www.johansontechnology.com/request-a-sample
Reference p/n: 2450AT18D0100-EB1SMA

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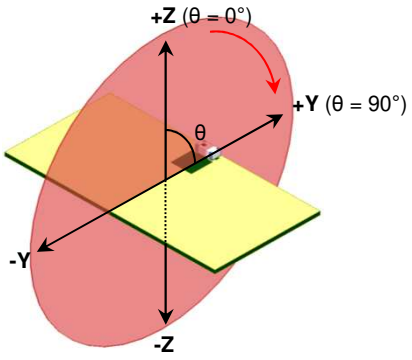
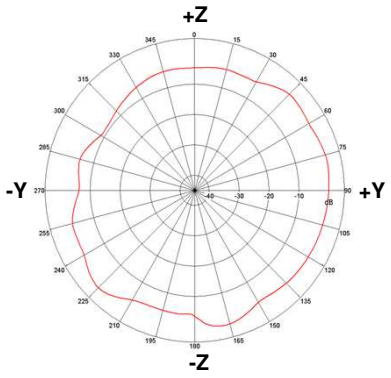
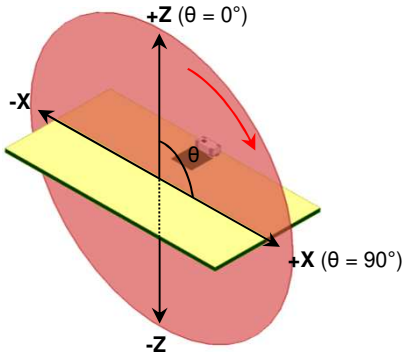
Mounting Considerations 1: Typical 2D radiation patterns @ 2.44GHz

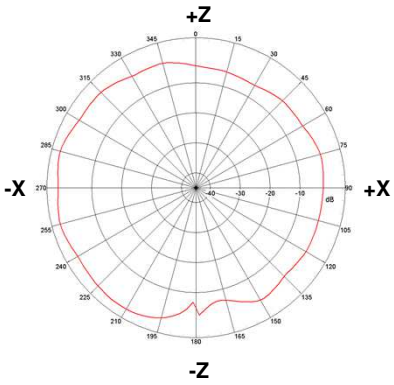
YZ-plane



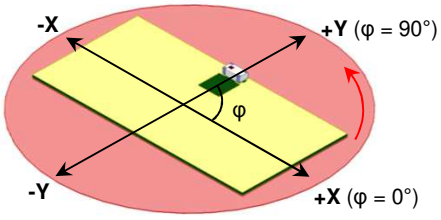


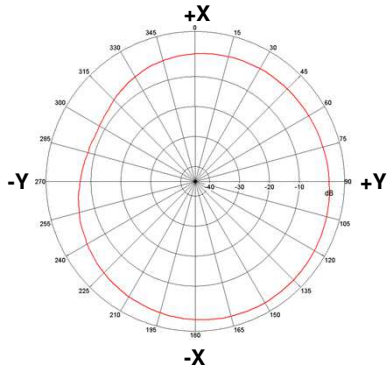
XZ-plane





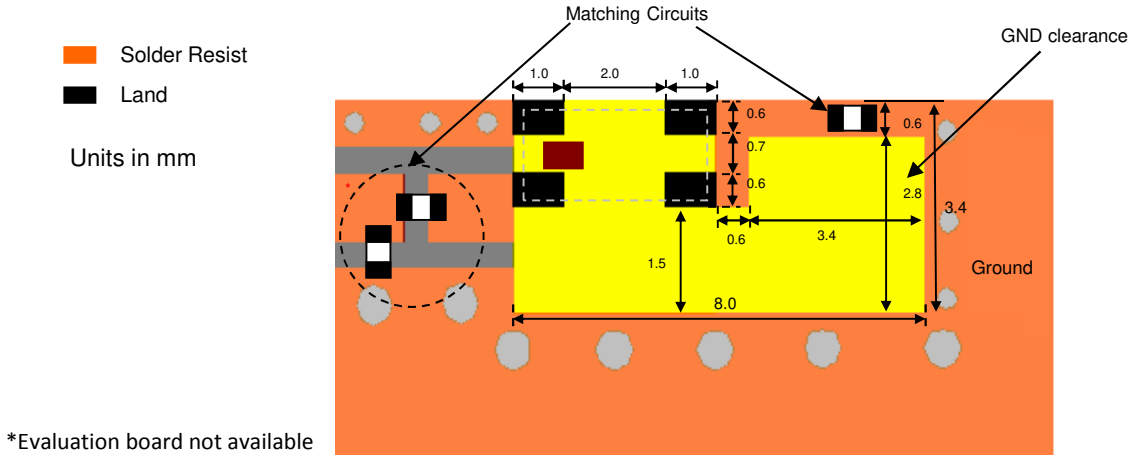
XY-plane





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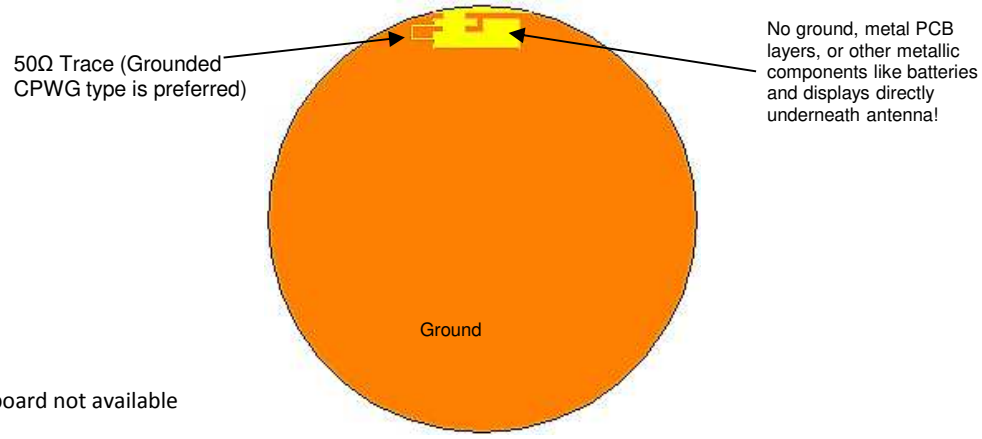
Mounting Considerations 3: "Thind edge" application on circular PCB



*Evaluation board not available

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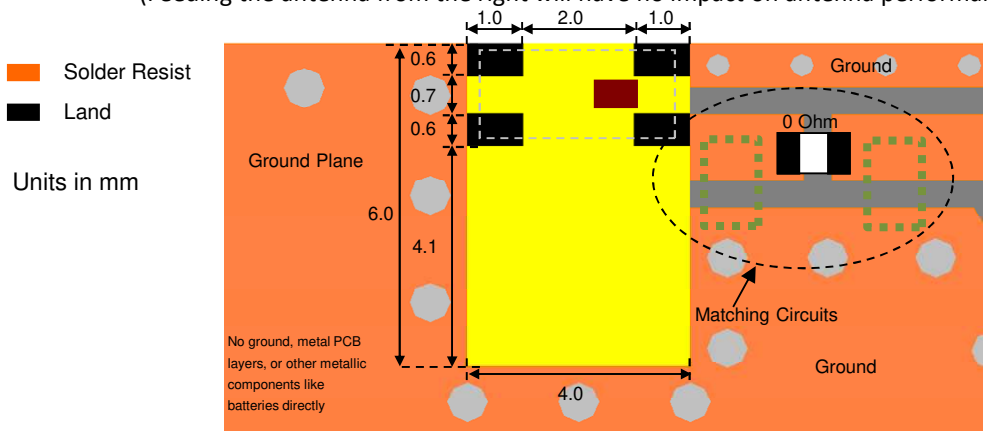
Mounting Considerations 4: Fed from Right Side*

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



*Evaluation board not available

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