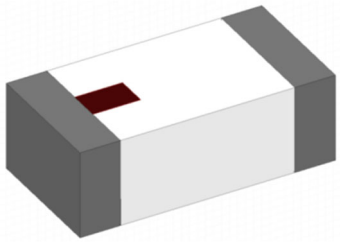
High Frequency Ceramic Solutions

2.4GHz Mini Antenna, SMT **P/N 2450AT18B100**

Detail Specification: 11/5/2018

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



General Specifications

Part Number	2450AT18B100
Frequency (MHz)	2400 - 2500
Avg. Rad Efficiency*	76%
Peak Gain (dBi typ.)	0.5
Average Gain (dBi typ.)	-0.5
Return Loss (dB)	9.5 min.
Impedance	50 Ω
Input Power	2 Watts max. (CW)

Storage Temperature	-45 to +125°C
Operating Temperature	-45 to +125°C
Recommended Storage Conditions of unused product on T&R and period.	+5 to +35°C Humidity 45~75%RH 18 months max.
Reel Quantity	3000pcs

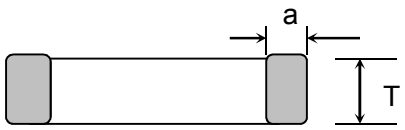
*Efficiency based on Johanson's standard evaluation board

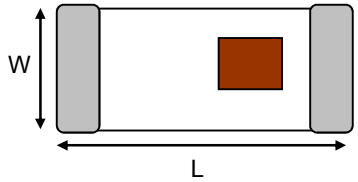
Part Number Explanation

P/N Suffix	**Packing Style**	Bulk (loose)	Suffix = S	e.g. 2450AT18B100S
		T & R	Suffix = E	e.g. 2450AT18B100E
		100% Tin	Suffix = E or S	e.g. 2450AT18B100(E or S)
	Evaluation Board	2450AT18B100-EB1SMA (see page 2&3 for details)		

Mechanical Dimensions

	In	mm
L	0.126 ± 0.008	3.20 ± 0.2
W	0.063 ± 0.008	1.60 ± 0.2
T	0.051 +.004/-.008	1.30 +0.1/-0.2
a	0.020 ± 0.008	0.50 ± 0.2

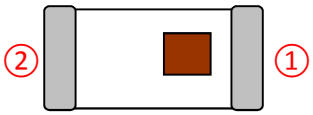




Want the layout file? Request it at: https://www.johansontechnology.com/ask-a-question

Terminal Configuration

No.	Function
1	FEED
2	NC



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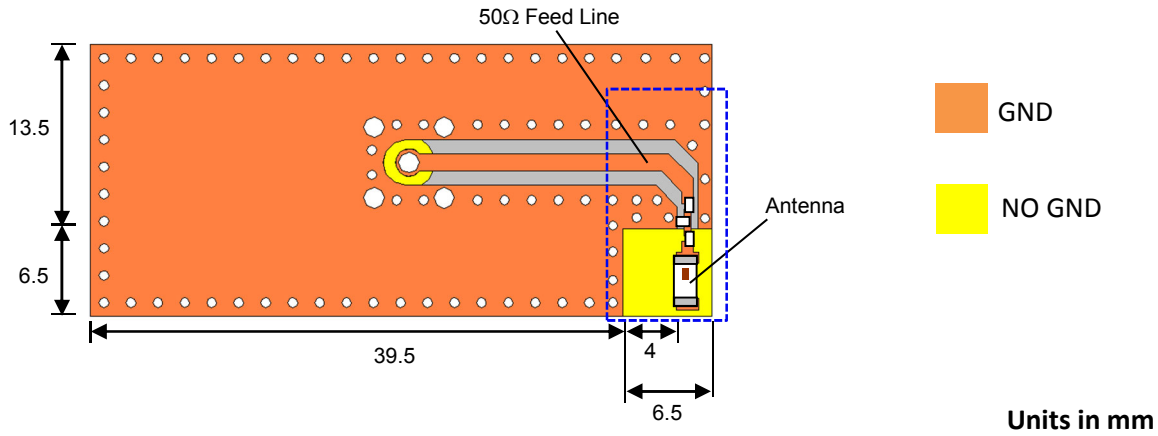
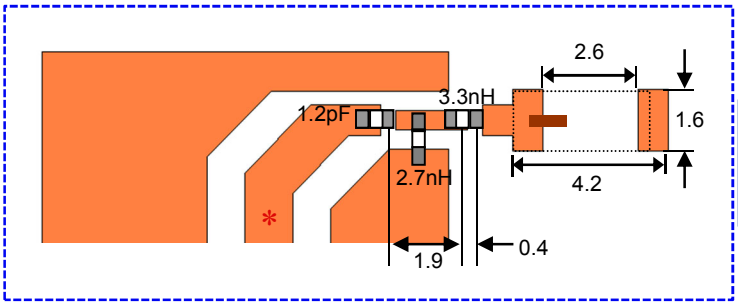
Mounting Considerations 1: Evaluation Board





JTI P/N for Matching Circuit:
Capacitor (1.2pF): 500R07S1R2BV4T
Inductor (2.7nH): L-07C2N7SV6T
Inductor (3.3nH): L-07C3N3SV6T

*Line width should be designed to provied 50Ω impedance

To order a pre-tuned 50Ω EVB with a female SMA connector click here: https://www.johansontechnology.com/request-a-sample
Reference p/n: 2450AT18B100-EB1SMA

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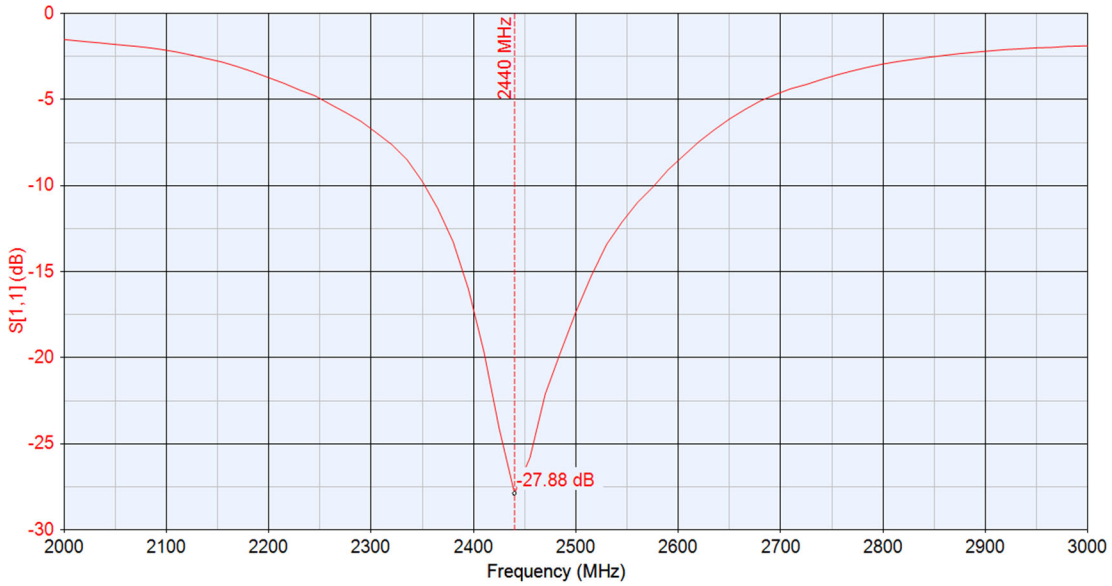
Mounting Considerations 1: Typical Electrical Performance (T=25°C)



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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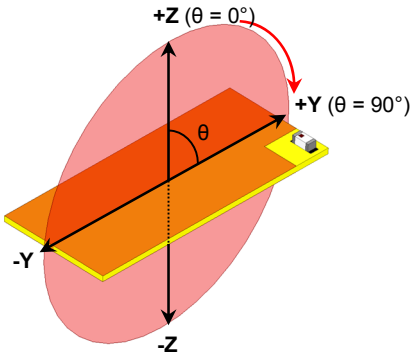
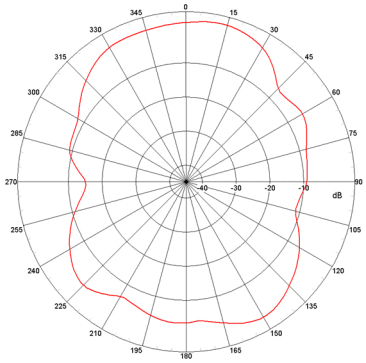
Mounting Considerations 1: Antenna Performance

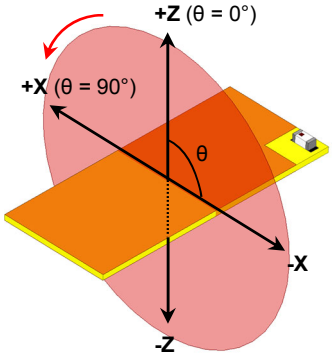
Typical 2D radiation patterns @ 2.44GHz

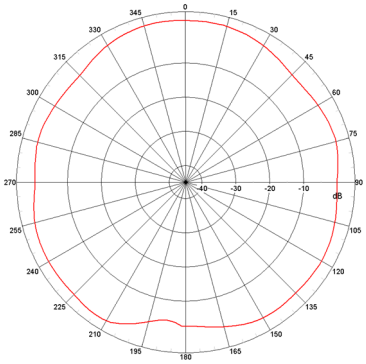
YZ-plane



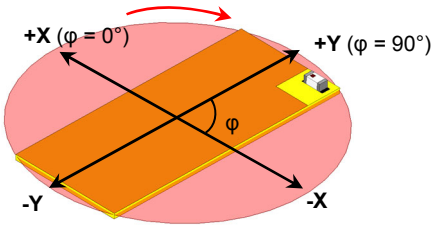


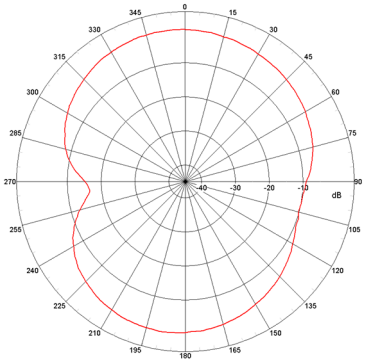
XZ-plane





XY-plane





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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:

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Soldering Information

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Packaging information

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Need help designing the antenna in? Use our antenna design services!
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We provide 2 free layout reviews and if you need us to tune and characterize the antenna on your product (inside our anechoic chamber) we can do that too. Small lab fee may apply.

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