

# "High Frequency Ceramic Solutions"

## 2.4GHz Mini Antenna, SMT

P/N 2450AT18B100

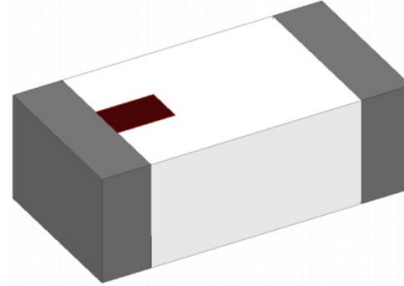
Detail Specification: 2/2/2018

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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.	Storage Period	18 months max.
		Storage Temperature	-45 to +125°C
Impedance	50 Ω	Operating Temperature	-45 to +125°C
Input Power	2 Watts max. (CW)	Reel Quantity	3000



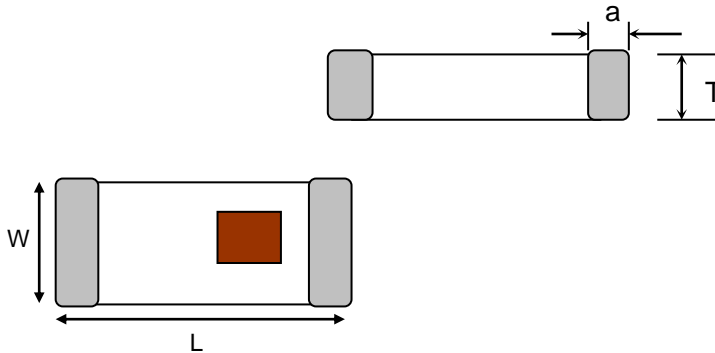
\*Efficiency based on Johanson's standard evaluation board

### 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-EBSMA (see page 2&3 for details)		

### Mechanical Dimensions

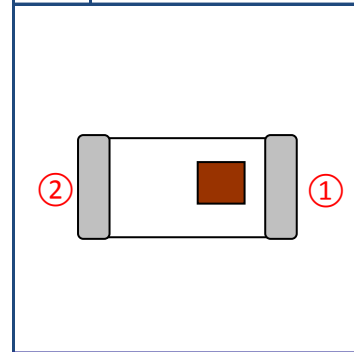
	In	mm
L	0.126 ± 0.008	3.20 ± 0.2
W	0.063 ± 0.008	1.60 ± 0.2
T	0.051 +.004/-.008	1.30 +0.1/-0.2
a	0.020 ± 0.008	0.50 ± 0.2



Want the layout file? Request it at: [www.johansontechnology.com/ask-a-question](http://www.johansontechnology.com/ask-a-question)

### Terminal Configuration

No.	Function
1	FEED
2	NC



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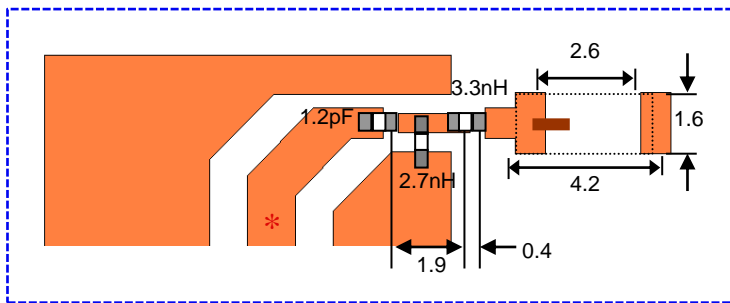
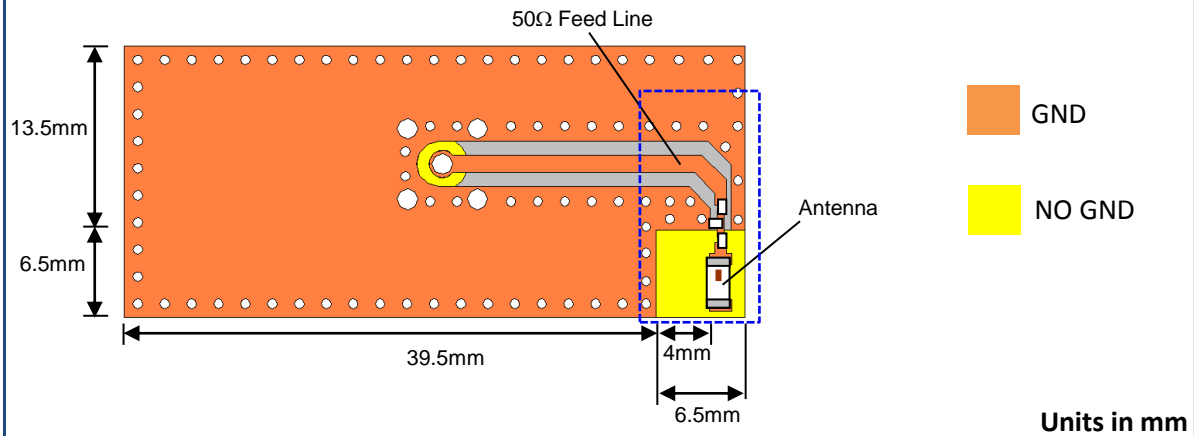
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## Mounting Considerations 1: Evaluation Board



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

\*Line width should be designed to provide 50Ω impedance

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: 2450AT18B100-EBSMA

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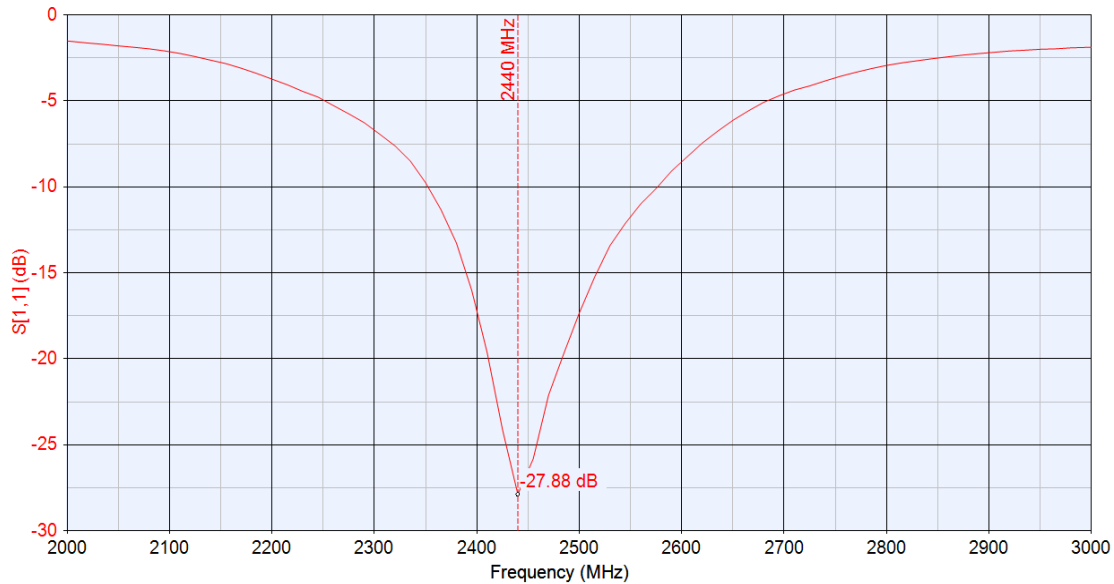
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## Mounting Considerations 1: Typical Electrical Performance (T=25°C)



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:  
[www.johansontechnology.com/ask-a-question](http://www.johansontechnology.com/ask-a-question)

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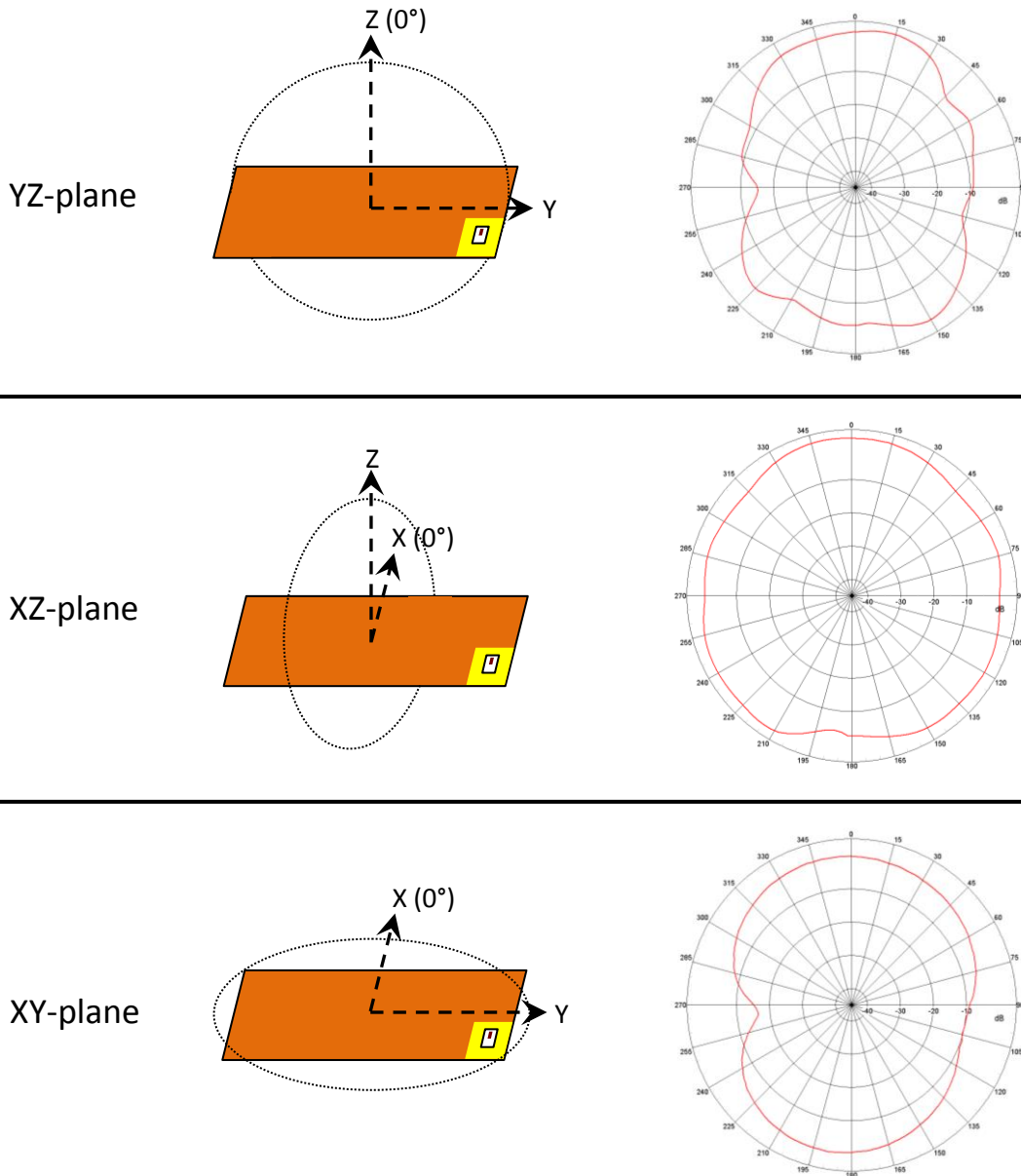
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## Mounting Considerations 1: Antenna Performance

Typical 2D radiation patterns @ 2.44GHz



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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

[www.johansontechnology.com/msl-rating](http://www.johansontechnology.com/msl-rating)

## Packaging information

[www.johansontechnology.com/tape-reel-packaging](http://www.johansontechnology.com/tape-reel-packaging)

## For layout review contact our Applications Team at:

[www.johansontechnology.com/ask-a-question](http://www.johansontechnology.com/ask-a-question)

## RoHS Compliance

[www.johansontechnology.com/rohs-compliance](http://www.johansontechnology.com/rohs-compliance)

Need help designing the antenna in? Use our antenna design services!

[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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