



**THE DATASHEET OF  
2450AT18B100E**



# High Frequency Ceramic Solutions

## 2.4GHz Mini Antenna, SMT

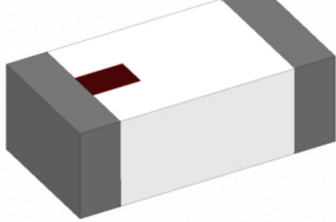
P/N 2450AT18B100

Detail Specification: 11/5/2018

Page 1 of 5

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			Storage Temperature	-45 to +125°C
Return Loss (dB)	9.5 min.			Operating Temperature	-45 to +125°C
Impedance	50 Ω			Recommended Storage Conditions of unused product on T&R and period.	+5 to +35°C Humidity 45~75%RH 18 months max.
Input Power	2 Watts max. (CW)				Reel Quantity

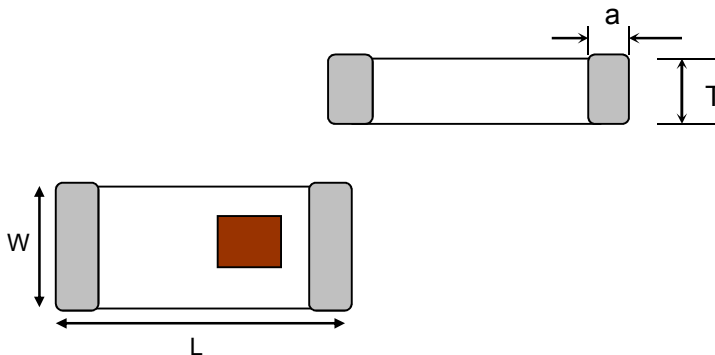
\*Efficiency based on Johanson's standard evaluation board

### 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

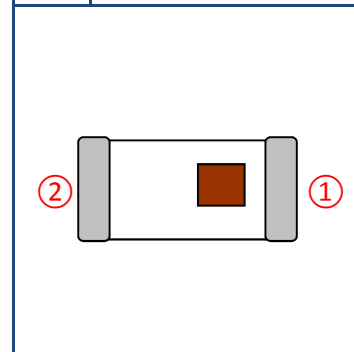
	In	mm
L	0.126 ± 0.008	3.20 ± 0.2
W	0.063 ± 0.008	1.60 ± 0.2
T	0.051 +.004/-0.008	1.30 +0.1/-0.2
a	0.020 ± 0.008	0.50 ± 0.2



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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Ver. 4.0

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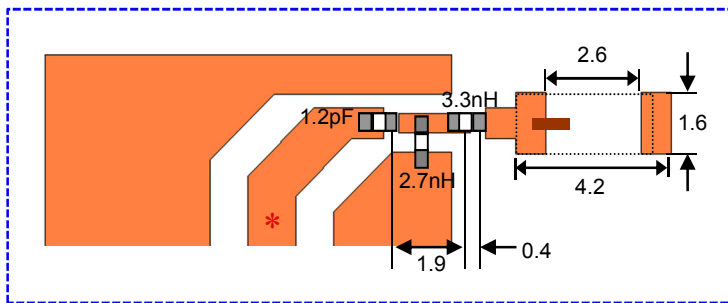
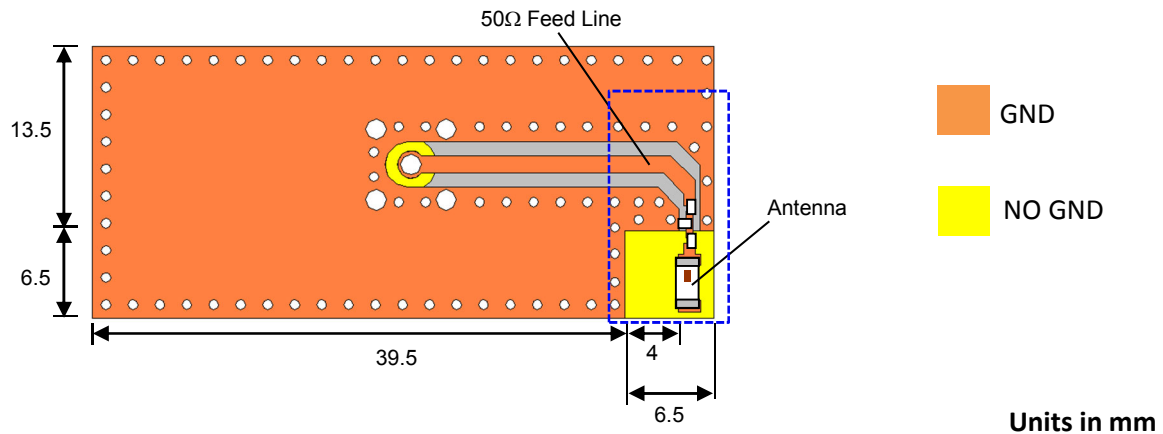
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P/N 2450AT18B100

Detail Specification: 11/5/2018

Page 2 of 5

## 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 provide 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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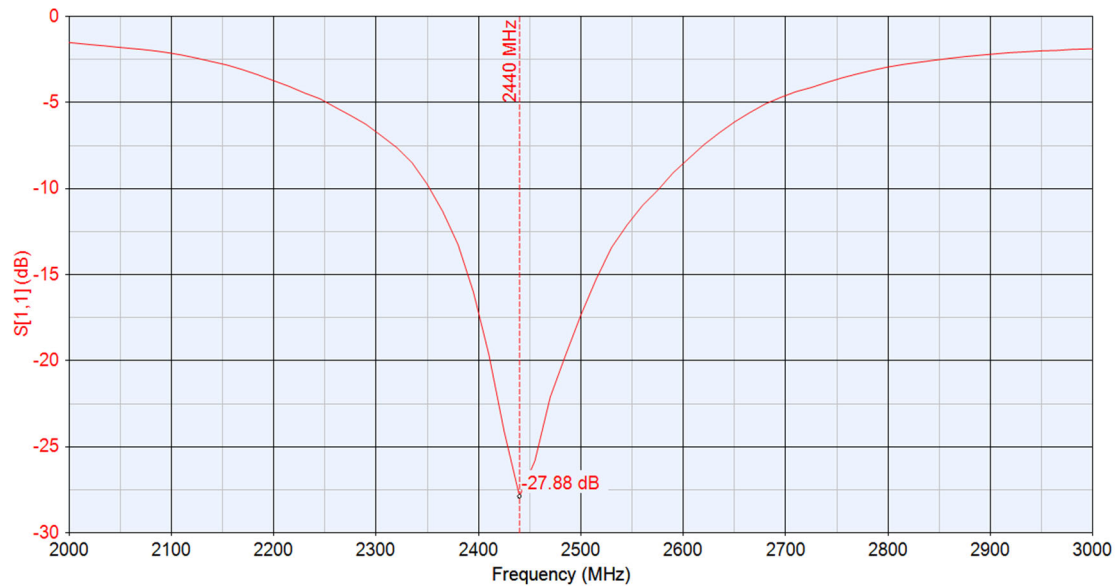
2.4GHz Mini Antenna, SMT

P/N 2450AT18B100

Detail Specification: 11/5/2018

Page 3 of 5

## 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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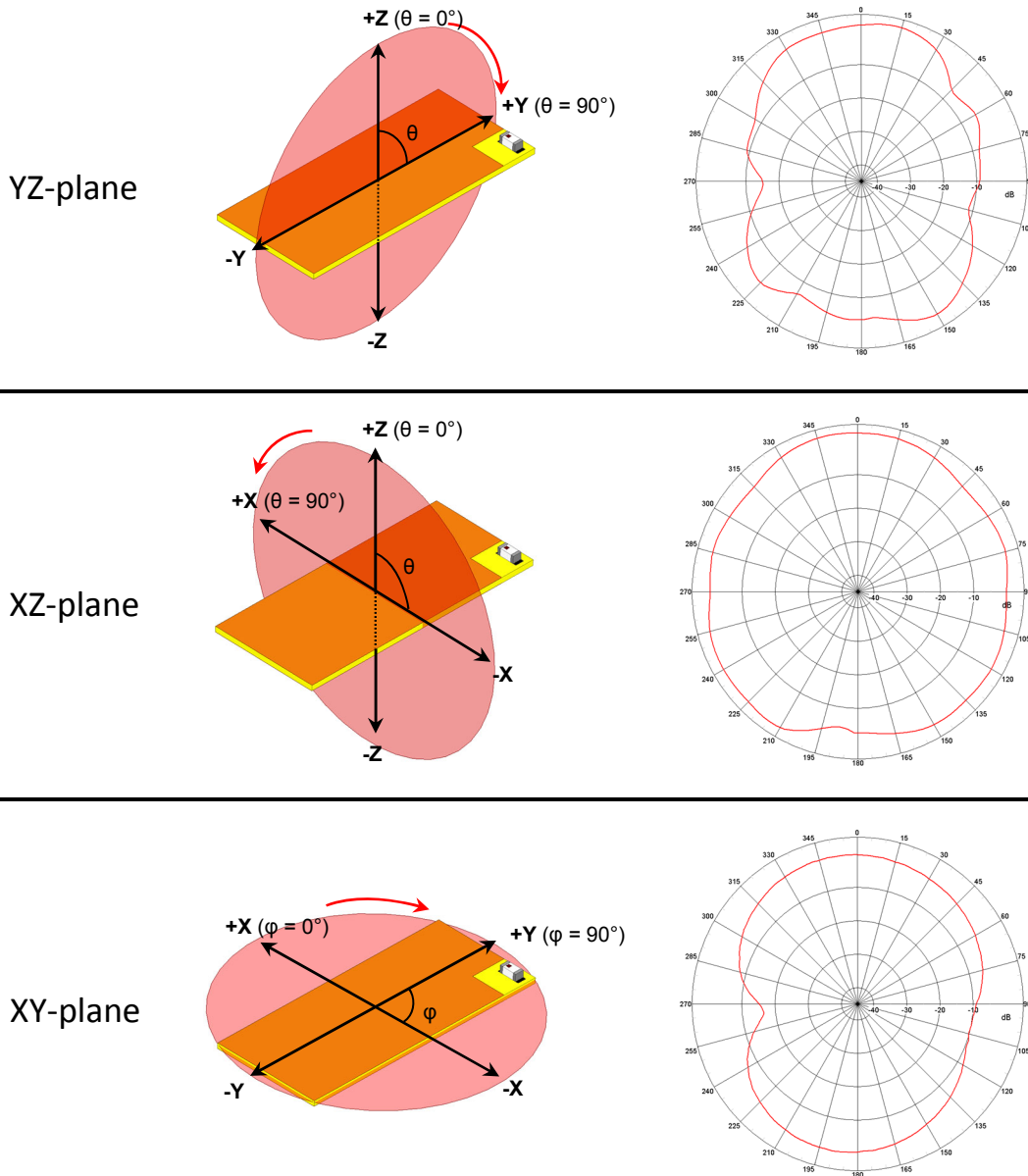
P/N 2450AT18B100

Detail Specification: 11/5/2018

Page 4 of 5

## Mounting Considerations 1: Antenna Performance

Typical 2D radiation patterns @ 2.44GHz



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Detail Specification: 11/5/2018

Page 5 of 5

**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>

**For layout review contact our Applications Team at:**

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

**RoHS Compliance**

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

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

<https://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 our anechoic chamber) we can do that too. Small lab fee may apply.

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