

# "High Frequency Ceramic Solutions"

## 2.4GHz Mini Antenna, SMT

P/N 2450AT18A100

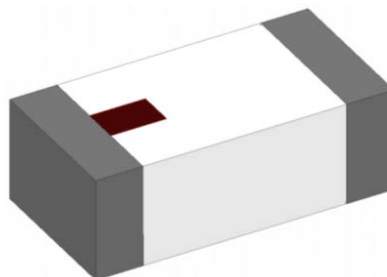
Detail Specification: 7/9/2018

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

### General Specifications

Part Number	2450AT18A100		
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	-40 to +125°C
Impedance	50 Ω	Operating Temperature	-40 to +125°C
Input Power	2 Watts max. (CW)	Reel Quantity	3000



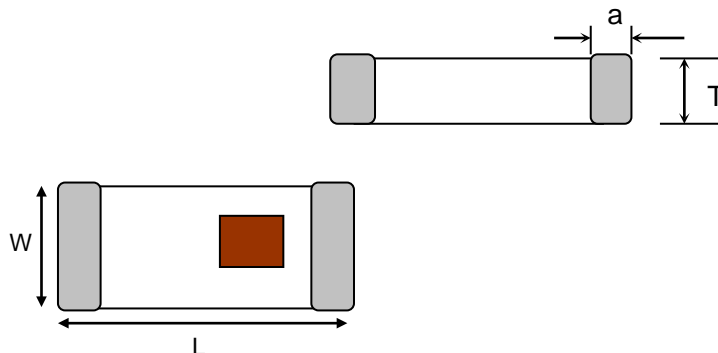
\*Efficiency based on Johanson's standard evaluation board

### Part Number Explanation

P/N Suffix	Packing Style	Bulk (loose)	Suffix = S	e.g. 2450AT18A100S
		T & R	Suffix = E	e.g. 2450AT18A100E
		100% Tin	Suffix = E or S	e.g. 2450AT18A100(E or S)
	Evaluation Board	2450AT18A100-EBSMA (see page 2&3 for details)		

### Mechanical Dimensions

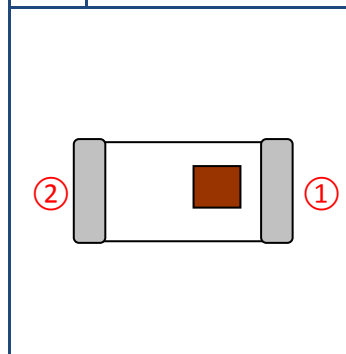
	In	mm
L	0.126 ± 0.008	3.20 ± 0.2
W	0.063 ± 0.008	1.60 ± 0.2
T	0.051 +.004/-.008	1.30 +0.1/-0.2
a	0.020 ± 0.012	0.50 ± 0.3



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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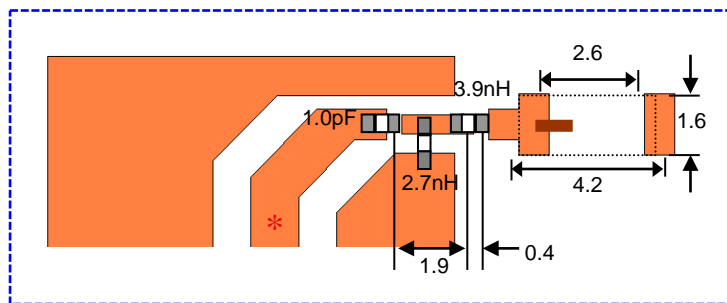
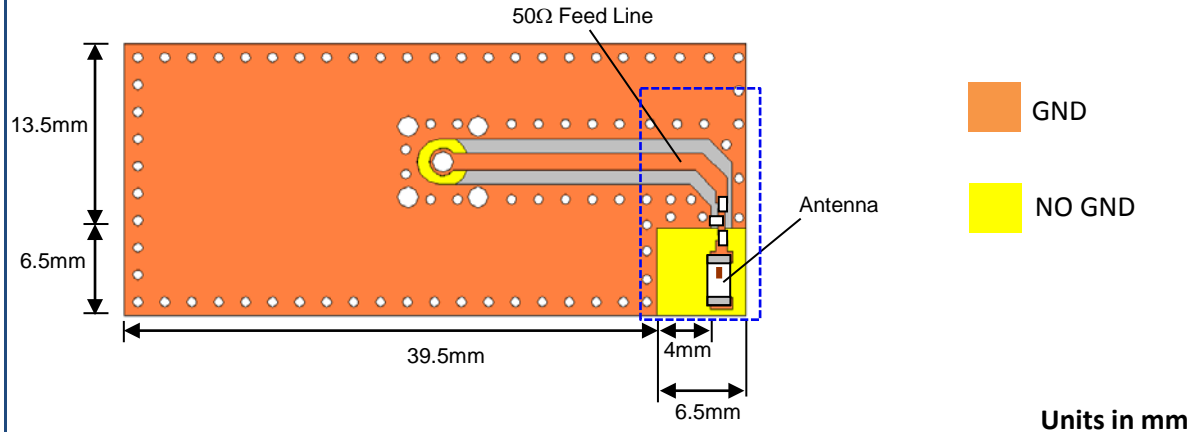
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## Mounting Considerations 1: Evaluation Board



JTI P/N for Matching Circuit: Cap  
(1.0pF): 500R07S1R0BV4T  
Inductor (2.7nH): L-07C2N7SV6T  
Inductor (3.9nH): L-07C3N9SV6T

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: 2450AT18A100-EBSMA

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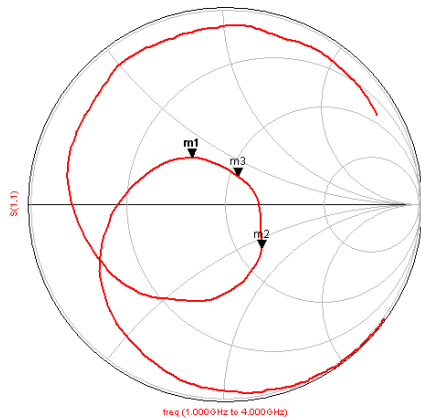
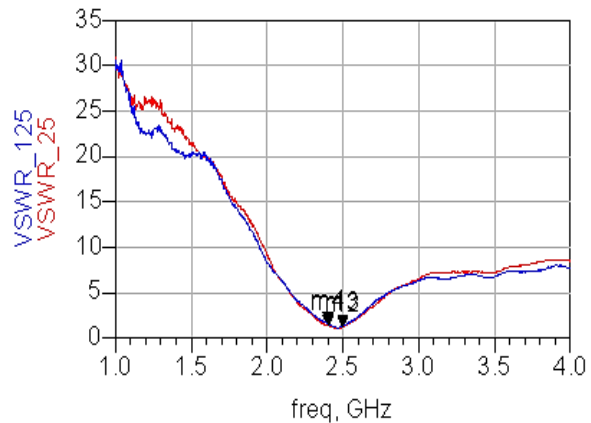
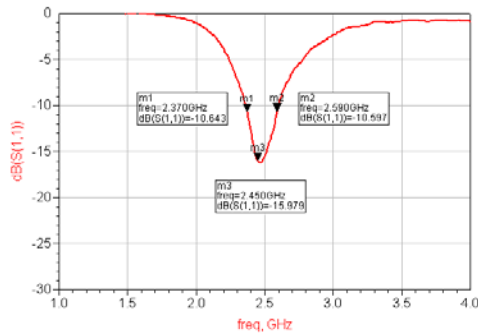
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## Mounting Considerations 1: Typical Electrical Performance (T=25°C)

Return Loss with matching circuit @ +25C VSWR with matching circuit @ +25C and +125C



m 1
freq=2.400GHz
VSWR_25=1.386
m 2
freq=2.500GHz
VSWR_25=1.219

m 4
freq=2.400GHz
VSWR_125=1.606
m 3
freq=2.500GHz
VSWR_125=1.332

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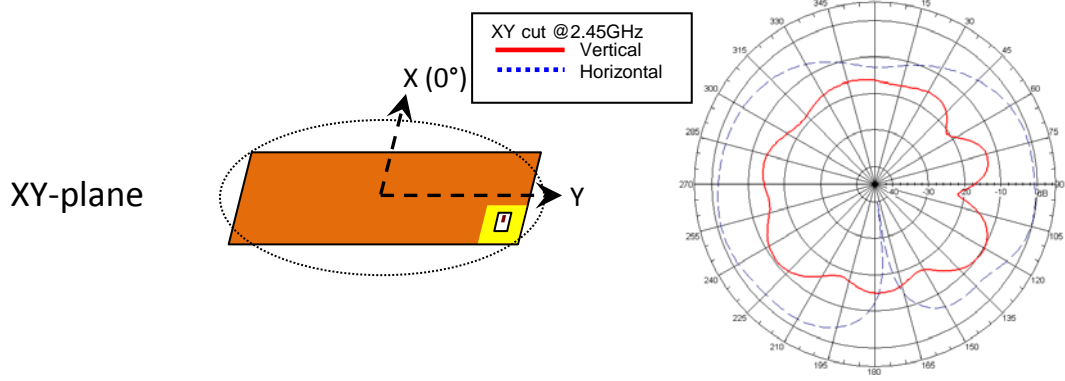
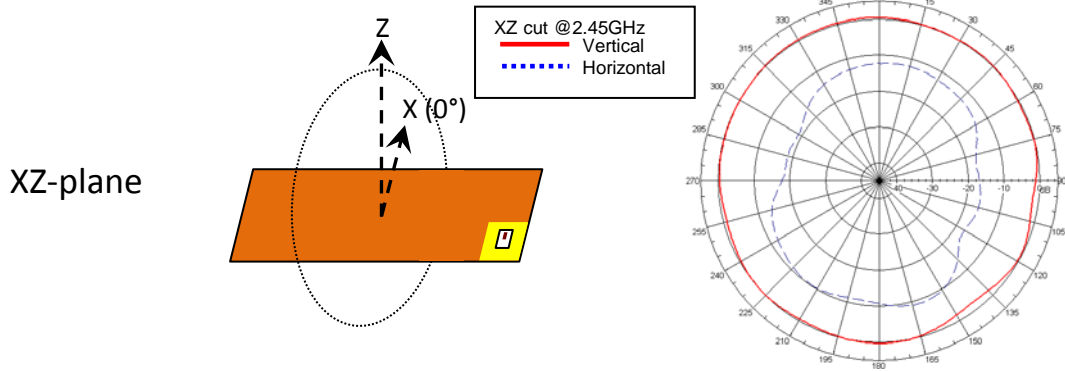
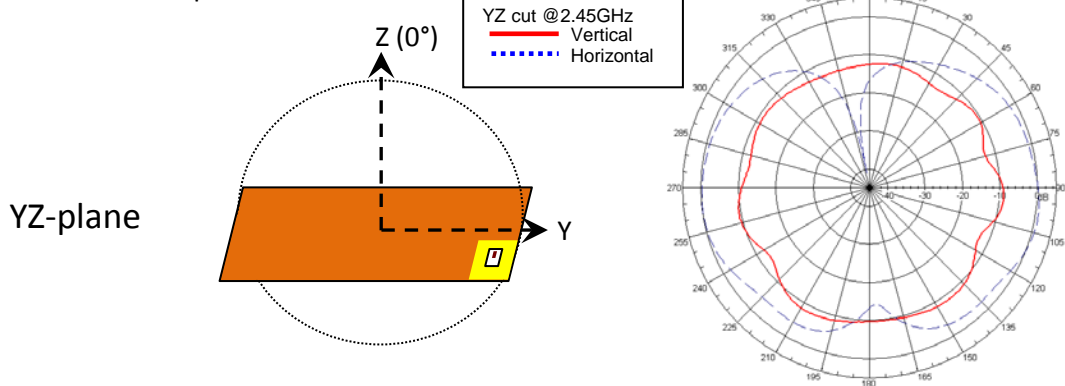
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## Mounting Considerations 1: Antenna Performance

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

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## 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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