

# "High Frequency Ceramic Solutions"

**2.4 GHz WLAN, Home RF, Bluetooth Antenna, 802.11 b/g P/N 2450AT43B100**  
**With Ground Clearance Requirements Minimized**

Detail Specification: 1/29/2013

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## General Specifications

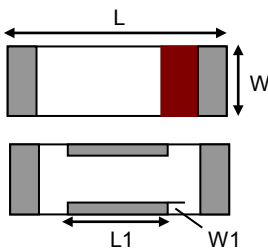
<b>Part Number</b>	2450AT43B100	<b>Input Power</b>	2W max.
<b>Frequency Range</b>	2400 - 2500 Mhz	<b>Impedance</b>	50 Ω
<b>Peak Gain</b>	1.3 dBi typ. (XZ-V)	<b>Reel Quantity</b>	1,000
<b>Average Gain</b>	-0.5 dBi typ. (XZ-V)	<b>Operating Temperature</b>	-40 to +85°C
<b>Return Loss</b>	9.5 dB min.	<b>Recommended Storage Conditions (for unused product on T&amp;R)</b>	+5 to +35°C, Humidity: 45-75%RH, 18 mos. Max

## Part Number Explanation

<b>P/N Suffix</b>	<b>Packaging Style</b>	Bulk	Suffix = S	Eg. 2450AT43B100S
		T & R	Suffix = E	Eg. 2450AT43B100E
	<b>Termination Style</b>	100% Tin	Suffix = None	Eg. 2450AT43B100(E or S)
		Tin / Lead	Please consult Factory	
<b>Evalaution Board</b>	2450AT43B100-EB1SMA (comes with SMA connector)			

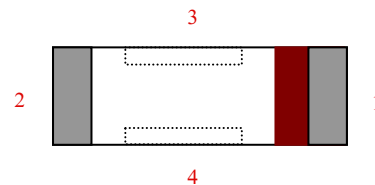
## Mechanical Dimensions

	In	mm
<b>L</b>	0.276 ± 0.008	7.00 ± 0.20
<b>W</b>	0.079 ± 0.008	2.00 ± 0.20
<b>L1</b>	0.102 ± 0.008	2.60 ± 0.20
<b>W1</b>	0.020 ± 0.008	0.50 ± 0.20
<b>T</b>	0.079 +.004/-0.008	2.00 +0.1/-0.2
<b>a</b>	0.020 ± 0.012	0.50 ± 0.30



## Terminal Configuration

No.	Function
1	Feed Point
2	NC
3	NC
4	NC



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[www.johansontechnology.com](http://www.johansontechnology.com)  
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Ver 1.1

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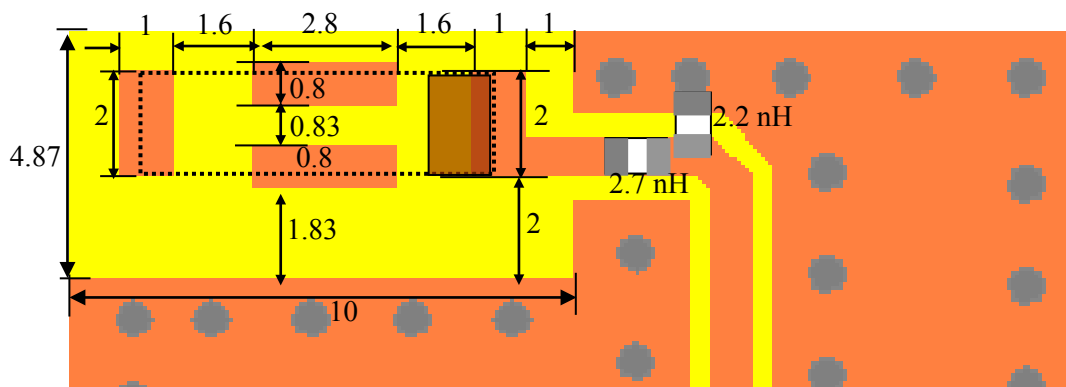
## Mounting and Layout Guidelines:

Mount these devices with brown mark facing up. Units: mm

\* Antenna feed line width should be designed to provide 50  $\Omega$  impedance otherwise improper operation will occur

**Note 1:** Pins 3 & 4, although "NC", must be soldered to its PCB pads for proper electrical operation

### With Matching Circuits



JTI P/N for Matching Circuit:  
Inductor (2.2nH): L-07C2N2SV6T  
Inductor (2.7nH): L-07C2N7SV6T

(Matching circuit and component values will be different, depending on PCB layout)

**Note 2:** It is recommended that the designer leave available slots for a "pi" (or shunt-series-shunt) network. The antenna matching network values above are used when antenna is mounted on Johanson's evaluation board. The matching values on client's PCB will be different. Go to: <http://johansontechnology.com/tuning> and see how to obtain the new values. If you need further help, contact our RF Applications Eng Team at: <http://www.johansontechnology.com/en/ask-a-technical-question.html>

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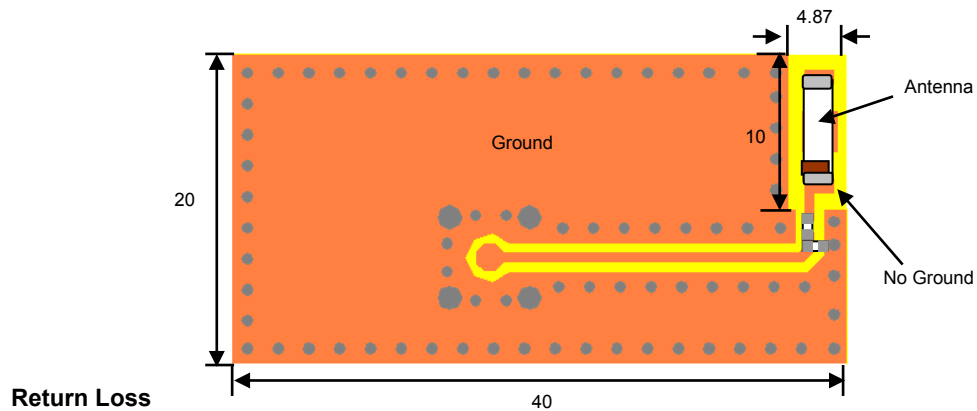
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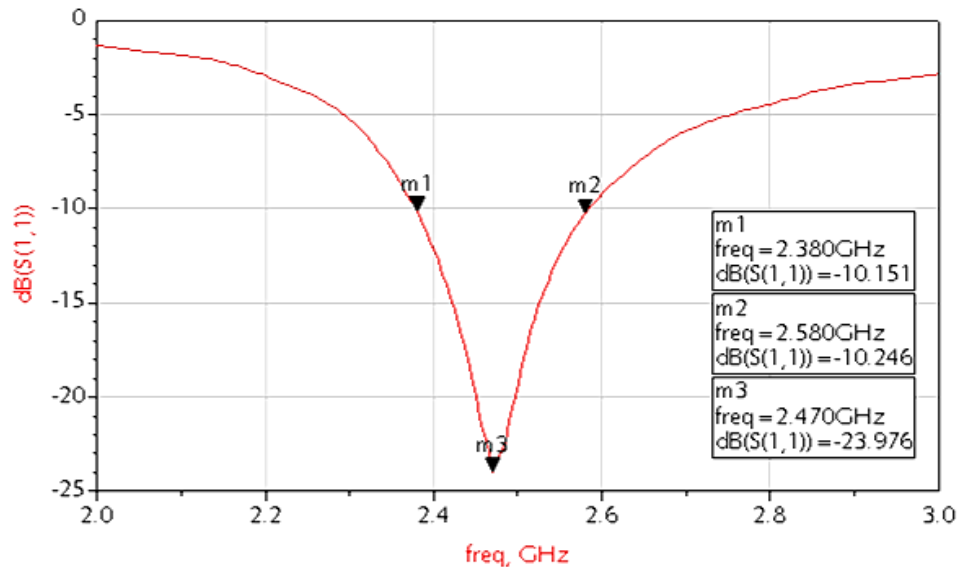
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## Typical Electrical Characteristics (T=25°C)

Test Board used orderable p/n: 2450AT43B100-EB1SMA (comes with SMA connector)



Return Loss



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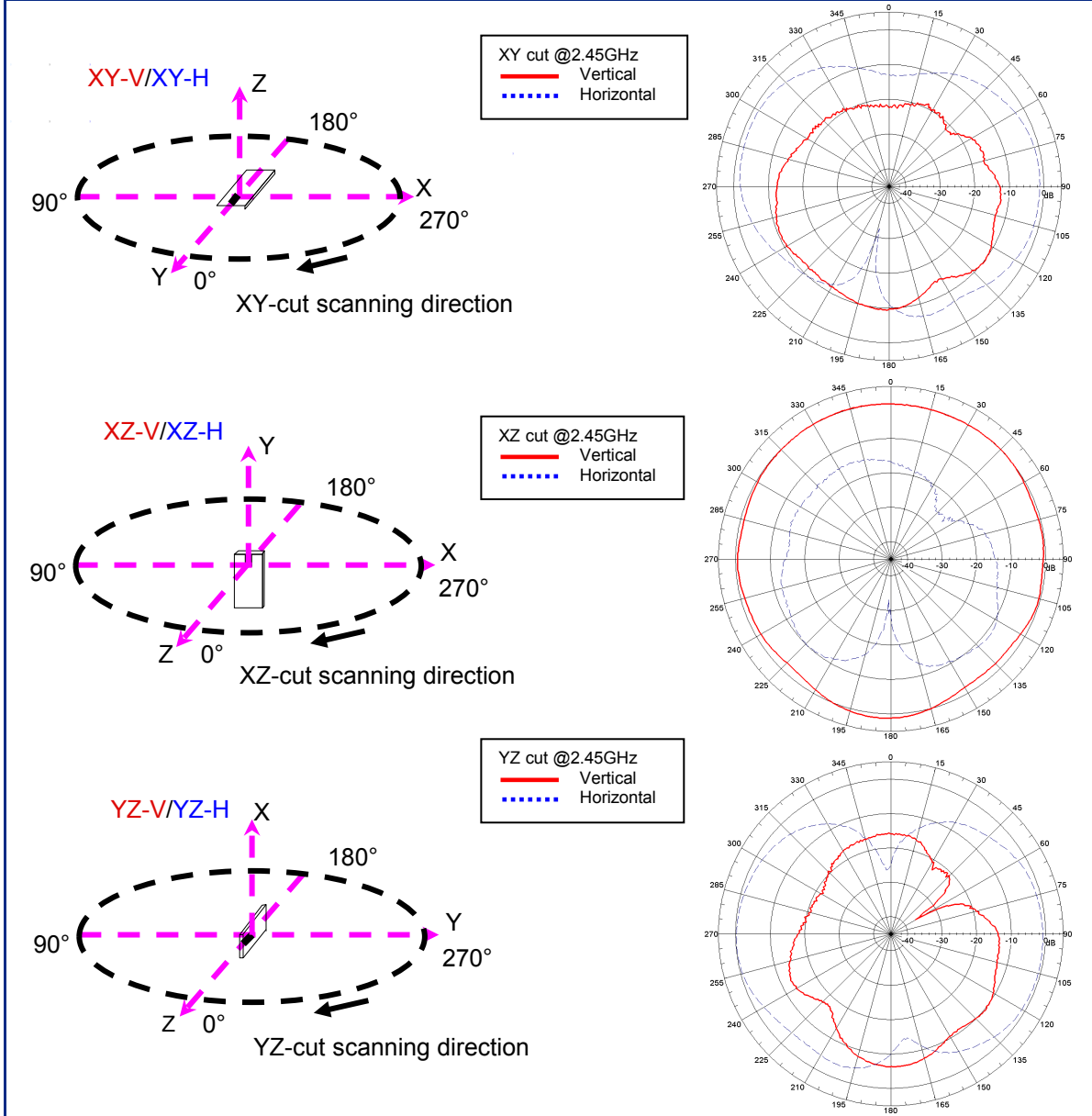
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Detail Specification: 1/29/2013

## Typical Electrical Characteristics/Radiation Patterns (T=25°C)



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