

"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

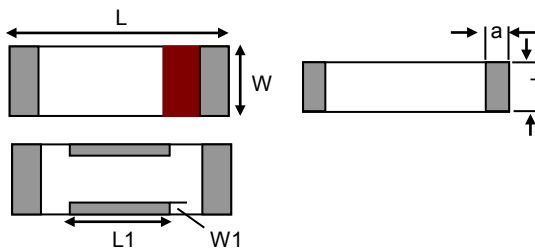
Part Number	2450AT43B100	Input Power	2W max.
Frequency Range	2400 - 2500 Mhz	Impedance	50 Ω
Peak Gain	1.3 dBi typ. (XZ-V)	Reel Quantity	1,000
Average Gain	-0.5 dBi typ. (XZ-V)	Operating Temperature	-40 to +85°C
Return Loss	9.5 dB min.	Recommended Storage Conditions (for unused product on T&R)	+5 to +35°C,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

Part Number Explanation

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

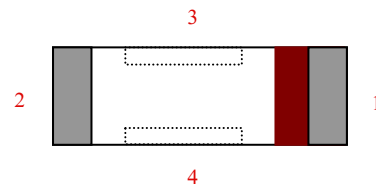
Mechanical Dimensions

	In	mm
L	0.276 $\pm$ 0.008	7.00 $\pm$ 0.20
W	0.079 $\pm$ 0.008	2.00 $\pm$ 0.20
L1	0.102 $\pm$ 0.008	2.60 $\pm$ 0.20
W1	0.020 $\pm$ 0.008	0.50 $\pm$ 0.20
T	0.079 +.004/-.008	2.00 +0.1/-0.2
a	0.020 $\pm$ 0.012	0.50 $\pm$ 0.30



Terminal Configuration

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



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Ver 1.1

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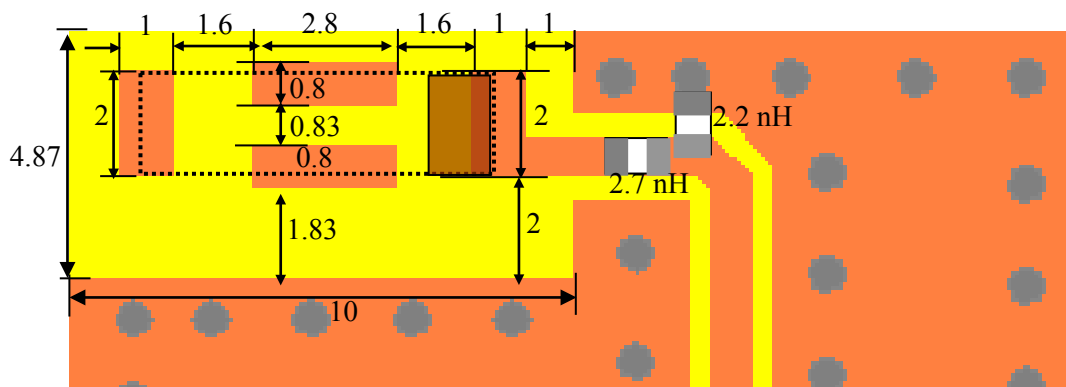
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Mounting and Layout Guidelines:

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

- * Antenna feed line width should be designed to provide 50 Ω 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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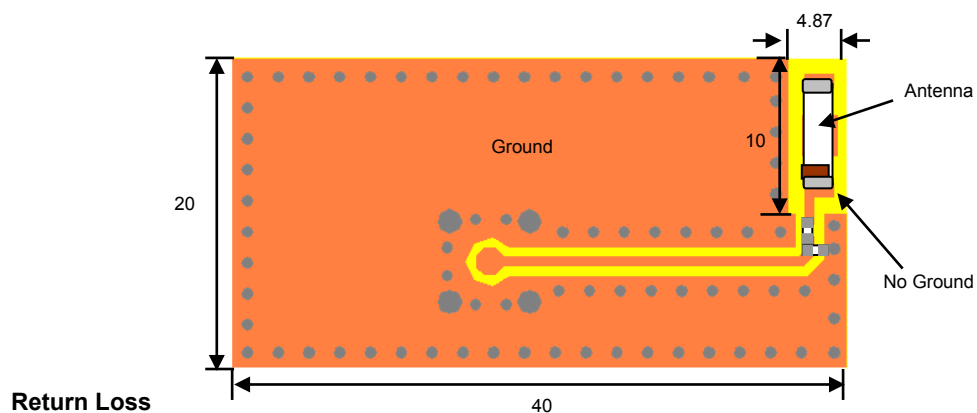
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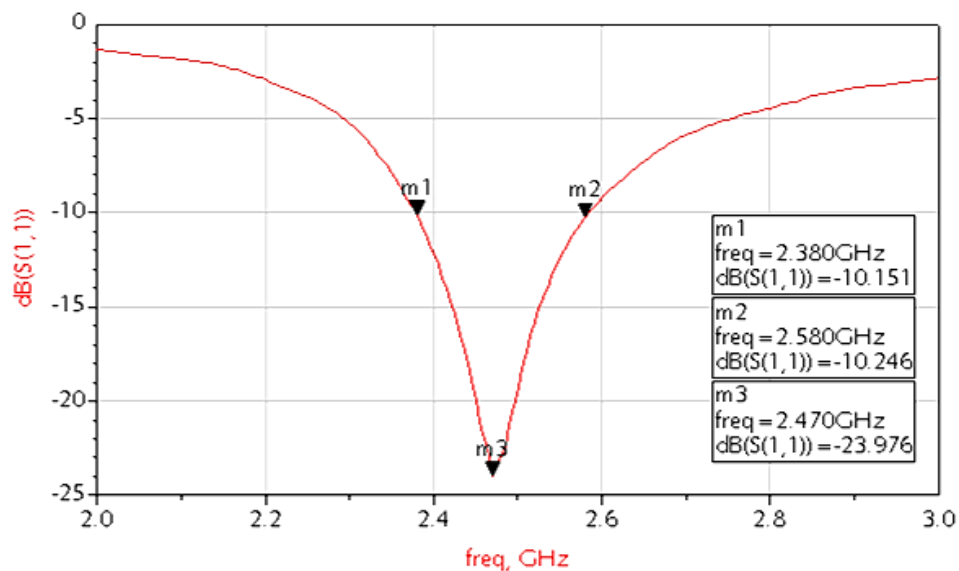
Detail Specification: 1/29/2013

Typical Electrical Characteristics (T=25°C)

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



With Matching Circuit



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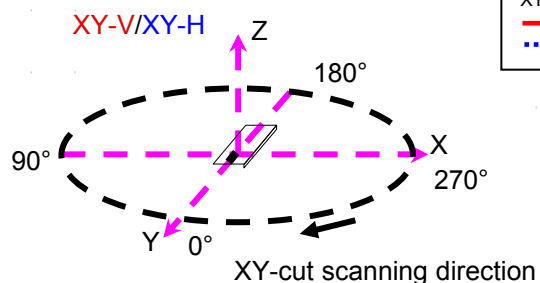
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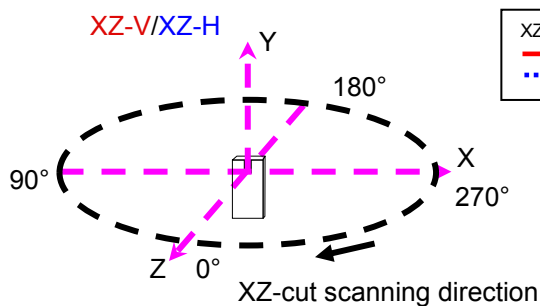
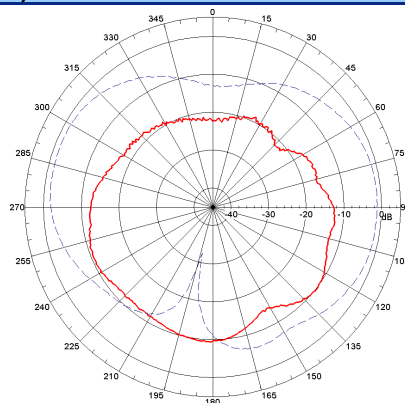
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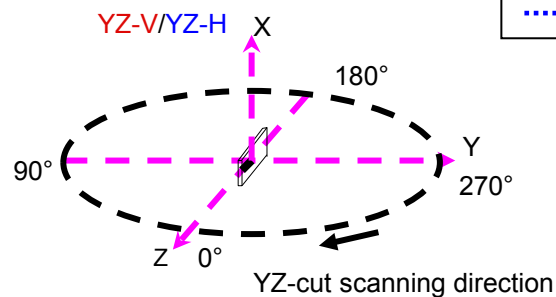
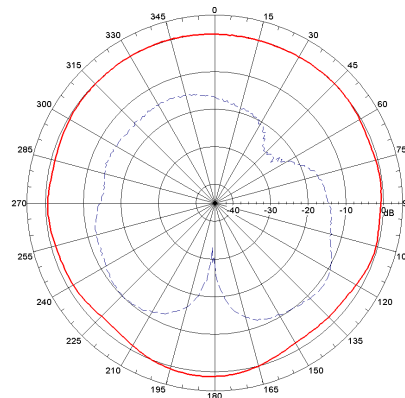
Typical Electrical Characteristics/Radiation Patterns (T=25°C)



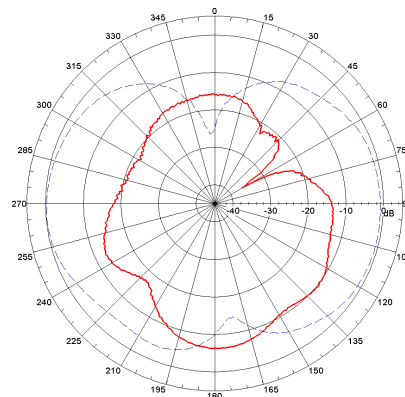
XY cut @2.45GHz
— Vertical
- - - Horizontal



XZ cut @2.45GHz
— Vertical
- - - Horizontal



YZ cut @2.45GHz
— Vertical
- - - Horizontal



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