

"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

Page 1 of 4

General Specifications

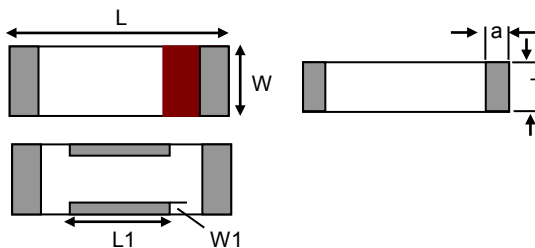
Part Number	2450AT43B100	Input Power	2W max.
Frequency Range	2400 - 2500 Mhz	Impedance	50 Ω
Peak Gain	1.3 dBi typ. (XZ-V)	Reel Quantity	1,000
Average Gain	-0.5 dBi typ. (XZ-V)	Operating Temperature	-40 to +85°C
Return Loss	9.5 dB min.	Recommended Storage Conditions (for unused product on T&R)	+5 to +35°C,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

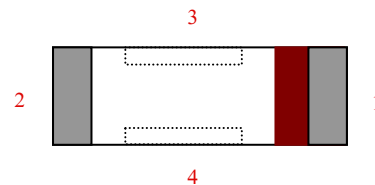
Mechanical Dimensions

	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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www.johansontechnology.com
4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821

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 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

The diagram shows a yellow rectangular area representing the antenna feed network on an orange PCB background. The yellow area has a total width of 10 mm and a total height of 4.87 mm. It contains several rectangular components and traces. Dimensions are given in mm: horizontal segments from left to right are 1, 1.6, 2.8, 1.6, 1, and 1; vertical segments from top to bottom are 2, 0.8, 0.83, 0.8, 1.83, and 2. Two inductor components are shown as grey rectangles with white labels: one labeled '2.2 nH' and another labeled '2.7 nH'. A dashed line indicates a central horizontal axis.

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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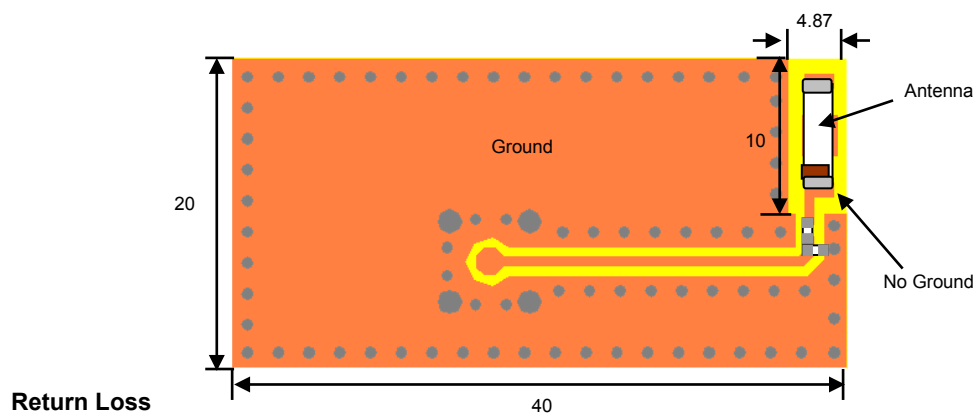
With Ground Clearance Requirements Minimized

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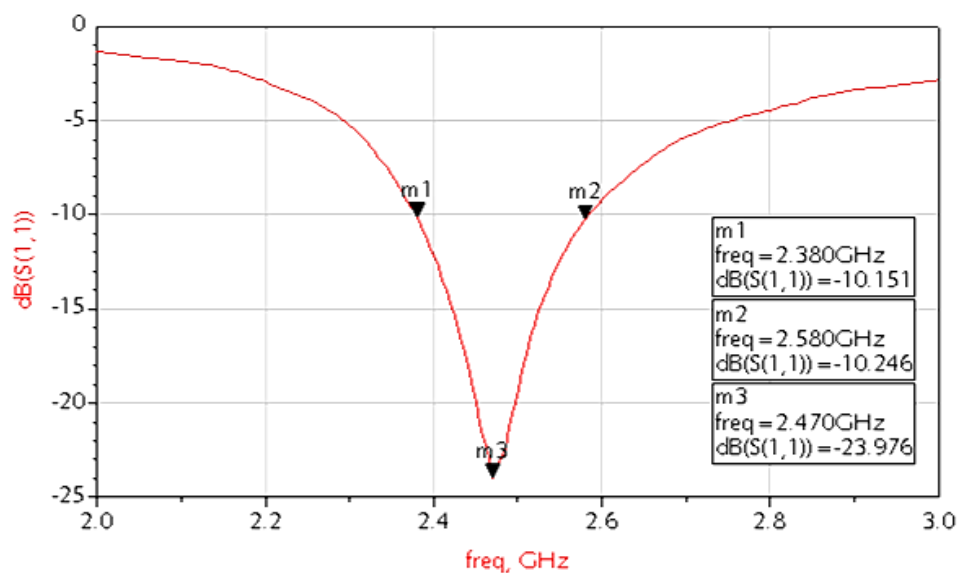
Detail Specification: 1/29/2013

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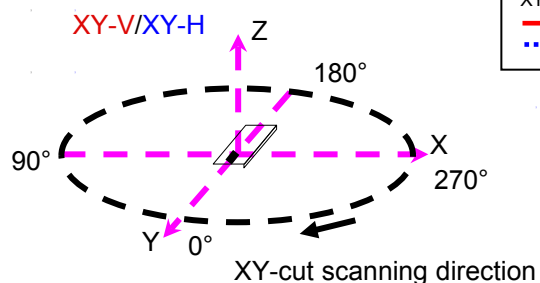
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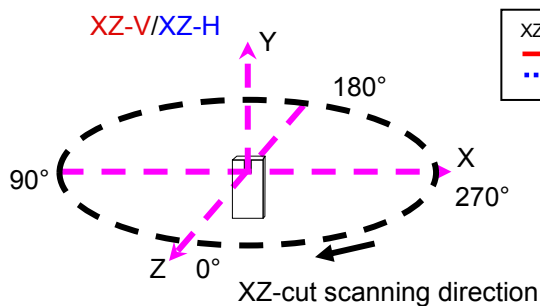
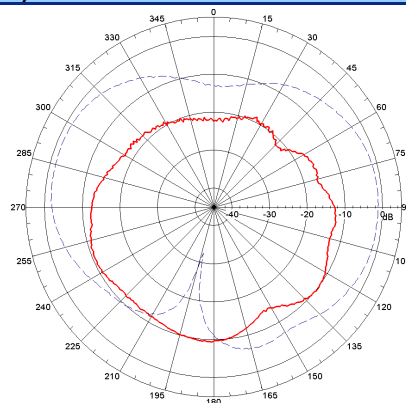
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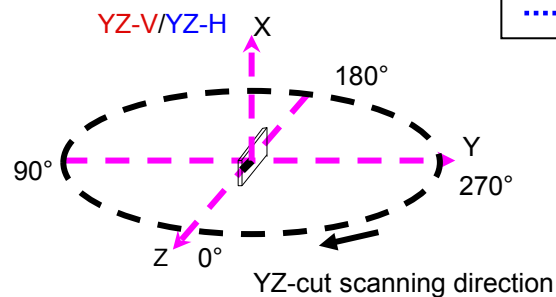
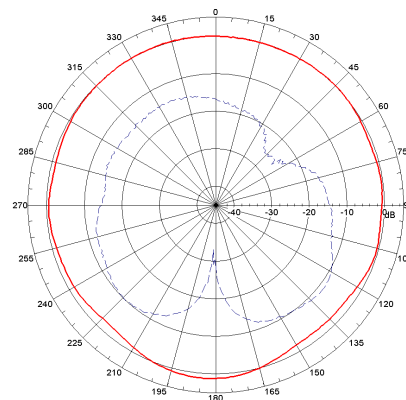
Typical Electrical Characteristics/Radiation Patterns (T=25°C)



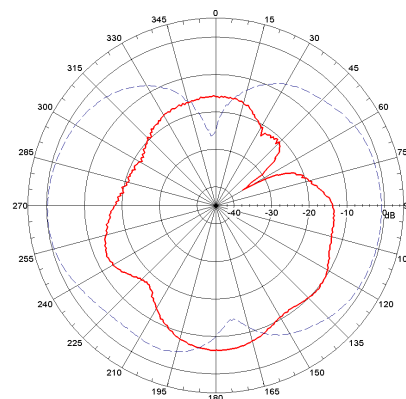
XY cut @2.45GHz
 — Vertical
 Horizontal



XZ cut @2.45GHz
 — Vertical
 Horizontal



YZ cut @2.45GHz
 — Vertical
 Horizontal



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Certificate of RoHS Compliance

Johanson Technology (JTI)
4001 Calle Tecate
Camarillo, CA 93012
805-389-1166

Johanson Technology Part Number, Lot Number (if applicable) & Description:

<u>JTI PN</u>	<u>Description</u>	<u>Lot</u>
2450AT43B100	2.4 GHz Chip Antenna	All

This document certifies that the component(s) of part number(s) stated above and manufactured by JTI are in compliance with "ROHS 2" EU Directive 2011/65/EU of the European Parliament and of the Council of 08 June 2011 on the Restriction of the use of certain Hazardous Substances in electrical and electronics equipment (RoHS Directives).

This document also certifies that the Chemical (Substance) Checklist and the Materials Declaration provided (if required) by JTI are accurate.

More information can be found by following the URL below:

<http://www.johansontechnology.com/technical-notes/rohs-compliance.html>

Authorized signatory for JTI:



Signature

01/04/2016

Date

Miriam Guerrero
Name (Printed)

Document Control Admin.
Title