"High Frequency Ceramic Solutions"

2.4 GHz WLAN, Home RF, Bluetooth, 802.11 b/g, Antenna — P/N 2450AT43B100

With Ground Clearance Requirements Minimized

Detail Specification: 11/14/2016

Tip: This antenna "loves" to be mounted on PCB corners for optimum performance

General Specifications

Part Number	2450AT43B100	**Input Power**	2W max. (CW)
Frequency Range	2400 - 2500 Mhz	**Reel Quanity**	1,000
Peak Gain	1.3 dBi typ. (XZ-V)	**Operating Temperature**	-40 to +105°C
Average Gain	-0.5 dBi typ. (XZ-V)	**Storage Temperature**	-40 to +105°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 months max.
Radiation Pattern	Omnidirectional		

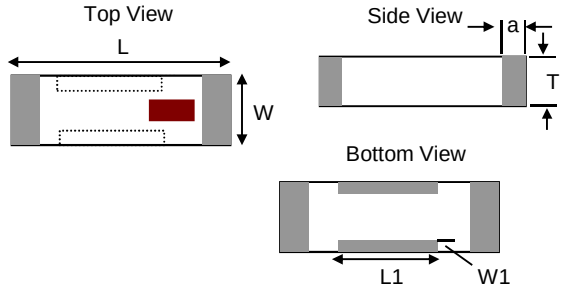
Would you like us to tune the antenna to your PCB? Contact us at:
www.johansontechnology.com/ask-a-question

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)
	Evalaution Board	2450AT43B100-EB1SMA (comes pre-tuned with SMA connector)		

Mechanical Dimensions

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



Want the layout file? Request it at:
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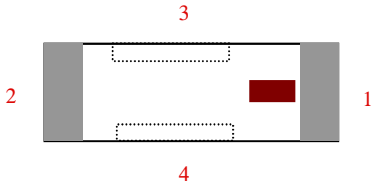
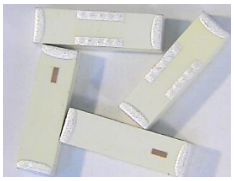
Terminal Configuration

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



NOTE: Pins 2, 3 & 4, although "NC", must be soldered to their corresponding PCB pads for proper electrical operation



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Ver 2.1

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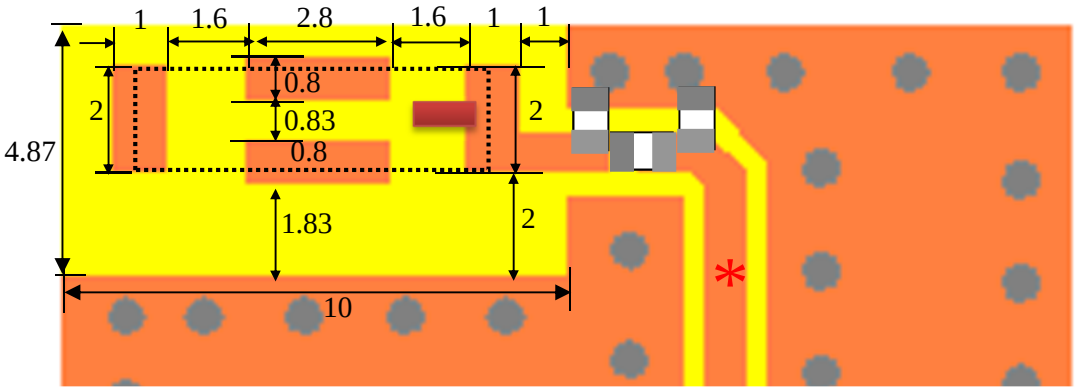
Mounting and Layout Guidelines:

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

Need help designing the antenna in? Use our antenna design services!
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 design (anechoic chamber) we can do that too (lab fee may apply for the latter).



IMPORTANT! Matching circuit and component values will be different on your PCB, this will depend on PCB layout and shape, encasment, etc

*Antenna feed line width should be designed to provide 50 Ω impedance otherwise improper operatio

Note 1: Pins 2, 3 & 4, although "NC", must be soldered to their corresponding PCB pads for proper e

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 monted on Johanson's evaluation board. The matching values on clinet's PCB will be different. Go to: www.johansontechnology.com/tuning and see how to obtain the new values. If you need need us to tune it for you or would like the lyaout files, please contact our RF Applications Eng Team at: www.johansontechnology.com/ask-a-question

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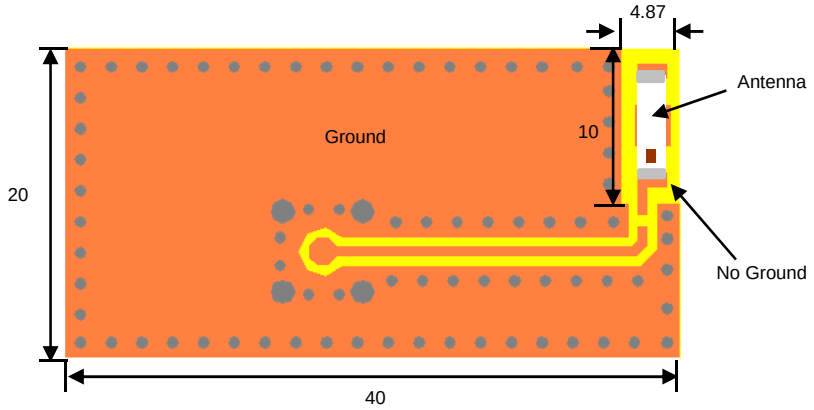
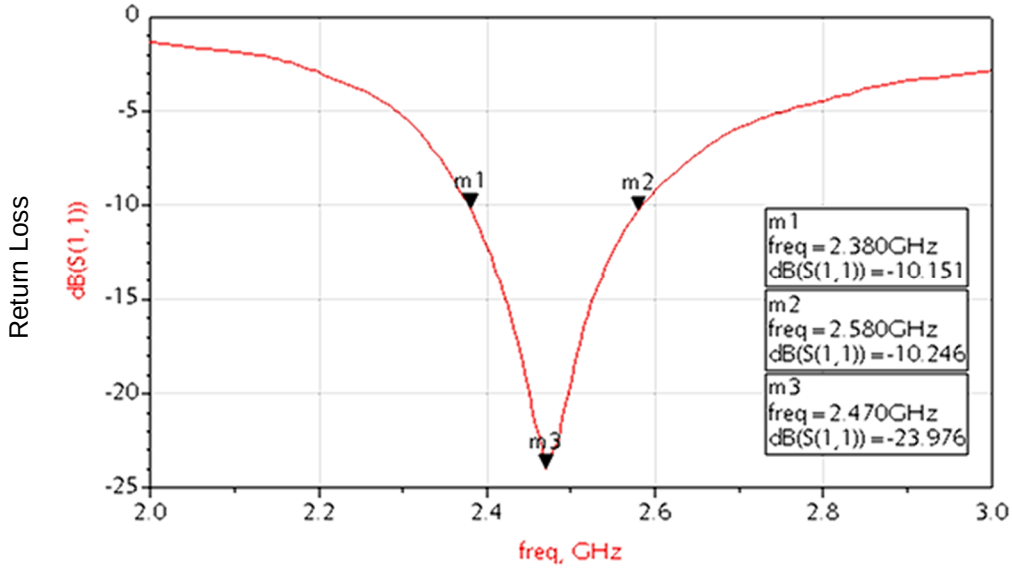
EVB used to characterize the antenna

Would you like to order this pre-tuned EVB? Click on:
www.johansontechnology.com/request-a-sample and please reference p/n: 2450AT43B100-EB1SMA
(comes with SMA connector)



Typical Electrical Characteristics (T=25°C)

With Proper Matching Circuit



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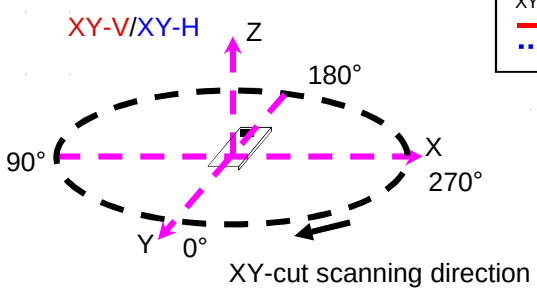
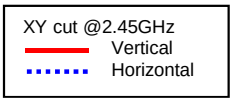
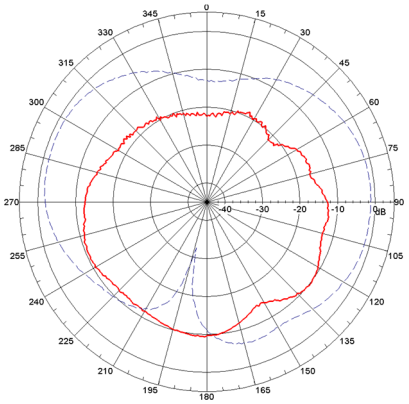
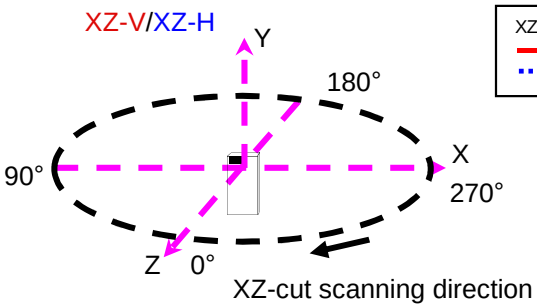
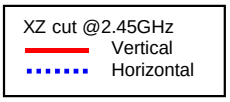
Typical Electrical Characteristics/Radiation Patterns (T=25°C)

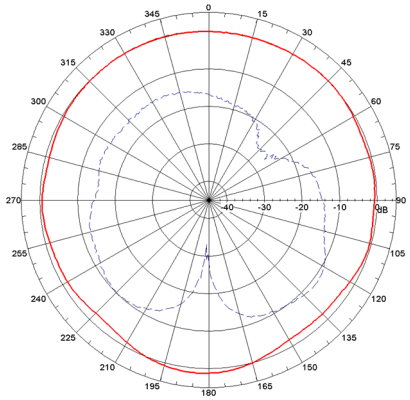


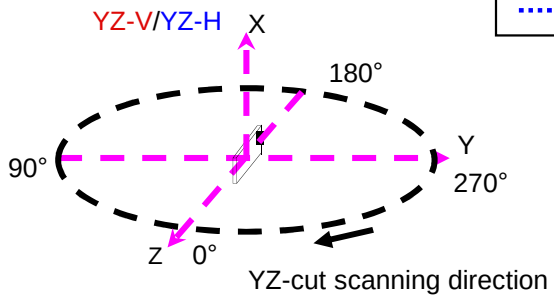


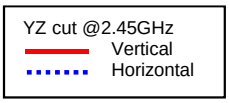


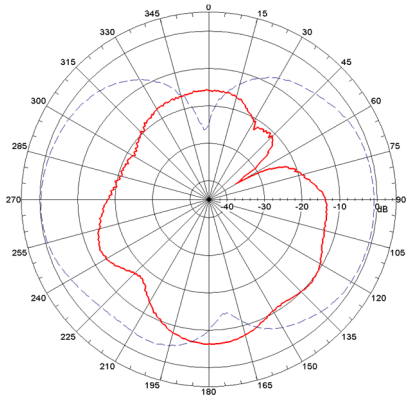












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www.johansontechnology.com/ipc-antenna-services

More SMD Chip Antennas at:
www.johansontechnology.com/antennas

Soldering Information
www.johansontechnology.com/ipcsoldering-profile

Antenna layout and tuning techniques (How to obtain the new antenna matching values)
www.johansontechnology.com/tuning

Packaging information
http://www.johansontechnology.com/tape-reel-packaging

RoHS2 (6/6) full compliance
www.johansontechnology.com/rohs-compliance

MSL Info
www.johansontechnology.com/msl-rating

P/N Explanation and Breakdown
www.johansontechnology.com/ipc-pn-explained

Recommended Storage Conditions of <u>uninstalled</u> product still on T&R	-40 ~ +85 °C, Humidity 45~75%RH, 18 mos. Max

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Technical Author: Manuel Carmona

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