

"High Frequency Ceramic Solutions"

Ultra-Miniature 2.4GHz Chip antenna 0.37mm max Thickness

P/N 2450AT07A0100

Detail Specification: 2/21/2014

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General Specifications

Part Number	2450AT07A0100	Input Power	2W max. (CW)
Frequency (MHz)	2400~2500	Impedance	50 Ω
Peak Gain (dBi typ.)	1.0 (XZ-Total)	Operating Temperature	-40 to +85°C
Average Gain (dBi typ.)	-1.5 (XZ-Total)	Recommended Storage Conditions	+5 ~ +35 °C, 18 mos max. Humidity 45~75%RH
Return Loss	6.5 dB min.		

Part Number Explanation

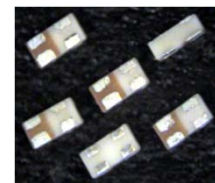
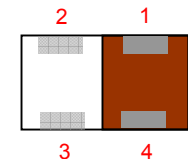
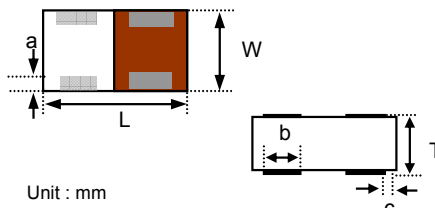
P/N Suffix	Packaging Style	Bulk	Suffix = S	Eg. 2450AT07A0100S
		T & R (10000pcs)	Suffix = T	Eg. 2450AT07A0100T
	Termination Style	100% Tin	Suffix = None	Eg. 2450AT07A0100(T or S)
	Evaluation Board	2450AT07A0100-EB1SMA		

Terminal Configuration

No.	Function
1	Feed
2	GND
3	GND
4	Feed

Mechanical Dimensions

	In	mm
L	0.039 \pm 0.004	1.00 \pm 0.10
W	0.020 \pm 0.004	0.50 \pm 0.10
T	0.014	0.37
a	0.006 +.004/-.006	0.15 +0.1/-0.05
b	0.010 +.004/-.006	0.25 +0.1/-0.05
c	0.003 +.004/-.006	0.08 +0.1/-0.05



Mounting Considerations

Mount these devices with brown mark facing up.

*Line width should be designed to provide 50 Ω impedance matching characteristics.

Units: mm

- Solder
- Land

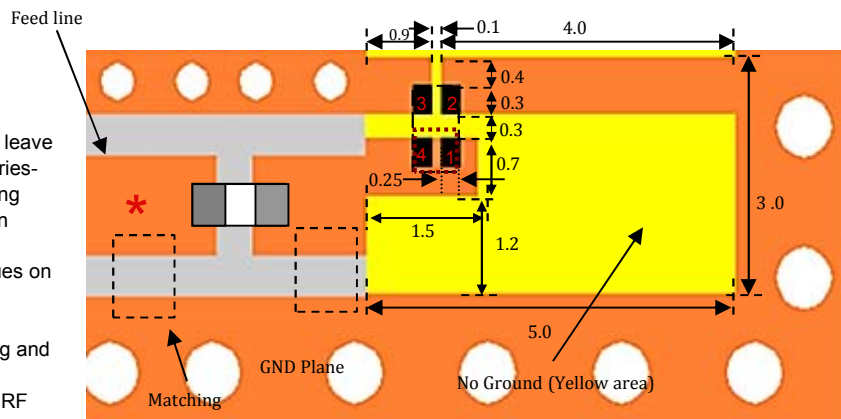
It is recommended that the designer leave available slots for a "pi" (or shunt-series-shunt) network. The antenna matching network values above are used when antenna is mounted on Johanson's evaluation board. The matching values on client's PCB will be different.

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/component/techquestion/2?Itemid=4>



Johanson Technology, Inc. reserves the right to make design changes without notice.

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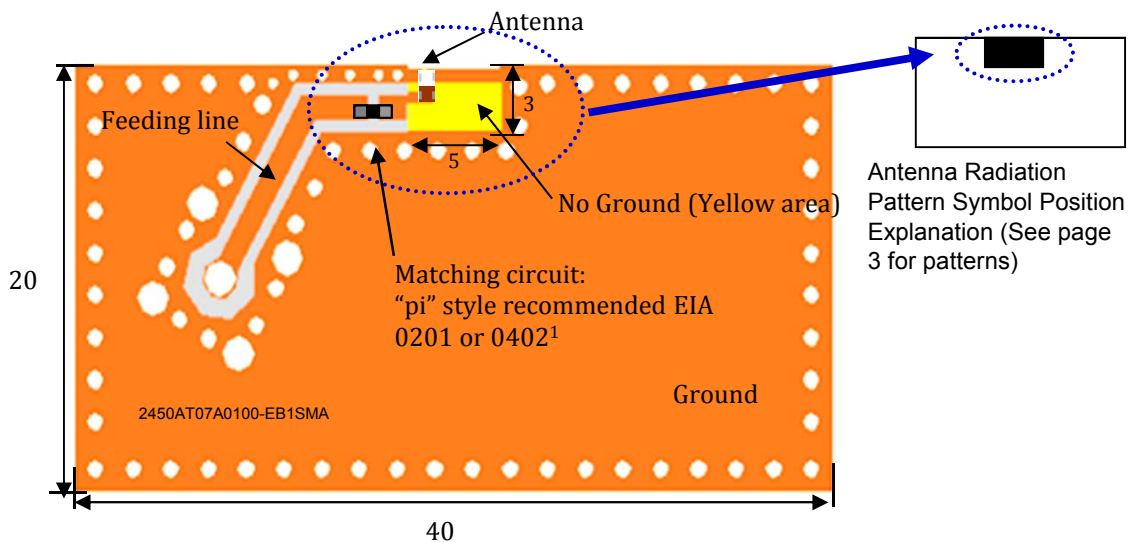
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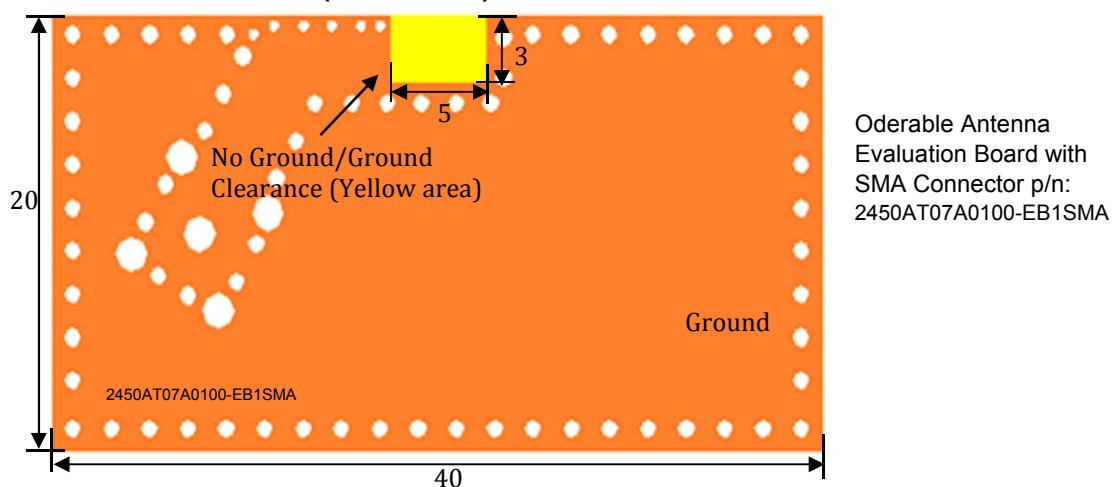
Layout Guidelines and EVB Specifications

Test Board-Top View (Units in mm)



To order the pre-tuned EVB Click here: www.johansontechnology.com/component/samplerrequest
To request the Gerber files click here: www.johansontechnology.com/component/techquestion
Reference p/n: 2450AT07A0100-EB1SMA

Test Board-Bottom View (Units in mm)



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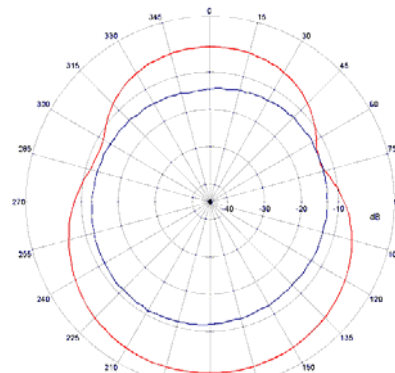
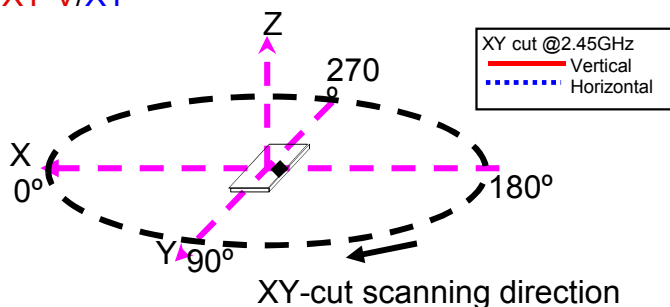
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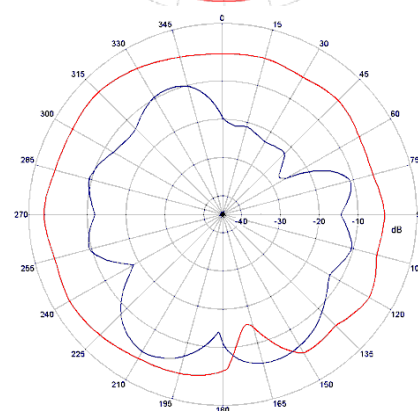
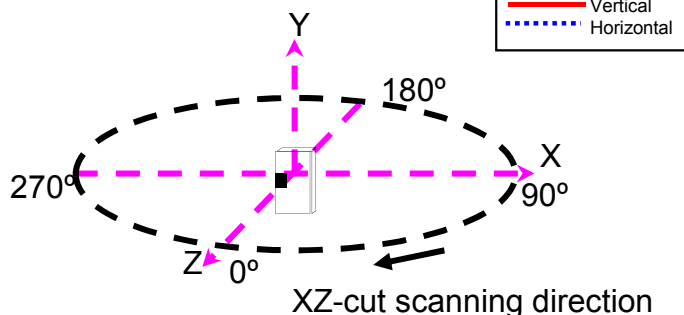
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Typical Radiation Patterns @25C

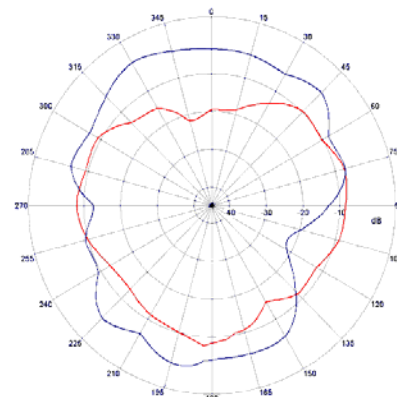
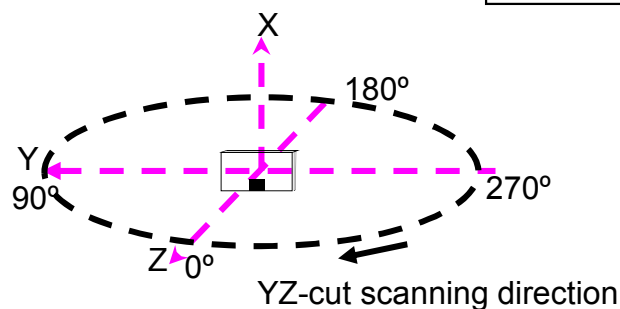
XY-V/XY-H



XZ-V/XZ-H



YZ-V/YZ-H



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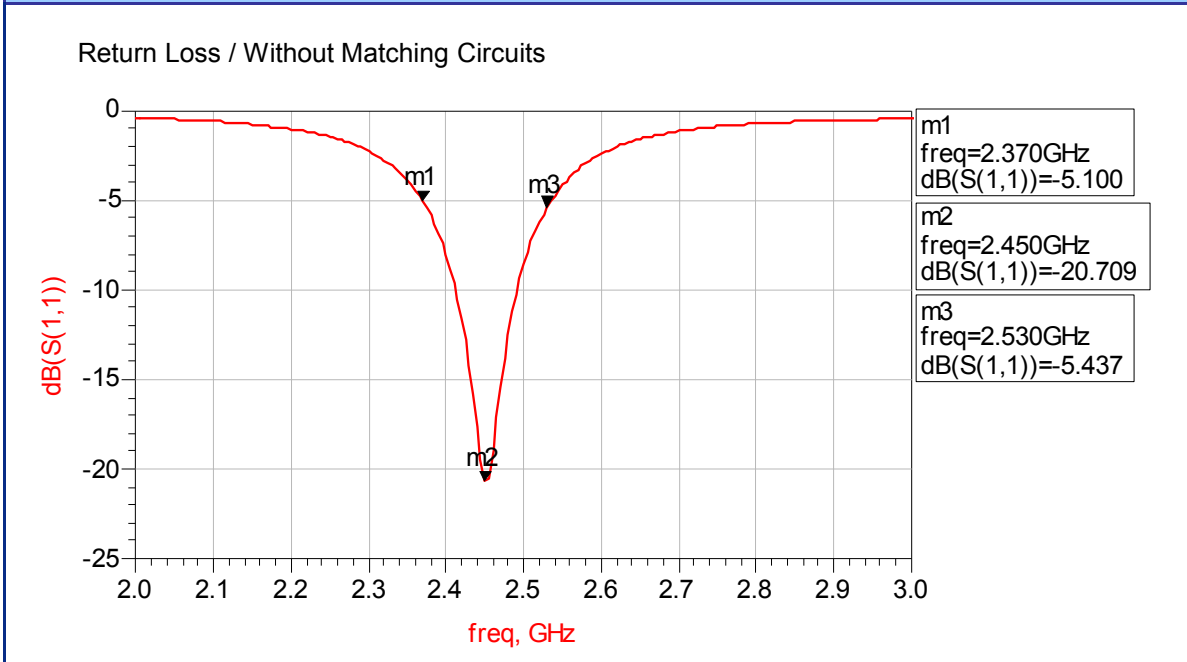
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Typical Electrical Performance (T=25°C)



Packaging information

www.johansontechnology.com/ipcpackaging.html

Soldering Information

www.johansontechnology.com/ipcsoldering-profile

Antenna layout and tuning techniques (How to obtain the new antenna matching values)

www.johansontechnology.com/tuning

Antenna layout review, tuning, and characterization services

www.johansontechnology.com/ipcantennaservices

RoHS Compliance

www.johansontechnology.com/technical-notes/rohs-compliance.html

MSL Info

www.johansontechnology.com/technical-notes/msl-rating.html

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