

"High Frequency Ceramic Solutions"

Ultra-Miniature 2.4GHz Chip antenna 0.37mm max Thickness

P/N 2450AT07A0100

Detail Specification: 2/23/2016

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General Specifications

Part Number	2450AT07A0100	Input Power	2W max. (CW)
Frequency (MHz)	2400~2500	Storage Temperature	-40 to +85°C
Peak Gain (dBi typ.)	1.0 (XZ-Total)	Operating Temperature	-40 to +125°C
Average Gain (dBi typ.)	-1.5 (XZ-Total)	Recommended Storage Conditions of unused product on T&R	+5 ~ +35 °C, 18 mos max. Humidity 45~75%RH
Return Loss	6.5 dB min.		
Impedance	50 Ω		

Part Number Explanation

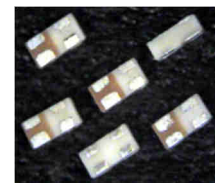
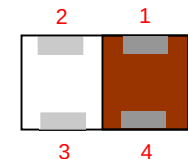
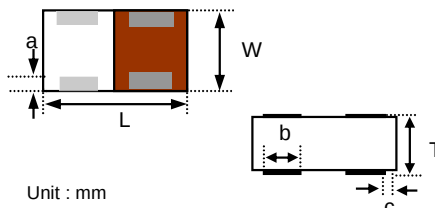
P/N	Packaging Style	Bulk	Suffix = S	Eg. 2450AT07A0100S
		T & R (10000pcs)	Suffix = T	Eg. 2450AT07A0100T
Suffix	Termination Style	100% Tin	Suffix = None	Eg. 2450AT07A0100(T or S)

Terminal Configuration

No.	Function
1	Feed
2	GND
3	GND
4	Feed

Mechanical Dimensions

	In	mm
L	0.039 ± 0.004	1.00 ± 0.10
W	0.020 ± 0.004	0.50 ± 0.10
T	0.014 (max)	0.37 (max)
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 red mark facing up.

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

Units: mm

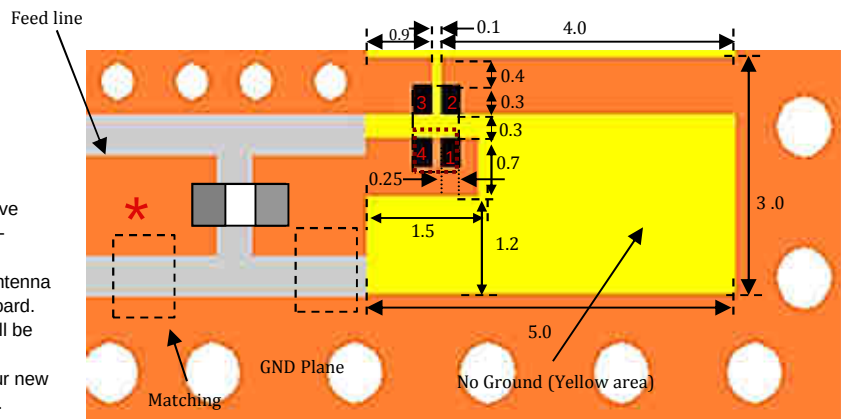
- Solder
- Land

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.

Let us help you tune our antenna on your new layout, contact our RF Applications Eng.

Team at:

www.johansontechnology.com/ask-a-question



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

All sales are subject to Johanson Technology, Inc. terms and conditions.



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Ver 3.0

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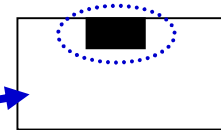
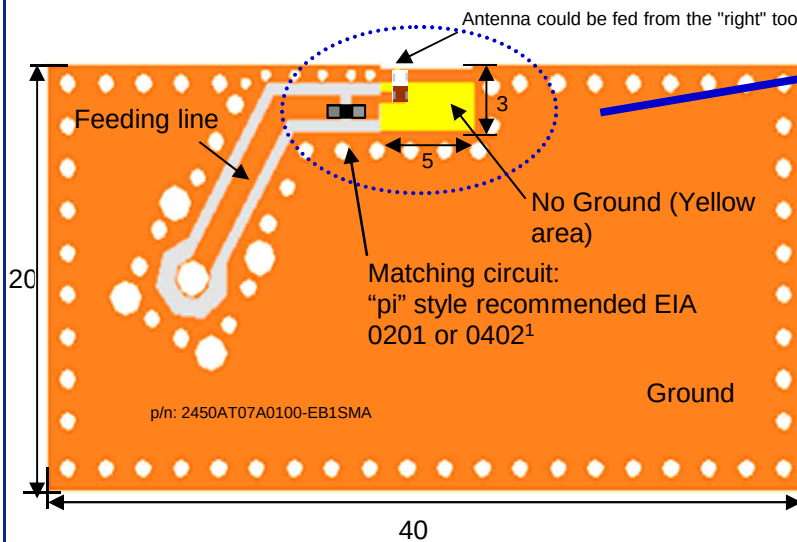
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Layout Guidelines and EVB Specifications

Test Board-Top View (Units in mm)



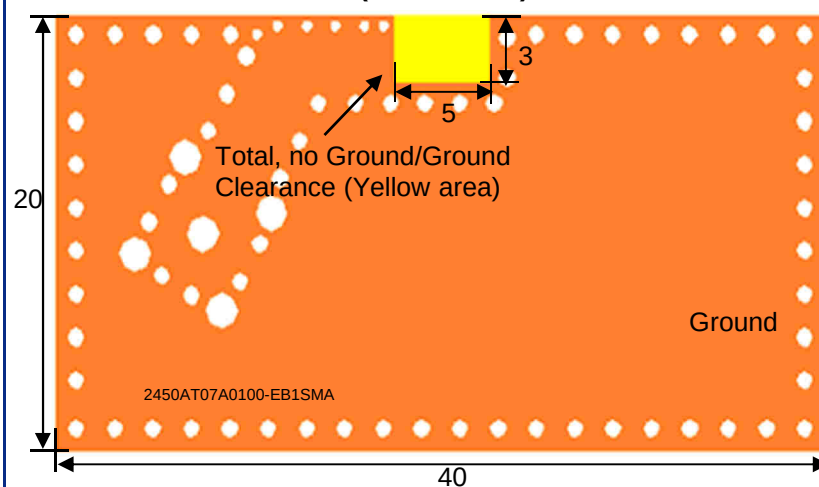
Antenna Radiation
Pattern Symbol Position
Explanation (See page
3 for patterns)

Want the layout file of this?
Send us a message at:
www.johansontechnology.com/ask-a-question

Let us help you design the
antenna in you PCB or optimize
your layout for best
performance and send us a

To order a pre-tuned evaluation board with SMA connector click here: <http://www.johansontechnology.com/request-a-sample>
Reference p/n: 2450AT07A0100-EB1SMA
To request the Gerber files click here: www.johansontechnology.com/component/techquestion

Test Board-Bottom View (Units in mm)



Need help designing the antenna in? Use
our antenna design services! Click on:
www.johansontechnology.com/ipc-antenna-services
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).

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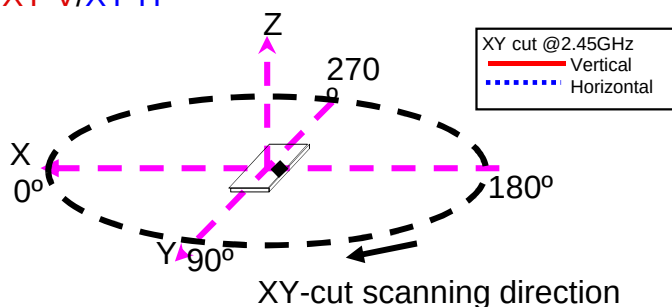
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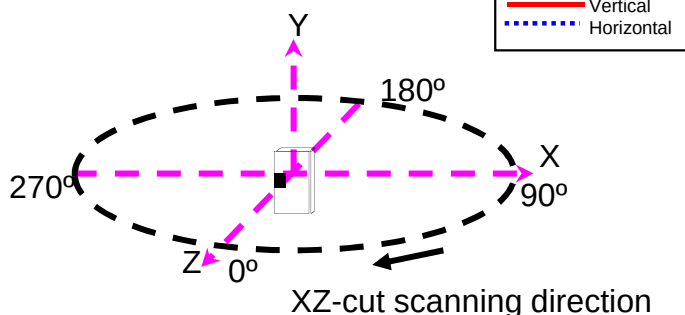
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Typical Radiation Patterns @25C

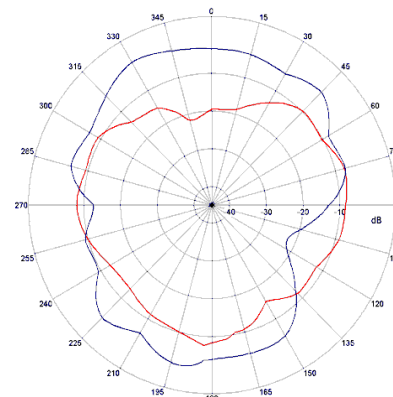
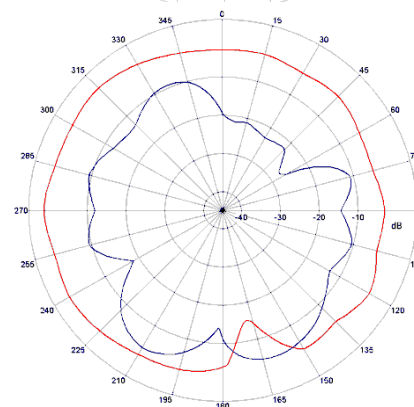
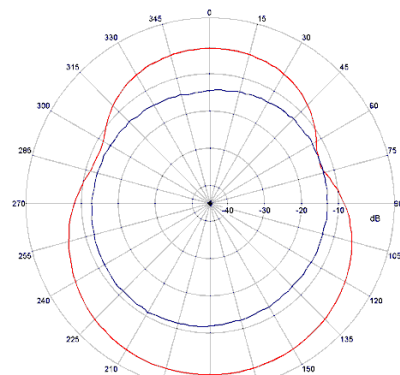
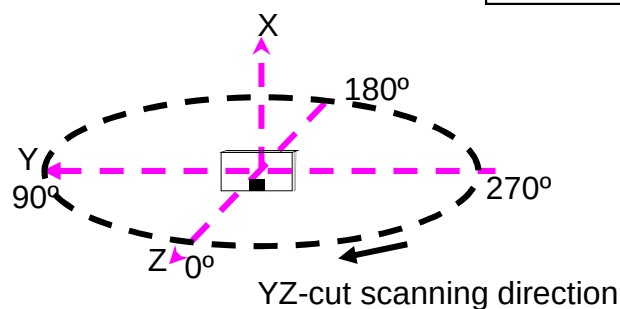
XY-V/XY-H



XZ-V/XZ-H



YZ-V/YZ-H



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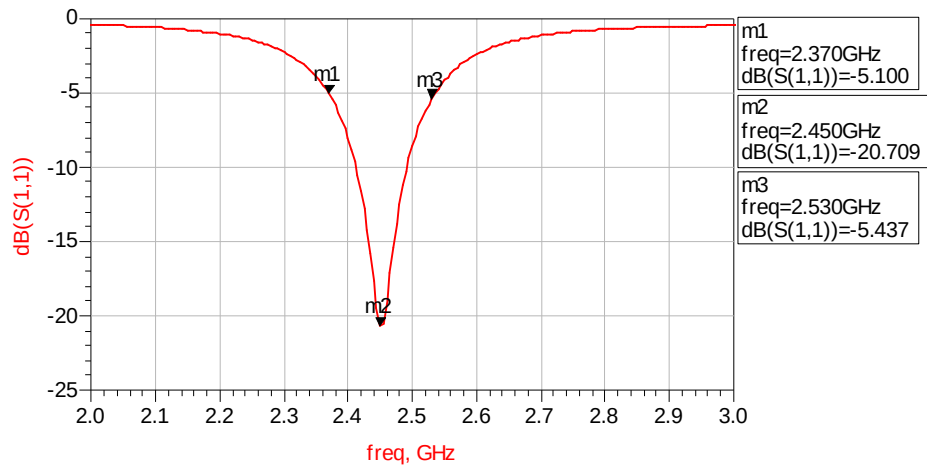
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Typical Electrical Performance (T=25°C)

Return Loss / Without Matching Circuits



The designer should not be highly concerned of the fact that the antenna only demonstrates a -5dB S11 level at the band edges. The antenna has sufficient gain at the band edges to satisfy the applications and uses a high dielectric constant ceramic giving it some detuning resilience to capacitive loading effects. This antenna is designed for close proximity environment applications.

Packaging information

<http://www.johansontechnology.com/tape-reel-packaging>

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/rohs-compliance

MSL Info

www.johansontechnology.com/msl-rating

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