

# "High Frequency Ceramic Solutions"

**Ultra-Miniature 2.4GHz Chip antenna 0.37mm max Thickness**

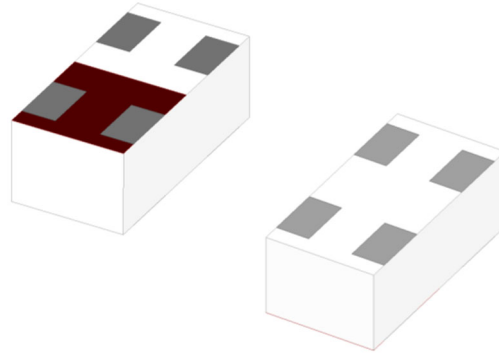
**P/N 2450AT07A0100**

Detail Specification: 10/12/2020

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## General Specifications

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

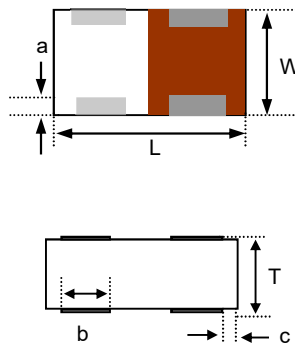


## Part Number Explanation

P/N Suffix	Packing Style	Bulk (loose)	Suffix = S	e.g. 2450AT07A0100S
		Tray	Suffix = T	e.g. 2450AT07A0100T
	Evaluation Board	2450AT07A0100-EB1SMA		

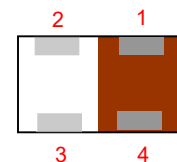
## Mechanical Dimensions

	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/-0.006	0.15 +0.1/-0.05
b	0.010 +.004/-0.006	0.25 +0.1/-0.05
c	0.003 +.004/-0.006	0.08 +0.1/-0.05



## Terminal Configuration

No.	Function
1	Feed
2	GND
3	GND
4	Feed



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<https://www.johansontechnology.com>

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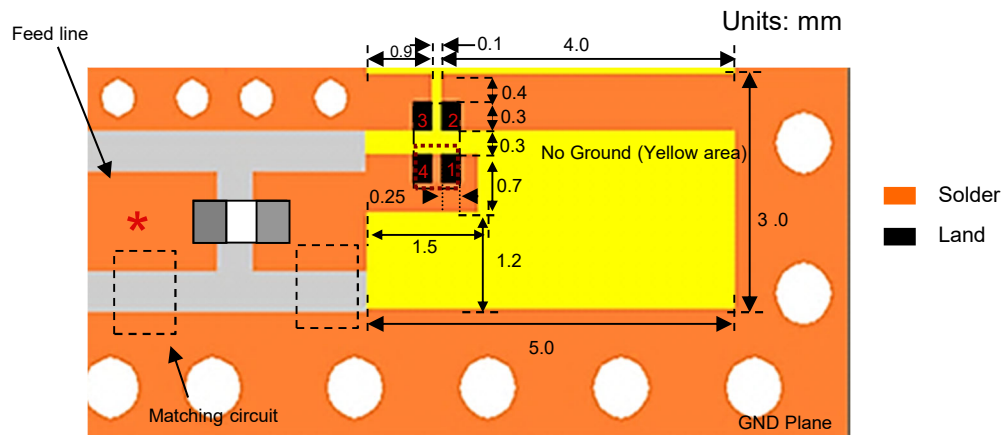
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## Mounting Considerations

### Test Board-Top View (Units in mm)



\*Line width should be designed to maintain 50 $\Omega$  impedance matching characteristics.

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

Let us help you tune our antenna on your new layout, contact our RF Applications Eng. Team at:  
<https://www.johansontechnology.com/ask-a-question>

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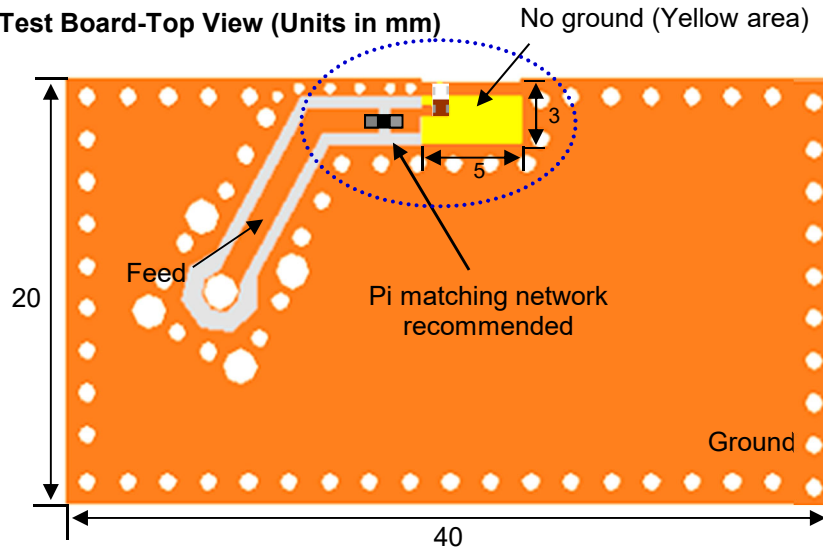
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## Layout Guidelines and EVB Specifications

Test Board-Top View (Units in mm)

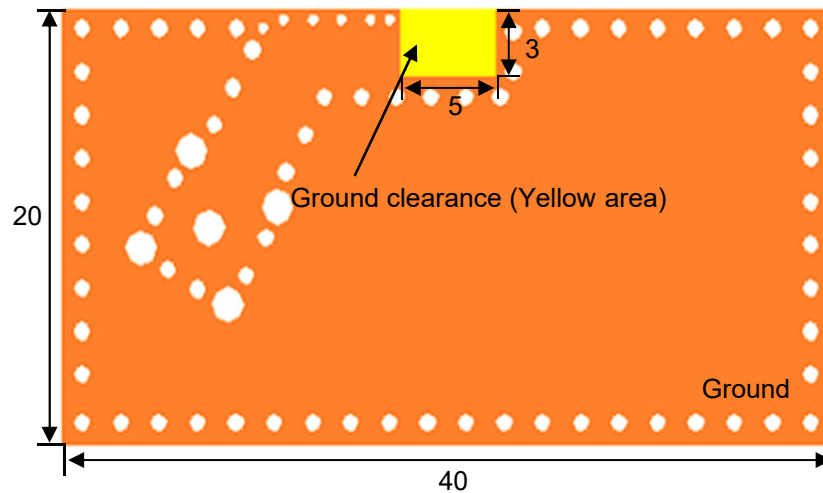


To order a pre-tuned evaluation board with SMA connector click here:

<https://www.johansontechnology.com/request-a-sample>

Reference p/n: 2450AT07A0100-EB1SMA

Test Board-Bottom View (Units in mm)



To request the layout files go to: <https://www.johansontechnology.com/ask-a-question>

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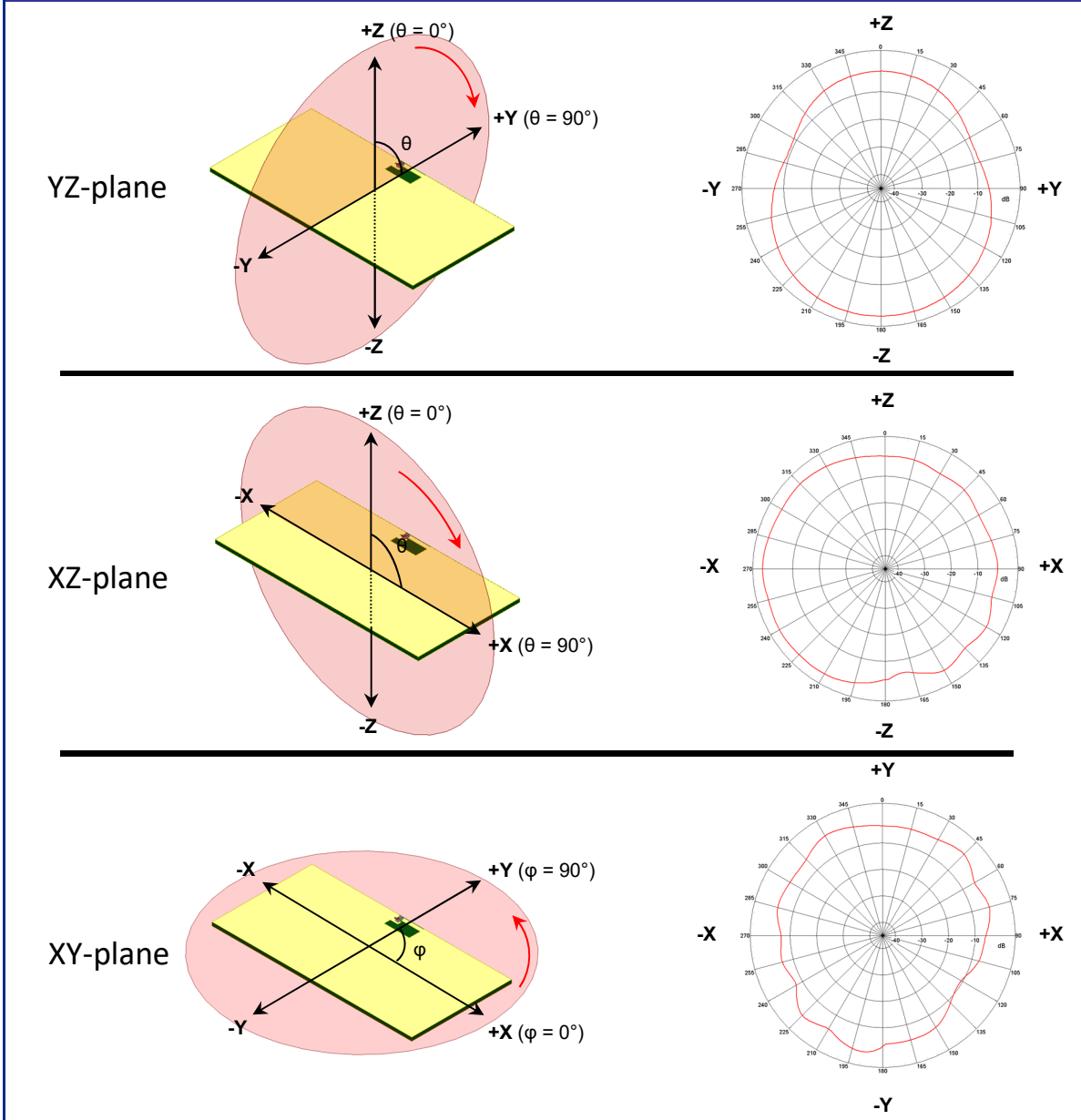
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## Typical Radiation Patterns @25C



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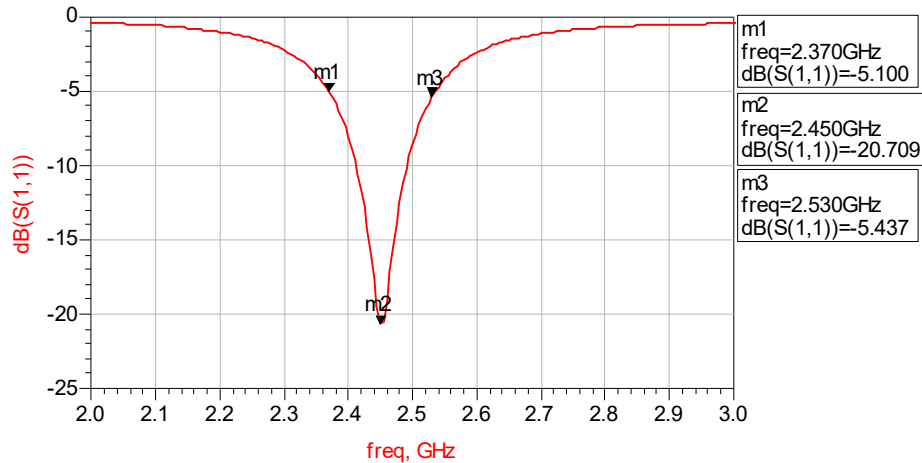
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## Typical Electrical Performance (T=25°C)

Return Loss / Without Matching Circuits



To download antenna s-parameters, please go to: <https://www.johansontechnology.com/antennas>

## Packaging information

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

## Soldering Information

<https://www.johansontechnology.com/ipcsoldering-profile>

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

<https://www.johansontechnology.com/tuning>

## Antenna layout review, tuning, and characterization services

<https://www.johansontechnology.com/ipc-antenna-services>

## RoHS Compliance

<https://www.johansontechnology.com/rohs-compliance>

## MSL Info

<https://www.johansontechnology.com/msl-rating>

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