"High Frequency Ceramic Solutions"

2450 MHz Small SMD Chip Antenna — P/N 2450AT42B100

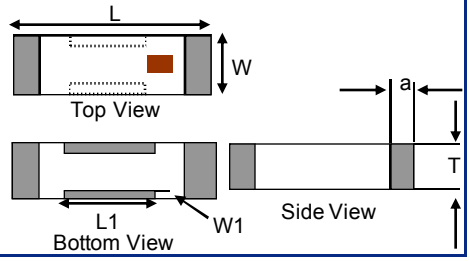
Ground Clearance Requirements Minimized. This antenna was designed for corner or end-mounting

Detail Specification: 10/08/13

General Specifications			
Part Number	2450AT42B100		
Frequency Range	2400 - 2500 Mhz		
Peak Gain	0 dBi typ. (XZ-V)		
Average Gain	-1.5 dBi typ. (XZ-V)		
Return Loss	9.5 dB min.		
Impedance	50 Ω		
Reel Quanity	2,000		
Operating Temperature	-40 to +85°C	**Storage Period**	-40 to +85°C
Recommended Storage Conditio	+5 ~ +35 °C,Humidity 45~75%RH	**Power Capacity**	2W max. (CW)

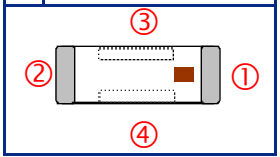
Mechanical Dimensions

	In	mm
L	0.197 ± 0.008	5.00 ± 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



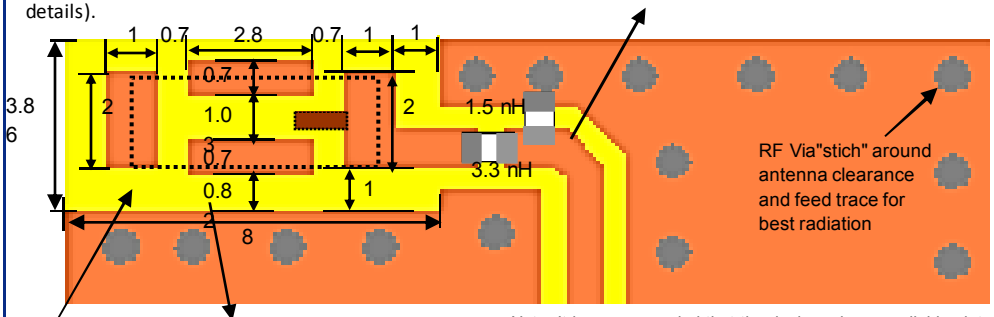
Terminal Configuration

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



Mounting Considerations

Line width should be designed to match 50Ω characteristic impedance (Grounded Co-Planar Waveguide), depending on PCB material and thickness. (The matching circuit and component values will be different on clients PCB layout, se notes below and go to page 2 for details).



We peform layout review as well as antenna tuning and characterization services. Go to page 2 for details.

Yellow area=Ground/Metal Clearance.

The "0.82mm" dimmension is a min. requirement, if the designer can make this larger, the better radiation and gain will occur (i.e. 2.0 or 4.0mm)

Note: It is recommended that the designer leave available slots for a "pi" (or shunt-series-shunt) network. The antenna matching network values here are used when antenna is mounted on Johanson's evaluation board. The matching values on clinet's PCB will be different, go to: johansontechnology.com/tuning and see how to obtain the new values. If you need further help, contact our RF Applications Eng Team at: www.johansontechnology.com/en/ask-a-technical-question.html

JOHANSON TECHNOLOGY

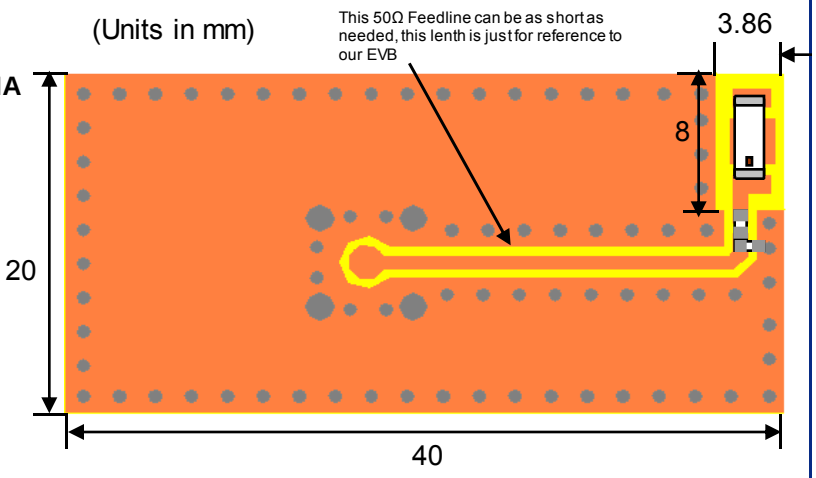
www.johansontechnology.com

4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821

Johanson Evaluation Board (orderable item)

Test Board:
P/N: 2450AT42B100-EB1SMA
(orderable item)

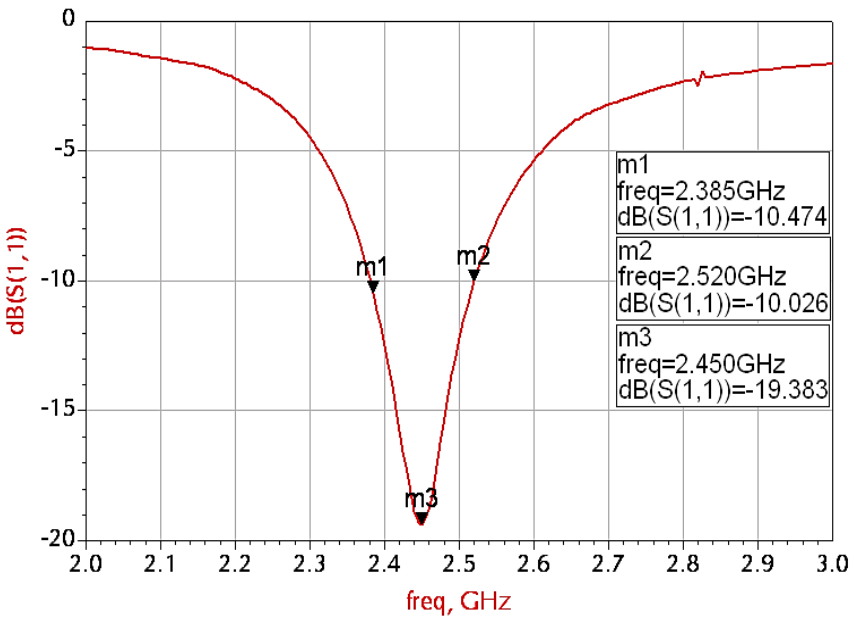
To order, go to:
www.johansontechnology.com/samplerequest



We offer antenna layout review, tuning, and characterization services, go to:
www.johansontechnology.com/ipcantennaservices for details and instructions

Typical Electrical Characteristics (T=25°C)

Return Loss (with matching)



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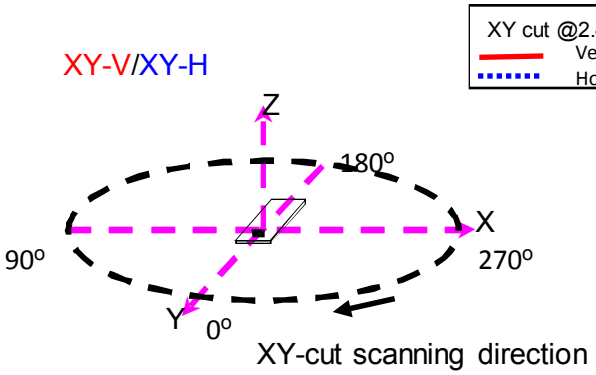
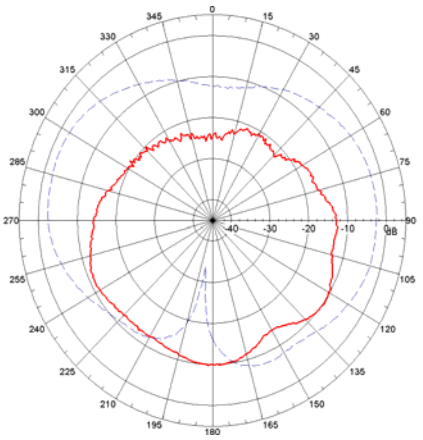
Detail Specification: 10/08/13

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

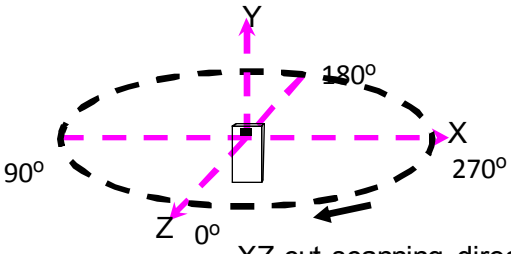
XY-V/XY-H



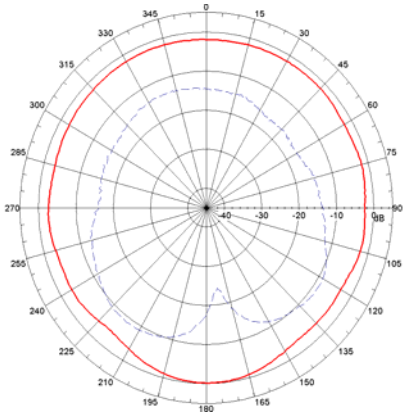
XY-cut scanning direction



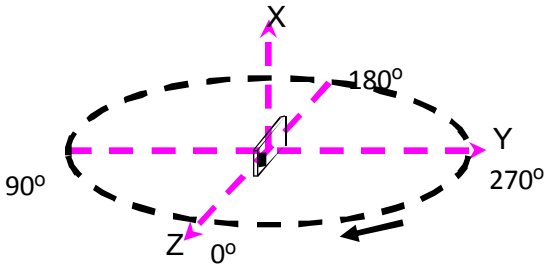
XZ-V/XZ-H



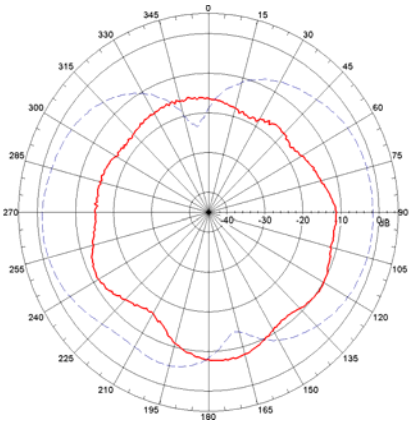
XZ-cut scanning direction



YZ-V/YZ-H



YZ-cut scanning direction



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Detail Specification: 10/08/13

Part Number Explanation				
P/N Suffix	Packing Style	Bulk (loose pieces)	Suffix = S	eg.2450AT42B100S
		T & R	Suffix = E	eg. 2450AT42B100E
		T & R (Reverse)	Suffix = R	eg. 2450AT42B100R (MOQ Applies)
		100% Tin	Suffix = None	eg. 2450AT42B100(S, E, R)
	Eval Board (1-port SMA antenna test boards)	2450AT42B100-EB1SMA (Page 2)		
	More Details	www.johansontechnology.com/ipc-pn-explained		

Storage Conditions and Shelf Life (On T&R or Bulk)			
Temperature:	+5C to +35°C	**Shelf Life:**	18 months max.
Relative Humidity:	45 to 75%		

Packaging information
www.johansontechnology.com/ipcpackaging.html

Soldering Information
www.johansontechnology.com/ipcsoldering-profile

Antenna layout and tuning techniques
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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