

"High Frequency Ceramic Solutions"

433 MHz ISM Antenna SMD (25x5mmx1.2)

P/N 0433AT62A0020

Detail Specification: 3/14/2016

Page 1 of 9

General Specifications

Part Number	0433AT62A0020	Operating Temperature	-40 to +85°C
Frequency (MHz)	423 - 443	Recommended Storage Conditions for unused	+5 ~ +35 °C, Humidity 45~75%RH, 18 mos. max
Peak Gain (XZ-total)	-4.0 dBi typ. (Mounting 1)	T&R product	
Average Gain (XZ-total)	-4.0 dBi typ. (Mounting 1)	Power Capacity	2W max. (CW)
Return Loss	8.5 dB min. (Mounting 1)	Reel Quantity	500 pcs.
Impedance	50 Ω		

This antenna can be tuned +/- 50MHz, to see 460MHz example, go to page 8. Gain will be comparable to 433MHz.

Part Number Explanation

P/N Suffix	Packing Style	Bulk	Suffix = S	eg. 0433AT62A0020S
		T & R	Suffix = T	eg. 0433AT62A0020E
		100% Tin	Suffix = None	eg. 0433AT62A0020(E or S)

Mechanical Dimensions

	In	mm
L	0.984 ± 0.008	25.00 ± 0.20
W	0.197 ± 0.008	5.00 ± 0.20
T	0.047 ± 0.004	1.20 ± 0.10
a	0.020 ± 0.008	0.50 ± 0.20
a2	0.039 ± 0.008	1.00 ± 0.20

Terminal Configuration

No.	Function
1	Feeding Point
2	NC



Mounting Consideration - 1

Mount these devices with the red mark facing

- Solder Resist
- Land

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

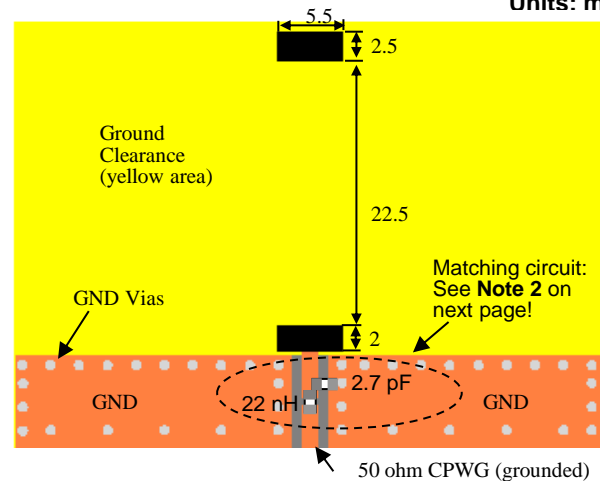
<http://johansontechnology.com/tuning> and see how to obtain the new values.

If you need further help and **would like us to do the tuning and characterization**, go to:

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

(nominal lab fee may apply)

Units: mm



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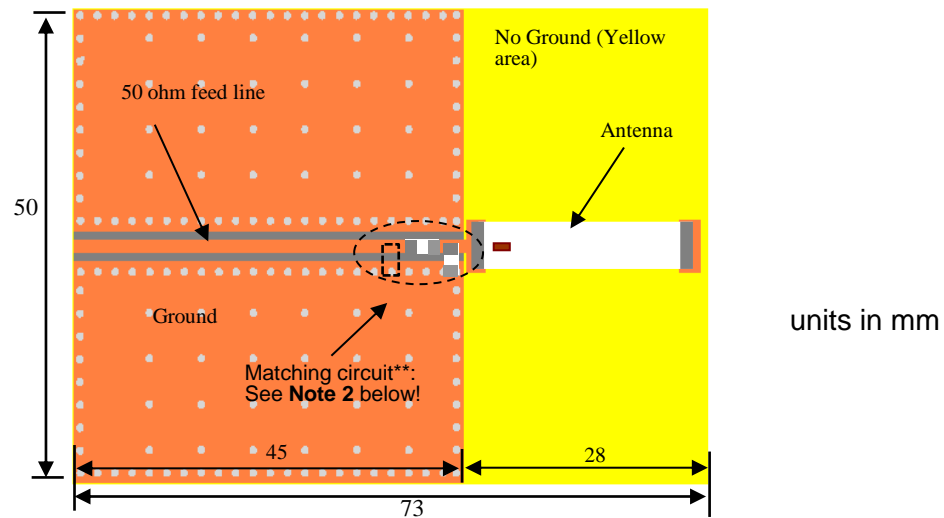
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Mounting Consideration - 1 (Evaluation board p/n: 0433AT62A0020-EB1SMA)



****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 mounted on Johanson's evaluation board. The matching values on client's PCB will be different. Go to: www.johansontechnology.com/tuning and see how to obtain the new values. If you need further help, such as needing the layout file of the above, contact our RF Applications Eng. Team at: www.johansontechnology.com/ask-a-question

Orderable EVB Johanson p/n: 0433AT62A0020-EB1SMA, go to:
<http://www.johansontechnology.com/request-a-sample> to request it

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

We offer 2 free layout reviews as well as antenna tuning and characterization services (lab fee may apply). Go to: <http://www.johansontechnology.com/ipc-antenna-services>

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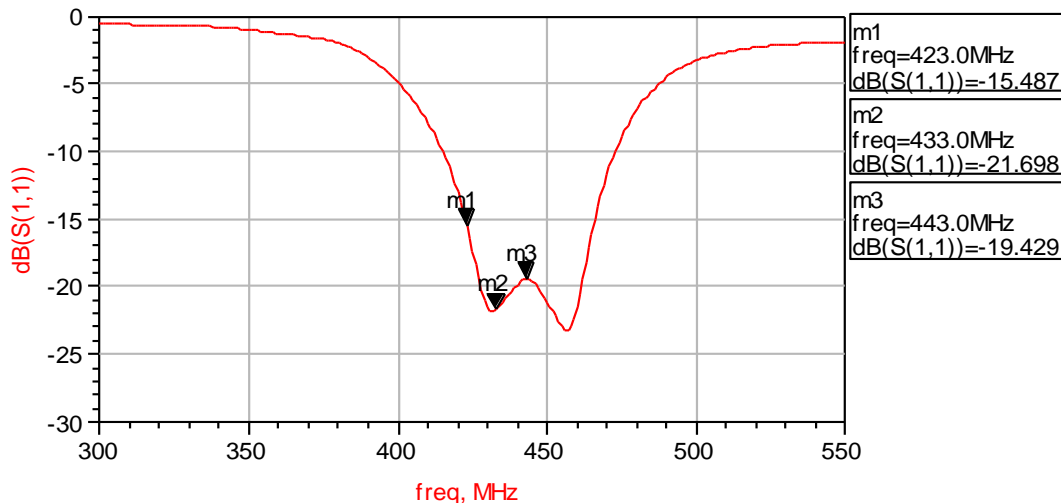
P/N 0433AT62A0020

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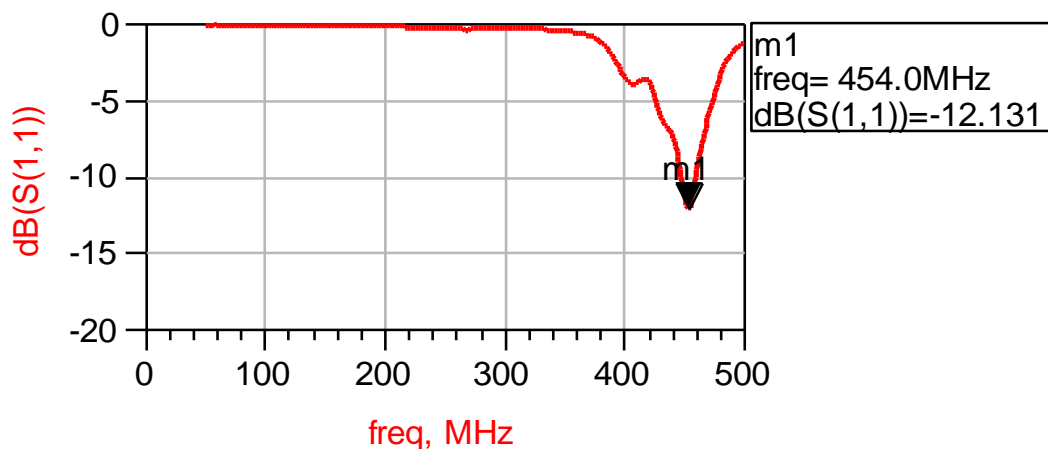
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Electrical Characteristics: Mounting Consideration - 1 (0433AT62A0020-EB1SMA)

Return Loss on EVB1 (pages 1&2) with matching network.



Return Loss without matching network (0Ω resistor in series on EVB).



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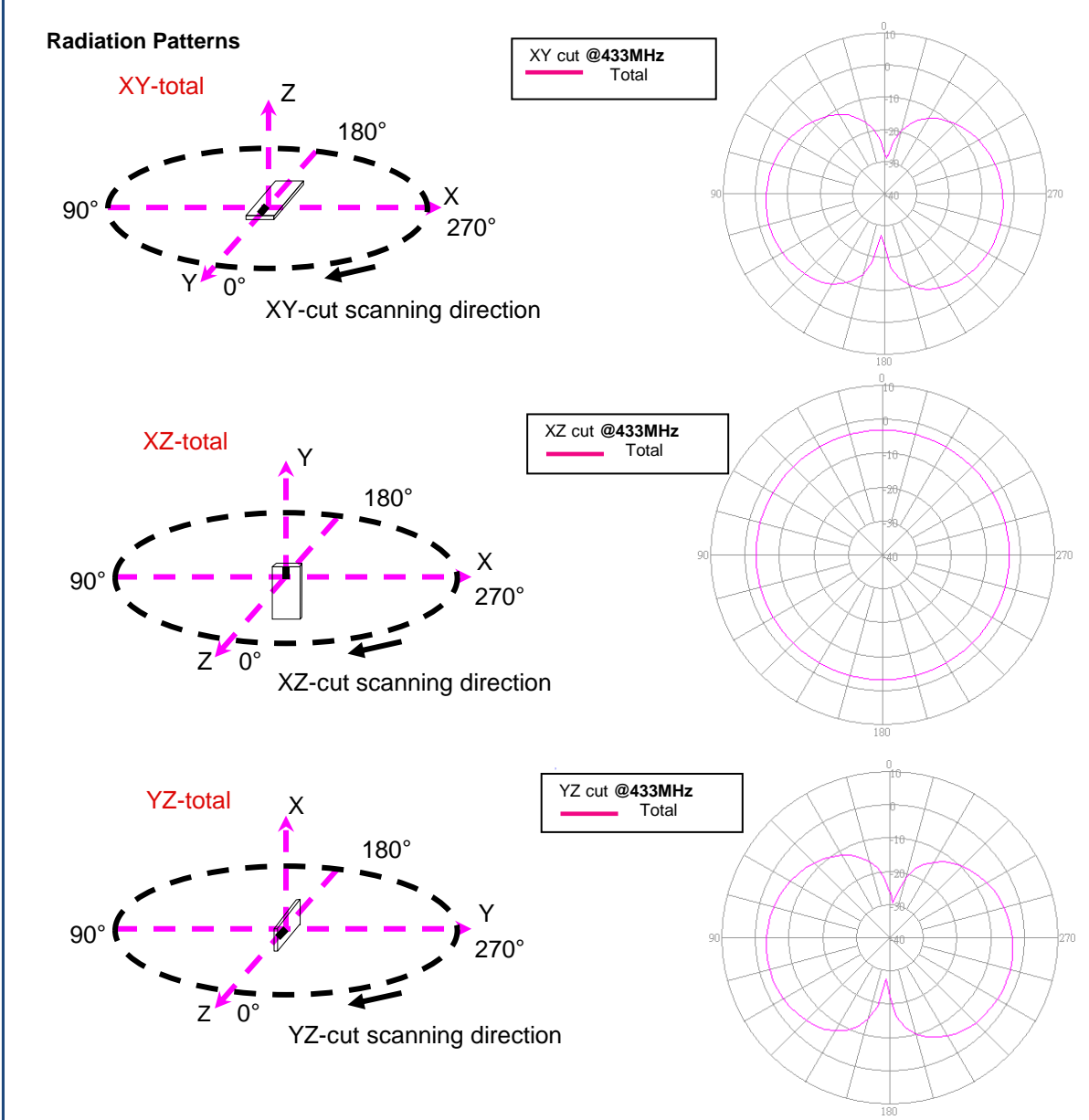
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Typical Radiation Performance @ 25°C Mounting Consideration - 1 (0433AT62A0020-EB1SMA)



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General Specifications

Part Number	0433AT62A0020
Frequency (MHz)	423 - 443
Peak Gain (XZ-total)	-6.8 dBi typ. (Mounting 2)
Average Gain (XZ-total)	-7.2 dBi typ. (Mounting 2)
Return Loss	5 dB min. (Mounting 2)
Impedance	50 Ω

Terminal Configuration


No.	Function
1	Feeding Point
2	NC



Mounting Consideration - 2

Units: mm

Mount these devices with the red mark facing

 Solder Resist

 Land

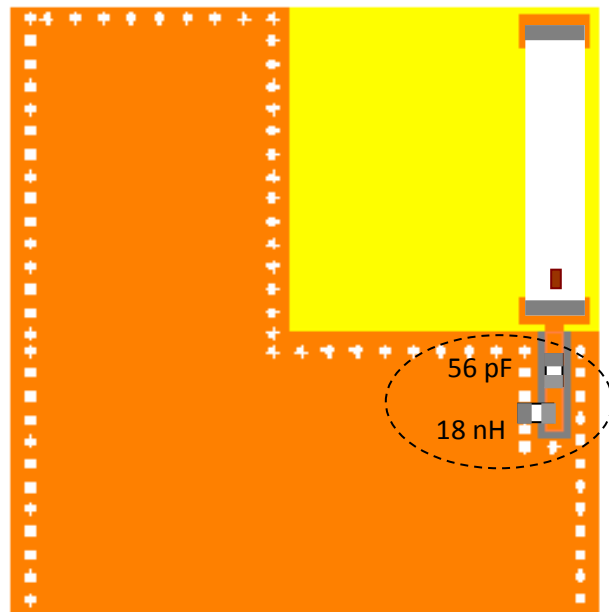
It is recommended that the designer leave available slots for a "pi" (or shunt-series-shunt) network. The antenna matching network values in this datasheet are only used when antenna is mounted on Johanson's evaluation board. The matching values on client's PCB will be different. Go to:

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(nominal lab fee may apply)



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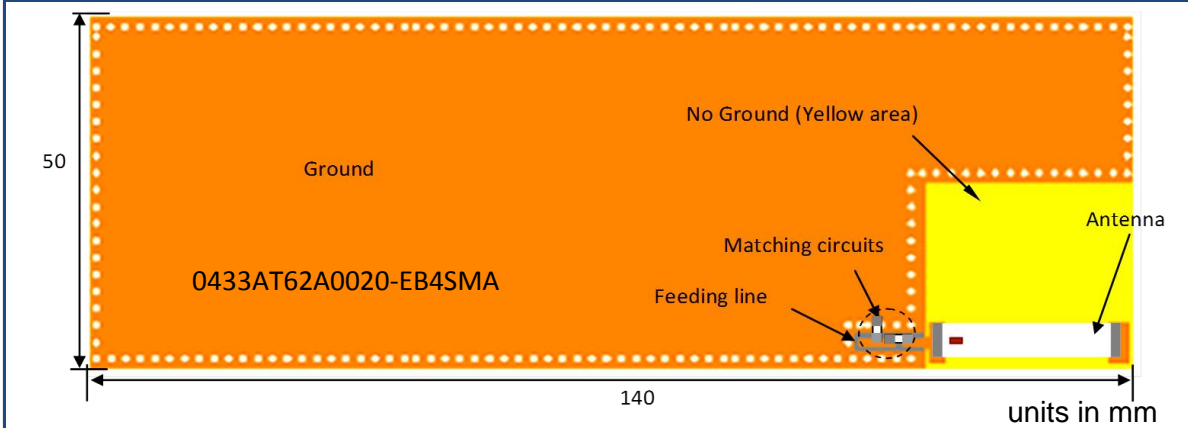
433 MHz ISM Antenna SMD (25x5mmx1.2)

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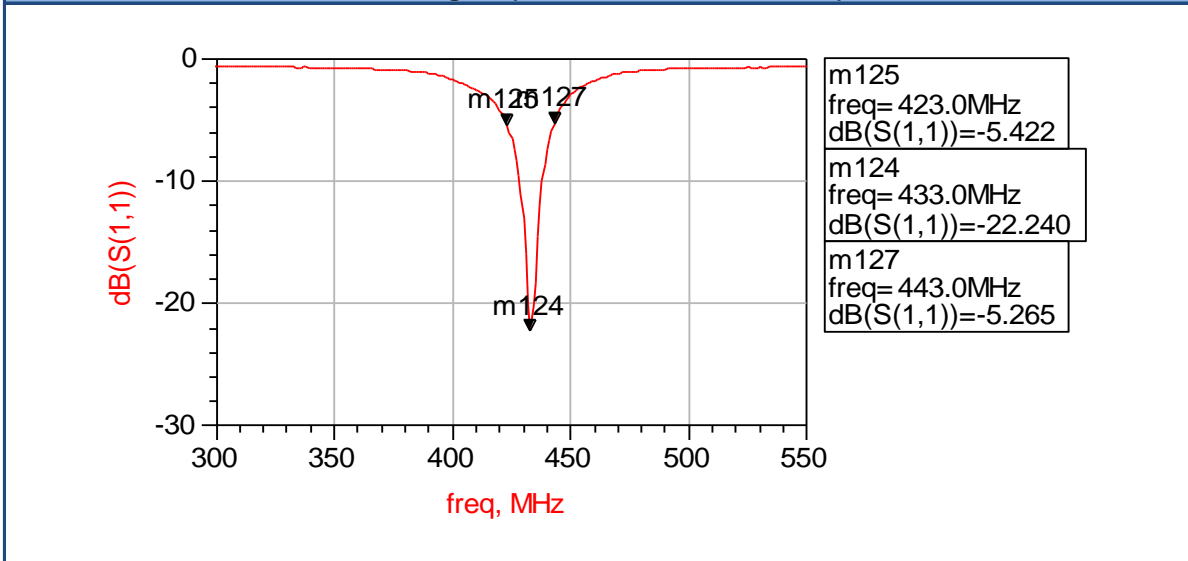
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Mounting Consideration - 2 (Evaluation board p/n: 0433AT62A0020-EB4SMA)



Orderable EVB Johanson p/n: 0433AT62A0020-EB4SMA, go to: <http://www.johansontechnology.com/request-a-sample> to request it. Want the layout file of the above? Send us a message at: <http://www.johansontechnology.com/ask-a-question>. We offer 2 free layout reviews as well as antenna tuning and characterization services (lab fee may apply). Go to: <http://www.johansontechnology.com/ipc-antenna-services>

Electrical Characteristics: Mounting - 2 (0433AT62A0020-EB4SMA)



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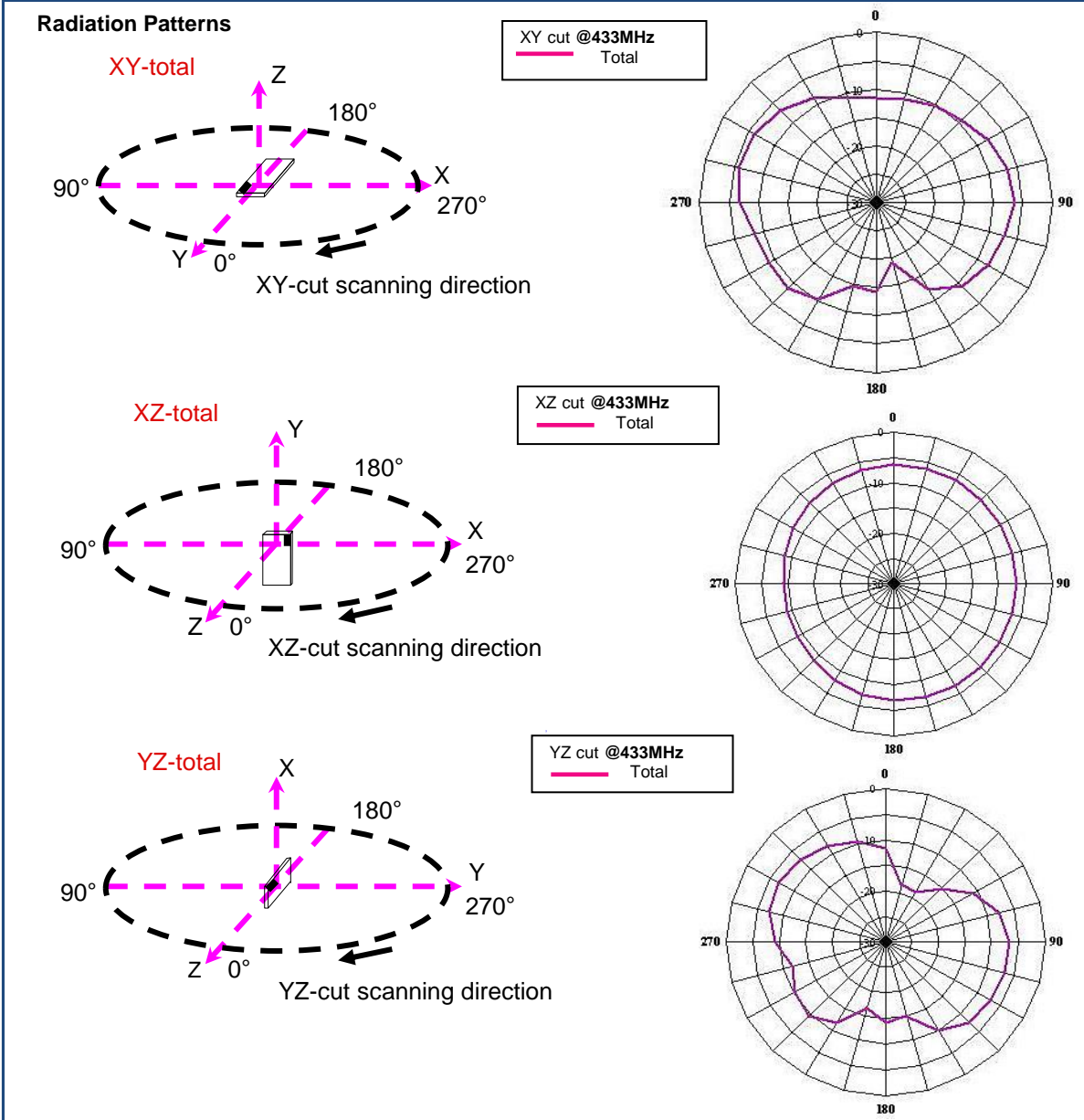
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Typical Radiation Performance @ 25°C Mounting C consideration - 2 (0433AT62A0020-EB4SMA)



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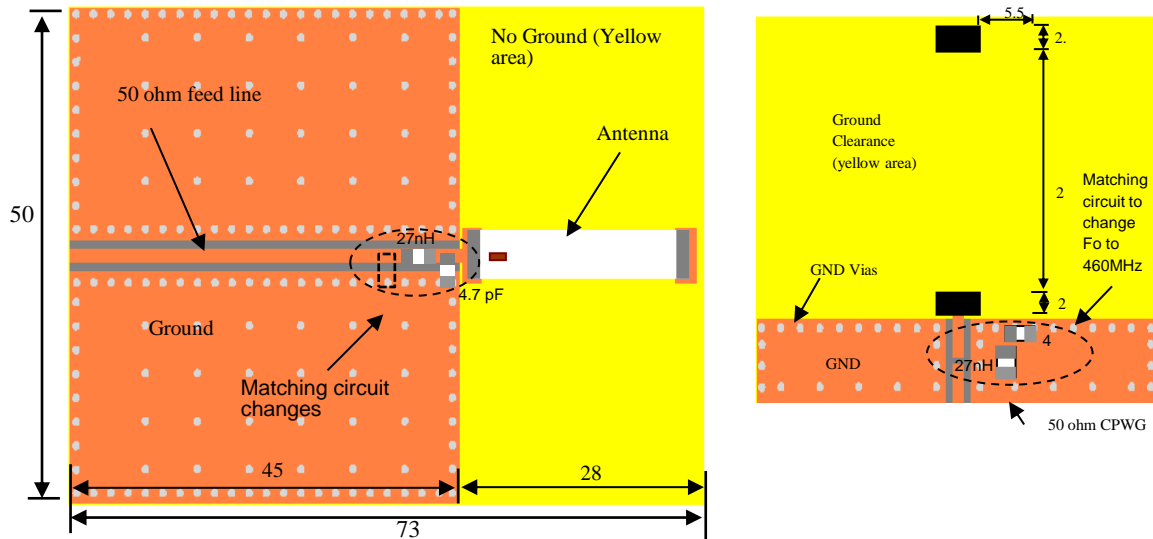
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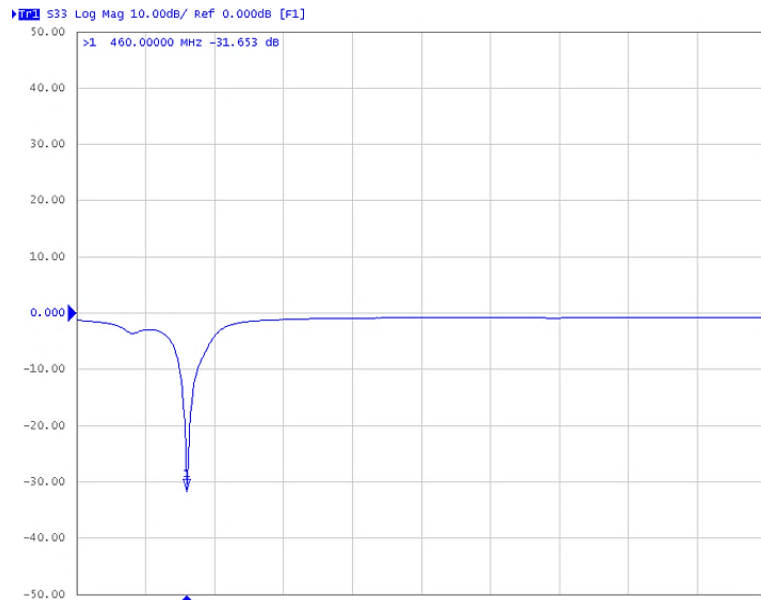
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Tuning 0433AT62A0020 to 460MHz



Orderable EVB Johanson p/n: 0433AT62A0460-EB1SMA



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More SMD Chip Antennas at:

<http://www.johansontechnology.com/antennas>

Packaging information

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

Soldering Information

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

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

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

Antenna layout review, tuning, and characterization services

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

RoHS Compliance

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

MSL Info

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

P/N Explanation and Breakdown

<http://www.johansontechnology.com/ipc-pn-explained>

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