

"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:

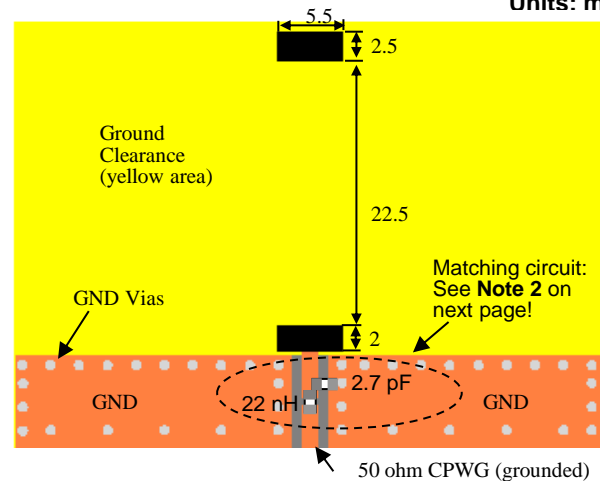
<http://johansontechnology.com/tuning> and see how to obtain the new values.

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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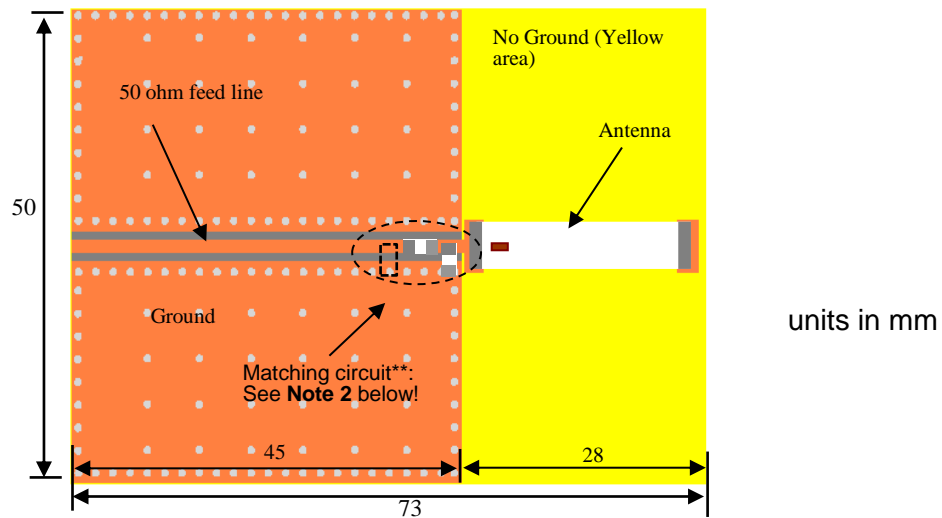
433 MHz ISM Antenna SMD (25x5mmx1.2)

P/N 0433AT62A0020

Detail Specification: 3/14/2016

Page 2 of 9

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>

Johanson Technology, Inc. reserves the right to make design changes without notice. Please confirm the specifications and delivery conditions when placing your order. All sales are subject to Johanson Technology, Inc. terms and conditions.



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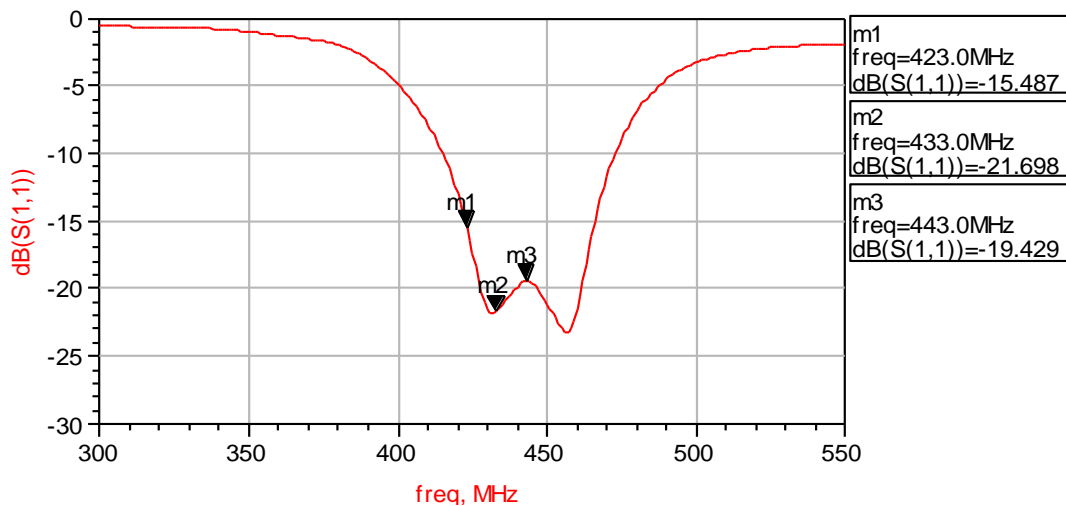
P/N 0433AT62A0020

Detail Specification: 3/14/2016

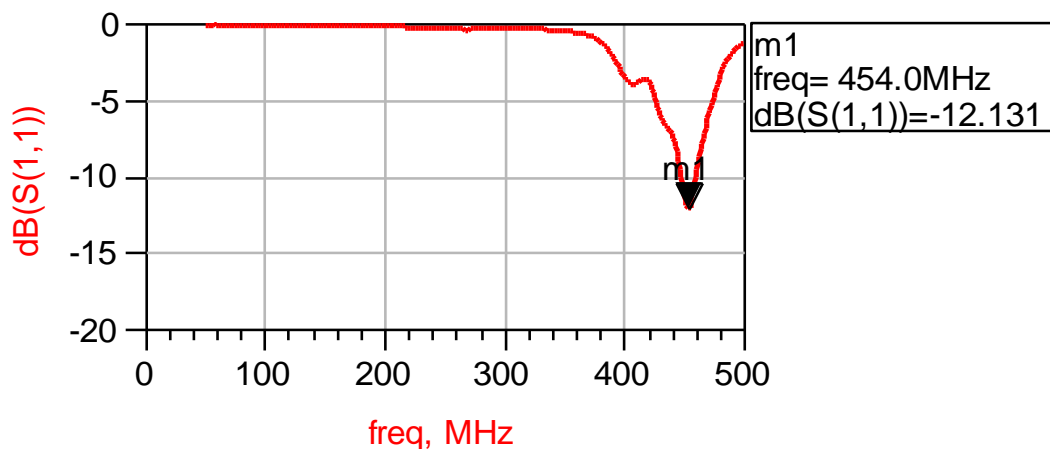
Page 3 of 9

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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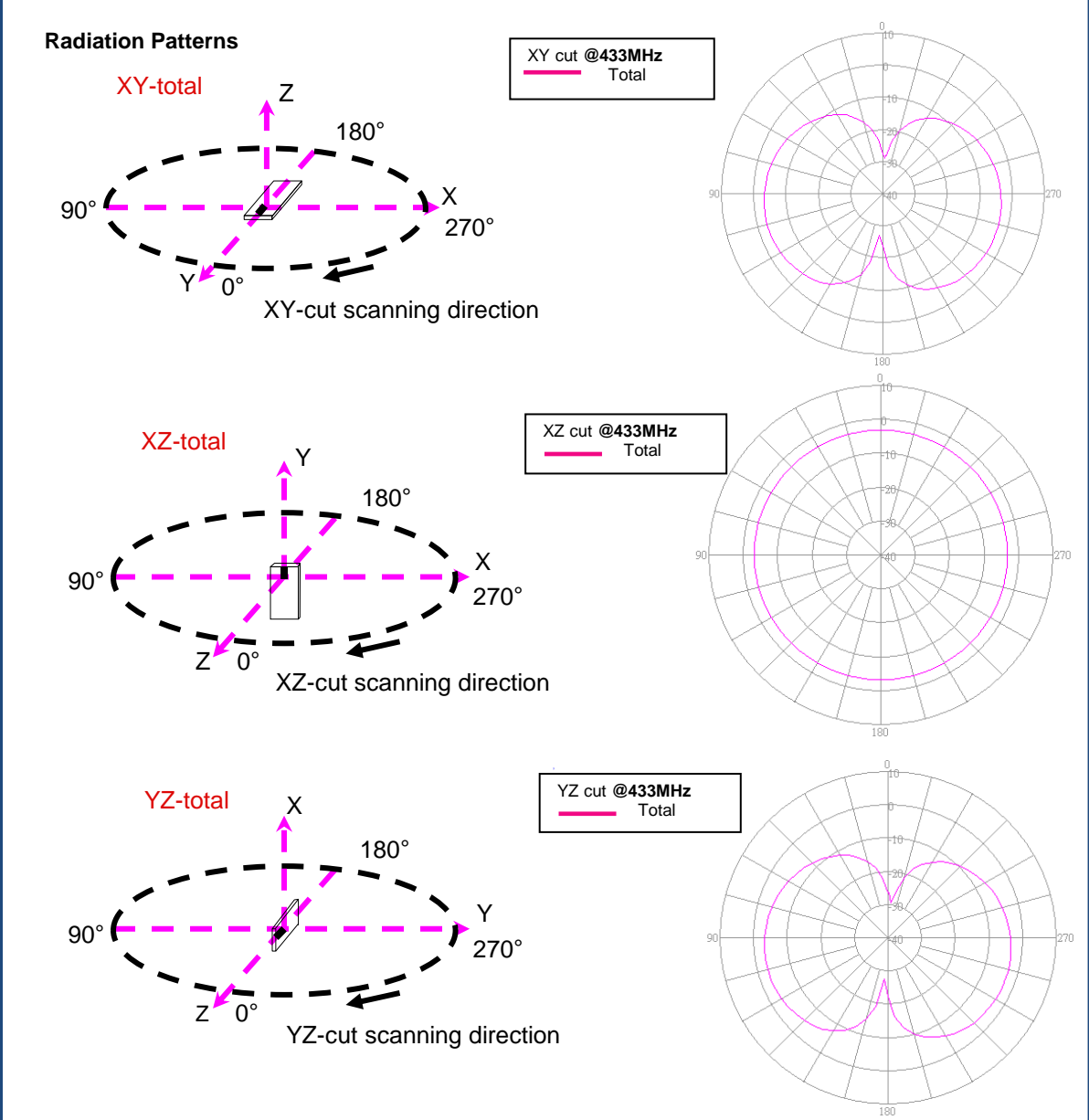
433 MHz ISM Antenna SMD (25x5mmx1.2)

P/N 0433AT62A0020

Detail Specification: 3/14/2016

Page 4 of 9

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



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P/N 0433AT62A0020

Detail Specification: 3/14/2016

Page 5 of 9

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

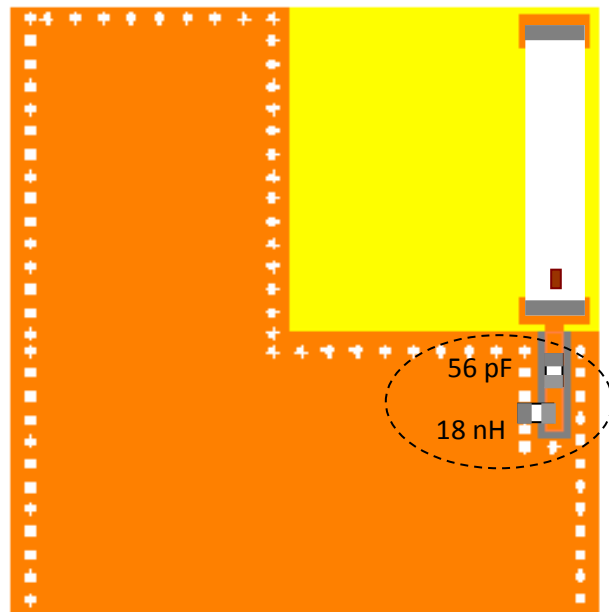
It is recommended that the designer leave available slots for a "pi" (or shunt-series-shunt) network. The antenna matching network values in this datasheet are only used when antenna is mounted on Johanson's evaluation board. The matching values on client's PCB will be different. Go to:

<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:

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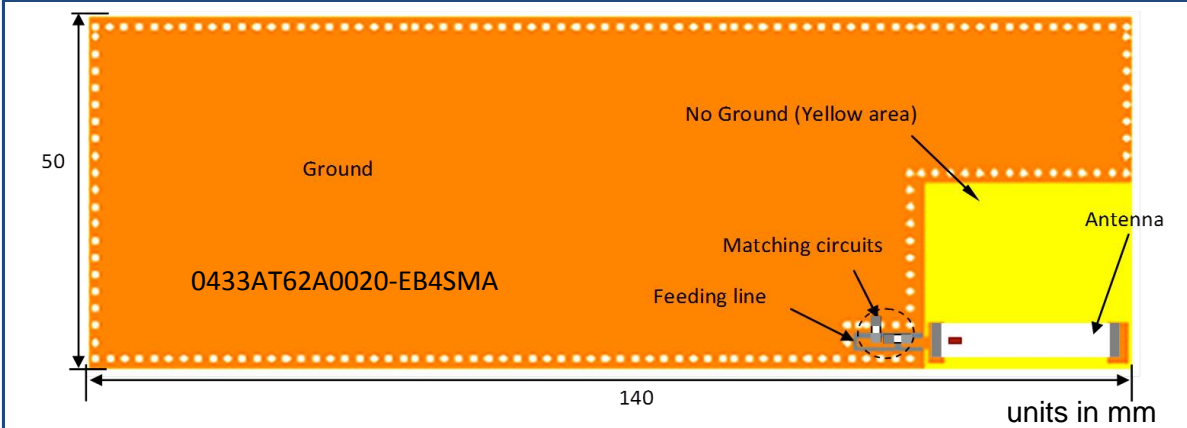
433 MHz ISM Antenna SMD (25x5mmx1.2)

P/N 0433AT62A0020

Detail Specification: 3/14/2016

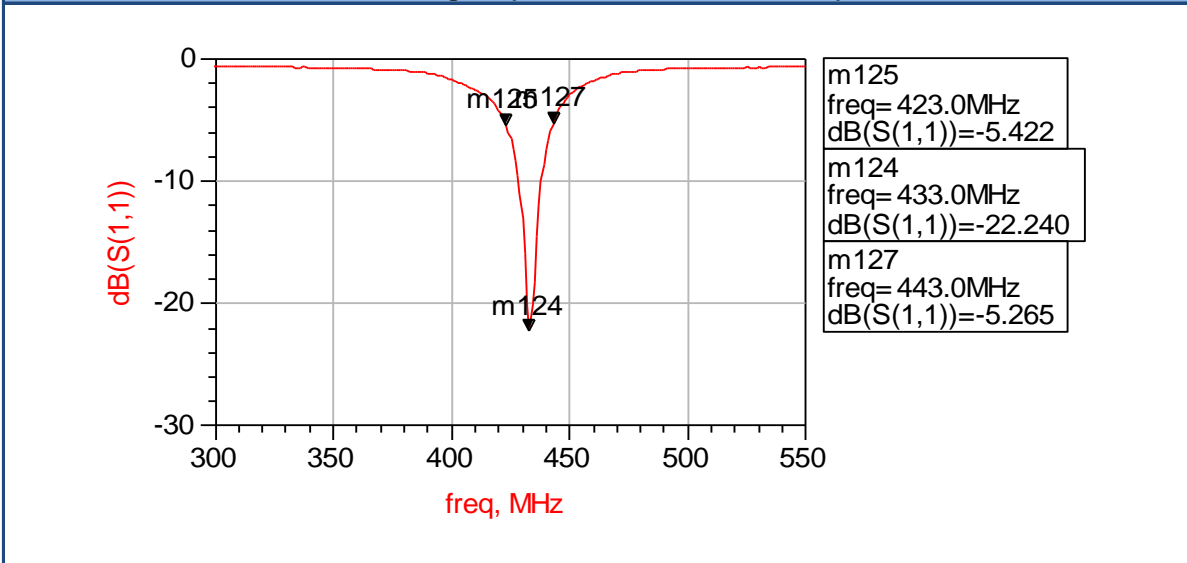
Page 6 of 9

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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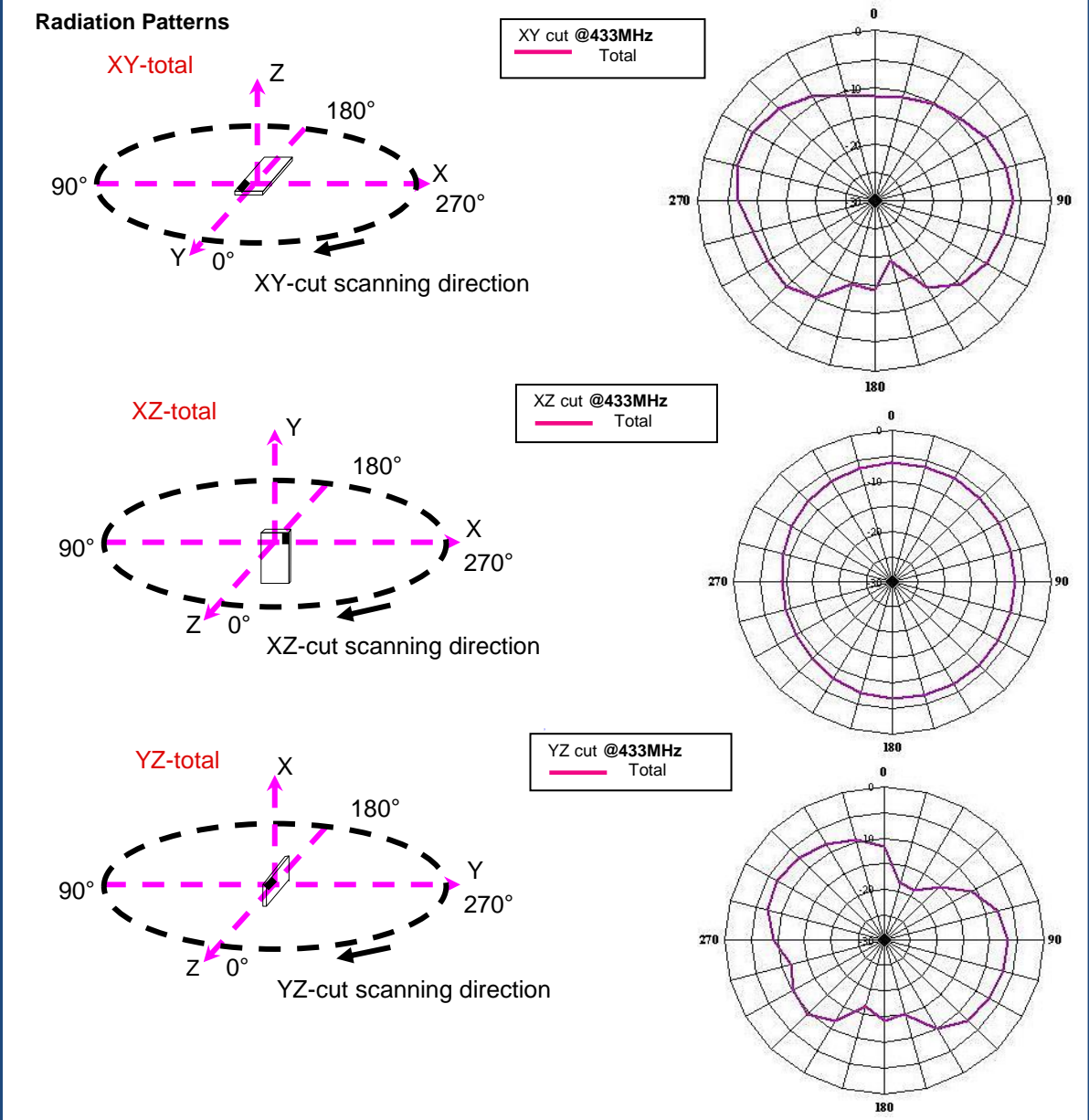
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P/N 0433AT62A0020

Detail Specification: 3/14/2016

Page 7 of 9

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



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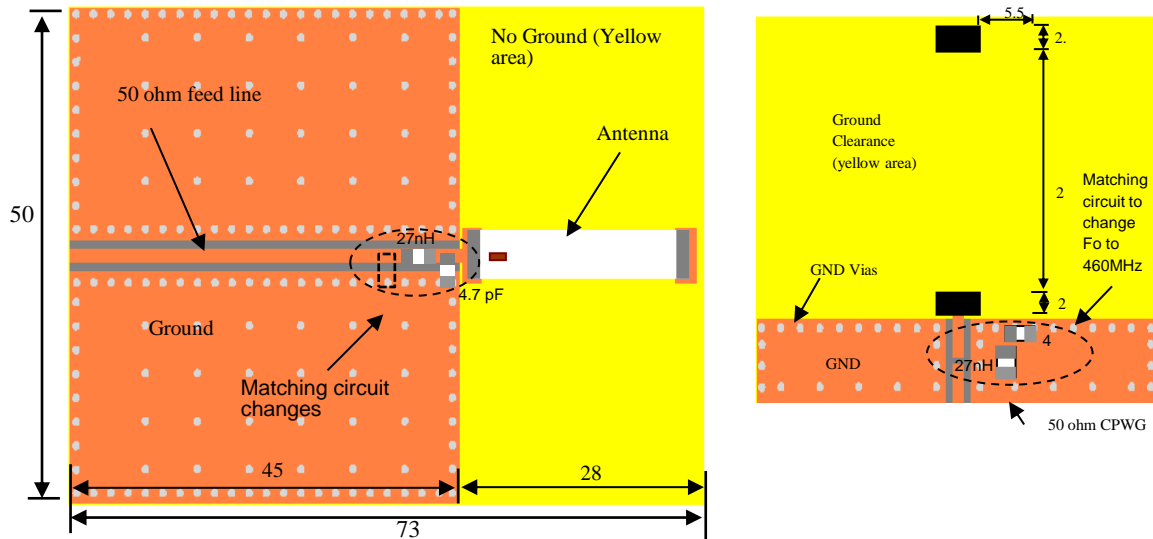
433 MHz ISM Antenna SMD (25x5mmx1.2)

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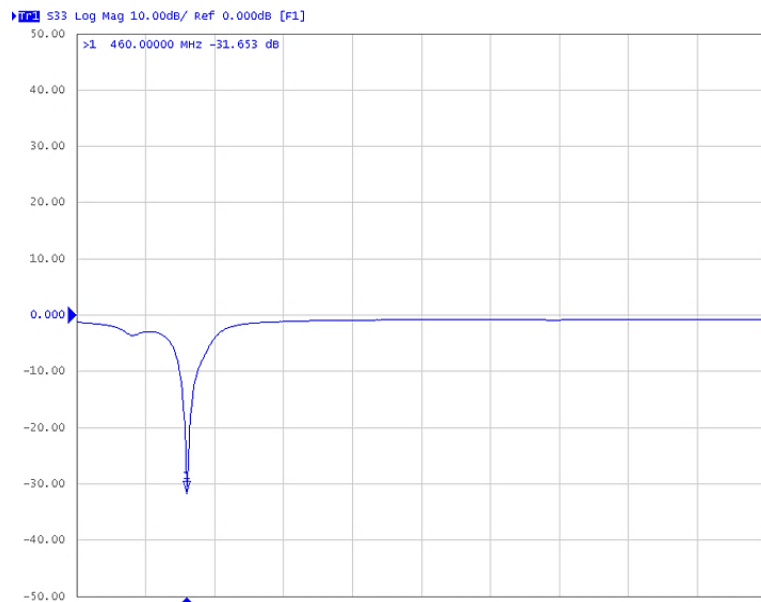
Detail Specification: 3/14/2016

Page 8 of 9

Tuning 0433AT62A0020 to 460MHz



Orderable EVB Johanson p/n: 0433AT62A0460-EB1SMA



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P/N 0433AT62A0020

Detail Specification: 3/14/2016

Page 9 of 9

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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