

"High Frequency Ceramic Solutions"

433 MHz ISM Antenna SMD (25x5mmx1.2)

P/N 0433AT62A0020

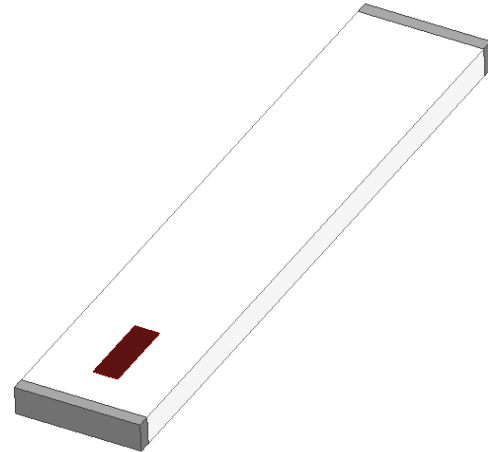
Detail Specification: 5/30/2018

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General Specifications

Part Number	0433AT62A0020
Frequency (MHz)*	423 - 443
Peak Gain (XZ-total)	-4.0 dBi typ.
Average Gain (XZ-total)	-4.0 dBi typ.
Return Loss	9.5 dB min.
Impedance	50 Ω

Power Capacity (W)	3 max. (CW)
Operating Temperature	-40 to +85°C
Recommended Storage Conditions for unused T&R product	+5 ~ +35 °C Humidity 45~75%RH 18 mos. max
Reel Quantity	500 pcs.



* See page 8 for tuned antenna performance at 460MHz

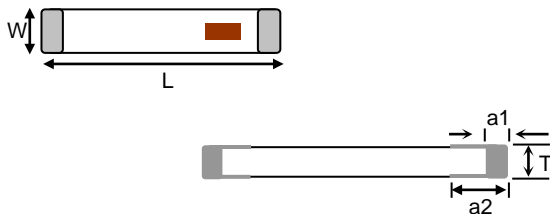
* See page 9 for tuned antenna performance at 403MHz

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



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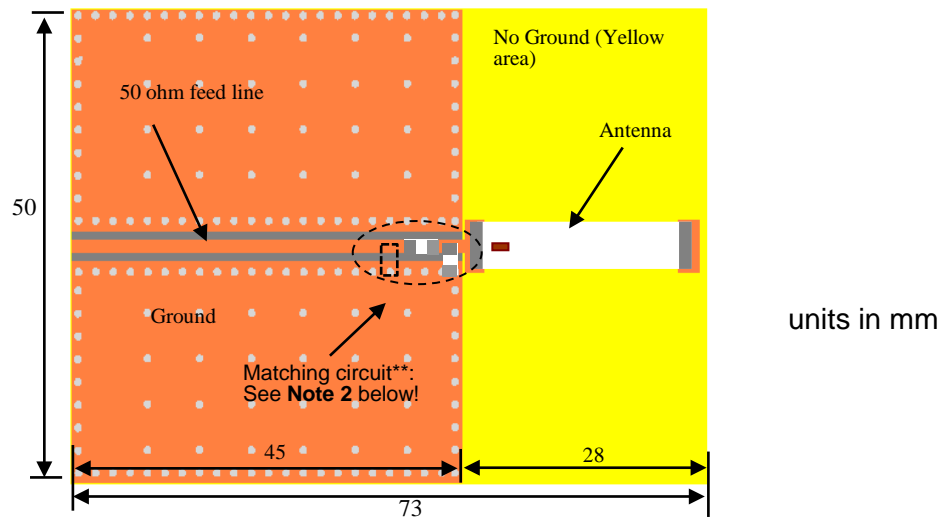
433 MHz ISM Antenna SMD (25x5mmx1.2)

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



****Note 2:** We recommend that the designer leave available slots for a "pi" (or shunt-series-shunt) matching network. The antenna matching values in this datasheet only apply to Johanson's evaluation board.

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

<https://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: <https://www.johansontechnology.com/ask-a-question>

Want the layout file of the above?

Send us a message at: www.johansontechnology.com/ask-a-question

Orderable EVB Johanson p/n: 0433AT62A0020-EB1SMA

to request a sample, go to: www.johansontechnology.com/request-a-sample

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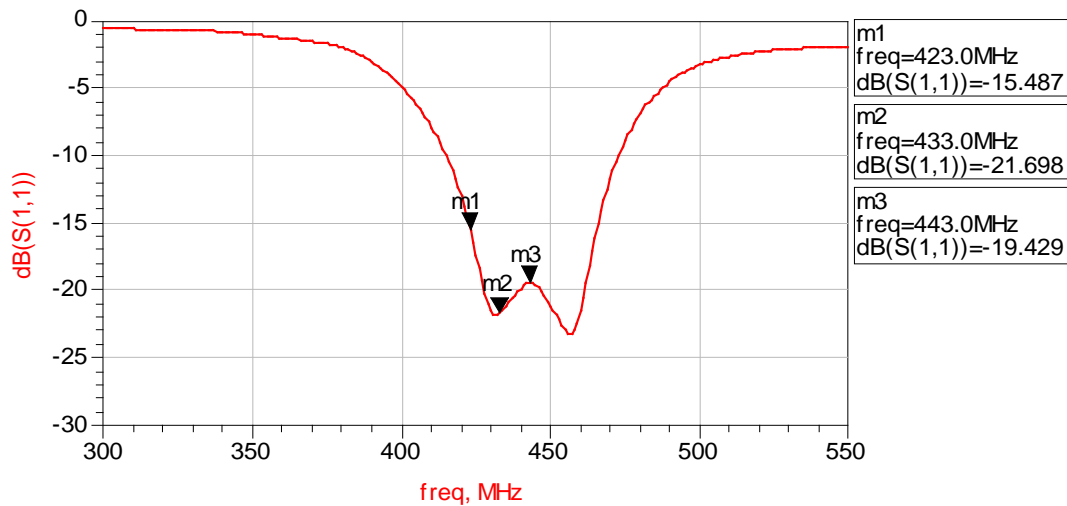
P/N 0433AT62A0020

Detail Specification: 5/30/2018

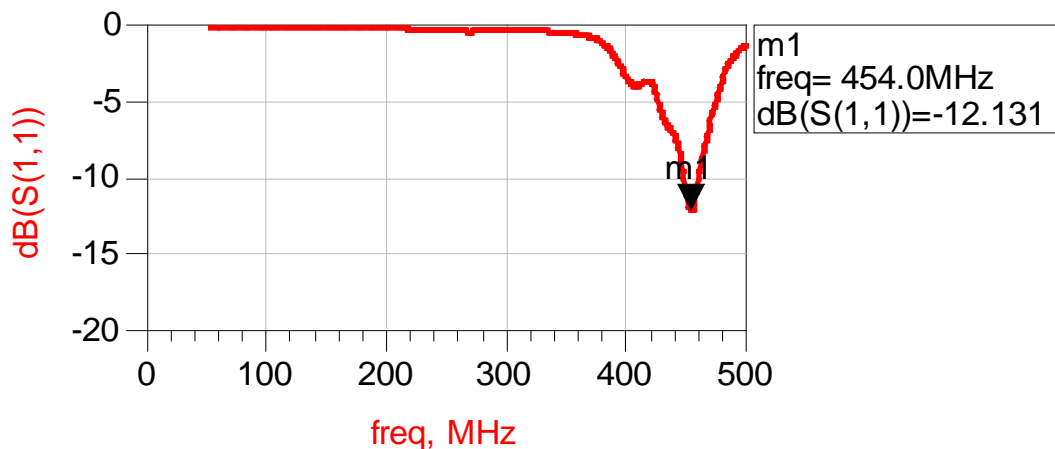
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Electrical Characteristics: Mounting Consideration - 1 (0433AT62A0020-EB1SMA)

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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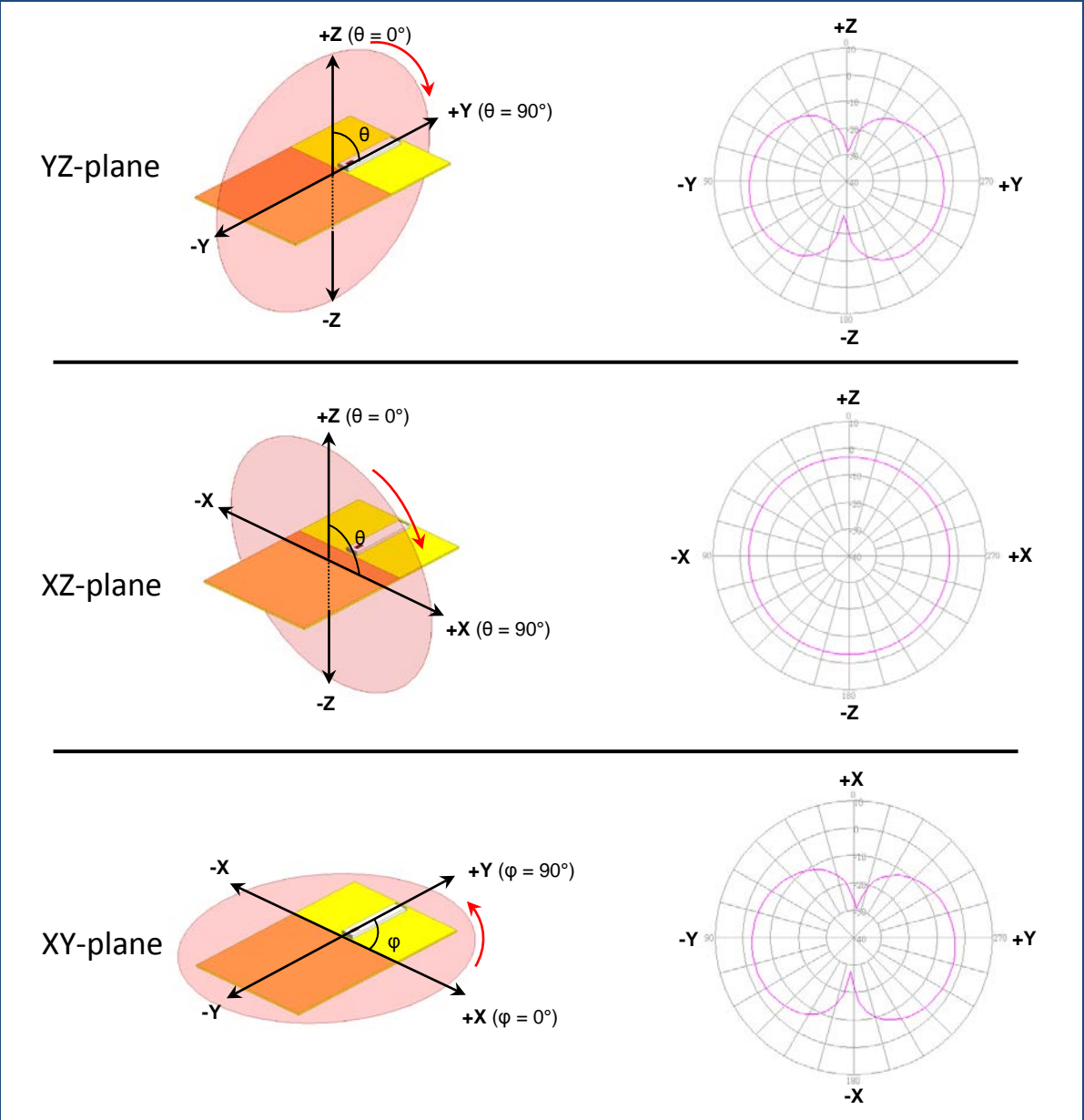
433 MHz ISM Antenna SMD (25x5mmx1.2)

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



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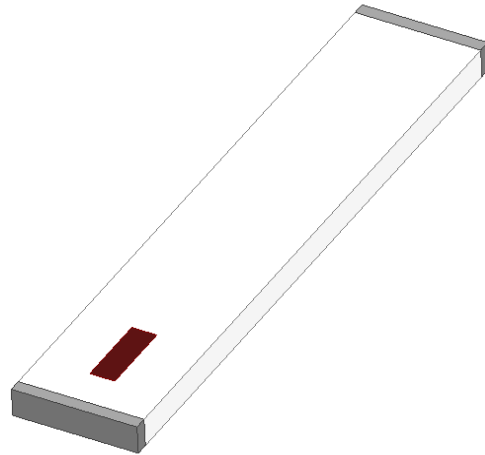
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General Specifications: Mounting Consideration - 2 (Larger PCB)

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

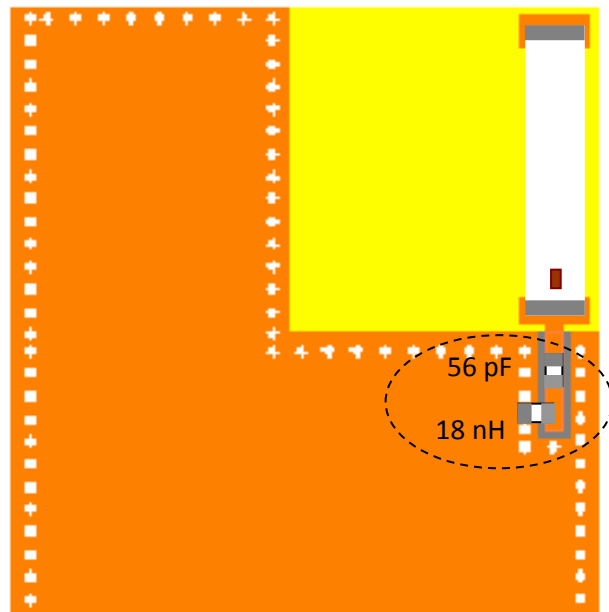
 Solder Resist

 Land

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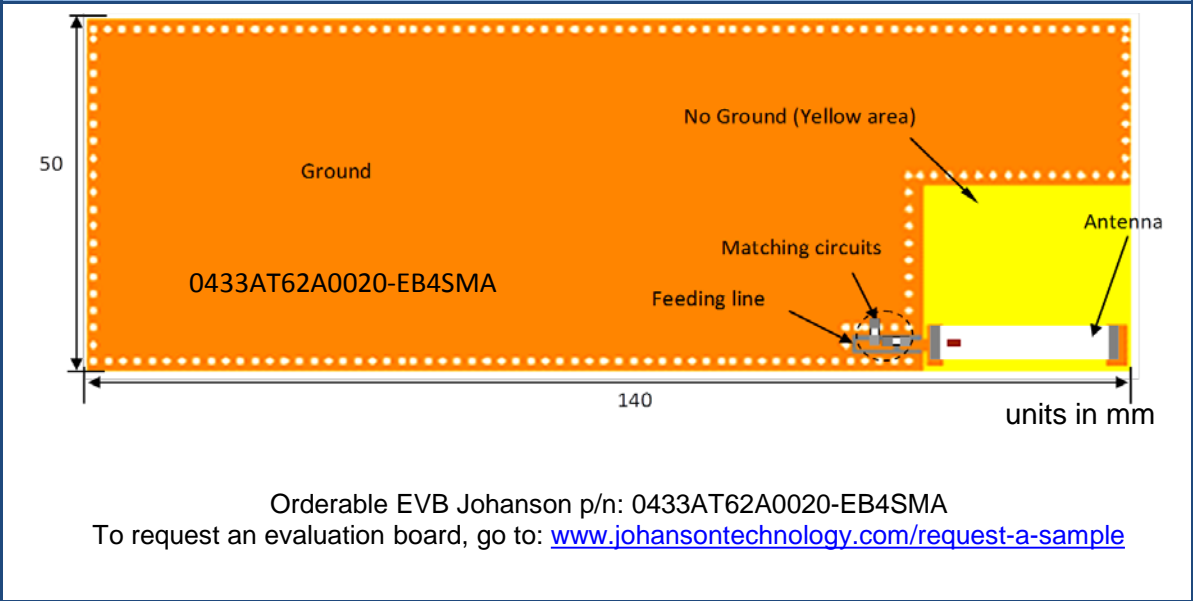
www.johansontechnology.com/ipc-antenna-services



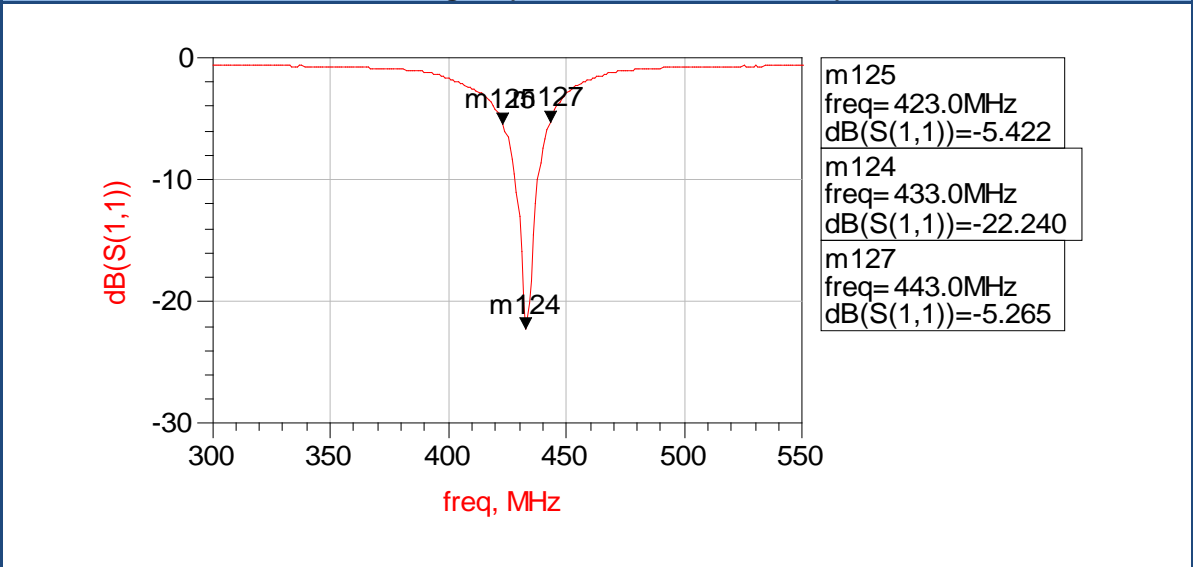
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433 MHz ISM Antenna SMD (25x5mmx1.2) **P/N 0433AT62A0020**
 Detail Specification: 5/30/2018 Page 6 of 10

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



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



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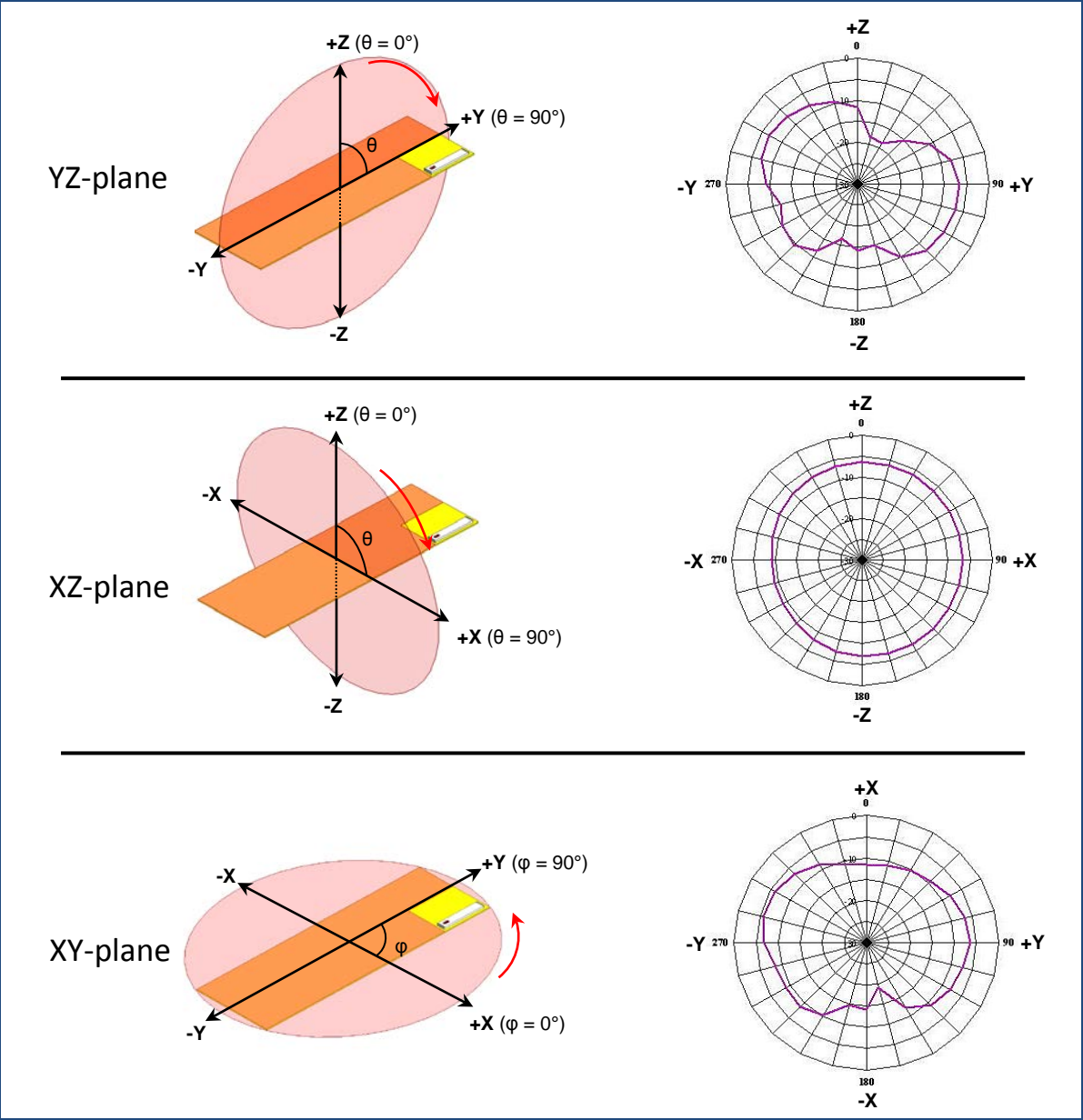
433 MHz ISM Antenna SMD (25x5mmx1.2)

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



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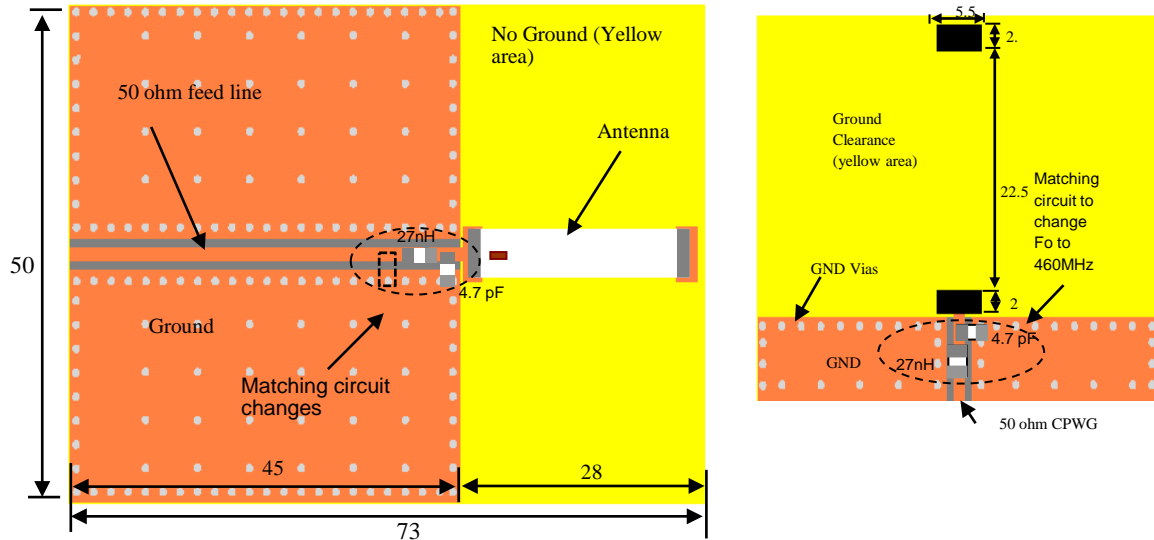
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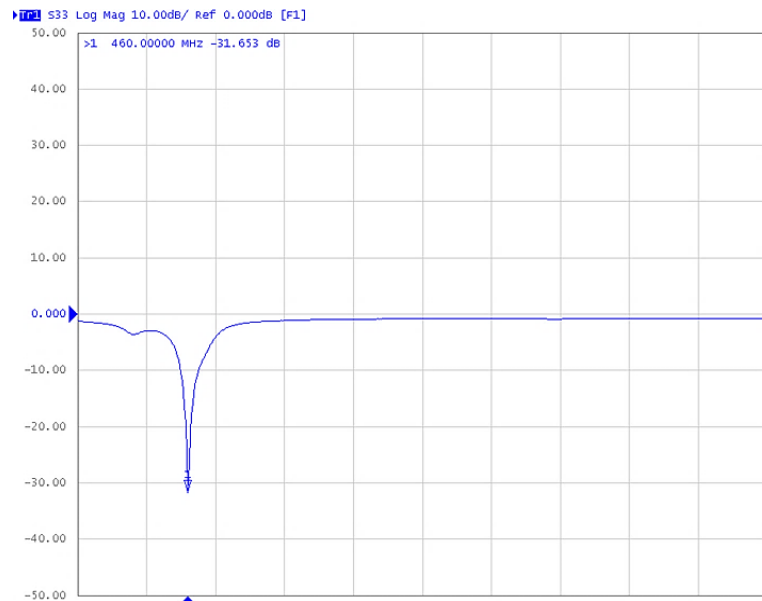
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Tuning 0433AT62A0020 to 460MHz



Orderable EVB Johanson p/n: 0433AT62A0460-EB1SMA



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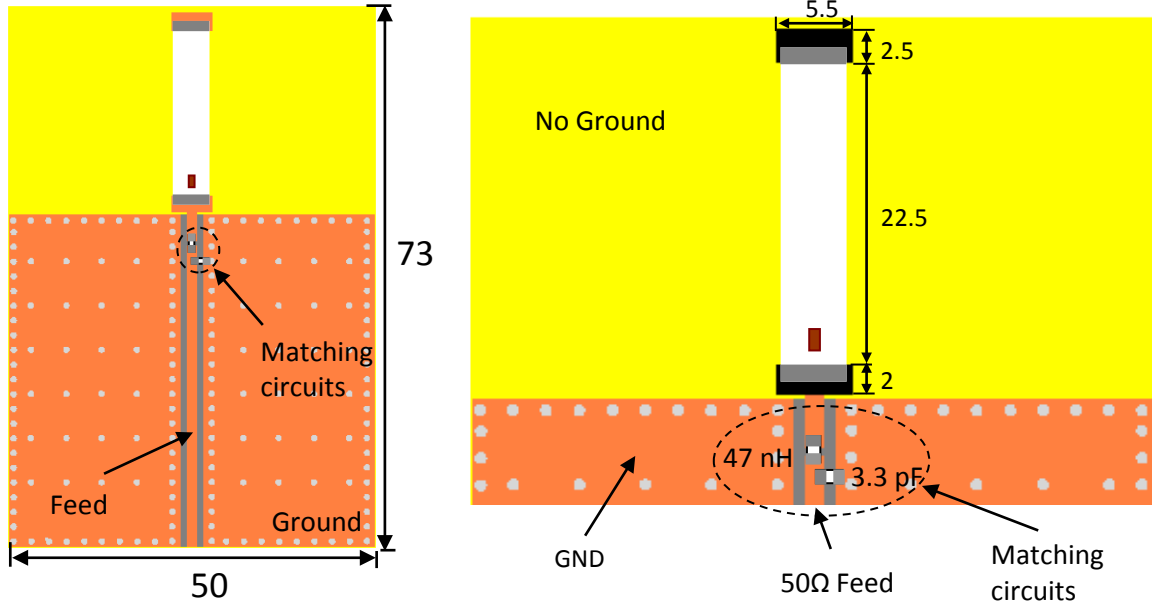
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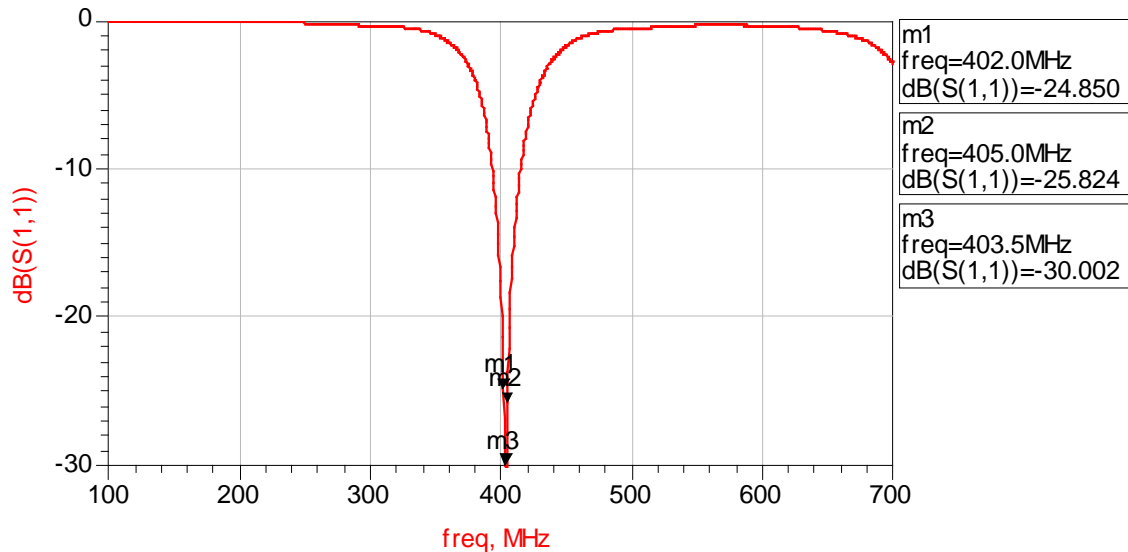
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Tuning 0433AT62A0020 to 403MHz



Orderable EVB Johanson p/n: 0433AT62A0020-EB5SMA



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More SMD Chip Antennas at:

www.johansontechnology.com/antennas

Packaging information

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/ipc-antenna-services

RoHS Compliance

www.johansontechnology.com/rohs-compliance

MSL Info

www.johansontechnology.com/msl-rating

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