

High Frequency Ceramic Solutions

AEC-Q200 Qualification Available

915 MHz ISM Antenna for small form factor applications

P/N 0915AT43A0026

Detail Specification: 2/11/2021

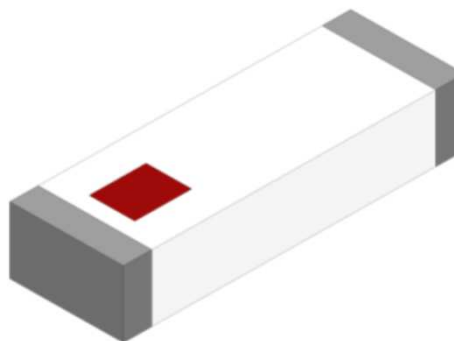
Page 1 of 7

General Specifications

Part Number	0915AT43A0026
Frequency (MHz)	902 - 928
Peak Gain (dBi)	1.0 typ. ((XZ-total)
Average Gain (dBi)	-4.0 typ. (XZ-total)
Return Loss (dB)	8.5 min.
Impedance (Ω)	50
Input Power (W)	2 max. (CW)
Operating Temperature	-40 to +85°C
Recommended Storage Conditions and Period for unused T&R Product	+5 to +35°C Humidity 45 - 75% RH 18 months max.
Reel Quantity (pcs/reel)	1,000

Let us help you with the antenna design, optimization, and tuning!

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

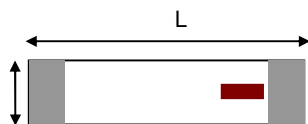


Part Number Explanation

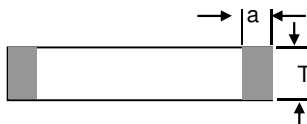
P/N Suffix	Packing Style	Bulk (loose pcs.)	Suffix = S	e.g. 0915AT43A0026S
		T & R	Suffix = E	e.g. 0915AT43A0026E
		100% Tin	Suffix = None	e.g. 0915AT43A0026(E or S)
	Evaluation Board	0915AT43A0026-EB1SMA		

Mechanical Dimensions

	In	mm
L	0.276 $\pm$ 0.008	7.00 $\pm$ 0.20
W	0.079 $\pm$ 0.008	2.00 $\pm$ 0.20
T	0.031 +0.004 / -0.008	0.80 +0.10 / -0.20
a	0.020 $\pm$ 0.012	0.50 $\pm$ 0.30



Top View



Side View

Terminal Configuration

No.	Function
1	Feeding Point
2	NC*



*This terminal must be soldered for anchoring and functionality purposes.

Johanson Technology, Inc. reserves the right to make design changes without notice.

All sales are subject to Johanson Technology, Inc. terms and conditions.



<https://www.johansontechnology.com>

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

Ver. 3.0

2021 Johanson Technology, Inc. All Rights Reserved

High Frequency Ceramic Solutions

915 MHz ISM Antenna for small form factor applications

P/N 0915AT43A0026

Detail Specification: 2/11/2021

Page 2 of 7

Mounting Considerations I

Mount these devices with maroon mark facing up. *Line width should be designed to provide 50 Ω impedance matching characteristics.

Matching circuit**:
See **Note 2** below!

JTI P/N for Matching Circuit**:

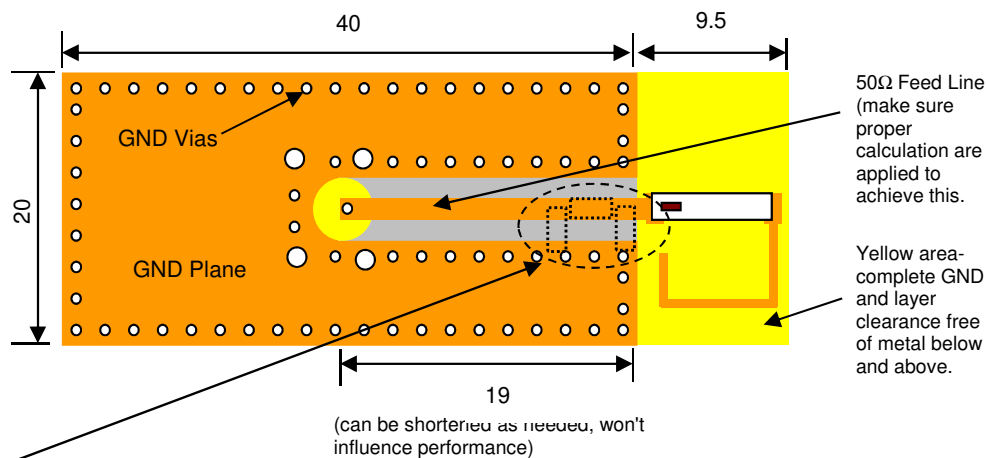
Inductor (4.7nH): L-07C4N7SV6T

Inductor (10nH): L-07C10NJV6T

Cap (0.5pF): 500R07S0R5BV4T

All units in: mm

Johanson Test Board (orderable)
p/n: 0915AT43A0026-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, depending on the layout, thickness, material, etc. 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>

Johanson Technology, Inc. reserves the right to make design changes without notice.

All sales are subject to Johanson Technology, Inc. terms and conditions.



<https://www.johansontechnology.com>

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

Ver. 3.0

2021 Johanson Technology, Inc. All Rights Reserved

High Frequency Ceramic Solutions

915 MHz ISM Antenna for small form factor applications

P/N 0915AT43A0026

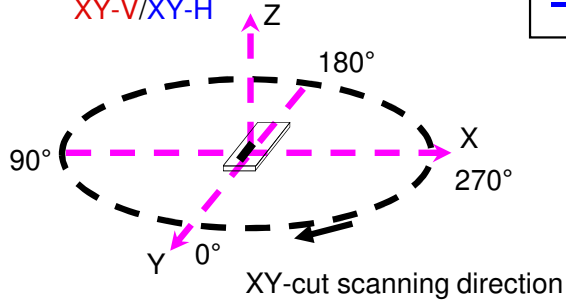
Detail Specification: 2/11/2021

Page 3 of 7

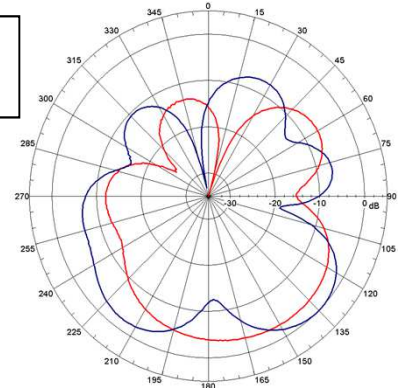
Typical Radiation Performance @ 25° C using 0915AT43A0026-EB1SMA

Typical Radiation Patterns

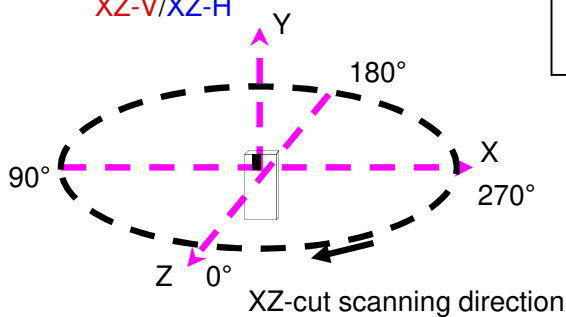
XY-V/XY-H



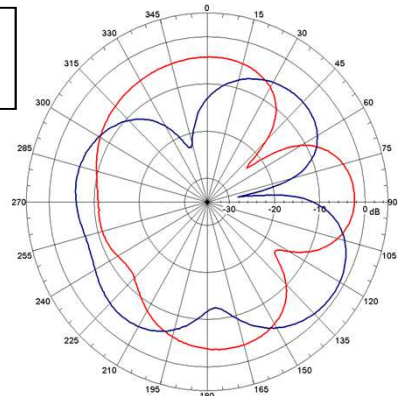
XY cut @915MHz
 — Vertical
 — Horizontal



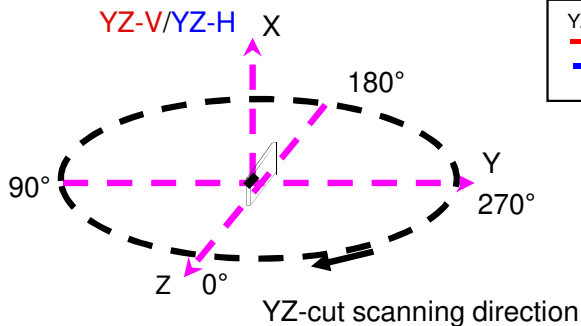
XZ-V/XZ-H



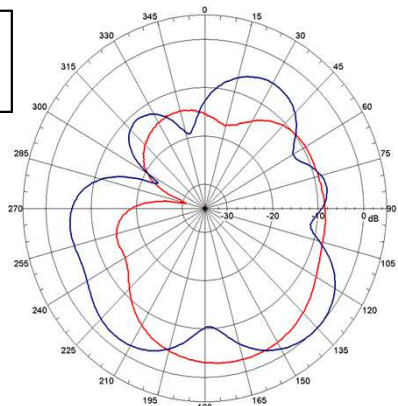
XZ cut @915MHz
 — Vertical
 — Horizontal



YZ-V/YZ-H



YZ cut @915MHz
 — Vertical
 — Horizontal



Johanson Technology, Inc. reserves the right to make design changes without notice.
 All sales are subject to Johanson Technology, Inc. terms and conditions.



<https://www.johansontechnology.com>

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

Ver. 3.0

2021 Johanson Technology, Inc. All Rights Reserved

High Frequency Ceramic Solutions

915 MHz ISM Antenna for small form factor applications

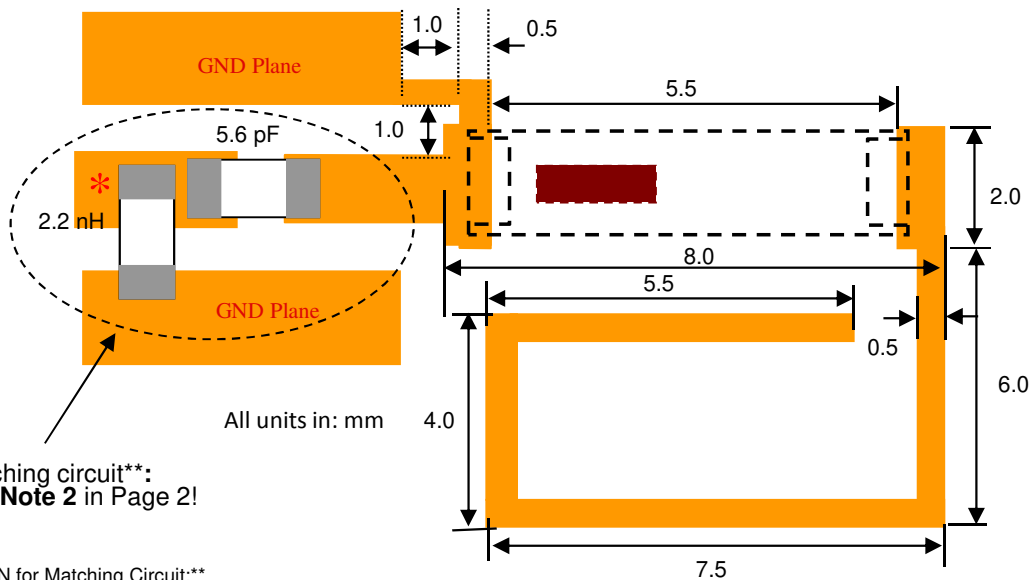
P/N 0915AT43A0026

Detail Specification: 2/11/2021

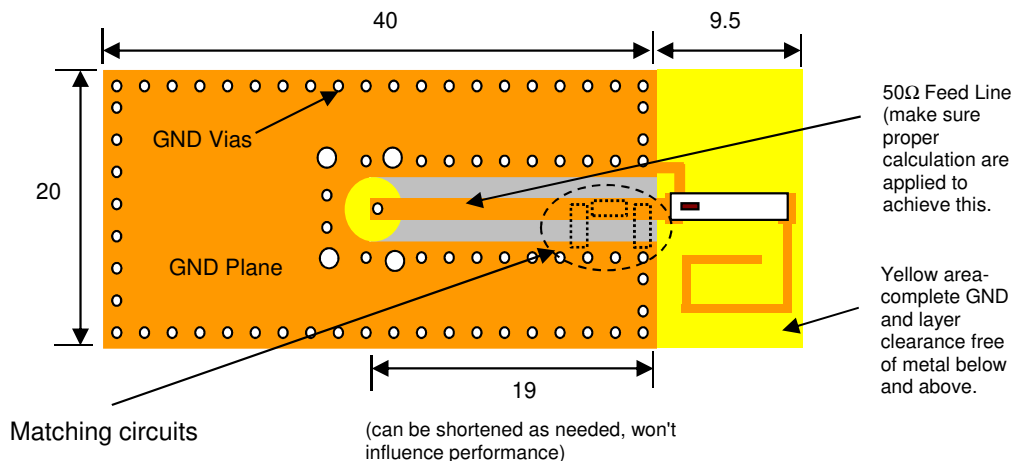
Page 4 of 7

Mounting Considerations II

Mount these devices with maroon mark facing up. *Line width should be designed to provide 50 Ω impedance matching characteristics.



JTI P/N for Matching Circuit:**
Inductor (2.2nH):L-07C2N2SV6T
Cap (5.6pF):500R07S5R6BV4T



Johanson Technology, Inc. reserves the right to make design changes without notice.
All sales are subject to Johanson Technology, Inc. terms and conditions.



<https://www.johansontechnology.com>

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

Ver. 3.0

2021 Johanson Technology, Inc. All Rights Reserved

High Frequency Ceramic Solutions

915 MHz ISM Antenna for small form factor applications

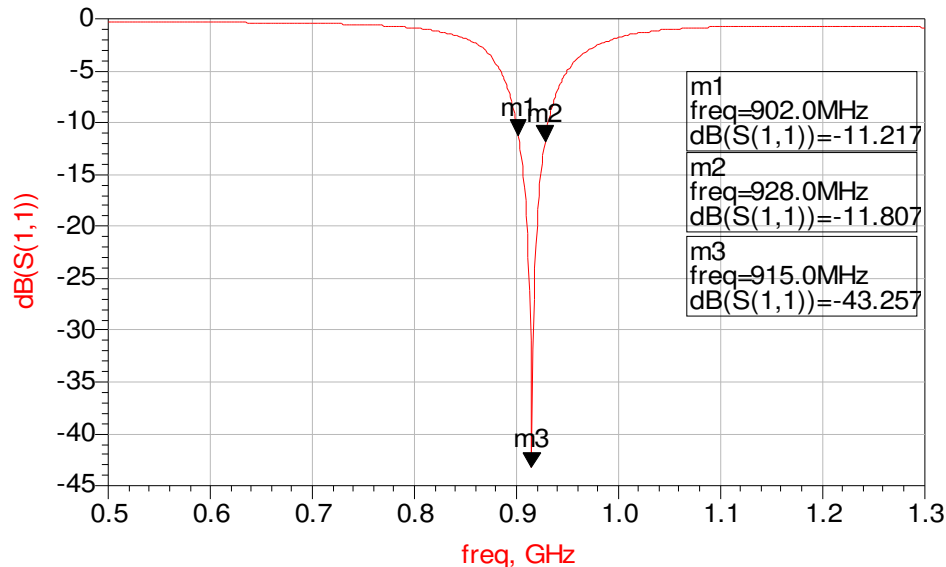
P/N 0915AT43A0026

Detail Specification: 2/11/2021

Page 5 of 7

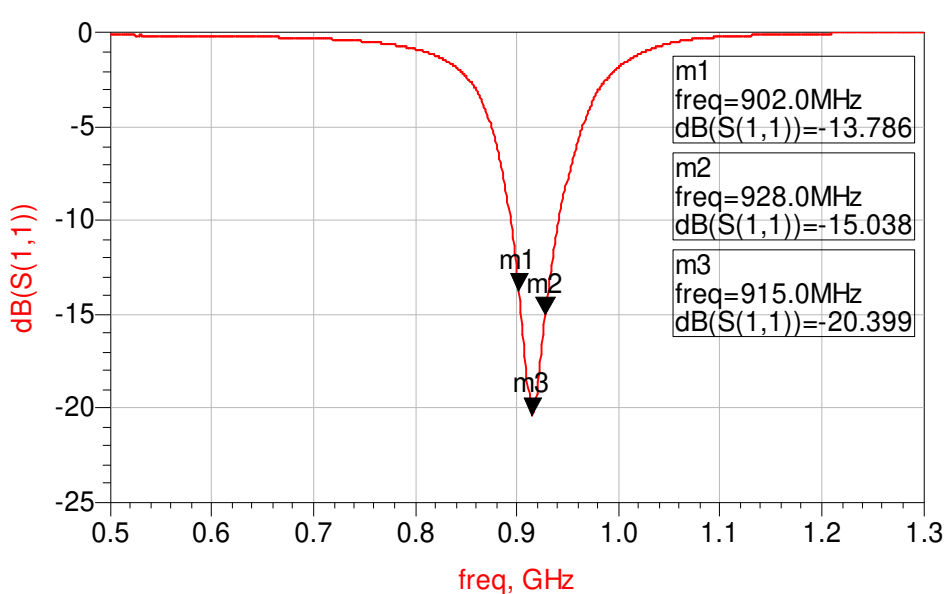
Mounting Considerations I: Electrical Performance @25°C

Return Loss (with matching)



Mounting Considerations II: Electrical Performance @25°C

Return Loss (with matching)



Johanson Technology, Inc. reserves the right to make design changes without notice.
All sales are subject to Johanson Technology, Inc. terms and conditions.



<https://www.johansontechnology.com>

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

Ver. 3.0

2021 Johanson Technology, Inc. All Rights Reserved

High Frequency Ceramic Solutions

915 MHz ISM Antenna for small form factor applications

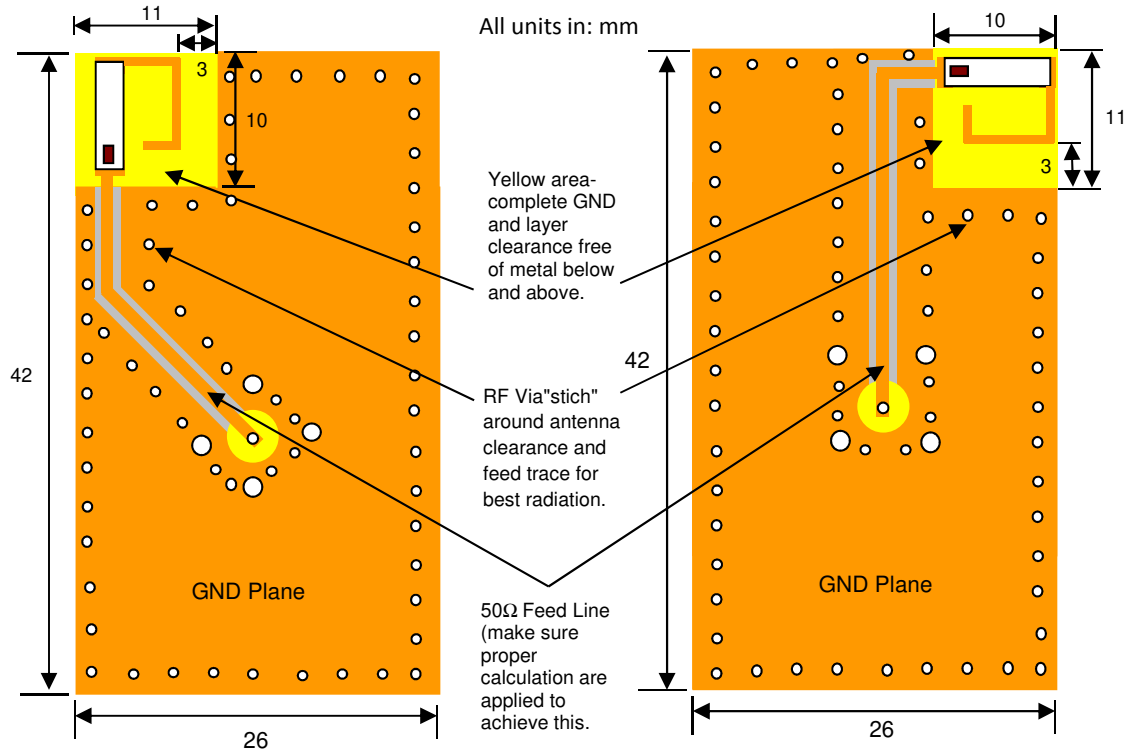
P/N 0915AT43A0026

Detail Specification: 2/11/2021

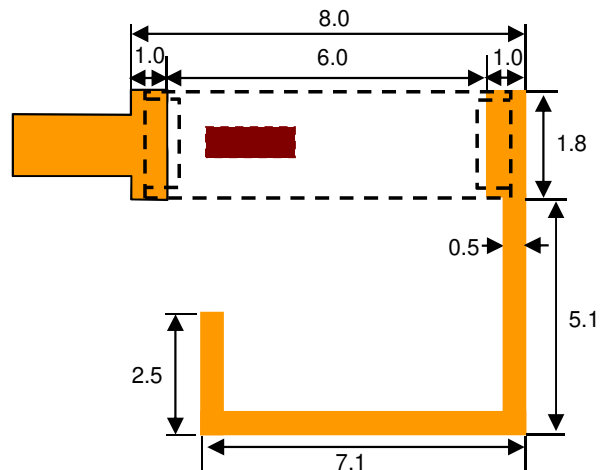
Page 6 of 7

Mounting Considerations III

We have conducted internal studies to show that the following corner placements provide antenna efficiency results with minimal detrimental effects.



Note: It is recommended that the designer leave available slots for a "pi" (or shunt-series-shunt) network. The matching values on client's PCB will be different, depending on the layout, thickness, material, etc. 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>



Johanson Technology, Inc. reserves the right to make design changes without notice.
All sales are subject to Johanson Technology, Inc. terms and conditions.



<https://www.johansontechnology.com>

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

Ver. 3.0

2021 Johanson Technology, Inc. All Rights Reserved

High Frequency Ceramic Solutions

915 MHz ISM Antenna for small form factor applications

P/N 0915AT43A0026

Detail Specification: 2/11/2021

Page 7 of 7

Antenna tuning, optimization, and validation services:

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

For more antennas and to download measured S-parameters, go to:

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

Soldering Information

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

MSL Info

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

Packaging Information

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

For layout review contact our applications team at:

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

RoHS Compliance

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

Johanson Technology, Inc. reserves the right to make design changes without notice.
All sales are subject to Johanson Technology, Inc. terms and conditions.



<https://www.johansontechnology.com>

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

Ver. 3.0

2021 Johanson Technology, Inc. All Rights Reserved

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Johanson:

0915AT43A0026E