

"High Frequency Ceramic Solutions"

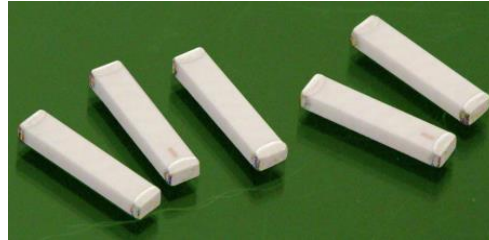
868 and 915MHz dual (wideband) ISM band SMD chip antenna P/N 0900AT43A0070

Detail Specification: 6/13/2016

Page 1 of 8

General Specifications

| | |
|-------------------------|-----------------------|
| Part Number | 0900AT43A0070 |
| Frequency (MHz) | 858 - 928 |
| Peak Gain (XZ-total) | -0.5 dBi typ. |
| Average Gain (XZ-total) | -2.5 dBi typ. |
| Radiated Efficiency | 48% ave. ¹ |
| Return Loss | -4 dB min. |
| impedance | 50 Ω |
| Reel Quantity | 1,000 |
| Operating Temperature | -40 to +85°C |
| Storage Temperature | -40 to +85°C |
| Power Capacity | 2W max. (CW) |



| | |
|---|-----------------------------------|
| Recommended Storage Conditions of unused product on T&R | +5 to +35°C, Humidity 45~75%RH |
| Storage Period | 18 months max. |

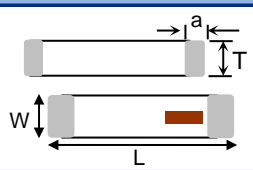
¹On test board 0900AT43A0070-EB2SMA, Layout# 2, page 5

Part Number Explanation

| P/N Suffix | Packing Style | Bulk (loose) | Suffix = S | eg. 0900AT43A0070S |
|------------|---------------|--------------|-----------------|---------------------------|
| | | T & R | Suffix = E | eg. 0900AT43A0070E |
| | | 100% Tin | Suffix = E or S | eg. 0900AT43A0070(E or S) |

Mechanical Dimensions

| | In | mm |
|---|----------------------|------------------|
| L | 0.276 ± 0.008 | 7.00 ± 0.20 |
| W | 0.079 ± 0.008 | 2.00 ± 0.20 |
| T | 0.031 ± +.004/-0.008 | 0.80 ± +0.1/-0.2 |
| a | 0.020 ± 0.012 | 0.50 ± 0.30 |

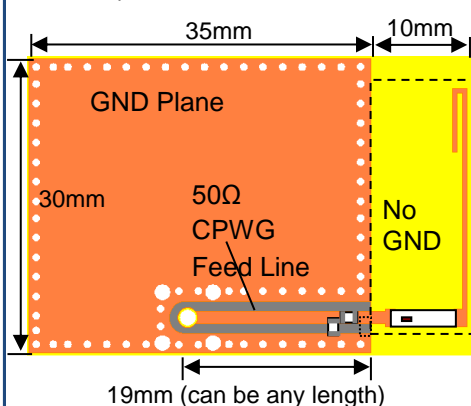


Terminal Configuration

| No. | Function |
|-----|------------------|
| 1 | RF Feed Point |
| 2 | To trace element |

Layout Recommendation #1

Test board p/n: 0900AT43A0070-EB1SMA



- Orderable EVB for evaluation, it comes with a female SMA connector. Go to: www.johansontechnology.com/request-a-sample and ask for p/n 0900AT43A0070-EB1SMA

- Need help laying out the antenna, want us to review your antenna design (free!), require the Gerber files for this EVB, or would like us to validate the new tuning values of your PCB (fee may apply) go to: www.johansontechnology.com/ask-a-question
www.johansontechnology.com/ipc-antenna-services

- The total antenna area usage for this EVB is approx. 25x10mm (due to trace element), but the trace can be re-shaped to reduce effective area and conform to the designer's PCB!



www.johansontechnology.com

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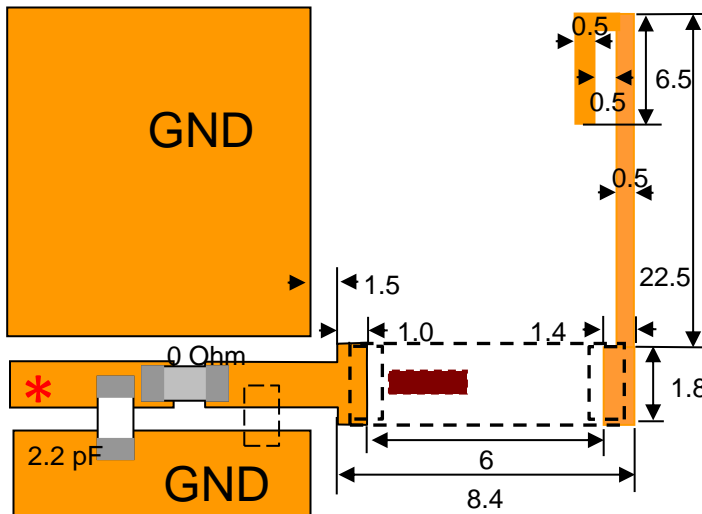
868 and 915MHz dual (wideband) ISM band SMD chip antenna P/N 0900AT43A0070

Detail Specification: 6/13/2016

Page 2 of 8

Recommended Application ISM

Layout Recommendation #1

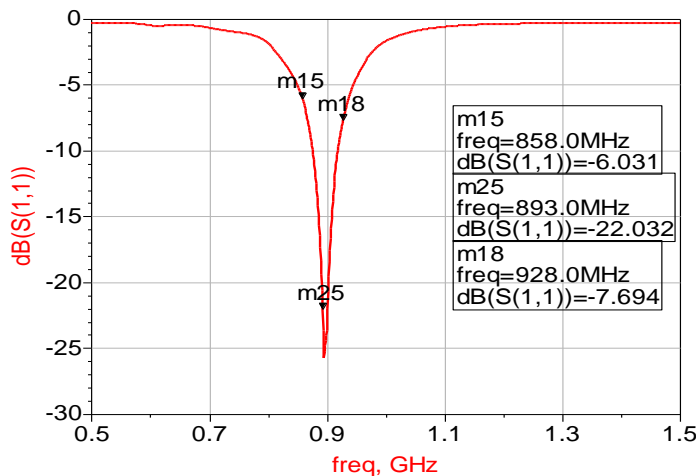


• Attention: Matching circuits and component values will be different on the client's design, depending on PCB layout, geometry, etc. It is recommended that the designer leave available slots for a "pi" (or shunt-series-shunt) network. The antenna matching network values you see here are used when antenna is mounted on Johanson's evaluation board.

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* Line width should be designed to match 50ohm characteristic impedance, depending on your PCB material and thickness (distance to GND)

Typical Electrical Characteristics S11 return loss (T=25 °C) on Layout #1



This antenna has about 20MHz of guard-band on each side

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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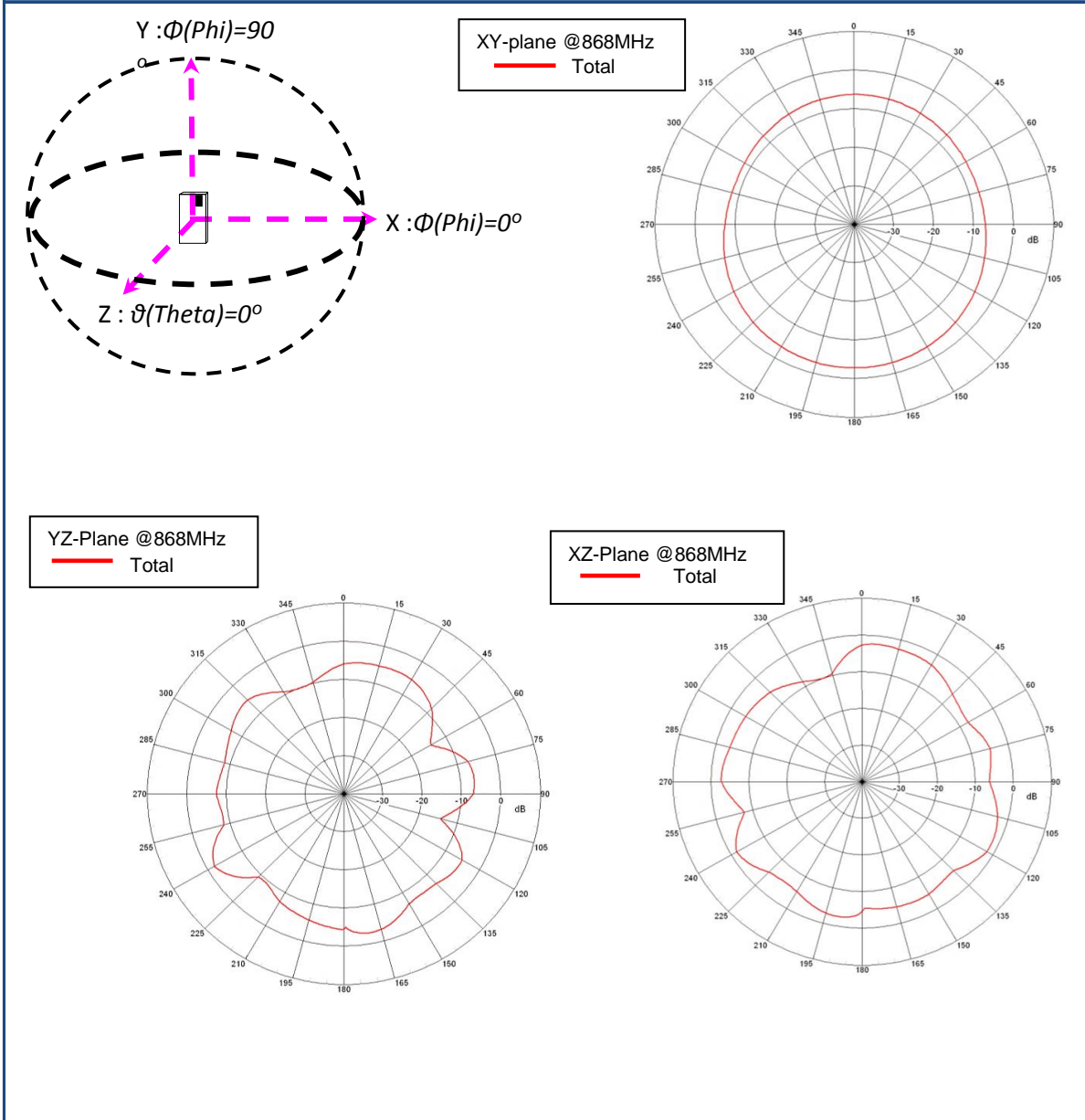
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Detail Specification: 6/13/2016

Page 3 of 8

Recommended Application ISM

Typical Radiation Patterns (@25C) of Layout Recommendation #1



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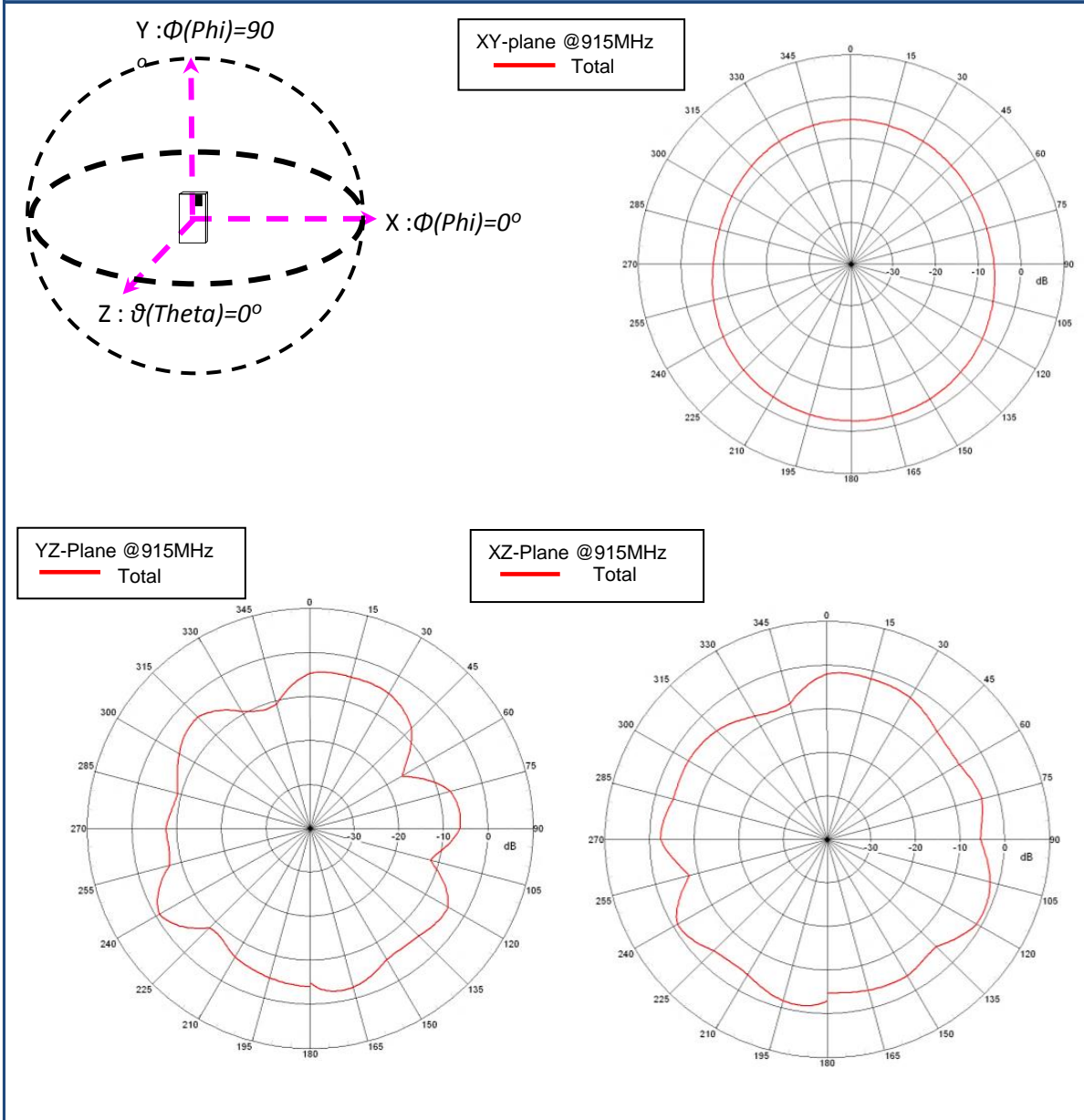
868 and 915MHz dual (wideband) ISM band SMD chip antenna P/N 0900AT43A0070

Detail Specification: 6/13/2016

Page 4 of 8

Recommended Application ISM

Typical Radiation Patterns (@25C) of Layout Recommendation #1



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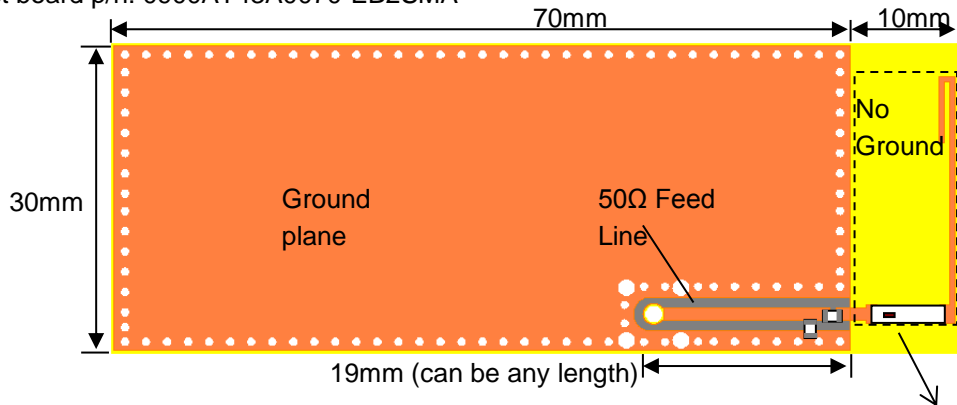
Detail Specification: 6/13/2016

Page 5 of 8

Recommended Application ISM

Layout Recommendation #2

Test board p/n: 0900AT43A0070-EB2SMA



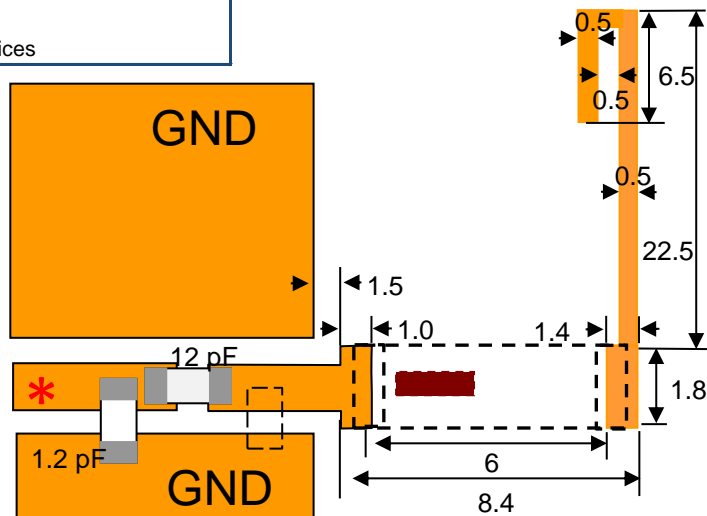
• Orderable EVB for evaluation, it comes with a female SMA connector. Go to: www.johansontechnology.com/request-a-sample and ask for p/n 0900AT43A0070-EB2SMA

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• Need help laying out the antenna, want us to review the design (free!), require the Gerber files for this EVB, or would like us to validate the new tuning values of your PCB (fee may apply) go to: www.johansontechnology.com/ask-a-question

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* Line width should be designed to match 50ohm characteristic impedance, depending on your PCB material and thickness (dist to GND)



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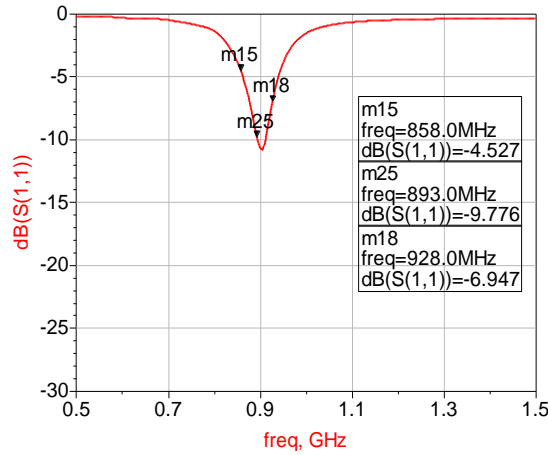
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Detail Specification: 6/13/2016

Page 6 of 8

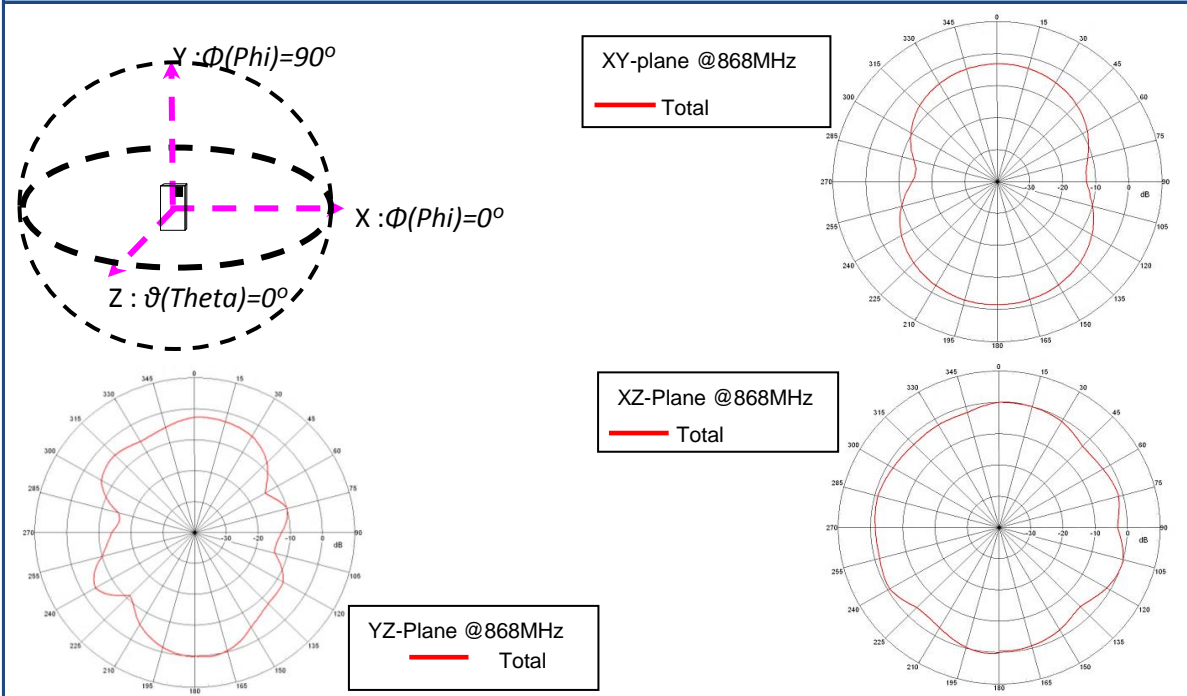
Recommended Application ISM

Typical Electrical Characteristics S11 return loss (T=25 °C) on Layout #2



This antenna has about 20MHz of guard-band on each side

Typical Radiation Patterns (@25C) of Layout Recommendation #2



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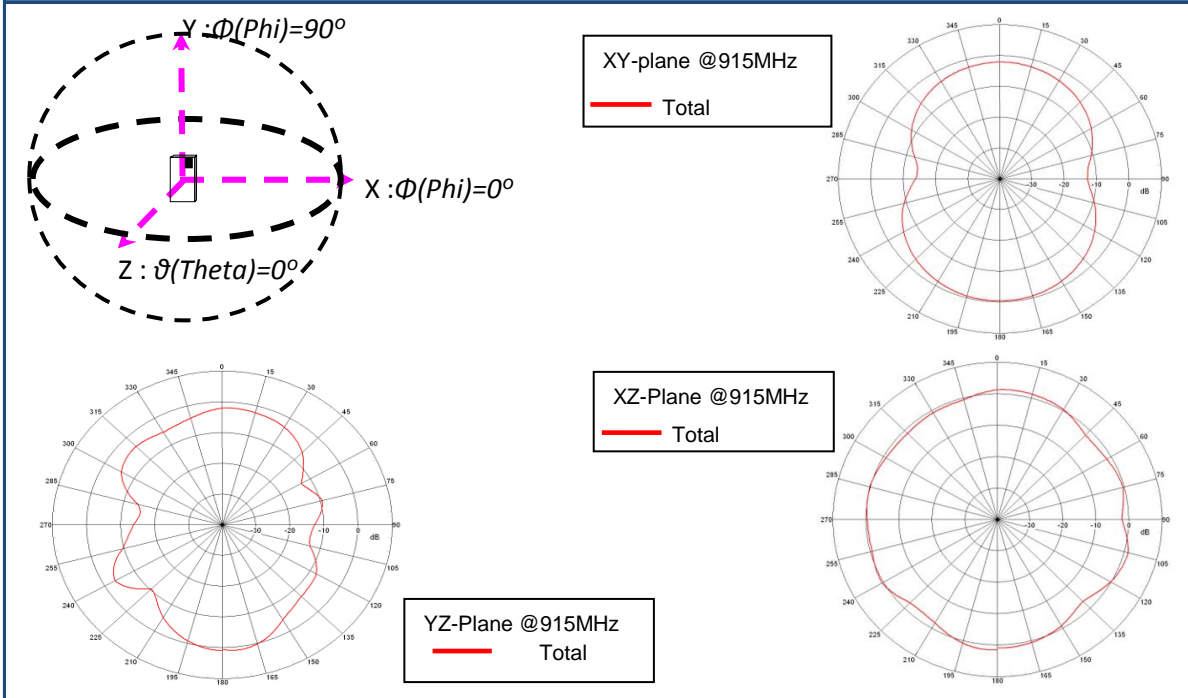
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Detail Specification: 6/13/2016

Page 7 of 8

Recommended Application ISM

Typical Radiation Patterns (@25C) of Layout Recommendation #2



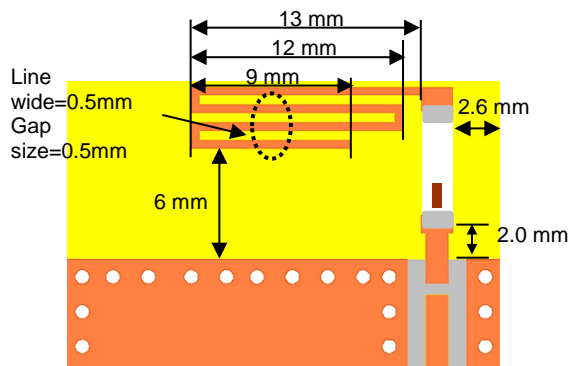
Alternative layout with reduced effective area

No EVB available for this layout

Total radiated efficiency will be reduced by about 10%

Do you have more questions about this layout?
 Contact our apps team at:

www.johansontechnology.com/ask-a-question



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Page 8 of 8

Recommended Application ISM

Antenna tuning, optimization, and validation Services

www.johansontechnology.com/ipc-antenna-services

For layout review contact our Applications Team at:

www.johansontechnology.com/ask-a-question

Soldering Information

www.johansontechnology.com/typical-soldering-profile

MSL Info

www.johansontechnology.com/msl-rating

Packaging information

www.johansontechnology.com/tape-reel-packaging

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

www.johansontechnology.com/antennas

RoHS Compliance

www.johansontechnology.com/rohs-compliance

Recommended Storage Condition and Max Shelf Life

www.johansontechnology.com/recommended-storage-conditions

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С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

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- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
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- Работу по проектам и поставку образцов.
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- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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Email: org@lifeelectronics.ru