

# High Frequency Ceramic Solutions

## LTE Multi-Band Ceramic Antenna, SMD

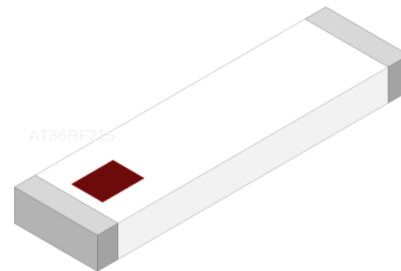
P/N: 0830AT54A2200

Detail Specification: 2/19/2018

Page 1 of 9

### General Specifications

|                                                                   |                                                 |                  |
|-------------------------------------------------------------------|-------------------------------------------------|------------------|
| Part Number                                                       | 0830AT54A2200                                   |                  |
| Antenna Matching*                                                 | Tuning Version 1                                | Tuning Version 2 |
| Frequency (MHz)                                                   | 700 - 800                                       | 824 - 960        |
|                                                                   | 1700 - 2100                                     | 1710 - 2690      |
| Return Loss (dB)                                                  | 3.5 min.                                        | 4.5 min.         |
| Peak Gain (dBi)                                                   | 2.0 typ.                                        | 2.0 typ.         |
| Average Gain (dBi)                                                | -1.6 typ.                                       | -1.0 typ.        |
| Power Capacity (W)                                                | 3 max. (CW)                                     |                  |
| Quantity/Reel                                                     | 500                                             |                  |
| Operating Temperature                                             | -40°C to +85°C                                  |                  |
| Storage Temperature                                               | -40°C to +85°C                                  |                  |
| Storage Conditions for unused product on T&R and max shelf period | +5 ~ +35 °C<br>Humidity 45~75%RH<br>18 mos. Max |                  |



Need help with the layout of the antenna?

We offer 2 free layout reviews!

Contact our applications engineers at:

[www.johansontechnology.com/ask-a-question](http://www.johansontechnology.com/ask-a-question)

For more antennas, go to:

[www.johansontechnology.com/antennas](http://www.johansontechnology.com/antennas)

\*Versions 1 and 2 represent impedance matches optimized for different frequency bands

### Part Number Explanation

|            |                  |                                                                    |               |                           |
|------------|------------------|--------------------------------------------------------------------|---------------|---------------------------|
| P/N Suffix | Packing Style    | Bulk                                                               | Suffix = S    | eg. 0830AT54A2200S        |
|            |                  | T & R                                                              | Suffix = E    | eg. 0830AT54A2200E        |
|            |                  | 100% Tin                                                           | Suffix = None | eg. 0830AT54A2200(E or S) |
|            | Evaluation Board | (Version 1) 0830AT54A2200-EB1SMA, (Version 2) 0830AT54A2200-EB2SMA |               |                           |

### Mechanical Dimensions

|   | In            | mm          |             |
|---|---------------|-------------|-------------|
| L | 0.591 ± 0.008 | 15.00 ± 0.2 |             |
| W | 0.157 ± 0.008 | 4.00 ± 0.2  |             |
| T | 0.059 ± 0.008 | 1.50 ± 0.2  |             |
| a | 0.039 ± 0.012 | 1.00 ± 0.3  |             |
|   |               |             | Top View    |
|   |               |             |             |
|   |               |             | Side View   |
|   |               |             |             |
|   |               |             | Bottom View |

### Terminal Configuration

| No.                                                          | Function |
|--------------------------------------------------------------|----------|
| 1                                                            | FEED     |
| 2                                                            | NC       |
|                                                              |          |
| Pin 2 must be soldered onto the PCB for mechanical stability |          |

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

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



[www.johansontechnology.com](http://www.johansontechnology.com)

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

Ver. 1.0

2018 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

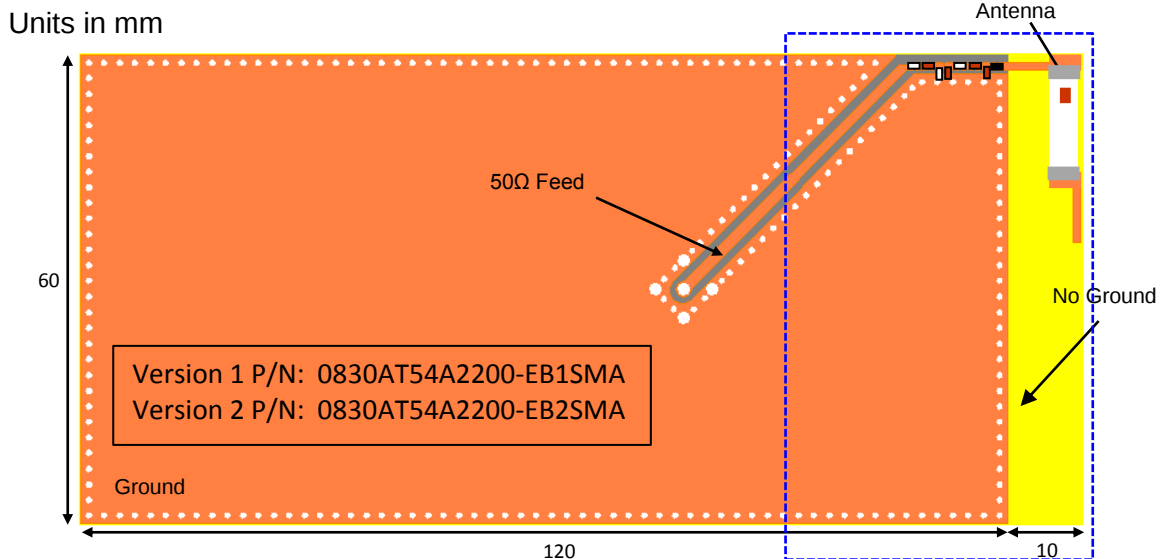
LTE Multi-Band Ceramic Antenna, SMD

P/N: 0830AT54A2200

Detail Specification: 2/19/2018

Page 2 of 9

## Mounting Consideration: Evaluation PCB (Versions 1 and 2)

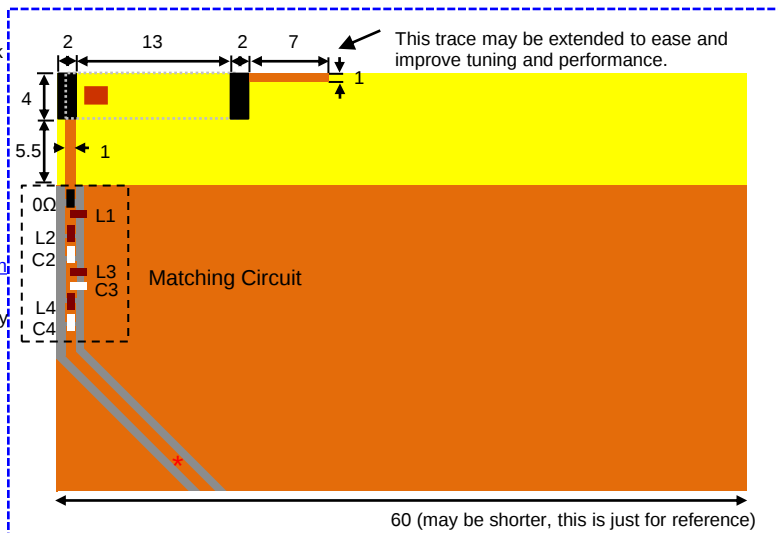


Units in mm

It is recommended that the designer leave available slots for the topology of the network to the right. These particular antenna matching values are used when antenna is mounted on Johanson's evaluation board. The matching values on client's PCB will be different, just leave them empty until final assembly, then tune. Want us to tune it for you and need layout optimization?

[www.johansontechnology.com/ask-a-question](http://www.johansontechnology.com/ask-a-question)

Would you like the layout file so you can copy and paste to your desing? Having antenna tuning issues? Contact us by clicking on the link above



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



[www.johansontechnology.com](http://www.johansontechnology.com)

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

Ver. 1.0

2018 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

LTE Multi-Band Ceramic Antenna, SMD

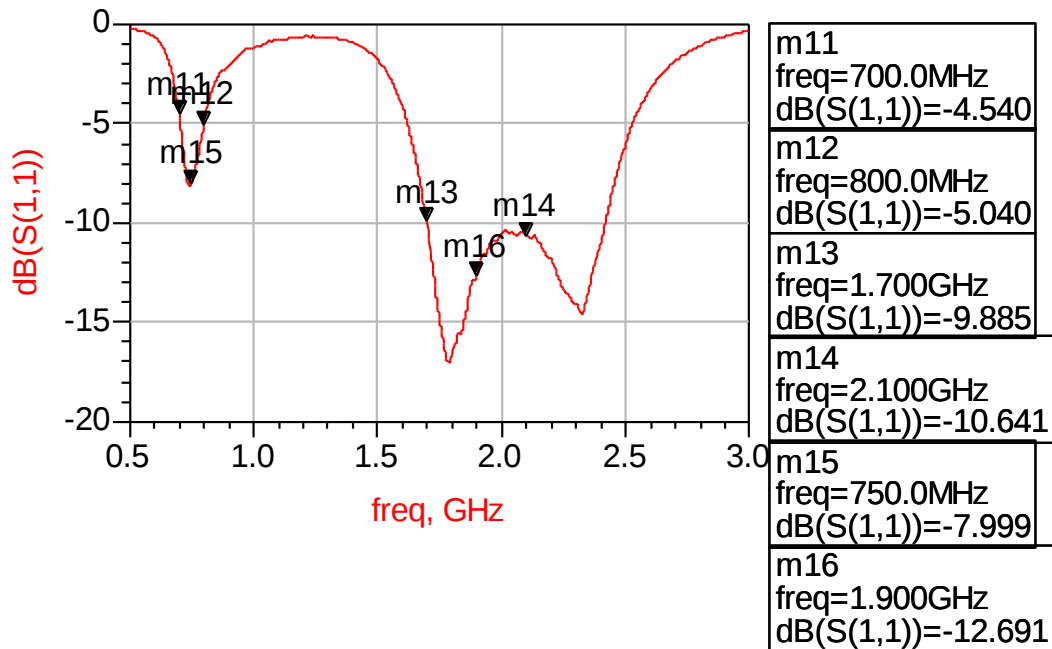
P/N: 0830AT54A2200

Detail Specification: 2/19/2018

Page 3 of 9

## Typical Electrical Characteristics (T=25°C)

### "Version 1" Evaluation PCB 0830AT54A2200-EB1SMA



To order a pre-tuned 50Ω EVB with a female SMA connector for "Tuning Version 1" click here: [www.johansontechnology.com/request-a-sample](http://www.johansontechnology.com/request-a-sample)  
Reference p/n: 0830AT54A2200-EB1SMA

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



[www.johansontechnology.com](http://www.johansontechnology.com)

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

Ver. 1.0

2018 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

LTE Multi-Band Ceramic Antenna, SMD

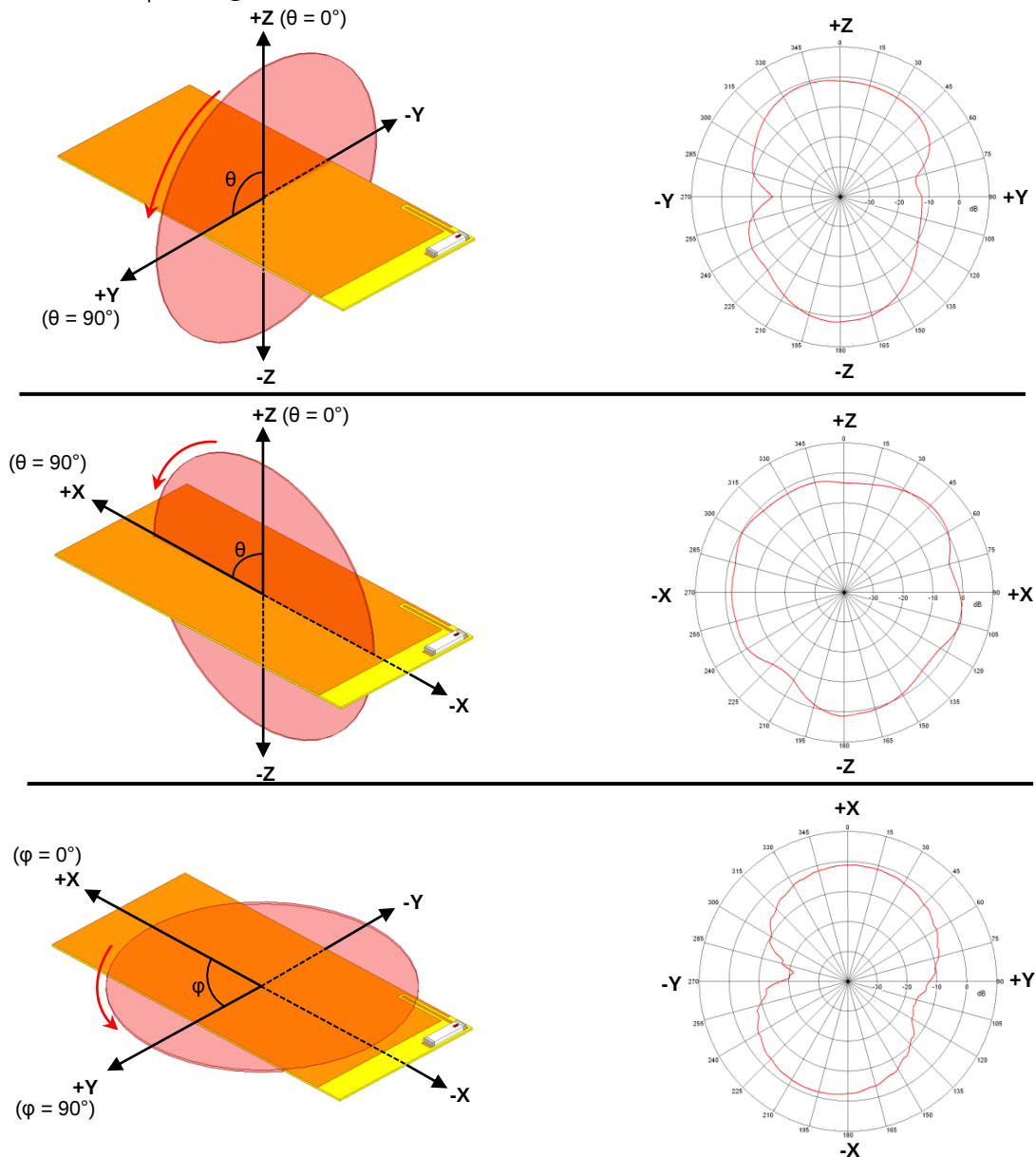
P/N: 0830AT54A2200

Detail Specification: 2/19/2018

Page 4 of 9

## Mounting Consideration: Evaluation PCB "Version 1" P/N 0830AT54A2200-EB1SMA

Typical 2D radiation patterns @ 750MHz



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

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



[www.johansontechnology.com](http://www.johansontechnology.com)

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

Ver. 1.0

2018 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

LTE Multi-Band Ceramic Antenna, SMD

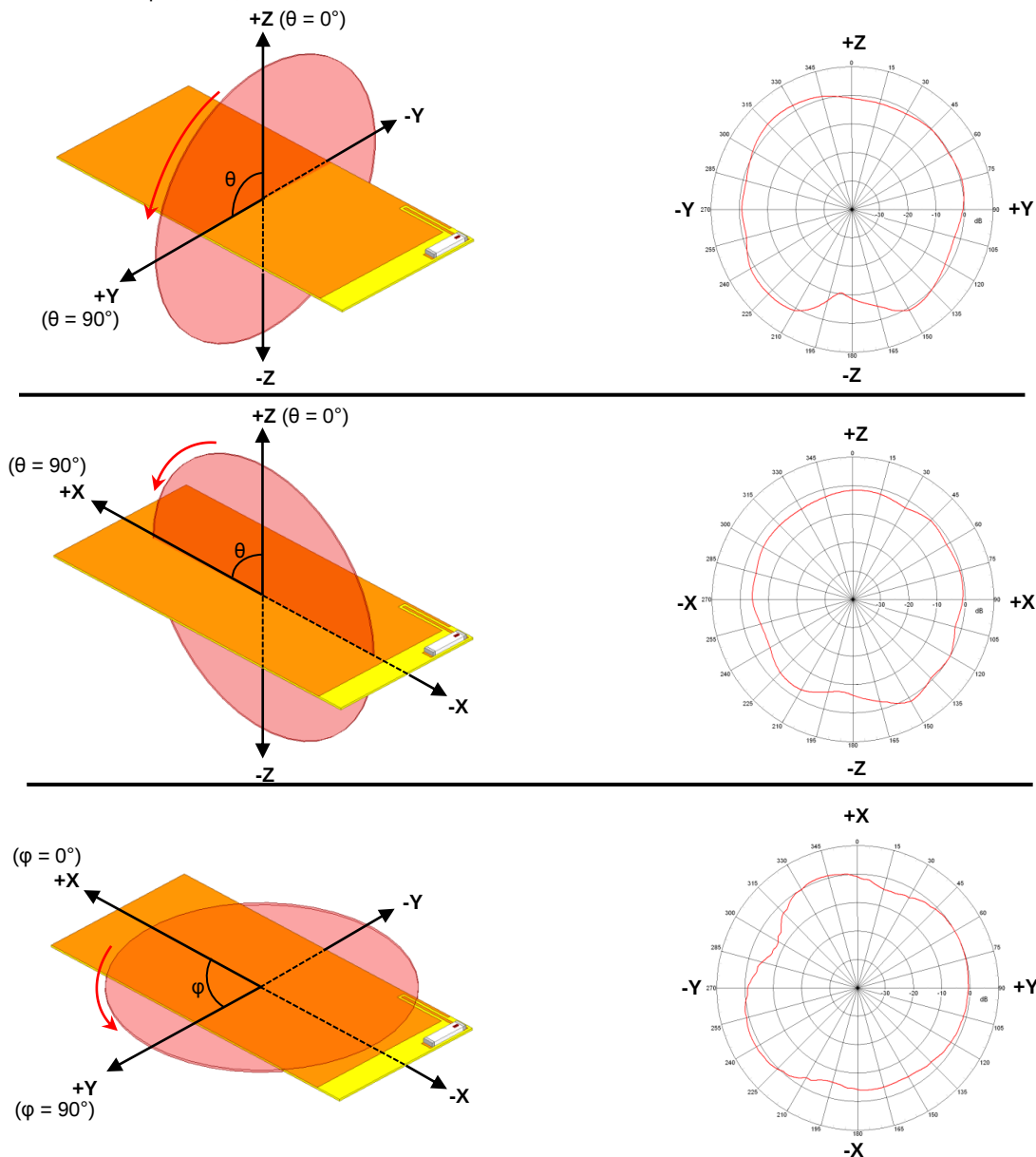
P/N: 0830AT54A2200

Detail Specification: 2/19/2018

Page 5 of 9

## Mounting Consideration: Evaluation PCB "Version 1" P/N 0830AT54A2200-EB1SMA

Typical 2D radiation patterns @ 1900MHz



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

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



[www.johansontechnology.com](http://www.johansontechnology.com)

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

Ver. 1.0

2018 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

LTE Multi-Band Ceramic Antenna, SMD

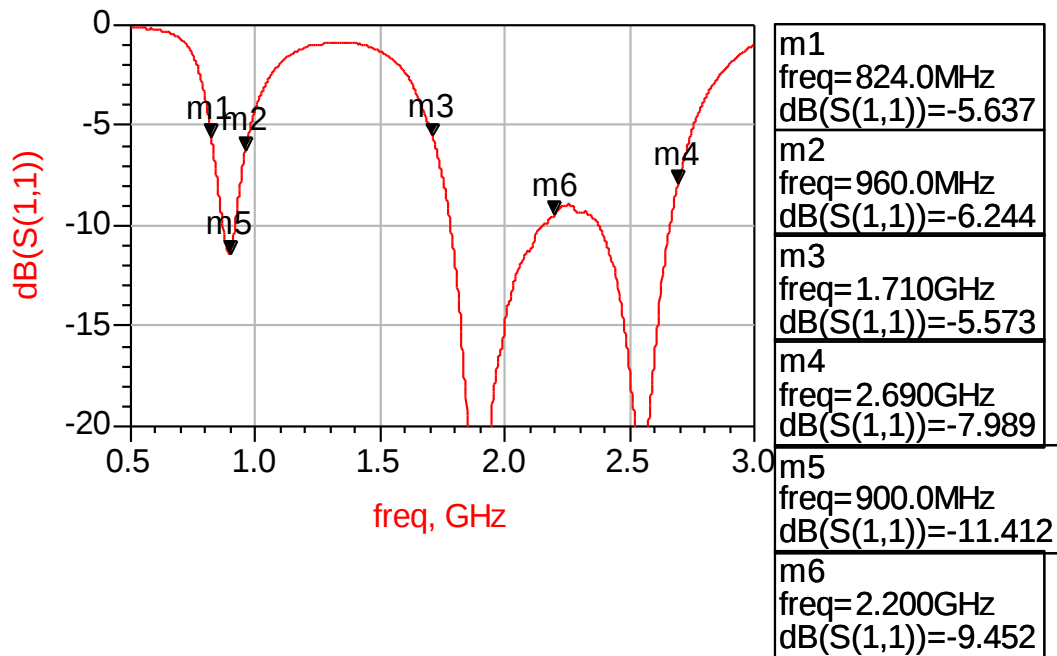
P/N: 0830AT54A2200

Detail Specification: 2/19/2018

Page 6 of 9

## Typical Electrical Characteristics (T=25°C)

### "Version 2" Evaluation Board 0830AT54A2200-EB2SMA



To order a pre-tuned 50Ω EVB with a female SMA connector for "Tuning Version 2" click here: [www.johansontechnology.com/request-a-sample](http://www.johansontechnology.com/request-a-sample)  
Reference p/n: 0830AT54A2200-EB2SMA

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



[www.johansontechnology.com](http://www.johansontechnology.com)

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

Ver. 1.0

2018 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

LTE Multi-Band Ceramic Antenna, SMD

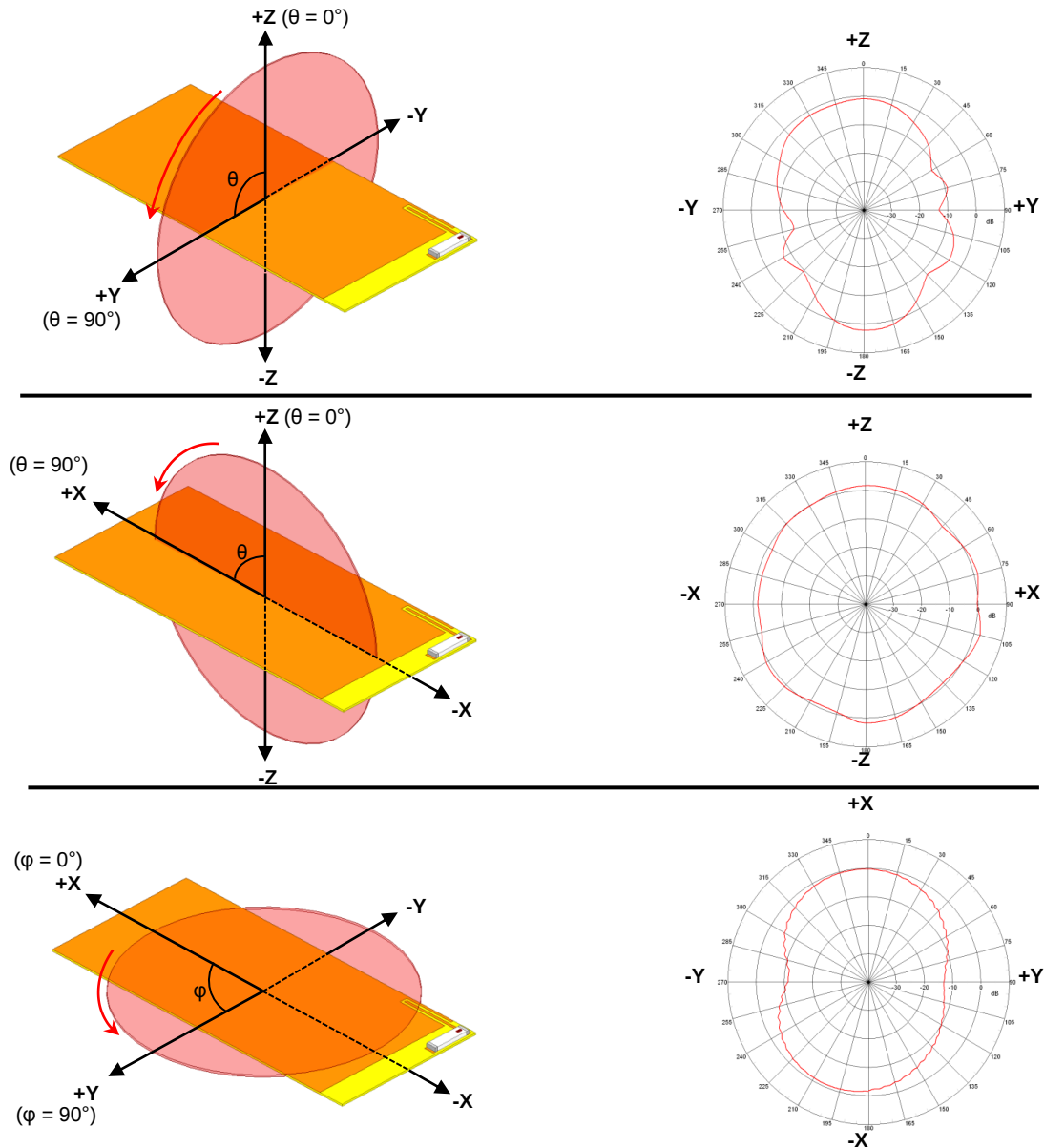
P/N: 0830AT54A2200

Detail Specification: 2/19/2018

Page 7 of 9

## Mounting Consideration: Evaluation PCB "Version 2" P/N 0830AT54A2200-EB2SMA

Typical 2D radiation patterns @ 900MHz



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

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



[www.johansontechnology.com](http://www.johansontechnology.com)

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

Ver. 1.0

2018 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

LTE Multi-Band Ceramic Antenna, SMD

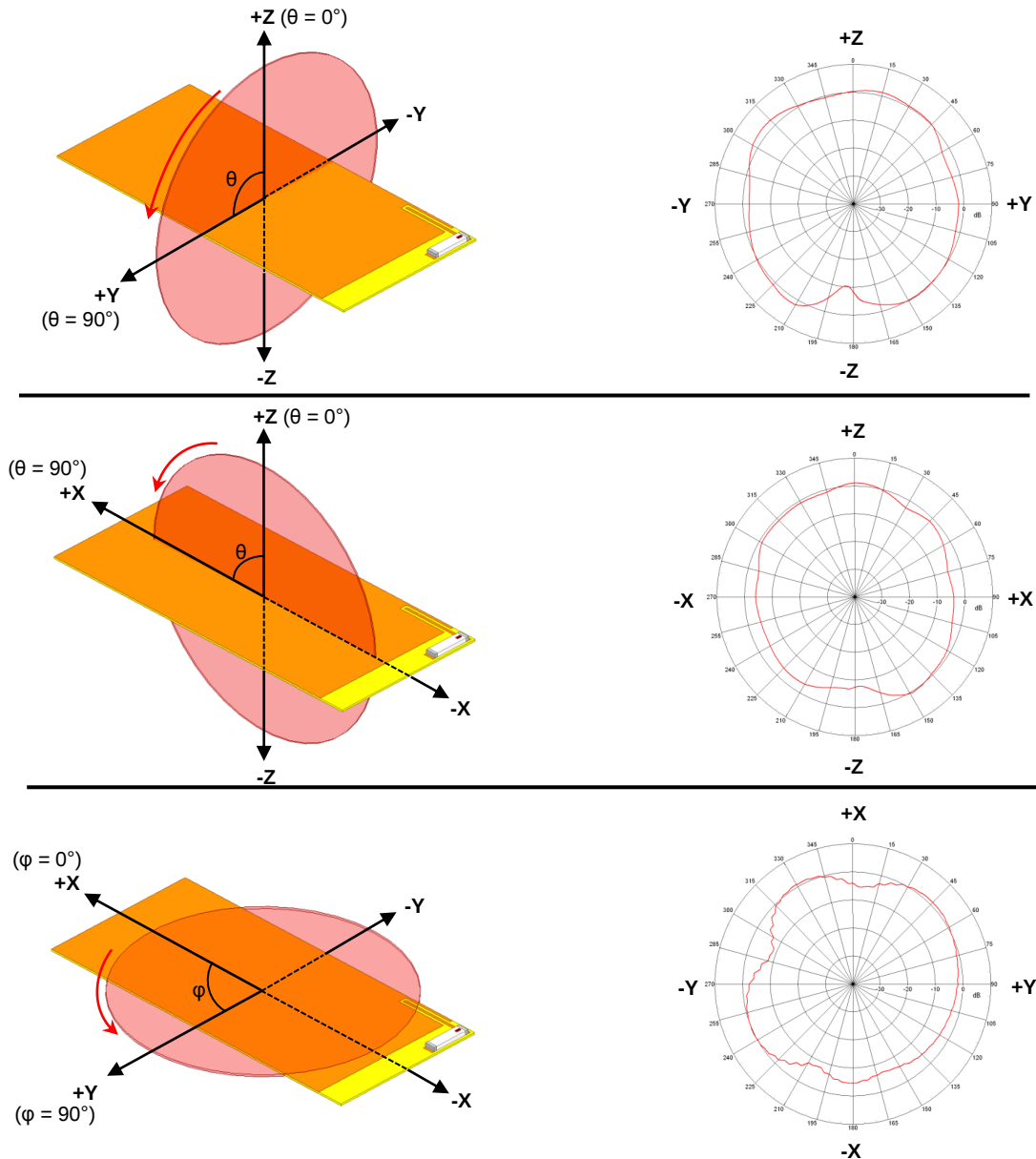
P/N: 0830AT54A2200

Detail Specification: 2/19/2018

Page 8 of 9

## Mounting Consideration: Evaluation PCB "Version 2" P/N 0830AT54A2200-EB2SMA

Typical 2D radiation patterns @ 2200MHz



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

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



[www.johansontechnology.com](http://www.johansontechnology.com)

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

Ver. 1.0

2018 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

**LTE Multi-Band Ceramic Antenna, SMD**

**P/N: 0830AT54A2200**

Detail Specification: 2/19/2018

Page 9 of 9

**Antenna tuning, optimization, and validation services:**

[www.johansontechnology.com/ipc-antenna-services](http://www.johansontechnology.com/ipc-antenna-services)

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

[www.johansontechnology.com/antennas](http://www.johansontechnology.com/antennas)

**Soldering Information**

[www.johansontechnology.com/ipcsoldering-profile](http://www.johansontechnology.com/ipcsoldering-profile)

**MSL Info**

[www.johansontechnology.com/msl-rating](http://www.johansontechnology.com/msl-rating)

**Packaging information**

[www.johansontechnology.com/tape-reel-packaging](http://www.johansontechnology.com/tape-reel-packaging)

**For layout review contact our Applications Team at:**

[www.johansontechnology.com/ask-a-question](http://www.johansontechnology.com/ask-a-question)

**RoHS Compliance**

[www.johansontechnology.com/rohs-compliance](http://www.johansontechnology.com/rohs-compliance)

Would you like us to review your layout for free? Need an embedded antenna recommendation for your application?

Contact us at:

[www.johansontechnology.com/ask-a-question](http://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.



[www.johansontechnology.com](http://www.johansontechnology.com)

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

Ver. 1.0

2018 Johanson Technology, Inc. All Rights Reserved



**Стандарт  
Электрон  
Связь**

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научно-исследовательскими институтами России.

С нами вы становитесь еще успешнее!

**Наши контакты:**

**Телефон:** +7 812 627 14 35

**Электронная почта:** [sales@st-electron.ru](mailto:sales@st-electron.ru)

**Адрес:** 198099, Санкт-Петербург,  
Промышленная ул, дом № 19, литера Н,  
помещение 100-Н Офис 331