

# High Frequency Ceramic Solutions

## 3.6 GHz Internal Chip Antenna, SMD 5G, n78 IoT Applications, and Related Frequency Operations

P/N 3600AT43A0400

Detail Specification: 6/13/2019

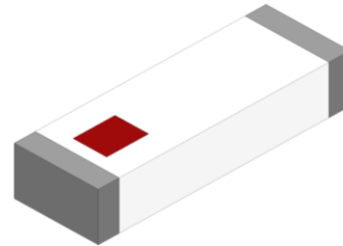
Page 1 of 5

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

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

### General Specifications

Part Number	3600AT43A0400		
Frequency (GHz)	3.4 - 3.8		
Peak Gain (dBi)	1.6 typ.		
Average Gain (dBi)	-1.8 typ.		
Radiated Efficiency <sup>1</sup>	61%		
Return Loss (dB)	9.5 min.	Reel Size	2,000 pcs/reel
Impedance (Ω)	50	Recommended Storage Conditions and Period for unused T&R Product	+5 to +35°C Humidity 45 - 75% RH 18 months max.
Input Power (W)	2 max. (CW)		
Operating Temperature	-40 to +85°C		



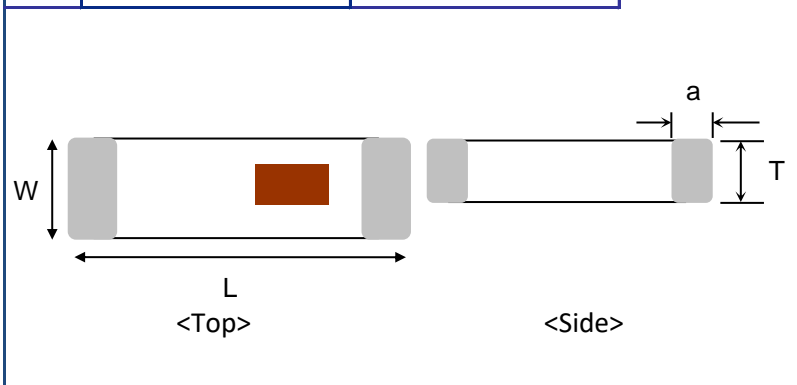
<sup>1</sup>Efficiency measured on Johanson's evaluation board PN 3600AT43A0400-EB1SMA

### Part Number Explanation

P/N Suffix	Packing Style	Bulk (loose)	Suffix = S	e.g. 3600AT43A0400S
		T&R	Suffix = E	e.g. 3600AT43A0400E
		100% Tin	Suffix = E or S	e.g. 3600AT43A0400(S or E)
	Evaluation Board	3600AT43A0400-EB1SMA		

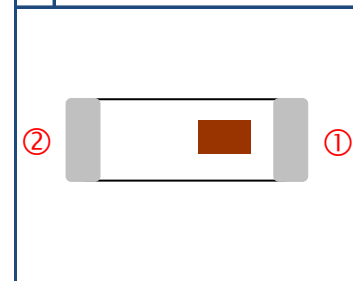
### Mechanical Dimensions

	In	mm
L	0.236 ± 0.008	6.00 ± 0.2
W	0.079 ± 0.008	2.00 ± 0.2
T	0.047 +0.004 / -0.008	1.20 +0.1 / -0.2
a	0.020 ± 0.012	0.50 ± 0.3



### Terminal Configuration

No.	Function
1	FEED
2	NC



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. 1.0

2019 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

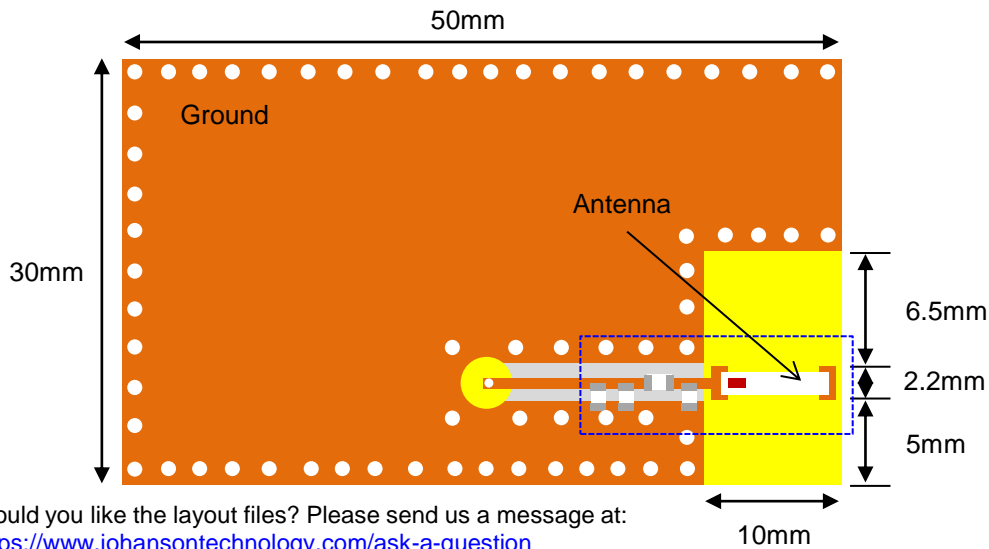
3.6 GHz Internal Chip Antenna, SMD 5G, n78 IoT Applications,  
and Related Frequency Operations

P/N 3600AT43A0400

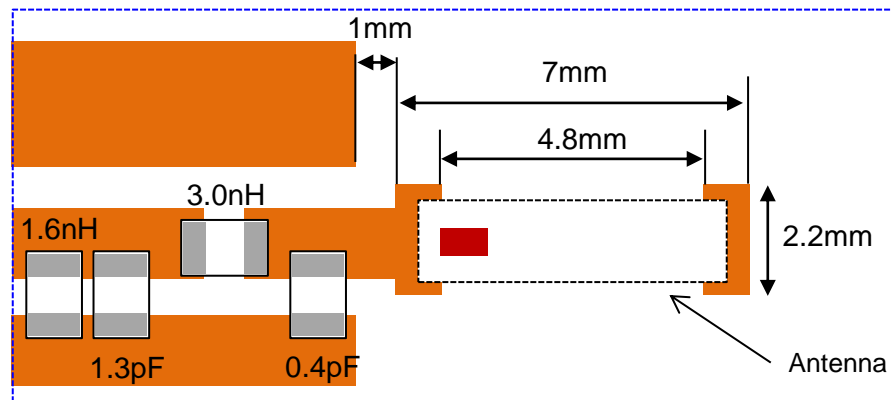
Detail Specification: 6/13/2019

Page 2 of 5

## Mounting Considerations 1: Evaluation Board (Standard Layout)



Would you like the layout files? Please send us a message at:  
<https://www.johansontechnology.com/ask-a-question>



Matching circuit values above only apply to our EVB. However,  
please follow this *topology* (shunt-shunt-series-shunt) and perform  
tuning to obtain the new values on your PCB

To order a pre-tuned 50Ω EVB with a female SMA connector click here:

<https://www.johansontechnology.com/request-a-sample>

Reference p/n: 3600AT43A0400-EB1SMA

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



Ver. 1.0

<https://www.johansontechnology.com>

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

2019 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

3.6 GHz Internal Chip Antenna, SMD 5G, n78 IoT Applications,  
and Related Frequency Operations

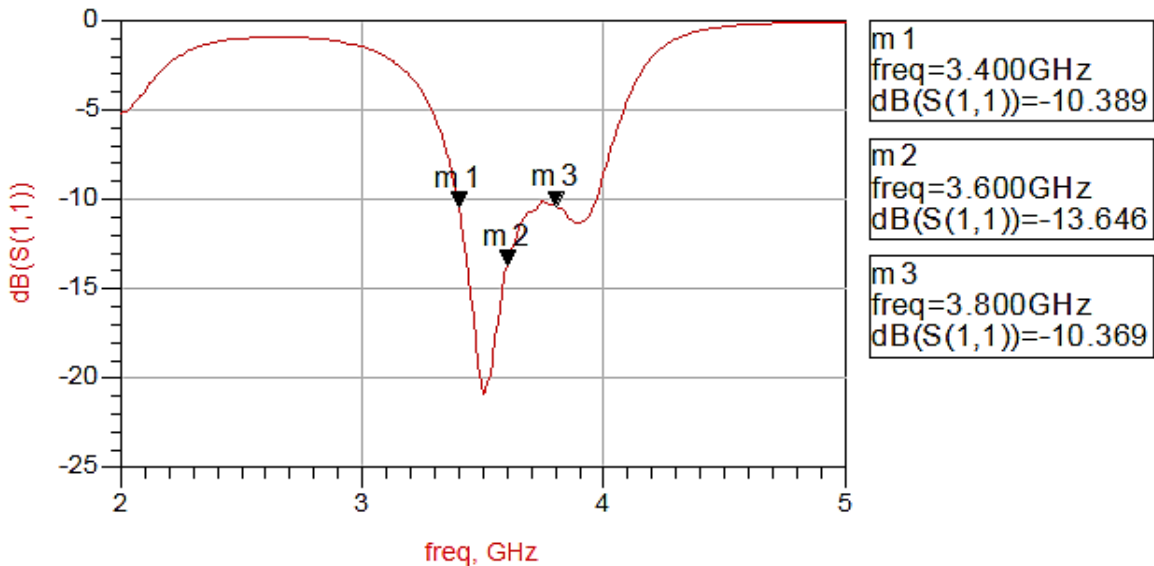
P/N 3600AT43A0400

Detail Specification: 6/13/2019

Page 3 of 5

## Mounting Considerations 1: Typical Electrical Performance @25°C

Measured Return Loss



Would you like the antenna layout? Have antenna tuning issues?  
Please contact us if you have any questions regarding the implementation of this antenna in your  
PCB's layout. We'll be happy to guide you to maximize the antenna's performance.

Contact our applications engineers 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. 1.0

2019 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

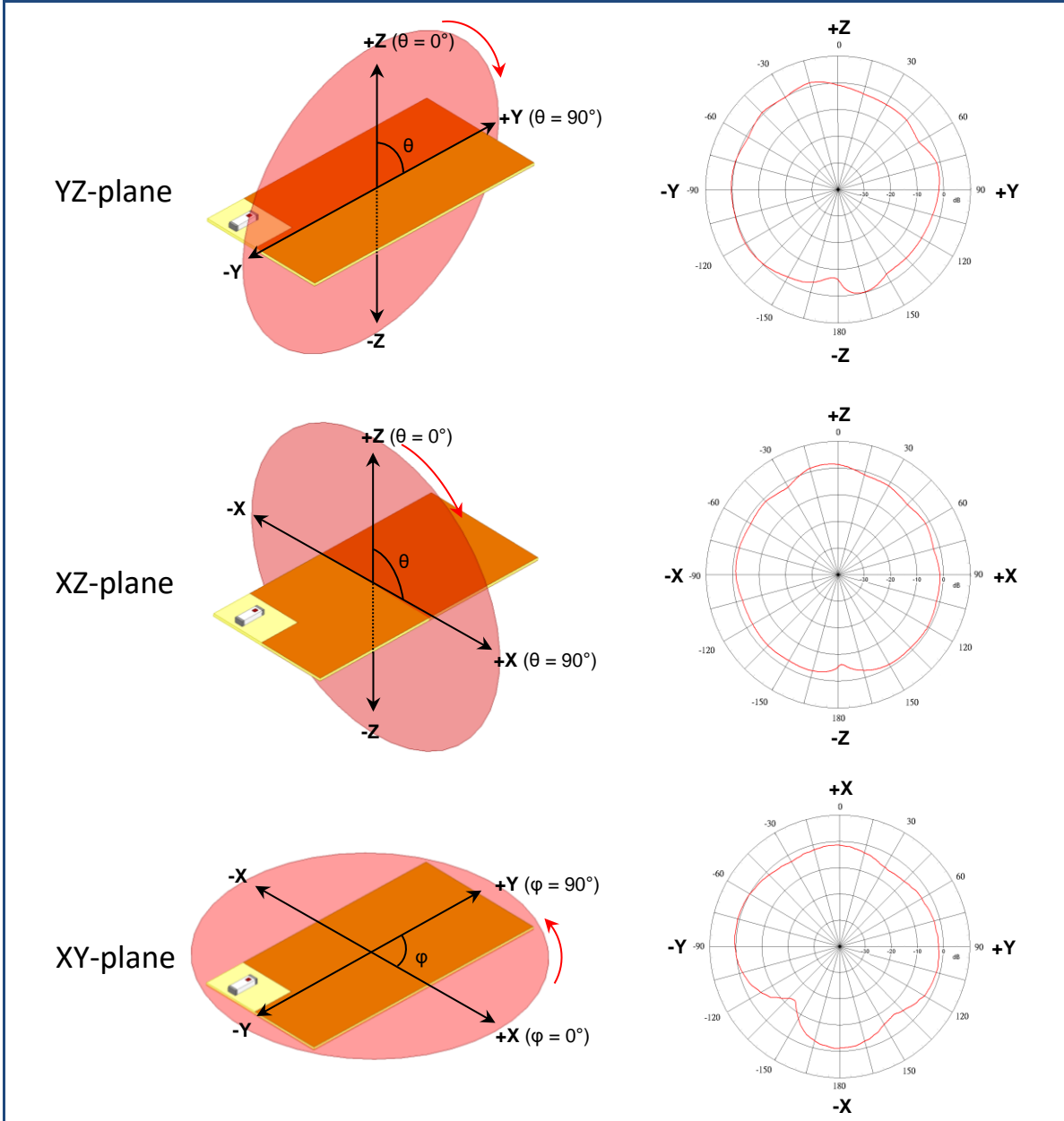
3.6 GHz Internal Chip Antenna, SMD 5G, n78 IoT Applications,  
and Related Frequency Operations

P/N 3600AT43A0400

Detail Specification: 6/13/2019

Page 4 of 5

## Mounting Considerations 1: Typical 2D radiation patterns @ 3.6GHz



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



Ver. 1.0

<https://www.johansontechnology.com>

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

2019 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

**3.6 GHz Internal Chip Antenna, SMD 5G, n78 IoT Applications,  
and Related Frequency Operations**

**P/N 3600AT43A0400**

Detail Specification: 6/13/2019

Page 5 of 5

**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>

Need help designing the antenna in? Use our antenna design services!

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

We provide 2 free layout reviews and if you need us to tune and characterize the antenna on your product (inside anechoic chamber) we can do that too. Small lab fee may apply for the latter.

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

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



Ver. 1.0

<https://www.johansontechnology.com>

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

2019 Johanson Technology, Inc. All Rights Reserved