

# Cellular 4G LTE FPC Antenna



**AANI-FB-0174**

Request Samples



Check Inventory



**30 x 20 x 0.2 mm**  
**RoHS/RoHS II Compliant**  
MSL Level = N/A

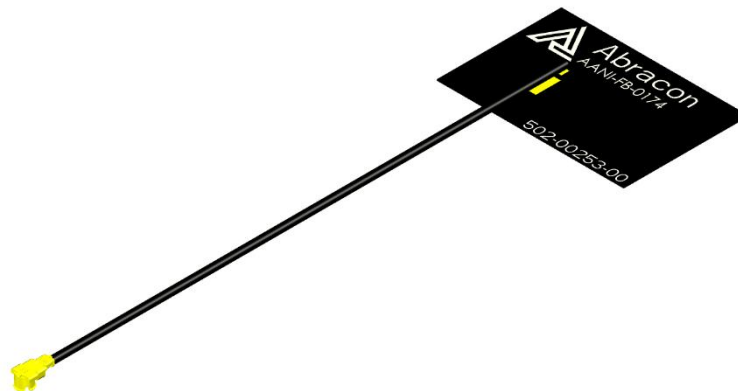
## Features

- Frequency Range: LTE 698-960/1710-2690 MHz
- LTE Peak Gain: 0.37 / 2.7 dBi
- LTE Efficiency: 37 / 59 %
- Ground Plane Independent
- Flexible to Fit Inside Plastic Enclosures
- Fully Customizable Cable Length and Connector Options

## Applications

- Internet of Things (IoT) Devices
- LTE-M, Cat M, Cat M1, NB-IoT
- LTE CAT 1 up to CAT 20 Supported
- CBRS and 5G bands Supported
- Smart Home Networking
- Networking & Telecommunication

## Product Image



5101 Hidden Creek Ln Spicewood TX 78669  
Phone: 512-371-6159 | Fax: 512-351-8858  
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## Electrical Specification

| Parameter                   | Specification    |           | Unit     |
|-----------------------------|------------------|-----------|----------|
| Operating Frequency         | 698-960          | 1710-2690 | MHz      |
| VSWR                        | < 3.2            | < 2.3     | :1       |
| Peak Gain                   | 0.37             | 2.7       | dBi      |
| Maximum Efficiency          | 37               | 59        | %        |
| Average Efficiency          | 25               | 43        |          |
| Impedance                   | 50               |           | $\Omega$ |
| Polarization                | Linear           |           | -        |
| Radiation Pattern (Azimuth) | Omni-directional |           | -        |
| Maximum Input Power         | 5                |           | W        |

## Mechanical Specification

| Parameter                    | Specification    |
|------------------------------|------------------|
| Antenna Dimensions           | 30 x 20 x 0.2 mm |
| Antenna Type                 | Flexible PCB     |
| Mounting Type                | Adhesive Mount   |
| RF Connector <sup>(1)</sup>  | u.FL/IPEX-1/MHF1 |
| RF Cable Type <sup>(1)</sup> | Ø1.13 mm         |
| Cable Length <sup>(1)</sup>  | 75 mm            |

(1): Fully customizable RF Cable & Connector

## Environmental Specification

| Parameter             | Specification  |
|-----------------------|----------------|
| Operating Temperature | -40°C to +85°C |
| Storage Temperature   | -40°C to +85°C |
| RoHS Compliance       | Yes            |



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## Ordering Information

| Part Number    | Description                                                               | Connector Option |
|----------------|---------------------------------------------------------------------------|------------------|
| AANI-FB-0174-1 | Cellular 4G LTE FPC Antenna with IPEX-1 connector and 75 mm cable length  | u.FL/IPEX-1/MHF1 |
| AANI-FB-0174-2 | Cellular 4G LTE FPC Antenna with IPEX-4 connector and 75 mm cable length  | w.FL/IPEX-4/MHF4 |
| AANI-FB-0174-3 | Cellular 4G LTE FPC Antenna with IPEX-1 connector and 150 mm cable length | u.FL/IPEX-1/MHF1 |
| AANI-FB-0174-4 | Cellular 4G LTE FPC Antenna with IPEX-4 connector and 150 mm cable length | w.FL/IPEX-4/MHF4 |
| AANI-FB-0174-5 | Cellular 4G LTE FPC Antenna with IPEX-1 connector and 200 mm cable length | u.FL/IPEX-1/MHF1 |
| AANI-FB-0174-6 | Cellular 4G LTE FPC Antenna with IPEX-4 connector and 200 mm cable length | w.FL/IPEX-4/MHF4 |

Note: Different cable and connector configurations that are not listed may be available upon request via [Abracon online support](#)



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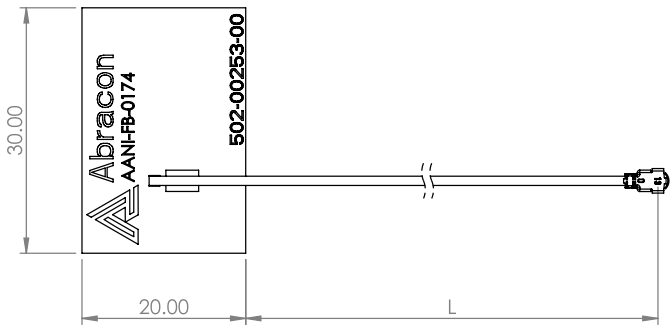


Check Inventory

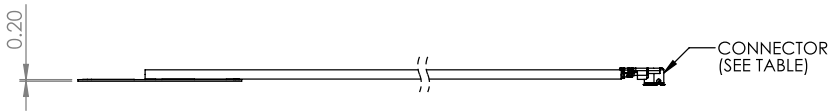


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RoHS/RoHS II Compliant  
MSL Level = N/A

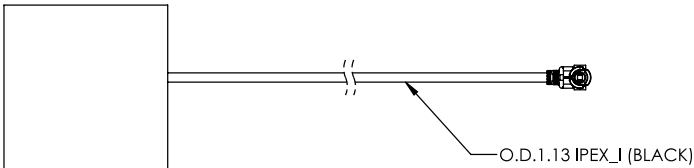
## Product Dimensions



TOP VIEW

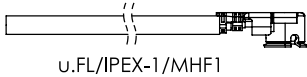


FRONT VIEW

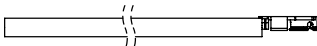


BOTTOM VIEW

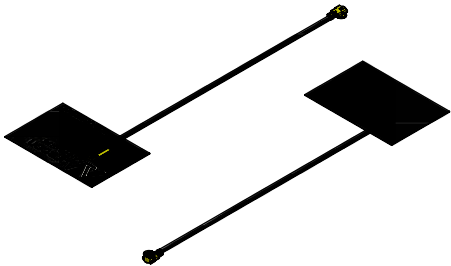
### CONNECTOR



U.FL/IPEX-1/MHF1



W.FL/IPEX-4/MHF4



| PART NUMBER    | CABLE LENGTH (L) | CONNECTOR        |
|----------------|------------------|------------------|
| AANI-FB-0174-1 | 75               | U.FL/IPEX-1/MHF1 |
| AANI-FB-0174-2 | 75               | W.FL/IPEX-4/MHF4 |
| AANI-FB-0174-3 | 150              | U.FL/IPEX-1/MHF1 |
| AANI-FB-0174-4 | 150              | W.FL/IPEX-4/MHF4 |
| AANI-FB-0174-5 | 200              | U.FL/IPEX-1/MHF1 |
| AANI-FB-0174-6 | 200              | W.FL/IPEX-4/MHF4 |

Unit: mm

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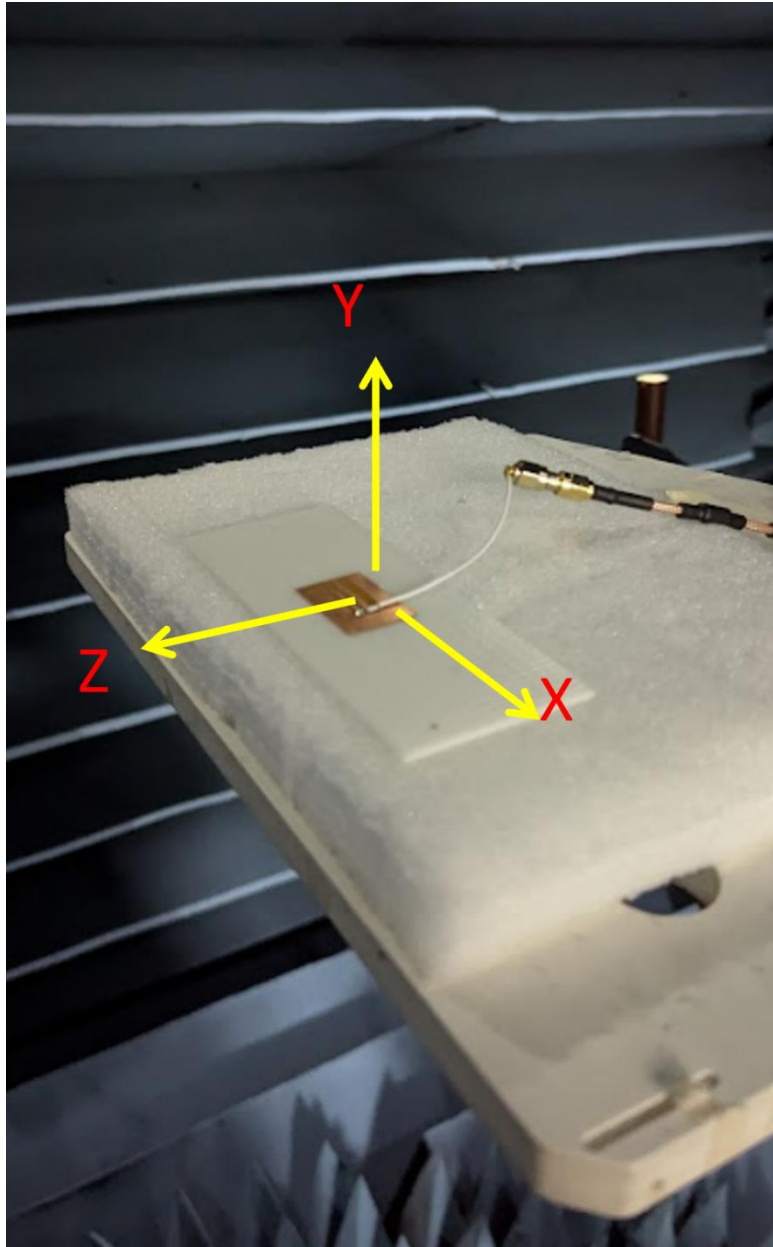


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## Measurement Setup photo



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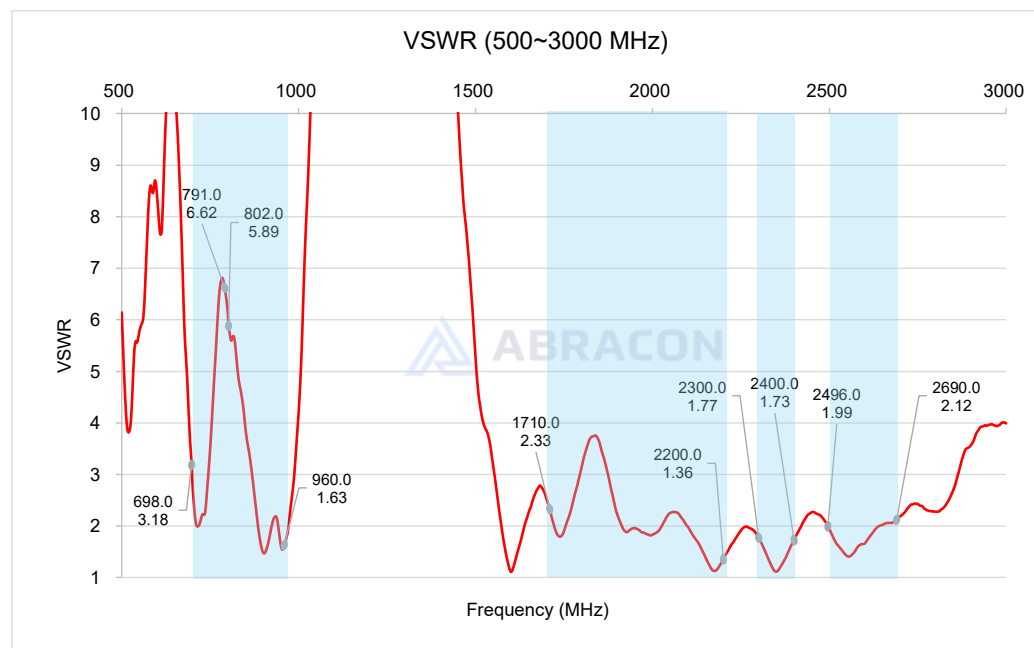
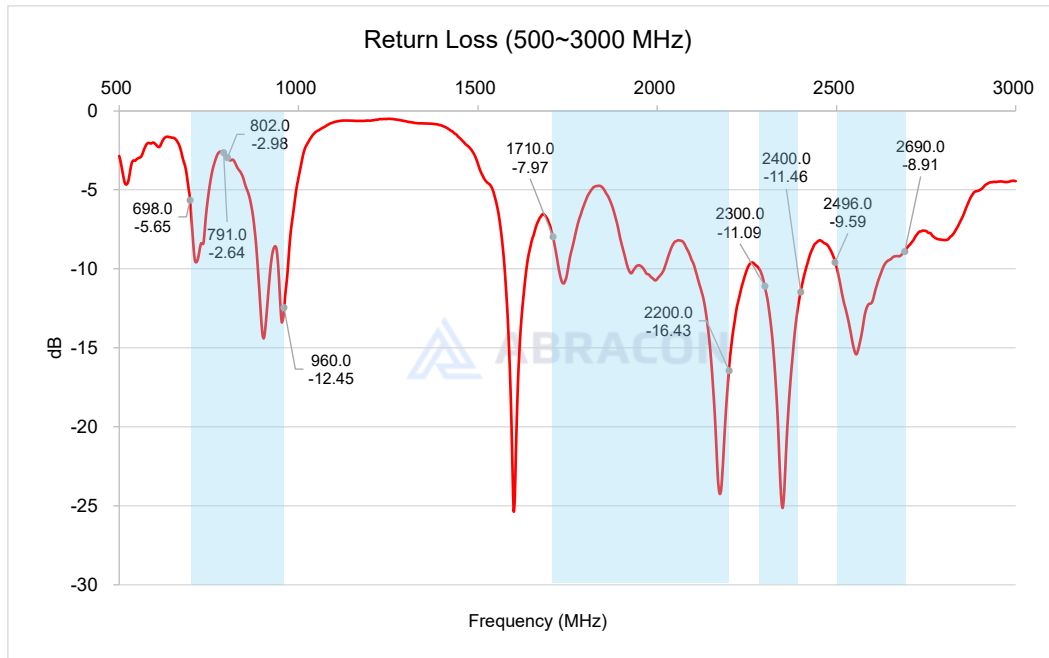


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MSL Level = N/A

## Reflection Characteristics – Return Loss & VSWR



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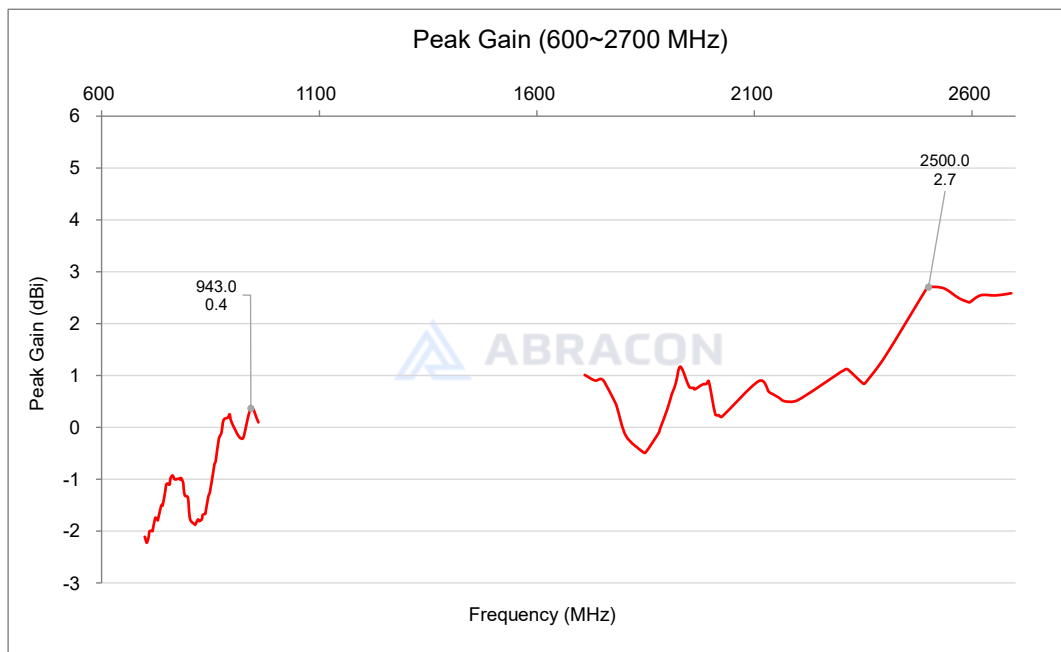


30 x 20 x 0.2 mm

RoHS/RoHS II Compliant

MSL Level = N/A

## Radiation Characteristics – Peak Gain



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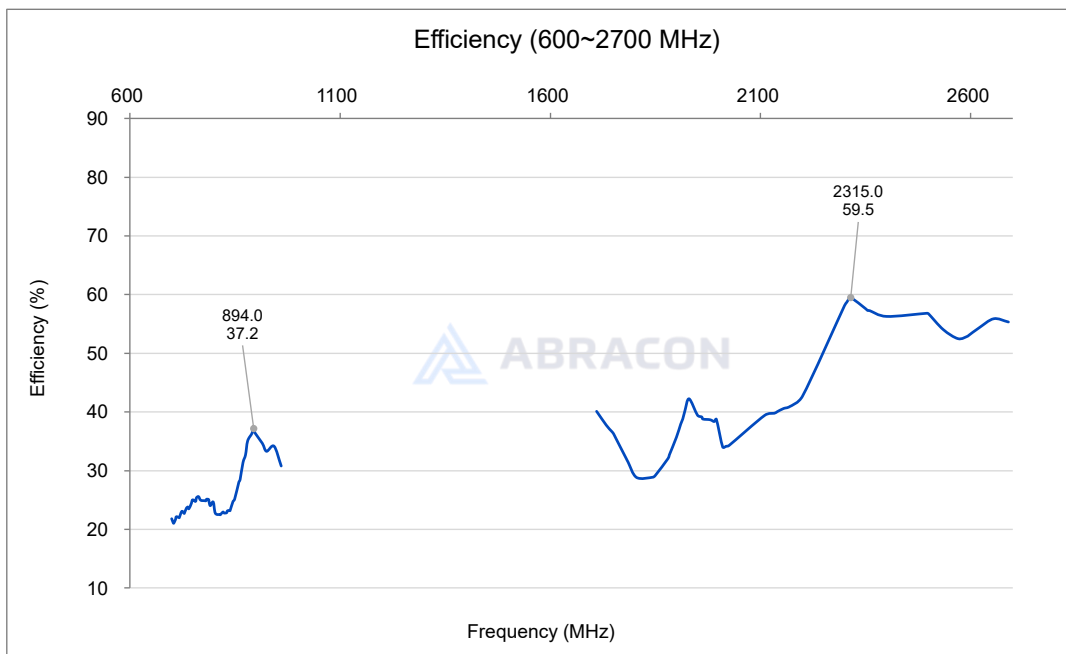


30 x 20 x 0.2 mm

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MSL Level = N/A

## Radiation Characteristics – Total Efficiency (%)



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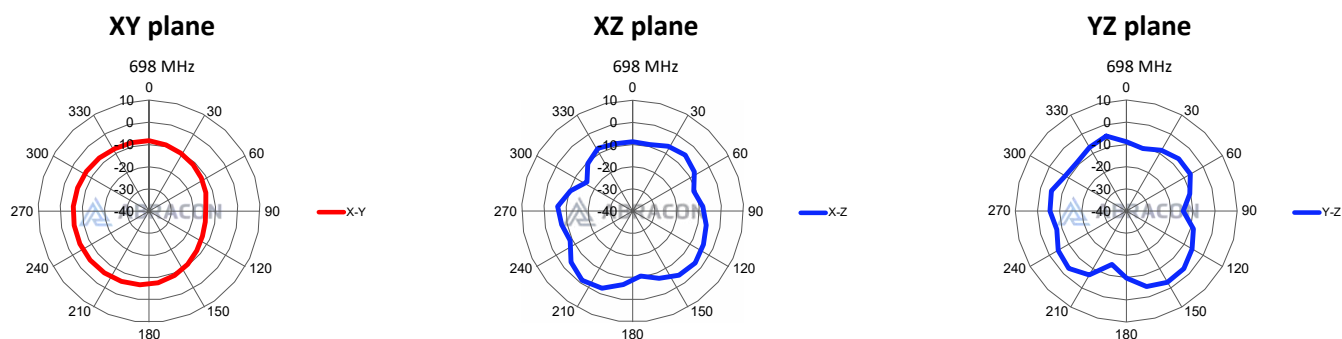
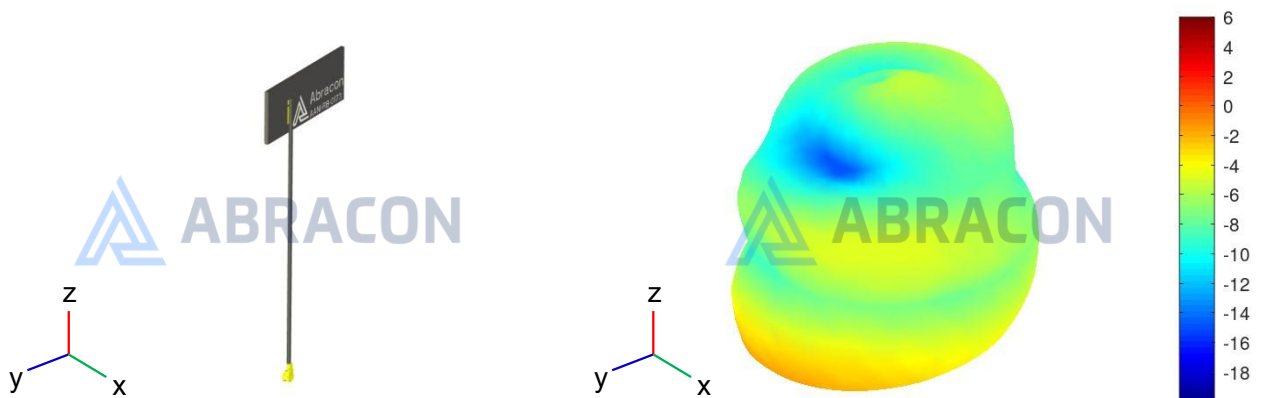
30 x 20 x 0.2 mm

RoHS/RoHS II Compliant

MSL Level = N/A

## Radiation Characteristics – 3D & 2D pattern

### 3D & 2D Pattern @ 698 MHz



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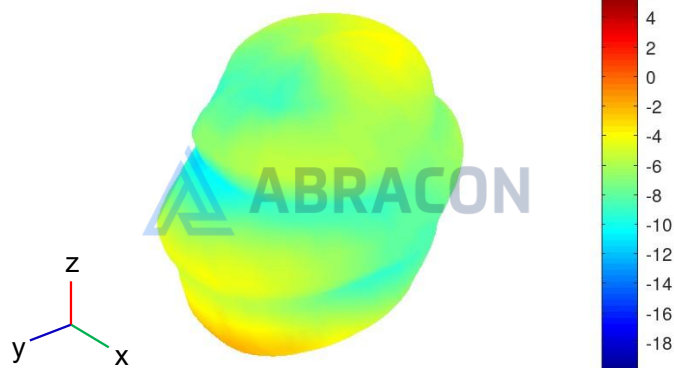
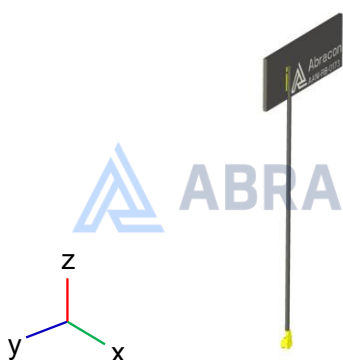


30 x 20 x 0.2 mm

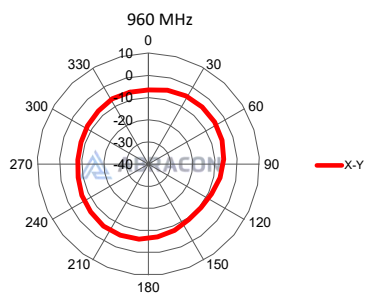
RoHS/RoHS II Compliant

MSL Level = N/A

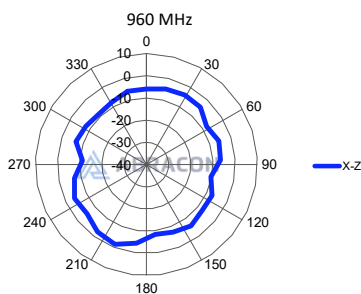
## 3D & 2D Pattern @ 960 MHz



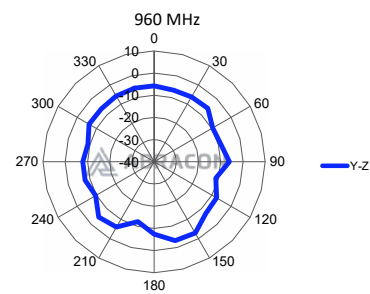
### XY plane



### XZ plane



### YZ plane



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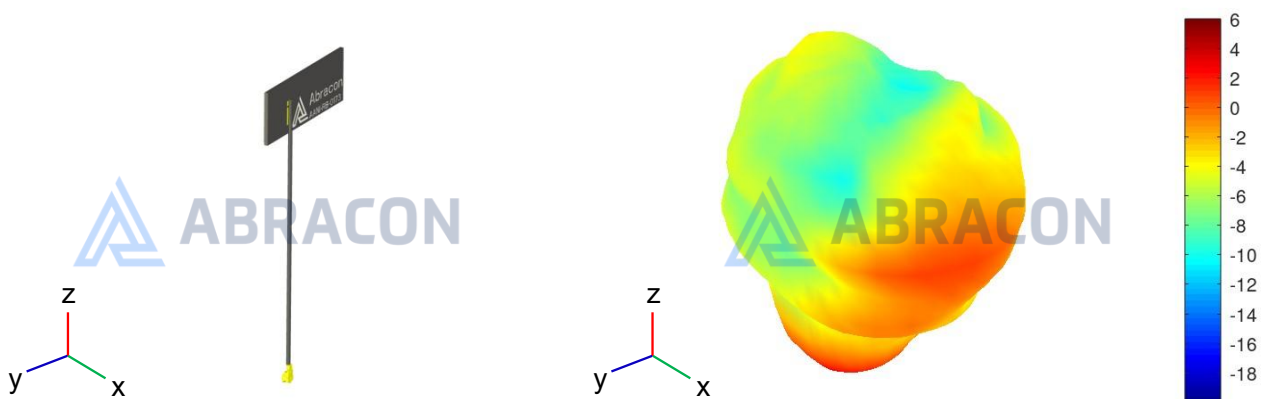


30 x 20 x 0.2 mm

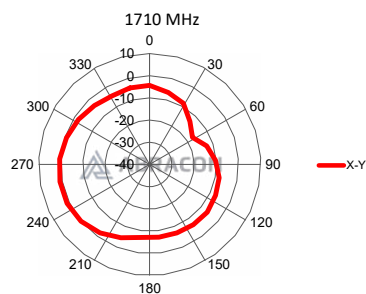
RoHS/RoHS II Compliant

MSL Level = N/A

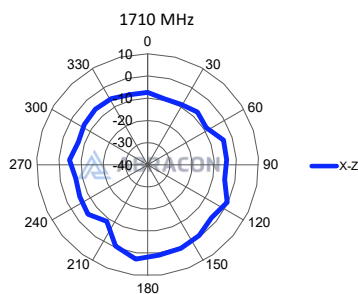
## 3D & 2D Pattern @ 1710 MHz



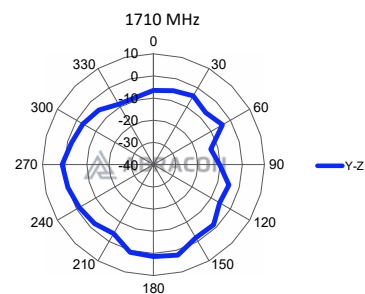
XY plane



XZ plane



YZ plane



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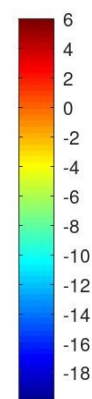
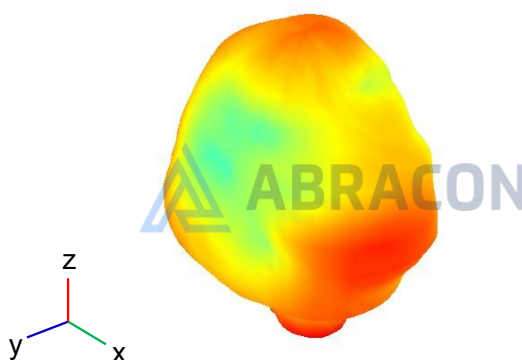
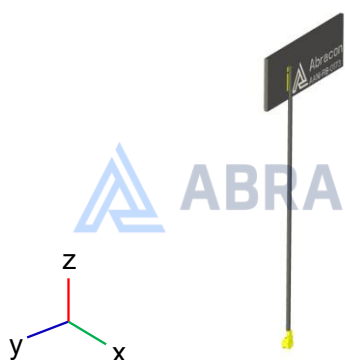


30 x 20 x 0.2 mm

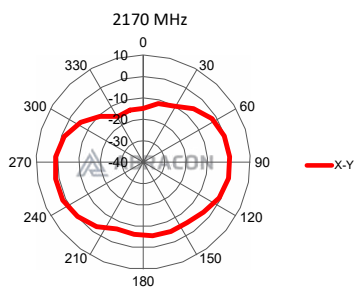
RoHS/RoHS II Compliant

MSL Level = N/A

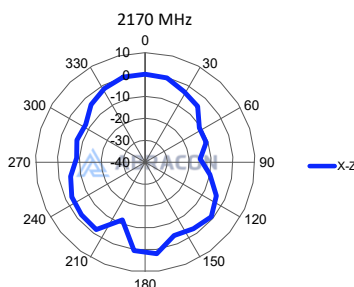
## 3D & 2D Pattern @ 2170 MHz



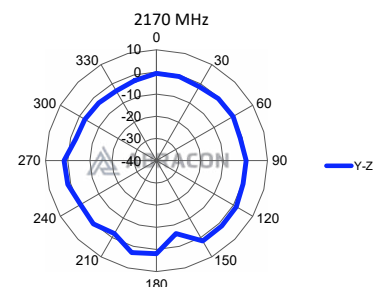
### XY plane



### XZ plane



### YZ plane



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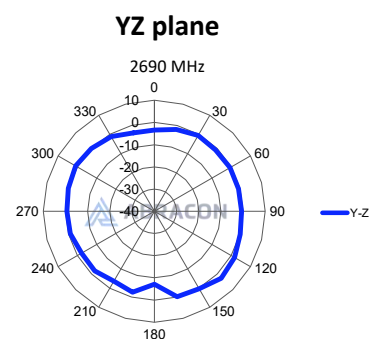
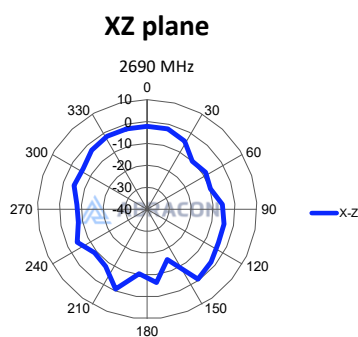
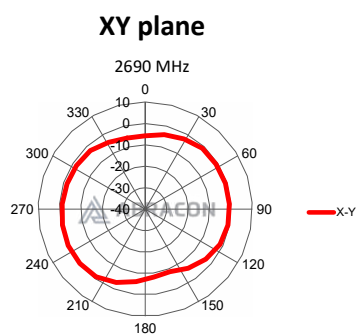
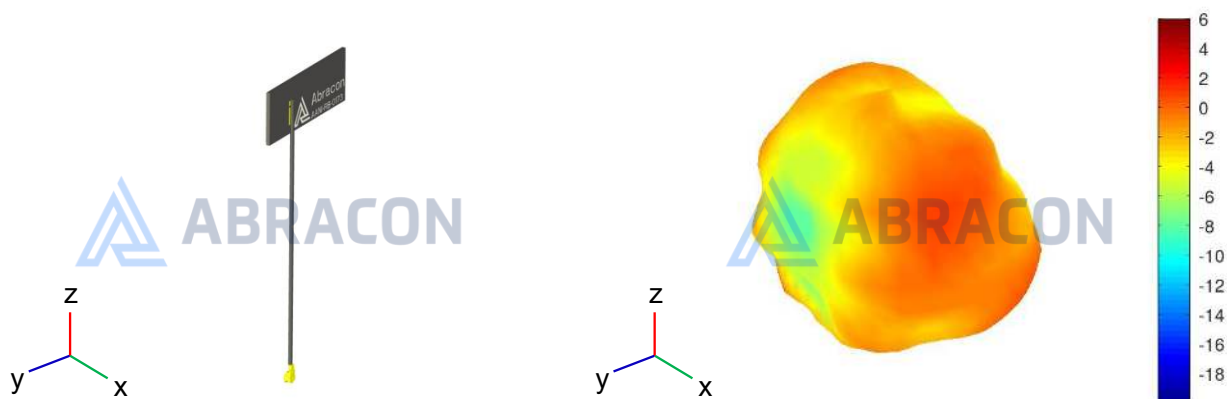


30 x 20 x 0.2 mm

RoHS/RoHS II Compliant

MSL Level = N/A

## 3D & 2D Pattern @ 2690 MHz



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## Packaging

4 sets x 25 pcs / per set = 100 pcs in one bag

10 bags x 100 pcs / per bag

Total: 1000 pcs in one package

**ATTENTION:** Abracon LLC's products are Commercial-Off-The-Shelf ("COTS"), which are designed, intended, and validated for use in commercial, industrial, and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.



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