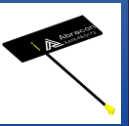


# Cellular 4G LTE FPC Antenna



**AANI-FB-0173**

Request Samples



Check Inventory



**40 x 15 x 0.2 mm**  
**RoHS/RoHS II Compliant**  
MSL Level = N/A

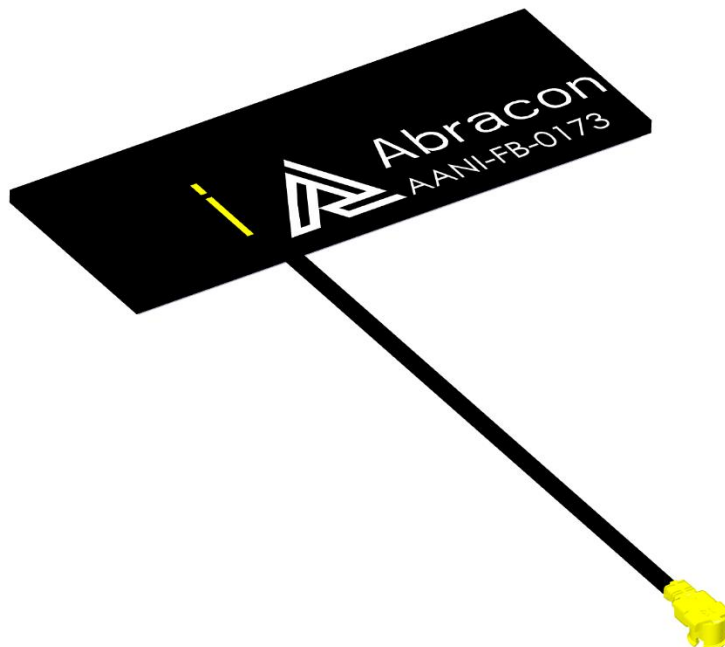
## Features

- Frequency Range: LTE 698-960/1710-2690 MHz
- LTE Peak Gain: 2.2 / 5.5 dBi
- LTE Efficiency: 48 / 75 %
- 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

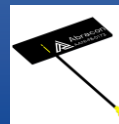


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# Cellular 4G LTE FPC Antenna



AANI-FB-0173

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40 x 15 x 0.2 mm  
RoHS/RoHS II Compliant  
MSL Level = N/A

## Electrical Specification

| Parameter                   | Specification    |           | Unit     |
|-----------------------------|------------------|-----------|----------|
| Operating Frequency         | 698-960          | 1710-2690 | MHz      |
| VSWR                        | < 2.0            |           | :1       |
| Peak Gain                   | 2.2              | 5.5       | dBi      |
| Maximum Efficiency          | 48               | 75        | %        |
| Average Efficiency          | 31               | 61        | %        |
| Impedance                   | 50               |           | $\Omega$ |
| Polarization                | Linear           |           | -        |
| Radiation Pattern (Azimuth) | Omni-directional |           | -        |
| Maximum Input Power         | 5                |           | W        |

## Mechanical Specification

| Parameter                    | Specification    |
|------------------------------|------------------|
| Antenna Dimensions           | 40 x 15 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>  | 66 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            |

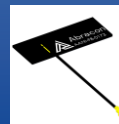


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# Cellular 4G LTE FPC Antenna



**AANI-FB-0173**

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**40 x 15 x 0.2 mm**  
**RoHS/RoHS II Compliant**  
MSL Level = N/A

## Ordering Information

| Part Number    | Description                                                               | Connector Option |
|----------------|---------------------------------------------------------------------------|------------------|
| AANI-FB-0173-1 | Cellular 4G LTE FPC Antenna with IPEX-1 connector and 66 mm cable length  | u.FL/IPEX-1/MHF1 |
| AANI-FB-0173-2 | Cellular 4G LTE FPC Antenna with IPEX-4 connector and 66 mm cable length  | w.FL/IPEX-4/MHF4 |
| AANI-FB-0173-3 | Cellular 4G LTE FPC Antenna with IPEX-1 connector and 150 mm cable length | u.FL/IPEX-1/MHF1 |
| AANI-FB-0173-4 | Cellular 4G LTE FPC Antenna with IPEX-4 connector and 150 mm cable length | w.FL/IPEX-4/MHF4 |
| AANI-FB-0173-5 | Cellular 4G LTE FPC Antenna with IPEX-1 connector and 200 mm cable length | u.FL/IPEX-1/MHF1 |
| AANI-FB-0173-6 | 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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# Cellular 4G LTE FPC Antenna

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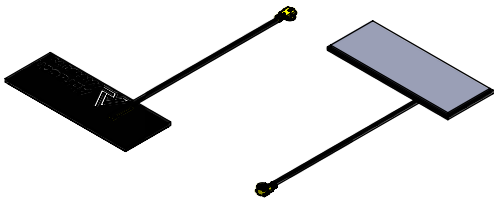
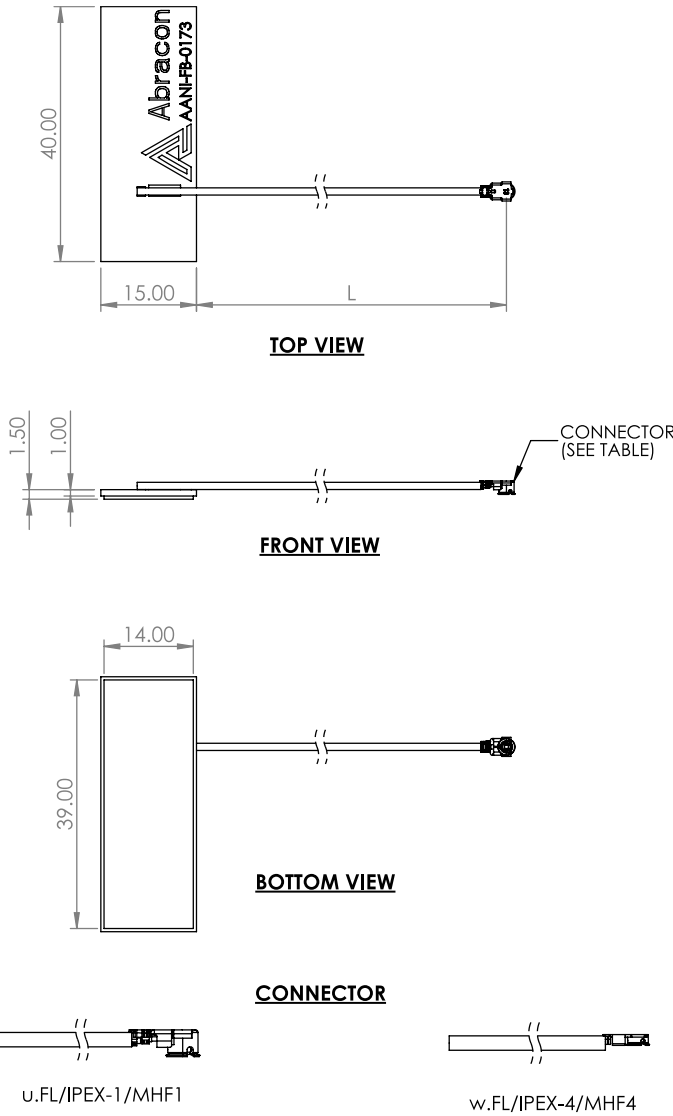


Check Inventory



40 x 15 x 0.2 mm  
RoHS/RoHS II Compliant  
MSL Level = N/A

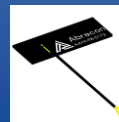
## Product Dimensions



| PART NUMBER    | CABLE LENGTH (L) | CONNECTOR        |
|----------------|------------------|------------------|
| AANI-FB-0173-1 | 66               | u.FL/IPEX-1/MHF1 |
| AANI-FB-0173-2 | 66               | w.FL/IPEX-4/MHF4 |
| AANI-FB-0173-3 | 150              | u.FL/IPEX-1/MHF1 |
| AANI-FB-0173-4 | 150              | w.FL/IPEX-4/MHF4 |
| AANI-FB-0173-5 | 200              | u.FL/IPEX-1/MHF1 |
| AANI-FB-0173-6 | 200              | w.FL/IPEX-4/MHF4 |

Unit: mm

# Cellular 4G LTE FPC Antenna



AANI-FB-0173

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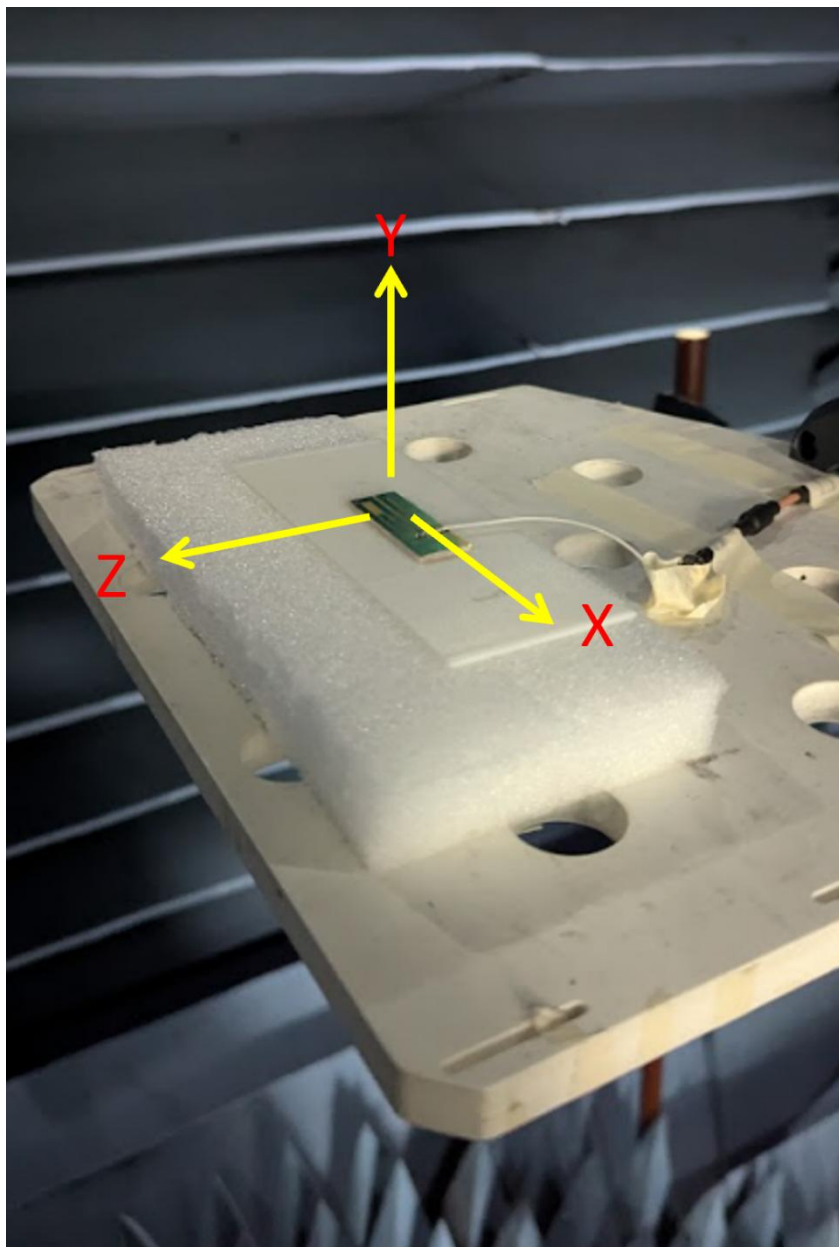


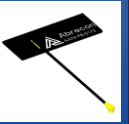
40 x 15 x 0.2 mm

RoHS/RoHS II Compliant

MSL Level = N/A

## Measurement Setup photo





**AANI-FB-0173**

Request Samples

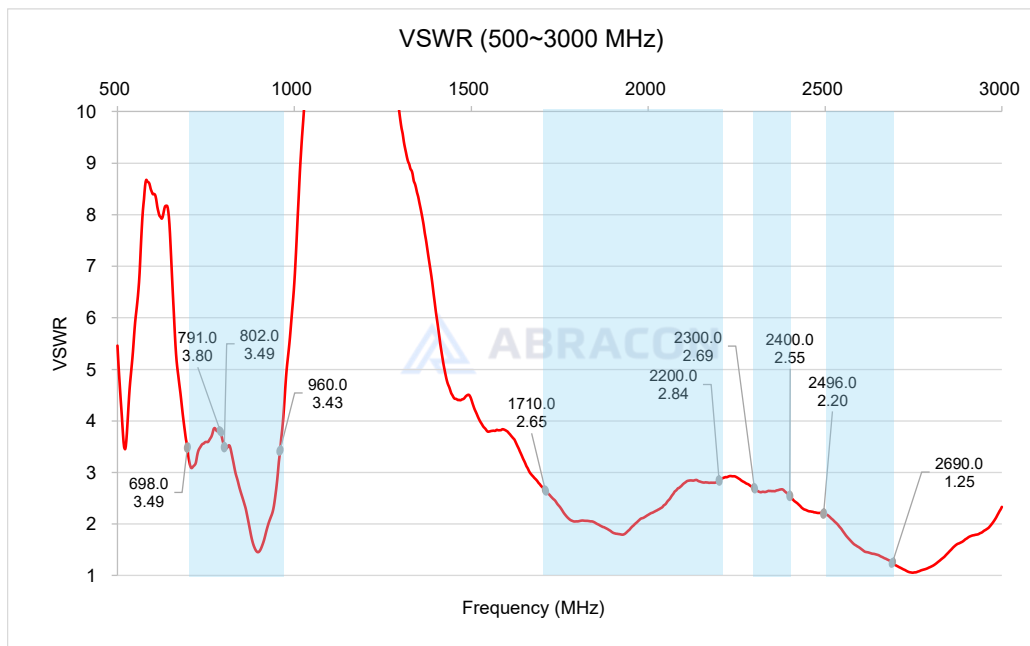
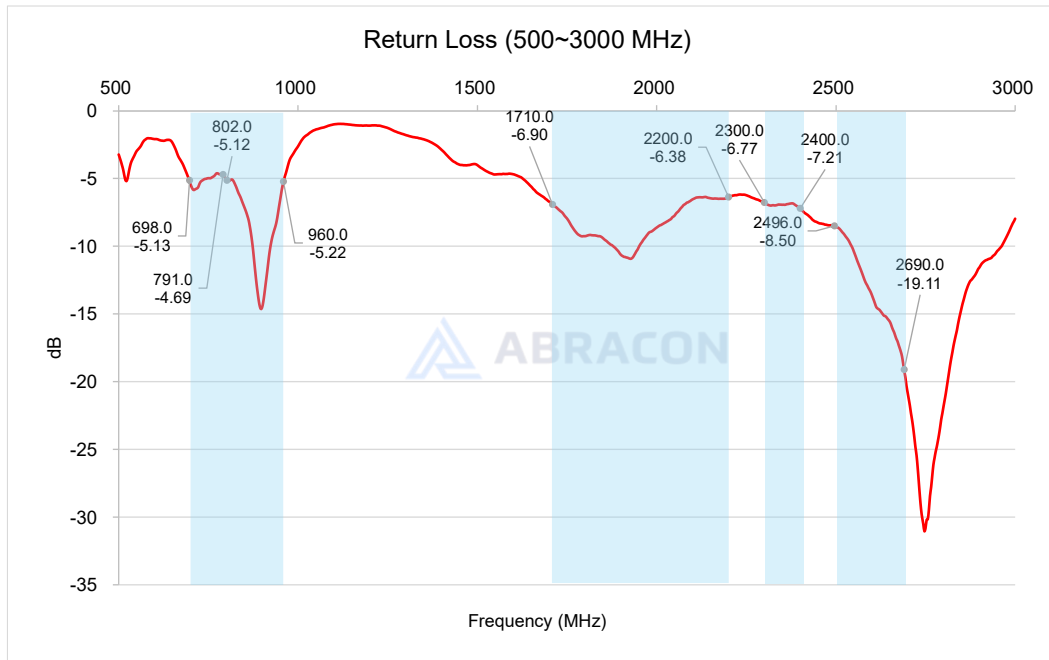


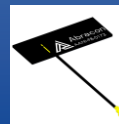
Check Inventory



**40 x 15 x 0.2 mm**  
**RoHS/RoHS II Compliant**  
**MSL Level = N/A**

## Reflection Characteristics – Return Loss & VSWR





**AANI-FB-0173**

Request Samples



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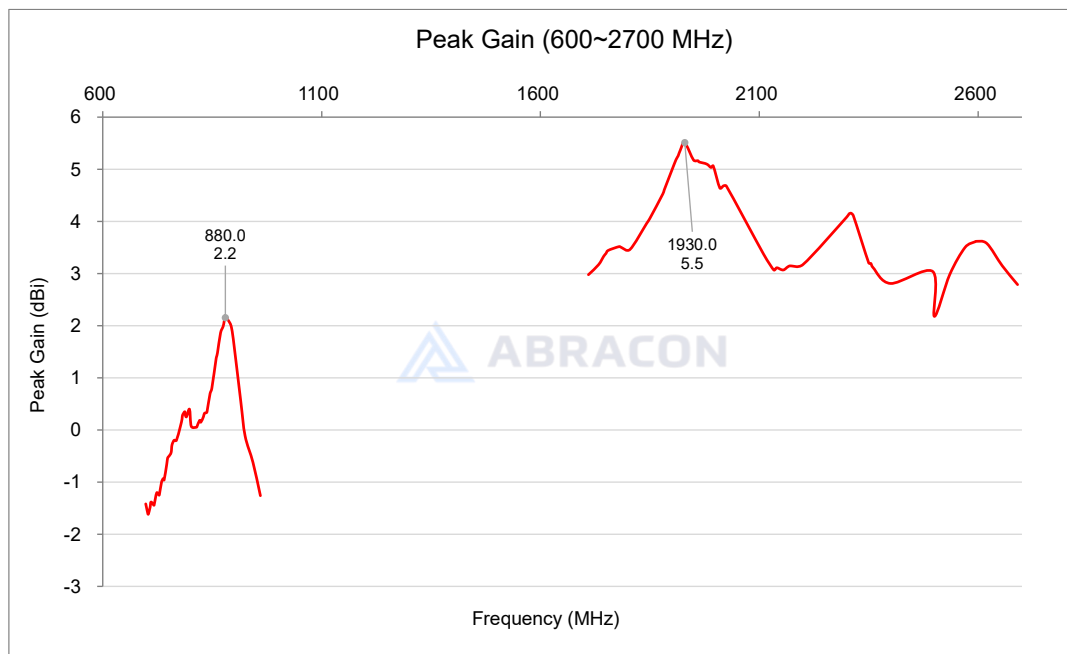


**40 x 15 x 0.2 mm**

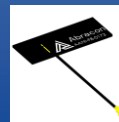
**RoHS/RoHS II Compliant**

**MSL Level = N/A**

## Radiation Characteristics – Peak Gain



# Cellular 4G LTE FPC Antenna



AANI-FB-0173

Request Samples



Check Inventory

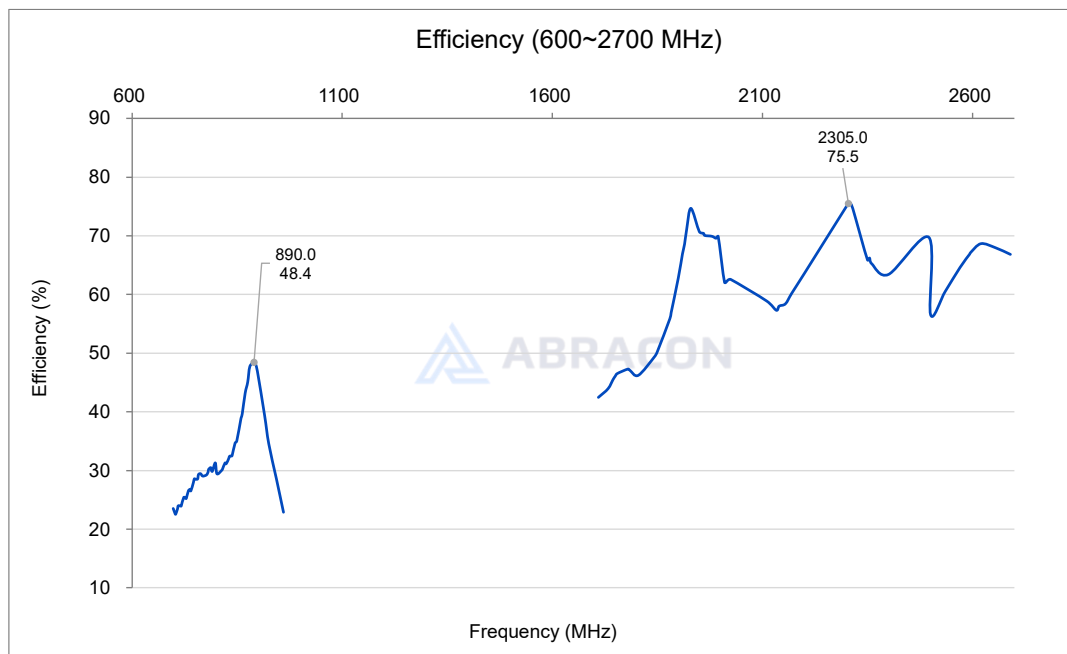


40 x 15 x 0.2 mm

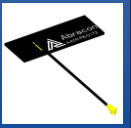
RoHS/RoHS II Compliant

MSL Level = N/A

## Radiation Characteristics – Total Efficiency (%)



# Cellular 4G LTE FPC Antenna



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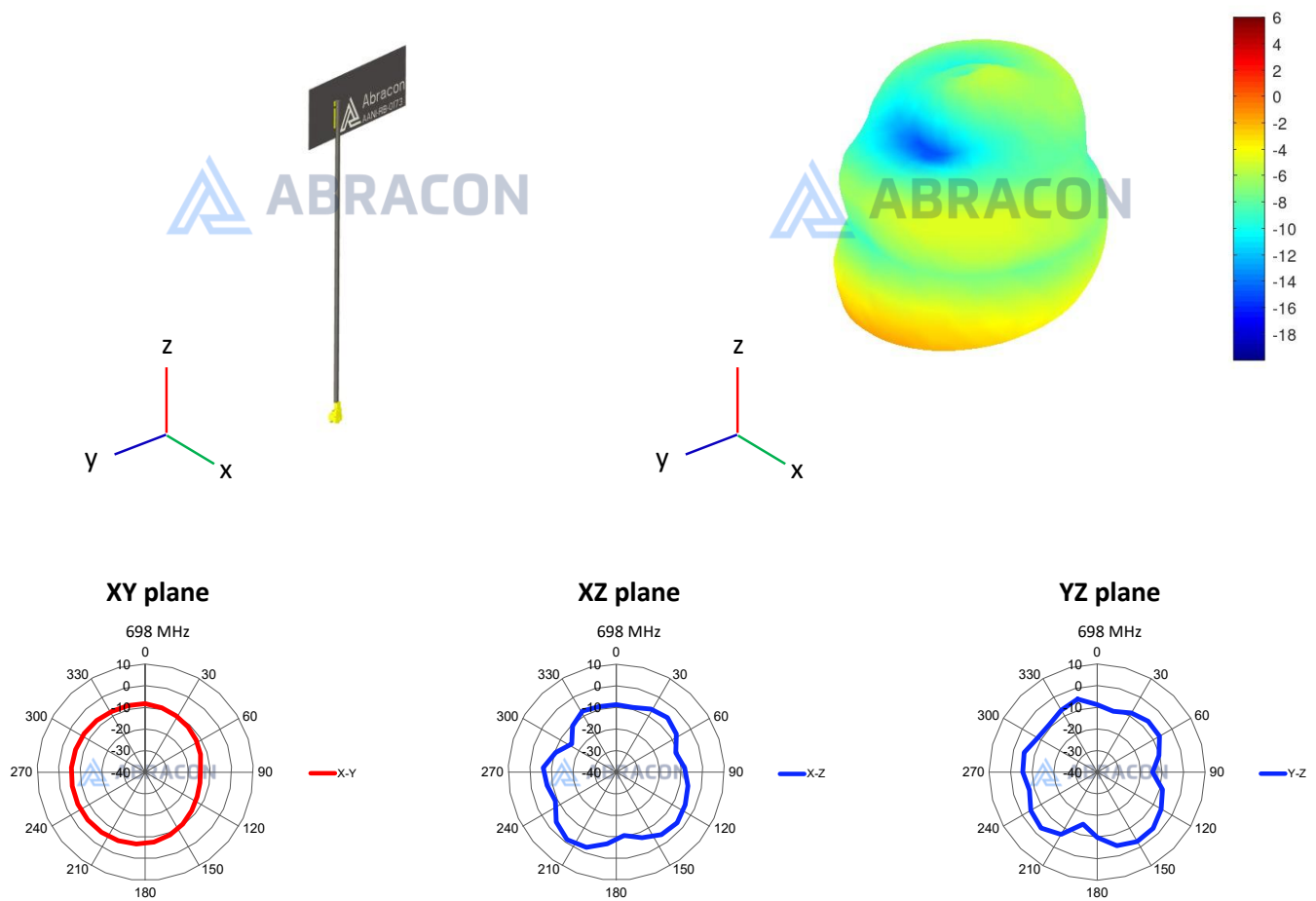
Check Inventory



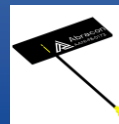
40 x 15 x 0.2 mm  
RoHS/RoHS II Compliant  
MSL Level = N/A

## Radiation Characteristics – 3D & 2D pattern

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



# Cellular 4G LTE FPC Antenna



AANI-FB-0173

Request Samples



Check Inventory

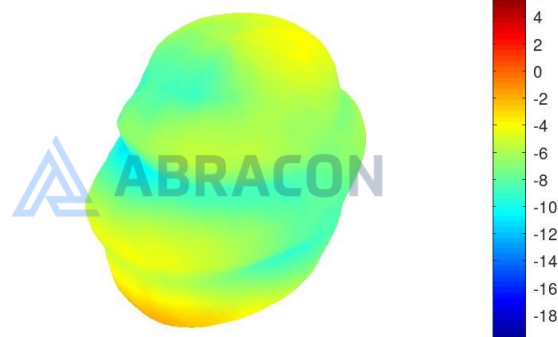
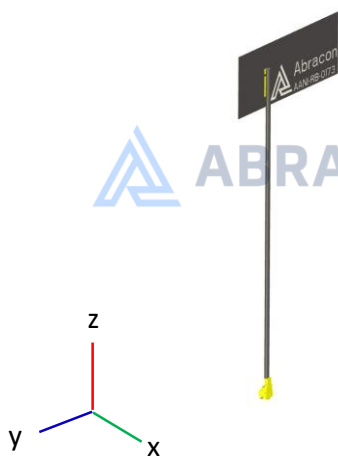


40 x 15 x 0.2 mm

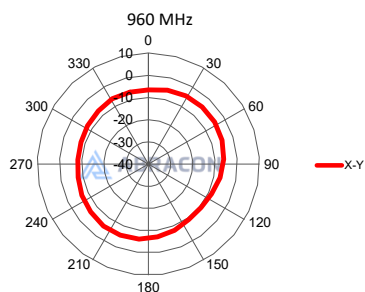
RoHS/RoHS II Compliant

MSL Level = N/A

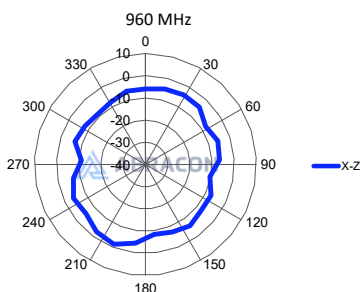
## 3D & 2D Pattern @ 960 MHz



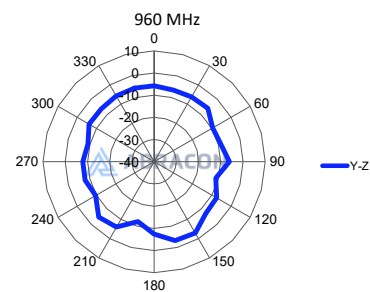
XY plane



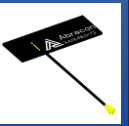
XZ plane



YZ plane



# Cellular 4G LTE FPC Antenna



AANI-FB-0173

Request Samples

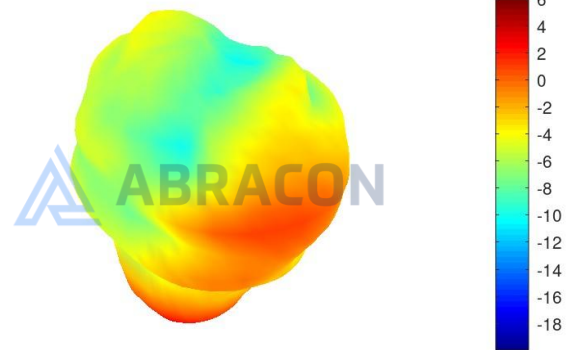
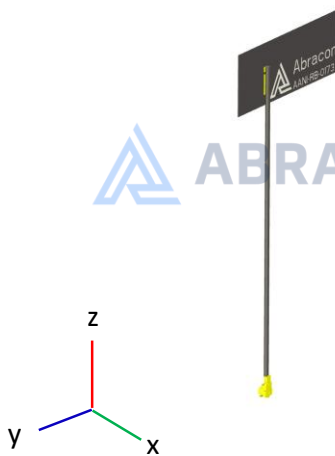


Check Inventory

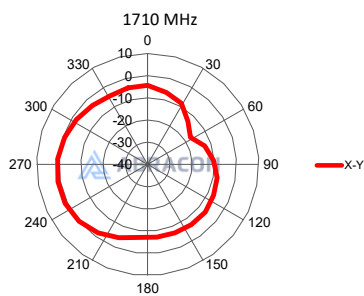


40 x 15 x 0.2 mm  
RoHS/RoHS II Compliant  
MSL Level = N/A

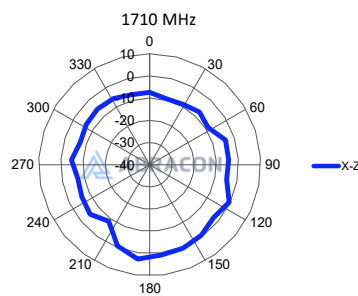
## 3D & 2D Pattern @ 1710 MHz



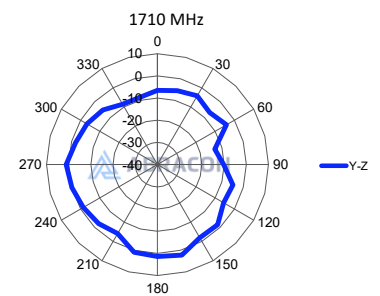
XY plane



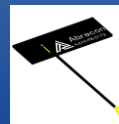
XZ plane



YZ plane



# Cellular 4G LTE FPC Antenna



AANI-FB-0173

Request Samples



Check Inventory

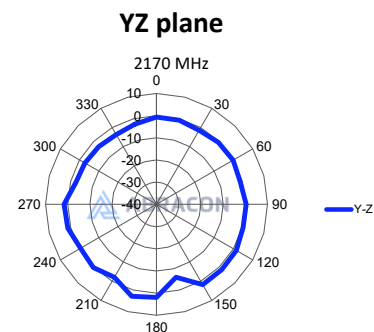
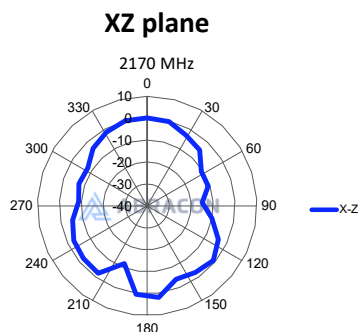
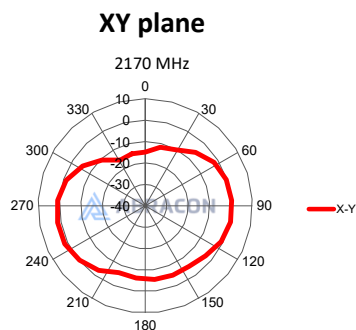
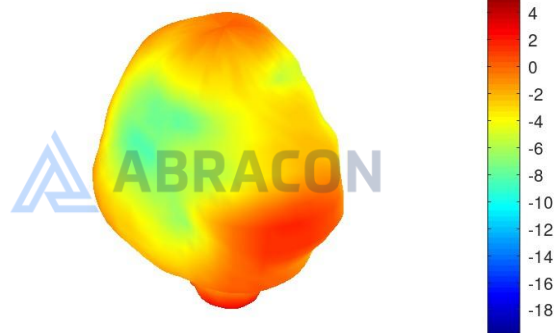
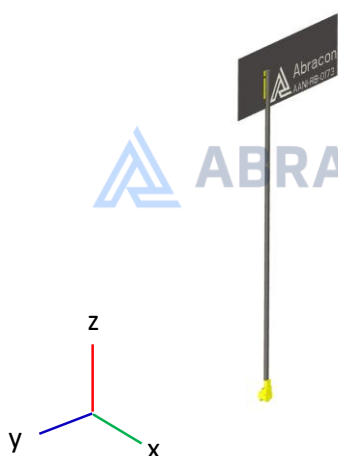


40 x 15 x 0.2 mm

RoHS/RoHS II Compliant

MSL Level = N/A

## 3D & 2D Pattern @ 2170 MHz



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# Cellular 4G LTE FPC Antenna



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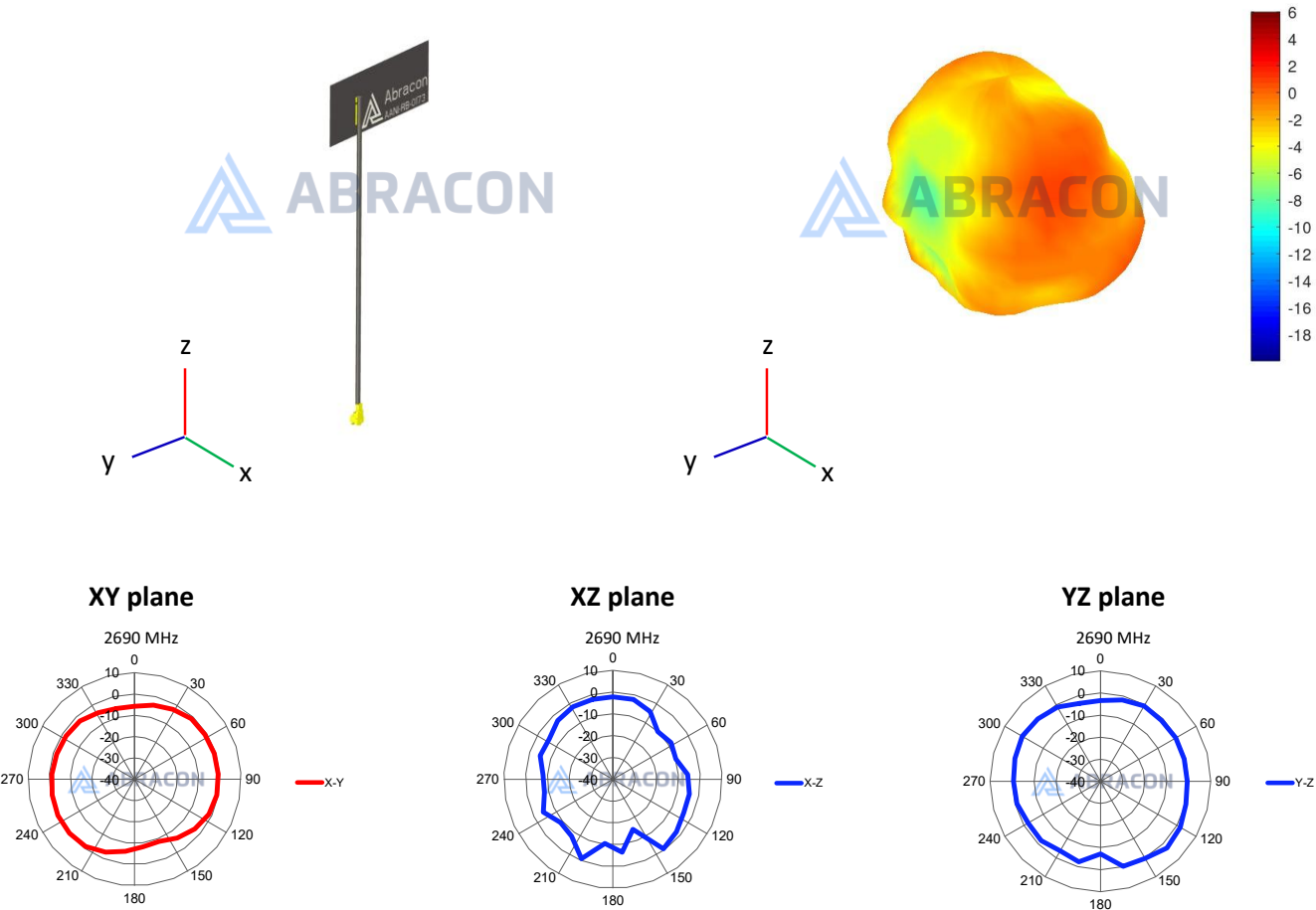


Check Inventory

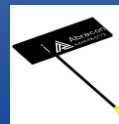


40 x 15 x 0.2 mm  
RoHS/RoHS II Compliant  
MSL Level = N/A

## 3D & 2D Pattern @ 2690 MHz



# Cellular 4G LTE FPC Antenna



**AANI-FB-0173**

Request Samples



Check Inventory



**40 x 15 x 0.2 mm**

**RoHS/RoHS II Compliant**

**MSL Level = N/A**

## 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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