

# External GPS/GLONASS + LTE MIMO + WiFi MIMO Antenna



AEACBK110053-MLWG



Ø110.0 x 53.0 mm  
RoHS/RoHS II Compliant  
MSL = 1

## Features

- 2 x 4G/LTE
- 2 x WiFi 2.4/5.5 GHz
- Active GPS/GLONASS
- Active GNSS with LNA gain of 28 dB
- RHCP for GNSS
- Linear polarized LTE and WiFi
- IP67 rated
- Screw mount

## Applications

- 4G/LTE/3G/2G/GSM applications
- GNSS/GPS/GLONASS
- Gateways and routers
- WiFi 2.4/5.5 GHz
- Telematics
- M2M
- IoT and Industrial IoT
- Geolocation and tracking
- Transportation and agriculture
- Smart city

## Electrical Characteristics

| Parameters                              | Min.   | Typ.                              | Max | Units | Note |
|---|--------|-----------------------------------|-----|-------|------|
| <b>LTE MIMO Antenna</b>                 |        |                                   |     |       |      |
| Frequency Range                         |        | 698-960/1710-2690                 |     | MHz   |      |
| VSWR                                    |        |                                   | 3.0 |       |      |
| Polarization                            | Linear |                                   |     |       |      |
| Impedance                               |        | 50                                |     | Ω     |      |
| Gain                                    |        | 3.0                               |     | dBi   |      |
| <b>GNSS (GPS &amp; GLONASS) Antenna</b> |        |                                   |     |       |      |
| Center Frequency                        |        | 1575.42-1610                      |     | MHz   |      |
| Polarization                            | RHCP   |                                   |     |       |      |
| Impedance                               |        | 50                                |     |       |      |
| Dimension                               |        | 25.0 x 25.0 x 6.0                 |     | mm    |      |
| <b>GNSS LNA</b>                         |        |                                   |     |       |      |
| Gain                                    |        | 28±2                              |     | dB    |      |
| Noise Figure                            |        |                                   | 1.5 | dB    |      |
| VSWR                                    |        |                                   | 2.0 |       |      |
| Supply Voltage                          | 3.0    |                                   | 5.0 | V     | DC   |
| Current Consumption                     |        |                                   | 15  | mA    |      |
| <b>WiFi MIMO Antenna</b>                |        |                                   |     |       |      |
| Frequency Range                         |        | 2400-2483.5MHz/<br>4900 - 5825MHz |     | MHz   |      |
| VSWR                                    |        |                                   | 2.5 |       |      |
| Polarization                            | Linear |                                   |     |       |      |
| Impedance                               |        | 50                                |     | Ω     |      |
| Gain                                    |        | 2.0                               |     | dBi   |      |

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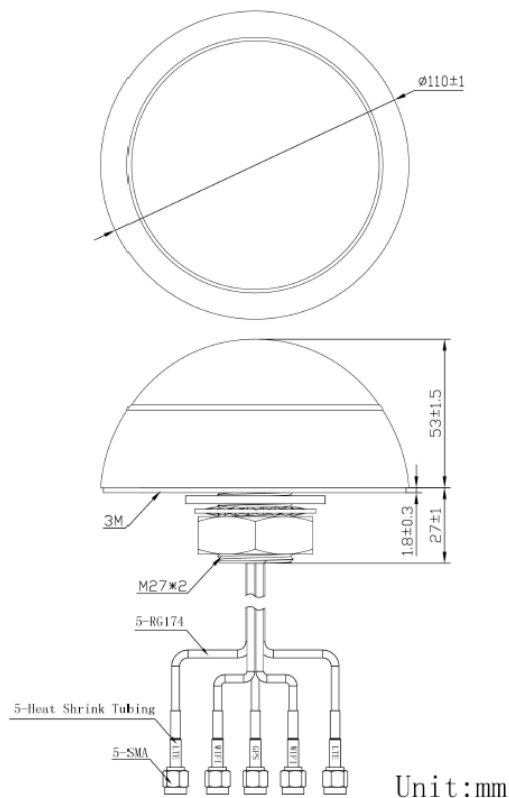
## Mechanical Characteristics

| Parameters      | Description      |
|-----------------|------------------|
| Connector       | SMA Male         |
| Cable Type      | RG174            |
| Cable Length    | 3M               |
| Radome Material | ABS              |
| Mounting Method | Screw            |
| Dimensions      | Φ110.0 x 53.0 mm |

## Environmental Characteristics

| Parameters            | Description                             |
|-----------------------|---|
| Waterproof            | IP67 (exclude cable outlet)             |
| Operating Temperature | -40 ~ +85°C                             |
| Relative Humidity     | Up to 95%                               |
| MSL Level             | 1                                       |
| ROHS Compliant        | Yes                                     |
| Vibration             | 10 to 55Hz with 1.5mm amplitude 2 hours |

## Dimensions



Unit:mm

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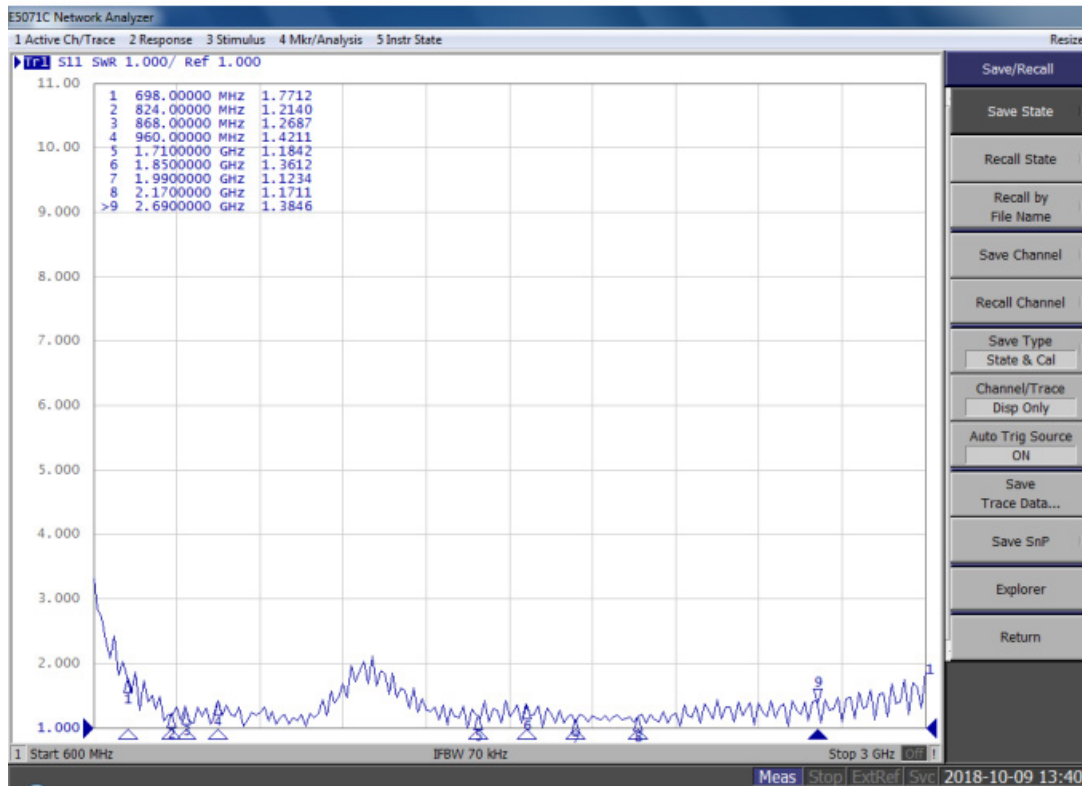
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## Product Image



## VSWR Characteristics

LTE



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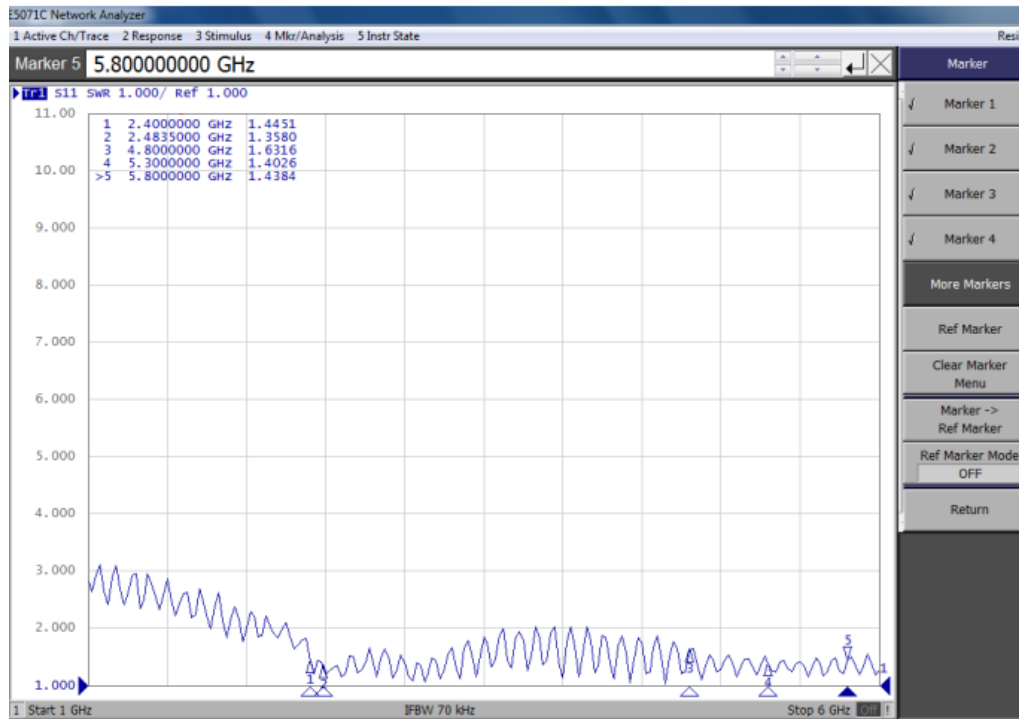
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## VSWR Characteristics

WiFi



## Gain and Efficiency

| Frequency (MHz) | Efficiency | Gain (dBi) |
|-----------------|------------|------------|
| 698.0           | 0.52       | 2.05       |
| 824.0           | 0.57       | 2.18       |
| 868.0           | 0.67       | 2.89       |
| 960.0           | 0.58       | 1.1        |
| 1710.0          | 0.57       | 0.8        |
| 1850.0          | 0.52       | 0.45       |
| 1990.0          | 0.57       | 0.81       |
| 2170.0          | 0.61       | 1.87       |
| 2690.0          | 0.56       | 1.69       |
| 2400.0          | 0.63       | 0.67       |
| 2450.0          | 0.62       | 1.75       |
| 2483.5          | 0.59       | 1.96       |
| 4800.0          | 0.57       | 0.83       |
| 5300.0          | 0.56       | 1.85       |
| 5800.0          | 0.58       | 1.75       |

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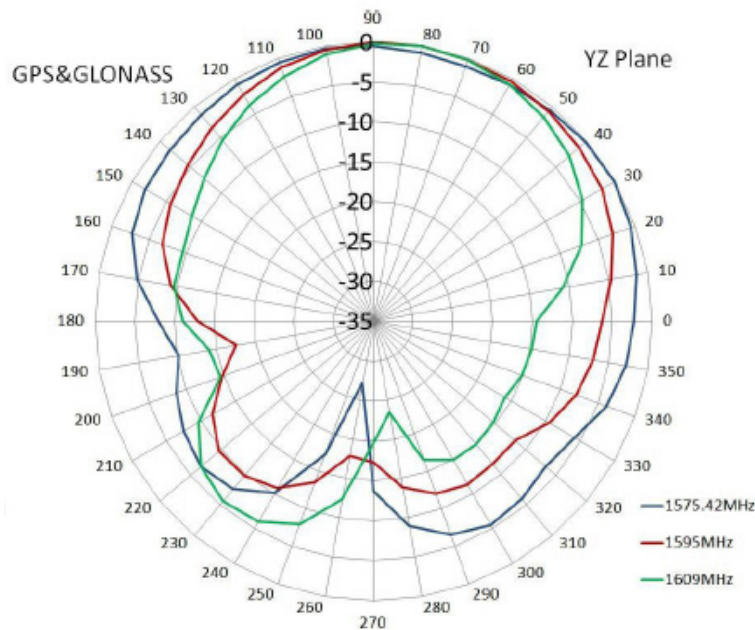
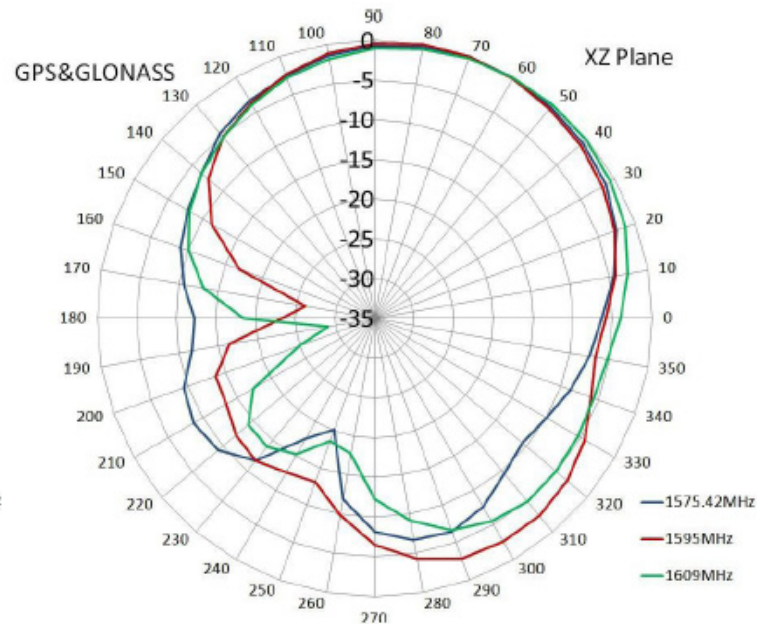
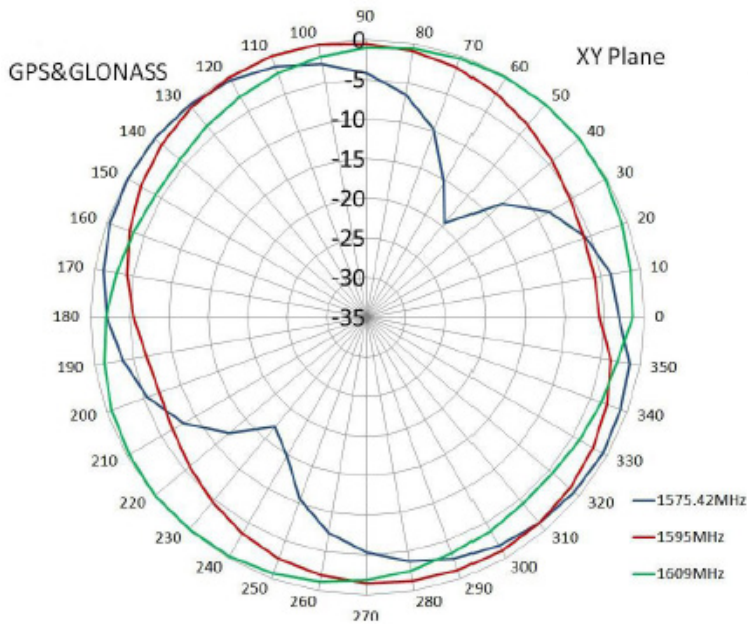
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## Radiation Patterns

2D Radiation Patterns  
GPS Antenna





# External GPS/GLONASS + LTE MIMO + WiFi MIMO Antenna

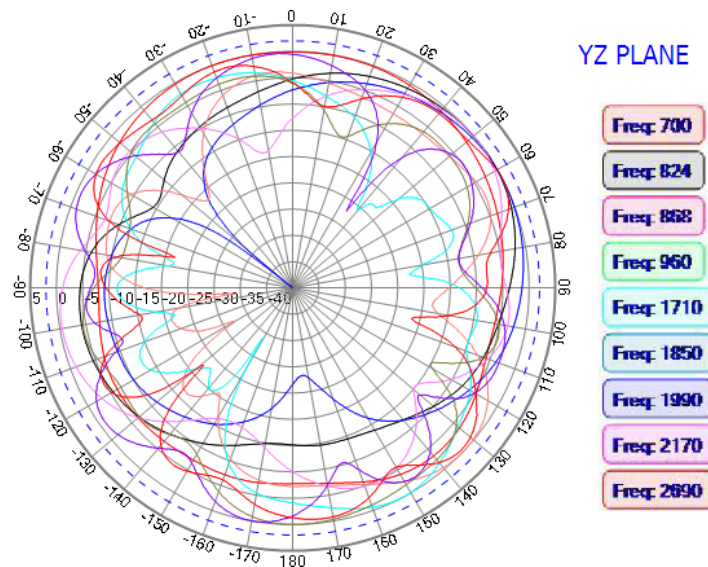
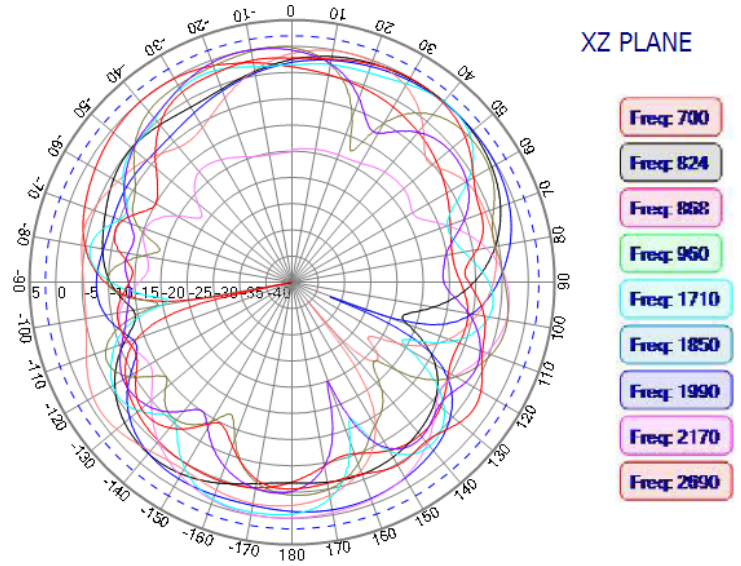
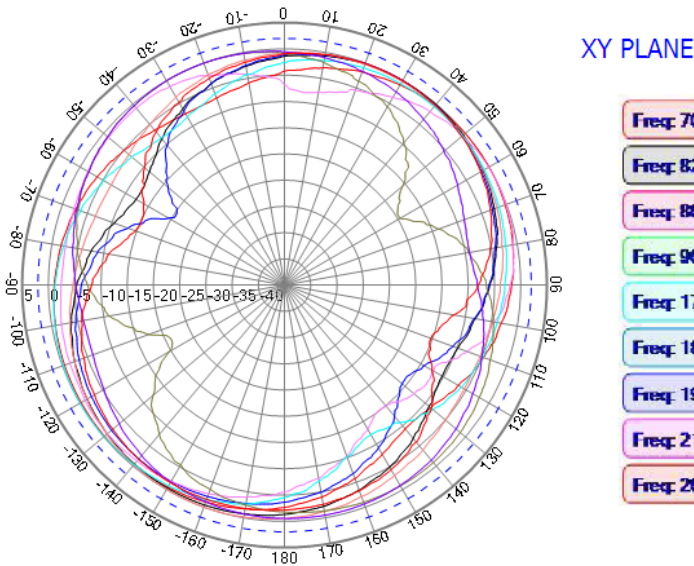


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## LTE Antenna



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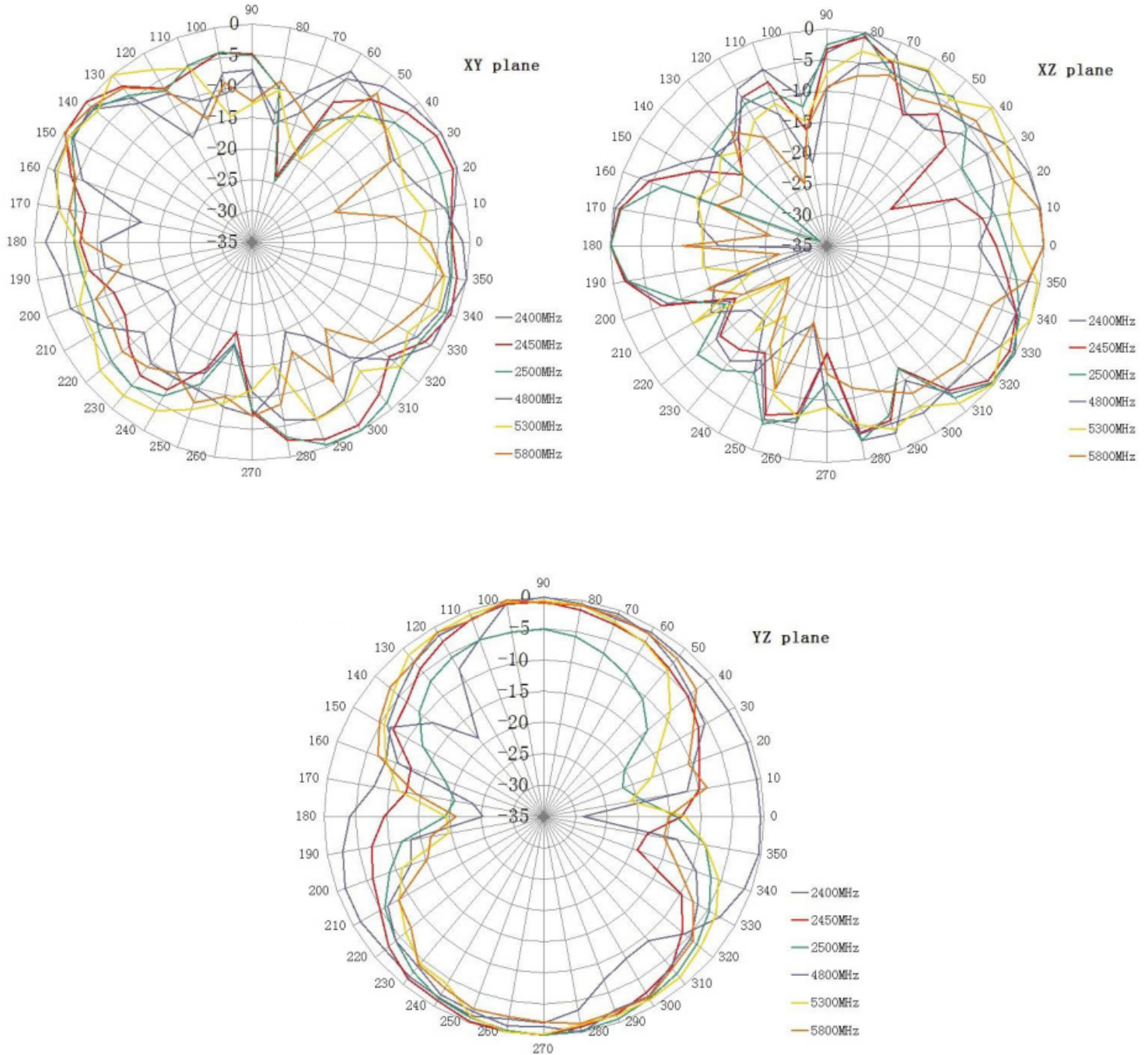


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Ø110.0 x 53.0 mm  
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MSL = 1

## WiFi Antenna



# External GPS/GLONASS + LTE MIMO + WiFi MIMO Antenna



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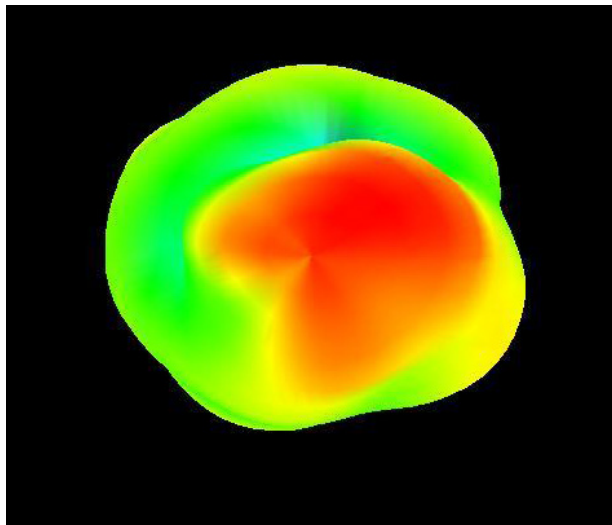


Ø110.0 x 53.0 mm  
RoHS/RoHS II Compliant  
MSL = 1

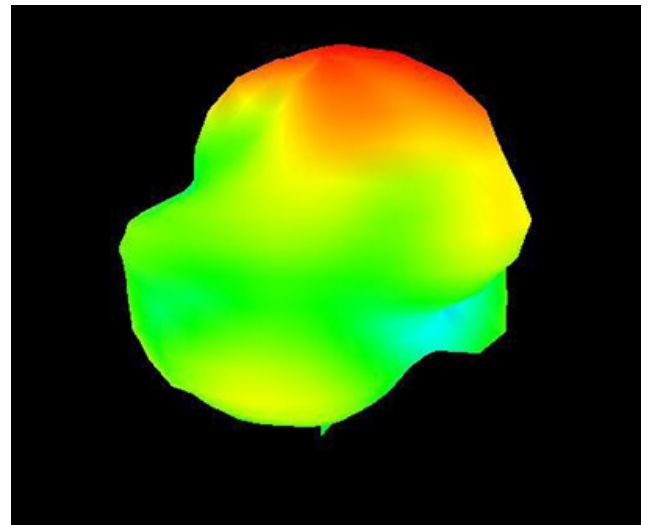
## 3D Radiation Patterns

### GPS/GLONASS Antenna

1575.42MHz

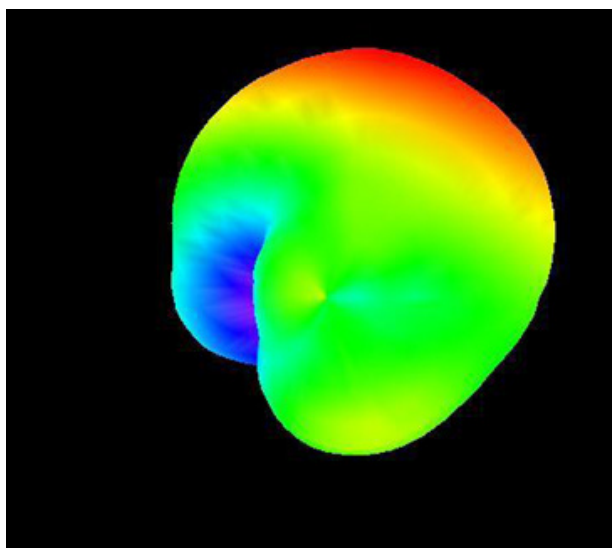


1610MHz

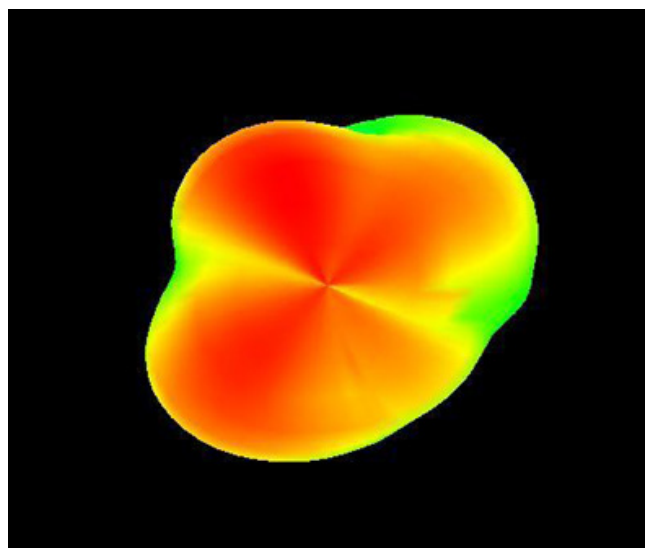


### LTE Antenna

698 MHz



824 MHz





# External GPS/GLONASS + LTE MIMO + WiFi MIMO Antenna



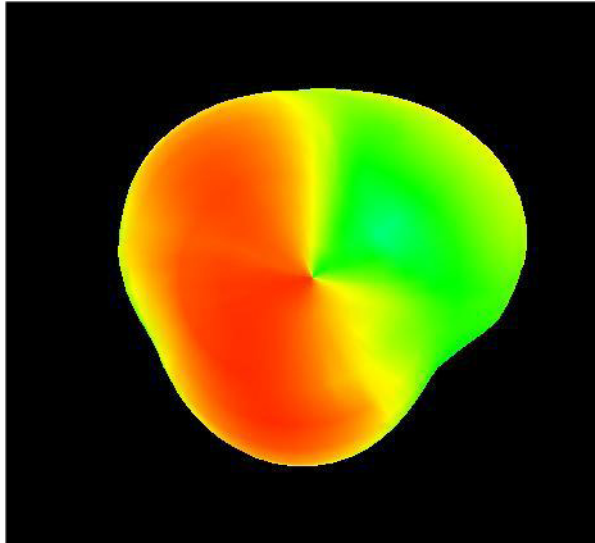
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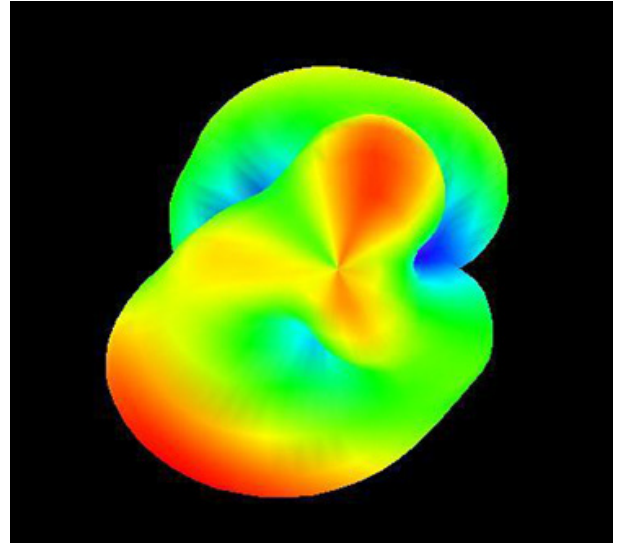
Ø110.0 x 53.0 mm  
RoHS/RoHS II Compliant  
MSL = 1

## 3D Radiation Patterns

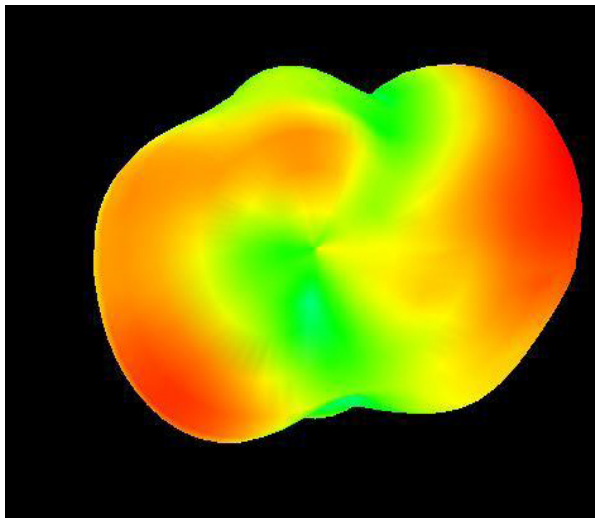
868 MHz



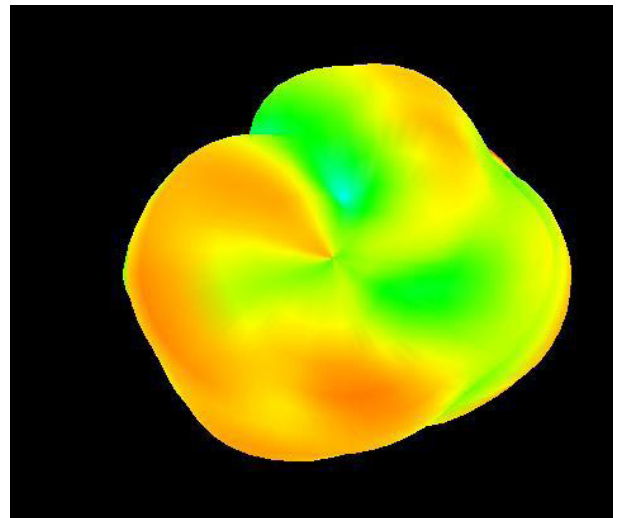
960 MHz



1710 MHz



1850 MHz



# External GPS/GLONASS + LTE MIMO + WiFi MIMO Antenna



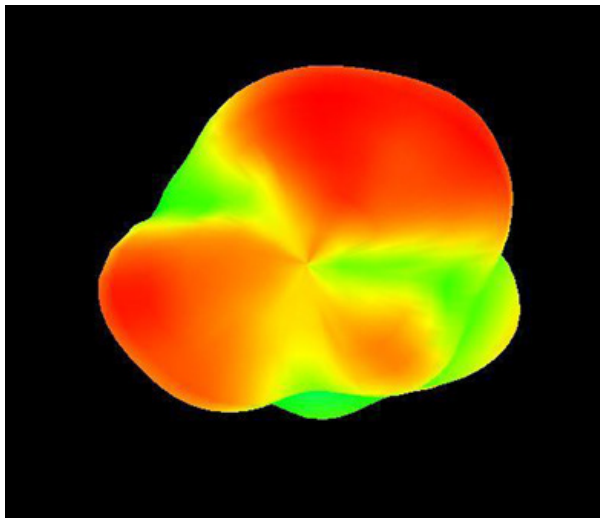
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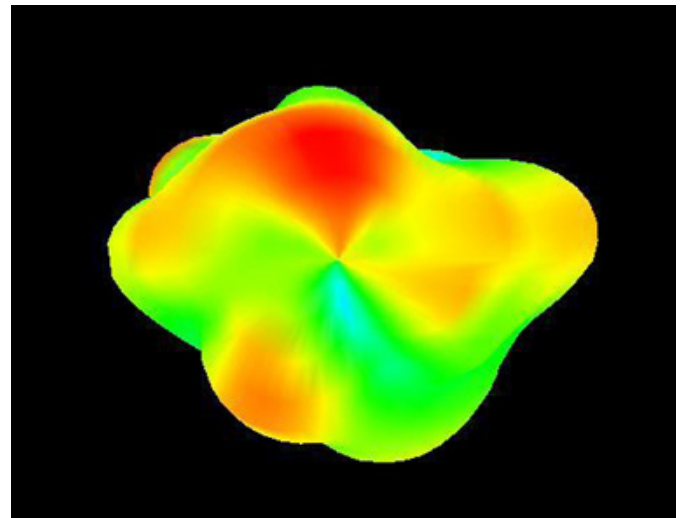
Ø110.0 x 53.0 mm  
RoHS/RoHS II Compliant  
MSL = 1

## 3D Radiation Patterns

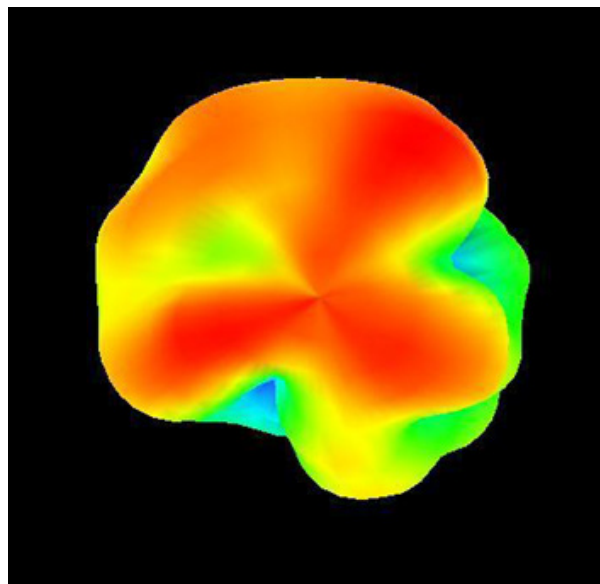
1990 MHz



2170 MHz



2690 MHz



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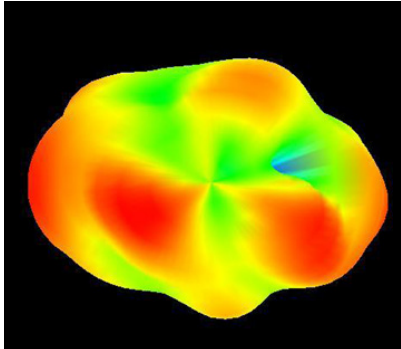


Ø110.0 x 53.0 mm  
RoHS/RoHS II Compliant  
MSL = 1

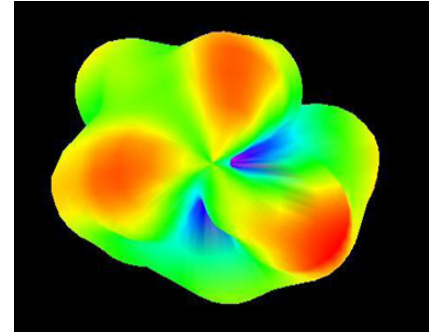
## 3D Radiation Patterns

### WiFi Antenna

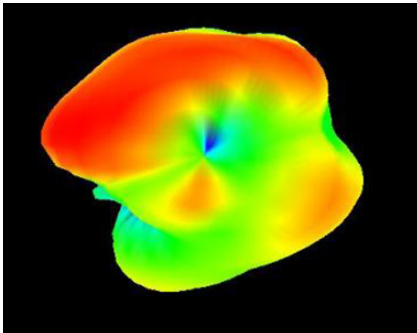
2400MHz



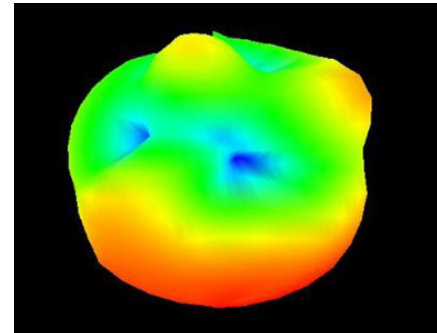
2483.5MHz



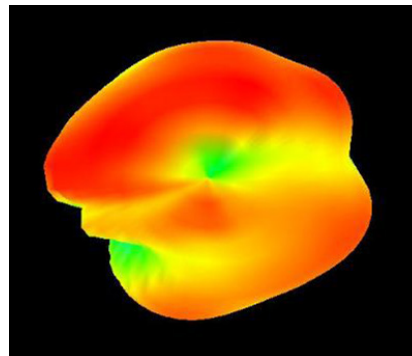
4800MHz



5300MHz



5800MHz



### Packaging

Each 50.0 x 27.0 x 28.0 cm size carton includes 16 pcs antenna.

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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