

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

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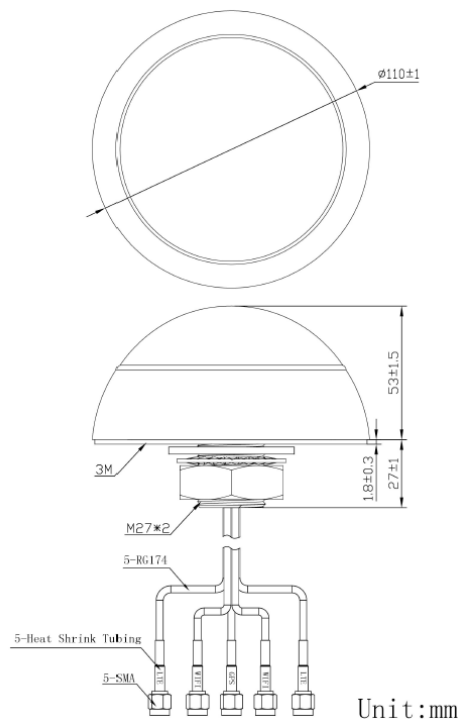
Mechanical Characteristics

| Parameters | Description |
|-----------------|--|
| Connector | SMA Male |
| Cable Type | 3 x RG174 (LTE MIMO +GNSS)+ 2 x LMR100 (WiFi MIMO) |
| Cable Length | 3M |
| Radome Material | ABS |
| Mounting Method | Screw |
| Dimensions | Ø110.0 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 Complaint | Yes |
| Vibration | 10 to 55Hz with 1.5mm amplitude 2 hours |

Dimensions



Unit: mm

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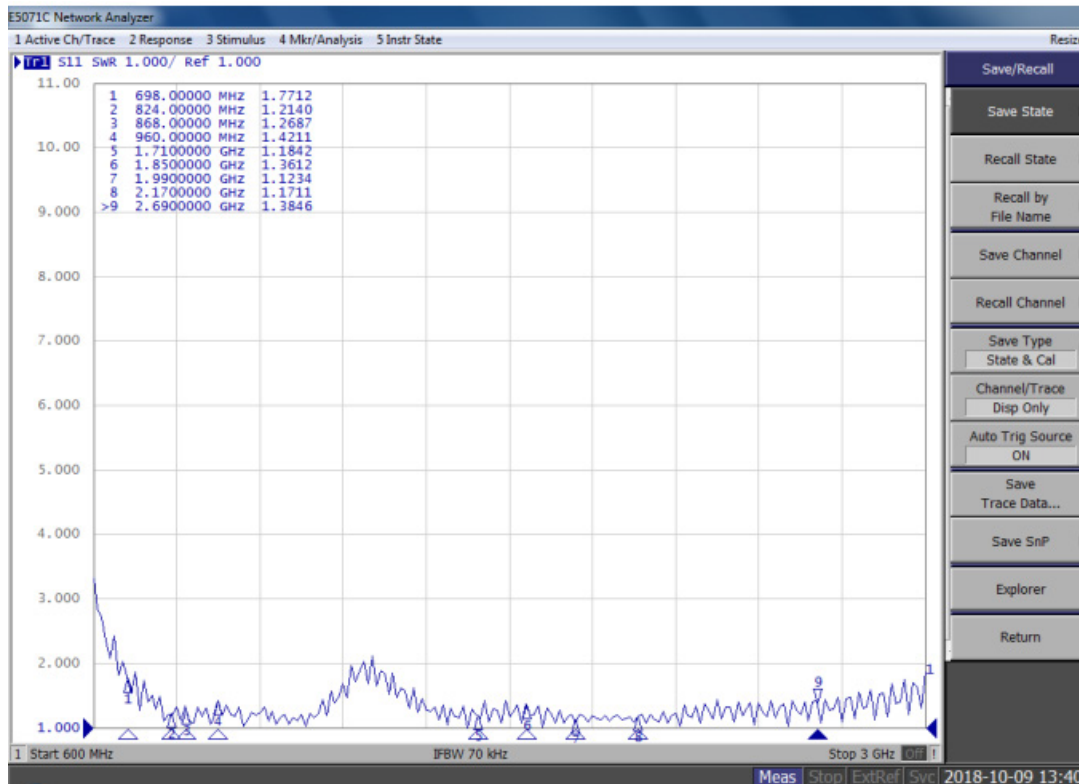
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Product Image



VSWR Characteristics

LTE



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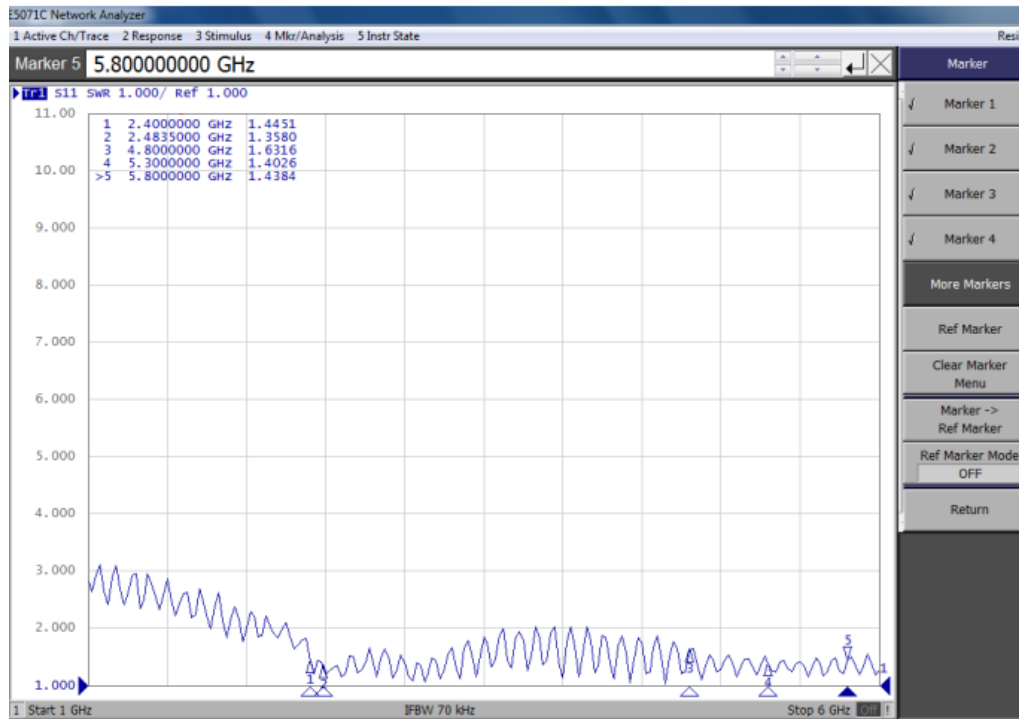
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VSWR Characteristics

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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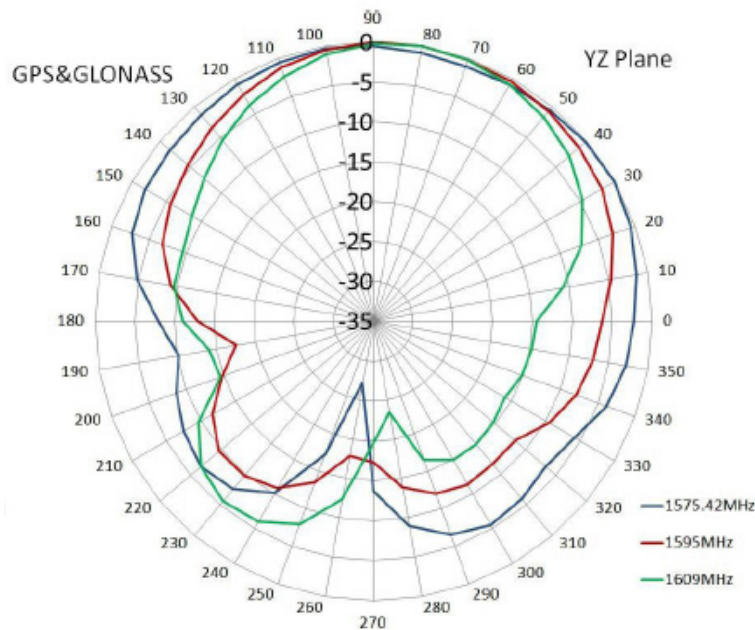
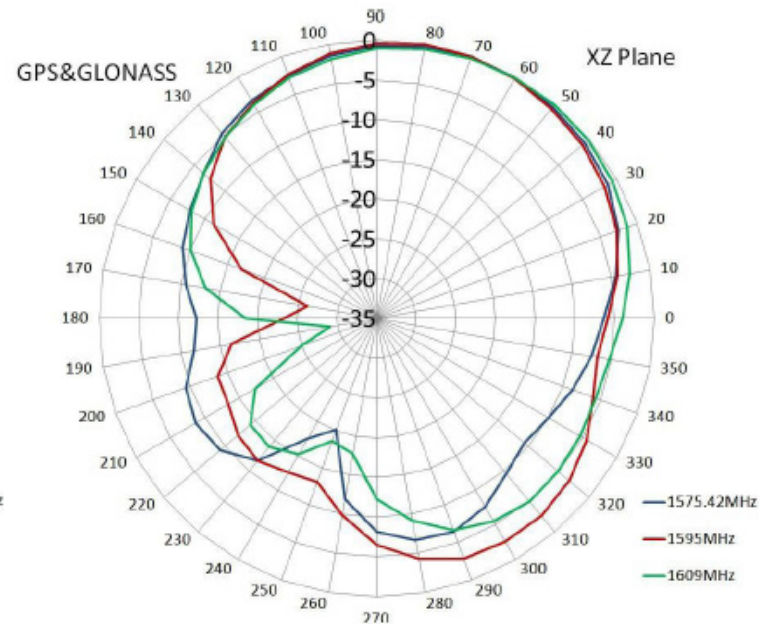
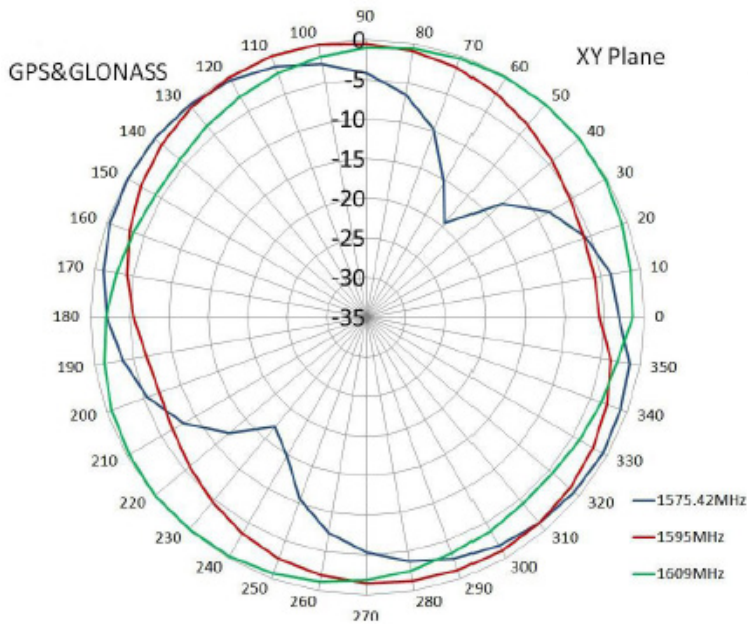
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Radiation Patterns

2D Radiation Patterns
GPS Antenna



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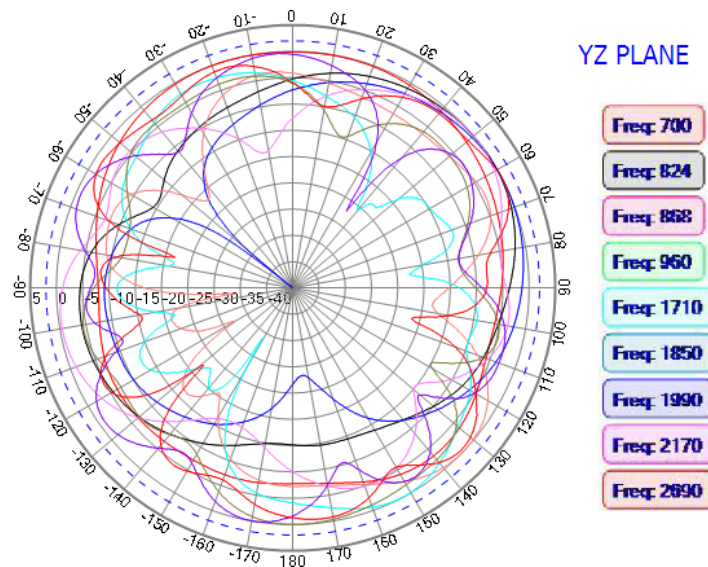
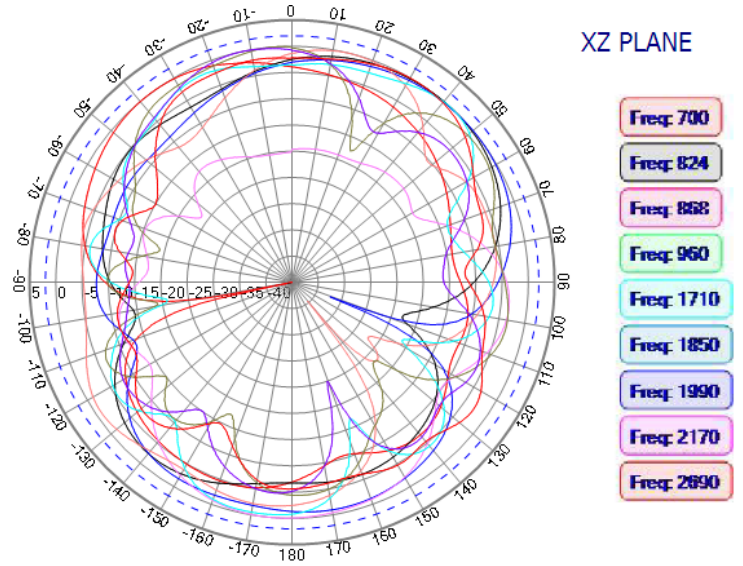
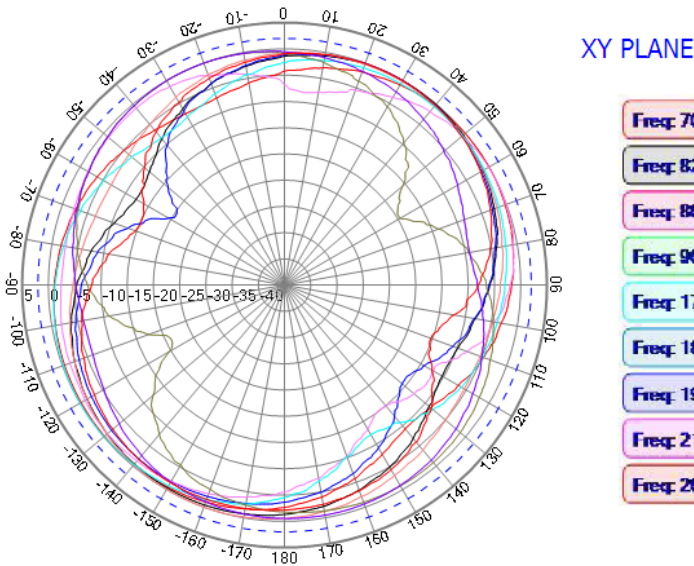


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LTE Antenna



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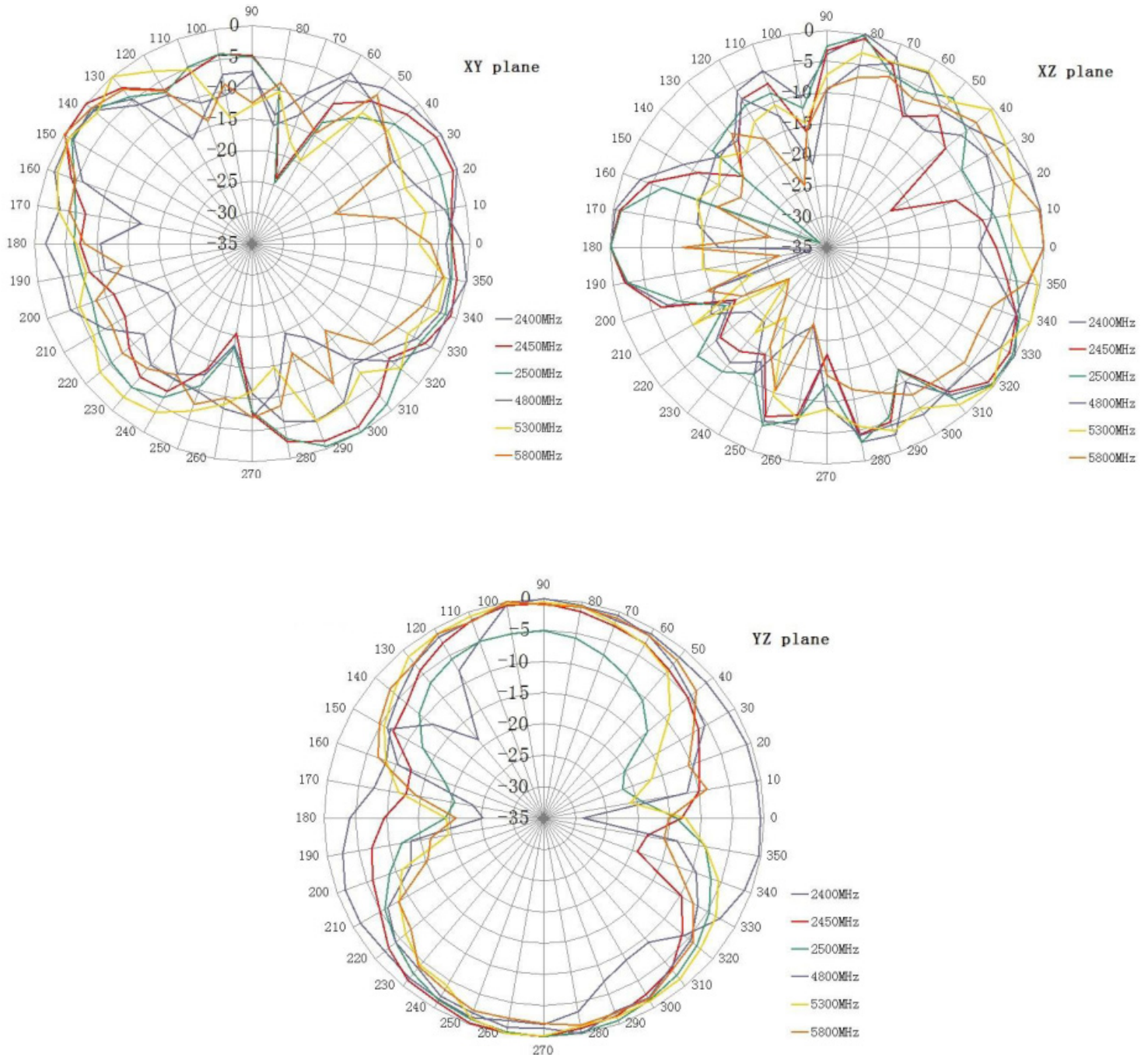


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WiFi Antenna



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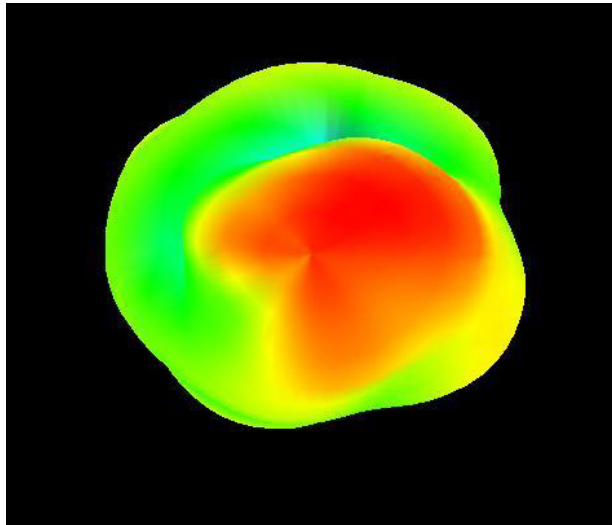


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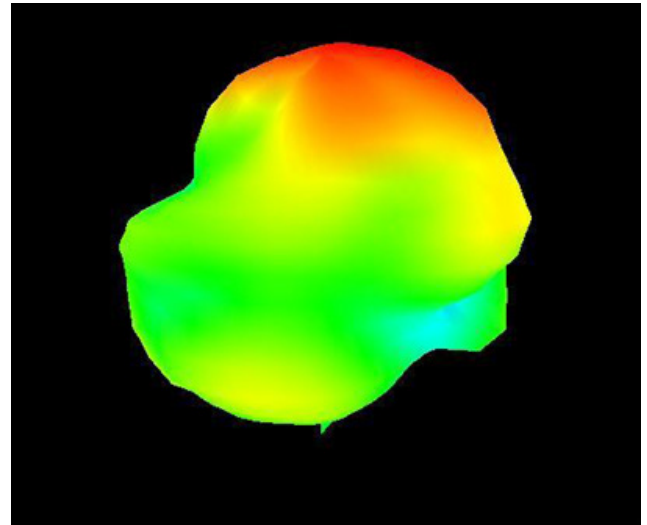
3D Radiation Patterns

GPS/GLONASS Antenna

1575.42MHz

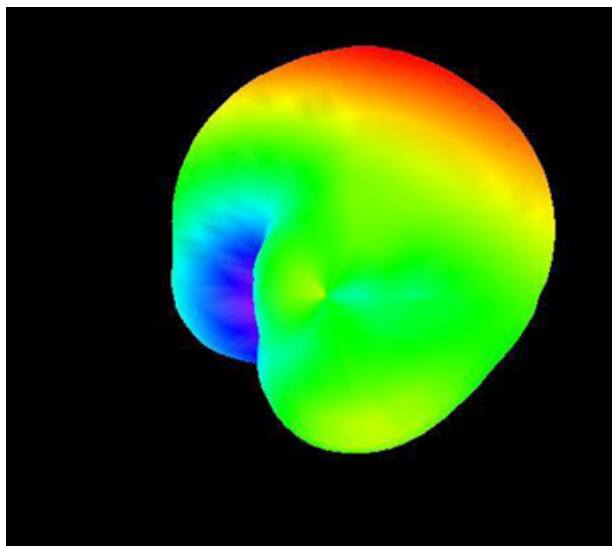


1610MHz

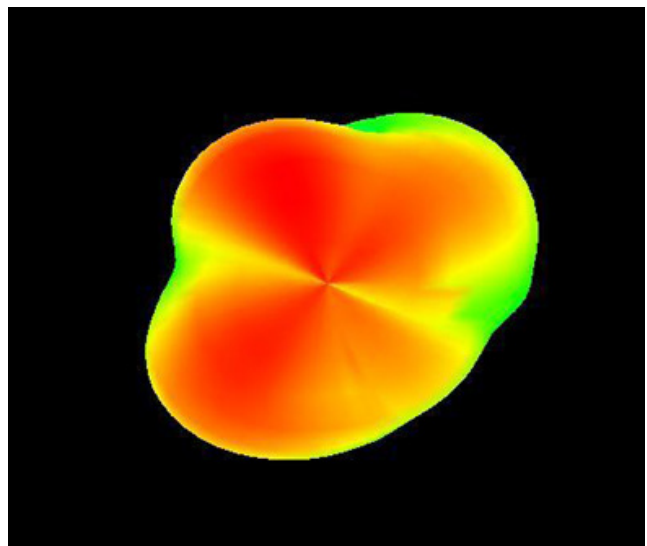


LTE Antenna

698 MHz



824 MHz



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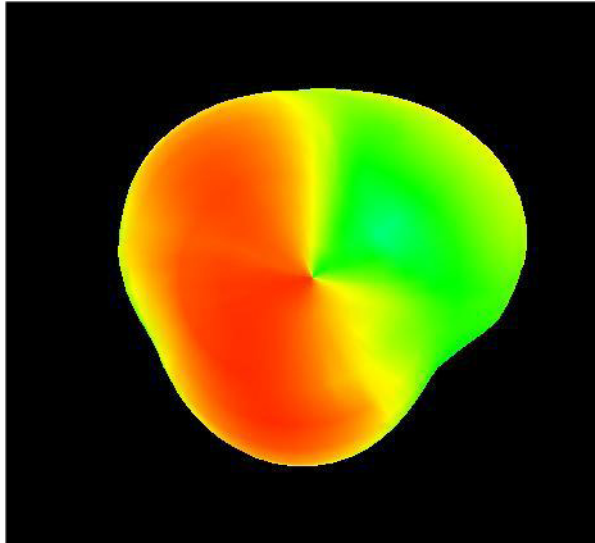
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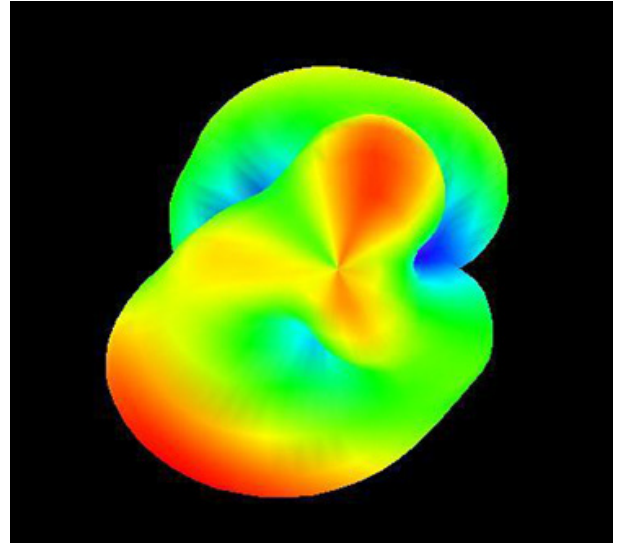
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3D Radiation Patterns

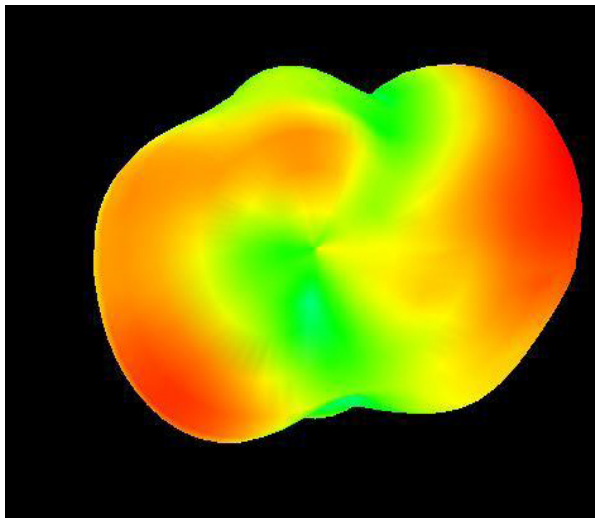
868 MHz



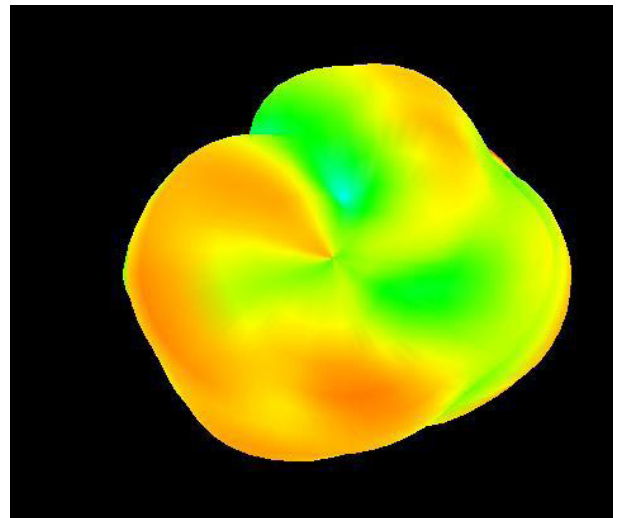
960 MHz



1710 MHz



1850 MHz



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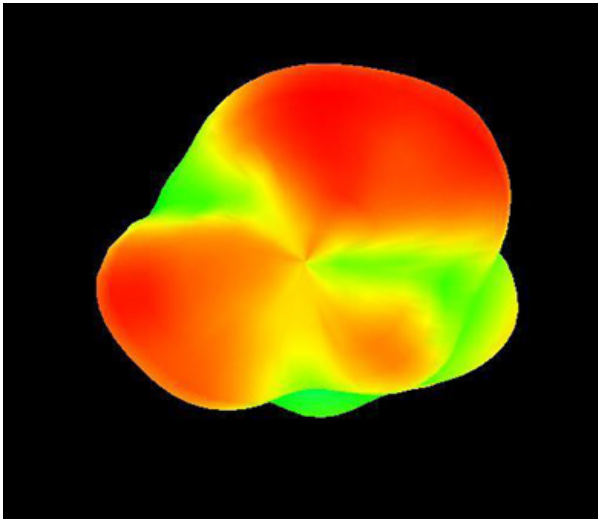
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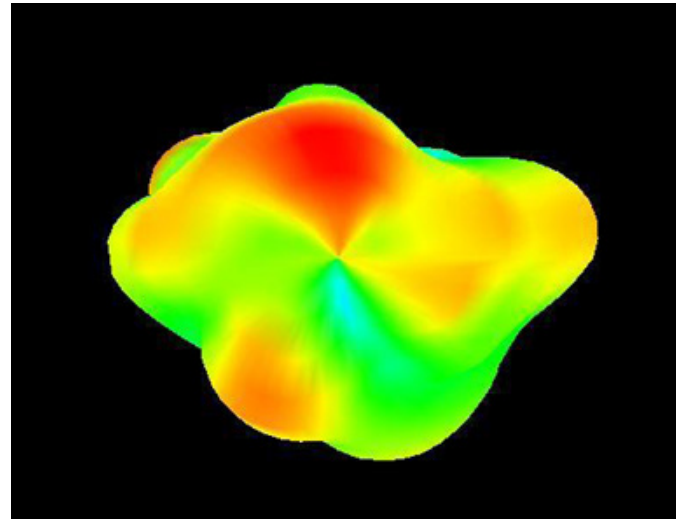
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3D Radiation Patterns

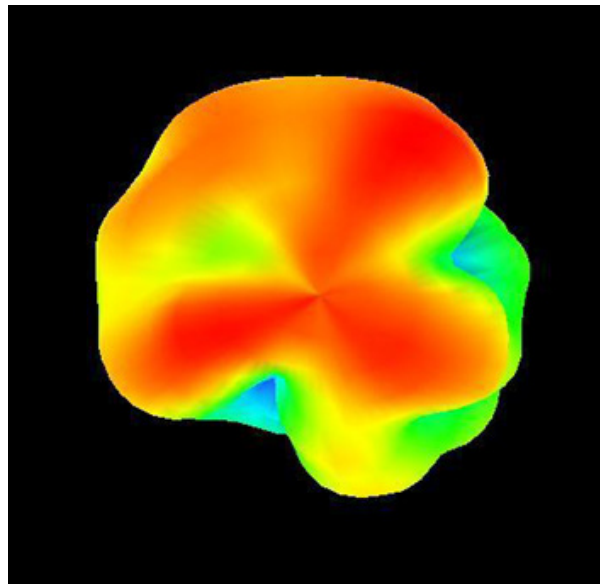
1990 MHz



2170 MHz



2690 MHz



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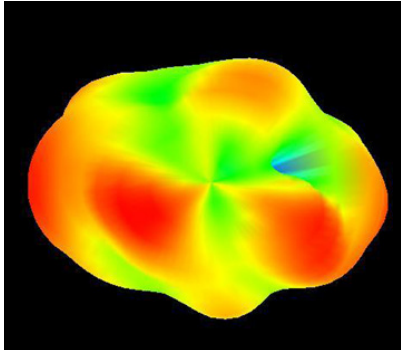


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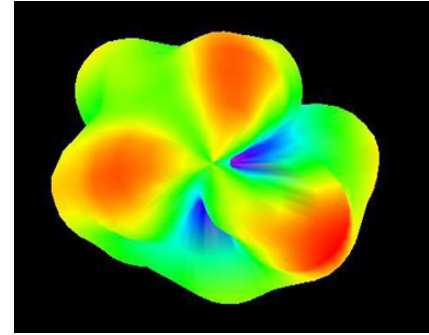
3D Radiation Patterns

WiFi Antenna

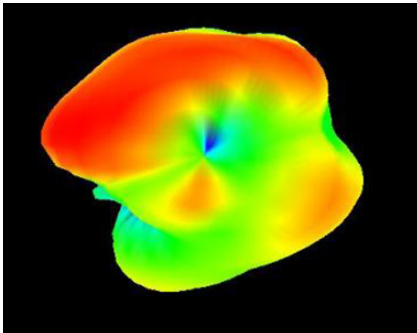
2400MHz



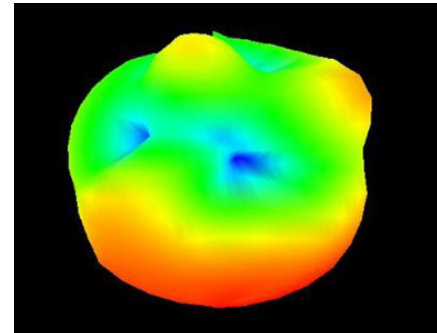
2483.5MHz



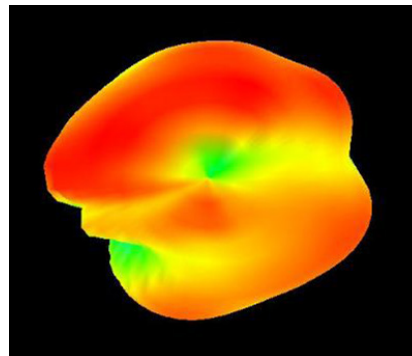
4800MHz



5300MHz



5800MHz



Packaging

Each 51 x 27 x 26 cm size carton includes 16 pcs antenna and weighs 11 Kg.

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