

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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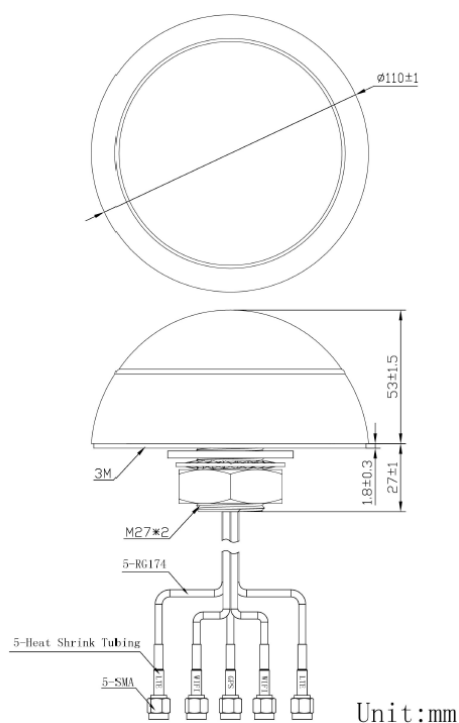
Mechanical Characteristics

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



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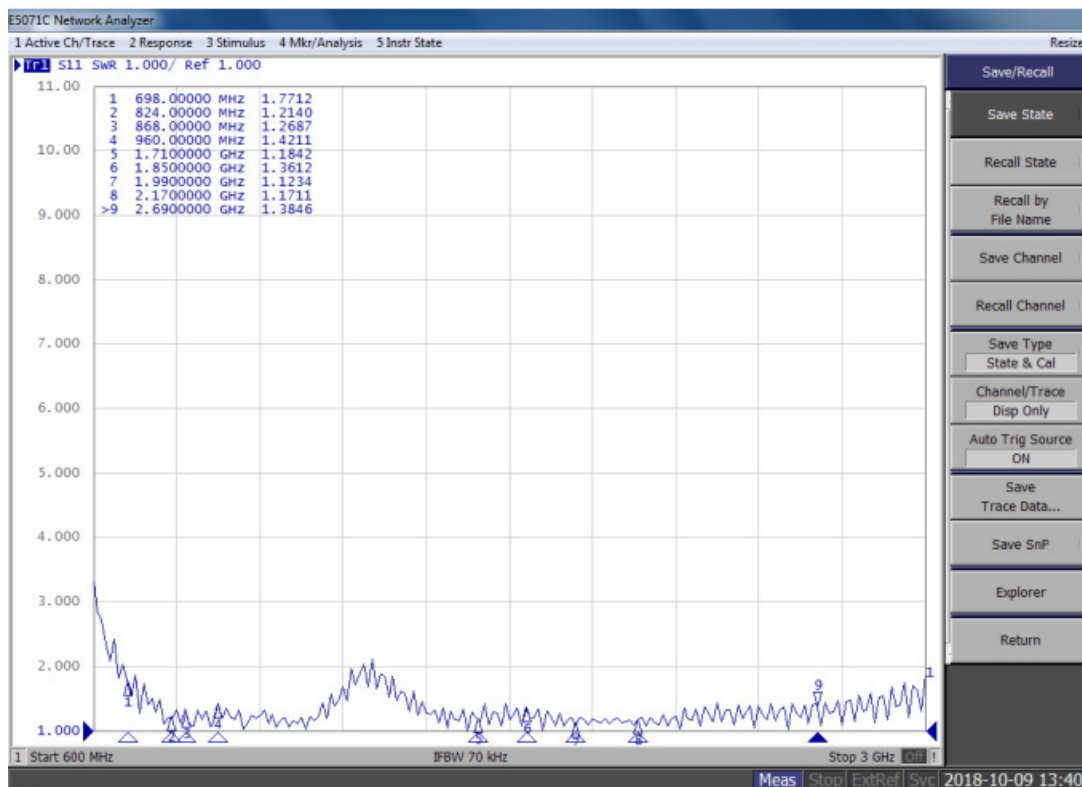
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Product Image



VSWR Characteristics

LTE



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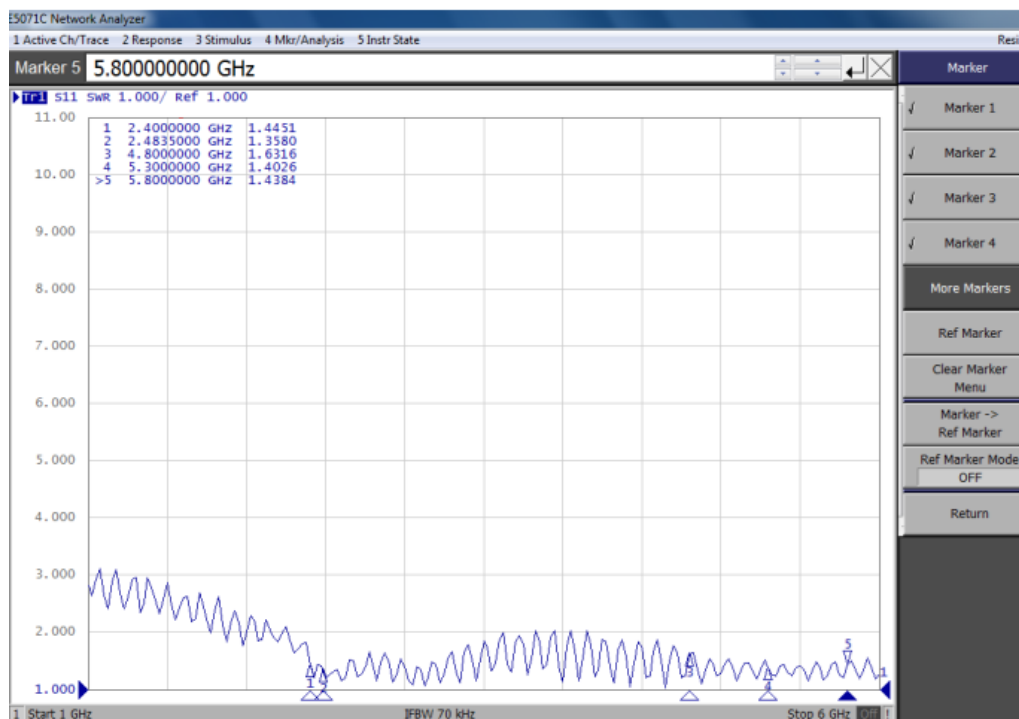
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VSWR Characteristics

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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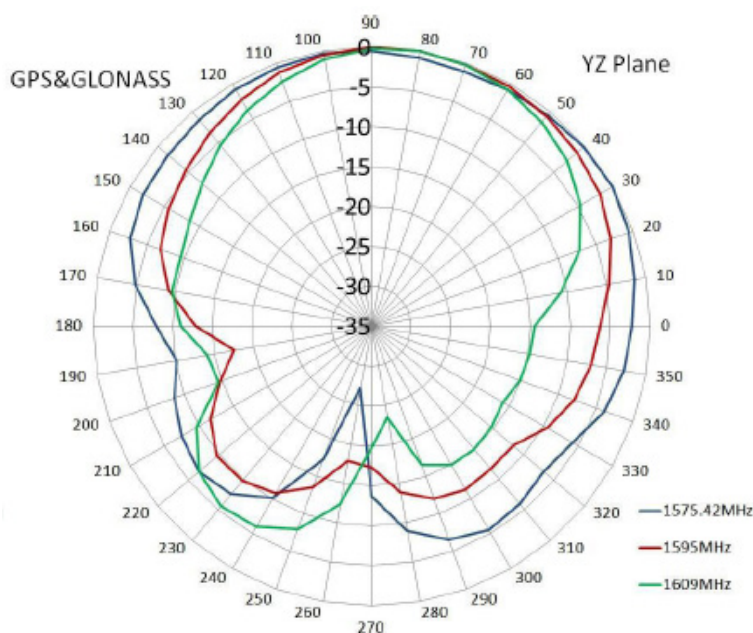
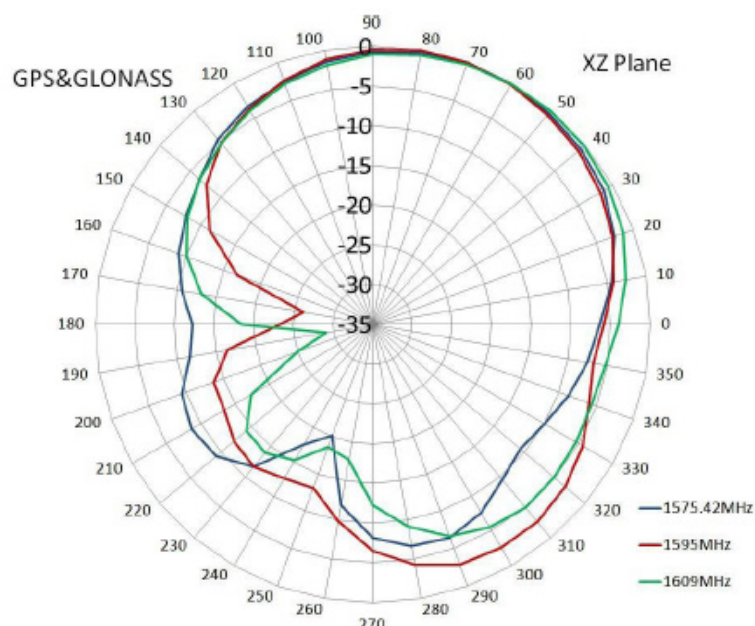
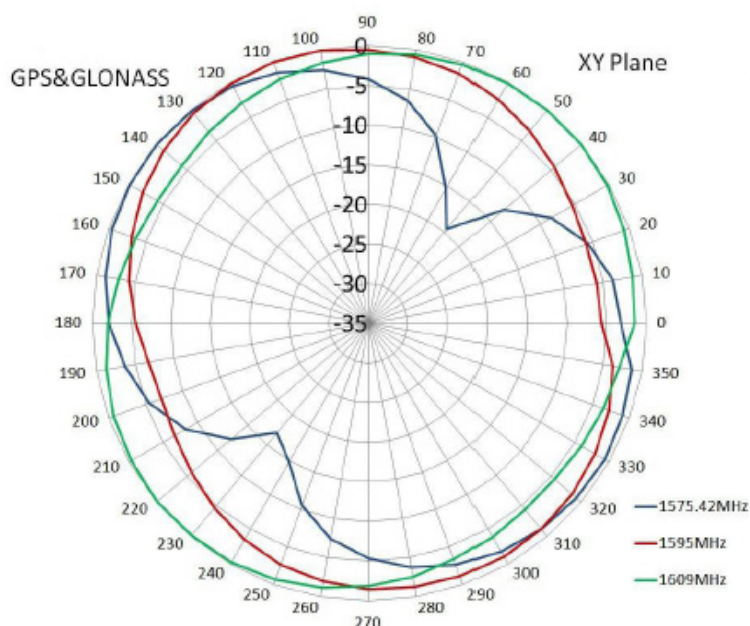
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Radiation Patterns

2D Radiation Patterns
GPS Antenna



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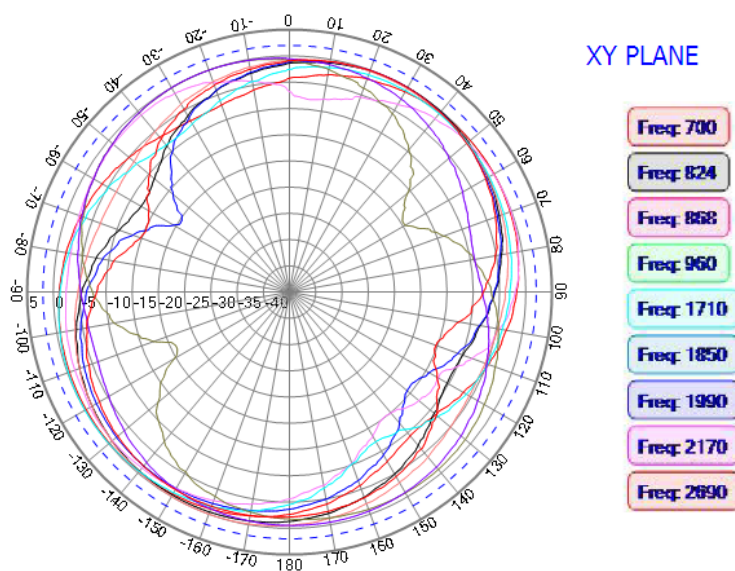
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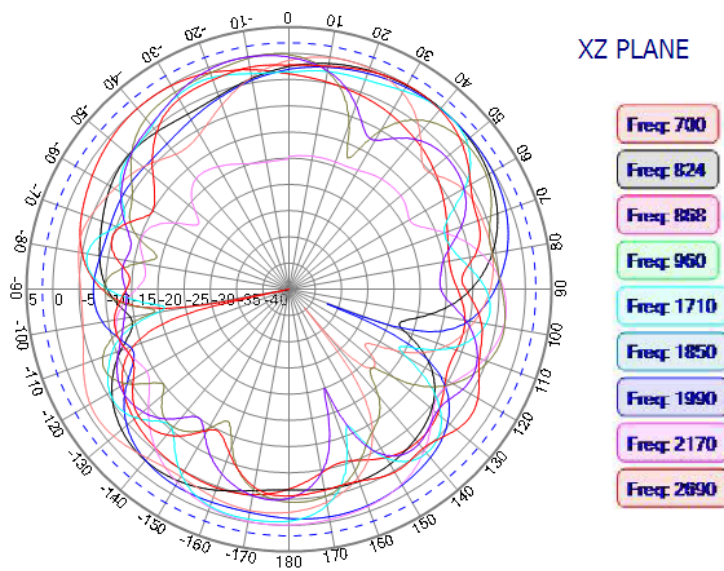
Ø110.0 x 53.0 mm
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LTE Antenna

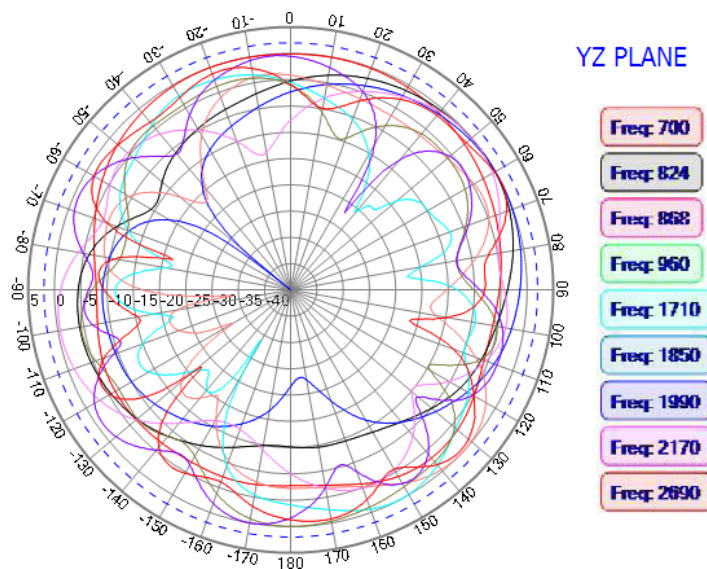
XY PLANE



XZ PLANE



YZ PLANE



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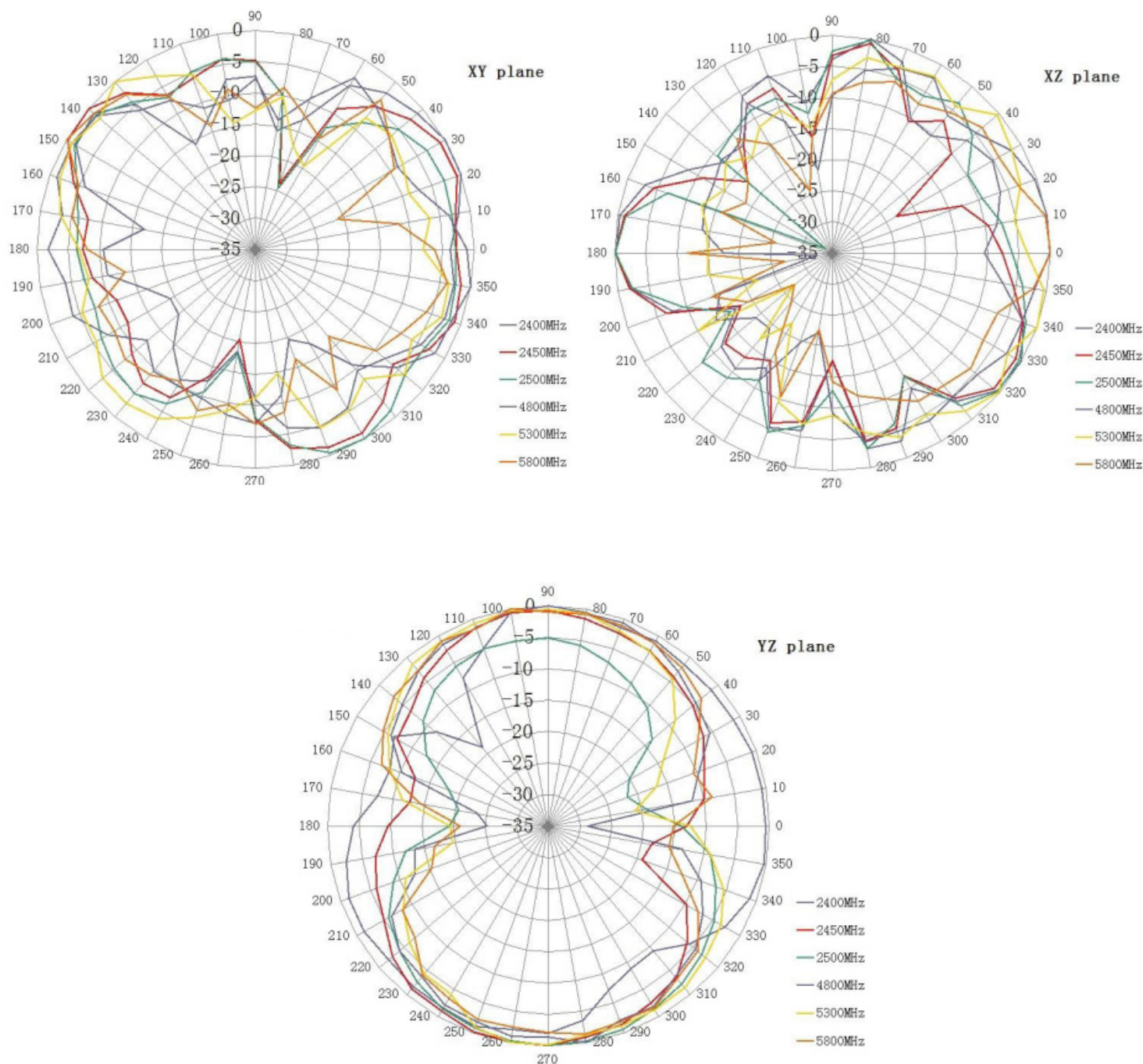


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WiFi Antenna



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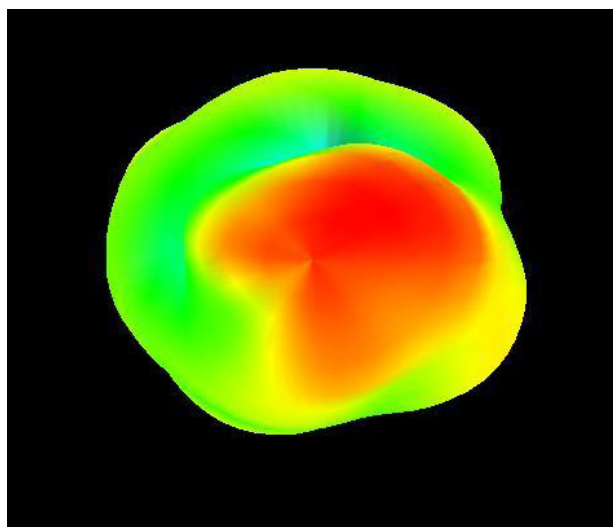


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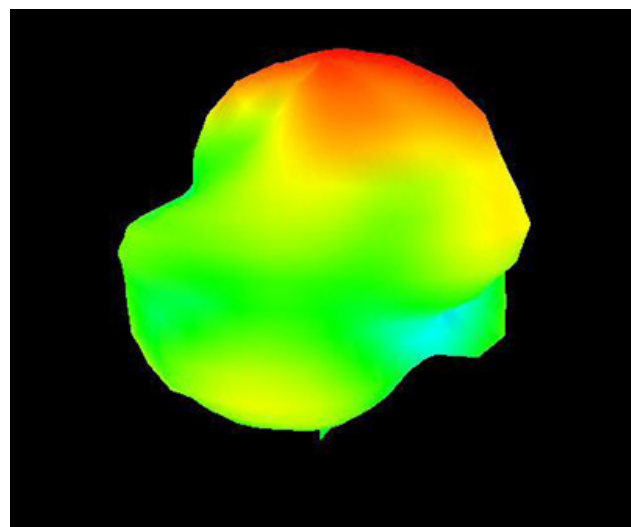
3D Radiation Patterns

GPS/GLONASS Antenna

1575.42MHz

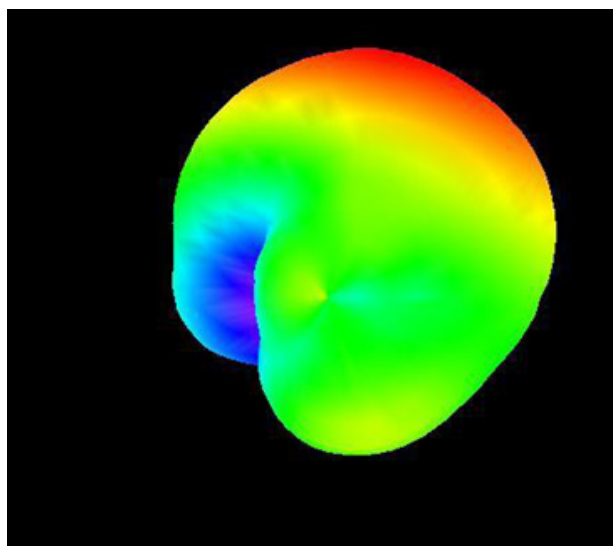


1610MHz

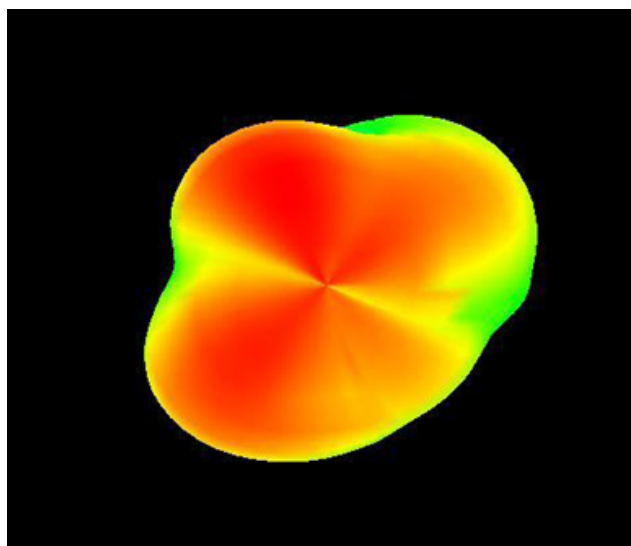


LTE Antenna

698 MHz



824 MHz



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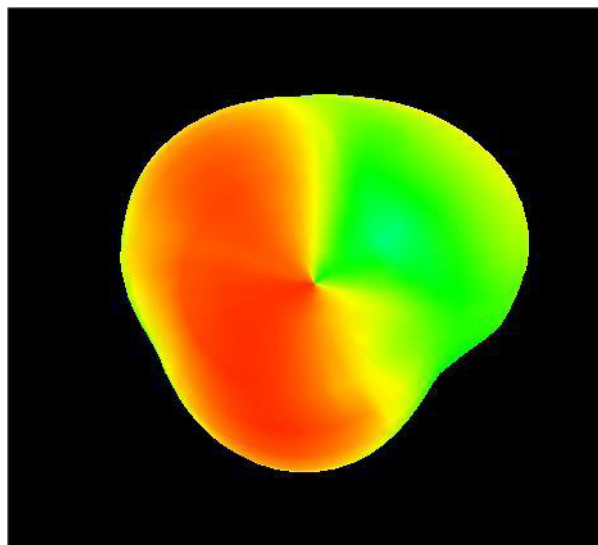
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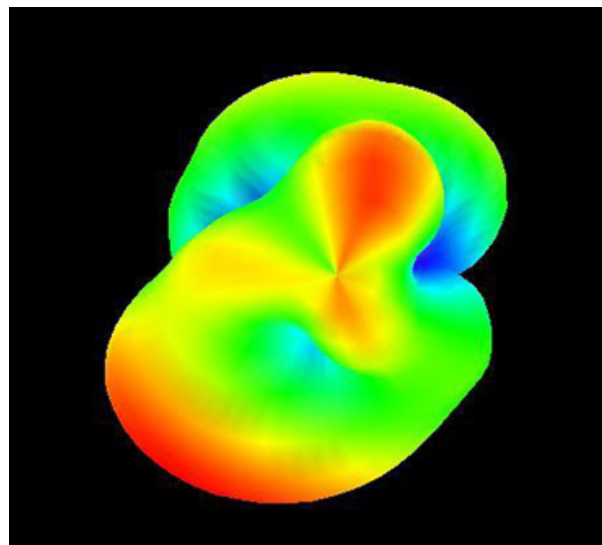
Ø110.0 x 53.0 mm
RoHS/RoHS II Compliant
MSL = 1

3D Radiation Patterns

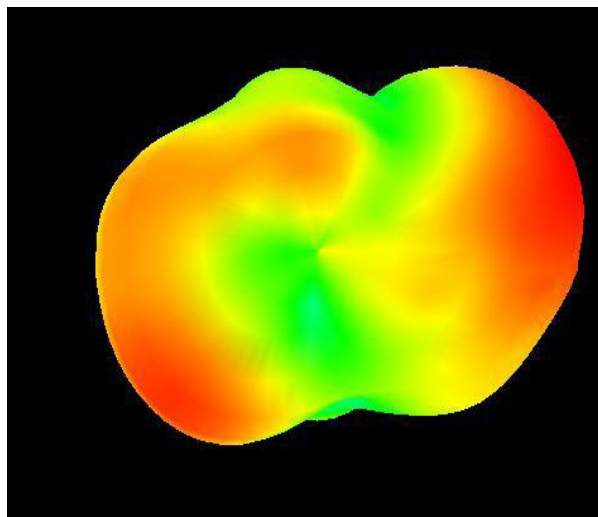
868 MHz



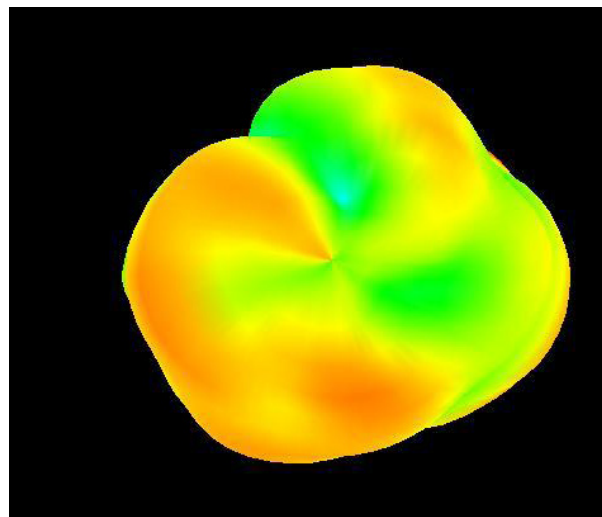
960 MHz



1710 MHz



1850 MHz



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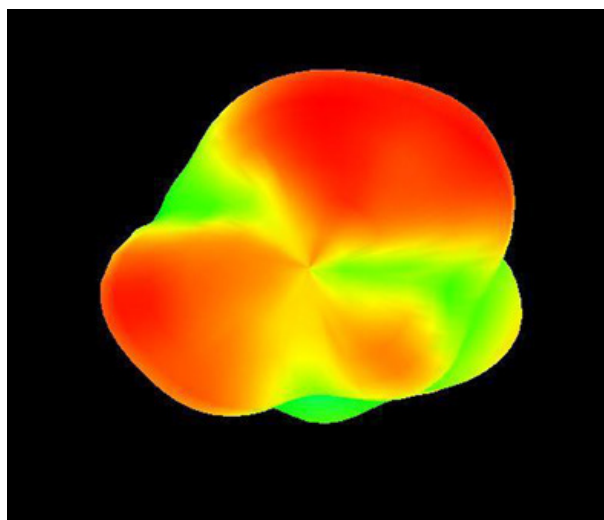
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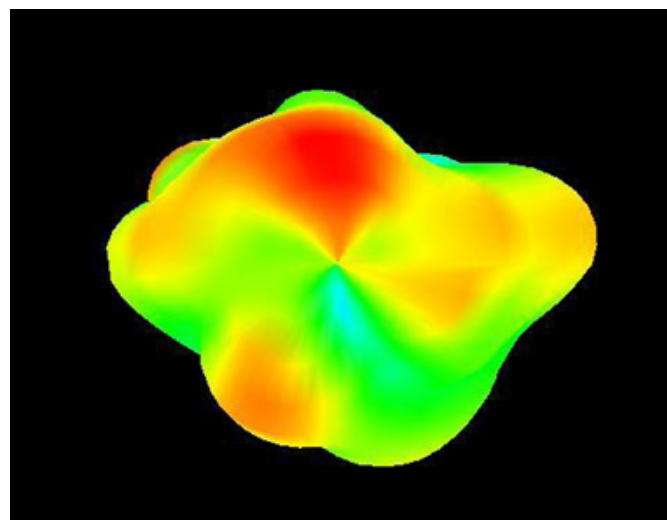
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3D Radiation Patterns

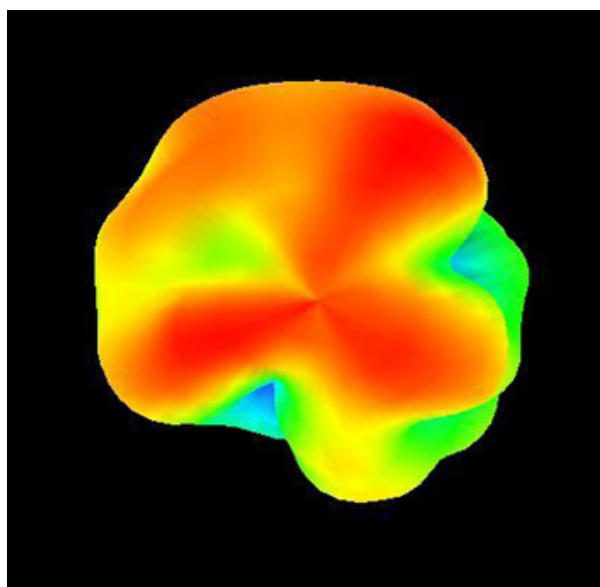
1990 MHz



2170 MHz



2690 MHz



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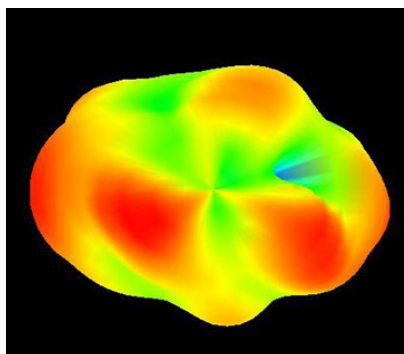


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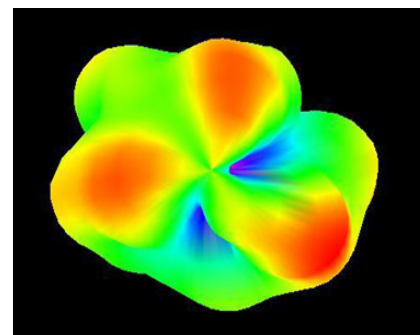
3D Radiation Patterns

WiFi Antenna

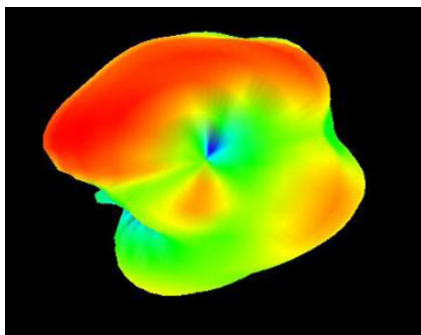
2400MHz



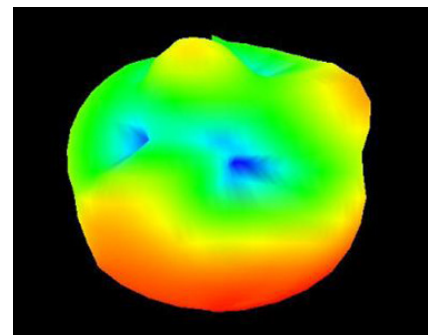
2483.5MHz



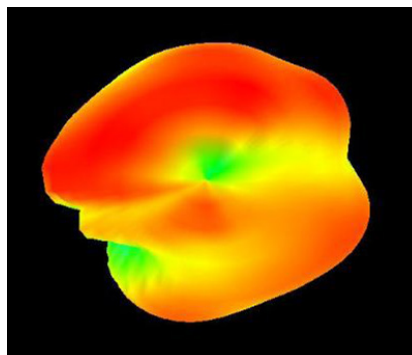
4800MHz



5300MHz



5800MHz



Packaging

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

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