

External LTE + Wi-Fi + GNSS COMBO ANTENNA



AECW0801C03

Request Samples



Check Inventory



Ø 81.3 x 16.3 mm
RoHS/RoHS II Compliant
MSL Level = 1

Features

- 3 cabled combo antenna
 - 1x 4G LTE
 - 1x Wi-Fi 2.4/5 GHz
 - 1x Active GNSS/GPS/GLONASS/BeiDou/QZSS
- Global 4G cellular band coverage including CAT M and NB-IoT
- IP67 rated
- Easy installation using Screw
- Fully customizable RF cable and connector options

Applications

- IoT
- M2M
- Smart City
- Telematics
- Transportation
- Smart Agriculture
- Geolocation and Tracking

Product Image



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Part Number Builder

AECW0801C03 □ - □□□□□

Color / UV Coating	
Code	Description
S (Standard)	Black without UV coating
A	Black with UV Coating
B	White without UV Coating
C	White with UV Coating

Cable length in 'mm'	
Maximum cable length supported : RG-174 (up to 3000 mm) LMR-100 (up to 5000 mm)	
Code	Description
3000 (Standard)	3000 mm
Other Examples :	
0200	200 mm
2000	2000 mm

Cable Type & Connector Type				
Code	Cable Type	Connector Type		
		LTE	GNSS	Wi-Fi
S (Standard)	RG-174	SMA (M)	SMA (M)	-
	LMR-100	-	-	SMA (M)
A	LMR-100	SMA (M)	SMA (M)	SMA (M)
B	LMR-100	SMA (M)	FAKRA C (F)	SMA (M)
C	LMR-100	FAKRA D (F)	SMA (M)	SMA (M)
D	LMR-100	FAKRA D (F)	FAKRA C (F)	SMA (M)
E	RG-174	SMA (M)	FAKRA C (F)	-
	LMR-100	-	-	SMA (M)
F	RG-174	FAKRA D (F)	SMA (M)	-
	LMR-100	-	-	SMA (M)
G	RG-174	FAKRA D (F)	FAKRA C (F)	-
	LMR-100	-	-	SMA (M)

Example Configurations :

Part Number	UV Protection Coating / Color	Cable length	Cable Type / Connector Type
AECW0801C03 S-3000S	No / Black	3000 mm	2xRG-174 with 1xSMA (M) for LTE + 1xSMA (M) for GNSS + 1xLMR-100 with 1xSMA (M) for Wi-Fi (Standard)
AECW0801C03 A-1000A	Yes / Black	1000 mm	3xLMR-100 with 1xSMA (M) for LTE + 1xSMA (M) for GNSS + 1xSMA (M) for Wi-Fi
AECW0801C03 B-5000G	No / White	5000 mm	2xRG-174 with 1xFAKRA D (F) for LTE + 1xFAKRA C (F) for GNSS + 1xLMR-100 with 1xSMA (M) for Wi-Fi

Note :

- For the standard part number (AECW0801C03**S-3000S**), please refer to the packaging at the end of the document
- For additional configuration (AECW0801C03□- □□□□□), MOQs, pricing and packaging changes may be applicable

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Electrical Specifications

Parameter	Specification			Unit
	Min	Typ	Max	
GNSS Antenna				
Frequency	1561		1602	MHz
Gain			2.0	dBiC
VSWR			1.5	
Impedance		50		Ω
Polarization	RHCP			
Axial Ratio			3.0	dB
LNA				
Noise Figure			1.5	dB
Gain	26	28	30	dB
VSWR			2.0	
Supply Voltage	2.2		5.0	V
Current Consumption			15.0	mA
LTE Antenna				
Frequency	698		960	MHz
	1710		2690	
VSWR			3.0	
Gain			2.0	dBi
Impedance		50		Ω
Polarization	Linear			
Wi-Fi Antenna				
Frequency	2400		2483.5	MHz
	4900		5825	
VSWR			2.5	
Gain			2.0	dBi
Impedance		50		Ω
Polarization	Linear			

Mechanical Specifications

Parameter	Specification
Antenna Dimension	Ø 81.3 x 16.3 mm
Material	ABS
Mounting Type	Screw
RF Connector	3x SMA (M)
RF Cable	2x RG-174 (LTE,GNSS) + 1x LMR-100 (Wi-Fi)
Cable Length	3 m



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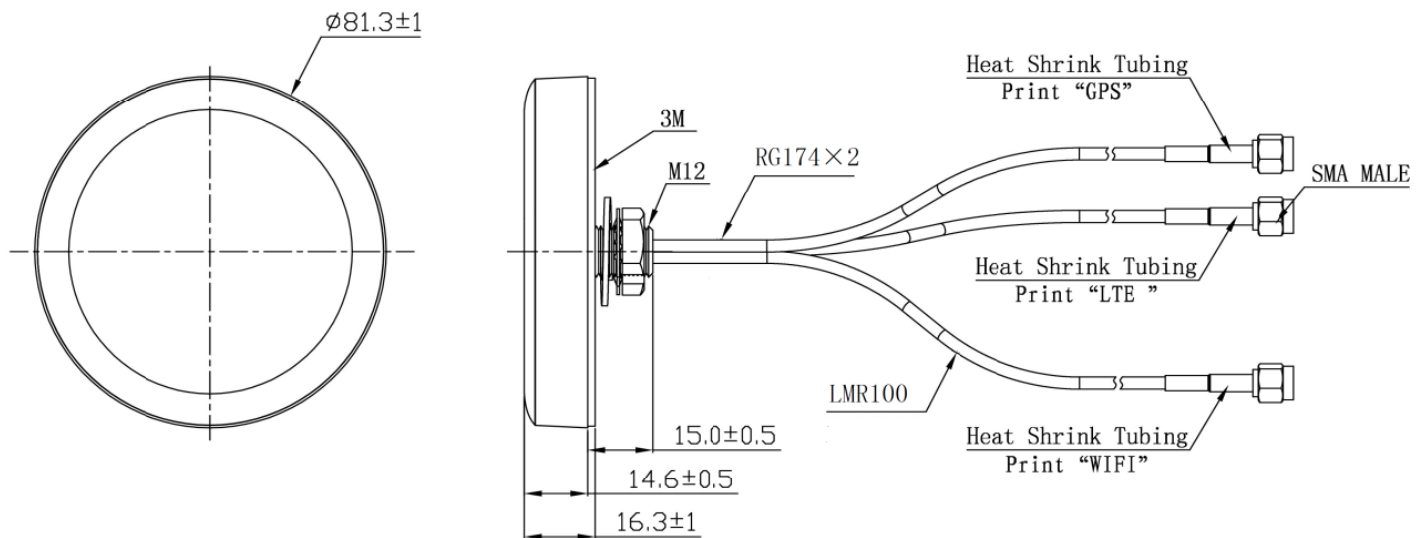


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Environmental Specification

Parameter	Specification
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Relative Humidity	Up to 95%
RoHS Compliance	Yes
PB Free	Yes
MSL	1
ESD Sensitive	Yes
Vibration	10 ~ 55 Hz with 1.5 mm amplitude 2 hrs
Ingress Protection	IP67 (excluding cable outlet)
UL rating	UL-94 HB

Product Dimension



Unit: mm



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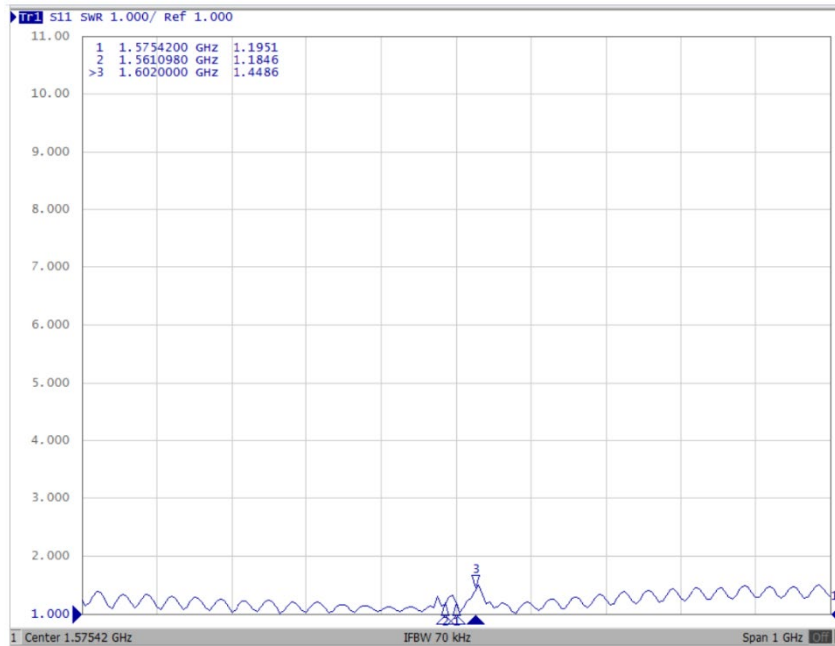
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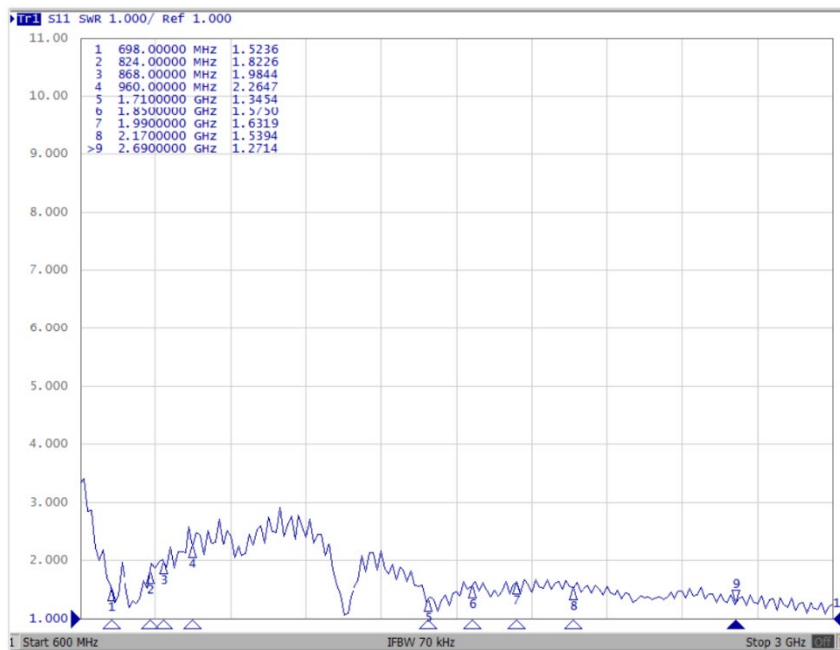
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Test Measurement - VSWR

GNSS Antenna



LTE Antenna



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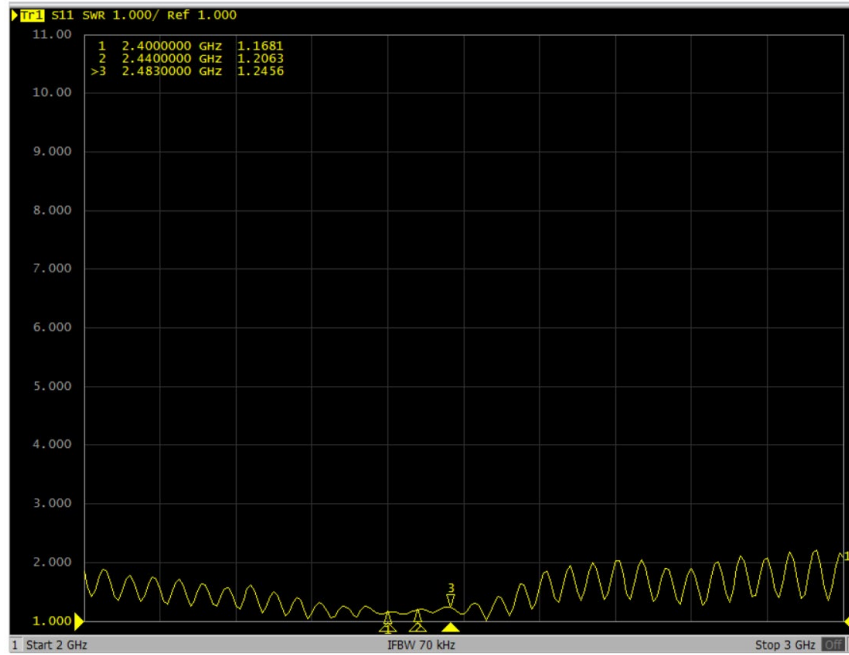


Check Inventory



Ø 81.3 x 16.3 mm
RoHS/RoHS II Compliant
MSL Level = 1

Wi-Fi Antenna



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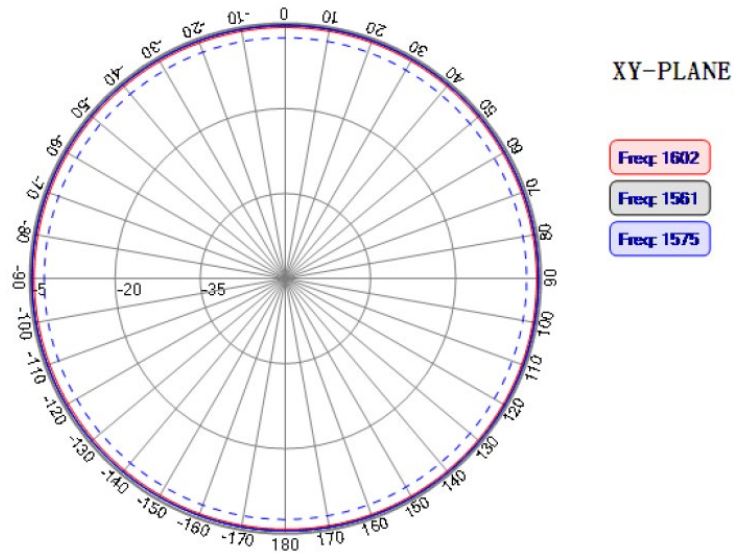


Ø 81.3 x 16.3 mm
RoHS/RoHS II Compliant
MSL Level = 1

Radiation Characteristics

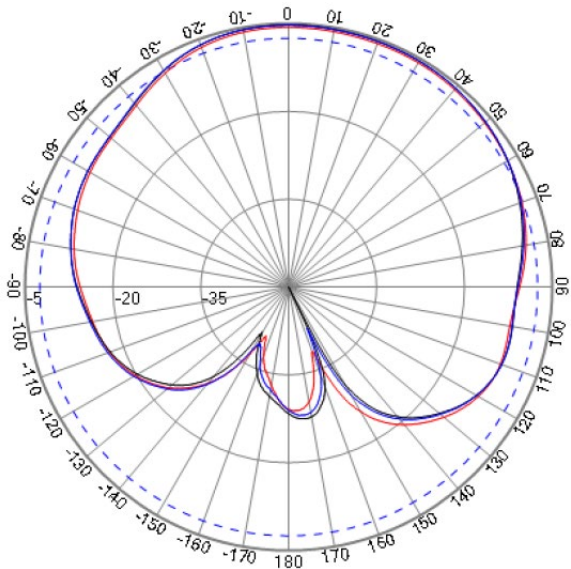
2D Pattern

GNSS



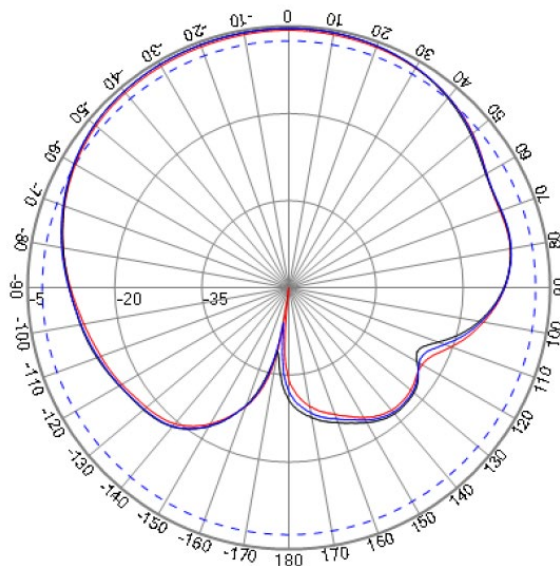
XZ-PLANE

Freq: 1602
Freq: 1561
Freq: 1575



YZ-PLANE

Freq: 1602
Freq: 1561
Freq: 1575



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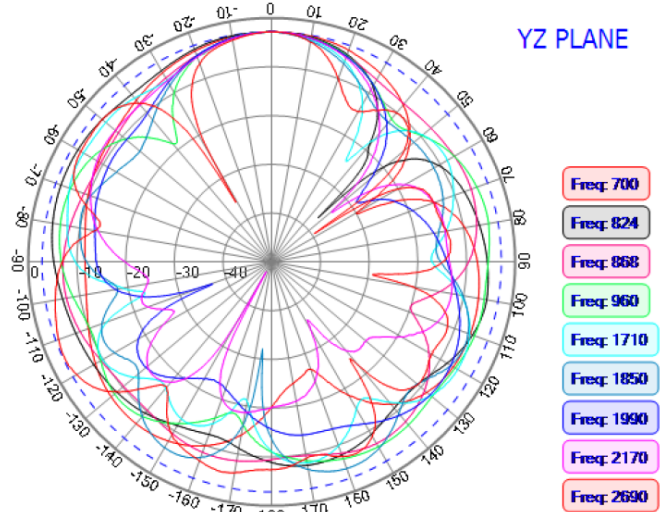
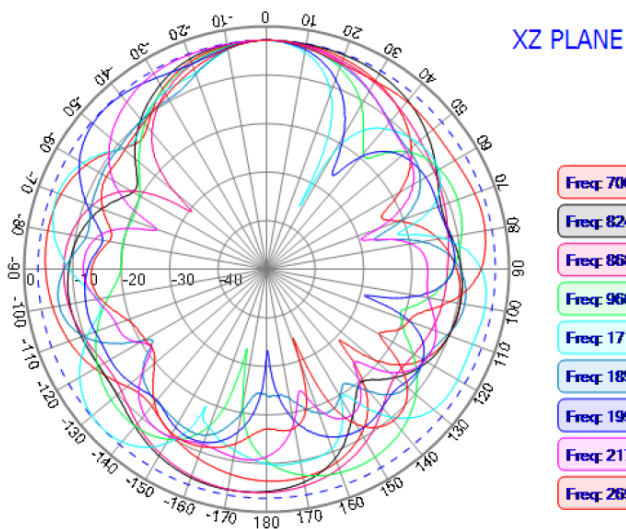
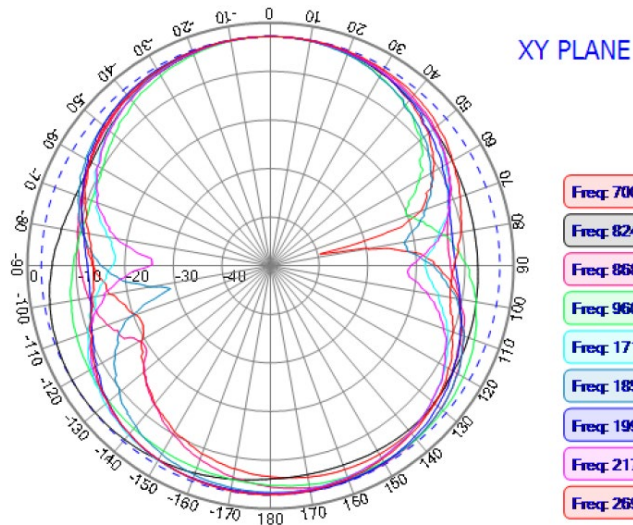


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LTE



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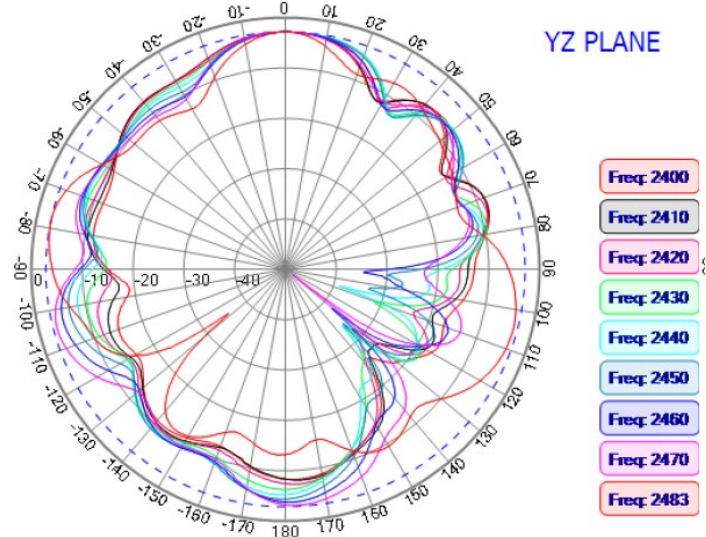
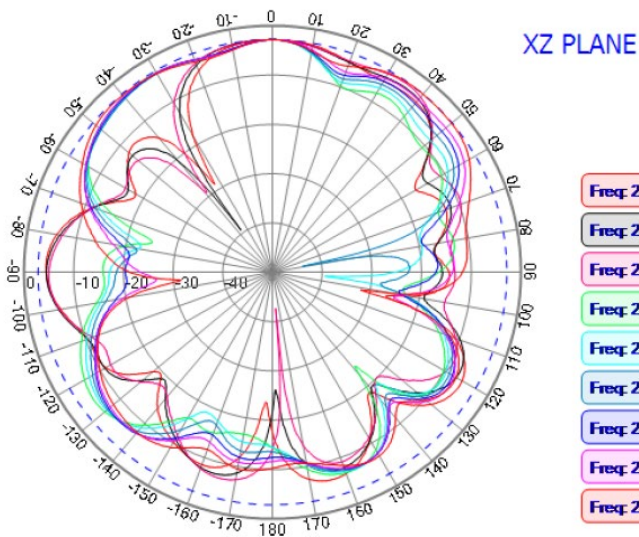
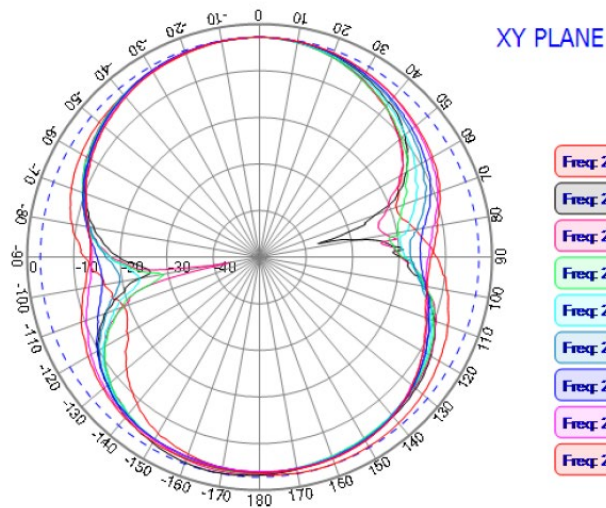
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Wi-Fi

2400~2483.5 MHz



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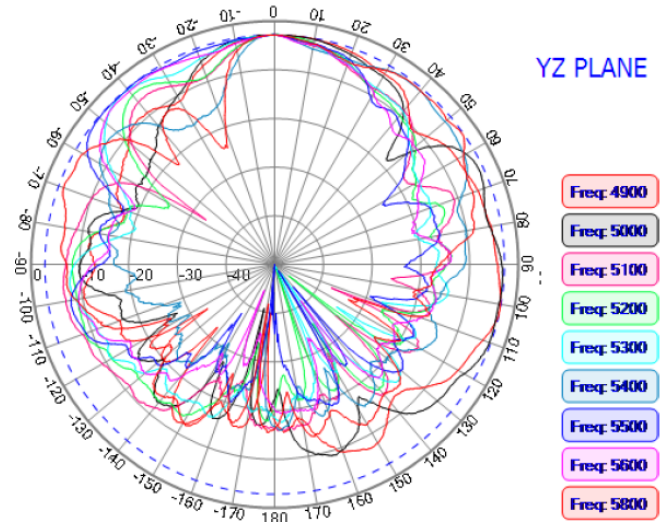
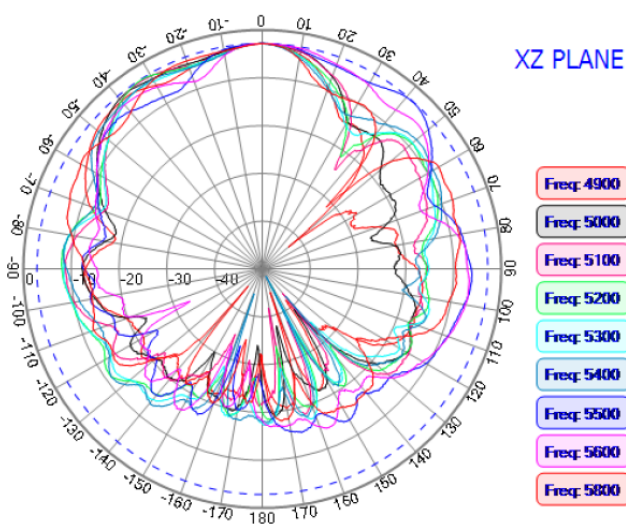
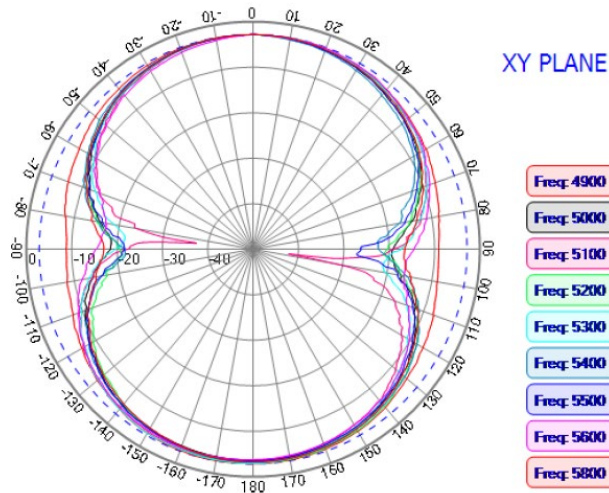


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4900~5800 MHz



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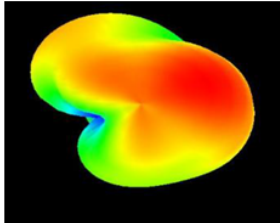
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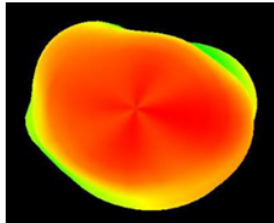
Ø 81.3 x 16.3 mm
RoHS/RoHS II Compliant
MSL Level = 1

3D Pattern

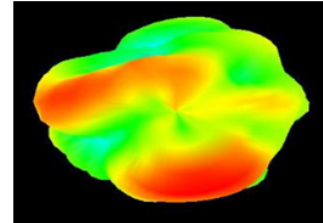
GNSS



1561 MHz

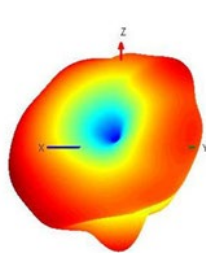


1575 MHz

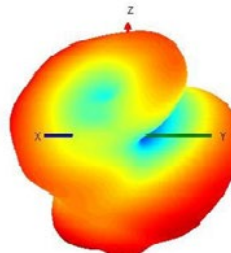


1602 MHz

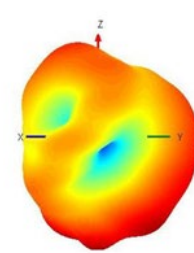
LTE



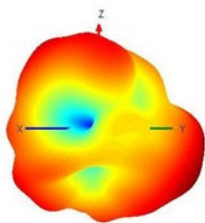
LTE 698 MHz



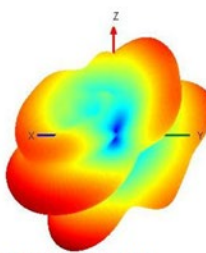
LTE 824 MHz



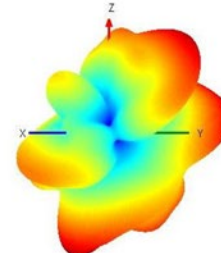
LTE 868 MHz



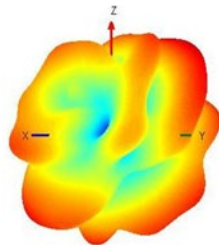
LTE 960 MHz



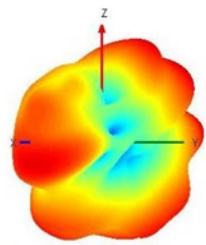
LTE 1710 MHz



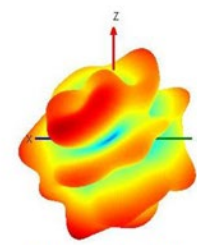
LTE 1850 MHz



LTE 1990 MHz



LTE 2170 MHz



LTE 2690 MHz

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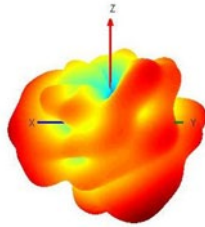


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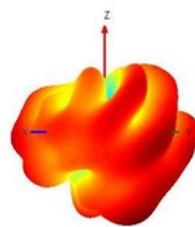


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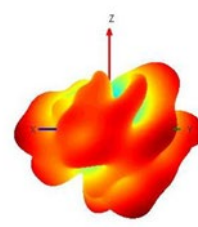
Wi-Fi



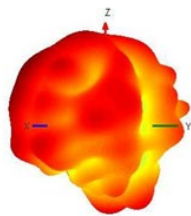
WiFi 2400 MHz



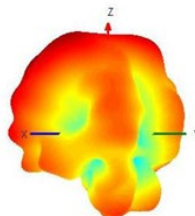
WiFi 2440 MHz



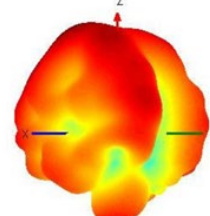
WiFi 2483 MHz



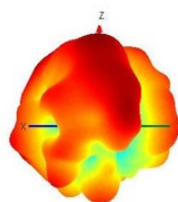
WiFi 4900 MHz



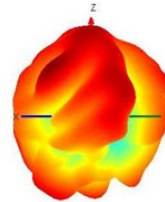
WiFi 5200 MHz



WiFi 5400 MHz



WiFi 5600 MHz



WiFi 5825 MHz

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Gain and Efficiency

Frequency (MHz)	Gain (dBi)	Efficiency
698	1.73	0.69
824	1.28	0.58
868	1.32	0.55
960	1.1	0.54
1710	2.11	0.57
1850	0.32	0.52
1990	0.75	0.57
2170	1.97	0.59
2690	1.94	0.58
2400	2.11	0.52
2440	1.59	0.52
2483	1.93	0.54
4900	-0.15	0.54
5200	-2.23	0.48
5400	-1.81	0.49
5600	0.48	0.47
5825	0.53	0.47

Packaging Information

Number of Antenna/ Carton : 50
Dimension of the Carton : 700 x 320 x 155 mm
Weight of 1pc of antenna : 220 g
Weight of the carton : 12 kg

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