

# GQ3115 天线规格书

## 1. Picture1 天线 2D 图

All of Implementation antenna

**MAIN**-700MHz-2700MHz, **DIV**: 700MHz-2700MHz **GBW**:1575.42MHz-5800MHz

o Number of antennas: (number, as well as whether they are external, internal, removable or fixed)

**3 internal antennas, the position above picture1**

o Brand of the antenna: (brand, unless it has no brand we will put it without brand)

**Manufacturer: 3Good Wireless**

**GQ3115-GSM GQ3115-DIV GQ3115-G/W/B**

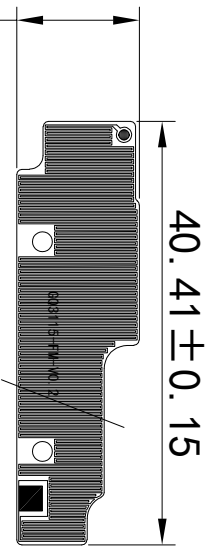
o Model of the antenna: (It is suggested to declare without model if you do not have this unless otherwise indicated)

**PIFA (FPC)**

o Antenna data

1 2 3 4 5 6 7 8

A



B

11.69 ± 0.15



40.41 ± 0.15

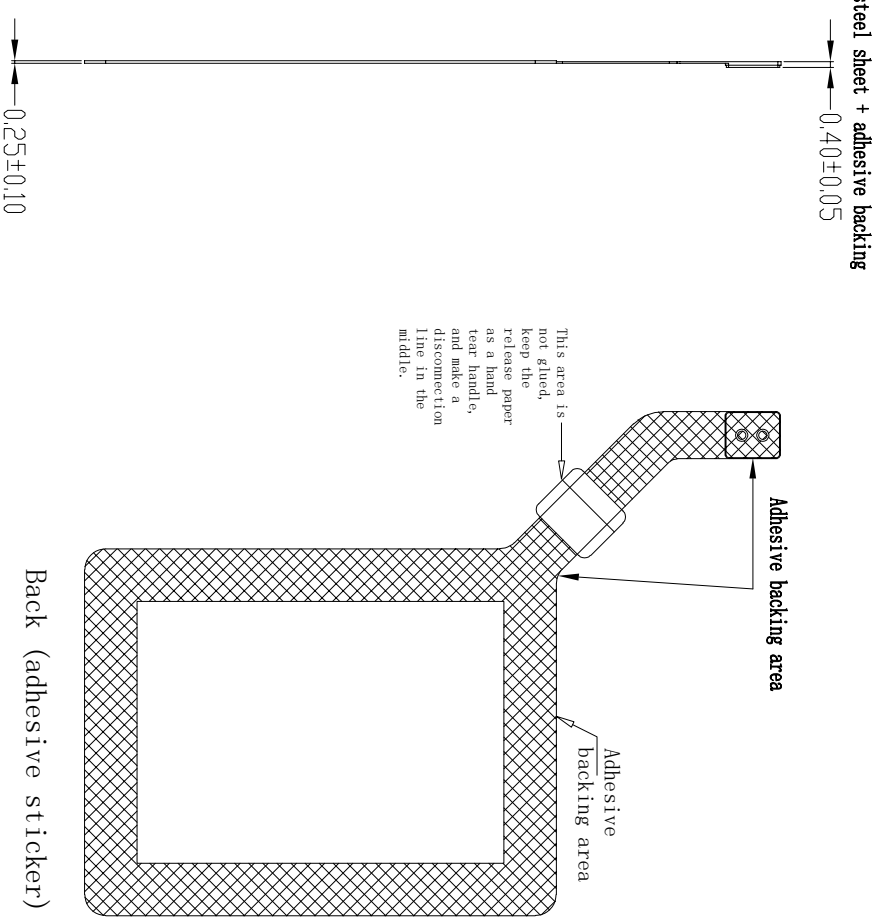
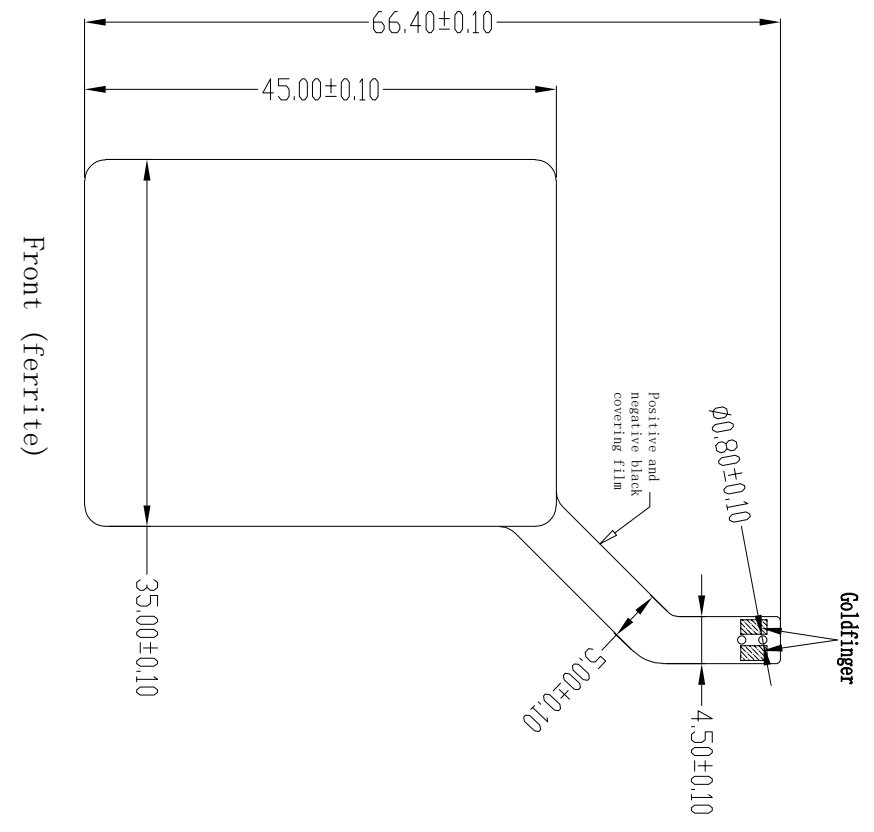
C

- Note: 1. The diagonal is the line area and the yellow grid is the exposed copper area. (plated)
2. Red Is the through hole, and purple is where the glue breaks off.
  3. The surface can not scratch exposed copper, poor electroplating, oxidation, notch, indentation, bubble, split cerstode; and do not allow foreign bodies, dirty spots, deviation and other phenomena.
  4. Surface black ink, substrate 25 μm, copper foil 18 μm .
  5. With 3M-467 backing, LOGO silk screen color black.
  6. Materials must comply with environmental regulations such as Rohs 2.0 and REACH.

D

Date	Modify the content	Version	Revision
1	2	3	4

				Shenzhen 3Good Wireless Communication Co. , Ltd.	
0~10	±0.10	○	0.02	Brand name	FM antenna
10~20	±0.12	◎	0.03	Material number	GQ-GQ3115-04
20~40	±0.15	⊥	0.02	Material	Electrolytic copper PI
40~50	±0.20	∇	0.04	Die quality	/
		∟	0.02	Treatment	/
Location	/	Appearance	/	Unit	mm
5	/	6	/	7	8
		Proportion	1:1	Version	R:A



- Technical requirements:
1. Material: FPC (double panel, electrolytic copper), substrate: PI18/25, surface black covering film T<math>0.125\text{mm}</math>; Adhesive type on the reverse side: 3M3001SE (viscosity requires superthermal shock test);
  2. Gold plating thickness: 1.5 $\mu\text{m}$ , nickel plating thickness: 2-6 $\mu\text{m}$ , no easy fracture and falling off after gold plating; poor conductivity, circuit part fracture and other undesirable phenomena; It is required to pass the 48-hour salt spray test.
  3. Thermal shock test conditions: -40 $^{\circ}\text{C}$ +80 $^{\circ}\text{C}$  24 cycles (one cycle is 30 minutes)
  4. The \* number is the key control size, and the unmarked tolerance is controlled according to the free tolerance in the drawing frame; The size of the unmarked is subject to the inspection of the film sheet (electrical properties need to be tested OK)
  5. The surface should not have pollutants, abrasions, black spots;
  6. The product meets ROHS standard.

Date	1	2	3	4
Modify the content				
Version				
Revision				

FPC + steel sheet + adhesive backing

0.40±0.05

Adhesive backing area

Adhesive backing area

This area is not glued, keep the release paper as a handle, tear handle, and make a disconnection line in the middle.

Back (adhesive sticker)

Shenzhen 3Good Wireless Communication Co., Ltd.

3Good		Type	Date	2023-07-05	
0~10	±0.10	○ 0.02	Brand name	NFC antenna	
10~20	±0.12	◎ 0.03	Material	GQ-GQ3115-05	
20~40	±0.15	⊥ 0.02	Material number	Electrolytic copper PI	
40~50	±0.20	∇ 0.04	Material Quality	/	
		∟ 0.02	Die Treatment	/	
			Appearance Treatment	/	

Location	5	6	7	8
Unit	mm	proportion	1:1	Version
Project				R:A

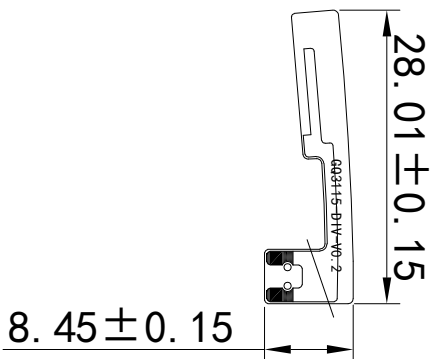
1 2 3 4 5 6 7 8

A

B



C

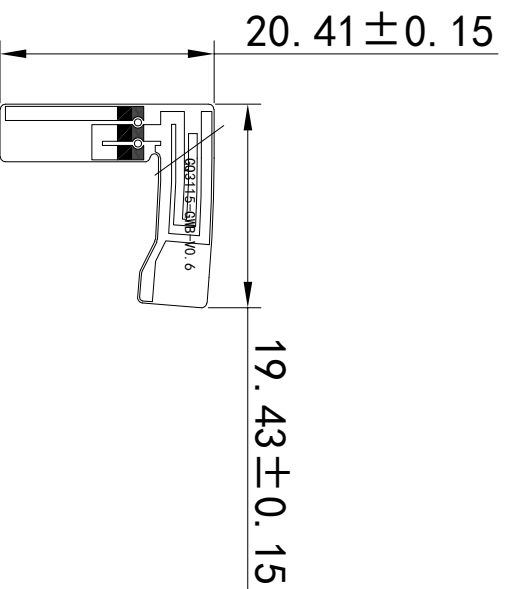
D



- Note: 1. The diagonal is the line area and the yellow grid is the exposed copper area. (plated)
- Red Is the through hole, and purple is where the glue breaks off.
  - The surface can not scratch exposed copper, poor electroplating, oxidation, notch, indentation, bubble, split electrode; and do not allow foreign bodies, dirty spots, deviation and other phenomena.
  - Surface black ink, substrate  $25 \mu\text{m}$ , copper foil  $18 \mu\text{m}$ .
  - With 3M-467 backing, LOGO silk screen color black.
  - Materials must comply with environmental regulations such as Rohs 2.0 and REACH.


Date	Modify the content	Version	Revision
1	2	3	4

 Shenzhen 3Good Wireless Communication Co., Ltd.			0~10 10~20 20~40 40~50	±0.10 ±0.12 ±0.15 ±0.20	/ / / /	0.02 0.03 0.02 0.04 0.02	Type Brand name Material number Material Die Treatment Appearance treatment	GQ3115 Diversity antenna GQ-GQ3115-02 Electrolytic copper PI /	Date Design Radio Frequency Type of project	2023-07-05 Li Fulun Yan Peiquan Cell phones



- Note: 1. The diagonal is the line area and the yellow grid is the exposed copper area. (plated)
- Red Is the through hole, and purple is where the glue breaks off.
  - The surface can not scratch exposed copper, poor electroplating, oxidation, notch, indentation, bubble, split electrode; and do not allow foreign bodies, dirty spots, deviation and other phenomena.
  - Surface black ink, substrate 25  $\mu\text{m}$ , copper foil 18  $\mu\text{m}$  .
  - With 3M-467 backing, LOGO silk screen color black.
  - Materials must comply with environmental regulations such as Rohs 2.0 and REACH.

Date	Modify the content	Version	Revision
1	2	3	4

Shenzhen 3Good Wireless Communication Co., Ltd.		Type		GQ3115		Date		2023-07-05			
	0~10	$\pm 0.10$	$\bigcirc$	0.02	Brand name	GPS/WIFI/BT antenna	Design	Li Fulun			
	10~20	$\pm 0.12$	$\odot$	$\emptyset 0.03$	Material number	GQ-GQ3115-03	Radio Frequency	Yan Peiquan			
	20~40	$\pm 0.15$	$\perp$	0.02	Material Quality	Electrolytic copper PI	Type of project	Cell phones			
	40~50	$\pm 0.20$	$\sphericalangle$	0.04	Die Treatment	/					
Location	/	$\sphericalangle$	0.02	Appearance treatment	/	Unit	mm	proportion	1:1	Version	R:A

2G	CH	TRP	CH	TIS	2G	CH	TRP	CH	TIS
GSM850	128	25.14			DCS1800	512	24.45		
	190	26.19				698	25.08		
	251	26.89	128	-100.44		885	25.55	885	-103.42
EGSM900	1	25.19			PCS1900	512	25.5		
	62	25.04				661	24.63		
	124	25.31	124	-100.28		810	24.56	810	-102.12
3G	CH	TRP	CH	TIS	3G	CH	TRP	CH	TIS
WCDMA1	10562	17.66			WCDMA5	4357	15.93		
	10700	17.64				4408	16.61		
	10838	17.37	10838	-103.15		4458	16.99	4458	-103.78
WCDMA2	9662	17.18			WCDMA8	2937	16.23		
	9800	17.42				3013	15.19		
	9938	17.25	9938	-104.75		3088	15.73	3088	-102.67
WCDMA4	1312	16.58							
	1413	16.86							
	1513	17.34	1738	-102.55					
4G	CH	TRP	CH	TIS	4G	CH	TRP	CH	TIS
FDD-LTE 1	18050	17.39			FDD-LTE20	24200	16.08		
	18300	17.29				24300	16.45		
	18550	17.25	550	-90.75		24400	17.18	6400	-90.2
FDD-LTE 2	18650	17.46			FDD-LTE 28A	27260	16.7		
	18900	17.5				27360	16.66		
	19150	17.71	1150	-92.96		27460	16.5		
FDD-LTE 3	19250	17.09			FDD-LTE 28 B	27410	15.72		
	19575	17.24				27510	15.44		
	19900	17.53	1900	-94.56		27610		9610	
FDD-LTE 4	20000	16.72			FDD-LTE 66	132022	16.06		
	20175	17.2				132322	16.79		
	20350	17.68	2350	-90.27		132622	17.51	67086	-90.77
FDD-LTE 5	20450	15.85			TDD-LTE 34	36250	17.12		
	20525	16.58				36275	17.04		
	20600	16.63	2600	-88.45		36300	16.93	36300	-90.77
FDD-LTE 7	20850	16			TDD-LTE 38	37850	16.47		
	21100	16.43				38000	16.29		
	21350	16.93	3350	-88.33		38150	16.03	38150	-87.57
FDD-LTE 8	21500	16.71			TDD-LTE39	38350	17.79		
	21625	15.78				38450	17.69		
	21750	15.85	3350	-90.69		38550	17.99	38550	-91.42
FDD-LTE12	23035	15.67			TDD-LTE 40	38750	14.79		
	23095	15.28				39150	14.58		
	23155	15.98	5155	-92.19		39550	14.94	39550	-83.76
FDD-LTE17	23780	16.46			TDD-LTE 41	40340	17.24		
	23790	16.4				40620	17.17		
	23800	16.38	5800	-86.96		41140	16.65	41490	-87.84
FDD-LTE19	6100	16.07	6075	-90.94					
WiFi b (亮屏10M)	1		1		WiFi a (亮屏54M)	36		36	
	7		7			149		149	
	13		13			157		157	

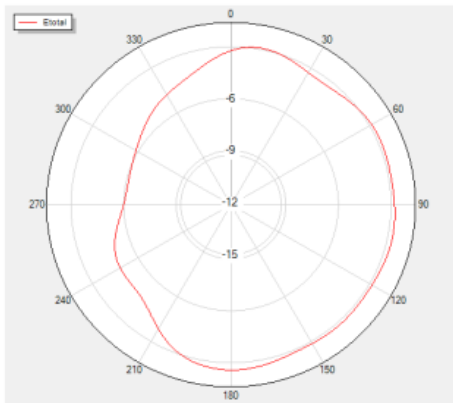
o Antenna gain: (dBi)

2G	CH	Gain(dBi)	2G	CH	Gain(dBi)
GSM850	128		DCS1800	512	
	190	-1.5		698	-1
	251			885	
EGSM900	1		PCS1900	512	
	62	-1.5		661	-1
	124			810	
3G	CH	Gain(dBi)	3G	CH	Gain(dBi)
WCDMA1			WCDMA2		

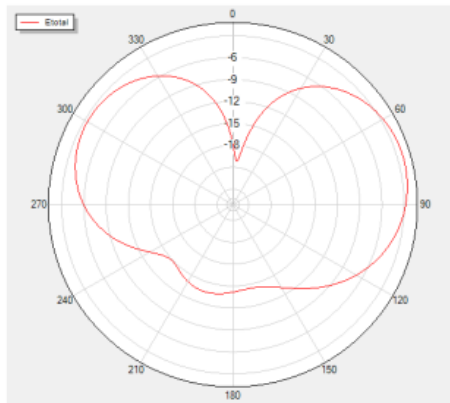
	9750	-1		9400	-1.5
<b>WCDMA4</b>	1312		<b>WCDMA5</b>	4357	
	1413	-1		4408	-1.5
	1513			4458	
<b>WCDMA8</b>	2712		<b>FDD-B1910M)</b>		
	2788	-1.5			<b>-1.5</b>
	2863				
<b>FDD-B1(10M)</b>	19250		<b>FDD-B20(10M)</b>	24200	
	19575	-1		24300	-1.5
	19900			24400	
<b>FDD-B2(10M)</b>	18650		<b>FDD-B28(10M)</b>	27260	
	18900	-1		27410	-2.5
	19150			27435	
<b>FDD-B3(10M)</b>	19250		<b>FDD-B28(10M)</b>	27510	
	19575	-1		27610	-2.5
	19900				
<b>FDD-B4(10M)</b>	20000		<b>TDD-B34(20M)</b>	36250	
	20175	-1		36275	-1
	20350			36300	
<b>FDD-B5(10M)</b>	20450		<b>TDD-38(20M)</b>	37850	
	20525	-1.5		38000	0.5
	20600			38150	
<b>FDD-B7(10M)</b>	20850		<b>TDD-39(20M)</b>	38350	
	21100	0.5		38450	-1
	21350			38550	
<b>FDD-B8(10M)</b>	21500		<b>TDD-40(20M)</b>	38750	
	21625	-1.5		39150	<b>0.5</b>
	21750			39550	
<b>FDD-B12(10M)</b>	23035		<b>TDD-41(20M)</b>	40340	
	23095	<b>-2.5</b>		40620	<b>0.5</b>
	23155			41140	
<b>FDD-B17(10M)</b>	23780		<b>FDD-66(5M)</b>	132022	
	23790	<b>-2.5</b>		132322	<b>-1</b>
	23800			132622	
<b>FDD-B19(10M)</b>	24050		<b>wifi B (11M)</b>	1	
	24075	<b>-1.5</b>		7	<b>-0.5</b>
	24100			13	
<b>wifi a (54M)</b>	36		<b>BT</b>		
	149	<b>1</b>		<b>7</b>	<b>-0.5</b>
	165				

3D\_Graphs  
**GSM850**

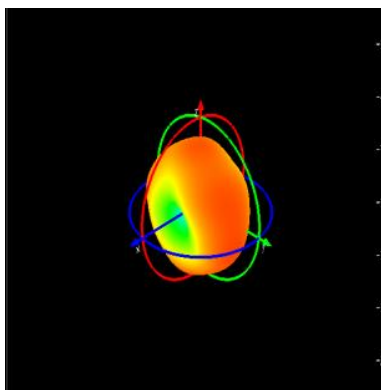
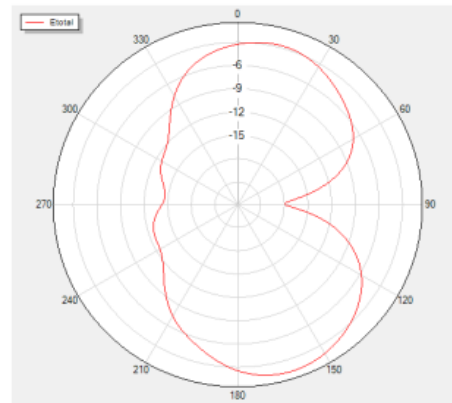
**Phi=90 Freq=850MHz**



**Theta=90 Freq=850MHz**

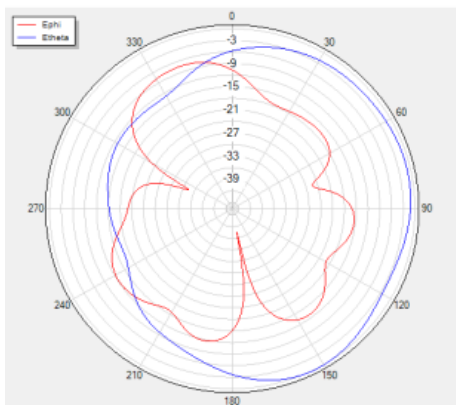


**Phi=0 Freq=850MHz**

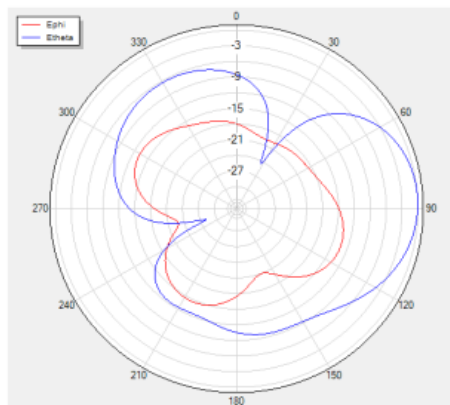


**EGSM900**

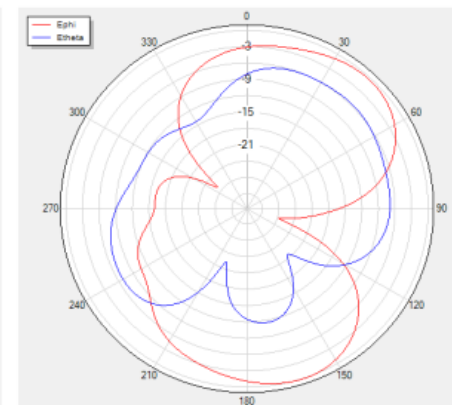
**Phi=90 freq=910MHz**



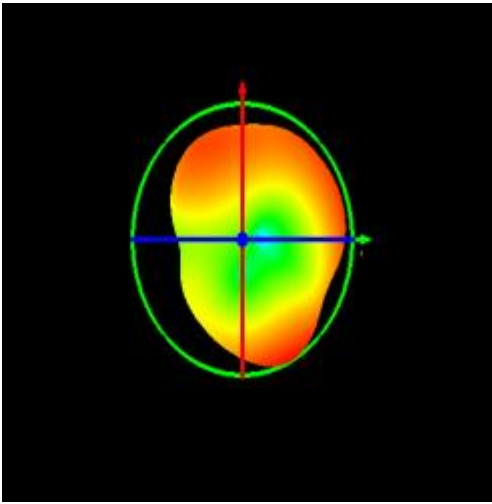
**Theta=90 freq=910MHz**



**Phi=0 freq=910MHz**

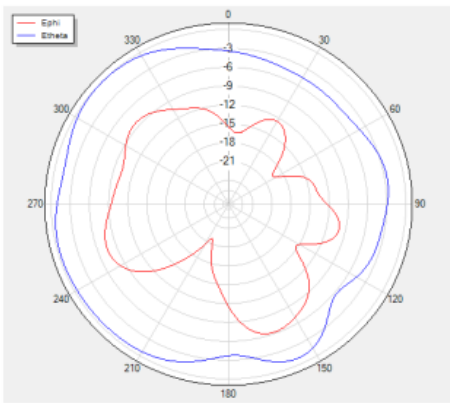




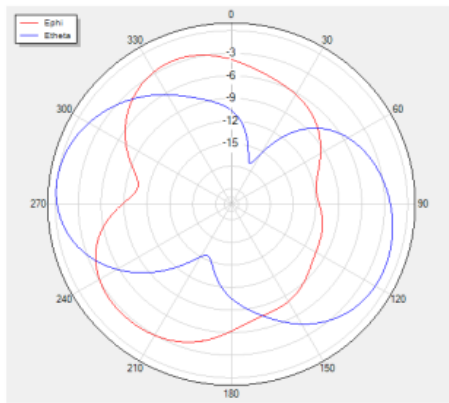


## DCS1800

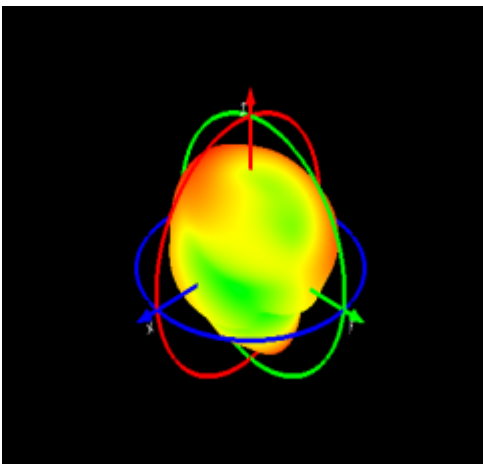
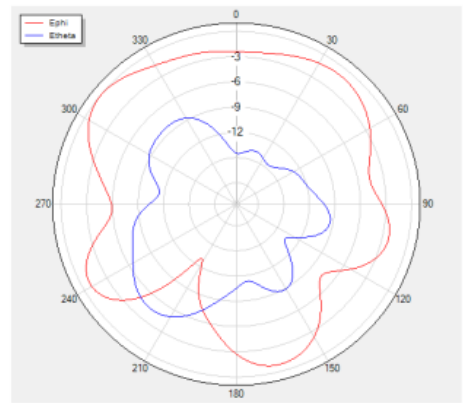
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Theta=90 freq=1800MHz

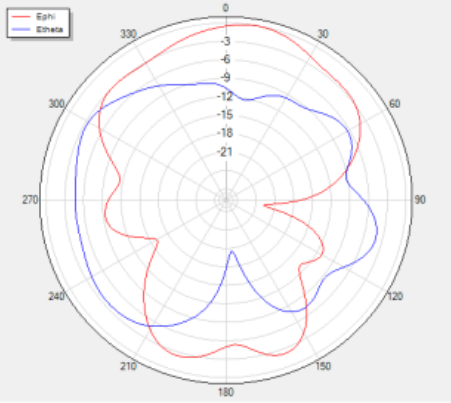


Phi=0 freq=1800MHz

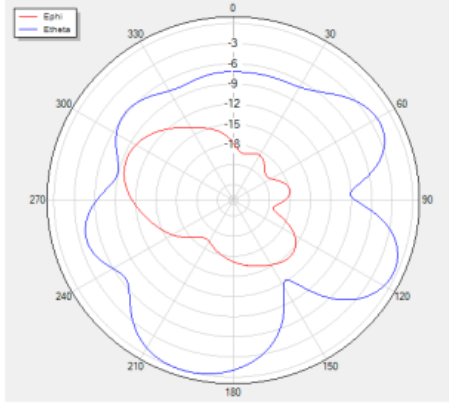


## PCS1900

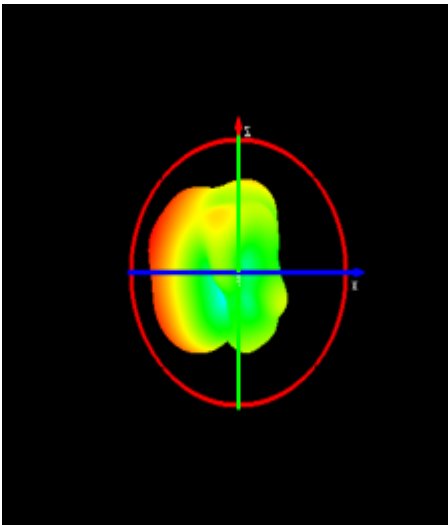
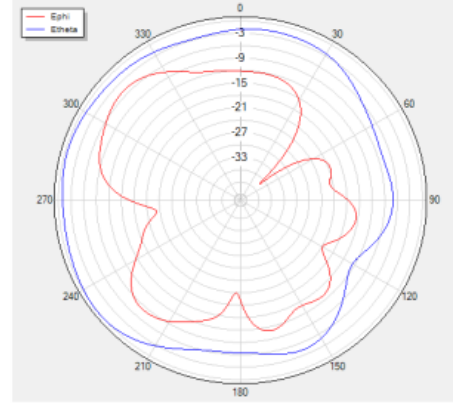
**Phi=90 freq=1860MHz**



**Theta=90 freq=1860MHz**

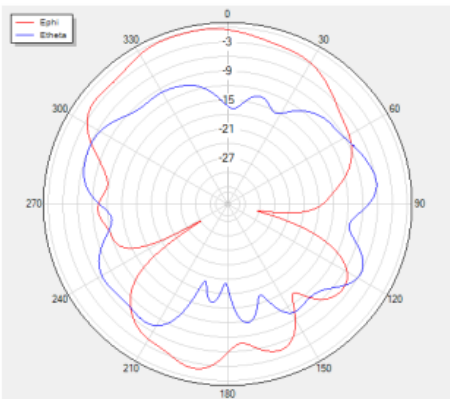


**Phi=0 freq=1860MHz**

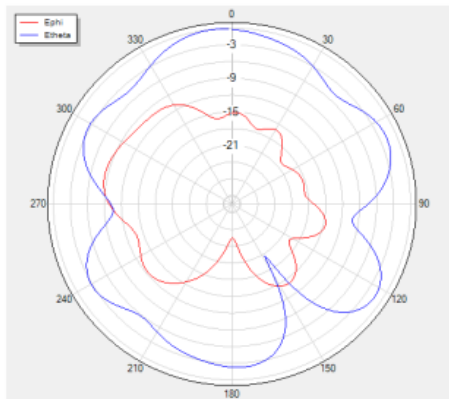


## WCDMA1

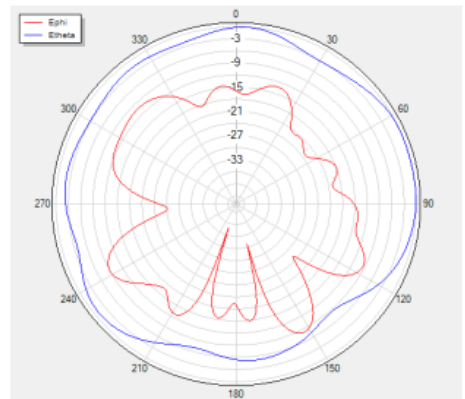
**Phi=90 freq=2100MHz**

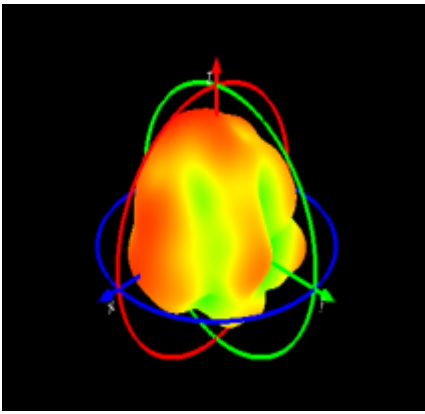


**Theta=90 freq=2100MHz**

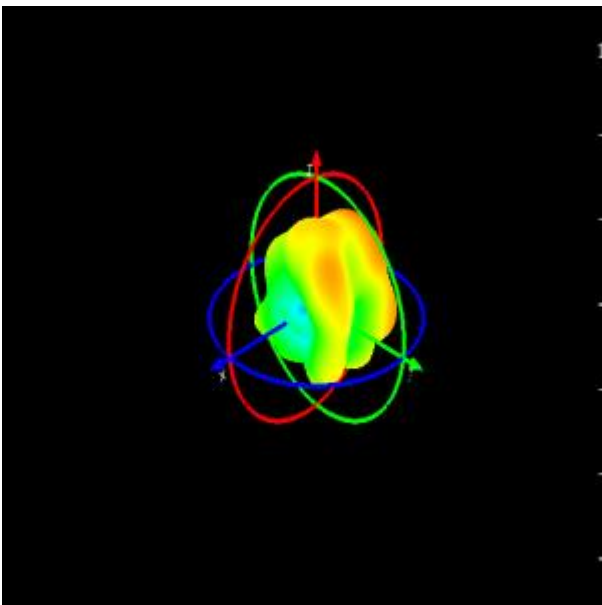
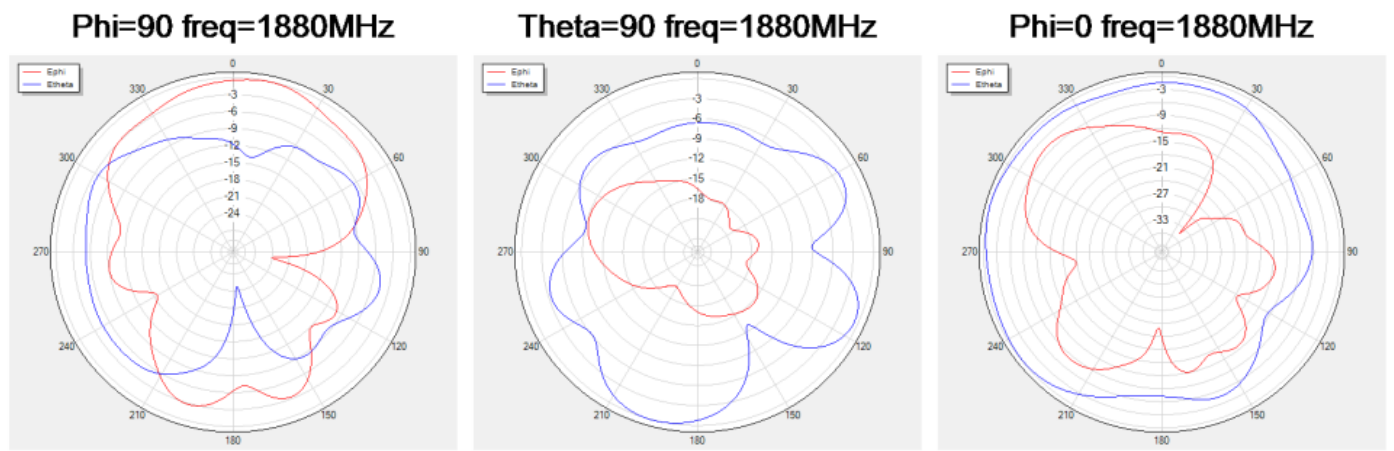


**Phi=0 freq=2100MHz**



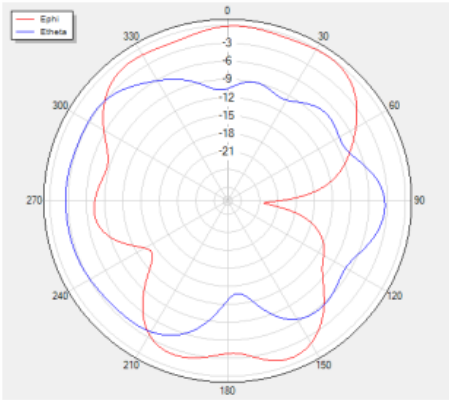


**WCDMA2**

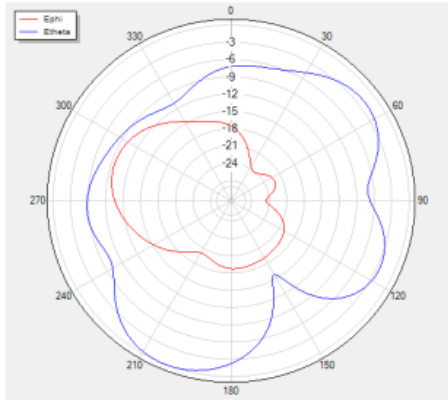


**WCDMA4**

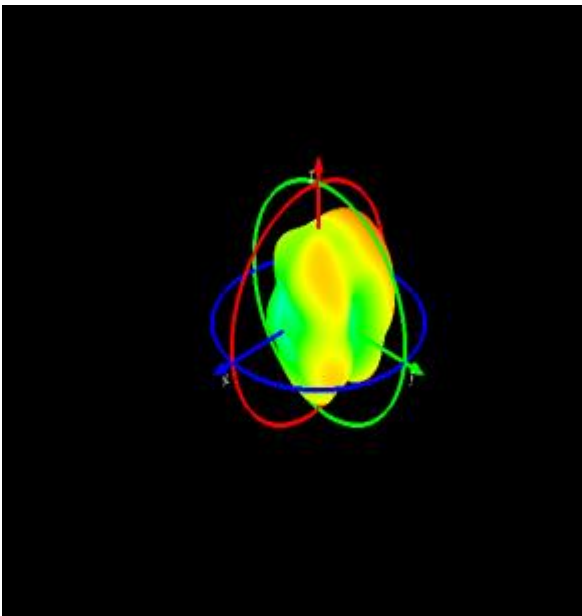
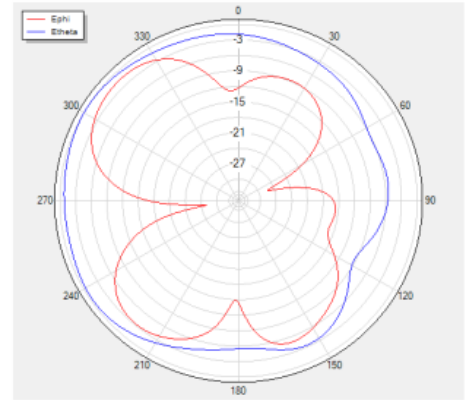
Phi=90 freq=1740MHz



Theta=90 freq=1740MHz

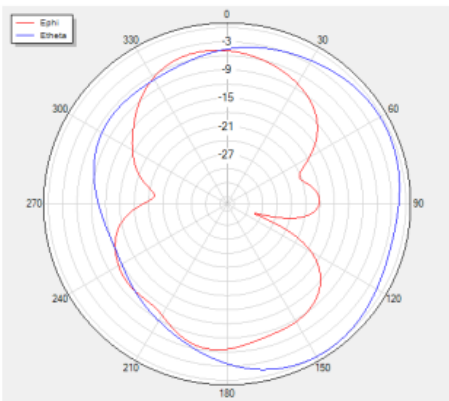


Phi=0 freq=1740MHz

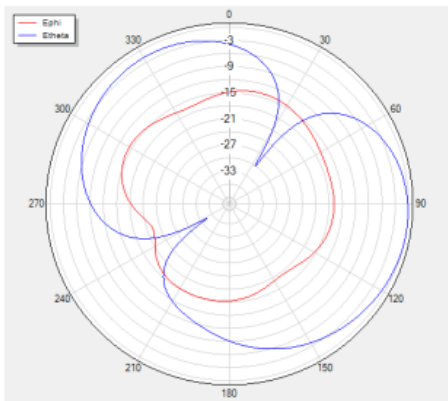


### WCDMA5

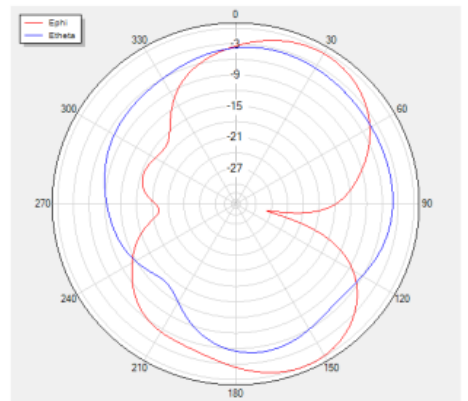
Phi=90 freq=840MHz

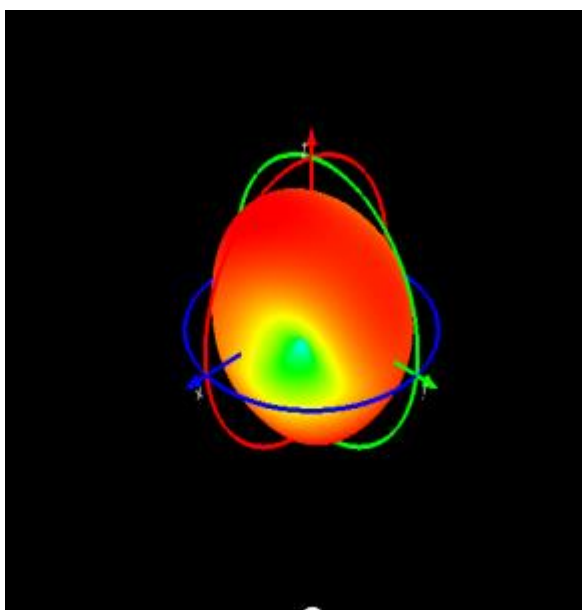


Theta=90 freq=840MHz



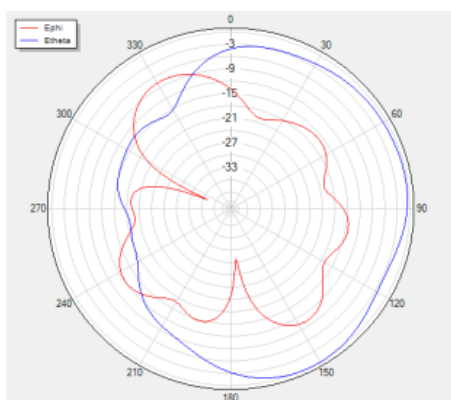
Phi=0 freq=840MHz



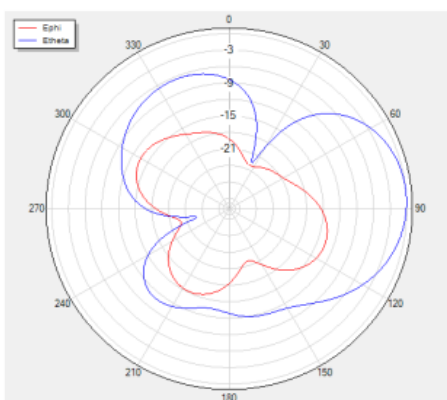


## WCDMA8

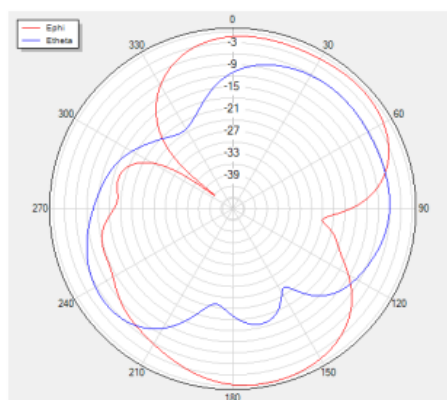
Phi=90 freq=930MHz

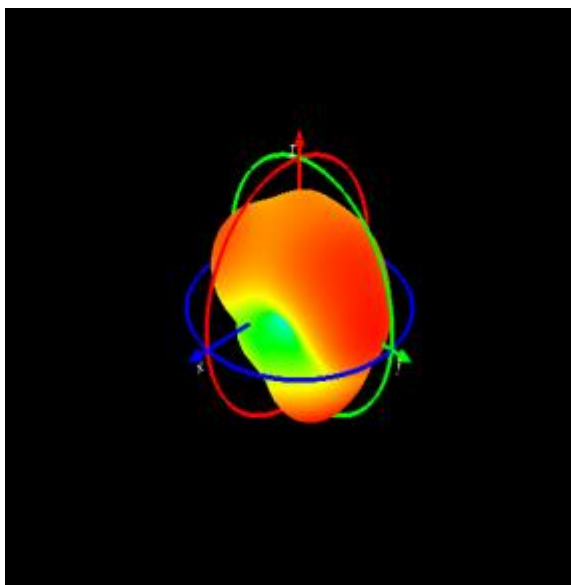


Theta=90 freq=930MHz



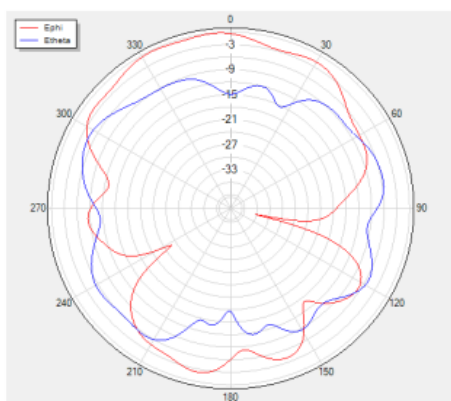
Phi=0 freq=930MHz



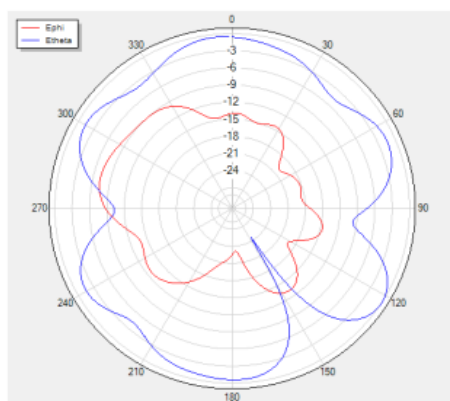


LTE B1

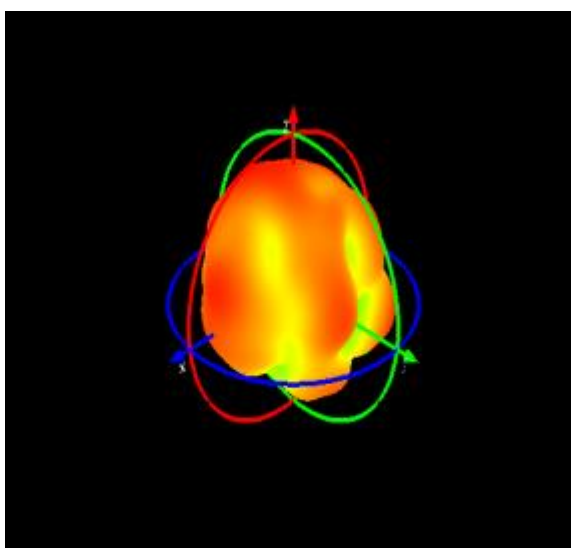
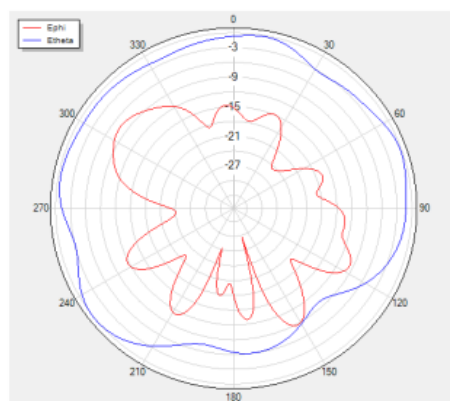
**Phi=90 freq=2060MHz**



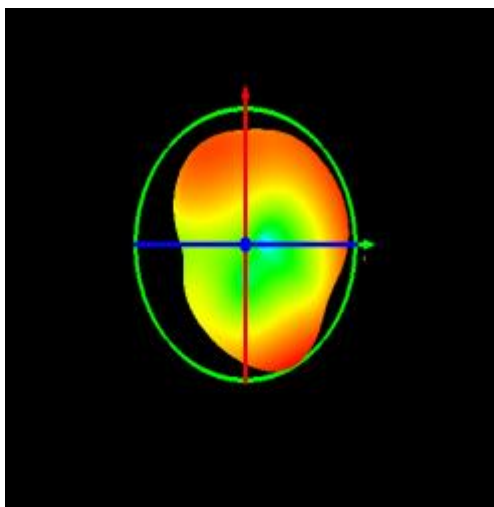
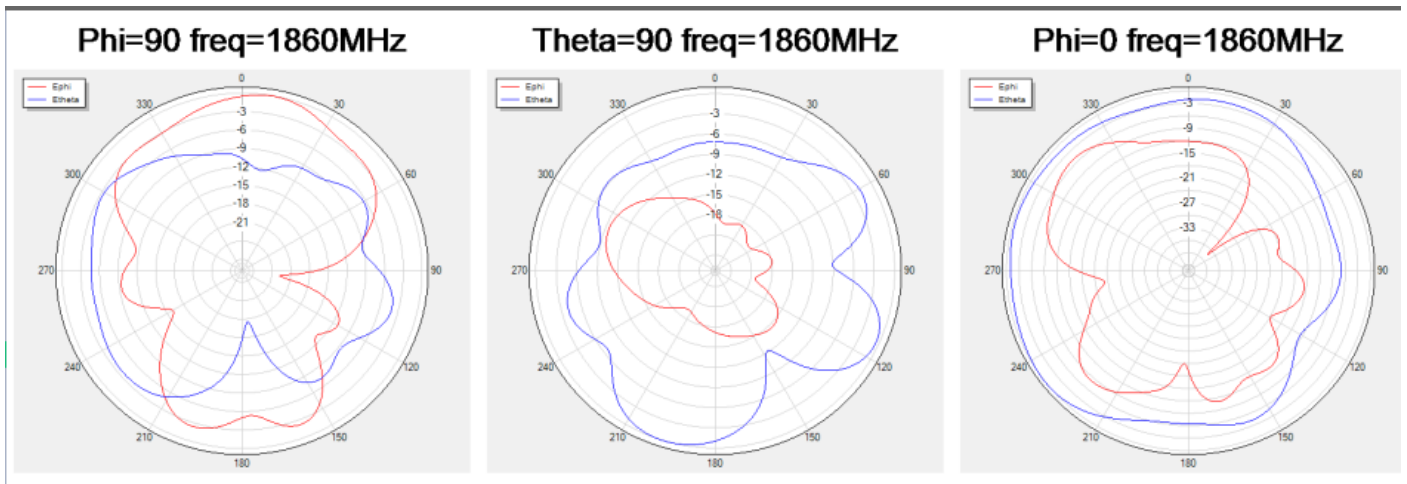
**Theta=90 freq=2060MHz**



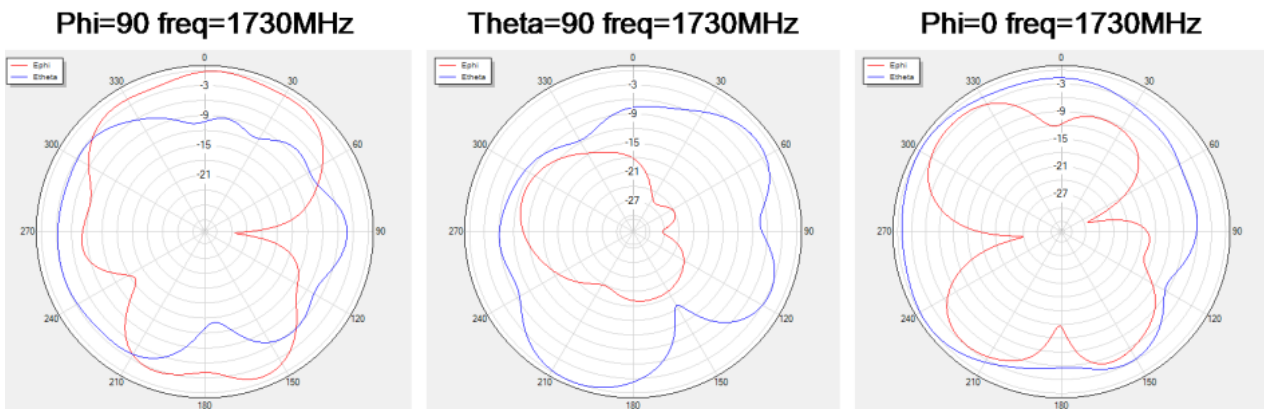
**Phi=0 freq=2060MHz**



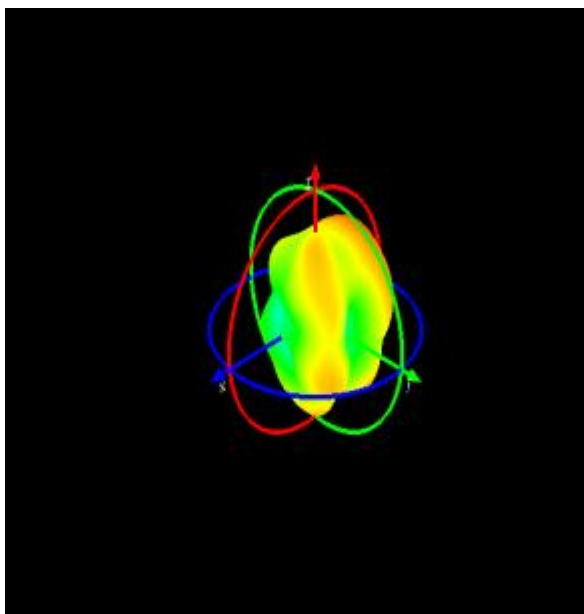
LTE B2



LTE B3

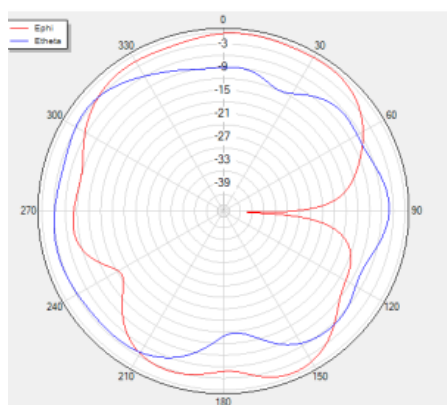




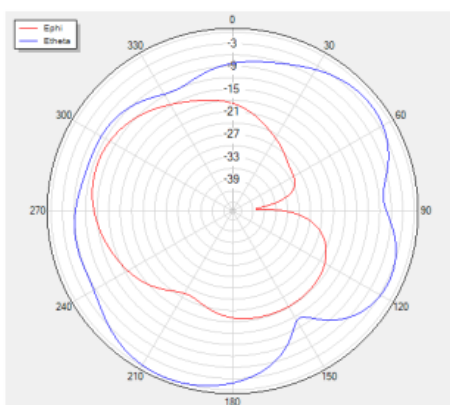


LTE B4

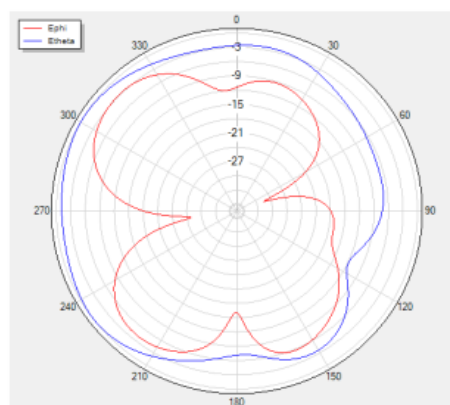
**Phi=90 freq=1710MHz**



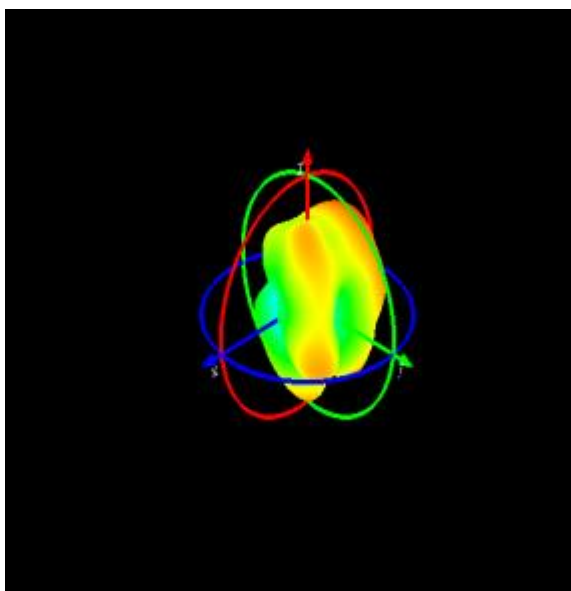
**Theta=90 freq=1710MHz**



**Phi=0 freq=1710MHz**

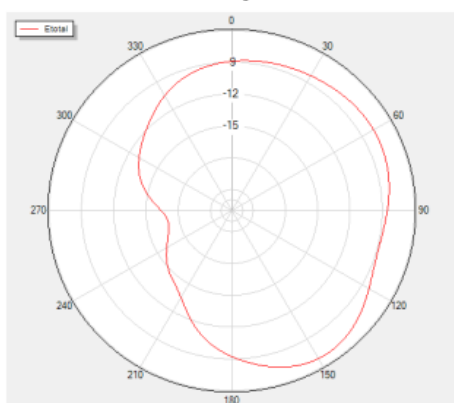




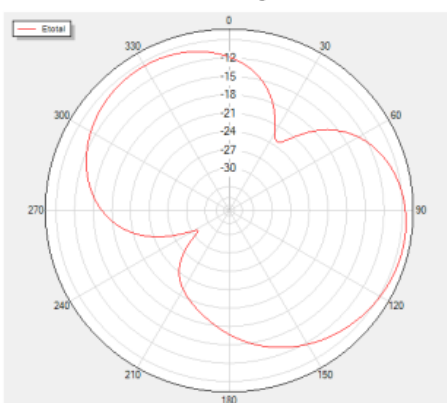


LTE B5

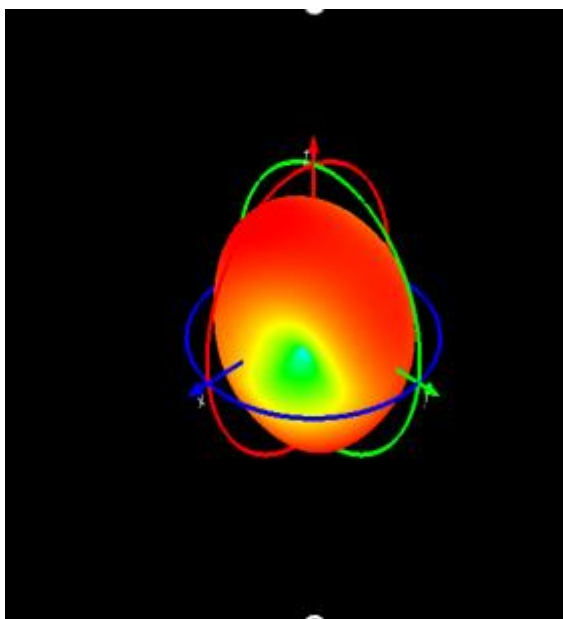
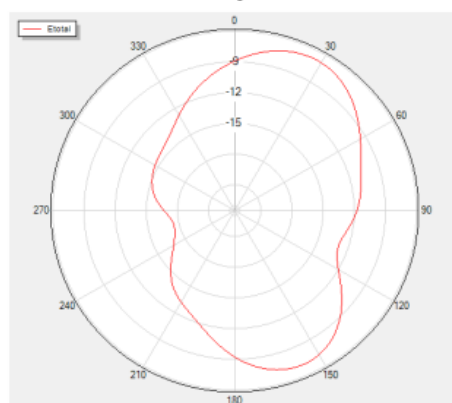
**Phi=90 Freq=830MHz**



**Theta=90 Freq=830MHz**

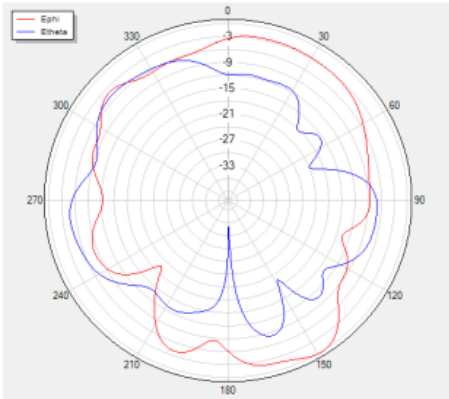


**Phi=0 Freq=830MHz**

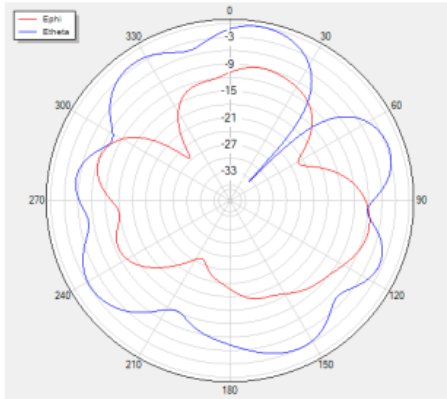


LTE B7

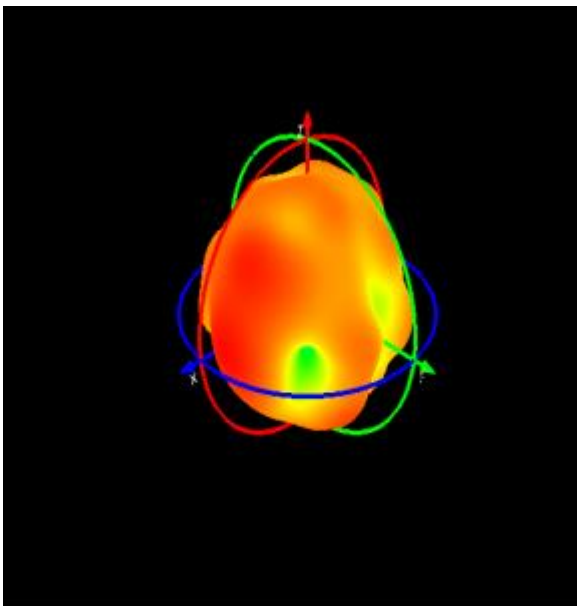
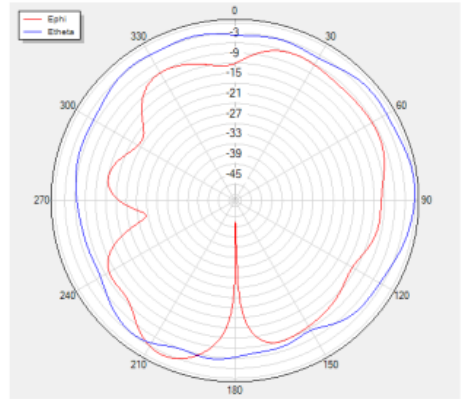
Phi=90 freq=2560MHz



Theta=90 freq=2560MHz

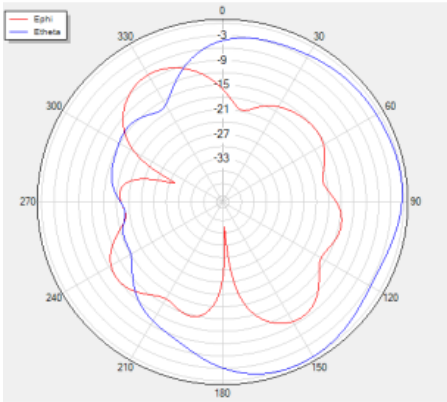


Phi=0 freq=2560MHz

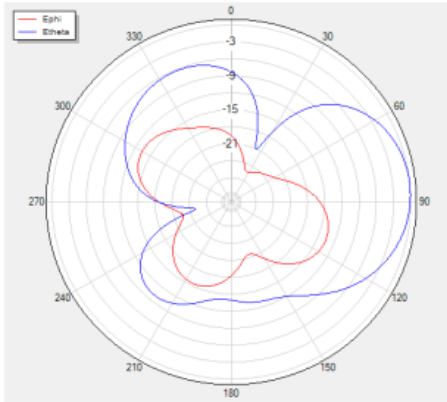


LTE B8

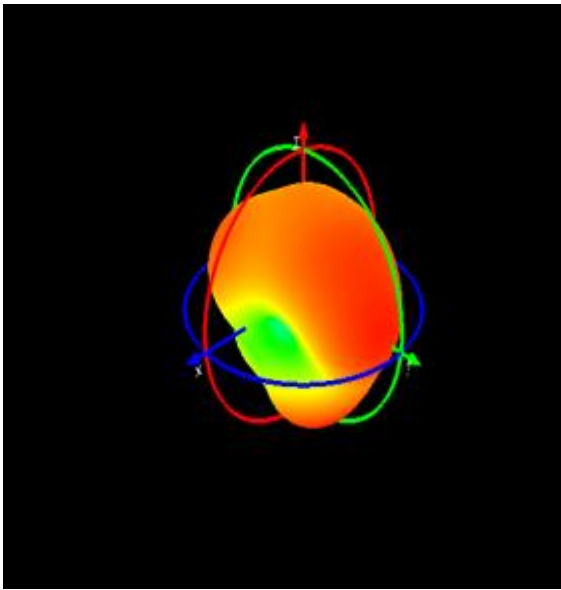
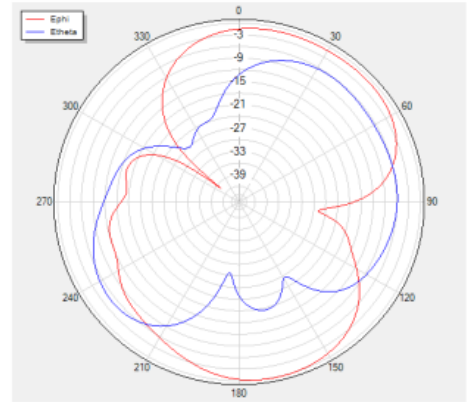
**Phi=90 freq=940MHz**



**Theta=90 freq=940MHz**

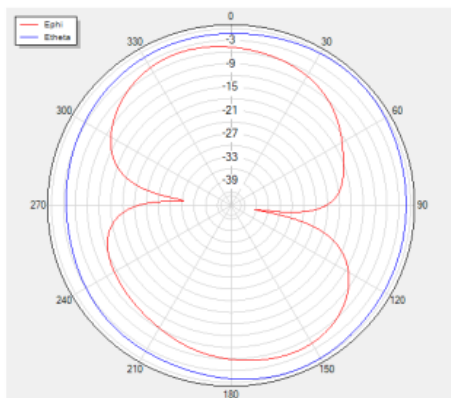


**Phi=0 freq=940MHz**

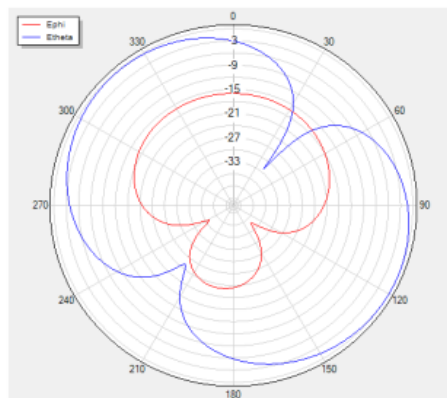


LTE B12

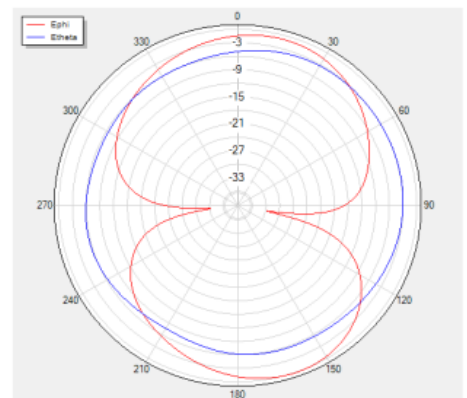
**Phi=90 freq=720MHz**

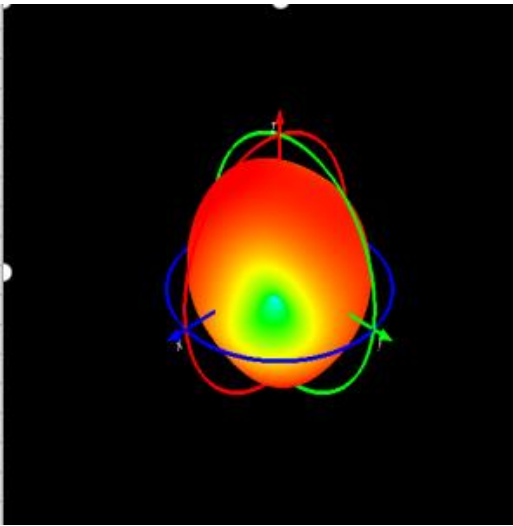


**Theta=90 freq=720MHz**



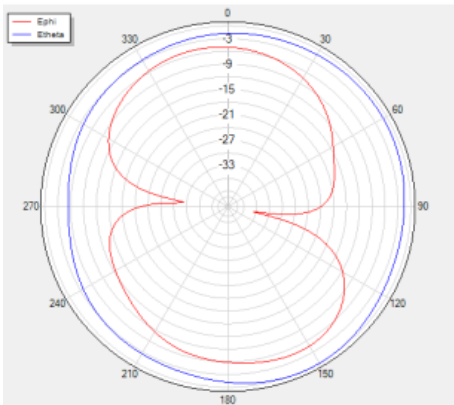
**Phi=0 freq=720MHz**



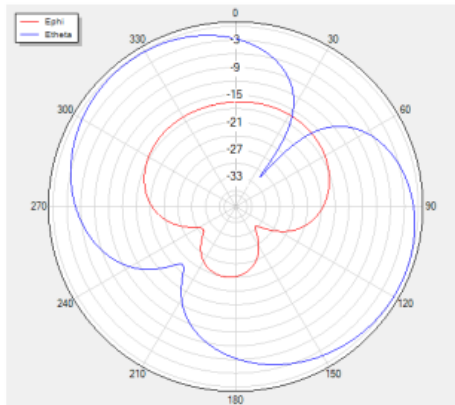


LTE B17

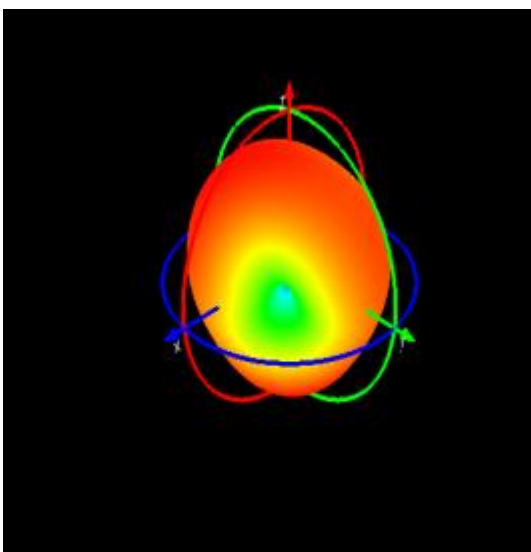
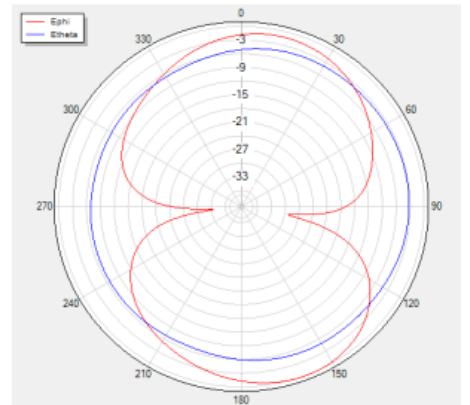
Phi=90 freq=740MHz



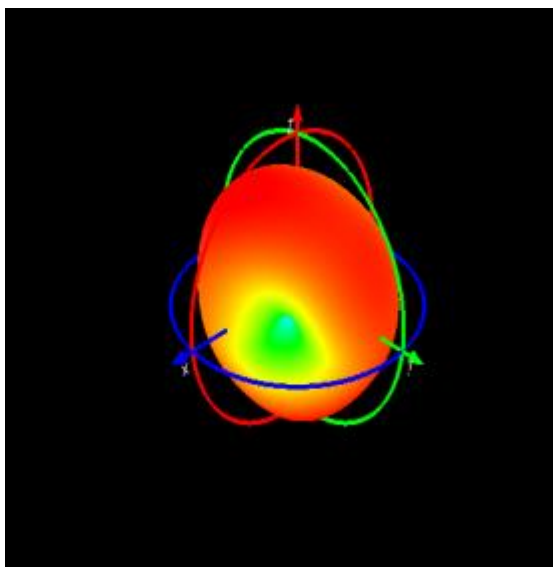
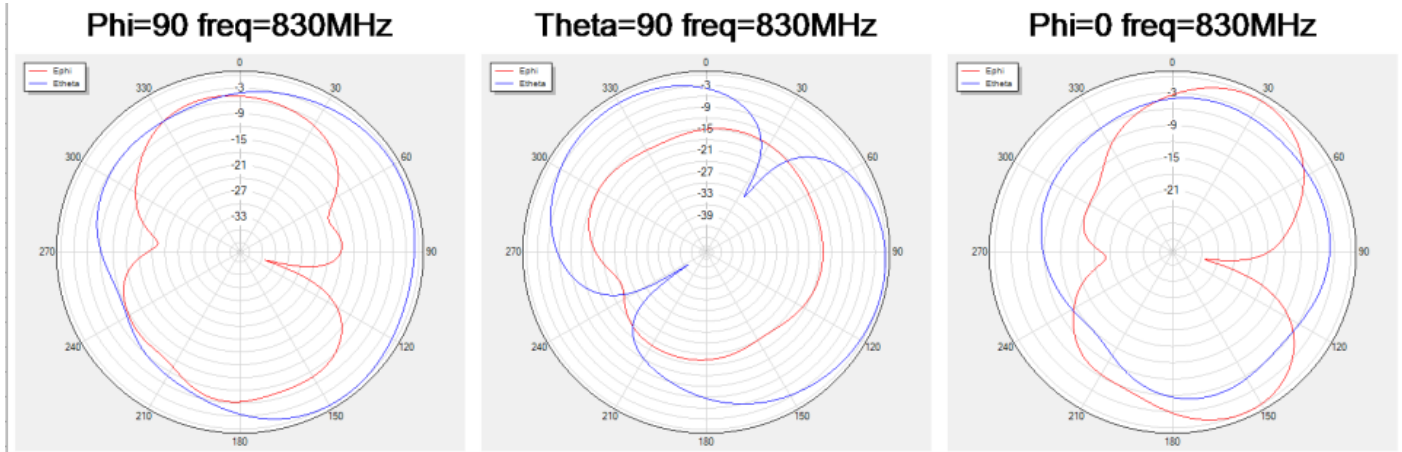
Theta=90 freq=740MHz



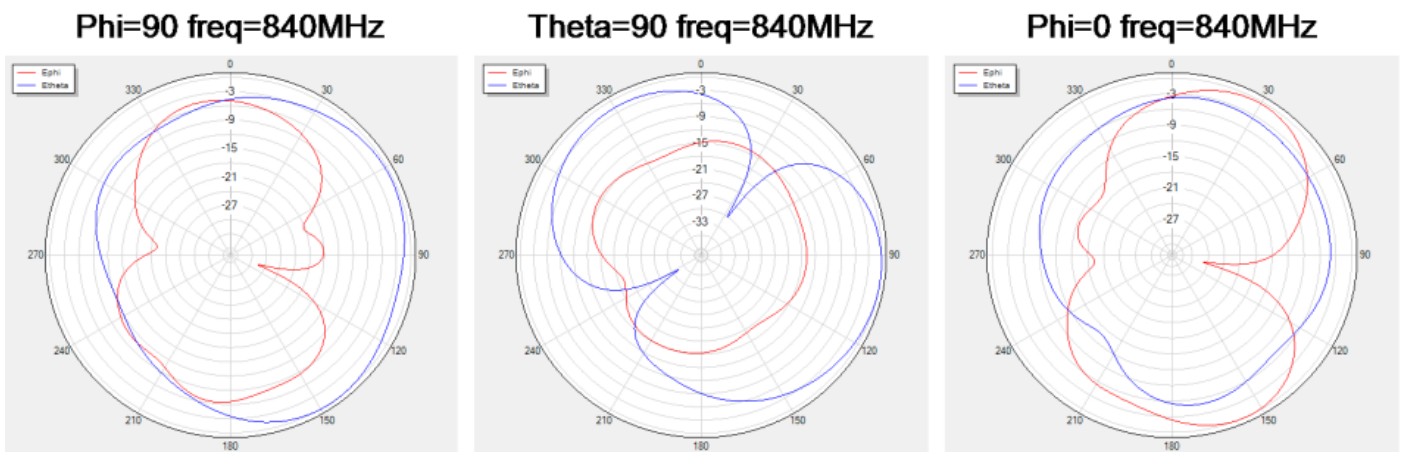
Phi=0 freq=740MHz

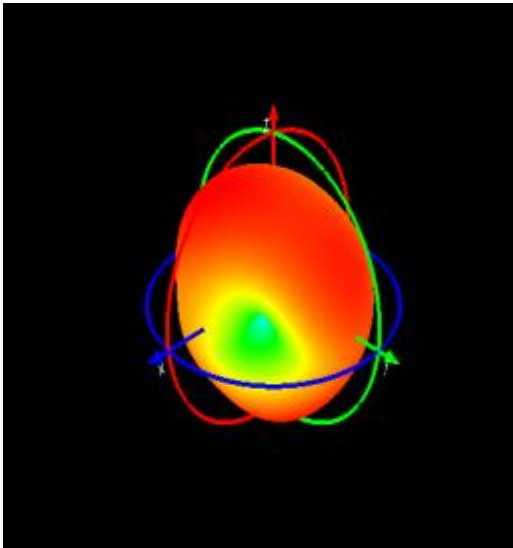


LTE B19



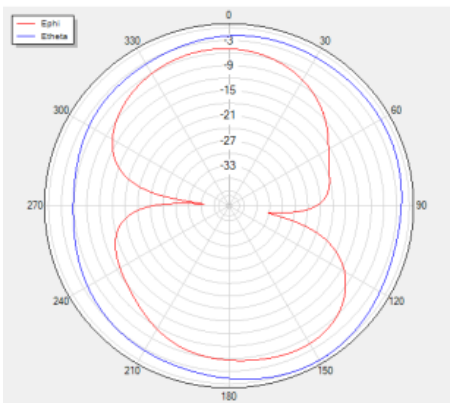
LTE B20



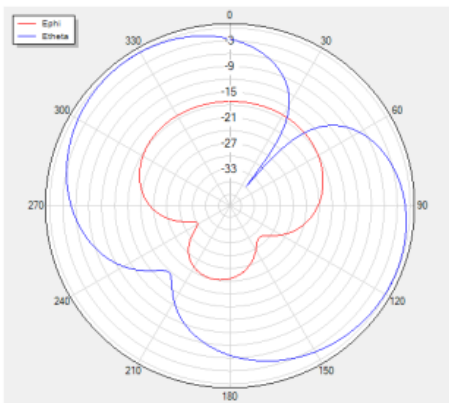


TE B28

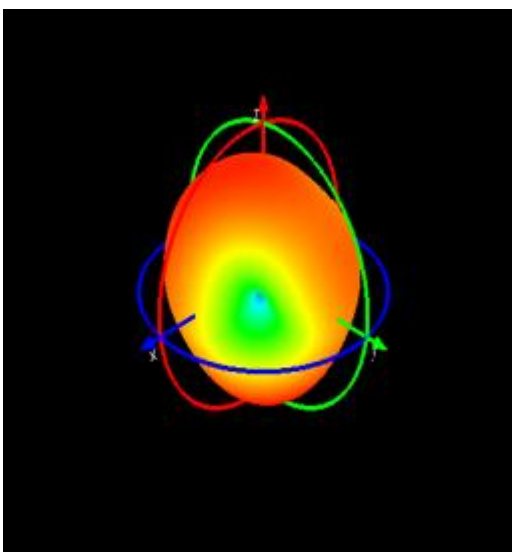
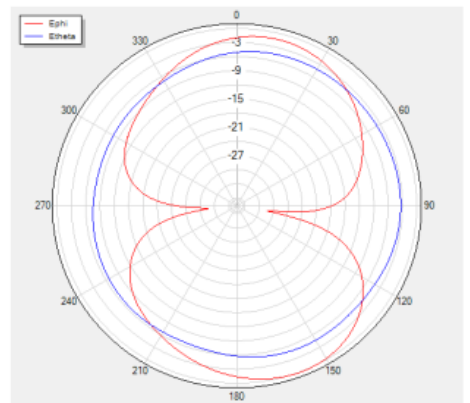
**Phi=90 freq=750MHz**



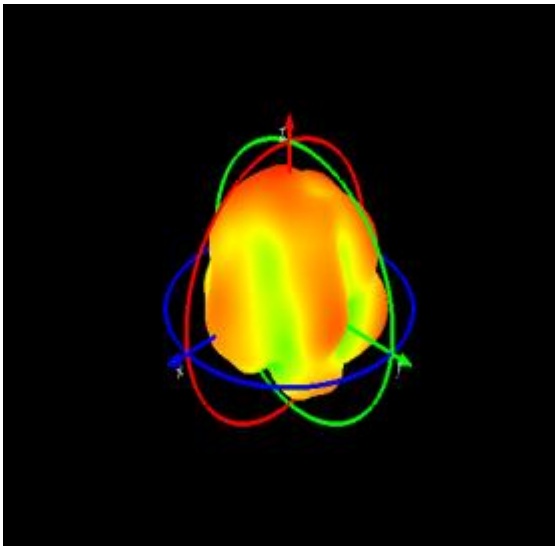
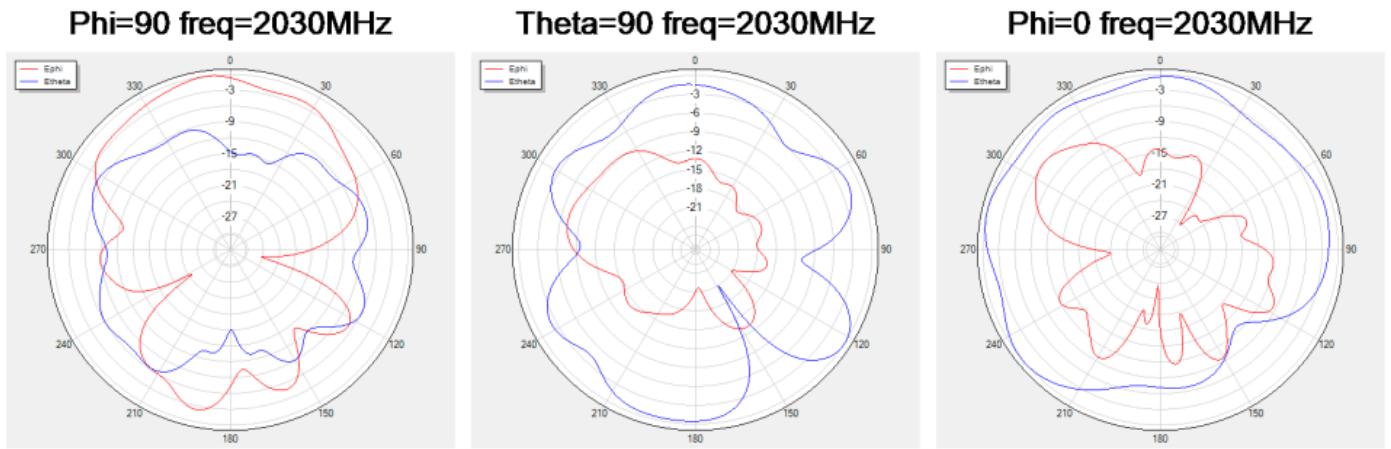
**Theta=90 freq=750MHz**



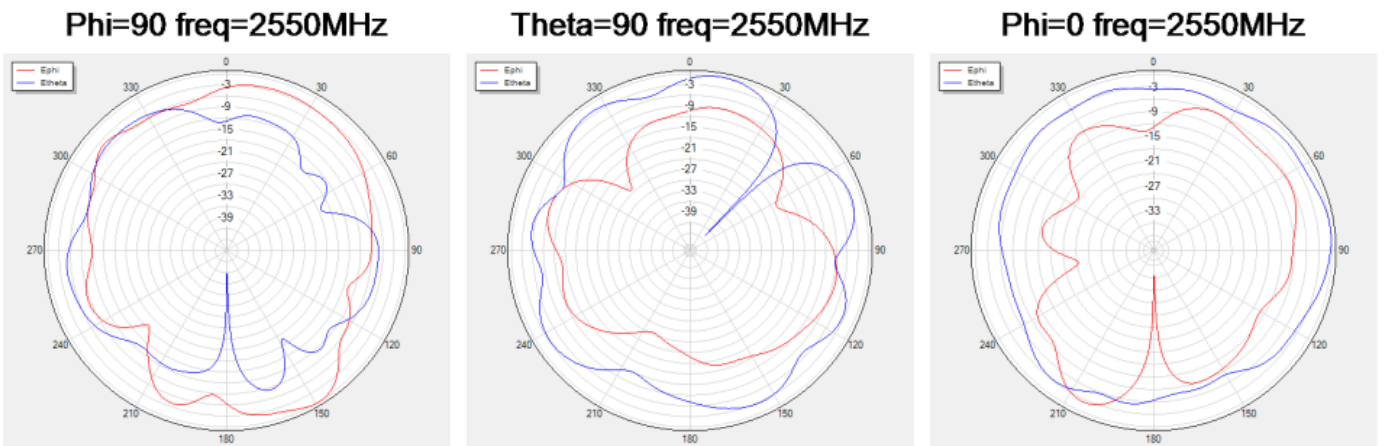
**Phi=0 freq=750MHz**



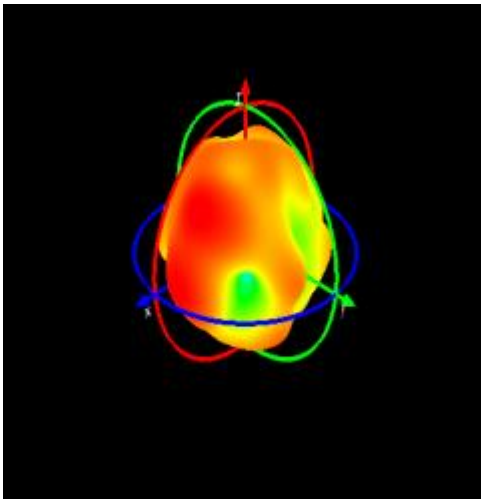
LTE B34



LTE B38

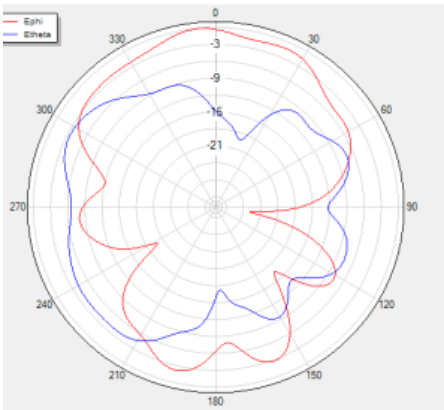




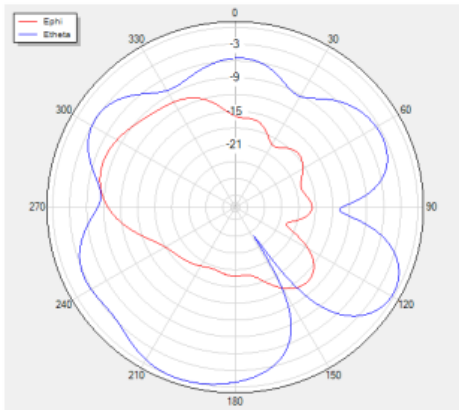


LTE B39

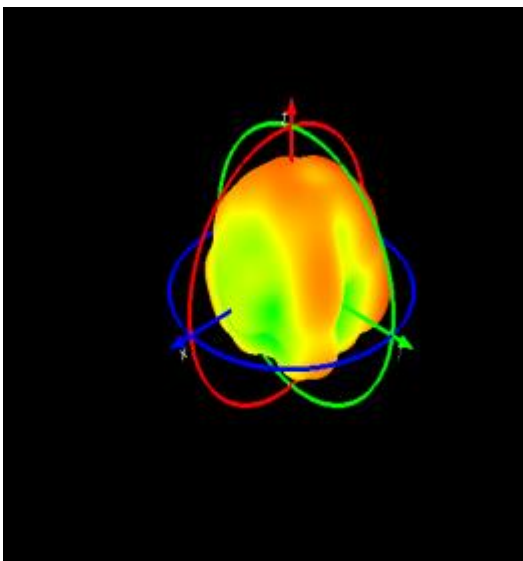
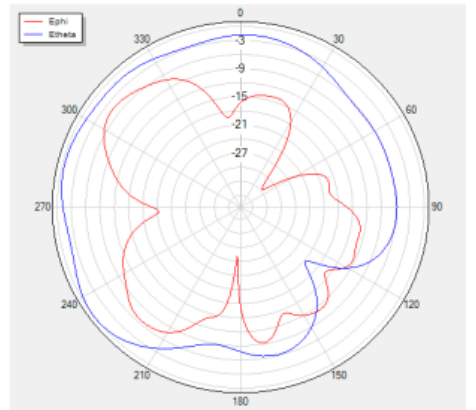
**Phi=90 freq=1950MHz**



**Theta=90 freq=1950MHz**

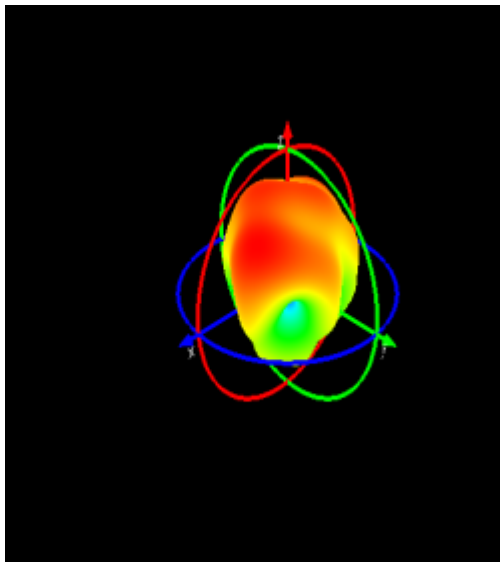
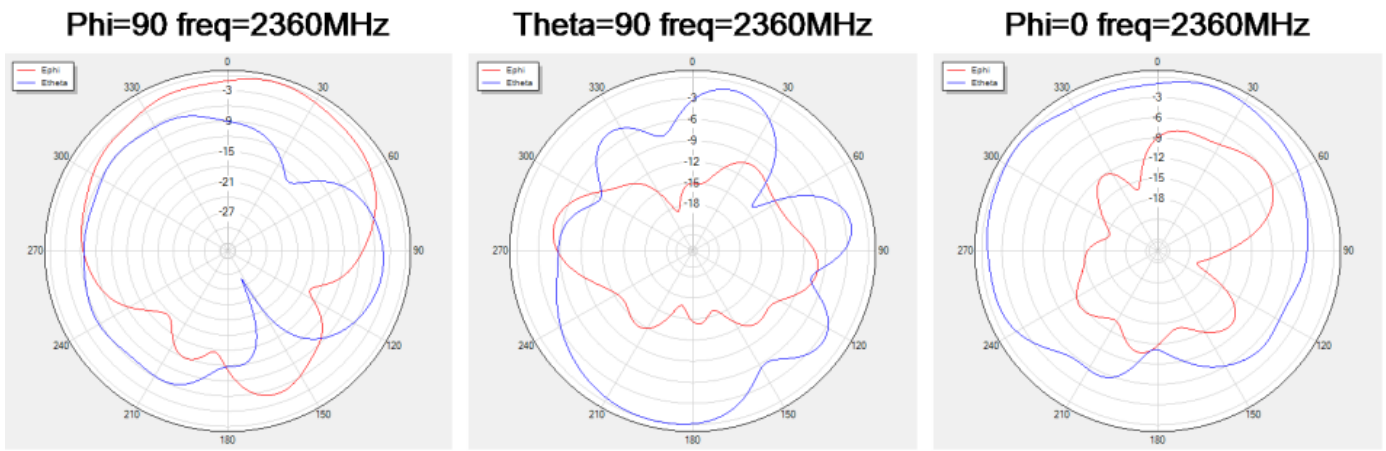


**Phi=0 freq=1950MHz**



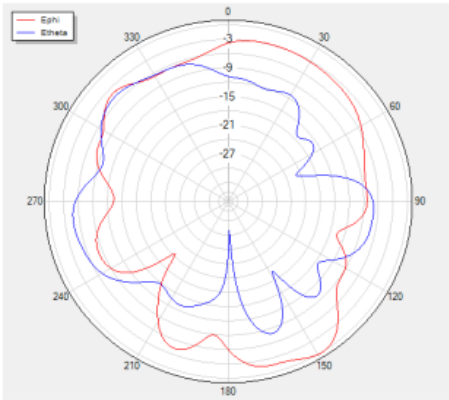


LTE B40

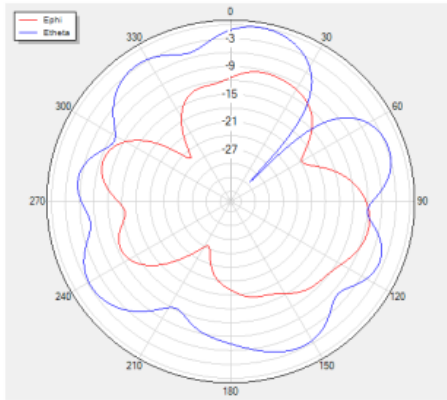


LTE B41

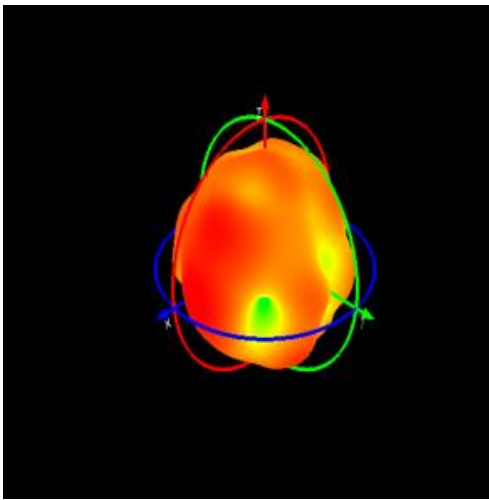
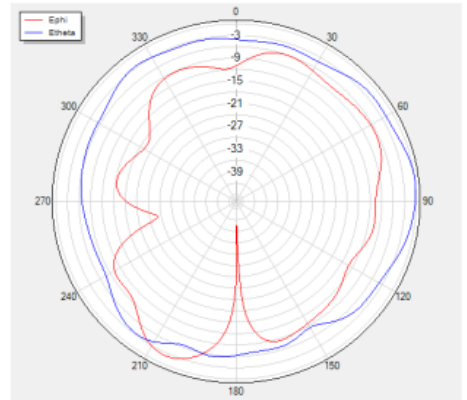
**Phi=90 freq=2570MHz**



**Theta=90 freq=2570MHz**

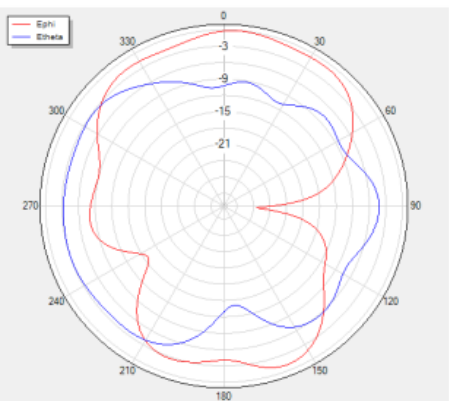


**Phi=0 freq=2570MHz**

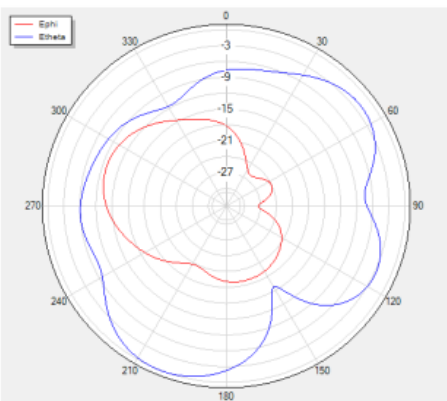


LTE B66

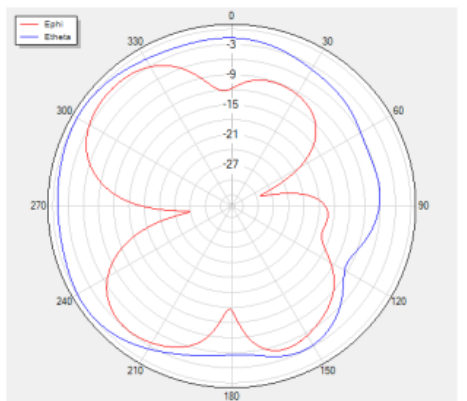
**Phi=90 freq=1730MHz**

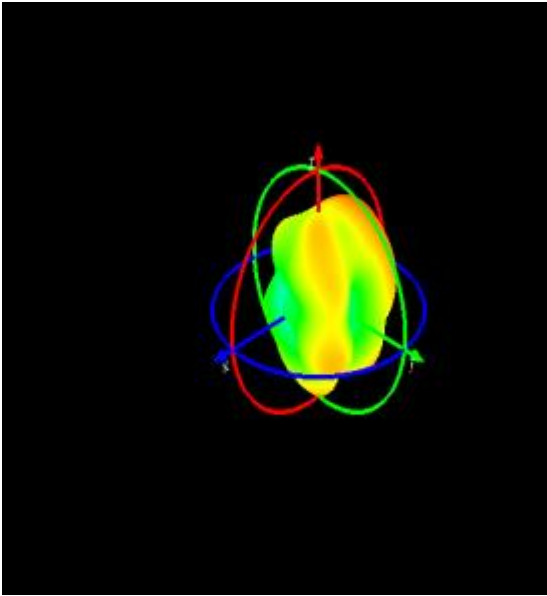


**Theta=90 freq=1730MHz**

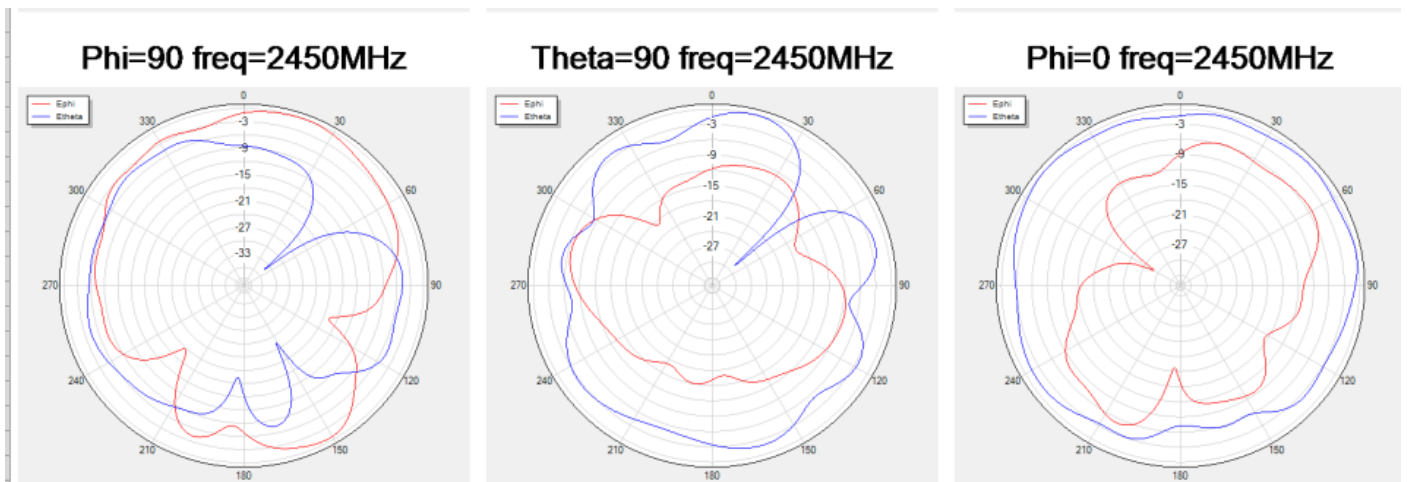


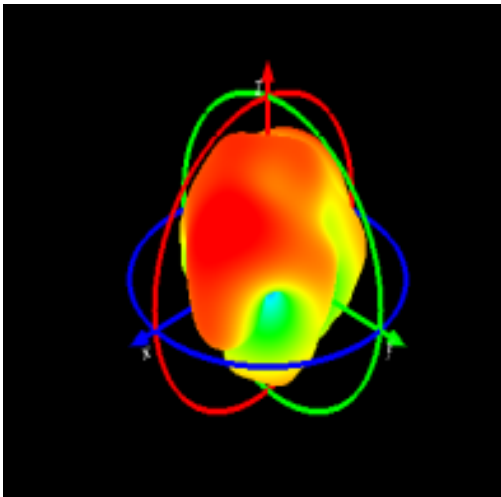
**Phi=0 freq=1730MHz**



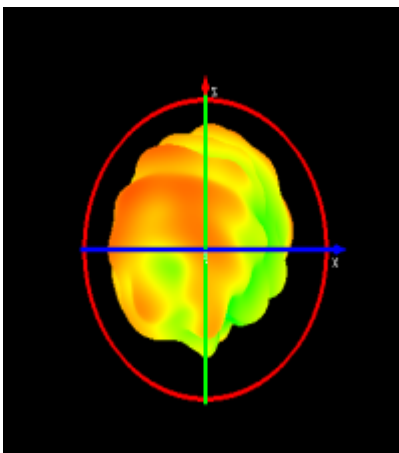
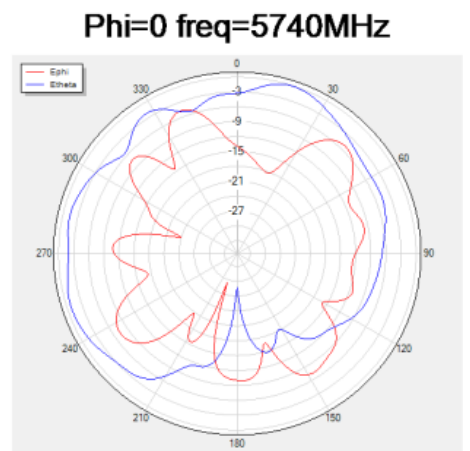
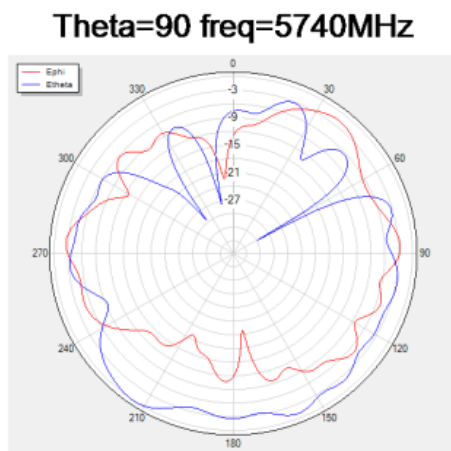
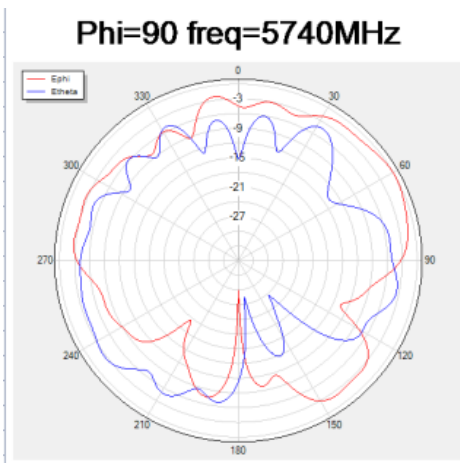


WIFI/BT2400MHz



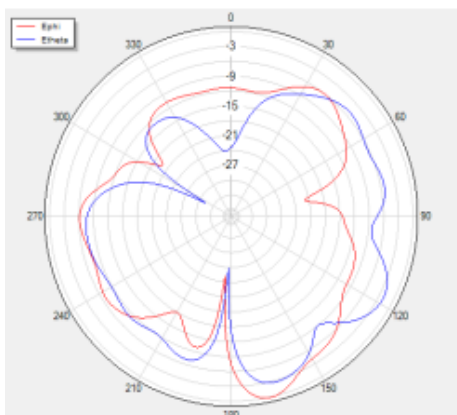


Wifi 5800 MHz

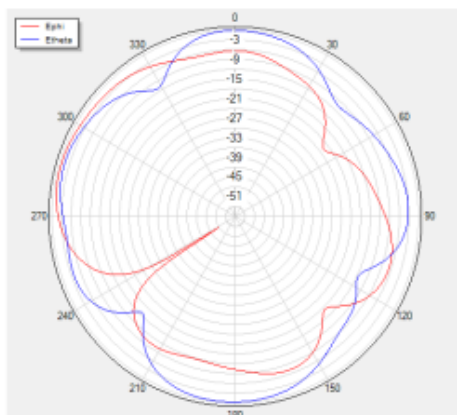


GPS

Phi=90 freq=1570MHz



Theta=90 freq=1570MHz



Phi=0 freq=1570MHz

