

天线规格书 Antenna Spec

Company Name: 深圳市三好无线通信有限公司

Shenzhen 3Good Wireless Communication Co., Ltd

Product Name: QC-M156 Antenna

Model: QC-M156

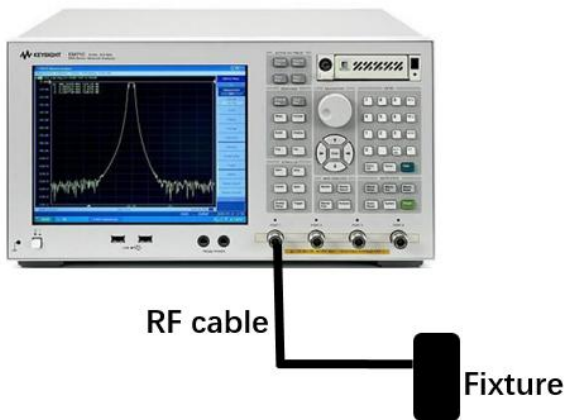
Date: 2023/10/18

Address: jinfulai Building, No. 49-1, Dabao Road, Baoan

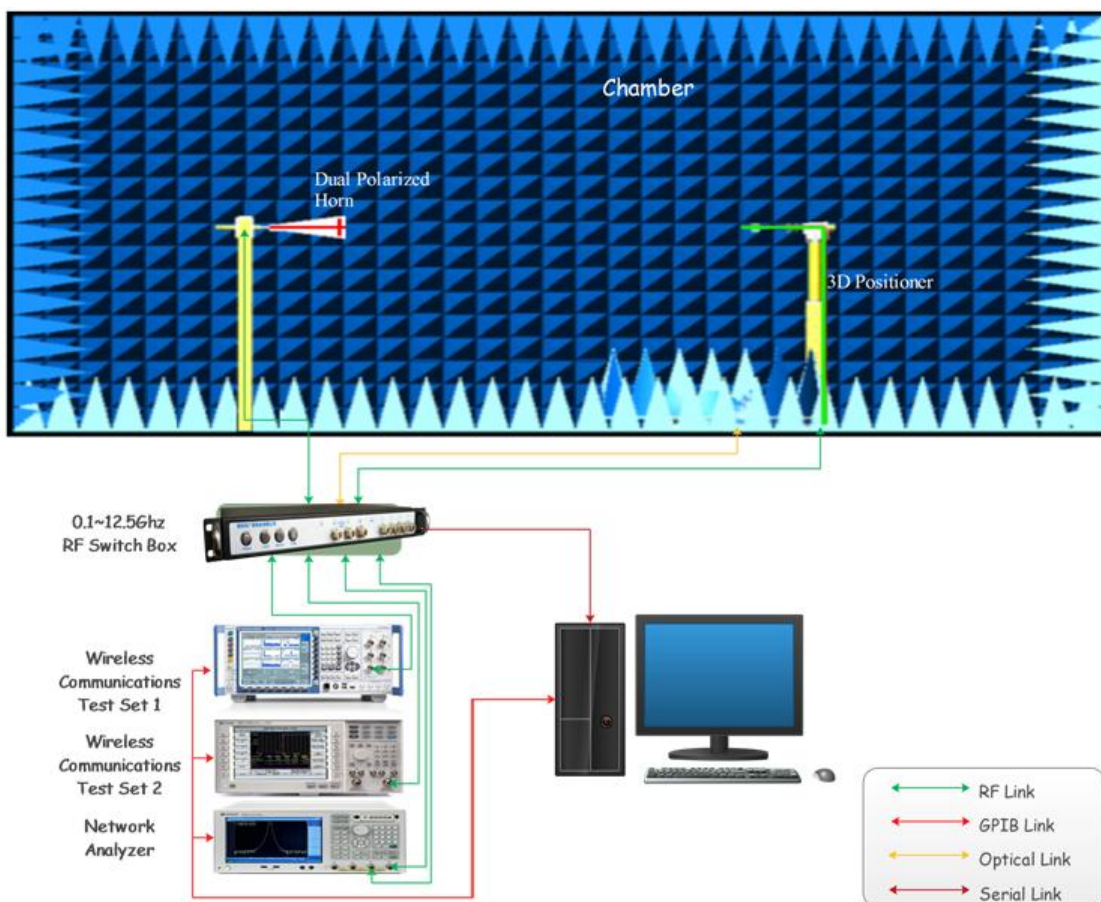
District, Shenzhen

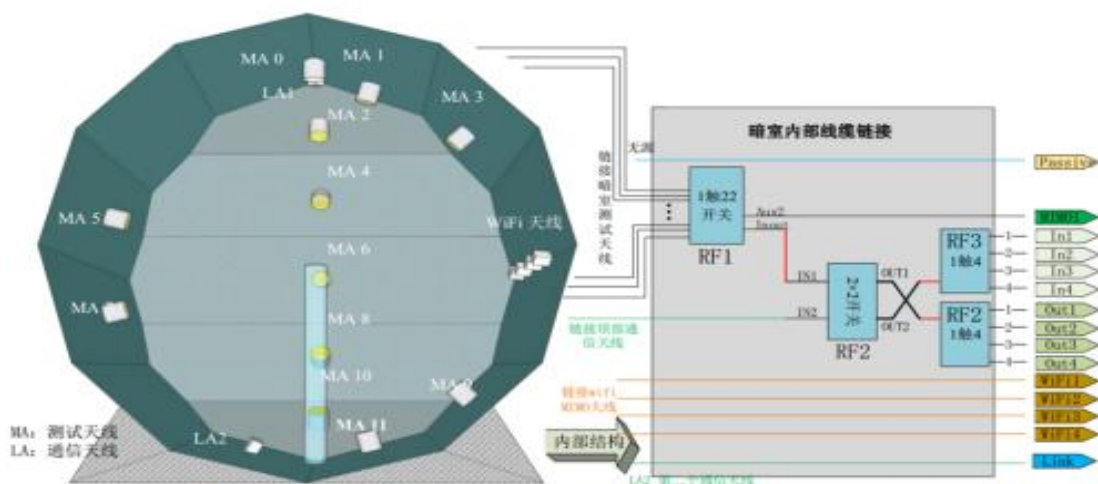
测试设备; |Test Equipment:

1. S11 测试|S11 Test



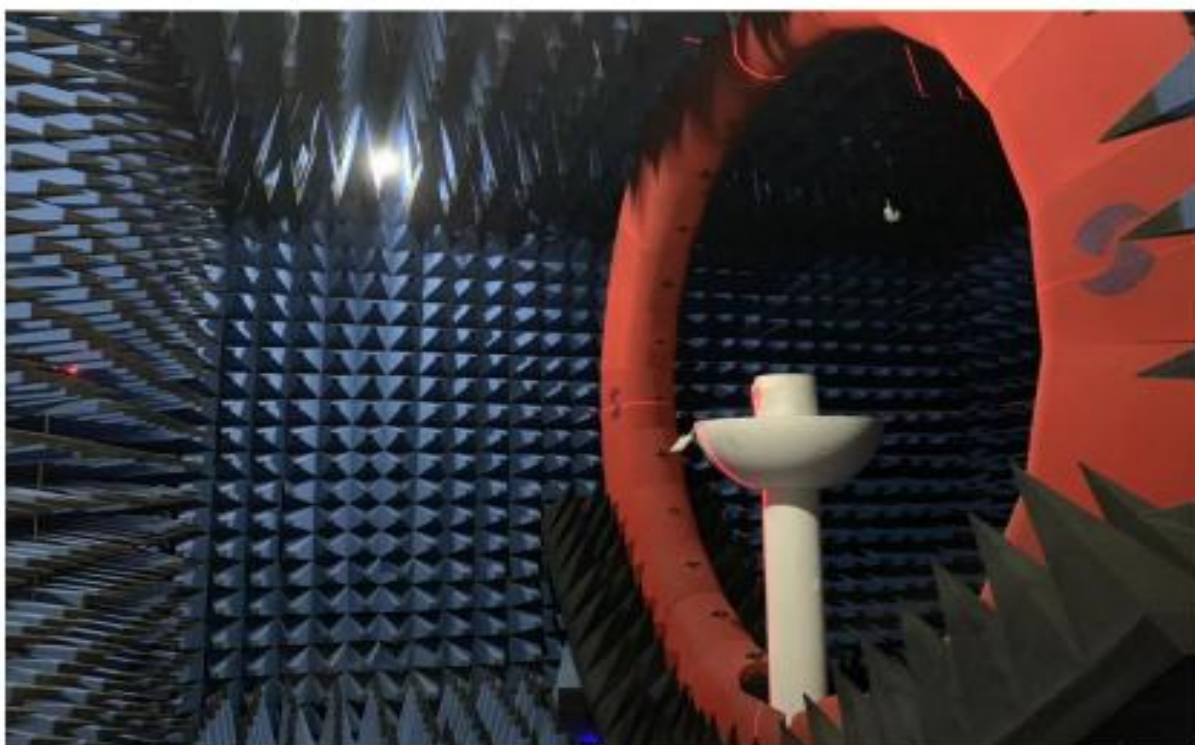
1-1. 增益/效率 (Effi./Gain) &有源(Trp/Tis)测试|Effi./Gain & Trp/Tis Test





多探头测量系统

Multi-prob Measurement System



多探头微波暗室系统内部图

Multi-probe Microwave Anechoic Chamber System Internal Graph



2. Picture1 天线位置图与分布 | Pic 1, Antenna location diagram



All of Implementation antenna

MAIN-600MHz-2700MHz、3300MHz-4200MHz、DIV600MHz-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

ANT0/ANT1/ANT2/ANT3/ANT4/ANT5/ANT6/ANT7/ANT8/

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

PIFA (LDS)

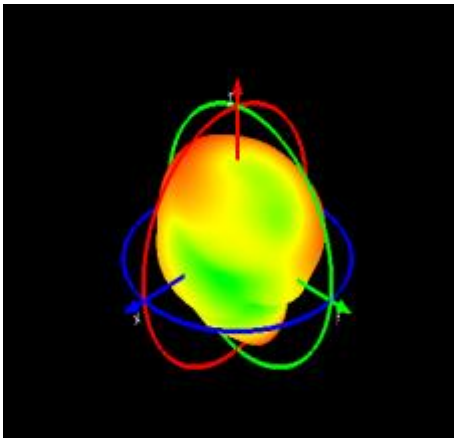
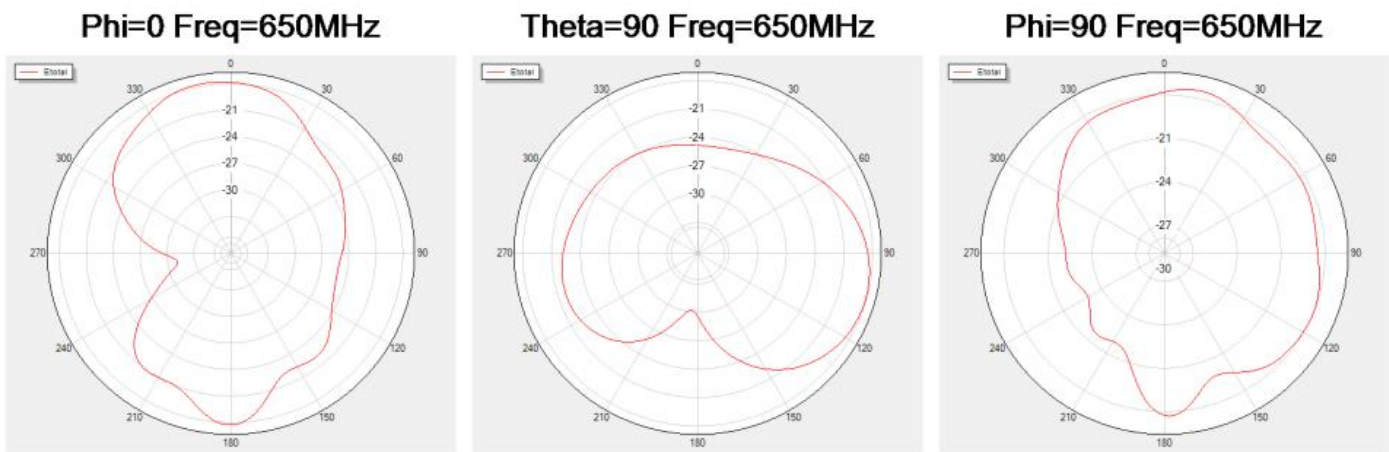
o Antenna gain: (dBi)

2G	Gain(dBi)	2G	Gain(dBi)
GSM850	-1.5	DCS1800	-1
EGSM900	-1.5	PCS1900	-1
3G	Gain(dBi)	3G	Gain(dBi)
WCDMA 1	-1	WCDMA 5	-1.5
WCDMA 2	-1	WCDMA 8	-1.5
WCDMA 4	-1		
4G	Gain(dBi)	4G	Gain(dBi)
FDD-LTE 1	-1	FDD-LTE25	-1
FDD-LTE 2	-1	FDD-LTE26	-1.5
FDD-LTE 3	-1	FDD-LTE 28	-2

FDD-LTE 4		FDD-LTE 66	
	-1		-1
FDD-LTE 5		TDD-LTE 71	
	-1.5		-2
FDD-LTE 7		TDD-LTE38	
	0.5		0.5
FDD-LTE 8		TDD-LTE 40	
	-1.5		-0.5
FDD-LTE12		TDD-LTE 41	
	-2		0.5
FDD-LTE13		TDD-LTE 42	
	-2		0.5
FDD-LTE 17		TDD-LTE 43	
	-2		0.5
FDD-LTE 20		TDD-LTE 48	
	-1.5		0.5
GPS		BT	
	-1.5		-0.5
WiFi b (10M)		WiFi a (54M)	
	-0.5		0.5
5G	Gain(dBi)	5G	Gain(dBi)
N1		N38	
	-1		0.5
N2		N40	
	-1		-0.5
N3		N41	
	-1		0.5
N5		N48	
	-1.5		0.5

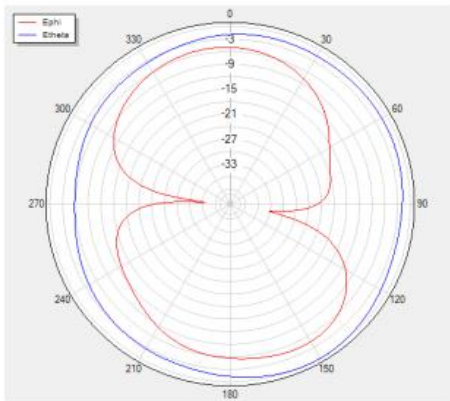
N7		N66	
	0.5		-1.5
N12		N71	
	-2		-2
N25		N77	
	-1		0.5
N28		N78	
	-2		0.5

3D_Graphs
600MHz

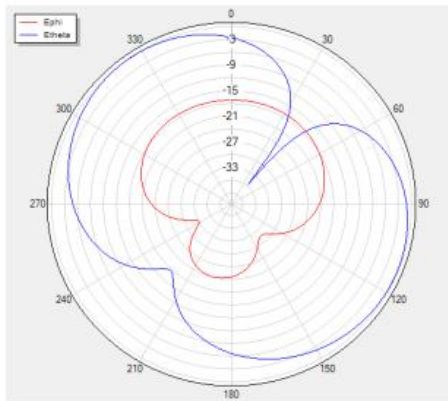


700MHz

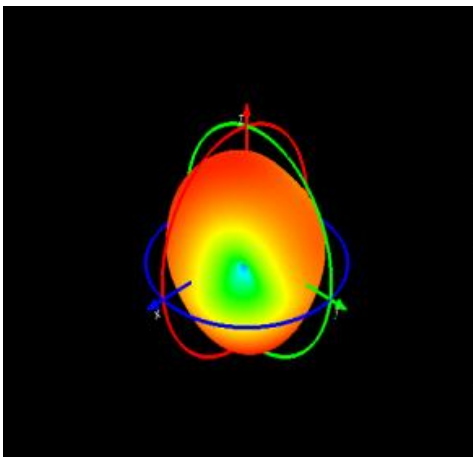
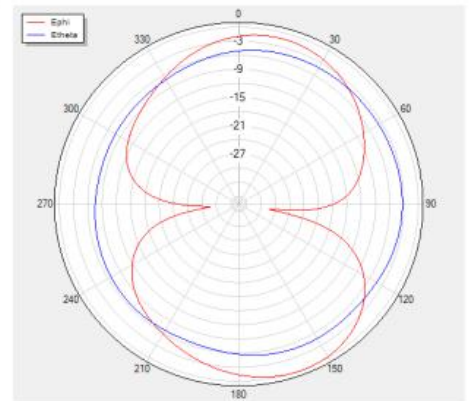
Phi=90 freq=750MHz



Theta=90 freq=750MHz

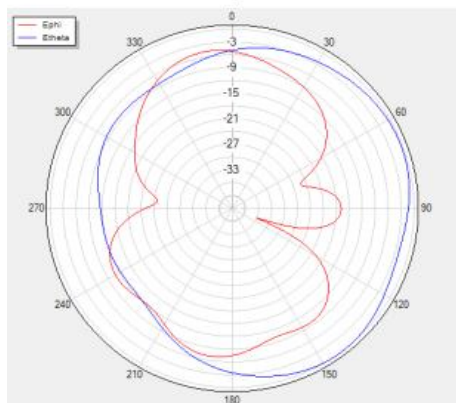


Phi=0 freq=750MHz

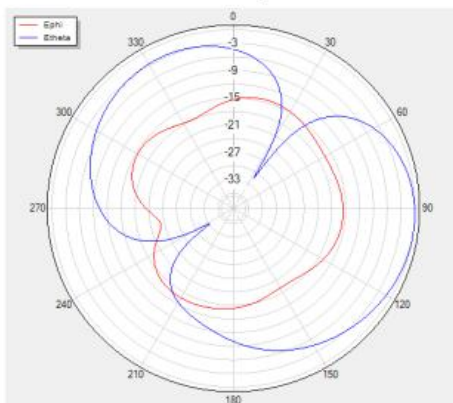


800MHz

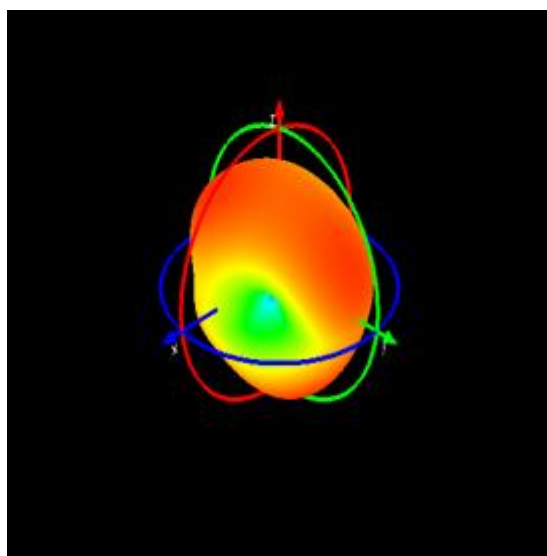
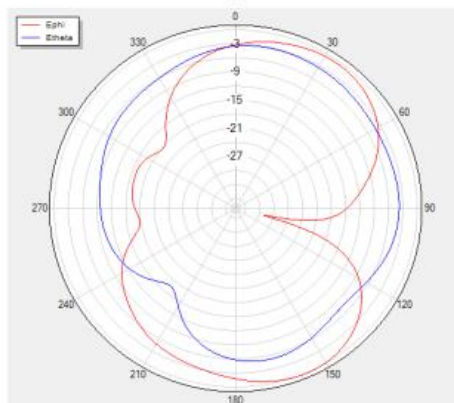
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Theta=90 freq=850MHz

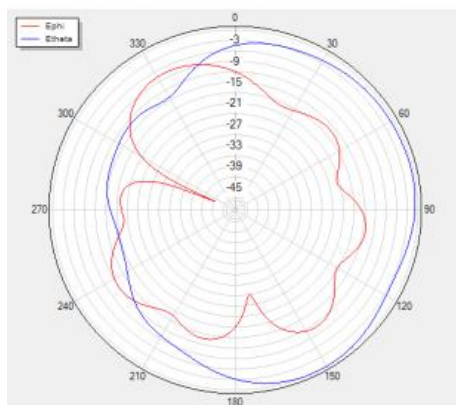


Phi=0 freq=850MHz

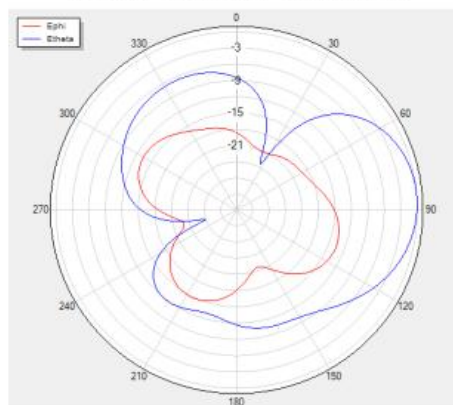


900 MHz

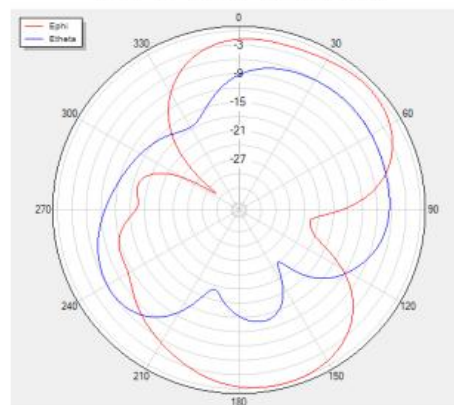
Phi=90 freq=920MHz

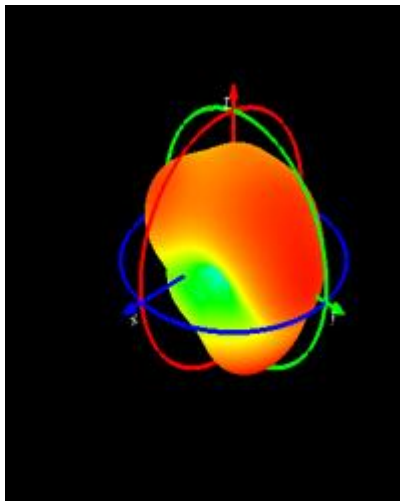


Theta=90 freq=920MHz

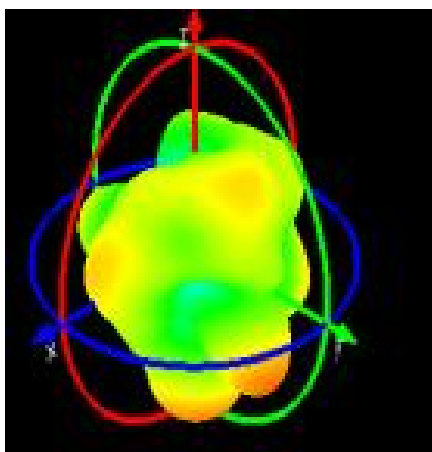
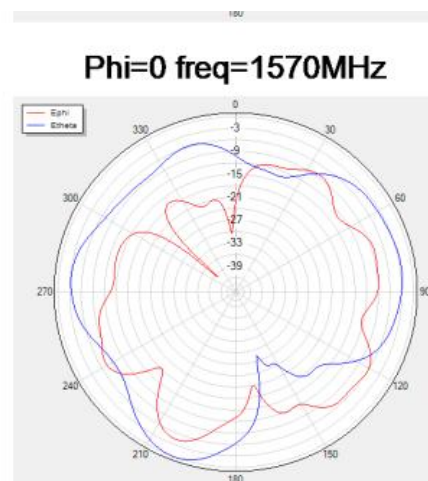
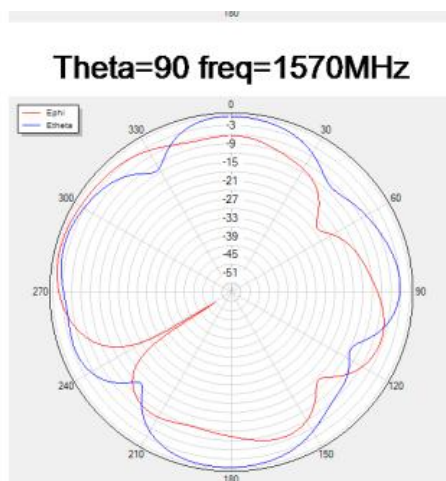
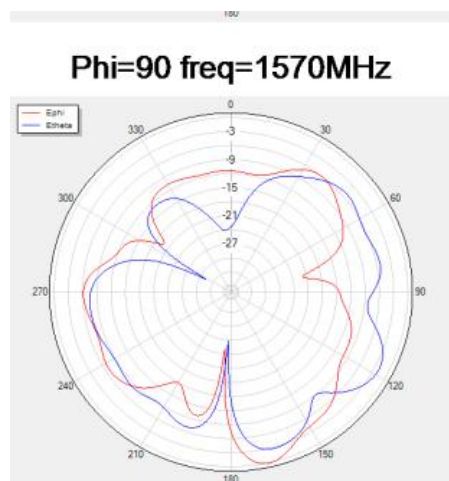


Phi=0 freq=920MHz



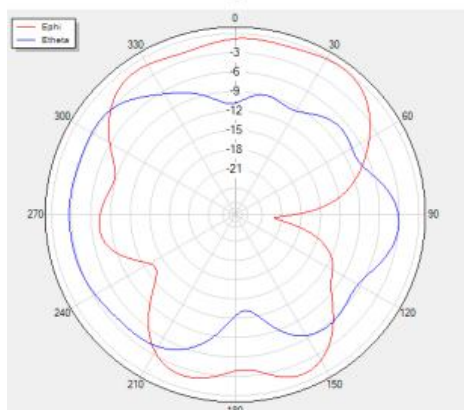


1575.42MHz

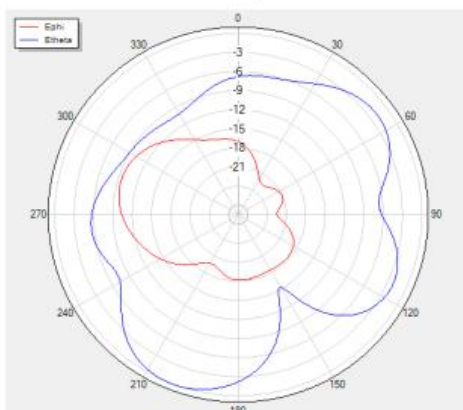


1700MHz

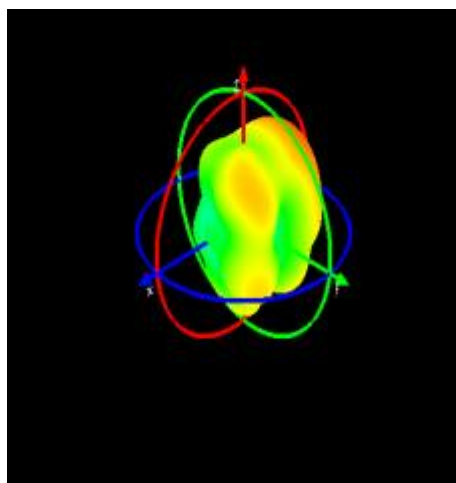
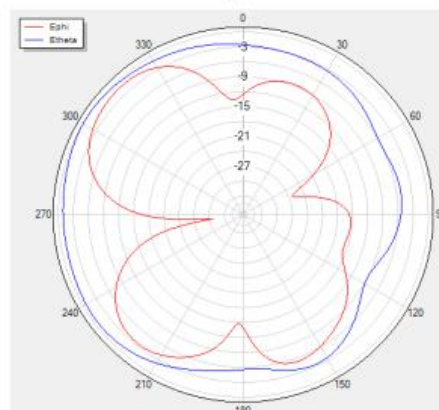
Phi=90 freq=1750MHz



Theta=90 freq=1750MHz

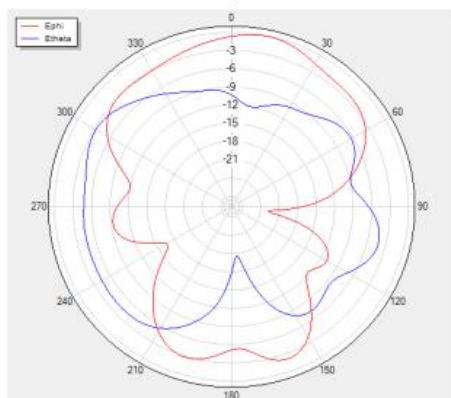


Phi=0 freq=1750MHz

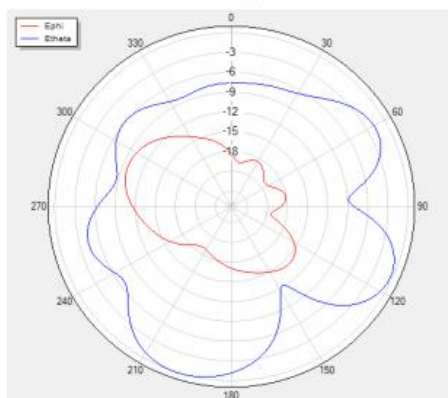


1800MHz

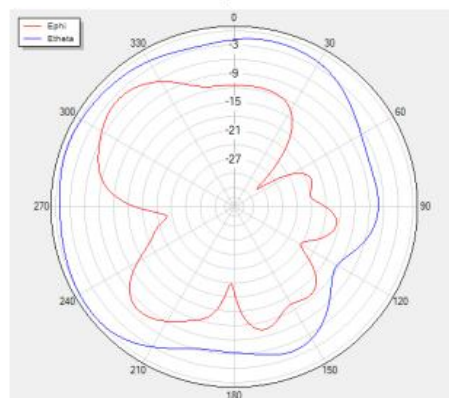
Phi=90 freq=1850MHz

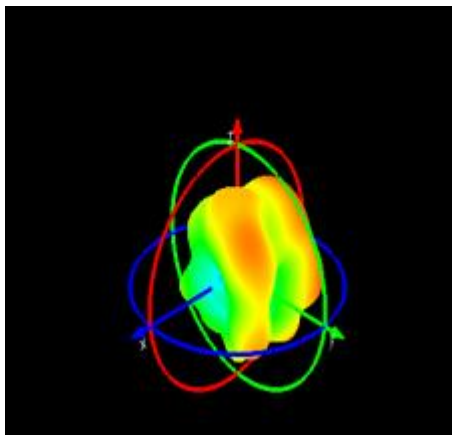


Theta=90 freq=1850MHz

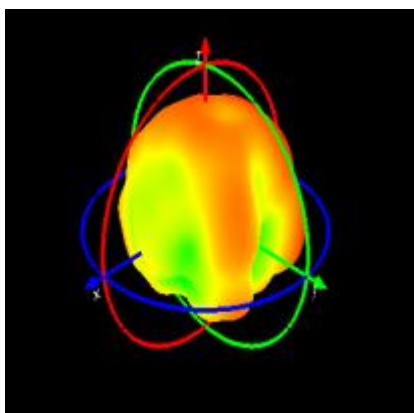
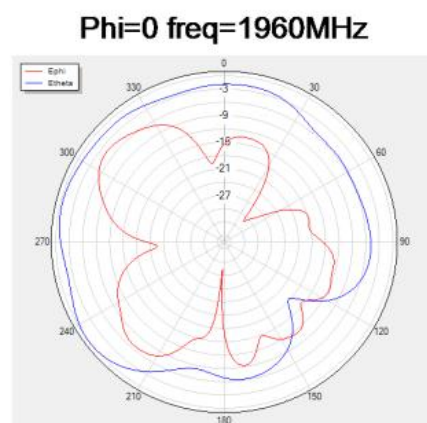
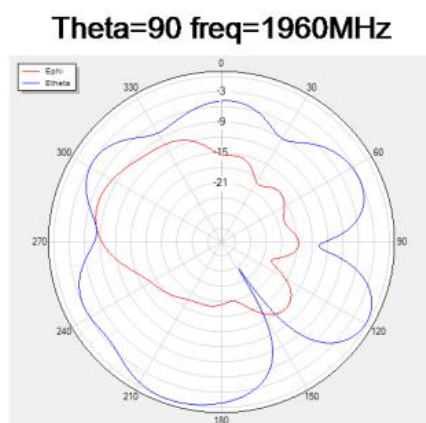
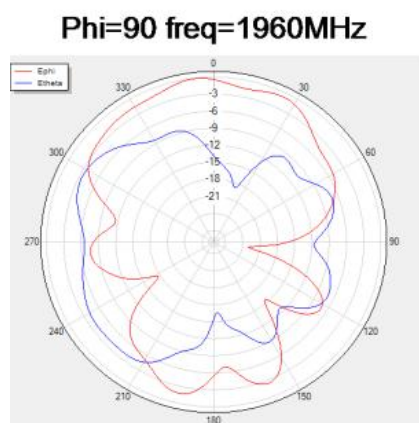


Phi=0 freq=1850MHz



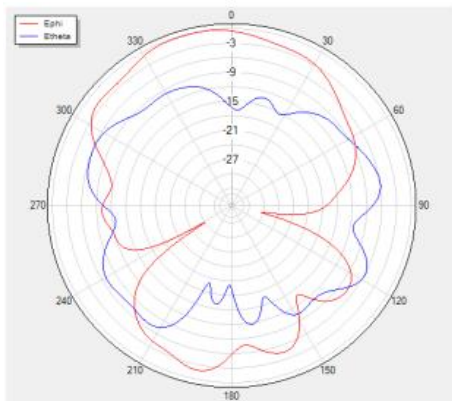


1900MHz

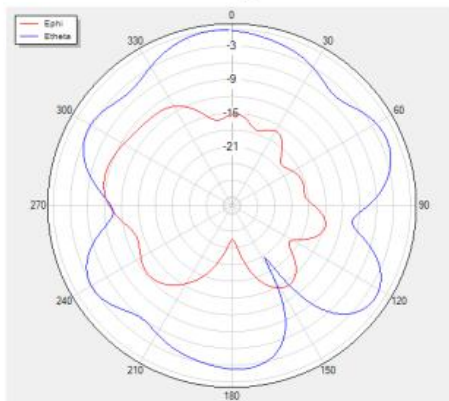


2100MHz

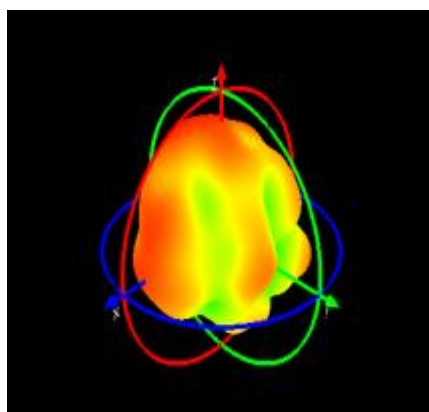
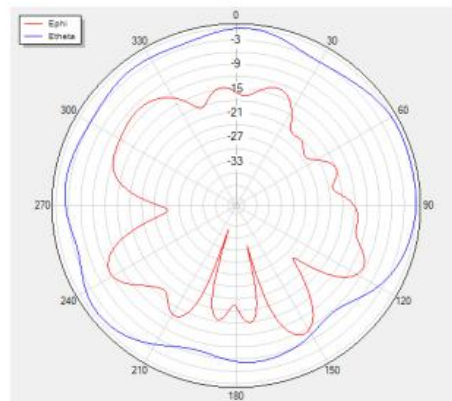
Phi=90 freq=2100MHz



Theta=90 freq=2100MHz

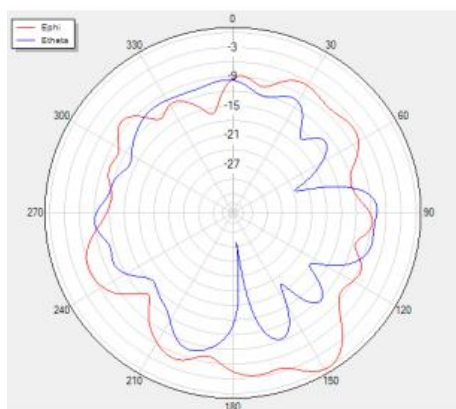


Phi=0 freq=2100MHz

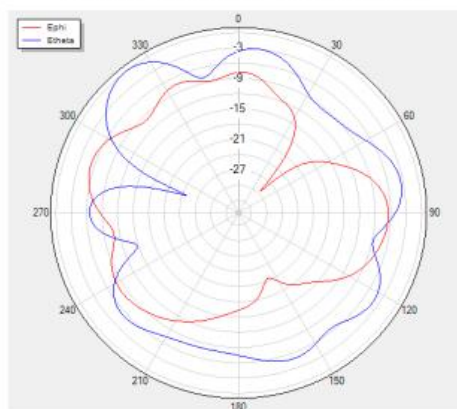


2400 MHz

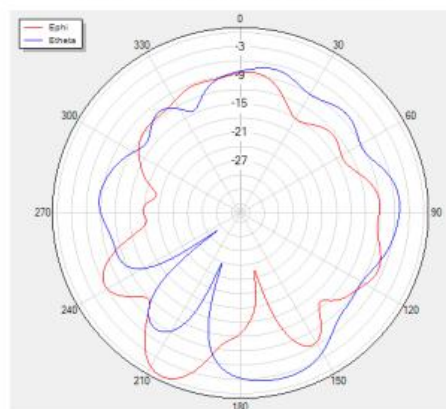
Phi=90 freq=2450MHz

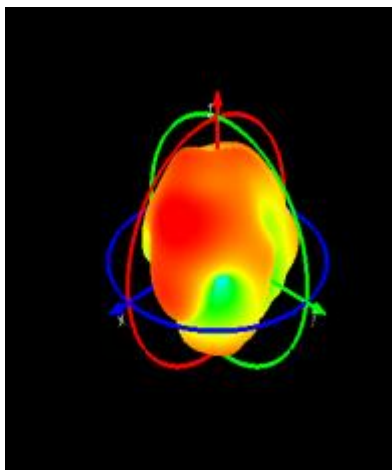


Theta=90 freq=2450MHz

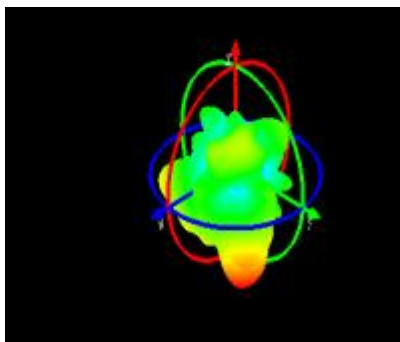
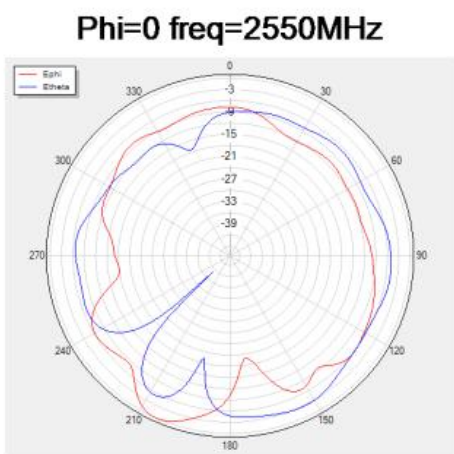
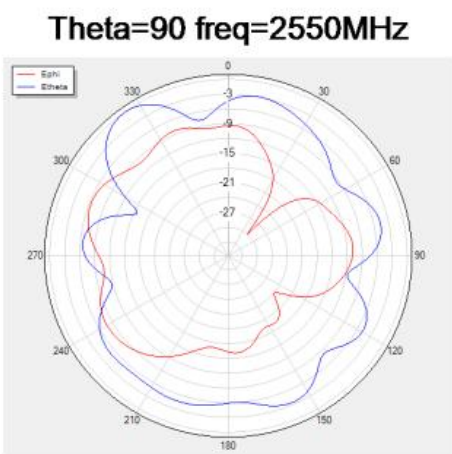
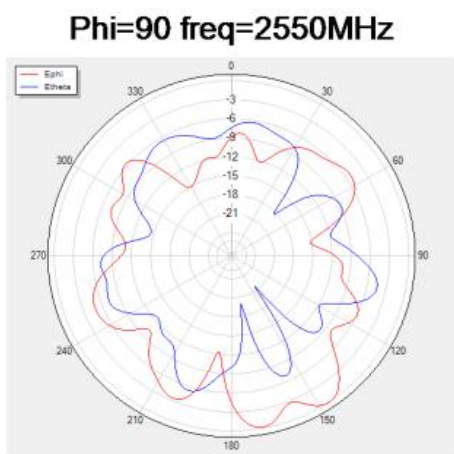


Phi=0 freq=2450MHz



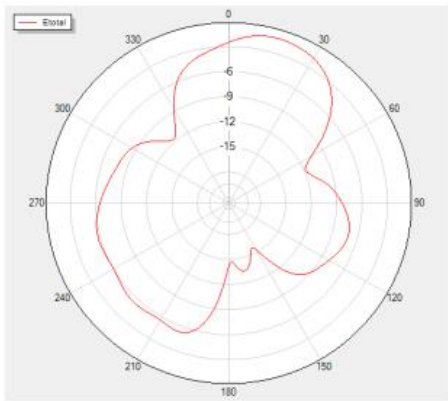


2500 MHz

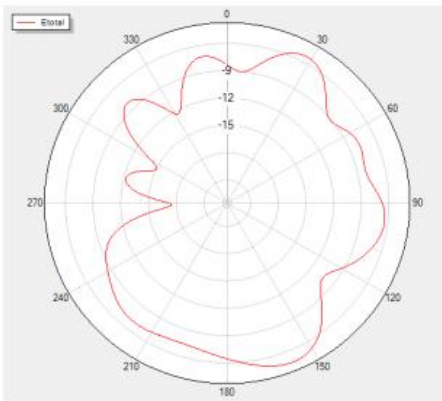


3500 MHz

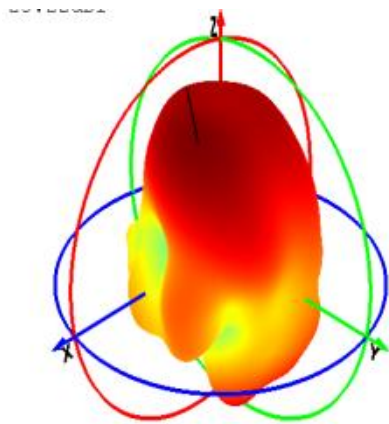
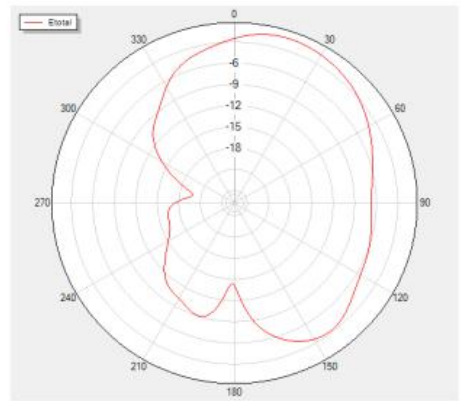
Phi=0 Freq=3500MHz



Theta=90 Freq=3500MHz

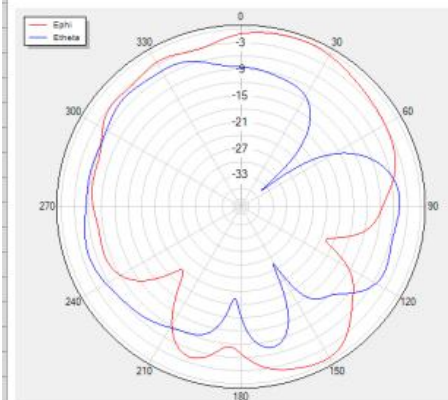


Phi=90 Freq=3500MHz

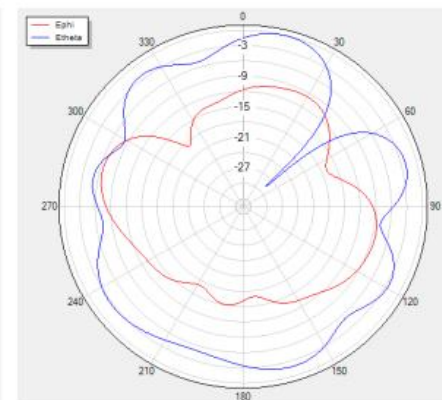


BT、WiFi 2400

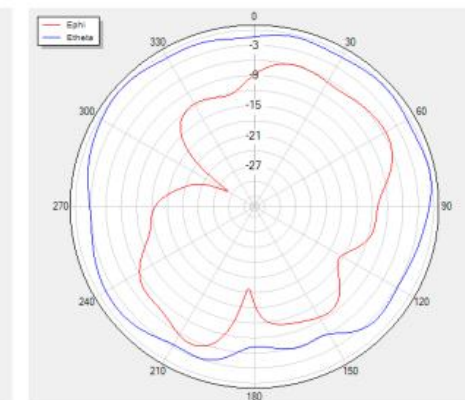
Phi=90 freq=2450MHz

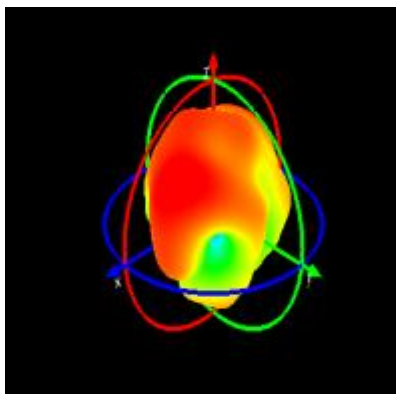


Theta=90 freq=2450MHz

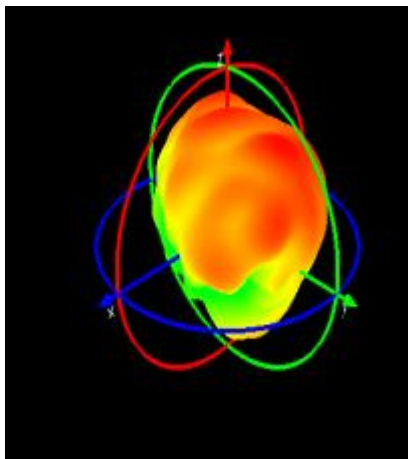
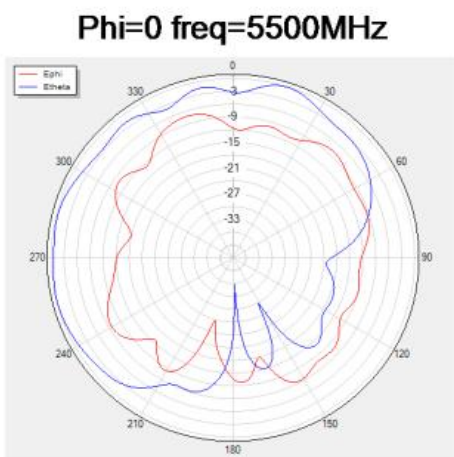
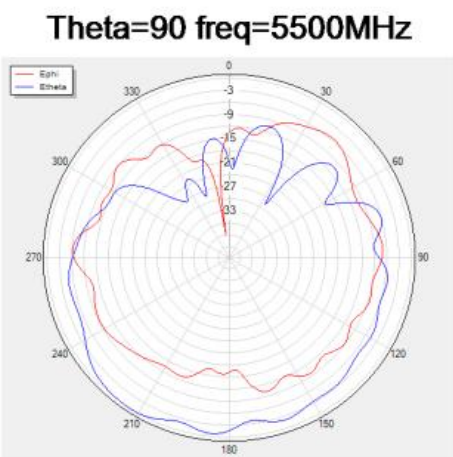
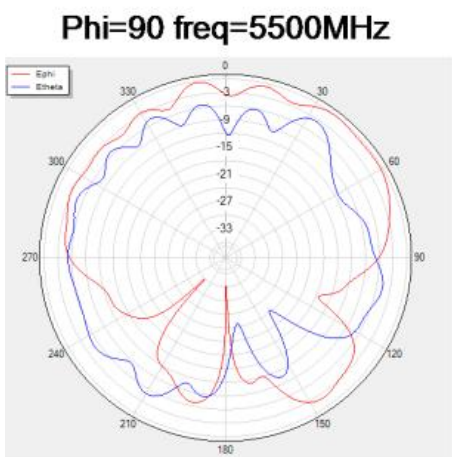


Phi=0 freq=2450MHz





WiFi 5800 MHz



天线有源数据 | Antenna TRP & TIS Data

2G	CH	TRP	CH	TIS	2G	CH	TRP	CH	TIS
GSM850	128	26.19			DCS1800	512	22.63		
	190	26.66				698	24.04		
	251	26.46	128	-103.24		885	22.53	885	-104.36
EGSM900	1	25.15			PCS1900	512	24.57		
	62	24.7				661	25.16		
	124	24.43	124	-102.04		810	25.55	810	-104.73
3G	CH	TRP	CH	TIS	3G	CH	TRP	CH	TIS
WCDMA1	10562	18.45			WCDMA5	4357	18.17		
	10700	18.02				4408	18.59		
	10838	18.59	10838	-106.6		4458	17.63	4458	-104.96
WCDMA2	9662	17.75			WCDMA8	2937	16.8		
	9800	16.63				3013	15.89		
	9938	15.89	9938	-107.12		3088	15.02	3088	-103.54
WCDMA4	1312	16.85							
	1413	15.69							
	1513	15.6	1738	-106.08					

4G	CH	TRP	CH	TIS	4G	CH	TRP	CH	TIS
FDD-LTE 1	18050	18.15			FDD-LTE25	26065	17.83		
	18300	18.36				26365	16.63		
	18550	18.26	550	-94.06		26665	15.05	8665	-98.31
FDD-LTE 2	18650	17.85			FDD-LTE 26	26715	18.09		
	18900	16.74				26865	18.18		
	19150	15.55	1150	-97.03		27015	17.84	9015	-96.09
FDD-LTE 3	19250	16.13			FDD-LTE 28A	27260	16.53		
	19575	16.63				27435	16.85		
	19900	16.8	1900	-94.01		27410	17.19		
FDD-LTE 4	20000	15.67			FDD-LTE 28 B	27510	17.66		
	20175	15.52				27610	17.15	9610	-91.88
	20350	15.38	2350	-97.23			16.52		
FDD-LTE 5	20450	17.86			FDD-LTE 66	132022	15.72		
	20525	18.17				132322	15.5		
	20600	17.03	2600	-95.74		132622	15.52	67086	-96.2
FDD-LTE 7	20850	17.76			FDD-LTE 71	133172	16.47		
	21100	17.52				133297	17.29		
	21350	17.26	3350	-92.42		133422	16.14	68886	-90.17
FDD-LTE 8	21500	17.53			TDD-LTE 38	37850	17.53		
	21625	16.36				38000	17.54		
	21750	15.3	3350	-90.43		38150	17.08	38150	-92.47
FDD-LTE12	23035	16.72			TDD-LTE 40	38750	18.96		
	23095	16.73				39150	18.47		
	23155	17.06	5155	-94.34		39550	19.05	39150	-90.18
FDD-LTE13					TDD-LTE 41	40340	19.19		
	23230	13.64		-93.04		40620	19.75		
						41140	17.01	41140	-92.11
FDD-LTE17	23780	17.68			TDD-LTE 42	41690	16.28		
	23790	17.97				42590	16.11		
	23800	17.81	5800	-92.56		43490	16.88	43490	-92.99
FDD-LTE20	24200	17.93			TDD-LTE 43	43690	16.98		
	24300	17.7				44590	17.05		
	24400	17.61	6400	-91.78		45490	17.62	45490	-93.6
					TDD-LTE 48	55240	19.15		
						55990	19.43		
						56739	19.85	50665	-103.33

NR/5G-SA	CH	TRP	CH	TIS	5G	CH	TRP	CH	TIS
N1 (10M)	386000	17.92			N38 (20M)	516000	17.77		
	390000	18.09				519000	17.16		
	394000	18.79	432000	-94.08		522000	16.63	522000	-94.69
N2 (10M)	372000	19.03			N40 (20M)	462000	18.5		
	376000	19.04				470000	18.38		
	380000	18.24	396000	-97.59		478000	19.02	9015	-90.96
N3 (10M)	344000	16.33			N41 (100M)	509202	19.31		
	349500	16.35				518598	18.31		
	355000	16.7	374000	-94.21		528000	18.18	528000	-86.53
N5 (10M)	166800	18.06			N48 (20M)	640000	16.67		
	167300	18.17				641666	17.13		
	167800	18.3	176800	-93.54		643332	17.42	643332	-94.29
N7 (10M)	502000	18.11			N66 (10M)	344000	19.96		
	507000	18				349000	19.93		
	512000	17.71	531000	-92.59		354000	19.7	434000	-96.87
N12 (10M)	140800	17.13			N71 (10M)	134600	17.12		
	141500	17.56				136100	17.24		
	142200	17.66	148200	-93.51		137600	17.41	128400	-91.34
N25 (10M)	372000	19.45			N77 (100M)	650000	18.91		
	376500	19.14				623334	20.05		
	381000	18.41	397000	-97.69		636666	17.11	676666	-87.12
N28 (10M)	142600	17.69			N78 (100M)	623334	18.81		
	145600	17.9				636666	20.12		
	147600	17.12	158600	-90.77		650000	20.56	650000	-88.04
三合一	CH	TRP	CH	TIS	三合一	CH	TRP	CH	TIS
WIFI B(11M亮屏)	1	14.49	1	-83.35	WiFi A (6M亮屏)	36	15.48	36	-90.06
	7	14.55	7	-83.05		149	14.15	149	-89.91
	13	15.09	13	-83.61		165	14.09	165	-89.88
BT	0	9.15	0	-87.12					
	39	9.87	39	-87.33					
	78	9.56	78	-87.41					