Antenna Test Report V1.0

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历史版本（Revision History）

Version:	Date:	Summary of content:
V1.0	2023.11.27	

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项目概况（Project Overview）

客户名称 Customer Name	项目名 Project Name	天线数目 Antenna Number	天线类型 Antenna Type
	话	1	Paddle Antenna

天线频段 Frequency Bands		
WIFI		/
BT		/
GNSS		/
NB		/
2G	✔	GSM850/900/DCS1800/PCS1900
3G	✔	WCDMA Band1/2/5/8
4G		/
5G		/

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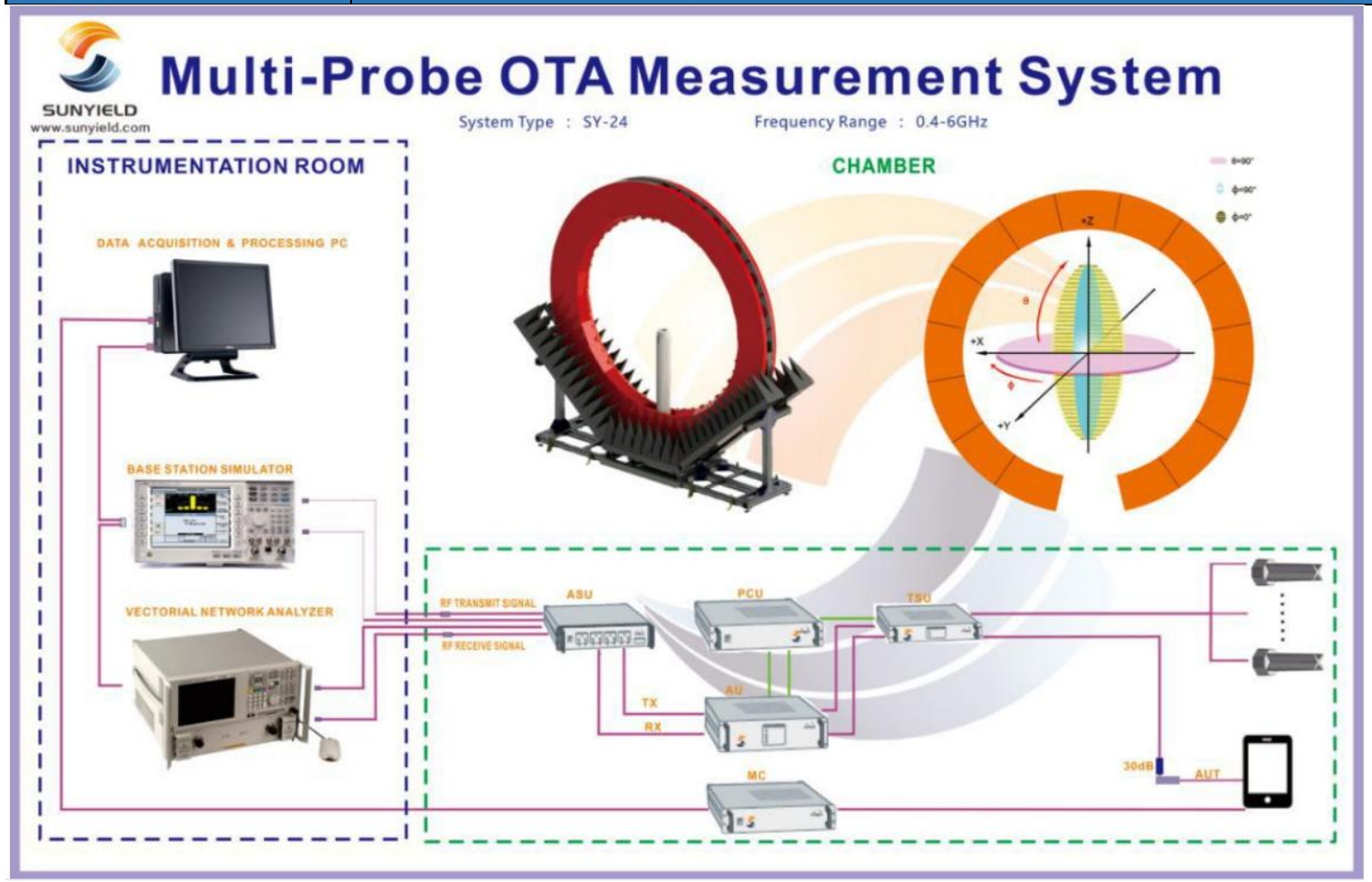
测试环境（Test Environment）

Test Equipment	Agilent E5071B 300 kHz - 8.5 GHz /ROHDE&SCHWARZ CMW500/ Anritsu MT8000A
Test System	SY-24M SISO/MIMO, 400 - 8500MHz



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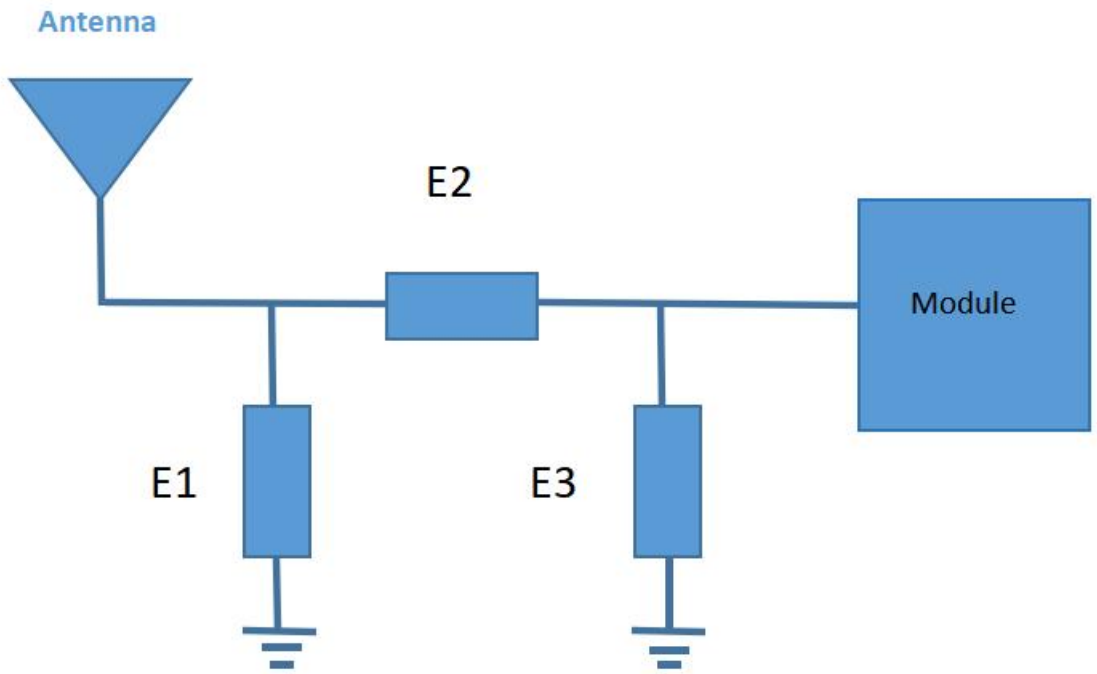
匹配电路（Matching circuit）



E1	E2	E3
NC	0Ω	NC

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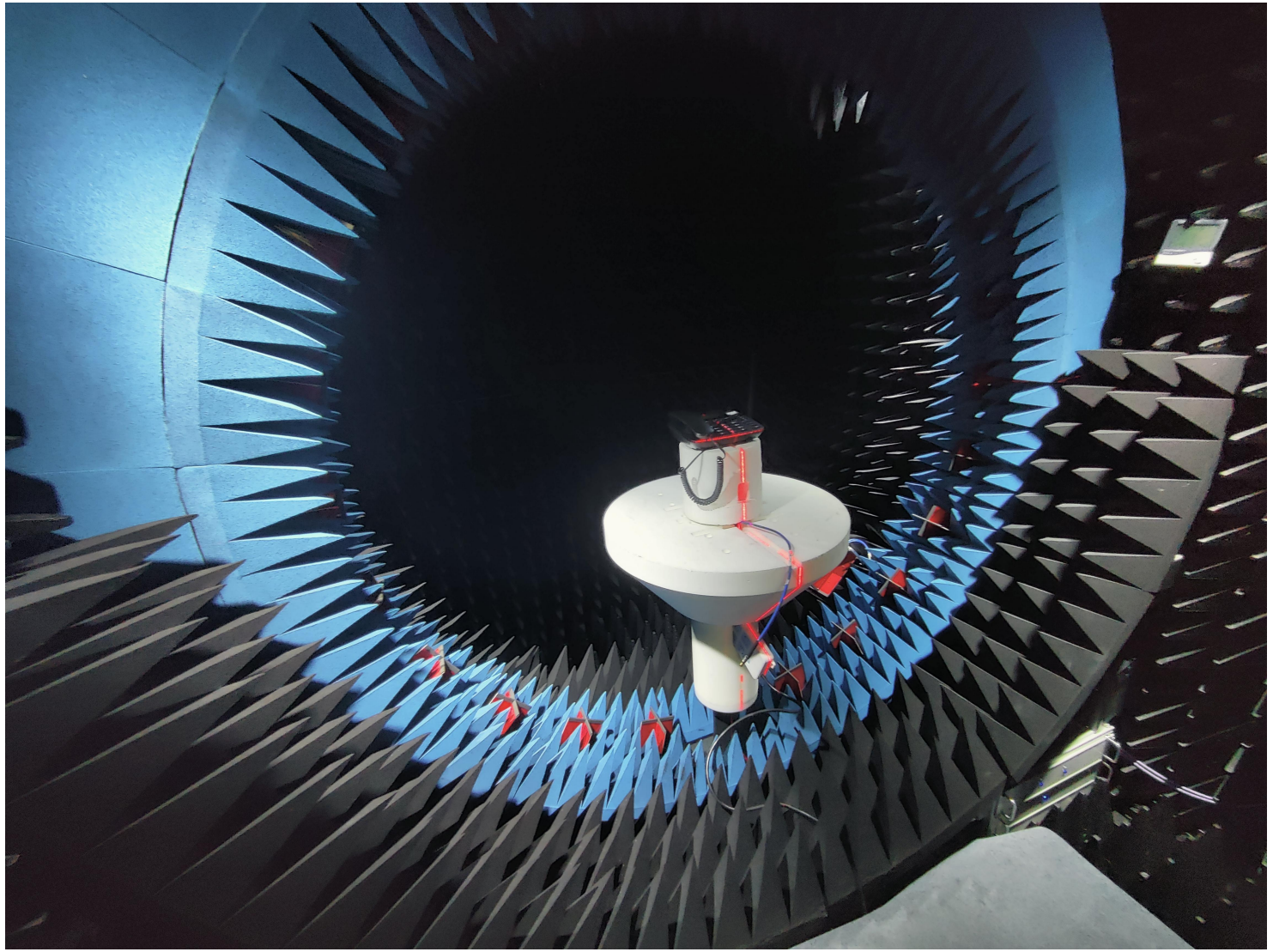
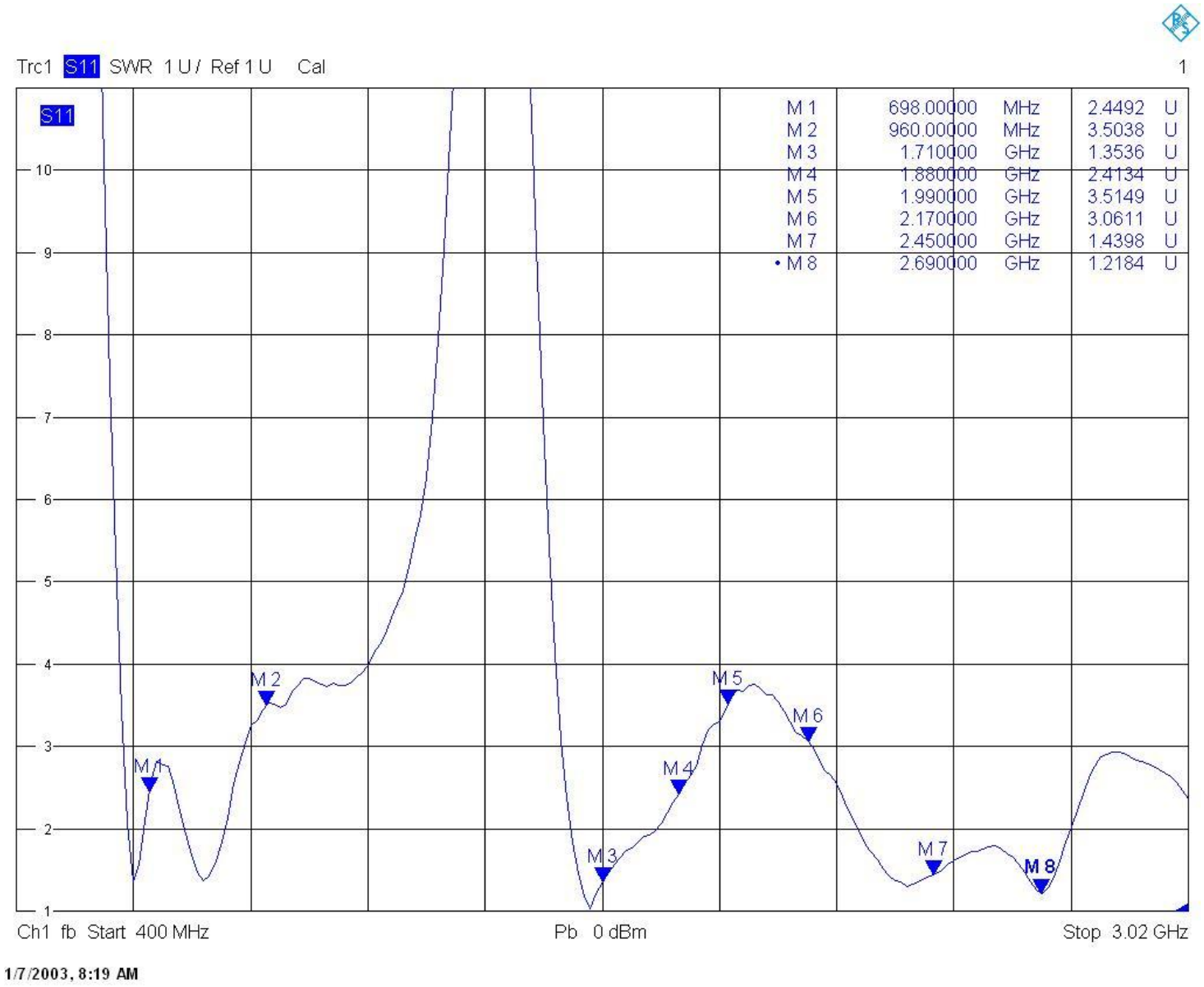
OTA



M1
M2
M3
M4
M5
CALL LOG
FM
SMS
REDIAL
MUTE
1
2ABC
3DEF
4GHI
5JKL
6MNO
7PQRS
8TUV
9WXYZ
*+
0
#

无源测试：驻波比（Passive test: VSWR）



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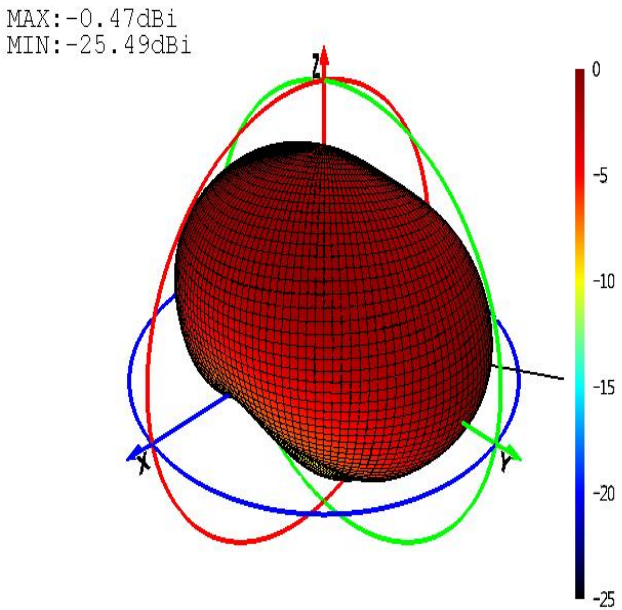
无源测试：效率和增益（Passive test: Efficiency&Gain)

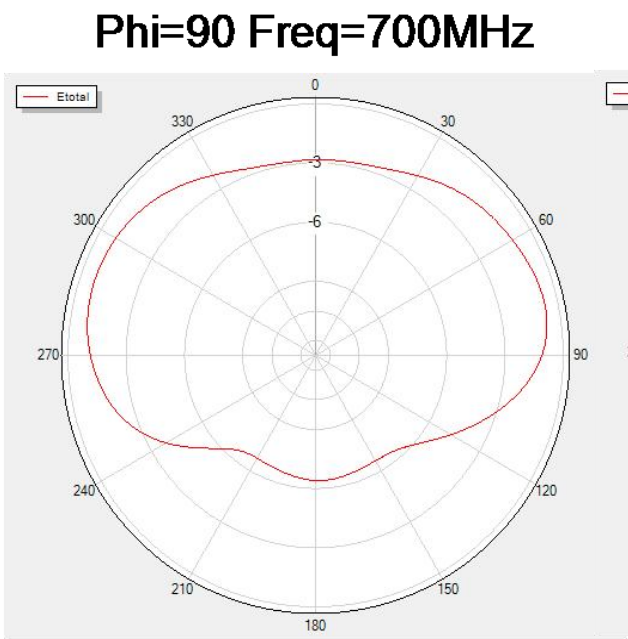
Gain&Efficiency 增益、效率			
frequency 频率(MHz)	gain 增益(dBi)	efficiency 效率(dB)	efficiency 效率(%)
700	-0.47	-3.32	46.57
710	-0.3	-2.81	52.38
720	-0.03	-3.3	46.79
730	-0.47	-3.83	41.37
740	-0.06	-3.35	46.19
750	0.16	-3.14	48.58
760	-0.04	-3.4	45.75
770	-0.15	-3.11	48.81
780	-0.81	-3.13	48.63
790	-1.33	-3.79	41.8
800	-1.31	-3.85	41.22
810	-0.46	-3.88	40.92
820	-0.56	-3.63	43.33
830	-0.53	-4.19	38.07
840	-0.8	-4.56	35.03
850	-0.98	-4.75	33.52
860	-0.94	-4.58	34.81
870	-0.91	-4.54	35.16
880	-0.54	-4.21	37.89
890	-0.54	-4.17	38.25
900	-0.48	-4.2	38
910	-0.31	-4.24	37.68
920	-0.33	-4.28	37.33
930	-0.26	-4.29	37.22
940	0.11	-4.21	37.93
950	1.25	-3.25	47.34
960	0.41	-4.23	37.75
970	0.99	-3.9	40.74
980	1.14	-3.79	41.82
990	1.08	-3.64	43.25
1000	1.79	-2.93	50.93

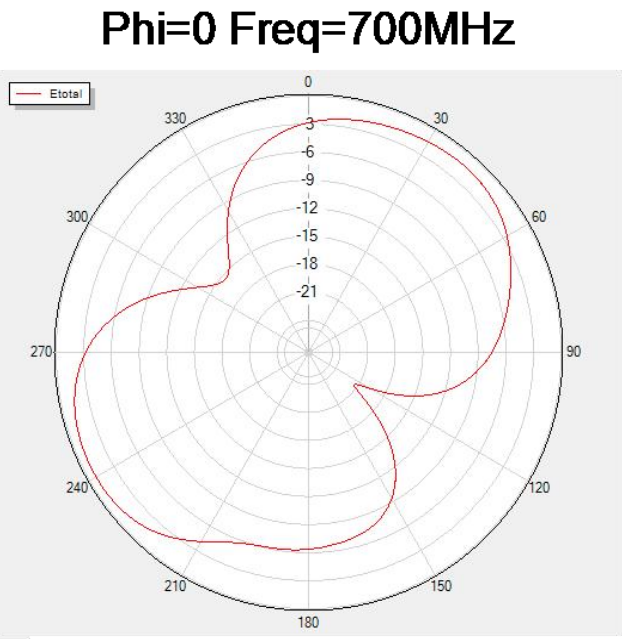
Gain&Efficiency&PhaseCenter 增益、效率和相位中心			
frequency 频率(MHz)	gain 增益(dBi)	efficiency 效率(dB)	efficiency 效率(%)
1700	1.77	-2.66	54.16
1750	1.84	-3.02	49.84
1800	0.57	-3.7	42.62
1850	1.29	-3.41	45.6
1900	1.6	-3.12	48.77
1950	2.32	-2.78	52.74
2000	2.55	-2.44	56.96
2050	3.02	-2.37	57.97
2100	2.93	-2.46	56.81
2150	2.15	-2.48	56.53
2200	1.84	-2.81	52.35
2250	1.78	-2.64	54.43
2300	2.81	-2.42	57.22
2350	2.46	-1.77	66.5
2400	2.94	-1.43	71.88
2450	3.36	-1.65	68.39
2500	3.01	-2	63.11
2550	2.74	-2.27	59.25
2600	2.83	-2.48	56.54
2650	2.23	-3.02	49.88
2700	0.76	-4.11	38.86

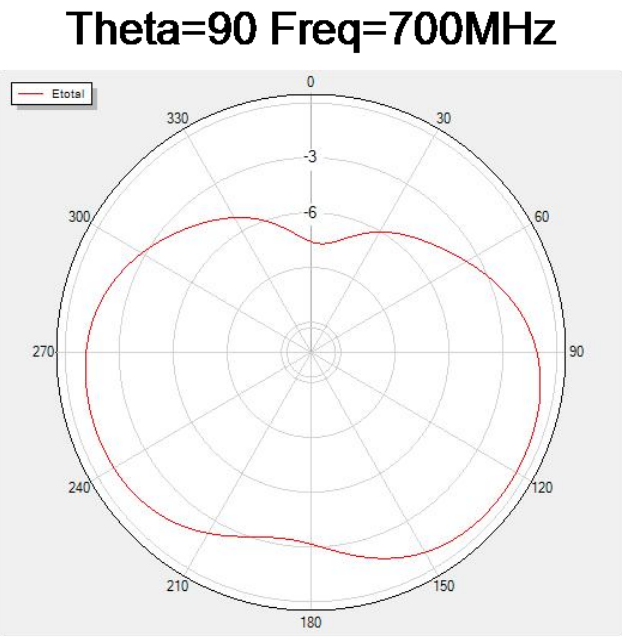
方向图（Directional diagram）

700MHz





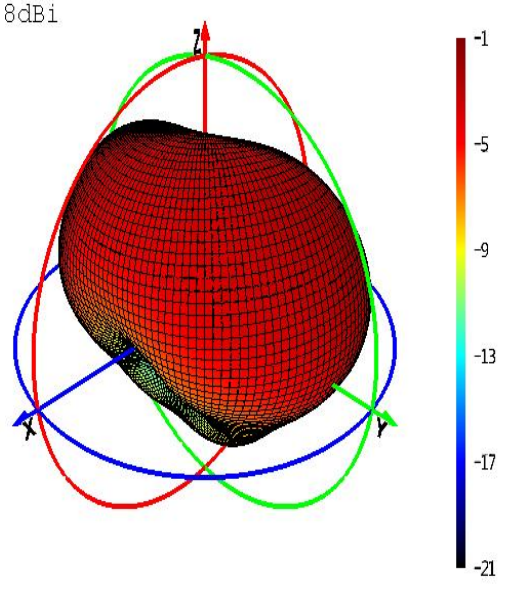




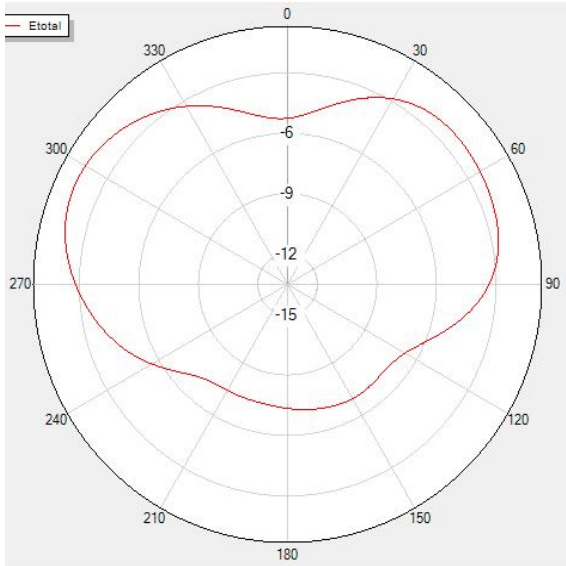
方向图（Directional diagram）

800MHz

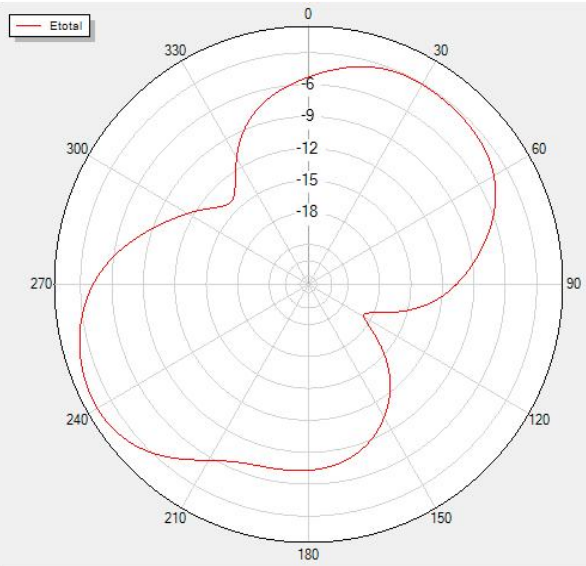
MAX:-1.31dBi
MIN:-21.8dBi



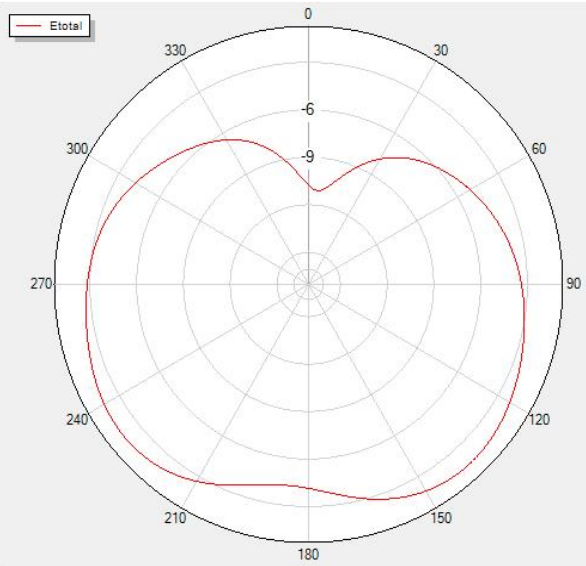
Phi=90 Freq=800MHz



Phi=0 Freq=800MHz



Theta=90 Freq=800MHz



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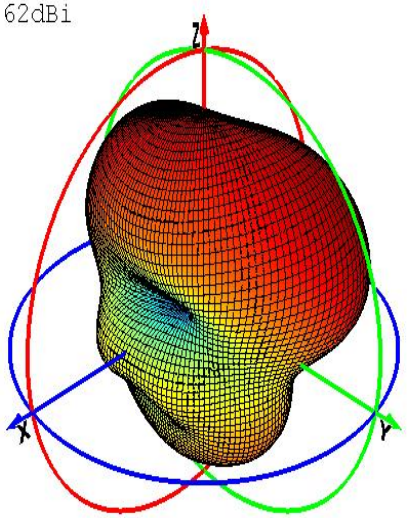
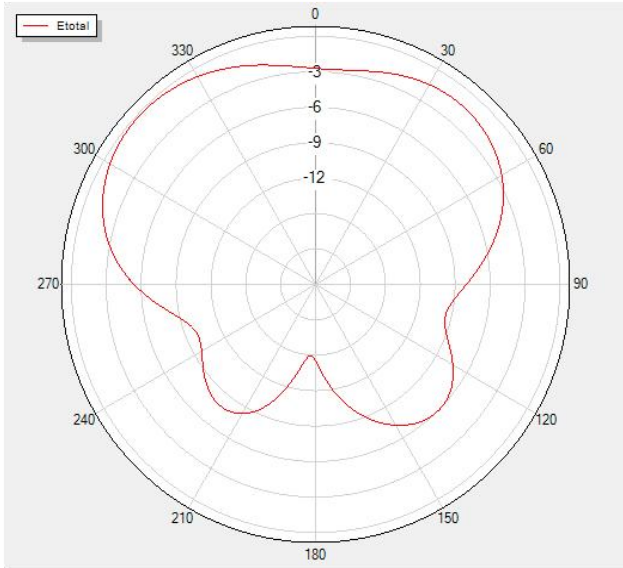
方向图（Directional diagram）

960MHz

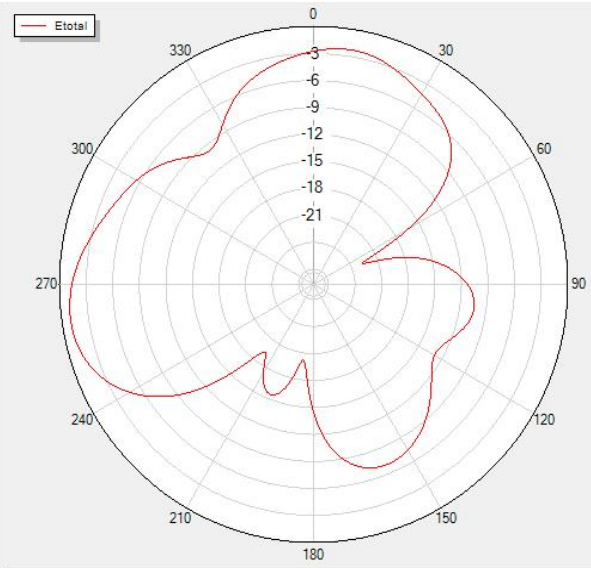
MAX:0.41dBi
MIN:-27.62dBi



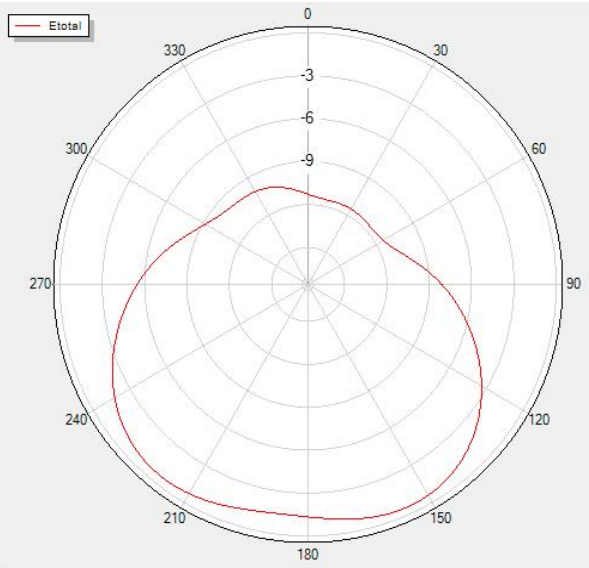
Phi=90 Freq=960MHz



Phi=0 Freq=960MHz



Theta=90 Freq=960MHz



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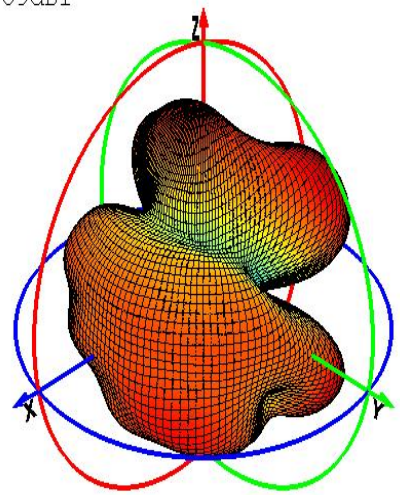
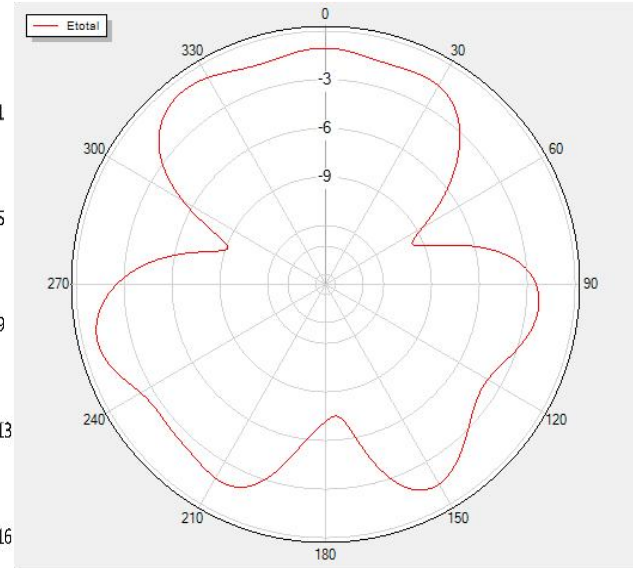
方向图（Directional diagram）

1710MHz

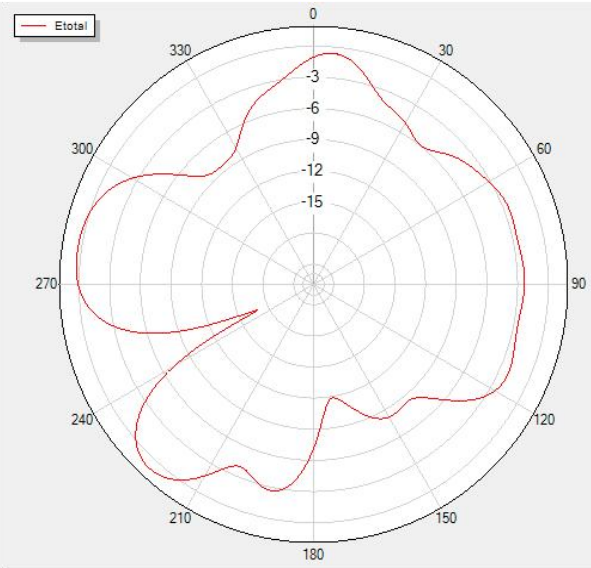
MAX:1.77dBi
MIN:-17.09dBi



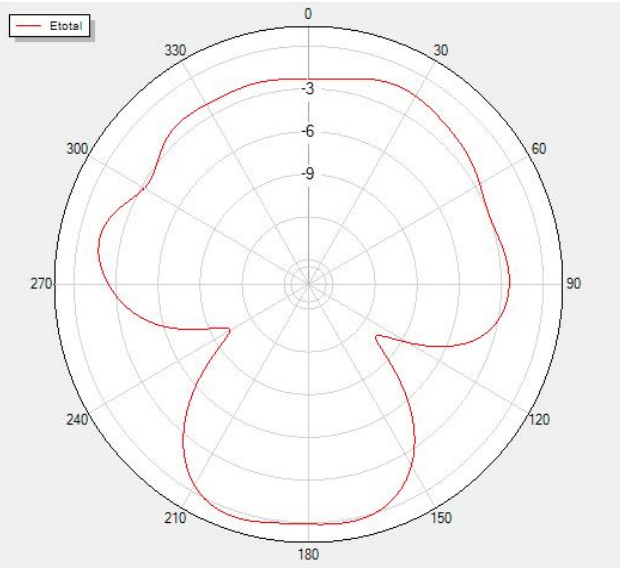
Phi=90 Freq=1700MHz



Phi=0 Freq=1700MHz



Theta=90 Freq=1700MHz



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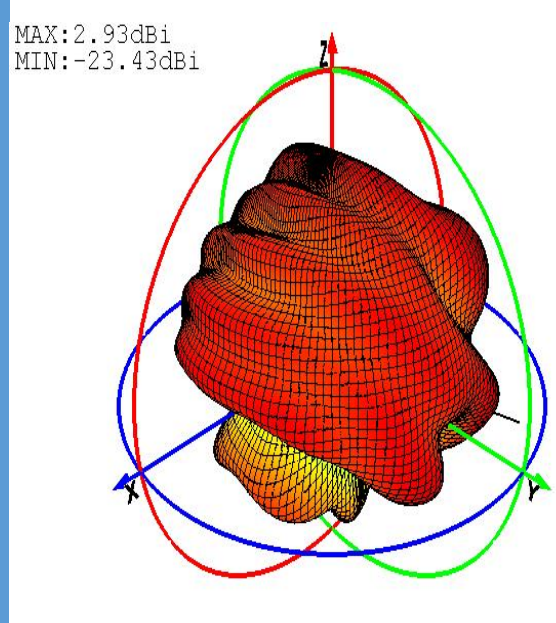
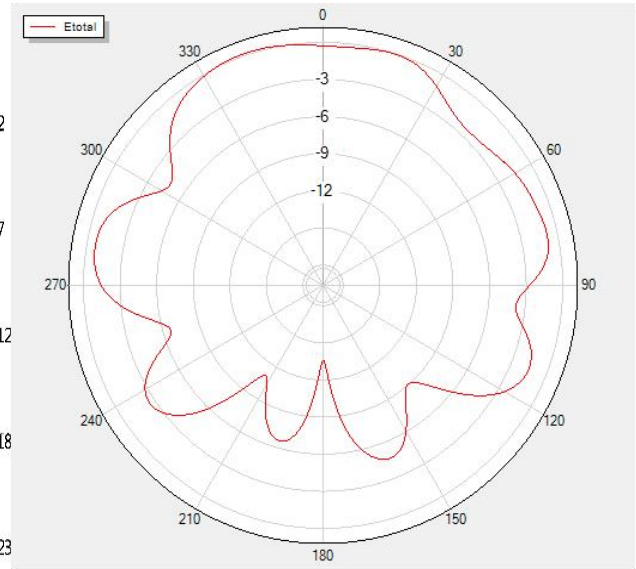
方向图（Directional diagram）

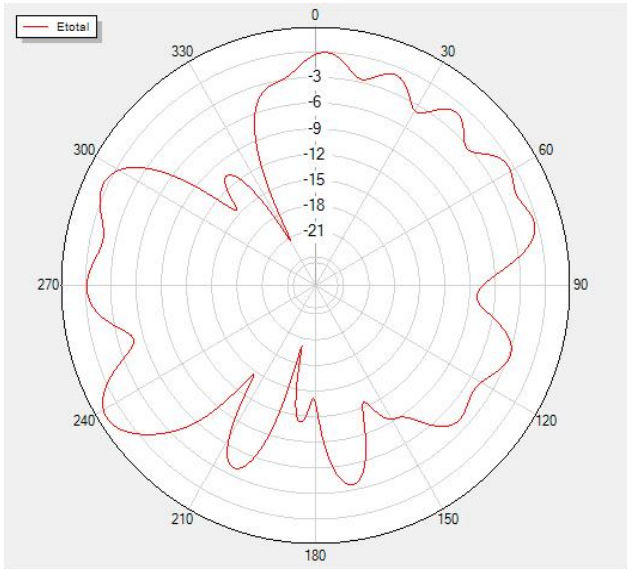
2100MHz



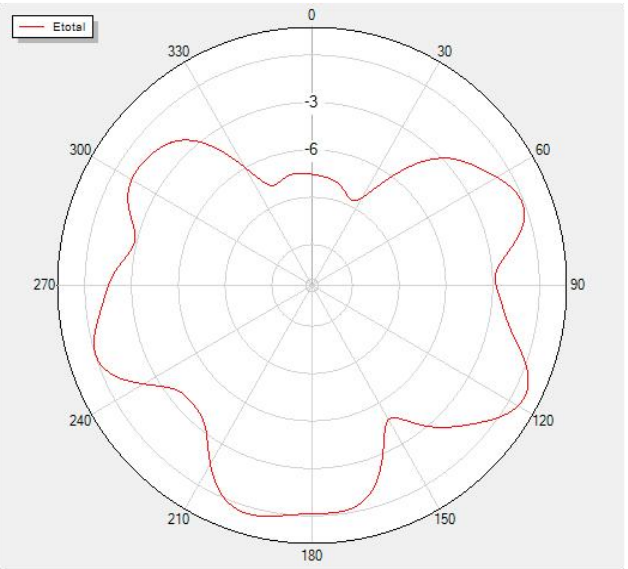
Phi=90 Freq=2100MHz



Phi=0 Freq=2100MHz



Theta=90 Freq=2100MHz



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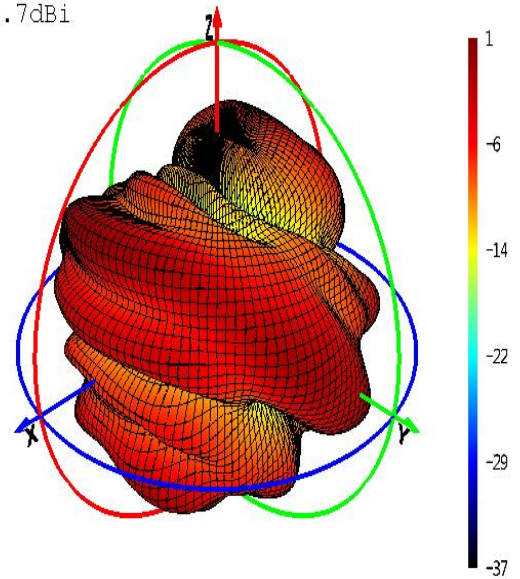
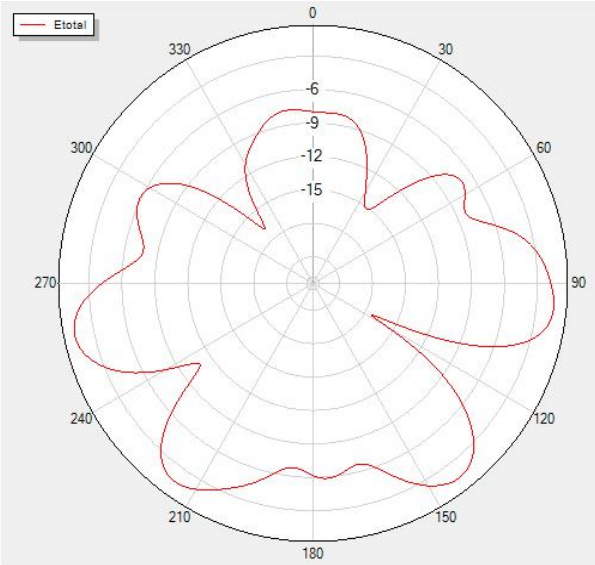
方向图（Directional diagram）

2700MHz

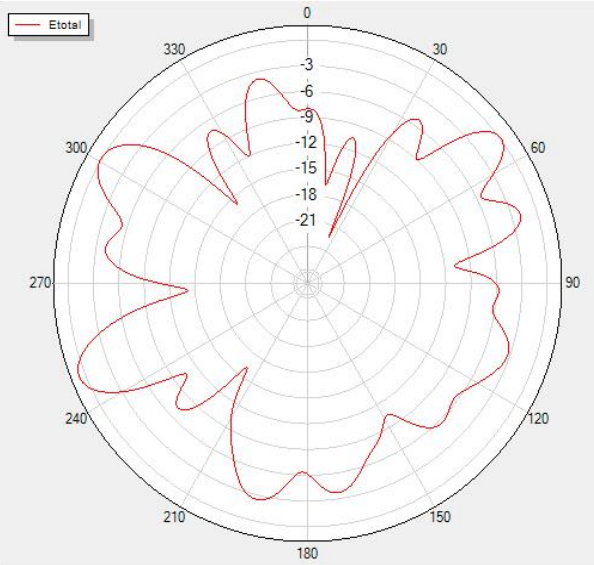
MAX:0.76dBi
MIN:-37.7dBi



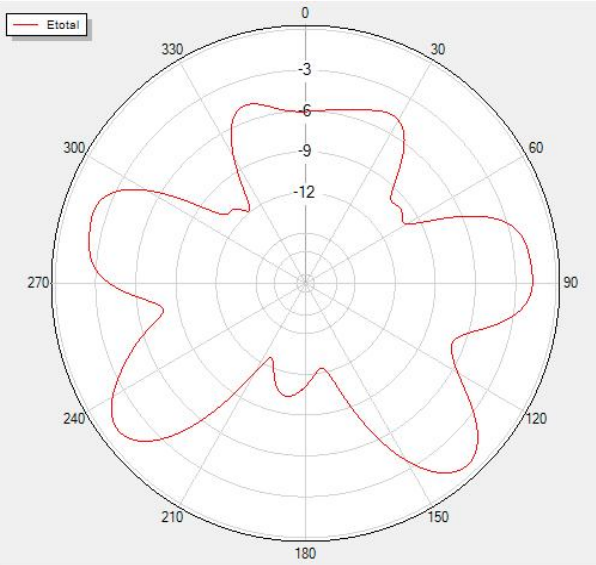
Phi=90 Freq=2700MHz



Phi=0 Freq=2700MHz



Theta=90 Freq=2700MHz



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有源测试：功率和灵敏度（Active test: TRP/TIS）

GSM				
Band	Channel	Frequency	TRP	TIS
GSM_B5	128	824.2	27.73	-102.97
	190	836.6	27.74	
	251	848.8	29.06	-103.22
GSM_B8	975	880.2	31.47	-100.4
	38	897.6	31.69	
	124	914.8	30.95	-104.08
GSM_B3	512	1710.2	26.31	-104.95
	699	1747.6	26.1	
	885	1784.8	26.19	-104.6
GSM_B2	512	1850.2	28.22	-106.21
	661	1880	28.32	
	810	1909.8	28.2	-105.46

WCDMA				
Band	Channel	Frequency	TRP	TIS
WCDMA_B1	9612	1922.4	20.68	-108.56
	9750	1950	20.1	
	9888	1977.6	19.21	-108.97
WCDMA_B2	9262	1852.4	20.36	-106.32
	9400	1880	21.17	
	9538	1907.6	20.77	-107.12
WCDMA_B5	4132	826.4	20.35	-106.07
	4183	836.6	20.49	
	4233	846.6	20.77	-108.67
WCDMA_B8	2712	882.4	20.49	-108.33
	2787	897.4	20.37	
	2863	912.6	20.6	-110.33

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