

Shenzhen Ruitong Electronic Co., LTD

313, Building 2, Chenghede Industrial Zone, No. 23 Huawang Road,
Dalang, Longhua District, Shenzhen, China

Antenna test report

Item name: NOVA

Designer: Hai Zhu

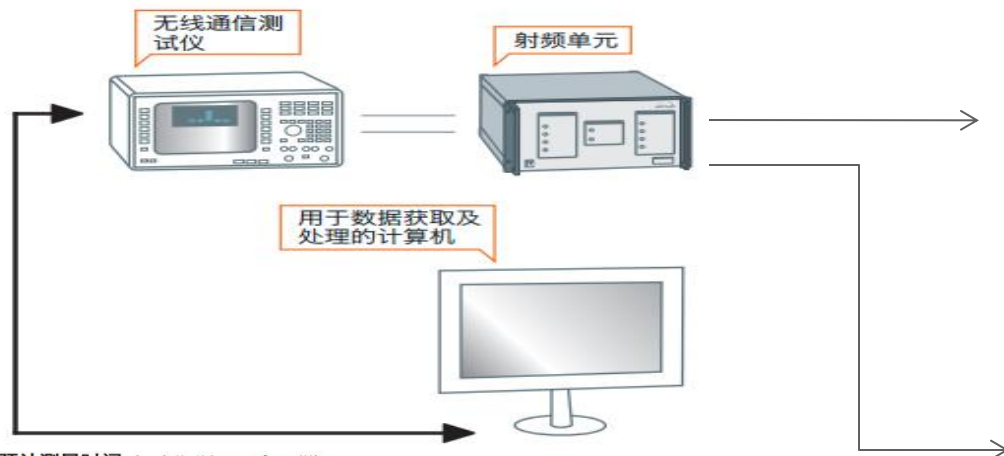
Date: 2025/3/29



NO.	Item	Specs		
1	frequency band	GSM/850/1900+WCDMA B/2/5 +LTEB/2/4/5/7/28		
2	Item name	Mobile phone		
3	Antenna space area			
4	Type of feedpoint			
5	TIS			
6	Antenna type			
7	PCB Board Length			
8	note	XXXX		
RF		Hai Zhu		

一、Test Systems and Test Equipment

System Brand: Measurement Functions: Gain - Directional Map Beamwidth Cross Polarization Deflection Side Flap Level 3D Cavity Reflectance Cavity Reflectance in any polarization (Straight or Circular) Antenna Efficiency TRP, TIS, EIRP, and EIS. Frequency Bands: StarLab 650 MHz to 6 Gi



TIS预计测量时间 (一个信道每隔30° 取样)

灵敏度算法 \ 标准	GSM GPRS EDGE	CDMA 1 x RTT 1 x EvDO	WCDMA HSDPA LTE FDD/TDD	Wi-Fi 802.11 a/b/g/n	CTIA 批准方法
RSSI模式+线性化+TIS补偿	8 min		10 min		是
EIS模式+TIS补偿		5 min		5 min	是 ²
快速CDMA		8 min			No
EIRP模式+TIS补偿				10 min	No

1、根据RTT
2、根据协议



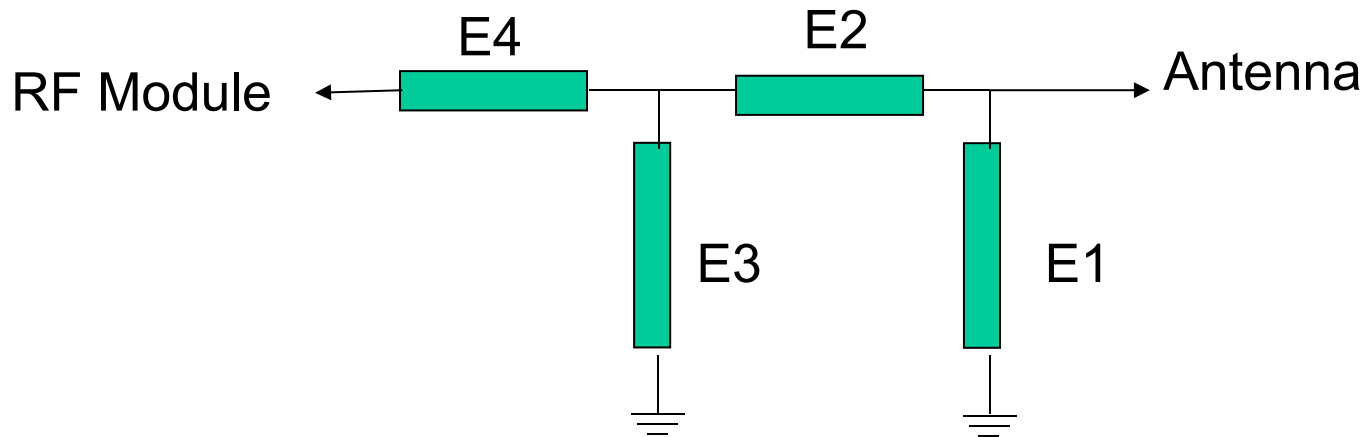
TIS 3D方位切割强度图



TRP 3D方位切割强度图

二、Matching Circuit Diagram

Element	E1(0402)	E2(0402)	E3(0402)
Value		0 Ω	



All antennas should have “ Π ” matching circuits.

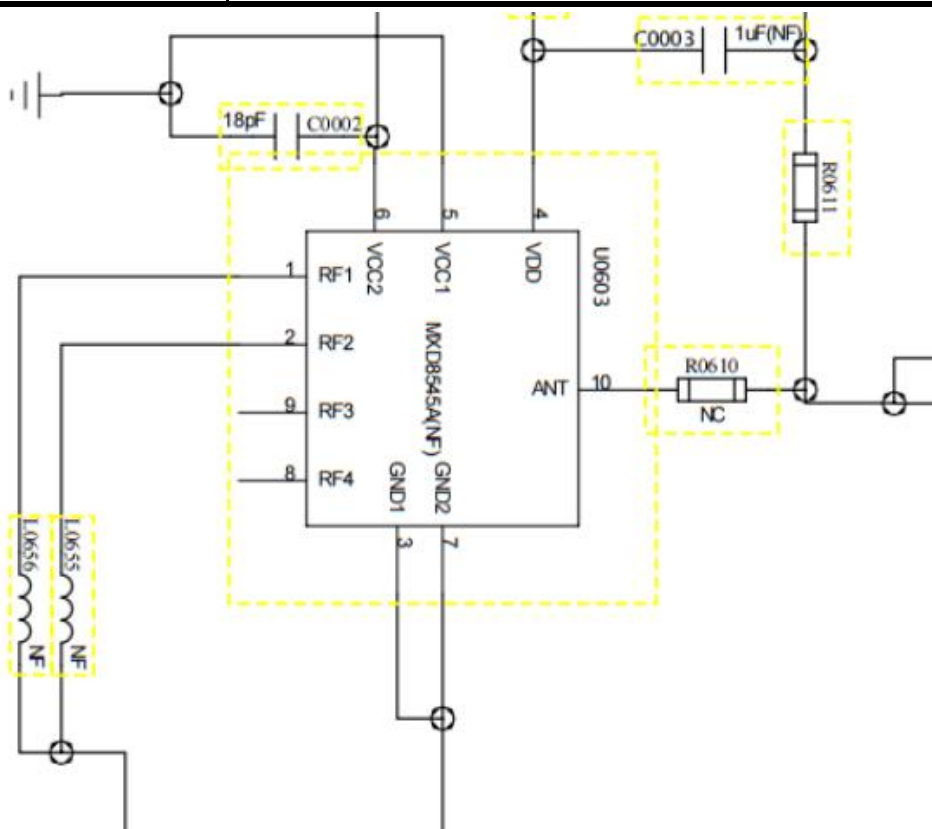
RF1 road is set as the default road on the software, and RF1 road is automatically in the normal working state after the cell phone is turned on.

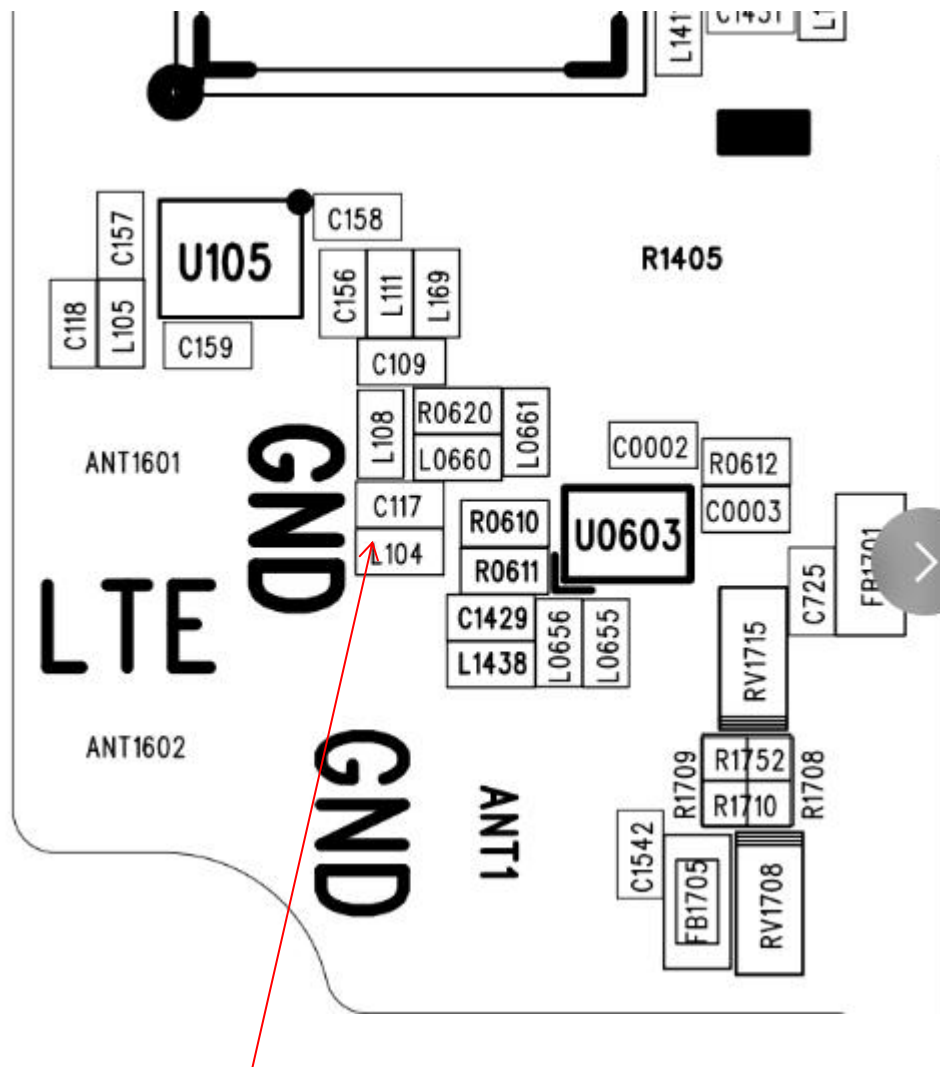
RF 1-way patch 0 ohm	GSM:850/1900+W-B2/5+LTE-B2/4/5/7
----------------------	----------------------------------

RF 2-way 15NH	LTE/B28
---------------	---------

RF 3	
------	--

RF 4	
------	--

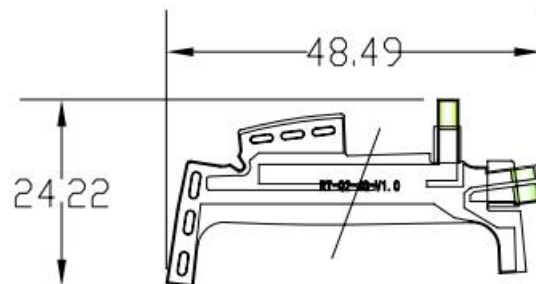




Remove the 120NH and 22PF capacitor inductors coming out of the main feedpoints.

版本	修改内容	修改者	修改日期

基 材	半对1/3	
	半对半	√
	一对半	
	一对一	

总厚 $0.12 \pm 0.01\text{mm}$

手撕线背胶图-背面

NOTES:

1. 胶纸为: 3M300LSE;
2. 金手指表面镀金 $0.5 \sim 3\mu$;注意用材, 此位置不可有氧化现象.
3. 总体厚度应小于或等于 0.12mm ;
4. 精确公差范围: $\pm 0.03\text{mm}$;
5. 只允许产品图导电;

深圳市瑞通电子有限公司			
	单位: mm	名称: FPC	日期: 2024-11-1
一般公差:		料号: RT2043-J150MINI-GSM	设计:
X. ± 0.5		材质: FPC+3M9471	R F:
.X ± 0.25		表面处理: 清洁	确认:
.XX ± 0.05		颜色:	比例: 1:1
.XXX ± 0.05			版本: A
ANGULAR $\angle \pm 0.5^\circ$			

[illegible]

			2G/3G				
Test Item		GSM850 measured value			PCS1900 measured value		
signal path		128	192	251	512	661	810
TRP (dBm)		27.1	27	26.4	23.1	23.9	24.2
TIS (dBm)		-103.8	-104.4	-103.9	-102.2	-102.8	-102.4
Test Item		WCDMA850 measured value			WCDMA1900 measured value		
signal path		4357	4408	4458	9662	9800	9938
TRP (dBm)		17.9	18.3	18.2	16.1	16.7	16.3
TIS (dBm)				-104.9			-104.1

			FDD-4G network				
Test item		B2 measured value			B4 measured value		
Signal path		L	M	H	L	M	H
TRP (dBm)		16.1	16.3	15.9	15.2	16.3	16.8
TIS (dBm)				-91.8			-88.9
Test item		B5 measured value			B7 measured value		
Signal path		L	M	H	L	M	H
TRP (dBm)		19.2	19.7	19.9	17.4	16.6	16.1
TIS (dBm)				-90.1			-87.7

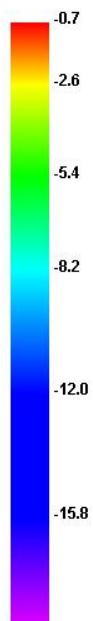
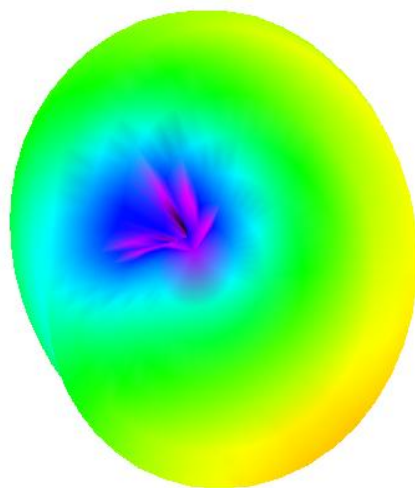
			FDD-4G network				
Test item		B28 measured value			measured value		
Signal path		L	M	H	L	M	H
TRP (dBm)		14	15.4	15.5			
TIS (dBm)				-87.4			
Test item		measured value			measured value		
Signal path		L	M	H	L	M	H
TRP (dBm)							
TIS (dBm)							

Efficient (2G+3G+4G)

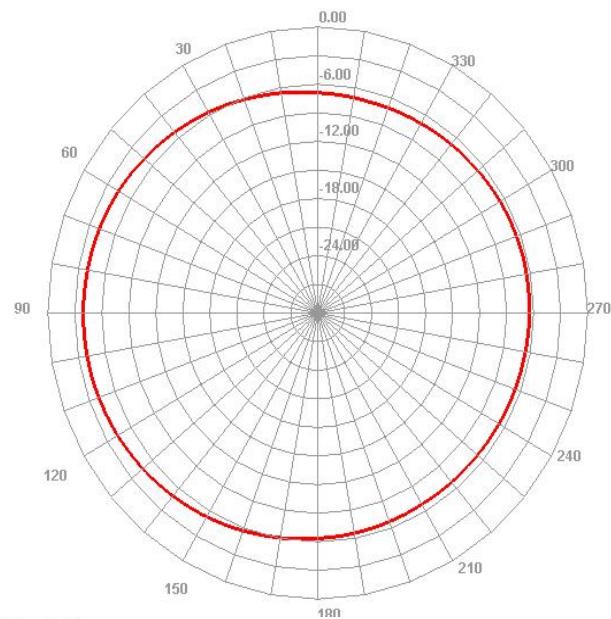
PEAK GAIN			
2G:	Frequency range	Effi %	Gaim dBi
GSM850	824~894Mhz	21. 80	-0. 71
PCS1900	1850~1990Mhz	30. 81	0. 81
3G:			
W2	1850~1990Mhz	30. 81	0. 81
W5	824~894Mhz	21. 80	-0. 71
4G:			
LTE-B2	1850~1990Mhz	30. 81	0. 81
LTE-B4	1710~2155Mhz	31. 07	0. 92
LTE-B5	824~894Mhz	21. 80	-0. 71
LTE-B7	2500~2690Mhz	28. 01	1. 12
LTE-B28	708~798Mhz	19. 05	-1. 42
BT	2400~2500Mhz	42. 51	1. 37

Efficient (791–894MHz)

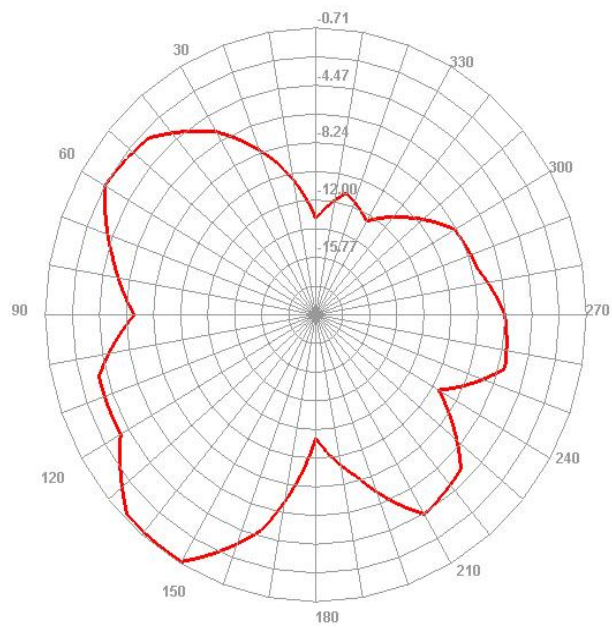
830.000MHz



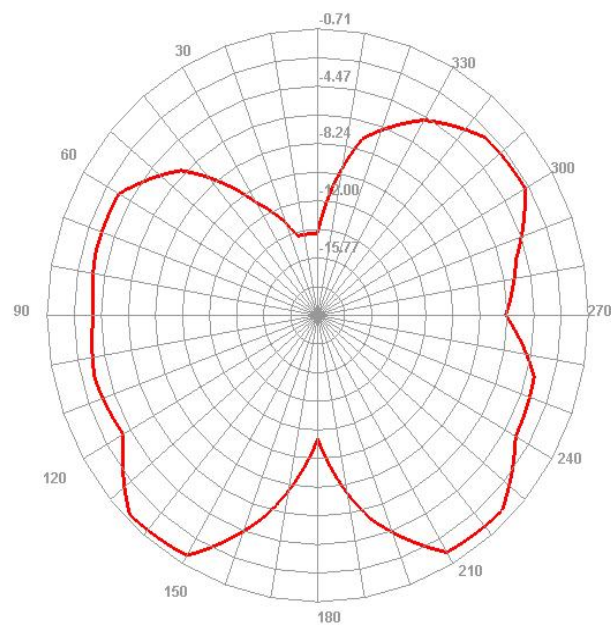
830.000MHz H



830.000MHz E1

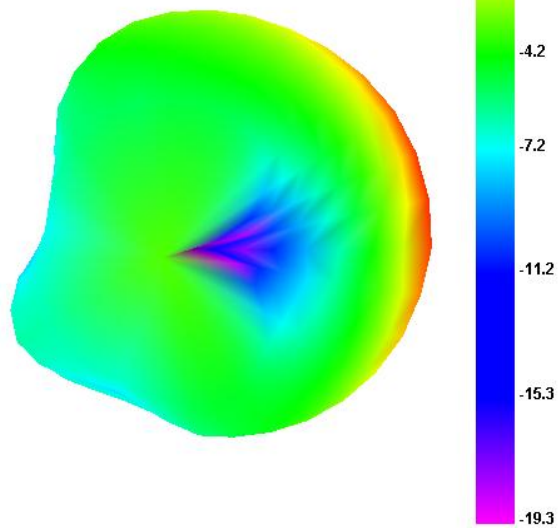


830.000MHz E2

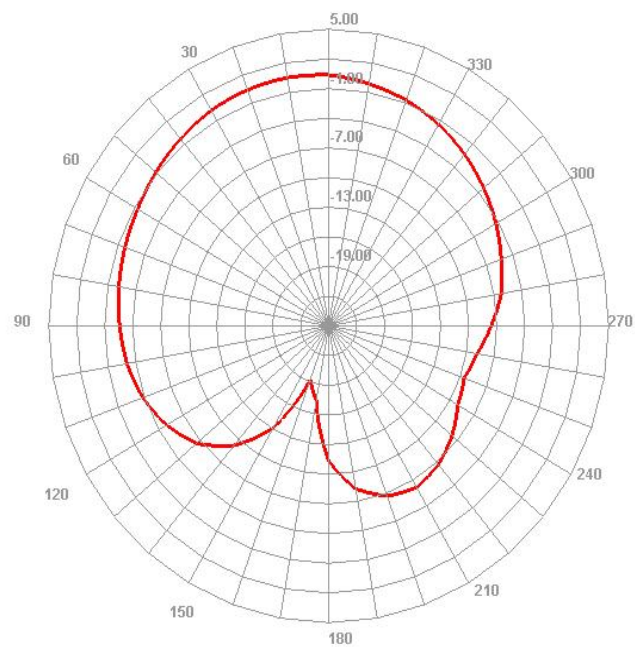


Efficient (1710-1990MHz)

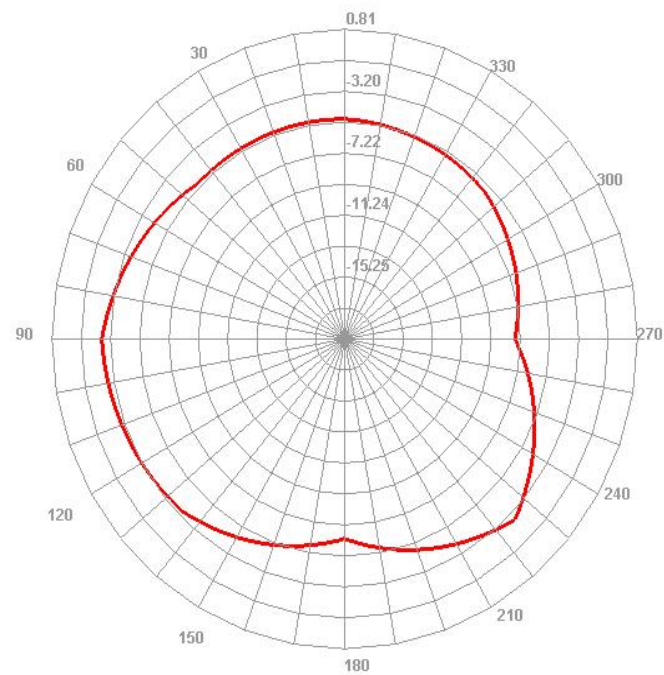
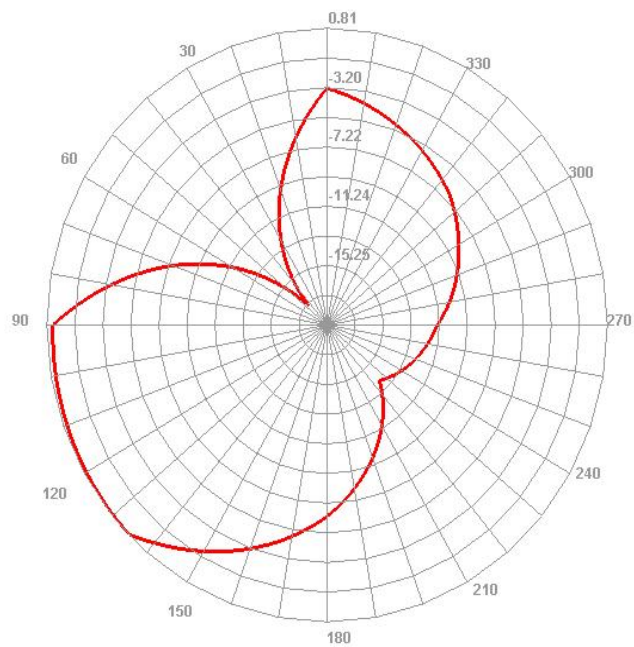
1920.000MHz



1920.000MHz H

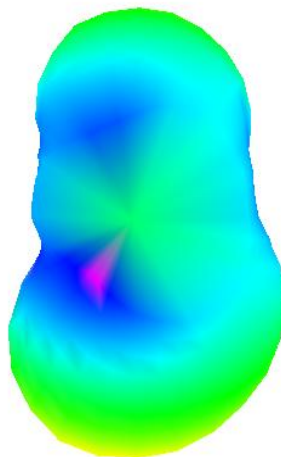


1920.000MHz E1

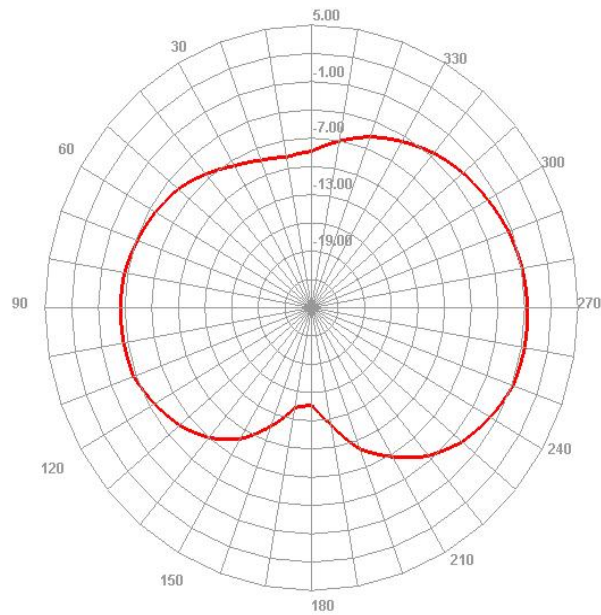


Efficient (1920-2170MHz)

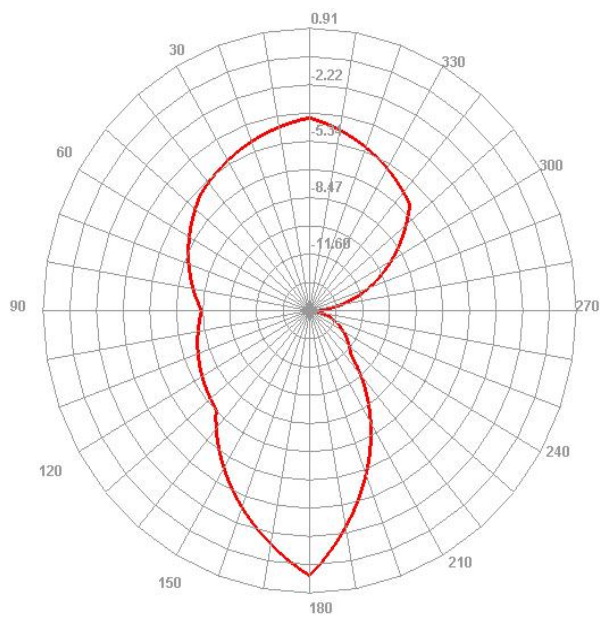
2010.000MHz



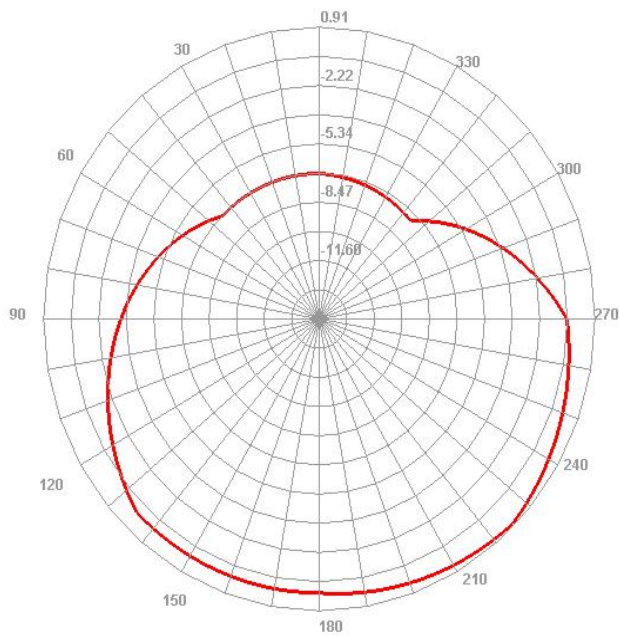
2010.000MHz H



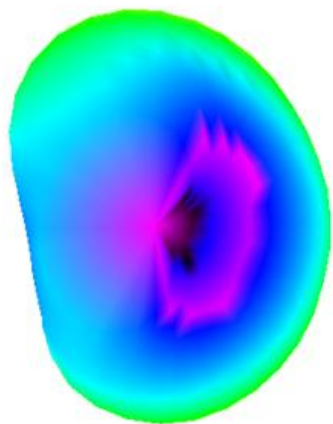
2010.000MHz E1



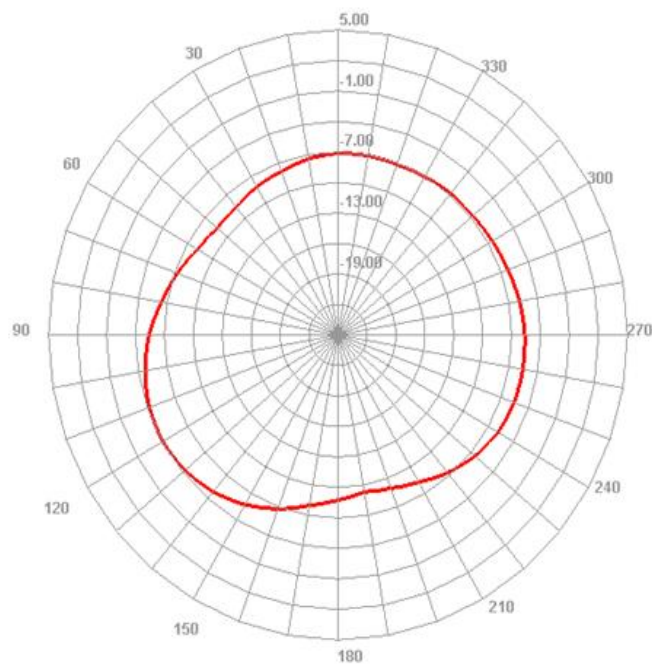
2010.000MHz E2



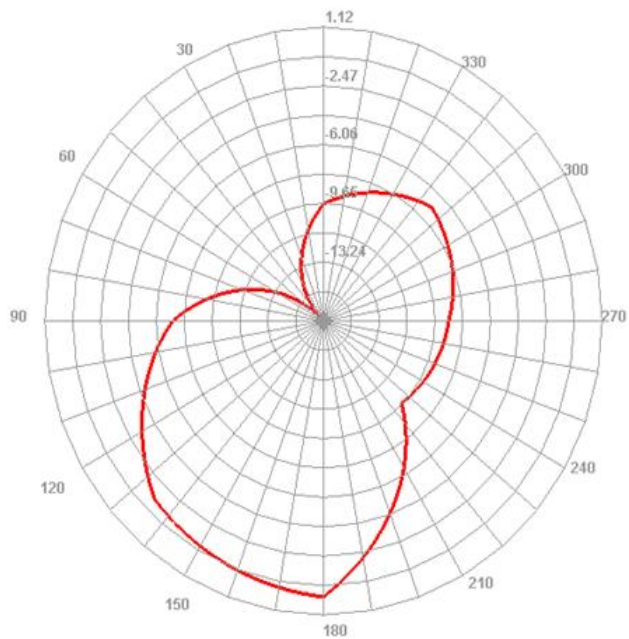
Efficient (2500-2690MHz)
2660.000MHz



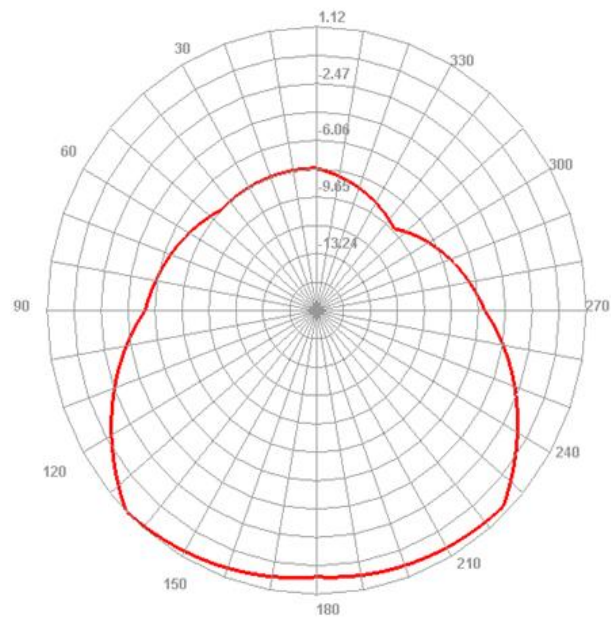
2660.000MHz H



2660.000MHz E1

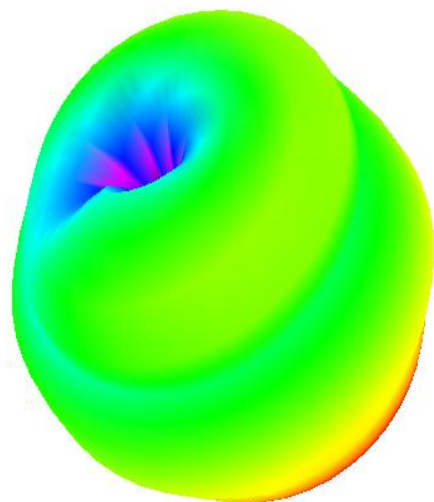


2660.000MHz E2

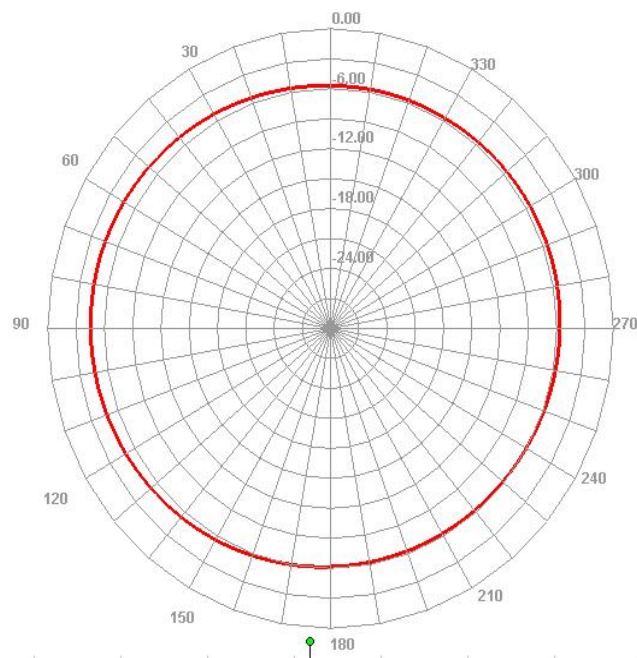


Efficient (698-798MHz)

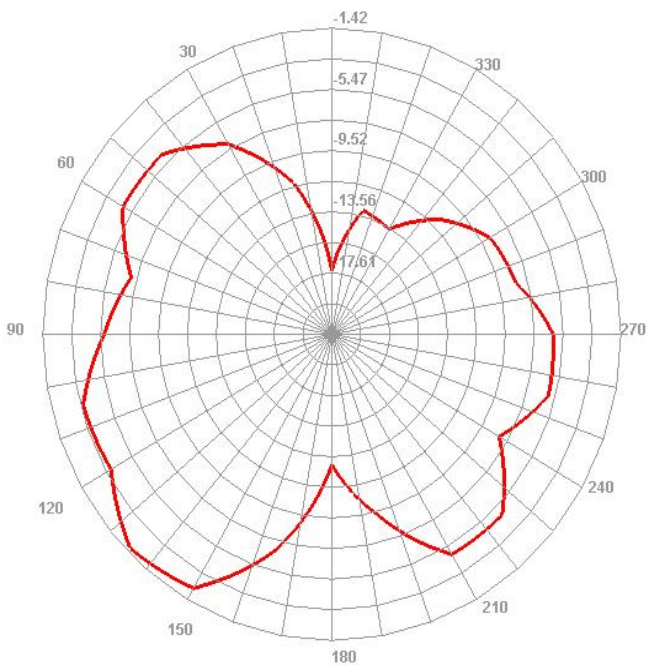
710.000MHz



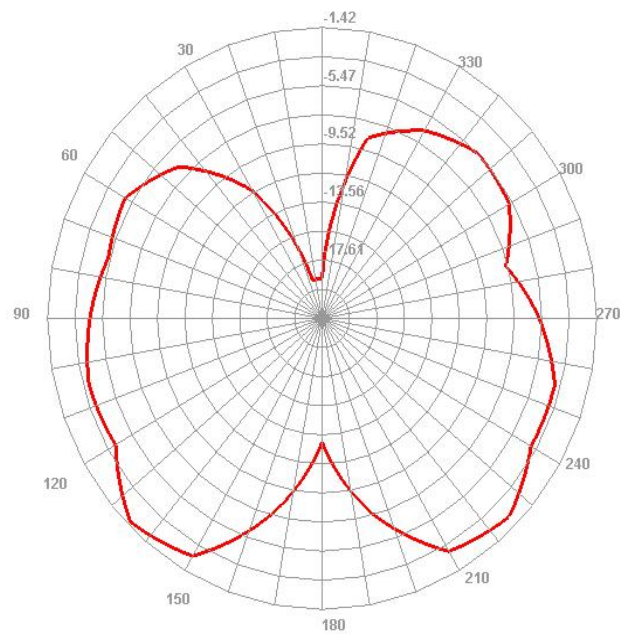
710.000MHz H



710.000MHz E1

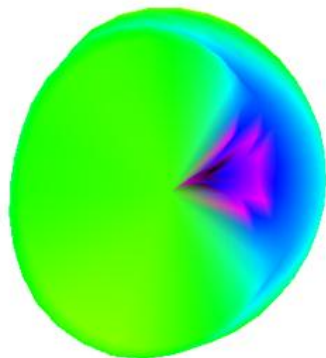


710.000MHz E2

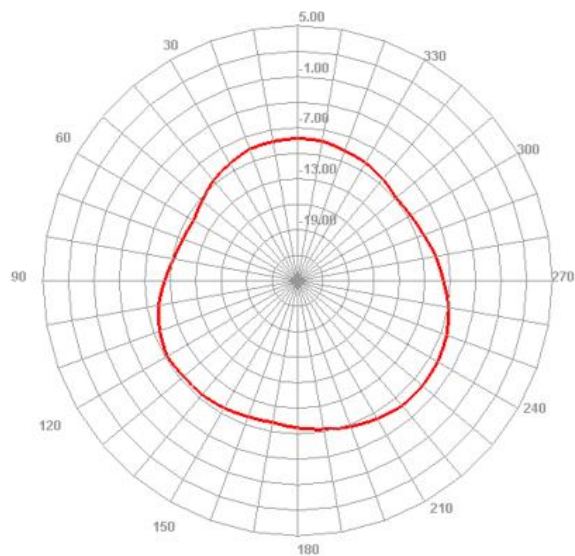


Efficient (2.4G-WIFI/BT 2400-2500MHz)

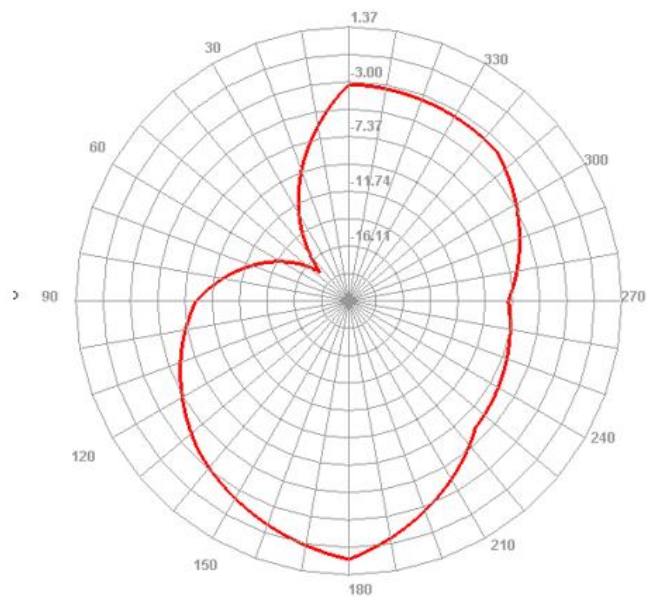
2450.000MHz



2450.000MHz H



2450.000MHz E1



2450.000MHz E2

