



ShenZhen Huaxinwei communication technology  
Co.,Ltd.

## Antenna test report

Customer Name: Hua Yue Shi Tong

Project Name: N62F

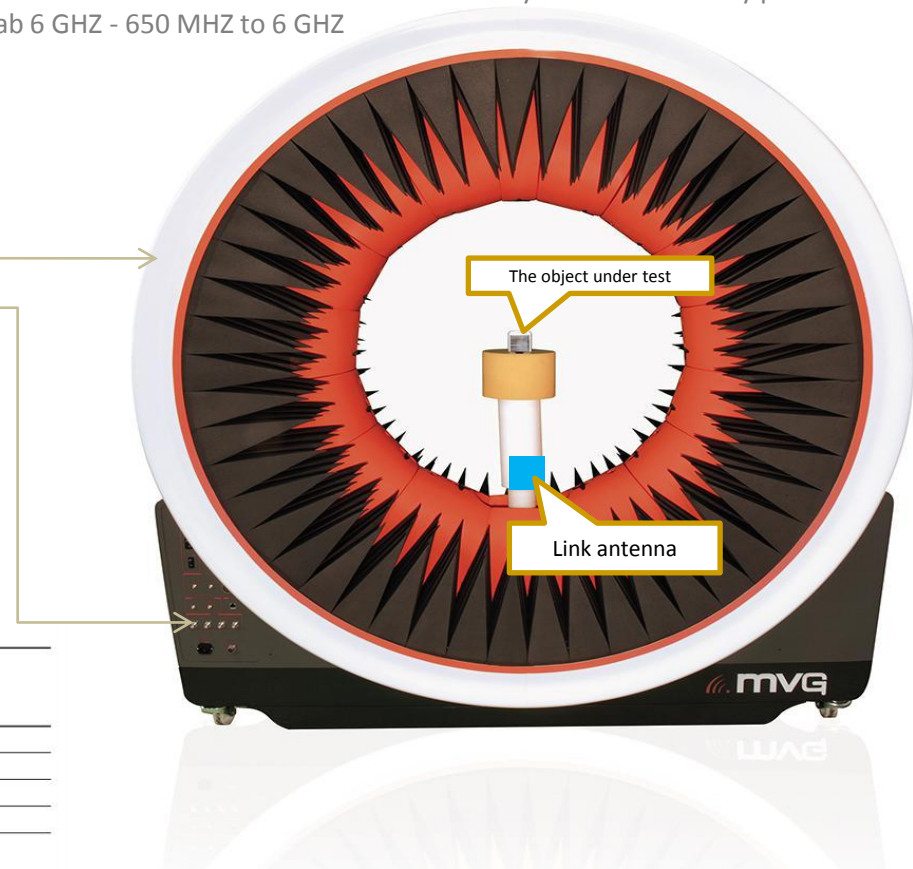
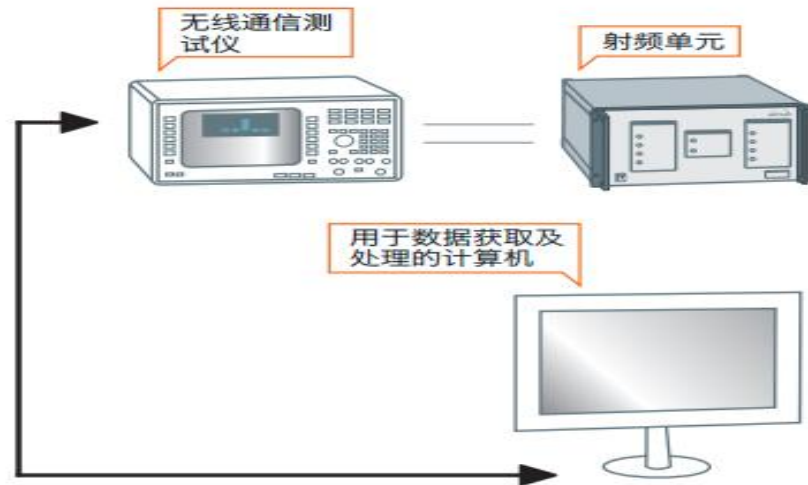
Designer: Zhang Jun

Date: 2023/03/13

The customer name		<b>Hua Yue Shi Tong</b>	Project Name	<b>N62F</b>
NO.	project	<b>Detailed above</b>		
1	spectrum	GSM850/900/1800/1900+WCDMA-B1/2/5/8+LTE-B2/3/4/5/7/8/12/17/28+GPS/WIFI/BT		
2	Project type	The mobile phone		
3	Antenna space area			
4	Feed point type			
5	The sensitivity			
6	Type of antenna			
7	The length of the PCB board			
8	note	Debugging prototype		
RF		Zhang Jun	13430515055	hxw_xiaozhang@126.com

# 1、 Test system and test equipment

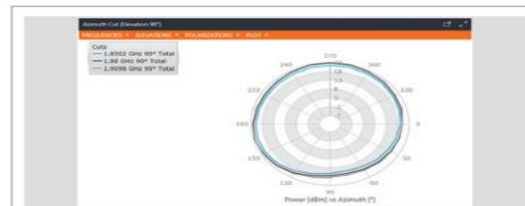
System Brand: MVG(SATIMO) measurement features: gain • pattern beamwidth cross polarization resolution sidelobe level 3D cavity reflectance at any polarization cavity reflectance (line or arc) antenna efficiency TRP, TIS, EIRP and EIS. Frequency band: StarLab 6 GHz - 650 MHz to 6 GHz



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 <sup>2</sup>
快速CDMA		8 min			No
EIRP模式+TIS补偿				10 min	No

1、根据RTC  
2、根据协议



# Test Equipment



Antenna position

WWAN LB antenna



GPS/WIFI/BT antenna



WWAN M&H antenna



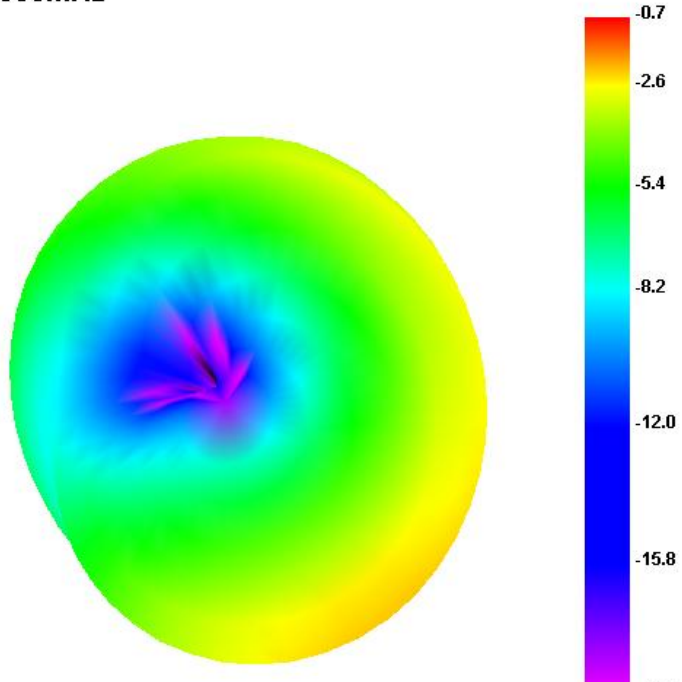
## Efficient ( 2G+3G+4G+2. 4G-WiFi /BT)

PEAK GAIN		
2G:	Frequency range	dBi
GSM850	824~894Mhz	-0.71
GSM900	880~960Mhz	-1.05
DCS1800	1710~1880Mhz	0.63
PCS1900	1850~1990Mhz	0.81
3G:		
W1	1920~2170Mhz	0.92
W2	1850~1990Mhz	0.81
W5	824~894Mhz	-0.71
W8	880~960Mhz	-1.05
4G:		
LTE-B2	1850~1990Mhz	0.81
LTE-B3	1710~1880Mhz	0.63
LTE-B4	1710~2155Mhz	0.92
LTE-B5	824~894Mhz	-0.71
LTE-B7	2500~2690Mhz	1.12
LTE-B8	880~960Mhz	-1.05
LTE-B12	698~746Mhz	-1.42
LTE-B17	704~746Mhz	-1.42
LTE-B28	708~798Mhz	-1.42
WIFI	2400~2500Mhz	2.08dBi
BT	2400~2500Mhz	2.08dBi

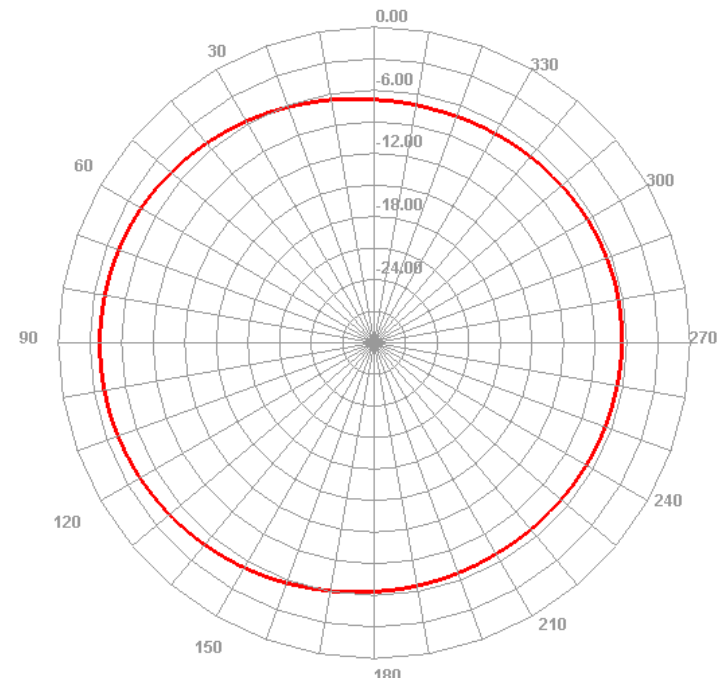


# Efficient ( GSM850+W5+LTE-B5 824~894MHz )

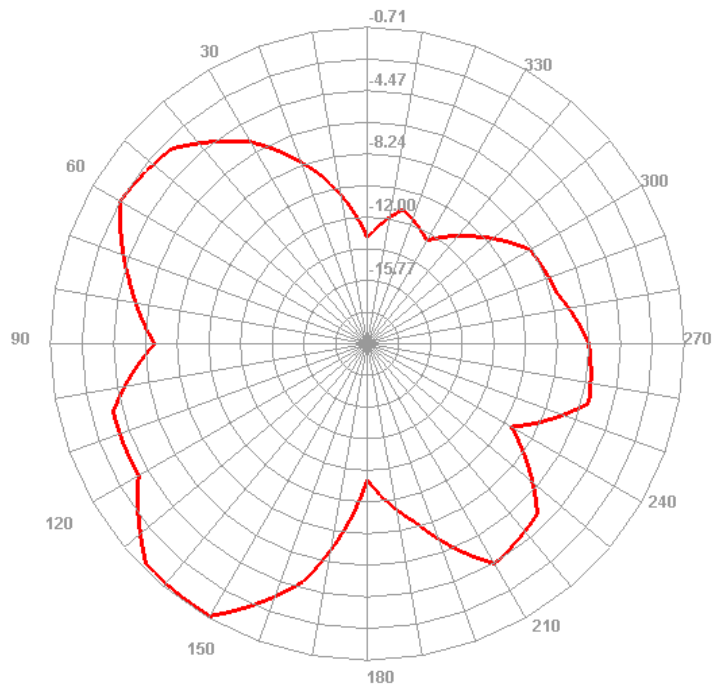
830.000MHz



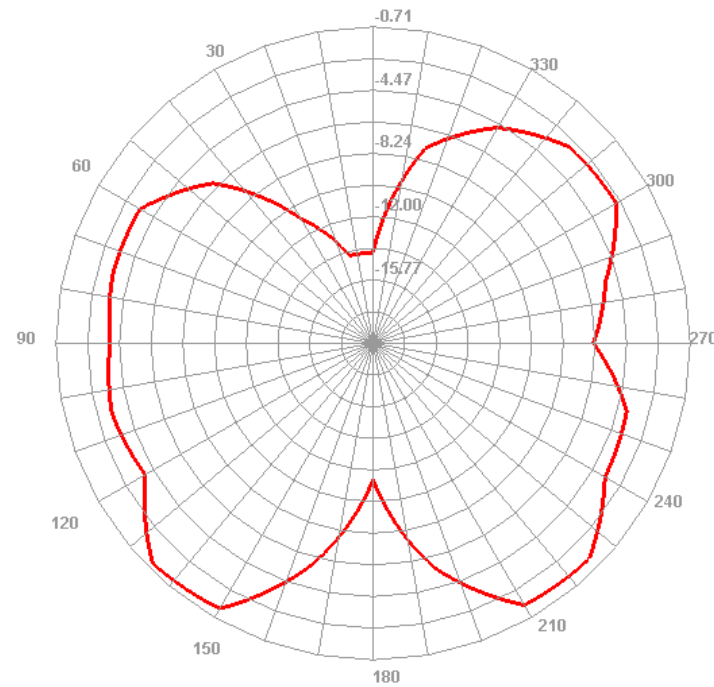
830.000MHz H



830.000MHz E1

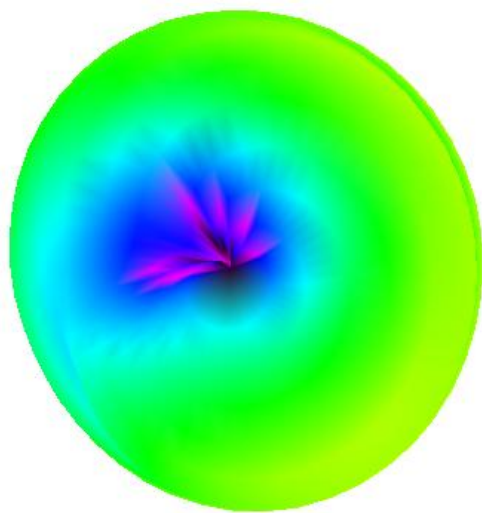


830.000MHz E2

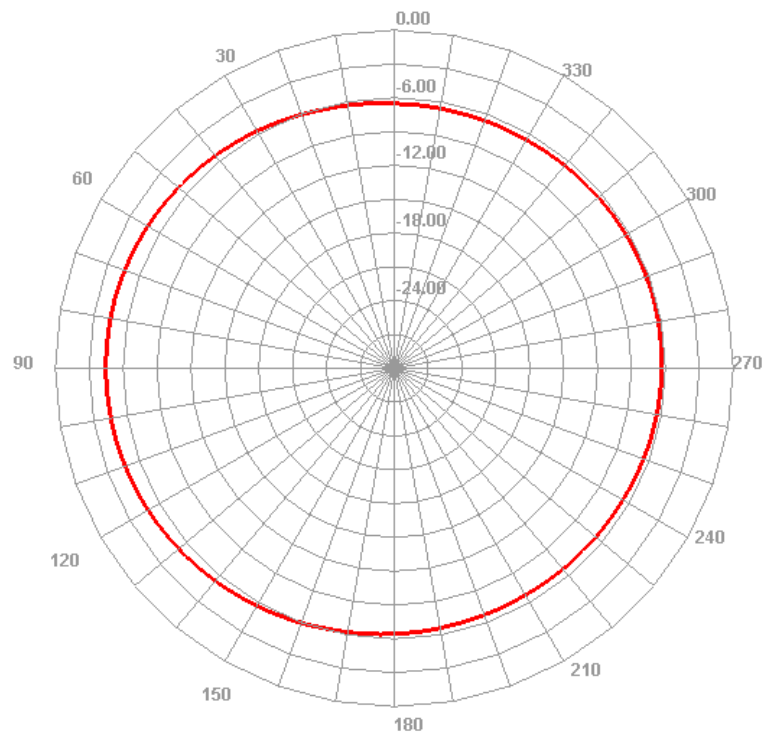


# Efficient ( GSM900+W8+LTE-B8 880~960MHz )

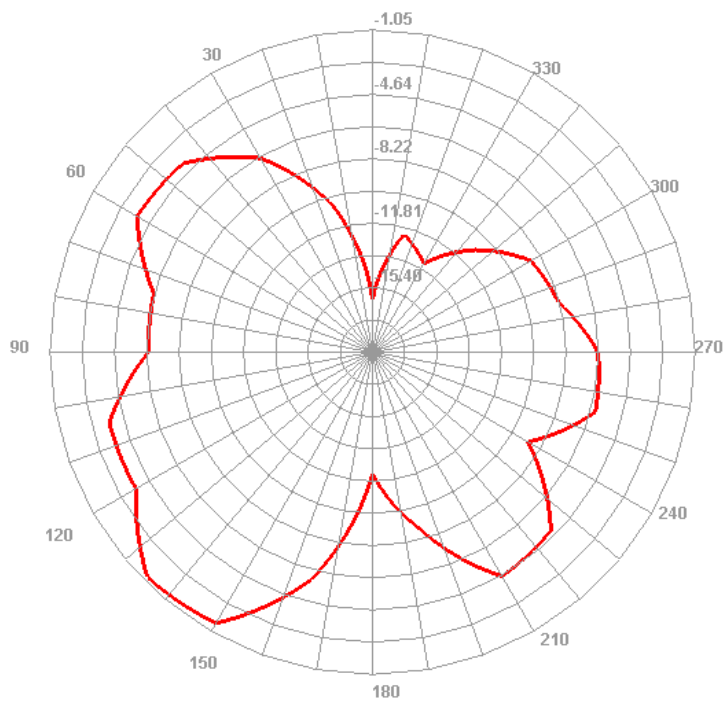
900.000MHz



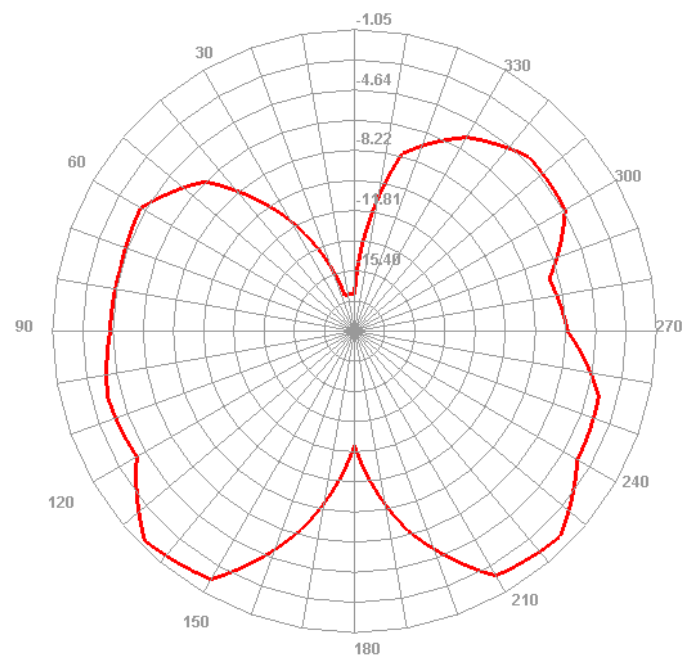
900.000MHz H



900.000MHz E1



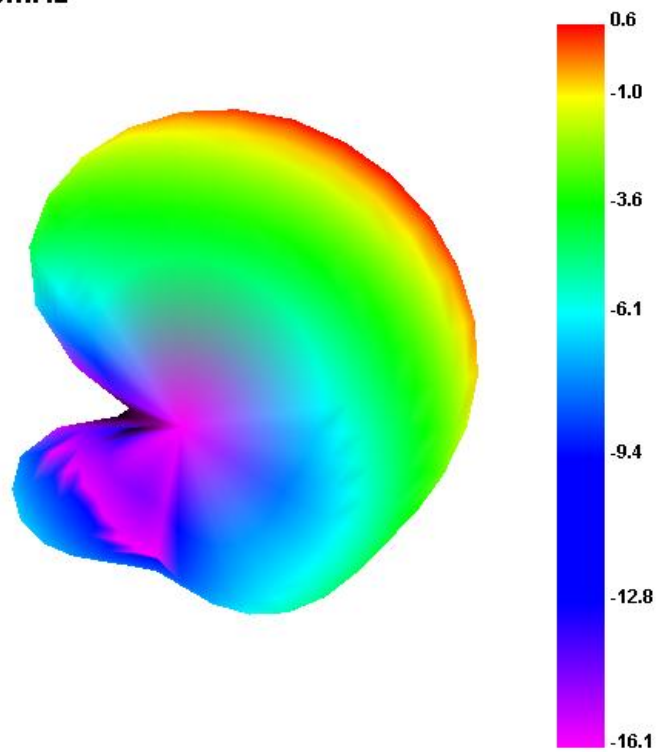
900.000MHz E2



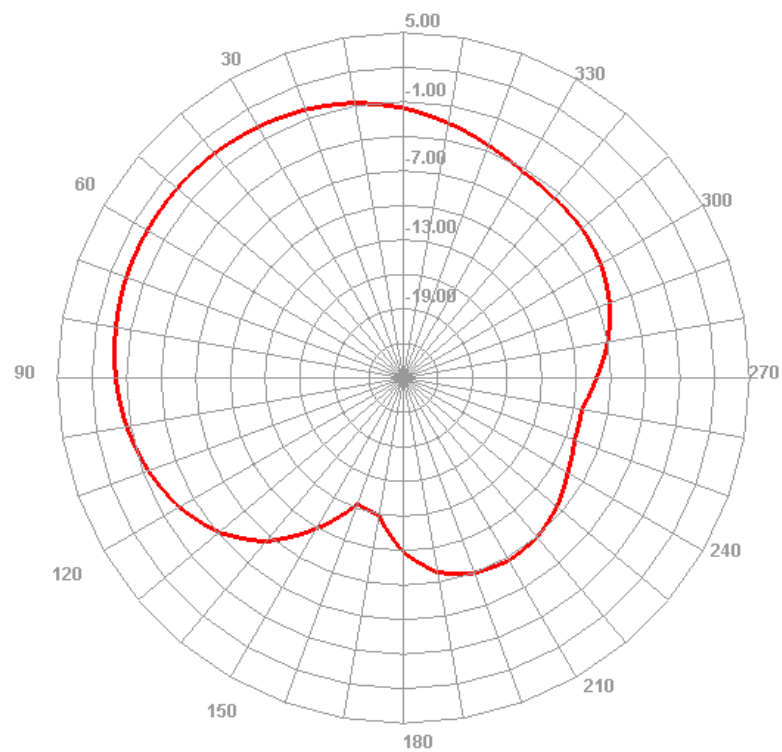


# Efficient ( GSM1800+LTE-B3 1710~1880 MHz)

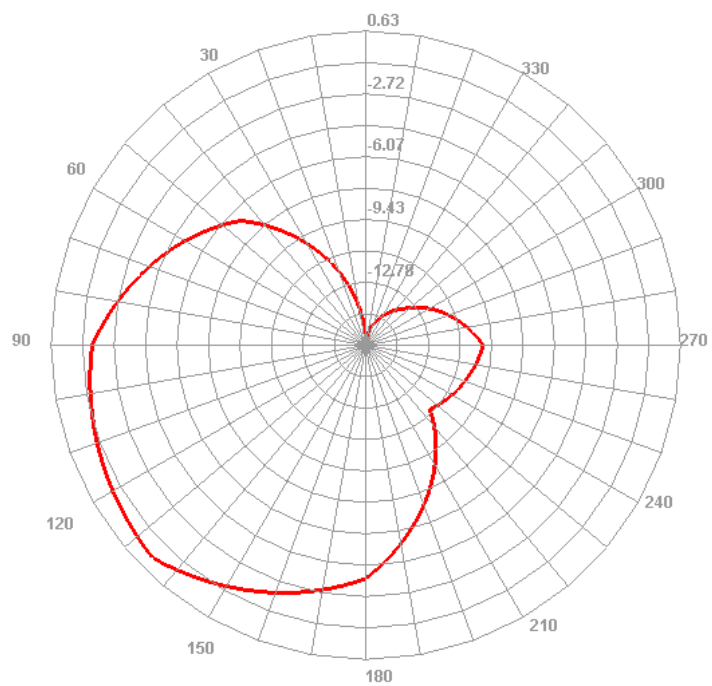
1820.000MHz



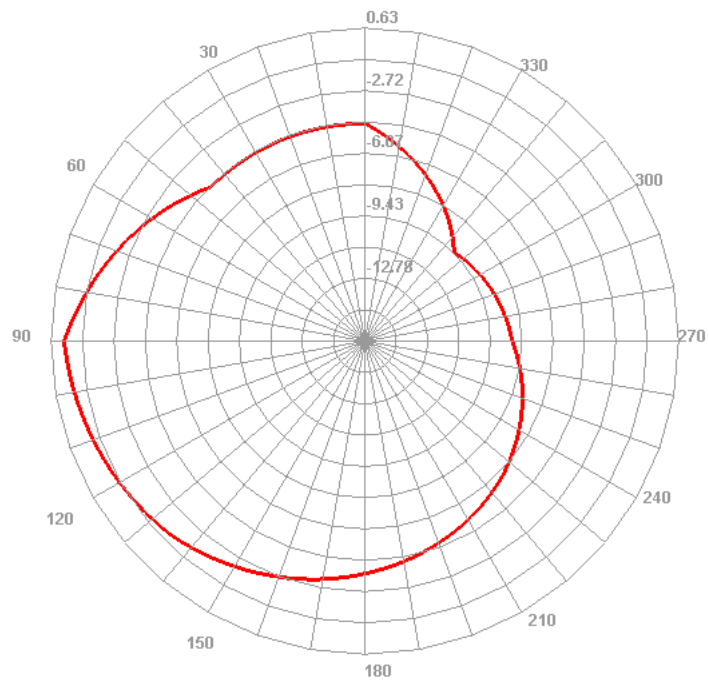
1820.000MHz H



1820.000MHz E1

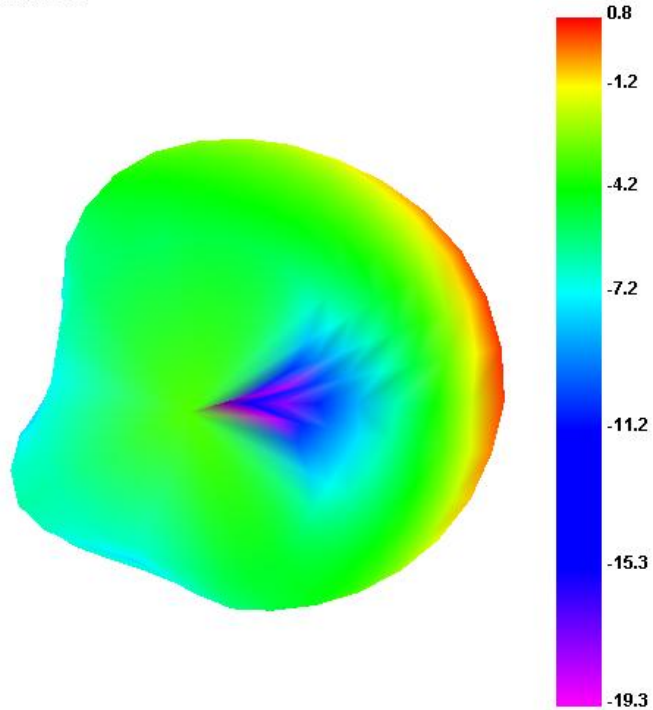


1820.000MHz E2

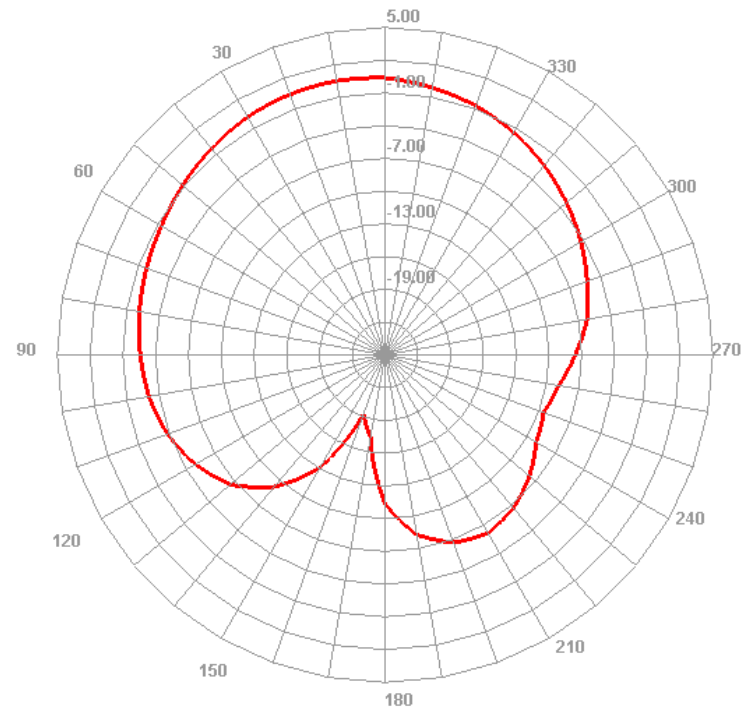


# Efficient ( GSM1900+W2+LTE-B2 1850~1990 MHz )

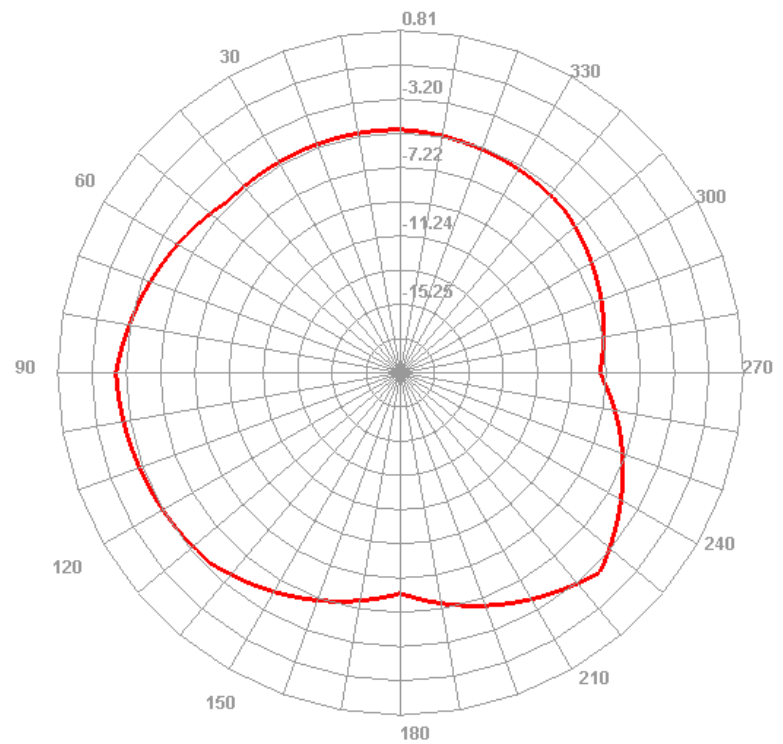
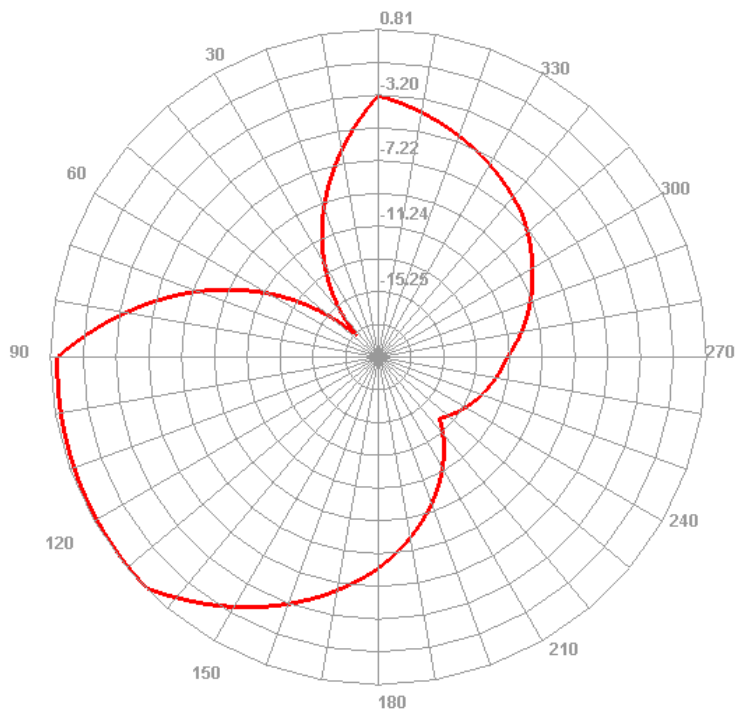
1920.000MHz



1920.000MHz H

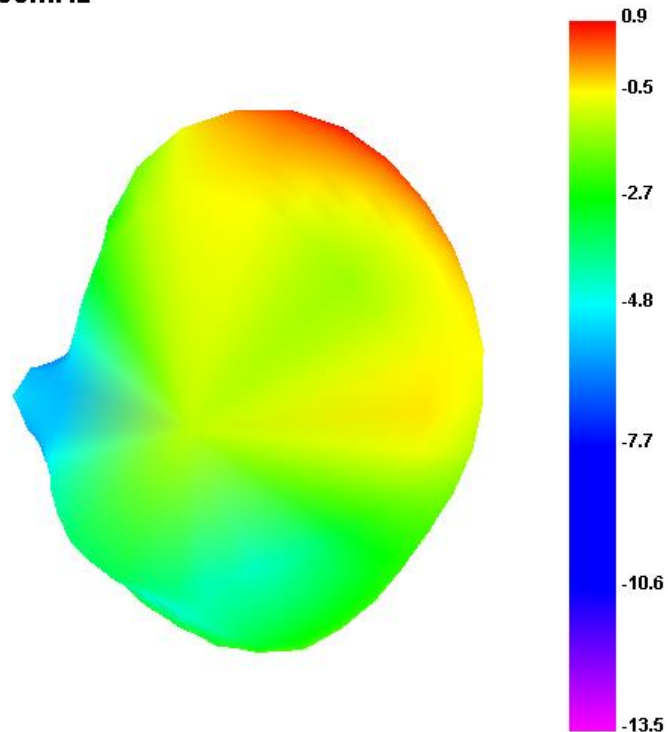


1920.000MHz E1

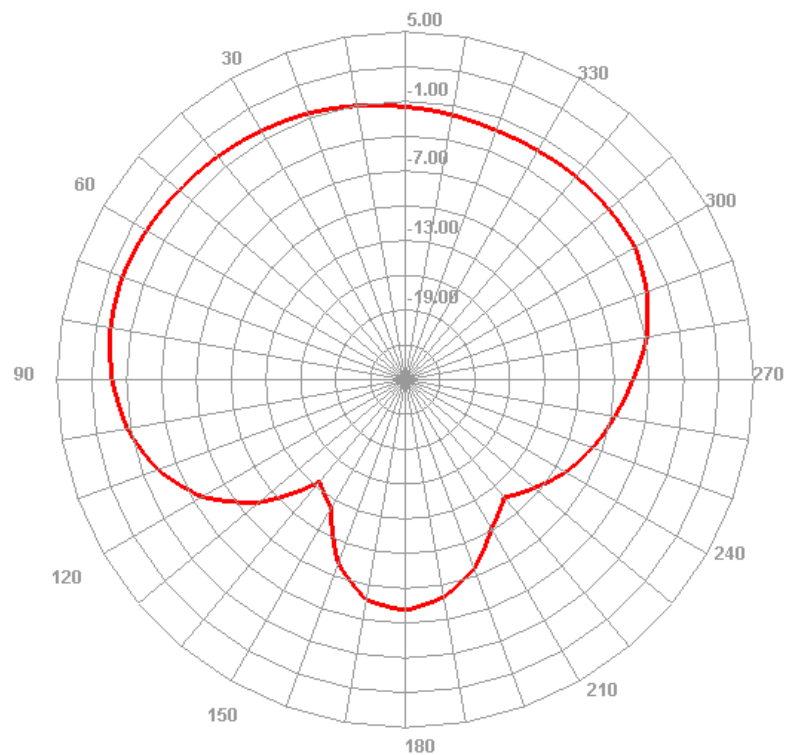


# Efficient (W1+LTE-B4 1710~2170MHz )

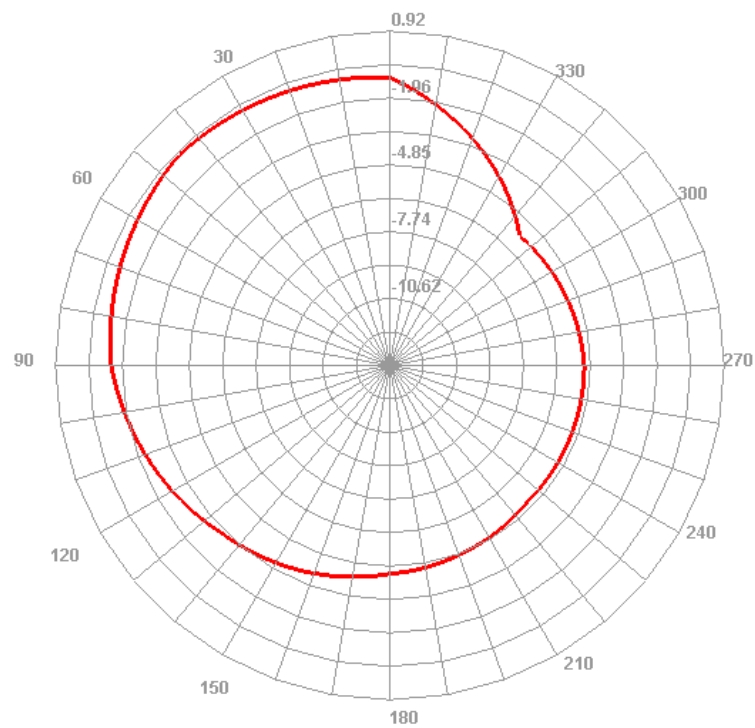
## 2160.000MHz



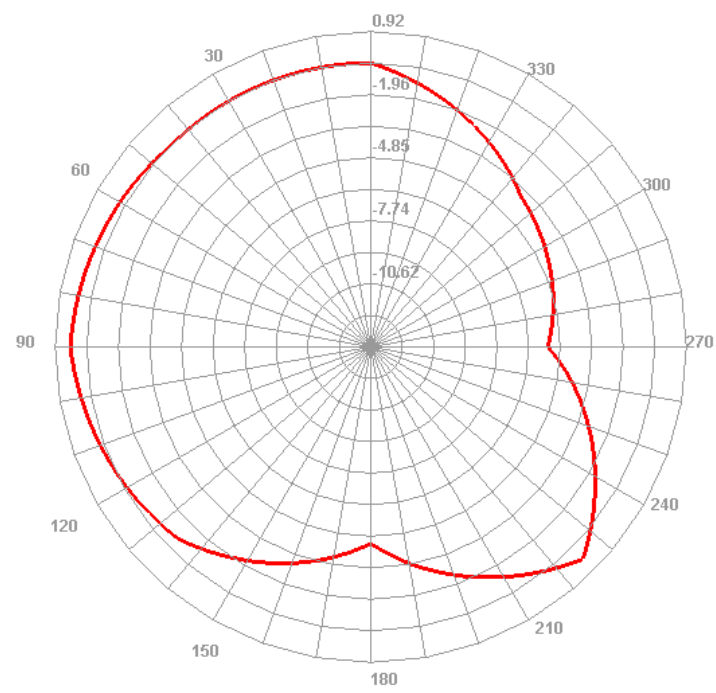
## 2160.000MHz H



## 2160.000MHz E1

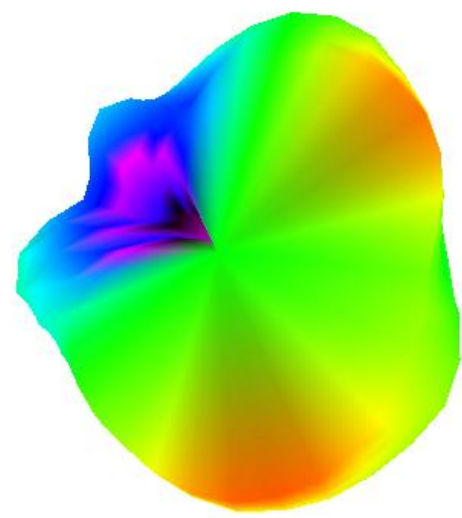


## 2160.000MHz E2

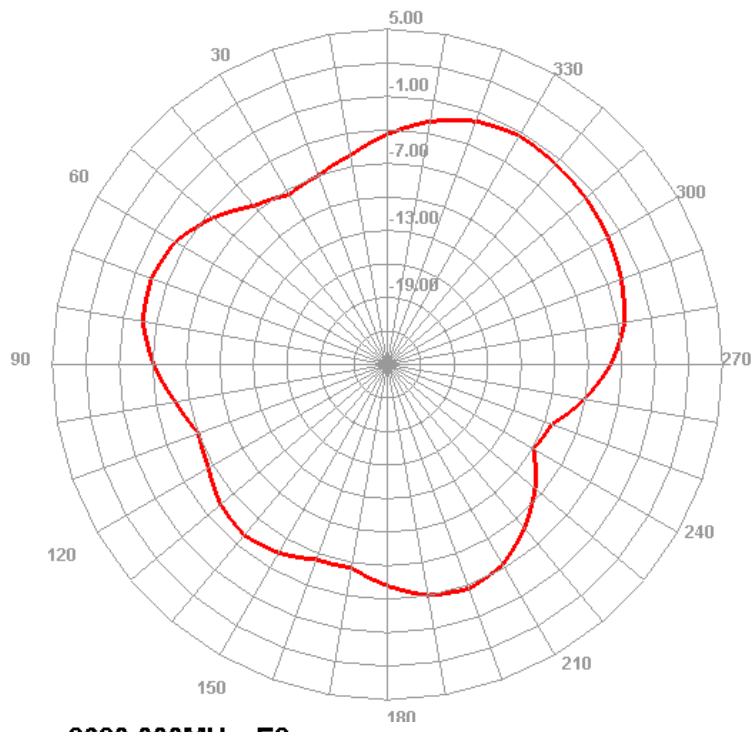


# Efficient ( LTE-B7 2500~2690MHz )

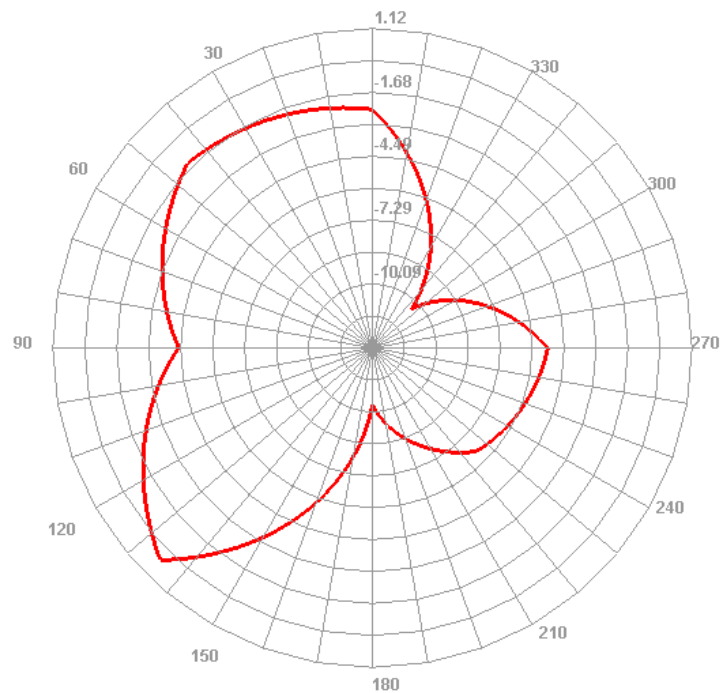
2680.000MHz



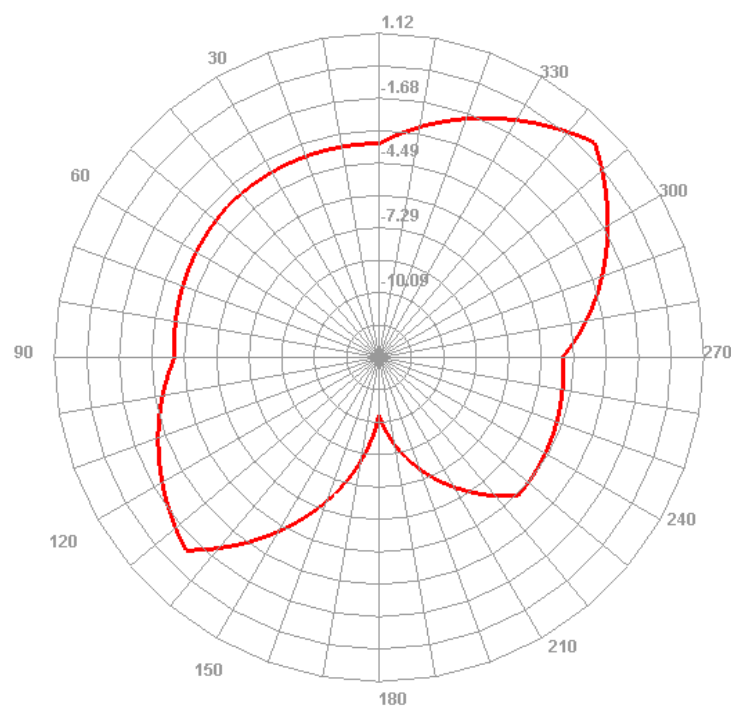
2680.000MHz H



2680.000MHz E1



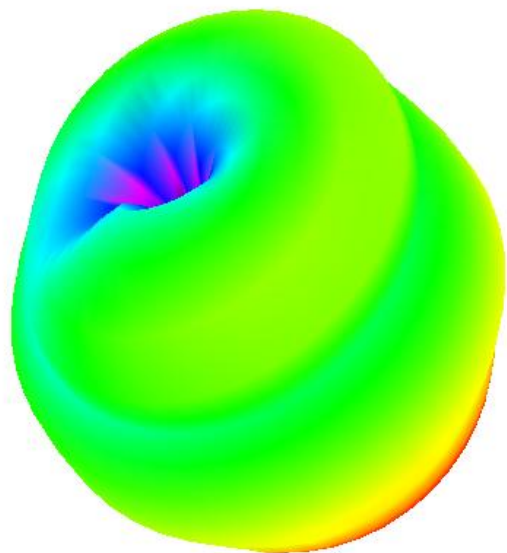
2680.000MHz E2



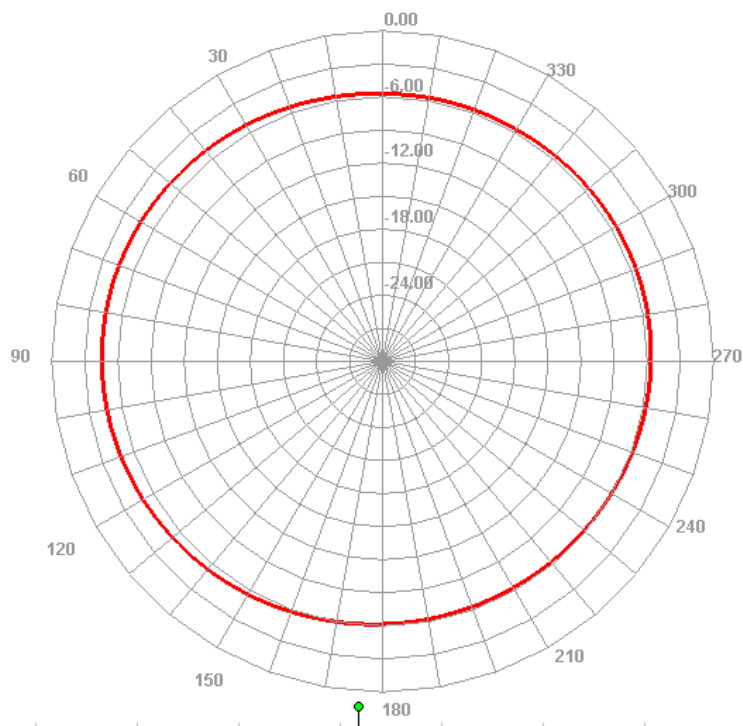


# Efficient (LTE-B12/17/28 698~798 MHz )

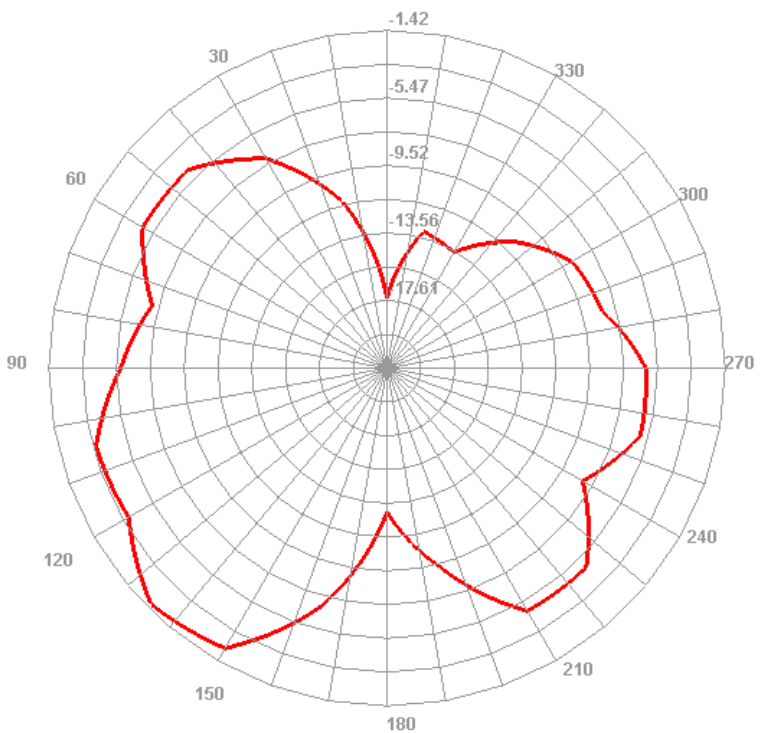
710.000MHz



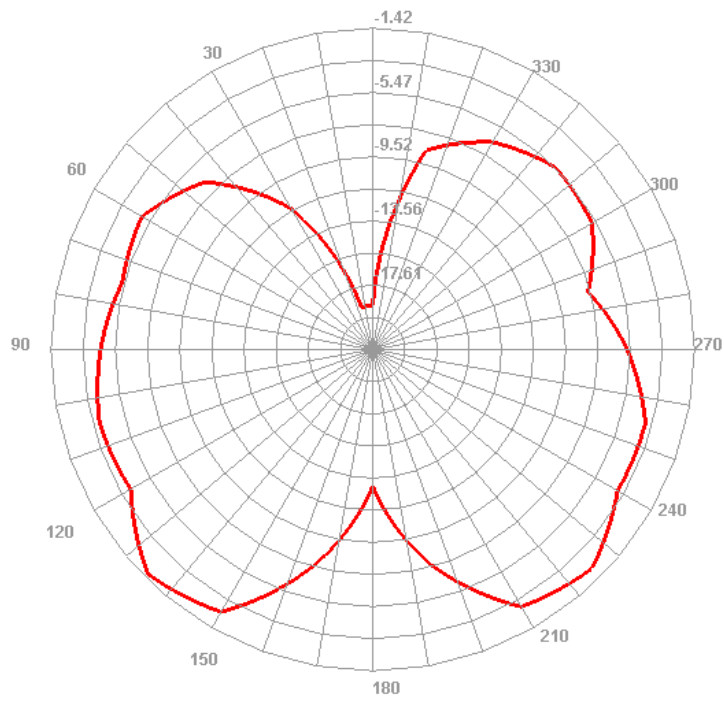
710.000MHz H



710.000MHz E1



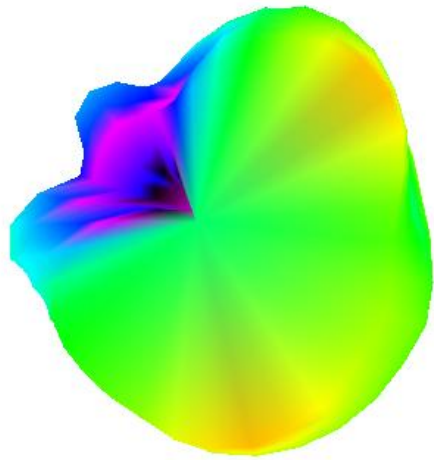
710.000MHz E2



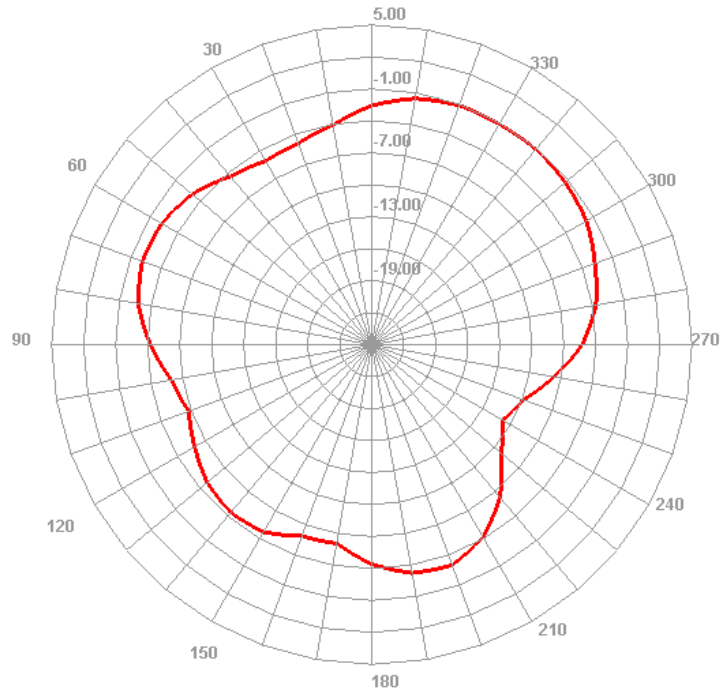


# Efficient (2.4GWIFI/BT)

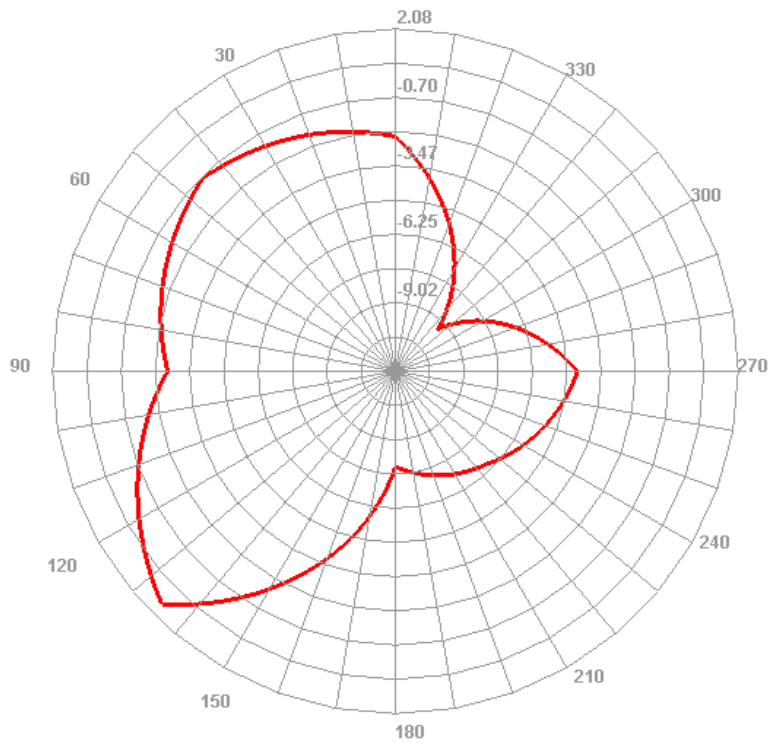
2440.000MHz



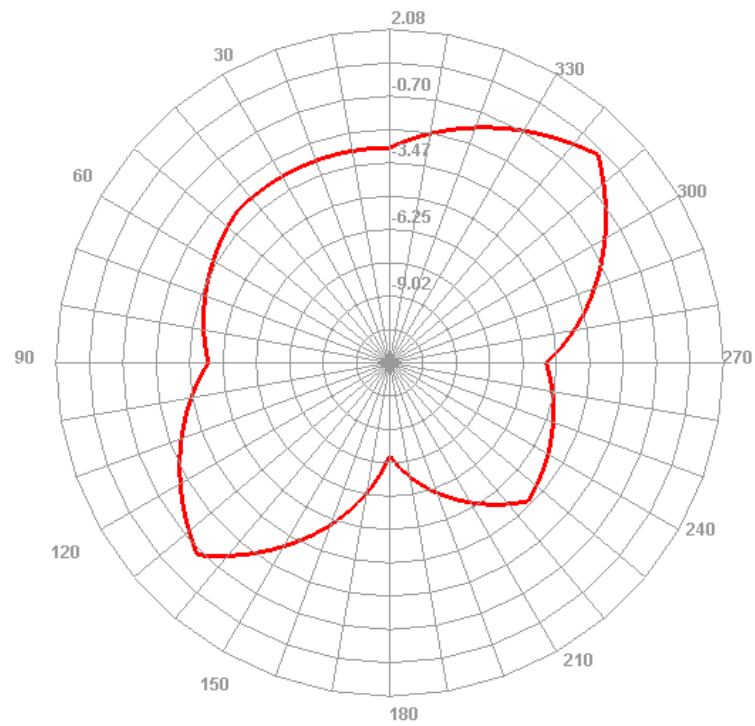
2440.000MHz H



2440.000MHz E1



2440.000MHz E2



# Master antenna specifications

版本	修改内容	修改者	修改日期

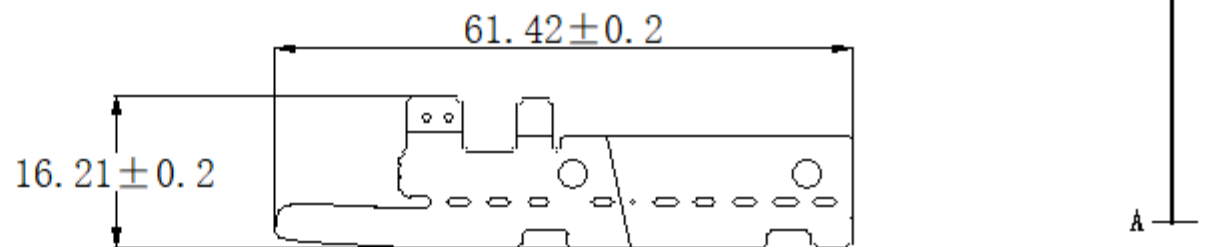
外形+丝印 →

亚黑油墨丝印亮黑字符



基材	半对1/3	✓
	半对半	
	一对半	
	一对一	

总厚 $0.12 \pm 0.01$ mm



成品图-正面

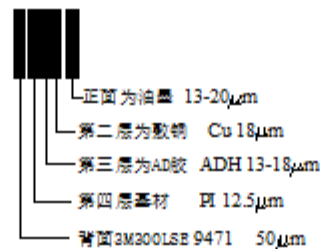
手撕线背胶图-背面

- FW.1
- FW.2
- FW.3
- FW.4
- FW.5
- FW.6
- FW.7
- FW.8
- FW.9
- FW.10

## 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 $0.12$ mm;
4. 精确公差范围:  $\pm 0.03$ mm;
5. 只允许产品图导电;

A 处放大

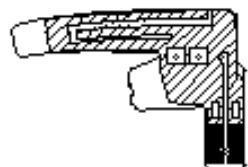


华信微通信技术有限公司			
	单位: mm	名称: FPC	日期: 2023-03-08
一般公差:		料号: N62F-GSM	设计: 朱顺身
.I	$\pm 0.5$	材质: FPC+3M9471	R F:
.X	$\pm 0.25$	表面处理: 清洁	确认:
.XX	$\pm 0.05$	颜色:	比例: 1:1
.XXX	$\pm 0.05$	版本: A	
ANGULAR	$\angle \pm 0.5^\circ$		

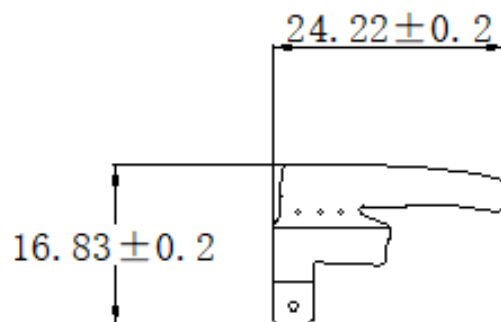
外形+丝印 →



亚白油墨丝印亮白字符  
亚黑油墨丝印亮黑字符



成品图-正面



手撕线背胶图-背面

总厚  $0.12 \pm 0.01$  mm

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	

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  $0.12$  mm;
4. 精确公差范围:  $\pm 0.03$  mm;
5. 只允许产品图导电;

A 处放大



- 图. 1
- 图. 2
- 图. 3
- 图. 4
- 图. 5
- 图. 6
- 图. 7
- 图. 8
- 图. 9
- 图. 10

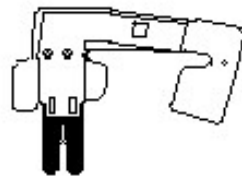
华信微通信技术有限公司			
	单位: mm	名称: FPC	日期: 2023-03-08
一般公差:		料号: N62F-G/W/B	设计: 朱顺身
.I	$\pm 0.5$	材质: FPC+9471	R F:
.II	$\pm 0.25$	表面处理: 清洁	确认:
.III	$\pm 0.05$	颜色:	比例: 1:1
ANGULAR	$\leq \pm 0.5^\circ$	版本: A	

# Diversity antenna specifications

外形+丝印 →



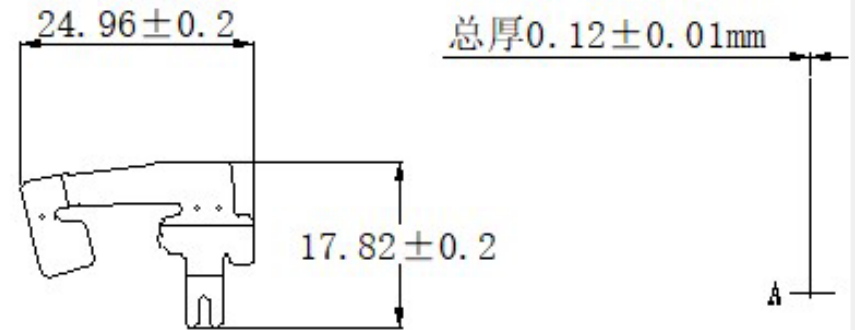
亚白油墨丝印亮白字符  
亚黑油墨丝印亮黑字符



成品图-正面

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	

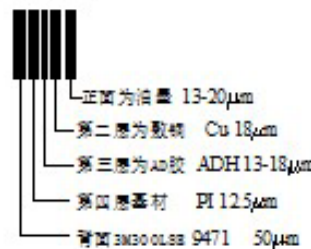


手撕线背胶图-背面

NOTES:

1. 胶纸为: 3M300LSE;
2. 金手指表面镀金0.5~3u";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: ±0.03mm;
5. 只允许产品图导电;

A 处放大



- 图.0
- 图.2
- 图.3
- 图.4
- 图.5
- 图.7
- 图.8
- 图.9
- 图.10

华信微通信技术有限公司			
单位: mm	名称: FPC	日期: 2023-03-08	
一般公差:	料号: N62F-LTE	设计: 朱顺身	
.I ±0.5	材质: FPC+329471	RF:	
.II ±0.25	表面处理: 清漆	确认:	
.III ±0.05	颜色:	比例: 1:1	版本: A
.XXX ±0.05			
ANGULAR < ± 0.5°			