



ShenZhen Huaxinwei communication technology
Co.,Ltd.

Antenna test report

Customer Name: FreeYond

Designer: Li Jun xian

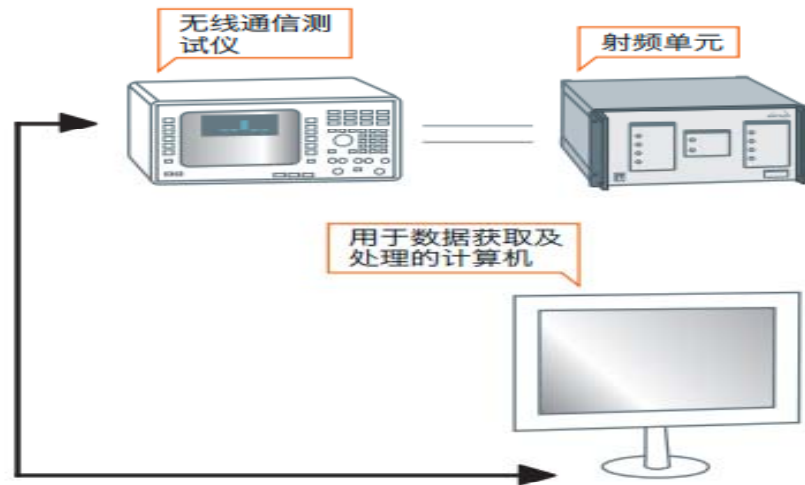
Date: 2023/07/07



The customer name		FreeYond	Project Name	M6
NO.	project	Detailed above		
1	spectrum	GSM850/1900+WCDMA-B2/5+LTE-B1/2/3/4/5/7/8/12/17/20/28/66/38/40/41+GPS/WIFI/BT		
2	Project type	The testing environment for this antenna report is tested together with the phone. (Shenzhen FreeYond Technology Co Ltd; FCC ID:2A8FE-F9S; Model: M6)		
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		Li Jun xian	1820807601	

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 ²
快速CDMA		8 min			No
EIRP模式+TIS补偿				10 min	No

1、根据RTC
2、根据协议



TIS 3D方位切割强度图



TRP 3D方位切割强度图

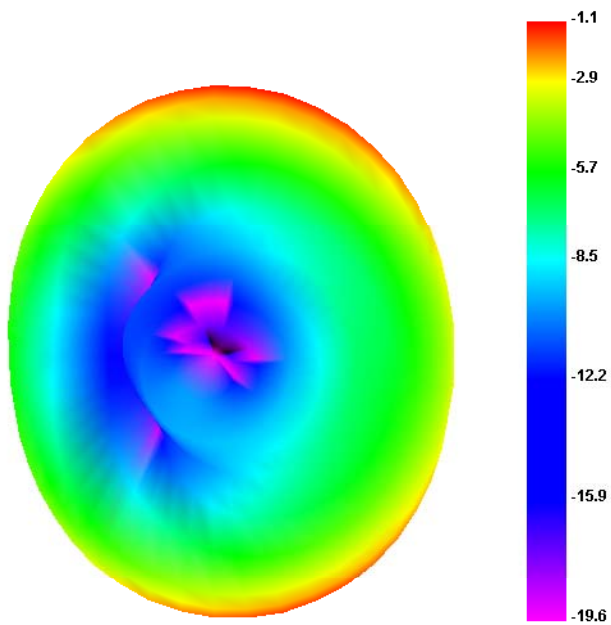
Test Equipment



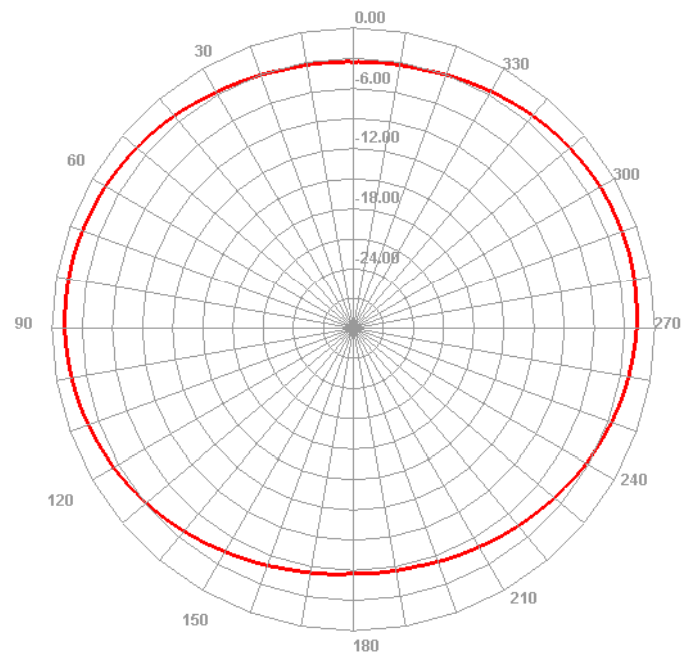
Efficient (2G+3G+4G+2. 4G-WiFi /BT)

Main PEAK GAIN			
2G:	Frequency range	Effi %	Gaim dBi
GSM850	824~894Mhz	21.80	-1.4
3G:			
W5	824~894Mhz	21.80	-1.4
4G:			
LTE-B5	824~894Mhz	21.80	-1.4
Div PEAK GAIN			
2G:	Frequency range	Effi %	Gaim dBi
PCS1900	1850~1990Mhz	40.81	1.83
3G:			
W2	1850~1990Mhz	40.81	1.83
4G:			
LTE-B1	1920~2170Mhz	37.85	1.55
LTE-B2	1850~1990Mhz	40.81	1.83
LTE-B3	1710~1880Mhz	38.62	1.58
LTE-B4	1710~2155Mhz	39.07	1.50
LTE-B7	2500~2690Mhz	28.01	0.94
LTE-B8	880~960Mhz	20.84	-1.1
LTE-B12	698~746Mhz	19.03	-1.58
LTE-B17	704~746Mhz	19.04	-1.58
LTE-B20	791~862Mhz	21.84	-1.4
LTE-B28	708~798Mhz	19.05	-1.58
LTE-B66	1710~2170Mhz	39.08	1.50
LTE-B38	2570~2620Mhz	28.02	0.94
LTE-B40	2300~2400Mhz	29.21	1.38
LTE-B41	2500~2690Mhz	28.03	0.94
2. 4G-WIFI	2400~2500Mhz	42.52	1.01
5. 18G WIFI	5000~5800Mhz	40.24	1.80
5. 8G WIFI	5000~5800Mhz	40.24	1.50
BT	2400~2500Mhz	42.51	1.01
GPS	1575Mhz	38.73	1.23

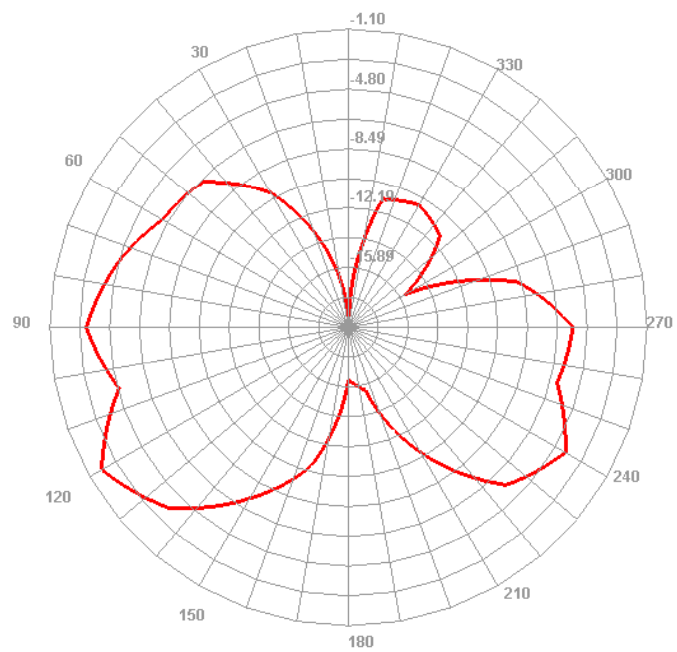
GSM 900



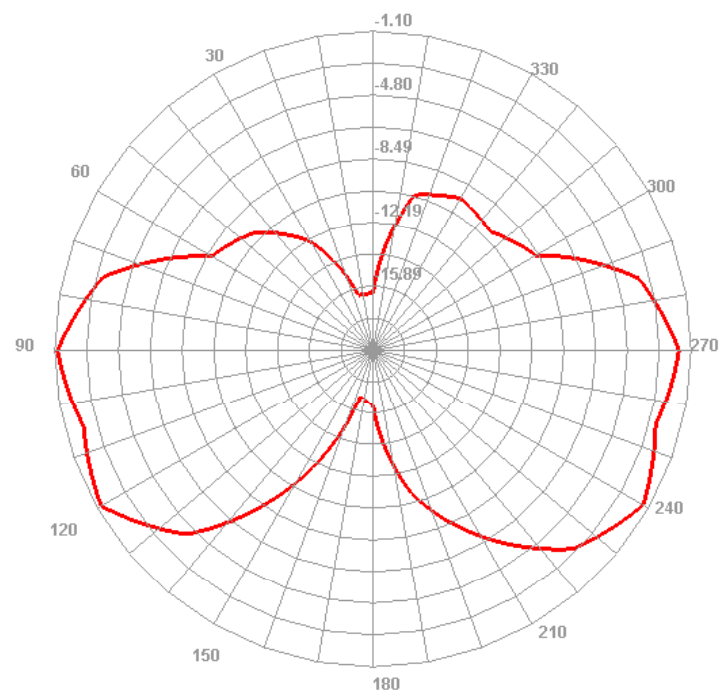
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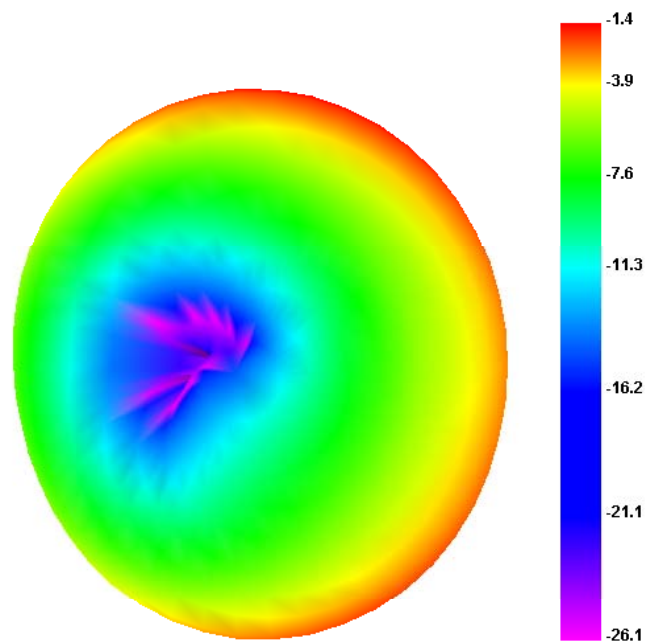
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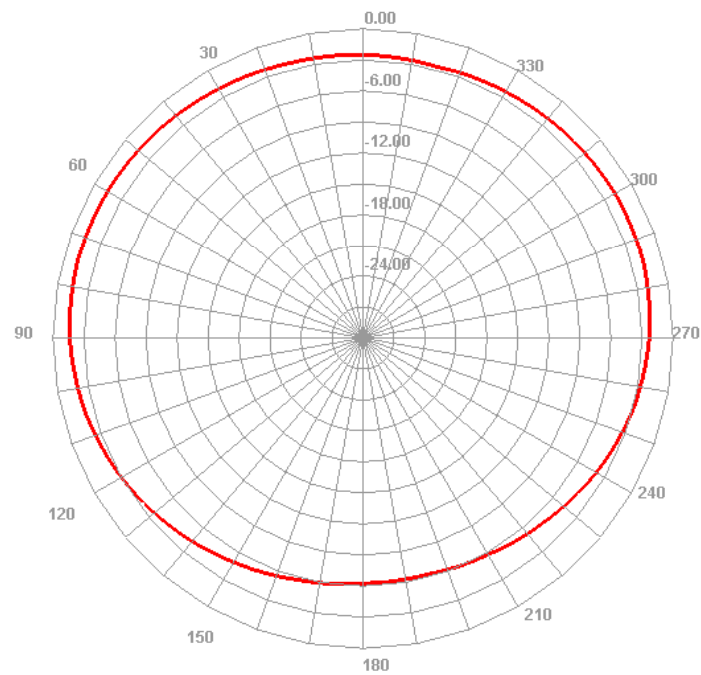
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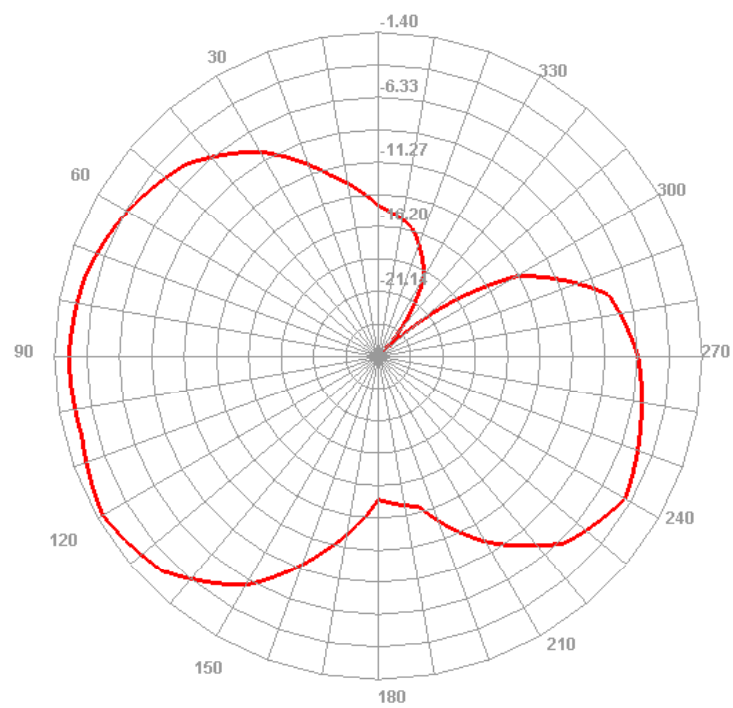
GSM 850



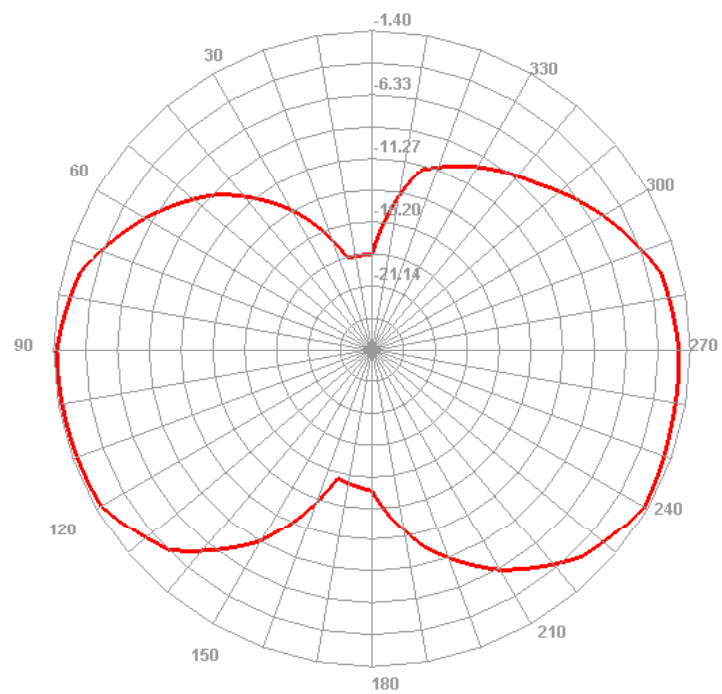
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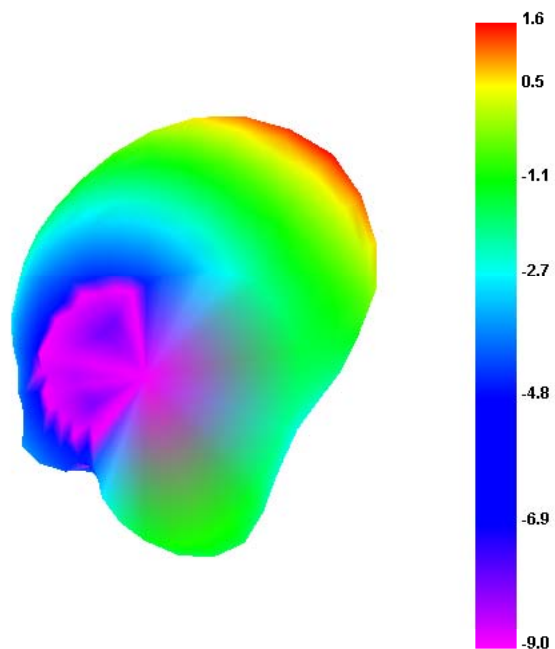
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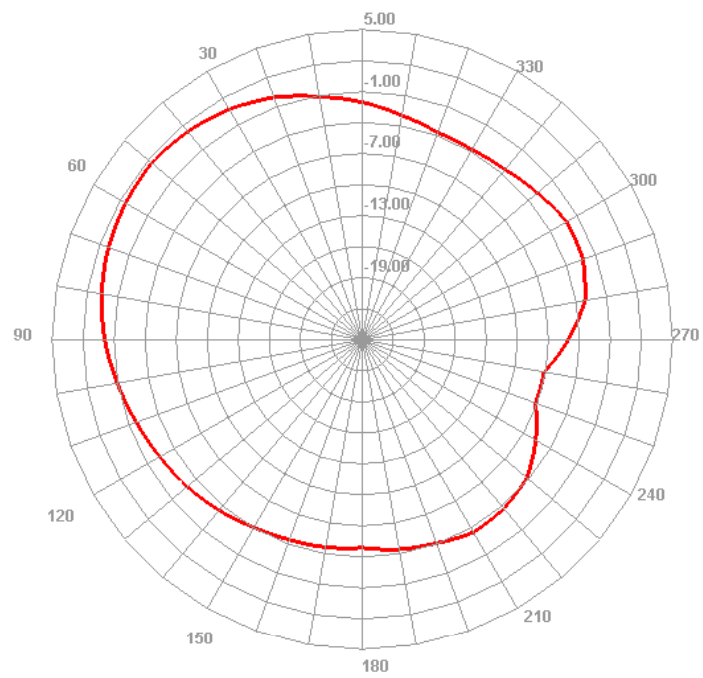
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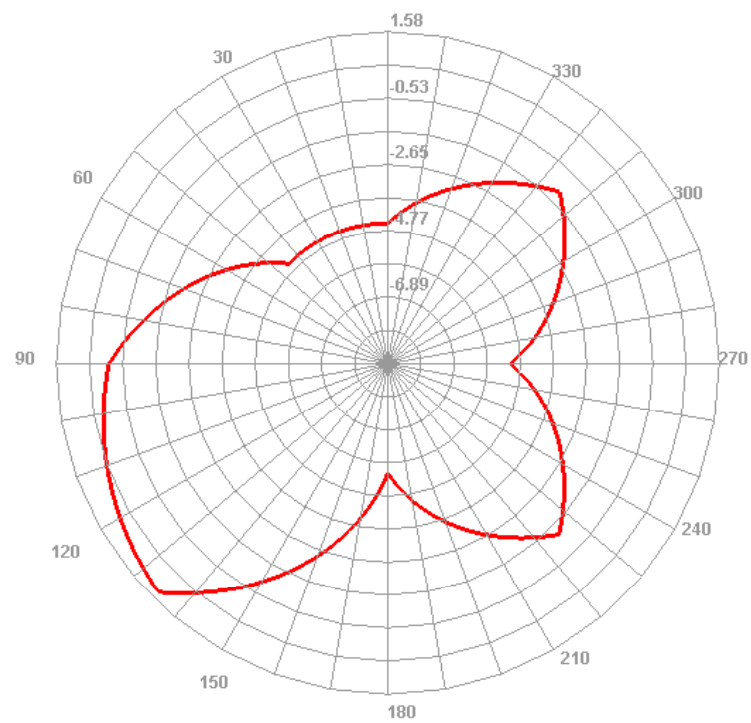
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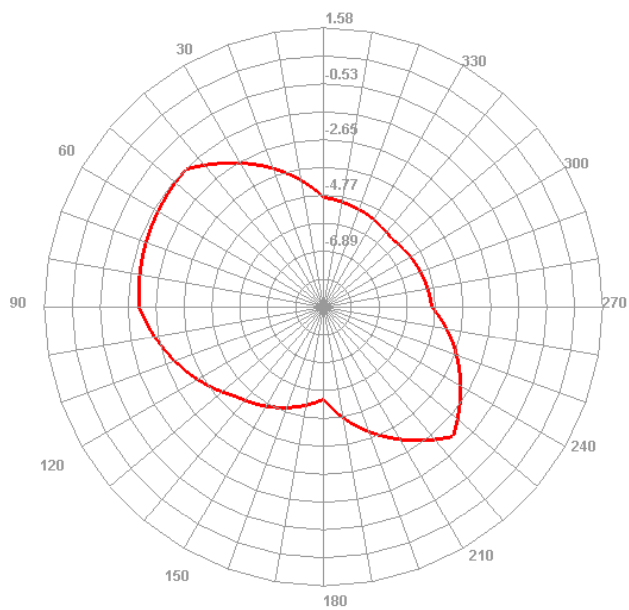
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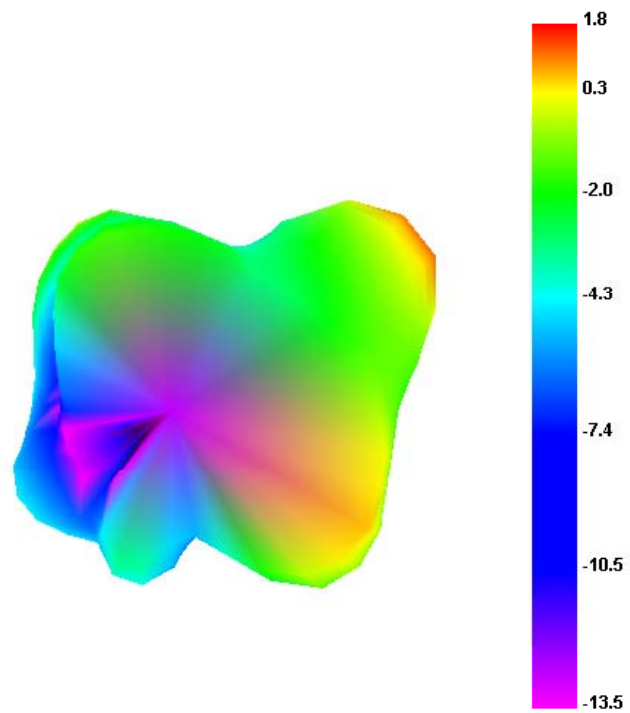
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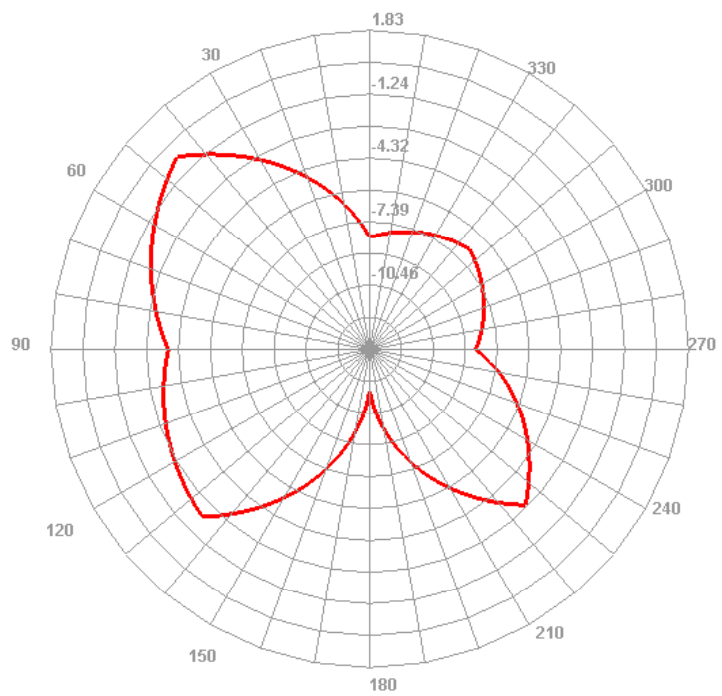
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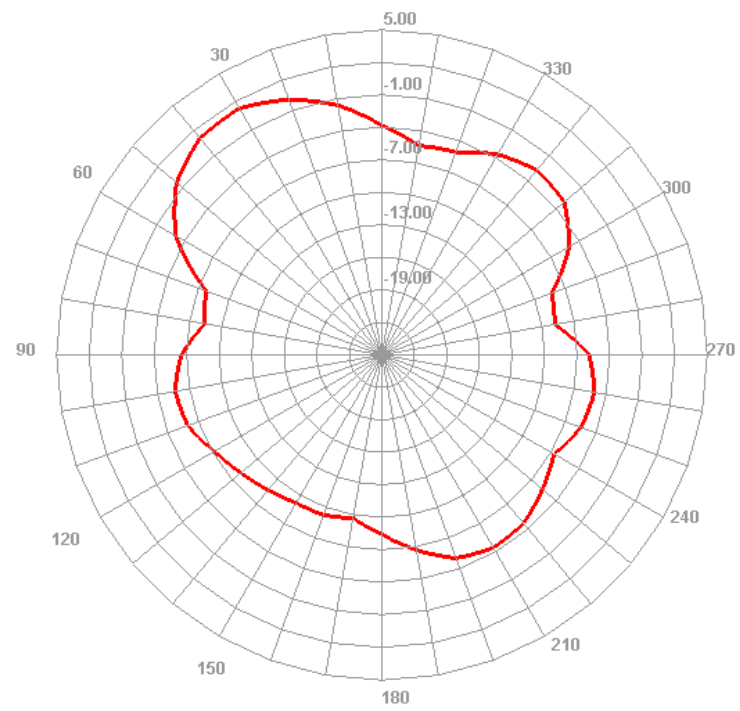
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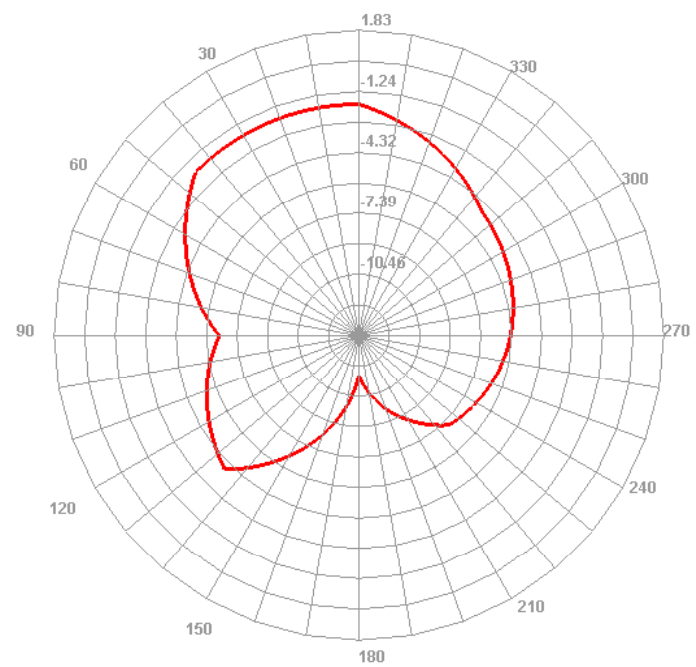
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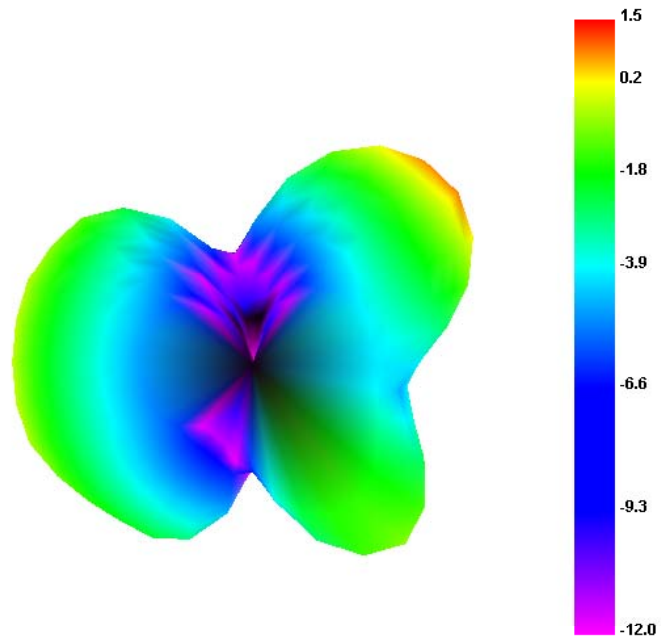
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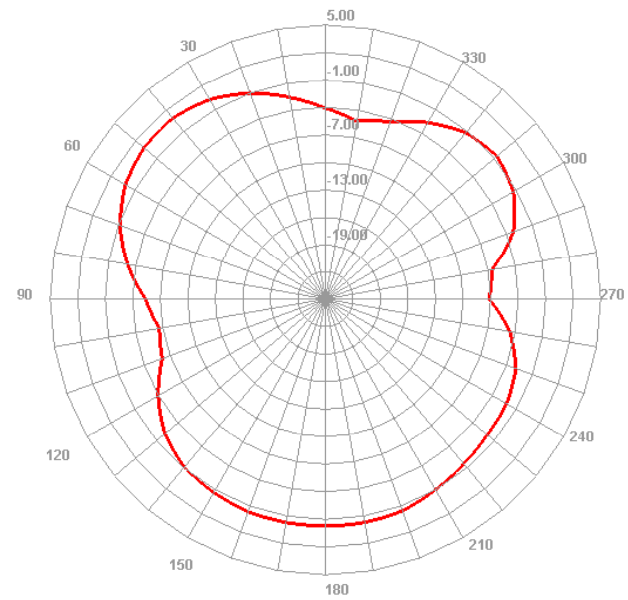
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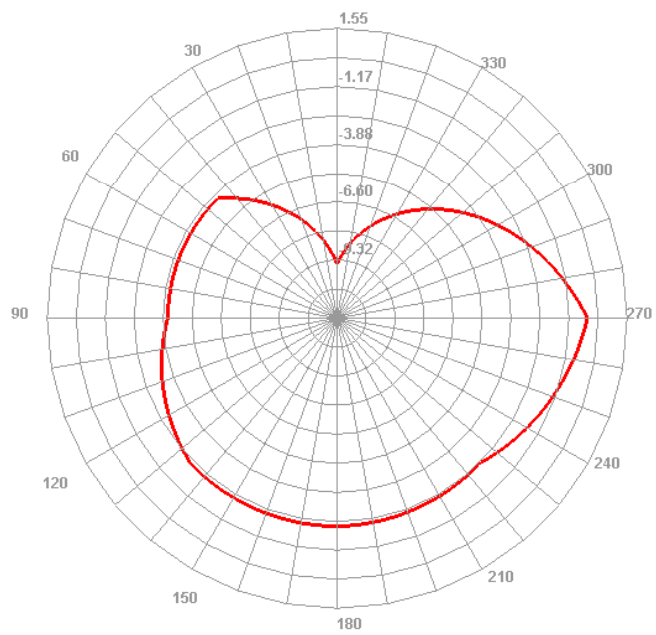
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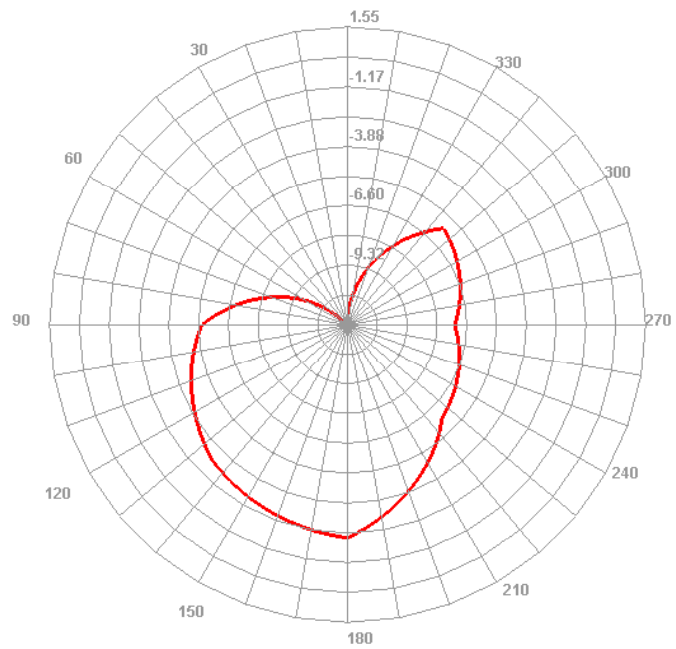
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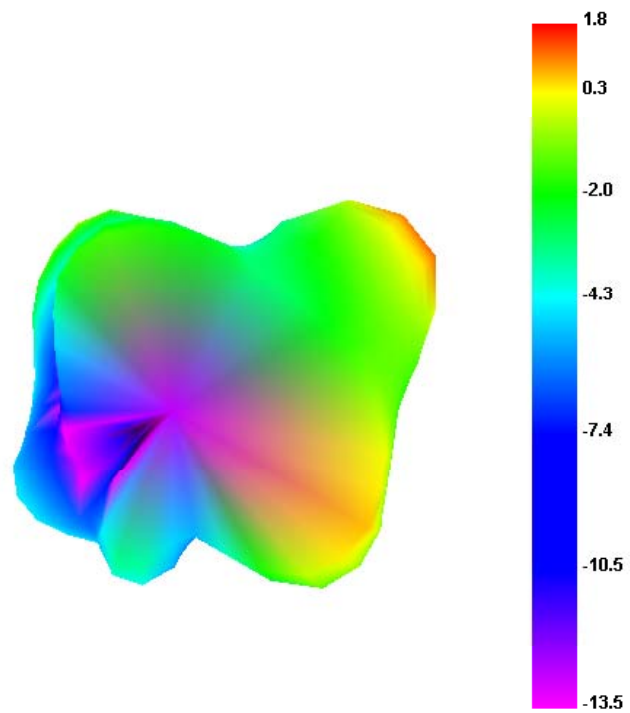
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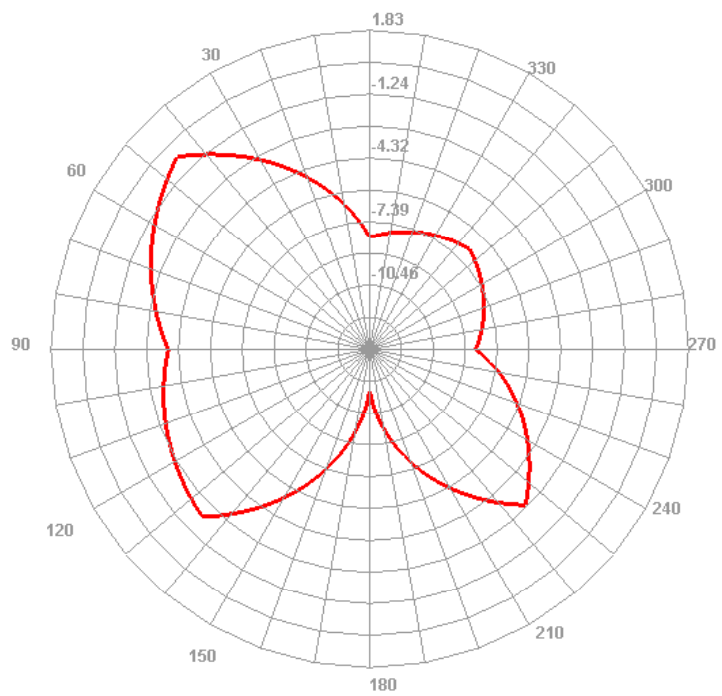
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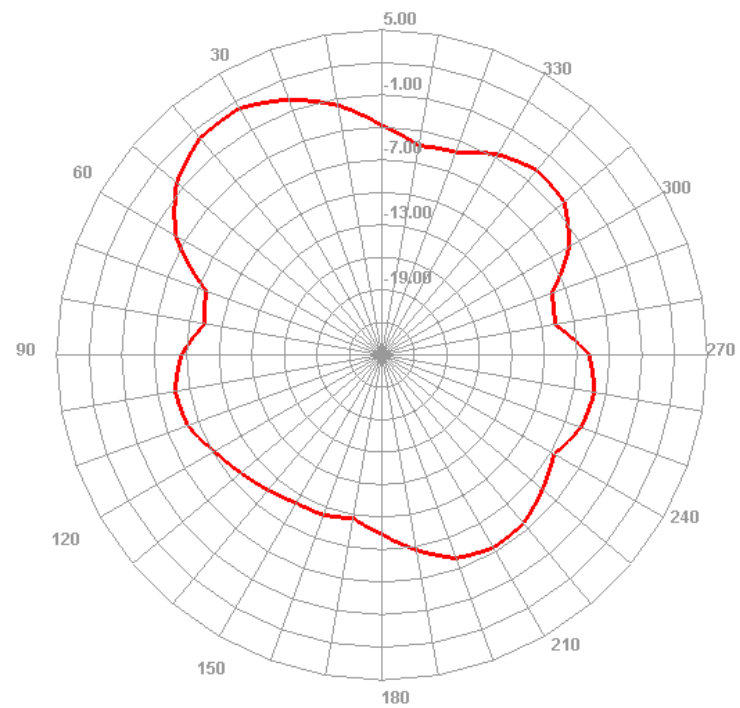
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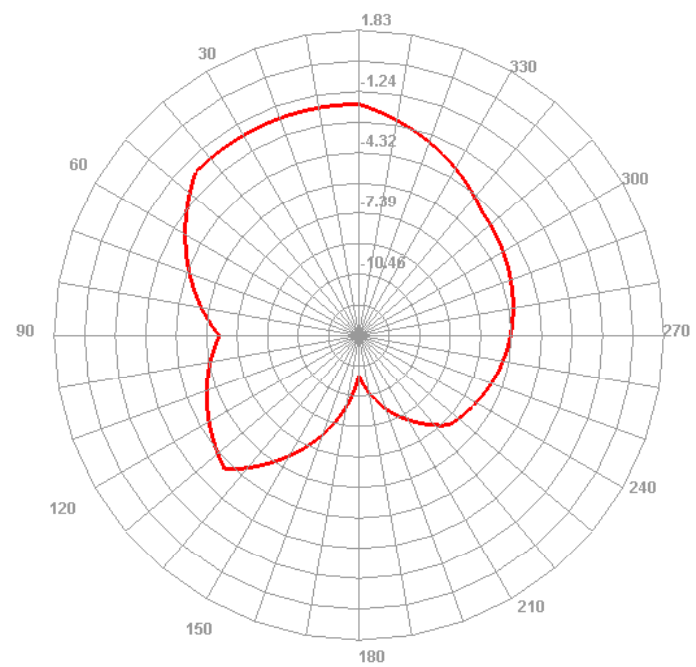
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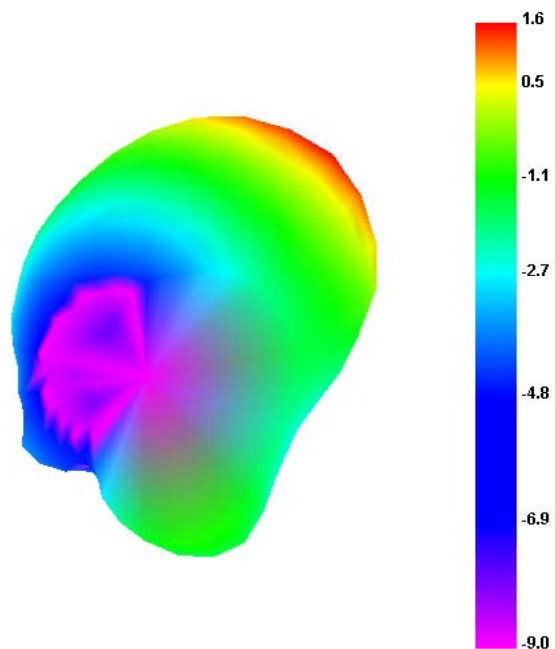
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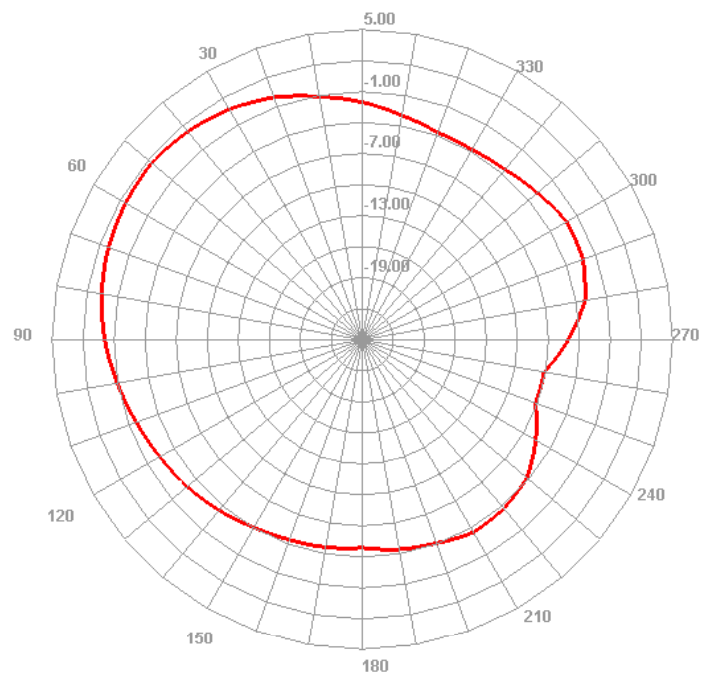
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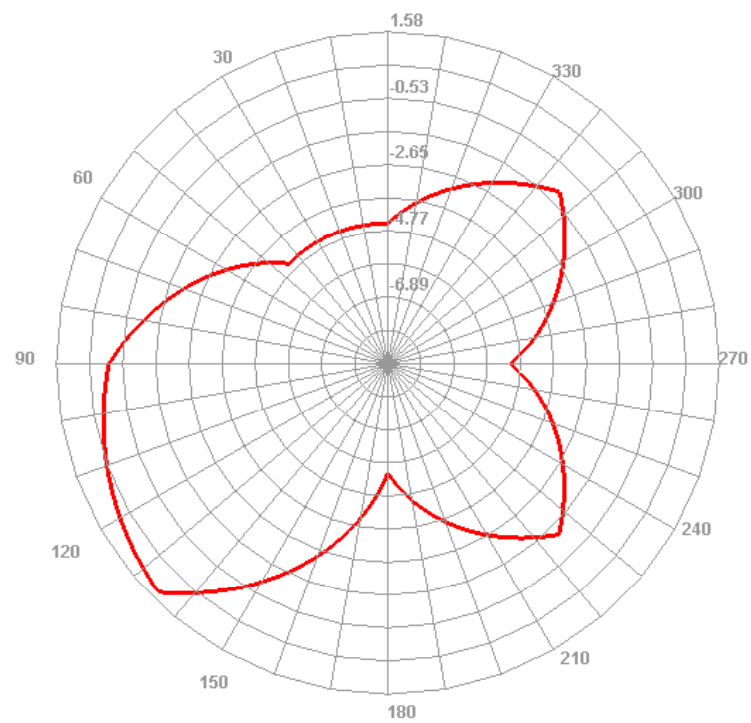
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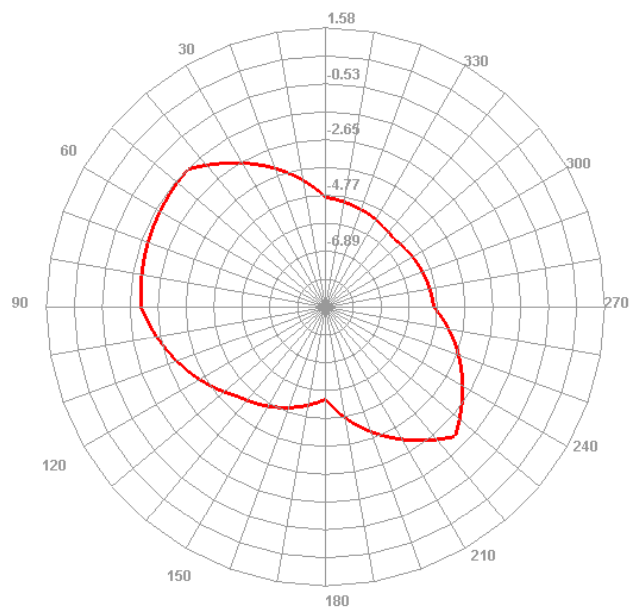
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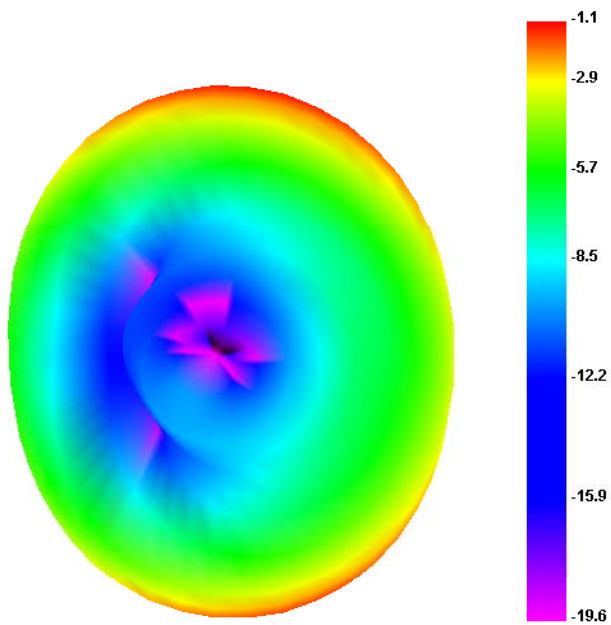
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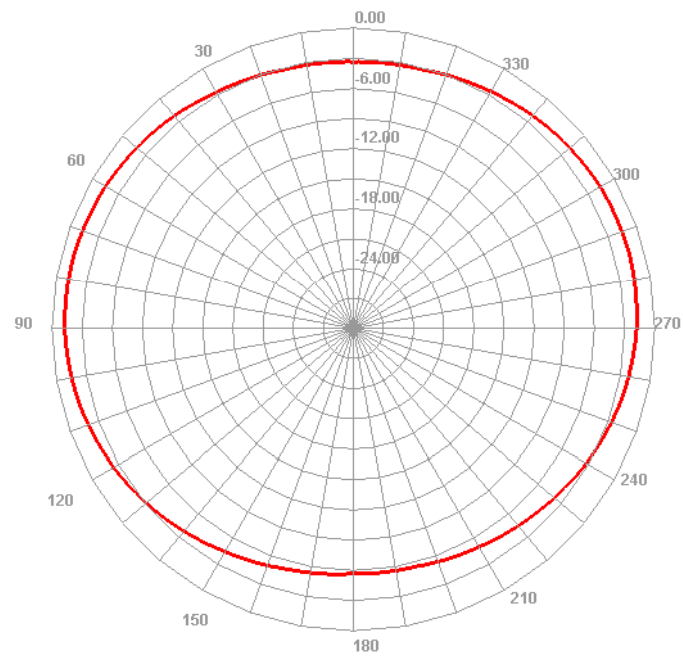
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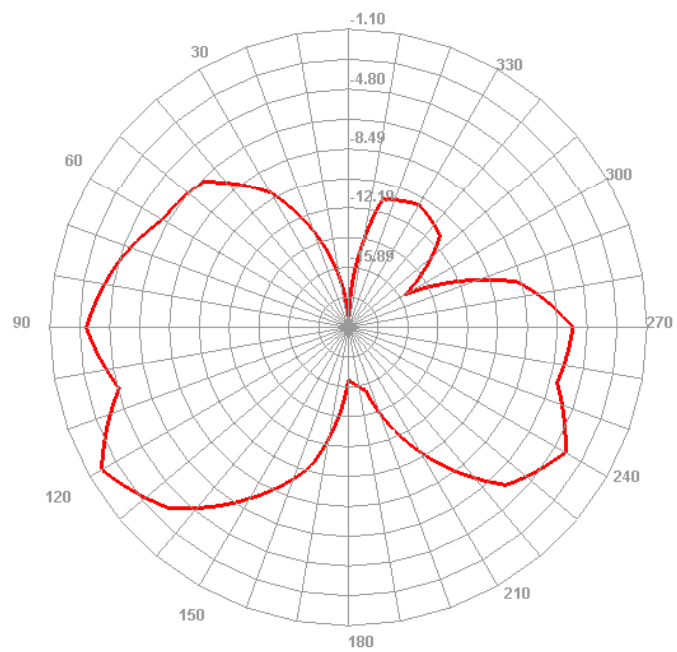
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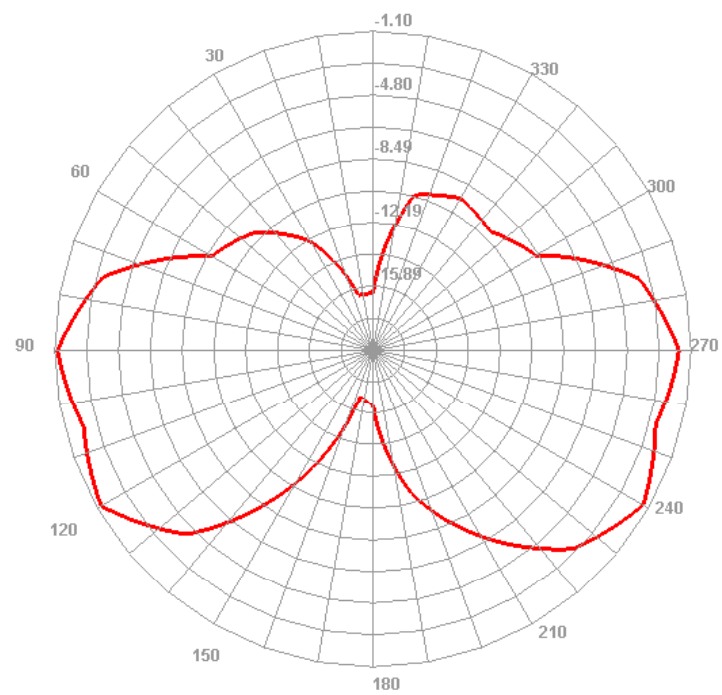
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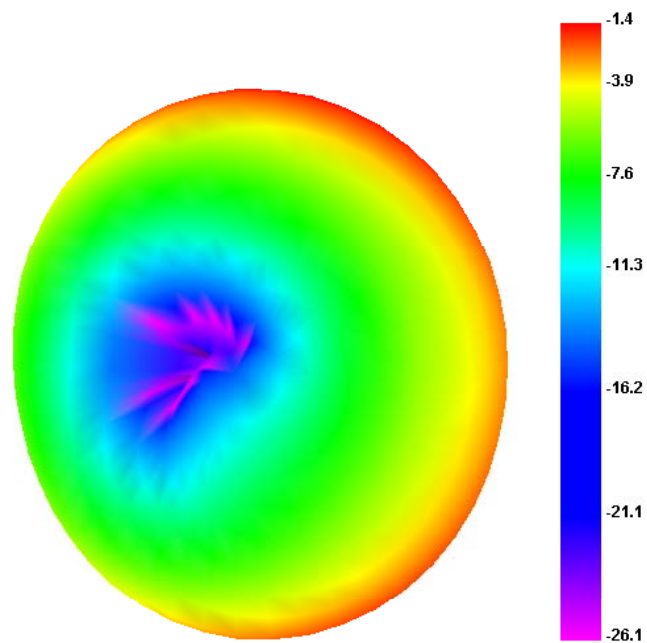
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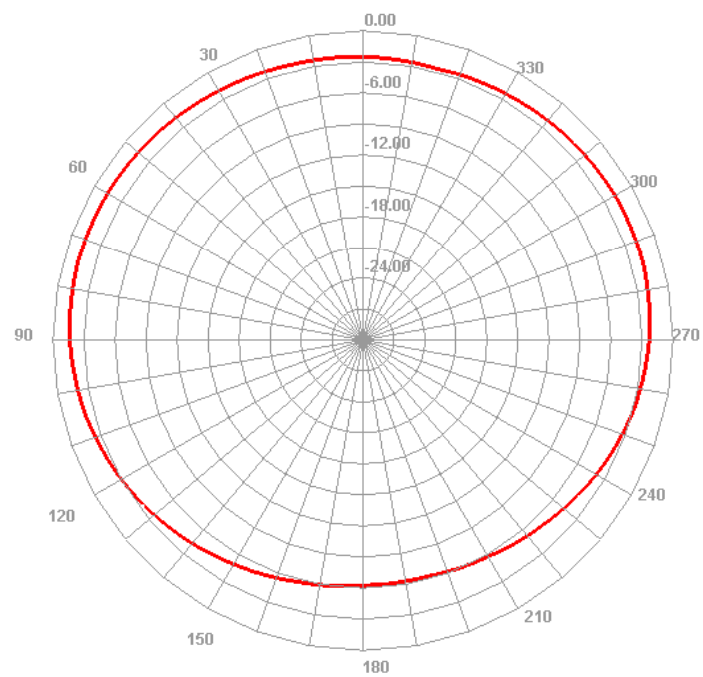
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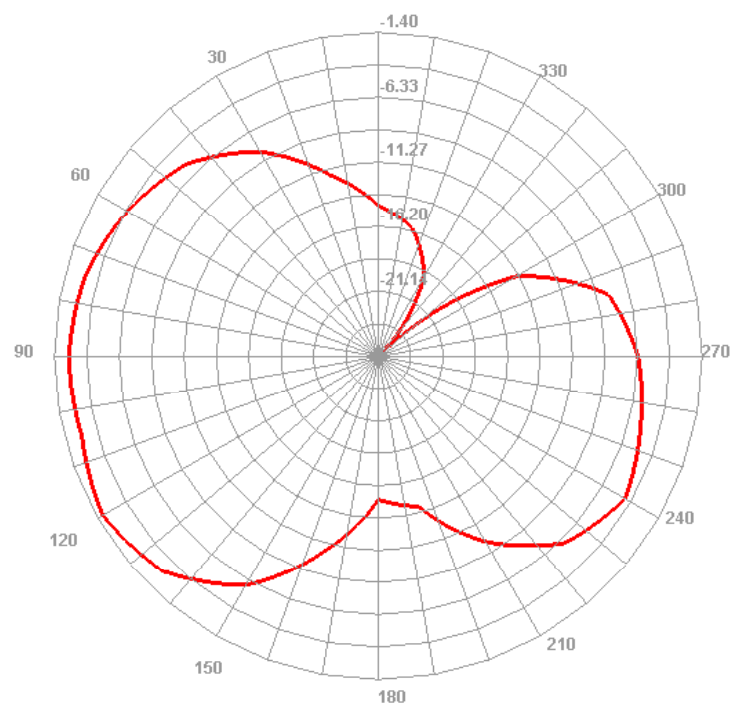
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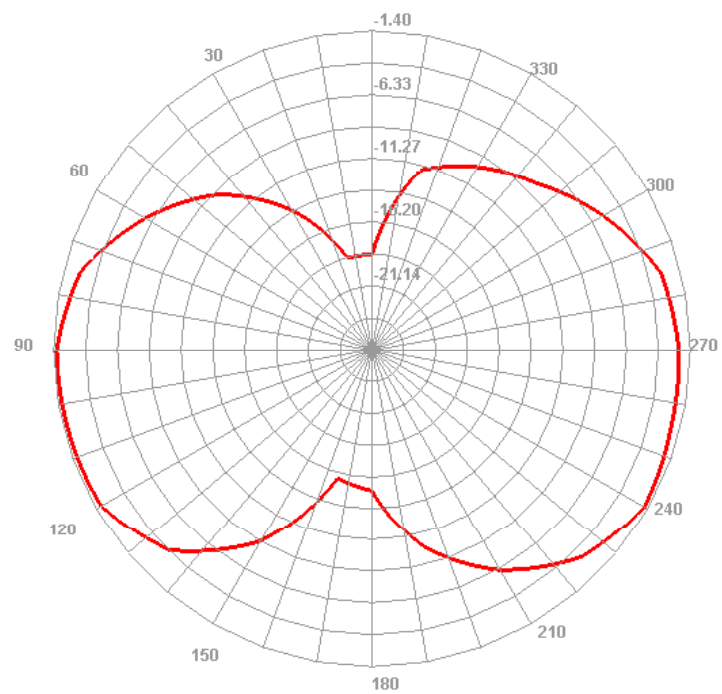
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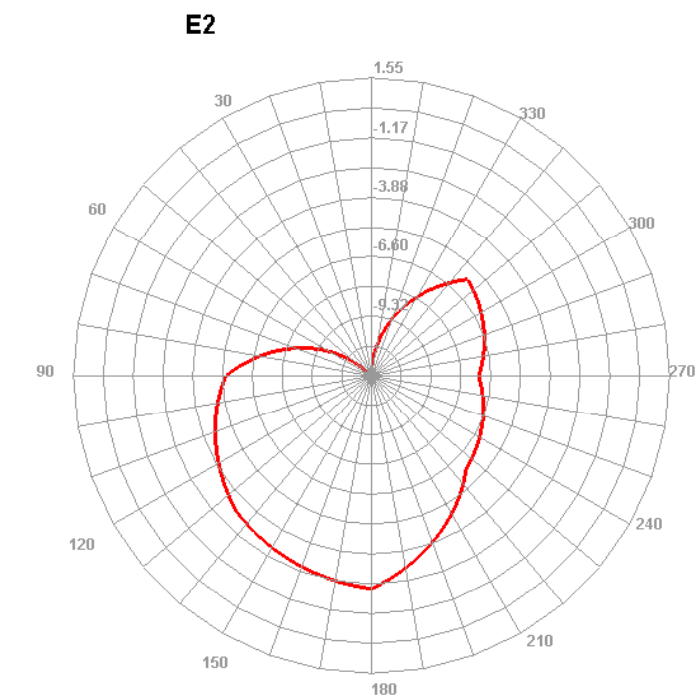
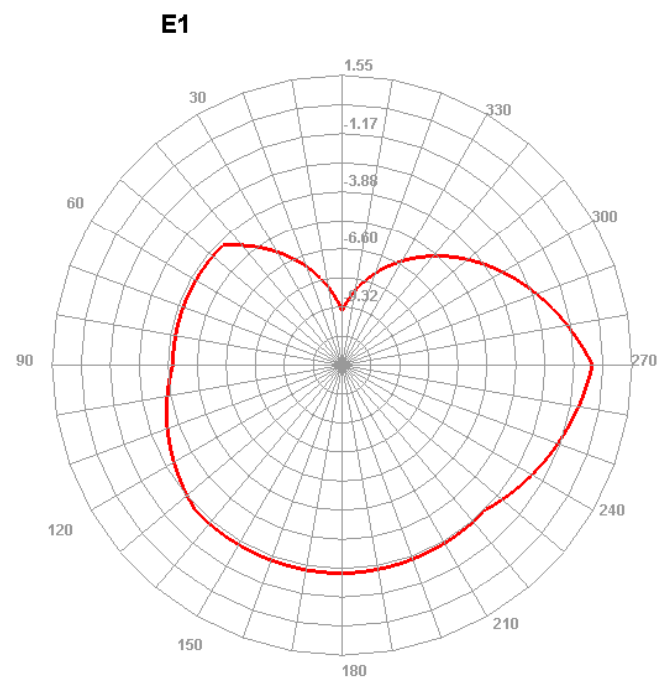
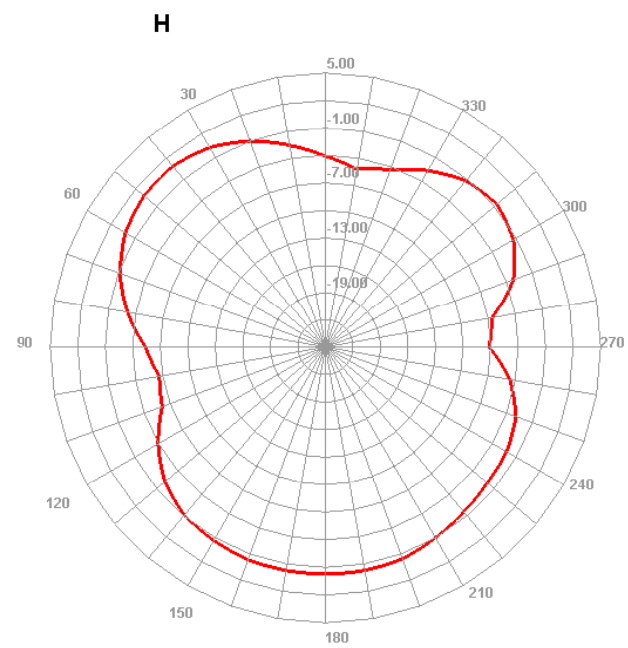
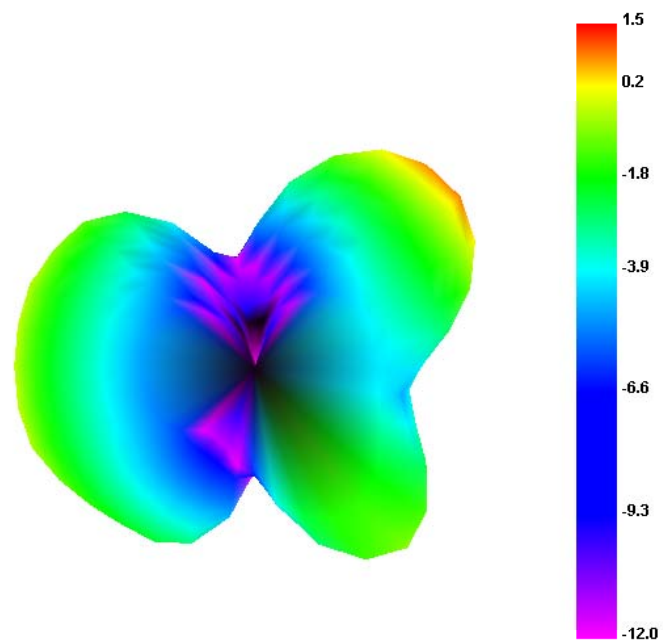
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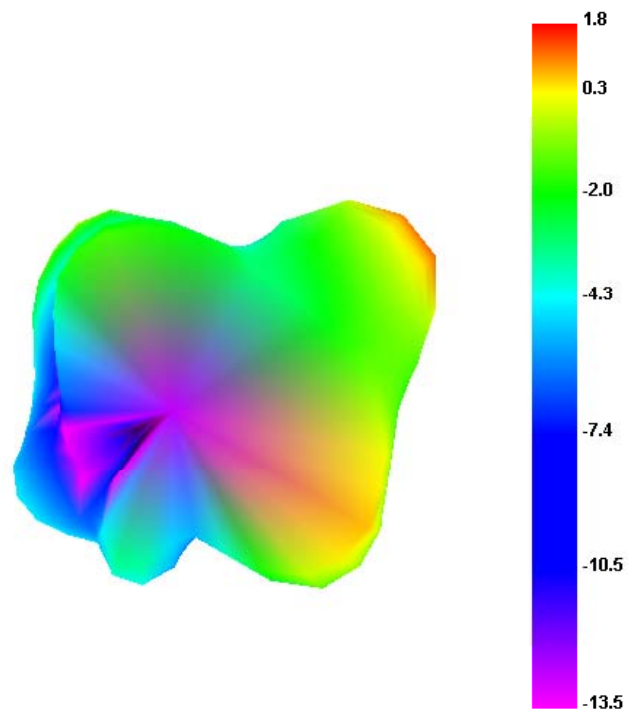
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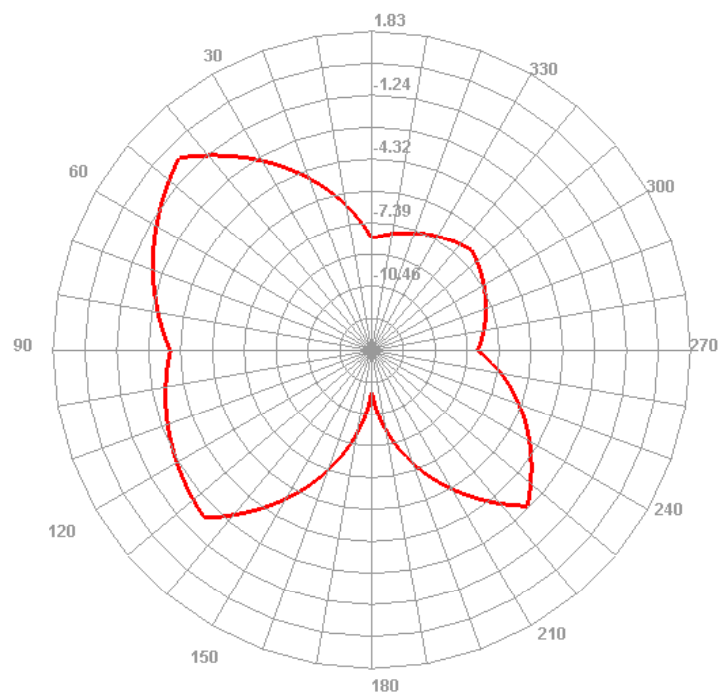
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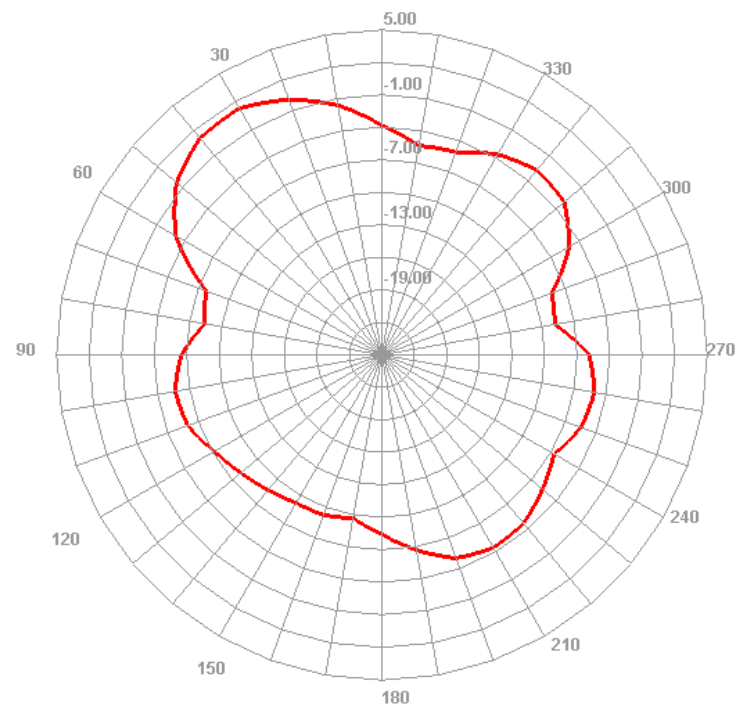
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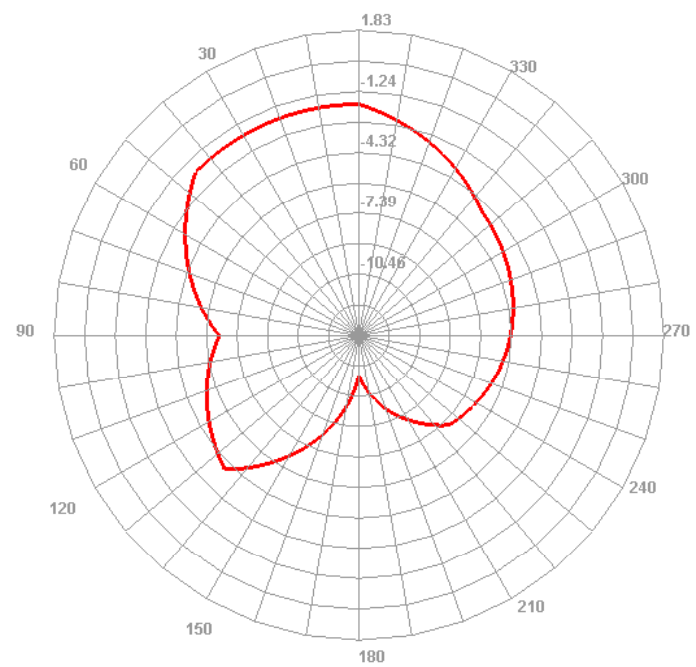
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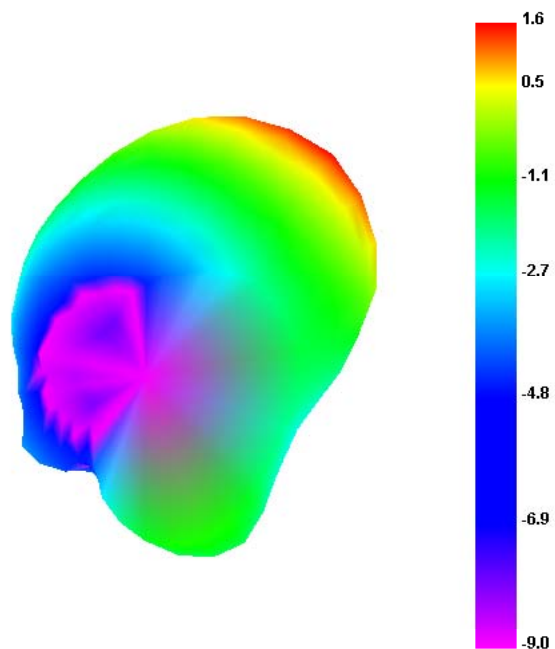
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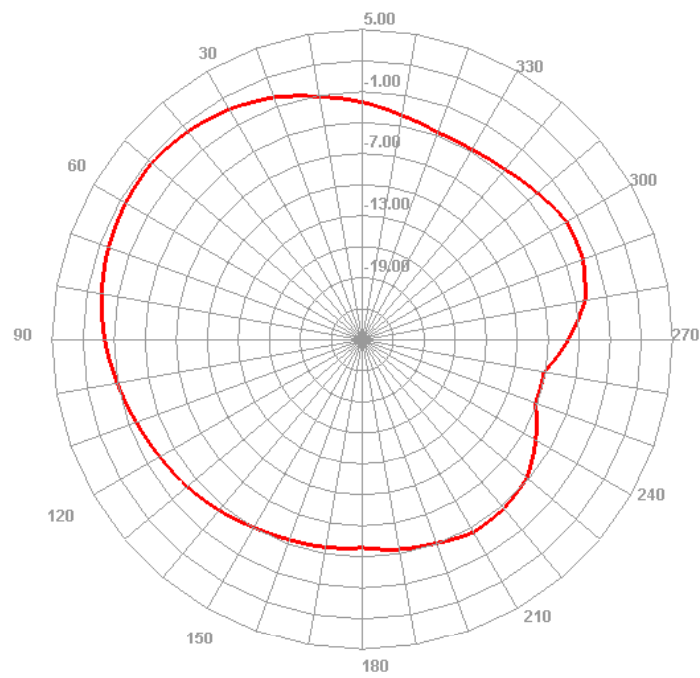
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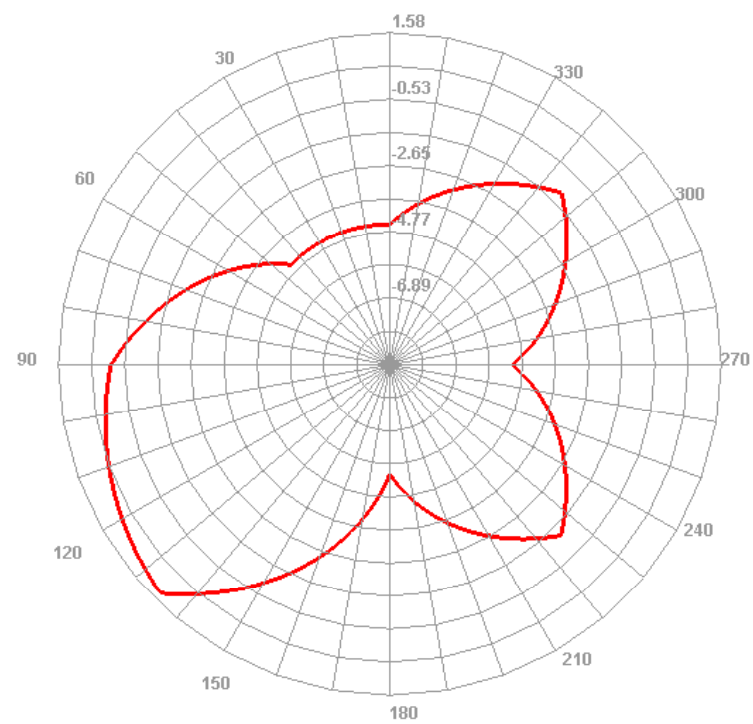
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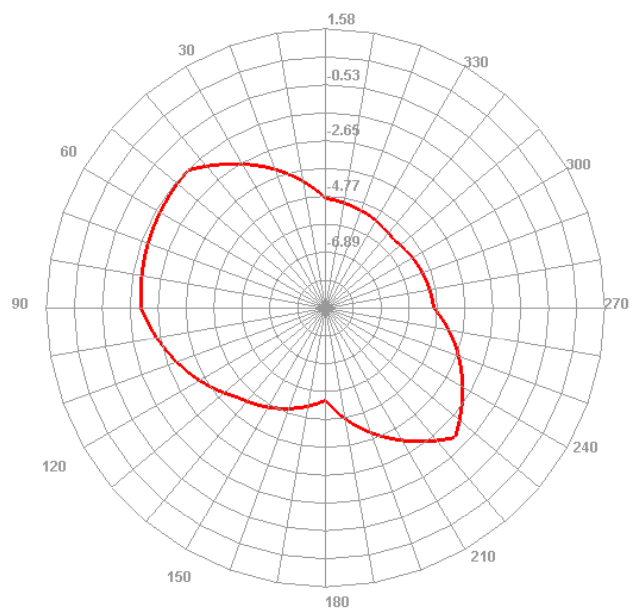
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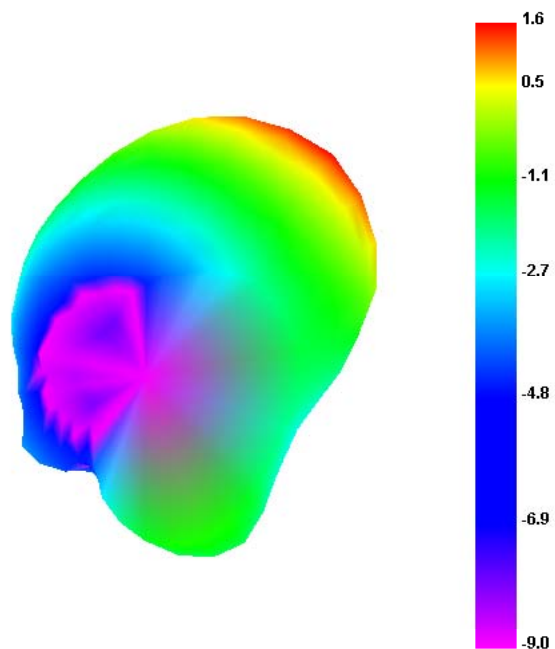
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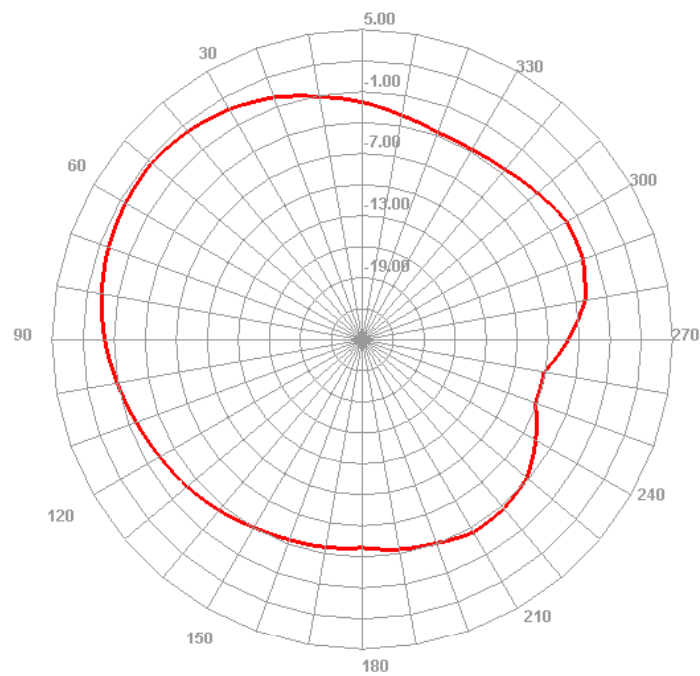
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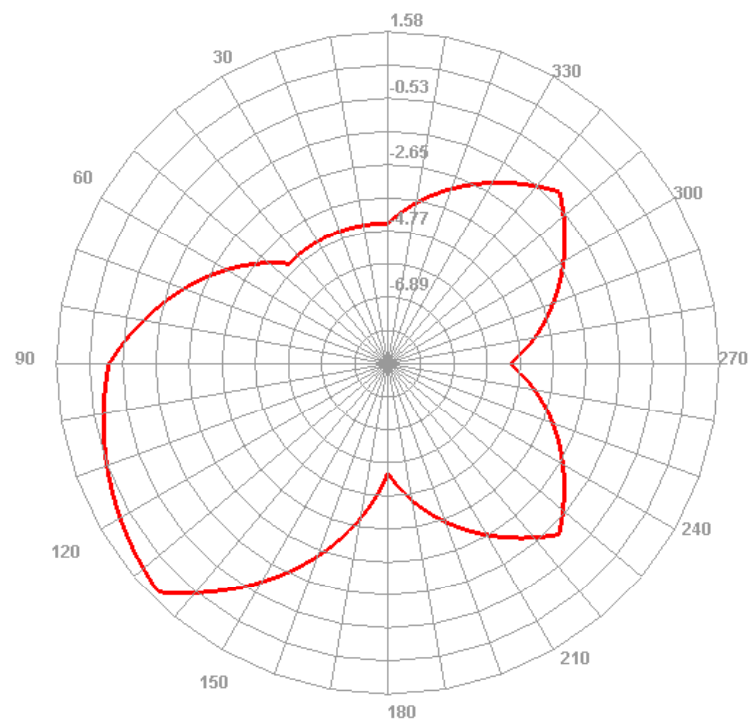
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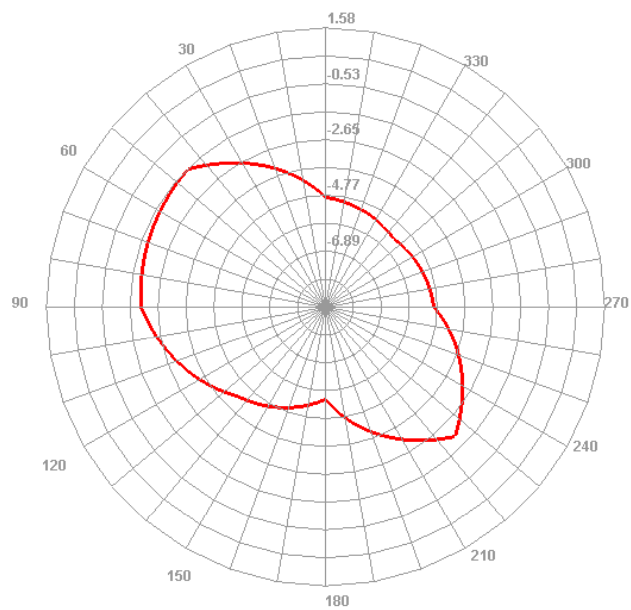
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E2

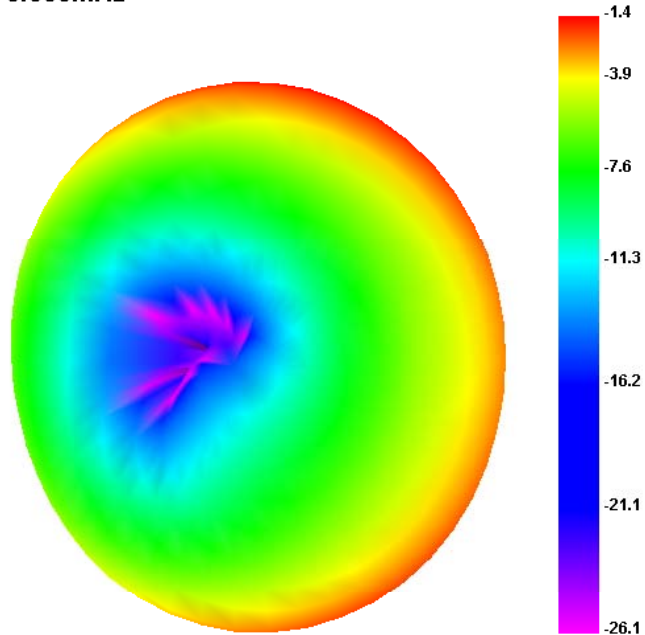


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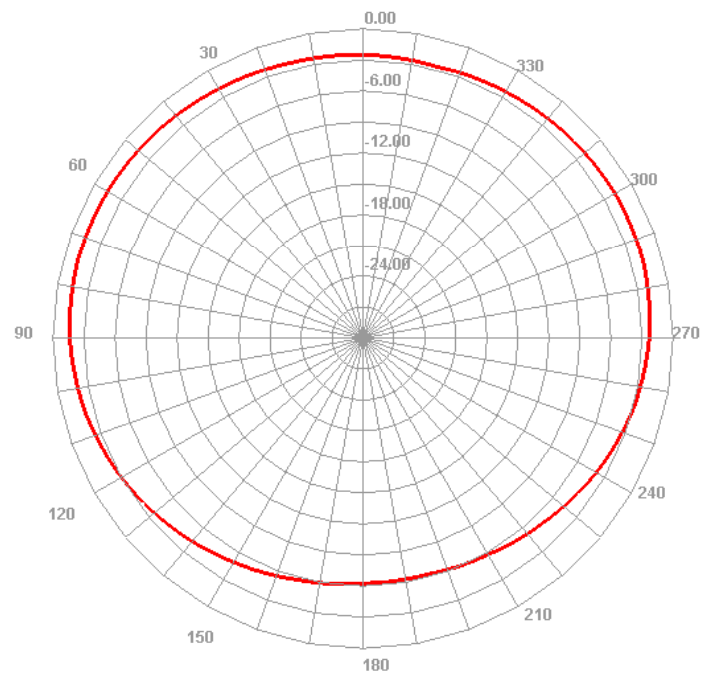


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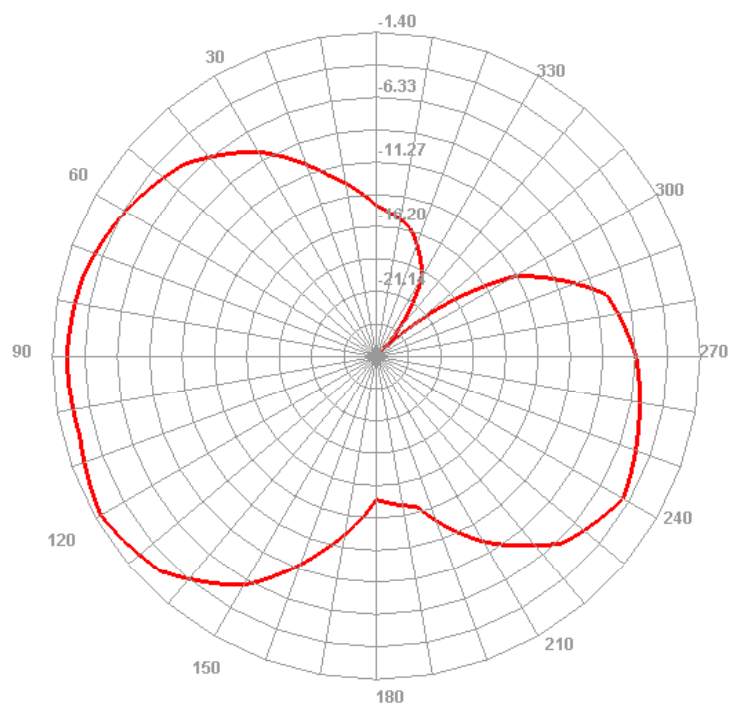
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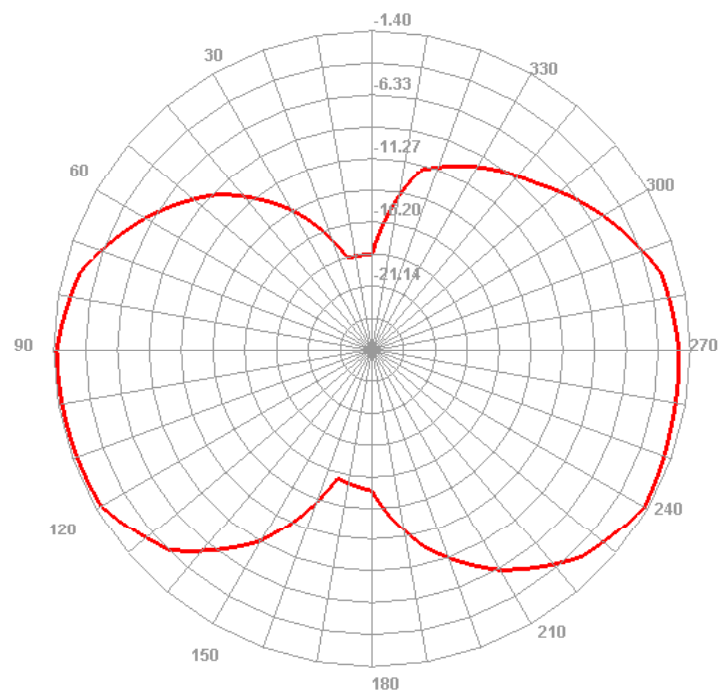
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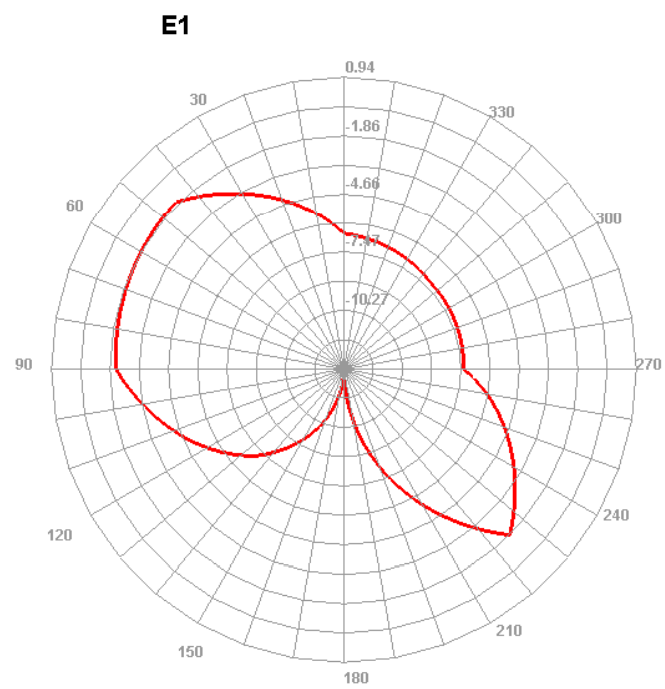
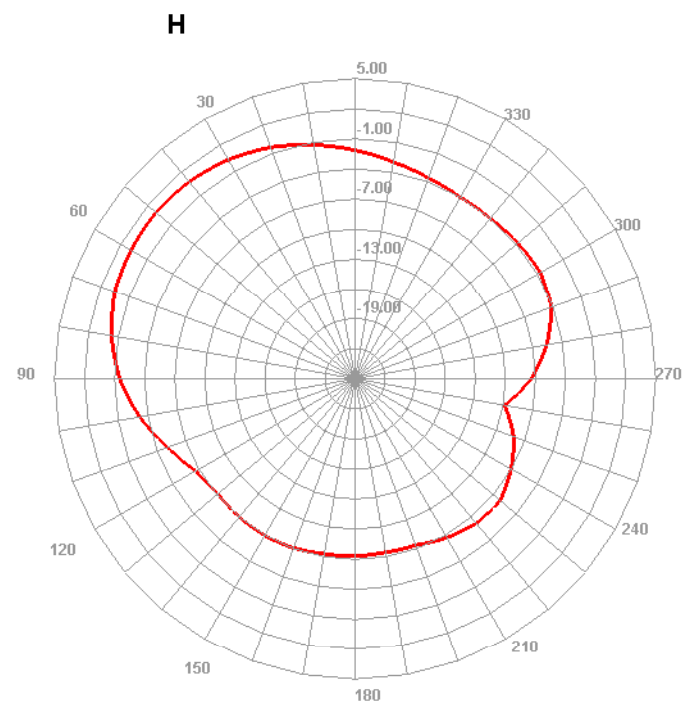
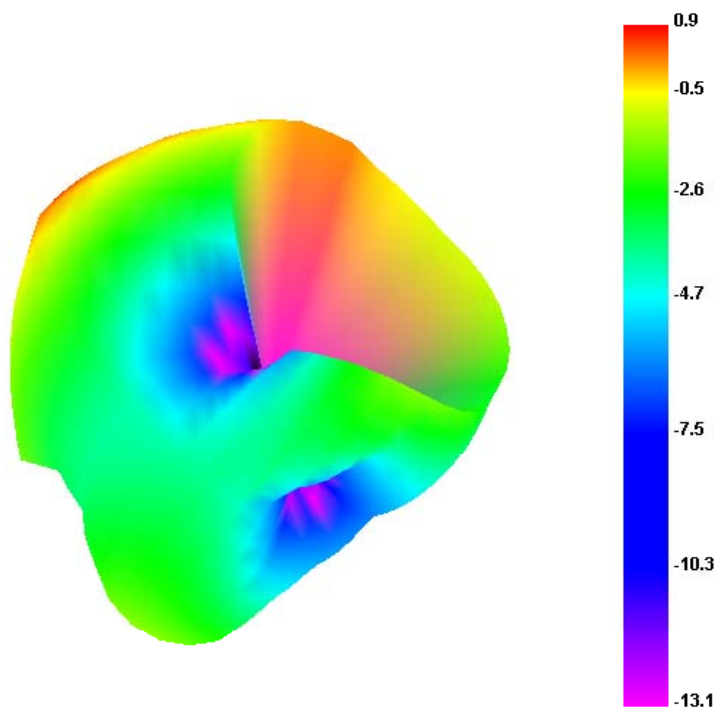
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E2

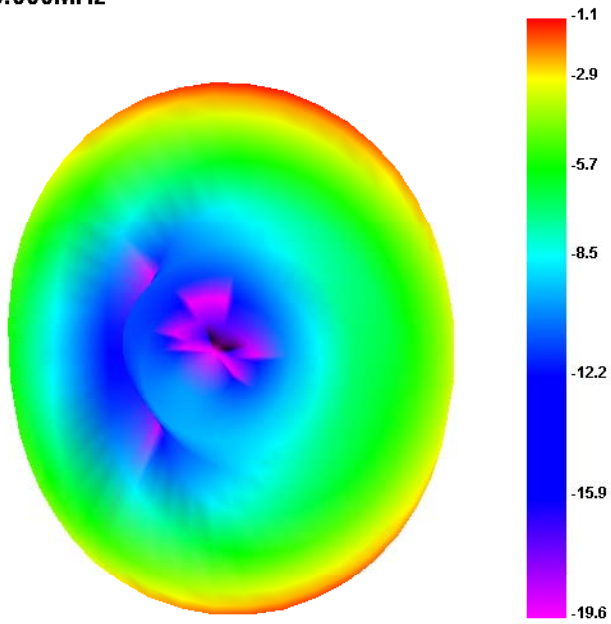


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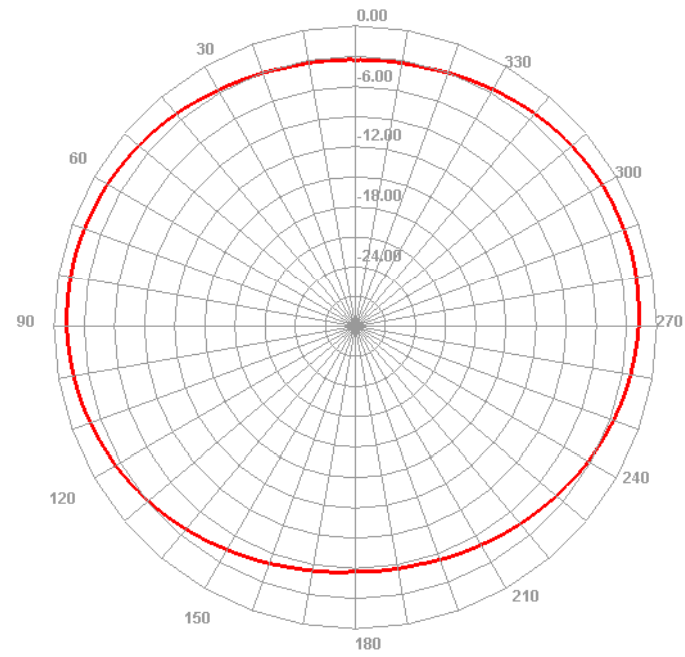


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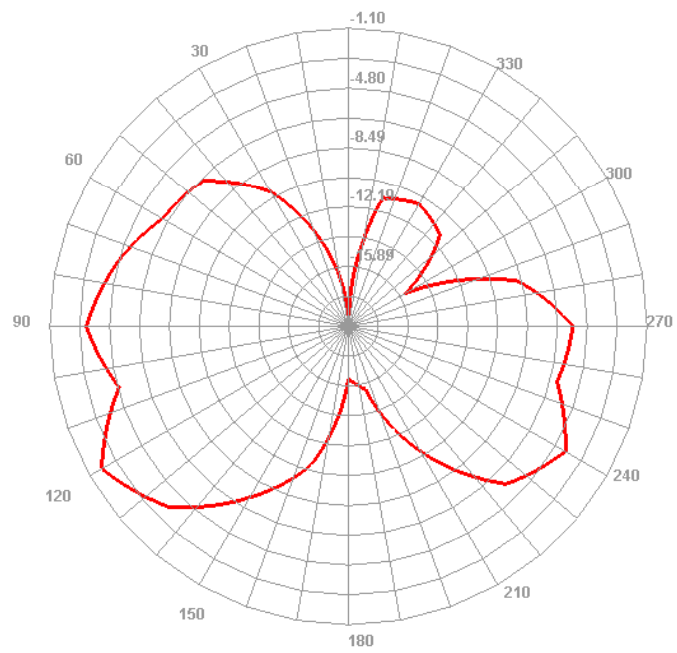
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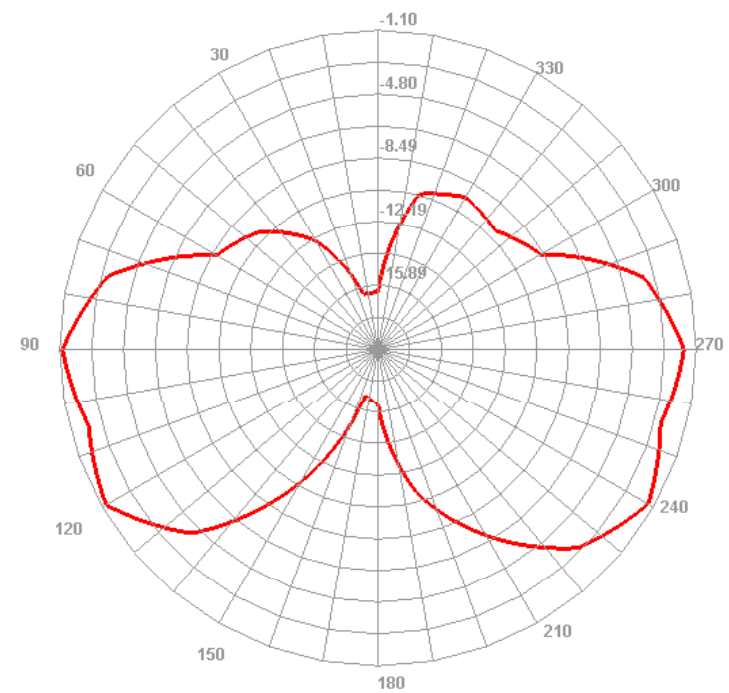
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E1

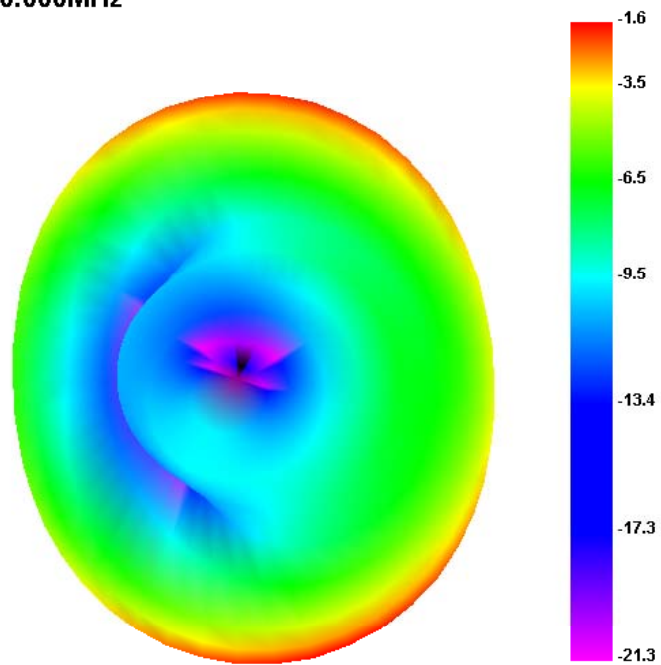


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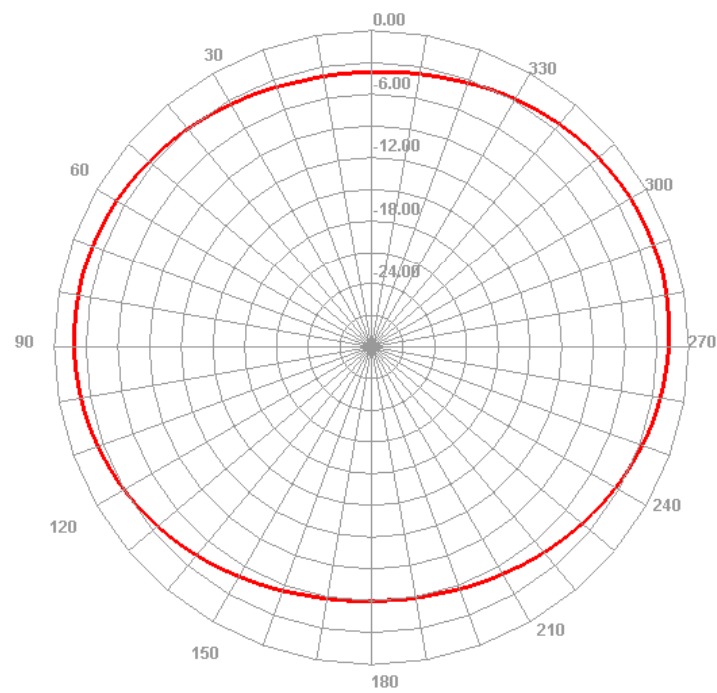


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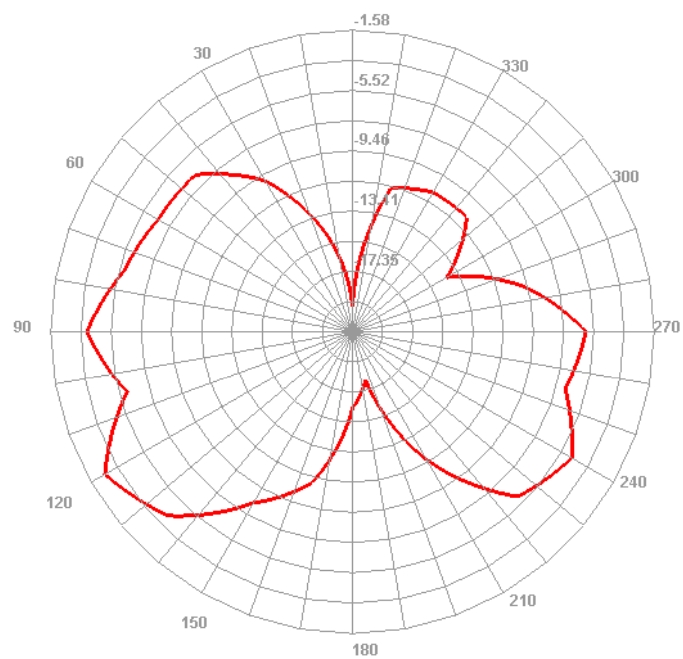
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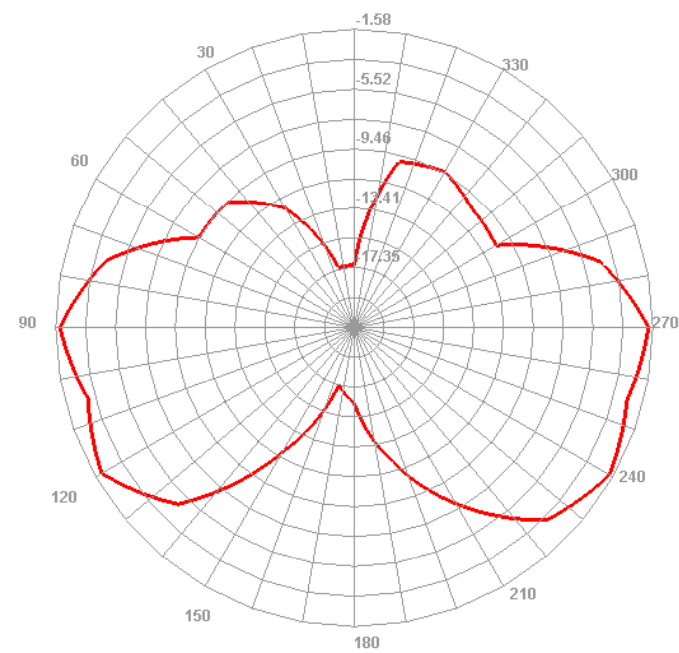
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E1

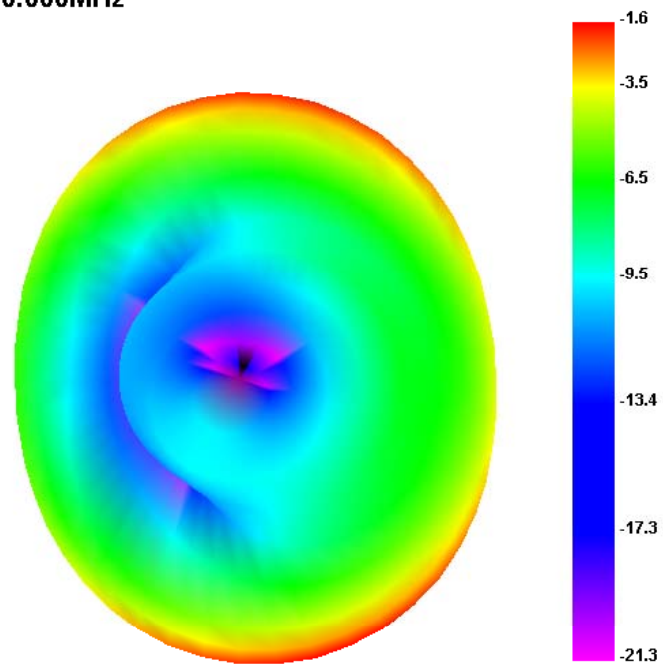


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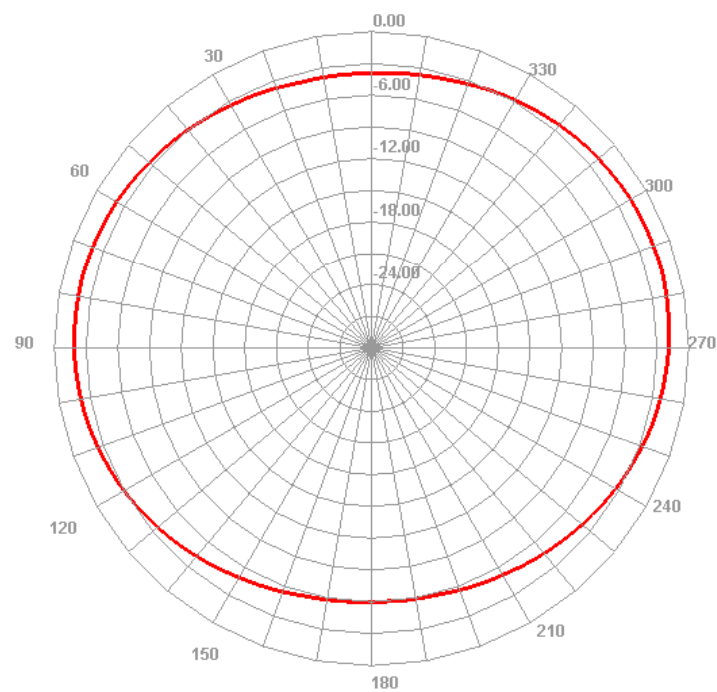


LTE-B17

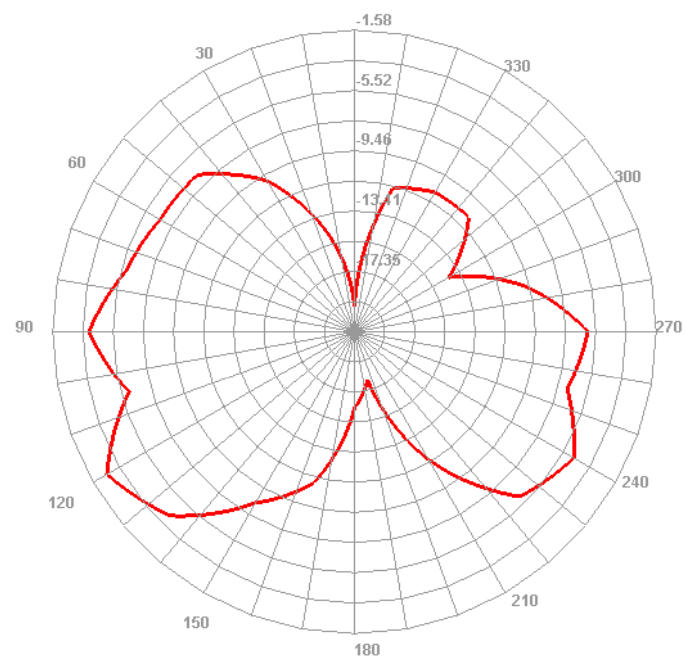
920.000MHz



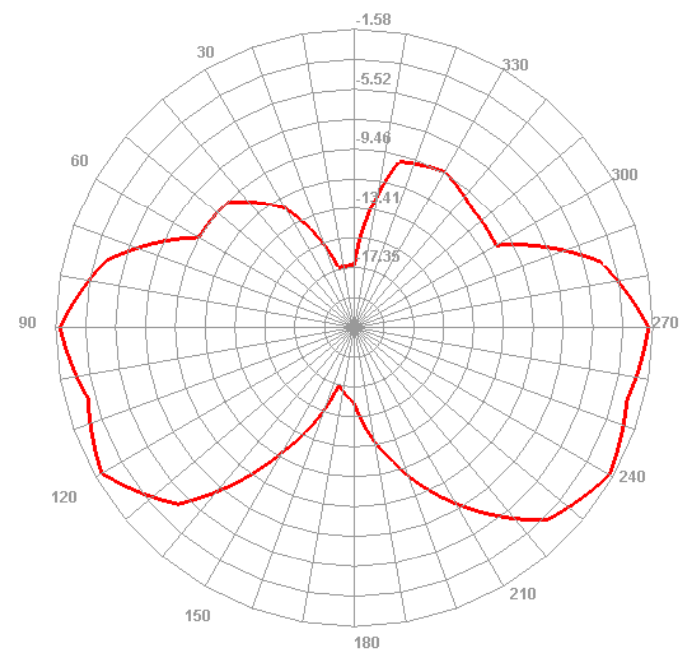
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E1

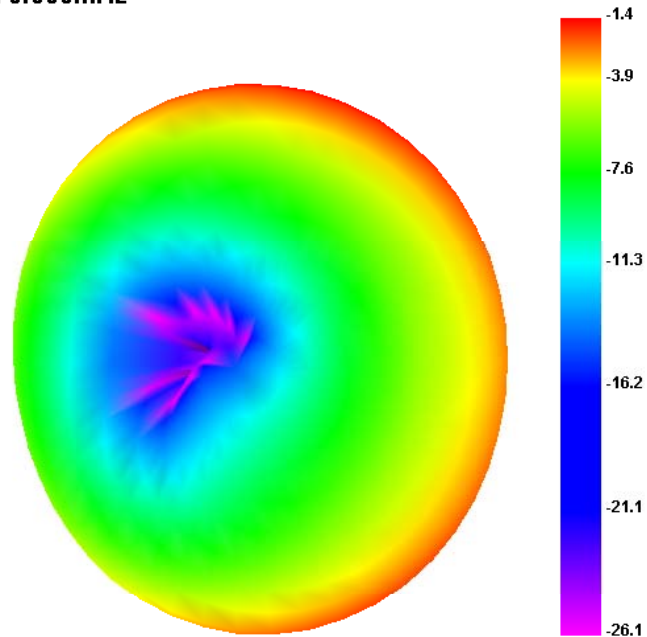


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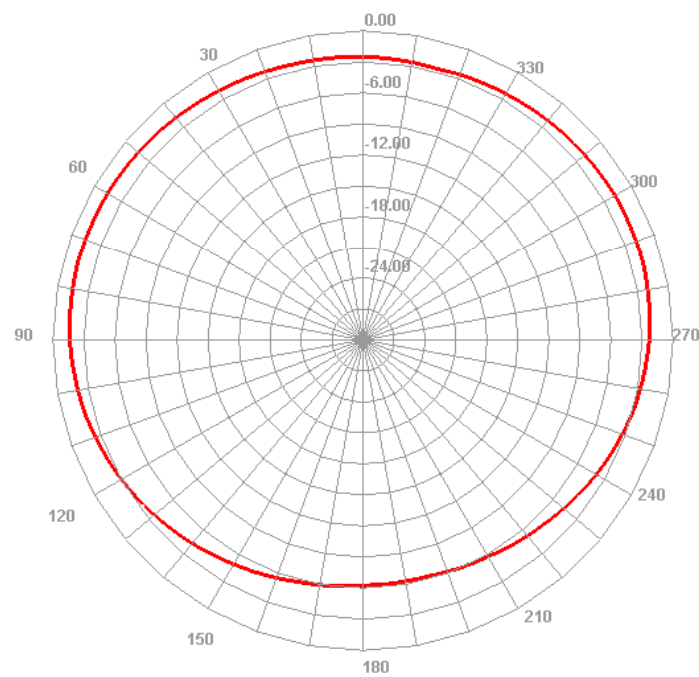


LTE-B20

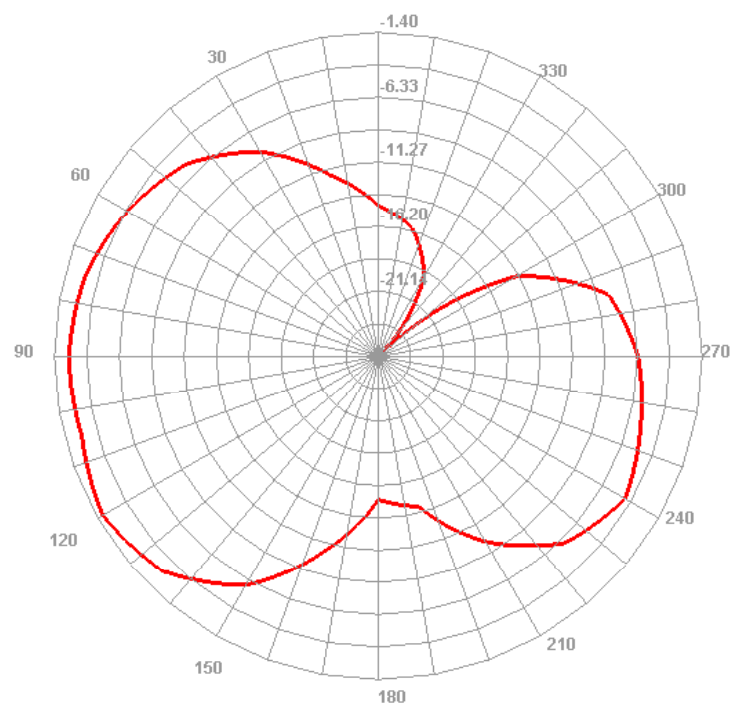
870.000MHz



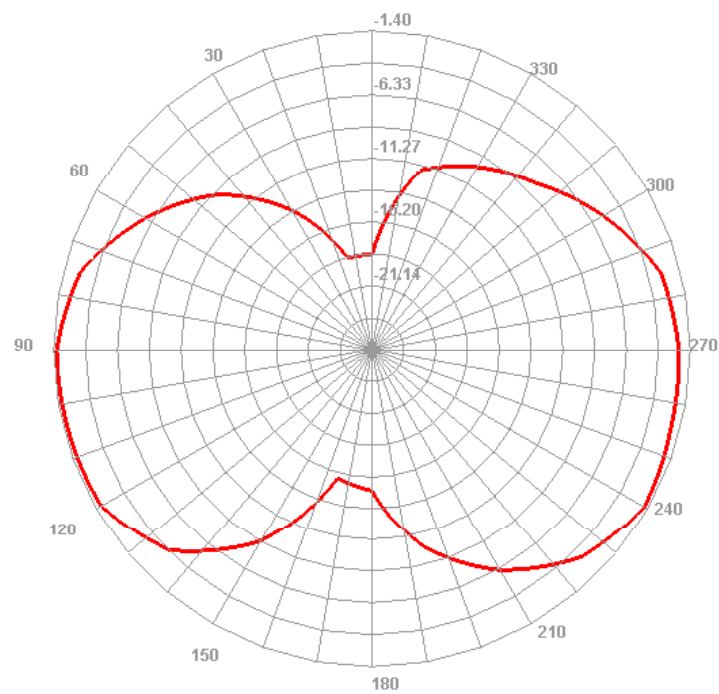
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E1

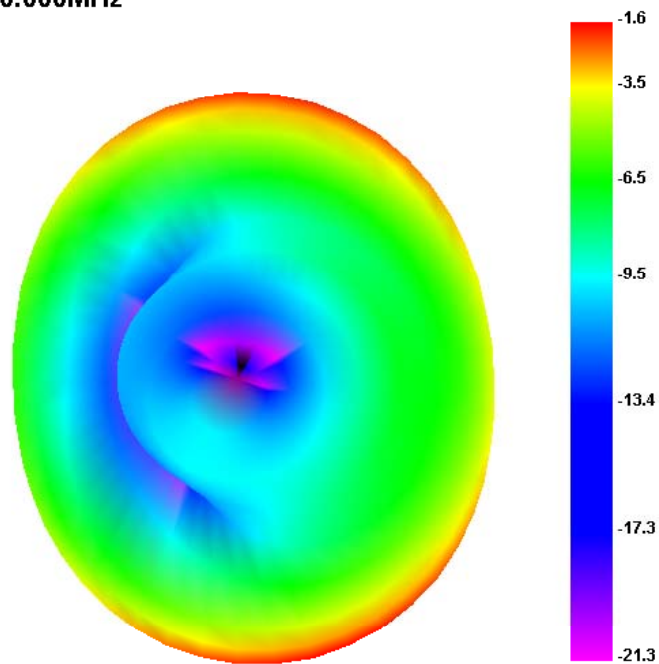


E2

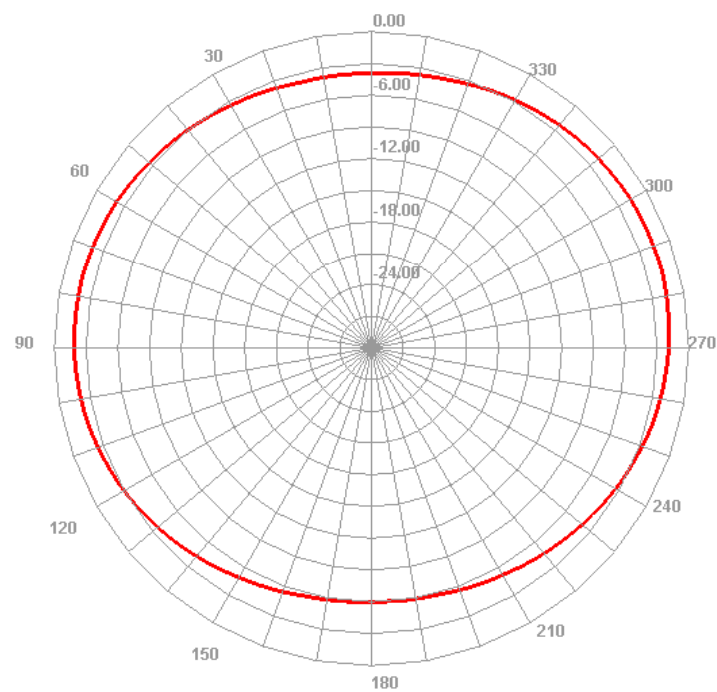


LTE-B28

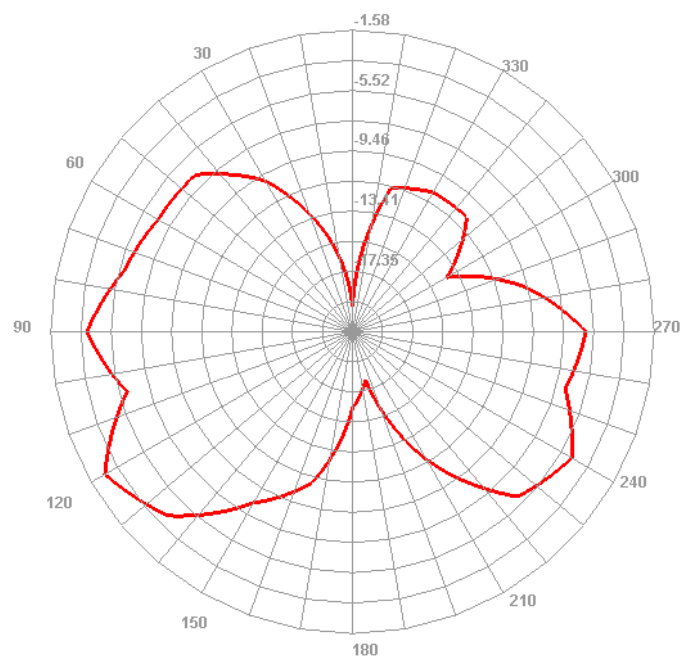
920.000MHz



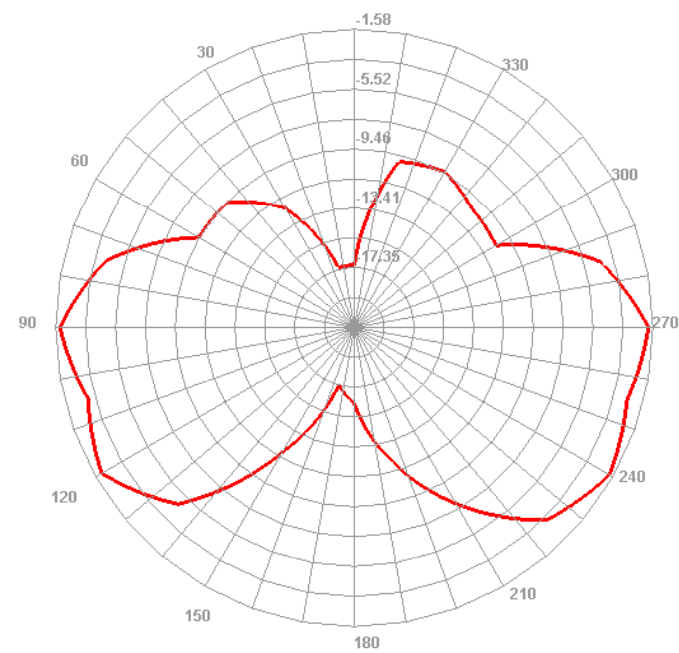
H



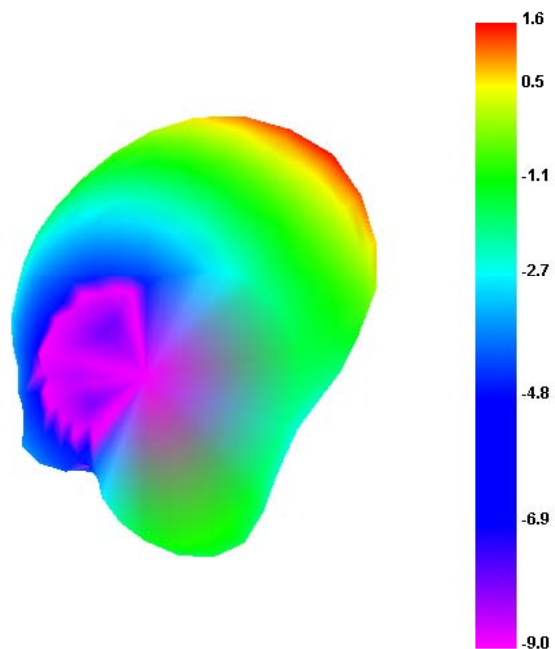
E1



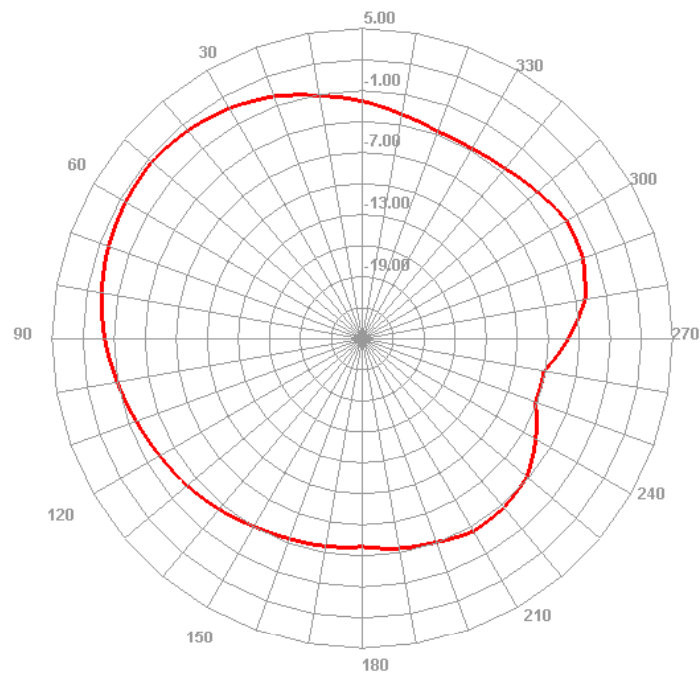
E2



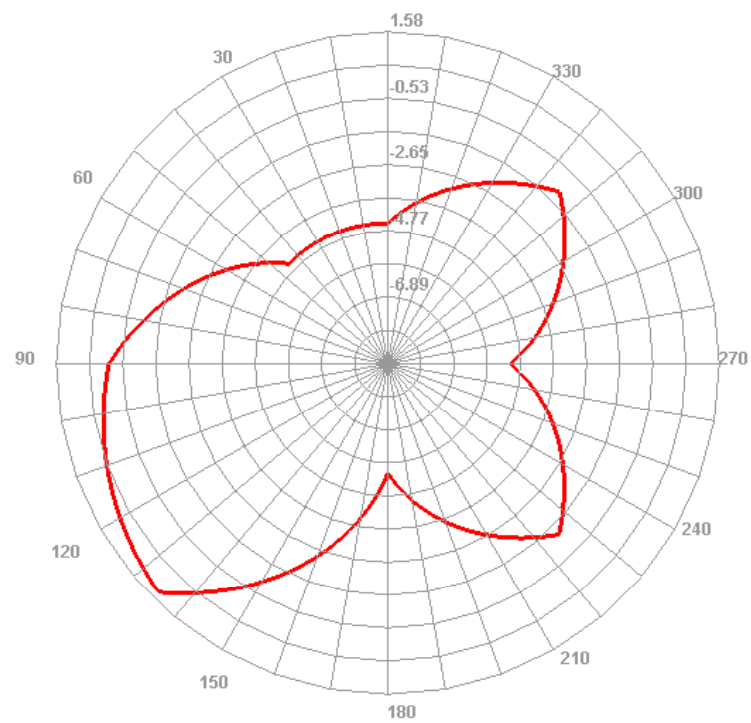
LTE-B66



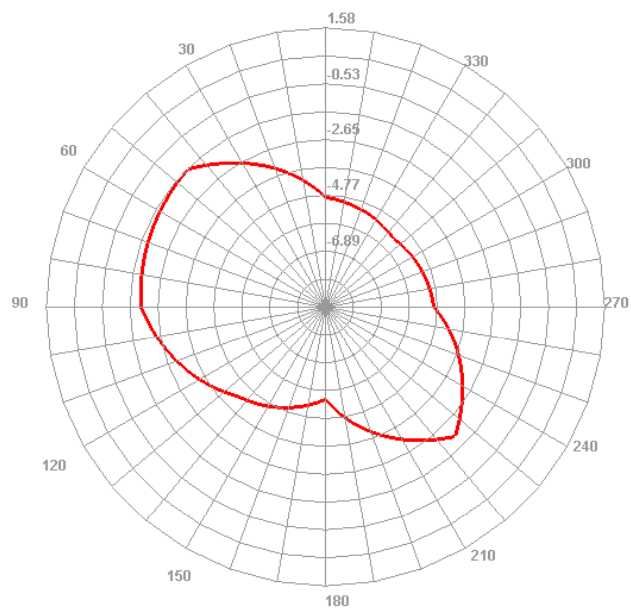
H



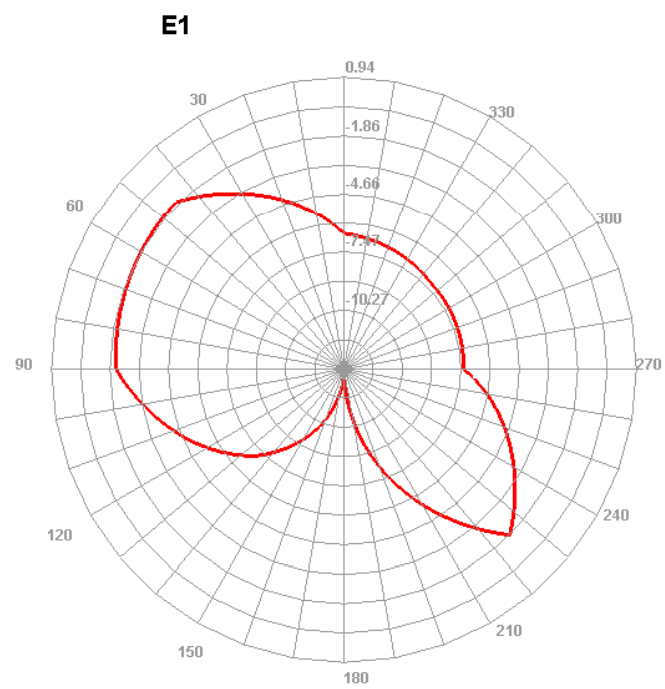
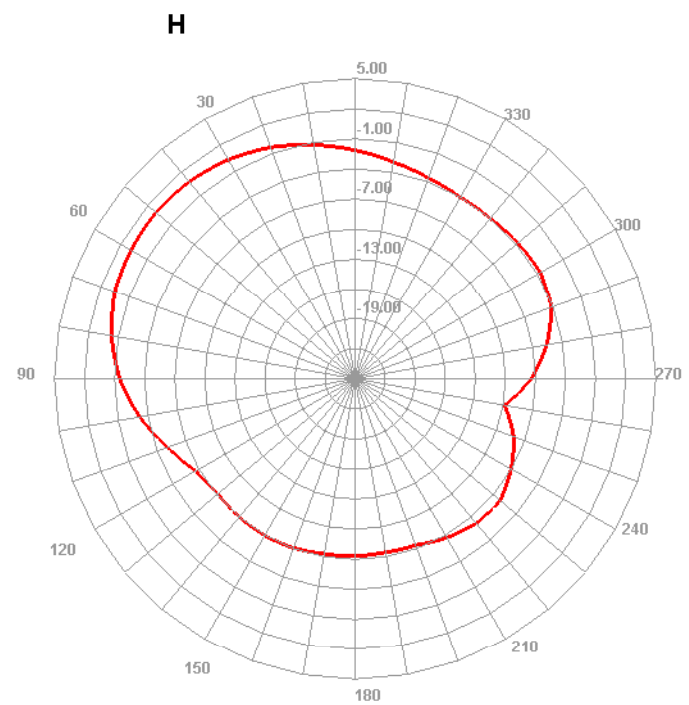
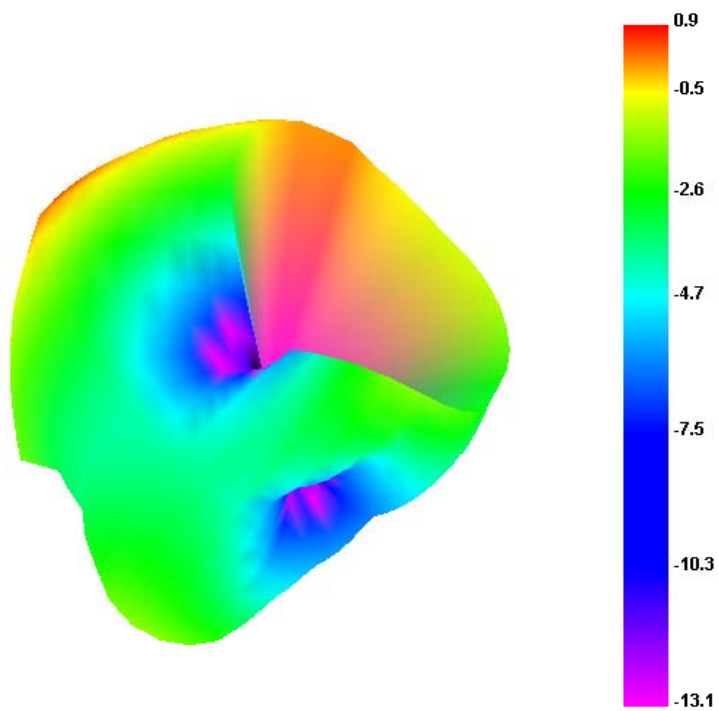
E2



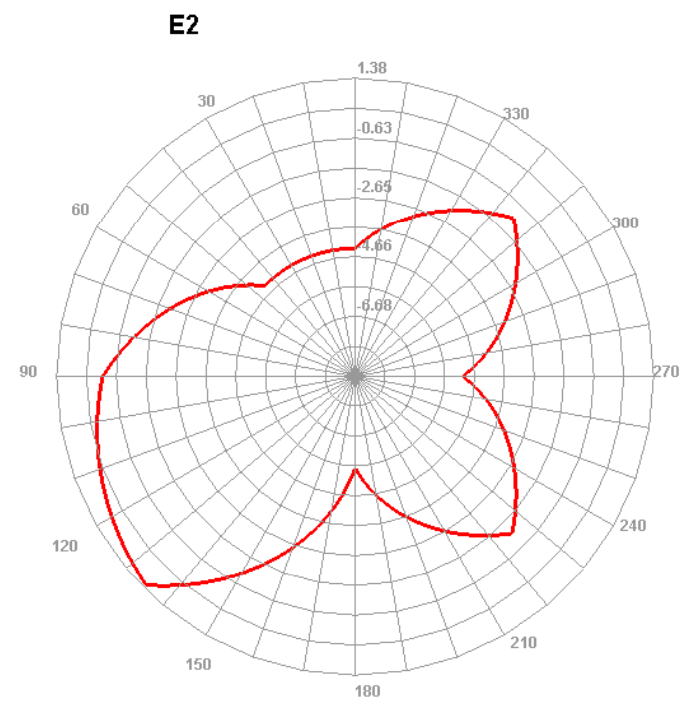
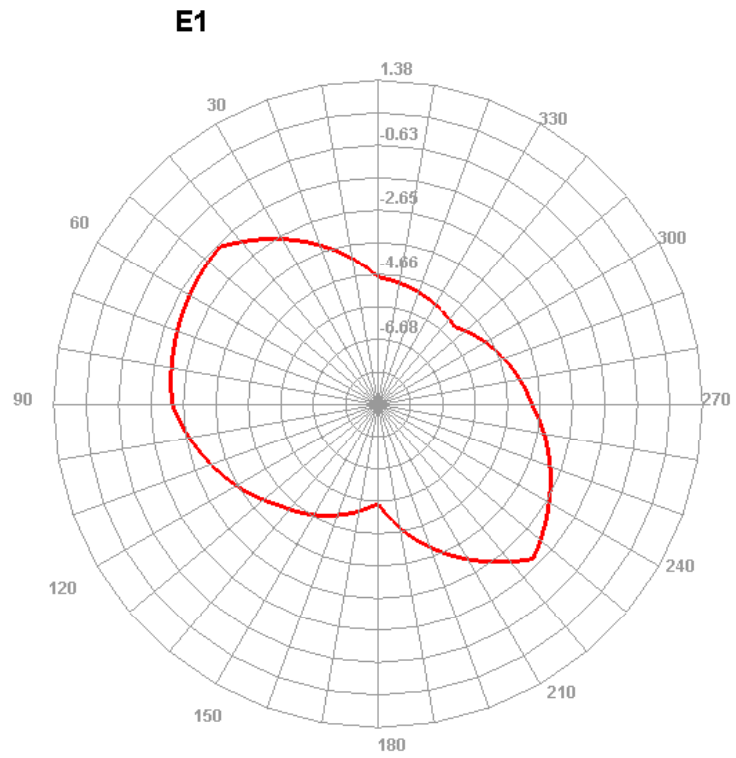
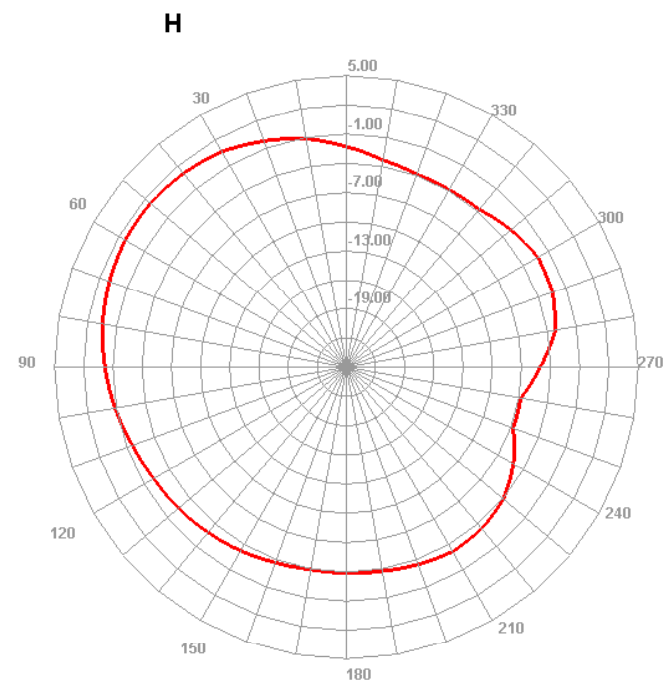
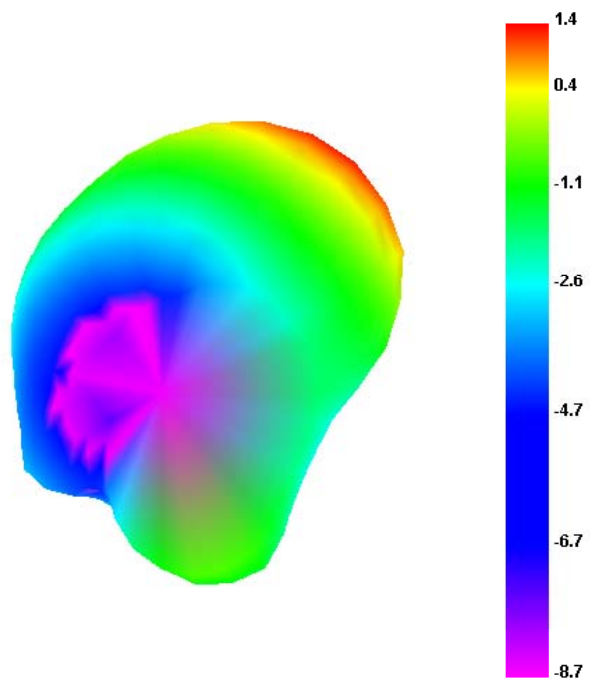
E1



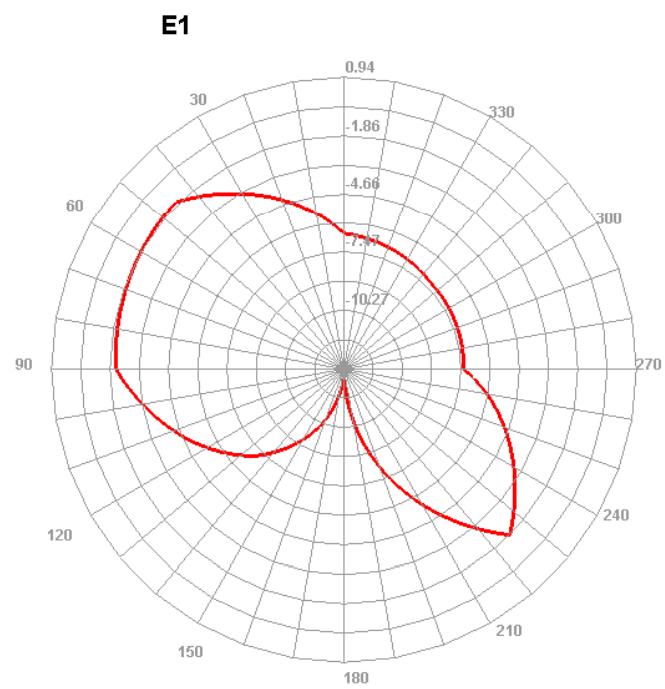
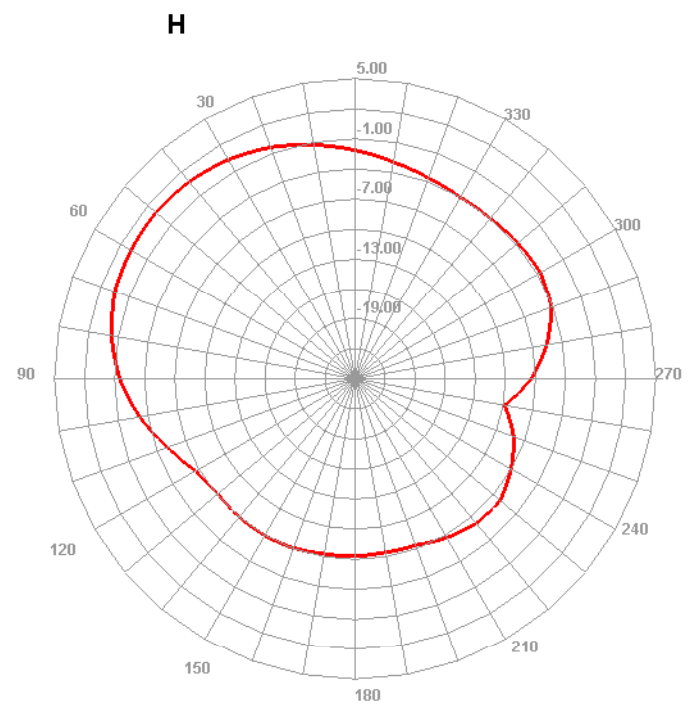
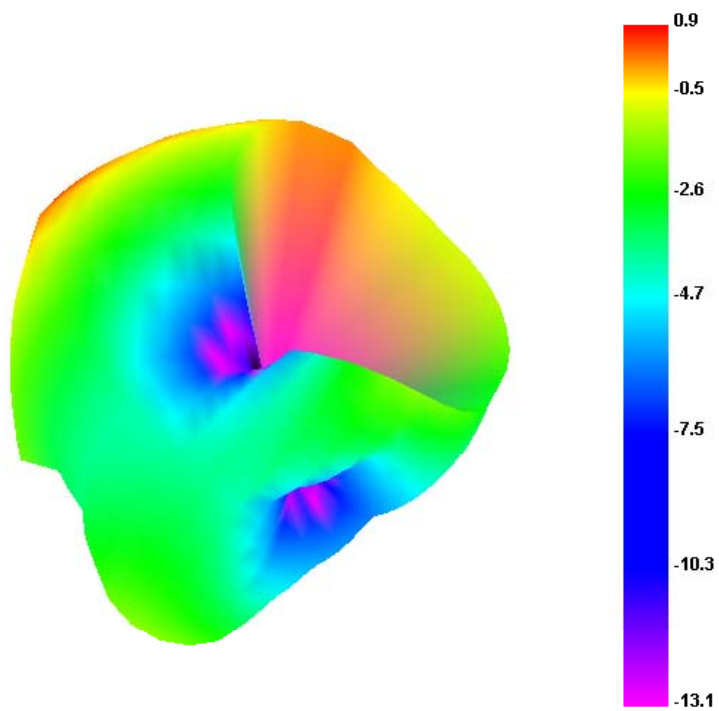
LTE-B38



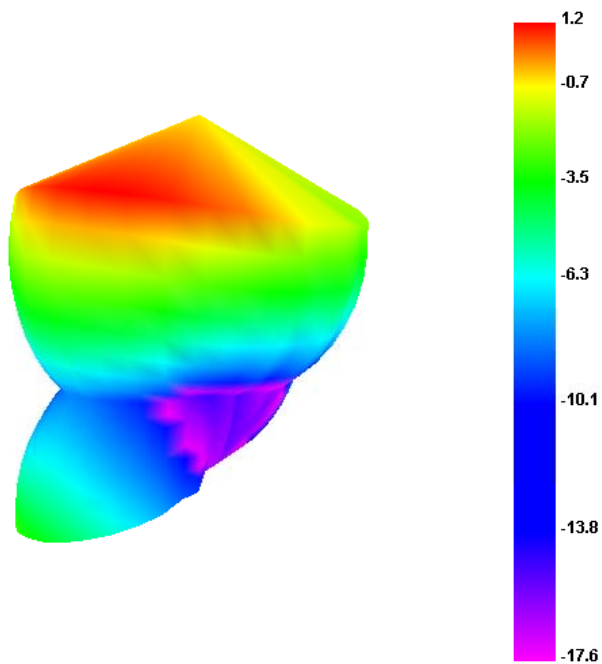
LTE-B40



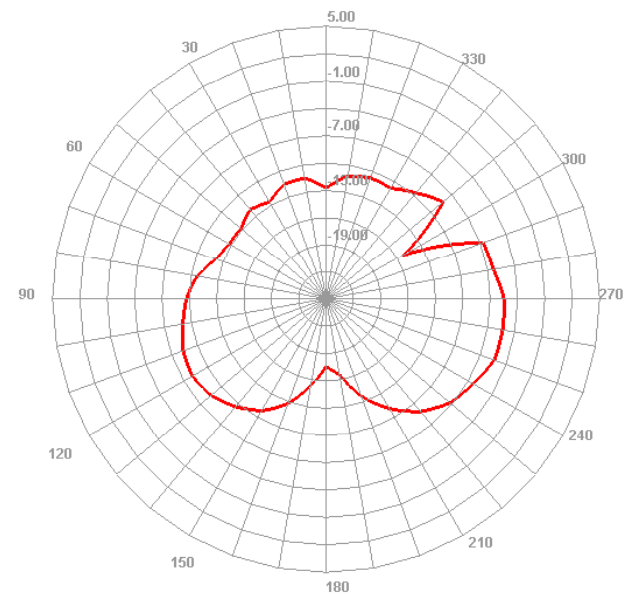
LTE-B41



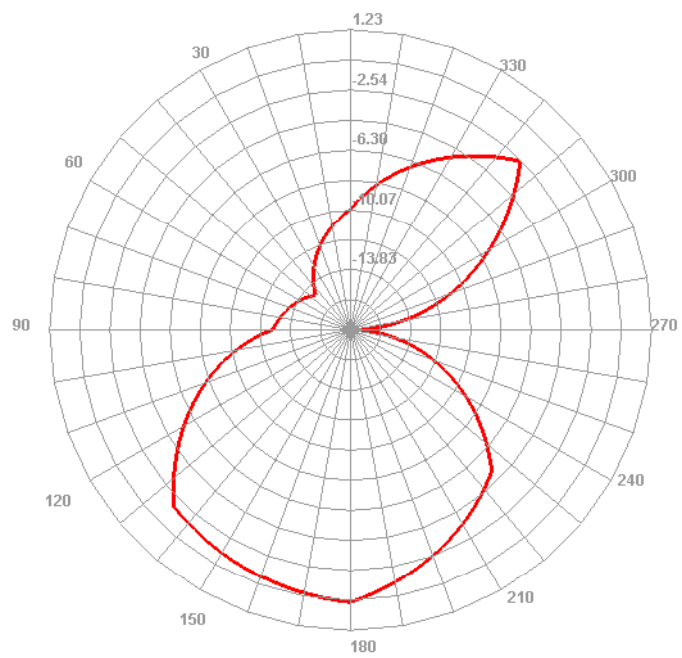
GPS



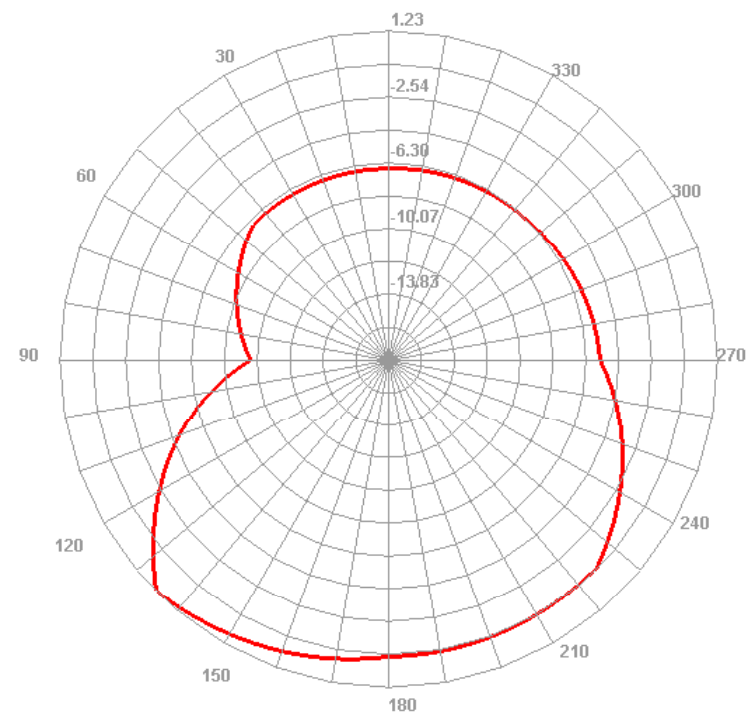
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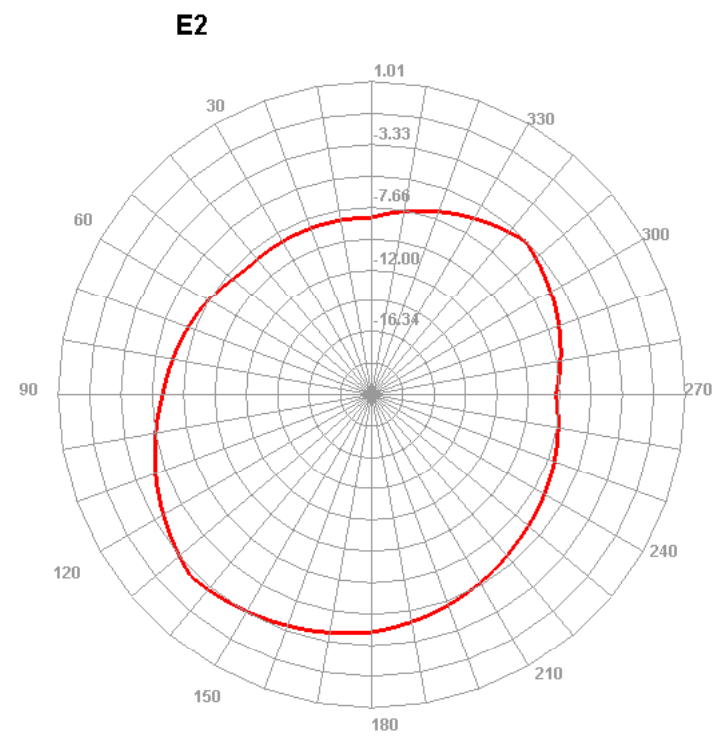
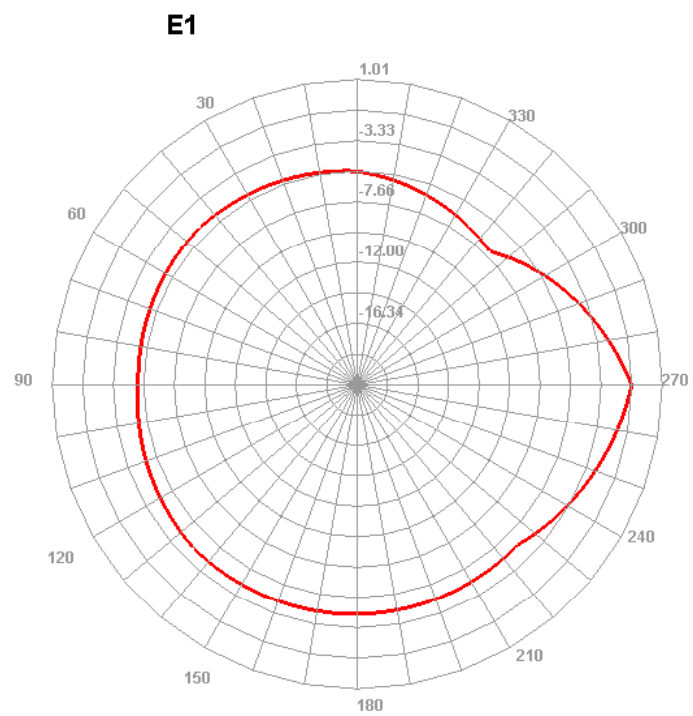
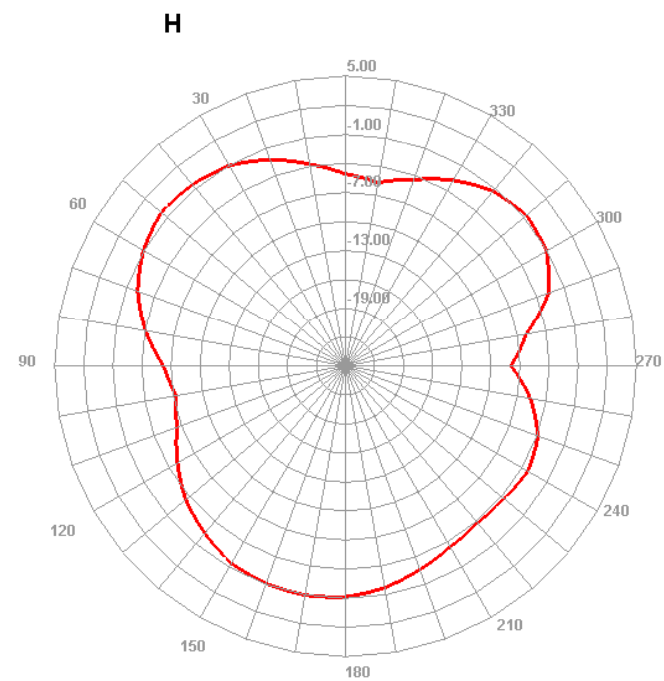
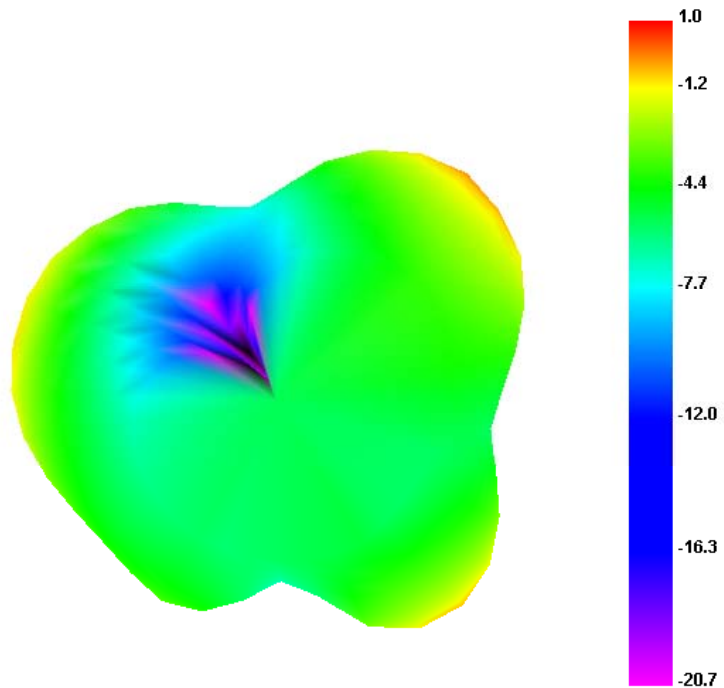
E1



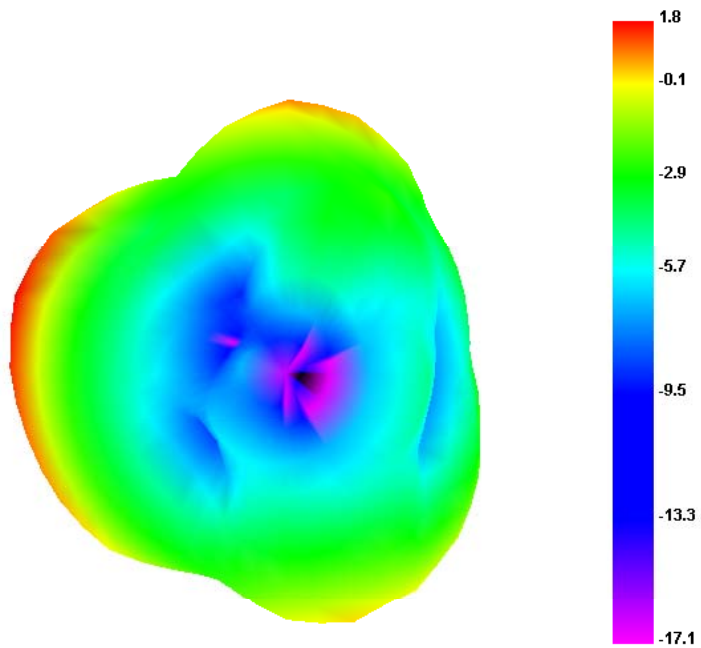
E2



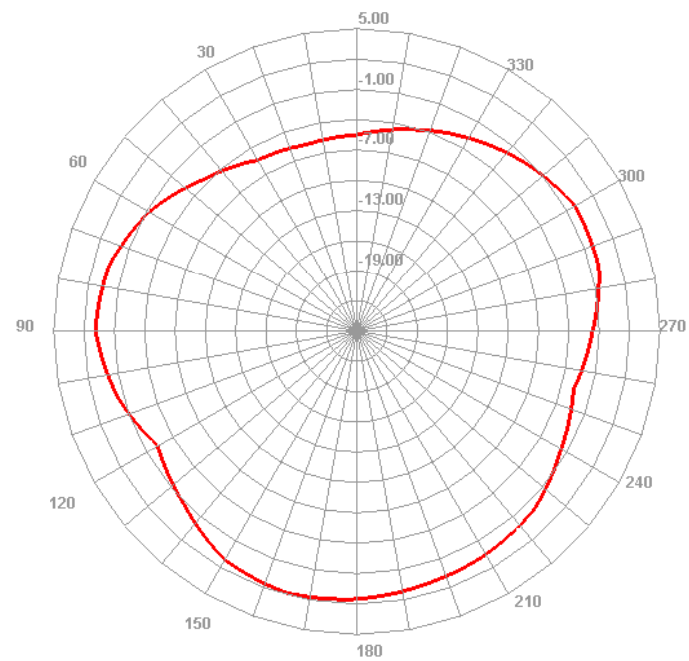
2.4G WiFi



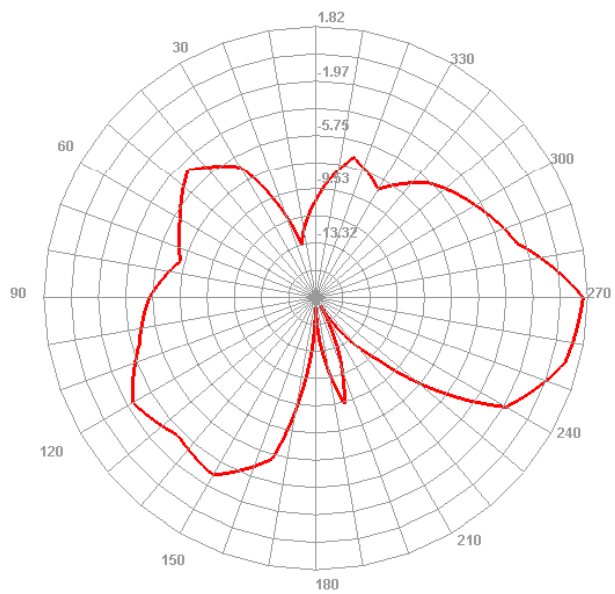
5.18G WiFi



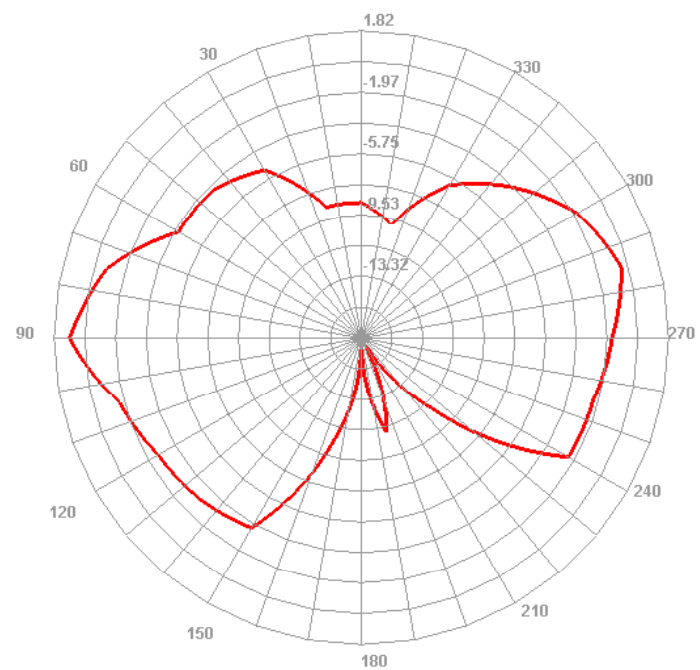
H



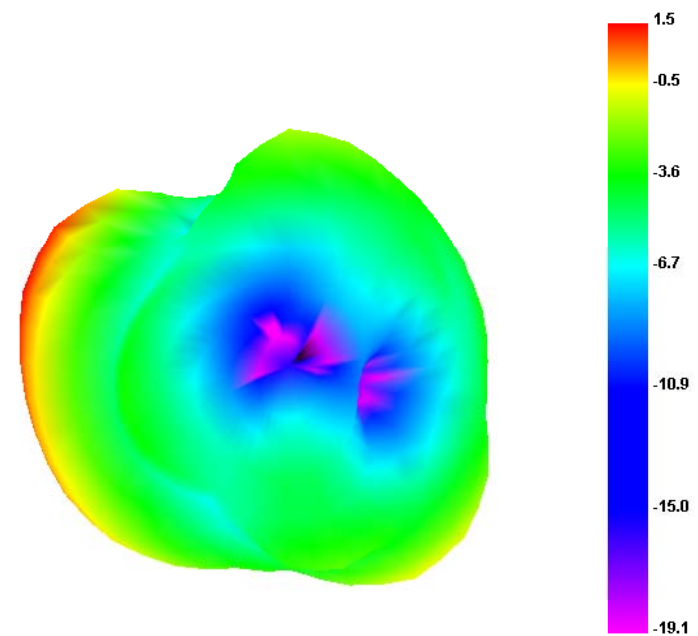
E1



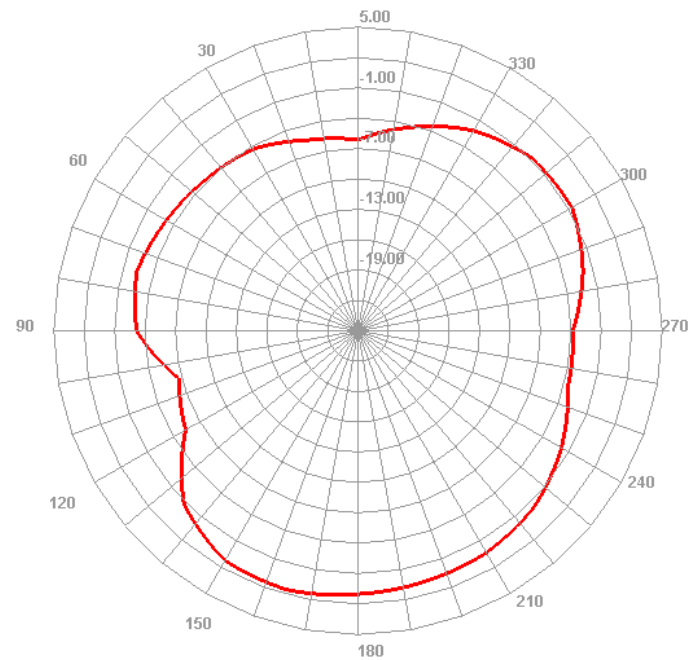
E2



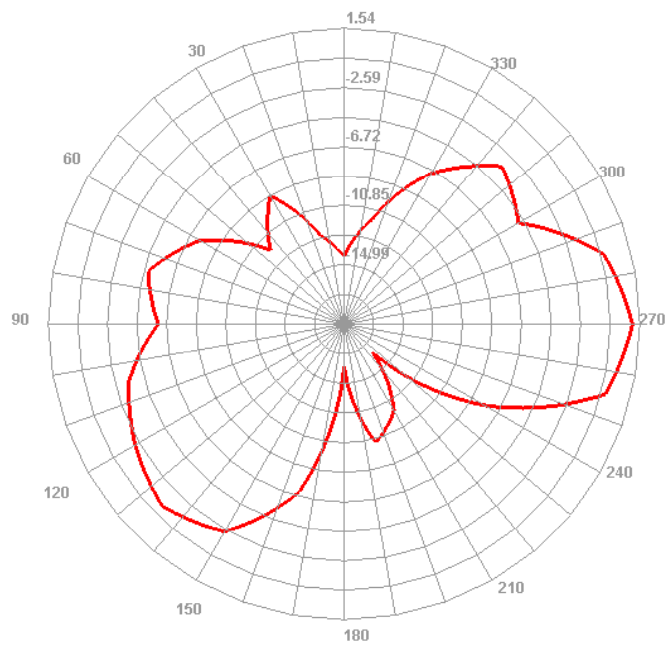
5.8G WiFi



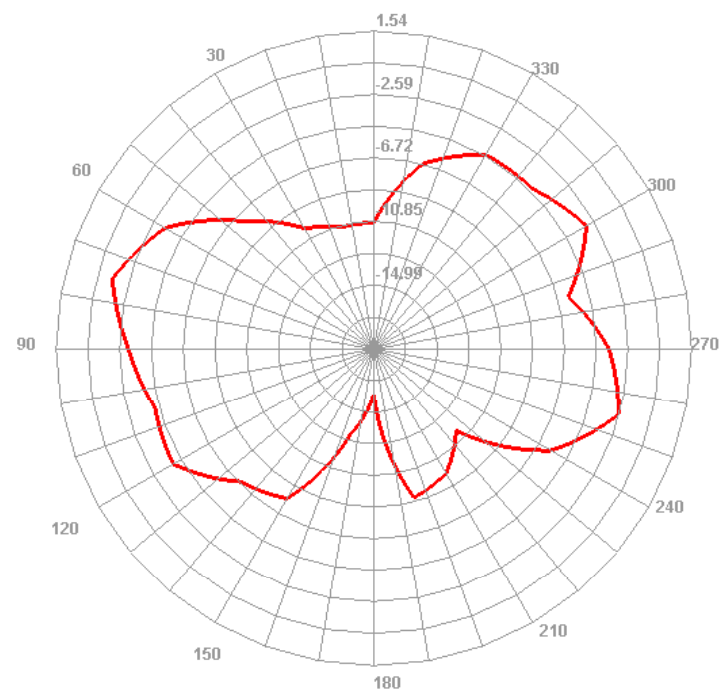
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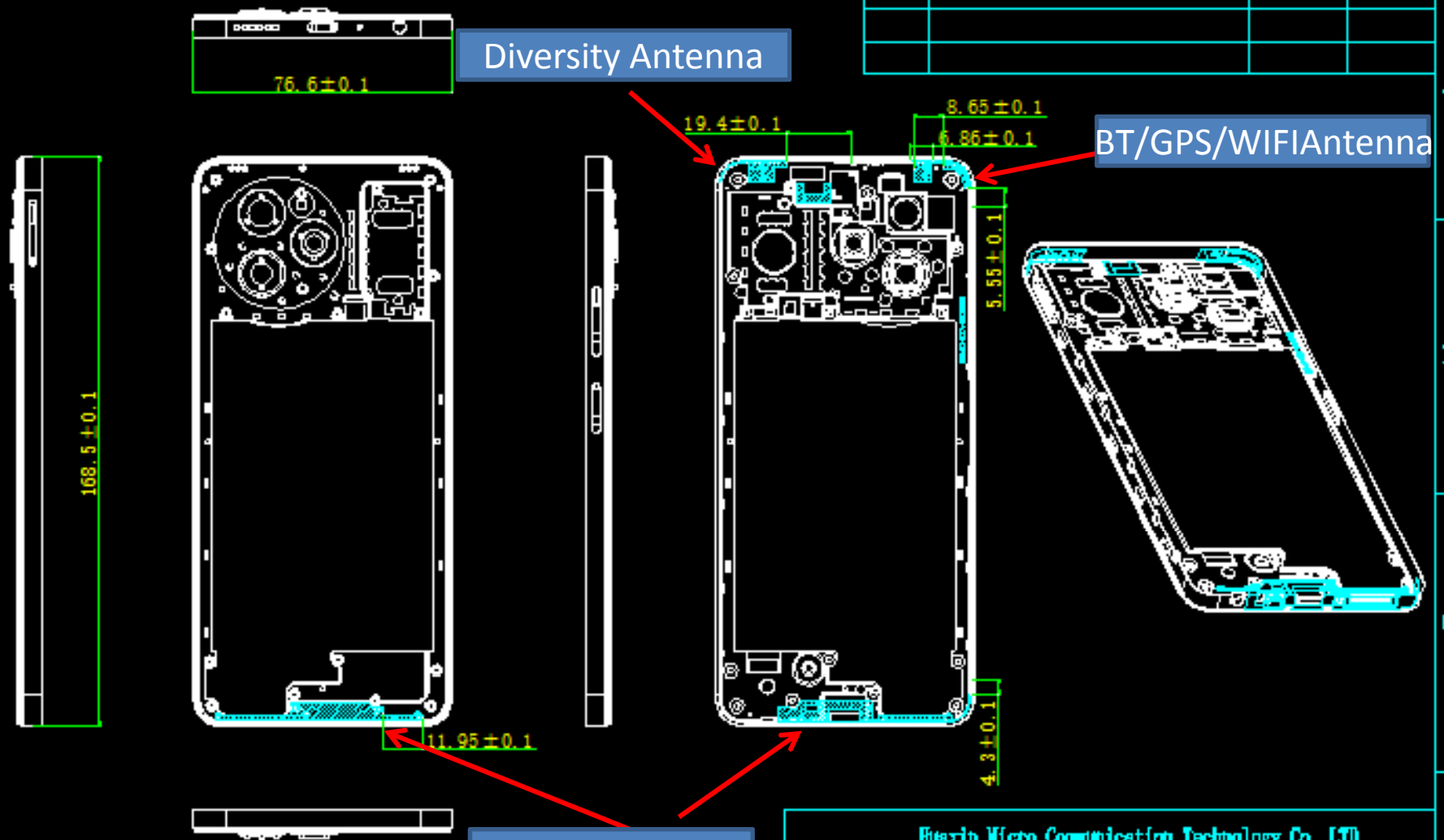
E1



E2



version	Modify the content	modifier	Date of revision



NOTES:

1. No shrinkage, deformation and other undesirable phenomena;
2. Pay attention to the hook, the thimble position can not have a tip.
3. LDS line edge should be clear rules, do not allow leakage plating, overflow plating.

Huaxin Micro Communication Technology Co. LTD				
		unit: mm	name: Middle frame:LDS	
			date: 2023-07-07	
General tolerance:		Material number: 2032H-LDS/2023/007		design: zhangshichao
I	±0.5	material: LDS		R F:
.I	±0.25	Surface treatment: clean		confirm:
.II	±0.05	color:		proportion: 1:1
.III	±0.05	version: A		
ANGULAR	± 0.5°			