



# 承認書

## APPROVAL SHEET

客 户  
CUSTOMER:

品 名 规 格  
DESCRIPTION: SMA-2.4G 天线-RG174-L5.0M

料 号  
PART NO.: TG 01-0333

客 户 料 号  
CUS PART NO.: TG 01-0333

日 期  
D A T E: 2018.09.06

### 特高呈样签章

工 程 ENGINEERING DEPARTMENT	品 保 Q C DEPARTMENT	业 务 SALES DEPARTMENT
朱万里	唐杰鑫	沈佩

### 客户承认签章

工 程 ENGINEERING DEPARTMENT	品 保 Q C DEPARTMENT	采 购 PURCHASING DEPARTMENT

联系电话: 0755 84160400 13612884554

※ 承认书一式三份, 惠蒙贵司承认签章

※ Approval in duplicate, please signed by your company.

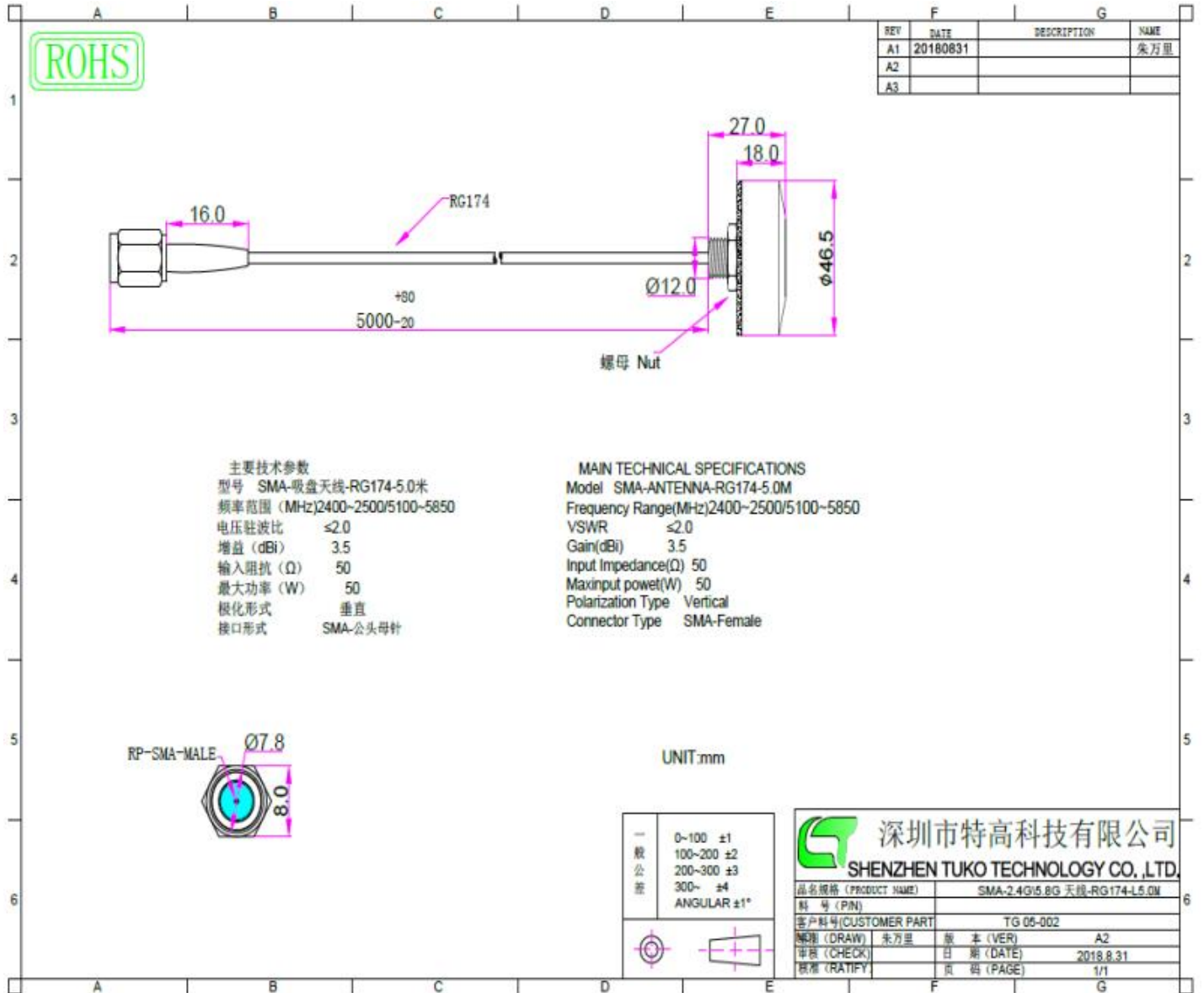


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产品图纸 Product drawings



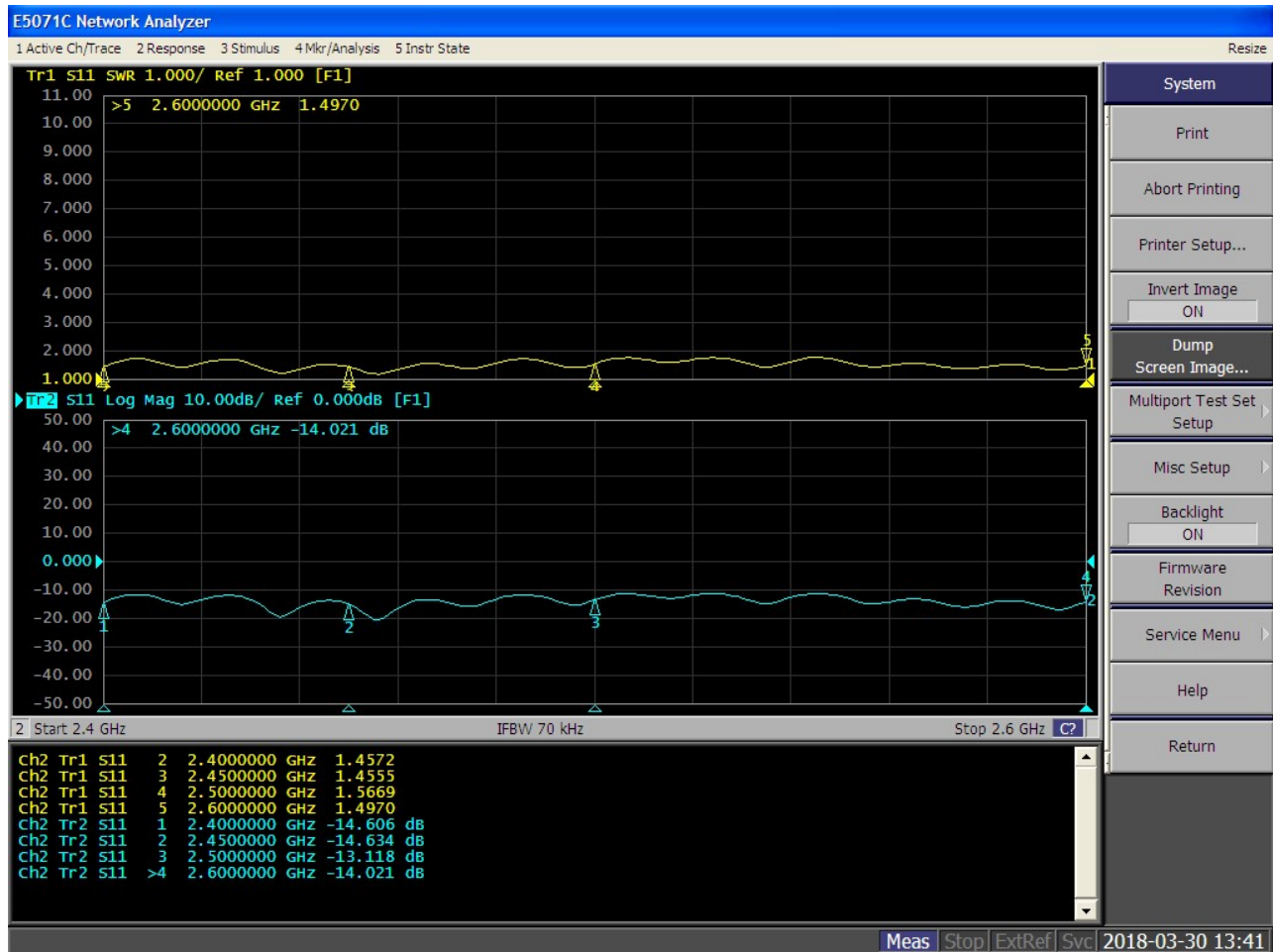


## 电气性能指标Electrical performance parameters

频率范围Frequency range (MHZ):	2400 ~ 2500
增益Gain (dBi):	3.5
电压驻波比VSWR:	≤2.0
极化方式Polarization mode:	Linear Vertical
阻抗Impedance:	50 Ω
天线尺寸Antenna size:	∅46.5*27mm
天线颜色Antenna color:	黑色 Black
线材规格Cable:	RG174 5.0M
接头Connector:	RP- SMA公头母针 Male



## 网络测试图 (Network test pattern)





环境性能测试 (Environment performance test) :

项目	测试条件	测试结果
储存环境	在没有指定的情况下测试温度、湿度、气压如下： 1. 温度为-30℃~+80℃ 2. 相对湿度为45%-85% 3. 气压为86kpa-106kpa	电气机械性能正常
高低温试验	在70℃与-40℃之间进行5次循环，然后在正常条件下1-2H，检查外观质量。	尺寸应满足规定并应满足于机械、电气性能
耐恒定湿热试验	相对湿度95±3%，试验温度：40℃.持续2H作用后，试品取出后5min之内测定电气性能，试品在正常条件下1-2H，检查外观质量	尺寸应满足规定并应满足于机械、电气性能
振动试验	振频范围10-55HZ，位移幅值：0.35MM，加速度幅值：50.0M/S，扫频循环次数：30次	电气机械性能正常
跌落试验	1M高空按照互相垂直的轴方向自由跌落3次	电气机械性能正常

Project	Test condition	Test results
Storage environment	Test temperature, humidity, pressure without stated condition as follwings:1.Temperature: -30 °C ~ +80 °C ;2.Relative humidity: 45%-85%;3, Pressure: 86kpa-106kpa	Electrical and mechanical performance normal
High and low temperature test	Having 5 times cycle between -40°C to 70°C,Then in common condition 1-2 hours test exterior quality.	Measurement satisfied with electrical and mechanical performance normal.
Resistance constant hot and humid test	Relative humidity:95±3%,Test temperature: 40°C,last 2 hours ,put it after 5 min test the electrical function .Test products during common condition 1-2 hours ,Then test exterior quality.	Measurement satisfied with electrical and mechanical performance normal.
Vibration test	Vibrate Frequency:10-55HZ; Distance :0.35mm;Acceleration :50.0m/s;Sweep frequency cycle:30 times	Electrical and mechanical performance normal
Fall test	From 1m height fall down 3 times freely (vertical direction)	Electrical and mechanical performance normal



## SMA射频同轴连接器

RF COAXIAL CONNECTORS

编号: TG 11

### 主要技术特性 (TECHNICAL SPECIFICATIONS):

温度范围 (Temperature):	-55~+125℃
特性阻抗 (Impedance):	50 Ω
频率范围 (Frequency Range):	DC~6 GHz
工作电压 (Working Voltage):	335V max(有效值)
耐压 (Withstand Voltage):	1000V rms(海平面最小值)
接触电阻 (Contact resistance):	
	内导体之间 (Center Contact) ≤6m Ω
	外导体之间 (Outer Contact) ≤1m Ω
绝缘电阻 (Insulation resistance):	≥1000m Ω
电压驻波比 (VSWR):	直式 (Right angle) ≤1.2
耐用性 (Durability):	≥500次

### 材料与涂覆 (MATERIAL AND PLATING):

壳体 (Shell):	黄铜 (Brass) 或 镀镍 (Nickel plating) 镀硬金 (Gold plated)
插针 (Contact pin):	黄铜 (Brass) 镀硬金 (Gold plated)
插孔 (Socket contact):	铍青铜 (Beryllium brass) 镀硬金 (Gold plated)
绝缘体 (Insulator):	聚四氟乙烯 (PTFE)
O型密封件 (O-ring sealing):	硅橡胶 (6146 silastic)



# 深圳市特高科技有限公司

SHENZHEN TUKO TECHNOLOGY CO.,LTD

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线材样品承认书			
CABLE SPECIFICATION			
样品编号 Sample No.			TG-174-64 全铜
结构项目/CONSTRUCTION ITEM			
导体 Conductor	型号 Size		RG-174 线
	同轴线导体规格 Construction	No.mm	7/0.15±0.008
	材料 Material	/	裸铜
绝缘 Insulation	材料 Material	/	PE
	外径 OD	m/m	1.5±0.05
	平均厚度 Average Thickness	mm	0.55
	最小厚度 Minimum Thickness	mm	0.5
	火花测试 Spark test	KV	1.5
	颜色 Color	/	本色
内部遮蔽 Innet Shield	编织 Braid		64 编
	材料 Material		裸铜
	遮蔽率 Coverage	%	90
外被 Jacket	材料 Material		60P PVC
	外径 OD	mm	2.8±0.1
	平均厚度 Average Thickness	mm	0.55
	最小厚度 Minimum Thickness	mm	0.5
	颜色 Color		黑色
印字 Marking	RG-174 ROHS		
备注 Remark	以上线材所用材料均要能符合 ROHS 环保标准.		





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## SHENZHEN TUKO TECHNOLOGY CO.,LTD

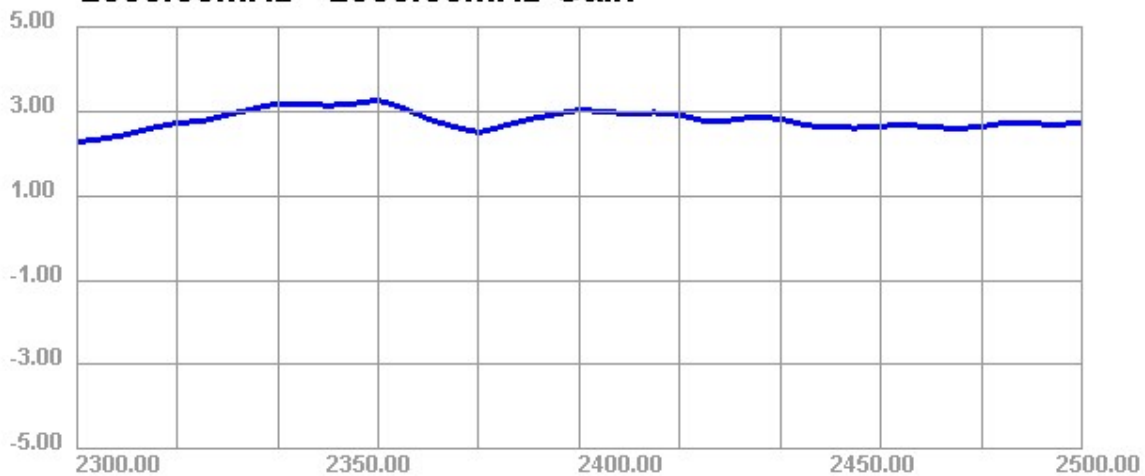
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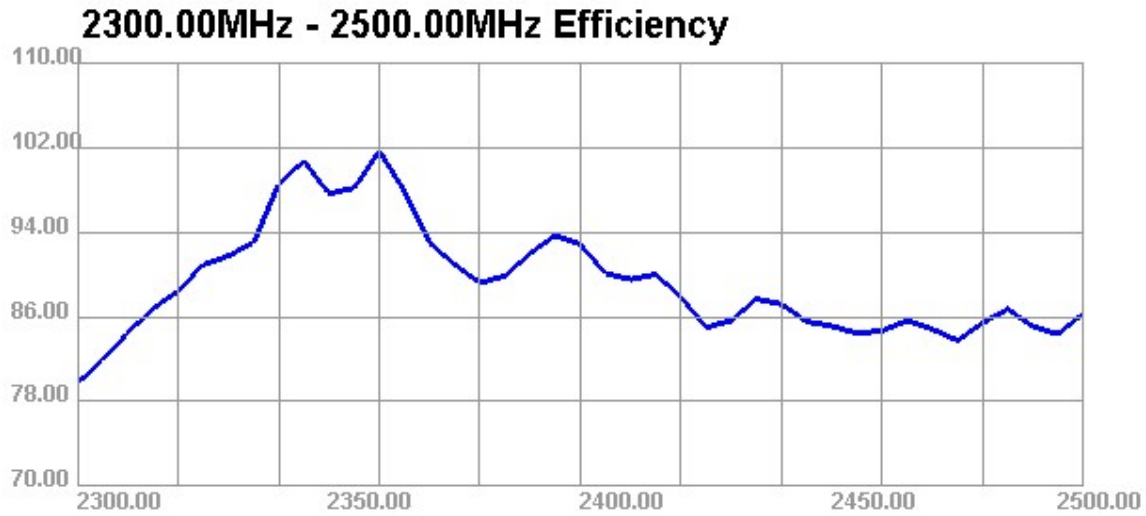
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E-mail:suzj@sztuko.com

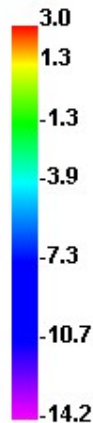
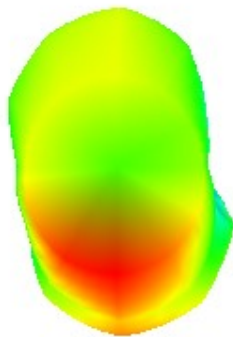
Passive Test For 2.4								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
2400	92.84	-0.32	3.5	0.88	3.5	-14.19	53	51.4
2405	90.11	-0.45	2.99	0.84	2.99	-14.32	53.01	51.47
2410	89.55	-0.48	2.94	0.79	2.94	-14.26	53.02	51.46
2415	90.02	-0.46	2.97	0.82	2.97	-14.31	53.01	51.42
2420	87.86	-0.56	2.91	0.76	2.91	-13.99	53	51.38
2425	85	-0.71	2.77	0.62	2.77	-13.95	52.75	51.38
2430	85.65	-0.67	2.79	0.64	2.79	-13.7	52.5	51.38
2435	87.68	-0.57	2.87	0.72	2.87	-13.42	52.83	51.47
2440	87.23	-0.59	2.81	0.66	2.81	-13.31	53.16	51.56
2445	85.56	-0.68	2.67	0.52	2.67	-13.47	52.83	51.47
2450	85.12	-0.7	2.61	0.46	2.61	-13.58	52.5	51.39
2455	84.46	-0.73	2.61	0.46	2.61	-13.91	52.42	51.57
2460	84.68	-0.72	2.65	0.5	2.65	-13.91	52.33	51.75
2465	85.64	-0.67	2.67	0.52	2.67	-14.2	52.35	51.74
2470	84.85	-0.71	2.63	0.48	2.63	-14.51	52.37	51.72
2475	83.77	-0.77	2.59	0.44	2.59	-14.94	52.31	51.76
2480	85.42	-0.68	2.64	0.49	2.64	-15.01	52.25	51.8
2485	86.75	-0.62	2.73	0.58	2.73	-15.19	52.32	51.92
2490	85.09	-0.7	2.71	0.56	2.71	-15.65	52.39	52.03
2495	84.38	-0.74	2.68	0.53	2.68	-15.89	52.28	52.02
2500	86.32	-0.64	2.73	0.58	2.73	-16.05	52.18	52.01

**2300.00MHz - 2500.00MHz Gain**

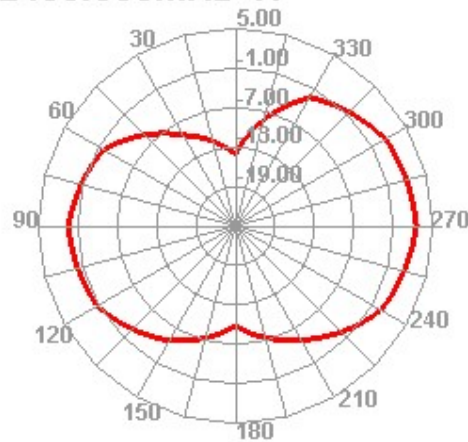




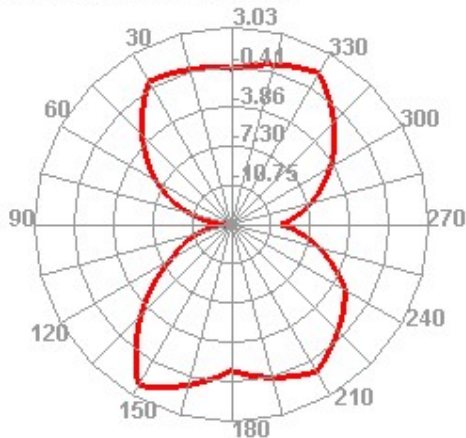
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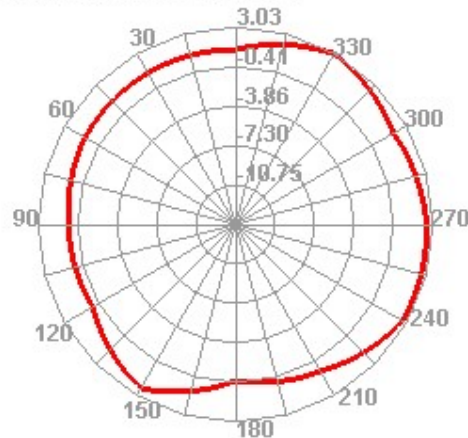
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### 2400.000MHz E1

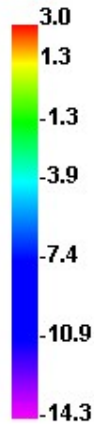
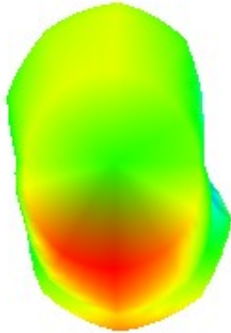


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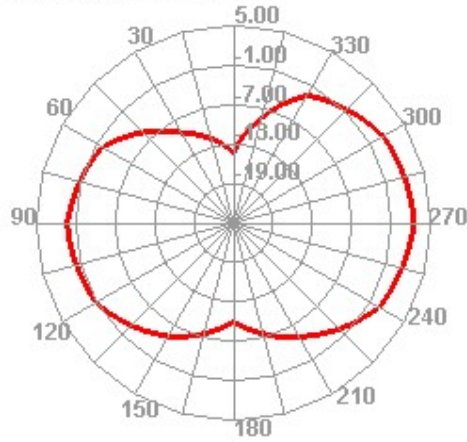




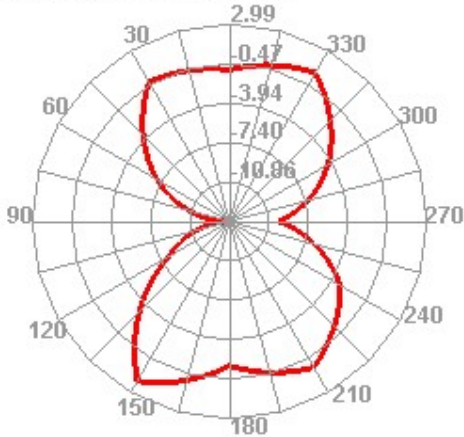
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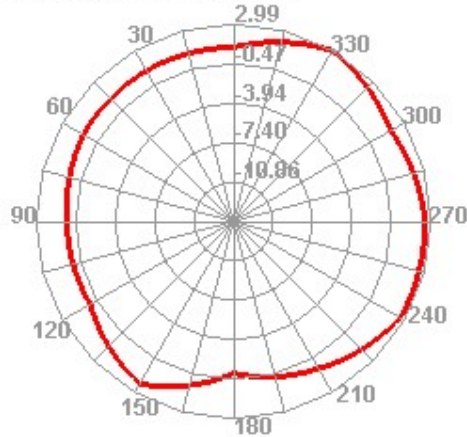
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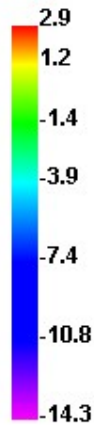
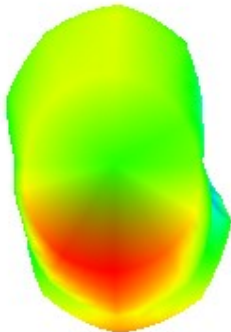
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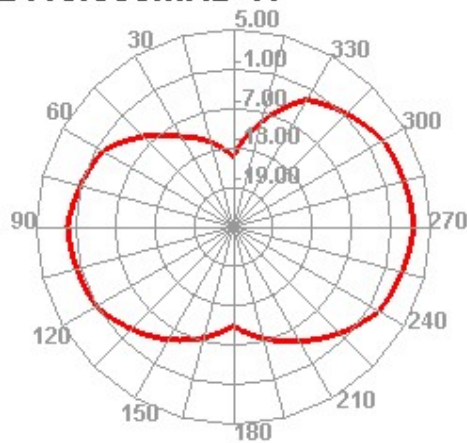
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2410.000MHz

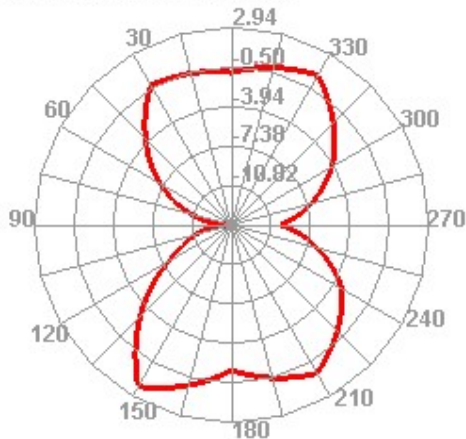


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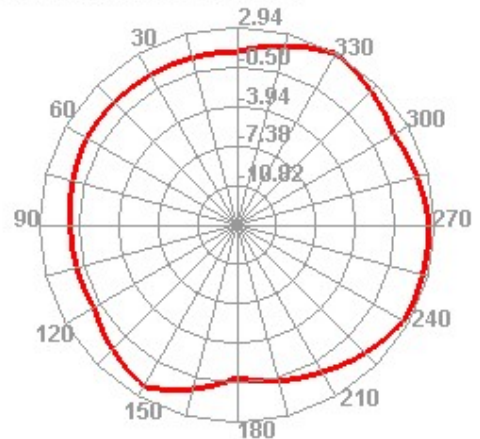




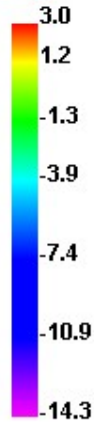
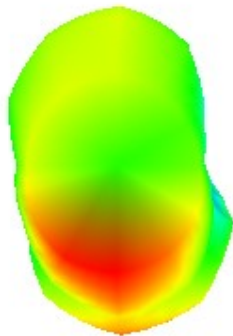
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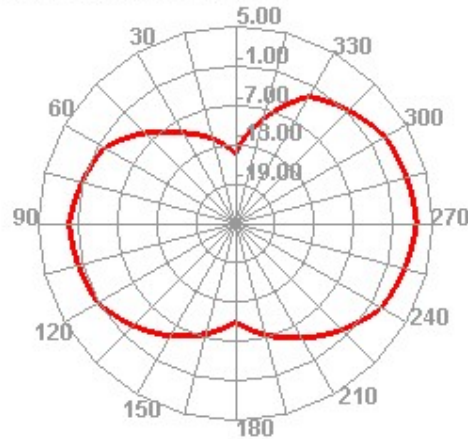
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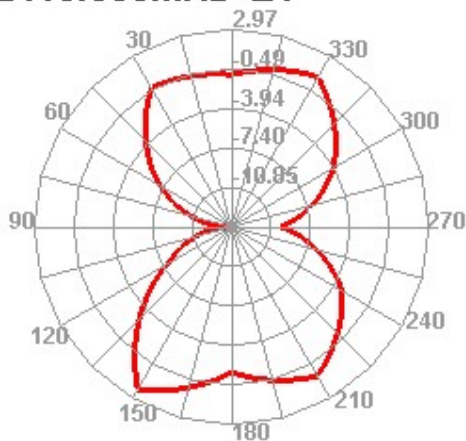
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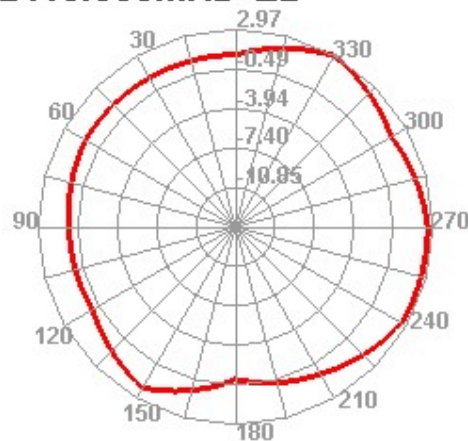
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2415.000MHz E1



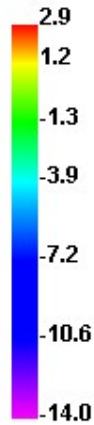
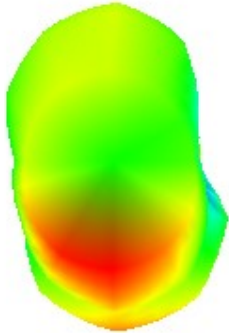
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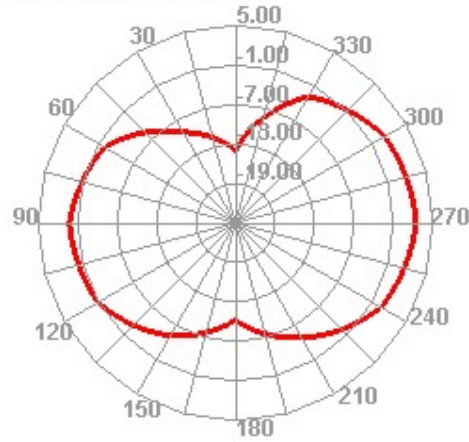




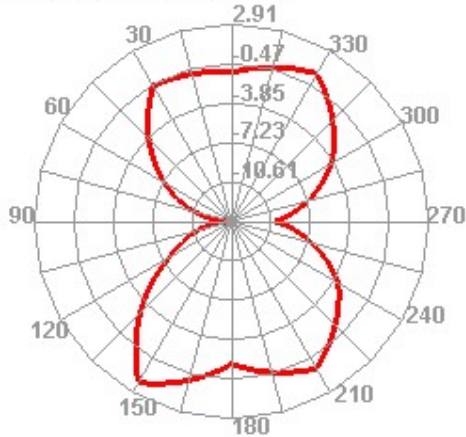
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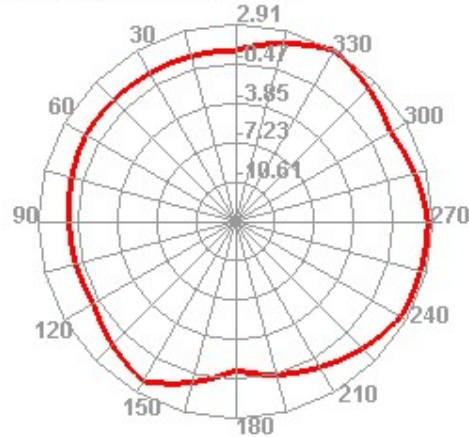
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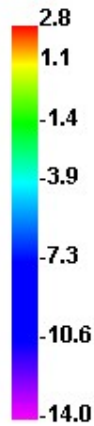
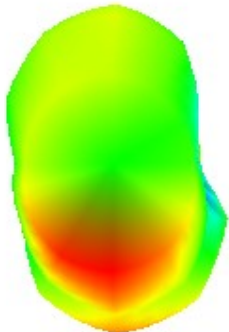
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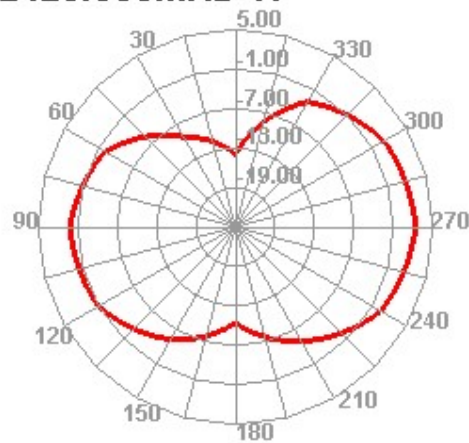
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2425.000MHz

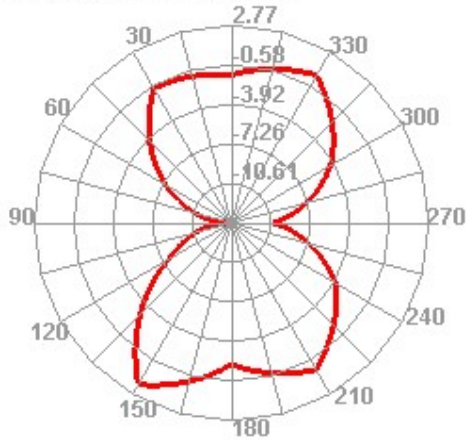


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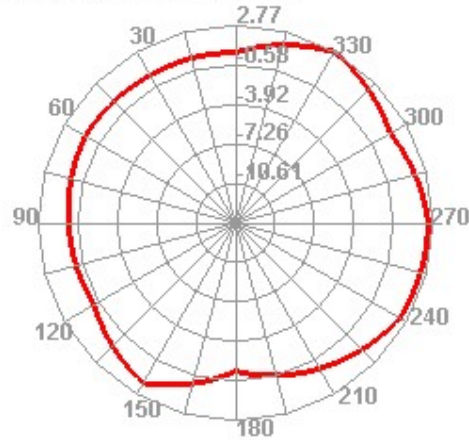




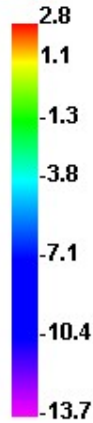
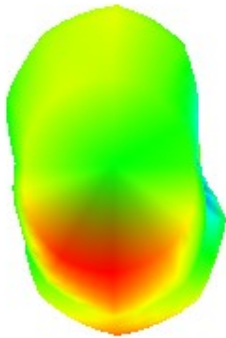
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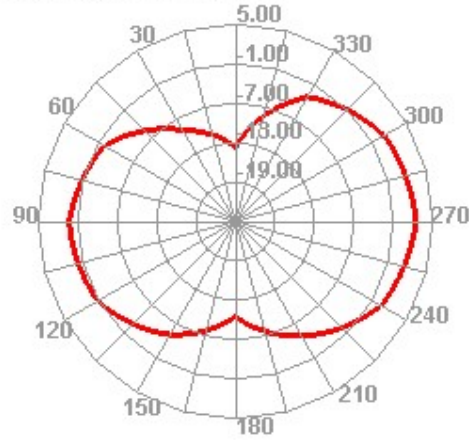
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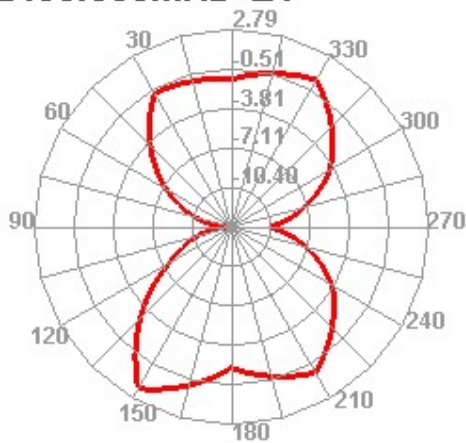
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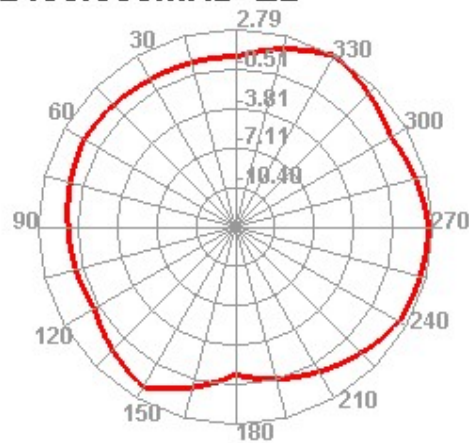
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2430.000MHz E1

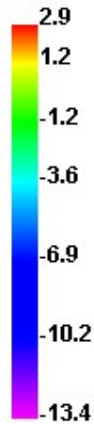
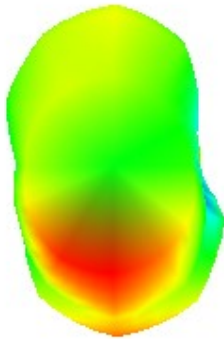


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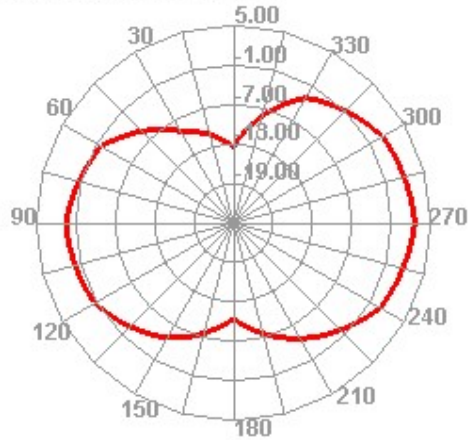




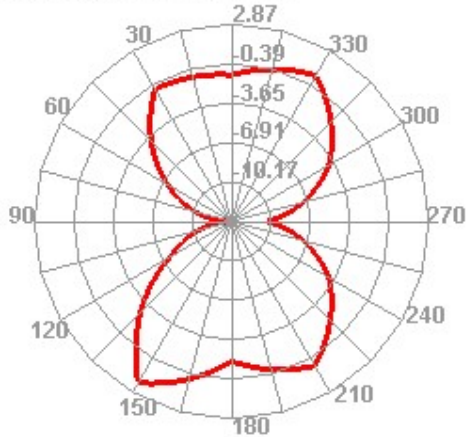
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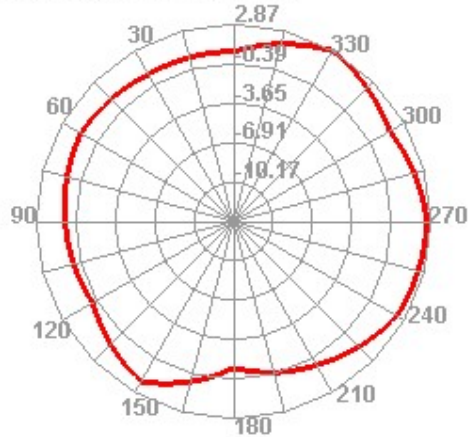
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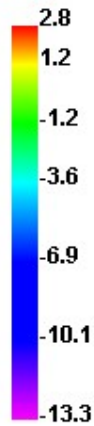
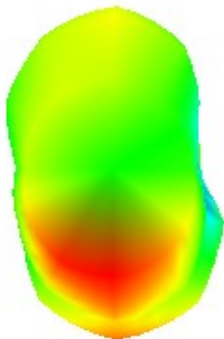
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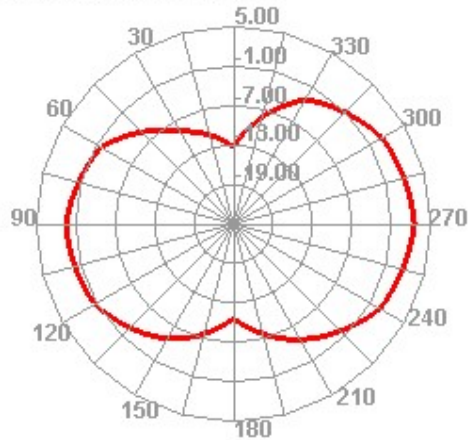
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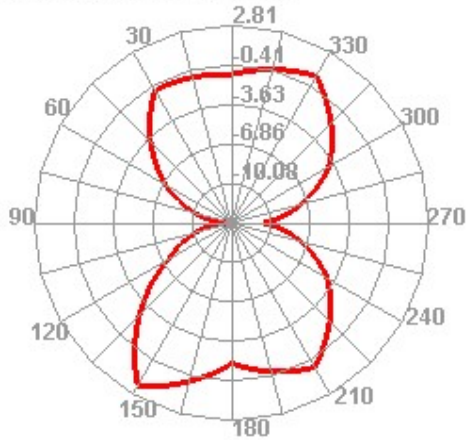


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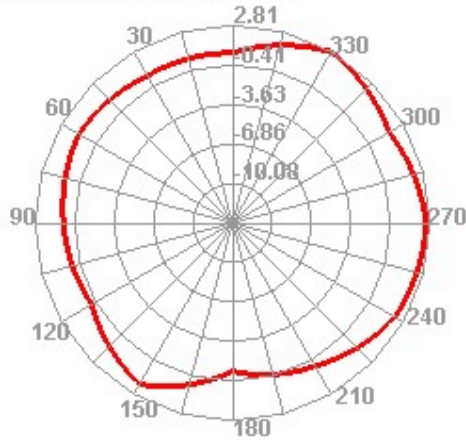




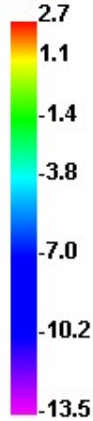
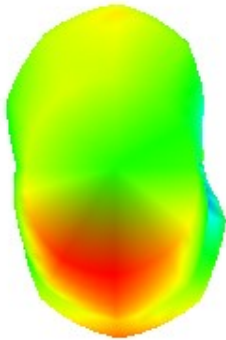
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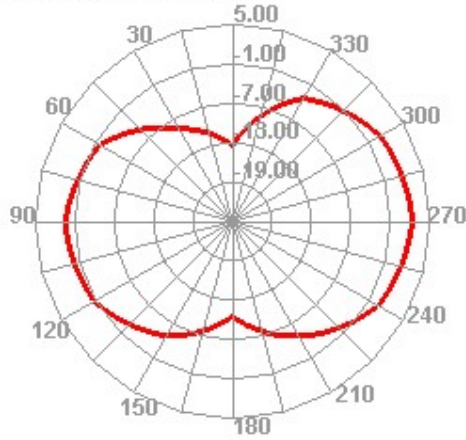
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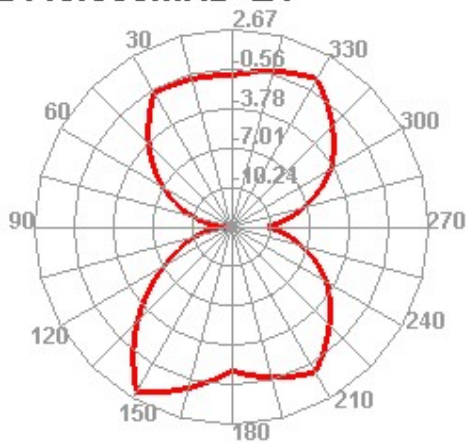
2445.000MHz



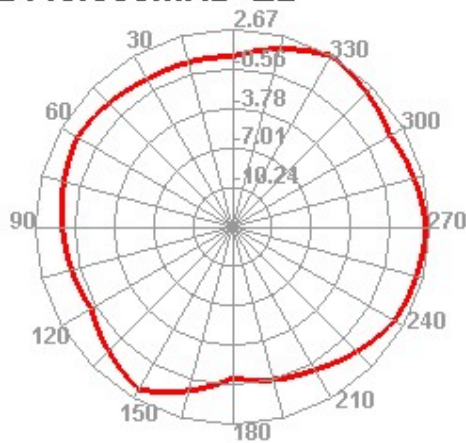
2445.000MHz H



2445.000MHz E1



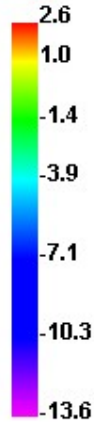
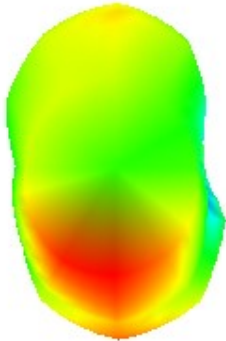
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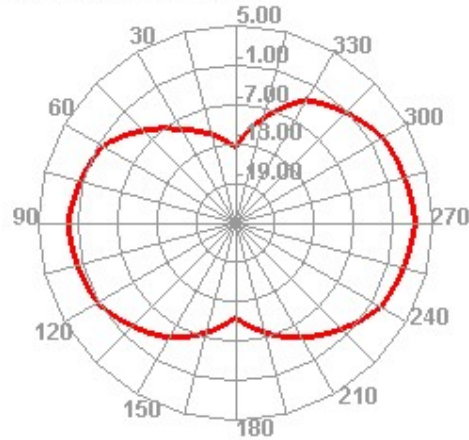




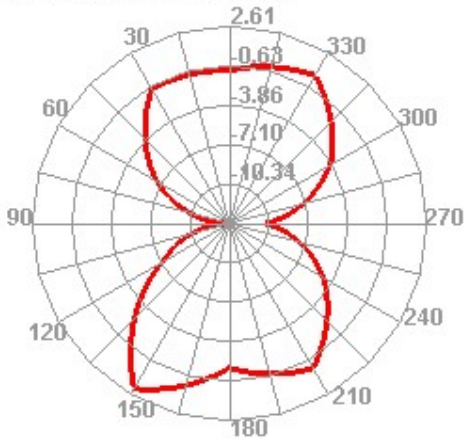
2450.000MHz



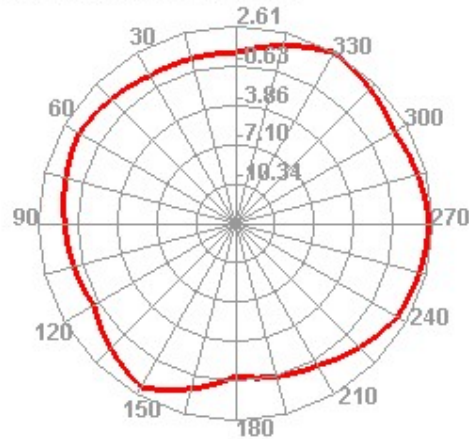
2450.000MHz H



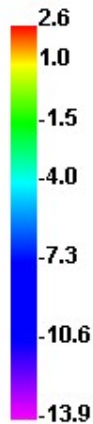
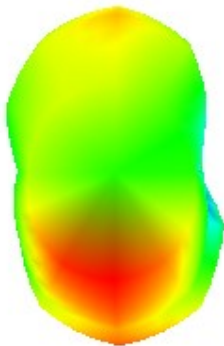
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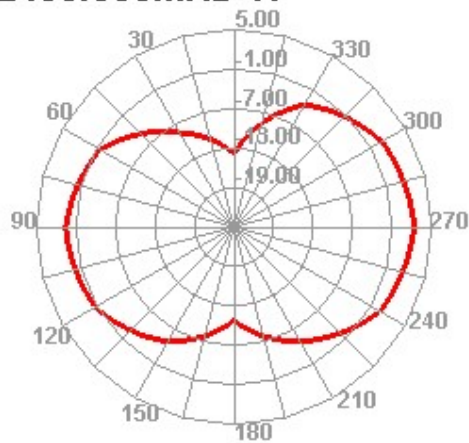
2450.000MHz E2



2455.000MHz

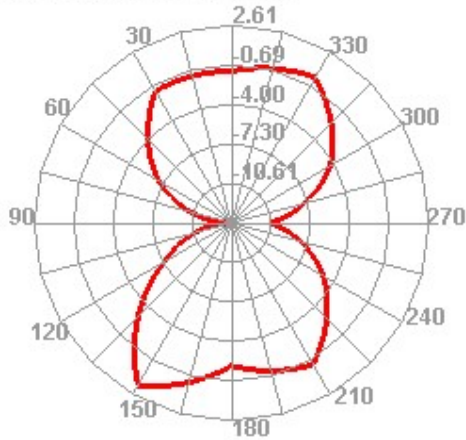


2455.000MHz H

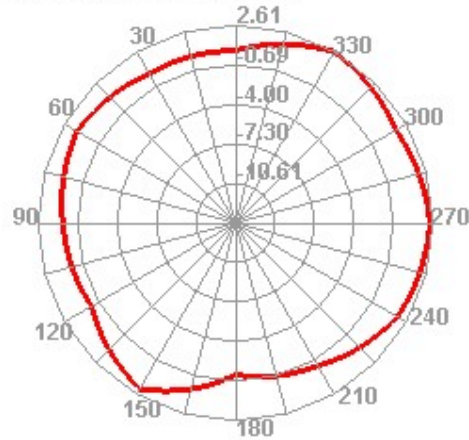




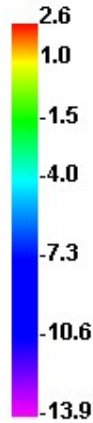
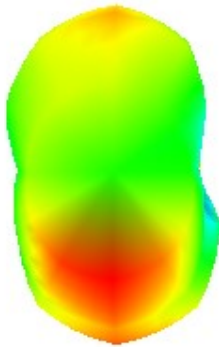
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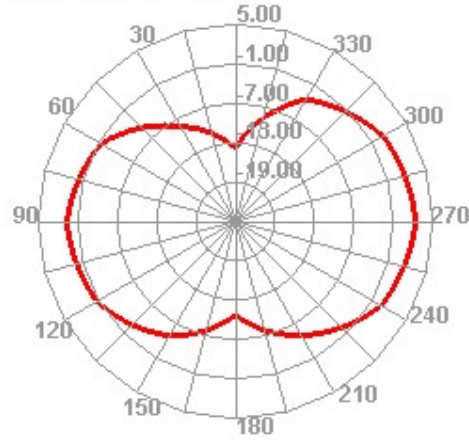
2455.000MHz E2



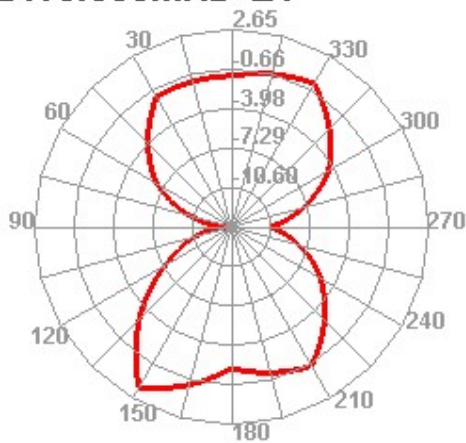
2460.000MHz



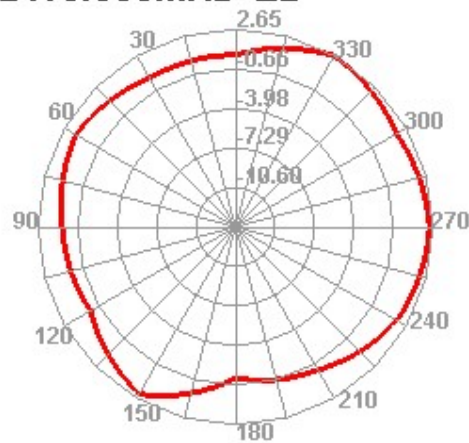
2460.000MHz H



2460.000MHz E1

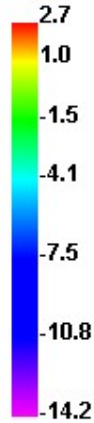
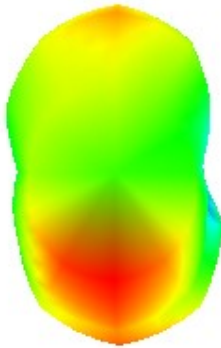


2460.000MHz E2

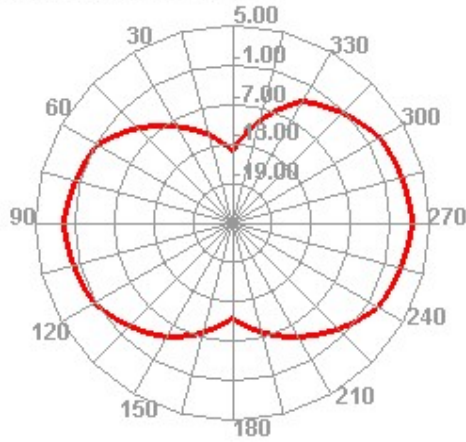




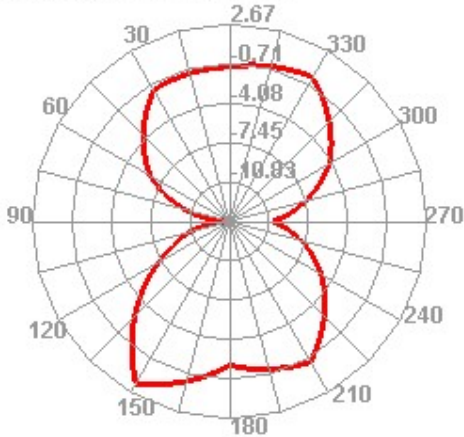
2465.000MHz



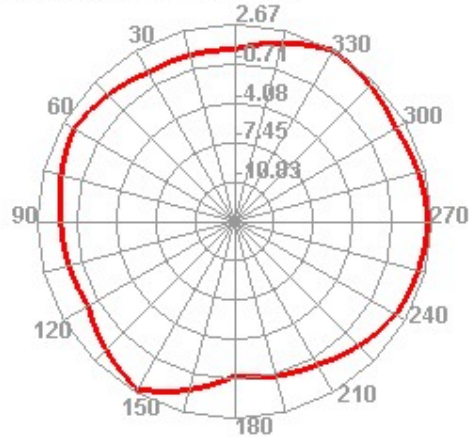
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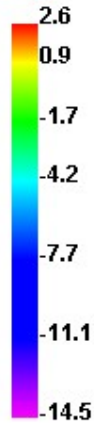
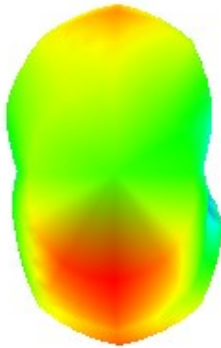
2465.000MHz E1



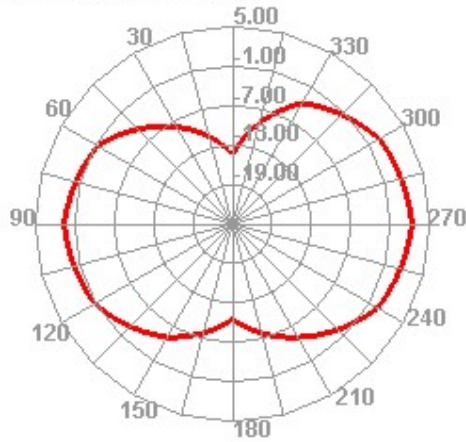
2465.000MHz E2



2470.000MHz



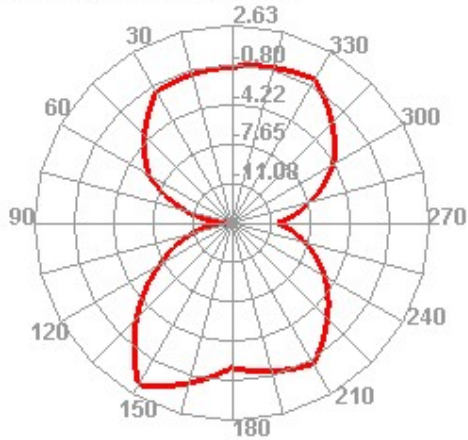
2470.000MHz H



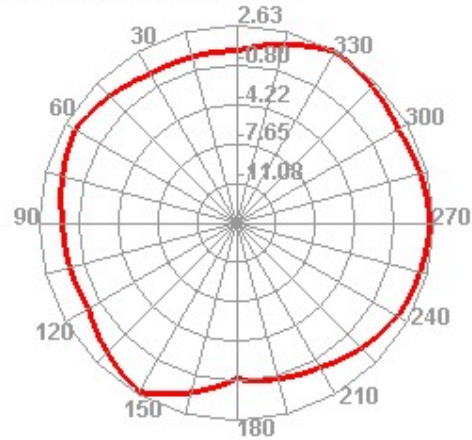




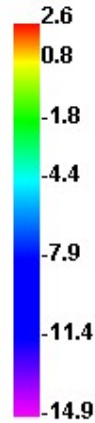
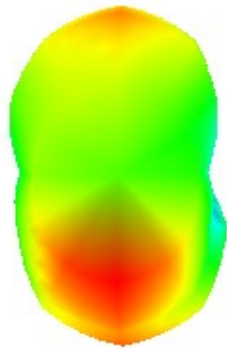
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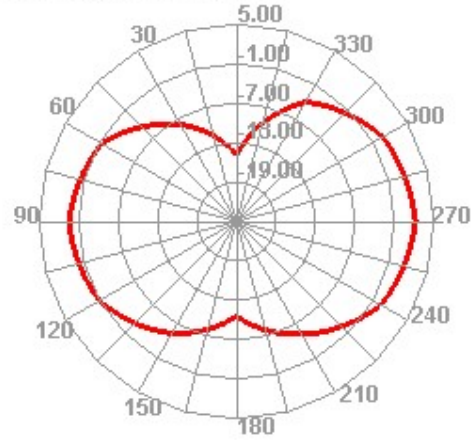
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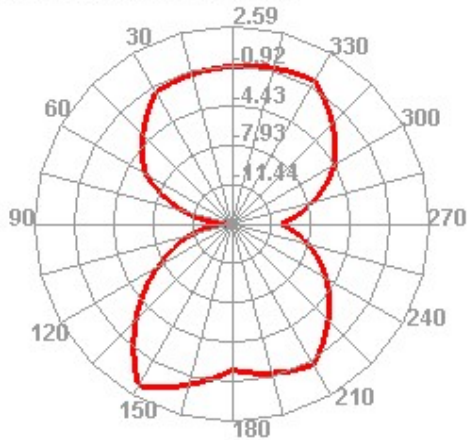
2475.000MHz



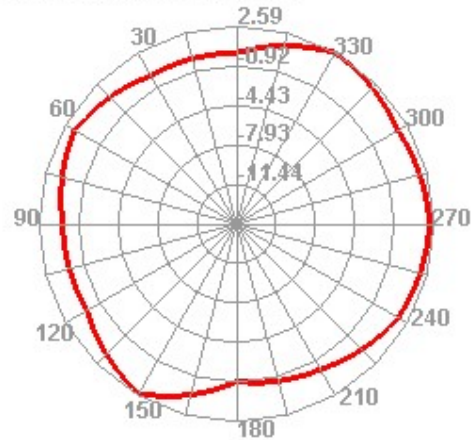
2475.000MHz H



2475.000MHz E1

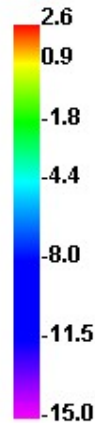
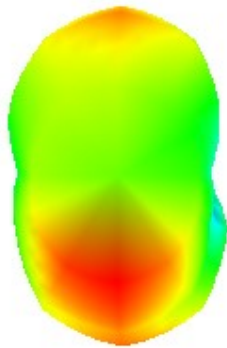


2475.000MHz E2

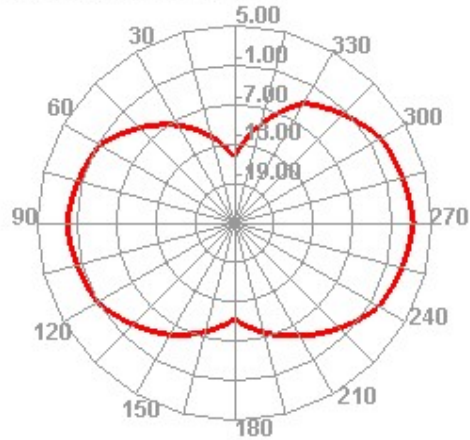




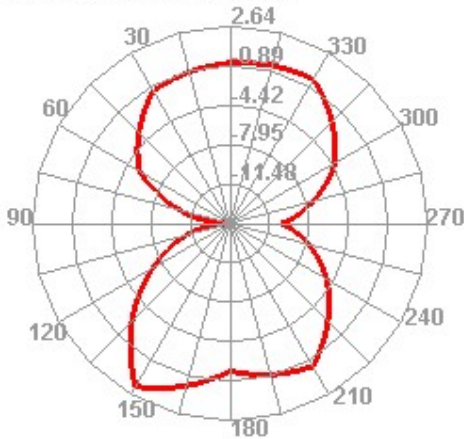
2480.000MHz



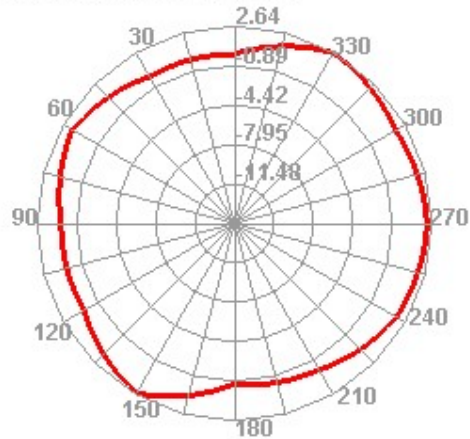
2480.000MHz H



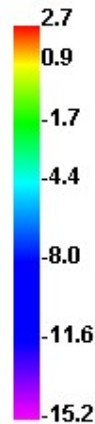
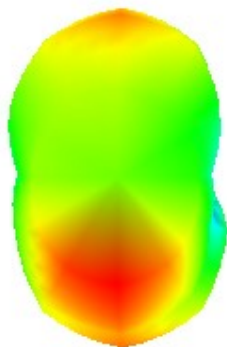
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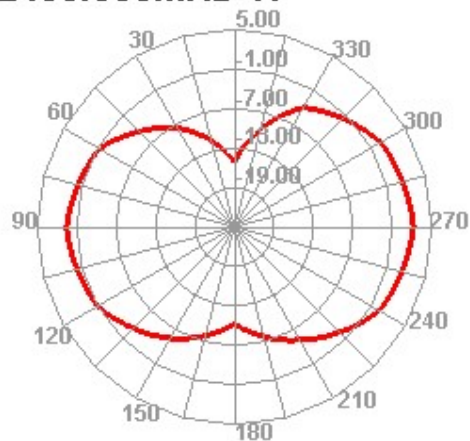
2480.000MHz E2



2485.000MHz

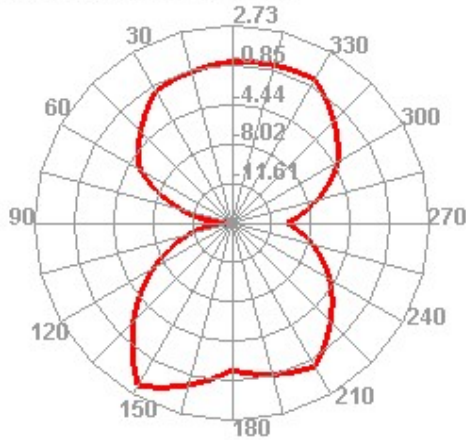


2485.000MHz H

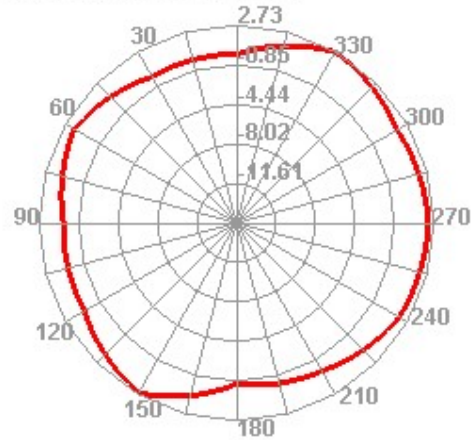




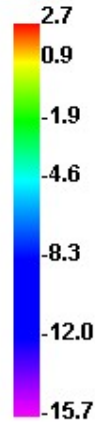
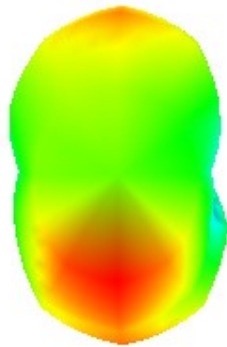
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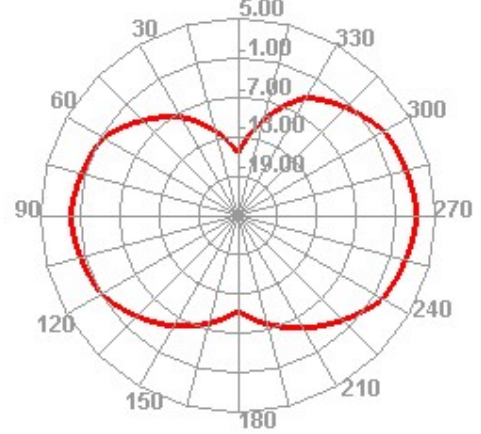
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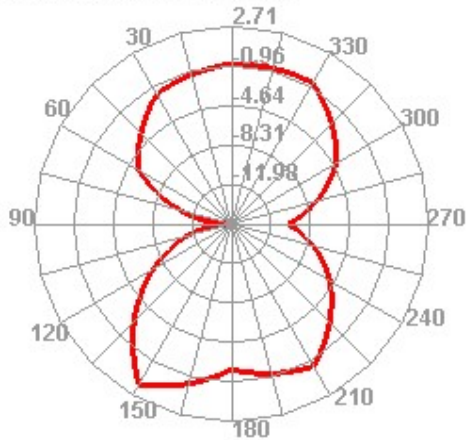
2490.000MHz



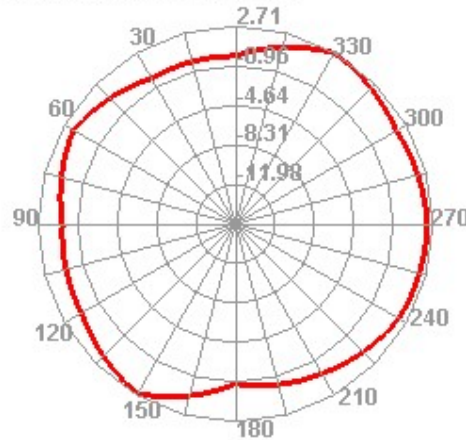
2490.000MHz H



2490.000MHz E1



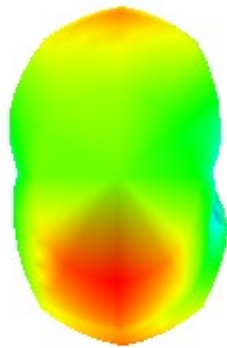
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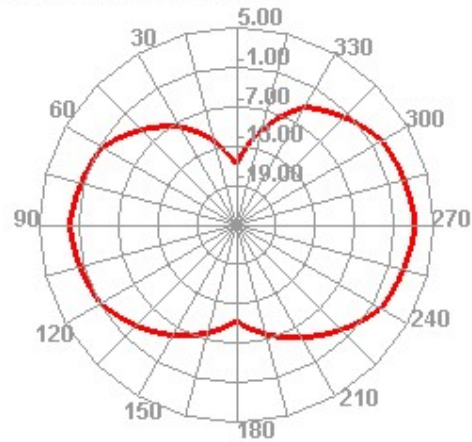




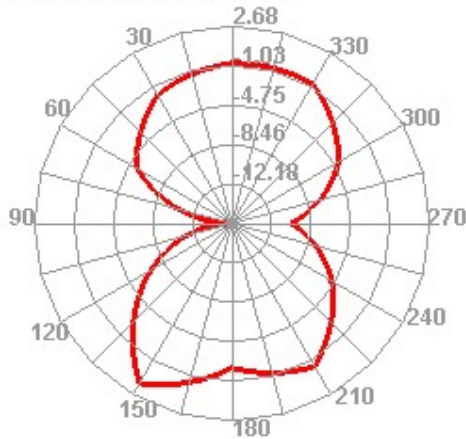
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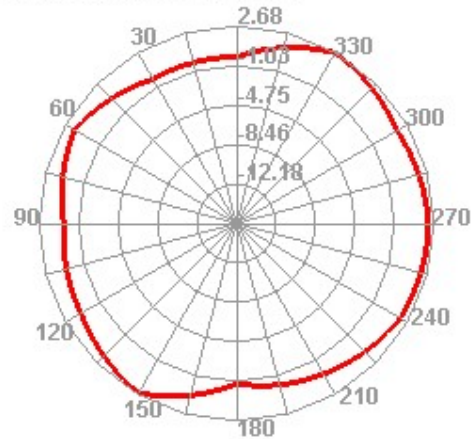
2495.000MHz H



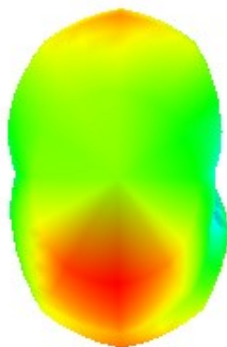
2495.000MHz E1



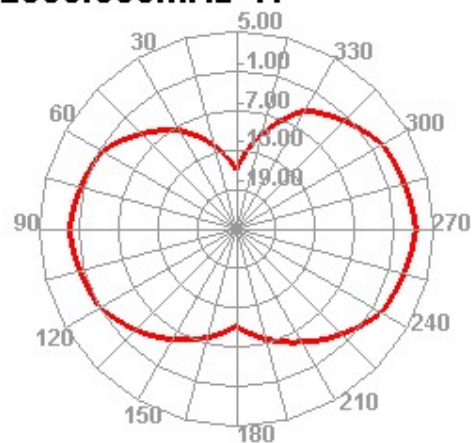
2495.000MHz E2



2500.000MHz

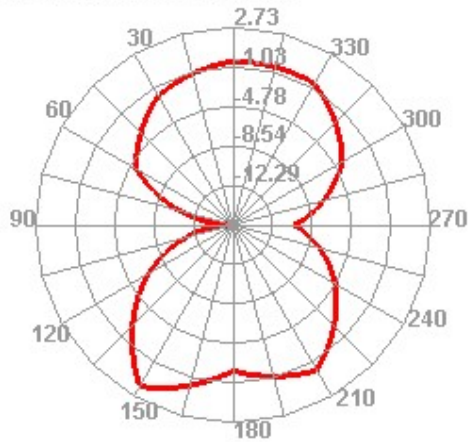


2500.000MHz H





2500.000MHz E1



2500.000MHz E2

