



深圳市迪比通通讯设备有限公司

Shenzhen DBT Telecommunication Technology CO.,LTD

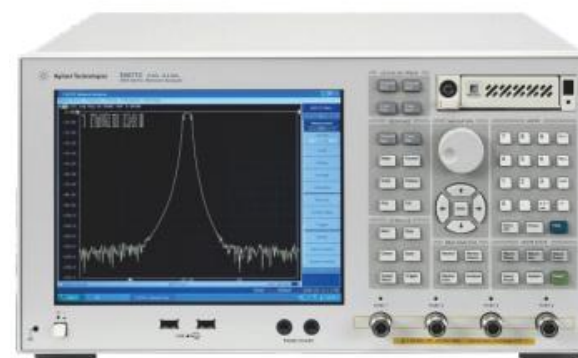
天线规格书

客 户：睿创科
项 目：XDC03-433

1. 测试设备



OTA-800
 品牌：ETS
 频率范围：370MHz-8.5GHz
 功能：无源、有源测试；G网、C网、2G/3G/4G，WIFI，BT等制式TRP、TIS测试。



5071C
 品牌：安捷伦
 频率范围：9KHz-8.5GHz
 功能：2G/3G/4G/BT/WIFI等天线综合无源测试。

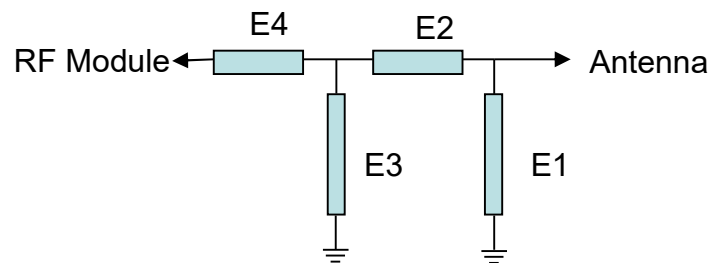


8960
 品牌：安捷伦
 频率范围：292MHz-2700GHz
 功能：满足2G/3G有源测试。



CMW500
 品牌：罗德与施瓦茨
 频率范围：70KHz-6GHz
 功能：2G/3G/4G/BT/WIFI/NB-Lot等天线综合有源测试。

2. 匹配电路



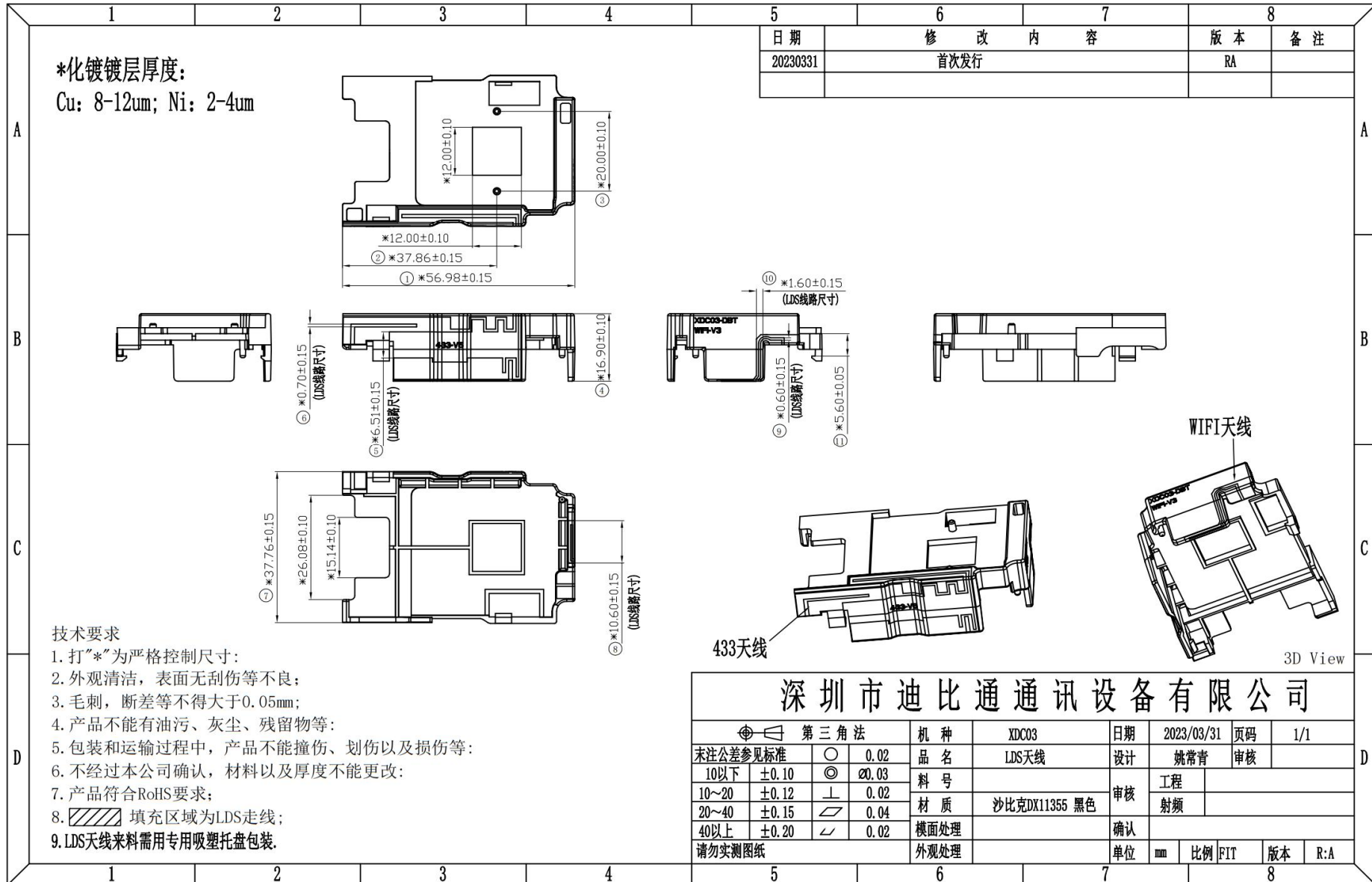
Element	WiFi1		433天线	
E1	NA	-	-	-
E2	0Ω	-	-	-
E3	NA	-	-	-

匹配没有改动

3. 天线电性能指标

电性能指标 Electrical Parameter			
频率范围 (MHz)	Frequency Range (MHz)	2400-2500	433
峰值增益	Average Gain (dBi)	2.4G: 2.3	433: -6
平均效率	Average Efficiency (%)	2.4G: 54	433: 3.8
电压驻波比	VSWR	2.4G < 1.5 typ. < 2.0 at the band edge	433 < 1.5 typ. < 2.0 at the band edge
回波损耗	Return Loss (dB)	2.4G < -15 typ. < -10 at the band edge	433 < -15 typ. < -10 at the band edge
隔离度	Isolation	2.4G \leq -40dB	\leq -32dB
极化形式	Polarization	Linear	
输入阻抗	Input Impedance	50 Ω	
最大输入功率 (W)	Maximum Input Power	10W	
材料	Material	LDS	
工作温度	Operation Temperature	-40° C ~ +85° C	
储存温度	Storage Temperature	-40° C ~ +85° C	

4. 天线2D图纸



5. OTA数据

802.11b : 11Mbps			
Test	Wifi 2G TRP		
Result	1	6	11
Frequency (MHz)	2412	2437	2462
Txp Ave(dBm)	17.12	17.03	17.03
Test	Wifi 2G TIS		
Result	1	6	11
Frequency (MHz)	2412	2437	2462
Sens Ave(dBm)	-87.76	-87.66	-87.79
802.11g : 54Mbps			
Test	Wifi 2G TRP		
Result	1	6	11
Frequency (MHz)	2412	2437	2462
Txp Ave(dBm)	15.59	15.55	15.42
Test	Wifi 2G TIS		
Result	1	6	11
Frequency (MHz)	2412	2437	2462
Sens Ave(dBm)	-75.71	-70.66	-74.33
802.11n : MCS2			
Test	Wifi 2G TRP		
Result	1	6	11
Frequency (MHz)	2412	2437	2462
Txp Ave(dBm)	16.15	15.89	15.82
Test	Wifi 2G TIS		
Result	1	6	11
Frequency (MHz)	2412	2437	2462
Sens Ave(dBm)	-84.45	-80.69	-83.65

TX EVM			
	1	6	11
	802.11n	802.11n	802.11n
MCS0/BPSK/1/2	-7	-7	-6
MCS1/QPSK/1/2	-12	-11	-11
MCS2/QPSK/3/4	-15	-15	-15
MCS3/16-QAM/1/2	-18	-19	-19
MCS4/16-QAM/3/4	-22	-22	-21
MCS5/64-QAM/2/3	-22	-22	-23
MCS6/64-QAM/3/4	-26	-25	-25
MCS7/64-QAM/5/6	-29	-29	-28
MCS8/256-QAM/3/4			
MCS9/256-QAM/5/6			

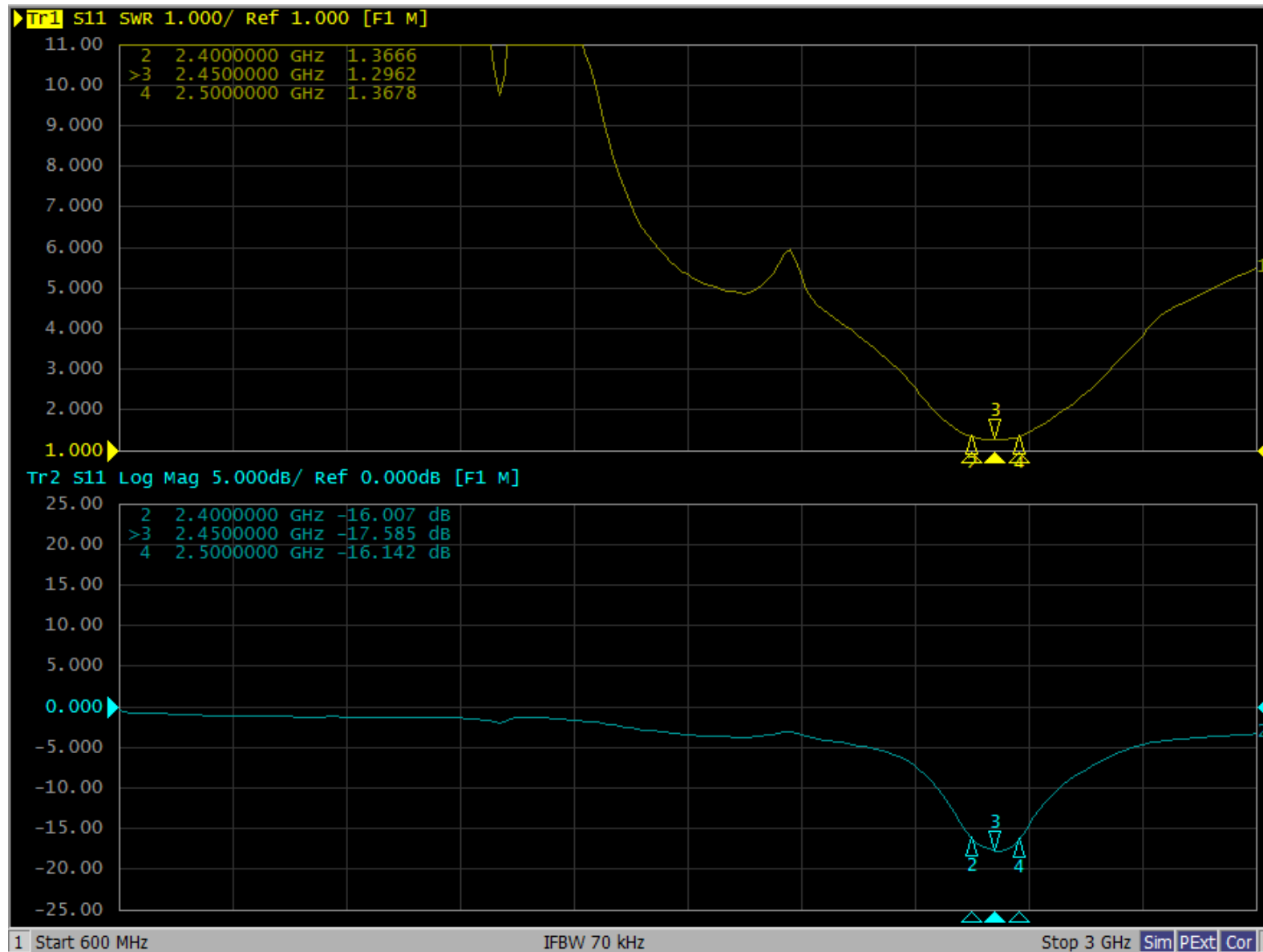
6. 传导数据

传导		802.11b : 11Mbps		
Test	Wifi 2G 传导功率			
Result	1	6	11	
Frequency (MHz)	2412	2437	2462	
功率(dBm)	18	18.3	18.4	
Test	Wifi 2G 传导灵敏度			
Result	1	6	11	
Frequency (MHz)	2412	2437	2462	
灵敏度(dBm)	-90	-90	-90	
		802.11g : 54Mbps		
Test	Wifi 2G 传导功率			
Result	1	6	11	
Frequency (MHz)	2412	2437	2462	
功率(dBm)	16.3	16.3	16.4	
Test	Wifi 2G 传导灵敏度			
Result	1	6	11	
Frequency (MHz)	2412	2437	2462	
灵敏度(dBm)	-77	-77	-77	
		802.11n : MCS2		
Test	Wifi 2G 传导功率			
Result	1	6	11	
Frequency (MHz)	2412	2437	2462	
功率(dBm)	17.3	17.3	17.6	
Test	Wifi 2G 传导灵敏度			
Result	1	6	11	
Frequency (MHz)	2412	2437	2462	
灵敏度(dBm)	-87	-87	-87	

Requirements (EVM Limit)

MSC 0 / BPSK / 1/2	802.11 n (dB): -5/ 802.11 ac (dB): -5
MSC 1 / QPSK / 1/2	802.11 n (dB): -10/ 802.11 ac (dB): -10
MSC 2 / QPSK / 3/4	802.11 n (dB): -13/ 802.11 ac (dB): -13
MSC 3 / 16-QAM / 1/2	802.11 n (dB): -16/ 802.11 ac (dB): -16
MSC 4 / 16-QAM / 3/4	802.11 n (dB): -19/ 802.11 ac (dB): -19
MSC 5 / 64-QAM / 2/3	802.11 n (dB): -22/ 802.11 ac (dB): -22
MSC 6 / 64-QAM / 3/4	802.11 n (dB): -25/ 802.11 ac (dB): -25
MSC 7 / 64-QAM / 5/6	802.11 n (dB): -27/ 802.11 ac (dB): -27
MSC 8 / 256-QAM / 3/4	802.11 n (dB): N/A/ 802.11 ac (dB): -30
MSC 9 / 256-QAM / 5/6	802.11 n (dB): N/A/ 802.11 ac (dB): -32

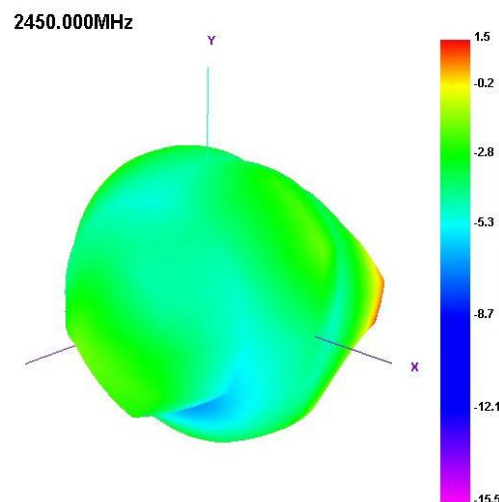
7. WIFI 天线无源数据



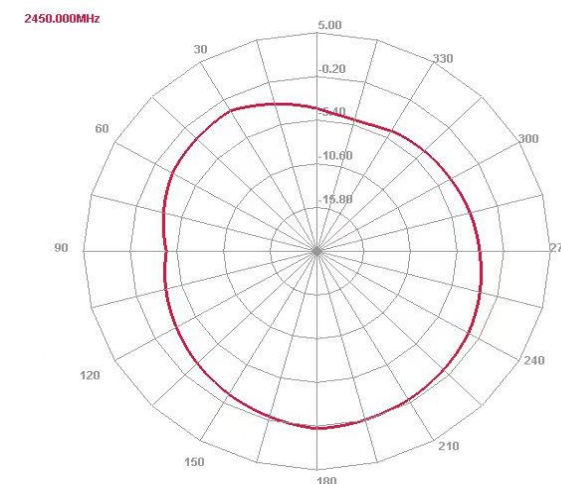
8. WIFI 天线增益/效率/3D苹果图

WiFi 1

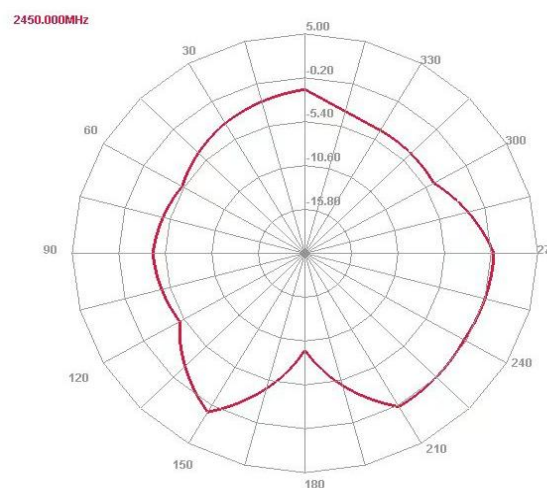
Freq (MHz)	Effi (%)	Gain (dBi)
2400	55.57	2.34
2410	49.9	2
2420	53.28	2.25
2430	49.45	1.78
2440	55.32	2.04
2450	52.52	1.46
2460	53.03	1.21
2470	51.48	1.07
2480	59.03	1.6
2490	56.14	1.38
2500	59.7	1.72
平均值	54.13	1.71



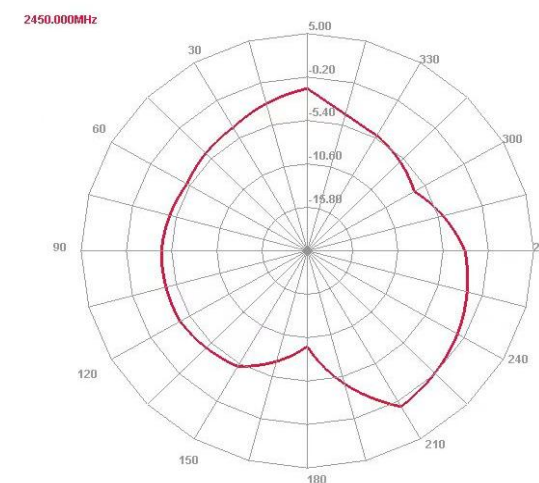
Horizontal



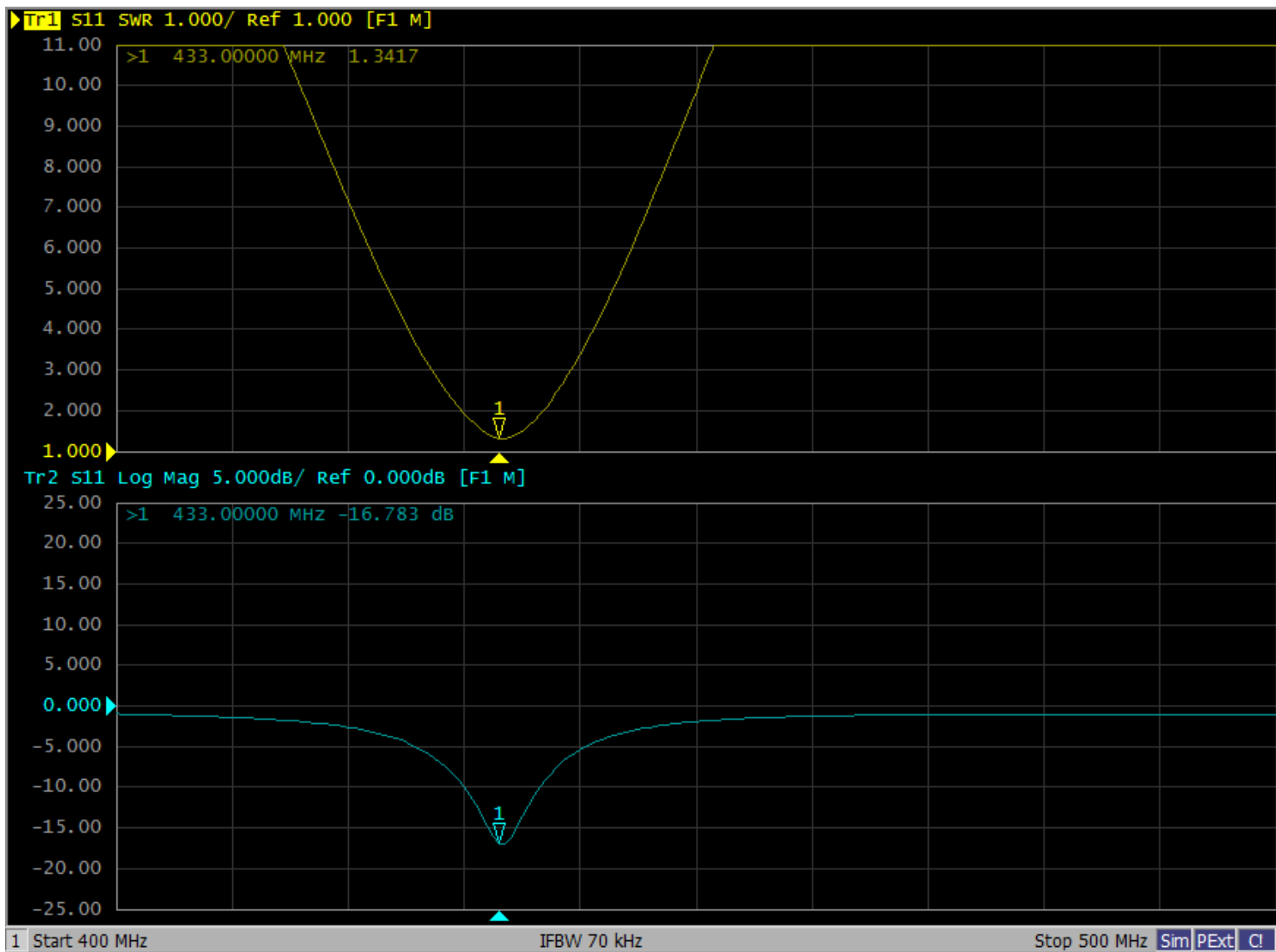
E1 Face



E2 Face



9. 433 天线无源数据

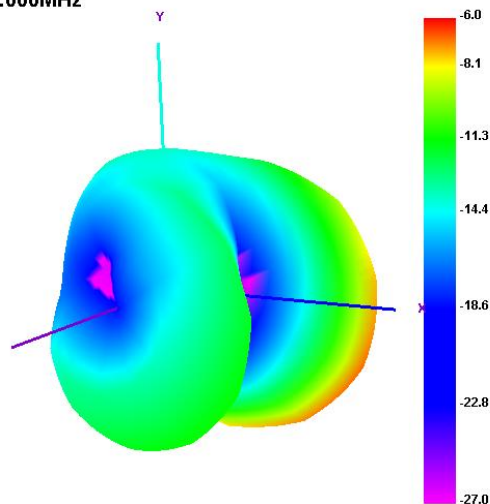


10. 433 天线增益/效率/3D苹果图

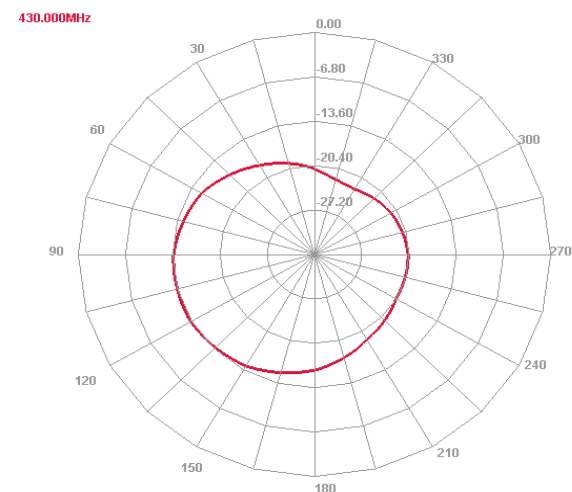
433

Freq (MHz)	Effi (%)	Gain (dBi)
400	3.19	-10.58
410	3.44	-10.03
420	3.62	-8.5
430	5.47	-6.03
440	3.28	-10.76
平均值	3.80	-9.18

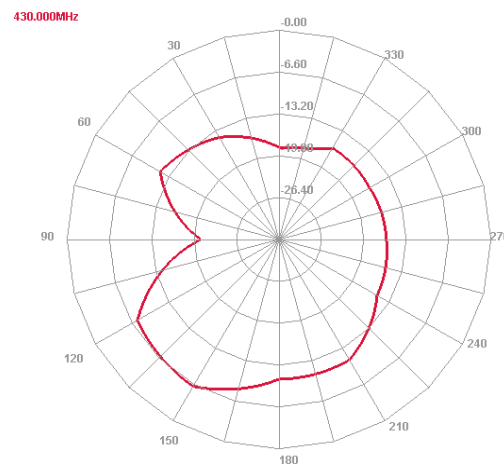
430.000MHz



Horizontal



E1 Face



E2 Face

