

Shenzhen SKYLink Technology Co.,Ltd

Antenna Specification for Approval

Customer Name: _____

Product Name: _____ DT01 4G&GWB Antenna _____

Part NO. : _____ DT01. PRA. GWB V1.0 _____

Write By: _____ Damon Cui _____

Issued Date: _____ 2022-7-13 _____

Customer

R&D Dept	Business Dept	Approved By

SKYLink

R&D Dept	Engineer Dept	Approval

□ Specification Summary

A. Electrical Characteristics	
Frequency	700MHz ~960MHz 1710~2690MHz 1575.42MHz 2400MHz~2500 5150MHz ~5850MHz
Return Loss	<-3.0
Efficiency	>30%
Peak Gain	2dbi
Impedance	50 Ohm
Polarization	Line
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Cable Type	/
Connector Type	/
Dimension	At Attachment
Heat-durability	280±5°C, 10sec.
C. Environmental Characteristics	
Operation Temperature	- 20 °C ~ + 80 °C
Storage Temperature	- 30 °C ~ + 85 °C

□ Test Equipment & Conditions

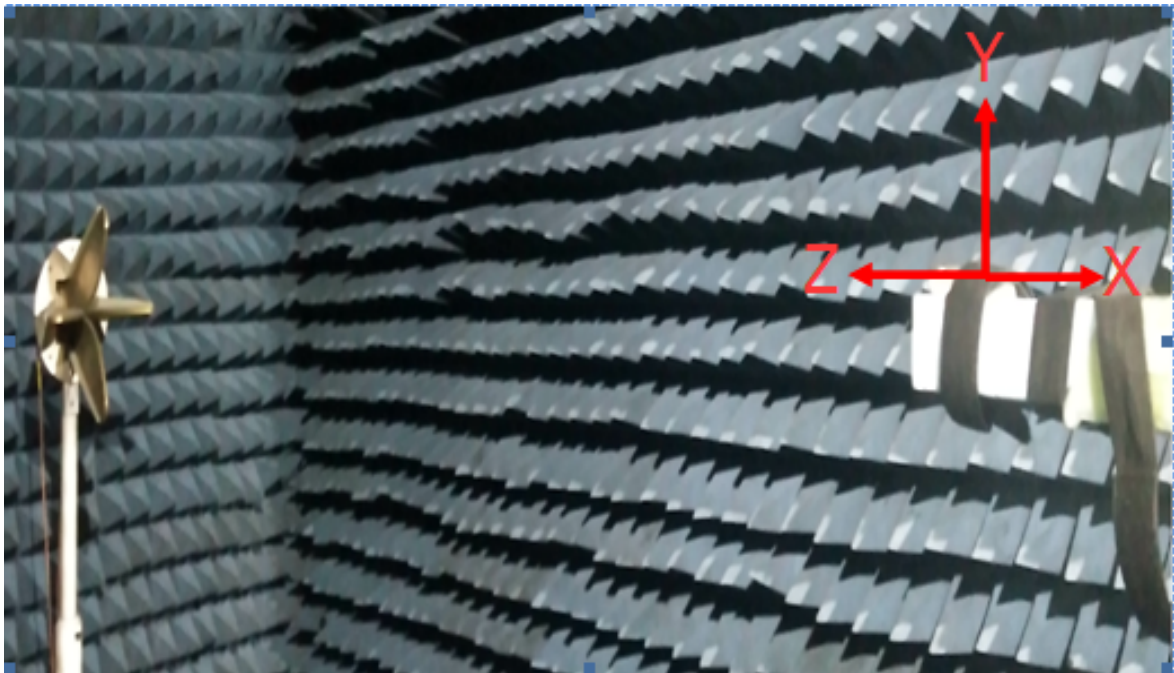
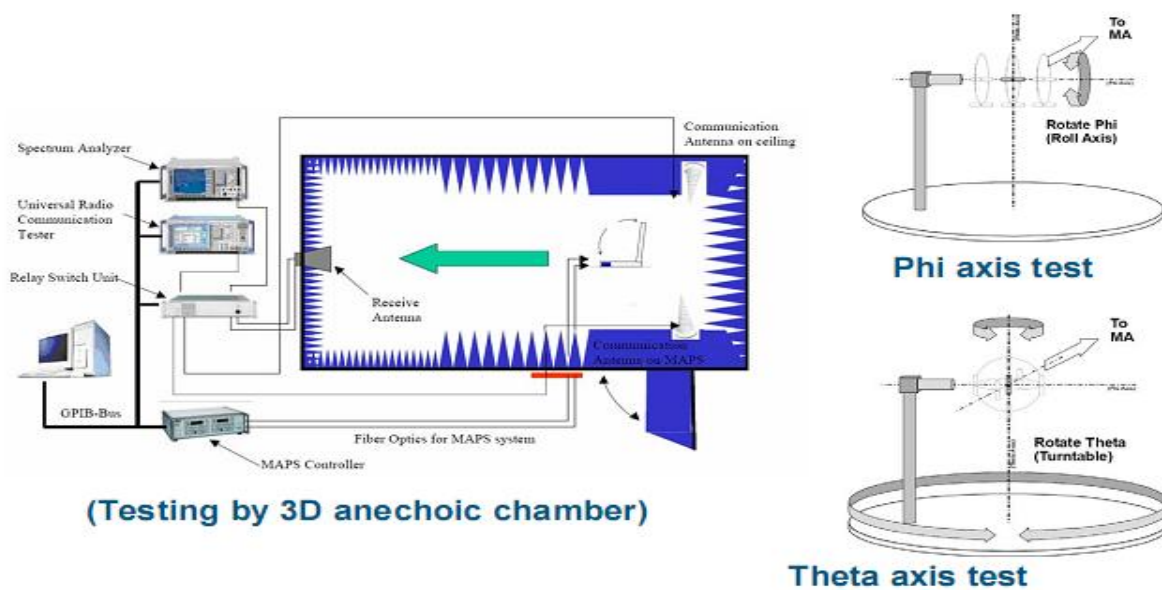
1. Network Analyzers :

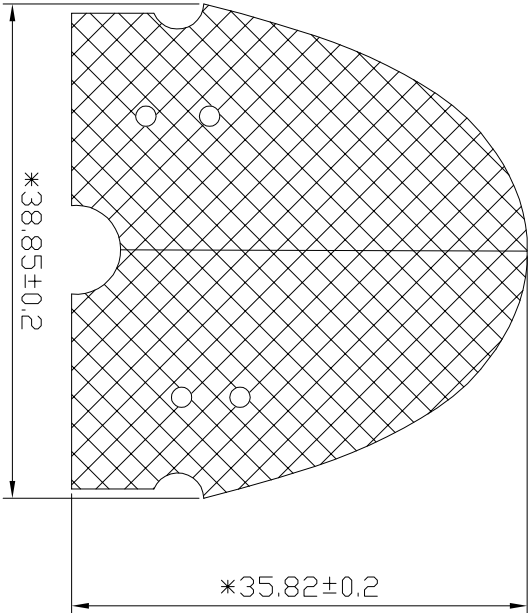
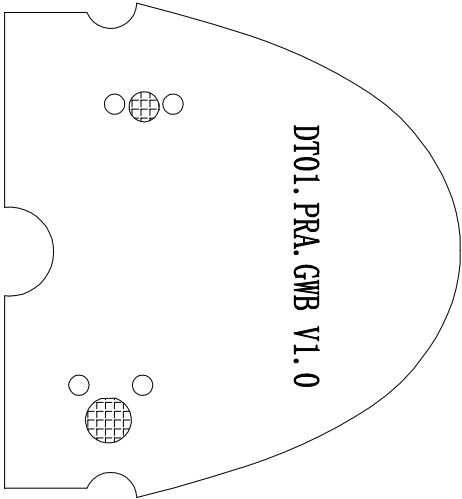
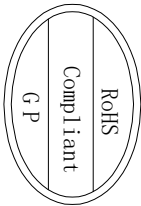
Agilent 8753D 5071B

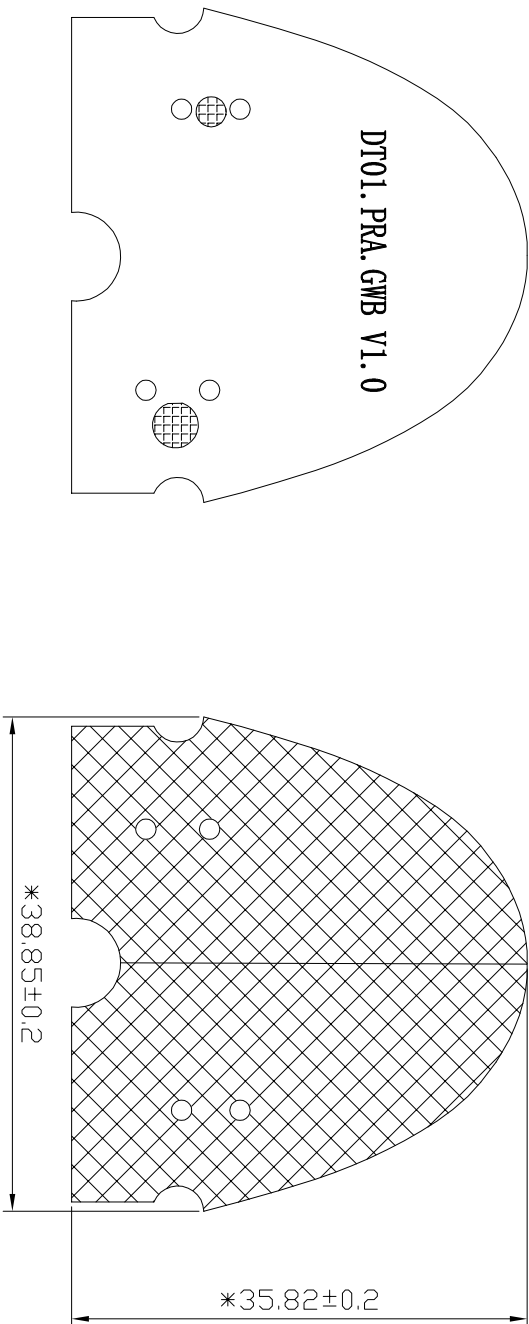
Communications Test Set:

Agilent E5515C CMW500

2. 3D Chamber Test System



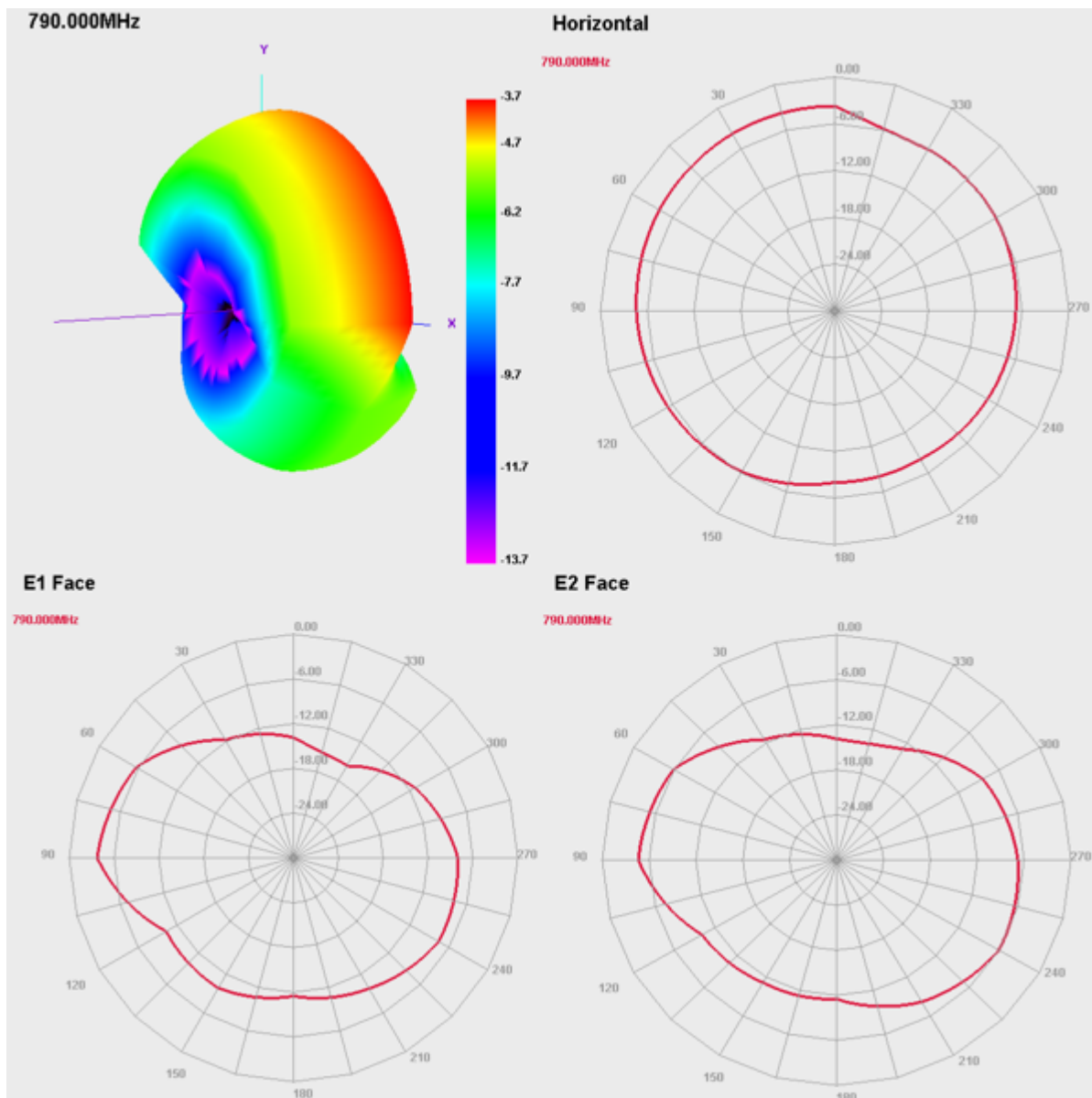


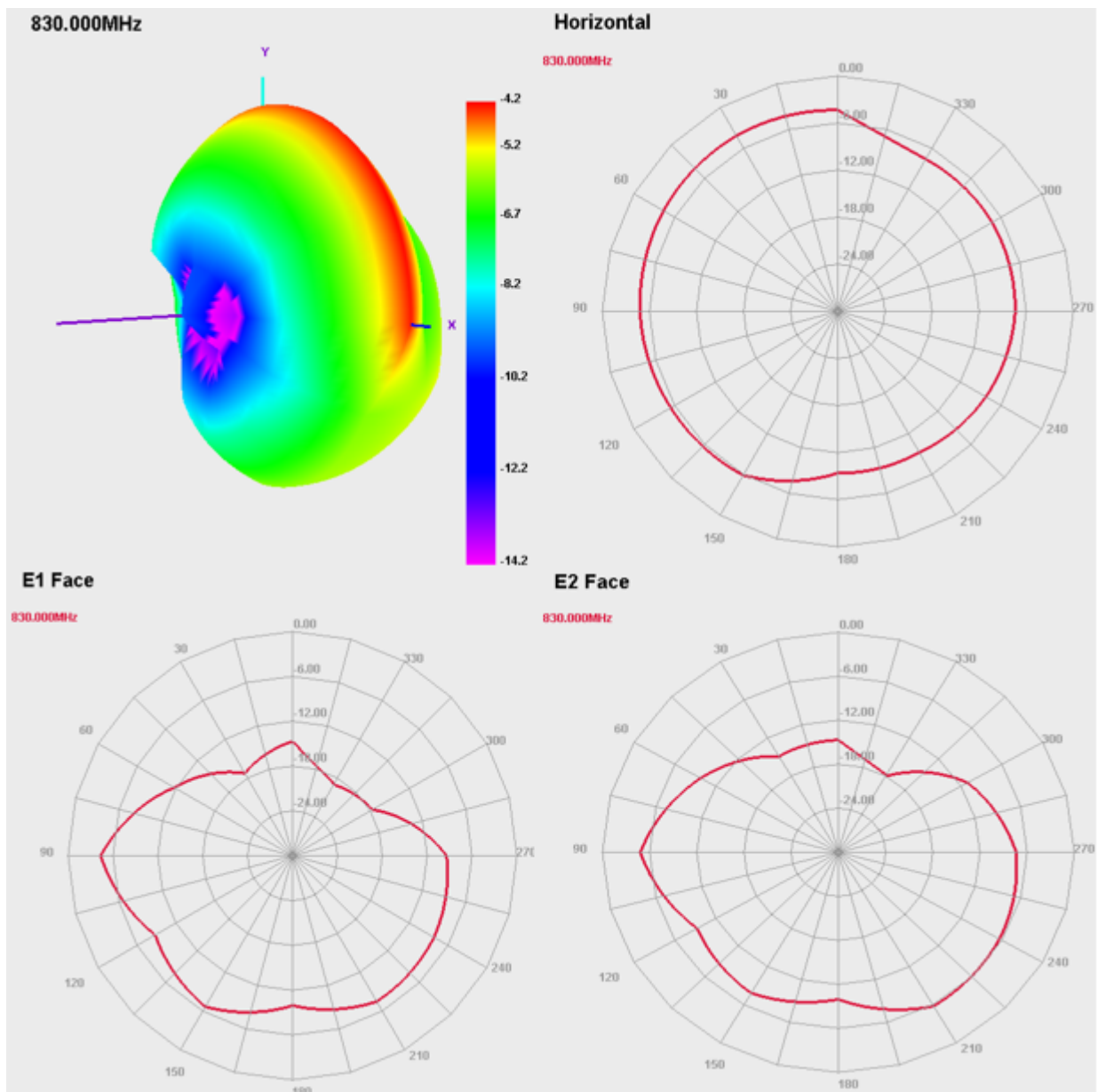
1		2		3		4		5		6		7		8	
A		B		C		D		A		B		C		D	
RoHS Compliant G.P															
DT01.PRA.GWB V1.0															
Rev		Description		Date		Remark		Location		DWG No.		Approved by		Scale 1:1	
1		New drawing						40~				by RF		A	
A		New drawing						30~40±0.15				by			
D								18~30±0.12				MD			
								10~18±0.10				by			
								0~10±0.05				2022-07-13			
								Third Angle Project		Part Name 4G天线		Date			
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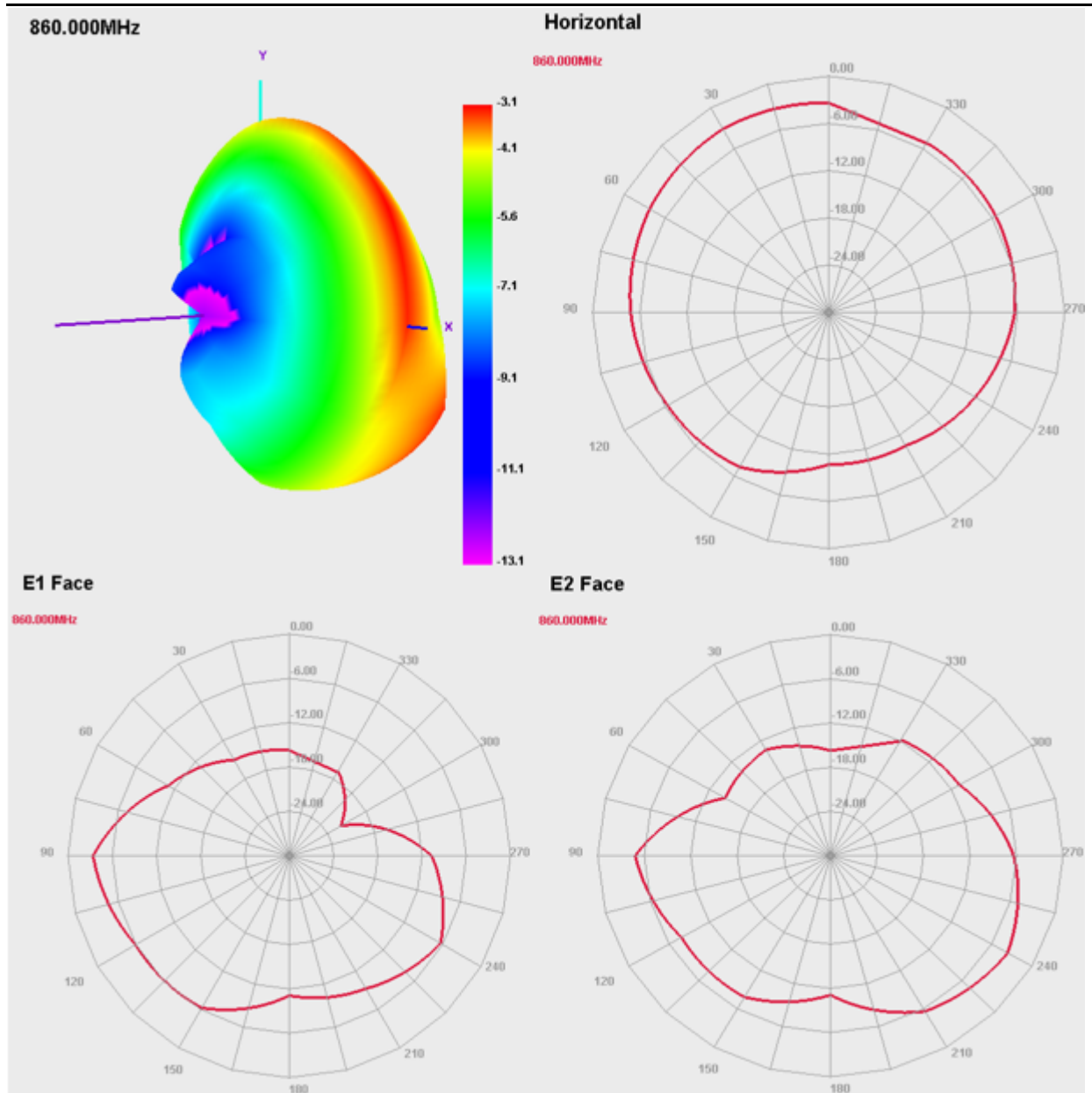
□ TRP & TIS

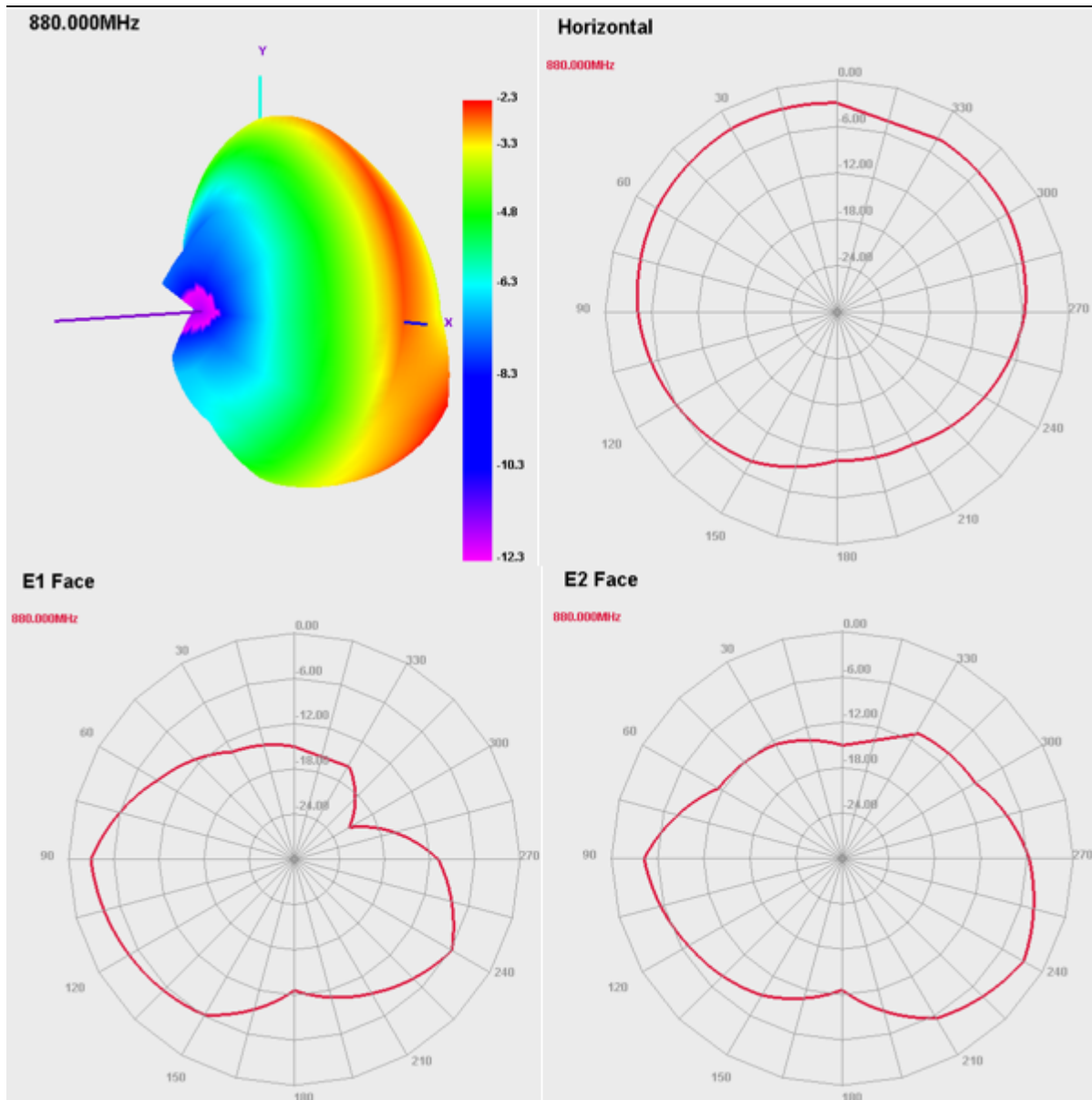
B1	Test	LTE1 TRP		Test	LTE1 TIS	
	Result	18050	18550	Result	50	550
	Frequency (MHz)	1925	1975	Frequency (MHz)	2115	2165
	TRP (dBm)	17.29	17.03	TIS (dBm)	-90.81	-92.42
B3	Test	LTE3 TRP		Test	LTE3 TIS	
	Result	19250	19900	Result	1250	1900
	Frequency (MHz)	1715	1780	Frequency (MHz)	1810	1875
	TRP (dBm)	20.69	18.63	TIS (dBm)	-80.69	-84.01
B7	Test	LTE7 TRP		Test	LTE7 TIS	
	Result	20800	21400	Result	2800	3400
	Frequency (MHz)	2505	2565	Frequency (MHz)	2625	2685
	TRP (dBm)	19.14	18.74	TIS (dBm)	-90.61	-86.34
B8	Test	LTE8 TRP		Test	LTE8 TIS	
	Result	21500	21750	Result	3500	3750
	Frequency (MHz)	885	910	Frequency (MHz)	930	955
	TRP (dBm)	18.63	15.95	TIS (dBm)	-85.02	-82.02
B20	Test	LTE20 TRP		Test	LTE20 TIS	
	Result	24200	24400	Result	6200	6400
	Frequency (MHz)	837	857	Frequency (MHz)	796	816
	TRP (dBm)	16.2	17.79	TIS (dBm)	-78.45	-83.41
B38	Test	LTE38 TRP		Test	LTE38 TIS	
	Result	37850	38150	Result	37850	38150
	Frequency (MHz)	2580	2610	Frequency (MHz)	2580	2610
	TRP (dBm)	17.16	17.22	TIS (dBm)	-88.13	-88.98
B41	Test	LTE41 TRP		Test	LTE41 TIS	
	Result	40340	41140	Result	40340	41140
	Frequency (MHz)	2565	2645	Frequency (MHz)	2565	2645
	TRP (dBm)	18.65	18.99	TIS (dBm)	-89.13	-86.38

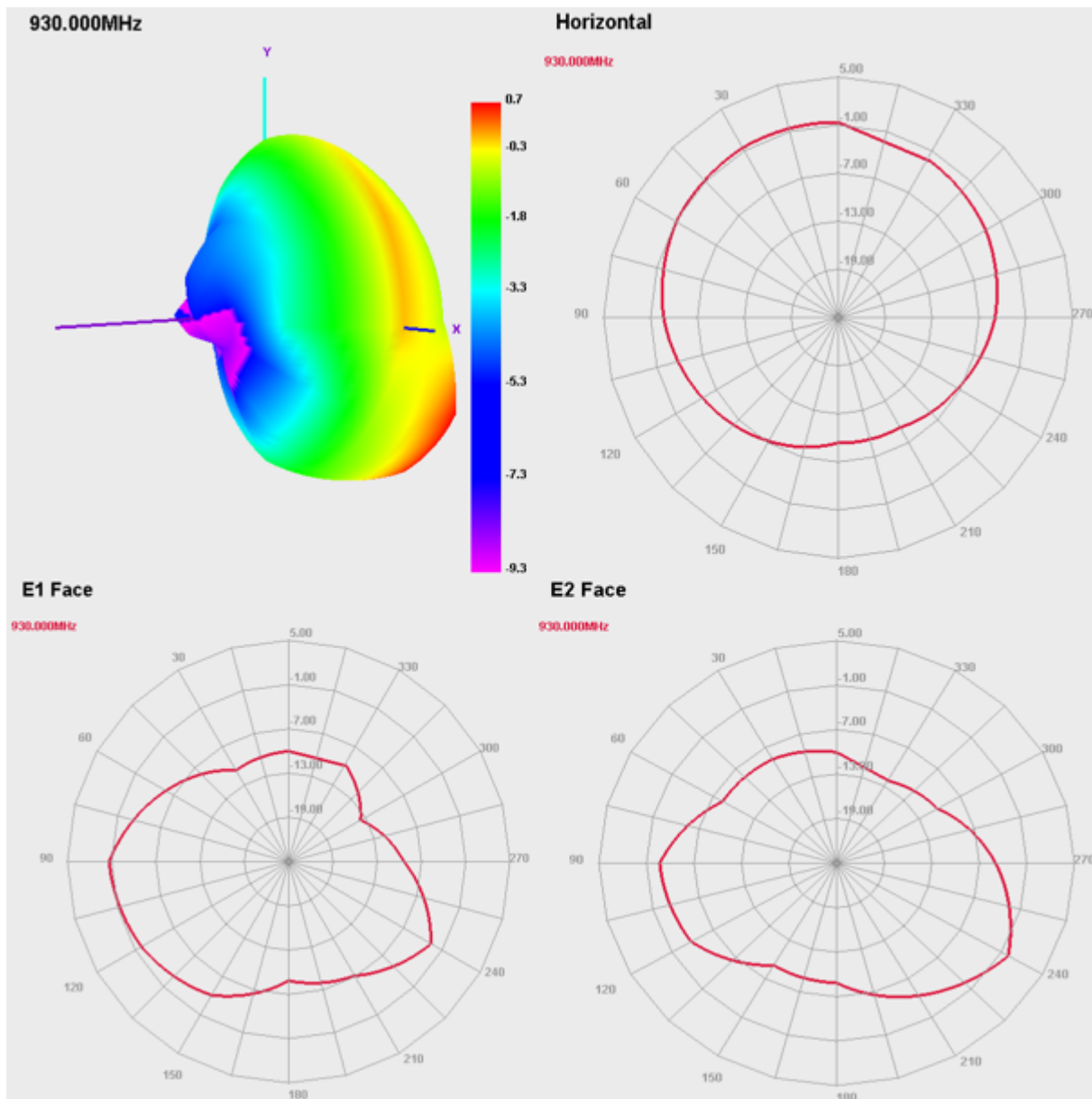
□ Radiation Pattern (PRA 天线)

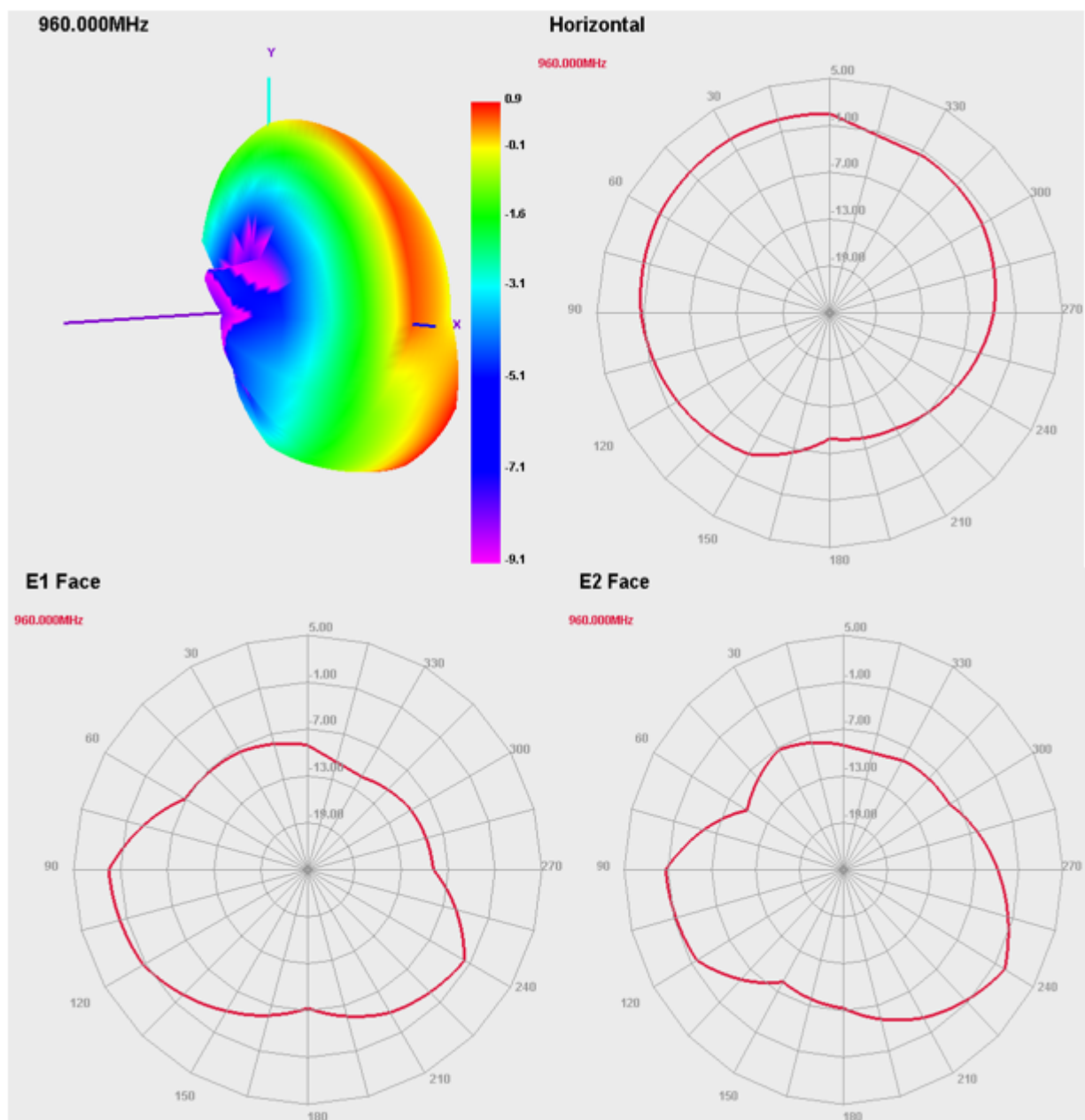


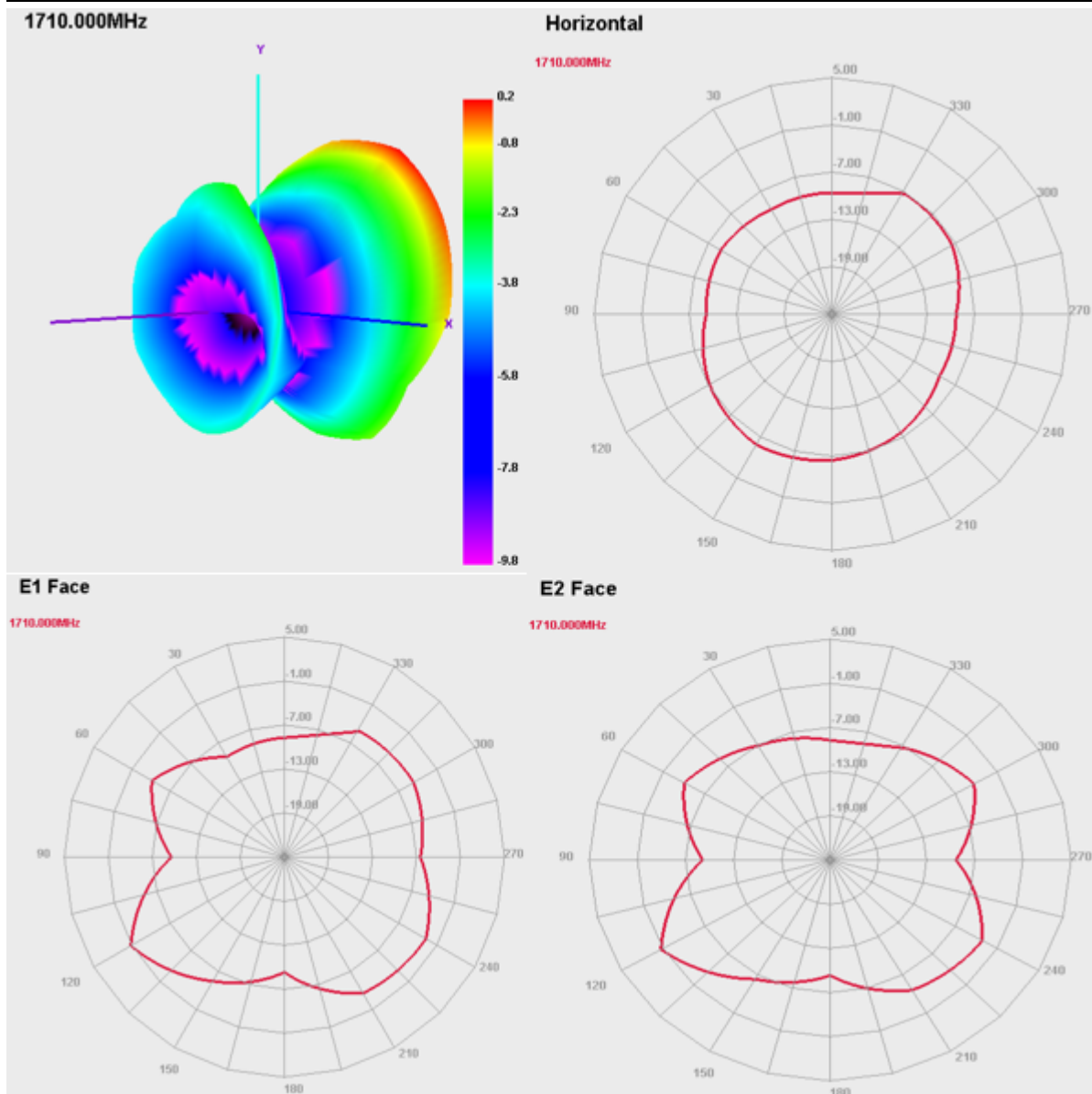


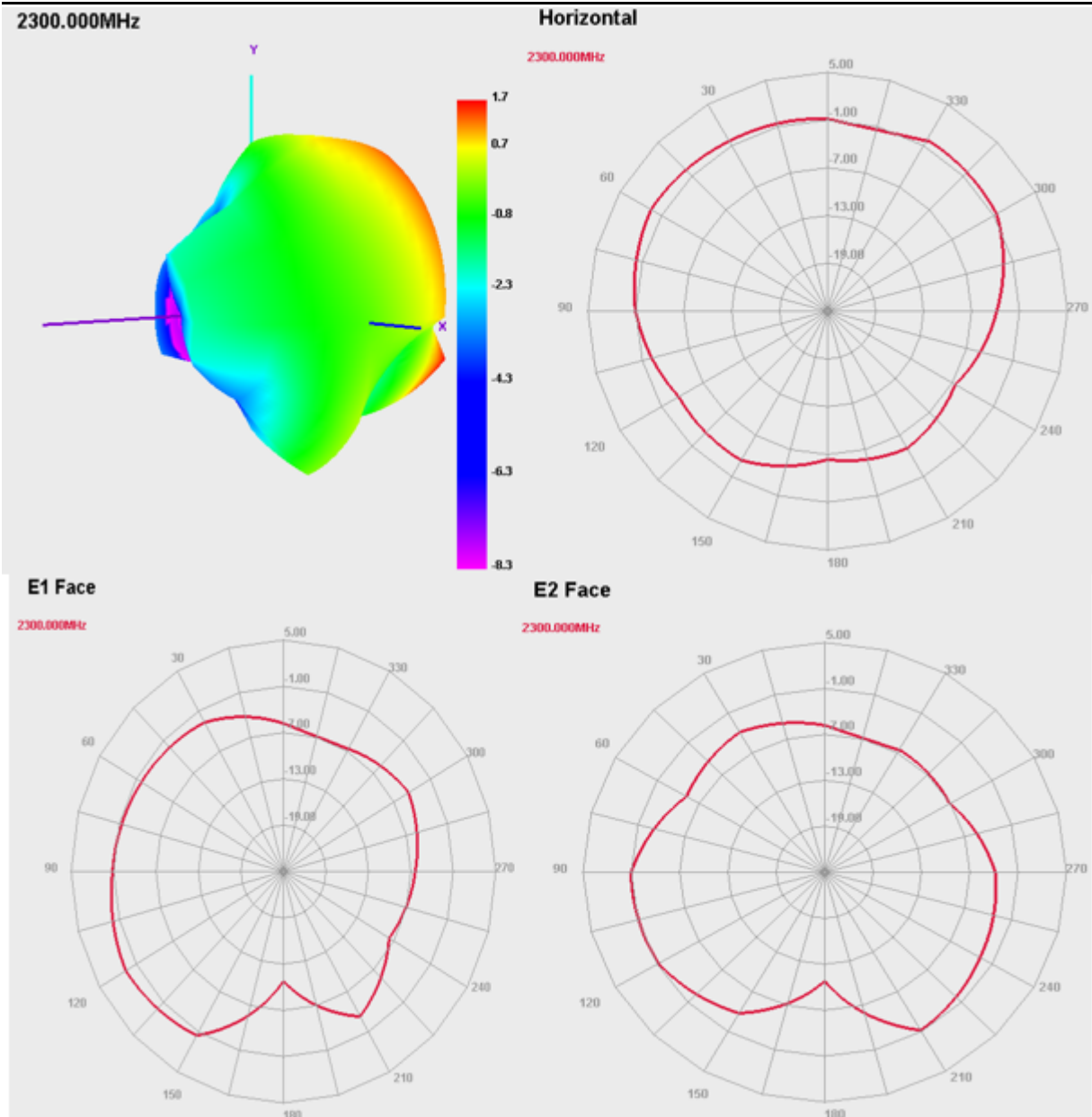


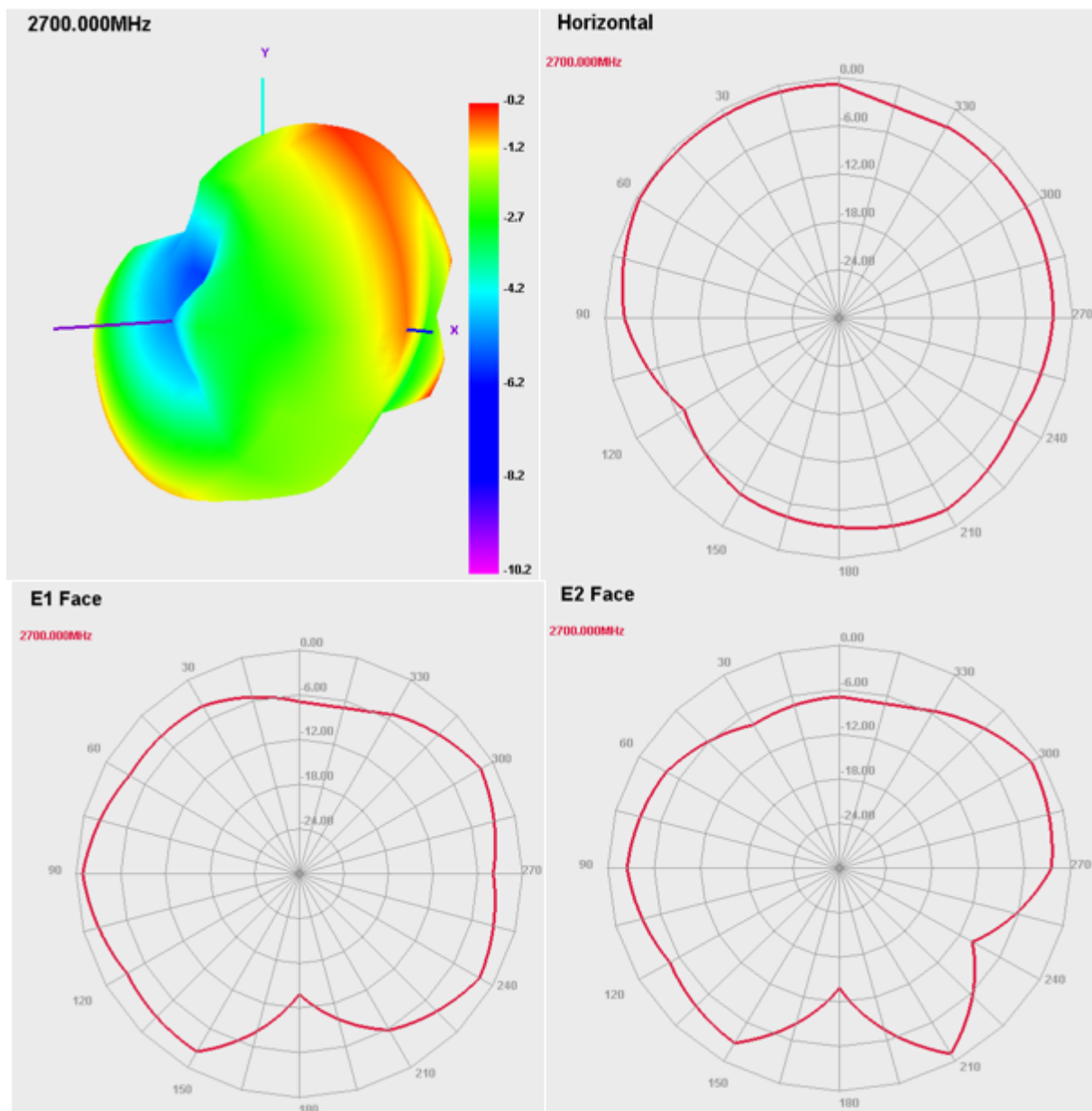












□ Gain&Efficiency (GPS&WIFI)

GPS Gain&Efficiency:

Freq	Effi	Gain
(MHz)	(%)	(dBi)
1575	30.61	-0.54

WIFI Gain&Efficiency:

Fre (MHz)	Eff (%) (dB)	Gain (dB)	Fre (MHz)	Eff (%) (dB)	Gain (dB)
2400	33.97	-0.41	5150	36.35	-1.98
2410	34.24	0	5200	35.77	-1.54
2420	34.88	0.27	5250	36.31	-0.33
2430	34.57	0.31	5300	35.11	0.37
2440	34.76	0.37	5350	38.18	1.66
2450	32.88	0.08	5400	37.28	1.59
2460	34.3	0.18	5450	35.42	1.37
2470	33.86	0.22	5500	35.53	1.27
2480	35.1	0.4	5550	33.25	0.8
2490	36.27	0.47	5600	33.71	0.89
2500	37.48	0.49	5650	36.28	0.74
			5700	37.95	0.55
			5750	43.32	0.73
			5800	44.99	1.4
			5850	49.85	2.13

□ Reliability Test

Test Item		Test condition	Equipment	Specification	Result
1	Low Temp. Storage Test	Temperature: -30℃, Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-down the temp. to -30℃ in one hour, store antenna for 44 hours; step-up temp to 25℃,test antenna after 2 hours.	Temp.&Humi. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
2	High Temp./High Humid Storage Test	Temperature: 85℃ Humidity: 85% RH Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-up the temp. to 80℃ and the humidity up to 85% in one hour, store antenna for 44 hours; step-down temp to 25℃,test antenna after 2 hours.	Temp.&Humi. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
3	Salt-Spray 6 pray Test	Placing antenna in the Salt-Spray Tester ,set the test condition , Temp: $35\pm 2^{\circ}\text{C}$ Humidity: 85% NaCl salt spray :$5\pm 1\%$.PH value :6.5~7.2 Test time:24hours	Salt-Spray Tester	No color change No appear rusting	PASS