

HF-LPT230天线测试报告

Outline Summary

● Purpose

Antenna design and test for Mojito. Result as following.

● Agenda

- Test Environment and Equipment
- Antenna Positions

Test Result : VSWR

Test Result : Efficiency

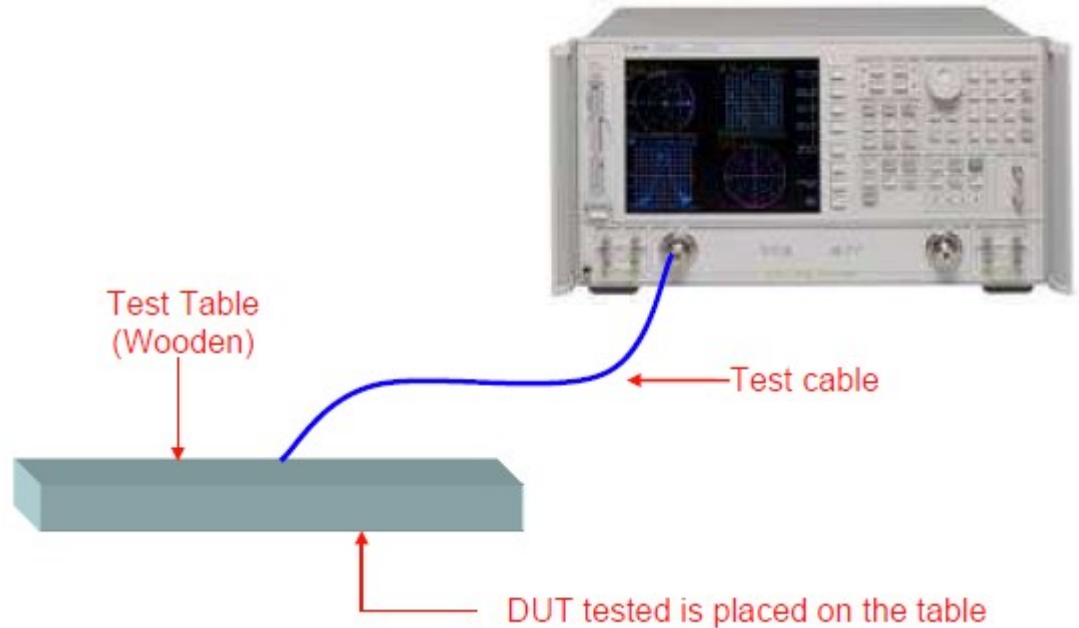
Test Result : 2D Radiation Pattern

● Result & Suggestions

Test Environment and Equipments

S-Parameter test

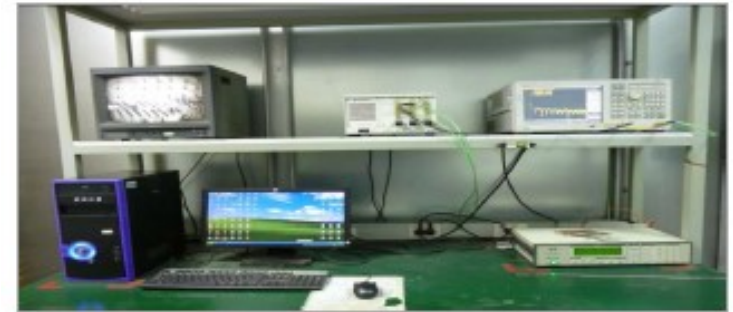
- Testing range from 9KHz to 8.5GHz or 300KHz~6.5GHz
- Network Analyzer(Agililent-E5071C or R&S ZVL)



Test Environment and Equipments

The Gain, Efficiency, Directivity and 2/3D Pattern

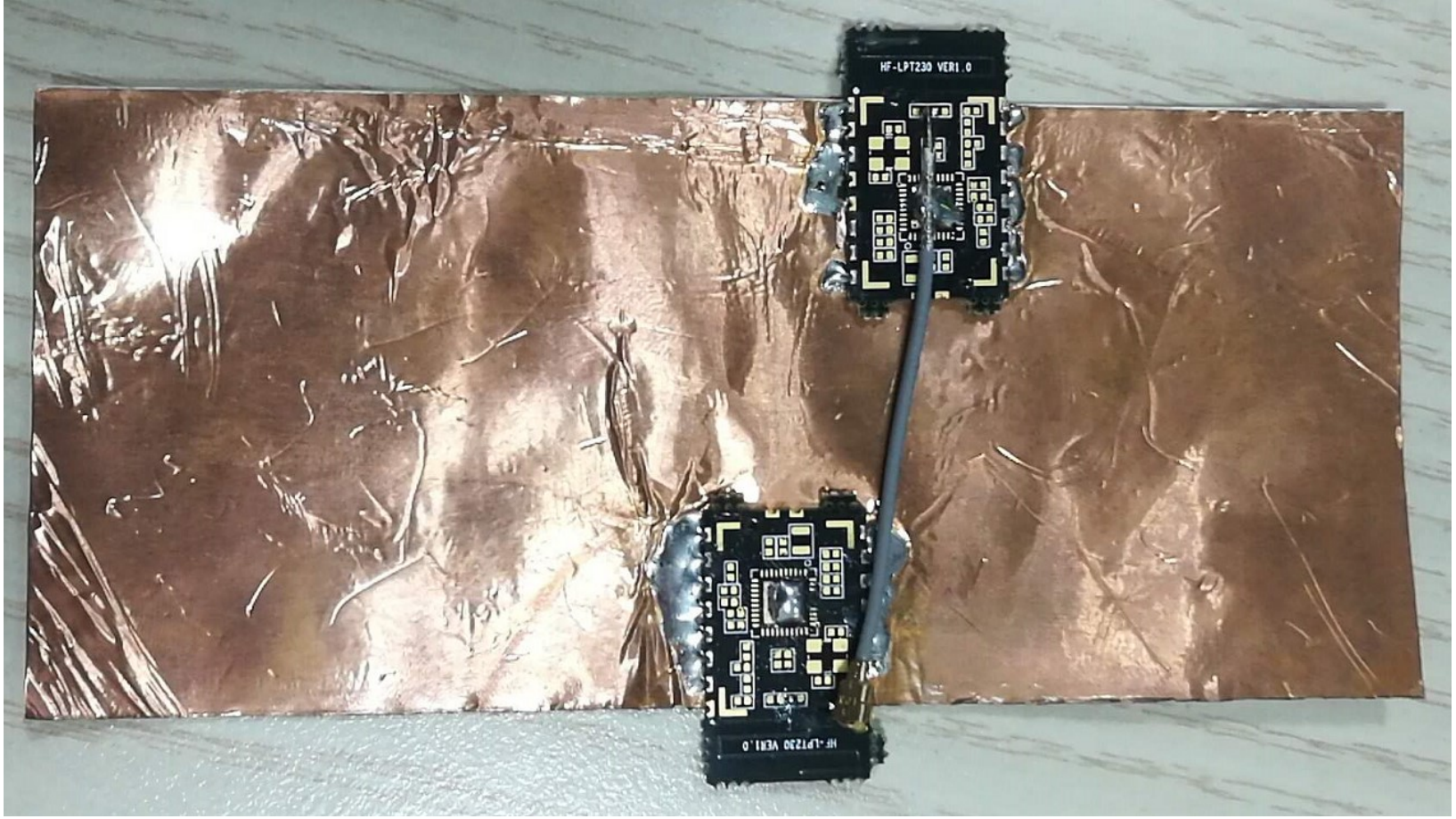
- 3D Anechoic Chamber
- Testing range from 700MHz to 6GHz
- Chamber Room Size: $L*W*H=9*4.7*4.7$ M



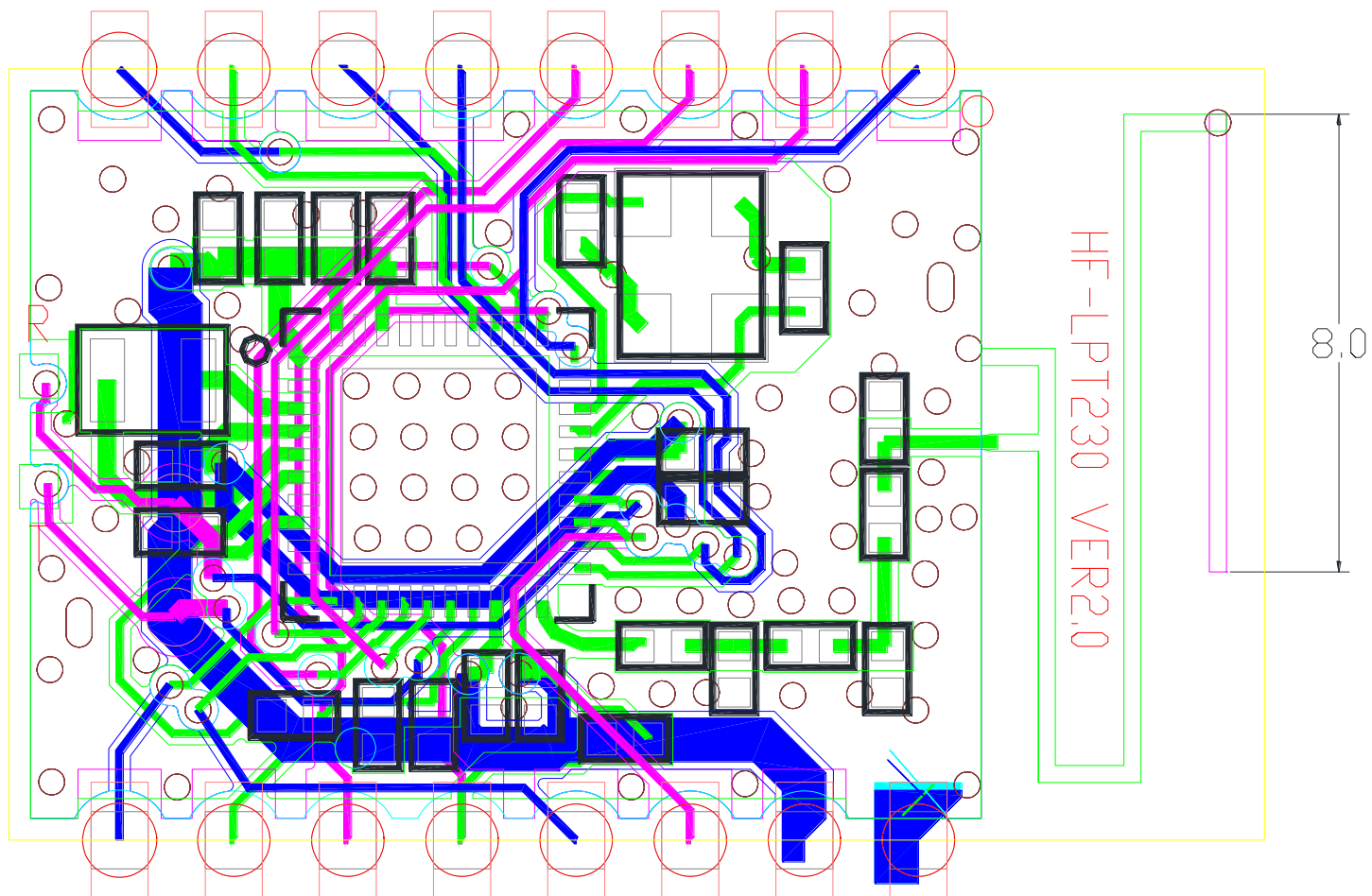
VSWR

- Testing range from 9KHz to 8.5GHz or 300KHz~6.5GHz
- Network Analyzer(Agilent-E5071C or R&S ZVL)





天线Dimension



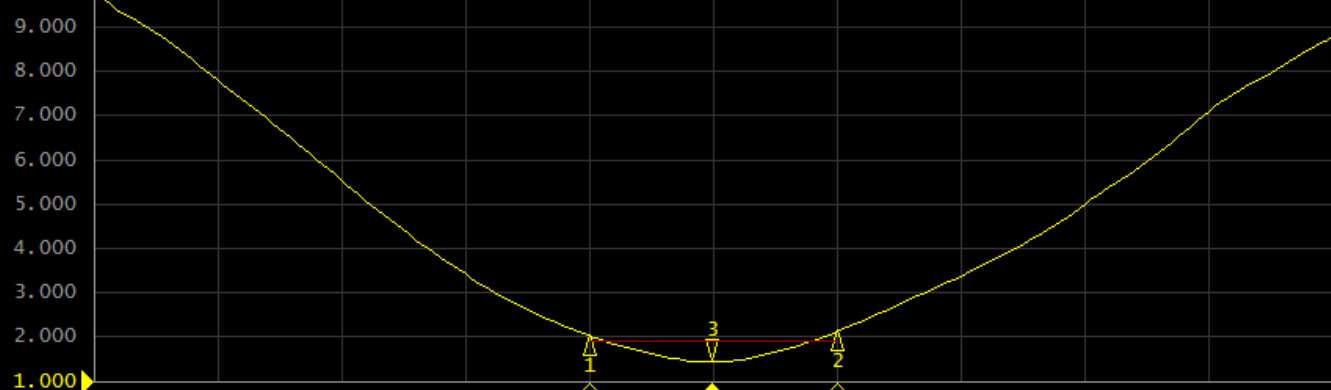
E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

Resize

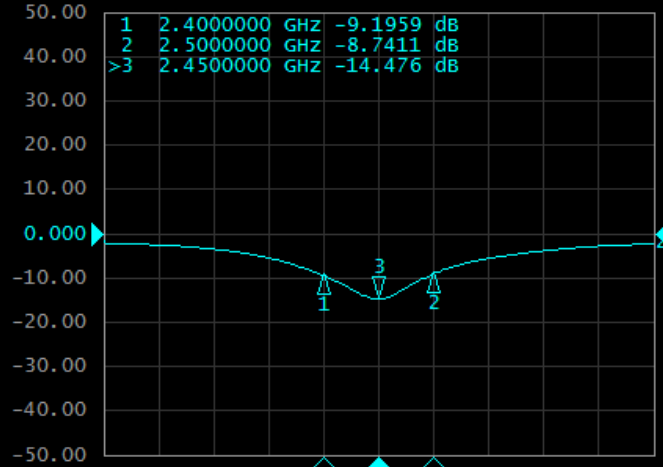
▶ Tr1 S11 SWR 1.000/ Ref 1.000 [F1]

1	2.4000000	GHz	2.0623
2	2.5000000	GHz	2.1522
>3	2.4500000	GHz	1.4657



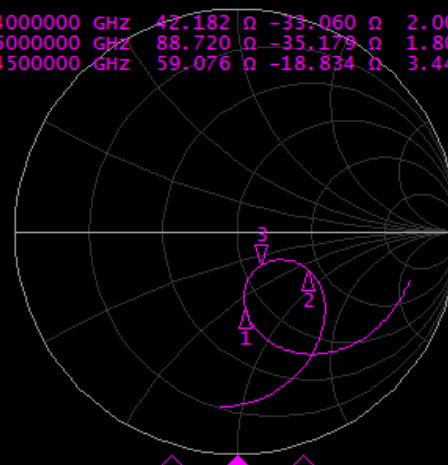
Tr2 S11 Log Mag 10.00dB/ Ref 0.000dB [F1]

1	2.4000000	GHz	-9.1959	dB
2	2.5000000	GHz	-8.7411	dB
>3	2.4500000	GHz	-14.476	dB



Tr3 S11 Smith (R+jX) Scale 1.000U [F1]

1	2.4000000	GHz	42.182	Ω	-33.060	Ω	2.0059	pF
2	2.5000000	GHz	88.720	Ω	-35.179	Ω	1.8097	pF
>3	2.4500000	GHz	59.076	Ω	-18.834	Ω	3.4492	pF



1 Start 2.2 GHz

IFBW 70 kHz

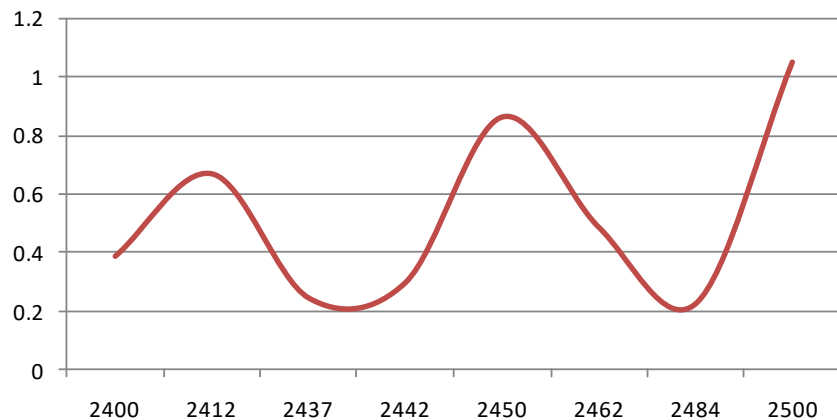
Stop 2.7 GHz

Meas Stop ExtRef Svc 2018-08-08 19:59

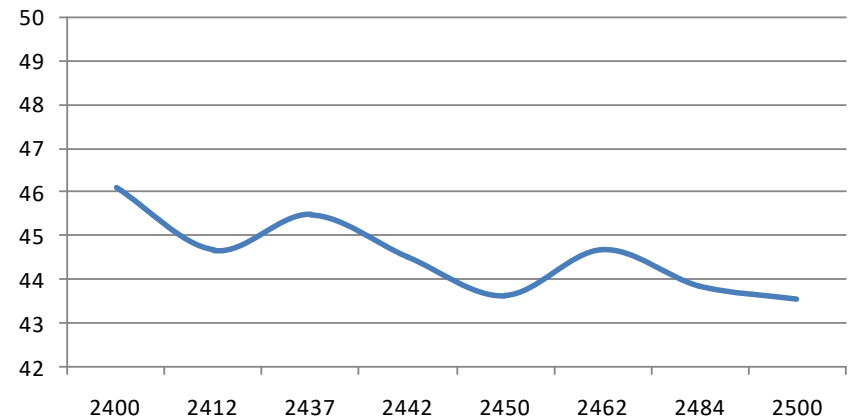
3D Total Date

Total/Fr equency	Ant. Port Input	Tot. Rad. Pwr . (dBm)	Peak EIRP (dBm)	Directivity (dBi)	Efficienc y (dB)	Efficiency (%)	Gain(dBi)
2400	0	-3.361413	0.389235	3.750648	-3.361413	46.116748	0.389235
2412	0	-3.50011	0.670378	4.170489	-3.50011	44.667224	0.670378
2437	0	-3.422525	0.246844	3.669369	-3.422525	45.47236	0.246844
2442	0	-3.515487	0.299056	3.814544	-3.515487	44.509351	0.299056
2450	0	-3.602275	0.864485	4.46676	-3.602275	43.628724	0.864485
2462	0	-3.497353	0.488575	3.985927	-3.497353	44.695595	0.488575
2484	0	-3.579493	0.226577	3.80607	-3.579493	43.858188	0.226577
2500	0	-3.611696	1.051473	4.663169	-3.611696	43.534182	1.051473

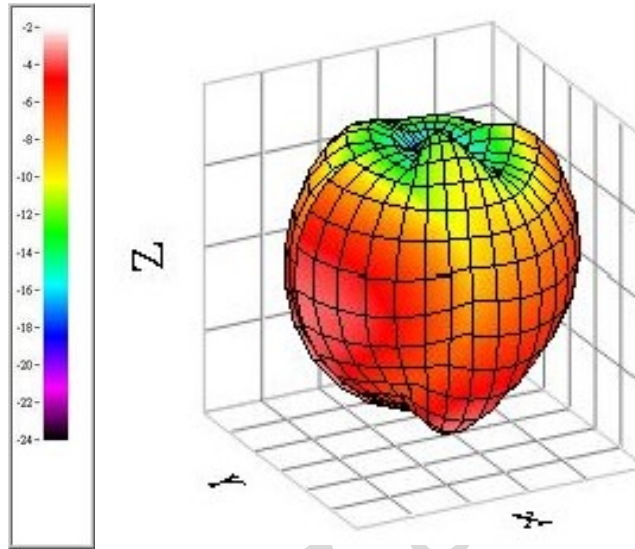
Gain(dBi)



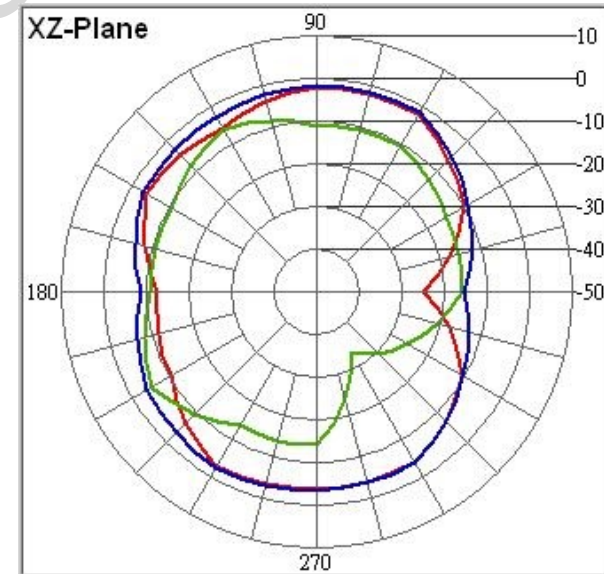
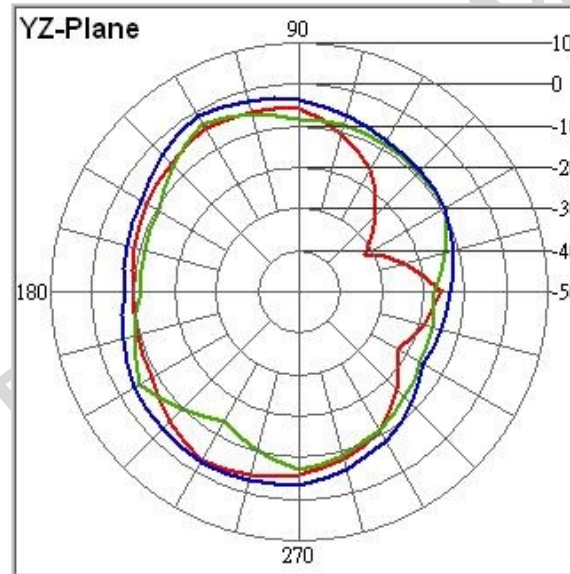
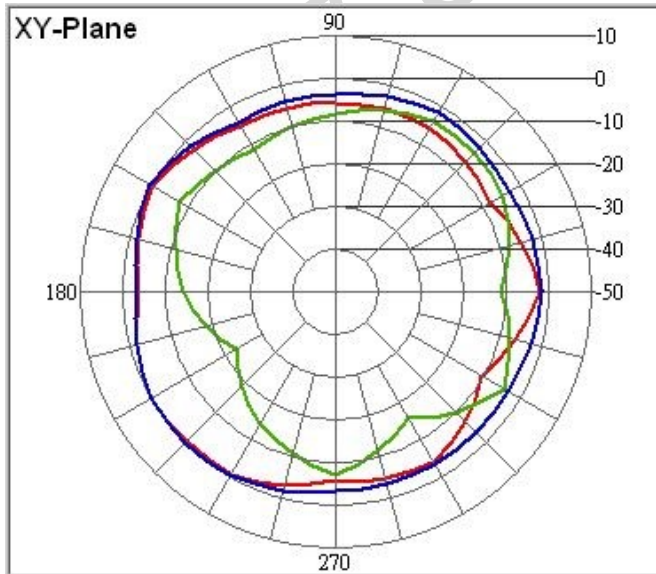
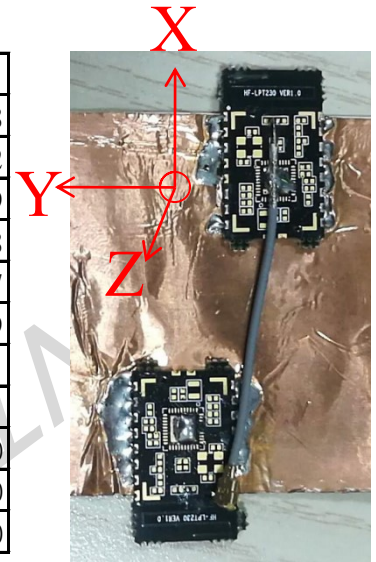
Efficiency(%)



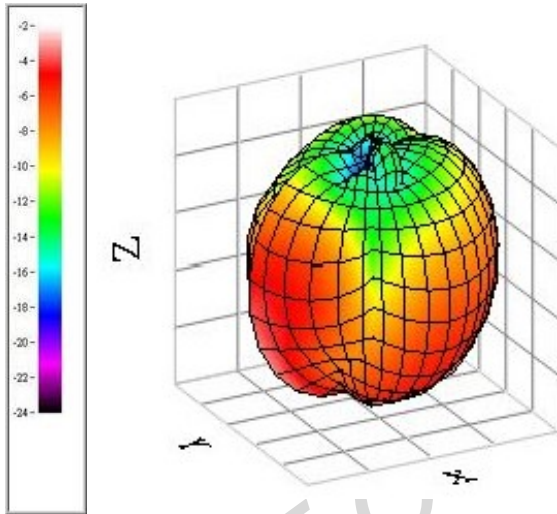
Frequency = 2400 MHz



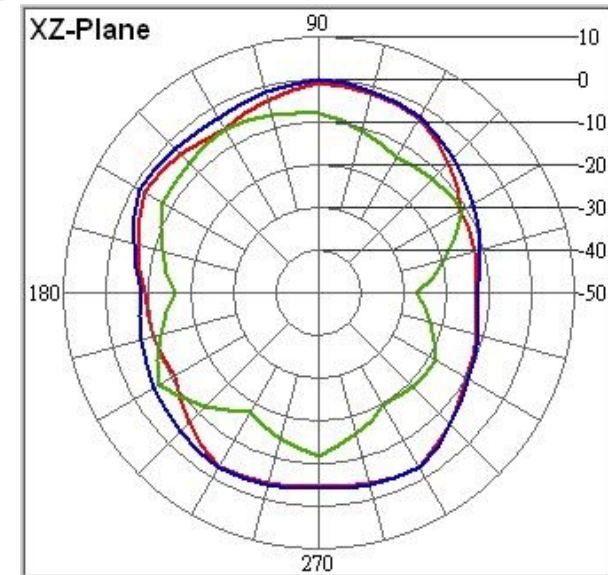
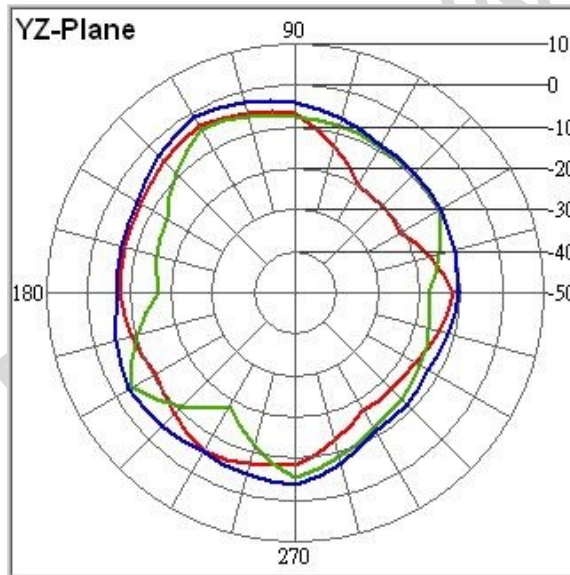
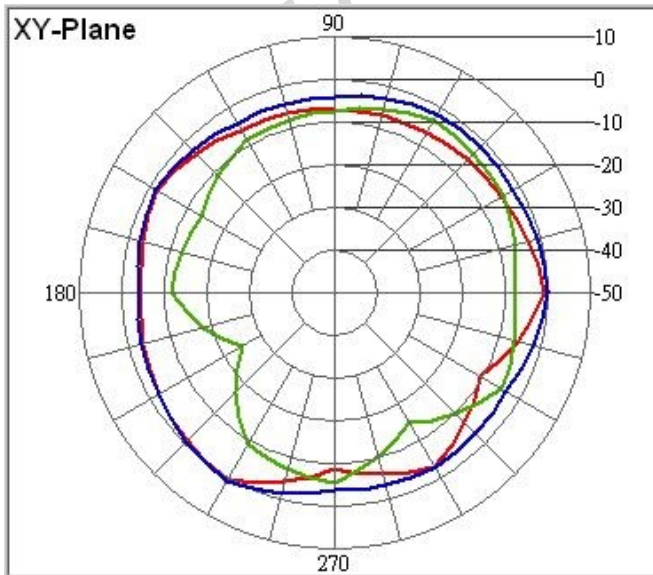
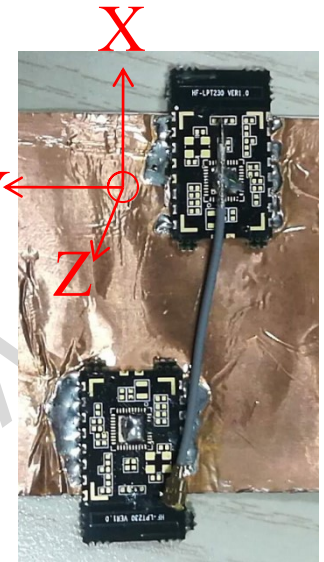
dBm	XY-Pl ane	XZ-Pl ane	YZ-Pl ane
H Pol . (Peak.)	0.139977	- 2.090171	- 3.032668
V- Pol . (Peak.)	- 3.795009	- 5.1371	- 3.269062
H+V. (Peak.)	0.389235	- 1.523236	- 0.898339
H Pol . (Avg.)	- 3.264823	- 5.228177	- 7.948598
V- Pol . (Avg.)	- 8.029977	- 10.711423	- 8.683427
H+V. (Avg.)	- 2.01392	- 4.146155	- 5.290189
Angle	XY- Pl ane	XZ- Pl ane	YZ- Pl ane
H Pol . (Peak.)	210	90	240
V- Pol . (Peak.)	60	210	120
H+V. (Peak.)	150	60	120



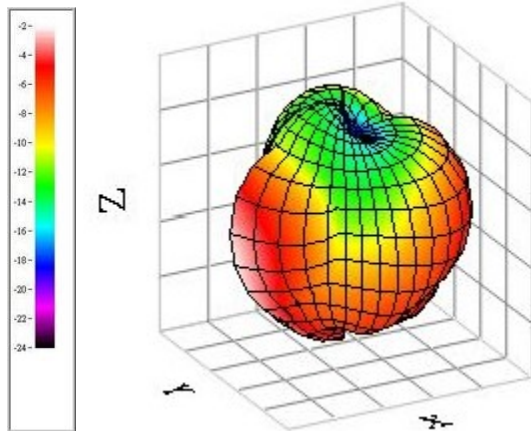
Frequency = 2450 MHz



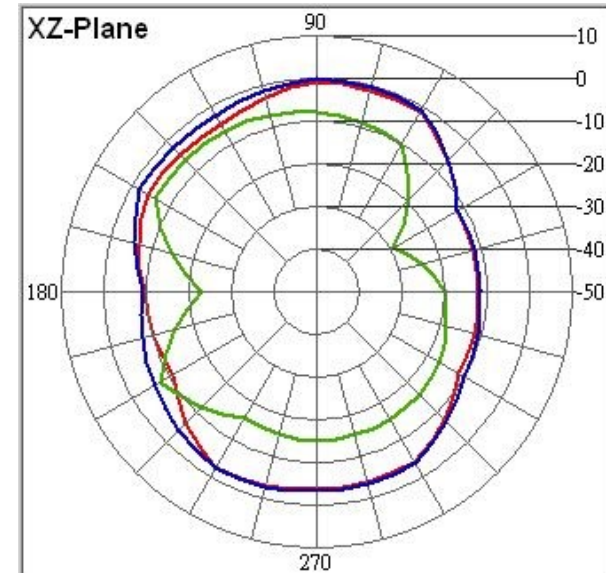
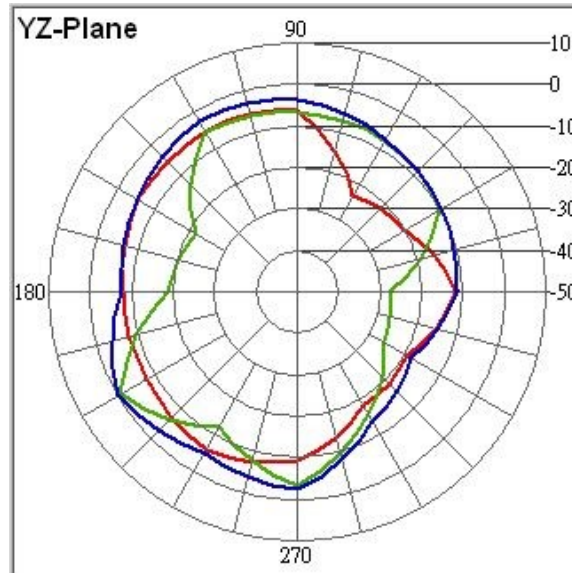
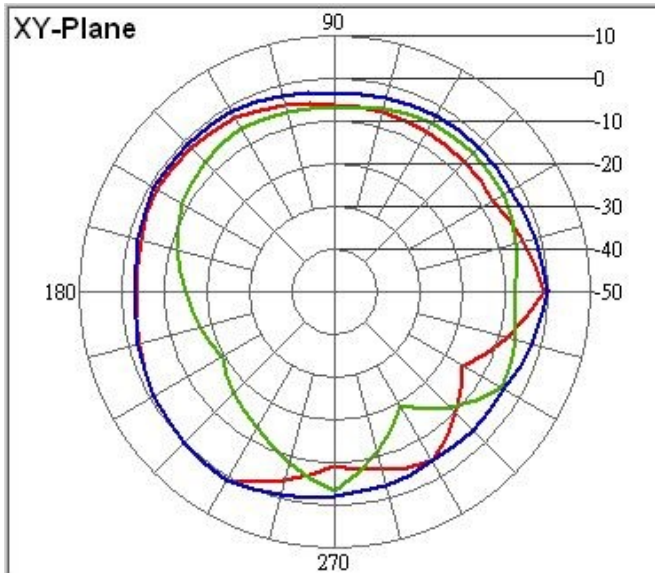
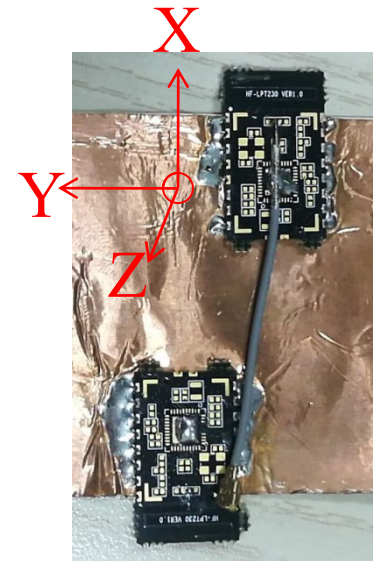
dBm	XY-Pl ane	XZ-Pl ane	YZ-Pl ane
H Pol . (Peak.)	0.40764	-0.699603	-3.588694
V Pol . (Peak.)	-3.331827	-5.890321	-4.315256
H+V. (Peak.)	0.864485	0.036144	-0.926499
H Pol . (Avg.)	-3.601958	-4.81098	-8.781966
V Pol . (Avg.)	-7.389187	-10.593998	-8.767373
H+V. (Avg.)	-2.084898	-3.793313	-5.764364
Angle	XY-Pl ane	XZ-Pl ane	YZ-Pl ane
H Pol . (Peak.)	240	90	120
V Pol . (Peak.)	60	120	120
H+V. (Peak.)	240	90	120



Frequency = 2500 MHz



dBm	XY-Pl ane	XZ-Pl ane	YZ-Pl ane
H Pol . (Peak.)	0.899152	-0.849051	-5.443866
V- Pol . (Peak.)	-3.294259	-6.126252	-0.737176
H+V. (Peak.)	1.051473	-0.048972	-0.013941
H Pol . (Avg.)	-3.342121	-4.686666	-8.809909
V- Pol . (Avg.)	-6.92073	-10.702135	-7.421952
H+V. (Avg.)	-1.762506	-3.71654	-5.050418
Angle	XY-Pl ane	XZ-Pl ane	YZ-Pl ane
H Pol . (Peak.)	240	90	120
V- Pol . (Peak.)	270	150	210
H+V. (Peak.)	240	90	210





APPENDIX A: CONTACT INFORMATION

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Manufacturer

Shanghai High-Flying Electronics Technology Co., Ltd

For more information about High-Flying modules, applications, and solutions, please visit our web site
<http://www.hi-flying.com/en/>

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