Antenna Type: FPC Antenna
Antenna Size: 3.9cm(L)*2.2cm(W)
Antenna Manufacture: Yuande Electronics (Shenzhen) Co., LTD
Address:101-1, Plant No. 4, Xiangyuer Cosmetics Longgang Factory, No. 8, Longsheng Road, Longgang Community, Longgang Street, Longgang District, Shenzhen
Antenna Model Number: 136-B7908-20A

1 Specification

This report mainly provides the test status of various electrical and structural performance parameters of 5.8G Ant.

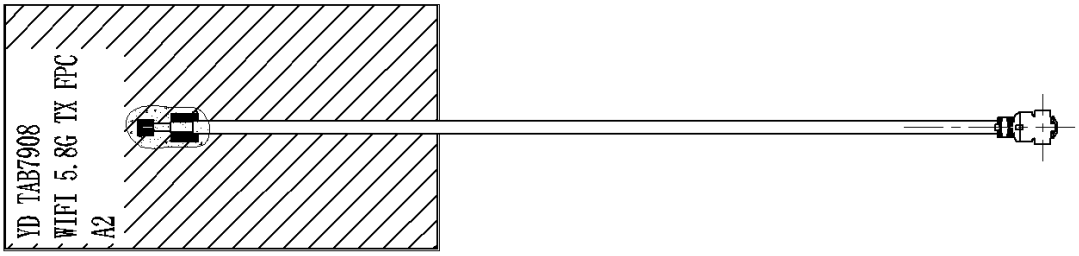


Photo 1 Ant

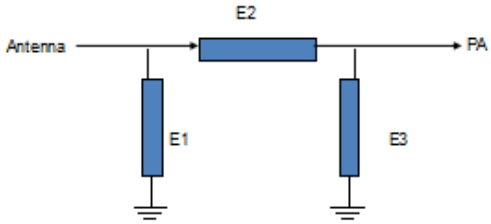
1.1 Electrical specification standard

1.1.1 Electrical performance index

The antenna works at 5729-5849MHz

Ant	5.8G Ant
Freq.	5729-5849MHz
SWR	< 2.0
Efficiency	> 40%
impedance	50 ohm
Polarization mode	Linear polarization

1.1.2 Match the circuit diagram



Element	Value
E1(0402)	N/A
E2(0402)	0R
E3(0402)	N/A

2 Test

Antenna commissioning and testing with the prototype provided by the customer.

2.1 Test the passive S11

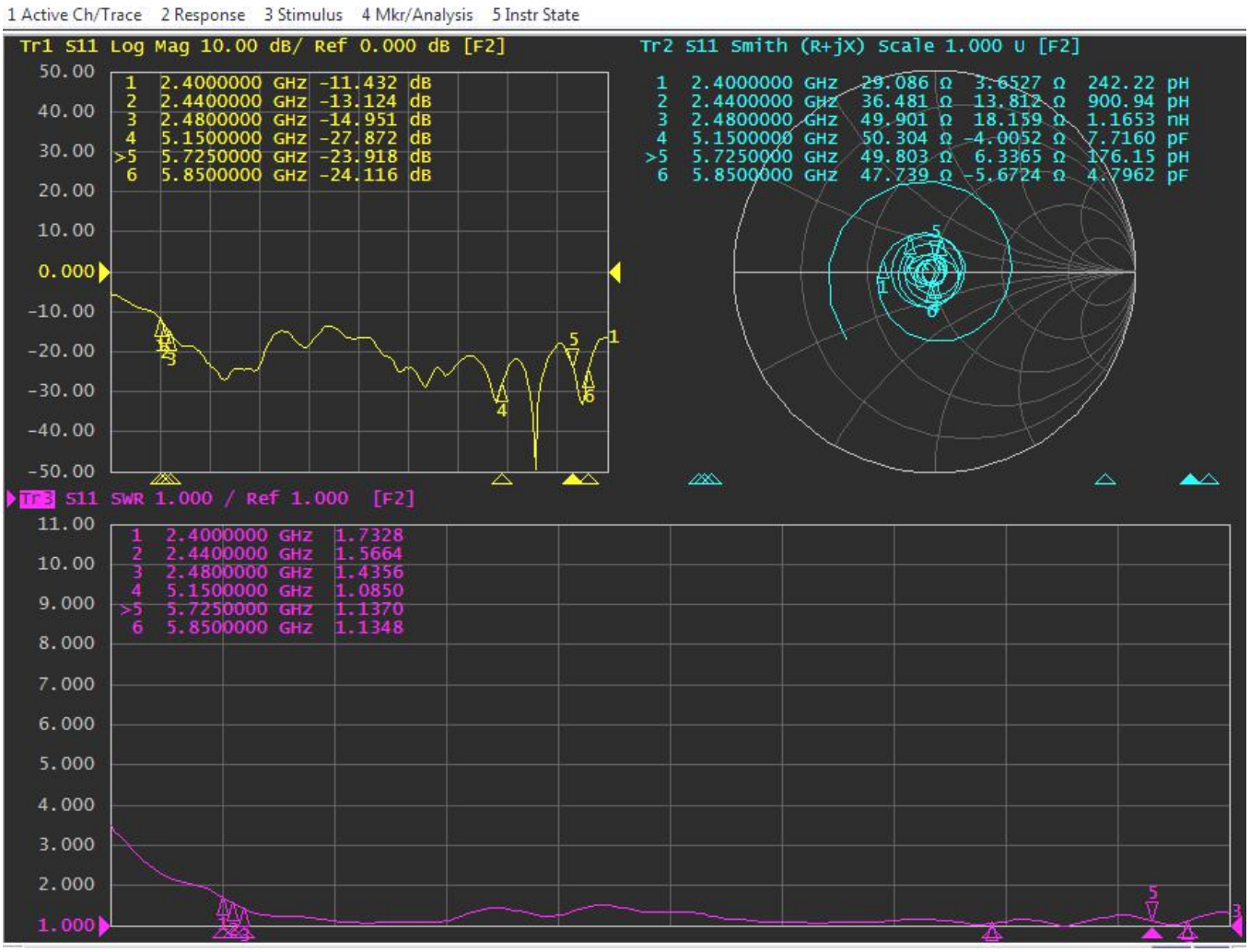
2.1.1 Test connection

The connection of passive S11 test device is as follows: network analyzer → test line → test fixture.

2.1.2 Passive S11

The following table shows the value of standing wave ratio of the frequency points at the edge of the working band of the antenna. ReturnLoss and VSWR related waveforms obtained from the test are shown in the figure below.

Freq. (MHz)	5725	5850	
VSWR	1.13	1.13	
Return Loss	-23.91	-24.11	



2.2 Measurement of gain and efficiency

2.2.1 Test site

Yuande microwave anechoic chamber: Test frequency range is 400MHz - 6GHz

2.2.2 Instrument for testing

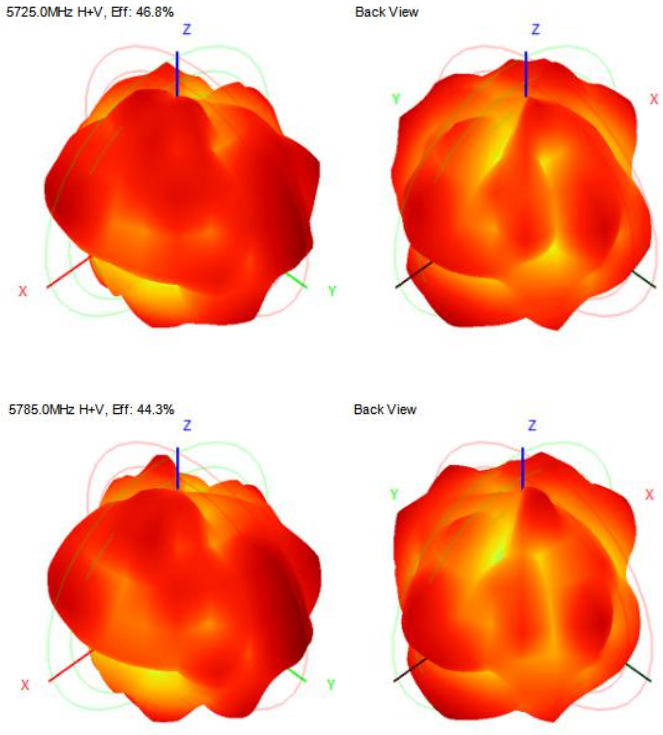
Network analyzer, standard horn antenna, multi-probe near-field antenna test system, test computer, etc.

2.2.3 Test result

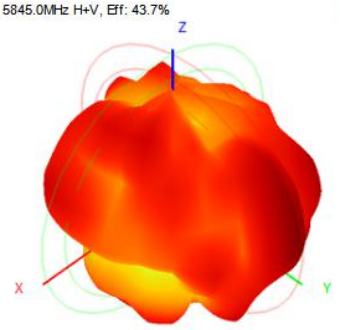
In the microwave darkroom, the values related to efficiency and gain measured are shown in the table below

Frequency(MHz)	Gain(dBi)	Efficency(%)
5725	2.83	46.78
5735	2.79	46.13
5745	2.66	45.79
5755	2.71	45.59
5765	2.67	45.27
5775	2.85	44.82
5785	2.81	44.34
5795	2.94	44.54
5805	3.01	44.68
5815	2.99	44.50
5825	3.01	43.89
5835	2.98	43.75
5845	3.01	43.69

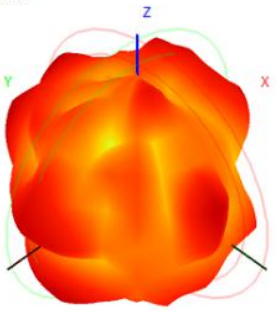
2.2.4 Passive radiation direction diagram



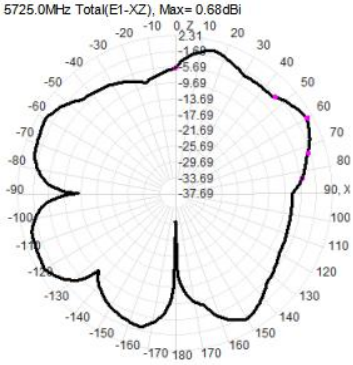
5845.0MHz H+V, Eff: 43.7%



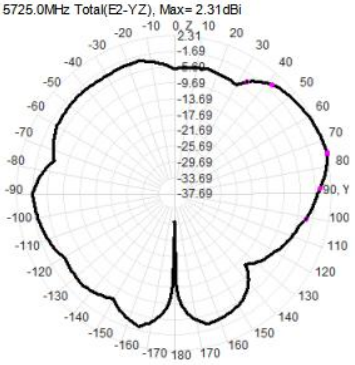
Back View



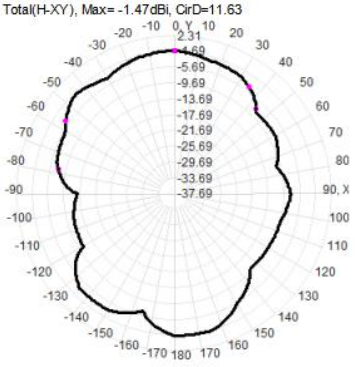
5725.0MHz Total(E1-XZ), Max= 0.68dBi



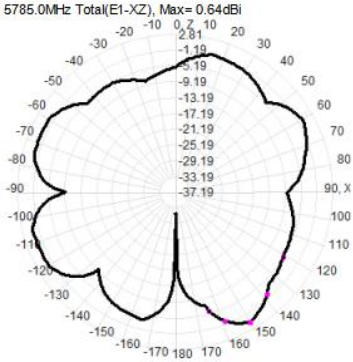
5725.0MHz Total(E2-YZ), Max= 2.31dBi



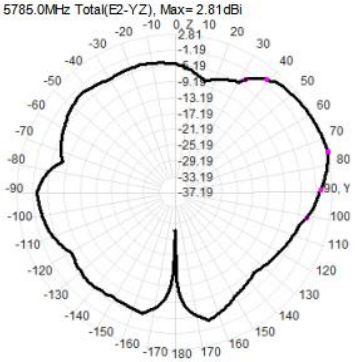
Total(H-XY), Max= -1.47dBi, CirD=11.63



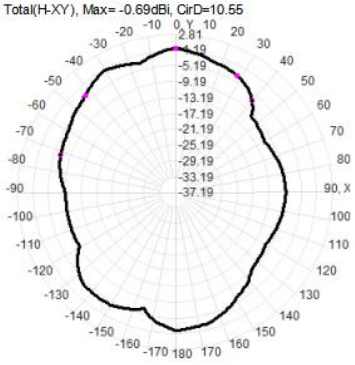
5785.0MHz Total(E1-XZ), Max= 0.64dBi



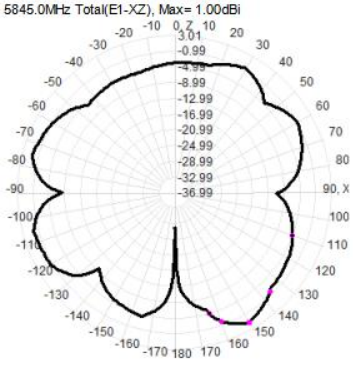
5785.0MHz Total(E2-YZ), Max= 2.81dBi



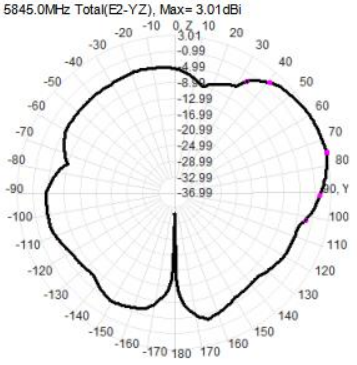
Total(H-XY), Max= -0.69dBi, CirD=10.55



5845.0MHz Total(E1-XZ), Max= 1.00dBi



5845.0MHz Total(E2-YZ), Max= 3.01dBi



Total(H-XY), Max= 0.17dBi, CirD=12.71