



Shenzhen Zhengdaxinwei Communication Equipment Co., Ltd

APPROVAL

CUSTOMER: _____

WIFI Antenna

DESCRIPTION: _____

ZDXV-RG174*1.0M/Bend FAKRA-B Female head female
needle/WIFI/Rectangular patch

MODEL NO: _____

CUS PART NO: _____

2025-03-20

D A T E: _____

ZDXV Sign by sample

ENGINEERING DEPARTMENT	Q C DEPARTMENT	SALES DEPARTMENT
YAN Kunpeng	Yang Dongdong	Tian Huadong

The customer presents the sample signature

ENGINEERING DEPARTMENT	Q C DEPARTMENT	SALES DEPARTMENT

※ Customer confirmation sample attached:

The name of the company: Shenzhen Zhengda Xinwei Communication Equipment Co., LTD

The company address: No.486, Zhangbei Road, Zhangbei Community, Longcheng Street, Longgang District, Shenzhen

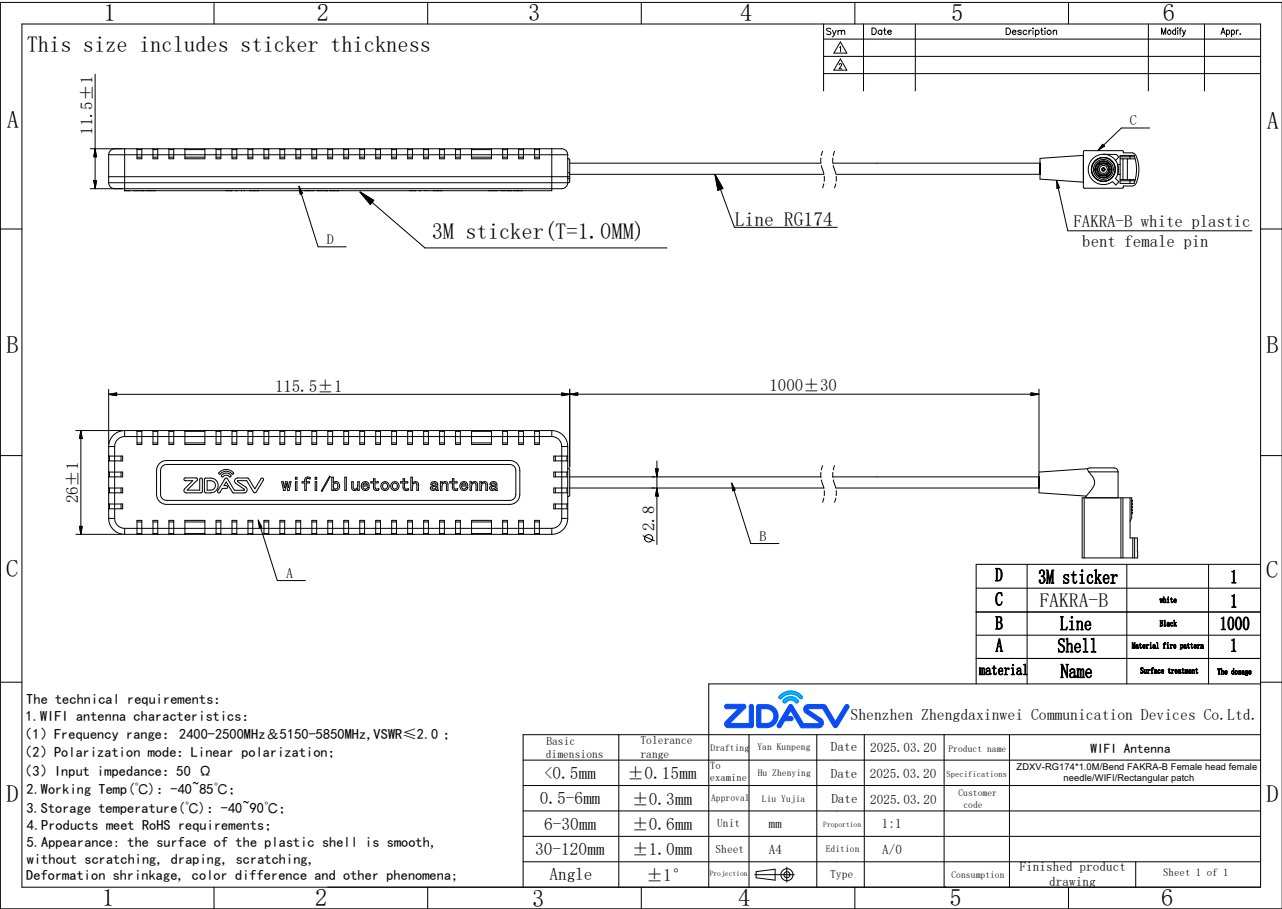
The company web site: www.zdxwtx.com Contact phone number: 0755-28839286

fax: 0755-89909291 email: luohao@zidasv.net

Description Record

[illegible]

1.Product drawing size



2.Electrical Specification :

Model	WIFI Antenna
Main Technical Specifications	
Frequency Range (MHz)	2400/2500MHz 5150/5800MHz
VSWR	2400/2500MHz $\leq$ 2.0
	5150/5800MHz $\leq$ 2.0
Gain/1M (dBi)	2400/2500MHz: 1.21
	5150/5800MHz: 2.43
Input Impedance (Ω)	50
Polarization Type	linear
Connector Type	FAKRA
Working Temperature	-40°C~+85°C
Storage Temperature	-40°C~+90°C

2-1. Frequency Band:

Frequency Band	MHz
WIFI	2400-2500MHz&5150-5850MHz

2-2. Impedance

50 ohm nominal

2-3. VSWR

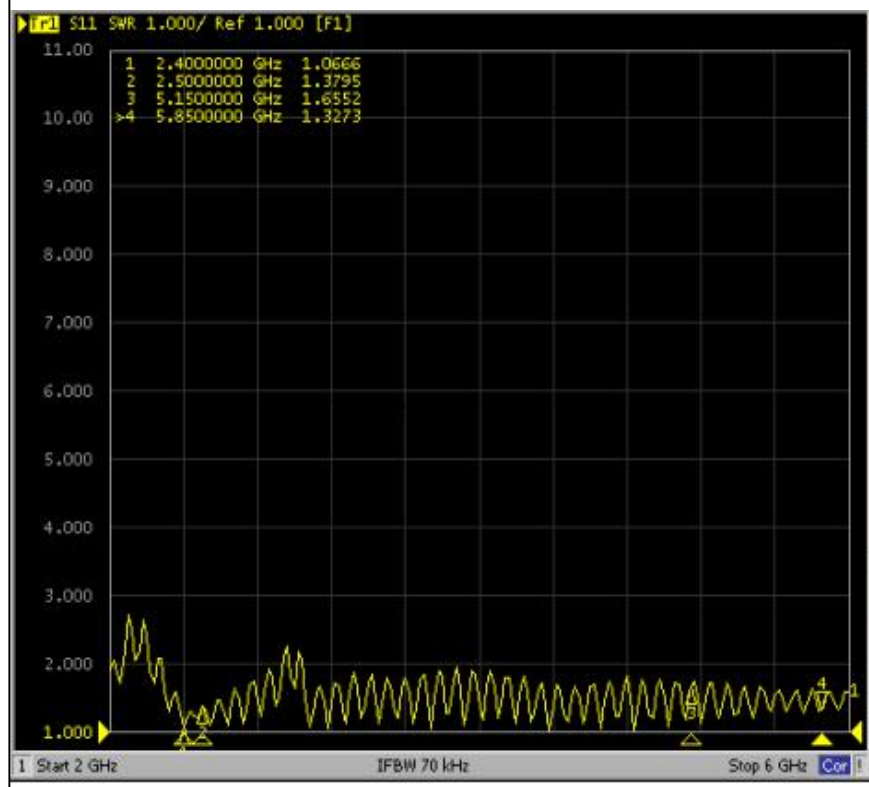
2-3-1.Measurement frequency points and VSWR value

Frequency (Unit MHz)	2400	2500	5150	5850
VSWR	1.06	1.37	1.65	1.32

2-3-2. VSWR

Frequency Band(MHz)	2400	2500	5150	5850
2-3-3. Typical Value:	≤ 2.0	≤ 2.0	≤ 2.0	≤ 2.0
2-3-4 Measuring Method	1. A 50 Ω coaxial cable is connected to the Antenna. Then this cable is connected to a network analyzer to measure the VSWR. 2. Keeping this jig away from metal at least 20 cm			

2-3-5 Picture



2-4. Efficiency and Gain

- measuring instrument: microwave darkroom, network analyzer, standard antenna
- description of microwave darkroom:

This is the microwave darkroom set up by our company in Shenzhen. The microwave darkroom belongs to a set of far-field measurement system. The size of the darkroom is 7.0m x4.0m x3.0m, and the quiet zone size is 15cm x15cm x15cm.

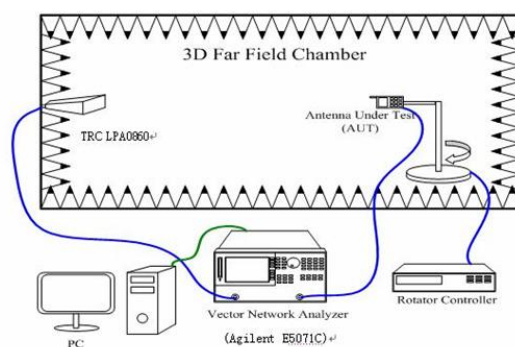


图 1. 微波暗室内部仪器设置

Figure. 1 shows the connection diagram of the instrument setting and network analyzer in the microwave darkroom. The distance from the transmitting antenna to the antenna to be tested (AUT) is 1.35M. The antenna to be tested is placed on the rotating platform. By controlling the rotation angle of the turntable, the antenna to

be tested can be measured roughly and accurately.

Place the antenna to be tested on the rotating table, and measure the 360 degree field strength data of each plane (ZY plane and ZX plane). Then, the antenna to be tested is replaced with a standard dipole antenna, and its 360 degree field strength data is measured as the conversion gain standard value. The gain value and pattern of the antenna to be tested can be obtained through the conversion of equation 1.

$$G_{AUT} = G_{stand} + P_{AUT} - P_{stand}$$

G_{AUT} : Gain of AUT

G_{stand} : Gain of Standard Gain Antenna

P_{AUT} : Measured Power of AUT

P_{stand} : Measured Power of Standard Gain Antenna

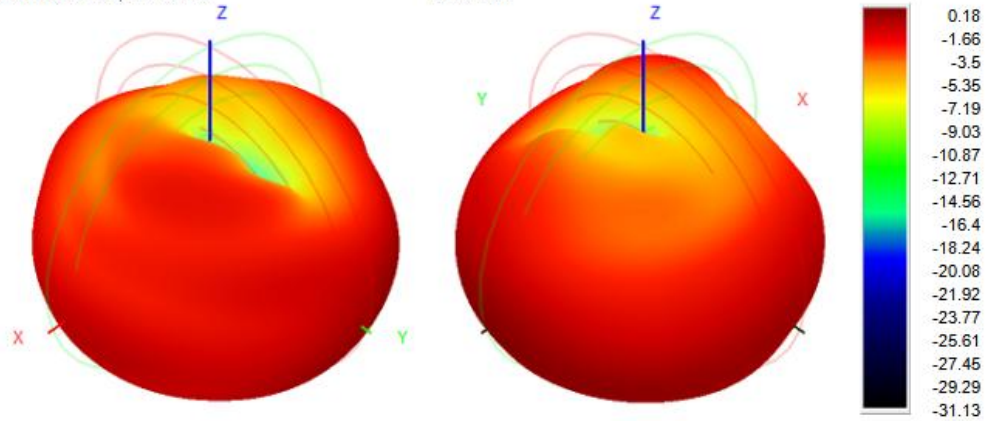
2-4-1 Efficiency and Gain

Frequency (MHz)	Gain (dBi)	Efficiency(%)	Frequency (MHz)	Gain (dBi)	Efficiency(%)
2400.0	0.18	44.11	5150.0	-0.09	31.37
2410.0	0.53	46.91	5200.0	0.77	33.69
2420.0	0.93	41.53	5250.0	-0.14	28.96
2430.0	0.53	46.90	5300.0	1.40	34.61
2440.0	0.37	45.09	5350.0	1.39	32.94
2450.0	0.38	45.61	5400.0	2.37	39.33
2460.0	0.34	45.30	5450.0	2.37	36.63
2470.0	0.62	46.50	5500.0	2.11	33.92
2480.0	1.21	41.72	5550.0	2.07	35.18
2490.0	1.04	40.08	5600.0	2.43	27.15
2500.0	0.26	43.11	5650.0	1.82	31.60
			5700.0	2.25	29.56
			5750.0	2.04	28.72
			5800.0	1.25	28.83
			5850.0	1.74	28.40

3. OTA方向图

2400.0MHz H+V, Eff: 44.1%

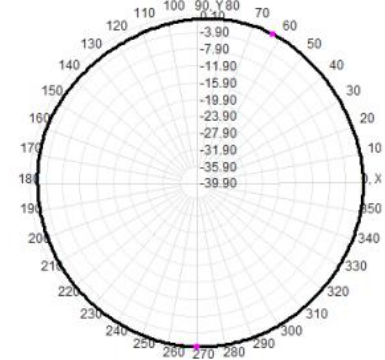
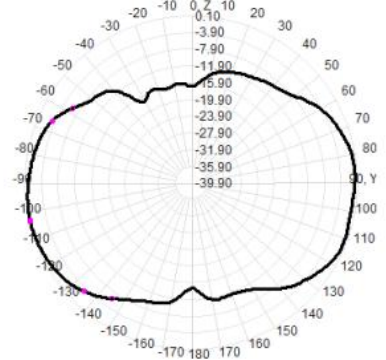
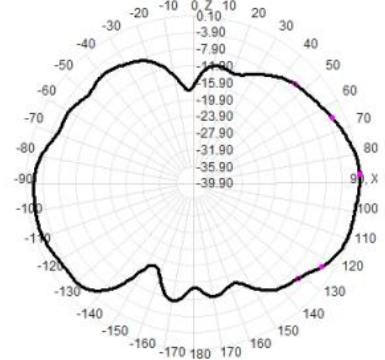
Back View



2400.0MHz Total(E1-XZ), Max= 0.10dBi

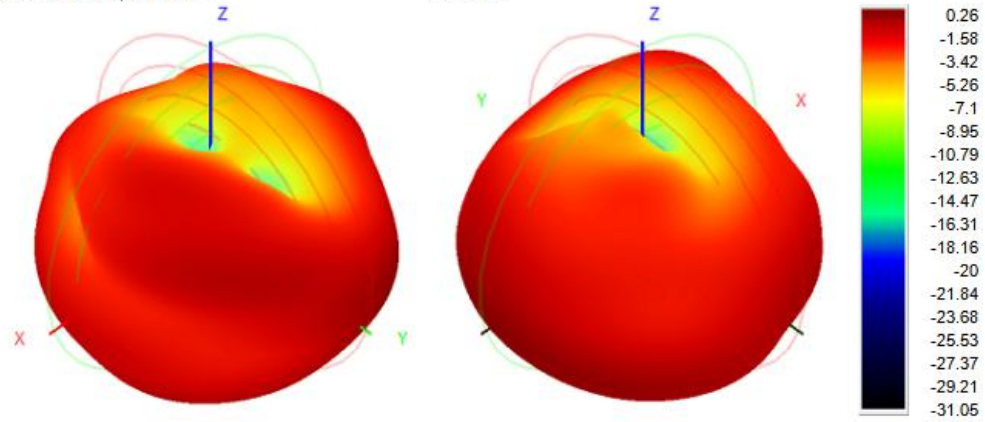
2400.0MHz Total(E2-YZ), Max= -0.19dBi

Total(H-XY), Max= 0.08dBi, CirD=2.38



2500.0MHz H+V, Eff: 43.1%

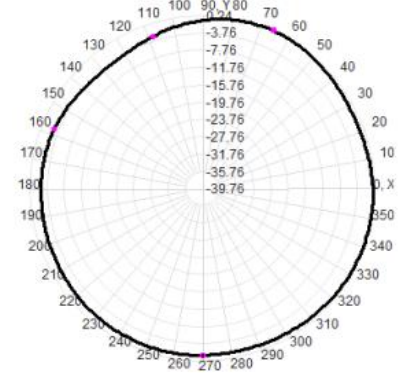
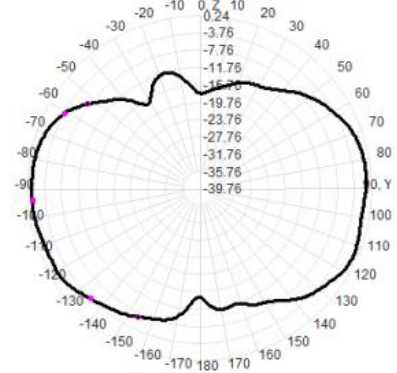
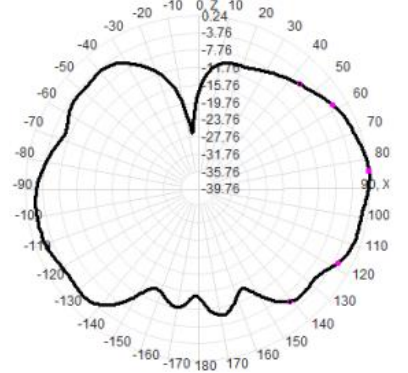
Back View



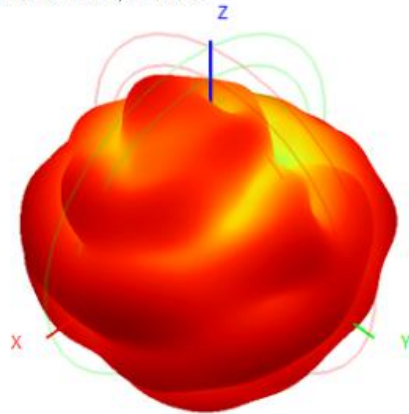
2500.0MHz Total(E1-XZ), Max= -0.02dBi

2500.0MHz Total(E2-YZ), Max= -0.89dBi

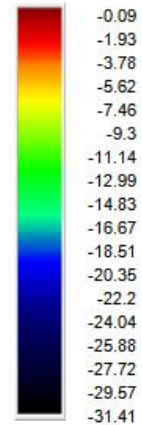
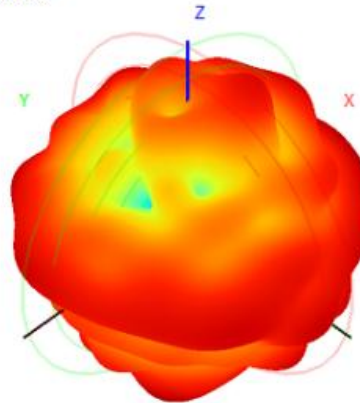
Total(H-XY), Max= 0.24dBi, CirD=4.39



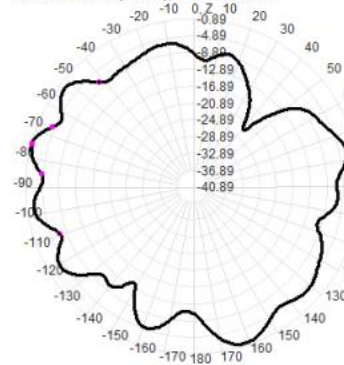
5150.0MHz H+V, Eff: 31.4%



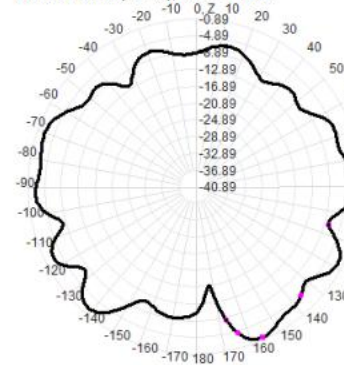
Back View



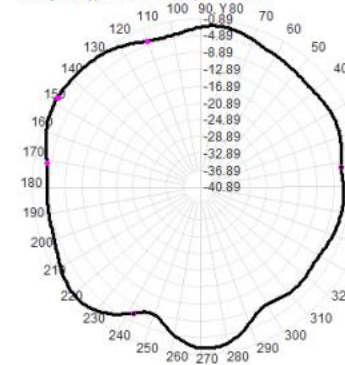
5150.0MHz Total(E1-XZ), Max=-1.19dBi



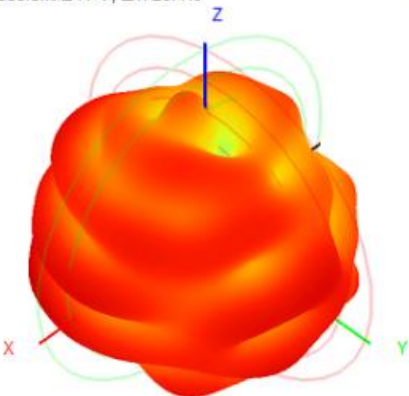
5150.0MHz Total(E2-YZ), Max=-1.79dBi



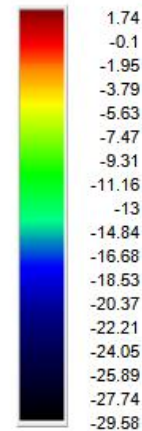
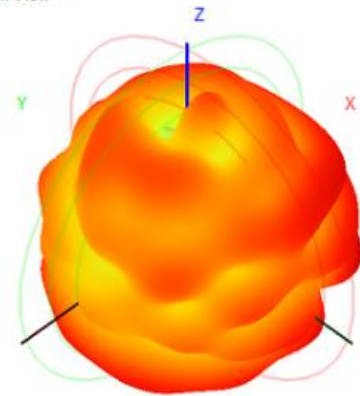
Total(H-XY), Max=-0.89dBi, CirD=7.93



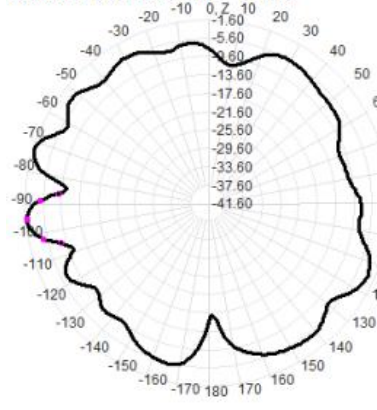
5850.0MHz H+V, Eff: 28.4%



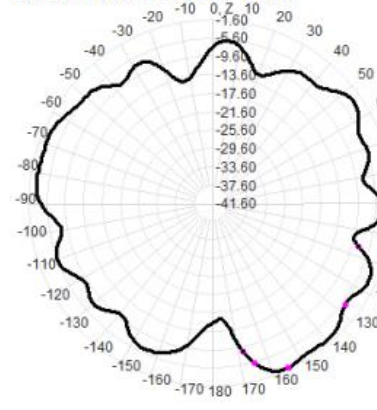
Back View



5850.0MHz Total(E1-XZ), Max=-1.92dBi



5850.0MHz Total(E2-YZ), Max=-2.28dBi



Total(H-XY), Max=-1.60dBi, CirD=7.21

