产品规格承认书

Product specifications acknowledgment

承认厂商： _____

(Recognized manufacturers)

制 造 厂 商 ： 深圳市蝙蝠无线技术有限公司

Shenzhen BatWireless Technology Co.,Ltd.

（Manufacturer）

产 品 名 称 ： 4G 胶棒天线 （4G Rubber Antenna）

（Description）

产品选型表：

（Product Type）

型号（Model number）	说明（Introductions）	备注（Remarks）
BW4GJWX68-8WJ	内螺内针（screw thread inside 、needle inside)	

供应商承认签栏（Vendor acknowledgement signature column）		
制表者（Tabulator）	审核者（Auditor）	核准者（Authorizer）

客户承认栏（Client acknowledgement column）	
审核者（Auditor）	核准者（Authorizer）

1.1 Specifications

天线型号 Antennas Type	BW4GJWX68-8WJ
频率范围 Frequenc Range(MHz)	600-2700
输入阻抗 Input Impendence (Ω)	50Ω
电压驻波比 V.S.W.R	<2
增益 Gain (dBi)	2.91dBi(MAX)
极化形式 Polarization Type	垂直 Vertical
功率容量 Power Capacity (w)	50
雷电保护 Lingtning Protection	None
工作电压 DC Voltage (V)	None
天线尺寸 Dimension (mm)	L=68 Φ8
接口形式/Connector Type:	SMA 直头 内螺内针 (straight , screw thread inside 、needle inside)
电缆型号 Cable type (mm)	None
电缆长度 Cable length(mm)	None
辐射体 Radiator	
天线颜色 Color	黑色 Black
重量 Weight(g)	None
工作温度 Operating Temperature(℃)	-40~80
储藏温度 Storage Temperature(℃)	-20~85

***注：以上数据仅供参考；因天线功能较为敏感，主体周边机构有变更请通知我们评估。**

Note: The above data is for reference only; due to the sensitive nature of the antenna function, please notify us of any changes in the organization surrounding the subject for evaluation.

1.2 Antenna Picture

Figure above model: BW4GJWX68-8WJ

(Customizable)

***注： 因天线功能较为敏感，主体周边机构有变更请通知我们评估。**

Note: Due to the sensitive nature of the antenna function, please notify us of any changes in the organization surrounding the subject for evaluation.

2. Electrical Specification

2.1 Test Equipment

A. VSWR and input impedance: Agilent 8753/E5071 Network Analyzer

B. Antenna gain and efficiency: ETS three-dimensional anechoic chamber

2.2 Test Setup

2.2.1 Frequency Range

2.2.2 VSWR

Step 1: The antenna is arranged on the customer provided test fixture.

Step 2: The VSWR of the antenna is measured via Agilent 8720/8753 Network Analyzer (see figure. 1).

Figure.1

2.2.3 Radiation pattern and Gain

A. The 3D chamber provides less than -40dB reflectivity from 800MHz to 6GHz and a 40cm diameter spherical quiet zone. The measurement results are calibrated using both dipoles and standard gain horns (see figure. 2).

B. The antenna under tested is arranged in the turned table and a decoupling sleeve is used to reduce feed line radiation (see figure. 3).

C. The measured results of the radiation patterns and antenna gain are obtained from the control system and showed on the monitor (see figure. 4 and 5).

Figure.2

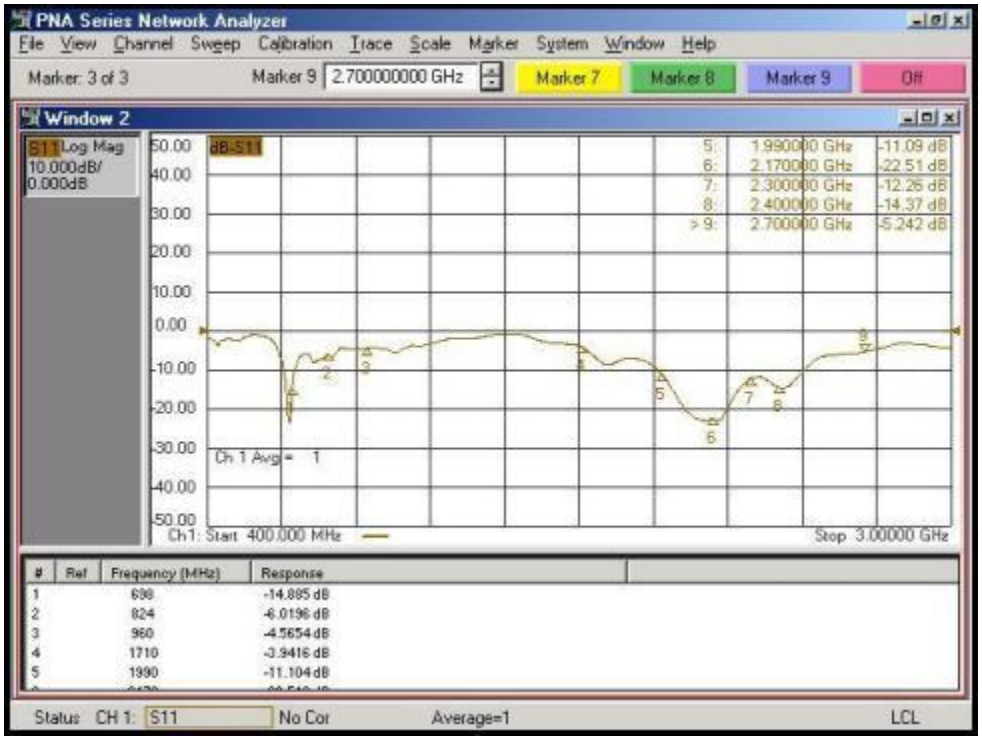
Figure.3

Figure.4

3. Performance Data

3.1 Passive data

VSWR（电压驻波比）/Return Loss（回波损耗）/Smith Chart（史密斯圆图）



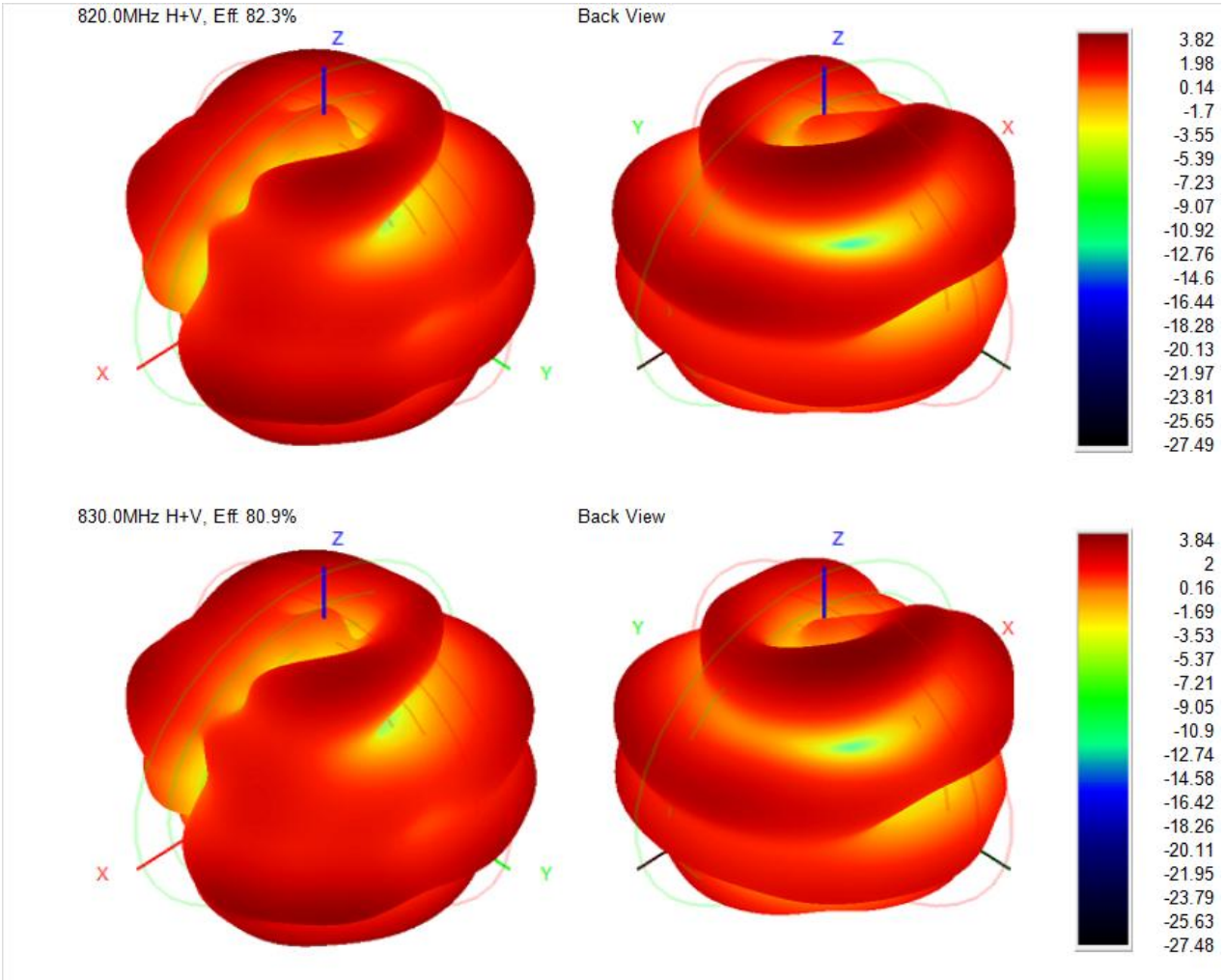
***注：以上为实测数据，仅供参考；因天线功能较为敏感，主体周边机构有变更请通知我们评估。**

3.2Efficiency & Gain

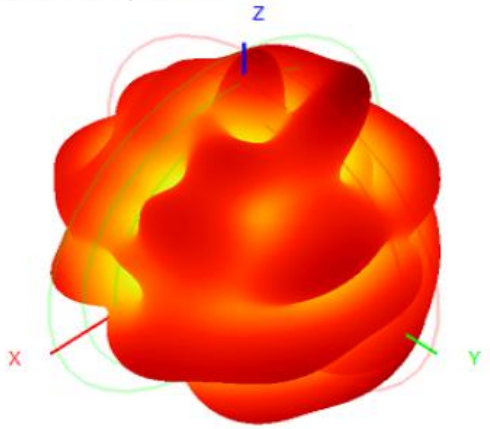
Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Frequency (MHz)	620.0	630.0	640.0	700.0	760.0	820.0	880.0	890.0	900.0	910.0	920.0	930.0	940.0	950.0	960.0	1700.0	1750.0
Efficiency (dBi)	-0.85	-0.92	-1.21	-1.24	-1.52	-1.71	-2.05	-2.22	-2.32	-2.31	-2.24	-2.14	-1.94	-1.75	-1.56	-1.13	-0.72
Gain (dBi)	1.82	1.99	1.63	1.99	1.98	1.98	1.51	1.55	1.39	1.45	1.92	1.35	1.79	1.05	1.23	1.28	2.02
Efficiency (%)	82.25	80.88	75.63	75.22	70.42	67.42	62.33	60.01	58.58	58.79	59.64	61.08	63.98	66.84	69.84	77.15	84.80
Directivity (dB)	4.67	4.76	4.84	4.86	4.76	4.56	4.56	4.76	4.71	4.76	5.16	5.49	5.73	5.80	5.79	6.40	6.44
Peak Gain Position (Theta)	25.00	25.00	25.00	26.00	26.00	26.00	89.00	119.00	119.00	171.00	171.00	171.00	171.00	171.00	171.00	147.00	25.00
Peak Gain Position (Phi)	237.00	239.00	239.00	235.00	234.00	234.00	126.00	31.00	32.00	252.00	252.00	253.00	255.00	257.00	259.00	209.00	125.00
Efficiency ThetaPol (%)	31.16	32.12	31.13	31.69	29.85	28.61	26.21	24.99	24.02	23.83	24.03	24.45	25.77	27.23	28.73	27.96	31.06
Efficiency PhiPol (%)	51.09	48.76	44.50	43.53	40.57	38.80	36.13	35.02	34.56	34.96	35.61	36.63	38.21	39.61	41.11	49.19	53.74
Upper Hem. Efficiency (%)	43.46	42.25	39.37	39.17	36.49	34.53	31.22	29.12	27.58	27.17	27.33	27.82	29.16	30.39	31.46	36.89	41.14
Lower Hem. Efficiency (%)	38.80	38.63	36.26	36.05	33.93	32.89	31.11	30.89	31.00	31.62	32.31	33.25	34.82	36.45	38.38	40.26	43.65

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
1800.0	1850.0	1900.0	1950.0	2000.0	2050.0	2100.0	2150.0	2200.0	2250.0	2300.0	2350.0	2400.0	2450.0	2500.0	2550.0	2600.0	2650.0	2700.0
-0.69	-0.18	-0.40	-0.28	-0.26	-0.59	-0.73	-0.90	-1.17	-1.20	-1.51	-1.57	-1.58	-1.64	-1.65	-1.75	-1.79	-1.95	-1.74
1.25	1.97	1.84	1.10	1.25	1.49	1.81	1.54	1.95	1.69	2.91	2.61	2.25	2.55	2.90	2.38	2.52	2.52	2.75
85.37	95.93	91.15	93.74	94.13	87.29	84.45	81.28	76.45	75.90	70.62	69.62	69.57	68.61	68.46	66.90	66.16	63.82	67.01
6.93	6.62	6.24	6.38	6.52	7.08	7.54	7.44	7.11	6.88	7.42	8.18	8.83	8.19	7.54	8.13	8.32	7.47	6.49
146.00	147.00	112.00	113.00	114.00	114.00	114.00	114.00	114.00	115.00	114.00	142.00	142.00	142.00	140.00	140.00	140.00	140.00	137.00
218.00	220.00	142.00	142.00	146.00	151.00	156.00	156.00	157.00	153.00	174.00	124.00	127.00	130.00	135.00	137.00	140.00	142.00	295.00
29.31	32.44	30.39	32.45	33.12	27.72	23.90	23.39	23.62	24.19	21.57	22.76	23.25	23.57	25.13	24.40	24.14	24.63	29.62
56.05	63.49	60.76	61.29	61.01	59.56	60.55	57.89	52.83	51.71	49.05	46.86	46.32	45.04	43.33	42.50	42.02	39.19	37.39
39.79	44.08	44.16	45.81	45.29	40.94	39.50	37.47	35.46	36.18	33.39	31.19	28.99	27.89	26.47	24.21	23.47	22.98	25.31
45.58	51.85	46.99	47.93	48.84	46.35	44.96	43.81	40.99	39.72	37.23	38.43	40.58	40.72	41.99	42.69	42.69	40.85	41.70

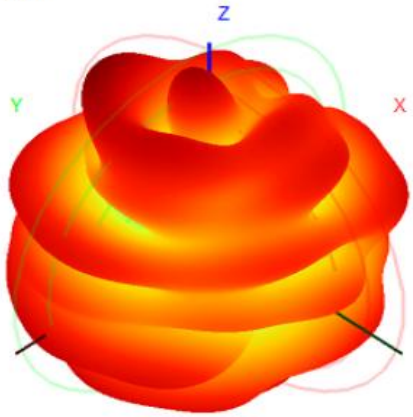
3.3 3‐D antenna pattern

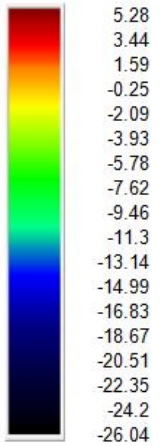


1700.0MHz H+V, Eff. 77.1%

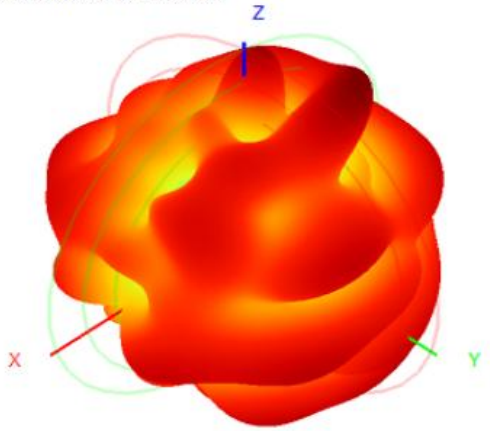


Back View

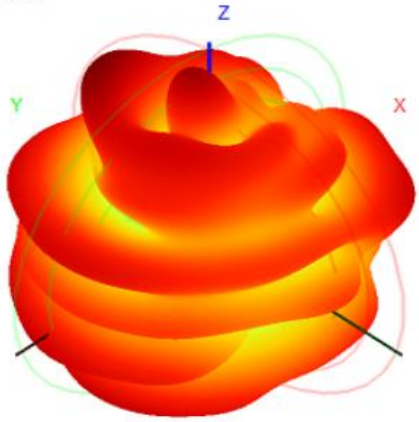


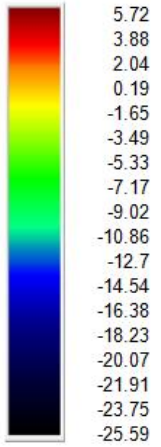


1750.0MHz H+V, Eff. 84.8%

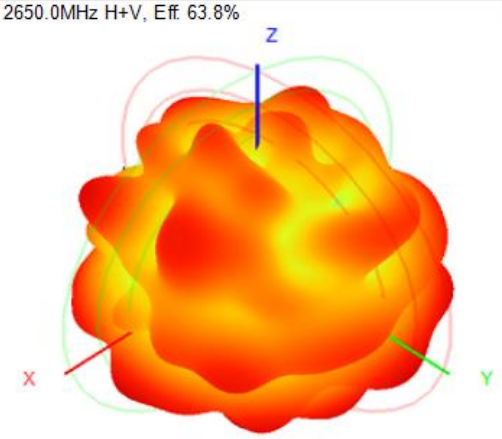


Back View

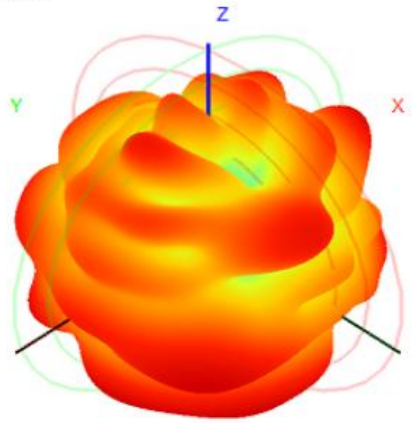


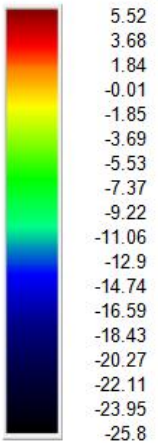


2650.0MHz H+V, Eff. 63.8%

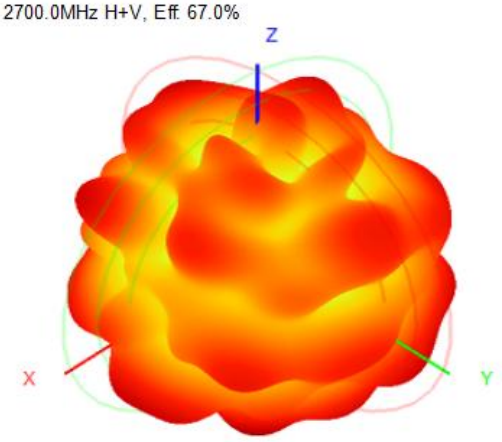


Back View

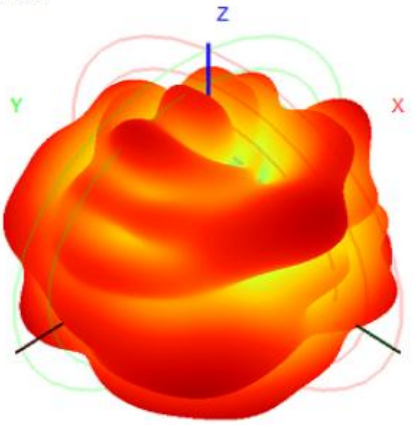


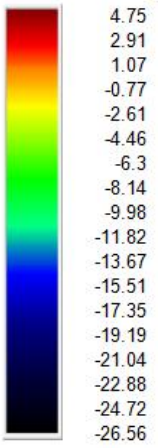


2700.0MHz H+V, Eff. 67.0%



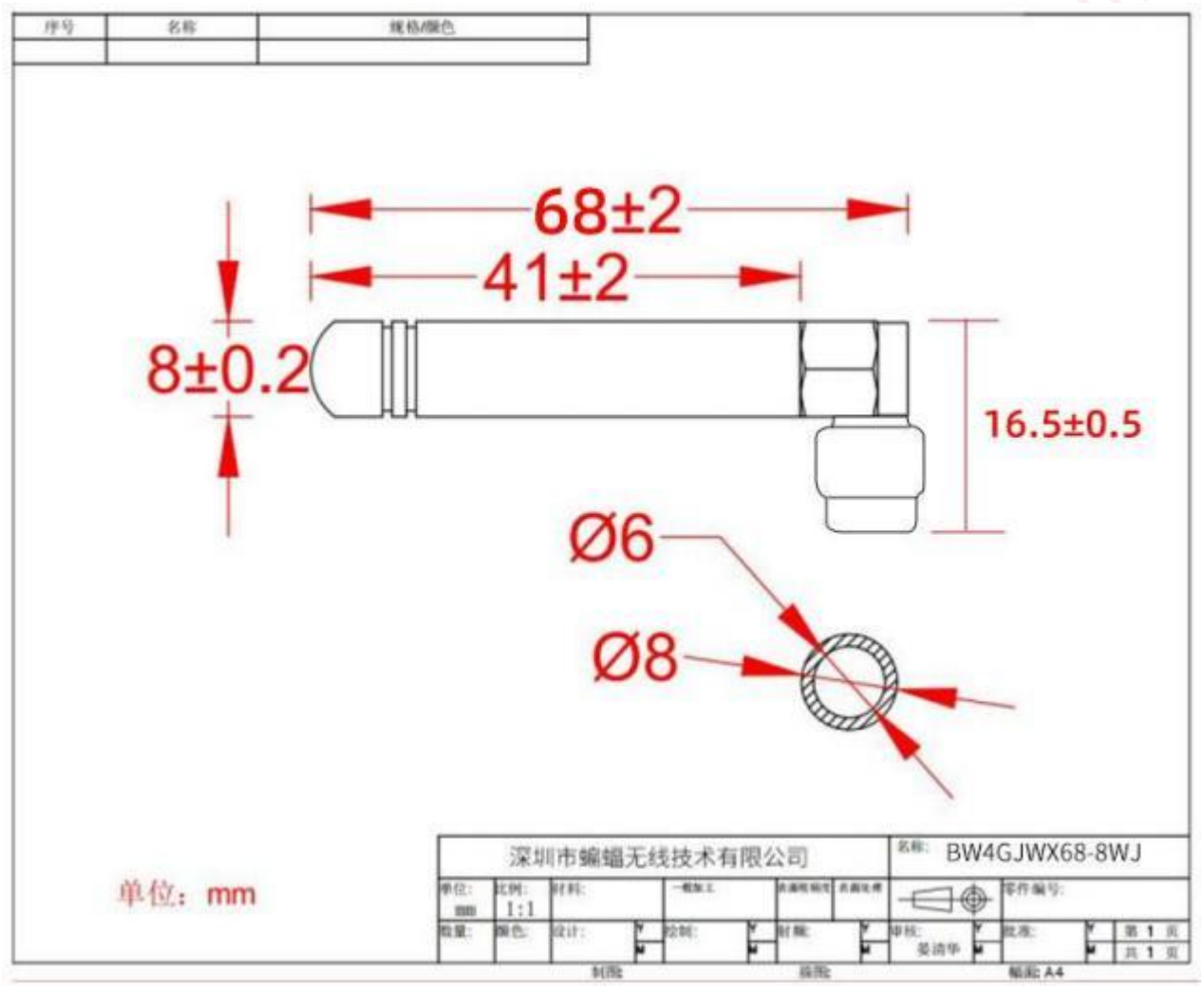
Back View





4.Mechanical Specification

4.1 Assembly Drawing



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1409, Building A, Zhiyun One Industrial Park, No. 13 Huaxing Road, Henglang Community, Dalang Street, Shenzhen, Guangdong, China