

Sample certificate of conformity

Manufacturer name : Shenzhen Huidu Technology Co., Ltd.

Gray scale

official part number : F03.02.0026

Gray scale

Sample part number : _____

name of a part : 2.4G Surface mount antenna

specifications and models : ZK-2.4G-SMAJ-1M

Important parameter description : _____

date : 2024.03.04

Customer seal	purchase	Hardware/ engineering	character

SPECIFICATION FOR APPROVAL

Manufacturer name: Shenzhen Huidu Technology Co., Ltd.

Customer number: F03.02.0026

Company number: A103451

Specification: ZK-2.4G-SMAJ-1M

DATA : 2024.03.04

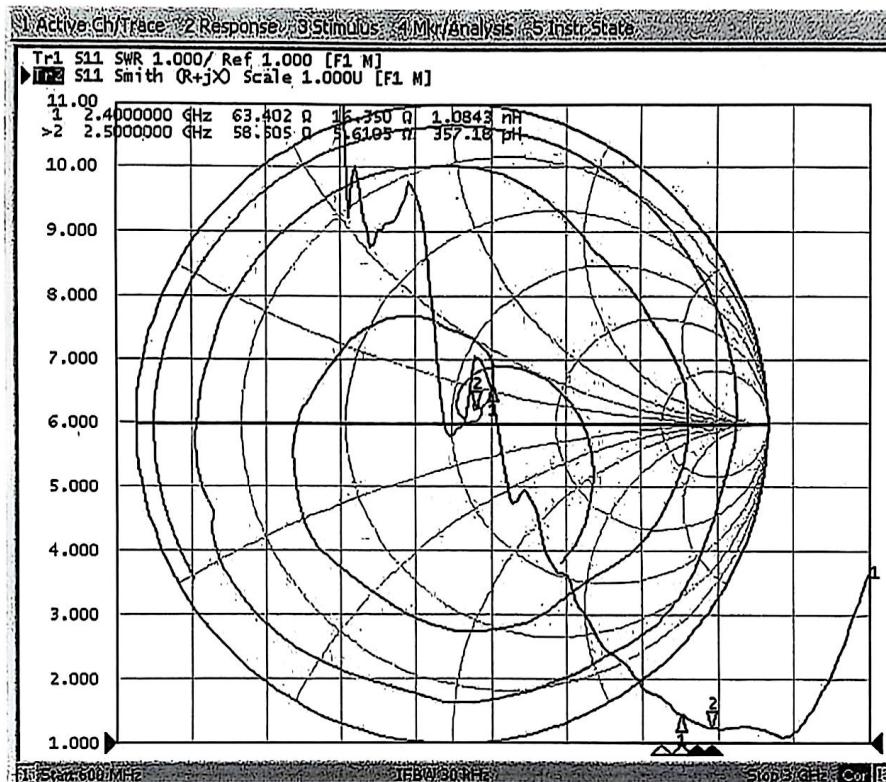
Signature	Approval	Engineering	quality
	Wu Haiyuan	Zhang shibing 	Jiang Zhenhua

1. Electrical and mechanical properties

Electrical Specifications	
Frequency Range	2400-2500MHZ
VSWR	≤1.7
GAIN	≤2.8DBI
Radiation	OMNI
Polarizatin	LINEAR
Input Impedance	50 Ω
Mechanical Specifications	
Input connector	SMA-J
Antenna materia	PCB
Working Temperature	-30°C~+80°C
Working Humidity	40~85%

2. Antenna structure size diagram

3. Passive test data

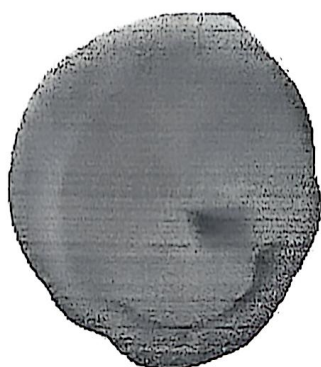


4. Gain efficiency test data

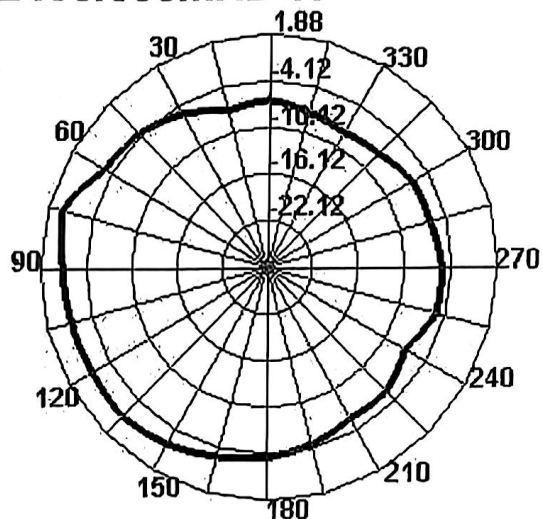
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)
2400	29.52	-5.3	0.69	-1.46
2405	28.15	-5.51	1.21	-0.94
2410	25.77	-5.89	-0.77	-2.92
2415	25.97	-5.86	0.29	-1.86
2420	25.28	-5.97	-0.08	-2.23
2425	27.53	-5.6	0.75	-1.4
2430	22.62	-6.46	0.32	-1.83
2435	23.36	-6.32	0.86	-1.29
2440	24.55	-6.1	1.71	-0.44
2445	25.69	-5.9	1.34	-0.81
2450	26.43	-5.78	1.88	-0.27
2455	27.02	-5.68	1.96	-0.19
2460	27.6	-5.59	2.29	0.14
2465	33.37	-4.77	2.99	0.84
2470	29.99	-5.23	2.66	0.51
2475	30.6	-5.14	2.6	0.45
2480	30.17	-5.2	2.84	0.69
2485	31.17	-5.06	2.98	0.83
2490	32.25	-4.91	3.17	1.02
2495	32.18	-4.92	2.97	0.82
2500	33.32	-4.77	3.06	0.91

5. Directional test data

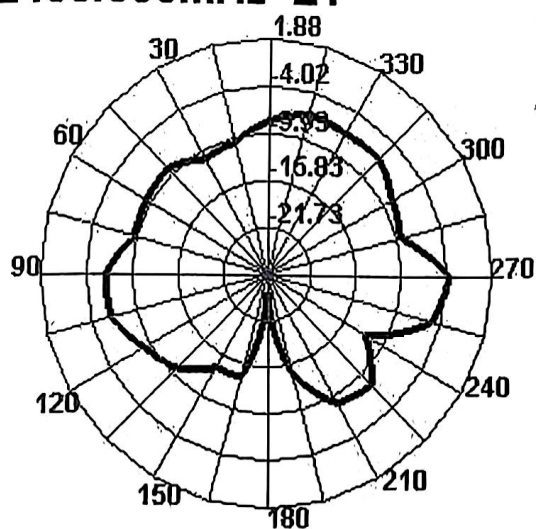
2450.000MHz



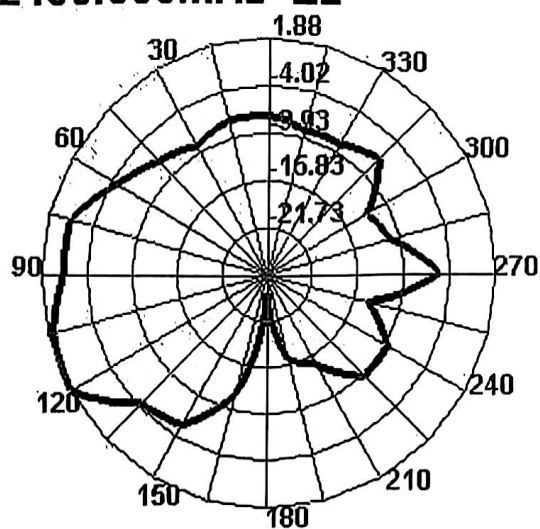
2450.000MHz H



2450.000MHz E1



2450.000MHz E2



6. Reliability test report

test item; test project		test method	ask	bear fruit
G1	V. S. W. R.	Design net analyzer parameters for testing	Directive DUT specification	pass
M1	antenna gain	Design the parameters of the antenna dark chamber for testing	Directive DUT specification	pass
M2	Vibration	GB / T2423.48-2008 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol. $\leq 5\%$	pass
M6	Random Drop	GB / T2423.8-1995 Single: Height: 1.0 Meter; 3 directions; 1 time for each direction	1. No parts separated, fracture 2. Frequency Tol. $\leq 5\%$	pass
E3	Dimension	Inspection of dimension, color, material, package, surface process.	Directive DUT specification	pass
E4	Temperature and Humidity Chamber	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: $\geq 90\%$; Time: 24H temperature 80°C	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. $\leq 5\%$	pass
E5	Thermal Shock	GB / T 2423.22 - 2008 - 40°C (30 minutes) to + 80°C (30 minutes); Cycles: 24-40°C	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. $\leq 5\%$ 频率偏移 $\leq 5\%$	pass
R1	Aging test	GB / T 2423.2-2008 Temp: 80°C; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. $\leq 5\%$	pass
M1	RoHS	With Reference to IEC 62321:2008 with flow chart	Directive RoHS 2015/863/EU	pass

7. Product packaging specifications

Product name / specification:

1. labeling requirement

Purchase order number	*****
material code	*****
Product name specification	*****
Quantity	*****
remarks	*****

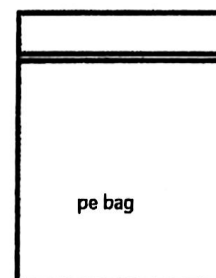
Purchase order number	*****
material code	*****
Product name specification	*****
Quantity	*****
remarks	*****

2. The packing requirements

job description :

1). inner packing:

Product___PCS in a small bag



2). external packing:

Determine the quantity / box according to the actual quantity



carton

3. matters need attention:

- 1). Whether to add a partition board, pearl cotton;
- 2). Attachment of labels, such as ROHS;

