

## Antenna 1

### 1、Specifications

The specification mainly provides the test status of electrical and structural performance parameters of antenna 1 in SH0111 project。 The picture below shows the antenna 1 designed by Tianda.

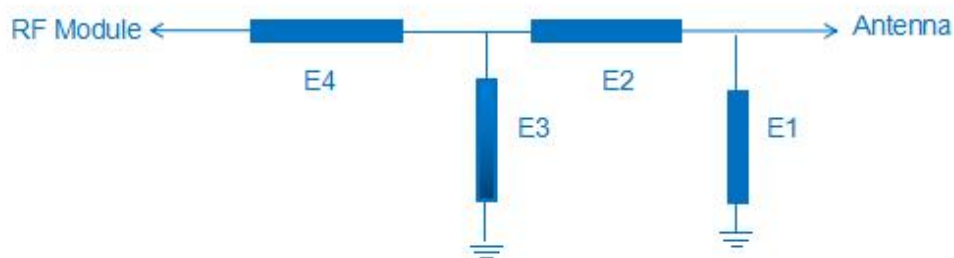
#### 1.1、Electrical specifications

##### 1.1.1、Electrical performance index

The operating frequency band of the antenna 2400MHz—2500MHz, The following is the electrical performance index of the antenna designed and produced by Tianda.

Ant 1		
Frequency band	Frequency (MHz)	VSWR
2.4G	2400~2500	$\leq 2.0$

##### 1.1.2、Matching circuit diagram

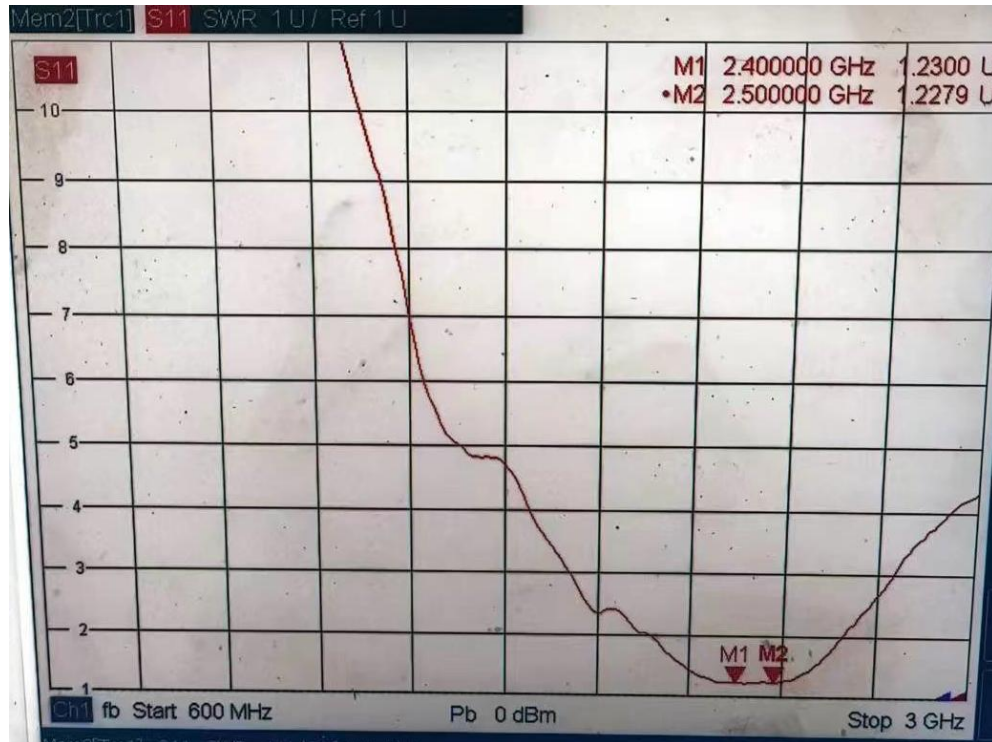


The matching circuit of the Antenna is the original matching circuit of the motherboard.

## 1.2、 Testing

### 1.2.1、 Passive test

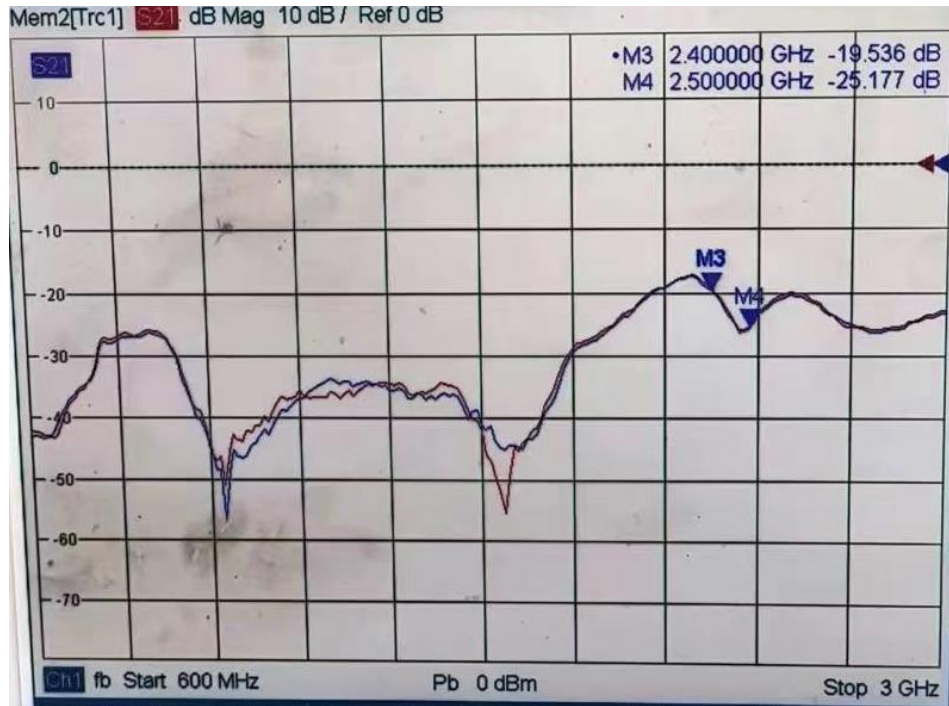
#### 1.2.1.1、 VSWR



#### 1.2.1.2、 Antenna Gain and Efficiency

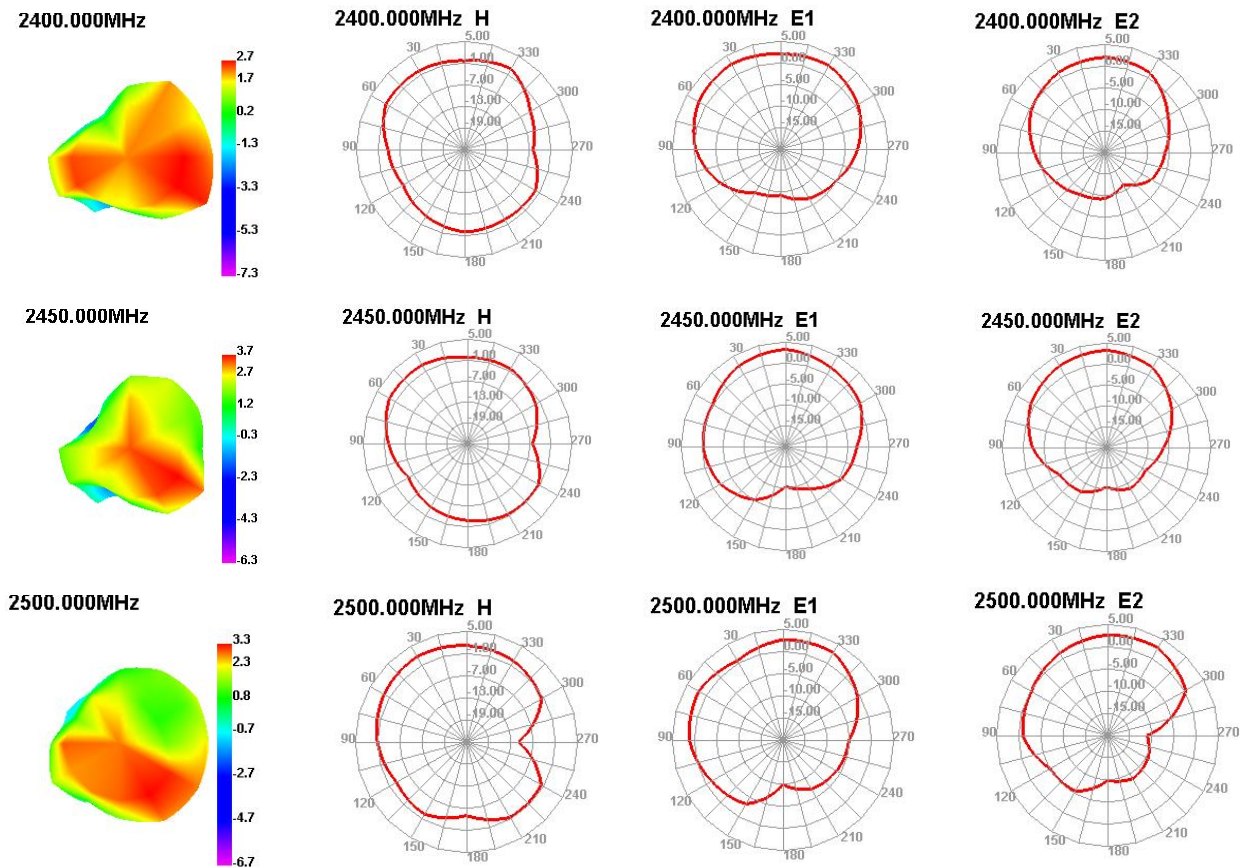
Passive Test For 2.4G-2.5G									
Freq (MHz)	Effi (%)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	AttH (dB)	AttV (dB)
2400	65.71	2.7	0.55	48.668	17.045	2.7	-11.41	46.87	46.81
2410	69.24	2.98	0.83	50.858	18.378	2.98	-10.83	47.08	47.17
2420	67.7	3.03	0.88	49.365	18.337	3.03	-10.16	47.06	47.12
2430	68.03	3.25	1.1	49.239	18.79	3.25	-10.34	47	47.09
2440	73.28	3.68	1.53	52.606	20.67	3.68	-10.9	47.5	47.69
2450	72.39	3.7	1.55	51.796	20.59	3.7	-11.72	47.48	47.63
2460	74.72	3.76	1.61	53.243	21.478	3.76	-11.85	47.73	47.89
2470	73.93	3.7	1.55	53.237	20.691	3.7	-11.47	47.81	48.06
2480	72.25	3.27	1.12	51.07	21.182	3.27	-11.18	47.79	47.96
2490	75.97	3.52	1.37	53.86	22.111	3.52	-11	48.2	48.46
2500	71.78	3.26	1.11	50.617	21.162	3.26	-11.23	47.83	48.01

### 1.2.1.3、 Antenna Isolation



The isolation between antennas is - 19.5dB~ -25.1dB.

### 1.2.1.4、 Antenna pattern Unit: dBi



## 2、Structural specifications

### 2.1、Antenna composition

The type of antenna is PCB antenna, mainly composed of PCB+Cable lines.

### 2.2、Drawings

