

QIN XIN technology CO.,LTD

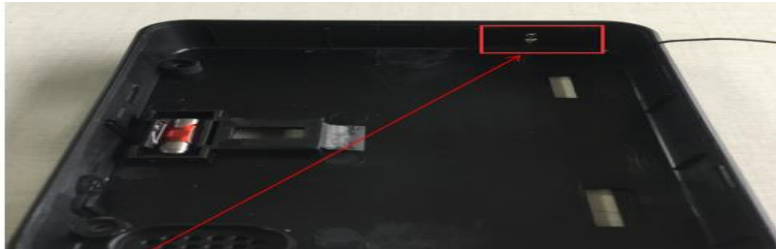
# Antenna specification sheet

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## 1. Antenna characteristic description

### 1.1 Antenna schematic diagram



### 1.2 Physical Property Description

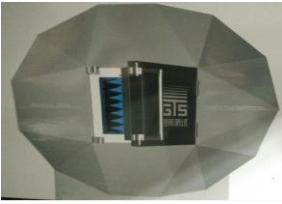

Function	2.4G
Antenna appearance size	15.5.*19.5*0.5MM
Antenna material	FPC
Antenna color	black
Working temperature	-20℃-65℃
Storage temperature	-20℃-80℃

### 1.3 Electrical characteristic description

function	2.4G
frequency range (GHZ)	2.4GHz-2.5GHz
Voltage standing wave ratio (VSWR)	$\leq 1.5$
gain (Peak gain)	0.2dBi
Input impedance( $\Omega$ )	50
Polarization mode	Vertical, linear
Antenna form	PIFA

## 2、 Antenna testing

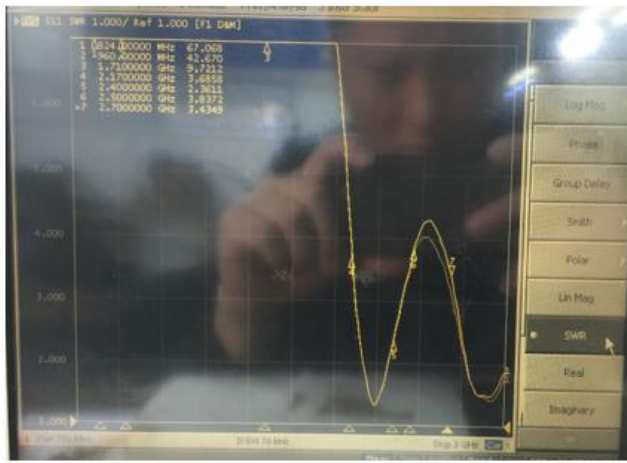
### 2.1 Testing equipment

Number	Device Name	Device images	Measurement indicators	Operating environment
1	Microwave anechoic chamber		<b>Passive performance</b>	There are no large metal objects around Normal temperature and humidity
2	HP8753D network analyzer			

## 2.2 test result

### Echo standing loss

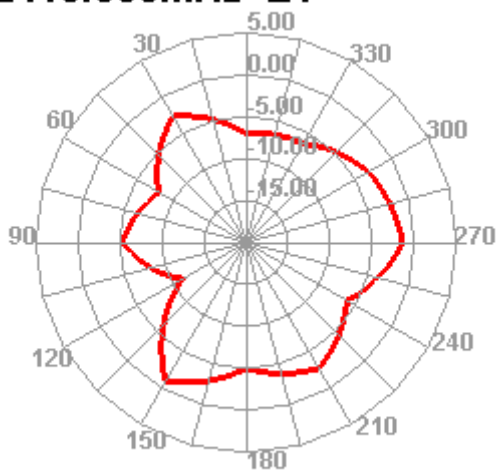
### SMITH



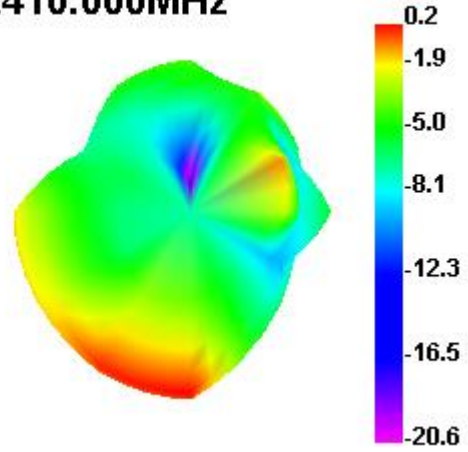
## 2.4G antenna efficiency and gain

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	37.43	-4.27	-0.48
2410	35.43	-4.51	0.2
2420	35.98	-4.44	-0.71
2430	34.3	-4.65	-1.08
2440	34.18	-4.66	-0.97
2450	35.78	-4.46	-0.9
2460	37.42	-4.27	-0.19
2470	37.25	-4.29	-0.09
2480	39.17	-4.07	-0.07
2490	38.71	-4.12	-0.01
2500	37.75	-4.23	-0.14

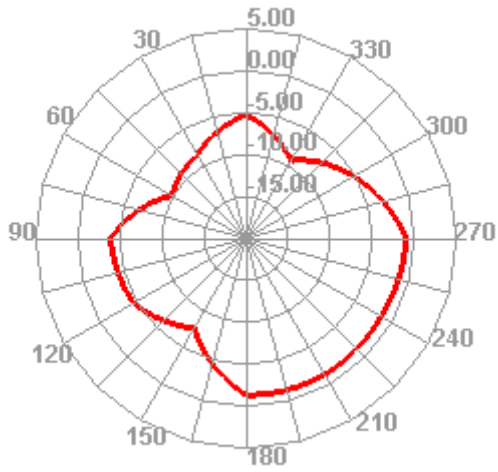
**2410.000MHz E1**



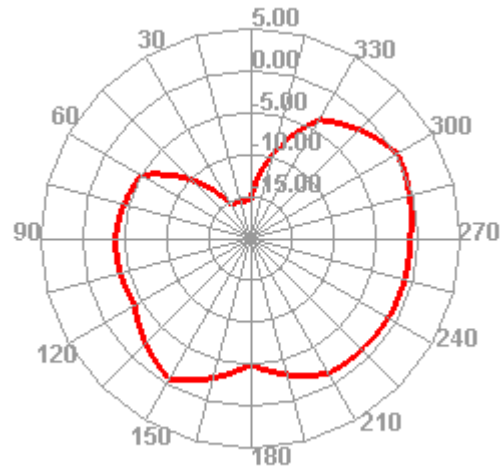
**2410.000MHz**



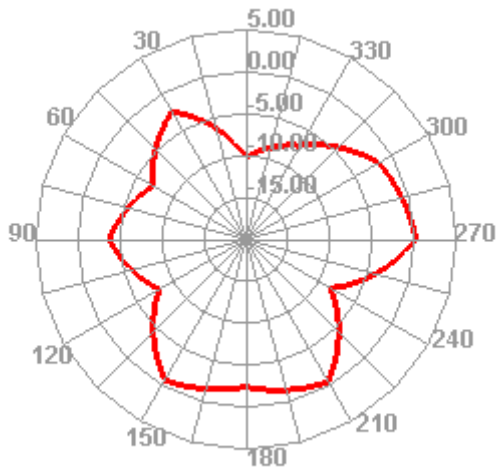
**2410.000MHz H**



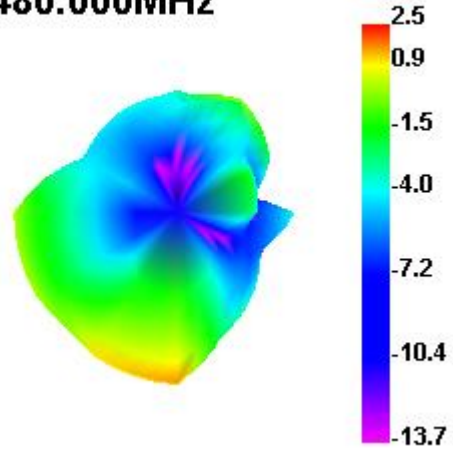
**2410.000MHz E2**



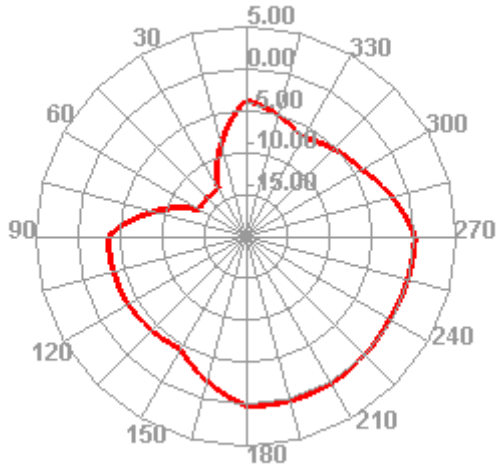
**2480.000MHz E1**



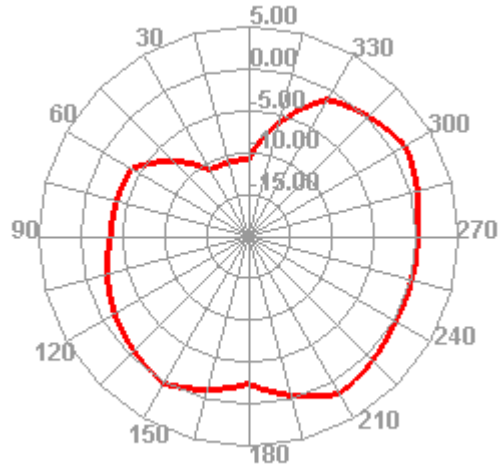
**2480.000MHz**



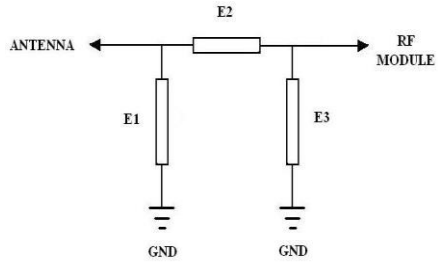
**2480.000MHz H**



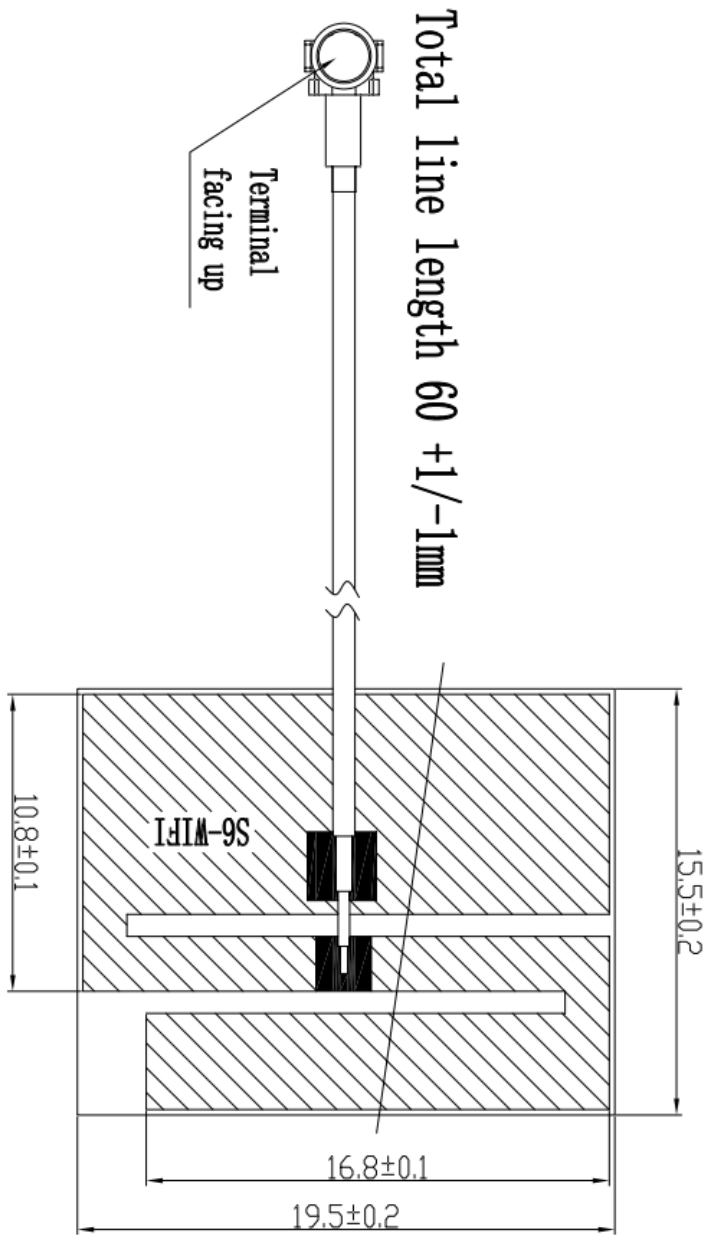
**2480.000MHz E2**



## 2.3 Matching circuit



- Note:
1. materials: PFC, base material: 18/25, surface color is Matte black;
  2. negative overall back glue type: 3n-3471 type.
  3. surfaces can not be contaminated, abrasions, and black spots.
  4. gold plating thickness "u", not easy to break and fall off after gold plating, to conduct poor on, and some bad phenomena such as are short.
  5. back glue needs thermal shock test; Experimental conditions: - $^{\circ}$ C 16 cycles (one cycle is 30 minutes ).
  6. the figure is the original size scale map, \* for the key control dimension.



Note: all holes are through holes and the red line is interrupted.

GENERAL TOLERANCES		ANGULAR TOLERANCES		THE MATERIAL CODE	
DIVISION	TOLERANCES	DIVISION	TOLERANCES	PRODUCT NAME	VERIFICATION
8-10	±0.05	8-10	±1°	SG-W1F1	2024/04/25
18-24	±0.07	24-30	±2°	SG-W1F1	2024/04/25
30-40	±0.10			SG-W1F1	2024/04/25
OVER 30	±0.15			SG-W1F1	2024/04/25

**Shenzhen qinxin technology co., Ltd.**

SCALE	DATE	DESIGN	VERIFY	APPROVE
1:1	2024/04/25			