

# ON-BOARD WIFI ANTENNA Specification

## 1. Product description

- (1) Supplier Name: Shanghai Sunmi Technology Co.,Ltd.
- (2) Material Name: 80 printer WiFi antenna

## 2. Electrical Specification :

### 2-1. Frequency Band:

Frequency Band	MHz
WIFI	2400-2500MHz

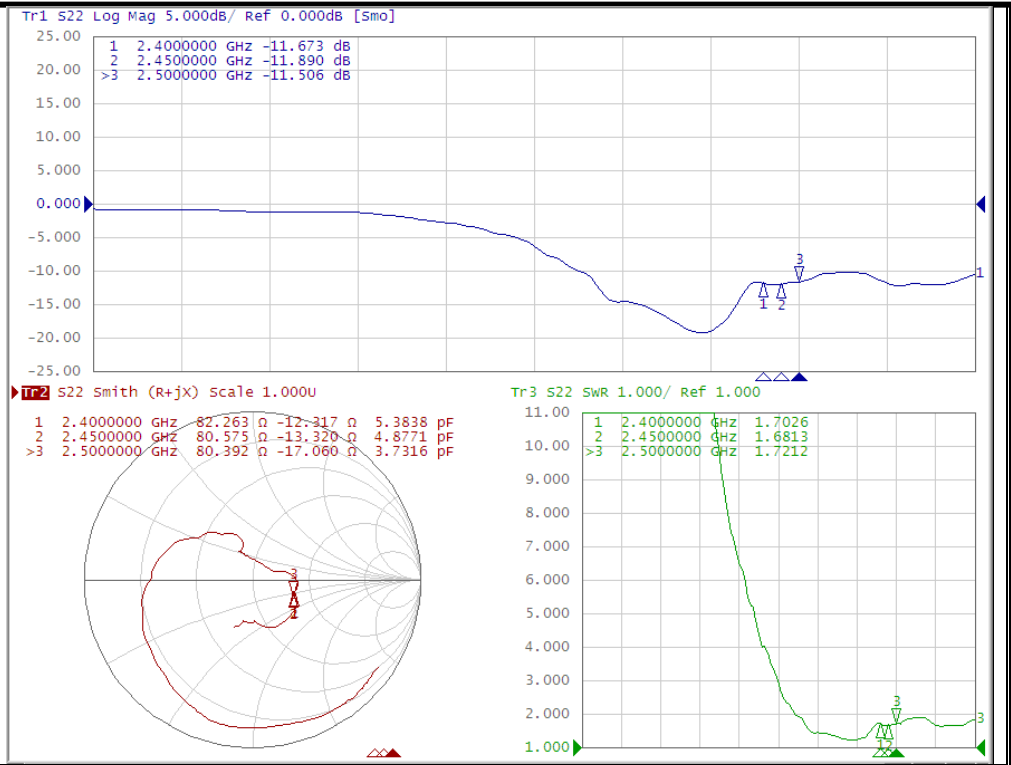
### 2-2. Impedance

50 ohm nominal

### 2-3. VSWR:

Frequency Band	2400	2450	2500		
2-3-1. Typical Value:	$\leq 3$	$\leq 3$	$\leq 3$		
2-3-2 Measuring Method	1. A 50 $\Omega$ coaxial cable is connected to the fpcb 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.				

2-3-3Picture

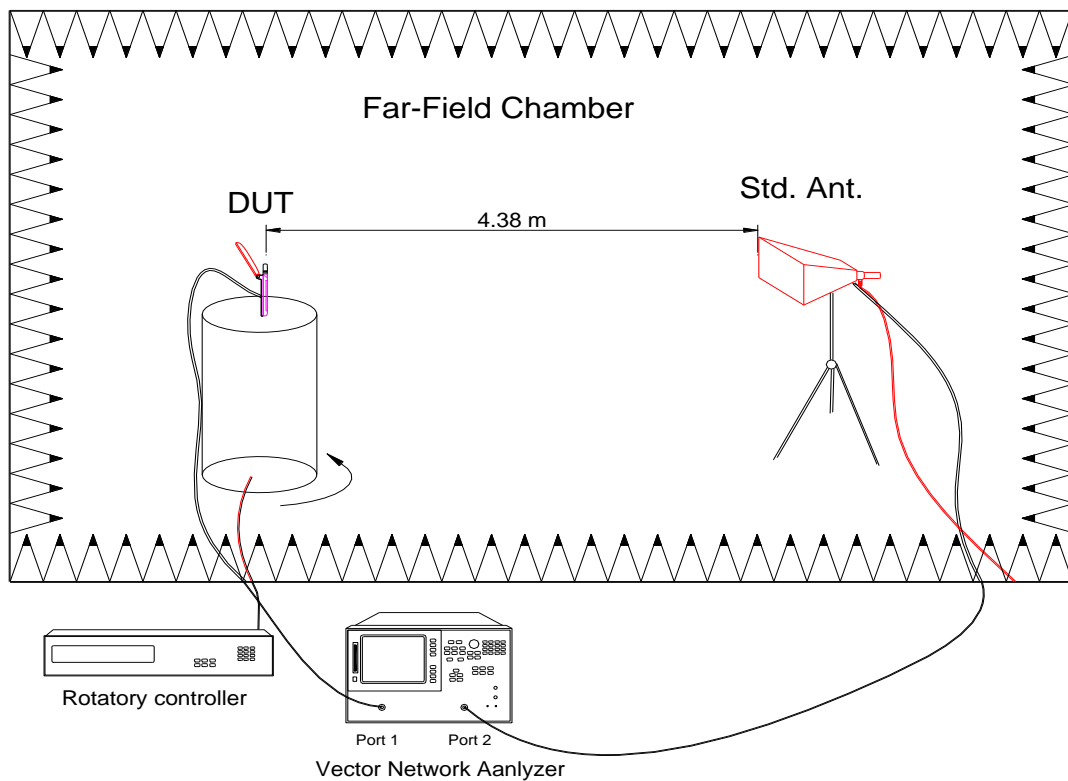


## 2-4. Gain and Efficiency

### 2-4.1 Measure method

1. Using a low loss coaxial cable to link a standard handset jig
2. Fixed this handset jig on chamber's rotator plane
3. Linking jig into network analyzer port and using a probing horn antenna to collect data.
4. Using another standard gain horn antenna to calibrated those data

## 2-4.2 Chamber definition

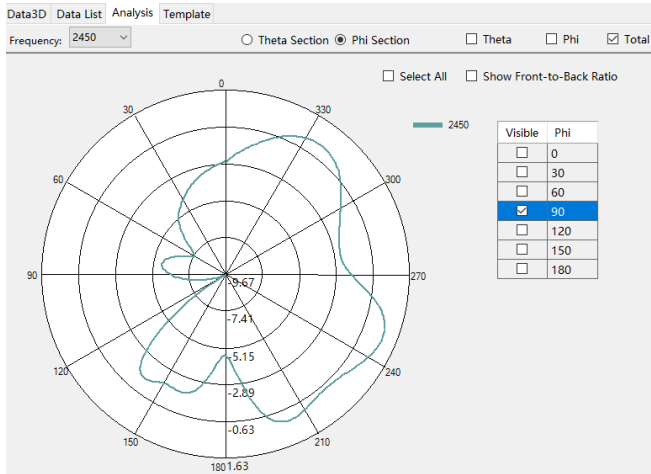
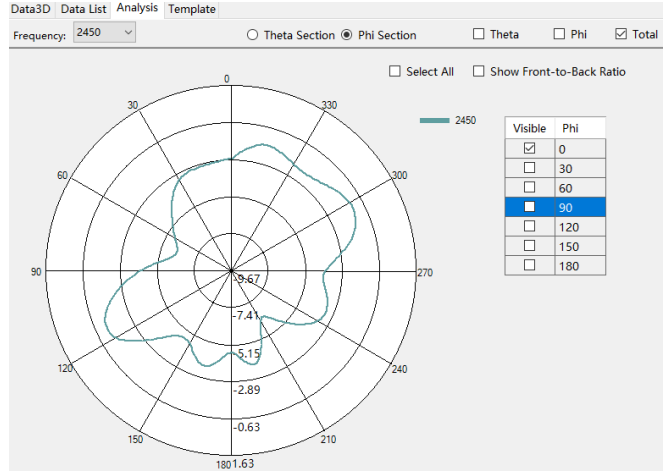
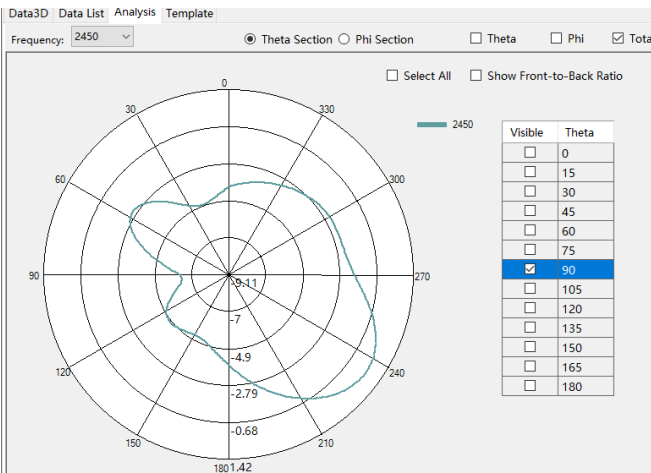
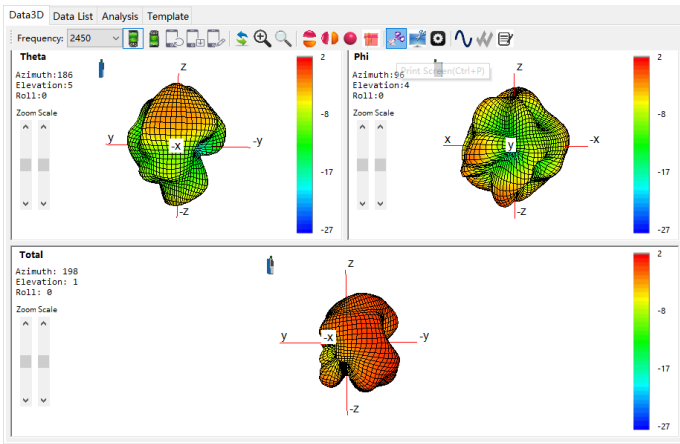


1. An anechoic chamber (8mx4mx3.5m) which satisfied far-field condition was applied to avoid multi-path effect
2. The quiet room region is 40cmx40cmx40cm at the center of rotator
3. The distance between DUT and standard antenna is 4.38 m
4. Probing antenna (9120D horn antenna) and standard gain horn antenna (BBHA9120 LPF 700MHz ~6GHz)

## 2-4.3 Gain and Efficiency

Freq	Efficiency_Pcent	Gain
2400	54.92	1.37
2410	55.56	1.36
2420	56.45	1.2
2430	58.14	1.11
2440	58.15	1.01
2450	57.37	1.17
2460	58.15	1.47
2470	61.69	1.93
2480	64.76	2.3
2490	66.59	2.45
2500	67.89	2.42

## 2-4.4 Antenna 2D and 3D



## 2-4.5 Antenna OTA

		TRP	TIS
WiFi	802.11b	11.22	-85.55
		11.83	
		12.69	-85.35
	802.11g	9.55	-71.78
		10.64	
	802.11n	10.82	-71.96
		9.43	-69
	10.04		
	11	-69.45	

## 3. Antenna Dimensions:(unit:mm)

