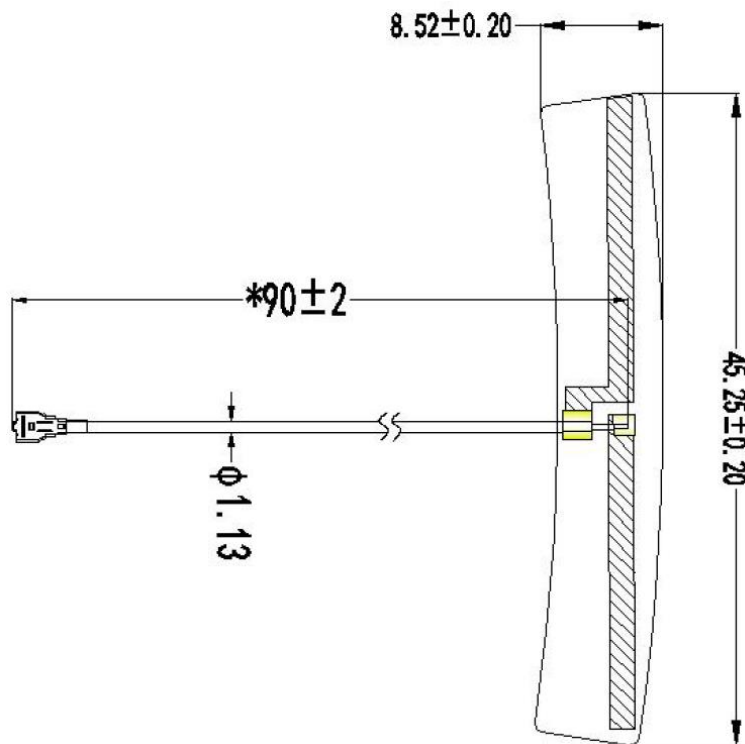


## Antenna Specification

### 1. Antenna Describe

Antenna Manufacturer	Woan Technology (Shenzhen) Co., Ltd.
Antenna Address	Room 1101, Qiancheng Commercial Center, No.5 Haicheng Road, Mabu Community, Xixiang Sub-district, Bao'an District, Shenzhen, Guangdong, P.R.China, 518100
Antenna Model	WA-S2 2.4G
Antenna Type	FPC Antenna
Antenna Gain	2.97dBi Max
Frequency Rang	2400-2500MHz
VSWR	$\leq 2$
Input Impedance	50 $\Omega$

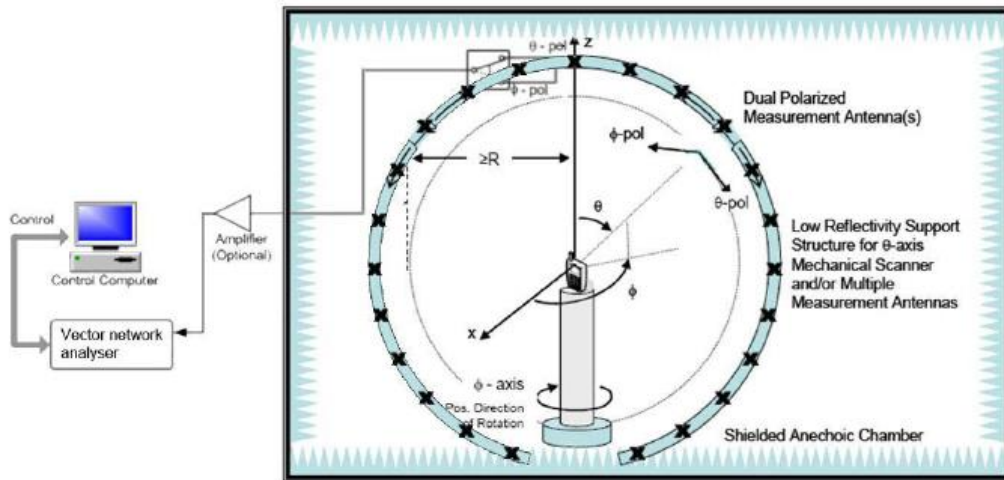
### 2. External View Drawing



Unit: mm

### 3. Measurement Result

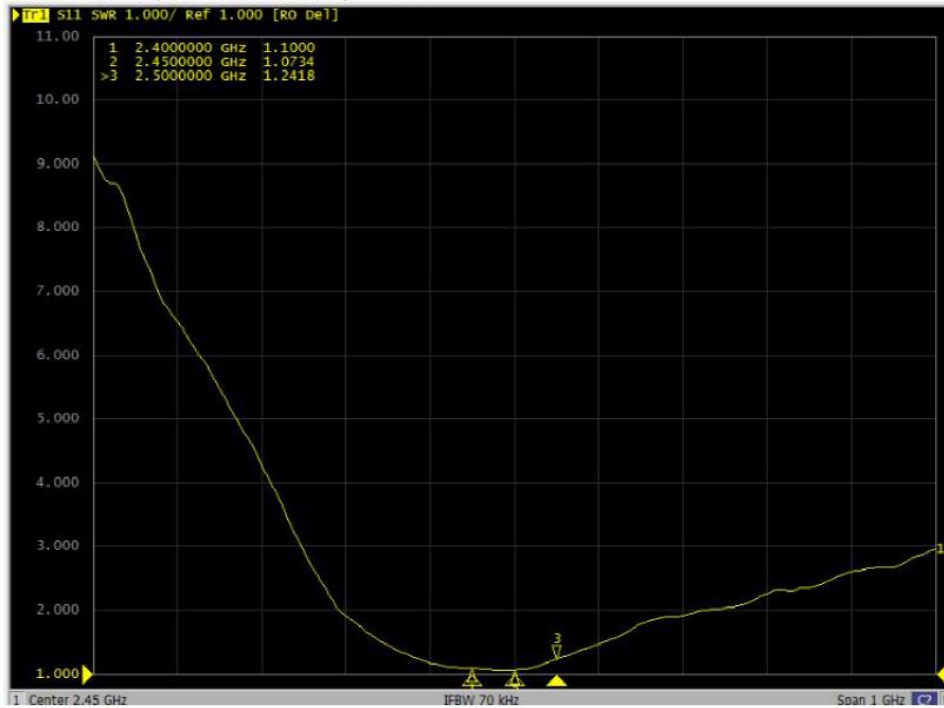
#### 3.1 Test Setup



#### 3.2 S11 Diagram

Marker	2400MHz	2450MHz	2500MHz
Return loss	-20.6	-21.4	-30.7
VSWR	1.2	1.14	1.07





Format

- SWR
- Log Mag
- Phase
- Group Delay
- Smith
- Polar
- Lin Mag
- SWR
- Real
- Imaginary
- Expand Phase
- Positive Phase
- Return

### 3.3 Antenna test data

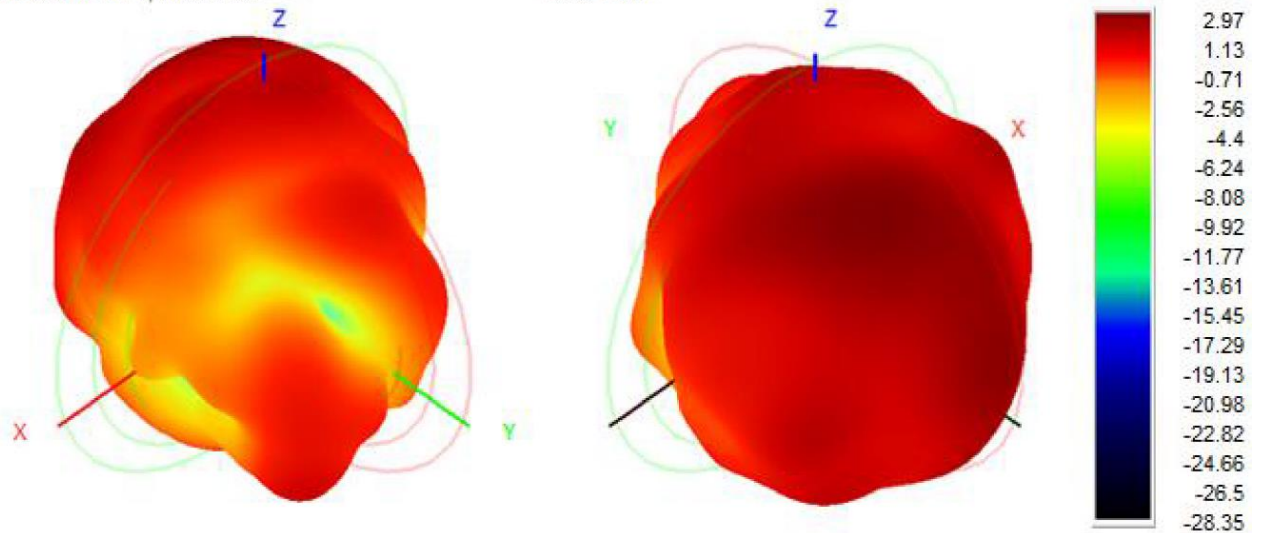
Frequency (MHz)	Peak Gain (dBi)	Efficiency (%)
2400	2.93	59.2
2410	2.91	59.4
2420	2.81	58.7
2430	2.83	59.1
2440	2.91	59.2
2450	2.97	60.4
2460	2.92	60.8
2470	2.74	61.0
2480	2.43	60.5
2490	2.35	60.6
2500	2.50	61.7

### 3.4 Antenna test diagram

#### 3D Pattern 2450MHz

2450.0MHz H+V, Eff: 60.5%

Back View



#### 2D Pattern 2450MHz

2450.0MHz Total(E1-XZ), Max= 1.56dBi

2450.0MHz Total(E2-YZ), Max= 2.24dBi

Total(H-XY), Max= 1.60dBi, C/D=14.95

