SWB006

PN: SW20060EB56



Features:

- Antenna for 2.4 ~2.5GHz and 4.9~5.9GHz applications: Wi-Fi 802.11a/b/g/j/n/ac.
- Maintains high performance on device.
- High gain.
- Impedance 50 Ohm.

Applications:

- Access Points
- Game Consoles
- Set-Top-Box
- Network Devices
- MIMO Systems

Sunnyway Technology

Add: 1F, Building 4, No.215-99, GaoGuang Road, QingPu District, Shanghai, China
Tel: +86-021-6083 5368 Fax: +86-021-6484 2328
Email: info@sunny-way.com Web: www.sunny-way.com

1. Electrical Specifications

Standards	**2.4G&5G WiFi**	
Frequency range(MHz)	2400~2500	4900~5900
Peak Gain (dBi)	2.5~3.0	0.5~4.5
Average Gain (dB)	-1.2~-1.6	-4.4~-1.9
VSWR	<2.0	<2.5
Return Loss	<-10.0	<-5.0
Efficiency (%)	70~75	36~65
Polarization mode	Linear	Linear
Radiation pattern	Omni-Directional	Omni-Directional
Output impedance (Ω)	50	50
Max. Input Power(W)	25	25

Note: tested with 250mm cable length - RG174

2. Mechanical and Environmental Specification

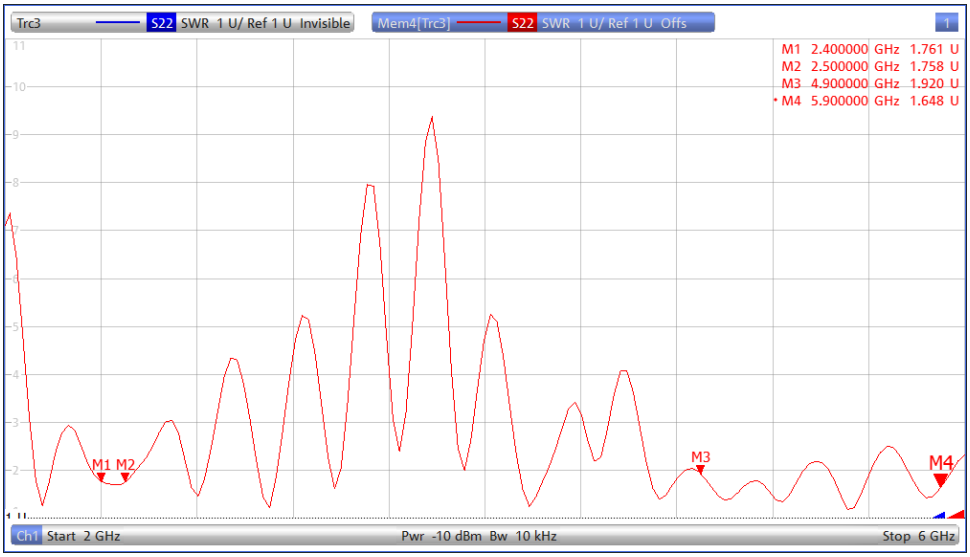
Mounting Type	Screw lock
Connector Type	RG174+SMA (M)
Antenna size(mm)	99.96 (φ) x 105.8 (H) x 250 (Line length)
Material	External
Cable length(mm)	250mm (can be customized)
Operating Temperature (˚C)	- 40 ˚C ~ + 85 ˚C
Storage Temperature(˚C)	- 40 ˚C ~ + 85 ˚C

3. Antenna parameters

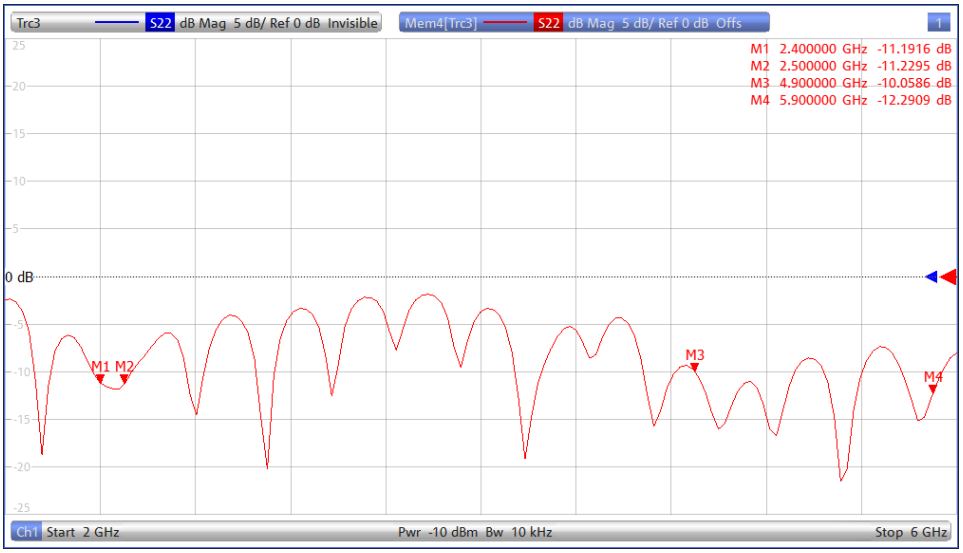
3.1 General Data

FRE (MHz)	2400	2500	4900	5900
VSWR	1.76	1.75	1.92	1.64
Return Loss	-11.19	-11.22	-10.05	-12.29
Eff (%)	73.2	72.3	53.8	36.3
Average Gain(dB)	-1.3	-1.4	-2.7	-4.4

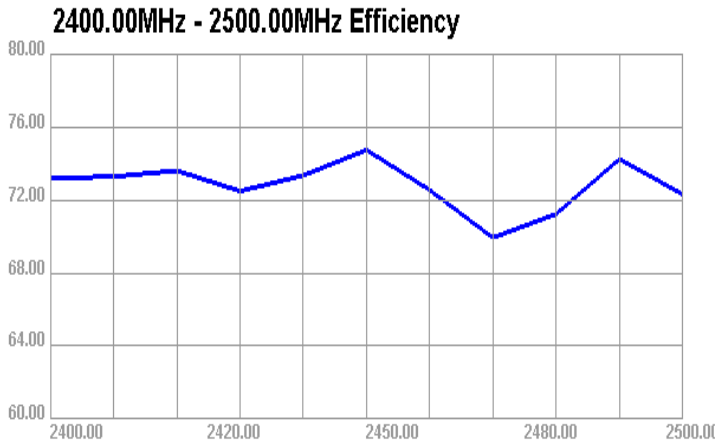
3.2 VSWR

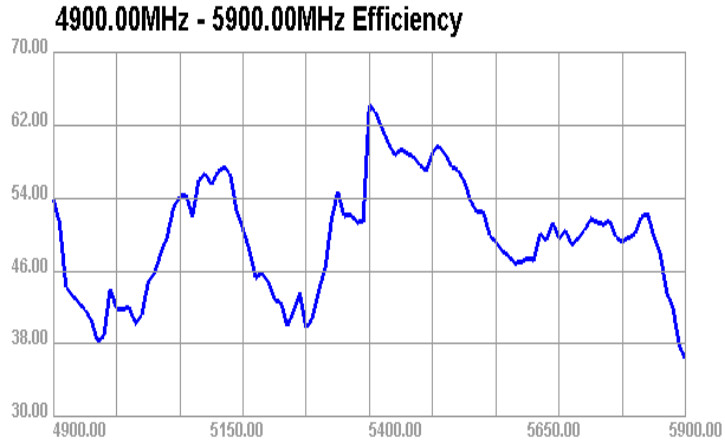


3.3 Return Loss

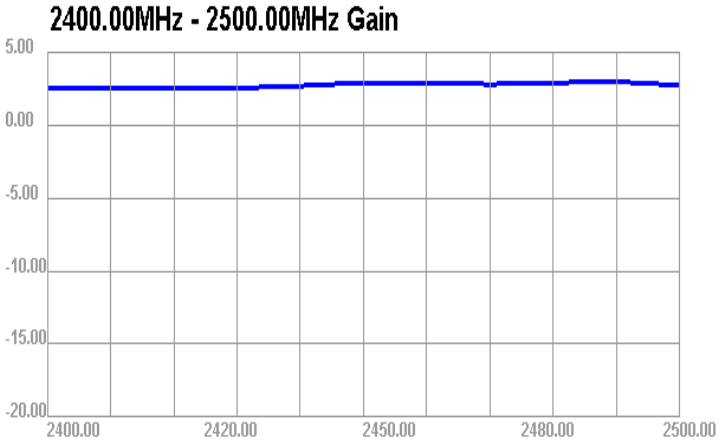


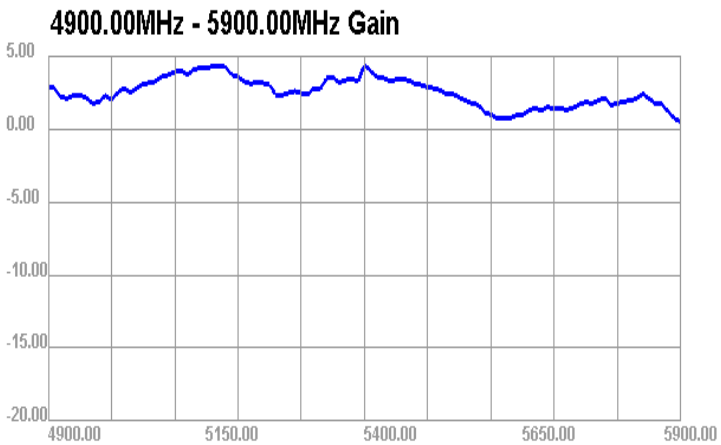
3.4 Efficiency and Gain



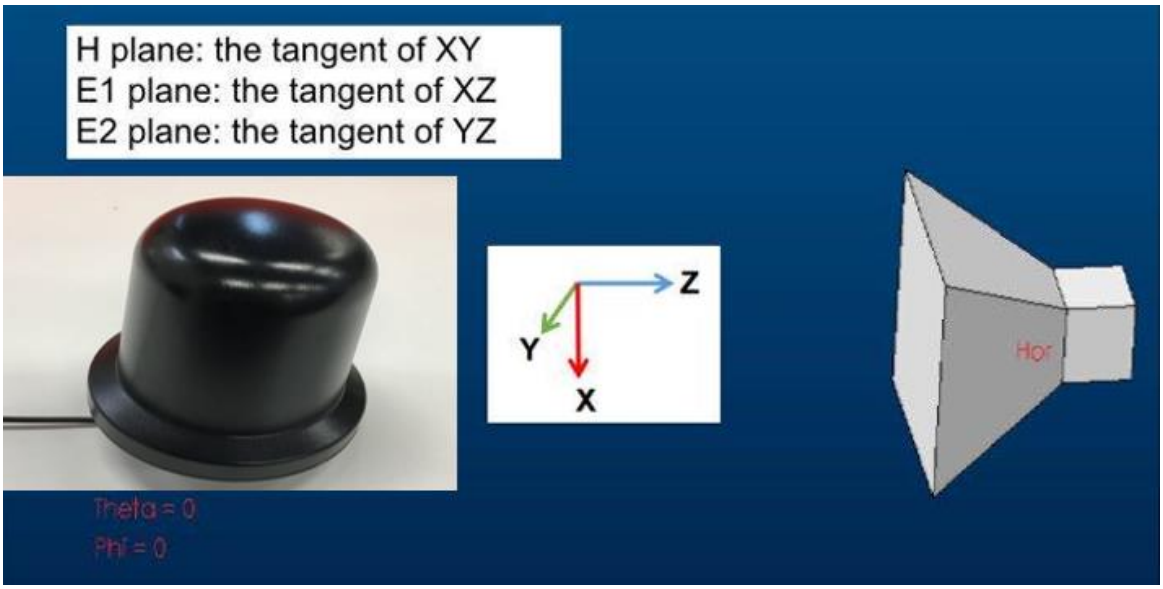


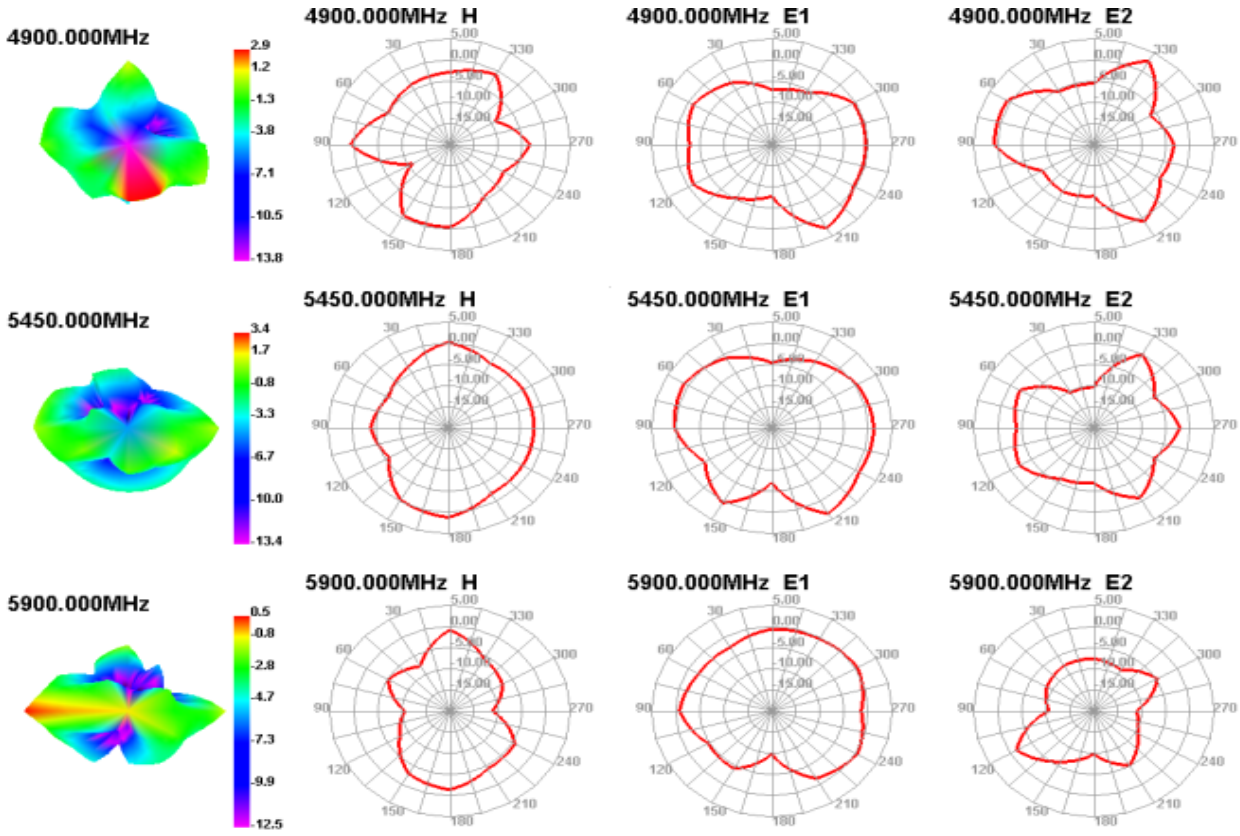
3.5 Gain

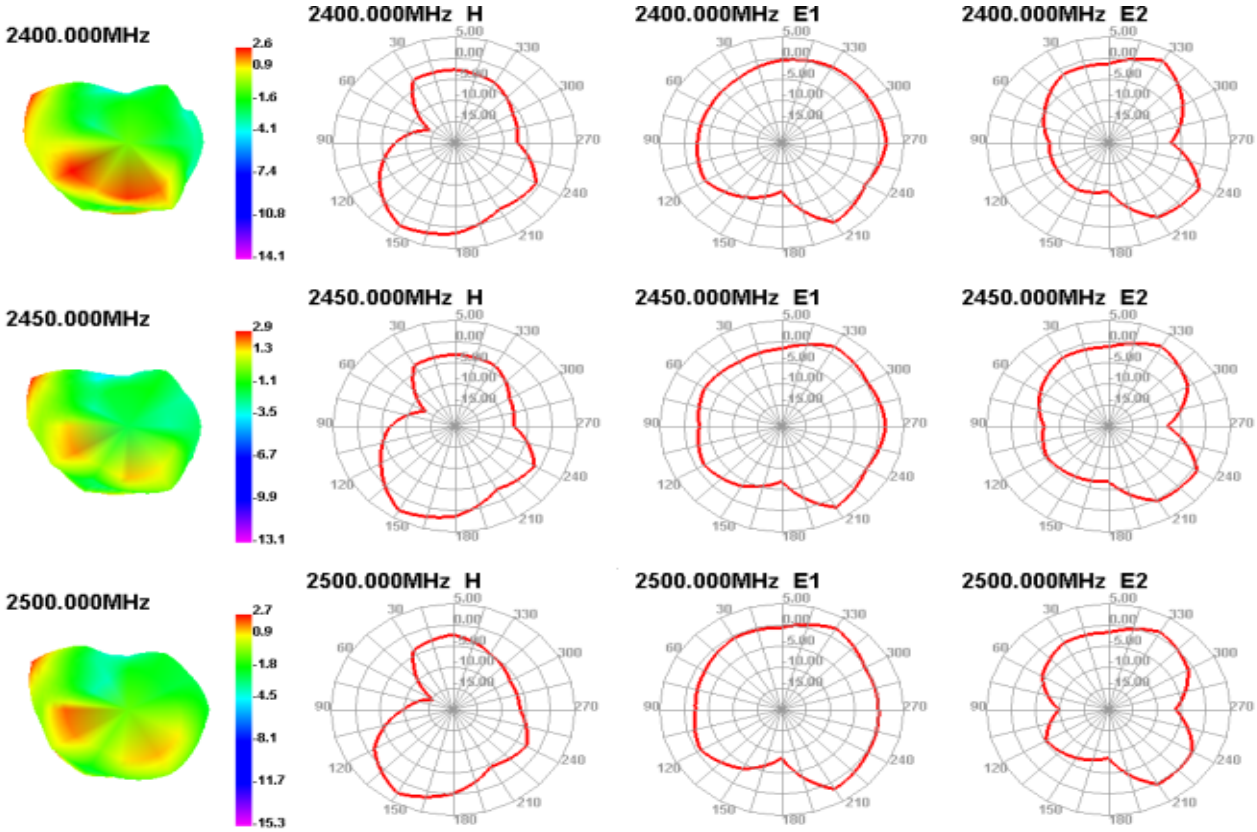




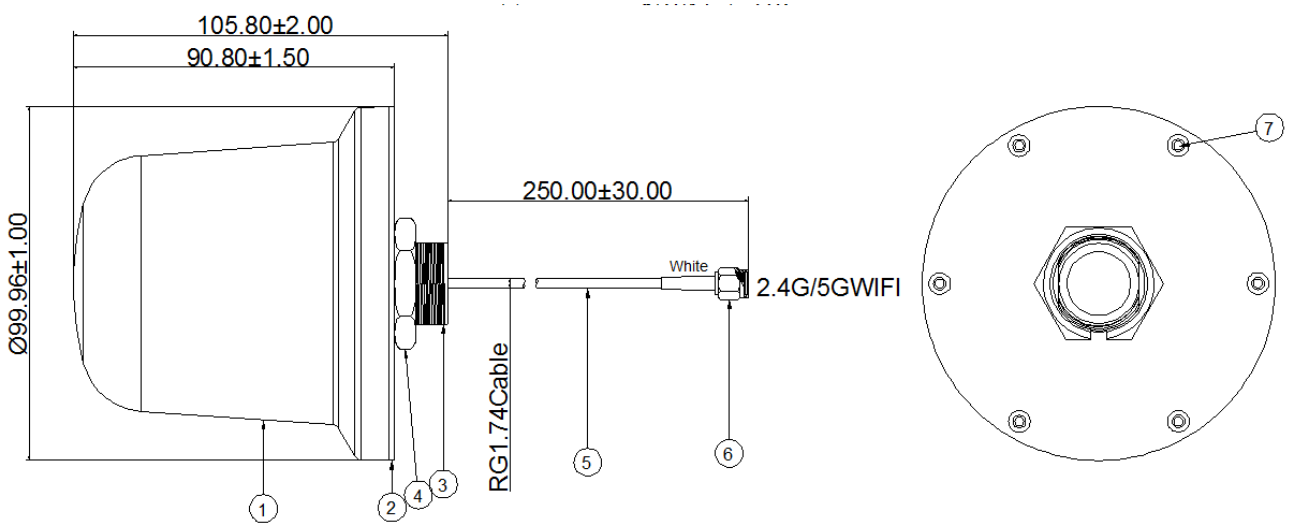
3.6 Directional pattern






2400.000MHz
2.6
0.9
-1.6
-4.1
-7.4
-10.8
-14.1
2400.000MHz H
2400.000MHz E1
2400.000MHz E2
2450.000MHz
2.9
1.3
-1.1
-3.5
-6.7
-9.9
-13.1
2450.000MHz H
2450.000MHz E1
2450.000MHz E2
2500.000MHz
2.7
0.9
-1.8
-4.5
-8.1
-11.7
-15.3
2500.000MHz H
2500.000MHz E1
2500.000MHz E2

4.Antenna Drawing



Series	Component name	Material	Color	Quantity
1	Upper Shell	SABIC PC 1414	black	1
2	Lower Shell	SABIC PC 1414	black	1
3	Screw	brass	gold	1
4	Nuts	brass	gold	1
5	Cable	RG174	black	1
6	SMA	brass	gold	1
7	Screw	M3x5	black	6

Note: Cable Loss

20℃时衰减（允许误差15%） Attenuation constant at 20℃ （Permissible error 15%）	200MHz	dB/100m	39
	400MHz	dB/100m	58
	900MHz	dB/100m	90
	1500MHz	dB/100m	117
	1800MHz	dB/100m	128
	2000MHz	dB/100m	139
	2500MHz	dB/100m	156