



SWE063

PN: SH19280IB56-HB

Key Features:

- Frequency bands from 600~ 6000MHz
- Covering Sub 6GHz 5GNR Bands
- Covering Worldwide 4G/3G/2G Bands
- Impedance 50 Ohm
- HB Fire Rating

Typica Applications:

- Network Devices
- Gateways & Routers
- Industrial IoT

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1. Introduction



The Sunnyway SWE063 is a 5G/4G omnidirectional antenna designed primarily for 5G/4G modules and devices. The antenna covers many 5G NR Sub 6GHz frequency bands, It exhibits high efficiency in the broadband 5G/4G frequency band and is compatible with 3G/2G cellular applications.

The antenna is equipped with SMA (M) connectors as standard, and the SMA (M) connector hinge mechanism allows the antenna to rotate to the preferred direction, which helps avoid other antennas or objects and also helps with isolation. When used in MIMO systems or when other antennas appear on the same device, the antenna blade can be rotated 90 degrees from the connector to adapt to different installation configurations.

Typical applications:

- Network Devices
- Gateways & Routers
- Industrial IoT
- Smart Metering
- Smart Home
- Others

Contact Sunnyway customer support team to request service or additional support to integrate and test the performance of this antenna in your device.

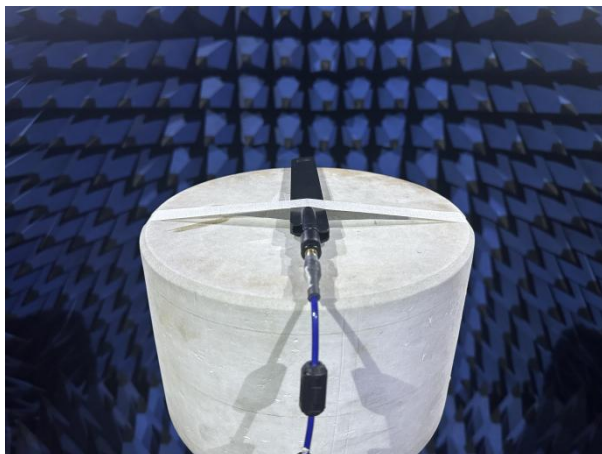
2. Specifications

Electrical			
Standards	5G&4G&3G&2G		
Frequency range (MHz)		600~3000	3000~6000
Peak Gain (dBi)	Straight	-0.7 ~ 4.8	1.3 ~ 5.2
	Bent 90°	-1.1 ~ 4.9	1.0 ~ 4.5
Average Gain (dB)	Straight	-5.1 ~ -1.0	-3.9 ~ -1.6
	Bent 90°	-5.2 ~ -0.7	-2.8 ~ -1.1
VSWR	Straight	< 4.0	< 3.0
	Bent 90°	< 4.0	< 3.0
Return Loss	Straight	< -5.0	< -5.0
	Bent 90°	< -5.0	< -5.0
Efficiency (%)	Straight	31.5 ~ 79.5	40.5 ~ 69.0
	Bent 90°	30.5 ~ 84.5	52.0 ~ 78.5
Polarization mode	Linear		
Radiation pattern	Omni-Directional		
Output impedance (Ω)	50		
Max. Input Power(W)	5		

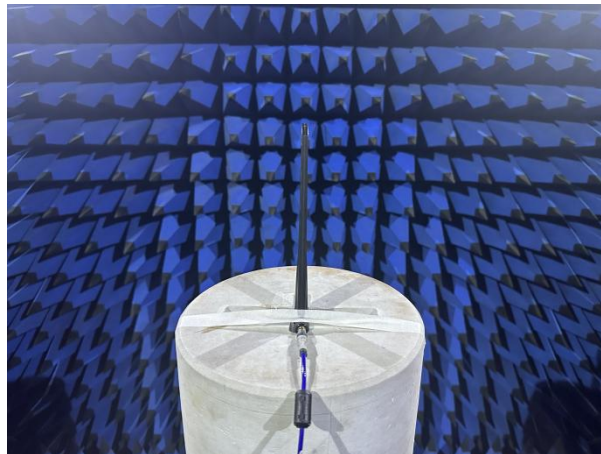
Mechanical	
Mounting Type	Connector Mount
Connector Type	SMA (M)
Antenna size(mm)	222.5 x 27.08
Material	ABS
Environmental	
Operating Temperature (°C)	- 40 °C ~ + 85 °C
Storage Temperature(°C)	- 40 °C ~ + 85 °C

3. Antenna Characteristics

3.1 Test Setup



Straight

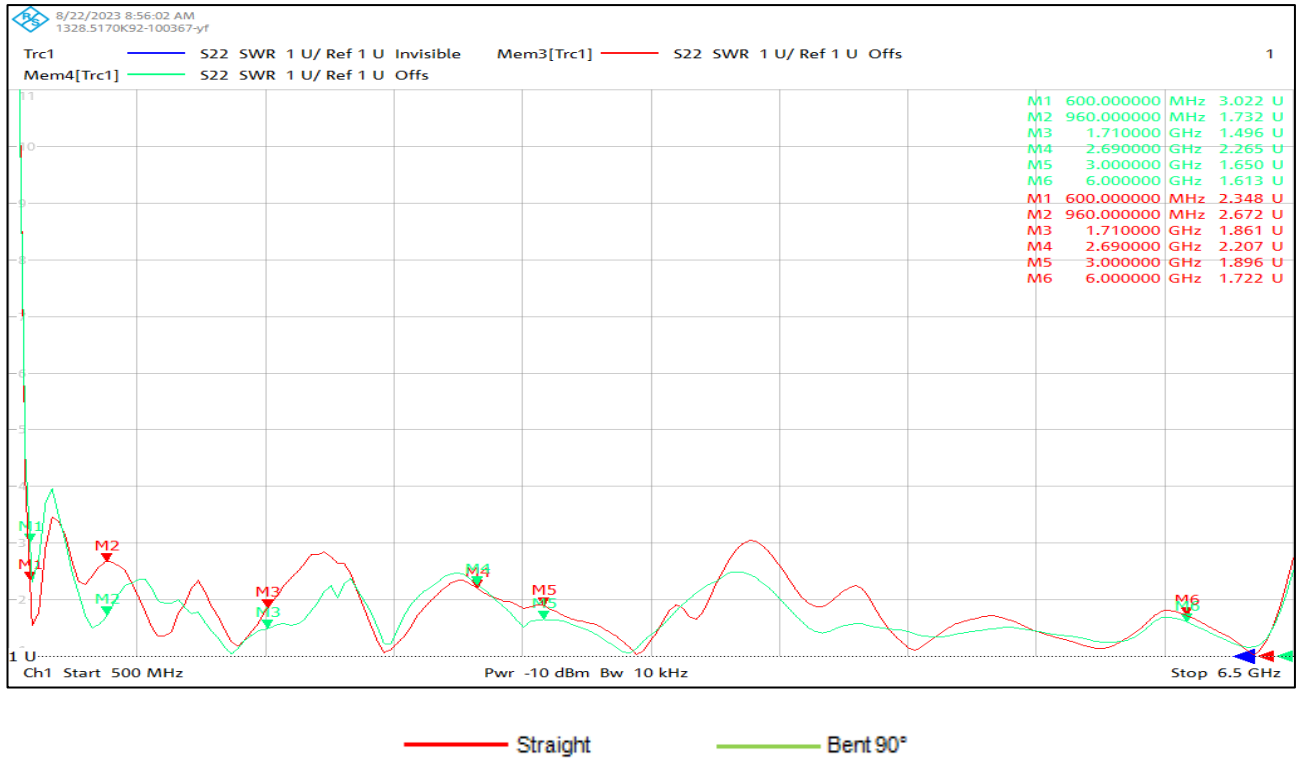


Bent 90°

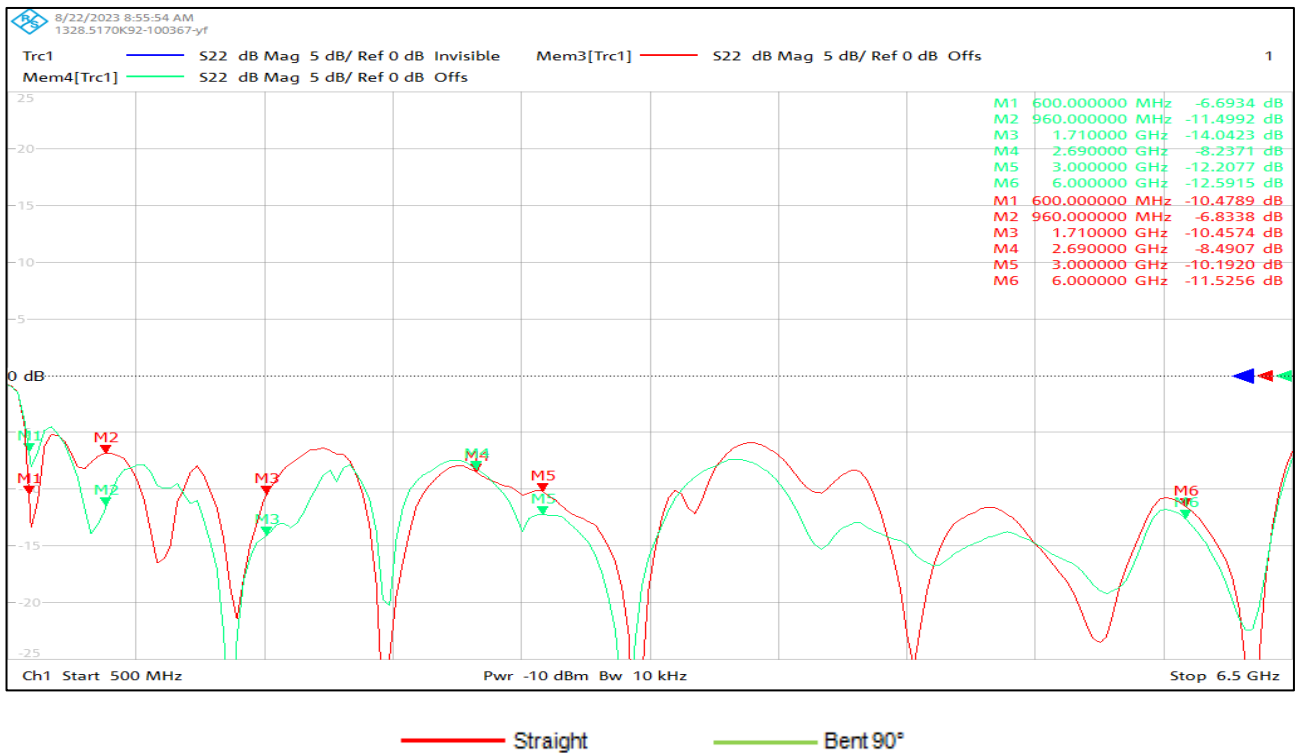
3.2 General Data

FRE (MHz)		600	960	1710	2690	3000	6000
VSWR	Straight	2.34	2.67	1.86	2.20	1.89	1.72
	Bent 90°	3.02	1.73	1.49	2.26	1.65	1.61
Return Loss	Straight	-10.47	-6.83	-10.45	-8.49	-10.19	-11.52
	Bent 90°	-6.69	-11.49	-14.04	-8.23	-12.20	-12.59
Eff (%)	Straight	36.22	42.27	63.1	59.98	58.88	47.1
	Bent 90°	32.58	48.98	78.53	61.66	61.52	58.34
Peak Gain (dBi)	Straight	1.17	1.17	2.8	2.12	3.51	3.36
	Bent 90°	-0.5	0.39	4.32	2.03	1.45	3.26

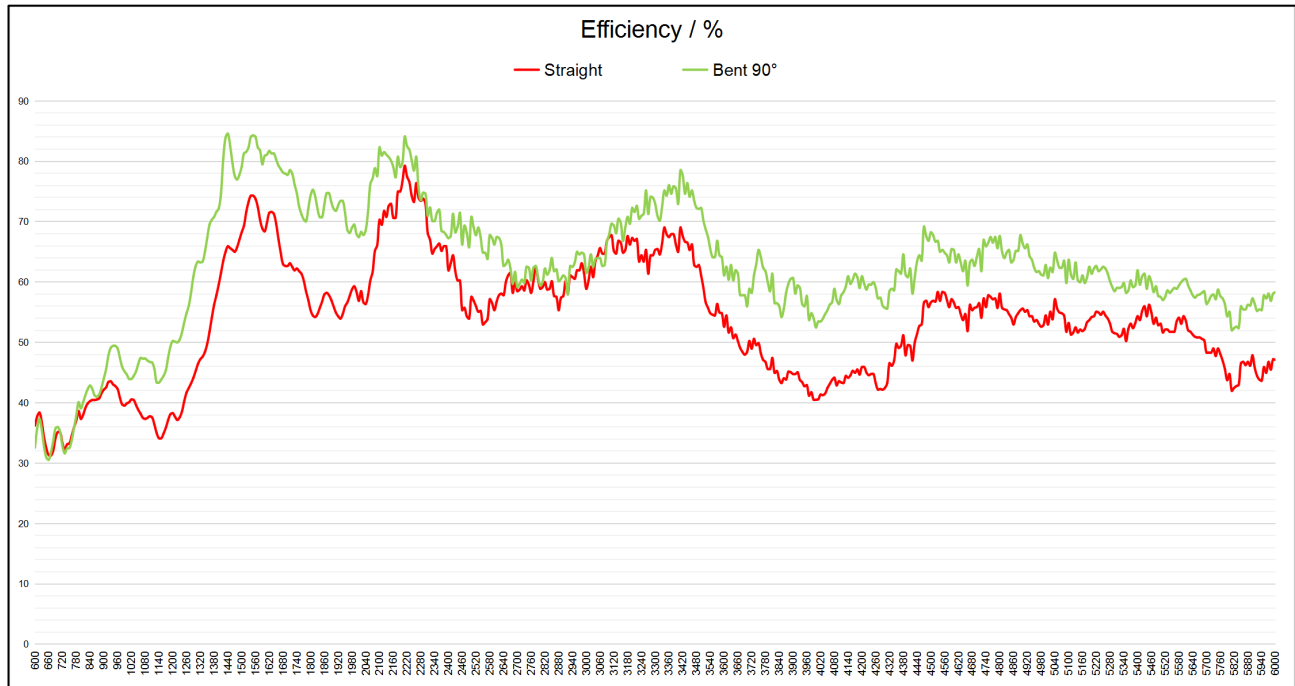
3.3 VSWR



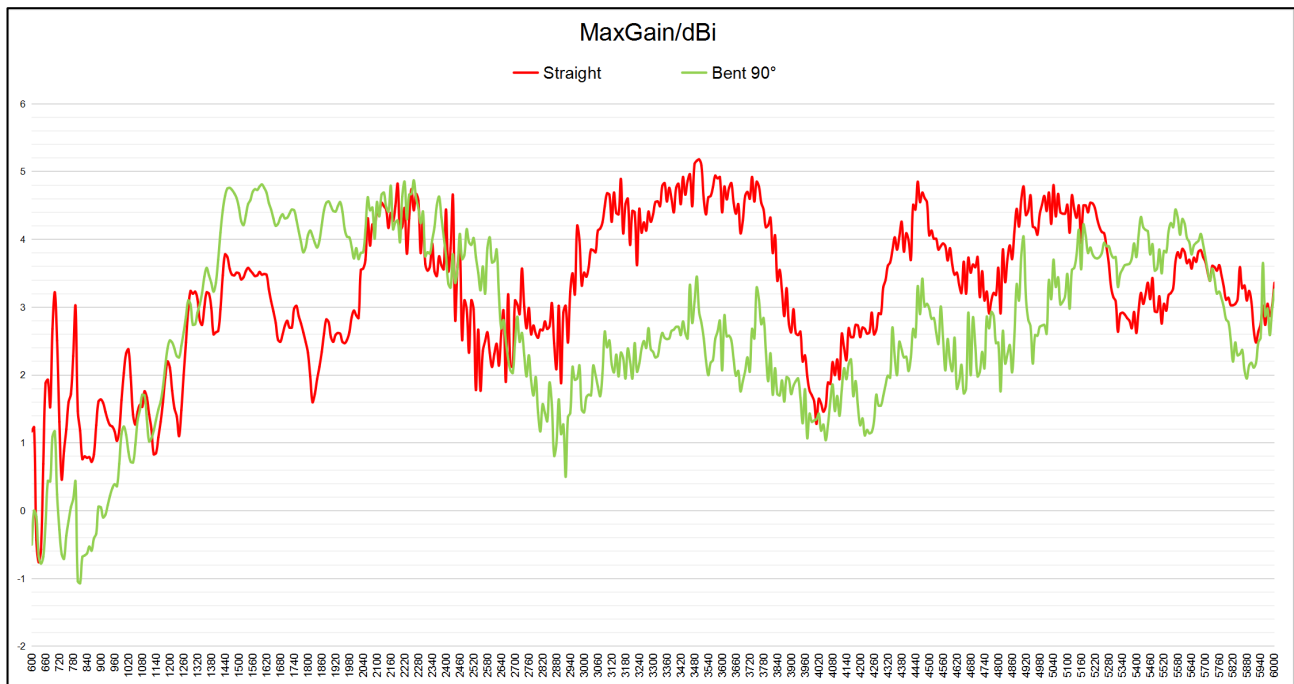
3.4 Return Loss



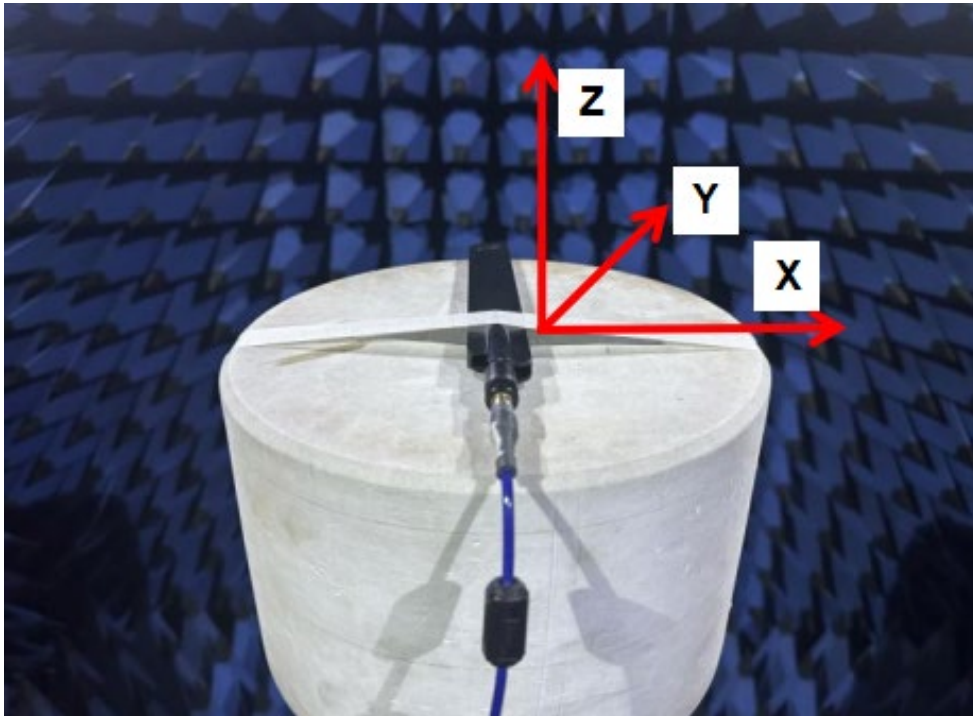
3.5 Efficiency



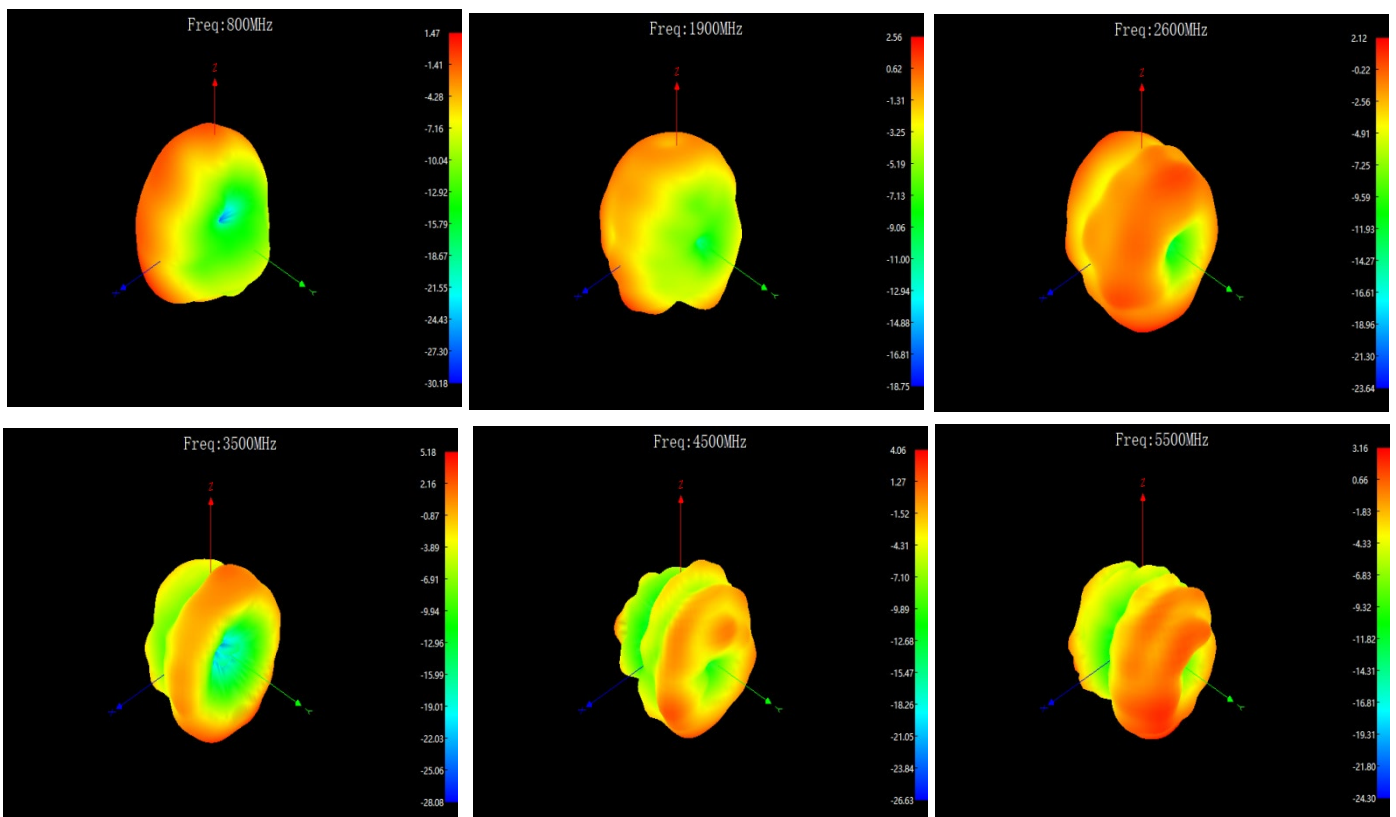
3.6 Gain

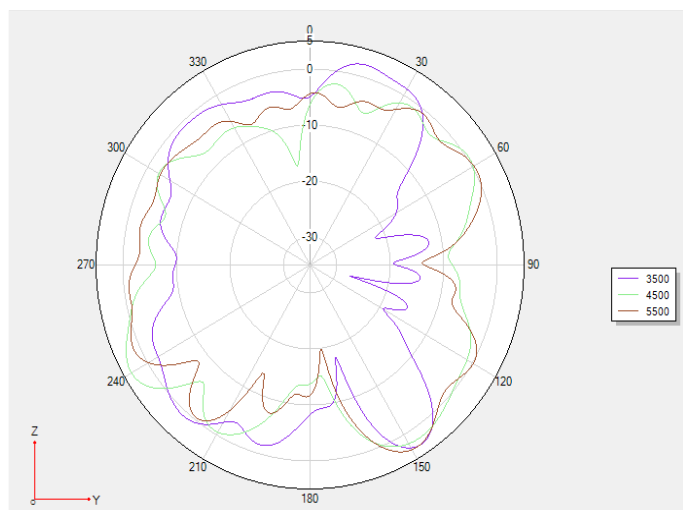
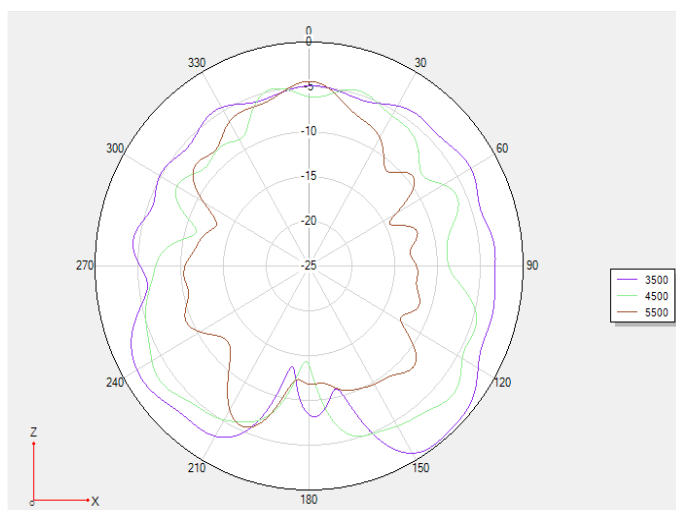
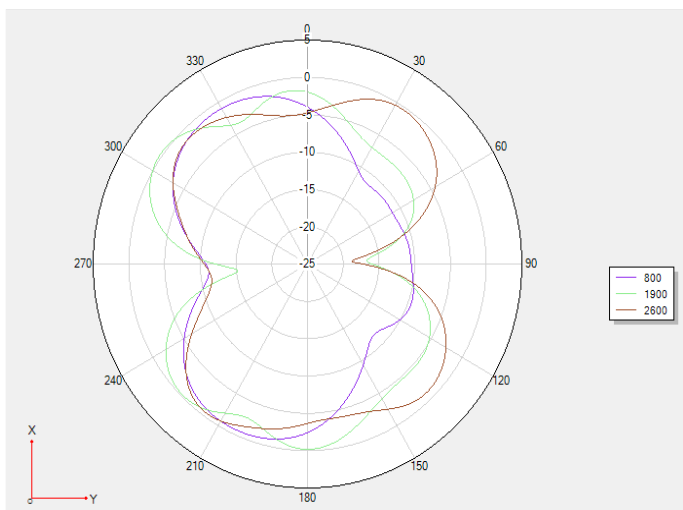
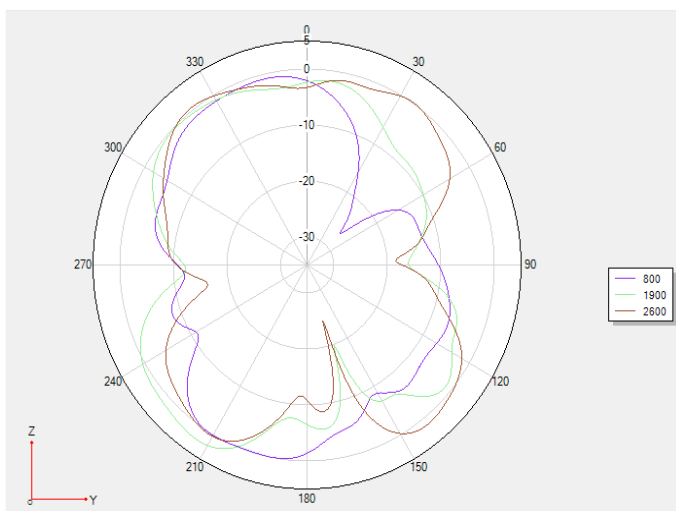
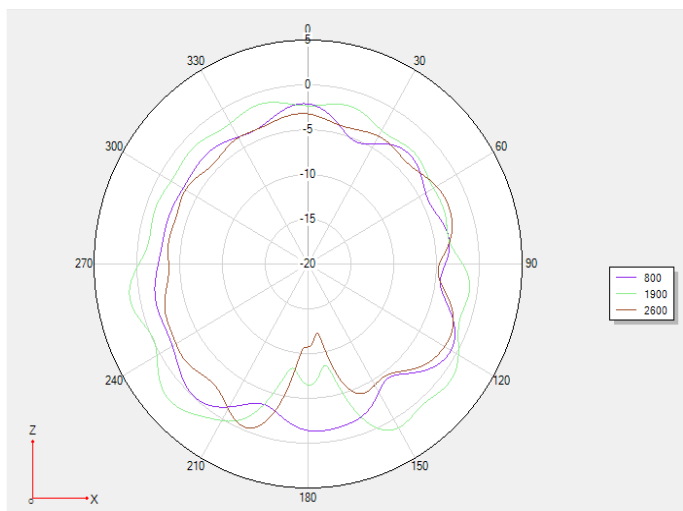


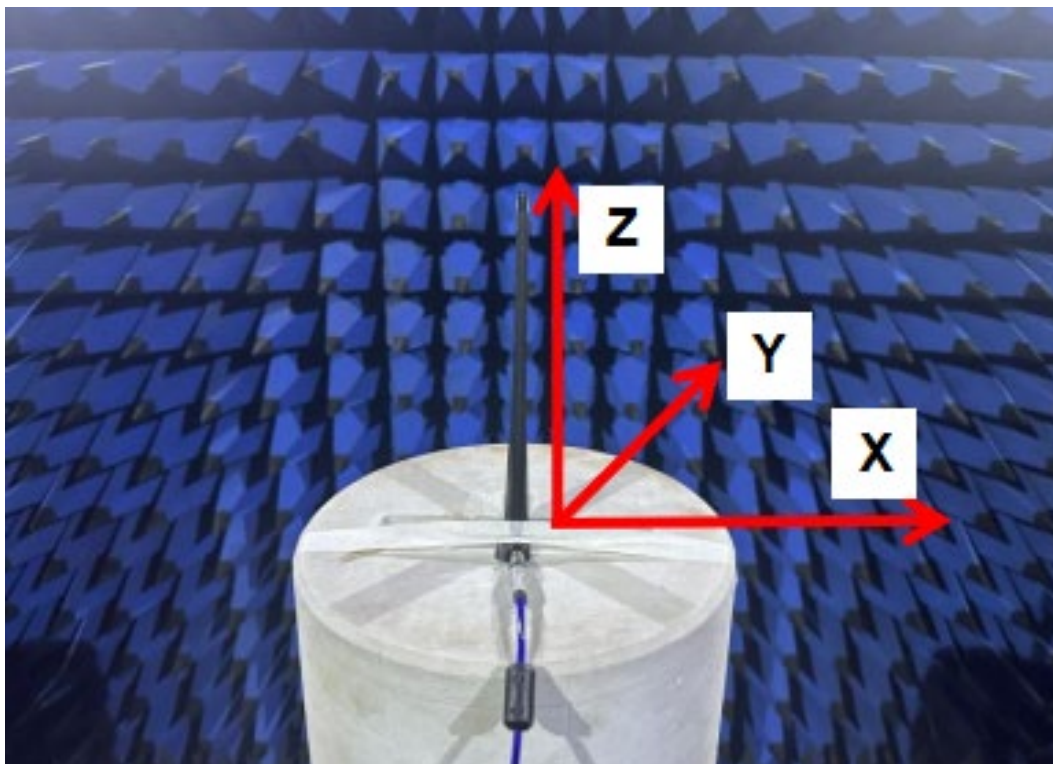
4. Radiation Patterns



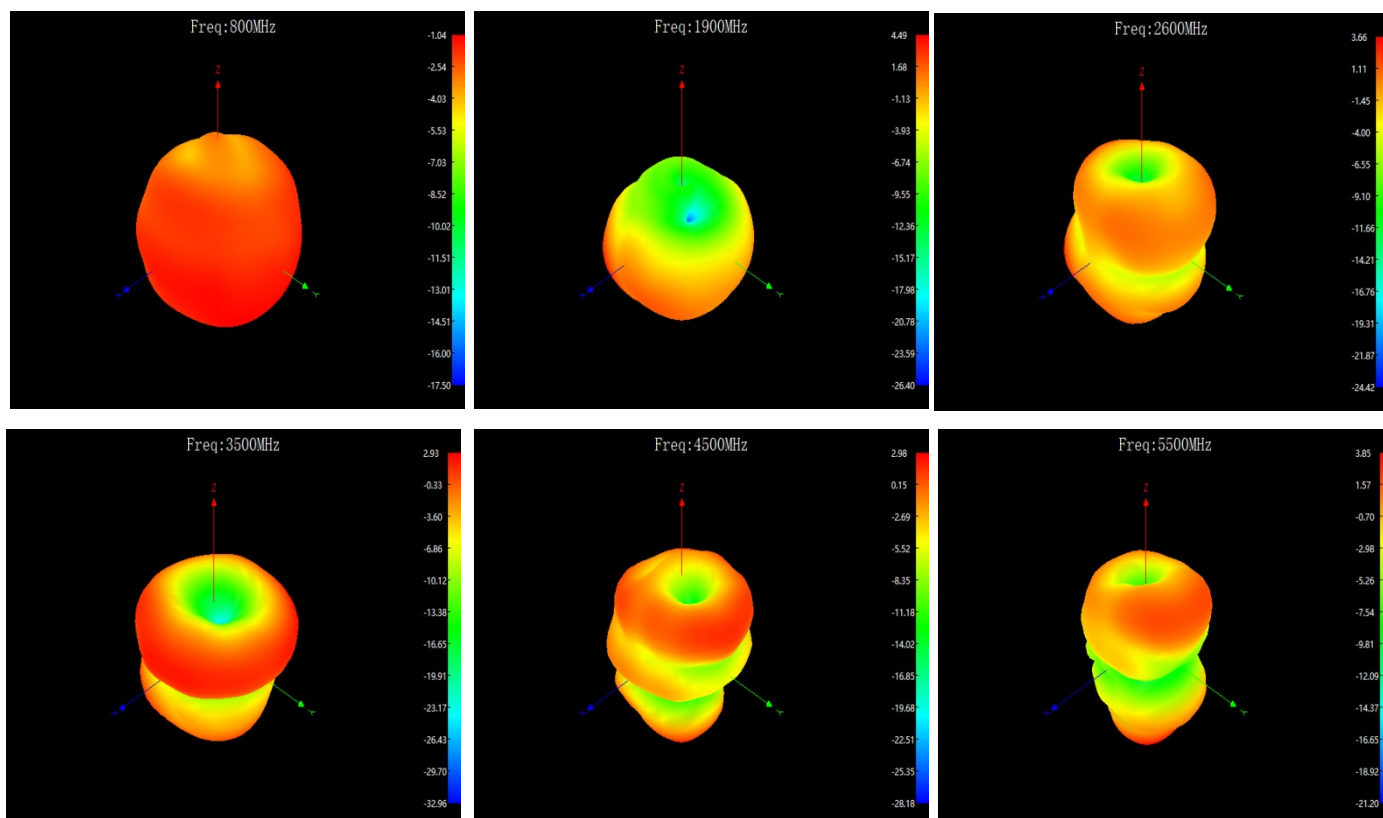
800MHz/1900MHz/2600MHz/3500MHz/4500MHz/5500MHz 3D and 2D Radiation Patterns

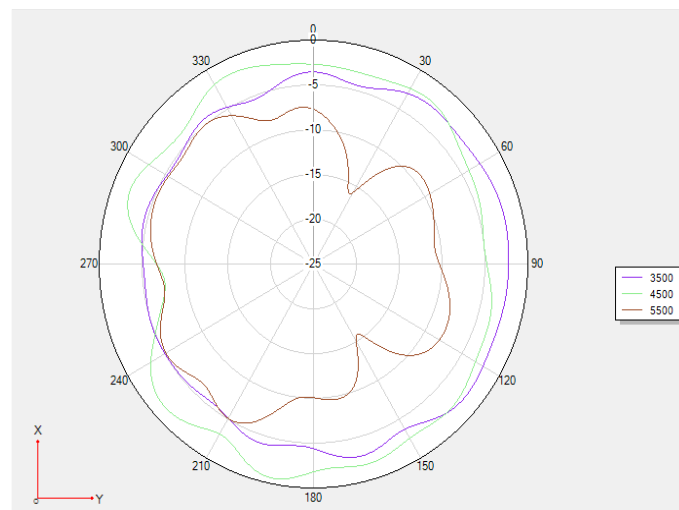
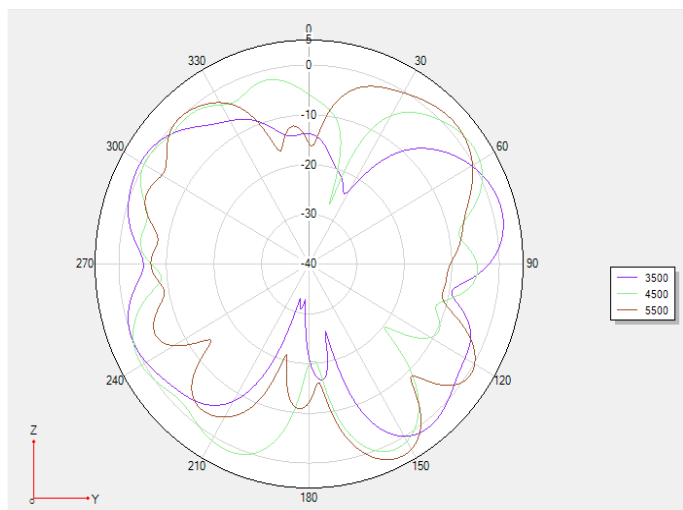
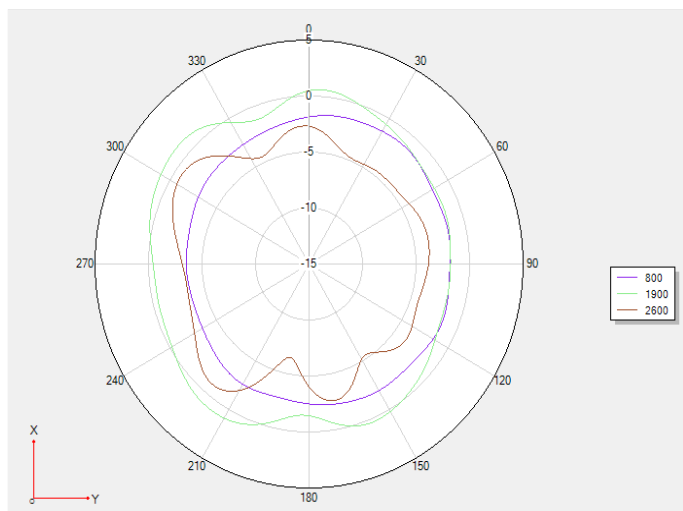
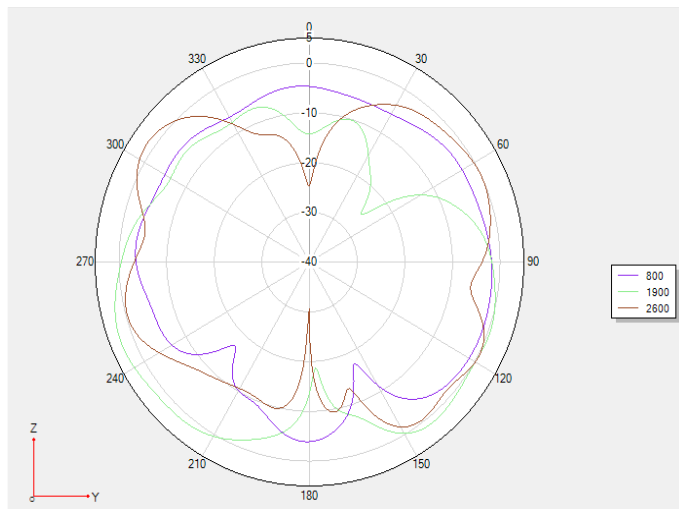
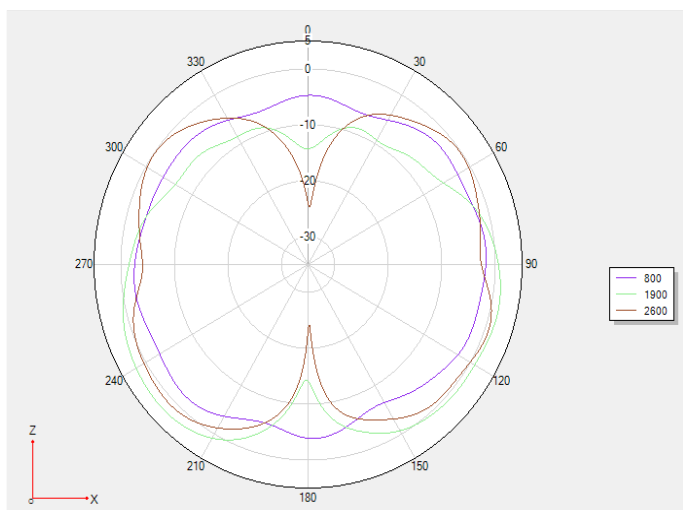




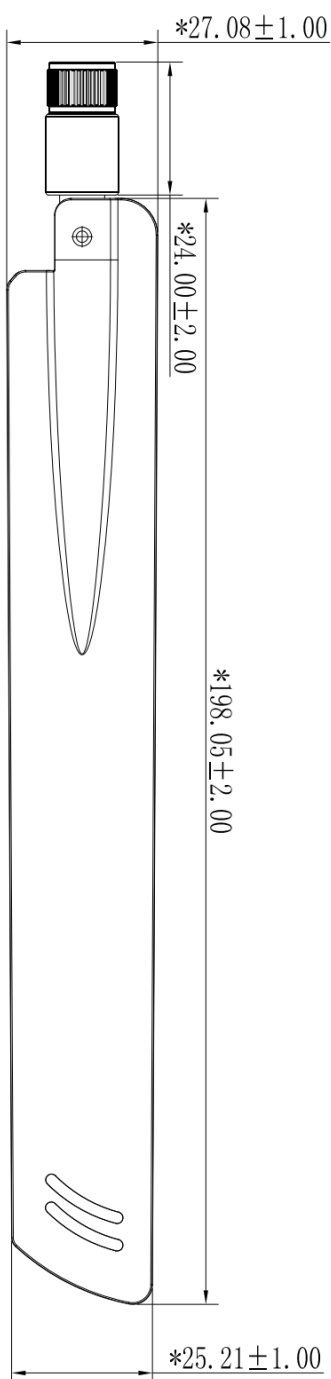


800MHz/1900MHz/2600MHz/3500MHz/4500MHz/5500MHz 3D and 2D Radiation Patterns







5. Antenna Drawings



Requirements:

1. The finished product must be 100% tested and turned on OK;
- 2, the finished product must be 100% full inspection OK;
- 3, using environmentally friendly processes, finished products;
- 4, in line with ROHS requirements,
5. For the tolerances, please refer to the general tolerances.

Sunnyway Technology Co., Ltd

		PART NAME : SW063	DATE : 2023-7-19
一般公差: f .1 .1X ANGULAR	±0.5 ±0.25 ±0.10 ±0.05 ≤ ± 0.5°	PART NO : SH192801B56-HB	DRAWN : yujiang
		MATERIAL :	CHECKED : chenxiaoping
		FINISHING : 2023-7-19	APPROVED : ceojinmo
UNIT : mm	COLOUR : black	SCALE : 1:1	REV :

Version	Modify content	modifier	Date

Changelog for the datasheet	
SWE063	
Revision: V0 (Current Version)	
Date:	2023-8-22
Notes:	Initial Datasheet Release
Author:	Kevin