Antenna Specifications

Manufacturer	Shenzhen Gymera Technology Co., Ltd
MATERIAL CODE	MA001-WiFi
JS P/N	148-001-0A

Add：4 / F, South District, Building B, He Fuqin Industrial Park, Dalang Street Industrial Park Road, Longhua New District, ShenzhenCity, Guangdong Province, P.R. China
Tel：0755-23744434 Fax：0755-23744434

1. General Description

This document provides the antenna specifications on electric, mechanic and reliability. The testing conditions and related pictures are also included.

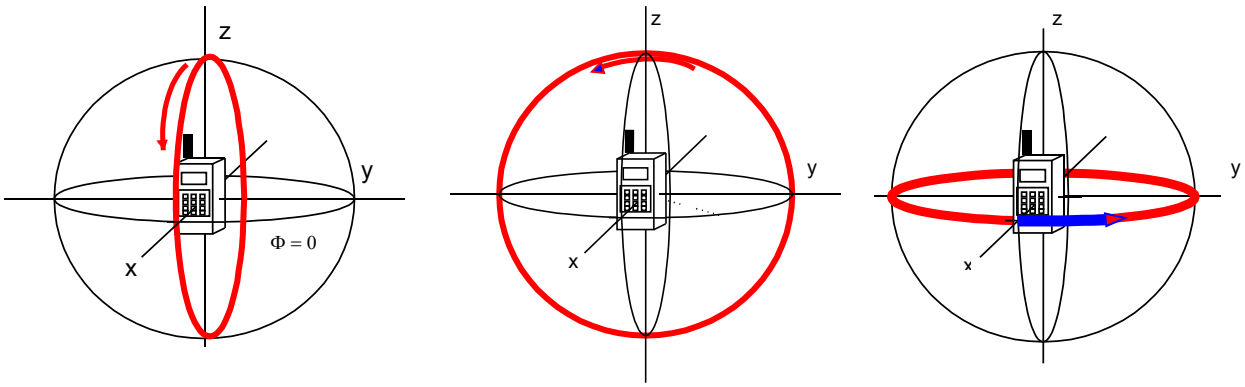
1.1 Print Acceptance

Samples and Antenna Specifications are to be sent to customer. When they are approved, the approval form should be completed, signed, and sent back to JINGSONG before further mass production batches can be delivered.

1.2 Coordinate System

The coordinate system for the phone is defined as follows:

- Origin in center of gravity.
- Positive X axis is perpendicular to, and directed from, front plane.
- Positive Y axis is perpendicular to, and directed from, right side plane (as seen from front).
- Positive Z axis is perpendicular to, and directed from, top plane.



a) E0-plane b) E90-plane c) Az-plane

Figure 1-1 The coordinate system for the phone

2. Specifications

This report mainly provides the testing conditions of various electric and structural performance parameters for cell phone antenna ----MF-WiFi dual-band antennas. Figure 2-1 shows the antenna designed by JS & The fixturing of MF-WiFi dual-band antennas

2.1 Frequency Band

Frequency Band	Tx(MHz)/Rx(MHz)
WiFi2.4G	2400-2500
WiFi5.8G	5100-5800

2.2 Impedance

2.2.1 Nominal

Nominal Impedance(including matching circuit) : 50 ohms

2.2.2 Matching Circuit

The matching circuit is as Figure 2-2.

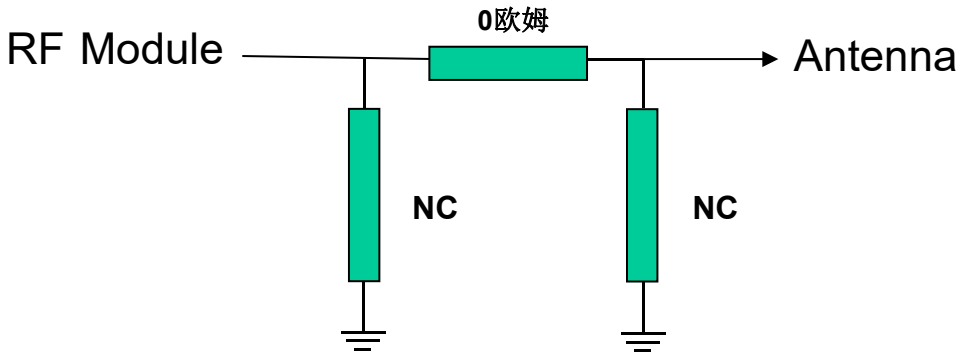


Figure 2-2: Matching circuit

2.3 Passive Measurements

2.3.1 VSWR & Gain Specifications

VSWR		GAIN	
Freq. Band	SPEC	Freq. Band	SPEC
2400MHz	≦1.5	2400MHz	≧1.0
2500MHz	≦1.5	2500MHz	≧1.0

2.3.2 S11 of the Typical Sample

Freq (MHz)	2400	2420	2440	2460	2480	2500
R.L(dB).	1.24	1.27	1.36	1.63	1.12	1.11
VSWR	1.45	1.43	1.46	1.47	1.50	1.50

Freq (MHz)	5100	5200	5300	5400	5500	5600
R.L(dB).	1.45	1.37	1.78	1.67	1.53	1.47
VSWR	1.45	1.43	1.46	1.47	1.50	1.50

Freq (MHz)	5700	5800
R.L(dB).	0.84	1.94
VSWR	1.45	1.43

3. Chamber Test Data

Fre.(Mhz)	Efficiency(%)	Gain(dBi)
2400	56.3	1.24
2410	55.8	1.55
2420	57.2	1.27
2430	53.6	1.42
2440	54.5	1.36
2450	55.2	1.45
2460	51.6	1.63
2470	51.3	1.33
2480	52.5	1.12

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WIFI test date:		
WIFI: 5G		
Freq(MHz)	Efficiency (%)	Gain (dBi)
5150	54.6	1.45
5200	56.3	1.37
5250	53.1	1.68
5300	57.2	1.78
5350	55.4	1.69
5400	58.6	1.67
5450	56.2	1.73
5500	57.3	1.53
5550	53.2	1.83
5600	56.6	1.47
5650	55.4	1.83
5700	54.3	0.84
5750	53.8	1.66
5800	57.2	1.94
5850	58.7	1.83

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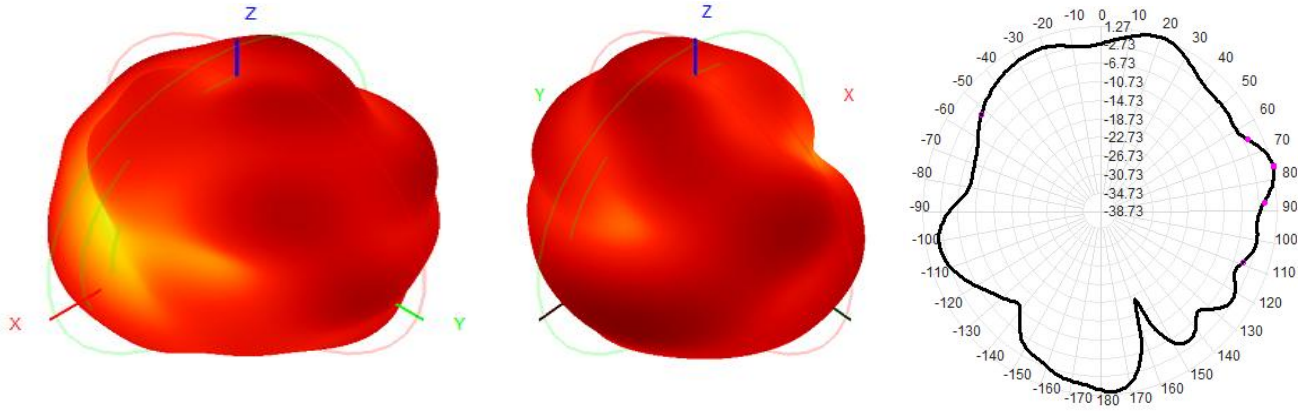
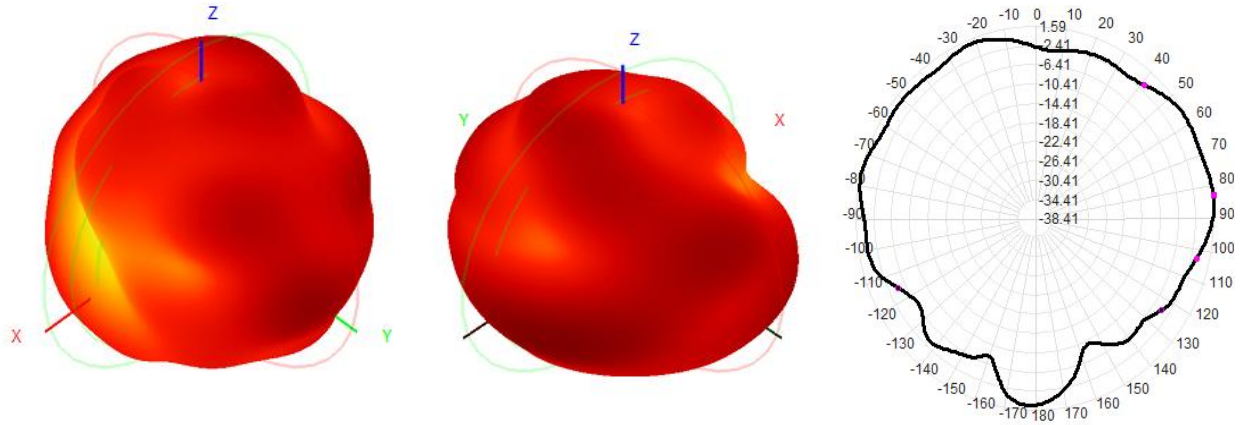
3.1 Radiation Pattern
The radiation pattern in free space is tested in chambers.

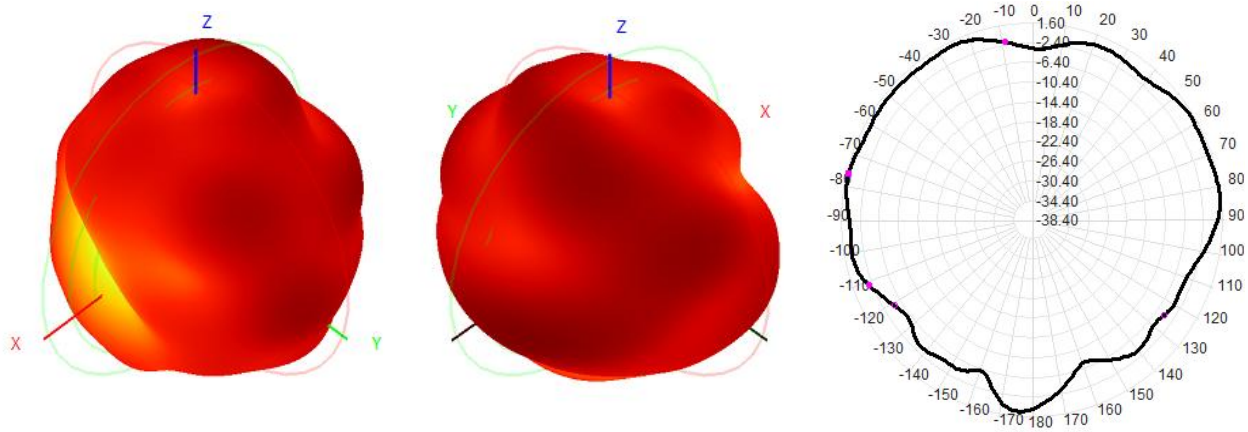
2400-2420MHz



2420-2440MHz



2440-2460MHz



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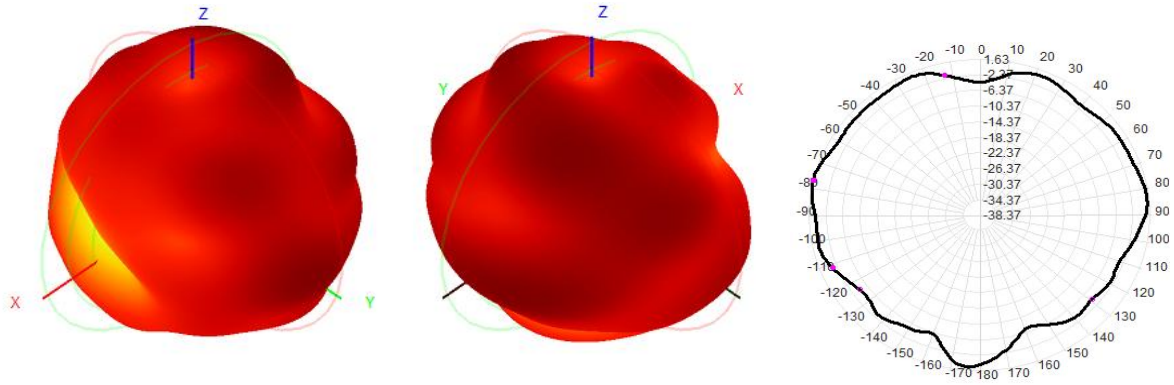
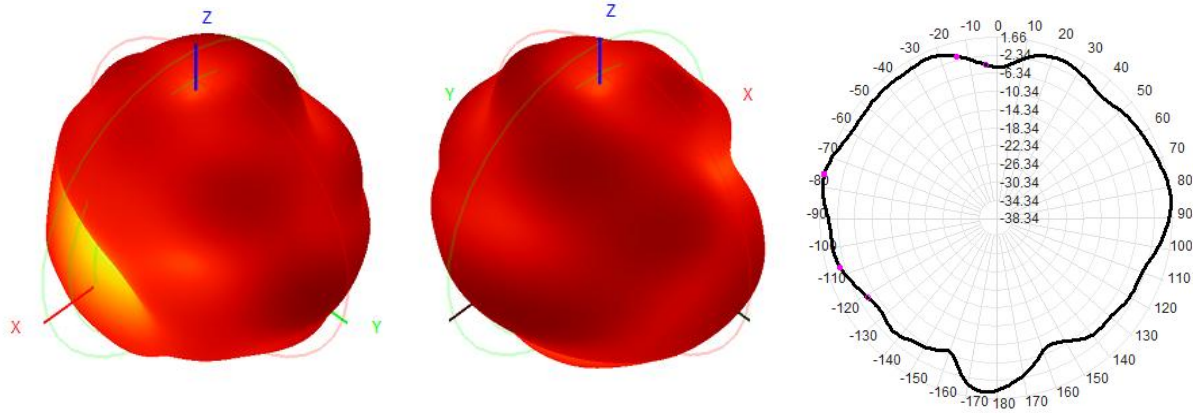
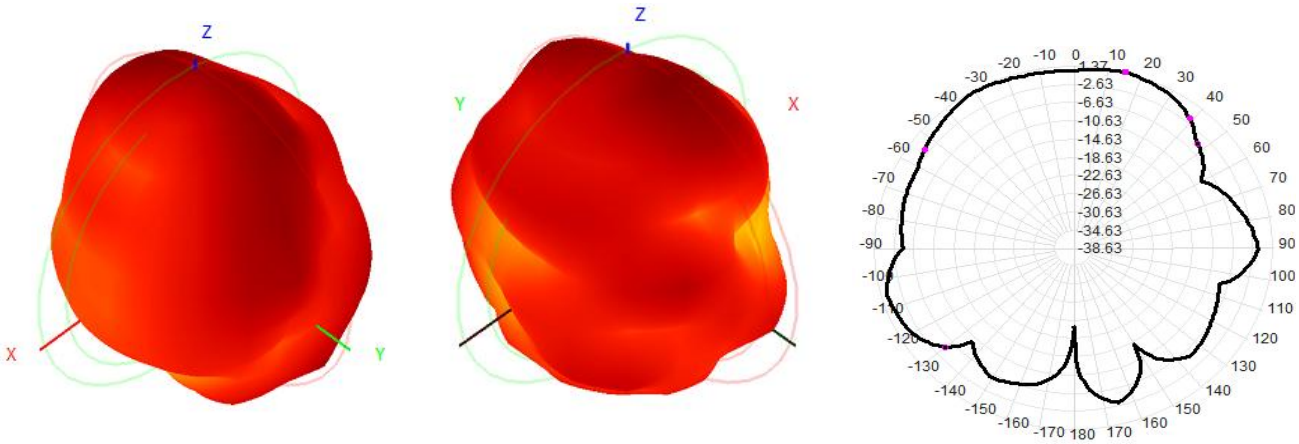
2460-2480MHz



2480-2500MHz



5100-5200MHz



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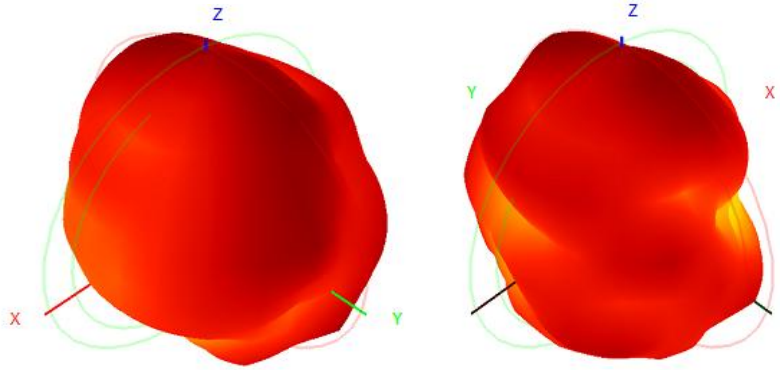
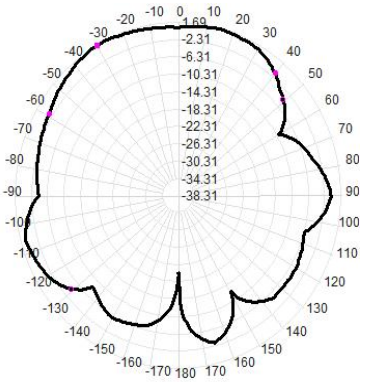
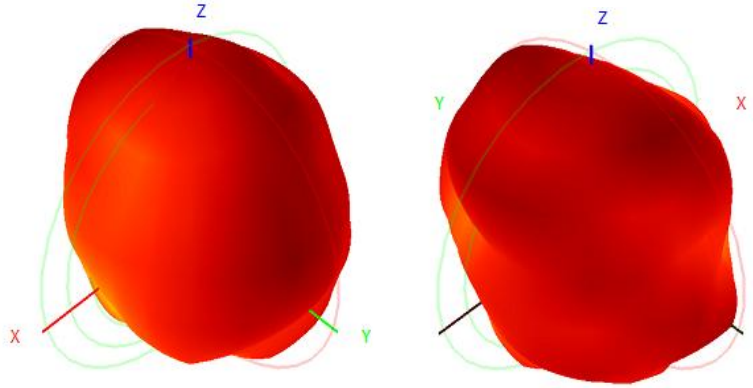
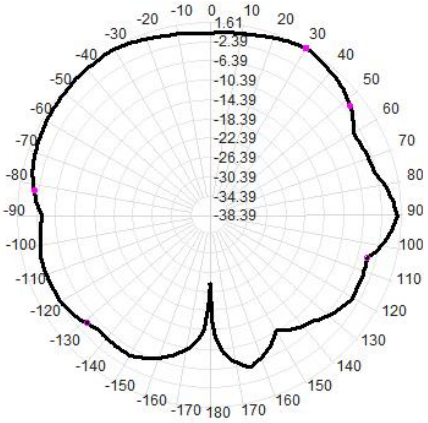
5200-5300MHz



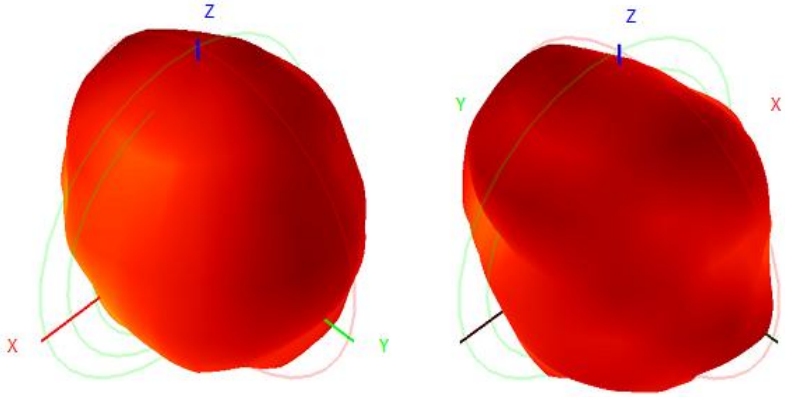


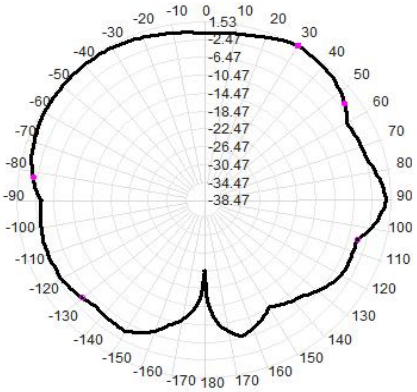
5300-5400MHz





5400-5500MHz





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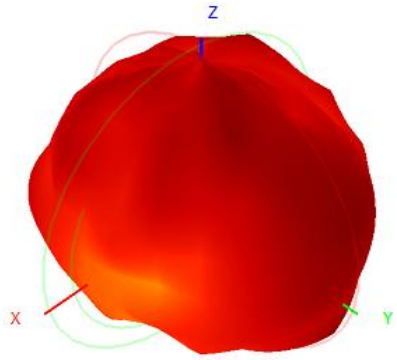
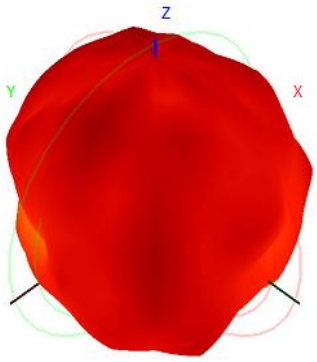
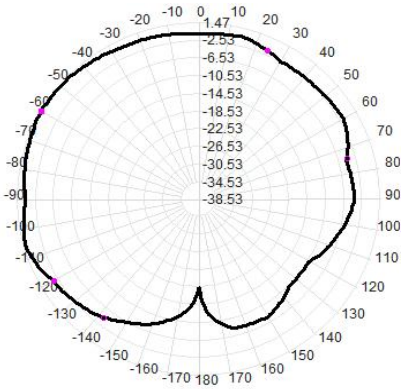
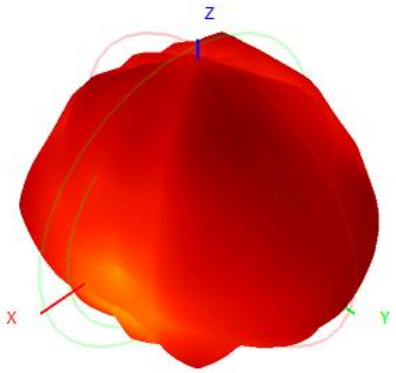
5500-5600MHz

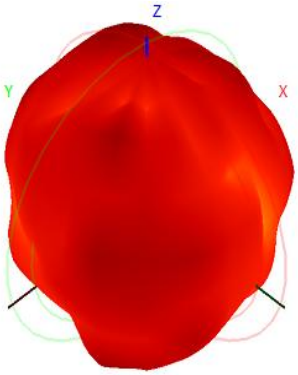


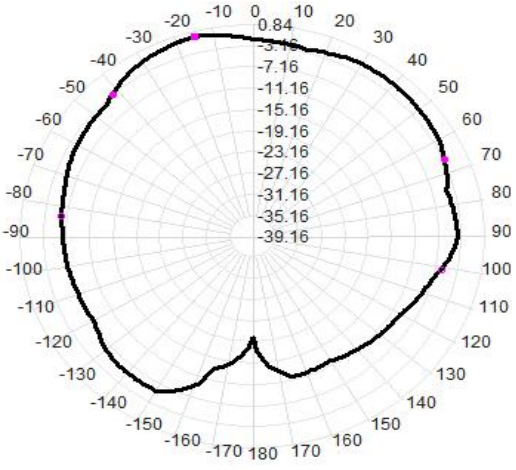




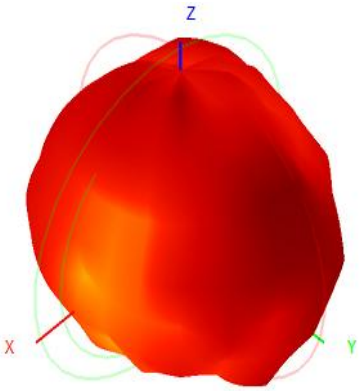
5600-5700MHz

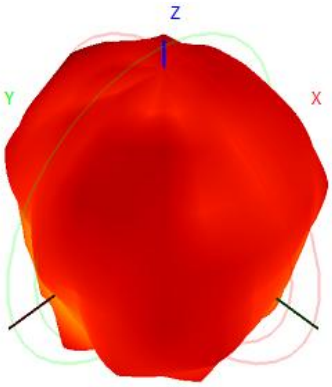


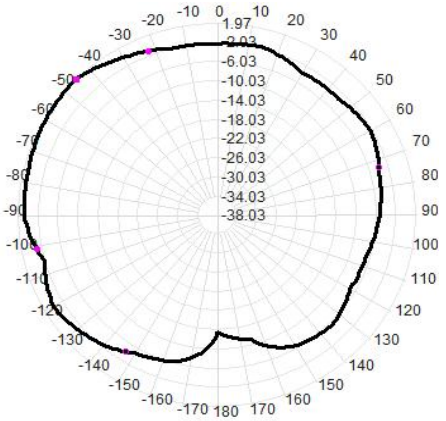




5700-5800MHz







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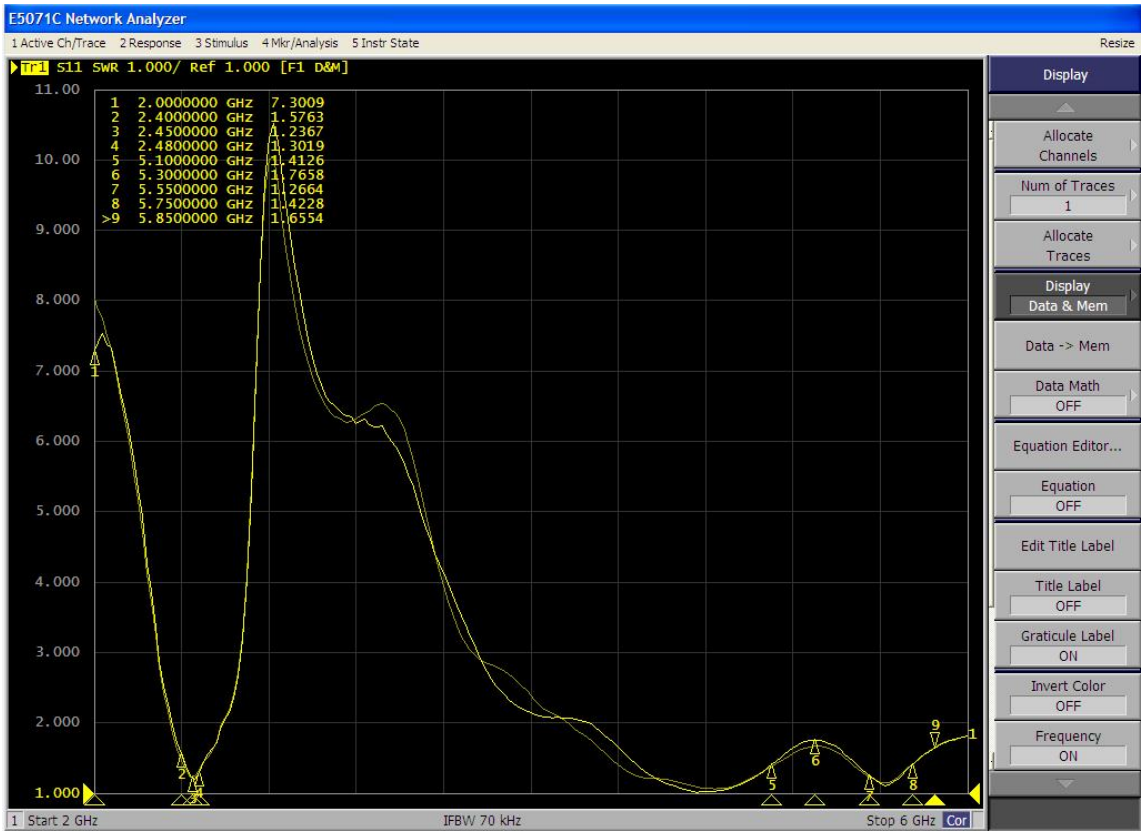
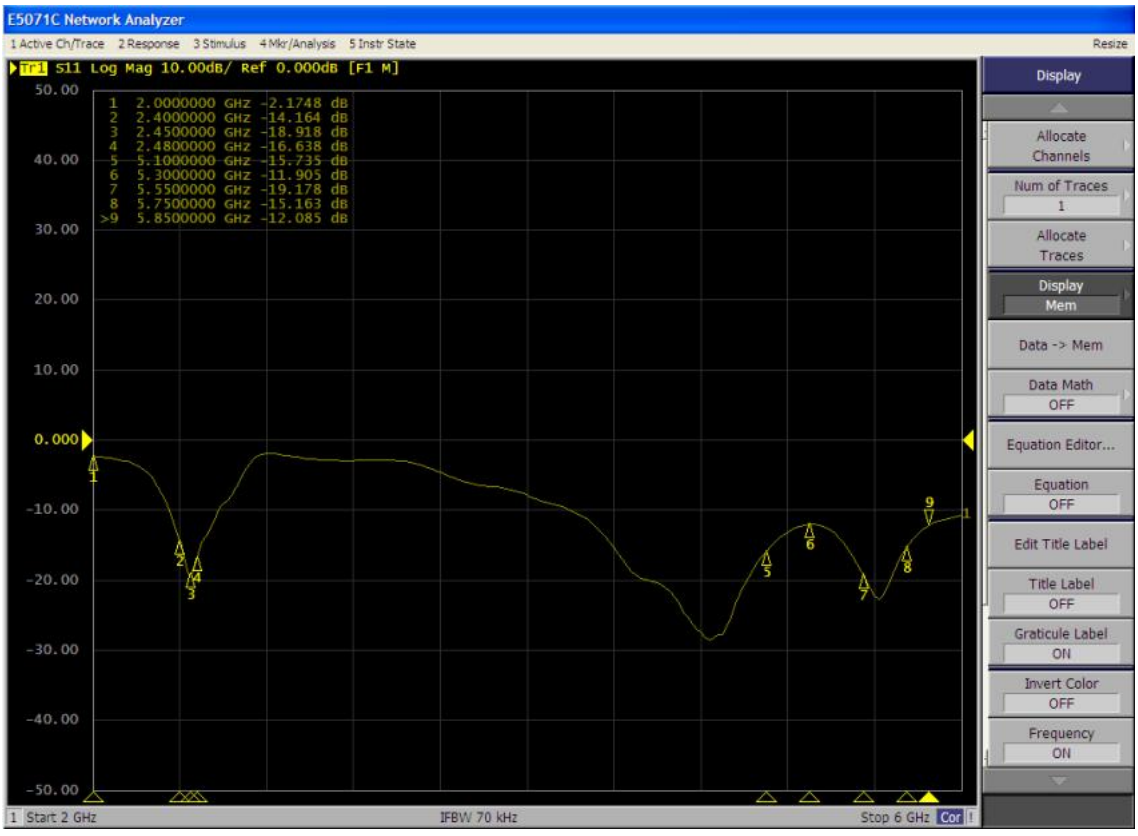
3.2 SWR:





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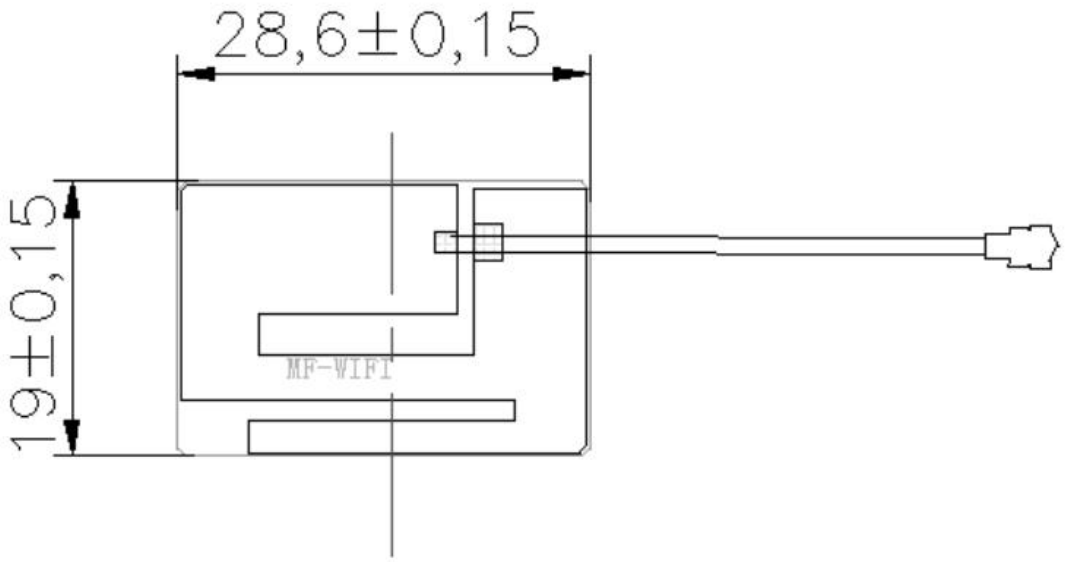
4. Mechanical Properties

4.1 Specifications Drawings



5. Environmental Characteristic

Test Item	Test description
1. Low Temperature	Temp.: -20 ℃ Time: 24 hours

2. High Temperature	Temp.: 80℃ Time: 24 hours
3. Salt Fog	5±0.1% Nad salt fog PH Value: 6.5-7.2 Temp: 35±1℃ Time:24 hours

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