Antenna Data Sheet

APPROVAL SHEET

Customer Name	
Product Model	Glue rod antenna
Customer P/N	
Specifications	**600-7200MHz,扁型,SMA-J**
KEESUN P/N	**KSANT-11492-A**
Date Prepared	**2024.11.28**
Revision	**1.0**

KEESUN		
Prepare	DQE	R&D
Customer		
PUR	QC	R&D

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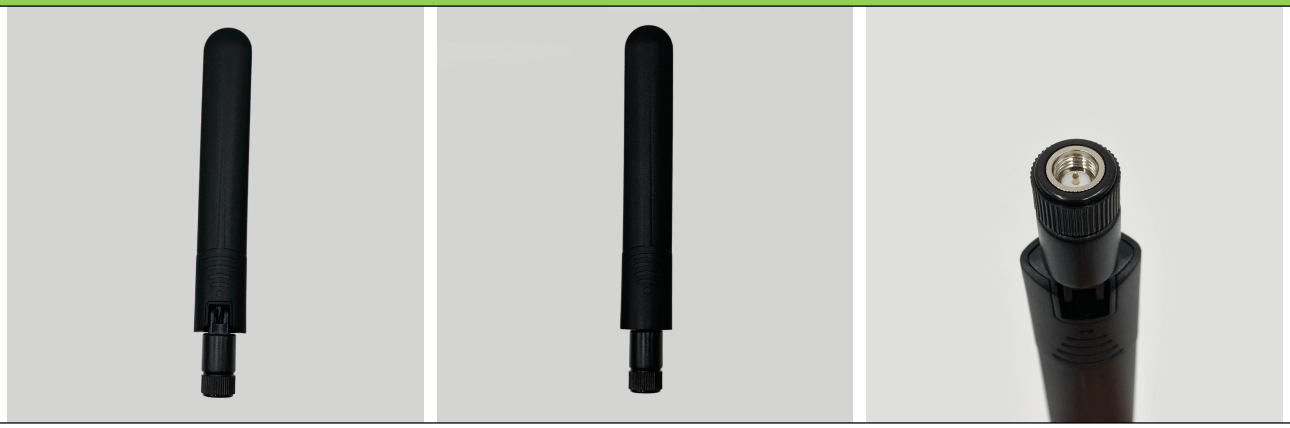
Product Specification

A. Electrical Characteristics		
Frequency	600-960MHz	1000-7200MHz
VSWR	<2.5	<4.0
Efficiency	≈55%	≈58%
Peak Gain	1.3-3.6dBi	0-4.6dBi
Impedance	50 Ohm	50 Ohm
Polarization	Linear	Linear
Horizontal Beamwidth	360°	360°
Vertical Beamwidth	31-45°	7-93°
Max Power	50W	50W

B. Material & Mechanical	
Connector Type	SMA-J
Dimension	20*145 ± 1mm
Color	Flat antenna, black
Weight	0.015kg

C. Environmental	
工作温度 Operation Temperature	- 40˚C ~ +80 ˚C
存放温度 Storage Temperature	- 45˚C ~ +85 ˚C
工作湿度 Operation Humidity	< 95%

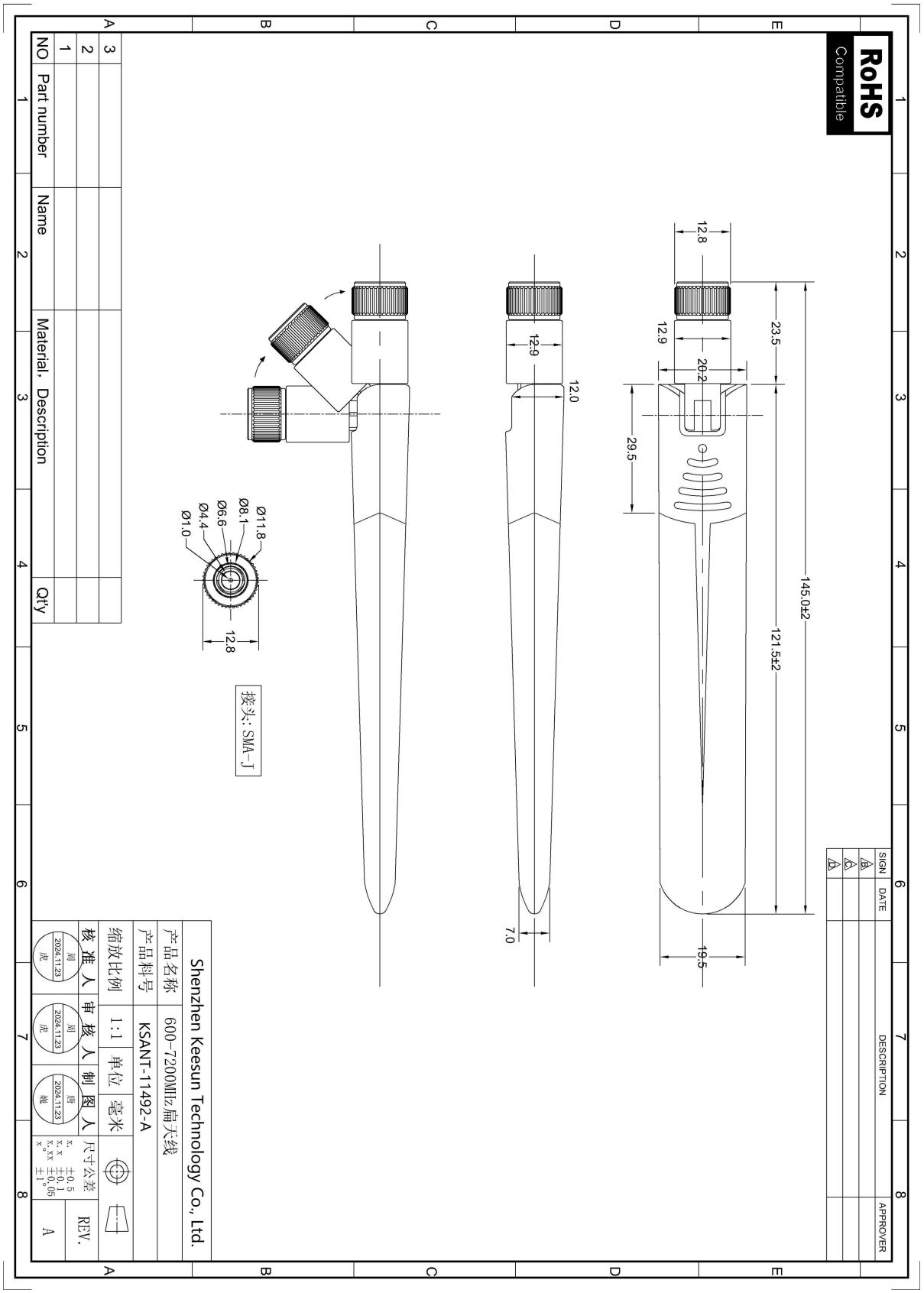
D. Photo



Reliability Test

Item	Test Condition		Specification
Storage Environment	In the absence of specified conditions, the test temperature, humidity, and air pressure are as follows: 1. Temperature: -45°C ~ +85°C 2. Relative humidity: 45%–85% 3. Air pressure: 86 kPa–106 kPa		Normal electrical and mechanical performance
High-Low Temperature Test	Place the sample in 85°C and -45°C environments for 5 cycles (2 hours per cycle), then leave it under normal conditions for 1–2 hours, and inspect the appearance and quality.		Dimensions shall meet specifications, and mechanical & electrical performance shall be satisfied
Constant Damp Heat Test	After exposure to 95±3% relative humidity at 40°C for 2 hours, measure the electrical performance of the sample within 5 minutes after removal, then leave it under normal conditions for 1–2 hours and inspect the appearance and quality.		Dimensions shall meet specifications, and mechanical & electrical performance shall be satisfied
Vibration Test	Vibration frequency range: 10–55 Hz, displacement amplitude: 0.35 mm, acceleration amplitude: 50.0 m/s², number of sweep cycles: 30		Normal electrical and mechanical performance
Drop Test	Free fall from 1 m height; select different drop positions for different products (preferentially select directions prone to damage), 1 drop per position.		Normal electrical and mechanical performance
Pull Force Test	Test the withstand force using a push-pull force gauge: ≥ 20 N		Normal electrical and mechanical performance
Withstand Voltage Test	1. Insulation spark voltage: 1.5 kV 2. Sheath spark voltage: 1.5 kV 3. Insulation-to-sheath withstand voltage: 0.5 kV		Normal electrical and mechanical performance
Attenuation Value	2.0(nominal) 2.9(nominal) 3.2(nominal) 3.7(nominal) 4.3(nominal) 4.8(nominal) 5.3(nominal)	1GHz 2GHz 2.4GHz 3.0GHz 4.0GHz 5.0GHz 6.0GHz	3.3dB/m (at20℃)

Product Drawing:

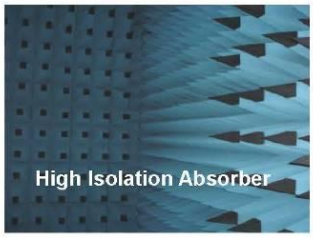


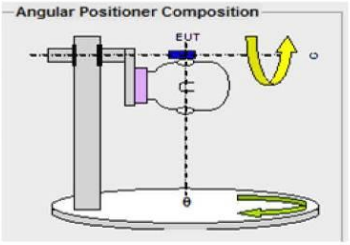
Test Equipment & Conditions

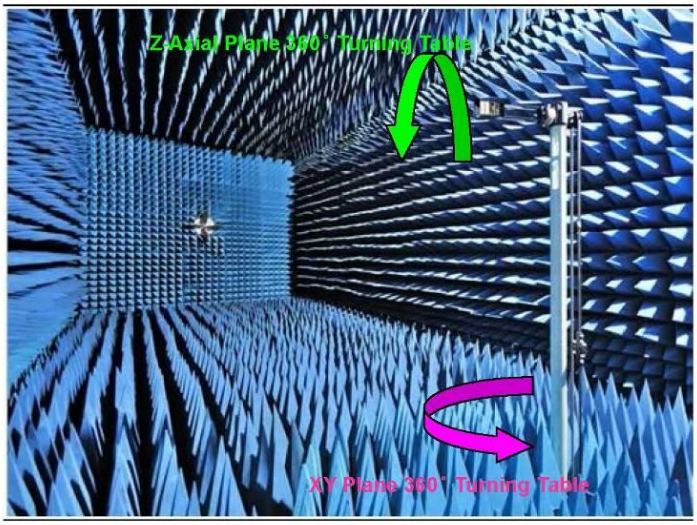
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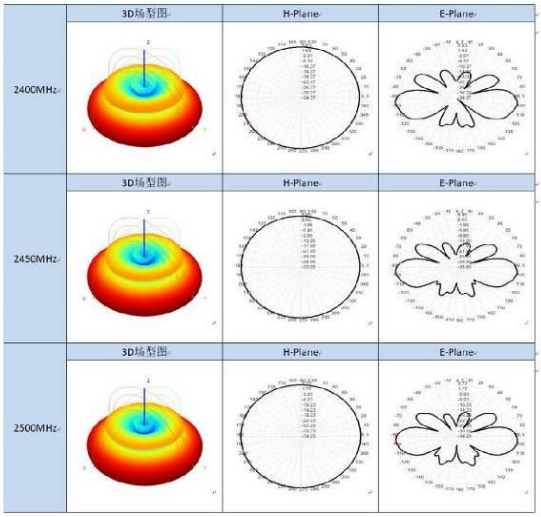
2、3D Chamber Test System

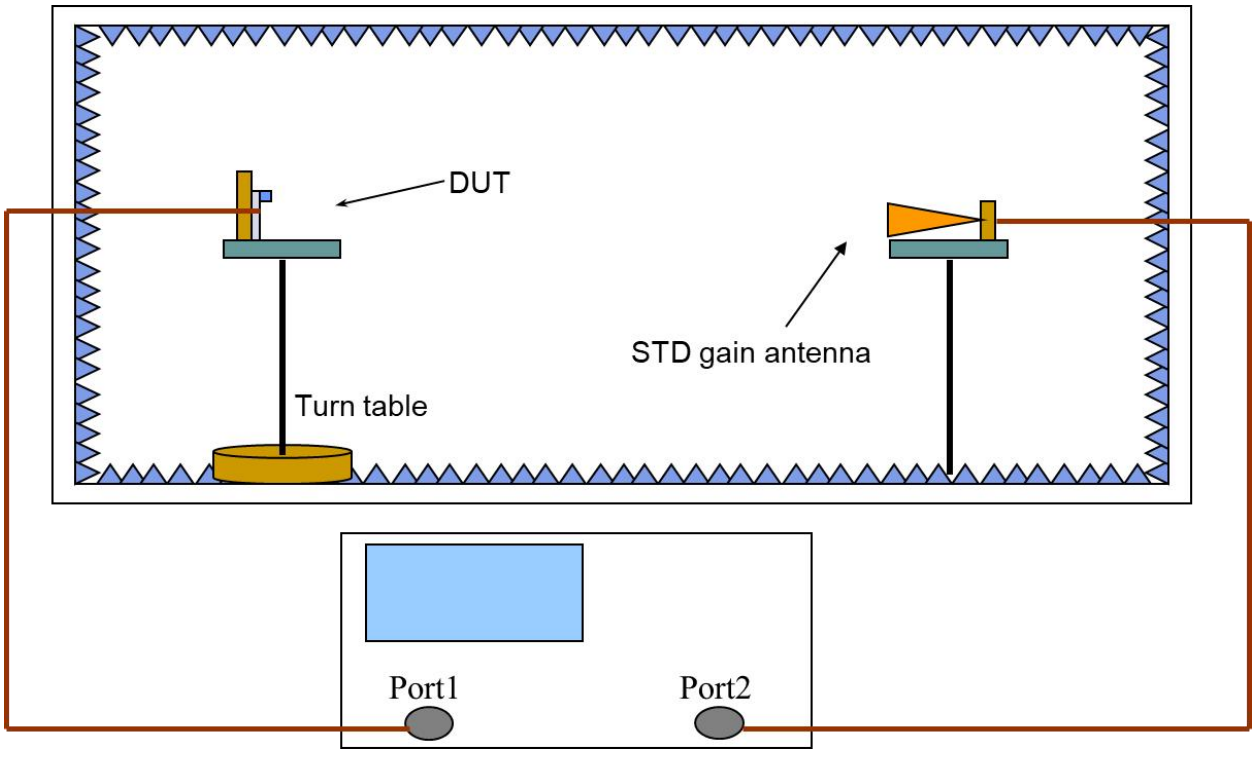
.Chamber Size: 9 x 5 x 4 m³
.Freq. Range: 0.4 ~ 18.0 GHz
.Double Ridge Horn Antenna
.VNA: Agilent E5071C
.3D Turning Table and Positioner
.ADT Solution 3D Testing Software



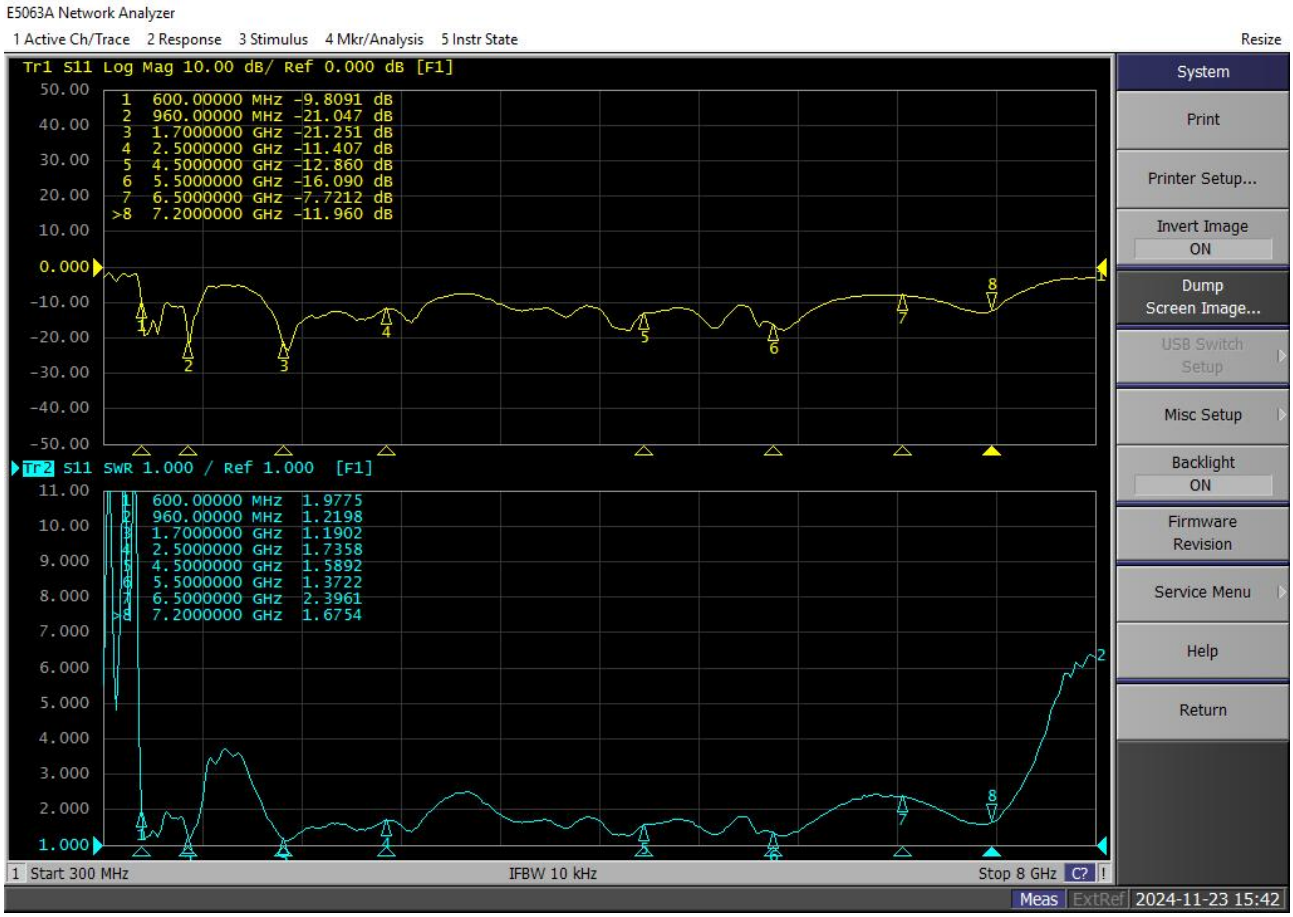








VSWR

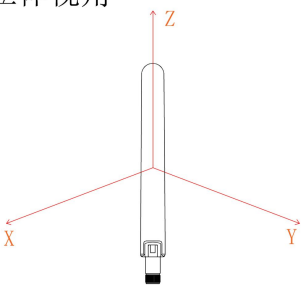
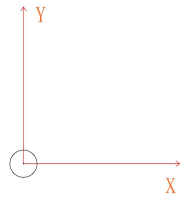
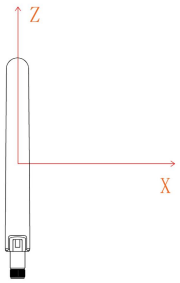
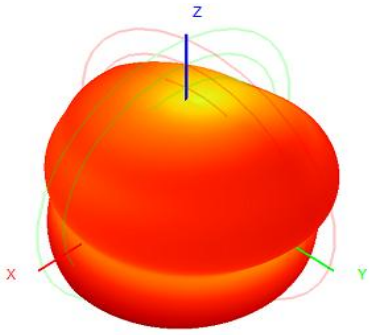
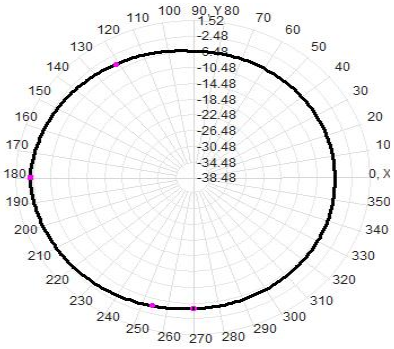
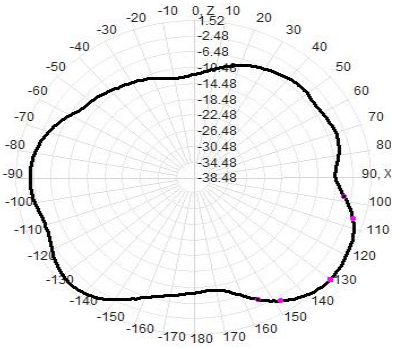
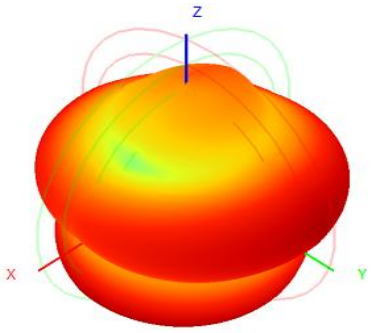
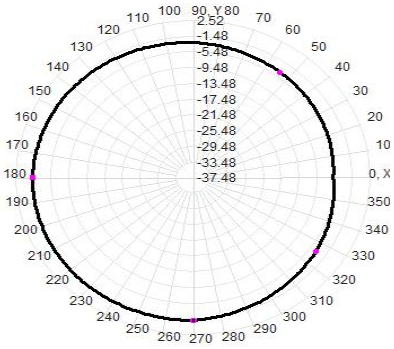
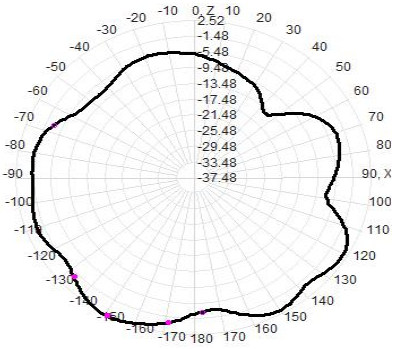
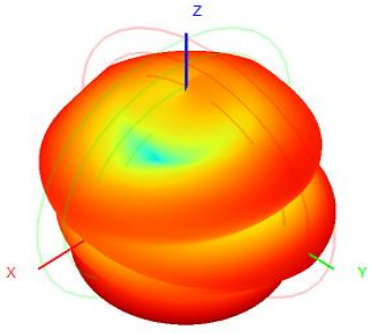
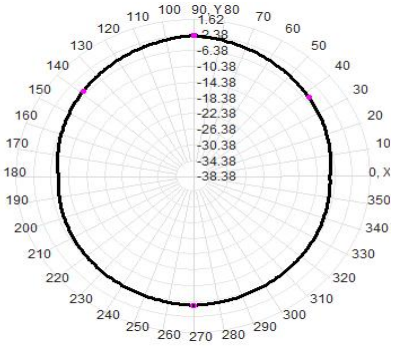
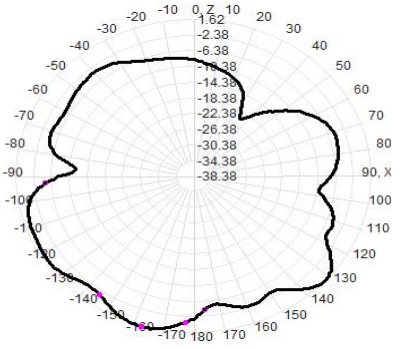

E5063A Network Analyzer
1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State
Resize
Tr1 S11 Log Mag 10.00 dB/ Ref 0.000 dB [F1]
1 600.00000 MHz -9.8091 dB
2 960.00000 MHz -21.047 dB
3 1.7000000 GHz -21.251 dB
4 2.5000000 GHz -11.407 dB
5 4.5000000 GHz -12.860 dB
6 5.5000000 GHz -16.090 dB
7 6.5000000 GHz -7.7212 dB
>8 7.2000000 GHz -11.960 dB
Tr2 S11 SWR 1.000 / Ref 1.000 [F1]
1 600.00000 MHz 1.9775
2 960.00000 MHz 1.2198
3 1.7000000 GHz 1.1902
4 2.5000000 GHz 1.7358
5 4.5000000 GHz 1.5892
6 5.5000000 GHz 1.3722
7 6.5000000 GHz 2.3961
>8 7.2000000 GHz 1.6754
1 Start 300 MHz
IFBW 10 kHz
Stop 8 GHz
Meas
ExtRef
2024-11-23 15:42
System
Print
Printer Setup...
Invert Image ON
Dump Screen Image...
USB Switch Setup
Misc Setup
Backlight ON
Firmware Revision
Service Menu
Help
Return

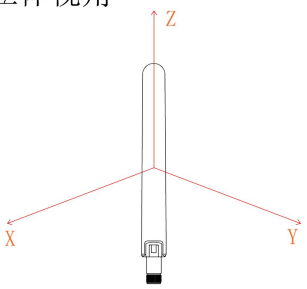
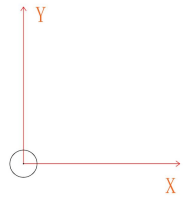
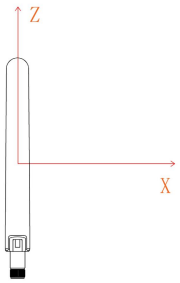
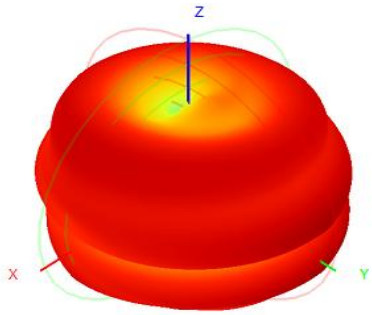
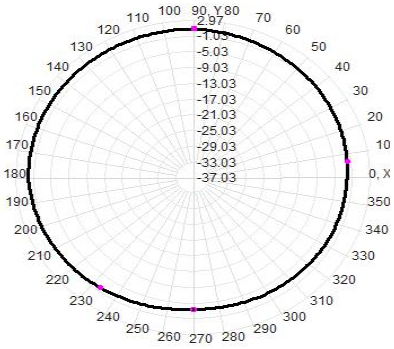
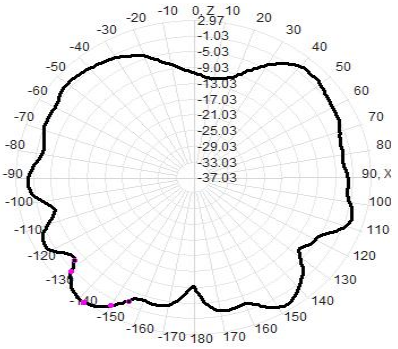
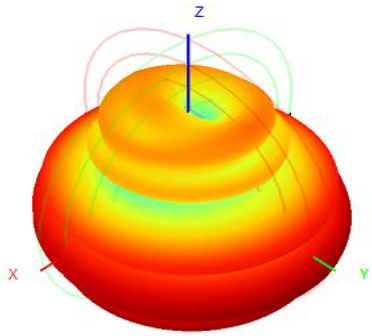
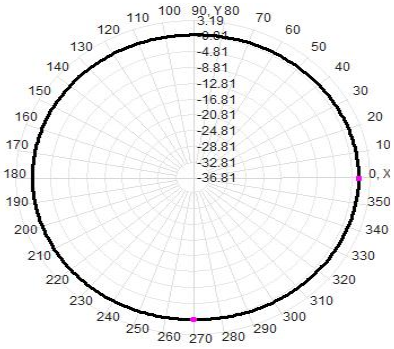
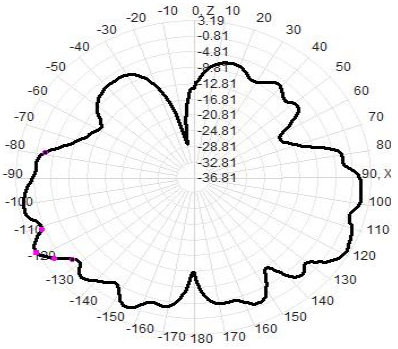
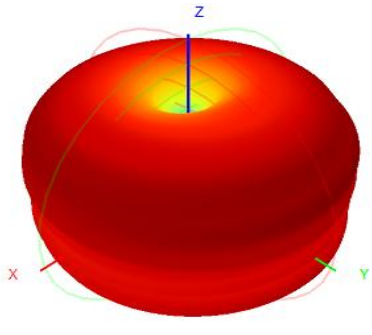
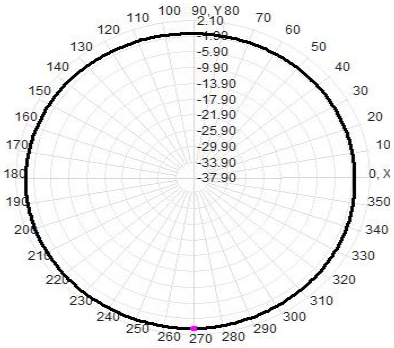
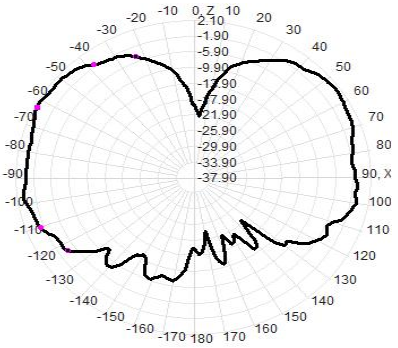
Total Efficiency& Gain:

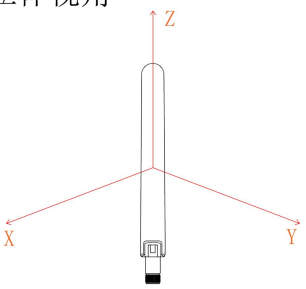
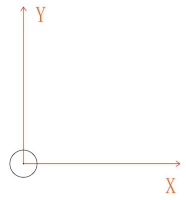
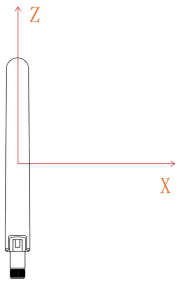
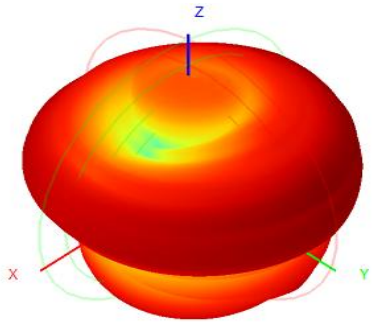
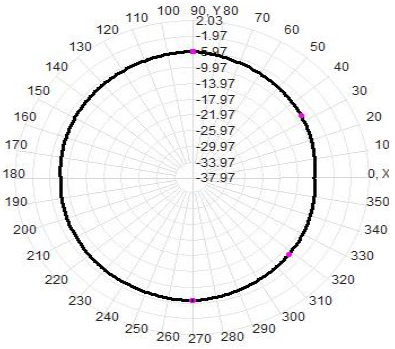
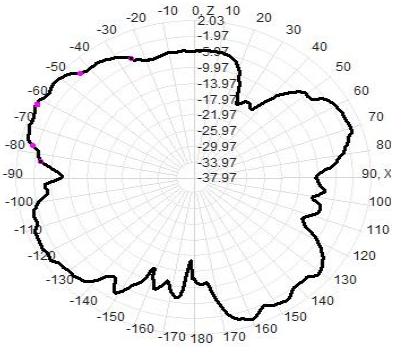
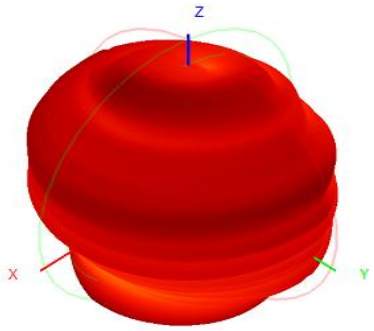
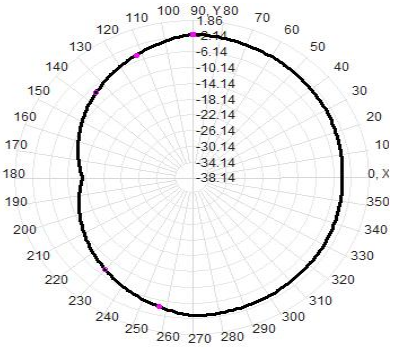
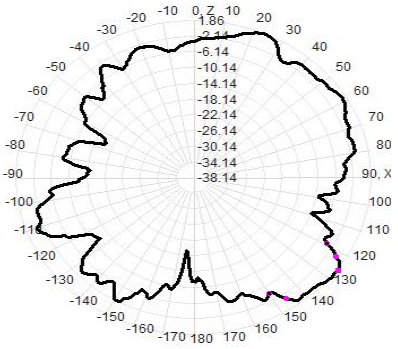
Frequency(MHz)	Gain(dBi)	Efficiency(%)	Frequency(MHz)	Gain(dBi)	Efficiency(%)
600	1.5	47.6	2100	2.6	53.9
620	1.8	50.2	2200	3.0	57.0
640	2.1	55.9	2300	2.9	59.3
660	1.9	57.0	2400	3.1	63.6
680	1.7	49.4	2500	3.2	62.7
700	1.3	45.7	2600	2.6	58.8
720	2.3	57.0	2700	3.1	58.6
740	2.4	61.1	2800	3.0	55.6
760	2.5	61.9	2900	1.8	51.2
780	2.7	59.3	3000	0.6	50.3
800	2.3	49.7	3100	0.6	56.1
820	2.8	55.3	3200	0.0	57.9
840	2.7	56.1	3300	0.9	63.4
860	3.3	60.9	3400	1.3	64.5
880	3.6	67.4	3500	2.1	67.5
900	2.4	53.2	3600	2.2	64.6
920	2.5	53.3	3700	2.7	64.2
940	2.1	51.8	3800	2.9	67.1
960	1.6	47.1	3900	2.6	60.0
			4000	2.9	60.0
1000	2.2	47.7	4100	3.0	59.4
1100	2.2	47.9	4200	3.0	64.6
1200	1.6	38.9	4300	2.7	61.8
1300	0.9	36.3	4400	2.6	63.5
1400	1.3	40.6	4500	2.0	63.3
1500	2.0	48.0	4600	1.9	62.2
1600	2.5	58.1	4700	1.3	55.9
1700	3.0	71.3	4800	1.1	54.6
1800	3.1	67.4	4900	1.5	56.3
1900	3.1	61.1	5000	1.9	59.5
2000	3.2	56.0	5100	3.8	60.5

Frequency(MHz)	Gain(dBi)	Efficiency(%)
5200	4.6	54.2
5300	3.8	50.1
5400	2.0	54.7
5500	1.9	61.9
5600	2.2	64.3
5700	2.1	60.2
5800	2.7	68.2
5900	2.5	60.8
6000	2.1	54.0
6100	2.6	56.5
6200	2.0	48.9
6300	2.3	52.8
6400	1.7	47.3
6500	1.5	46.2
6600	2.4	53.4
6700	3.0	56.0
6800	2.9	51.4
6900	2.0	45.3
7000	2.5	49.7
7100	2.6	50.7
7200	2.5	46.4

场型图

	3D	2D-水平面	2D-垂直面
轴的定义	立体视角 	顶端俯视 	前方视角 
600MHz			
760MHz			
960MHz			

	3D	2D-水平面	2D-垂直面
轴的定义	立体视角 	顶端俯视 	前方视角 
1700MHz			
2500MHz			
3500MHz			

	3D	2D-水平面	2D-垂直面
轴的定义	立体视角 	顶端俯视 	前方视角 
4500MHz			
5500MHz			
7200MHz	