Directional antenna Data Sheet

APPROVAL SHEET

Customer Name	
Product Model	**Fiberglass Antenna**
Customer P/N	
Specifications	**20-500MHz,φ32*600mm,Integrated N-J, Army Green**
KEESUN P/N	**KSANT-12334-A**
Date Prepared	**2026.10.13**
Revision	**1.0**

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

Index

1. Cover ·····1

2. Contents ·····2

3. Product Specification ····· 3

4. Reliability Test ····· 4

5. IP67 Test Report ·····5-10

6. Product Drawing ·····11

7. Test Equipment & Conditions ·····12

8. Test Report ·····13-16

Product Specification

A. Electrical Characteristics	
Frequency	20-500MHz
VSWR (Grounding Test)	< 2.5
EfficiencyEfficiency	≈22%
Peak GainPeak Gain	-5 ~ -1.5dBi
Impedance	50 Ohm
Polarization	Linear
Horizontal Beamwidth	360°
Vertical Beamwidth	40-89°
Out of Roundness	±2
Max Power	100W
B. Material & Mechanical	
Connector Type	Integrated N-J
Dimension	Φ32*600±5mm
Weight	0.45Kg
Radome Material	Fiberglass (Army Green)
C. Environmental	
Operation Temperature	- 45˚C ~ +85 ˚C
Storage Temperature	- 45˚C ~ +85 ˚C
Rated Wind Velocity	36.9m/s
Lightning Protection	DC Ground

D. Photo

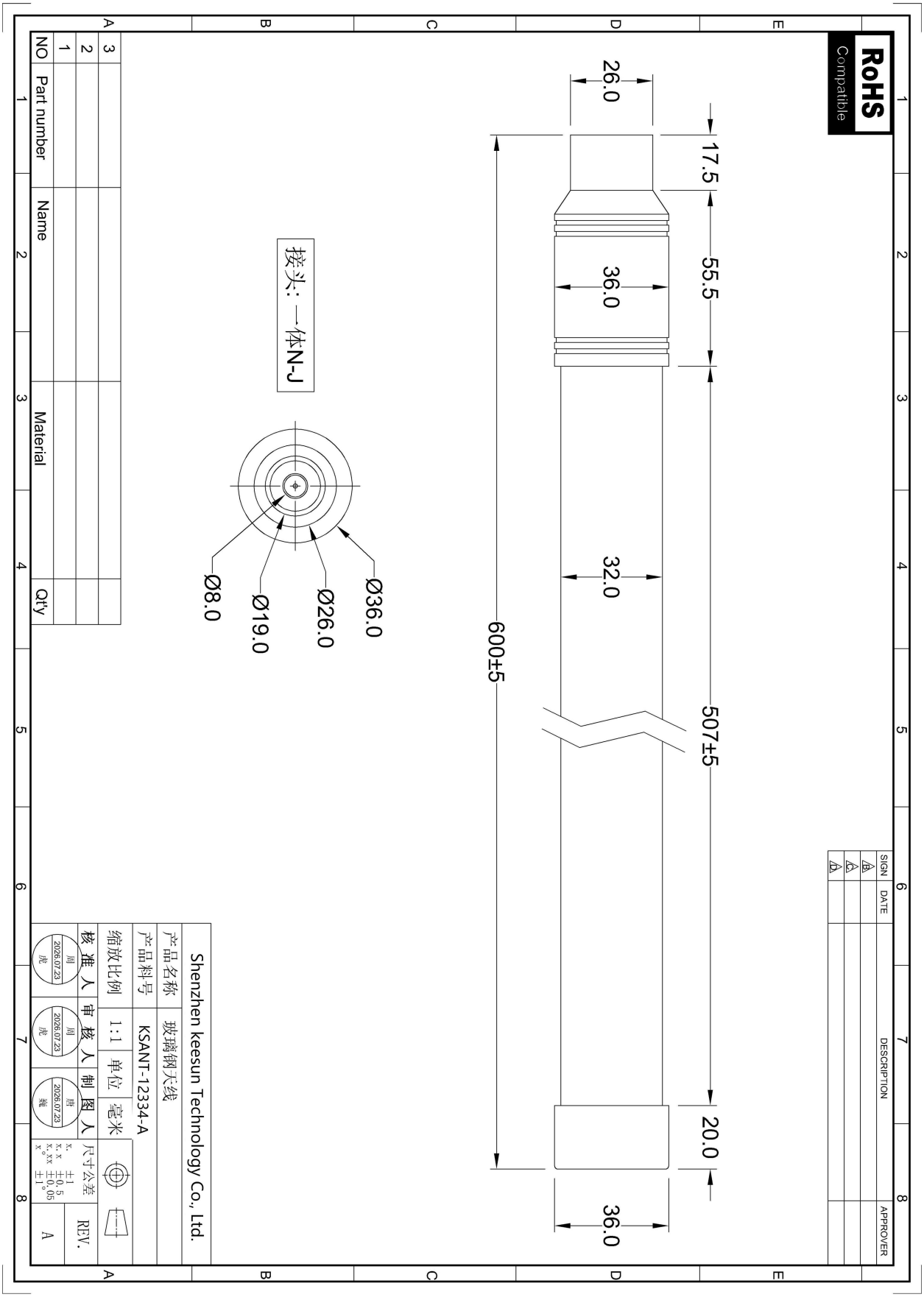




Reliability Test

Item	Test Conditions	Specifications
Storage Environment	Unless otherwise specified, test temperature, humidity, and air pressure are as follows: 1. Temperature: -45℃ ~ +85℃ 2. Relative humidity: 45% – 85% 3. Air pressure: 86 kPa – 106 kPa	Electrical and mechanical performance shall be normal
High/Low Temperature Test	Place at 85℃ and -45℃ for 5 cycles of 2H each, then under normal conditions for 1-2H; check appearance quality.	Dimensions shall meet specifications and meet mechanical and electrical performance
Constant Humidity & Heat Test	Relative humidity 95±3%, test temperature 40℃. After 2H exposure, measure electrical performance within 5 min after sample removal, then under normal conditions for 1-2H; check appearance quality.	Dimensions shall meet specifications and meet mechanical and electrical performance
Vibration Test	Vibration frequency 10-55 Hz, displacement amplitude: 0.35 mm, acceleration amplitude: 50.0 m/s², sweep cycles: 30	Electrical and mechanical performance shall be normal
Drop Test	1 m drop test	Electrical and mechanical performance shall be normal
Pull Force Test	Use a force gauge to verify tensile strength: ≥ 200 N	Electrical and mechanical performance shall be normal
Withstand Voltage	1. Insulation spark voltage 1.5 KV 2. Sheath spark voltage 1.5 KV 3. Insulation-to-sheath withstand voltage 0.5 KV	Electrical and mechanical performance shall be normal
Attenuation	2.0(nominal) 1GHz 2.9(nominal) 2GHz 3.2(nominal) 2.4GHz 3.7(nominal) 3.0GHz 4.3(nominal) 4.0GHz 4.8(nominal) 5.0GHz 5.3(nominal) 6.0GHz	3.3dB/m (at20℃)

Product Drawing:



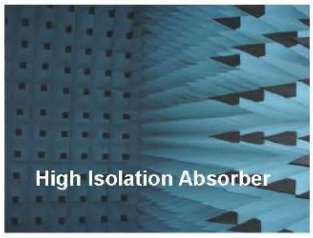
Add：4th Floor, Building B, Haiwei Jingsong Industrial Zone Heping Community Fuhai Street, Baoan District, Shenzhen City.
Web： www.keesunantenna.com

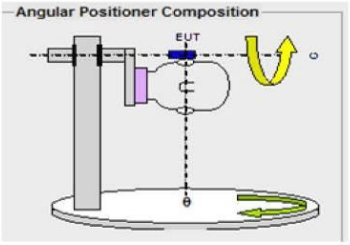
Test Equipment & Conditions

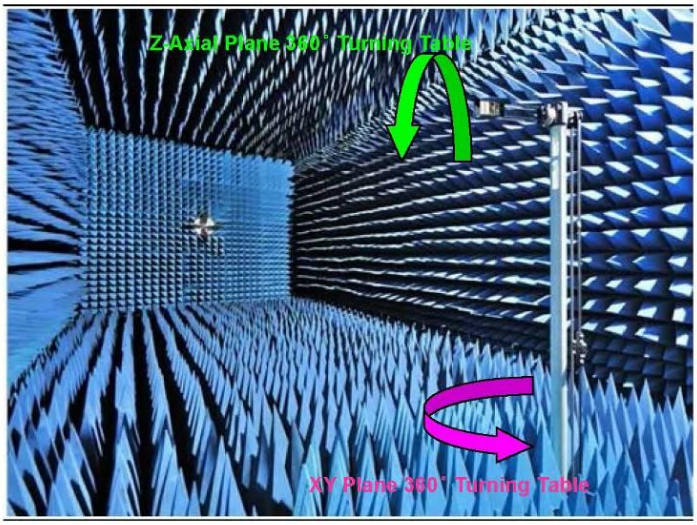
1. Network Analyzer: Keysight E5071C

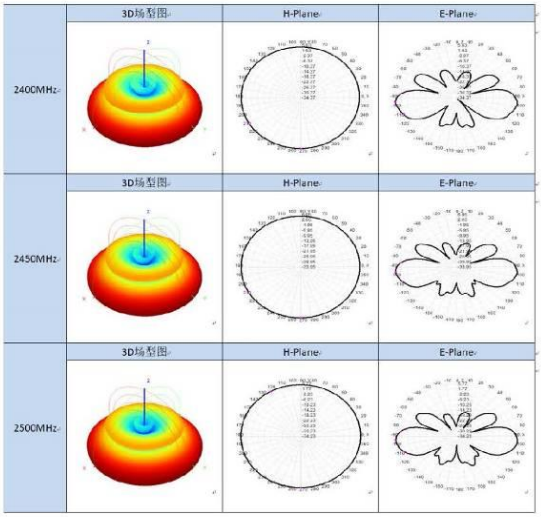
2. 3D Chamber Test System

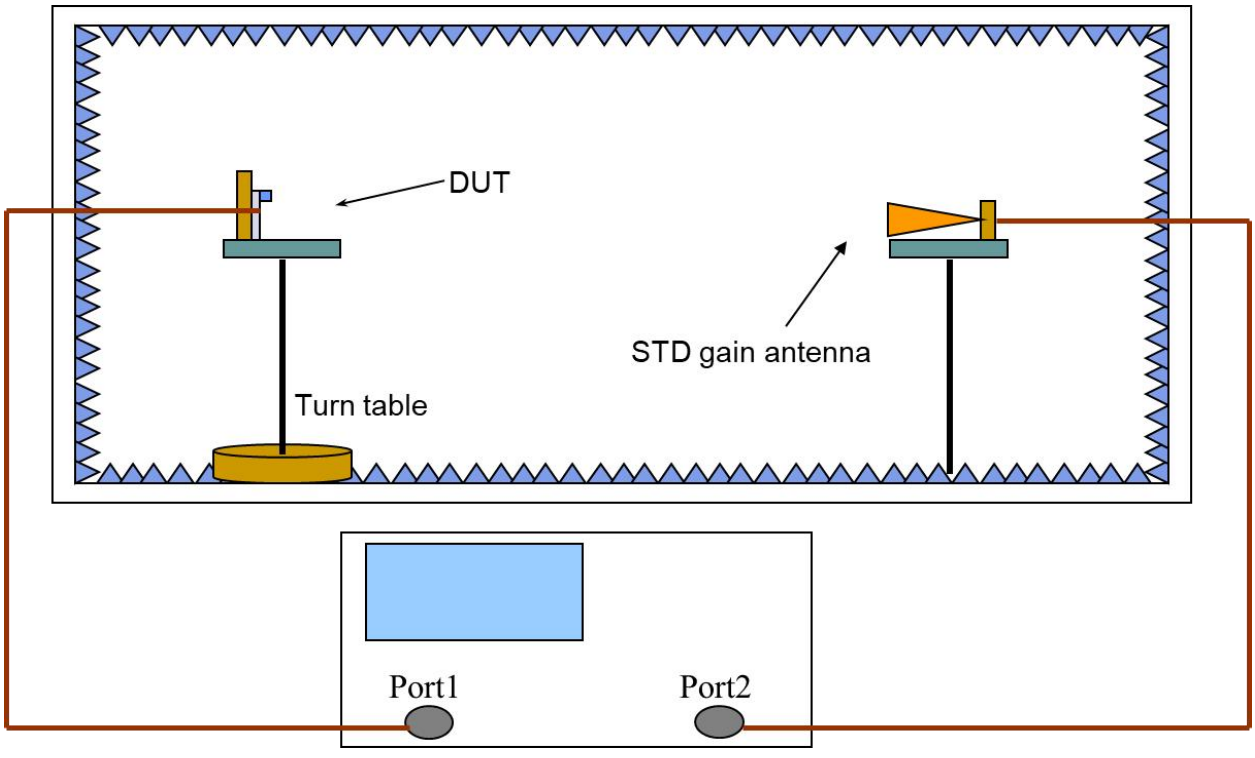
.Chamber Size: 9 x 5 x 4 m³
.Freq. Range: 0.4 ~ 18.0 GHz
.Double Ridge Horn Antenna
.VNA: Agilent E5071C
.3D Turning Table and Positioner
.ADT Solution 3D Testing Software



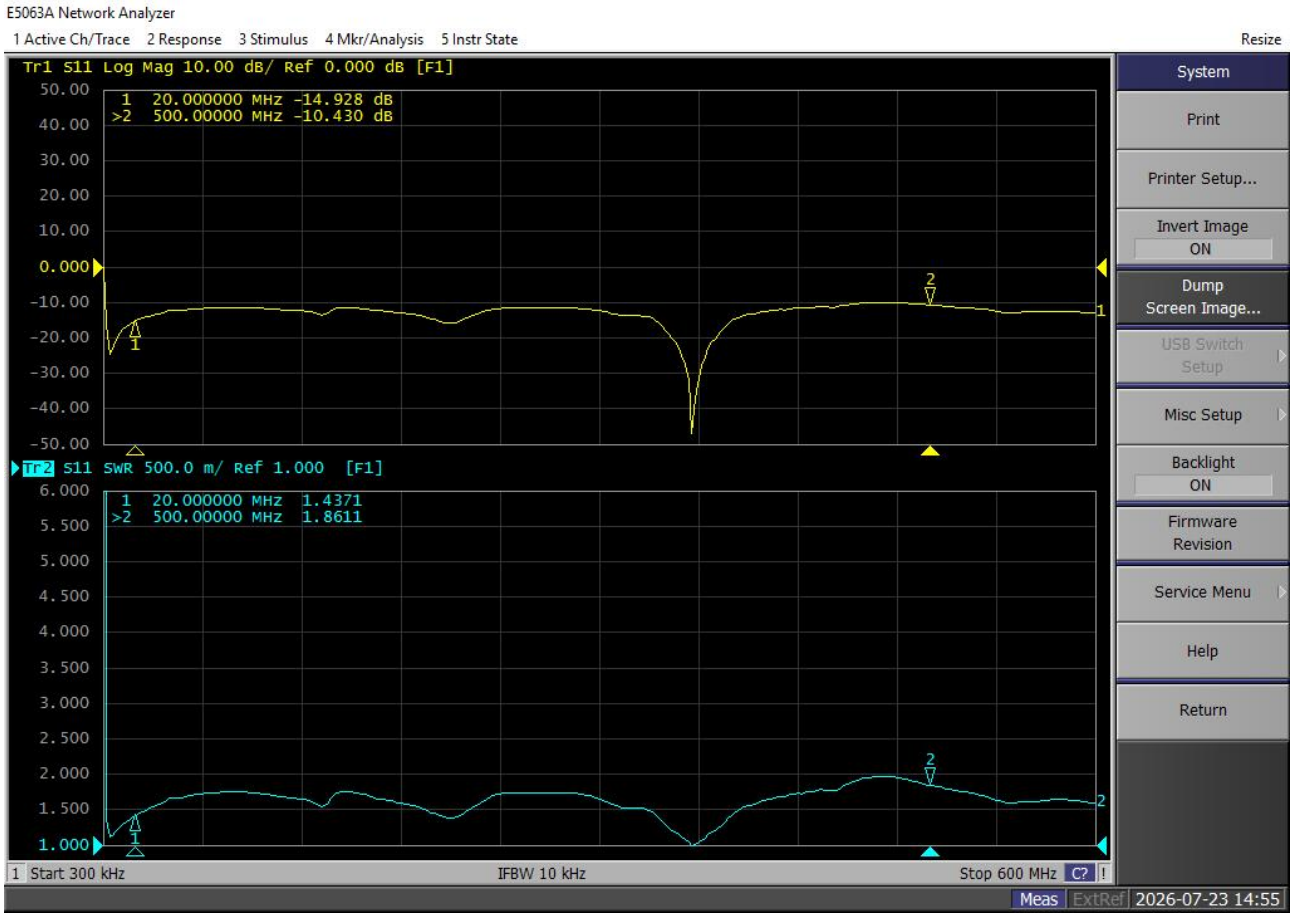








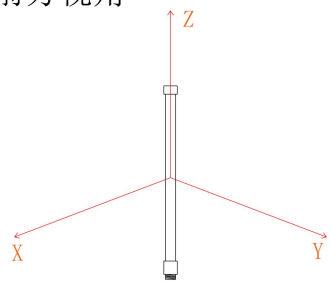
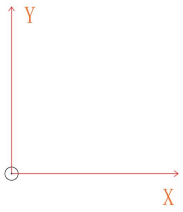
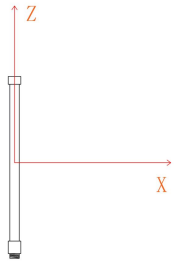
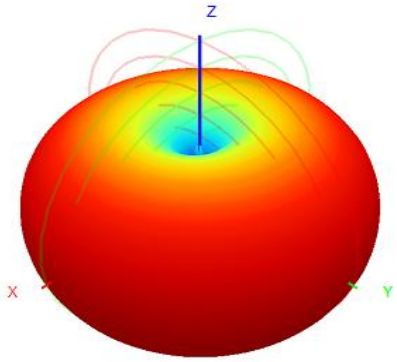
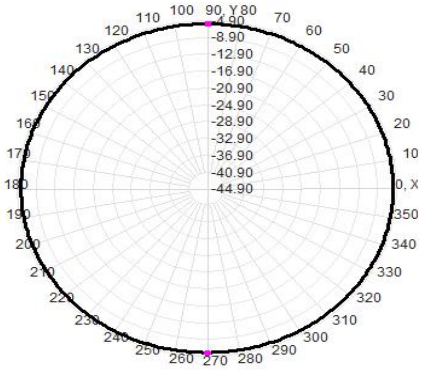
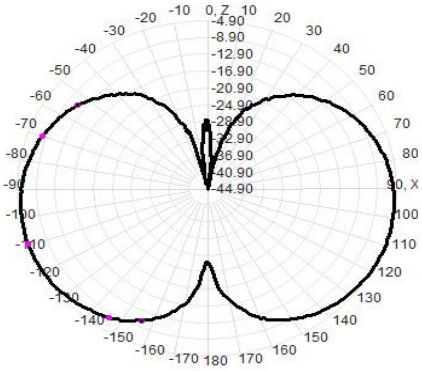
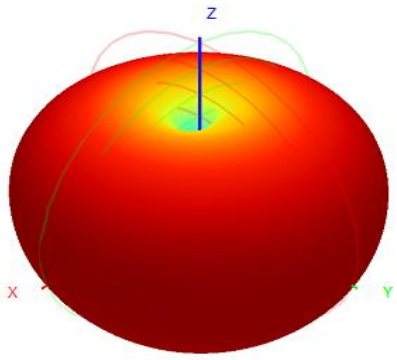
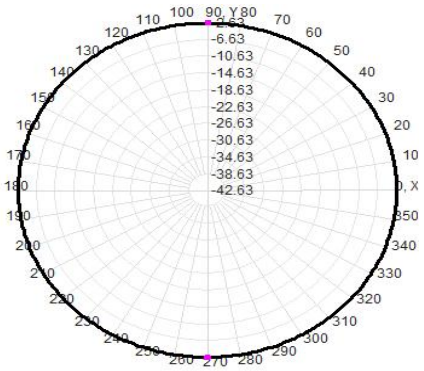
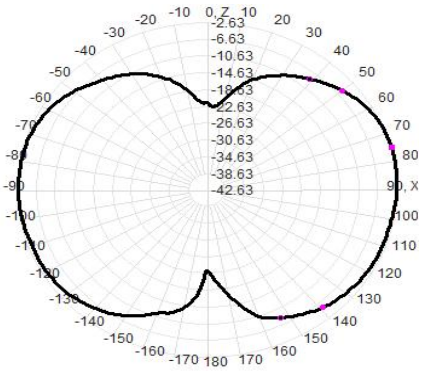
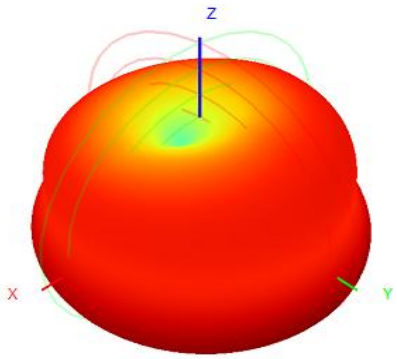
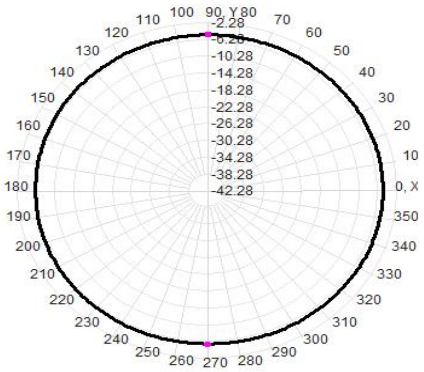
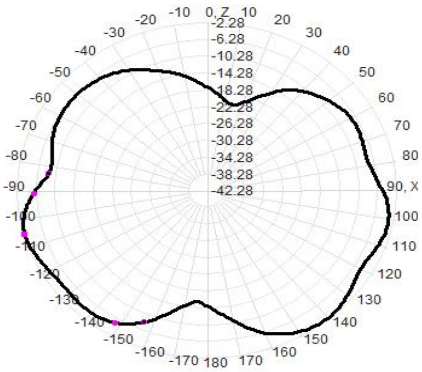
VSWR


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 20.000000 MHz -14.928 dB
>2 500.00000 MHz -10.430 dB
Tr2 S11 SWR 500.0 m/ Ref 1.000 [F1]
1 20.000000 MHz 1.4371
>2 500.00000 MHz 1.8611
1 Start 300 kHz
IFBW 10 kHz
Stop 600 MHz
Meas
ExtRef
2026-07-23 14:55
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(%)
20	-2.0	9.1
50	-3.9	14.3
100	-4.9	17.4
150	-4.1	21.2
200	-3.5	16.6
250	-3.2	20.7
300	-2.7	18.5
350	-2.6	34.7
400	-1.6	34.1
450	-2.6	29.4
500	-2.3	26.0

Pattern Plot

	3D	2D-Horizontal Plane	2D-Vertical Plane
Axis Definition	前方视角 	顶端俯视 	侧边视角 
100MHz			
350MHz			
400MHz			

Out of Roundness

100MHz	350MHz	400MHz
0.39	0.16	1.05
