Omni Fiberglass antenna Data Sheet

APPROVAL SHEET

Customer Name	
Product Model	**Fiberglass Antenna**
Customer P/N	
Specifications	**5.8G,Φ20*400mm/Sea Grey / side-exit N-K, with spring & flange**
KEESUN P/N	**KSANT-12128-A**
Date Prepared	**2026.10.29**
Revision	**1.0**

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

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Product Specification

A. Electrical Characteristics

Frequency	5150-5850MHz
VSWR	< 2.0
Efficiency	≈76%
Peak Gain	6.5-8dBi
Impedance	50 Ohm
Polarization	Linear
Horizontal Beamwidth	360°
Vertical Beamwidth	11-15°
Roundness	±1
Max Power	300W



B. Material & Mechanical

Connector Type	With spring, round flange, side-exit N-K
Dimension	Φ20*400±10mm
Weight	0.71Kg
Radome Material	Fiberglass (Sea Grey)

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



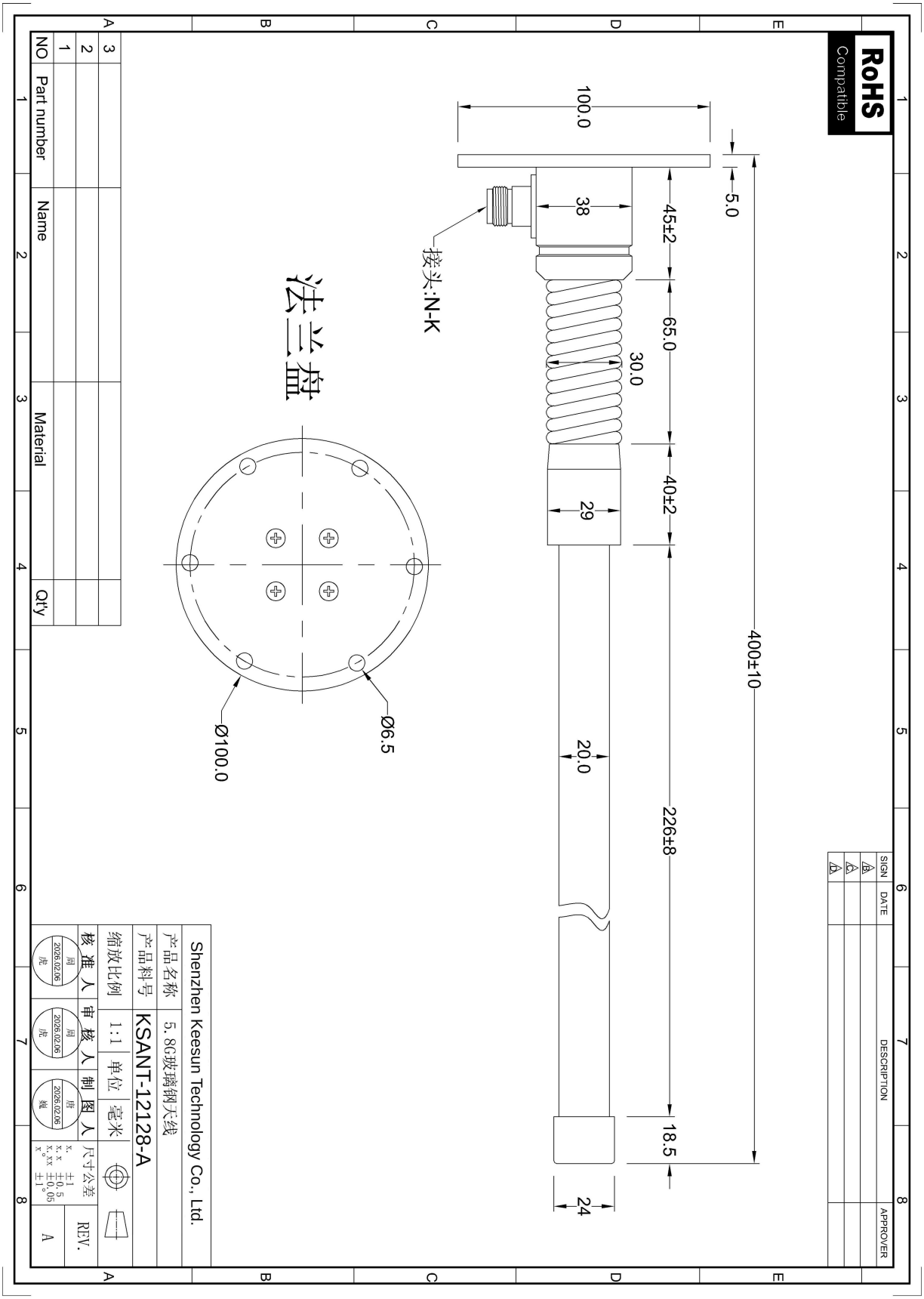




Reliability Test

Item	Test Conditions	Specification
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 & mechanical performance normal
High/Low Temperature Test	5 cycles between 85℃ and -45℃, 2H each; then 1-2H under normal conditions; check appearance quality.	Dimensions meet specification; mechanical & electrical performance normal
Constant Damp Heat Test	Relative humidity 95±3%, test temperature 40℃. After 2H exposure, measure electrical performance within 5 min after sample removal; then 1-2H under normal conditions; check appearance quality	Dimensions meet specification; mechanical & electrical performance normal
Vibration Test	Sweep 10-55 Hz, displacement 0.35 mm, acceleration 50.0 m/s², 30 sweep cycles	Electrical & mechanical performance normal
Drop Test	Drop from 1m height	Electrical & mechanical performance normal
Tensile Test	Force gauge test; withstand force ≥ 200N	Electrical & mechanical performance 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 & mechanical performance 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	3.3 dB/m (at 20℃)

Product Drawing

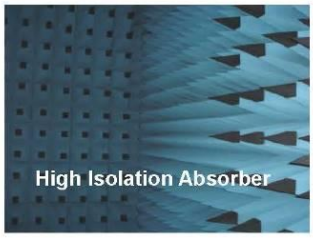


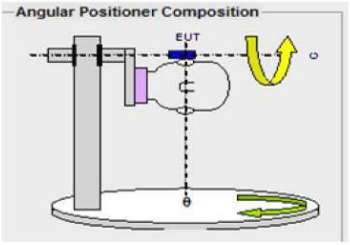
Test Equipment & Conditions

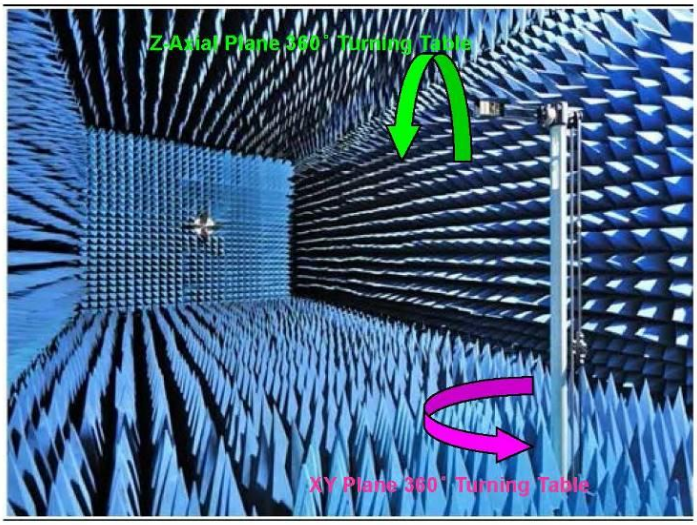
1. Network Analyzers: Keysight E5071C

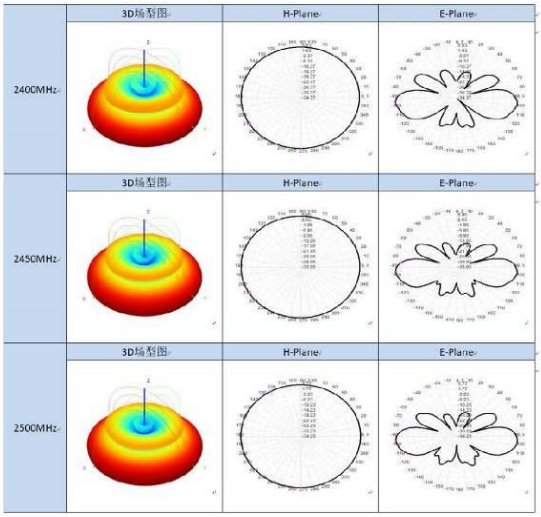
2. 3D Chamber Test System

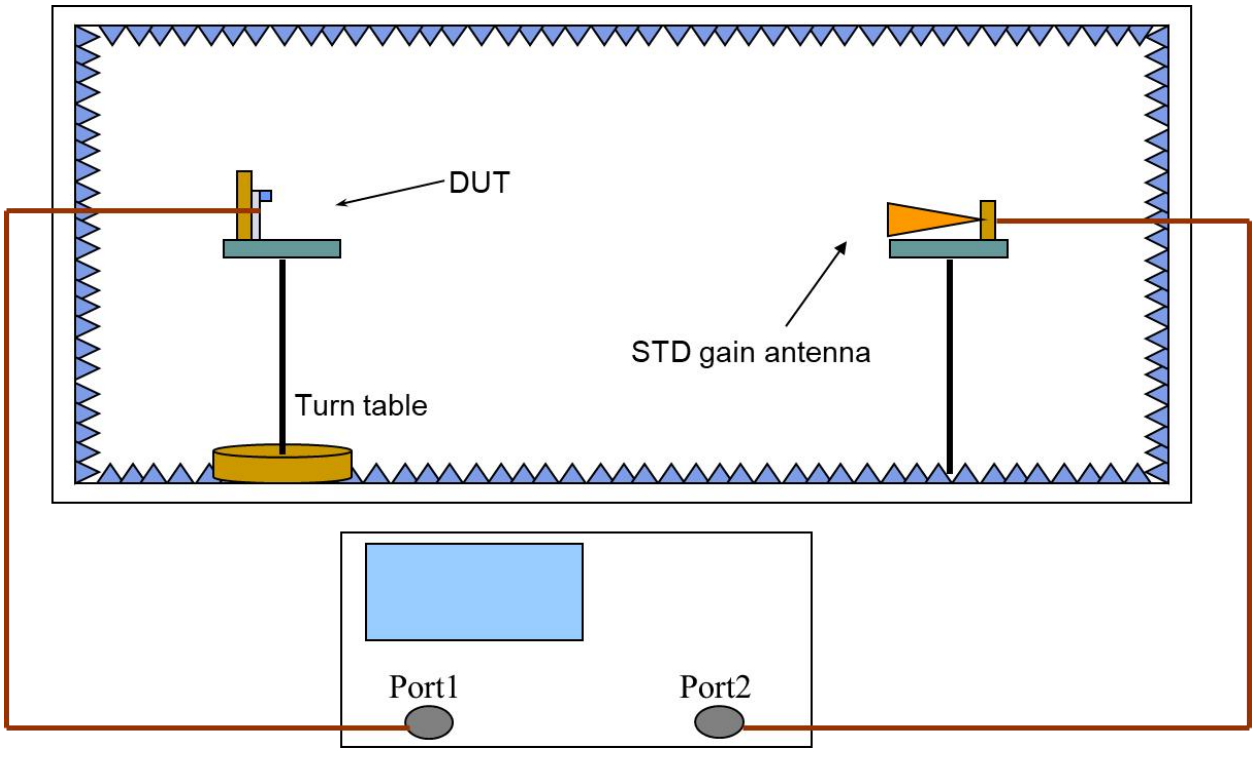
.Chamber Size: 9 x 5 x 4 m³
.Freq. Range: 0.4 ~ 18.0 GHz
.Double Ridge Horn Antenna
.VNA: Agilent E5071C
.3D Turning Table and Positioner
.ADT Solution 3D Testing Software



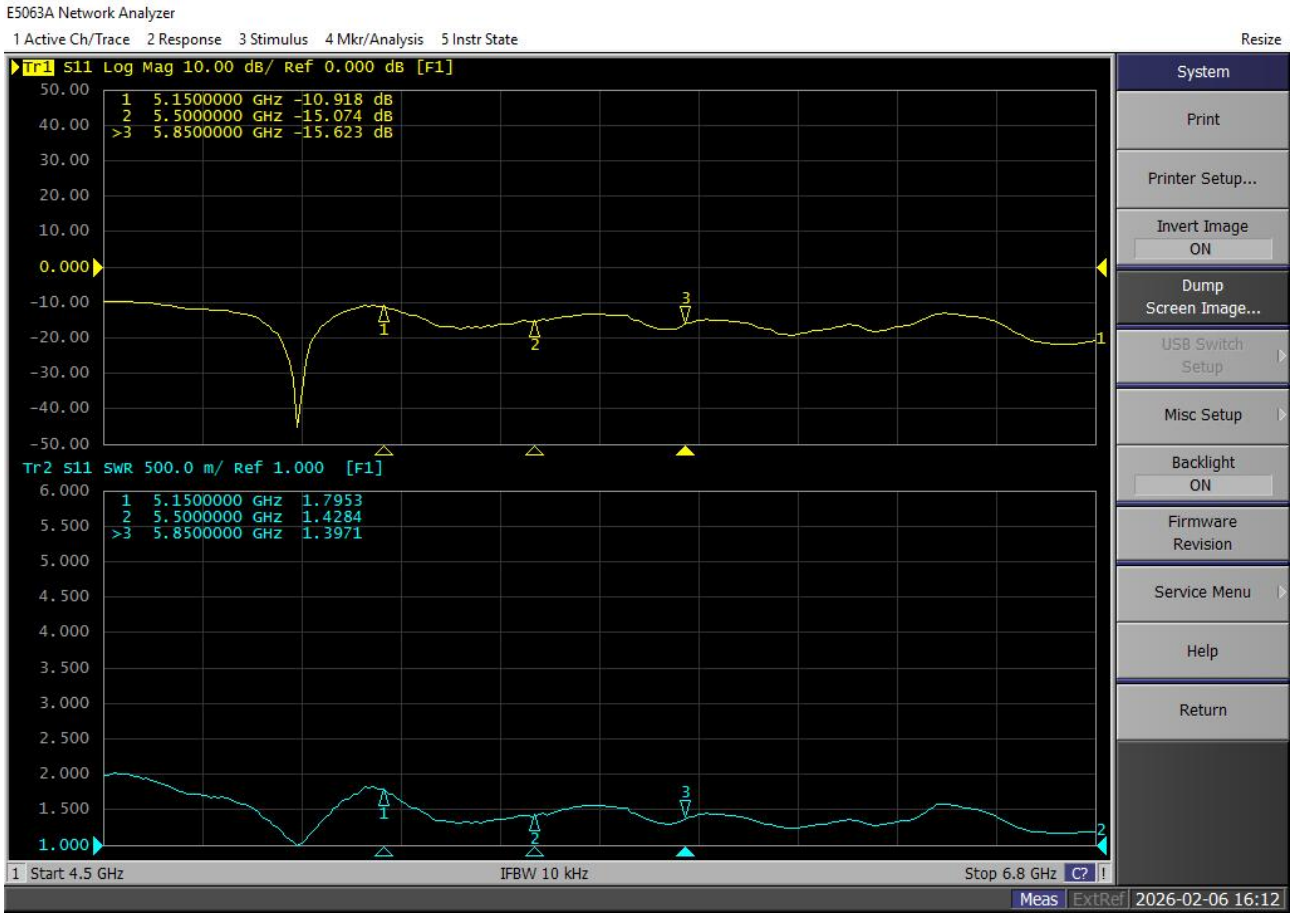








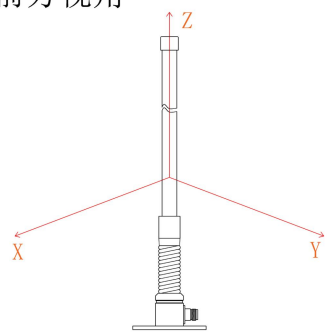
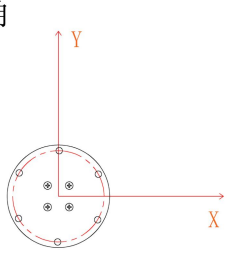
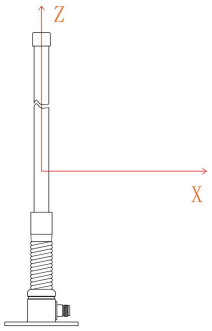
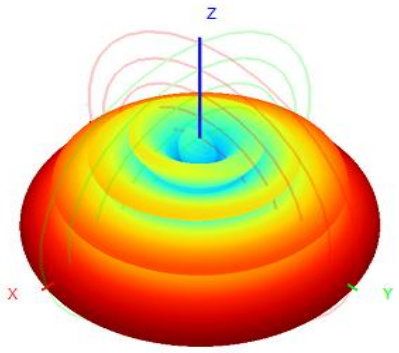
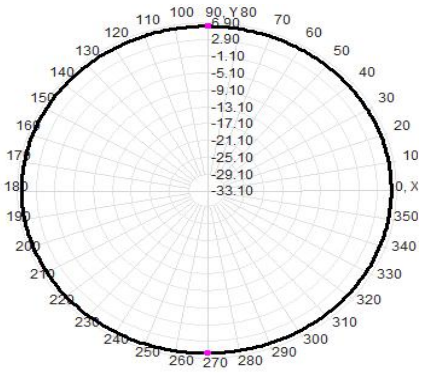
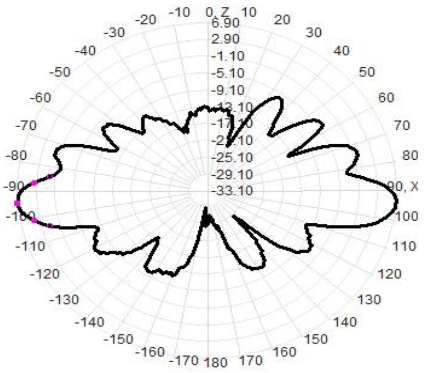
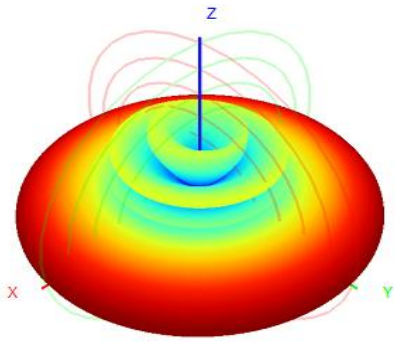
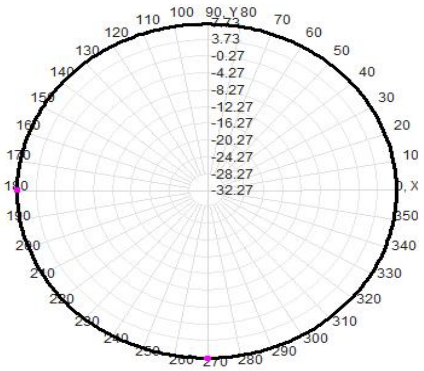
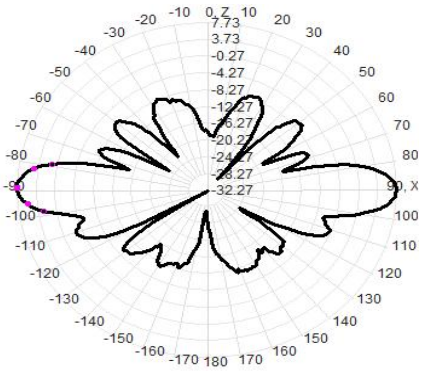
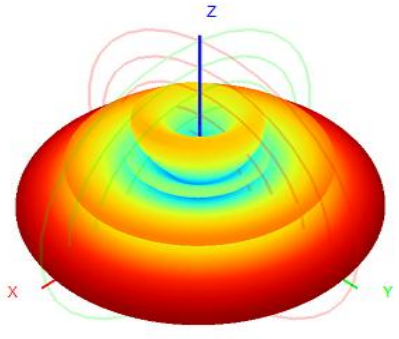
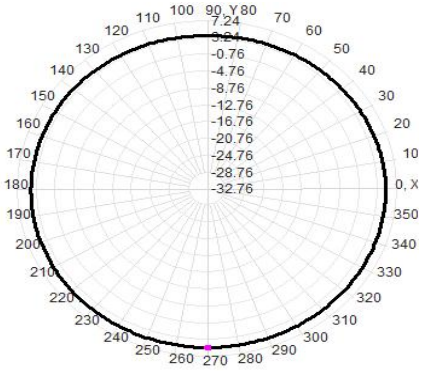
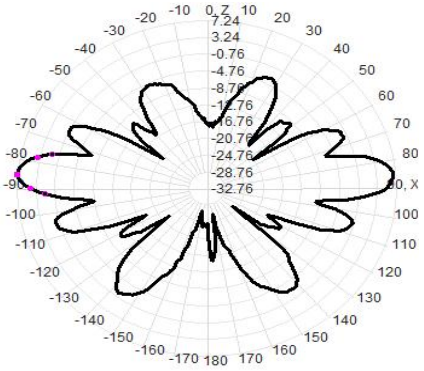
VSWR


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 5.1500000 GHz -10.918 dB
2 5.5000000 GHz -15.074 dB
>3 5.8500000 GHz -15.623 dB
Tr2 S11 SWR 500.0 m/ Ref 1.000 [F1]
1 5.1500000 GHz 1.7953
2 5.5000000 GHz 1.4284
>3 5.8500000 GHz 1.3971
1 Start 4.5 GHz
IFBW 10 kHz
Stop 6.8 GHz
Meas
ExtRef
2026-02-06 16:12
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(%)
5150	6.9	74.9
5200	7.3	76.2
5250	7.6	80.5
5300	7.4	75.5
5350	7.5	76.6
5400	7.8	80.7
5450	7.7	81.4
5500	7.7	78.6
5550	7.9	79.1
5600	7.6	76.0
5650	7.9	80.2
5700	6.8	63.9
5750	7.3	72.7
5800	7.5	72.1
5850	7.2	70.5

Pattern Plot

	3D	2D-Horizontal Plane	2D-Vertical Plane
Axis Definition	前方视角 	底部视角 	侧面视角 
5150MHz			
5500MHz			
5850MHz			

Roundness

5150MHz	5500MHz	5850MHz
0.61	0.37	1.32
