Shenzhen SKYLink Technology Co.,Ltd
Floor D, 5th Floor, Building L, No. 26, Lane 2, Liuxian 1st Road,
Bao'an District, Shenzhen

Antenna Specification for Approval

Customer Name: _____

Product Name: SRD Antenna

Part NO.: EWF046.DF01B.SMAMF

Write By: Damon Cui

Issued Date: 2025-4-1

Customer

R&D Dept	Business Dept	Approved By

SKYLink

R&D Dept	Engineer Dept	Approval

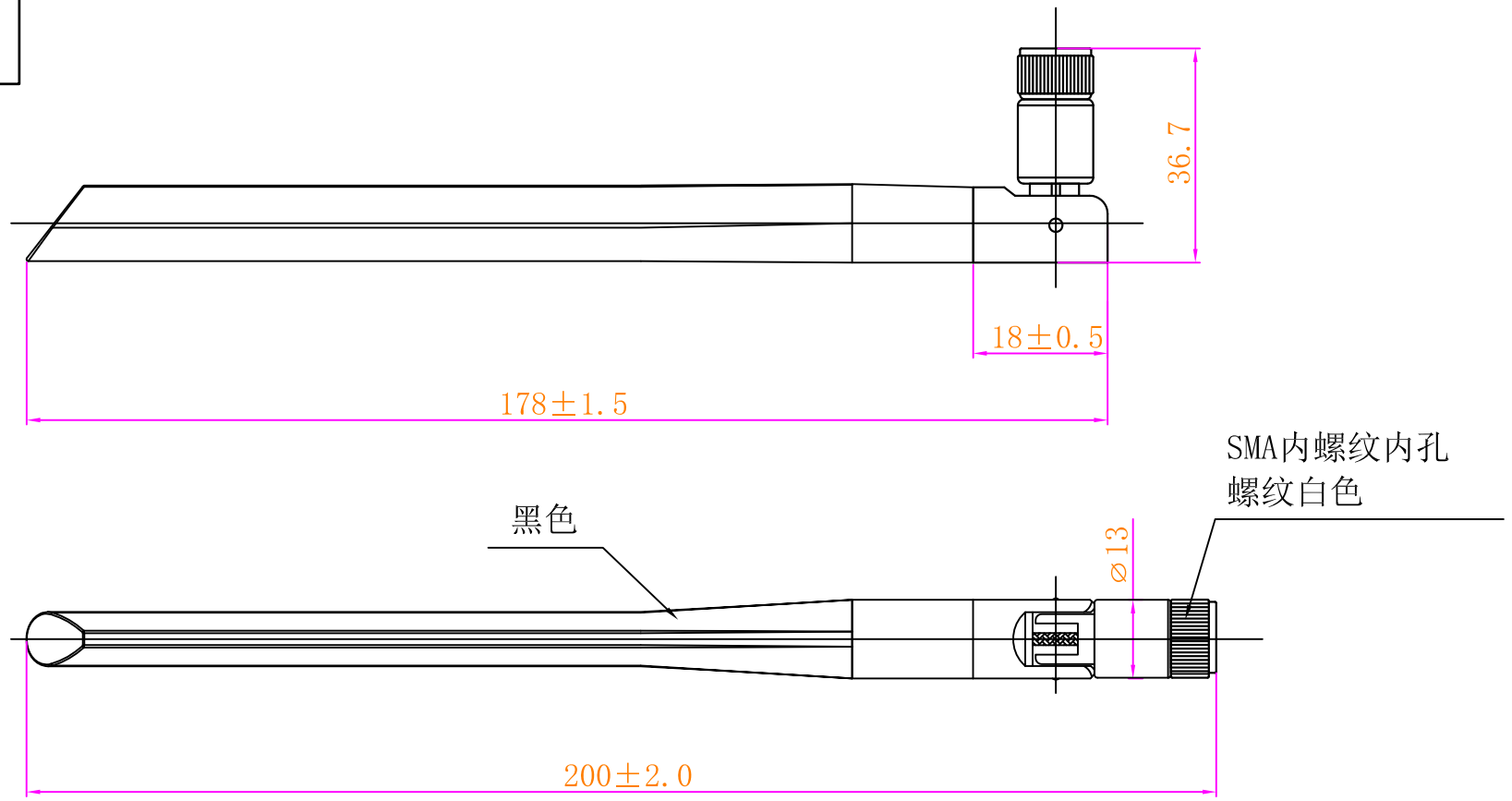
Product Specification

A. Electrical Characteristics	
Frequency	**2400MHz ~2500MHz 5150MHz~5850 MHz**
VSWR	**2400MHz ~2500MHz <2.0** **5150MHz~5850 MHz <3.0**
Efficiency	**>50%**
Impedance	**50 Ohm**
Polarization	**Line**
Gain	**≤5DBi@ 5150MHz~5850 MHz** **≤3DBi @ 2400MHz ~2500MHz**
B. Material & Mechanical Characteristics	
Material of Radiator	**Cu**
Cable Type	**RG178**
Connector Type	**SMA**
Dimension	
C. Environmental	
Operation Temperature	**- 30 ˚C ~ + 80 ˚C**
Storage Temperature	**- 30 ˚C ~ + 85 ˚C**

Test Equipment & Conditions

由 Autodesk 教育版产品制作

RoHS
Compliant
G P



Rev	Description	Date	Remark
A	New drawing		

深 圳 天 联 凌 科 技 有 限 公 司
SHEN ZHEN SKYLink CO.,LTD

Third Angle				Project		Date	2021-07-21
0～10	±0.05	○	0.02	Part Name	棒子天线	Designed by	
10～18	±0.10	◎	⌀0.03	Part No.	EWF046.DF01B.SMAMF	Checked by	MD
18～30	±0.12	⊥	0.02	Material			RF
30～40	±0.15	▱	0.04	DWG No.		Approved by	
40～	±0.20	Angle	±0.5°			Unit mm	Scale 1:1 Rev A
Location							

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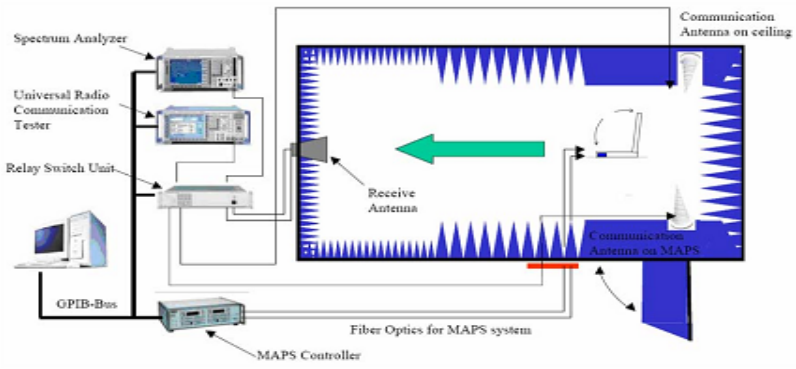
1. Network Analyzers :

Agilent 8753D 5071B

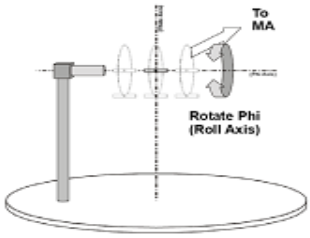
2. Communications Test Set:

Agilent E5515C

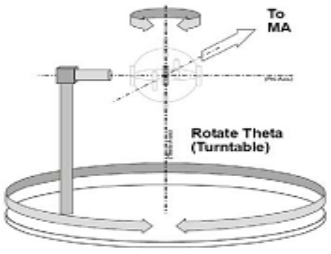
3. 3D Chamber Test System



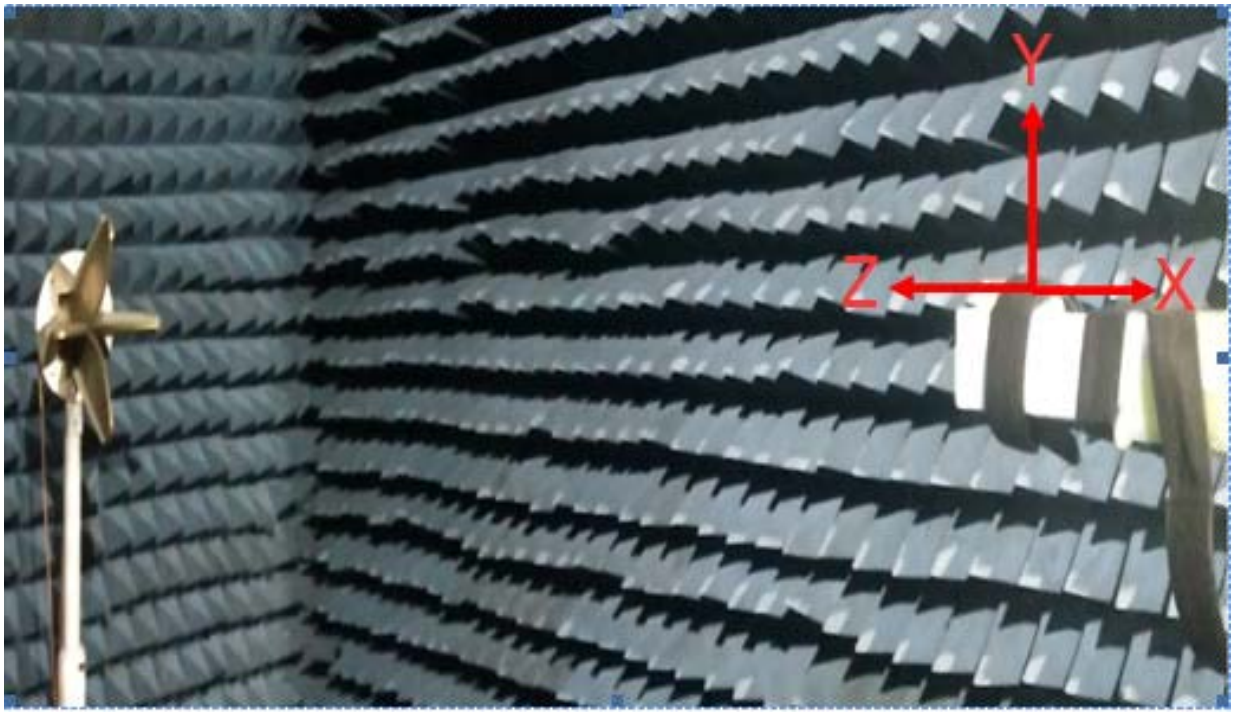
(Testing by 3D anechoic chamber)



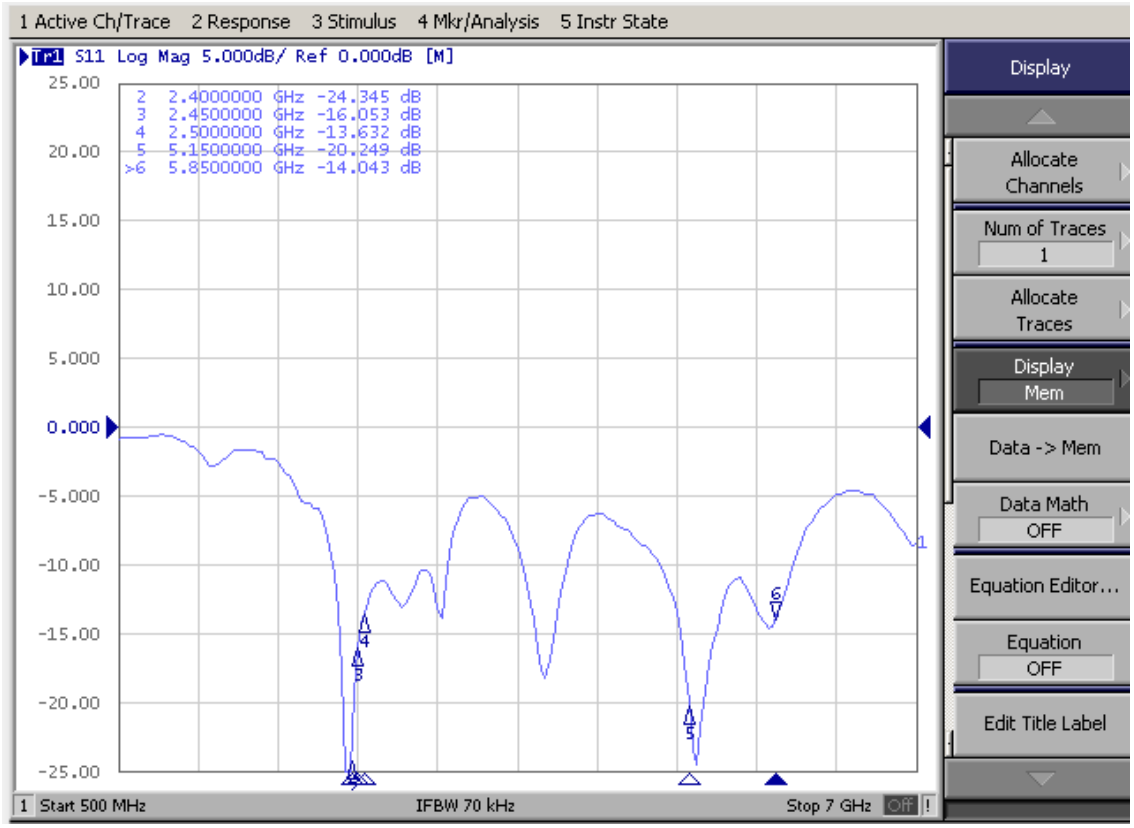
Phi axis test

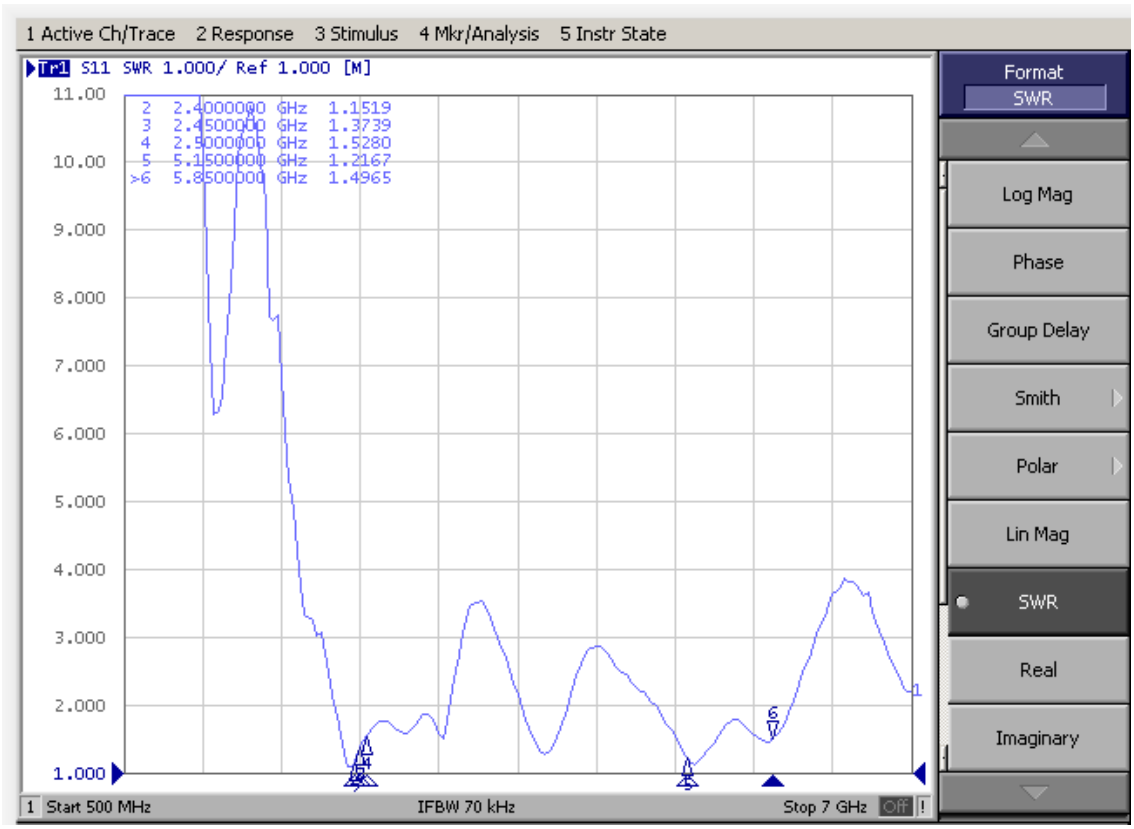


Theta axis test



S11


1 Active Ch/Trace
2 Response
3 Stimulus
4 Mkr/Analysis
5 Instr State
Tr1 S11 Log Mag 5.000dB/ Ref 0.000dB [M]
2 2.4000000 GHz -24.345 dB
3 2.4500000 GHz -16.053 dB
4 2.5000000 GHz -13.632 dB
5 5.1500000 GHz -20.249 dB
>6 5.8500000 GHz -14.043 dB
25.00
20.00
15.00
10.00
5.000
0.000
-5.000
-10.00
-15.00
-20.00
-25.00
1 Start 500 MHz
IFBW 70 kHz
Stop 7 GHz
Off
Display
Allocate Channels
Num of Traces
1
Allocate Traces
Display
Mem
Data -> Mem
Data Math
OFF
Equation Editor...
Equation
OFF
Edit Title Label

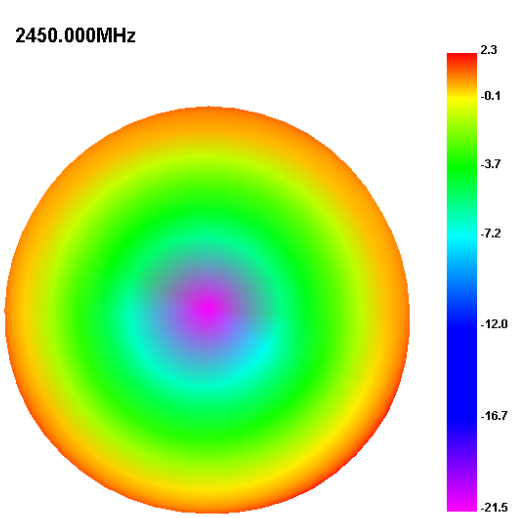

1 Active Ch/Trace
2 Response
3 Stimulus
4 Mkr/Analysis
5 Instr State
Tr1 S11 SWR 1.000/ Ref 1.000 [M]
2 2.4000000 GHz 1.1519
3 2.4500000 GHz 1.3739
4 2.5000000 GHz 1.5280
5 5.1500000 GHz 1.2167
>6 5.8500000 GHz 1.4965
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
1 Start 500 MHz
IFBW 70 kHz
Stop 7 GHz
Off
Format
SWR
Log Mag
Phase
Group Delay
Smith
Polar
Lin Mag
SWR
Real
Imaginary

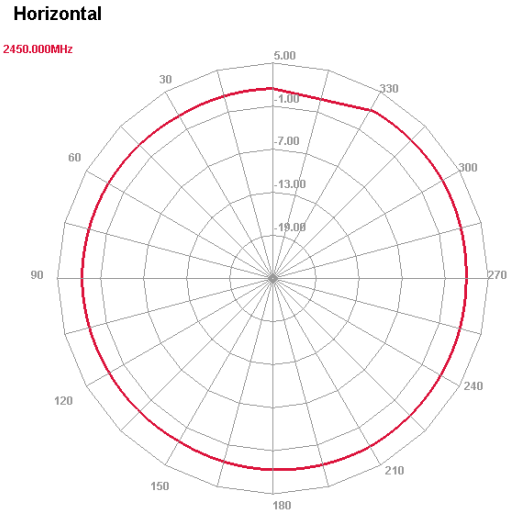
Gain & Efficiency

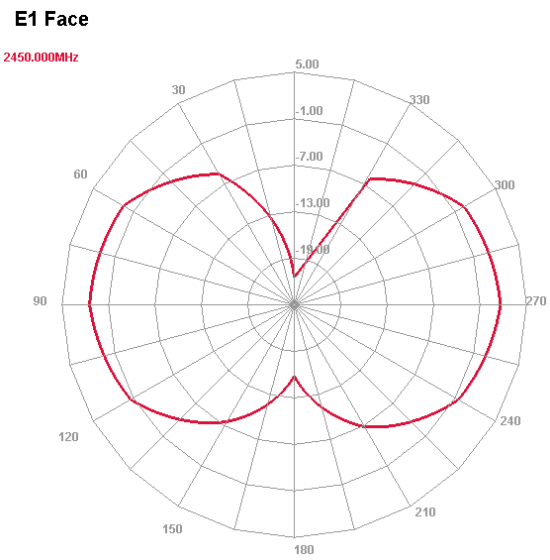
Freq (MHz)	Effi (%)	Gain (dBi)
5000	61.64	3.47
5100	66.76	2.13
5200	65.59	2.23
5300	68.04	2.04
5400	60.09	2.43
5500	62.45	2.4
5600	60.76	2.13
5700	60.21	2.81
5800	57.51	2.9
5900	59.49	2.26

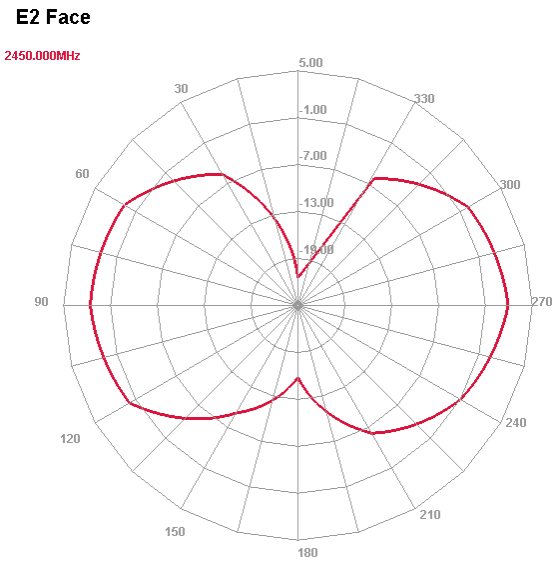
Freq (MHz)	Effi (%)	Gain (dBi)
2400	70.25	1.99
2410	69.47	1.95
2420	68.73	1.91
2430	67.58	1.85
2440	66.35	1.84
2450	66.02	1.87
2460	65.21	1.93
2470	67.82	1.96
2480	66.34	1.92
2490	68.23	2.23
2500	72.14	2.35

Radiation Pattern:

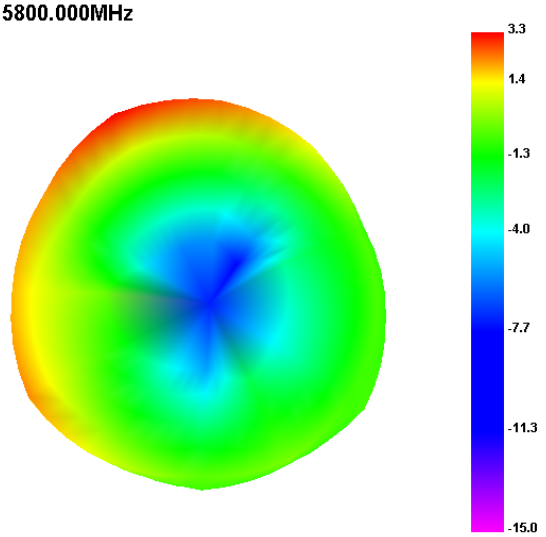






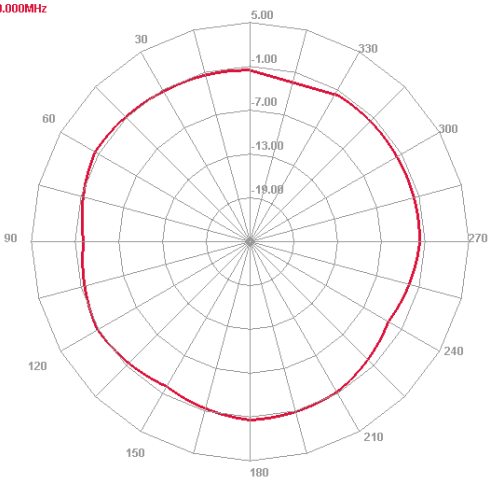


5800.000MHz



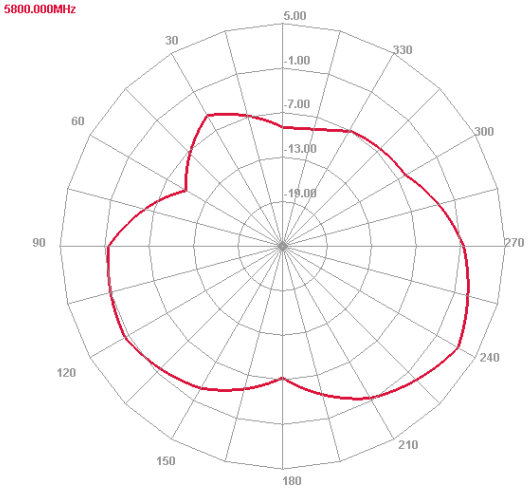
Horizontal

5800.000MHz



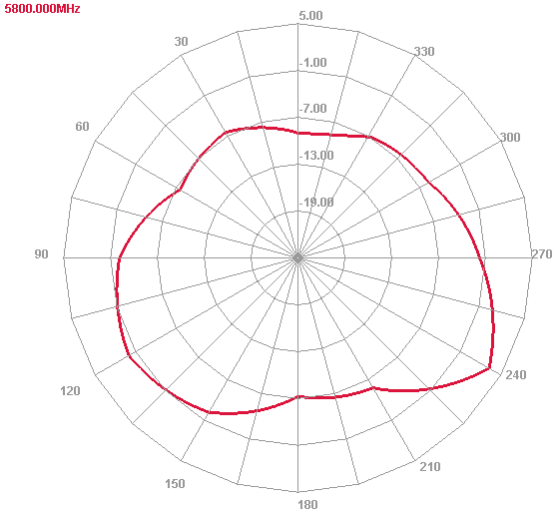
E1 Face

5800.000MHz



E2 Face

5800.000MHz



Test Item		Test condition	Equipment	Specification	Result
1	Low Temp. Storage Test	Temperature: -30℃， Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-down the temp. to -30℃ in one hour, store antenna for 44 hours; step-up temp to 25℃,test antenna after 2 hours.	Temp.&Humi. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
2	High Temp./High Humid Storage Test	Temperature: 85℃ Humidity: 85% RH Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-up the temp. to 80℃ and the humidity up to 85% in one hour, store antenna for 44 hours; step-down temp to 25℃,test antenna after 2 hours.	Temp.&Humi. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
3	Salt-Spray 6 pray Test	Placing antenna in the Salt-Spray Tester ,set the test condition ， Temp: 35±2℃ Humidity: 85% NaCl salt spray :5 ±1 %.PH value :6.5~7.2 Test time:12hours	Salt-Spray Tester	No color change No appear rusting	PASS