

# Shenzhen SKYLink Technology Co.,Ltd

## Antenna Specification for Approval

Customer Name: \_\_\_\_\_

Product Name: \_\_\_\_\_ 2.4G \_\_\_\_\_ WIFI Antenna \_\_\_\_\_

Part NO. : \_\_\_\_\_ TY05 \_\_\_\_\_

Write By: \_\_\_\_\_ Damon Cui \_\_\_\_\_

Issued Date: \_\_\_\_\_ 2023-04-10 \_\_\_\_\_

### Customer

R&D Dept	Business Dept	Approved By

### SKYLink

R&D Dept	Engineer Dept	Approval

## Specification Summary

A. Electrical Characteristics	
Frequency	2400MHz ~2500MHz 5150MHz ~5850MHz
VSWR	<3.0
Efficiency	>40%
Peak Gain	2.3dbi
Impedance	50 Ohm
Polarization	Line
B. Material & Mechanical Characteristics	
Material of Radiator	/
Cable Type	/
Connector Type	/
Dimension	At Attachment
Heat-durability	280±5°C, 10sec.
C. Environmental Characteristics	
Operation Temperature	- 20 °C ~ + 80 °C
Storage Temperature	- 30 °C ~ + 85 °C

## ● Test Equipment & Conditions

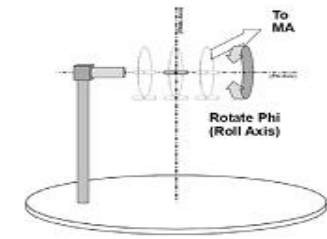
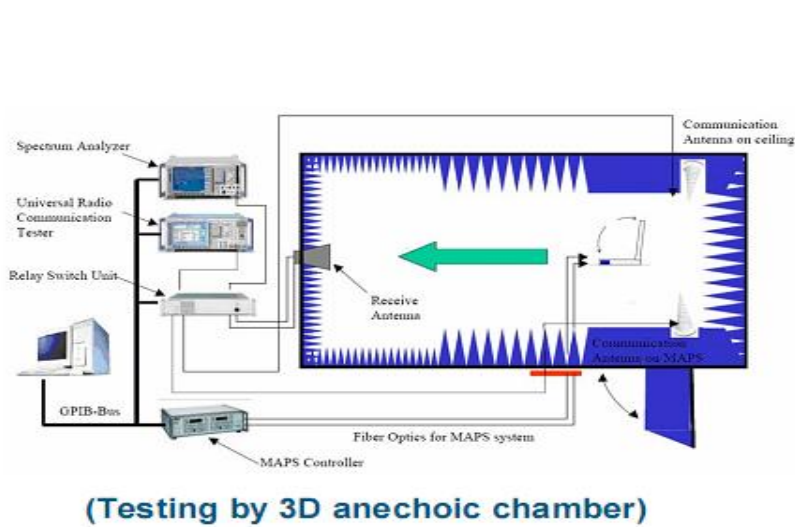
### 1. Network Analyzers :

Agilent 8753D 5071B

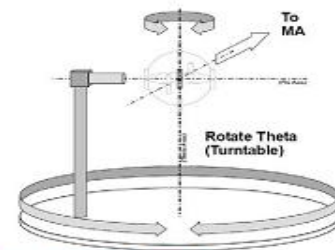
Communications Test Set:

Agilent E5515C CMW500

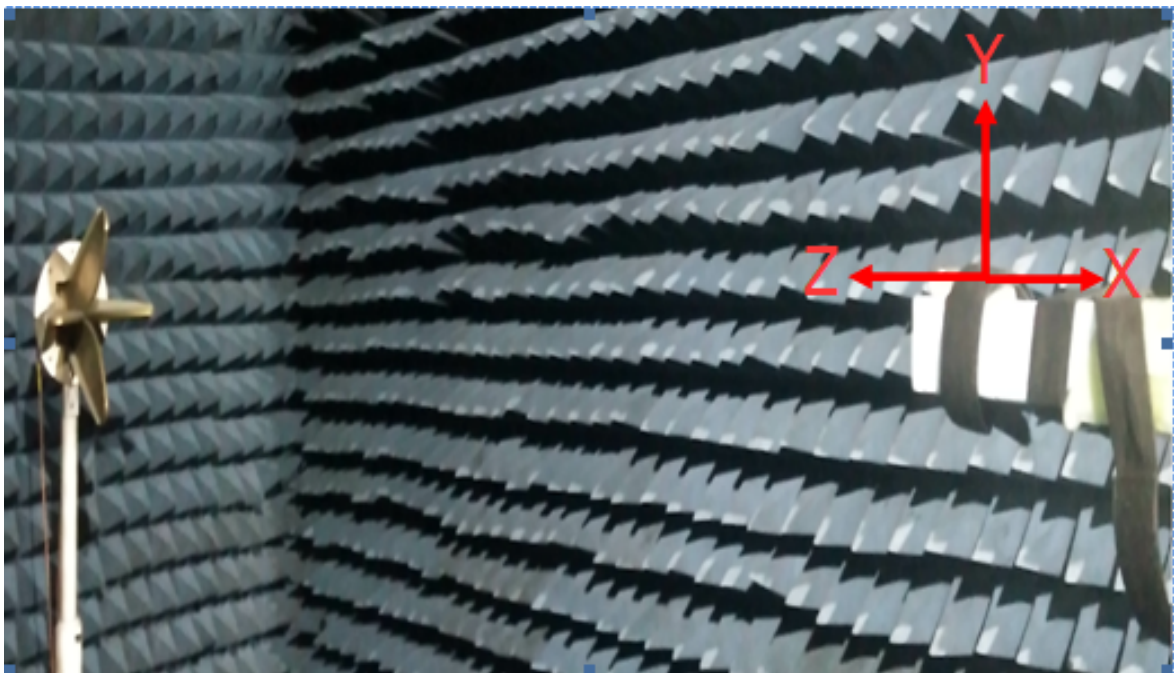
### 2. 3D Chamber Test System

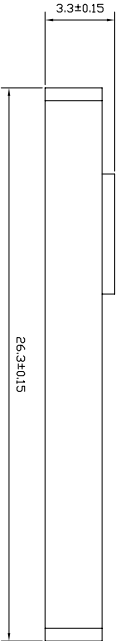
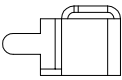
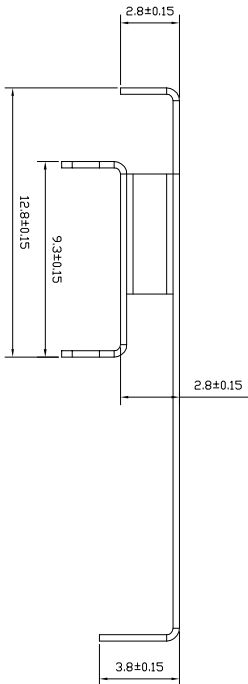
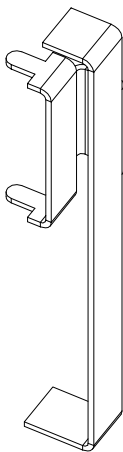
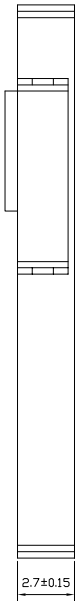
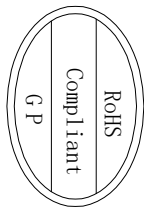


Phi axis test



Theta axis test



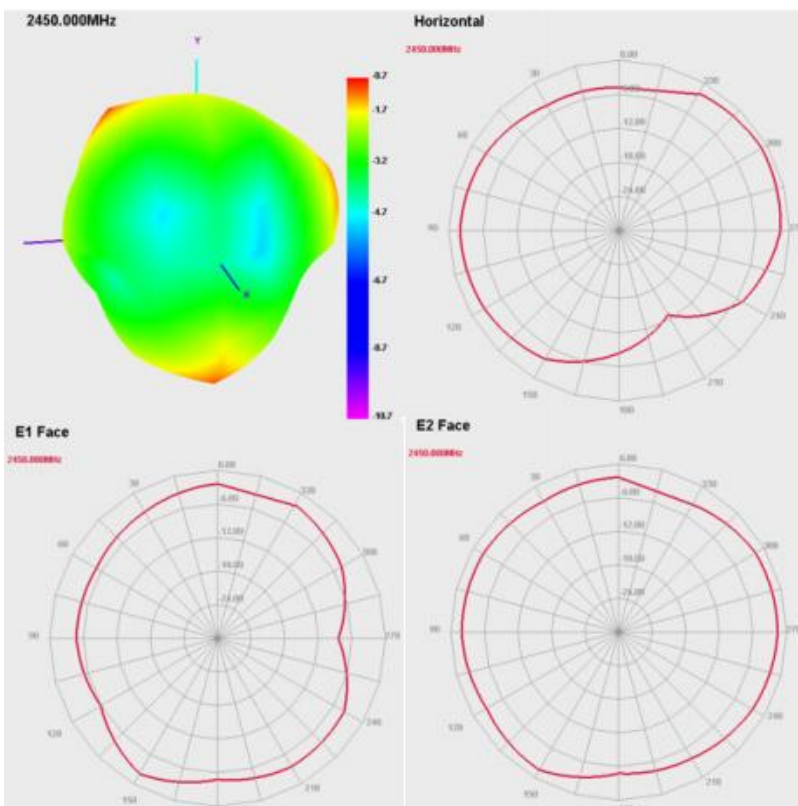
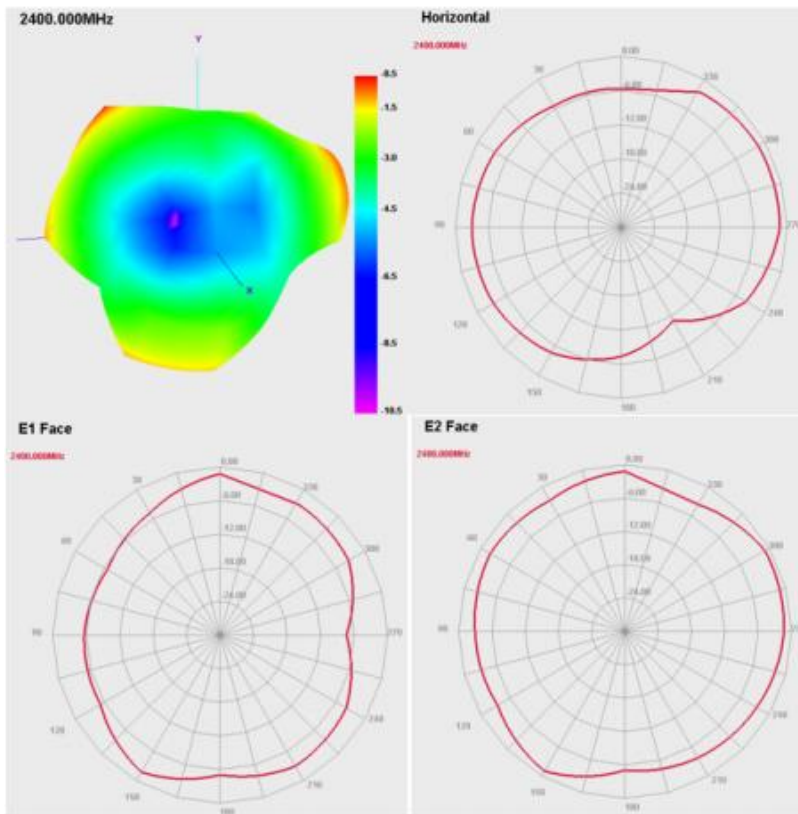


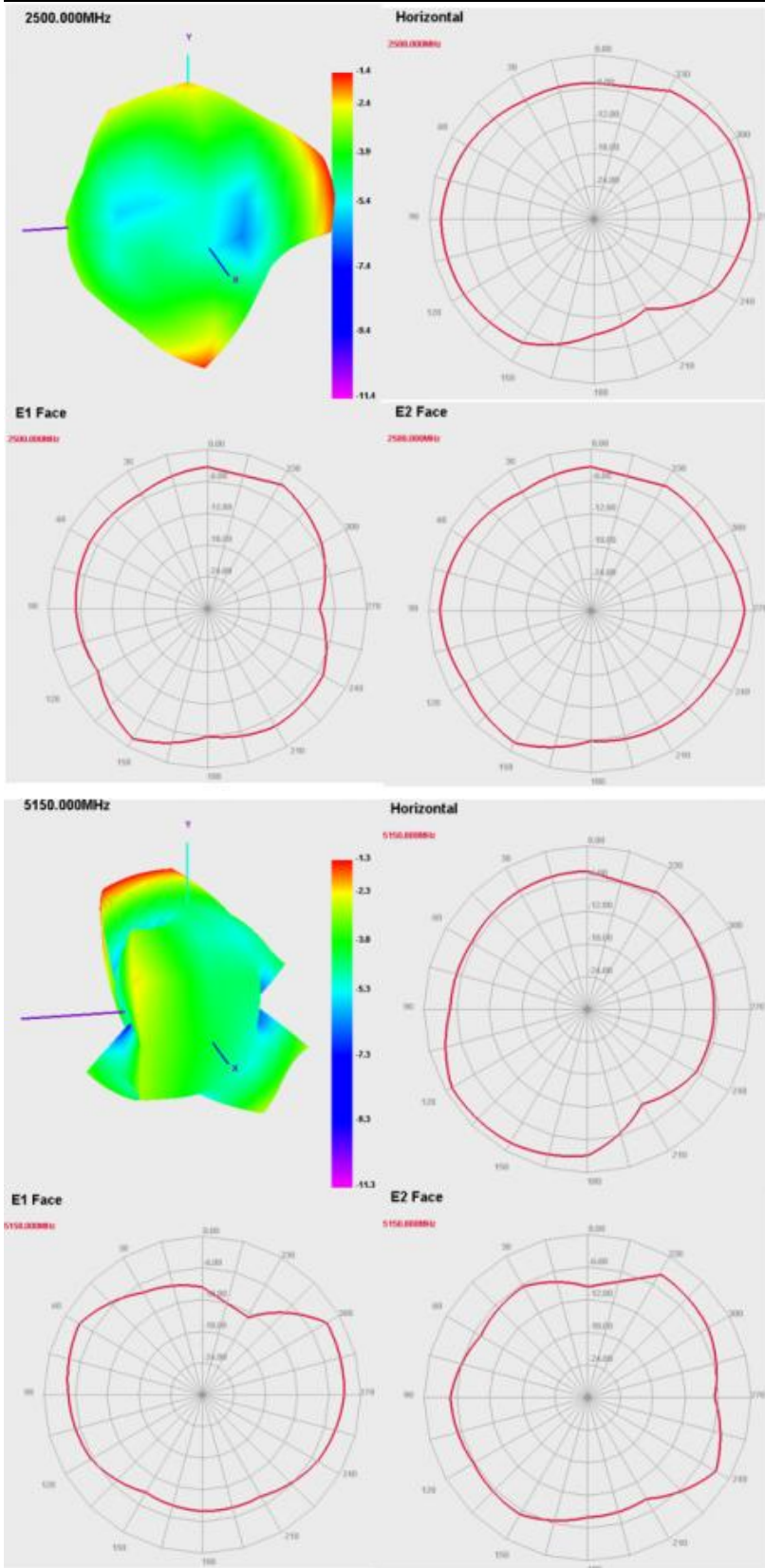
1	2	3	4	5	6	7	8
<p>SHEN ZHEN SKYlink CO., LTD</p> <p>Project: SHEN ZHEN SKYlink CO., LTD</p> <p>Date: 2023-04-10</p> <p>Part Name: TY05</p> <p>Part No.: TY05</p> <p>Material: RF</p> <p>DWG No.: RF</p> <p>Designed by: MD</p> <p>Checked by: RF</p> <p>Approved by: RF</p> <p>Unit: mm</p> <p>Scale: 1:1</p> <p>Rev: A</p>							
<p>Third Angle</p> <p>0~10 ±0.05 ○ 0.02</p> <p>10~18 ±0.10 ◎ 0.03</p> <p>18~30 ±0.12 ⊥ 0.02</p> <p>30~40 ±0.15 ∇ 0.04</p> <p>40~ ±0.20 Angle ±0.5°</p>		<p>Location</p>		<p>Project</p>		<p>Date</p>	
<p>Rev</p>		<p>Description</p>		<p>Date</p>		<p>Remark</p>	
1	New drawing						

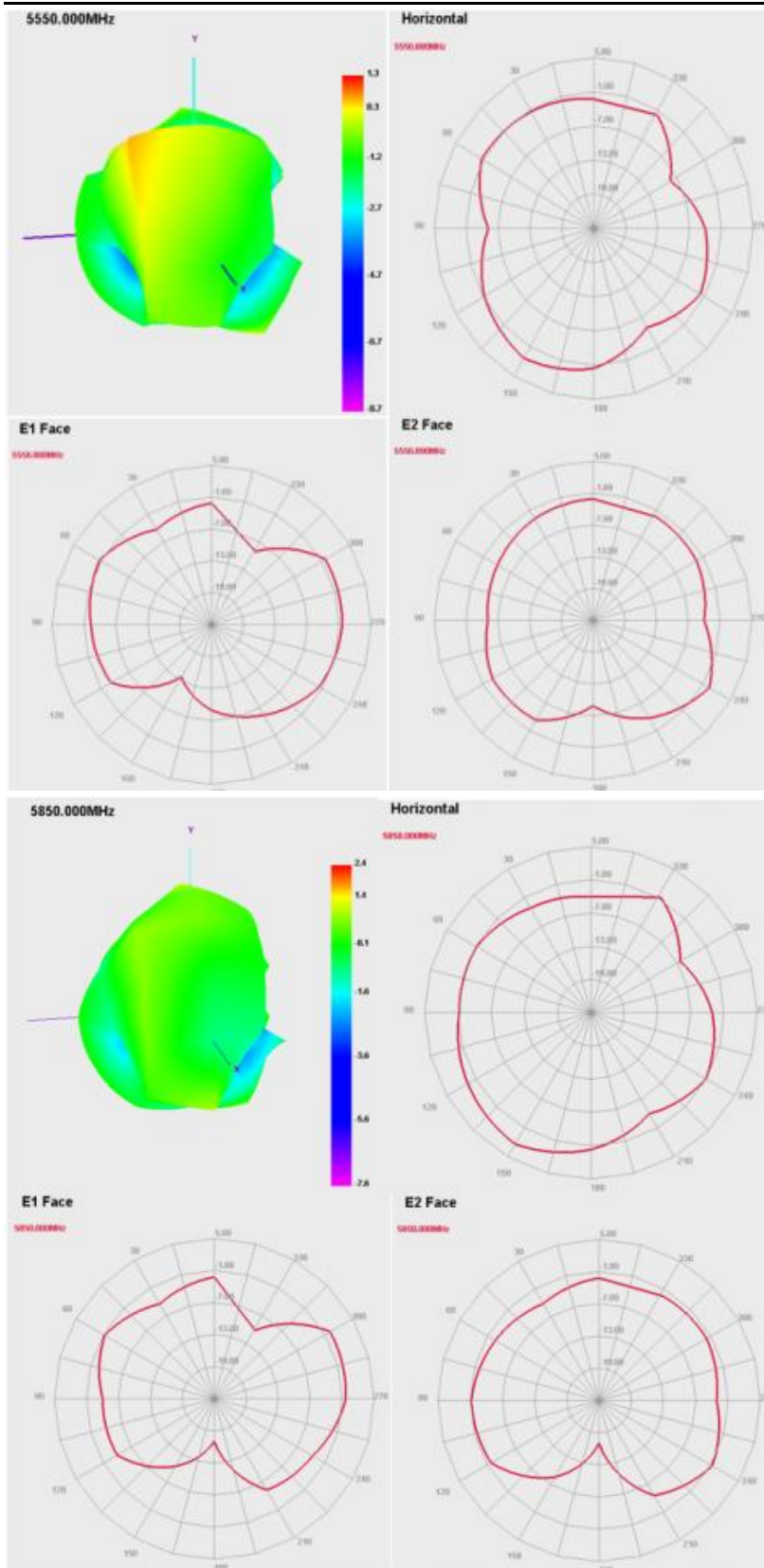
## ◆ Gain & Efficiency

Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)
2400	45.1	-0.53	5150	33.95	-1.27
2410	46.89	-0.65	5200	38.25	-1.1
2420	45.86	-0.61	5250	42.94	-0.72
2430	45.86	-0.59	5300	44.09	-0.74
2440	45.66	-0.36	5350	51.74	-0.13
2450	46.47	-0.68	5400	52.94	0.11
2460	45.44	-0.89	5450	53.74	0.3
2470	42.67	-1.1	5500	56.86	1.07
2480	42.02	-1.12	5550	56.78	1.31
2490	42	-1.2	5600	58.66	1.94
2500	40.29	-1.41	5650	58.75	2.15
			5700	57.4	2.19
			5750	57.76	2.23
			5800	55.36	2.25
			5850	55.31	2.37

## ◆ Radiation Pattern









## ◆ Reliability Test

Test Item	Test condition	Equipment	Specification	Result
1 Low Temp. Storage Test	<p>Temperature: -30℃, Time:48hrs</p> <p>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.</p>	Temp.&Humi. Tester	<p>No material deformation is allowed.</p> <p>Electronic Performance is ok .</p>	PASS
2 High Temp./High Humid Storage Test	<p>Temperature: 85℃ Humidity: 85% RH Time:48hrs</p> <p>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.</p>	Temp.&Humi. Tester	<p>No material deformation is allowed.</p> <p>Electronic Performance is ok .</p>	PASS
3 Salt-Spray 6 pray Test	<p>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:24hours</p>	Salt-Spray Tester	<p>No color change</p> <p>No appear rusting</p>	PASS