

Shenzhen QiBing Technology Co.,Ltd

Antenna Specification for Approval

NO. QBAC202404150001

Customer Name: TenVeo

Product Name: WIFI Antenna

Product description: 2DB Black Cable Type, L=109mm, SMA

Part NO.: Q2458A

Customer NO.: 01.23.0007

Version number: V1.0

Issued Date: 2024-4-15

QIBING	
R&D Dept	
Business Dept	
Approved By	

CUSTOMER	
R&D Dept	
Business Dept	
Approved By	

● Specification Summary

A. Electrical Characteristics	
Frequency	2400MHz ~2500MHz
	5150MHz ~5850MHz
LogMag	<-10
Efficiency	>45%
Peak Gain	2.4G wifi: 2.61dBi, 5G B1:1.98dBi, 5G B4: 2.39dBi
Impedance	50 Ω
Polarization	Line
B. Material & Mechanical Characteristics	
Material of Radiator	CU
Cable Type	RG178 LINE
Connector Type	SMA
Dimension	At Attachment
C. Environmental Characteristic	
Storage Temperature	- 30 °C ~ + 85 °C
Heat-durability	280±5°C, 10sec.
Weld Temperature	320±5°C 2-3sec.

● Test Equipment & Conditions

1. Network Analyzers :

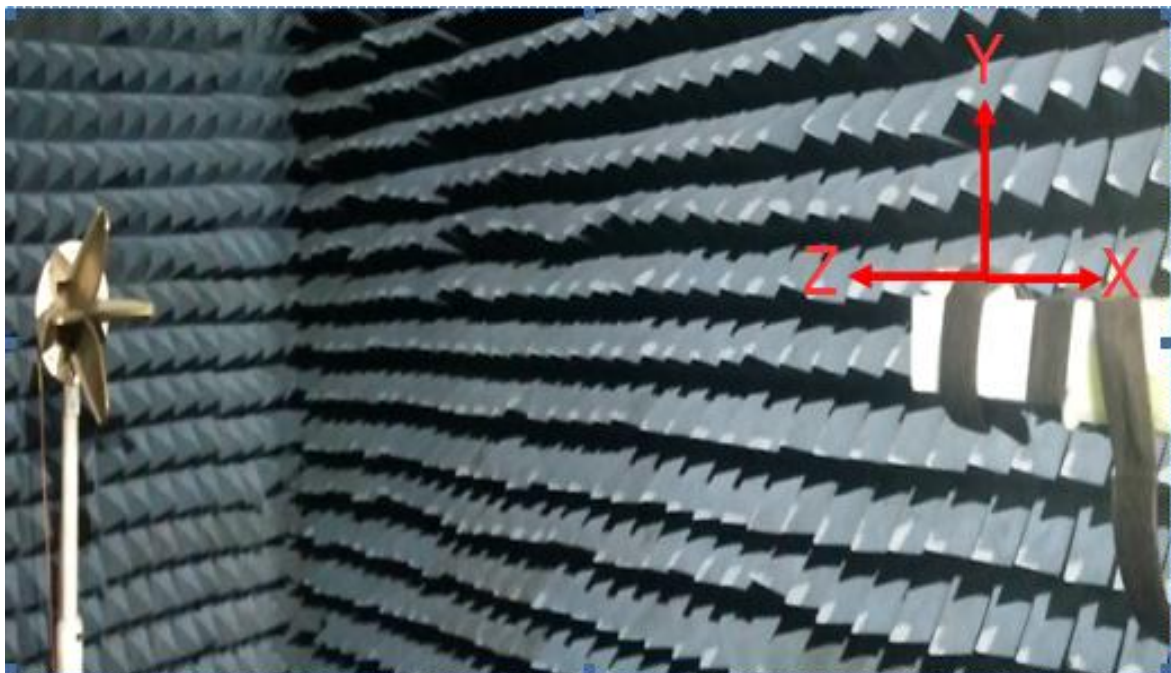
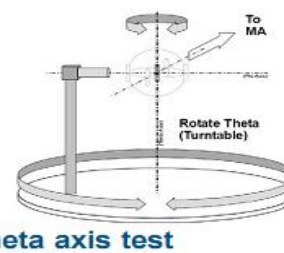
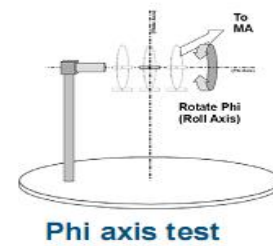
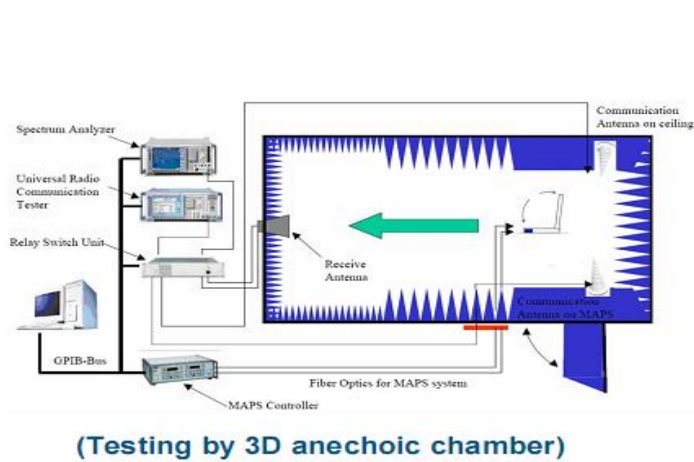
Agilent 8753D

5071B

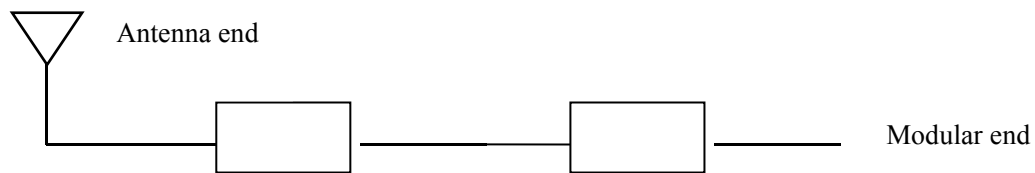
Communications Test Set:

Agilent E5515C CMW500

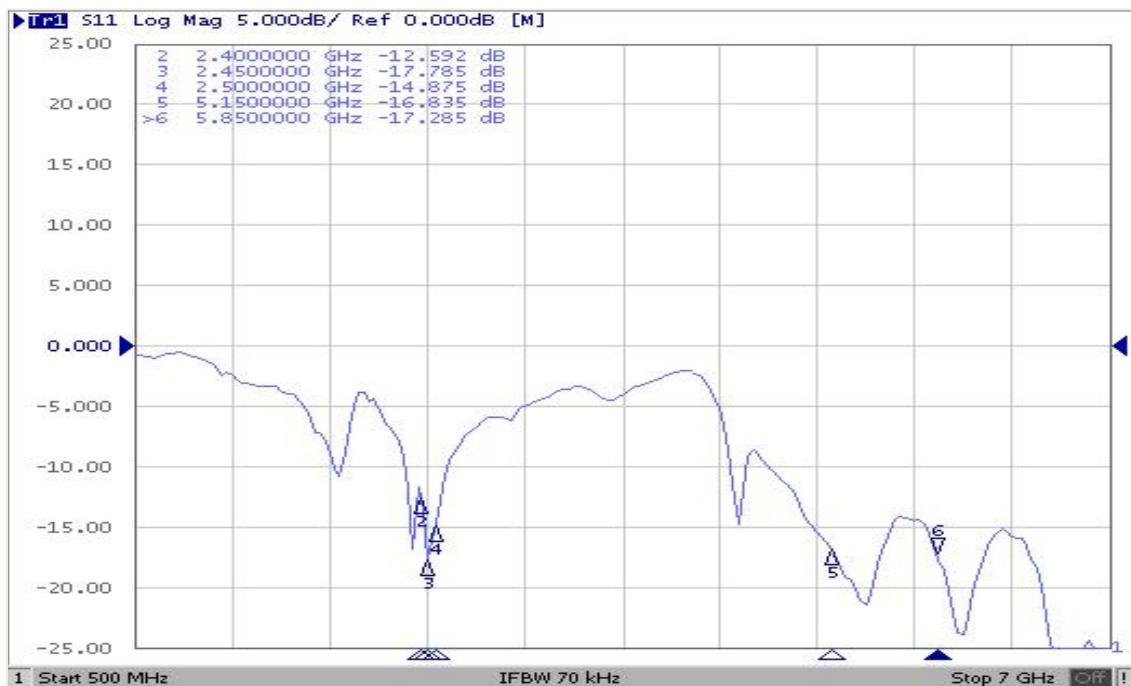
2. 3D Chamber Test System



● Matching Circuit



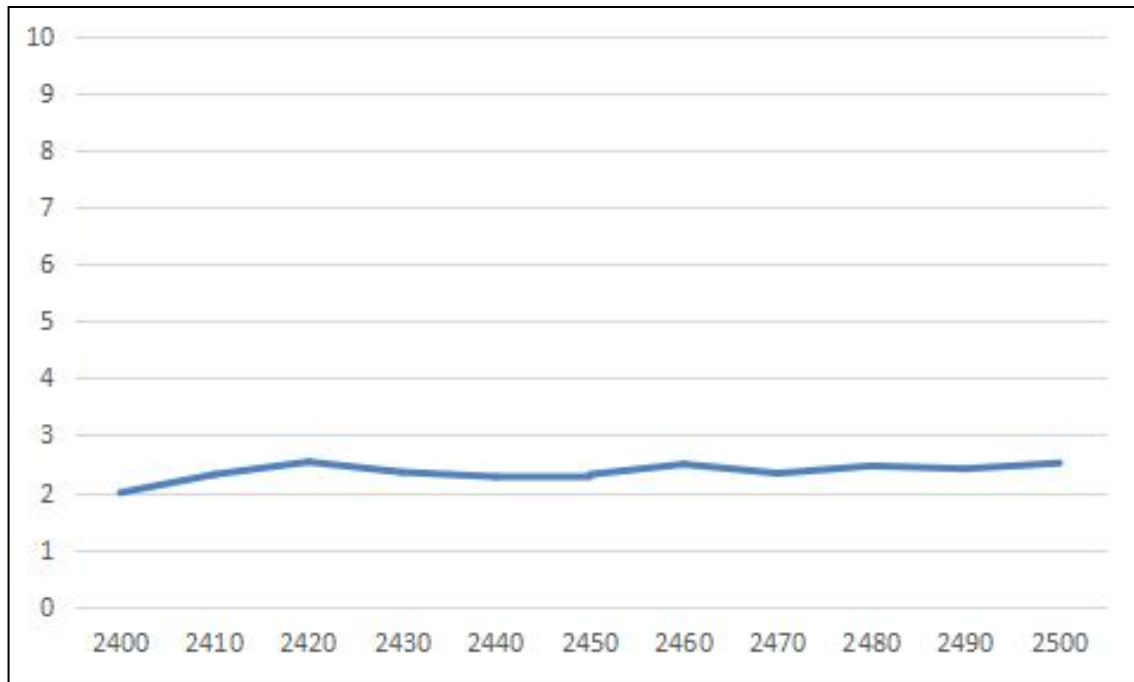
● Return Loss



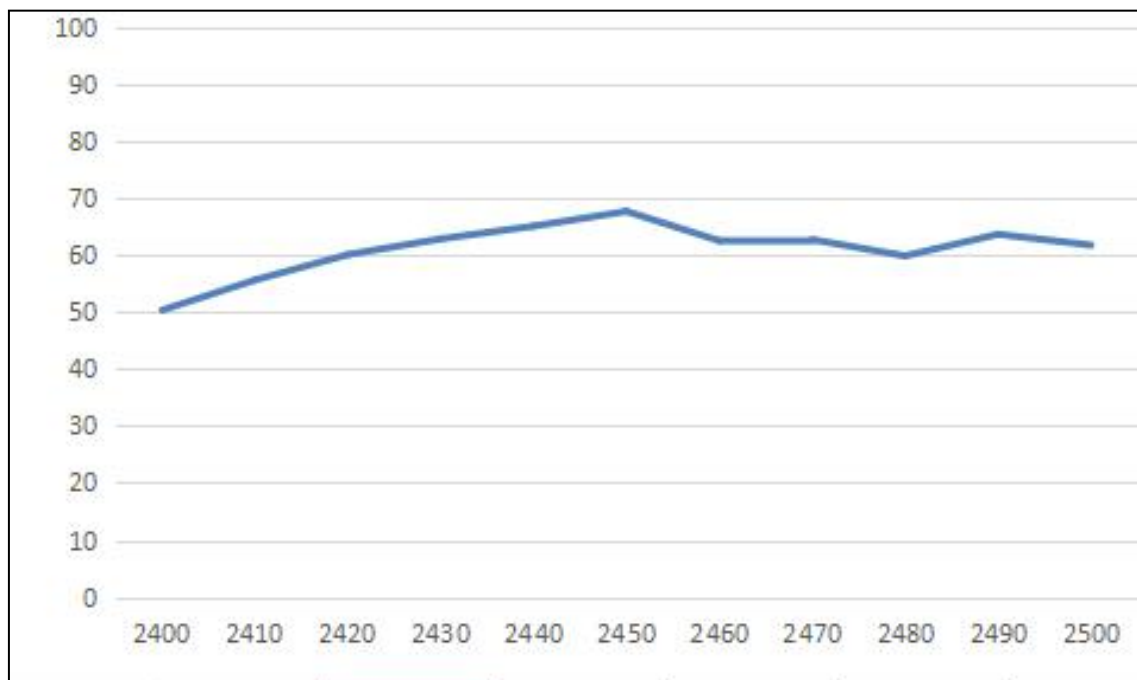
Passive Test For 2.4-2.5G											
Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain(dBi)	2.12	2.55	2.61	2.53	2.48	2.3	2.57	2.41	2.5	2.48	2.6
Effi(%)	50.11	56.3	60.07	63.53	65.8	68.78	62.34	62.31	60.46	64.63	61.11

Passive Test For 5.0-5.8G														
Freq(MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800
Gain(dBi)	1.36	1.53	1.98	1.57	1.58	1.45	1.48	1.76	2.07	1.81	2.2	2.26	2.39	2.31
Effi(%)	47.81	45.23	48.1	48.93	48.32	57.55	46.11	46.54	63.81	63.14	58.82	58.35	59.71	58.97

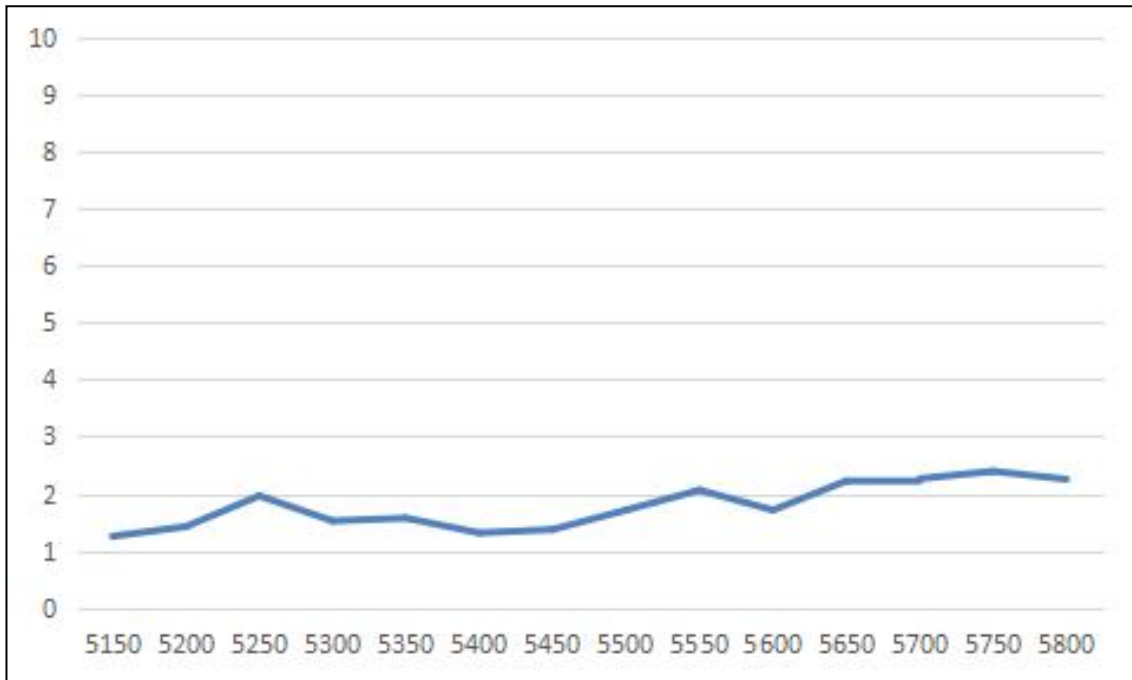
◆ 2.4G Gain



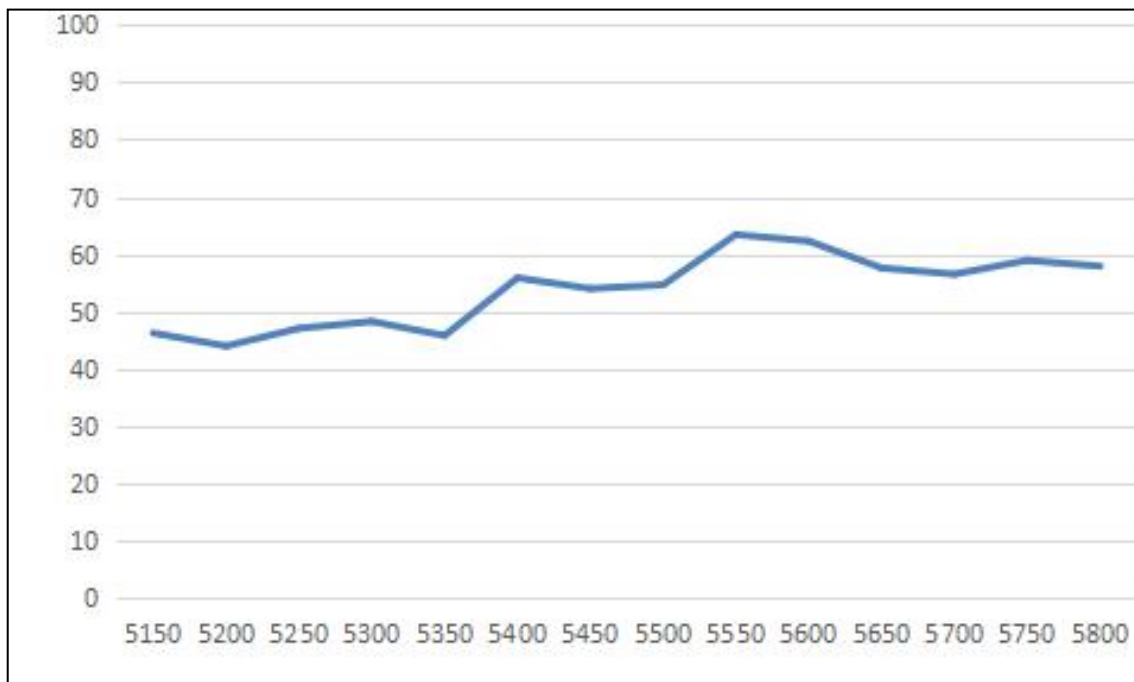
◆ 2.4G Efficiency



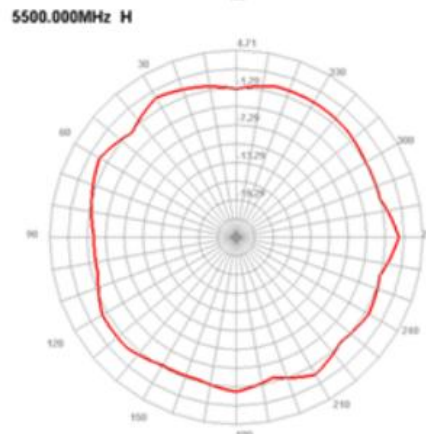
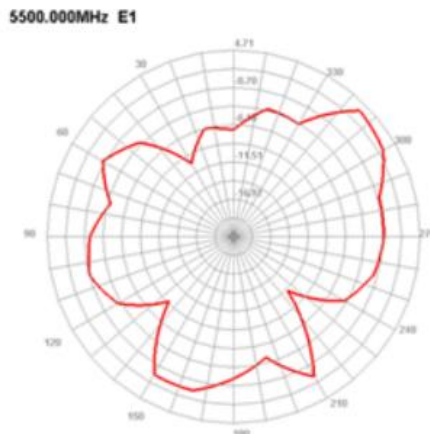
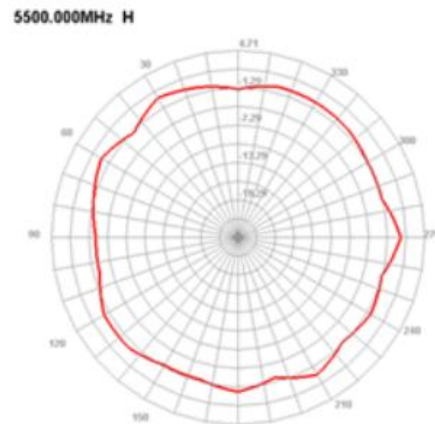
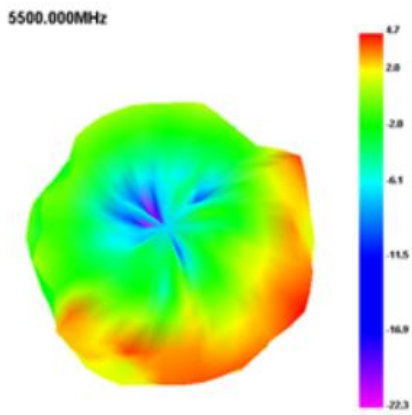
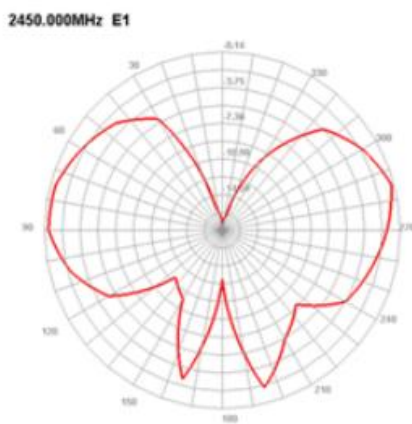
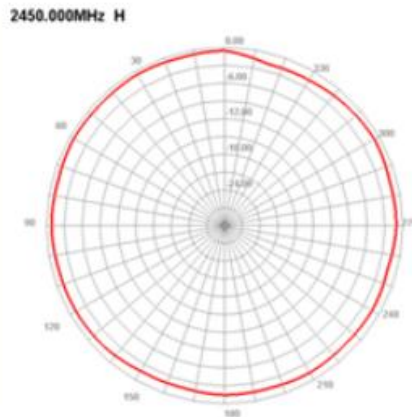
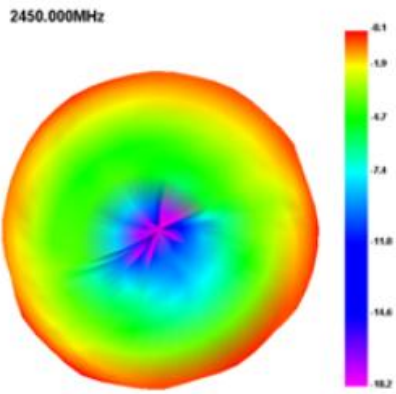
◆ 5.8G Gain



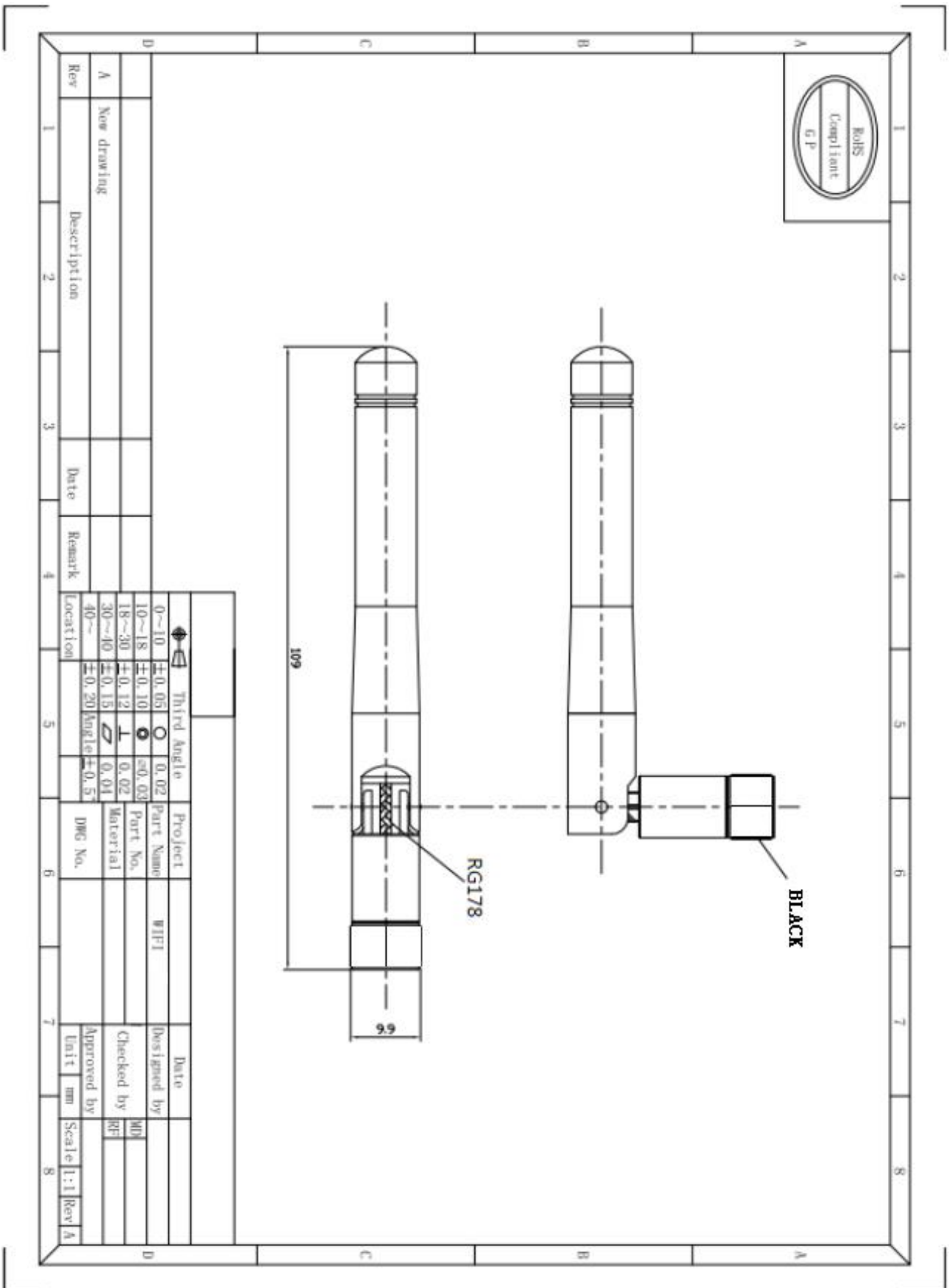
◆ 5.8G Efficiency



● Radiation Pattern:



● Antenna Size:



● Reliability Test

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:24hours	Salt-Spray Tester	No color change No appear rusting	PASS