



Shen Zhen Hanyang Antenna Design Co., Ltd.

SPECIFICATION

PART NAME	ANT Q1 Pro
HY NO.	F02602000017
CS P/N	Q1 Pro ANT BT/2.4G RF-4 L=120mm
SUPPLIER	Shenzhen Hanyang Antenna Design Co., Ltd.

Hanyang Antenna Design Co., Ltd.			
MANAGER CHECKED	ME CHECKED	RF CHECKED	DATE
Liu Zhi Gao	Lv Jun Peng	Qu Long Yue	2022-06-24

CUSTOMER			
QA CHECKED	RF CHECKED	MANAGER CHECKED	DATE

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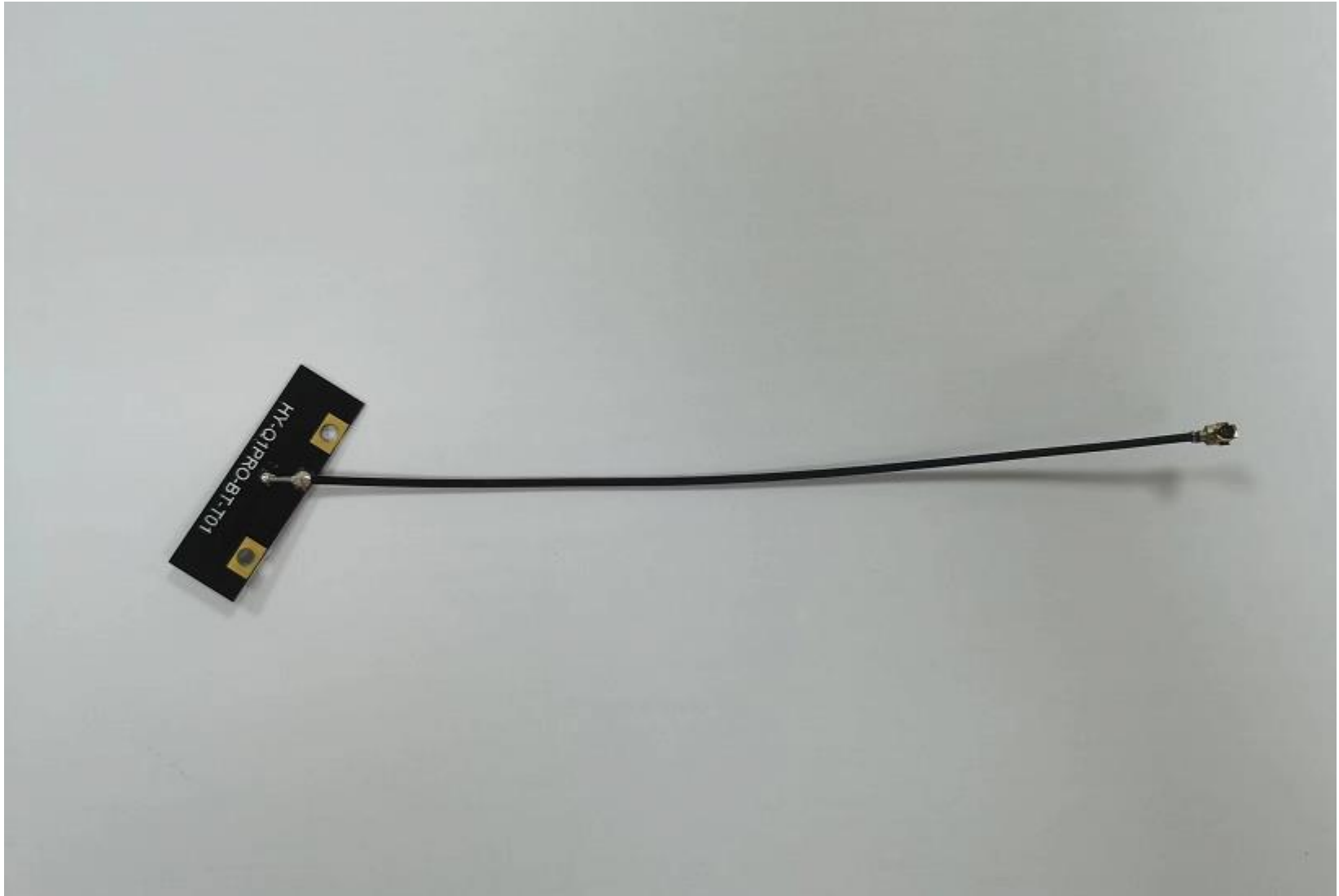
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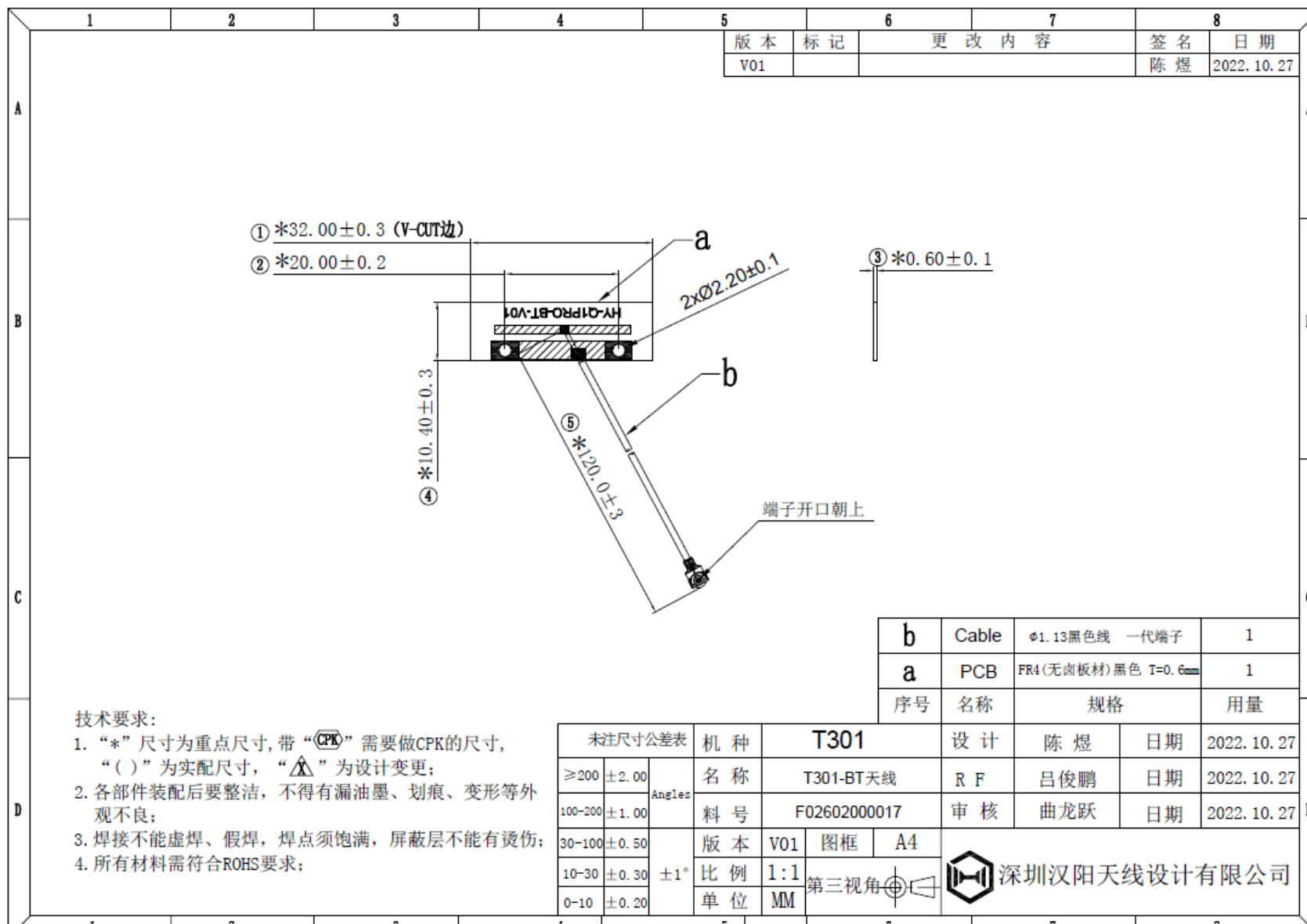
Revision history

version	change the date	Page	Change content
V1.00	2022-06-24	-	First release
V2.00	2022-10-27		Change the line length from 130mm to 115 mm.
V3.00	2022-11-28		Change the line length from 115mm to 120 mm.
V4.00	2023-02-25		PCB surface ink changed to halogen-free.

1. actual picture



2. Mechanical Specification



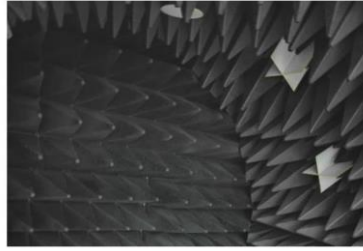
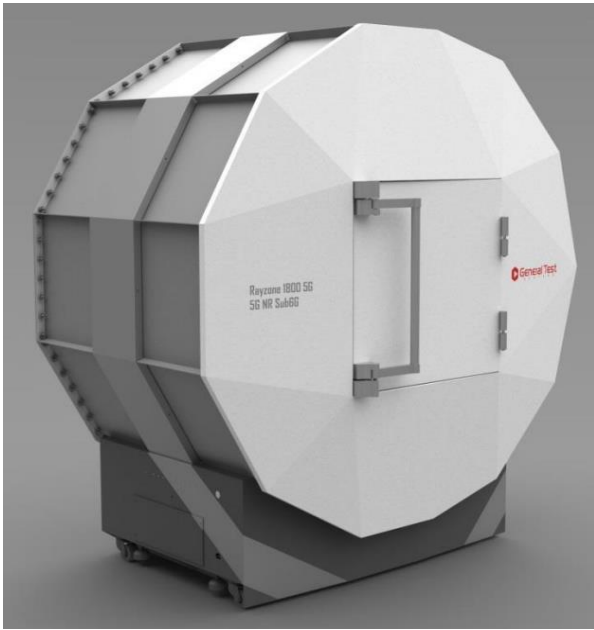
3.BOM

Component name	Material	Unit	Specifications	Comments
ANT Package	/	set	/	PCB +Cable Φ 1.13*120mm+IPEX
PCB	RF4	pcs	32*10.4*0.6mm	Halogen-free, black ink, 2 gold plated vias
Cable	FEP (F46)	pcs	Φ 1.13*L=120mm	black
IPEX	Gold-plate	pcs	IPEX 1代	/

4. General specification

Frequency Spectrum	2400MHz—2500MHz
Characteristic Impedance	50 Ω
Max Peak Gain (dBi)	1.53 dBi
Max Efficiency (%)	32.82 %
Polarization	Linear Polarization
Directivity	Omnidirectional
Operation/Storage Temp	-10 ~ 85°C

5. Test equipment



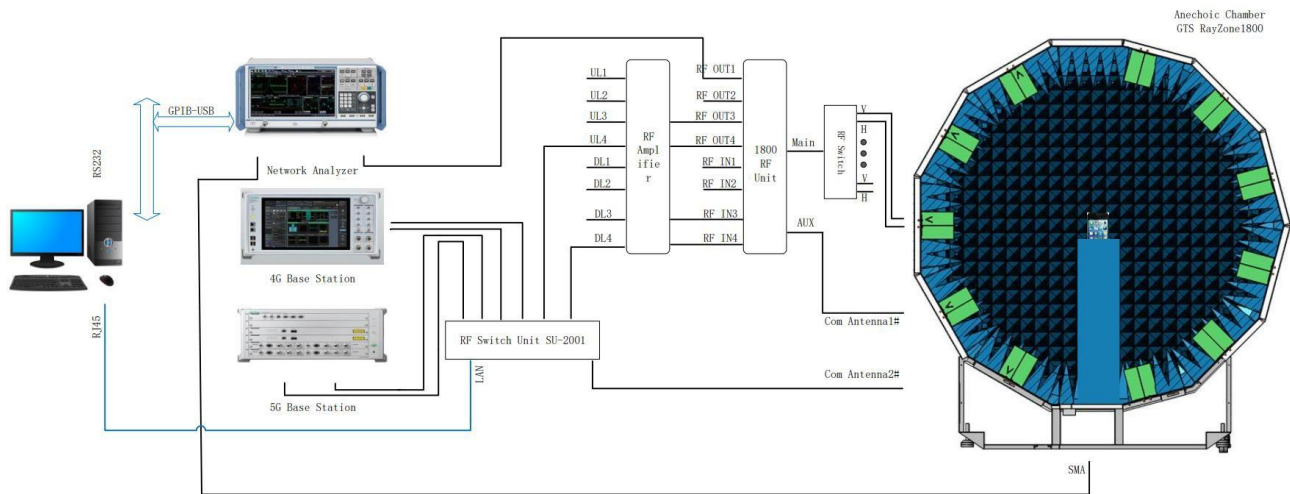
Owned 6 microwave dark room, equipped 2 sets world leading France Satimo SG24 OTA certification test systems (one in SHENZHEN, another one in Shanghai), ETS OTA Standard test system, Blue test reverberation test system which is High repeatability, high accuracy and high resolution. It can quickly provide accurate test reports, fully meet the CITA standards.

Testing range:

Support active, passive testing of GSM/CDMA/WCDMA/TD-SCDMA/LTE/WIFI/WLAN/WiMax/BT/GPS/MIMO/UWB within 0.4-6G.

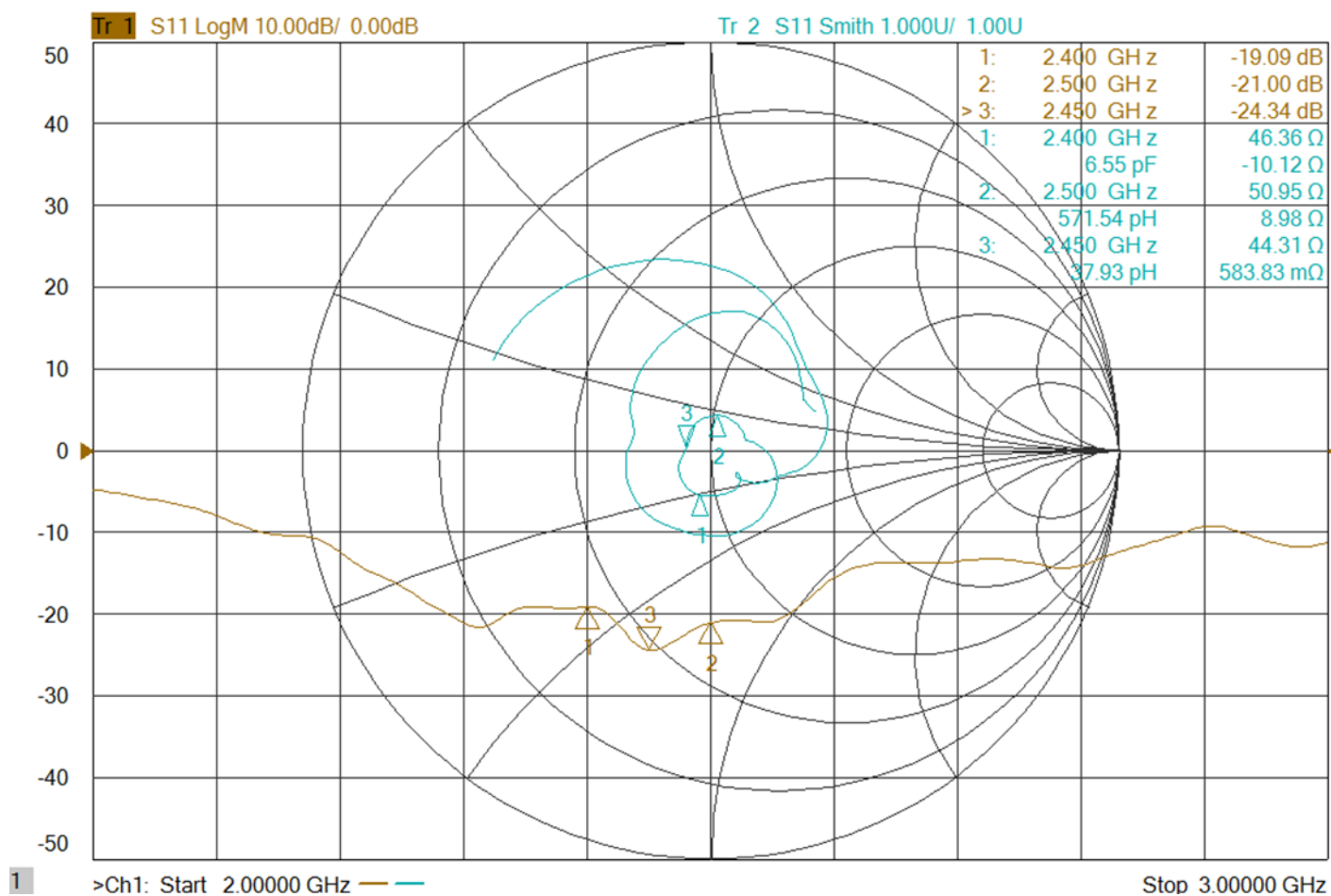


RayZone1800 Test Setup



6. Antenna test data

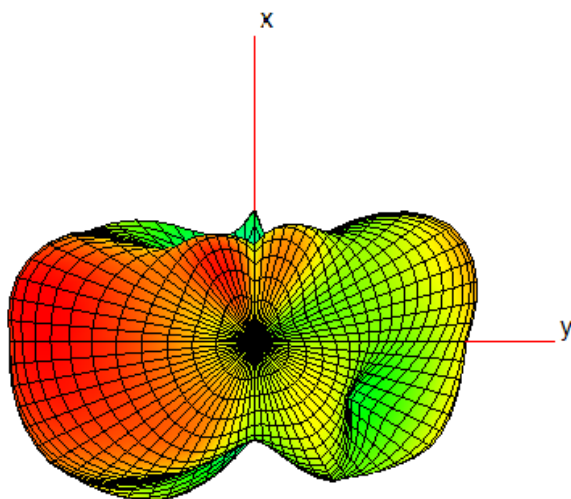
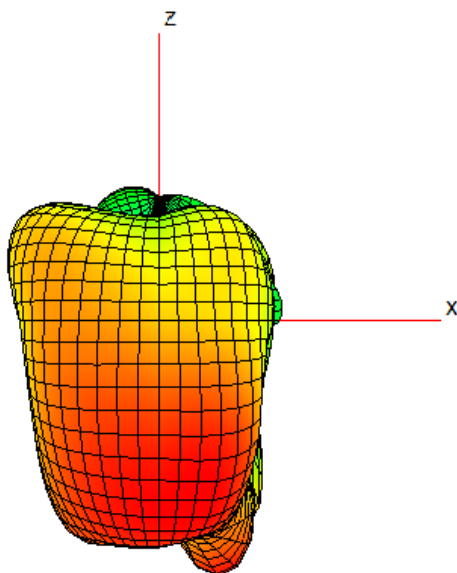
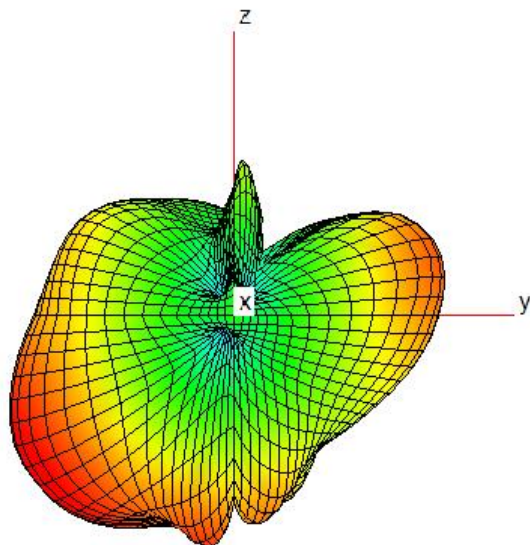
6.1 S11 & Smith Chart



6.2 No-source test data

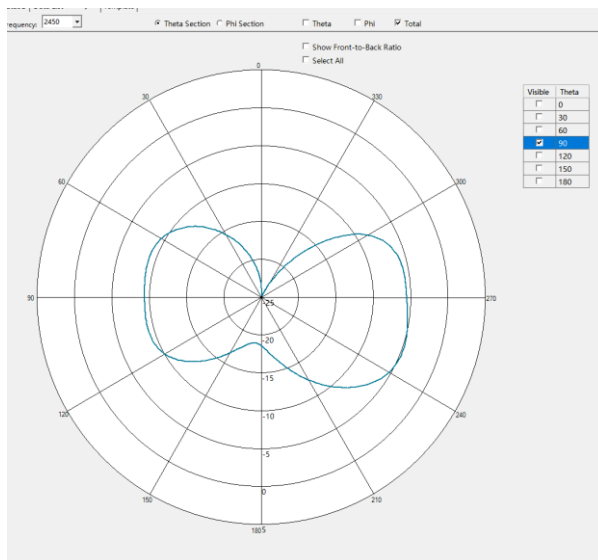
Q1#2.4G			
Frequency_MHz	Efficiency_dB	Efficiency_%	Gain_dBi
2400	-5.37	29.04	1.46
2410	-5.07	31.09	1.44
2420	-4.84	32.82	1.53
2430	-5.36	29.13	1.36
2440	-5.84	26.04	1.24
2450	-6.17	24.14	1.13
2460	-6.2	23.98	0.88
2470	-6.03	24.94	0.34
2480	-6.45	22.63	-0.06
2490	-6.8	20.88	0.04
2500	-7.17	19.18	-0.08

6.3 Radiation pattern-3D

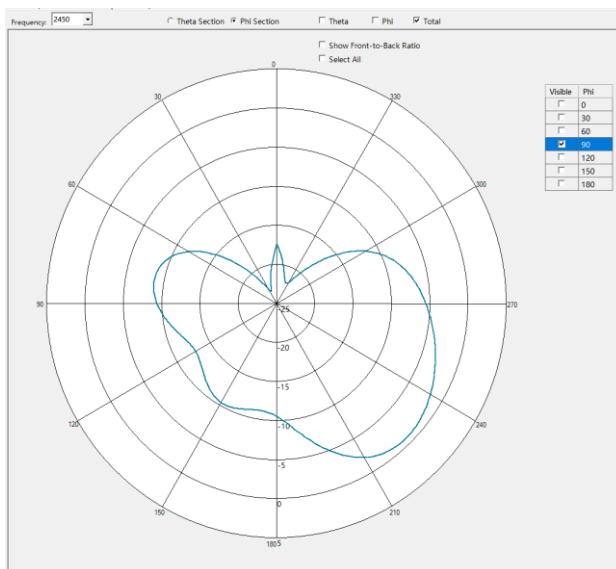


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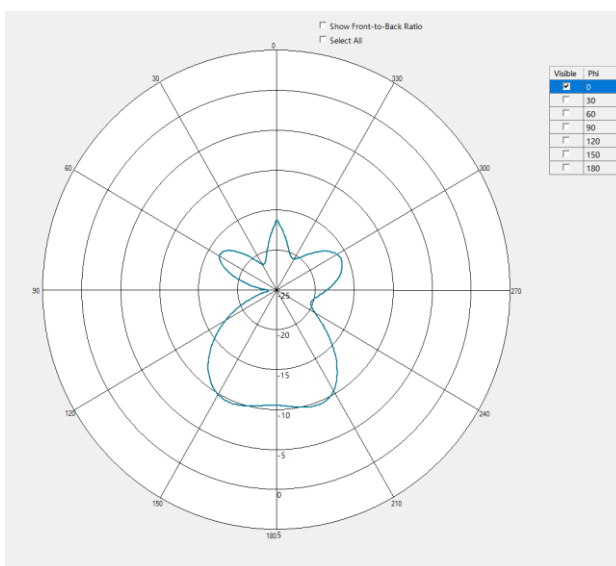
6.4 Radiation pattern-2D



Theta 90deg



Phi 0deg



Phi 90deg



7. Dimensional detection

frequency	2.4G	product name	ANTENNA Q1 Pro	quantity	5SET
material	PCB/Cable	Colour	black	date	2022-6-24

Product type: New sample Modified sample Mass production Other.

NO	Required dimensions of engineering drawings	Measured size					Decide OK/NG	comments
		1	2	3	4	5		
1	32.50±0.3	32.53	32.47	32.55	32.48	32.56	OK	
2	20.00±0.2	20.10	20.09	20.08	20.00	20.05	OK	
3	10.40±0.30	10.42	10.43	10.45	10.43	10.40	OK	
4	0.60±0.10	0.61	0.60	0.61	0.61	0.59	OK	
5	120.00±3	120.20	120.21	120.24	120.21	120.20	OK	
6								
7								
8								

Exterior : OK

performance : OK

Final judgment :

OK

NG

Written by: Tang Aijun;

reviewed by: Jiang Huan;

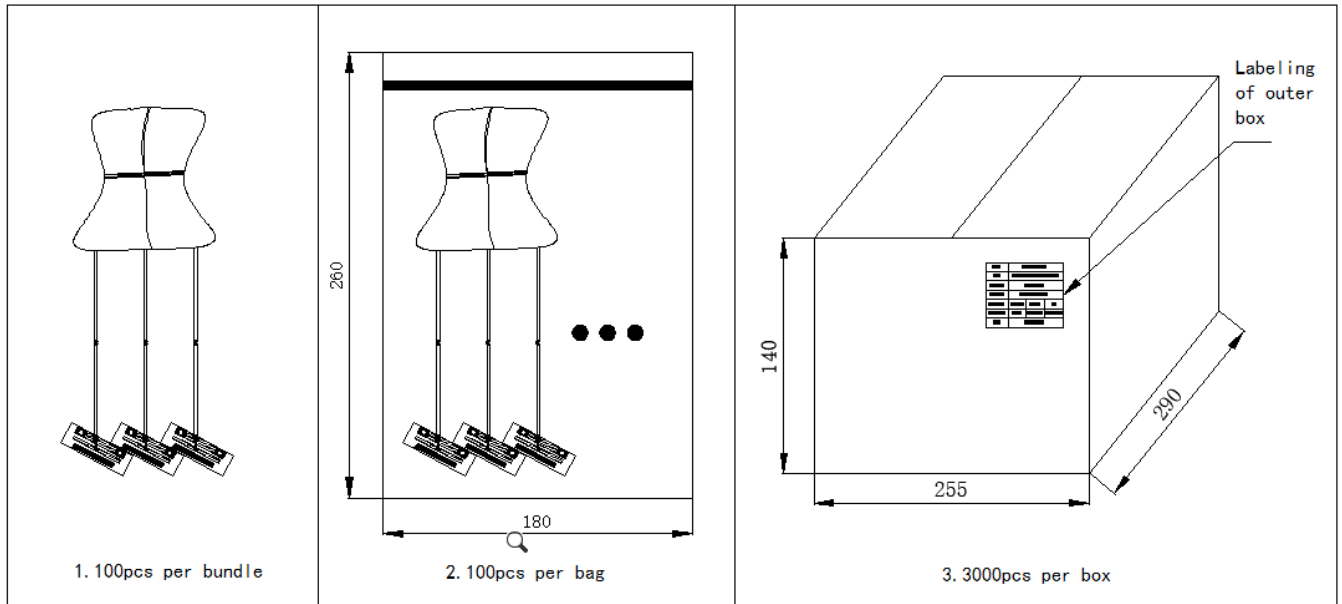
approved by: Yang Chubing.



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8. The packing way



10. Environmental protection

Raw materials and packaging materials used for parts and components must meet the requirements of ROHS and REAHC chemical substances restriction