

Antenna Report

PRODUCT NAME: 2.4/5.8GHz antenna L=160mm+terminal

UB P/N: UB01C100P2D3718A REV: B

Revision	Revisor	Date	Revision Record
V-A	Kangjun.Xu	2023/05/06	First release
V-B	wenqiang.xiong	2023/06/12	Change gain description

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:		
APPROVED BY:		
DATE:	2023/06/12	

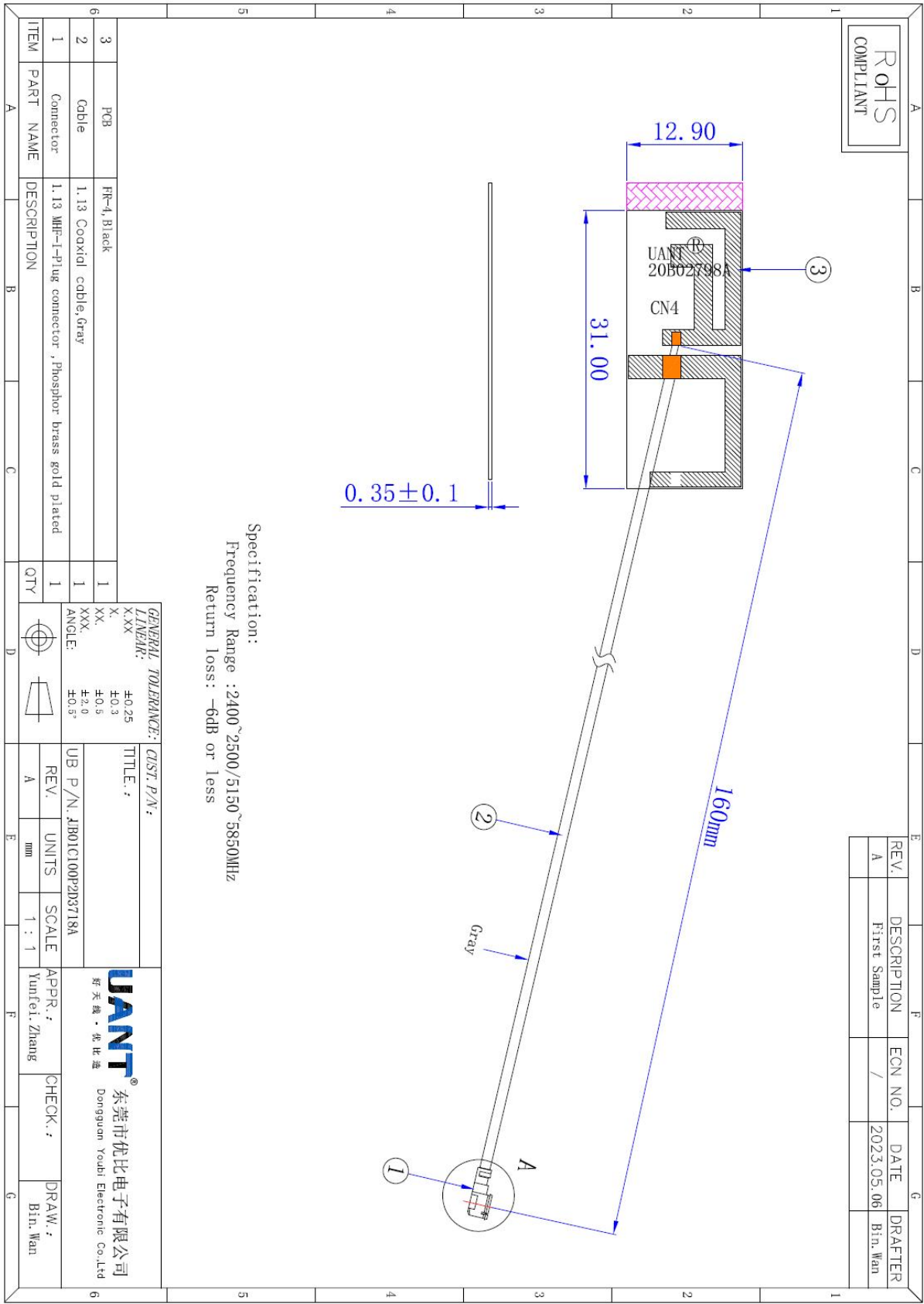
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1 Specification

Specification	
P/N	
Frequency	2400-2500/5150-5850MHz
Antenna Type	Feed coupling
Dimension	Φ31*12.9*0.2mm
Impedance	50Ω
Polarization	Linear
VSWR	<3
Axial Ratio	not involved
Average efficiency	50~55%
Gain	2400-2500MHz@1.17dBi 5150-5850MHz@3.98dBi
Radiation Pattern	Omni-directional
Connection	IPEX 1
Line Type	RF1.13 , 160mm , gray
Power Handling	1W
Operating Temperature	-20~70°C

2 Antenna Dimension

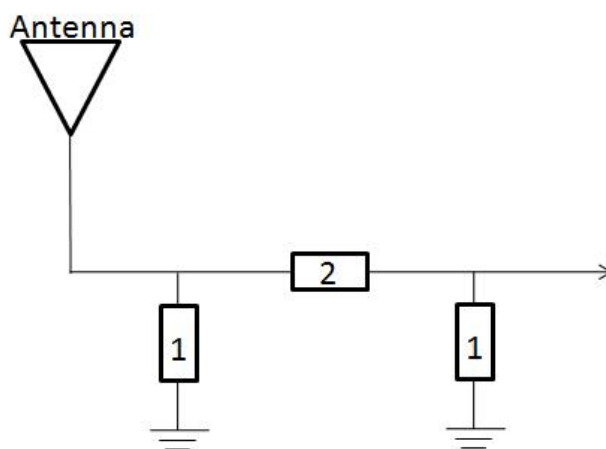


3 Picture

3.1 Picture



3.2 Matching Circuit



The Components of Matching Circuit

Position	Description	Tolerance
1	—	—
2	0 Ω	—
3	—	—

4 Electrical Test

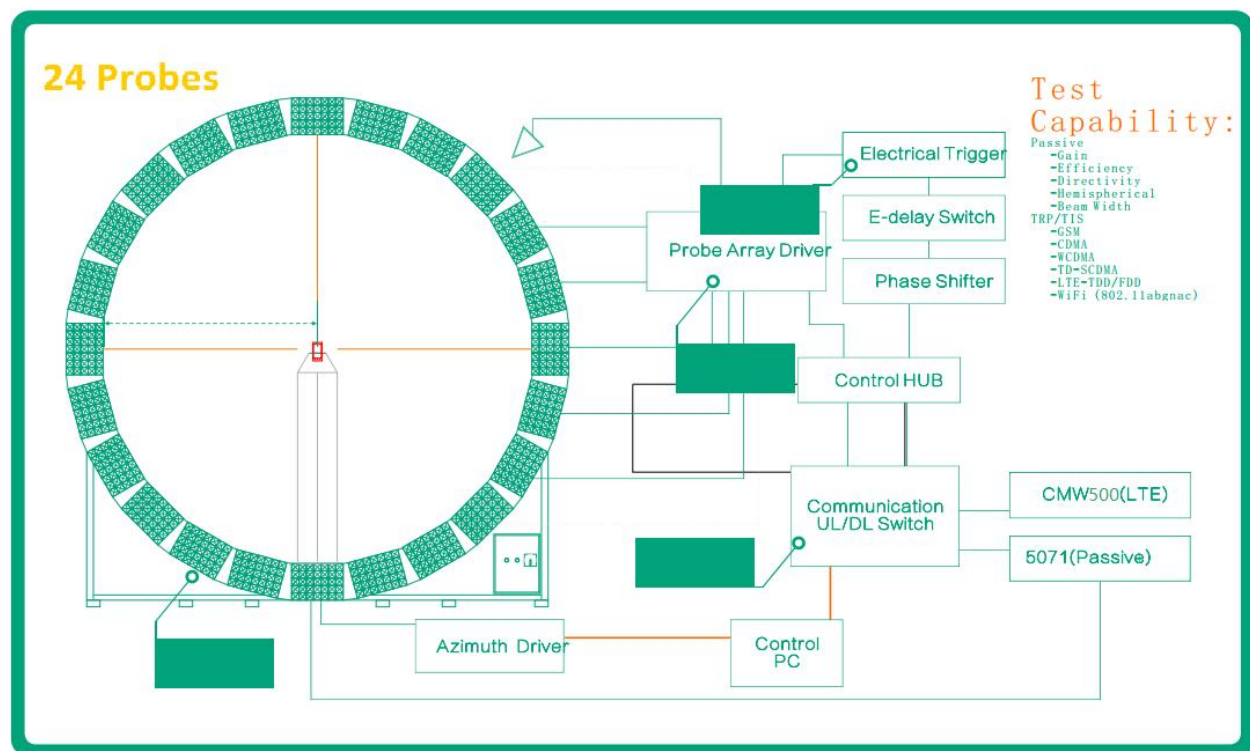
4.1 Method

Name	Parameter	Method	Standard no.
Mobile Communication antenna	VSWR	Generic specification for antennas used in the mobile communications	GB/T 9410-2008
	Antenna gain		
	Radiation pattern		
Antenna performance	Radiation efficiency	IEEE Standard Test Procedures for Antennas	ANSI/IEEE Std 149-1979

4.2 Device

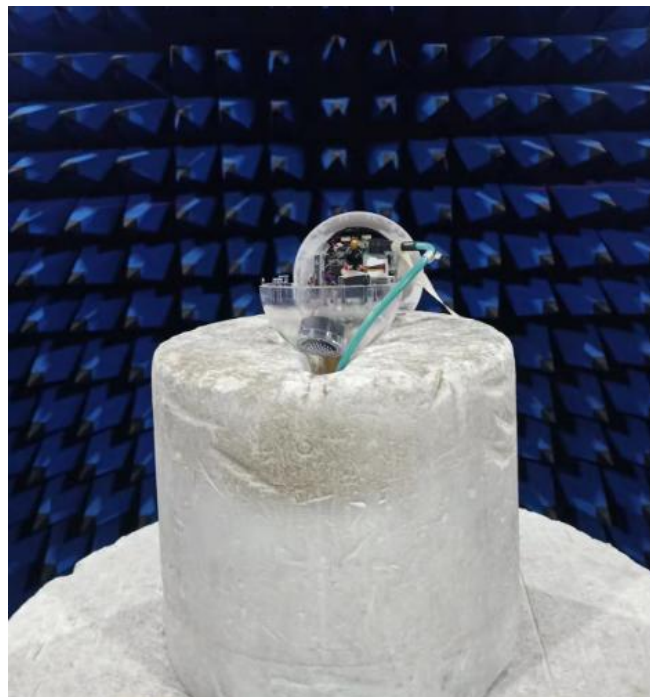
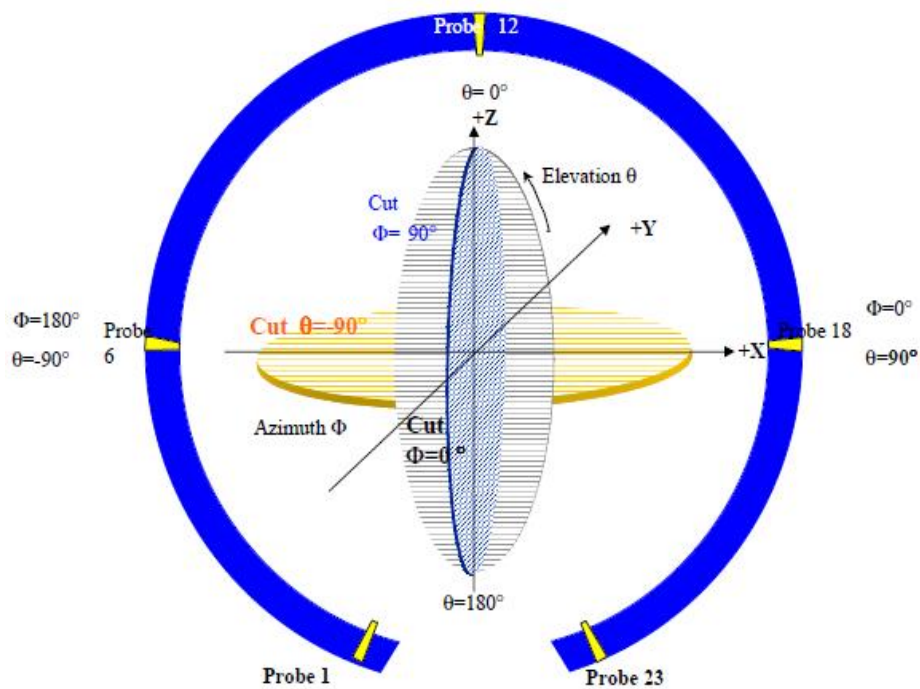
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
Network Analyzer	Agilent	E5071C	MY46315996	2022.08.25	2023.08.24
Radio Communication Tester	ROHDE&SCHWARZ	CMW500	0002K50-100 844	2022.08.25	2023.08.24

4.3 Test Configuration

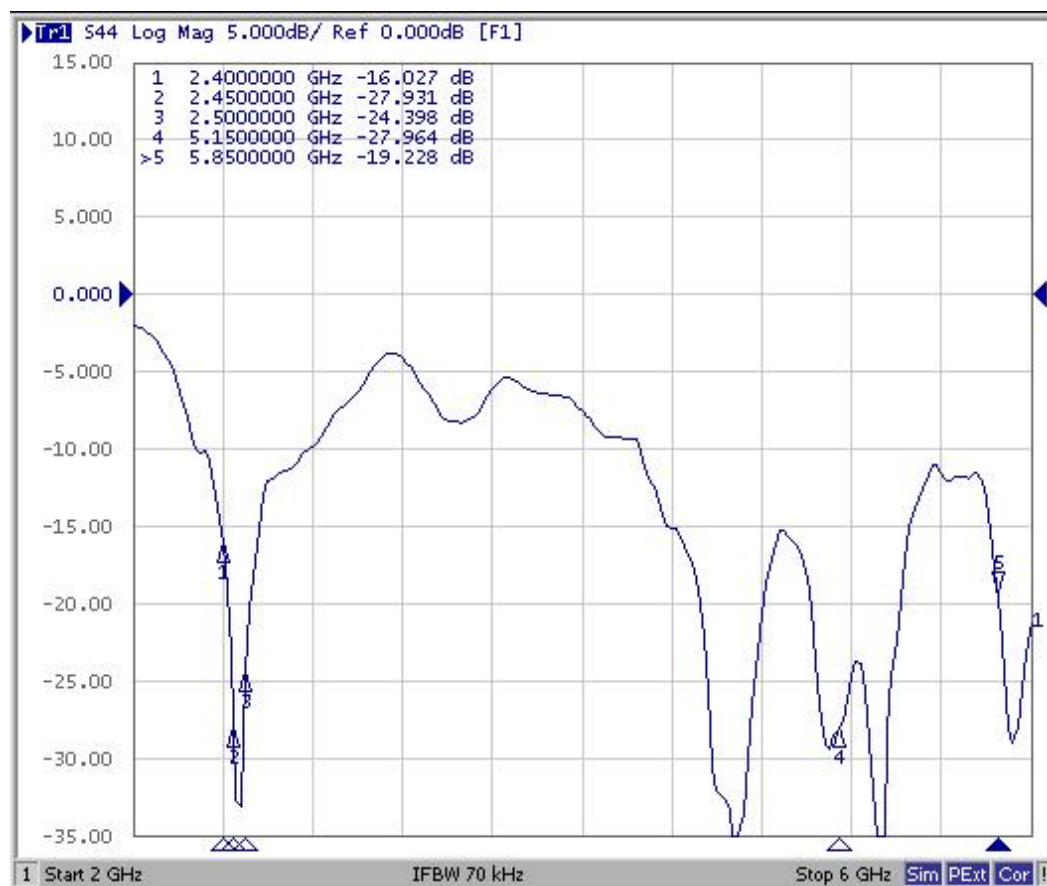


4.4 Passive Test

4.4.1 Position



4.4.2 Return Loss

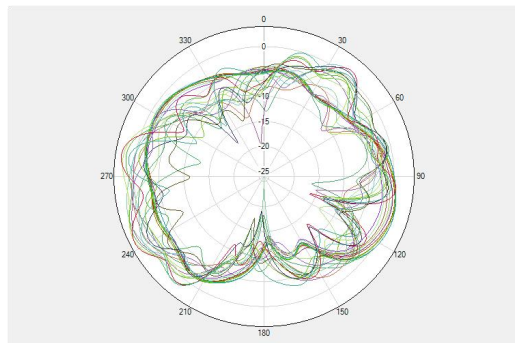


Frequency (MHz)	2400	2450	2500	5150	5850
Return Loss (dB)	-16.12	-27.93	-24.39	-27.96	-19.22

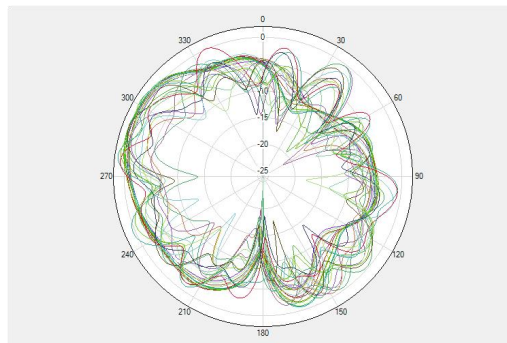
4.4.3 Efficiency & Gain

Frequency / MHz	Efficiency / dB	Efficiency / %	Gain/ dBi
2400	-3.08	49.2	0.41
2410	-3	50.12	0.48
2420	-2.91	51.17	0.67
2430	-2.88	51.52	0.59
2440	-2.7	53.7	0.6
2450	-2.65	54.33	0.5
2460	-2.71	53.58	0.79
2470	-2.68	53.95	1.1
2480	-2.68	53.95	0.95
2490	-2.61	54.83	1.17
2500	-2.73	53.33	1.11
5150	-2.81	52.36	1.93
5200	-2.79	52.6	3.26
5250	-2.83	52.12	2.73
5300	-2.55	55.59	2.46
5350	-2.59	55.08	3.55
5400	-2.25	59.57	3.16
5450	-2.56	55.46	2.61
5500	-2.67	54.08	3.57
5550	-2.6	54.95	2.92
5600	-2.9	51.29	3.98
5650	-2.16	60.81	3.91
5700	-2.68	53.95	2.55
5750	-3.03	49.77	3.36
5800	-2.35	58.21	3.63
5850	-2.51	56.1	3.27

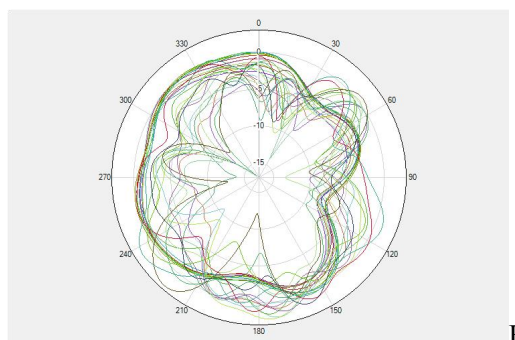
4.4.4 2D Report



E1

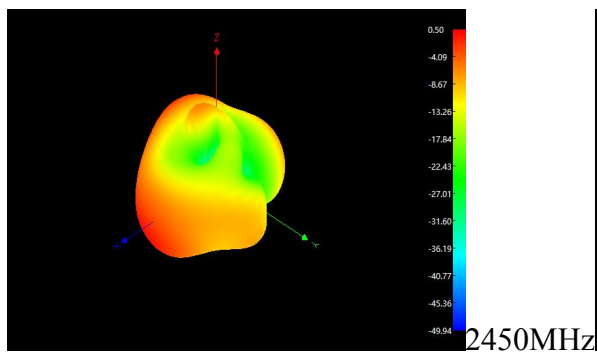


E2

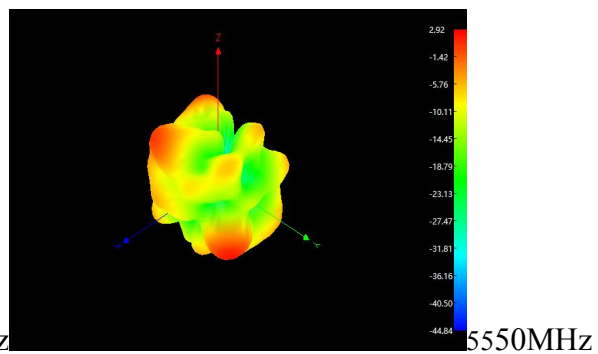


H

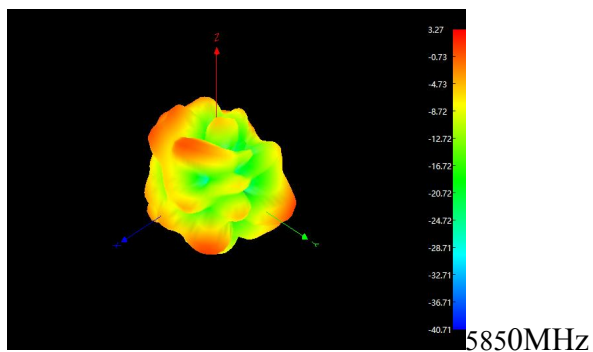
4.4.5 3D Report



2450MHz



5550MHz



5850MHz