

Antenna Report

PRODUCT NAME: 433MHz thumb black antenna 1.13 Black

cable=70mm+ terminal

UB P/N: UB02C100B1Daa07A REV: A

Revision	Revisor	Date	Revision Record
V-A	Wenqiang.Xiong	2023/10/20	First Draft

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:		
APPROVED BY:		
DATE:	2023/10/20	

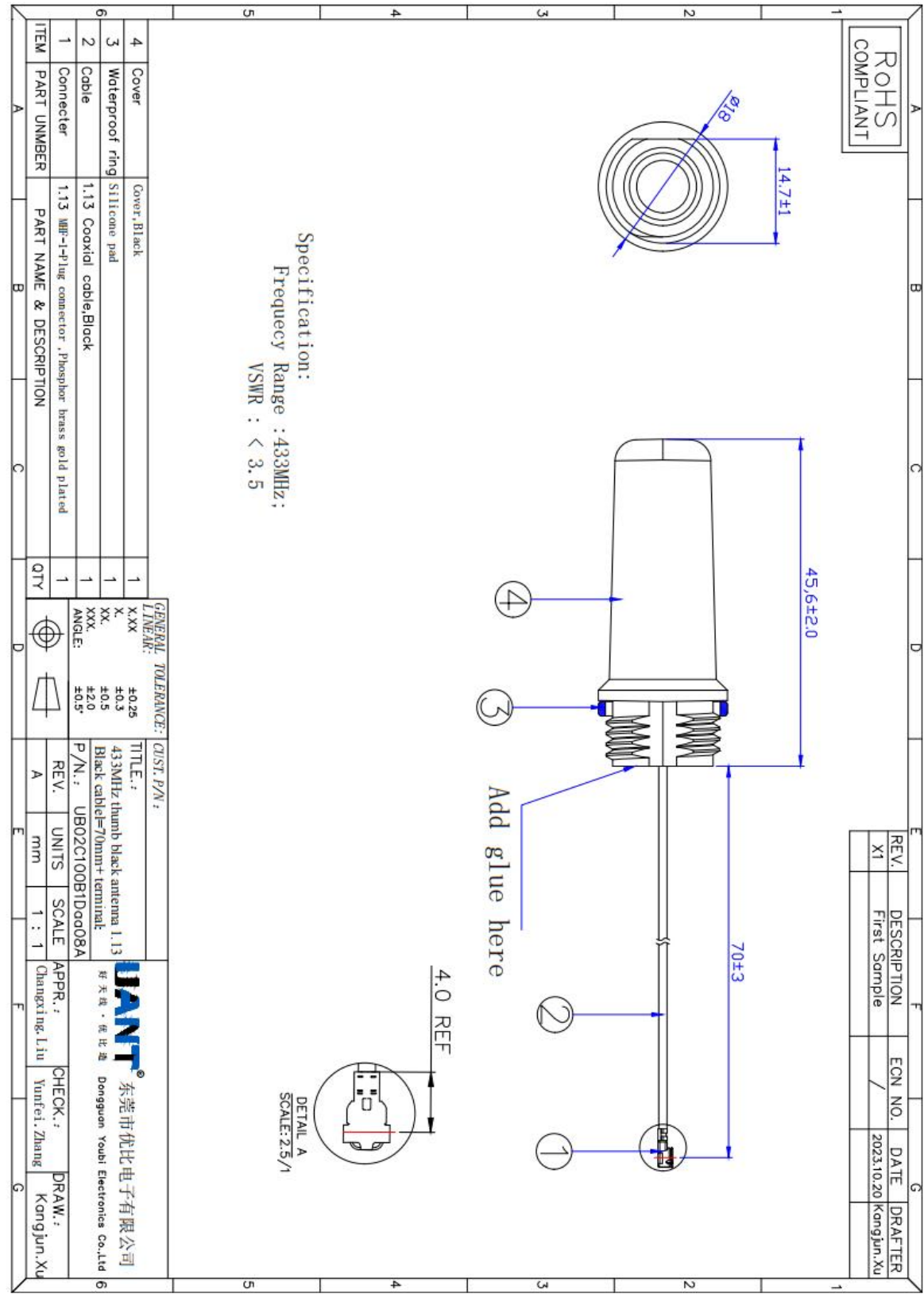
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1 Specification

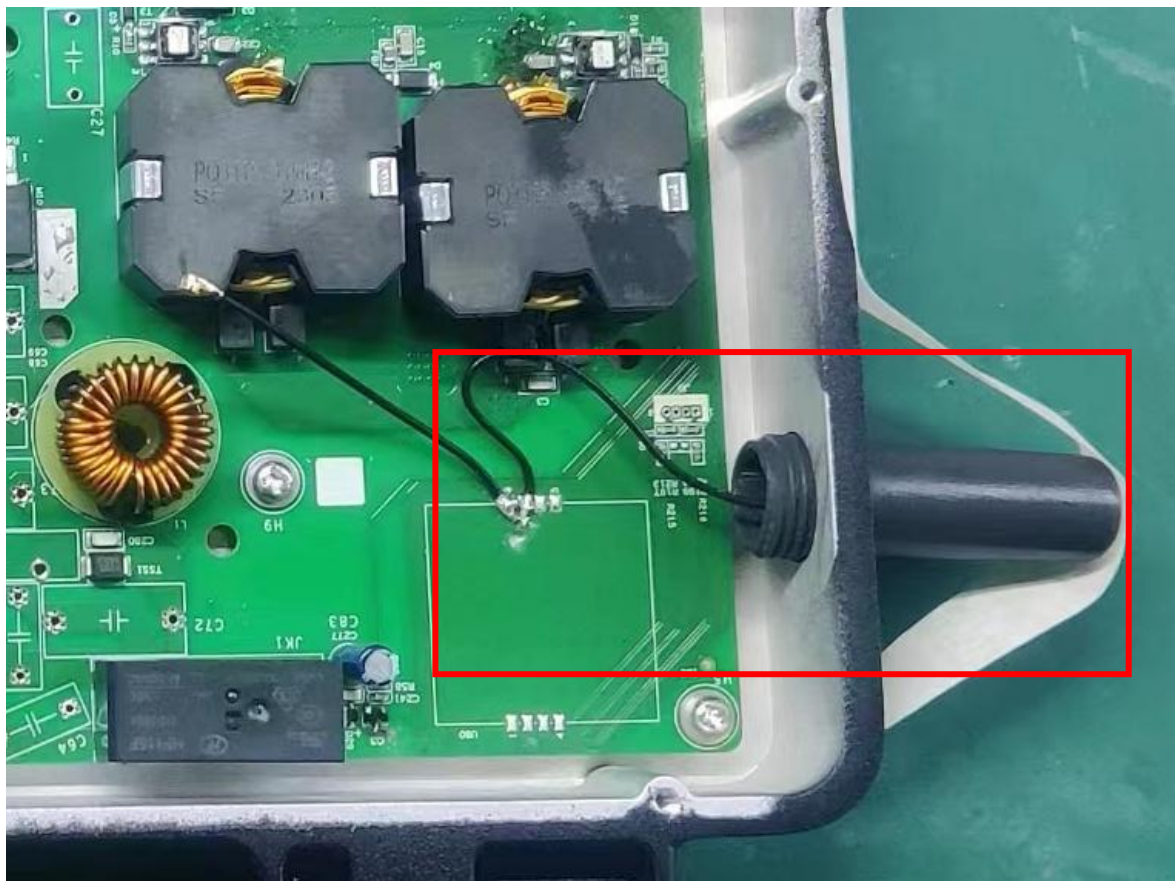
Specification	
P/N	
Frequency	433MHz
Antenna Type	Feed coupling
Dimension	Φ18*45.6mm
Impedance	50Ω
Polarization	Linear
VSWR	<3.5
Axial Ratio	not involved
Efficiency	13~15%
Gain	-2.71dbi
Radiation Pattern	Omni-directional
Connection	IPEX 1
Line Type	RF1.13, 70mm, Black
Line Loss	0.5dB·m ⁻¹ @1GHz, 1dB·m ⁻¹ @3GHz, 3dB·m ⁻¹ @6GHz
Power Handling	1W
Operating Temperature	-20~70℃

2 Antenna Dimension

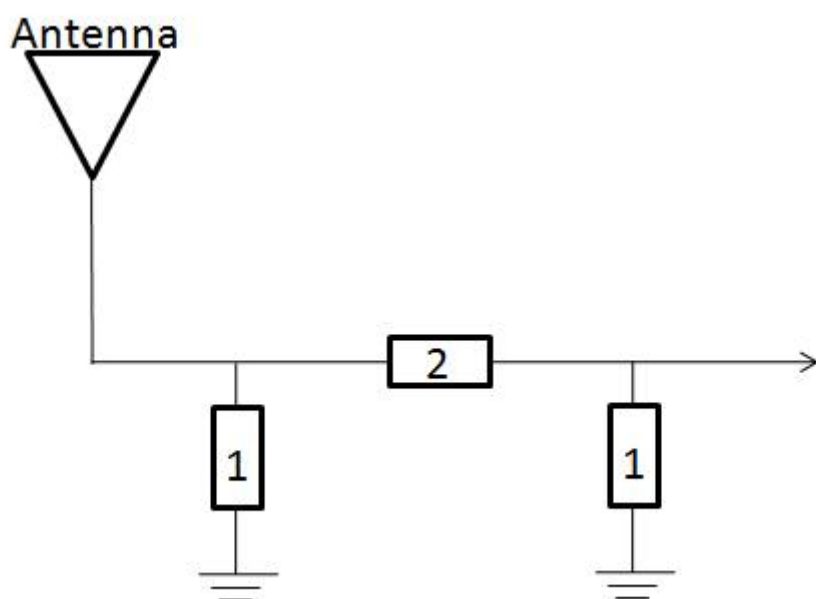


3 Picture

3.1 Picture



3.2 Matching Circuit



The Components of Matching Circuit

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

4 Electrical Test

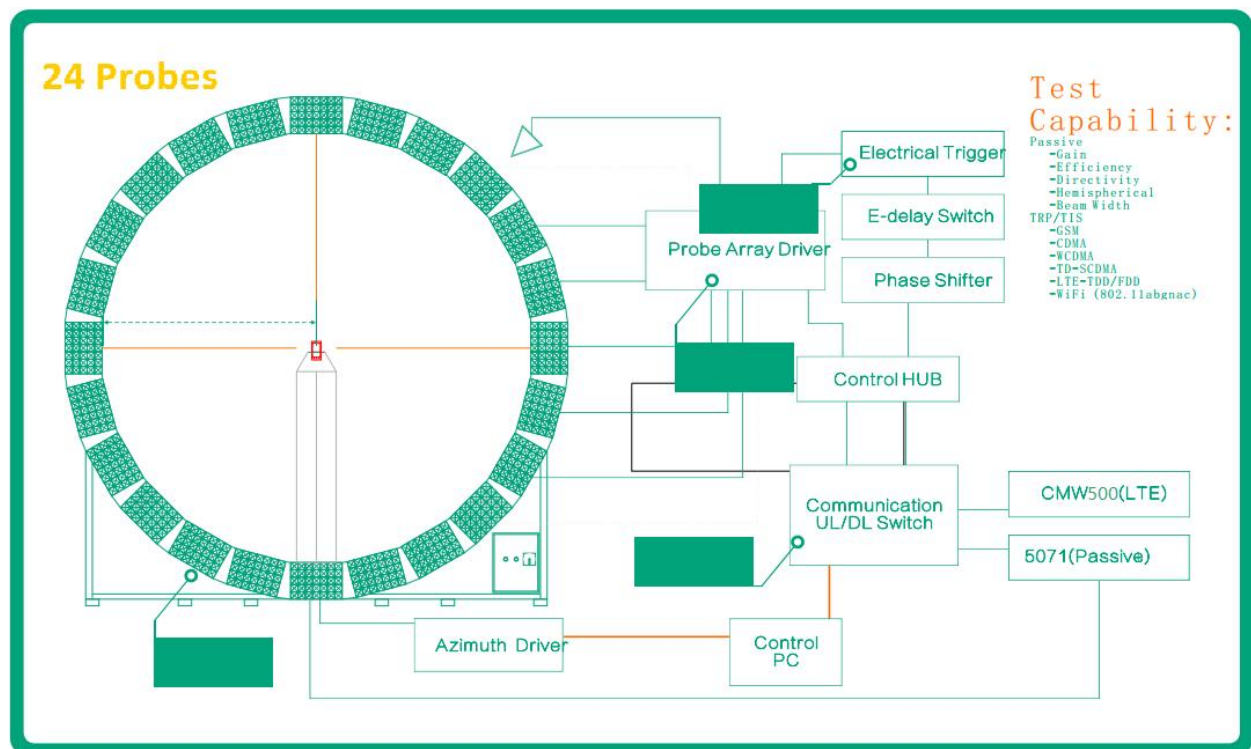
4.1 Method

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

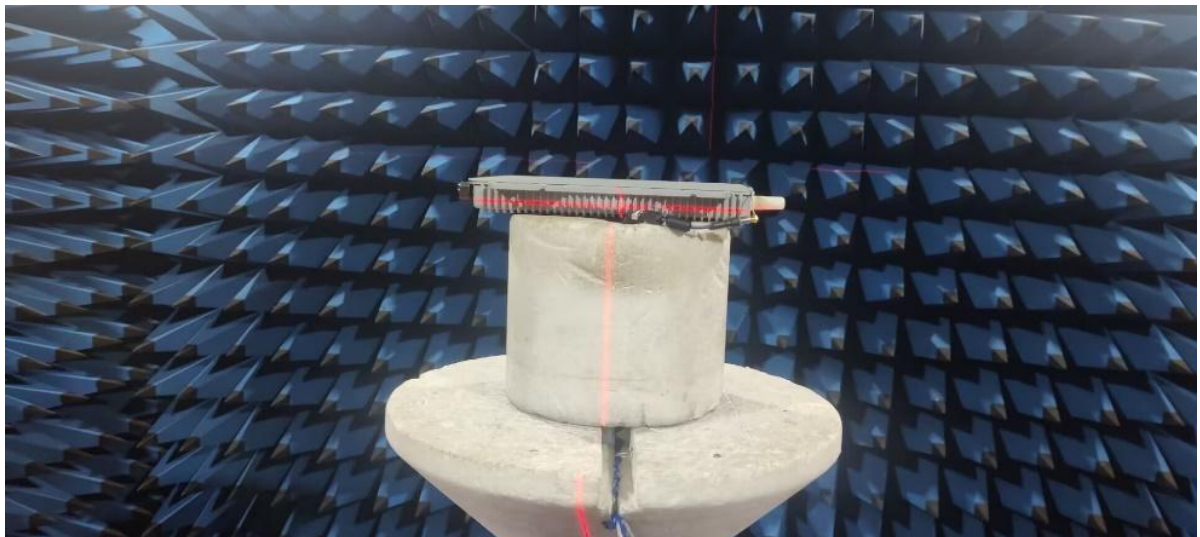
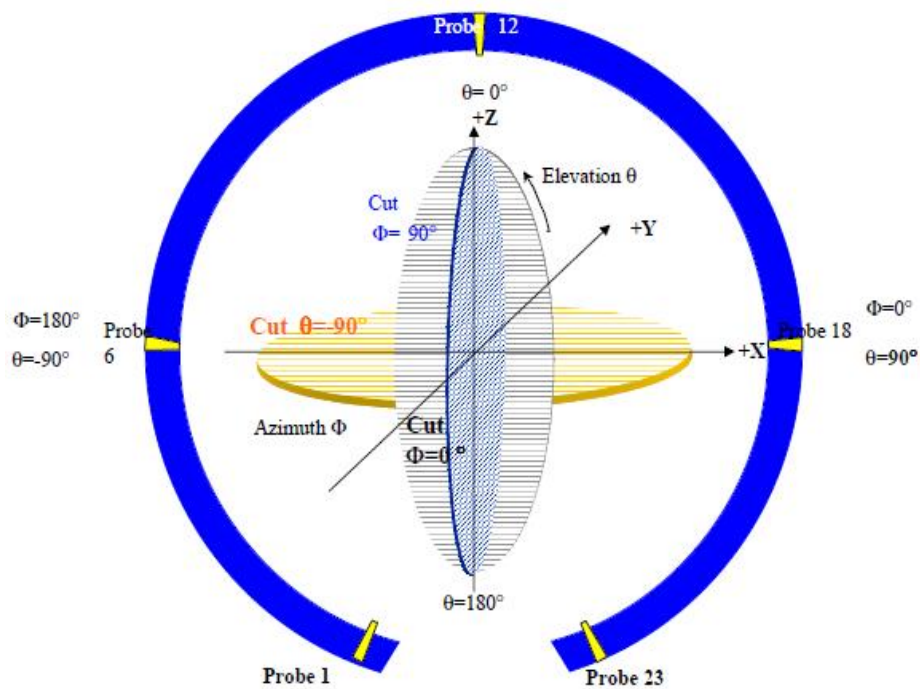
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
Network Analyzer	Agilent	E5071C	MY46315996	2022.08.25	2023.08.24
Radio Communication Tester	ROHDE&SCHWARZ	CMW500	0002K50-100 844	2022.08.25	2023.08.24

4.3 Test Configuration



4.4 Passive Test

4.4.1 Position



4.4.2 Return Loss

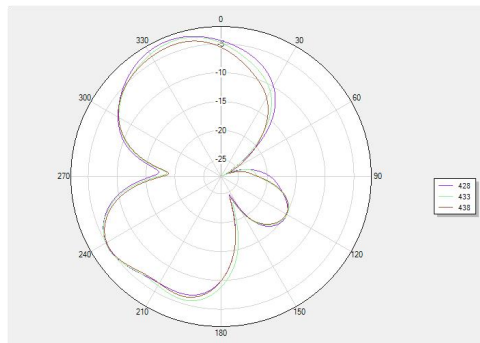


Frequency (MHz)	433
Return loss (dB)	-6.03

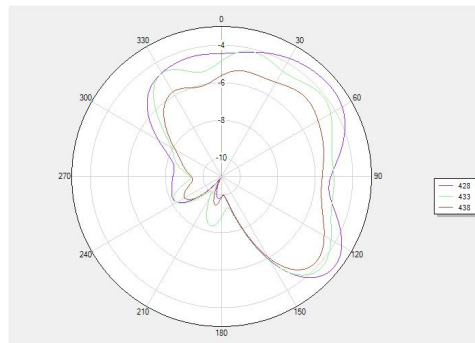
4.4.3 Efficiency & Gain

Frequency / MHz	Efficiency / dB	Efficiency / %	Gain/ dBi
428	-7.91	14.18	-2.71
429	-7.95	15.03	-2.78
430	-8.18	15.21	-3.02
431	-8.15	15.31	-2.93
432	-8.2	15.14	-3
433	-8.26	14.93	-3.09
434	-8.29	14.83	-3.15
435	-8.19	15.17	-3
436	-8.46	14.26	-3.29
437	-8.56	13.93	-3.53
438	-8.59	13.84	-3.62

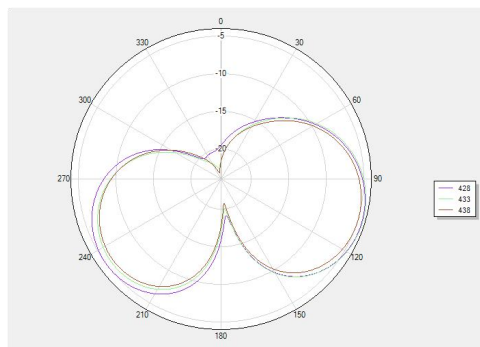
4.4.4 2D Report



E1

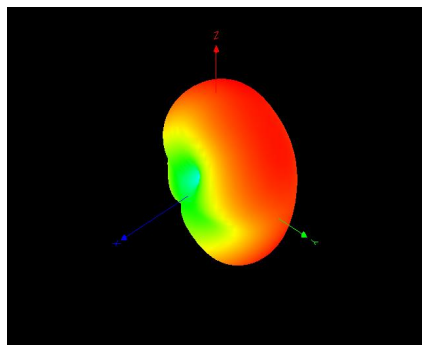


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4.4.5 3D Report



433Mhz