

APPROVAL SHEET

CUSTOMER NAME:

PRODUCT NAME: 2.4G FPC inner antenna 0.81 black cable
L=40mm+terminal

CUSTOMER P/N:

UB P/N: UB01C40F1D382aA REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:		
APPROVED BY:		
DATE:	2023/07/14	

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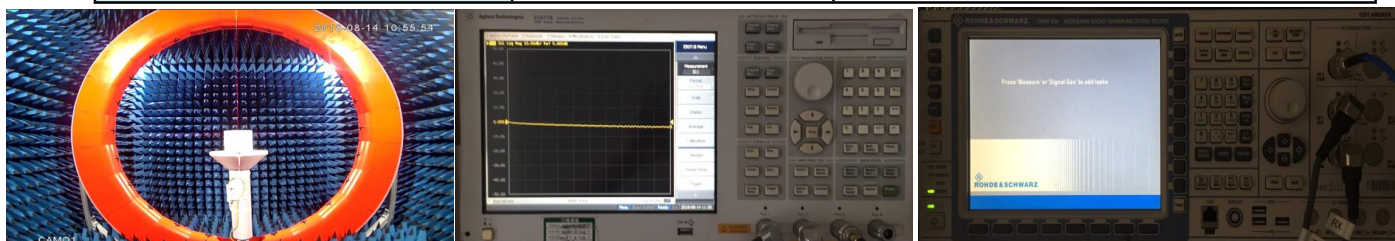
<i>Item</i>	<i>Description</i>
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1. Specification table:

Electrical Specification	
Design Specifications	Types
Antenna Type	Inner antenna lineout
Operating Frequency	2400-2500MHz
Peak Gain	3.07dBi@without metal shell ; 1.66dBi @with metal shell
Average Efficiency	43%@without metal shell; 35.2%@with metal shell
VSWR	<3
Polarization	Linear
Axial Ratio	\
Radiation pattern	Omnidirectional
Impedance	50 ohm
Power handling	1W
Interface	Cable+terminal
Overall dimensions	52.3*23*0.2mm
Operating Temp.	-20℃~+70℃
Storage Temp.	-20℃~+70℃

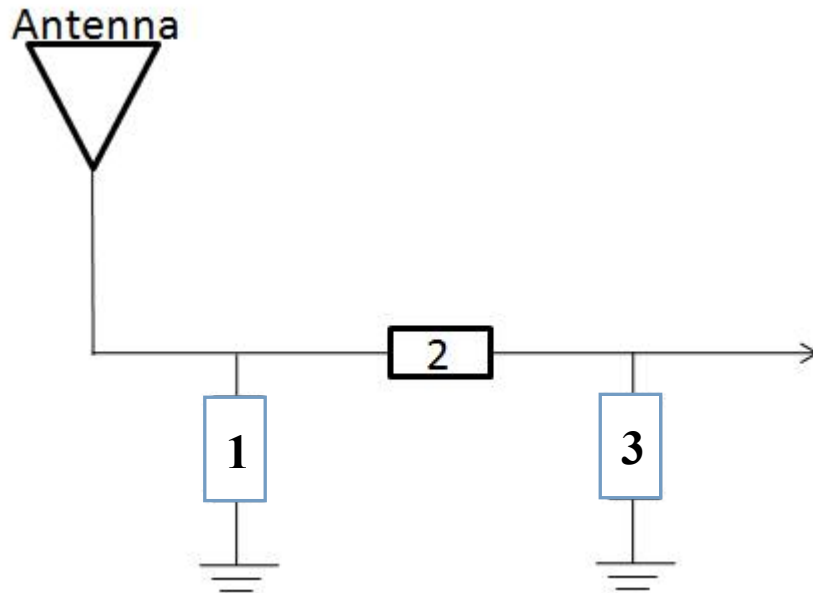
2. Test Items and Equipment

	Test items	Test equipment
S-Parameter	1.Return Loss 2.VSWR	Network analyzer (Agilent E5071B)
The whole machine of Passive parameters	1.Frequency 2.Gain 3.Radiation Pattern	1.3D microwave darkroom (5m*5m*5m) 2.Network analyzer (Agilent E5071B)
The whole machine of Active parameters	1.TRP 2.TIS	1.3D microwave darkroom (5m*5m*5m) 2.Comprehensive test instrument (CMW500)



4. test report:

Matching Circuits



The Circuit matching system and components		
Location	Description	Tolerance
1	—	—
2	RES	0 Ω
3	—	—

4.1: S-Parameter

Test without metal shell



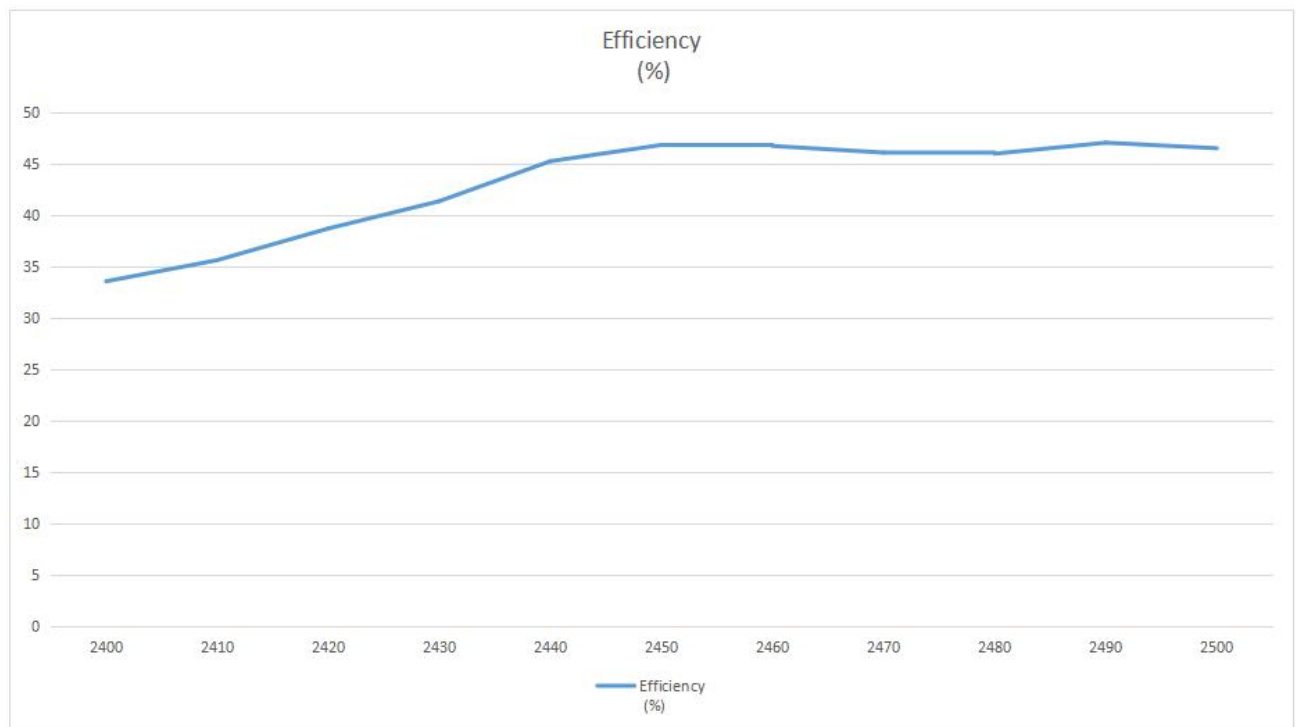
Test with metal shell



4.2: Efficiency and Gain

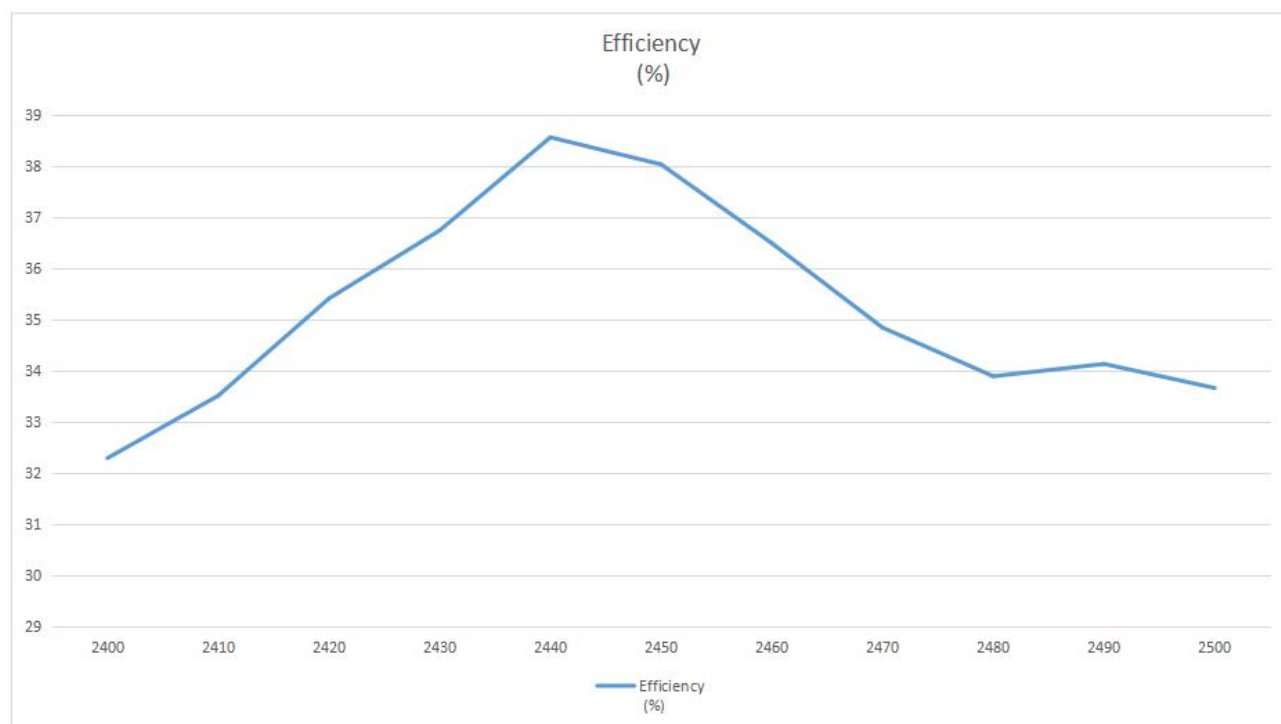
Test without metal shell

Frequency / MHz	Efficiency / dB	Efficiency / %	Gain/ dBi
2400	-4.75	33.5	1.24
2410	-4.49	35.56	1.45
2420	-4.13	38.64	1.85
2430	-3.84	41.3	2.17
2440	-3.45	45.19	2.67
2450	-3.3	46.77	3.07
2460	-3.31	46.67	2.85
2470	-3.37	46.03	2.89
2480	-3.38	45.92	2.51
2490	-3.28	46.99	2.44
2500	-3.33	46.45	2.25

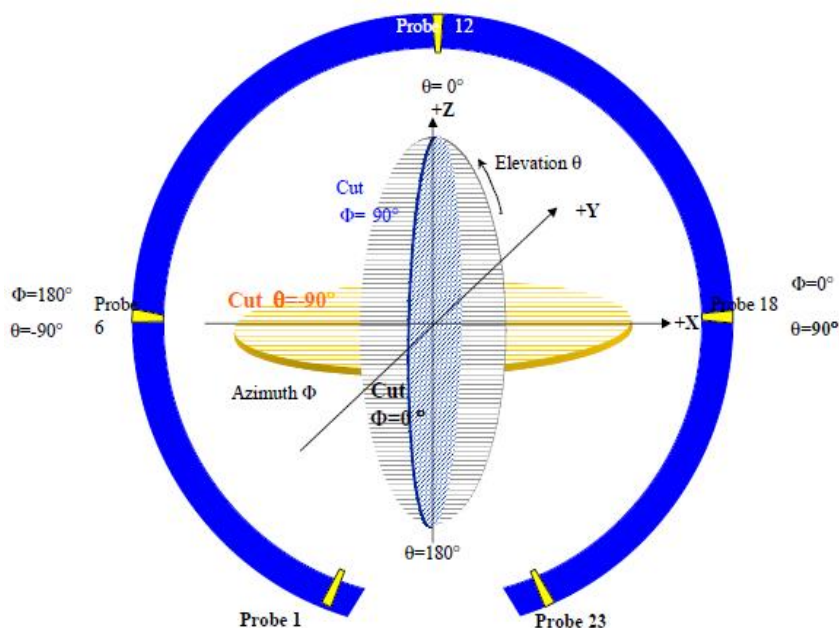


Test with metal shell

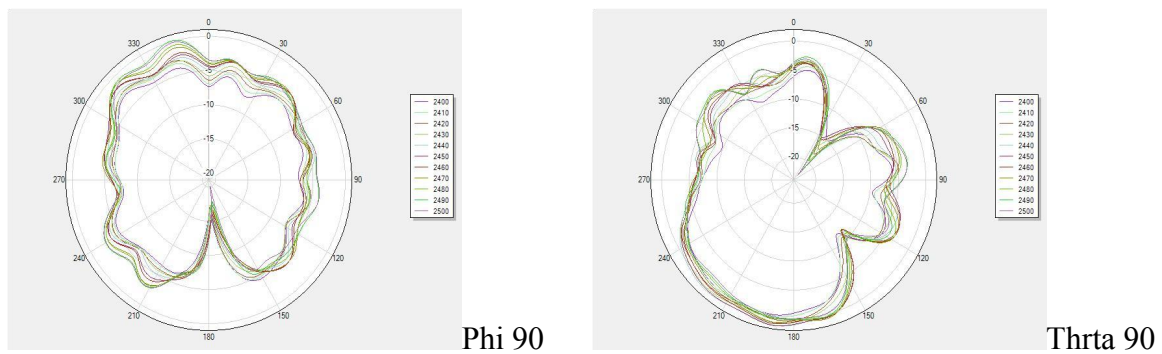
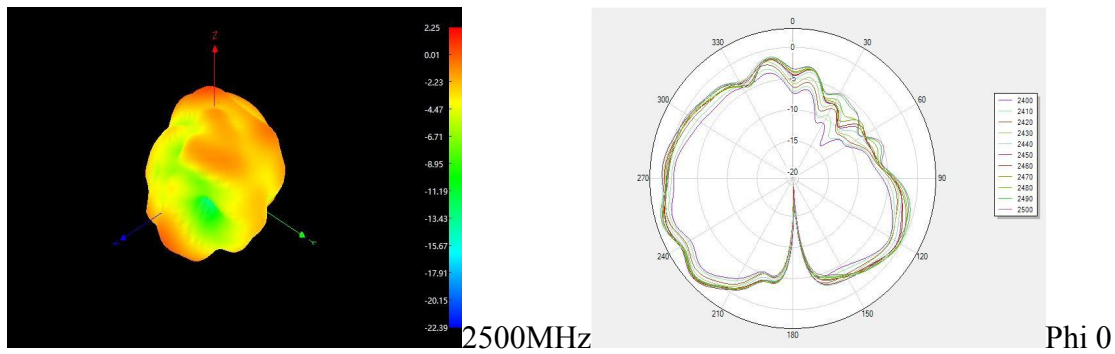
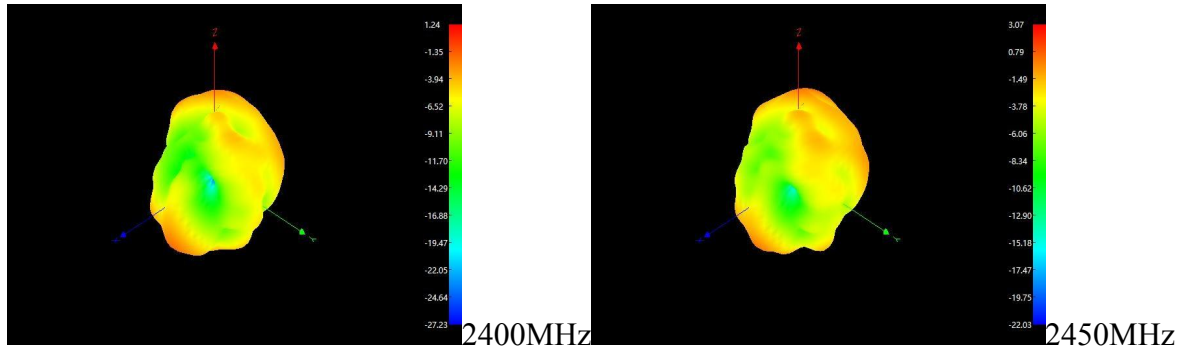
Frequency / MHz	Efficiency / dB	Efficiency / %	Gain/ dBi
2400	-4.91	32.28	0.14
2410	-4.75	33.5	0.62
2420	-4.51	35.4	1.28
2430	-4.35	36.73	1.54
2440	-4.14	38.55	1.66
2450	-4.2	38.02	1.17
2460	-4.38	36.48	0.74
2470	-4.58	34.83	0.55
2480	-4.7	33.88	0.55
2490	-4.67	34.12	0.78
2500	-4.73	33.65	0.53



Coordinate Axis



4.3: Antenna 2/3D Radiation Pattern——Test without metal shell



4.3: Antenna 2/3D Radiation Pattern——Test with metal shell

