

Antenna specification datasheet

Manufacturer: STANDARD MERIT INDUSTRIAL LIMITED

Address: 604 Kalok Building, 720 Nathan Road, Kowloon, Hong Kong

Product name: 2.4GHz Antenna L=133mm

Model number: UB01C133J2D3321A

Modification History

Version	Content Revision	Issued by	Date
A	Original version	King	2022-10-14

Content

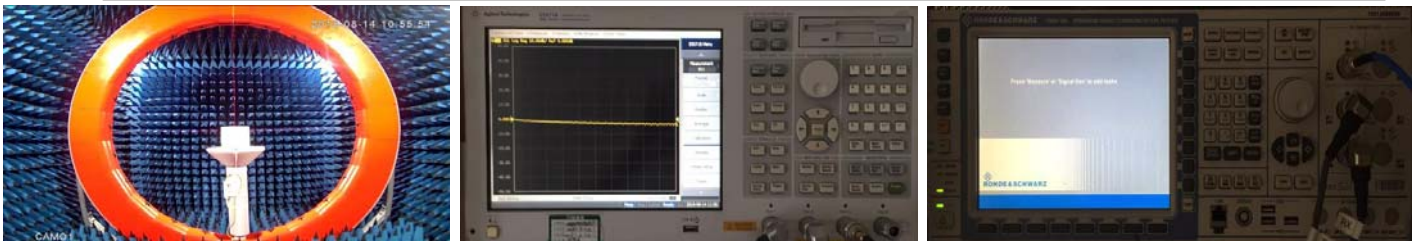
<i>Item</i>	<i>Description</i>
1.-----	Electrical Specification
2.-----	Test Items and Equipment
3.-----	S Parameter
4.-----	Efficiency and Gain
5.-----	Radiation Pattern
6.-----	Mechanical Specification

1. Electrical Specification:

Characteristics	Specifications	Unit
Outline Dimensions	$\Phi 3.5 \times 133$	mm
Frequency	2400-2500	MHz
Impedance	50	Ω
Machine VSWR	≤ 2.0	
Polarization	Linear Polarization	
Gain	2.0 REF	dBi
Efficiency	> 70	%
Connector Type	/	
Operating temperature	-20°C ~ +70°C	
Storage Temp	-20°C ~ +70°C	

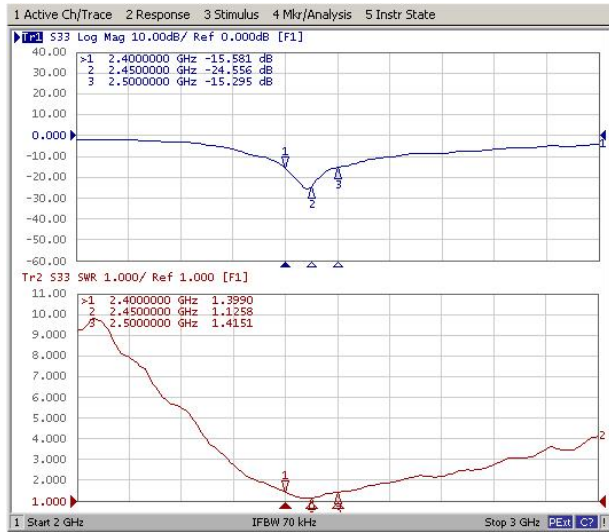
2. Test Items and Equipment

	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)



3. S Parameter

Frequency (MHz)	Return Loss (dB)	VSWR
2400	-15.58	1.39
2450	-24.55	1.12
2500	-15.29	1.41



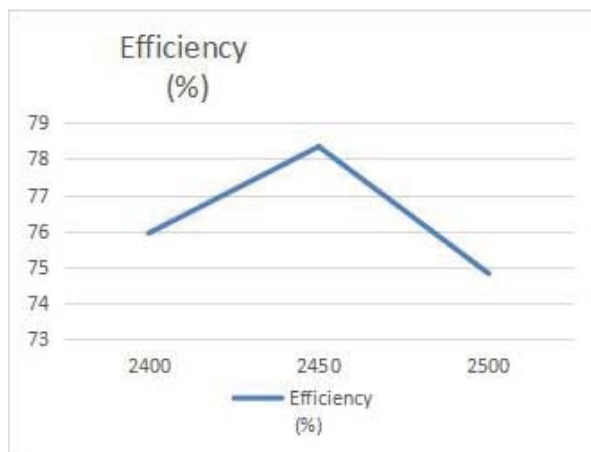
* Voltage Standing Wave Ratio(VSWR)

Return Loss(RL)

$$RL=20*\log_{10}[(VSWR+1)/(VSWR-1)]$$

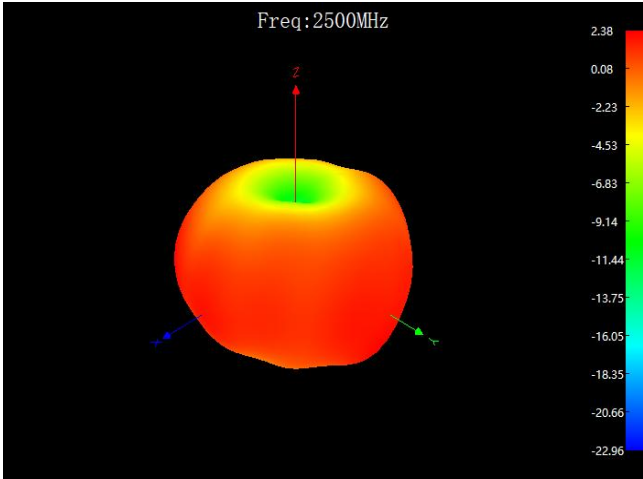
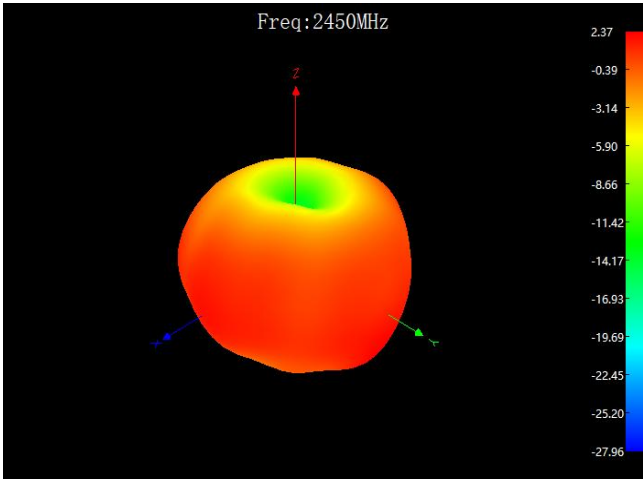
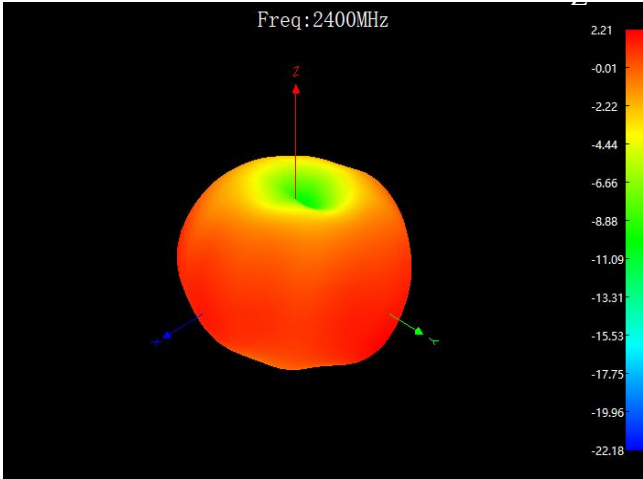
4. Efficiency and Gain

Frequency (MHz)	2400	2450	2500
Efficiency (%)	75.94	78.34	74.82
Gain (dBi)	2.21	2.37	2.38

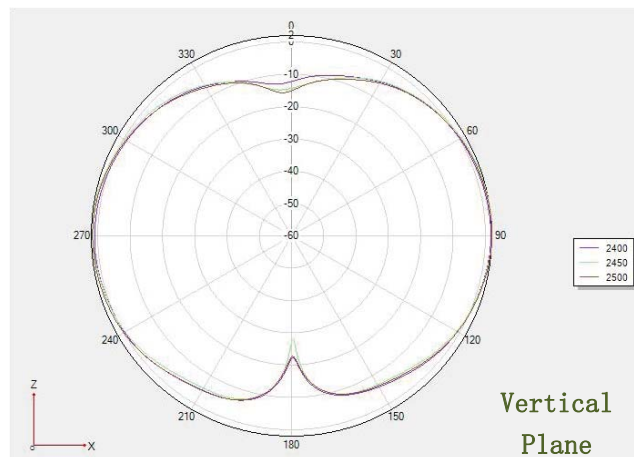


5. Radiation Pattern

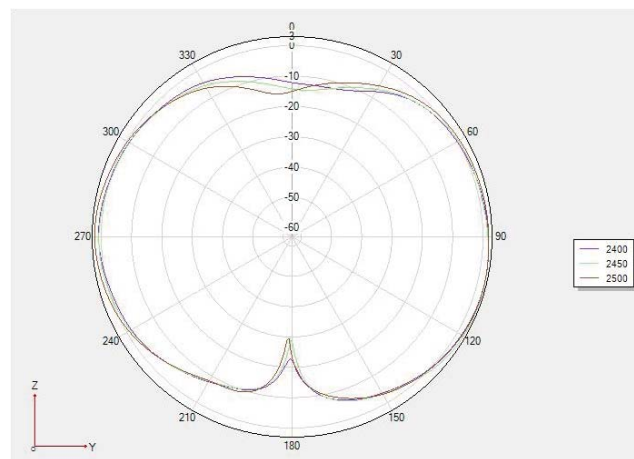
5-1 Antenna 3D Radiation Pattern



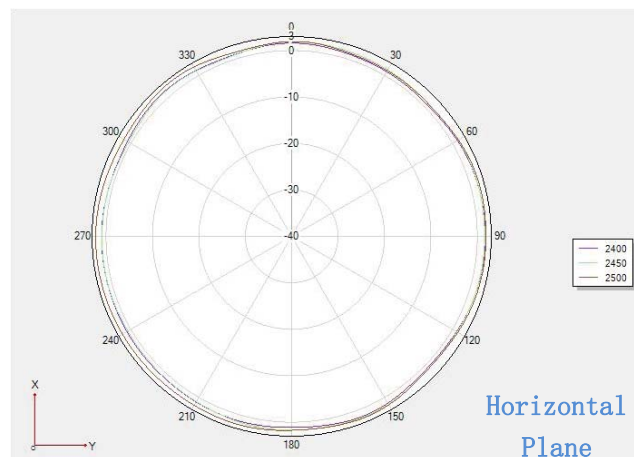
5-2 Antenna 2D Radiation Pattern



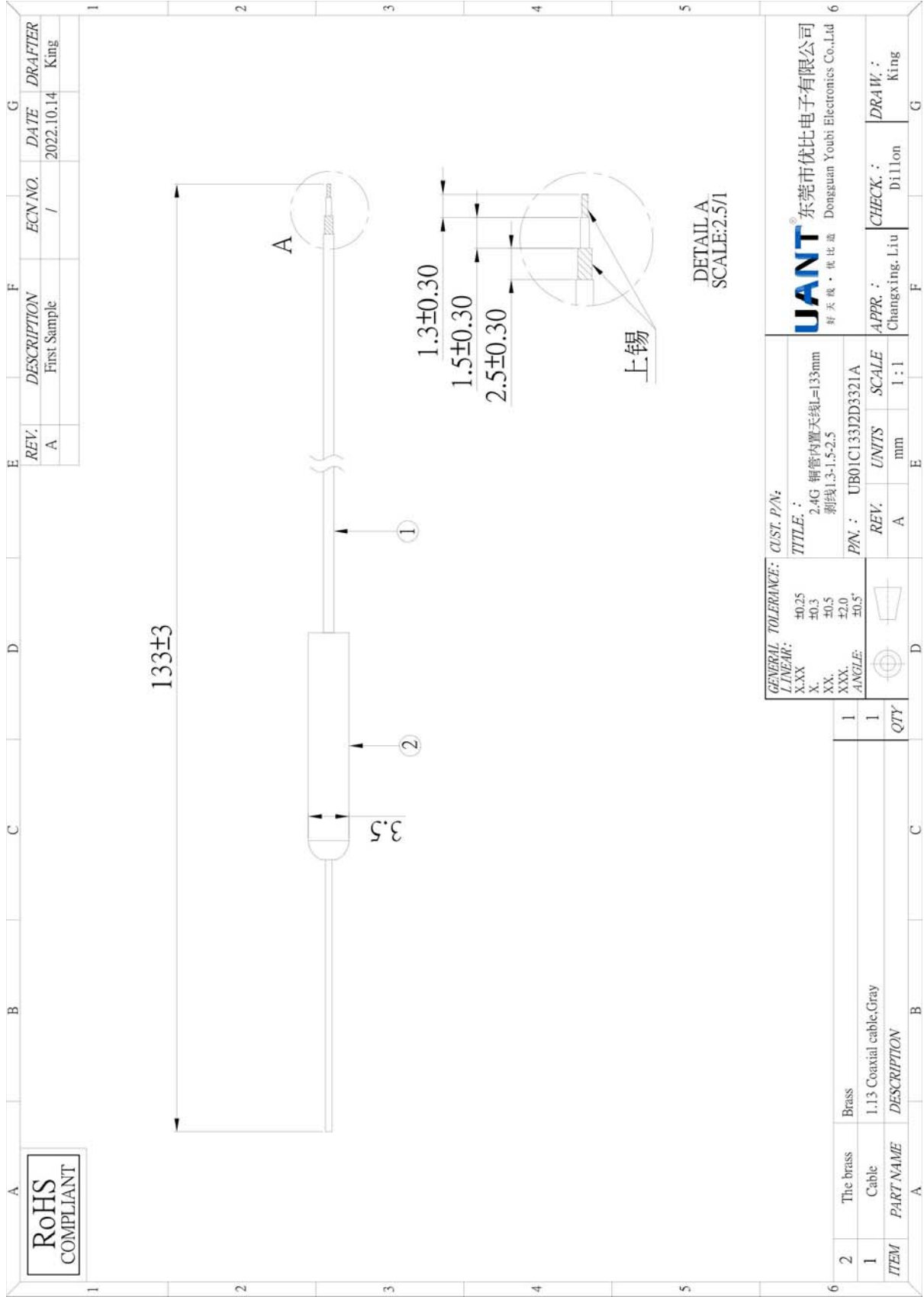
Phi 0 2D



Phi 90 2D



Theta 90 2D



6. Mechanical Specification: