

承 认 书

APPROVAL SHEET

客 户 名 称 深圳市积加创新技术有限公司

CUSTOMER NAME: Shenzhen Addx Innovation Technology Co., Ltd.

产 品 名 称 2.4G Antenna

PRODUCT M/N: W70-B

天线材质 : 棒状天线

Antenna Type : FPC Antenna

优比电子料号

Youbi P/N: UB02C220W3D2270A REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:	Kang jun. Xu	
APPROVED BY:	Changxing. Liu	
DATE:	2021/08/17	

Modification History

Version	Content Revision	Issued by	Date
A	Original version	Kangjun. Xu	2021-08-17

Content

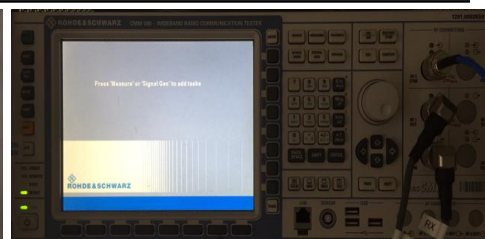
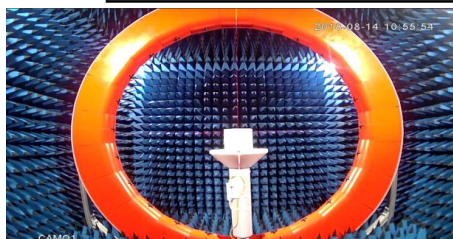
<i>Item</i>	<i>Description</i>
1.-----	Electrical Specification
2.-----	Test Items and Equipment
3.-----	S Parameter
4.-----	Efficiency and Gain
5.-----	Radiation Pattern
6.-----	Mechanical Specification
7.-----	Packaging

1. Electrical Specification:

Characteristics	Specifications	Unit
Outline Dimensions	6.5x105	mm
Frequency	2400-2500	MHz
Impedance	50	Ω
VSWR	≤ 2.0	
Polarization	Linear Polarization	
Gain	2.62 $\pm$ 0.5	dBi
Efficiency	>60	%
Connector Type	1.13 MHF-1-Plug	
Operating temperature	-20 $^{\circ}$ C~+50 $^{\circ}$ C	
Storage Temp	-20 $^{\circ}$ C~+50 $^{\circ}$ C	

2. Test Items and Equipment

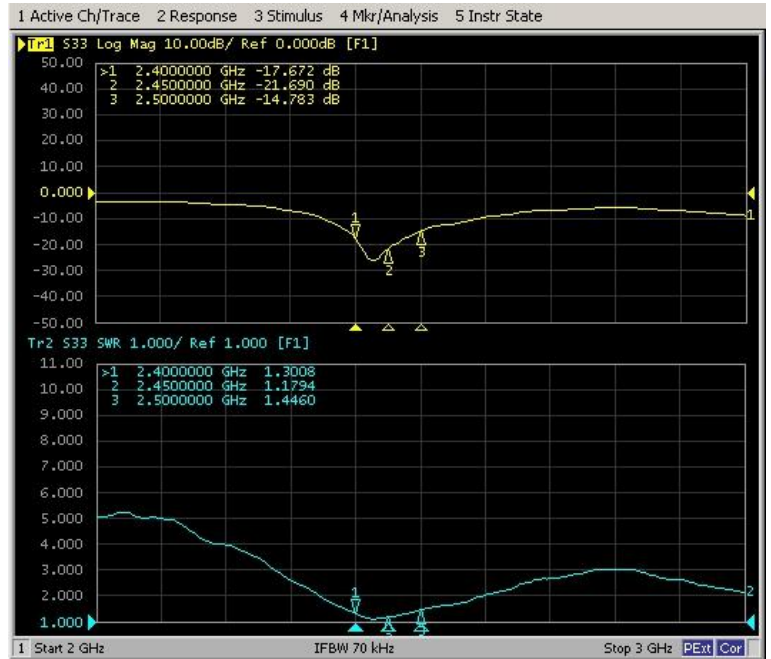
	Test items	Test equipment
S Parameter	1.Return Loss 2.VSWR	Network analyzer (Agilent E5071B)
The whole machine of Passive parameters	1.Frequency 2.Gain 3.Radiation Pattern	1.3D microwave darkroom (5m*5m*5m) 2.Network analyzer (Agilent E5071B)
The whole machine of Active parameters	1.TRP 2.TIS	1.3D microwave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



3. S Parameter

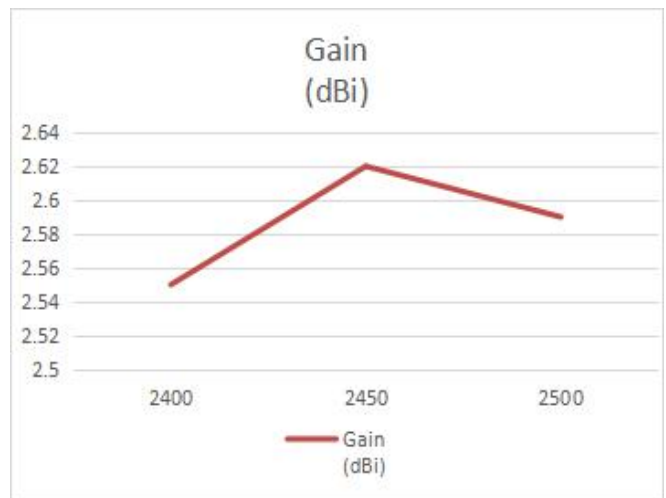
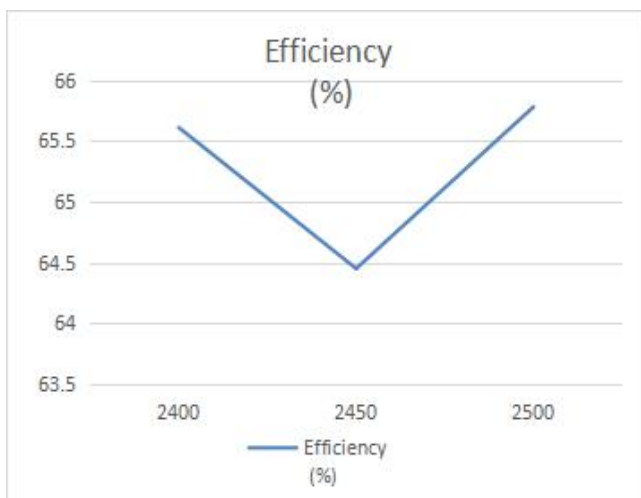
Frequency (MHz)	Return Loss (dB)	VSWR
2400	-17.67	1.30
2450	-21.69	1.17
2500	-14.78	1.44

* Voltage Standing Wave Ratio(VSWR)
Return Loss(RL)
 $RL=20*\log_{10}[(VSWR+1)/(VSWR-1)]$



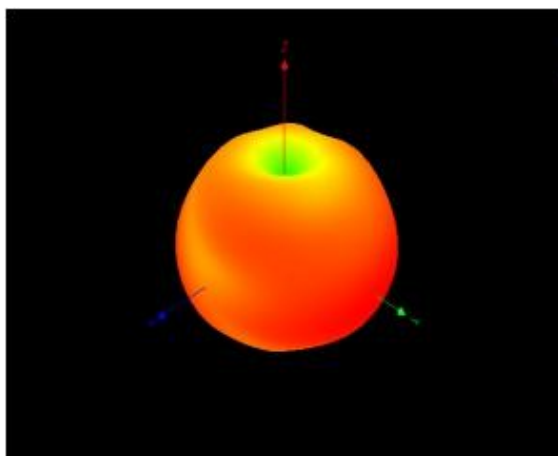
4. Efficiency and Gain

Frequency (MHz)	2400	2450	2500
Efficiency (%)	65.61	64.45	65.78
Gain (dBi)	2.55	2.62	2.59

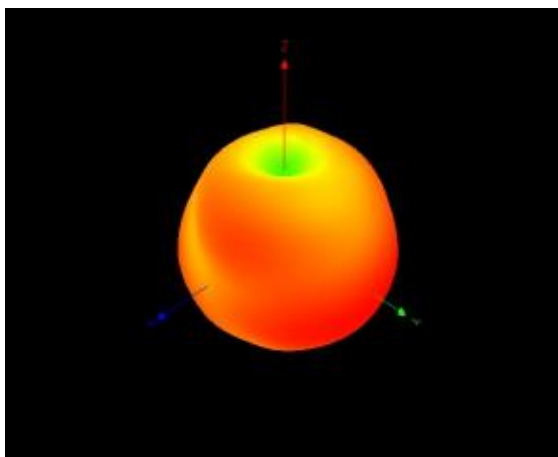


5. Radiation Pattern

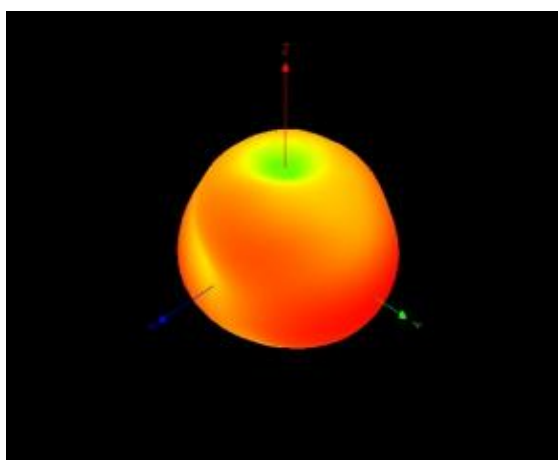
5-1 Antenna 3D Radiation Pattern



2400MHz

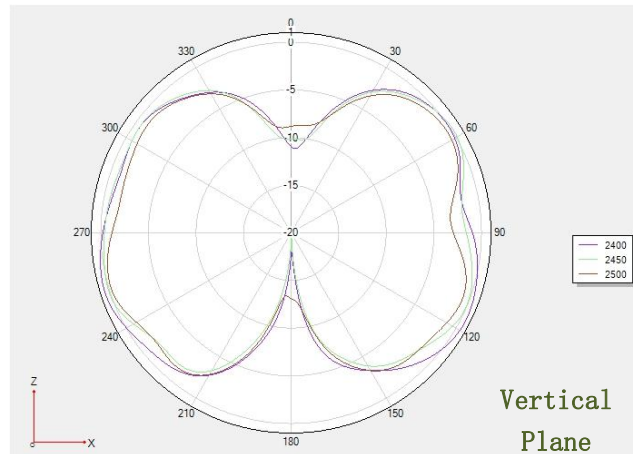


2450MHz

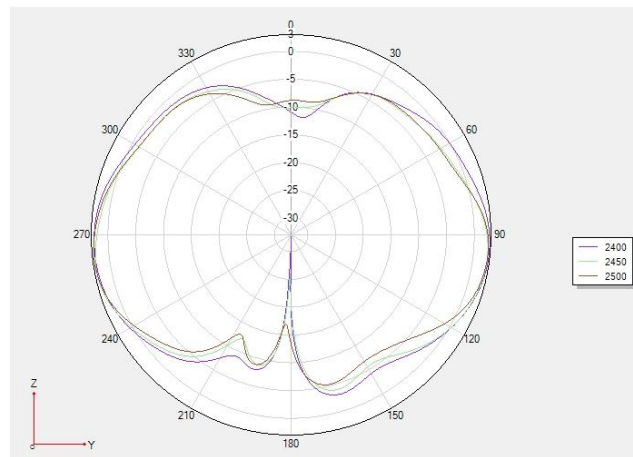


2500MHz

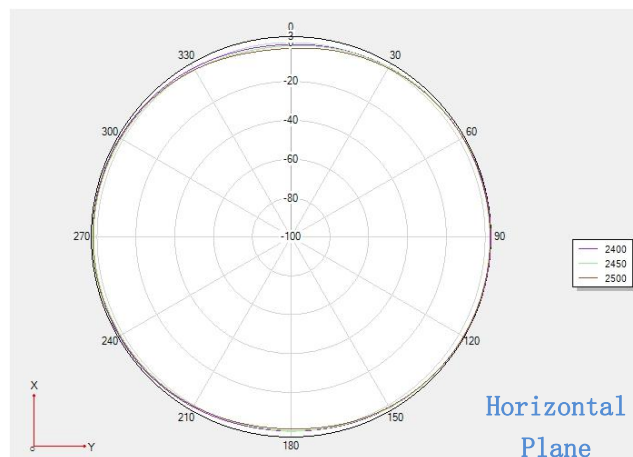
5-2 Antenna 2D Radiation Pattern



Phi 0 2D



Phi 90 2D



Theta 90 2D

6. Mechanical Specification:

