



Shenzhen Yuchen Technology
Co., LTD

SPECIFICATION FOR

CUSTOMER : Xu lian
CUSTOMER P/N : MS-ANT-WD1401-R03
OUR MODEL NO : A1022M0006.WI-AR
SPECIFICATIONS : The WD1401 / WD1402A receiving end antenna
QTY : 1
Date: 2022-05-18

Shenzhen Yuchen Technology Co., Ltd			Customer Customer admission
RF	Structural	Approved	Signature (seal)
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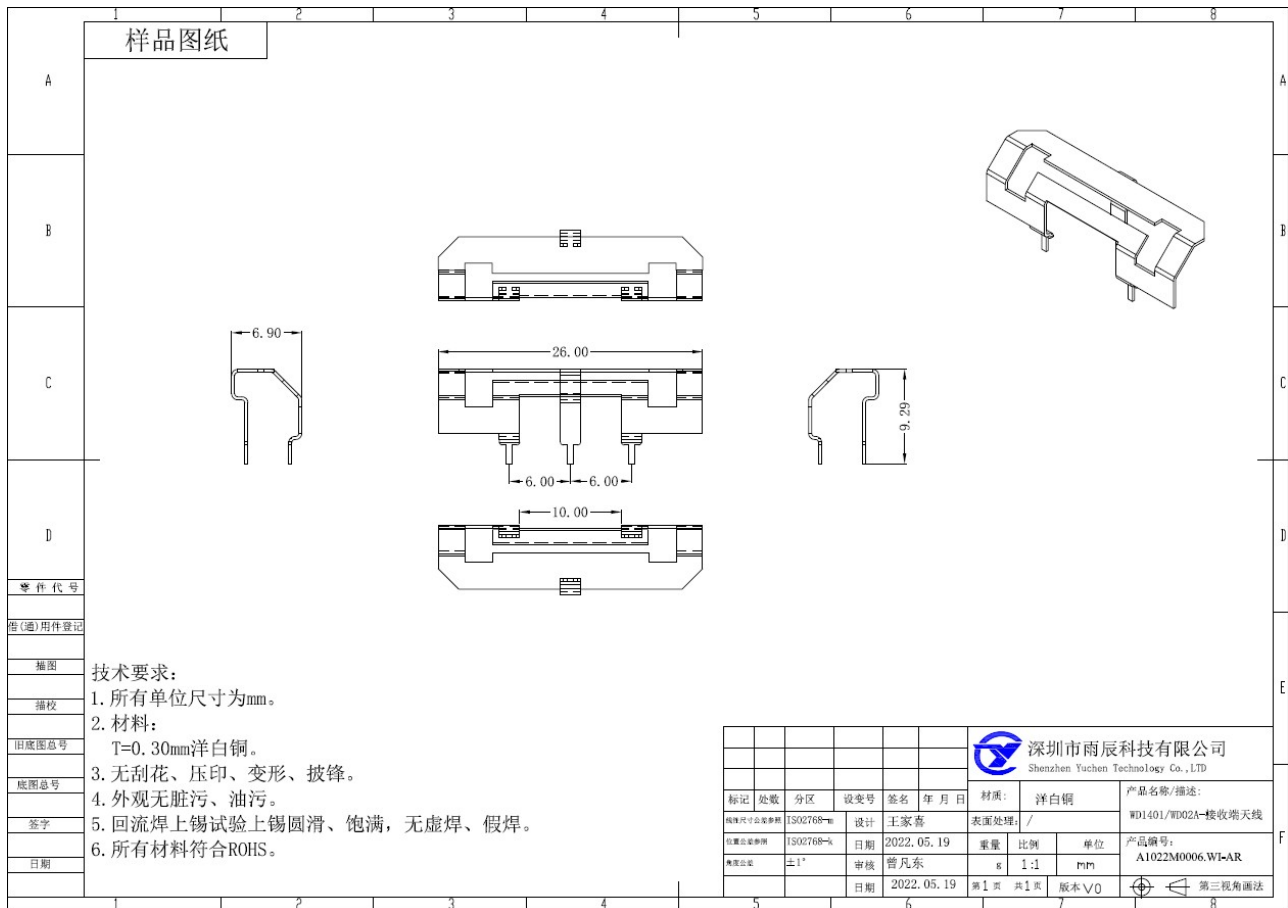
catalogue

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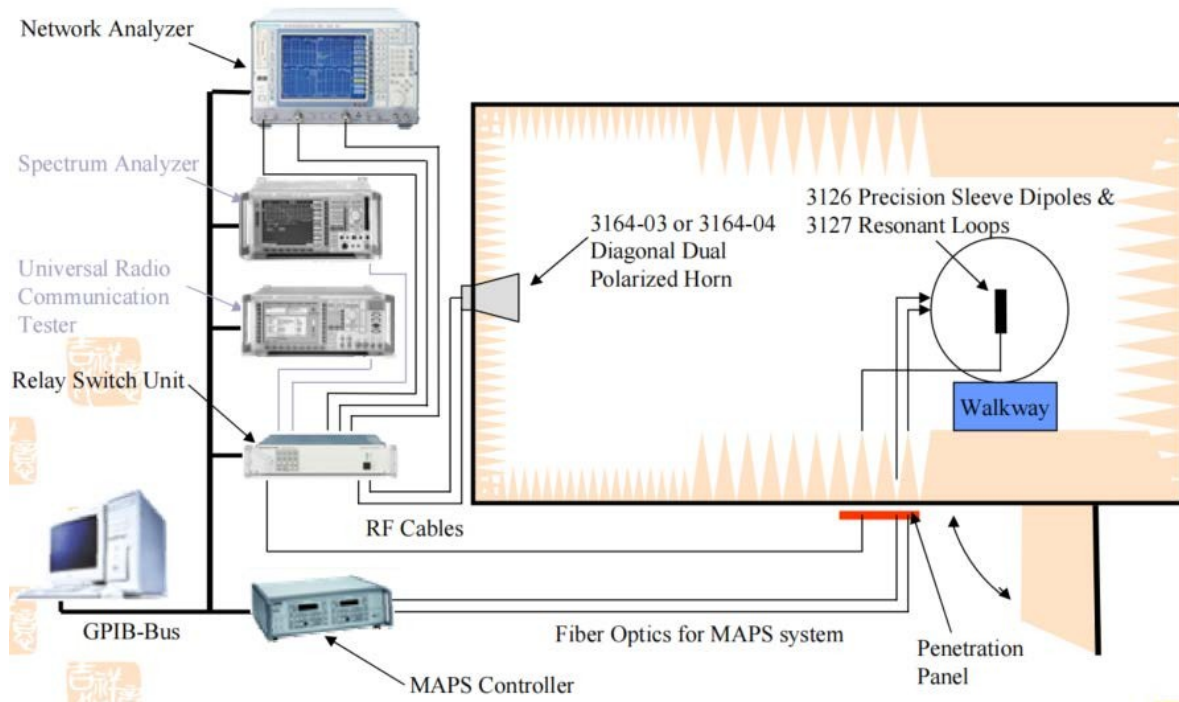
3 basic parameters: The basic parameters

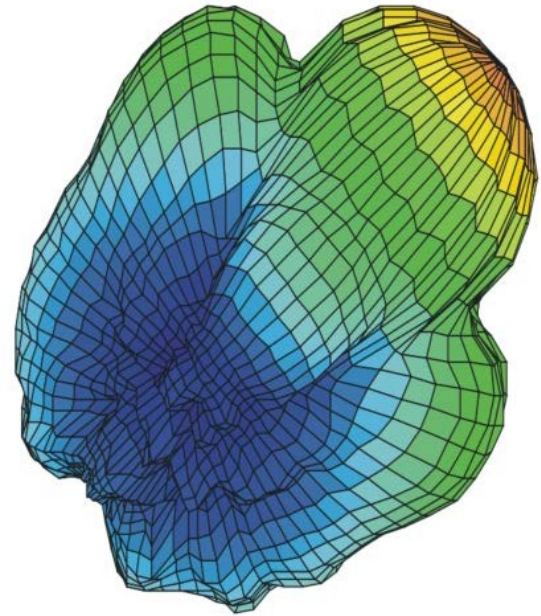
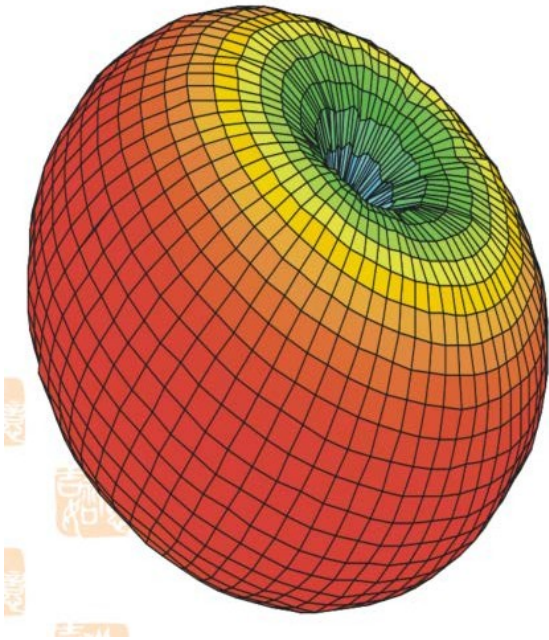
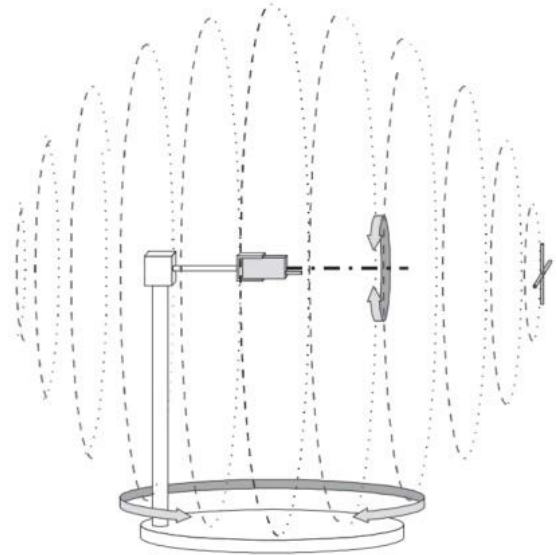
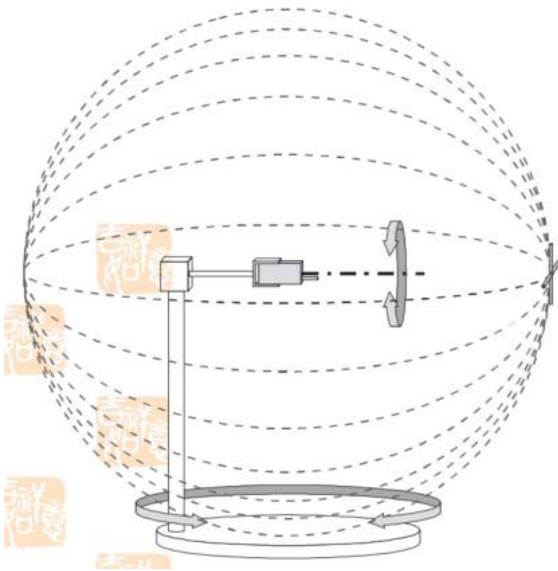
the key technical indexes		Main technical specifications	
frequency range (MHz)	2400-2500 5150-5850	Frequency Range (MHz)	2400-2500 5150-5850
characteristic impedance (Ω)	50	Impedance (Ω)	50
Peak Gain (dBi)	>2.1	Peak Gain (dBi)	>2.1
voltage standing-wave ratio	≤ 3.0	VSWR	≤ 3.0
maximum power	10W	Admitted Power	10W
Polarization mode	linear polarization	Polarization	Linear polarization
attended mode	weld	Connector Type	welding
physical property		Physical Properties	
Antenna ontology material	metal	Antenna Base	metal
Antenna size	26*6.90*9.29mm	Antenna Dimensions	26*6.90*9.29mm
working temperature	-20 $^{\circ}$ C~+85 $^{\circ}$ C	Operating Temp	-20 $^{\circ}$ C~+85 $^{\circ}$ C

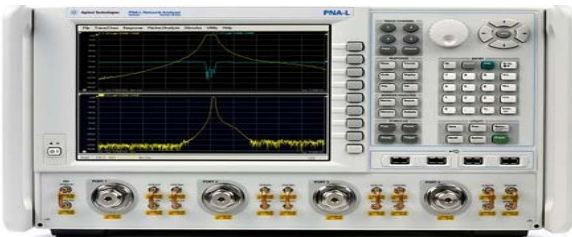
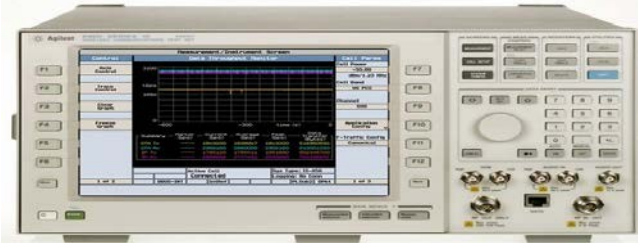
4 Engineering drawing Product Drawing



5 Test the equipment The Equipment & Conditions



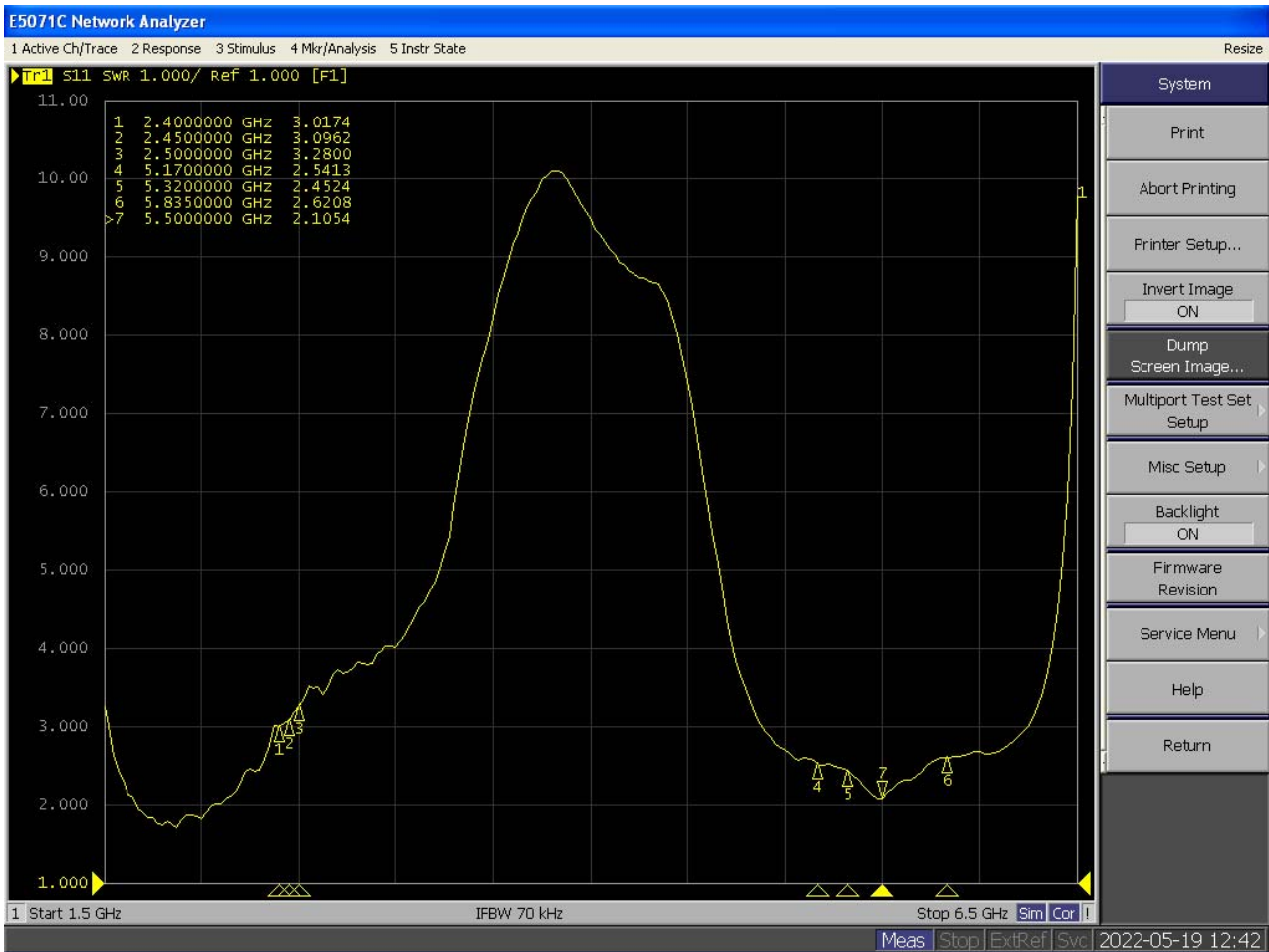




**Agilent 8960、Agilent E5515C 、R&S CMW500、Anritsu MT8820C 、
Agilent5071C 、R&S ZVB 8、HP 8753D 、HP-8594E**

6 Performance Test Report (The Report)

6.1 In the wave



6.2 Passive gain, efficiency-2.4G

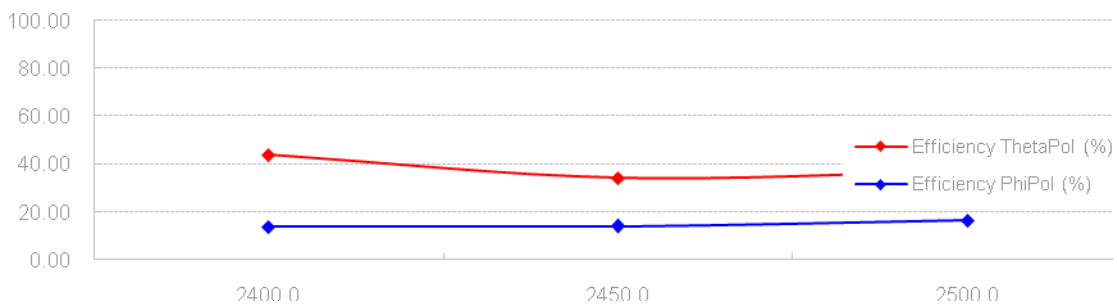
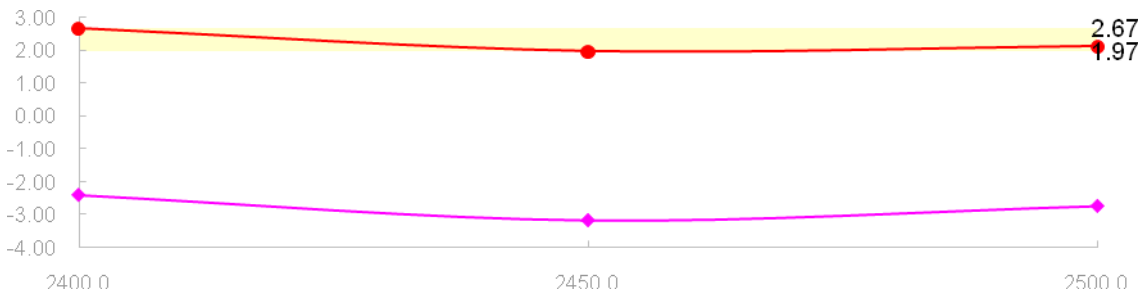
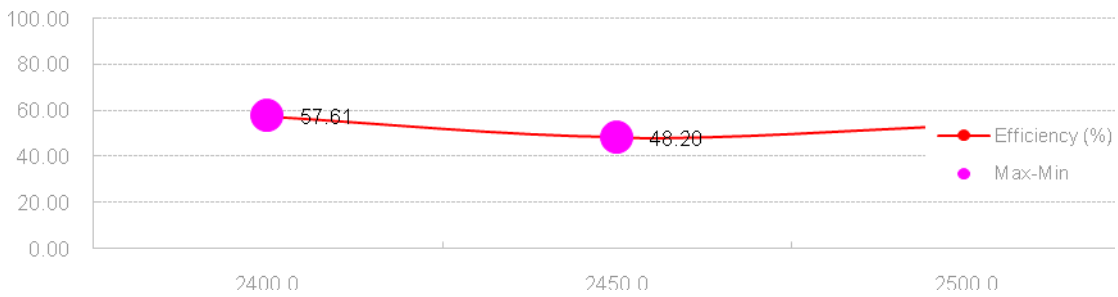
Frequency ID	1	2	3
Frequency (MHz)	2400.0	2450.0	2500.0
Efficiency (dBi)	-2.39	-3.17	-2.73
Gain (dBi)	2.67	1.97	2.12
Efficiency (%)	57.61	48.20	53.30
Directivity (dB)	5.06	5.14	4.86
Peak Gain Position (Theta)	115.00	142.00	140.00
Peak Gain Position (Phi)	299.00	142.00	136.00
Efficiency ThetaPol (%)	43.79	34.12	36.97
Efficiency PhiPol (%)	13.82	14.08	16.32
Upper Hem.Efficiency (%)	19.09	14.30	18.06
Lower Hem.Efficiency (%)	38.52	33.90	35.24

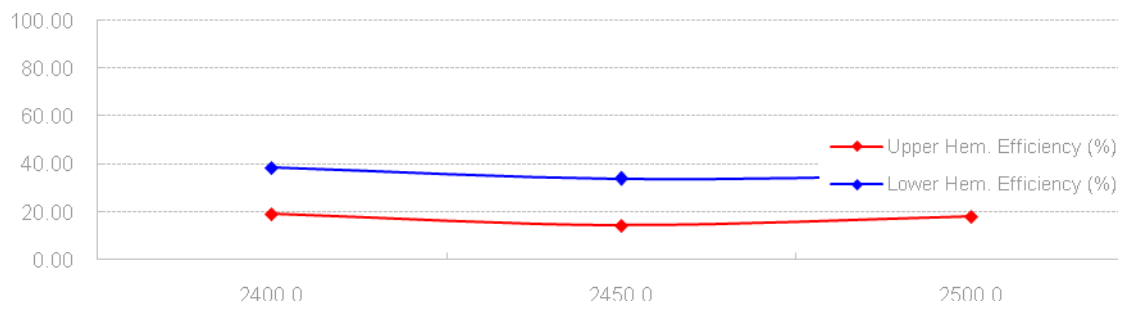
VER7

T90 (H) circle degree	4.32	8.94	7.47
Gain 15deg (dBi)			

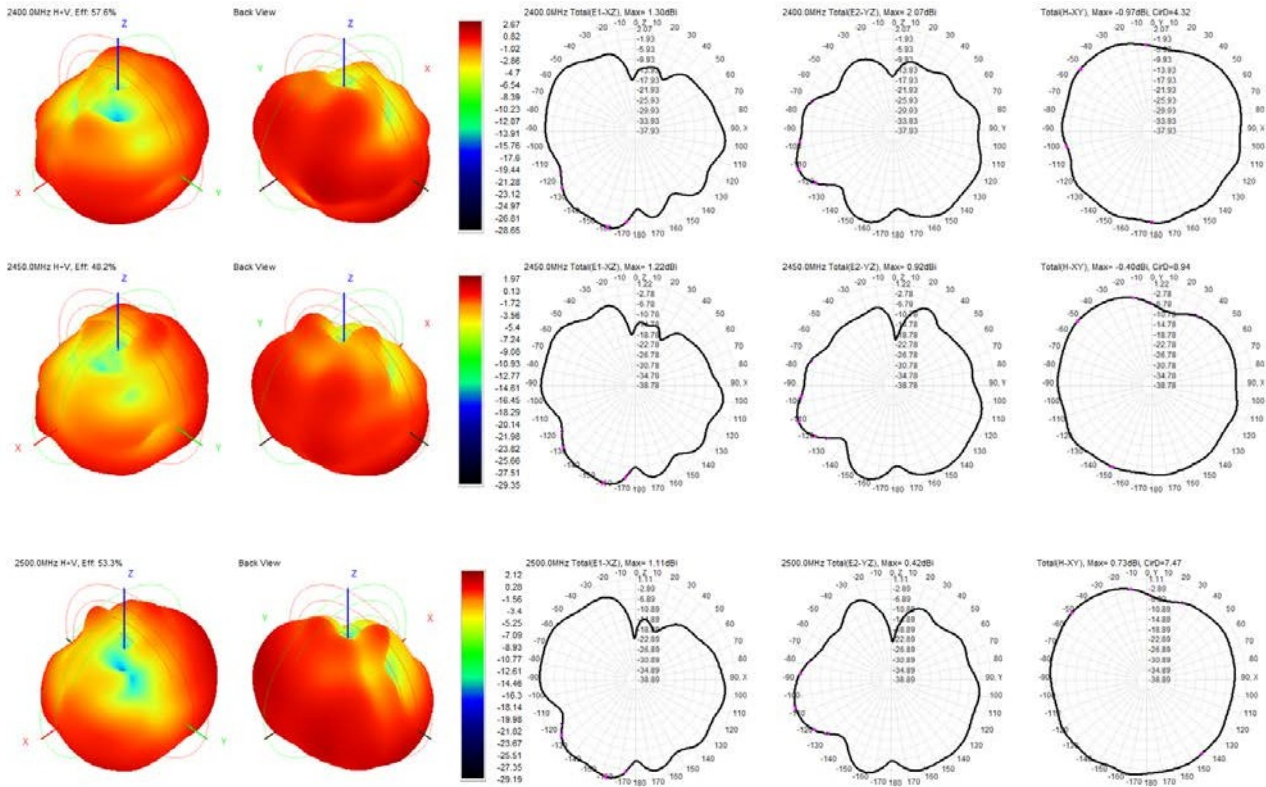
E1 (XZ) lobe width	47.00	43.00	47.00
E1 (XZ) ratio	0.00	0.00	0.00
E2 (YZ) lobe width	27.00	26.00	37.00
E2 (YZ) ratio	2.41	1.61	1.39
Axis ratio at maximum gain (P)	15.04	8.04	6.62
Elevation angle of 10 degrees, worst (large) axis ratio (P)	55.73	38.30	46.51
Hc (XY) lobe width	96.00	142.00	207.00
Hc (XY) before-after ratio	0.73	2.88	1.65
Left-handed circular polarization efficiency (%)	35.68	29.67	32.78
Right-handed circular polarization efficiency, (%)	21.94	18.53	20.52
Empty			

6.3 Plot-2. 4G





6.4 field pattern-2.4G



6.5 Passive gain, efficiency-5.8G

Frequency ID	1	2	3	4	5
Frequency (MHz)	5150.0	5390.0	5630.0	5770.0	5830.0
Efficiency (dBi)	-2.67	-2.77	-2.59	-3.28	-3.38
Gain (dBi)	1.90	2.10	2.00	1.64	0.98
Efficiency (%)	54.06	52.86	55.13	46.96	45.94
Directivity (dB)	4.57	4.87	4.58	4.92	4.36
Peak Gain Position (Theta)	121.00	122.00	76.00	82.00	150.00
Peak Gain Position (Phi)	114.00	153.00	187.00	157.00	114.00
Efficiency ThetaPol (%)	35.95	36.72	34.85	26.03	24.63
Efficiency PhiPol (%)	18.11	16.13	20.28	20.93	21.31
Upper Hem.Efficiency (%)	25.71	27.14	29.14	22.65	21.91
Lower Hem.Efficiency (%)	28.35	25.72	25.99	24.31	24.02

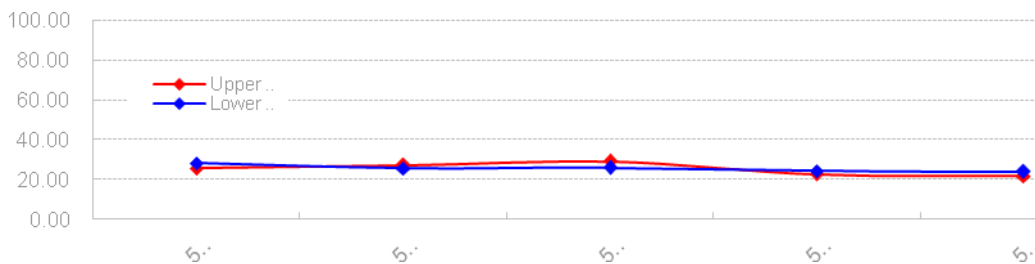
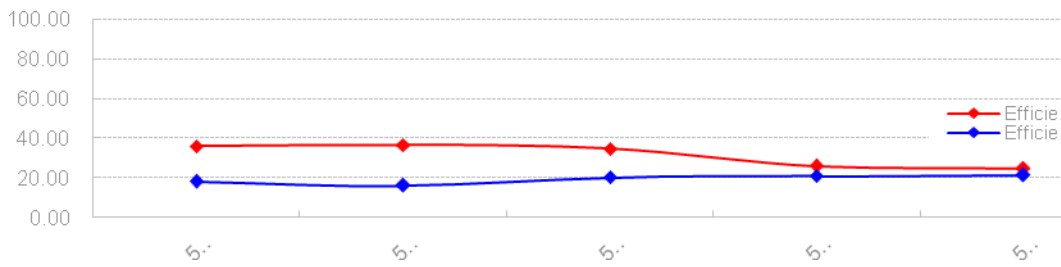
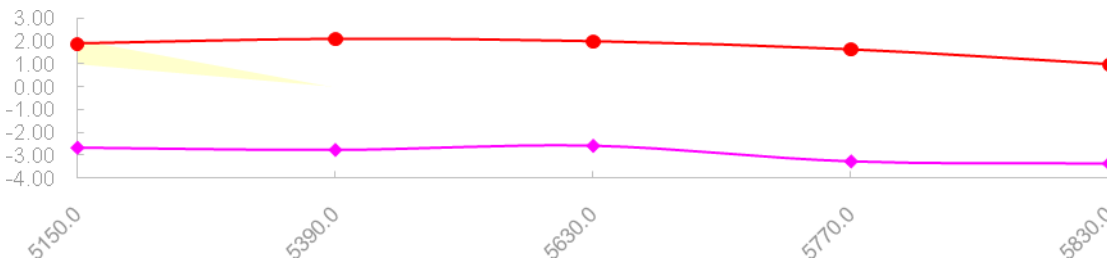
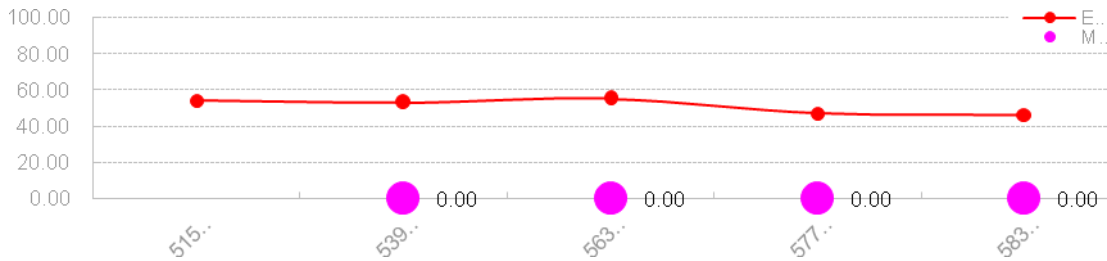
VER7

T90 (H) circle degree	10.23	10.91	9.13	10.54	8.34
Gain 15deg (dBi)					
E1 (XZ) lobe width	23.00	36.00	31.00	38.00	38.00
E1 (XZ) ratio	6.79	5.32	6.13	2.87	2.75
E2 (YZ) lobe width	64.00	52.00	44.00	45.00	46.00
E2 (YZ) ratio	2.89	1.11	0.45	0.11	0.05
Axis ratio at maximum gain (P)	29.04	5.13	16.49	32.69	11.91
Elevation angle of 10	58.04	64.99	53.43	63.75	57.64

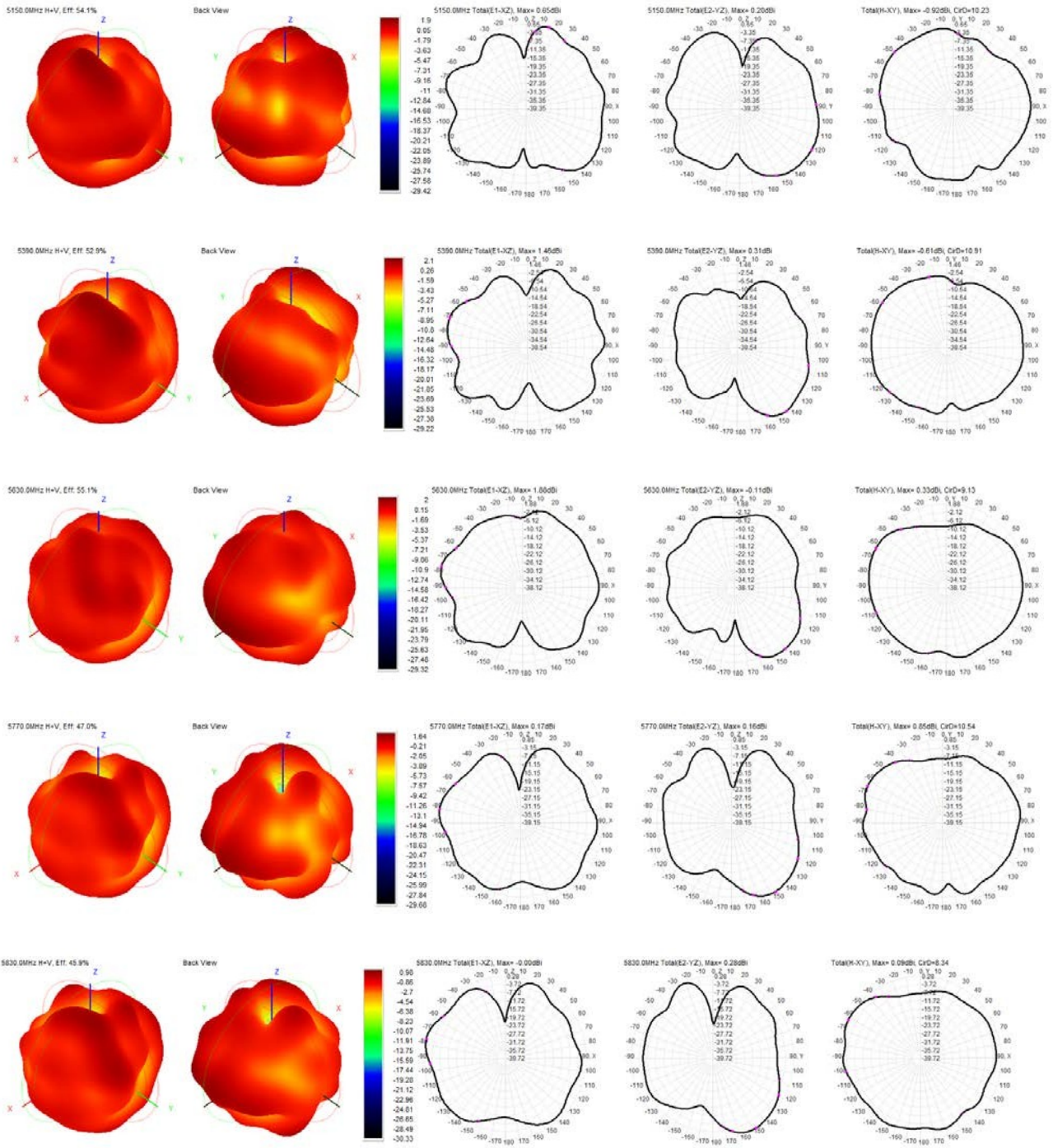
degrees, worst (large)					
axis ratio (P)					

Hc (XY) lobe width	83.00	114.00	72.00	42.00	64.00
Hc (XY) before-after ratio	4.04	5.36	4.40	3.95	3.63
Left-handed circular polarization efficiency (%)	28.43	28.64	27.04	21.11	21.39
Right-handed circular polarization efficiency, (%)	25.63	24.22	28.08	25.85	24.54
Empty					

6.6 Plot-5.8G



6.7 field pattern-5.8G



7. Environmental reliability test report: environmental testing

1. Reliability test report is Reliability test report

test item		test method	ask	bear fruit
C1	V.S.W.R. Electric station Bobby	Netanalyzer parameters are tested	According to the specifications to be tested	pass
M1	antenna gain	The antenna dark chamber parameters were tested	According to the specifications to be tested	pass
M2	Vibration Shake	GB / T2423.48-2008 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz3 directions; 2 hours for each direction amplitude: 1.5mm; frequency: 20~80~20Hz; 3 2H in each direction	1. No Visual Damage 2. Frequency Tol.5% has no obvious poor appearance; frequency offset 5%	pass
M6	Random Drop Drop-off	GB / T2423.8-1995 Single: Height: 1.0 Meter; 3 directions; 1 time for each direction single antenna, 1m high; 3, once in each direction	1. No parts separated 、 fracture 2. Frequency Tol.≤5% No falling off or fracture; frequency offset of 5%	pass
E3	Dimension Size	Inspection of dimension, color, material, package, surface process. Check the dimensions, color, materials, packaging, and surface treatment	Directive DUT specification According to the specifications to be tested	pass
E4	Temperature and Humidity Chamber Constant temperature and humidity	GB / T 2423.3-2006 Temp: 80° C / 12 H; -40 ° C / 12 HRH: 90%; Time: 24H temperature 80° C test 12H to-40° C test 12H; humidity 90%; time 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. After 5% recovery of 2H, no obvious poor appearance; frequency offset 5%	pass
E5	Thermal Shock Cold and cold shock	GB / T 2423.22 - 2008 - 40° C (30 minutes) t 0 + 80° C (30 minutes); Cycles: 2440° C Test 30 minutes to 80° C Test 30 minutes per cycle; a total of 24 cycles	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. After 5% recovery of 2H, no obvious bad appearance; frequency bias Removal of 5%	pass

R1	Aging test Aging	GB / T 2423.2-2008 Temp:: 80° C; Time: 24 hours temperature: 80° C, test: 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.5% has no obvious poor appearance; frequency offset 5%	pass
M1	RoHS	With Reference to IEC 62321:2008 with flow chart Refer to the IEC 62321 test process	Directive RoHS 2015/863/EU accord with RoHS 2015 / 863 / EU standard	pass

2. Salt mist test

Salt mist				
test	salt			
Test model	WD1402A Receiver	Test	2022.5.15	
device	salt spray	Test the	5 PCS	
experime	Put the test sample into the prepared salt solution test box and			
Concentrat	52g/L	PH value of salt solution:	Test period:	
Actual test data		PH value of salt	Test period:	
test	Conduct the test according to GB / T10125 Artificial GB / T6461-2002 Metal and other inorganic overlays on metal matrix are samples and tested after corrosion test			
end of				
numb	Corrosion	Actual test	Evaluati	rema
1	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qual	
2	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qual	
3	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qual	
4	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qual	
5	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qual	

8 Installation method (installation method)

1. Plug the antenna pin in the hole of the pad of the main board, and put tin on the pad. Pay attention not to do false welding, false welding.



9. Packaging (packaging)

1. labeling requirement

深圳市雨辰科技有限公司

客户名称	*****
订单号	*****
产品名称	*****
物料代码	 *****
数量	***
日期	*****

深圳市雨辰科技有限公司

客户名称	*****
订单号	*****
产品名称	*****
物料代码	 *****
数量	***
日期	*****

2. 1.

Internal

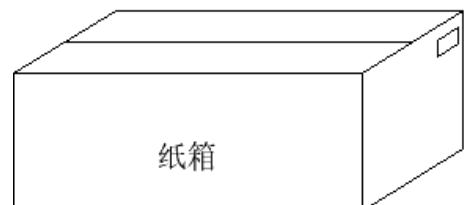
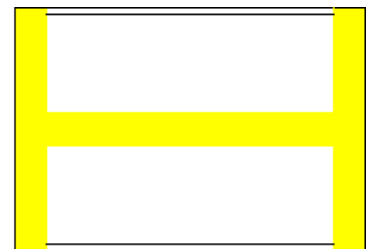
packaging:

product 200 PCS/ satchel



2. Packaging:

According to the actual packing quantity / box



matters need attention:

1, packaging needs to add protection measures such as partition according to the actual situation of the product, pearl cotton, etc.

2. Labels or other contents such as ROHS labels and month labels should be added according to the requirements specified by the customer.