



东莞市超威电子有限公司

Chaowei Electronics CO.,LTD

规格书

客 户：

品 名：

2.4GHz Antenna

料 号：

CW-IM1704-A01

客户料号：

送样日期：

2024.08.28

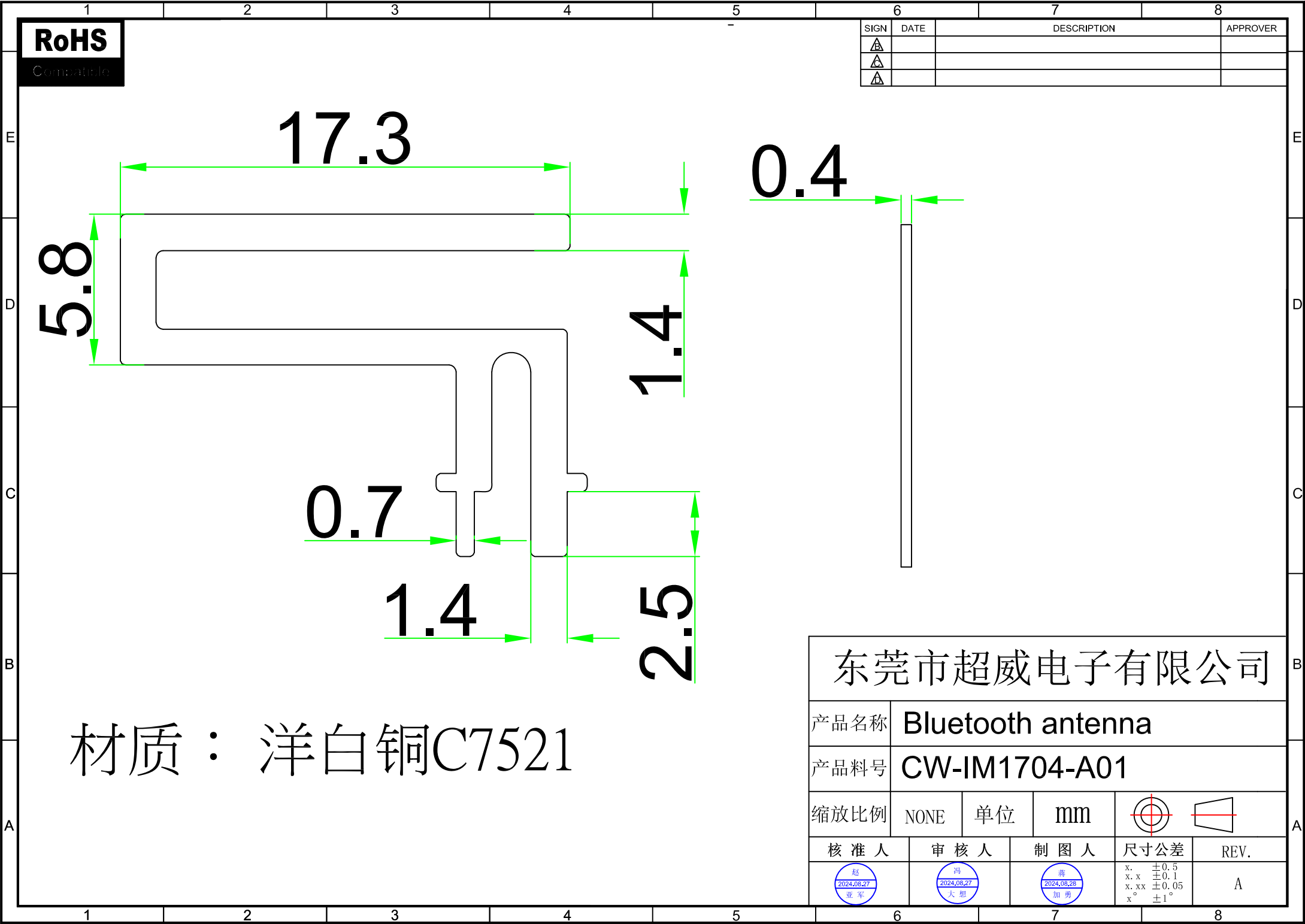
客户确认			供应厂商	
工程部	品保部	采购部	核准	送样人
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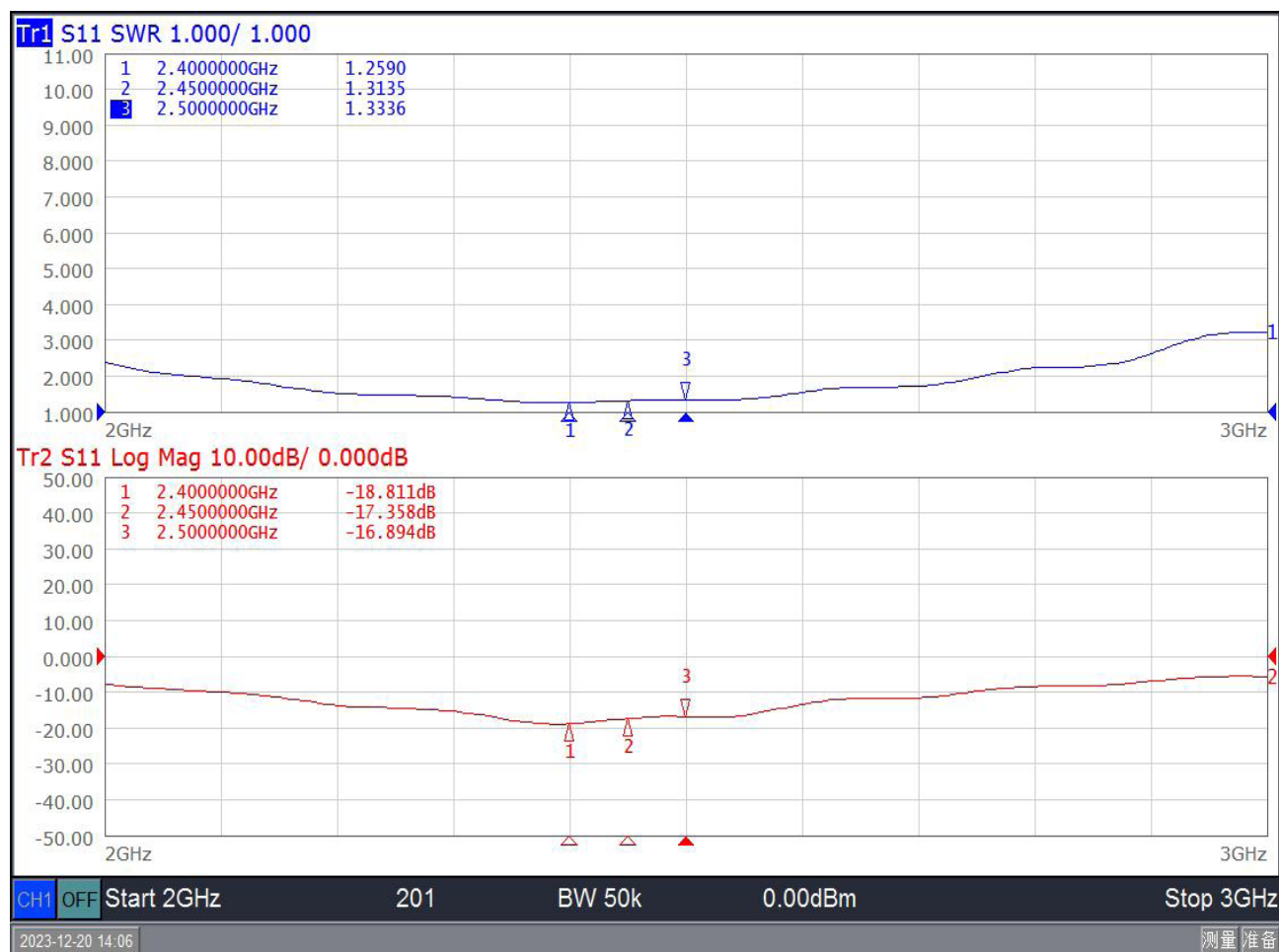
1. Reliability Testing

Test Item	Procedure	Requirement
1. Visual inspection and Dimension Check	Applicable methods using x5 magnification	follow specification
2. Rapid Changing of Temperature	-40°C (30minutes) to 80°C (30minutes); 24 cycles	After 2 hours recovery: 1. no visible damage 2. bandwidth tolerance < ±5%
3. Damp Heat	24 hours at 60°C; 90 ~ 95% RH	After 2 hours recovery: 1. no visible damage 2. bandwidth tolerance < ±5%
4. Endurance	24 hours at 80°C	After 2 hours recovery: 1. no visible damage 2. bandwidth tolerance < ±5%
5. Connector Pull Strength Test	>= 1.0 Kg	Hold 2~3S: 1. no visible damage 2. bandwidth tolerance < ±5%

2. Specification

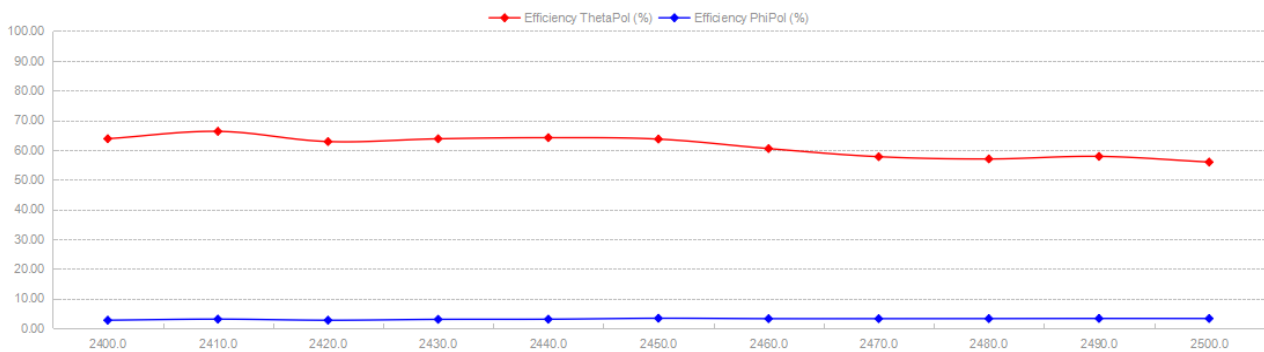
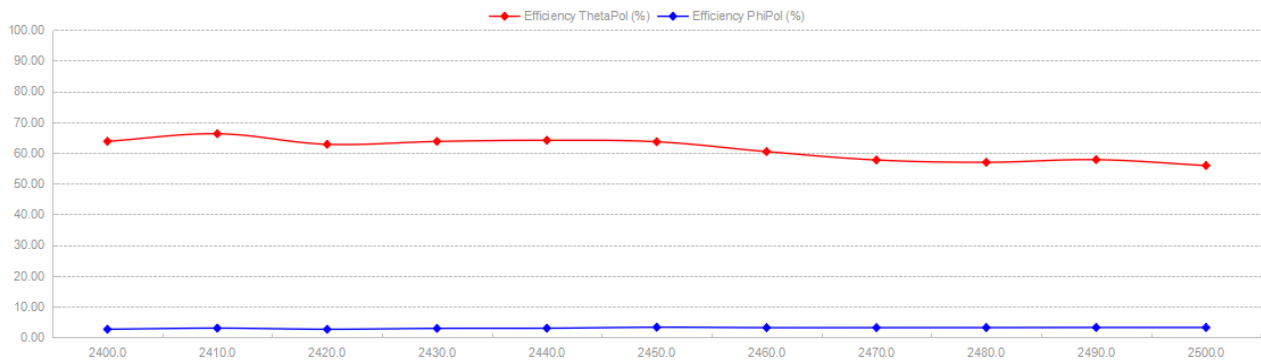
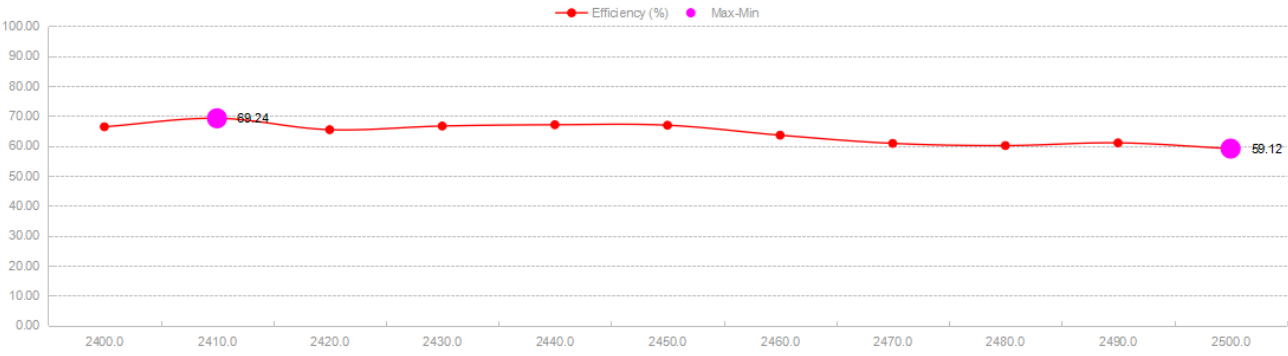
A. Electrical Characteristics	
Center Frequency	2400-2500MHz
Wavelength	1/4-wave
S.W.R	≤1.5
Gain (Max)	2.51dBi
Impedance	50 Ohm
Peak Gain	2.51dBi
Polarization	Linear
Horizontal Beamwidth	360°
B. Material	
Material of Plastic	C7521
Connector Type	DIP
C. Environmental	
Storage Temperature	- 40 °C ~ + 85 °C
Operation Temperature	- 40 °C ~ + 85 °C

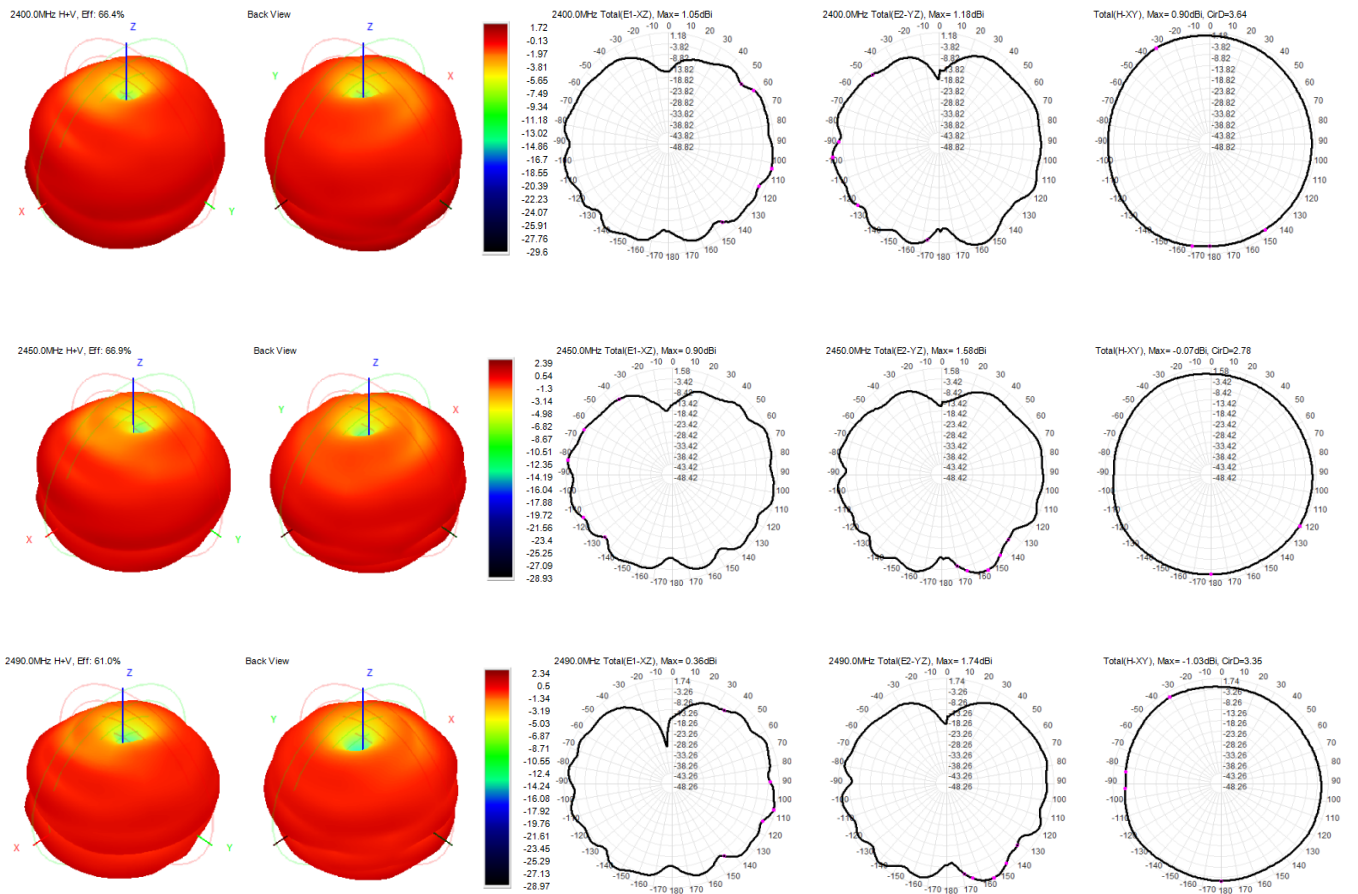
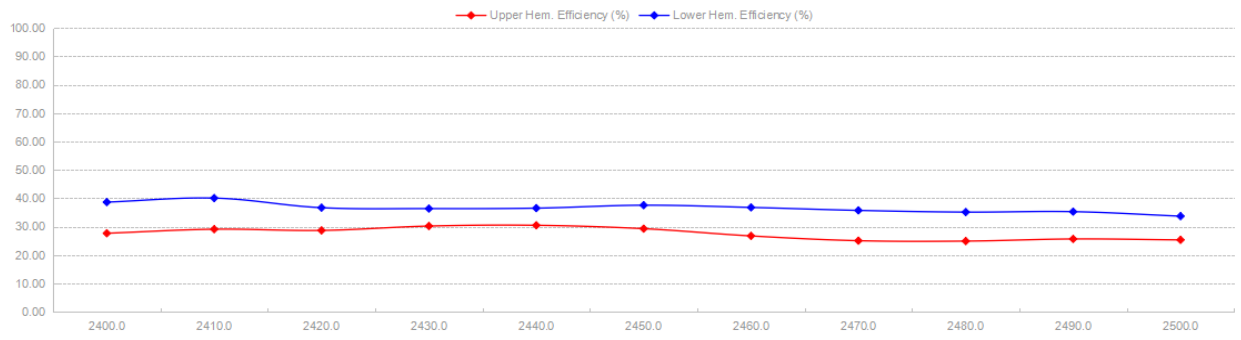
3. S.W.R. Testing Result



4. Antenna Radiation Pattern

FEITUKEJI											
Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Efficiency (dBi)	-1.78	-1.60	-1.84	-1.76	-1.73	-1.74	-1.97	-2.16	-2.21	-2.14	-2.28
Gain (dBi)	1.72	2.30	2.36	2.51	2.46	2.39	2.17	2.03	2.07	2.34	2.45
Efficiency (%)	66.41	69.24	65.44	66.67	67.09	66.93	63.60	60.88	60.13	61.05	59.12
Directivity (dB)	3.49	3.89	4.20	4.27	4.20	4.13	4.14	4.18	4.28	4.48	4.73
Peak Gain Position (Theta)	106.00	138.00	138.00	138.00	138.00	138.00	139.00	139.00	139.00	139.00	139.00
Peak Gain Position (Phi)	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00
Efficiency ThetaPol (%)	63.75	66.23	62.80	63.72	64.10	63.62	60.43	57.70	56.94	57.81	55.89
Efficiency PhiPol (%)	2.66	3.02	2.65	2.94	2.99	3.31	3.17	3.18	3.19	3.24	3.23
Upper Hem. Efficiency (%)	27.72	29.14	28.72	30.26	30.53	29.33	26.78	25.11	24.96	25.72	25.38
Lower Hem. Efficiency (%)	38.68	40.10	36.73	36.41	36.56	37.59	36.82	35.77	35.17	35.33	33.74
T90(H)圆度	3.64	3.45	2.81	2.87	2.99	2.78	2.78	2.96	3.09	3.35	4.16
Gain 15deg (dBi)											
E1(XZ)波瓣宽度	55.00	54.00	38.00	35.00	32.00	53.00	54.00	27.00	25.00	24.00	25.00
E1(XZ)前后比	3.55	2.96	2.52	2.86	3.03	2.64	2.25	2.13	1.78	1.39	1.03
E2(YZ)波瓣宽度	37.00	23.00	23.00	23.00	22.00	21.00	21.00	21.00	21.00	21.00	22.00
E2(YZ)前后比	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
最大增益处轴比(P)											
仰角10度最差(大)轴比(P)											
Hc(XY)波瓣宽度	316.00	319.00	360.00	360.00	360.00	360.00	360.00	360.00	357.00	350.00	331.00
Hc(XY)前后比	1.86	1.99	1.58	1.02	1.04	0.88	1.09	1.49	1.48	0.94	0.73





5. Testing Equipment Specification:

Antenna Anechoic Chamber Dimension: 7x3 x3 m

Quiet Zone: 600mm @1 GHz

Isolation: >100dB @ 1 MHz ~ 10 GHz

Testing Equipment: Agilent E5071C

Received Antenna: 0.4 ~ 6.0 GHz for Gain Calibration

Double Ridged Horn Antenna

