

# Shenzhen Jiexuntong Wireless Technology Co. LTD

## Antenna acknowledgment

**Customer name: Baoneng Daktron**

**Project model: DPXTH**

**Our company's material number: 20016000004**

**Antenna specification: Spring antenna**

**Date of issue: 2023-1-9**

### Manufacturer acknowledgment column:

Project preparation	RF	structure	approve	Date

### Customer acknowledgement column:

confirm	audit	approve	Date



## Acknowledgement of change of resume

version	Date	Change description	remarks
R/A	2023-1-9	First edition	

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## 一、Antenna picture



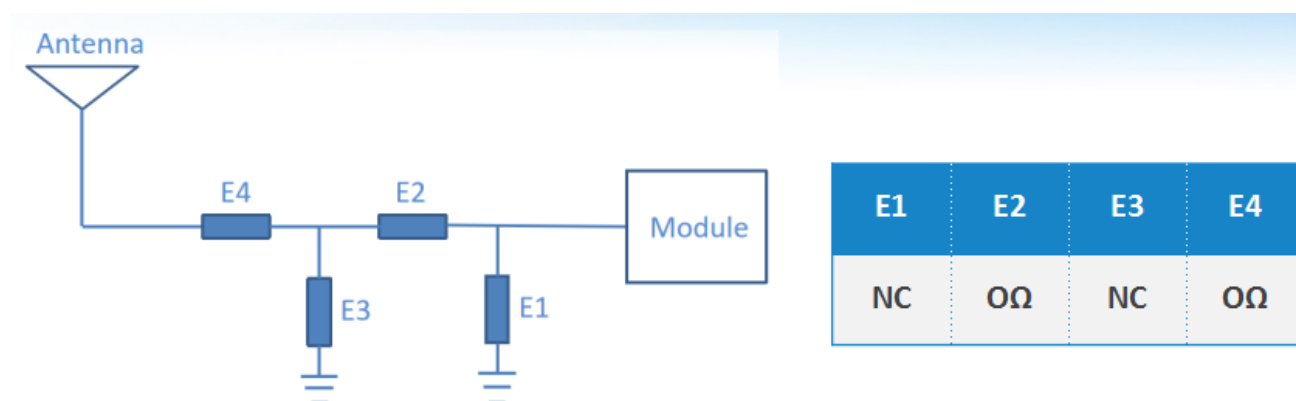
## 二、Test the environment

### 2.1.Environmental treatment

There is no

## 三、Antenna matching

### 3.1.Antenna



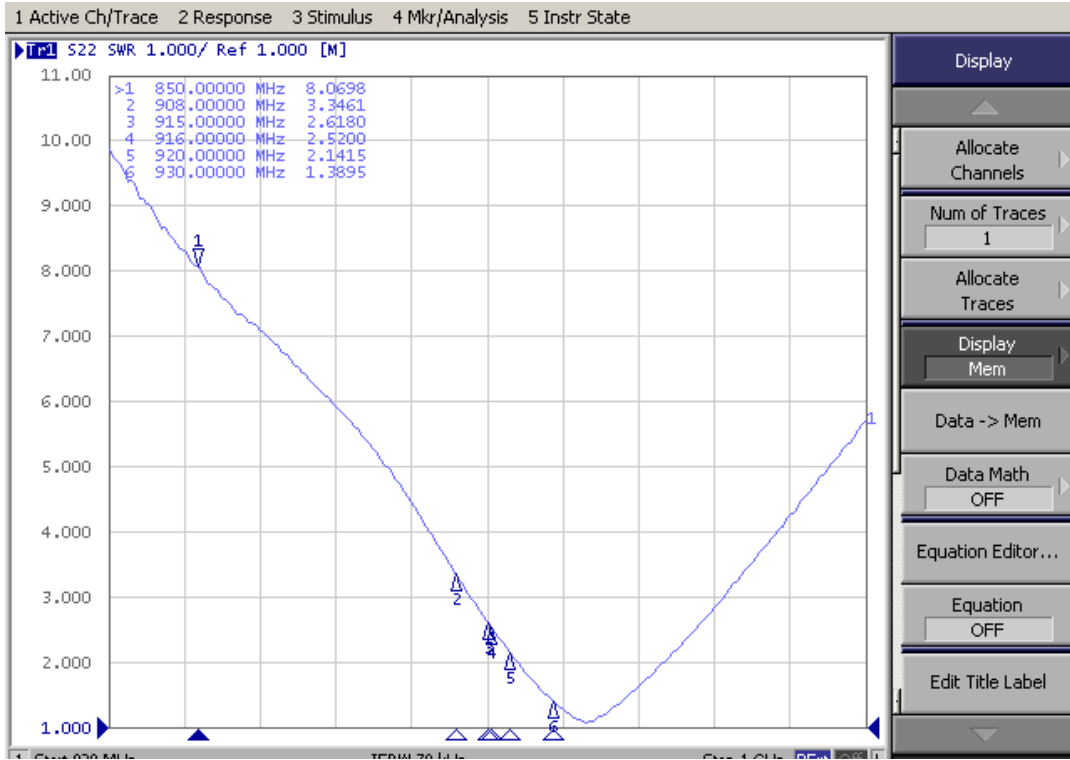
**Our company has not changed the original antenna front-end matching**

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### 四、Electrical performance report

#### VSWR



Frequency (MHz)	850	908	915	916	920	930
VSWR	8.06	3.34	2.61	2.52	2.14	1.38

#### Passive test data:

Freq(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)
850	-7.03	-10.02	9.95
851	-6.96	-9.93	10.17
852	-6.88	-9.83	10.39
853	-6.76	-9.74	10.60
854	-6.67	-9.67	10.79
855	-6.59	-9.61	10.94
856	-6.50	-9.54	11.12
857	-6.43	-9.49	11.25
858	-6.37	-9.43	11.41
859	-6.28	-9.36	11.59
860	-6.21	-9.29	11.77

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Freq(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)
861	-6.16	-9.23	11.93
862	-6.08	-9.15	12.15
863	-6.02	-9.08	12.35
864	-5.96	-9.01	12.56
865	-5.93	-8.95	12.74
866	-5.86	-8.89	12.93
867	-5.82	-8.82	13.11
868	-5.76	-8.77	13.27
869	-5.73	-8.72	13.41
870	-5.67	-8.68	13.55
871	-5.66	-8.65	13.66
872	-5.61	-8.61	13.77
873	-5.60	-8.58	13.88
874	-5.56	-8.53	14.03
875	-5.56	-8.50	14.12
876	-5.53	-8.47	14.21
877	-5.51	-8.44	14.33
878	-5.49	-8.41	14.44
879	-5.48	-8.38	14.51
880	-5.46	-8.36	14.58
881	-5.45	-8.35	14.63
882	-5.44	-8.33	14.68
883	-5.44	-8.33	14.70
884	-5.45	-8.34	14.67
885	-5.47	-8.34	14.64
886	-5.47	-8.35	14.64
887	-5.50	-8.35	14.62
888	-5.50	-8.37	14.57
889	-5.51	-8.36	14.60
890	-5.50	-8.36	14.60
891	-5.49	-8.33	14.67
892	-5.45	-8.31	14.75
893	-5.44	-8.29	14.84
894	-5.40	-8.26	14.93
895	-5.39	-8.24	14.99
896	-5.37	-8.24	15.01
897	-5.37	-8.23	15.05
898	-5.34	-8.22	15.08
899	-5.35	-8.22	15.07
900	-5.34	-8.22	15.05
901	-5.33	-8.21	15.09
902	-5.30	-8.18	15.20

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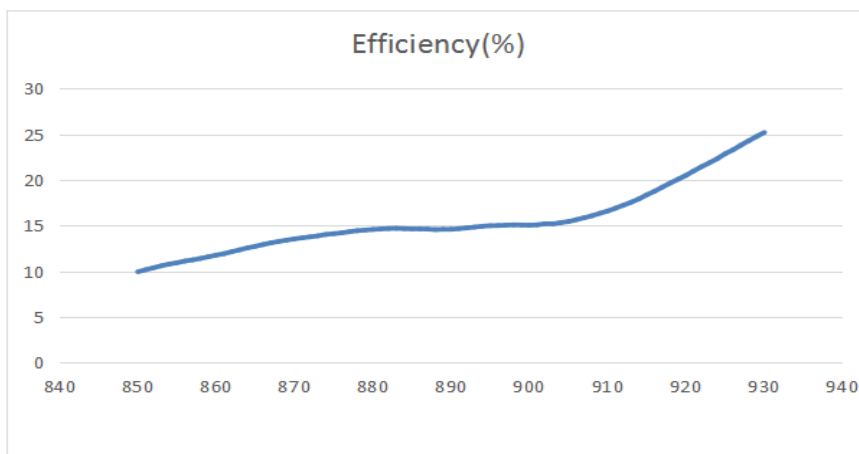


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Freq(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)
903	-5.29	-8.18	15.20
904	-5.26	-8.14	15.33
905	-5.21	-8.11	15.45
906	-5.17	-8.05	15.65
907	-5.09	-8.00	15.86
908	-5.01	-7.94	16.08
909	-4.94	-7.86	16.35
910	-4.82	-7.80	16.60
911	-4.75	-7.72	16.91
912	-4.60	-7.64	17.23
913	-4.53	-7.55	17.56
914	-4.37	-7.47	17.93
915	-4.27	-7.36	18.37
916	-4.12	-7.27	18.77
917	-4.03	-7.16	19.22
918	-3.89	-7.06	19.66
919	-3.81	-6.97	20.08
920	-3.70	-6.88	20.50
921	-3.60	-6.78	20.99
922	-3.49	-6.69	21.45
923	-3.40	-6.60	21.88
924	-3.30	-6.51	22.33
925	-3.19	-6.41	22.86
926	-3.12	-6.33	23.29
927	-3.00	-6.23	23.80
928	-2.93	-6.15	24.28
929	-2.84	-6.06	24.75
930	-2.80	-5.99	25.19

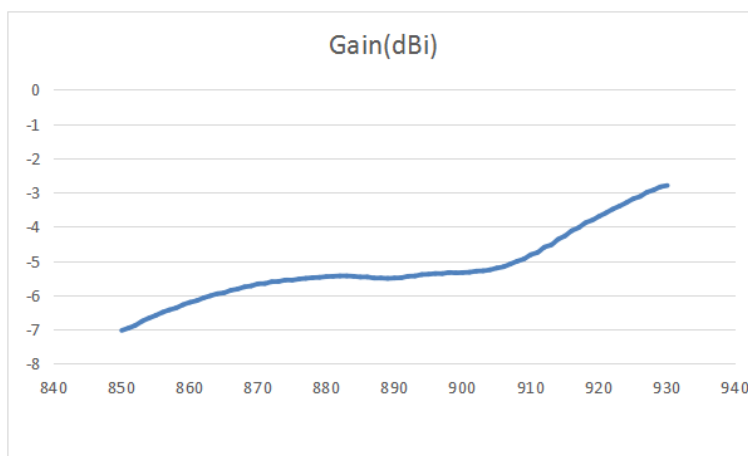
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**Efficiency line graph:**



Frequency (MHz)	850	908	915	916	920	930
Efficiency	9.95	16.08	18.37	18.77	20.5	25.19

**Gain line graph:**



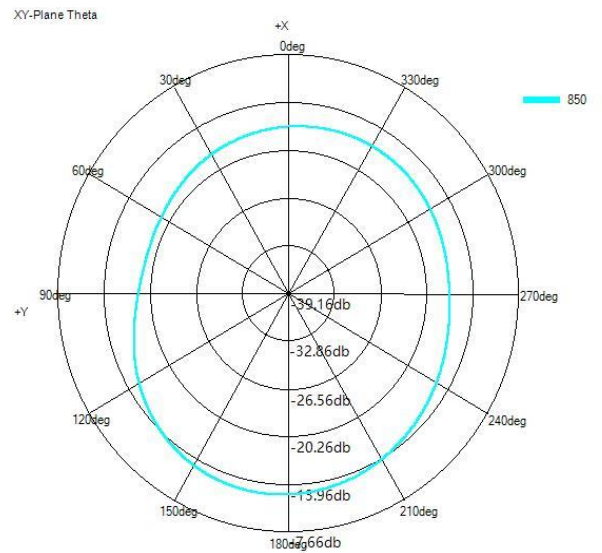
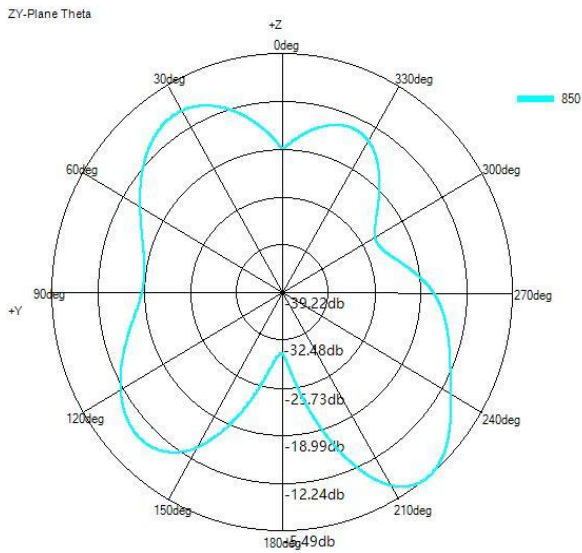
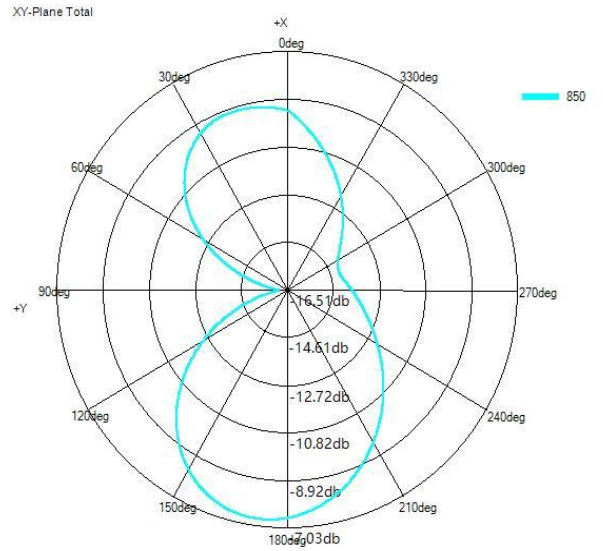
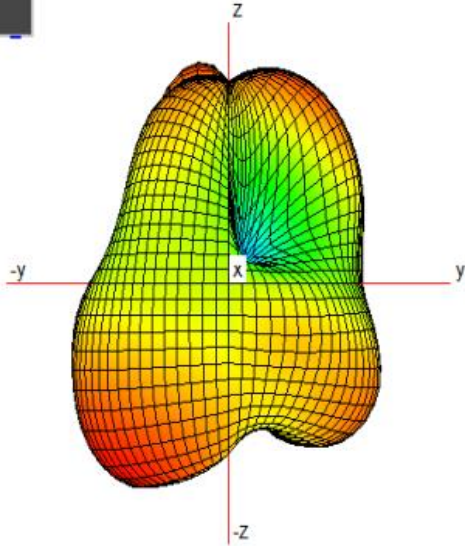
Frequency (MHz)	850	908	915	916	920	930
Gain(dbi)	-7.03	-5.01	-4.27	-4.12	-3.7	-2.8

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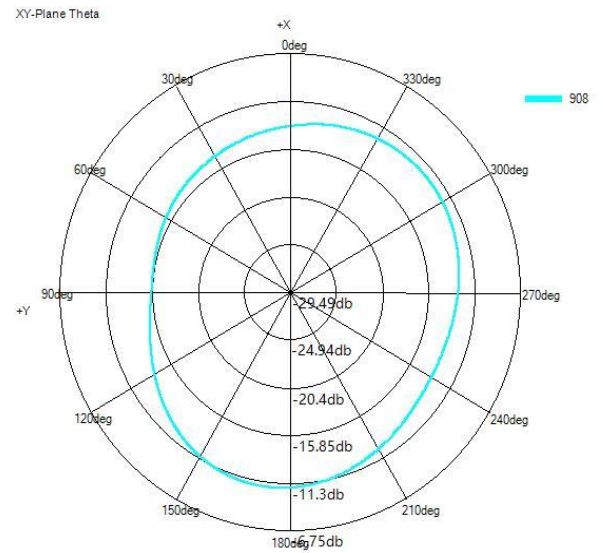
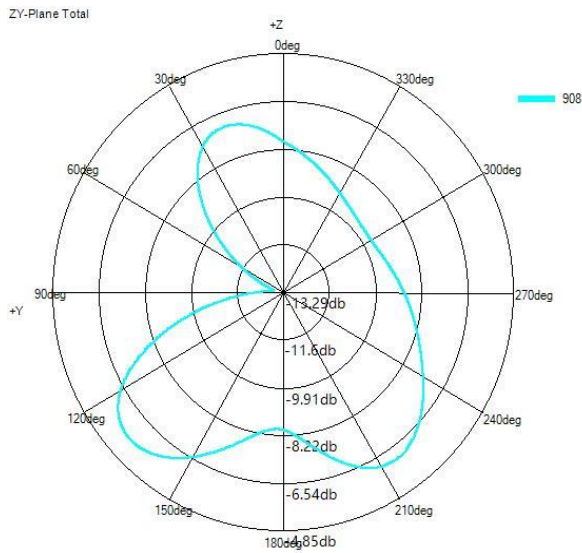
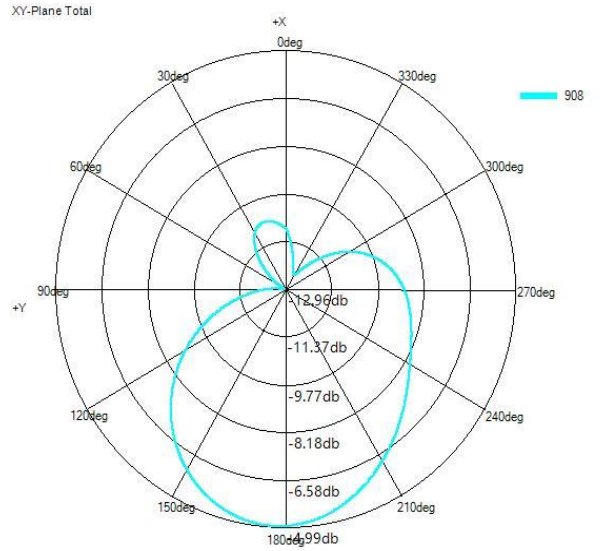
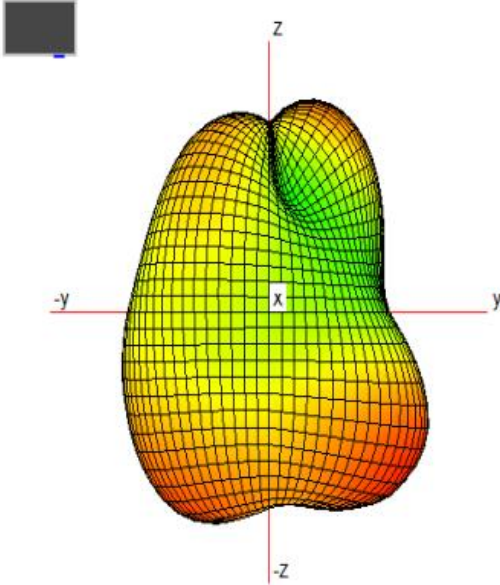
**Field pattern diagram:**

**850MHZ**



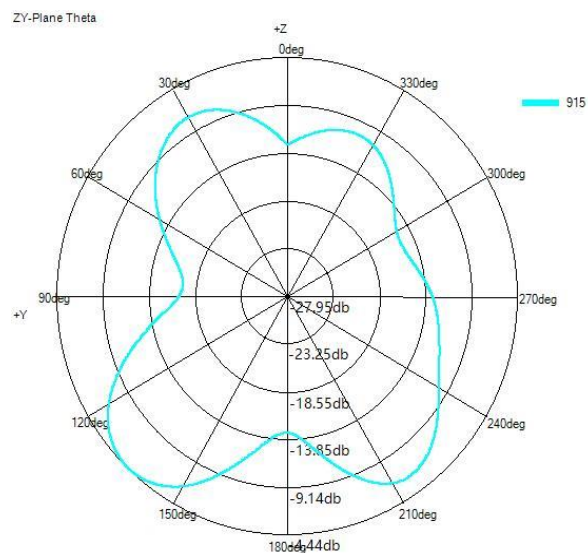
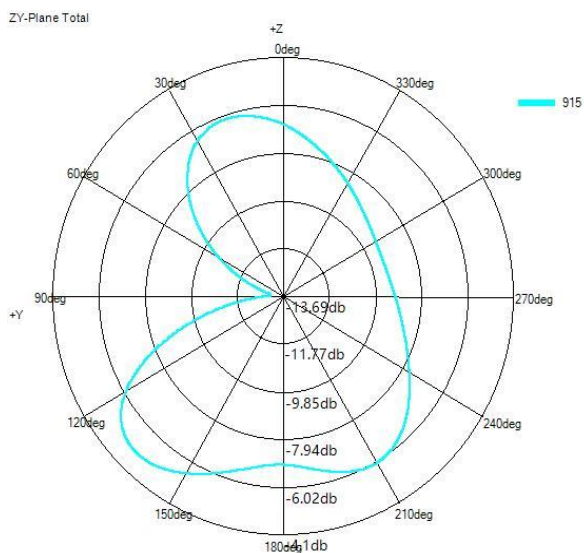
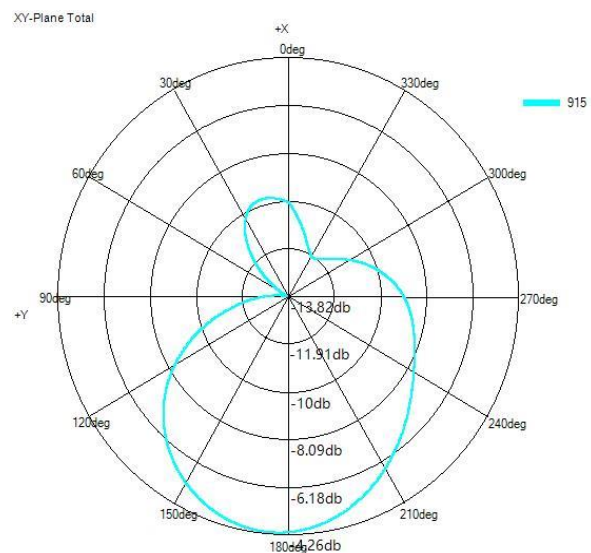
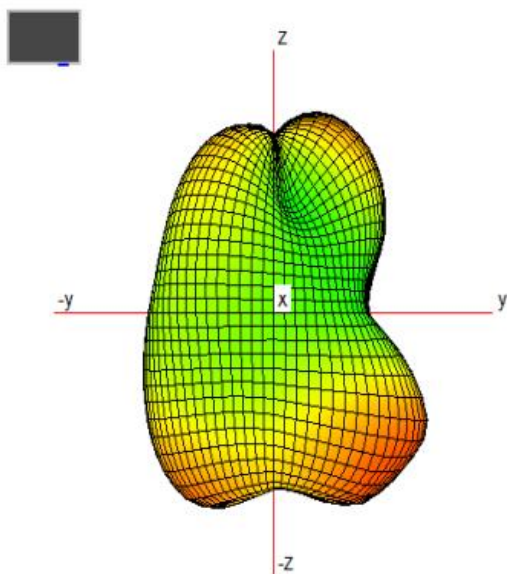
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**908MHZ**



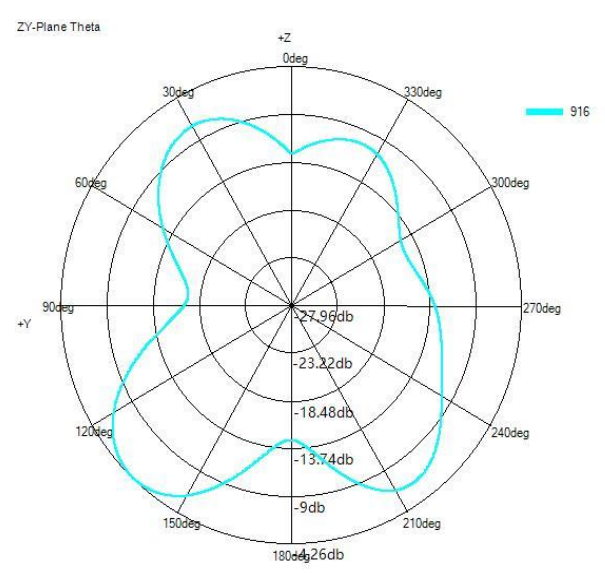
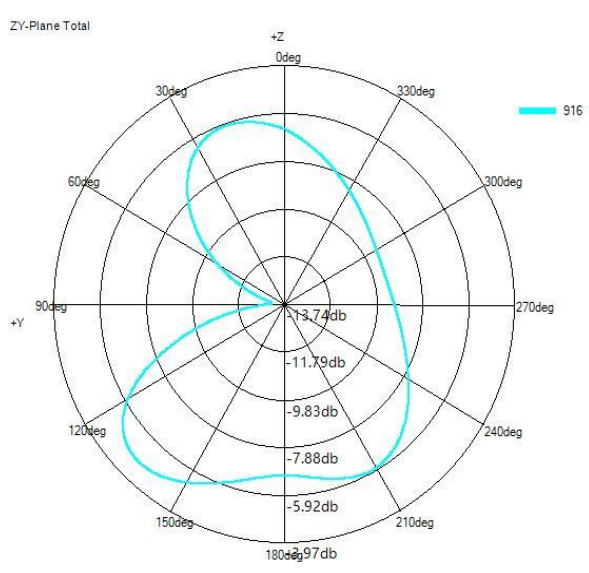
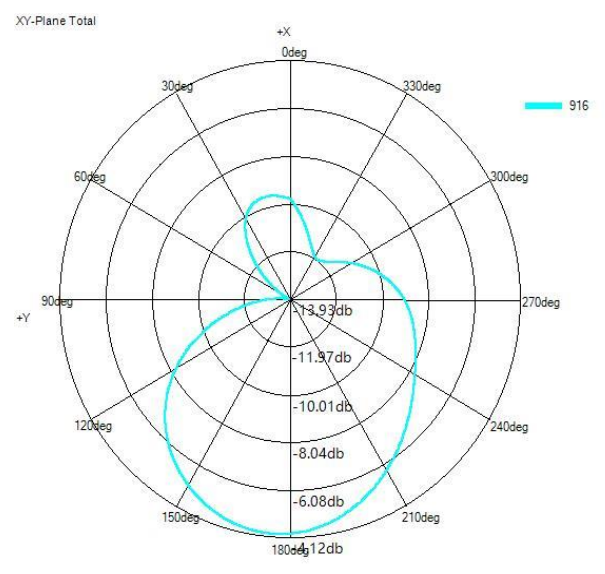
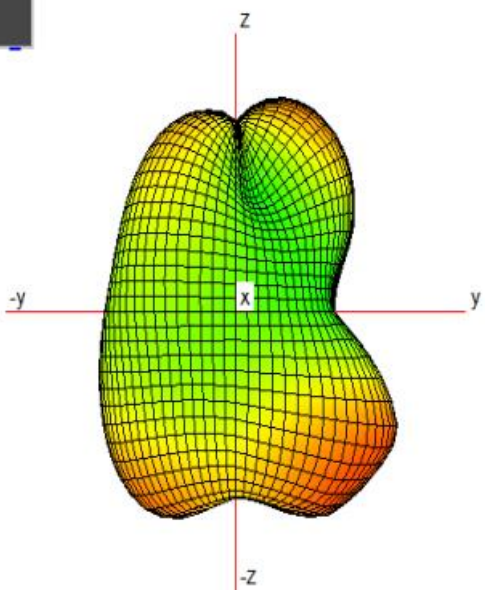
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**915MHZ**



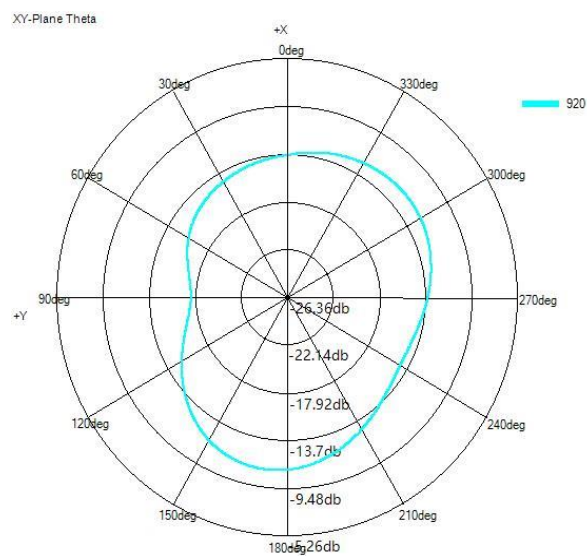
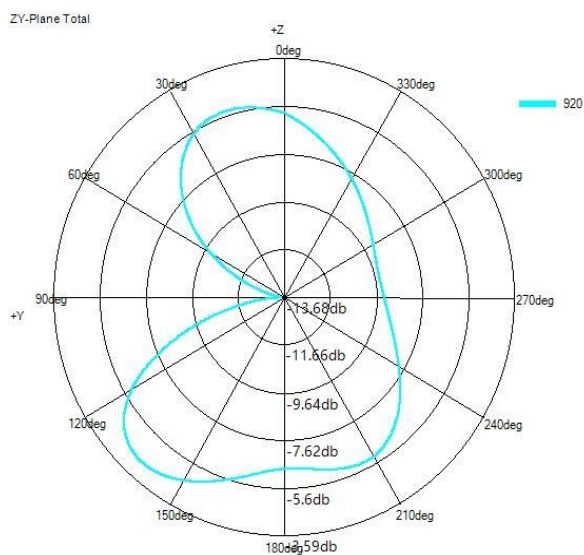
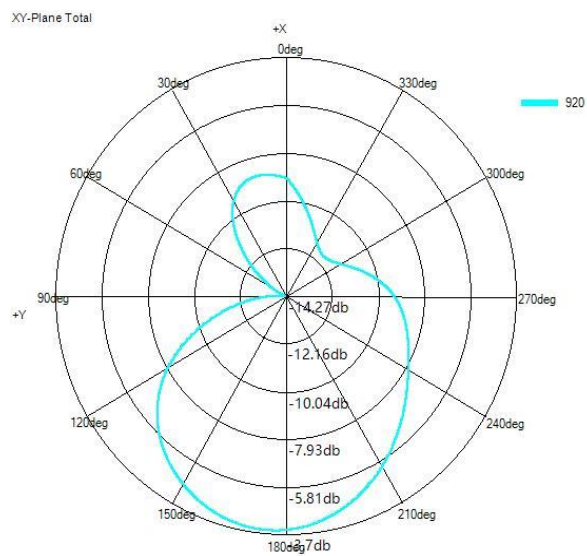
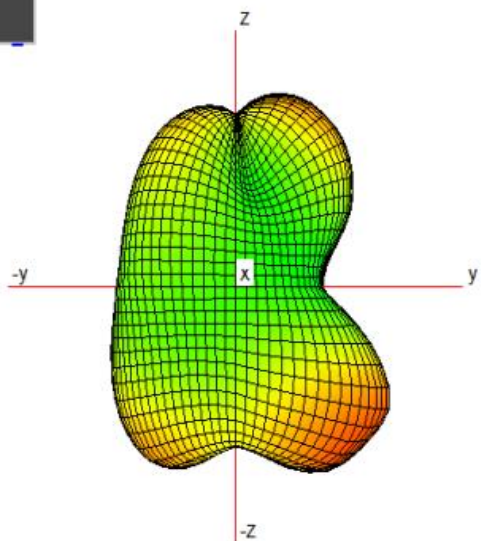
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**916MHZ**



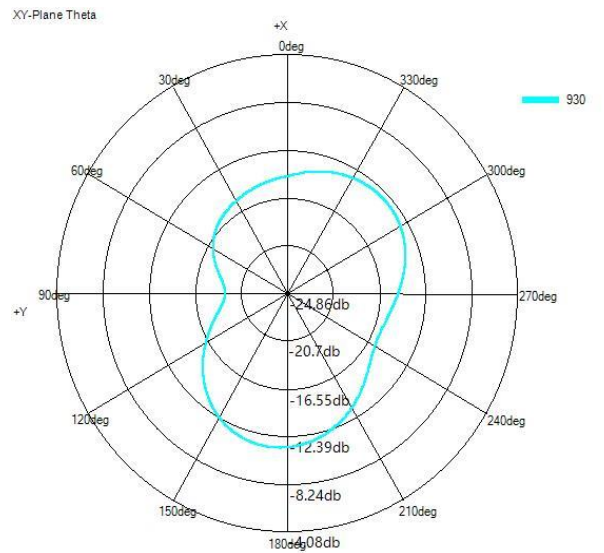
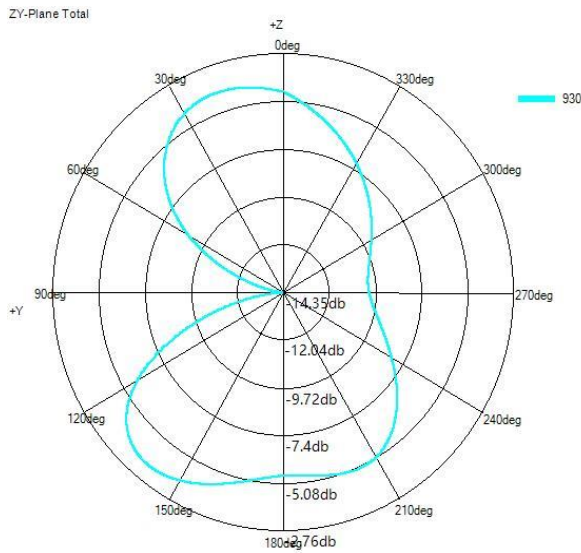
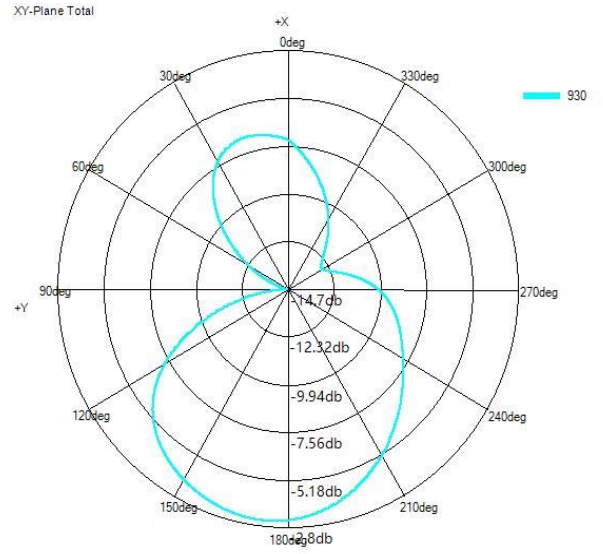
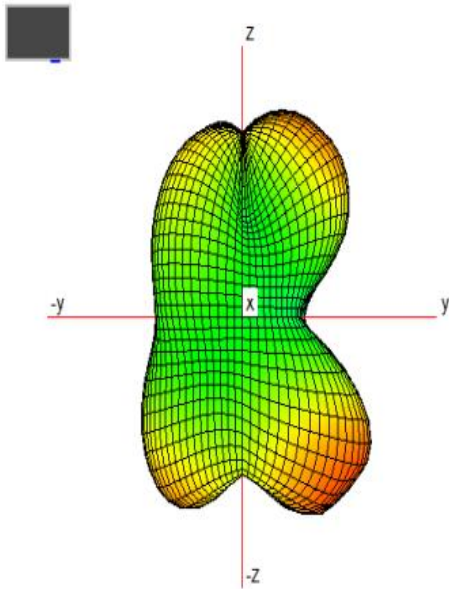
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**920MHZ**



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**930MHZ**



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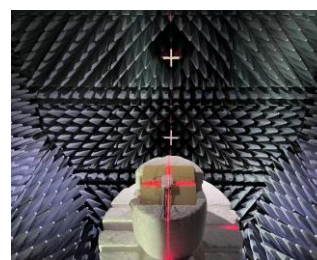
## 五、Reliability test report

### 5.1.Salt spray test report

Guest house	Baoneng Daktron	Part name	<b>DPXTH</b>	Date of completion	2022.12.27
Test item	Test requirement			Measured result	evaluation
Neutral salt spray test	<p>Experimental process: Neutral salt spray test was carried out on the hardware on the antenna. In the closed environment of <math>35\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}</math>, humidity <math>&gt; 85\%</math>, PH value within the range of 6.5-7.2, <math>5\% \pm 1\%</math> NaCl solution was used. After continuous 24h brine spray, the surface of the product should be free from corrosion, discoloration, and coating peeling.</p>			<p>After the end of the experiment, the surface of the product has no rust, no discoloration, and the coating has no peeling.</p>	PASS
Experiment: Wang Ming			Approved by: Wang Ming		



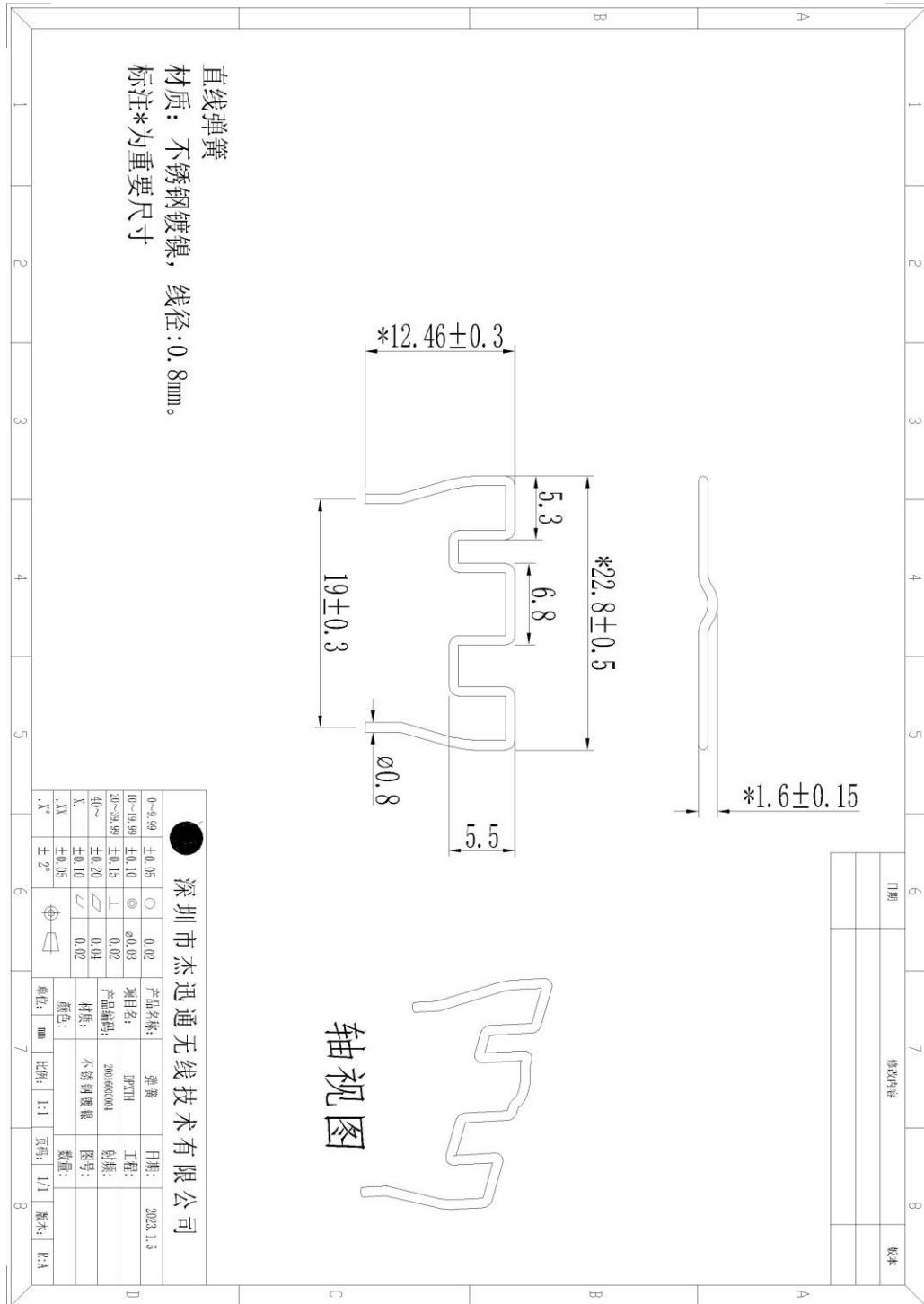
Antenna testing instrument



Darkroom test environment

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## 六. Engineering drawing



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