

SPECIFICATION FOR APPROVAL

CUSTOMER/PROJECT

Zhejiang JC Antenna Co., Ltd.

CUSTOMER P.N./

PRODUCT NAME./

Internal Antenna

MODEL NO./

13P032A

SPECIFICATION/

VERSION	DATE	REVISION DESCRIPTION
T:A	2022/6/13	ADDED

SUPPLIER AUTHORIZED SIGNATURE/		
/PREPARED	/CHECKED	/APPROVED
Xiao Wenzhen		

CUSTOMER AUTHORIZED SIGNATURE/			
Project		Quality	

Please return to us one copy of " SPECIFICATION FOR APPROVAL" with your approved signature.//

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1 Glossary

dBi	Decibel relative isotropic antenna
Tx	Transmit frequency
Rx	Receive frequency
TRP	Total Radiated Power
TIS	Total Isotropic Sensitivity
VSWR	Voltage Standing Wave Ratio
GSM	Global Service for Mobile communication
DCS	Digital Communication System
CDMA	Code Division Multiple Access
WCDMA	Wideband Code Division Multiple Access

2 Test Equipment

Vector Network Analyzer

Integrated

Tester **SATIMO**

64-bit Darkroom

3 Applicable frequency band

Standard/band	Uplink/ uplink	downlink/ downlink
GSM800	824MHz~896MHz	824MHz~896MHz
GSM900	890MHz~915MHz	935MHz~960MHz
DCS1800	1710MHz~1785MHz	1805MHz~1880MHz
PCS1900	1850MHz~1910MHz	1930MHz~1990MHz
CDMA800	825MHz~835MHz	870 MHz~880 MHz
WCDMA900	880MHz~915MHz	925MHz~960MHz
WCDMA2100	1920MHz~1980MHz	2110MHz~2170MHz
NB-B5	824MHz~896MHz	824MHz~896MHz
NB-B8	890MHz~915MHz	935MHz~960MHz
LTE	824MHz~2700MHz	

4 Basic test item

4.1 VSWR diagram

4.2 Smith impedance diagram

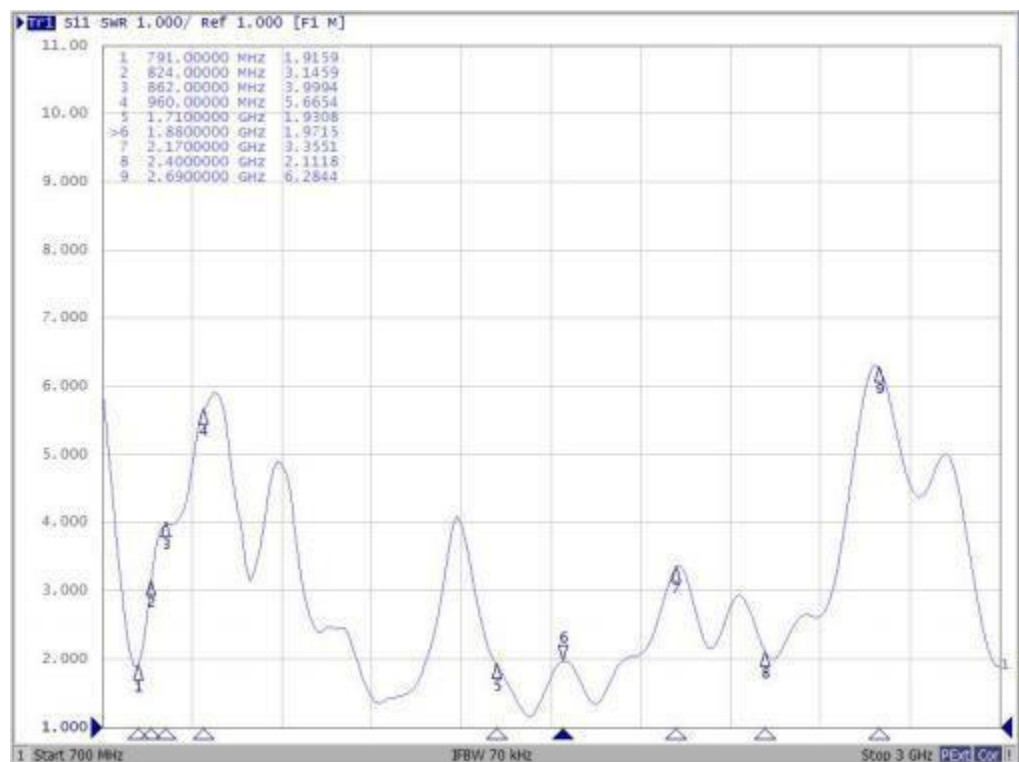
4.3 Radiation direction map

4.4 Gain and

5 Test Index and Chart

5.1 VSWR

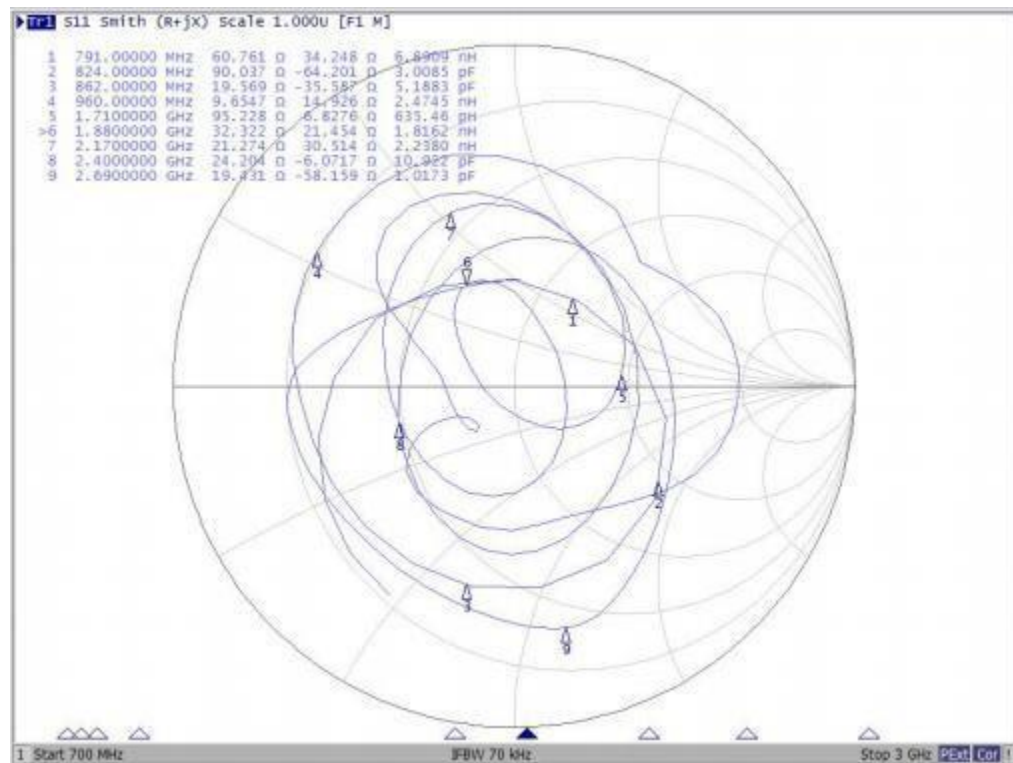
5.1.1 VSWR



5.1.2 VSWR data / VSWR data

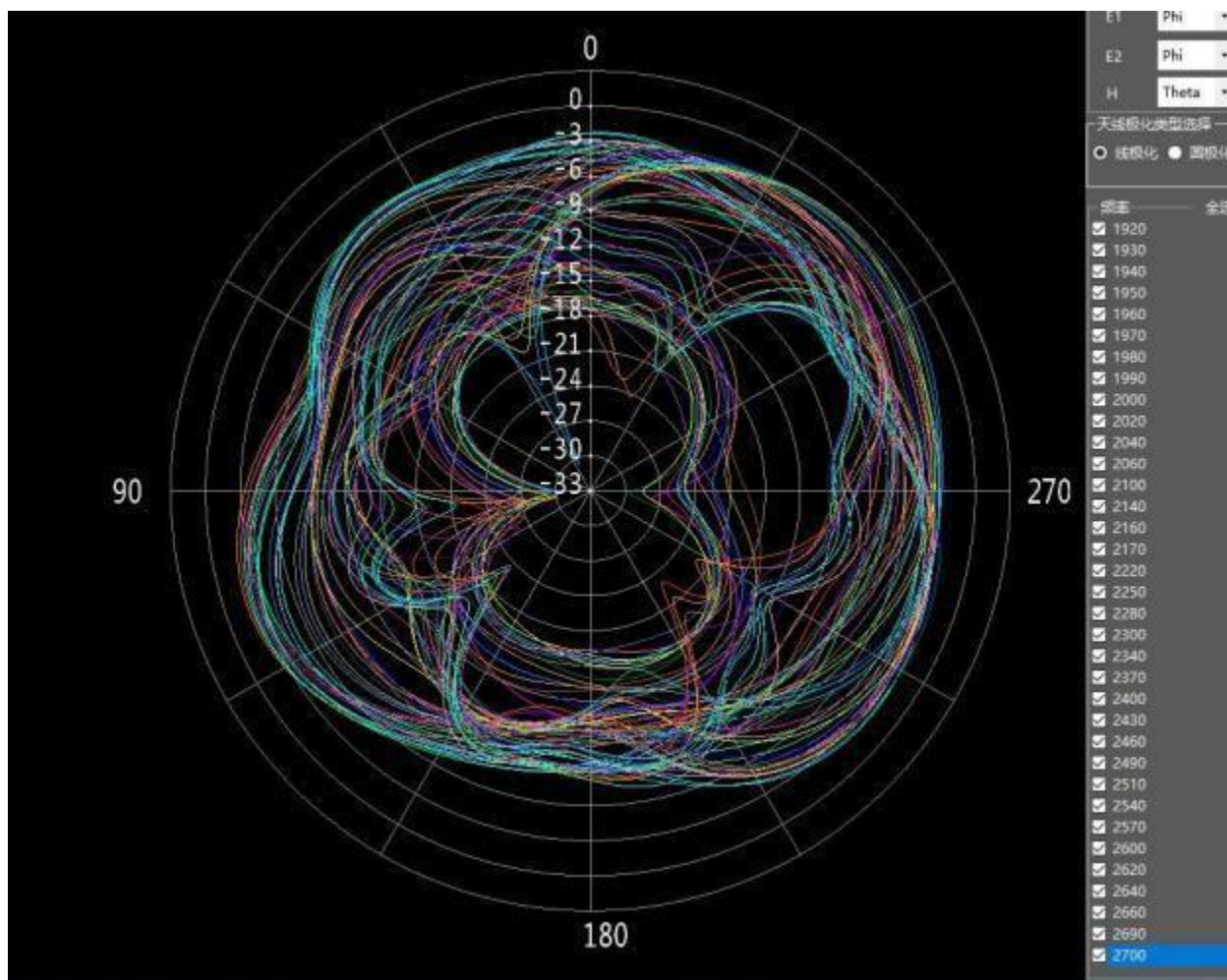
Freq/MHz	791	824	960	1710	1880	2170	2400	2690
VSWR	1.9	3.1	5.6	1.9	1.9	3.3	2.1	6.2

Smith.



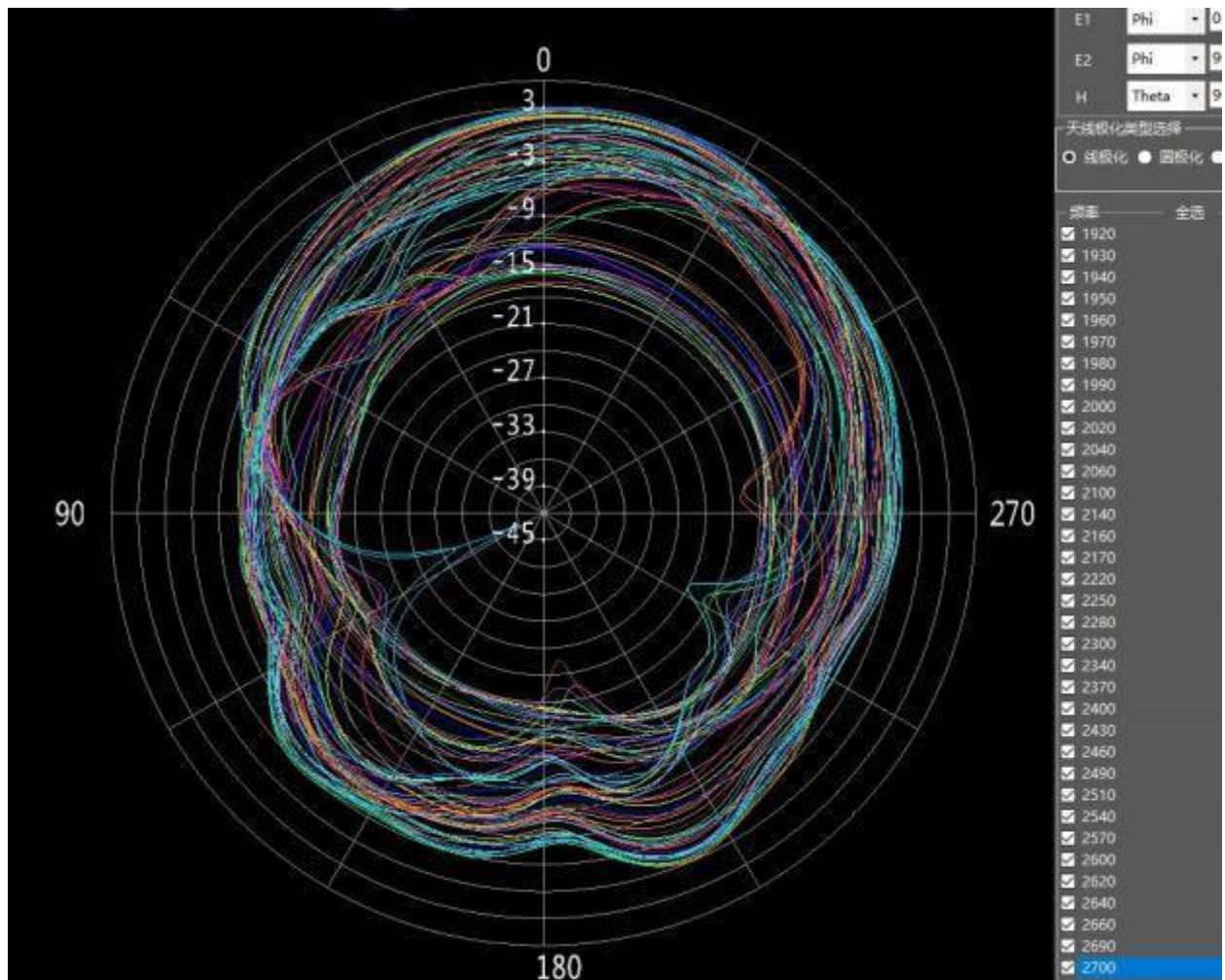
5.2 Radiation direction map

5.2.1 H-plane

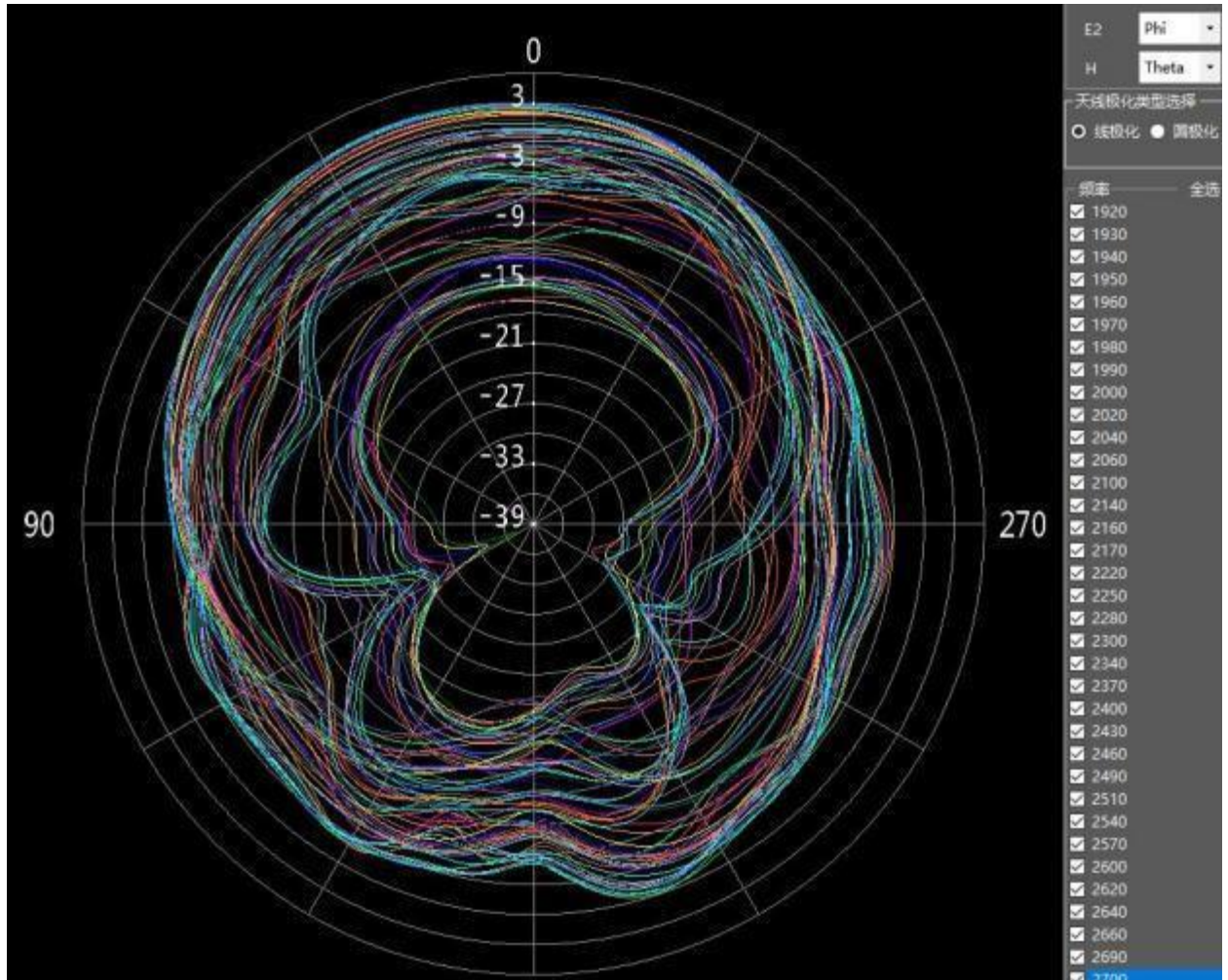


5.2.2 E-plane

E1



E2



2570	-3.10	20.82
2600	-2.49	21.79
2640	-3.05	20.83
2700	- 1.77	23.52

6 Environmental treatment suggestions

The environment does not need to be processed.

5.3 Gain and efficiency

Frequency(MHz)	Gain(dBi)	Efficiency (%)
824	-6.11	10.01
844	-6.84	12.89
864	-5.09	12.17
880	-6.43	11.70
900	-7.12	11.38
920	-9.99	11.44
940	-6.18	11.64
960	-7.22	11.61
1720	-2.68	26.90
1740	-1.92	30.19
1760	-1.90	32.02
1780	0.65	33.73
1800	0.91	34.62
1820	1.05	38.13
1840	1.64	43.31
1860	0.95	41.50
1880	1.53	45.88
1900	1.68	39.50
1920	2.19	40.06
1940	2.65	41.05
1960	3.01	41.68
1980	3.88	46.85
2000	3.46	40.48
2040	3.16	38.75
2100	3.66	43.03
2160	2.99	38.20
2220	1.06	24.28
2280	0.00	29.39
2340	-0.29	28.73
2400	-1.57	24.32
2460	-1.65	23.76
2510	-2.62	22.15
2570	-2.92	21.05

