

Product performance test report

Name of antenna	2.4&5.8G built-in antenna		Model number of prototype	CES-6374-M	
Type of antenna	GKZS - 2.4 & 5.8 G - AC358 - RF1.13 I - 140				
Number of antennas	1pcs		Date of inspection	May 13, 2022	
Environmental Conditions	Ambient temperature: 22 ~ 30℃			Relative humidity: 50% ~ 68%	
Test Items	Standing wave ratio, return loss, microwave darkroom detection (direction chart, gain, efficiency)				
Main instruments and equipment for inspection	The serial number	The name of the	model	Serial number	
	1	Network analyzer	E5071C	GKZS-LY-JS032	
	2	Comprehensive test instrument	8960	GKZS-LY-JS007	
	3	Spectrum analyzer	8595E	GKZS-LY-JS004	
	4	Microwave anechoic chamber	/	GKZS-LY-JS008	
	5	Regulated power supply	PS-303DM	GKZS-LY-JS011	
	6	The computer	HP	GKZS-LY-JS018	
Survey Overview	Test the antenna according to the customer's new prototype, verify the antenna performance; Test performance, test results see page 2-4.				
Surveyor	Liu Guangjin	audit	Xie Qianju	approval	Yang Jingsong
The date of	2022.05.13	The date of	2022.05.13	The date of	2022.05.13

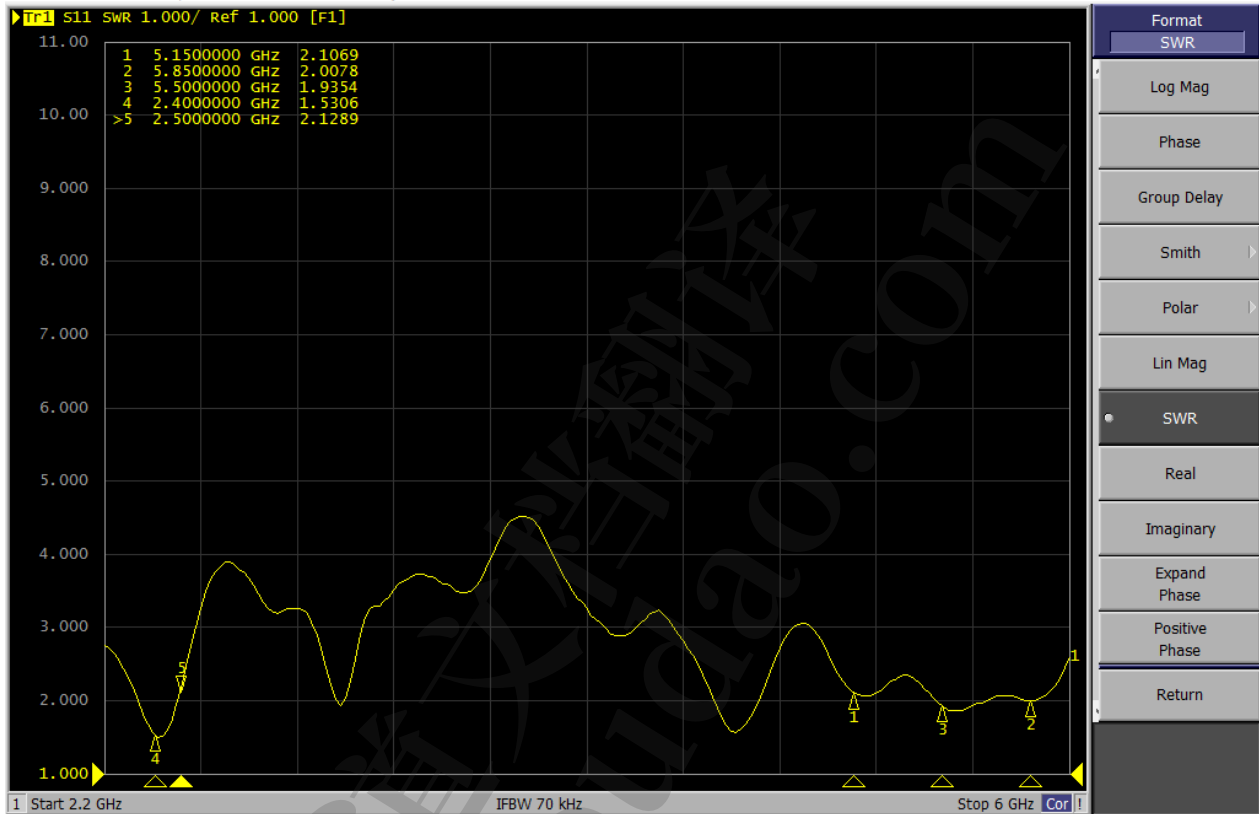
I. Performance test data

1、Standing wave ratio

E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

Resize

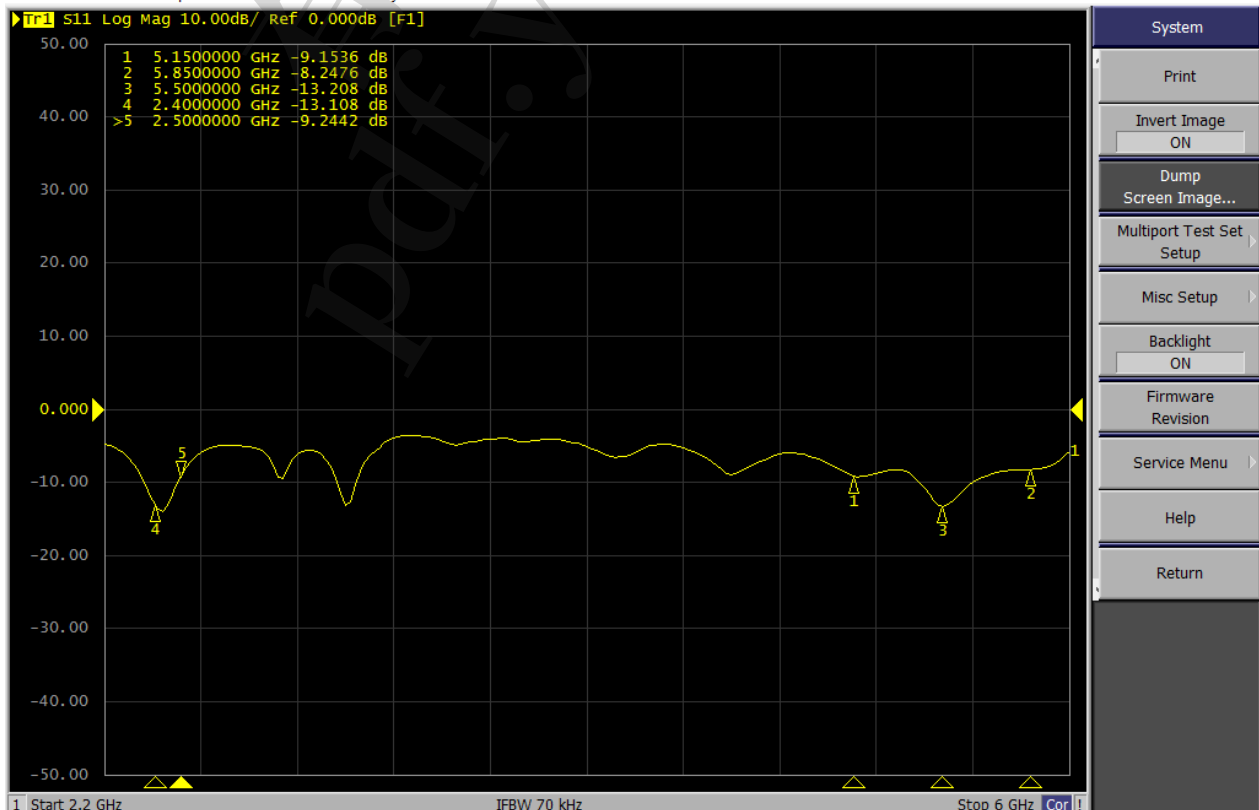


2、Loss of return

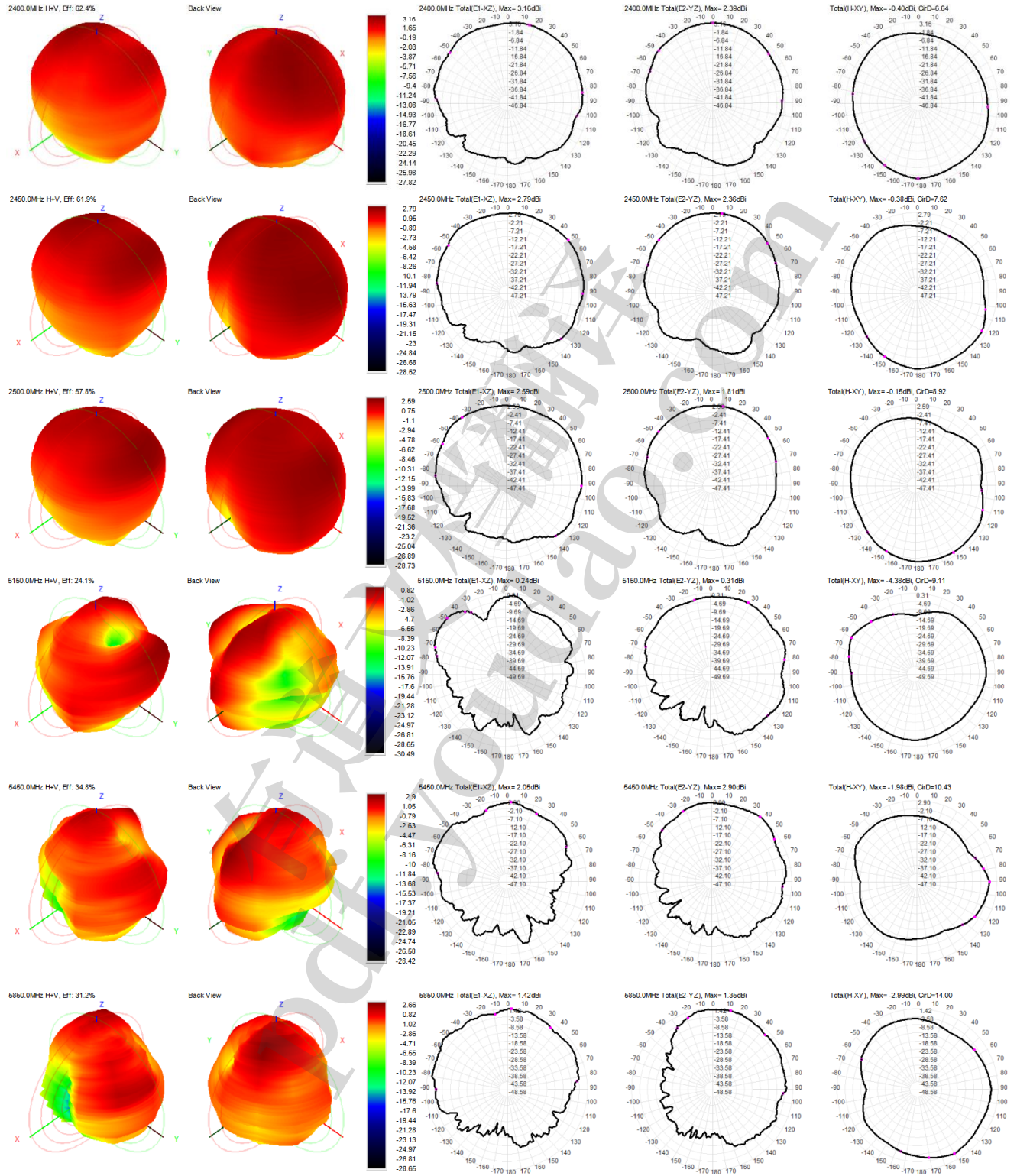
E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

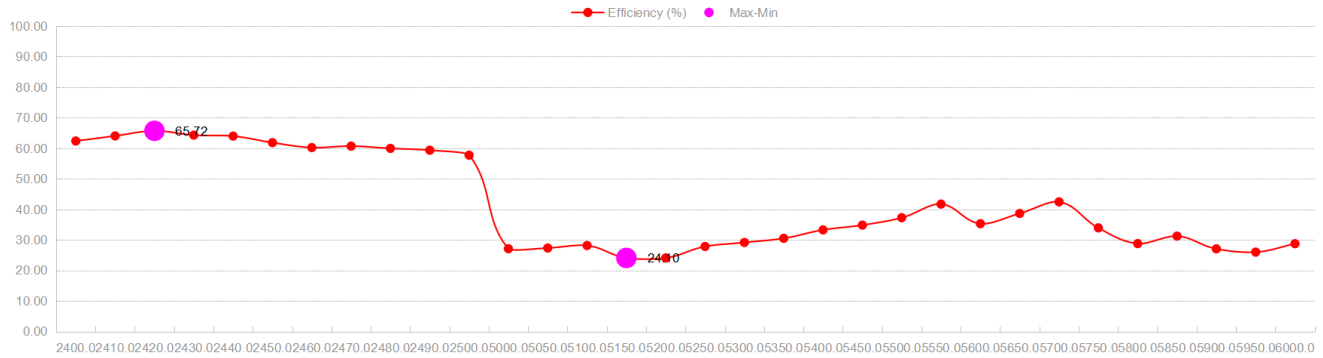
Resize



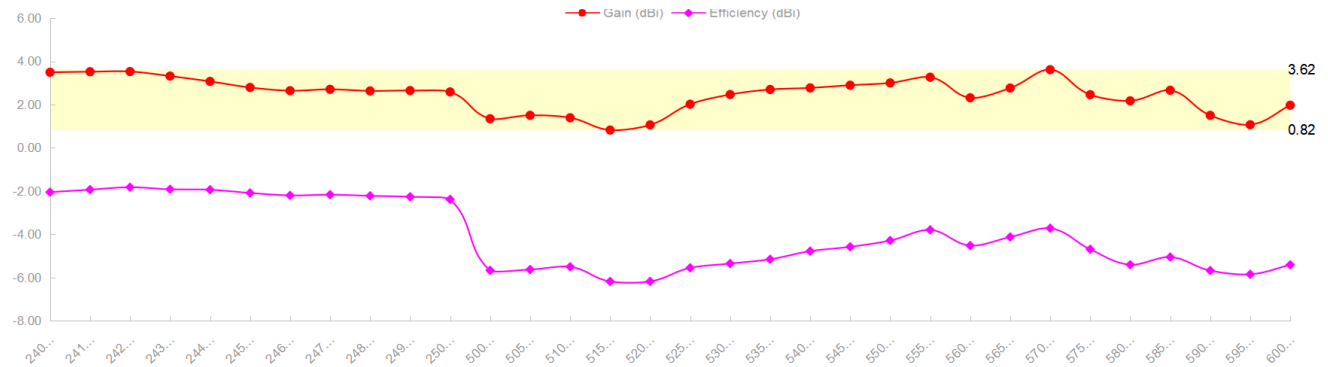
3、Diagram of direction



4. Efficiency curve



5. Gain curve



Ii. Test results

1. Standing Poppy

Test frequency band	2400-2500 MHZ, 5150-5850 MHZ				
	2400MHz	2500MHz	5150MHz	5500MHz	5850MHz
Standing wave ratio	1.5306	2.1289	2.1069	1.9354	2.0078
Loss of return	13.108	9.2442	9.1536	13.208	8.2476

2. Gain and efficiency

2400-2500MHz

Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500	On average,	peak
Gain (dBi)	3.16	3.52	3.53	3.32	3.07	2.79	2.64	2.71	2.63	2.65	2.59	2.99	3.53
Efficiency (%)	62.39	64.05	65.72	64.31	64.00	61.85	60.25	60.72	59.98	59.37	57.75	61.85	65.72

5150-5850MHz

Frequency (MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550
Gain (dBi)	0.31	1.06	2.02	2.47	2.70	2.77	2.90	3.00	3.27
Efficiency (%)	24.10	24.11	27.85	29.16	30.52	33.28	34.85	37.27	41.73

Frequency (MHz)	5600	5650	5700	5750	5800	5850	On average,	peak
Gain (dBi)	2.32	2.77	3.62	2.46	2.17	1.42	2.46	3.62

Efficiency (%)	35.32	38.68	42.47	33.95	28.80	31.24	32.88	42.47
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