Antenna data sheet

品牌 Brand: CHUANGYIN

品名 Description: WIFI Antenna

规格/型号

Specification

/part no: Built in Antenna/50 Ω/2.4-2.5GHz&5.15-5.85GHz/ 3.0 dBi@2.4G,3.0dBi@5.8G /RG0.81 Black Cable L=120 mm/I-PEX Second Generation Terminal/Black Built-In FPC Dual Frequency Antenna

日期 Date: 2024.08.26

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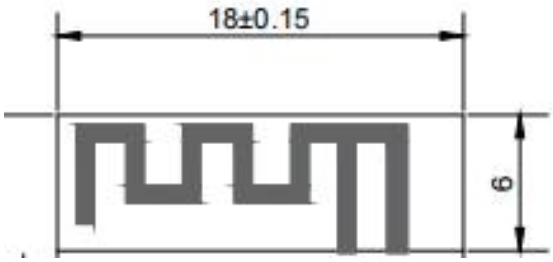
天线图纸（Picture）：



电气参数（Electrical parameters）：

Frequency 频率范围	2.4~2.5GHz&5.15-5.85GHz
Impedance 特性阻抗	50Ω
S.W.R. 电压驻波比	≤2.0
Antenna Gain 增益	3.0dBi±0.5@2.4~2.5GHz 3.0dBi±0.5@5.15~5.85GHz
Polarization 极化形式	vertical polarization
Return Loss 回波损耗	-9.2dB MAX

机械参数(Mechanical parameters)：

Antenna Colour 天线颜色	Black
RF Cable Model 射频线型号	RG0.81，Black
Connect Type 接口方式	I-PEX Second Generation Terminal

工作/储存温度（Operating/ Storage Temperature）：

Operating Temperature 工作温度	-40~85℃
Storage Temperature 储存温度	-40~85℃

环境与可靠性试验(Environmental and reliability testing):

Environmental test

High and low temperature humidity test report						
Experimental project	High temperature, low temperature and constant humidity test					
Test sample Name plate	FPC Antenna		Test date	2024.07.25		
Quimente	Constant temperature and humidity test chamber network analyzer		Quantity	5PCS		
Inspection standd	1. 1. The metal surface coating has no peeling, cracking, wrinkling and other defects;The non-metal part should not be discolored, broken, deformed, degummed and other defects. 2 .Electrical test meets the design requirements; The voltage standing wave ratio test is qualified.					
Test name	experimental project	require	experimental method	Actual test data	result	
					sample	decide
High temperature test	Temperature (℃)	+85±3	In accordance withGB2423.1-89 9 chapter To be carried out in the prescribed manner	+85	1	qualified
	Temperature stabilization time of test sample (h)	12		1.2	2	qualified
	Duration of test (h)	1		2.3	3	qualified
	Recovery time (h)	1		1	4	qualified
					5	qualified
	Temperature (℃)	-40±3	n accordance	-40	1	qualified

Low temperature test	Temperature stabilization time of test sample (h) Duration of test (h) Recovery time (h)	1 2 1	withGB2423.1-89 Section 8 chapter Regulation of the methods	1.2 2.4 1.1	2	qualified
					3	qualified
					4	qualified
					5	qualified

salt spray test; salt fog test

Salt spray test report			
Experimental project	salt spray test; salt fog test		
Test sample Name plate	FPC Antenna	Test date	2024.07.25
Quimente	salt spray corrosion test chamber	Quantity	5PCS
Inspection standd	Put the test sample into the prepared salt solution test chamber and salt spray corrosion chamber for continuous spray test		
Salt solution concentration	52g/L	The pH of the salt solution：6.5-7.2	test cycle： 24h
Actual test data	55g/L	The pH of the salt solution：6.8	test cycle：26h
Test standard; test criteria	According to GB/T10125 "artificial atmosphere corrosion test, salt spray test" test;Results according to the GB/T6461-2002 "Metal and other inorganic coating on metal substrate after corrosion test is the grade of samples and test pieces" rating.		

test results				
NO.	Corrosion rating	Actual test data	Evaluation of the results	备注
1	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
2	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	

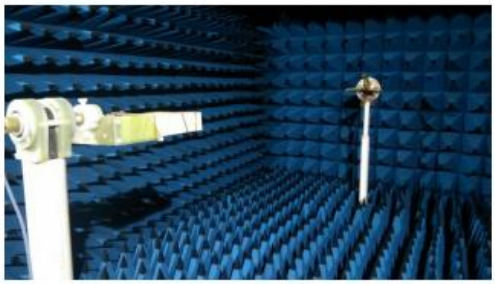
3	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
4	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
5	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	

测试设备(Test equipment)

安捷伦 E5071C 网络分析仪

HP 8594E 频谱分析仪

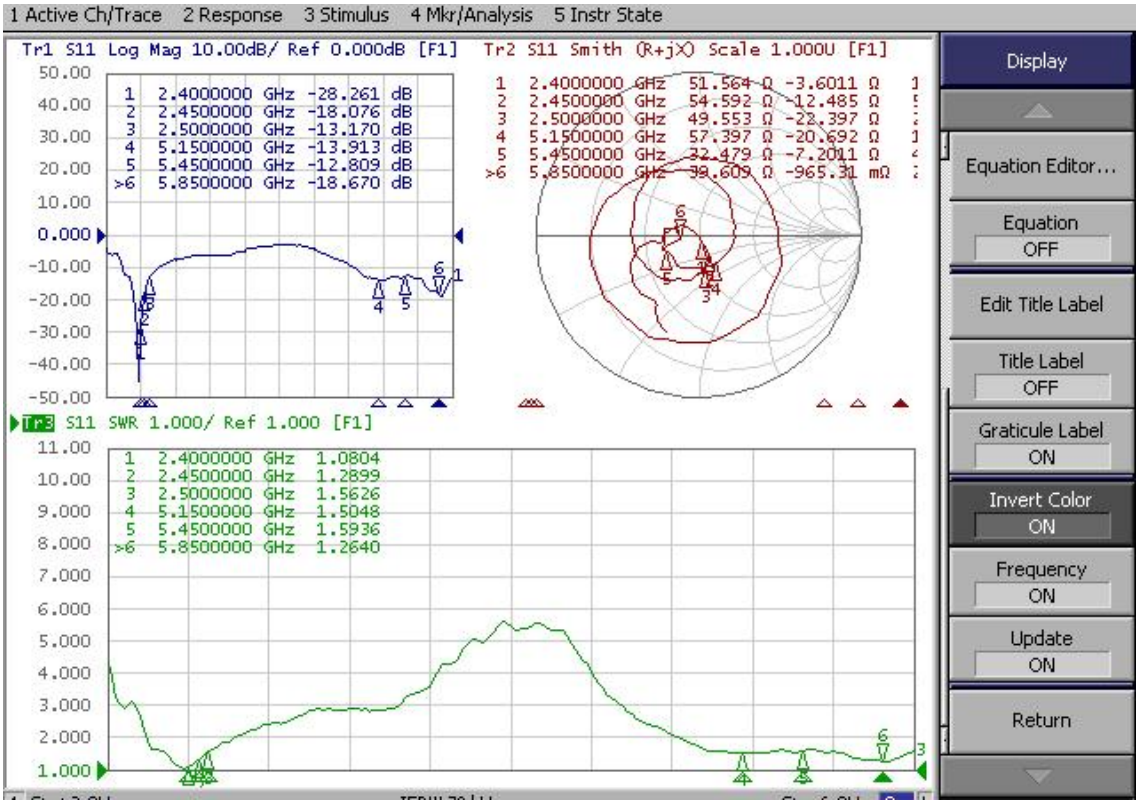
CMW-500



微波暗室

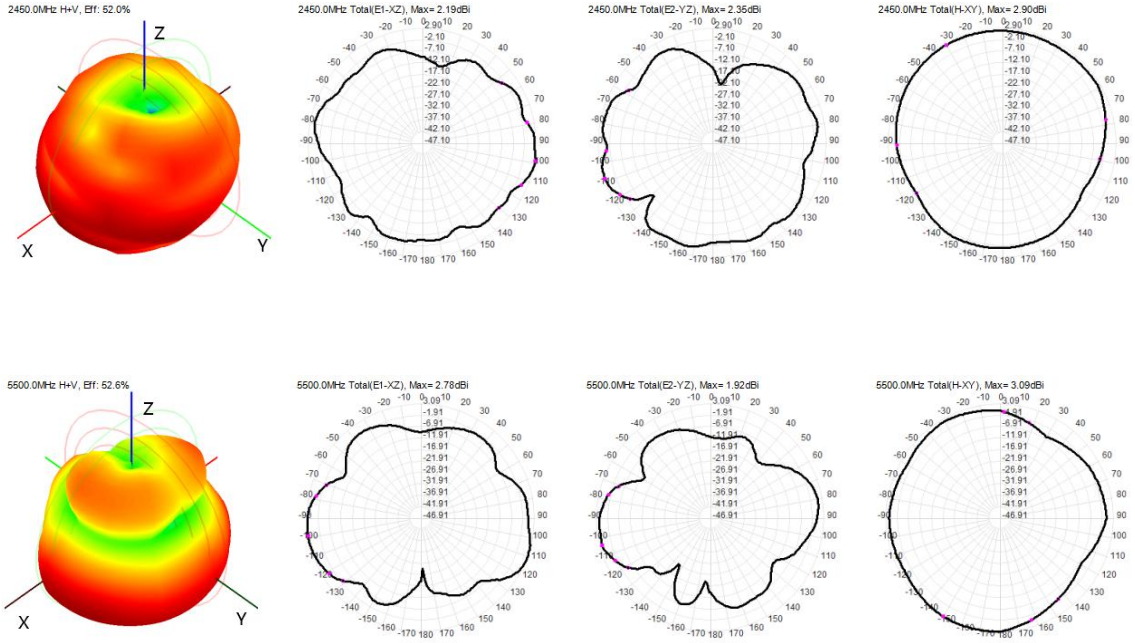
测试参数(Measuring parameter)

V.S.W.R&Ruturn Loss



增益&效率(Gain&Efficiency)

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
Gain (dBi)	2.52	2.54	2.75	2.93	2.82	2.90	2.98	2.90	3.09	2.68	2.92
Efficiency (%)	48.28	47.23	48.18	49.36	51.27	52.07	51.68	52.99	50.48	49.63	48.61

FEITUKEJI															
Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Frequency (MHz)	5150.0	5200.0	5250.0	5300.0	5350.0	5400.0	5450.0	5500.0	5550.0	5600.0	5650.0	5700.0	5750.0	5800.0	5850.0
Gain (dBi)	3.12	3.24	3.36	3.33	3.02	2.89	2.95	3.09	3.26	3.23	3.12	3.21	3.01	2.91	2.87
Efficiency (%)	51.86	49.94	50.66	50.15	50.15	51.78	52.05	52.60	52.67	49.53	53.14	53.57	54.97	53.32	50.98

2D、3D Radiation Patter