

承 认 书

SPECIFICATION FOR APPROVAL

Customer: Kandao

Brand: Jiutian

Description: WIFI Antenna

Specification

/part no: 3dBi@2.4GHz , 3dBi@5.8GHz Internal antenna,
RG1.13 black Cable L=205mm, IPEX first
generation terminal, black FPC antenna

Date: 2023.04.19

Remark:

Please return one specification or one copy of it with your chop and signature of approval and retain the others for your record. In the event of an order being placed for this part number before the chop and signed with specification (or copy) is returned and without special explanation, it will be assumed that full approval have been given.

Customer signature and seal:

CHECKED/DATE	AUDITOR/DATE	APPROVED/DATE

Specifications

Customer P/N: /

Specification: Antenna,3dBi@2.4GHz ,3dBi@5.8GHz
Internal antenna, RG1.13 blackCable
L=205mm, IPEX first generation terminal,
black FPC antenna

Description: WIFI Antenna

Supplier: Jiutian

Producer: Jiutian

Remark: Please return one specification or one copy of it with your chop and signature of approval and retain the others for your record. In the event of an order being placed for this part number before the chop and signed with specification (or copy) is returned and without special explanation, it will be assumed that full approval have been given.

CHECKED/DATE	AUDITOR/DATE	APPROVED/DATE
Zhang Bingxiang 2023.04.19	Wu Qianjin 2023.04.19	Luo Daxun 2023.04.19

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Specification list

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Picture:



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	3dBi±0.5@2.4GHz, 3dBi±0.5@5.85GHz
Polarization 极化形式	vertical polarization
Return Loss 回波损耗	-9.2dB MAX

Mechanical parameters

Antenna Colour 天线颜色	Black
RF Cable Model 射频线型号	RG113, Black
Connect Type 接口方式	I-PEX I

Operating/ Storage Temperature:

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

REV	DATE	DESCRIPTION
1	2022.11.23	NEW ISSUE
2		
3		

Environmental and reliability testing:

Environmental test

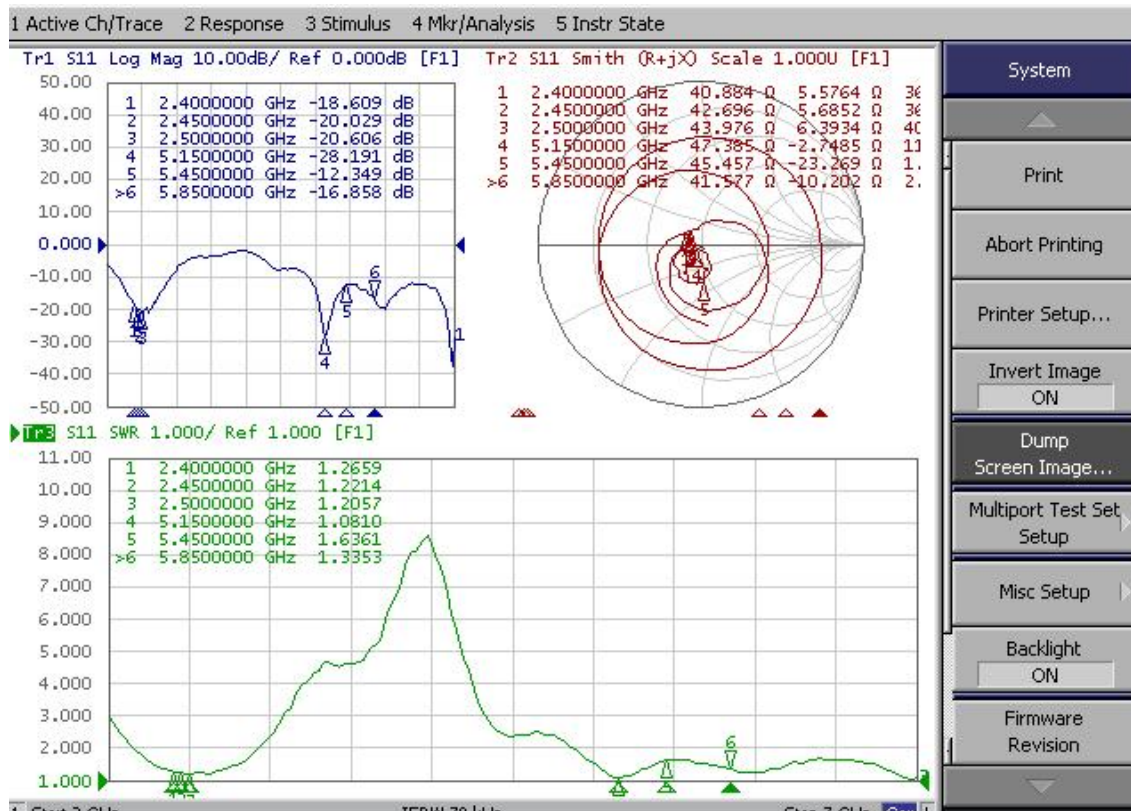
High and low temperature humidity test report						
experimental project	High temperature, low temperature and constant humidity test					
Test sample Name plate	FPC Antenna		Test date		2023.03.15	
equipment	Constant temperature and humidity test chamber network analyzer		quantity		5PCS	
inspection standard	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.					
nameThe	experimental project	require	experimental method	Actual test data	result	
					sample	decide
high temperature test	Temperature (°C)	+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)	1		1.2	2	qualified
	Duration of test (h)	1		2.3	3	qualified
	Recovery time (h)	1		1	4	qualified
					5	qualified
low temperature test	Temperature (°C)	-40±3	n accordance withGB2423.1-89 Section 8 chapter Regulation of the methods	-40	1	qualified
	Temperature stabilization time of test sample (h)	1		1.2	2	qualified
	Duration of test (h)	2		2.4	3	qualified
	Recovery time (h)	1		1.1	4	qualified
					5	qualified
steady-state damp heat test	Temperature (°C)	+40±2	According to GB2423.3-93 section 5 chapter Stipulated by the parties the parties	+42	1	qualified
	Relative Humidity (%)	90~95		92	2	qualified
	Duration of test (h)	21		22	3	qualified
	Recovery time (h)	1		1.1	4	qualified
					5	qualified

Salt spray test; salt fog test

Salt spray test report				
experimental project	salt spray test; salt fog test			
Test sample	FPC Antenna	Test date	2023. 03. 15	
Name plate				
quimentente	salt spray corrosion test chamber	quantity	5PCS	
inspection standard	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	

Measuring parameter

V.S.W.R&Return Loss



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)	3.01	2.88	3.14	3.35	3.65	3.65	3.59	3.12	2.43	2.23	2.19
Efficiency (%)	44.01	44.86	45.75	45.25	46.63	45.57	48.94	48.57	44.76	42.74	43.09

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)	3.02	3.03	3.88	3.36	3.29	3.11	3.56	3.07	3.61	3.11	3.12	3.66	3.11	3.13	2.70
Efficiency (%)	55.08	53.82	54.89	51.06	50.85	53.04	49.33	53.69	47.87	43.89	49.17	48.29	45.43	44.29	44.92

2D、3D Radiation Patter

