




SPECIFICATION FOR APPROVAL

(CUSTOMER)	Guangdong nine United Technology Co., LTD
(MODEL NO)	
(PART NO)	
(MODEL NO)	2.4G black PCB internal antenna 1.13 Black L=135MM
(PART NO)	YJC-6N135-B15
(MPQ)	100PCS
(BRAND)	YJC
(DATE)	2023-04-24
(QUANTITY)	15PCS

APPROVED SIGNATURES			APPROVED SIGNATURES		
PREPARED BY	CHECKED BY	APPROVED BY	TESTED BY	CHECKED BY	APPROVED BY
					

Note: The sample shall be delivered in one copy, which shall be signed by the supplier manually and stamped with the company's official seal. The specification shall provide one paper file and one electronic file.

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Shenzhen Yingjia Chuang electronic technology Co., LTD

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APPROVAL SHEET

CUSTOMER NAME		
CUSTOMER P/N		
PART NAME	2.4G black PCB internal antenna 1.13 Black L=90mm	
P/ N	YJC-6N135-B15	
APPROVAL REV.	A1	
DELIVERY DATE	April 24, 2023	
PREPARED BY	Yin Feijie	
CHECKED BY	Fang Wenfeng	
APPROVED BY	Fang Wenfeng	
Customer Approved		
Prepared By	Checked By	Approved By



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Catalogue

1、	Cover	1
2、	Catalogue	2
3、	Resume	3
4、	Product plan	4
5、	Antennatechnicalparametersandenvironmentaltesting	5
6、	Environmentalperformancetesting	5
7、	Antennaphysicaldiagramandattachedlocationdiagram	6
8、	Antennaperformancetestdiagram	6
9、	2D.3D (2.4G) test data	6-7
10、	OTAactivetest data statistics	8
11、	ROHS Material control report	9



Product plan :

1	A	B	C	D	E	F	G												
<div style="float: right; border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>NAME</th> </tr> </thead> <tbody> <tr> <td>A0</td> <td>2023-08-12</td> <td>New edition Issue</td> <td>Wu Jiantong</td> </tr> <tr> <td>A1</td> <td>2023-04-24</td> <td>Change the PCB board to optimize the commissioning</td> <td>Yin Feijie</td> </tr> </tbody> </table> </div>								REV	DATE	DESCRIPTION	NAME	A0	2023-08-12	New edition Issue	Wu Jiantong	A1	2023-04-24	Change the PCB board to optimize the commissioning	Yin Feijie
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<p>Material label card shall be affixed to the outer box/PCS for each ROHS label</p>																			
<p>Requirements:</p> <ol style="list-style-type: none"> 1. The finished product must be 100% test conduction OK 2. The finished product must be 100% inspected OK. 3. The finished product uses an environmentally friendly process. 4. Meet ROHS requirements. 5. No tolerance is specified. Please refer to general tolerance. 6. * Dimensioning for emphasis. 																			
A	B	C	D	E	F	G	G												

**Antenna technical parameters and environmental testing:**

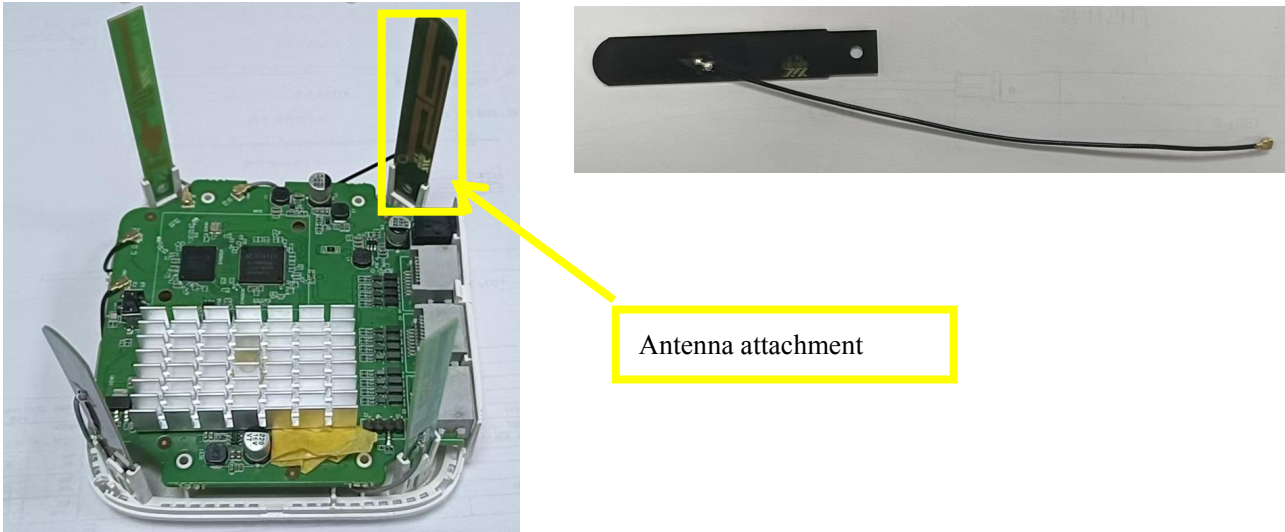
Electrical technical parameter			
Electrical Specifications		Mechanical Specifications	
Frequency Range	2400-2500MHz	Cable Color	Black
VSWR	<1.92	Input connector	XD
Input Impedance	50 Ω	Cable length	135mm
Direction	All	Working Temperature	-20℃~+70℃
Gain	2.0±1dBi	Working Humidity	20%~80%

Environmental performance test:

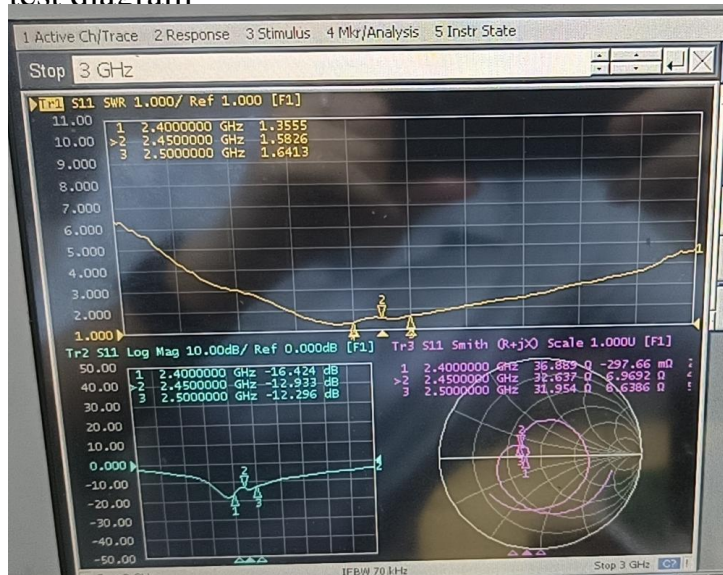
Project	Test condition	Standard
Storage Conditions	In the absence of specified test temperature, humidity, air pressure is as follows:: 1. Temperature is - 30 °C ~ + 80 °C 2. Relative humidity of 45% to 45% 3. Air pressure is 86 kpa to 106 kpa	Electrical and mechanical performance is normal
High and low temperature test	Between 70 °C and -20 °C for 5 loops, then 1-2 h under normal conditions, check the appearance quality.	Size should meet the requirements and meet the performance of machinery and electric.
Constant damp and hot resistance test	95 + / - 3% relative humidity, temperature test: 40 °C. Lasts 2 h after, try to take out the determination of electrical properties, within 5 min after try 1-2 h under article normal thing, check the appearance quality	Size should meet the requirements and meet the performance of machinery and electric.
vibration test	10-55 hz, vibration frequency range of displacement amplitude: 0.35 MM, acceleration amplitude: 50.0 M/S, sweep cycles: 30 times	Electrical and mechanical performance is normal
Fall down test	1 m high altitude in accordance with the perpendicular axis free drop 3 times	Electrical and mechanical performance is normal



Antenna physical diagram and attached location diagram:



Antenna performance test diagram:

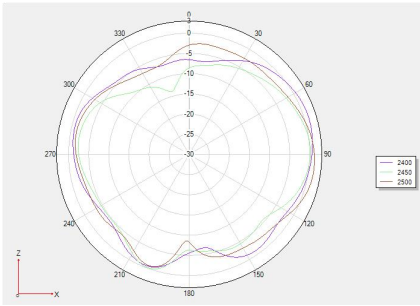


2D and 3D test data (2.4G):

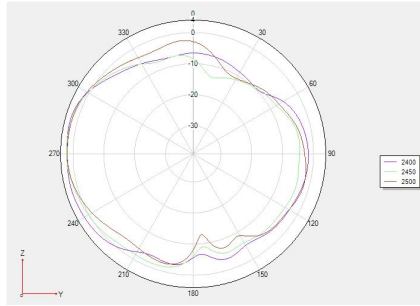
Frequency	Efficiency (%)	Gain. (dBi)
2400MHz	66.22	2.73
2410MHz	65.01	2.7
2420MHz	67.76	2.42
2430MHz	62.81	2.9
2440MHz	61.24	2.09
2450MHz	62.57	2.29
2460MHz	58.21	2.18
2470MHz	58.88	2.24
2480MHz	57.94	2.99
2490MHz	59.83	2.01
2500MHz	58.95	2.31



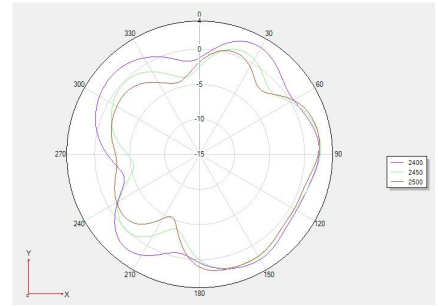
Phi 0 2D



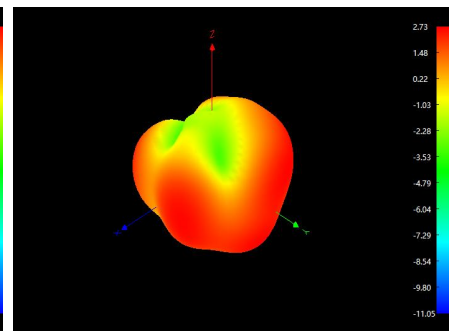
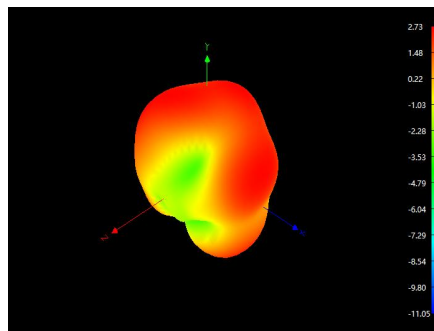
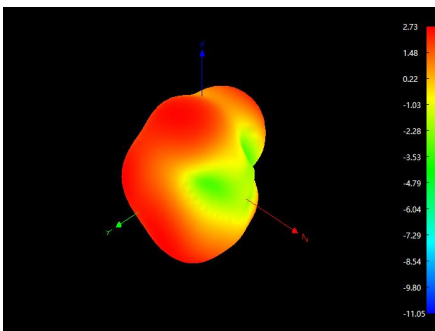
Phi 90 2D



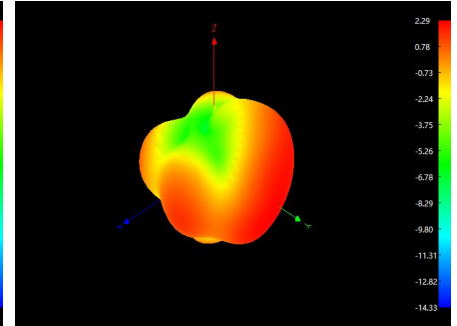
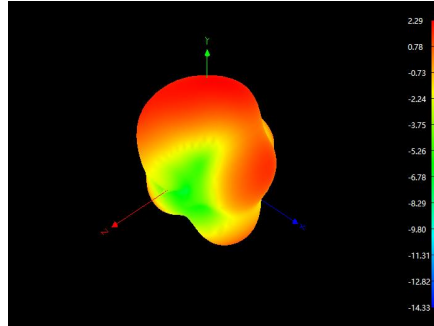
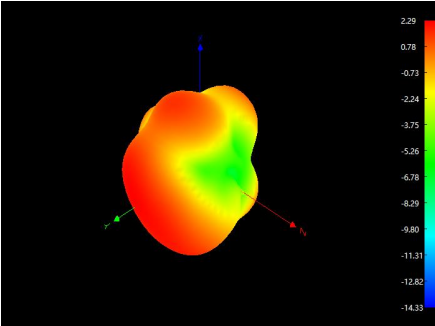
Theta 90 2D



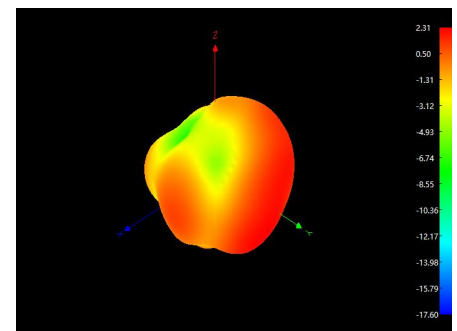
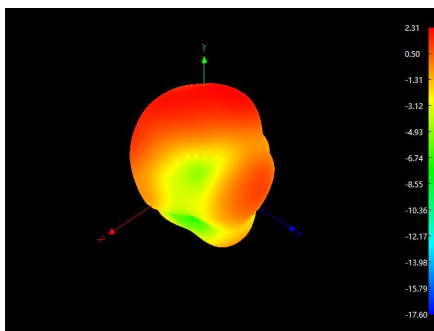
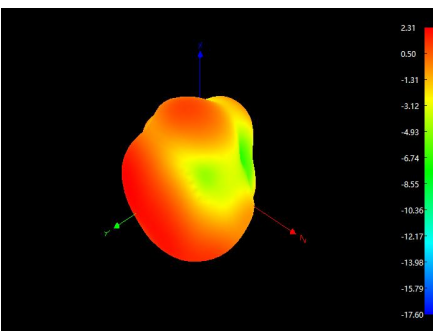
3D 2400:



3D 2450:



3D 2500:





OTA active test data statistics:

Item	Measurement	Band	Channel	Frequency	Total
1	TRP	WIFI_G (54M)	1	2412	17.13
2	TRP	WIFI_G (54M)	6	2437	17.15
3	TRP	WIFI_G (54M)	11	2462	17.58
4	TIS(EIRP)	WIFI_G (54M)	1	2412	-70.19
5	TIS(EIRP)	WIFI_G (54M)	6	2437	-70.8
6	TIS(EIRP)	WIFI_G (54M)	11	2462	-71.4
7	TRP	WIFI_AX_ISM (135M)	1	2412	16.4
8	TRP	WIFI_AX_ISM (135M)	6	2437	16.32
9	TRP	WIFI_AX_ISM (135M)	11	2462	16.1
10	TIS(EIRP)	WIFI_AX_ISM (135M)	1	2412	-51.57
11	TIS(EIRP)	WIFI_AX_ISM (135M)	6	2437	-51.45
12	TIS(EIRP)	WIFI_AX_ISM (135M)	11	2462	-51.13



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Material RoHS conformity declaration form

This is to certify that the delivery to your company's components, raw materials, auxiliary materials used and the additives in the production engineering are accord with RoHS environmental requirements of the restrictions on the use of hazardous substances directive (RoHS directive 2011/65 / EU)

About components used raw materials, packaging materials, auxiliary materials and additives used in the production process such as composition of the report is as follows:

Component /Part Name	Material Composition	ICP report #	Test Org.	Test Date	Content of harmful substances (ppm)						PASS?
					Cd	Pb	Hg	Cr ⁶⁺	PBB	PBDE	PASS
PCB	PCB	CANEC2221844502	SGS	22/10/20	ND	12	ND	ND	ND	ND	PASS
Wire rod	Teflon coaxial cable	SZXEC2202766604	SGS	22/08/18	ND	ND	ND	ND	ND	ND	PASS
Eco-friendly tin wire	Eco-friendly tin wire	SHAEC2206174502	SGS	22/06/13	ND	181	ND	ND	ND	ND	PASS
terminal	copper	CANEC2301145810	SGS	23/02/08	ND	5	ND	ND	ND	ND	PASS
	Gold coating	A2220404860101001C	CTI	22/09/17	ND	ND	ND	ND	ND	ND	PASS
	Rubber core	A2230035037101002E	SGS	23/02/06	ND	ND	ND	ND	ND	ND	PASS