Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: 深圳市维度创新实业有限公司

Product Name: 2.4GHz Antenna

Product Model: POD7

Part Number: LJF02-22112908A-R0A

Write By : Huxuwen

Issued Date: 2022-11-29

CUSTOMER

ENGINEER R&D DEPT	BUSSINESS DEPT	APPROVAL

LEJIN

R&D DEPT	ENGINEER DEPT	APPROVAL

REV	MODIFIED DESCRIPTION	DATE	REMARK
V1.0	Initial Draft Release	2022/11/29	

Add：Rm 301B,A4 Bld,Junfeng Innovation Park,Fuyong, Baoan Dist,Shenzhen. Tel:0755-27780515 Email:phxcler@szljrf.com

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3.Product Specification

A. Electrical Characteristics	
Frequency	2400MHz ~2500 MHz
VSWR	<2.0
Efficiency	⩾40%
Impedance	50Ohm
Polarization	Linear
Gain(2.4GHz)	⩽2.1dB
B. Material & Mechanical Characteristics	
Material of Radiator	FPC(Black),LJWF27A
Cable Type	Φ1.13mm,L135mm,Black
Connector Type	IPX1
Dimension	26.0*18.8mm
C. Environmental	
Operation Temperature	- 20 ˚C ~ + 70 ˚C
Storage Temperature	- 30 ˚C ~ + 85 ˚C
Humidity	40%~95%

4.Test Equipment & Conditions

1.Network Analyzers Agilent 8753D/5071C

2.HSPA and LTE protocol test set R&S CMW500 -PT

3.Communications Test Set Agilent 8960

4.3D Chamber Test System

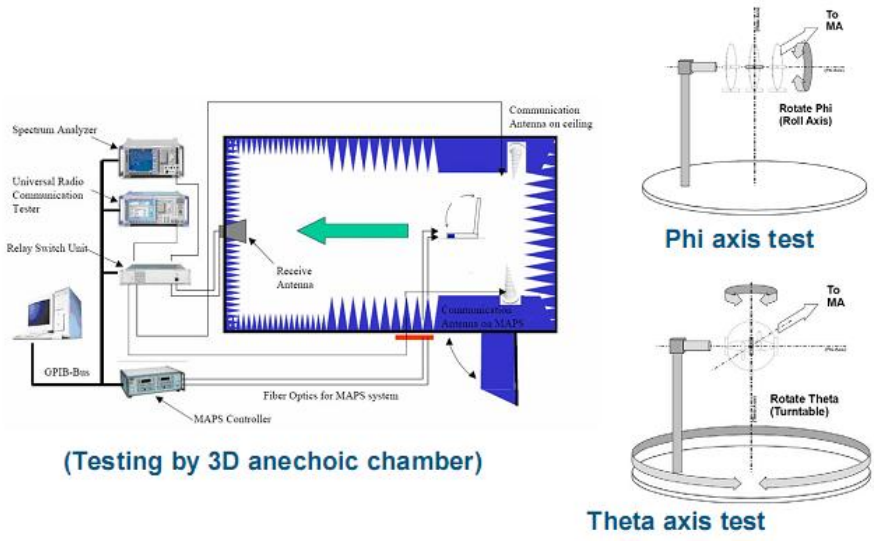

Chart 1 Test topology

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5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

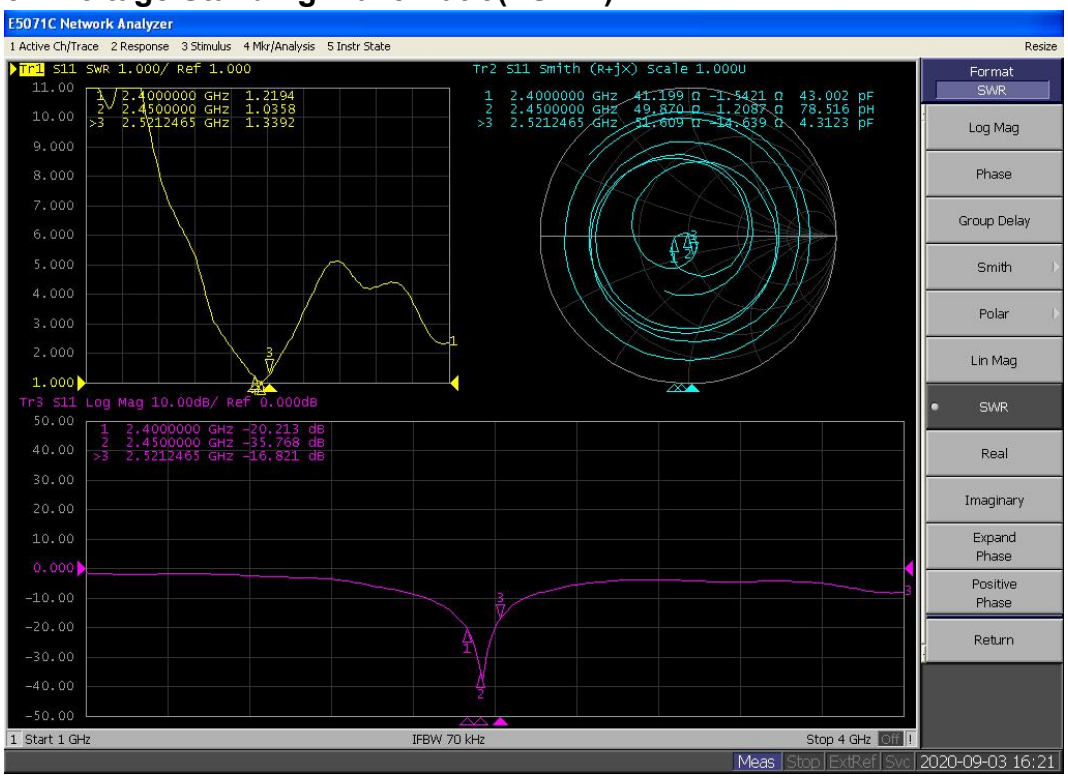
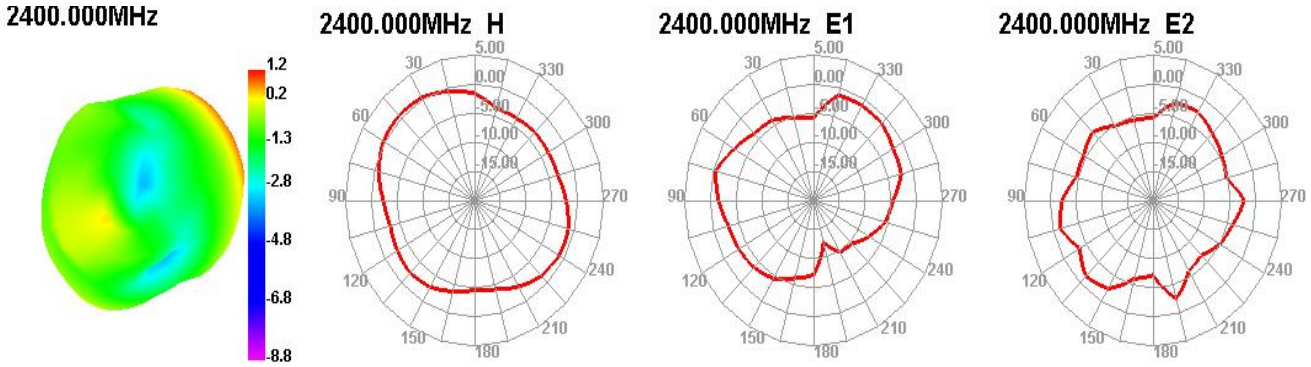


Chart 2 VSWR

5.2 Efficient and gain.

Passive Test For WIFI BT	Freq (MHz)	2400	2405	2410	2415	2420	2425	2430	2435	2440	2445	2450	2455	2460	2465	2470	2475	2480	2485	2490	2495	2500
	Effi (%)	51.79	51.66	57.56	58.33	56.67	55.00	53.23	58.35	61.78	59.77	50.16	52.86	56.42	54.61	59.78	55.06	58.55	50.26	43.93	44.52	40.30
	Gain (dBi)	1.89	2.04	1.93	1.88	1.90	1.99	1.95	1.84	1.95	2.08	1.92	1.89	1.92	1.82	1.63	1.97	2.07	1.84	1.73	1.52	1.46

5.3 Radiation pattern.



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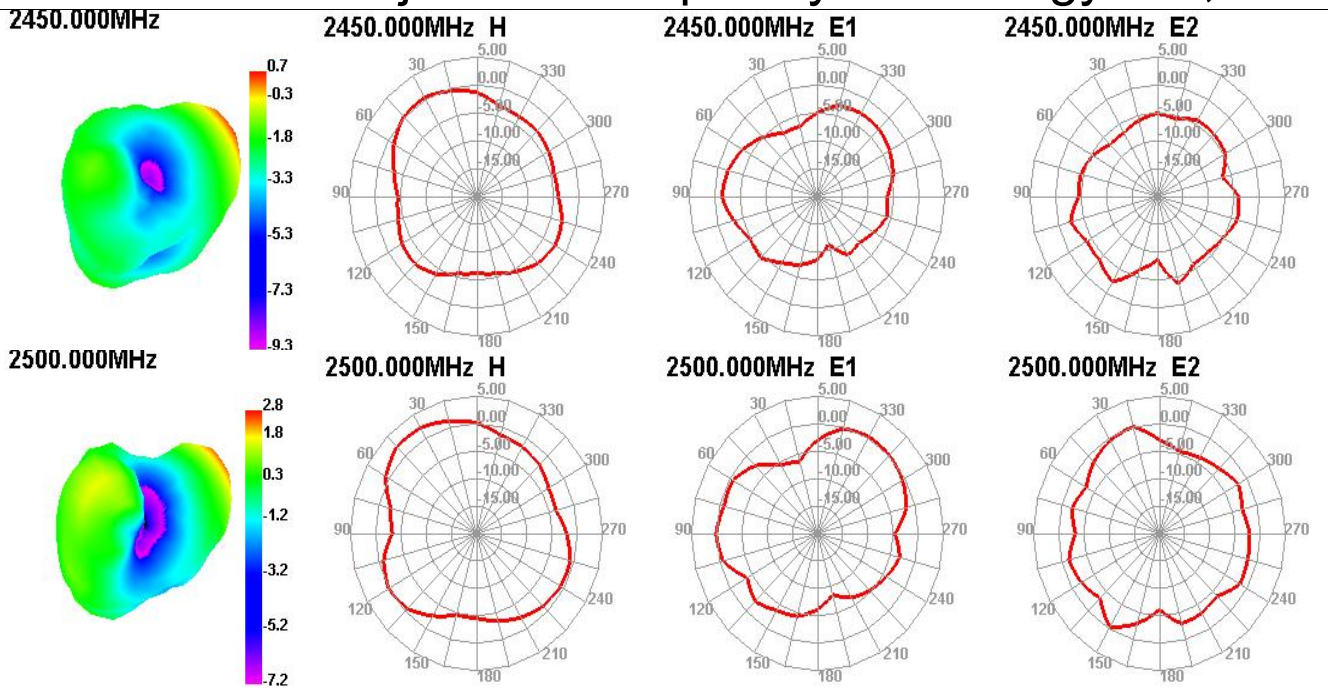

6.Reliability Test

Test Item		Test condition	Equipment	Specification	Result
1	Low Temp. Storage Test	Temperature: -30℃， Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃and humidity is 65% for one hour, then step-down the temp. to -30℃ in one hour, store antenna for44 hours; step-up temp to 25 ℃,test antenna after 2 hours.	Temp.&Humi. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
2	High Temp./High Humid Storage Test	Temperature: 85℃ Humidity: 85% RH Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃and humidity is 65% for one hour, then step-up the temp. to 80℃ and the humidity up to 85% in one hour, store antenna for 44 hours; step-down tempto 25℃,test antenna after 2 hours.	Temp.&Humi. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
3	Salt-Spray 6 pray Test	Placing antenna in the Salt-Spray Tester ,set the test condition ，Temp: 35±2℃ Humidity: 85% NaCl salt spray :5±1%.PH value :6.5~7.2 Testtime:24hours	Salt-Spray Tester	No color change No appear rusting	PASS

7. **Assemble type**

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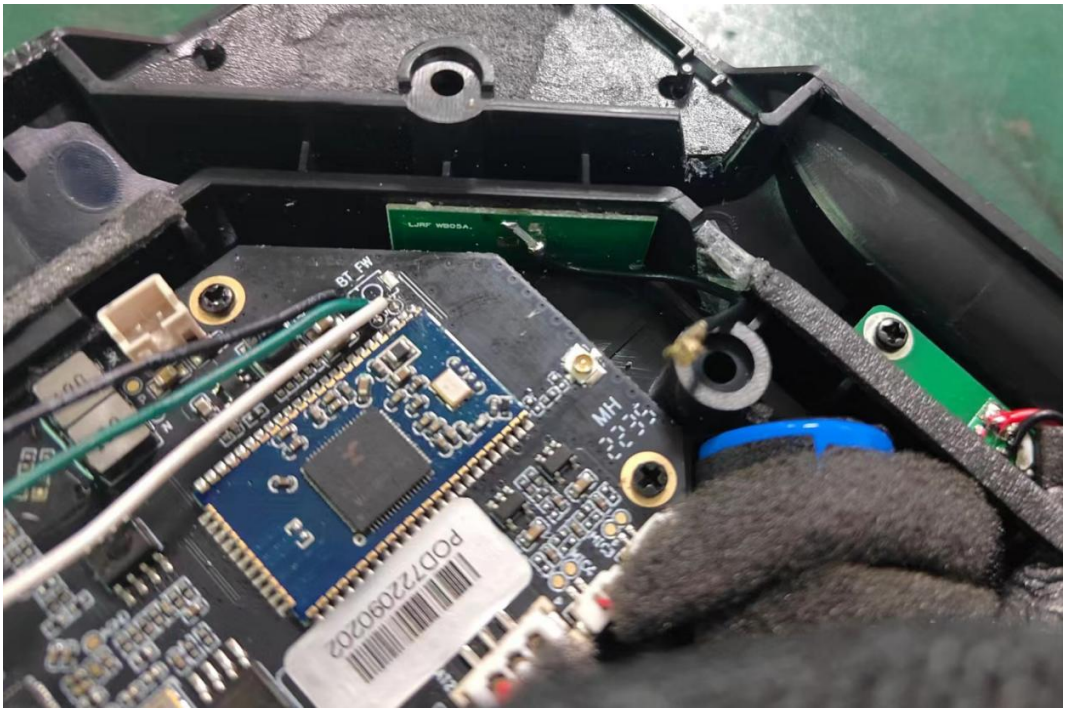

Chart 3 POD3 assemble type

8.Product Drawing

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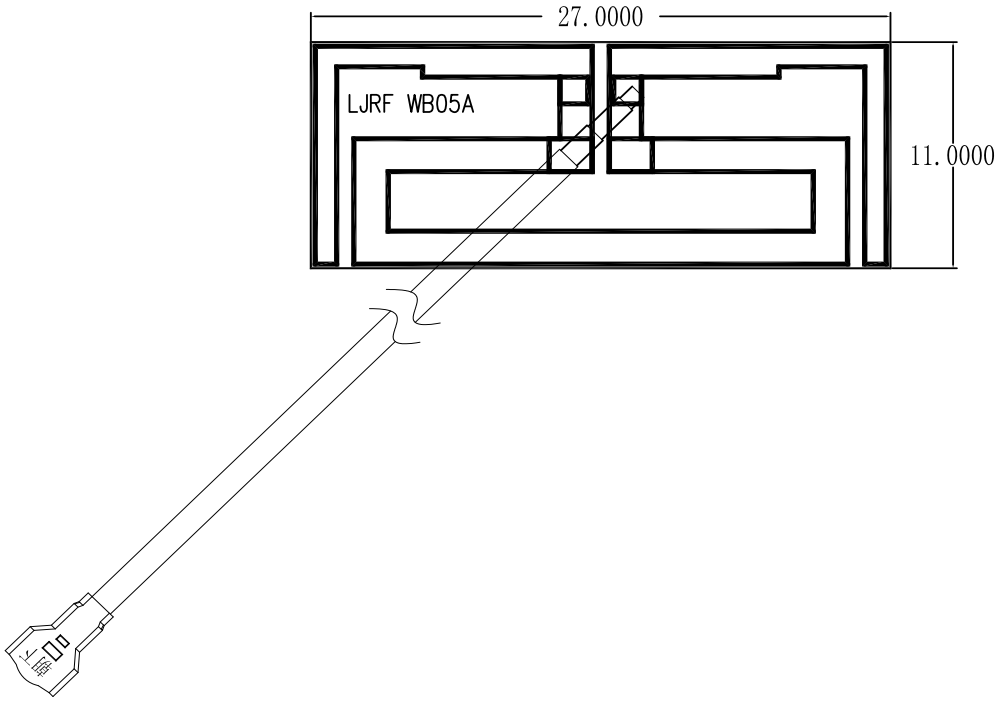
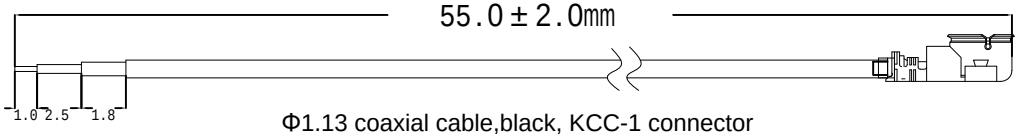
RoHS
Compliant
G P





Φ1.13 coaxial cable,black, KCC-1 connector

Remark:

1.PCB material:FR4.

2.Backing in behind:3M300LSE.

3.Tolerance：Cuting die:±0.1mm;Circuit on FPC:±0.05mm；others are ±0.05mm.

4.ROHS:(Pb,Hg,Cr+6,PBBs,PBDEs),<1000ppm; Cd,<100ppm.

Revise record				
	1			
	2			
	3			

Rev	Description	Date	Remark
A	New drawing		

SHEN ZHEN LEJIN RADIO FREQUENCY CO.,LTD

Third Angle				Project	维度创新	Date	2022-12-04
0～10	±0.05	○	0.02	Part Name	2.4GHz ANT	Designed by	
10～18	±0.10	◎	⌀0.03	Part No.	POD7	Checked by	MD
18～30	±0.12	⊥	0.02	Material			RF
30～40	±0.15	▱	0.04	Treatment	LJF02-22112908B-R0A	Approved by	
40～	±0.20	Angle	±0.5°			Unit mm	Scale FIT Rev A
Location							