Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: YOUTEK INC

Product Name: WIFI Antenna

Product Model: CMB-101

Part Number: LJF01-19120502-R0A

Write By : Huxuwen

Issued Date: 2022-12-05

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	2019/12/05	
V1.1	Remove IPEX connector	2019/12/23	
V1.2	Add radiation pattern	2024/03/27	

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

Index

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3.Product Specification

A. Electrical Characteristics	
Frequency	2400MHz ~2500 MHz
VSWR	<2.0
Efficiency	≥30%
Impedance	50Ohm
Polarization	Linear
Gain	1.99dBi
B. Material & Mechanical Characteristics	
Material of Radiator	FPC(Black),LJWF84A-L
Cable Type	Φ1.13mm,L130mm,Black
Connector Type	IPX1
Dimension	21.0*16.8mm
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

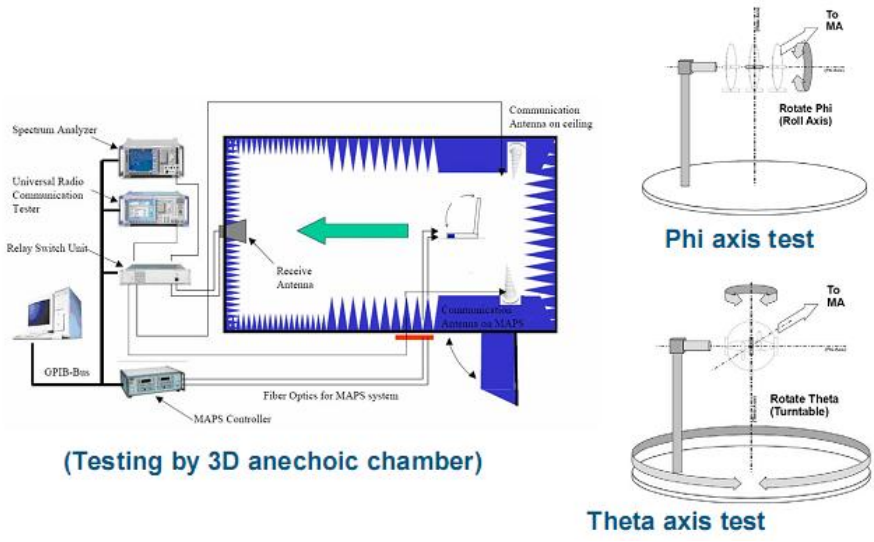

Chart 1 Test topology

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5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

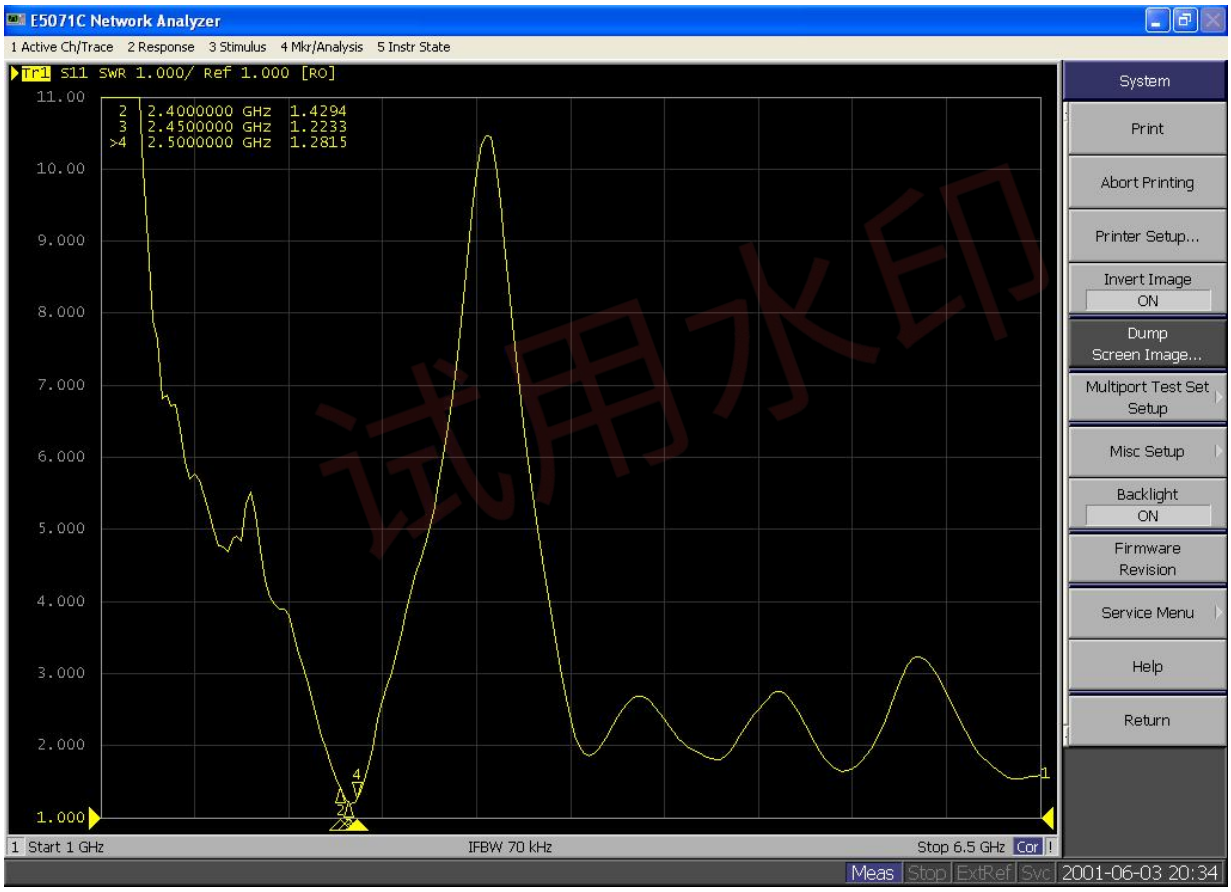
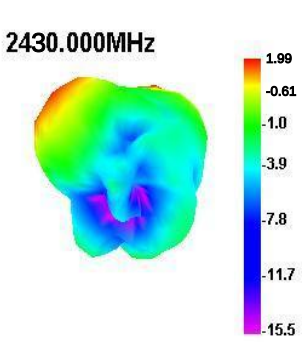


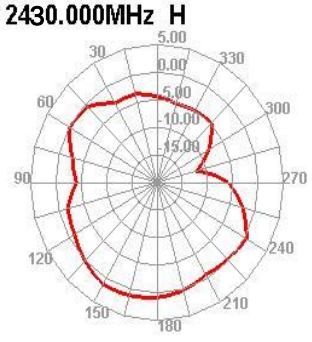
Chart 2 VSWR

5.2 Efficient and gain.

Passive Test For WIFI BT	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
	Effi(%)	54.38	58.61	50.82	56.01	61.82	55.13	61.04	57.28	50.26	53.60	55.75
	Gain(dBi)	1.94	1.96	1.86	1.99	1.91	1.97	1.87	1.90	1.83	1.79	1.72

5.3 Radiation pattern. Unit:dBi





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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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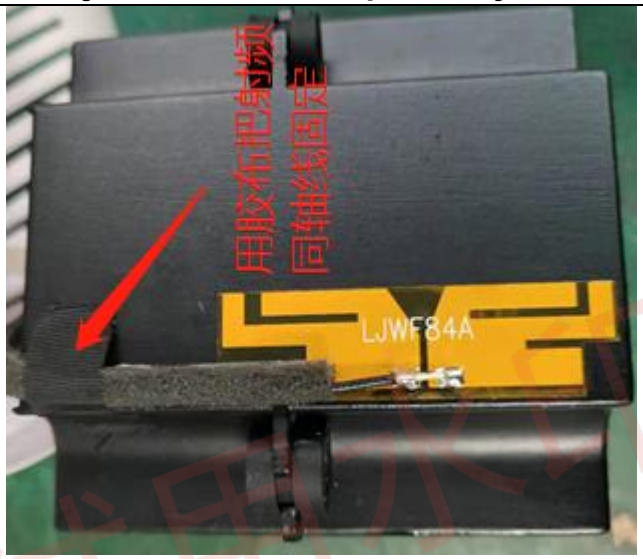

Chart 3 Antenna assemble type(overall)

8.Product Drawing

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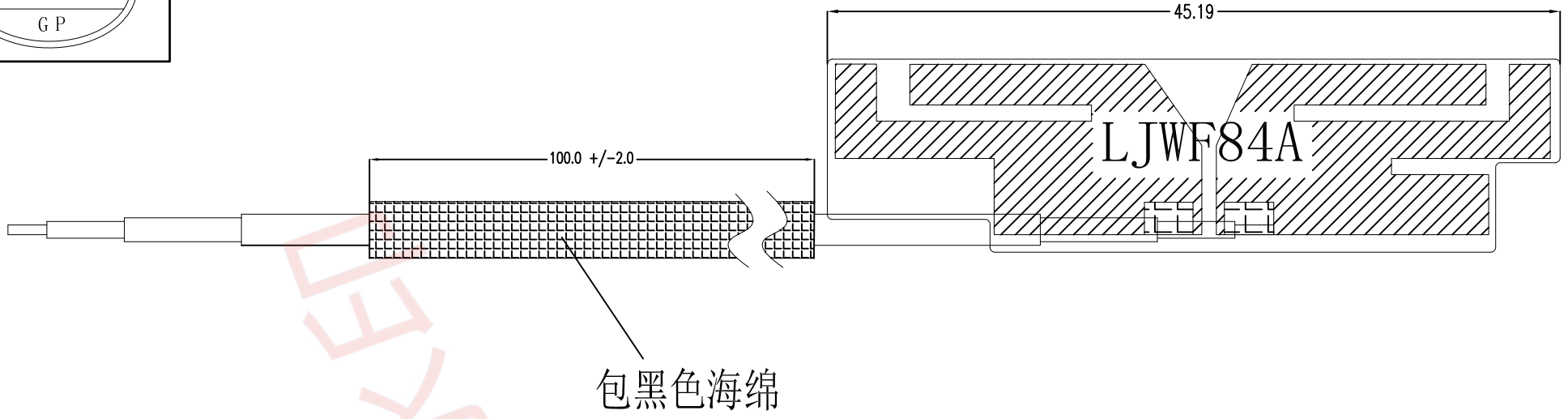
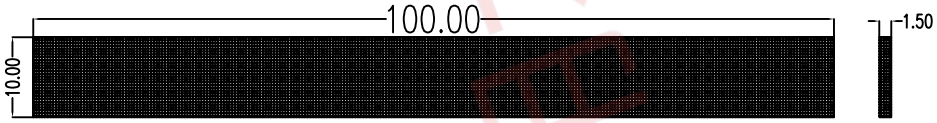
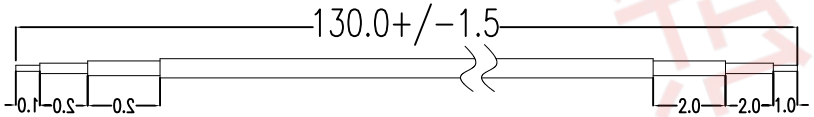
RoHS
Compliant
G P





单面背胶海绵（黑色）：10*100

Unit: mm



1.13黑色银锡线

变更记录				
	1	修正		
	2			
	3			

深 圳 乐 进 射 频 科 技 有 限 公 司
SHEN ZHEN LEJIN RADIO FREQUENCY CO.,LTD

Third Angle				Project	宽洋	Date	2019-12-05
0～10	±0.05	○	0.02	Part Name	MRS-101 WIFI ANT	Designed by	
10～18	±0.10	◎	⌀0.03	Part No.		Checked by	MD
18～30	±0.12	⊥	0.02	Material			RF
30～40	±0.15	▱	0.04	Treatment	LJF01-19120502-R0A	Approved by	
40～	±0.20	Angle	±0.5°			Unit mm	Scale FIT Rev A
Location							

Rev	Description	Date	Remark
A	New drawing		