



Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: Suga Macao Commercial Offshore Limited

Product Name: BT Antenna

Product Model: 88T

Part Number: LJF02-23070308A-R0A

Write By : Pengsiheng

Issued Date: 2023-07-03

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	2023/07/03	



Index

1. Cover	1
2. Index	2
3. Product Specification	3
4. Test Equipment & Conditions	3
5. Test Report	4
6. Reliability Test	5
7. Assemble type	6
8. Product Drawing	7

3.Product Specification

A. Electrical Characteristics	
Frequency	2400MHz ~2500 MHz
VSWR	<2.0
Efficiency	≥40%
Impedance	50Ohm
Polarization	Linear
Gain	≤2.30dB
B. Material & Mechanical Characteristics	
Material of Radiator	FPC(Black),LJWF29A(L)
Cable Type	Φ1.13mm,L80mm,black
Connector Type	IPX1
Dimension	43.0*11.5mm
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

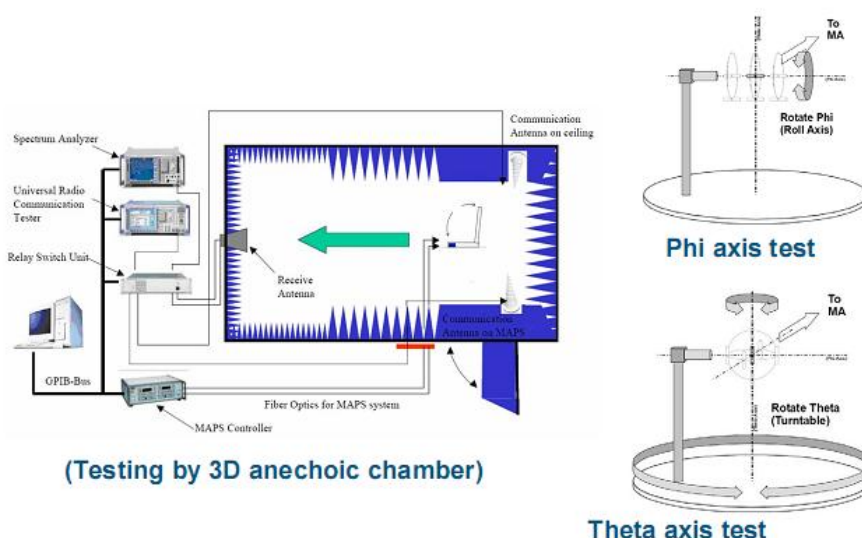


Chart 1 Test topology



5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

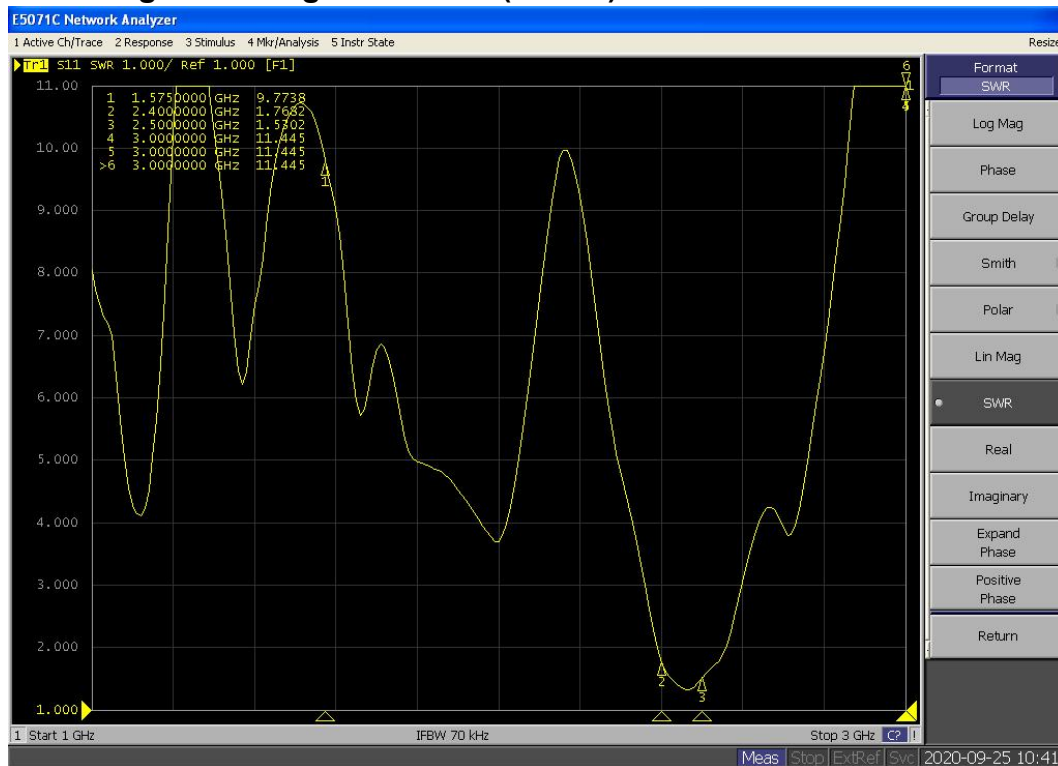
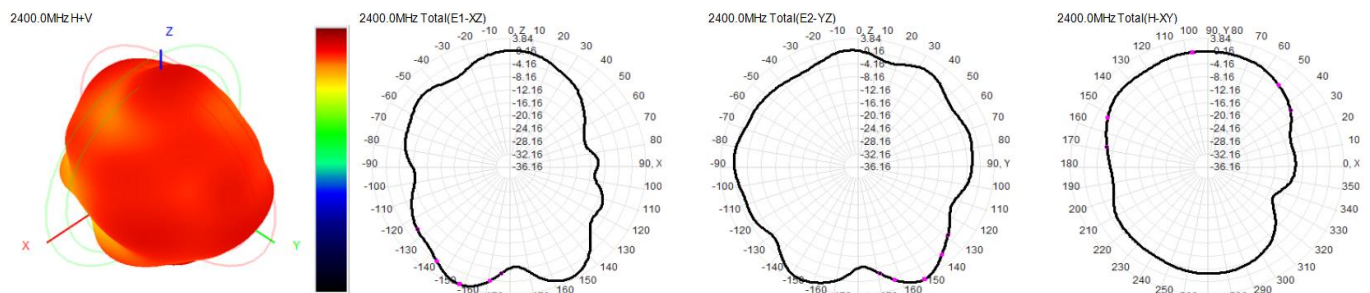


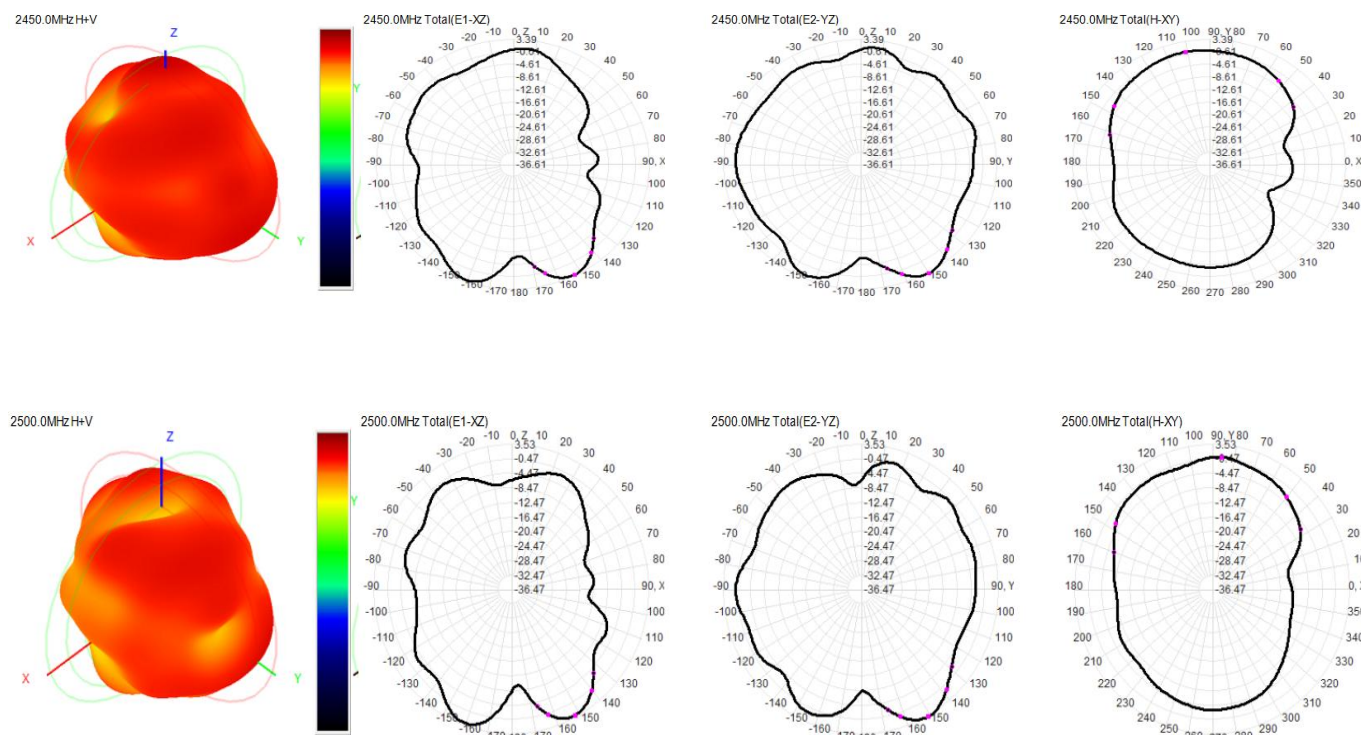
Chart 2 VSWR

5.2 Efficient and gain.

Passive	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Test	Effi(%)	56.02	55.58	53.39	52.24	53.74	52.94	53.83	52.92	51.61	51.10	49.53
2.4GHz	Gain(dBi)	2.19	2.30	2.19	2.08	2.10	1.87	1.88	1.82	1.87	2.05	2.19

5.3 Radiation pattern.





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 for 44 hours; step-up temp to 25℃, test antenna after 2 hours.	Temp.&Humidity Tester	No material deformation is allowed. Electronic Performance is ok.	PASS
	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 temp to 25℃, test antenna after 2 hours.		No material deformation is allowed. Electronic Performance is ok.	
3	Salt-Spray 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 Test time: 24 hours	Salt-Spray Tester	No color change No appear rusting	PASS

7. Assemble type

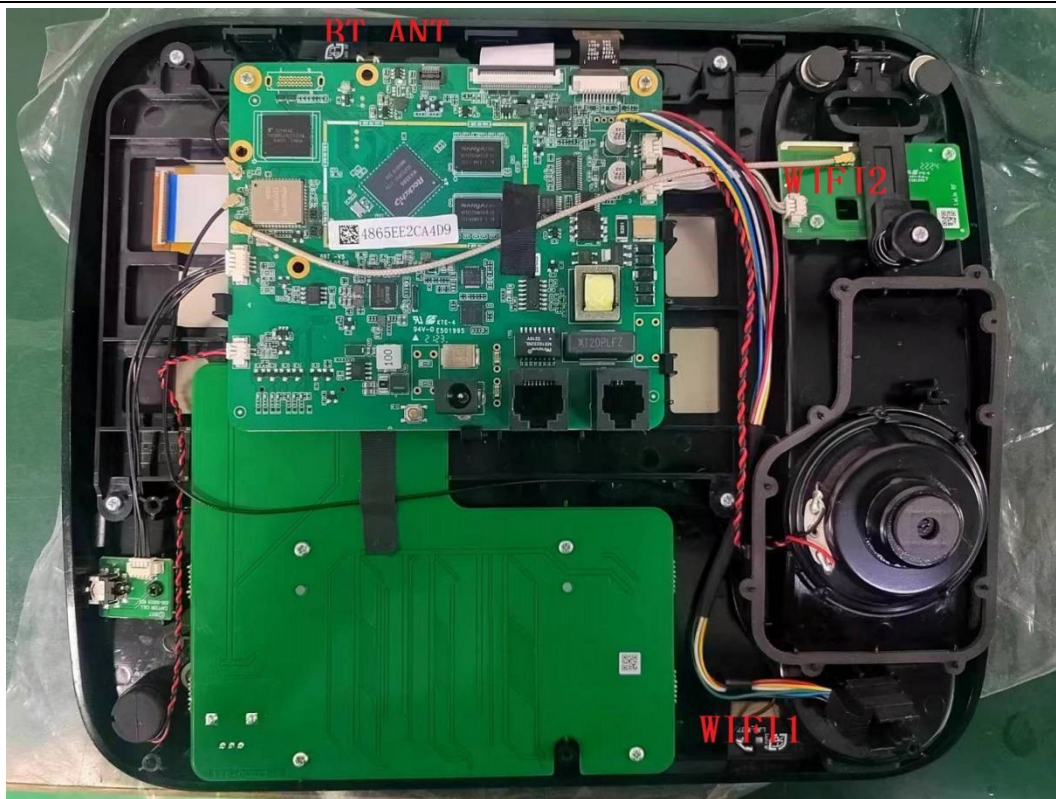
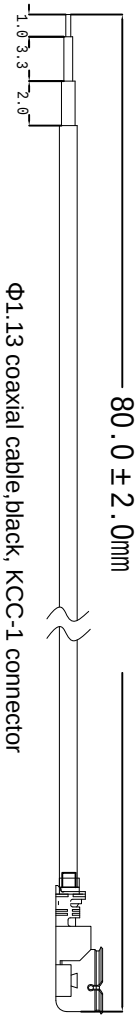
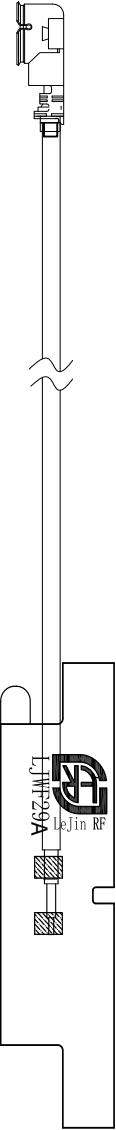
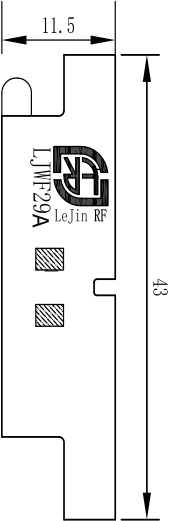
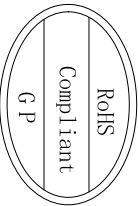


Chart 3 assemble type

8.Product Drawing



Remark:

- 1.FPC material:Electrolytic copper.
- 2.Backing in behind:3M300LSE.
- 3.Tolerance: Cutting die:±0.1mm;Circuit on FPC:±0.05mm; others are ±0.05mm.
- 4.ROHS:(Pb,Hg,Cr+6,PBBs,PBDEs),<1000ppm; Cd,<100ppm.



SHEN ZHEN LEJIN RADIO FREQUENCY CO., LTD

1					
Revise	2				
record	3				

Third Angle	Project	Suga	Date	2023-07-03
0~10 ±0.05	Part Name	BT ANT	Designed by	
10~18 ±0.10	Part No.	88T	Checked by	MD
18~30 ±0.12	Material		RF	
30~40 ±0.15				
40~ ±0.20	Angle	±0.5°	Approved by	
Location	Treatment	LJM29A	Unit	mm
		LJM29A-ROA	Scale	FIT
			Rev	A

D									
A	New drawing								
Rev	Description	Date	Remark	Location	Treatment	Unit	Scale	FIT	Rev
1	2	3	4	5	6	7	8		