



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	



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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 | |

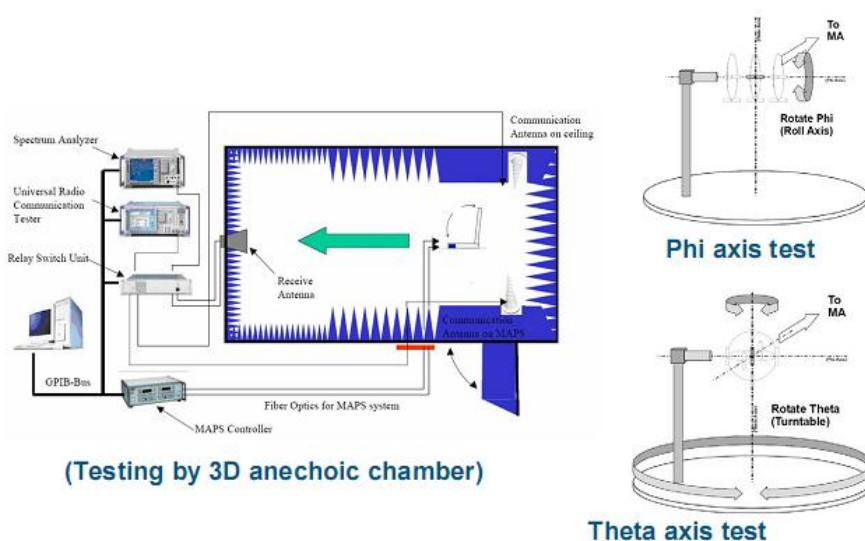


Chart 1 Test topology



5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

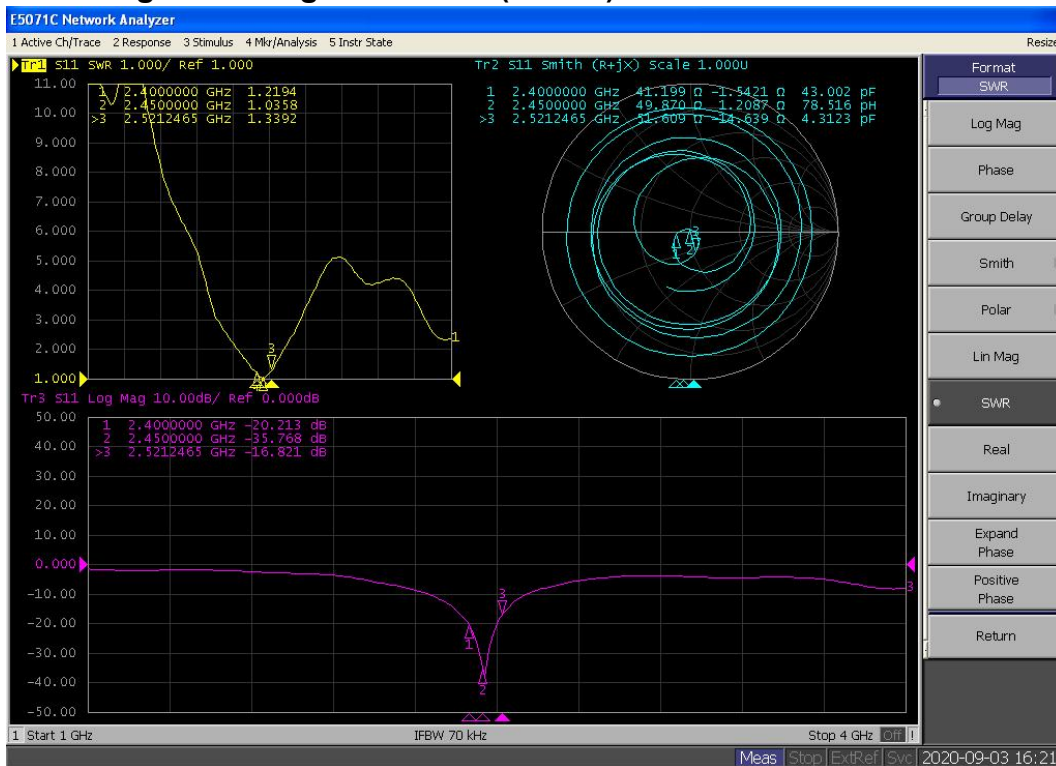
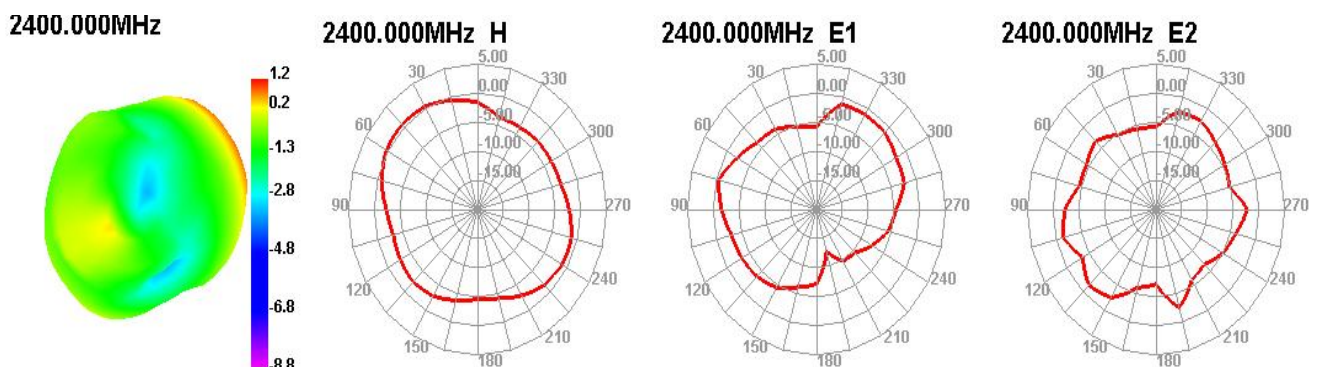


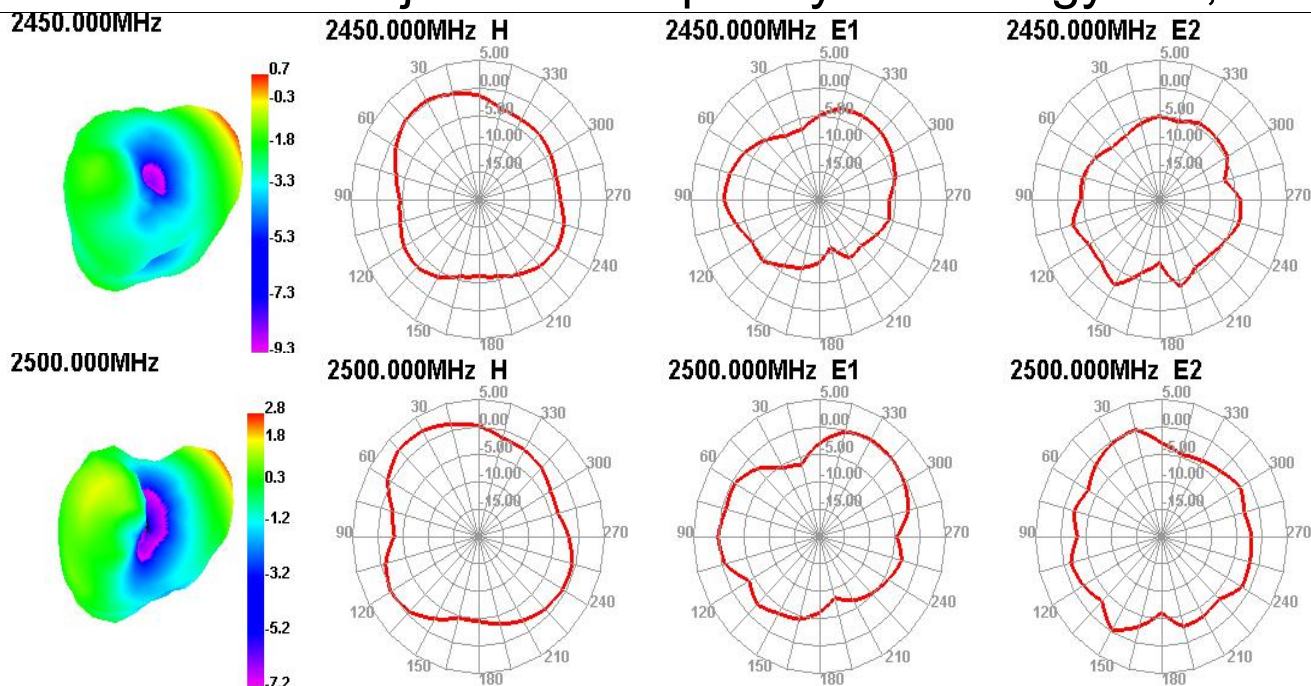
Chart 2 VSWR

5.2 Efficient and gain.

Passive	Freq (MHz)	2400	2405	2410	2415	2420	2425	2430	2435	2440	2445	2450	2455	2460	2465	2470	2475	2480	2485	2490	2495	2500
Test For	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
WIFI BT	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.





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
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 temp to 25℃, test antenna after 2 hours.	Temp.&Humidity 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

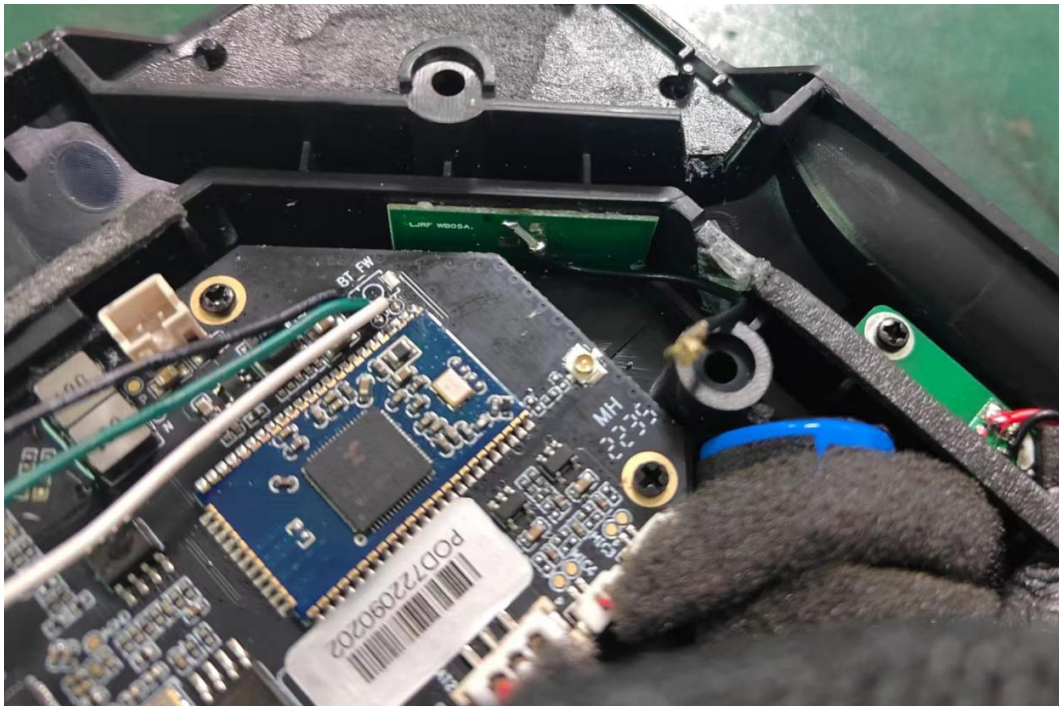
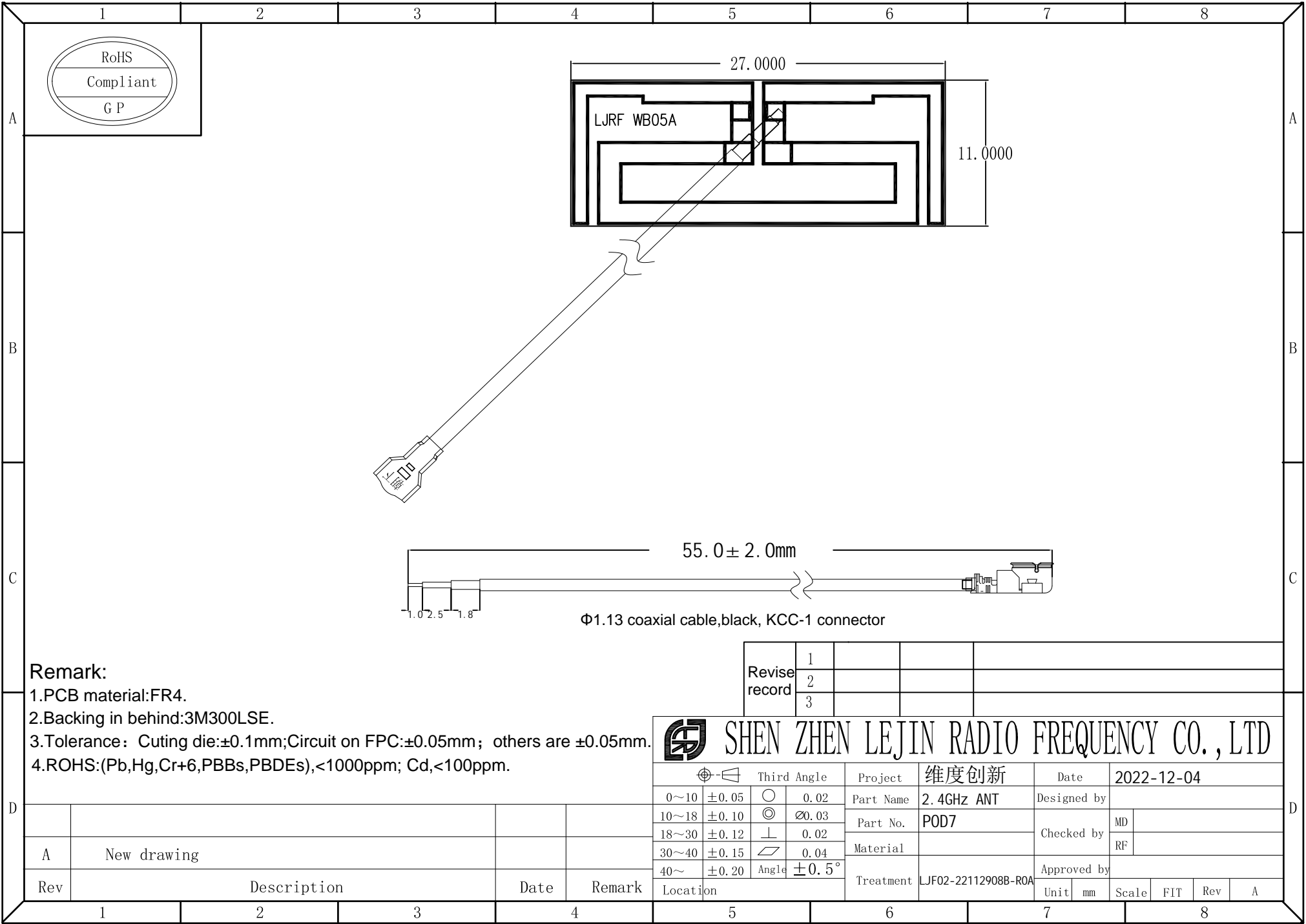


Chart 3 POD3 assemble type

8.Product Drawing



RoHS
Compliant
G P

LJRF WB05A

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

Remark:
1.PCB material:FR4.
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.

Revise record	1			
	2			
	3			

		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
10~18	±0.10	◎	Ø0.03	Part No.	POD7
18~30	±0.12	⊥	0.02	Material	
30~40	±0.15	▤	0.04		
40~	±0.20	Angle	±0.5°	Treatment	LJF02-22112908B-R0A
Location				Approved by	
		Unit	mm	Scale	FIT
		Rev	A		

A		New drawing	
Rev	Description		Remark
1	2	3	4