



SPECIFICATIONS FOR APPROVAL

Customer Name: 智纬

Product Name: WIFI 2G+5G

Product Model: G105U (3165) WIFI MAIN ANT

Part Number: LJF02-210304002M-R0A

Write By : 李明进

Issued Date: 2021/3/4

CUSTOMER				
ENGINEER R&D DEPT	BUSSINESS DEPT	APPROVED BY	DATE	Edition/Part number

LEJIN				
R&D DEPT	ENGINEER R&D DEPT	APPROVAL	DATE	Edition/Part number

ECN/ECR			



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Electrical Characteristics

Frequency	VSWR	Efficiency	Impedance	Polarization	Gain
2400 MHz ~2500 MHz	<2	>20%	50 Ohm	Linear	≥ 1 DB
5100MHZ--5900 MHZ	<2.5	>25%	50 Ohm	Linear	≥ 1 DB

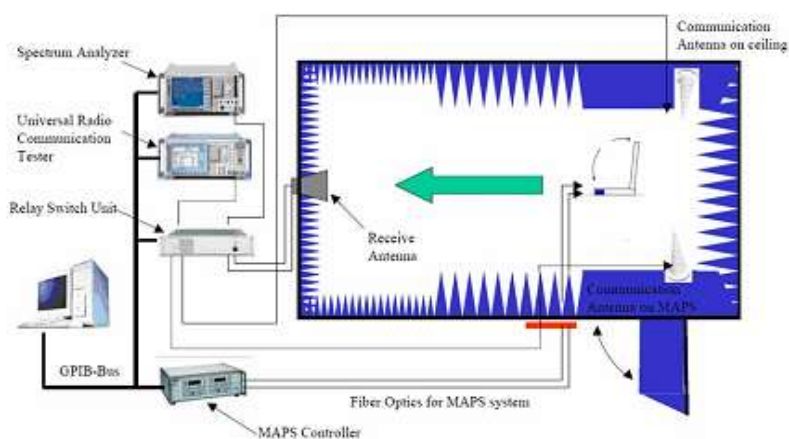
Material & Mechanical Characteristics

Environmental

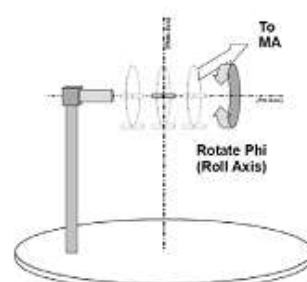
Material of Radiator	Cable Type	Connector Type	Dimension	Operation Temperature	Storage Temperature
FPC black/YELLOW	113B	IPX_4		- 20 °C ~ + 50 °C	- 30 °C ~ + 80 °C

Test Equipment & Conditions

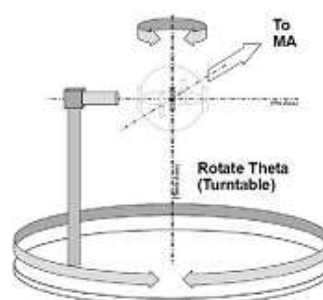
1. Network Analyzers :Agilent 8753SE 5071C
2. Communications Test Set:Agilent E5515C/CMW500
3. 3D Chamber Test System(ETS743)



(Testing by 3D anechoic chamber)

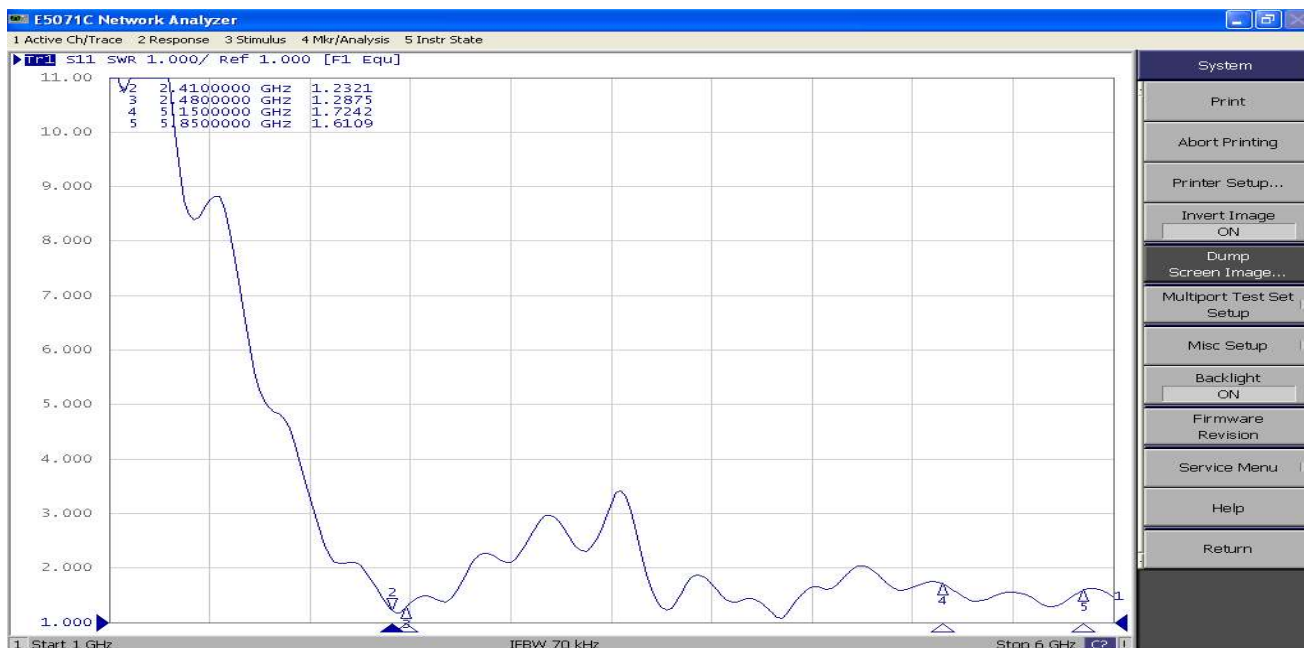


Phi axis test



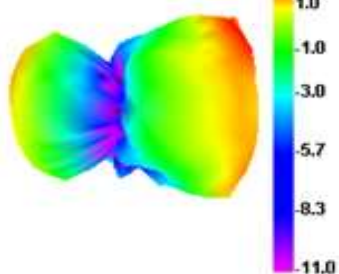
Theta axis test

Antenna Impedance: WIFI ANT A:

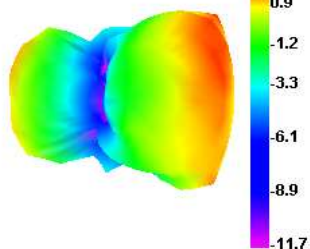


2.4G (Wifi and BT)	Freq (MHz)	2400	2410	2420	2430	2450	2460	2470	2480	2490	2500	ANT A
	Effi (%)	22.1	24.3	20.75	28.5	26.55	27.3	22.7	24.56	22.5	21.98	
	Gain (dBi)	2.25	2.35	2.48	3.07	3.35	2.78	2.85	2.44	2.26	2.08	
5G WIFI	Freq (MHz)	5150	5250	5350	5450	5550	5650	5750	5850	5950	6000	
	Effi (%)	27.5	31.58	33.75	29.95	38.8	33.78	36.9	33.8	38.85	39.97	
	Gain (dBi)	0.75	1.78	3.35	1.03	1.2	1.41	2.1	1.02	1.01	1.2	

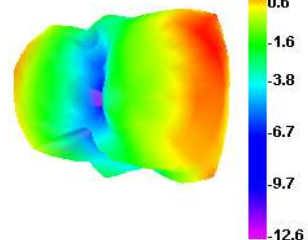
2400.000MHz



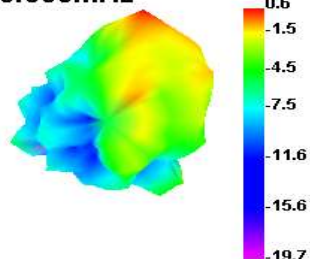
2450.000MHz



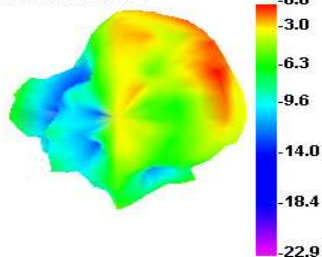
2480.000MHz



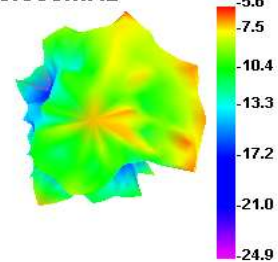
5150.000MHz



5350.000MHz



5850.000MHz



OTD_DATA:(以下OTD_DATA是在本规格书中的天线所测试得来,更换天线或更改天线的安装方式,以下OTD_DATA将会失效测试时需关掉BT 配合WIFI主天线)

2.4G 802.11.B @11Mbit		
Frequency	TRP (dBm)	TIS (dBm)
1 (2412MHz)	7.81	-73.05
6 (2437MHz)	8.15	-74.47
13 (2472MHz)	7.87	-75.25

2.4G 802.11.G(ODF) @48Mbit		
Frequency	TRP (dBm)	TIS (dBm)
1 (2412MHz)	6.8	-68.18
6 (2437MHz)	5.98	-69.8
13 (2472MHz)	6.25	-68.3

5G 802.11 A @54Mbit		
Frequency	TRP (dBm)	TIS (dBm)
36 (5180MHz)	7.78	-66.2
60 (5300MHz)	7.69	-67.1
161 (5805MHz)	7.05	-66.5

5G 802.11 N @MCS4		
Frequency	TRP (dBm)	TIS (dBm)
36 (5180MHz)	7.03	-70.68
60 (5300MHz)	7.97	-71.8
161 (5805MHz)	7.58	-70.09

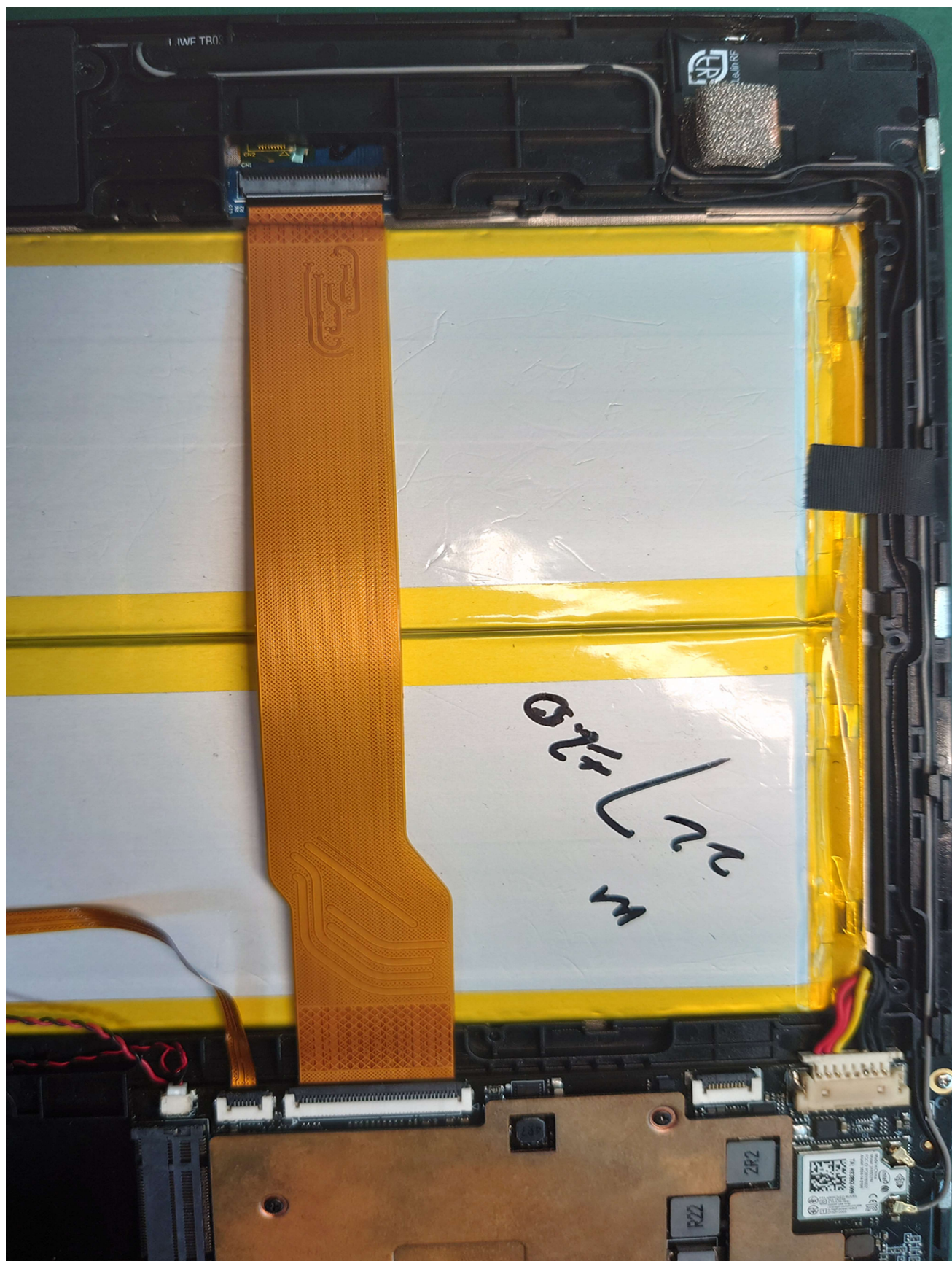
天线安装与环境处理：1， 主板处理部分



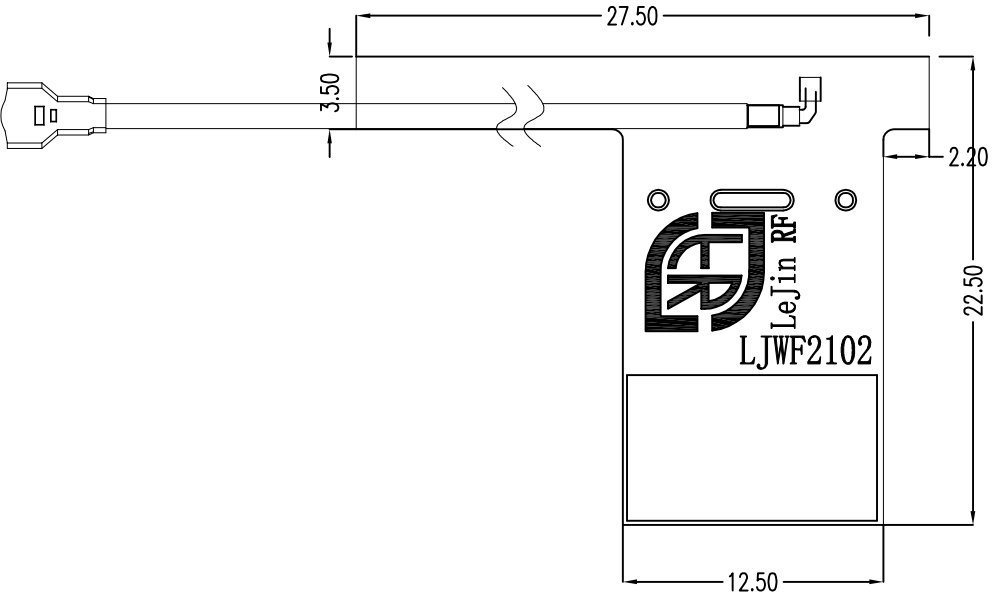
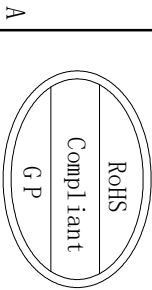
3, 综合环境处理说明:



天线合壳前的布线状态:



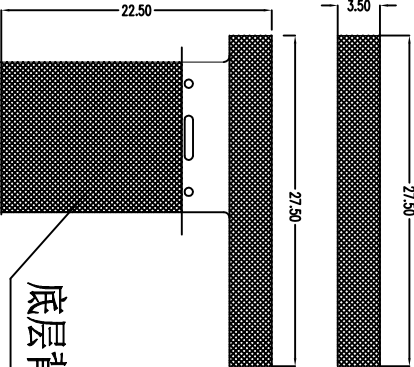
天线工程图纸:



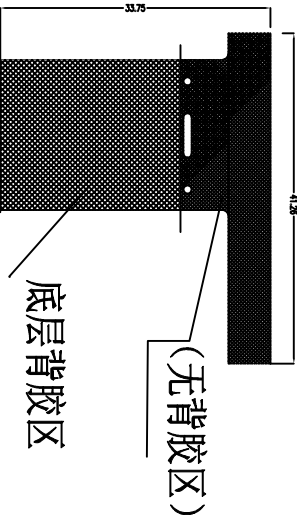
220.0+/-2.0
1.13黑色单银线
1.5-1.8-1.0

A			Rev		
New drawing			1		
Description			2		
Date			3		
Remark			4		
Location			5		
Project			6		
Part Name			7		
Material			8		
Treatment			9		
Designed by			10		
Checked by			11		
Approved by			12		
Unit			13		
Scale			14		
FIT			15		
Rev			16		
A			17		

说明文件:



蓝色为底层FR4_0.15补强板:28.5*3.5*0.15(mm)



深圳乐进射频科技有限公司			SHEN ZHEN LEJIN RADIO FREQUENCY CO.,LTD		
Project			ZW G105U(3165)		
Part Name			WIFI M		
Part No.			LJF01-21022501M-RIA		
Material			LJF01-21022501M-RIA		
Treatment			Date		
Designed by			2021-6-11		
Checked by			MD		
Approved by			RF		
Unit			mm		
Scale			FIT		
Rev			A		