

索沃德天线调试报告 Soward Antenna Commissioning Report

Customer name: Yipuda

Project name: ES752-7-inch plastic case-Dajing A863

motherboard-A133P master control

Date: 2023.03.21

Customer
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electricity

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项目简介

1. Brief description of the project

Item Number of Antennas	machine type
1	flat
Machine shell material: plastic shell	

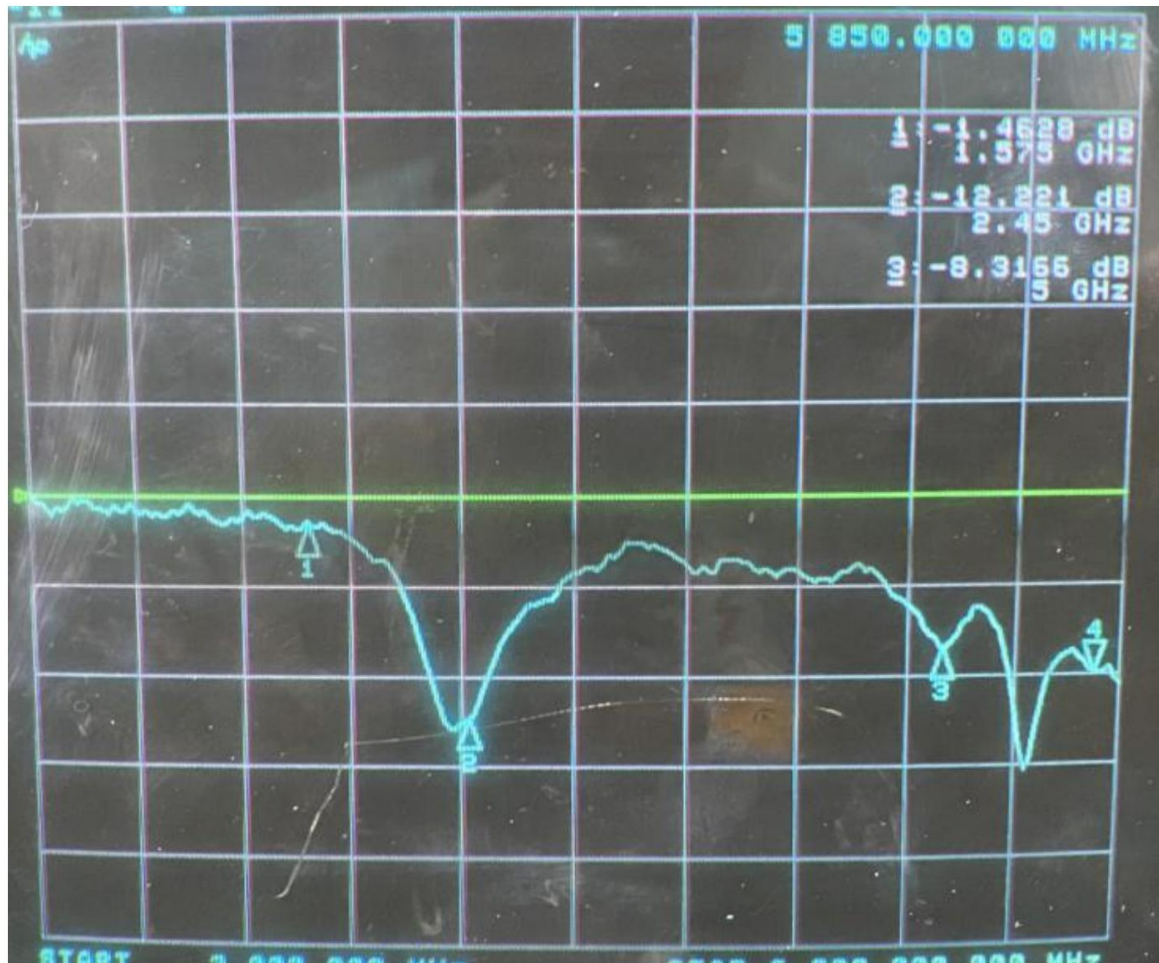
2. Antenna brief introduction

Antenna number	name	Working frequency band/MHZ	Material/Structure
1	WIFI&BT	2400MHz/2500MHz	FPC

antenna layout



WIFI&BT Antenna S11



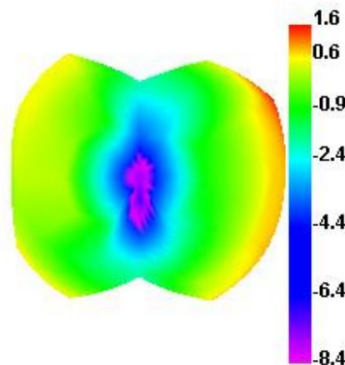
BT antenna measured distance

Measured effect	
model number	1
test environment	Thorward R&D Center
Test Equipment	Huawei AM08
Test distance	15 meters y

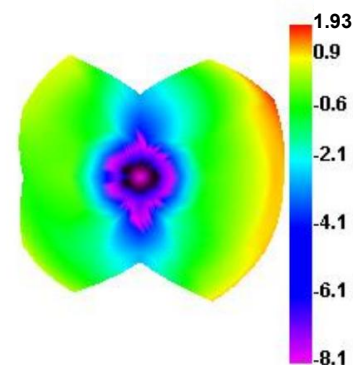
WIFI&BT Antenna Efficiency

Passive Test For 2.4G			
Freq	Effie	Effie	Gain
(MHz)	(%)	(dB)	(dBi)
2400	60.12	-2.21	1.65
2410	60.39	-2.19	1.77
2420	59.85	-2.23	1.89
2430	58.95	-2.29	1.75
2440	61.25	-2.13	1.93
2450	61.55	-2.11	1.87
2460	61.64	-2.1	1.9
2470	61.39	-2.12	1.81
2480	64.36	-1.91	1.9
2490	64.01	-1.94	1.75
2500	65.64	-1.83	1.82

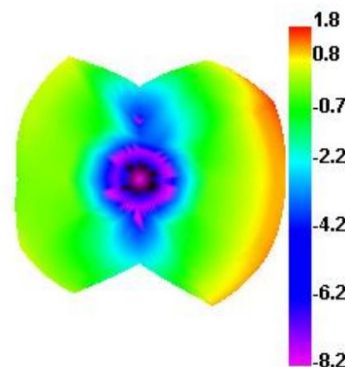
2400.000MHz



2440.000MHz



2500.000MHz



WIFI antenna active data

802.11b: 11Mbps		
1	7	13
2412	2442	2472
17.14	18.02	17.08
-83.54	-85.37	-82.98
802.11g: 54Mbps		
1	7	13
2412	2442	2472
14.05	15.32	14.26
-72.23	-73.07	-69.65
802.11n : MCS7		
1	7	13
2412	2442	2472
14.69	15.93	13.89
-69.03	-70.12	-67.89

WIFI Antenna Throughput Test

Iperf throughput test						
model		module		Software version		
model number	channel	distance	test angle	Test data (TX) 1min average	Test Data(RX) 1min average value	Remarks (packet drop times number)
2.4 GWIFI		15 meters	0°	73.9M/S	91.5M/S	0
			90°	71.3M/S	86.7M/S	
			180°	72.1M/S	88.9M/S	
			270°	71.3M/S	87.7M/S	

WIFI antenna signal strength measured picture (data)



Test location: Our R&D office Test time:

14:00-14:30 Test distance: 10m-15m

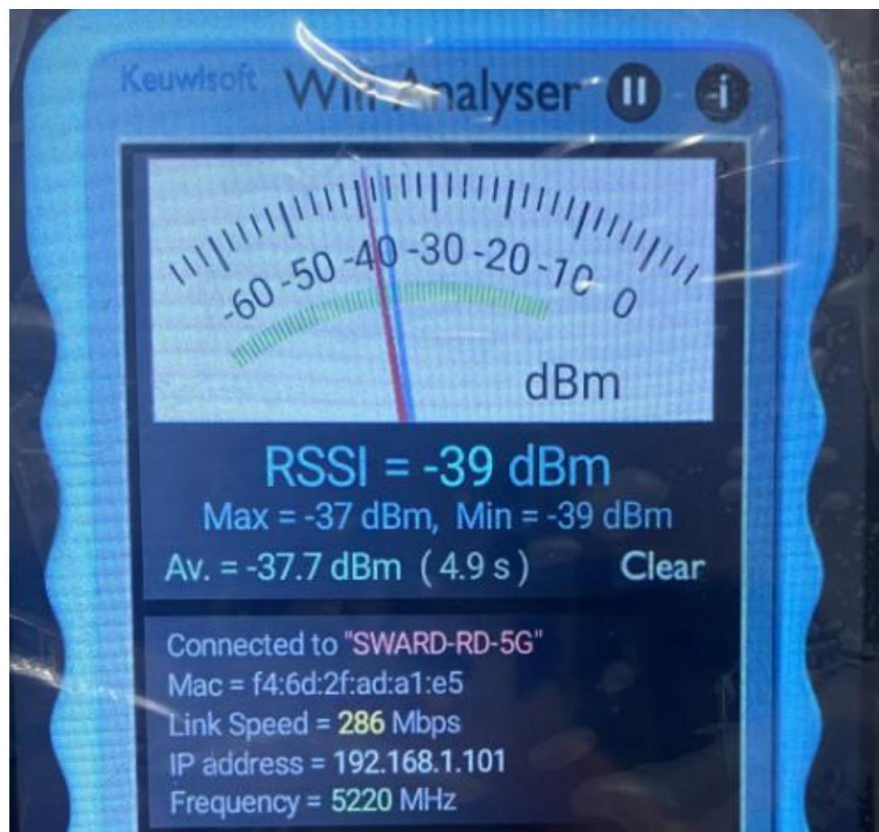
Signal strength: -42dBm to

-37dBm 6th Floor, Building B, Hexi

Hangcheng Industrial Zone, No. 135, Qianjin 2nd Road, Baoan District, Shenzhen

Building B, Hexi Hangcheng Industrial Zone, No. 135 Qianjin No. 2 Road, Baoan District, Shenzhen

WIFI antenna signal strength measured picture (data)



Test location: Our R&D office Test time:

14:00-14:30 Test distance: 10m-15m

Signal strength: -45dBm to

-38dBm 6th Floor, Building B, Hexi

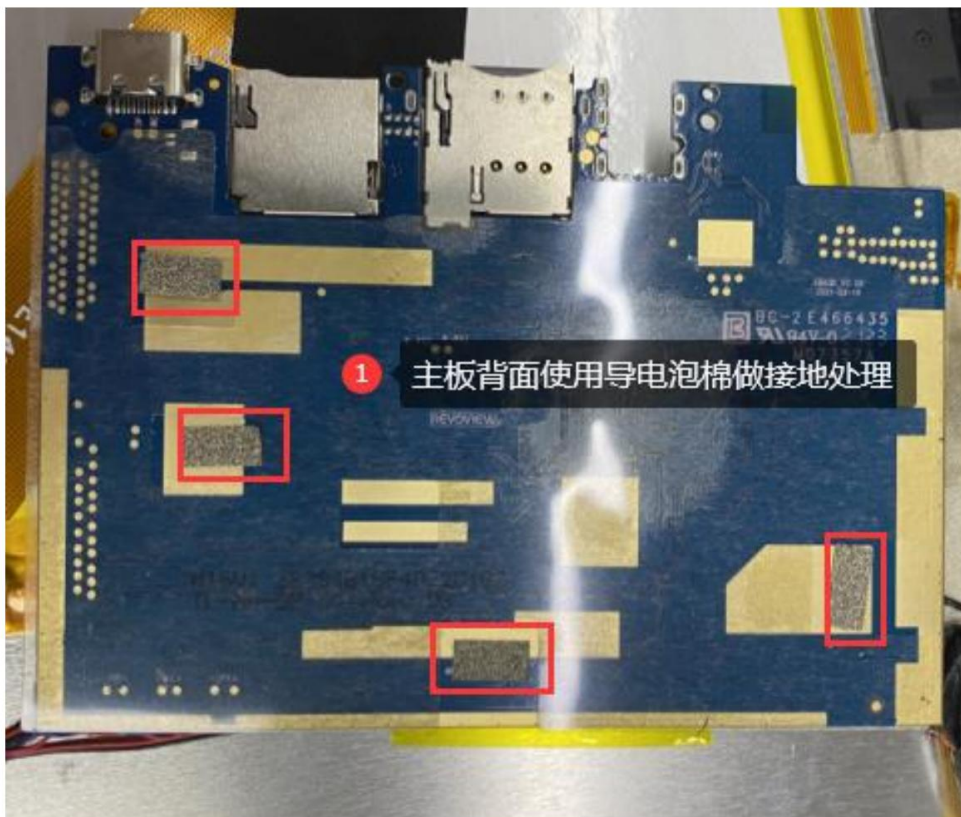
Hangcheng Industrial Zone, No. 135, Qianjin 2nd Road, Baoan District, Shenzhen

Building B, Hexi Hangcheng Industrial Zone, No. 135 Qianjin No. 2 Road, Baoan District, Shenzhen

Environmental Handling and Assembly Instructions



Environmental Handling and Assembly Instructions



[illegible]

Note: 1. This report is based on the actual debugging and testing of the debugging prototype, including environmental treatment, antenna position and assembly position of each device

cannot be changed at will;

2. If there is any change in the materials used in the prototype, it is necessary to timely feedback to our company for re-verification;

3. List of sensitive components:

TP (material, coating, wiring, etc.)

Screen (amplifying circuit, LED, cable design, etc.)

Shell material (antenna assembly method, structural interference, shell material, antenna position height and area, etc.)

Mainboard (mainboard conduction, RF circuit matching, PA, duplexer, filter, LNA, power circuit, etc.)

Camera, battery, motor, MIC, fingerprint recognition module, etc.

4. Due to the small number of debugging prototypes or only one, some probabilistic problems cannot be completely found. It is recommended to check the problem points in small batches before mass production (such as splash screen, noise from speakers, TP jump, black screen of death, signal diving, etc.)