Parts Acknowledgment

Name of Part:	2.4 antenna
Specification of Parts:	Accessory, can Antenna to be used the CPP, 2.4 GWIFI Antenna, line Length 150mm,49.3*7.65mm, line diameter 0.81mm,3 generation end Child face down, built-in,SF1627A-1L23B-150-A,FPC
Stare at the material numbe:	10883000125
Modelof application:	CPP-MB-V1.1 (SV6158 module)
Name of Supplier:	Shenzhen Suo Ward Communication Technology Co., Ltd.
Type of Supplier:	☑ Manufacturer、☐ Agent、 ☐ Trader;
Manufacturer's material number:	SF1627A-1L23B-150-A
Recognition number:	CRS0001342
Keep an eye on the date of issue:	

Supplier approval column			
To develop: LTT	audit:	Approved by the:	
* The following is the check column of the tag tag			
Material to send sample check column		Material confirmation and approval column	
Procurement Engineer	Purchasing Supervisor	Research and Development Engineer	Research and Development Supervisor

DDPai Technology CO.,LTD. Tel: 86-755-26401213

Address: Guangdong, China. 12th Floor, Yihua Fintech Building, Software Industry Base, Nanshan District, Shenzhen; Website: www.ddpai.com

DDPai vision equipment Co.,LTD

Address: Building 6, No. 139, Xinhuang Road, Xindai Town, Pinghu City, Jiaxing, Zhejiang

Supplier Address: 6th Floor, Building B, Hexi Hangcheng Industrial Zone, No. 135, Qianjin Second Road, Bao'an District, Shenzhen

Contact information of supplier: Chen Heng /13717086260

Serial number	Certification number	Material type	Date of issue	Remarks
1	A22301735411010O1E	Tinned copper wire	2023-04-24	One year
2	CANEC2227657302	halogen	2022-12-28	One year
3	CANEC2227657303	Adhesive	2022-12-28	One year
4	SHAEC23000346911	FEP sheath	2023-01-13	One year
5	SHAEC22004639301	FEP insulation	2022-12-15	One year
6	SZXEC2203054804	Tin wire	2022-09-19	One year
7	SZXEC2203054808	Tin	2022-09-19	One year
8	ETR22800844	Printing ink	2022-08-09	One year
9	EKR22501369	Substrate	2022-05-27	One year
10	CANEC2227574118	EVA foam	2023-01-03	One year
11	SZXEC2202709609	Conductive cloth	2022-08-16	One year
12	CANEC2218227002	Gold plating	2022-08-30	One year

6th Floor, Building B, Hexi Hangcheng Industrial Zone, No. 135 Qianjin Second Road, Bao 'an District, Shenzhen
CityTel: 0755-29985185 Fax: 0755-27487028

table of Contents

6th Floor, Building B, Hexi Hangcheng Industrial Zone, No. 135 Qianjin Second Road, Bao 'an District, Shenzhen
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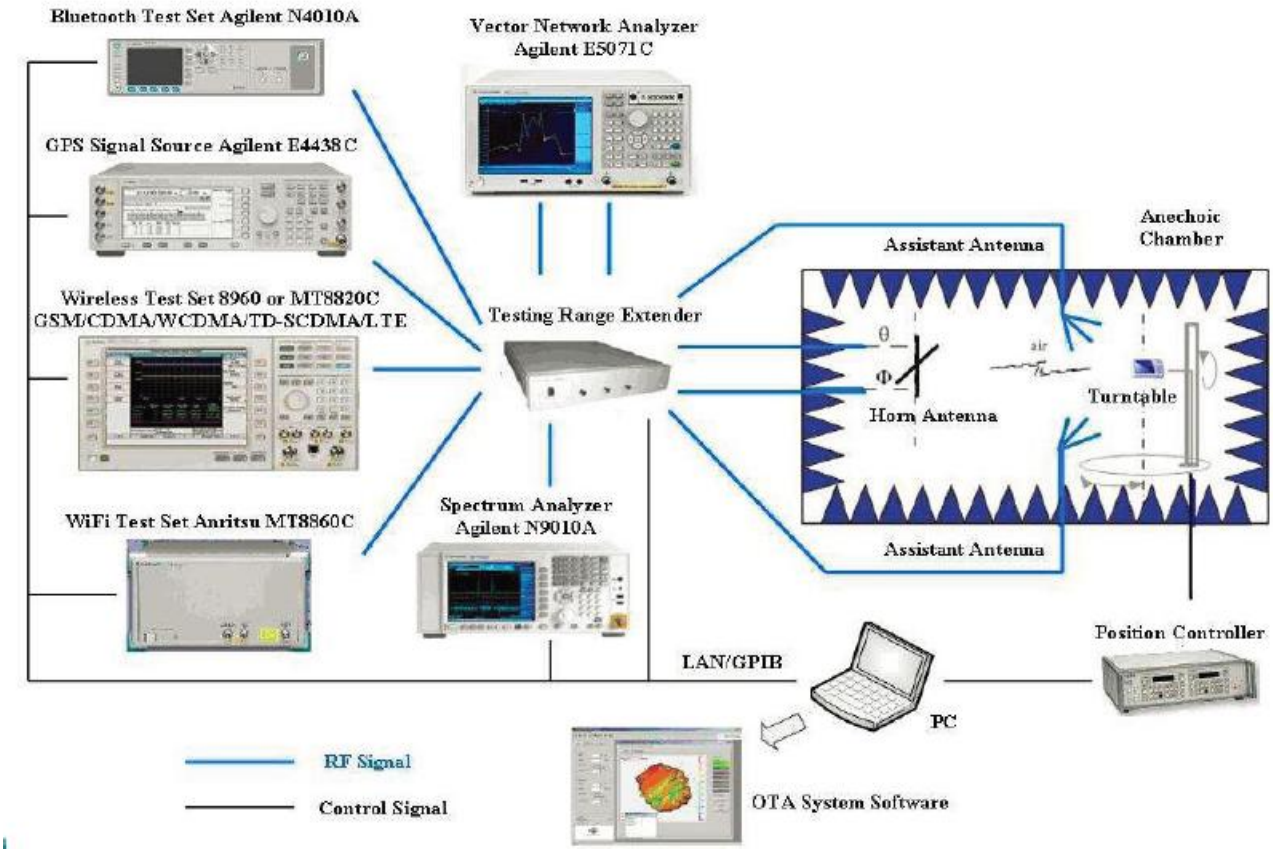
一:Device Support & Testable Antenna Type



Antenna function	Frequency Range	test instrument	test method	standard test
2G antenna (GSM)	824MHz-960MHz, 1710MHz-1990MHz	5071B、8960 OTA darkroom	Active test, passive test	Soward standards, customer requirements
3G antenna (WCDMA/TDSCDMA/CDMA-EVDO/2000)	824MHz-960MHz, 1710MHz-2170MHz	5071B、8960 OTA darkroom	Active test, passive test	Soward standards, customer requirements
4G antenna (LTE-FDD/LTE-TDD)		5071B、CMW500、SP8011、OTA darkroom	Active test, passive test	Soward standards, customer requirements
WIFI antenna	2.4GHz-2.48GHz, 5.15GHz-5.35GHz, 5.725GHz-5.825GHz	5071B、CMW500、OTA darkroom、router、PC	Active test, passive test, APK actual test, throughput test	Soward standards, customer requirements
BT antenna	2.4GHz-2.48GHz,	5071B、OTA darkroom、Bluetooth Speaker	Passive test, actual test	Soward standards, customer requirements
Positioning antenna (GPS, GLONASS, Beidou, Galileo)	1.575.42MHz±10MHz 1602MHz+0.5625MHz 1561MHz+2.046MHz	5071B、OTA darkroom、APK	Passive test, actual test	Soward standards, customer requirements
NFC antenna	13.56MHz	5071B、Dedicated test fixture、OTA darkroom、APK	Passive test, actual test	Soward standards, customer requirements
Remote control antenna	433MHz	5071B、OTA darkroom	Passive test, actual test	Soward standards, customer requirements

二:Overview

(1)Antenna performance

1. This approval sheet supports for MID project. FPC antennas include in this project. This report is for the performance of 2.4G antenna.

2. Antennashapesize：Meettherequirement of MID

3. Antenna band: 2400MHz~2500MHz

4. Antenna material: Antenna material meet the requirement of MID

5. Adhesive performance: Adhesive performance meet the requirement of MID

6. Antenna performance meet the spec below:

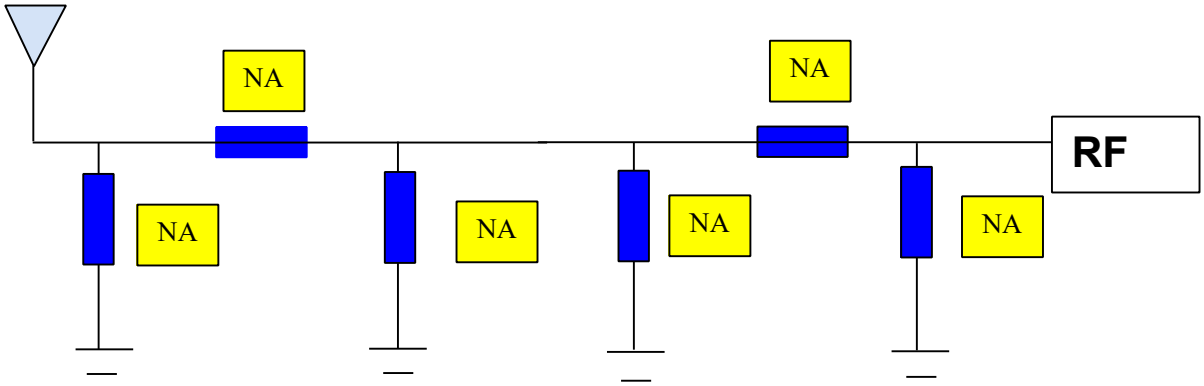
Description	2.4GHZ~2.5GHz	Units
VSWR	≤2.0	
Average Antenna Gain	≥-4.5	dB
Antenna Efficiency	≥40	%
Feed Impedance	50 ohms	
Operating Temperature	-40 to +85 deg C	
Polarization / Azimuth	Linear / Omni-directional	

(2)Mechanical Information

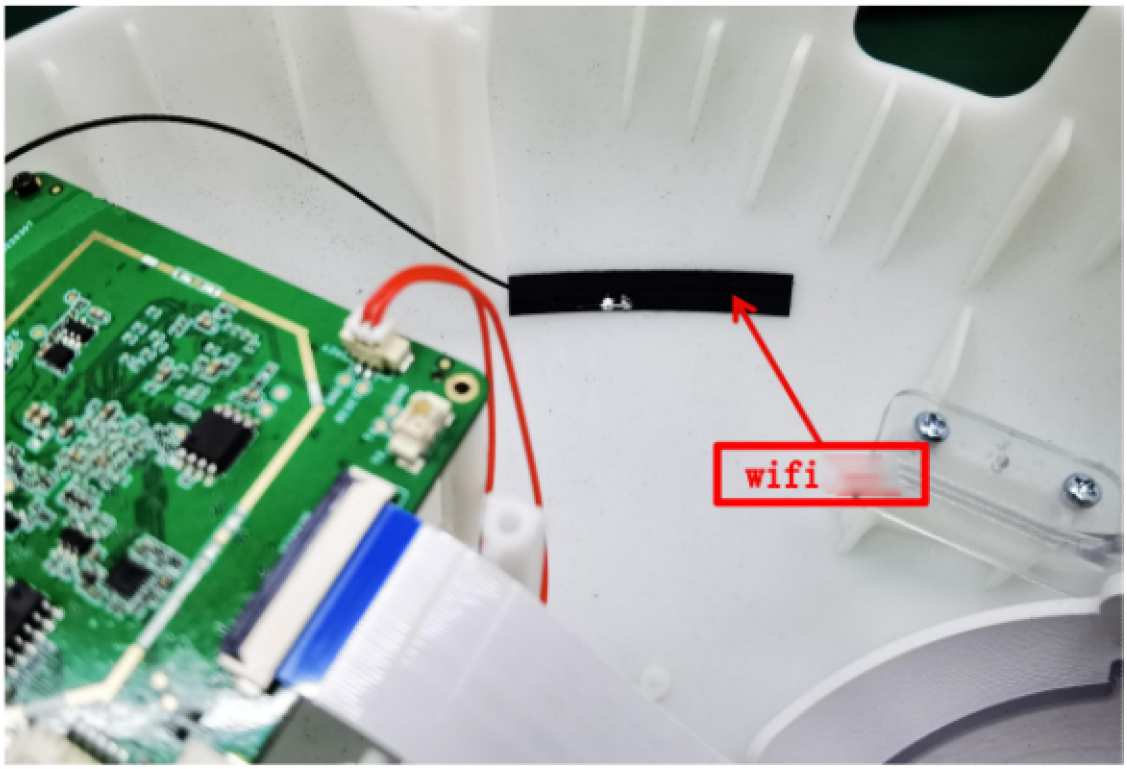
Mechanical Dimension	
Cable Length	150mm/BLACK
Description	2.4G antenna
Material	FPC
Coaxial Cable	50Ohm/O.D.0.81mm
Environmental	
Operation Temperature	-40 to +85 deg C
Storage Temperature	-40 to +85 deg C

三:Matching circuit diagram & machine picture & antenna picture

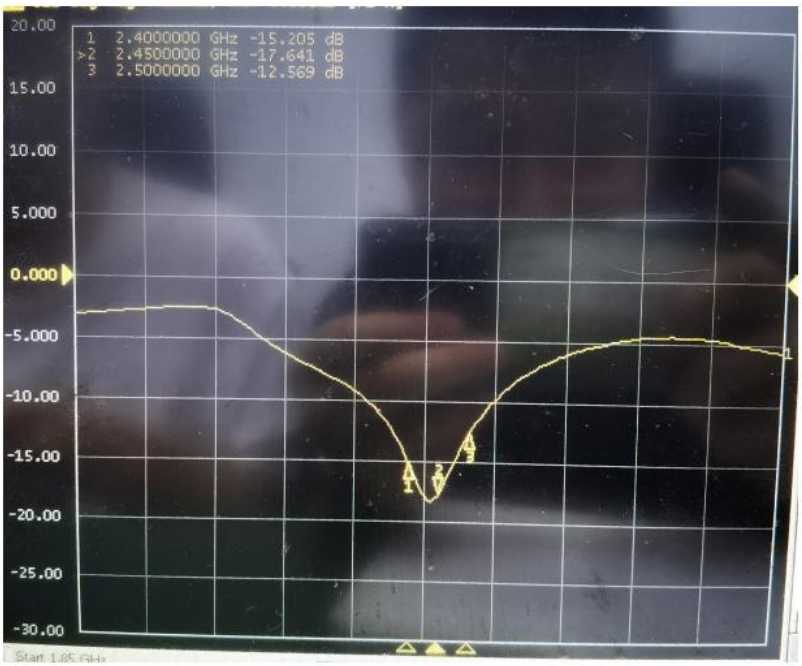
(1)Matching circuit



(2) Machine picture & antenna picture



四:Antenna standing wave ratio & Antenna Efficiency

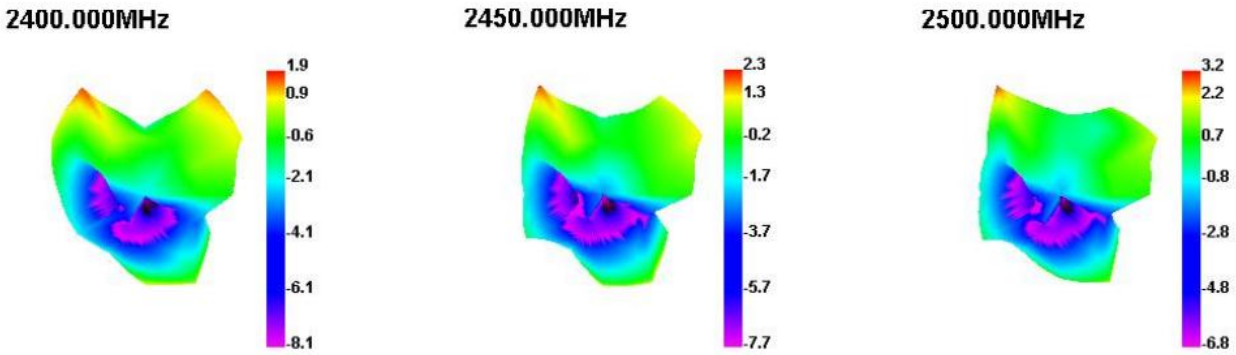


Passive Test For 2.4G-WiFi-BT										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)
2400	50.57	-2.96	1.95	-0.2	25.995	24.578	1.95	-13.32	4.91	30
2410	49.33	-3.07	2.03	-0.12	25.18	24.148	2.03	-13.17	5.1	30
2420	49.62	-3.04	1.91	-0.24	25.45	24.172	1.91	-12.81	4.95	30
2430	49.44	-3.06	1.94	-0.21	25.211	24.234	1.94	-12.68	5	30
2440	52.16	-2.83	2.21	0.06	26.693	25.469	2.21	-12.36	5.04	30
2450	53.16	-2.74	2.26	0.11	27.022	26.142	2.26	-12.26	5	30
2460	52.98	-2.76	2.37	0.22	27.009	25.975	2.37	-12.44	5.13	30
2470	52.45	-2.8	2.3	0.15	26.628	25.826	2.3	-12.83	5.11	30
2480	55.56	-2.55	2.74	0.59	28.276	27.281	2.74	-12.82	5.3	30
2490	57.77	-2.38	3.01	0.86	29.29	28.479	3.01	-12.61	5.39	30
2500	56.68	-2.47	3.2	1.05	28.761	27.922	3.2	-12.45	5.67	30

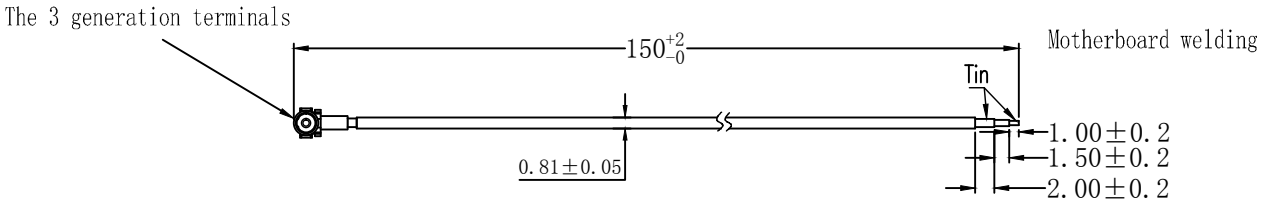
Active data

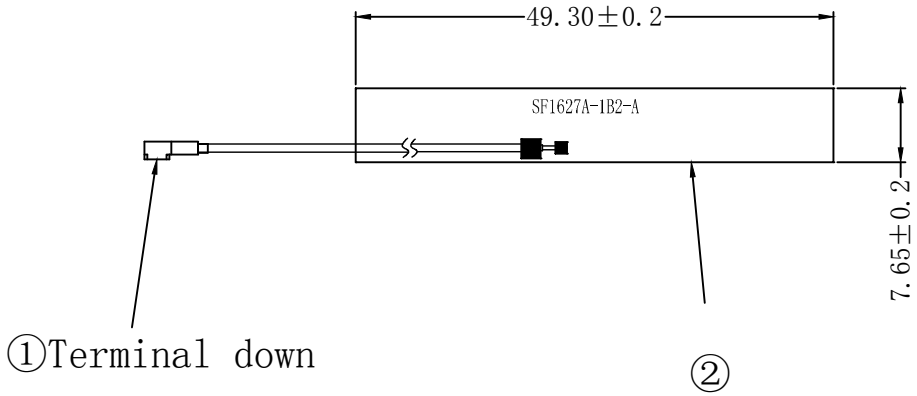
Wifi 2G TRP			Wifi 2G TIS		
1	6	11	1	6	11
2412	2437	2462	2412	2437	2462
13.42	13.15	13.48	-81.31	-82.59	-82.97
Wifi 2G TRP			Wifi 2G TIS		
1	6	11	1	6	11
2412	2437	2462	2412	2437	2462
11.75	11.81	11.36	-68.79	-69.37	-71.38
Wifi 2G TRP			Wifi 2G TIS		
1	6	11	1	6	11
2412	2437	2462	2412	2437	2462
11.86	11.23	11.77	-68.41	-68.84	-69.87

五:3D pattern



六:Structural drawing





technical requirements:
1.* for critical dimensions;
2.Size conform to the requirements of the drawings;
3.No virtual welding welding point, false welding。Require full welding points。
4.Network test pass。
5.No marked tolerance according toSJ/T 10628 1995 6classes;

5										
4										
3						signatures	date	mass	signatures	date
2	FPC	black	1	SF1627A-1B2-A	RD	YWD	2023.05.31	Q C		
1	coaxial line	black	1	ϕ=0.81	RF					
	name	color	quantity	specifications	audits			approval		

SWARD

time markup					percentage
1			A		1 : 1

ShenZhen SWARD Communication Technology Co.Ltd

SF1627A-1R23B-150-A

ROHS