

天线规格书

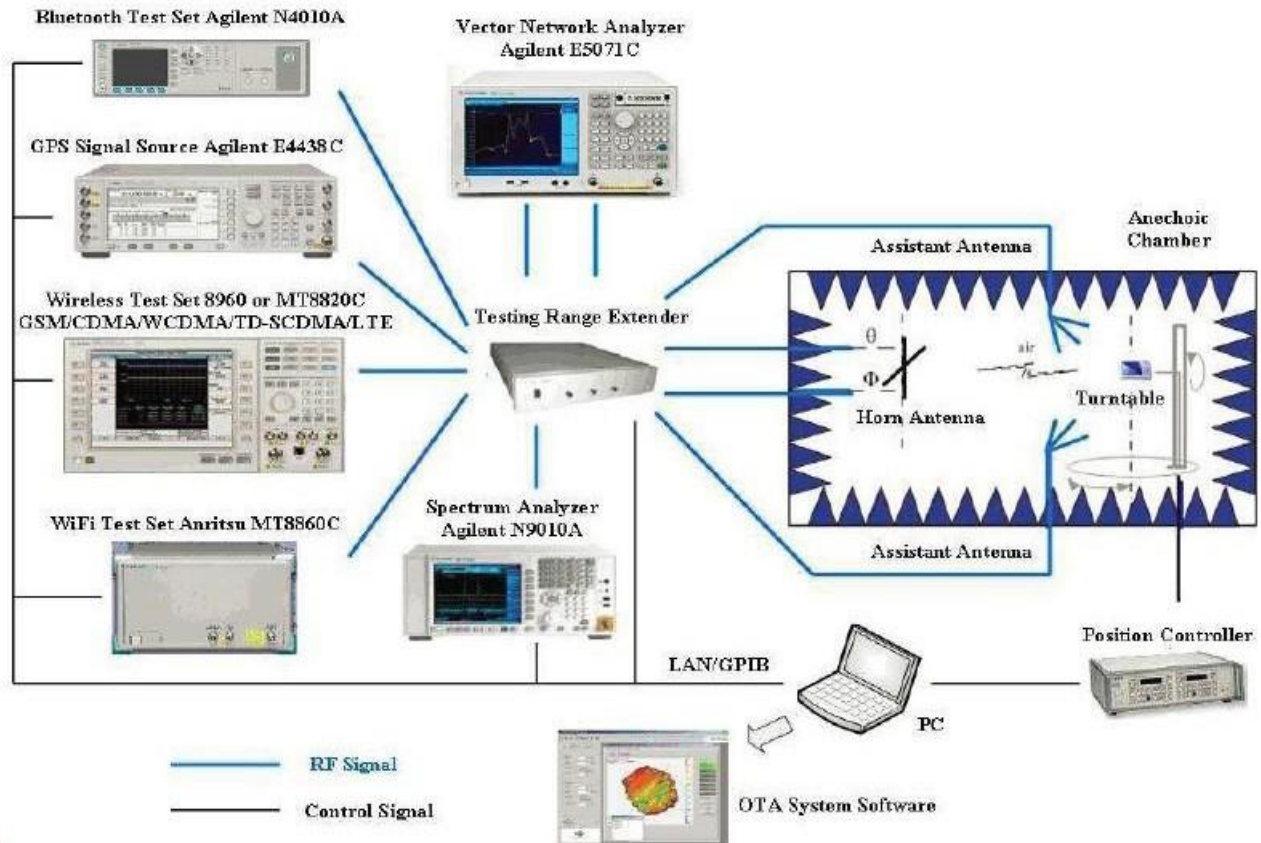
Antenna specification for approval

客户名称 Customer name			
机型 Model			
天线频段 Antenna band	2.4GHZ WIFI5G		
天线类型 Antenna type	TYX-2450-FPC天线+线长47+1代端子		
天线材质 Antenna material	FPC		
FPC 颜色 FPC color	黑色		
料号 Material number			
厂商承认签章 Baren accepted the signature		客户承认签章 Client acknowledges signature	
结构 structure		采购 Purchase	
品质 QC		结构 structure	
射频 radio frequency		工程 engineering	
审核 To examine		品质 QC	
日期 date 2023. 10. 6	盖章区 Seal area	日期 date 2023. 10. 6	盖章区 Seal area

目录

一:设备支持&可测试天线类型Device Support & Testable Antenna Types	1
二:概述overview	2
三:匹配电路图&机器图片&天线图片Matching circuit diagram & machine picture & antenna picture.....	3
四:天线驻波比&天线效率 (VSWR) Antenna VSWR & Antenna Efficiency (VSWR)	4
五:3D pattern	5
六:结构图纸Structural drawings	6

一:设备支持&可测试天线类型Device Support & Testable Antenna Types



Antenna function	Frequency range	Test instruments	Testing method	Test Standards
2G Antenna (GSM)	824MHz-960MHz, 1710MHz-1990MHz	5071B, 8960, OTA Darkroom	Active testing, passive testing	Sovod standards, customer requirements
3G Antenna (WCDMA/TDS CDMA/CDMA-EVDO/2000)	824MHz-960MHz, 1710MHz-2170MHz	5071B, 8960, OTA Darkroom	Active testing, passive testing	Sovod standards, customer requirements
4G Antenna (LTE-FDD/LTE-TDD)		5071B, CMW500SP8011, OTA Darkroom	Active testing, passive testing	Sovod standards, customer requirements
WIFI antenna	2.4GHz-2.48GHz, 5.15GHz-5.35GHz, 5.725GHz-5.825GHz	5071B, CMW500, OTA dark room, router, PC	Active test, passive test, APK test, throughput test	Sovod standards, customer requirements
BT Antenna	2.4GHz-2.48GHz	5071B, OTA darkroom, Bluetooth speaker	Passive test, actual measurement	Sovod standards, customer requirements
Positioning antenna (GPS, GLONASS, BeiDou, Galileo)	1575.42MHz ± 10MHz, 1602MHz ± 0.5625MHz, 1561MHz ± 2.046MHz	5071B, OTA Darkroom, APK	Passive test, actual measurement	Sovod standards, customer requirements
NFC antenna	13.56MHz	5071B, special test fixture, OTA dark room, APK	Passive test, actual measurement	Sovod standards, customer requirements
Remote control antenna	433MHz	5071B, OTA Darkroom	Passive test, actual measurement	Sovod standards, customer requirements



二:概述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 BT antenna.
2. Antenna shape size: Meet the requirement 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:

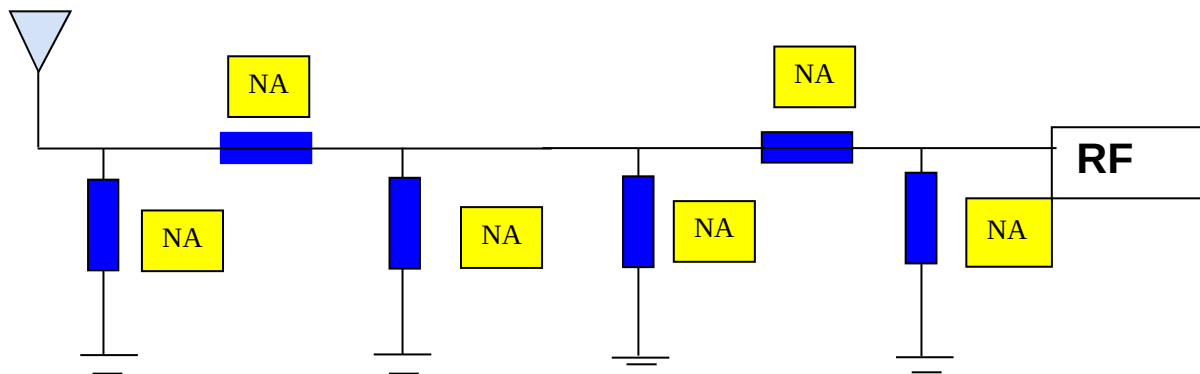
Description	2. 4GHZ~2. 5GHz	Units
VSWR	≤ 2.0	
Average Antenna Gain	≥ -4.5	dB
Antenna Efficiency	≥ 40	%
Feed Impedance	50 ohms	
Operating Temperature	-40 to +85 deg C	
Polarization / Azimuth	Linear / Omni-directional	

(2) Mechanical Information

Mechanical Dimension	
Cable Length	NA
Description	BT antenna
Material	FPC
Coaxial Cable	NA
Environmental	
Operation Temperature	-40 to +85 deg C
Storage Temperature	-40 to +85 deg C

三: 匹配电路图&机器图片&天线图片 Matching circuit diagram & machine picture & antenna picture

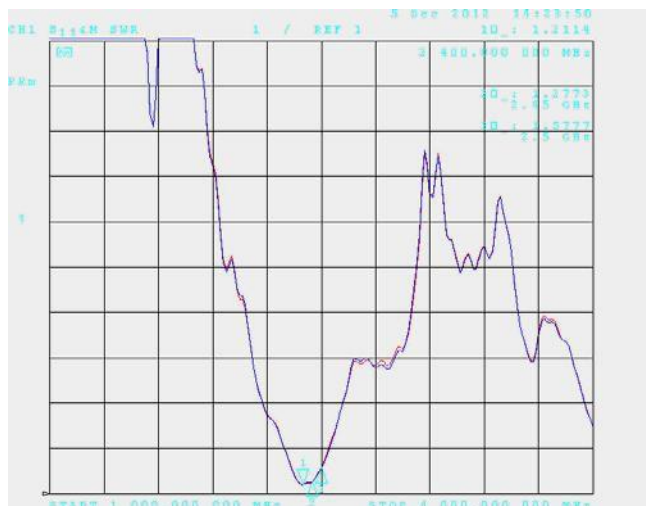
(1) 匹配电路 Matching circuit



(2) 机器图片&天线图片 Machine pictures & antenna pictures

1 : 镀金沉金; 3: 表面黑色哑光油墨; 4: 符合最新环保要求: RoHS&REACH; 5: 整板出货;
 1: Gilded immersion gold; 3: Black matte ink on the surface; 4: Comply with the latest environmental protection requirements: RoHS&REACH; 5: Ship the whole board;

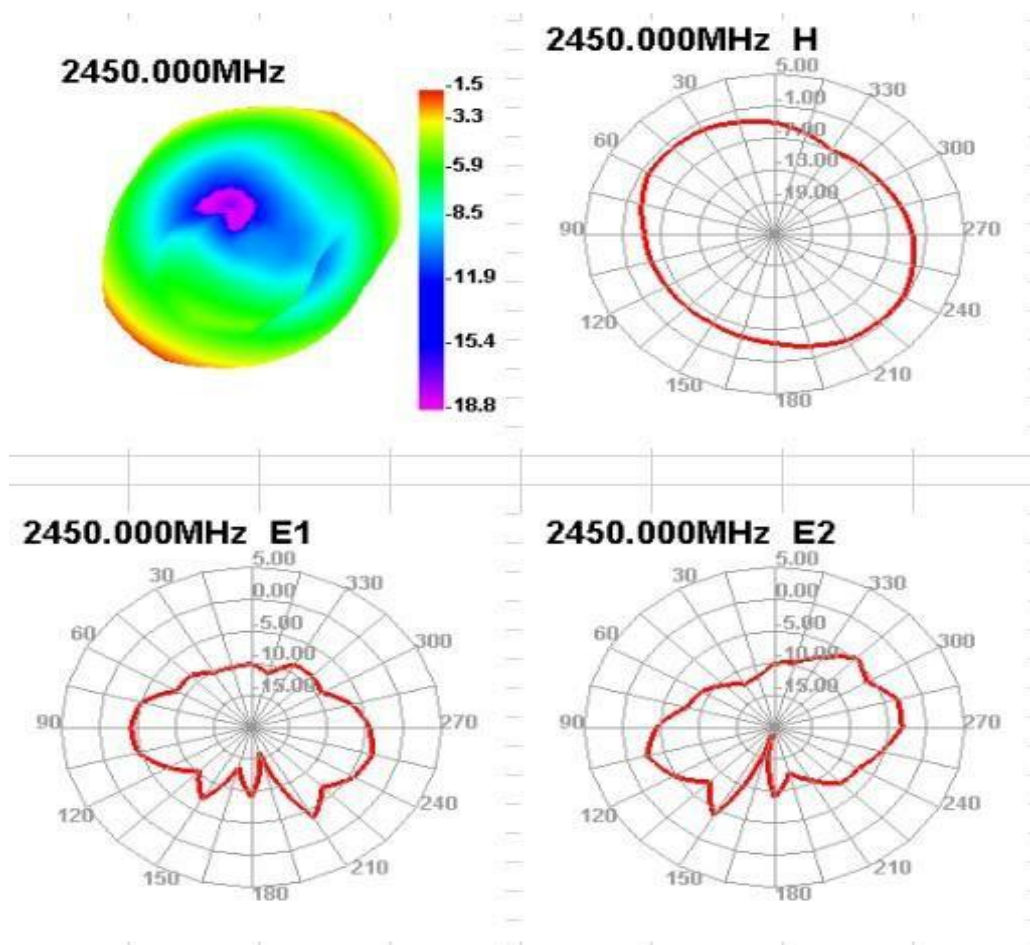
四: 天线驻波比&天线效率 (VSWR) Antenna VSWR & Antenna Efficiency (VSWR)



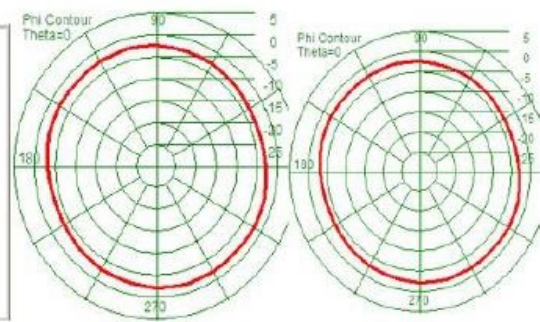
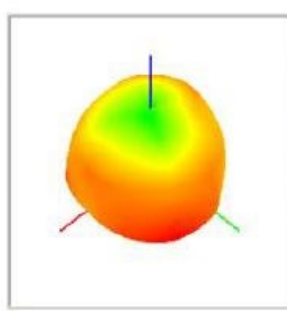
Frequency (MHz)	VSWR
2400	1.25
2450	1.18
2500	1.16

Passive Test For 2.4G										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
2400	22.93	-6.4	-1.99	-4.14	9.57	13.363	-1.99	-18.81	48.83	49.05
2410	24.58	-6.09	-1.66	-3.81	10.321	14.257	-1.66	-18.99	49.12	49.31
2420	25.81	-5.88	-1.63	-3.78	10.894	14.918	-1.63	-18.92	49.47	49.54
2430	25.8	-5.88	-1.61	-3.76	10.97	14.826	-1.61	-18.74	49.45	49.53
2440	25.22	-5.98	-1.72	-3.87	10.72	14.5	-1.72	-18.82	49.47	49.59
2450	25.93	-5.86	-1.55	-3.7	11.093	14.836	-1.55	-18.83	49.56	49.63
2460	26.37	-5.79	-1.53	-3.68	11.328	15.047	-1.53	-18.67	49.75	49.92
2470	25.91	-5.87	-1.43	-3.58	11.279	14.63	-1.43	-18.94	49.79	50.03
2480	27.1	-5.67	-1.3	-3.45	11.806	15.295	-1.3	-20.52	49.89	50.07
2490	26.44	-5.78	-1.36	-3.51	11.542	14.894	-1.36	-21.66	49.81	50.01
2500	24.84	-6.05	-1.74	-3.89	10.82	14.018	-1.74	-21.76	49.76	49.92

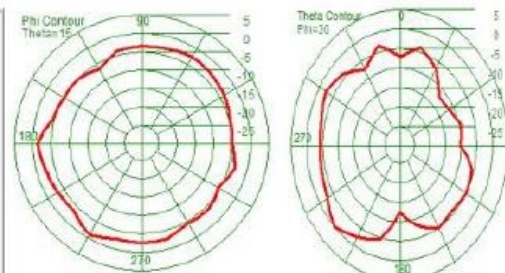
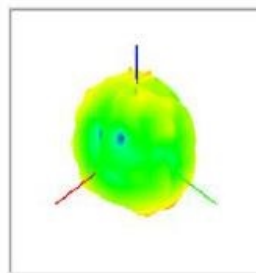
五:3D patter



Channel	增益(dBi)	效率(%)
5150	0.85	40.6
5200	0.89	43.8
5250	0.92	42.6
5300	1.02	42.5
5350	0.86	40.4
5400	0.79	40.6
5450	0.87	41.0
5600	0.72	40.2
5650	0.83	41.3
5700	1.05	42.5
5750	1.35	42.8
5800	1.46	43.4
5850	1.58	43.5



5150-5850M



六:结构图纸Structural drawing

