

天线规格书  
Antenna specification for approval

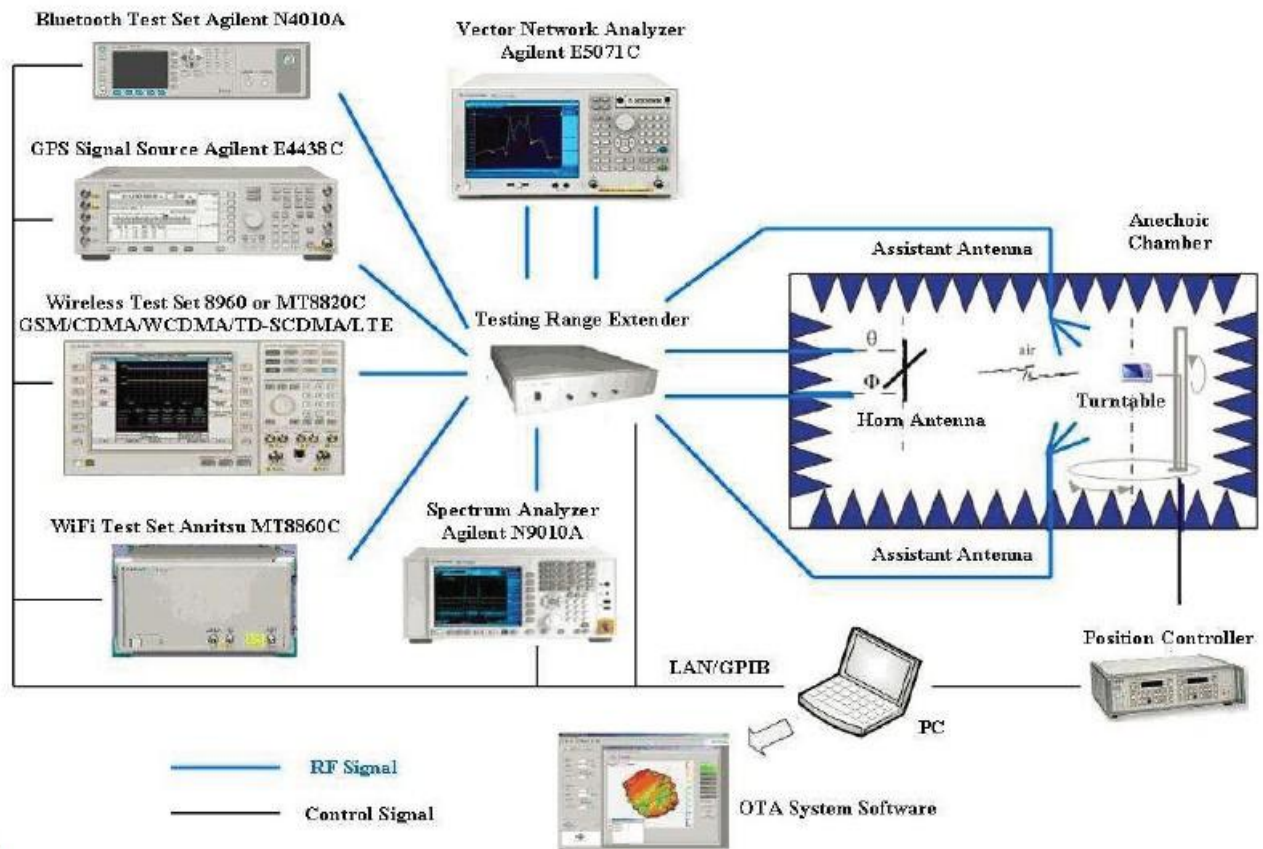
客户名称 Customer name			
机型 Model			
天线频段 Antenna band	2.4GHZ		
天线类型 Antenna type	A60--FPC -L/R-FPC 天线		
天线材质 Antenna material	FPC		
FPC 颜色 FPC color	L白色/R黑色		
料号 Material number	A60--FPC -L/R-FPC天线		
厂商承认签章 Baren accepted the signature		客户承认签章 Client acknowledges signature	
结构 structure	采购 Purchase		
品质 QC	结构 structure		
射频 radio frequency	工程 engineering		
审核 To examine	品质 QC		
日期 date 2024. 12. 26	盖章区 Seal area	日期 date 2024. 12. 26	盖章区 Seal area

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## 一:设备支持&可测试天线类型



天线功能	频率范围	测试仪器	测试方式	测试标准
2G天线 (GSM)	824MHz-960MHz, 1710MHz-1990MHz	5071B、8960、 OTA暗室	有源测试、无源测试	索沃德标准、客户要求
3G天线 (WCDMA/TDSCDMA/CDMA-EVDO/2000)	824MHz-960MHz, 1710MHz-2170MHz	5071B、8960、 OTA暗室	有源测试、无源测试	索沃德标准、客户要求
4G天线 (LTE-FDD/LTE-TDD)		5071B、CMW500、 SP8011、OTA暗室	有源测试、无源测试	索沃德标准、客户要求
WIFI天线	2.4GHz-2.48GHz, 5.15GHz-5.35GHz, 5.725GHz-5.825GHz	5071B、CMW500、 OTA暗室、路由器 、PC	有源测试、无源测试 、APK实测、吞吐量 测试	索沃德标准、客户要求
BT天线	2.4GHz-2.48GHz	5071B、OTA暗室 、蓝牙音箱	无源测试、实测	索沃德标准、客户要求
定位天线 (GPS、GLONASS、北斗、伽利略)	1575.42MHz±10MHz 1602MHz±0.5625MHz 1561MHz±2.046MHz	5071B、OTA暗室 、APK	无源测试、实测	索沃德标准、客户要求
NFC天线	13.56MHz	5071B、专用测试 治具、OTA暗室、 APK	无源测试、实测	索沃德标准、客户要求
遥控天线	433MHz	5071B、OTA暗室	无源测试、实测	索沃德标准、客户要求

## 二:概述

## (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:

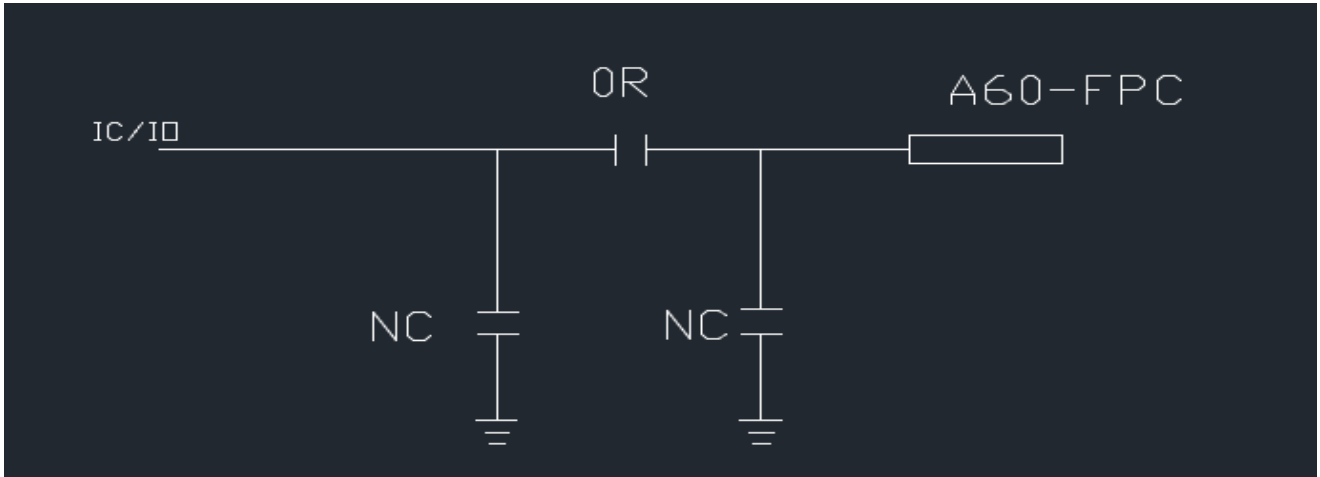
Description	2. 4GHZ~2. 5GHz	Units
VSWR	$\leq 2.0$	
Average Antenna Gain	$\geq -4.5$	dB
Antenna Efficiency	$\geq 40$	%
Feed Impedance	50 ohms	
Operating Temperature	-40 to +85 deg C	
Polarization / Azimuth	Linear / Omni-directional	

## (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

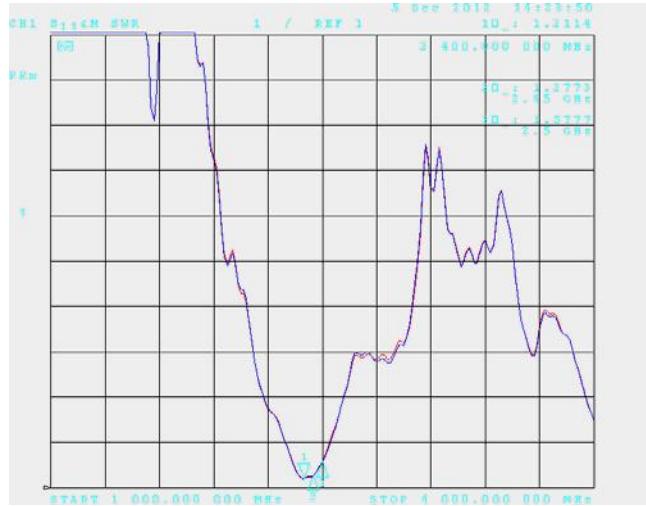
#### (1)匹配电路



#### (2) 机器图片&天线图片

1 :镀金沉金; 3:表面白色/黑色哑光油墨; 4:符合最新环保要求: RoHS&REACH; 5:整板出货;

### 四: 天线驻波比&天线效率 (VSWR)

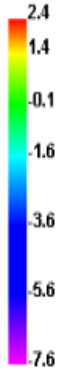
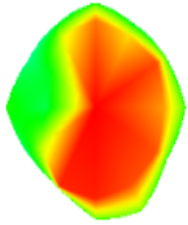


Frequency (MHz)	VSWR
2400	1.25
2450	1.18
2500	1.16

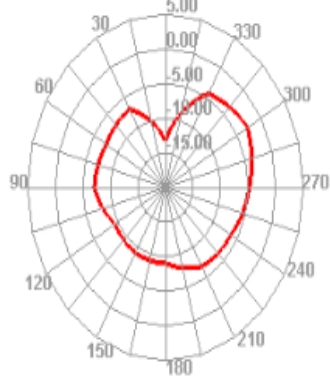
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	47.6	-3.22	2.36
2410	41.94	-3.77	1.79
2420	44.56	-3.51	2.06
2430	50.2	-2.99	2.66
2440	40.53	-3.92	1.71
2450	50.36	-2.98	2.69
2460	42.12	-3.75	2.01
2470	43.69	-3.6	2.06
2480	47.52	-3.23	2.3
2490	36.44	-4.38	1.03
2500	41.78	-3.79	1.48

### 五:3D pattern

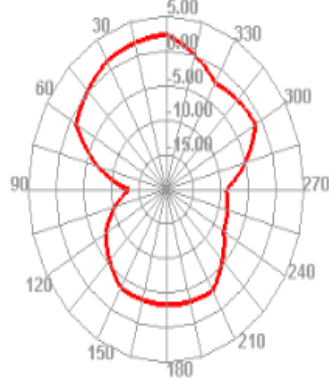
2400.000MHz



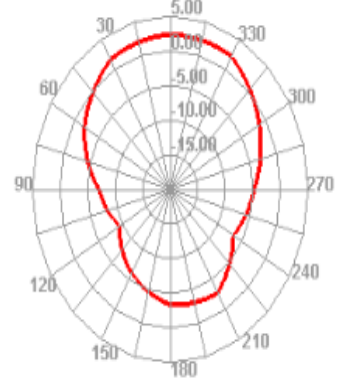
2400.000MHz H



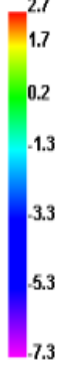
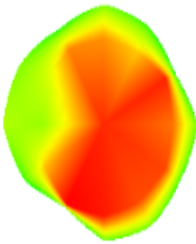
2400.000MHz E1



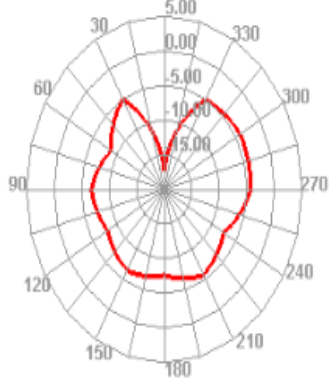
2400.000MHz E2



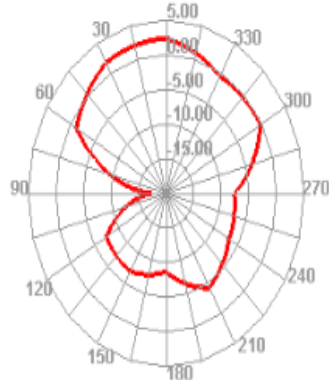
2450.000MHz



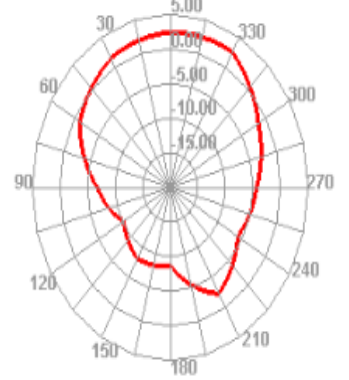
2450.000MHz H



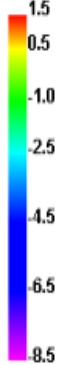
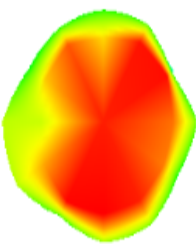
2450.000MHz E1



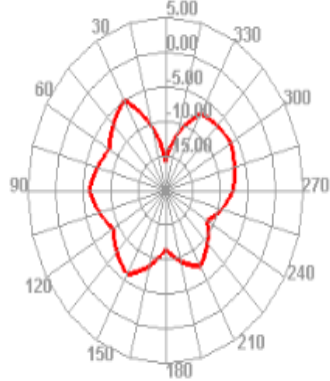
2450.000MHz E2



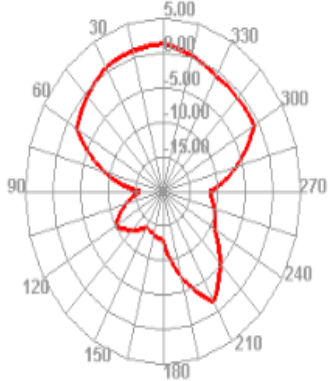
2500.000MHz



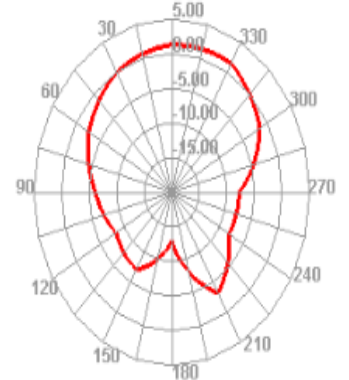
2500.000MHz H



2500.000MHz E1



2500.000MHz E2



### 六: 结构图纸

