

## MP3 Plus Specification of Antenna

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## 1. 描述 (DESCRIPTION)

This specification is applied to main antenna of MP3P

Main antenna type: PIFA, material: FPC

BT/WIFI antenna type: PIFA, material: Steel

## 2. 电气性能 (ELECTRICAL SPECIFICATION)

### 2.1. 频段 (Frequency band)

频段 Band	频率范围 Operation Frequency Range(MHz)
GSM850/900/1800/1900/WCDMA Band1/ WCDMA Band2/WCDMA Band5/ WCDMA Band8	824~960; 1710~2170
BT/WIFI	2.4~2.5GHz

### 2.2. 阻抗 (impedance)

50 Ω

### 2.3. 电压驻波比和回波损耗 (VSWR&RL)

测试设备: Agilent E5071C

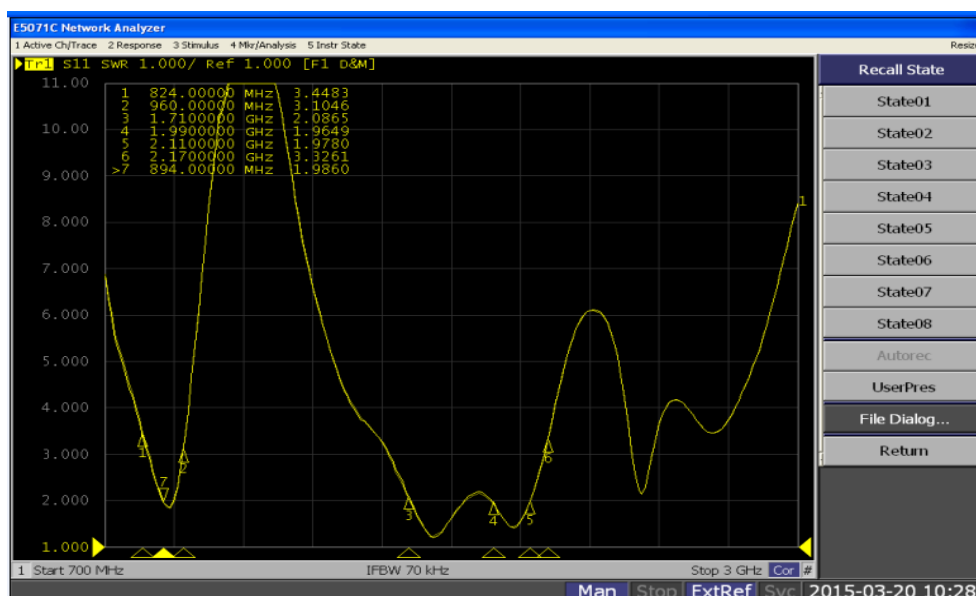
测试方法:

- 1、 将主天线装在测试样机上;
- 2、 用 50Ω 同轴线焊接在 PCB 上的 RF 测试点, 然后连接到网络分析仪;
- 3、 保证手机离开周围金属物至少 20cm 以上。

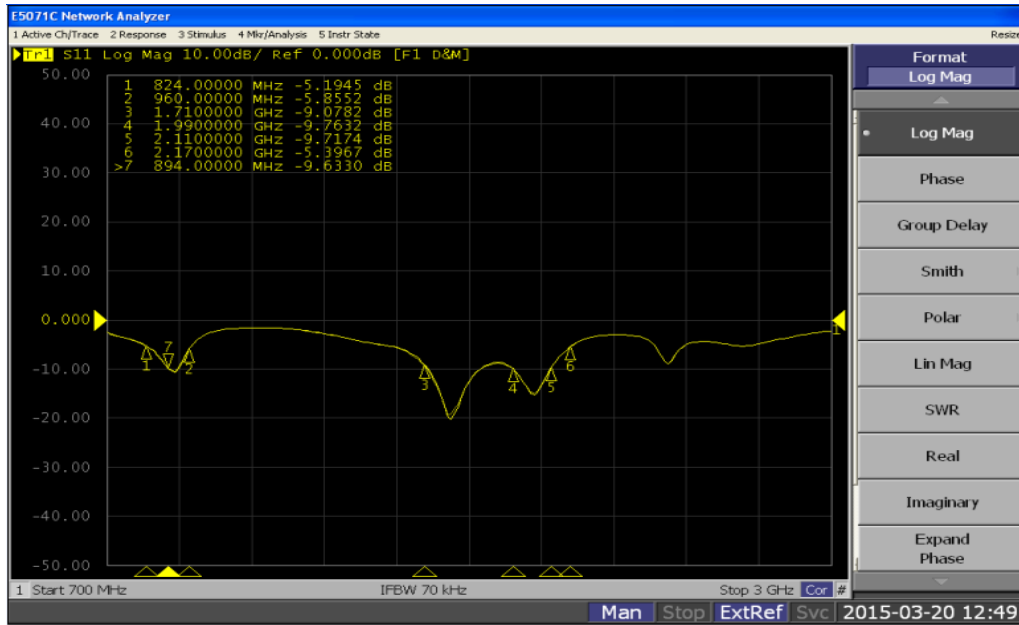
Test result:

主天线电压驻波比

Frequency (MHz)	824	960	1710	1990	2110	2170
VSWR	3.45	3.10	2.09	1.96	1.98	3.33
Return loss (RL)	-5.19	-5.86	-9.07	-9.76	-9.71	-5.39



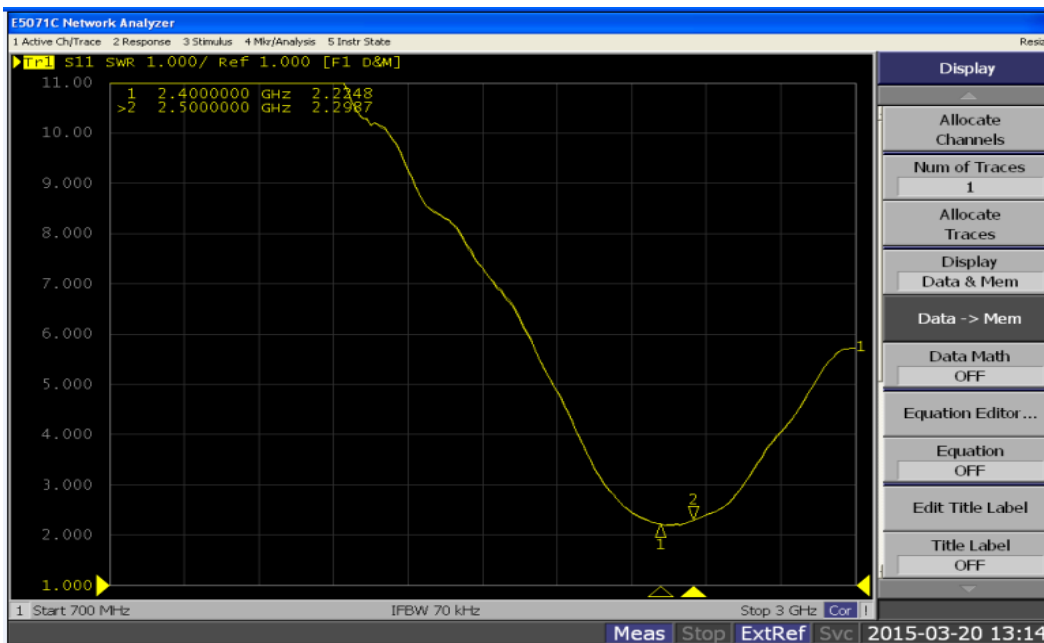
电压驻波比图



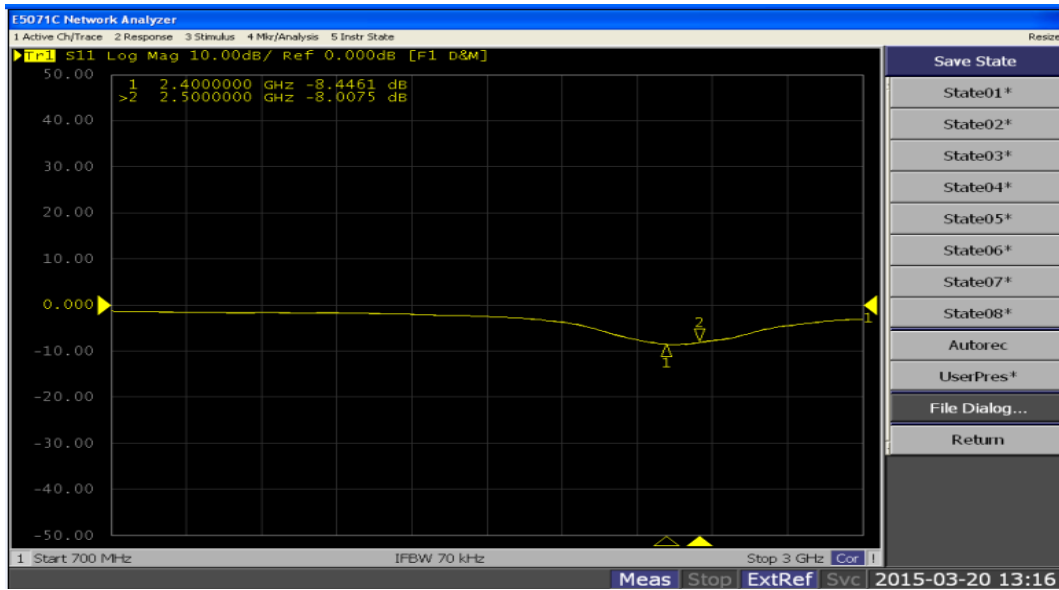
电压损耗图

BT/WIFI 驻波比:

Frequency (MHz)	2400	2500
VSWR	2.22	2.29
RL	-8.44	-8.01



电压驻波比图



电压损耗图

### 2.4. 天线最大增益 (Maximum of antenna gain)

- GSM850: -2.5dBi
- EGSM900: -0.5 dBi
- DCS1800: 2 dBi
- PCS1900: 1.5 dBi
- WCDMA2100: 3.5 dBi
- WCDMA1900: 2 dBi
- WCDMA850: -0.5 dBi
- WCDMA900: 0 dBi
- Bluetooth/WiFi 2.4Ghz:1.5 dBi

### 2.5. 全向辐射功率和灵敏度 (TRP&TIS)

OTA 测试结果:

FS: Free Space

测试结果 (dBm)	EGSM900			DCS1800		
		975	37	124	512	698
TRP	28.2	28.8	28.0	25.5	26.1	26.3
TIS	-104.3	-103.0	-103.3	-105.2	-105.5	-105.8
测试结果 (dBm)	GSM850			PCS1900		
		128	190	251	512	661
TRP	26.5	26.2	26.1	25.6	26.0	25.7
TIS	-105.1	-104.5	-104.0	-105.2	-105.1	-104.7

测试结果 (dBm)	WCDMA Band1			WCDMA Band2		
	L	M	H	L	M	H
TRP	19.8	20.2	20.2	19.1	18.7	18.9
TIS	-107.9	-109.0	-107.7	-105.4	-107.2	-106.3

测试结果 (dBm)	WCDMA Band5			WCDMA Band8		
	L	M	H	L	M	H
TRP	17.5	17.5	18.7	18.7	17.8	17.0
TIS	-105.9	-106.2	-104.5	-103.0	-103.9	-101.4

### 3. 天线尺寸 (Antenna Dimensions)

#### 3.1. 天线图片

主天线:



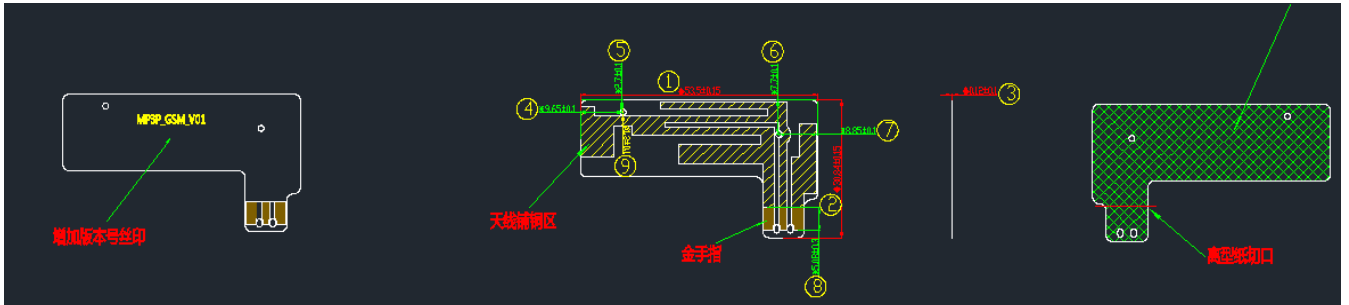
BT/WIFI 天线:





### 3.2. 结构尺寸

主天线:



BT/WIFI 天线:

