

天频智能物联科技（深圳）有限公司

产 品 规 格 书

客 户：	国华
客户机种	TZB-1(直播盒子)
品 名：	BT-1 天线组件
规 格：	FPC：29.5±0.15*13.1±0.15mm，阻焊黑油，丝印字符 ZTX-BT1-V1.0，线长105mm，
	Φ1.13mm，黑色，一代端子
日 期：	2023-4-8

客户确认/日期

地址:深圳市光明区上村永南工业区平泰昌 A 区 6 栋 10 楼 1002

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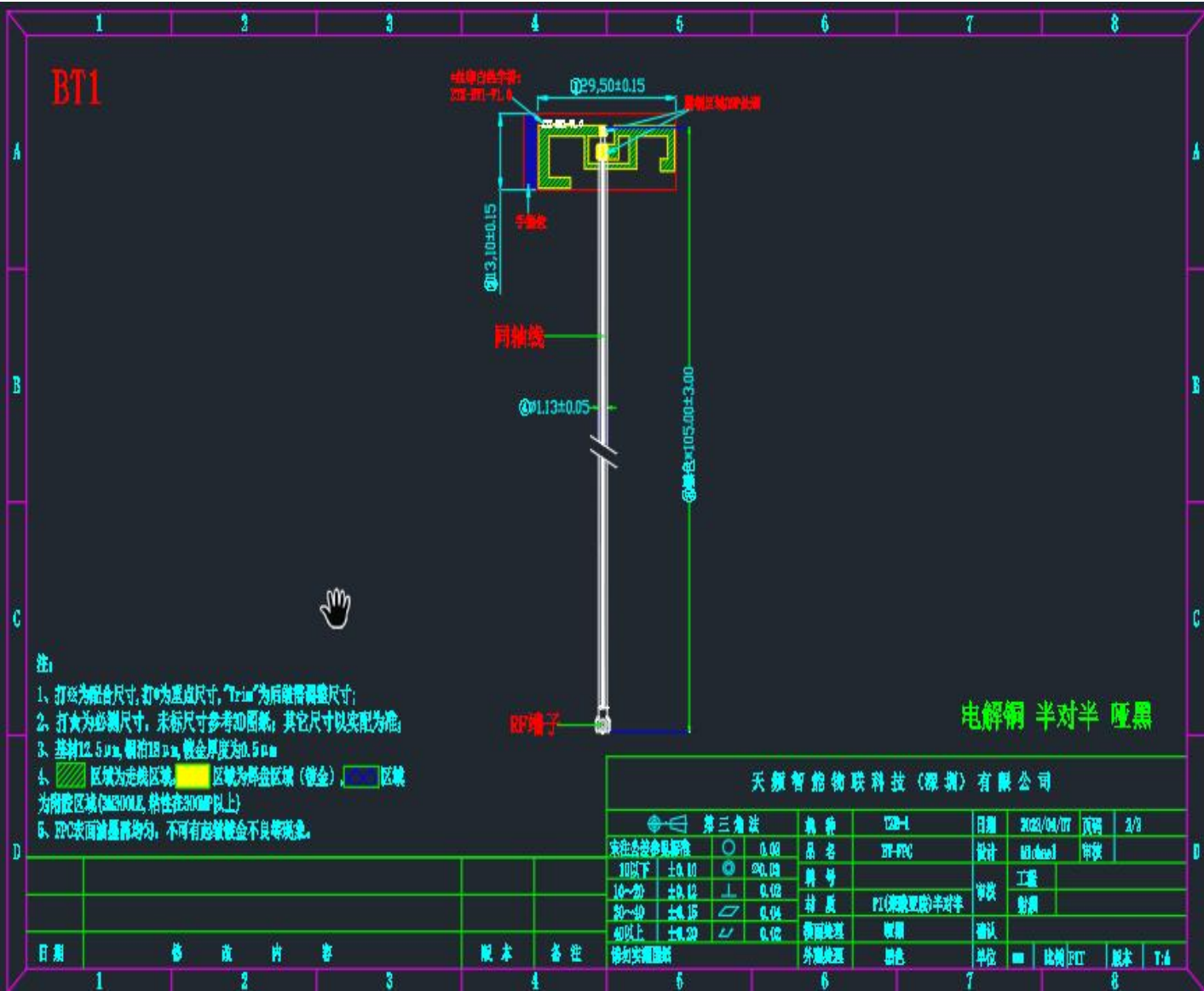
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1. 承认书概述

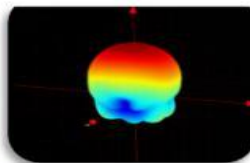
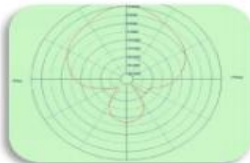
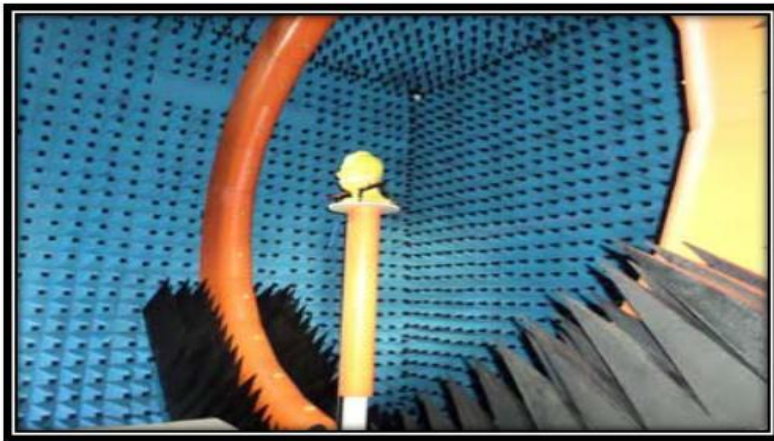
该承认书描述了国华 ZTX-BT1-V1.0 天线状况，其频段为 **2.4G/2.5GHz**，厂家为天频智能物联科技（深圳）有限公司。

2. Mechanical Specification

2-1 Mechanical Configuration（BT-1 天线组件）



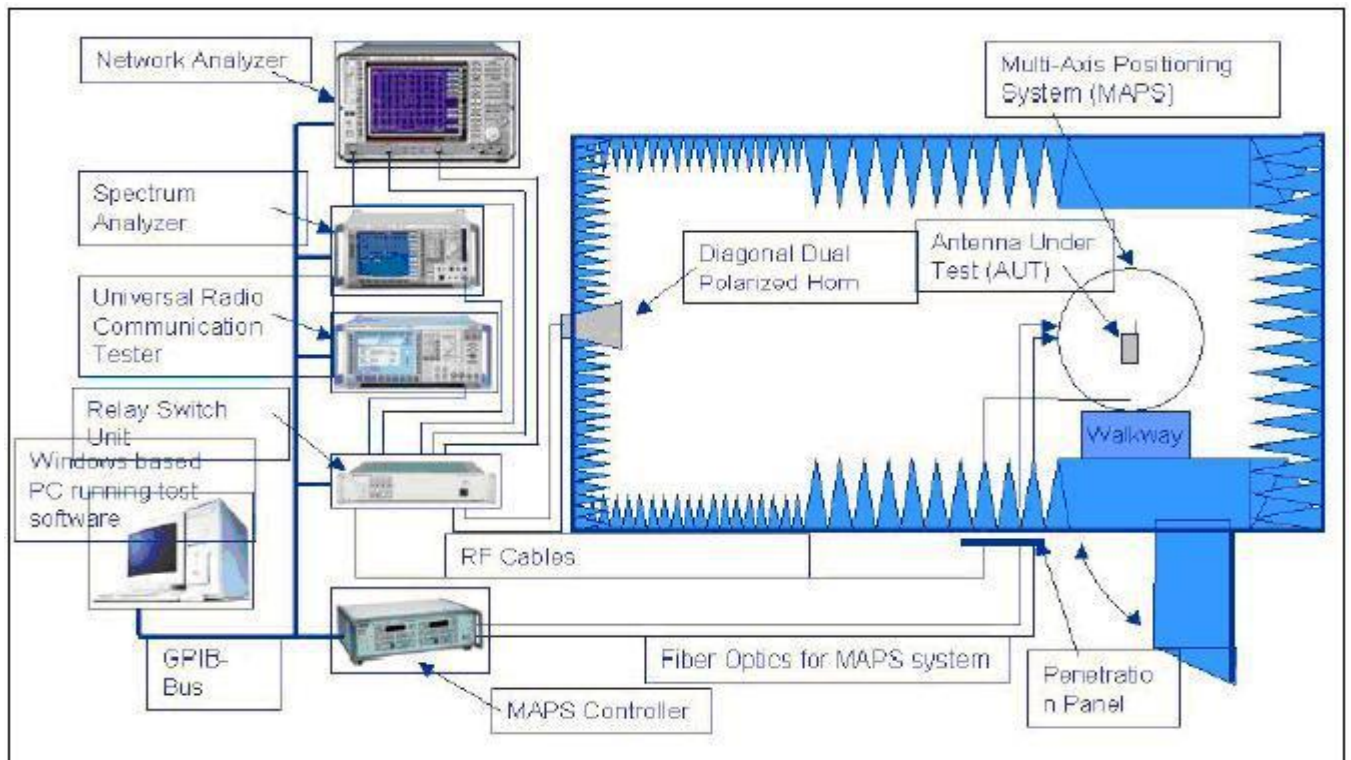
2-2. Test equipment



Owned 6 microwave dark room, equipped 2 sets world leading France Satimo SG24 OTA certification test systems (one in SHENZHEN, another one in Shanghai), ETS OTA Standard test system, Blue test reverberation test system which is High repeatability, high accuracy and high resolution. It can quickly provide accurate test reports, fully meet the CITA standards.

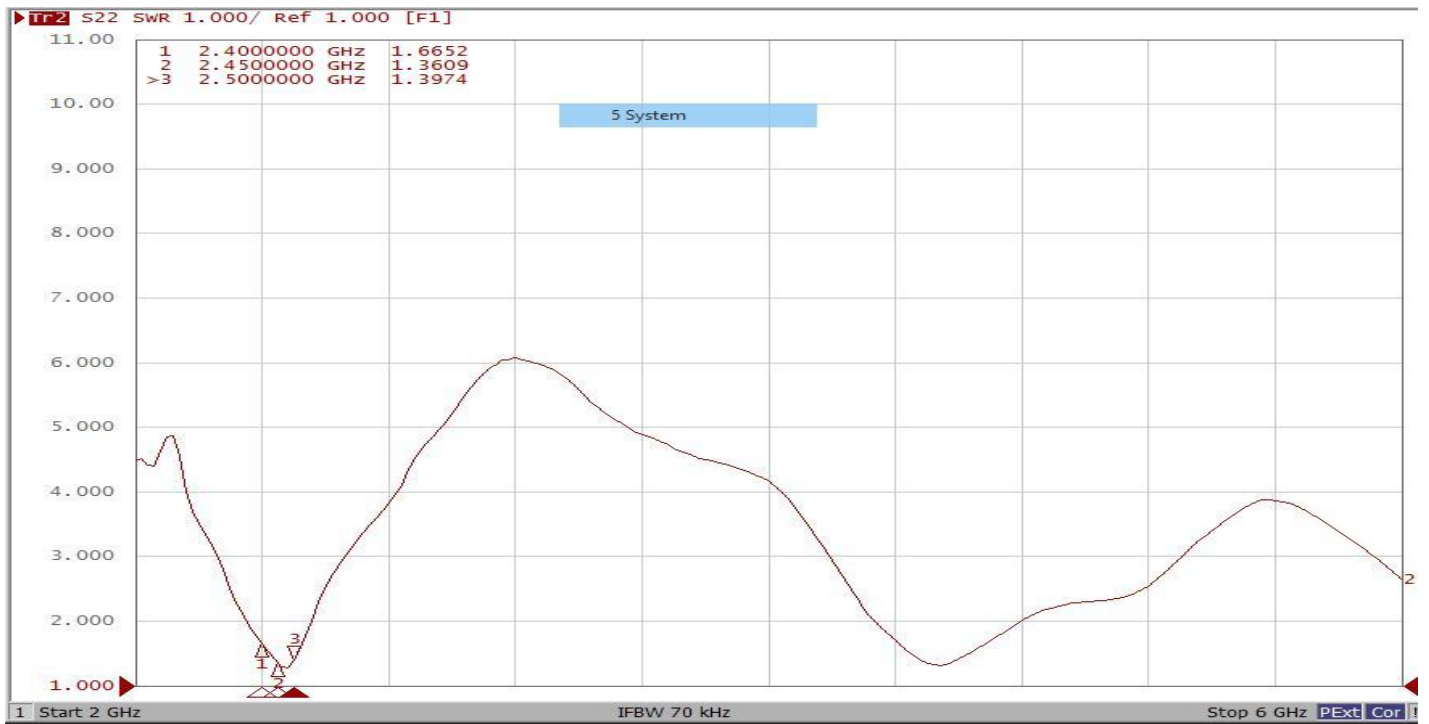
Testing range:

Support active, passive testing of GSM/CDMA/WCDMA/TD-SCDMA/LTE/WIFI/WLAN/WiMax/BT/GPS/MIMO/UWB within 0.4-6G.



3. Antenna test data

3-1 VSWR



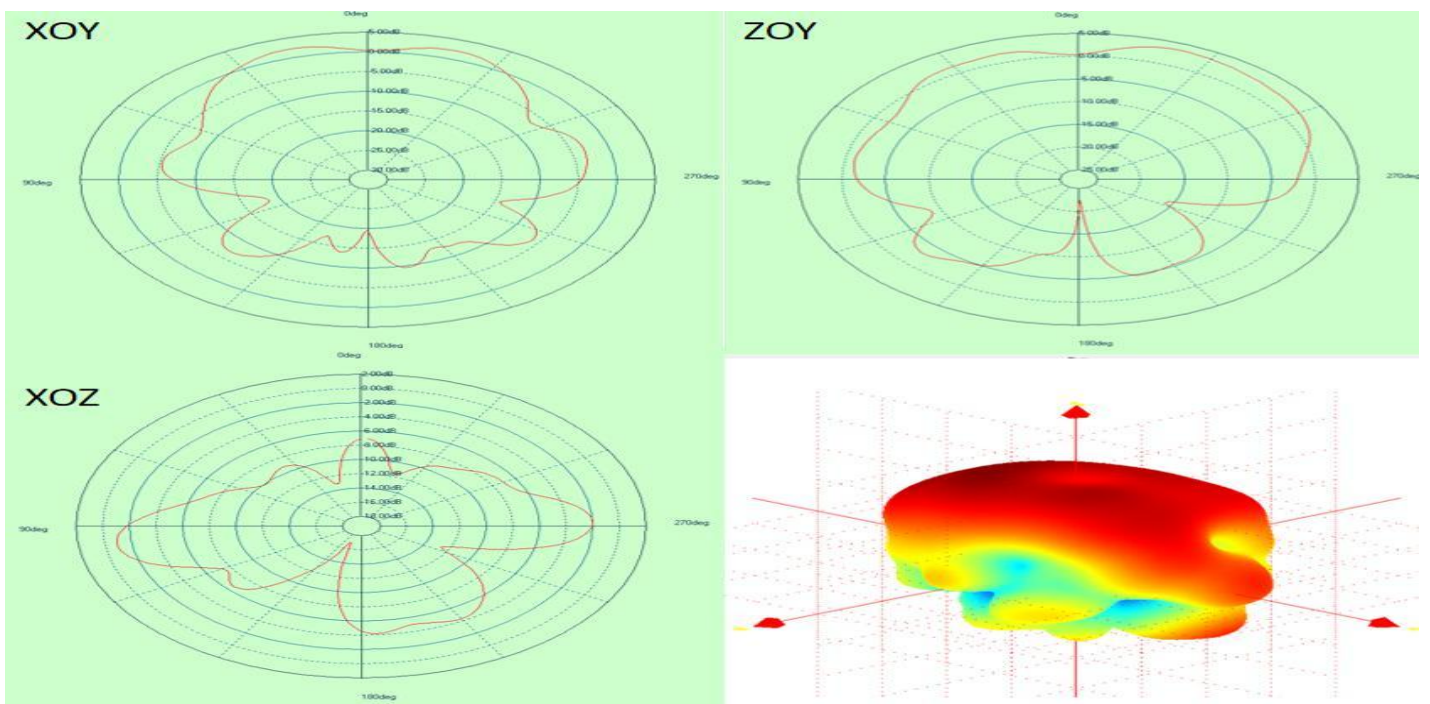
3-2 No-source test data

Frequency	Efficiency	Gain . dB
2.4E+09	41%	2.980584779
2.41E+09	42%	2.413395911
2.42E+09	40%	2.60196275
2.43E+09	42%	2.736159415
2.44E+09	41%	2.773969724
2.45E+09	41%	2.710606812
2.46E+09	42%	2.345917298
2.47E+09	43%	2.547831705
2.48E+09	41%	2.23574286
2.49E+09	42%	2.570686493
2.5E+09	44%	3.118737712

3-3 Matching circuit

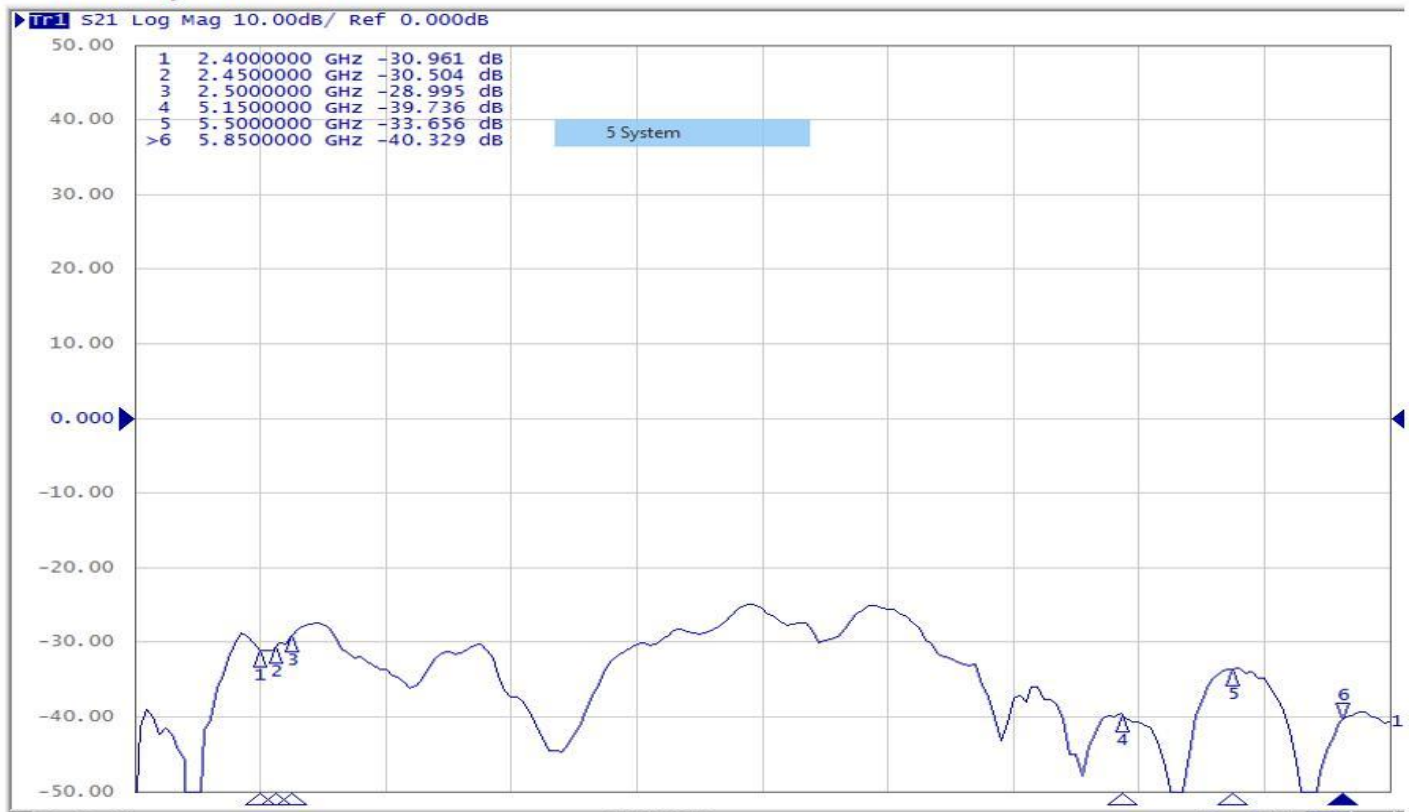
N/A

3-4 Directional drawing of horizontal plane of 3D radiation drawing

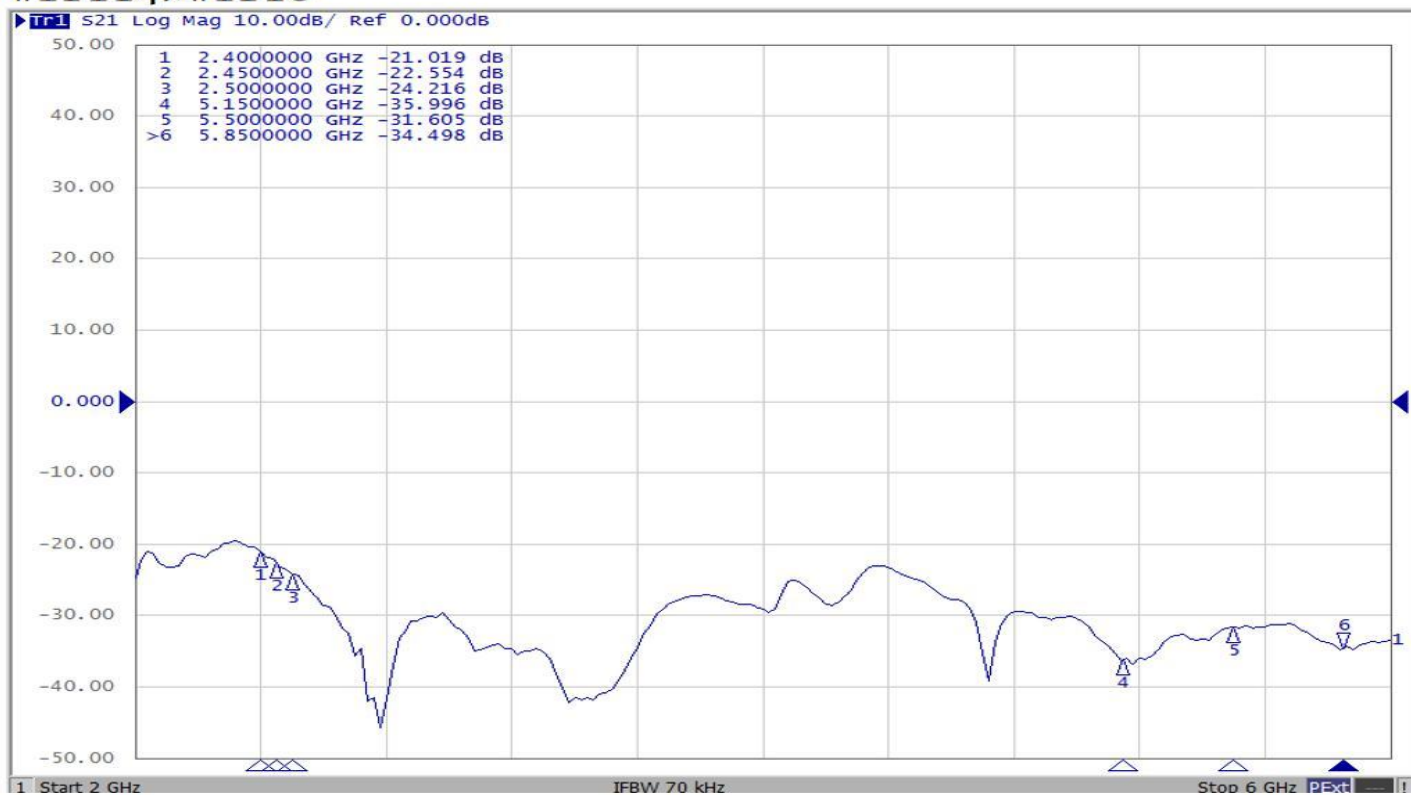


3-5 Isolation test

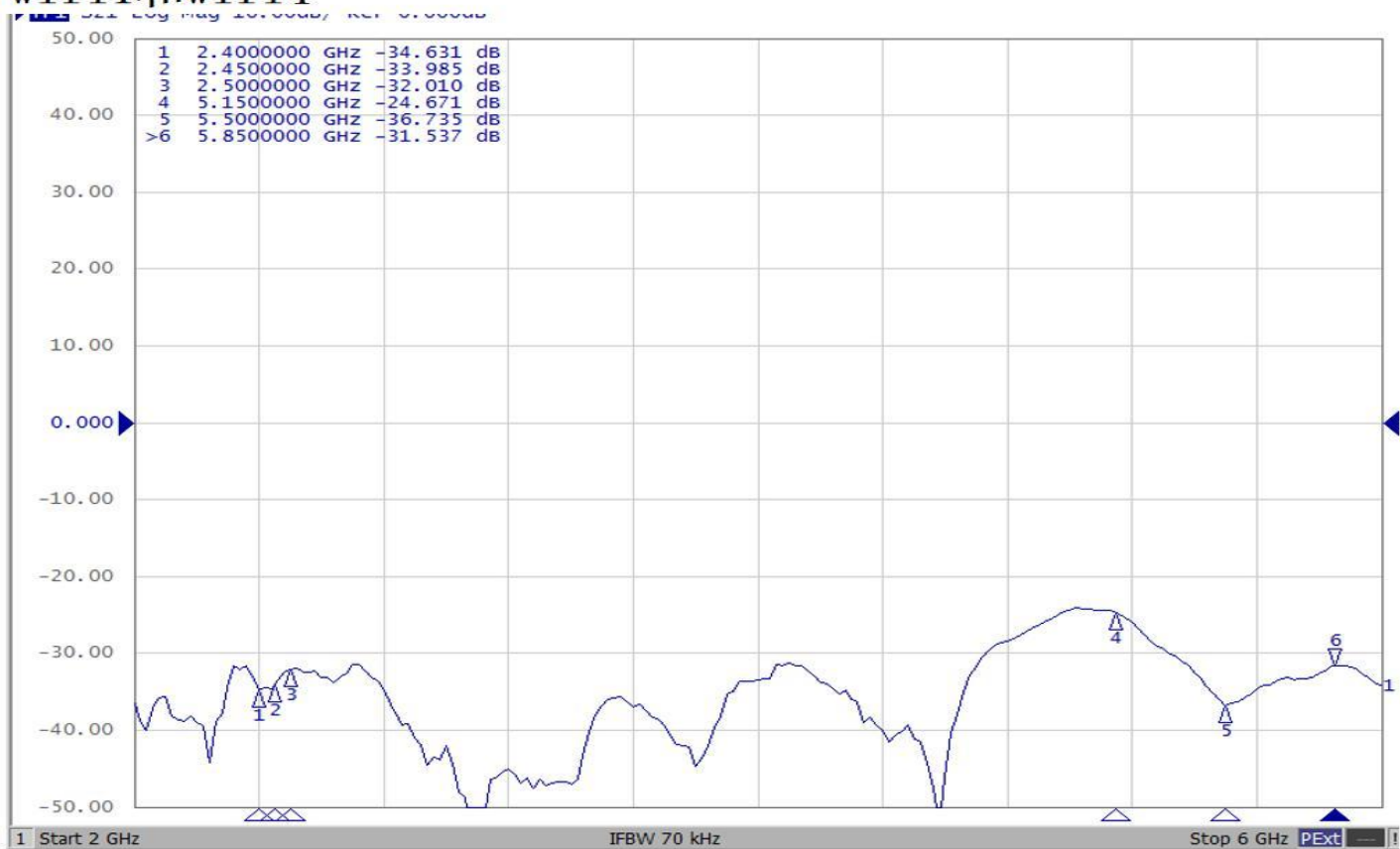
wifi1和wifi2



wifi1和wifi3



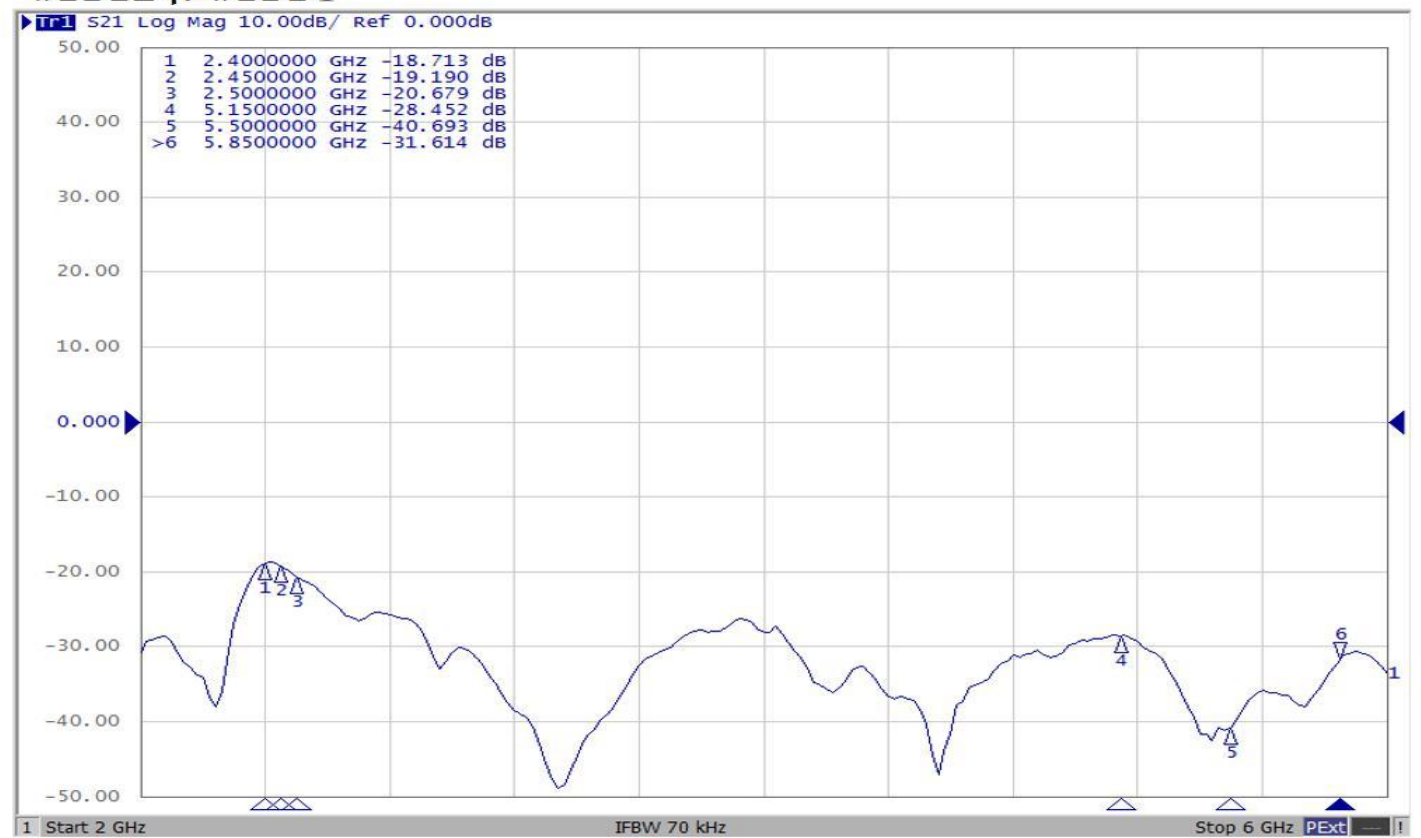
wifi1和wifi4



wifi2和wifi3



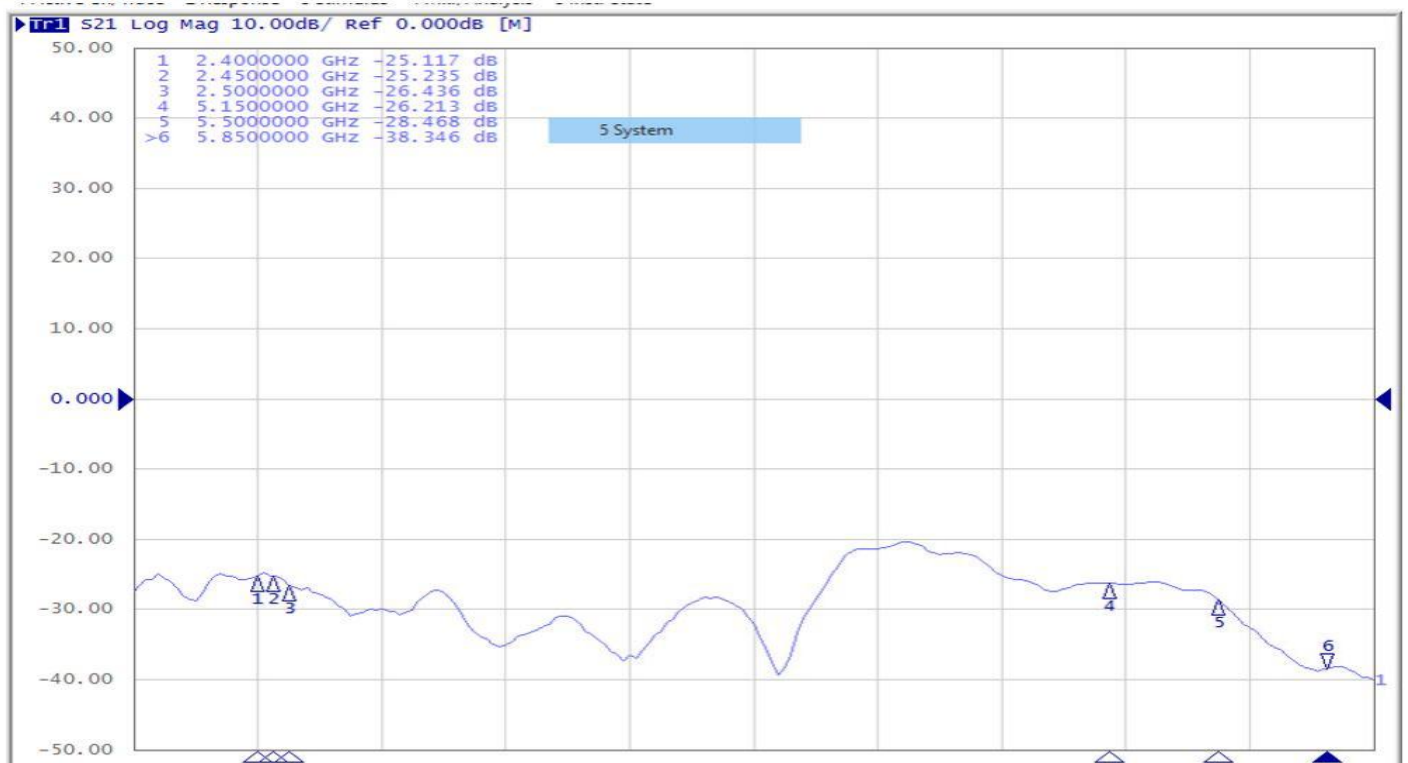
wifi2和wifi4



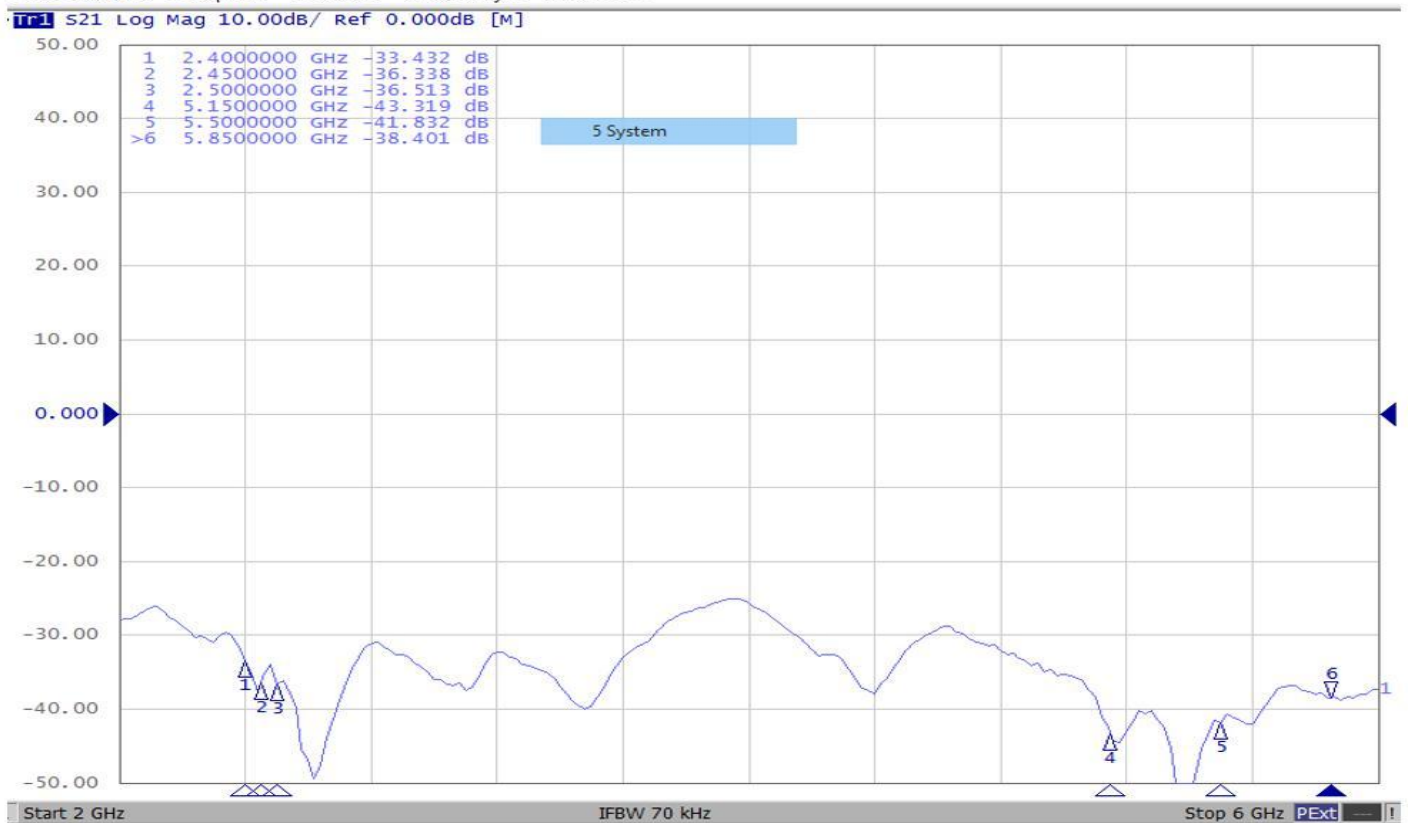
wifi3和wifi4



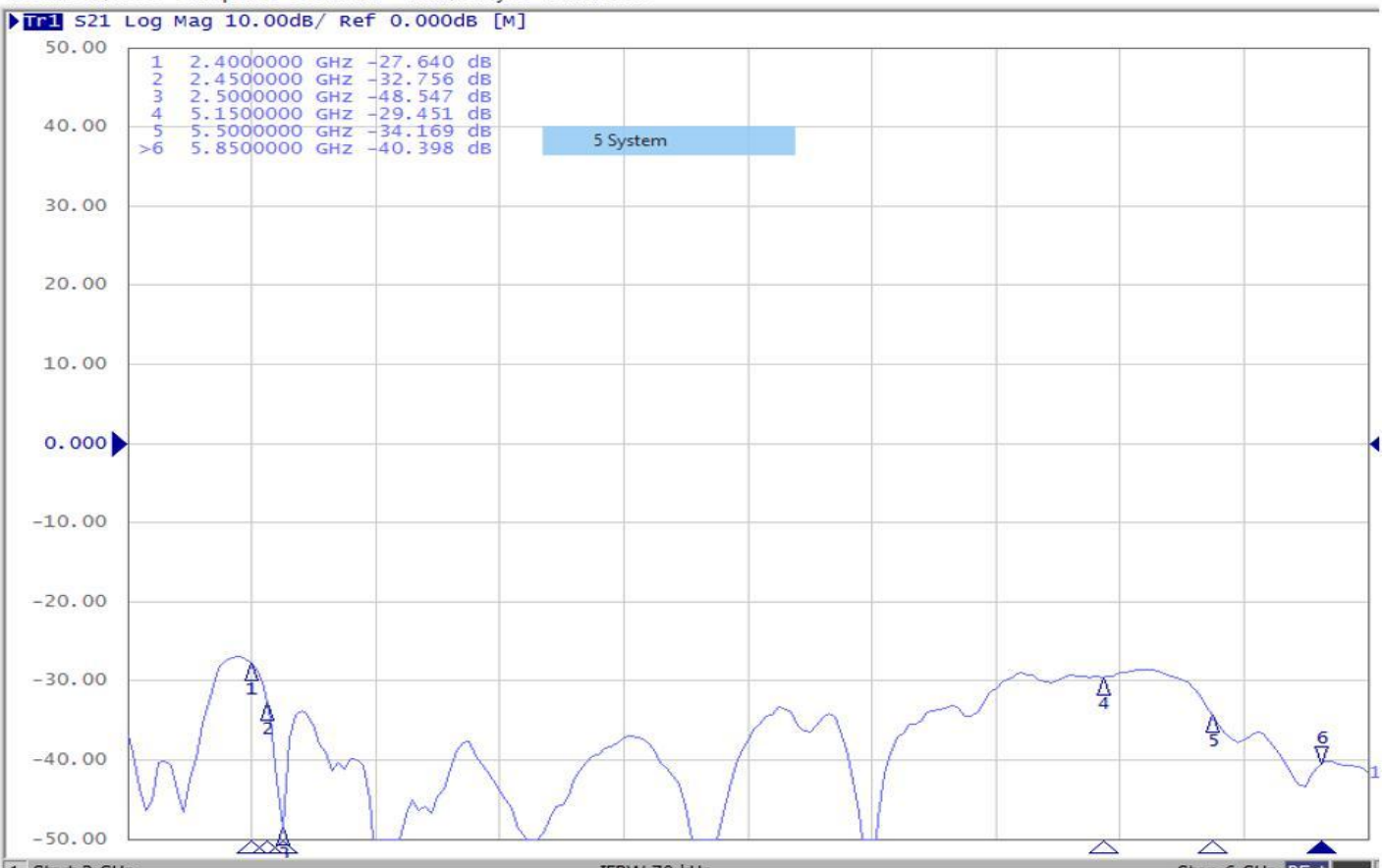
BT1和WIFI1



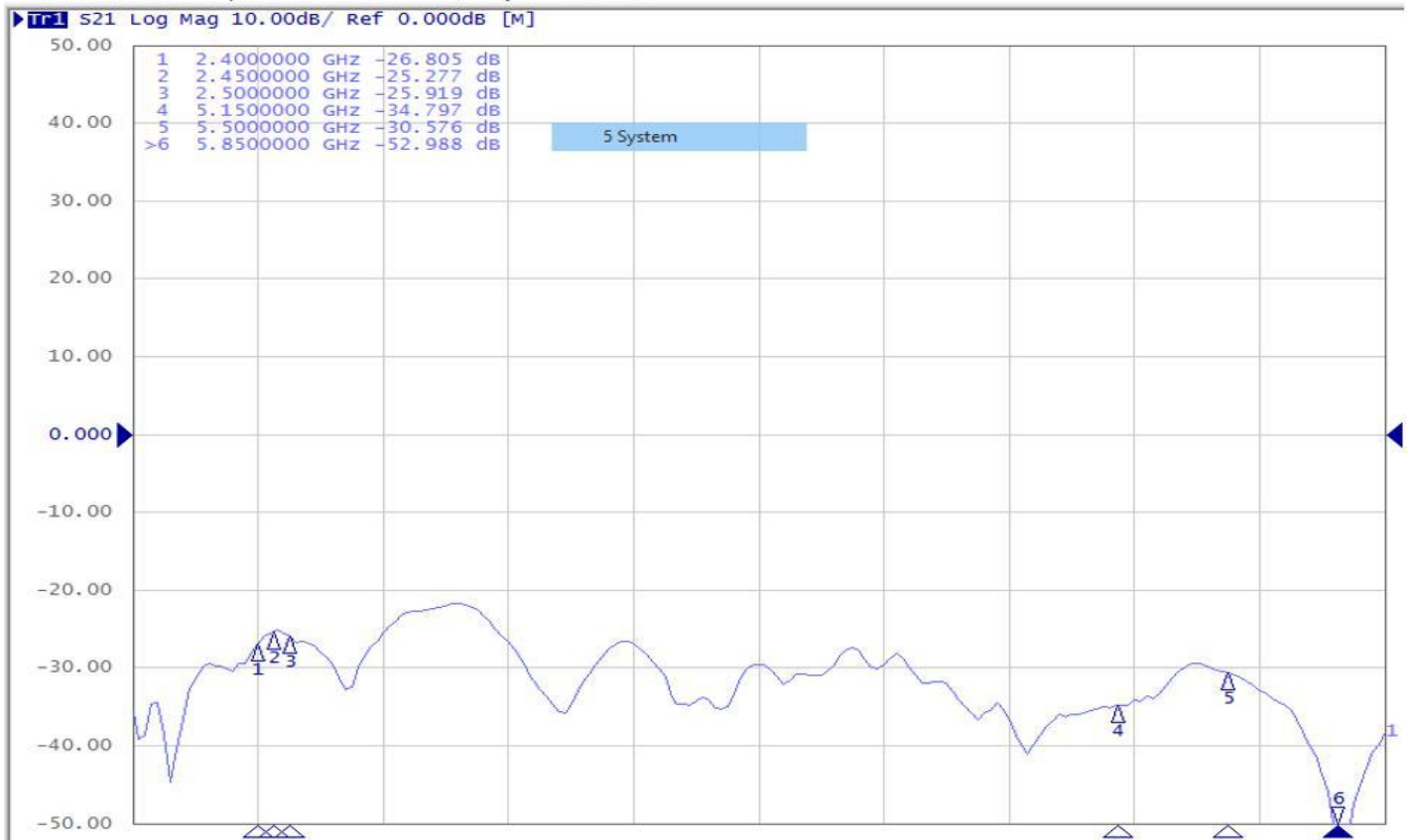
BT2和wifi1



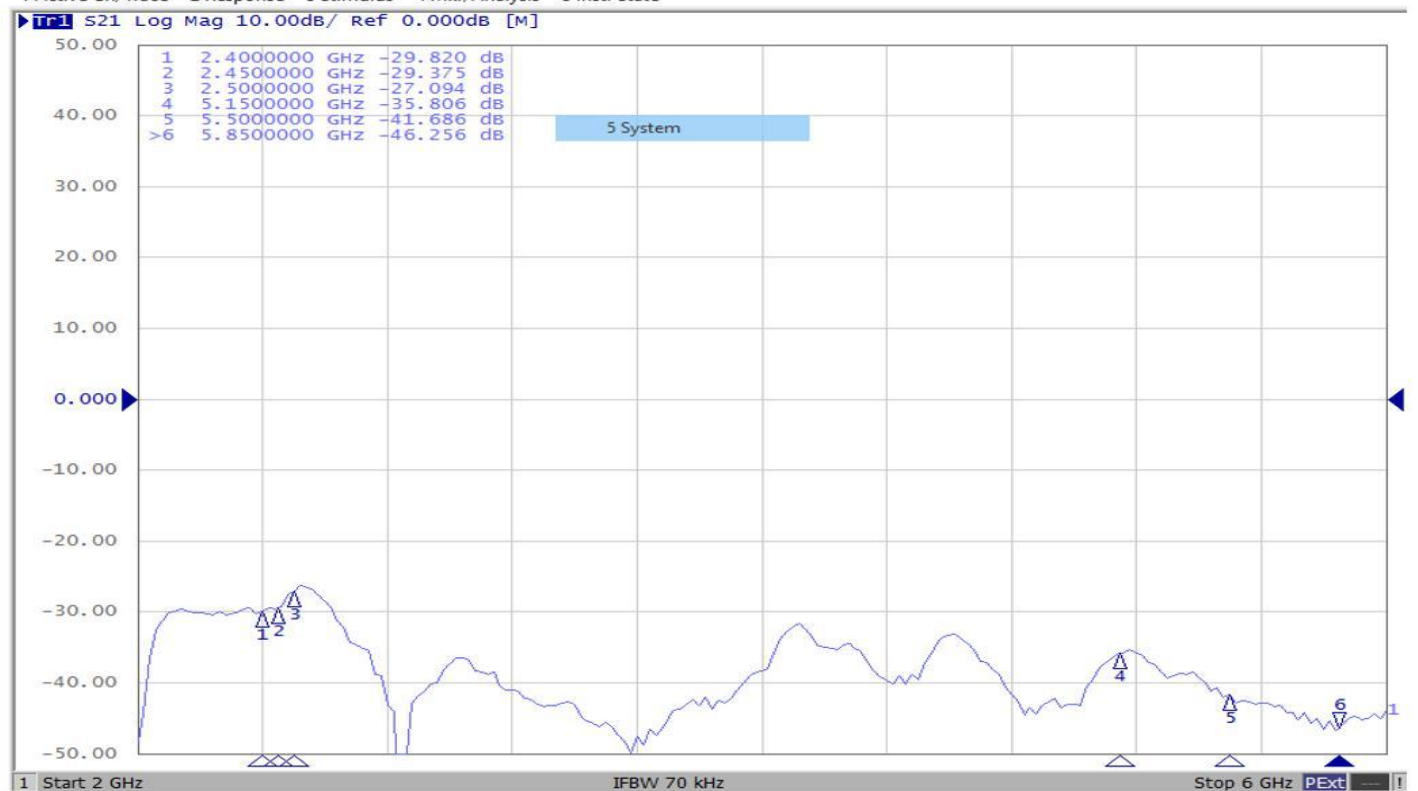
BT3和wifi1



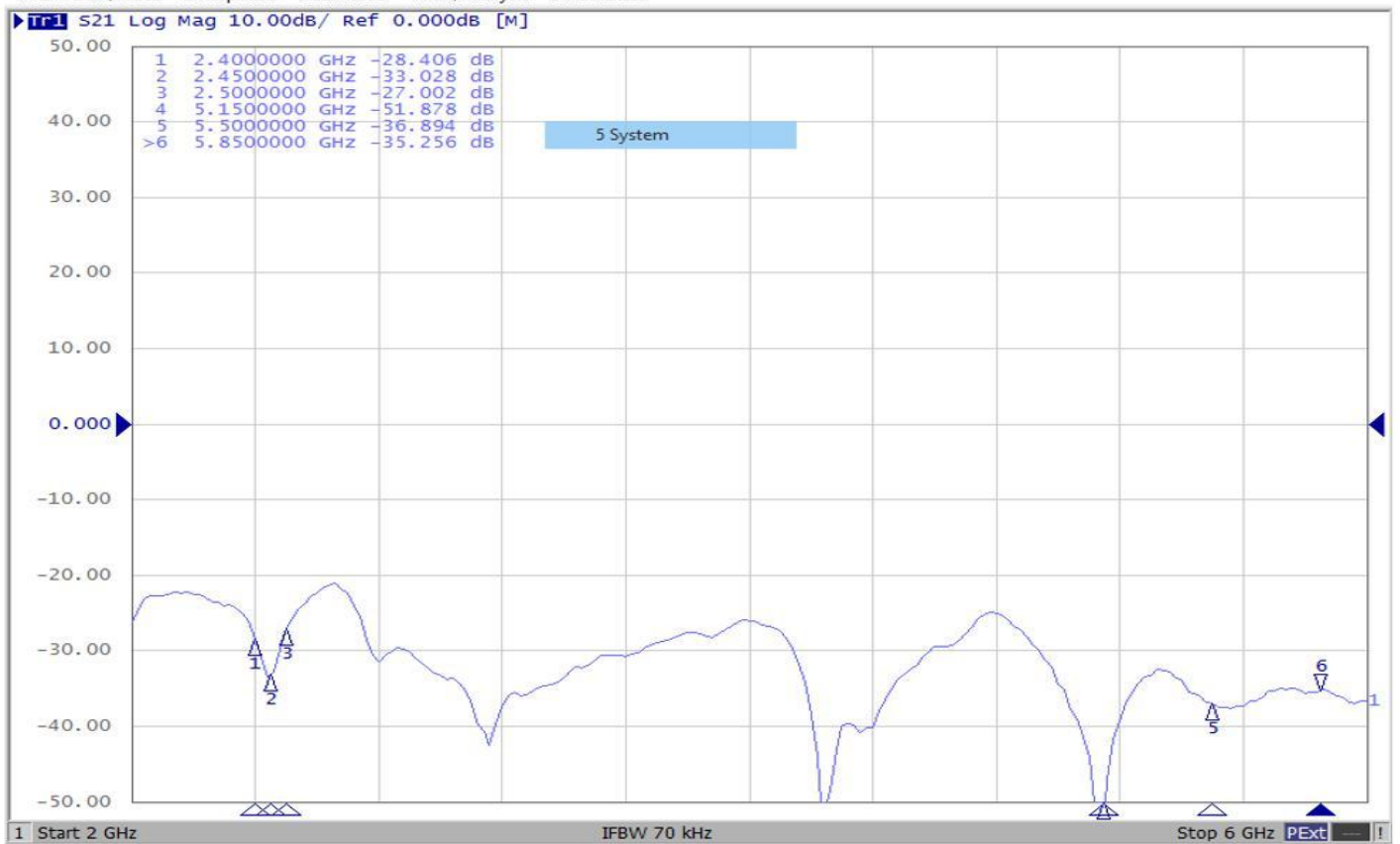
BT1和wifi2



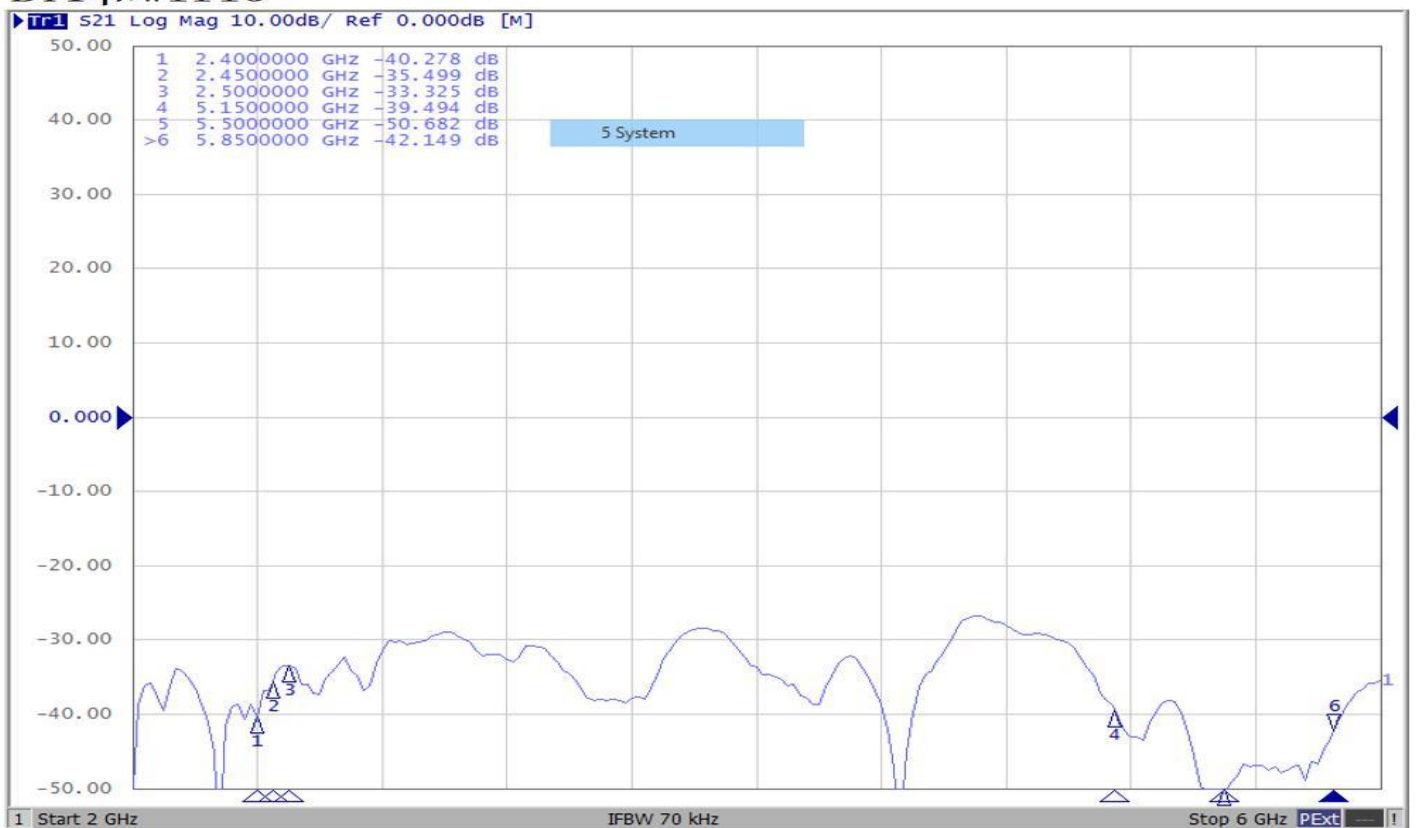
BT2和wifi2



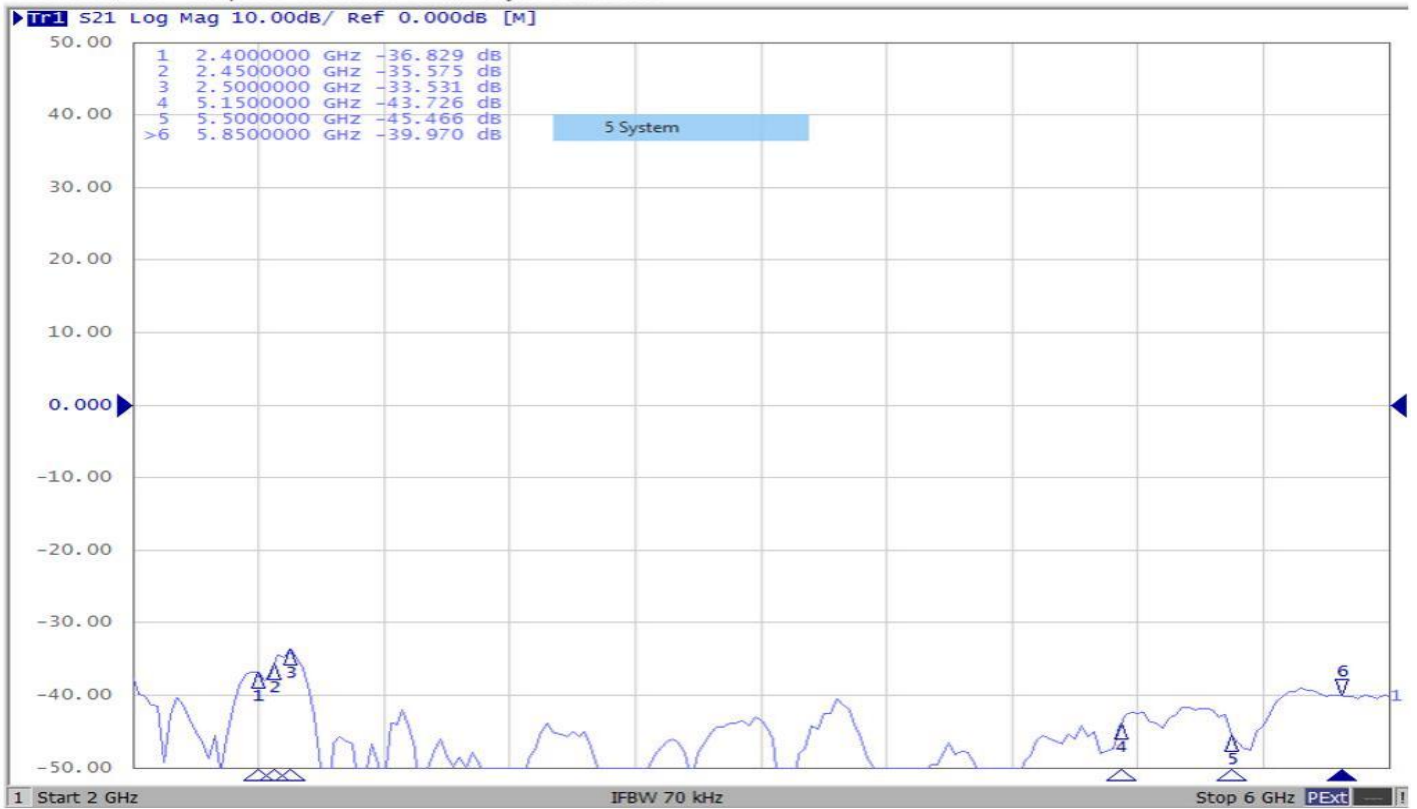
BT3和wifi2



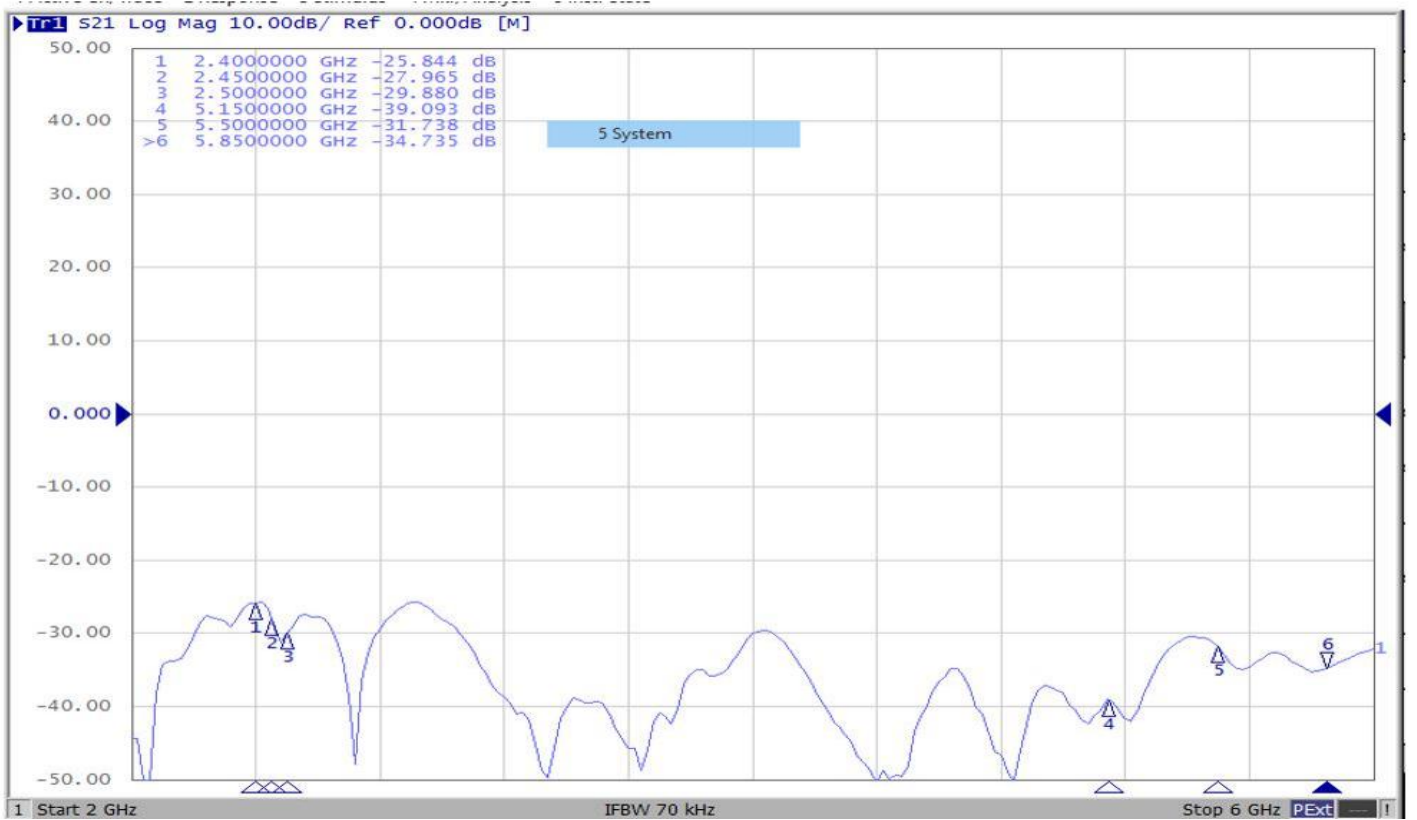
BT1和wifi3



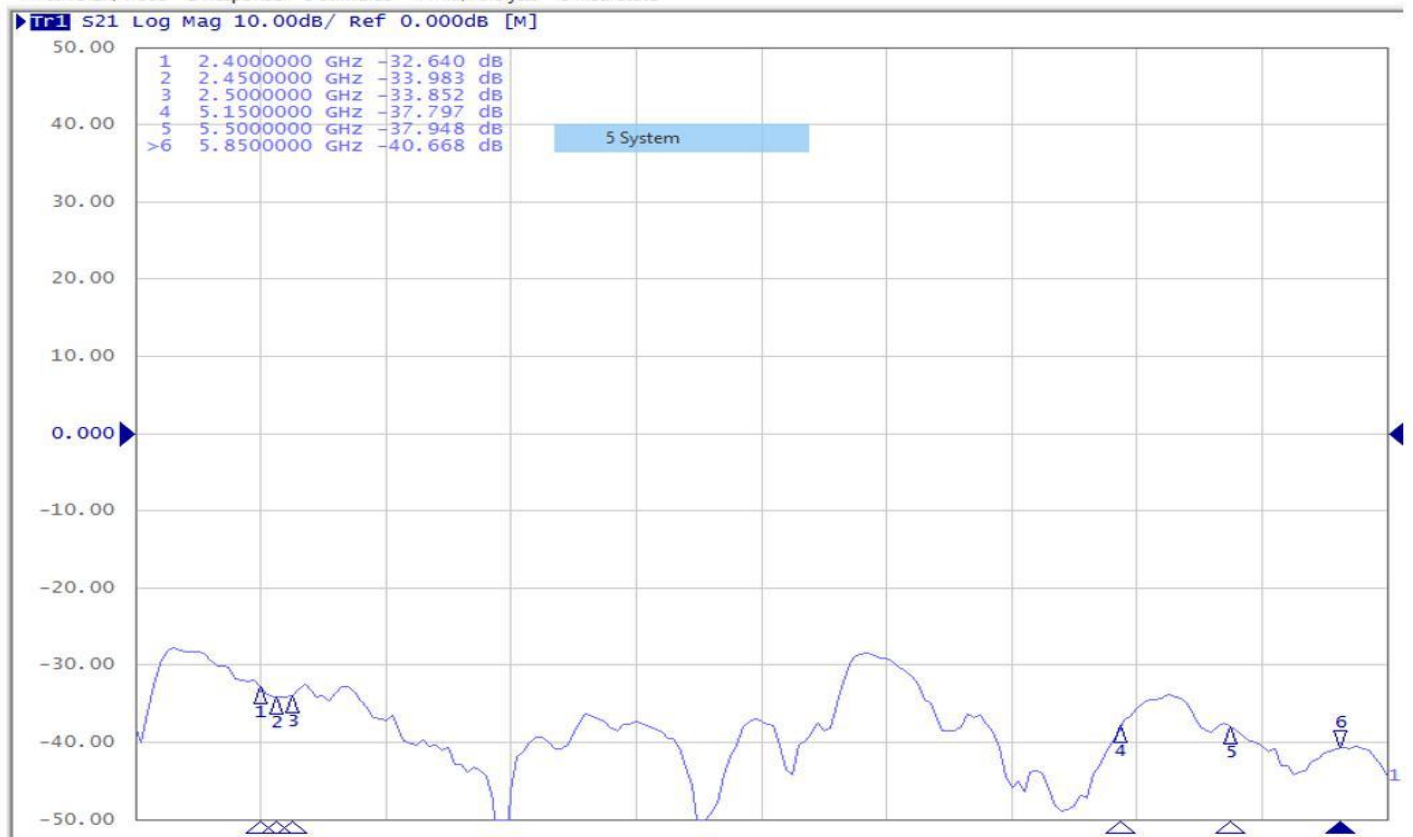
BT2和wifi3



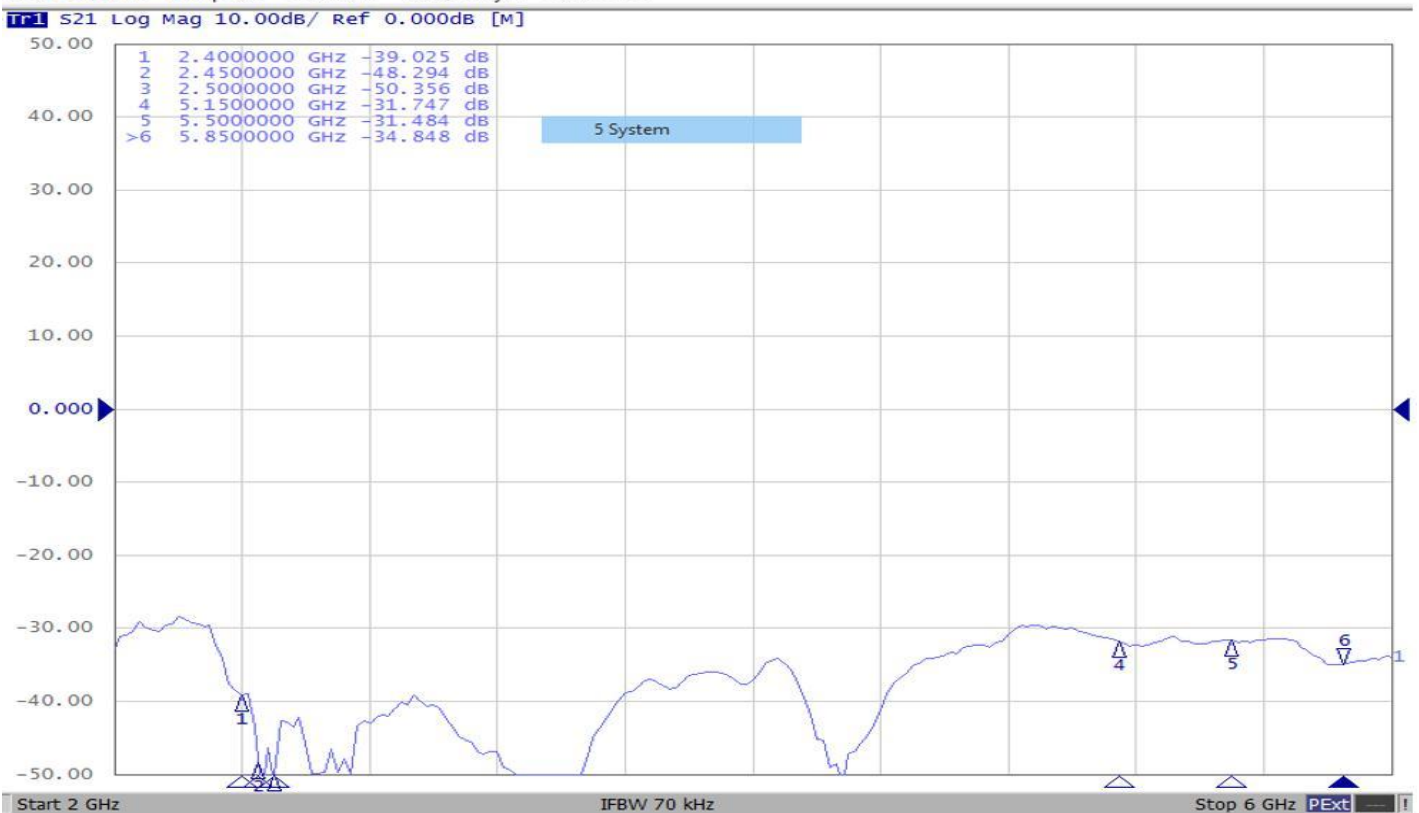
BT3和wifi3



BT1和wifi4



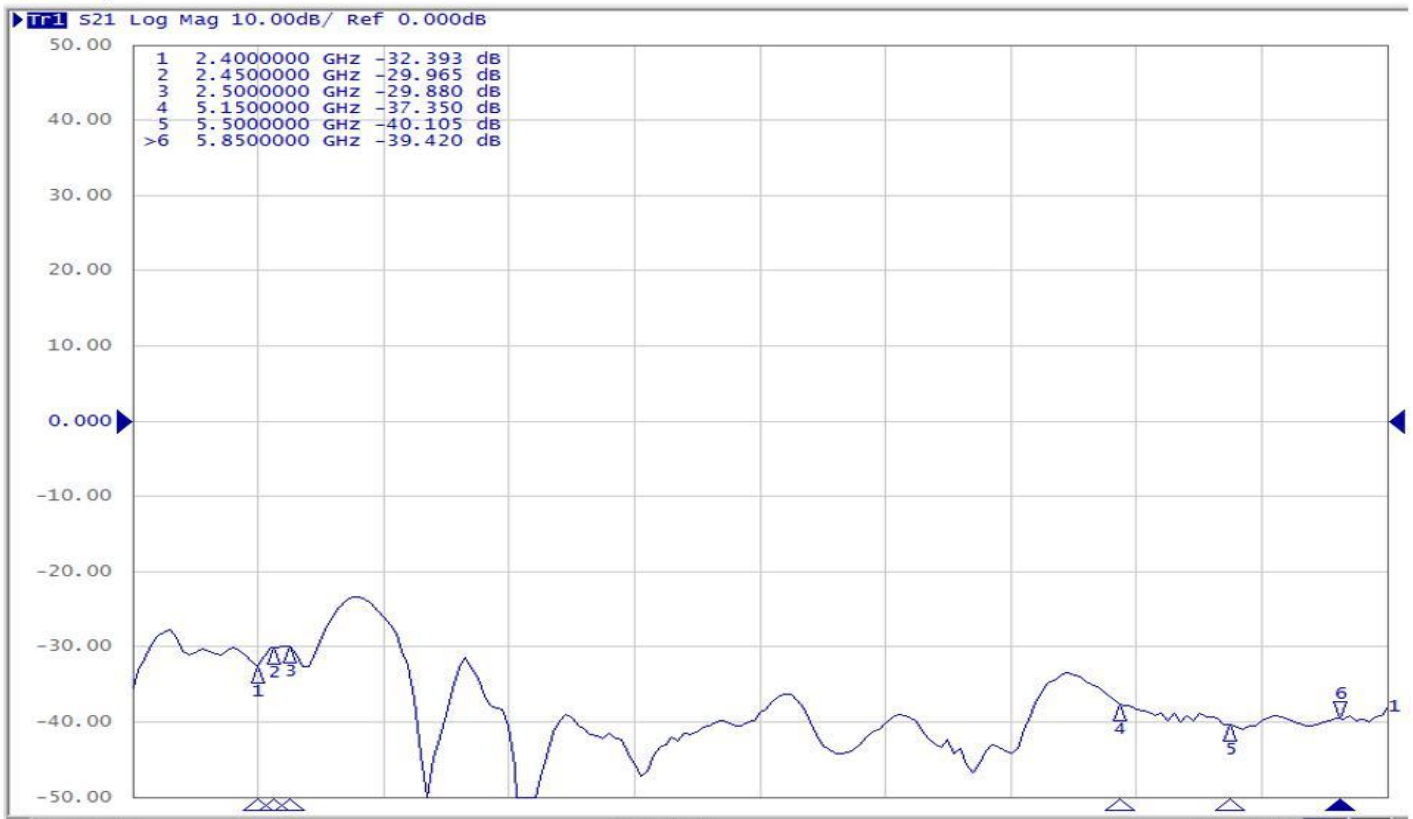
BT2和wifi4



BT3和wifi4



BT1和BT2

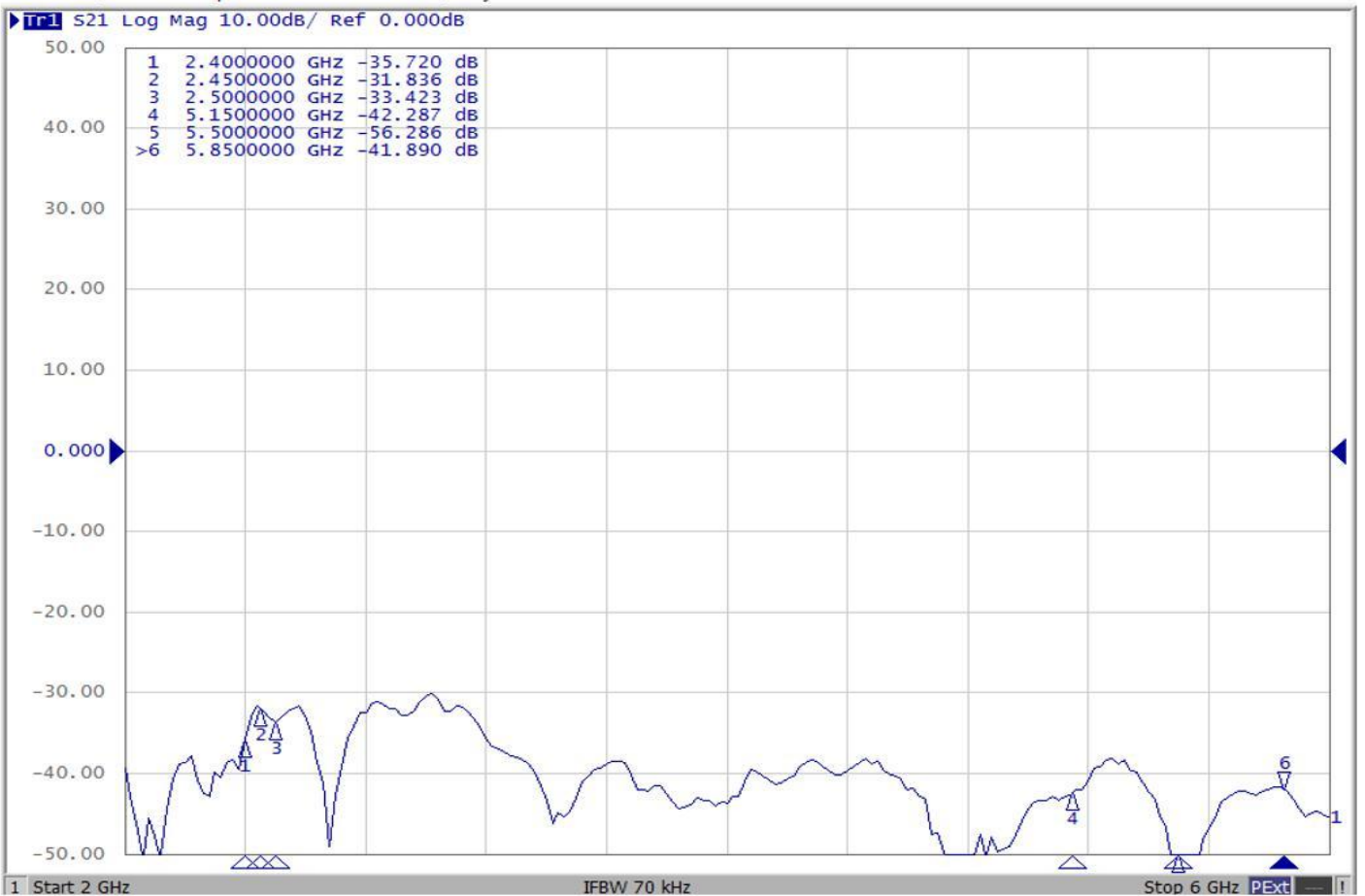


BT1和BT3



BT2和BT3

Trace On/Off Response Stimulus Time/Analysis Max/Min



4.Environment Characteristic

NO.	ITEM	TEST CONDITION	SPECIFICATION
4-1	High Temperature/Humidity Storage Test(non operating)	1.Temperature: $+70 \pm 2^{\circ}\text{C}$ 2.Humidity: 90~95%RH 3.Time: 48hrs	No material deformation is allowed.
4-2	Low Temperature/Humidity Storage Test(non operating)	1.Temperature: $-30 \pm 2^{\circ}\text{C}$ 2.Humidity: 0%RH 3.Time: 48hrs	The VSWR, Gain, Radiation Pattern must be met specifications after these test.

5.Raw Material Detection List

N/A