

Antenna Test Report

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Approval : Chen Guoqiang

Date : 2021 / 01 / 15



1. Device Profile

Device





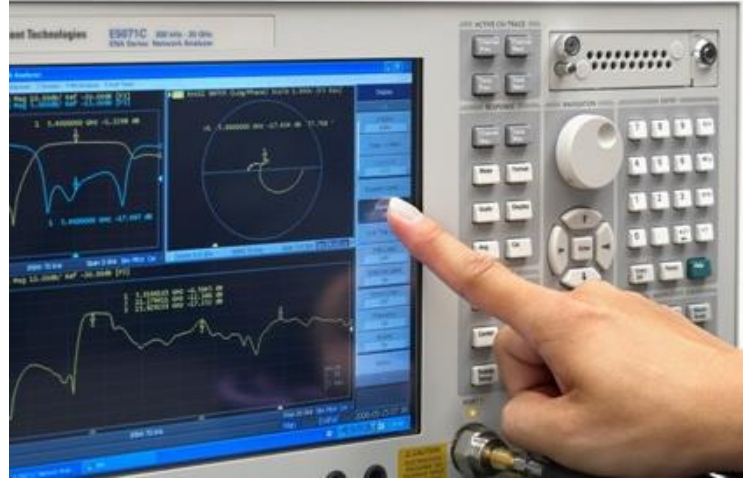
2. Antenna WiFi Test

*Antenna
WiFi*

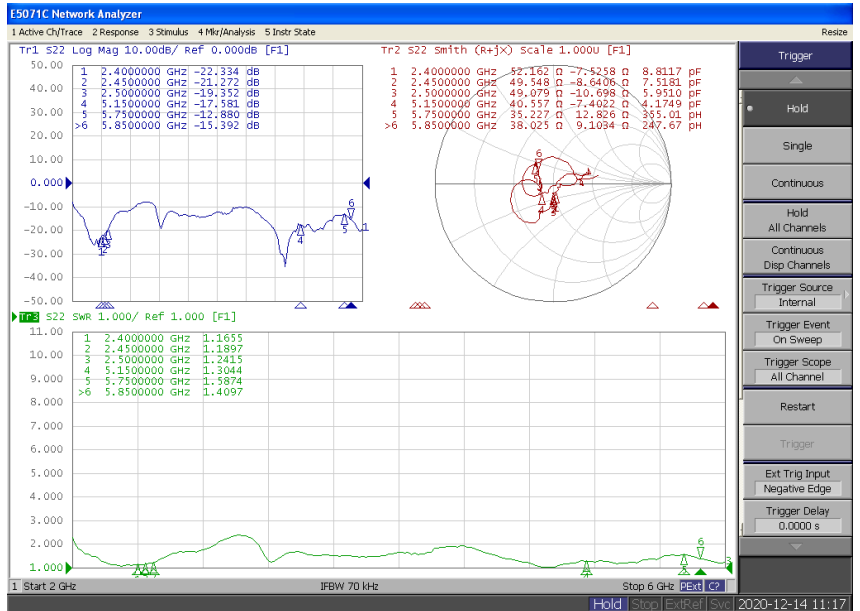




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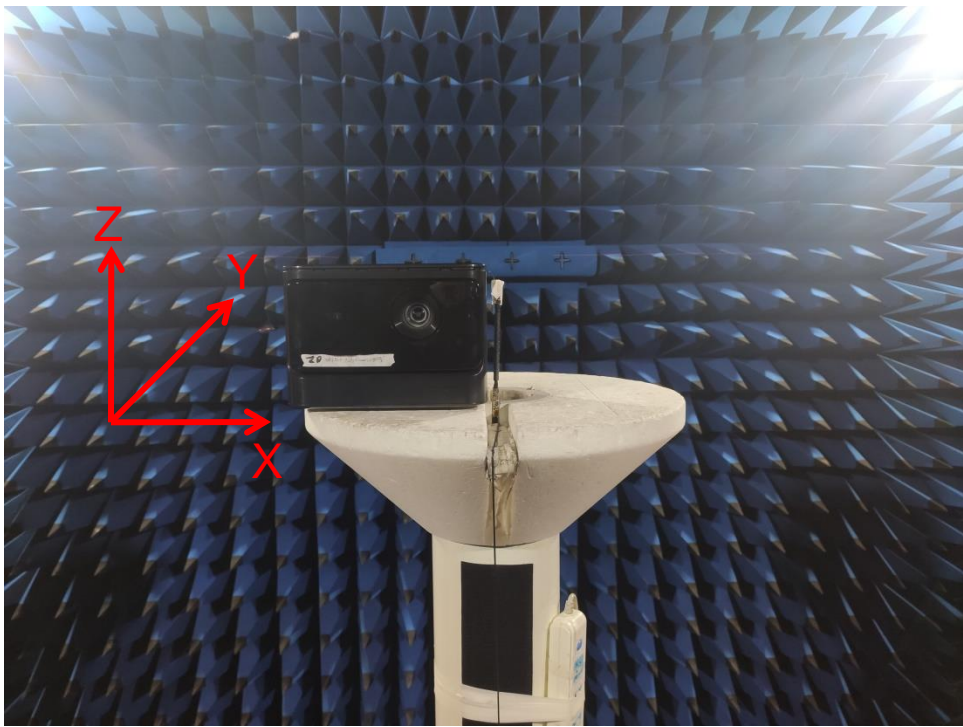


S Parameter Test // WiFi1 Antenna





Antenna Passive Test





Passive Test For WiFi1 Antenna(2.4G)

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	63.5	-2.0	4.3
2410	63.0	-2.0	4.3
2420	62.4	-2.1	4.3
2430	63.4	-2.0	4.4
2440	64.0	-1.9	4.4
2450	64.9	-1.9	4.4
2460	63.7	-2.0	4.3
2470	64.0	-1.9	4.4
2480	62.7	-2.0	4.3
2490	62.7	-2.0	4.3
2500	61.5	-2.1	4.2

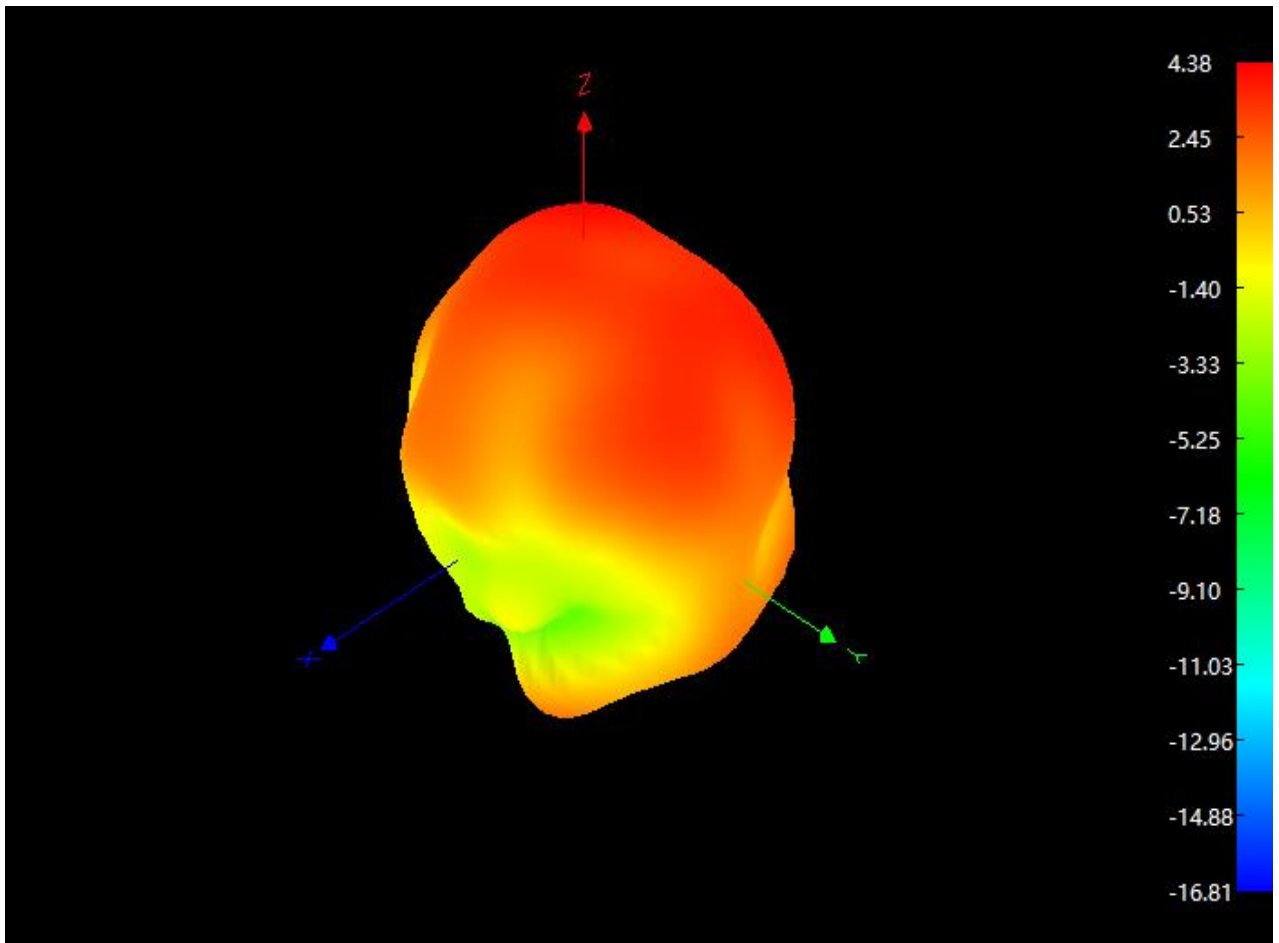


Passive Test For WiFi1 Antenna(5.8G)

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
5150	49.4	-3.1	2.4
5200	48.3	-3.2	2.7
5250	51.8	-2.9	3.0
5300	49.7	-3.0	3.3
5350	49.0	-3.1	3.2
5400	48.8	-3.1	3.0
5450	51.8	-2.9	3.5
5500	53.4	-2.7	3.6
5550	54.0	-2.7	4.1
5600	54.5	-2.6	3.3
5650	53.2	-2.7	3.3
5700	52.5	-2.8	2.9
5750	52.7	-2.8	2.9
5800	54.2	-2.7	2.8
5850	56.0	-2.5	2.8

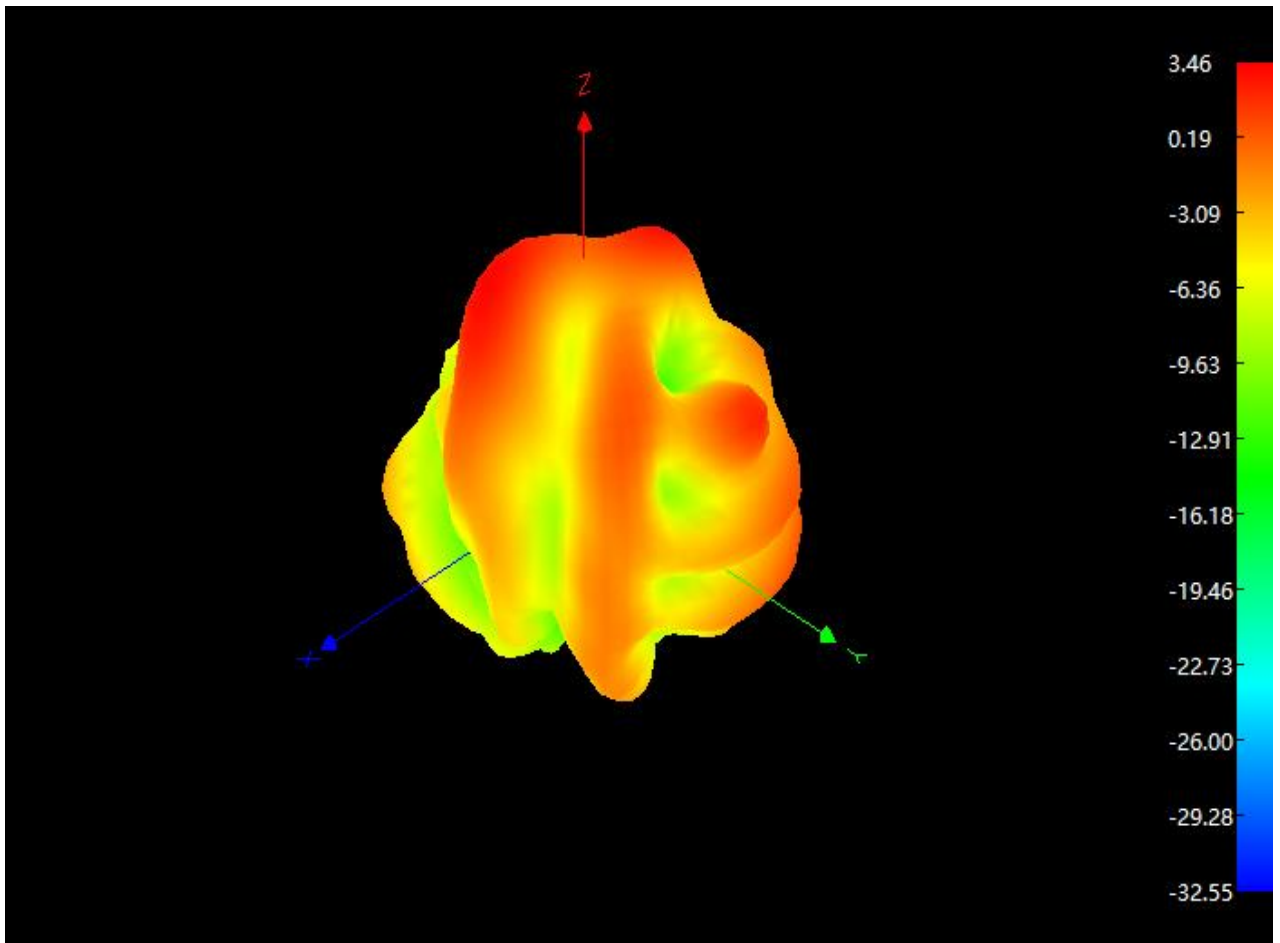


Radiation Pattern For WiFi1 Antenna(2.4G)





Radiation Pattern For WiFi1 Antenna(5.8G)





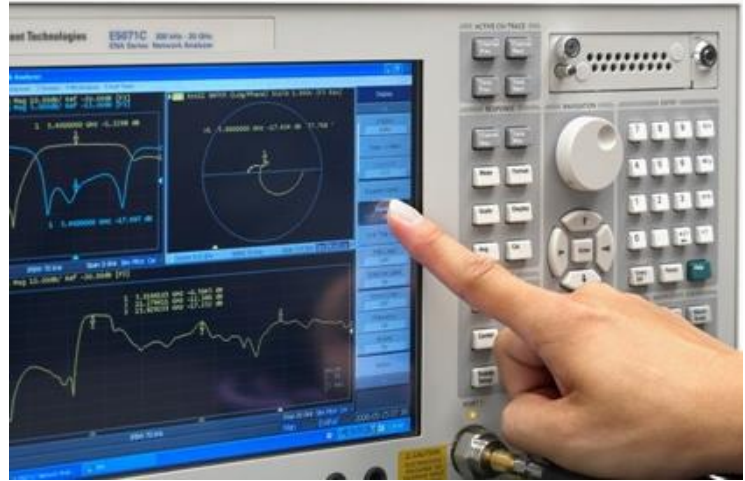
3. Antenna WiFi2 Test

*Antenna
WiFi2*

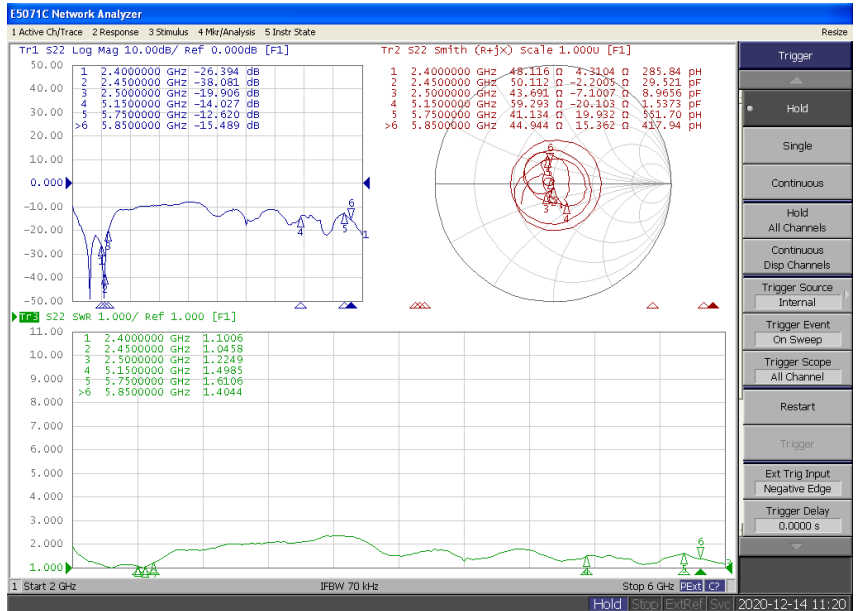




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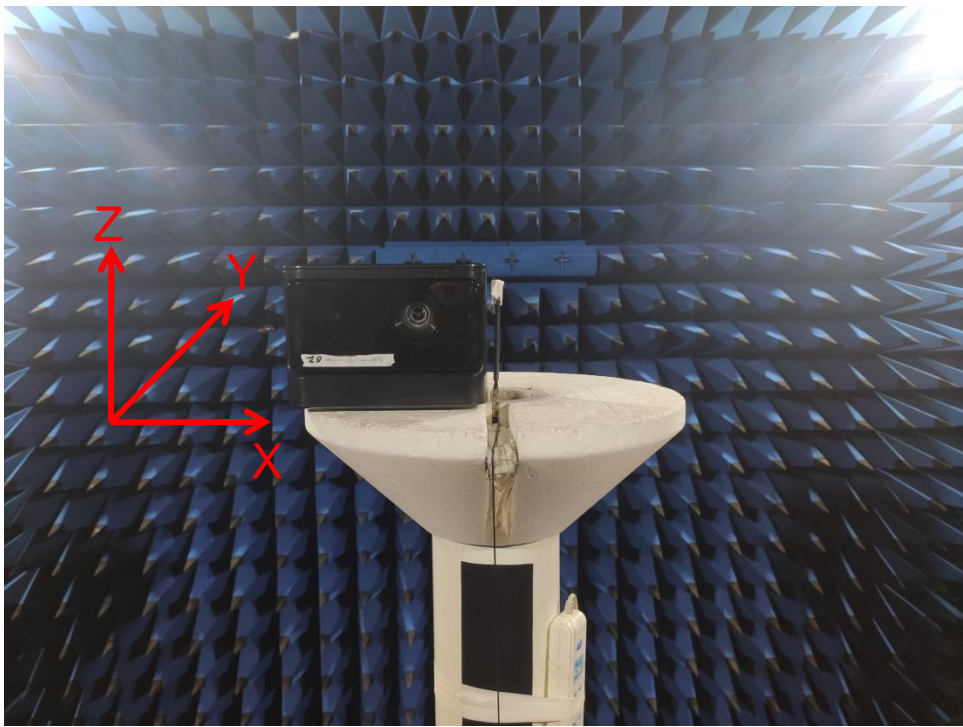


S Parameter Test // WiFi2 Antenna





Antenna Passive Test





Passive Test For WiFi2 Antenna(2.4G)

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	60.4	-2.2	4.2
2410	59.6	-2.3	4.0
2420	58.5	-2.3	3.8
2430	59.4	-2.3	3.8
2440	59.6	-2.3	3.7
2450	60.8	-2.2	3.6
2460	58.6	-2.3	3.5
2470	59.4	-2.3	3.5
2480	57.5	-2.4	3.5
2490	57.8	-2.4	3.5
2500	55.5	-2.6	3.5

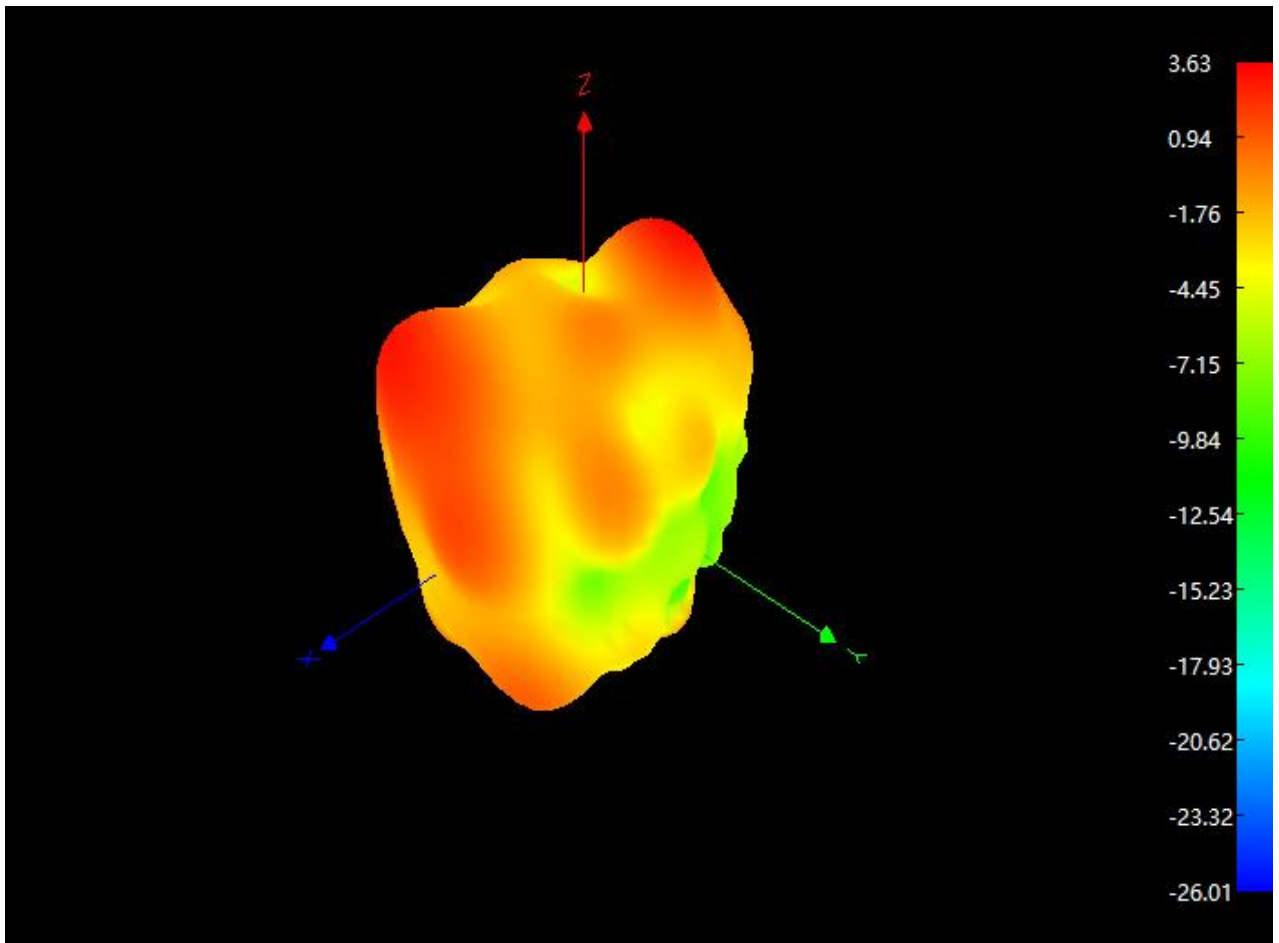


Passive Test For WiFi2 Antenna(5.8G)

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
5150	47.0	-3.3	2.6
5200	46.6	-3.3	3.4
5250	46.2	-3.4	2.7
5300	44.3	-3.5	2.0
5350	43.6	-3.6	1.5
5400	42.8	-3.7	1.6
5450	43.8	-3.6	1.9
5500	43.6	-3.6	1.4
5550	43.3	-3.6	1.9
5600	44.9	-3.5	1.7
5650	43.3	-3.6	2.5
5700	44.5	-3.5	2.9
5750	42.5	-3.7	2.8
5800	42.0	-3.8	2.4
5850	41.4	-3.8	2.3

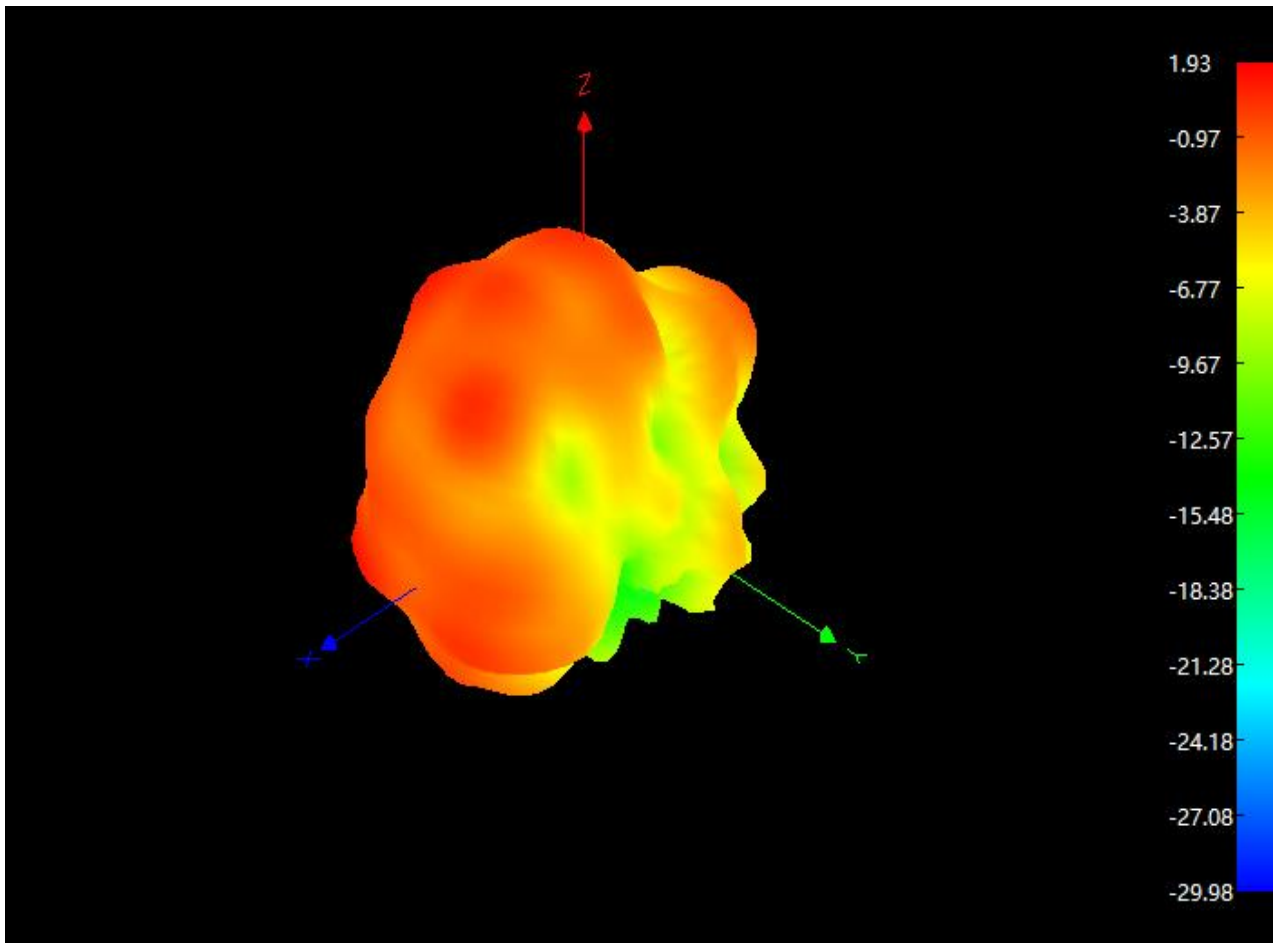


Radiation Pattern For WiFi2 Antenna(2.4G)





Radiation Pattern For WiFi2 Antenna(5.8G)





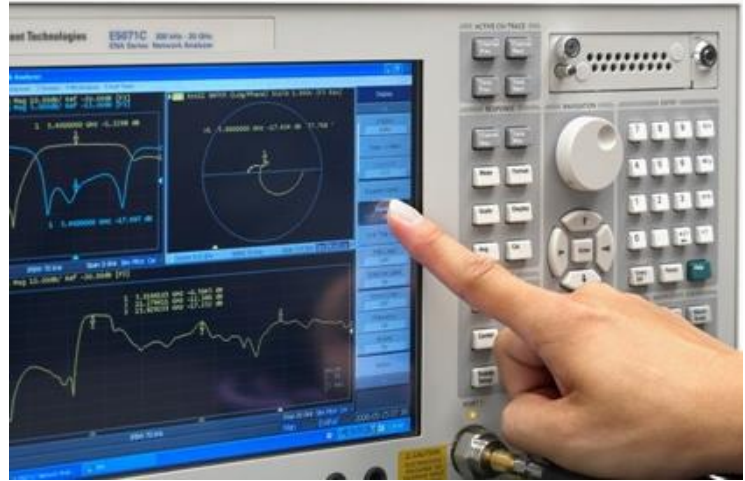
4. Antenna BT Test

*Antenna
BT*

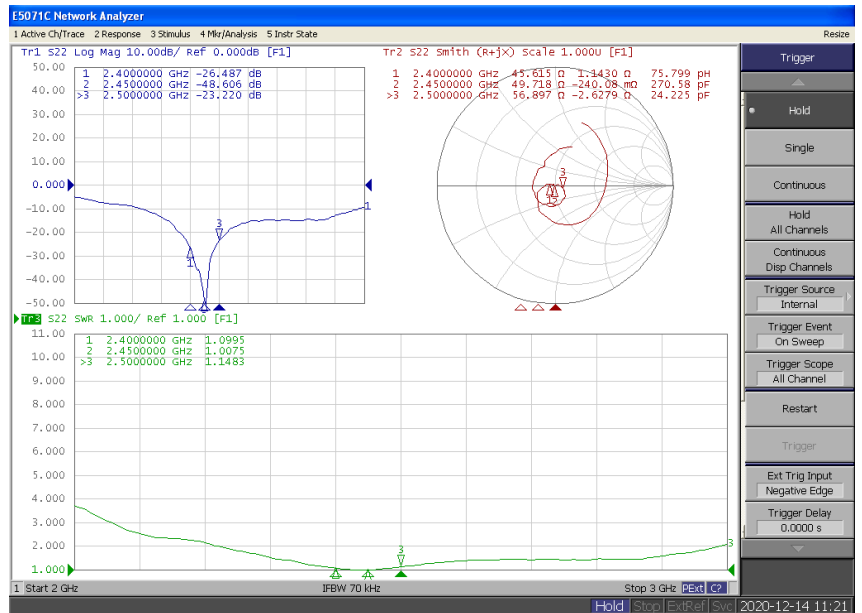




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S Parameter Test // BT Antenna





Antenna Passive Test



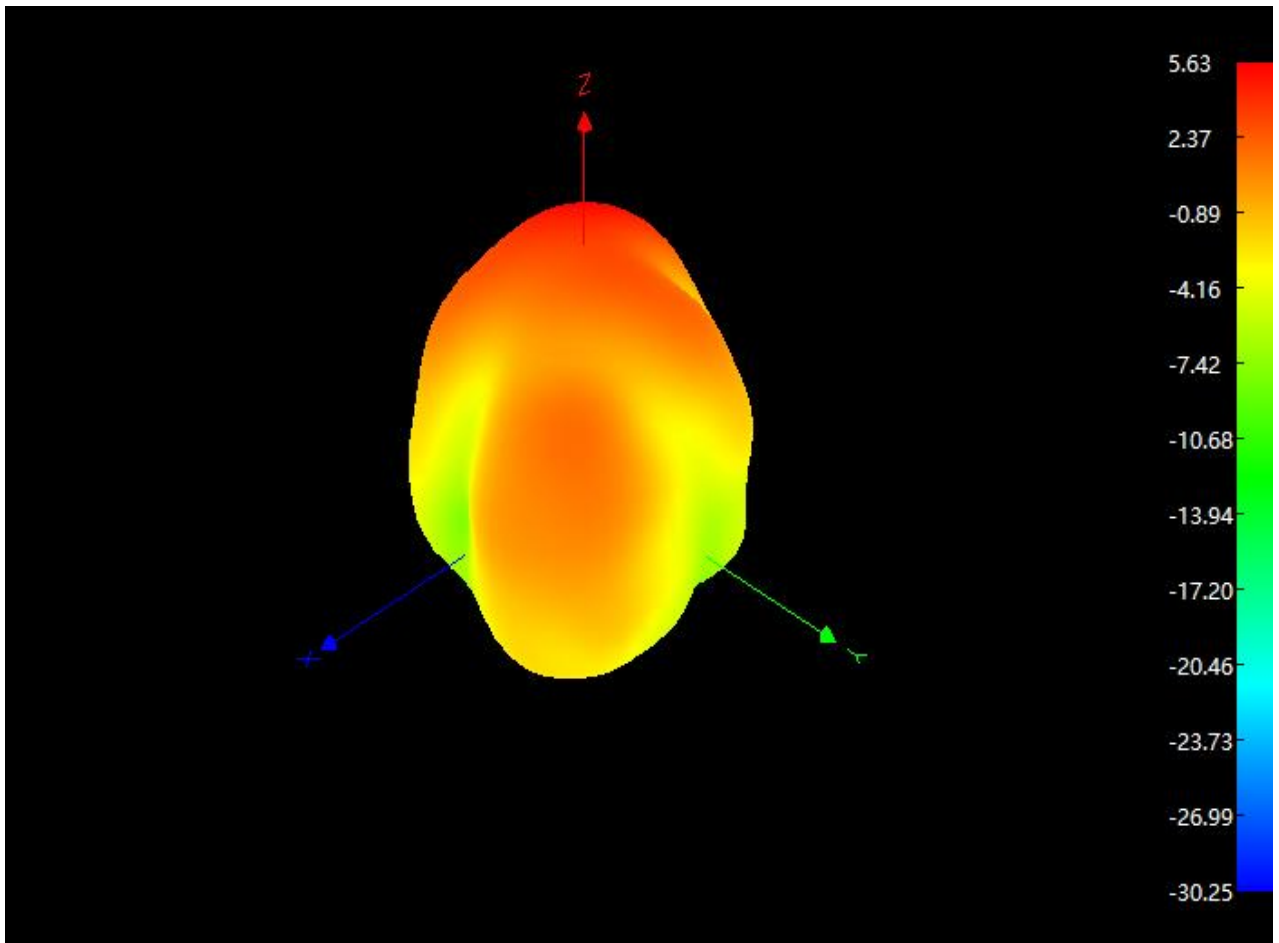


Passive Test For BT Antenna

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	57.3	-2.4	5.7
2410	57.4	-2.4	5.7
2420	58.1	-2.4	5.7
2430	58.3	-2.3	5.8
2440	56.8	-2.5	5.7
2450	57.3	-2.4	5.6
2460	56.9	-2.5	5.7
2470	57.5	-2.4	5.6
2480	56.0	-2.5	5.4
2490	56.0	-2.5	5.2
2500	55.6	-2.6	5.1



Radiation Pattern For BT Antenna





Active Test For WIFI Antenna(欧智通模块)

Band	Channel	Data Rate	TRP	EIRP	Data Rate	TIS	EIS
WIFI 2.4G 802.11b	1	11Mbps	11.6	19.3	11Mbps	-83.6	-93.0
	7		14.5	23.0		-80.3	-88.3
	13		13.0	20.7		-81.0	-87.8
WIFI 2.4G 802.11g	1	5.4Mbps	12.0	20.5	54Mbps	-71.1	-76.0
	7		12.4	19.4		-72.8	-77.8
	13		10.3	14.4		-73.9	-78.2
WIFI 2.4G 802.11n	1	6.5Mbps	8.3	13.6	65Mbps	-66.6	-74.3
	7		9.3	14.9		-64.7	-73.4
	13		10.6	19.2		-67.1	-73.9
WIFI 5G 802.11a	149	6Mbps	14.0	19.2	54Mbps	-73.5	-78.6
	157		14.4	19.6		-73.9	-78.5
	165		13.3	17.9		-73.6	-78.2



Active Test For WIFI Antenna(高盛达模块)

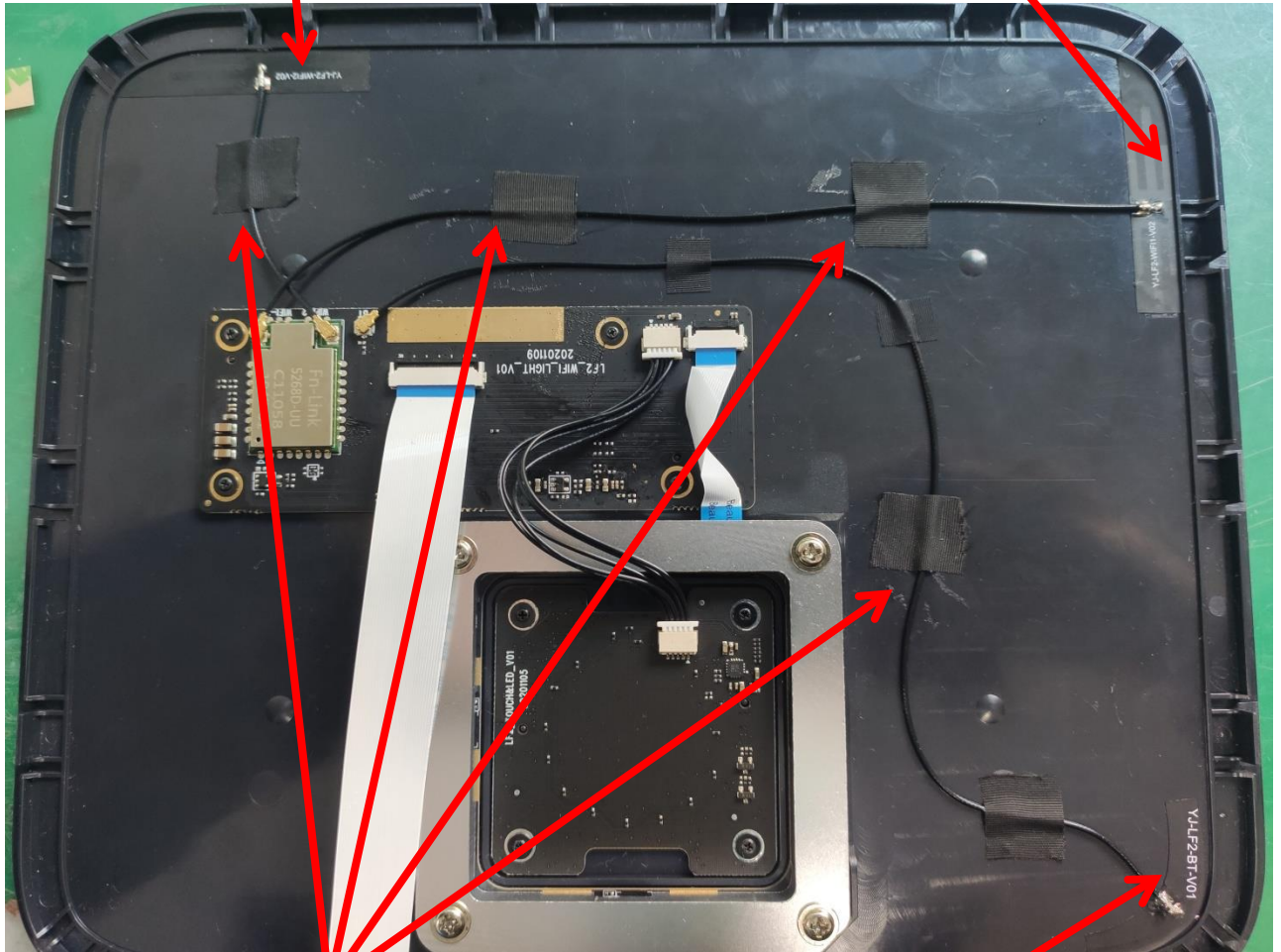
Band	Channel	Data Rate	TRP	EIRP	Data Rate	TIS	EIS
WIFI 2.4G 802.11b	1	11Mbps	11.8	18.7	11Mbps	-84.3	-90.2
	7		12.7	18.0		-84.3	-91.0
	13		14.1	21.8		-81.2	-89.5
WIFI 2.4G 802.11g	1	5.4Mbps	11.8	18.3	54Mbps	-72.7	-77.8
	7		10.8	15.7		-71.8	-76.5
	13		9.0	13.7		-71.5	-76.6
WIFI 2.4G 802.11n	1	6.5Mbps	9.8	14.6	65Mbps	-68.8	-73.2
	7		9.3	15.1		-68.0	-75.0
	13		8.1	14.7		-68.8	-73.9
WIFI 5G 802.11a	149	6Mbps	13.0	18.4	54Mbps	-75.8	-81.3
	157		13.4	19.2		-76.2	-82.4
	165		14.6	20.5		-75.1	-81.0



5. Assembly Picture

WiFi2 Antenna

WiFi1 Antenna



醋酸布固定同轴
线走线

BT Antenna