RG2102

Antenna Specifications

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1 Electronic Specification

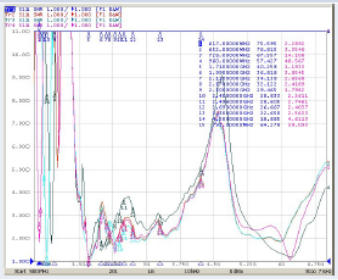
1.1 Top Antenna

1.1.1 VSWR & Gain

① DRX Passive Data (ANT2)

VSWR & Passive Data(Main Band)

VSWR

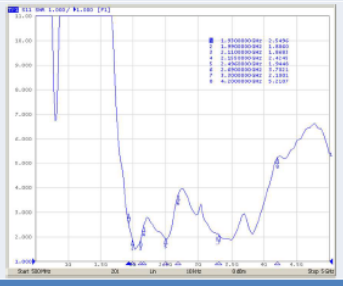
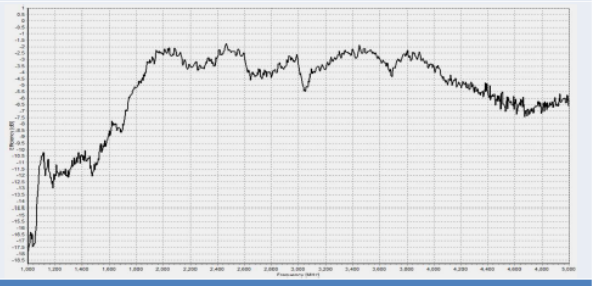


Total Radiation Efficiency

Gain

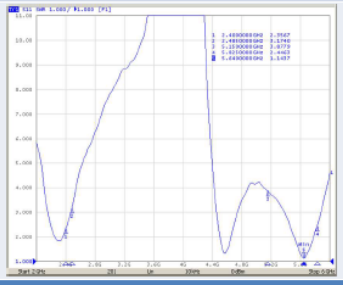
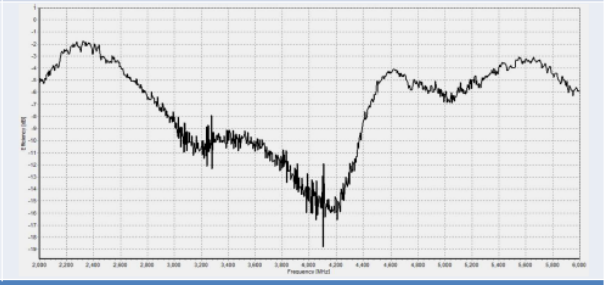
Band	Freq.[MHz]	Switch Logic		Avg Gain. [dBi]	Peak Gain. [dBi]
B2(25)	1850 – 1910	RF2	15nH	-1.97	-1.54
	1930 – 1990			-3.47	-3.00
B4(66)	1710 – 1755	RF4	100pF	-1.45	-1.19
	2110 – 2155			-3.18	-2.77
B5(26)	869 – 894	RF4	100pF	-2.93	-2.79
B12	728 – 746	RF2	15nH	-3.32	-2.87
B41	2496 – 2690	RF3	Open	-2.42	-1.91
B48	3550 – 3700	RF3	Open	-2.60	-2.20
B71	617 – 652	RF1	47nH	-6.34	-6.34

② MIMO DRX, PRX Passive Data (ANT3)

VSWR & Passive Data	
VSWR	Total Radiation Efficiency
	

Gain				
Band	Freq.[MHz]	Switch Logic	Avg Gain. [dBi]	Peak Gain. [dBi]
B48(n48)	3550 – 3700	-	-3.19	-2.40
B2(25)	1930 – 1990	-	-2.58	-2.26
B4(66)	2110 – 2155	-	-2.87	-2.42
B41	2496 – 2690	-	-3.11	-2.18
n77	3300 - 4200	-	-3.13	-1.88

③ WIFI0 Passive Data (ANT6)

VSWR & Passive Data	
VSWR	Total Radiation Efficiency
	

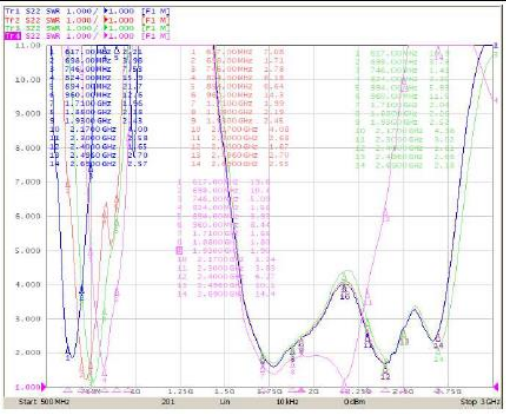
Gain				
Band	Freq.[MHz]	Switch Logic	Avg Gain. [dBi]	Peak Gain. [dBi]
2.4G	2400 – 2485	-	-2.64	-2.21
5G	5150 – 5825	-	-4.10	-3.00

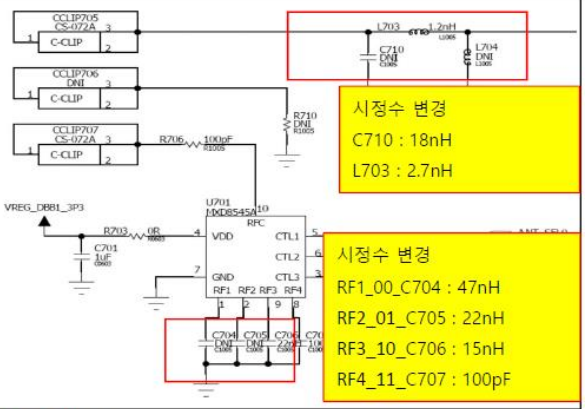
1.2 BTM Antenna

1.2.1 VSWR & Gain

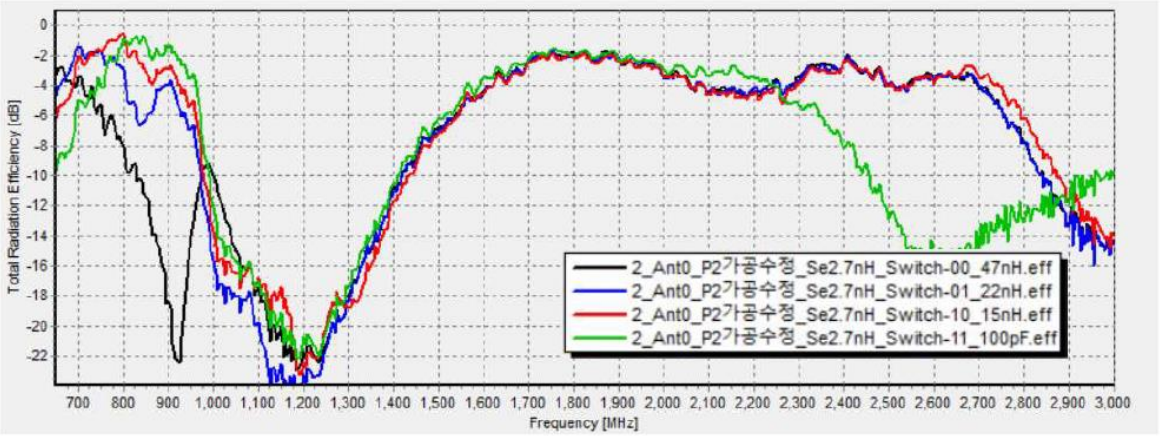
① Main Passive Data (ANT0)

VSWR 및 Switch Logic





Passive Chamber Data

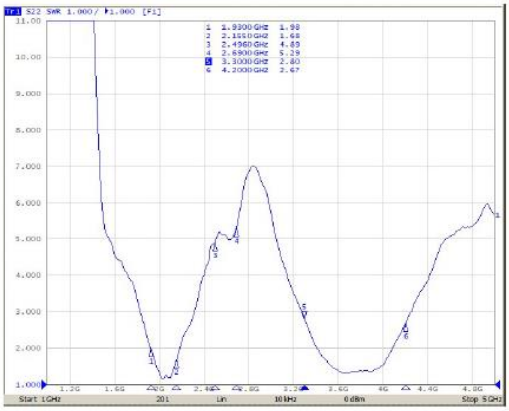


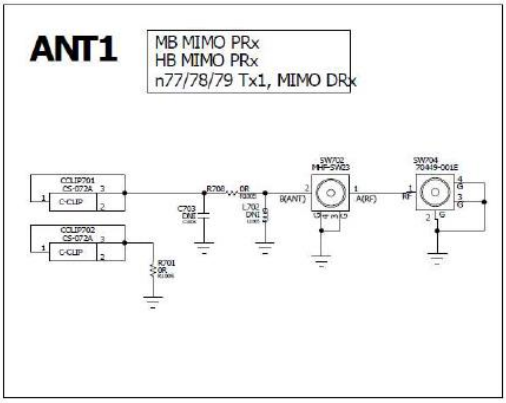
Passive Chamber Data (Gain)

BAND	Freq.[MHz]	Switch Logic	Gain [dB]		BAND	Freq.[MHz]	Switch Logic	Gain [dB]	
			AVG.	Peak				AVG.	Peak
B71	617-698	RF1_CTL : 00_47nH	(650-698) -3.44	-2.75	B29	717-728	RF3_CTL : 10_15nH	-1.48	-0.58
B12	699-746	RF2_CTL : 01_22nH	-1.80	-1.43	B14	758-798		-1.22	-0.93
B5(26)	824-894	RF4_CTL : 11_100pF	-1.44	-0.66	B20	791-862	RF4_CTL : 11_100pF	-1.13	-0.66
B4(66)	1710-1755		-1.83	-1.56	B8	880-960		-2.32	-1.33
	2110-2155		-3.05	-2.64	B3	1710-1880		-1.89	-1.56
B2(25)	1850-1990		-2.19	-1.66	B39	1880-1920		-2.05	-1.66
B41	2496-2690	RF1_CTL : 00_47nH	-3.55	-2.99	B1	1920-2170		-2.82	-2.03
					B30	2305-2360	RF1_CTL : 00_47nH	-2.81	-2.39
					B7	2500-2690		-3.55	-2.99
					B38	2570-2620		-3.34	-2.99

② MIMO PRX Passive Data (ANT1)

VSWR 및 Switch Logic





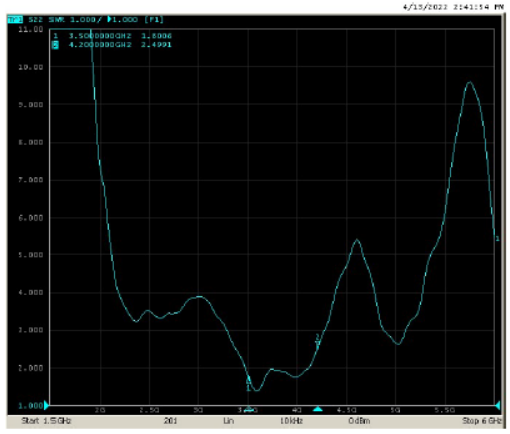
Passive Chamber Data

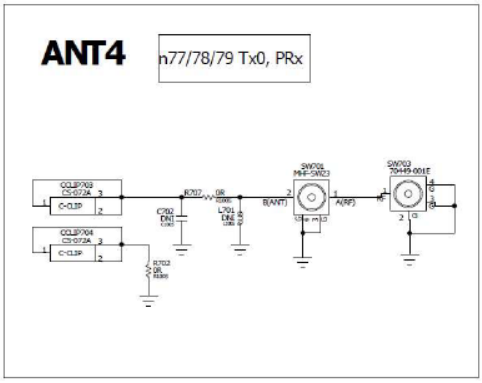
Passive Chamber Data (Gain)

BAND	Freq.[MHz]	Switch Logic	Gain [dB]		BAND	Freq.[MHz]	Switch Logic	Gain [dB]	
			AVG.	Peak				AVG.	Peak
B2(25)	1930-1990	-	-2.11	-1.72	B48	3550-3700	-	-1.79	-1.32
B4(66)	2110-2155		-2.45	-2.24	n77	3300-4200		-2.03	-1.12
B41	2496-2690		-5.12	-4.41					

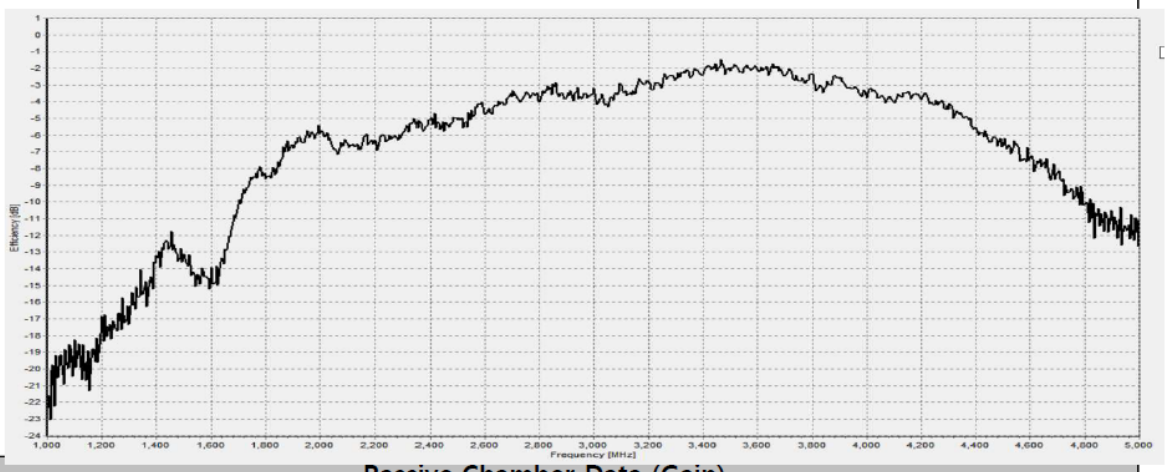
③ UHB TRX0 Passive Data (ANT4)

VSWR 및 Switch Logic





Passive Chamber Data

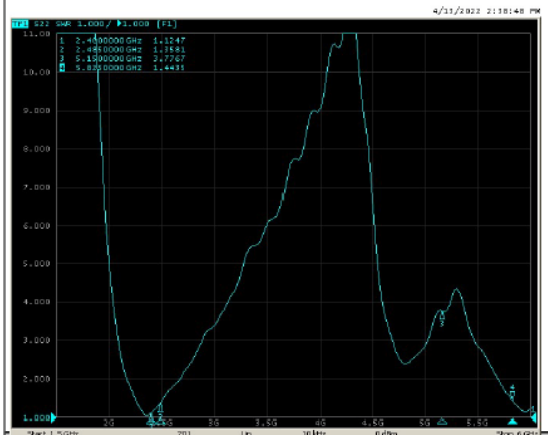


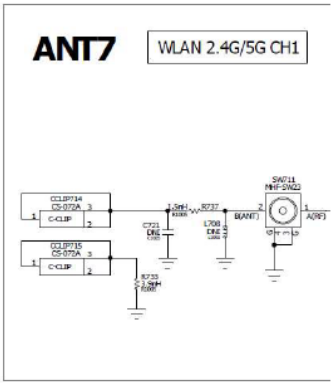
Passive Chamber Data (Gain)

BAND	Freq.[MHz]	Switch Logic	Gain [dB]	
			AVG.	Peak
B48 (n48)	3550-3700	-	-2.04	-1.71
n77	3300-4200		-2.65	-1.49

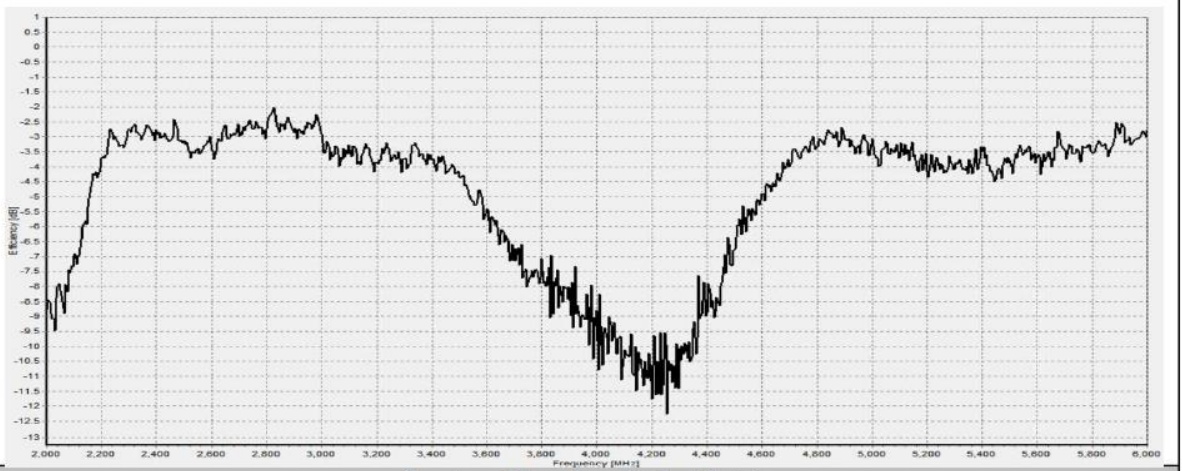
④ WIFI1 Passive Data (ANT7)

VSWR 및 Switch Logic





Passive Chamber Data



Passive Chamber Data (Gain)

BAND	Freq.[MHz]	Switch Logic	Gain [dB]	
			AVG.	Peak
2.4GHz	2400-2485	-	-2.94	-2.41
5GHz	5150-5825		-3.73	-2.84

2 Test Condition

2.1 Test Environment (Condition/Method)

① Voltage Standing Wave Ratio(VSWR)

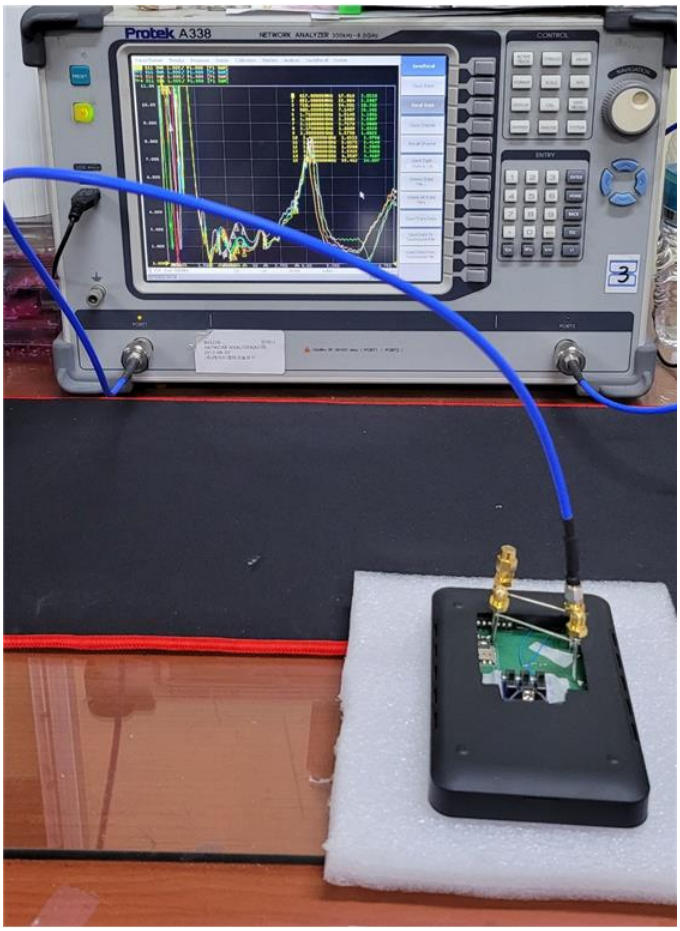
Step 1. Set the frequency range after connect 50cm cable to Network analyzer.

Step 2. Connect Calibration Kit to Network analyzer and calibrate.

Step 3. Fix the cable and keep separation distance over 30cm for reducing effect by Network analyzer.

Step 4. Fix insulator over 5cm on the bottom of measuring antenna.

Step 5. Measure VSWR with setting marker of desired frequency.

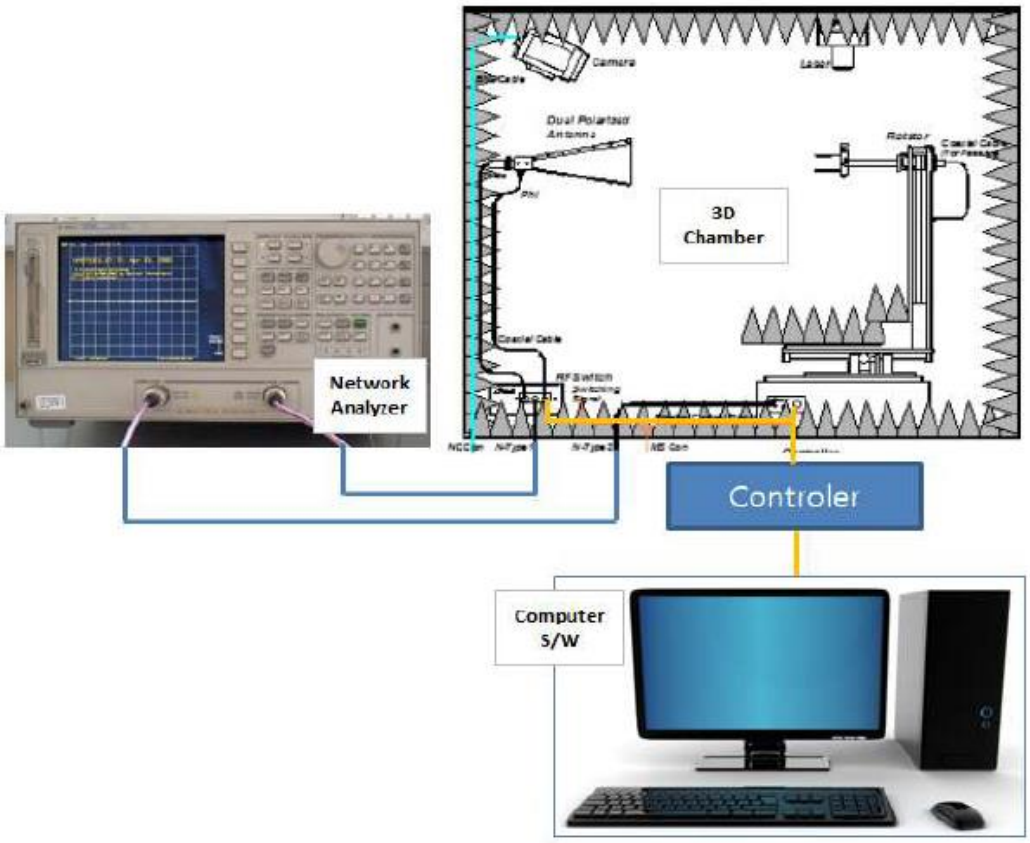


② Radiation & Gain

Step 1. Calibrate the Chamber system using Horn antenna, and set up the software to control the Chamber system at the same time.

Step 2. Keep the measuring antenna to holder.

Step 3. Measure Gain & efficiency.



3 Antenna Type : PIFA

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
Network Analyzer	Protek	A338	GSI_12090007	300kHz - 8G	Aug. 04. 2022	Aug. 04. 2023	VSWR
Network Analyzer	Agilent Technologies	ENA E5071B	MY42100528	300kHz - 8.5G	May. 02. 2022	May. 02. 2023	Radiation Gain

5 Test Site

Test Site	Vendor	Address
Korea	Patron	22, Samsung 1-ro 2-gil, Seokwoo-dong, Hwaseong-si, Gyeonggi-do