

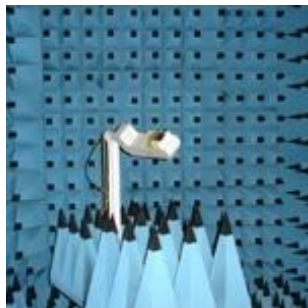
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Test & Lab. Information



Outside the chamber



Inside the chamber

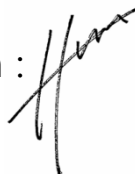


Inside the chamber



Network Analyzer

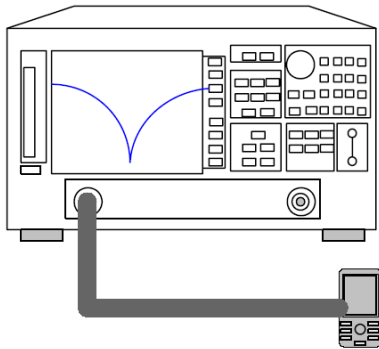
EQUIPMENT	Model	Maker	Calibration date	Cal. Expiration Date
Network Analyzer	5071B ENA	Agilent	2022.10.24	2023.10.24
Anechoic Chamber	3m *3m * 6m	MTG	2023.9.28	2024.9.27

- **Measurement location** : INPAQ Korea R&D Center
- **Address** : #102-610, 36, Bucheon-ro 198beon-gil, Bucheon-si, Gyeonggi-do
- **Test S/W** : MTG / VWM ver.21
- **Test date** : 2023/10/5
- **Tester** : Jee-Hun.Seo **Sign** : 

Measuring Process

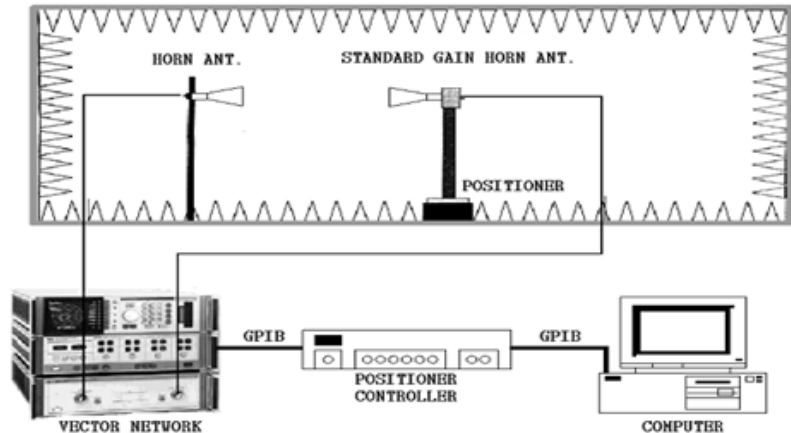
DUT test method

1. After attaching the antenna to the DUT, connect the coaxial cable to the DUT.
2. After calibration the Network analyzer, connect the coaxial cable connected to the DUT to the Port. (The DUT shall be tested on a nonconductive table when measured.)
3. Connect the coaxial cable connected to the DUT to the Port of the Network Analyst.
4. Set the point marker to the corresponding frequency band.



Chamber test method

1. The antenna is tested with the DUT mounted.
2. Antenna is tested in an anechoic chamber.
3. A dipole antenna or horn antenna is installed in the chamber system to face each other.
4. Run software to perform calibration.
5. Remove the dipole antenna or horn antenna on the positioner side and fix the terminal to be measured there.
6. Measure by running the chamber software.
7. Check the gain data after the measurement based IEEE std 149-2021.



PCB Overview

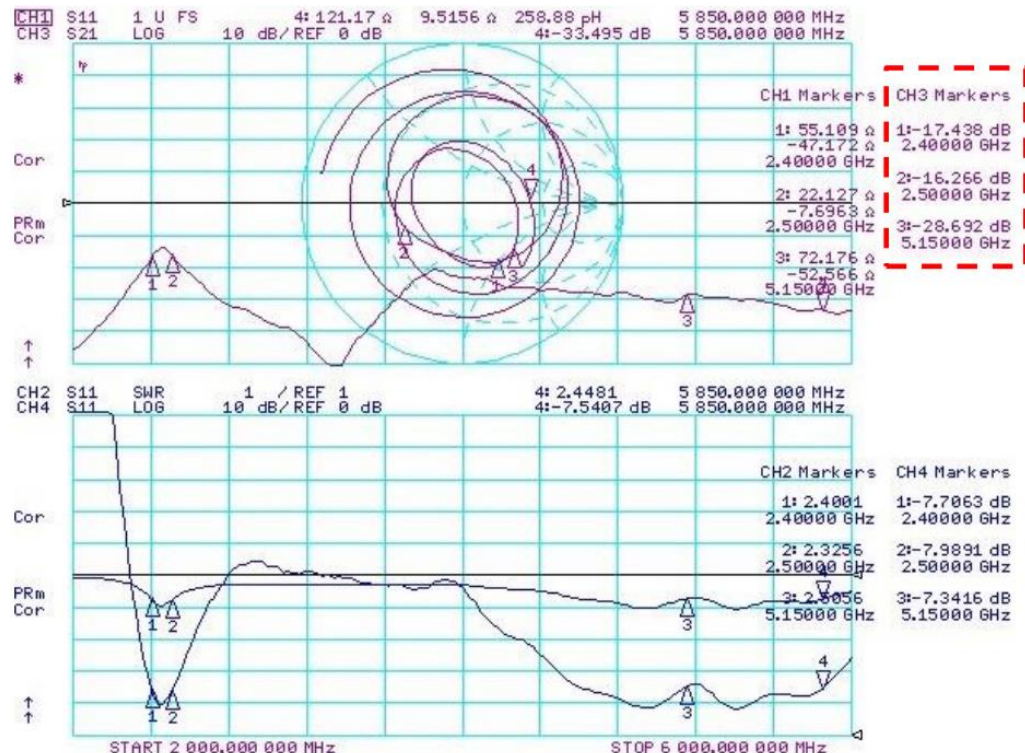
Please refer to Supplement photos for Antenna report

Test setup photo

Please refer to Supplement photos for Antenna report

Smith Chart & VSWR / 3D Gain Data _ ANT 0_PCB Only

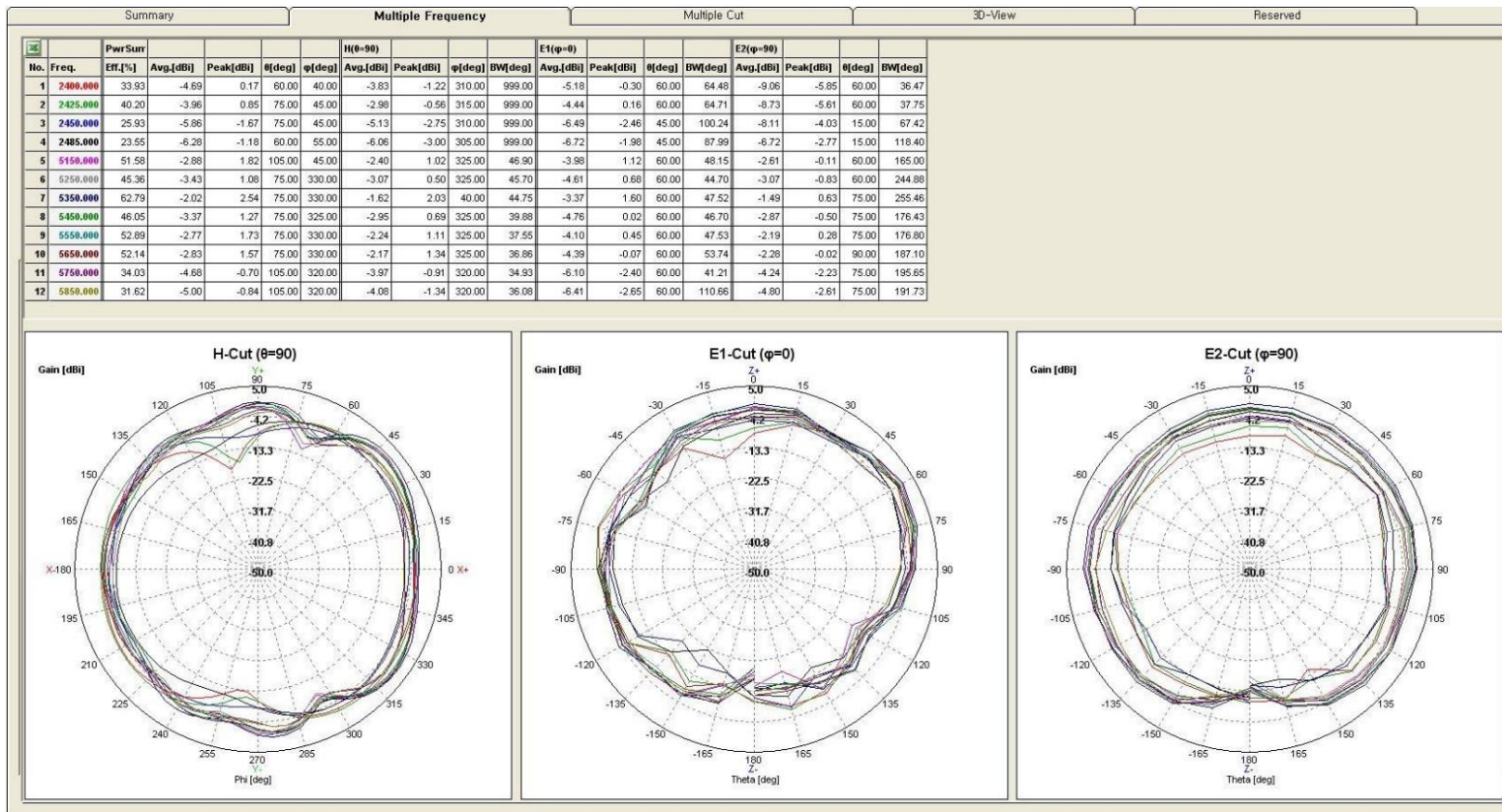
[Smith Chart & VSWR]



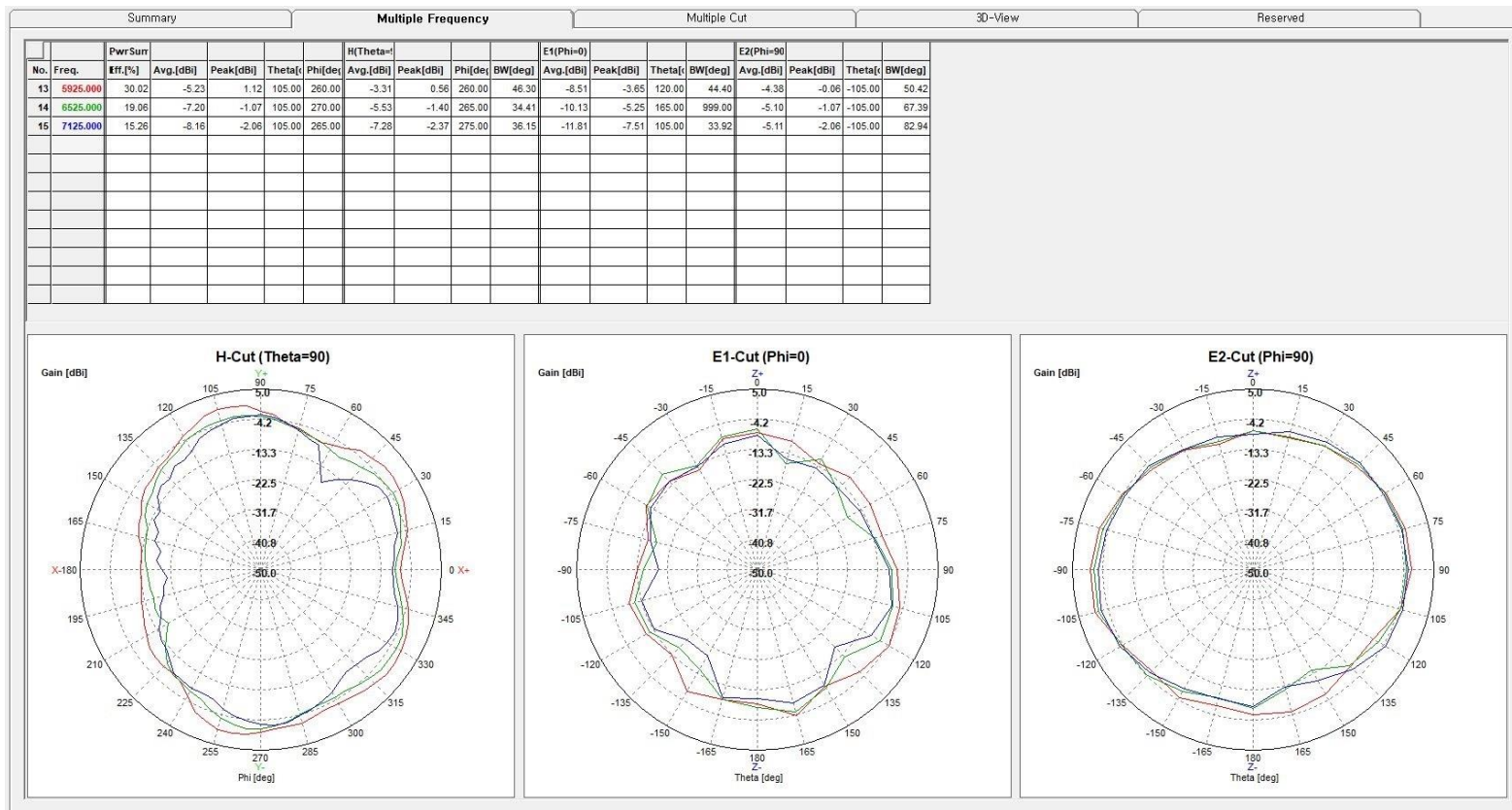
[3D Gain data]

Freq.[MHz]	Eff.[%]	Avg.[dBi]	Peak[dBi]
2400	33.93	-4.69	0.17
2425	40.2	-3.96	0.85
2450	25.93	-5.86	-1.67
2485	23.55	-6.28	-1.18
5150	51.58	-2.88	1.82
5250	45.36	-3.43	1.08
5350	62.79	-2.02	2.54
5450	46.05	-3.37	1.27
5550	52.89	-2.77	1.73
5650	52.14	-2.83	1.57
5750	34.03	-4.68	-0.7
5850	31.62	-5	-0.84
5925	30.02	-5.23	1.12
6525	19.06	-7.2	-1.07
7125	15.26	-8.16	-2.06

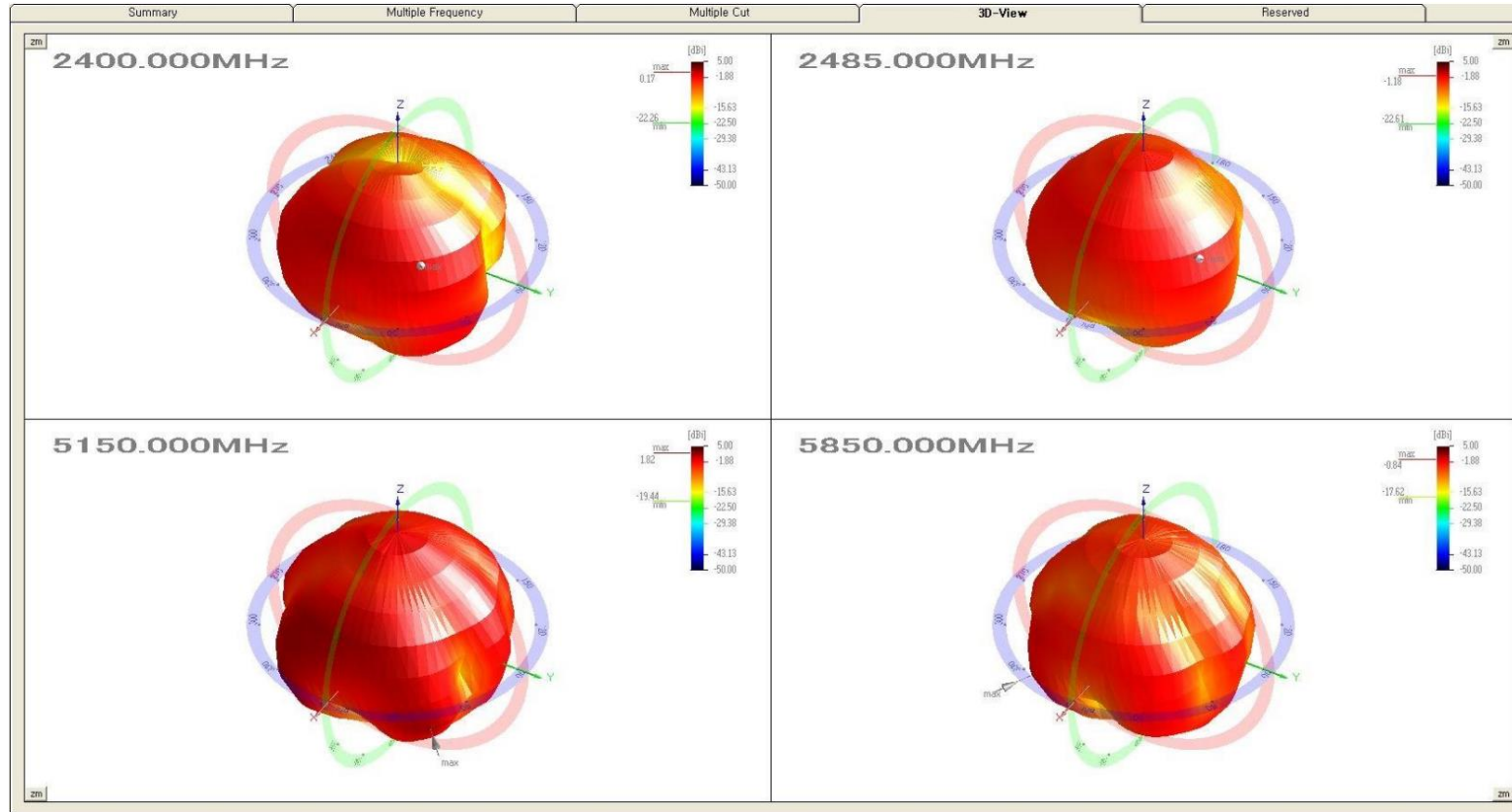
2D Radiation Pattern & Gain _ ANT 0_PCB Only



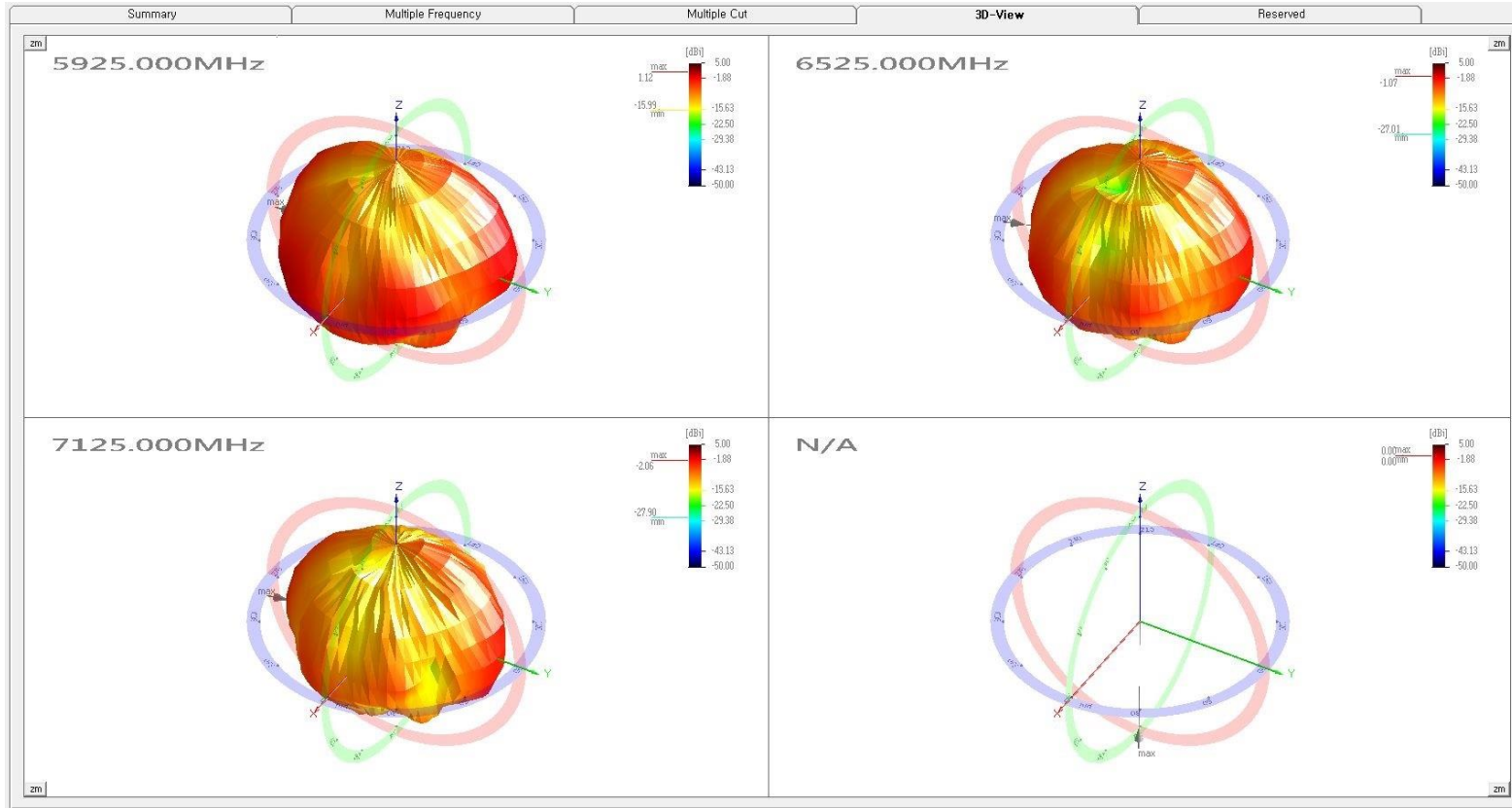
2D Radiation Pattern & Gain _ ANT 0_PCB Only



3D Radiation Pattern _ ANT 0_PCB Only

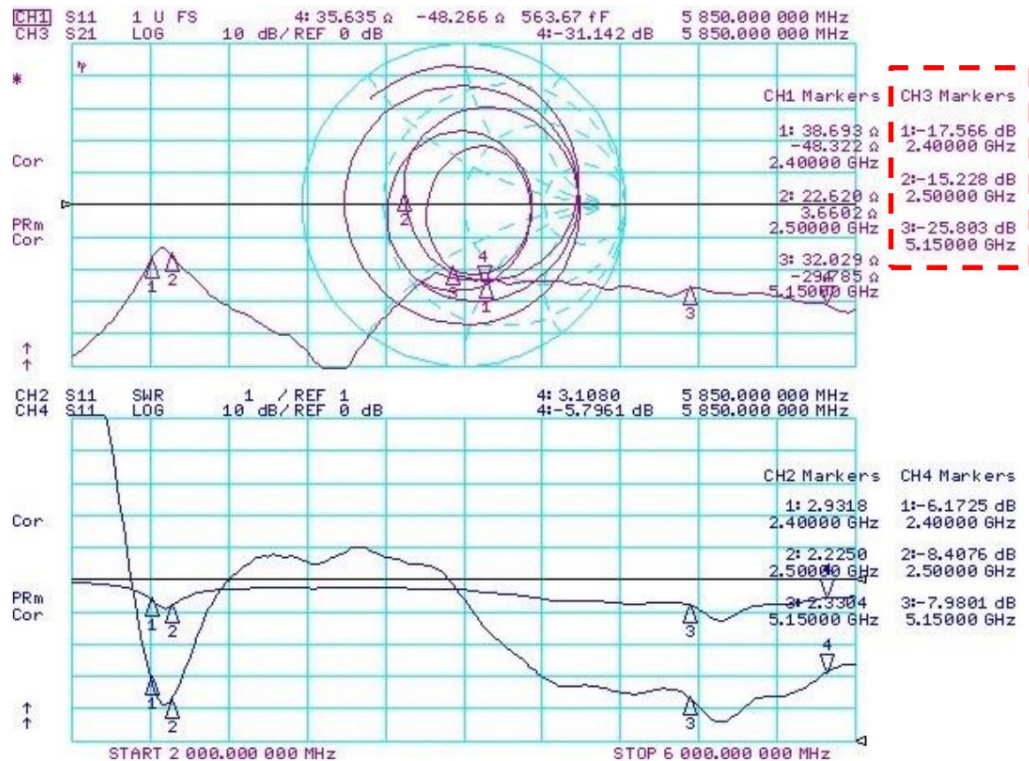


3D Radiation Pattern _ ANT 0_PCB Only



Smith Chart & VSWR / 3D Gain Data _ ANT 1_PCB Only

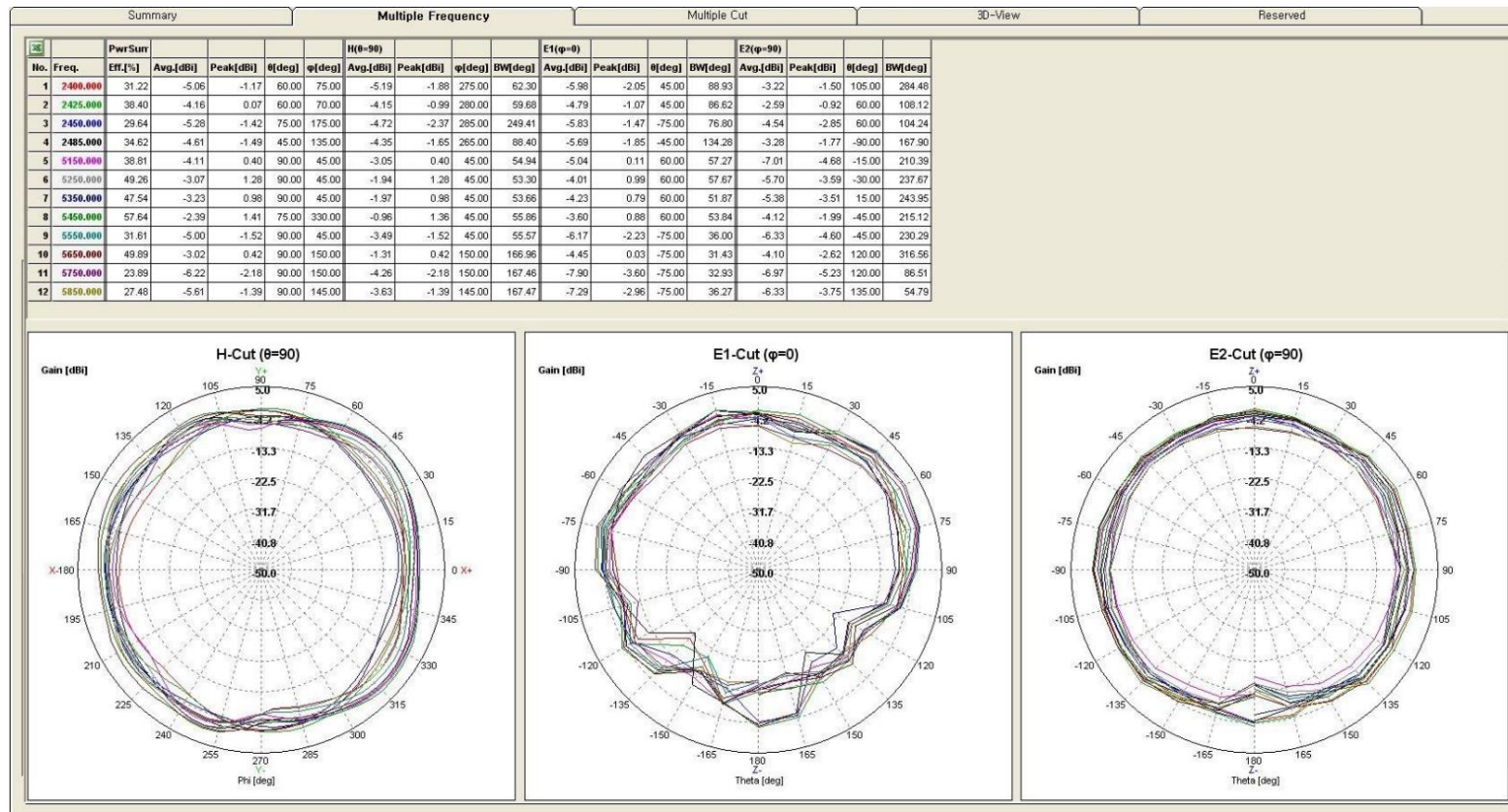
[Smith Chart & VSWR]



[3D Gain data]

Freq.[MHz]	Eff.[%]	Avg.[dBi]	Peak[dBi]
2400	31.22	-5.06	-1.17
2425	38.4	-4.16	0.07
2450	29.64	-5.28	-1.42
2485	34.62	-4.61	-1.49
5150	38.81	-4.11	0.4
5250	49.26	-3.07	1.28
5350	47.54	-3.23	0.98
5450	57.64	-2.39	1.41
5550	31.61	-5	-1.52
5650	49.89	-3.02	0.42
5750	23.89	-6.22	-2.18
5850	27.48	-5.61	-1.39
5925	21.25	-6.73	-0.37
6525	24.56	-6.1	-0.57
7125	19.25	-7.16	-0.84

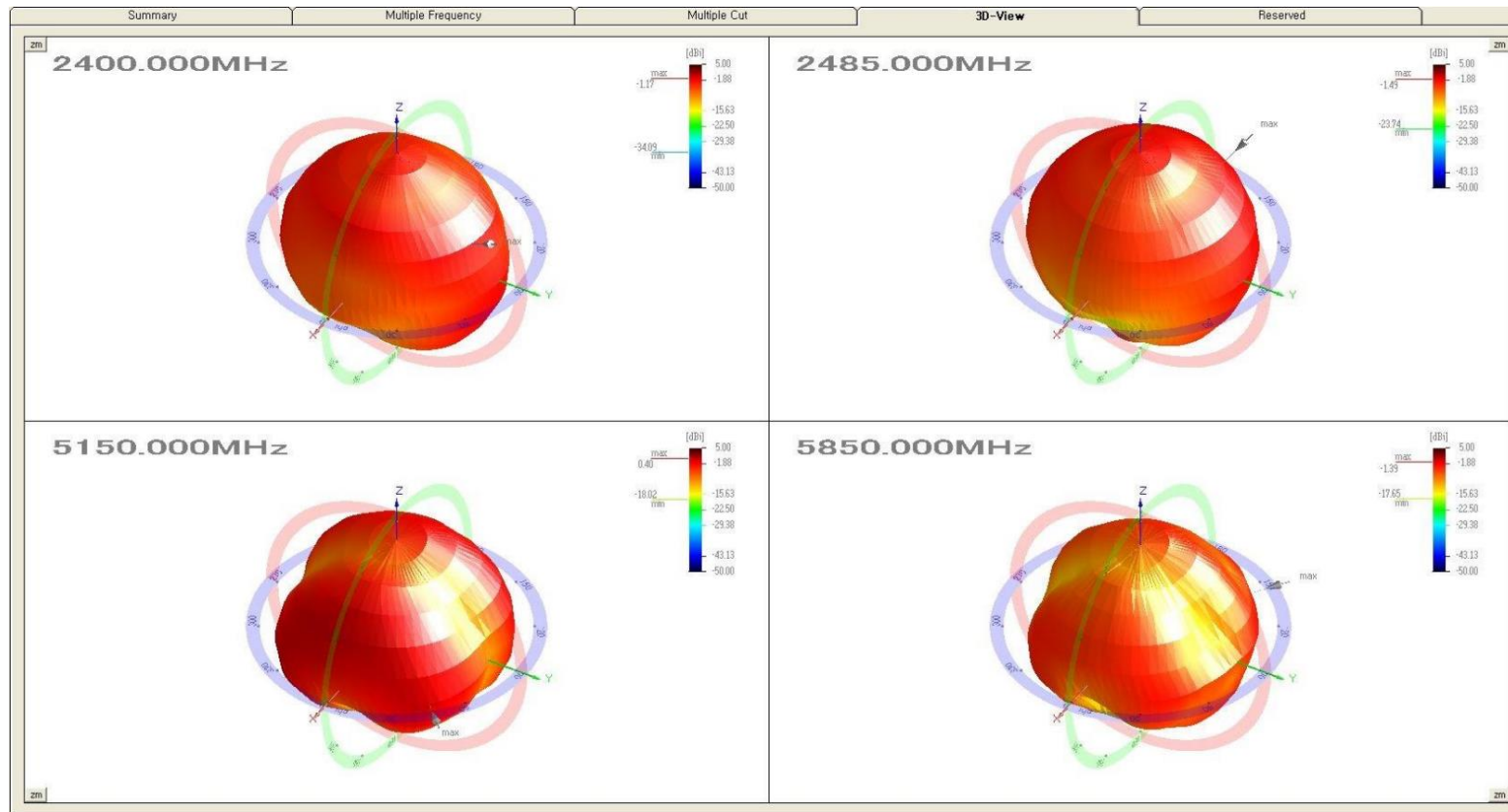
2D Radiation Pattern & Gain _ ANT 1_PCB Only



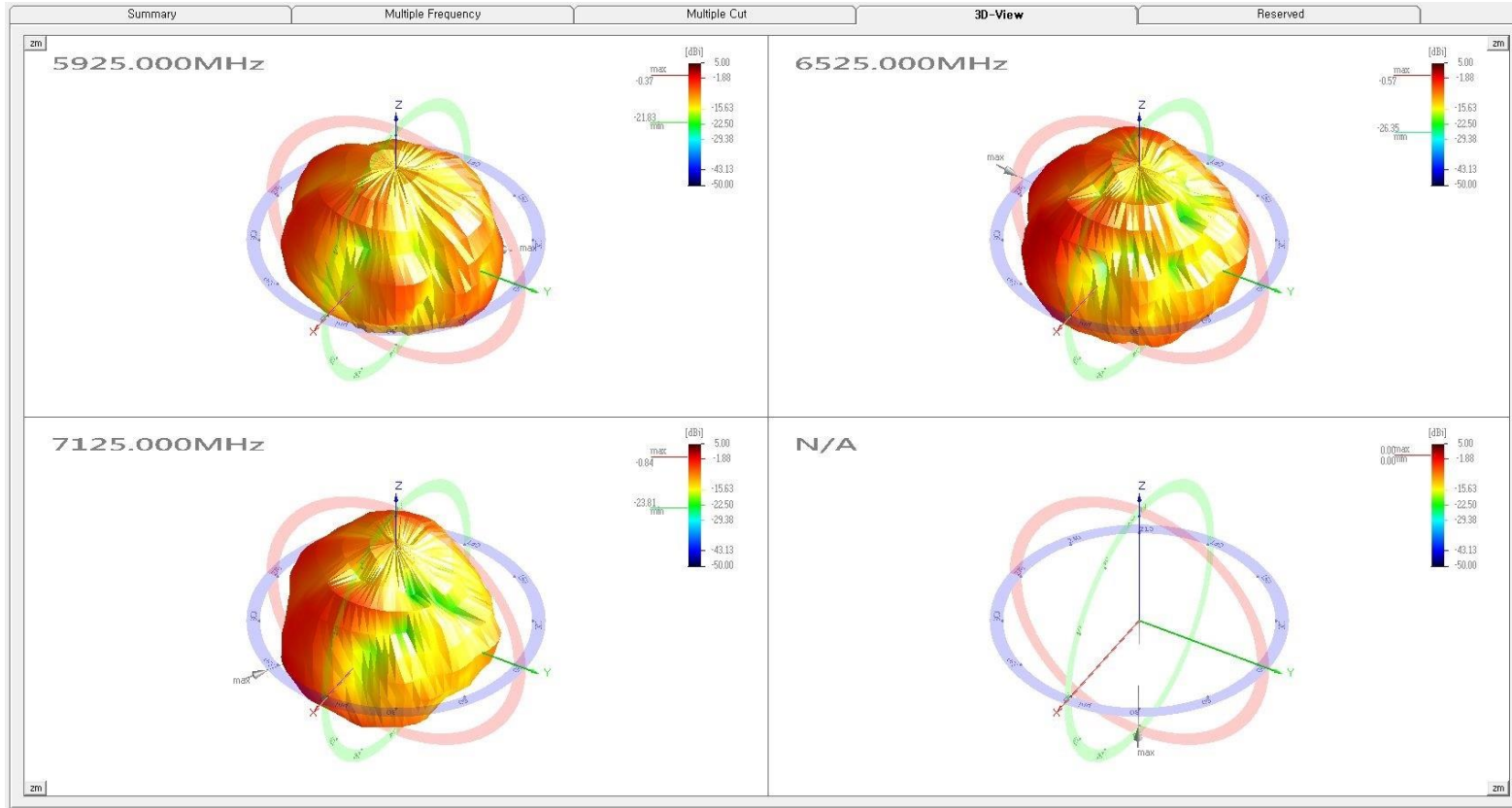
2D Radiation Pattern & Gain _ ANT 1_PCB Only



3D Radiation Pattern _ ANT 1_PCB Only

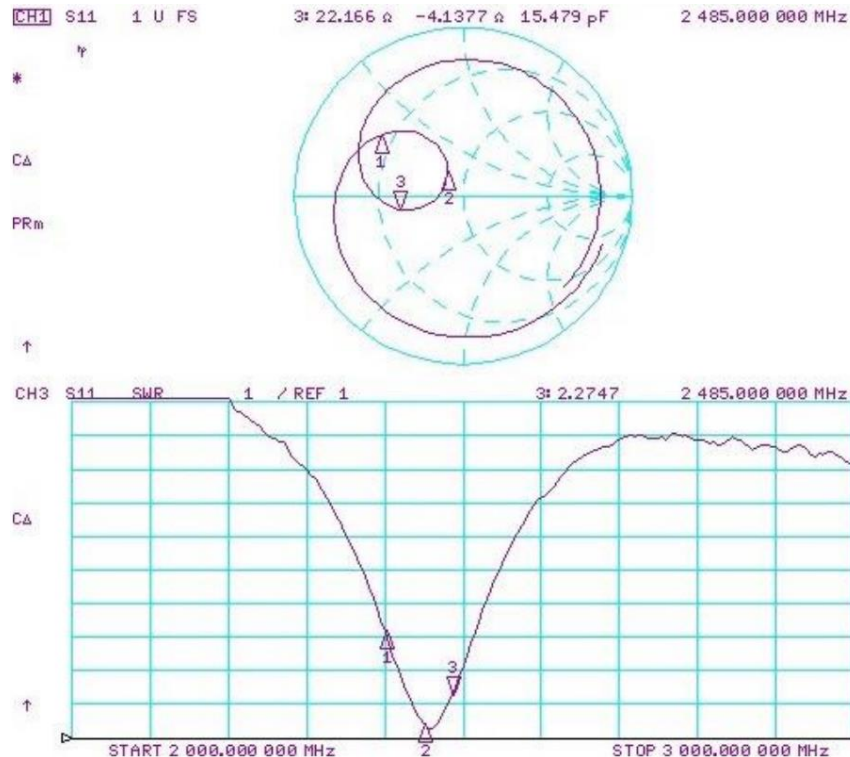


3D Radiation Pattern _ ANT 1_PCB Only



Smith Chart & VSWR / 3D Gain Data _ BT0_PCB Only

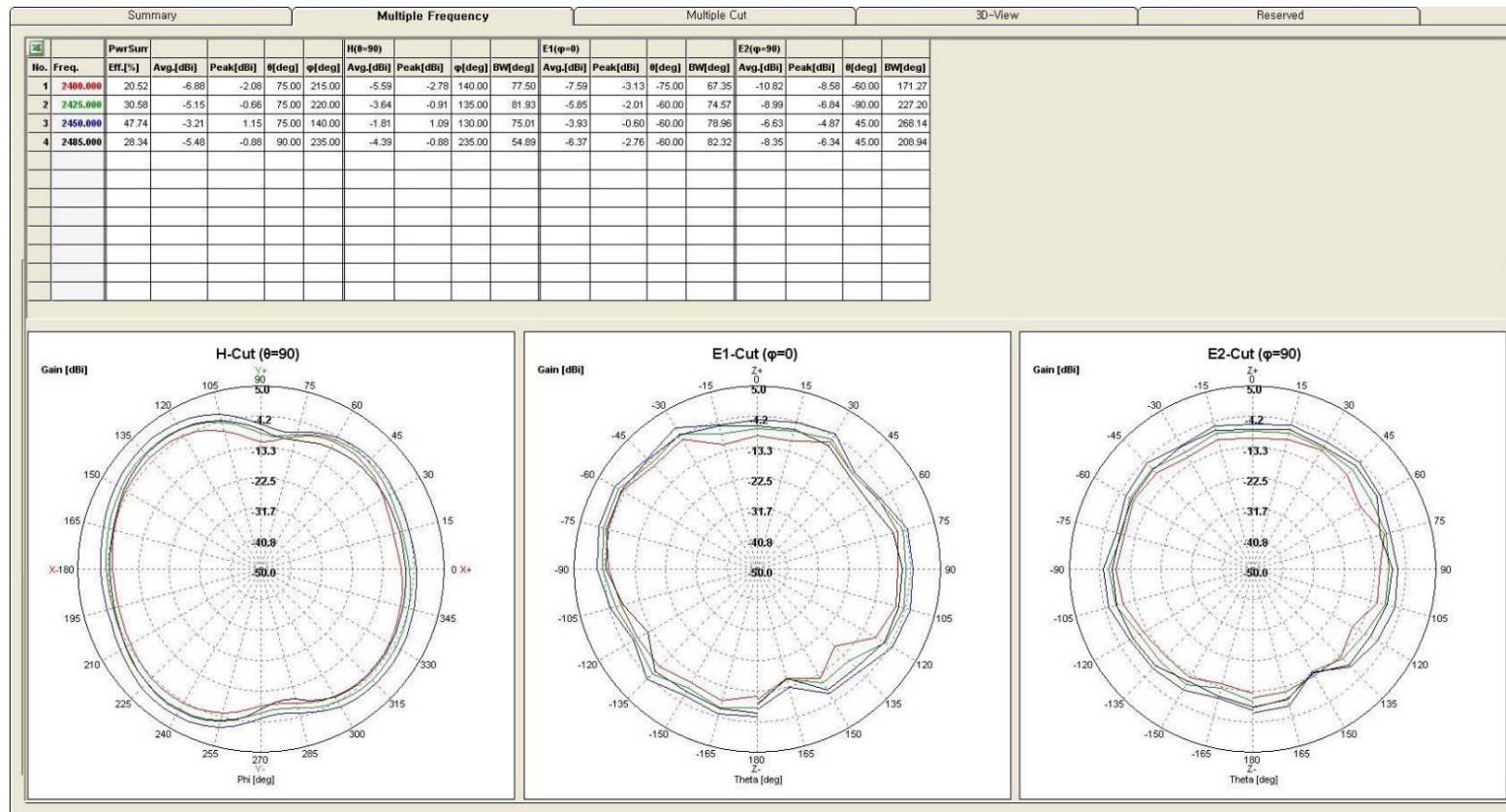
[Smith Chart & VSWR]



[3D Gain data]

Freq.[MHz]	Eff.[%]	Avg.[dBi]	Peak[dBi]
2400	20.52	-6.88	-2.08
2425	30.58	-5.15	-0.66
2450	47.74	-3.21	1.15
2485	28.34	-5.48	-0.88

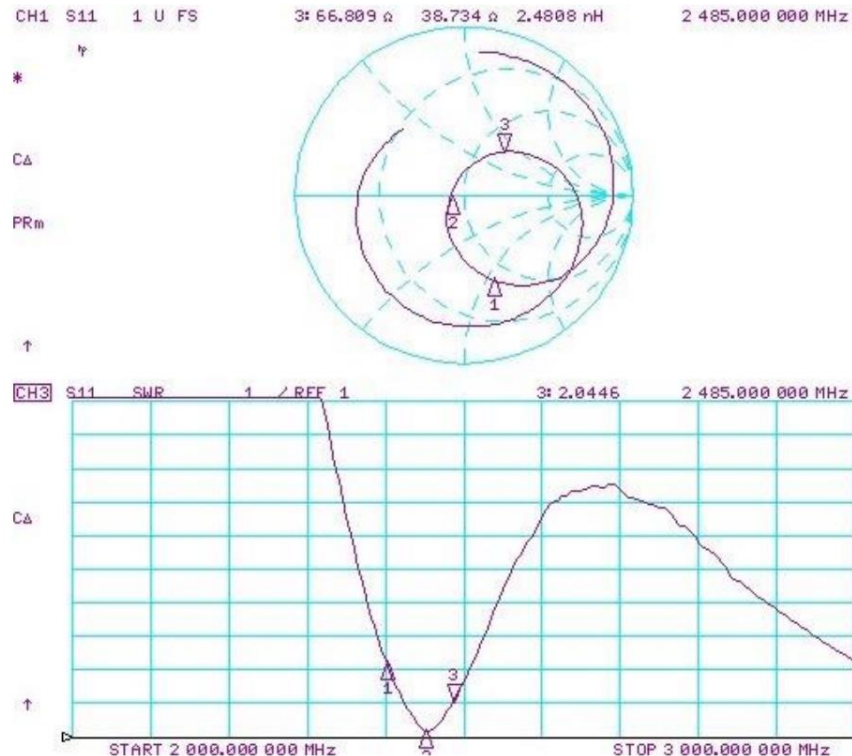
2D Radiation Pattern & Gain _ BT0_PCB Only



Summary	Multiple Frequency	Multiple Cut	3D-View	Reserved
zm 2400.000MHz 3D radiation pattern at 2400.000MHz. The plot shows a main lobe oriented along the Z-axis. A color bar on the right indicates the gain in dB, ranging from -50.00 (blue) to 5.00 (red). The maximum gain is 5.00 dB, and the minimum gain is -22.36 dB. The plot includes coordinate axes (X, Y, Z) and a scale from 0 to 200. zm				
zm 2425.000MHz 3D radiation pattern at 2425.000MHz. The plot shows a main lobe oriented along the Z-axis. A color bar on the right indicates the gain in dB, ranging from -50.00 (blue) to 5.00 (red). The maximum gain is 5.00 dB, and the minimum gain is -23.65 dB. The plot includes coordinate axes (X, Y, Z) and a scale from 0 to 200. zm				
zm 2450.000MHz 3D radiation pattern at 2450.000MHz. The plot shows a main lobe oriented along the Z-axis. A color bar on the right indicates the gain in dB, ranging from -50.00 (blue) to 5.00 (red). The maximum gain is 5.00 dB, and the minimum gain is -22.63 dB. The plot includes coordinate axes (X, Y, Z) and a scale from 0 to 200. zm				
zm 2485.000MHz 3D radiation pattern at 2485.000MHz. The plot shows a main lobe oriented along the Z-axis. A color bar on the right indicates the gain in dB, ranging from -50.00 (blue) to 5.00 (red). The maximum gain is 5.00 dB, and the minimum gain is -22.51 dB. The plot includes coordinate axes (X, Y, Z) and a scale from 0 to 200. zm				

Smith Chart & VSWR / 3D Gain Data _ BT1_PCB Only

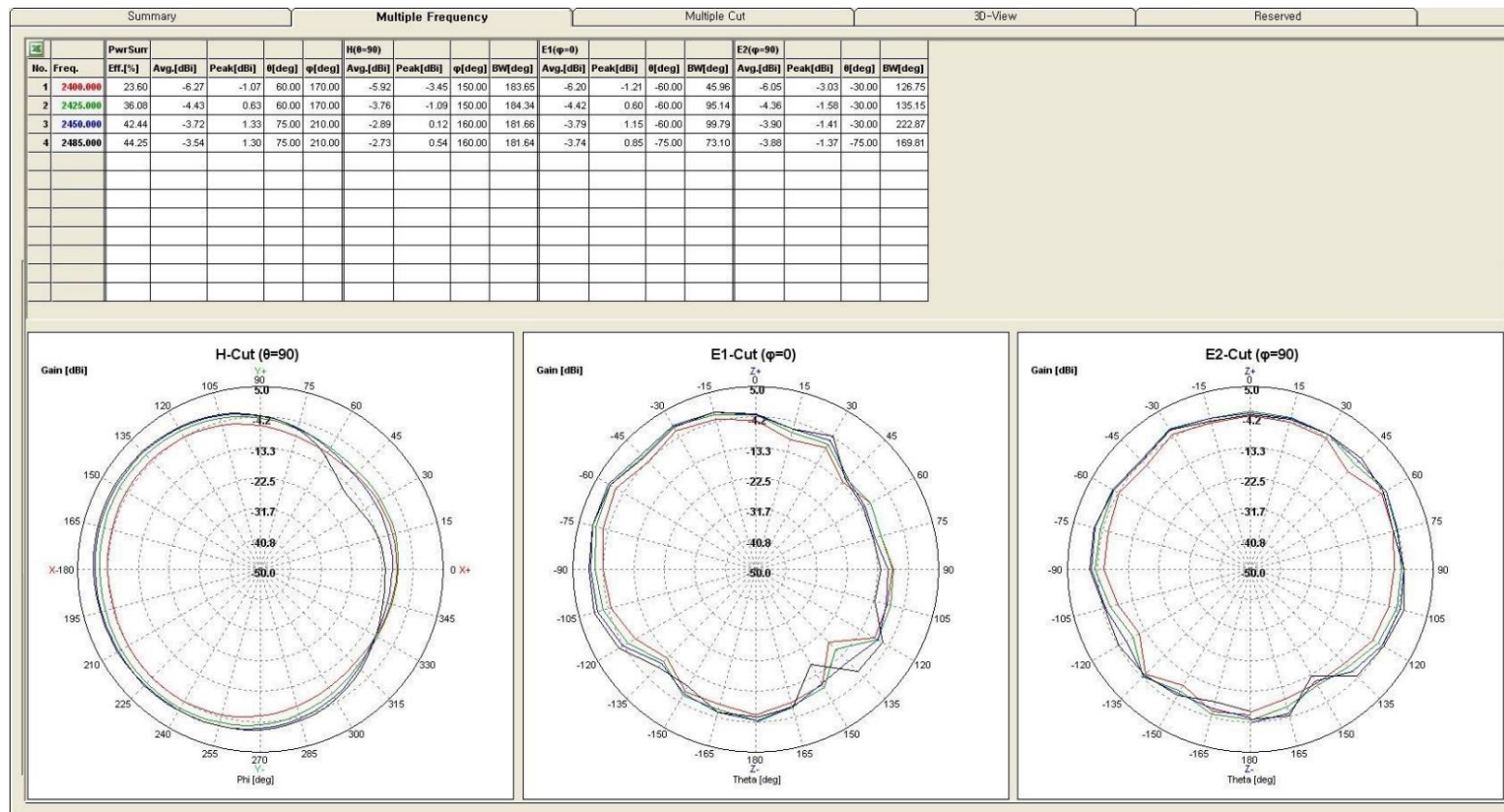
[Smith Chart & VSWR]



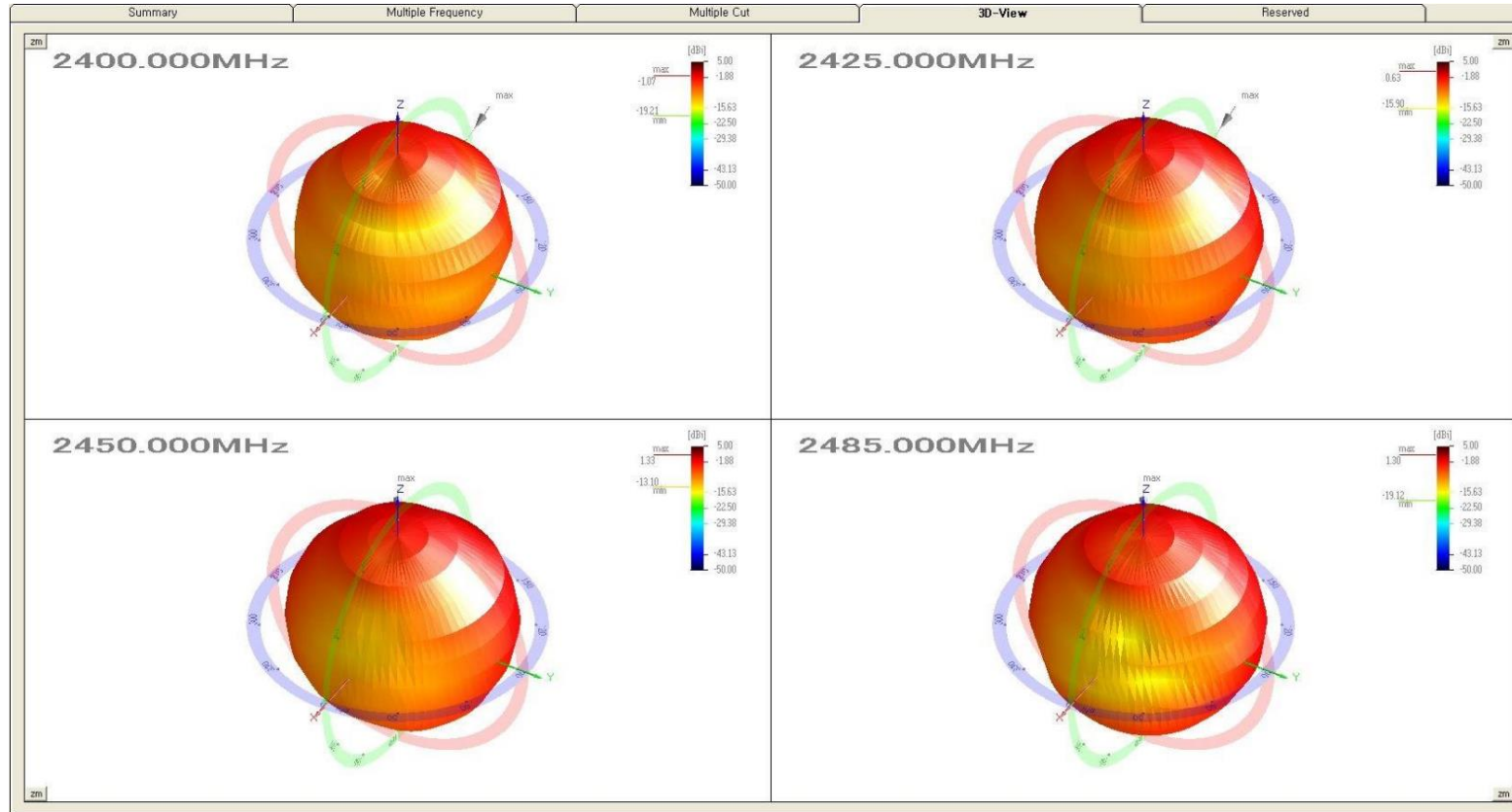
[3D Gain data]

Freq.[MHz]	Eff.[%]	Avg.[dBi]	Peak[dBi]
2400	23.6	-6.27	-1.07
2425	36.08	-4.43	0.63
2450	42.44	-3.72	1.33
2485	44.25	-3.54	1.3

2D Radiation Pattern & Gain _ BT1_PCB Only



3D Radiation Pattern _ BT1_PCB Only



WiFi Ant0/1 Isolation_PCB Only

