

IE310 RF Radiated data

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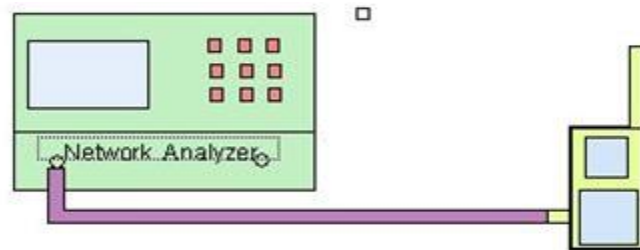
1. Frequency Band

Mode	Frequency Band (MHz)
Zigbee	2,400 ~ 2,500

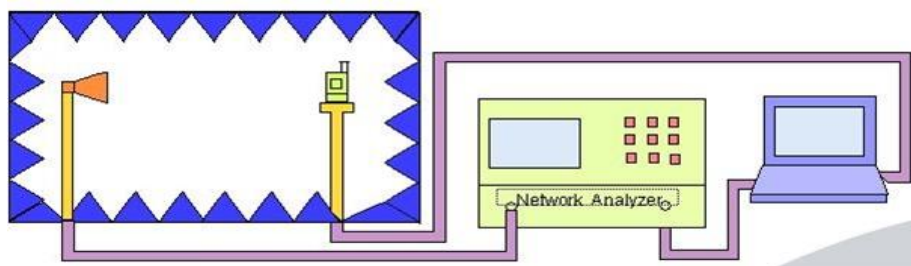
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1-1. Measurement Engineer

- Connect the device under test and required test equipment (Network analyzer). Measuring VSWR and frequency. Measurements include the magnitude and phase of both the vertical and horizontal components of the 3-D antenna pattern of actual hardware in an anechoic chamber (Partron). all measurements are made with antennas installed.
- Frequency, VSWR measurement



- Gain measurement



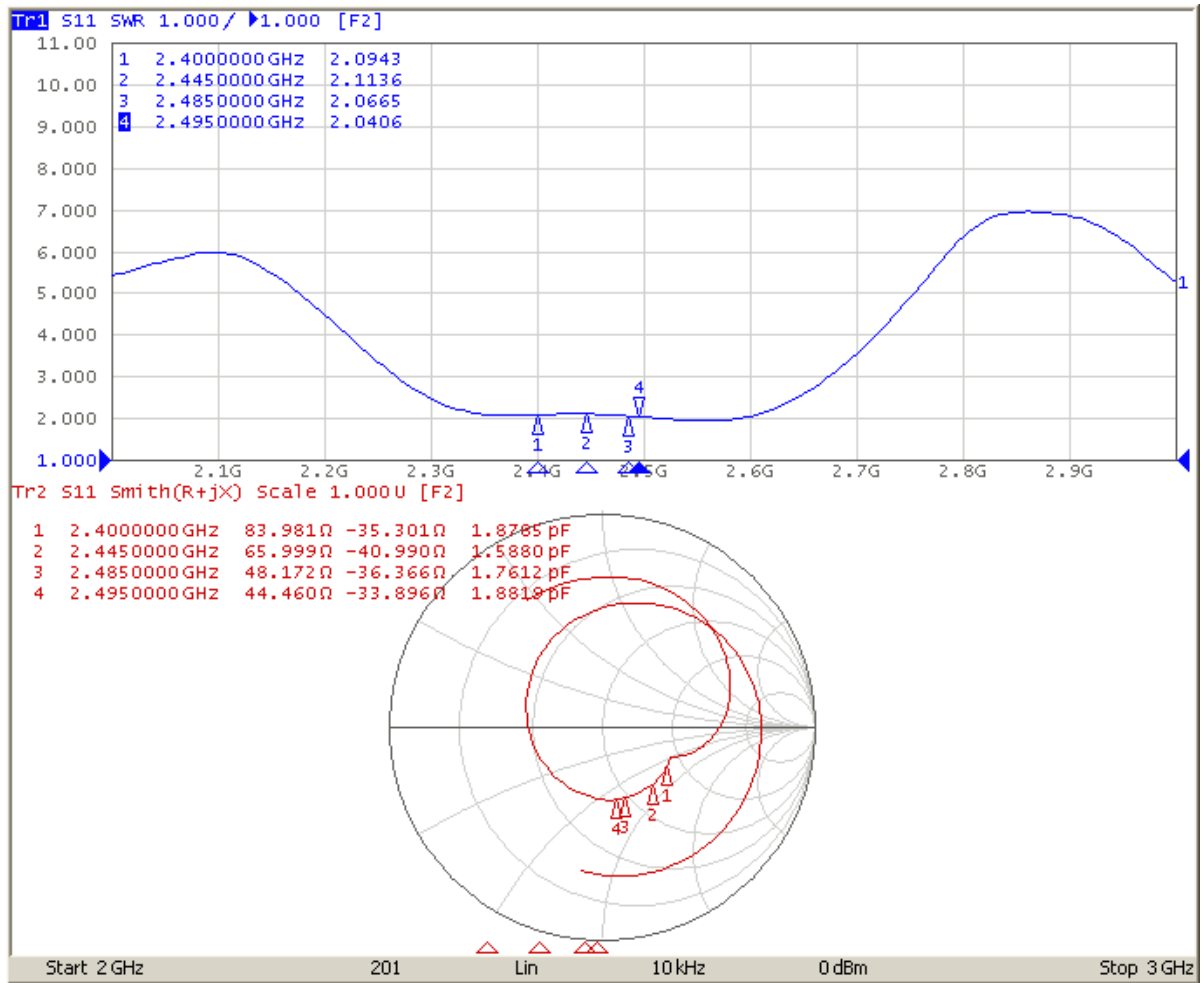
- Co-Polarization, Cross-Polarization Meaning
- Co-Polarization : When Radiated Vertical and Horizontal Polarization in Source Ant.

Co-Polarization is Higher Polarization that is Ave. Gain Value

- Cross-Polarization : When Radiated Vertical and Horizontal Polarization in Source Ant.

Co-Polarization is Lower Polarization that is Ave. Gain Value

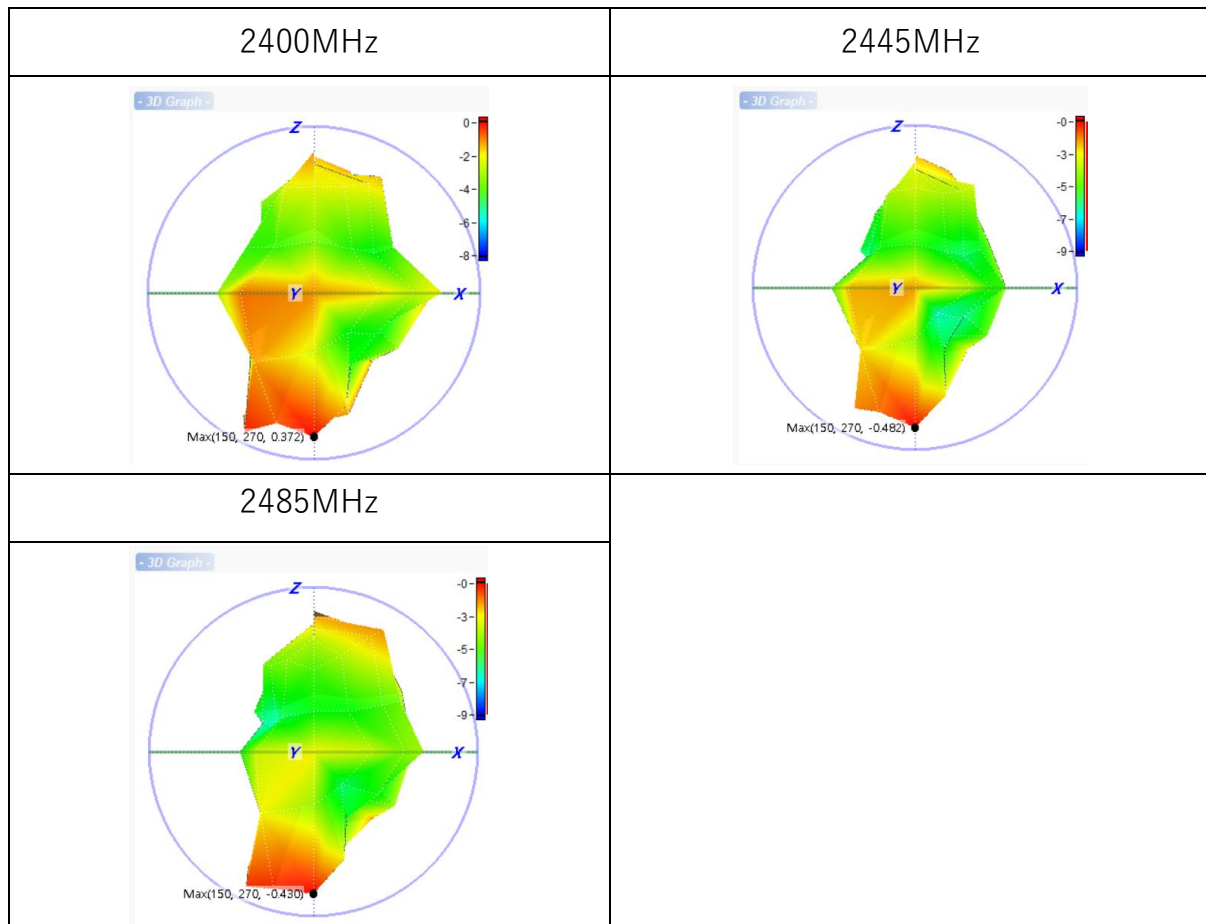
1-2. VSWR



1-3. Efficiency & Gain

Frequency	Max Gain			Min Gain			Average Gain	Efficiency
[MHz]	θ [Deg]	Φ [Deg]	Gain[dBi]	θ [Deg]	Φ [Deg]	Gain[dBi]	Gain[dBi]	[%]
2,400.00	150	270	0.372	120	180	-8.434	-2.526	55.903
2,415.00	150	270	0.757	120	180	-7.9	-2.199	60.271
2,430.00	150	270	-1.028	120	180	-9.75	-4.386	36.425
2,445.00	150	270	-0.482	180	30	-9.257	-4.045	39.397
2,460.00	150	270	0.489	180	270	-8.292	-2.875	51.582
2,465.00	150	270	0.906	120	180	-8.051	-2.71	53.586
2,480.00	150	270	-0.664	120	180	-9.456	-4.035	39.495
2,485.00	150	270	-0.43	120	180	-9.235	-3.775	41.932
2,490.00	150	210	-1.014	180	270	-9.89	-4.156	38.408
2,500.00	150	270	-1.2	120	180	-10.152	-4.396	36.343

1-4. 3D Radiated Pattern



2. TEST METHOD

2-1. Measurement information

Description	Manufacturer	Model
Network Analyzer	Anritsu	ME7848A

2-2. 3D Chamber

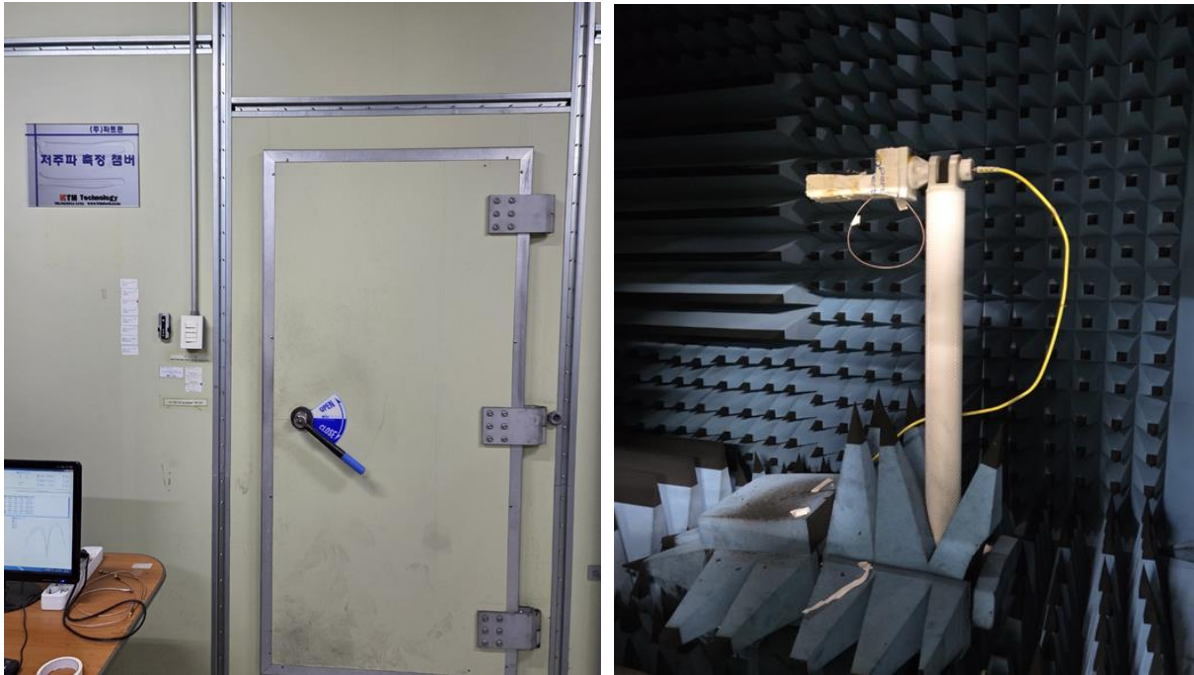


Figure 1: Testing with RF Chamber

Measurement facility: Partron ESL, 3D Chamber

3. Antenna Dimension

