

Antenna Specifications

Frequency range of operation:

Antenna 1:

- BLE: 2.4 to 2.48 GHz

Antenna type: PCB Antenna

Antenna gain:

Frequency(MHz)	Peak Gain(dBi)
2402	4.7
2440	4.8
2480	4.8

Testing engineer: wenlong.yao

Testing date: 2026.03.17

Lab name: Goertek WF antenna lab

Lab address: OTA Laboratory, No. 268, Dongfang Road, Xincheng Street, Kuiwen District, Weifang City, Shandong Province, china.

Measurement test method:

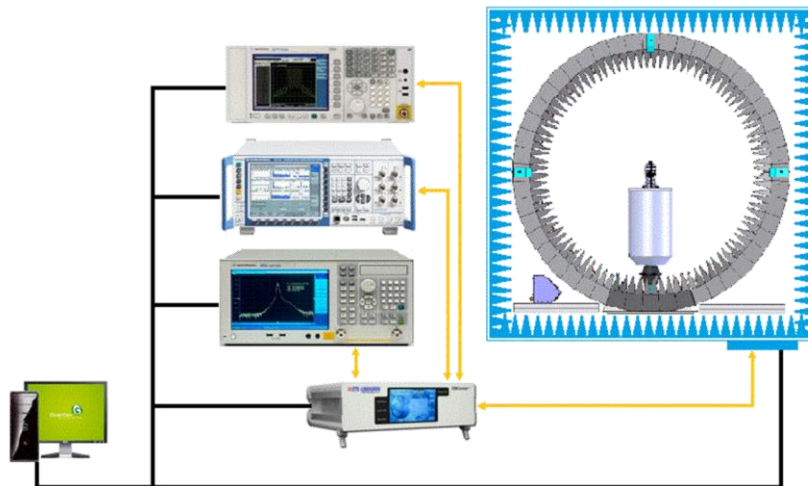
Solder pigtails on feeding point of antenna and measure passive antenna performance by VNA and OTA chamber system.

Test equipment:

Description	Manufacturer	Model	Serial Number	Cal from	Cal Due
Test Chamber	ETS	AMS8923	Euroshieldpn-CT0000789-1162	Aug 2025	Dec 2033
ENA Network Analyzer	Keysight	E5071C	MY46419524	Jan 2026	1 year
CMW500	ROHDE&SCHWARZ	1201.0002K50	M-WI-0118	Jan 2026	1 year
MAX signal analyzer	Keysight	N9020A	MY55338109	Jan 2026	1 year
EMCCenter	ETS	2090	SN0012547	Jan 2026	1 year

Equipment setup:

- Below is a block diagram of the antenna measurement setup.



- Actual setup picture of the DUT mounted on the turn table inside the anechoic chamber
- Set up the device on the turn table and connect the pigtails to the RF cable.

Software used: EMQUEST Version1.10

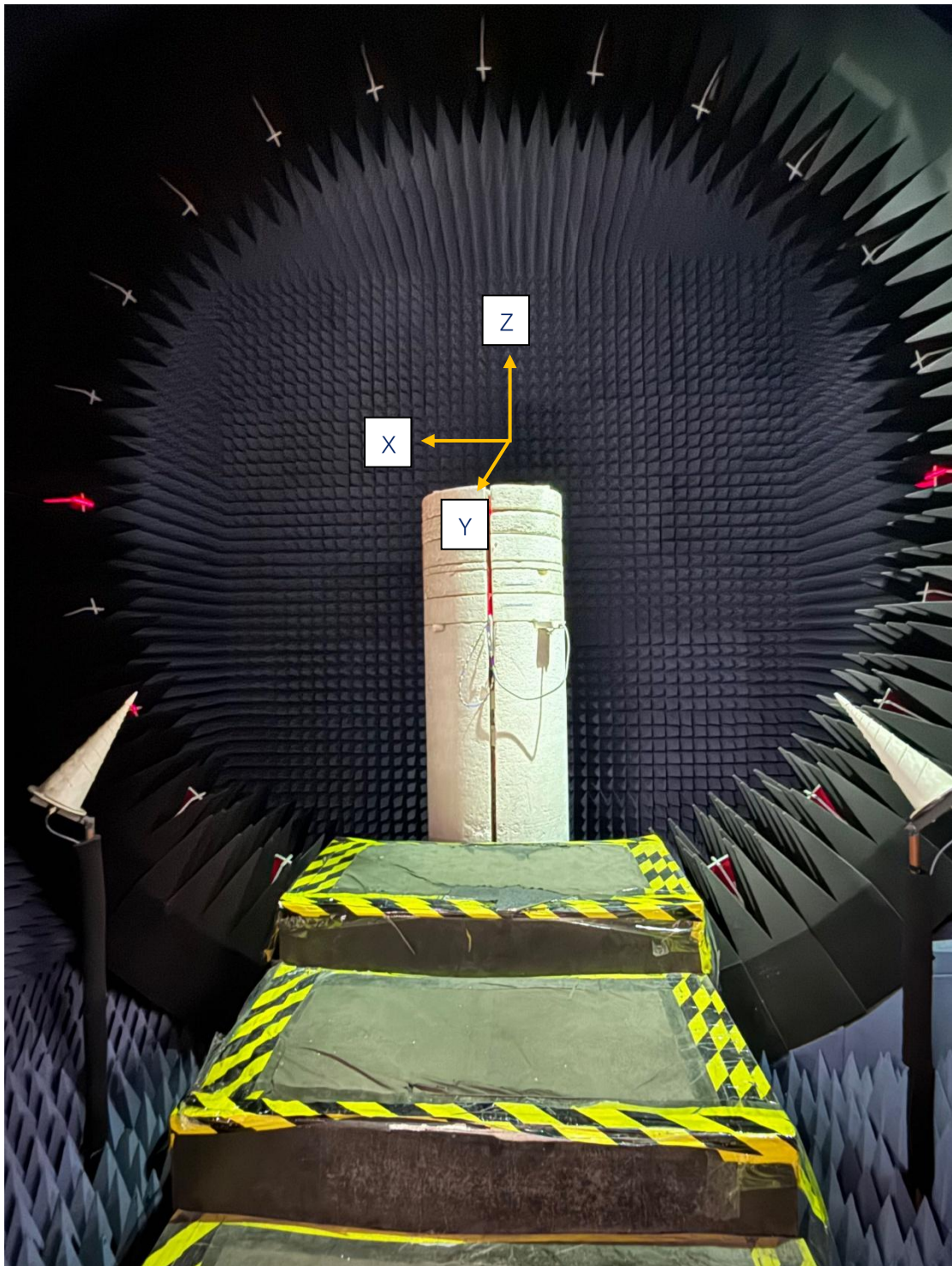
Test Standard: CTIA Test Plan

Test set-up:

Test Procedure (Passive Antenna Measurement):

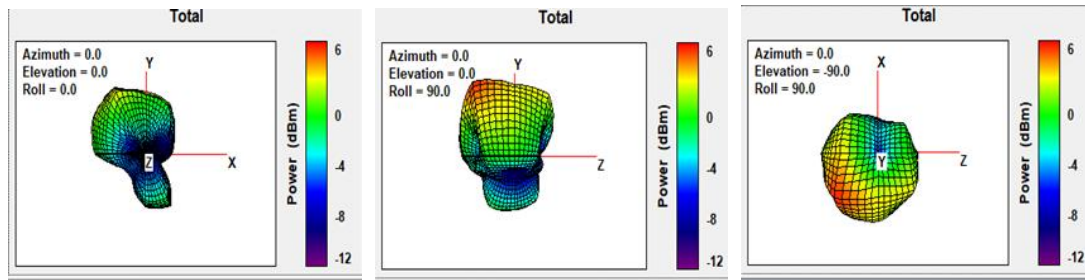
- Mount the Device Under Test (DUT) on the supporting pole at the center of the anechoic chamber.
- Connect the DUT antenna port to the measurement system using a coaxial cable at the transmitter side of the chamber.
- Close the chamber door to eliminate external signal interference during measurement.
- Launch the antenna measurement system, configure the required test parameters (e.g., frequency points or rotation angles), and import the frequency list for testing.
- After completing the measurement, process the recorded data and perform far-field data conversion as required.

Antenna radiated pattern orientation:

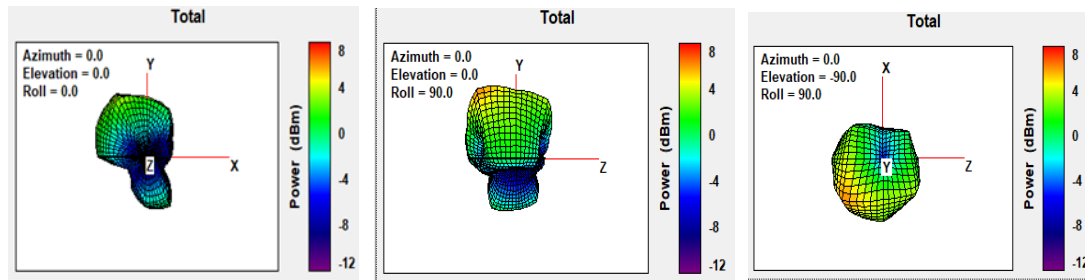


Antenna radiation pattern:

2402MHz



2440MHz



2480MHz

