

Antenna Report

Frequency range of operation:

Bluetooth Antenna:

- BLE: 2.4 to 2.48 GHz

Antenna Types:

Bluetooth antenna: Stamping IFA antenna.

Antenna Gain:

Frequency	Peak Gain (dbi)
	BLE
	IFA
2400-2480MHz	1.15

Frequency(MHz)	Gain(dB)
2400	0.17
2410	0.56
2420	0.72
2430	0.82
2440	0.97
2450	1.15
2460	1.11
2470	0.91
2480	0.93

Measurement Test Method:

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

Test Equipment used and test date:

VNA: Agilent E5071C

OTA chamber: ETS AMS8923

Software for Measurement: EMQuest

Test date: August 31, 2026

Lab location and people performed test

Test people: kris.pang@goertek.com

Lab location: OTA Laboratory, 1st Floor, Building 10, Phase II, Ge'er Electronic Sound Park, Kuiwen District, Weifang City, Shandong Province

庞嘉睿
kris.pang

Test Set-up:

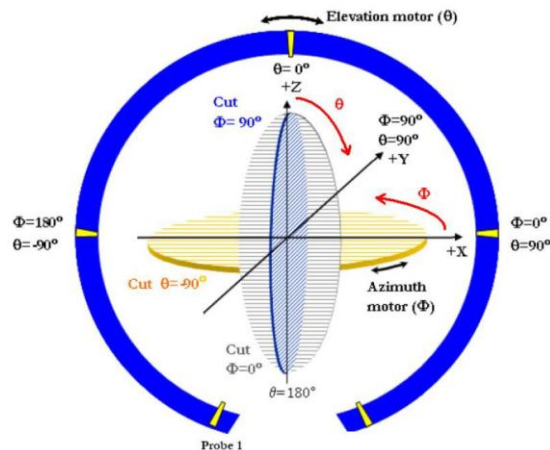
1. Set up the device on the turn table and connect the pigtails to the RF cable.
2. Measure the 3D passive performance according to the following coordinate axis.

Turntable – Phi: 0-150°, step size: 30°, clockwise rotation

Test Equipment Calibration Information:

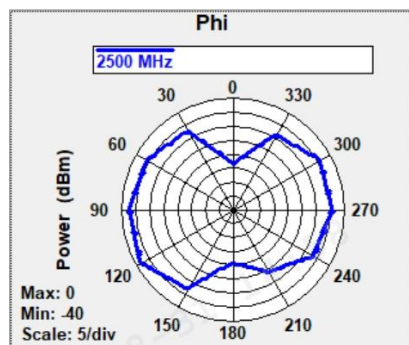
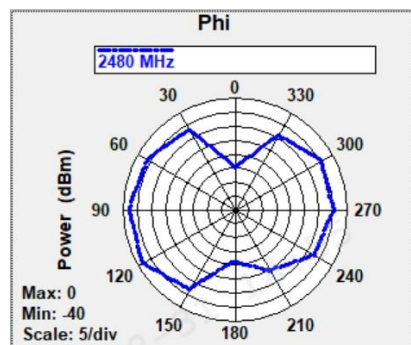
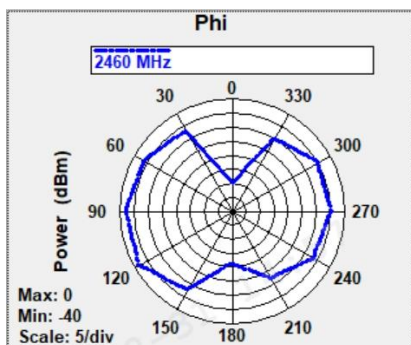
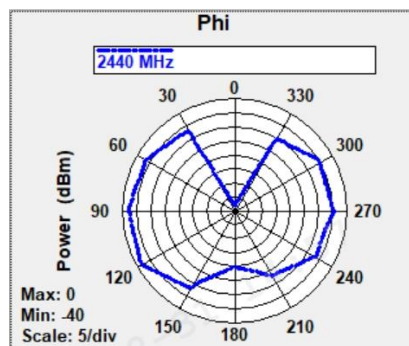
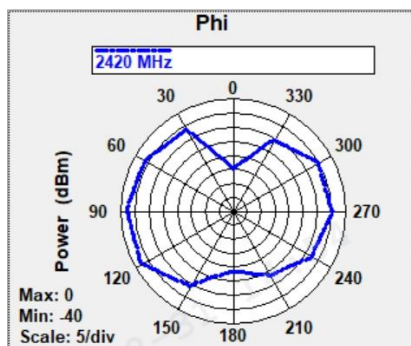
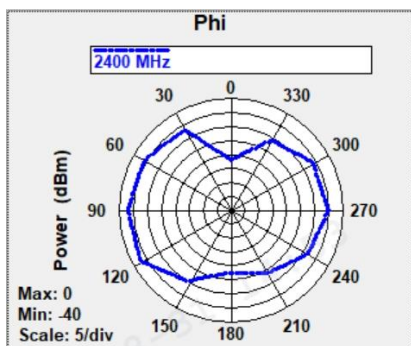
Equipment	Manufacturer	SN	Calibration period
OTA laboratory	ETS	Euroshieldpn-CT0000789-1162	2033. 10. 27
Comprehensive measuring instrument CMW500	R&S	143272	2027. 1. 14
Spectrum N9020A	Agilent	MY51285279	2027. 6. 23
E5071C	Agilent	MY46107864	2027. 1. 13

Antenna Radiated Pattern Orientation:

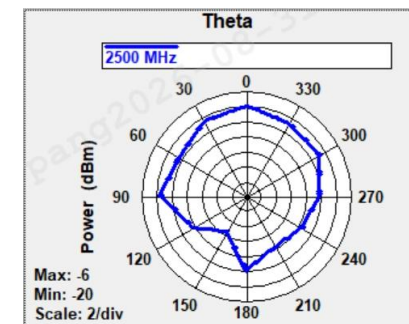
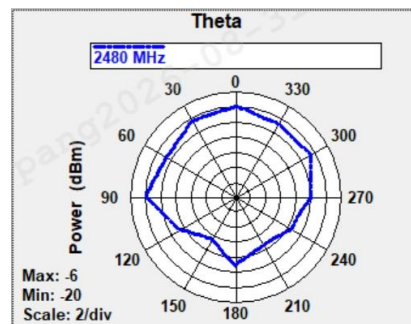
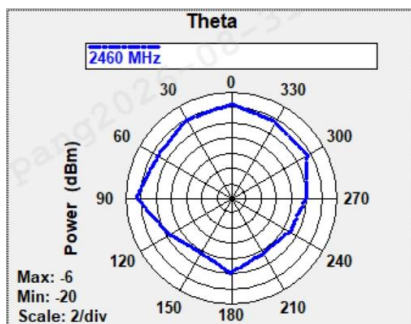
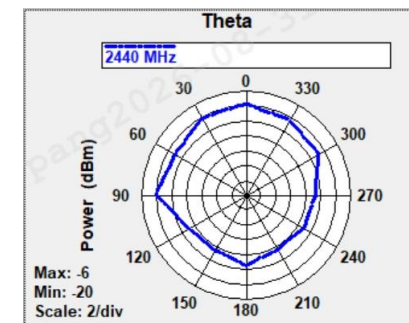
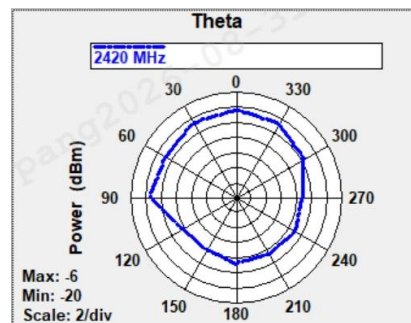
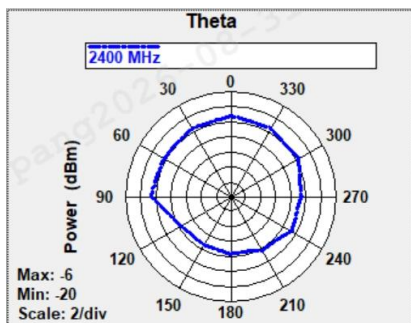


BLE Antenna

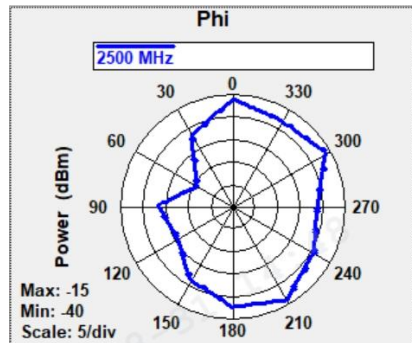
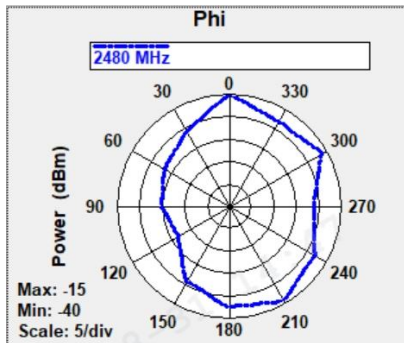
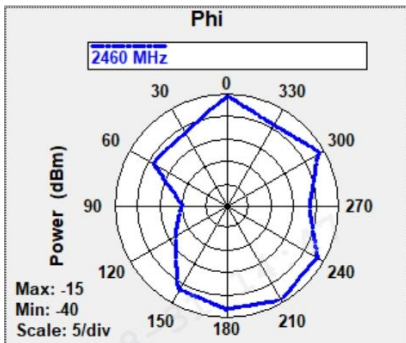
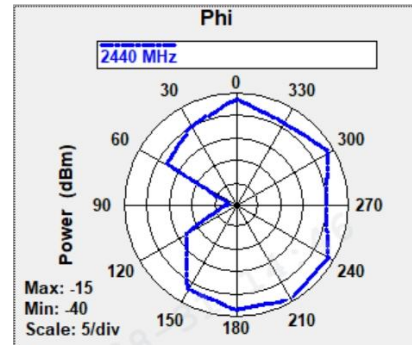
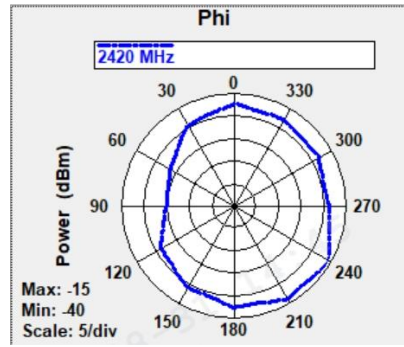
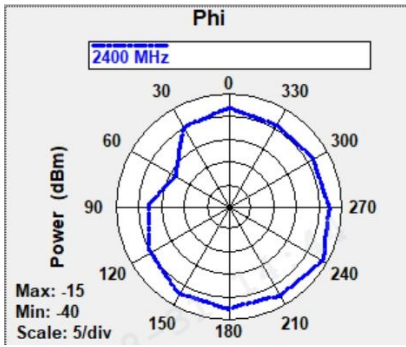
Antenna Horizontal, XY Polar Plots, 2.4GHz



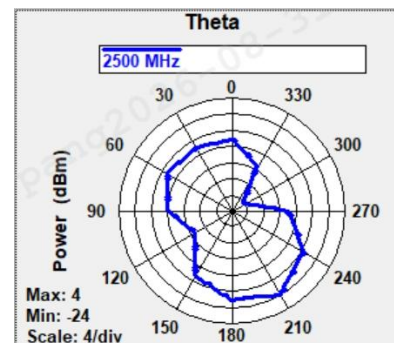
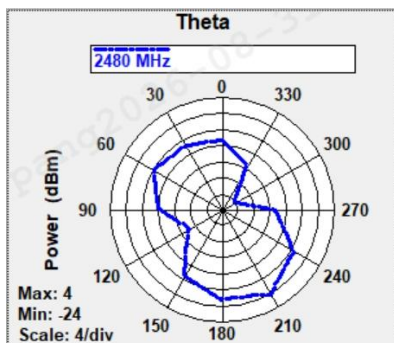
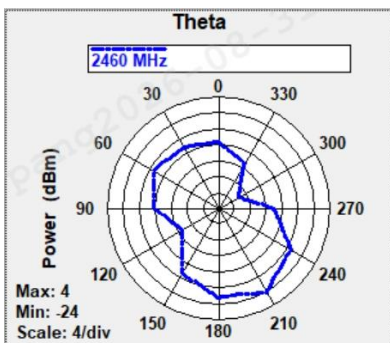
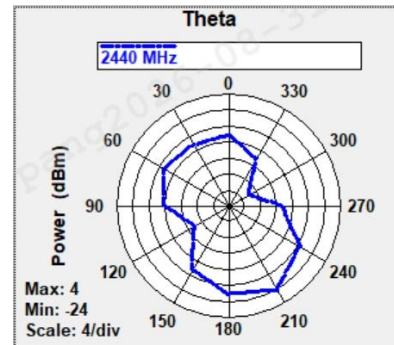
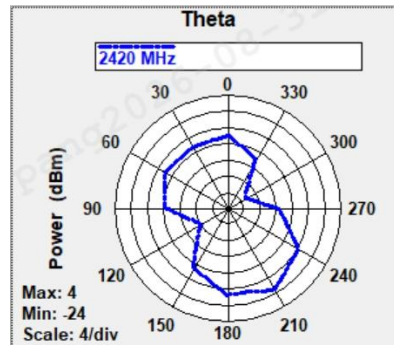
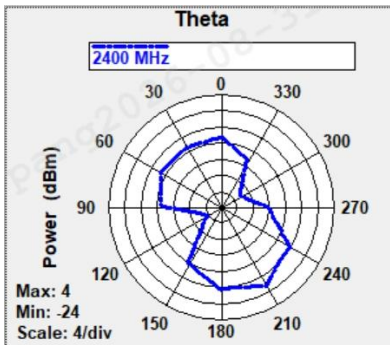
Antenna Vertical, XY Polar Plots, 2.4GHz



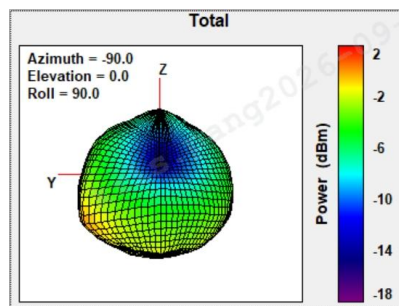
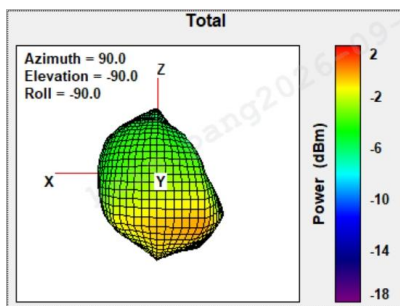
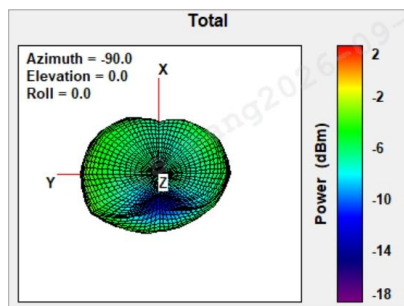
Antenna Horizontal, XZ Polar Plots, 2.4GHz



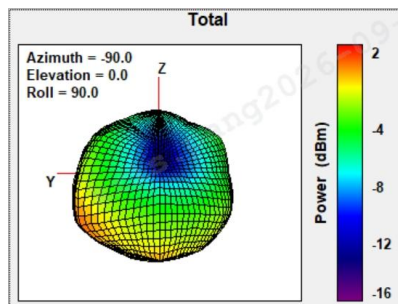
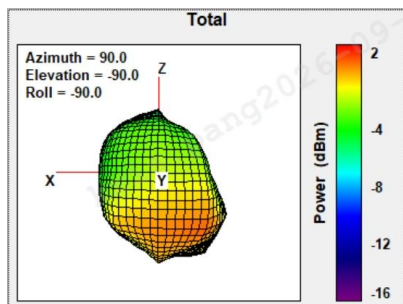
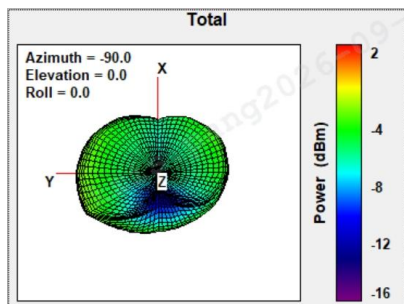
Antenna Vertical, XZ Polar Plots, 2.4GHz



Antenna 3D Polar Plots, 2.4GHz



Antenna 3D Polar Plots, 2.44GHz



Antenna 3D Polar Plots, 2.48GHz

