

Test Report for Antenna Specifications

Model:P8Z7MN; FCC ID: 2BFXH-1523; IC ID: 32528-1523

Frequency range and operation

Antenna 1:

- BT, BLE & Zigbee: 2.4 to 2.482 GHz

Antenna 2:

- Wi-Fi 2G: 2.4 to 2.482 GHz
- WiFi 5G: 5.15 to 5.85 GHz
- WiFi 6E: 5.925 to 7.125 GHz

Antenna 3:

- 5G: 5.725 to 5.875 GHz – RX only

Antenna type

Ant1: FPC Loop antenna

Ant2: PCB IFA antenna

Ant3: PCB monopole antenna

Antenna Gain

Frequency	Peak Gain (dBi)		
	Ant1	Ant2	Ant3 (Rx only)
	2.4GHz	2.4,5,6GHz	5.8GHz
2400-2500MHz	2.65	1.63	-
5150-5250MHz		4.5	-
5250-5350MHz		4.5	-
5470-5725MHz		4.5	-
5725-5850MHz		4.5	0.85
5850-5925MHz		4	-
5925-6425MHz		5.8	-
6425-6525MHz		5.8	-
6525-6875MHz		4.5	-
6875-7125MHz		4.1	-

Measurement Test method

Solder pigtailed 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: January 24, 2025

Lab location and people performed test

Test people: randell.guo@goertek.com

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

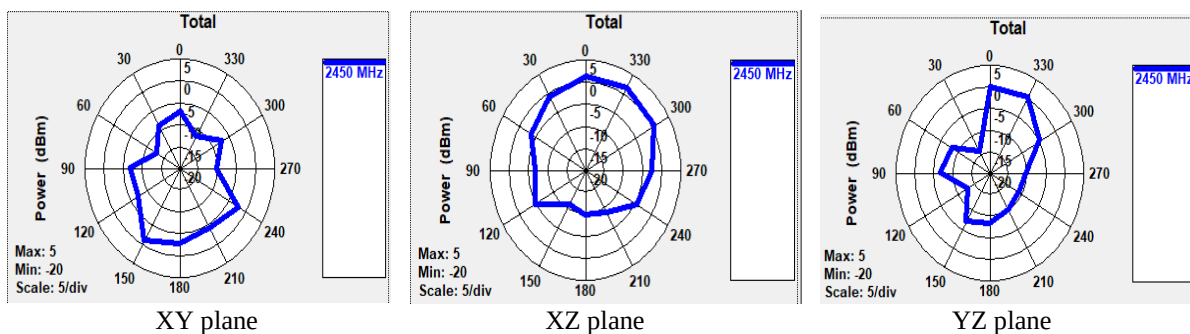
Test set up and block diagram of test setup

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

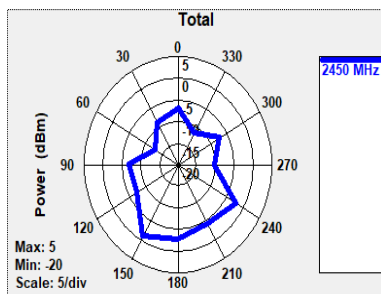
Turntable – Phi: 0-150°, step size: 30°, clockwise rotation

Antenna Radiation Pattern

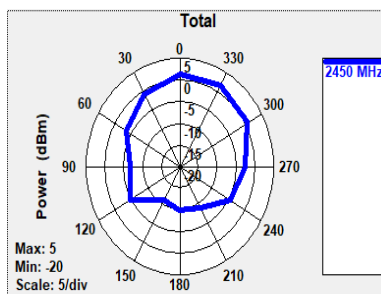
BT/BLE Antenna



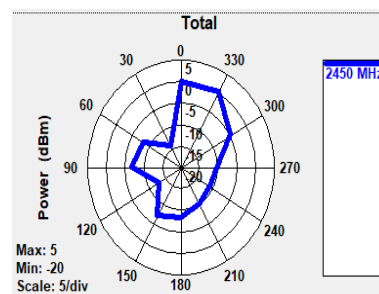
Zigbee Antenna



XY plane

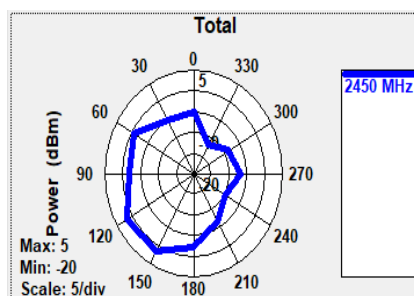


XZ plane

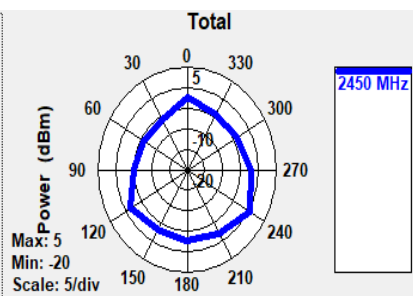


YZ plane

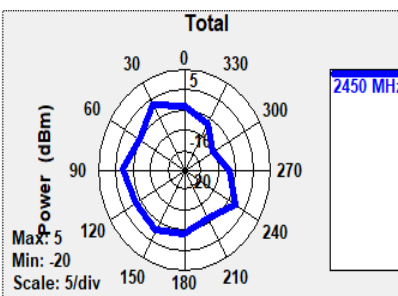
Wifi 2G Antenna



XY plane

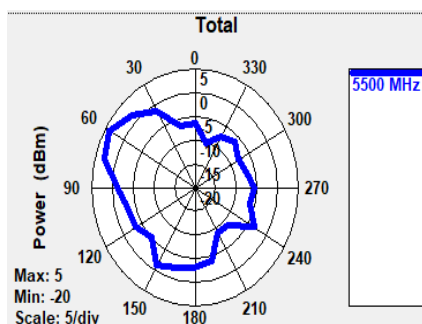


XZ plane

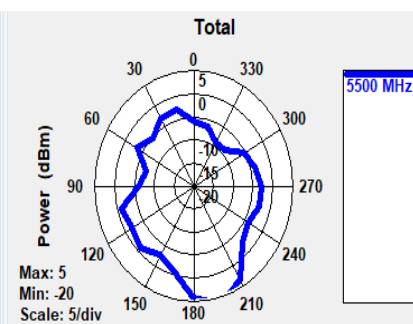


YZ plane

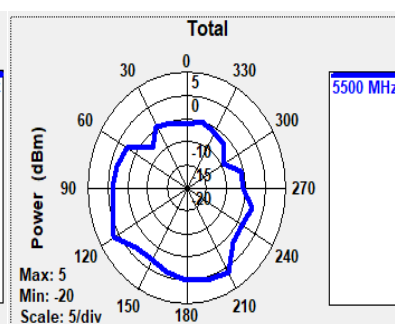
Wifi 5G Antenna



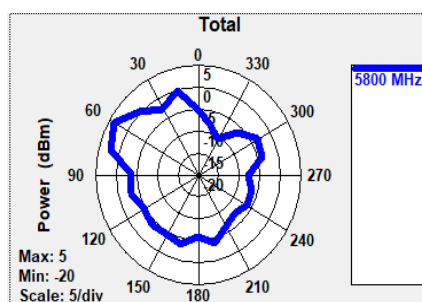
XY plane



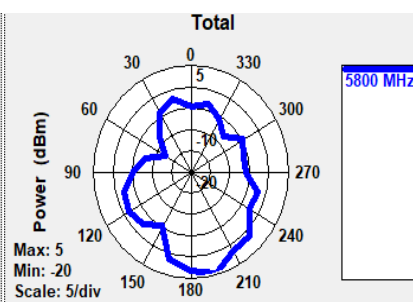
XZ plane



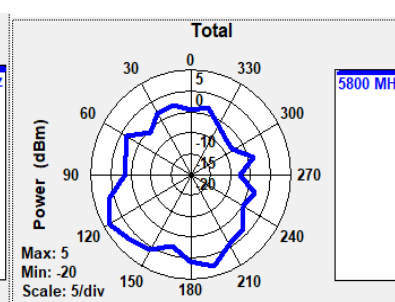
YZ plane



XY plane



XZ plane



YZ plane

Wifi 6G Antenna

