

Antenna Report

FCC ID: SZGGW8XE

1/14/2024

1. Test Method

The antenna gains are obtained through measurements in a fully anechoic OTA chamber with a 3D positioner.

Measurements are taken in discrete steps in theta and phi direction, data is being recorded using the spectrum analyzer (active) or network analyzer (passive) for both theta and phi polarizations at each position resulting in a 3D gain pattern. Step size is <30 deg along both axes.

Gain is either derived directly through spatial averaging of VNA S21 measurements (passive measurement) or by the ratio of spatial averaging of 3D EIRP/TRP measurements vs the conducted power (active measurement).

Measurements were obtained through an active non-signalling measurement (test mode) plus measured conductive RF power.

2. Test Setup

See separate appendix document for pictures of the test setup in this filing.

3. Test Equipment

Site Description	Chamber Manufacture	Type
ETS 8813	ETS	Anechoic Chamber
Site Location	No.268 Dongfang Road, High-Tech Industrial Development District, Weifang, Shandong, 261031, P.R.China	

4. Other information

Equipment Calibration Status	Chamber Calibration 11/02/2023
Test Dates	12/04/2023
Names of test personnel	Bourneli Li

5. Antenna Spec

- Antenna Type: IFA
- Peak Antenna Gain

Frequency (MHz)	Efficiency (dB)	Gain (dBi)
2400	-8.5	-5.4
2440	-8.1	-5.4
2480	-7.9	-5.3

Appendix: Radiation Plots

