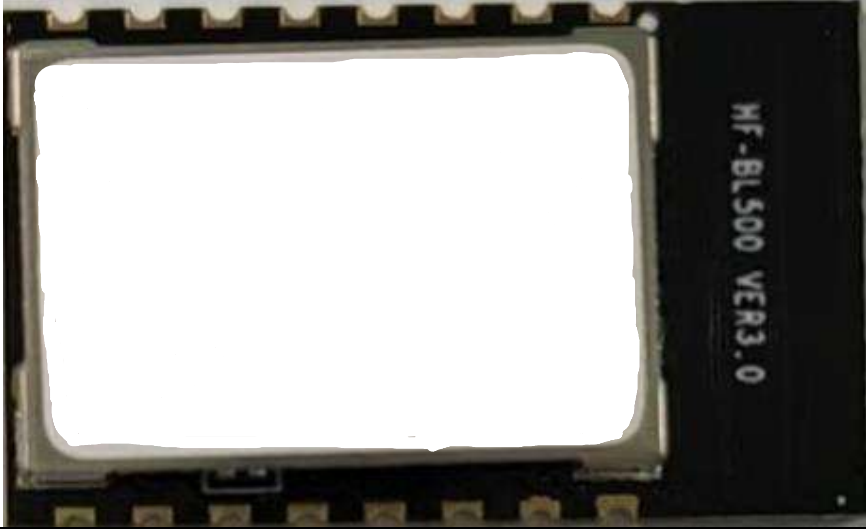


HF-BL500-1 Antenna Test Report

1. General information

EUT Description	
	
Product Name:	Low Power BLE Module
Model	HF-BL500-1
HW Version:	V1.0
SW Version:	V1.0
Antenna Type:	Internal Antenna
Antenna Manufacturer:	Shanghai High-Flying Electronics Technology Co., Ltd
Test Frequency:	2400MHz ~ 2483.5MHz

Address: Building 17, 1500 Zuchongzhi Road, Pilot Free Trade Zone, Shanghai, China

2. Laboratory environment

Temperature	Min. =19°C, Max. = 25°C	
Relative humidity	Min. =40%, Max. =72%	
Shield effect	0.7-6GHz	> 100dB
Ground resistance	<0.5 Ω	

3. Test Date

The test is performed on, Nov 2023

Shanghai High-Flying Electronics Technology Co., Ltd
www.hi-flying.com

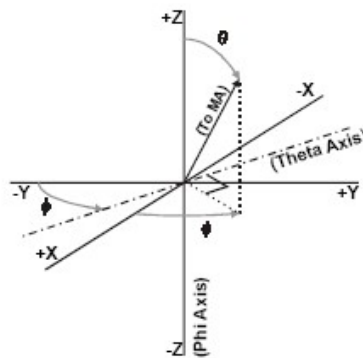
4. Test Conditions

4.1 Test Configuration

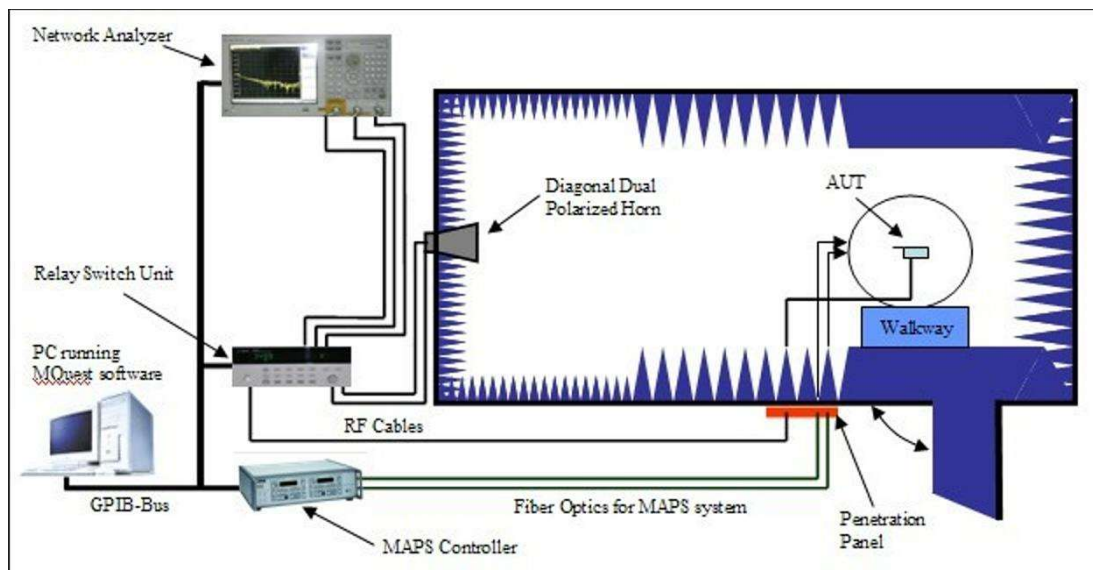
Great-Circle-Cut method is used to measure the antenna 3D GAIN of EUT in OTA qualified anechoic chamber. Equipment Under Test (EUT) geometry centre vertical projection at the centre of platform, the distance from EUT to measurement antenna is 5m.

4.2 Test Measurement

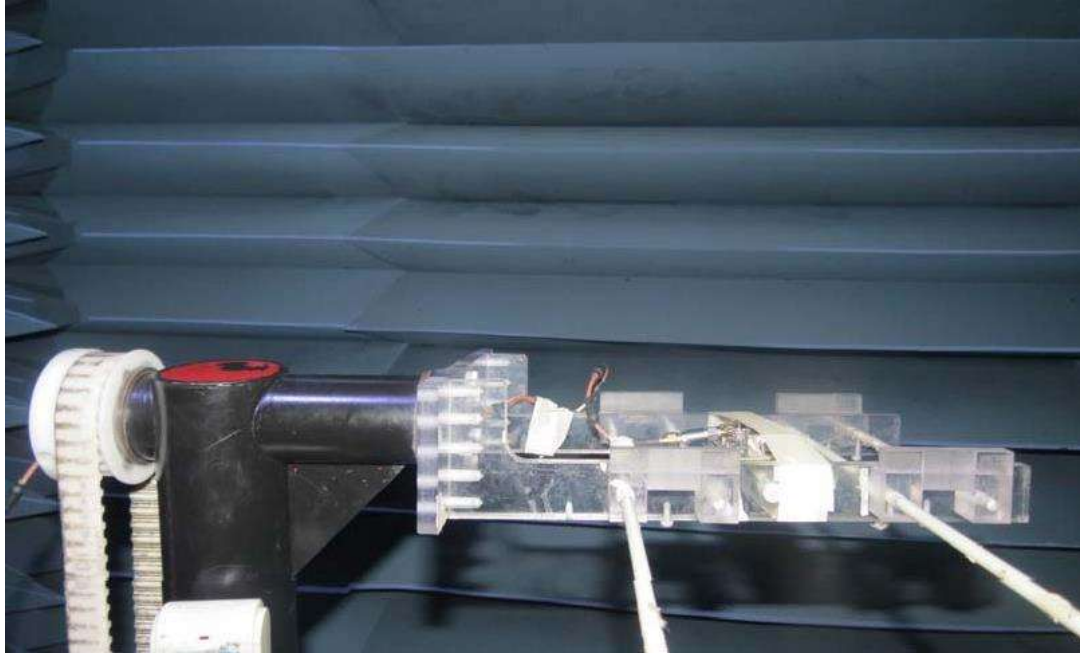
Spherical coordinate system



4.3 Test Setup



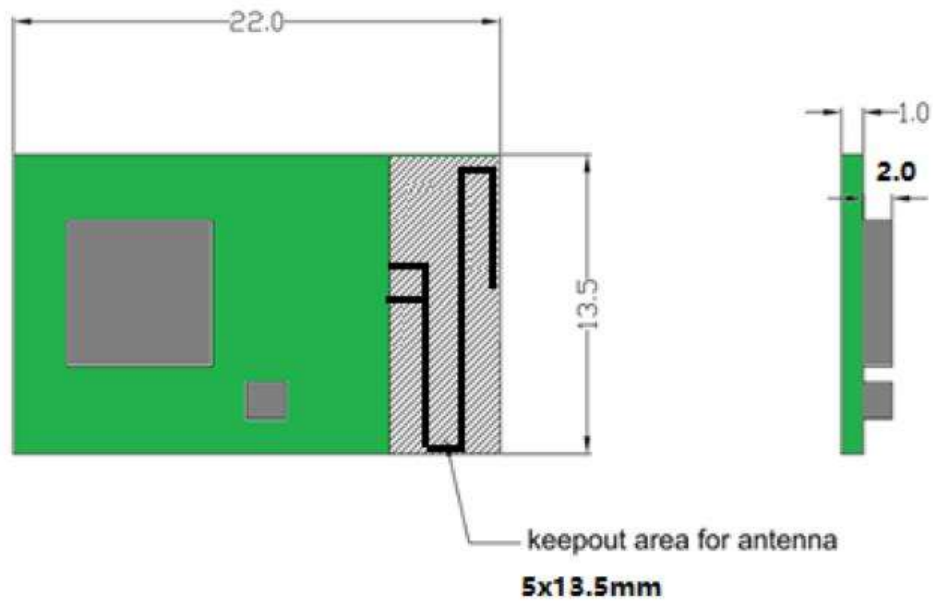
4.4 Test Configuration



5. Equipment List

Type of Equipment	Manufact ure	Model Number	S/N	Calibration Date	Expiration Time
Anechoic Chamber	ETS	AMS-8500	CT-001157-1219	2020-05-17	2025-05-16
Test Software	ETS	EMQuest TM	REV 1.0.9	-	-
EMCenter_Switch Control System	ETS	7006/7001	00059957/MY 42001152	-	-
Diagonal Dual Polarized Horn	ETS	ETS 3164-04	00062743	2020-04-14	2025-04-13
Communication TX/RXAntenna on turntable	ETS	taoglas WDMP.2458.A	100214H000 088A	-	-
Network Analyzer	Keysight	E5071B	MY42404014	2023-05-13	2024-05-14

6. ANTENNA SIZE

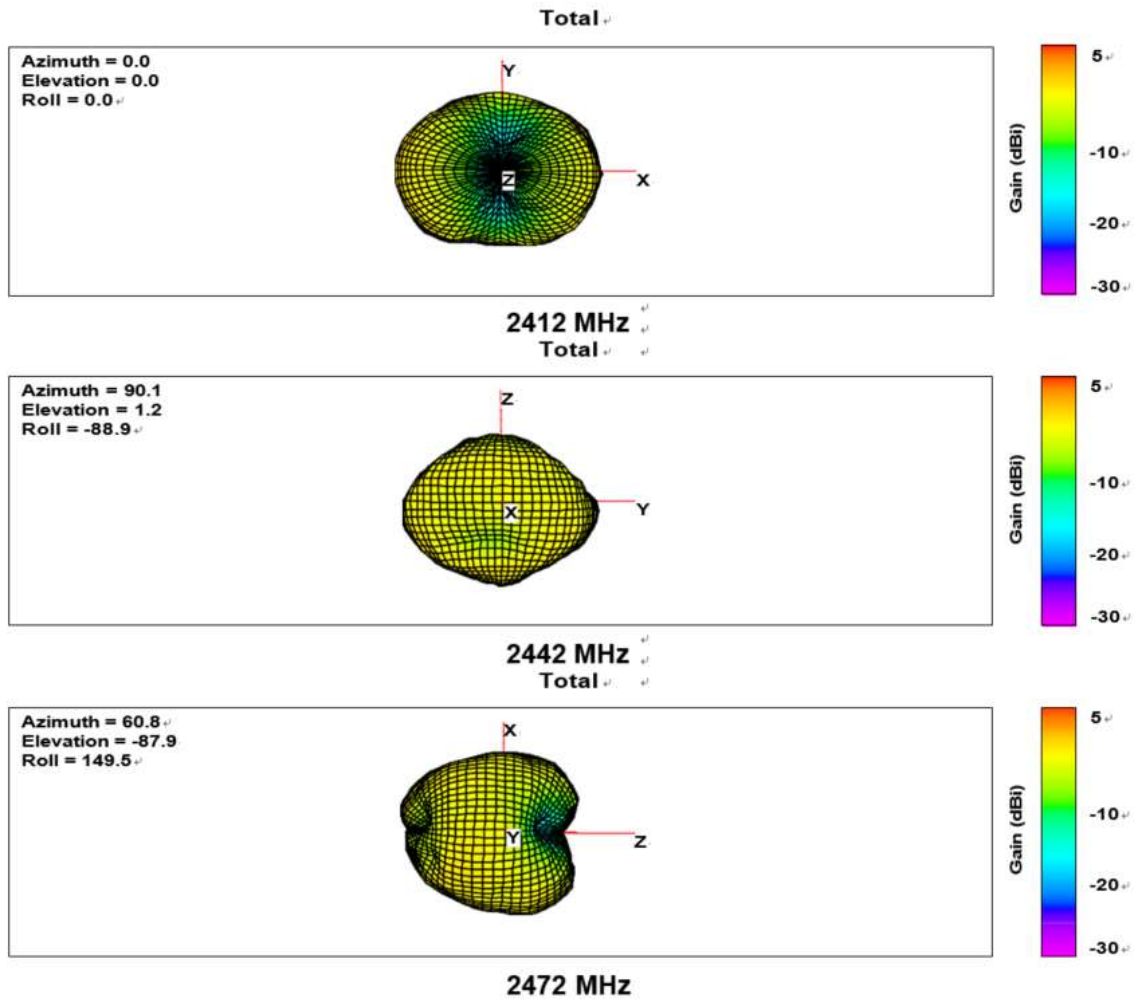


7. Test Results

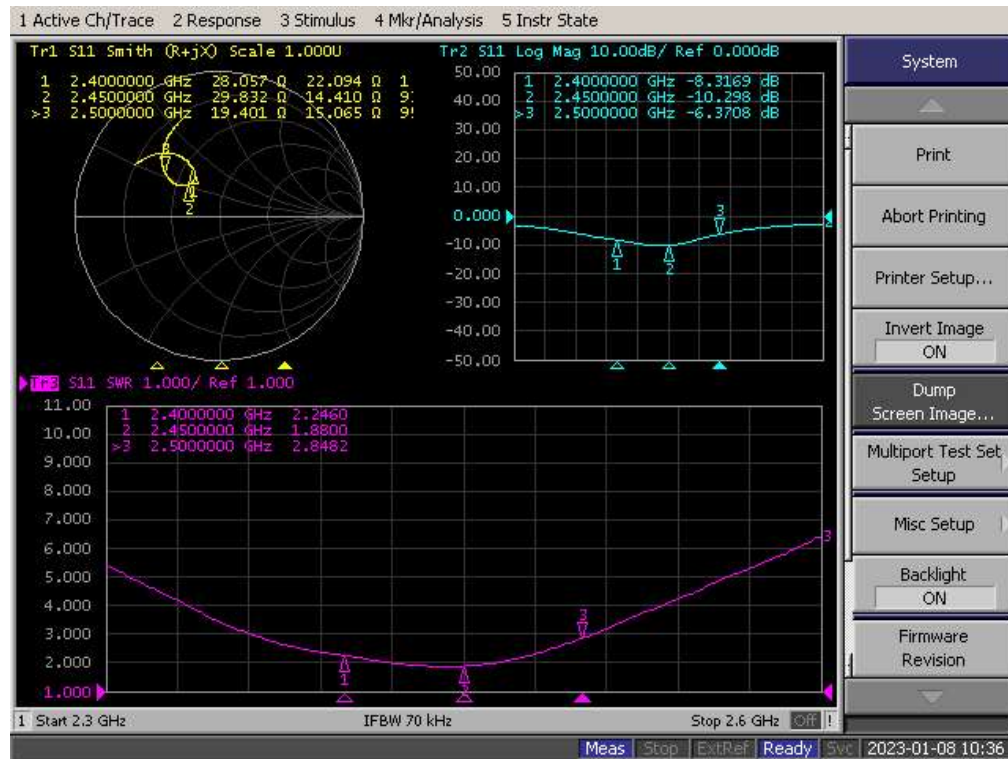
7.1. Gain and Efficiency

Test State	Frequency (MHz)	Efficiency (%)	Gain (dBi)	Note
Free Space	2400	49.39	0.75	/
	2440	49.66	0.52	
	2480	49.87	0.53	

7.2. 3-D Pattern Plots



7.3. Voltage Standing Wave Ratio (VSWR) & Antenna S11 & Smith Chart



END OF REPORT