

RYQGW23 antenna report

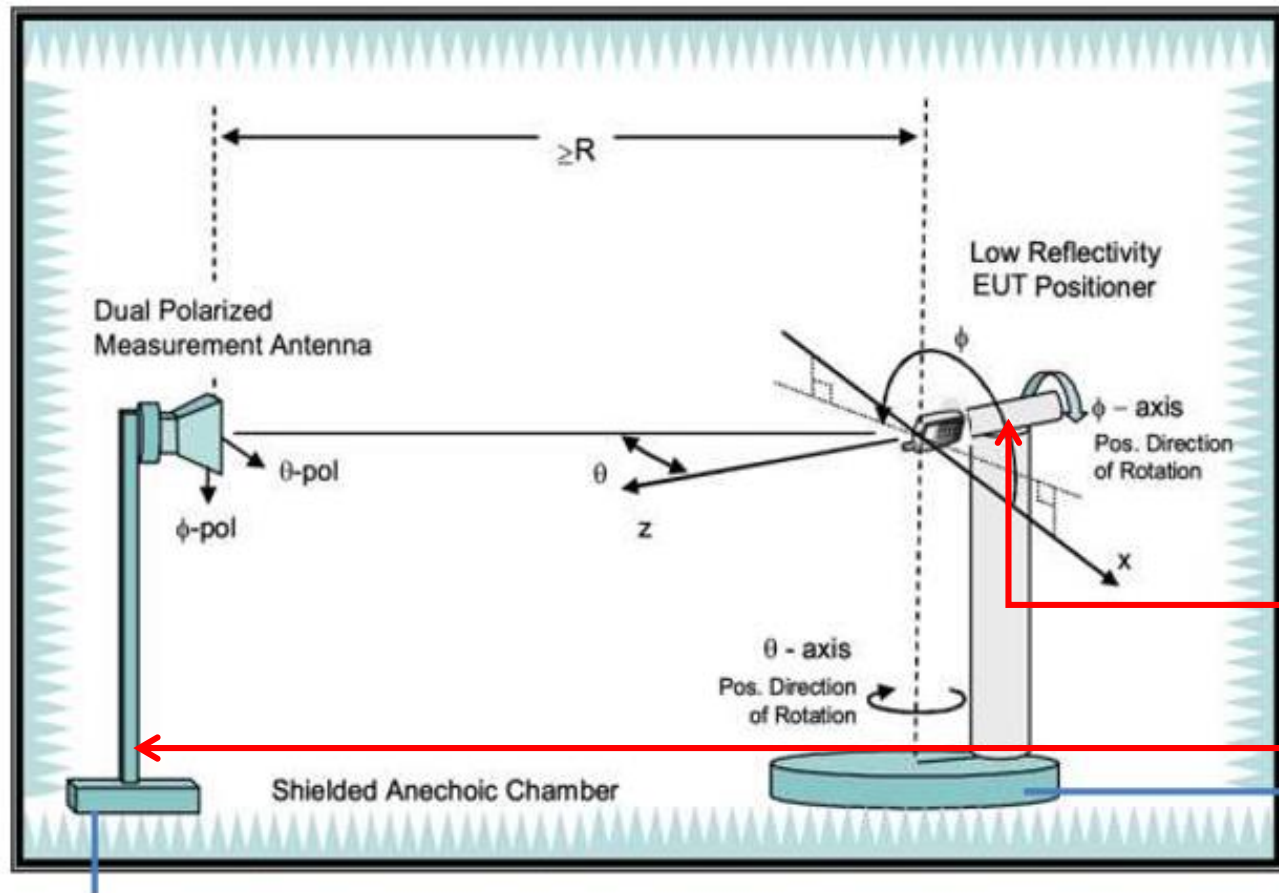
Item	Description
FCC ID	RYQGW23
Manufacture	HINGE INTERNATIONAL CO.,LTD
Manufacturer Address	No. 2 Tanglian 1st Street, Tangxia Community, Tangxia Town, Dongguan City
Test Environment	ETS-Lindgren AMS-8500 Antenna Measurement System
Test Equipment	Key-sight E5071C
Test Software	ETS-Lindgren EM-Quest Data Acquisition and Analysis Software V1.12 build 1470
Calibration date	June. 30 2022~2023
Test date	May. 10th 2023
Test engineer	Edward Ou

Outline

1. Test method
2. Antenna gain
3. Radiation pattern

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 $< 30^\circ$ 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).



2. Antenna gain

B13 TX

Frequency (MHz)	777	780	782	787	1710	1730	1747	1755
Gain (dBi)	-3.52	-3.57	-3.48	-4.16	-2.41	-2.32	-1.85	-0.97

B4 TX

Wi-Fi/BT TX

Frequency (MHz)	2400	2410	2412	2420	2430	2435	2440	2445	2450	2455	2460	2465	2470	2475	2480	2485
Gain (dBi)	1.5168	1.6517	1.6952	1.7605	1.7736	1.8240	1.7530	1.7539	1.8288	1.8375	1.7476	1.7060	1.8262	1.7891	1.7228	1.7915

3. Radiation pattern

