

**SAMSUNG**

**Unlicensed Band Antenna Gain**

**Model: SM-G766U, SM-G766U1**

**FCC ID: A3LSMG766U**

**BT/WIFI\_2.4GHz, 5GHz, 6GHz (SUB2)**

| G766B/U BT, WiFi<br>(Sub2 2.4G/5G/6G) |            |
|---------------------------------------|------------|
| Freq                                  | Peak.[dBi] |
| 2400                                  | -6.2       |
| 2417                                  | -6.1       |
| 2437                                  | -6.5       |
| 2451                                  | -5.8       |
| 2472                                  | -6.1       |
| 2485                                  | -6.4       |
| 5150                                  | -6.2       |
| 5290                                  | -6.4       |
| 5430                                  | -6.3       |
| 5570                                  | -6.5       |
| 5710                                  | -6.4       |
| 5850                                  | -6.5       |
| 5925                                  | -8.5       |
| 6165                                  | -8.4       |
| 6405                                  | -8.6       |
| 6645                                  | -8.5       |
| 6885                                  | -8.3       |
| 7125                                  | -8.4       |

**BT/WIFI\_2.4GHz, 5GHz, 6GHz (SUB4)**

| G766B/U BT, WiFi<br>(Sub4 2.4G/5G/6G) |            |
|---------------------------------------|------------|
| Freq                                  | Peak.[dBi] |
| 2400                                  | -6.6       |
| 2417                                  | -6.5       |
| 2437                                  | -6.3       |
| 2451                                  | -6.4       |
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| 2485                                  | -6.4       |
| 5150                                  | -6.5       |
| 5290                                  | -6.2       |
| 5430                                  | -6.3       |
| 5570                                  | -6.4       |
| 5710                                  | -6.4       |
| 5850                                  | -6.2       |
| 5925                                  | -8.6       |
| 6165                                  | -8.4       |
| 6405                                  | -8.7       |
| 6645                                  | -8.5       |
| 6885                                  | -8.7       |
| 7125                                  | -8.6       |

## Radiation Pattern Test

Antennas tested for Gain and Efficiency must be assembled into the enclosure and tested in the fully assembled and operating **SM-G766U** handset. The antenna is tested in free space in the anechoic chamber in the H, E1 and, E2 planes. The radiation patterns are measured at the center of transmit and receive bands.

A picture showing the geometry for this device is included in the test setup photos.

## Chamber Information

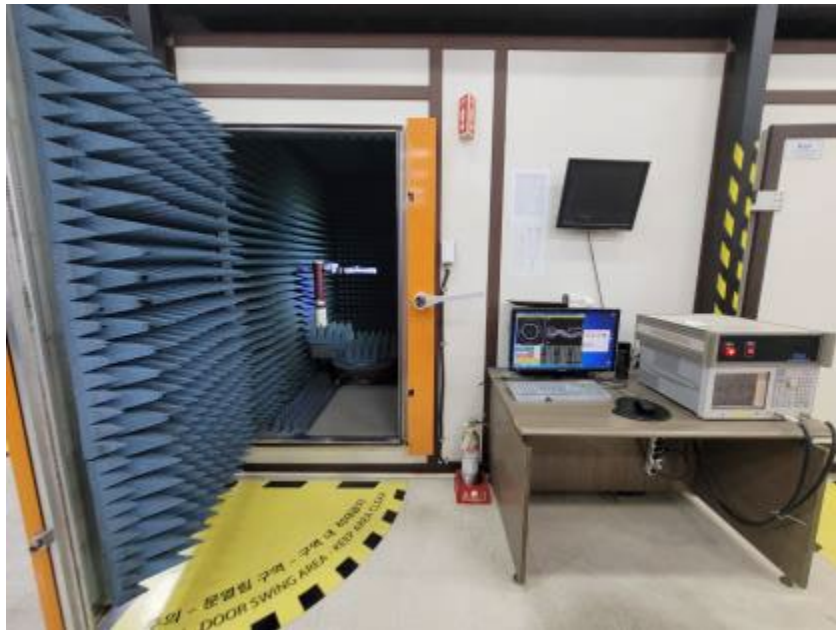
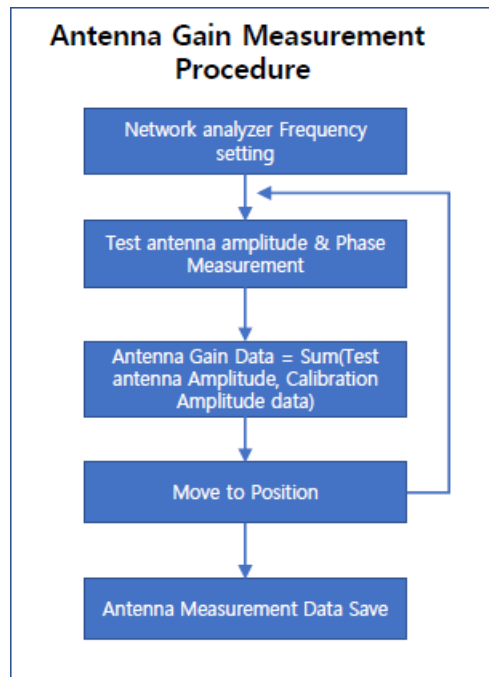


Figure 2: Geometry of Anechoic Chamber for Radiation patterns.

- ✓ Location : Kyocera-Avx.  
(166, Gosan-ro, Gunpo-si, Gyeonggi-do, Republic of Korea)
- ✓ Size : 3 x 2.5 x 2.5m
- ✓ Frequency : 600 MHz - 6GHz
- ✓ TX Antenna : KSS-HA600 (Double Rigid Horn Antenna)
- ✓ KSS 3D Motion Controller

## Antenna Gain Measurement Procedure



### Detail antenna description

- ✓ Antenna type :
  - SUS Carrier Inmold Antenna
- ✓ Antenna manufacturer : Kyocera AVX Components

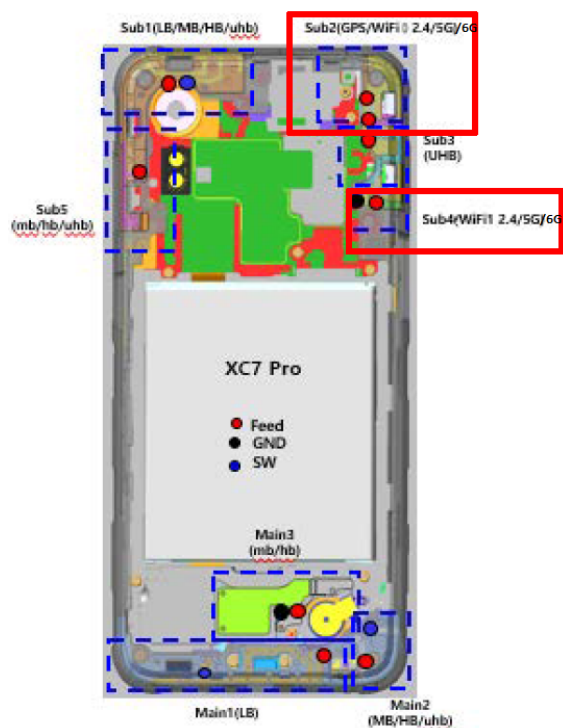
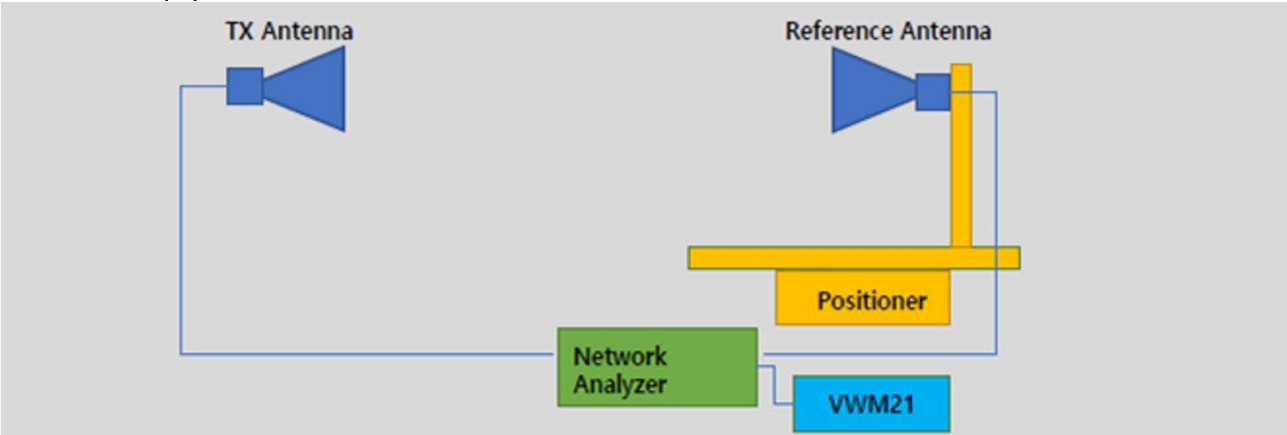


Table of calibrated equipment



| Part                 | Model Name                      | Specification    | S/N            | Cal Date                                        |
|----------------------|---------------------------------|------------------|----------------|-------------------------------------------------|
| Tx Antenna           | KSS-HA600                       | 600MHz to 6GHz   | KSS-D600D-0024 |                                                 |
| Reference Antenna    | KSS-HA600                       | 600MHz to 6GHz   | KSS-D600D-0024 |                                                 |
| Network Analyzer     | Agilent E5071B                  | 300kHz to 8.5GHz | MY42300768     | Cal. Date : 2024.10.05<br>Due Date : 2025.10.05 |
| Measurement Software | KSS-ANT<br>(Ver. : VEE Pro 9.3) |                  |                |                                                 |

Test dates

2024.12.20

Names of test personnel

HS Ryu

Signature

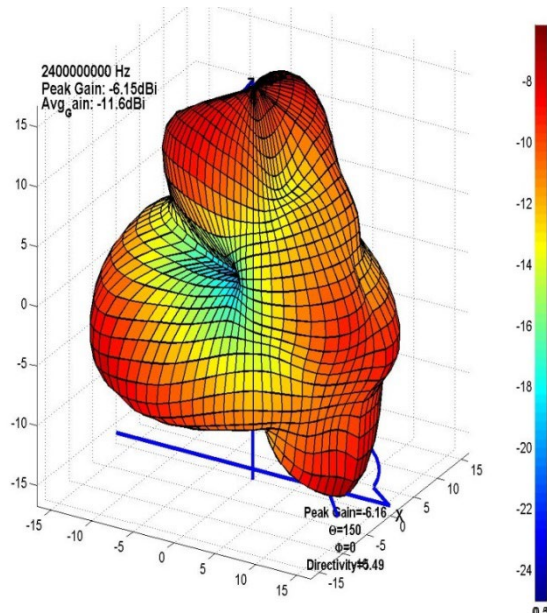
### **Test setup photos**

The antenna gain report test setup photos includes pictures of the measurement setup.

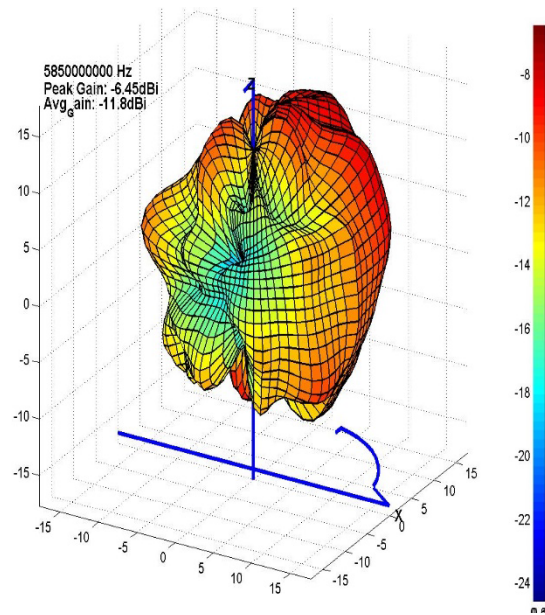
## Radiation plots for max gain plane (3D)

Sub2 WiFi

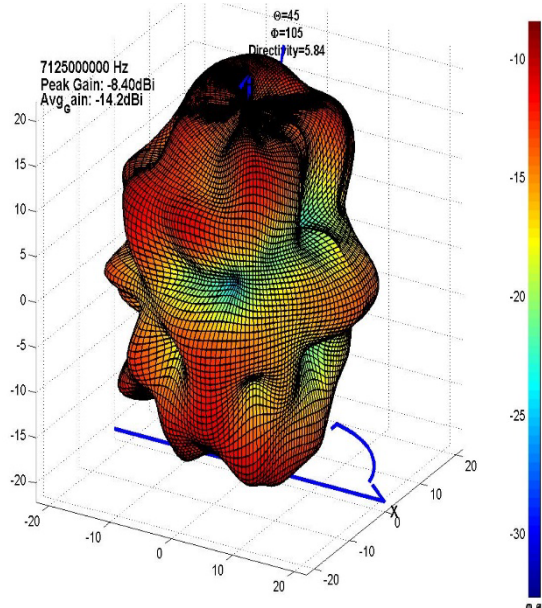
2.4G



5G



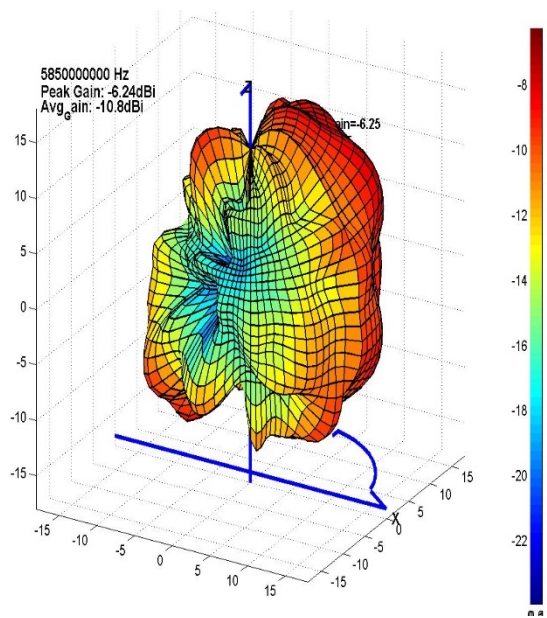
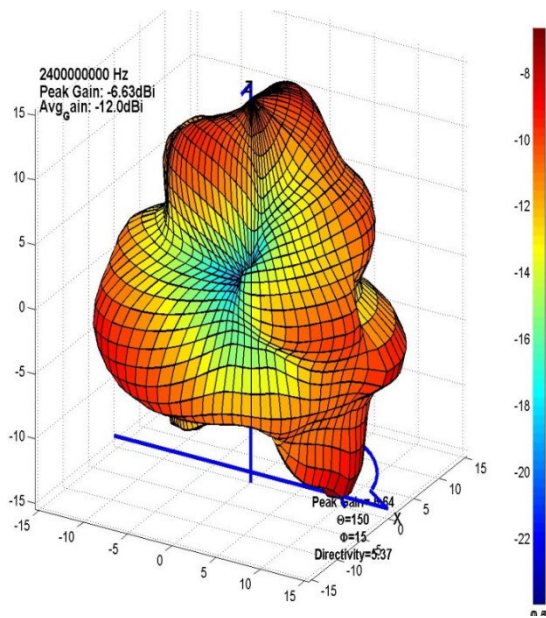
6G



Sub4 WiFi

2.4G

5G



6G

