SAMSUNG

Unlicensed Band Antenna Gain

Model: SM-L505U, SM-L505F

FCC ID : A3LSML505

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WIFI _5GHz

L505U WiFi 5G	
Freq	Peak.[dBi]
5150	-10.6
5290	-10.6
5430	-9.5
5570	-9.5
5710	-9.2
5850	-9.1

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Radiation Pattern Test

The Bluetest Reverberation Test Systems is the ideal choice for developers of wireless devices and components as well as operators wanting to verify their suppliers' wireless devices. Over-The-Air (OTA) measurements reflect the true performance of the device and ensure that the tested product performs as intended once released to the market. The patented design creates a rich and isotropic multipath environment inside the chamber allowing for fast, easy and realistic performance measurements on SISO as well as MIMO devices like LTE and WLAN. The RTS is capable of performing passive measurements like antenna efficiency, diversity and MIMO gain as well as active measurements like TRP, TIS and Throughput (TPUT)..

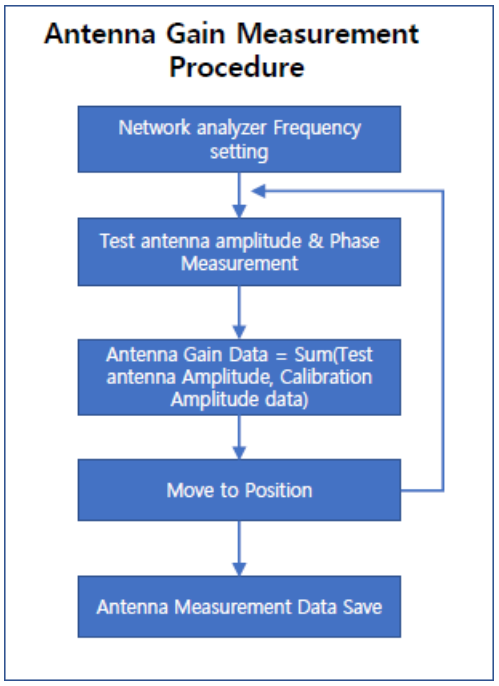
A picture showing the geometry for this device is included in the test setup photos.

Chamber Information

Figure 1: 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

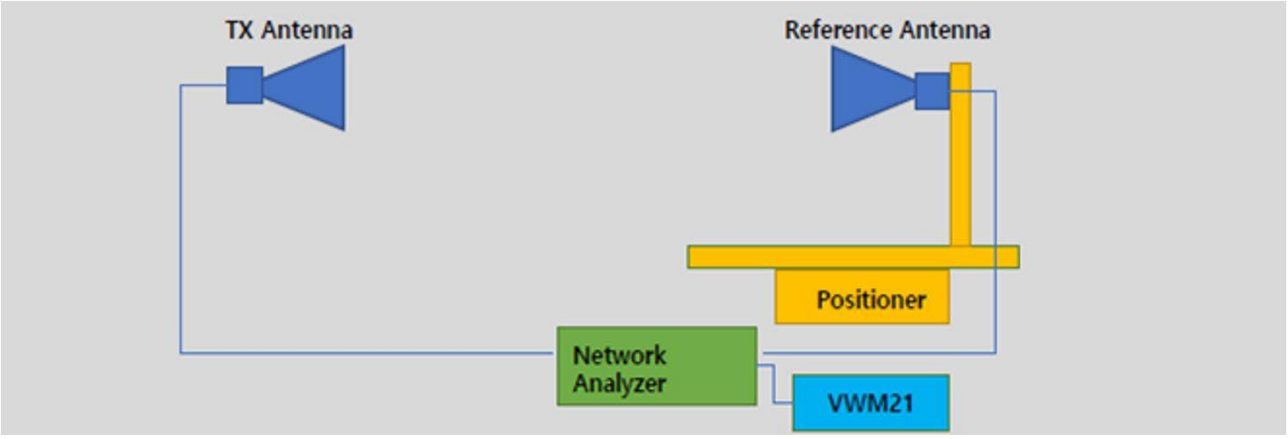


Detail antenna description

- ✓ Antenna type :
  - FPCB Antenna
- ✓ Antenna manufacturer : Kyocera AVX Components

Please refer to the setup photo document

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 Due Date : 2025.10.05
Measurement Software	KSS-ANT (Ver. : VEE Pro 9.3)			

Test dates

2025.3.18

Names of test personnel

SH Seo

Test setup photos

Radiation Pattern Test

Antennas tested for Gain and Efficiency must be assembled into the enclosure and tested in the fully assembled and operating SM-L505U Smart Watch. 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.

Test setup photos

Please refer to the setup photo document

Radiation plots for max gain plane (3D)