



Unlicensed Band Antenna Gain (BT/WLAN)

Model: SM-P625, SM-P620

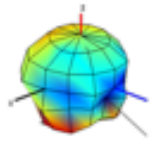
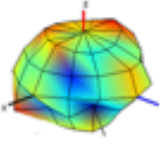
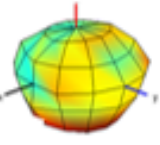
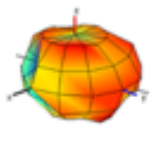
FCC ID: A3LSMP625, A3LSMP620

1. WIFI0 : BT/WLAN 2.4 & 5GHz

Antenna type : **Metal type**

2. WIFI1 : WLAN 2.4 & 5GHz

Antenna type : **Metal type**

Ant	Band	Freq.	EFF	AVG	Peak	
WIFI0	2.4G	2400	24.5	-6.1	-4.3	
		2451	23.4	-6.3	-4.3	
		2473	22.9	-6.4	-4.5	
		2480	24.5	-6.1	-3.8	
	5G	5150	21.4	-6.7	-5.0	
		5350	17.8	-7.5	-5.1	
		5500	17.8	-7.5	-5.1	
		5700	17.4	-7.6	-5.7	
		5795	16.2	-7.9	-6.2	
		5815	16.2	-7.9	-5.5	
		5825	15.8	-8.0	-5.8	
		5850	16.2	-7.9	-6.2	
		5885	16.2	-7.9	-6.0	
WIFI1	2.4G	2400	22.9	-6.4	-4.2	
		2451	20.4	-6.9	-5.0	
		2473	25.1	-6.0	-3.7	
		2480	24.0	-6.2	-3.9	
	5G	5150	14.8	-8.3	-6.4	
		5350	15.5	-8.1	-5.7	
		5500	13.5	-8.7	-6.8	
		5700	13.8	-8.6	-6.7	
		5795	13.8	-8.6	-6.8	
		5815	14.1	-8.5	-6.0	
		5825	13.5	-8.7	-7.0	
		5850	13.8	-8.6	-6.9	
		5885	14.1	-8.5	-6.5	

Radiation Pattern Test

Antennas tested for Gain and Efficiency must be assembled into the enclosure and tested in the fully assembled and operating SM-P625, SM-P620 device. 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.

Photo #1

Note: Please refer to photos uploaded in separate antenna test setup photos exhibit.

Figure 1: Geometry for SM-P625, SM-P620 for Radiation patterns

Chamber Information

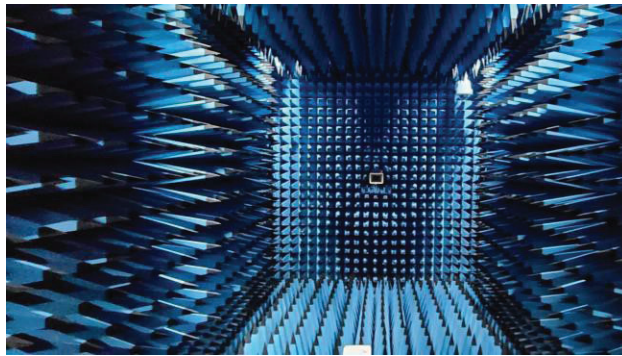


Figure 2: Geometry of Anechoic Chamber for Radiation patterns.

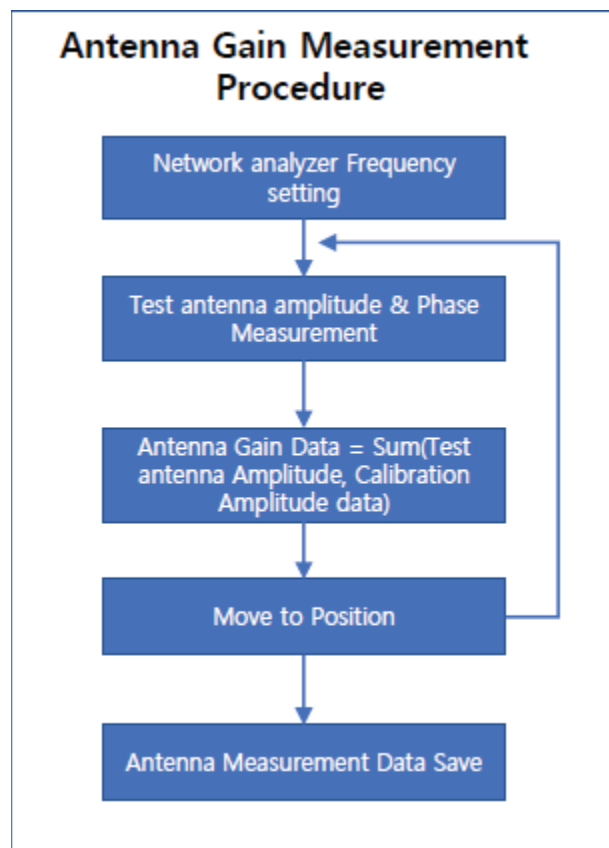
- ✓ Location : Samsung R&D Center R5 bld.
- ✓ Size : 4m x 2.5 x 2.5m (L x W x H)
- ✓ Frequency : 600 MHz -18GHz
- ✓ TX Antenna : 2GHz –18GHz Dual Polarization
- ✓ Quiet zone : 22cm @ 6GHz (Far-Field Length 2m)
- ✓ 2-axis DUT positioner -360°continuous rotation

Test setup photos

Photo #2

Note: Please refer to photos uploaded in separate antenna test setup photos exhibit.

Antenna Gain Measurement Procedure



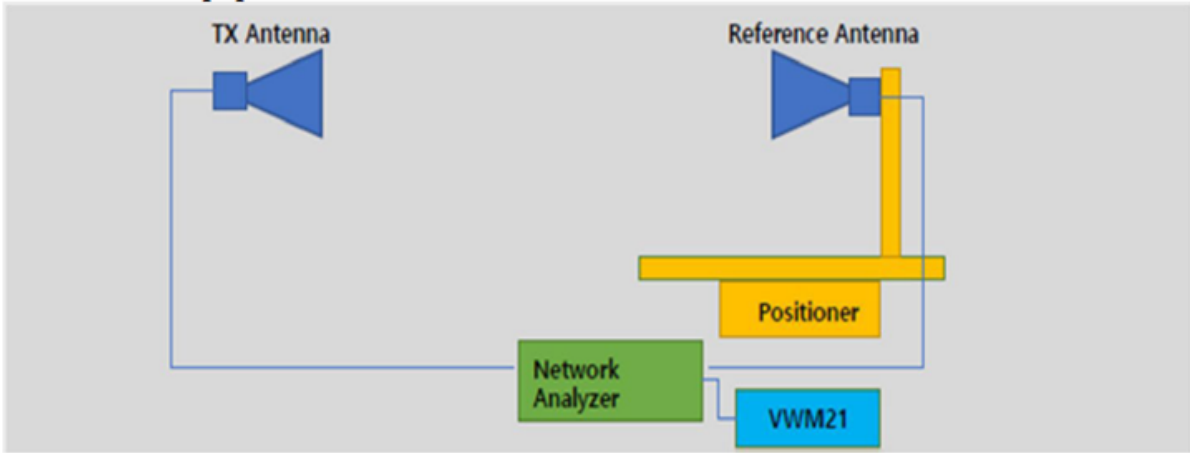
Detail antenna description

Photo #3

Note: Please refer to photos uploaded in separate antenna test setup photos exhibit.

Table of calibrated equipment (BT & WLAN)

Table of calibrated equipment



Part	Model Name	Specification	
Tx Antenna	QRH-006M-006G	600MHz to 6GHz	Calibrated date :2022.8.8 / Cal. Due : 2023.12.28
	QRH-002G-018G	2GHz to 18GHz	Calibrated date :2022.8.8 / Cal. Due : 2023.12.28
Reference Antenna	BBHA9120LFA	680MHz to 6500MHz	Calibration Frequency(680MHzto 6GHz) Calibrated date:2022.8.8 / Cal. Due : 2023.12.28
	BBHA9120C	2GHz to 18GHz	Calibration Frequency(2GHz to 8.5GHz) Calibrated date:2022.8.8 / Cal. Due : 2023.12.28
Network Analyzer	Agilent 5071B	300KHz to 8.5GHz	Calibrated date :2022.8.8 / Cal. Due : 2023.12.28
Measurement Software	VWM21		MTG Visual Wave-Mobile(Ver.2.1)

Test dates

2023.03.31

Names of test personnel

Seongyong An

Names of commercial test software being used

MTG Visual Wave-Mobile (Ver.2.1)

Model: SM-P625
FCC ID: A3LSMP625

Photo #1

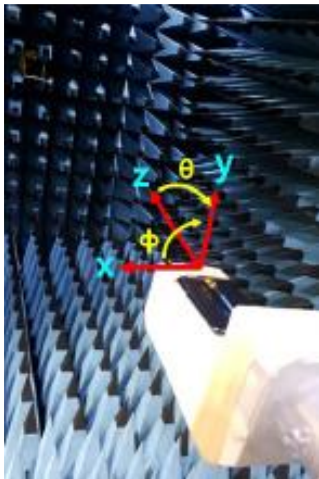


Photo #3

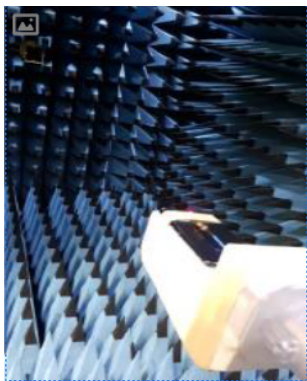


Photo #4

* Placement of each Antenna

