

TEST REPORT

Applicant Name : Seeed Technology Co., Ltd
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 Nanshan District, Shenzhen, Guangdong Province, P.R.C
 Report Number : SZNS211025-54608E-00C
 FCC ID: Z4T-RESERVER-A

Test Standard (s)

FCC PART 15.407

Sample Description

Product: reServer-X86-A1135
 Trademark: Seeed Studio
 Tested Model: reServer-I51135(64G+512G/z)
 Multiple Product and Model: reServer-X86-A1115, reServer-I31115(xx+yy/z);
 reServer-X86-A1125, reServer-I31125(xx+yy/z)
 reServer-X86-A1135, reServer-I51135(xx+yy/z)
 (Note: xx: DDR, 8G/16G/32G/64G
 yy: SSD, 128G/256G/512G; z: wifi module)

Date Received: 2021-10-20
 Date of Test: 2021-10-22 to 2022-04-18
 Report Date: 2022-04-18

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Ting Lü

Ting Lü
 EMC Engineer

Approved By:

Candy Li

Candy Li
 EMC Engineer

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "*".
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TABLE OF CONTENTS

GENERAL INFORMATION	3
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT).....	3
OBJECTIVE	3
TEST METHODOLOGY	3
MEASUREMENT UNCERTAINTY	4
TEST FACILITY	4
SYSTEM TEST CONFIGURATION	5
DESCRIPTION OF TEST CONFIGURATION	5
EUT EXERCISE SOFTWARE	5
EQUIPMENT MODIFICATIONS	6
SUPPORT EQUIPMENT LIST AND DETAILS	6
EXTERNAL I/O CABLE.....	6
BLOCK DIAGRAM OF TEST SETUP	7
SUMMARY OF TEST RESULTS	9
TEST EQUIPMENT LIST	10
FCC §15.247 (i) & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)	11
FCC §15.203 – ANTENNA REQUIREMENT	13
APPLICABLE STANDARD	13
ANTENNA CONNECTOR CONSTRUCTION	13
FCC §15.407 (B) (8) §15.207 (A) – CONDUCTED EMISSIONS	14
APPLICABLE STANDARD	14
EUT SETUP.....	14
EMI TEST RECEIVER SETUP.....	14
TEST PROCEDURE	14
TRANSD FACTOR & MARGIN CALCULATION	15
TEST DATA	15
§15.205 & §15.209 & §15.407(B) (1), (4), (8) , (9), (10) – UNDESIRABLE EMISSION	20
APPLICABLE STANDARD	20
EUT SETUP.....	20
EMI TEST RECEIVER & SPECTRUM ANALYZER SETUP	21
TEST PROCEDURE	21
FACTOR & MARGIN CALCULATION	22
TEST DATA	22
FCC §15.407(a) (1) (3) – CONDUCTED TRANSMITTER OUTPUT POWER	36
APPLICABLE STANDARD	36
TEST PROCEDURE	36
TEST DATA	36
MAXIMUM CONDUCTED OUTPUT POWER (AVERAGE POWER).....	37

GENERAL INFORMATION**Product Description for Equipment under Test (EUT)**

Product	reServer-X86-A1135	
Trademark	Seed Studio	
Tested Model	reServer-I51135(64G+512G/z)	
Multiple Product and Model	reServer-X86-A1115	reServer-I31115(xx+yy/z)
	reServer-X86-A1125	reServer-I31125(xx+yy/z)
	reServer-X86-A1135	reServer-I51135(xx+yy/z)
	(Note: xx: DDR, 8G/16G/32G/64G; yy: SSD, 128G/256G/512G; z: wifi module)	
Model difference	Please refer to the DoS letter	
Frequency Range	5G Wi-Fi: 5150-5250 MHz; 5725-5850 MHz	
Maximum Average Conducted Output Power	5G Wi-Fi: 5150-5250 MHz 12.70dBm (802.11a), 11.75dBm(802.11n20), 11.60dBm(802.11n40), 12.59dBm (802.11ac20), 11.56dBm (802.11ac40), 11.22dBm (802.11ac80) 5725-5850 MHz: 11.74dBm (802.11a), 11.90dBm(802.11n20), 11.70dBm(802.11n40), 12.12dBm (802.11ac20), 11.68dBm (802.11ac40), 11.38dBm (802.11ac80)	
Modulation Technique	OFDM	
Antenna Specification	External Antenna 1&2: 1.57dBi(5.2G&5.8G) (provided by the applicant)	
Voltage Range	DC 12V from adapter.	
Sample serial number	SZNS211025-54608E-RF-S1	
Sample/EUT Status	Good condition	
Adapter 1 information	Model: HA-1600-12 Input: 100-240V~1.7A 50/60Hz, Output: DC 12V, 5A	
Adapter 2 information	Model: PA-1061-81 Input: 100-240V~, 50/60Hz 1.6A Output: DC 12V, 5A, 60W	

Objective

This type approval report is in accordance with Part 2-Subpart J, Part 15-Subparts A and E of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart E, section 15.203, 15.205, 15.207, 15.209 and 15.407 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices. And KDB789033D02 General U-NII Test Procedures New Rules v02r01.

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd.. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		5%
RF Frequency		0.082×10^{-7}
RF output power, conducted		0.73dB
Unwanted Emission, conducted		1.6dB
AC Power Lines Conducted Emissions		2.72dB
Emissions, Radiated	9kHz - 30MHz	2.66dB
	30MHz - 1GHz	4.28dB
	1GHz - 18GHz	4.98dB
	18GHz - 26.5GHz	5.06dB
	26.5GHz - 40GHz	4.72dB
Temperature		1°C
Humidity		6%
Supply voltages		0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358, the FCC Designation No.: CN1189. Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 4297.01.

Listed by Innovation, Science and Economic Development Canada (ISED), the Registration Number is 5077A.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in an engineering mode, which was provided by manufacturer.

The device only supports 5G Wi-Fi 802.11a/n20/n40//ac20/ac40/ac80 modes, which was declared by manufacturer.

For 5150-5250MHz Band, 7 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
38	5190	46	5230
40	5200	48	5240
42	5210		

For 802.11a, 802.11n20 channel 36, 40, 48 were tested;

For 802.11n40 channel 38, 46 were tested.

For 802.11ac80 channel 42 was tested.

For 5725-5850MHz Band, 8 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	157	5785
151	5755	159	5795
153	5765	161	5805
155	5775	165	5825

For 802.11a, 802.11n20 channel 149, 157, 165 were tested; For 802.11n40, channel 151, 159 were tested.

For 802.11ac80, channel 155 was tested.

EUT Exercise Software

Software of “app DRTU”* provided by manufacturer and power level as below:

Mode	Data Rate (Mbps)	Power Level*
802.11 a	6	12.5
802.11 n20/n40/ac20/ac40/ac80	MCS0	12.5

The worse-case data rates are determined to be as above for each mode based upon investigations by measuring the output power and PSD across all data rates, bandwidths and modulations.

The device only supports SISO in all modes for Wi-Fi, per pretest and all the antenna ports have the same power level for SISO modes.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

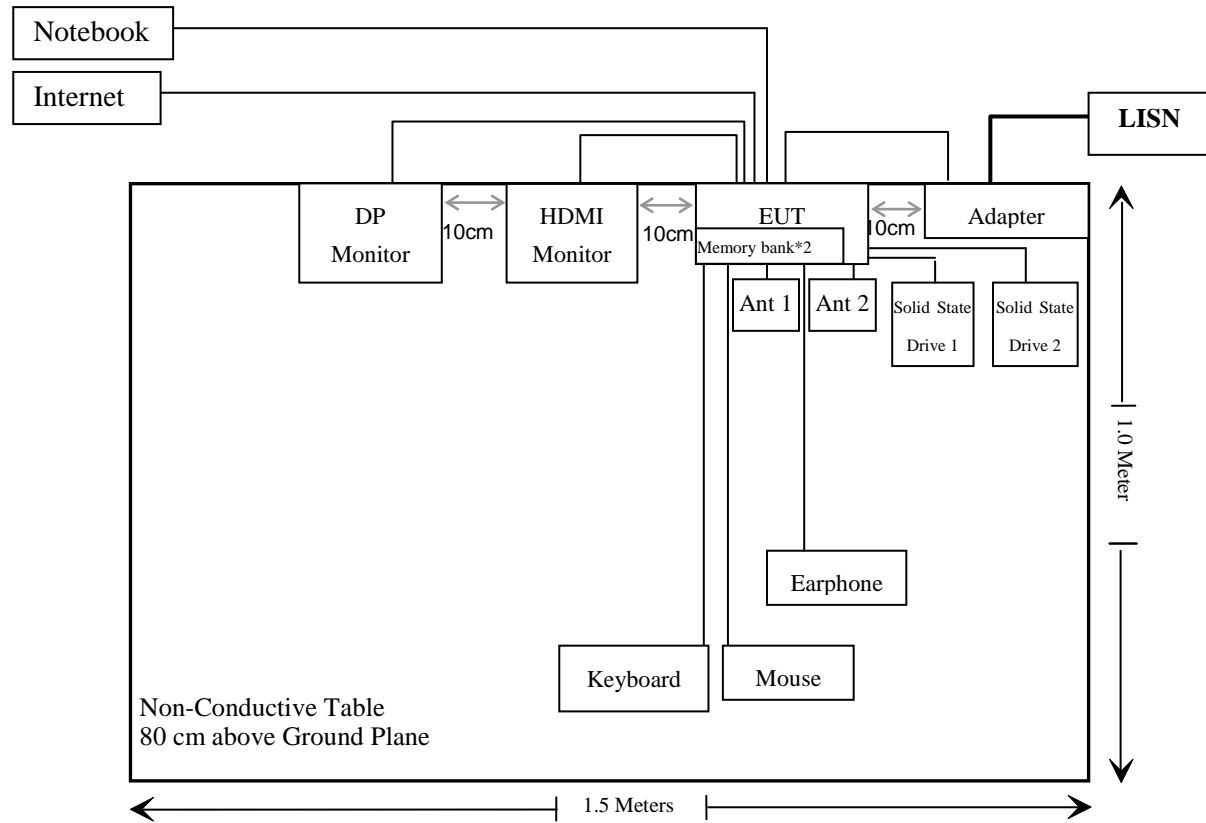
Manufacturer	Description	Model	Serial Number
DELL	Keyboard	L100	CN0RH66658985C018C
DELL	Mouse	MOC5UG	Unknown
PHILIPS	DP Monitor	275M7C	Unknown
DELL	HDMI Monitor	ST2310f	Unknown
ZHIKE	Solid State Drive 1	U300	USA210510105
ZHIKE	Solid State Drive 2	U300	USA210510106
BORY	NVME PCIE SSD	Unknown	800295763
Kingston	Memory bank 1	9905700-E15.AO OG	Unknown
Kingston	Memory bank 2	99P5711-002.AO OG	Unknown
Unknown	M.2 PCI-E	YX-520	2106H520A 128GA 18829
SCI	Earphone	SCRC-130A	Unknown
Lenovo	Notebook	T430	Unknown

External I/O Cable

Cable Description	Length (m)	From Port	To
Unshielded Detachable DC output Cable	1.15	Adapter 1	EUT
Unshielded Detachable DC output Cable	1.0	Adapter2	EUT
Unshielded Detachable AC power Cable	1.0	EUT	Adapter 1
Unshielded Detachable AC power Cable	1.5	EUT	Adapter 2
Shielded Detachable HDMI Cable	1.75	EUT	HDMI Monitor
Shielded Detachable DP Cable	1.75	EUT	DP Monitor
Unshielded Detachable USB Cable	1.5	EUT	Mouse
Unshielded Detachable USB Cable	1.5	EUT	Keyboard
Unshielded Detachable RJ45 Cable 1	3	Internet	EUT
Unshielded Detachable RJ45 Cable 2	3	Notebook	EUT
Unshielded Detachable earphone Cable	0.75	EUT	Earphone

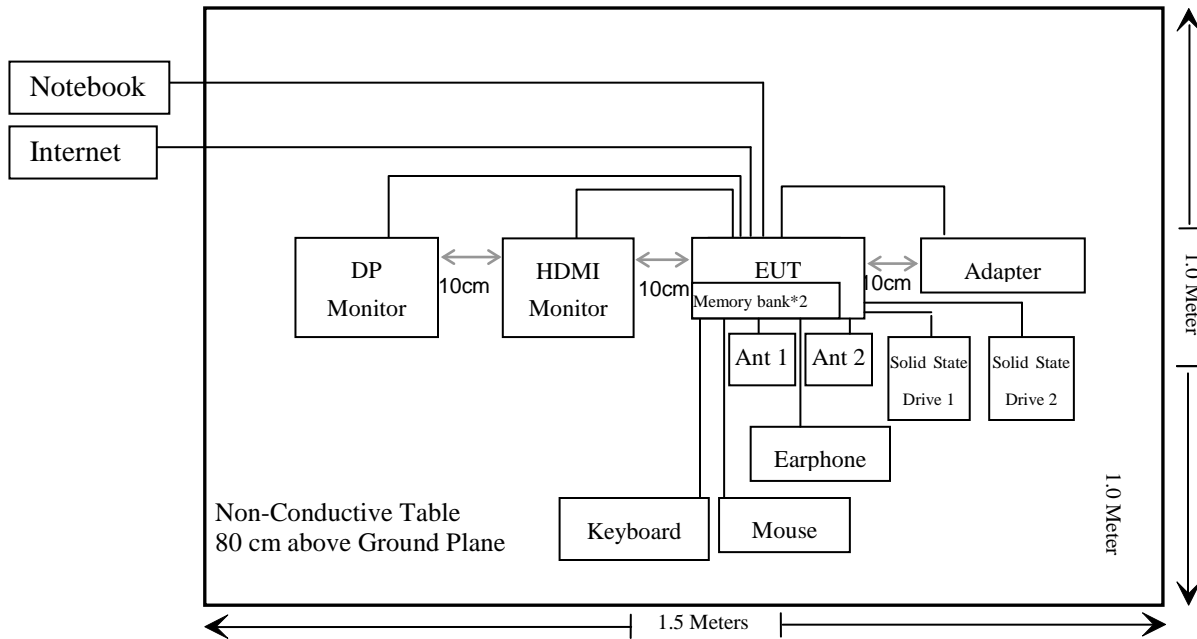
Block Diagram of Test Setup

For conducted emission:

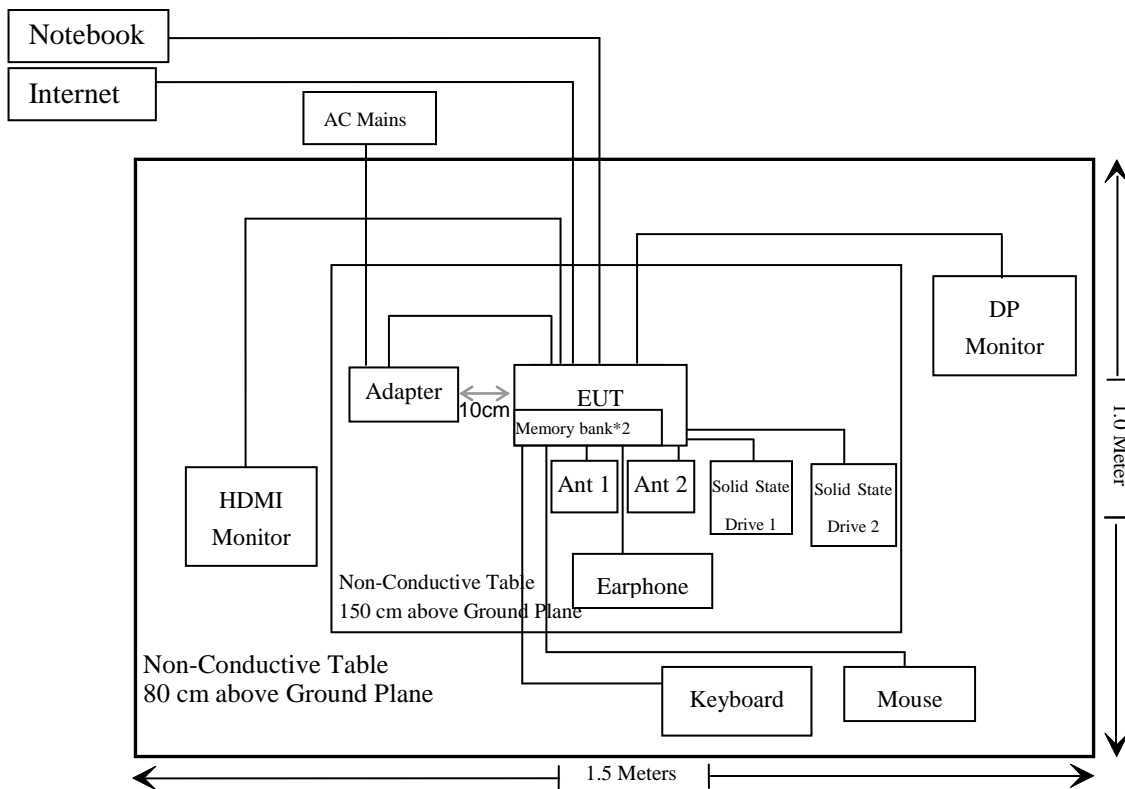


For Radiated Emission:

Below 1GHz:



Above 1GHz:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC §15.247 (i), §2.1091	Maximum Permissible Exposure(MPE)	Compliant
§15.203	Antenna Requirement	Compliant
§15.407(b)(8) & §15.207(a)	Conducted Emissions	Compliant
§15.205 & §15.209 & §15.407(b) (1), (4), (8), (9), (10)	Undesirable Emission& Restricted Bands	Compliant
§15.407(a) (12), (e)	Bandwidth	Compliant*
§15.407(a) (1), (3)	Conducted Transmitter Output Power	Compliant* (Note*)
§15.407 (a) (1), (3)	Power Spectral Density	Compliant*

Compliant*: This device contains one same PCBA Module Radio unit, which certified with product model of ODYSSEY-I51135(64G+512G/z), FCC ID: Z4T-ODYSSEY-A, please refers to report: SZNS211008-51520E-00C.

Note: Per pre-test for all models, and the worst case about maximum emission is model of reServer-I51135(64G+512G/z), which was recorded in this report.

Note*: The EUT had been tested and verified the RF parameters consistently with the PCBA Module.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emissions Test					
Rohde& Schwarz	EMI Test Receiver	ESCI	100784	2021/02/03	2022/02/02
R & S	L.I.S.N.	ENV216	101314	2020/12/25	2021/12/24
Anritsu Corp	50Ω Coaxial Switch	MP59B	6200506474	2020/12/25	2021/12/24
Unknown	RF Coaxial Cable	N-2m	No.2	2020/12/25	2021/12/24
Conducted Emission Test Software: e3 19821b (V9)					
Radiated Emissions Test					
Rohde& Schwarz	Test Receiver	ESR	102725	2020/12/25	2021/12/24
Rohde&Schwarz	Spectrum Analyzer	FSV40	101949	2021/5/18	2022/5/17
SONOMA INSTRUMENT	Amplifier	310 N	186131	2020/12/25	2021/12/24
A.H. Systems, inc.	Preamplifier	PAM-0118P	531	2021/11/9	2022/11/8
Quinstar	Amplifier	QLW-184055 36-J0	15964001002	2020/11/28	2021/11/27
Anritsu Corp	50 Coaxial Switch	MP59B	6100237248	2020/12/25	2021/12/24
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2020/01/05	2023/01/04
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2020/01/05	2023/01/04
Schwarzbeck	HORN ANTENNA	BBHA9170	9170-359	2020/01/05	2023/01/04
Unknown	RF Coaxial Cable	N-5m	No.3	2020/12/25	2021/12/24
Unknown	RF Coaxial Cable	N-1m	No.5	2020/12/25	2021/12/24
Unknown	RF Coaxial Cable	N-10m	No.7	2020/11/09	2021/11/08
Unknown	RF Coaxial Cable	N-2m	No.8	2020/11/09	2021/11/08
CD	High Pass Filter	WHNX6.0/26. 5G-6SS	4	2020/12/25	2021/12/24
Radiated Emission Test Software: e3 19821b (V9)					
RF Conducted Test					
Rohde & Schwarz	Open Switch and Control Unit	OSP120 + OSP-B157	101244 + 100866	2021/12/13	2022/12/12
WEINSCHL	10dB Attenuator	5324	AU 3842	Each time	
Unknown	RF Coaxial Cable	No.32	RF-02	Each time	

* **Statement of Traceability:** Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §15.247 (i) & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to subpart 15.247 (i) and subpart 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm²)	Averaging Time (Minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

Result

Calculated Formulary:

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

For worst case:

Frequency (MHz)	Antenna Gain		Tune up conducted power		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
	(dBi)	(numeric)	(dBm)	(mW)			
5150-5250	1.57	1.44	13.0	19.95	20	0.0057	1
5725-5850	1.57	1.44	12.5	17.78	20	0.0051	1

Note: 1. The tune up conducted power was declared by the applicant.
2. The BT and Wi-Fi can not transmit at the same time.

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 20cm from nearby persons.

Result: Compliant.

FCC §15.203 – ANTENNA REQUIREMENT

Applicable Standard

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.

Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.407 (a), if the transmitting antennas of directional gain greater than 6dBi are used, the transmit power and power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

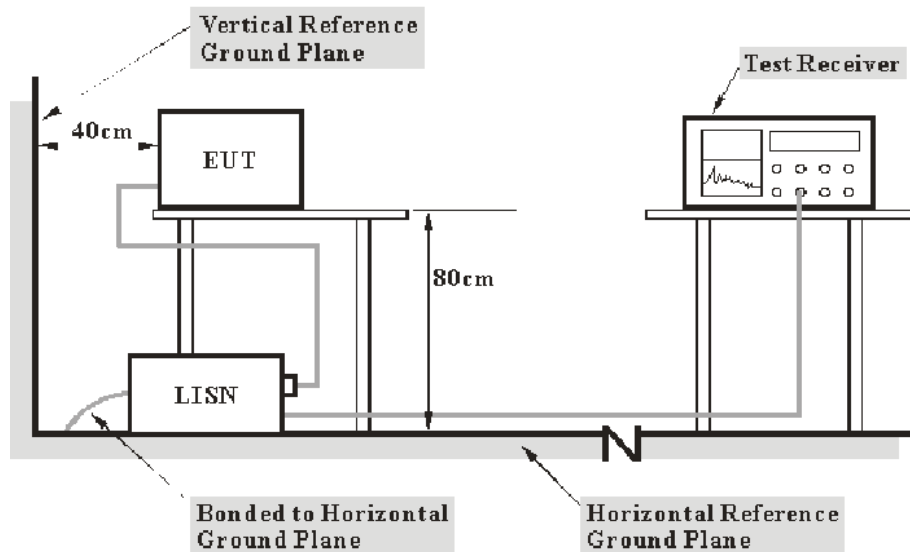
Antenna Connector Construction

The EUT has two external Antennas arrangement for 5G Wi-Fi, which was used a unique coupling and the antenna gain is 1.57dBi, fulfill the requirement of this section. Please refer to the EUT photos.

Result: Compliant.

FCC §15.407 (B) (8) §15.207 (A) – CONDUCTED EMISSIONS**Applicable Standard**

FCC §15.207, §15.407(b) (8)

EUT Setup

- Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the adapter was connected to the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Transd Factor & Margin Calculation

The Transd factor is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss. The basic equation is as follows:

$$\text{Transd Factor} = \text{LISN VDF} + \text{Cable Loss}$$

The “**Over limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over limit of -7 dB means the emission is 7 dB below the limit. The equation for calculation is as follows:

$$\begin{aligned} \text{Over Limit} &= \text{Level} - \text{Limit} \\ \text{Level} &= \text{Read Level} + \text{Factor} \end{aligned}$$

Test Data

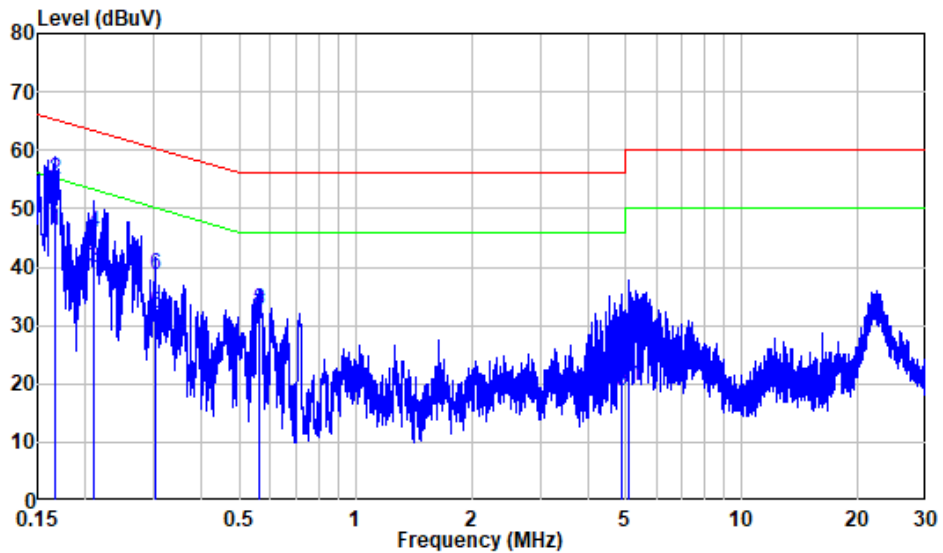
Environmental Conditions

Temperature:	25 °C
Relative Humidity:	64 %
ATM Pressure:	101.0 kPa

The testing was performed by Ting Lü on 2021-11-18

EUT operation mode: 5G Wi-Fi transmitting (worst case)

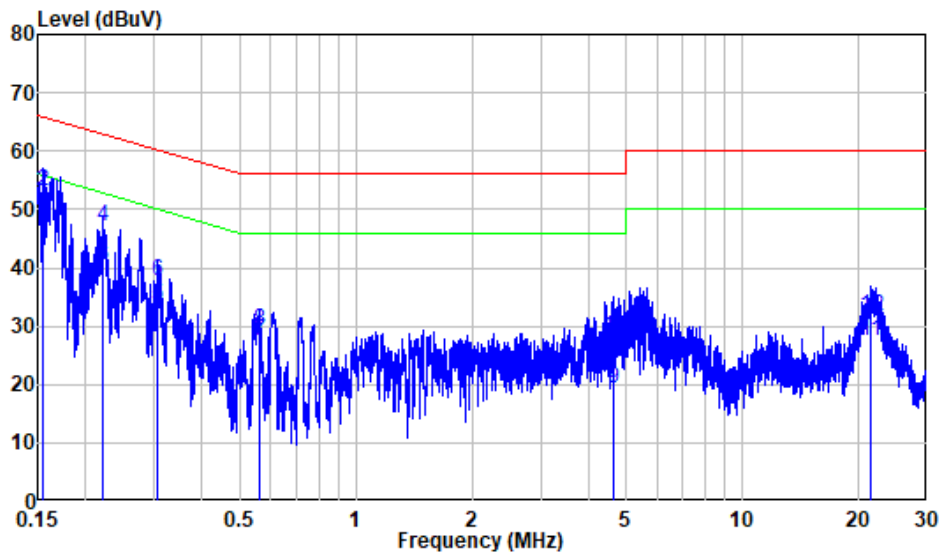
**Adapter 1:
AC 120V/60 Hz, Line**



Site : Shielding Room
 Condition: Line
 Mode : 5G WIFI
 Model : reServer-I51135 (64G+512G/z)

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.167	9.86	36.45	46.31	55.12	-8.81	Average
2	0.167	9.86	45.11	54.97	65.12	-10.15	QP
3	0.210	9.80	29.94	39.74	53.21	-13.47	Average
4	0.210	9.80	36.03	45.83	63.21	-17.38	QP
5	0.303	9.80	22.21	32.01	50.15	-18.14	Average
6	0.303	9.80	28.80	38.60	60.15	-21.55	QP
7	0.565	9.81	21.93	31.74	46.00	-14.26	Average
8	0.565	9.81	22.90	32.71	56.00	-23.29	QP
9	4.896	9.99	8.63	18.62	46.00	-27.38	Average
10	4.896	9.99	17.05	27.04	56.00	-28.96	QP
11	5.115	9.99	9.66	19.65	50.00	-30.35	Average
12	5.115	9.99	18.45	28.44	60.00	-31.56	QP

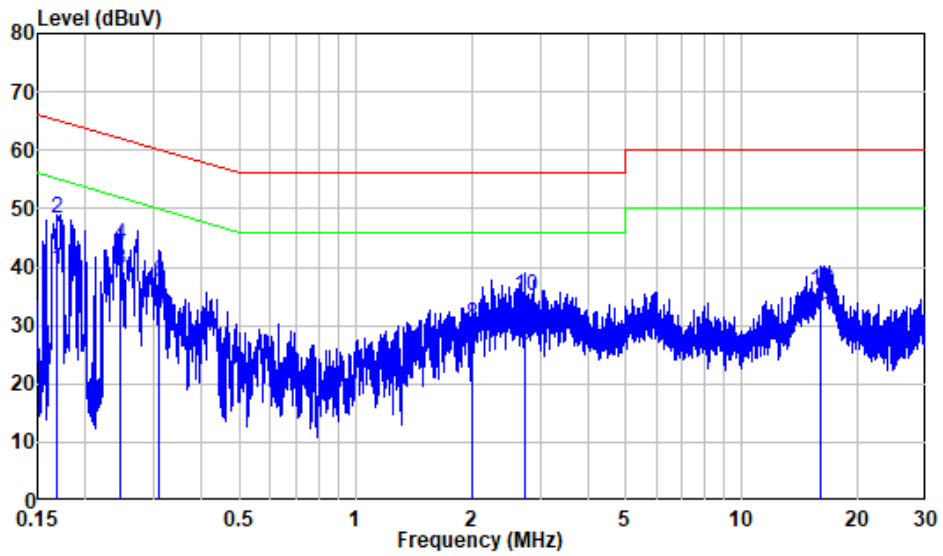
AC 120V/60 Hz, Neutral



Site : Shielding Room
 Condition: Neutral
 Mode : 5G WIFI
 Model : reServer-I51135 (64G+512G/z)

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.155	9.91	35.41	45.32	55.75	-10.43	Average
2	0.155	9.91	43.25	53.16	65.75	-12.59	QP
3	0.222	9.99	30.49	40.48	52.76	-12.28	Average
4	0.222	9.99	37.18	47.17	62.76	-15.59	QP
5	0.307	9.95	23.61	33.56	50.04	-16.48	Average
6	0.307	9.95	27.87	37.82	60.04	-22.22	QP
7	0.560	9.91	17.70	27.61	46.00	-18.39	Average
8	0.560	9.91	19.48	29.39	56.00	-26.61	QP
9	4.619	10.05	9.39	19.44	46.00	-26.56	Average
10	4.619	10.05	18.12	28.17	56.00	-27.83	QP
11	21.429	10.23	17.29	27.52	50.00	-22.48	Average
12	21.429	10.23	21.38	31.61	60.00	-28.39	QP

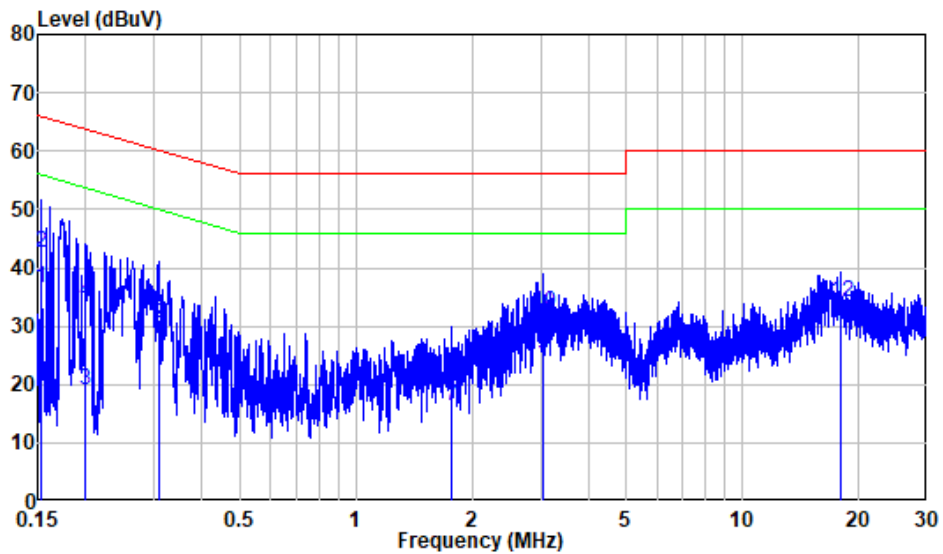
**Adapter 2:
AC 120V/60 Hz, Line**



Site : Shielding Room
 Condition: Line
 Mode : 5G WIFI
 Model : reServer-I51135 (64G+512G/z)

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.169	9.86	29.75	39.61	55.02	-15.41	Average
2	0.169	9.86	38.29	48.15	65.02	-16.87	QP
3	0.245	9.80	29.89	39.69	51.92	-12.23	Average
4	0.245	9.80	34.09	43.89	61.92	-18.03	QP
5	0.311	9.80	22.67	32.47	49.95	-17.48	Average
6	0.311	9.80	27.72	37.52	59.95	-22.43	QP
7	2.000	9.92	14.35	24.27	46.00	-21.73	Average
8	2.000	9.92	20.27	30.19	56.00	-25.81	QP
9	2.734	9.93	16.64	26.57	46.00	-19.43	Average
10	2.734	9.93	25.03	34.96	56.00	-21.04	QP
11	16.055	10.08	21.71	31.79	50.00	-18.21	Average
12	16.055	10.08	25.81	35.89	60.00	-24.11	QP

AC 120V/60 Hz, Neutral



Site : Shielding Room
 Condition: Neutral
 Mode : 5G WIFI
 Model : reServer-I51135 (64G+512G/z)

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.153	9.91	26.68	36.59	55.83	-19.24	Average
2	0.153	9.91	32.53	42.44	65.83	-23.39	QP
3	0.200	10.00	8.96	18.96	53.61	-34.65	Average
4	0.200	10.00	24.01	34.01	63.61	-29.60	QP
5	0.309	9.95	18.94	28.89	50.00	-21.11	Average
6	0.309	9.95	21.09	31.04	60.00	-28.96	QP
7	1.766	9.92	6.32	16.24	46.00	-29.76	Average
8	1.766	9.92	11.02	20.94	56.00	-35.06	QP
9	3.035	9.99	14.96	24.95	46.00	-21.05	Average
10	3.035	9.99	22.43	32.42	56.00	-23.58	QP
11	17.897	10.14	19.64	29.78	50.00	-20.22	Average
12	17.897	10.14	23.98	34.12	60.00	-25.88	QP

§15.205 & §15.209 & §15.407(B) (1), (4), (8), (9), (10) – UNDESIRABLE EMISSION

Applicable Standard

FCC §15.407 (b) (1), (4), (8), (9), (10); §15.209; §15.205;

(b) Undesirable emission limits. Except as shown in paragraph (b) (7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

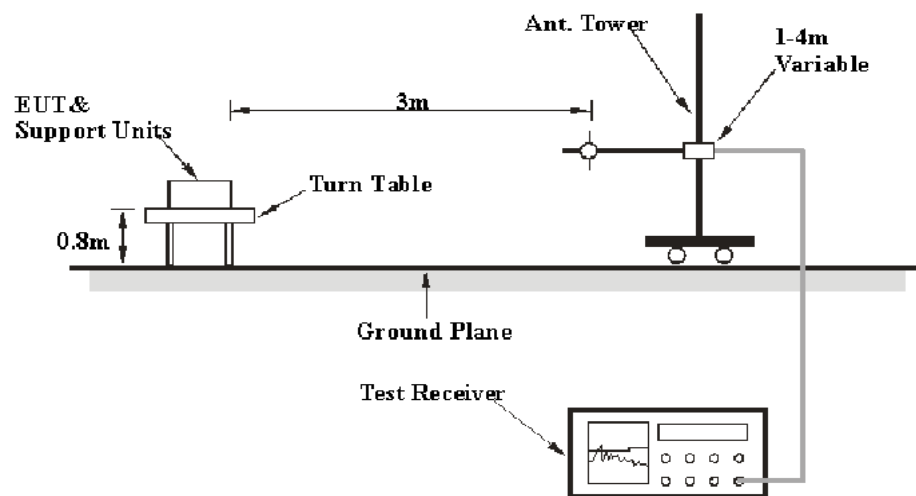
(4) For transmitters operating in the 5.725-5.85 GHz band:

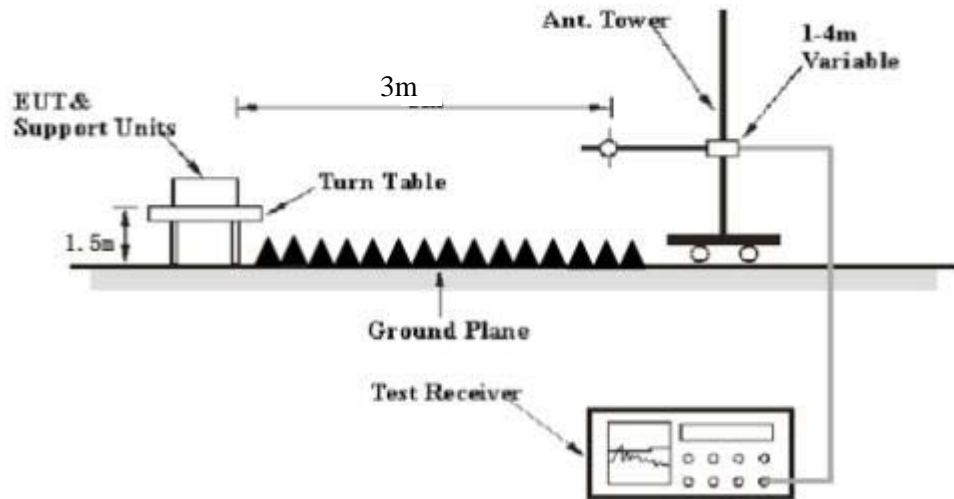
(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.

EUT Setup

Below 1 GHz:



Above 1 GHz:

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC 15.209 and FCC 15.407 limits.

EMI Test Receiver & Spectrum Analyzer Setup

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1 MHz	3 MHz	/	PK
	1MHz	10 Hz ^{Note 1}	/	Average
	1MHz	> 1/T ^{Note 2}	/	Average

Note 1: when duty cycle is no less than 98%

Note 2: when duty cycle is less than 98%

Test Procedure**Radiated Spurious Emission**

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all the installation combinations.

Factor & Margin Calculation

The Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain. The basic equation is as follows:

$$\text{Factor} = \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Over Limit/Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit/margin of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

$$\begin{aligned} \text{Over Limit} &= \text{Result} / \text{Corrected Amplitude} - \text{Limit} \\ \text{Result} / \text{Corrected Amplitude} &= \text{Read Level} + \text{Factor} \end{aligned}$$

Test Data

Environmental Conditions

Temperature:	22~29 °C
Relative Humidity:	50~56 %
ATM Pressure:	101.0 kPa

The testing was performed by Chao Mo on 2021-11-16 for below 1GHz and by Chao Mo on 2021-11-22 for above

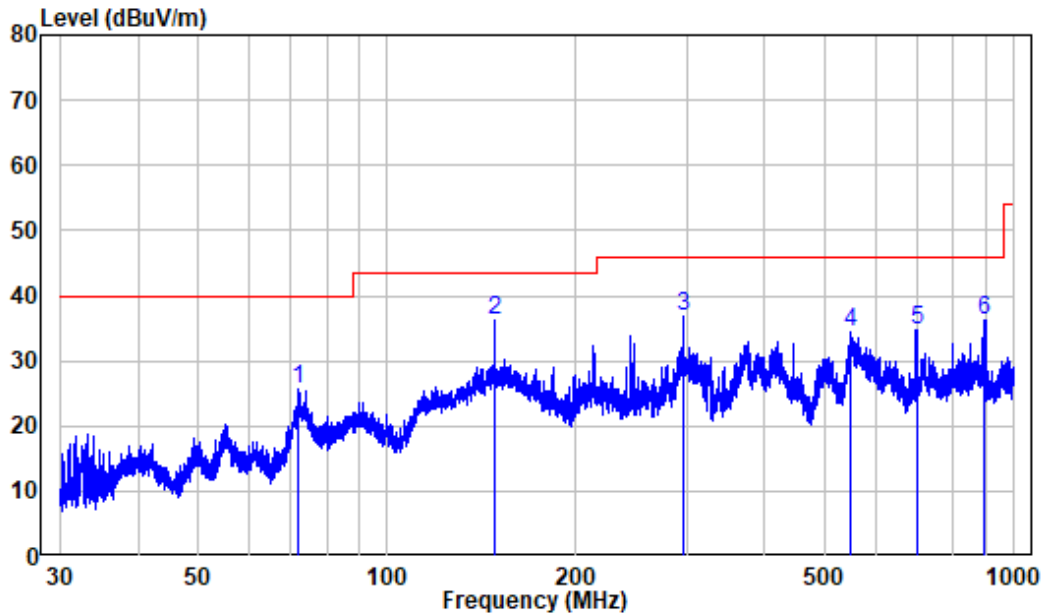
EUT operation mode: Transmitting

(Scan with 802.11a/n20/n40/ac20/ac40/ac80 mode, the worst case as below)

30 MHz~1 GHz: (Worst case for 802.11a 5180MHz antenna 1)

Adapter 1:

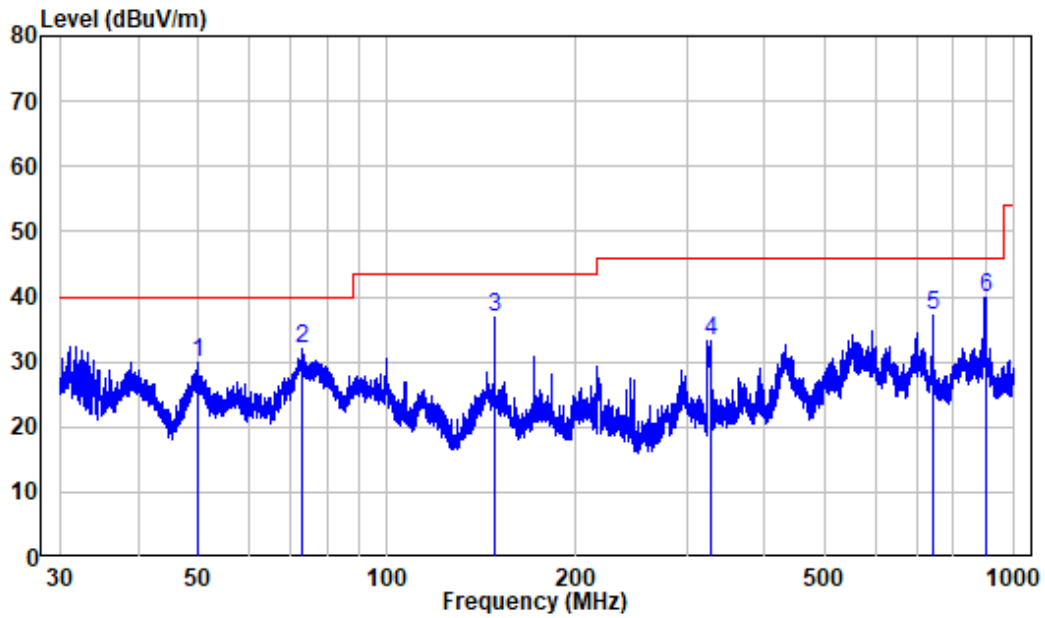
Horizontal



Site : chamber
 Condition: 3m HORIZONTAL
 Job No. : SZNS211025-54608E-RF
 Test Mode: 5GWIFI
 Note : Adapter 1#

	Freq	Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	72.27	-21.74	47.32	25.58	40.00	-14.42	Peak
2	148.51	-21.63	57.84	36.21	43.50	-7.29	Peak
3	296.96	-16.77	53.53	36.76	46.00	-9.24	Peak
4	546.86	-12.62	47.07	34.45	46.00	-11.55	Peak
5	699.92	-11.37	46.21	34.84	46.00	-11.16	Peak
6	896.60	-8.25	44.45	36.20	46.00	-9.80	Peak

Vertical

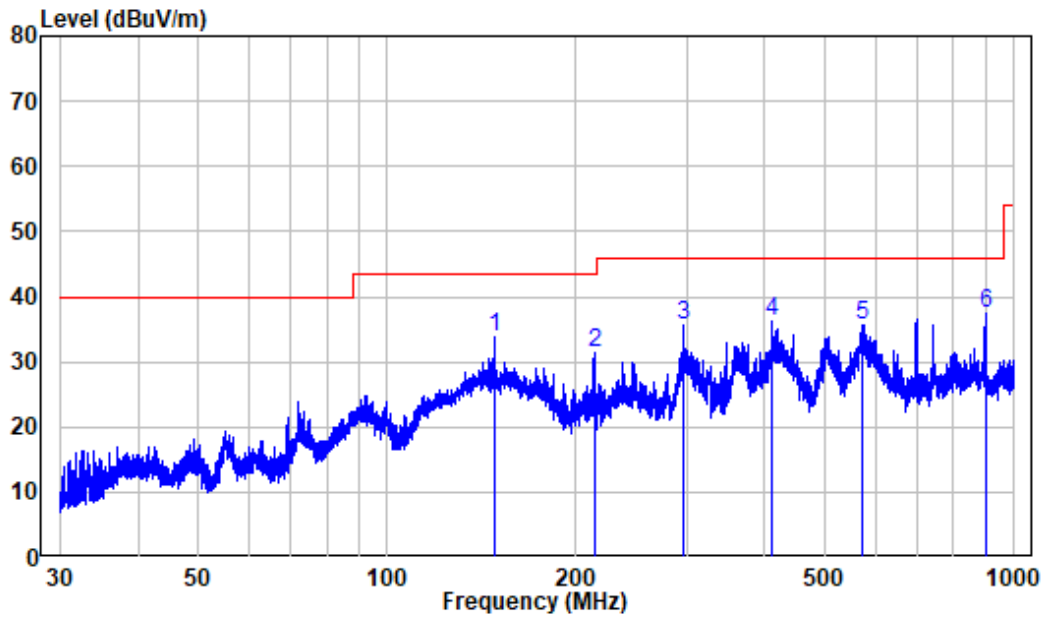


Site : chamber
 Condition: 3m VERTICAL
 Job No. : SZNS211025-54608E-RF
 Test Mode: 5GWIFI
 Note : Adapter 1#

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	49.90	-17.24	47.21	29.97	40.00	-10.03	Peak
2	72.91	-21.87	53.80	31.93	40.00	-8.07	Peak
3	148.51	-21.63	58.51	36.88	43.50	-6.62	Peak
4	327.31	-16.72	50.05	33.33	46.00	-12.67	Peak
5	742.58	-11.14	48.28	37.14	46.00	-8.86	Peak
6	899.36	-8.14	48.06	39.92	46.00	-6.08	Peak

Adapter 2:

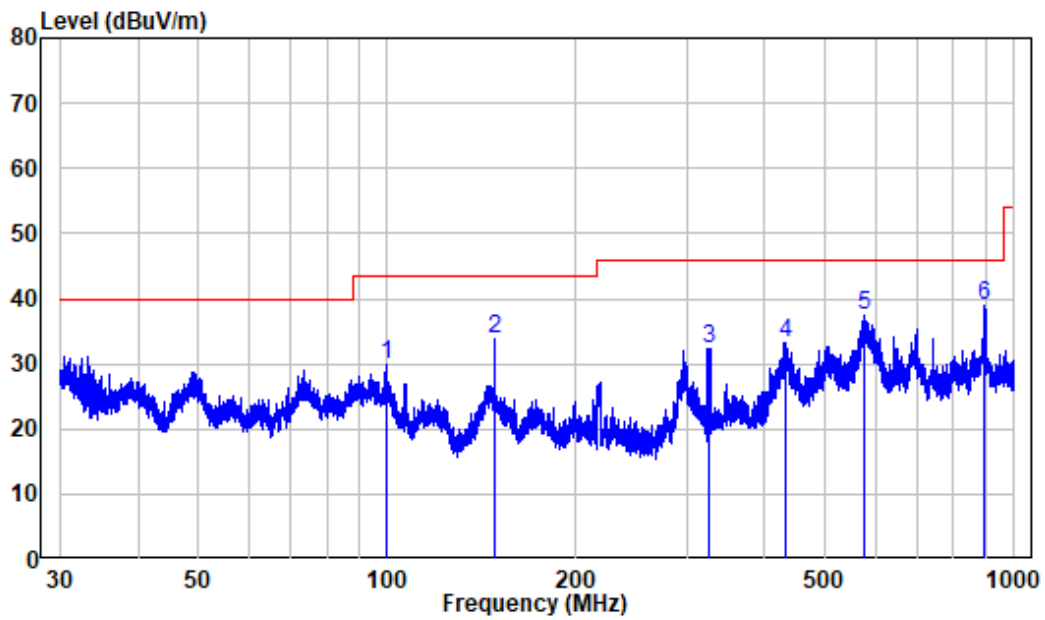
Horizontal



Site : chamber
 Condition: 3m HORIZONTAL
 Job No. : SZNS211025-54608E-RF
 Test Mode: 5GWIFI
 Note : Adapter 2#

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	148.51	-21.63	55.59	33.96	43.50	-9.54	Peak
2	213.86	-18.99	50.51	31.52	43.50	-11.98	Peak
3	296.96	-16.77	52.25	35.48	46.00	-10.52	Peak
4	410.20	-15.24	51.47	36.23	46.00	-9.77	Peak
5	571.36	-11.52	47.18	35.66	46.00	-10.34	Peak
6	899.75	-8.12	45.48	37.36	46.00	-8.64	Peak

Vertical



Site : chamber
 Condition: 3m VERTICAL
 Job No. : SZNS211025-54608E-RF
 Test Mode: 5GWIFI
 Note : Adapter 2#

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	99.92	-19.18	49.01	29.83	43.50	-13.67	Peak
2	148.44	-21.64	55.55	33.91	43.50	-9.59	Peak
3	326.45	-16.75	49.20	32.45	46.00	-13.55	Peak
4	430.84	-14.38	47.72	33.34	46.00	-12.66	Peak
5	577.66	-11.30	48.65	37.35	46.00	-8.65	Peak
6	898.18	-8.19	47.18	38.99	46.00	-7.01	Peak

1 ~ 40 GHz: Pre-scan with two antennas, and worst case for antenna 1 was recorded.

5150-5250MHz:

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
	Reading (dB μ V)	PK/QP/AV		Height (m)	Polar (H/V)				
802.11A, Low channel									
4500.00	43.15	PK	338	1.3	H	1.89	45.04	74	-28.96
4500.00	42.59	PK	359	1.2	V	1.89	44.48	74	-29.52
5150.00	44.12	PK	328	1.9	H	3.37	47.49	74	-26.51
5150.00	43.43	PK	275	1.9	V	3.37	46.8	74	-27.2
10360.00	28.18	PK	217	1.5	H	14.41	42.59	68.2	-25.61
10360.00	29.49	PK	337	1.9	V	14.41	43.9	68.2	-24.3
802.11A, Middle channel									
10400.00	82.71	PK	106	2.4	H	11.46	94.17	68.2	25.97
10400.00	32.09	PK	255	2.3	V	11.46	43.55	68.2	-24.65
802.11A, High channel									
5350.00	45.27	PK	97	2.1	H	3.43	48.7	74	-25.3
5350.00	44.03	PK	95	2	V	3.43	47.46	74	-26.54
5460.00	45.06	PK	145	1.3	H	3.58	48.64	74	-25.36
5460.00	45.85	PK	354	2.1	V	3.58	49.43	74	-24.57
10480.00	30.83	PK	18	1.5	H	11.53	42.36	68.2	-25.84
10480.00	32.16	PK	198	1.7	V	11.53	43.69	68.2	-24.51
802.11N20, Low channel									
4500.00	42.96	PK	203	1.9	H	1.89	44.85	74	-29.15
4500.00	41.97	PK	203	1.9	V	1.89	43.86	74	-30.14
5150.00	44.12	PK	17	2	H	3.37	47.49	74	-26.51
5150.00	43.44	PK	1	1.7	V	3.37	46.81	74	-27.19
10360.00	26.61	PK	28	2.2	H	14.41	41.02	68.2	-27.18
10360.00	26.92	PK	261	1.3	V	14.41	41.33	68.2	-26.87
802.11N20, Middle channel									
10400.00	31.61	PK	104	1.7	H	11.46	43.07	68.2	-25.13
10400.00	32.33	PK	2	1.9	V	11.46	43.79	68.2	-24.41
802.11N20, High channel									
5350.00	44.27	PK	211	1	H	3.43	47.70	74	-26.3
5350.00	45.43	PK	35	1.2	V	3.43	48.86	74	-25.14
5460.00	42.44	PK	142	2	H	3.58	46.02	74	-27.98
5460.00	43.67	PK	97	1.4	V	3.58	47.25	74	-26.75
10480.00	31.48	PK	212	1.7	H	11.53	43.01	68.2	-25.19
10480.00	31.67	PK	347	2	V	11.53	43.62	68.2	-24.58

802.11N40, Low channel									
4500.00	42.27	PK	102	1.3	H	1.89	44.16	74	-29.84
4500.00	43.68	PK	297	1.9	V	1.89	45.57	74	-28.43
5150.00	44.32	PK	309	2	H	3.37	47.69	74	-26.31
5150.00	44.66	PK	245	1.7	V	3.37	48.03	74	-25.97
10380.00	30.88	PK	142	1.5	H	11.43	42.31	68.2	-25.89
10380.00	32.62	PK	303	1.5	V	11.43	44.05	68.2	-24.15
802.11N40, High channel									
5350.00	44.2	PK	124	1.8	H	3.43	47.63	74	-26.37
5350.00	44.81	PK	289	2.5	V	3.43	48.24	74	-25.76
5460.00	43.23	PK	157	1.4	H	3.58	46.81	74	-27.19
5460.00	43.55	PK	135	1.4	V	3.58	47.13	74	-26.87
10460.00	30.96	PK	10	1.6	H	11.5	42.46	68.2	-25.74
10460.00	31.76	PK	170	1	V	11.5	43.26	68.2	-24.94
802.11AC20, Low channel									
4500.00	43.2	PK	308	1.9	H	1.89	45.09	74	-28.91
4500.00	44.83	PK	289	1.3	V	1.89	46.72	74	-27.28
5150.00	44.04	PK	206	2.5	H	3.37	47.41	74	-26.59
5150.00	44.79	PK	351	1.7	V	3.37	48.16	74	-25.84
10360.00	28.31	PK	128	1.2	H	14.41	42.72	68.2	-25.48
10360.00	28.97	PK	98	2.3	V	14.41	43.38	68.2	-24.82
802.11AC20, Middle channel									
10400.00	31.25	PK	94	1.7	H	11.46	42.71	68.2	-25.49
10400.00	32.16	PK	8	1.3	V	11.46	43.62	68.2	-24.58
802.11AC20, High channel									
5350.00	44.22	PK	339	1.3	H	3.43	47.65	74	-26.35
5350.00	44.95	PK	4	1.6	V	3.43	48.38	74	-25.62
5460.00	42.96	PK	295	1.2	H	3.58	46.54	74	-27.46
5460.00	43.61	PK	185	2.5	V	3.58	47.19	74	-26.81
10480.00	31.26	PK	232	1.3	H	11.53	42.79	68.2	-25.41
10480.00	31.84	PK	105	1.1	V	11.53	43.37	68.2	-24.83
802.11AC40, Low channel									
4500.00	42.5	PK	282	1.7	H	1.89	44.39	74	-29.61
4500.00	43.54	PK	231	1.1	V	1.89	45.43	74	-28.57
5150.00	43.82	PK	148	2.1	H	3.37	47.19	74	-26.81
5150.00	44.85	PK	287	2.5	V	3.37	48.22	74	-25.78
10380.00	31.08	PK	266	2.4	H	11.43	42.51	68.2	-25.69
10380.00	32.4	PK	327	1.1	V	11.43	43.83	68.2	-24.37
802.11AC40, High channel									
5350.00	44.12	PK	300	1.6	H	3.43	47.55	74	-26.45

5350.00	44.84	PK	231	2	V	3.43	48.27	74	-25.73
5460.00	43.02	PK	171	2.3	H	3.58	46.6	74	-27.4
5460.00	43.6	PK	144	1	V	3.58	47.18	74	-26.82
10460.00	31.52	PK	134	1.5	H	11.5	43.02	68.2	-25.18
10460.00	32.34	PK	182	2	V	11.5	43.84	68.2	-24.36
802.11AC80 5210MHz									
4500.00	43.2	PK	88	1.2	H	1.89	45.09	74	-28.91
4500.00	44.54	PK	105	1.5	V	1.89	46.43	74	-27.57
5150.00	43.47	PK	282	2.1	H	3.37	46.84	74	-27.16
5150.00	44.14	PK	154	1.9	V	3.37	47.51	74	-26.49
5350.00	43.18	PK	220	1.9	H	3.43	46.61	74	-27.39
5350.00	43.76	PK	330	2	V	3.43	47.19	74	-26.81
5460.00	98.98	PK	119	2.2	H	3.58	102.56	74	28.56
5460.00	43.19	PK	251	2.1	V	3.58	46.77	74	-27.23
10420.00	30.23	PK	258	2	H	11.49	41.72	68.2	-26.48
10420.00	31.69	PK	251	2.2	V	11.49	43.18	68.2	-25.02

5725-5850MHz:

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/QP/AV		Height (m)	Polar (H/V)				
802.11A, Low channel									
5725	48.51	PK	307	1.6	H	3.97	52.48	122.20	-69.72
5725	47.97	PK	187	1.9	V	3.97	51.94	122.20	-70.26
5720	43.28	PK	95	1.3	H	3.95	47.23	110.80	-63.57
5720	42.73	PK	318	1.4	V	3.95	46.68	110.80	-64.12
5700	55.58	PK	304	2.5	H	3.89	59.47	105.20	-45.73
5700	54.80	PK	156	2.3	V	3.89	58.69	105.20	-46.51
5650	45.66	PK	7	2.1	H	3.75	49.41	68.2	-18.79
5650	45.11	PK	334	1.2	V	3.75	48.86	68.2	-19.34
11490	36.00	PK	344	2.3	H	14.74	50.74	74	-23.26
11490	36.69	PK	155	1.9	V	14.74	51.43	74	-22.57
802.11A, Middle channel									
11570	35.12	PK	25	1.30	H	14.76	49.88	74.00	-24.12
11570	35.30	PK	11	2.00	V	14.76	50.06	74.00	-23.94
802.11A, High channel									
5850	49.34	PK	185	1.1	H	4.33	53.67	122.2	-68.53
5850	48.66	PK	13	2.1	V	4.33	52.99	122.2	-69.21
5855	43.70	PK	37	2	H	4.35	48.05	110.8	-62.75
5855	43.30	PK	80	2.1	V	4.35	47.65	110.8	-63.15
5875	55.97	PK	19	1.2	H	4.41	60.38	105.2	-44.82
5875	55.48	PK	269	1.9	V	4.41	59.89	105.2	-45.31
5925	45.39	PK	211	1.1	H	4.55	49.94	68.2	-18.26
5925	44.23	PK	83	1.3	V	4.55	48.78	68.2	-19.42
11650	35.84	PK	324	2.1	H	14.79	50.63	74	-23.37
11650	36.57	PK	158	1.7	V	14.79	51.36	74	-22.64
802.11N20, Low channel									
5725	51.95	PK	219	2.3	H	3.97	55.92	122.2	-66.28
5725	49.69	PK	109	1.8	V	3.97	53.66	122.2	-68.54
5720	46.13	PK	259	2.2	H	3.95	50.08	110.8	-60.72
5720	45.36	PK	97	2.4	V	3.95	49.31	110.8	-61.49
5700	59.99	PK	351	1.9	H	3.89	63.88	105.2	-41.32
5700	59.12	PK	35	2	V	3.89	63.01	105.2	-42.19
5650	46.78	PK	171	1.3	H	3.75	50.53	68.2	-17.67
5650	46.21	PK	18	2.1	V	3.75	49.96	68.2	-18.24
11490	35.72	PK	312	1.4	H	14.74	50.46	74	-23.54
11490	36.45	PK	46	1.8	V	14.74	51.19	74	-22.81

802.11N20, Middle channel									
11570	34.71	PK	107	2.40	H	14.76	49.47	74.00	-24.53
11570	36.08	PK	194	1.70	V	14.76	50.84	74.00	-23.16
802.11N20, High channel									
5850	50.74	PK	13	1.4	H	4.33	55.07	122.2	-67.13
5850	49.63	PK	193	1.1	V	4.33	53.96	122.2	-68.24
5855	45.10	PK	215	2.1	H	4.35	49.45	110.8	-61.35
5855	44.47	PK	288	2.2	V	4.35	48.82	110.8	-61.98
5875	59.00	PK	133	1.4	H	4.41	63.41	105.2	-41.79
5875	58.12	PK	154	2.1	V	4.41	62.53	105.2	-42.67
5925	45.73	PK	141	2.1	H	4.55	50.28	68.2	-17.92
5925	45.10	PK	316	1.7	V	4.55	49.65	68.2	-18.55
11650	35.48	PK	61	1.5	H	14.79	50.27	74	-23.73
11650	36.32	PK	317	2.2	V	14.79	51.11	74	-22.89
802.11N40, Low channel									
5725	50.25	PK	158	1.4	H	3.97	54.58	122.2	-67.62
5725	49.53	PK	4	1.4	V	3.97	53.86	122.2	-68.34
5720	44.88	PK	310	1.7	H	3.95	49.23	110.8	-61.57
5720	44.17	PK	22	2.5	V	3.95	48.52	110.8	-62.28
5700	59.17	PK	345	1.8	H	3.89	63.58	105.2	-41.62
5700	58.48	PK	292	1.5	V	3.89	62.89	105.2	-42.31
5650	45.80	PK	313	1.8	H	3.75	50.35	68.2	-17.85
5650	45.22	PK	162	1	V	3.75	49.77	68.2	-18.43
11510	34.30	PK	208	1.7	H	14.75	49.05	74	-24.95
11510	35.58	PK	350	1	V	14.75	50.33	74	-23.67
802.11N40, High channel									
5850	53.14	PK	103	1.4	H	4.33	57.47	122.2	-64.73
5850	52.38	PK	219	1.5	V	4.33	56.71	122.2	-65.49
5855	46.34	PK	335	2	H	4.35	50.69	110.8	-60.11
5855	45.58	PK	114	1.7	V	4.35	49.93	110.8	-60.87
5875	60.93	PK	297	2.4	H	4.41	65.34	105.2	-39.86
5875	60.54	PK	128	2.4	V	4.41	64.95	105.2	-40.25
5925	46.33	PK	250	1.2	H	4.55	50.88	68.2	-17.32
5925	45.01	PK	114	1.8	V	4.55	49.56	68.2	-18.64
11590	34.64	PK	320	2.1	H	14.77	49.41	74	-24.59
11590	36.61	PK	328	1.6	V	14.77	51.38	74	-22.62
802.11AC20, Low channel									
5725	54.02	PK	66	2.1	H	3.97	57.99	122.2	-64.21
5725	53.16	PK	230	1.5	V	3.97	57.13	122.2	-65.07
5720	47.03	PK	180	2.2	H	3.95	50.98	110.8	-59.82
5720	46.41	PK	10	2.4	V	3.95	50.36	110.8	-60.44

5700	61.56	PK	95	1.8	H	3.89	65.45	105.2	-39.75
5700	61.05	PK	304	2	V	3.89	64.94	105.2	-40.26
5650	46.70	PK	41	1.2	H	3.75	50.27	68.2	-17.93
5650	45.59	PK	16	2.4	V	3.75	49.34	68.2	-18.86
11490	35.48	PK	245	1.3	H	14.74	50.22	74	-23.78
11490	36.43	PK	77	1.7	V	14.74	51.17	74	-22.83
802.11AC20, Middle channel									
11570	34.72	PK	258	2.2	H	14.76	49.48	74	-24.52
11570	35.60	PK	227	2.4	V	14.76	50.36	74	-23.64
802.11AC20, High channel									
5850	50.24	PK	200	1.8	H	4.33	54.57	122.2	-67.63
5850	49.46	PK	151	2.3	V	4.33	53.79	122.2	-68.41
5855	43.93	PK	284	2.3	H	4.35	48.28	110.8	-62.52
5855	43.63	PK	155	2.1	V	4.35	47.98	110.8	-62.82
5875	59.73	PK	337	2.3	H	4.41	64.14	105.2	-41.06
5875	58.71	PK	317	2.3	V	4.41	63.12	105.2	-42.08
5925	45.14	PK	117	1.5	H	4.55	49.69	68.2	-18.51
5925	44.45	PK	41	2.4	V	4.55	49.00	68.2	-19.2
11650	35.06	PK	341	2.2	H	14.79	49.85	74	-24.15
11650	35.60	PK	309	1.3	V	14.79	50.39	74	-23.61
802.11AC40, Low channel									
5725	55.03	PK	213	2.4	H	3.97	59.00	122.2	-63.2
5725	53.72	PK	302	1.6	V	3.97	57.69	122.2	-64.51
5720	42.62	PK	147	1.9	H	3.95	46.57	110.8	-64.23
5720	43.34	PK	289	1.8	V	3.95	47.29	110.8	-63.51
5700	59.25	PK	190	2.2	H	3.89	63.14	105.2	-42.06
5700	58.22	PK	201	1.2	V	3.89	62.11	105.2	-43.09
5650	45.98	PK	267	2.4	H	3.75	49.73	68.2	-18.47
5650	44.84	PK	331	1.3	V	3.75	48.59	68.2	-19.61
11510	34.44	PK	238	1.4	H	14.75	49.19	74	-24.81
11510	35.61	PK	180	1.9	V	14.75	50.36	74	-23.64
802.11AC40, High channel									
5850	53.28	PK	27	2.2	H	4.33	57.61	122.2	-64.59
5850	52.69	PK	126	1.7	V	4.33	57.02	122.2	-65.18
5855	45.21	PK	310	2.1	H	4.35	49.56	110.8	-61.24
5855	43.97	PK	154	2.1	V	4.35	48.32	110.8	-62.48
5875	58.63	PK	19	1.4	H	4.41	63.04	105.2	-42.16
5875	57.74	PK	180	1.3	V	4.41	62.15	105.2	-43.05
5925	45.24	PK	305	1.7	H	4.55	49.79	68.2	-18.41
5925	43.84	PK	218	2.1	V	4.55	48.39	68.2	-19.81
11590	35.07	PK	253	2.5	H	14.77	49.84	74	-24.16

11590	36.21	PK	329	1	V	14.77	50.98	74	-23.02
802.11AC80 5775MHz									
5725	53.03	PK	160	1.7	H	3.97	57.00	122.2	-65.2
5725	54.21	PK	335	1.2	V	3.97	58.18	122.2	-64.02
5720	47.04	PK	311	1.3	H	3.95	50.99	110.8	-59.81
5720	45.98	PK	238	1.5	V	3.95	49.93	110.8	-60.87
5700	60.26	PK	305	1.8	H	3.89	64.15	105.2	-41.05
5700	59.26	PK	256	1.4	V	3.89	63.15	105.2	-42.05
5650	46.03	PK	153	1.2	H	3.75	49.78	68.2	-18.42
5650	44.61	PK	137	1.4	V	3.75	48.36	68.2	-19.84
5850	53.29	PK	359	1.2	H	4.33	57.62	122.2	-64.58
5850	52.83	PK	193	2	V	4.33	57.16	122.2	-65.04
5855	46.88	PK	309	1.9	H	4.35	51.23	110.8	-59.57
5855	45.64	PK	63	2	V	4.35	49.99	110.8	-60.81
5875	59.71	PK	275	1.1	V	4.41	64.12	105.2	-41.08
5875	58.44	PK	186	2	H	4.41	62.85	105.2	-42.35
5925	45.01	PK	328	1.2	V	4.55	49.56	68.2	-18.64
5925	43.84	PK	172	1.6	H	4.55	48.39	68.2	-19.81
11550	34.94	PK	123	1.4	H	14.76	49.70	74	-24.3
11550	35.55	PK	159	2.3	V	14.76	50.31	74	-23.69

Note:

Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor

Absolute Level (Corrected Amplitude) = Factor + Reading

Margin = Absolute Level (Corrected Amplitude) – Limit

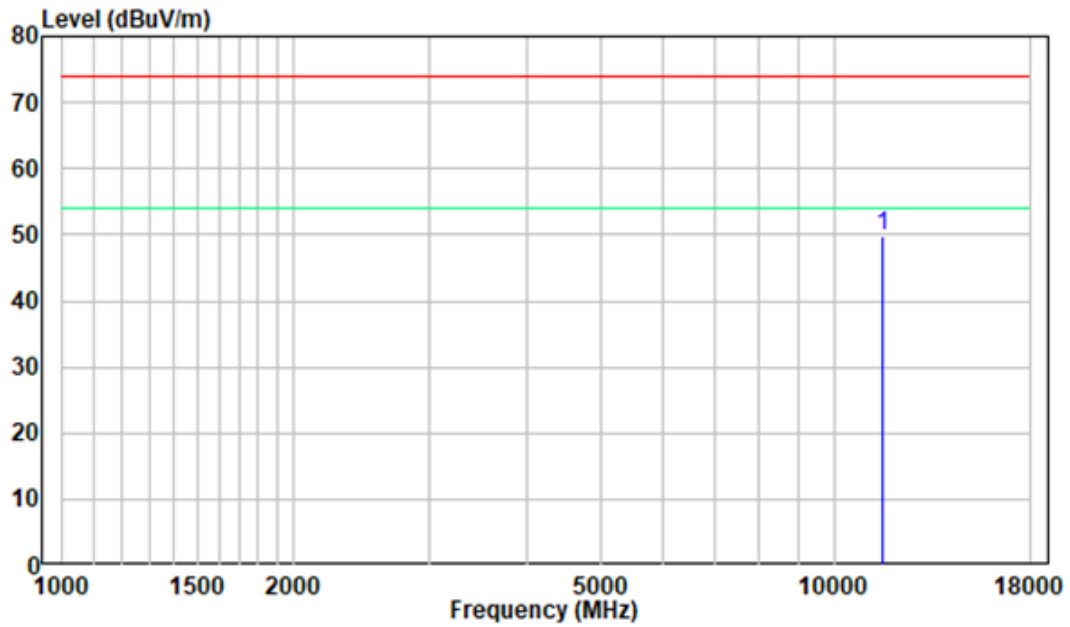
The other spurious emission which is in the noise floor level was not recorded.

The test result of peak was 20dB below to the limit of peak, which can be compliant to the average limit, so just peak value was recorded.

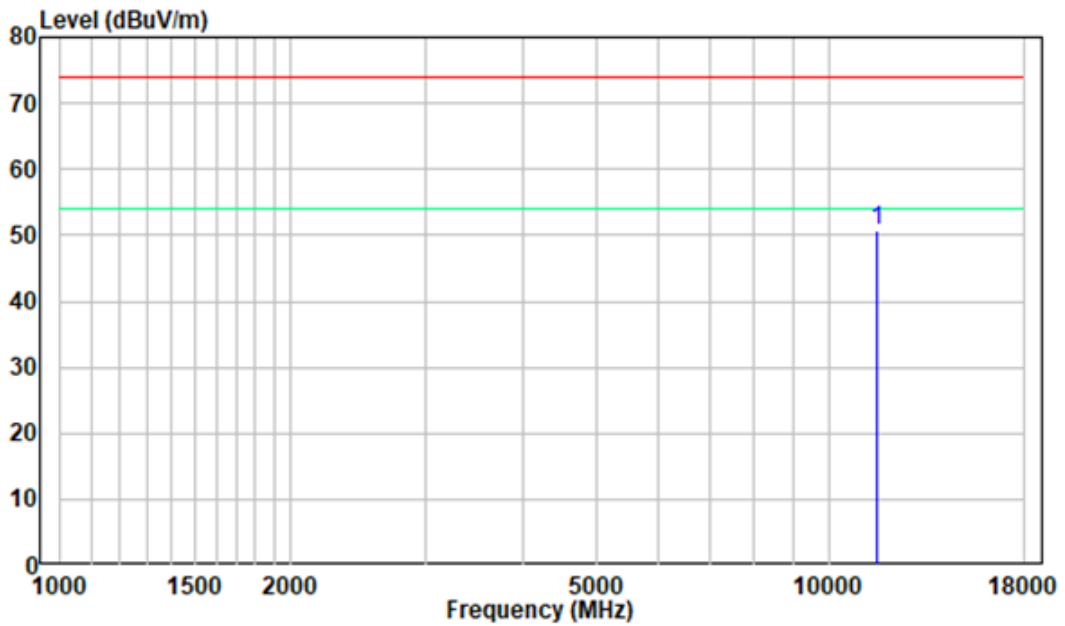
1-18 GHz:

Pre-scan plots:

802.11a 5180MHz
Horizontal:



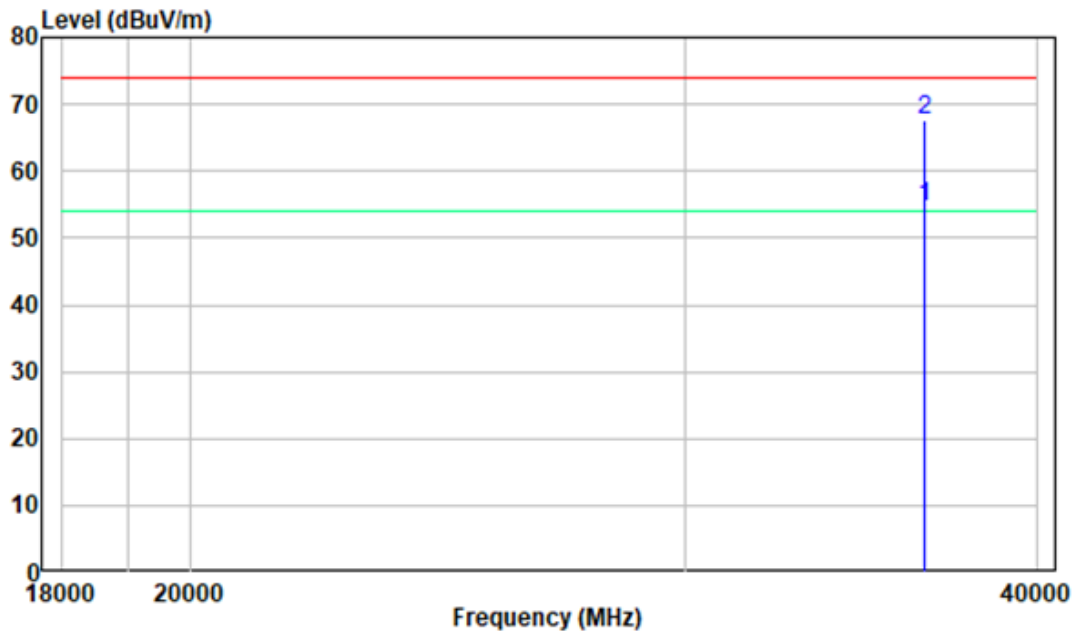
Vertical:



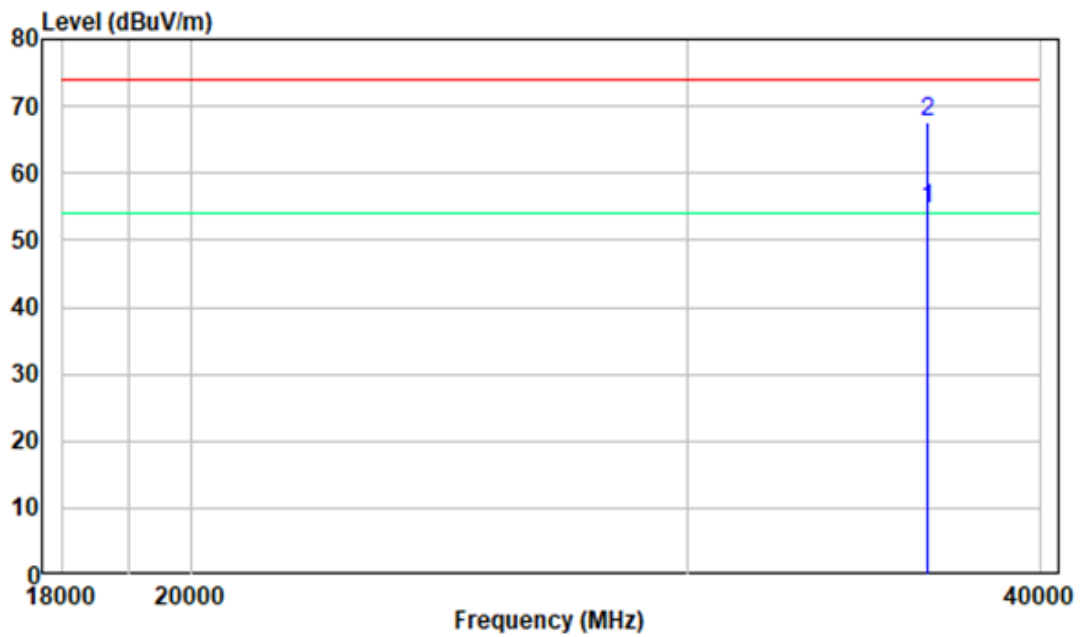
18-40 GHz:

Pre-scan plots:

802.11a 5180MHz
Horizontal:



Vertical:



FCC §15.407(a) (1) (3) – CONDUCTED TRANSMITTER OUTPUT POWER

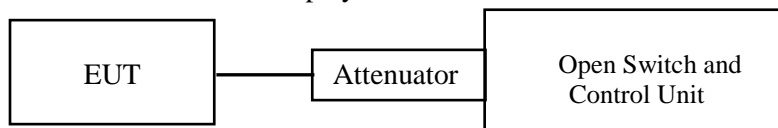
Applicable Standard

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple colocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Test Procedure

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to one test equipment.
3. Add a correction factor to the display.



Test Data

Environmental Conditions

Temperature:	23 °C
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

The testing was performed by Key Pei on 2022-04-18.

EUT operation mode: Transmitting

Test Result: Pass

Maximum conducted output power (Average power)

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	5180	12.62	<=17	PASS
		5200	12.75	<=17	PASS
		5240	11.61	<=17	PASS
		5745	11.68	<=30	PASS
		5785	11.61	<=30	PASS
		5825	11.63	<=30	PASS
11N20SISO	Ant1	5180	11.27	<=17	PASS
		5200	11.40	<=17	PASS
		5240	11.70	<=17	PASS
		5745	11.95	<=30	PASS
		5785	11.37	<=30	PASS
		5825	11.50	<=30	PASS
11N40SISO	Ant1	5190	11.41	<=17	PASS
		5230	11.66	<=17	PASS
		5755	11.73	<=30	PASS
		5795	11.58	<=30	PASS
11AC20SISO	Ant1	5180	12.39	<=17	PASS
		5200	12.62	<=17	PASS
		5240	11.80	<=17	PASS
		5745	12.17	<=30	PASS
		5785	11.28	<=30	PASS
		5825	11.10	<=30	PASS
11AC40SISO	Ant1	5190	11.59	<=17	PASS
		5230	11.43	<=17	PASS
		5755	11.27	<=30	PASS
		5795	11.72	<=30	PASS
11AC80SISO	Ant1	5210	11.26	<=17	PASS
		5775	11.32	<=30	PASS

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant2	5180	12.29	<=17	PASS
		5200	12.40	<=17	PASS
		5240	11.14	<=17	PASS
		5745	11.50	<=30	PASS
		5785	11.70	<=30	PASS
		5825	11.60	<=30	PASS
11N20SISO	Ant2	5180	11.12	<=17	PASS
		5200	11.31	<=17	PASS
		5240	11.64	<=17	PASS
		5745	11.83	<=30	PASS
		5785	11.20	<=30	PASS
		5825	11.43	<=30	PASS
11N40SISO	Ant2	5190	11.40	<=17	PASS
		5230	11.52	<=17	PASS
		5755	11.59	<=30	PASS
		5795	11.48	<=30	PASS
11AC20SISO	Ant2	5180	12.20	<=17	PASS
		5200	12.41	<=17	PASS
		5240	11.72	<=17	PASS
		5745	12.07	<=30	PASS
		5785	11.18	<=30	PASS
		5825	11.13	<=30	PASS
11AC40SISO	Ant2	5190	11.42	<=17	PASS
		5230	11.31	<=17	PASS
		5755	11.12	<=30	PASS
		5795	11.60	<=30	PASS
11AC80SISO	Ant2	5210	11.10	<=17	PASS
		5775	11.30	<=30	PASS

***** END OF REPORT *****