



TEST REPORT

Applicant Name : Inrico Technologies Co.,Ltd
Address : A1703, Shenzhen National Engineering Laboratory Building,
No. 20 Gaoxin South 7th Road, Shenzhen, China
Report Number : SZNS220908-40790E-RF-00C
FCC ID: 2AIV6-2-T522A

Test Standard (s)

FCC PART 15.407

Sample Description

Product Type: PoC RADIO
Model No.: T522A
Multiple Model(s) No.: N/A
Trade Mark: Inrico
Date Received: 2022/09/08
Report Date: 2022/11/28

Test Result:	Pass*
--------------	-------

* In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Roger Ling

Roger Ling
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 "*" .

Shenzhen Accurate Technology Co., Ltd. is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk "**". Customer model name, addresses, names, trademarks etc. are not considered data.

This report cannot be reproduced except in full, without prior written approval of the Company. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

Shenzhen Accurate Technology Co., Ltd.

1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China
Tel: +86 755-26503290 Fax: +86 755-26503396 Web: www.atc-lab.com

REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	SZNS220908-40790E-RF-00C	Original Report	2022/11/28

TABLE OF CONTENTS

GENERAL INFORMATION.....	5
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT).....	5
OBJECTIVE	5
TEST METHODOLOGY	5
MEASUREMENT UNCERTAINTY.....	6
TEST FACILITY	6
SYSTEM TEST CONFIGURATION.....	7
DESCRIPTION OF TEST CONFIGURATION	7
EUT EXERCISE SOFTWARE	8
DUTY CYCLE.....	8
EQUIPMENT MODIFICATIONS	8
SUPPORT EQUIPMENT LIST AND DETAILS	9
EXTERNAL I/O CABLE.....	9
BLOCK DIAGRAM OF TEST SETUP	9
SUMMARY OF TEST RESULTS	11
TEST EQUIPMENT LIST	12
FCC §1.1307 (B) (1) & §2.1093 – RF EXPOSURE	13
APPLICABLE STANDARD	13
FCC §15.203 – ANTENNA REQUIREMENT.....	14
APPLICABLE STANDARD	14
ANTENNA CONNECTOR CONSTRUCTION	14
FCC §15.407 (B) (6) §15.207 (A) – CONDUCTED EMISSIONS.....	15
APPLICABLE STANDARD	15
EUT SETUP	15
EMI TEST RECEIVER SETUP.....	15
TEST PROCEDURE	15
CORRECTED FACTOR & MARGIN CALCULATION	16
TEST DATA	16
§15.205 & §15.209 & §15.407(B)– UNDESIRABLE EMISSION.....	19
APPLICABLE STANDARD	19
EUT SETUP	19
EMI TEST RECEIVER & SPECTRUM ANALYZER SETUP	20
TEST PROCEDURE	20
FACTOR & MARGIN CALCULATION	21
TEST DATA	21
FCC §15.407(A),(E) – 26 DB & 6DB EMISSION BANDWIDTH.....	35
APPLICABLE STANDARD	35
TEST PROCEDURE	35
TEST DATA	35
FCC §15.407(A) – CONDUCTED TRANSMITTER OUTPUT POWER.....	36
APPLICABLE STANDARD	36
TEST PROCEDURE	36
TEST DATA	36

FCC §15.407(A) - POWER SPECTRAL DENSITY37
TEST PROCEDURE37
TEST DATA37

APPENDIX38
APPENDIX A1: EMISSION BANDWIDTH38
APPENDIX A2: OCCUPIED CHANNEL BANDWIDTH45
APPENDIX A3: MIN EMISSION BANDWIDTH.....54
APPENDIX B: DUTY CYCLE.....58
APPENDIX C: MAXIMUM CONDUCTED OUTPUT POWER67
APPENDIX D: MAXIMUM POWER SPECTRAL DENSITY68

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Frequency Range	5G Wi-Fi: 5150~5250MHz ,5250-5350MHz ,5725~5850 MHz
Mode	802.11a/n20/n40
Maximum Conducted Average Output Power	5150-5250MHz: 12.75dBm 5250-5350MHz: 12.64dBm 5725-5850MHz: 11.22dBm
Modulation Technique	OFDM
Antenna Specification*	2dBi (It is provided by the applicant)
Voltage Range	HS: DC 3.7V from battery or DC 4.2V from charger Charger: DC5V from adapter
Test Sample serial number	SZNS220908-40790E-RF-S1 for Conducted and Radiated Emissions SZNS220908-40790E-RF-S2 for RF Conducted Test (Assigned by ATC)
Sample/EUT Status	Good condition
Adapter information	Model: HJ-0502000W2-US Input: AC 100-240V, 50/60Hz, 0.3A Output: DC 5.0V, 2000mA

Objective

This test 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 KDB789033 D02 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.

Each test item follows test standards and with no deviation.

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 429 7.01.

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.

For 5150-5250MHz Band, 6channels are provided to testing:

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

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

For 802.11n40 mode: channel 38, 46 were tested.

For 5250-5350MHz Band, 6 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	60	5300
54	5270	62	5310
56	5280	64	5320

For 802.11a/n20 mode: channel 52, 56, 64 were tested;

For 802.11n40 mode: channel 54, 62 were tested.

For 5725-5850MHz Band, 7 channels are provided to testing:

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

For 802.11a/n20 mode: channel 149, 157, 165 were tested;

For 802.11n40 mode: channel 151, 159 were tested;

EUT Exercise Software

EUT was test in the engineering mode. The power level was provided by the applicant.

The worst case was performed under:

Band (MHz)	Mode	Data Rate	Power Level*		
			Low	Middle	High
5150-5250	802.11a	6Mbps	17	17	17
	802.11n20	MCS0	17	17	17
	802.11n40	MCS0	17	/	17
5250-5350	802.11a	6Mbps	17	17	17
	802.11n20	MCS0	17	17	17
	802.11n40	MCS0	17	/	17
5725-5850	802.11a	6Mbps	17	17	17
	802.11n20	MCS0	17	17	17
	802.11n40	MCS0	17	/	17

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

Duty cycle

Test Result: Pass. Please refer to the Appendix.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

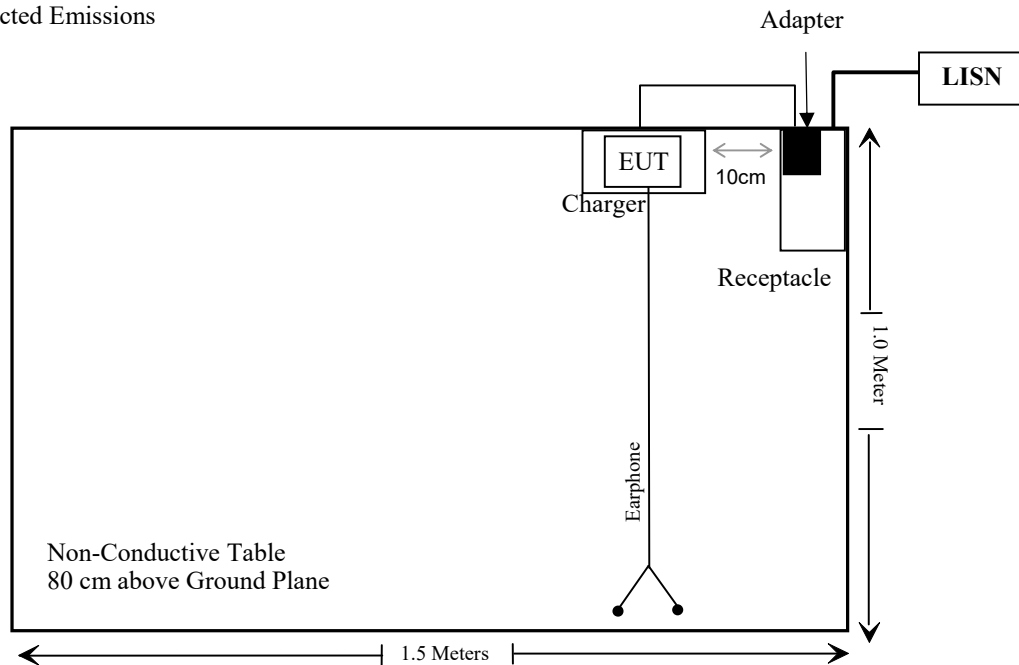
Manufacturer	Description	Model	Serial Number
Unknown	Earphone	Unknown	Unknown

External I/O Cable

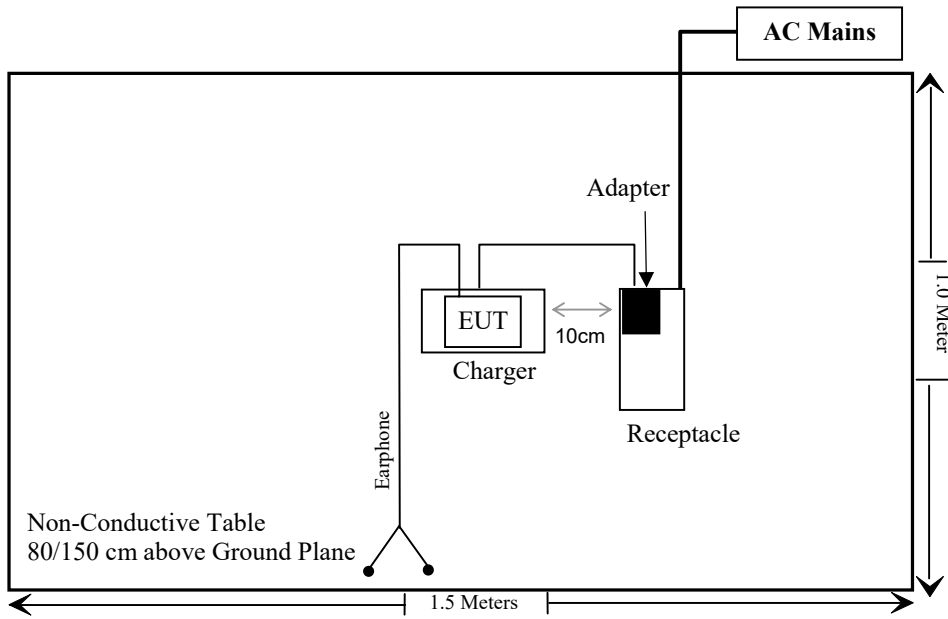
Cable Description	Length (m)	From Port	To
Un-shielding Detachable USB Cable	1.0	Charger	Adapter

Block Diagram of Test Setup

For Conducted Emissions



For Radiated Emissions:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307 (b) (1) & §2.1093	RF Exposure	Compliant
§15.203	Antenna Requirement	Compliant
§15.407(b)(9)& §15.207(a)	Conducted Emissions	Compliant
§15.205& §15.209 &§15.407(b)	Undesirable Emission& Restricted Bands	Compliant
§15.407(a) (e)	26 dB Emission Bandwidth & 6dB Bandwidth	Compliant
§15.407(a)	Conducted Transmitter Output Power	Compliant
§15.407 (a)	Power Spectral Density	Compliant
§15.407 (h)	Transmit Power Control (TPC)	Not Applicable
§15.407 (h)	Dynamic Frequency Selection (DFS)	Compliant*

Not Applicable: the EUT has no TPC function which was declared by the applicant.

Compliant*: Please refer to DFS report: SZNS220908-40790E-RF-00E.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emissions Test					
Rohde& Schwarz	EMI Test Receiver	ESCI	100784	2021/12/13	2022/12/12
Rohde & Schwarz	L.I.S.N.	ENV216	101314	2021/12/13	2022/12/12
Anritsu Corp	50 Coaxial Switch	MP59B	6100237248	2021/12/13	2022/12/12
Unknown	RF Coaxial Cable	No.17	N0350	2021/12/14	2022/12/13
Conducted Emission Test Software: e3 19821b (V9)					
Radiated Emissions Test					
Rohde& Schwarz	Test Receiver	ESR	102725	2021/12/13	2022/12/12
Rohde&Schwarz	Spectrum Analyzer	FSV40	101949	2021/12/13	2022/12/12
SONOMA INSTRUMENT	Amplifier	310 N	186131	2021/11/09	2022/11/08
A.H. Systems, inc.	Preamplifier	PAM-0118P	135	2021/11/09	2022/11/08
Quinstar	Amplifier	QLW-18405536-J0	15964001002	2021/11/11	2022/11/10
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021/07/06	2024/07/05
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2020/01/05	2023/01/04
Schwarzbeck	HORN ANTENNA	BBHA9170	9170-359	2020/01/05	2023/01/04
Radiated Emission Test Software: e3 19821b (V9)					
Unknown	RF Coaxial Cable	No.10	N050	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.11	N1000	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.12	N040	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.13	N300	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.14	N800	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.15	N600	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.16	N650	2021/12/14	2022/12/13
CD	Band Reject Filter	BRM-5.15/5.35g-45	075	2021/12/14	2022/12/13
CD	Band Reject Filter	BRM-5.725/5.875G-45	065	2021/12/14	2022/12/13
RF Conducted Test					
Rohde&Schwarz	Spectrum Analyzer	FSV-40	101495	2021/12/13	2022/12/12
Tonscend	RF Control Unit	JS0806-2	19G8060182	2022/07/06	2023/07/05
WEINSCHHEL	10dB Attenuator	5324	AU 3842	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.31	RF-01	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 §1.1307 (b) (1) & §2.1093 – RF EXPOSURE

Applicable Standard

According to FCC §2.1093 and §1.1307(b) (1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

Measurement Result

Please refer to SAR test report: CR22090016-20.

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 one internal antenna arrangement for 5G Wi-Fi which were permanently attached. Please refer to the EUT photos.

Type	Antenna Gain	Impedance	Frequency Range
FPC	2dBi	50 Ω	5150-5850MHz

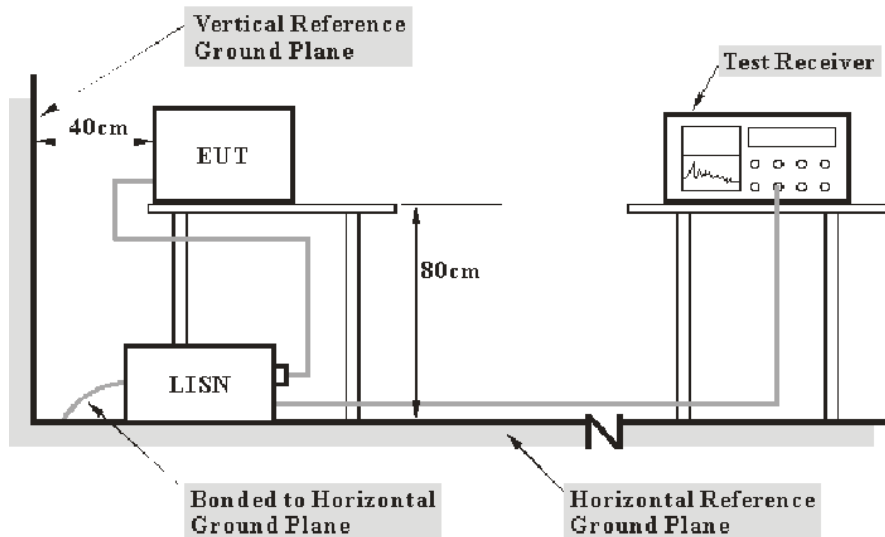
Result: Compliant.

FCC §15.407 (b) (6) §15.207 (a) – CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207, §15.407(b) (6)

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.

Corrected Factor & Margin Calculation

The Transd factor is calculated by adding LISN VDF (Voltage Division Factor) and 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

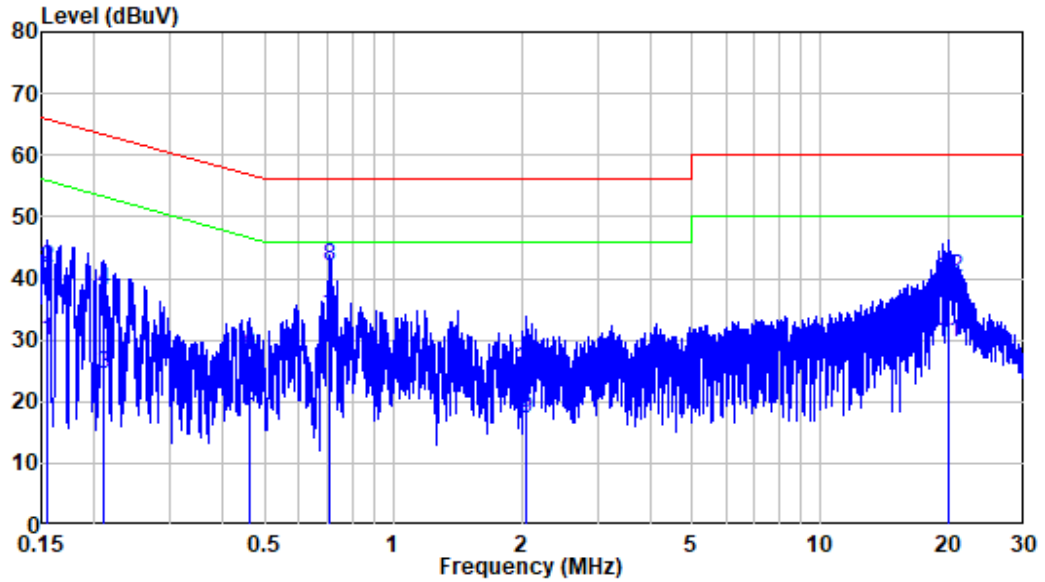
Environmental Conditions

Temperature:	24°C
Relative Humidity:	53 %
ATM Pressure:	101.0 kPa

The testing was performed by Jason Liu on 2022-11-04.

EUT operation mode: Transmitting (worst case is 802.11a, 5180MHz)

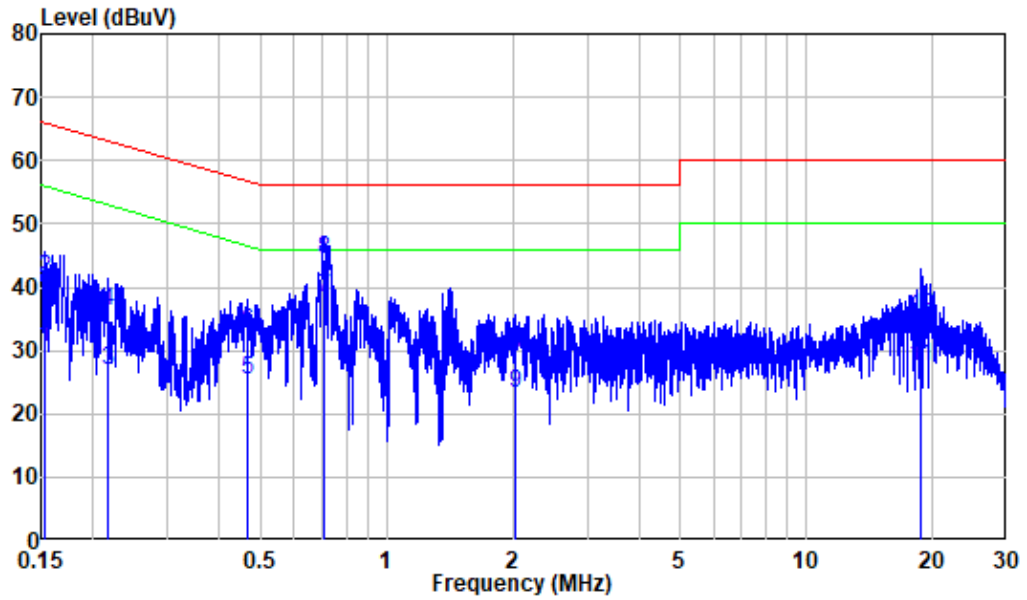
AC 120V/60 Hz, Line



Site : Shielding Room
 Condition: Line
 Job No. : SZNS220908-40790E-RF
 Mode : 5G WIFI
 Power : AC 120V 60Hz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.155	9.80	19.94	29.74	55.72	-25.98	Average
2	0.155	9.80	31.96	41.76	65.72	-23.96	QP
3	0.209	9.80	14.78	24.58	53.24	-28.66	Average
4	0.209	9.80	28.23	38.03	63.24	-25.21	QP
5	0.459	9.80	9.53	19.33	46.71	-27.38	Average
6	0.459	9.80	17.69	27.49	56.71	-29.22	QP
7	0.708	9.81	23.83	33.64	46.00	-12.36	Average
8	0.708	9.81	32.20	42.01	56.00	-13.99	QP
9	2.040	9.82	7.40	17.22	46.00	-28.78	Average
10	2.040	9.82	15.51	25.33	56.00	-30.67	QP
11	19.897	10.00	19.60	29.60	50.00	-20.40	Average
12	19.897	10.00	30.27	40.27	60.00	-19.73	QP

AC 120V/60 Hz, Neutral



Site : Shielding Room
 Condition: Neutral
 Job No. : SZNS220908-40790E-RF
 Mode : 5G WIFI
 Power : AC 120V 60Hz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.153	9.80	20.81	30.61	55.83	-25.22	Average
2	0.153	9.80	31.41	41.21	65.83	-24.62	QP
3	0.216	9.80	17.08	26.88	52.95	-26.07	Average
4	0.216	9.80	26.44	36.24	62.95	-26.71	QP
5	0.464	9.80	15.66	25.46	46.62	-21.16	Average
6	0.464	9.80	23.08	32.88	56.62	-23.74	QP
7	0.710	9.81	28.40	38.21	46.00	-7.79	Average
8	0.710	9.81	34.46	44.27	56.00	-11.73	QP
9	2.020	9.82	13.30	23.12	46.00	-22.88	Average
10	2.020	9.82	19.35	29.17	56.00	-26.83	QP
11	18.634	10.09	17.30	27.39	50.00	-22.61	Average
12	18.634	10.09	25.35	35.44	60.00	-24.56	QP

§15.205 & §15.209 & §15.407(B)– UNDESIRABLE EMISSION

Applicable Standard

FCC §15.407 (b); §15.209; §15.205;

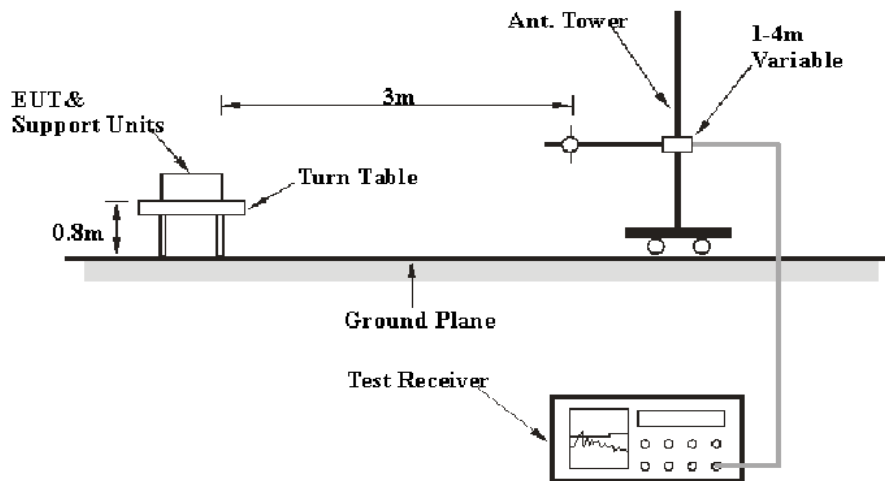
(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

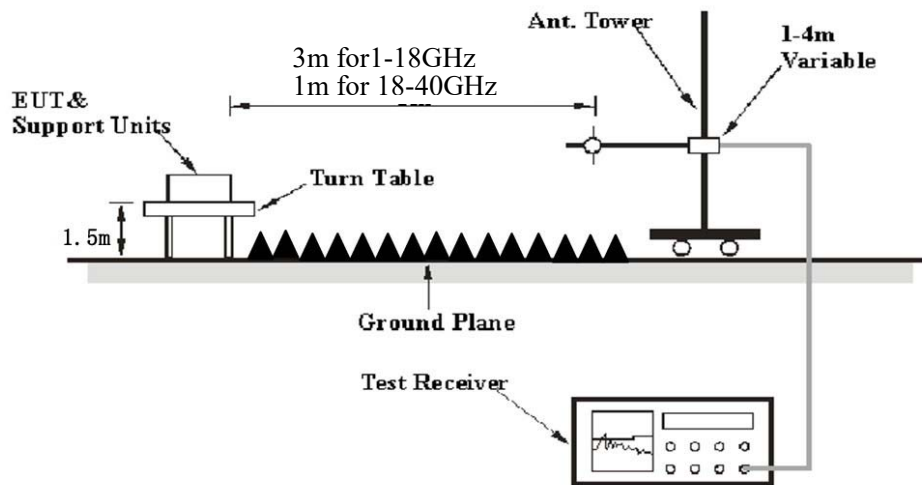
- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 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.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 40 GHz.

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}	/	Ave.erage
	1MHz	> 1/T ^{Note 2}	/	Ave.erage

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

Note 2: when duty cycle is less than 98%

Test Procedure**Radiated Spurious Emission**

During the radiated emission test, the adapter was connected to the AC floor outlet.

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

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1GHz, peak and Ave.erage detection modes for frequencies above 1GHz.

According to ANSI C63.10-2013,9.4: For field strength measurements made at other than the distance at which the applicable limit is specified, extrapolate the measured field strength to the field strength at the distance specified by the limit using an inverse distance correction factor (20 dB/decade of distance). In some cases, a different distance correction factor may be required;

$$E_{\text{SpecLimit}} = E_{\text{Meas}} + 20 \log \left(\frac{d_{\text{Meas}}}{d_{\text{SpecLimit}}} \right)$$

where

$E_{\text{SpecLimit}}$	is the field strength of the emission at the distance specified by the limit, in dB μ V/m
E_{Meas}	is the field strength of the emission at the measurement distance, in dB μ V/m
d_{Meas}	is the measurement distance, in m
$d_{\text{SpecLimit}}$	is the distance specified by the limit, in m

So the extrapolation factor of 1m is $20 * \log(1/3) = -9.5$ dB, for 18-40GHz range, the limit of 1m distance was added by 9.5dB from limit of 3m to compared with the result measurement at 1m distance.

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:

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

Test Data

Environmental Conditions

Temperature:	25~25.2°C
Relative Humidity:	53~60%
ATM Pressure:	101~101.5kPa

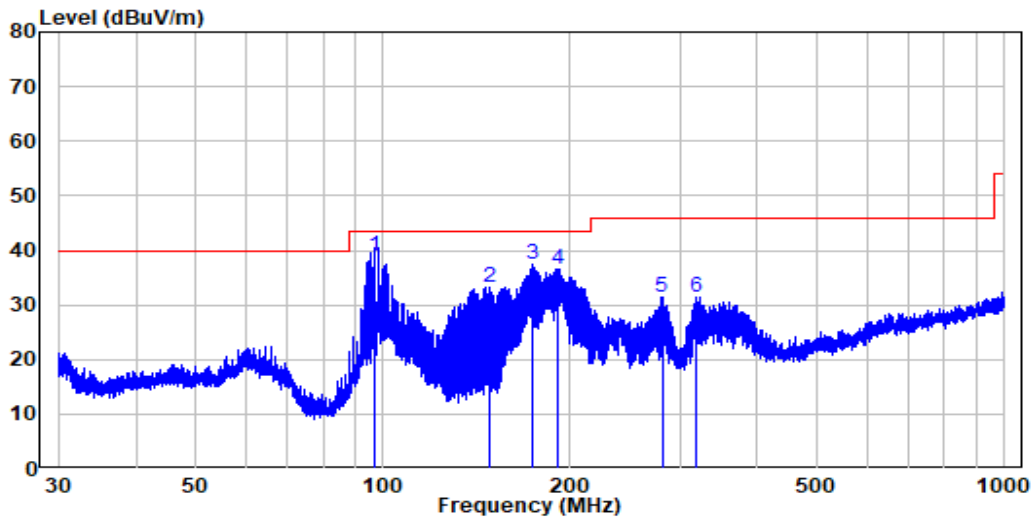
The testing was performed by Level Li on 2022-11-04 for below 1GHz, and on 2022-09-22 for above 1GHz.

EUT operation mode: Transmitting (Pre-scan in the X,Y and Z axes of orientation, the worst case X-axes of orientation was recorded)

30 MHz – 1 GHz: (worst case is 802.11a, 5180MHz)

Note: When the result of Peak less than the limit of QP by more than 6dB, just the peak value was recorded.

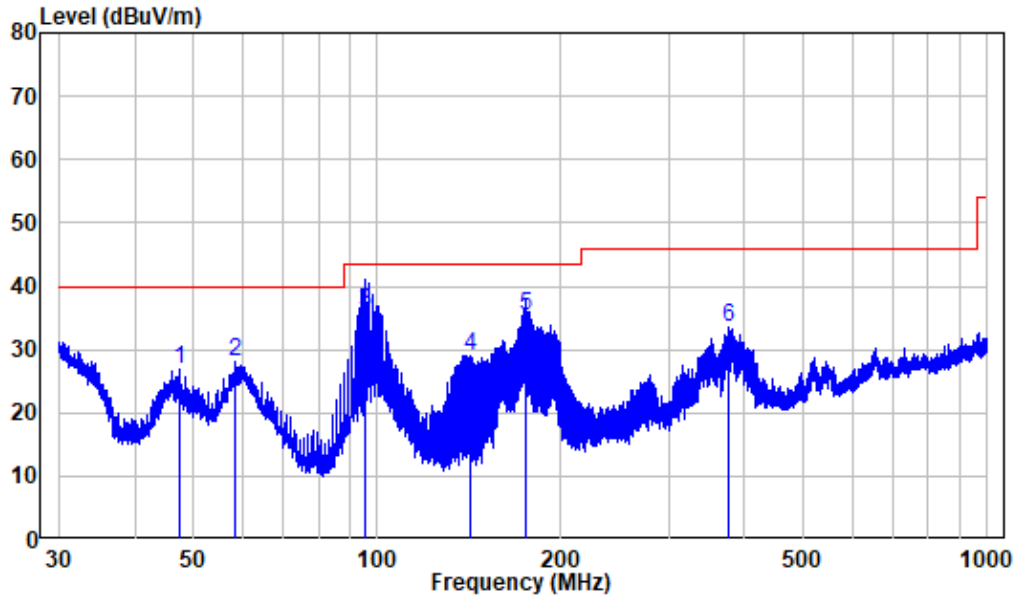
Horizontal



Site : chamber
 Condition: 3m HORIZONTAL
 Job No. : SZNS220908-40790E-RF
 Test Mode: 5G WIFI Transmitting

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	96.945	-12.28	51.30	39.02	43.50	-4.48	QP
2	147.857	-15.39	48.71	33.32	43.50	-10.18	Peak
3	173.966	-13.18	50.54	37.36	43.50	-6.14	Peak
4	191.409	-11.35	47.84	36.49	43.50	-7.01	Peak
5	281.008	-9.56	40.84	31.28	46.00	-14.72	Peak
6	318.259	-8.55	40.02	31.47	46.00	-14.53	Peak

Vertical



Site : chamber
 Condition: 3m VERTICAL
 Job No. : SZNS220908-40790E-RF
 Test Mode: 5G WIFI Transmitting

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	47.284	-10.00	36.95	26.95	40.00	-13.05	Peak
2	58.433	-10.06	38.07	28.01	40.00	-11.99	Peak
3	95.678	-12.35	48.39	36.04	43.50	-7.46	QP
4	141.702	-15.53	44.60	29.07	43.50	-14.43	Peak
5	175.267	-13.11	48.50	35.39	43.50	-8.11	QP
6	376.598	-7.24	40.64	33.40	46.00	-12.60	Peak

Above 1GHz:**5150-5250 MHz:**

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
	Reading (dB μ V)	PK/Ave		Height (m)	Polar (H/V)				
802.11A									
5180MHz									
4500	63.33	PK	273	2	H	-4.72	58.61	74	-15.39
4500	50.47	AV	273	2	H	-4.72	45.75	54	-8.25
4500	63.24	PK	245	1.8	V	-4.72	58.52	74	-15.48
4500	50.38	AV	245	1.8	V	-4.72	45.66	54	-8.34
5150	64.38	PK	118	1.7	H	-2.73	61.65	74	-12.35
5150	50.67	AV	118	1.7	H	-2.73	47.94	54	-6.06
5150	64.27	PK	134	1.1	V	-2.73	61.54	74	-12.46
5150	50.56	AV	134	1.1	V	-2.73	47.83	54	-6.17
10360	41.79	PK	112	1.1	H	8.12	49.91	68.2	-18.29
10360	41.86	PK	33	1.1	V	8.12	49.98	68.2	-18.22
5200MHz									
10400	41.99	PK	14	2.3	H	8.24	50.23	68.2	-17.97
10400	42.12	PK	248	2.3	V	8.24	50.36	68.2	-17.84
5240MHz									
5350	65.17	PK	313	1.8	H	-2.33	62.84	74	-11.16
5350	51.31	AV	313	1.8	H	-2.33	48.98	54	-5.02
5350	65.06	PK	84	1.5	V	-2.33	62.73	74	-11.27
5350	51.20	AV	84	1.5	V	-2.33	48.87	54	-5.13
5460	63.67	PK	345	2.4	H	-2.26	61.41	74	-12.59
5460	51.10	AV	345	2.4	H	-2.26	48.84	54	-5.16
5460	63.56	PK	333	1.1	V	-2.26	61.30	74	-12.70
5460	50.99	AV	333	1.1	V	-2.26	48.73	54	-5.27
10480	43.08	PK	108	1.7	H	8.56	51.64	68.2	-16.56
10480	43.66	PK	323	1.7	V	8.56	52.22	68.2	-15.98

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
	Reading (dB μ V)	PK/Ave		Height (m)	Polar (H/V)				
802.11N20									
5180MHz									
4500	63.41	PK	103	2.4	H	-4.72	58.69	74	-15.31
4500	50.54	AV	103	2.4	H	-4.72	45.82	54	-8.18
4500	63.30	PK	177	1.6	V	-4.72	58.58	74	-15.42
4500	50.43	AV	177	1.6	V	-4.72	45.71	54	-8.29
5150	64.51	PK	156	1.3	H	-2.73	61.78	74	-12.22
5150	50.75	AV	156	1.3	H	-2.73	48.02	54	-5.98
5150	64.42	PK	302	2	V	-2.73	61.69	74	-12.31
5150	50.64	AV	302	2	V	-2.73	47.91	54	-6.09
10360	41.55	PK	171	1.3	H	8.12	49.67	68.2	-18.53
10360	41.66	PK	222	1.3	V	8.12	49.78	68.2	-18.42
5200MHz									
10400	41.79	PK	99	1.5	H	8.24	50.03	68.2	-18.17
10400	41.93	PK	16	1.5	V	8.24	50.17	68.2	-18.03
5240MHz									
5350	65.24	PK	317	1.4	H	-2.33	62.91	74	-11.09
5350	51.37	AV	317	1.4	H	-2.33	49.04	54	-4.96
5350	65.13	PK	137	2	V	-2.33	62.80	74	-11.20
5350	51.26	AV	137	2	V	-2.33	48.93	54	-5.07
5460	63.74	PK	108	2.1	H	-2.26	61.48	74	-12.52
5460	51.16	AV	108	2.1	H	-2.26	48.90	54	-5.10
5460	63.63	PK	198	1.1	V	-2.26	61.37	74	-12.63
5460	51.05	AV	198	1.1	V	-2.26	48.79	54	-5.21
10480	43.06	PK	148	1.7	H	8.56	51.62	68.2	-16.58
10480	43.31	PK	116	1.7	V	8.56	51.87	68.2	-16.33

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
	Reading (dB μ V)	PK/Ave		Height (m)	Polar (H/V)				
802.11N40									
5190MHz									
4500	63.51	PK	65	1.7	H	-4.72	58.79	74	-15.21
4500	50.82	AV	65	1.7	H	-4.72	46.10	54	-7.90
4500	63.40	PK	73	2.1	V	-4.72	58.68	74	-15.32
4500	50.73	AV	73	2.1	V	-4.72	46.01	54	-7.99
5150	64.59	PK	182	1.3	H	-2.73	61.86	74	-12.14
5150	52.05	AV	182	1.3	H	-2.73	49.32	54	-4.68
5150	64.48	PK	35	2.5	V	-2.73	61.75	74	-12.25
5150	51.92	AV	35	2.5	V	-2.73	49.19	54	-4.81
10380	41.63	PK	75	1.8	H	8.18	49.81	68.2	-18.39
10380	41.78	PK	188	1.8	V	8.18	49.96	68.2	-18.24
5230MHz									
5350	65.44	PK	326	1.7	H	-2.33	63.11	74	-10.89
5350	51.70	AV	326	1.7	H	-2.33	49.37	54	-4.63
5350	65.35	PK	232	2.4	V	-2.33	63.02	74	-10.98
5350	51.59	AV	232	2.4	V	-2.33	49.26	54	-4.74
5460	63.82	PK	231	1.8	H	-2.26	61.56	74	-12.44
5460	51.44	AV	231	1.8	H	-2.26	49.18	54	-4.82
5460	63.71	PK	28	1	V	-2.26	61.45	74	-12.55
5460	51.35	AV	28	1	V	-2.26	49.09	54	-4.91
10460	42.13	PK	323	1.7	H	8.47	50.60	68.2	-17.60
10460	42.32	PK	228	1.7	V	8.47	50.79	68.2	-17.41

5250-5350 MHz:

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
	Reading (dB μ V)	PK/Ave		Height (m)	Polar (H/V)				
802.11A									
5260MHz									
4500	63.40	PK	269	1.4	H	-4.72	58.68	74	-15.32
4500	50.43	AV	269	1.4	H	-4.72	45.71	54	-8.29
4500	63.31	PK	88	2.1	V	-4.72	58.59	74	-15.41
4500	50.32	AV	88	2.1	V	-4.72	45.60	54	-8.40
5150	64.41	PK	235	1.5	H	-2.73	61.68	74	-12.32
5150	50.72	AV	235	1.5	H	-2.73	47.99	54	-6.01
5150	64.30	PK	59	1.7	V	-2.73	61.57	74	-12.43
5150	50.61	AV	59	1.7	V	-2.73	47.88	54	-6.12
10520	42.75	PK	116	1.3	H	8.65	51.40	68.2	-16.80
10520	41.54	PK	355	1.3	V	8.65	50.19	68.2	-18.01
5280MHz									
10560	42.50	PK	249	1.9	H	8.69	51.19	68.2	-17.01
10560	42.27	PK	287	1.9	V	8.69	50.96	68.2	-17.24
5320MHz									
5350	65.37	PK	192	1.3	H	-2.33	63.04	74	-10.96
5350	51.28	AV	192	1.3	H	-2.33	48.95	54	-5.05
5350	65.26	PK	64	2.3	V	-2.33	62.93	74	-11.07
5350	51.19	AV	64	2.3	V	-2.33	48.86	54	-5.14
5460	63.67	PK	328	1.3	H	-2.26	61.41	74	-12.59
5460	51.02	AV	328	1.3	H	-2.26	48.76	54	-5.24
5460	63.58	PK	210	1.4	V	-2.26	61.32	74	-12.68
5460	50.93	AV	210	1.4	V	-2.26	48.67	54	-5.33
10640	43.55	PK	80	1.2	H	8.92	52.47	74	-21.53
10640	42.76	PK	85	2.2	V	8.92	51.68	74	-22.32

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
	Reading (dB μ V)	PK/Ave		Height (m)	Polar (H/V)				
802.11N20									
5260MHz									
4500	63.45	PK	222	2.2	H	-4.72	58.73	74	-15.27
4500	50.48	AV	222	2.2	H	-4.72	45.76	54	-8.24
4500	63.34	PK	64	2.4	V	-4.72	58.62	74	-15.38
4500	50.37	AV	64	2.4	V	-4.72	45.65	54	-8.35
5150	64.50	PK	59	2.2	H	-2.73	61.77	74	-12.23
5150	50.77	AV	59	2.2	H	-2.73	48.04	54	-5.96
5150	64.39	PK	80	2.4	V	-2.73	61.66	74	-12.34
5150	50.66	AV	80	2.4	V	-2.73	47.93	54	-6.07
10520	41.14	PK	359	1.1	H	8.65	49.79	68.2	-18.41
10520	40.85	PK	113	1.1	V	8.65	49.50	68.2	-18.70
5280MHz									
10560	43.26	PK	248	2	H	8.69	51.95	68.2	-16.25
10560	42.20	PK	111	2	V	8.69	50.89	68.2	-17.31
5320MHz									
5350	65.48	PK	5	1.4	H	-2.33	63.15	74	-10.85
5350	51.34	AV	5	1.4	H	-2.33	49.01	54	-4.99
5350	65.37	PK	49	1.2	V	-2.33	63.04	74	-10.96
5350	51.23	AV	49	1.2	V	-2.33	48.90	54	-5.10
5460	63.76	PK	220	1.7	H	-2.26	61.50	74	-12.50
5460	51.07	AV	220	1.7	H	-2.26	48.81	54	-5.19
5460	63.65	PK	202	2.3	V	-2.26	61.39	74	-12.61
5460	50.98	AV	202	2.3	V	-2.26	48.72	54	-5.28
10640	43.63	PK	143	1.6	H	8.92	52.55	74	-21.45
10640	43.36	PK	282	1.7	V	8.92	52.28	74	-21.72

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
	Reading (dB μ V)	PK/Ave		Height (m)	Polar (H/V)				
802.11N40									
5270MHz									
4500	63.69	PK	130	2.1	H	-4.72	58.97	74	-15.03
4500	50.92	AV	130	2.1	H	-4.72	46.20	54	-7.80
4500	63.58	PK	317	2.2	V	-4.72	58.86	74	-15.14
4500	50.81	AV	317	2.2	V	-4.72	46.09	54	-7.91
5150	64.95	PK	190	1.7	H	-2.73	62.22	74	-11.78
5150	51.32	AV	190	1.7	H	-2.73	48.59	54	-5.41
5150	64.84	PK	159	2.1	V	-2.73	62.11	74	-11.89
5150	51.21	AV	159	2.1	V	-2.73	48.48	54	-5.52
10540	41.27	PK	252	2	H	8.65	49.92	68.2	-18.28
10540	41.04	PK	297	2	V	8.65	49.69	68.2	-18.51
5310MHz									
5350	65.60	PK	300	2.3	H	-2.33	63.27	74	-10.73
5350	51.77	AV	300	2.3	H	-2.33	49.44	54	-4.56
5350	65.49	PK	233	2.4	V	-2.33	63.16	74	-10.84
5350	51.66	AV	233	2.4	V	-2.33	49.33	54	-4.67
5460	63.76	PK	11	2	H	-2.26	61.50	74	-12.50
5460	51.45	AV	11	2	H	-2.26	49.19	54	-4.81
5460	63.64	PK	43	1.8	V	-2.26	61.38	74	-12.62
5460	51.36	AV	43	1.8	V	-2.26	49.10	54	-4.90
10620	42.81	PK	54	1.2	H	8.89	51.70	74	-22.30
10620	42.54	PK	227	1.5	V	8.89	51.43	74	-22.57

5725~5850 MHz:

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/Ave		Height (m)	Polar (H/V)				
802.11A									
5745MHz									
5650	66.09	PK	275	1.1	H	-1.95	64.14	68.2	-4.06
5650	65.98	PK	270	2	V	-1.95	64.03	68.2	-4.17
5700	66.85	PK	349	1.7	H	-2.02	64.83	105.2	-40.37
5700	66.76	PK	233	1.2	V	-2.02	64.74	105.2	-40.46
5720	67.19	PK	249	2.3	H	-1.97	65.22	110.8	-45.58
5720	67.03	PK	201	1.7	V	-1.97	65.06	110.8	-45.74
5725	67.91	PK	265	1.2	H	-1.96	65.95	122.2	-56.25
5725	67.73	PK	190	2.3	V	-1.96	65.77	122.2	-56.43
11490	44.87	PK	48	2.4	H	6.63	51.50	74	-22.50
11490	45.06	PK	81	1.8	V	6.63	51.69	74	-22.31
5785MHz									
11570	46.39	PK	74	1	H	6.59	52.98	74	-21.02
11570	46.07	PK	225	1.7	V	6.59	52.66	74	-21.34
5825MHz									
5850	68.04	PK	103	1.5	H	-1.81	66.23	122.2	-55.97
5850	67.91	PK	99	1.8	V	-1.81	66.10	122.2	-56.10
5855	67.90	PK	96	1.6	H	-1.81	66.09	110.8	-44.71
5855	67.72	PK	225	1.5	V	-1.81	65.91	110.8	-44.89
5875	67.66	PK	282	1.4	H	-1.84	65.82	105.2	-39.38
5875	67.48	PK	185	2.1	V	-1.84	65.64	105.2	-39.56
5925	66.68	PK	243	2.3	H	-1.82	64.86	68.2	-3.34
5925	66.59	PK	316	1.8	V	-1.82	64.77	68.2	-3.43
11650	44.36	PK	338	2.5	H	6.77	51.13	74	-22.87
11650	44.23	PK	204	2.1	V	6.77	51.00	74	-23.00

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
	Reading (dB μ V)	PK/Ave		Height (m)	Polar (H/V)				
802.11N20									
5745MHz									
5650	66.17	PK	342	2	H	-1.95	64.22	68.2	-3.98
5650	66.06	PK	64	2.5	V	-1.95	64.11	68.2	-4.09
5700	66.88	PK	347	1.8	H	-2.02	64.86	105.2	-40.34
5700	66.66	PK	27	2.4	V	-2.02	64.64	105.2	-40.56
5720	67.28	PK	158	1.9	H	-1.97	65.31	110.8	-45.49
5720	67.02	PK	158	2.4	V	-1.97	65.05	110.8	-45.75
5725	68.10	PK	12	2.5	H	-1.96	66.14	122.2	-56.06
5725	67.63	PK	139	1.2	V	-1.96	65.67	122.2	-56.53
11490	44.78	PK	123	2.2	H	6.63	51.41	74	-22.59
11490	45.20	PK	303	1.7	V	6.63	51.83	74	-22.17
5785MHz									
11570	46.17	PK	177	1.8	H	6.59	52.76	74	-21.24
11570	45.90	PK	74	1	V	6.59	52.49	74	-21.51
5825MHz									
5850	68.07	PK	65	2.2	H	-1.81	66.26	122.2	-55.94
5850	67.90	PK	144	1.3	V	-1.81	66.09	122.2	-56.11
5855	67.86	PK	205	2.3	H	-1.81	66.05	110.8	-44.75
5855	67.71	PK	102	1.8	V	-1.81	65.90	110.8	-44.90
5875	67.75	PK	156	1.1	H	-1.84	65.91	105.2	-39.29
5875	67.59	PK	242	2.5	V	-1.84	65.75	105.2	-39.45
5925	66.72	PK	296	2.1	H	-1.82	64.90	68.2	-3.30
5925	66.63	PK	312	2.2	V	-1.82	64.81	68.2	-3.39
11650	44.33	PK	91	1.4	H	6.77	51.10	74	-22.90
11650	44.15	PK	79	2.2	V	6.77	50.92	74	-23.08

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Corrected Amplitude (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
	Reading (dB μ V)	PK/Ave		Height (m)	Polar (H/V)				
802.11N40									
5755MHz									
5650	66.29	PK	87	2.4	H	-1.95	64.34	68.2	-3.86
5650	66.16	PK	315	2	V	-1.95	64.21	68.2	-3.99
5700	66.97	PK	227	2.3	H	-2.02	64.95	105.2	-40.25
5700	66.85	PK	285	1.3	V	-2.02	64.83	105.2	-40.37
5720	67.39	PK	14	1.6	H	-1.97	65.42	110.8	-45.38
5720	67.32	PK	24	1.4	V	-1.97	65.35	110.8	-45.45
5725	69.19	PK	169	2.2	H	-1.96	67.23	122.2	-54.97
5725	68.50	PK	280	1.5	V	-1.96	66.54	122.2	-55.66
11510	43.76	PK	73	2.4	H	6.59	50.35	74	-23.65
11510	43.91	PK	113	2.3	V	6.59	50.50	74	-23.50
5795MHz									
5850	68.51	PK	358	2.1	H	-1.81	66.70	122.2	-55.50
5850	68.16	PK	340	1.3	V	-1.81	66.35	122.2	-55.85
5855	68.02	PK	131	1.8	H	-1.81	66.21	110.8	-44.59
5855	67.91	PK	147	2.2	V	-1.81	66.10	110.8	-44.70
5875	67.73	PK	256	2.5	H	-1.84	65.89	105.2	-39.31
5875	67.50	PK	190	2.2	V	-1.84	65.66	105.2	-39.54
5925	66.78	PK	94	1.9	H	-1.82	64.96	68.2	-3.24
5925	66.66	PK	87	2.1	V	-1.82	64.84	68.2	-3.36
11590	44.29	PK	225	1	H	6.57	50.86	74	-23.14
11590	44.58	PK	75	1.2	V	6.57	51.15	74	-22.85

Note:

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

Corrected Amplitude = Corrected Factor + Reading

Margin = Corrected Amplitude - Limit

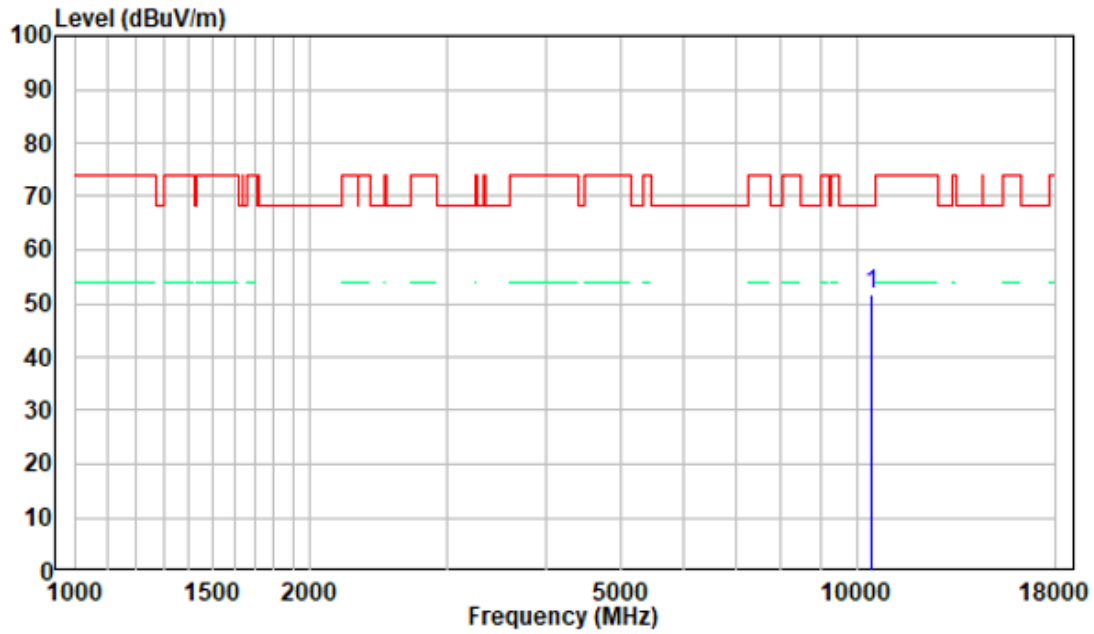
The other spurious emission which is 20dB to the limit or in the noise floor level was not recorded.

The test result of peak was less than the limit of average or QP, so just the peak value was recorded.

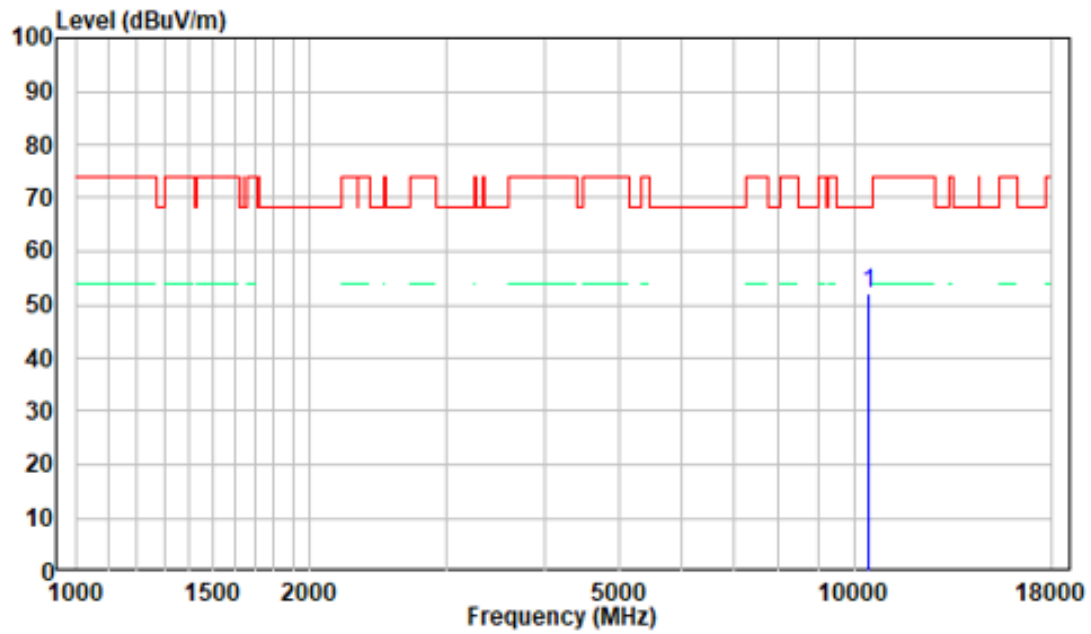
1 GHz - 18 GHz: (Pre-Scan plots)

802.11 a, 5240MHz

Horizontal



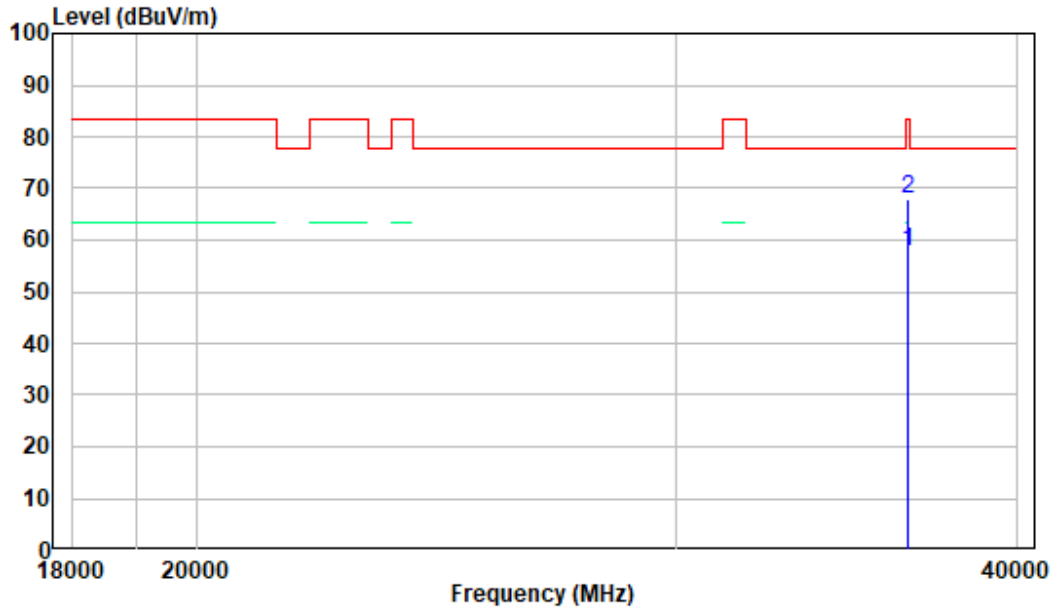
Vertical



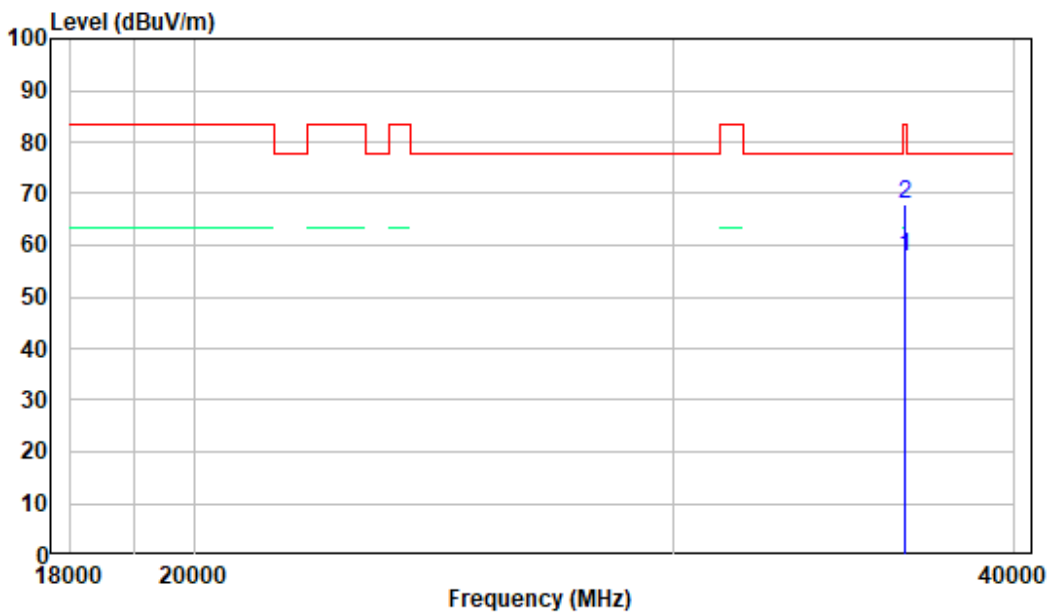
18-40GHz: (Pre-Scan plots)

802.11 a, 5240MHz

Horizontal



Vertical



FCC §15.407(a),(e) – 26 dB & 6dB EMISSION BANDWIDTH

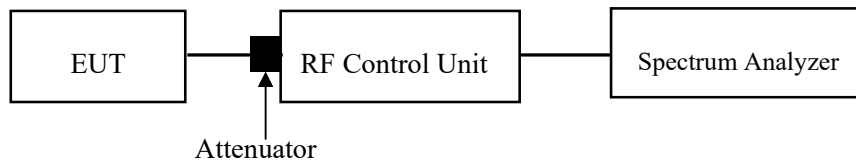
Applicable Standard

The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Test Procedure

Please refer to ANSI C63.10-2013 section 12.4.1



Test Data

Environmental Conditions

Temperature:	25°C
Relative Humidity:	65 %
ATM Pressure:	101.0 kPa

The testing was performed by Cat Kang from 2022-09-21 to 2022-11-01.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the Appendix.

FCC §15.407(a) – CONDUCTED TRANSMITTER OUTPUT POWER

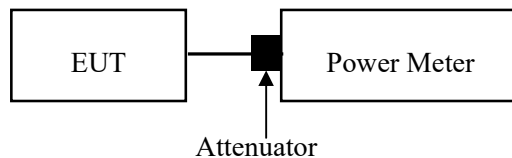
Applicable Standard

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 collocated 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

Please refer to ANSI C63.10-2013 section 12.3.3.1



Test Data

Environmental Conditions

Temperature:	25°C
Relative Humidity:	65 %
ATM Pressure:	101.0 kPa

The testing was performed by Cat Kang from 2022-09-21 to 2022-11-01.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the Appendix.

FCC §15.407(a) - POWER SPECTRAL DENSITY

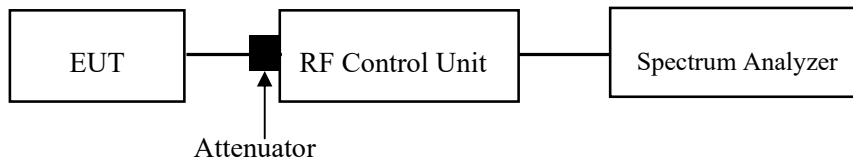
For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting 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 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. 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 collocated 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

Please refer to ANSI C63.10-2013 section 12.5



Test Data

Environmental Conditions

Temperature:	25°C
Relative Humidity:	65 %
ATM Pressure:	101.0 kPa

The testing was performed by Cat Kang from 2022-09-21 to 2022-11-25.

EUT operation mode: Transmitting

Test Result: Pass

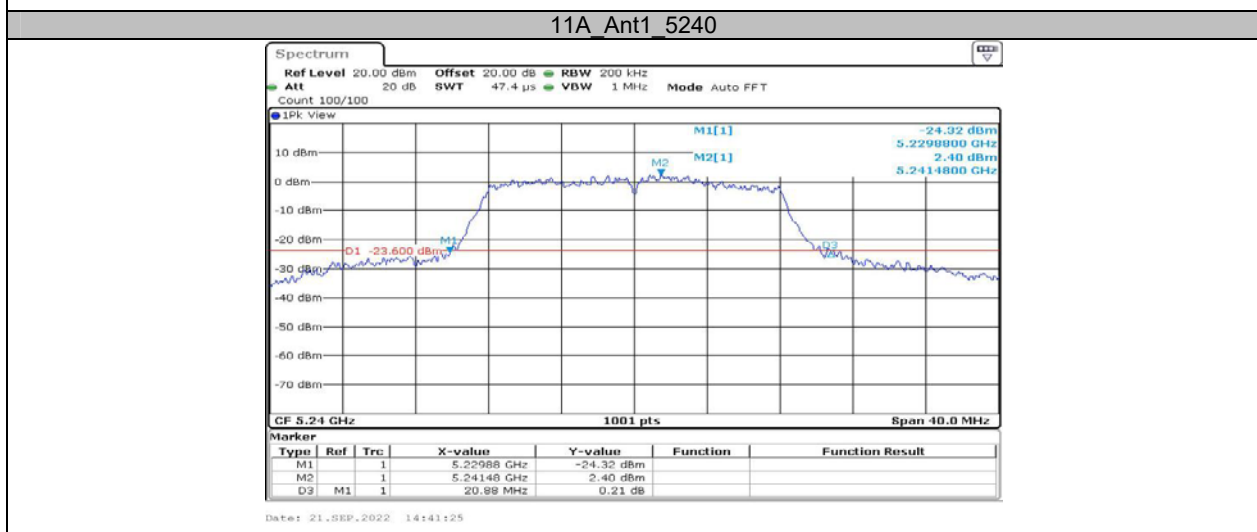
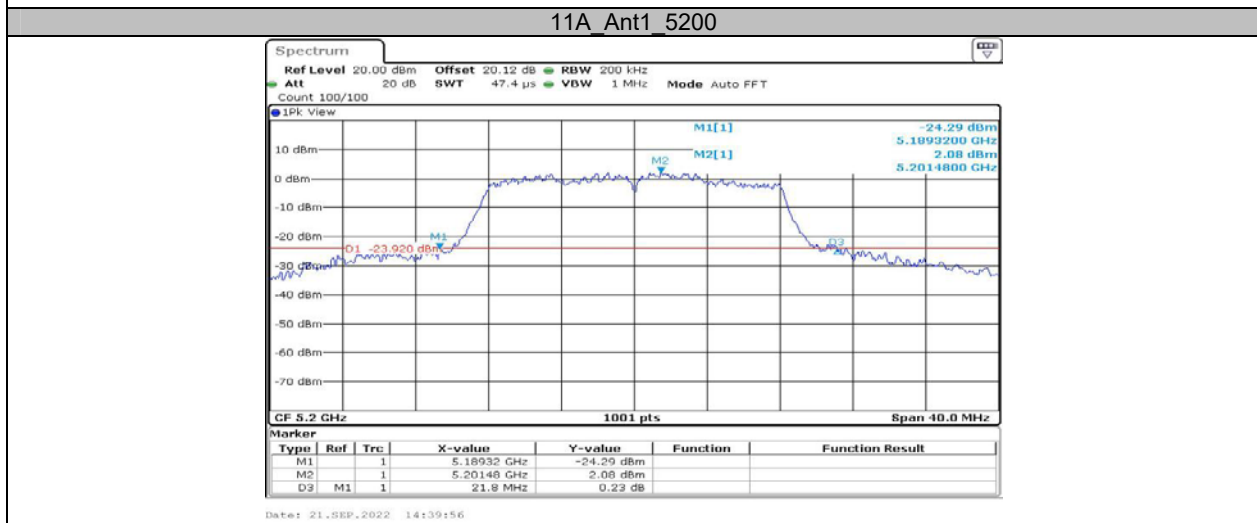
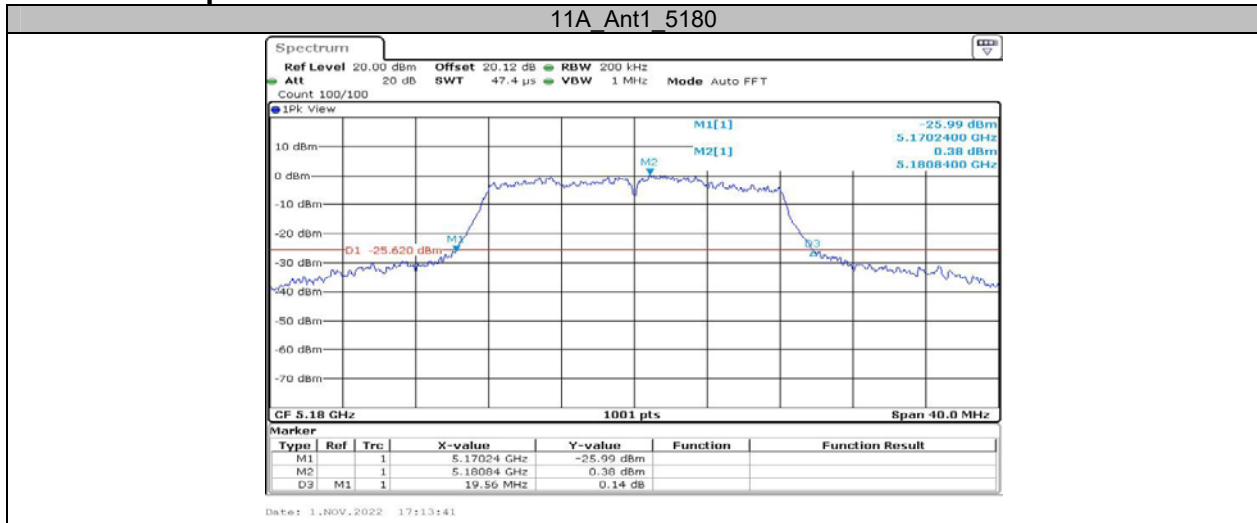
Please refer to the Appendix.

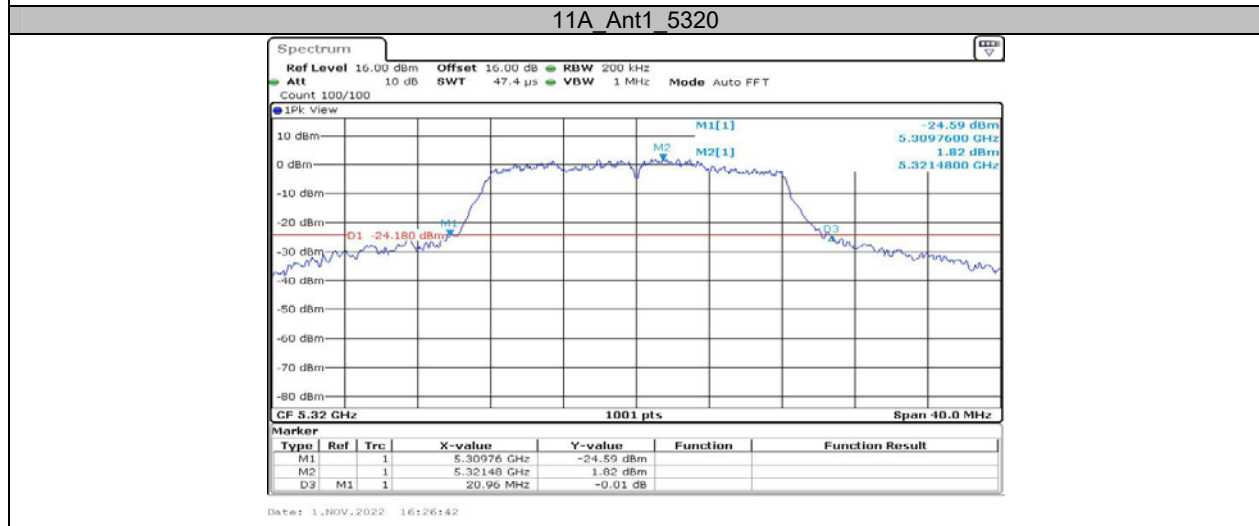
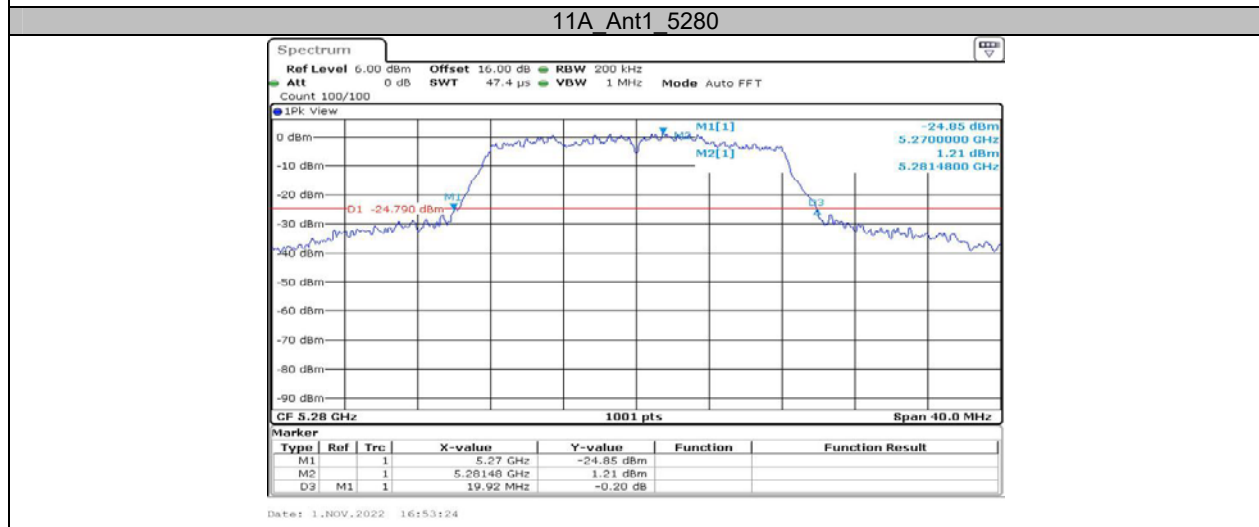
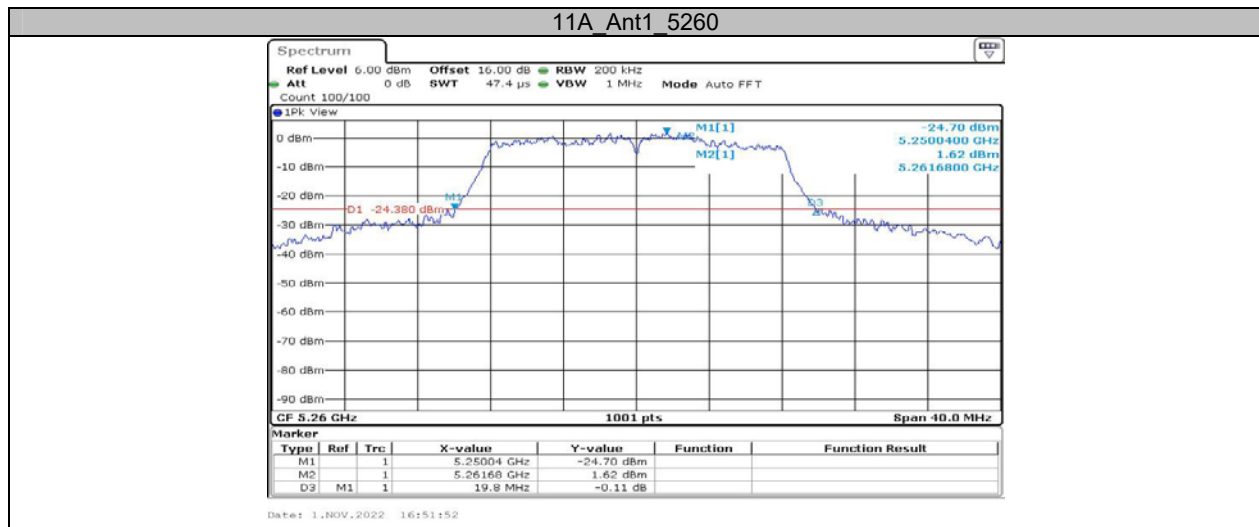
APPENDIX

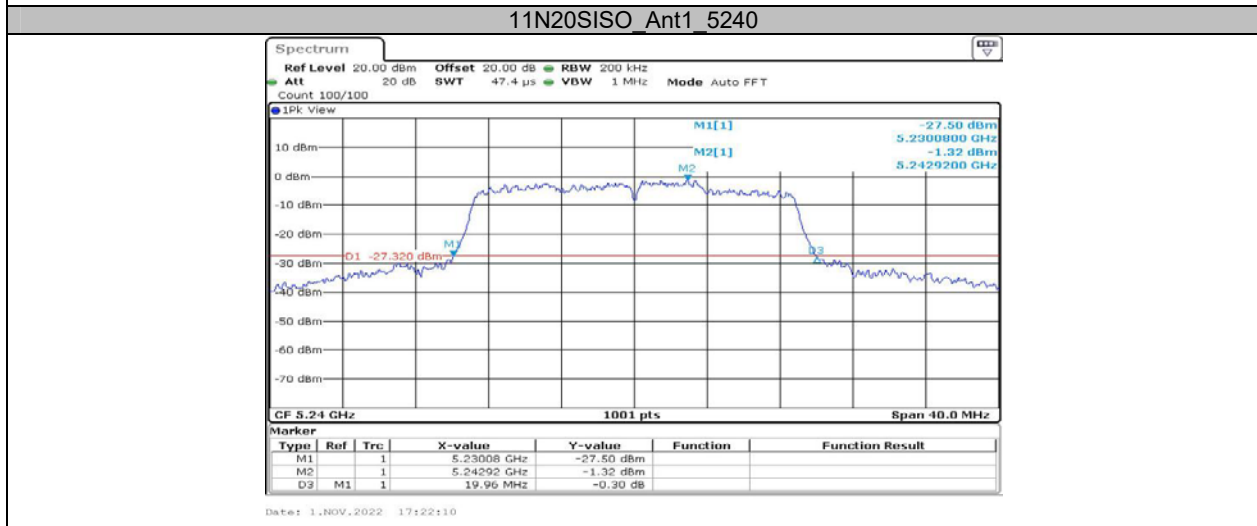
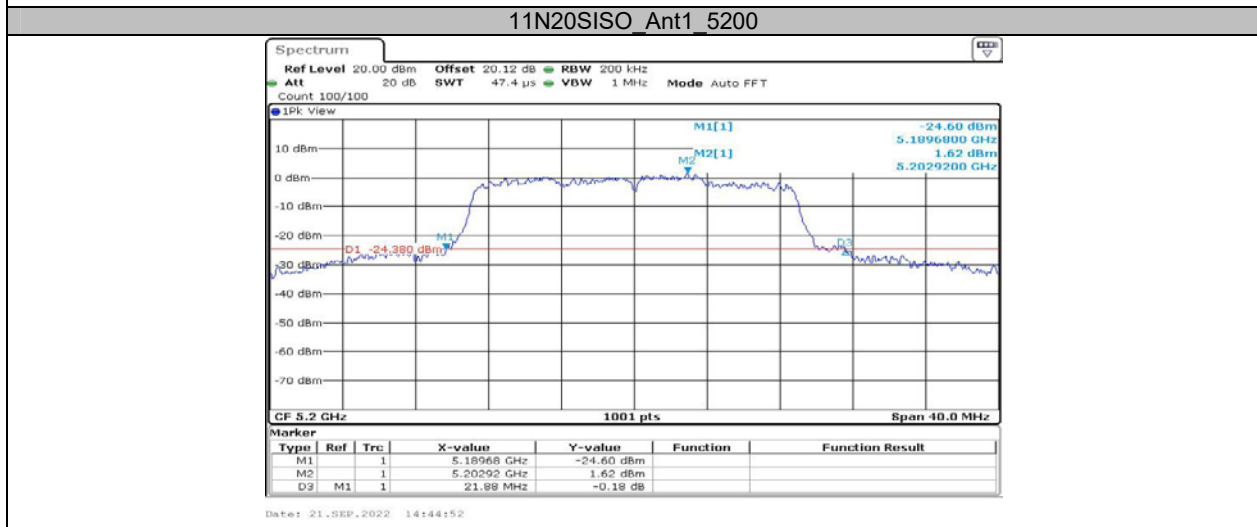
Appendix A1: Emission Bandwidth Test Result

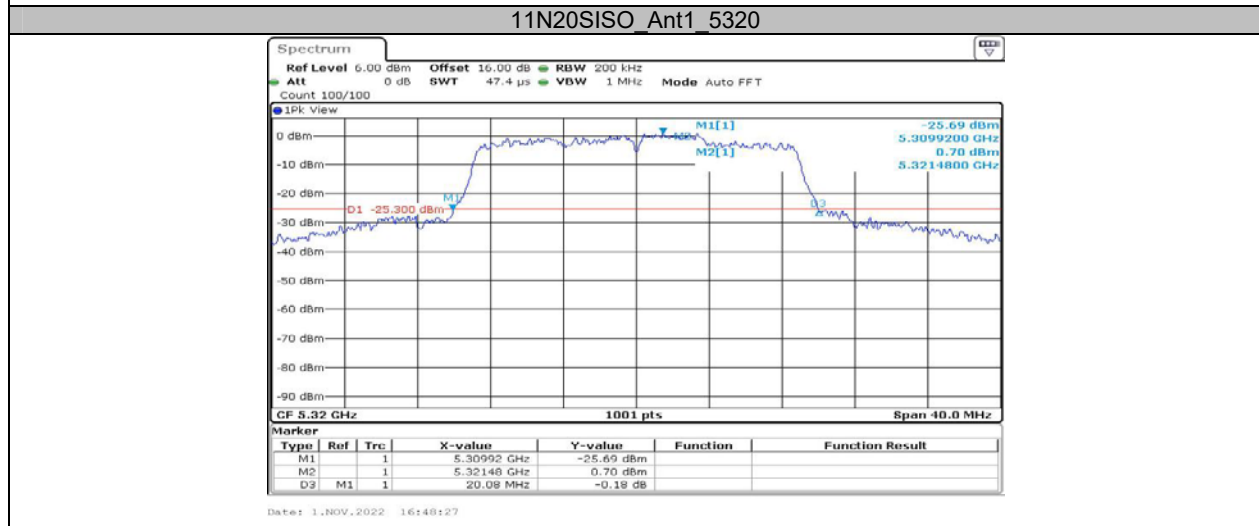
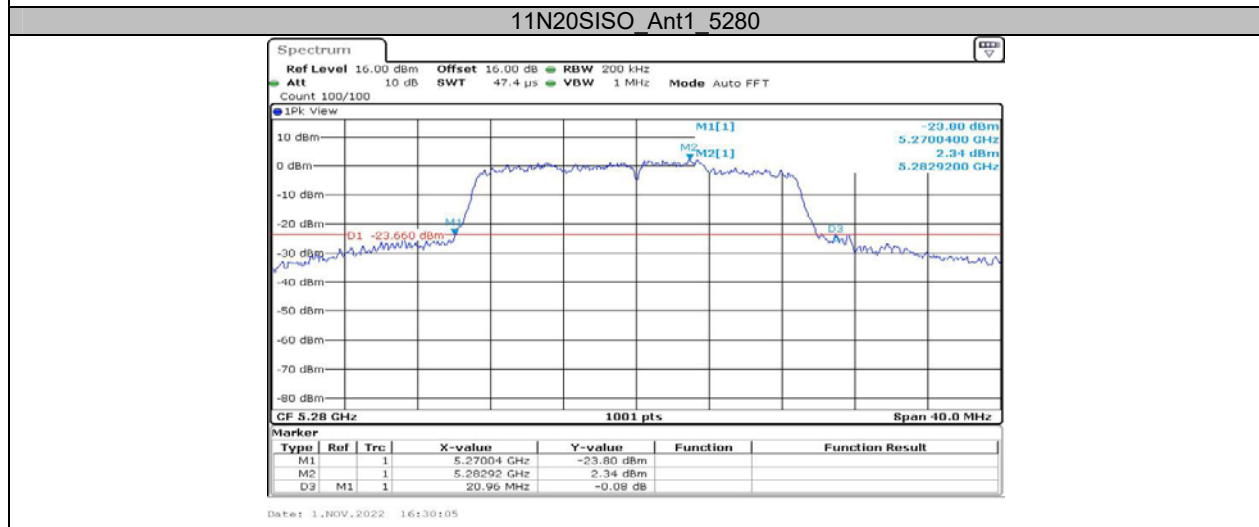
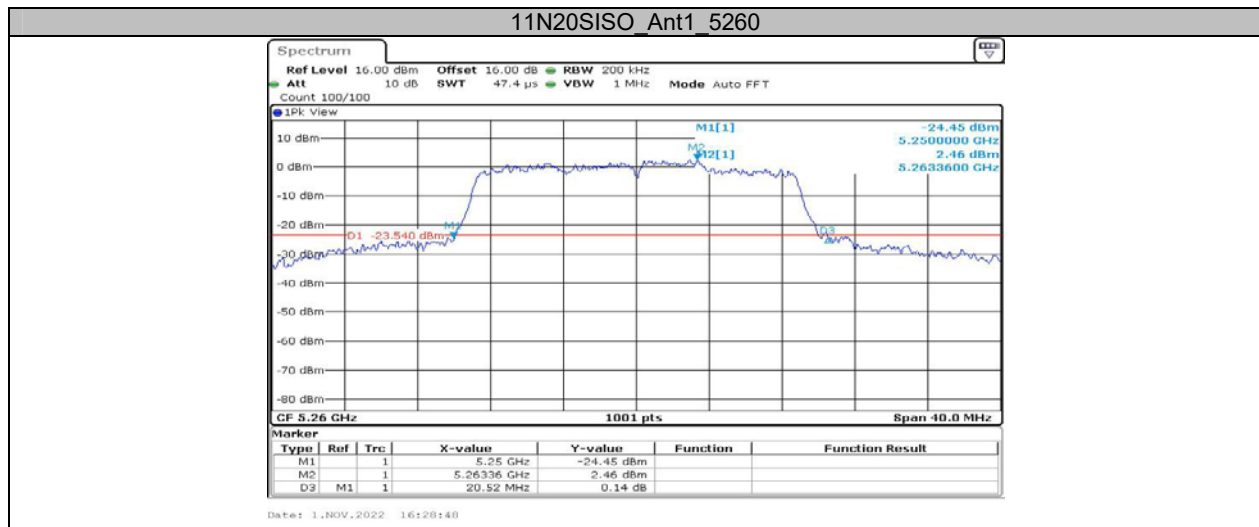
Test Mode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	19.56	5170.24	5189.80	---	---
		5200	21.80	5189.32	5211.12	---	---
		5240	20.88	5229.88	5250.76	---	---
		5260	19.80	5250.04	5269.84	---	---
		5280	19.92	5270.00	5289.92	---	---
		5320	20.96	5309.76	5330.72	---	---
11N20SISO	Ant1	5180	19.88	5170.08	5189.96	---	---
		5200	21.88	5189.68	5211.56	---	---
		5240	19.96	5230.08	5250.04	---	---
		5260	20.52	5250.00	5270.52	---	---
		5280	20.96	5270.04	5291.00	---	---
		5320	20.08	5309.92	5330.00	---	---
11N40SISO	Ant1	5190	40.96	5169.60	5210.56	---	---
		5230	40.96	5209.52	5250.48	---	---
		5270	40.88	5249.60	5290.48	---	---
		5310	40.48	5289.76	5330.24	---	---

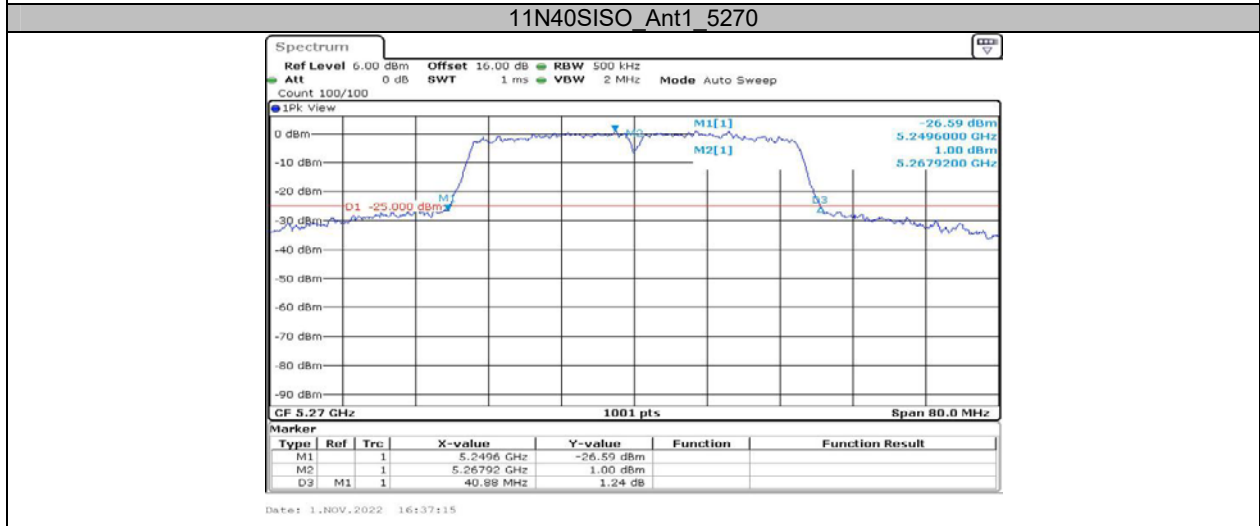
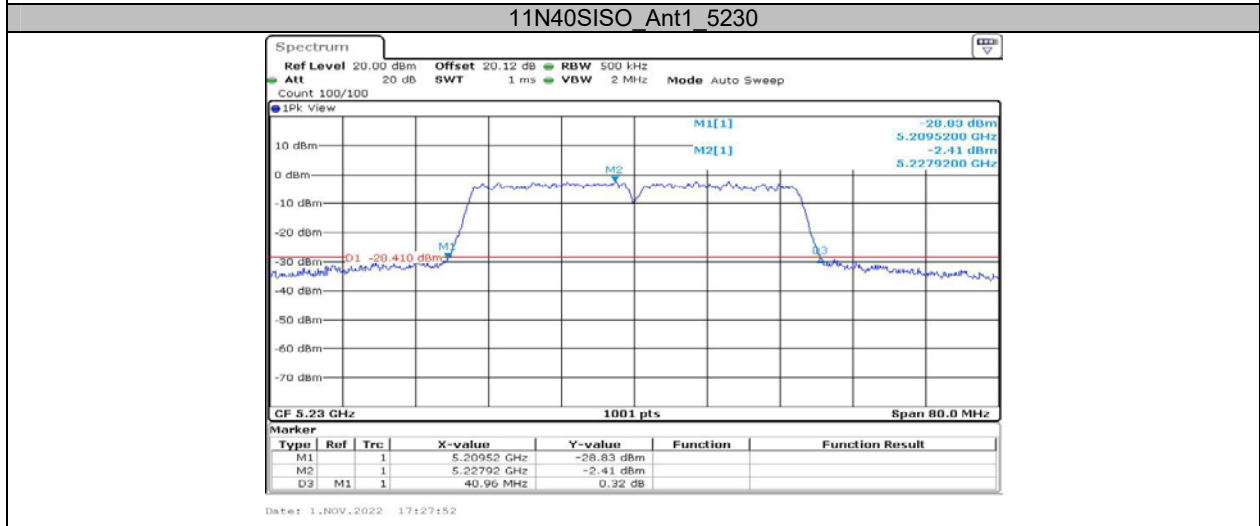
Test Graphs













Appendix A2: Occupied channel bandwidth Test Result

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	17.662	5171.129	5188.791	---	---
		5200	17.423	5191.249	5208.671	---	---
		5240	17.502	5231.209	5248.711	---	---
		5260	17.383	5251.289	5268.671	---	---
		5280	17.702	5271.089	5288.791	---	---
		5320	17.582	5311.169	5328.751	---	---
		5745	17.343	5736.329	5753.671	---	---
		5785	17.582	5776.249	5793.831	---	---
11N20SISO	Ant1	5825	17.542	5816.289	5833.831	---	---
		5180	18.102	5171.009	5189.111	---	---
		5200	18.102	5190.969	5209.071	---	---
		5240	18.062	5230.969	5249.031	---	---
		5260	18.062	5251.009	5269.071	---	---
		5280	17.982	5271.049	5289.031	---	---
		5320	18.022	5311.009	5329.031	---	---
		5745	17.982	5736.089	5754.071	---	---
11N40SISO	Ant1	5785	17.942	5776.129	5794.071	---	---
		5825	17.982	5816.129	5834.111	---	---
		5190	36.603	5171.778	5208.382	---	---
		5230	36.523	5211.858	5248.382	---	---
		5270	36.523	5251.858	5288.382	---	---
		5310	36.603	5291.778	5328.382	---	---
		5755	36.364	5737.018	5773.382	---	---
		5795	36.444	5777.018	5813.462	---	---

Test Graphs

