

RF Test Report

Test Report Number	STA-22121361-LCG-FCC-IC-RF-NII		
FCC ID IC ID	ZKP-ZOLLALS0001 9702A-ZOLLALS0001		
Applicant	ZOLL Medical Corporation		
Applicant Address	269 Mill Road, Chelmsford, MA 01824-4105		
Product Name	Zenix Monitor/Defibrillator		
Model (s)	Zenix		
Date of Receipt	08/10/2023		
Date of Test	08/21/2023 – 08/24/2023		
Report Issue Date	03/27/2024		
Test Standards	47 CFR Part 15.247 RSS-247 Issue 3, Aug 2023		
Test Result	PASS		
		Issued by: Vista Compliance Laboratories 1261 Puerta Del Sol, San Clemente, CA 92673 USA www.vista-compliance.com	
 Devin Tai (Test Engineer)		 David Zhang (Technical Manager)	
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Report #	STA-22121361-LCG-FCC-IC-RF-NII
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REVISION HISTORY

Report Number	Version	Description	Issued Date
STA-22121361-LCG-FCC-IC-RF-NII	01	Initial report	03/27/2024

TABLE OF CONTENTS

1	TEST SUMMARY	4
2	GENERAL INFORMATION.....	5
2.1	Applicant.....	5
2.2	Product information.....	5
2.3	Test standard and method.....	5
3	TEST SITE INFORMATION.....	6
4	MODIFICATION OF EUT / DEVIATIONS FROM STANDARDS.....	6
5	TEST CONFIGURATION AND OPERATION	6
5.1	EUT Test Configuration	6
5.2	Supporting Equipment.....	6
6	UNCERTAINTY OF MEASUREMENT	7
7	TEST RESULTS.....	8
7.1	Radiated Spurious Emission.....	8
8	EUT AND TEST SETUP PHOTOS.....	49
9	TEST INSTRUMENT LIST	51

1 Test Summary

Test Item	Test Requirement	Test Method	Result
Antenna Requirement	47 CFR Part 15.203	N/A	N/A*
AC Power Line Conducted Emissions	47 CFR Part 15.207 RSS-Gen Issue 5, Feb 2021	ANSI C63.10 (2013) RSS-Gen Issue 5, Feb 2021	N/A*
26 dB Bandwidth	47 CFR Part 15.247 RSS-247 Issue 3, Aug 2023	ANSI C63.10 (2013)	N/A*
Occupied Bandwidth	RSS-247 Issue 3, Aug 2023	RSS-247 Issue 3, Aug 2023	N/A*
Maximum Conducted Output Power	47 CFR Part 15.247 RSS-247 Issue 3, Aug 2023	ANSI C63.10 (2013)	N/A*
Power Spectral Density	47 CFR Part 15.247 RSS-247 Issue 3, Aug 2023	ANSI C63.10 (2013)	N/A*
Radiated Band-Edge into Restricted Frequency Bands	47 CFR Part 15.247 RSS-247 Issue 3, Aug 2023	ANSI C63.10 (2013)	N/A*
Radiated Spurious Emission	47 CFR Part 15.247 RSS-247 Issue 3, Aug 2023	ANSI C63.10 (2013)	Pass

Note: * The EUT is a host product with FCC/ISED certified BT and WLAN single module integrated (Module model: SX-SDMAC). For more test details, please see FCC ID: N6C-SDMAC and ISED ID: 4908A-SDMAC. The current report is an additional evaluation for the host product with the module integrated.

2 General Information

2.1 Applicant

Applicant	ZOLL Medical Corporation
Applicant address	269 Mill Road, Chelmsford, MA 01824-4105
Manufacturer	ZOLL Medical Corporation
Manufacturer Address	269 Mill Road, Chelmsford, MA 01824-4105

2.2 Product information

Product Name	Zenix Monitor/Defibrillator
Model Number	Zenix
Family Models	N/A
Serial Number	ST22E00204
Frequency Band	BT BDR/EDR: 2402-2480MHz BT BLE: 2402-2480MHz WLAN: 2.4GHz/5GHz 11a/b/g/n/ac
Type of modulation	BT BDR/EDR: GFSK, π /4DQPSK, 8DPSK BLE: GFSK 802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g: OFDM-CCK (BPSK, QPSK, 16QAM, 64QAM) 802.11a/n/ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
Equipment Class	DSS, DTS, U-NII
Antenna Information	2.4/5GHz Flexible Antenna (Model: 1461530100, Brand: molex) Antenna Peak Gain: 2.4G WLAN/BT: 3.0 dBi, 5G WLAN: 4.5 dBi
Clock Frequencies	N/A
Input Power	15Vdc, 8.0A (DC rating for EMS version) 120-240VAC, 50-60Hz, 160VA (AC rating for Hospital version)
Power Adapter Manufacturer/Model	N/A
Power Adapter SN	N/A
Hardware version	N/A
Software version	N/A
Additional Info	ZOLL Zenix has two different hardware versions, the Hospital version, and EMS version. The difference is Hospital version has direct connection to AC power mains; the EMS version has DC connector, which can be connected to a external AC/DC power supply for recharging. This difference is not RF related, therefore there is no impact on RF performance. The EUT used for testing is EMS version.

2.3 Test standard and method

Test standard	47 CFR Part 15.407 RSS-247 Issue 3, Aug 2023
Test method	ANSI C63.10 (2013) 789033 D02 General UNII Test Procedures New Rules v02r01

3 Test Site Information

Lab performing tests	Vista Laboratories, Inc.
Lab Address	1261 Puerta Del Sol, San Clemente, CA 92673 USA
Phone Number	+1 (949) 393-1123
Website	www.vista-compliance.com

Test Condition	Temperature	Humidity	Atmospheric Pressure
RF Testing	23.5°C	58.2%	996 mbar

4 Modification of EUT / Deviations from Standards

N/A

5 Test Configuration and Operation

5.1 EUT Test Configuration

The EUT is an engineering test sample loaded with special S/W (includes MyFTM & hcitool) to support the RF TX/RX measurement in different aspects. (S/W version 0.S109.Silex)

The following software was used for testing.

Software	Description
EMISoft Vasona	EMC/RF Spurious emission test software used during testing
Tera Term	To set WLAN 5GHz into different channel, modulation

5.2 Supporting Equipment

Description	Manufacturer	Model #	Serial #
Wideband radio communication tester	Rohde & Schwarz	CMW500	147508
Laptop	DELL	Latitude E6510	3RZC1M1
Zenix AC-DC external power supply	ZOLL	TR9WG4000A00G3228R6B	880488123-23

6 Uncertainty of Measurement

Test item	Measurement Uncertainty (dB)
RF Output Power (Conducted)	± 1.2 dB
Power Spectral Density	± 0.9 dB
Unwanted Emission (conducted)	± 2.6 dB
Occupied Channel Bandwidth	± 5 %
Radiated Emission (9KHz-30MHz)	± 3.5 dB
Radiated Emission (30MHz-1GHz)	± 4.6 dB
Radiated Emission (1-18GHz)	± 4.9 dB
Radiated Emission (18-40GHz)	± 3.5 dB

7 Test Results

7.1 Radiated Spurious Emission

7.1.1 Requirement

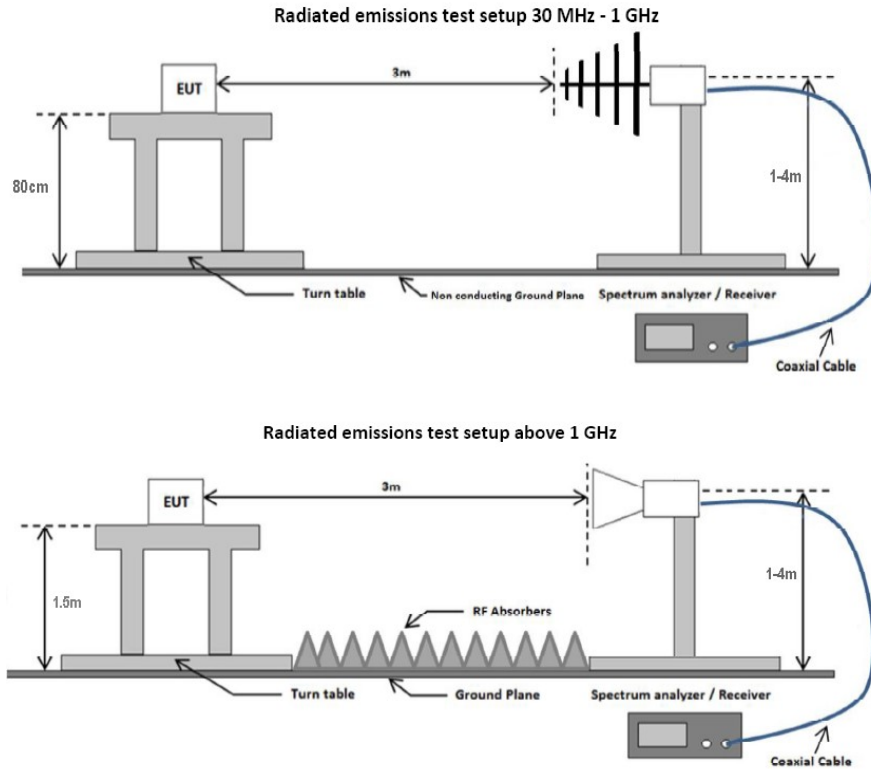
§ 15.407 (b)

- 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 EIRP 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 EIRP of -27 dBm/MHz.
- 4) For transmitters operating in the 5.725-5.825 GHz band: 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.
- 5) Restricted band, emission must also comply with the radiated emission limits specified in 15.209

Attenuation below the general limits specified in §15.209(a) and RSS-Gen is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Frequency Range (MHZ)	Field Strength (μV/m)	Measurement Distance (m)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 960	200	3
Above 960	500	3

7.1.2 Test Setup



7.1.3 Test Procedure

According to subclause 12.7, radiated spurious emission measurements, in ANSI C63.10-2013:

- 1) The EUT was switched on and allowed to warm up to its normal operating condition.
- 2) The test was carried out at the selected frequency points obtained from the EUT characterization. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner:
 - a. Vertical or horizontal polarization (whichever gave the higher emission level over a full rotation of the EUT was chosen.
 - b. The EUT was then rotated to the direction that gave the maximum emission.
 - c. Finally, the antenna height was adjusted to the height that gave the maximum emission.
- 3) The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 300Hz for frequencies below 150kHz.
- 4) The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 10kHz for frequency between 150kHz-30MHz.
- 5) The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for quasi-peak detection at frequency between 30MHz-1GHz.
- 6) The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz with peak detection for peak and average measurement at frequency above 1GHz.

- 7) Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.

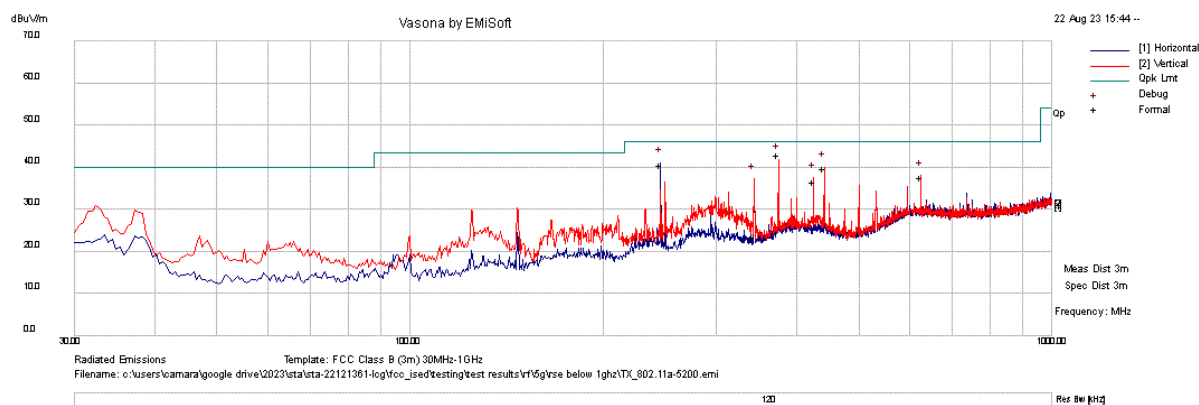
7.1.4 Test Result

Radiated Emission between 9KHz – 30MHz test result

Note: no substantial emission is found other than the noise floor. Different modes have been verified.

RADIATED SPURIOUS EMISSION BELOW 1GHZ

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Below 1GHz_802.11a
Frequency Range:	30 MHz - 1 GHz	Test Date:	08/22/2023
Antenna Type/Polarity:	Bi-Log/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 40	Test Result:	Pass



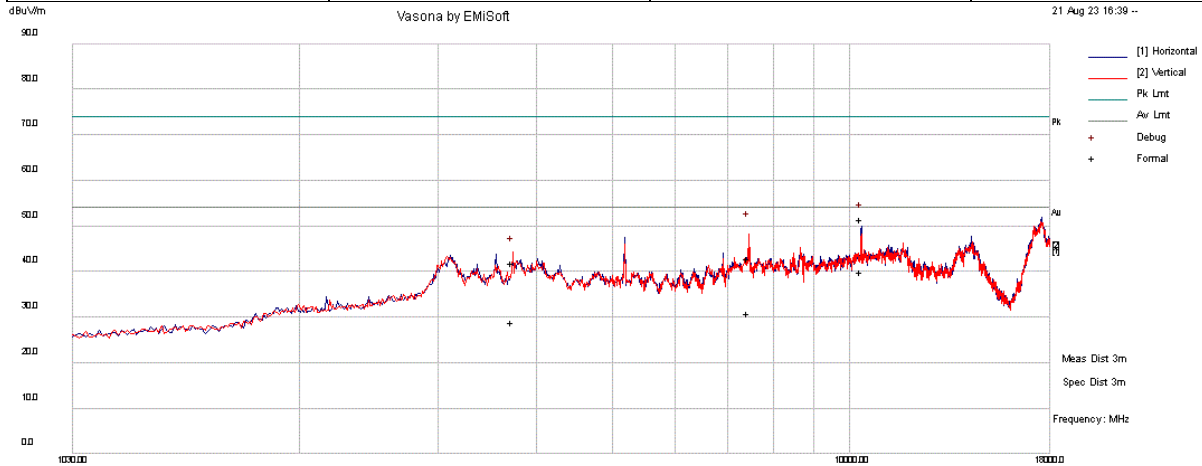
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	374.994	46.3	6.2	-9.4	43.1	Quasi Max	V	124	134	46	-2.9	Pass
2	245.451	50.1	5.2	-14.8	40.5	Quasi Max	H	121	168	46	-5.5	Pass
3	441.798	42.5	6.2	-9	39.7	Quasi Max	V	100	175	46	-6.3	Pass
4	624.983	35.6	7.2	-5	37.8	Quasi Max	V	106	242	46	-8.2	Pass
5	424.989	38.9	6.3	-8.6	36.6	Quasi Max	V	100	190	46	-9.4	Pass
6	343.073	28.9	6	-11.5	23.4	Quasi Max	V	159	118	46	-22.6	Pass

Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11a
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 36	Test Result:	Pass



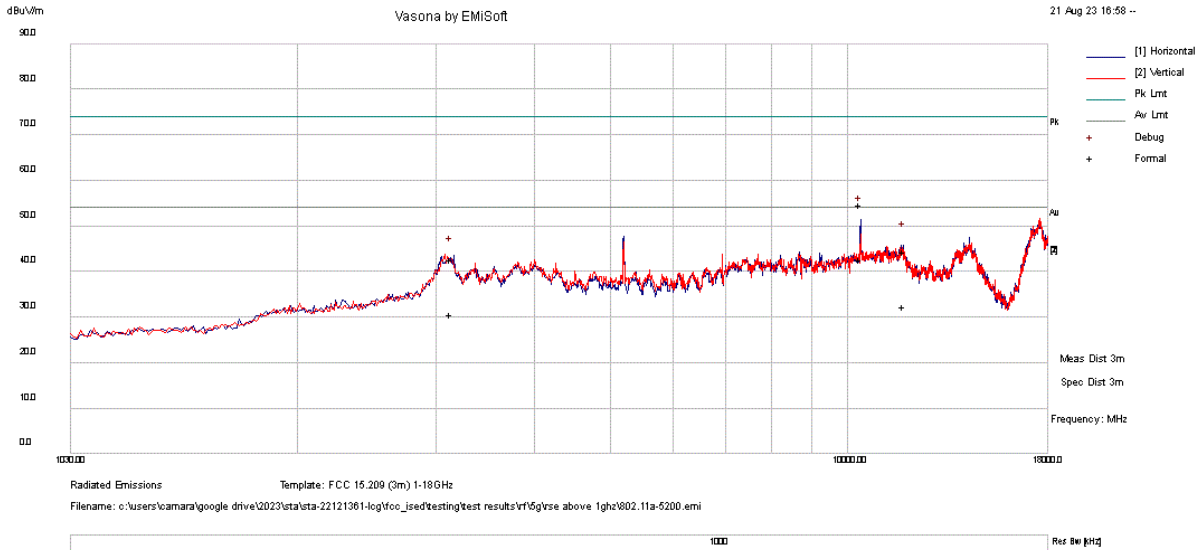
Radiated Emissions
Template: FCC 15.209 (3m) 1-18GHz
Filename: c:\users\camara\google drive\2023\sta-22121361-lcg\fcc_used\testing\test results\rf15gvse above 1ghz\802.11a-5180.emi

No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10359.97	39.8	16.8	-5.1	51.5	Peak Max	H	231	8	74	-22.5	Pass
2	7446.244	35.5	13.2	-5.6	43.1	Peak Max	V	283	266	74	-30.9	Pass
3	3733.502	28.6	8.8	4.6	42	Peak Max	V	174	330	74	-32	Pass
4	10359.97	28.4	16.8	-5.1	40.1	Average Max	H	231	8	54	-13.9	Pass
5	7446.244	23.3	13.2	-5.6	30.9	Average Max	V	283	266	54	-23.1	Pass
6	3733.502	15.6	8.8	4.6	29	Average Max	V	174	330	54	-25	Pass

Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11a
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/22/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 40	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10400.118	42.9	16.9	-5.1	54.7	Peak Max	H	215	328	74	-19.3	Pass
2	11785.381	30	18.4	-4.1	44.3	Peak Max	H	330	0	74	-29.7	Pass
3	3136.022	37.6	7.8	-2.6	42.8	Peak Max	V	200	2	74	-31.2	Pass
4	10400.118	31	16.9	-5.1	42.8	Average Max	H	215	328	54	-11.2	Pass
5	11785.381	18.1	18.4	-4.1	32.4	Average Max	H	330	0	54	-21.6	Pass
6	3136.022	25.6	7.8	-2.6	30.8	Average Max	V	200	2	54	-23.2	Pass

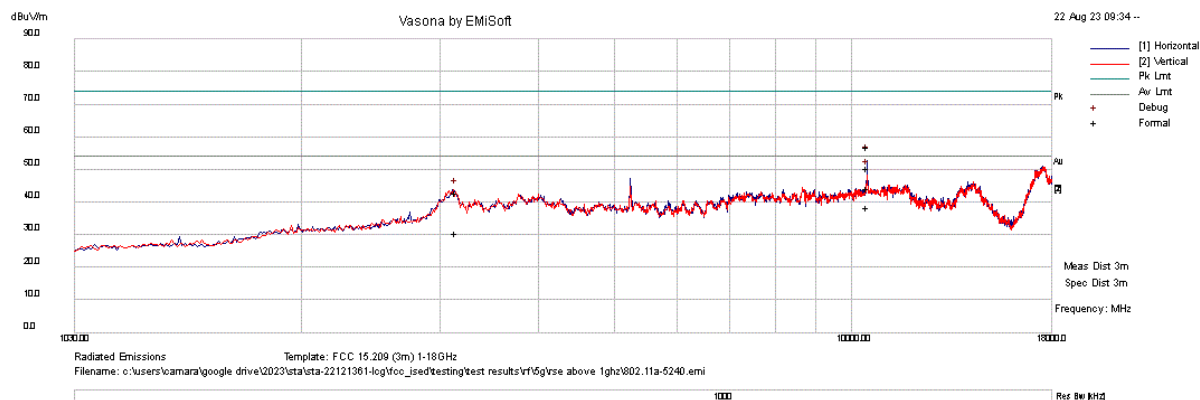
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11a
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 48	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10480.318	44.9	17.1	-5.2	56.8	Peak Max	H	211	146	74	-17.2	Pass
2	10478.37	38.5	17.1	-5.2	50.4	Peak Max	V	216	309	74	-23.6	Pass
3	3144.061	38.1	7.8	-3.1	42.8	Peak Max	V	348	297	74	-31.2	Pass
4	10480.318	32.3	17.1	-5.2	44.2	Average Max	H	211	146	54	-9.8	Pass
5	10478.37	26.5	17.1	-5.2	38.4	Average Max	V	216	309	54	-15.6	Pass
6	3144.061	25.9	7.8	-3.1	30.6	Average Max	V	348	297	54	-23.4	Pass

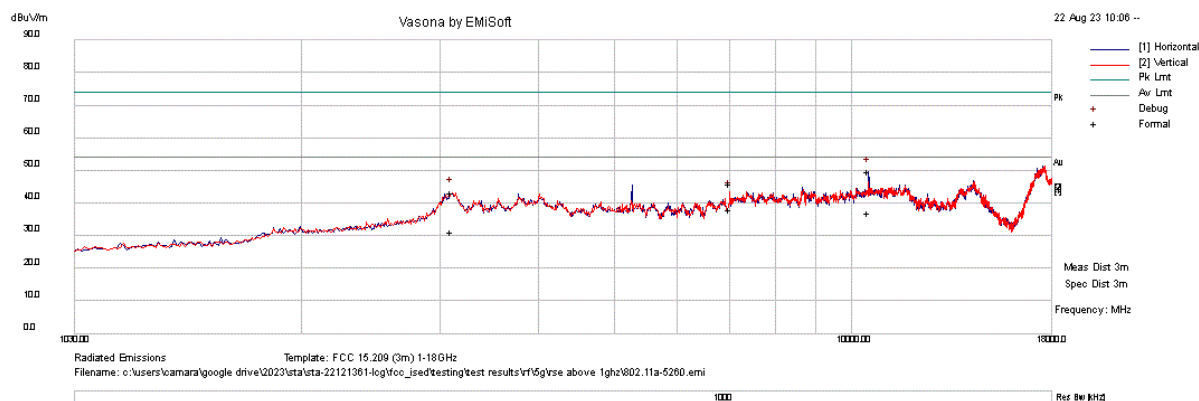
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

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STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11a
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 52	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10521.908	37.7	17.2	-5.2	49.7	Peak Max	H	217	178	74	-24.3	Pass
2	3109.665	36.9	7.7	-1.2	43.4	Peak Max	H	145	346	74	-30.6	Pass
3	7013.426	39.5	12.6	-6.2	45.9	Peak Max	V	239	340	74	-28.1	Pass
4	10521.908	25.2	17.2	-5.2	37.2	Average Max	H	217	178	54	-16.8	Pass
5	3109.665	24.7	7.7	-1.2	31.2	Average Max	H	145	346	54	-22.8	Pass
6	7013.426	31.7	12.6	-6.2	38.1	Average Max	V	239	340	54	-15.9	Pass

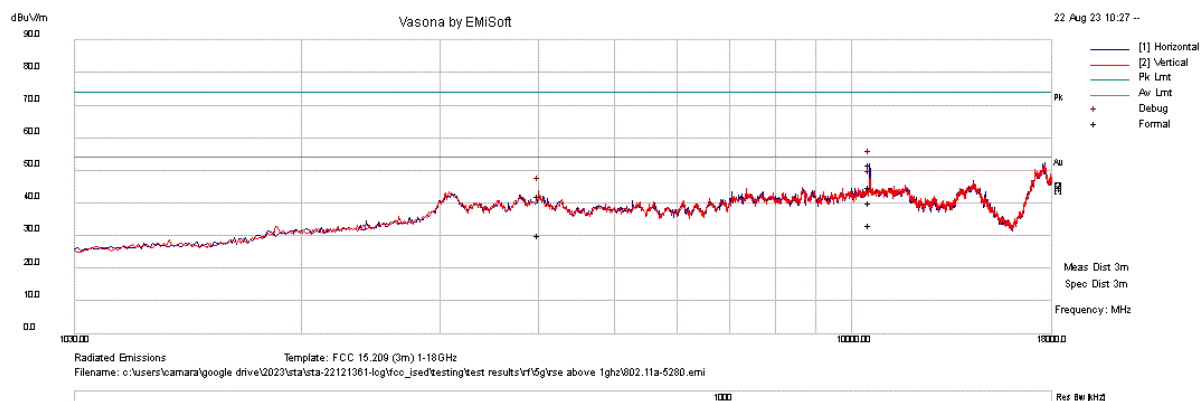
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

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STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11a
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 56	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10559.2	40	17.2	-5.2	52	Peak Max	H	274	136	74	-22	Pass
2	10560.268	33	17.2	-5.2	45	Peak Max	V	202	294	74	-29	Pass
3	4009.934	27	9.9	5.5	42.4	Peak Max	V	289	133	74	-31.6	Pass
4	10559.2	28.2	17.2	-5.2	40.2	Average Max	H	274	136	54	-13.8	Pass
5	10560.268	21.3	17.2	-5.2	33.3	Average Max	V	202	294	54	-20.7	Pass
6	4009.934	14.8	9.9	5.5	30.2	Average Max	V	289	133	54	-23.8	Pass

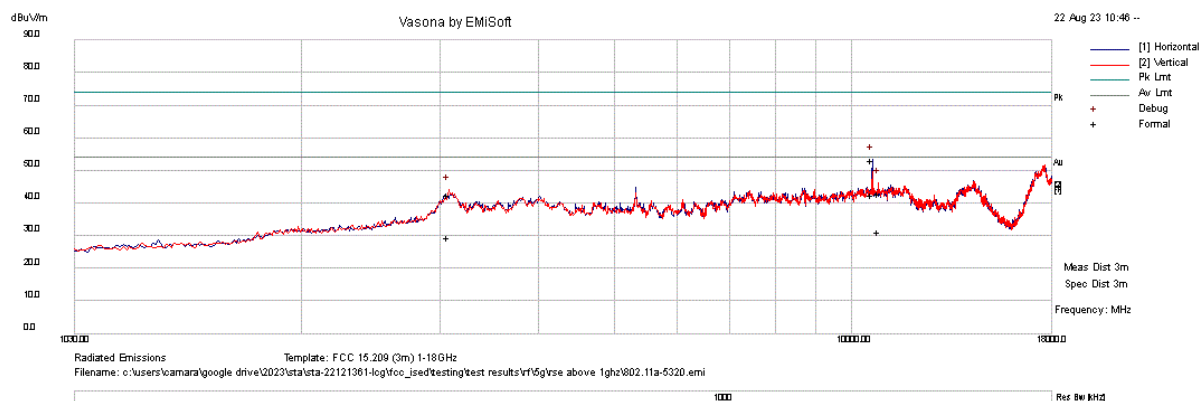
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

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STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11a
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 64	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10639.81	41.4	17.2	-5.3	53.3	Peak Max	H	193	146	74	-20.7	Pass
2	10829.9	30.9	17.3	-5.1	43.1	Peak Max	V	131	54	74	-30.9	Pass
3	3076.026	34.5	7.7	0.5	42.7	Peak Max	V	144	300	74	-31.3	Pass
4	10639.81	30.6	17.2	-5.3	42.5	Average Max	H	193	146	54	-11.5	Pass
5	10829.9	19	17.3	-5.1	31.2	Average Max	V	131	54	54	-22.8	Pass
6	3076.026	21.2	7.7	0.5	29.4	Average Max	V	144	300	54	-24.6	Pass

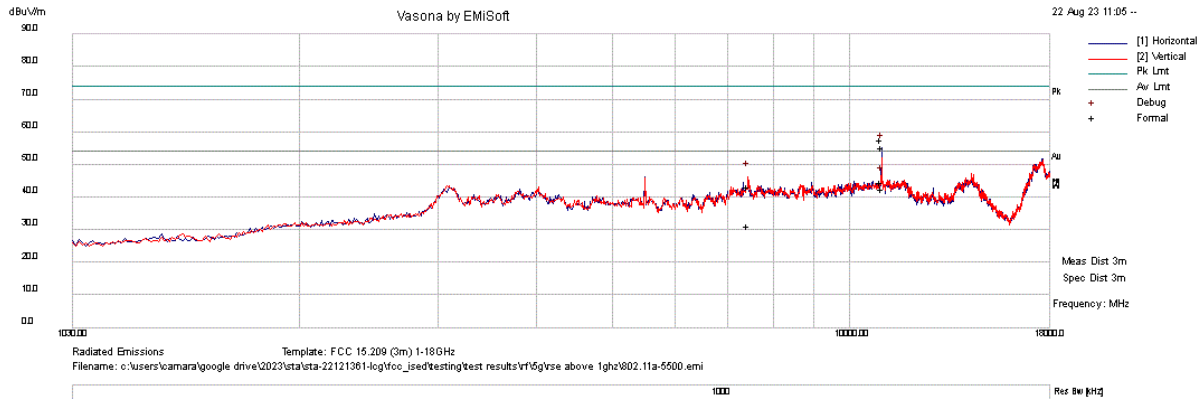
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

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STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11a
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 100	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10998.853	44.9	17.2	-4.5	57.6	Peak Max	H	224	153	74	-16.4	Pass
2	7434.828	35.7	13.2	-5.6	43.3	Peak Max	V	368	132	74	-30.7	Pass
3	11001.538	42.6	17.2	-4.5	55.3	Peak Max	V	228	99	74	-18.7	Pass
4	10998.853	31.9	17.2	-4.5	44.6	Average Max	H	224	153	54	-9.4	Pass
5	7434.828	23.6	13.2	-5.6	31.2	Average Max	V	368	132	54	-22.8	Pass
6	11001.538	29.8	17.2	-4.5	42.5	Average Max	V	228	99	54	-11.5	Pass

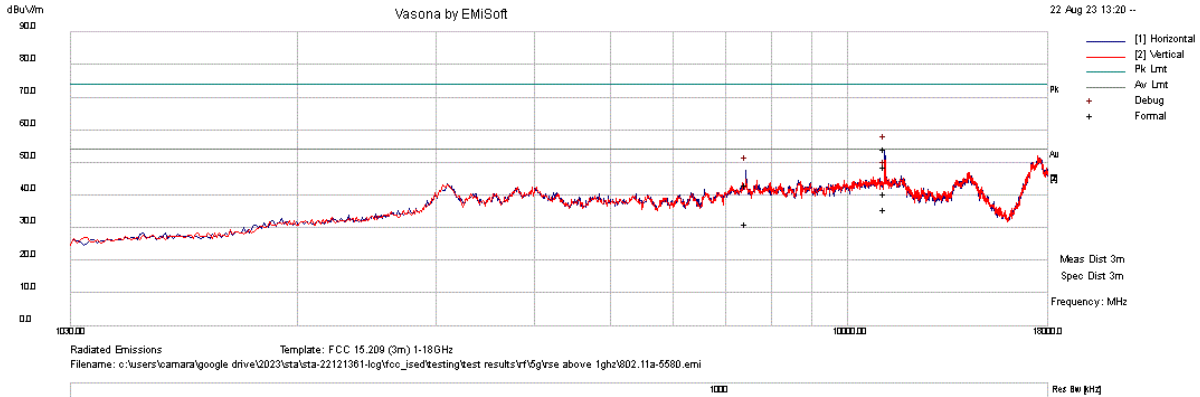
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11a
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 116	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	11161.583	41.3	17.4	-4.6	54.1	Peak Max	H	155	132	74	-19.9	Pass
2	7435.57	35.6	13.2	-5.6	43.2	Peak Max	H	239	0	74	-30.8	Pass
3	11161.483	36	17.4	-4.6	48.8	Peak Max	V	151	274	74	-25.2	Pass
4	11161.583	27.8	17.4	-4.6	40.6	Average Max	H	155	132	54	-13.4	Pass
5	7435.57	23.5	13.2	-5.6	31.1	Average Max	H	239	0	54	-22.9	Pass
6	11161.483	22.8	17.4	-4.6	35.6	Average Max	V	151	274	54	-18.4	Pass

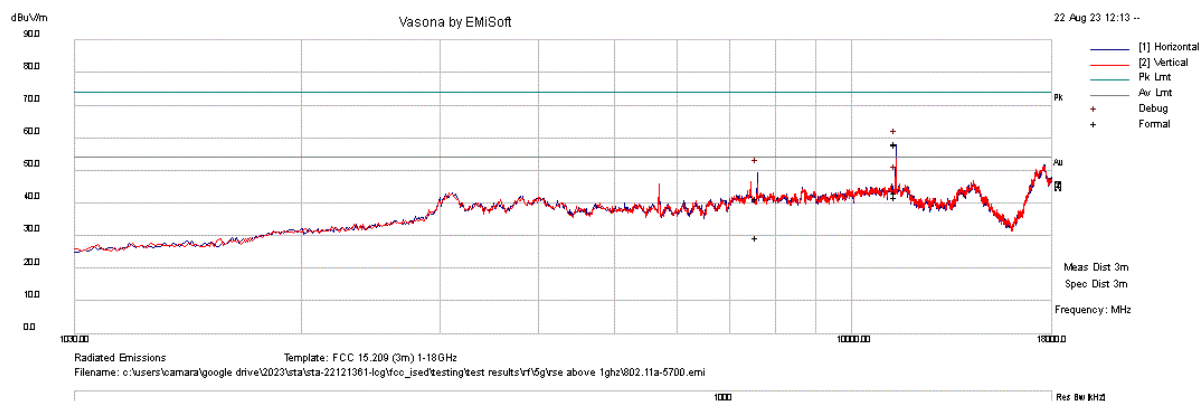
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11a
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 140	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	11401.843	45.3	17.7	-4.8	58.2	Peak Max	H	218	127	74	-15.8	Pass
2	7597.069	34	13.5	-5.8	41.7	Peak Max	H	168	216	74	-32.3	Pass
3	11399.165	45	17.7	-4.8	57.9	Peak Max	V	203	312	74	-16.1	Pass
4	11401.843	30.5	17.7	-4.8	43.4	Average Max	H	218	127	54	-10.6	Pass
5	7597.069	21.8	13.5	-5.8	29.5	Average Max	H	168	216	54	-24.5	Pass
6	11399.165	28.9	17.7	-4.8	41.8	Average Max	V	203	312	54	-12.2	Pass

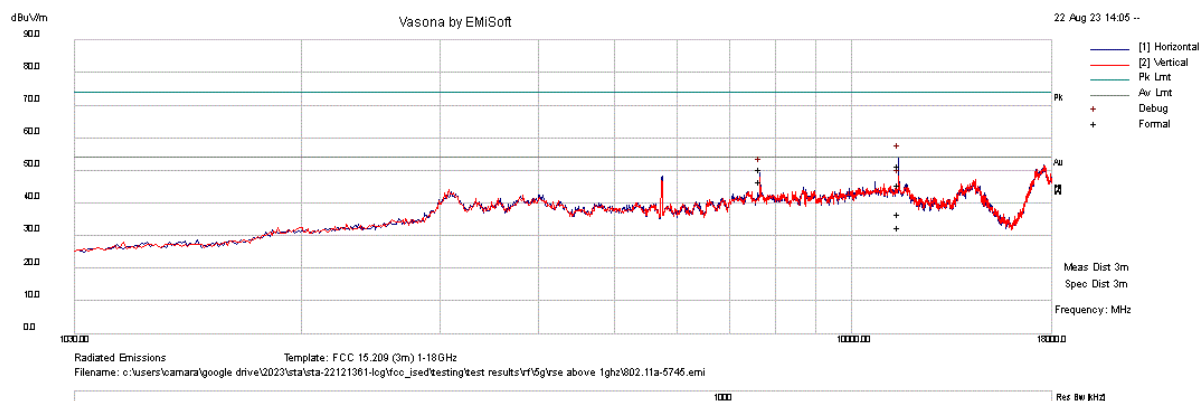
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11a
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 149	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	11491.968	38.5	17.8	-4.7	51.6	Peak Max	H	221	2	74	-22.4	Pass
2	7660.119	42.7	13.6	-5.7	50.6	Peak Max	H	180	229	74	-23.4	Pass
3	11491.865	32.7	17.8	-4.7	45.8	Peak Max	V	170	335	74	-28.2	Pass
4	11491.968	23.7	17.8	-4.7	36.8	Average Max	H	221	2	54	-17.2	Pass
5	7660.119	38.7	13.6	-5.7	46.6	Average Max	H	180	229	54	-7.4	Pass
6	11491.865	19.6	17.8	-4.7	32.7	Average Max	V	170	335	54	-21.3	Pass

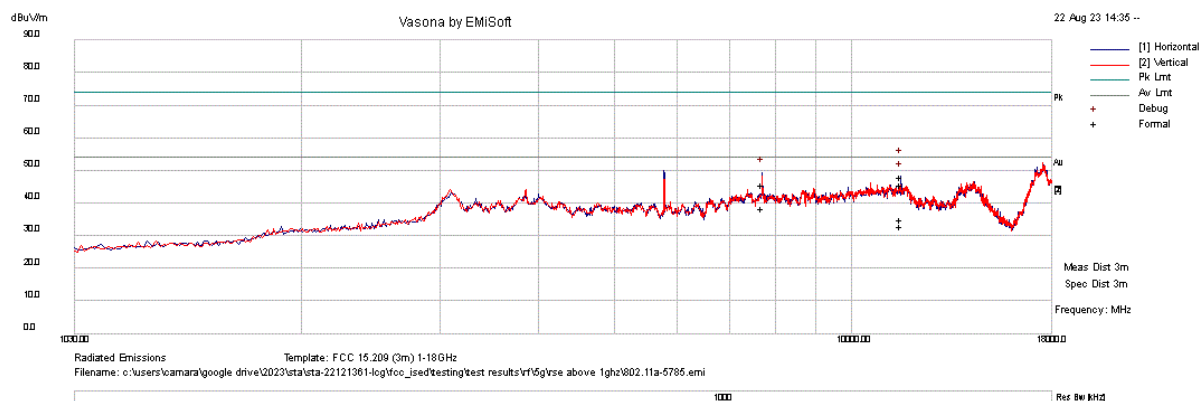
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11a
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 157	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	11570.605	32.2	17.9	-4.4	45.7	Peak Max	V	265	112	74	-28.3	Pass
2	7713.893	37.7	13.7	-5.7	45.7	Peak Max	H	212	242	74	-28.3	Pass
3	11570.475	34.7	17.9	-4.4	48.2	Peak Max	H	162	126	74	-25.8	Pass
4	11570.605	19.5	17.9	-4.4	33	Average Max	V	265	112	54	-21	Pass
5	7713.893	30.5	13.7	-5.7	38.5	Average Max	H	212	242	54	-15.5	Pass
6	11570.475	21.5	17.9	-4.4	35	Average Max	H	162	126	54	-19	Pass

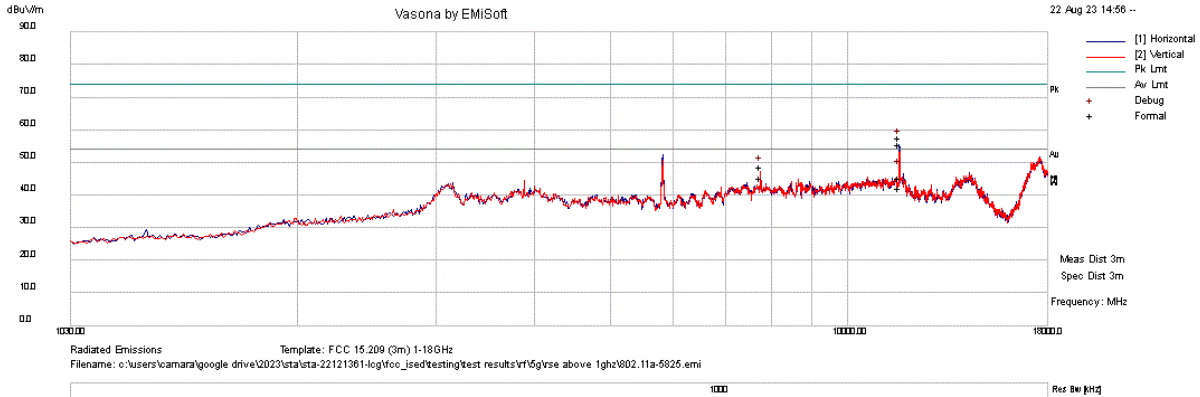
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11a
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 165	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	11649.625	43.9	18.1	-4.3	57.7	Peak Max	H	194	146	74	-16.3	Pass
2	7766.816	40.8	13.7	-5.6	48.9	Peak Max	H	204	229	74	-25.1	Pass
3	11651.905	41.6	18.1	-4.3	55.4	Peak Max	V	252	7	74	-18.6	Pass
4	11649.625	31.5	18.1	-4.3	45.3	Average Max	H	194	146	54	-8.7	Pass
5	7766.816	37.2	13.7	-5.6	45.3	Average Max	H	204	229	54	-8.7	Pass
6	11651.905	28.2	18.1	-4.3	42	Average Max	V	252	7	54	-12	Pass

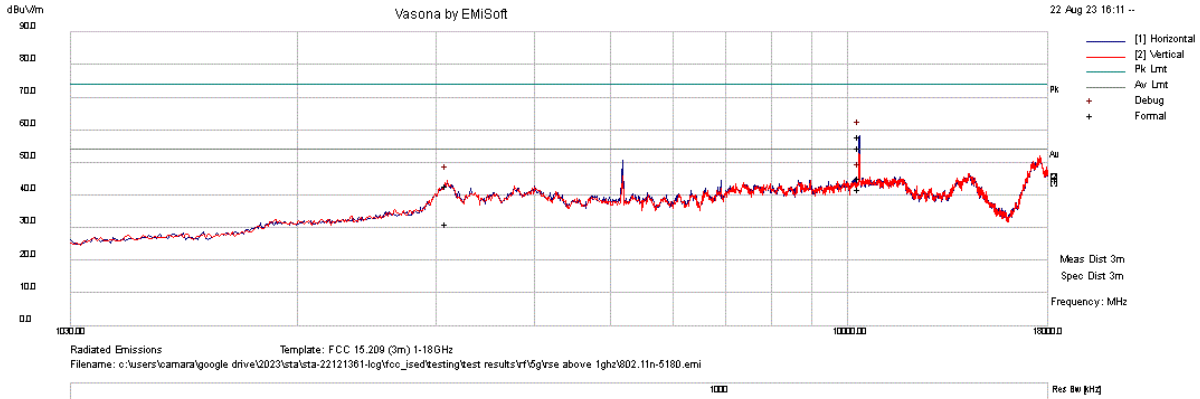
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 36	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10358.838	46.5	16.8	-5.1	58.2	Peak Max	H	241	137	74	-15.8	Pass
2	10359.428	43	16.8	-5.1	54.7	Peak Max	V	309	42	74	-19.3	Pass
3	3099.724	36	7.7	-0.7	43	Peak Max	V	328	122	74	-31	Pass
4	10358.838	33.7	16.8	-5.1	45.4	Average Max	H	241	137	54	-8.6	Pass
5	10359.428	30.1	16.8	-5.1	41.8	Average Max	V	309	42	54	-12.2	Pass
6	3099.724	24.2	7.7	-0.7	31.2	Average Max	V	328	122	54	-22.8	Pass

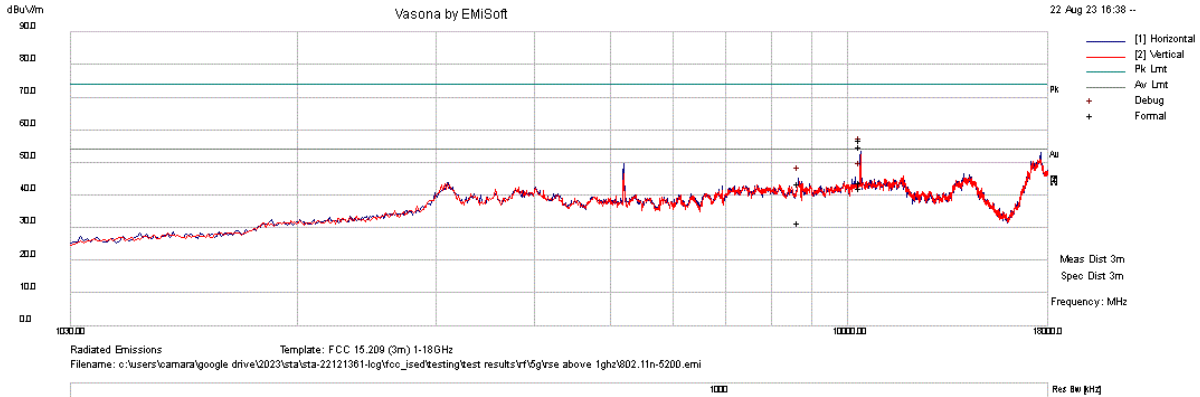
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 40	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10398.968	45	16.9	-5.1	56.8	Peak Max	H	255	137	74	-17.2	Pass
2	10398.665	43.1	16.9	-5.1	54.9	Peak Max	V	245	308	74	-19.1	Pass
3	8681.499	33.1	16.1	-5.7	43.5	Peak Max	H	164	132	74	-30.5	Pass
4	10398.968	32	16.9	-5.1	43.8	Average Max	H	255	137	54	-10.2	Pass
5	10398.665	30.3	16.9	-5.1	42.1	Average Max	V	245	308	54	-11.9	Pass
6	8681.499	21.3	16.1	-5.7	31.7	Average Max	H	164	132	54	-22.3	Pass

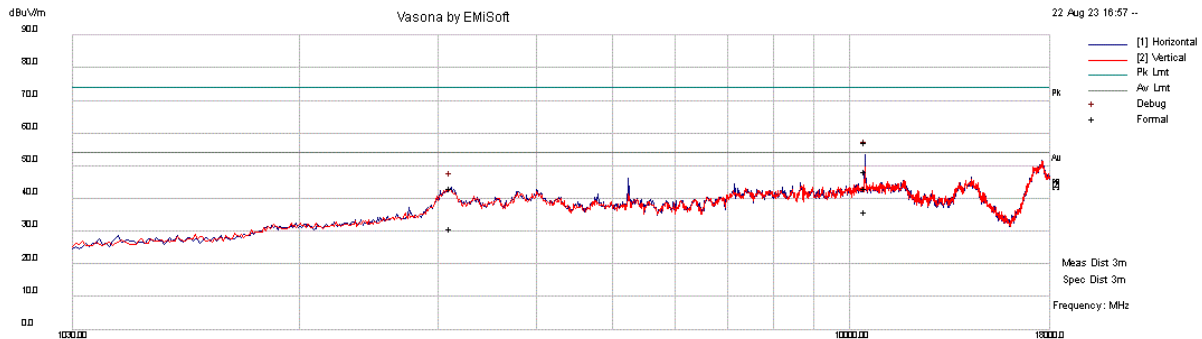
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 48	Test Result:	Pass



Radiated Emissions
Template: FCC 15.209 (3m) 1-18GHz
Filename: c:\users\camara\google drive\2023\sta\sta-22121361-lcg\lco_used\testing\test results\rf15gvse above 1ghz\802.11n-6240.emi

No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10479.117	45.3	17.1	-5.2	57.2	Peak Max	H	223	140	74	-16.8	Pass
2	10479.793	36.6	17.1	-5.2	48.5	Peak Max	V	181	344	74	-25.5	Pass
3	3117.721	37.1	7.8	-1.6	43.3	Peak Max	H	221	177	74	-30.7	Pass
4	10479.117	31.3	17.1	-5.2	43.2	Average Max	H	223	140	54	-10.8	Pass
5	10479.793	24.2	17.1	-5.2	36.1	Average Max	V	181	344	54	-17.9	Pass
6	3117.721	24.8	7.8	-1.6	31	Average Max	H	221	177	54	-23	Pass

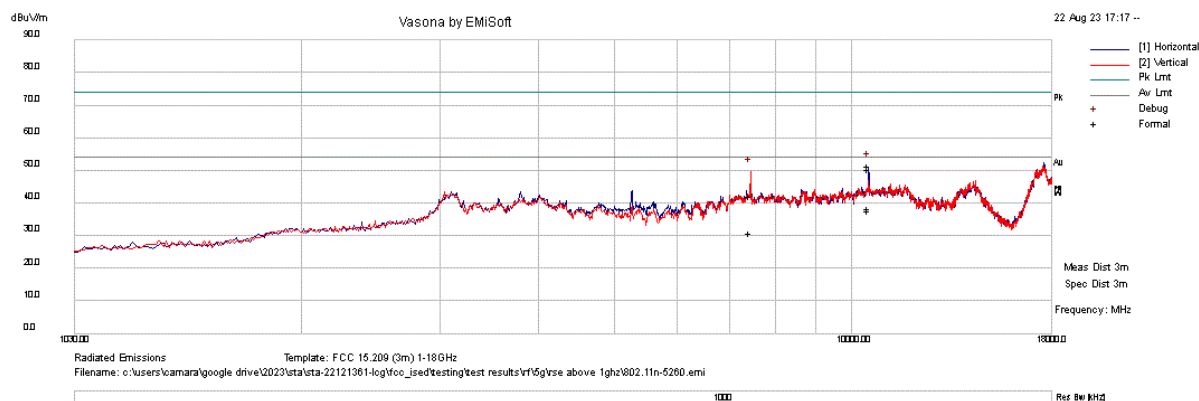
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 52	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10518.248	39.6	17.2	-5.2	51.6	Peak Max	H	210	26	74	-22.4	Pass
2	7448.121	34.5	13.2	-5.6	42.1	Peak Max	V	118	274	74	-31.9	Pass
3	10521.19	38.6	17.2	-5.2	50.6	Peak Max	V	235	308	74	-23.4	Pass
4	10518.248	26.4	17.2	-5.2	38.4	Average Max	H	210	26	54	-15.6	Pass
5	7448.121	23.2	13.2	-5.6	30.8	Average Max	V	118	274	54	-23.2	Pass
6	10521.19	25.7	17.2	-5.2	37.7	Average Max	V	235	308	54	-16.3	Pass

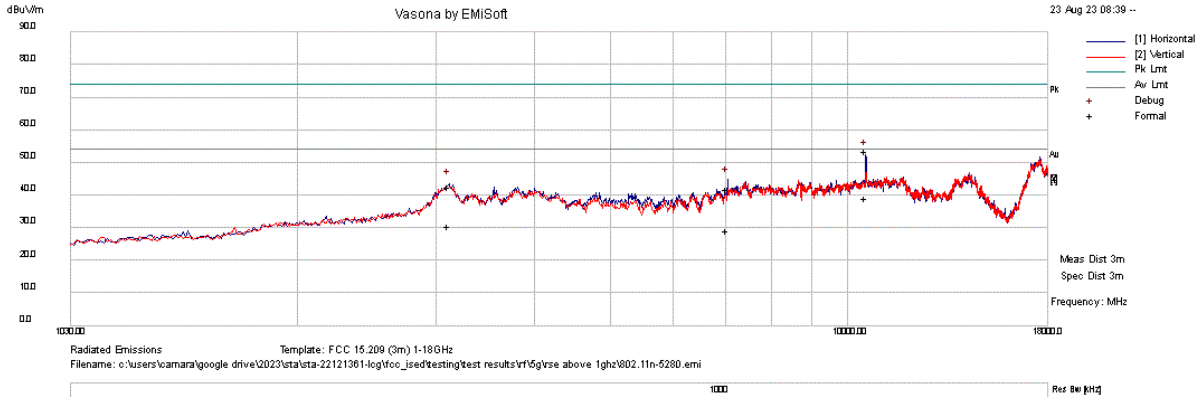
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 56	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10558	41.4	17.2	-5.2	53.4	Peak Max	H	229	133	74	-20.6	Pass
2	7047.367	35.3	12.6	-6.1	41.8	Peak Max	V	178	0	74	-32.2	Pass
3	3119.716	36.5	7.8	-1.8	42.5	Peak Max	H	136	254	74	-31.5	Pass
4	10558	27.1	17.2	-5.2	39.1	Average Max	H	229	133	54	-14.9	Pass
5	7047.367	22.6	12.6	-6.1	29.1	Average Max	V	178	0	54	-24.9	Pass
6	3119.716	24.6	7.8	-1.8	30.6	Average Max	H	136	254	54	-23.4	Pass

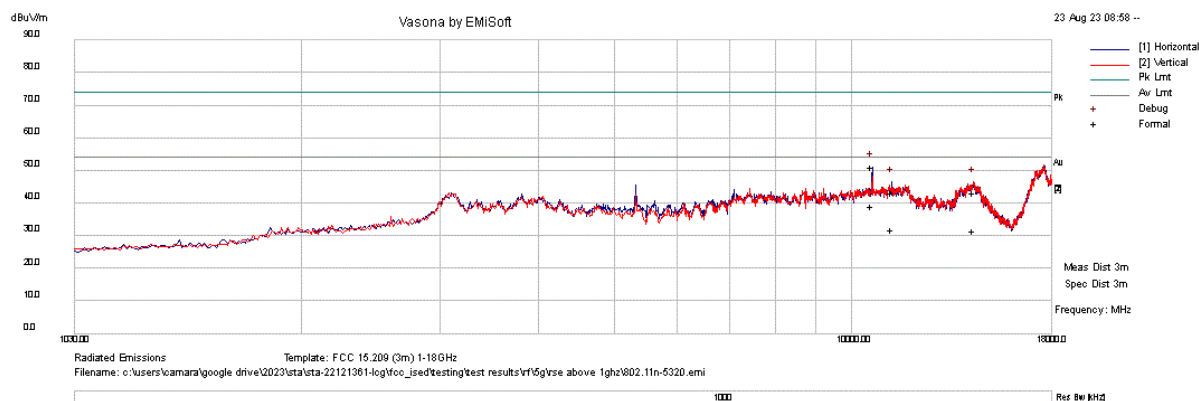
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 64	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10641.295	39.2	17.2	-5.3	51.1	Peak Max	H	220	179	74	-22.9	Pass
2	14320.996	25.9	16.4	1.1	43.4	Peak Max	H	131	0	74	-30.6	Pass
3	11266.231	30.6	17.5	-4.8	43.3	Peak Max	H	131	133	74	-30.7	Pass
4	10641.295	27.3	17.2	-5.3	39.2	Average Max	H	220	179	54	-14.8	Pass
5	14320.996	14.2	16.4	1.1	31.7	Average Max	H	131	0	54	-22.3	Pass
6	11266.231	19.3	17.5	-4.8	32	Average Max	H	131	133	54	-22	Pass

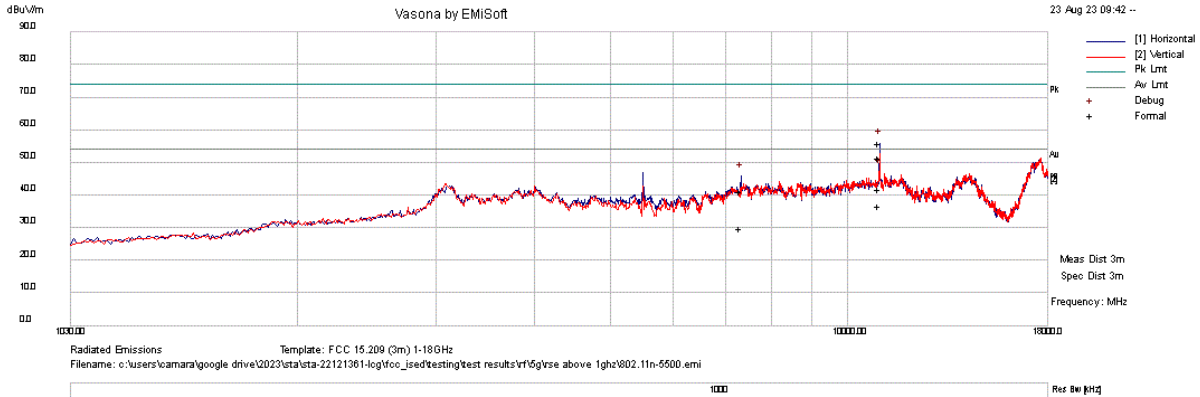
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 100	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10998.898	43.3	17.2	-4.5	56	Peak Max	H	140	150	74	-18	Pass
2	10998.093	38.9	17.2	-4.5	51.6	Peak Max	V	286	154	74	-22.4	Pass
3	7330.867	33.6	12.9	-5.5	41	Peak Max	V	273	221	74	-33	Pass
4	10998.898	29.4	17.2	-4.5	42.1	Average Max	H	140	150	54	-11.9	Pass
5	10998.093	24.2	17.2	-4.5	36.9	Average Max	V	286	154	54	-17.1	Pass
6	7330.867	22.3	12.9	-5.5	29.7	Average Max	V	273	221	54	-24.3	Pass

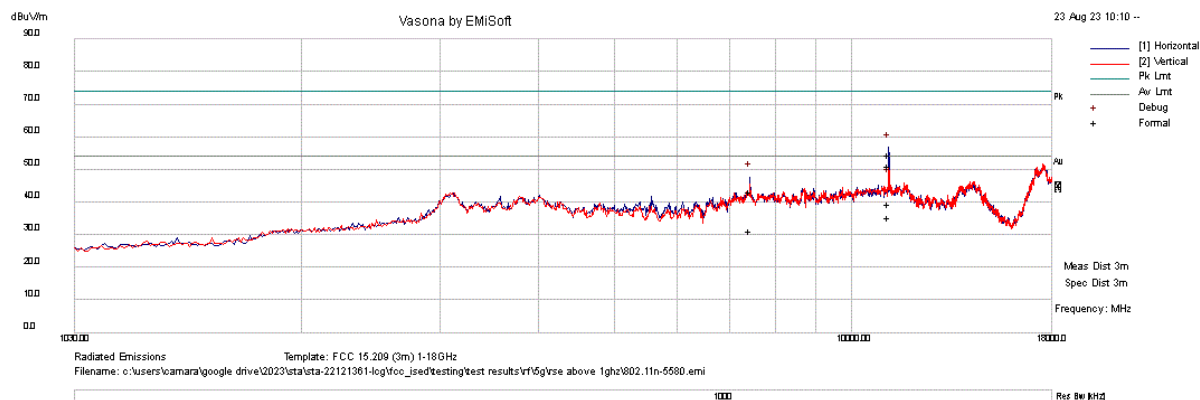
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 116	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	11158.763	41.9	17.4	-4.6	54.7	Peak Max	H	154	147	74	-19.3	Pass
2	7438.04	35.7	13.2	-5.6	43.3	Peak Max	H	100	261	74	-30.7	Pass
3	11158.505	38.4	17.4	-4.6	51.2	Peak Max	V	159	232	74	-22.8	Pass
4	11158.763	26.5	17.4	-4.6	39.3	Average Max	H	154	147	54	-14.7	Pass
5	7438.04	23.6	13.2	-5.6	31.2	Average Max	H	100	261	54	-22.8	Pass
6	11158.505	22.7	17.4	-4.6	35.5	Average Max	V	159	232	54	-18.5	Pass

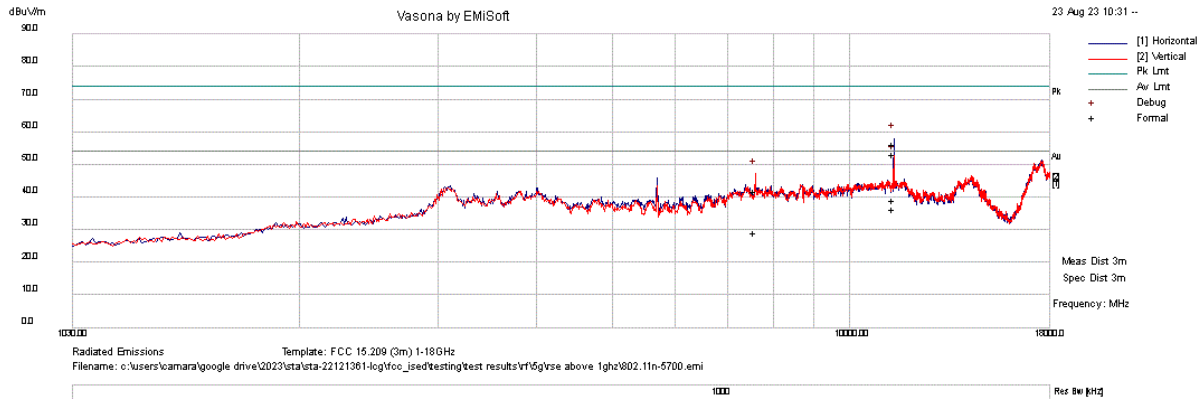
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 140	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	11398.108	43.6	17.7	-4.8	56.5	Peak Max	H	264	39	74	-17.5	Pass
2	11398.115	40.3	17.7	-4.8	53.2	Peak Max	V	320	230	74	-20.8	Pass
3	7596.139	34.2	13.5	-5.8	41.9	Peak Max	V	269	334	74	-32.1	Pass
4	11398.108	26.1	17.7	-4.8	39	Average Max	H	264	39	54	-15	Pass
5	11398.115	23.6	17.7	-4.8	36.5	Average Max	V	320	230	54	-17.5	Pass
6	7596.139	21.7	13.5	-5.8	29.4	Average Max	V	269	334	54	-24.6	Pass

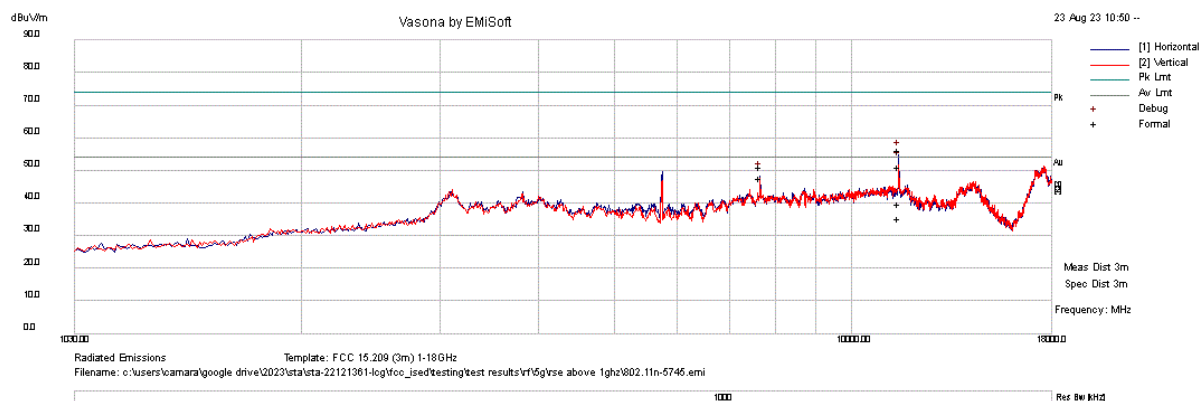
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 149	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	11488.568	43.1	17.8	-4.7	56.2	Peak Max	H	206	133	74	-17.8	Pass
2	11488.108	38.1	17.8	-4.7	51.2	Peak Max	V	143	110	74	-22.8	Pass
3	7659.939	43.3	13.6	-5.7	51.2	Peak Max	H	200	227	74	-22.8	Pass
4	11488.568	26.7	17.8	-4.7	39.8	Average Max	H	206	133	54	-14.2	Pass
5	11488.108	22.3	17.8	-4.7	35.4	Average Max	V	143	110	54	-18.6	Pass
6	7659.939	39.9	13.6	-5.7	47.8	Average Max	H	200	227	54	-6.2	Pass

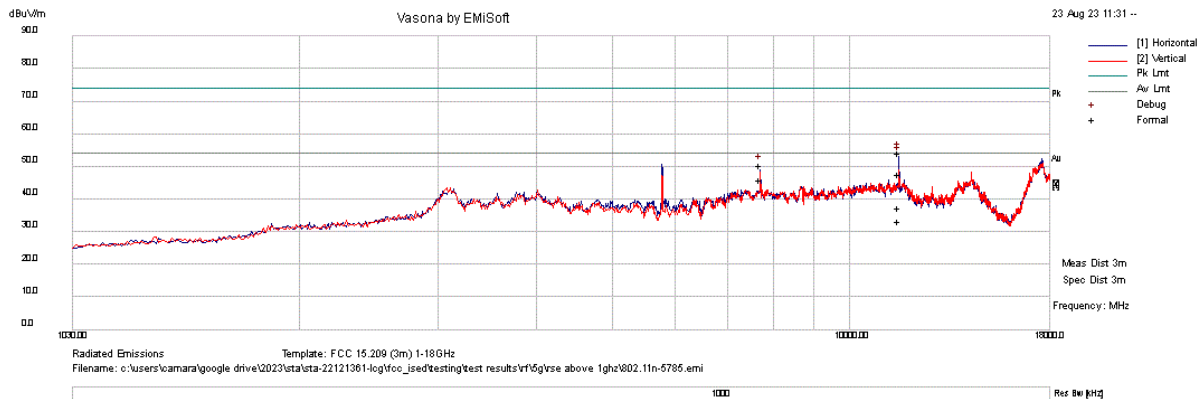
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 157	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	11568.089	40.9	17.9	-4.5	54.3	Peak Max	H	241	144	74	-19.7	Pass
2	11568.638	34.3	17.9	-4.5	47.7	Peak Max	V	171	332	74	-26.3	Pass
3	7713.64	42.4	13.7	-5.7	50.4	Peak Max	H	207	226	74	-23.6	Pass
4	11568.089	23.9	17.9	-4.5	37.3	Average Max	H	241	144	54	-16.7	Pass
5	11568.638	19.9	17.9	-4.5	33.3	Average Max	V	171	332	54	-20.7	Pass
6	7713.64	38	13.7	-5.7	46	Average Max	H	207	226	54	-8	Pass

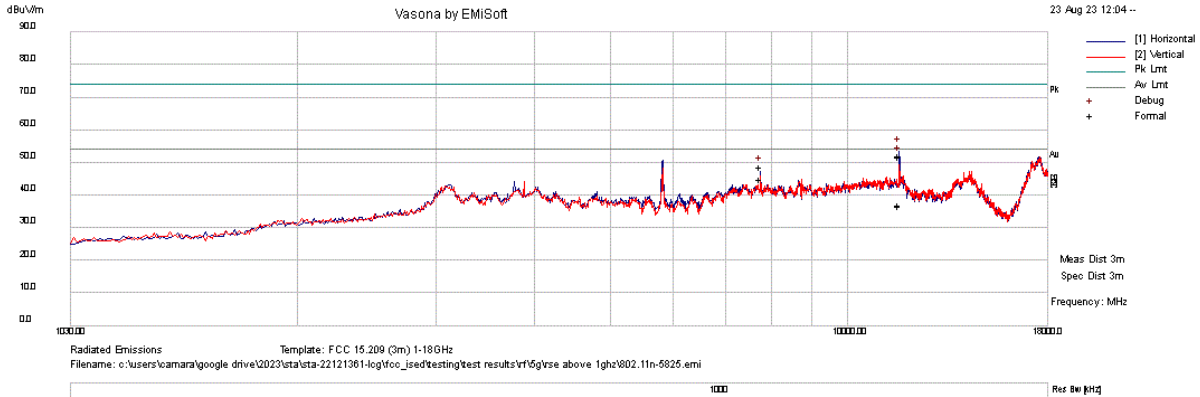
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 165	Test Result:	Pass

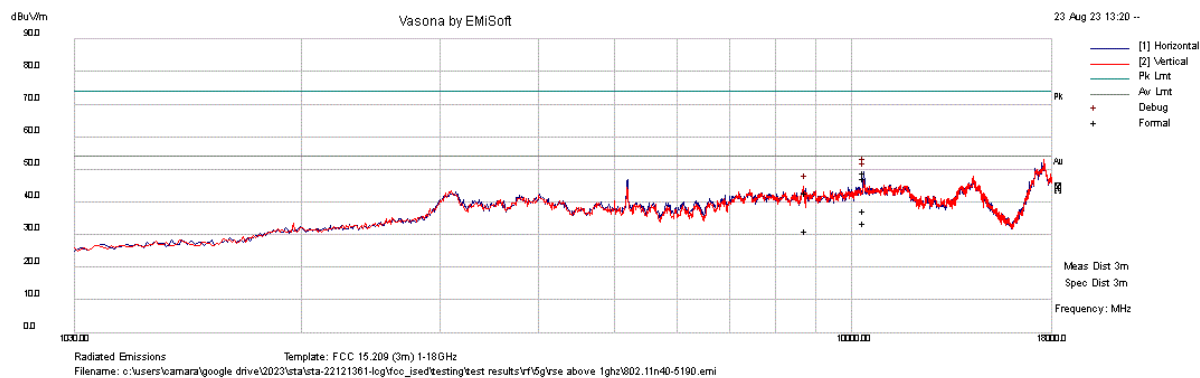


No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	11651.31	38.3	18.1	-4.3	52.1	Peak Max	H	265	108	74	-21.9	Pass
2	11649.068	38.1	18.1	-4.3	51.9	Peak Max	V	262	304	74	-22.1	Pass
3	7766.681	40.6	13.7	-5.6	48.7	Peak Max	H	178	229	74	-25.3	Pass
4	11651.31	23.1	18.1	-4.3	36.9	Average Max	H	265	108	54	-17.1	Pass
5	11649.068	23.3	18.1	-4.3	37.1	Average Max	V	262	304	54	-16.9	Pass
6	7766.681	36.9	13.7	-5.6	45	Average Max	H	178	229	54	-9	Pass

Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n40
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 38	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10380.175	37.4	16.9	-5.1	49.2	Peak Max	H	185	128	74	-24.8	Pass
2	10378.673	35.7	16.9	-5.1	47.5	Peak Max	V	182	294	74	-26.5	Pass
3	8755.465	31.8	16.8	-5.7	42.9	Peak Max	V	369	75	74	-31.1	Pass
4	10380.175	25.5	16.9	-5.1	37.3	Average Max	H	185	128	54	-16.7	Pass
5	10378.673	21.9	16.9	-5.1	33.7	Average Max	V	182	294	54	-20.3	Pass
6	8755.465	20.1	16.8	-5.7	31.2	Average Max	V	369	75	54	-22.8	Pass

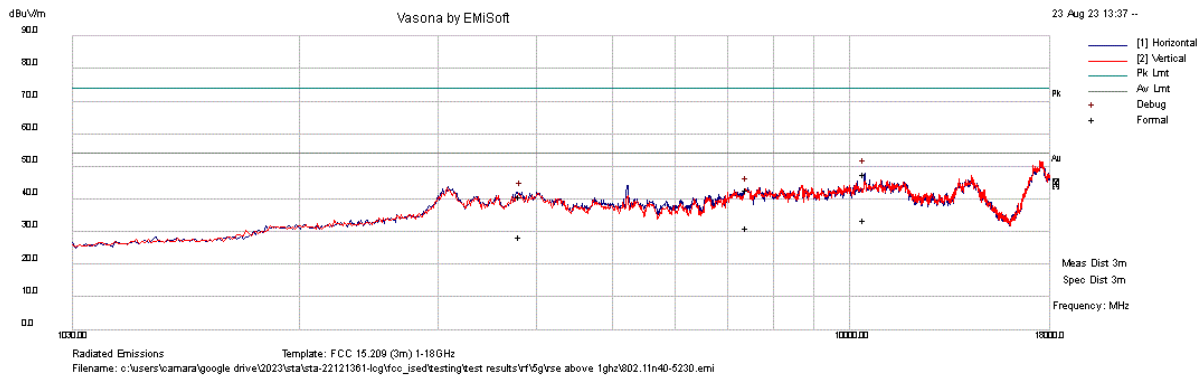
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n40
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 46	Test Result:	Pass

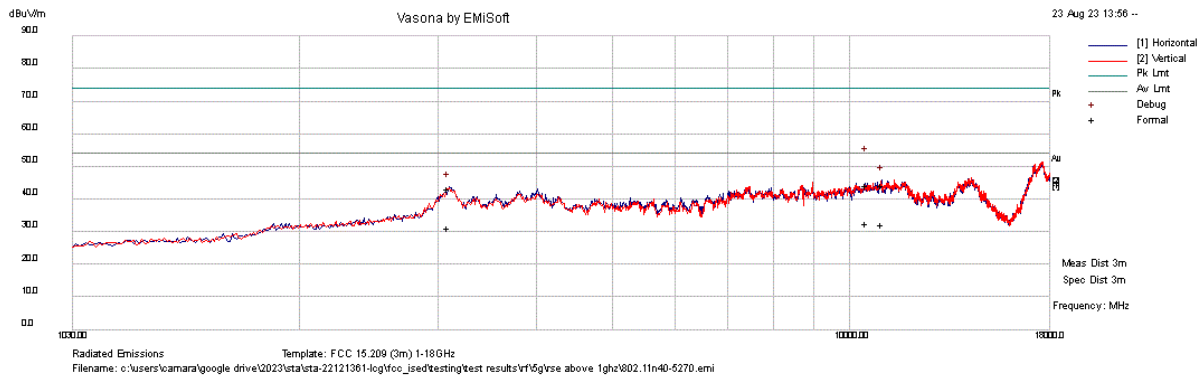


No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10458.7	35.7	17.1	-5.1	47.7	Peak Max	H	174	0	74	-26.3	Pass
2	7427.397	35.2	13.2	-5.6	42.8	Peak Max	V	386	124	74	-31.2	Pass
3	3821.948	26.2	9.1	5.5	40.8	Peak Max	V	363	270	74	-33.2	Pass
4	10458.7	21.9	17.1	-5.1	33.9	Average Max	H	174	0	54	-20.1	Pass
5	7427.397	23.6	13.2	-5.6	31.2	Average Max	V	386	124	54	-22.8	Pass
6	3821.948	14	9.1	5.5	28.6	Average Max	V	363	270	54	-25.4	Pass

Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n40
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 54	Test Result:	Pass

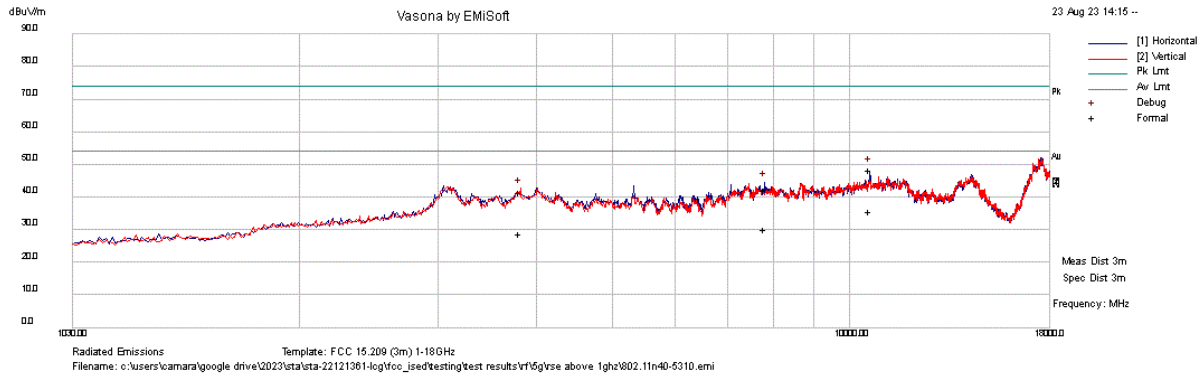


No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10540.305	32.4	17.2	-5.2	44.4	Peak Max	H	100	318	74	-29.6	Pass
2	11011.631	31.7	17.2	-4.5	44.4	Peak Max	H	261	2	74	-29.6	Pass
3	3099.081	36.2	7.7	-0.6	43.3	Peak Max	H	247	291	74	-30.7	Pass
4	10540.305	20.7	17.2	-5.2	32.7	Average Max	H	100	318	54	-21.3	Pass
5	11011.631	19.7	17.2	-4.5	32.4	Average Max	H	261	2	54	-21.6	Pass
6	3099.081	24.1	7.7	-0.6	31.2	Average Max	H	247	291	54	-22.8	Pass

Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n40
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 62	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10619.178	36.6	17.2	-5.3	48.5	Peak Max	H	216	95	74	-25.5	Pass
2	7810.754	34.1	13.8	-5.6	42.3	Peak Max	H	249	19	74	-31.7	Pass
3	3821.436	26.8	9.1	5.5	41.4	Peak Max	V	213	86	74	-32.6	Pass
4	10619.178	23.8	17.2	-5.3	35.7	Average Max	H	216	95	54	-18.3	Pass
5	7810.754	22	13.8	-5.6	30.2	Average Max	H	249	19	54	-23.8	Pass
6	3821.436	14.1	9.1	5.5	28.7	Average Max	V	213	86	54	-25.3	Pass

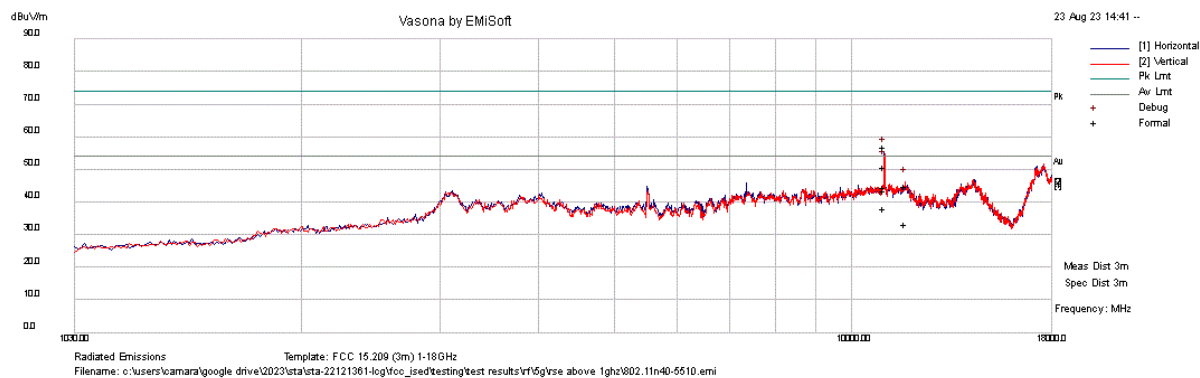
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n40
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 102	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	11018.808	44.1	17.2	-4.5	56.8	Peak Max	H	253	213	74	-17.2	Pass
2	11021.81	38.2	17.2	-4.5	50.9	Peak Max	V	392	236	74	-23.1	Pass
3	11719.228	30.8	18.3	-4.2	44.9	Peak Max	V	220	141	74	-29.1	Pass
4	11018.005	32	17.2	-4.5	44.7	Average Max	H	208	126	54	-9.3	Pass
5	11018.808	30.9	17.2	-4.5	43.6	Average Max	H	253	213	54	-10.4	Pass
6	11021.81	25.5	17.2	-4.5	38.2	Average Max	V	392	236	54	-15.8	Pass

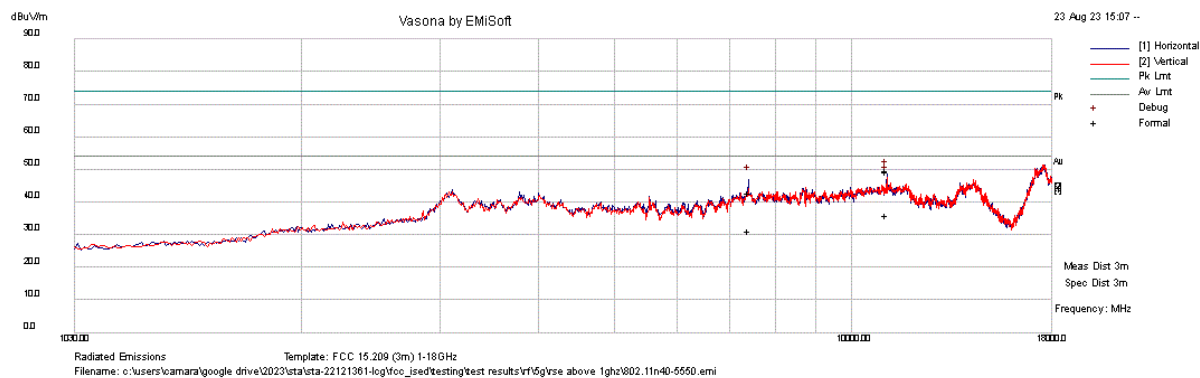
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n40
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 110	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	11099.733	36.8	17.3	-4.5	49.6	Peak Max	H	232	19	74	-24.4	Pass
2	11098.89	37	17.3	-4.5	49.8	Peak Max	V	323	108	74	-24.2	Pass
3	7404.134	35.5	13.1	-5.5	43.1	Peak Max	H	234	16	74	-30.9	Pass
4	11099.733	23.4	17.3	-4.5	36.2	Average Max	H	232	19	54	-17.8	Pass
5	11098.89	23.3	17.3	-4.5	36.1	Average Max	V	323	108	54	-17.9	Pass
6	7404.134	23.6	13.1	-5.5	31.2	Average Max	H	234	16	54	-22.8	Pass

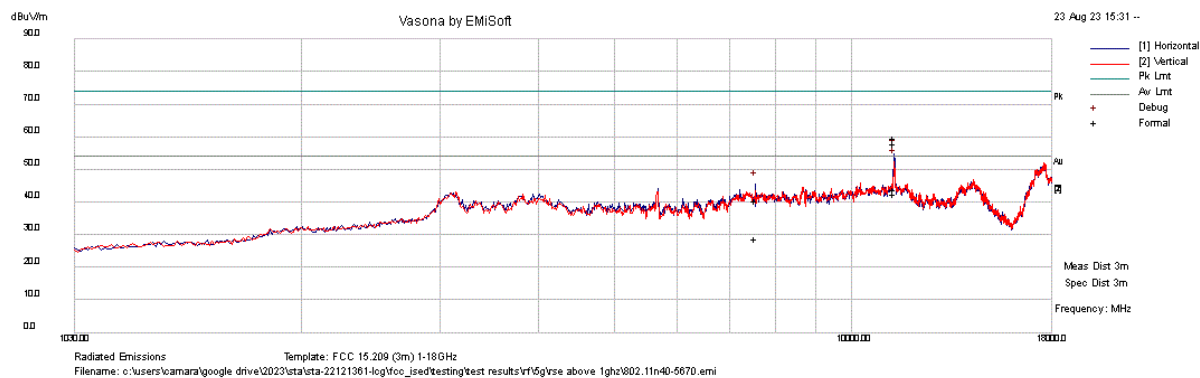
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n40
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 134	Test Result:	Pass

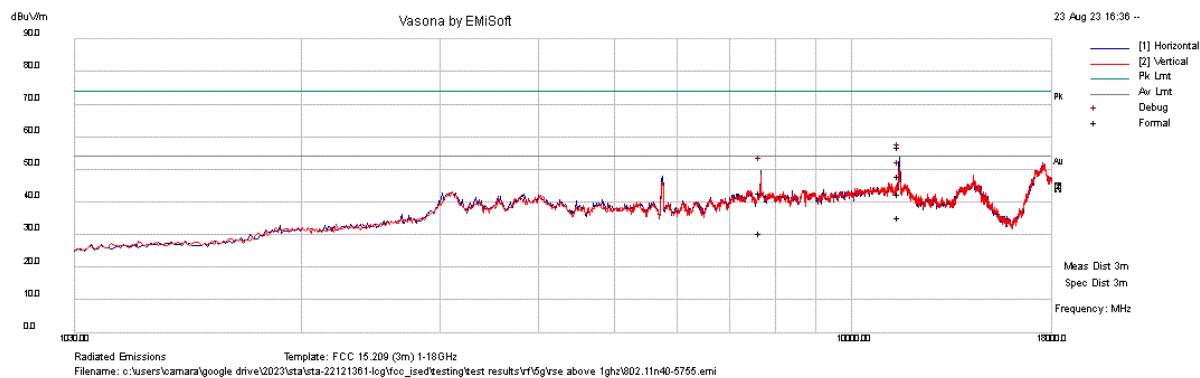


No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	11340.365	47.1	17.6	-4.8	59.9	Peak Max	H	216	12	74	-14.1	Pass
2	11340.05	45.1	17.6	-4.8	57.9	Peak Max	V	204	308	74	-16.1	Pass
3	7565.246	32.8	13.4	-5.8	40.4	Peak Max	H	142	270	74	-33.6	Pass
4	11340.365	31.3	17.6	-4.8	44.1	Average Max	H	216	12	54	-9.9	Pass
5	11340.05	29.9	17.6	-4.8	42.7	Average Max	V	204	308	54	-11.3	Pass
6	7565.246	21.2	13.4	-5.8	28.8	Average Max	H	142	270	54	-25.2	Pass

Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n40
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 151	Test Result:	Pass

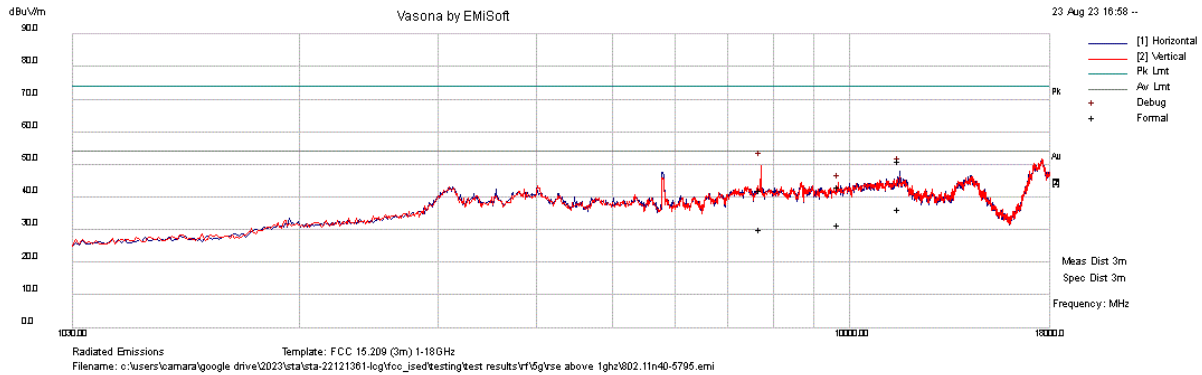


No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	11510.313	43.8	17.8	-4.6	57	Peak Max	H	230	14	74	-17	Pass
2	7671.485	35.2	13.6	-5.7	43.1	Peak Max	H	375	208	74	-30.9	Pass
3	11511.818	35	17.8	-4.6	48.2	Peak Max	V	183	87	74	-25.8	Pass
4	11510.313	29.3	17.8	-4.6	42.5	Average Max	H	230	14	54	-11.5	Pass
5	7671.485	22.7	13.6	-5.7	30.6	Average Max	H	375	208	54	-23.4	Pass
6	11511.818	22.2	17.8	-4.6	35.4	Average Max	V	183	87	54	-18.6	Pass

Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11n40
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 159	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	7721.771	34.2	13.7	-5.7	42.2	Peak Max	V	113	32	74	-31.8	Pass
2	11590.3	37.5	18	-4.4	51.1	Peak Max	H	212	214	74	-22.9	Pass
3	9684.629	32.2	16.1	-5.1	43.2	Peak Max	V	301	254	74	-30.8	Pass
4	7721.771	22.1	13.7	-5.7	30.1	Average Max	V	113	32	54	-23.9	Pass
5	11590.3	22.8	18	-4.4	36.4	Average Max	H	212	214	54	-17.6	Pass
6	9684.629	20.4	16.1	-5.1	31.4	Average Max	V	301	254	54	-22.6	Pass

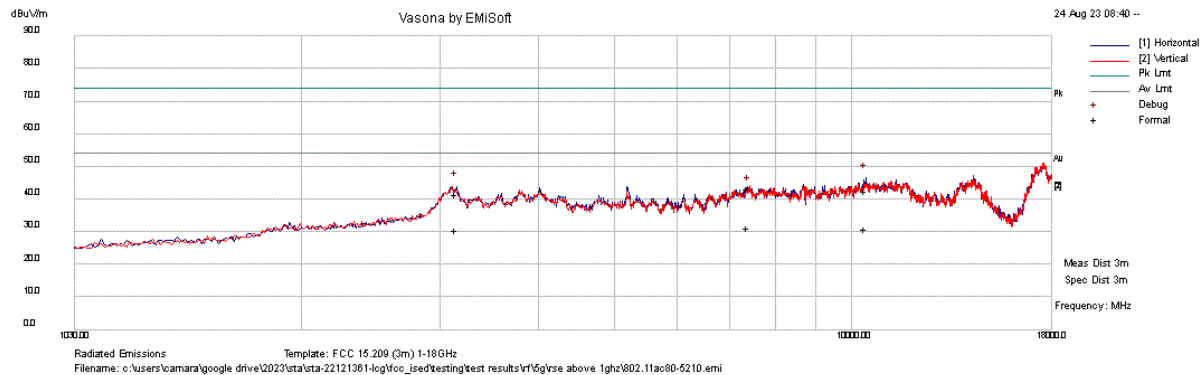
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11ac80
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 42	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10420.12	30.6	17	-5.1	42.5	Peak Max	H	311	91	74	-31.5	Pass
2	3150.638	37.3	7.8	-3.4	41.7	Peak Max	H	336	140	74	-32.3	Pass
3	7402.62	35.5	13.1	-5.5	43.1	Peak Max	V	392	3	74	-30.9	Pass
4	10420.12	19.1	17	-5.1	31	Average Max	H	311	91	54	-23	Pass
5	3150.638	26	7.8	-3.4	30.4	Average Max	H	336	140	54	-23.6	Pass
6	7402.62	23.8	13.1	-5.5	31.4	Average Max	V	392	3	54	-22.6	Pass

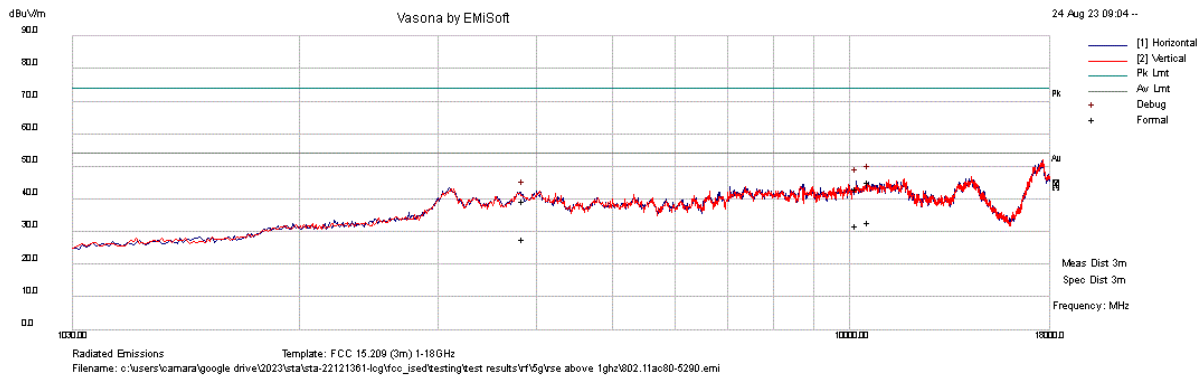
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11ac80
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 58	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	10578.263	33.2	17.2	-5.3	45.1	Peak Max	V	275	124	74	-28.9	Pass
2	10217.69	31.8	16.7	-5.2	43.3	Peak Max	H	131	0	74	-30.7	Pass
3	3849.392	24.6	9.3	5.7	39.6	Peak Max	V	301	48	74	-34.4	Pass
4	10578.263	21.1	17.2	-5.3	33	Average Max	V	275	124	54	-21	Pass
5	10217.69	20.4	16.7	-5.2	31.9	Average Max	H	131	0	54	-22.1	Pass
6	3849.392	13	9.3	5.7	28	Average Max	V	301	48	54	-26	Pass

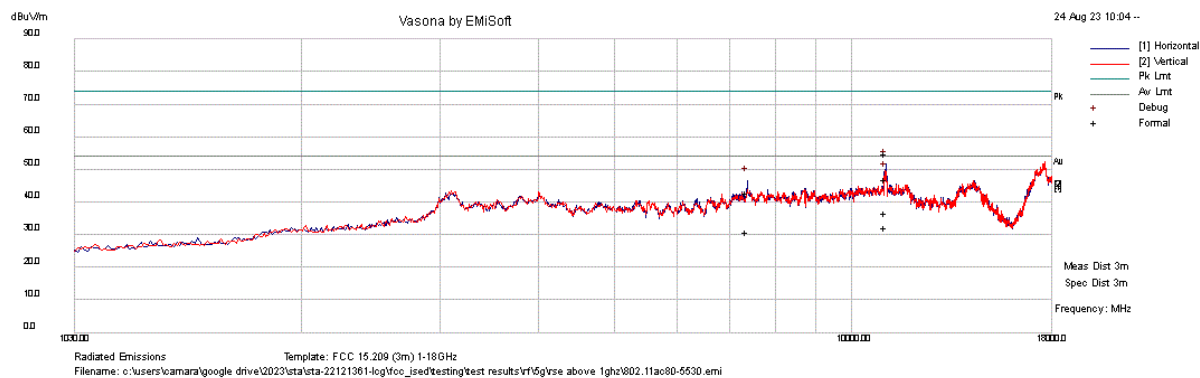
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11ac80
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 106	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	11059.783	42.3	17.3	-4.5	55.1	Peak Max	H	178	0	74	-18.9	Pass
2	11059.91	34.2	17.3	-4.5	47	Peak Max	V	328	229	74	-27	Pass
3	7372.135	35.4	13	-5.5	42.9	Peak Max	H	197	309	74	-31.1	Pass
4	11059.783	24	17.3	-4.5	36.8	Average Max	H	178	0	54	-17.2	Pass
5	11059.91	19.4	17.3	-4.5	32.2	Average Max	V	328	229	54	-21.8	Pass
6	7372.135	23.4	13	-5.5	30.9	Average Max	H	197	309	54	-23.1	Pass

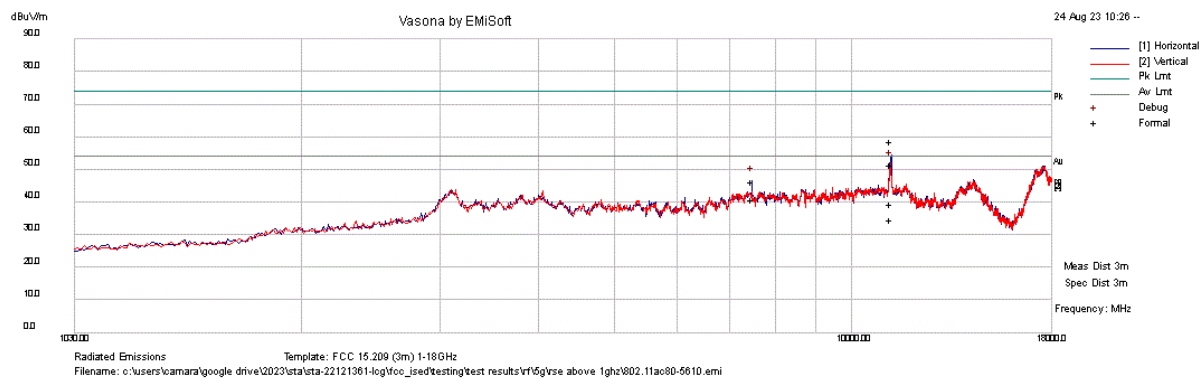
Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Report #

STA-22121361-LCG-FCC-IC-RF-NII

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11ac80
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 122	Test Result:	Pass

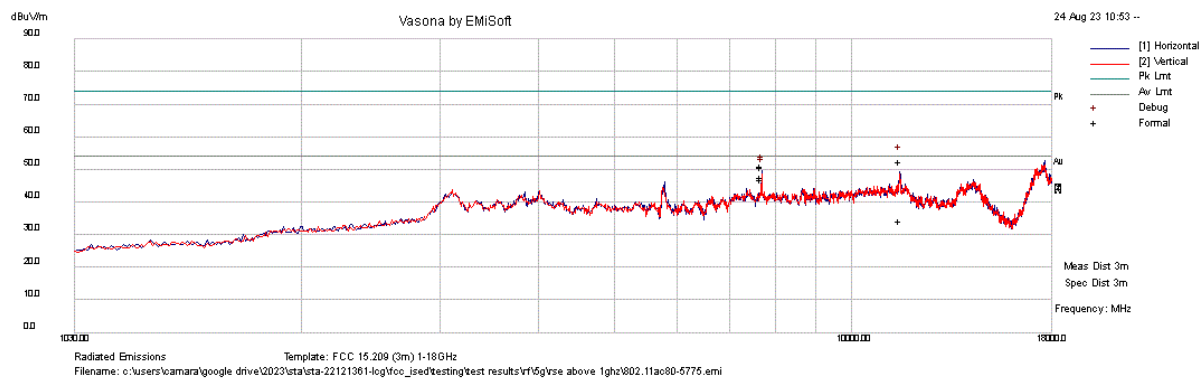


No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	11220.338	45.8	17.5	-4.7	58.6	Peak Max	H	246	0	74	-15.4	Pass
2	11220.575	38.7	17.5	-4.7	51.5	Peak Max	V	103	330	74	-22.5	Pass
3	7480.245	38.8	13.3	-5.7	46.4	Peak Max	H	163	223	74	-27.6	Pass
4	11220.338	26.6	17.5	-4.7	39.4	Average Max	H	246	0	54	-14.6	Pass
5	11220.575	21.9	17.5	-4.7	34.7	Average Max	V	103	330	54	-19.3	Pass
6	7480.245	33.4	13.3	-5.7	41	Average Max	H	163	223	54	-13	Pass

Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

Test Standard:	FCC 15.407, 15.209, RSS-247	Mode:	RSE-Above 1GHz-802.11ac80
Frequency Range:	1 GHz - 18 GHz	Test Date:	08/21/2023 ~ 08/24/2023
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Devin Tai
Remark:	Ch 155	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	11549.683	39.3	17.9	-4.5	52.7	Peak Max	H	204	0	74	-21.3	Pass
2	7699.809	43.3	13.6	-5.7	51.2	Peak Max	H	193	0	74	-22.8	Pass
3	7699.94	42.9	13.6	-5.7	50.8	Peak Max	V	249	0	74	-23.2	Pass
4	11549.683	20.8	17.9	-4.5	34.2	Average Max	H	204	0	54	-19.8	Pass
5	7699.809	39.7	13.6	-5.7	47.6	Average Max	H	193	0	54	-6.4	Pass
6	7699.94	39	13.6	-5.7	46.9	Average Max	V	249	0	54	-7.1	Pass

Remarks:

1. Level (dBuV/m) = Raw (dBuV) + Cable loss(dB) + AF (dB/m).
2. AF (dB/m) = Antenna Factor (dB) - Preamplifier Gain (dB)
3. Margin = Level (dBuV/m) - Limit value(dBuV/m)

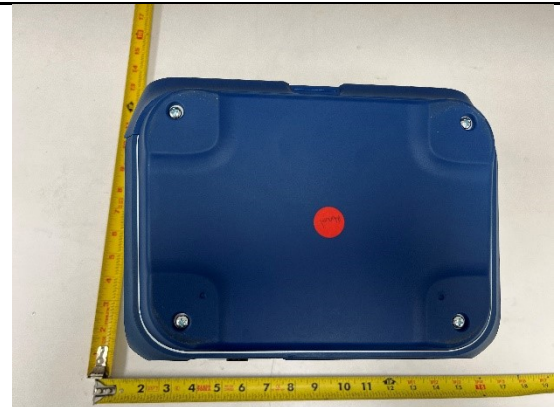
18GHz - 40GHz test result

Note: no substantial emission is found other than the noise floor.

8 EUT and Test Setup Photos



EUT Top View



EUT Bottom View



EUT Front View



EUT Rear View



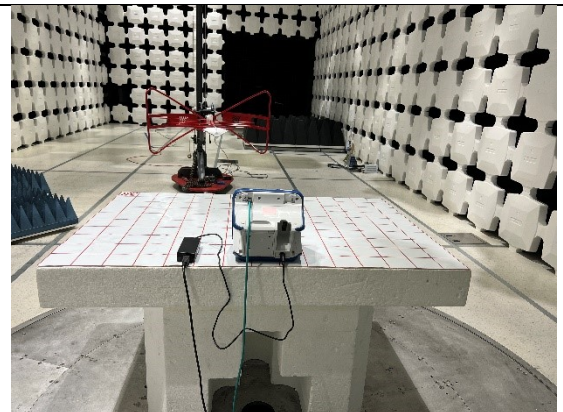
EUT Left View



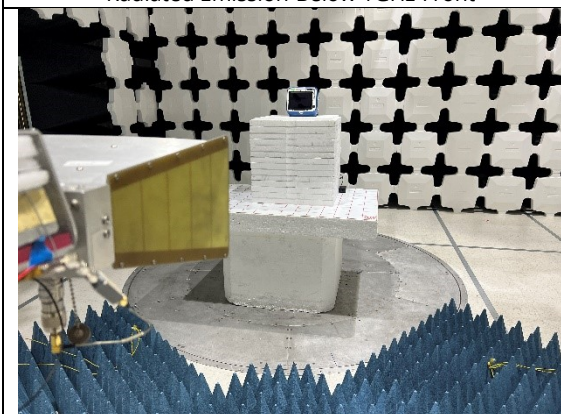
EUT Right View



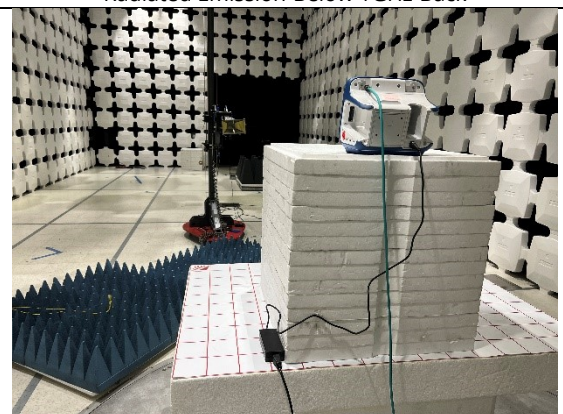
Radiated Emission-Below 1GHz-Front



Radiated Emission-Below 1GHz-Back



Radiated Emission-Above 1GHz-Front



Radiated Emission-Above 1GHz-Back

9 Test Instrument List

Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
10m Semi-Anechoic Chamber	ETS-Lingren	10M	VL001	10/18/2022	10/18/2023
Turn Table	ETS-Lingren	2181-3.03	VL002	N/A	N/A
Boresight Antenna Tower	ETS-Lingren	2171B	VL003	N/A	N/A
MXA Signal Analyzer 20Hz to 26.5GHz	Keysight	N9020A	MY50110074	06/17/2023	06/17/2024
MXG Vector Signal Generator	Keysight	N5182A	US47080548	06/17/2023	06/17/2024
EMI Test Receiver (9KHz to 6 GHz)	Rohde & Schwarz	ESL6	100230	06/24/2023	06/24/2024
BICONILOG ANTENNA (30 MHz to 6 GHz)	ETS-Lingren	3142E	217921	08/15/2023	08/15/2024
Horn Antenna (1-18GHz)	Electro-Metrics	EM-6961	6292	06/09/2023	06/09/2024
Synthesized Signal Generator (10MHz - 40GHz)	Anritsu	68367C A/NV	11625	06/24/2023	06/24/2024
Temperature/Humidity Chamber	Bemco	FBW1.5-100/350	3621-9	06/24/2023	06/24/2024
Power Splitter/Combiner	Mini-Circuits	ZFSC-2-9G+	VL052	N/A	N/A
Power Splitter/Combiner	Mini-Circuits	ZFSC-2-9G+	VL053	N/A	N/A
2 x Attenuator - 10dB (SMA) (DC~18GHz) (2 Watt)	Pasternack	PE7005-10	VL059-1, VL059-2	N/A	N/A
Attenuator - 20dB (SMA) (DC~18GHz) (2 Watt)	Pasternack	PE7005-20	VL060	N/A	N/A
Attenuator - 3dB (SMA) (DC~18GHz) (2 Watt)	Pasternack	PE7005-3	VL061	N/A	N/A
Attenuator - 20dB (N-Type) (DC~6GHz) (50 Watt)	Aeroflex	6N50W-20-048	64671	N/A	N/A
2.4GHz Notch Filter	Micro-Tronics	BRM50702	G332	N/A	N/A
Wideband Radio Communicator	Rohde & Schwarz	CMW500	147508	07/09/2023	07/09/2023
Temp / Humidity / Pressure Meter	PCE Instruments	PCE-THB 40	R062028	05/15/2023	05/15/2023
Broadband RF Power Amplifier 100KHz - 40GHz	Aeroflex	33711-392-77150-11	064	N/A	N/A
2 x Attenuator - 6dB (SMA) (DC~18GHz) (2 Watt)	JFW Industries, Inc	50HF-006 SMA	VL084-1, VL084-2	N/A	N/A
Attenuator - 30dB (SMA) (DC~18GHz) (2 Watt)	JFW Industries, Inc	50HF-030 SMA	VL085	N/A	N/A
Directional coupler	KRYTAR	1850	64023	N/A	N/A

Note:

- 1) This equipment is not for measurement purposes and only requires functional verification. Calibration is not required.

---END---