

RF Test Report

Test Report Number	STA-24072634-LC-FCC-IC-RF-NII		
FCC ID ISED ID	N6C-PCEAXAP 4908A-PCEAXAP		
Applicant	Silex technology, Inc.		
Applicant Address	2-3-1 Hikaridai, Seika-cho, Kyoto 619-0237, Japan		
Product Name	Embedded wireless module		
Model Number	SX-PCEAX-AP		
Date of Receipt	08/14/2024		
Date of Test	08/30/2024- 09/13/2024		
Report Issue Date	09/20/2024		
Test Standards	47CFR Part 15.407 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	
 Minoush Niknam (Test Engineer)		 David Zhang (Technical Manager)	
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REVISION HISTORY

Report Number	Version	Description	Issued Date
STA-24072634-LC-FCC-IC-RF-NII	01	Initial report	09/20/2024

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1 Test Summary

Test Item	Test Requirement	Test Method	Result
Antenna Requirement	47 CFR Part 15.203	N/A	Pass
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 15.407 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 15.407 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. 407 RSS-247 Issue 3, Aug 2023	ANSI C63.10 (2013)	N/A
Radiated Spurious Emission	47 CFR Part 15. 407 RSS-247 Issue 3, Aug 2023	ANSI C63.10 (2013)	Pass

Note: N/A. The EUT is a certified BT and WLAN module, for more test details please see FCC ID: N6C-PCEAXAP and ISSED ID: 4908A-PCEAXAP. Current report is additional evaluation due to adding new antenna for C2PC filing.

2 General Information

2.1 Applicant

Applicant	Silex technology,Inc.
Applicant address	2-3-1 Hikaridai, Seika-cho, Kyoto 619-0237, Japan
Manufacturer	Silex technology,Inc.
Manufacturer Address	2-3-1 Hikaridai, Seika-cho, Kyoto 619-0237, Japan

2.2 Product information

Product Name	Embedded wireless module
Model Number	SX-PCEAX-AP
Family Models	N/A
Serial Number	1CBCEC2A9913
Frequency Band	WLAN 2.4G: 2412-2462MHz WLAN 5G: U-NII-1: 5150-5250MHz, U-NII-2A: 5250-5350MHz U-NII-2C: 5470-5725MHz, U-NII-3: 5725-5850MHz
Type of modulation	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g: OFDM-CCK (BPSK, QPSK, 16QAM, 64QAM) 802.11a/n/ac/ax: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
Antenna (S) Information	Antenna type 1 - 2.4/5GHz PCB Adhesive Antenna - Model: 2JF0188P, Brand: 2J Antenna - Antenna Peak Gain: 2.4G WLAN, 0.8 dBi; 5G WLAN: 4.7 dB Antenna type 2 - 2.4/5GHz Broadband Omnidirectional Antenna - Model: 1399.17.0224, Brand: Huber+Suhner - Antenna Peak Gain: 2.4G WLAN, 2 dBi; 5G WLAN: 2.5 dB
Input Power	3.30 VDC
Power Adapter Manufacturer/Model	N/A
Power Adapter SN	N/A
Hardware version	N/A
Software version	N/A
Additional Info	The EUT has u.FL connector for direct RF conducted measurement. Both 2JF0188P (2J antenna) and 1399.17.0224 (Huber+Suhner) are with pigtail RF cable with u.FI connector to connect to the EUT. 1399.17.0224 (Huber+Suhner) may use longer RF cable in the actual application. The shortest cable with least loss has been used in this test report as worst.

2.3 Test standard and method

Test standard	47CFR 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	61.3%	1002 mbar
Radiated Emission Testing	23.5°C	61.3%	1002 mbar

4 Modification of EUT / Deviations from Standards

The EUT is an engineering test sample loaded with RF testing firmware specifically designed to support the RF TX/RX measurement in different aspects.

5 Test Configuration and Operation

5.1 EUT Test Configuration

The EUT is mounted onto a MCIMX8M-EVK Kit to support testing. EUT is set to different transmission modes in terms of radio mode bandwidth, power level, test channel, etc.

The following software was used for testing and to monitor EUT performance.

Software	Description
EMISoft Vasona	EMC/RF Spurious emission test software used during testing
Tera Term	Set the module word at WLAN mode
QRCT Application	Set the module into different mode, to change channel, modulation, power setting, data rate, etc.

5.2 Supporting Equipment

Description	Manufacturer	Model #	Serial #	Remark
Laptop	Dell	P57F	P57F002	Send command
i.MX6Q EVK Kit	N/A	N/A	N/A	Test Fixture
AC Adapter	EDAC	EA10682N-120	400-7606	Power to MCIMX8M-EVK Kit

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 Summary and Result

7.1 Antenna Requirements

7.1.1 Requirement

Per § 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 use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site.

7.1.2 Conclusion

Analysis:

EUT has u.FL antenna connector which is a unique type that is acceptable for FCC.

The added PCB antenna (P/N: 2JF0188P-2.4) has soldered pigtail RF cable with u.FL connectors for connecting to the EUT, which is a unique coupling that is acceptable for FCC.

The external Broadband omnidirectional Wifi antenna (P/N: 1399.17.0224), have suitable antenna RF cable with u.FL connectors, for connecting to EUT. To meet FCC requirements, this entire antenna assembly must be either inseparable to ensure a broken antenna cannot be replaced by the user, or the antenna is subject to professional installation.

Conclusion:

- EUT and its antennas meet FCC requirements.

7.2 Radiated Emissions & Unwanted Emissions into Restricted Frequency Bands

7.2.1 Requirement

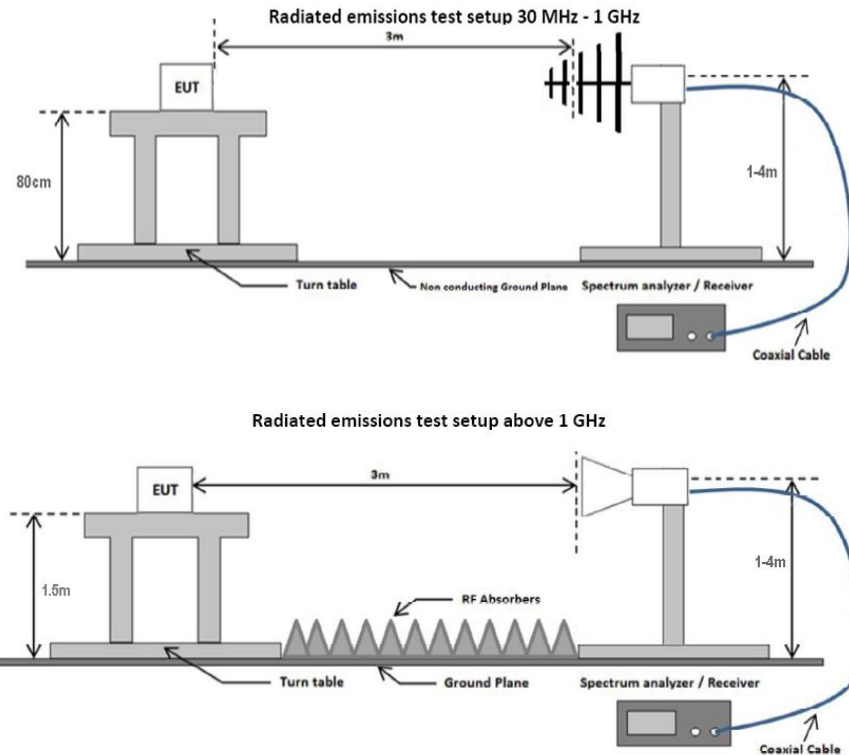
§ 15.407 (b) , RSS-247 (6.2.1.2)

- 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

7.2.2 Test Setup



7.2.3 Test Procedure

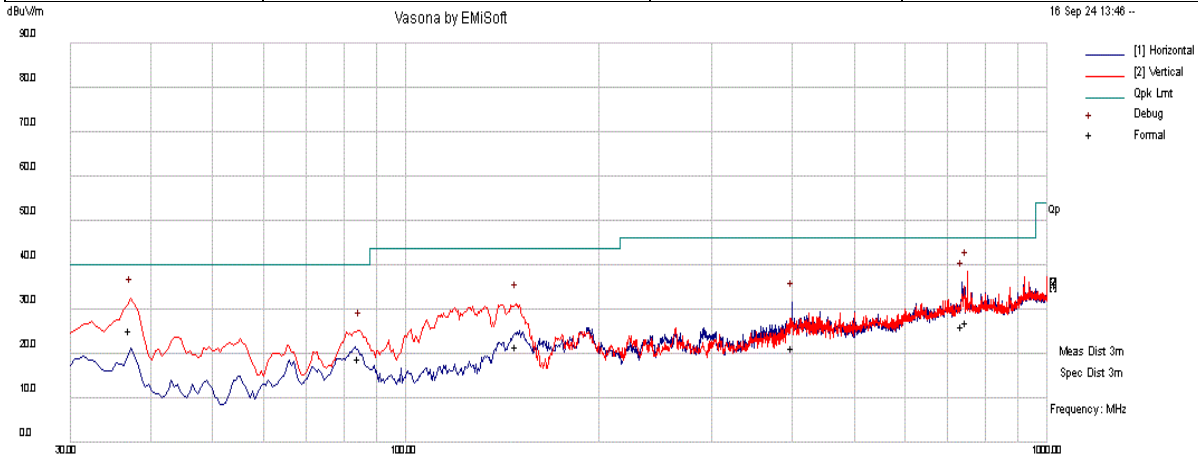
According to subclause 12.7, radiated spurious emission measurements, in ANSI C63.10-2013:

- 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.

7.2.4 Test Result

RADIATED SPURIOUS EMISSION BELOW 1GHZ

Test Standard:	15.209, 15.407	Mode:	802.11a-20M, 5300MHz
Frequency Range:	30 MHz - 1 GHz	Test Date:	09/16/2024
Antenna Type/Polarity:	Bi-Log/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



Radiated Emissions Template: FCC Class B (3m) 30MHz-1GHz
Filename: v:\my drive\2024\sta-24072634-lc-fcc-ised-ce\fcc-ised\2 antenna\fcc-ised-15.407\below 1ghz\01-11a-0Mbps_emi

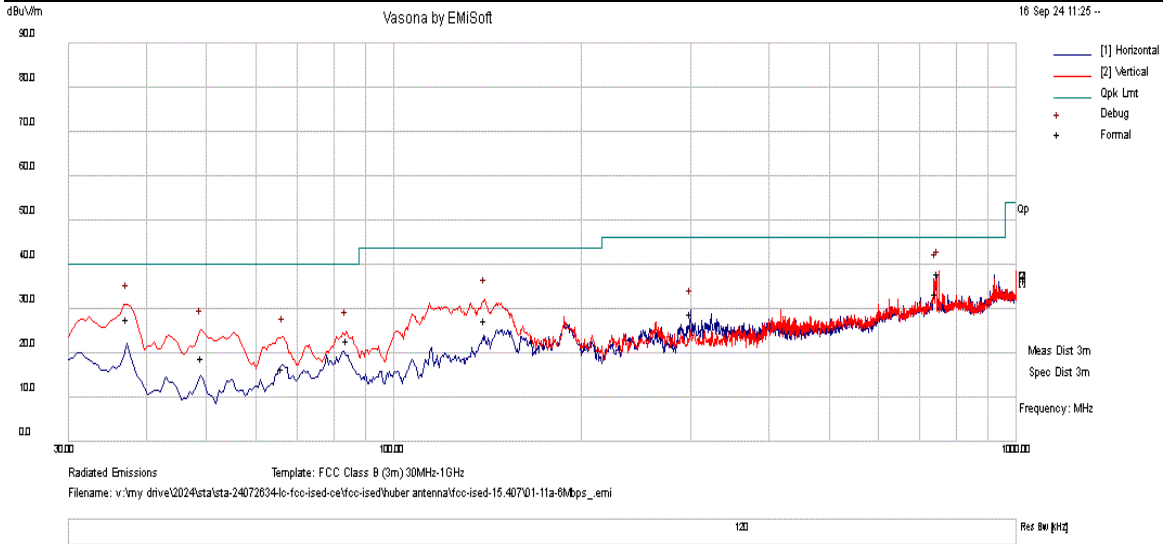
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	750.067	14.35	7.3	5.8	27.45	Quasi Max	H	316	275	46	-18.55	Pass
2	37.215	31.82	2.5	-9.2	25.12	Quasi Max	V	127	318	40	-14.88	Pass
3	737.266	13.17	7.3	5.8	26.27	Quasi Max	H	154	0	46	-19.73	Pass
4	149.069	28.33	4.2	-11.7	20.83	Quasi Max	V	318	353	43.5	-22.67	Pass
5	399.964	15.21	6.4	-1.3	20.31	Quasi Max	H	227	112	46	-25.69	Pass
6	84.606	30.73	3.4	-14.9	19.23	Quasi Max	V	151	93	40	-20.77	Pass

Remarks:

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

RADIATED SPURIOUS EMISSION BELOW 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5300MHz
Frequency Range:	30 MHz - 1 GHz	Test Date:	09/16/2024
Antenna Type/Polarity:	Bi-Log/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



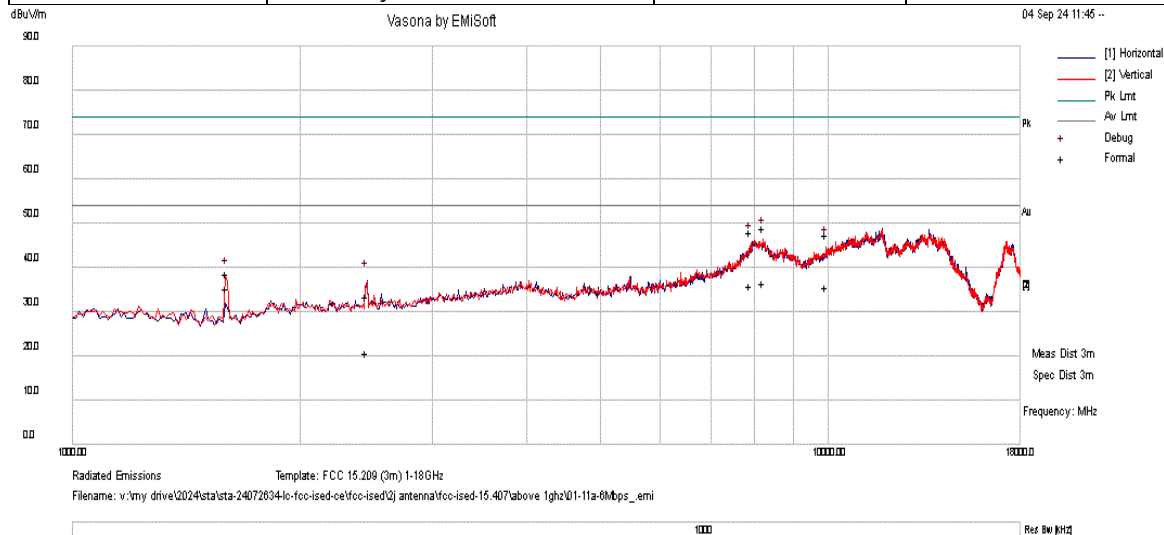
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	750.07	24.81	7.28	5.79	37.88	Quasi Max	H	380	16	46.00	-8.12	Pass
2	743.06	20.31	7.28	5.73	33.32	Quasi Max	H	193	169	46.00	-12.68	Pass
3	37.26	34.45	2.46	-9.25	27.67	Quasi Max	V	122	152	40.00	-12.33	Pass
4	139.92	35.71	4.13	-12.53	27.31	Quasi Max	V	158	118	43.50	-16.19	Pass
5	49.16	30.95	2.77	-14.84	18.89	Quasi Max	V	167	149	40.00	-21.11	Pass
6	84.07	34.30	3.37	-14.95	22.72	Quasi Max	V	148	82	40.00	-17.28	Pass
7	300.01	30.23	5.68	-7.05	28.86	Quasi Max	H	111	257	46.00	-17.14	Pass
8	66.29	27.84	3.11	-14.40	16.55	Quasi Max	V	125	46	40.00	-23.45	Pass

Remarks:

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

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5180MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/04/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



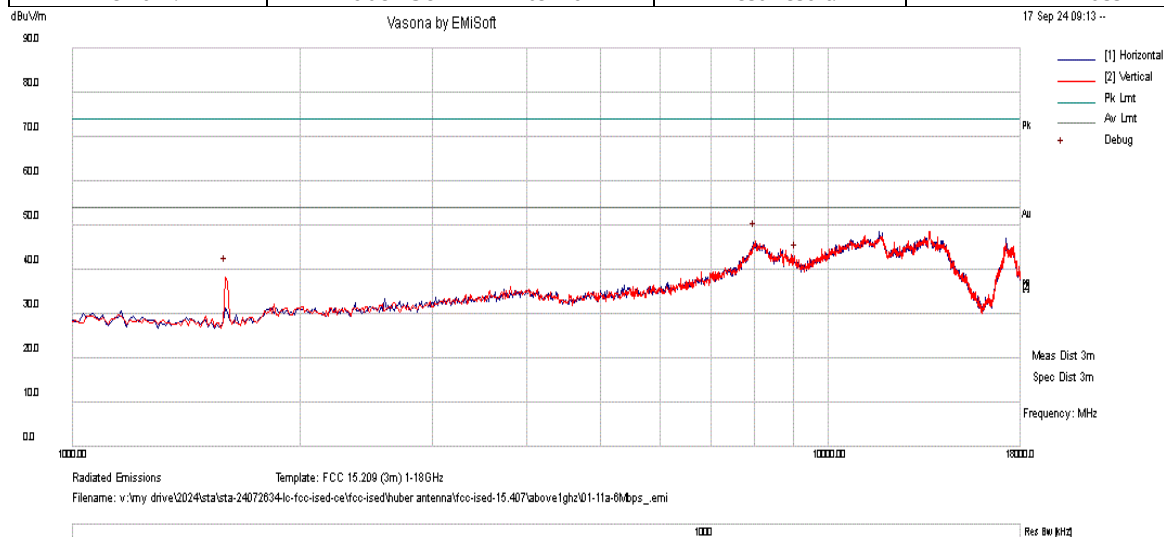
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8212.69	19.22	14.17	15.61	49.00	Peak Max	V	129	0	74.00	-25.00	Pass
2	7907.31	19.37	14.06	14.54	47.98	Peak Max	H	106	101	74.00	-26.02	Pass
3	9956.01	18.15	16.61	12.64	47.40	Peak Max	H	180	105	74.00	-26.60	Pass
4	1599.9	34.53	5.55	-1.58	38.50	Peak Max	V	146	12	74.00	-35.50	Pass
5	2453.31	26.17	6.79	0.40	33.36	Peak Max	H	177	180	74.00	-40.64	Pass
6	8212.69	6.84	14.17	15.61	36.62	Average Max	V	129	0	54.00	-17.38	Pass
7	7907.31	7.34	14.06	14.54	35.94	Average Max	H	106	101	54.00	-18.06	Pass
8	9956.01	6.40	16.61	12.64	35.65	Average Max	H	180	105	54.00	-18.35	Pass
9	1599.9	31.33	5.55	-1.58	35.29	Average Max	V	146	12	54.00	-18.71	Pass
10	2453.31	13.52	6.79	0.40	20.71	Average Max	H	177	180	54.00	-33.29	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5180MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



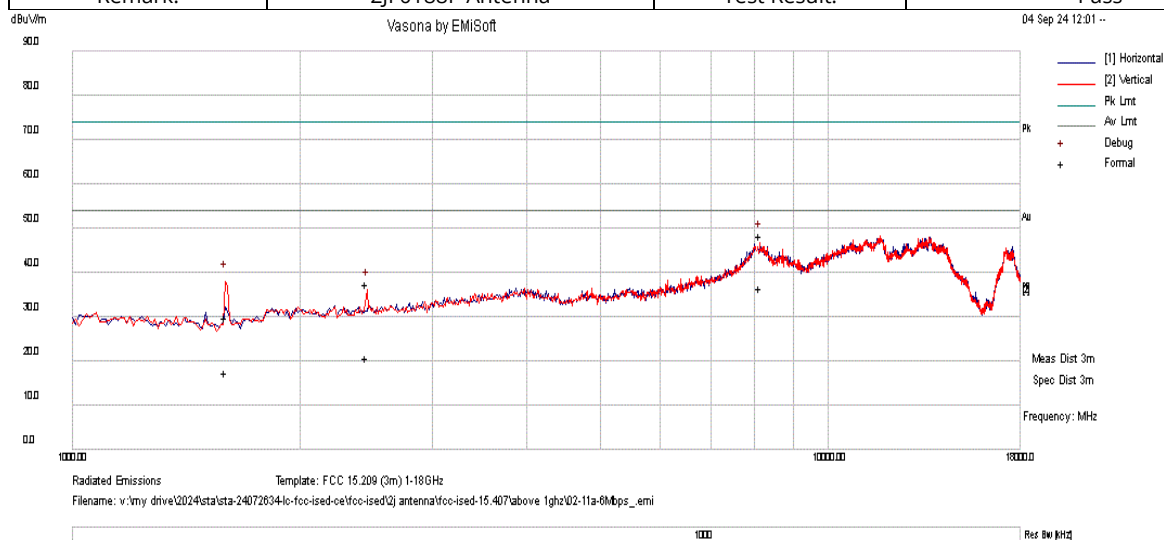
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8012.5	16.03	14.26	15.85	46.15	Peak	V	200	0	54.00	-7.85	Pass
2	1595.0	34.32	5.53	-1.60	38.25	Peak	V	200	0	54.00	-15.75	Pass
3	9066.05	14.95	15.13	11.27	41.35	Peak	H	100	360	54.00	-12.65	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5220MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/04/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



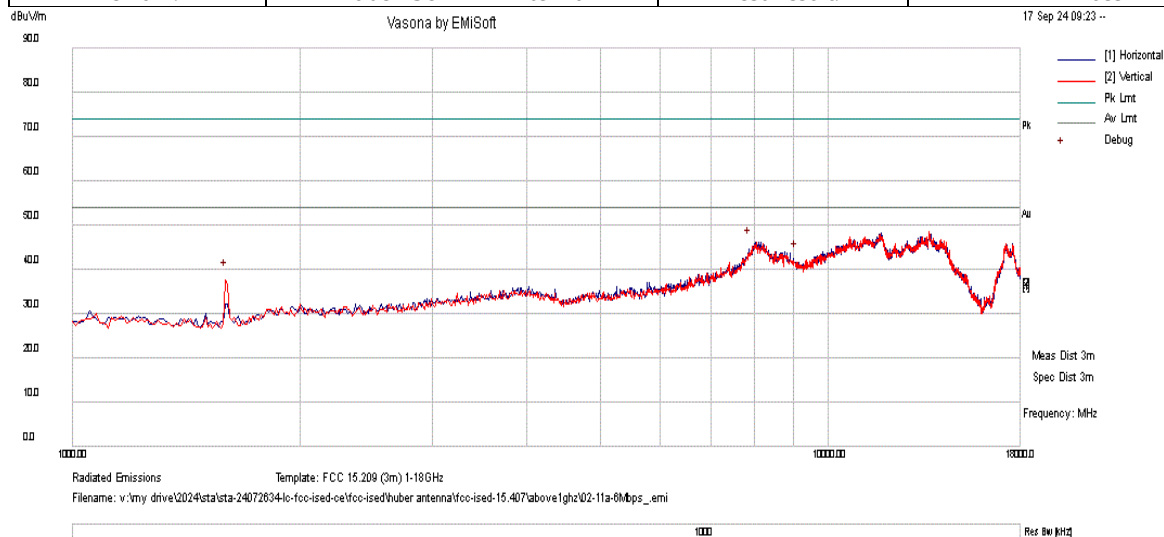
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8129.22	18.51	14.21	15.67	48.40	Peak Max	V	171	160	74.00	-25.61	Pass
2	1595.0	25.99	5.53	-1.60	29.93	Peak Max	V	169	100	74.00	-44.08	Pass
3	2455.97	30.23	6.79	0.42	37.44	Peak Max	H	123	137	74.00	-36.57	Pass
4	8129.22	6.56	14.21	15.67	36.44	Average Max	V	171	160	54.00	-17.56	Pass
5	1595.0	13.52	5.53	-1.60	17.45	Average Max	V	169	100	54.00	-36.55	Pass
6	2455.97	13.52	6.79	0.42	20.73	Average Max	H	123	137	54.00	-33.27	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5220MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



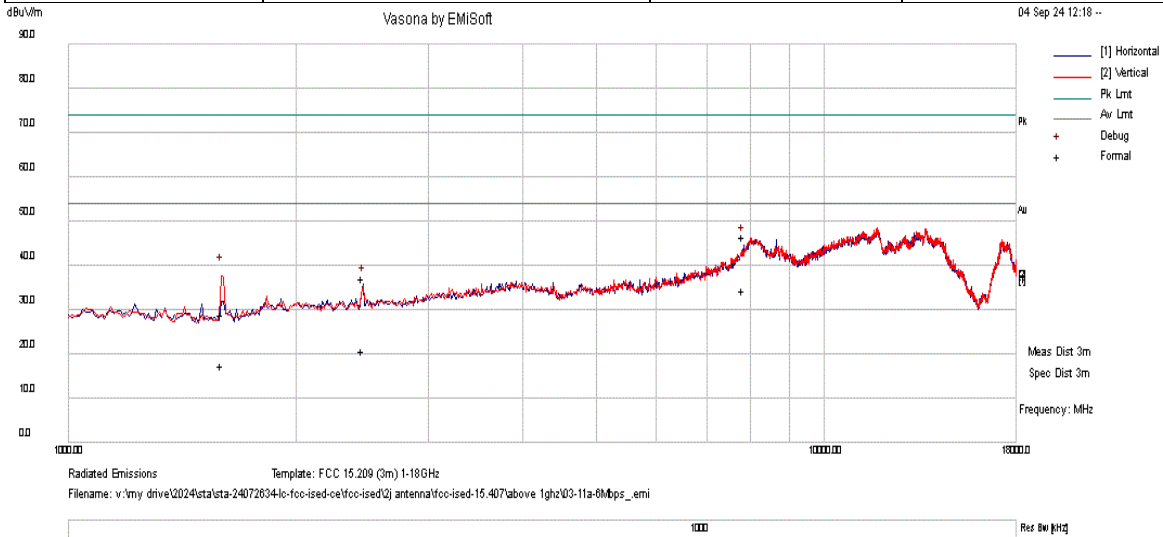
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	1595.0	33.47	5.53	-1.60	37.40	Peak	V	200	0	54.00	-16.60	Pass
2	7865.15	16.52	13.97	13.92	44.41	Peak	H	100	360	54.00	-9.59	Pass
3	9067.31	15.13	15.13	11.26	41.52	Peak	H	100	360	54.00	-12.48	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5240MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/04/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



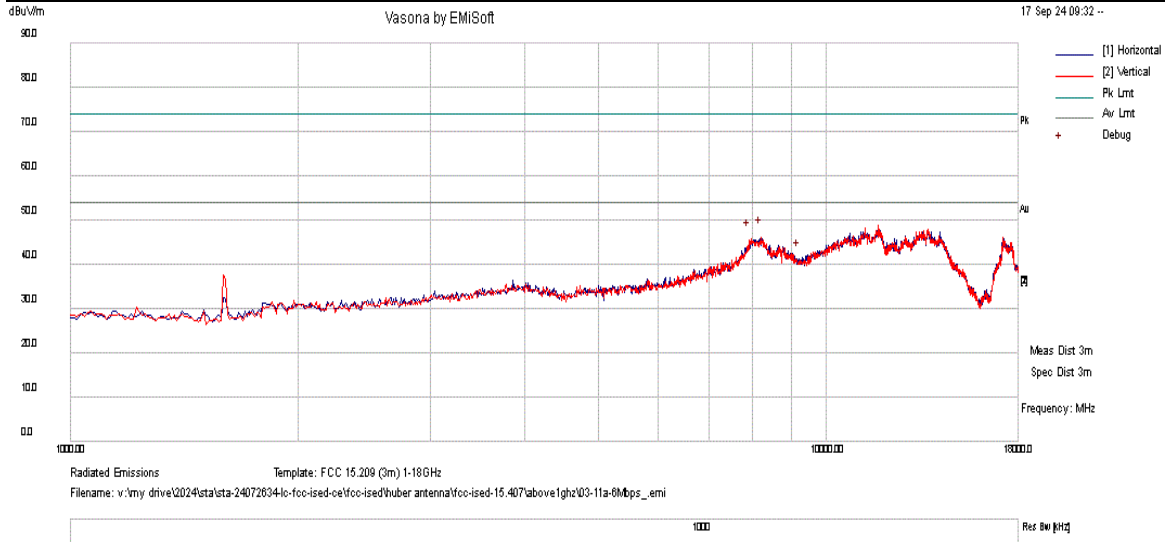
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	7832.3	19.07	13.89	13.42	46.38	Peak Max	H	130	58	74.00	-27.62	Pass
2	1594.19	25.12	5.53	-1.60	29.05	Peak Max	V	121	142	74.00	-44.95	Pass
3	2455.42	29.98	6.79	0.41	37.19	Peak Max	H	115	128	74.00	-36.81	Pass
4	7832.3	7.19	13.89	13.42	34.51	Average Max	H	130	58	54.00	-19.49	Pass
5	1594.19	13.51	5.53	-1.60	17.44	Average Max	V	121	142	54.00	-36.56	Pass
6	2455.42	13.61	6.79	0.41	20.82	Average Max	H	115	128	54.00	-33.18	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5240MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



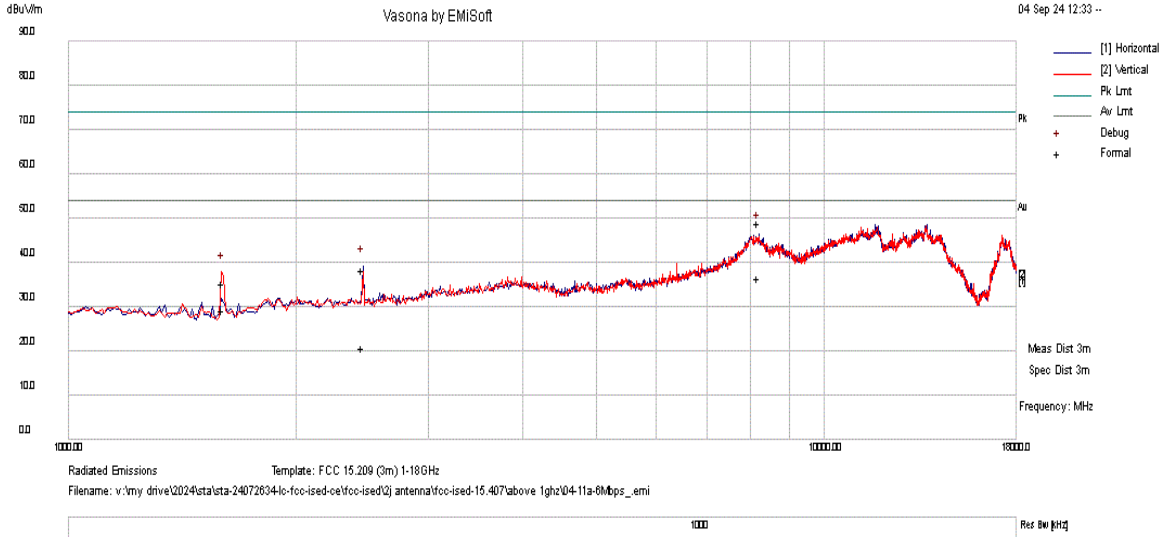
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8203.75	16.07	14.18	15.60	45.86	Peak	V	100	0	54.00	-8.15	Pass
2	7906.28	16.66	14.06	14.53	45.25	Peak	H	100	360	54.00	-8.75	Pass
3	9212.17	14.44	15.12	10.94	40.50	Peak	H	100	360	54.00	-13.50	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5260MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/04/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



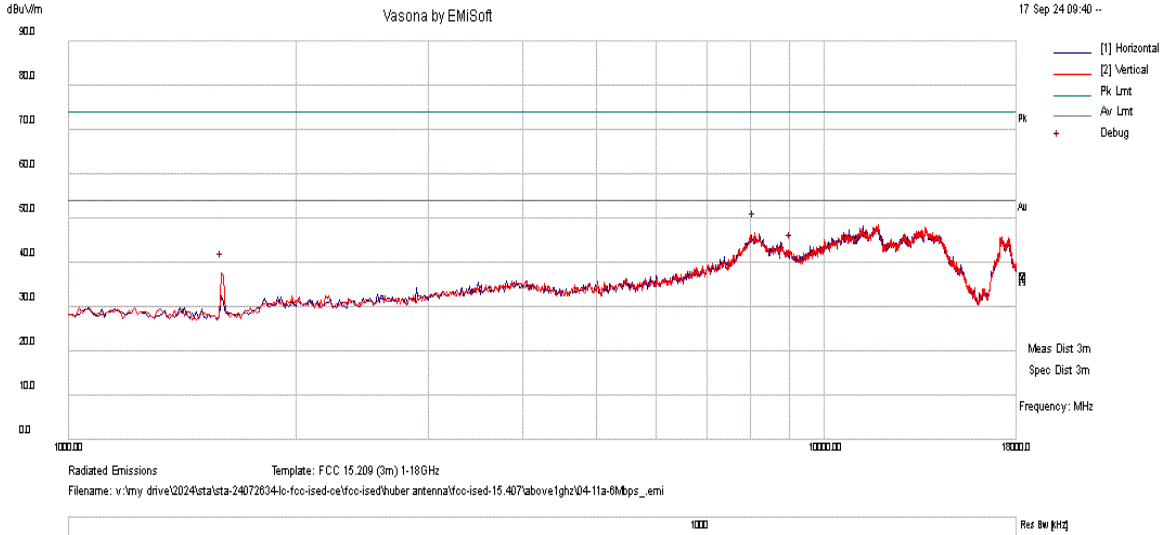
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8203.65	18.97	14.18	15.60	48.75	Peak Max	H	154	93	74.00	-25.25	Pass
2	2454.11	31.07	6.79	0.41	38.27	Peak Max	H	176	161	74.00	-35.73	Pass
3	1599.93	31.28	5.55	-1.58	35.25	Peak Max	H	103	172	74.00	-38.75	Pass
4	8203.65	6.70	14.18	15.60	36.49	Average Max	H	154	93	54.00	-17.51	Pass
5	2454.11	13.61	6.79	0.41	20.81	Average Max	H	176	161	54.00	-33.19	Pass
6	1599.93	25.16	5.55	-1.58	29.13	Average Max	H	103	172	54.00	-24.87	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5260MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



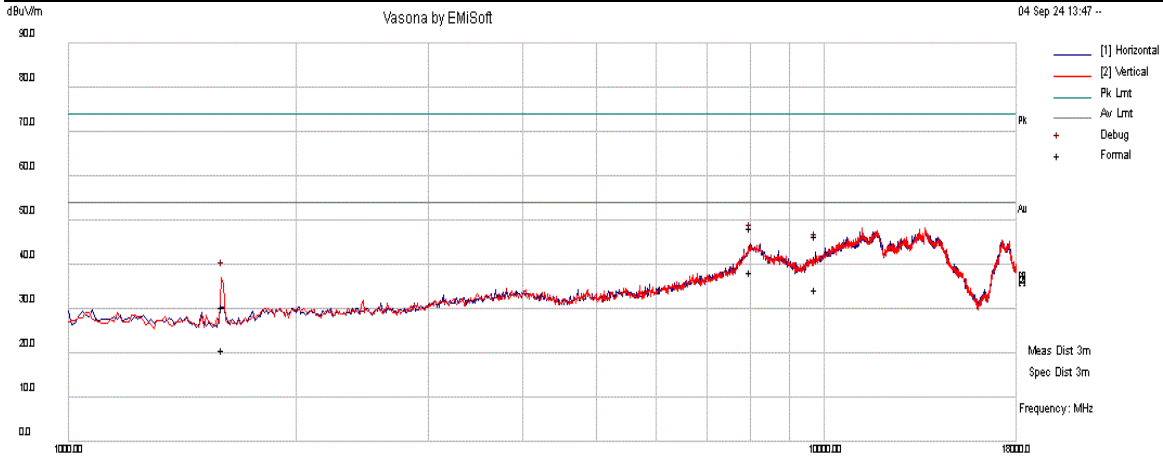
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8097.5	16.69	14.23	15.72	46.64	Peak	V	200	0	54.00	-7.36	Pass
2	1595.0	33.60	5.53	-1.60	37.53	Peak	V	200	0	54.00	-16.47	Pass
3	9035.41	15.41	15.14	11.37	41.92	Peak	H	100	360	54.00	-12.08	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5300MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/04/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



Radiated Emissions
Template: FCC 15.209 (3m) 1-18GHz
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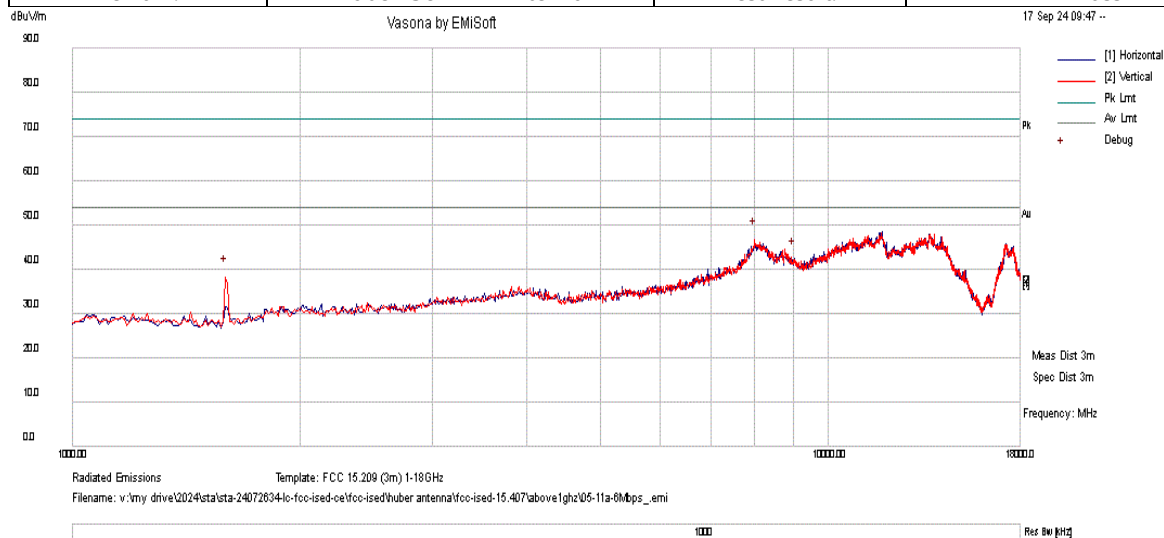
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8002.02	18.28	14.27	15.86	48.41	Peak Max	H	131	24	74.00	-25.59	Pass
2	9767.15	17.76	16.22	12.37	46.35	Peak Max	H	150	16	74.00	-27.65	Pass
3	1600.45	26.49	5.55	-1.58	30.46	Peak Max	H	222	180	74.00	-43.54	Pass
4	8002.02	8.15	14.27	15.86	38.28	Average Max	H	131	24	54.00	-15.72	Pass
5	9767.15	5.83	16.22	12.37	34.43	Average Max	H	150	16	54.00	-19.58	Pass
6	1600.45	16.78	5.55	-1.58	20.75	Average Max	H	222	180	54.00	-33.25	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5300MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



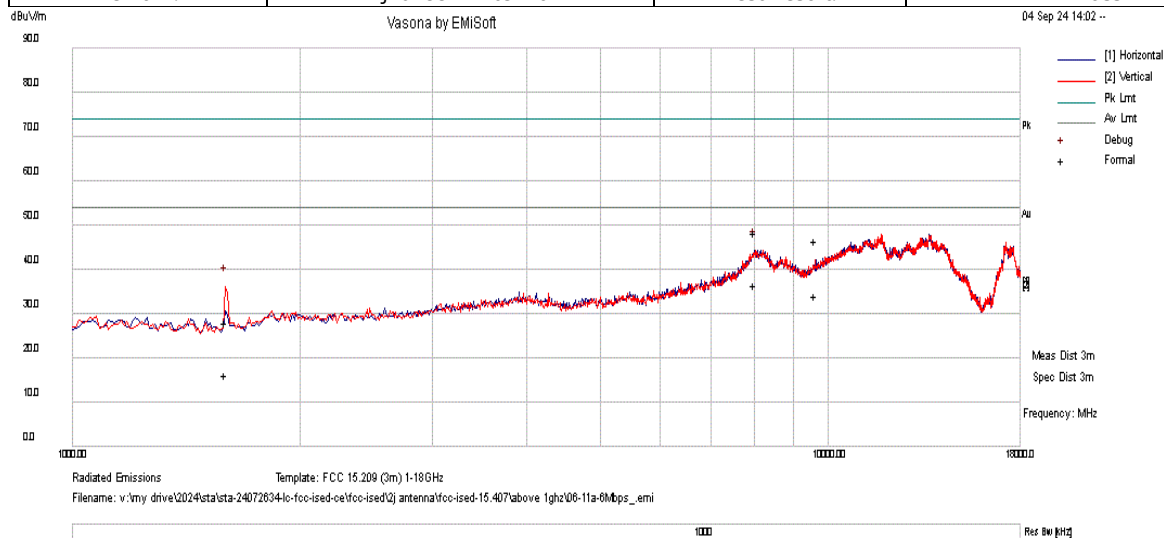
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8001.88	16.44	14.27	15.86	46.57	Peak	V	100	0	54.00	-7.43	Pass
2	1595.0	34.25	5.53	-1.60	38.18	Peak	V	200	0	54.00	-15.82	Pass
3	9033.98	15.74	15.14	11.38	42.25	Peak	H	100	360	54.00	-11.75	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5320MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/04/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



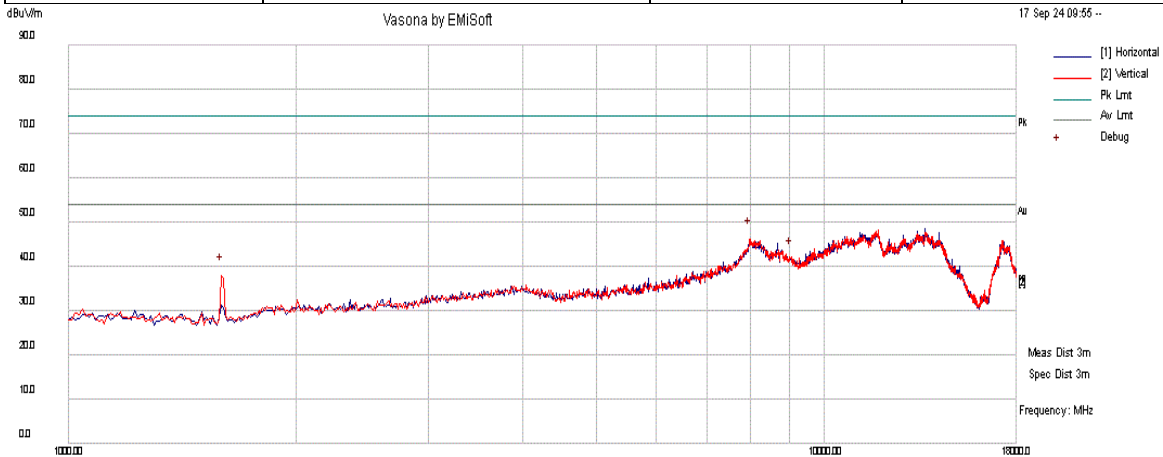
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8000.47	18.10	14.27	15.86	48.23	Peak Max	H	100	62	74.00	-25.77	Pass
2	9648.4	18.37	16.08	11.92	46.37	Peak Max	H	149	150	74.00	-27.63	Pass
3	1596.87	24.15	5.54	-1.59	28.10	Peak Max	V	166	86	74.00	-45.90	Pass
4	8000.47	6.48	14.27	15.86	36.61	Average Max	H	100	62	54.00	-17.39	Pass
5	9648.4	6.13	16.08	11.92	34.13	Average Max	H	149	150	54.00	-19.87	Pass
6	1596.87	12.27	5.54	-1.59	16.21	Average Max	V	166	86	54.00	-37.79	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5320MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



Radiated Emissions
Template: FCC 15.209 (3m) 1-18GHz
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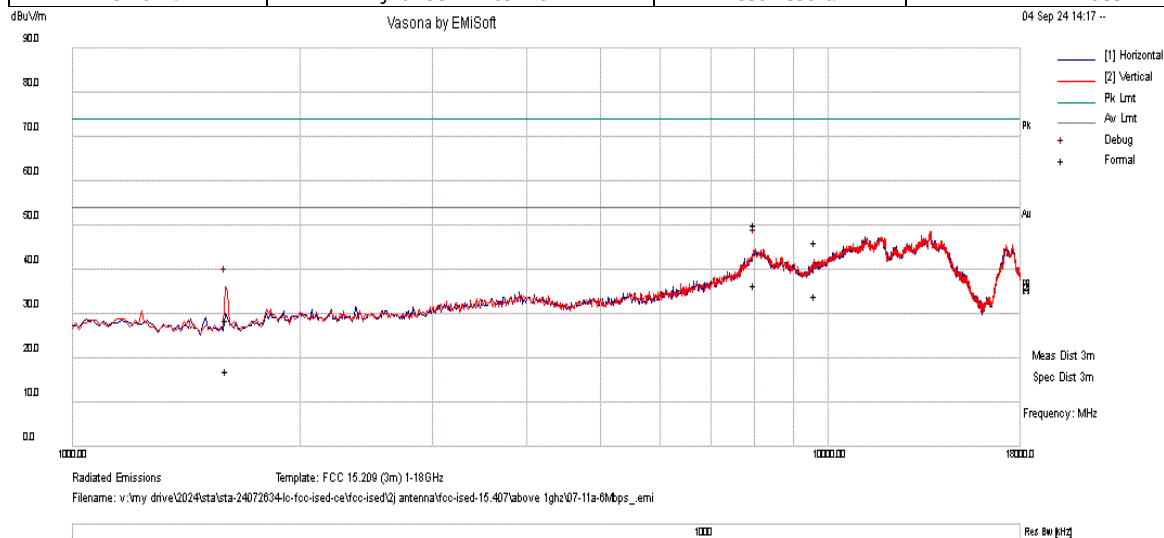
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	7970.0	16.43	14.20	15.43	46.06	Peak	V	200	0	54.00	-7.94	Pass
2	1595.0	33.85	5.53	-1.60	37.78	Peak	V	200	0	54.00	-16.22	Pass
3	9056.16	15.13	15.13	11.30	41.56	Peak	H	100	360	54.00	-12.44	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5500MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/04/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



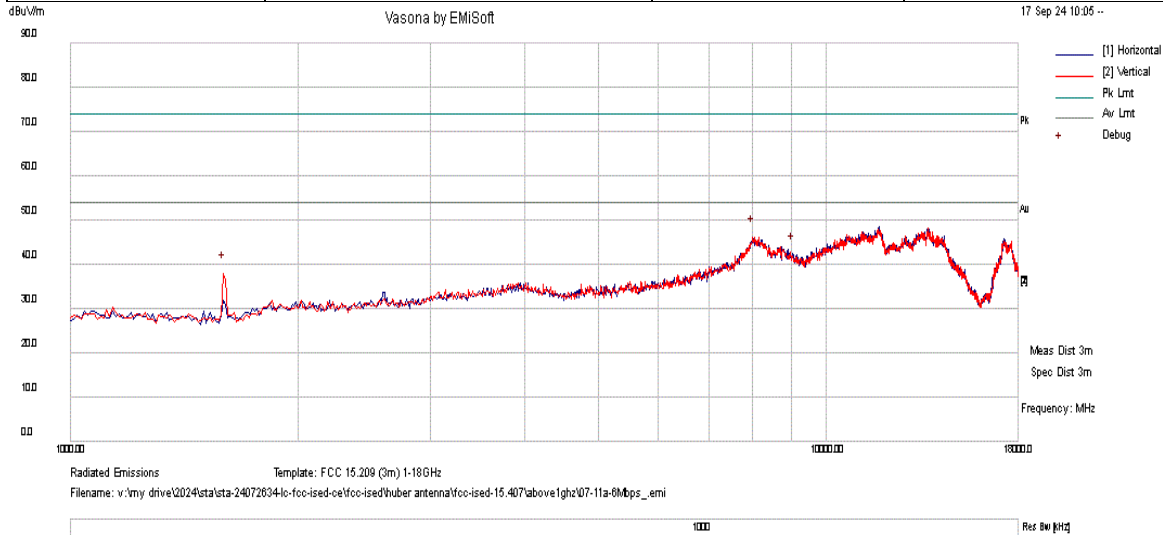
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8013.69	19.87	14.26	15.85	49.98	Peak Max	V	136	34	74.00	-24.02	Pass
2	9625.73	18.24	16.05	11.88	46.18	Peak Max	H	165	0	74.00	-27.82	Pass
3	1599.32	24.70	5.55	-1.58	28.66	Peak Max	H	116	180	74.00	-45.34	Pass
4	8013.69	6.49	14.26	15.85	36.61	Average Max	V	136	34	54.00	-17.39	Pass
5	9625.73	6.12	16.05	11.88	34.06	Average Max	H	165	0	54.00	-19.94	Pass
6	1599.32	13.20	5.55	-1.58	17.16	Average Max	H	116	180	54.00	-36.84	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5500MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



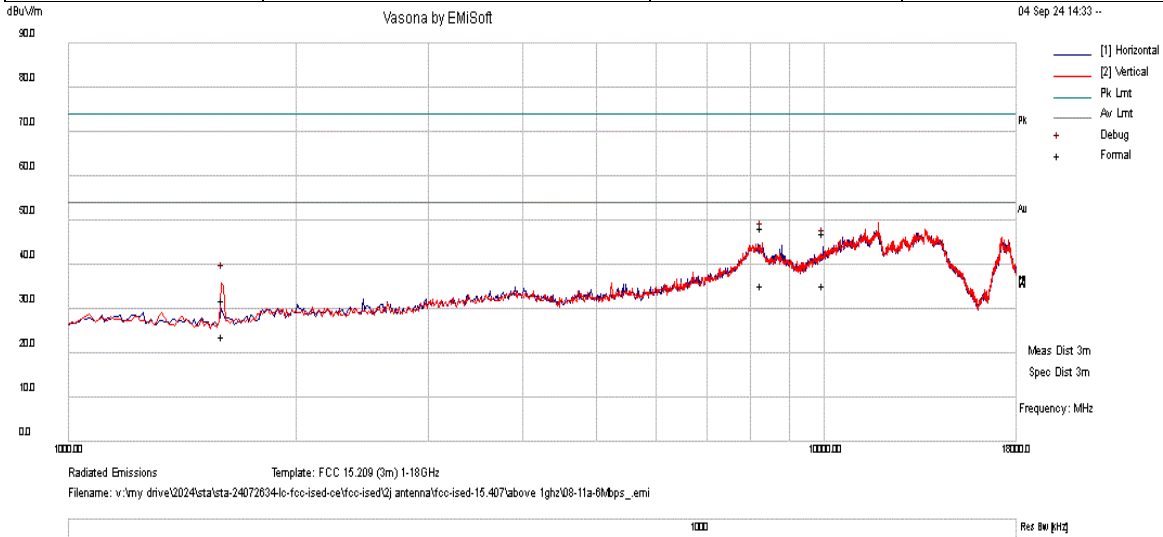
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8001.88	15.88	14.27	15.86	46.00	Peak	V	100	0	54.00	-8.00	Pass
2	1595.0	33.80	5.53	-1.60	37.73	Peak	V	200	0	54.00	-16.27	Pass
3	9037.92	15.60	15.14	11.36	42.10	Peak	H	100	360	54.00	-11.90	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5580MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/04/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



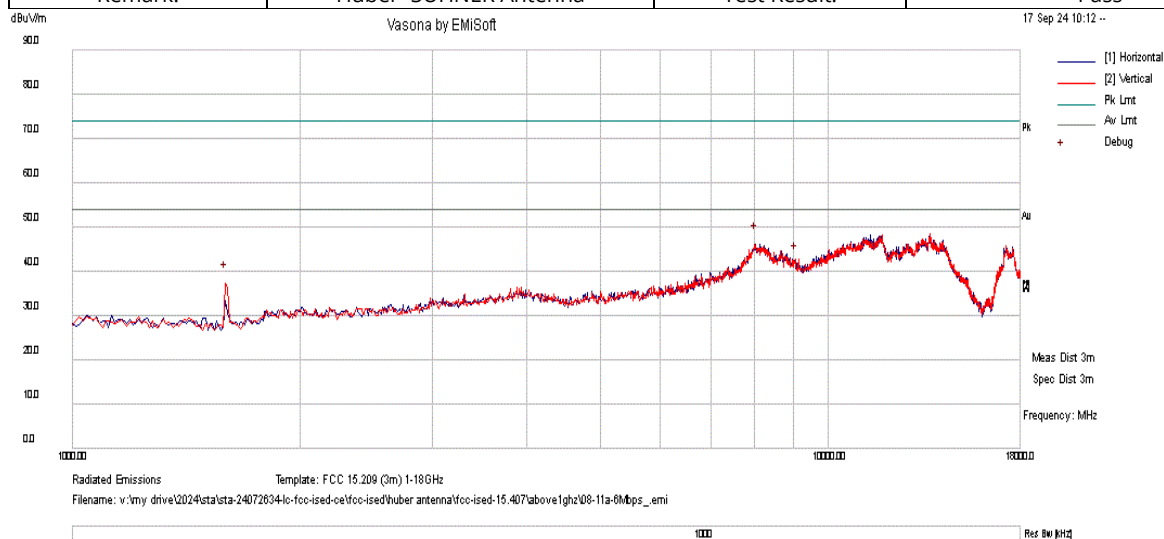
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8287.78	18.91	14.17	15.24	48.32	Peak Max	V	123	175	74.00	-25.68	Pass
2	9991.21	17.66	16.68	12.66	46.99	Peak Max	H	100	166	74.00	-27.01	Pass
3	1599.92	28.06	5.55	-1.58	32.02	Peak Max	H	144	172	74.00	-41.98	Pass
4	8287.78	5.98	14.17	15.24	35.39	Average Max	V	123	175	54.00	-18.61	Pass
5	9991.21	5.95	16.68	12.66	35.28	Average Max	H	100	166	54.00	-18.72	Pass
6	1599.92	19.93	5.55	-1.58	23.90	Average Max	H	144	172	54.00	-30.10	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5580MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



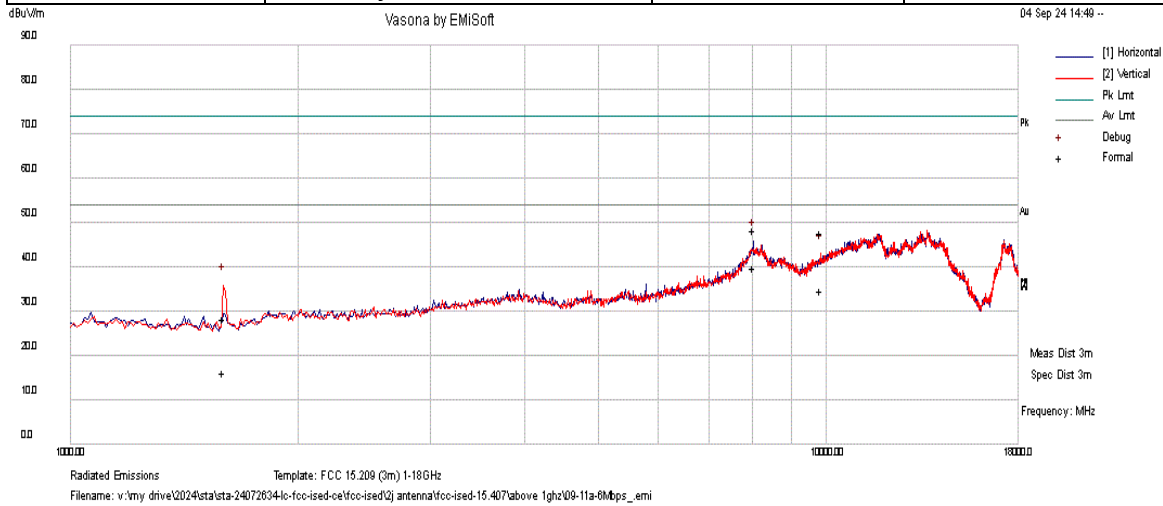
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8023.12	15.99	14.26	15.84	46.10	Peak	H	100	0	54.00	-7.90	Pass
2	1595.0	33.20	5.53	-1.60	37.14	Peak	V	200	0	54.00	-16.86	Pass
3	9086.33	15.28	15.13	11.20	41.61	Peak	H	100	360	54.00	-12.39	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5700MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/04/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



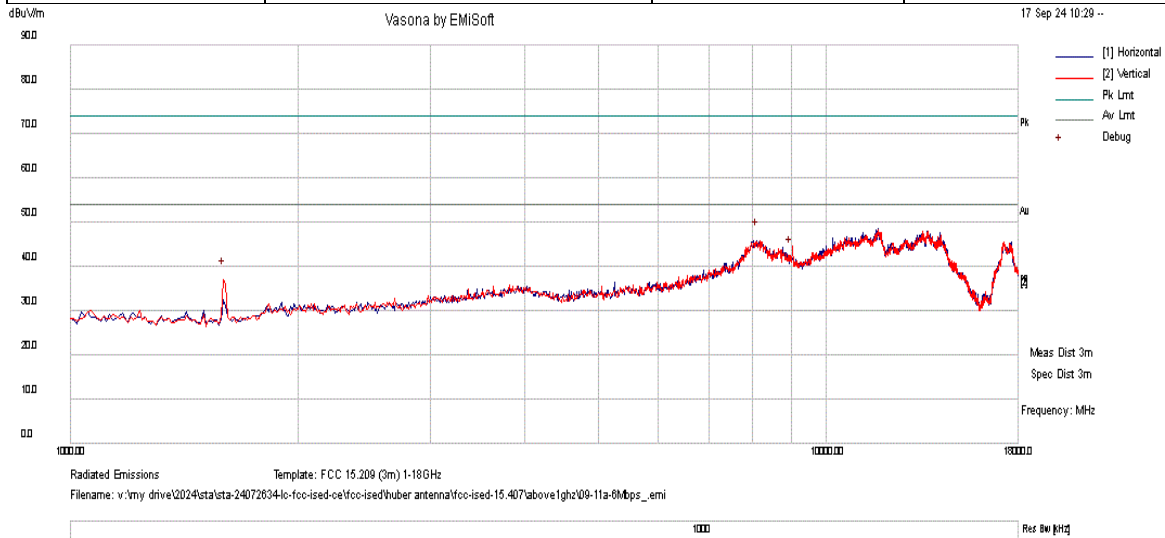
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8023.27	18.21	14.26	15.84	48.32	Peak Max	H	162	174	74.00	-25.69	Pass
2	9863.91	18.69	16.42	12.51	47.63	Peak Max	H	168	54	74.00	-26.37	Pass
3	1593.49	24.31	5.53	-1.61	28.23	Peak Max	V	129	45	74.00	-45.77	Pass
4	8023.27	9.60	14.26	15.84	39.70	Average Max	H	162	174	54.00	-14.30	Pass
5	9863.91	5.83	16.42	12.51	34.76	Average Max	H	168	54	54.00	-19.24	Pass
6	1593.49	12.20	5.53	-1.61	16.12	Average Max	V	129	45	54.00	-37.88	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5700MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



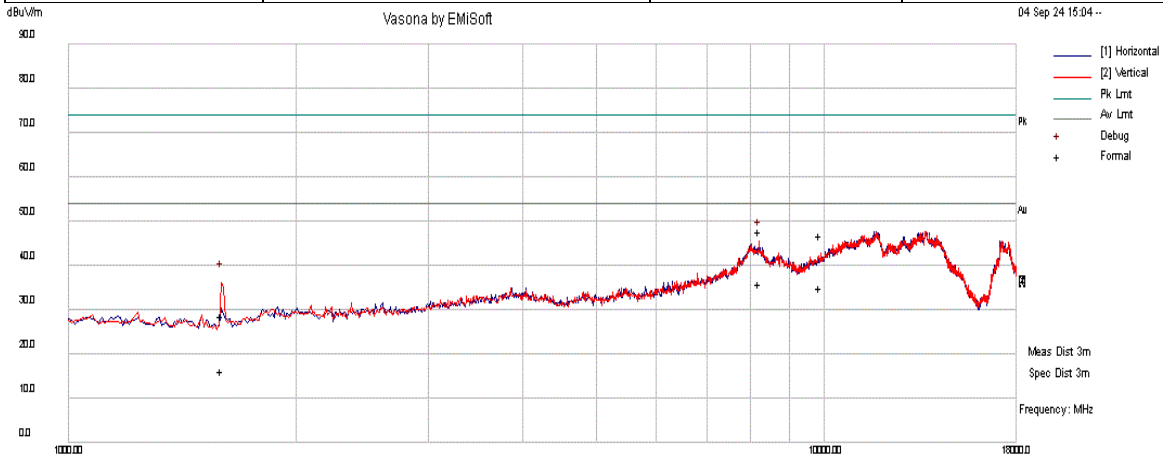
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	1595.0	33.07	5.53	-1.60	37.00	Peak	V	200	0	54.00	-17.00	Pass
2	8107.78	15.77	14.22	15.70	45.70	Peak	H	100	360	54.00	-8.30	Pass
3	9000.32	15.13	15.14	11.51	41.78	Peak	H	100	360	54.00	-12.22	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5745MHZ
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/04/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



Radiated Emissions
Template: FCC 15.209 (3m) 1-18GHz
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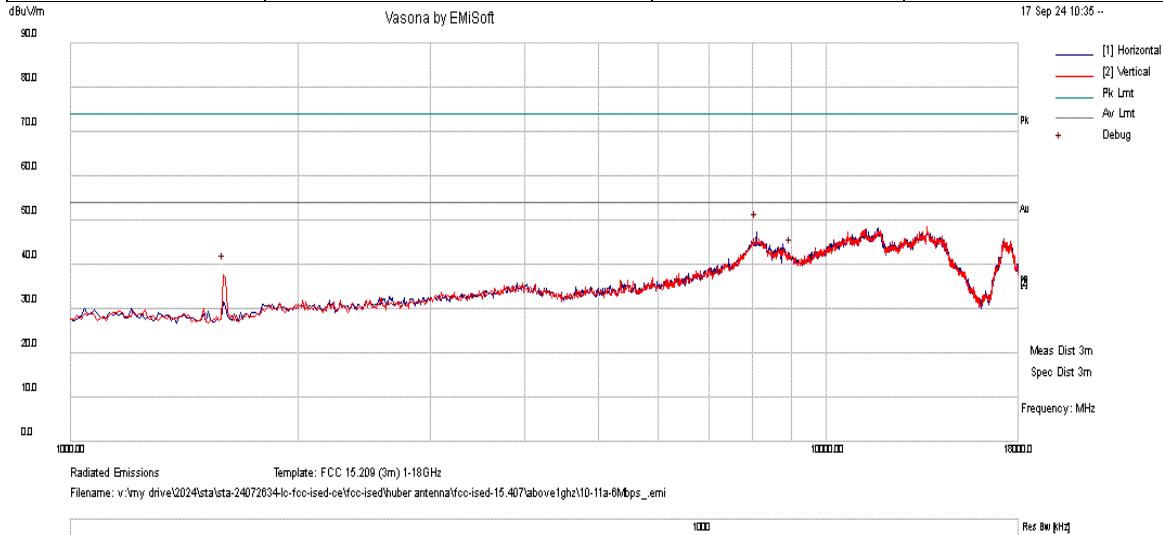
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8212.77	17.80	14.17	15.61	47.58	Peak Max	V	156	2	74.00	-26.42	Pass
2	9906.47	17.79	16.51	12.61	46.91	Peak Max	H	195	167	74.00	-27.09	Pass
3	1596.89	24.69	5.54	-1.59	28.63	Peak Max	V	112	128	74.00	-45.37	Pass
4	8212.77	6.03	14.17	15.61	35.81	Average Max	V	156	2	54.00	-18.19	Pass
5	9906.47	5.92	16.51	12.61	35.03	Average Max	H	195	167	54.00	-18.97	Pass
6	1596.89	12.10	5.54	-1.59	16.04	Average Max	V	112	128	54.00	-37.96	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5745MHZ
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



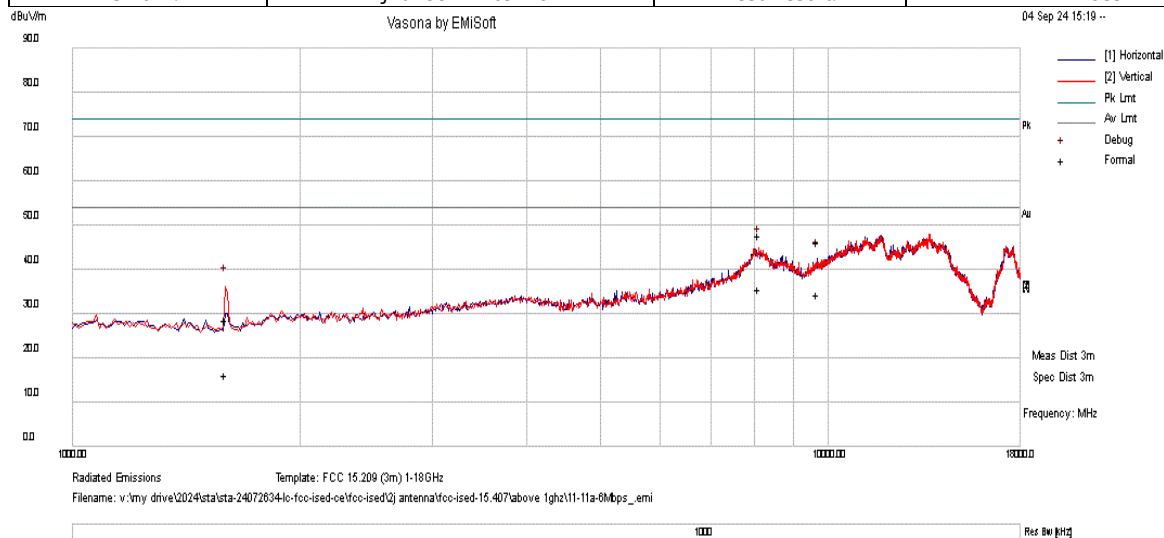
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8097.5	17.15	14.23	15.72	47.10	Peak	H	200	0	54.00	-6.90	Pass
2	1595.0	33.57	5.53	-1.60	37.50	Peak	V	200	0	54.00	-16.50	Pass
3	8983.77	14.47	15.25	11.56	41.28	Peak	H	100	360	54.00	-12.72	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5785MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/04/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



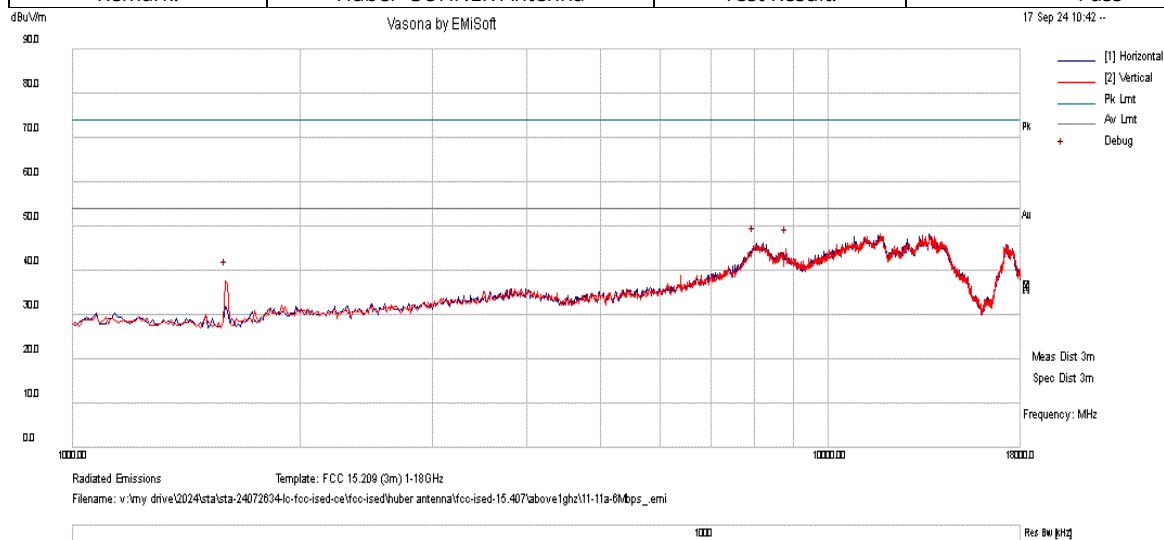
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8107.3	17.76	14.22	15.71	47.69	Peak Max	V	130	14	74.00	-26.31	Pass
2	9694.21	17.90	16.13	12.07	46.10	Peak Max	H	116	173	74.00	-27.90	Pass
3	1596.87	24.58	5.54	-1.59	28.52	Peak Max	V	178	263	74.00	-45.48	Pass
4	8107.3	5.71	14.22	15.71	35.64	Average Max	V	130	14	54.00	-18.36	Pass
5	9694.21	6.01	16.13	12.07	34.21	Average Max	H	116	173	54.00	-19.79	Pass
6	1596.87	12.09	5.54	-1.59	16.03	Average Max	V	178	263	54.00	-37.97	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5785MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



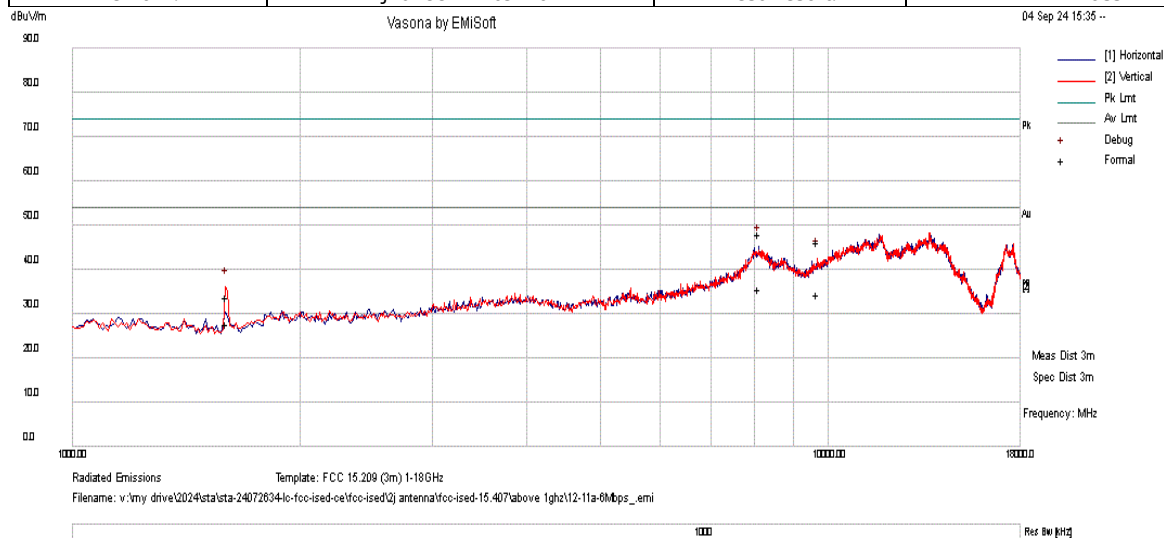
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	1595.0	33.49	5.53	-1.60	37.43	Peak	V	200	0	54.00	-16.58	Pass
2	7972.52	15.55	14.21	15.46	45.22	Peak	H	100	360	54.00	-8.78	Pass
3	8798.68	16.20	16.50	12.00	44.70	Peak	V	100	360	54.00	-9.30	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5825MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/04/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



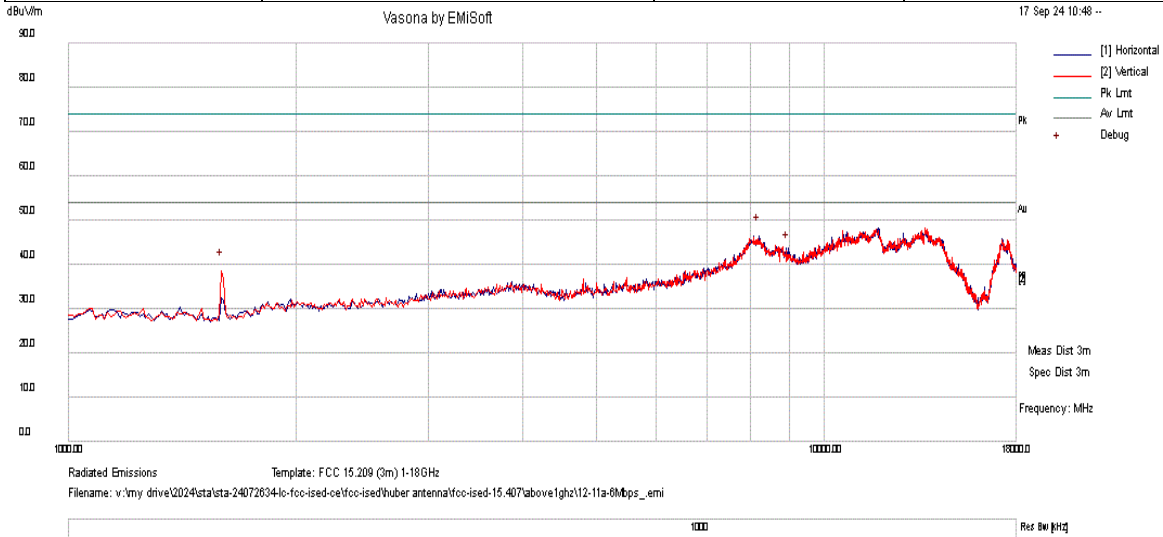
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8106.73	18.03	14.22	15.71	47.96	Peak Max	H	170	86	74.00	-26.04	Pass
2	9704.71	17.81	16.14	12.11	46.06	Peak Max	H	173	121	74.00	-27.94	Pass
3	1600.01	29.76	5.55	-1.58	33.72	Peak Max	H	185	166	74.00	-40.28	Pass
4	8106.73	5.79	14.22	15.71	35.72	Average Max	H	170	86	54.00	-18.28	Pass
5	9704.71	5.98	16.14	12.11	34.23	Average Max	H	173	121	54.00	-19.77	Pass
6	1600.01	23.59	5.55	-1.58	27.55	Average Max	H	185	166	54.00	-26.45	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11a-20M-5825MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



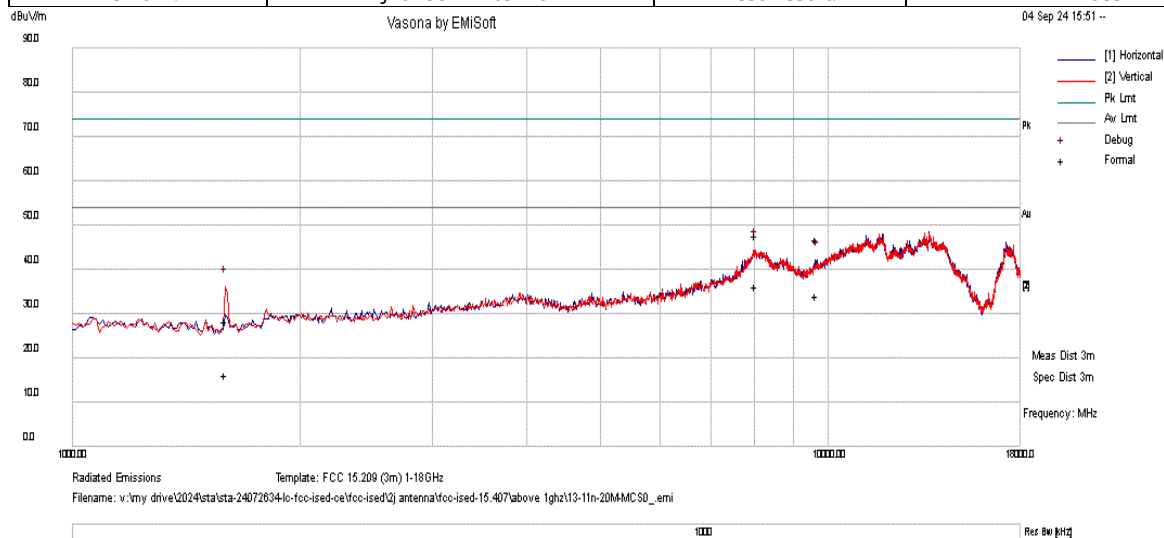
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8203.75	16.43	14.18	15.60	46.22	Peak	H	200	0	54.00	-7.79	Pass
2	1595.0	34.45	5.53	-1.60	38.38	Peak	V	200	0	54.00	-15.62	Pass
3	8962.37	15.26	15.39	11.62	42.27	Peak	H	100	360	54.00	-11.73	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5180MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/04/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



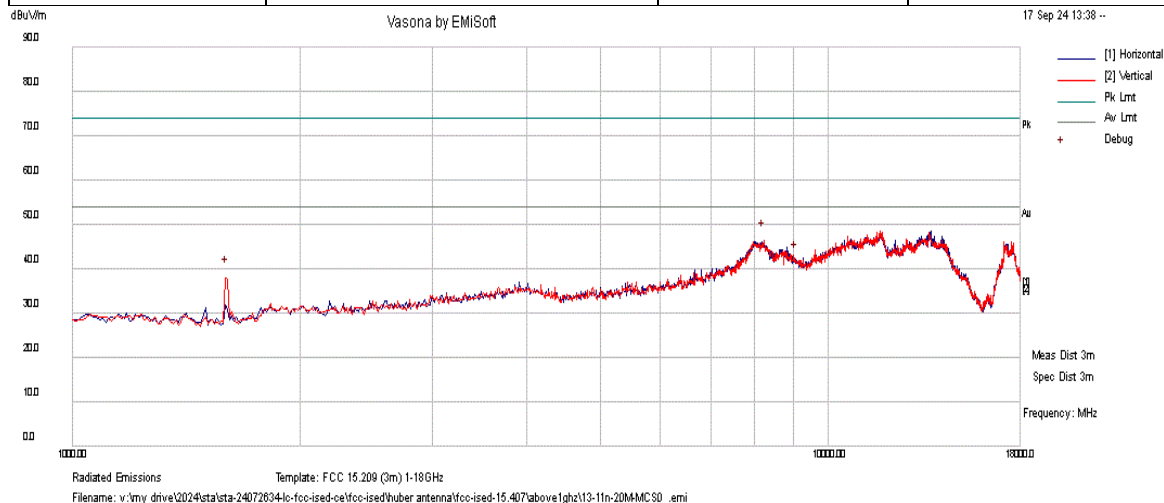
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8032.49	17.65	14.26	15.84	47.75	Peak Max	V	116	181	74.00	-26.26	Pass
2	9683.68	18.58	16.12	12.03	46.73	Peak Max	H	102	20	74.00	-27.27	Pass
3	1593.3	24.24	5.53	-1.61	28.16	Peak Max	V	145	55	74.00	-45.84	Pass
4	8032.49	6.14	14.26	15.84	36.23	Average Max	V	116	181	54.00	-17.77	Pass
5	9683.68	5.93	16.12	12.03	34.08	Average Max	H	102	20	54.00	-19.92	Pass
6	1593.3	12.18	5.53	-1.61	16.10	Average Max	V	145	55	54.00	-37.90	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5180MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



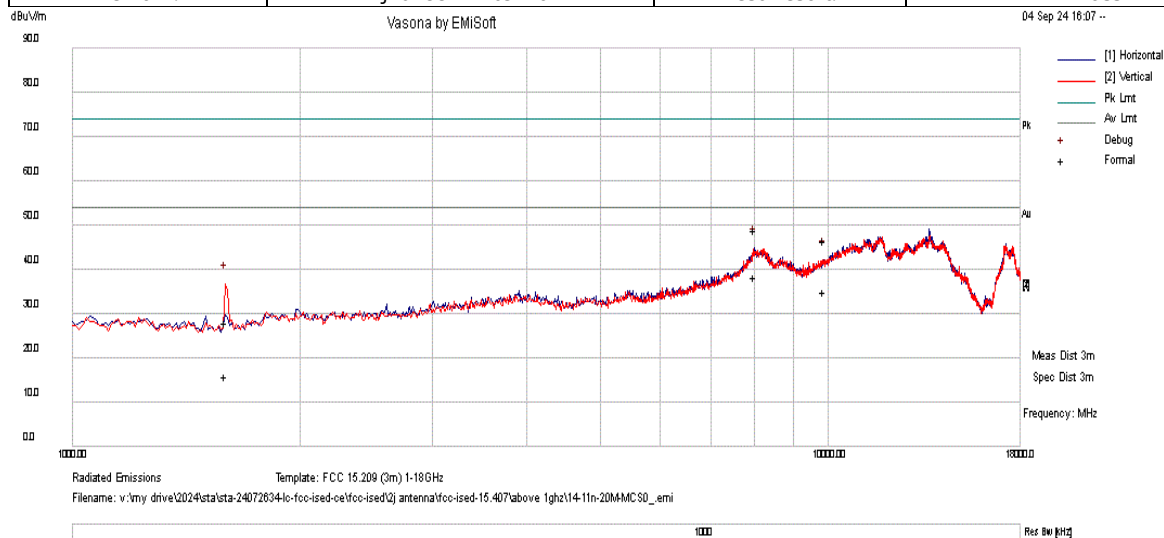
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8235.62	16.42	14.16	15.62	46.20	Peak	V	200	0	54.00	-7.80	Pass
2	1599.68	33.80	5.55	-1.58	37.76	Peak	H	100	360	54.00	-16.24	Pass
3	9068.2	14.92	15.13	11.26	41.31	Peak	H	100	360	54.00	-12.69	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5220MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/04/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



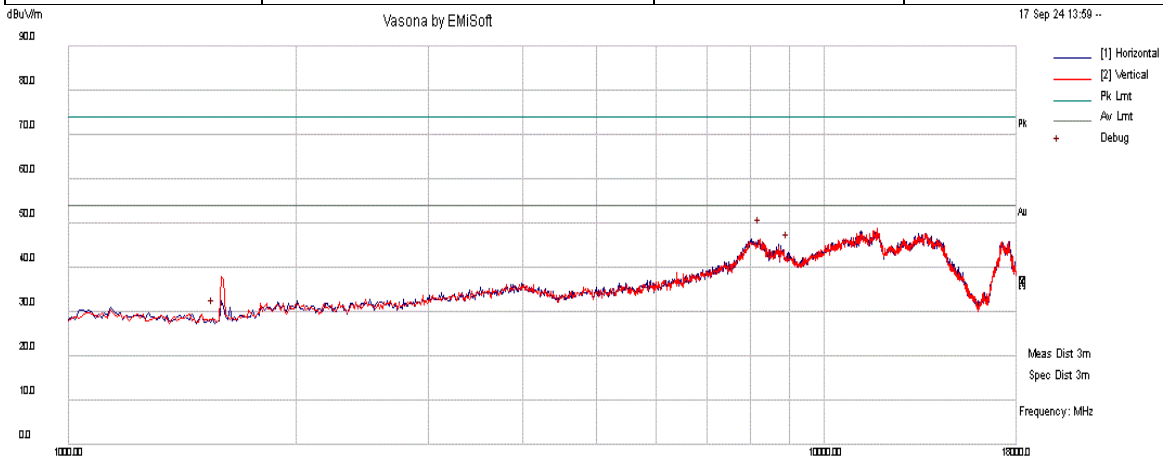
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8001.67	18.63	14.27	15.86	48.76	Peak Max	H	151	150	74.00	-25.24	Pass
2	9893.11	17.56	16.48	12.59	46.63	Peak Max	H	100	134	74.00	-27.37	Pass
3	1596.93	24.14	5.54	-1.59	28.08	Peak Max	V	112	0	74.00	-45.92	Pass
4	8001.67	8.13	14.27	15.86	38.26	Average Max	H	151	150	54.00	-15.74	Pass
5	9893.11	5.93	16.48	12.59	35.00	Average Max	H	100	134	54.00	-19.00	Pass
6	1596.93	12.04	5.54	-1.59	15.98	Average Max	V	112	0	54.00	-38.02	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5220MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



Radiated Emissions
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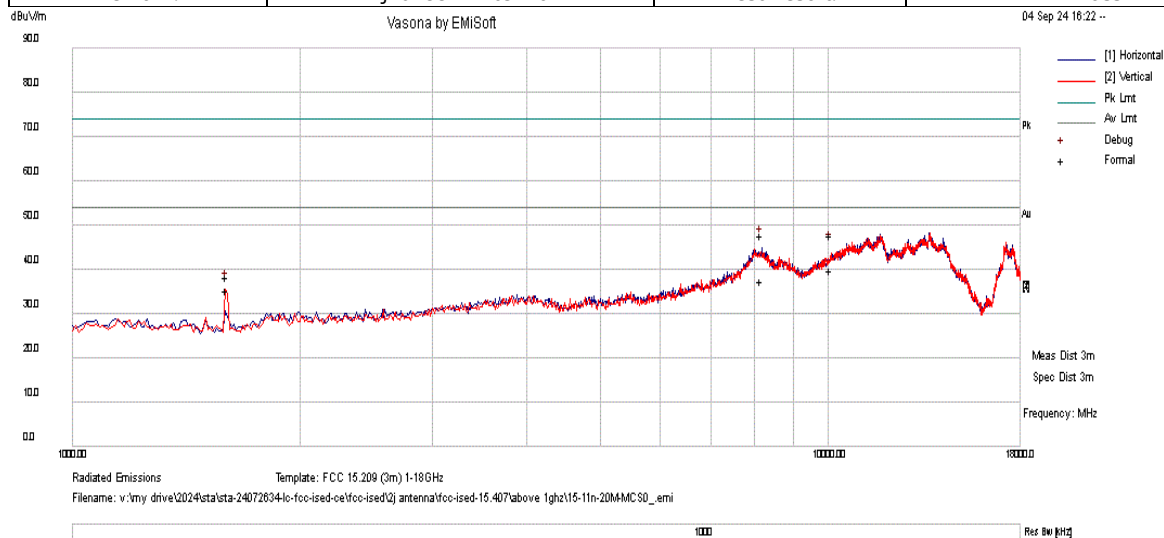
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8235.62	16.64	14.16	15.62	46.43	Peak	V	100	0	54.00	-7.58	Pass
2	1553.27	24.50	5.40	-1.80	28.15	Peak	V	100	360	54.00	-25.90	Pass
3	8969.58	16.15	15.34	11.60	43.09	Peak	H	100	360	54.00	-10.91	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5240MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/04/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



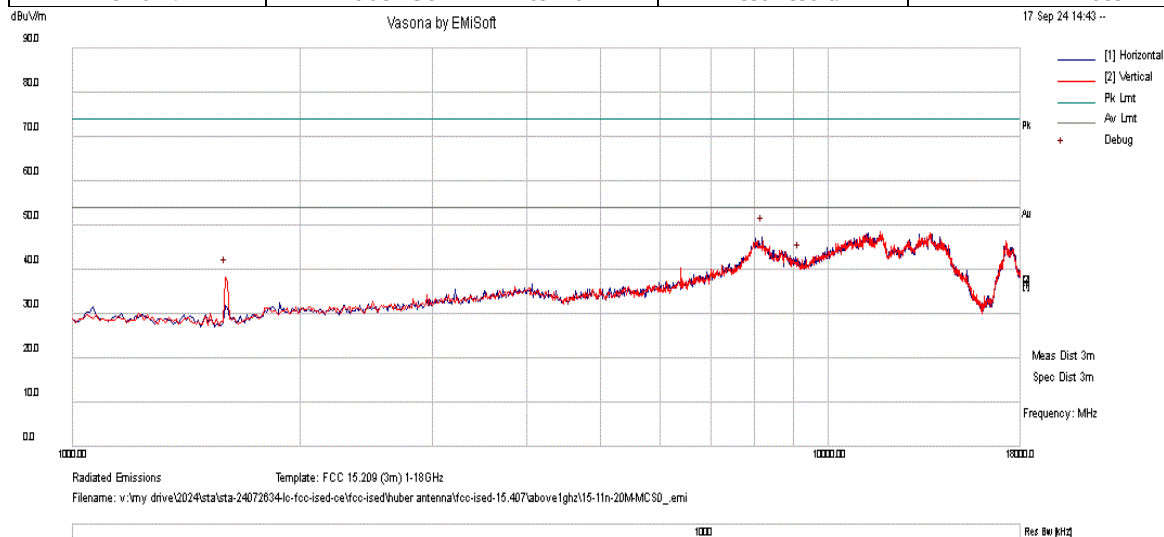
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8173.39	17.85	14.19	15.62	47.67	Peak Max	H	208	34	74.00	-26.34	Pass
2	10105.97	17.67	16.68	13.28	47.63	Peak Max	V	134	180	74.00	-26.37	Pass
3	1599.99	34.37	5.55	-1.58	38.34	Peak Max	V	178	30	74.00	-35.66	Pass
4	8173.39	7.46	14.19	15.62	37.27	Average Max	H	208	34	54.00	-16.73	Pass
5	10105.97	9.80	16.68	13.28	39.76	Average Max	V	134	180	54.00	-14.24	Pass
6	1599.99	31.22	5.55	-1.58	35.18	Average Max	V	178	30	54.00	-18.82	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5240MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



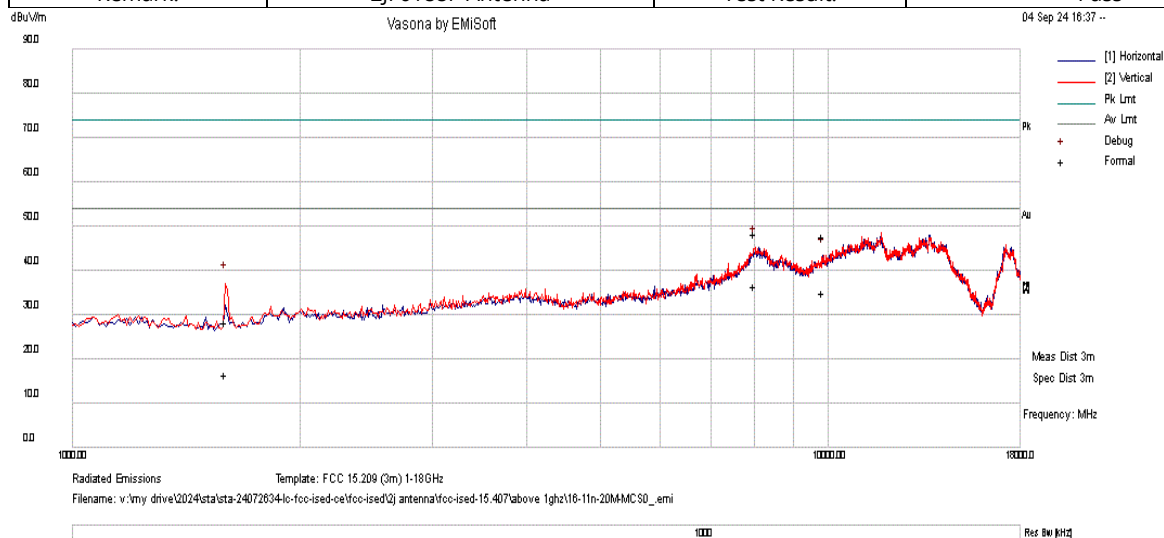
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8182.5	17.33	14.19	15.61	47.13	Peak	H	100	0	54.00	-6.87	Pass
2	1595.0	34.05	5.53	-1.60	37.98	Peak	V	200	0	54.00	-16.02	Pass
3	9158.58	15.15	15.12	11.05	41.33	Peak	H	100	360	54.00	-12.67	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5260MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/04/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



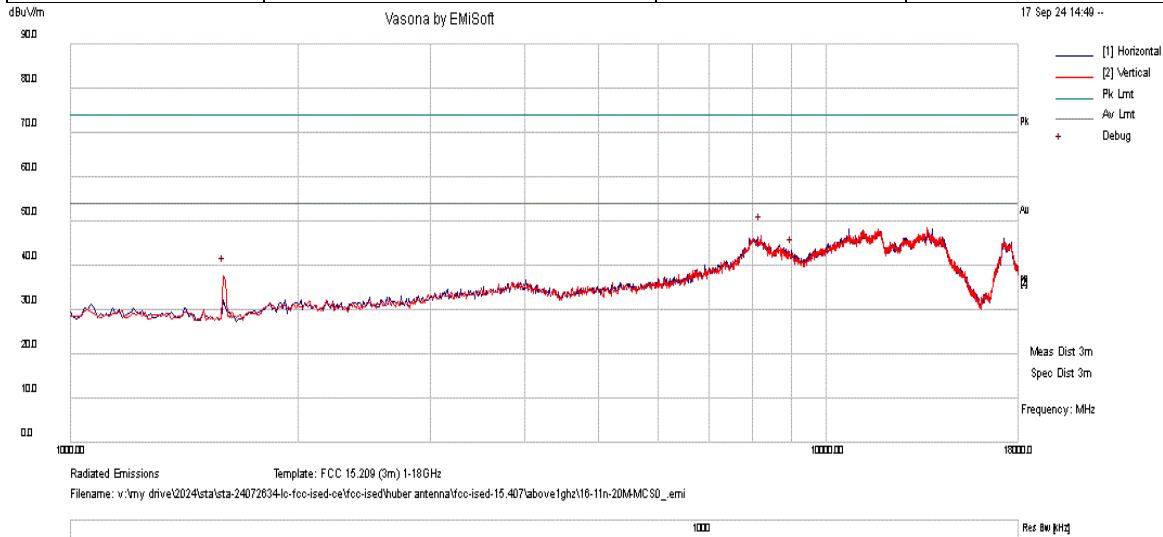
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8013.06	18.04	14.26	15.85	48.15	Peak Max	V	136	160	74.00	-25.85	Pass
2	9850.67	18.73	16.39	12.48	47.60	Peak Max	H	131	43	74.00	-26.40	Pass
3	1593.53	24.24	5.53	-1.61	28.16	Peak Max	V	117	60	74.00	-45.84	Pass
4	8013.06	6.42	14.26	15.85	36.53	Average Max	V	136	160	54.00	-17.47	Pass
5	9850.67	5.97	16.39	12.48	34.85	Average Max	H	131	43	54.00	-19.15	Pass
6	1593.53	12.58	5.53	-1.61	16.50	Average Max	V	117	60	54.00	-37.50	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5260MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



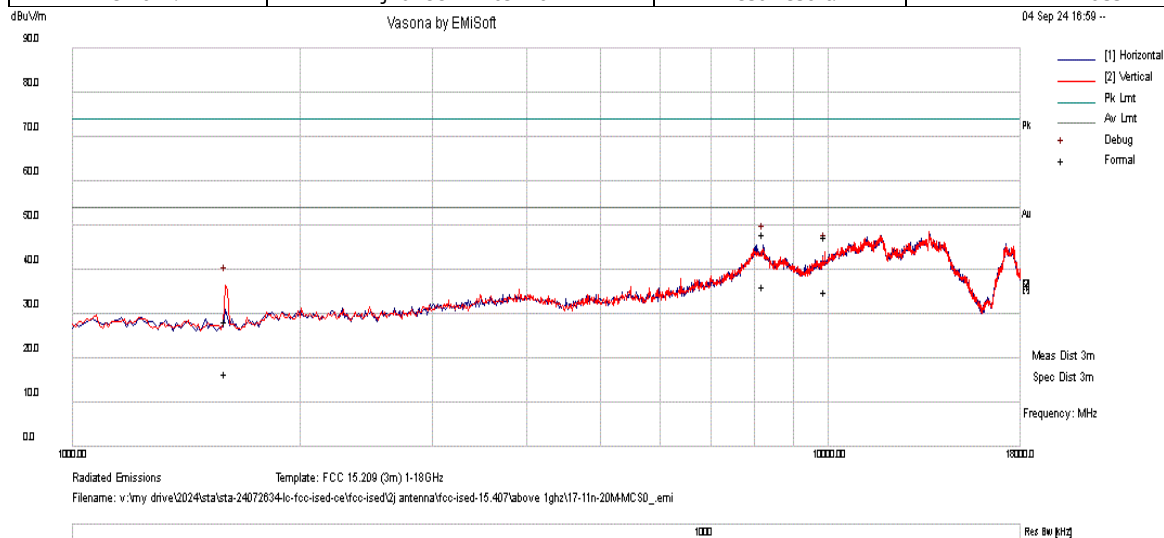
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8203.75	16.73	14.18	15.60	46.51	Peak	V	100	0	54.00	-7.49	Pass
2	1597.61	33.20	5.50	-1.60	37.17	Peak	V	100	360	54.00	-16.80	Pass
3	9008.45	14.99	15.14	11.48	41.61	Peak	H	100	360	54.00	-12.39	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5300MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



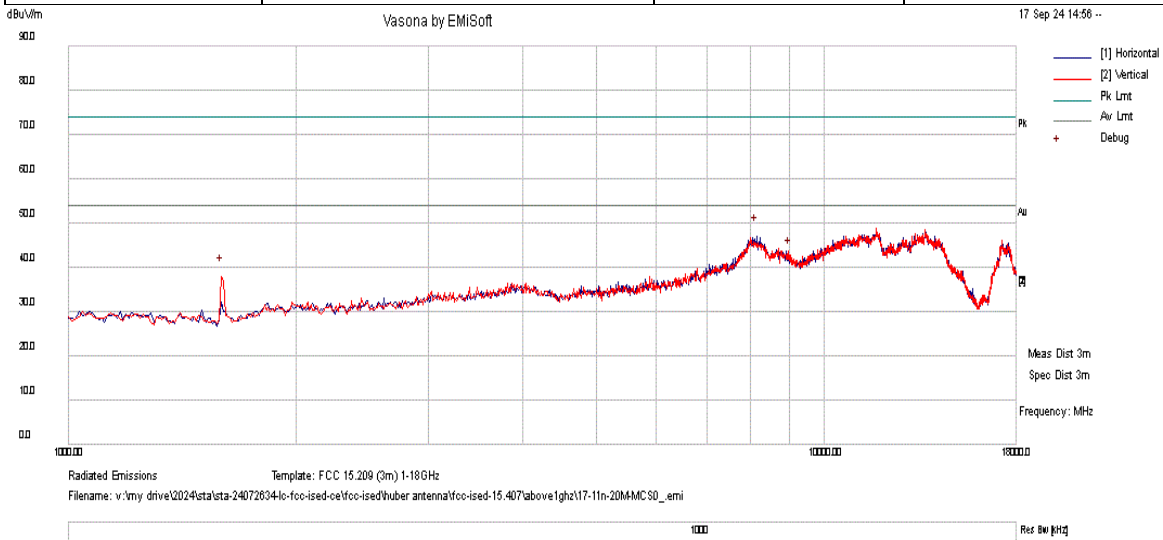
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8214.21	18.25	14.17	15.61	48.03	Peak Max	H	128	58	74.00	-25.97	Pass
2	9914.5	18.31	16.52	12.61	47.45	Peak Max	H	122	56	74.00	-26.55	Pass
3	1594.38	24.43	5.53	-1.60	28.35	Peak Max	V	183	62	74.00	-45.65	Pass
4	8214.21	6.29	14.17	15.61	36.07	Average Max	H	128	58	54.00	-17.93	Pass
5	9914.5	5.96	16.52	12.61	35.09	Average Max	H	122	56	54.00	-18.91	Pass
6	1594.38	12.61	5.53	-1.60	16.54	Average Max	V	183	62	54.00	-37.46	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5300MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



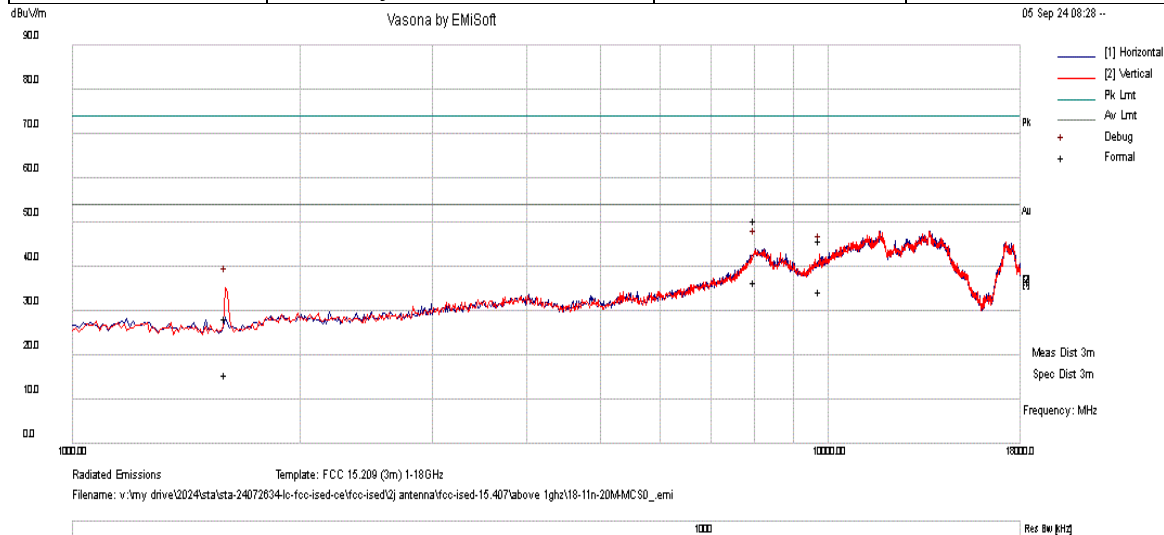
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8150.62	17.12	14.20	15.64	46.95	Peak	H	100	0	54.00	-7.05	Pass
2	1595.0	33.87	5.53	-1.60	37.80	Peak	V	200	0	54.00	-16.20	Pass
3	9008.45	15.09	15.14	11.48	41.71	Peak	H	100	360	54.00	-12.29	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5320MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



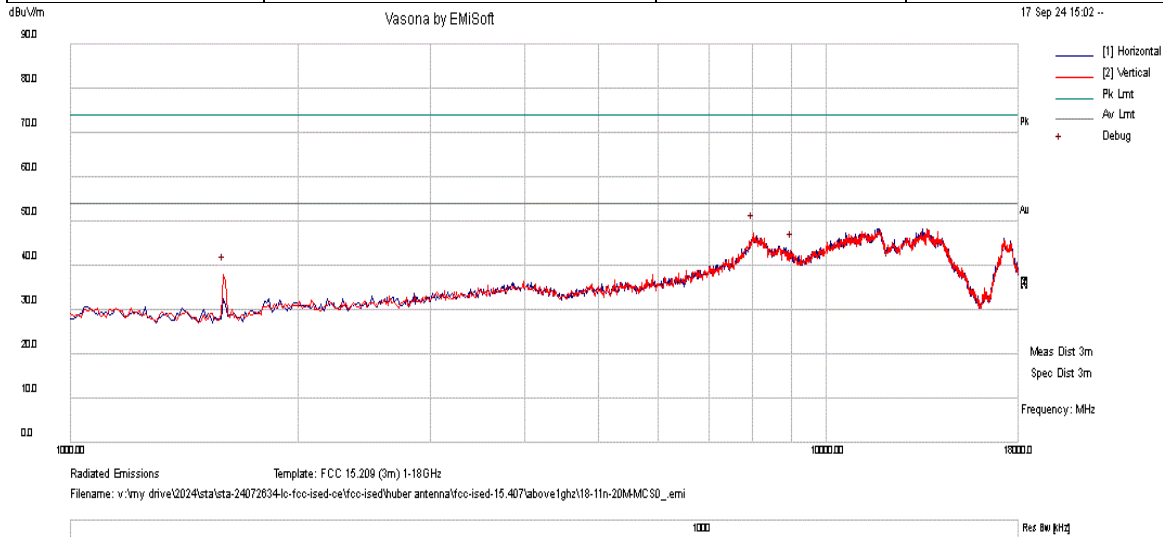
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8012.2	20.17	14.26	15.85	50.29	Peak Max	H	206	56	74.00	-23.72	Pass
2	9766.22	17.14	16.22	12.36	45.73	Peak Max	H	176	70	74.00	-28.27	Pass
3	1593.94	24.23	5.53	-1.60	28.16	Peak Max	V	100	131	74.00	-45.84	Pass
4	8012.2	6.26	14.26	15.85	36.38	Average Max	H	206	56	54.00	-17.63	Pass
5	9766.22	5.66	16.22	12.36	34.25	Average Max	H	176	70	54.00	-19.75	Pass
6	1593.94	11.57	5.53	-1.60	15.49	Average Max	V	100	131	54.00	-38.51	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5320MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



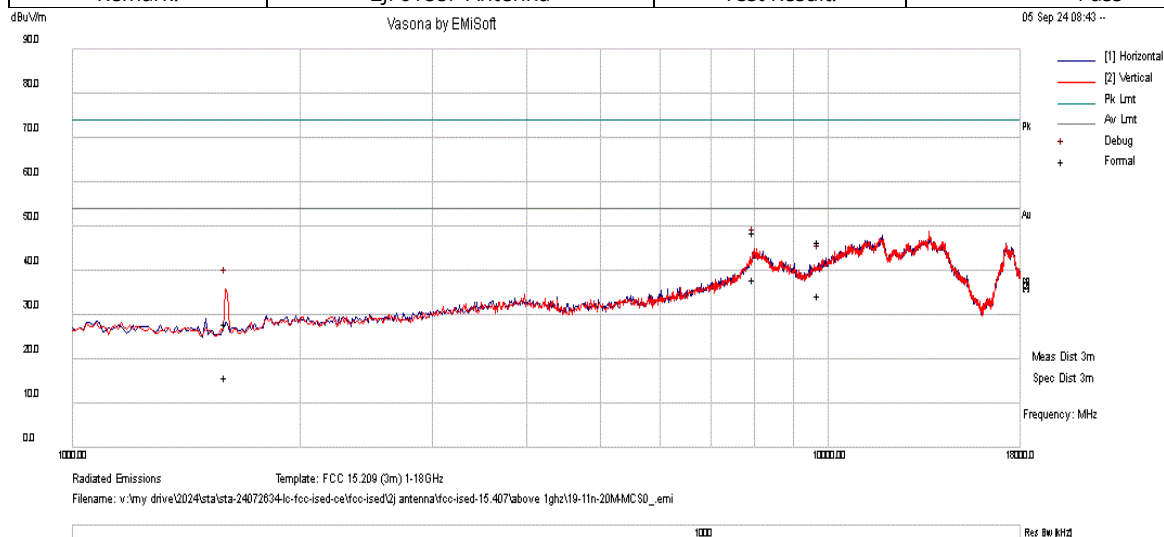
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8012.5	16.95	14.26	15.85	47.07	Peak	V	100	0	54.00	-6.93	Pass
2	1595.0	33.74	5.53	-1.60	37.67	Peak	V	200	0	54.00	-16.33	Pass
3	9023.81	16.25	15.14	11.42	42.80	Peak	H	100	360	54.00	-11.20	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5500MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



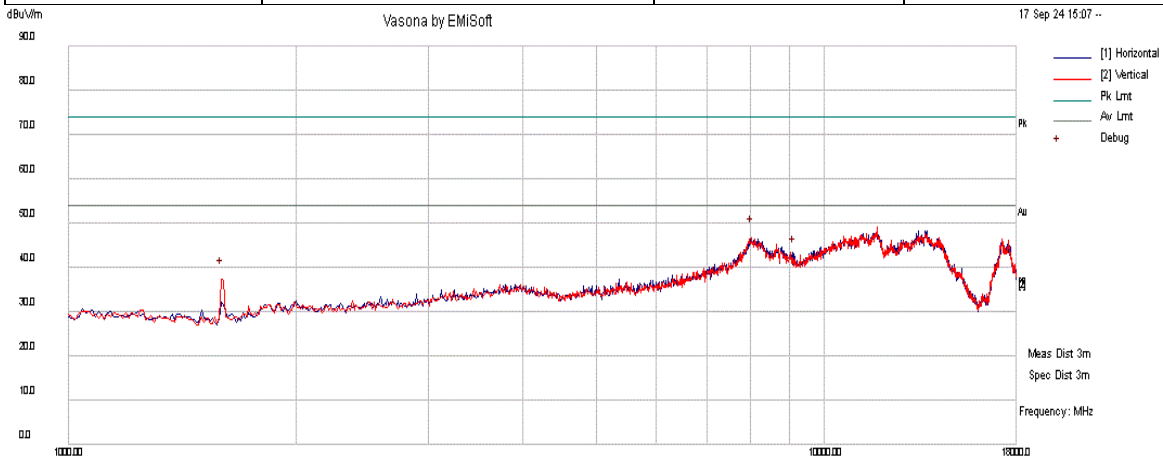
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	7993.13	18.48	14.25	15.76	48.49	Peak Max	V	123	44	74.00	-25.51	Pass
2	9746.82	18.00	16.19	12.32	46.51	Peak Max	V	194	122	74.00	-27.49	Pass
3	1593.53	24.14	5.53	-1.61	28.06	Peak Max	V	159	111	74.00	-45.94	Pass
4	7993.13	8.04	14.25	15.76	38.05	Average Max	V	123	44	54.00	-15.95	Pass
5	9746.82	5.73	16.19	12.32	34.24	Average Max	V	194	122	54.00	-19.76	Pass
6	1593.53	11.99	5.53	-1.61	15.91	Average Max	V	159	111	54.00	-38.09	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5500MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



Radiated Emissions Template: FCC 15.209 (3m) 1-18GHz
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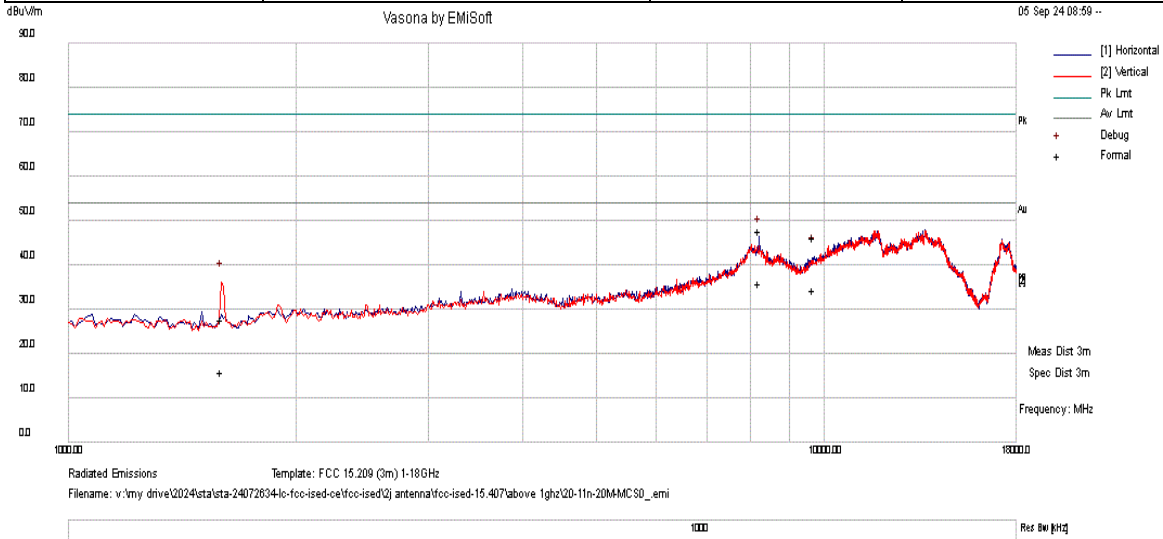
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8023.12	16.59	14.26	15.84	46.69	Peak	V	200	0	54.00	-7.31	Pass
2	1596.38	33.35	5.54	-1.59	37.29	Peak	H	100	360	54.00	-16.71	Pass
3	9128.35	15.82	15.13	11.11	42.06	Peak	H	100	360	54.00	-11.94	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5580MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



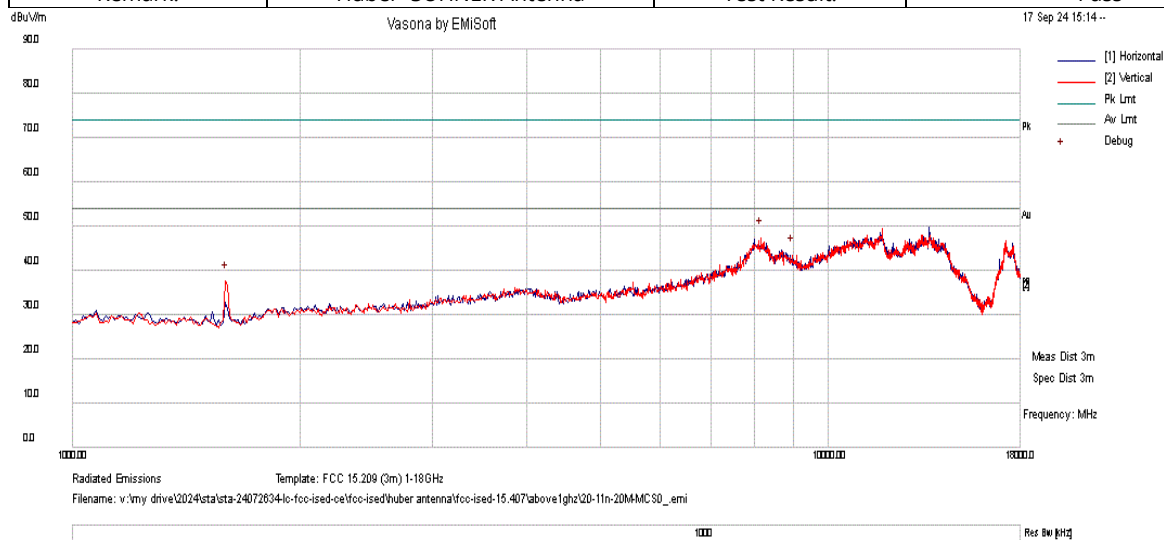
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8214.11	17.91	14.17	15.61	47.69	Peak Max	H	110	42	74.00	-26.31	Pass
2	9710.7	18.03	16.15	12.14	46.32	Peak Max	H	149	180	74.00	-27.68	Pass
3	1594.88	23.64	5.53	-1.60	27.57	Peak Max	H	100	167	74.00	-46.43	Pass
4	8214.11	6.00	14.17	15.61	35.78	Average Max	H	110	42	54.00	-18.22	Pass
5	9710.7	5.95	16.15	12.14	34.24	Average Max	H	149	180	54.00	-19.76	Pass
6	1594.88	11.93	5.53	-1.60	15.87	Average Max	H	100	167	54.00	-38.13	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5580MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



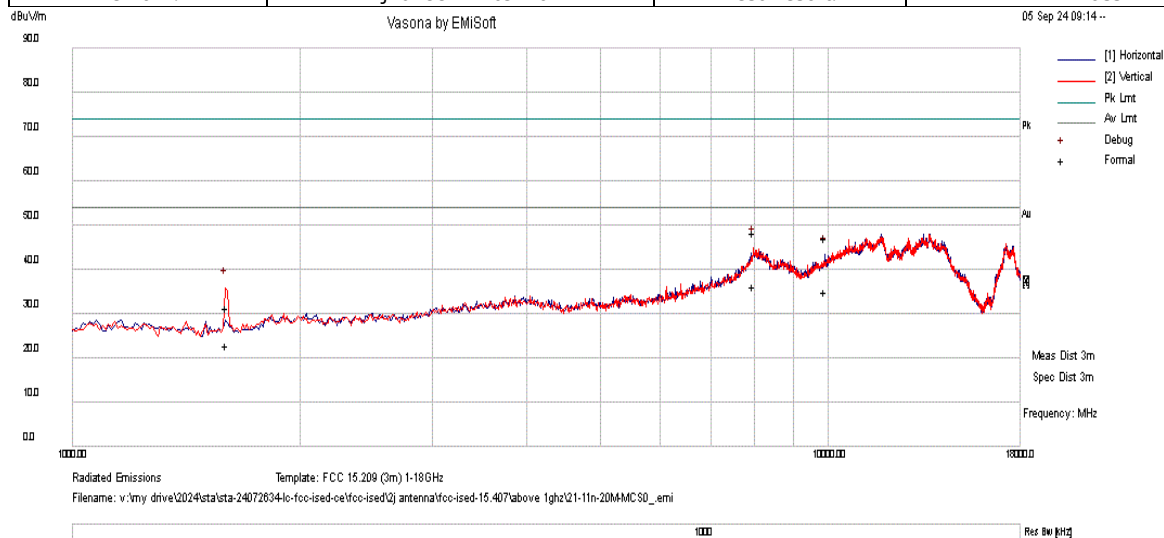
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8161.25	17.23	14.20	15.63	47.05	Peak	V	100	0	54.00	-6.95	Pass
2	1599.42	33.13	5.55	-1.58	37.09	Peak	H	100	360	54.00	-16.91	Pass
3	8980.68	16.29	15.27	11.57	43.13	Peak	H	100	360	54.00	-10.87	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5700MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



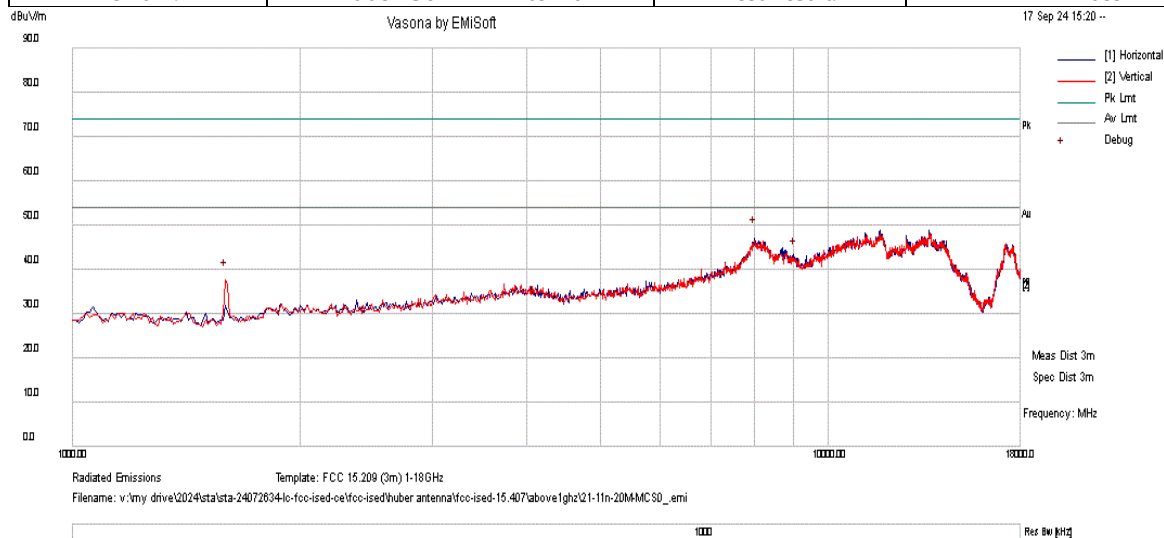
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	7971.1	18.74	14.21	15.44	48.39	Peak Max	V	180	166	74.00	-25.61	Pass
2	9929.37	17.97	16.55	12.62	47.15	Peak Max	H	207	106	74.00	-26.85	Pass
3	1599.34	27.31	5.55	-1.58	31.28	Peak Max	V	112	52	74.00	-42.73	Pass
4	7971.1	6.38	14.21	15.44	36.03	Average Max	V	180	166	54.00	-17.97	Pass
5	9929.37	5.77	16.55	12.62	34.95	Average Max	H	207	106	54.00	-19.06	Pass
6	1599.34	18.84	5.55	-1.58	22.80	Average Max	V	112	52	54.00	-31.20	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5700MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



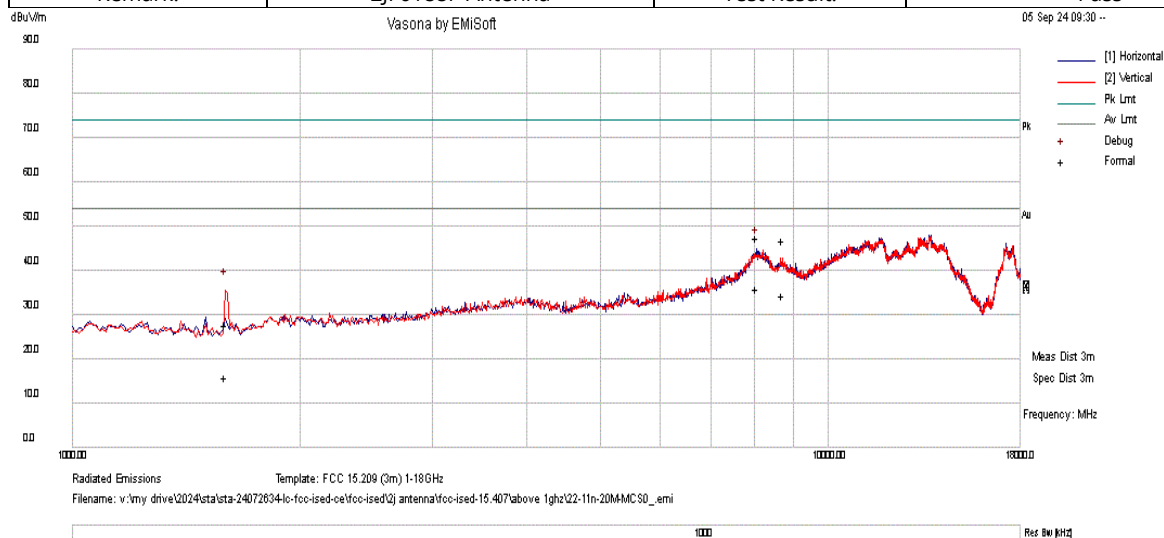
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8001.88	16.72	14.27	15.86	46.84	Peak	H	200	0	54.00	-7.16	Pass
2	1596.74	33.44	5.54	-1.59	37.38	Peak	H	100	360	54.00	-16.62	Pass
3	9035.95	15.55	15.14	11.37	42.06	Peak	H	100	360	54.00	-11.94	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5745MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



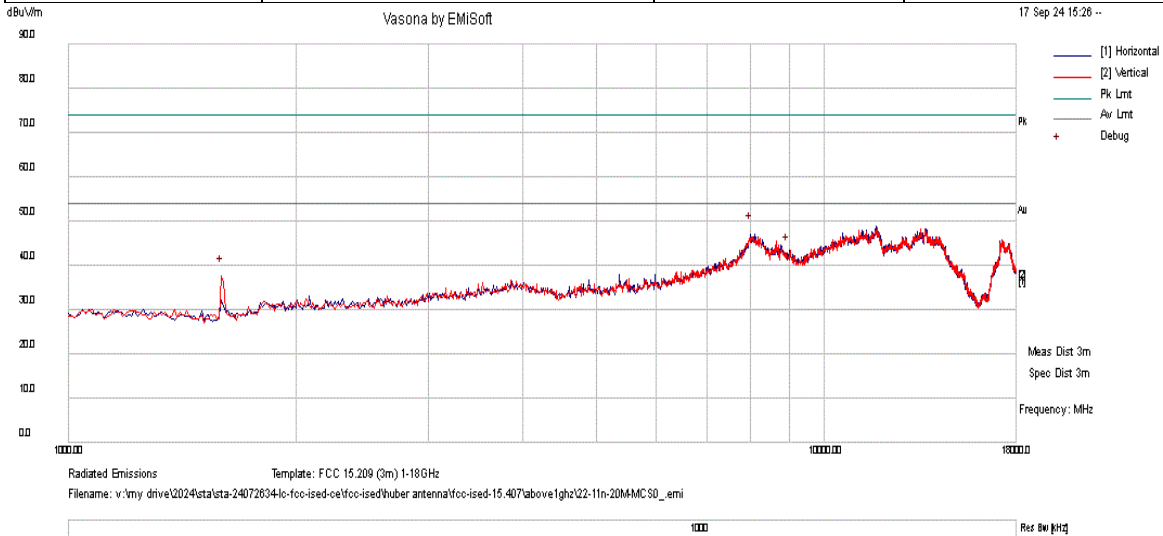
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8056.66	17.41	14.24	15.81	47.46	Peak Max	H	174	0	74.00	-26.54	Pass
2	8727.25	18.00	16.59	12.12	46.71	Peak Max	H	123	151	74.00	-27.29	Pass
3	1593.48	23.68	5.53	-1.61	27.60	Peak Max	V	126	31	74.00	-46.40	Pass
4	8056.66	5.85	14.24	15.81	35.90	Average Max	H	174	0	54.00	-18.10	Pass
5	8727.25	5.52	16.59	12.12	34.23	Average Max	H	123	151	54.00	-19.77	Pass
6	1593.48	11.91	5.53	-1.61	15.83	Average Max	V	126	31	54.00	-38.17	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5745MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



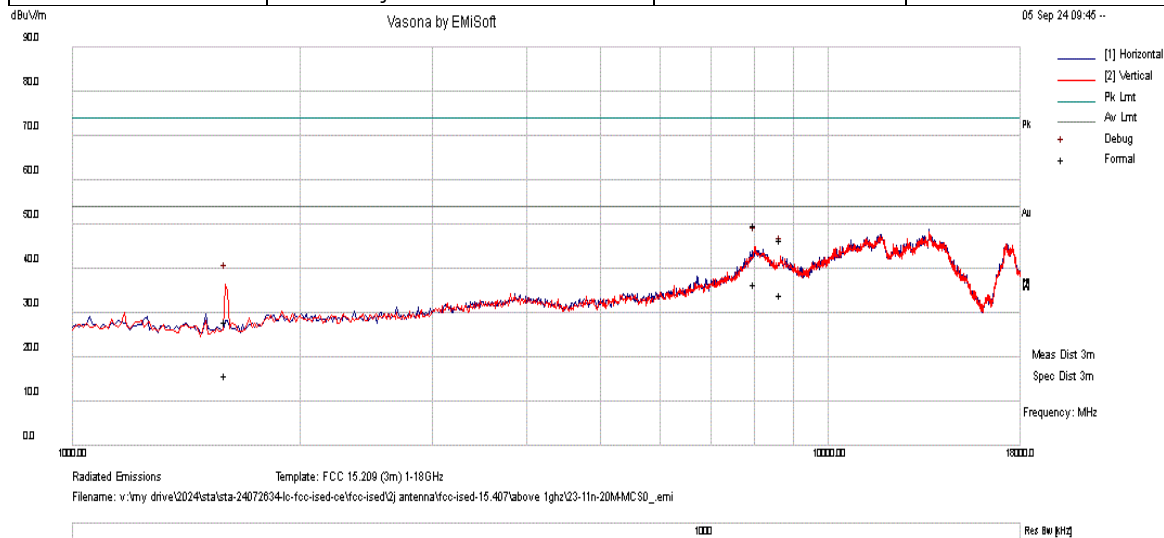
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8001.88	16.87	14.27	15.86	47.00	Peak	H	200	0	54.00	-7.00	Pass
2	1596.21	33.33	5.54	-1.60	37.27	Peak	H	100	360	54.00	-16.73	Pass
3	8949.09	14.93	15.48	11.66	42.07	Peak	H	100	360	54.00	-11.93	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5785MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



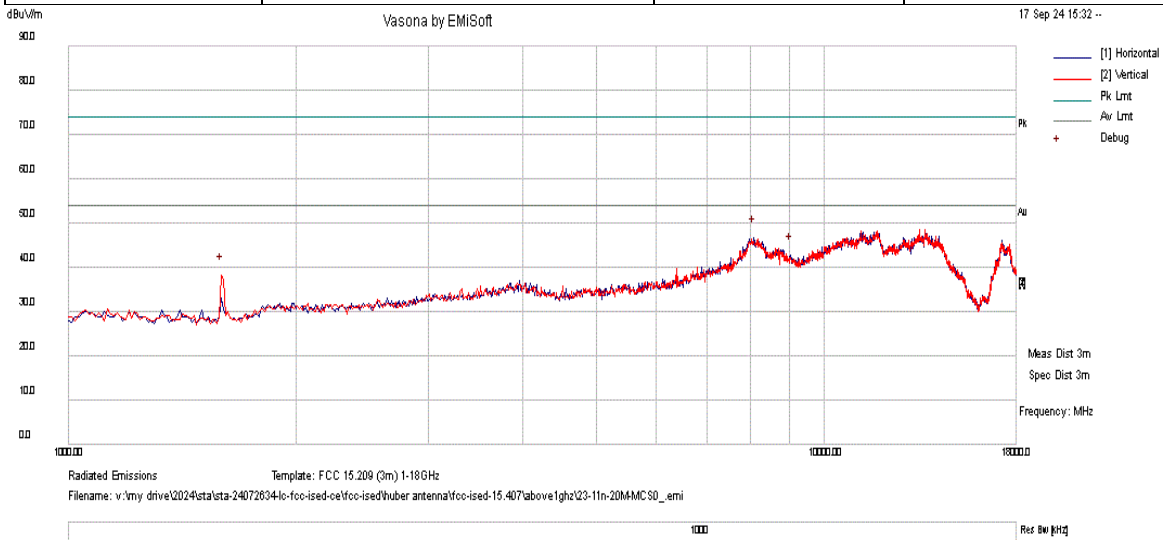
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8001.0	19.76	14.27	15.86	49.89	Peak Max	V	121	48	74.00	-24.11	Pass
2	8673.98	18.15	16.04	12.30	46.49	Peak Max	V	113	155	74.00	-27.51	Pass
3	1595.25	24.20	5.53	-1.60	28.13	Peak Max	V	131	140	74.00	-45.87	Pass
4	8001.0	6.36	14.27	15.86	36.49	Average Max	V	121	48	54.00	-17.51	Pass
5	8673.98	5.78	16.04	12.30	34.12	Average Max	V	113	155	54.00	-19.88	Pass
6	1595.25	12.09	5.53	-1.60	16.02	Average Max	V	131	140	54.00	-37.98	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5785
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



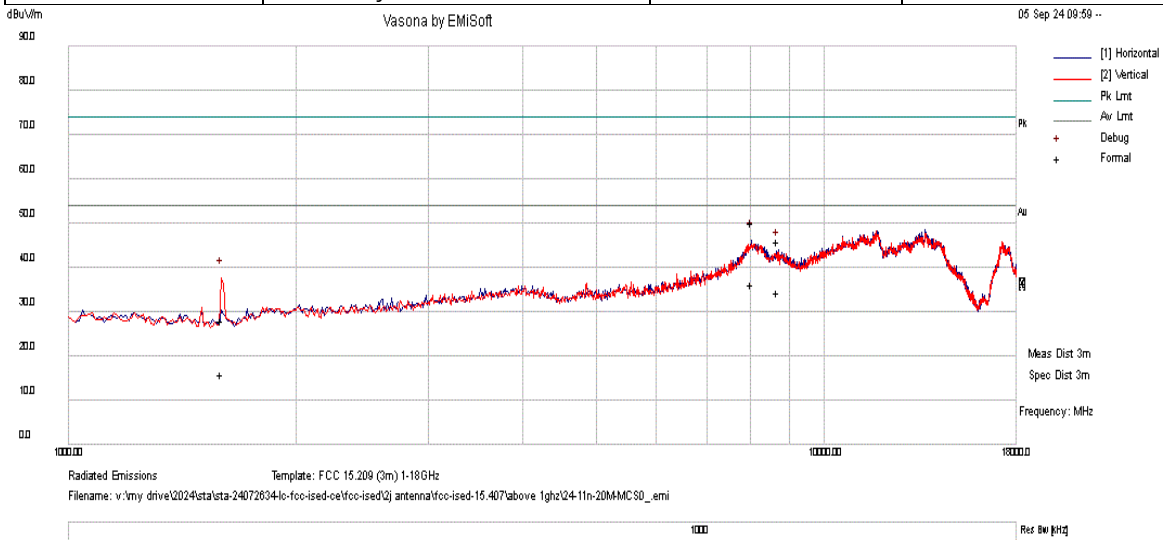
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8086.88	16.54	14.23	15.75	46.51	Peak	H	200	0	54.00	-7.49	Pass
2	1595.0	34.10	5.53	-1.60	38.04	Peak	V	200	0	54.00	-15.96	Pass
3	9036.12	16.07	15.14	11.37	42.57	Peak	H	100	360	54.00	-11.43	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5825MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



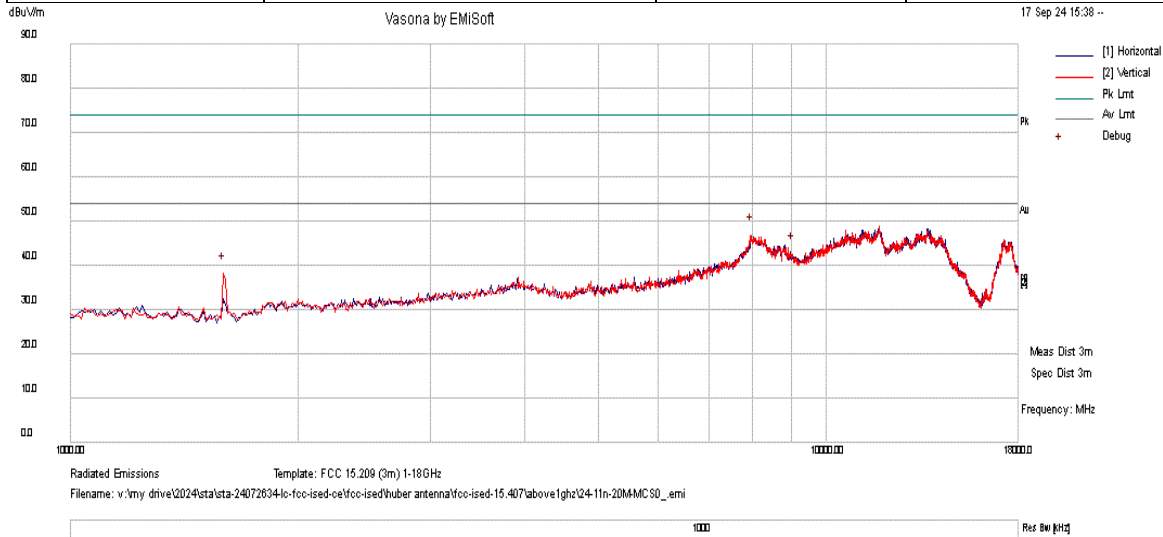
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8021.81	20.10	14.26	15.84	50.21	Peak Max	H	141	84	74.00	-23.79	Pass
2	8702.18	17.33	16.33	12.21	45.88	Peak Max	H	122	120	74.00	-28.12	Pass
3	1593.68	23.94	5.53	-1.60	27.87	Peak Max	V	142	35	74.00	-46.13	Pass
4	8021.81	6.21	14.26	15.84	36.32	Average Max	H	141	84	54.00	-17.69	Pass
5	8702.18	5.82	16.33	12.21	34.36	Average Max	H	122	120	54.00	-19.64	Pass
6	1593.68	12.05	5.53	-1.60	15.98	Average Max	V	142	35	54.00	-38.02	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-20M-5825MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



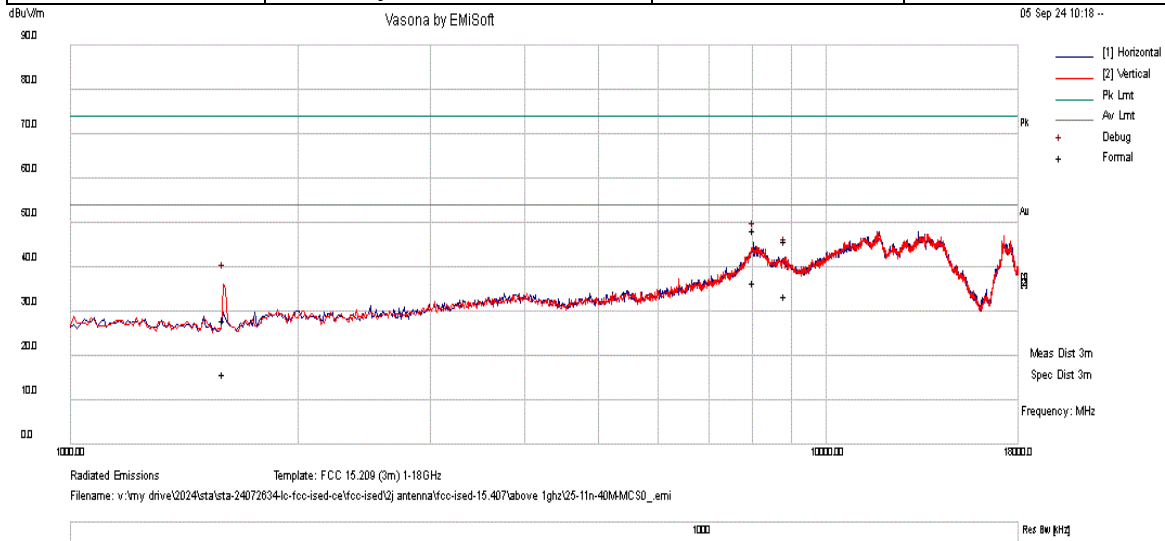
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	7980.62	16.87	14.23	15.58	46.67	Peak	V	200	0	54.00	-7.33	Pass
2	1595.98	34.00	5.50	-1.60	37.92	Peak	V	100	360	54.00	-16.10	Pass
3	9038.28	15.99	15.14	11.36	42.49	Peak	H	100	360	54.00	-11.51	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5190MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



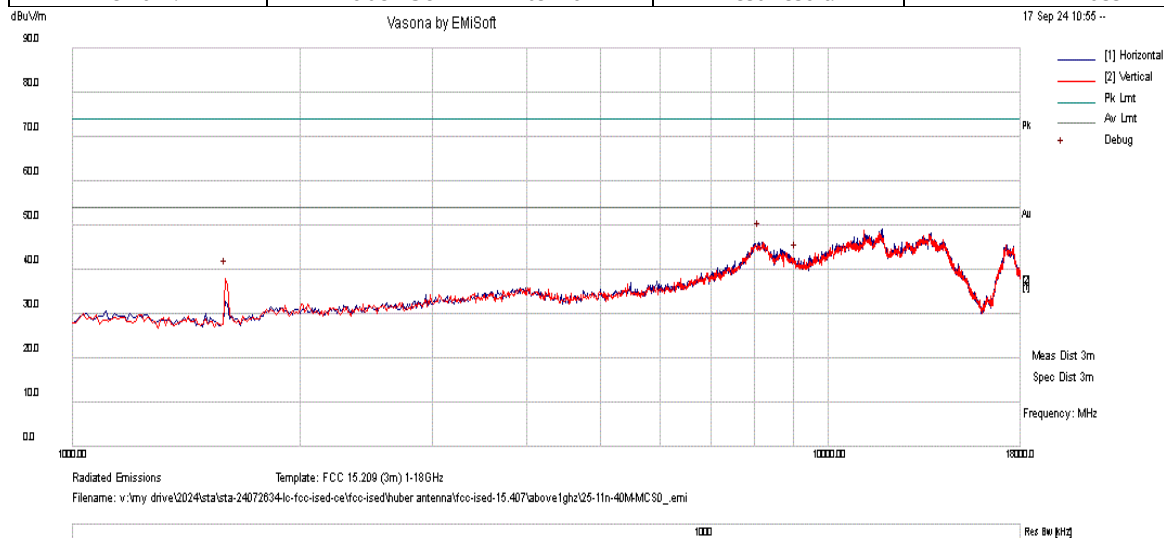
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8022.32	18.11	14.26	15.84	48.22	Peak Max	H	151	0	74.00	-25.78	Pass
2	8856.77	17.75	16.10	11.91	45.76	Peak Max	V	101	8	74.00	-28.25	Pass
3	1594.62	23.96	5.53	-1.60	27.89	Peak Max	V	115	109	74.00	-46.11	Pass
4	8022.32	6.23	14.26	15.84	36.33	Average Max	H	151	0	54.00	-17.67	Pass
5	8856.77	5.39	16.10	11.91	33.40	Average Max	V	101	8	54.00	-20.60	Pass
6	1594.62	11.89	5.53	-1.60	15.82	Average Max	V	115	109	54.00	-38.18	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5190MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



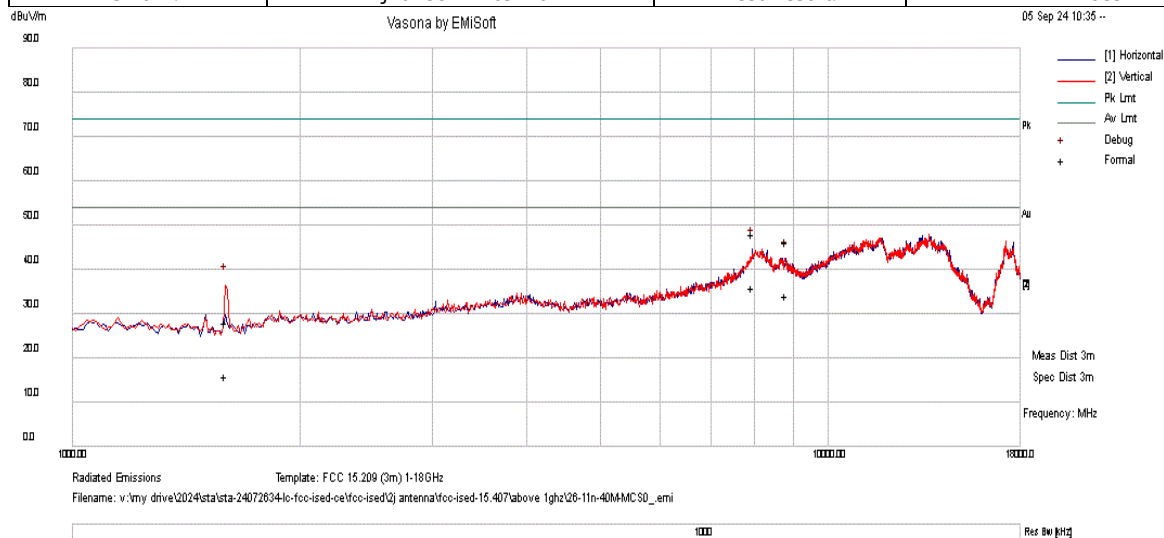
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8108.12	16.19	14.22	15.70	46.11	Peak	H	100	0	54.00	-7.89	Pass
2	1596.17	33.69	5.54	-1.60	37.63	Peak	H	100	360	54.00	-16.37	Pass
3	9068.2	14.88	15.13	11.26	41.27	Peak	H	100	360	54.00	-12.73	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5230MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



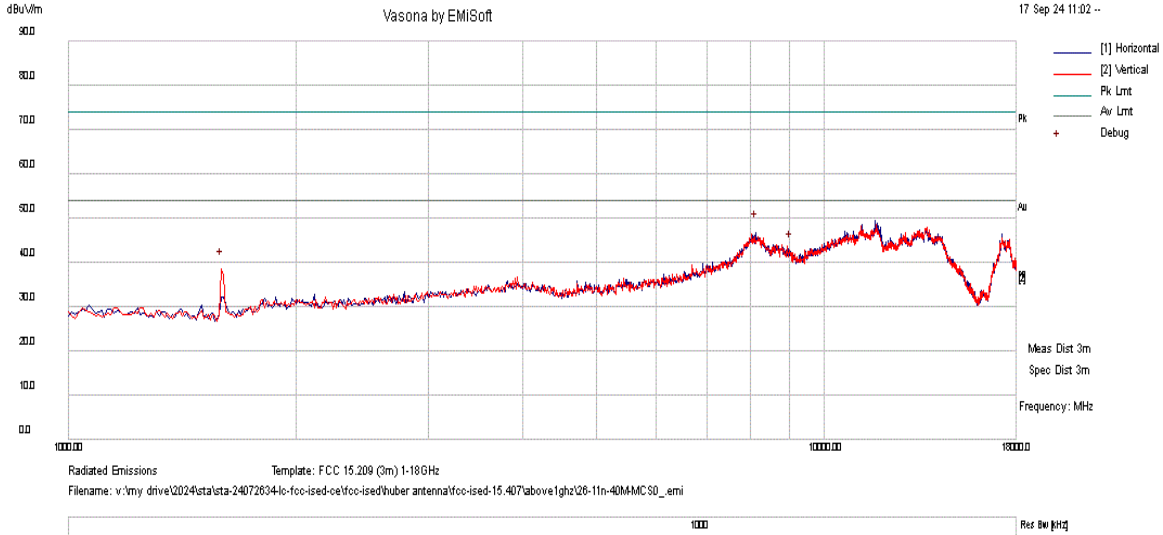
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	7949.91	18.78	14.16	15.13	48.07	Peak Max	H	194	110	74.00	-25.93	Pass
2	8804.29	17.71	16.46	11.98	46.14	Peak Max	H	154	87	74.00	-27.86	Pass
3	1594.24	24.07	5.53	-1.60	27.99	Peak Max	V	146	169	74.00	-46.01	Pass
4	7949.91	6.60	14.16	15.13	35.89	Average Max	H	194	110	54.00	-18.11	Pass
5	8804.29	5.48	16.46	11.98	33.91	Average Max	H	154	87	54.00	-20.09	Pass
6	1594.24	11.96	5.53	-1.60	15.89	Average Max	V	146	169	54.00	-38.11	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5230MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



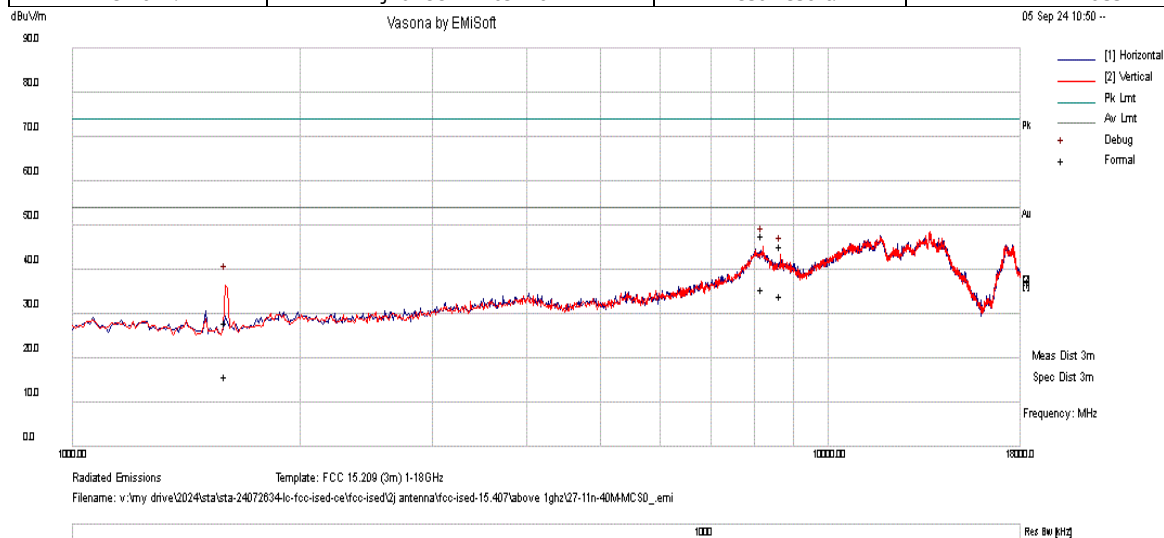
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8140.0	16.87	14.21	15.65	46.73	Peak	H	200	0	54.00	-7.27	Pass
2	1596.11	34.25	5.54	-1.60	38.19	Peak	H	100	360	54.00	-15.81	Pass
3	9052.57	15.54	15.13	11.31	41.98	Peak	H	100	360	54.00	-12.02	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5270MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



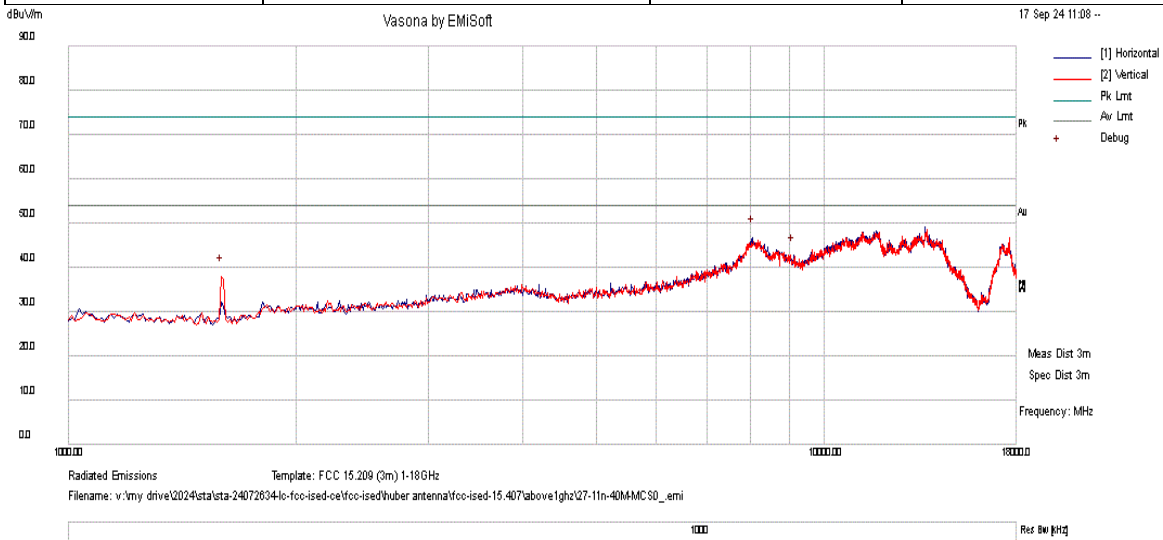
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8203.11	17.84	14.18	15.60	47.62	Peak Max	V	115	144	74.00	-26.38	Pass
2	8661.99	17.01	15.91	12.33	45.26	Peak Max	H	192	109	74.00	-28.74	Pass
3	1596.02	24.04	5.54	-1.60	27.98	Peak Max	V	150	0	74.00	-46.02	Pass
4	8203.11	5.87	14.18	15.60	35.66	Average Max	V	115	144	54.00	-18.35	Pass
5	8661.99	5.75	15.91	12.33	33.99	Average Max	H	192	109	54.00	-20.01	Pass
6	1596.02	11.99	5.54	-1.60	15.93	Average Max	V	150	0	54.00	-38.07	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5270MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



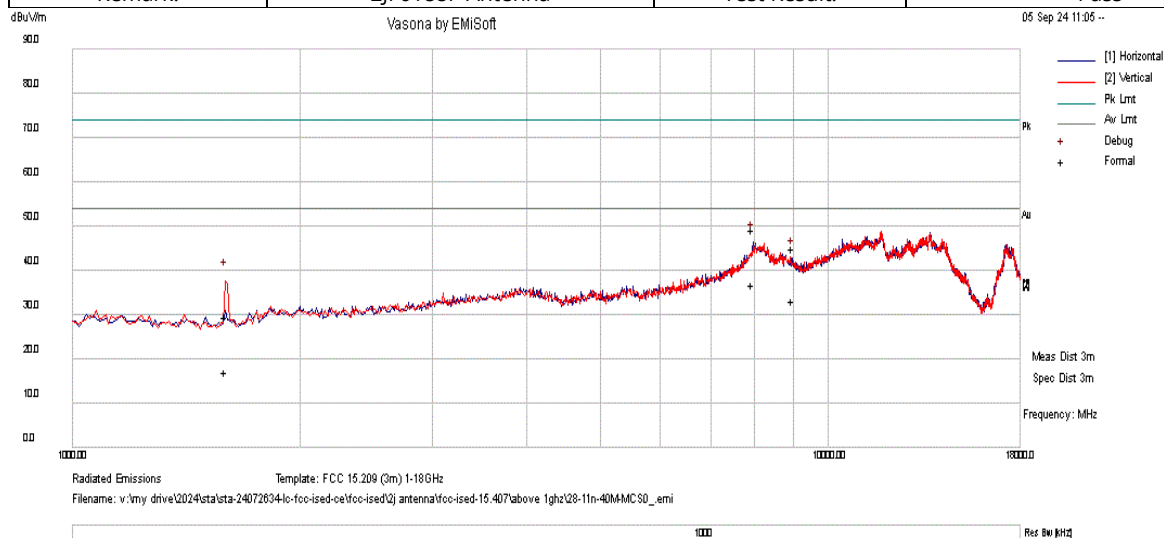
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8055.0	16.57	14.25	15.81	46.63	Peak	H	100	0	54.00	-7.37	Pass
2	1595.27	33.80	5.50	-1.60	37.75	Peak	V	100	360	54.00	-16.30	Pass
3	9119.73	16.25	15.13	11.13	42.51	Peak	H	100	360	54.00	-11.49	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5310MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



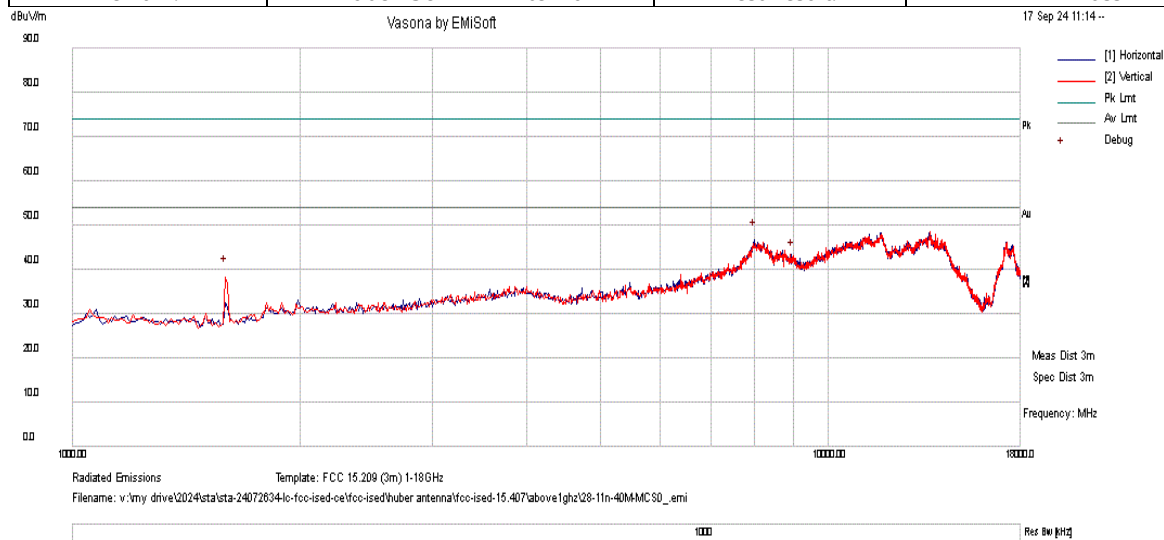
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	7958.53	19.81	14.18	15.26	49.25	Peak Max	H	159	151	74.00	-24.75	Pass
2	8992.16	18.33	15.19	11.53	45.05	Peak Max	H	185	111	74.00	-28.95	Pass
3	1596.06	25.53	5.54	-1.60	29.47	Peak Max	H	130	29	74.00	-44.53	Pass
4	7958.53	7.35	14.18	15.26	36.79	Average Max	H	159	151	54.00	-17.21	Pass
5	8992.16	6.52	15.19	11.53	33.25	Average Max	H	185	111	54.00	-20.75	Pass
6	1596.06	13.27	5.54	-1.60	17.21	Average Max	H	130	29	54.00	-36.79	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5310MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



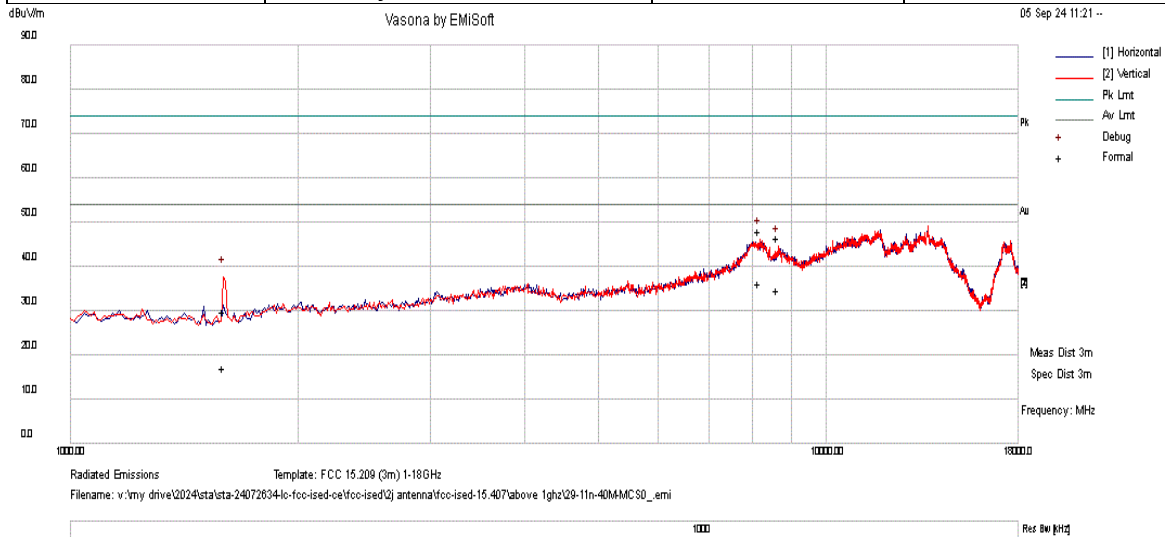
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8001.88	16.37	14.27	15.86	46.50	Peak	H	100	0	54.00	-7.50	Pass
2	1595.0	34.16	5.53	-1.60	38.09	Peak	V	200	0	54.00	-15.91	Pass
3	9000.95	15.27	15.14	11.51	41.92	Peak	H	100	360	54.00	-12.08	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5510MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



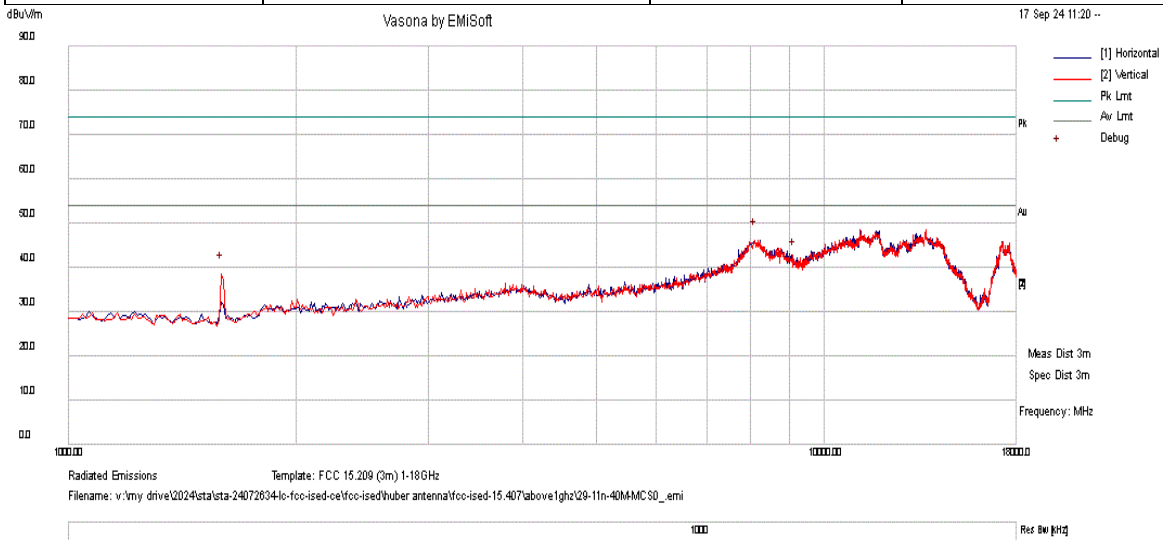
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8172.72	18.22	14.19	15.62	48.03	Peak Max	V	103	0	74.00	-25.97	Pass
2	8651.0	18.34	15.80	12.36	46.51	Peak Max	V	168	67	74.00	-27.49	Pass
3	1594.82	25.83	5.53	-1.60	29.76	Peak Max	V	171	0	74.00	-44.24	Pass
4	8172.72	6.26	14.19	15.62	36.07	Average Max	V	103	0	54.00	-17.93	Pass
5	8651.0	6.49	15.80	12.36	34.65	Average Max	V	168	67	54.00	-19.35	Pass
6	1594.82	13.21	5.53	-1.60	17.14	Average Max	V	171	0	54.00	-36.86	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5510MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



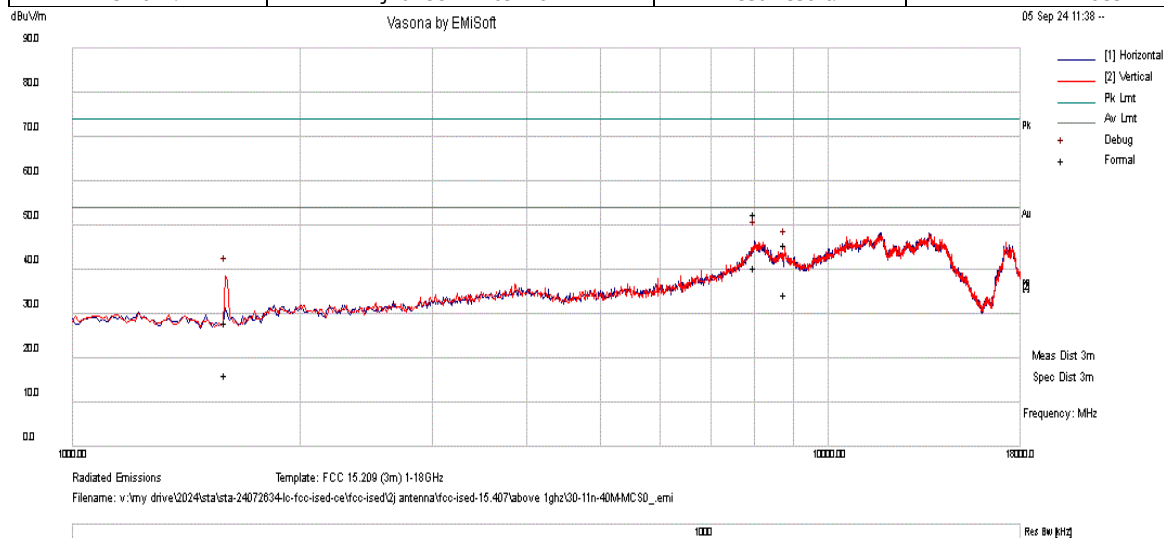
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8108.12	16.17	14.22	15.70	46.09	Peak	H	100	0	54.00	-7.91	Pass
2	1595.16	34.40	5.50	-1.60	38.37	Peak	V	100	360	54.00	-15.60	Pass
3	9142.61	15.20	15.10	11.10	41.39	Peak	V	100	360	54.00	-12.60	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5550MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



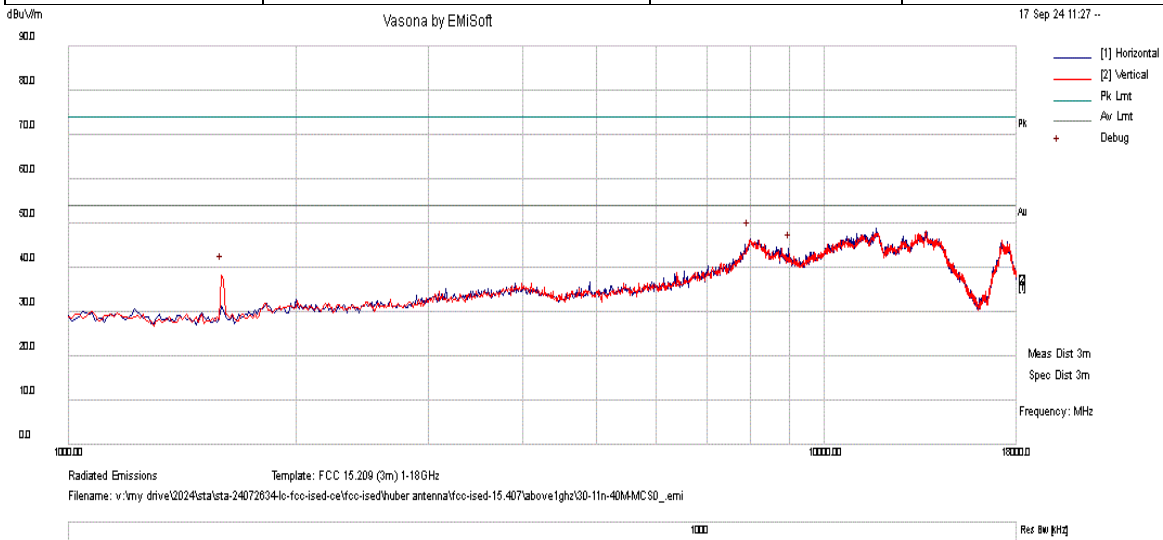
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8001.65	22.51	14.27	15.86	52.64	Peak Max	H	113	132	74.00	-21.36	Pass
2	8781.38	16.96	16.61	12.00	45.58	Peak Max	H	108	84	74.00	-28.42	Pass
3	1595.37	23.98	5.53	-1.60	27.92	Peak Max	V	164	113	74.00	-46.09	Pass
4	8001.65	10.22	14.27	15.86	40.35	Average Max	H	113	132	54.00	-13.65	Pass
5	8781.38	5.63	16.61	12.00	34.25	Average Max	H	108	84	54.00	-19.75	Pass
6	1595.37	12.11	5.53	-1.60	16.05	Average Max	V	164	113	54.00	-37.96	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5550MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



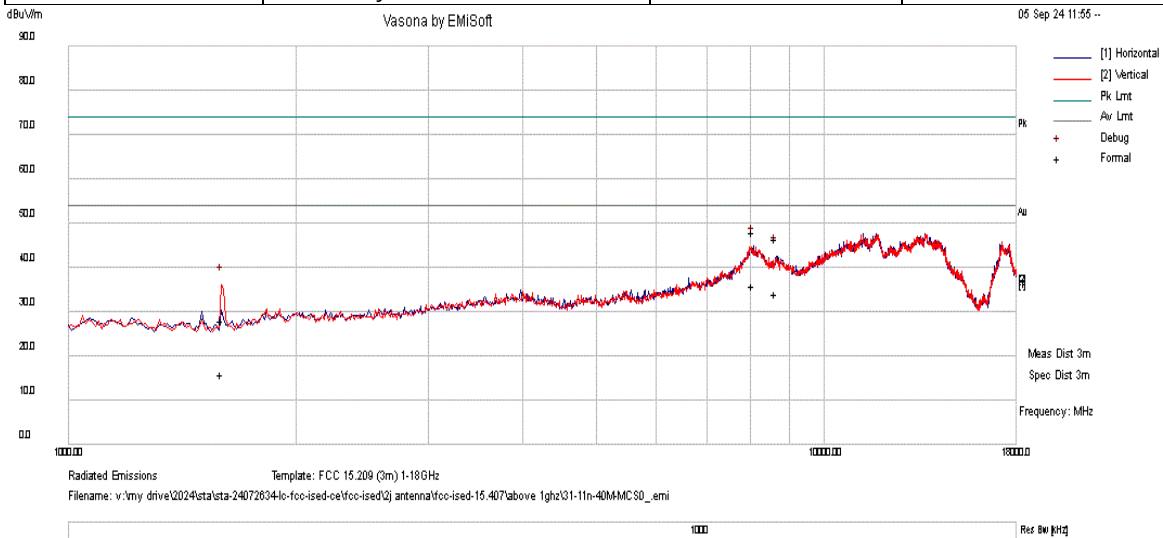
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	1595.55	34.20	5.50	-1.60	38.14	Peak	V	100	360	54.00	-15.90	Pass
2	7961.35	16.30	14.20	15.30	45.83	Peak	V	100	360	54.00	-8.20	Pass
3	9011.75	16.30	15.10	11.50	42.93	Peak	V	100	360	54.00	-11.10	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5670MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



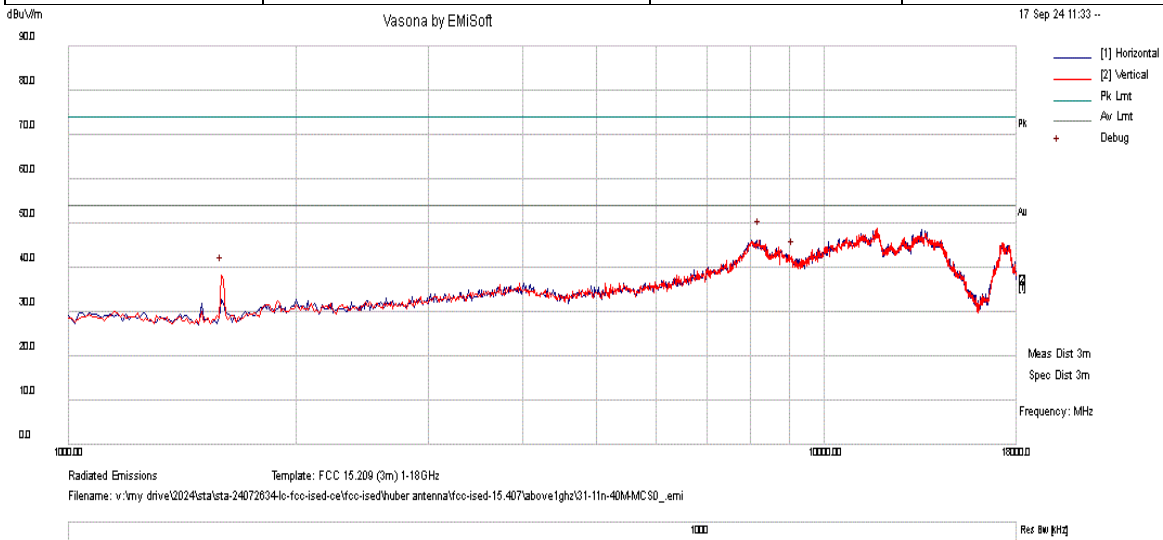
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8065.91	17.97	14.24	15.79	48.00	Peak Max	H	160	38	74.00	-26.00	Pass
2	8652.28	18.21	15.81	12.36	46.39	Peak Max	H	170	88	74.00	-27.62	Pass
3	1594.73	24.01	5.53	-1.60	27.94	Peak Max	V	129	48	74.00	-46.06	Pass
4	8065.91	5.87	14.24	15.79	35.90	Average Max	H	160	38	54.00	-18.10	Pass
5	8652.28	5.91	15.81	12.36	34.09	Average Max	H	170	88	54.00	-19.92	Pass
6	1594.73	11.99	5.53	-1.60	15.92	Average Max	V	129	48	54.00	-38.08	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5670MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



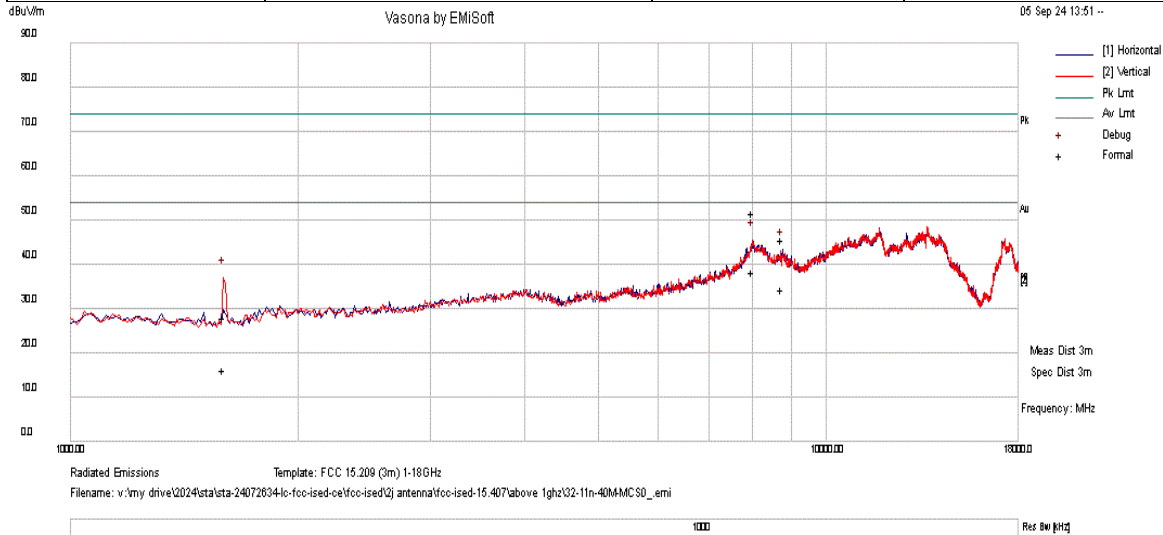
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8214.38	16.23	14.17	15.61	46.01	Peak	V	200	0	54.00	-7.99	Pass
2	1597.04	33.98	5.54	-1.59	37.93	Peak	H	100	360	54.00	-16.07	Pass
3	9109.36	15.28	15.13	11.15	41.55	Peak	H	100	360	54.00	-12.45	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5755MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



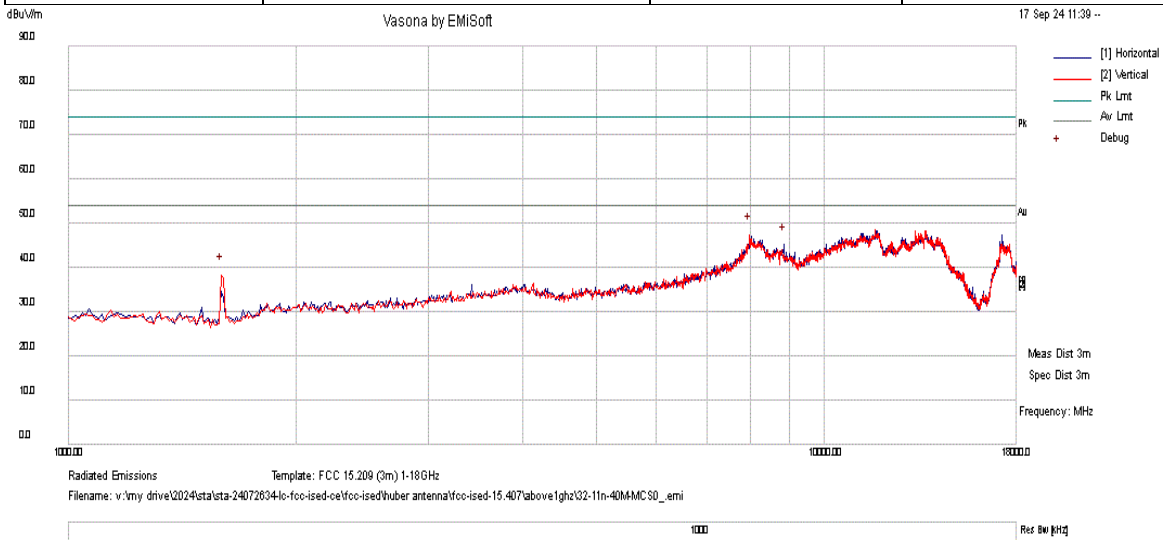
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8002.72	21.60	14.27	15.86	51.72	Peak Max	V	207	3	74.00	-22.28	Pass
2	8769.24	16.85	16.69	12.02	45.57	Peak Max	H	131	76	74.00	-28.43	Pass
3	1595.03	24.05	5.53	-1.60	27.99	Peak Max	V	164	159	74.00	-46.02	Pass
4	8002.72	8.17	14.27	15.86	38.30	Average Max	V	207	3	54.00	-15.70	Pass
5	8769.24	5.61	16.69	12.02	34.33	Average Max	H	131	76	54.00	-19.67	Pass
6	1595.03	12.23	5.53	-1.60	16.16	Average Max	V	164	159	54.00	-37.84	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5755MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



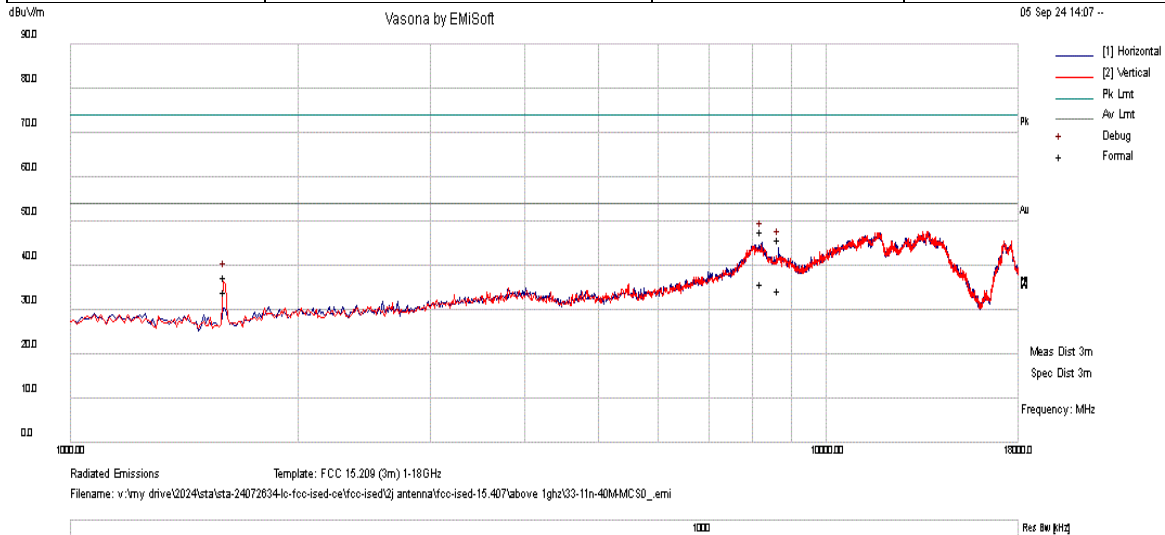
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	7980.62	17.36	14.23	15.58	47.17	Peak	V	100	0	54.00	-6.83	Pass
2	1595.0	34.31	5.53	-1.60	38.24	Peak	V	200	0	54.00	-15.76	Pass
3	8861.6	16.87	16.07	11.90	44.83	Peak	H	100	360	54.00	-9.17	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5795MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



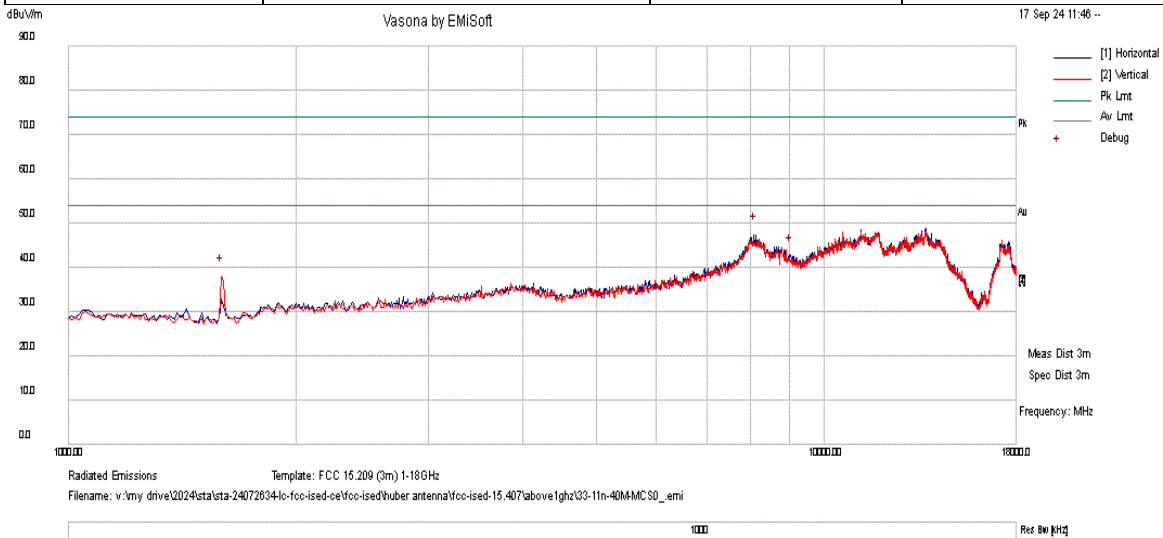
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8234.07	18.03	14.17	15.62	47.81	Peak Max	H	125	10	74.00	-26.19	Pass
2	8674.72	17.66	16.05	12.29	46.00	Peak Max	H	178	19	74.00	-28.00	Pass
3	1599.99	33.51	5.55	-1.58	37.48	Peak Max	V	118	42	74.00	-36.52	Pass
4	8234.07	6.16	14.17	15.62	35.94	Average Max	H	125	10	54.00	-18.06	Pass
5	8674.72	5.94	16.05	12.29	34.28	Average Max	H	178	19	54.00	-19.72	Pass
6	1599.99	30.22	5.55	-1.58	34.19	Average Max	V	118	42	54.00	-19.82	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11n-40M-5795MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



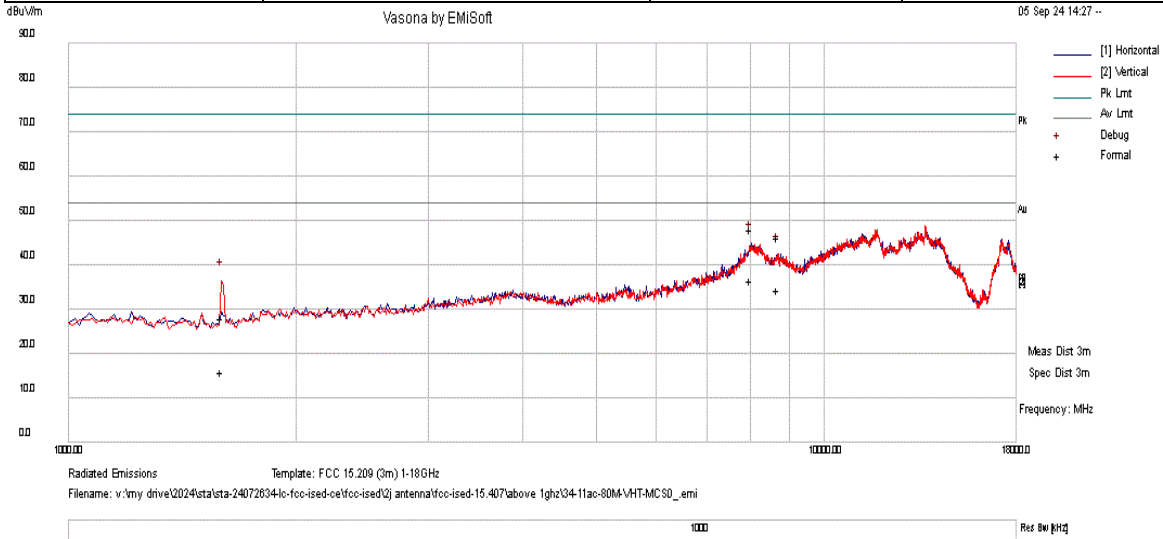
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8118.75	17.28	14.22	15.69	47.18	Peak	H	200	0	54.00	-6.82	Pass
2	1595.0	33.87	5.53	-1.60	37.80	Peak	V	200	0	54.00	-16.20	Pass
3	9037.95	15.94	15.14	11.36	42.44	Peak	H	100	360	54.00	-11.56	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ac-80M-5210MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



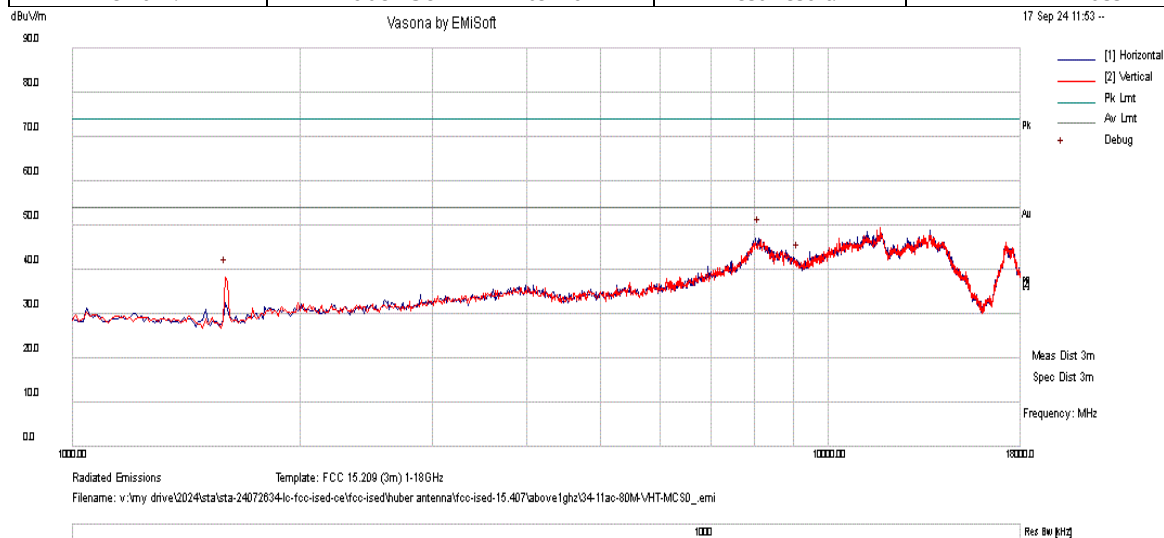
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8013.4	17.85	14.26	15.85	47.97	Peak Max	H	127	130	74.00	-26.03	Pass
2	8706.01	17.64	16.37	12.20	46.21	Peak Max	V	125	64	74.00	-27.79	Pass
3	1595.81	24.06	5.53	-1.60	28.00	Peak Max	V	102	46	74.00	-46.00	Pass
4	8013.4	6.39	14.26	15.85	36.51	Average Max	H	127	130	54.00	-17.49	Pass
5	8706.01	5.81	16.37	12.20	34.38	Average Max	V	125	64	54.00	-19.62	Pass
6	1595.81	12.03	5.53	-1.60	15.97	Average Max	V	102	46	54.00	-38.03	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ac-80M-5210MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



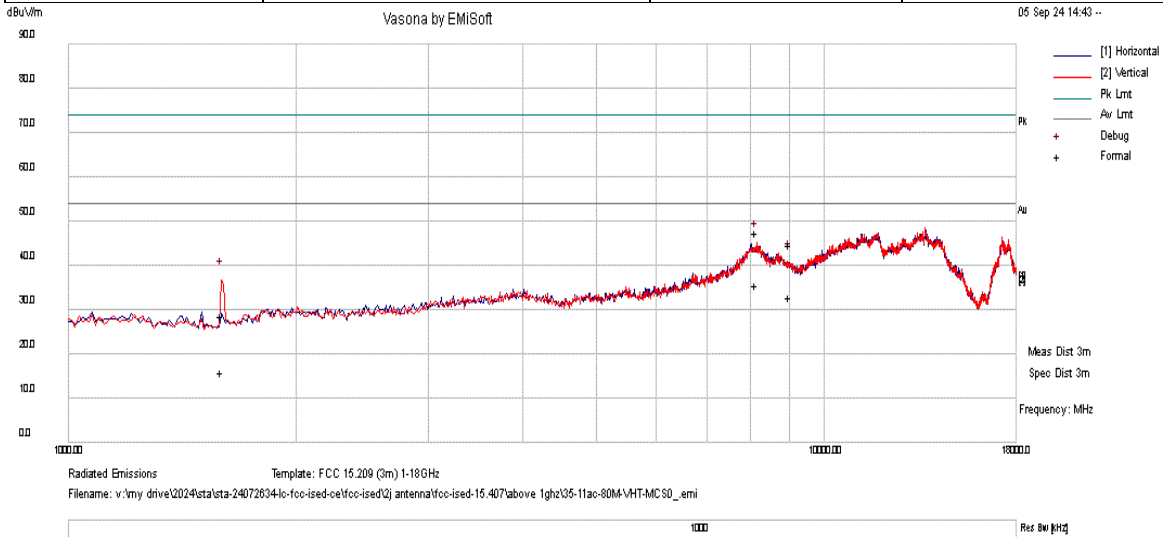
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8108.12	16.91	14.22	15.70	46.84	Peak	H	100	0	54.00	-7.17	Pass
2	1597.73	34.00	5.50	-1.60	37.92	Peak	V	100	360	54.00	-16.10	Pass
3	9142.24	14.95	15.12	11.09	41.16	Peak	H	100	360	54.00	-12.84	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ac-80M-5290MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



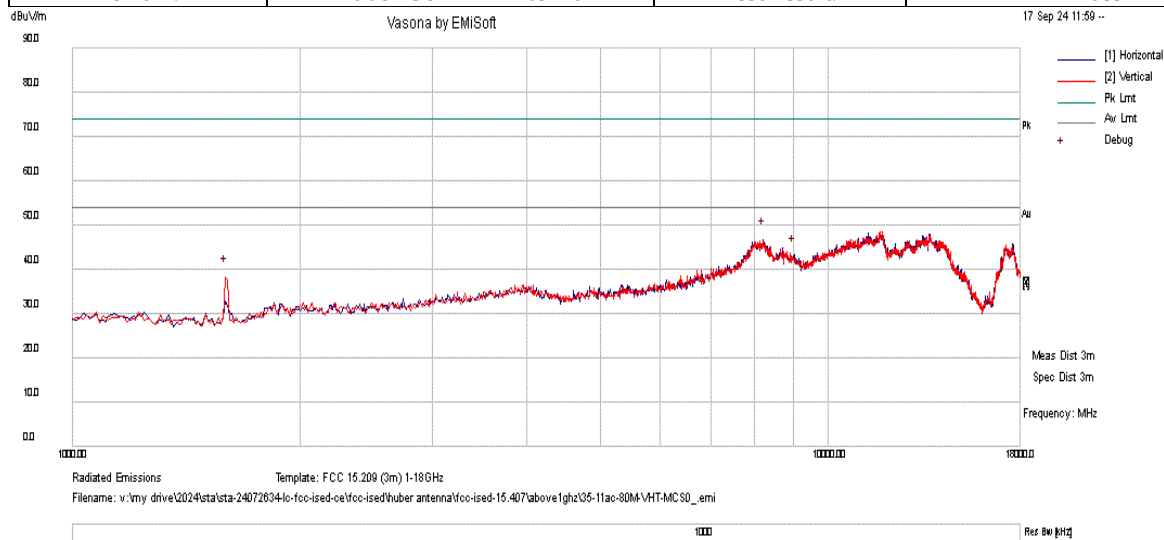
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8149.5	17.50	14.20	15.64	47.34	Peak Max	V	121	90	74.00	-26.66	Pass
2	9025.1	18.07	15.14	11.41	44.62	Peak Max	H	107	157	74.00	-29.38	Pass
3	1595.12	24.78	5.53	-1.60	28.72	Peak Max	V	180	14	74.00	-45.28	Pass
4	8149.5	5.76	14.20	15.64	35.60	Average Max	V	121	90	54.00	-18.41	Pass
5	9025.1	6.20	15.14	11.41	32.75	Average Max	H	107	157	54.00	-21.25	Pass
6	1595.12	12.07	5.53	-1.60	16.00	Average Max	V	180	14	54.00	-38.00	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ac-80M-5290MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



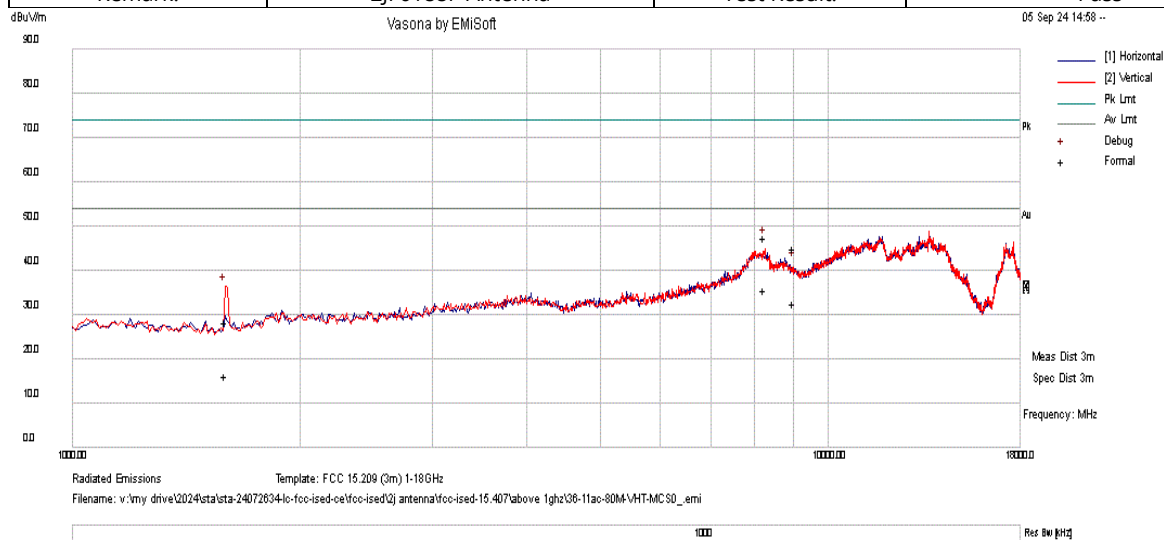
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8225.0	16.93	14.17	15.61	46.72	Peak	H	200	0	54.00	-7.29	Pass
2	1595.0	34.17	5.53	-1.60	38.11	Peak	V	200	0	54.00	-15.89	Pass
3	9008.45	15.97	15.14	11.48	42.59	Peak	H	100	360	54.00	-11.41	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ac-80M-5530MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



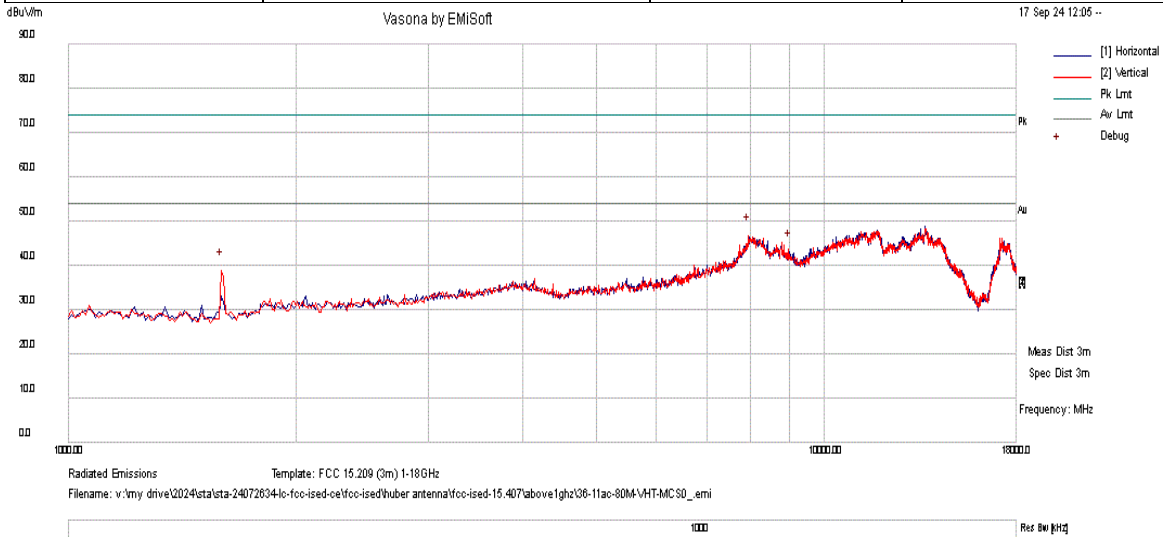
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8258.5	17.76	14.16	15.54	47.46	Peak Max	V	178	180	74.00	-26.54	Pass
2	9021.93	18.44	15.14	11.42	45.01	Peak Max	H	136	75	74.00	-28.99	Pass
3	1593.85	24.49	5.53	-1.60	28.42	Peak Max	H	168	0	74.00	-45.58	Pass
4	8258.5	5.81	14.16	15.54	35.51	Average Max	V	178	180	54.00	-18.49	Pass
5	9021.93	6.10	15.14	11.42	32.66	Average Max	H	136	75	54.00	-21.34	Pass
6	1593.85	12.35	5.53	-1.60	16.27	Average Max	H	168	0	54.00	-37.73	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ac-80M-5530MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



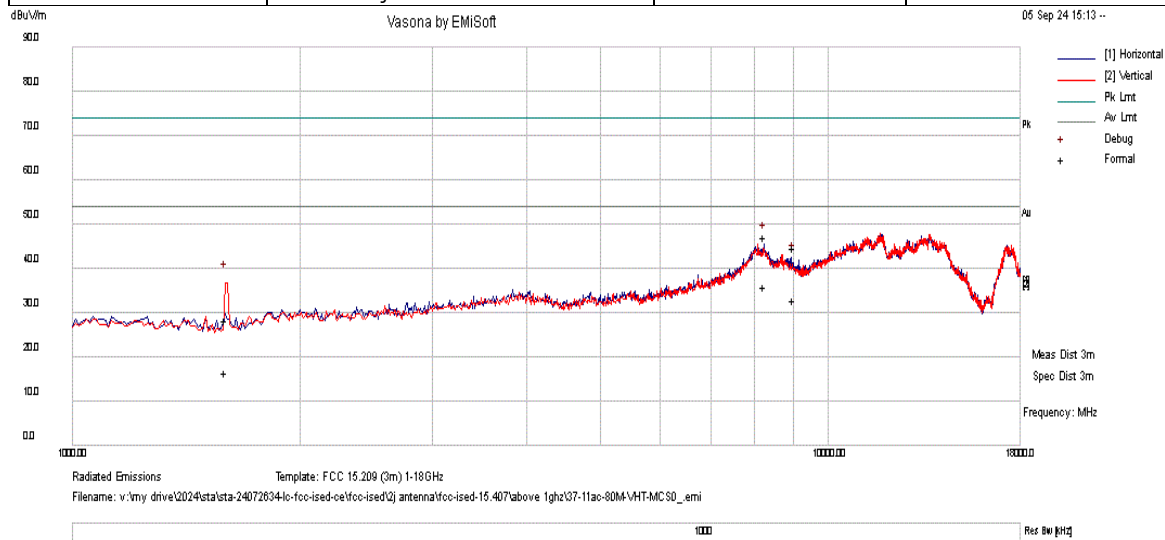
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	7948.75	17.40	14.16	15.12	46.68	Peak	V	100	0	54.00	-7.32	Pass
2	1595.0	34.84	5.53	-1.60	38.77	Peak	V	200	0	54.00	-15.23	Pass
3	9011.53	16.27	15.14	11.47	42.87	Peak	H	100	360	54.00	-11.13	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ac-80M-5610MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



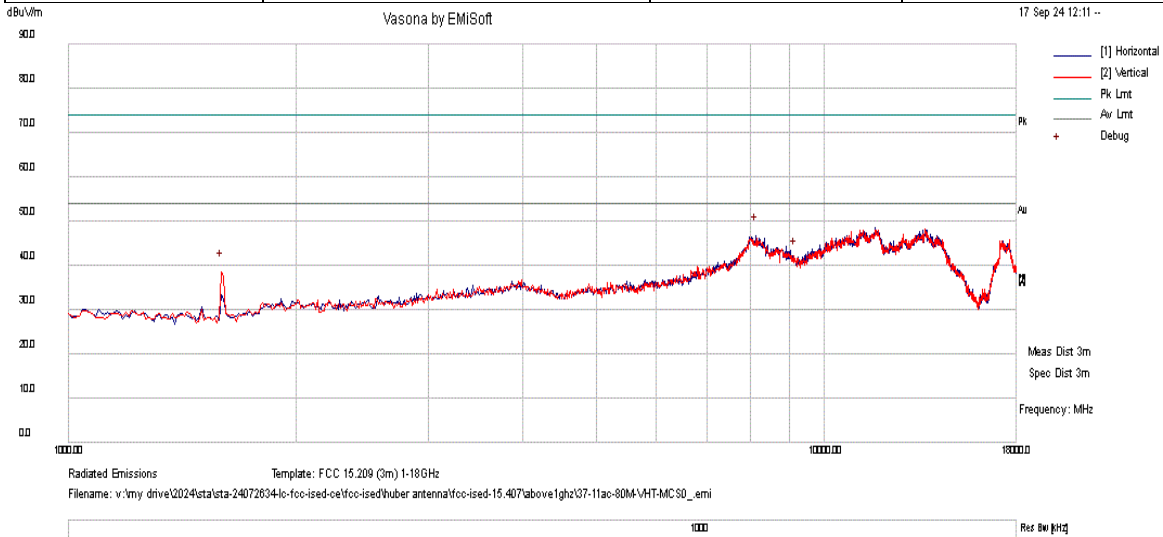
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8244.87	17.40	14.16	15.62	47.18	Peak Max	H	108	0	74.00	-26.82	Pass
2	9013.31	18.10	15.14	11.46	44.70	Peak Max	H	121	84	74.00	-29.30	Pass
3	1597.33	24.46	5.54	-1.59	28.41	Peak Max	V	163	174	74.00	-45.59	Pass
4	8244.87	6.01	14.16	15.62	35.79	Average Max	H	108	0	54.00	-18.21	Pass
5	9013.31	6.10	15.14	11.46	32.70	Average Max	H	121	84	54.00	-21.30	Pass
6	1597.33	12.49	5.54	-1.59	16.43	Average Max	V	163	174	54.00	-37.57	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ac-80M-5610MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



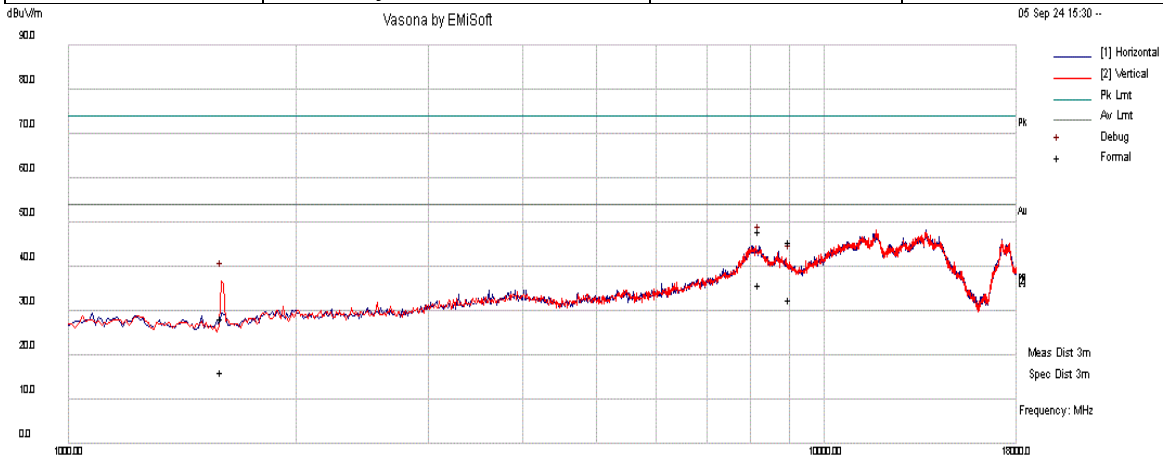
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8129.38	16.64	14.21	15.67	46.52	Peak	H	100	0	54.00	-7.48	Pass
2	1595.0	34.44	5.53	-1.60	38.38	Peak	V	200	0	54.00	-15.62	Pass
3	9167.0	15.05	15.12	11.03	41.20	Peak	H	100	360	54.00	-12.80	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ac-80M-5775MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



Radiated Emissions
Template: FCC 15.209 (3m) 1-18GHz
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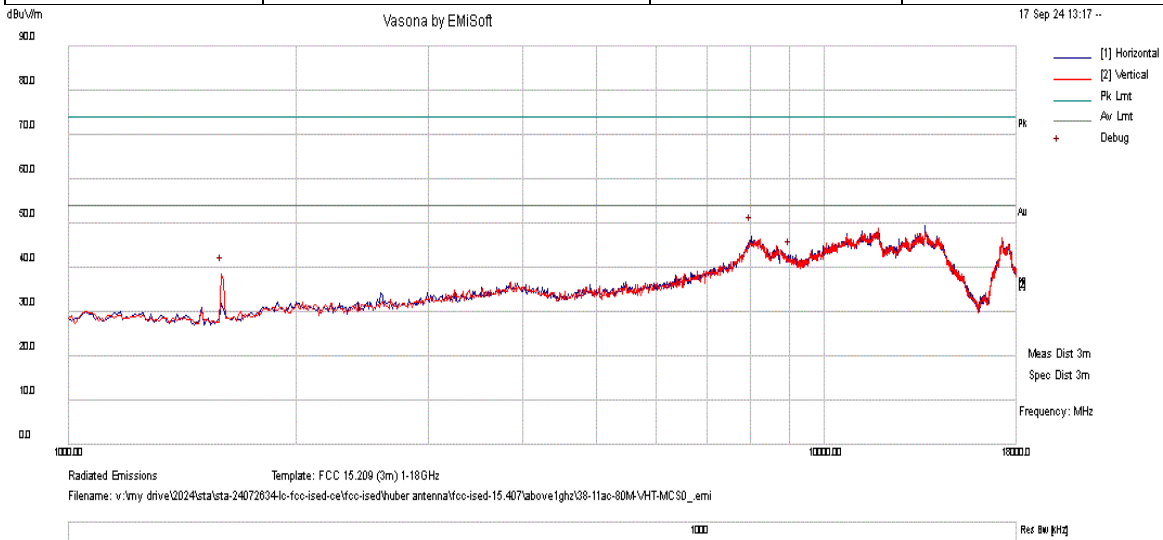
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8212.73	18.29	14.17	15.61	48.07	Peak Max	H	140	100	74.00	-25.93	Pass
2	9013.69	18.91	15.14	11.46	45.51	Peak Max	H	113	21	74.00	-28.49	Pass
3	1596.55	24.21	5.54	-1.59	28.15	Peak Max	V	127	88	74.00	-45.85	Pass
4	8212.73	6.07	14.17	15.61	35.85	Average Max	H	140	100	54.00	-18.15	Pass
5	9013.69	6.08	15.14	11.46	32.67	Average Max	H	113	21	54.00	-21.33	Pass
6	1596.55	12.27	5.54	-1.59	16.22	Average Max	V	127	88	54.00	-37.79	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ac-80M-5775MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



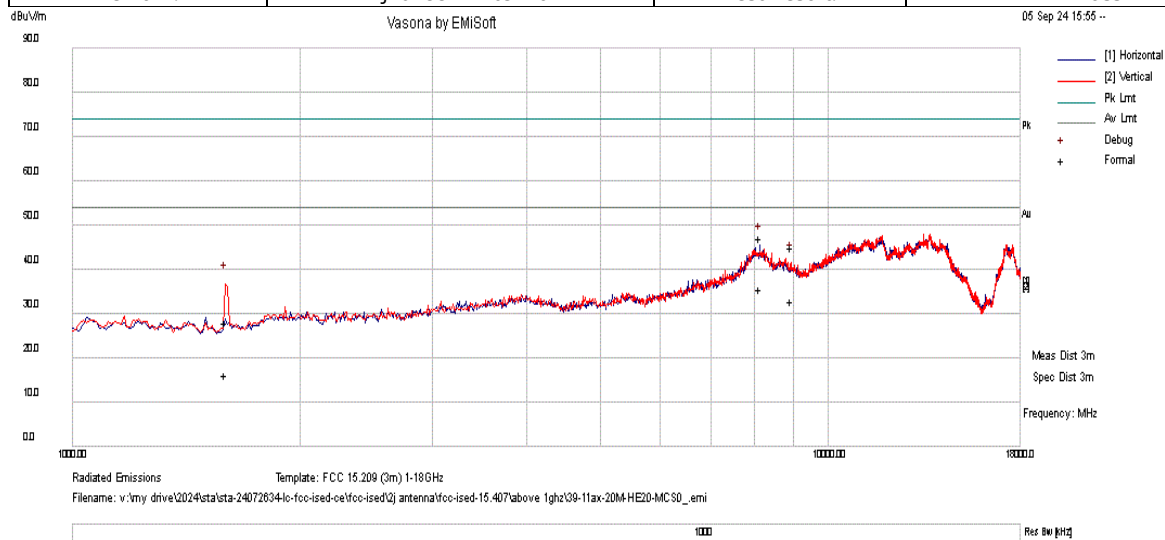
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8012.5	16.78	14.26	15.85	46.90	Peak	H	100	0	54.00	-7.10	Pass
2	1597.4	34.10	5.50	-1.60	38.02	Peak	V	100	360	54.00	-16.00	Pass
3	9008.45	14.86	15.14	11.48	41.48	Peak	H	100	360	54.00	-12.52	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-20M-5500MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



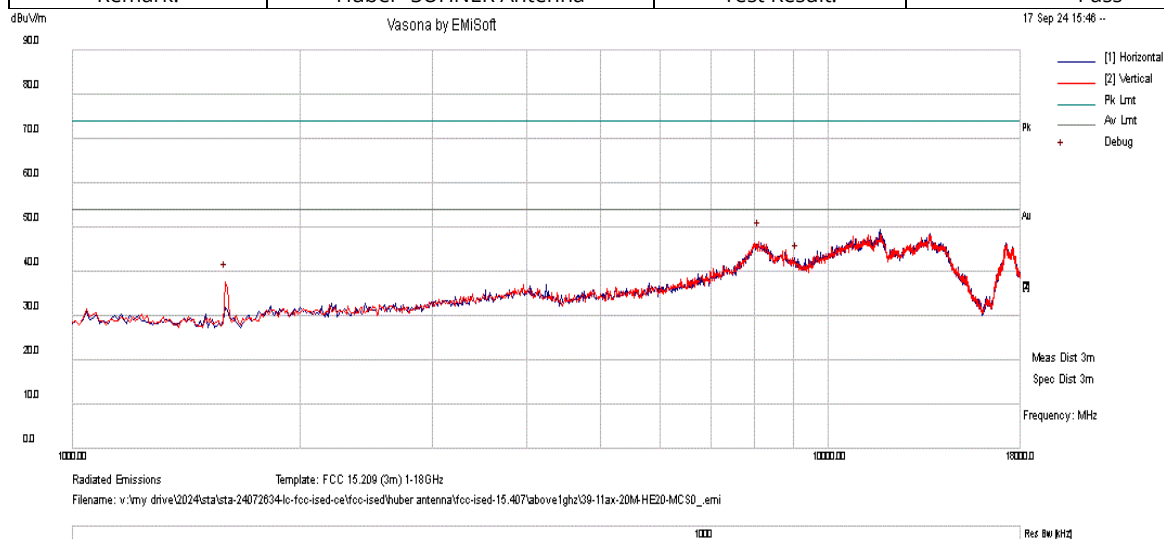
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8131.02	17.35	14.21	15.67	47.23	Peak Max	H	194	42	74.00	-26.77	Pass
2	8946.43	17.82	15.50	11.67	44.99	Peak Max	H	100	180	74.00	-29.01	Pass
3	1595.18	23.93	5.53	-1.60	27.87	Peak Max	V	138	97	74.00	-46.13	Pass
4	8131.02	5.73	14.21	15.67	35.60	Average Max	H	194	42	54.00	-18.40	Pass
5	8946.43	5.74	15.50	11.67	32.91	Average Max	H	100	180	54.00	-21.10	Pass
6	1595.18	12.18	5.53	-1.60	16.11	Average Max	V	138	97	54.00	-37.89	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-20M-5500MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



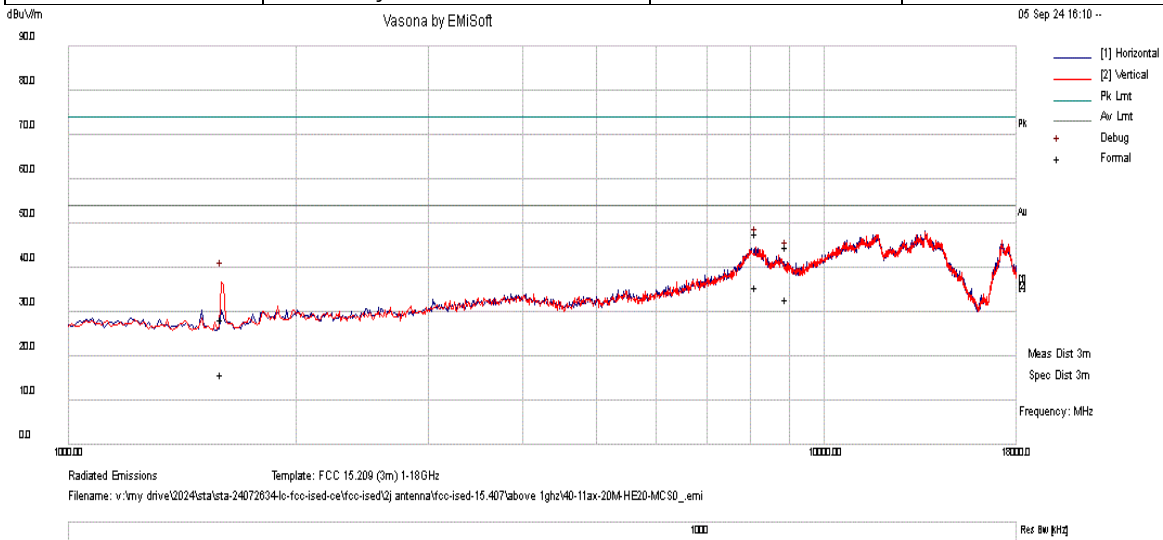
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8108.12	16.72	14.22	15.70	46.64	Peak	V	200	0	54.00	-7.36	Pass
2	1596.17	33.30	5.50	-1.60	37.29	Peak	V	100	360	54.00	-16.70	Pass
3	9118.85	15.32	15.13	11.13	41.58	Peak	H	100	360	54.00	-12.42	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-20M-5580MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



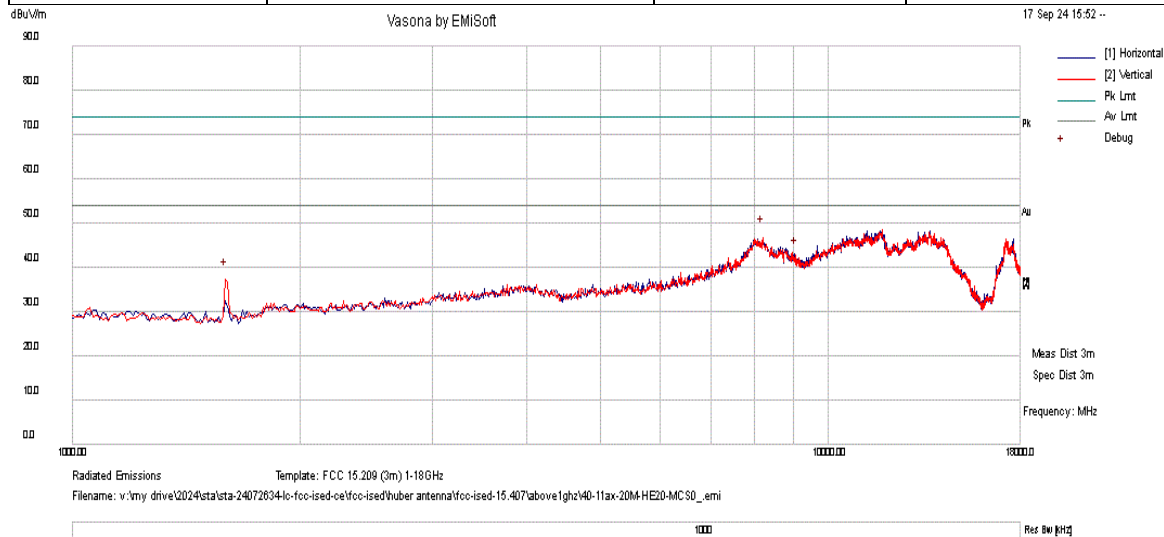
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8132.97	17.71	14.21	15.66	47.58	Peak Max	V	131	133	74.00	-26.42	Pass
2	8938.34	17.46	15.55	11.69	44.71	Peak Max	H	150	54	74.00	-29.30	Pass
3	1595.04	24.27	5.53	-1.60	28.20	Peak Max	V	108	2	74.00	-45.80	Pass
4	8132.97	5.64	14.21	15.66	35.52	Average Max	V	131	133	54.00	-18.48	Pass
5	8938.34	5.71	15.55	11.69	32.95	Average Max	H	150	54	54.00	-21.05	Pass
6	1595.04	12.00	5.53	-1.60	15.93	Average Max	V	108	2	54.00	-38.07	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-20M-5580MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



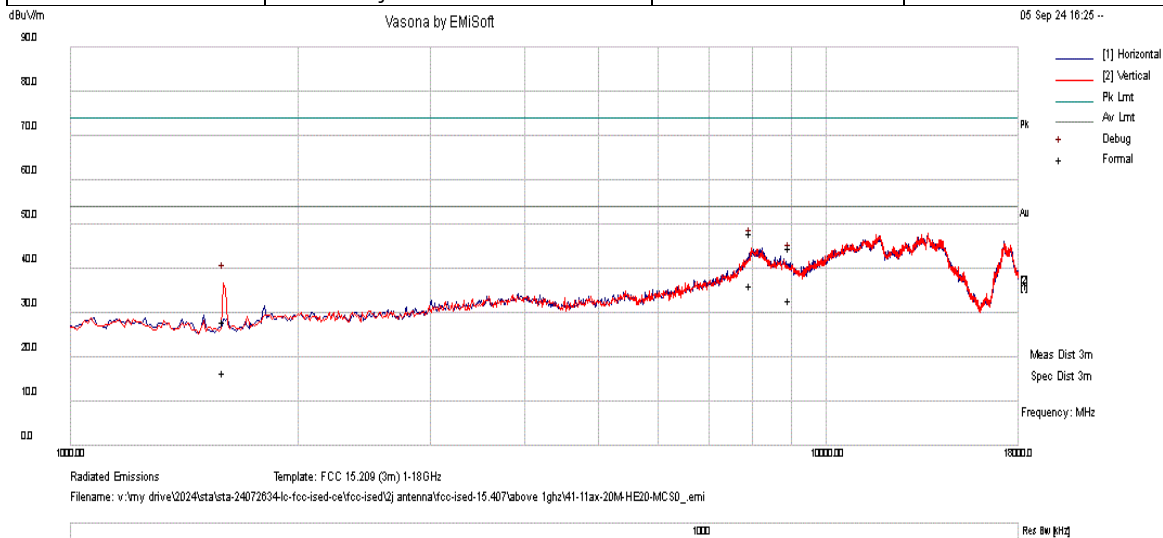
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8203.75	16.74	14.18	15.60	46.53	Peak	V	200	0	54.00	-7.47	Pass
2	1596.61	33.10	5.50	-1.60	37.02	Peak	V	100	360	54.00	-17.00	Pass
3	9068.2	15.50	15.13	11.26	41.89	Peak	H	100	360	54.00	-12.11	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ax-20M-5700MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



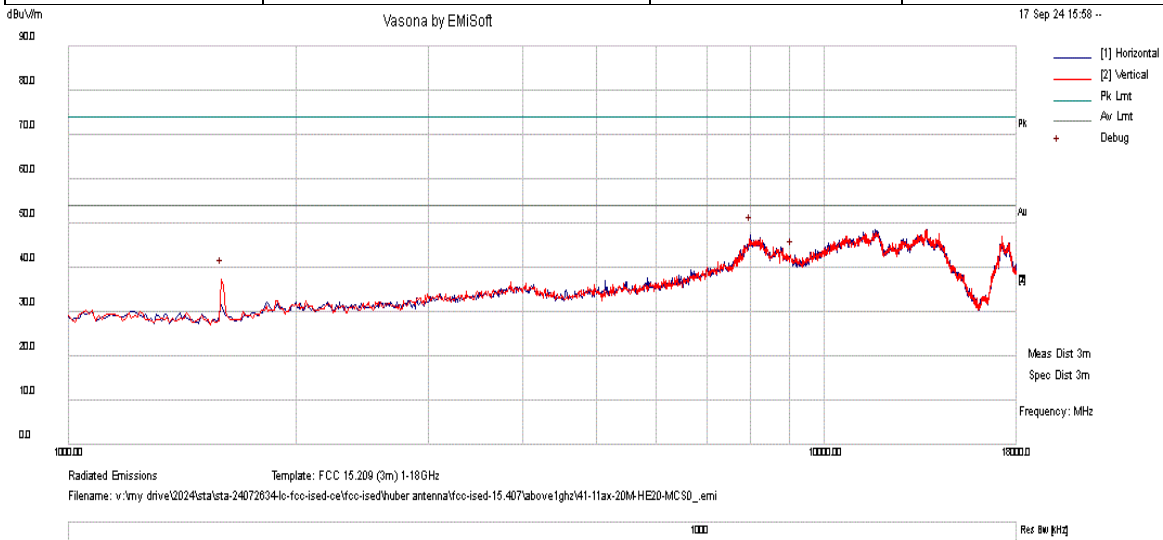
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	7961.36	18.54	14.18	15.30	48.03	Peak Max	V	175	64	74.00	-25.97	Pass
2	8971.02	17.83	15.33	11.59	44.76	Peak Max	H	129	180	74.00	-29.24	Pass
3	1597.76	24.14	5.54	-1.59	28.09	Peak Max	V	192	130	74.00	-45.91	Pass
4	7961.36	6.61	14.18	15.30	36.10	Average Max	V	175	64	54.00	-17.91	Pass
5	8971.02	5.89	15.33	11.59	32.81	Average Max	H	129	180	54.00	-21.19	Pass
6	1597.76	12.52	5.54	-1.59	16.47	Average Max	V	192	130	54.00	-37.53	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-20M-5700MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



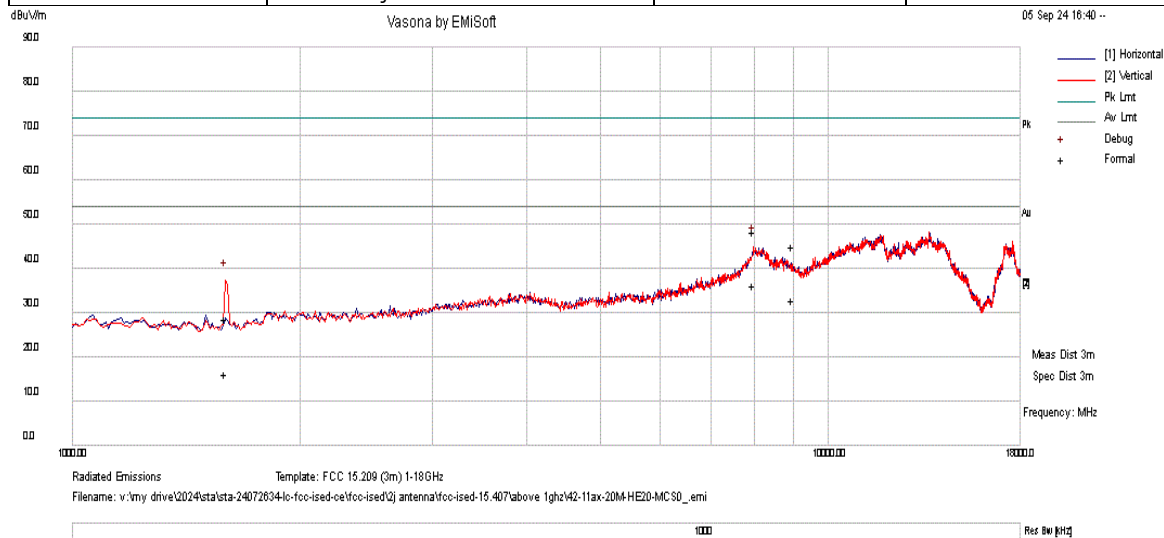
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8001.88	16.94	14.27	15.86	47.06	Peak	H	100	0	54.00	-6.94	Pass
2	1595.0	33.27	5.53	-1.60	37.20	Peak	V	200	0	54.00	-16.80	Pass
3	9068.2	15.15	15.13	11.26	41.54	Peak	H	100	360	54.00	-12.46	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ax-20M-5745MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/05/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



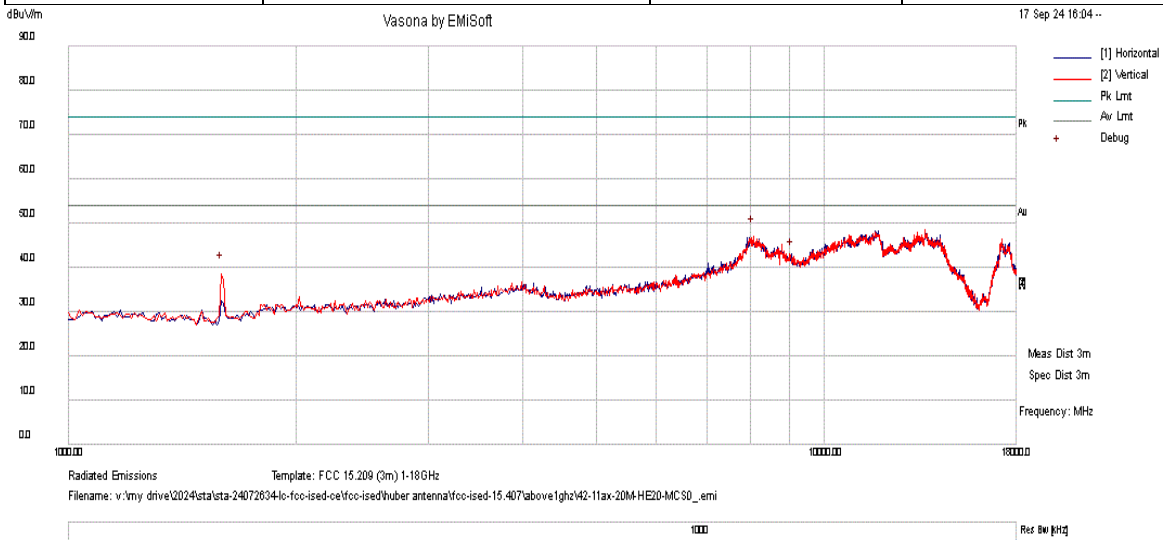
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	7968.23	18.76	14.20	15.40	48.36	Peak Max	V	120	99	74.00	-25.64	Pass
2	8990.81	18.13	15.20	11.54	44.87	Peak Max	H	112	173	74.00	-29.13	Pass
3	1595.47	24.74	5.53	-1.60	28.67	Peak Max	V	146	66	74.00	-45.33	Pass
4	7968.23	6.53	14.20	15.40	36.13	Average Max	V	120	99	54.00	-17.87	Pass
5	8990.81	5.98	15.20	11.54	32.72	Average Max	H	112	173	54.00	-21.28	Pass
6	1595.47	12.36	5.53	-1.60	16.30	Average Max	V	146	66	54.00	-37.70	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-20M-5745MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



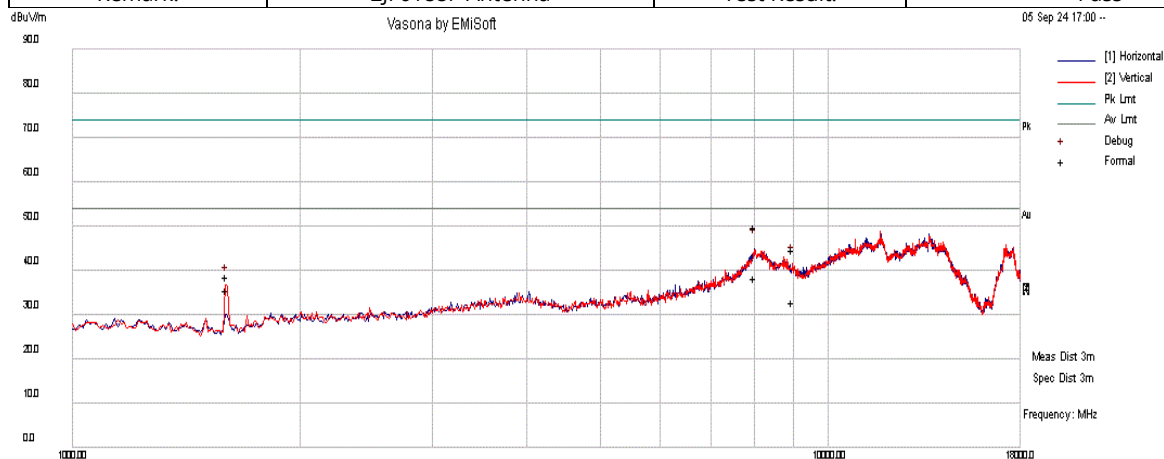
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8065.62	16.77	14.24	15.79	46.80	Peak	V	200	0	54.00	-7.20	Pass
2	1595.0	34.55	5.53	-1.60	38.49	Peak	V	200	0	54.00	-15.51	Pass
3	9067.96	15.24	15.13	11.26	41.63	Peak	H	100	360	54.00	-12.37	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ax-20M-5785MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/06/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



Radiated Emissions
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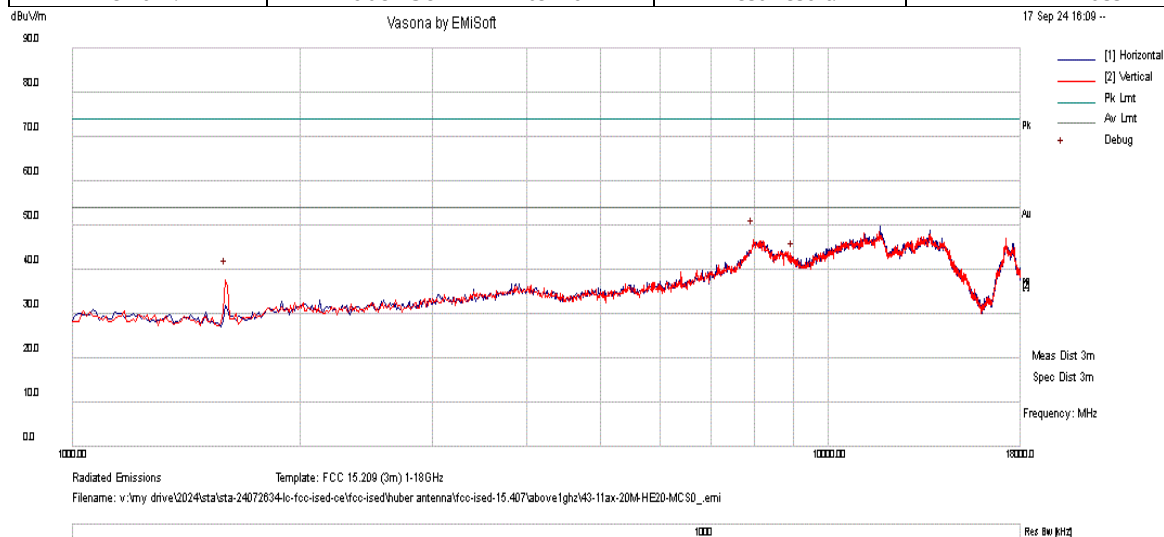
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8001.27	19.74	14.27	15.86	49.87	Peak Max	H	100	66	74.00	-24.13	Pass
2	8983.76	17.70	15.25	11.56	44.51	Peak Max	H	207	24	74.00	-29.49	Pass
3	1600.05	34.71	5.55	-1.58	38.68	Peak Max	V	152	44	74.00	-35.32	Pass
4	8001.27	8.12	14.27	15.86	38.25	Average Max	H	100	66	54.00	-15.75	Pass
5	8983.76	5.93	15.25	11.56	32.73	Average Max	H	207	24	54.00	-21.27	Pass
6	1600.05	31.75	5.55	-1.58	35.72	Average Max	V	152	44	54.00	-18.28	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spuroius emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-20M-5785MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



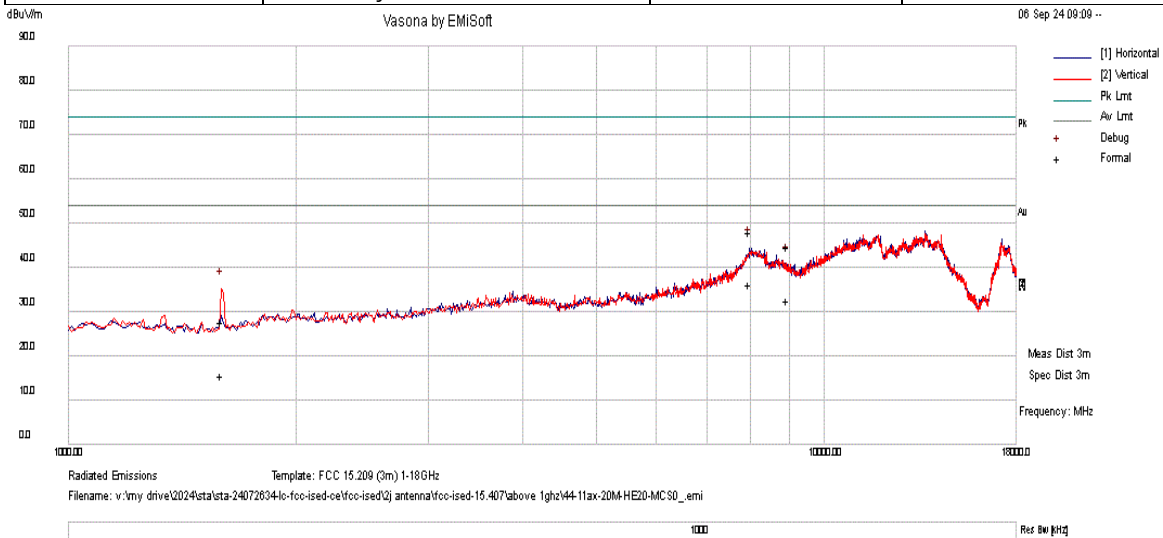
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	7959.38	17.13	14.18	15.27	46.58	Peak	V	100	0	54.00	-7.42	Pass
2	1595.97	33.53	5.54	-1.60	37.47	Peak	H	100	360	54.00	-16.53	Pass
3	9003.37	15.00	15.14	11.50	41.64	Peak	H	100	360	54.00	-12.36	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-20M-5825MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/06/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



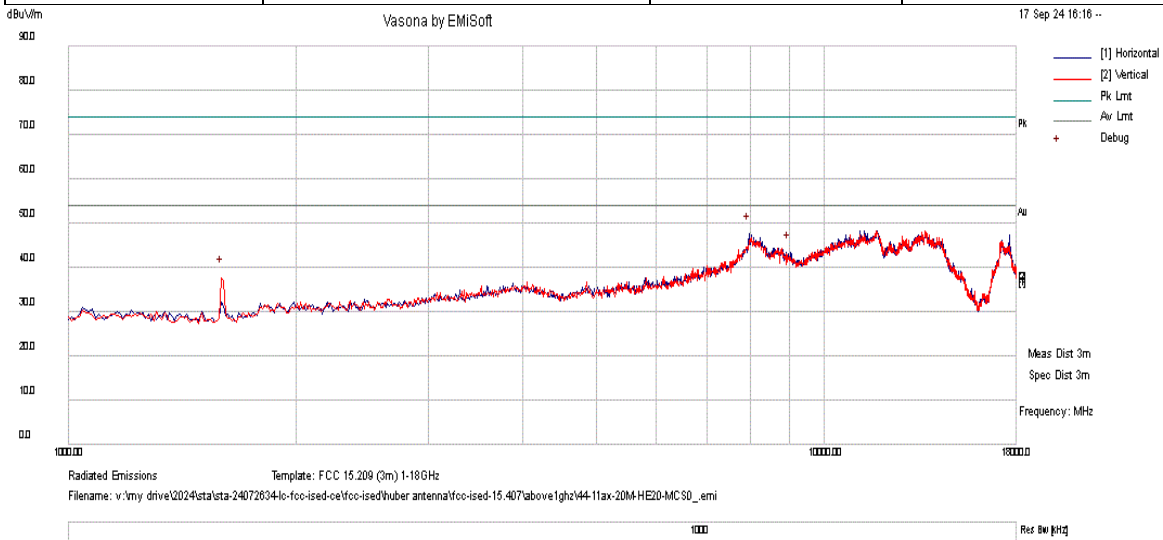
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	7980.85	18.26	14.23	15.58	48.07	Peak Max	H	111	2	74.00	-25.93	Pass
2	8970.62	17.75	15.34	11.60	44.68	Peak Max	V	122	104	74.00	-29.32	Pass
3	1595.61	23.88	5.53	-1.60	27.81	Peak Max	V	174	129	74.00	-46.19	Pass
4	7980.85	6.47	14.23	15.58	36.28	Average Max	H	111	2	54.00	-17.72	Pass
5	8970.62	5.70	15.34	11.60	32.63	Average Max	V	122	104	54.00	-21.37	Pass
6	1595.61	11.76	5.53	-1.60	15.69	Average Max	V	174	129	54.00	-38.31	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-20M-5825MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



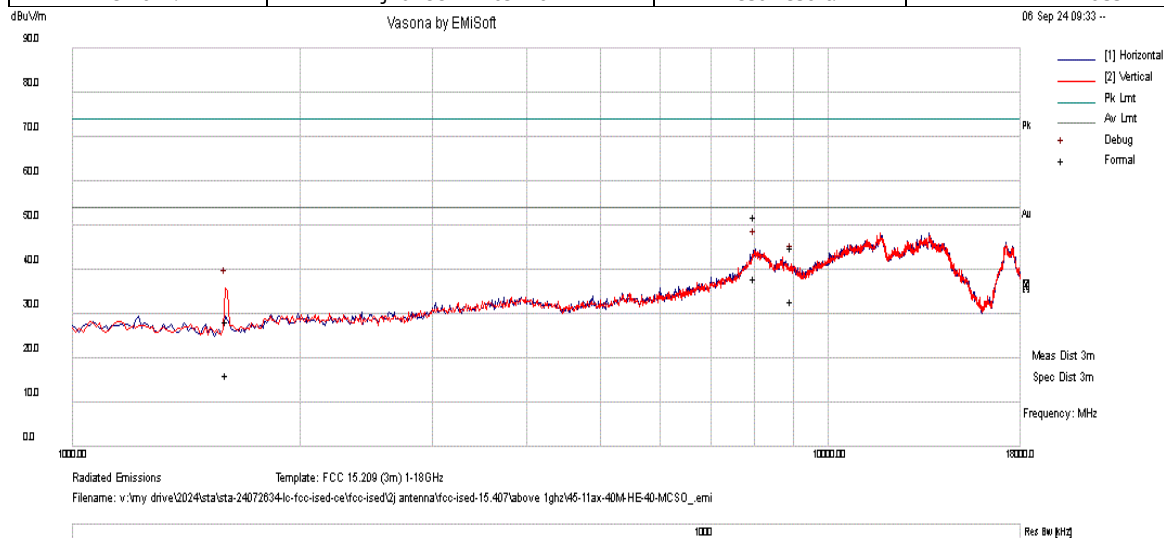
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	7959.38	17.94	14.18	15.27	47.39	Peak	H	200	0	54.00	-6.61	Pass
2	1595.0	33.58	5.53	-1.60	37.51	Peak	V	200	0	54.00	-16.49	Pass
3	8990.02	16.21	15.21	11.54	42.96	Peak	H	100	360	54.00	-11.04	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ax-40M-5190MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/06/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



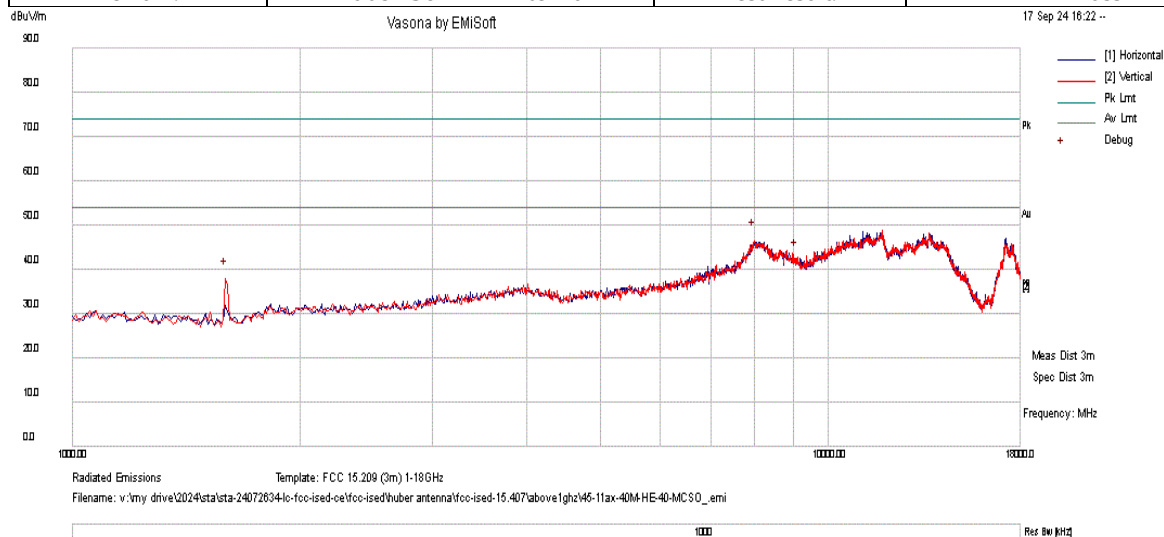
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8010.78	21.75	14.27	15.85	51.87	Peak Max	H	140	140	74.00	-22.13	Pass
2	8949.36	17.81	15.48	11.66	44.95	Peak Max	V	179	86	74.00	-29.05	Pass
3	1598.35	24.33	5.54	-1.59	28.29	Peak Max	V	112	22	74.00	-45.71	Pass
4	8010.78	8.01	14.27	15.85	38.13	Average Max	H	140	140	54.00	-15.87	Pass
5	8949.36	5.69	15.48	11.66	32.82	Average Max	V	179	86	54.00	-21.18	Pass
6	1598.35	12.13	5.54	-1.59	16.09	Average Max	V	112	22	54.00	-37.91	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-40M-5190MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



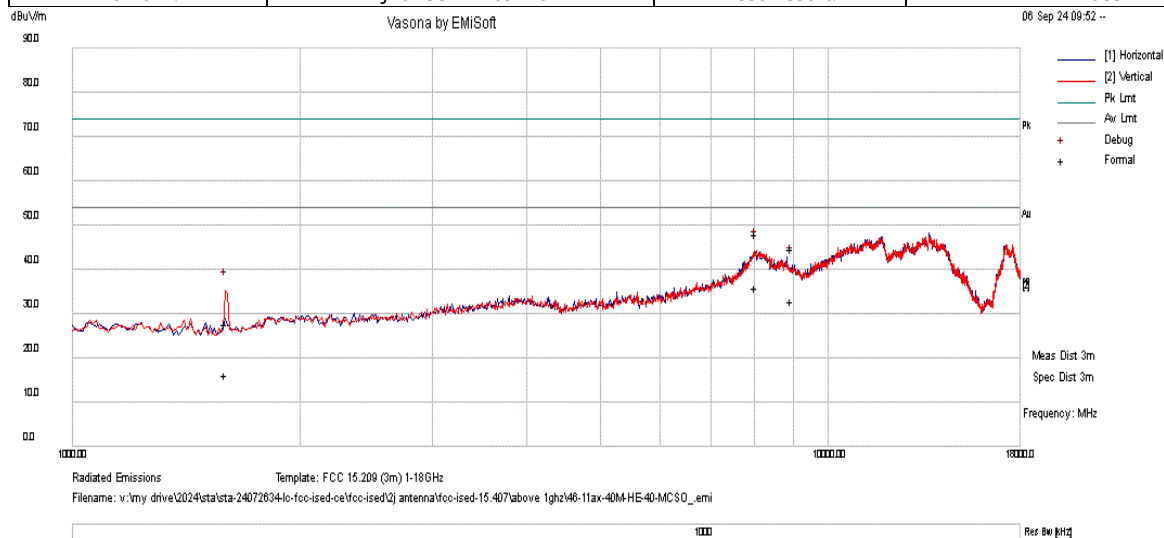
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	7991.25	16.33	14.25	15.73	46.32	Peak	V	200	0	54.00	-7.68	Pass
2	1595.0	33.75	5.53	-1.60	37.68	Peak	V	200	0	54.00	-16.32	Pass
3	9068.2	15.56	15.13	11.26	41.95	Peak	H	100	360	54.00	-12.05	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ax-40M-5230MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/06/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



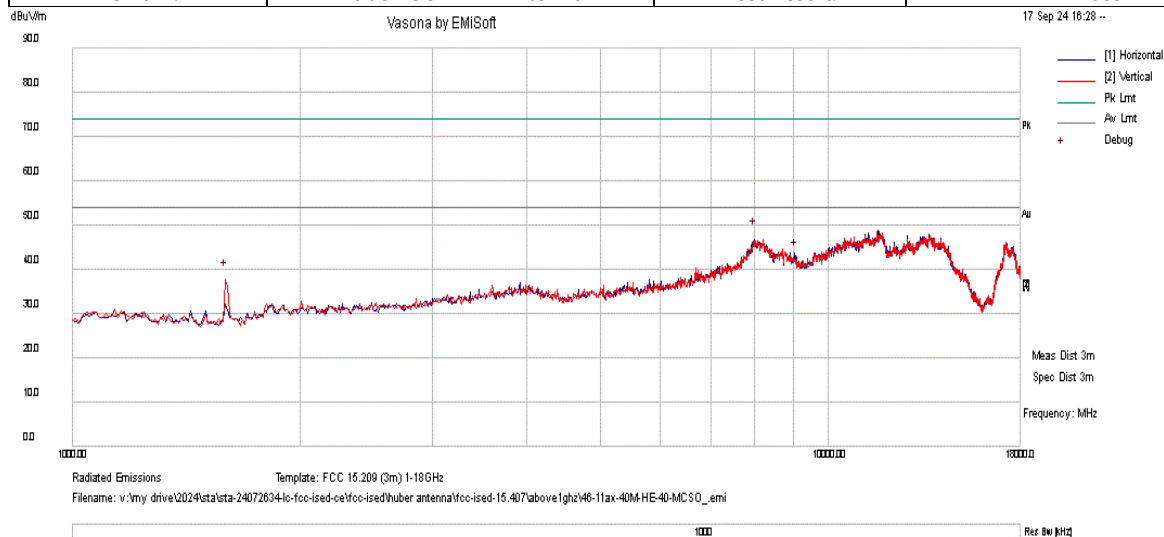
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8043.03	17.84	14.25	15.83	47.92	Peak Max	V	156	0	74.00	-26.08	Pass
2	8968.16	17.72	15.35	11.60	44.68	Peak Max	H	122	95	74.00	-29.32	Pass
3	1593.36	23.84	5.53	-1.61	27.77	Peak Max	V	161	118	74.00	-46.24	Pass
4	8043.03	5.83	14.25	15.83	35.91	Average Max	V	156	0	54.00	-18.09	Pass
5	8968.16	5.80	15.35	11.60	32.75	Average Max	H	122	95	54.00	-21.25	Pass
6	1593.36	12.14	5.53	-1.61	16.07	Average Max	V	161	118	54.00	-37.93	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-40M-5230MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



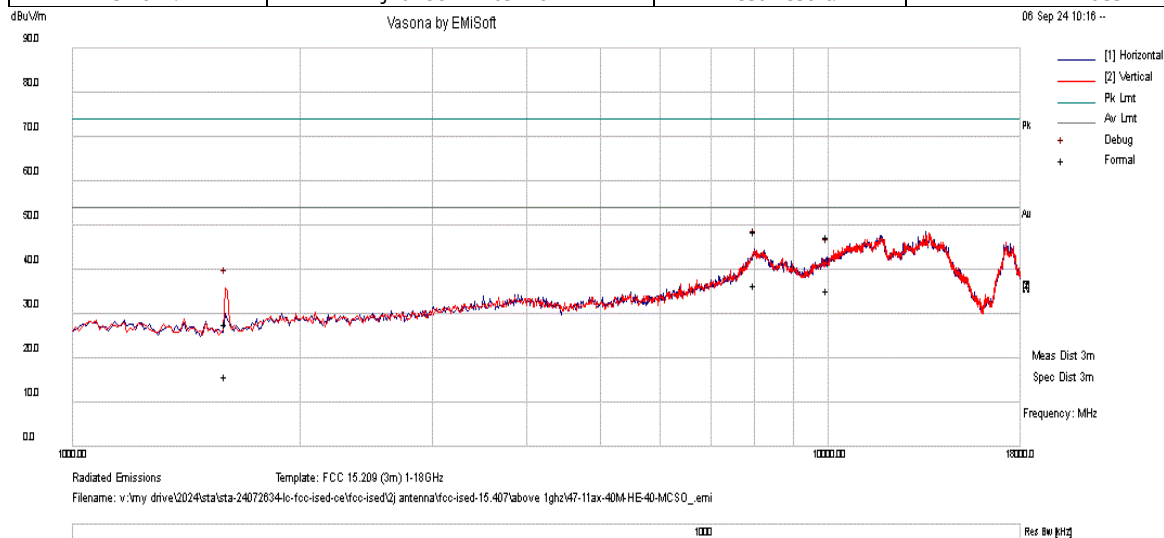
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8001.88	16.52	14.27	15.86	46.65	Peak	H	200	0	54.00	-7.35	Pass
2	1596.49	33.39	5.54	-1.59	37.33	Peak	H	100	360	54.00	-16.67	Pass
3	9068.2	15.45	15.13	11.26	41.84	Peak	H	100	360	54.00	-12.16	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ax-40M-5270MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/06/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



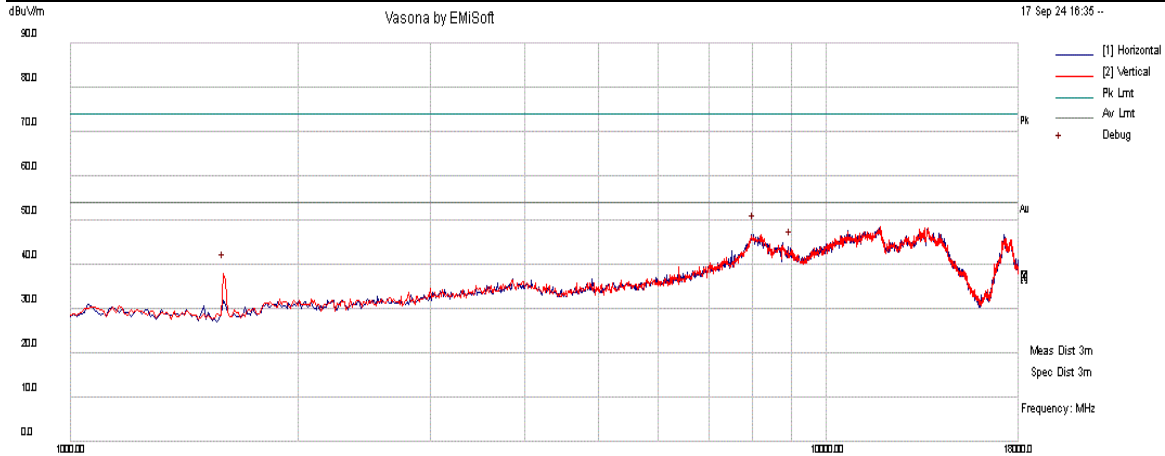
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8003.83	18.61	14.27	15.86	48.73	Peak Max	H	100	0	74.00	-25.27	Pass
2	9990.95	17.94	16.68	12.66	47.28	Peak Max	H	166	52	74.00	-26.72	Pass
3	1594.35	23.65	5.53	-1.60	27.58	Peak Max	V	164	134	74.00	-46.42	Pass
4	8003.83	6.49	14.27	15.86	36.62	Average Max	H	100	0	54.00	-17.38	Pass
5	9990.95	5.98	16.68	12.66	35.32	Average Max	H	166	52	54.00	-18.68	Pass
6	1594.35	12.10	5.53	-1.60	16.02	Average Max	V	164	134	54.00	-37.98	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ax-40M-5270MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



Radiated Emissions Template: FCC 15.209 (3m) 1-18GHz
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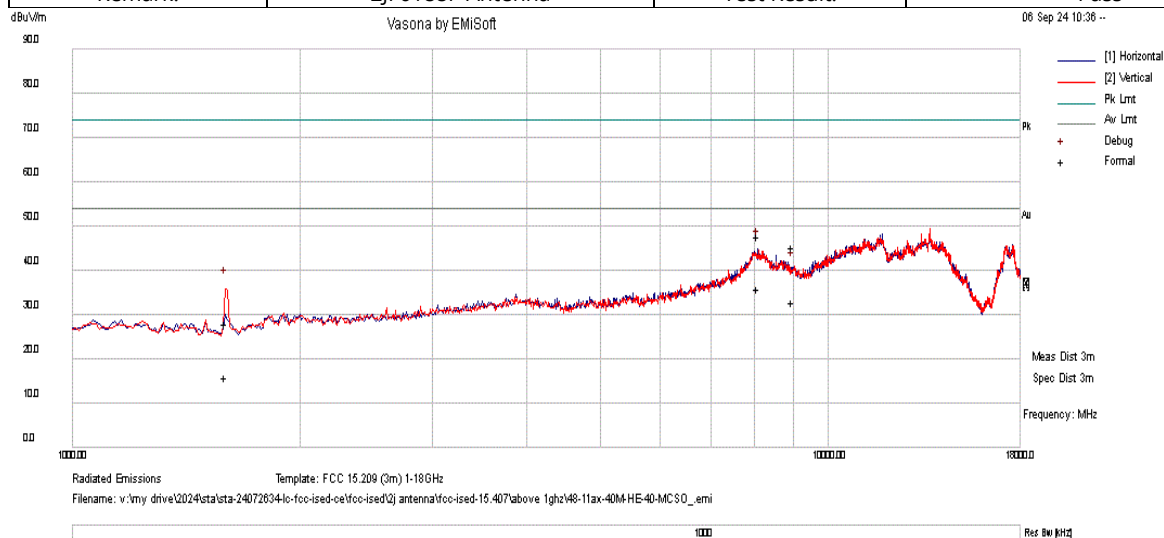
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8023.12	16.58	14.26	15.84	46.68	Peak	H	100	0	54.00	-7.32	Pass
2	1595.0	33.91	5.53	-1.60	37.84	Peak	V	200	0	54.00	-16.16	Pass
3	8992.74	16.39	15.19	11.53	43.11	Peak	H	100	360	54.00	-10.89	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ax-40M-5310MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/06/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



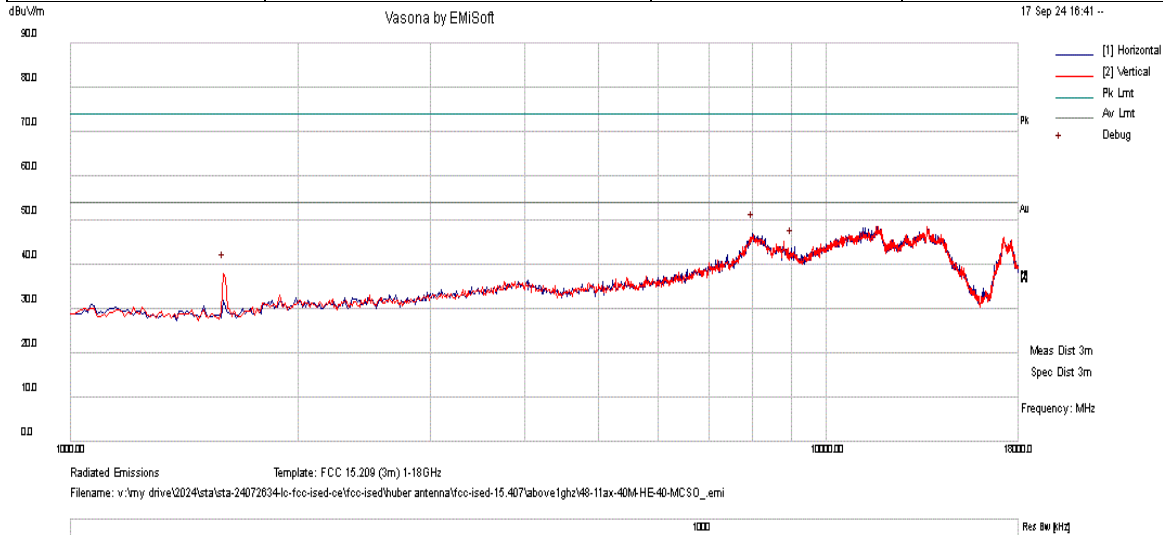
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8077.45	17.79	14.23	15.76	47.79	Peak Max	H	114	52	74.00	-26.22	Pass
2	8989.38	18.38	15.21	11.54	45.13	Peak Max	H	177	153	74.00	-28.87	Pass
3	1594.26	23.98	5.53	-1.60	27.90	Peak Max	H	170	6	74.00	-46.10	Pass
4	8077.45	5.92	14.23	15.76	35.92	Average Max	H	114	52	54.00	-18.08	Pass
5	8989.38	6.06	15.21	11.54	32.82	Average Max	H	177	153	54.00	-21.18	Pass
6	1594.26	12.05	5.53	-1.60	15.98	Average Max	H	170	6	54.00	-38.02	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ax-40M-5310MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



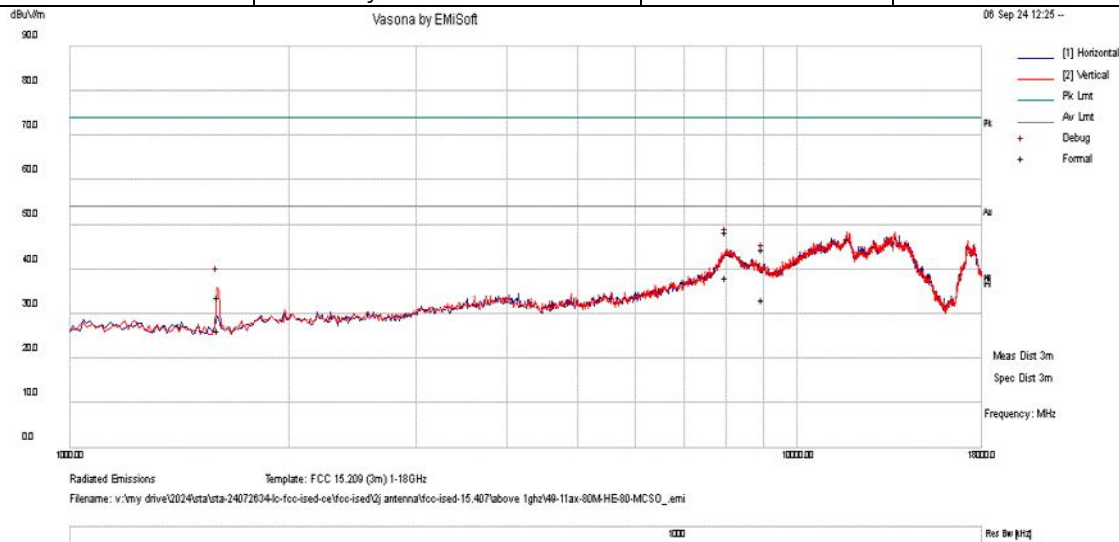
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8001.88	16.75	14.27	15.86	46.88	Peak	H	200	0	54.00	-7.12	Pass
2	1595.0	33.87	5.53	-1.60	37.80	Peak	V	200	0	54.00	-16.20	Pass
3	9023.83	16.67	15.14	11.42	43.22	Peak	H	100	360	54.00	-10.78	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-80M-5210MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/06/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



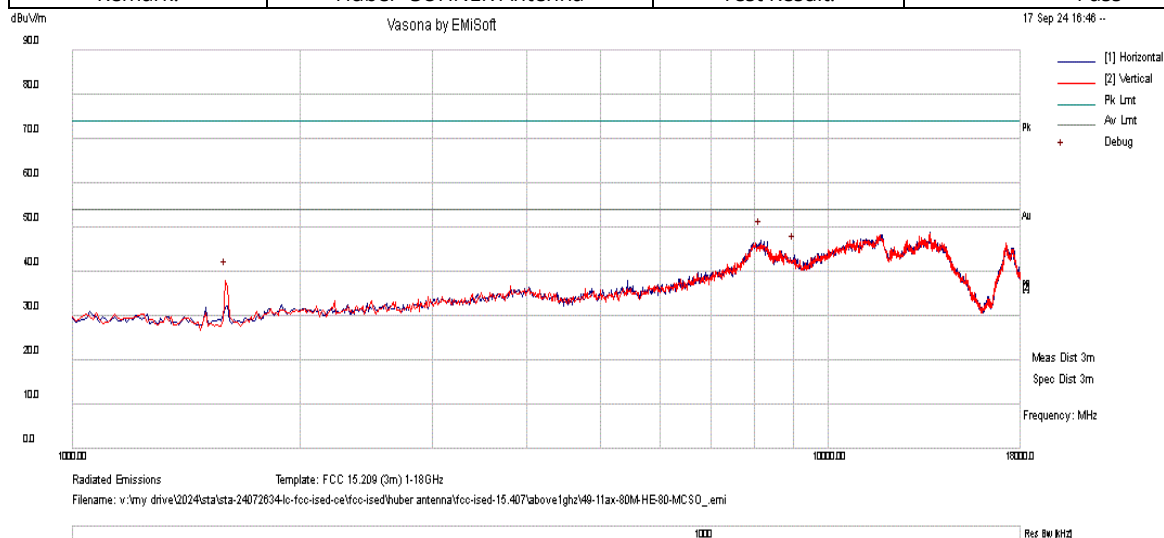
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8013.65	18.30	14.26	15.85	48.41	Peak Max	H	112	66	74.00	-25.59	Pass
2	9001.94	17.85	15.14	11.50	44.49	Peak Max	V	150	160	74.00	-29.51	Pass
3	1599.39	29.82	5.55	-1.58	33.78	Peak Max	V	140	35	74.00	-40.22	Pass
4	8013.65	8.10	14.26	15.85	38.22	Average Max	H	112	66	54.00	-15.78	Pass
5	9001.94	6.57	15.14	11.50	33.21	Average Max	V	150	160	54.00	-20.79	Pass
6	1599.39	22.38	5.55	-1.58	26.34	Average Max	V	140	35	54.00	-27.66	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-80M-5210MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



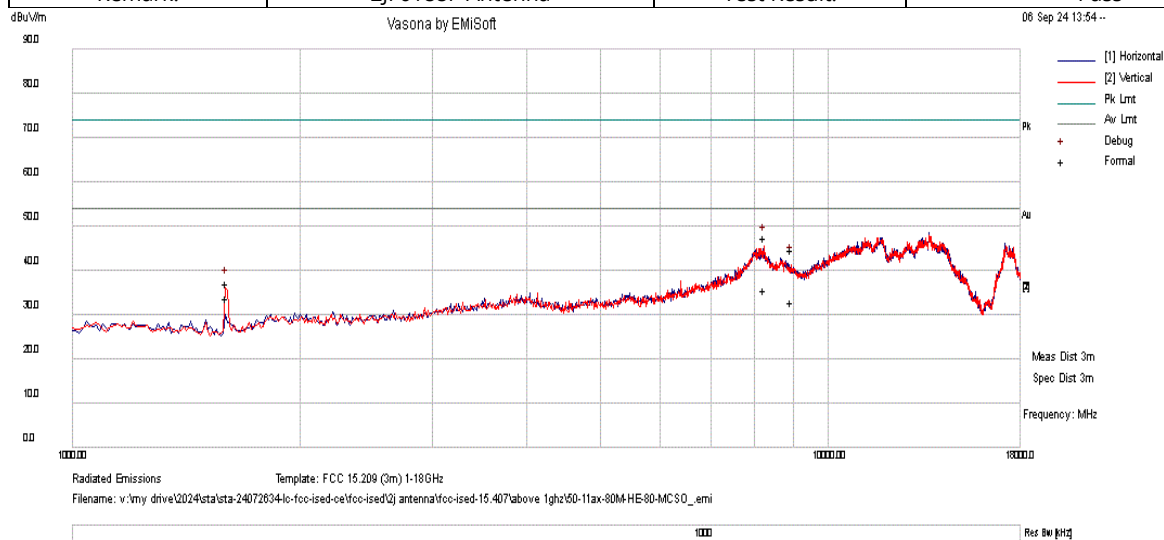
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8150.62	17.13	14.20	15.64	46.97	Peak	H	200	0	54.00	-7.03	Pass
2	1595.0	33.79	5.53	-1.60	37.72	Peak	V	200	0	54.00	-16.28	Pass
3	9033.71	17.00	15.14	11.38	43.51	Peak	H	100	360	54.00	-10.49	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ax-80M-5290MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/06/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



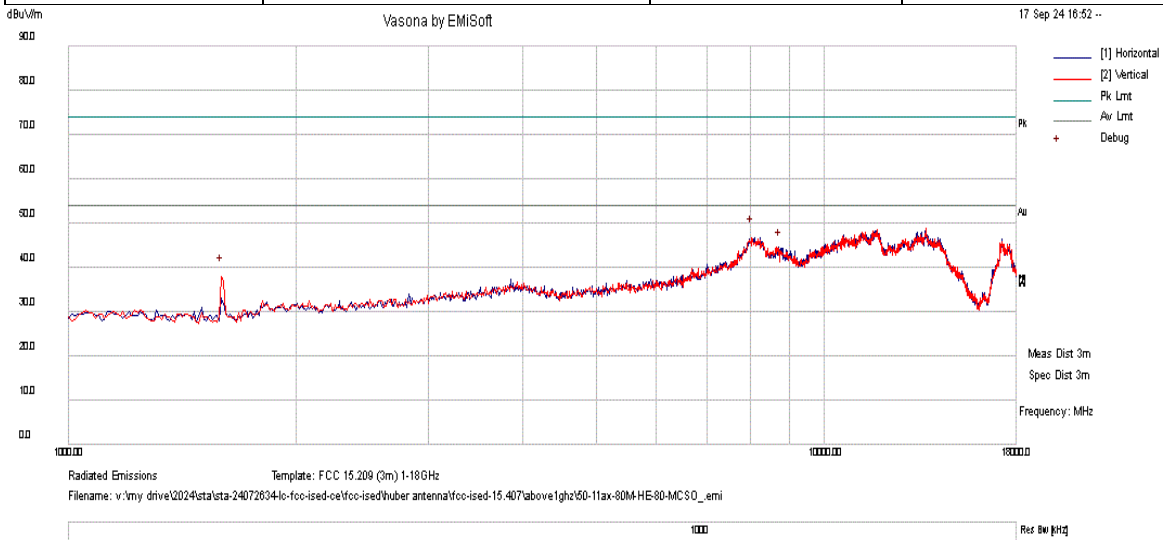
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8244.54	17.66	14.16	15.62	47.44	Peak Max	V	180	150	74.00	-26.56	Pass
2	8959.55	17.52	15.41	11.63	44.56	Peak Max	V	157	0	74.00	-29.44	Pass
3	1599.86	33.20	5.55	-1.58	37.16	Peak Max	V	144	16	74.00	-36.84	Pass
4	8244.54	5.83	14.16	15.62	35.62	Average Max	V	180	150	54.00	-18.38	Pass
5	8959.55	5.80	15.41	11.63	32.84	Average Max	V	157	0	54.00	-21.17	Pass
6	1599.86	29.92	5.55	-1.58	33.88	Average Max	V	144	16	54.00	-20.12	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-80M-5290MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



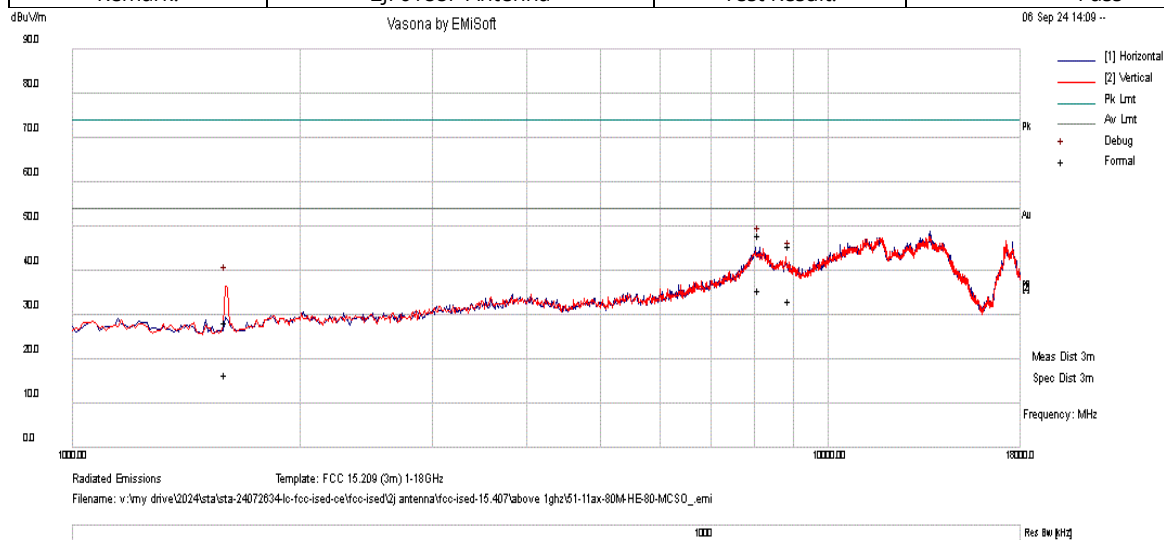
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8023.12	16.64	14.26	15.84	46.74	Peak	V	200	0	54.00	-7.26	Pass
2	1596.96	33.80	5.50	-1.60	37.72	Peak	V	100	360	54.00	-16.30	Pass
3	8767.6	14.77	16.70	12.02	43.50	Peak	H	100	360	54.00	-10.50	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ax-80M-5290MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/06/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



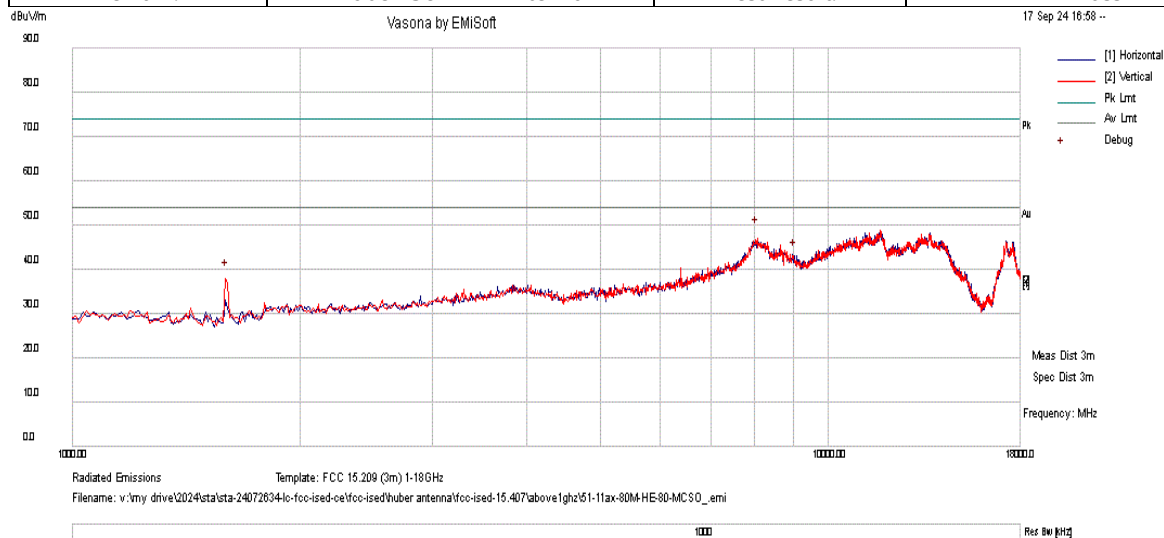
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8118.02	18.01	14.22	15.69	47.91	Peak Max	H	164	90	74.00	-26.09	Pass
2	8893.58	17.84	15.85	11.83	45.52	Peak Max	V	166	140	74.00	-28.48	Pass
3	1598.16	24.47	5.54	-1.59	28.43	Peak Max	V	145	54	74.00	-45.57	Pass
4	8118.02	5.70	14.22	15.69	35.60	Average Max	H	164	90	54.00	-18.40	Pass
5	8893.58	5.47	15.85	11.83	33.15	Average Max	V	166	140	54.00	-20.85	Pass
6	1598.16	12.60	5.54	-1.59	16.56	Average Max	V	145	54	54.00	-37.44	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ax-80M-5530MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



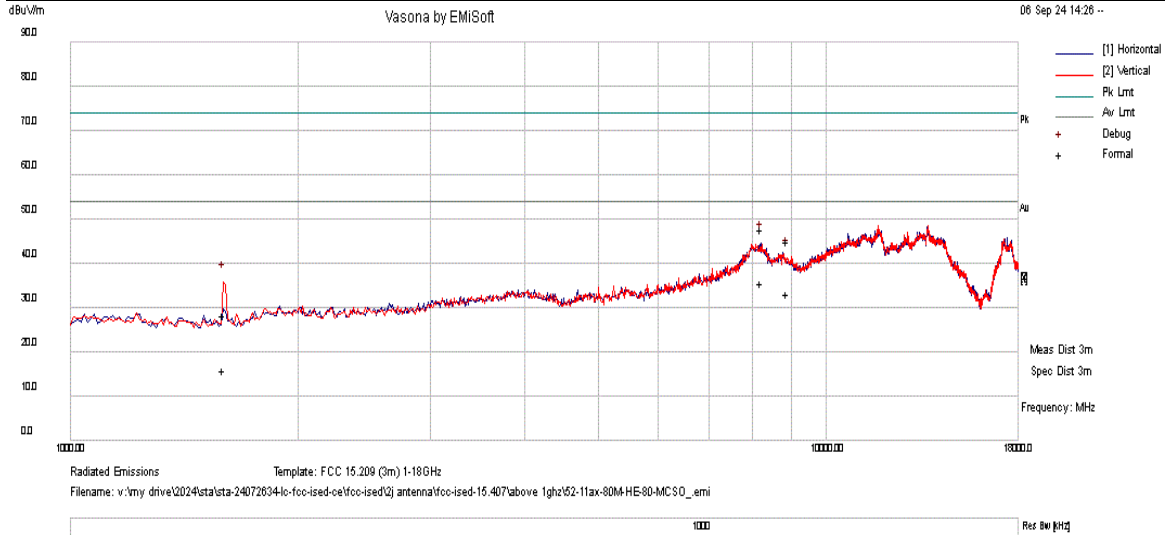
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8065.62	17.00	14.24	15.79	47.04	Peak	V	200	0	54.00	-6.97	Pass
2	1599.82	33.39	5.55	-1.58	37.35	Peak	H	100	360	54.00	-16.65	Pass
3	9038.28	15.28	15.14	11.36	41.78	Peak	H	100	360	54.00	-12.22	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-80M-5530MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/06/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



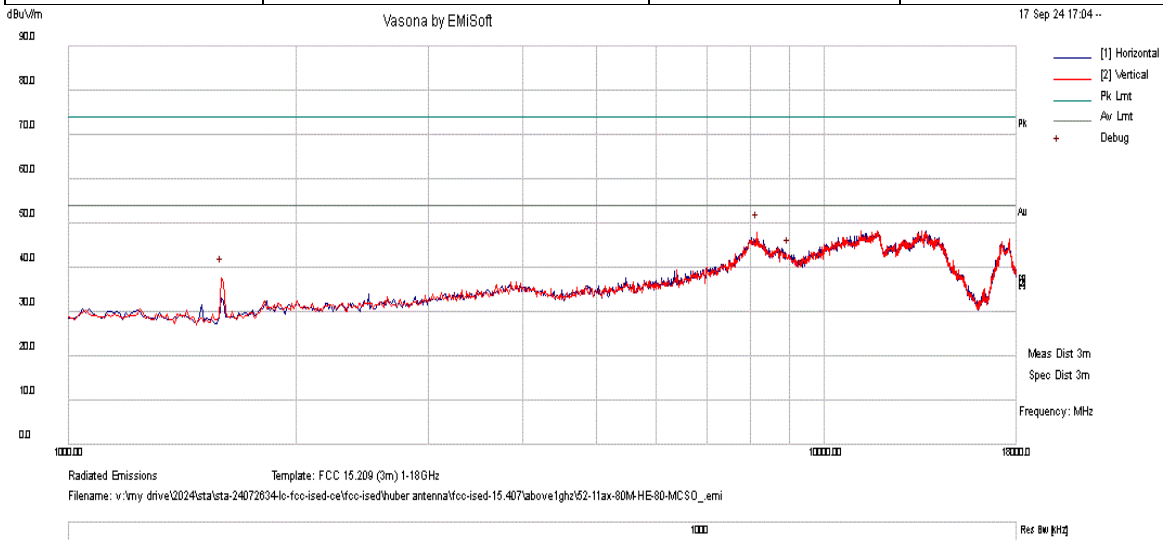
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8214.35	17.84	14.17	15.61	47.62	Peak Max	H	118	0	74.00	-26.38	Pass
2	8889.65	17.10	15.88	11.84	44.81	Peak Max	V	100	45	74.00	-29.19	Pass
3	1598.08	24.35	5.54	-1.59	28.30	Peak Max	V	168	100	74.00	-45.70	Pass
4	8214.35	5.92	14.17	15.61	35.70	Average Max	H	118	0	54.00	-18.30	Pass
5	8889.65	5.41	15.88	11.84	33.13	Average Max	V	100	45	54.00	-20.87	Pass
6	1598.08	11.98	5.54	-1.59	15.93	Average Max	V	168	100	54.00	-38.07	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-80M-5610MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



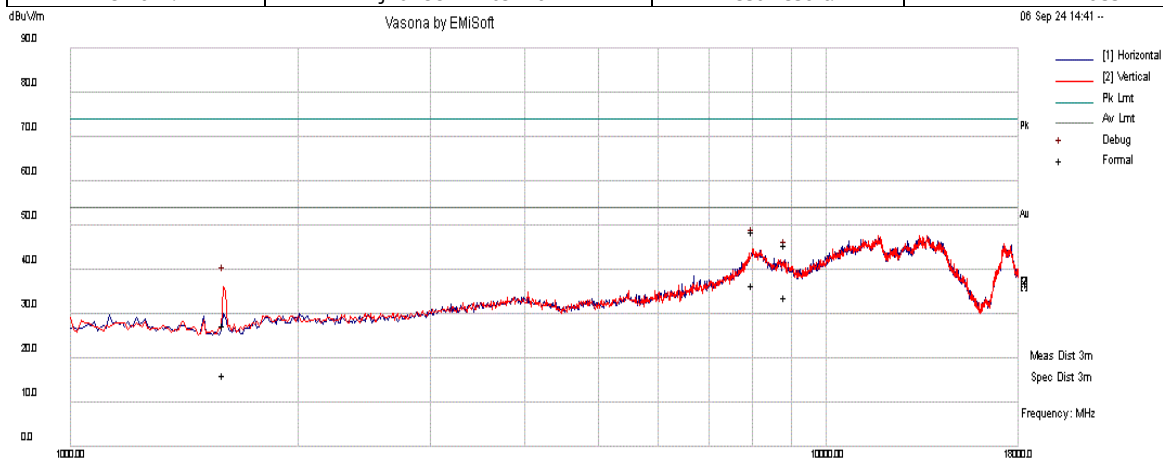
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8161.25	17.85	14.20	15.63	47.68	Peak	V	200	0	54.00	-6.32	Pass
2	1595.0	33.62	5.53	-1.60	37.55	Peak	V	200	0	54.00	-16.45	Pass
3	9003.08	15.16	15.14	11.50	41.80	Peak	H	100	360	54.00	-12.20	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ax-160M-5250MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/06/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



Radiated Emissions
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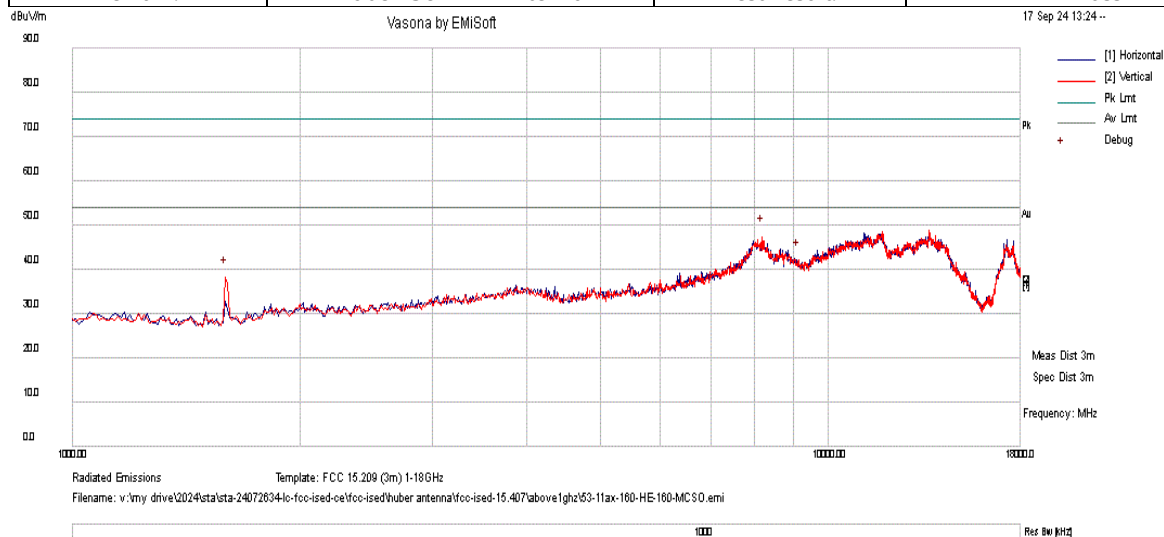
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8000.3	18.52	14.27	15.86	48.65	Peak Max	V	100	180	74.00	-25.35	Pass
2	8832.58	17.26	16.26	11.94	45.46	Peak Max	H	183	84	74.00	-28.54	Pass
3	1595.95	23.60	5.54	-1.60	27.54	Peak Max	V	159	181	74.00	-46.46	Pass
4	8000.3	6.36	14.27	15.86	36.49	Average Max	V	100	180	54.00	-17.51	Pass
5	8832.58	5.56	16.26	11.94	33.76	Average Max	H	183	84	54.00	-20.24	Pass
6	1595.95	12.13	5.54	-1.60	16.07	Average Max	V	159	181	54.00	-37.93	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss(dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value(dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-160M-5250MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



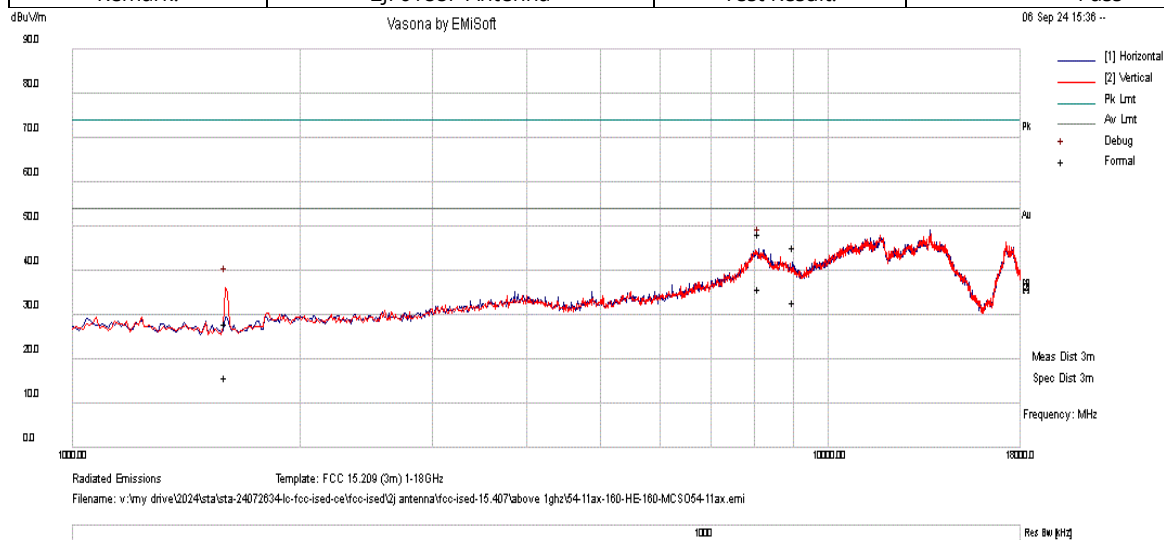
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8182.5	17.39	14.19	15.61	47.19	Peak	V	200	0	54.00	-6.81	Pass
2	1596.74	33.80	5.50	-1.60	37.79	Peak	V	100	360	54.00	-16.20	Pass
3	9128.35	15.60	15.10	11.10	41.88	Peak	V	100	360	54.00	-12.10	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Spurious Emission Above 1GHz

Test Standard:	15.209, 15.407	Mode:	802-11ax-160M-5570MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/06/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	2JF0188P Antenna	Test Result:	Pass



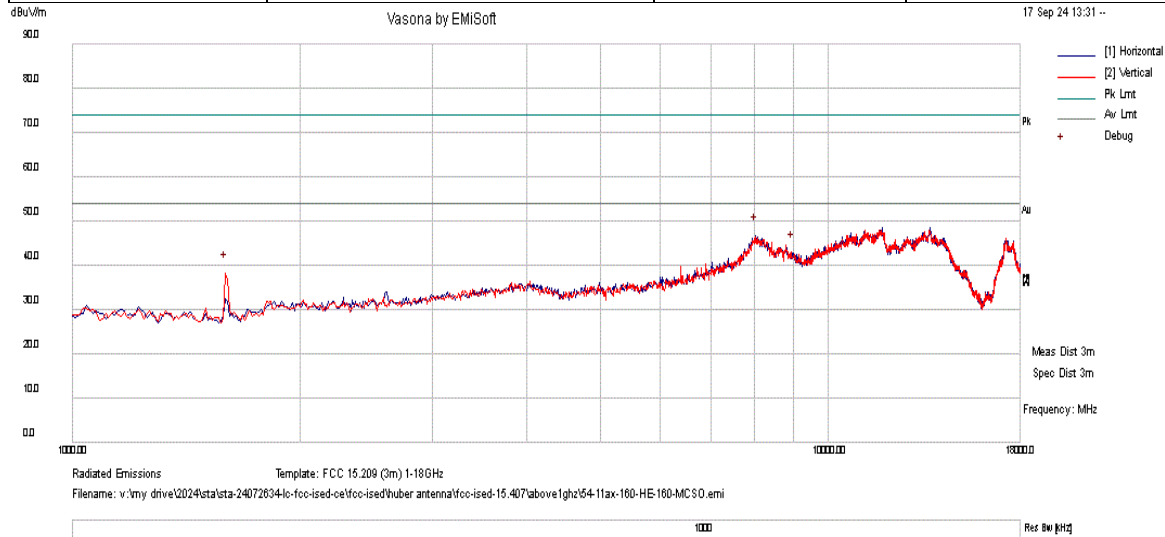
No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8106.96	18.37	14.22	15.71	48.30	Peak Max	H	159	169	74.00	-25.70	Pass
2	9012.22	18.59	15.14	11.46	45.19	Peak Max	H	178	76	74.00	-28.81	Pass
3	1596.85	24.02	5.54	-1.59	27.97	Peak Max	H	112	81	74.00	-46.03	Pass
4	8106.96	5.82	14.22	15.71	35.75	Average Max	H	159	169	54.00	-18.25	Pass
5	9012.22	6.13	15.14	11.46	32.73	Average Max	H	178	76	54.00	-21.27	Pass
6	1596.85	11.80	5.54	-1.59	15.75	Average Max	H	112	81	54.00	-38.25	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.

RADIATED SPURIOUS EMISSION ABOVE 1GHZ

Test Standard:	15.209, 15.407	Mode:	802-11ax-160M-5570MHz
Frequency Range:	1 GHz - 18 GHz	Test Date:	09/17/2024
Antenna Type/Polarity:	Horn/Hor & Ver	Test Personnel:	Minoush Niknam
Remark:	Huber+SUHNER Antenna	Test Result:	Pass



No.	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
1	8023.12	16.48	14.26	15.84	46.59	Peak	H	200	0	54.00	-7.42	Pass
2	1595.0	34.09	5.53	-1.60	38.02	Peak	V	200	0	54.00	-15.98	Pass
3	9002.45	15.98	15.14	11.50	42.62	Peak	H	100	360	54.00	-11.38	Pass

Remarks:

- 1) Level (dBuV) = Raw (dBuV) + Cable loss (dB) + AF (dB).
- 2) AF (dB) = Antenna Factor (dB) - Preamplifier Gain (dB)
- 3) Margin = Level (dBuV/m) - Limit value (dBuV/m)
- 4) RF notch filter was used during RF testing to block the high power RF fundamental that is not subject to spurious emission limit requirement.
- 5) Measurement of Average max is not required if peak result is already below average limit of 54 dBuV/m.

Radiated Emission between 9KHz – 30MHz test result

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

18GHz – 40GHz test result

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

9 Test Instrument List

Equipment	Manufacturer	Model	Instrument Number	Cal. Date	Cal. Due
Semi-Anechoic Chamber	ETS-Lindgren	10M	VL001	5/24/2024	5/24/2027
Shielding Control Room	ETS-Lindgren	Series 81	VL006	N/A1)	N/A1)
Spectrum Analyzer	Keysight	N9020A	MY50110074	5/15/2024	5/15/2026
EMC Test Receiver	R&S	ESL6	100230	5/14/2024	5/14/2025
LISN (9KHz – 30MHz)	EMCO	3816/2	9705-1066	5/28/2024	5/28/2025
Bi-Log Antenna	ETS-Lindgren	3142E	217921	7/25/2024	7/25/2025
Horn Antenna (1-18GHz)	Electro-Metrics	EM-6961	6292	7/22/2024	7/22/2025
Horn Antenna (18-40GHz)	Com-Power	AH-840	101109	7/22/2024	7/22/2025
Temp / Humidity / Pressure Meter	PCE Instruments	PCE-THB 40	R062028	5/17/2024	5/17/2025
RF Attenuator	Pasternack	PE7005-3	VL061	07/29/2024	07/29/2025
EM Center Control	ETS-Lindgren	7006-001	160136	N/A1)	N/A1)
Turn Table	ETS-Lindgren	2181-3.03	VL002	N/A1)	N/A1)
Boresight Antenna Tower	ETS-Lindgren	2171B	VL003	N/A1)	N/A1)
Loop Antenna (9k-30MHz)	Com-Power	AL-130	121012	6/13/2024	6/13/2026
RE test cable (below 6GHz)	Vista	RE-6GHz-01	RE-6GHz-01	07/29/2024	07/29/2025
RE test cable (1-18GHz)	PhaseTrack	II-240	RE-18GHz-01	07/29/2024	07/29/2025
RE test cable (>18GHz)	Sucoflex	104	344903/4	07/29/2024	07/29/2025
Pulse limiter	Com-Power	LIT-930A	531727	07/29/2024	07/29/2025
CE test cable #1	FIRST RF	FRF-C-1002-001	CE-6GHz-01	07/29/2024	07/29/2025
CE test cable#2	FIRST RF	FRF-C-1002-001	CE-6GHz-02	07/29/2024	07/29/2025
USB RF Power Sensor	ETS-Lindgren	7002-006	SN 00151268	5/14/2024	5/14/2026
Agilent Signal Generator	MXG N5182A	N5182A	US47080548	5/15/2024	5/15/2025
Power Splitter/Combiner	Mini-Circuits	ZFSC-2-9G+	VL052	N/A1)	N/A1)
Power Splitter/Combiner	Mini-Circuits	ZFSC-2-9G+	VL053	N/A1)	N/A1)
Power Splitter/Combiner	Mini-Circuits	ZFSC-2-9G+	VL054	N/A1)	N/A1)
Power Splitter/Combiner	Mini-Circuits	ZFSC-2-9G+	VL055	N/A1)	N/A1)
2.4GHz Notch Filter	Micro-Tronics	BRM50702	VL063	N/A1)	N/A1)
5GHz Notch Filter	Micro-Tronics	BRM50716	VL064	N/A1)	N/A1)

Note:

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

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