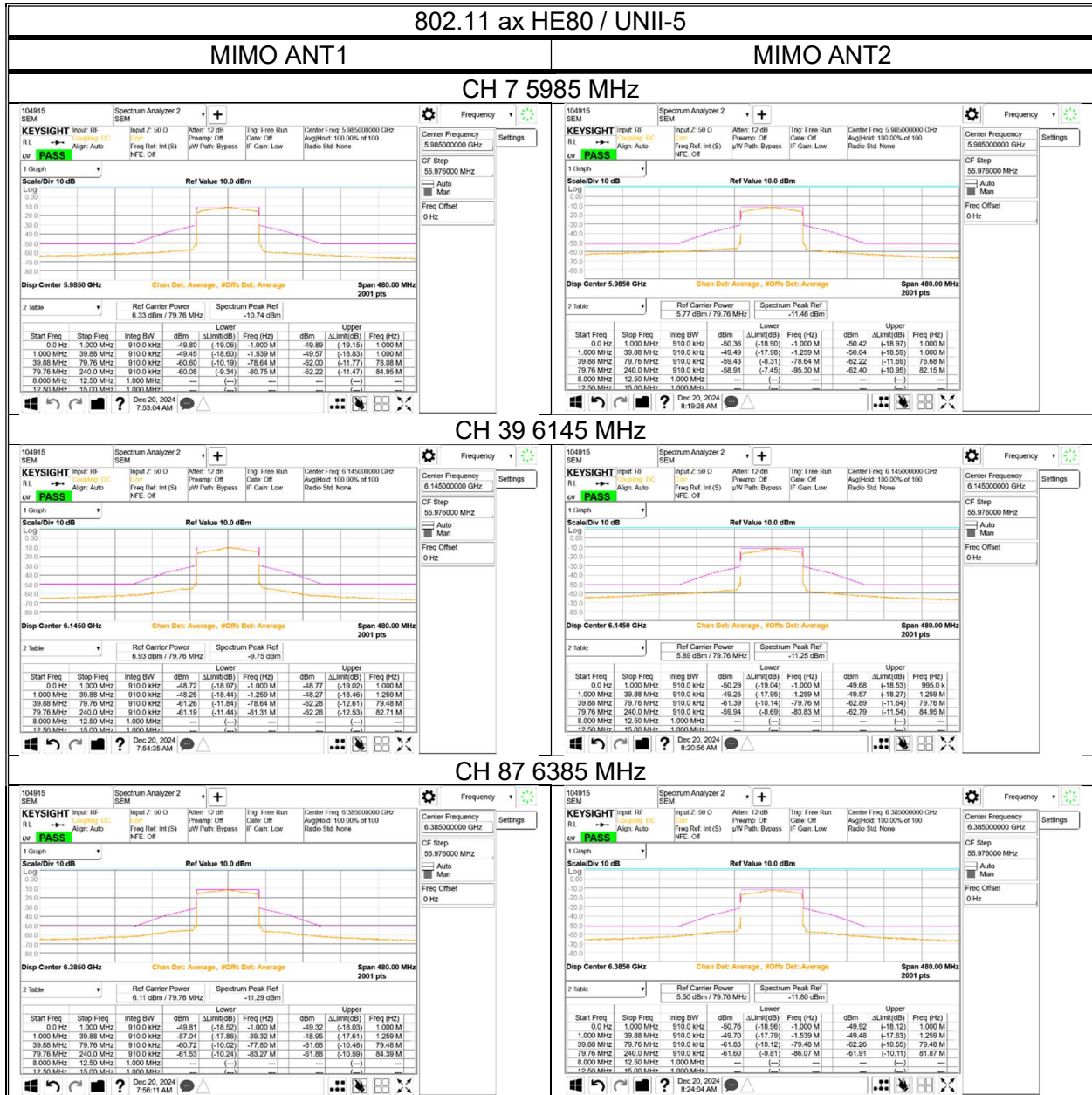
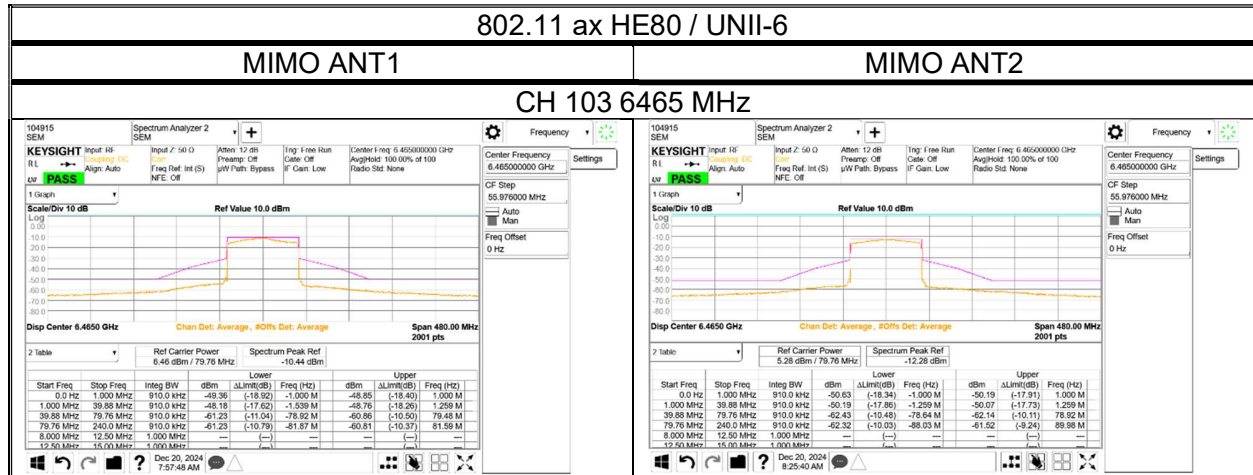


11.2.4. 802.11 ax HE80 RU(996T) MODE

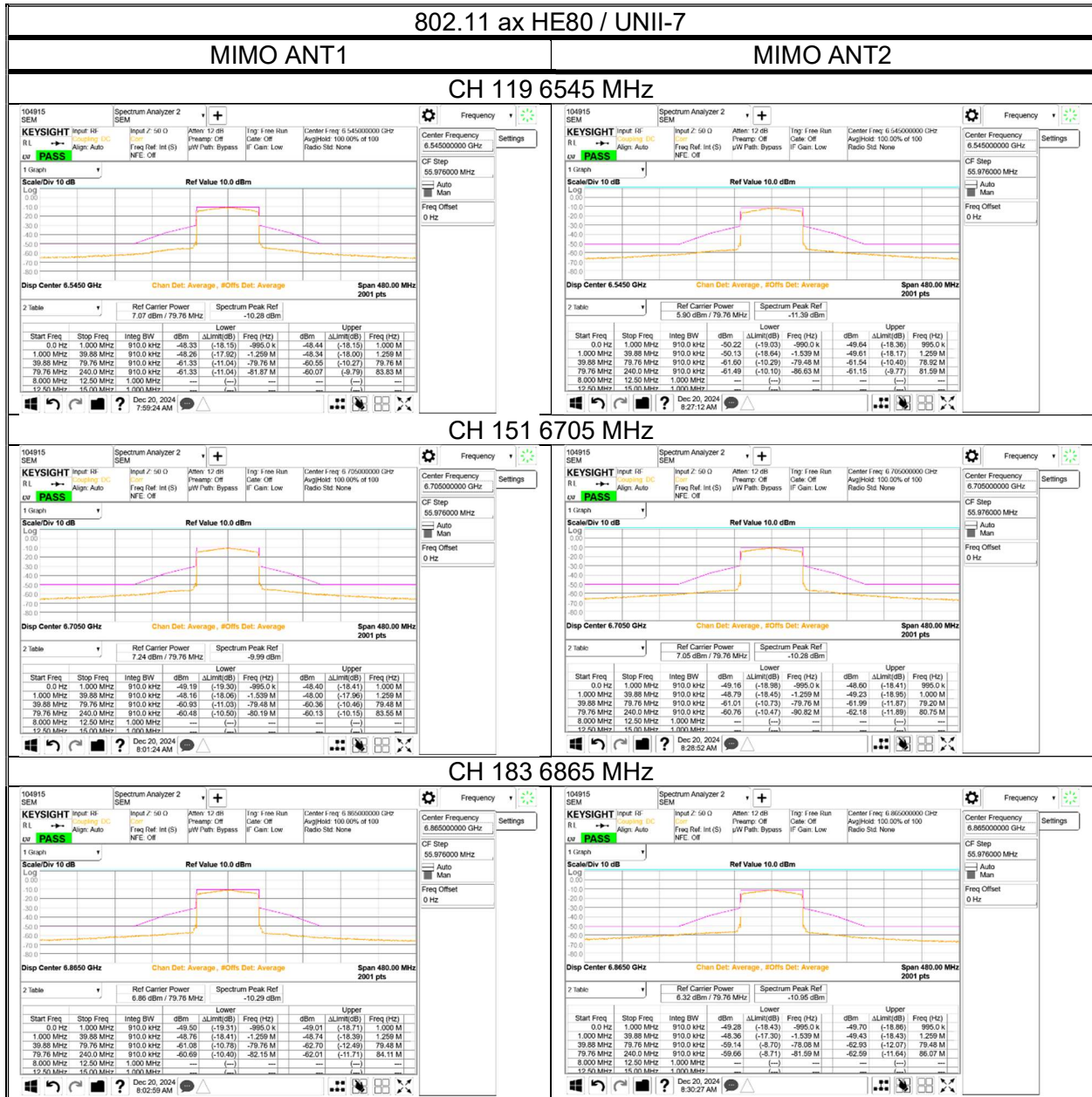
- LPI



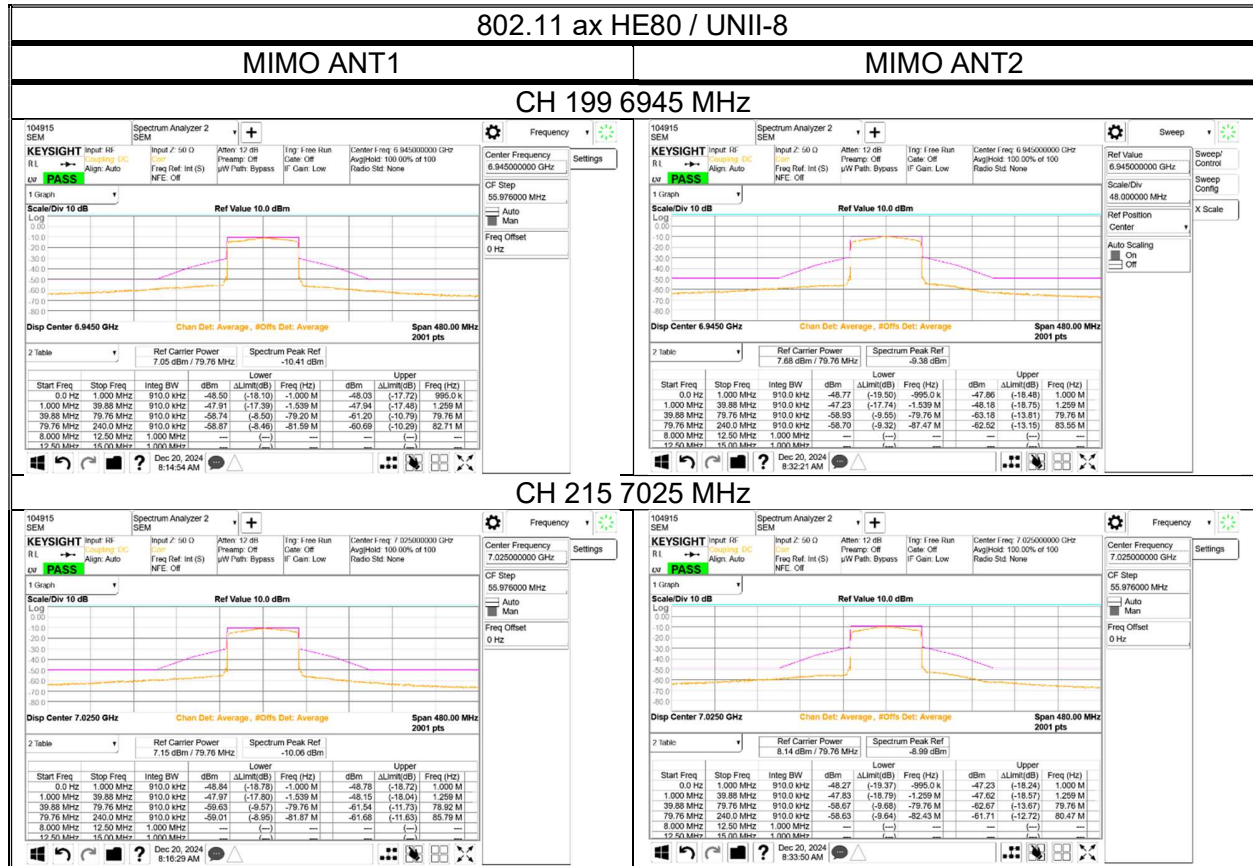
- LPI



- LPI

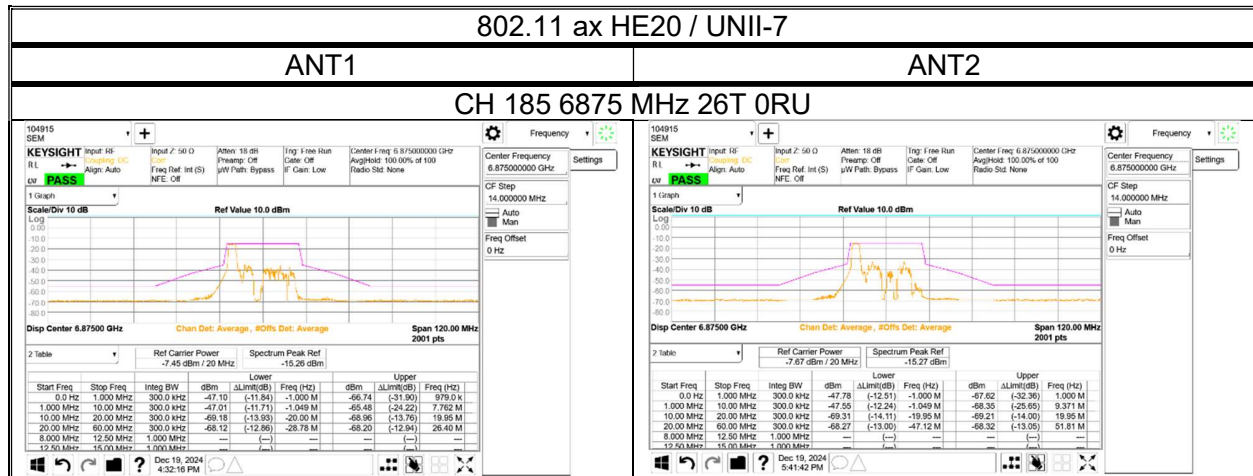


- LPI



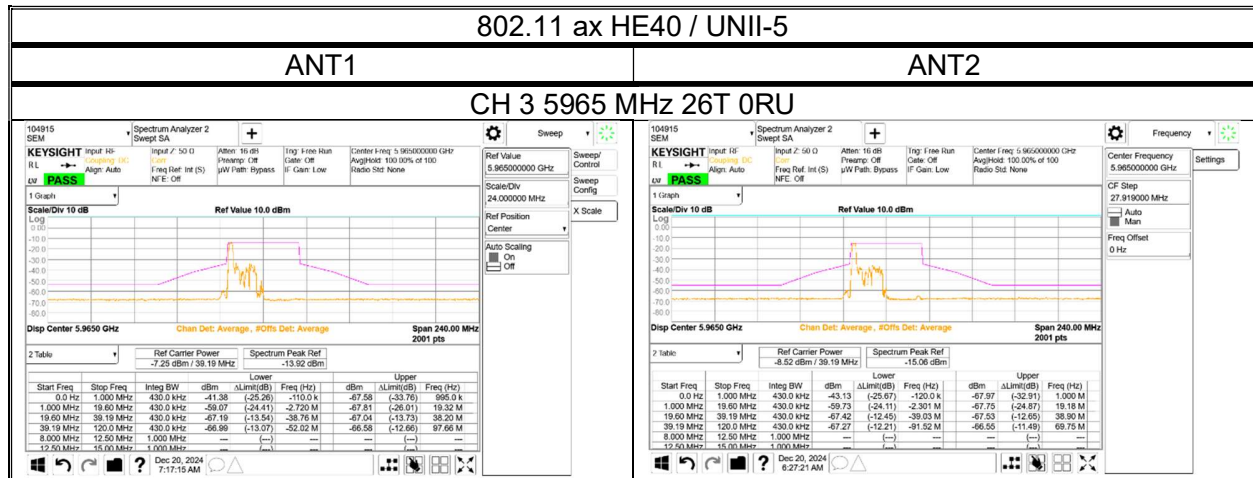
11.2.5. 802.11 ax HE20 RU MODE (WORST CASE)

-LPI



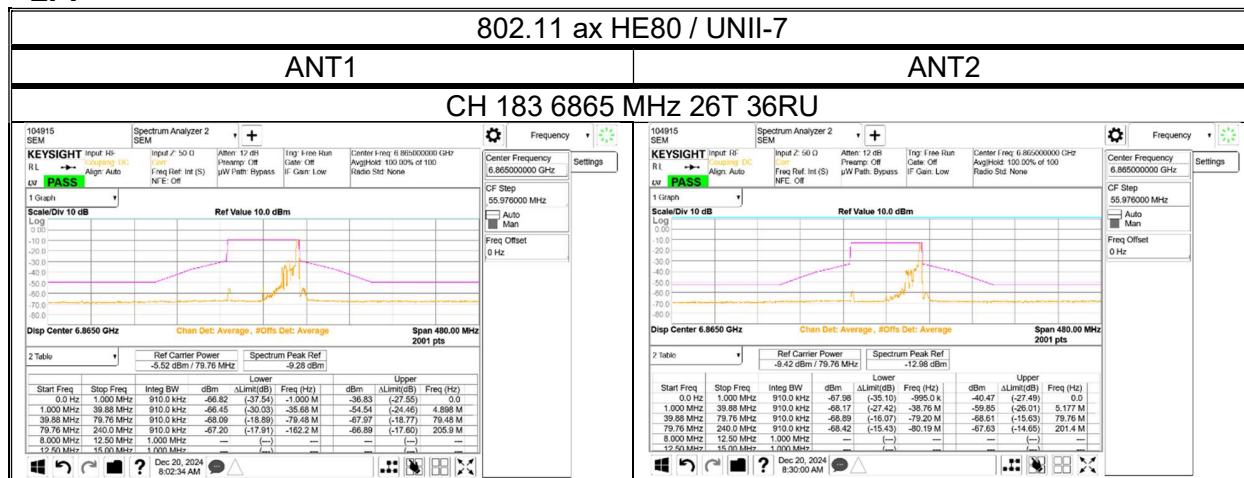
11.2.6. 802.11 ax HE40 RU MODE (WORST CASE)

- LPI



11.2.7. 802.11 ax HE80 RU MODE (WORST CASE)

- LPI



12. TRANSMITTER ABOVE 1 GHz

LIMITS

FCC §15.205 and §15.209

Limits for radiated disturbance of an intentional radiator		
Frequency range (MHz)	Limits (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

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g. §§ 15.231 and 15.241.

RSS-Gen (8.9)

Frequency (MHz)	Field strength (μV/m at 3 m)
30 – 88	100
88 – 216	150
216 – 960	200
Above 960	500

Frequency (MHz)	Magnetic field strength (H-Field) (μA/m)	Measurement Distance (m)
0.009–0.490 ^{Note 1}	6.37/F (F in kHz)	300
0.490–1.705	63.7/F (F in kHz)	30
1.705–30.0	0.08	30
Note 1: The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.		

Note: The limits in CFR 47, Part 15, Subpart C, paragraph 15.209(a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω. For example, the measurement frequency X kHz resulted in a level of Y dBuV/m, which is equivalent to $Y-51.5 = Z$ dBuA/m, which has the same margin, W dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.

RSS-Gen (8.10) : Restricted frequency bands

MHz	MHz	MHz	MHz	MHz	GHz
0.090 - 0.110	8.41425 - 8.41475	149.9 - 150.05	1435 - 1626.5	4500 - 5150	9.0 - 9.2
0.495 - 0.505	12.29 - 12.293	156.52475 -	1645.5 - 1646.5	5350 - 5460	9.3 - 9.5
2.1735 - 2.1905	12.51975 - 12.52025	156.52525	1660 - 1710	7250 - 7750	10.6 - 12.7
3.020 - 3.026	12.57675 - 12.57725	156.7 - 156.9	1718.8 - 1722.2	8025 - 8500	13.25 - 13.4
4.125 - 4.128	13.36 - 13.41	162.0125 - 167.17	2200 - 2300		14.47 - 14.5
4.17725 - 4.17775	16.42 - 16.423	167.72 - 173.2	2310 - 2390		15.35 - 16.2
4.20725 - 4.20775	16.69475 - 16.69525	240 - 285	2483.5 - 2500		17.7 - 21.4
5.677 - 5.683	16.80425 - 16.80475	322 - 335.4	2655 - 2900		22.01 - 23.12
6.215 - 6.218	25.5 - 25.67	399.9 - 410	3260 - 3267		23.6 - 24.0
6.26775 - 6.26825	37.5 - 38.25	608 - 614	3332 - 3339		31.2 - 31.8
6.31175 - 6.31225	73 - 74.6	960 - 1427	3345.8 - 3358		36.43 - 36.5
8.291 - 8.294	74.8 - 75.2		3500 - 4400		Above 38.6
8.362 - 8.366					
8.37625 - 8.38675					

▪ Note 1: Certain frequency bands listed in table 7 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

FCC §15.407 (b)

(6) For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

(8) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(9) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(10) The provisions of §15.205 apply to intentional radiators operating under this section.

(11) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

RSS-248 4.6.2 (a)

- a. any emissions outside of the 5925-7125 MHz frequency band shall not exceed -27 dBm/MHz e.i.r.p. spectral density

Note

- Limit translation to field strength level (FCC §15.407)

$$E[\text{dBuV/m}] = \text{EIRP}[\text{dBm}] + 95.2 = -27\text{dBm} + 95.2 = 68.2\text{dBuV/m}$$

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz and 100 cm for above 1GHz. EUT is set 3 meters away from the receiving antenna and scan from 1m to 4m to find out the highest emission.

The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

Reference to KDB 789033 D02 v02r01 UNII part G) 6) c) Method AD:

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor to the reading offset for average measurements.

Pre-scans to detect harmonic and spurious emissions, the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 kHz for peak measurements.

Radiated harmonics spurious 1~18 GHz Low/Mid/High channels, 18-40GHz were performed with the EUT set at the 2TX MIMO mode.

(From 30MHz to 1GHz, test was performed with the EUT set to transmit at the channel with highest output power)

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

Note : Emission was pre-scanned from 9kHz to 30MHz; No emissions were detected which was at least 20dB below the specification limit (consider distance correction factor).
Per FCC part 15.31(o), test results were not reported.

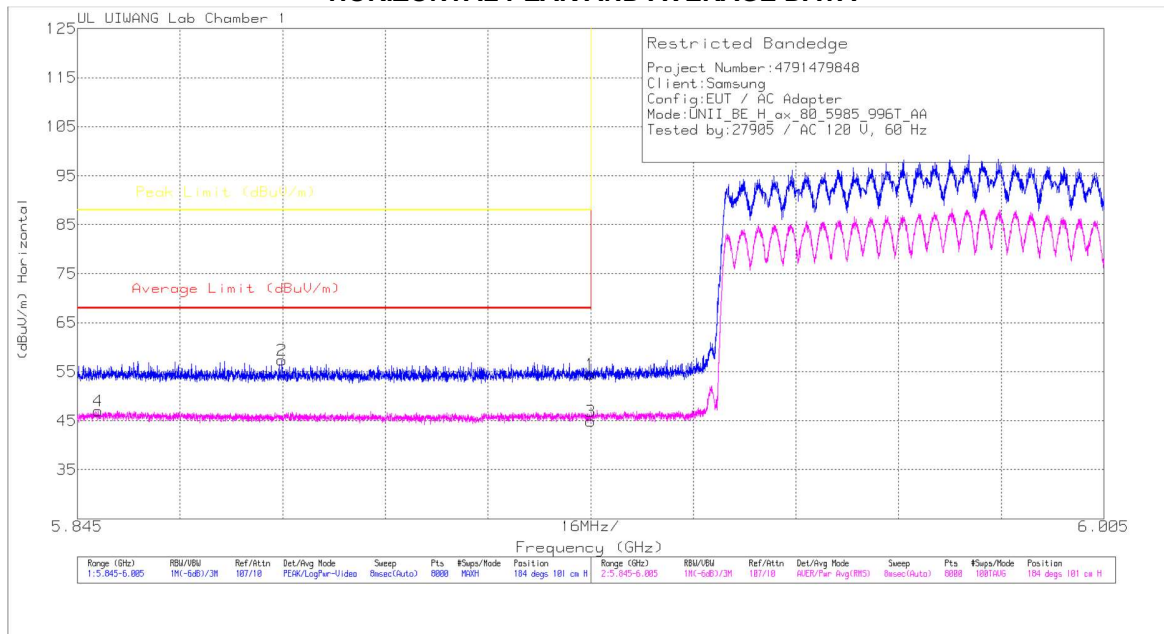
Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open are test site.

Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the one of tests made in an open field based on KDB 414788.

12.1. TX ABOVE 1GHz 1Tx & 2Tx MODE IN U-NII-5 BAND

BANDEDGE (WORST CASE: 802.11ax HE80 / 5985 MHz)

HORIZONTAL PEAK AND AVERAGE DATA



Trace Markers

Marker	Frequency (GHz)	Mode	Det	DBI AP 1 180 2172 2172 2172 Antenna Factor (dBm)	DBI R 1 180 2172 2172 2172 Antenna Factor (dBm)	DBI VL 1 400 2172 2172 2172 Antenna Factor (dBm)	DC Corr (dB)	Corrected Reading (dBm)	Average Limit (dBm)	Margin (dB)	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (m)	Priority
1	5.82488	39.05	PK	34.9	-30.3	10.8	0	34.45	-	-	88	-33.55	184	101	H
2	5.87655	41.57	PK	34.9	-30.3	11.2	0	37.37	-	-	88	-30.63	184	101	H
3	5.92499	27.87	RMS	34.9	-30.3	10.8	1.65	44.92	88	-23.08	-	-	184	101	H
4	5.84826	29.3	RMS	34.8	-30.3	11.6	1.65	47.05	88	-20.95	-	-	184	101	H

PK - Peak detector
RMS - RMS detection

BANDEDGE TEST DATA

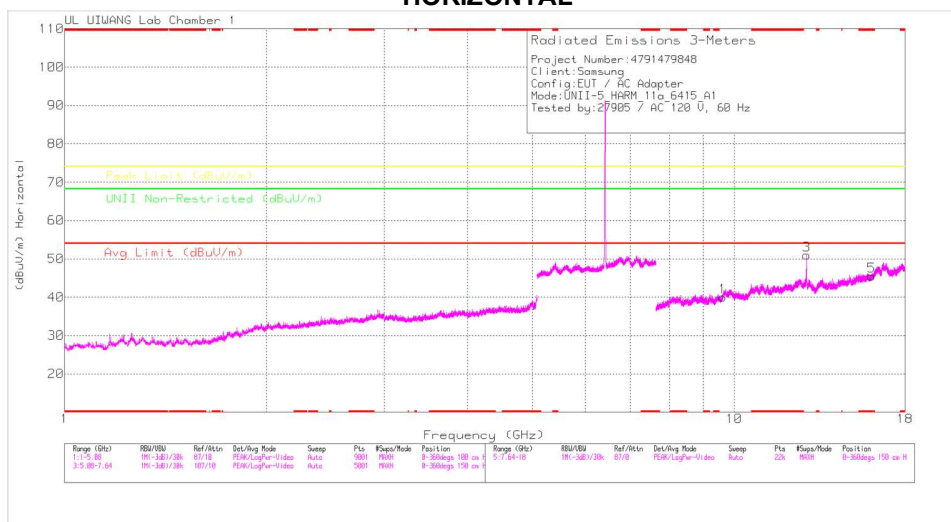
Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	FB Gain [dB]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5955	ANT 1	5.92499	38.75	Pk	34.90	-30.30	10.80	0.00	54.15	-	-	88.00	-33.85	229	100	H
			5.89029	41.55	Pk	34.90	-30.30	10.90	0.00	57.05	-	-	88.00	-30.95	229	100	H
			5.92499	28.24	RMS	34.90	-30.30	10.80	0.66	44.30	68.00	-23.70	-	-	229	100	H
			5.85068	29.29	RMS	34.80	-30.30	11.50	0.66	45.95	68.00	-22.05	-	-	229	100	H
			5.92499	38.58	Pk	34.90	-30.30	10.80	0.00	53.98	-	-	88.00	-34.02	211	104	V
			5.87642	40.53	Pk	34.90	-30.30	11.20	0.00	56.33	-	-	88.00	-31.67	211	104	V
			5.92499	28.74	RMS	34.90	-30.30	10.80	0.66	44.80	68.00	-23.20	-	-	211	104	V
			5.85542	29.43	RMS	34.80	-30.30	11.50	0.66	46.09	68.00	-21.91	-	-	211	104	V
802.11a	5955	ANT 2	5.92499	38.86	Pk	34.90	-30.30	10.80	0.00	54.26	-	-	88.00	-33.74	219	111	H
			5.91853	41.65	Pk	34.90	-30.30	10.80	0.00	57.05	-	-	88.00	-30.95	219	111	H
			5.92499	28.92	RMS	34.90	-30.30	10.80	0.66	44.98	68.00	-23.02	-	-	219	111	H
			5.91913	30.19	RMS	34.90	-30.30	10.80	0.66	46.25	68.00	-21.75	-	-	219	111	H
			5.92499	39.02	Pk	34.90	-30.30	10.80	0.00	54.42	-	-	88.00	-33.58	220	238	V
			5.86010	41.02	Pk	34.80	-30.30	11.40	0.00	56.92	-	-	88.00	-31.08	220	238	V
			5.92499	28.35	RMS	34.90	-30.30	10.80	0.66	44.41	68.00	-23.59	-	-	220	238	V
			5.84632	29.33	RMS	34.80	-30.30	11.60	0.66	46.09	68.00	-21.91	-	-	220	238	V
802.11ax HE20 RU mode 242 Tone Offset 61	5955	MIMO	5.92499	37.29	Pk	34.90	-30.30	10.80	0.00	52.69	-	-	88.00	-35.31	247	101	H
			5.88531	40.70	Pk	34.90	-30.30	11.00	0.00	56.30	-	-	88.00	-31.70	247	101	H
			5.92499	27.19	RMS	34.90	-30.30	10.80	1.35	43.94	68.00	-24.06	-	-	247	101	H
			5.84948	28.60	RMS	34.80	-30.30	11.60	1.35	46.05	68.00	-21.95	-	-	247	101	H
			5.92499	37.95	Pk	34.90	-30.30	10.80	0.00	53.35	-	-	88.00	-34.65	189	240	V
			5.84846	39.43	Pk	34.80	-30.30	11.60	0.00	55.53	-	-	88.00	-32.47	189	240	V
			5.92499	27.59	RMS	34.90	-30.30	10.80	1.35	44.34	68.00	-23.66	-	-	189	240	V
			5.85078	28.42	RMS	34.80	-30.30	11.50	1.35	45.77	68.00	-22.23	-	-	189	240	V
802.11ax HE40 RU mode 484 Tone Offset 65	5965	MIMO	5.92499	38.02	Pk	34.90	-30.30	10.80	0.00	53.42	-	-	88.00	-34.58	186	102	H
			5.89359	40.95	Pk	34.90	-30.30	10.90	0.00	56.45	-	-	88.00	-31.55	186	102	H
			5.92499	28.45	RMS	34.90	-30.30	10.80	1.45	45.30	68.00	-22.70	-	-	186	102	H
			5.85172	29.07	RMS	34.80	-30.30	11.50	1.45	46.52	68.00	-21.48	-	-	186	102	H
			5.92499	38.34	Pk	34.90	-30.30	10.80	0.00	53.74	-	-	88.00	-34.26	175	252	V
			5.84898	39.54	Pk	34.80	-30.30	11.60	0.00	55.64	-	-	88.00	-32.36	175	252	V
			5.92499	26.91	RMS	34.90	-30.30	10.80	1.45	43.76	68.00	-24.24	-	-	175	252	V
			5.84650	28.60	RMS	34.80	-30.30	11.60	1.45	46.15	68.00	-21.85	-	-	175	252	V
802.11ax HE80 RU mode 996 Tone Offset 67	5985	MIMO	5.92499	39.05	Pk	34.90	-30.30	10.80	0.00	54.45	-	-	88.00	-33.55	184	101	H
			5.87688	41.57	Pk	34.90	-30.30	11.20	0.00	57.37	-	-	88.00	-30.63	184	101	H
			5.92499	27.87	RMS	34.90	-30.30	10.80	1.65	44.92	68.00	-23.08	-	-	184	101	H
			5.84826	29.30	RMS	34.80	-30.30	11.60	1.65	47.05	68.00	-20.95	-	-	184	101	H
			5.92499	39.26	Pk	34.90	-30.30	10.80	0.00	54.66	-	-	88.00	-33.34	173	253	V
			5.92229	41.36	Pk	34.90	-30.30	10.80	0.00	56.76	-	-	88.00	-31.24	173	253	V
			5.92499	27.93	RMS	34.90	-30.30	10.80	1.65	44.98	68.00	-23.02	-	-	173	253	V
			5.84994	28.77	RMS	34.80	-30.30	11.60	1.65	46.52	68.00	-21.48	-	-	173	253	V

Note1. Pk - Peak detector, RMS - RMS detector

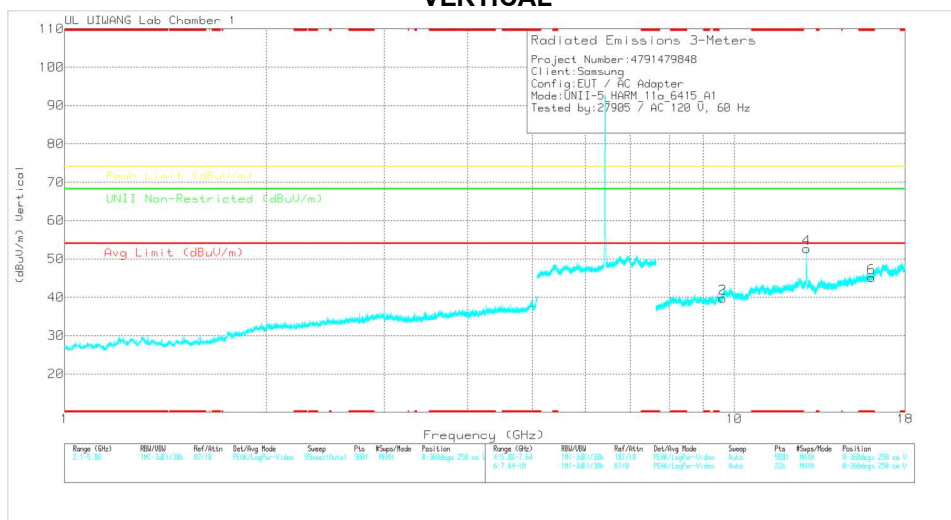
Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 6415 MHz / ANT1)

HORIZONTAL



VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

Frequency (GHz)	Meas Reading (dBuV)	Det	CH1, Pt 1, 180, 217, 240924 Antenna Factor (dBm)	FBI, Pt 1, 180, 217, 240924 Antenna Factor (dBm)	CH1, CL 1, 400, 217, 240924 Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Deg)	Height (m)	Polarity
9.62092	37.3	PK-U	36.5	-38.1	14.7	0	50.4	-	-	-	-	68.2	-17.8	0	100	H
9.91987	37.05	PK-U	36.5	-38.1	14.6	0	50.05	-	-	-	-	68.2	-18.15	0	100	V
12.82842	44.93	PK-U	38.9	-36.8	15.8	0	62.83	-	-	-	-	68.2	-5.37	84	189	H
12.83078	46.34	PK-U	38.9	-36.8	15.8	0	64.24	-	-	-	-	68.2	-3.96	84	289	V
* 16.0445	35.73	PK-U	40.5	-37.8	17.2	0	55.83	-	-	74	-18.37	-	-	0	100	H
* 16.0335	35.44	PK-U	40.5	-37.8	17.3	0	55.44	-	-	-	-	-	-	0	100	V
* 16.0445	23.55	ADR	40.5	-37.8	17.2	0.66	44.11	54	-9.89	-	-	-	-	0	100	H
* 16.0335	23.33	ADR	40.5	-37.8	17.3	0.66	43.99	54	-10.01	-	-	-	-	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak

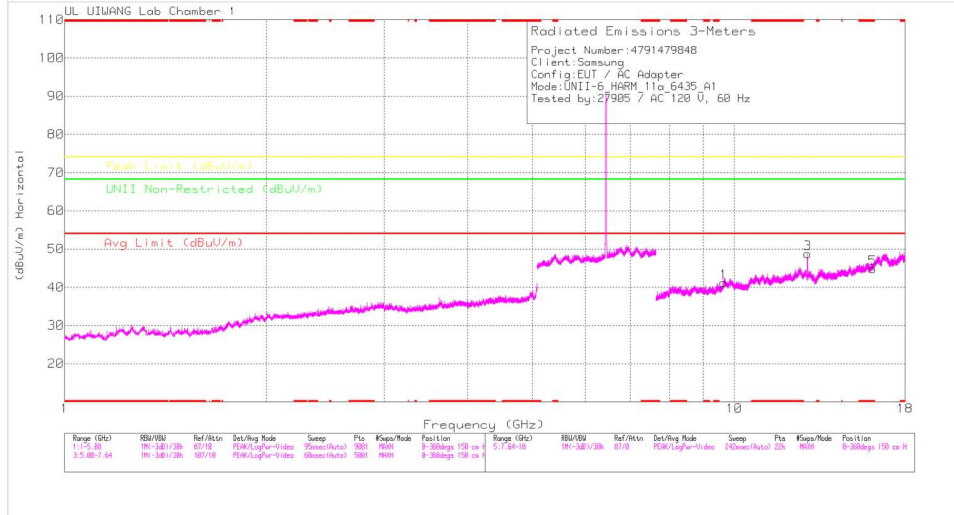
HARMONICS AND SPURIOUS EMISSIONS TEST DATA

Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	FB Gain [dB]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Non-Restricted [dBuV/m]	Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5955	ANT1	8.94248	38.71	PK-U	35.90	-38.40	13.20	0.00	49.41	-	-	-	-	68.20	-18.79	0	100	H
			8.93685	38.63	PK-U	35.90	-38.40	13.20	0.00	49.33	-	-	-	-	68.20	-18.87	0	100	V
			* 11.90384	38.28	PK-U	38.40	-36.80	14.90	0.00	54.78	-	-	74.00	-19.22	-	-	96	190	H
			* 11.91023	26.18	ADR	38.40	-36.80	15.00	0.66	43.44	54.00	-10.56	-	-	-	-	96	190	H
			* 11.90884	38.43	PK-U	38.40	-36.80	15.00	0.00	55.03	-	-	74.00	-18.97	-	-	141	100	V
			* 11.91567	26.79	ADR	38.40	-36.80	15.00	0.66	44.05	54.00	-9.95	-	-	-	-	141	100	V
			14.88874	35.59	PK-U	39.50	-37.60	17.60	0.00	55.09	-	-	-	-	68.20	-13.11	0	100	H
			14.88547	36.09	PK-U	39.50	-37.60	17.50	0.00	55.49	-	-	-	-	68.20	-12.71	0	100	V
			9.26608	38.02	PK-U	36.20	-38.30	14.00	0.00	49.92	-	-	-	-	68.20	-18.28	0	100	H
			9.25942	37.89	PK-U	36.20	-38.30	14.00	0.00	49.79	-	-	-	-	68.20	-18.41	0	100	V
	6175	ANT1	* 12.34572	38.14	PK-U	38.70	-36.80	16.00	0.00	56.04	-	-	74.00	-17.96	-	-	82	196	H
			* 12.35012	25.62	ADR	38.70	-36.80	16.10	0.66	44.28	54.00	-9.72	-	-	-	-	82	196	H
			* 12.35069	37.62	PK-U	38.70	-36.80	16.10	0.00	55.62	-	-	74.00	-18.38	-	-	94	100	V
			* 12.34985	25.35	ADR	38.70	-36.80	16.10	0.66	44.01	54.00	-9.99	-	-	-	-	94	100	V
			* 15.43896	35.85	PK-U	39.70	-37.70	17.30	0.00	55.15	-	-	74.00	-18.85	-	-	0	100	H
			* 15.43916	35.53	PK-U	39.70	-37.70	17.30	0.00	54.83	-	-	74.00	-19.17	-	-	0	100	V
			* 15.43896	23.77	ADR	39.70	-37.70	17.30	0.66	43.73	54.00	-10.27	-	-	-	-	0	100	H
			* 15.43916	24.02	ADR	39.70	-37.70	17.30	0.66	43.98	54.00	-10.02	-	-	-	-	0	100	V
			9.62092	37.30	PK-U	36.50	-38.10	14.70	0.00	50.40	-	-	-	-	68.20	-17.80	0	100	H
			9.61987	37.05	PK-U	36.50	-38.10	14.60	0.00	50.05	-	-	-	-	68.20	-18.15	0	100	V
	6415	ANT1	12.82842	44.93	PK-U	38.90	-36.80	15.80	0.00	62.83	-	-	-	-	68.20	-5.37	84	189	H
			12.83078	46.34	PK-U	38.90	-36.80	15.80	0.00	64.24	-	-	-	-	68.20	-3.96	84	289	V
			* 16.0445	35.73	PK-U	40.50	-37.80	17.20	0.00	55.63	-	-	74.00	-18.37	-	-	0	100	H
			* 16.0335	35.44	PK-U	40.50	-37.80	17.30	0.00	55.44	-	-	74.00	-18.56	-	-	0	100	V
			* 16.0445	23.55	ADR	40.50	-37.80	17.20	0.66	44.11	54.00	-9.89	-	-	-	-	0	100	H
			* 16.0335	23.33	ADR	40.50	-37.80	17.30	0.66	43.99	54.00	-10.01	-	-	-	-	0	100	V
			8.63438	38.30	PK-U	35.80	-38.70	13.30	0.00	48.70	-	-	-	-	68.20	-19.50	0	100	H
			8.63424	38.49	PK-U	35.80	-38.70	13.30	0.00	48.89	-	-	-	-	68.20	-19.31	0	100	V
			* 11.9097	36.71	PK-U	38.40	-36.80	15.00	0.00	53.31	-	-	74.00	-20.69	-	-	144	102	H
			* 11.91006	24.88	ADR	38.40	-36.80	15.00	0.66	42.24	54.00	-11.76	-	-	-	-	144	102	H
5955	ANT2	* 11.91007	36.00	PK-U	38.40	-36.80	15.00	0.00	52.60	-	-	74.00	-21.40	-	-	317	100	V	
		* 11.90985	26.06	ADR	38.40	-36.80	15.00	0.66	43.32	54.00	-10.68	-	-	-	-	317	100	V	
		14.88836	35.61	PK-U	39.50	-37.60	17.60	0.00	55.11	-	-	-	-	68.20	-13.09	0	100	H	
		14.88582	35.60	PK-U	39.50	-37.60	17.50	0.00	55.00	-	-	-	-	68.20	-13.20	0	100	V	
		9.25748	37.67	PK-U	36.20	-38.30	14.00	0.00	49.57	-	-	-	-	68.20	-18.63	0	100	H	
		9.26498	38.49	PK-U	36.20	-38.30	14.00	0.00	50.39	-	-	-	-	68.20	-17.81	0	100	V	
		* 12.3521	37.49	PK-U	38.70	-36.80	16.10	0.00	55.49	-	-	74.00	-18.51	-	-	59	101	H	
		* 12.34937	24.84	ADR	38.70	-36.80	16.10	0.66	43.50	54.00	-10.50	-	-	-	-	59	101	H	
		* 12.35054	37.85	PK-U	38.70	-36.80	16.10	0.00	55.85	-	-	74.00	-18.15	-	-	85	225	V	
		* 12.34988	25.87	ADR	38.70	-36.80	16.10	0.66	44.53	54.00	-9.47	-	-	-	-	85	225	V	
6175	ANT2	* 15.43869	35.61	PK-U	39.70	-37.70	17.30	0.00	54.91	-	-	74.00	-19.09	-	-	0	100	H	
		* 15.44091	35.78	PK-U	39.70	-37.70	17.30	0.00	55.08	-	-	74.00	-18.92	-	-	0	100	V	
		* 15.43869	23.55	ADR	39.70	-37.70	17.30	0.66	43.51	54.00	-10.49	-	-	-	-	0	100	H	
		* 15.44091	23.74	ADR	39.70	-37.70	17.30	0.66	43.70	54.00	-10.30	-	-	-	-	0	100	V	
		9.61356	37.18	PK-U	36.50	-38.10	14.50	0.00	50.08	-	-	-	-	68.20	-18.12	0	100	H	
		9.62137	37.27	PK-U	36.50	-38.10	14.70	0.00	50.37	-	-	-	-	68.20	-17.83	0	100	V	
		12.82687	38.30	PK-U	38.90	-36.80	15.90	0.00	56.30	-	-	-	-	68.20	-11.90	219	108	H	
		12.83058	40.16	PK-U	38.90	-36.80	15.80	0.00	58.06	-	-	-	-	68.20	-10.14	91	103	V	
		* 16.03355	35.58	PK-U	40.50	-37.80	17.30	0.00	55.58	-	-	74.00	-18.42	-	-	0	100	H	
		* 16.03641	35.89	PK-U	40.50	-37.80	17.30	0.00	55.89	-	-	74.00	-18.11	-	-	0	100	V	
6415	ANT2	* 16.03355	23.33	ADR	40.50	-37.80	17.30	0.66	43.99	54.00	-10.01	-	-	-	-	0	100	H	
		* 16.03641	23.52	ADR	40.50	-37.80	17.30	0.66	44.18	54.00	-9.82	-	-	-	-	0	100	V	
		8.93226	38.67	PK-U	35.90	-38.40	13.30	0.00	49.47	-	-	-	-	68.20	-18.73	0	100	H	
		8.93066	38.82	PK-U	35.90	-38.40	13.30	0.00	49.62	-	-	-	-	68.20	-18.58	0	100	V	
		* 11.90896	36.26	PK-U	38.40	-36.80	15.00	0.00	52.86	-	-	74.00	-21.14	-	-	31	105	H	
		* 11.90988	24.45	ADR	38.40	-36.80	15.00	1.35	42.40	54.00	-11.60	-	-	-	-	31	105	H	
		* 11.90995	35.79	PK-U	38.40	-36.80	15.00	0.00	52.39	-	-	74.00	-21.61	-	-	138	104	V	
		* 11.90991	25.52	ADR	38.40	-36.80	15.00	1.35	43.47	54.00	-10.53	-	-	-	-	138	104	V	
		14.88805	35.40	PK-U	39.50	-37.60	17.60	0.00	54.90	-	-	-	-	68.20	-13.30	0	100	H	
		14.88863	35.89	PK-U	39.50	-37.60	17.60	0.00	55.39	-	-	-	-	68.20	-12.81	0	100	V	
802.11ax HE20 RU mode 242 Tone Offset 61	5955	MIMO	* 12.3123	38.66	PK-U	36.20	-38.30	14.00	0.00	50.56	-	-	-	-	68.20	-17.64	0	100	H
			9.26385	38.40	PK-U	36.20	-38.30	14.00	0.00	50.30	-	-	-	-	68.20	-17.90	0	100	V
			* 12.35861	34.48	PK-U	38.70	-36.80	16.00	0.00	52.38	-	-	74.00	-21.62	-	-	23	100	H
			* 12.35	23.21	ADR	38.70	-36.80	16.10	1.35	42.56	54.00	-11.44	-	-	-	-	23	100	H
			* 12.34985	24.09	ADR	38.70	-36.80	16.10	1.35	43.44	54.00	-10.56	-	-	-	-	138	100	V
			* 12.34917	35.72	PK-U	38.70	-36.80	16.10	0.00	53.72	-	-	74.00	-20.28	-	-	138	100	V
			* 15.43866	35.56	PK-U	39.70	-37.70	17.30	0.00	54.86	-	-	74.00	-19.14	-	-	0	100	H
			* 15.43895	36.37	PK-U	39.70	-37.70	17.30	0.00	55.67	-	-	74.00	-18.33	-	-	0	100	V
			* 15.43866	23.34	ADR	39.70	-37.70	17.30	1.35	43.99	54.00	-10.01	-	-	-	-	0	100	H
			* 15.43895	23.46	ADR	39.70	-37.70	17.30	1.35	44.11	54.00	-9.89	-	-	-	-	0	100	V
	6175	MIMO	9.62218	37.24	PK-U	36.50	-38.10	14.70	0.00	50.34	-	-	-	-	68.20	-17.86	0	100	H
6415	MIMO	9.62295	37.57	PK-U	36.50	-38.10	14.70	0.00	50.67	-	-	-	-	68.20	-17.53	0	100	V	
		12.83397	37.16	PK-U	38.90	-36.80	15.70	0.00	54.96	-	-	-	-	68.20	-13.24	90	109	H	
		12.83646	38.41	PK-U	38.90	-36.80	15.70	0.00	56.21	-	-	-	-	68.20	-11.99	36	100	V	
		* 16.03703	34.63	PK-U	40.50	-37.80	17.30	0.00	54.63	-	-	74.00	-19.37	-	-	0	100	H	
		* 16.03884	34.72	PK-U	40.50	-37.80	17.20	0.00	54.62	-	-	74.00	-19.38	-	-	0	100	V	
		* 16.03703	22.64	ADR	40.50	-37.80	17.30	1.35	43.99	54.00	-10.01	-	-	-	-	0	100	H	
		16.03894	22.60	ADR	40.50	-37.80	17.20	1.35	44.85	54.00	-10.15	-	-	-	-	0	100	V	
		8.93681	39.18	PK-U	35.90	-38.40	13.20	0.00	49.88	-	-	-	-	68.20	-18.32	0	100	H	
		8.93415	38.75	PK-U	35.90	-38.40	13.20	0.00	49.45	-	-	-	-	68.20	-18.75	0	100	V	
		* 11.91116	35.79	PK-U	38.40	-36.80	15.00	0.00	52.39	-	-	74.00	-21.61	-	-	33	113	H	
802.11ax HE20 RU mode 26 Tone Offset 4 Spot-check	5955	MIMO	* 11.90995	24.99	ADR	38.40	-36.80	15.00	1.00	41.69	54.00	-12.31	-	-	-	33	113	H	
			* 11.91071	35.99	PK-U	38.40	-36.80	15.00	0.00	52.59	-	-	74.00	-21.41	-	-	139	102	V
			* 11.90989	25.23	ADR	38.40	-36.80	15.00											

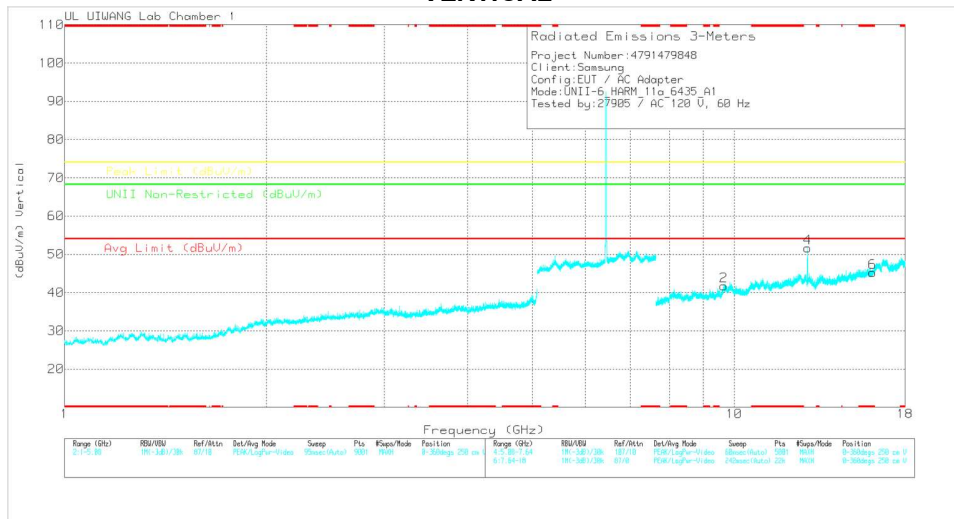
12.2. TX ABOVE 1GHz 1Tx & 2Tx MODE IN U-NII-6 BAND

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 6435 MHz / ANT1)

HORIZONTAL



VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

Frequency (GHz)	Meas Reading (dBuV)	Det	2017F-15 150-317T-24024 Antenna Factor(dBm)	FBI_RL 1-180-80 80-14002 Gain(dB)	CH1 Ch 1-400-200-24104 Loss(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Degs)	Height (m)	Polarity
9.65208	38.04	PK-U	36.6	-38	15.2	0	51.84	-	-	-	-	68.2	-16.36	0	100	H
9.65099	37.75	PK-U	36.6	-38	15.2	0	51.55	-	-	-	-	68.2	-16.65	0	100	V
12.86853	44.36	PK-U	38.9	-36.9	15.6	0	62.56	-	-	-	-	68.2	-5.64	78	191	H
12.86788	46.31	PK-U	38.9	-36.9	15.6	0	63.91	-	-	-	-	68.2	-4.29	77	294	V
* 16.08399	34.68	PK-U	40.6	-37.8	17.4	0	55.08	-	-	74	-18.92	-	-	0	100	H
* 16.095	35.11	PK-U	40.6	-37.8	17.5	0	55.41	-	-	74	-18.59	-	-	0	100	V
* 16.08399	22.8	ADR	40.6	-37.8	17.4	0.66	43.66	54	-10.34	-	-	-	-	0	100	H
* 16.095	22.92	ADR	40.6	-37.8	17.5	0.66	43.88	54	-10.12	-	-	-	-	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	FB Gain [dB]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Non-Restricted [dBuV/m]	Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	6435	ANT1	9.65208	38.04	PK-U	36.60	-38.00	15.20	0.00	51.84	-	-	-	-	68.20	-16.36	0	100	H
			9.65099	37.75	PK-U	36.60	-38.00	15.20	0.00	51.55	-	-	-	-	68.20	-16.65	0	100	V
			12.86888	44.96	PK-U	38.90	-36.90	15.60	0.00	62.56	-	-	-	-	68.20	-5.64	78	191	H
			12.86788	46.31	PK-U	38.90	-36.90	15.60	0.00	63.91	-	-	-	-	68.20	-4.29	77	294	V
			* 16.08399	34.88	PK-U	40.60	-37.80	17.40	0.00	55.08	-	-	74.00	-18.92	-	-	0	100	H
			* 16.095	35.11	PK-U	40.60	-37.80	17.50	0.00	55.41	-	-	74.00	-18.59	-	-	0	100	V
			* 16.08399	22.80	ADR	40.60	-37.80	17.40	0.66	43.66	54.00	-10.34	-	-	-	-	0	100	H
			* 16.095	22.92	ADR	40.60	-37.80	17.50	0.66	43.88	54.00	-10.12	-	-	-	-	0	100	V
			9.70731	37.34	PK-U	36.60	-38.00	15.10	0.00	51.04	-	-	-	-	68.20	-17.16	0	100	H
			9.70426	37.70	PK-U	36.60	-38.00	15.10	0.00	51.40	-	-	-	-	68.20	-16.80	0	100	V
	6475	ANT1	12.94569	43.79	PK-U	38.80	-36.90	16.30	0.00	61.99	-	-	-	-	68.20	-6.21	76	201	H
			12.95055	45.19	PK-U	38.80	-36.90	16.40	0.00	63.49	-	-	-	-	68.20	-4.71	86	289	V
			* 16.19211	35.34	PK-U	40.70	-37.90	17.80	0.00	55.94	-	-	74.00	-18.06	-	-	0	100	H
			* 16.19106	35.41	PK-U	40.70	-37.90	17.80	0.00	56.01	-	-	74.00	-17.99	-	-	0	100	V
			* 16.19211	22.92	ADR	40.70	-37.90	17.80	0.66	44.18	54.00	-9.82	-	-	-	-	0	100	H
			* 16.19106	22.84	ADR	40.70	-37.90	17.80	0.66	44.10	54.00	-9.90	-	-	-	-	0	100	V
			9.77117	37.81	PK-U	36.70	-37.80	14.40	0.00	51.11	-	-	-	-	68.20	-17.09	0	100	H
			9.77628	37.72	PK-U	36.80	-37.70	14.40	0.00	51.22	-	-	-	-	68.20	-16.98	0	100	V
			13.03245	45.69	PK-U	38.70	-36.90	16.00	0.00	63.49	-	-	-	-	68.20	-4.71	78	183	H
			13.03358	45.36	PK-U	38.70	-36.90	15.90	0.00	62.96	-	-	-	-	68.20	-5.24	59	287	V
	6515	ANT1	17.28544	35.66	PK-U	40.70	-38.40	18.40	0.00	56.36	-	-	-	-	68.20	-11.84	0	100	H
			17.28469	35.71	PK-U	40.70	-38.40	18.40	0.00	56.41	-	-	-	-	68.20	-11.79	0	100	V
			9.65122	37.85	PK-U	36.60	-38.00	15.20	0.00	51.65	-	-	-	-	68.20	-16.55	0	100	H
			9.65160	37.87	PK-U	36.60	-38.00	15.20	0.00	51.67	-	-	-	-	68.20	-16.53	0	100	V
			12.87134	39.15	PK-U	38.90	-36.90	15.60	0.00	56.75	-	-	-	-	68.20	-11.45	221	106	H
			12.87199	41.67	PK-U	38.90	-36.90	15.60	0.00	59.27	-	-	-	-	68.20	-8.93	89	102	V
			* 16.08886	35.46	PK-U	40.60	-37.80	17.40	0.00	55.66	-	-	74.00	-18.34	-	-	0	100	H
			* 16.08807	35.49	PK-U	40.60	-37.80	17.40	0.00	55.69	-	-	74.00	-18.31	-	-	0	100	V
			* 16.08886	23.10	ADR	40.60	-37.80	17.40	0.66	43.96	54.00	-10.04	-	-	-	-	0	100	H
			* 16.08807	23.13	ADR	40.60	-37.80	17.40	0.66	43.99	54.00	-10.01	-	-	-	-	0	100	V
802.11a	6435	ANT2	9.71427	37.47	PK-U	36.60	-38.00	15.00	0.00	51.07	-	-	-	-	68.20	-17.13	0	100	H
			9.71177	37.96	PK-U	36.60	-38.00	15.00	0.00	51.56	-	-	-	-	68.20	-16.64	0	100	V
			12.95001	37.57	PK-U	38.80	-36.90	16.40	0.00	55.87	-	-	-	-	68.20	-12.33	219	100	H
			12.94676	39.42	PK-U	38.80	-36.90	16.30	0.00	57.62	-	-	-	-	68.20	-10.58	93	100	V
			16.28990	35.85	PK-U	40.70	-37.90	17.80	0.00	56.45	-	-	-	-	68.20	-11.75	0	100	H
			16.28778	35.87	PK-U	40.70	-37.90	17.80	0.00	56.47	-	-	-	-	68.20	-11.73	0	100	V
			9.77102	37.85	PK-U	36.70	-37.80	14.40	0.00	51.15	-	-	-	-	68.20	-17.05	0	100	H
			9.77285	37.95	PK-U	36.70	-37.70	14.40	0.00	51.35	-	-	-	-	68.20	-16.85	0	100	V
			13.02994	36.47	PK-U	38.70	-36.90	16.00	0.00	54.27	-	-	-	-	68.20	-13.93	220	107	H
			13.02713	38.43	PK-U	38.70	-36.90	16.00	0.00	56.23	-	-	-	-	68.20	-11.97	91	102	V
	6475	ANT2	16.28914	36.16	PK-U	40.70	-37.90	17.80	0.00	56.76	-	-	-	-	68.20	-11.44	0	100	H
			16.28920	35.98	PK-U	40.70	-37.90	17.80	0.00	56.58	-	-	-	-	68.20	-11.62	0	100	V
			9.64898	37.79	PK-U	36.60	-38.00	15.10	0.00	51.49	-	-	-	-	68.20	-16.71	0	100	H
			9.65149	37.89	PK-U	36.60	-38.00	15.20	0.00	51.69	-	-	-	-	68.20	-16.51	0	100	V
			12.87190	36.62	PK-U	38.90	-36.90	15.60	0.00	54.22	-	-	-	-	68.20	-13.98	117	104	H
			12.86875	38.07	PK-U	38.90	-36.90	15.60	0.00	55.67	-	-	-	-	68.20	-12.53	38	114	V
			* 16.08641	35.03	PK-U	40.60	-37.80	17.40	0.00	55.23	-	-	74.00	-18.77	-	-	0	100	H
			* 16.08949	35.18	PK-U	40.60	-37.80	17.40	0.00	55.38	-	-	74.00	-18.62	-	-	0	100	V
			* 16.08641	22.72	ADR	40.60	-37.80	17.40	1.35	44.27	54.00	-9.73	-	-	-	-	0	100	H
			* 16.08949	22.64	ADR	40.60	-37.80	17.40	1.35	44.19	54.00	-9.81	-	-	-	-	0	100	V
	6515	MIMO	9.71092	37.80	PK-U	36.60	-38.00	15.00	0.00	51.40	-	-	-	-	68.20	-16.80	0	100	H
			9.71373	37.47	PK-U	36.60	-38.00	15.00	0.00	51.07	-	-	-	-	68.20	-17.13	0	100	V
			12.94648	37.08	PK-U	38.80	-36.90	16.30	0.00	55.28	-	-	-	-	68.20	-12.92	105	104	H
			12.94644	37.59	PK-U	38.80	-36.90	16.30	0.00	55.79	-	-	-	-	68.20	-12.41	339	101	V
			* 16.19596	35.77	PK-U	40.70	-37.90	17.90	0.00	56.47	-	-	74.00	-17.53	-	-	0	100	H
			* 16.18738	35.17	PK-U	40.70	-37.90	17.80	0.00	55.77	-	-	74.00	-18.23	-	-	0	100	V
			* 16.19596	23.10	ADR	40.70	-37.90	17.90	1.35	45.15	54.00	-8.85	-	-	-	-	0	100	H
			* 16.18738	22.84	ADR	40.70	-37.90	17.80	1.35	44.79	54.00	-9.21	-	-	-	-	0	100	V
			9.76797	37.87	PK-U	36.70	-37.80	14.40	0.00	51.17	-	-	-	-	68.20	-17.03	0	100	H
			9.76745	38.53	PK-U	36.70	-37.80	14.40	0.00	51.83	-	-	-	-	68.20	-16.37	0	100	V
802.11ax HE20 RU mode 242 Tone Offset 61 Spot-check	6515	MIMO	13.02890	38.84	PK-U	38.70	-36.90	16.00	0.00	58.64	-	-	-	-	68.20	-11.56	106	112	H
			13.02982	37.49	PK-U	38.70	-36.90	16.00	0.00	55.29	-	-	-	-	68.20	-12.91	10	101	V
			16.28896	35.94	PK-U	40.70	-37.90	17.80	0.00	56.54	-	-	-	-	68.20	-11.66	0	100	H
			16.28323	36.06	PK-U	40.70	-37.90	17.80	0.00	56.66	-	-	-	-	68.20	-11.54	0	100	V
			9.77058	37.58	PK-U	36.70	-37.80	14.40	0.00	50.88	-	-	-	-	68.20	-17.32	0	100	H
			9.77353	37.59	PK-U	36.70	-37.70	14.40	0.00	50.99	-	-	-	-	68.20	-17.21	0	100	V
			13.02949	36.03	PK-U	38.70	-36.90	16.00	0.00	53.83	-	-	-	-	68.20	-14.37	22	106	H
			13.02989	34.99	PK-U	38.70	-36.90	16.00	0.00	52.79	-	-	-	-	68.20	-15.41	346	110	V
			16.28545	36.18	PK-U	40.70	-37.90	17.80	0.00	56.78	-	-	-	-	68.20	-11.42	0	100	H
			16.28648	36.71	PK-U	40.70	-37.90	17.80	0.00	57.31	-	-	-	-	68.20	-10.89	0	100	V

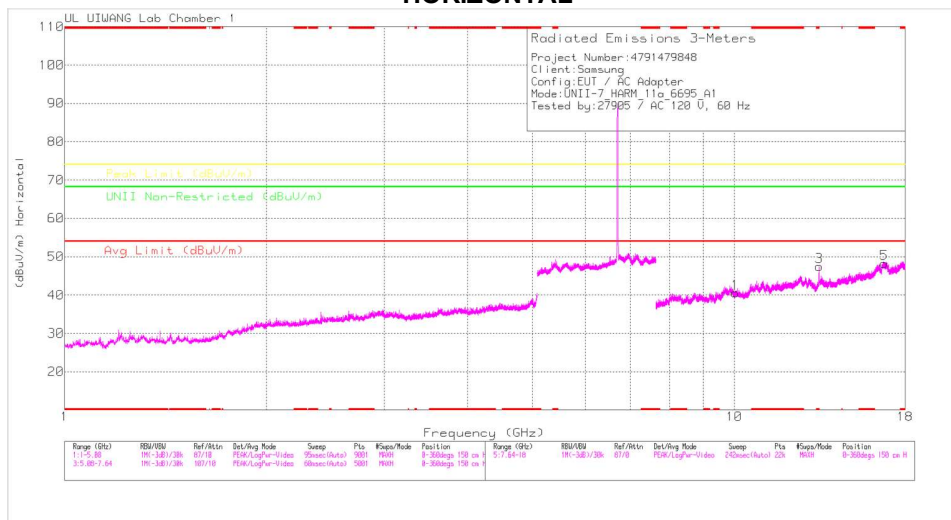
Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average

Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

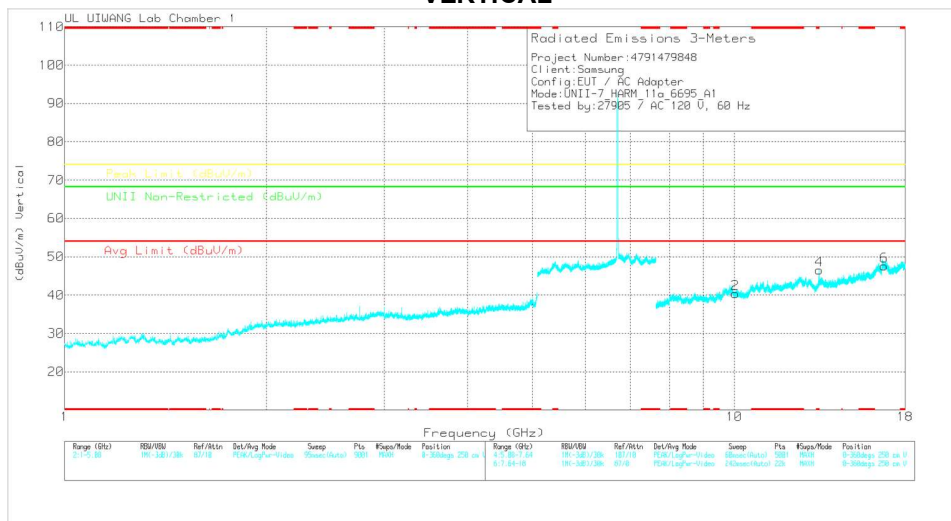
12.3. TX ABOVE 1GHz 1Tx & 2Tx MODE IN U-NII-7 BAND

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802. 11a / 6695 MHz / ANT1)

HORIZONTAL



VERTICAL



Note. Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

Frequency (GHz)	Meas Reading (dBuV)	Det	Ch1 Ref: 150, 317, 24024 Antenna Factor (dBm)	FBI Ref: 1-180, 85 150, 317, 24024 Gain (dB)	Ch1, Ch2, 1-400, 150, 240, 154 Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Degs)	Height (m)	Polarity
10.04361	36.78	PK-U	37.2	-37.6	14.3	0	50.68	-	-	-	-	68.2	-17.52	0	100	H
10.04322	36.88	PK-U	37.2	-37.6	14.3	0	50.76	-	-	-	-	68.2	-17.44	0	100	V
* 13.38588	29.65	ADR	38.7	-37.1	16.2	68	47.94	54	-6.06	-	-	-	-	78	178	H
* 13.39003	43.27	PK-U	38.7	-37.1	16.2	0	61.07	-	-	74	-12.93	-	-	78	178	H
* 13.39052	40.91	PK-U	38.7	-37.1	16.2	0	58.71	-	-	74	-15.29	-	-	59	273	V
* 13.39077	27.76	ADR	38.7	-37.1	16.2	68	46.22	54	-7.78	-	-	-	-	59	273	V
16.73507	36.38	PK-U	41.4	-38	17.8	0	57.58	-	-	-	-	68.2	-10.62	0	100	H
16.7417	36.64	PK-U	41.4	-38.1	17.8	0	57.74	-	-	-	-	68.2	-10.46	0	100	V

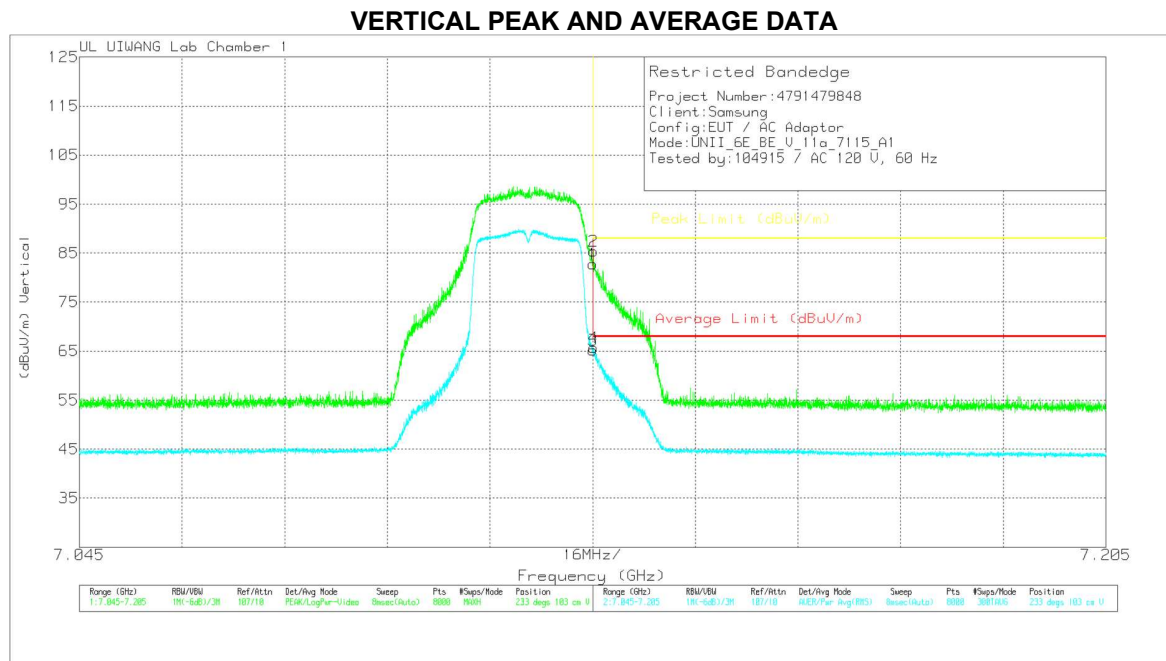
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	FB Gain [dB]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Non-Restricted [dBuV/m]	Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity		
802.11a	6535	ANT1	9.80809	37.27	PK-U	36.80	-37.60	14.40	0.00	50.87	-	-	-	-	68.20	-17.33	360	100	H		
			9.79394	37.61	PK-U	36.80	-37.60	14.30	0.00	51.11	-	-	-	-	68.20	-17.09	0	100	V		
			13.07079	43.55	PK-U	38.70	-36.90	15.80	0.00	61.15	-	-	-	-	68.20	-7.05	87	103	H		
			13.06820	43.72	PK-U	38.70	-36.90	15.80	0.00	61.32	-	-	-	-	68.20	-6.88	67	258	V		
			16.33275	36.42	PK-U	40.80	-38.00	18.00	0.00	57.22	-	-	-	-	68.20	-10.98	0	100	H		
			16.34448	36.42	PK-U	40.80	-38.10	18.10	0.00	57.22	-	-	-	-	68.20	-10.98	0	100	V		
			10.04361	36.78	PK-U	37.20	-37.60	14.30	0.00	50.68	-	-	-	-	68.20	-17.52	0	100	H		
			10.04322	36.86	PK-U	37.20	-37.60	14.30	0.00	50.76	-	-	-	-	68.20	-17.44	0	100	V		
			* 13.38986	29.48	ADR	38.70	-37.10	16.20	0.66	47.94	54.00	-6.06	-	-	-	-	78	178	H		
			* 13.39003	43.27	PK-U	38.70	-37.10	16.20	0.00	61.07	-	-	74.00	-12.93	-	-	78	178	H		
	* 13.39052	40.91	PK-U	38.70	-37.10	16.20	0.00	58.71	-	-	74.00	-15.29	-	-	59	273	V				
	* 13.39077	27.76	ADR	38.70	-37.10	16.20	0.66	46.22	54.00	-7.78	-	-	-	-	59	273	V				
	16.73507	36.38	PK-U	41.40	-38.00	17.80	0.00	57.58	-	-	-	-	68.20	-10.62	0	100	H				
	16.74170	36.64	PK-U	41.40	-38.10	17.80	0.00	57.74	-	-	-	-	68.20	-10.46	0	100	V				
	6875	ANT1	13.75067	38.42	PK-U	38.50	-37.10	16.40	0.00	56.22	-	-	-	-	68.20	-11.98	87	197	H		
			13.74542	36.13	PK-U	38.50	-37.10	16.40	0.00	53.93	-	-	-	-	68.20	-14.27	60	115	V		
			10.30765	36.42	PK-U	37.30	-37.20	14.00	0.00	50.52	-	-	-	-	68.20	-17.68	0	100	H		
			10.30580	35.69	PK-U	37.30	-37.20	14.00	0.00	49.79	-	-	-	-	68.20	-18.41	0	100	V		
			17.18882	35.65	PK-U	40.90	-38.20	18.00	0.00	56.35	-	-	-	-	68.20	-11.85	0	100	H		
			17.19009	35.00	PK-U	40.90	-38.20	18.00	0.00	55.70	-	-	-	-	68.20	-12.50	0	100	V		
			6535	ANT2	9.79279	37.46	PK-U	36.80	-37.60	14.30	0.00	50.96	-	-	-	-	68.20	-17.24	0	100	H
					9.80296	37.48	PK-U	36.80	-37.60	14.40	0.00	51.08	-	-	-	-	68.20	-17.12	0	100	V
					16.33928	36.77	PK-U	40.80	-38.10	18.00	0.00	57.47	-	-	-	-	68.20	-10.73	0	100	H
					16.33638	36.20	PK-U	40.80	-38.10	18.00	0.00	56.90	-	-	-	-	68.20	-11.30	0	100	V
13.07169	35.97	PK-U			38.70	-36.90	15.80	0.00	53.57	-	-	-	-	68.20	-14.63	349	358	H			
13.06582	37.66	PK-U			38.70	-36.90	15.80	0.00	55.26	-	-	-	-	68.20	-12.94	93	101	V			
10.04342	36.66	PK-U			37.20	-37.60	14.30	0.00	50.56	-	-	-	-	68.20	-17.64	0	100	H			
10.04123	36.72	PK-U			37.20	-37.60	14.30	0.00	50.62	-	-	-	-	68.20	-17.58	0	100	V			
* 13.38901	36.15	PK-U			38.70	-37.10	16.20	0.00	53.95	-	-	74.00	-20.05	-	-	224	104	H			
* 13.3894	24.61	ADR			38.70	-37.10	16.20	0.66	43.07	54.00	-10.93	-	-	-	-	224	104	H			
802.11ax HE20 RU mode 242 Tone Offset 61	6535	ANT2	* 13.38701	37.68	PK-U	38.70	-37.10	16.20	0.00	55.48	-	-	74.00	-18.52	-	-	93	100	V		
			* 13.38994	26.15	ADR	38.70	-37.10	16.20	0.66	44.61	54.00	-9.39	-	-	-	-	93	100	V		
			16.73836	36.14	PK-U	41.40	-38.00	17.80	0.00	57.34	-	-	-	-	68.20	-10.86	0	100	H		
			16.73616	36.23	PK-U	41.40	-38.00	17.80	0.00	57.43	-	-	-	-	68.20	-10.77	0	100	V		
			10.31315	36.22	PK-U	37.30	-37.20	14.00	0.00	50.32	-	-	-	-	68.20	-17.88	0	100	H		
			10.31145	37.08	PK-U	37.30	-37.20	14.00	0.00	51.18	-	-	-	-	68.20	-17.02	0	100	V		
			13.74918	37.31	PK-U	38.50	-37.10	16.40	0.00	55.11	-	-	-	-	68.20	-13.09	323	268	H		
			13.74854	38.51	PK-U	38.50	-37.10	16.40	0.00	56.31	-	-	-	-	68.20	-11.89	76	109	V		
			17.18638	35.18	PK-U	40.90	-38.10	18.00	0.00	55.98	-	-	-	-	68.20	-12.22	0	100	H		
			17.18843	35.23	PK-U	40.90	-38.10	18.00	0.00	56.03	-	-	-	-	68.20	-12.17	0	100	V		
	6695	MIMO	9.80532	37.27	PK-U	36.80	-37.60	14.40	0.00	50.87	-	-	-	-	68.20	-17.33	0	100	H		
			9.80728	37.61	PK-U	36.80	-37.60	14.40	0.00	51.21	-	-	-	-	68.20	-16.99	0	100	V		
			13.06940	35.01	PK-U	38.70	-36.90	15.80	0.00	52.61	-	-	-	-	68.20	-15.59	95	110	H		
			13.06740	38.70	PK-U	38.70	-36.90	15.80	0.00	56.30	-	-	-	-	68.20	-11.90	137	378	V		
			16.33646	36.46	PK-U	40.80	-38.10	18.00	0.00	57.16	-	-	-	-	68.20	-11.04	0	100	H		
			16.33354	36.58	PK-U	40.80	-38.00	18.00	0.00	57.38	-	-	-	-	68.20	-10.82	0	100	V		
			10.04185	36.94	PK-U	37.20	-37.60	14.30	0.00	50.84	-	-	-	-	68.20	-17.36	0	100	H		
			10.04202	37.27	PK-U	37.20	-37.60	14.30	0.00	51.17	-	-	-	-	68.20	-17.03	0	100	V		
			* 13.38951	24.56	ADR	38.70	-37.10	16.20	1.35	43.71	54.00	-10.29	-	-	-	-	89	104	H		
			* 13.39203	37.02	PK-U	38.70	-37.10	16.20	0.00	54.82	-	-	74.00	-19.18	-	-	89	104	H		
	6875	MIMO	* 13.38909	24.99	ADR	38.70	-37.10	16.20	1.35	44.14	54.00	-9.86	-	-	-	-	134	329	V		
			* 13.38885	36.87	PK-U	38.70	-37.10	16.20	0.00	54.67	-	-	74.00	-19.33	-	-	134	329	V		
			16.74529	36.14	PK-U	41.40	-38.10	17.80	0.00	57.24	-	-	-	-	68.20	-10.96	0	100	H		
			16.73482	36.88	PK-U	41.40	-38.00	17.80	0.00	56.08	-	-	-	-	68.20	-10.12	0	100	V		
10.31353			36.49	PK-U	37.30	-37.20	14.00	0.00	50.59	-	-	-	-	68.20	-17.61	0	100	H			
10.31235			35.97	PK-U	37.30	-37.20	14.00	0.00	50.07	-	-	-	-	68.20	-18.13	0	100	V			
13.74895			36.43	PK-U	38.50	-37.10	16.40	0.00	54.23	-	-	-	-	68.20	-13.97	88	110	H			
13.74993			36.10	PK-U	38.50	-37.10	16.40	0.00	53.90	-	-	-	-	68.20	-14.30	358	107	V			
17.18750			35.39	PK-U	40.90	-38.10	18.00	0.00	56.19	-	-	-	-	68.20	-12.01	0	100	H			
17.19025			35.34	PK-U	40.90	-38.20	18.00	0.00	56.04	-	-	-	-	68.20	-12.16	0	100	V			
802.11ax HE40 RU mode 484 Tone Offset 65 Spot-check	6685	MIMO	10.02559	36.15	PK-U	37.20	-37.60	14.10	0.00	49.85	-	-	-	-	68.20	-18.35	0	100	H		
			10.02923	36.66	PK-U	37.20	-37.60	14.20	0.00	50.36	-	-	-	-	68.20	-17.84	0	100	V		
			* 13.36918	24.32	ADR	38.80	-37.10	16.10	1.45	43.57	54.00	-10.43	-	-	-	-	89	109	H		
			* 13.36922	37.19	PK-U	38.80	-37.10	16.10	0.00	54.97	-	-	74.00	-19.01	-	-	89	109	H		
			* 13.36975	36.99	PK-U	38.80	-37.10	16.10	0.00	54.79	-	-	74.00	-19.21	-	-	12	223	V		
			* 13.36986	24.88	ADR	38.80	-37.10	16.10	1.45	44.13	54.00	-9.87	-	-	-	-	12	223	V		
			16.71303	35.66	PK-U	41.40	-38.00	17.90	0.00	56.96	-	-	-	-	68.20	-11.24	0	100	H		
			16.71031	36.15	PK-U	41.40	-37.90	17.90	0.00	57.55	-	-	-	-	68.20	-10.65	0	100	V		
			10.05531	36.20	PK-U	37.20	-37.60	14.30	0.00	50.10	-	-	-	-	68.20	-18.10	0	100	H		
			10.05824	36.40	PK-U	37.20	-37.60	14.30	0.00	50.30	-	-	-	-	68.20	-17.90	0	100	V		
802.11ax HE80 RU mode 996 Tone Offset 67 Spot-check	6705	MIMO	* 13.3891	36.62	PK-U	38.70	-37.10	16.20	0.00	56.42	-	-	74.00	-17.58	-	-	98	104	H		
			* 13.38907	36.82	PK-U	38.70	-37.10	16.20	1.65	44.61	54.00	-9.39	-	-	-	-	98	104	H		
			* 13.39396	37.28	PK-U	38.70	-37.10	16.20	0.00	55.08	-	-	74.00	-18.92	-	-	139	373	V		
			* 13.39939	25.33	ADR	38.70	-37.10	16.20	1.65	44.78	54.00	-9.22	-	-	-	-	139	373	V		
			16.76194	36.10	PK-U	41.40	-38.10	17.90	0.00	57.30	-	-	-	-	68.20	-10.90	0	100	H		
			16.76386	36.04	PK-U	41.40	-38.00	17.90	0.00	57.24	-	-	-	-	68.20	-10.96	0	100	V		
			10.04431	36.44	PK-U	37.20	-37.60	14.30	0.00	50.34	-	-	-	-	68.20	-17.86	44	100	H		
			10.05114	36.48	PK-U	37.20	-37.60	14.30	0.00	50.38	-	-	-	-	68.20	-17.82	34	100	V		
			* 13.38198	35.87	PK-U	38.70	-37.10	16.20	0.00	53.67	-	-	74.00	-20.33	-	-	50	101	H		
			* 13.39302	24.11	PK-U	38.70	-37.10	16.20	1.00	42.91	54.00	-11.09	-	-	-	-	50	101	H		
802.11ax HE20 RU mode 26 Tone Offset 8 Spot-check	6695	MIMO	* 13.39003	35.54	PK-U	38.70	-37.10	16.20	0.00	53.34	-	-	74.00	-20.66	-	-	3	302	V		
			* 16.36914	24.40	ADR	38.70	-37.10	16.20	1.00	43.20	54.00	-10.80	-	-	-	-	3	302	V		
			16.73479	35.84	PK-U	41.40	-38.00	17.80	0.00	57.80	-	-	-	-	68.20	-11.16					

12.4. TX ABOVE 1GHz 1Tx & 2Tx MODE IN U-NII-8 BAND

BANDEDGE (WORST CASE: 802.11a / 7115 MHz / ANT1)



Trace Markers

Marker	Frequency (MHz)	Marker Reading (dBuV)	Det	CH2 AF 1: 150.015 (dBm) Antenna Factor (dBm)	FBD PL 1: 150.015 (dBm) Gain (dB)	CH2 CL 1: 40.0 (dBm) Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (deg)	Height (m)	Polarity
1	7.12501	67.35	Pk	35.7	-31.8	11.5	0	65.75	-	-	88	-5.21	233	103	V
2	7.12513	69.95	Pk	35.7	-31.8	11.5	0	66.35	-	-	88	-2.65	233	103	V
3	7.12501	49.17	RMS	35.7	-31.8	11.5	.66	65.23	68	-2.77	-	-	233	103	V
4	7.12517	49.64	RMS	35.7	-31.8	11.5	.66	65.7	68	-2.3	-	-	233	103	V

Pk - Peak detector
RMS - RMS detection

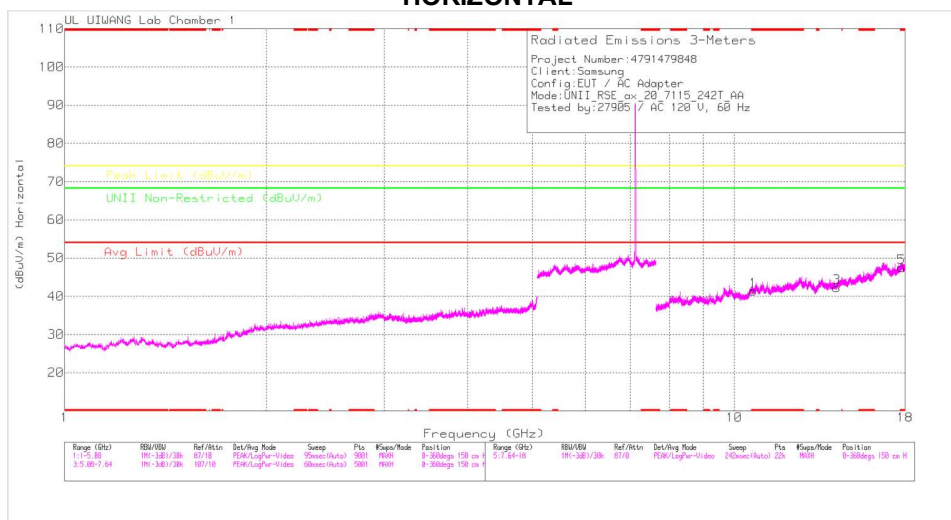
BANDEDGE TEST DATA

Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	FB Gain [dB]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	7115	ANT1	7.12501	62.75	Pk	35.70	-31.80	11.50	0.00	78.15	-	-	88.00	-9.85	298	272	H
			7.12503	63.54	Pk	35.70	-31.80	11.50	0.00	78.94	-	-	88.00	-9.06	298	272	H
			7.12501	42.67	RMS	35.70	-31.80	11.50	0.66	58.73	68.00	-9.27	-	-	298	272	H
			7.12511	44.47	RMS	35.70	-31.80	11.50	0.66	60.53	68.00	-7.47	-	-	298	272	H
			7.12501	67.39	Pk	35.70	-31.80	11.50	0.00	82.79	-	-	88.00	-5.21	233	103	V
			7.12513	69.95	Pk	35.70	-31.80	11.50	0.00	85.35	-	-	88.00	-2.65	233	103	V
			7.12501	49.17	RMS	35.70	-31.80	11.50	0.66	65.23	68.00	-2.77	-	-	233	103	V
			7.12517	49.64	RMS	35.70	-31.80	11.50	0.66	65.70	68.00	-2.30	-	-	233	103	V
802.11a	7115	ANT2	7.12501	66.53	Pk	35.70	-31.80	11.50	0.00	81.93	-	-	88.00	-6.07	231	105	H
			7.12537	67.35	Pk	35.70	-31.80	11.50	0.00	82.75	-	-	88.00	-5.25	231	105	H
			7.12501	47.49	RMS	35.70	-31.80	11.50	0.66	63.55	68.00	-4.45	-	-	231	105	H
			7.12511	49.00	RMS	35.70	-31.80	11.50	0.66	65.06	68.00	-2.94	-	-	231	105	H
			7.12501	62.68	Pk	35.70	-31.80	11.50	0.00	78.08	-	-	88.00	-9.92	232	104	V
			7.12545	63.97	Pk	35.70	-31.80	11.50	0.00	79.37	-	-	88.00	-8.63	232	104	V
			7.12501	41.55	RMS	35.70	-31.80	11.50	0.66	57.61	68.00	-10.39	-	-	232	104	V
			7.12505	46.65	RMS	35.70	-31.80	11.50	0.66	62.71	68.00	-5.29	-	-	232	104	V
802.11ax HE20 RU mode 242 Tone Offset 61	7115	MIMO	7.12551	64.35	Pk	35.60	-30.00	13.00	0.00	82.95	-	-	88.00	-5.05	214	100	H
			7.12563	63.76	Pk	35.60	-30.00	13.00	0.00	82.36	-	-	88.00	-5.64	214	100	H
			7.12551	43.04	RMS	35.60	-30.00	13.00	1.35	62.99	68.00	-5.01	-	-	214	100	H
			7.12569	39.61	RMS	35.60	-30.00	13.00	1.35	59.56	68.00	-8.44	-	-	214	100	H
			7.12551	61.29	Pk	35.60	-30.00	13.00	0.00	79.89	-	-	88.00	-8.11	275	392	V
			7.12555	58.89	Pk	35.60	-30.00	13.00	0.00	77.49	-	-	88.00	-10.51	275	392	V
			7.12551	37.57	RMS	35.60	-30.00	13.00	1.35	57.52	68.00	-10.48	-	-	275	392	V
			7.12553	37.34	RMS	35.60	-30.00	13.00	1.35	57.29	68.00	-10.71	-	-	275	392	V
802.11ax HE40 RU mode 484 Tone Offset 65	7085	MIMO	7.12501	36.78	Pk	35.60	-30.00	13.00	0.00	55.38	-	-	88.00	-32.62	250	110	H
			7.14518	39.69	Pk	35.60	-30.00	13.40	0.00	58.69	-	-	88.00	-29.31	250	110	H
			7.12501	27.71	RMS	35.60	-30.00	13.00	1.45	47.76	68.00	-20.24	-	-	250	110	H
			7.14620	28.31	RMS	35.60	-30.00	13.40	1.45	48.76	68.00	-19.24	-	-	250	110	H
			7.12501	37.13	Pk	35.60	-30.00	13.00	0.00	55.73	-	-	88.00	-32.27	164	102	V
			7.15250	39.06	Pk	35.60	-30.00	13.50	0.00	58.16	-	-	88.00	-29.84	164	102	V
			7.12501	26.33	RMS	35.60	-30.00	13.00	1.45	46.38	68.00	-21.62	-	-	164	102	V
			7.15048	27.91	RMS	35.60	-30.00	13.50	1.45	48.46	68.00	-19.54	-	-	164	102	V
802.11ax HE80 RU mode 996 Tone Offset 67	7025	MIMO	7.12501	36.27	Pk	35.60	-30.00	13.00	0.00	54.87	-	-	88.00	-33.13	248	102	H
			7.14576	39.49	Pk	35.60	-30.00	13.40	0.00	58.49	-	-	88.00	-29.51	248	102	H
			7.12501	26.54	RMS	35.60	-30.00	13.00	1.65	46.79	68.00	-21.21	-	-	248	102	H
			7.15766	28.45	RMS	35.60	-30.00	13.40	1.65	49.10	68.00	-18.90	-	-	248	102	H
			7.12501	35.79	Pk	35.60	-30.00	13.00	0.00	54.39	-	-	88.00	-33.61	178	104	V
			7.14984	39.32	Pk	35.60	-30.00	13.50	0.00	58.42	-	-	88.00	-29.58	178	104	V
			7.12501	26.63	RMS	35.60	-30.00	13.00	1.65	46.88	68.00	-21.12	-	-	178	104	V
			7.14365	27.59	RMS	35.60	-30.00	13.40	1.65	48.24	68.00	-19.76	-	-	178	104	V

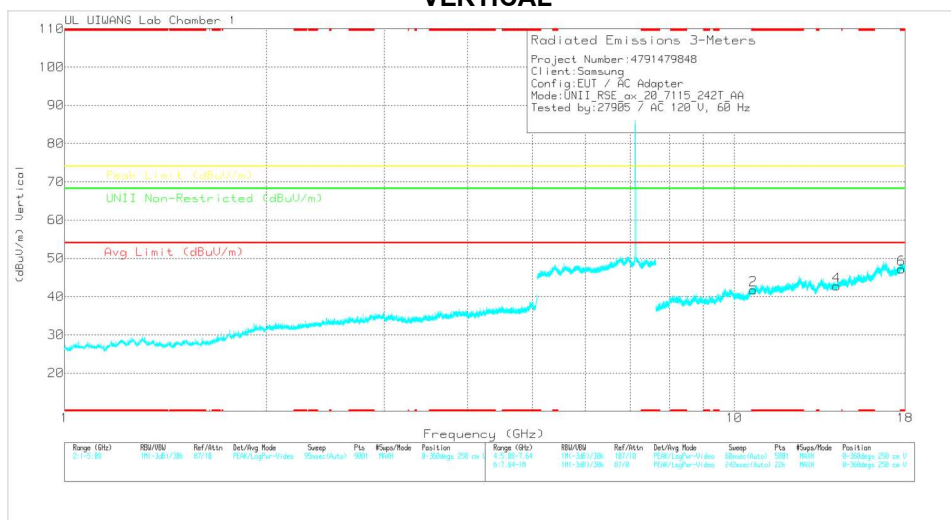
Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11ax HE20 242T / 7115 MHz / MIMO)

HORIZONTAL



VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

Frequency (GHz)	Meas Reading (dBuV)	Det	CH1_F1: 180-317.24024 Antenna Factor(dBm)	FB1_F1: 1-180.80 AP 241002 Gain(dB)	CH1_C1: 1-400 100-24104 Loss(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (m)	Height (m)	Polarity
* 10.6706	37.02	PK-U	37.5	-36.7	14.4	0	52.22	-	-	74	-21.78	-	-	0	100	H
* 10.6708	36.16	PK-U	37.5	-36.7	14.4	0	51.36	-	-	74	-22.64	-	-	0	100	V
14.23353	37.03	PK-U	38.9	-37.4	16.3	0	54.83	-	-	-	-	68.2	-13.37	90	110	H
14.22993	36.05	PK-U	38.9	-37.4	16.3	0	53.85	-	-	-	-	68.2	-14.35	7	392	V
* 17.78709	36.11	PK-U	41.4	-38.4	18.6	0	57.71	-	-	74	-16.29	-	-	0	100	H
* 17.78821	36.02	PK-U	41.4	-38.4	18.6	0	57.62	-	-	74	-16.38	-	-	0	100	V
* 17.78709	23.92	ADR	41.4	-38.4	18.6	1.35	46.87	54	-7.13	-	-	-	-	0	100	H
* 17.78821	23.90	ADR	41.4	-38.4	18.6	1.35	46.85	54	-7.15	-	-	-	-	0	100	V

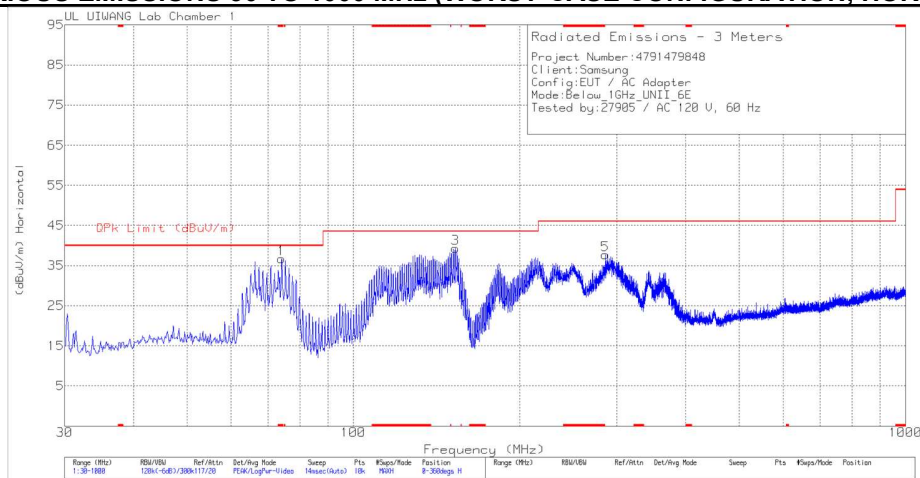
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak

HARMONICS AND OUT-OF-BAND EMISSIONS TEST DATA																				
Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBμV]	Detector Mode	ANT Factor [dB/m]	FB Gain [dB]	Loss [dB]	DC Corr [dB]	Result [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	PK Limit [dBμV/m]	PK Margin [dB]	Non-Restricted [dBμV/m]	Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity	
802.11a	6895	ANT1	10.33559	36.42	PK-U	37.20	-37.30	14.00	0.00	50.32	-	-	-	-	68.20	-17.98	0	100	H	
			10.33559	36.17	PK-U	37.20	-37.30	14.00	0.00	50.07	-	-	-	-	68.20	-18.13	0	100	V	
			13.78562	37.39	PK-U	38.50	-37.20	16.20	0.00	54.89	-	-	-	-	68.20	-13.31	340	189	H	
			13.78974	37.43	PK-U	38.50	-37.20	16.20	0.00	54.93	-	-	-	-	68.20	-13.27	62	106	V	
			17.23607	35.74	PK-U	40.80	-38.30	18.00	0.00	56.24	-	-	-	-	68.20	-11.96	0	100	H	
			17.22296	35.32	PK-U	40.90	-38.30	18.00	0.00	55.92	-	-	-	-	68.20	-12.28	0	100	V	
			10.49921	36.14	PK-U	37.40	-37.20	14.10	0.00	50.44	-	-	-	-	68.20	-17.76	0	100	H	
			10.49726	36.44	PK-U	37.40	-37.20	14.10	0.00	50.74	-	-	-	-	68.20	-17.46	0	100	V	
	6995	ANT1	13.99014	37.72	PK-U	38.70	-37.30	16.60	0.00	55.72	-	-	-	-	68.20	-12.48	326	190	H	
			13.99608	37.28	PK-U	38.70	-37.30	16.60	0.00	55.28	-	-	-	-	68.20	-12.92	64	110	V	
			17.49208	35.95	PK-U	40.90	-38.40	18.20	0.00	56.65	-	-	-	-	68.20	-11.55	0	100	H	
			17.48879	35.43	PK-U	40.90	-38.40	18.20	0.00	56.13	-	-	-	-	68.20	-12.07	0	100	V	
			* 10.6714	36.33	PK-U	37.50	-36.60	14.40	0.00	51.63	-	-	-	-	74.00	-22.37	-	0	100	H
			* 10.66955	36.62	PK-U	37.50	-36.70	14.40	0.00	51.82	-	-	-	-	74.00	-22.18	-	0	100	V
			* 14.23026	36.77	PK-U	38.90	-37.40	16.30	0.00	53.57	-	-	-	-	68.20	-13.63	324	104	H	
			* 14.22933	35.41	PK-U	38.90	-37.40	16.30	0.00	53.21	-	-	-	-	68.20	-14.99	57	105	V	
	7115	ANT1	* 17.78708	36.07	PK-U	41.40	-38.40	18.60	0.00	57.67	-	-	-	-	74.00	-16.33	-	0	100	H
			* 17.78566	36.18	PK-U	41.40	-38.40	18.60	0.00	57.78	-	-	-	-	74.00	-16.22	-	0	100	V
			* 17.78708	23.97	ADR	41.40	-38.40	18.60	0.66	46.23	54.00	-7.77	-	-	-	-	0	100	H	
			* 17.78566	24.02	ADR	41.40	-38.40	18.60	0.66	46.28	54.00	-7.72	-	-	-	-	0	100	V	
			* 10.35091	36.57	PK-U	37.20	-37.40	14.00	0.00	50.37	-	-	-	-	68.20	-17.83	0	100	H	
			10.34094	36.62	PK-U	37.20	-37.40	14.00	0.00	50.42	-	-	-	-	68.20	-17.78	0	100	V	
			13.79512	39.39	PK-U	38.50	-37.20	16.20	0.00	56.89	-	-	-							

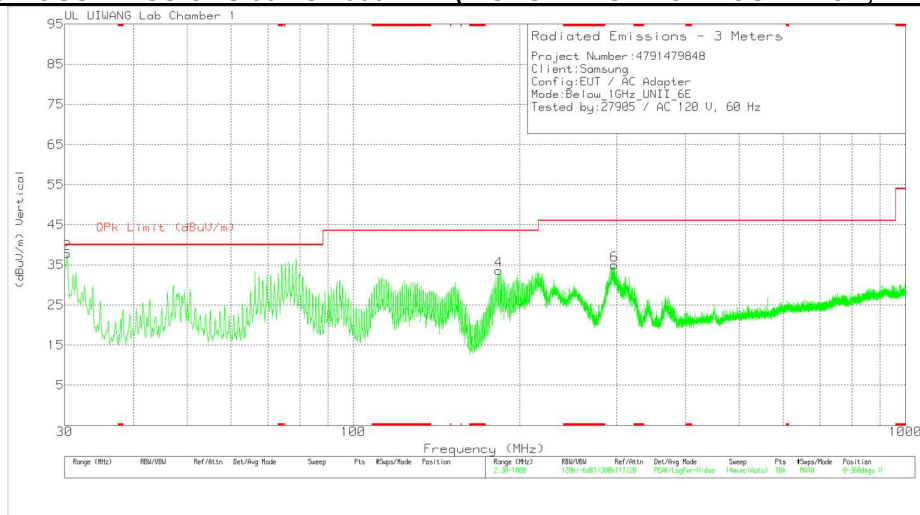
Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

13. WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)



SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB 9163 Antenna Factor(dB/m)	1Cham_30M-1000M_AMP(ELNA0 3-40D Gain(dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 74.1396	62.76	Pk	13.6	-39.7	36.66	40	-3.34	0-360	100	H
2	30.291	62	Pk	15.8	-40	37.8	40	-2.2	0-360	100	V
3	153.0087	64.77	Pk	13.9	-39.3	39.37	43.52	-4.15	0-360	200	H
4	183.2758	57.25	Pk	15.5	-39.2	33.55	43.52	-9.97	0-360	100	V
5	285.7184	57.59	Pk	18.8	-38.7	37.69	46.02	-8.33	0-360	100	H
6	296.8745	54.68	Pk	19	-38.7	34.98	46.02	-11.04	0-360	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB 9163 Antenna Factor(dB/m)	1Cham_30M-1000M_AMP(ELN A03-40D Gain(dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
30.3624	58.99	Qp	15.8	-40	34.79	40	-5.21	237	100	V
* 74.2316	60.88	Qp	13.6	-39.7	34.78	40	-5.22	353	222	H
152.9331	63.97	Qp	13.9	-39.3	38.57	43.52	-4.95	221	130	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Qp - Quasi-Peak detector

14. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)
IC RSS-GEN Clause 8.8

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 [*]	56 to 46 [*]
0.5-5	56	46
5-30	60	50

^{*} Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

WORST EMISSIONS

LINE 1 DATA

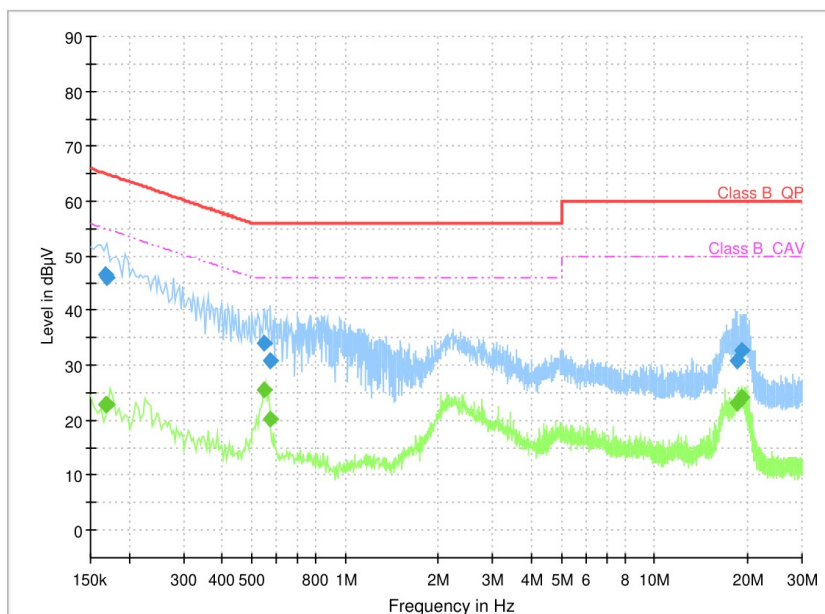
AC LINE UNII 6E-L

1 / 1

Test Report

Common Information

Project No: 479147984
Test Description: Shielded Room#1, Conducted Emission
Test Standard: FCC Part 15 Subpart C
Model Name: WCF934M
Test Voltage: AC 120 V, 60 Hz
Test Mode: AC Line UNII 6E
Operator: 27905
Line: LINE



Final Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.167710	---	22.88	55.07	32.20	9.000	L1	ON	9.9
0.167710	46.42	---	65.07	18.66	9.000	L1	ON	9.9
0.170330	---	22.77	54.94	32.17	9.000	L1	ON	9.9
0.170330	45.90	---	64.94	19.04	9.000	L1	ON	9.9
0.546450	---	25.57	46.00	20.43	9.000	L1	ON	9.8
0.546450	33.96	---	56.00	22.04	9.000	L1	ON	9.8
0.570580	---	20.16	46.00	25.84	9.000	L1	ON	9.8
0.570580	30.87	---	56.00	25.13	9.000	L1	ON	9.8
18.509160	---	23.14	50.00	26.86	9.000	L1	ON	10.0
18.509160	30.79	---	60.00	29.21	9.000	L1	ON	10.0
19.161560	---	24.31	50.00	25.69	9.000	L1	ON	10.0
19.161560	32.63	---	60.00	27.37	9.000	L1	ON	10.0

LINE 2 DATA

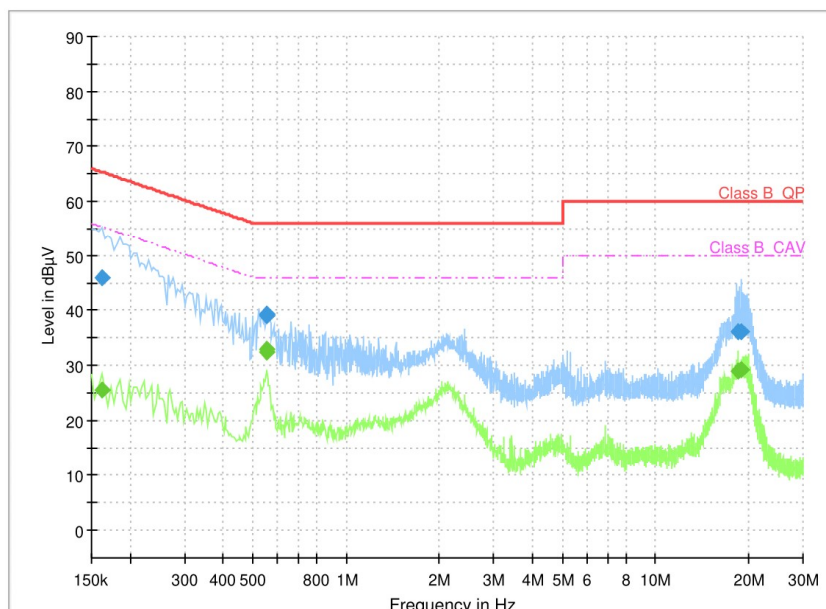
AC LINE UNII 6E-N

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Test Report

Common Information

Project No: 479147984
Test Description: Shielded Room#1, Conducted Emission
Test Standard: FCC Part 15 Subpart C
Model Name: WCF934M
Test Voltage: AC 120 V, 60 Hz
Test Mode: AC Line UNII 6E
Operator: 27905
Line: NEUTRAL



Final Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.161710	45.90	---	65.38	19.47	9.000	N	ON	9.8
0.161710	---	25.51	55.38	29.87	9.000	N	ON	9.8
0.552210	39.24	---	56.00	16.76	9.000	N	ON	9.9
0.552210	---	32.98	46.00	13.02	9.000	N	ON	9.9
0.553970	38.95	---	56.00	17.05	9.000	N	ON	9.9
0.553970	---	32.42	46.00	13.58	9.000	N	ON	9.9
18.453500	36.06	---	60.00	23.94	9.000	N	ON	10.0
18.453500	---	29.02	50.00	20.98	9.000	N	ON	10.0
18.854350	36.21	---	60.00	23.79	9.000	N	ON	10.0
18.854350	---	29.26	50.00	20.74	9.000	N	ON	10.0

15. Contention Based Protocol

15.1. OVERVIEW

15.1.1. LIMITS

FCC

§15.407 (d) (6) / RSS-248 Issue 3 (4.7)
KDB 987594 D02

Indoor access points, subordinate devices and client devices operating in the 5.925-7.125 GHz band (herein referred to as unlicensed devices) are required to use technologies that include a contention-based protocol to avoid co-channel interference with incumbent devices sharing the band. To ensure incumbent co-channel operations are detected in a technology-agnostic manner, unlicensed devices are required to detect co-channel radio frequency energy (energy detect) and avoid simultaneous transmission.

Unlicensed low-power indoor devices must detect co-channel radio frequency power that is at least -62 dBm or lower. Upon detection of energy in the band, unlicensed low power indoor devices must vacate the channel (in which incumbent signal is transmitted) and stay off the incumbent channel as long as detected radio frequency power is equal to or greater than the threshold (-62 dBm). The -62 dBm (or lower) threshold is referenced to a 0 dBi antenna gain.

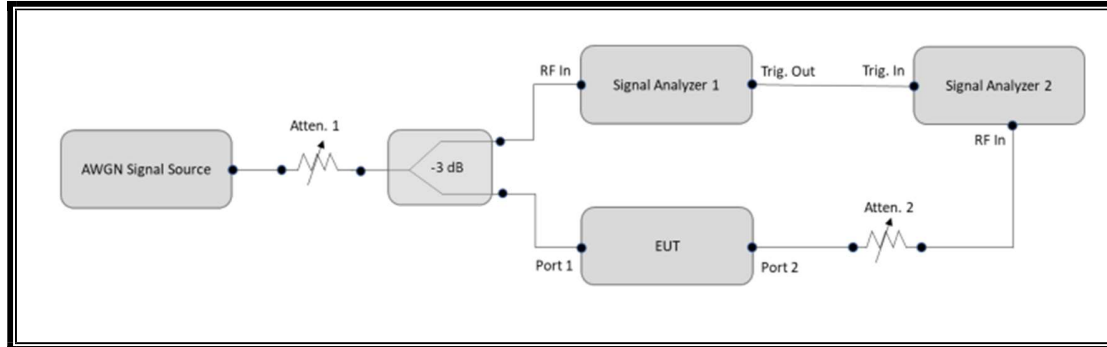
To ensure incumbent operations are reliably detected in the band, low power indoor devices must detect RF energy throughout their intended operating channel. For example, an 802.11 device that plans to transmit a 40 MHz- wide signal (on a primary 20 MHz channel and a secondary 20 MHz channel) must detect energy throughout the entire 40 MHz channel. Additionally, low-power indoor devices must detect co-channel energy with 90% or greater certainty.

CHANNEL PUNCTURING AND BANDWIDTH REDUCTION (802.11ax)

This EUT does not support channel puncturing and bandwidth reduction.

15.1.2. TEST AND MEASUREMENT SYSTEM

CONDUCTED METHOD SYSTEM BLOCK DIAGRAM



TEST SETTING

- 1) Configure the EUT to transmit with a constant duty cycle.
- 2) Set the operating parameters of the EUT including power level, operating frequency, modulation and bandwidth.
- 3) Set the signal analyzer center frequency to the nominal EUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT. Connect the output port of the EUT to the signal analyzer 2, as shown in Figure 2. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
- 4) Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters set at step two.
- 5) Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
- 6) Set the AWGN signal power to an extremely low level (more than 20 dB below the -62 dBm threshold). Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT as shown in Figure 2.
- 7) Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
- 8) Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
- 9) (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
- 10) Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step 5, choose a different center frequency for the AWGN signal and repeat the process.

TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	S/N	Next Cal Due
Spectrum Analyzer	Keysight	N9030B	MY57143652	2025-07-22
Vector Signal Generator	R&S	SMW200A	110251	2025-07-24
Power Splitter	WEINSCHL	WA1534	UL005	2025-01-17
				2026-01-03
Power Splitter	WEINSCHL	WA1534	UL010	2025-01-17
				2026-01-20
Attenuator	AGILENT	8494B	MY42155321	2025-07-24
Attenuator	AGILENT	8494B	MY42149775	2025-07-24

SUPPORT EQUIPMENT

The following support equipment was utilized for the CBP tests documented in this report:

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
Wireless Access Point	ASUS	GT-AXE11000	NBIG0X401037X8D	MSQ-RTAXJF00
Notebook PC (Controller/Server)	Lenovo	TP00050C	XU100606-15005A	DoC