



11. 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.

FCC Part 15.205 (a) : Only spurious emissions are permitted in any of the frequency bands listed below :

MHz	MHz	MHz	MHz	GHz	GHz
0.009 ~ 0.110	8.41425 ~ 8.41475	108 ~ 121.94	1300 ~ 1427	4.5 ~ 5.15	14.47 ~ 14.5
0.495 ~ 0.505	12.29 ~ 12.293	123 ~ 138	1435 ~ 1626.5	5.35 ~ 5.46	15.35 ~ 16.2
2.1735 ~ 2.1905	12.51975 ~ 12.52025	149.9 ~ 150.05	1645.5 ~ 1646.5	7.25 ~ 7.75	17.7 ~ 21.4
4.125 ~ 4.128	12.57675 ~ 12.57725	156.52475 ~ 156.52525	1660 ~ 1710	8.025 ~ 8.5	22.01 ~ 23.12
4.17725 ~ 4.17775	13.36 ~ 13.41	156.7 ~ 156.9	1718.8 ~ 1722.2	9.0 ~ 9.2	23.6 ~ 24.0
4.20725 ~ 4.20775	16.42 ~ 16.423	162.0125 ~ 167.17	2200 ~ 2300	9.3 ~ 9.5	31.2 ~ 31.8
6.215 ~ 6.218	16.69475 ~ 16.69525	167.72 ~ 173.2	2310 ~ 2390	10.6 ~ 12.7	36.43 ~ 36.5
6.26775 ~ 6.26825	16.80425 ~ 16.80475	240 ~ 285	2483.5 ~ 2500	13.25 ~ 13.4	Above 38.6
6.31175 ~ 6.31225	25.5 ~ 25.67	322 ~ 335.4	2655 ~ 2900		
8.291 ~ 8.294	37.5 ~ 38.25	399.90 ~ 410	3260 ~ 3267		
8.362 ~ 8.366	73 ~ 74.6	608 ~ 614	3332 ~ 3339		
8.37625 ~ 8.38675	74.8 ~ 75.2	960 ~ 1240	3345.8 ~ 3358 3600 ~ 4400		

▪ FCC Part 15.205(b) : The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.

FCC §15.407 (b)

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

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band:
 - (i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
- (5) 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.
- (6) 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.
- (7) The provisions of §15.205 apply to intentional radiators operating under this section.
- (8) 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.

Note

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

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

$$E[\text{dBuV/m}] = \text{EIRP}[\text{dBm}] + 95.2 = -17\text{dBm} + 95.2 = 78.2\text{dBuV/m}$$

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz and 150 cm for above 1GHz. The antenna to EUT distance is 3 meters. 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.

The spectrum from 1GHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.
(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.

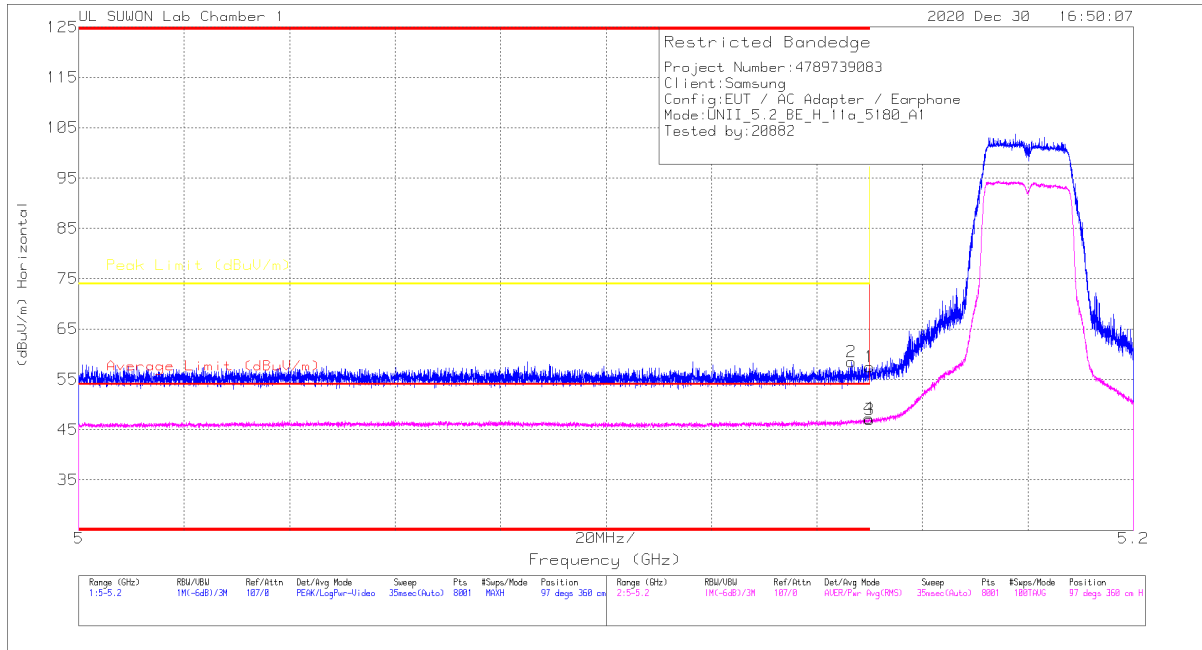
Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open are test site.
Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the one of tests made in an open field based on KDB 414788.

11.1. 5.2 GHz

11.1.1. TX ABOVE 1GHz 802.11a 1Tx MODE IN THE 5.2GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

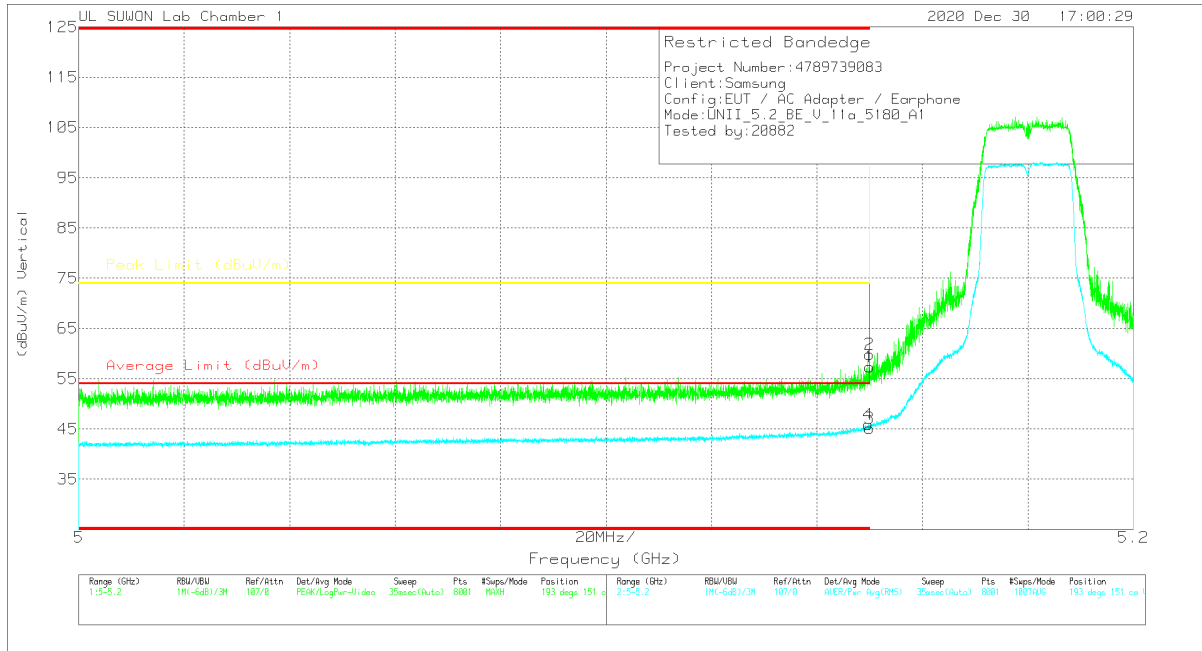


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	40.75	Pk	34.4	-17.7	0	57.45	-	-	74	-15.55	97	360	H
2	* 5.14655	41.77	Pk	34.4	-17.7	0	58.47	-	-	74	-15.53	97	360	H
3	5.15	30.22	RMS	34.4	-17.7	15	47.07	54	-6.93	-	-	97	360	H
4	* 5.14988	30.44	RMS	34.4	-17.7	15	47.29	54	-6.71	-	-	97	360	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak detector
 RMS - RMS detection

VERTICAL PEAK AND AVERAGE DATA



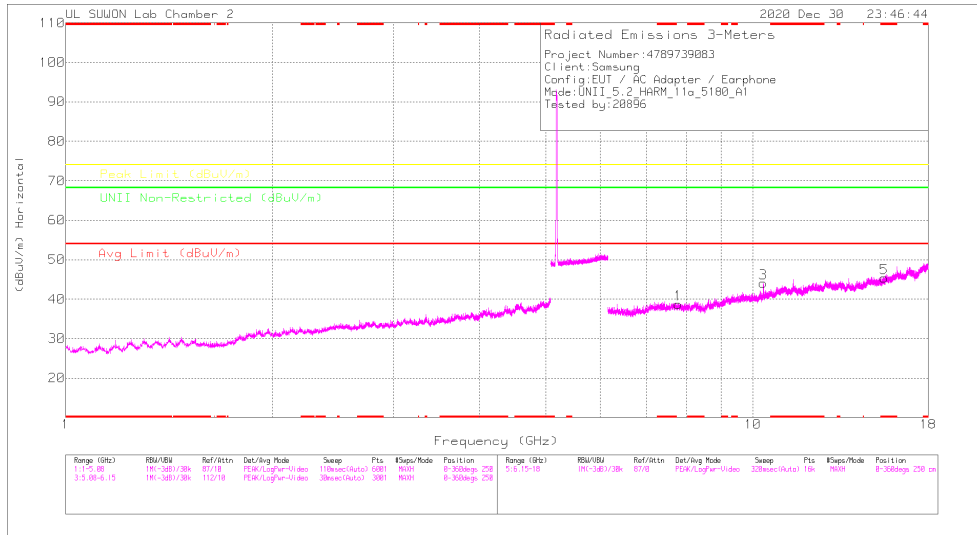
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	44.63	PK	34.3	-21.6	0	57.33	-	-	74	-16.67	193	151	V
2	* 5.14998	47.1	PK	34.3	-21.6	0	59.8	-	-	74	-14.2	193	151	V
3	5.15	32.34	RMS	34.3	-21.6	.15	45.19	54	-8.81	-	-	193	151	V
4	* 5.14975	33.17	RMS	34.3	-21.7	.15	45.92	54	-8.08	-	-	193	151	V

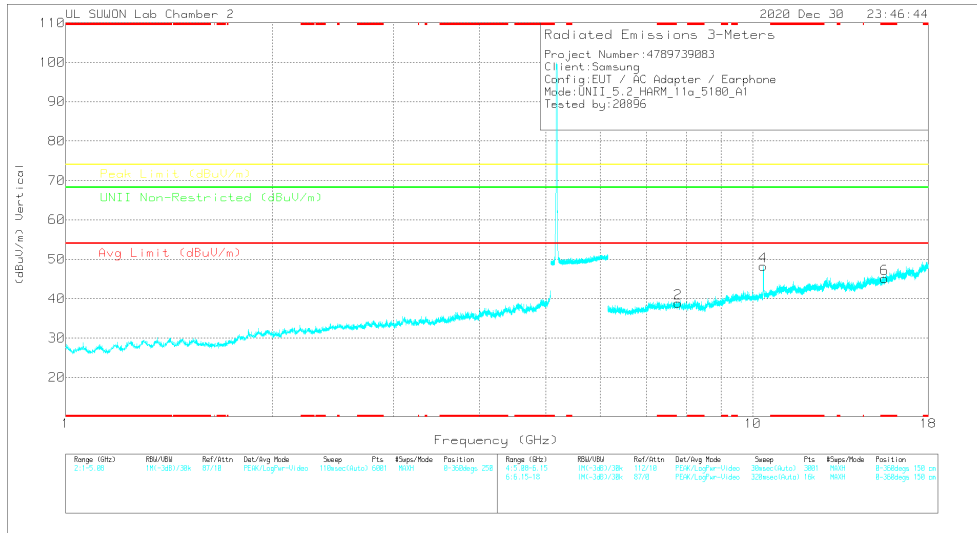
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL 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.

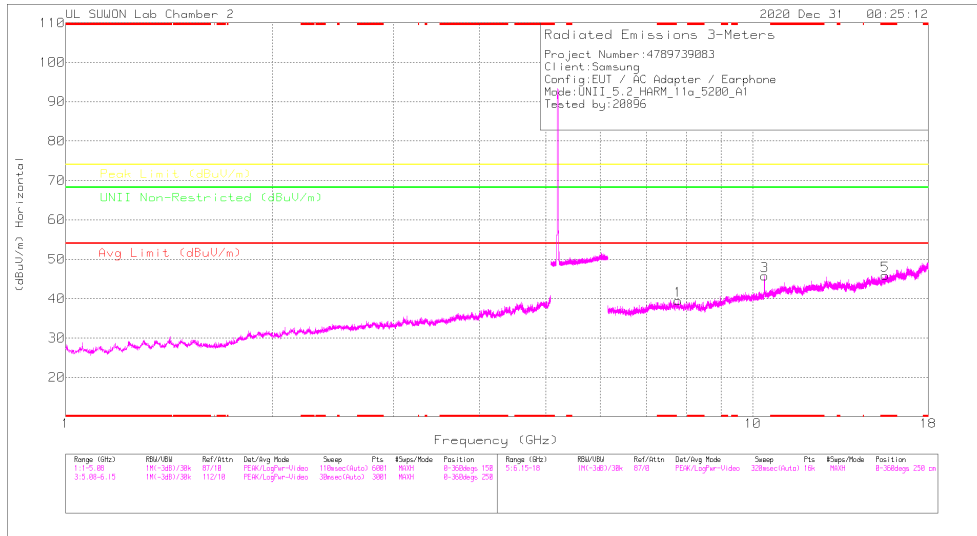
LOW CHANNEL DATA

Radiated Emissions

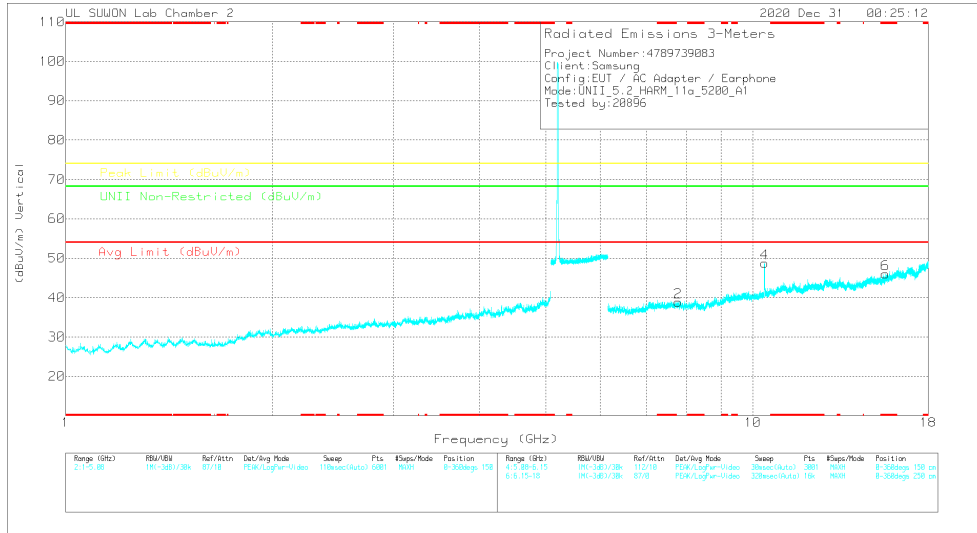
Frequency (GHz)	Mean Reading (dBuV)	Det	317_00168724	6GHz_HPSRB	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Degs)	Height (m)	Polarity
7.78051	-37.07	PK-U	36	-23	0	50.07	-	-	-	-	68.2	-18.13	360	100	H
7.78034	-36.67	PK-U	36	-23	0	49.67	-	-	-	-	68.2	-18.53	360	100	V
10.36697	40.91	PK-U	37.7	-20.2	0	58.41	-	-	-	-	68.2	-9.79	162	100	H
10.36165	43.38	PK-U	37.7	-20.1	0	60.98	-	-	-	-	68.2	-7.22	231	100	V
* 15.53878	34.57	PK-U	40	-19.4	0	55.17	-	-	74	-18.83	-	-	0	100	H
* 15.5409	34.43	PK-U	40	-19.4	0	55.03	-	-	74	-18.97	-	-	0	100	V

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

MID CHANNEL HORIZONTAL



MID CHANNEL 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.

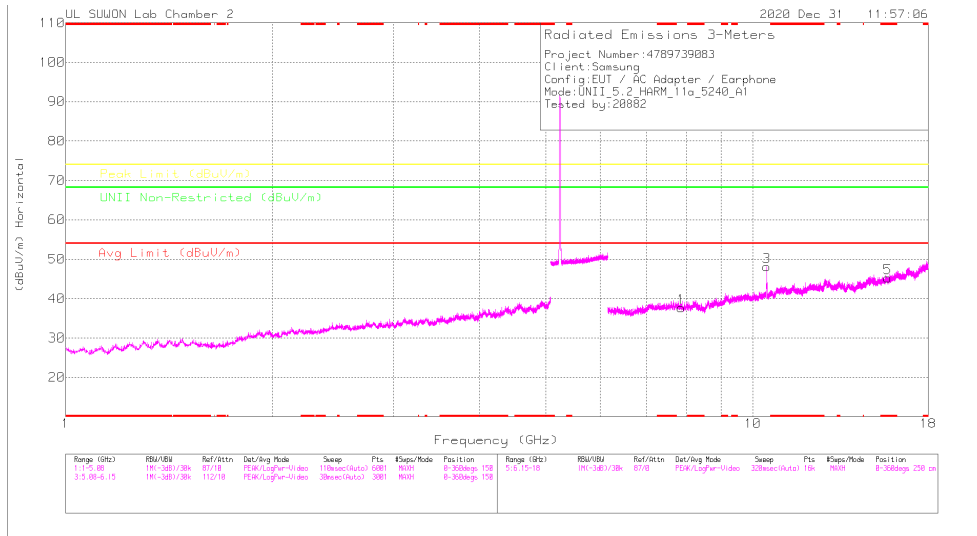
MID CHANNEL DATA

Radiated Emissions

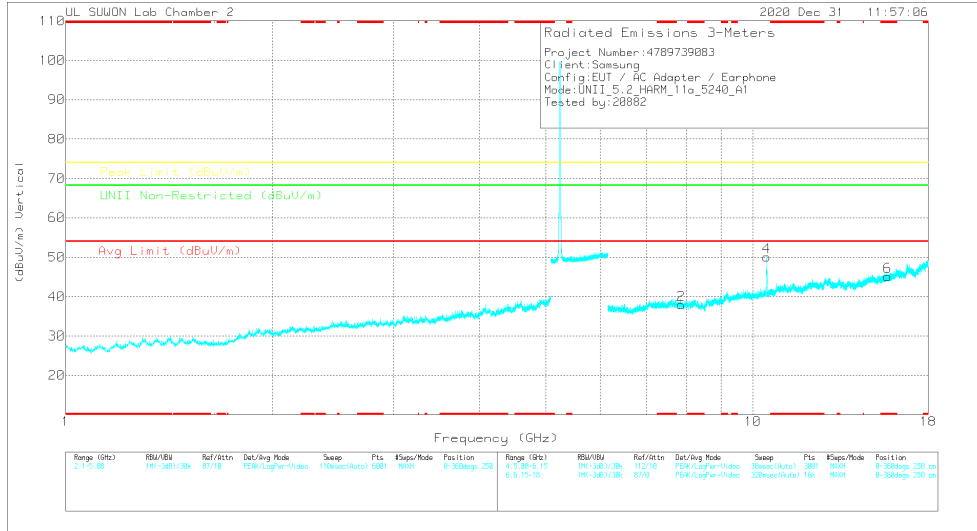
Frequency (GHz)	Mean Reading (dBuV)	Dist	317_00168724	6GHz_HPSRB	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Deg)	Height (cm)	Polarity
7.78868	35.16	PK-U	36	-23.1	0	48.06	-	-	-	-	68.2	-19.14	0	100	H
7.78695	35.98	PK-U	36	-23.1	0	48.88	-	-	-	-	68.2	-19.32	0	100	V
10.39886	41.7	PK-U	37.7	-20.1	0	59.3	-	-	-	-	68.2	-8.9	146	113	H
10.39858	44.61	PK-U	37.7	-20.1	0	62.21	-	-	-	-	68.2	-8.99	225	102	V
*15.59989	34.53	PK-U	40	-19.5	0	55.03	-	-	74	-18.97	-	-	0	100	H
*15.59993	34.97	PK-U	40	-19.5	0	55.47	-	-	74	-18.53	-	-	0	100	V

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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL 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.

HIGH CHANNEL DATA

Radiated Emissions

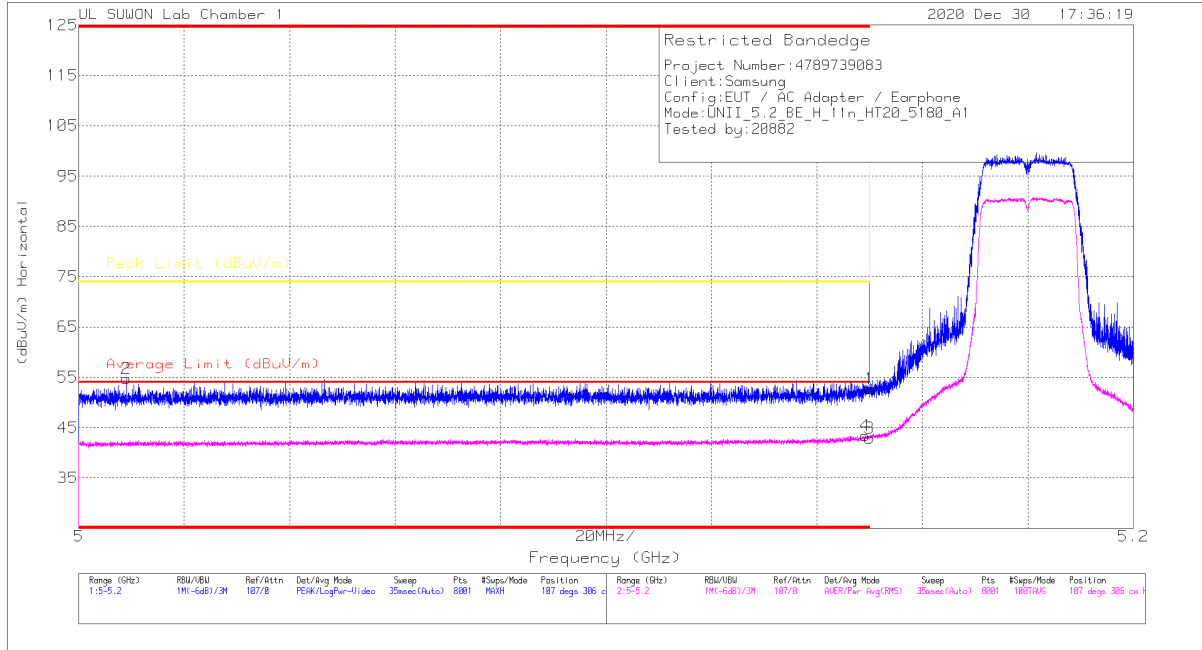
Frequency (GHz)	Max Reading (dBuV)	Det	317.06168724	6GHz_HF(dB)	DC Corr (dB)	Concord Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7.85873	36.38	PK-U	36	-23.8	0	48.58	-	-	-	-	68.2	-19.62	0	100	H
7.85944	36.48	PK-U	36	-23.8	0	48.68	-	-	-	-	68.2	-19.52	0	100	V
10.47892	42.05	PK-U	37.8	-19.9	0	59.95	-	-	-	-	68.2	-8.25	162	101	H
10.47936	42.93	PK-U	37.8	-19.9	0	60.83	-	-	-	-	68.2	-7.37	238	103	V
*15.72196	35	PK-U	40.2	-18.4	0	55.8	-	-	74	-18.2	-	-	0	100	H
*15.72087	34.51	PK-U	40.2	-18.3	0	55.41	-	-	74	-18.59	-	-	0	100	V

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

11.1.2. TX ABOVE 1GHz 802.11n HT20 1Tx MODE IN THE 5.2GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

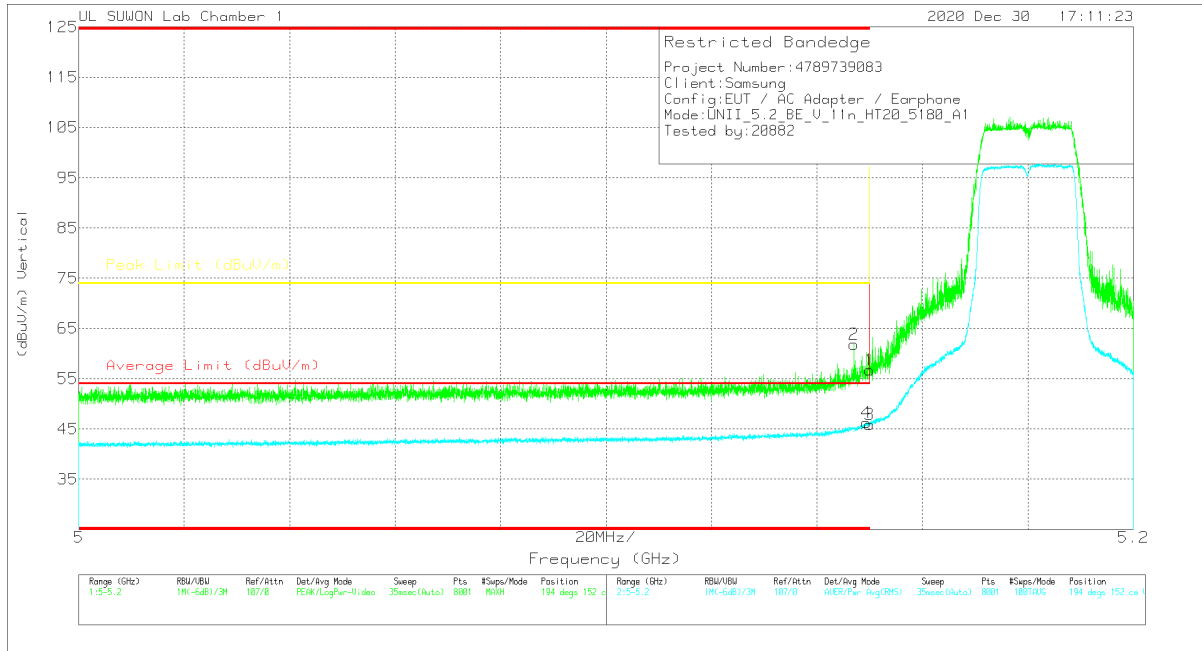


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT(dB)	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	40.03	Pk	34.3	-21.6	0	52.73	-	-	74	-21.27	107	306	H
2	* 5.009	42.35	Pk	34.1	-21.7	0	54.75	-	-	74	-19.25	107	306	H
3	5.15	30.04	RMS	34.3	-21.6	-17	42.91	54	-11.09	-	-	107	306	H
4	* 5.14915	30.61	RMS	34.3	-21.7	-17	43.38	54	-10.62	-	-	107	306	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 RMS - RMS detection

VERTICAL PEAK AND AVERAGE DATA



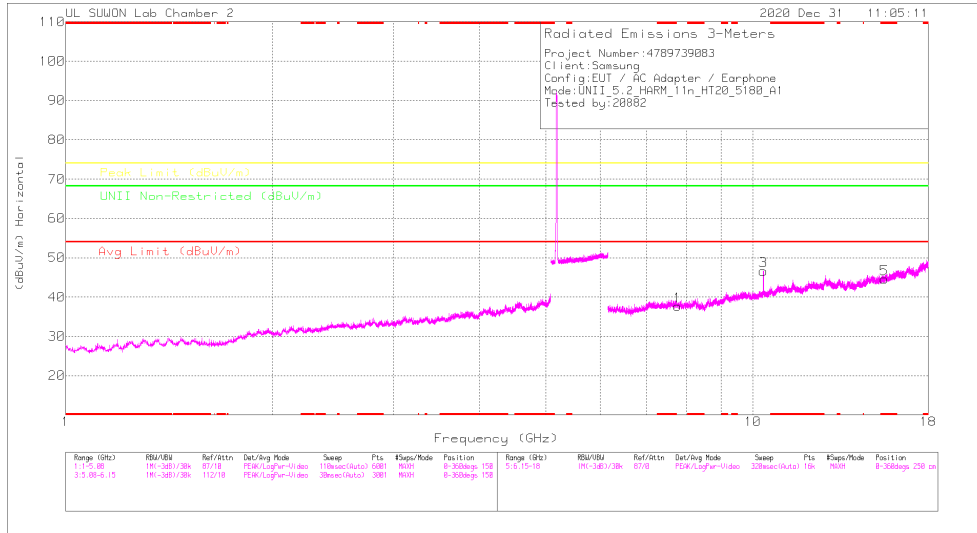
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	44.07	PK	34.3	-21.6	0	56.77	-	-	74	-17.23	194	152	V
2	* 5.14703	49.22	PK	34.3	-21.7	0	61.82	-	-	74	-12.18	194	152	V
3	5.15	33.04	RMS	34.3	-21.6	.17	45.51	54	-8.08	-	-	194	152	V
4	* 5.14935	33.5	RMS	34.3	-21.7	.17	46.27	54	-7.73	-	-	194	152	V

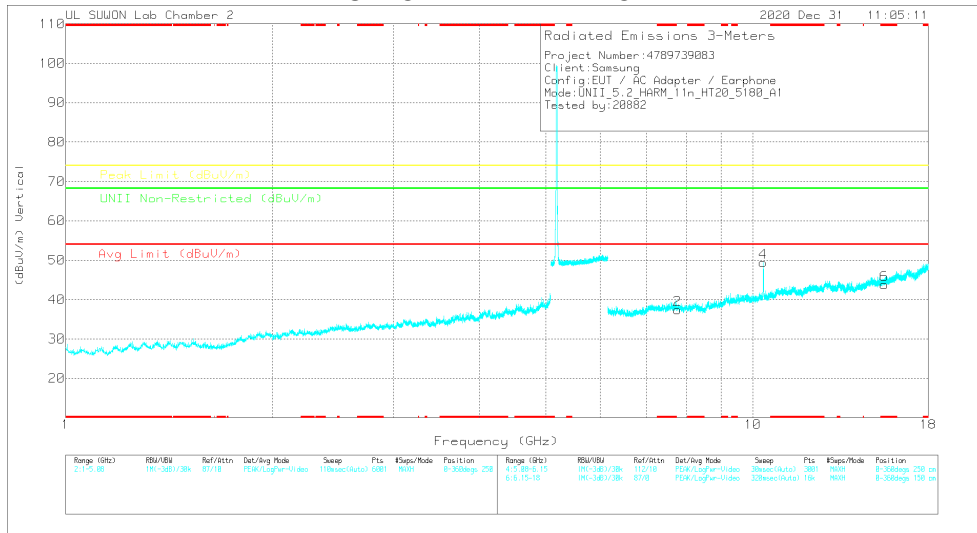
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL 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.

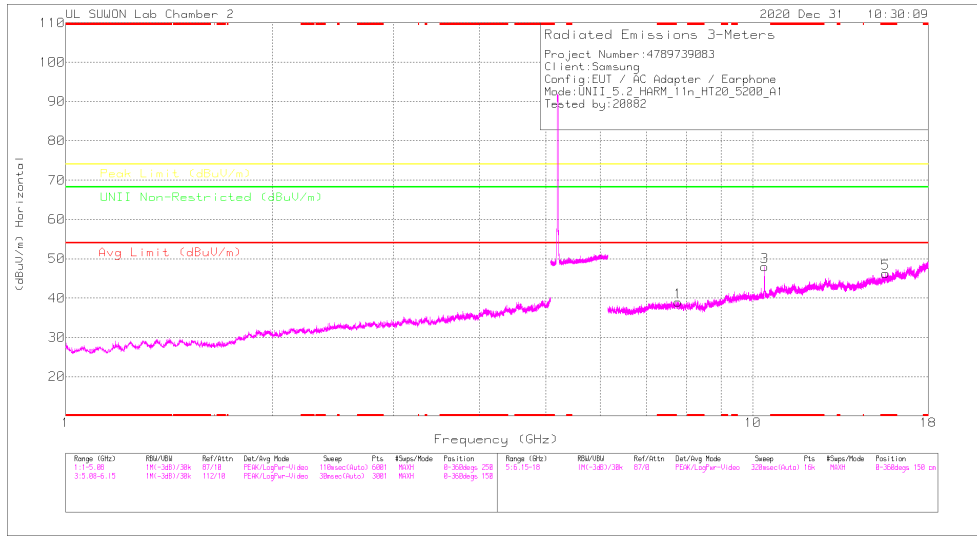
LOW CHANNEL DATA

Radiated Emissions

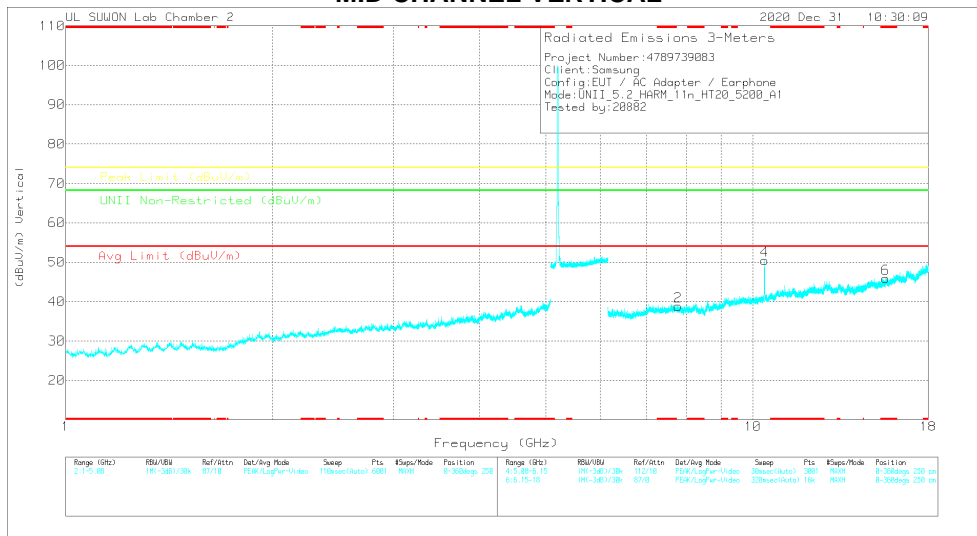
Frequency (GHz)	Max Reading (dBuV)	Det	317_00168724	5GHz_HF[dB]	DC Corr (dB)	Corrected Reading (dBuV)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Meters)	Height (cm)	Polarity
7.77036	36.36	PK-U	36	-23.1	0	49.26	-	-	-	-	68.2	-18.94	0	100	H
7.77083	36.7	PK-U	36	-23.1	0	49.8	-	-	-	-	68.2	-18.8	0	100	V
10.38555	39.27	PK-U	37.7	-20.2	0	56.77	-	-	-	-	68.2	-11.43	163	101	H
10.38163	42.32	PK-U	37.7	-20.1	0	59.92	-	-	-	-	68.2	-8.28	236	103	V
* 15.54229	35.08	PK-U	40	-19.4	0	55.68	-	-	74	-18.32	-	-	0	100	H
* 15.54252	34.54	PK-U	40	-19.4	0	55.14	-	-	74	-18.86	-	-	0	100	V

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

MID CHANNEL HORIZONTAL



MID CHANNEL 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.

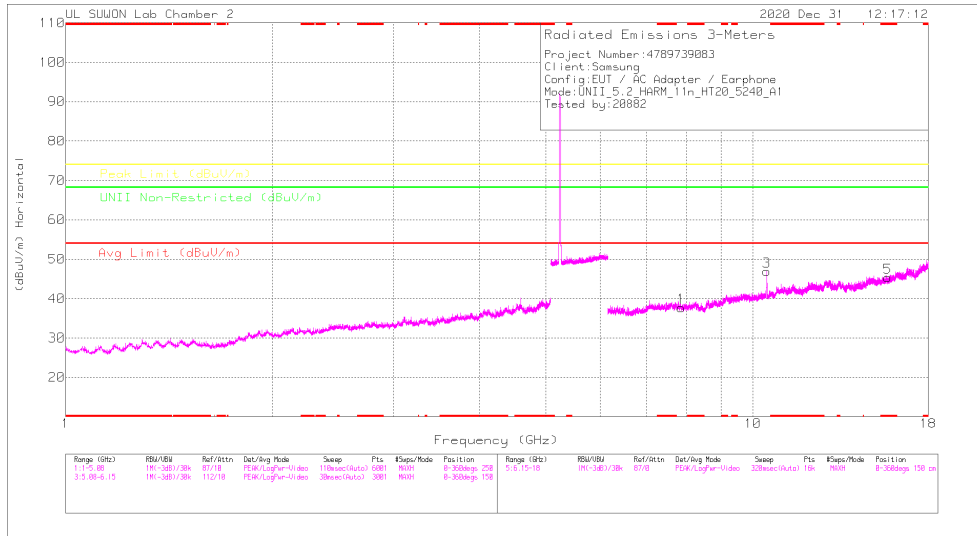
MID CHANNEL DATA

Radiated Emissions

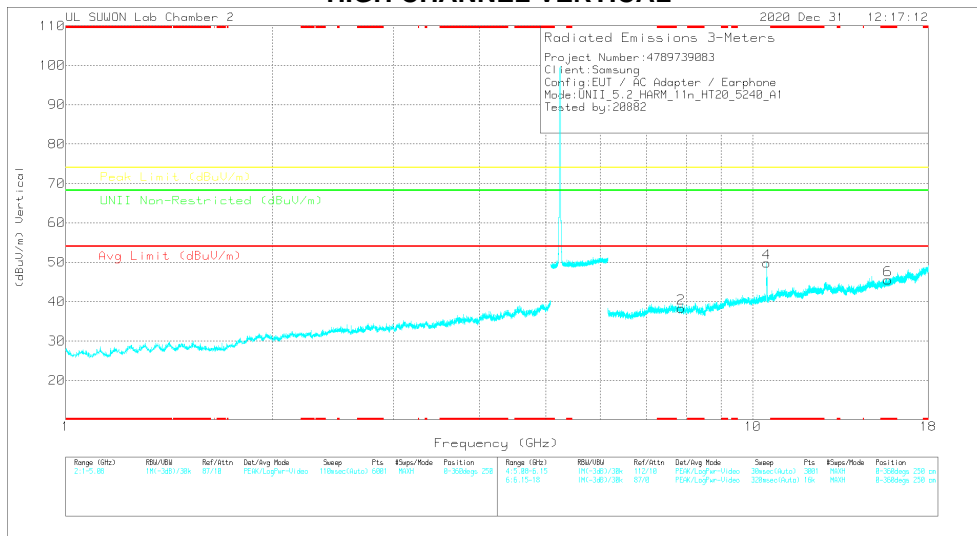
Frequency (GHz)	Max Reading (dBuV)	Det	317_00168724	5GHz_HF[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7.78034	36.35	PK-U	36	-23	0	49.35	-	-	-	-	68.2	-18.85	0	100	H
7.78023	36.55	PK-U	36	-23	0	49.55	-	-	-	-	68.2	-18.65	0	100	V
10.40797	40.4	PK-U	37.7	-20.1	0	58	-	-	-	-	68.2	-10.2	152	116	H
10.40209	43.38	PK-U	37.7	-20.1	0	60.98	-	-	-	-	68.2	-7.22	236	100	V
* 15.61858	35.74	PK-U	40	-19.4	0	56.34	-	-	74	-17.66	-	-	0	100	H
* 15.62093	35.62	PK-U	40.1	-19.5	0	56.22	-	-	74	-17.78	-	-	0	100	V

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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL 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.

HIGH CHANNEL DATA

Radiated Emissions

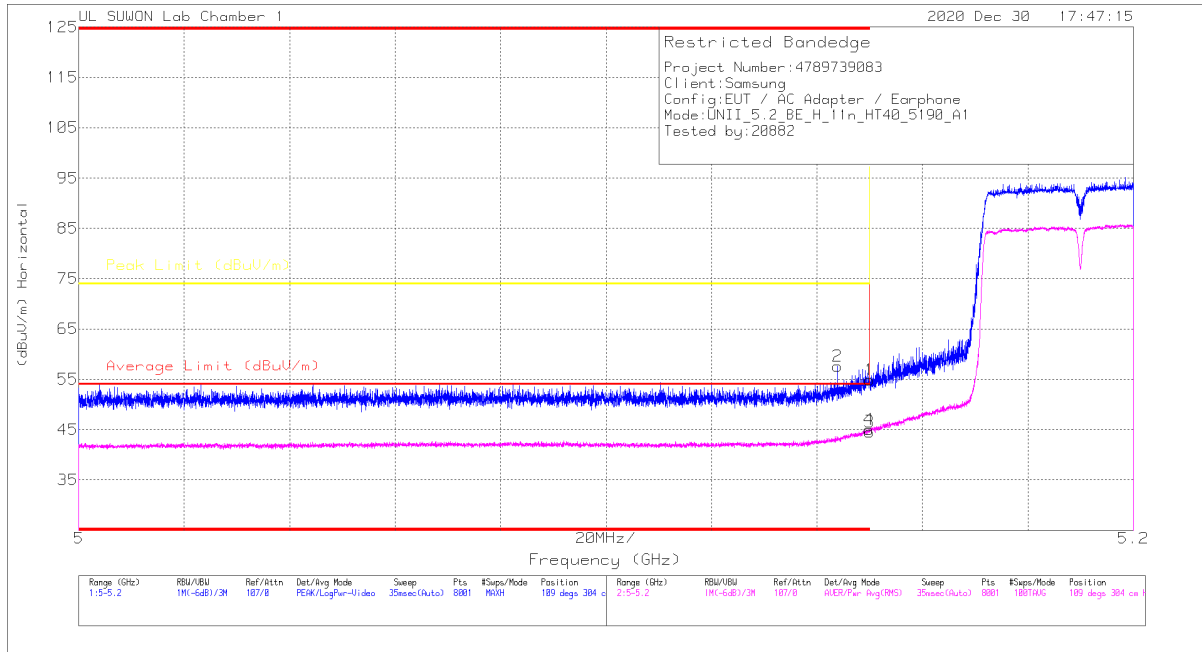
Frequency (GHz)	Main Reading (dBuV)	Det	317_00169724	6GHz_HPS(SB)	DC Corr (dB)	Corrected Reading (dBuV)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Digits)	Height (cm)	Polarity
7.85929	36.67	PK-U	36	-23.8	0	48.87	-	-	-	-	68.2	-19.33	360	100	H
7.86013	36.83	PK-U	36	-23.8	0	49.03	-	-	-	-	68.2	-19.17	360	100	V
10.45384	42.47	PK-U	37.8	-20	0	62.27	-	-	-	-	68.2	-7.93	159	100	H
10.47493	42.69	PK-U	37.8	-19.9	0	60.59	-	-	-	-	68.2	-7.61	235	100	V
* 15.7289	34.7	PK-U	40.2	-19.2	0	55.7	-	-	74	-18.3	-	-	360	100	H
* 15.72494	34.81	PK-U	40.2	-19.4	0	55.61	-	-	74	-18.39	-	-	360	100	V

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

11.1.3. TX ABOVE 1GHz 802.11n HT40 1Tx MODE IN THE 5.2GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

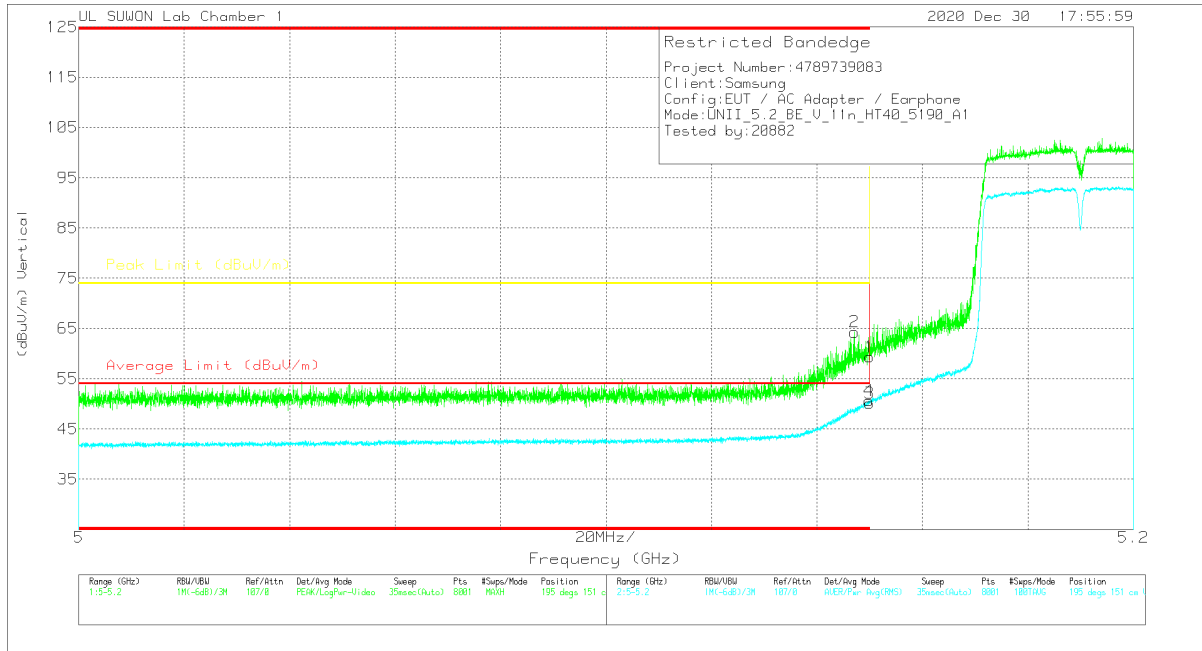


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	42.11	Pk	34.3	-21.6	0	54.81	-	-	74	-19.19	109	304	H
2	* 5.14393	44.96	Pk	34.3	-21.7	0	57.56	-	-	74	-16.44	109	304	H
3	5.15	31.72	RMS	34.3	-21.6	-16	44.58	54	-9.42	-	-	109	304	H
4	* 5.1499	32.28	RMS	34.3	-21.7	-16	45.04	54	-8.96	-	-	109	304	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 RMS - RMS detection

VERTICAL PEAK AND AVERAGE DATA



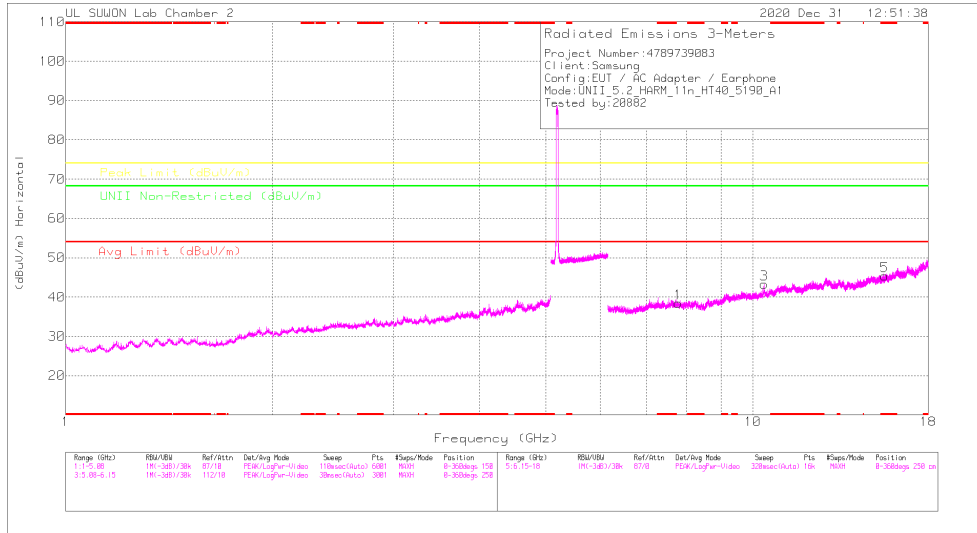
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	46.7	Pk	34.3	-21.6	0	59.4	-	-	74	-14.8	195	151	V
2	*5.1471	51.68	Pk	34.3	-21.7	0	64.29	-	-	74	-9.72	195	151	V
3	5.15	37.29	RMS	34.3	-21.6	.16	50.15	54	-3.85	-	-	195	151	V
4	*5.1498	37.9	RMS	34.3	-21.7	.16	50.66	54	-3.34	-	-	195	151	V

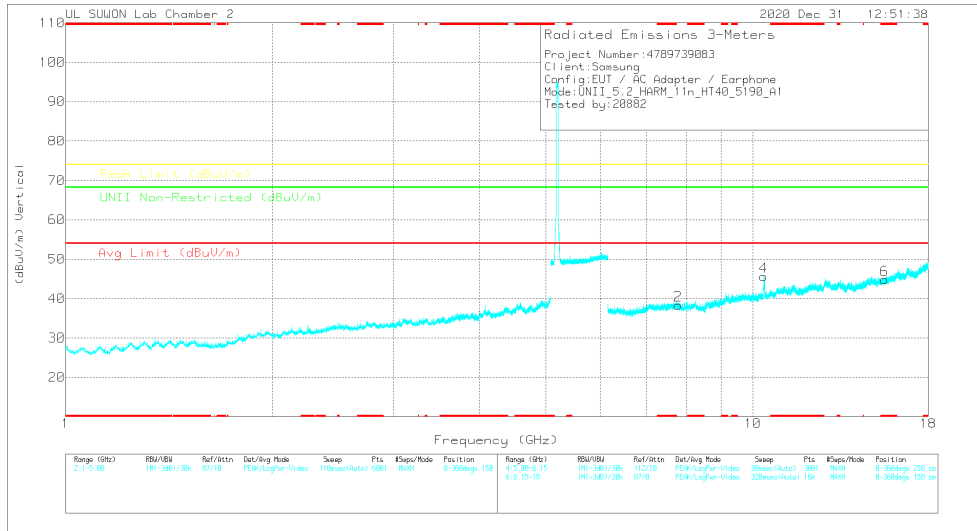
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL 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.

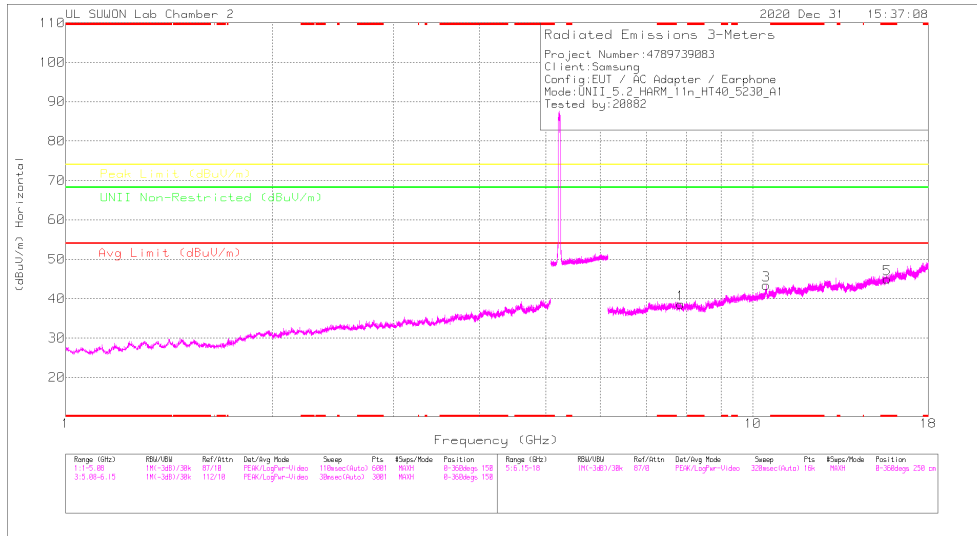
LOW CHANNEL DATA

Radiated Emissions

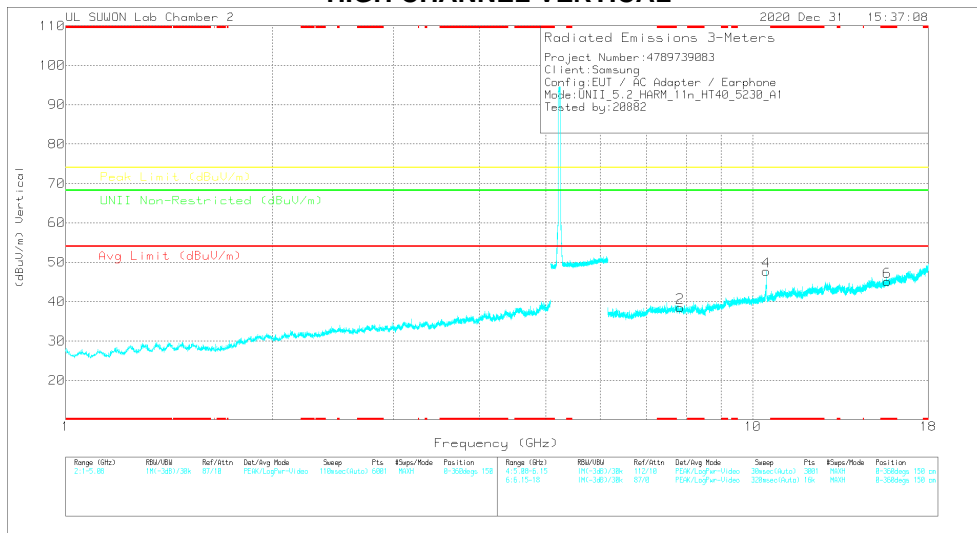
Frequency (GHz)	Mask Reading (dBm)	Det	317_06168724	6GHz_HPS[B]	DC Corr (dB)	Corrected Reading (dBm)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Deg)	Height (m)	Polarity
7.78294	35.63	PKU	36	-23	0	48.63	-	-	-	-	68.2	-19.57	360	100	H
7.78186	36.06	PKU	36	-23.1	0	48.96	-	-	-	-	68.2	-19.24	360	100	V
10.38106	37.57	PKU	37.7	-20.3	0	54.97	-	-	-	-	68.2	-13.23	147	135	H
10.37894	39.69	PKU	37.7	-20.2	0	57.19	-	-	-	-	68.2	-11.01	237	101	V
* 15.5585	35.14	PKU	40	-19.3	0	55.84	-	-	74	-18.16	-	-	0	100	H
* 15.56174	34.22	PKU	40	-19.5	0	54.72	-	-	74	-19.28	-	-	0	100	V

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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL 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.

HIGH CHANNEL DATA

Radiated Emissions

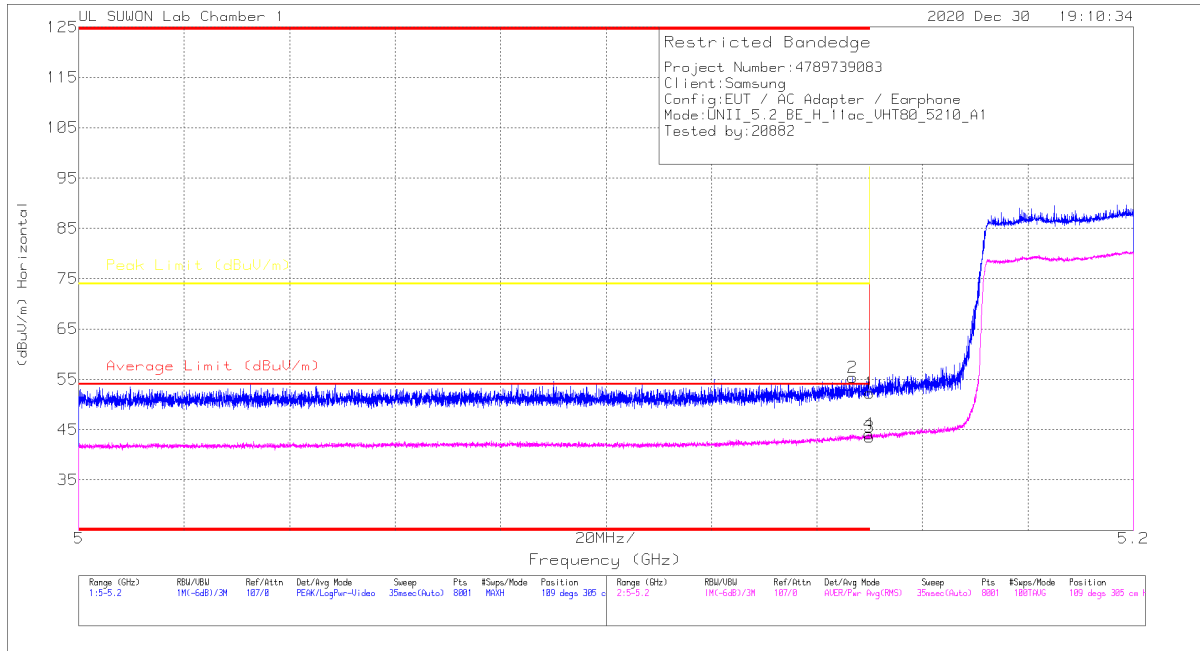
Frequency (GHz)	Meas Reading (dBuV)	Det	317_00168724	6GHz_HPI(S)	DC Corr (dB)	Corrected Reading (dBuV)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7.84602	36.54	PKU	36	-23.6	0	48.04	-	-	-	-	68.2	-19.16	0	100	H
7.84787	36.4	PKU	36	-23.7	0	48.7	-	-	-	-	68.2	-19.5	0	100	V
10.46044	38.83	PKU	37.8	-19.9	0	56.73	-	-	-	-	68.2	-11.47	160	103	H
10.45826	39.01	PKU	37.8	-19.9	0	56.91	-	-	-	-	68.2	-11.29	235	100	V
* 15.69071	35.17	PKU	40.2	-19.5	0	55.67	-	-	74	-18.13	-	-	0	100	H
* 15.69098	34.99	PKU	40.2	-19.5	0	55.69	-	-	74	-18.31	-	-	0	100	V

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

11.1.4.TX ABOVE 1GHz 802.11ac VHT80 1Tx MODE IN THE 5.2GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

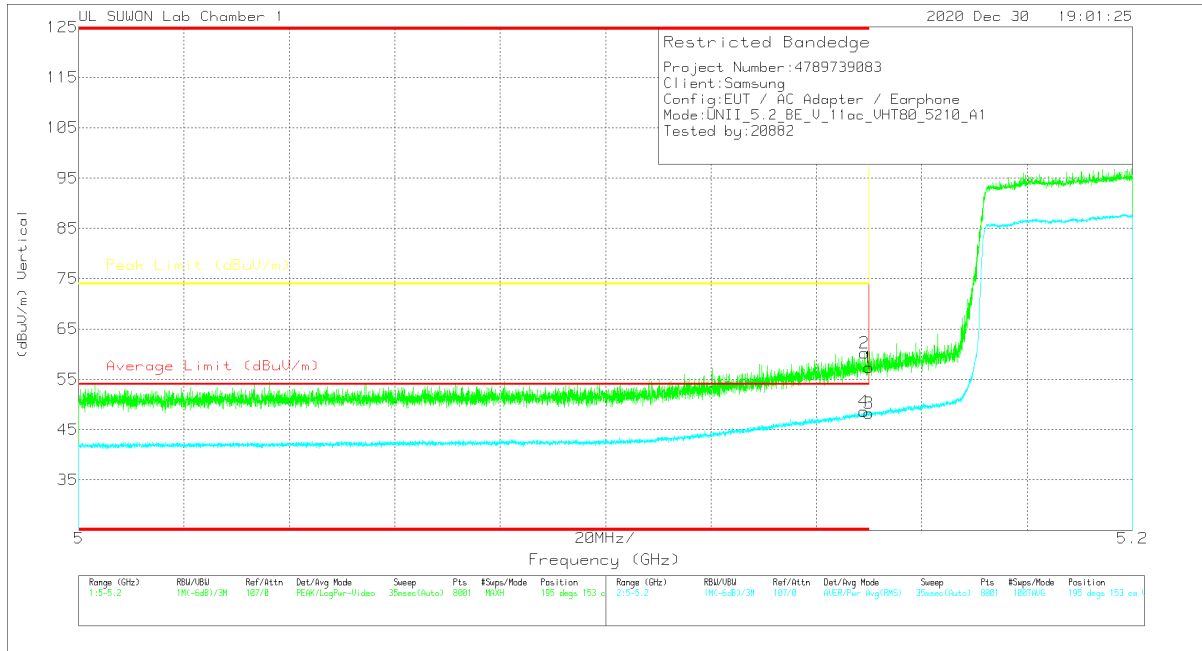


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBu/m)	Average Limit (dBu/m)	Margin (dB)	Peak Limit (dBu/m)	PK Margin (dB)	Acimuh (Degs)	Height (cm)	Polarity
1	5.15	39.57	Pk	34.3	-21.6	0	52.27	-	-	74	-21.73	109	305	H
2	* 5.1467	42.75	Pk	34.3	-21.7	0	55.35	-	-	74	-18.65	109	305	H
3	5.15	30.6	RMS	34.3	-21.6	-17	43.47	54	-10.53	-	-	109	305	H
4	* 5.14988	31.36	RMS	34.3	-21.7	-17	44.13	54	-9.87	-	-	109	305	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak detector
 RMS - RMS detection

VERTICAL PEAK AND AVERAGE DATA



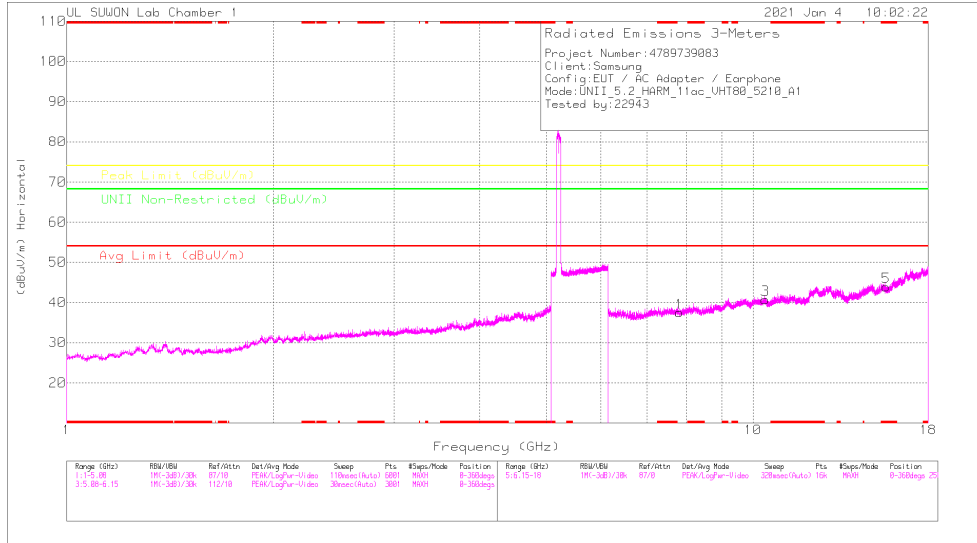
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT(dB)	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	44.67	Pk	34.3	-21.6	0	57.37	-	-	74	-16.63	195	153	V
2	*5.14815	47.67	Pk	34.3	-21.7	0	60.27	-	-	74	-13.73	195	153	V
3	5.15	35.35	RMS	34.3	-21.6	.17	48.22	54	-5.78	-	-	195	153	V
4	*5.14905	35.88	RMS	34.3	-21.7	.17	48.65	54	-5.35	-	-	195	153	V

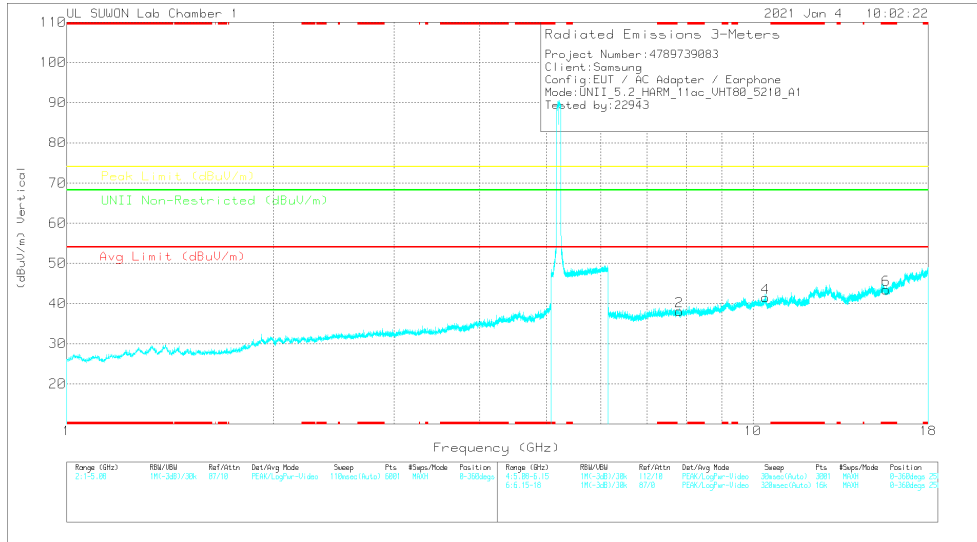
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL



MID CHANNEL 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.

MID CHANNEL DATA

Radiated Emissions

Frequency (GHz)	Max Reading (dBuV)	Det	317.00160717	dBc_VFp(dB)	DC Corr (dB)	Combined Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Height) (m)	Height (m)	Polarity
7.81497	38.51	PK-U	35.3	-28.3	0	48.11	-	-	-	-	68.2	-20.09	360	100	H
7.81504	38.95	PK-U	35.3	-28.3	0	48.55	-	-	-	-	68.2	-19.65	360	100	V
10.41834	35.88	PK-U	37.8	-21.5	0	52.18	-	-	-	-	68.2	-16.02	360	100	H
10.41879	35.5	PK-U	37.8	-21.5	0	51.8	-	-	-	-	68.2	-16.4	360	100	V
*15.6281	36.4	PK-U	40.1	-21.3	0	55.2	-	-	74	-18.8	-	-	360	100	H
*15.63009	36.24	PK-U	40.1	-21.3	0	55.04	-	-	74	-18.86	-	-	360	100	V

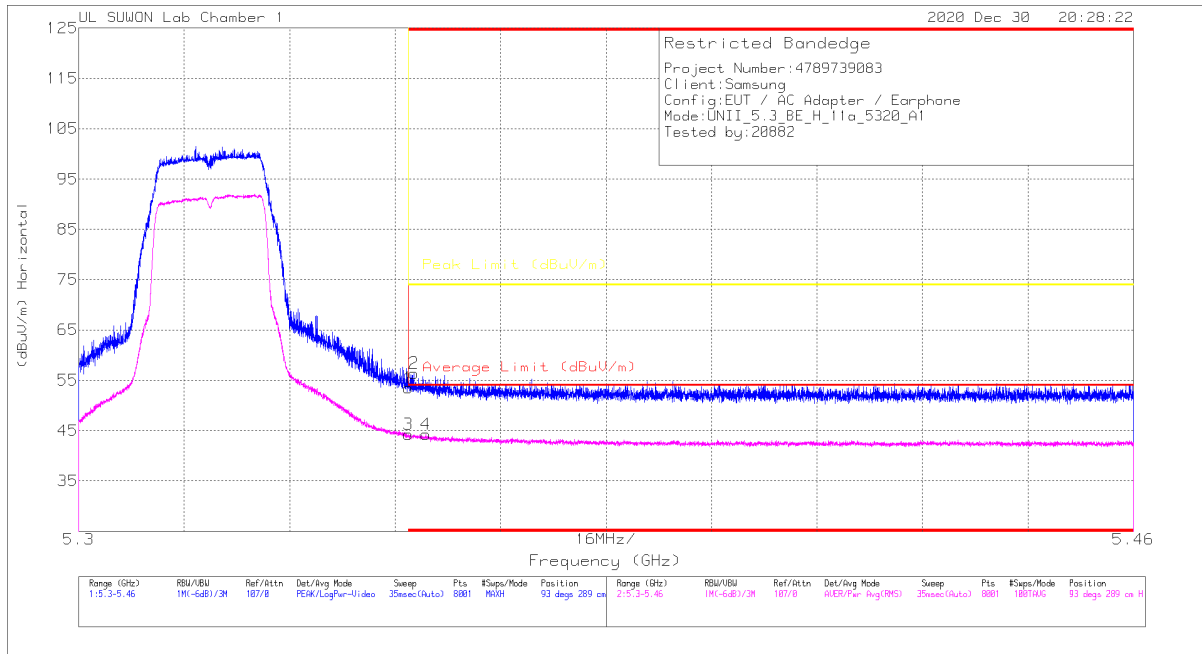
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK-U - U-NII: Maximum Peak

11.2. 5.3 GHz

11.2.1.TX ABOVE 1GHz 802.11a 1Tx MODE IN THE 5.3GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

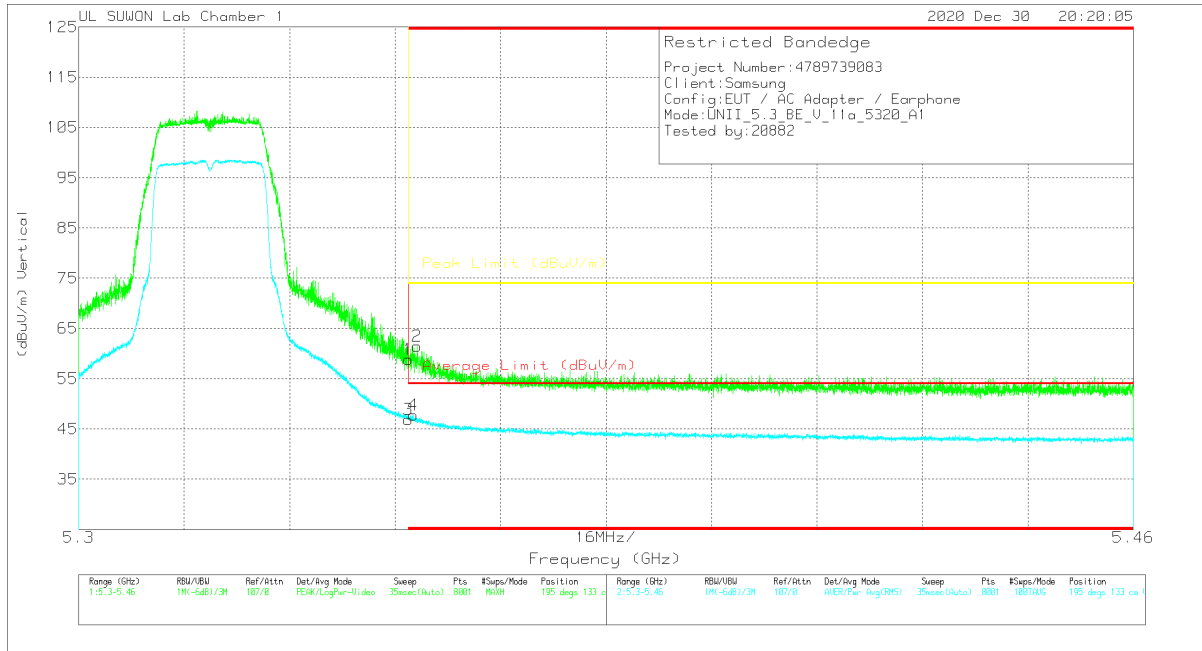


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35002	40.53	Pk	34.5	-21.5	0	53.53	-	-	74	-20.47	93	289	H
2	* 5.35082	43.42	Pk	34.5	-21.5	0	56.42	-	-	74	-17.58	93	289	H
3	* 5.35002	31.12	RMS	34.5	-21.5	15	44.27	54	-9.73	-	-	93	289	H
4	* 5.35266	31.08	RMS	34.5	-21.5	15	44.23	54	-9.77	-	-	93	289	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak detector
 RMS - RMS detection

VERTICAL PEAK AND AVERAGE DATA



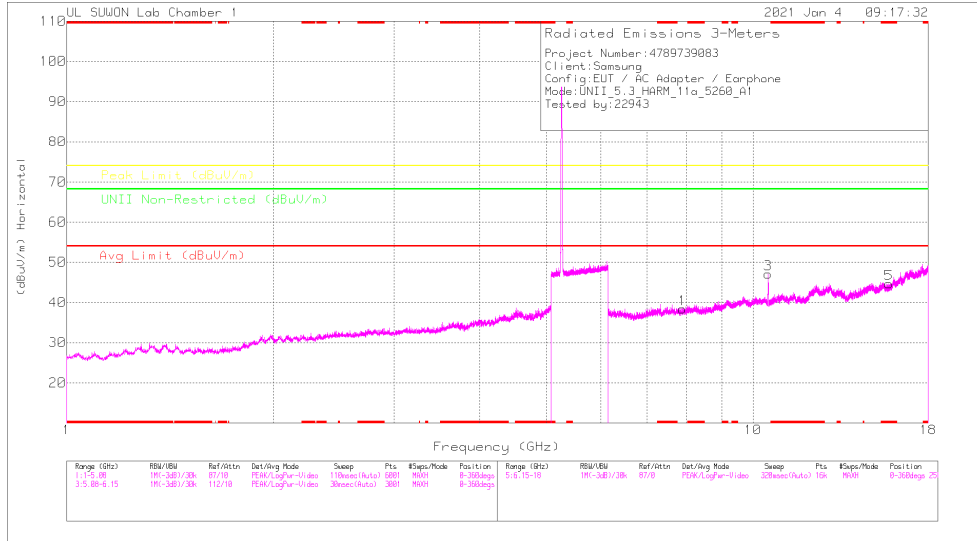
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35002	45.86	PK	34.5	-21.5	0	58.86	-	-	74	-15.14	195	133	V
2	* 5.35134	48.45	PK	34.5	-21.5	0	61.45	-	-	74	-12.55	195	133	V
3	* 5.35002	33.79	RMS	34.5	-21.5	15	46.94	54	-7.06	-	-	195	133	V
4	* 5.35072	34.59	RMS	34.5	-21.5	15	47.74	54	-6.26	-	-	195	133	V

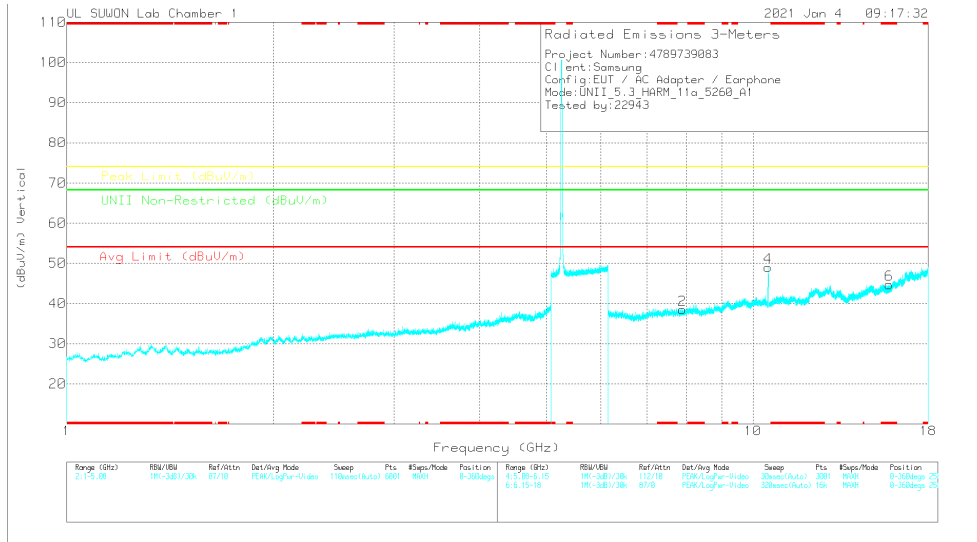
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL 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.

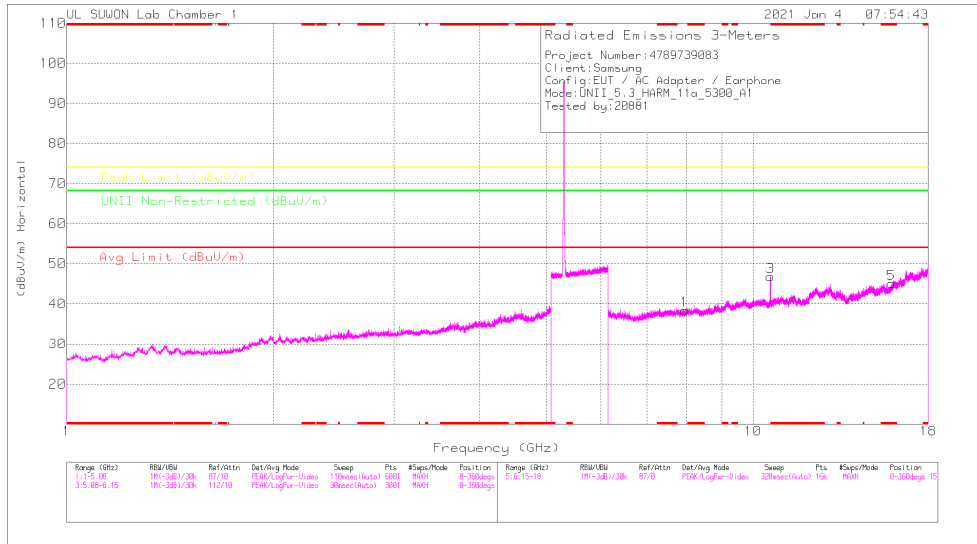
LOW CHANNEL DATA

Radiated Emissions

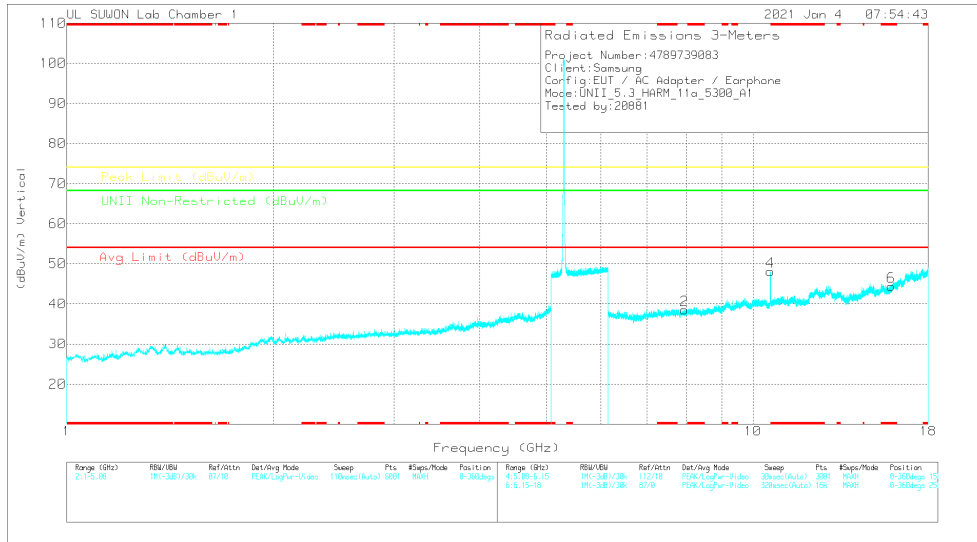
Frequency (GHz)	Mean Reading (dBm)	Det	3117_00168717	6GHz_HF(E)	DC Corr (dB)	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)	Peak Limit (dBm)	Margin (dB)	UNII Non-Restricted (dBm)	Margin (dB)	Azimuth (Degs)	Height (m)	Polarity
7.88896	39.32	PK-U			0	48.72	-	-	-	-	68.2	-19.48	360	100	H
7.8889	39.4	PK-U			0	48.8	-	-	-	-	68.2	-19.4	360	100	V
10.5139	44.88	PK-U			0	60.28	-	-	-	-	68.2	-7.92	157	109	H
10.51872	46.93	PK-U			0	62.23	-	-	-	-	68.2	-5.97	219	158	V
* 15.7813	36.96	PK-U			0	56.06	-	-	74	-17.94	-	-	0	100	H
* 15.7787	36.14	PK-U			0	55.24	-	-	74	-18.76	-	-	0	100	V

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

MID CHANNEL HORIZONTAL



MID CHANNEL 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.

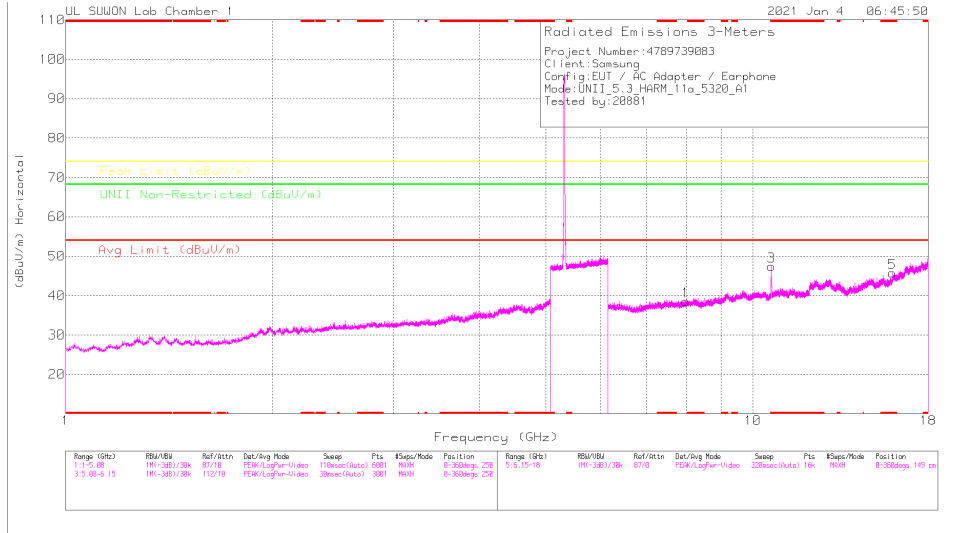
MID CHANNEL DATA

Radiated Emissions

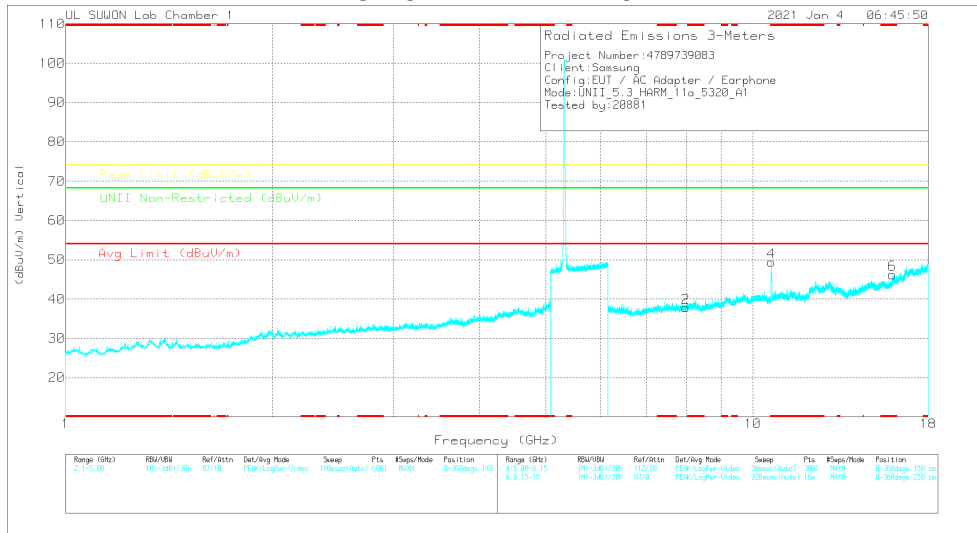
Frequency (GHz)	Mask Reading (dBuV)	Det	317_0168717	ISHL_HPS(B)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restrictd (dBuV/m)	Margin (dB)	Altitude (Degs)	Height (m)	Polarity
7.84838	39.76	PK-U	36	-26	0	49.76	-	-	-	-	68.2	-18.44	360	100	H
7.95092	38.88	PK-U	36	-26.1	0	48.78	-	-	-	-	68.2	-18.42	360	100	V
* 10.60176	44.86	PK-U	38	-22.4	0	60.46	-	-	74	-13.54	-	-	162	100	H
* 10.60031	32.13	ADR	38	-22.5	-15	47.78	54	-6.22	-	-	-	-	162	100	H
* 10.60158	46.31	PK-U	38	-22.4	0	61.91	-	-	74	-12.09	-	-	219	221	V
* 10.60128	33.61	ADR	38	-22.5	-15	49.26	54	-4.74	-	-	-	-	219	221	V
* 15.89898	36.9	PK-U	40.3	-21	0	56.2	-	-	74	-17.8	-	-	0	100	H
* 15.90168	36.4	PK-U	40.3	-20.9	0	55.8	-	-	74	-18.2	-	-	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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL 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.

HIGH CHANNEL DATA

Radiated Emissions

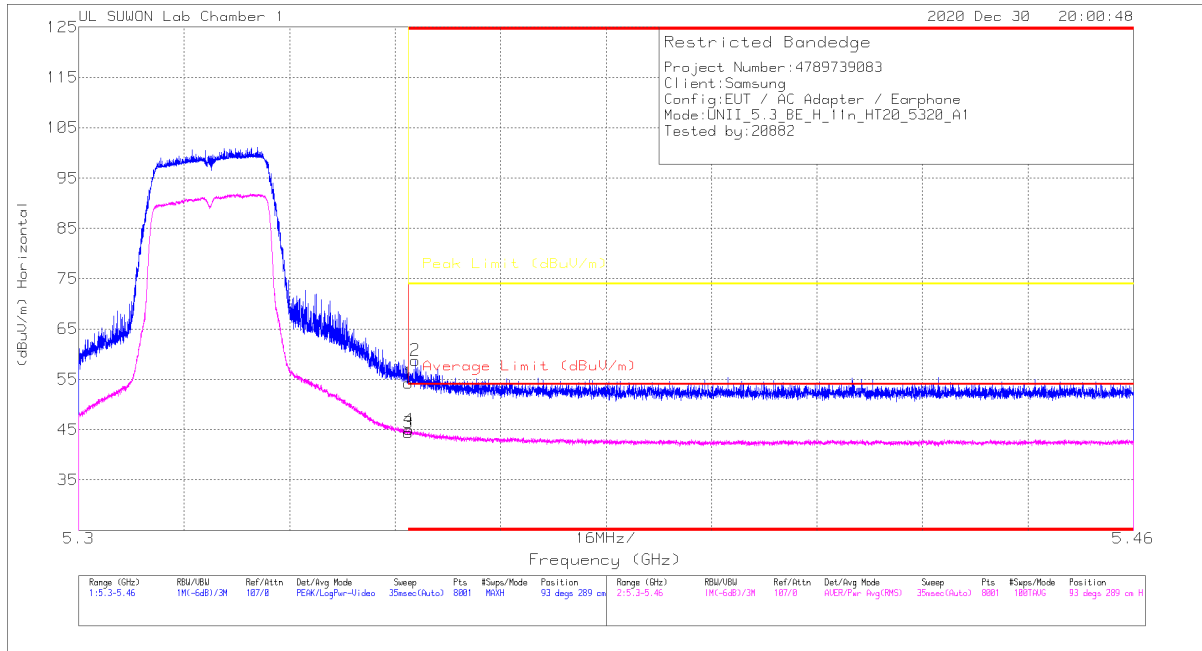
Frequency (GHz)	Meas Reading (dBuV)	Det	3177_00168717	5GHz_HF[dB]	DC Corr (dB)	Concord (dB/Hz)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Meters)	Height (cm)	Priority
7.88178	38.35	PK-U	36	-25.9	0	48.46	-	-	-	-	68.2	-19.74	0	100	H
7.88141	38.31	PK-U	36	-26	0	48.31	-	-	-	-	68.2	-19.89	360	100	V
* 10.64178	44.45	PK-U	38	-22	0	50.45	-	-	74	-13.55	-	-	200	132	H
* 10.64006	31.73	ADR	38	-22.1	-15	47.78	54	-6.22	-	-	-	-	200	132	H
* 10.6415	43.17	PK-U	38	-22	0	50.17	-	-	74	-14.83	-	-	151	352	V
* 10.6413	30.45	ADR	38	-22	-15	46.6	54	-7.4	-	-	-	-	151	352	V
* 15.95994	36.38	PK-U	40.4	-20.8	0	55.98	-	-	74	-18.02	-	-	360	100	H
* 15.95995	36.34	PK-U	40.4	-20.8	0	55.94	-	-	74	-18.06	-	-	360	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

11.2.2.TX ABOVE 1GHz 802.11n HT20 1Tx MODE IN THE 5.3GHZ BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

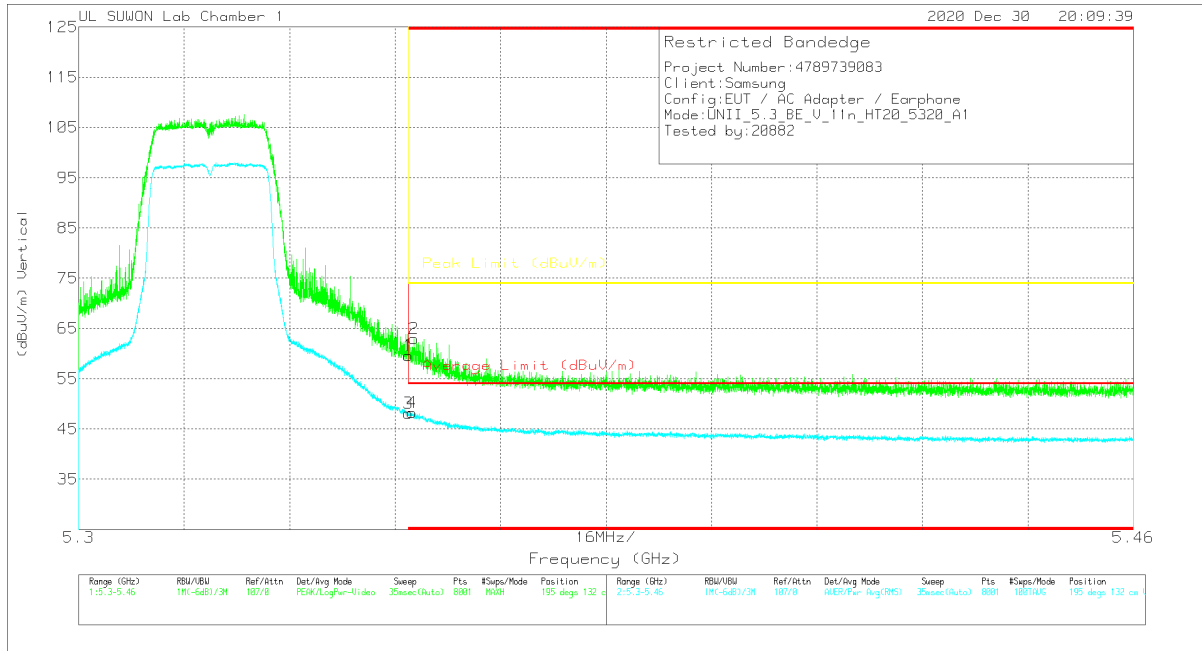


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35002	41.22	Pk	34.5	-21.5	0	54.22	-	-	74	-19.78	93	289	H
2	* 5.35108	45.79	Pk	34.5	-21.5	0	58.79	-	-	74	-15.21	93	289	H
3	* 5.35002	31.28	RMS	34.5	-21.5	-17	44.45	54	-9.56	-	-	93	289	H
4	* 5.35012	31.9	RMS	34.5	-21.6	-17	44.97	54	-9.03	-	-	93	289	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 RMS - RMS detection

VERTICAL PEAK AND AVERAGE DATA



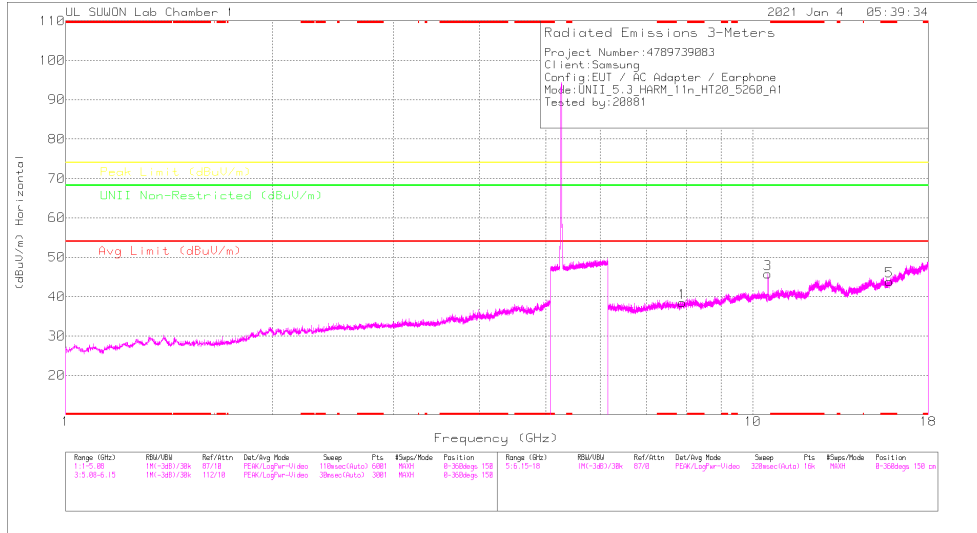
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35002	46.64	PK	34.5	-21.5	0	59.64	-	-	74	-14.36	195	132	V
2	* 5.35088	49.94	PK	34.5	-21.5	0	62.94	-	-	74	-11.06	195	132	V
3	* 5.35002	34.94	RMS	34.5	-21.5	-17	48.11	54	-5.89	-	-	195	132	V
4	* 5.3506	35.09	RMS	34.5	-21.5	-17	48.26	54	-5.74	-	-	195	132	V

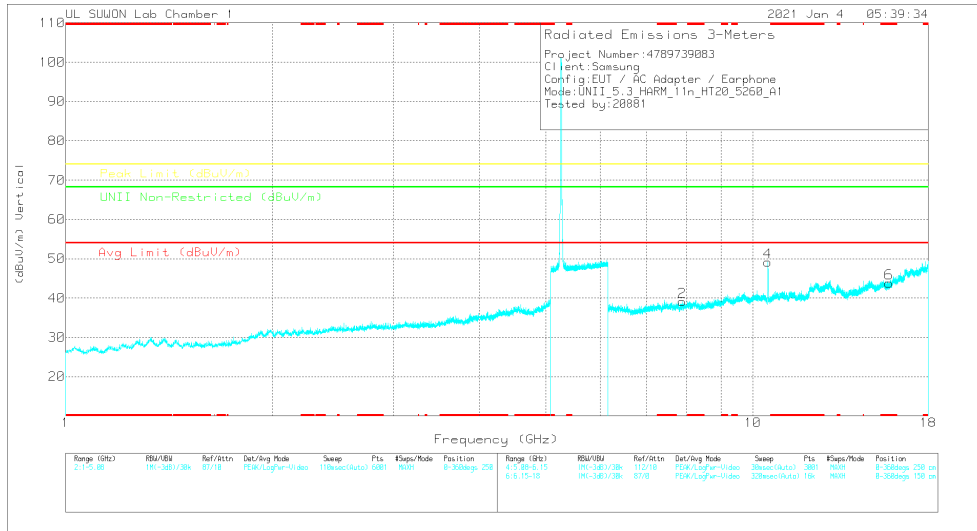
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL 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.

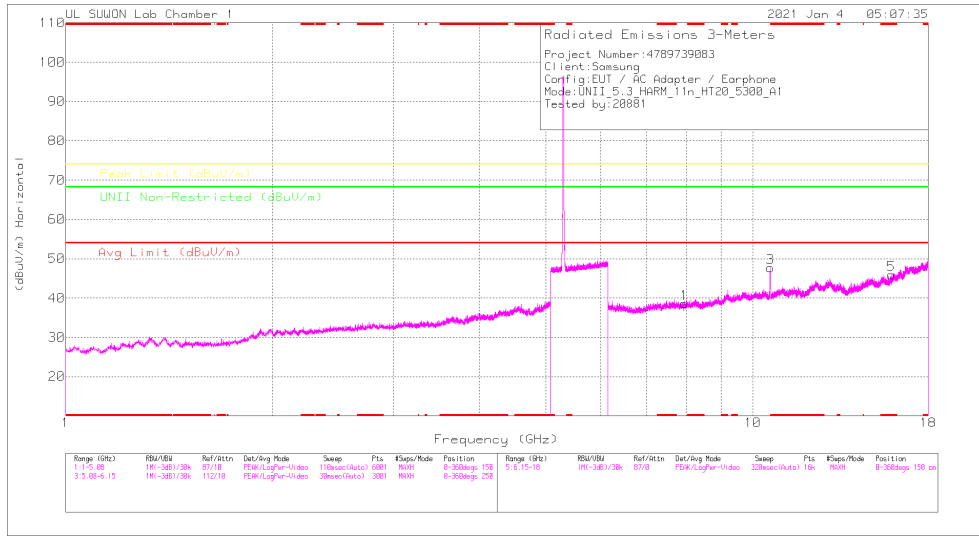
LOW CHANNEL DATA

Radiated Emissions

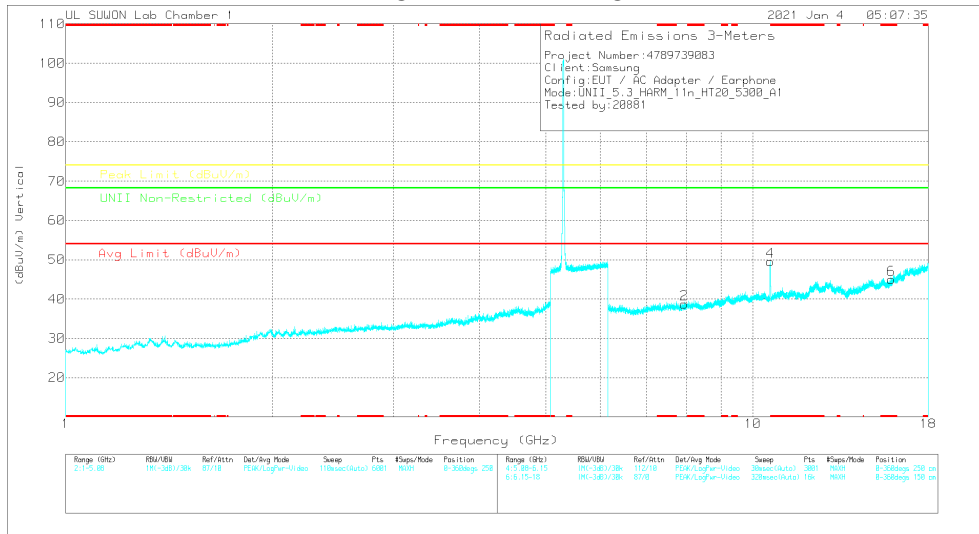
Frequency (GHz)	Meas Reading (dBm)	Det	317_00168717	6GHz_HF(SB)	DC Corr (dB)	Corrected Reading (dBm)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Deg)	Height (m)	Polarity
7.89048	39.19	PK-U	35.9	-26.4	0	48.89	-	-	-	-	68.2	-19.51	0	100	H
7.89101	39.39	PK-U	35.9	-26.4	0	48.89	-	-	-	-	68.2	-19.31	0	100	V
10.52504	44.78	PK-U	37.8	-22.6	0	60.08	-	-	-	-	68.2	-8.12	171	115	H
10.52596	47.02	PK-U	37.8	-22.6	0	62.32	-	-	-	-	68.2	-5.88	206	235	V
* 15.78686	36.26	PK-U	40.2	-21.2	0	55.26	-	-	74	-18.74	-	-	0	100	H
* 15.78432	36.24	PK-U	40.2	-21.2	0	55.24	-	-	74	-18.76	-	-	0	100	V

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

MID CHANNEL HORIZONTAL



MID CHANNEL 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.

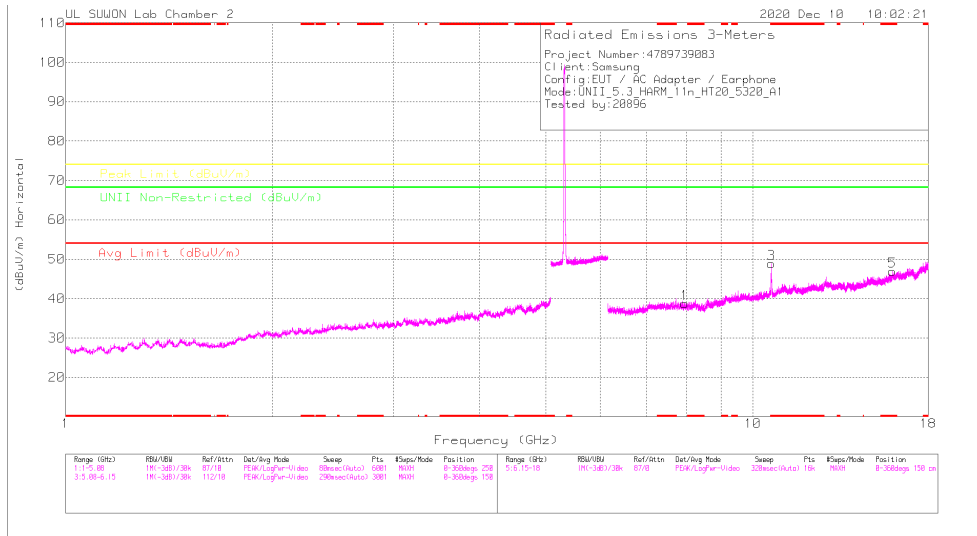
MID CHANNEL DATA

Radiated Emissions

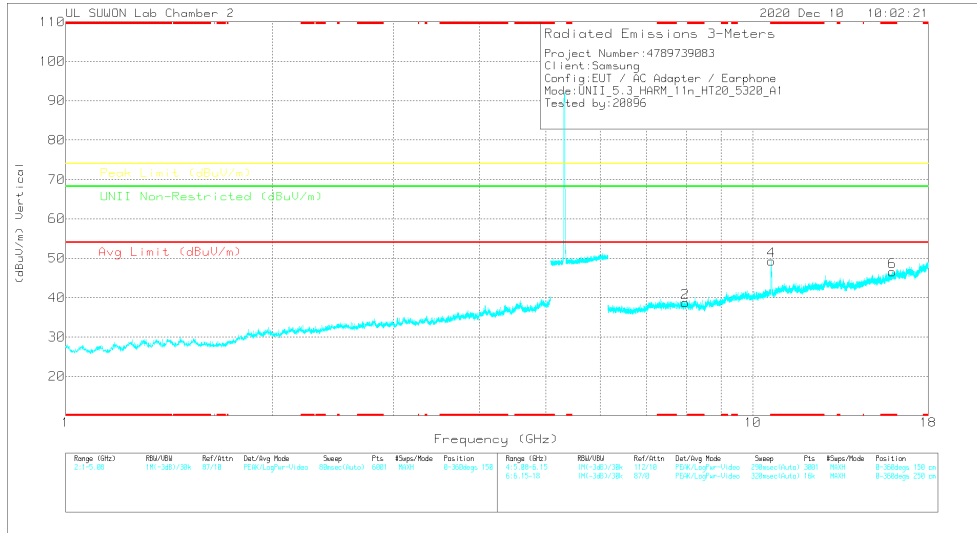
Frequency (GHz)	Mask Reading (dBuV)	Det	317_00168717	6GHz_HPSdB	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7.94823	39	PK-U	36	-26	0	49	-	-	-	-	68.2	-19.2	0	100	H
7.94826	39.02	PK-U	36	-26	0	49.02	-	-	-	-	68.2	-19.18	0	100	V
*10.6007	44.88	PK-U	38	-22.5	0	60.38	-	-	74	-13.62	-	-	197	101	H
*10.60036	32.3	ADR	38	-22.5	-17	47.87	54	-6.03	-	-	-	-	197	101	H
*10.60034	45.7	PK-U	38	-22.4	0	62.3	-	-	74	-11.7	-	-	143	241	V
*10.60094	34.23	ADR	38	-22.5	-17	49.9	54	-4.1	-	-	-	-	143	241	V
*15.90046	38.76	PK-U	40.3	-21	0	58.06	-	-	74	-15.94	-	-	0	100	H
*15.90096	37.63	PK-U	40.3	-21	0	56.93	-	-	74	-17.07	-	-	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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL 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.

HIGH CHANNEL DATA

Radiated Emissions

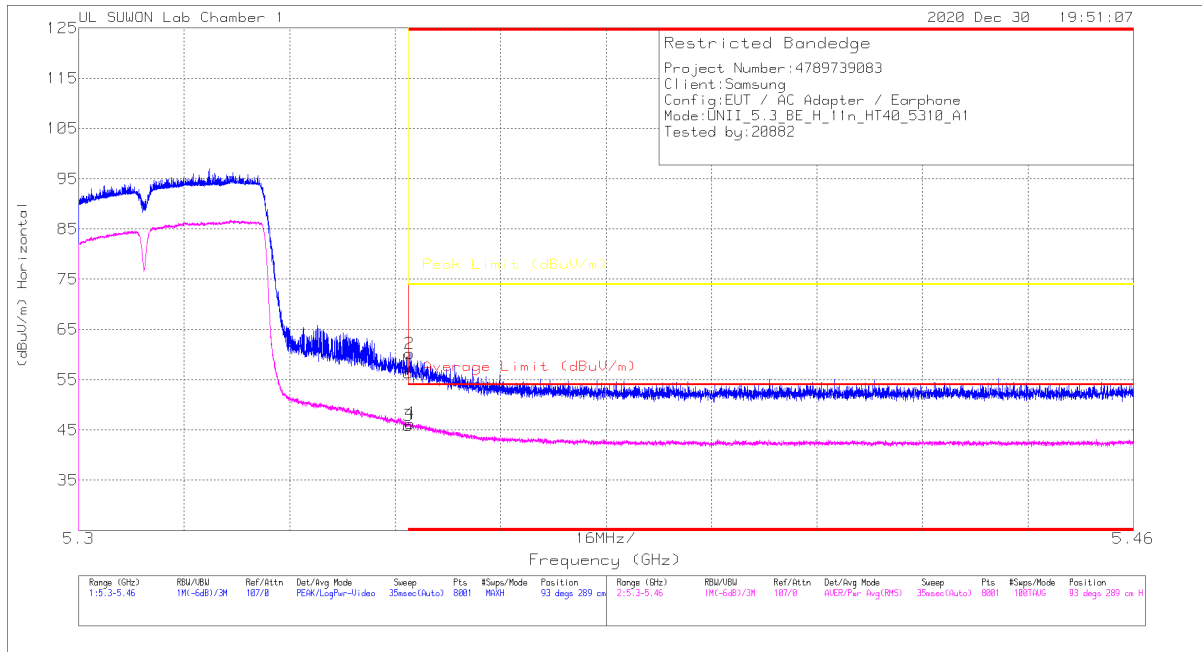
Frequency (GHz)	Meas Reading (dBu)	Det	3177_00168724	dBHz_HF[dB]	DC Corr (dB)	Concord Reading (dBu/m)	Avg Limit (dBu/m)	Margin (dB)	Peak Limit (dBu/m)	Margin (dB)	UNII Non-Restricted (dBu/m)	Margin (dB)	Asmth (Deg)	Height (cm)	Priority	
7.96199	36.62	PK-U	36	-23.1	0	49.52	-	-	-	-	68.2	-18.68	360	100	H	
7.9624	36.46	PK-U	36	-23.1	0	49.36	-	-	-	-	68.2	-18.84	360	100	V	
* 10.63925	44.05	PK-U	37.9	-19.9	0	63.05	-	-	74	-10.95	-	-	194	109	H	
* 10.63949	31.72	ADR	37.9	-18.9	-17	50.89	54	-3.11	-	-	-	-	-	194	109	H
* 10.63477	44.39	PK-U	37.9	-18.9	0	63.39	-	-	74	-10.61	-	-	215	234	V	
* 10.63909	30.85	ADR	37.9	-19	-17	49.82	54	-4.08	-	-	-	-	215	234	V	
* 15.95405	40.46	PK-U	40.6	-19.2	0	61.86	-	-	74	-12.14	-	-	225	352	H	
* 15.95993	26.13	ADR	40.6	-19.2	-17	47.7	54	-6.3	-	-	-	-	225	352	H	
* 15.95773	37.89	PK-U	40.6	-19.3	0	59.19	-	-	74	-14.81	-	-	208	100	V	
* 15.95785	24.48	ADR	40.6	-19.3	-17	45.95	54	-8.05	-	-	-	-	208	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

11.2.3. TX ABOVE 1GHz 802.11n HT40 1Tx MODE IN THE 5.3GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

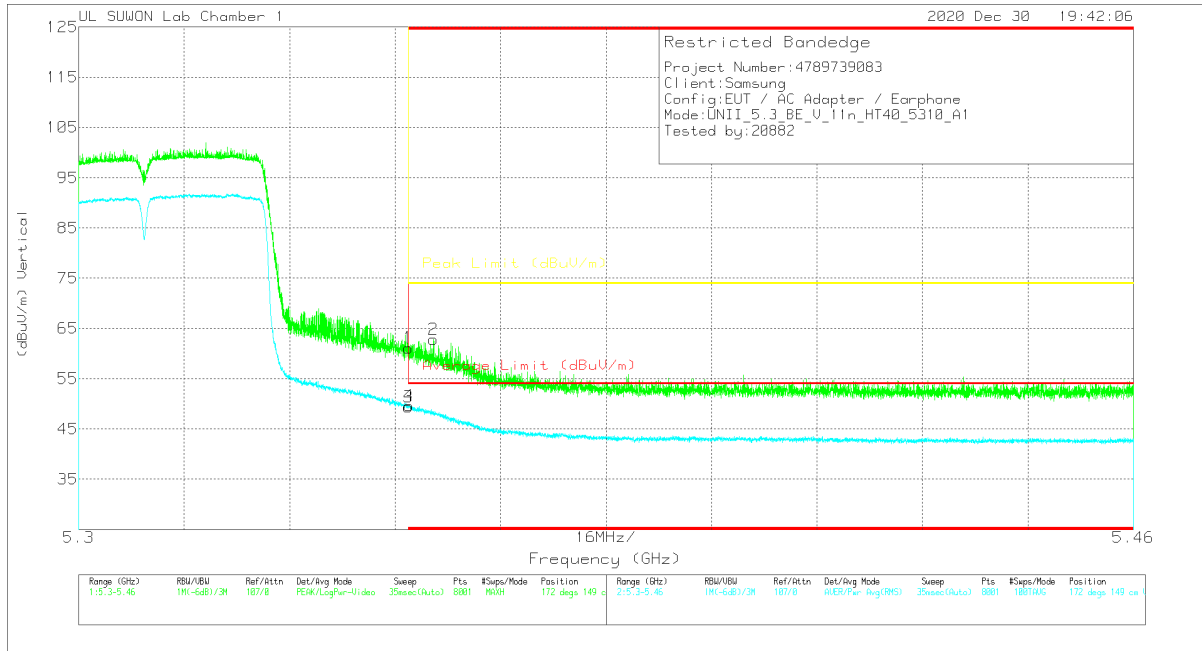


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35002	43.33	Pk		-21.5	0	56.33	-	-	74	-17.67	93	289	H
2	* 5.35022	47.33	Pk		-21.6	0	60.23	-	-	74	-13.77	93	289	H
3	* 5.35002	32.77	RMS		-21.5	.16	45.93	54	-8.07	-	-	93	289	H
4	* 5.35032	33.27	RMS		-21.6	.16	46.33	54	-7.67	-	-	93	289	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak detector
 RMS - RMS detection

VERTICAL PEAK AND AVERAGE DATA



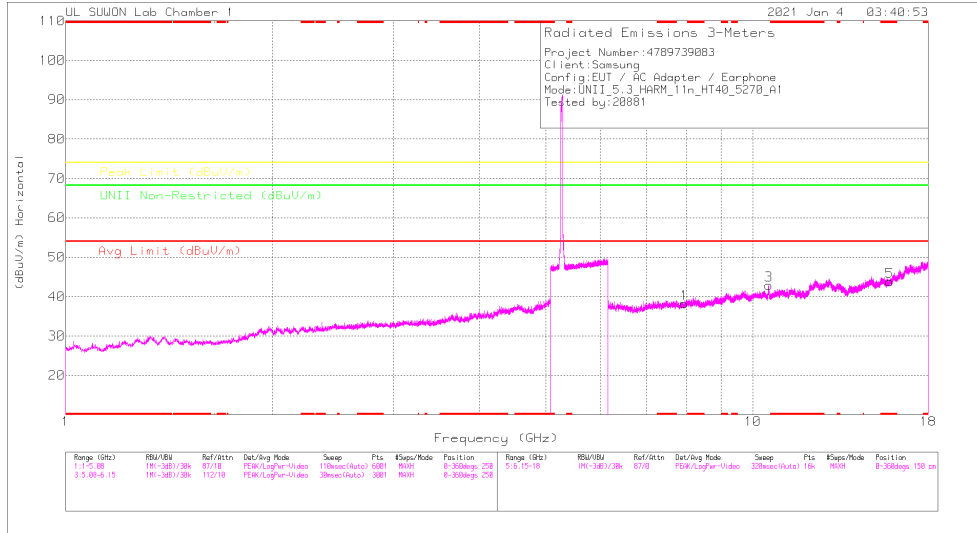
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35002	48.16	PK	34.5	-21.5	0	61.16	-	-	74	-12.84	172	149	V
2	* 5.3538	49.85	PK	34.5	-21.5	0	62.95	-	-	74	-11.15	172	149	V
3	* 5.35002	36.27	RMS	34.5	-21.5	16	49.43	54	-4.57	-	-	172	149	V
4	* 5.35006	36.61	RMS	34.5	-21.6	16	49.67	54	-4.33	-	-	172	149	V

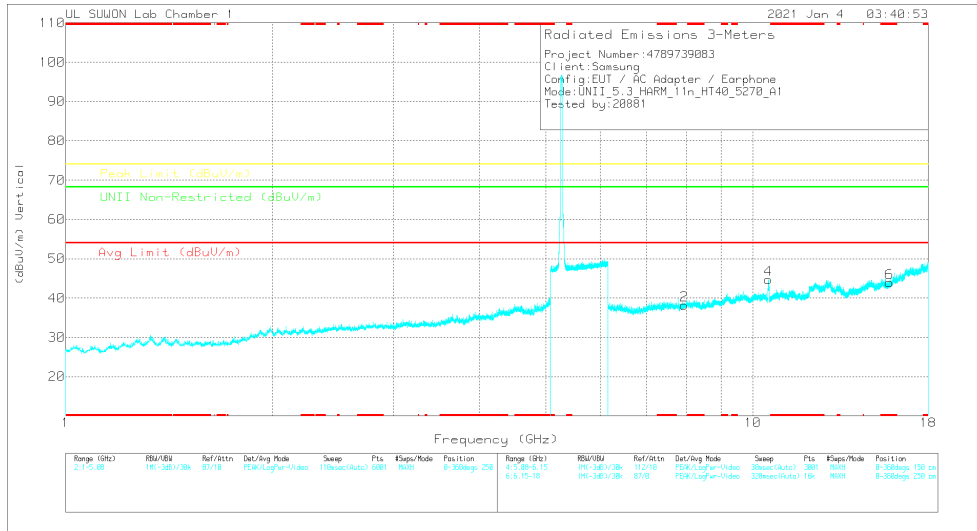
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL 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.

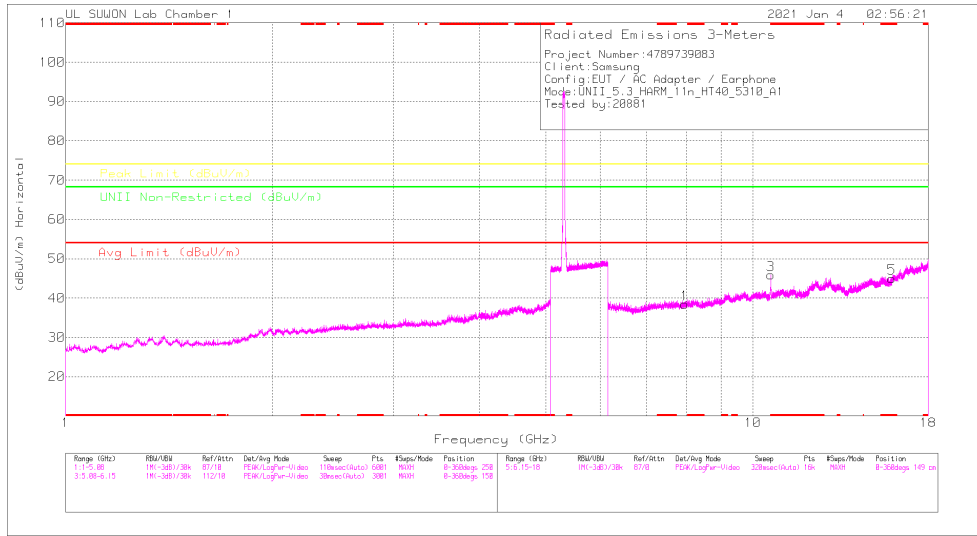
LOW CHANNEL DATA

Radiated Emissions

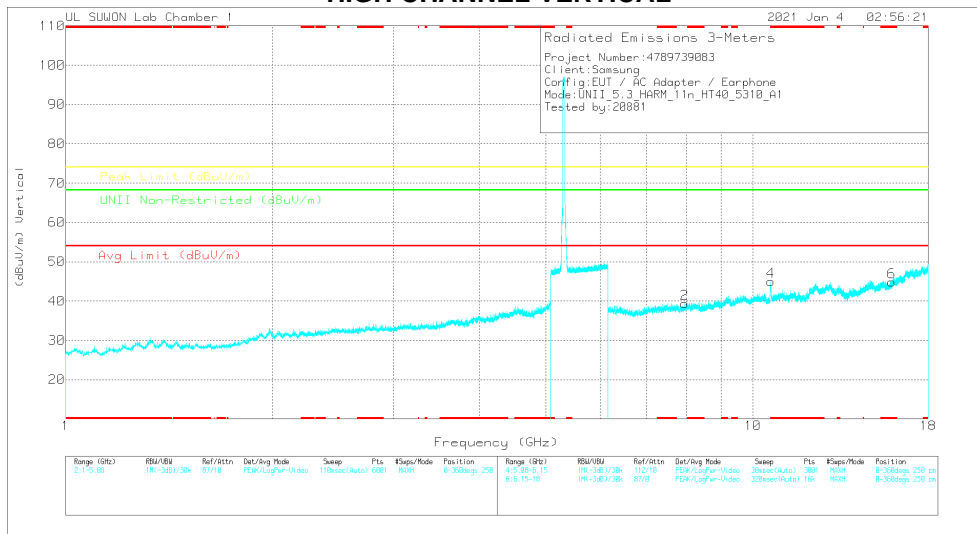
Frequency (GHz)	Max Reading (dBuV)	Det	317_0160717	@Hz_HFdB	CC Corr (dB)	Constat Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Deg)	Height (m)	Polarity
7.95425	38.78	PK-U	36	-26	0	48.78	-	-	-	-	68.2	-18.42	360	100	H
7.95308	39.43	PK-U	36	-26	0	49.43	-	-	-	-	68.2	-18.77	360	100	V
10.53884	40.88	PK-U	37.9	-22.7	0	56.08	-	-	-	-	68.2	-12.12	167	108	H
10.54108	43.49	PK-U	37.9	-22.6	0	58.79	-	-	-	-	68.2	-9.41	143	233	V
* 15.81173	36.61	PK-U	40.2	-21.1	0	55.71	-	-	74	-18.29	-	-	0	100	H
* 15.81203	37	PK-U	40.2	-21.1	0	56.1	-	-	74	-17.9	-	-	0	100	V

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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL 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.

HIGH CHANNEL DATA

Radiated Emissions

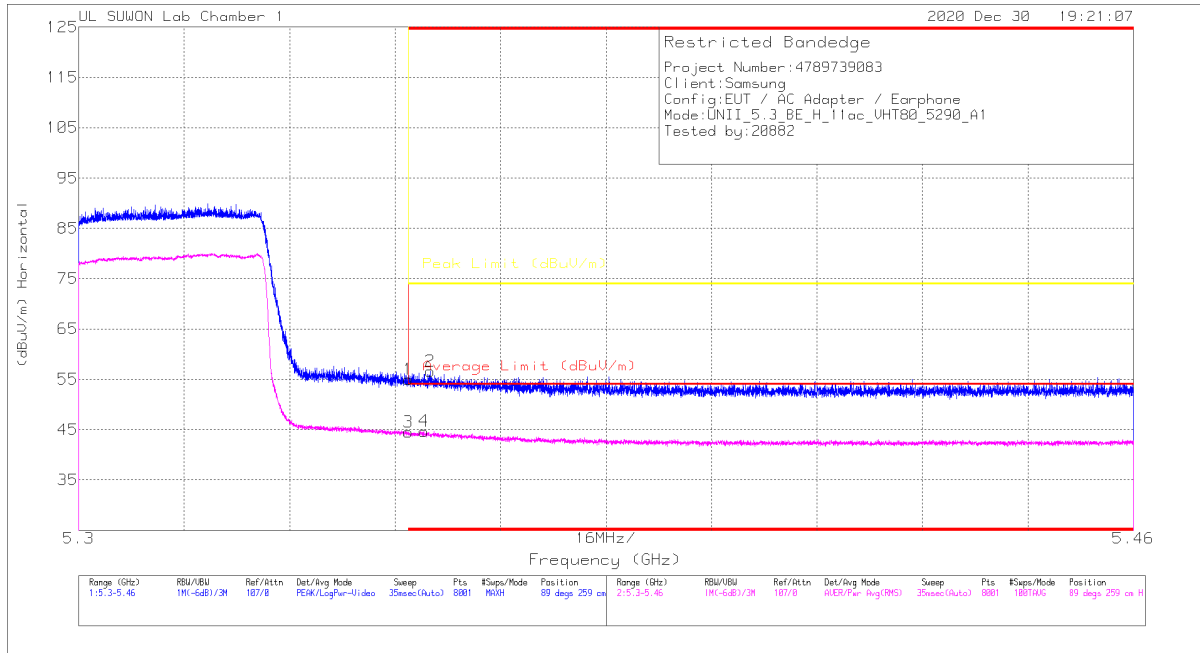
Frequency (GHz)	Mask Reading (dBuV)	Det	317_0168717	5GHz_HPSB	DC Corr (dB)	Compass Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Asmuth (Eqs)	Height (cm)	Polarity
7.96403	39.4	PK-U	36	-25.9	0	49.2	-	-	-	-	68.2	-18	0	100	H
7.96416	39.8	PK-U	36	-25.9	0	49.9	-	-	-	-	68.2	-18.3	0	100	V
* 10.62186	41.6	PK-U	38	-22.3	0	57.3	-	-	74	-16.7	-	-	201	118	H
* 10.6191	28.56	ADR	38	-22.3	-16	44.42	54	-9.58	-	-	-	-	201	118	H
* 10.61464	42.78	PK-U	38	-22.3	0	58.48	-	-	74	-15.62	-	-	211	243	V
* 10.62104	29.77	ADR	38	-22.3	-16	45.63	54	-8.37	-	-	-	-	211	243	V
* 15.93034	36.33	PK-U	40.3	-21	0	55.83	-	-	74	-18.37	-	-	360	100	H
* 15.93138	36.53	PK-U	40.3	-21	0	55.83	-	-	74	-18.17	-	-	360	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

11.2.4. TX ABOVE 1GHz 802.11ac VHT80 1Tx MODE IN THE 5.3GHz BAND

RESTRICTED BANDEDGE (High CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

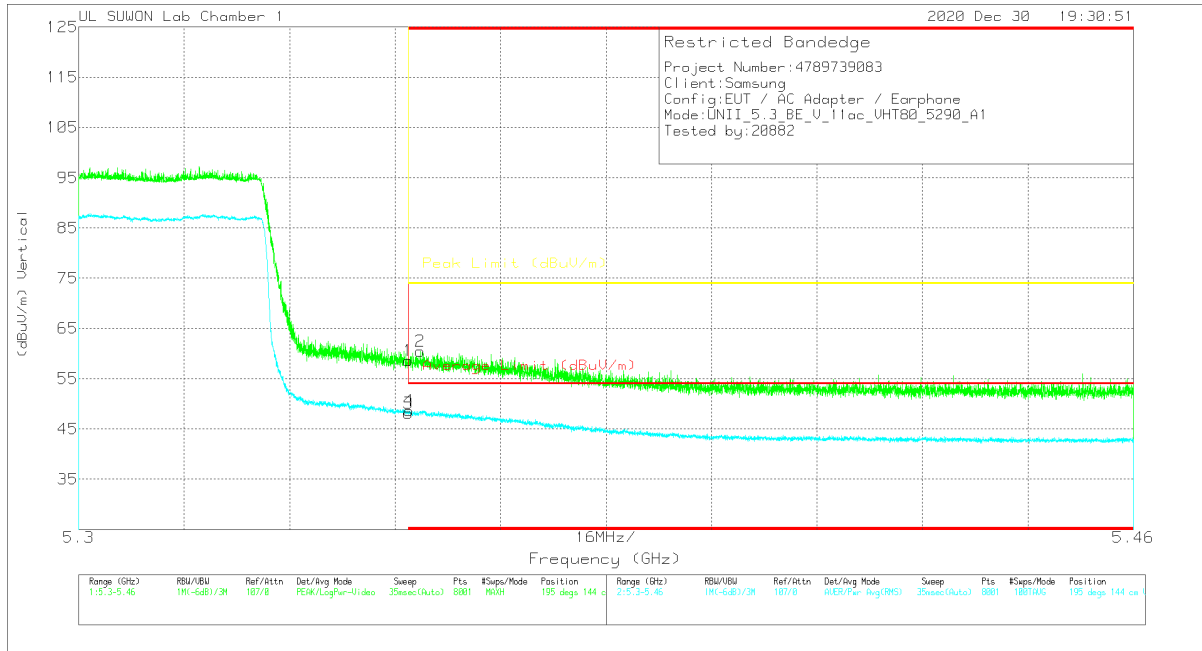


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35002	41.97	PK	34.5	-21.5	0	54.97	-	-	74	-19.03	89	259	H
2	* 5.35328	43.56	PK	34.5	-21.5	0	56.56	-	-	74	-17.44	89	259	H
3	* 5.35002	31.36	RMS	34.5	-21.5	.17	44.53	54	-9.47	-	-	89	259	H
4	* 5.35238	31.44	RMS	34.5	-21.4	.17	44.71	54	-9.29	-	-	89	259	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak detector
 RMS - RMS detection

VERTICAL PEAK AND AVERAGE DATA



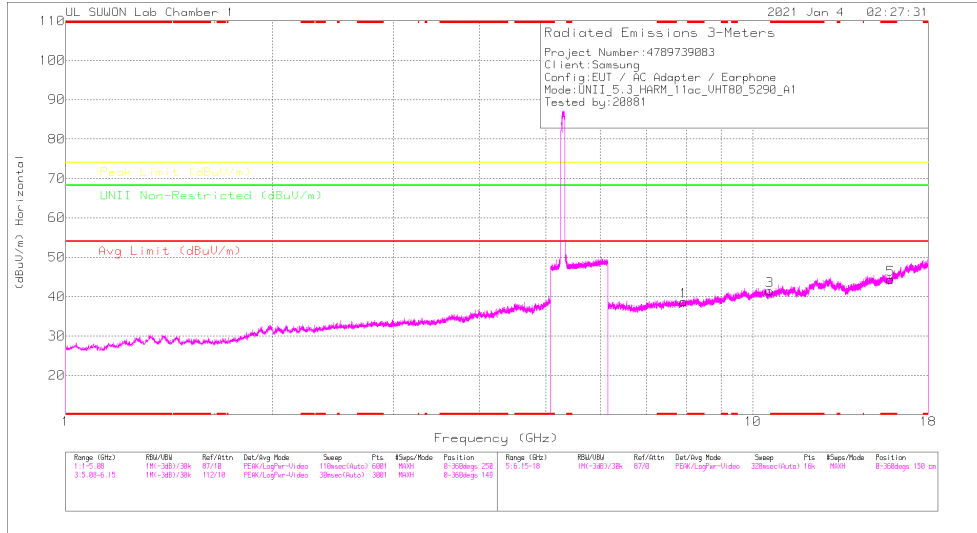
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35002	45.57	PK	34.5	-21.5	0	58.57	-	-	74	-15.43	195	144	V
2	* 5.35182	47.45	PK	34.5	-21.5	0	60.45	-	-	74	-13.55	195	144	V
3	* 5.35002	35	RMS	34.5	-21.5	-17	48.17	54	-5.83	-	-	195	144	V
4	* 5.35006	35.56	RMS	34.5	-21.6	-17	48.63	54	-5.37	-	-	195	144	V

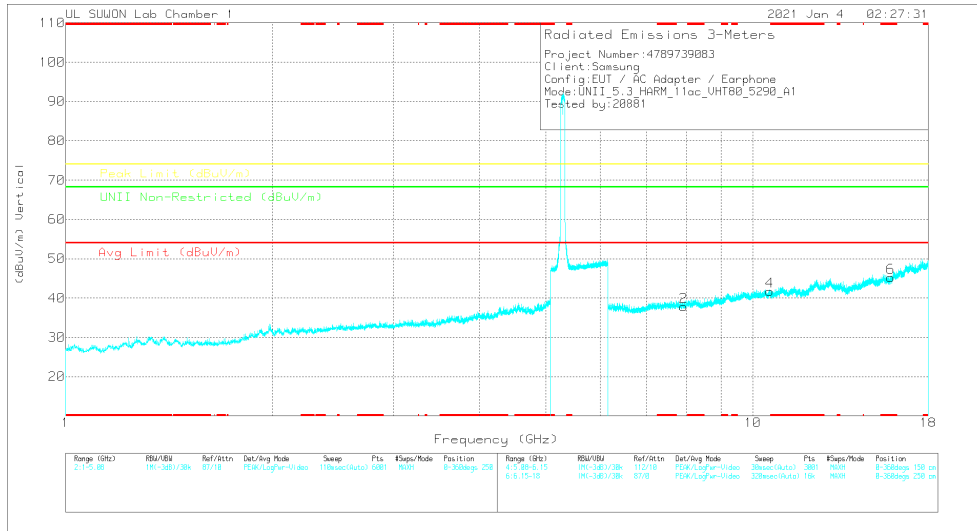
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL



MID CHANNEL 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.

MID CHANNEL DATA

Radiated Emissions

Frequency (GHz)	Mask Reading (dBuV)	Det	317_20168717	5GHz_F15[dB]	DC Corr (dB)	Concord 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 (cm)	Polarity
7.93522	39.13	PK-U	35.9	-26.2	0	48.83	-	-	-	-	68.2	-19.37	0	100	H
7.93218	39.42	PK-U	35.9	-26.2	0	49.12	-	-	-	-	68.2	-19.08	0	100	V
10.57885	36.81	PK-U	37.9	-22.7	0	52.01	-	-	-	-	68.2	-16.19	0	100	H
10.57908	36.65	PK-U	37.9	-22.7	0	51.85	-	-	-	-	68.2	-16.36	0	100	V
* 15.87134	36.65	PK-U	40.3	-20.9	0	56.05	-	-	74	-17.95	-	-	0	100	H
* 15.86848	36.68	PK-U	40.3	-20.9	0	56.08	-	-	74	-17.92	-	-	0	100	V

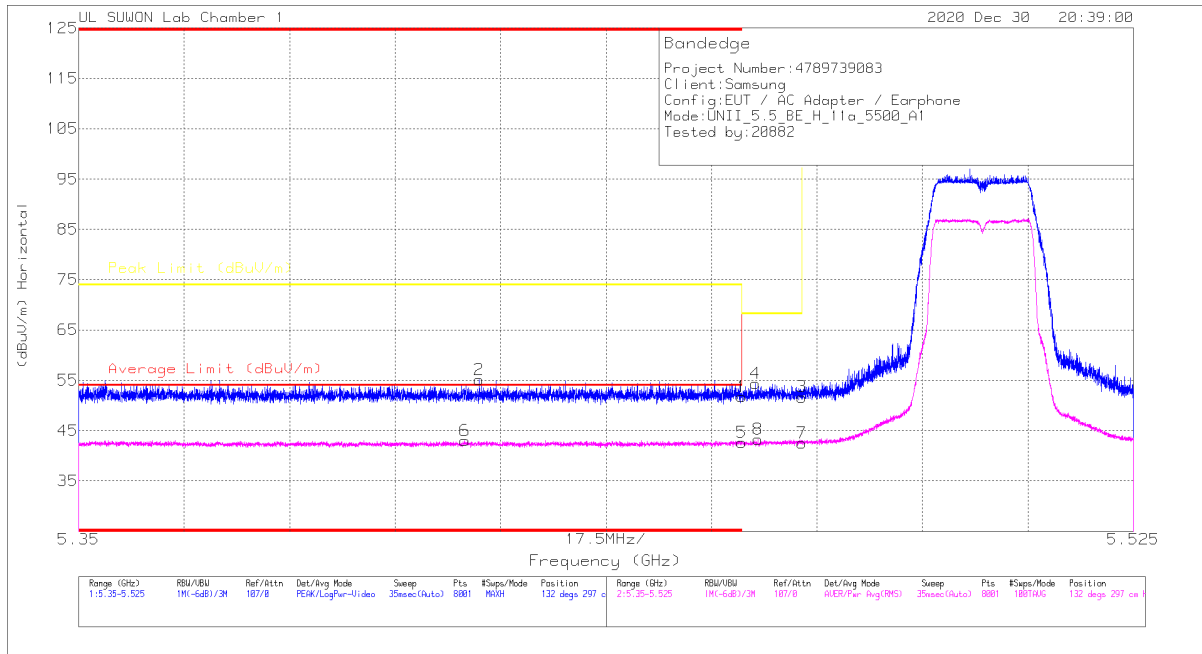
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK-U - U-NII: Maximum Peak

11.3. 5.5-5.6 GHz

11.3.1. TX ABOVE 1 GHz 802.11a 1Tx MODE IN THE 5.5 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

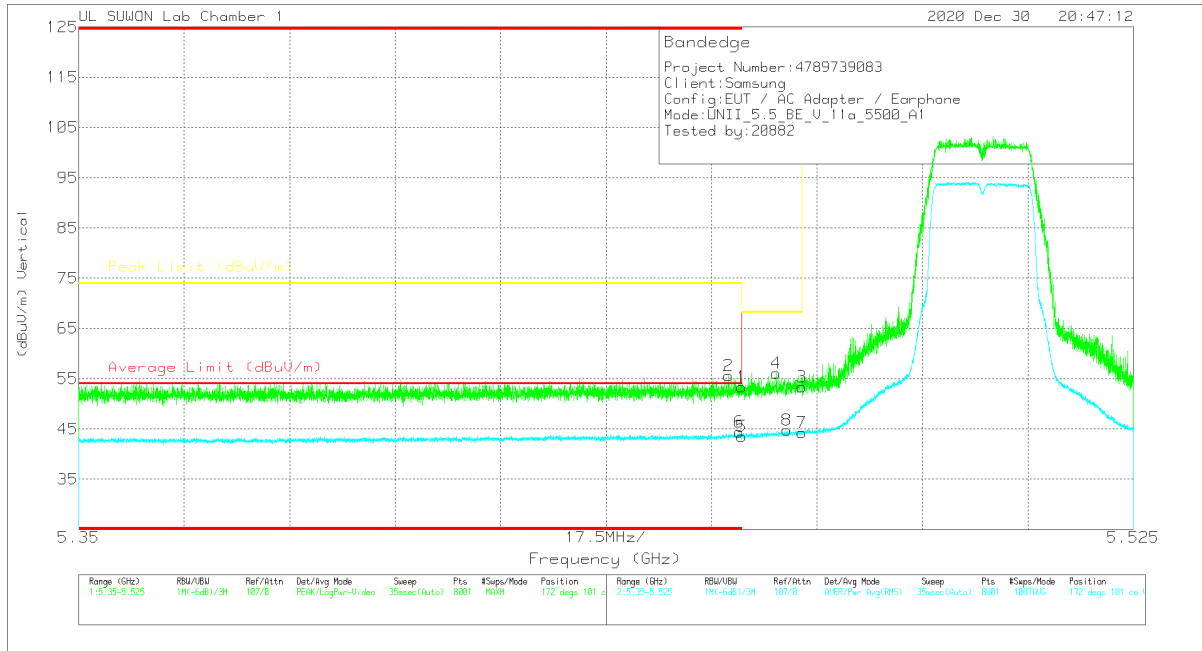


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.45999	38.6	Pk	34.5	-21.3	0	51.8	-	-	74	-22.2	132	297	H
2	* 5.41648	42.05	Pk	34.5	-21.4	0	55.15	-	-	74	-18.85	132	297	H
3	5.46998	38.49	Pk	34.5	-21.3	0	51.89	-	-	68.2	-16.51	132	297	H
4	5.46226	41.25	Pk	34.5	-21.4	0	54.35	-	-	68.2	-13.85	132	297	H
5	* 5.45999	29.26	RMS	34.5	-21.3	15	42.61	54	-11.39	-	-	132	297	H
6	* 5.41409	29.83	RMS	34.5	-21.4	15	43.08	54	-10.92	-	-	132	297	H
7	5.46998	29.19	RMS	34.5	-21.3	15	42.54	-	-	-	-	132	297	H
8	5.46272	30	RMS	34.5	-21.4	15	43.25	-	-	-	-	132	297	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak detector
 RMS - RMS detection

VERTICAL PEAK AND AVERAGE DATA



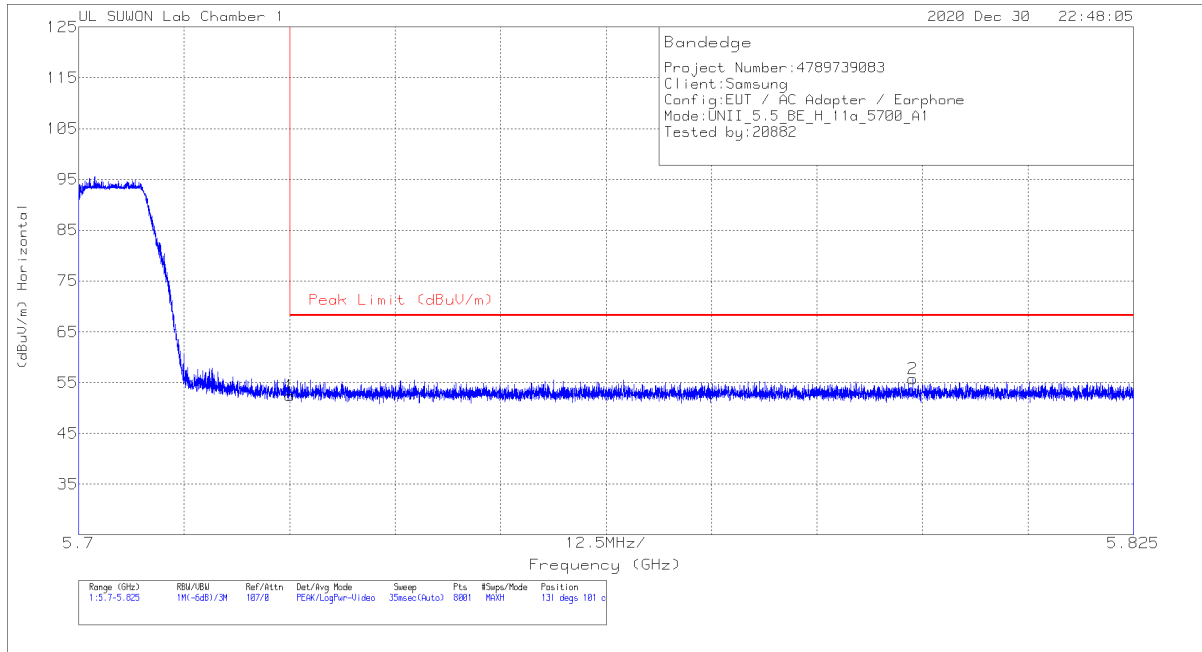
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_50168717	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (m)	Polarity
1	* 5.45999	40.2	PK	34.5	-21.3	0	53.4	-	-	74	-20.6	172	101	V
2	* 5.45778	42.43	PK	34.5	-21.3	0	55.63	-	-	74	-18.37	172	101	V
3	5.46998	40.19	PK	34.5	-21.3	0	53.39	-	-	68.2	-14.81	172	101	V
4	5.46576	42.93	PK	34.5	-21.3	0	56.13	-	-	68.2	-12.07	172	101	V
5	* 5.45999	30.15	RMS	34.5	-21.3	15	43.5	54	-10.5	-	-	172	101	V
6	* 5.45964	31.01	RMS	34.5	-21.3	15	44.36	54	-9.64	-	-	172	101	V
7	5.46998	30.95	RMS	34.5	-21.3	15	44.3	-	-	-	-	172	101	V
8	5.46753	31.39	RMS	34.5	-21.3	15	44.74	-	-	-	-	172	101	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak detector
 RMS - RMS detection

BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

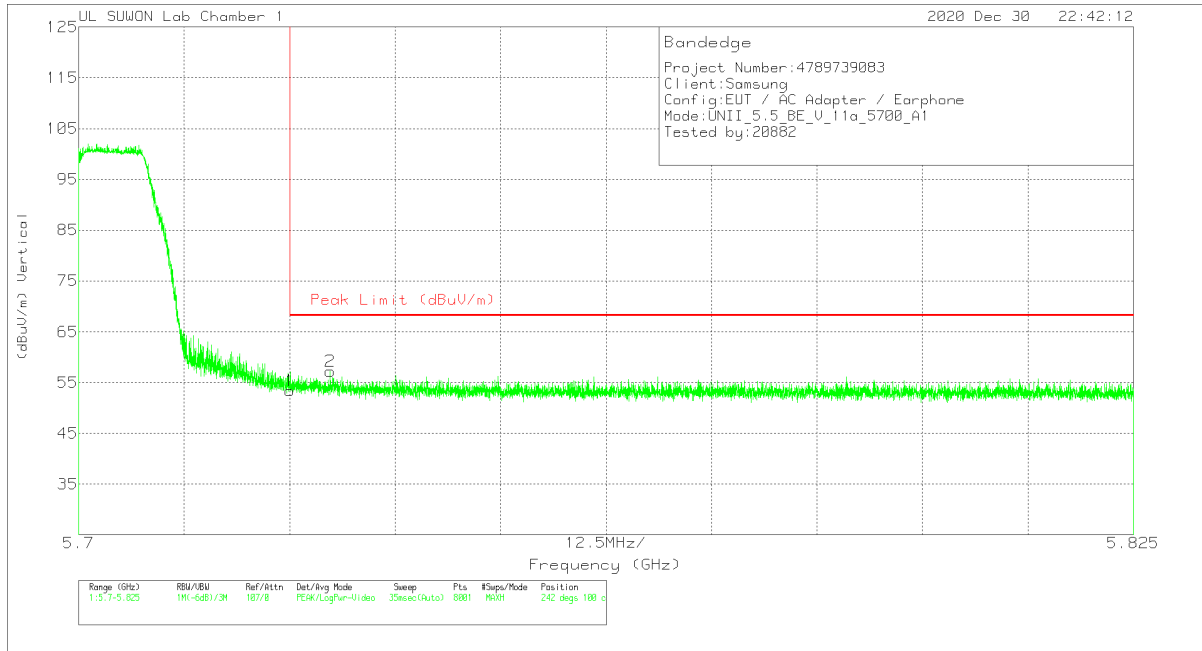


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72502	38.47	Pk	34.9	-20.9	0	52.47	68.2	-15.73	131	101	H
2	5.79886	41.78	Pk	35	-21	0	55.78	68.2	-12.42	131	101	H

Pk - Peak detector

VERTICAL PEAK AND AVERAGE DATA



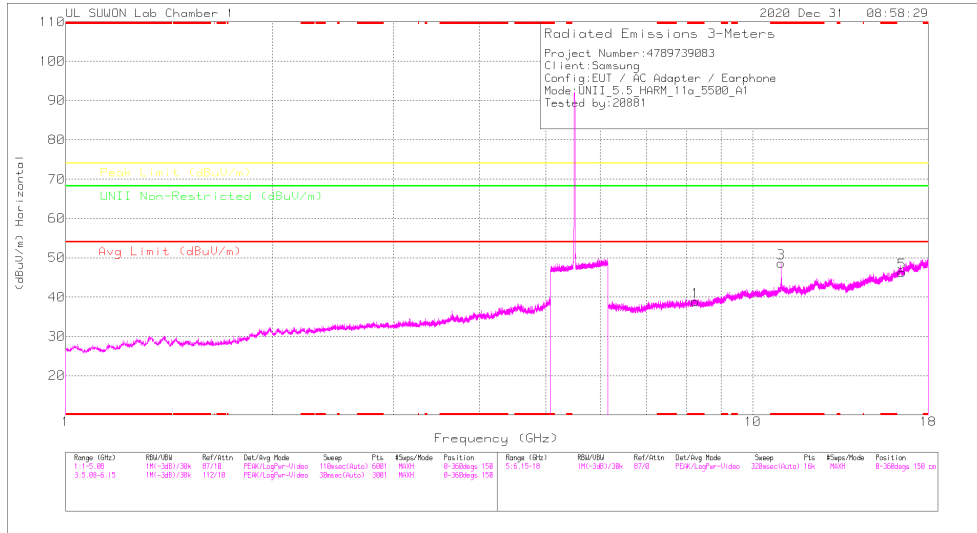
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72502	39.37	Pk	34.9	-20.9	0	53.37	68.2	-14.83	242	100	V
2	5.72981	43.3	Pk	34.9	-21	0	57.2	68.2	-11	242	100	V

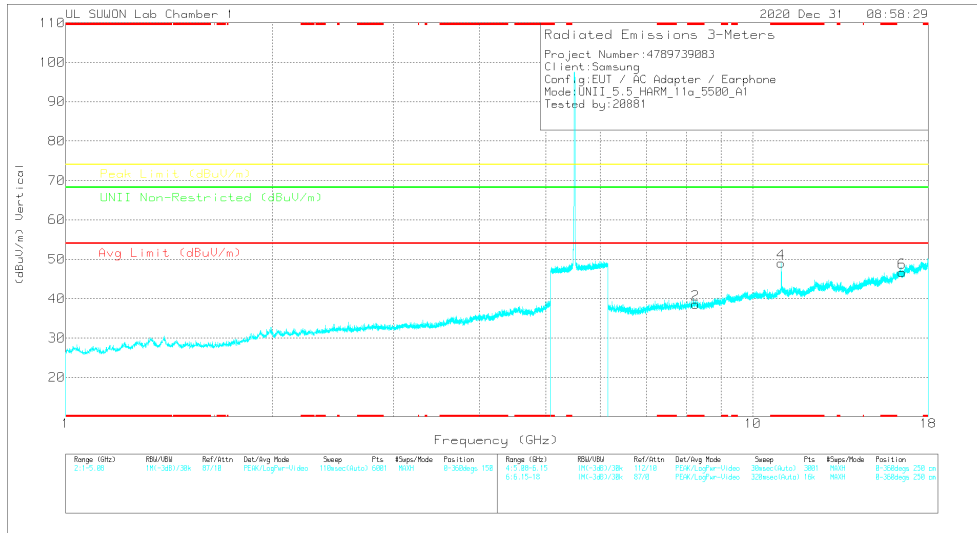
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL 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.

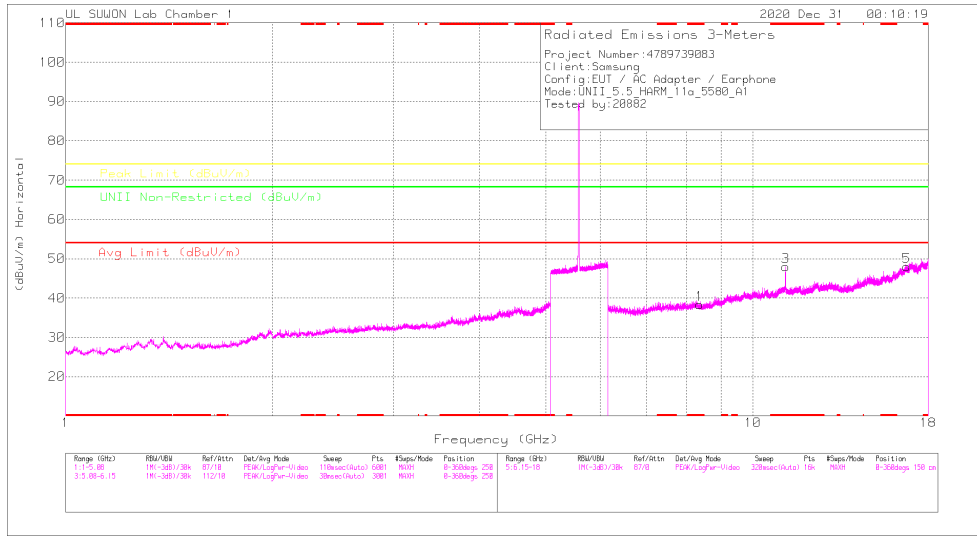
LOW CHANNEL DATA

Radiated Emissions

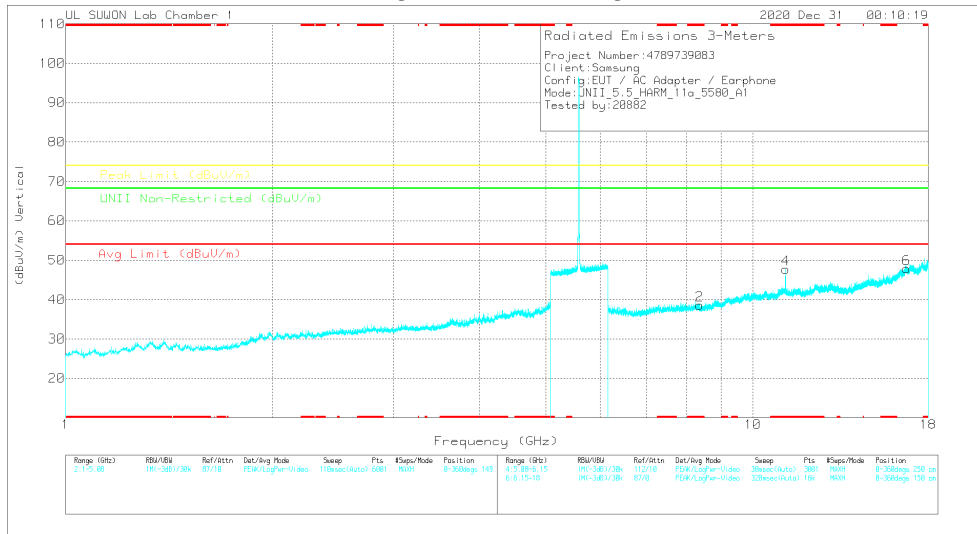
Frequency (GHz)	Meas. Reading (dBuV)	Det.	317_00168717	6GHz_HPS(S)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (m)	Polarity
* 8.25207	38.42	PK-U	38.3	-25.2	0	49.52	-	-	74	-24.48	-	-	360	100	H
* 8.25127	38.15	PK-U	38.3	-25.2	0	49.25	-	-	74	-24.75	-	-	360	100	V
** 11.0016	44.09	PK-U	38.2	-21.8	0	60.49	-	-	74	-13.51	-	-	202	277	H
** 11.00048	30.64	ADR	38.2	-21.7	-15	47.29	54	-6.71	-	-	-	-	202	277	H
** 11.0017	44.09	PK-U	38.2	-21.8	0	60.49	-	-	74	-13.51	-	-	213	247	V
** 11.00164	30.77	ADR	38.2	-21.8	-15	47.32	54	-6.68	-	-	-	-	213	247	V
16.4922	37.29	PK-U	41.1	-19.7	0	58.66	-	-	-	-	68.2	-9.54	360	100	H
16.50072	35.96	PK-U	41.1	-19.6	0	57.46	-	-	-	-	68.2	-10.74	360	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

MID CHANNEL HORIZONTAL



MID CHANNEL 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.

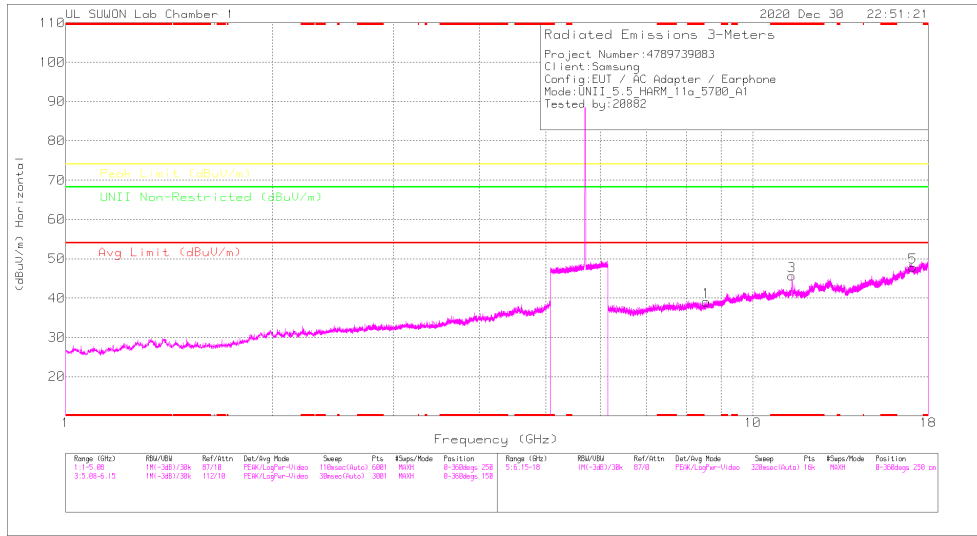
MID CHANNEL DATA

Radiated Emissions

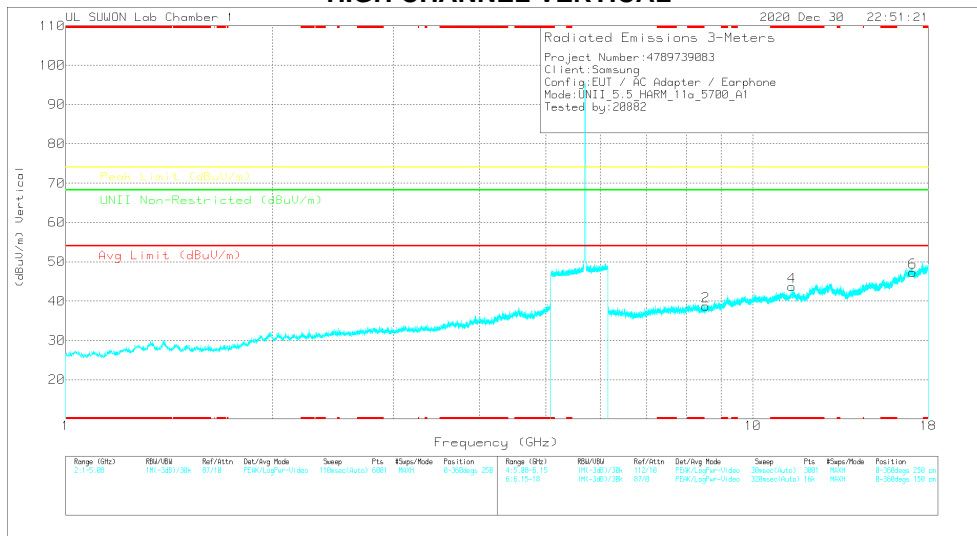
Frequency (GHz)	Meas Reading (dBu)	Det	317_00168717	6GHz_HPS(S)	DC Corr (dB)	Corrected Reading (dBu/m)	Avg Limit (dBu/m)	Margin (dB)	Peak Limit (dBu/m)	Margin (dB)	UNII Non-Restricted (dBu/m)	Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
* 8.37358	37.89	PK-U	36.3	-25.5	0	48.69	-	-	74	-25.31	-	-	360	100	H
* 8.37323	38.37	PK-U	36.3	-25.5	0	49.17	-	-	74	-24.83	-	-	360	100	V
* 11.15832	44.06	PK-U	38.4	-22.4	0	60.06	-	-	74	-13.84	-	-	206	263	H
* 11.16052	31.26	ADR	38.4	-22.5	-15	47.31	54	-6.69	-	-	-	-	206	263	H
* 11.1584	42.45	PK-U	38.4	-22.4	0	58.45	-	-	74	-15.55	-	-	185	378	V
* 11.1602	29.51	ADR	38.4	-22.5	-15	45.56	54	-8.44	-	-	-	-	185	378	V
16.74063	34.53	PK-U	41.5	-18	0	58.03	-	-	-	-	68.2	-10.17	360	100	H
16.73856	34.5	PK-U	41.5	-18	0	58	-	-	-	-	68.2	-10.2	360	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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL 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.

HIGH CHANNEL DATA

Radiated Emissions

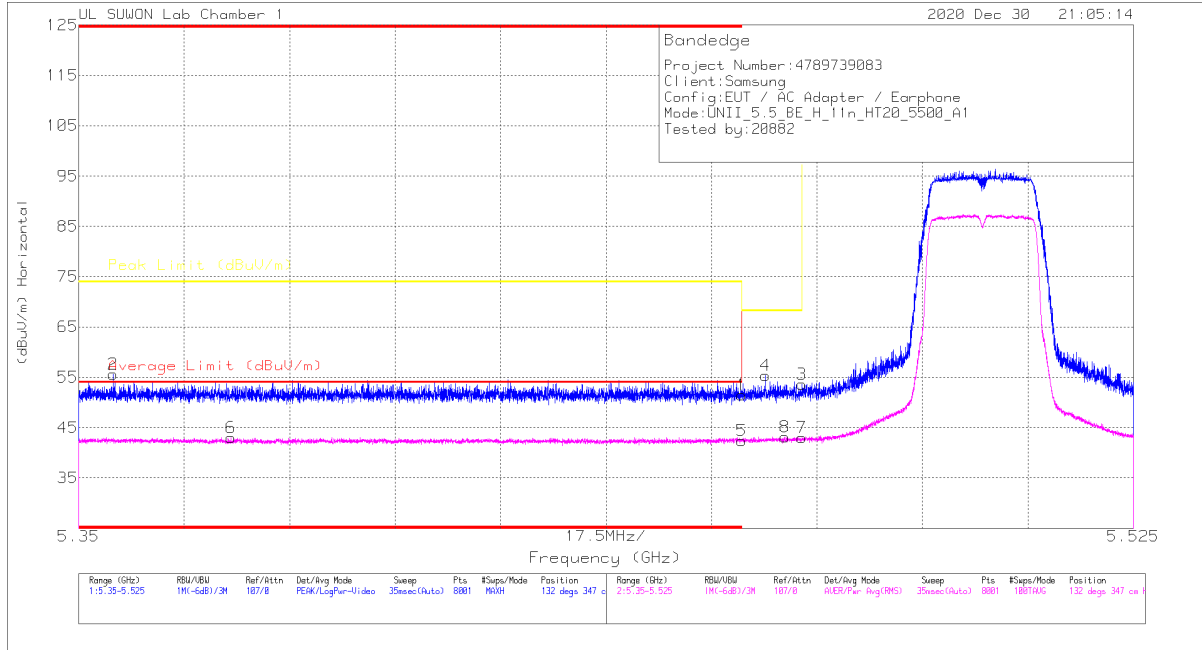
Frequency (GHz)	Mag. Reading (dBuV)	Det	317_00168717	6GHz_HPSSE	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Deg)	Height (cm)	Polarity
8.55414	37.41	PK-U	36.2	-24.5	0	49.11	-	-	-	-	68.2	-19.09	0	100	H
8.55698	38.09	PK-U	36.2	-24.4	0	49.89	-	-	-	-	68.2	-18.31	360	100	V
*11.39896	40.5	PK-U	38.4	-22.1	0	56.8	-	-	74	-17.2	-	-	128	101	H
*11.401	27.35	ADR	38.4	-22.2	.15	43.7	54	-10.3	-	-	-	-	128	101	H
*11.39316	39.17	PK-U	38.4	-22.2	0	55.37	-	-	74	-16.63	-	-	251	178	V
*11.3998	26.68	ADR	38.4	-22.1	.15	43.13	54	-10.87	-	-	-	-	251	178	V
17.09642	34.21	PK-U	41.5	-17.6	0	58.11	-	-	-	-	68.2	-10.09	360	100	H
17.09605	35.58	PK-U	41.5	-17.6	0	59.48	-	-	-	-	68.2	-8.72	360	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

11.3.2. TX ABOVE 1GHz 802.11n HT20 1Tx MODE IN THE 5.5GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

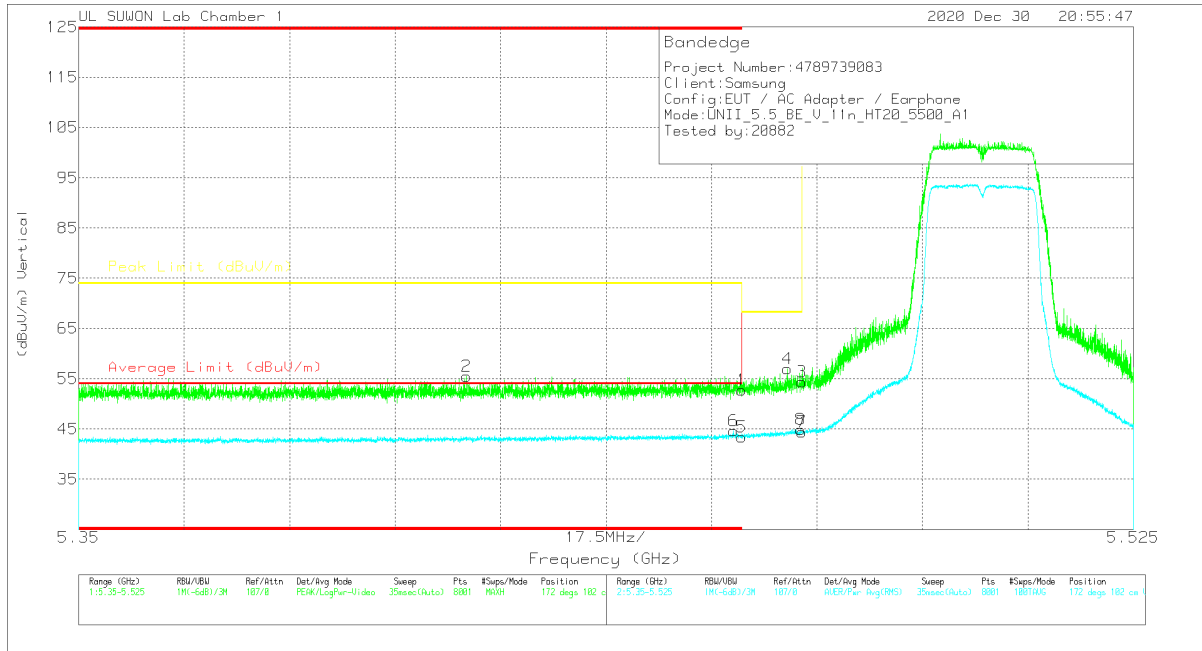


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT(dB)	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.45999	38.32	Pk	34.5	-21.3	0	51.52	-	-	74	-22.48	132	347	H
2	* 5.35575	42.62	Pk	34.5	-21.5	0	55.62	-	-	74	-18.38	132	347	H
3	5.46998	40.47	Pk	34.5	-21.3	0	53.67	-	-	68.2	-14.53	132	347	H
4	5.46395	42.21	Pk	34.5	-21.3	0	55.41	-	-	68.2	-12.79	132	347	H
5	* 5.45999	29.05	RMS	34.5	-21.3	-17	42.42	54	-11.58	-	-	132	347	H
6	* 5.37527	29.91	RMS	34.5	-21.5	-17	43.08	54	-10.92	-	-	132	347	H
7	5.46998	29.63	RMS	34.5	-21.3	-17	43	-	-	-	-	132	347	H
8	5.46721	29.81	RMS	34.5	-21.3	-17	43.18	-	-	-	-	132	347	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak detector
 RMS - RMS detection

VERTICAL PEAK AND AVERAGE DATA



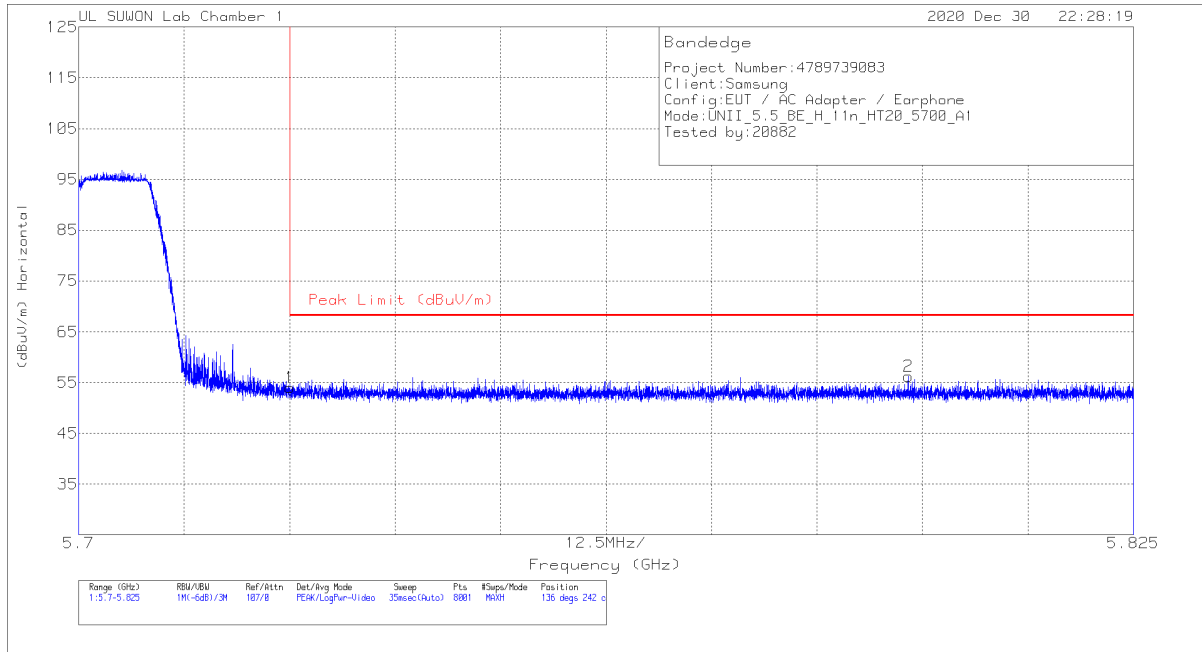
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.45999	39.52	PK	34.5	-21.3	0	52.72	-	-	74	-21.28	172	102	V
2	* 5.4144	42.43	PK	34.5	-21.4	0	55.53	-	-	74	-18.47	172	102	V
3	5.46998	41.22	PK	34.5	-21.3	0	54.42	-	-	68.2	-13.78	172	102	V
4	5.46756	43.75	PK	34.5	-21.3	0	56.95	-	-	68.2	-11.25	172	102	V
5	* 5.45999	30.02	RMS	34.5	-21.3	.17	43.39	54	-10.61	-	-	172	102	V
6	* 5.45863	31.25	RMS	34.5	-21.3	.17	44.62	54	-9.38	-	-	172	102	V
7	5.46998	30.98	RMS	34.5	-21.3	.17	44.35	-	-	-	-	172	102	V
8	5.46977	31.54	RMS	34.5	-21.3	.17	44.91	-	-	-	-	172	102	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak detector
 RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK DATA

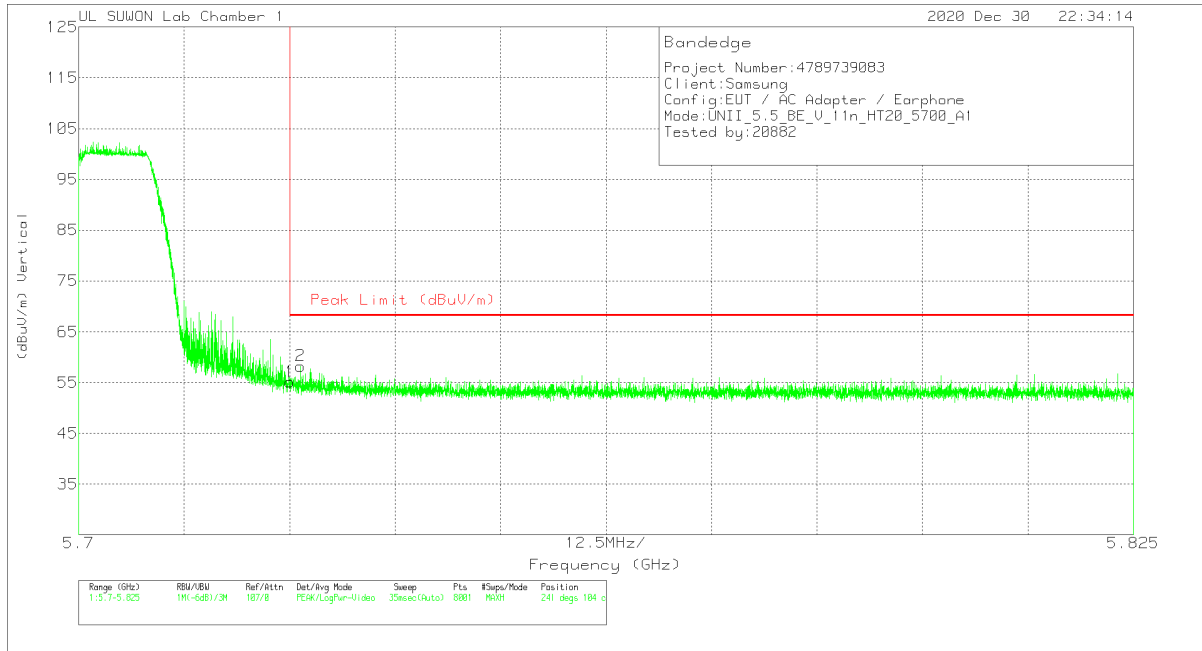


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72502	40.02	Pk	34.9	-20.9	0	54.02	68.2	-14.18	136	242	H
2	5.7983	42.22	Pk	35	-21	0	56.22	68.2	-11.98	136	242	H

Pk - Peak detector

VERTICAL PEAK AND AVERAGE DATA



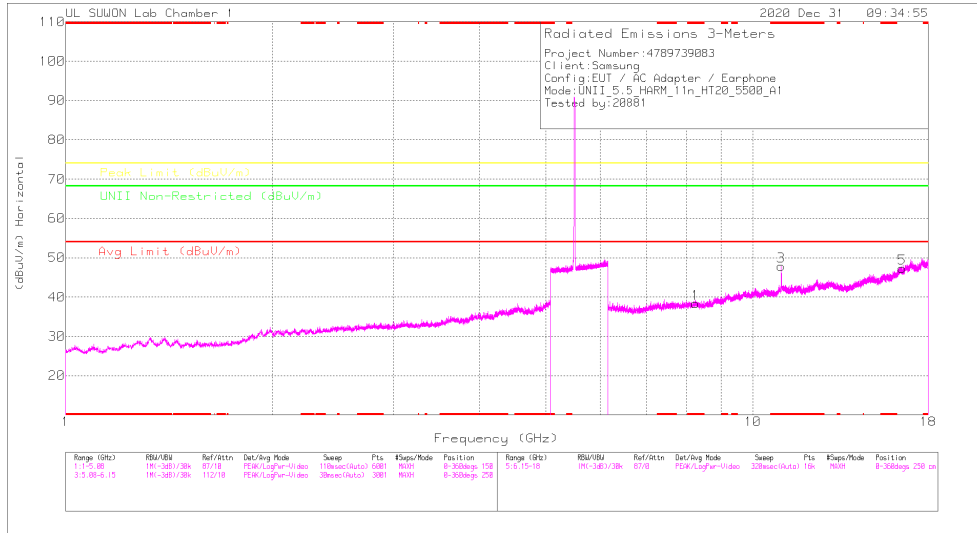
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72502	41.15	Pk	34.9	-20.9	0	55.15	68.2	-13.05	241	104	V
2	5.72627	44.48	Pk	34.9	-21.1	0	58.28	68.2	-9.92	241	104	V

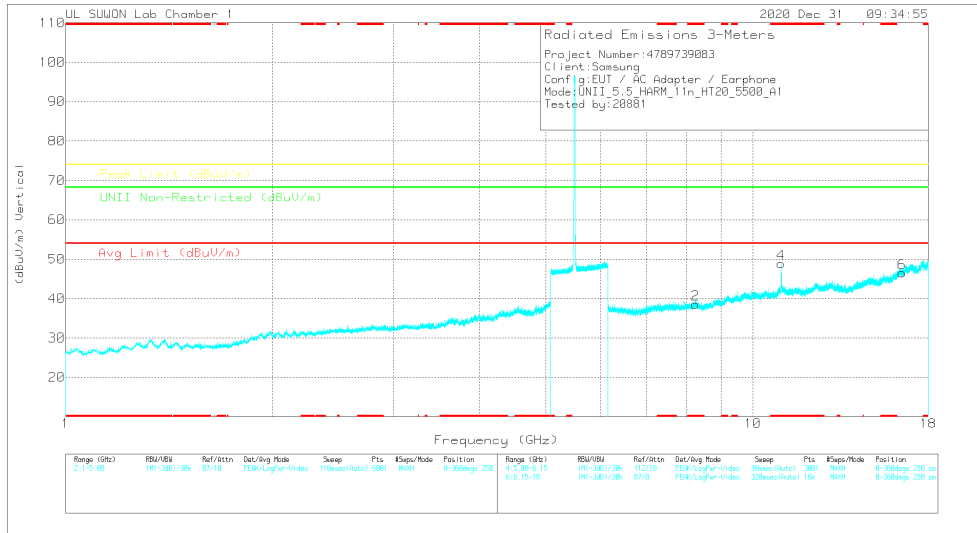
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL 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.

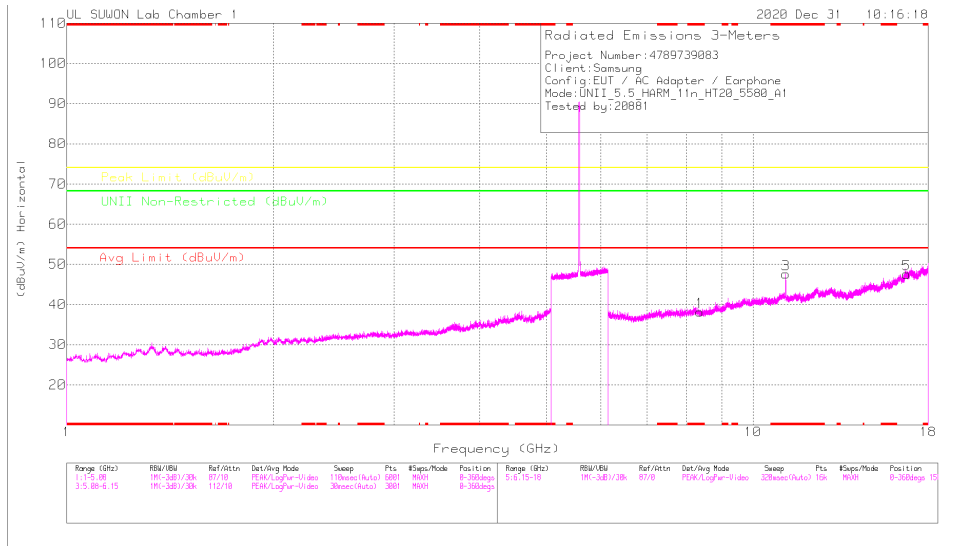
LOW CHANNEL DATA

Radiated Emissions

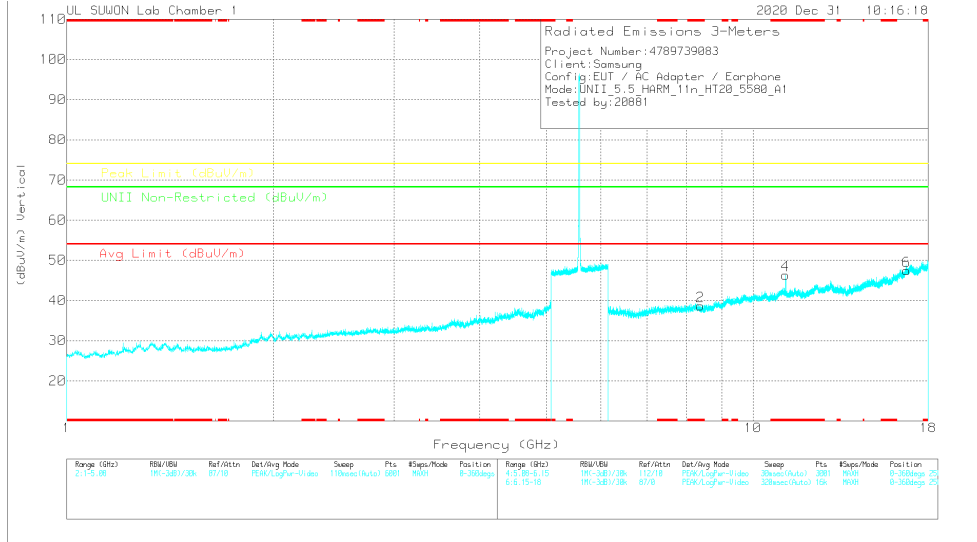
Frequency (GHz)	Mean Reading (dBuV)	Det	317_00168717	6GHz_HPSSE	DC Corr (dB)	Corrected Reading (dBuV)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Admtht (dB)	Height (m)	Polarity
* 8.25299	37.84	PK-U	36.3	-25.2	0	48.94	-	-	74	-25.06	-	-	360	100	V
* 8.25194	37.69	PK-U	36.3	-25.2	0	48.79	-	-	74	-25.21	-	-	360	100	V
* 11.00044	44.75	PK-U	38.2	-21.7	0	61.25	-	-	74	-12.75	-	-	204	279	H
* 10.99984	31.16	ADR	38.2	-21.7	.17	47.83	54	-6.17	-	-	-	-	204	279	H
* 10.99943	44.16	PK-U	38.2	-21.8	0	60.56	-	-	74	-13.44	-	-	210	231	V
* 10.9996	31.13	ADR	38.2	-21.8	.17	47.7	54	-6.3	-	-	-	-	210	231	V
16.49941	36.84	PK-U	41.1	-19.7	0	58.24	-	-	-	-	68.2	-9.96	360	100	H
16.49801	35.77	PK-U	41.1	-19.6	0	57.27	-	-	-	-	68.2	-10.93	360	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

MID CHANNEL HORIZONTAL



MID CHANNEL 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.

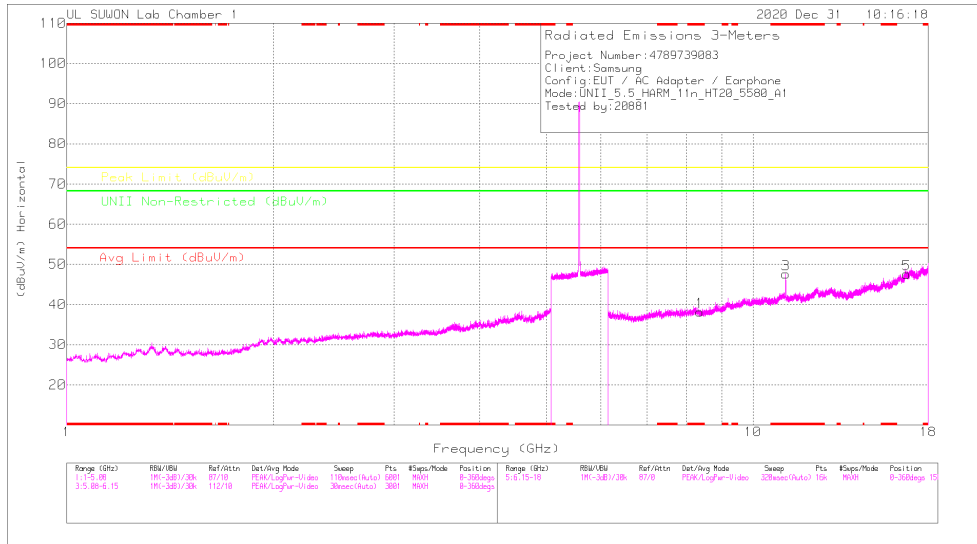
MID CHANNEL DATA

Radiated Emissions

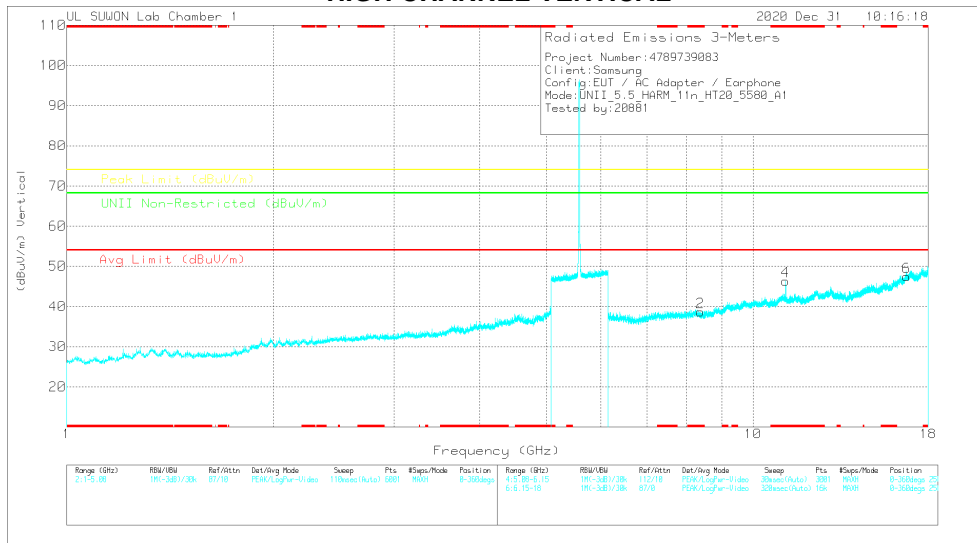
Frequency (GHz)	Max Reading (dBuV)	Det	317_00168717	6GHz_HPS(B)	DC Corr (dB)	Consolidated Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (ft/m)	Height (ft/m)	Polarity
* 8.36892	38.2	PK-U	38.3	-25.5	0	49	-	-	74	-25	-	-	360	100	H
* 8.36818	38.18	PK-U	38.3	-25.6	0	48.88	-	-	74	-25.12	-	-	360	100	V
* 11.1548	45.32	PK-U	38.4	-22.4	0	61.32	-	-	74	-12.68	-	-	205	274	H
* 11.16006	31.69	ADR	38.4	-22.4	-17	47.85	54	-6.15	-	-	-	-	205	274	H
* 11.15498	42.9	PK-U	38.4	-22.4	0	58.9	-	-	74	-15.1	-	-	209	261	V
* 11.15926	29.75	ADR	38.4	-22.4	-17	45.92	54	-8.08	-	-	-	-	209	261	V
16.73933	34.69	PK-U	41.5	-18	0	58.19	-	-	-	-	68.2	-10.01	360	100	H
16.73971	35.04	PK-U	41.5	-18	0	58.54	-	-	-	-	68.2	-9.66	360	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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL 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.

HIGH CHANNEL DATA

Radiated Emissions

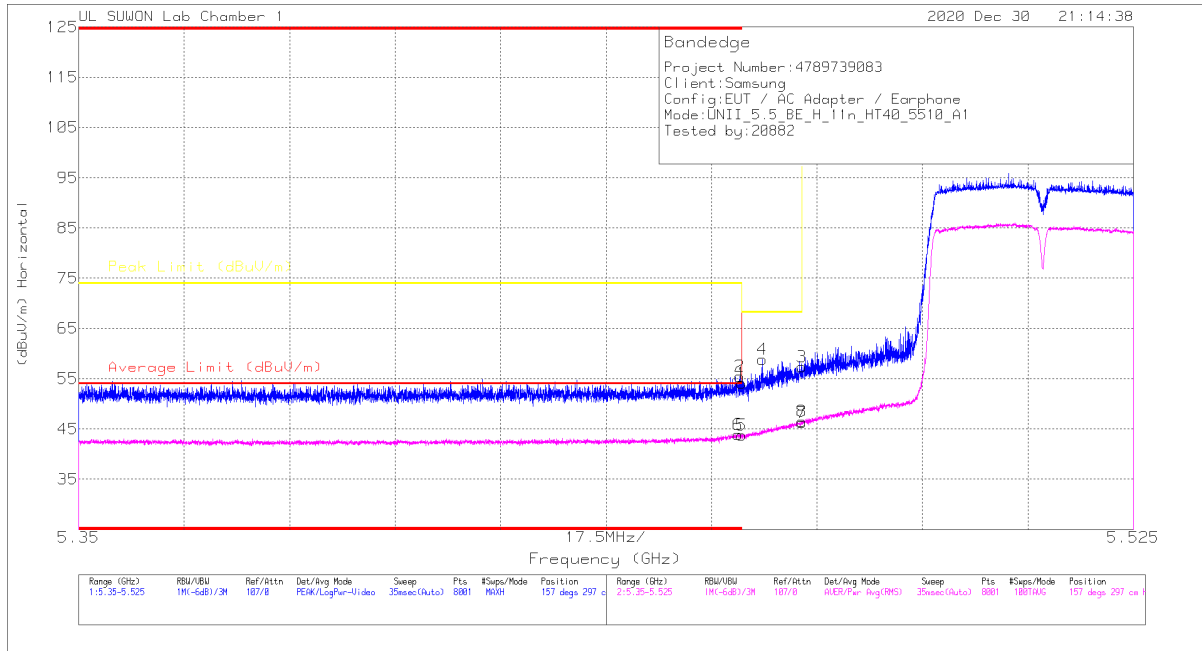
Frequency (GHz)	Main Reading (dBuV)	Det	317_0016B717	6GHz_HPS(B)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Drops)	Height (m)	Polarity
* 8.36892	38.2	PK-U	38.3	-25.5	0	49	-	-	74	-25	-	-	360	100	H
* 8.36818	38.18	PK-U	38.3	-25.6	0	48.88	-	-	74	-25.12	-	-	360	100	V
* 11.1548	45.32	PK-U	38.4	-22.4	0	61.32	-	-	74	-12.68	-	-	205	274	H
* 11.16008	31.68	ADR	38.4	-22.4	.17	47.85	54	-6.15	-	-	-	-	205	274	H
* 11.15498	42.9	PK-U	38.4	-22.4	0	58.9	-	-	74	-15.1	-	-	209	261	V
* 11.15926	29.75	ADR	38.4	-22.4	.17	45.92	54	-8.08	-	-	-	-	209	261	V
16.73933	34.69	PK-U	41.5	-18	0	58.19	-	-	-	-	68.2	-10.01	360	100	H
16.73971	35.04	PK-U	41.5	-18	0	58.54	-	-	-	-	68.2	-9.66	360	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

11.3.3. TX ABOVE 1GHz 802.11n HT40 1Tx MODE IN THE 5.5GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

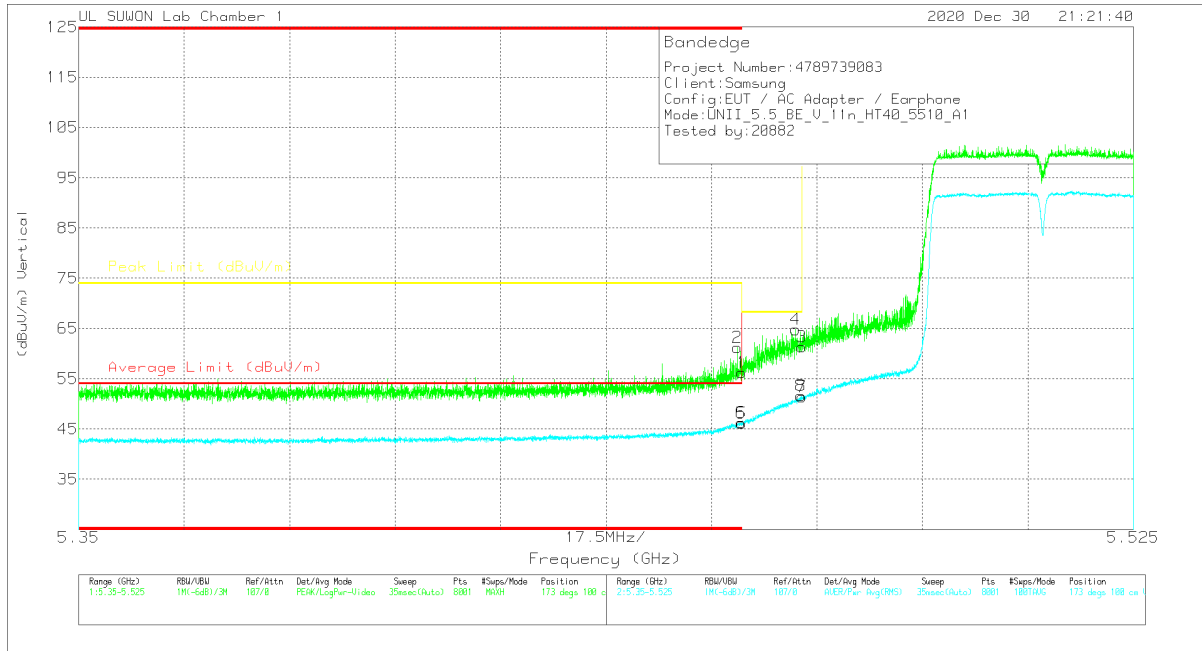


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.45999	40.96	Pk		-21.3	0	54.16	-	-	74	-19.84	157	297	H
2	* 5.45996	42.32	Pk		-21.3	0	55.52	-	-	74	-18.48	157	297	H
3	5.46998	44.21	Pk		-21.3	0	57.41	-	-	68.2	-10.79	157	297	H
4	5.46342	45.6	Pk		-21.3	0	58.8	-	-	68.2	-9.4	157	297	H
5	* 5.45999	30.42	RMS		-21.3	-16	43.78	54	-10.22	-	-	157	297	H
6	* 5.45935	30.56	RMS		-21.3	-16	43.92	54	-10.08	-	-	157	297	H
7	5.46998	32.89	RMS		-21.3	-16	46.25	-	-	-	-	157	297	H
8	5.46996	33.17	RMS		-21.3	-16	46.53	-	-	-	-	157	297	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 RMS - RMS detection

VERTICAL PEAK AND AVERAGE DATA



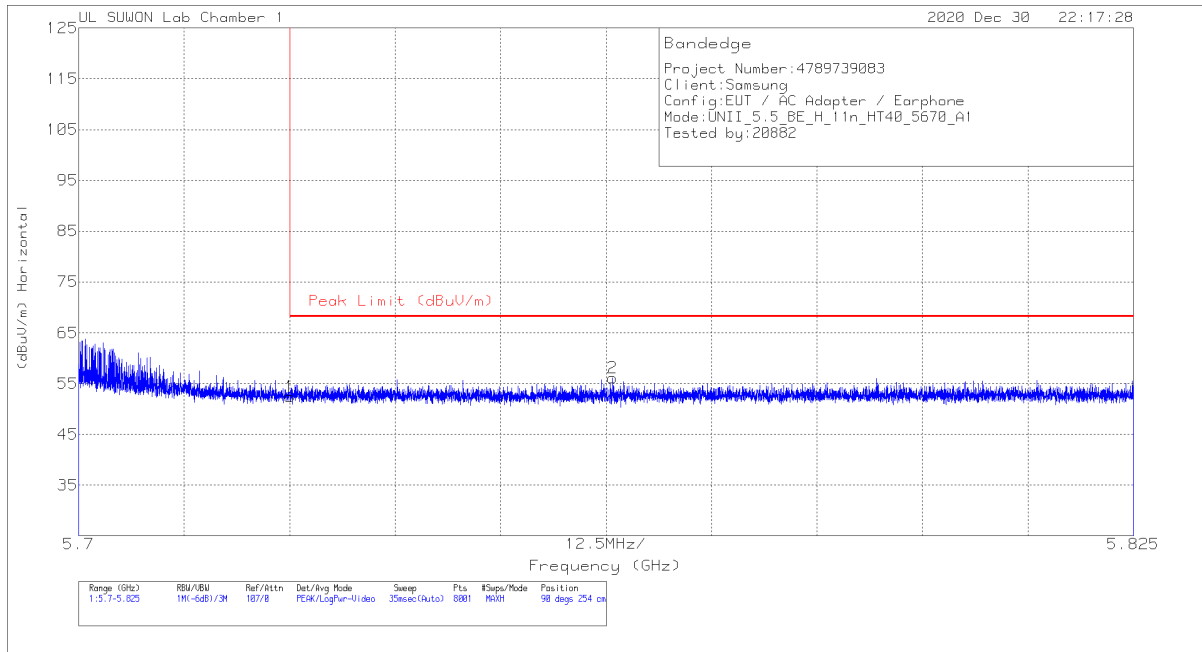
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.45999	43.08	PK	34.5	-21.3	0	56.28	-	-	74	-17.72	173	100	V
2	* 5.45927	48.04	PK	34.5	-21.3	0	61.24	-	-	74	-12.76	173	100	V
3	5.46998	48.16	PK	34.5	-21.3	0	61.36	-	-	68.2	-6.84	173	100	V
4	5.46898	51.68	PK	34.5	-21.4	0	64.78	-	-	68.2	-3.42	173	100	V
5	* 5.45999	32.75	RMS	34.5	-21.3	.16	46.11	54	-7.89	-	-	173	100	V
6	* 5.45992	32.93	RMS	34.5	-21.3	.16	46.29	54	-7.71	-	-	173	100	V
7	5.46998	38.04	RMS	34.5	-21.3	.16	51.4	-	-	-	-	173	100	V
8	5.46983	38.27	RMS	34.5	-21.3	.16	51.63	-	-	-	-	173	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak detector
 RMS - RMS detection

BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

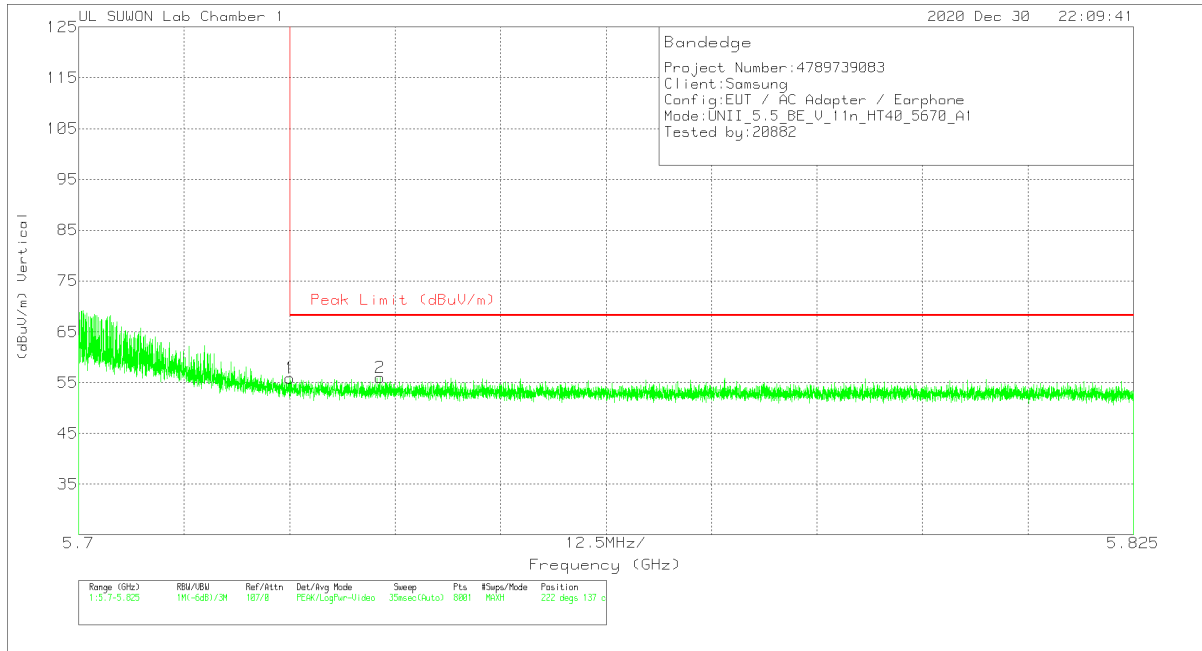


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72502	38.37	Pk	34.9	-20.9	0	52.37	68.2	-15.83	90	254	H
2	5.7633	42.14	Pk	35	-21	0	56.14	68.2	-12.06	90	254	H

Pk - Peak detector

VERTICAL PEAK AND AVERAGE DATA



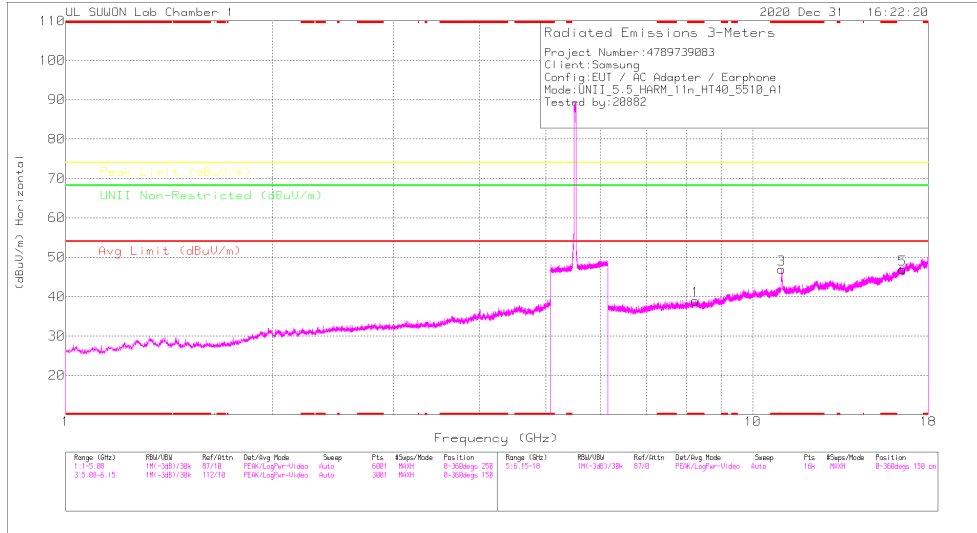
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72502	41.92	Pk	34.9	-20.9	0	55.92	68.2	-12.28	222	137	V
2	5.73572	42.09	Pk	34.9	-21	0	55.99	68.2	-12.21	222	137	V

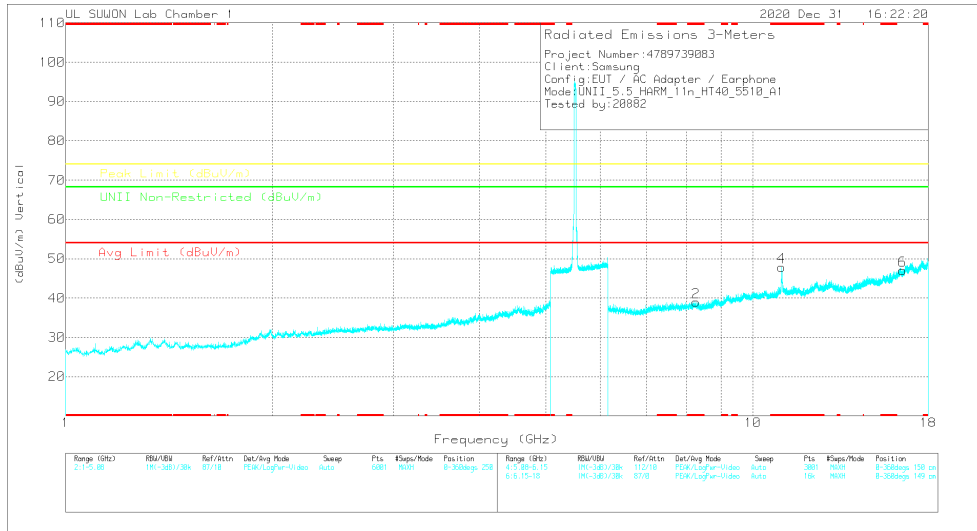
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL 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.

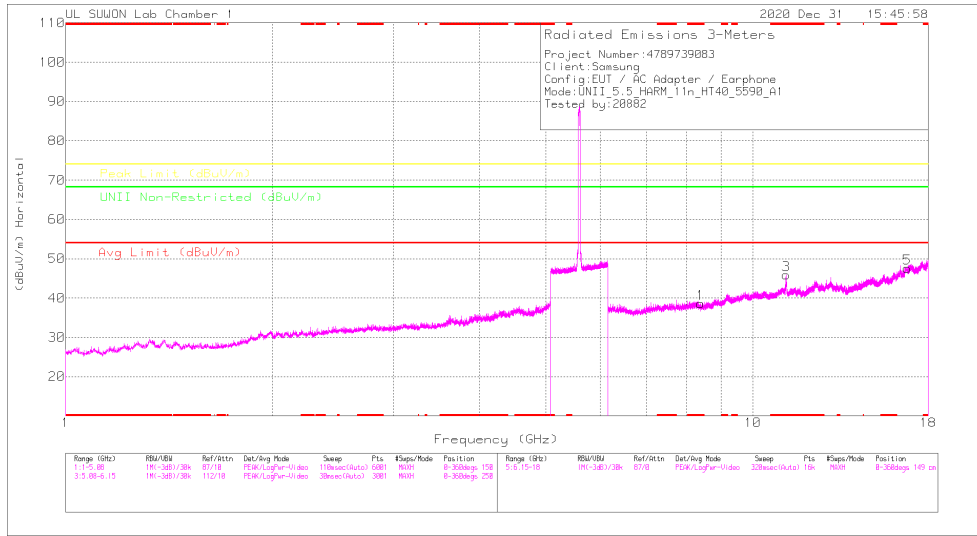
LOW CHANNEL DATA

Radiated Emissions

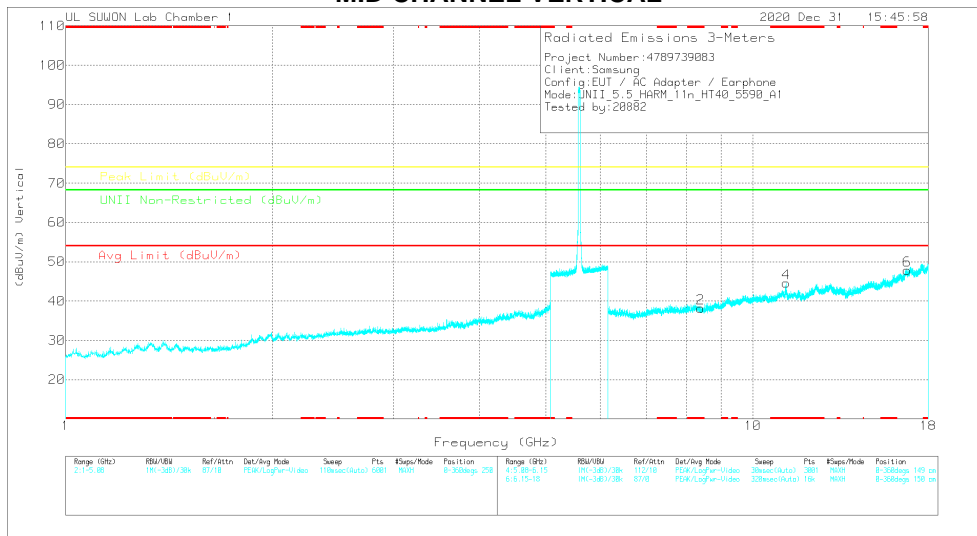
Frequency (GHz)	Meas. Result (dBuV)	Det.	317.0168717	ISRL-HP(SR)	DC Corr (dB)	Conduct. Coupling (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Deg)	Height (m)	Polarity	
* 8.25712	37.82	PKU	36.3	-25.1	0	49.02	-	-	74	-24.98	-	-	-	360	100	H
* 8.25689	37.85	PKU	36.3	-25.1	0	49.05	-	-	74	-24.95	-	-	-	360	100	V
* 11.0192	42.88	PKU	38.2	-21.7	0	59.38	-	-	74	-14.62	-	-	-	203	276	H
* 11.02084	29.66	ADR	38.2	-21.6	-16	46.42	54	-7.58	-	-	-	-	-	203	276	H
* 11.02183	42.47	PKU	38.2	-21.7	0	59.97	-	-	74	-15.03	-	-	-	209	228	V
* 11.02095	29.84	ADR	38.2	-21.6	-16	46.6	54	-7.4	-	-	-	-	-	209	228	V
16.53124	35.72	PKU	41.1	-19.4	0	57.42	-	-	-	-	68.2	-10.78	360	100	H	
16.53074	35.32	PKU	41.1	-19.4	0	57.02	-	-	-	-	68.2	-11.18	360	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

MID CHANNEL HORIZONTAL



MID CHANNEL 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.

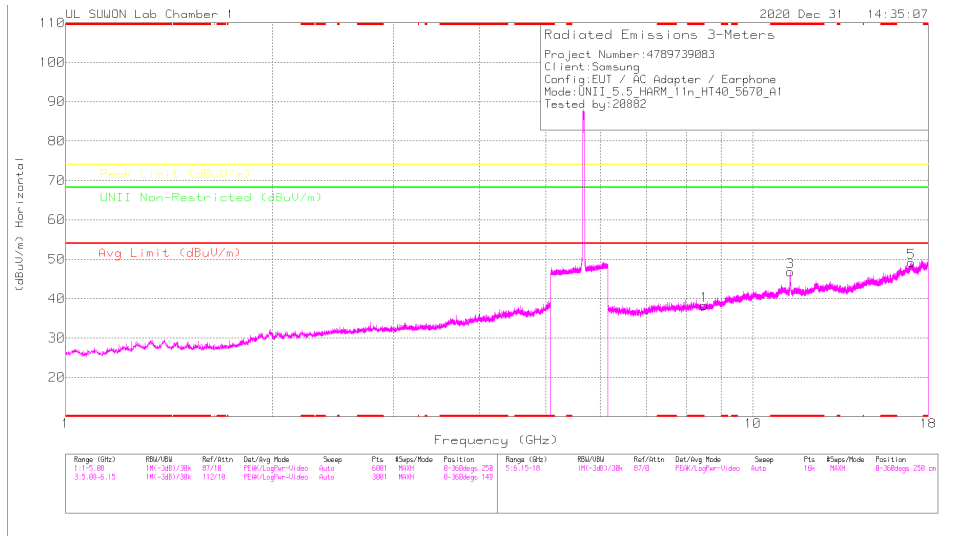
MID CHANNEL DATA

Radiated Emissions

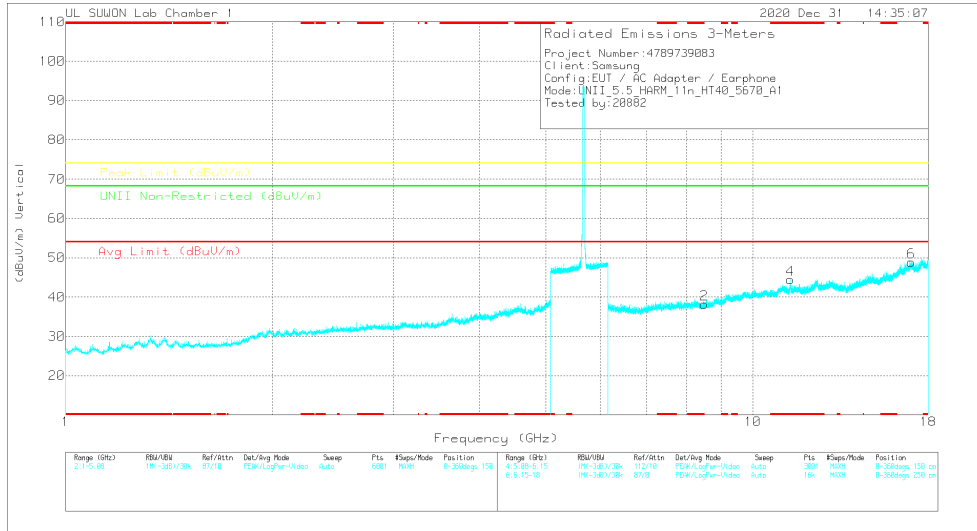
Frequency (GHz)	Meas Reading (dBuV)	Det	317_00168717	6GHz_HPS(B)	DC Corr (dB)	Corrected Reading (dBuV)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
* 8.38859	38.02	PK-U	38.3	-25.6	0	48.72	-	-	74	-25.28	-	-	360	100	H
* 8.3845	38.53	PK-U	38.3	-25.5	0	49.33	-	-	74	-24.67	-	-	360	100	V
* 11.17508	42.27	PK-U	38.4	-22.4	0	58.27	-	-	74	-15.73	-	-	300	324	H
* 11.18138	29.36	ADR	38.4	-22.3	-16	45.62	54	-8.38	-	-	-	-	200	324	H
* 11.18064	42.39	PK-U	38.4	-22.3	0	58.49	-	-	74	-15.51	-	-	206	241	V
* 11.17884	28.72	ADR	38.4	-22.4	-16	44.88	54	-9.12	-	-	-	-	206	241	V
16.76911	34.86	PK-U	41.6	-18	0	58.46	-	-	-	-	68.2	-9.74	360	100	H
16.7706	34.78	PK-U	41.6	-18	0	58.38	-	-	-	-	68.2	-9.82	360	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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL 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.

HIGH CHANNEL DATA

Radiated Emissions

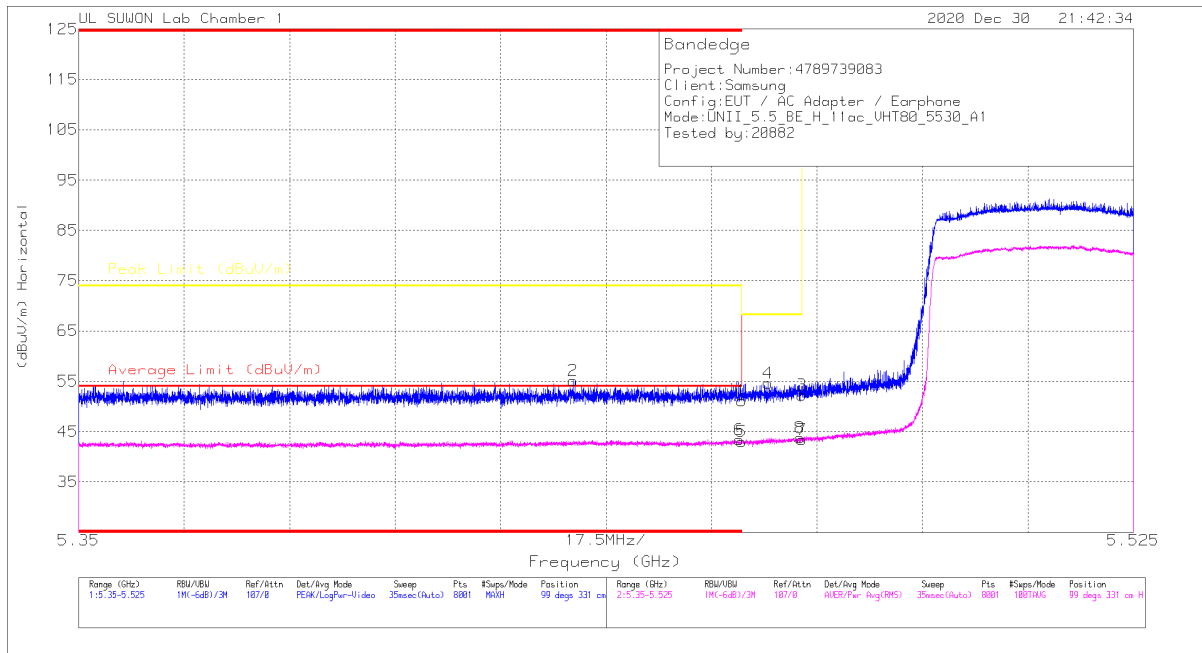
Frequency (GHz)	Main Reading (dBuV)	Det	317_00168717	6GHz_HPS(S)	DC Corr (dB)	Corrected Reading (dBuV)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Deg)	Height (cm)	Polarity
8.50031	37.98	PK-U	36.2	-25.1	0	49.08	-	-	-	-	68.2	-19.12	360	100	H
8.50336	37.75	PK-U	36.2	-25.1	0	48.85	-	-	-	-	68.2	-19.35	360	100	V
*11.33894	41.42	PK-U	38.4	-22.2	0	57.62	-	-	74	-16.38	-	-	200	360	H
*11.34112	28.64	ADR	38.4	-22.2	-16	45	54	-9	-	-	-	-	200	360	H
*11.32828	39.14	PK-U	38.4	-22.2	0	55.34	-	-	74	-18.66	-	-	183	113	V
*11.34084	26.61	ADR	38.4	-22.2	-16	42.97	54	-11.03	-	-	-	-	183	113	V
17.01123	35.04	PK-U	41.6	-17.6	0	59.04	-	-	-	-	68.2	-9.16	360	100	H
17.00626	35.01	PK-U	41.6	-17.5	0	59.11	-	-	-	-	68.2	-9.09	360	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

11.3.4. TX ABOVE 1GHz 802.11ac VHT80 1Tx MODE IN THE 5.5GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

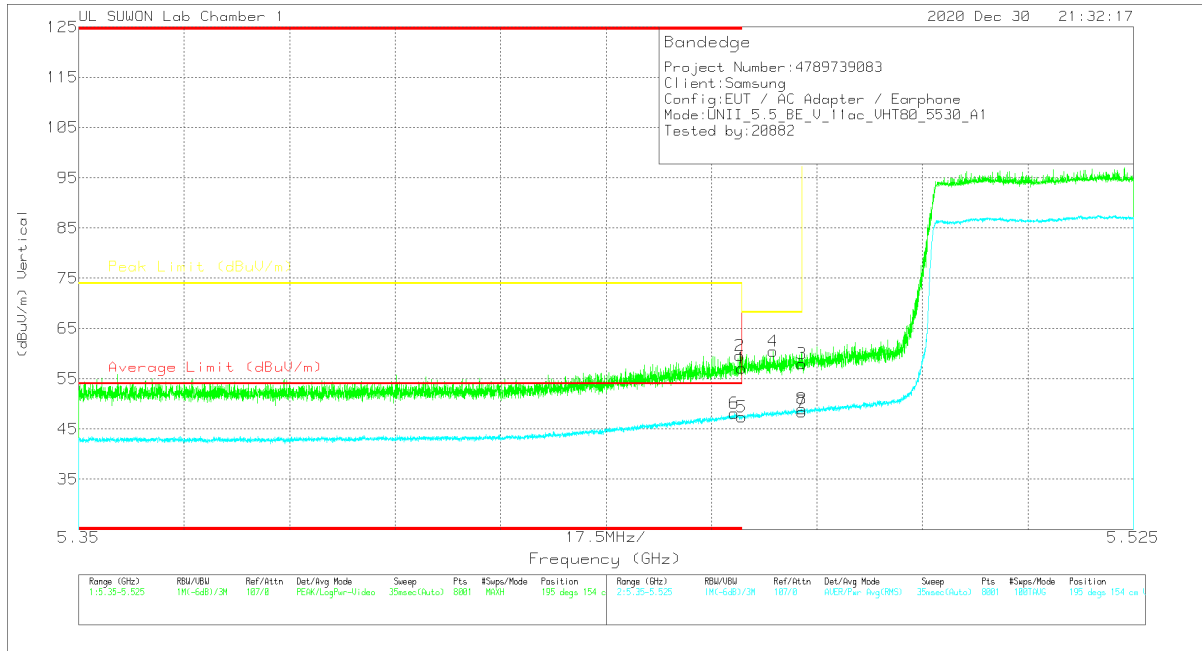


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.45999	37.88	PK	34.5	-21.3	0	51.08	-	-	74	-22.92	99	331	H
2	* 5.43203	42.01	PK	34.5	-21.4	0	55.11	-	-	74	-18.89	99	331	H
3	5.46998	39.08	PK	34.5	-21.3	0	52.38	-	-	68.2	-15.92	99	331	H
4	* 5.46438	41.41	PK	34.5	-21.3	0	54.61	-	-	68.2	-13.59	99	331	H
5	* 5.45999	29.62	RMS	34.5	-21.3	-17	42.99	54	-11.01	-	-	99	331	H
6	* 5.45955	30.04	RMS	34.5	-21.3	-17	43.41	54	-10.59	-	-	99	331	H
7	5.46998	30.04	RMS	34.5	-21.3	-17	43.41	-	-	-	-	99	331	H
8	5.46963	30.43	RMS	34.5	-21.3	-17	43.8	-	-	-	-	99	331	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak detector
 RMS - RMS detection

VERTICAL PEAK AND AVERAGE DATA



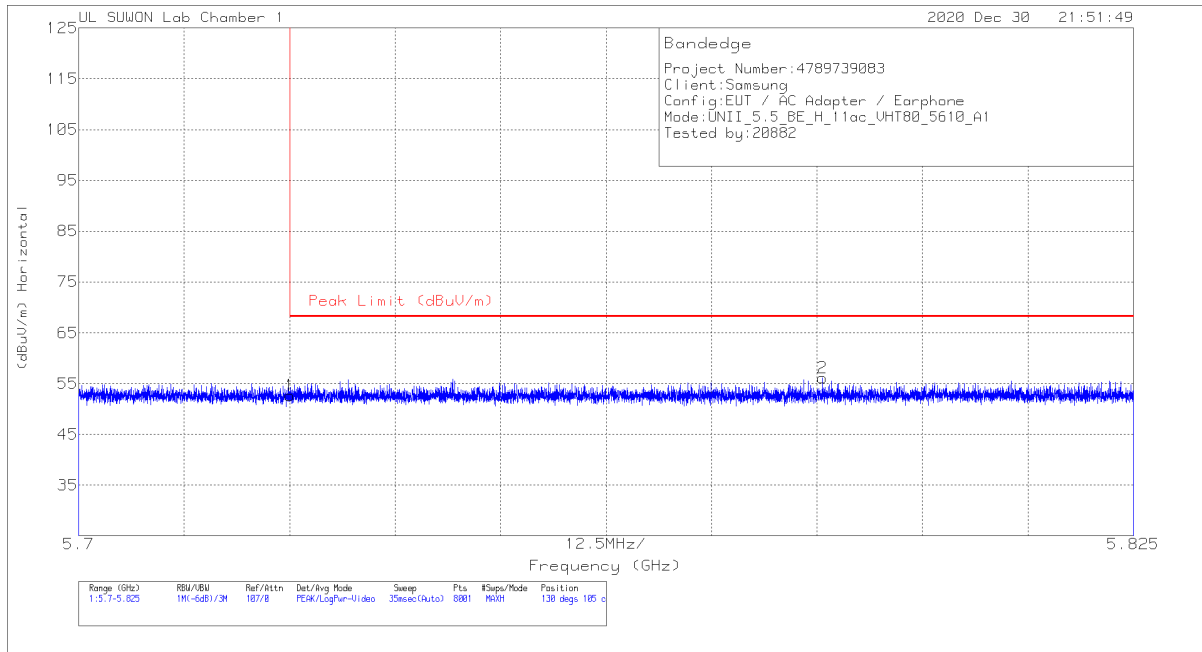
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (m)	Polarity
1	* 5.45999	43.94	PK	34.5	-21.3	0	57.14	-	-	74	-16.86	195	154	V
2	* 5.45966	46.46	PK	34.5	-21.3	0	59.66	-	-	74	-14.34	195	154	V
3	5.46998	44.75	PK	34.5	-21.3	0	57.95	-	-	68.2	-10.25	195	154	V
4	5.46519	47.27	PK	34.5	-21.3	0	60.47	-	-	68.2	-7.73	195	154	V
5	* 5.45999	34.03	RMS	34.5	-21.3	.17	47.4	54	-6.6	-	-	195	154	V
6	* 5.45874	34.74	RMS	34.5	-21.3	.17	48.11	54	-5.89	-	-	195	154	V
7	5.46998	35.08	RMS	34.5	-21.3	.17	48.45	-	-	-	-	195	154	V
8	5.46994	35.61	RMS	34.5	-21.3	.17	48.98	-	-	-	-	195	154	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak detector
 RMS - RMS detection

BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

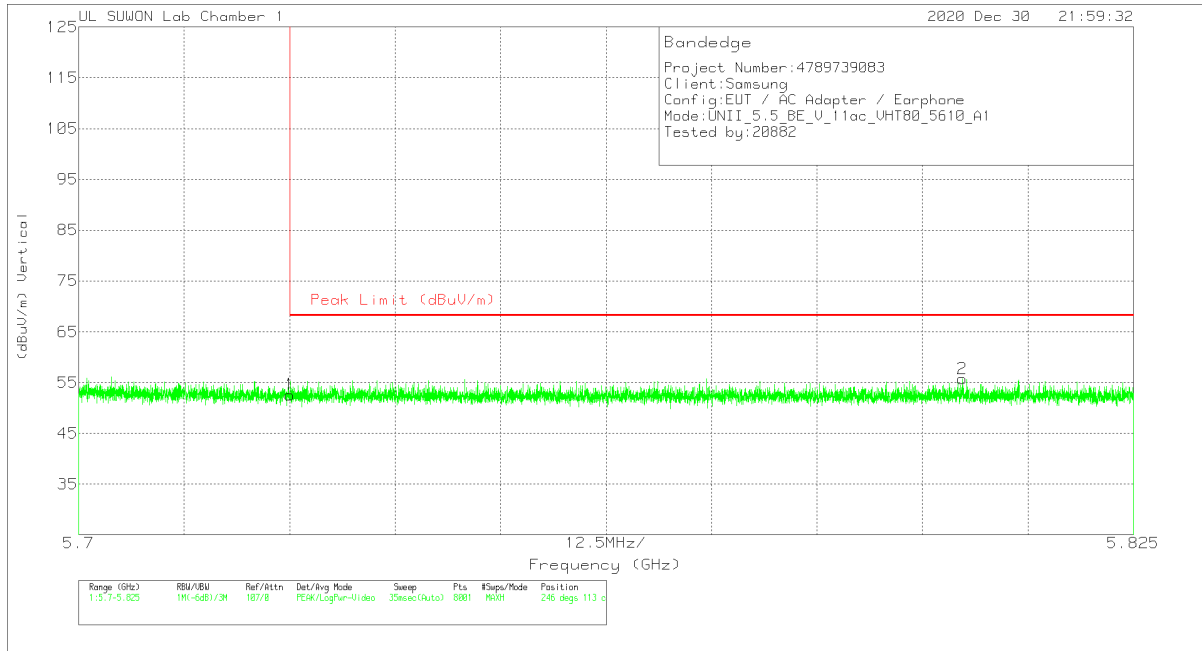


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72502	38.67	Pk	34.9	-20.9	0	52.67	68.2	-15.53	130	105	H
2	5.78817	42.04	Pk	35	-20.9	0	56.14	68.2	-12.06	130	105	H

Pk - Peak detector

VERTICAL PEAK AND AVERAGE DATA



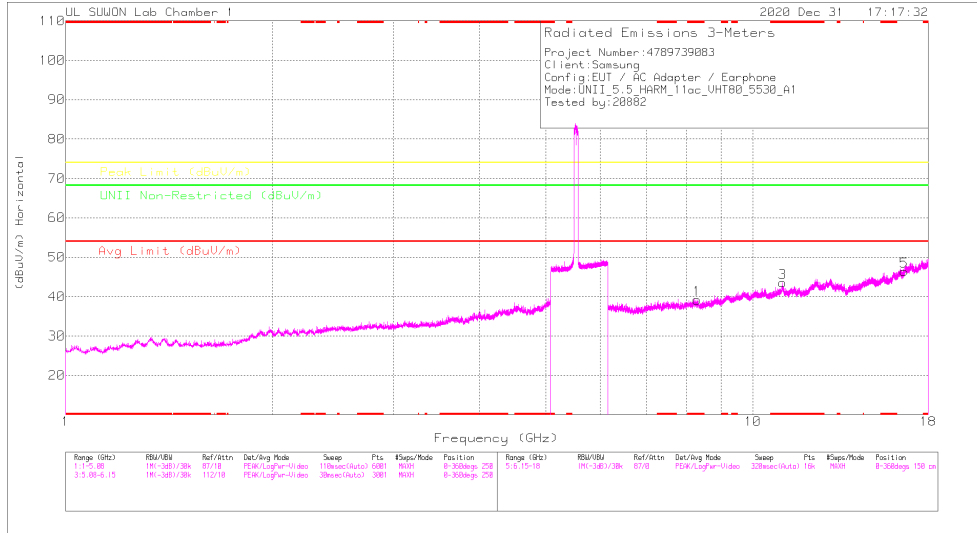
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72502	38.61	Pk	34.9	-20.9	0	52.61	68.2	-15.59	246	113	V
2	5.8047	41.76	Pk	35	-21	0	55.76	68.2	-12.44	246	113	V

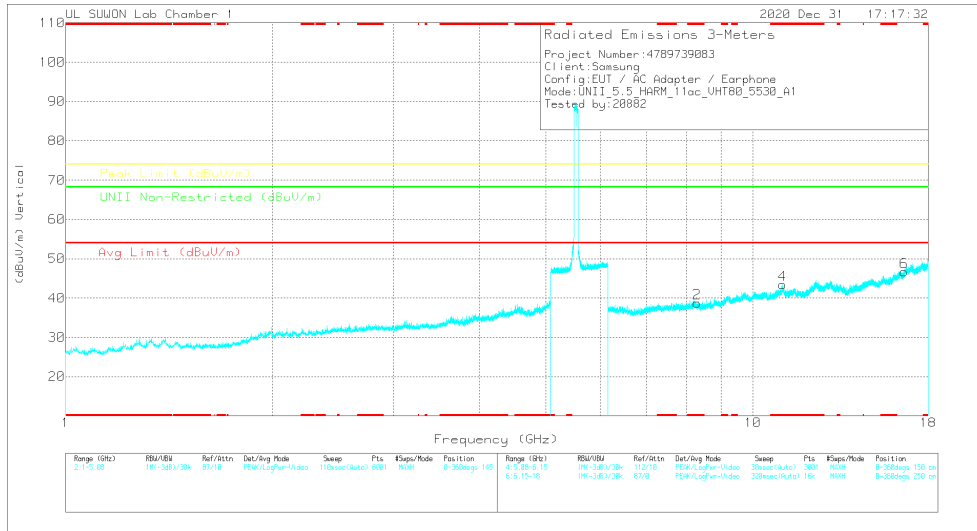
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL 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.

LOW CHANNEL DATA

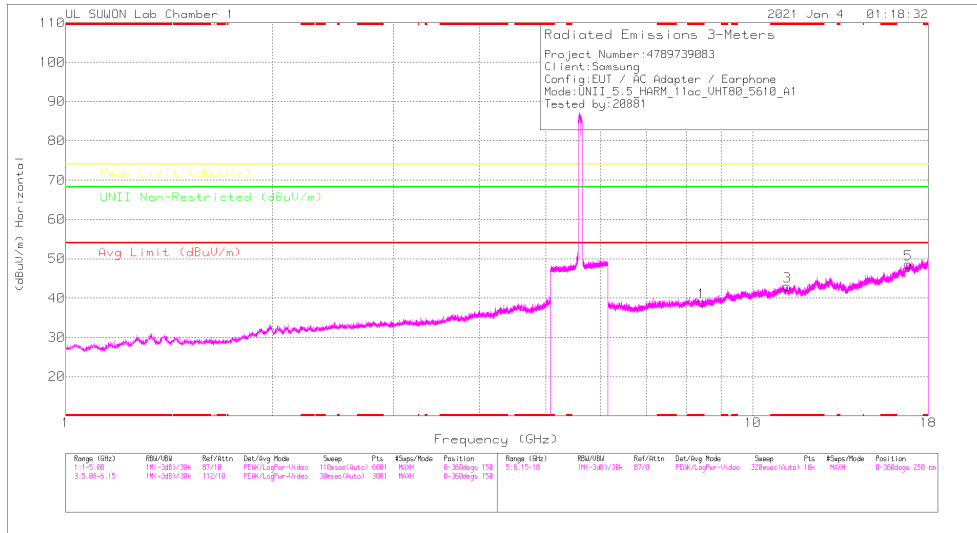
Radiated Emissions

Frequency (GHz)	Meas Reading (dBuV)	Det	317_0016B717	6GHz_HPS(S)	DC Corr (dB)	Corrected Reading (dBuV)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Asmth (dBSpl)	Height (cm)	Polarity
* 8.30075	36.93	PKU	36.3	-24.9	0	48.33	-	-	74	-25.67	-	-	360	100	H
* 8.29605	37.37	PKU	36.3	-24.9	0	48.77	-	-	74	-25.23	-	-	360	100	V
* 11.05916	35.85	PKU	38.3	-21.8	0	52.35	-	-	74	-21.65	-	-	360	100	H
* 11.05969	35.77	PKU	38.3	-21.7	0	52.37	-	-	74	-21.63	-	-	360	100	V
16.59135	35.76	PKU	41.3	-19.1	0	57.96	-	-	-	-	68.2	-10.24	360	100	H
16.59116	36.15	PKU	41.3	-19.1	0	58.35	-	-	-	-	68.2	-9.85	360	100	V

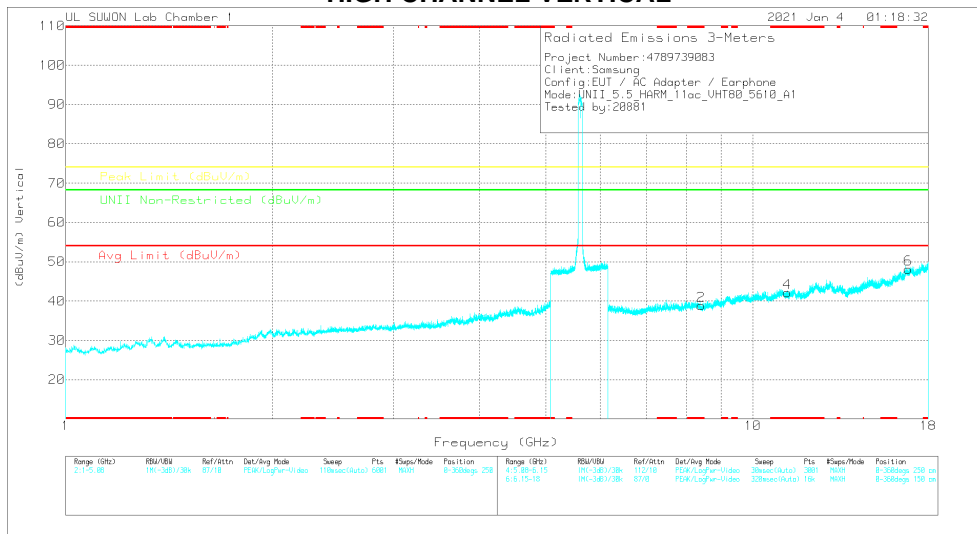
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL 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.

HIGH CHANNEL DATA

Radiated Emissions

Frequency (GHz)	Max Reading (dBuV)	Det	317.00160717	@GHz_HF(dB)	DC Corr (dB)	Conducted Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Adm'n (Deg)	Height (cm)	Polarity
* 8.42253	39.04	PK-U	36.2	-25.7	0	49.54	-	-	74	-24.46	-	-	0	100	H
* 8.42316	39.88	PK-U	36.2	-25.7	0	49.39	-	-	74	-24.62	-	-	0	100	V
* 11.21835	36.7	PK-U	38.4	-22.2	0	52.9	-	-	74	-21.1	-	-	0	100	H
* 11.21955	36.85	PK-U	38.4	-22.2	0	53.05	-	-	74	-20.95	-	-	0	100	V
16.82804	35.11	PK-U	41.6	-18.5	0	58.21	-	-	-	-	68.2	-9.99	0	100	H
16.82999	35.2	PK-U	41.6	-18.5	0	58.3	-	-	-	-	68.2	-9.9	0	100	V

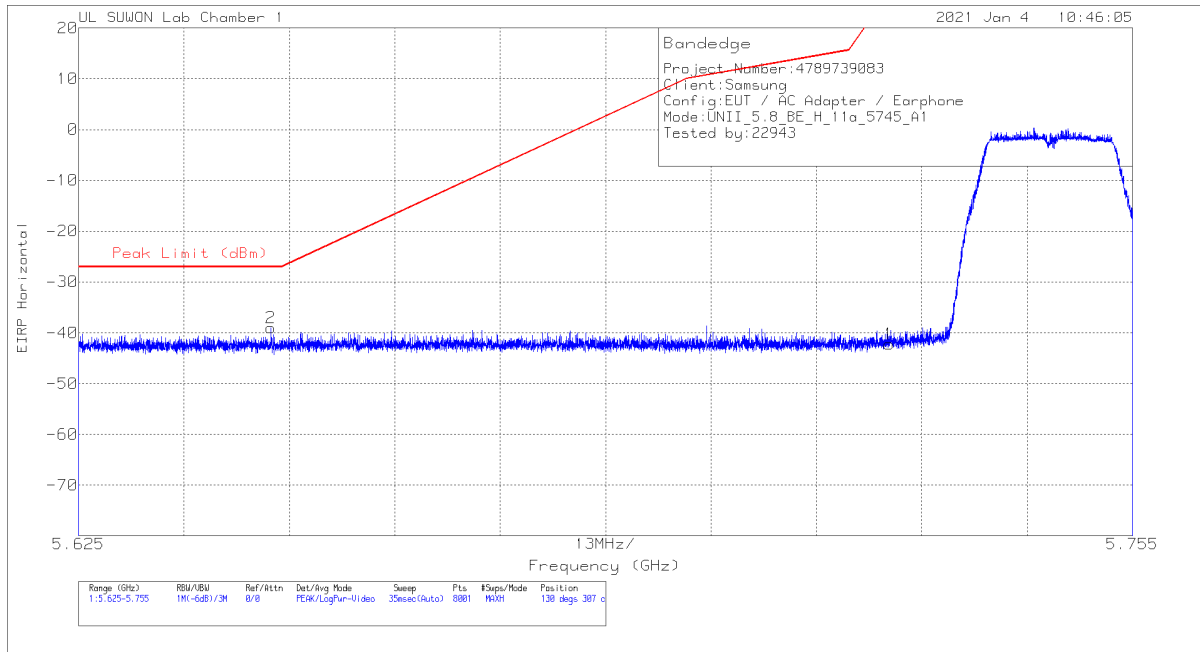
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK-U - U-NII: Maximum Peak

11.4. 5.8 GHz

11.4.1. TX ABOVE 1GHz 802.11a 1Tx MODE IN THE 5.8GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK DATA

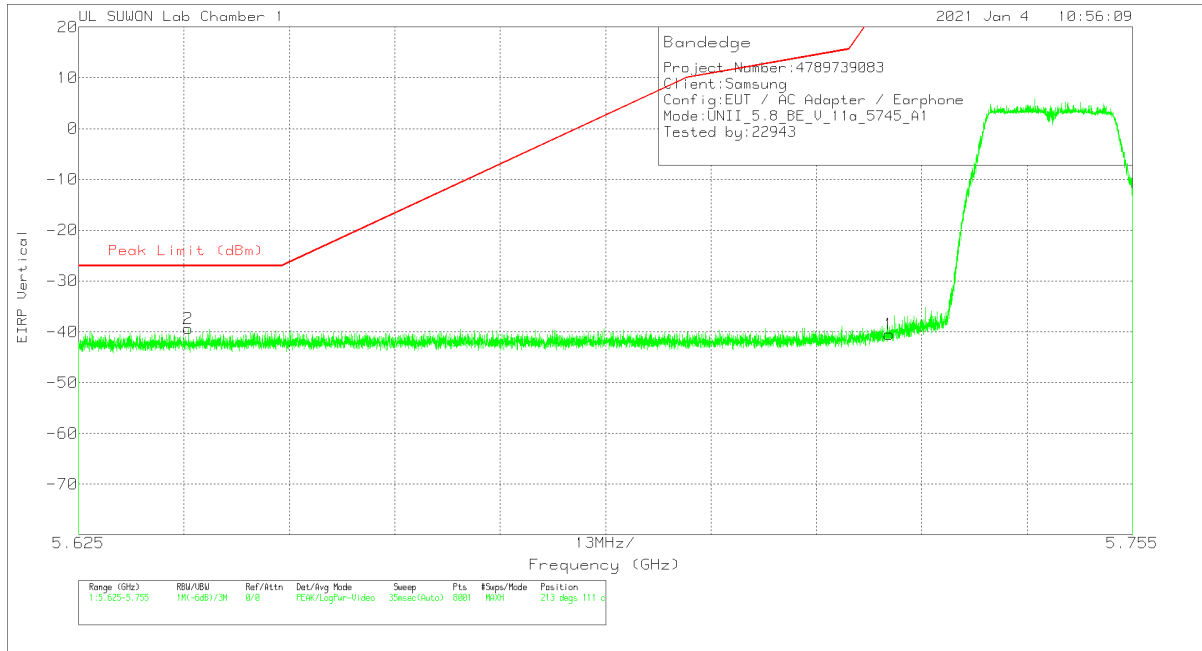


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00168717	10dB_ATT(dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72499	-68.06	Pk	34.9	-20.9	11.8	0	-42.26	26.97	-69.23	130	307	H
2	5.64874	-64.71	Pk	34.8	-20.9	11.8	0	-39.01	-27	-12.01	130	307	H

Pk - Peak detector

VERTICAL PEAK DATA



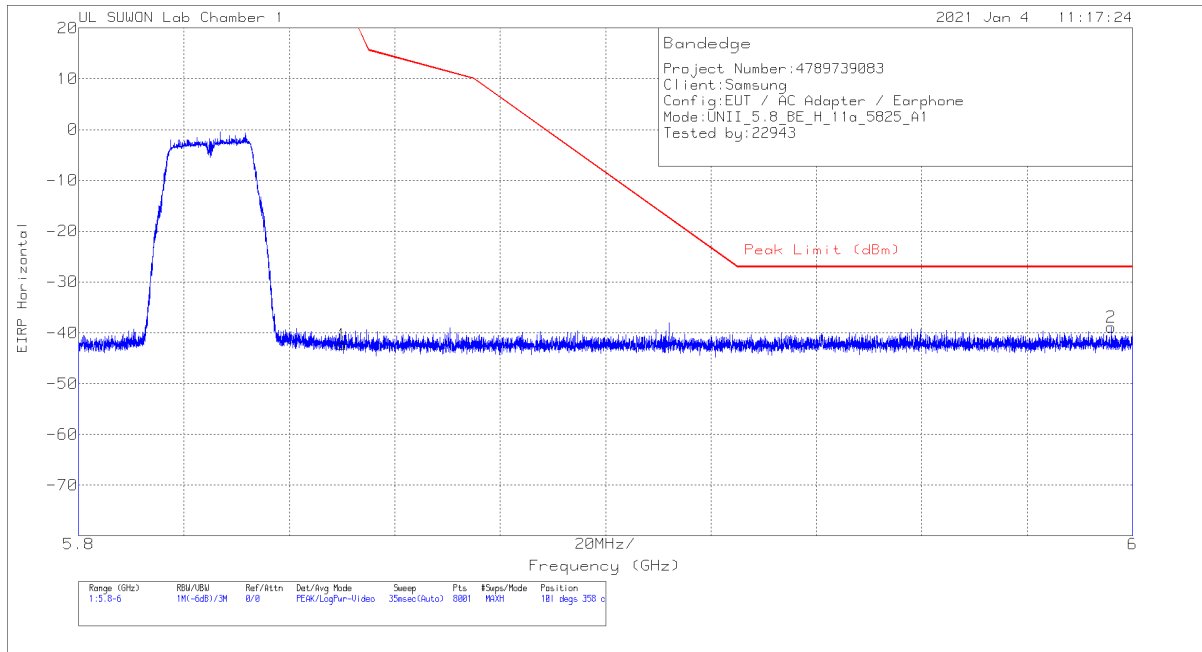
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00168717	10dB_ATT[dB]	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72499	-66.32	Pk	34.9	-20.9	11.8	0	-40.52	26.97	-67.49	213	111	V
2	5.6385	-64.89	Pk	34.7	-21	11.8	0	-39.39	-27	-12.39	213	111	V

Pk - Peak detector

BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK DATA

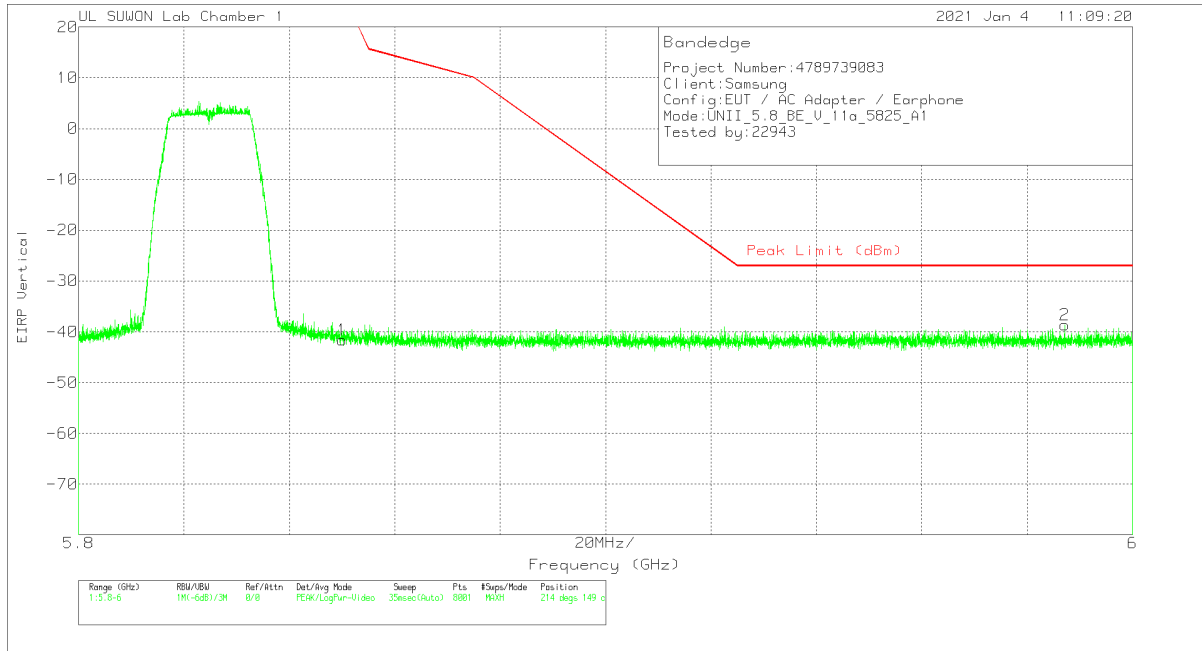


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00168717	10dB_ATT[dB]	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85003	-68.31	Pk	35.1	-20.9	11.8	0	-42.31	26.94	-69.25	101	358	H
2	5.99598	-65.27	Pk	35.2	-20.6	11.8	0	-38.87	-27	-11.87	101	358	H

Pk - Peak detector

VERTICAL PEAK DATA



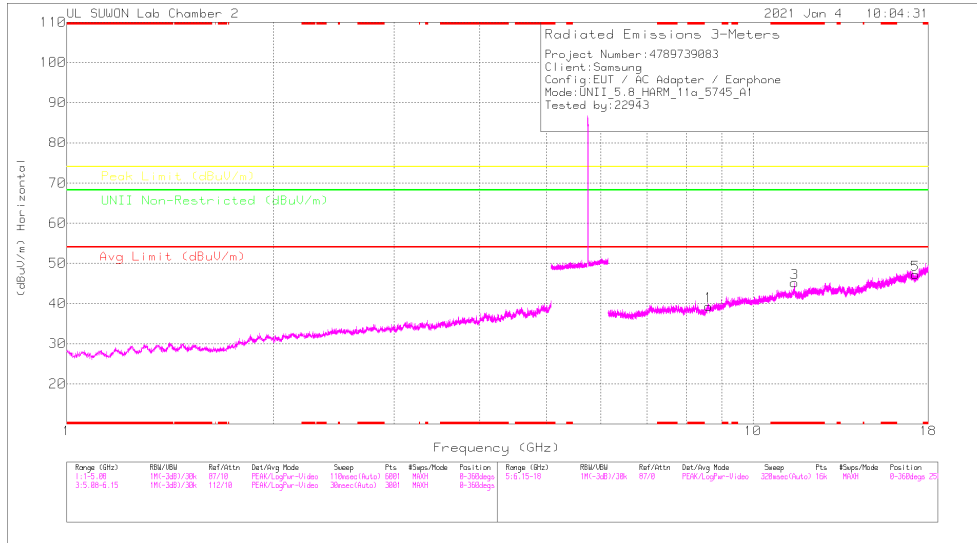
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00168717	10dB_ATT[dB]	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85003	-67.62	Pk	35.1	-20.9	11.8	0	-41.62	26.94	-68.56	214	149	V
2	5.98713	-65	Pk	35.2	-20.6	11.8	0	-38.6	-27	-11.6	214	149	V

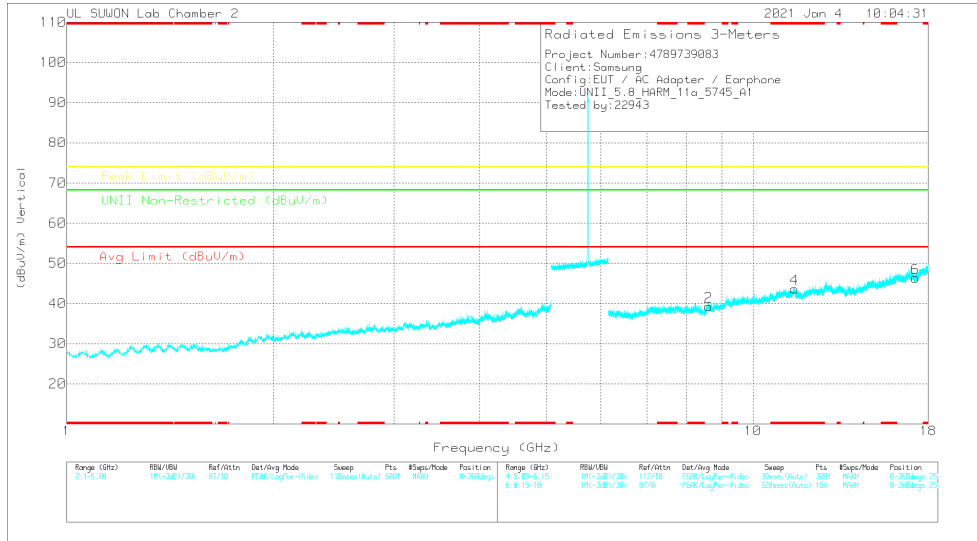
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL 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.

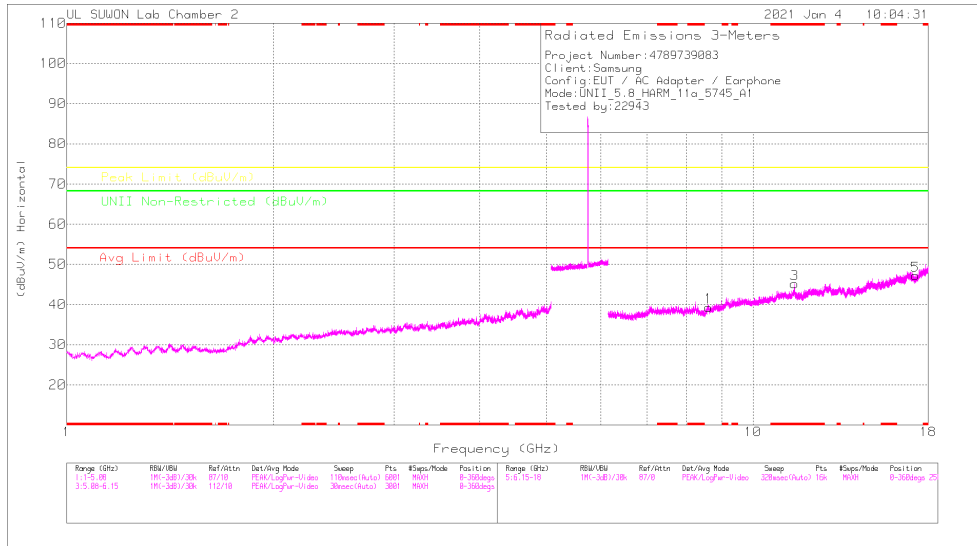
LOW CHANNEL DATA

Radiated Emissions

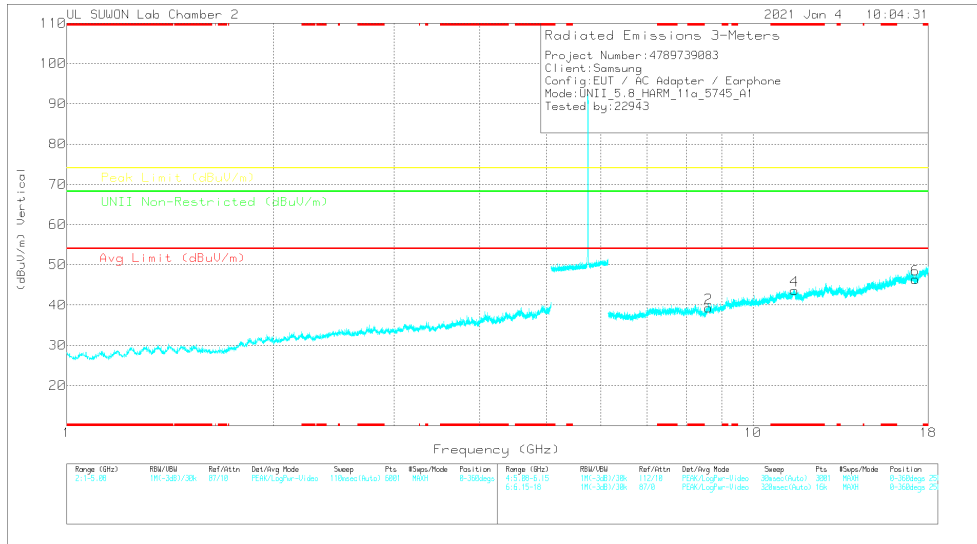
Frequency (GHz)	Obs'd Reading (dBuV)	Det	317_00168724	6GHz_HPSRB	DC Corr (dB)	Corrected Reading (dBuV)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Adm'd (dBgs)	Height (cm)	Polarity
8.61621	34.59	PK-U	36.1	-20.8	0	49.89	-	-	-	-	68.2	-18.31	0	100	H
8.61686	34.55	PK-U	36.1	-20.8	0	49.85	-	-	-	-	68.2	-18.35	0	100	V
* 11.49266	35.37	PK-U	38.3	-19.2	0	54.47	-	-	74	-19.53	-	-	127	101	H
* 11.49114	23.08	ADR	38.3	-19.1	-15	42.43	54	-11.57	-	-	-	-	127	101	H
* 11.49172	34.99	PK-U	38.3	-19.2	0	54.09	-	-	74	-19.91	-	-	180	106	V
* 11.491	22.91	ADR	38.3	-19.1	-15	42.26	54	-11.74	-	-	-	-	180	106	V
17.23745	34.06	PK-U	40.9	-18.2	0	56.76	-	-	-	-	68.2	-11.44	0	100	H
17.2384	34.69	PK-U	40.9	-18.3	0	57.29	-	-	-	-	68.2	-10.91	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

MID CHANNEL HORIZONTAL



MID CHANNEL 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.

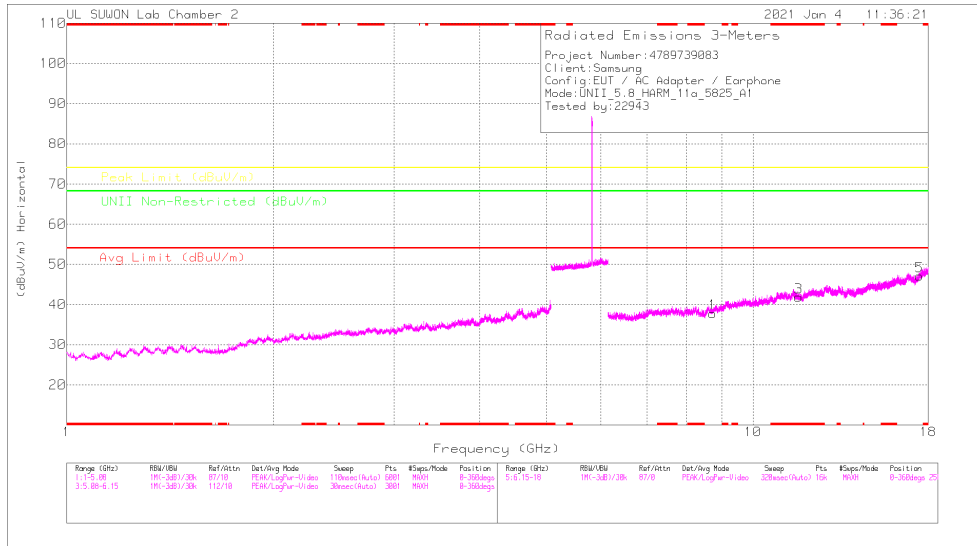
MID CHANNEL DATA

Radiated Emissions

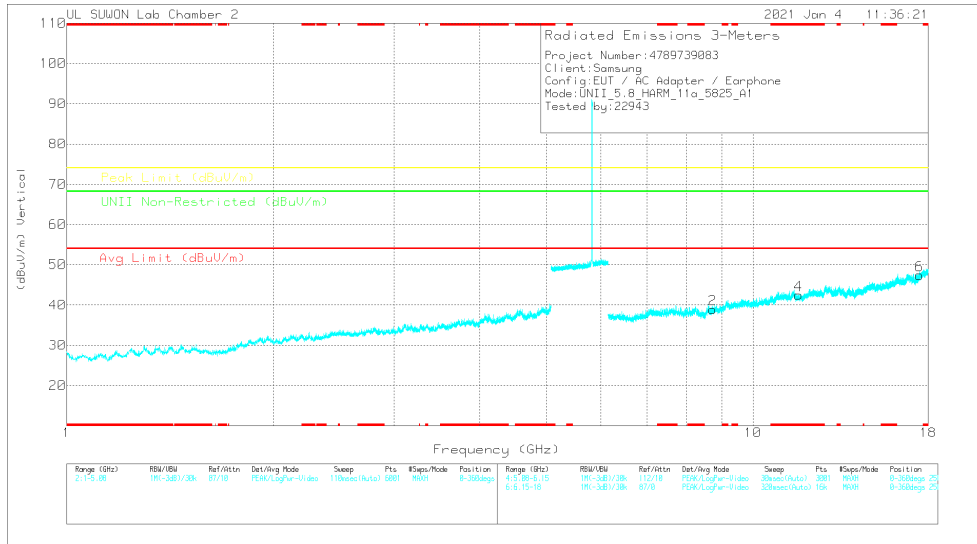
Frequency (GHz)	Major Reading (dBuV)	Det	317_00168724	ISGZL_HPSSE	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Deg)	Height (m)	Polarity
8.61621	34.59	PK-U	36.1	-20.8	0	49.89	-	-	-	-	68.2	-18.31	0	100	H
8.61686	34.55	PK-U	36.1	-20.8	0	49.85	-	-	-	-	68.2	-18.35	0	100	V
* 11.49266	35.37	PK-U	38.3	-19.2	0	54.47	-	-	74	-19.53	-	-	127	101	H
* 11.49114	23.08	ADR	38.3	-19.1	15	42.43	54	-11.57	-	-	-	-	127	101	H
* 11.48712	34.99	PK-U	38.3	-19.2	0	54.09	-	-	74	-19.91	-	-	180	106	V
* 11.491	22.91	ADR	38.3	-19.1	15	42.26	54	-11.74	-	-	-	-	180	106	V
17.23745	34.06	PK-U	40.9	-18.2	0	56.76	-	-	-	-	68.2	-11.44	0	100	H
17.2384	34.69	PK-U	40.9	-18.3	0	57.29	-	-	-	-	68.2	-10.91	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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL 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.

HIGH CHANNEL DATA

Radiated Emissions

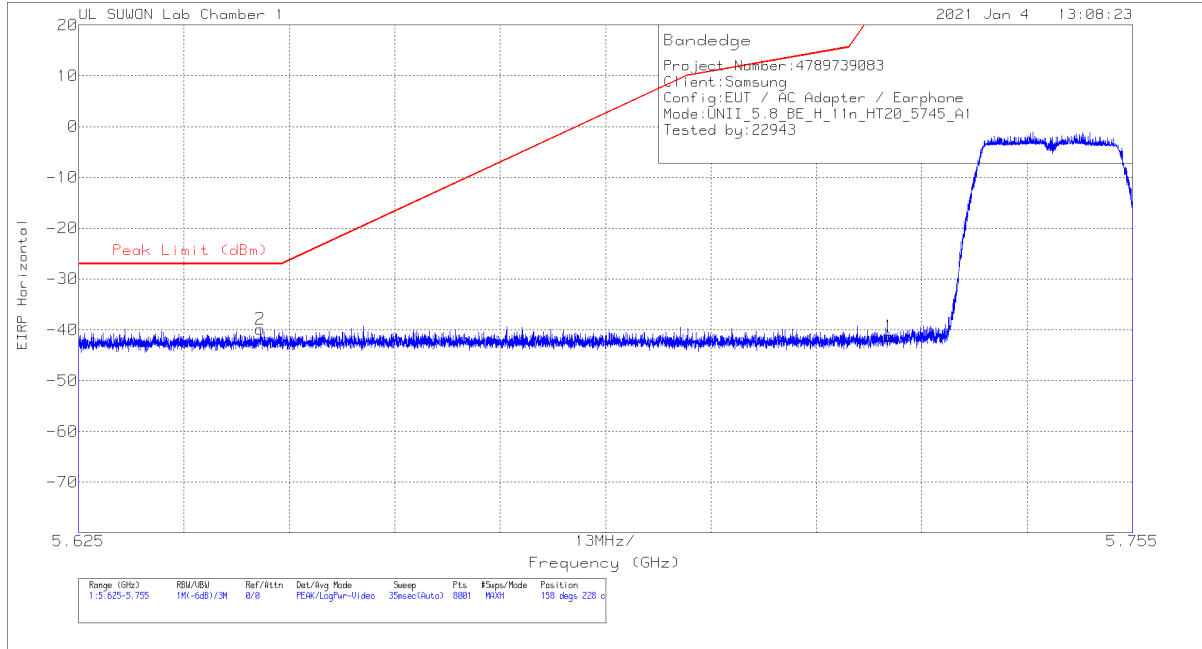
Frequency (GHz)	Mean Reading (dBm)	Det	317_00168724	60Hz_HPS(B)	DC Corr (dB)	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)	Peak Limit (dBm)	Margin (dB)	UNII Non-Restricted (dBm)	Margin (dB)	Altitude (dBm)	Height (m)	Polarity
8.73559	35.07	PK-U	36.2	-22.6	0	49.67	-	-	-	-	68.2	-18.53	0	100	H
8.73857	35.71	PK-U	36.2	-22.5	0	49.41	-	-	-	-	68.2	-18.79	0	100	V
* 11.6507	33.45	PK-U	38.4	-19.2	0	52.65	-	-	74	-21.35	-	-	0	100	H
* 11.64966	33.5	PK-U	38.4	-19.3	0	52.6	-	-	74	-21.4	-	-	0	100	V
17.47493	34.62	PK-U	41.1	-17.9	0	57.82	-	-	-	-	68.2	-10.38	0	100	H
17.47649	35.26	PK-U	41.2	-17.7	0	58.76	-	-	-	-	68.2	-9.44	0	100	V

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

11.4.2. TX ABOVE 1GHz 802.11n HT20 1Tx MODE IN THE 5.8GHz BAND

BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK DATA

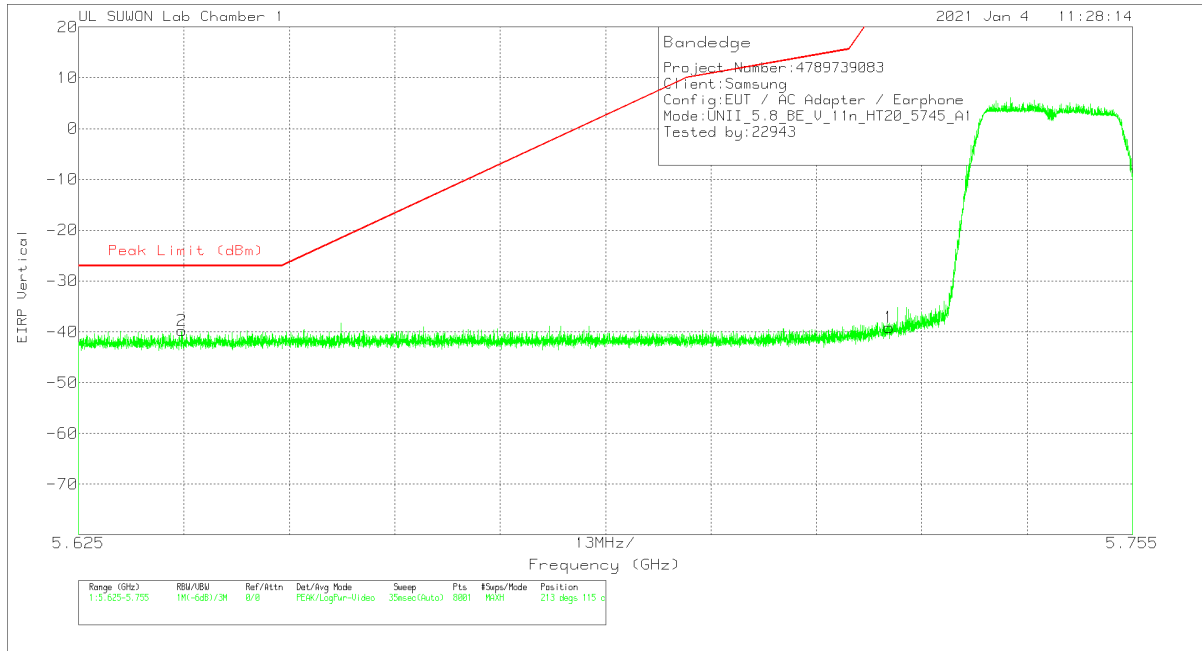


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00168717	10dB_ATT[dB]	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72499	-67.1	Pk	34.9	-20.9	11.8	0	-41.3	26.97	-68.27	158	228	H
2	5.64738	-65.52	Pk	34.8	-20.9	11.8	0	-39.82	-27	-12.82	158	228	H

Pk - Peak detector

VERTICAL PEAK DATA



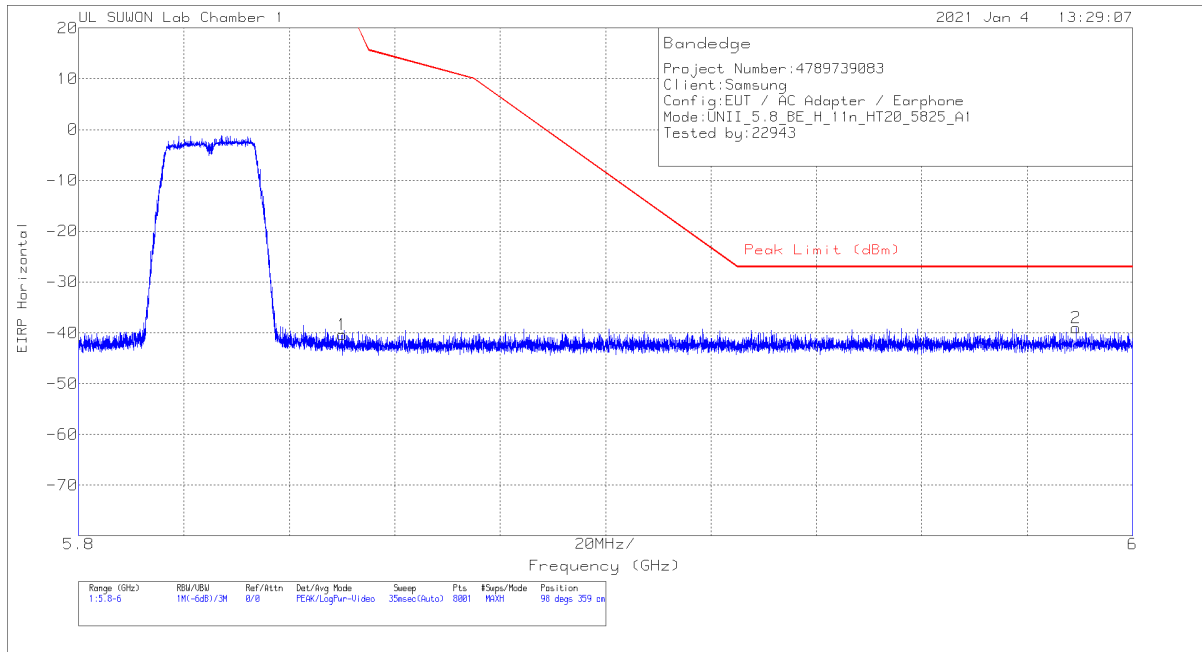
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00168717	10dB_ATT[dB]	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72499	-64.96	Pk	34.9	-20.9	11.8	0	-39.16	26.97	-66.13	213	115	V
2	5.63771	-65.2	Pk	34.7	-21	11.8	0	-39.7	-27	-12.7	213	115	V

Pk - Peak detector

BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK DATA

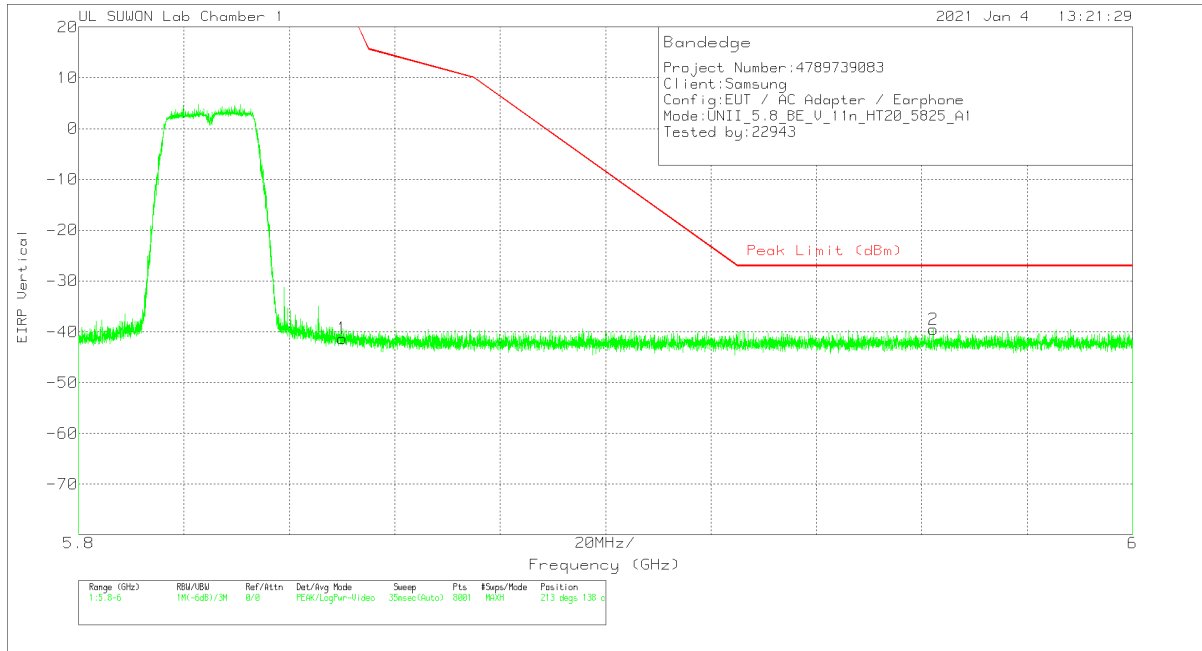


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00168717	10dB_ATT[dB]	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85003	-66.36	Pk	35.1	-20.9	11.8	0	-40.36	26.94	-67.3	98	359	H
2	5.98928	-65.57	Pk	35.2	-20.5	11.8	0	-39.07	-27	-12.07	98	359	H

Pk - Peak detector

VERTICAL PEAK DATA



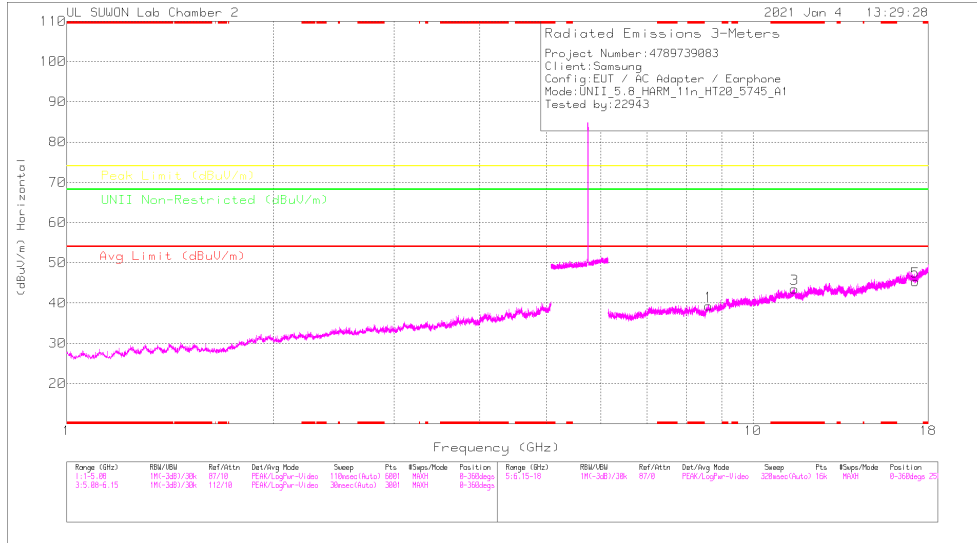
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00168717	10dB_ATT[dB]	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85003	-67.3	Pk	35.1	-20.9	11.8	0	-41.3	26.94	-68.24	213	138	V
2	5.96223	-65.78	Pk	35.2	-20.7	11.8	0	-39.48	-27	-12.48	213	138	V

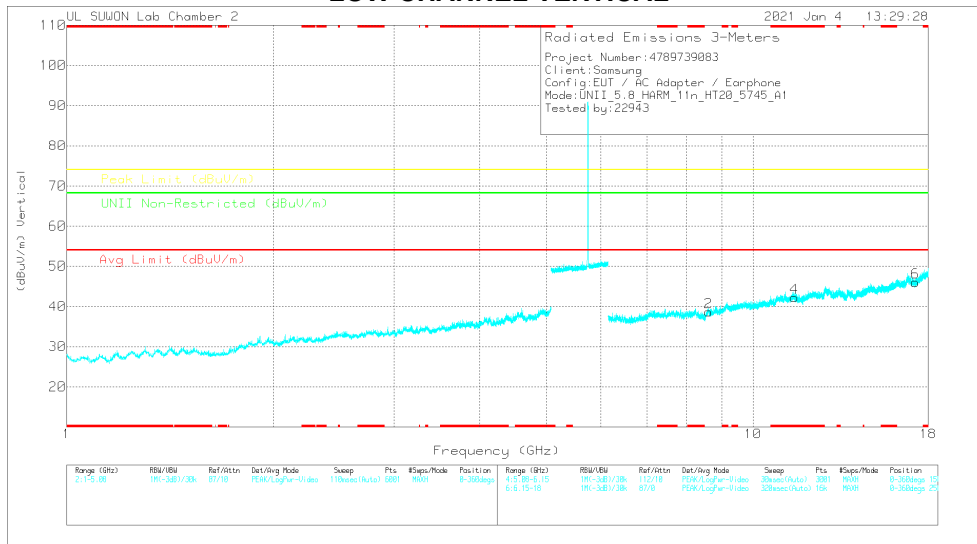
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL 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.

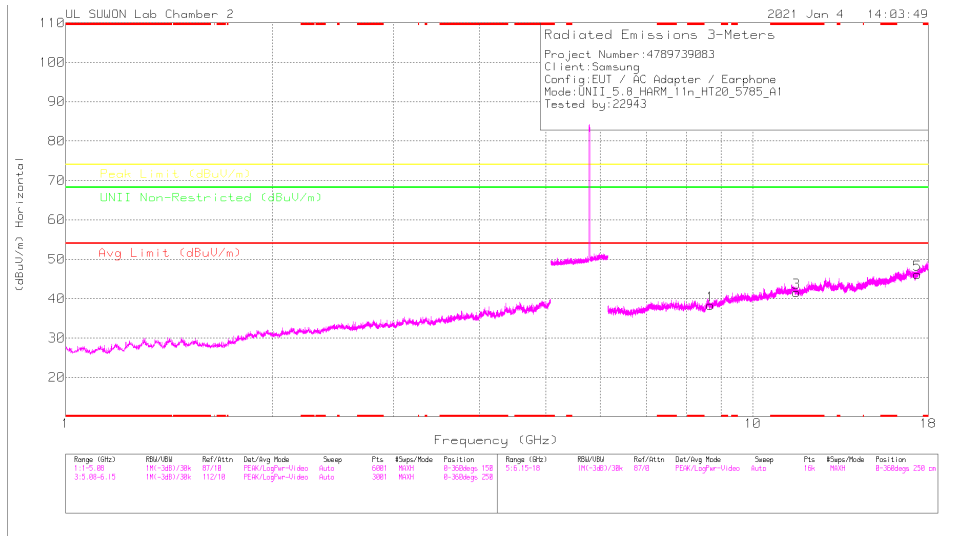
LOW CHANNEL DATA

Radiated Emissions

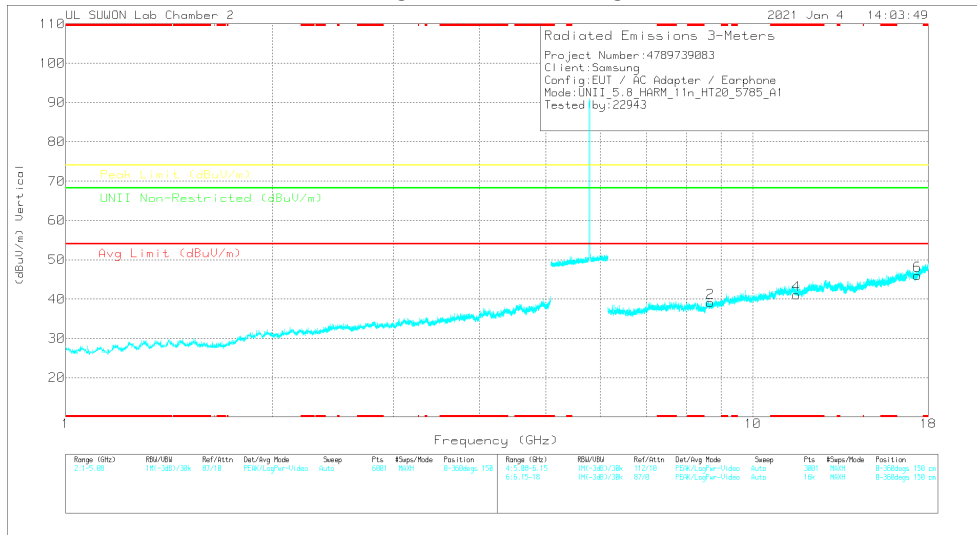
Frequency (GHz)	Obs'd Reading (dBuV)	Det	317_00168724	6GHz_HPSRB	DC Corr (dB)	Corrected Reading (dBuV)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
8.61882	34.22	PK-U	36.1	-21	0	49.32	-	-	-	-	68.2	-18.88	0	100	H
8.61809	34.12	PK-U	36.1	-21	0	49.22	-	-	-	-	68.2	-18.98	0	100	V
* 11.49096	34.3	PK-U	38.3	-19.1	0	53.5	-	-	74	-20.5	-	-	0	100	H
* 11.49227	34.22	PK-U	38.3	-19.1	0	53.42	-	-	74	-20.58	-	-	0	100	V
17.2335	34.51	PK-U	40.9	-18.2	0	57.21	-	-	-	-	68.2	-10.99	0	100	H
17.23459	34.55	PK-U	40.9	-18.3	0	57.15	-	-	-	-	68.2	-11.05	0	100	V

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

MID CHANNEL HORIZONTAL



MID CHANNEL 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.

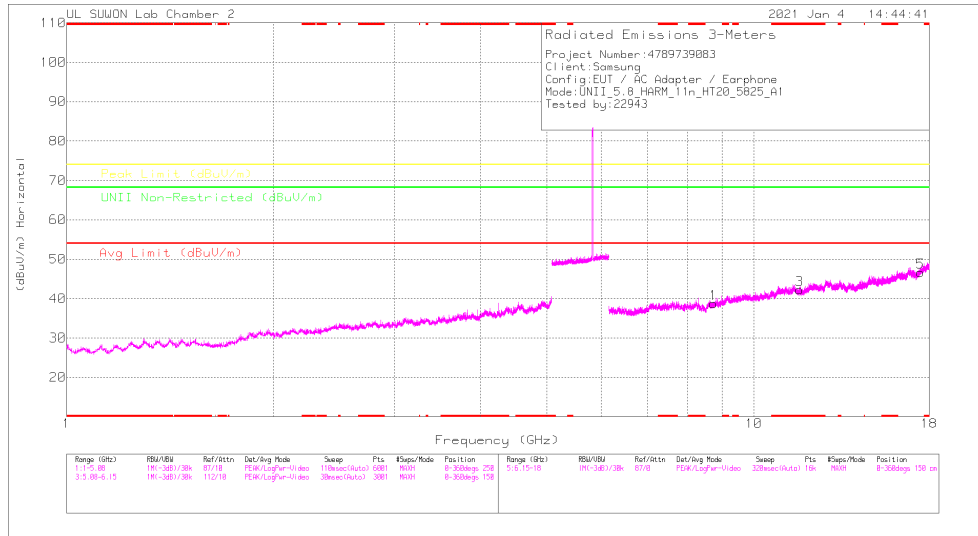
MID CHANNEL DATA

Radiated Emissions

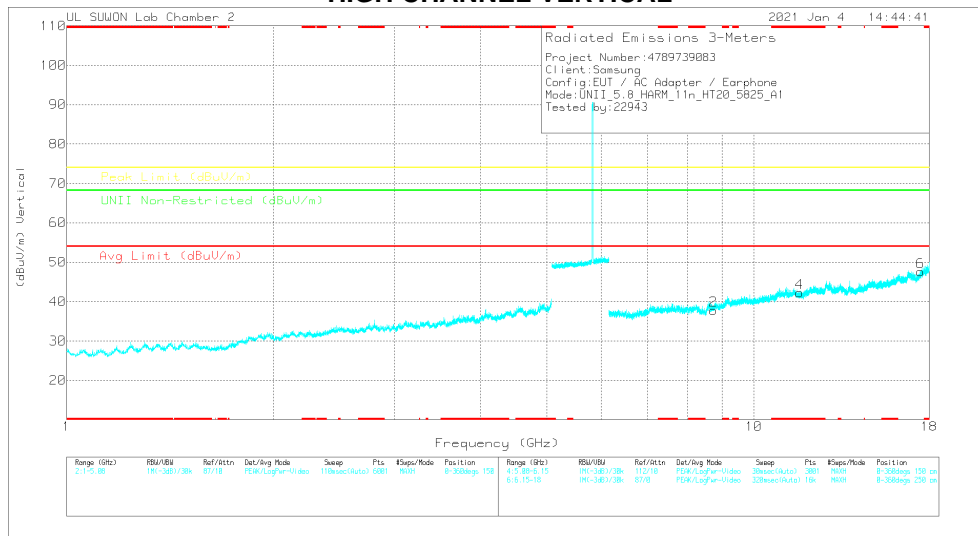
Frequency (GHz)	Mask Reading (dBuV)	Det	317_00168724	6GHz_HPS(B)	DC Corr (dB)	Composed Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Deg)	Height (m)	Polarity
8.6771	34.67	PK-U	36.2	-22	0	48.57	-	-	-	-	68.2	-19.33	0	100	H
8.6785	35.06	PK-U	36.2	-22	0	49.26	-	-	-	-	68.2	-18.94	0	100	V
* 11.57202	34.52	PK-U	38.3	-19.3	0	53.52	-	74	-20.48	-	-	-	0	100	H
* 11.57174	34	PK-U	38.3	-19.3	0	53	-	74	-21	-	-	-	0	100	V
17.35418	34.35	PK-U	41	-18.3	0	57.05	-	-	-	-	68.2	-11.15	0	100	H
17.35724	34.81	PK-U	41	-18.4	0	57.41	-	-	-	-	68.2	-10.79	0	100	V

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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL 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.

HIGH CHANNEL DATA

Radiated Emissions

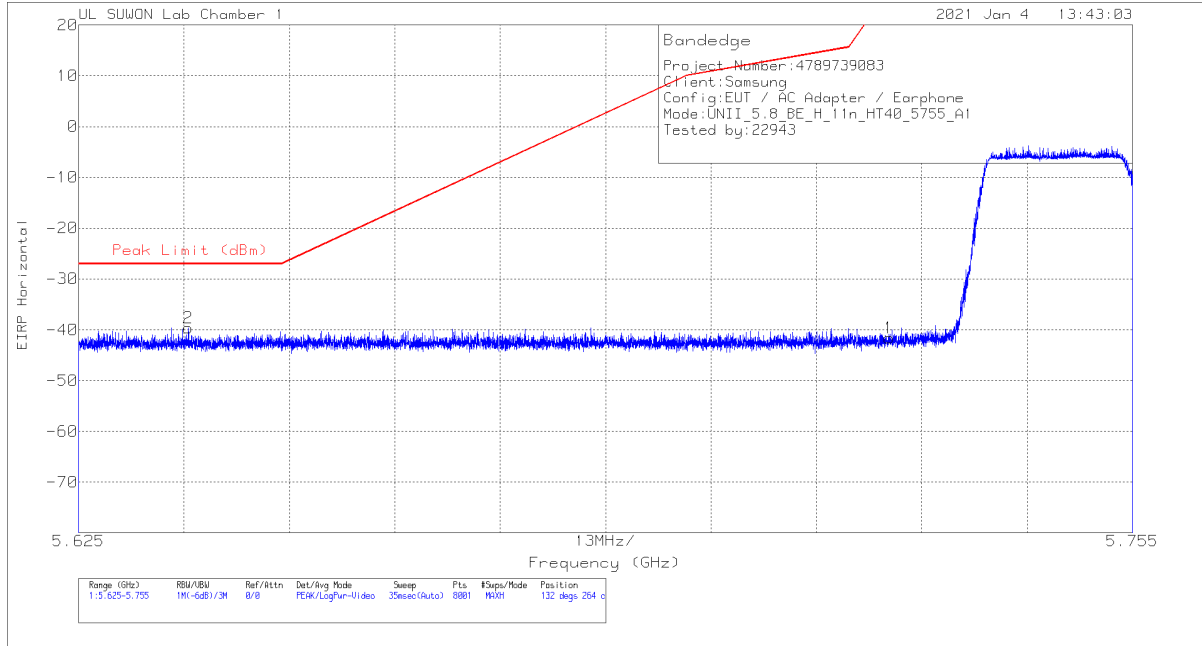
Frequency (GHz)	Meter Reading (dBuV)	Det	317_00168724	6GHz_HF(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Asimuth (Degs)	Height (cm)	Polarity
8.73739	34.97	PK-U	36.2	-22.6	0	48.57	-	-	-	-	68.2	-19.63	0	100	H
8.73629	35.65	PK-U	36.2	-22.6	0	49.25	-	-	-	-	68.2	-18.95	0	100	V
*11.65093	33.48	PK-U	38.4	-19.2	0	52.68	-	-	74	-21.32	-	-	0	100	H
*11.64817	33.63	PK-U	38.4	-19.2	0	52.83	-	-	74	-21.17	-	-	0	100	V
17.47394	34.84	PK-U	41.1	-17.8	0	58.14	-	-	-	-	68.2	-10.06	0	100	H
17.47702	34.63	PK-U	41.2	-17.7	0	58.13	-	-	-	-	68.2	-10.07	0	100	V

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

11.4.3. TX ABOVE 1GHz 802.11n HT40 1Tx MODE IN THE 5.8GHz BAND

BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK DATA

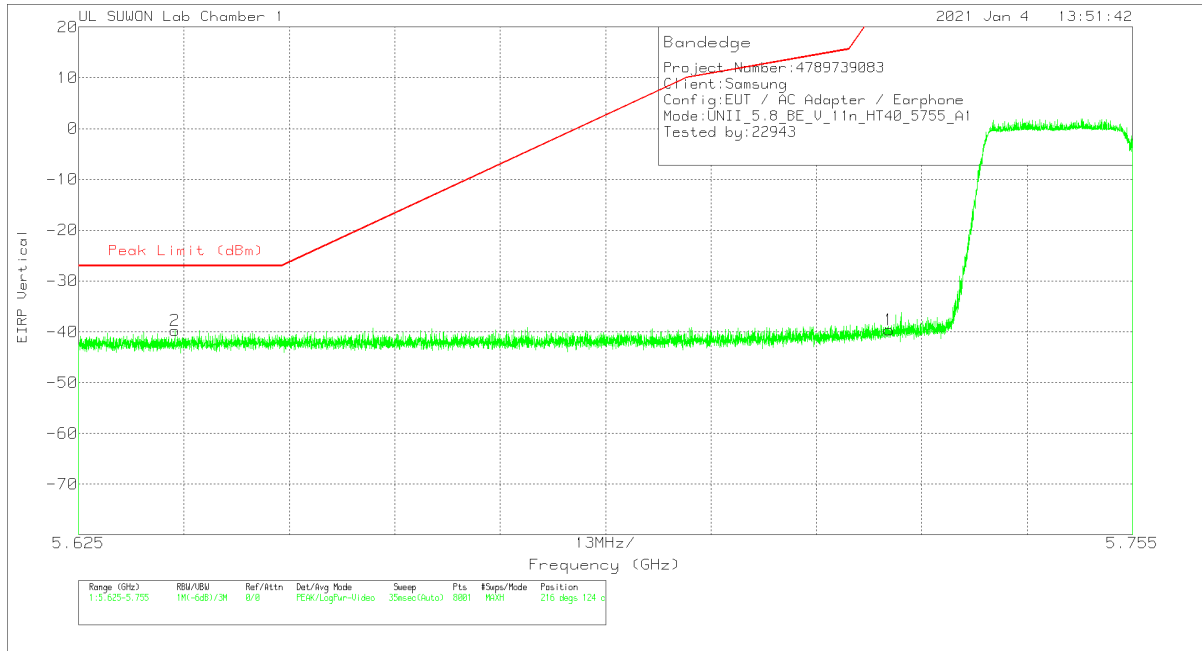


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00168717	10dB_ATT[dB]	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72499	-67.45	Pk	34.9	-20.9	11.8	0	-41.65	26.97	-68.62	132	264	H
2	5.6385	-65.1	Pk	34.7	-21	11.8	0	-39.6	-27	-12.6	132	264	H

Pk - Peak detector

VERTICAL PEAK DATA



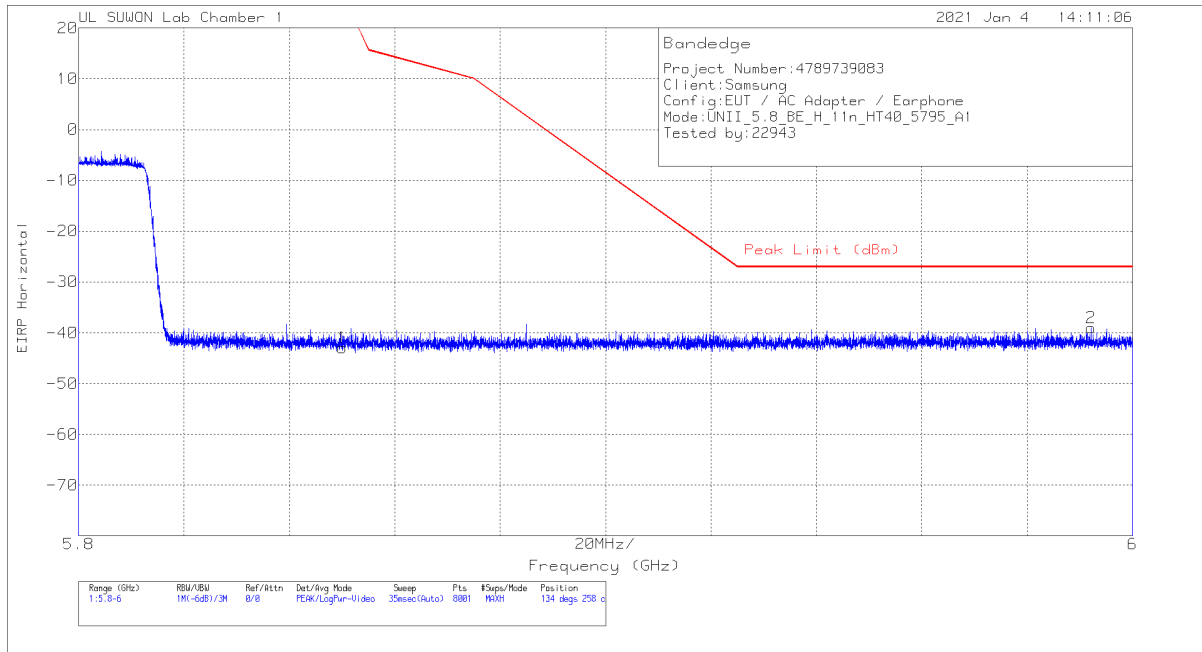
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00168717	10dB_ATT[dB]	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72499	-65.41	Pk	34.9	-20.9	11.8	0	-39.61	26.97	-66.58	216	124	V
2	5.63688	-65.23	Pk	34.7	-21	11.8	0	-39.73	-27	-12.73	216	124	V

Pk - Peak detector

BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK DATA

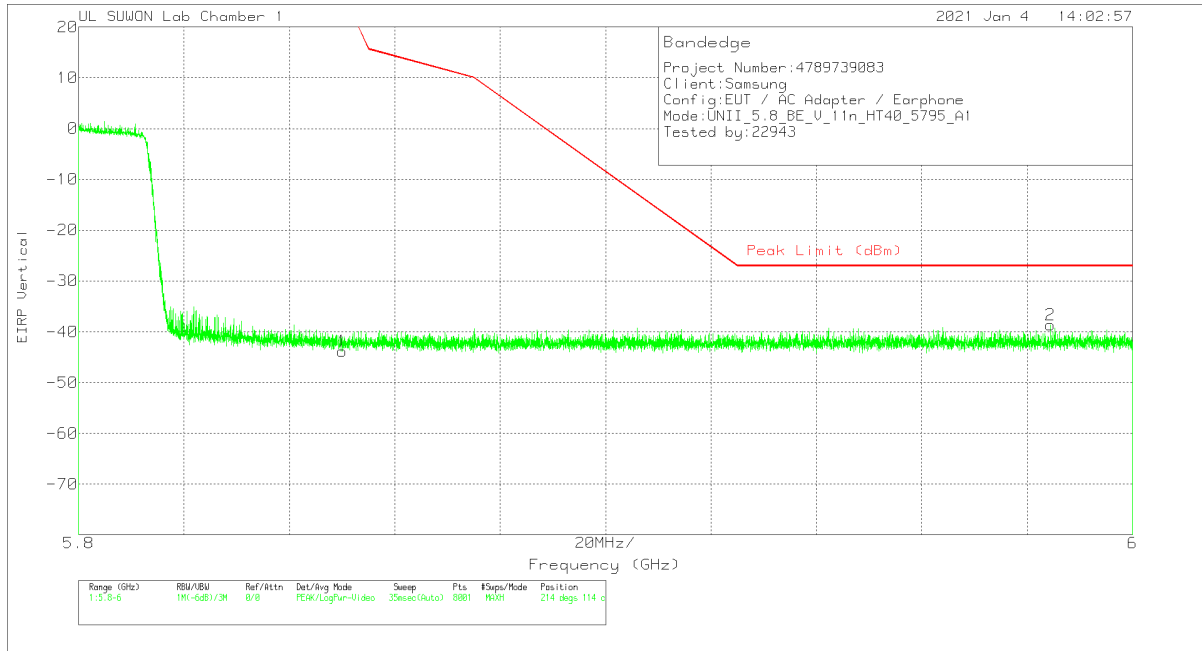


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00168717	10dB_ATT[dB]	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85003	-68.95	Pk	35.1	-20.9	11.8	0	-42.95	26.94	-69.89	134	258	H
2	5.99213	-65.42	Pk	35.2	-20.6	11.8	0	-39.02	-27	-12.02	134	258	H

Pk - Peak detector

VERTICAL PEAK DATA



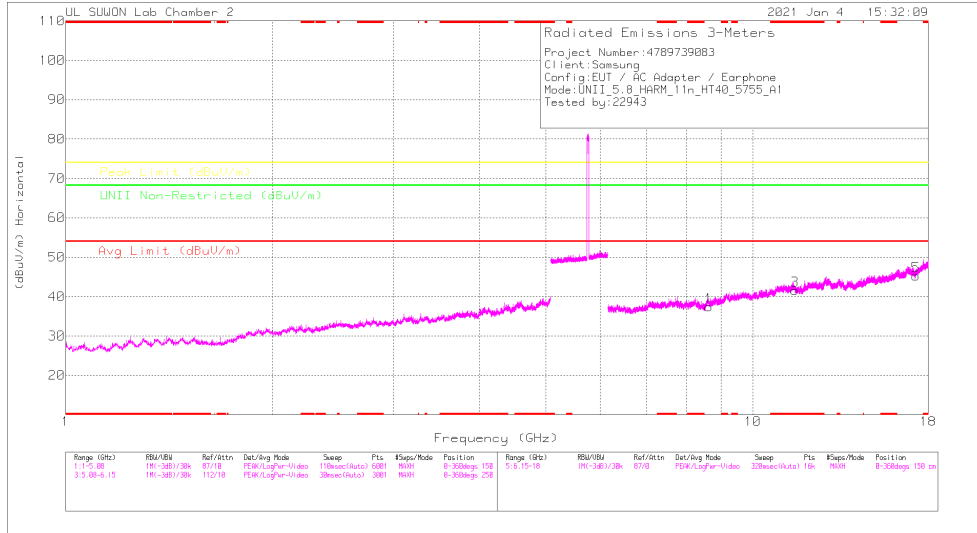
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00168717	10dB_ATT[dB]	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85003	-69.82	Pk	35.1	-20.9	11.8	0	-43.82	26.94	-70.76	214	114	V
2	5.9844	-64.99	Pk	35.2	-20.6	11.8	0	-38.59	-27	-11.59	214	114	V

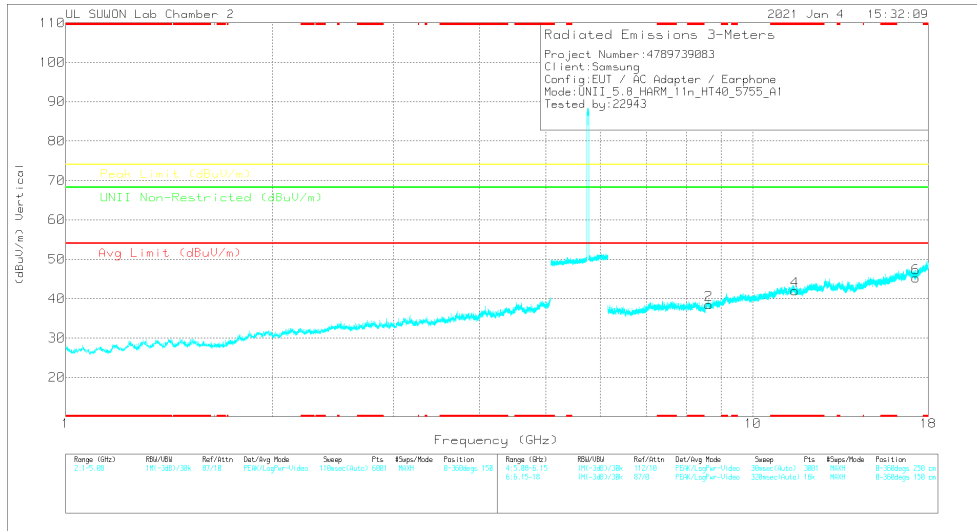
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL 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.

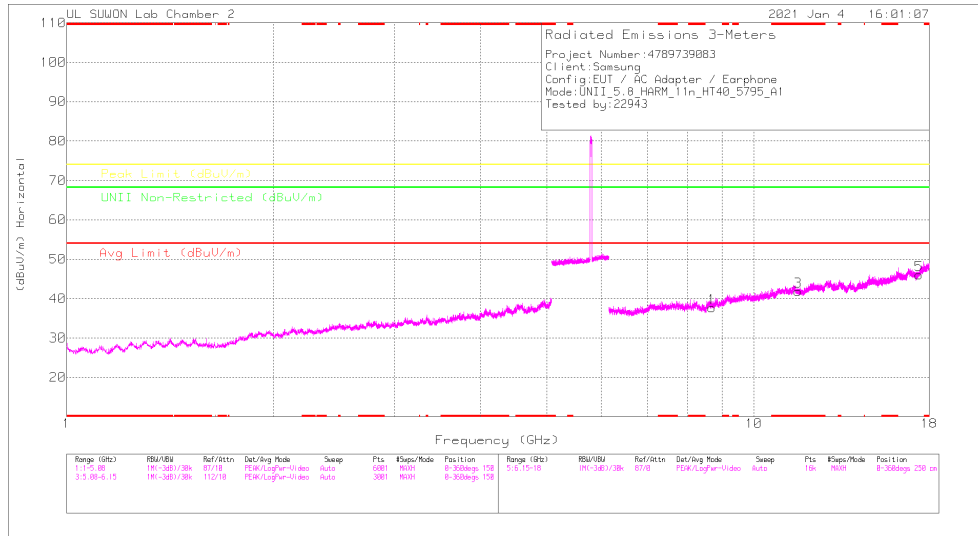
LOW CHANNEL DATA

Radiated Emissions

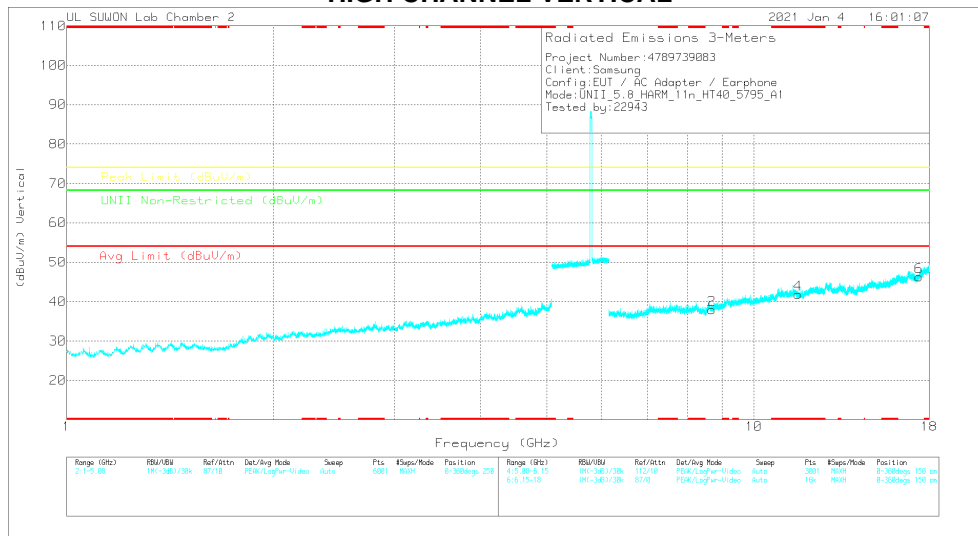
Frequency (GHz)	Meas Reading (dBuV)	Det	317_00168724	6GHz_HF(dB)	DC Cor (dB)	Corrected (dBuV)	Avg Limt (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
8.63081	35.03	PK-U	36.1	-21.3	0	49.83	-	-	-	-	68.2	-18.37	0	100	H
8.63176	34.84	PK-U	36.1	-21.2	0	49.74	-	-	-	-	68.2	-18.46	0	100	V
*11.51012	34.06	PK-U	38.3	-19.2	0	53.16	-	-	74	-20.84	-	-	0	100	H
*11.50974	33.98	PK-U	38.3	-19.2	0	53.08	-	-	74	-20.92	-	-	0	100	V
17.26463	33.8	PK-U	40.9	-18.4	0	56.3	-	-	-	-	68.2	-11.9	0	100	H
17.26319	34.92	PK-U	40.9	-18.4	0	57.42	-	-	-	-	68.2	-10.78	0	100	V

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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL 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.

HIGH CHANNEL DATA

Radiated Emissions

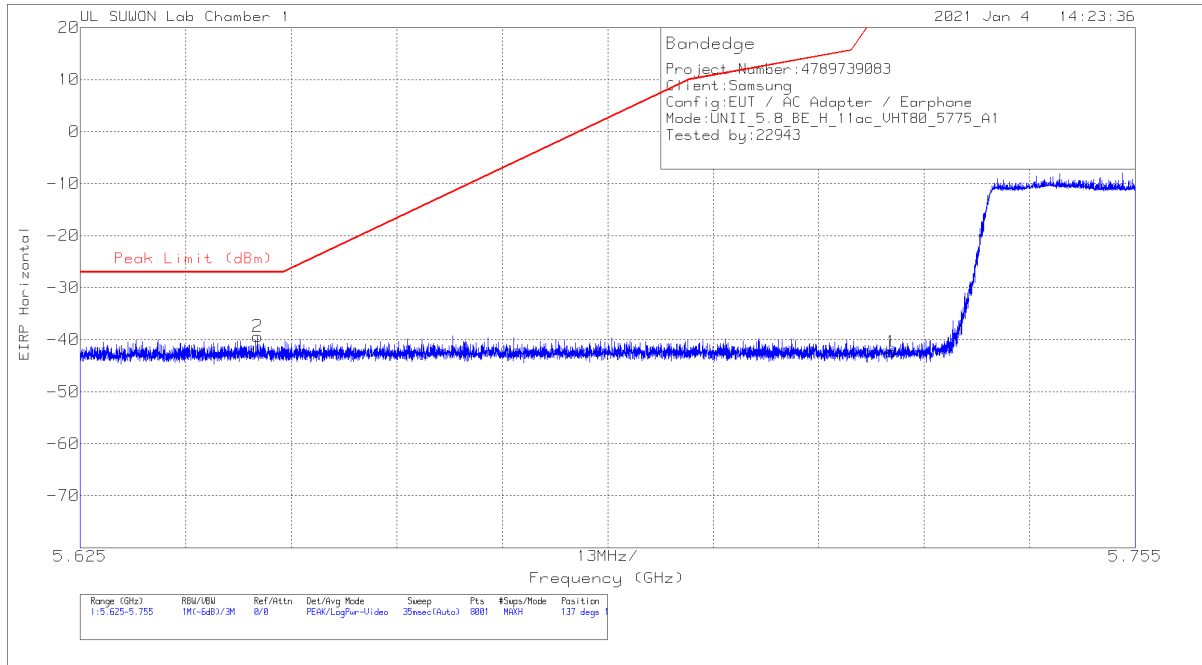
Frequency (GHz)	Meas Reading (dBuV)	Det	317_00166724	6GHz_HF(SB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margn (dB)	Peak Limit (dBuV/m)	Margn (dB)	UNII Non-Restricted (dBuV/m)	Margn (dB)	Azimuth (Degs)	Height (cm)	Polarity
8.69123	35.32	PK-U	36.2	-22.3	0	49.22	-	-	-	-	68.2	-18.98	0	100	H
8.69406	34.55	PK-U	36.2	-22.3	0	48.45	-	-	-	-	68.2	-19.75	0	100	V
*11.59164	33.59	PK-U	38.4	-19.4	0	52.59	-	74	-	-21.42	-	-	0	100	H
*11.59009	33.82	PK-U	38.4	-19.4	0	52.52	-	74	-	-21.18	-	-	0	100	V
17.38108	33.96	PK-U	41	-18.2	0	56.76	-	-	-	-	68.2	-11.44	0	100	H
17.38319	34.08	PK-U	41	-18.2	0	56.88	-	-	-	-	68.2	-11.32	0	100	V

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

11.4.4. TX ABOVE 1GHz 802.11ac VHT80 1Tx MODE IN THE 5.8GHZ BAND

BANDEDGE (Lower side)

HORIZONTAL PEAK DATA

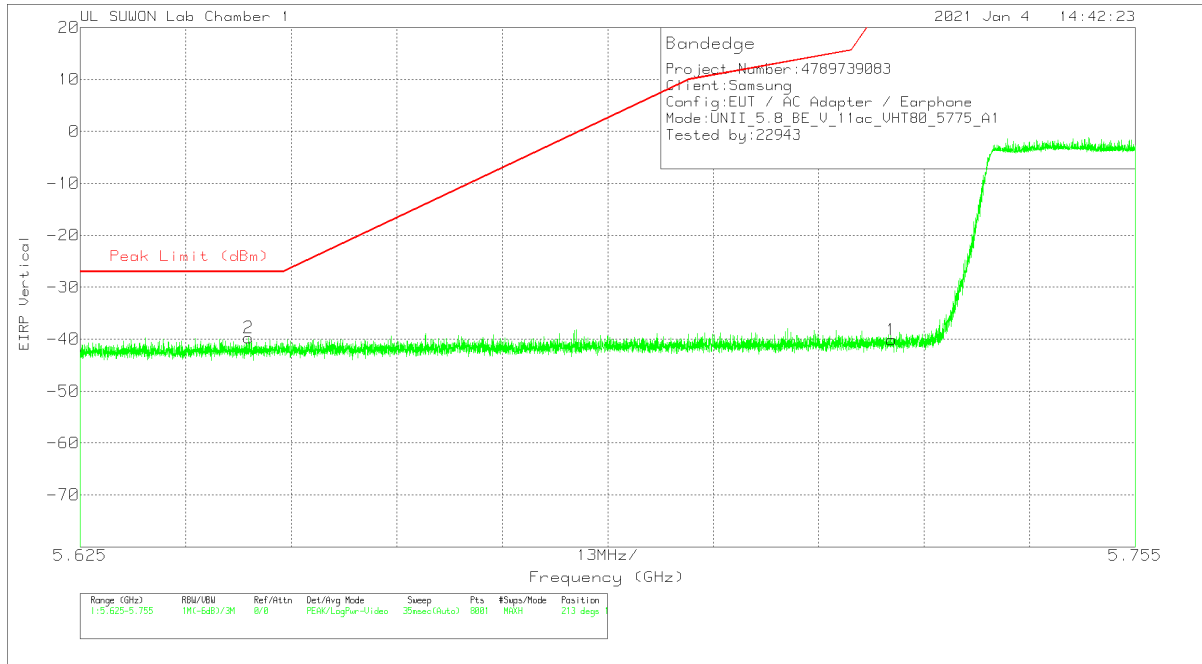


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00168717	10dB_ATT[dB]	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72499	-68.1	Pk		-20.9	11.8	0	-42.3	26.97	-69.27	137	114	H
2	5.64686	-65.07	Pk		-20.9	11.8	0	-39.37	-27	-12.37	137	114	H

Pk - Peak detector

VERTICAL PEAK DATA



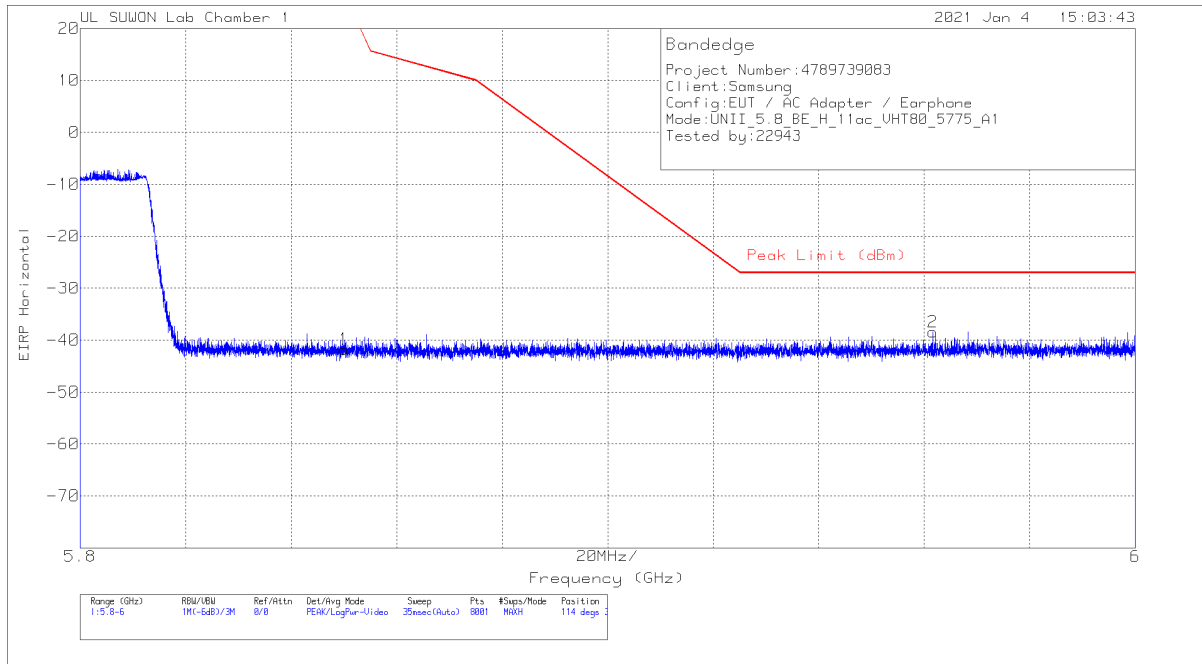
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00168717	10dB_ATT[dB]	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72499	-65.92	PK	34.9	-20.9	11.8	0	-40.12	26.97	-67.09	213	114	V
2	5.64572	-65.45	PK	34.8	-20.9	11.8	0	-39.75	-27	-12.75	213	114	V

Pk - Peak detector

BANDEDGE (Upper side)

HORIZONTAL PEAK DATA

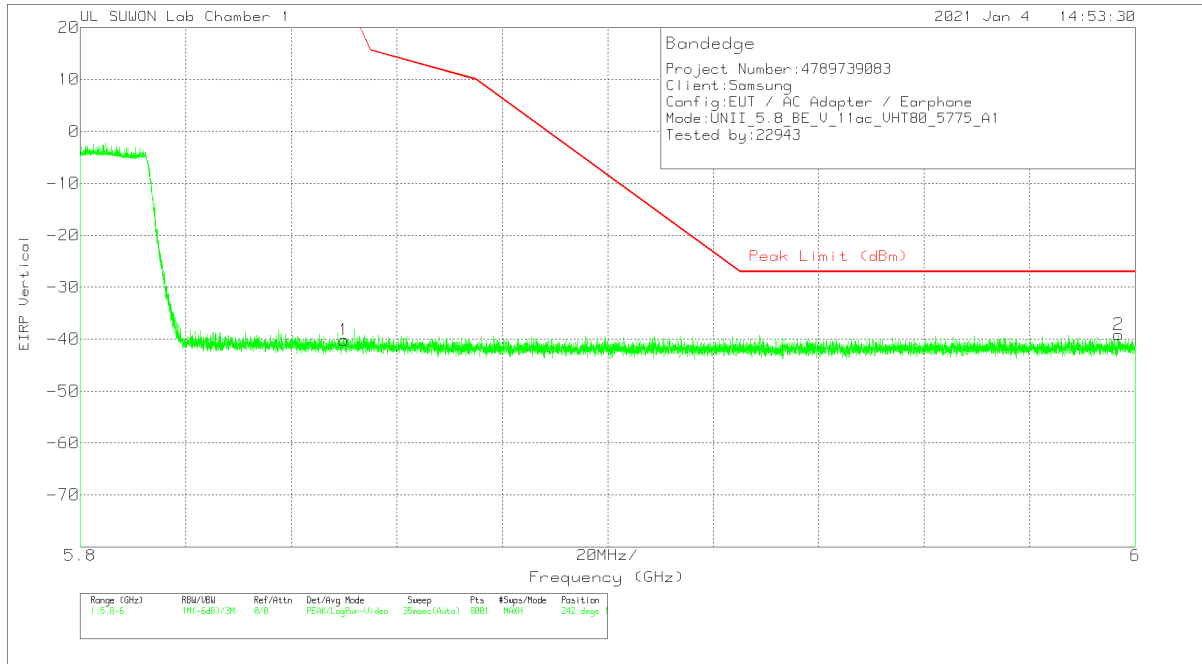


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00168717	10dB_ATT[dB]	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85003	-67.78	Pk	35.1	-20.9	11.8	0	-41.78	26.94	-68.72	114	381	H
2	5.9616	-64.74	Pk	35.2	-20.7	11.8	0	-38.44	-27	-11.44	114	381	H

Pk - Peak detector

VERTICAL PEAK DATA



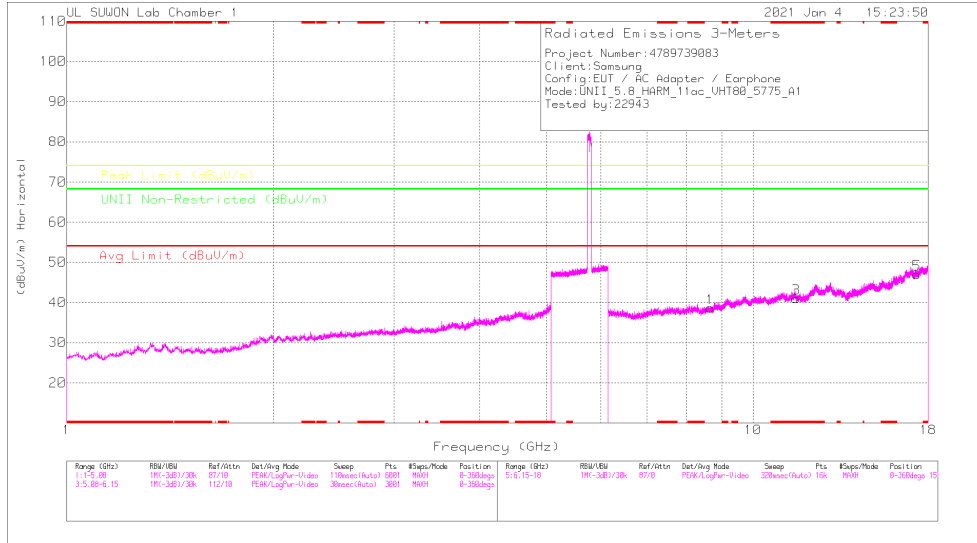
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00168717	10dB_ATT[dB]	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85003	-66.15	Pk	35.1	-20.9	11.8	0	-40.15	26.94	-67.09	242	127	V
2	5.99683	-65.52	Pk	35.2	-20.6	11.8	0	-39.12	-27	-12.12	242	127	V

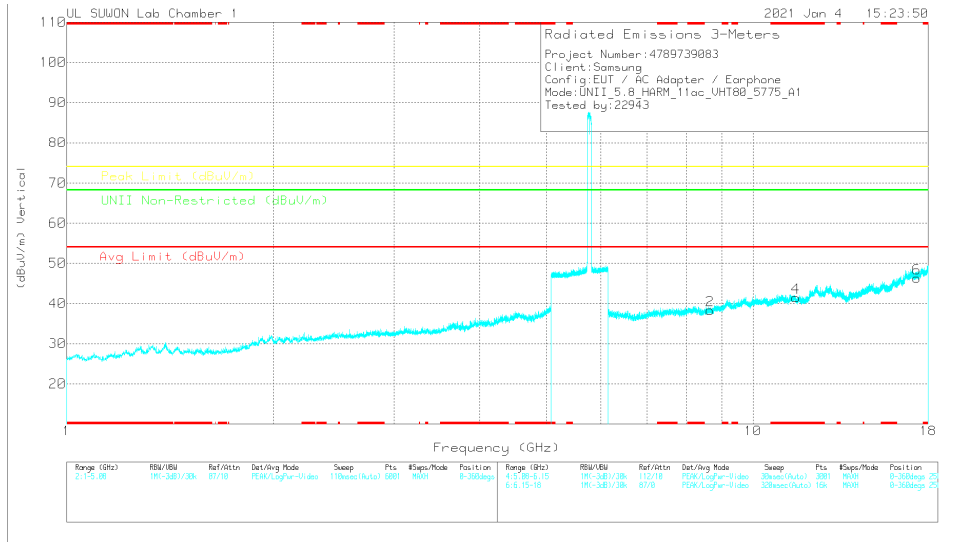
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL



MID CHANNEL 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.

MID CHANNEL DATA

Radiated Emissions

Frequency (GHz)	Main Reading (dBuV)	Det	317_00168717	6GHz_HPS(B)	DC Corr (dB)	Corrected Reading (dBuV)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Digits)	Height (cm)	Polarity
8.66168	37.43	PK-U	36.3	-25.1	0	48.63	-	-	-	-	68.2	-19.57	0	100	H
8.66139	37.68	PK-U	36.3	-25.1	0	48.88	-	-	-	-	68.2	-19.32	0	100	V
*11.54854	36.74	PK-U	38.3	-22.3	0	52.74	-	-	74	-21.28	-	-	0	100	H
*11.5482	36.59	PK-U	38.3	-22.3	0	52.59	-	-	74	-21.41	-	-	0	100	V
17.32678	34.2	PK-U	41.2	-17.5	0	57.9	-	-	-	-	68.2	-10.3	0	100	H
17.32646	33.93	PK-U	41.2	-17.5	0	57.63	-	-	-	-	68.2	-10.57	0	100	V

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

11.5. Spurious Emissions for Simultaneous Transmission

11.5.1. Worst test case RSDB condition

Case 1	2.4 GHz WLAN ANT1	5GHz WLAN ANT1
Mode	802.11b	802.11n HT20
Channel	1	60
Frequency[MHz]	2412	5300
Data Rate	1Mbps	MCS 0
Axis (Worst)	X & Y	

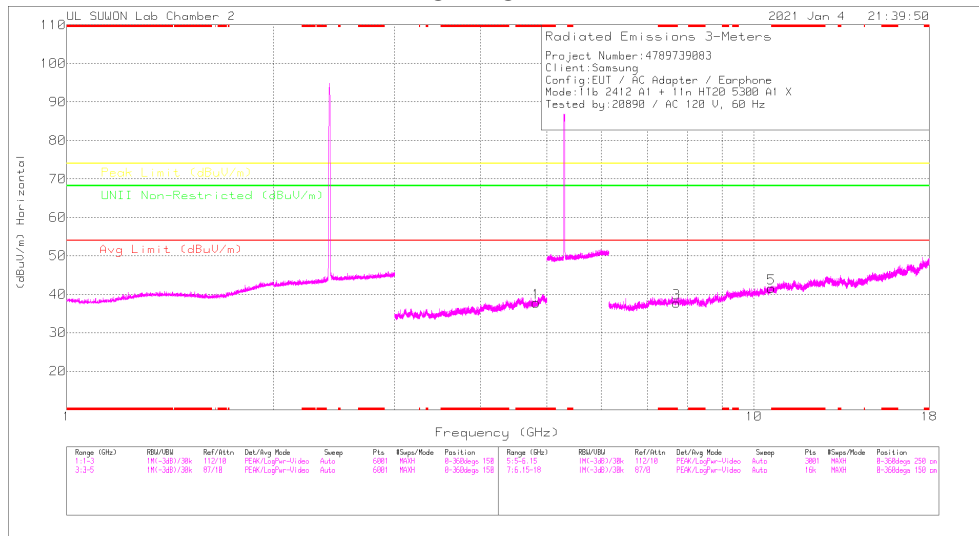
NOTE

The lowest margin condition among the channels and modes were selected for test. Low, mid, and high channels of 2.4GH WLAN were tested, and the worst case configuration & data were listed in the test report.

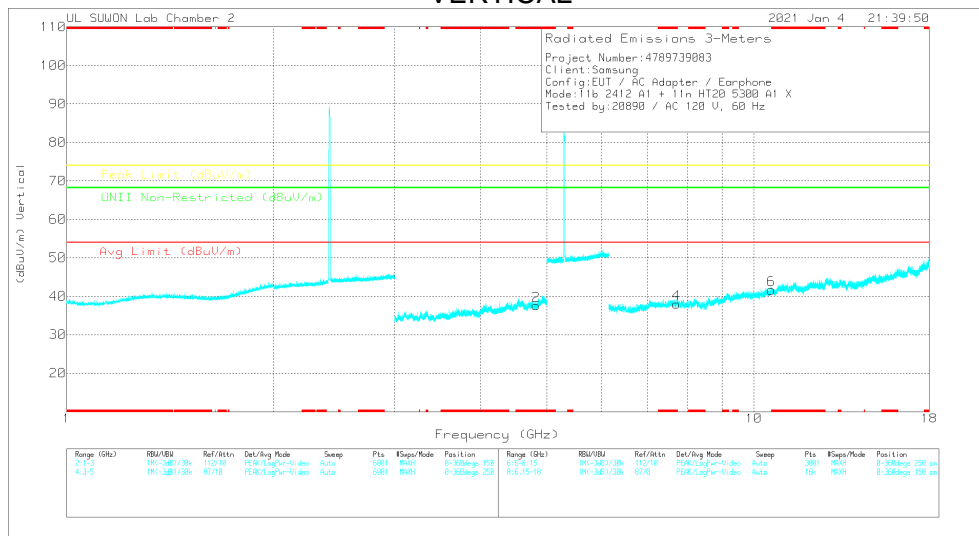
11.5.2. Test Results

Spurious emission for Simultaneous Transmission Case1. – X axis

HORIZONTAL



VERTICAL



Radiated Emissions

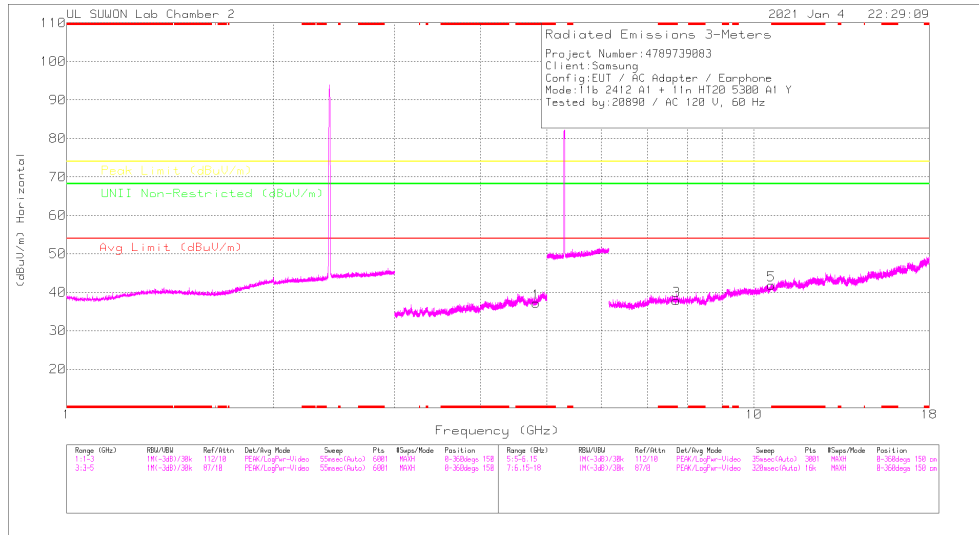
Frequency (GHz)	Max Reading (dBuV)	Det	317_00169724	5GHz_HFdB	DTS_Noise(dB)	DC Cor (dB)	Concord Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.81971	41.54	PK2	34.1	-27.4	-3	0	48.54	-	-	74	-25.46	-	-	0	100	H
* 4.82777	41.81	PK2	34.1	-27.4	-3	0	48.81	-	-	74	-25.09	-	-	0	100	V

Frequency (GHz)	Max Reading (dBuV)	Det	317_00169724	5GHz_HFdB	DC Cor (dB)	Concord Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 7.71504	35.84	PK-U	36	-23.1	0	48.74	-	-	74	-25.26	-	-	0	100	H
* 7.722	36.2	PK-U	36	-23.1	0	49.1	-	-	74	-24.9	-	-	0	100	V
* 10.60174	33.64	PK-U	37.9	-18.7	0	52.54	-	-	74	-21.16	-	-	0	100	H
* 10.60187	33.34	PK-U	37.9	-18.7	0	52.54	-	-	74	-21.46	-	-	0	100	V

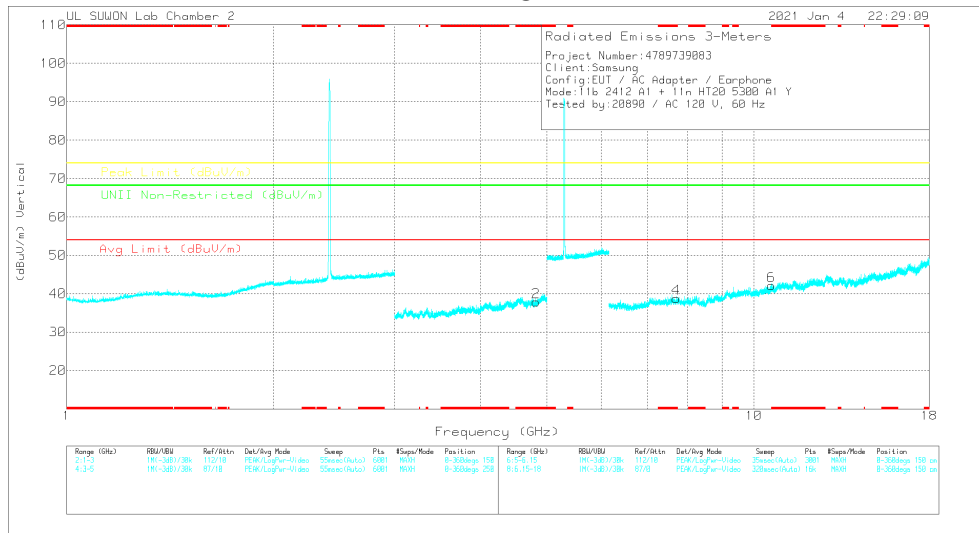
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK2 - KDB558074 Method: Maximum Peak
 PK-U - U-NII: Maximum Peak

Case1. - Y axis

HORIZONTAL



VERTICAL



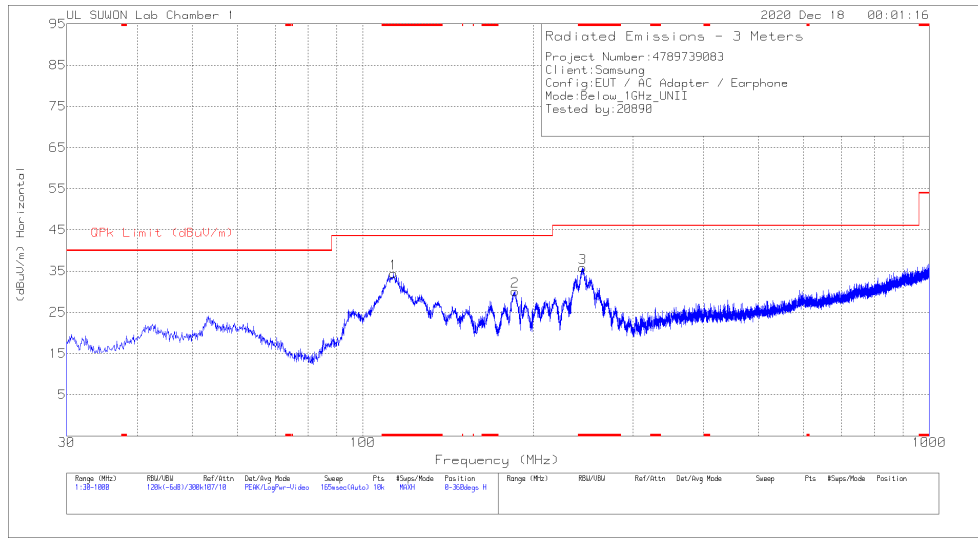
Radiated Emissions

Frequency (GHz)	Max Reading (dBu)	Det	3117_00168724	5GHz_LF1[dB]	DTS_Noise[dB]	DC Corr [dB]	Corrected Reading (dBu/m)	Avg Limit (dBu/m)	Margin (dB)	Peak Limit (dBu/m)	Margin (dB)	UNII Non-Restricted (dBu/m)	Margin (dB)	Asmth (Deg)	Height (cm)	Polarity	
* 4.81934	41.67	PK2	34.1	-27.5	-3	0	48.57	-	-	74	-25.43	-	-	-	0	100	H
* 4.81445	41.3	PK2	34.1	-27.6	-3	0	48.1	-	-	74	-25.9	-	-	-	0	100	V
Frequency (GHz)	Max Reading (dBu)	Det	3117_00168724	6GHz_HF1[dB]	DC Corr [dB]	Corrected Reading (dBu/m)	Avg Limit (dBu/m)	Margin (dB)	Peak Limit (dBu/m)	Margin (dB)	UNII Non-Restricted (dBu/m)	Margin (dB)	Asmth (Deg)	Height (cm)	Polarity		
* 7.71016	36.07	PK-U	36	-23.1	0	48.97	-	-	74	-25.03	-	-	-	0	100	H	
* 7.71257	36.12	PK-U	36	-23.2	0	48.92	-	-	74	-25.08	-	-	-	0	100	V	
* 10.5988	33.03	PK-U	37.9	-18.8	0	52.13	-	-	-	-	68.2	-16.07	0	100	H		
10.59869	33.16	PK-U	37.9	-18.8	0	52.26	-	-	-	-	68.2	-15.94	0	100	V		

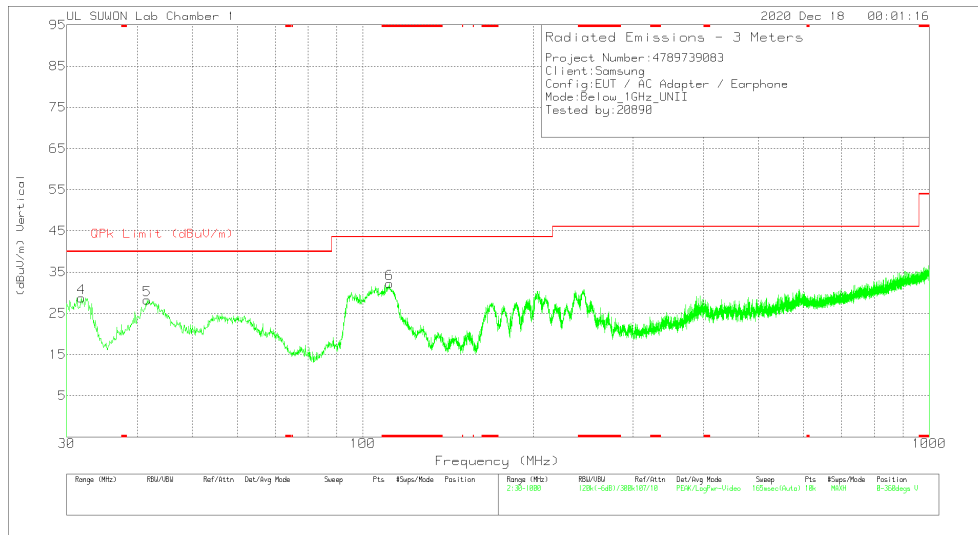
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK2 - KDB558074 Method: Maximum Peak
 PK-U - U-NII: Maximum Peak

12. 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)



Below 1G Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_750	Below_1G[dB]	Corrected Reading (dBuV/m)	QPK Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 113.226	47.8	Pk	16.3	-29.6	34.5	43.52	-9.02	0-360	200	H
2	185.588	42.73	Pk	16	-28.6	30.13	43.52	-13.39	0-360	200	H
3	* 244.467	45.39	Pk	18.4	-28	35.79	46.02	-10.23	0-360	100	H
4	31.843	43.85	Pk	15.6	-30.7	28.75	40	-11.25	0-360	100	V
5	41.64	39.76	Pk	19	-30.5	28.26	40	-11.74	0-360	100	V
6	* 111.383	45.09	Pk	16.7	-29.6	32.19	43.52	-11.33	0-360	100	V

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

13. 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.

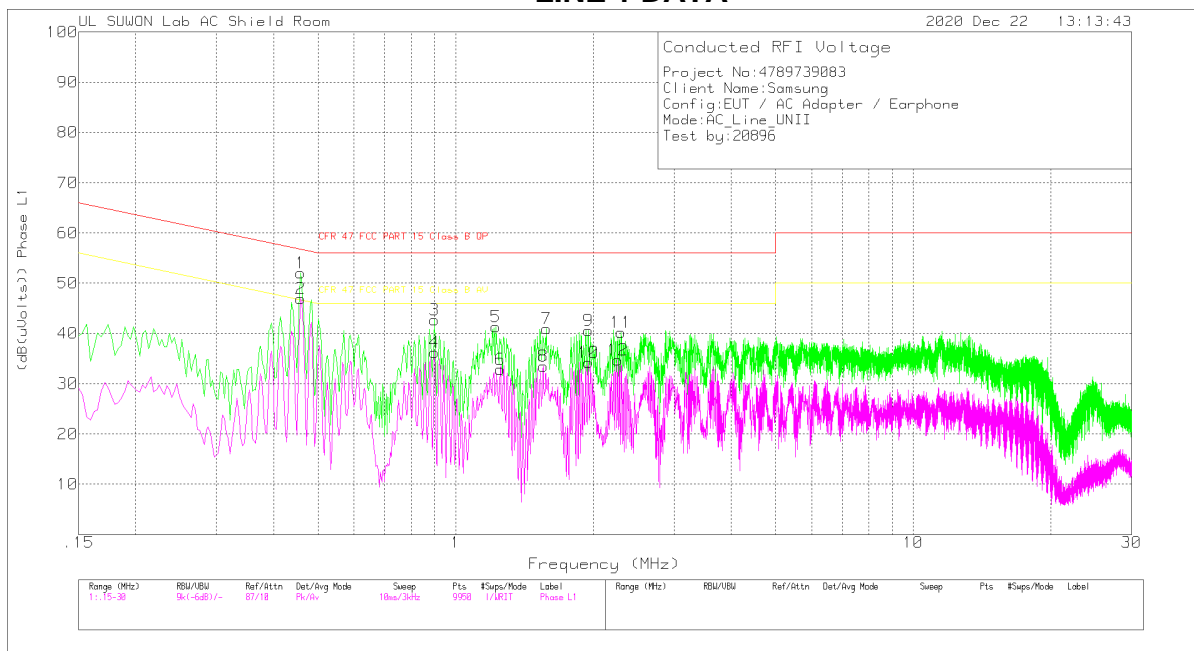
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

WORST EMISSIONS

LINE 1 DATA



Trace Markers

Range 1: Phase L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_L1[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
1	.459	42	Pk	9.9	.2	52.1	56.71	-4.61	-	-
2	.459	36.83	Av	9.9	.2	46.93	-	-	46.71	.22
3	.9	32.55	Pk	9.8	.3	42.65	56	-13.35	-	-
4	.9	26.15	Av	9.8	.3	36.25	-	-	46	-9.75
5	1.224	31.23	Pk	9.8	.3	41.33	56	-14.67	-	-
6	1.251	22.81	Av	9.8	.3	32.91	-	-	46	-13.09
7	1.578	30.93	Pk	9.7	.3	40.93	56	-15.07	-	-
8	1.554	23.47	Av	9.7	.3	33.47	-	-	46	-12.53
9	1.95	30.54	Pk	9.7	.3	40.54	56	-15.46	-	-
10	1.95	24.2	Av	9.7	.3	34.2	-	-	46	-11.8
11	2.301	30.16	Pk	9.7	.3	40.16	56	-15.84	-	-
12	2.259	24.69	Av	9.7	.3	34.69	-	-	46	-11.31

Pk - Peak detector
 Av - Average detection

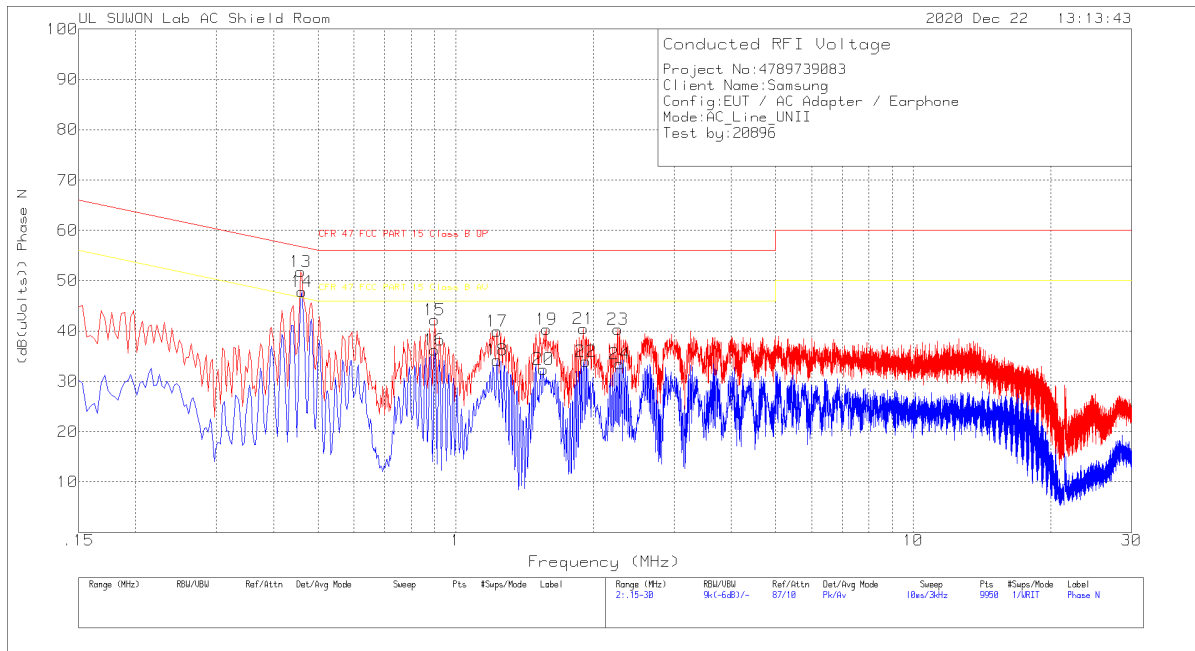
Quasi-Peak Emissions

Range 1: Phase L1 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_L1[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
.45975	39.3	Qp	9.9	.2	49.4	56.7	-7.3	-	-
.90075	29.43	Qp	9.8	.3	39.53	56	-16.47	-	-

Qp - Quasi-Peak detector

LINE 2 DATA



Trace Markers

Range 2: Phase N .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_N[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
13	.459	41.69	Pk	9.9	.2	51.79	56.71	-4.92	-	-
14	.462	37.7	Av	9.9	.2	47.8	-	-	46.66	1.14
15	.9	32.15	Pk	9.8	.3	42.25	56	-13.75	-	-
16	.9	26.18	Av	9.8	.3	36.28	-	-	46	-9.72
17	1.233	29.86	Pk	9.8	.3	39.96	56	-16.04	-	-
18	1.233	24.07	Av	9.8	.3	34.17	-	-	46	-11.83
19	1.578	30.26	Pk	9.8	.3	40.36	56	-15.64	-	-
20	1.554	22.32	Av	9.8	.3	32.42	-	-	46	-13.58
21	1.902	30.37	Pk	9.8	.3	40.47	56	-15.53	-	-
22	1.929	23.83	Av	9.8	.3	33.93	-	-	46	-12.07
23	2.259	30.28	Pk	9.8	.3	40.38	56	-15.62	-	-
24	2.283	23.33	Av	9.8	.3	33.43	-	-	46	-12.57

Pk - Peak detector

Av - Average detection

Quasi-Peak Emissions

Range 2: Phase N .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_N[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
.45975	39.37	Qp	9.9	.2	49.47	56.7	-7.23	-	-
.46215	40.02	Qp	9.9	.2	50.12	56.65	-6.53	-	-
.90075	28.43	Qp	9.8	.3	38.53	56	-17.47	-	-

Qp - Quasi-Peak detector

14. DYNAMIC FREQUENCY SELECTION

14.1. OVERVIEW

14.1.1. LIMITS

FCC

§15.407 (h), FCC KDB 905462 D02 “COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVICES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION” and KDB 905462 D03 “U-NII CLIENT DEVICES WITHOUT RADAR DETECTION CAPABILITY”.

Table 1: Applicability of DFS requirements prior to use of a channel

Requirement	Operational Mode		
	Master	Client (without radar detection)	Client (with radar detection)
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode		
	Master	Client (without DFS)	Client (with DFS)
DFS Detection Threshold	Yes	Not required	Yes
Channel Closing Transmission Time	Yes	Yes	Yes
Channel Move Time	Yes	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required	Yes

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar DFS	Client (without DFS)
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required

Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in all 20 MHz channel blocks and a null frequency between the bonded 20 MHz channel blocks.

Table 3: Interference Threshold values, Master or Client incorporating In-Service Monitoring

Maximum Transmit Power	Value (see notes)
E.I.R.P. \geq 200 mill watt	-64 dBm
E.I.R.P. < 200 mill watt and power spectral density < 10 dBm/MHz	-62 dBm
E.I.R.P. < 200 mill watt that do not meet power spectral density requirement	-64 dBm
<p>Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. Note 3: E.I.R.P. is based on the highest antenna gain. For MIMO devices refer to KDB publication 662911 D01.</p>	

Table 4: DFS Response requirement values

Parameter	Value
<i>Non-occupancy period</i>	30 minutes
<i>Channel Availability Check Time</i>	60 seconds
<i>Channel Move Time</i>	10 seconds (See Note 1)
<i>Channel Closing Transmission Time</i>	200 milliseconds + approx. 60 milliseconds over remaining 10 second period. (See Notes 1 and 2)
<i>U-NII Detection Bandwidth</i>	Minimum 100% of the U- NII 99% transmission power bandwidth. (See Note 3)
<p>Note 1: <i>Channel Move Time</i> and the <i>Channel Closing Transmission Time</i> should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst. Note 2: The <i>Channel Closing Transmission Time</i> is comprised of 200 milliseconds starting at the beginning of the <i>Channel Move Time</i> plus any additional intermittent control signals required to facilitate a <i>Channel</i> move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions. Note 3: During the <i>U-NII Detection Bandwidth</i> detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.</p>	

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (usec)	PRI (usec)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in table 5a	Roundup: $\{(1/360) \times (19 \times 10^6 \text{ PRI}_{\text{usec}})\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 usec. With a minimum increment of 1 usec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the <i>Detection Bandwidth</i> test, <i>Channel Move Time</i> , and <i>Channel Closing Time</i> tests.					

Table 6 – Long Pulse Radar Test Signal

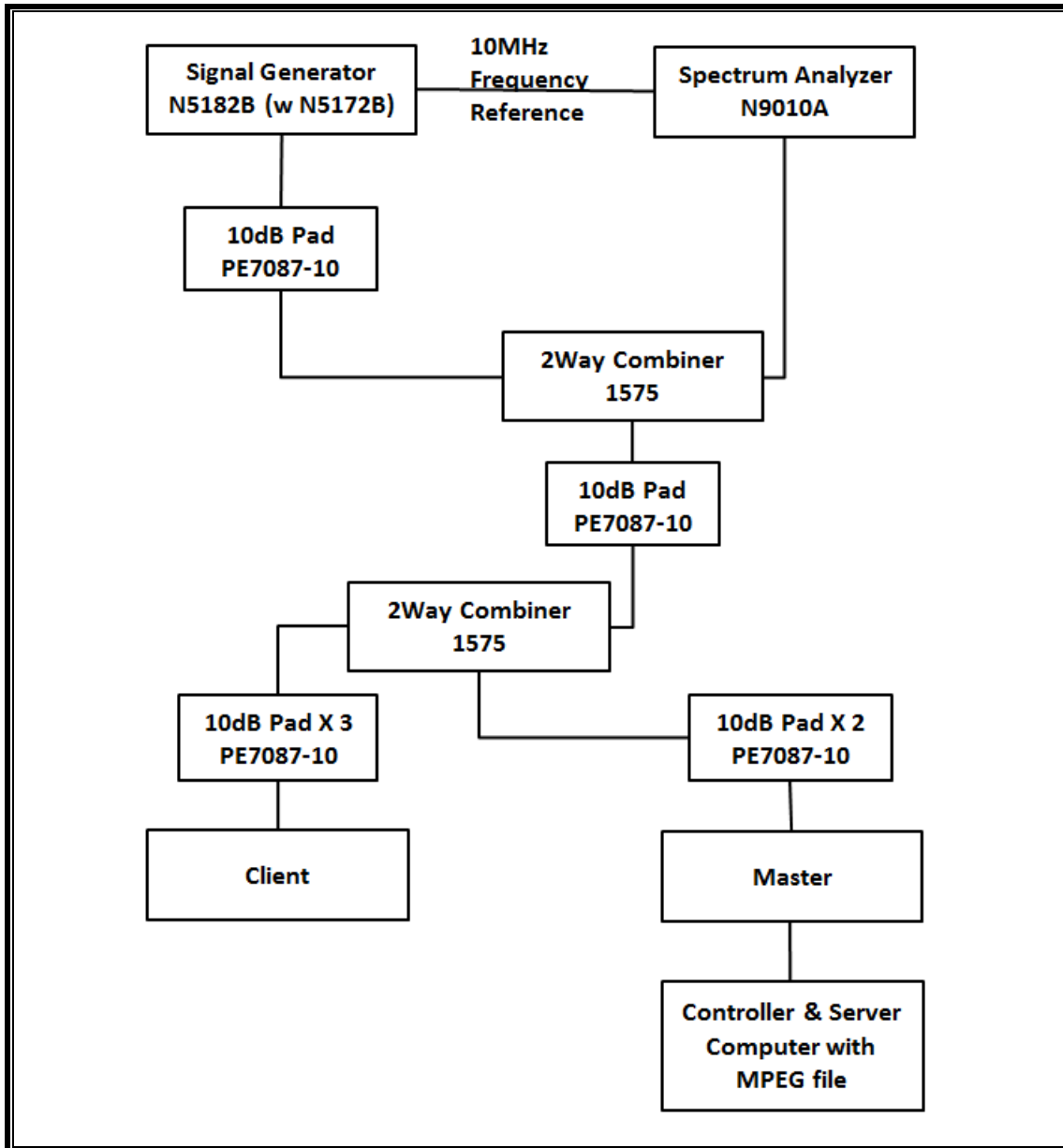
Radar Waveform Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

Table 7 – Frequency Hopping Radar Test Signal

Radar Waveform Type	Pulse Width (μsec)	PRI (μsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Trials
6	1	333	9	0.333	300	70%	30

14.1.2. TEST AND MEASUREMENT SYSTEM

CONDUCTED METHOD SYSTEM BLOCK DIAGRAM



SYSTEM OVERVIEW

The short pulse and long pulse signal generating system utilizes the Keysite Signal Studio for Pulse Building as N5172B. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

The short pulse types 1, 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of KDB 905462 D02. The frequency of the signal generator is incremented in 1 MHz steps from F_L to F_H for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold.

SYSTEM CALIBRATION

A 50-ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to a horn antenna via a coaxial cable, with the reference level offset set to (horn antenna gain – coaxial cable loss). The signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of –64 dBm as measured on the spectrum analyzer.

Without changing any of the instrument settings, the spectrum analyzer is reconnected to the Common port of the Spectrum Analyzer Combiner/Divider. The Reference Level Offset of the spectrum analyzer is adjusted so that the displayed amplitude of the signal is –64 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –64 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

ADJUSTMENT OF DISPLAYED TRAFFIC LEVEL

A link is established between the Master and Slave and the distance between the units is adjusted as needed to provide a suitable received level at the Master and Slave devices. The video test file is streamed to generate WLAN traffic. The monitoring antenna is adjusted so that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold.

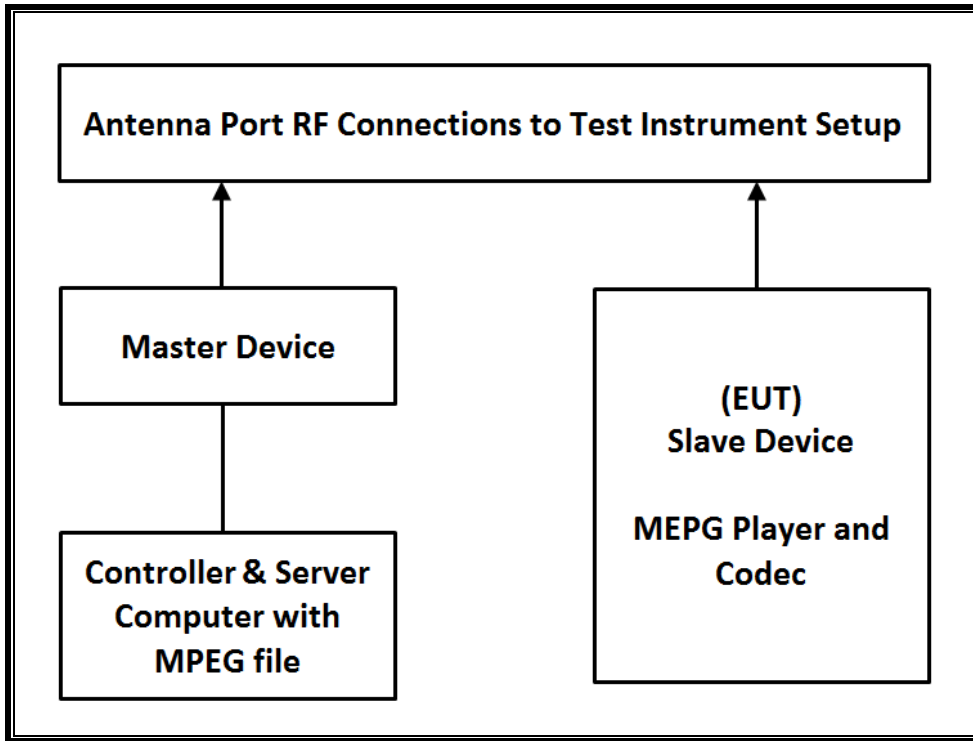
TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	S/N	Next Cal Due
Spectrum Analyzer, 7 GHz	Agilent / HP	N9010A	MY54200580	08-05-21
Vector Signal Generator, 6GHz	Agilent / HP	N5182B	MY53051241	08-03-21
Combiner	WEINSCHTEL	WA1534	UL001	02-05-21
Combiner	WEINSCHTEL	WA1535	UL002	02-05-21

14.1.3. SETUP OF EUT

CONDUCTED METHOD EUT TEST SETUP



SUPPORT EQUIPMENT

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

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
Wireless Access Point	Cisco	AIR-CAP3702E-A-K9	FTX182276QX	LDK102087
Notebook PC (Controller/Server)	HP	HP EliteDesk 800 G1 TWR	CZC4125J25	DoC

14.1.4. DESCRIPTION OF EUT

The EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges.

The EUT is a Slave Device without Radar Detection.

The highest power level of the widest bandwidth (802.11ac VHT80) within these bands is 12.11 dBm in the 5250-5350 MHz band and 11.94 dBm in the 5470-5725 MHz band.

The antenna assembly utilized two antenna.

Gain of ANT1 : -4.20 dBi for UNII 2A and -6.30 dBi for UNII 2C.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is -64 dBm. After correction for procedural adjustments, the required conducted threshold at the antenna port is $-64 + 1 = -63$ dBm.

The calibrated radiated DFS Detection Threshold level is set to -64 dBm. The tested level is lower than the required level hence it provides a margin to the limit.

The EUT uses one transmitter/receiver chain connected to an antenna to perform radiated tests. WLAN traffic that meets or exceeds the minimum required loading was generated by transferring a data stream from the controller/server PC to the EUT using iPerf version 2.0.5 software package.

TPC is not required since the maximum EIRP is less than 500 mW (27 dBm).

The EUT utilizes the 802.11 architecture. Three nominal channel bandwidths are implemented: 20 MHz, 40 MHz and 80 MHz.

The software installed in the access point is 12.4(25d)JA1.

UNIFORM CHANNEL SPREADING

This requirement is not applicable to Slave radio devices.

OVERVIEW OF MASTER DEVICE WITH RESPECT TO §15.407 (h) REQUIREMENTS

The Master Device is a Cisco Access Point, FCC ID: LDK102087. The minimum antenna gain for the Master Device is 6 dBi.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is -64 dBm. After correction for procedural adjustments, the required radiated threshold at the antenna port is $-64 + 1 = -63$ dBm.

The calibrated radiated DFS Detection Threshold level is set to -64 dBm. The tested level is lower than the required level hence it provides a margin to the limit.

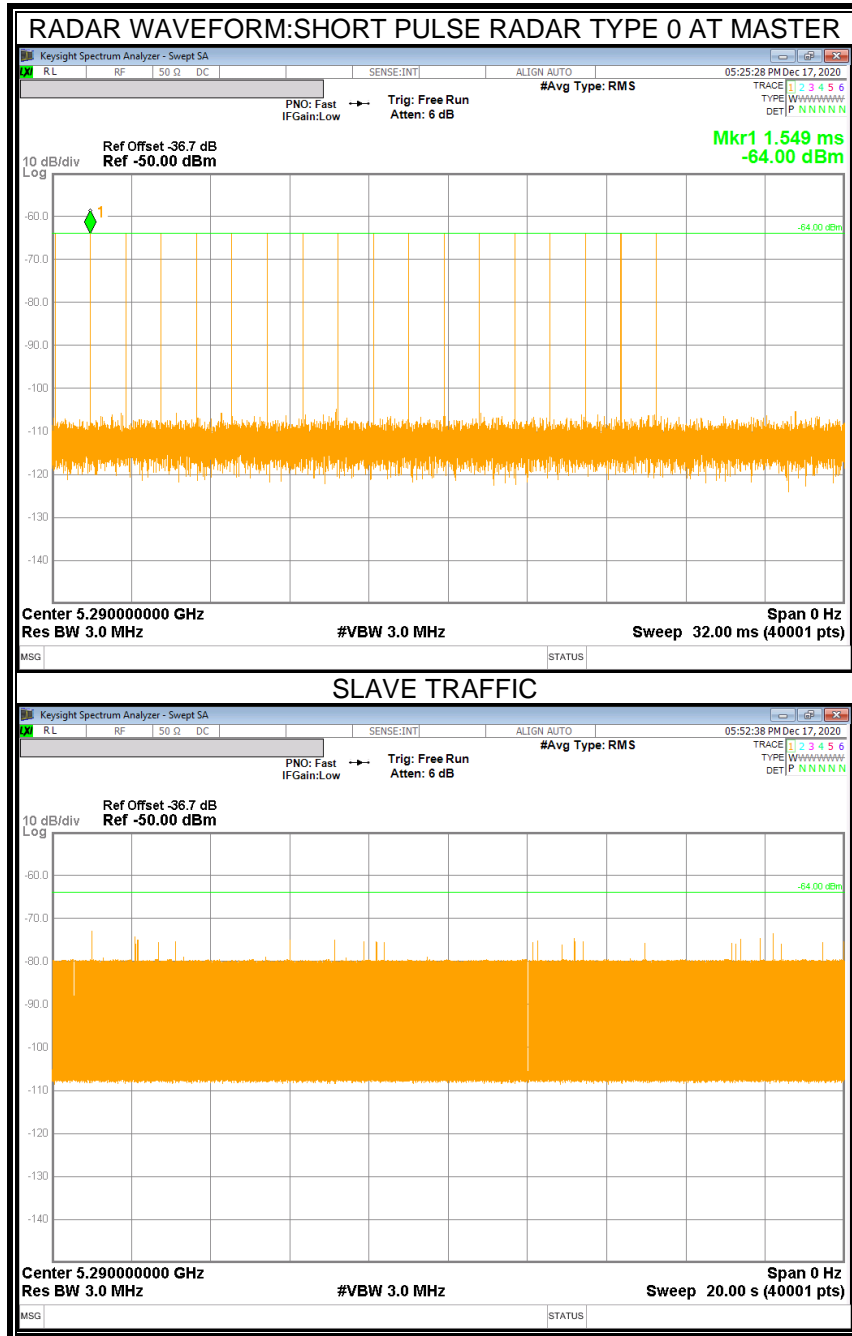
14.2. RESULTS FOR 80 MHz BANDWIDTH (UNII-2A BAND)

14.2.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5290 MHz.

14.2.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



14.2.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

14.2.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

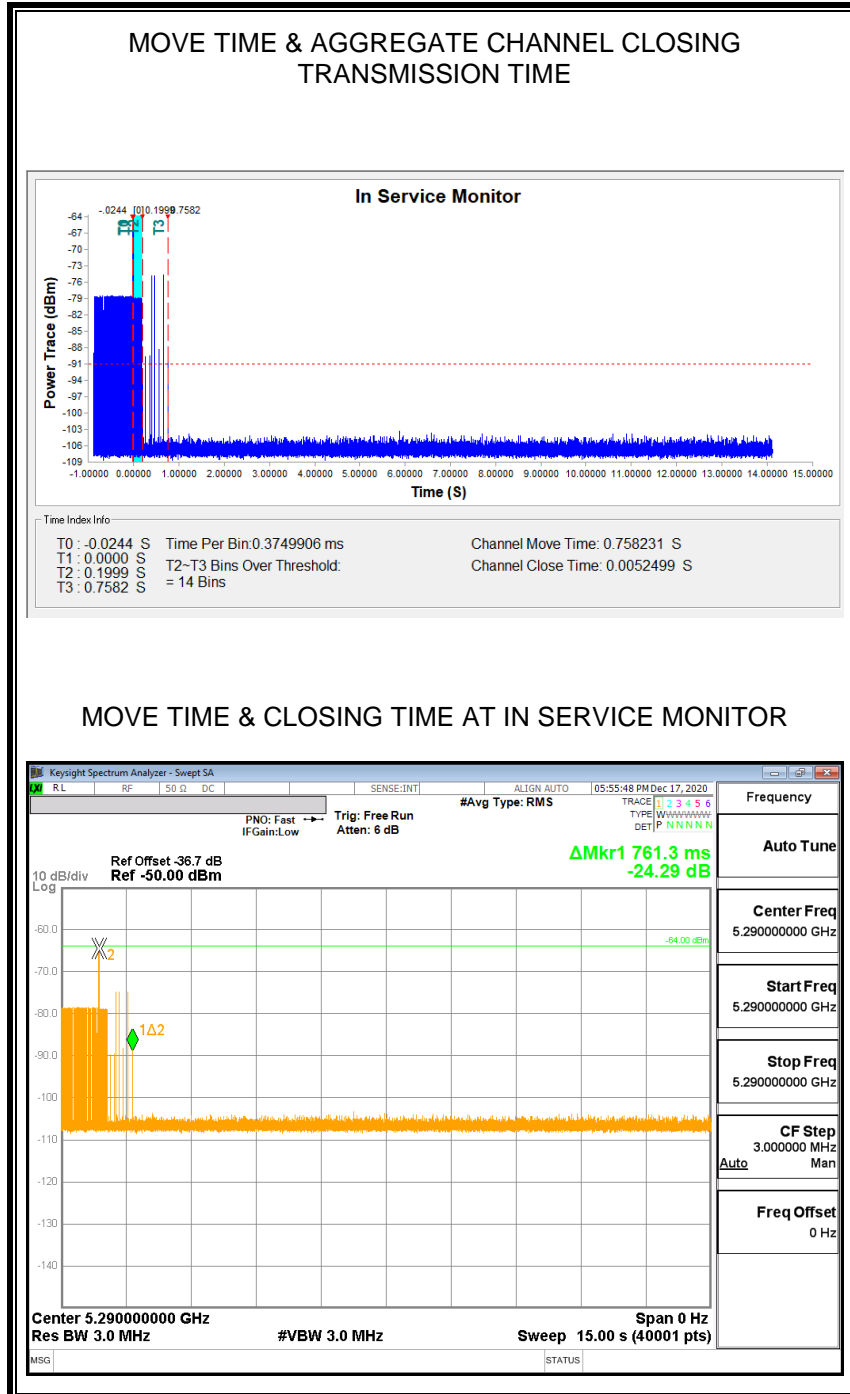
Channel Move Time (sec)	Limit (sec)
0.758	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
5.250	60

MOVE TIME & CHANNEL CLOSING TIME

AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

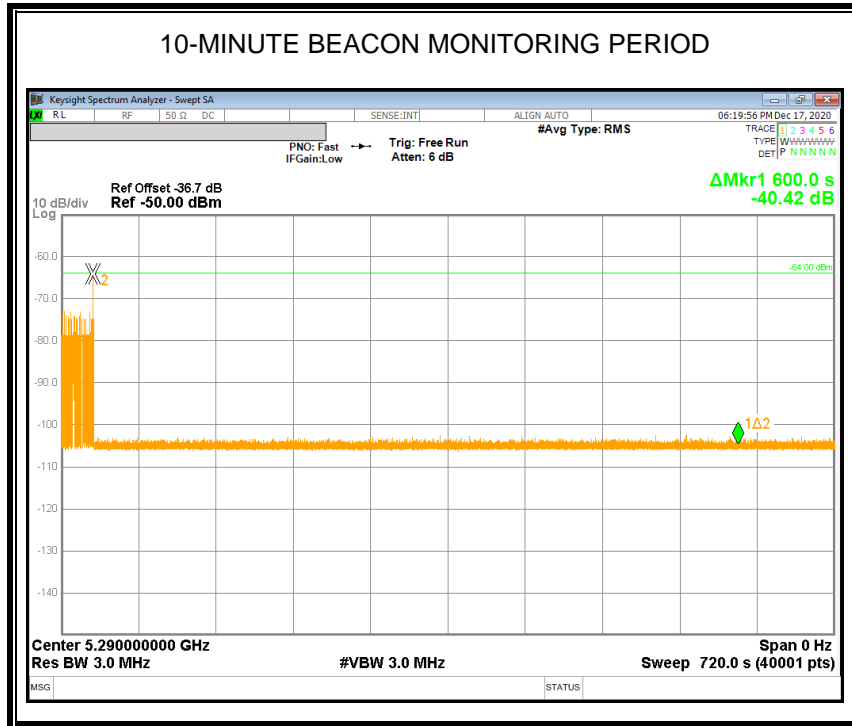
No transmissions are observed during the aggregate monitoring period.



NON-OCCUPANCY PERIOD

RESULTS

No EUT transmissions were observed on the test channel during the 10-minute observation time.



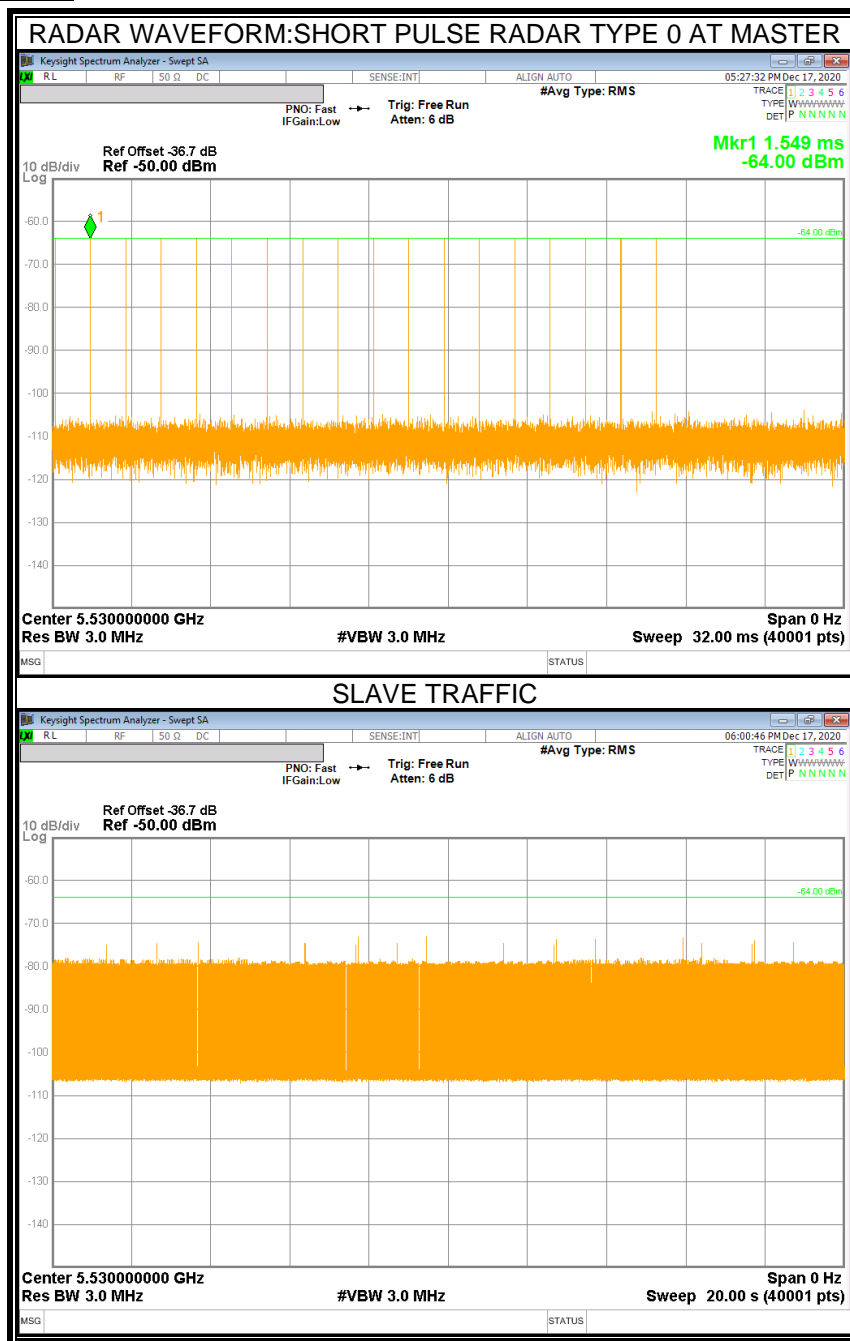
14.3. RESULTS FOR 80 MHz BANDWIDTH (UNII-2C BAND)

14.3.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5530 MHz.

14.3.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



14.3.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

14.3.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

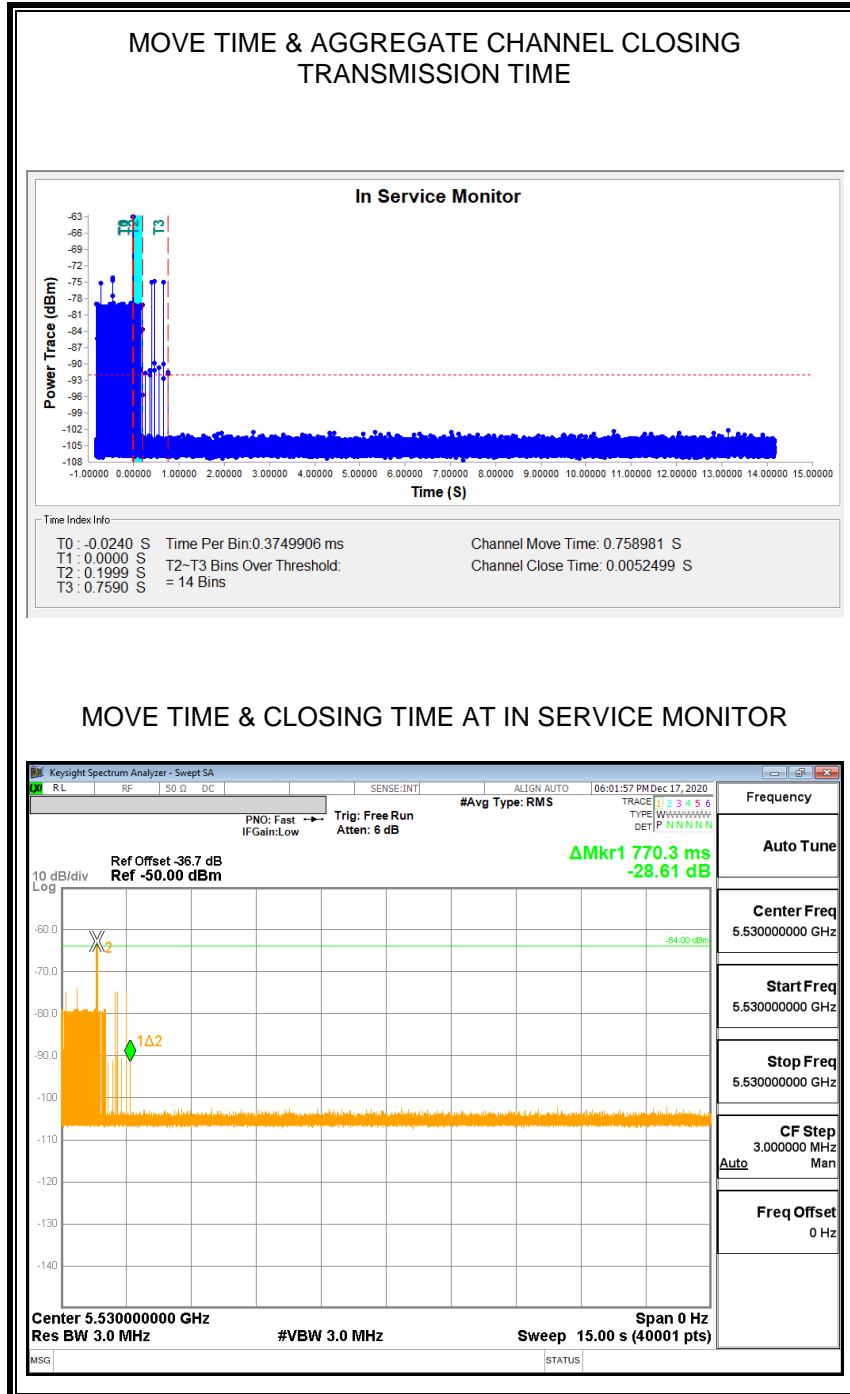
Channel Move Time (sec)	Limit (sec)
0.759	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
5.250	60

MOVE TIME & CHANNEL CLOSING TIME

AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

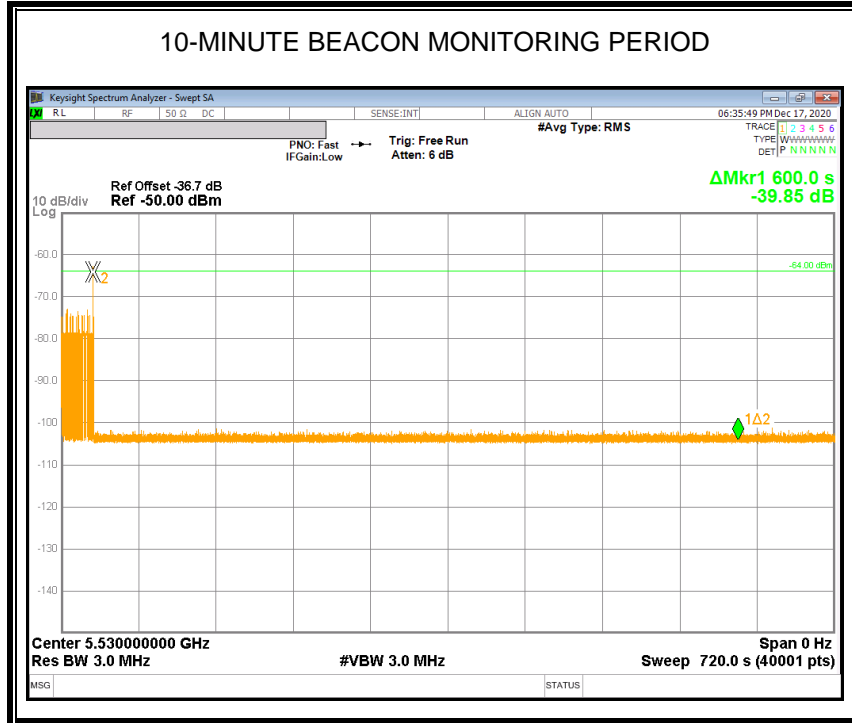
No transmissions are observed during the aggregate monitoring period.



NON-OCCUPANCY PERIOD

RESULTS

No EUT transmissions were observed on the test channel during the 10-minute observation time.



END OF TEST REPORT