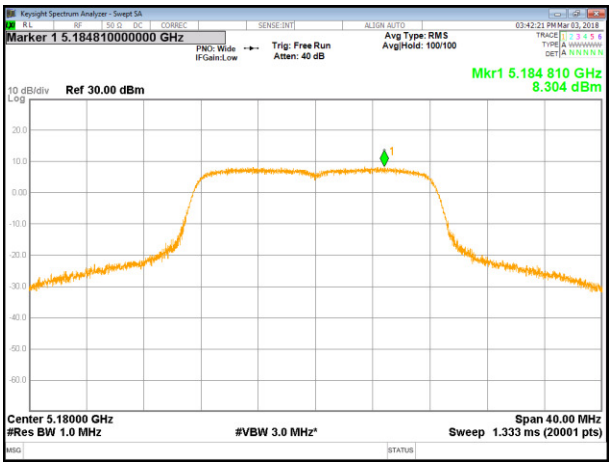
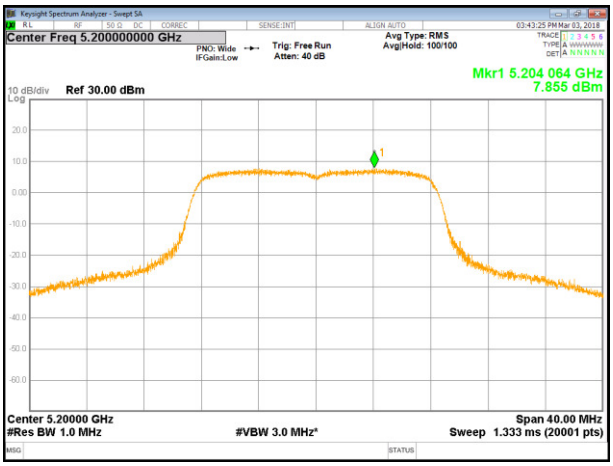
10.2.13. PPSD PLOTS

UNII 5.2 GHz IEEE 802.11a mode

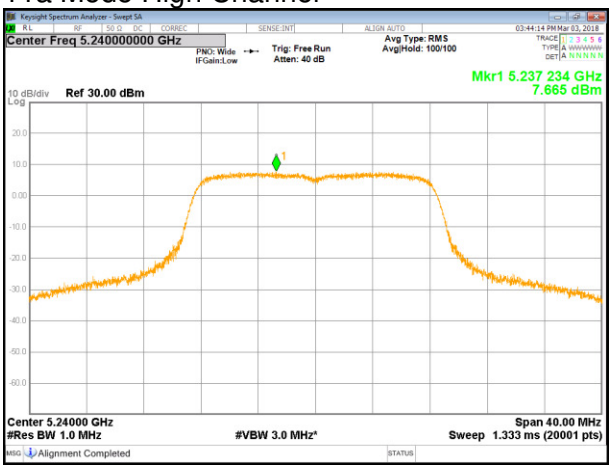
11a Mode Low Channel



11a Mode Middle Channel



11a Mode High Channel



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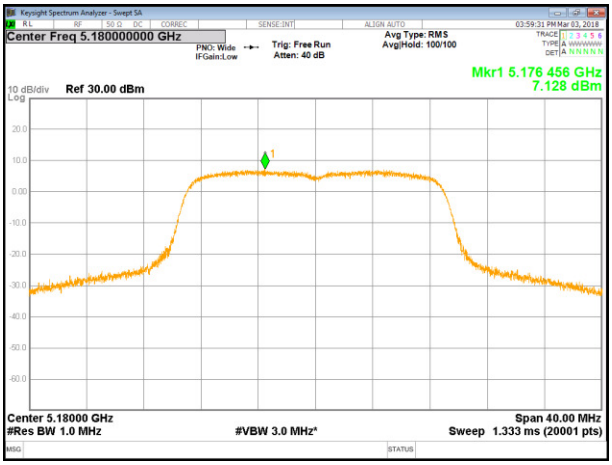
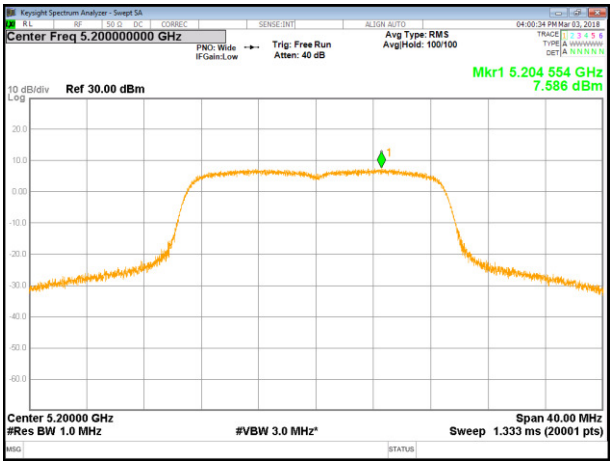
UNII 5.2 GHz IEEE 802.11n HT20 mode

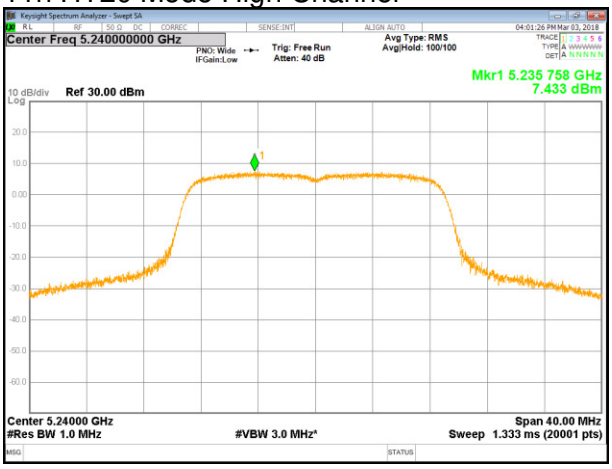
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



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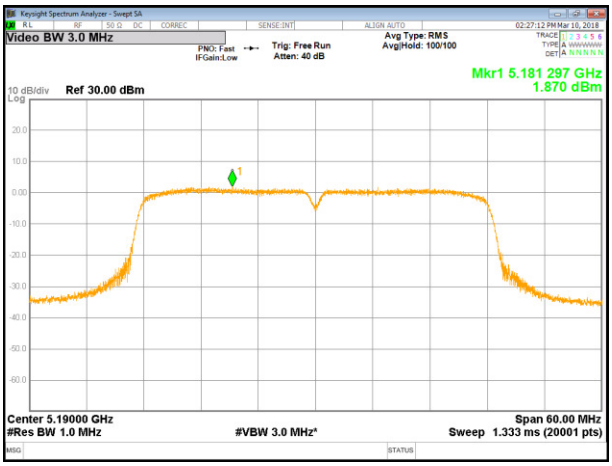
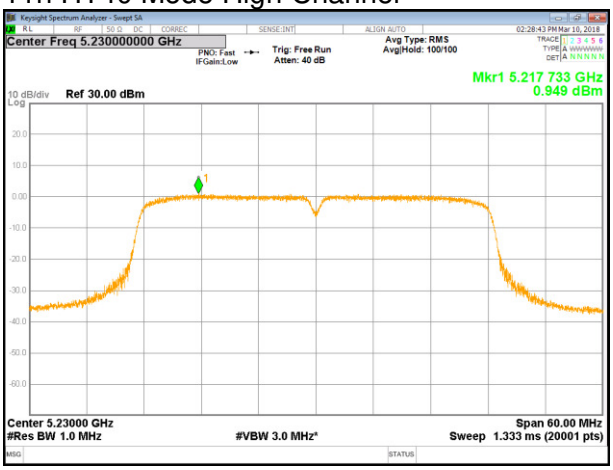
UNII 5.2 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel



11n HT40 Mode High Channel



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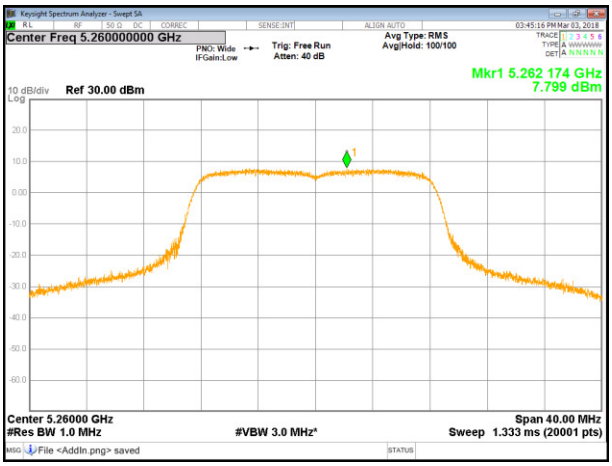
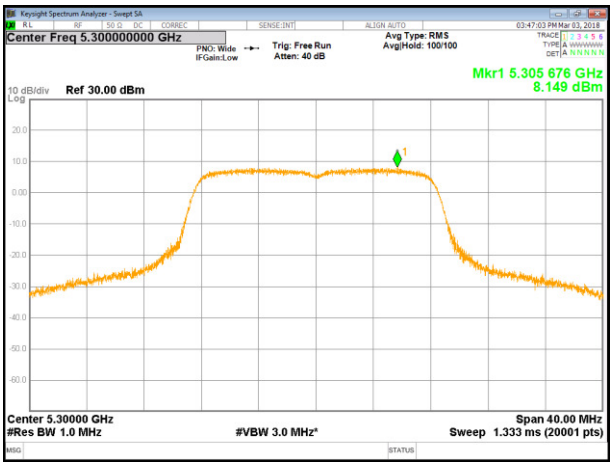
UNII 5.3 GHz IEEE 802.11a mode

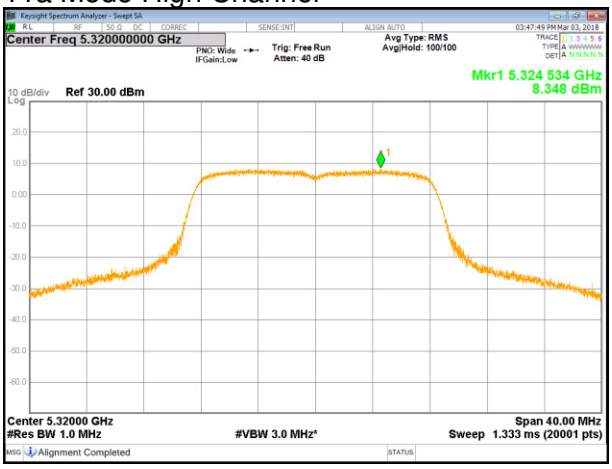
11a Mode Low Channel



11a Mode Middle Channel



11a Mode High Channel



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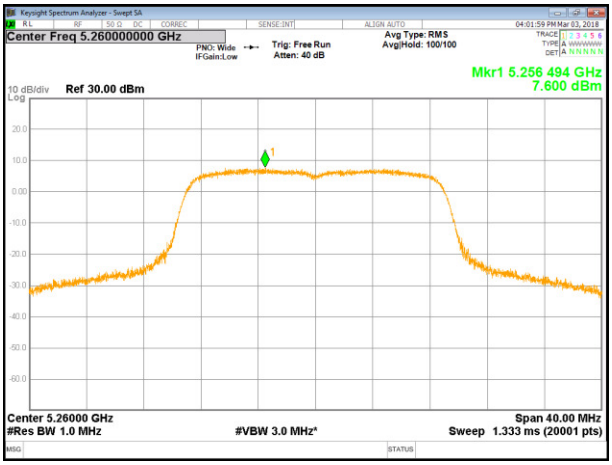
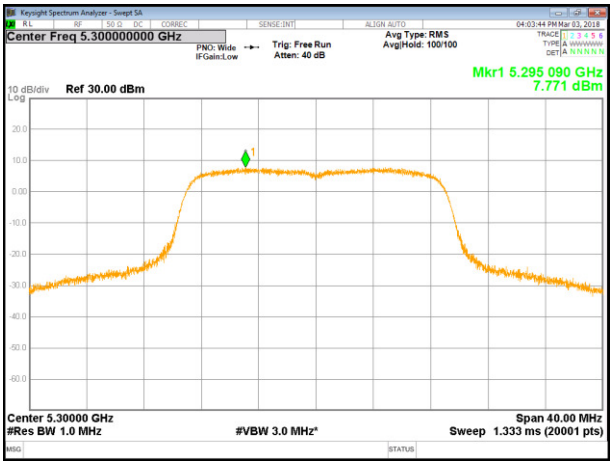
UNII 5.3 GHz IEEE 802.11n HT20 mode

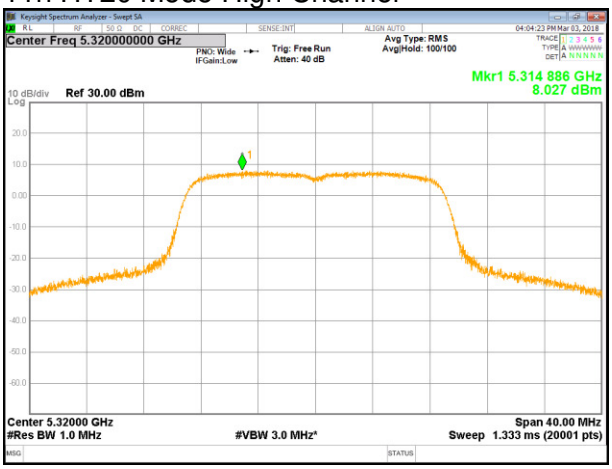
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



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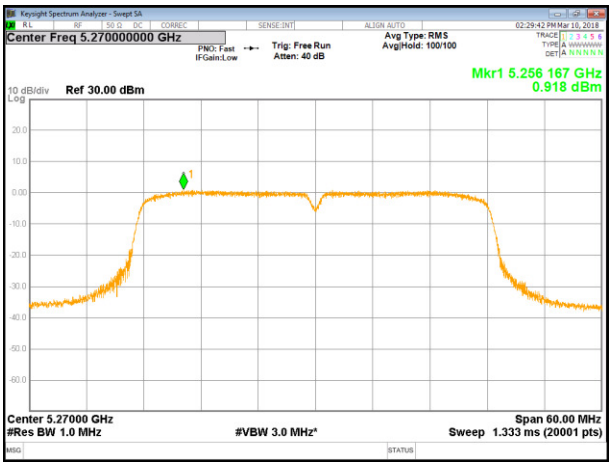
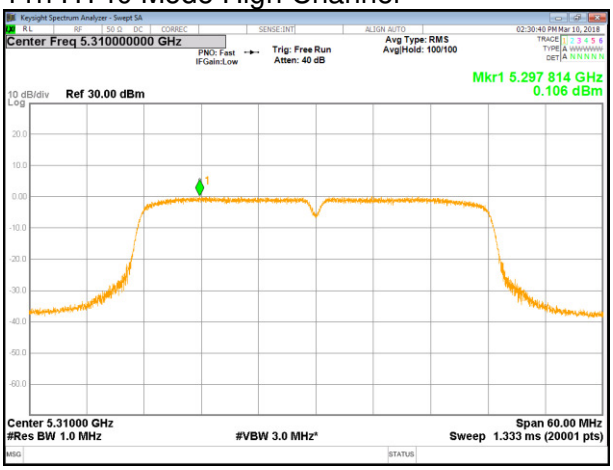
UNII 5.3 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel



11n HT40 Mode High Channel



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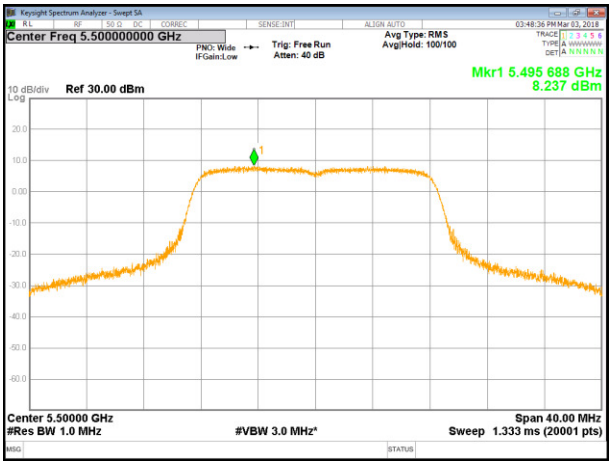
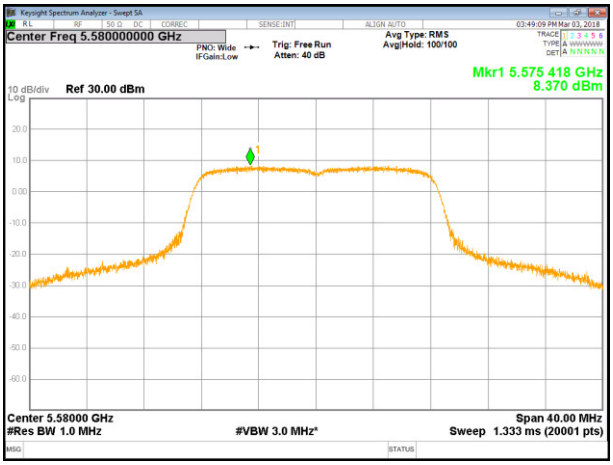
UNII 5.5 GHz IEEE 802.11a mode

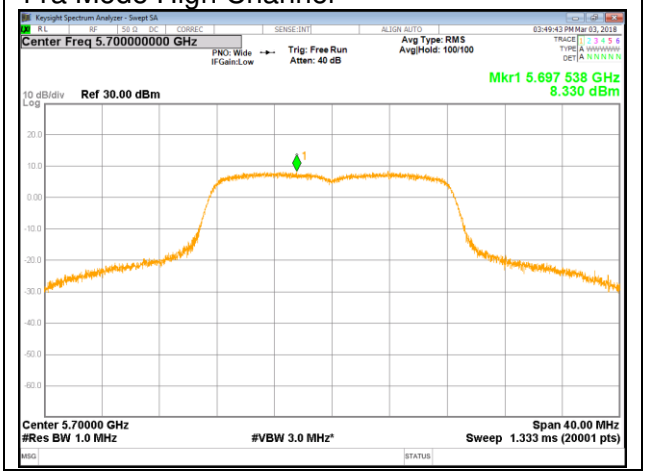
11a Mode Low Channel



11a Mode Middle Channel



11a Mode High Channel



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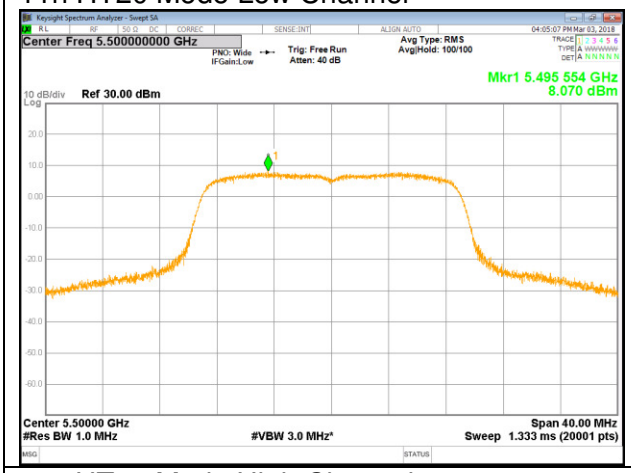
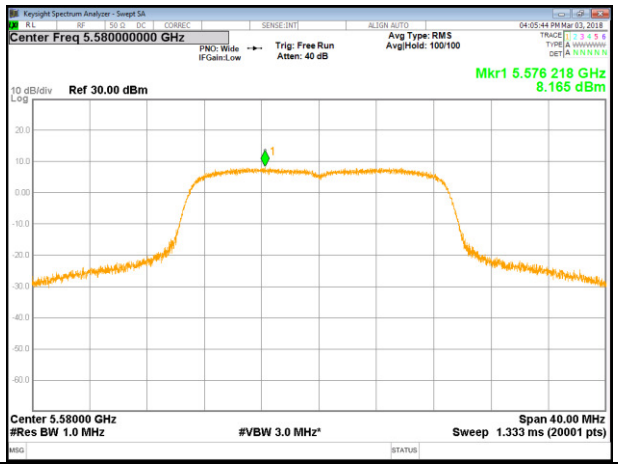
UNII 5.5 GHz IEEE 802.11n HT20 mode

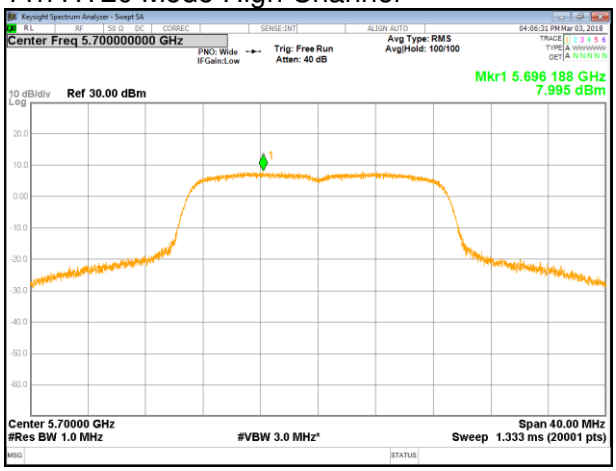
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



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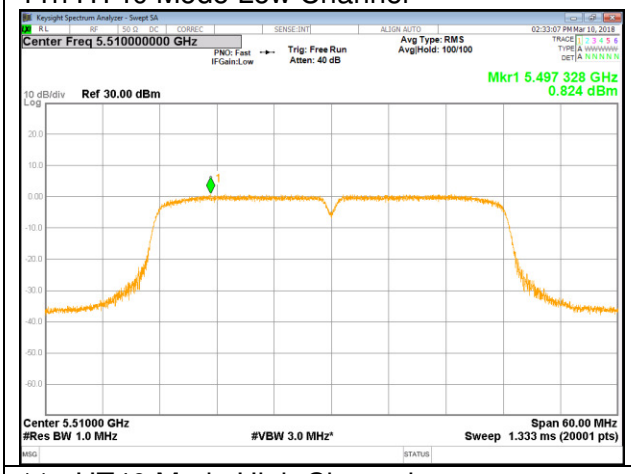
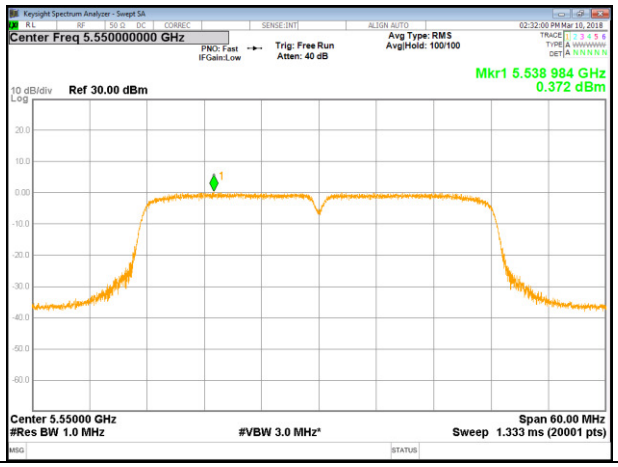
UNII 5.5 GHz IEEE 802.11n HT40 mode

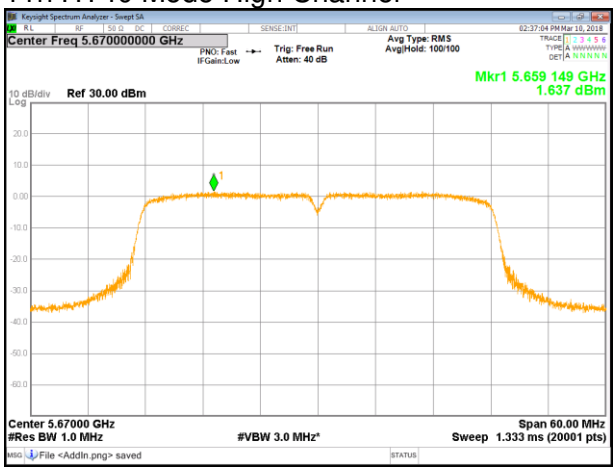
11n HT40 Mode Low Channel



11n HT40 Mode Middle Channel



11n HT40 Mode High Channel



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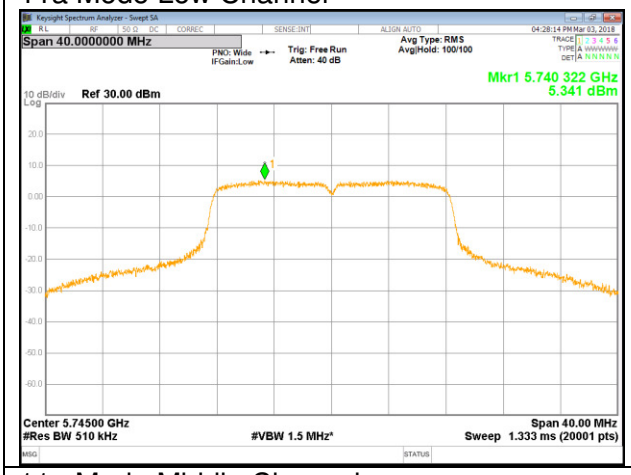
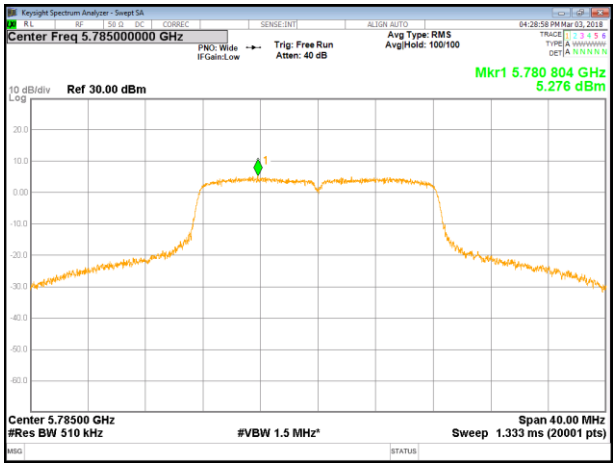
UNII 5.8 GHz IEEE 802.11a mode

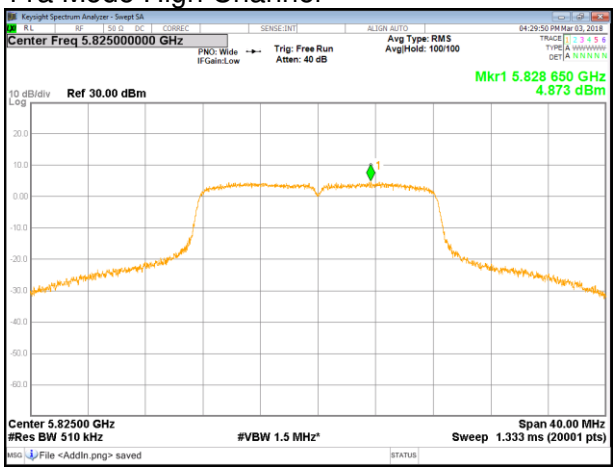
11a Mode Low Channel



11a Mode Middle Channel



11a Mode High Channel



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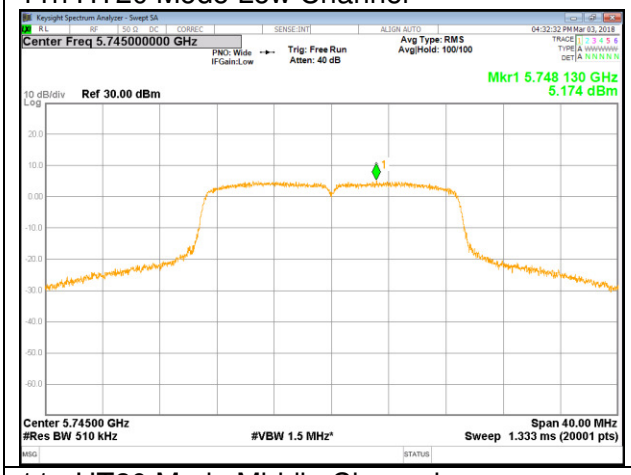
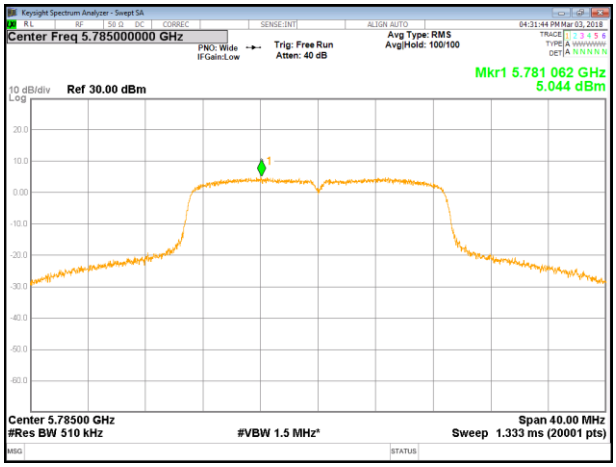
UNII 5.8 GHz IEEE 802.11n HT20 mode

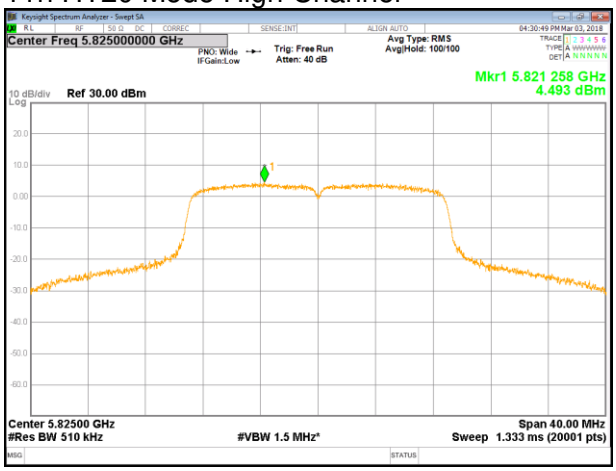
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



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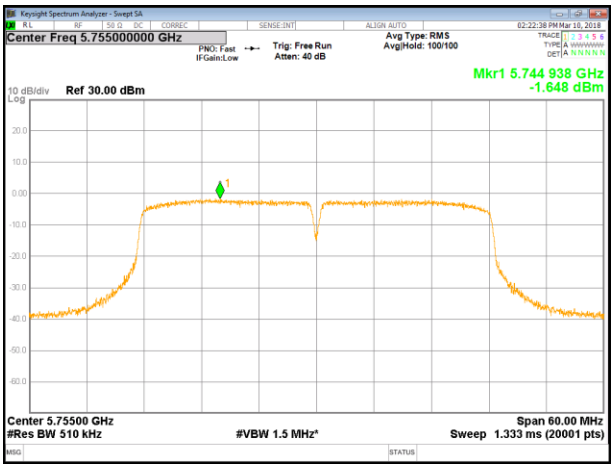
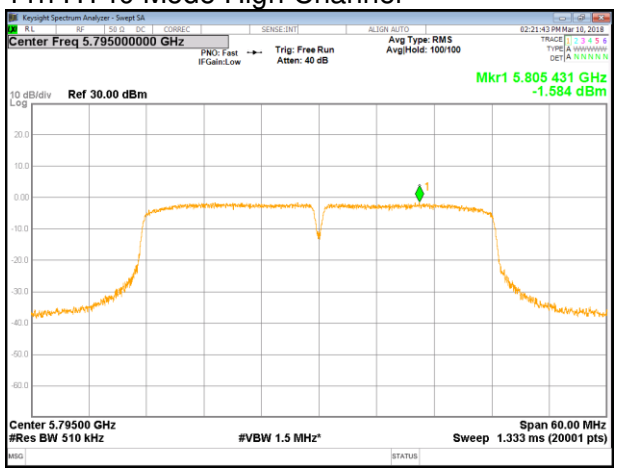
UNII 5.8 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel	11n HT40 Mode High Channel
	

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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 §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

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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[dBuV/m] = EIRP[dBm] + 95.2 = -27dBm + 95.2 = 68.2dBuV/m
E[dBuV/m] = EIRP[dBm] + 95.2 = -17dBm + 95.2 = 78.2dBuV/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 1 GHz 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.

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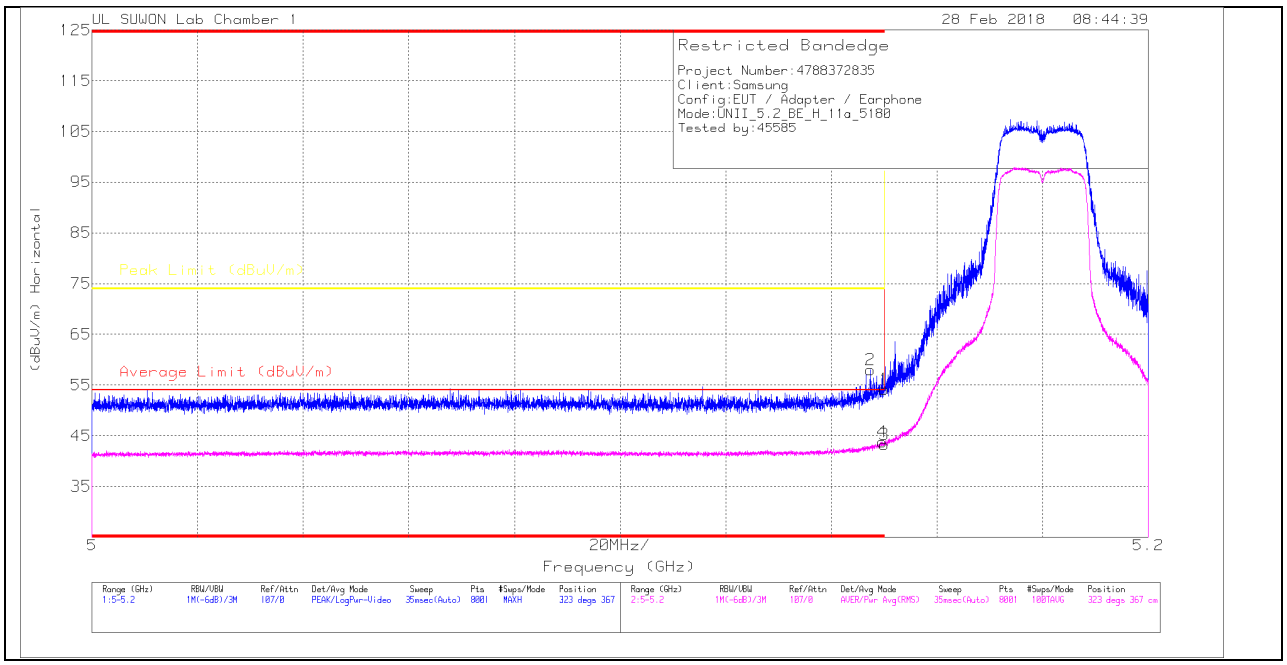
11.1. 5.2 GHz

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

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	42.13	Pk	34	-22	0	54.13	-	-	74	-19.87	323	367	H
2	* 5.147	45.94	Pk	34	-22	0	57.94	-	-	74	-16.06	323	367	H
3	5.15	31.3	RMS	34	-22	0	43.3	54	-10.7	-	-	323	367	H
4	* 5.15	31.81	RMS	34	-22	0	43.81	54	-10.19	-	-	323	367	H

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

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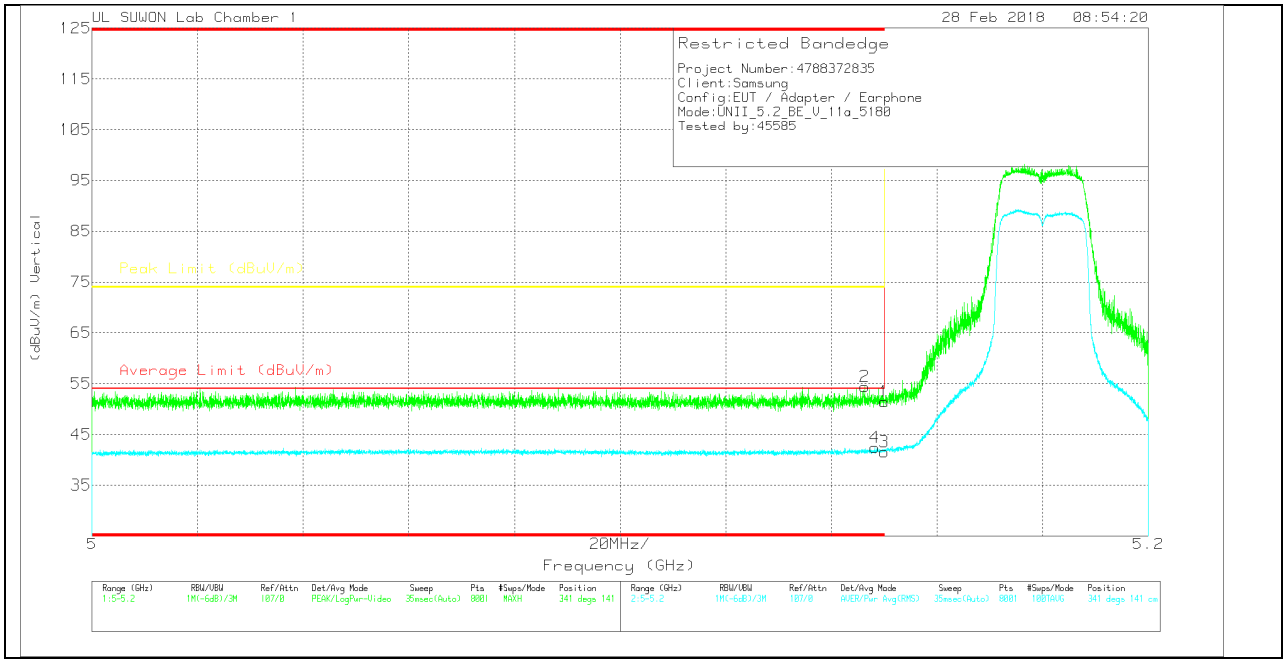
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	39.4	Pk	34	-22	0	51.4	-	-	74	-22.6	341	141	V
2	* 5.146	42.4	Pk	34	-22	0	54.4	-	-	74	-19.6	341	141	V
3	5.15	29.6	RMS	34	-22	0	41.6	54	-12.4	-	-	341	141	V
4	* 5.148	30.36	RMS	34	-22	0	42.36	54	-11.64	-	-	341	141	V

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

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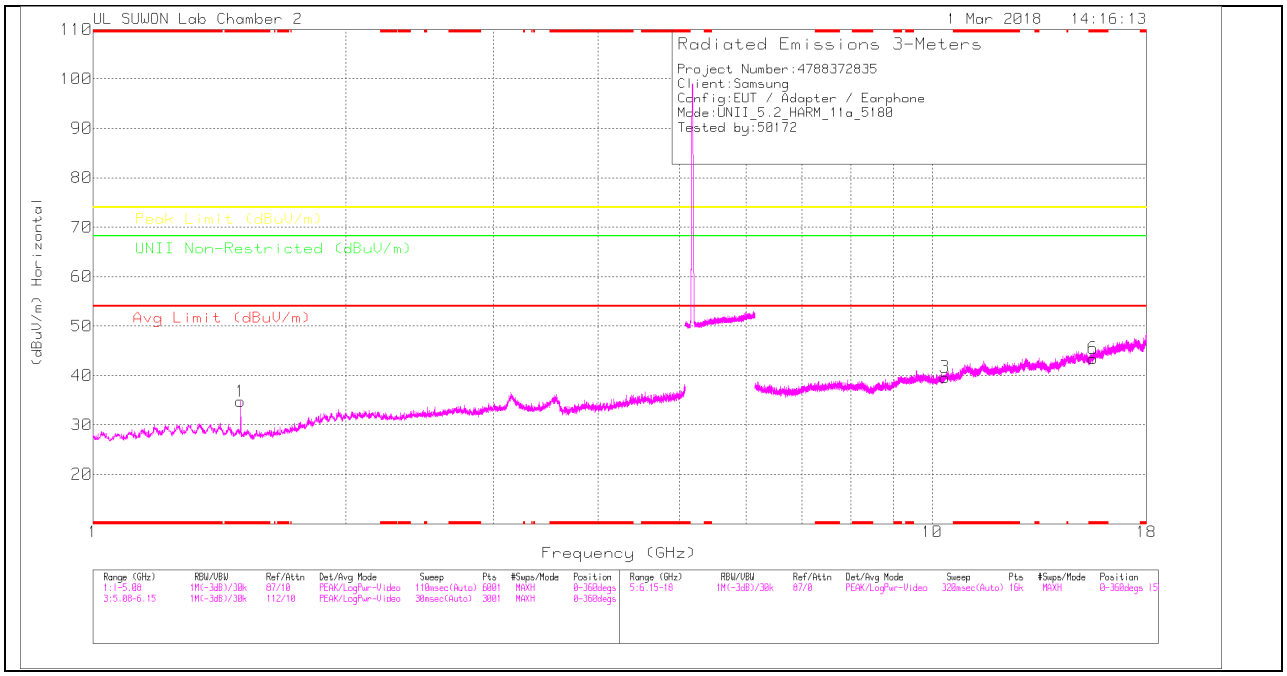
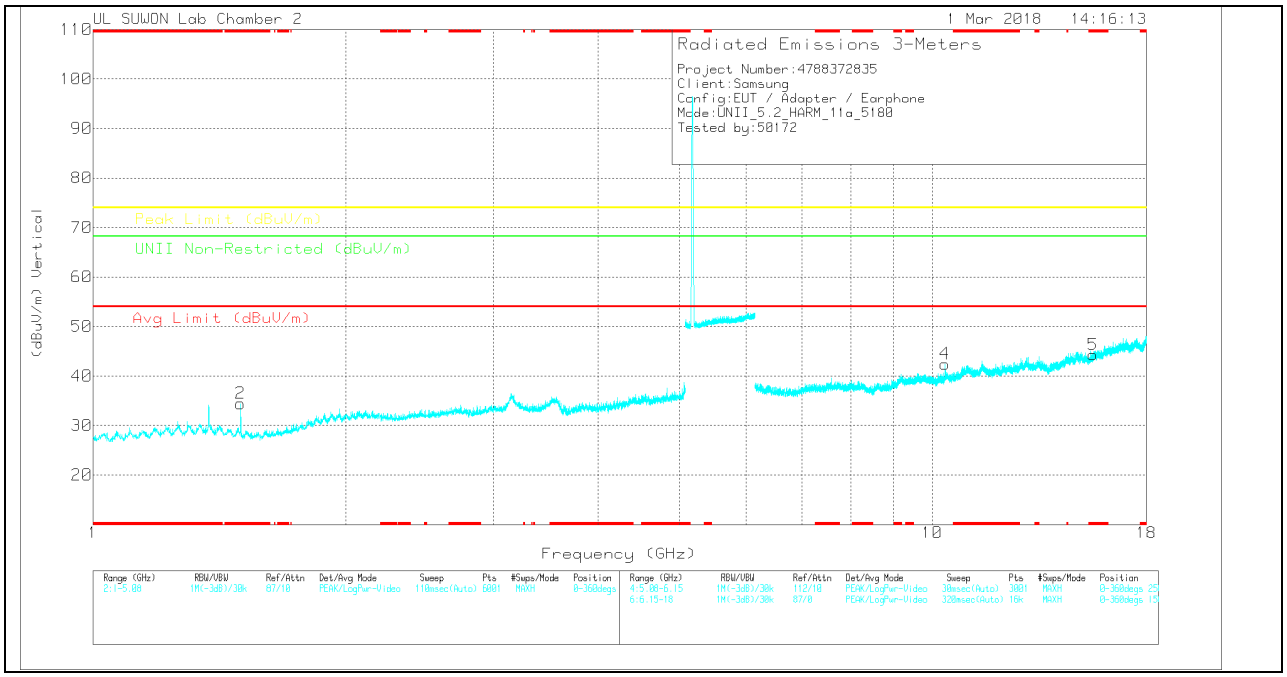
HARMONICS AND SPURIOUS EMISSIONS

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.

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LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	170531_3117[00168724]	5GHz_LP[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
1	* 1.499	34.85	Avg	28.3	-28.4	0	34.75	-	-	74	-39.25	-	-	0-360	250	H
2	* 1.499	34.55	Avg	28.3	-28.4	0	34.45	-	-	74	-39.55	-	-	0-360	250	V
3	10.359	18.85	Avg	37.5	-16.7	0	39.65	-	-	-	-	68.2	-28.55	0-360	250	H
6	* 15.54	18.06	Avg	39.8	-14.4	0	43.46	-	-	74	-30.54	-	-	0-360	150	H
4	10.359	21.64	Avg	37.5	-16.7	0	42.44	-	-	-	-	68.2	-25.76	0-360	150	V
5	* 15.541	18.91	Avg	39.8	-14.4	0	44.31	-	-	74	-29.69	-	-	0-360	250	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	170531_3117[00168724]	5GHz_LP[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
* 1.5	29.63	PK-U	28.3	-28.4	0	29.53	-	-	74	-44.47	-	-	346	389	H
* 1.5	27.74	ADR	28.3	-28.4	0	27.64	54	-26.36	-	-	-	-	346	389	H
* 1.5	42.48	PK-U	28.3	-28.4	0	42.38	-	-	74	-31.62	-	-	237	129	V
* 1.499	28.01	ADR	28.3	-28.4	0	27.91	54	-26.09	-	-	-	-	237	129	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

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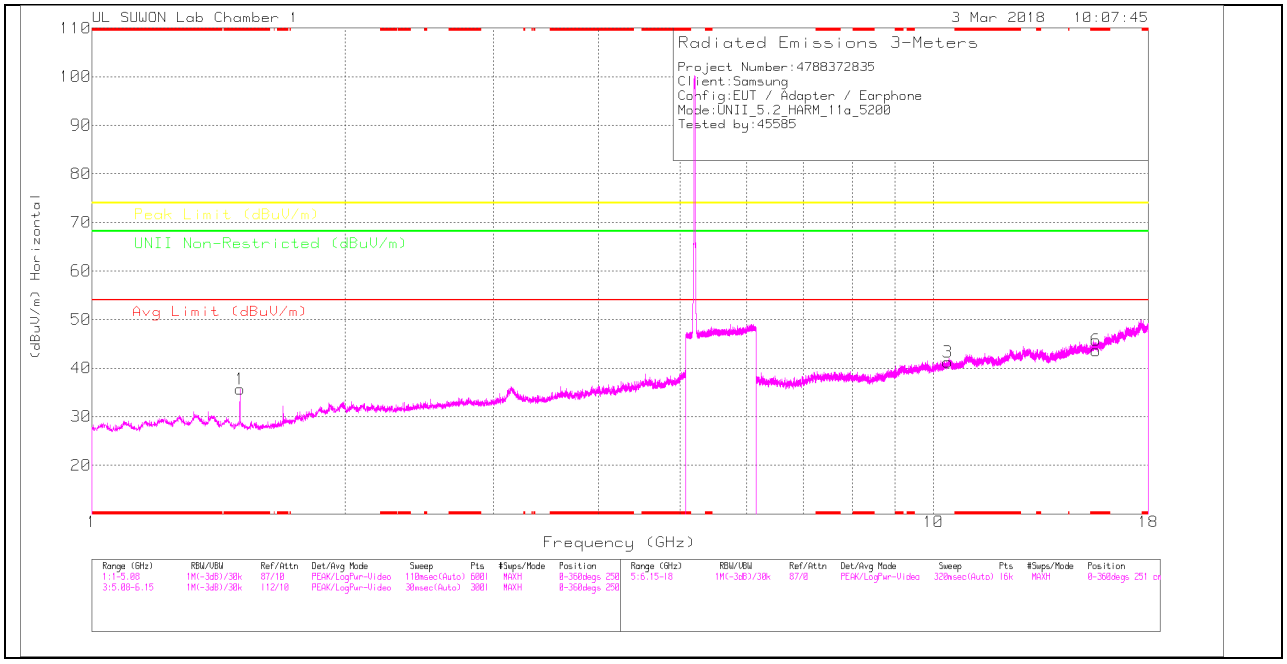
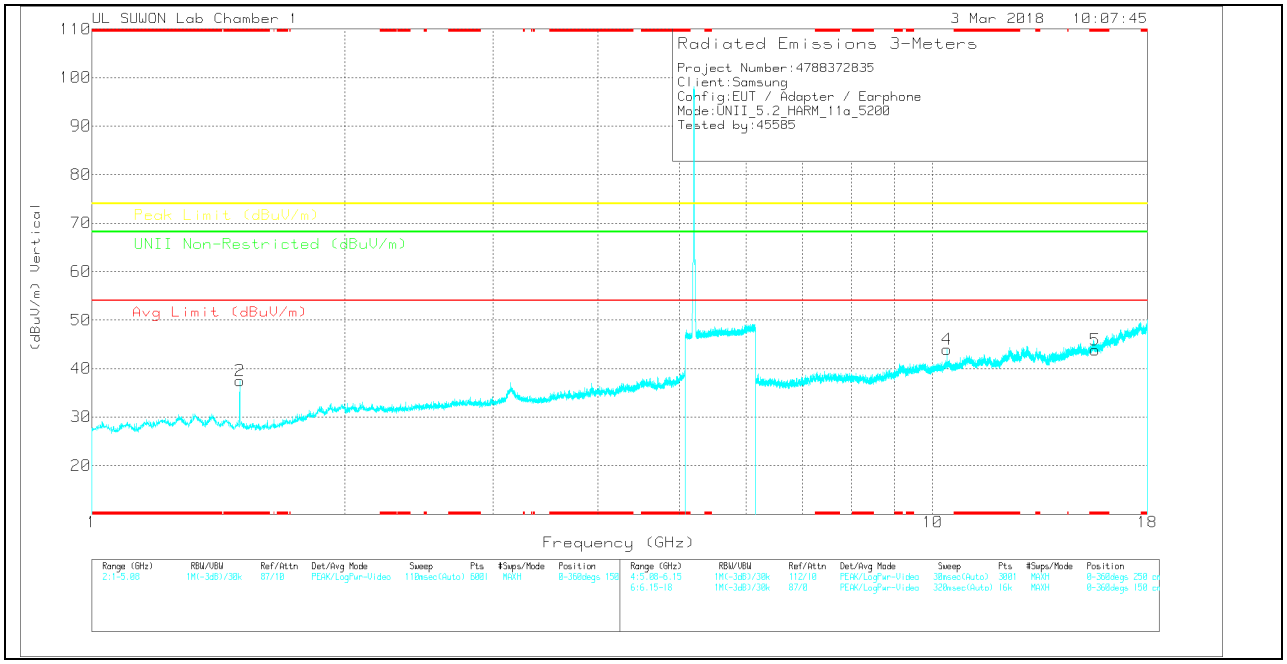
MID CHANNEL HORIZONTAL



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.

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MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	5GHz_LP(dB)_170809	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
1	* 1.499	43.97	PK	28.3	-36.6	0	35.67	-	-	74	-38.33	-	-	0-360	150	H
2	* 1.499	45.82	PK	28.3	-36.6	0	37.52	-	-	74	-36.48	-	-	0-360	150	V
3	10.404	25.7	PK	37.5	-22	0	41.2	-	-	-	-	68.2	-27	0-360	150	H
6	* 15.601	25.63	PK	39.8	-21.8	0	43.63	-	-	74	-30.37	-	-	0-360	150	H
4	10.399	28.49	PK	37.5	-22.1	0	43.89	-	-	-	-	68.2	-24.31	0-360	251	V
5	* 15.601	25.85	PK	39.8	-21.8	0	43.85	-	-	74	-30.15	-	-	0-360	251	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168 717	5GHz_LP(dB)_170809	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
* 1.5	53.13	PK-U	28.3	-36.6	0	44.83	-	-	74	-29.17	-	-	263	283	H
* 1.5	37.73	ADR	28.3	-36.6	0	29.43	54	-24.57	-	-	-	-	263	283	H
* 1.5	47.75	PK-U	28.3	-36.6	0	39.45	-	-	74	-34.55	-	-	51	312	V
* 1.503	35.32	ADR	28.3	-36.6	0	27.02	54	-26.98	-	-	-	-	51	312	V
10.4	36.74	PK-U	37.5	-22.1	0	52.14	-	-	-	-	68.2	-16.06	285	217	V
10.403	36.07	PK-U	37.5	-22	0	51.57	-	-	-	-	68.2	-16.63	290	245	H

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

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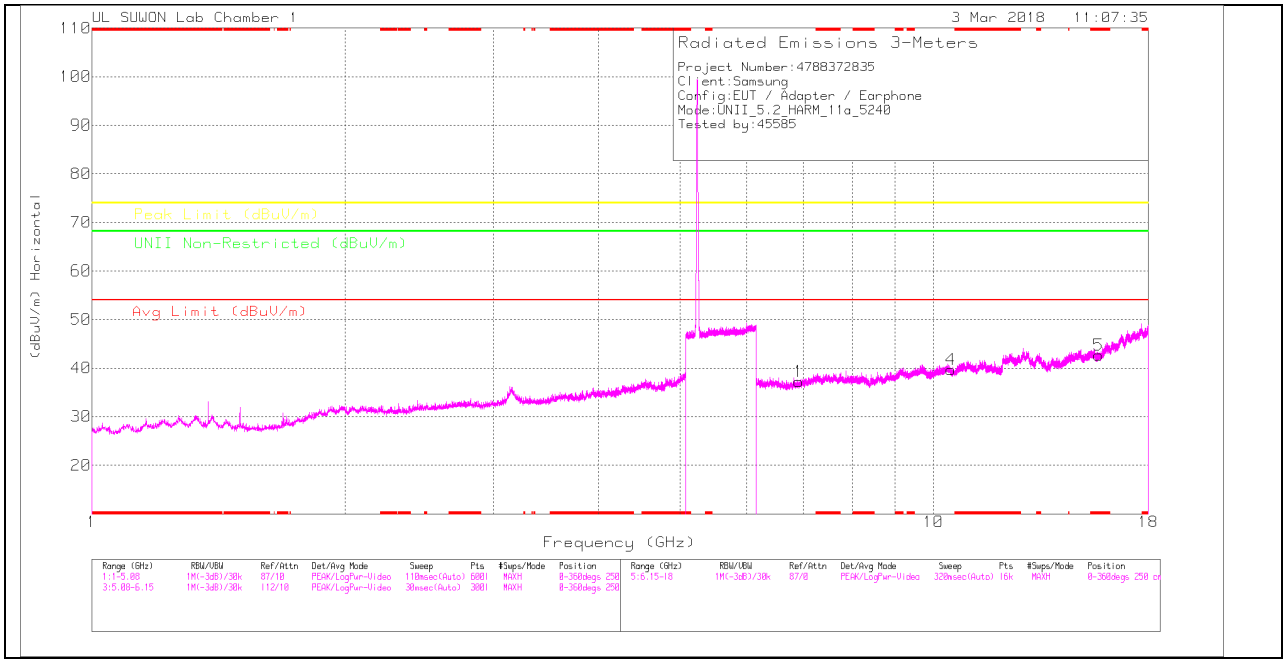
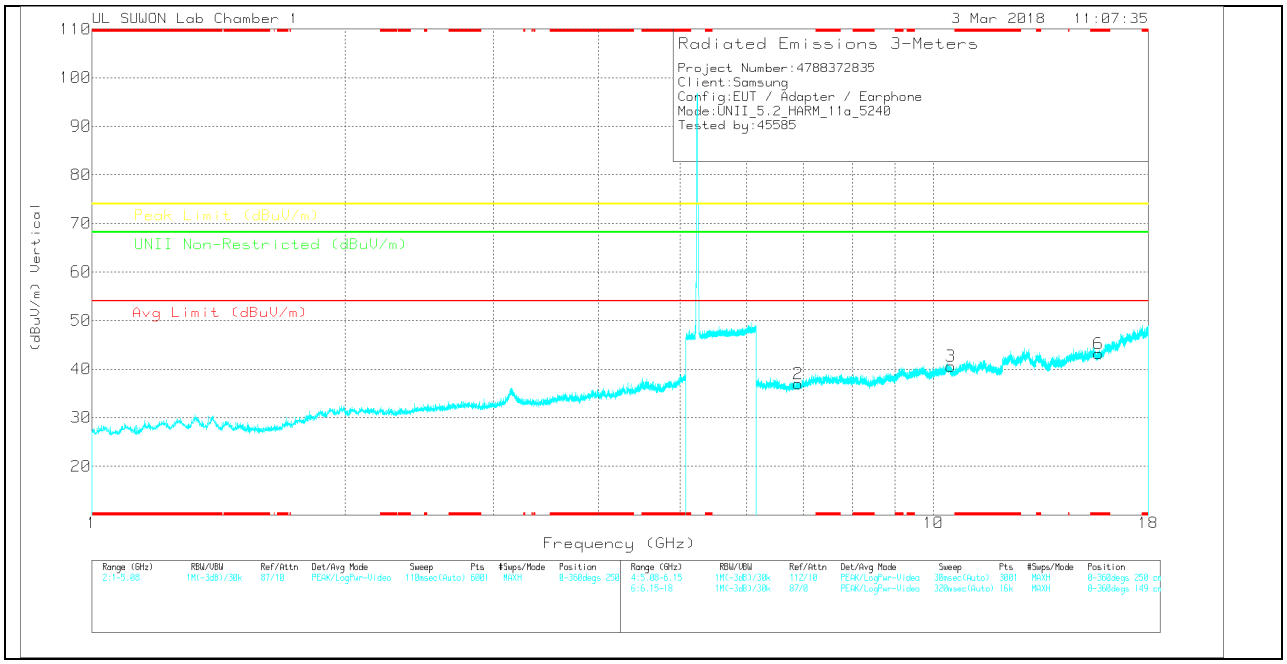
HIGH CHANNEL HORIZONTAL



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.

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HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	6GHz_HP(dB)_17080 9	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
1	6.915	30.21	PK	35.5	-28.5	0	37.21	-	-	-	-	68.2	-30.99	0-360	150	H
4	10.479	24.43	PK	37.5	-22.3	0	39.63	-	-	-	-	68.2	-28.57	0-360	150	H
5	* 15.717	24.29	PK	39.9	-21.5	0	42.69	-	-	74	-31.31	-	-	0-360	250	H
2	6.902	30.11	PK	35.5	-28.6	0	37.01	-	-	-	-	68.2	-31.19	0-360	250	V
3	10.48	25.43	PK	37.5	-22.3	0	40.63	-	-	-	-	68.2	-27.57	0-360	149	V
6	* 15.722	24.72	PK	39.9	-21.5	0	43.12	-	-	74	-30.88	-	-	0-360	149	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

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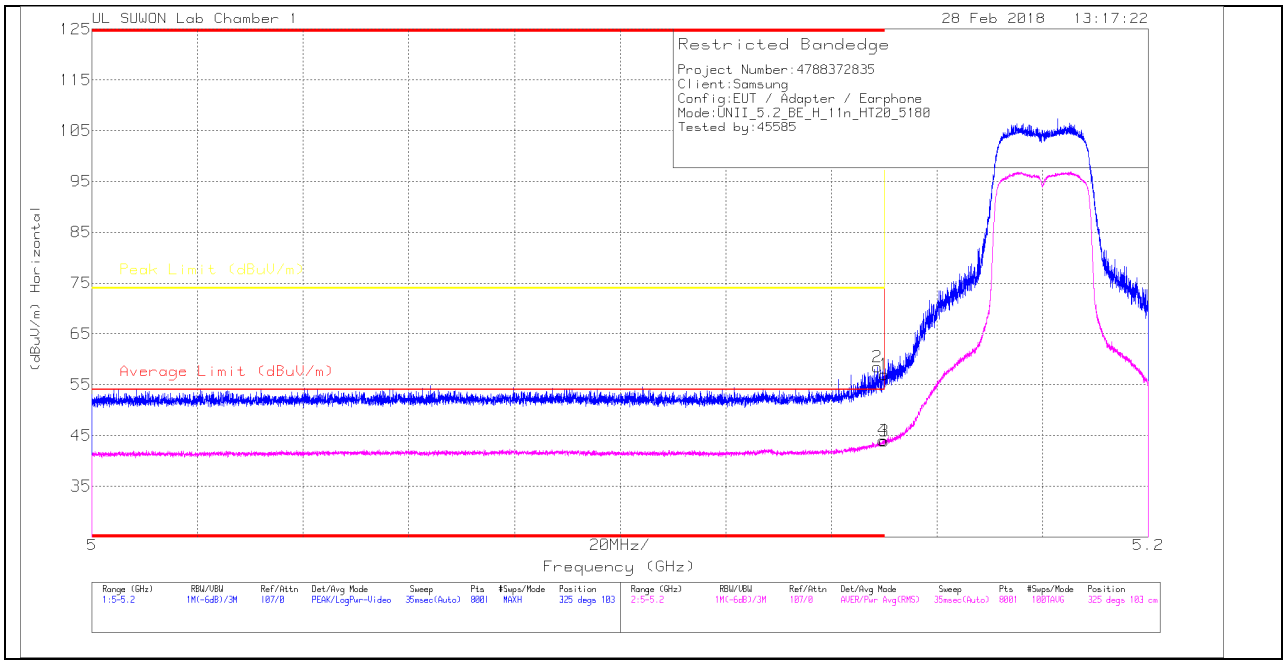
11.1.2. TX Above 1GHz 802.11n HT20 MODE IN THE 5.2GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	44.99	Pk	34	-22	0	56.99	-	-	74	-17.01	325	103	H
2	* 5.149	46.45	Pk	34	-22	0	58.45	-	-	74	-15.55	325	103	H
3	5.15	31.86	RMS	34	-22	0	43.86	54	-10.14	-	-	325	103	H
4	* 5.15	32.07	RMS	34	-22	0	44.07	54	-9.93	-	-	325	103	H

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

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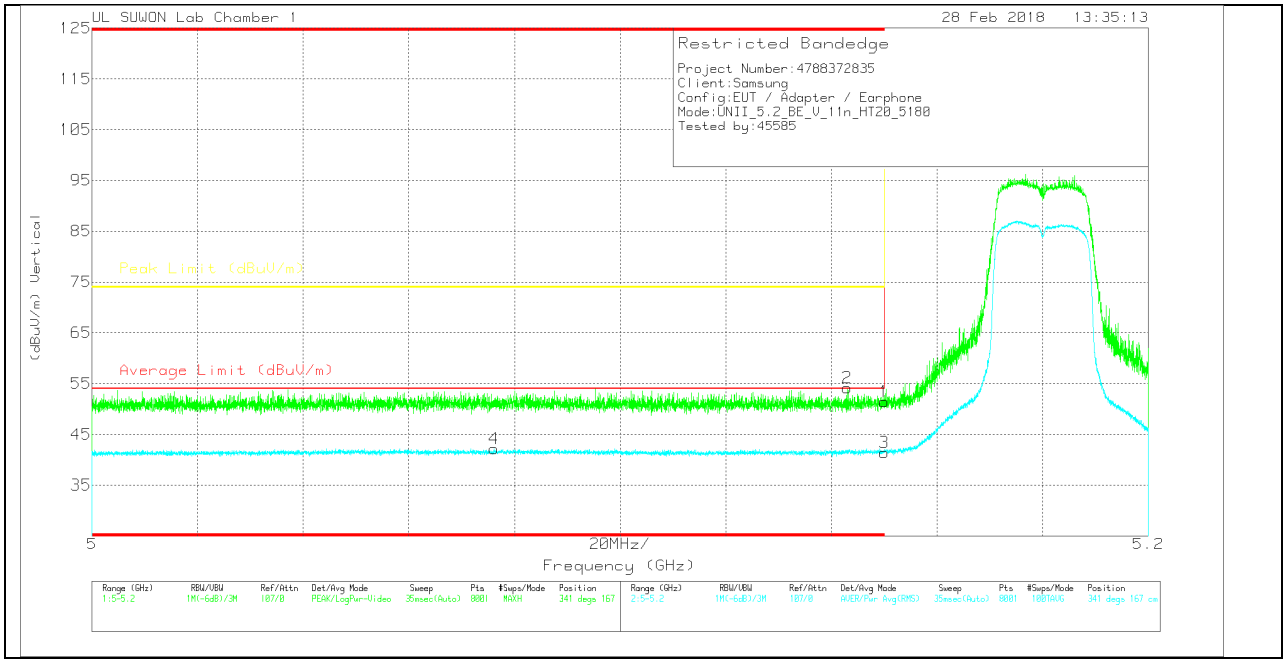
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	39.41	Pk	34	-22	0	51.41	-	-	74	-22.59	341	167	V
2	* 5.143	42.11	Pk	34	-21.9	0	54.21	-	-	74	-19.79	341	167	V
3	5.15	29.38	RMS	34	-22	0	41.38	54	-12.62	-	-	341	167	V
4	* 5.076	30.2	RMS	33.9	-21.9	0	42.2	54	-11.8	-	-	341	167	V

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

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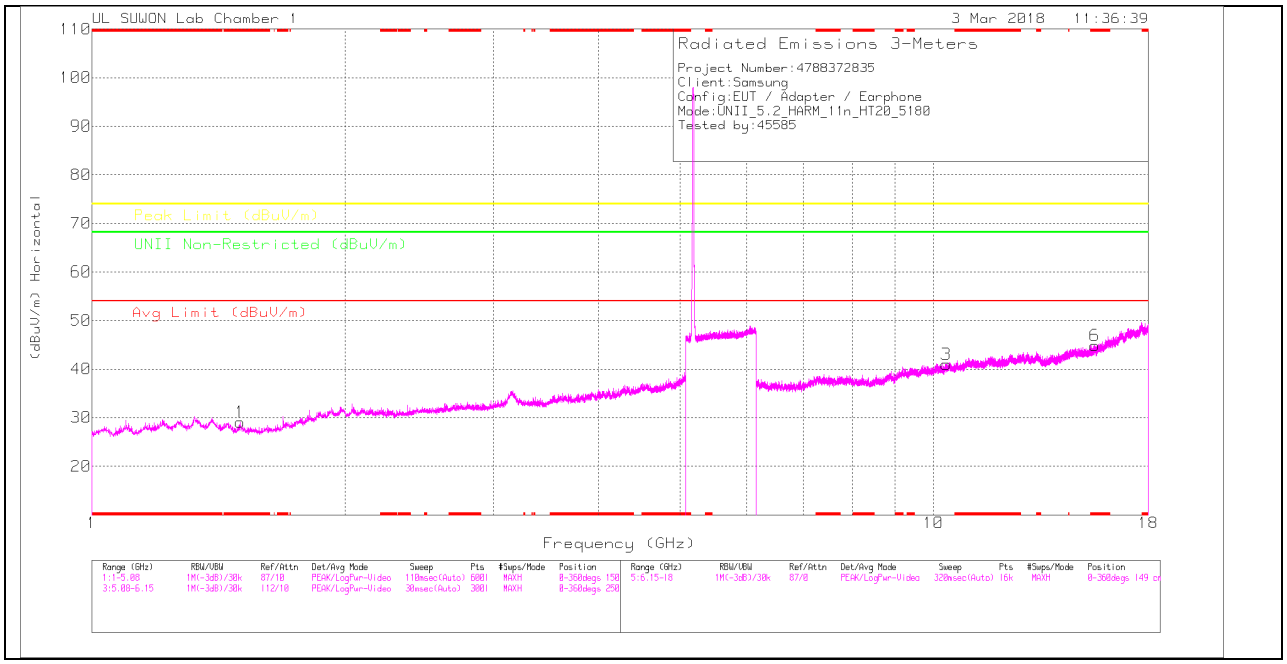
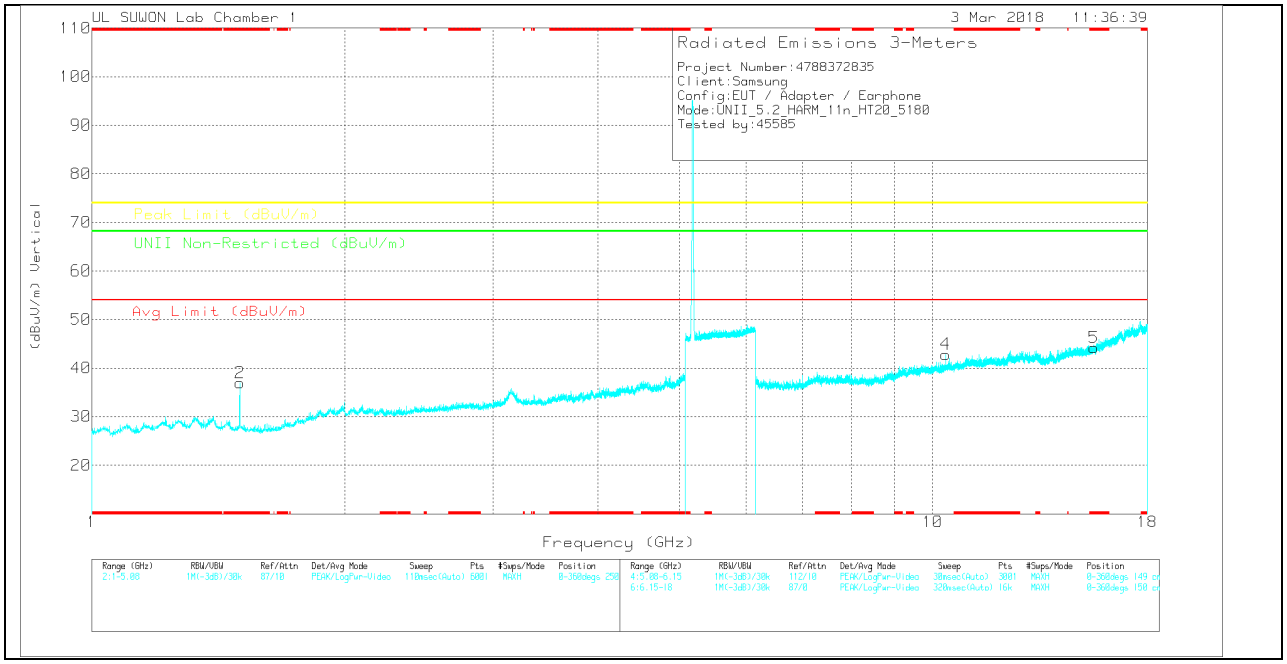
HARMONICS AND SPURIOUS EMISSIONS

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.

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LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	5GHz_LP(dB)_170809	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
1	* 1.499	37.43	PK	28.3	-36.6	0	29.13	-	-	74	-44.87	-	-	0-360	150	H
2	* 1.5	45.28	PK	28.3	-36.6	0	36.98	-	-	74	-37.02	-	-	0-360	250	V
3	10.354	26.07	PK	37.5	-22.6	0	40.97	-	-	-	-	68.2	-27.23	0-360	250	H
6	* 15.539	26.39	PK	39.8	-21.3	0	44.89	-	-	74	-29.11	-	-	0-360	250	H
4	10.36	27.85	PK	37.5	-22.5	0	42.85	-	-	-	-	68.2	-25.35	0-360	250	V
5	* 15.547	25.84	PK	39.8	-21.4	0	44.24	-	-	74	-29.76	-	-	0-360	250	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168 717	5GHz_LP(dB)_170809	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
* 1.499	50.49	PK-U	28.3	-36.6	0	42.19	-	-	74	-31.81	-	-	35	142	H
* 1.5	35.6	ADR	28.3	-36.6	0	27.3	54	-26.7	-	-	-	-	35	142	H
* 1.5	50.5	PK-U	28.3	-36.6	0	42.2	-	-	74	-31.8	-	-	109	277	V
* 1.5	35.51	ADR	28.3	-36.6	0	27.21	54	-26.79	-	-	-	-	109	277	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

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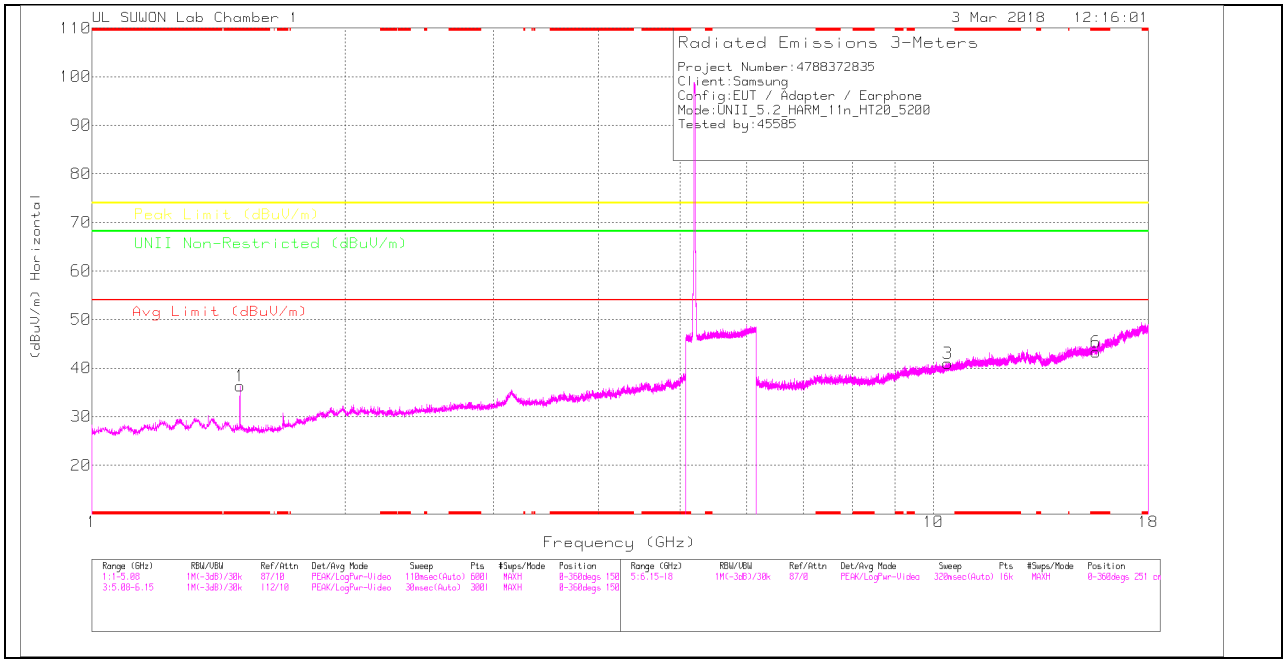
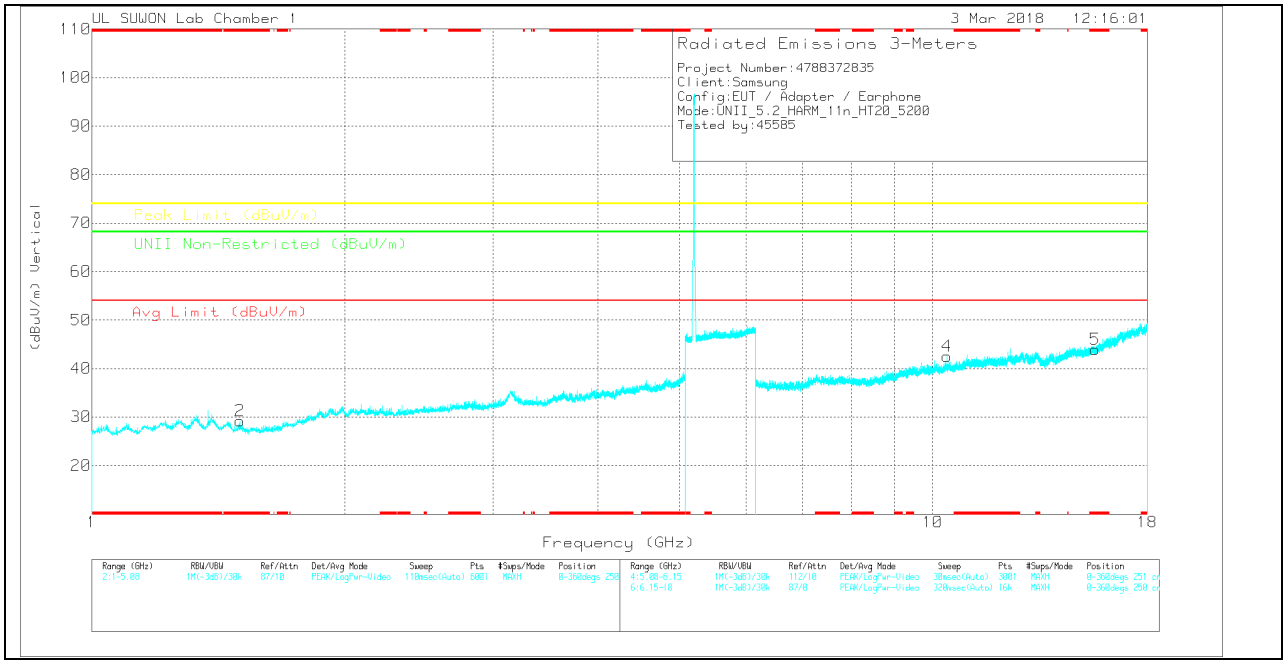
MID CHANNEL HORIZONTAL



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.

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MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
1	* 1.499	44.65	PK	28.3	-36.6	0	36.35	-	-	74	-37.65	-	-	0-360	250	H
2	* 1.5	37.54	PK	28.3	-36.6	0	29.24	-	-	74	-44.76	-	-	0-360	250	V
3	10.392	25.63	PK	37.5	-22.2	0	40.93	-	-	-	-	68.2	-27.27	0-360	251	H
6	* 15.602	25.28	PK	39.8	-21.8	0	43.28	-	-	74	-30.72	-	-	0-360	150	H
4	10.399	27.1	PK	37.5	-22.1	0	42.5	-	-	-	-	68.2	-25.7	0-360	150	V
5	* 15.601	25.93	PK	39.8	-21.8	0	43.93	-	-	74	-30.07	-	-	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
* 1.5	50.87	PK-U	28.3	-36.6	0	42.57	-	-	74	-31.43	-	-	46	190	H
* 1.5	36.16	ADR	28.3	-36.6	0	27.86	54	-26.14	-	-	-	-	46	190	H
* 1.5	49.1	PK-U	28.3	-36.6	0	40.8	-	-	74	-33.2	-	-	182	352	V
* 1.5	35.02	ADR	28.3	-36.6	0	26.72	54	-27.28	-	-	-	-	182	352	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

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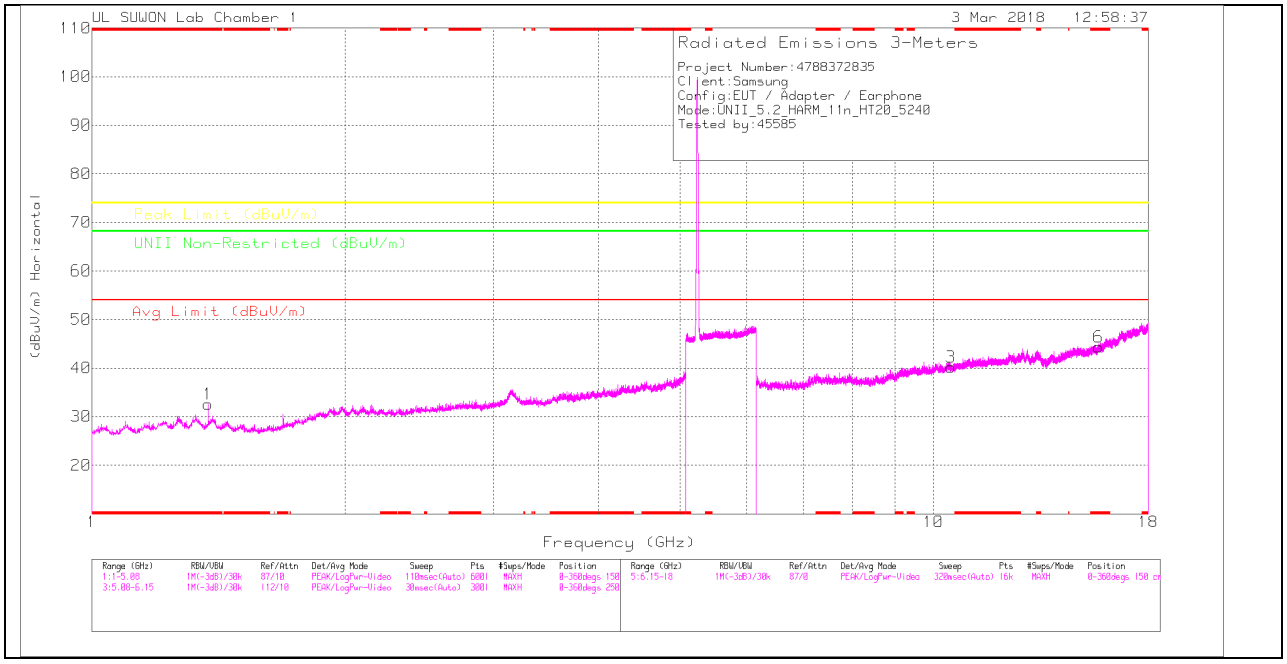
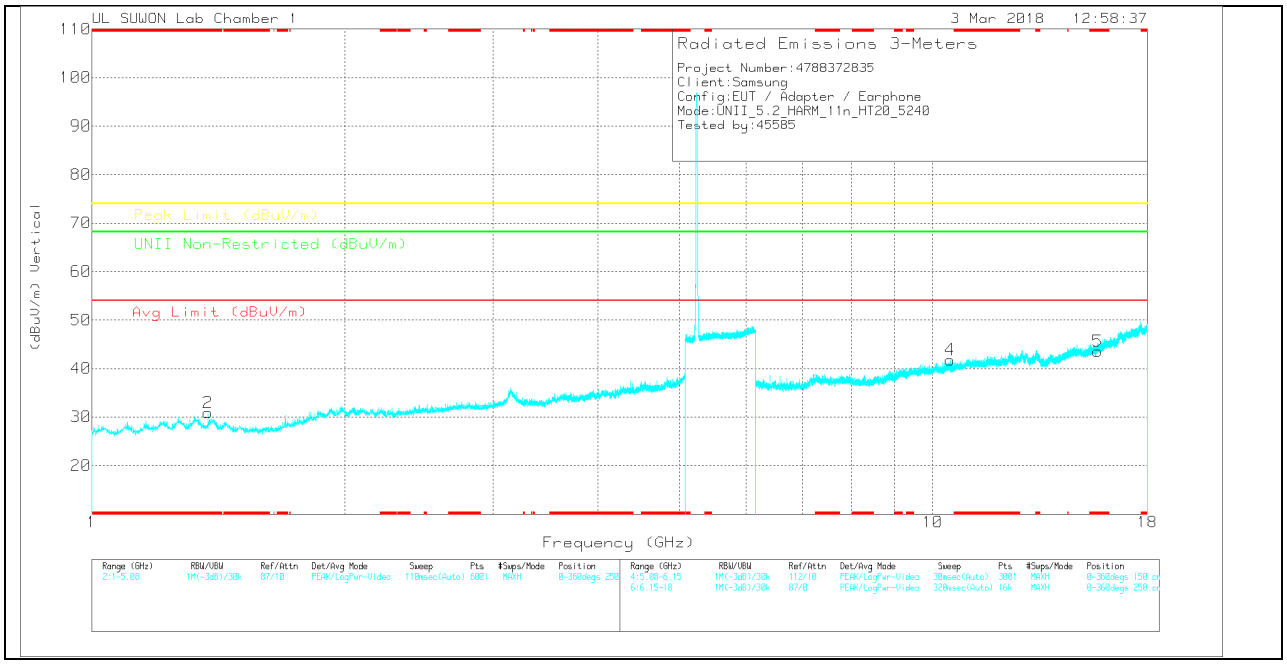
HIGH CHANNEL HORIZONTAL



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.

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HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	5GHz_LP(dB)_170809	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
1	* 1.375	39.6	PK	29.4	-36.4	0	32.6	-	-	74	-41.4	-	-	0-360	250	H
2	* 1.375	37.84	PK	29.4	-36.4	0	30.84	-	-	74	-43.16	-	-	0-360	150	V
3	10.481	25.03	PK	37.5	-22.3	0	40.23	-	-	-	-	68.2	-27.97	0-360	250	H
6	* 15.721	25.97	PK	39.9	-21.5	0	44.37	-	-	74	-29.63	-	-	0-360	250	H
4	10.479	26.61	PK	37.5	-22.3	0	41.81	-	-	-	-	68.2	-26.39	0-360	250	V
5	* 15.721	25.18	PK	39.9	-21.5	0	43.58	-	-	74	-30.42	-	-	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
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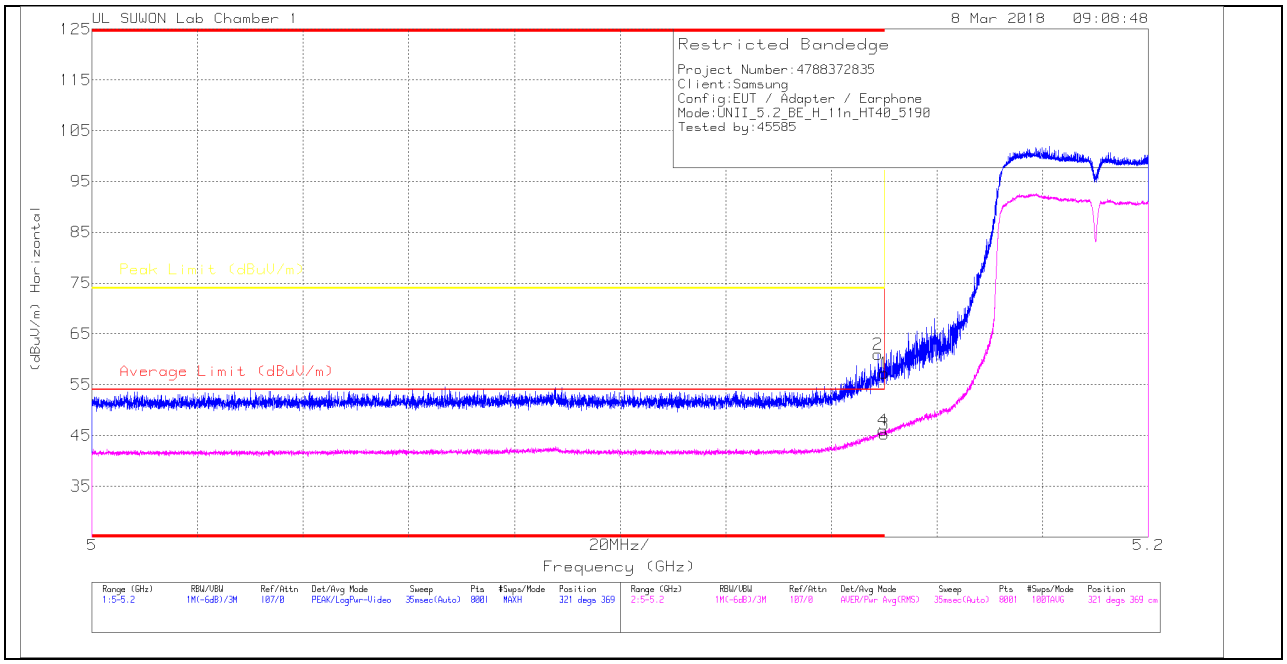
11.1.3. TX Above 1GHz 802.11n HT40 MODE IN THE 5.2GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	45.23	Pk	34	-22	0	57.23	-	-	74	-16.77	321	369	H
2	* 5.149	48.95	Pk	34	-22	0	60.95	-	-	74	-13.05	321	369	H
3	5.15	33.07	RMS	34	-22	.18	45.25	54	-8.75	-	-	321	369	H
4	* 5.15	33.86	RMS	34	-22	.18	46.04	54	-7.96	-	-	321	369	H

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

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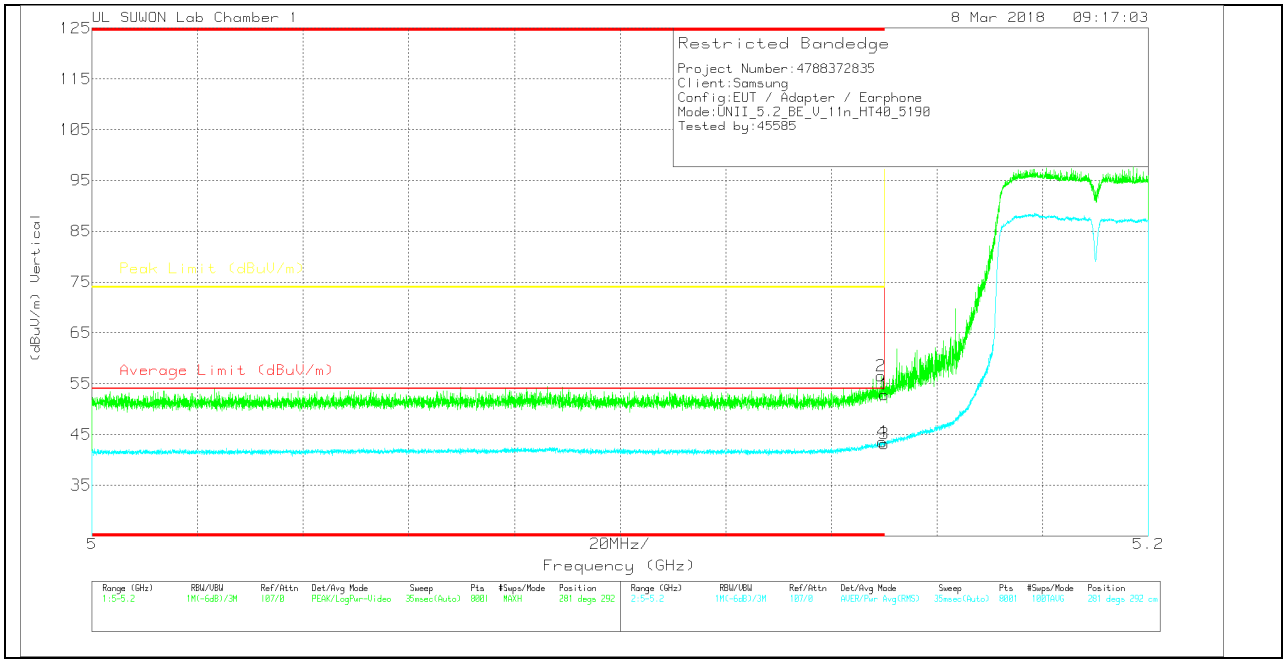
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	40.79	Pk	34	-22	0	52.79	-	-	74	-21.21	281	292	V
2	* 5.149	44.48	Pk	34	-22	0	56.48	-	-	74	-17.52	281	292	V
3	5.15	31.02	RMS	34	-22	.18	43.2	54	-10.8	-	-	281	292	V
4	* 5.15	31.34	RMS	34	-22	.18	43.52	54	-10.48	-	-	281	292	V

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

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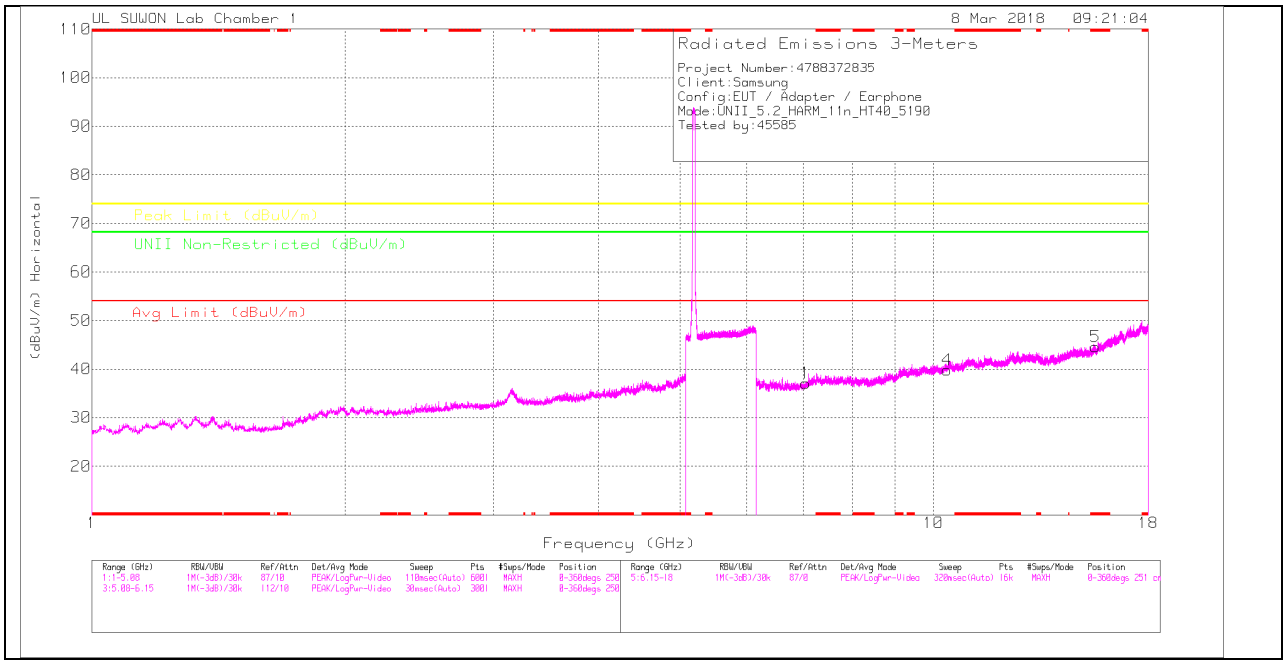
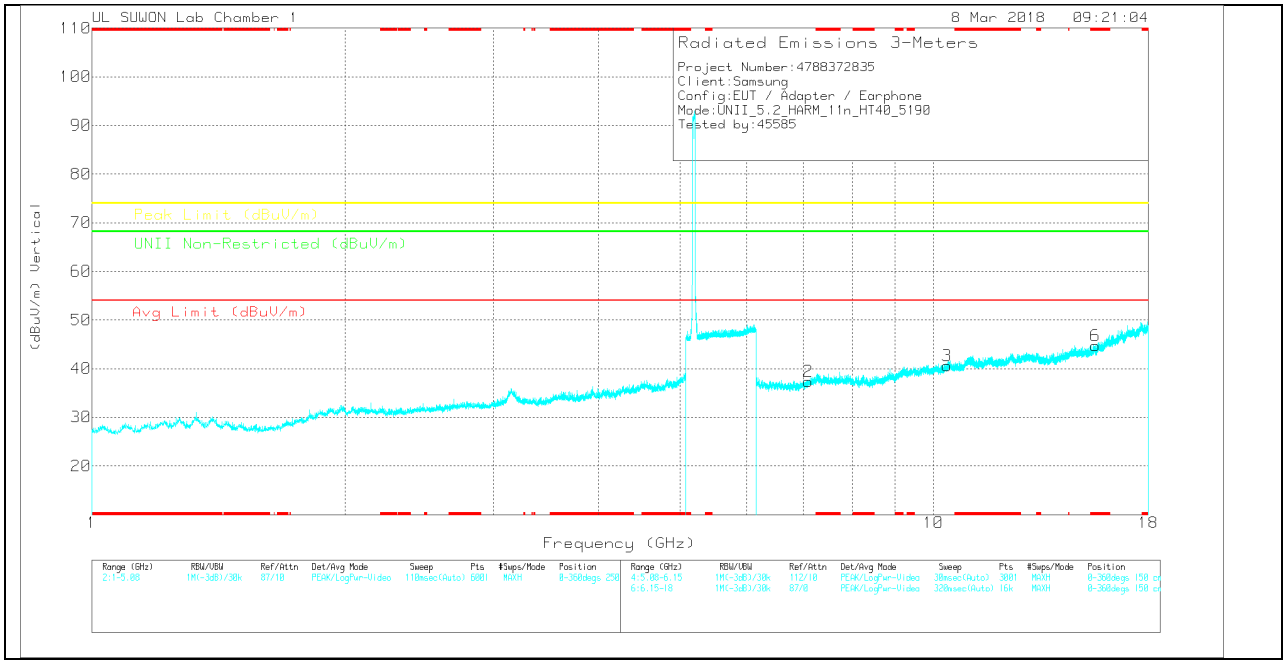
HARMONICS AND SPURIOUS EMISSIONS

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.

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LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	6GHz_HP(dB)_17080 9	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
1	7.054	29.53	PK	35.6	-28	0	37.13	-	-	-	-	68.2	-31.07	0-360	150	H
4	10.38	24.63	PK	37.5	-22.3	0	39.83	-	-	-	-	68.2	-28.37	0-360	150	H
5	* 15.573	26.31	PK	39.8	-21.5	0	44.61	-	-	74	-29.39	-	-	0-360	251	H
2	7.099	29.71	PK	35.7	-28	0	37.41	-	-	-	-	68.2	-30.79	0-360	251	V
3	10.38	25.35	PK	37.5	-22.3	0	40.55	-	-	-	-	68.2	-27.65	0-360	251	V
6	* 15.572	26.52	PK	39.8	-21.6	0	44.72	-	-	74	-29.28	-	-	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

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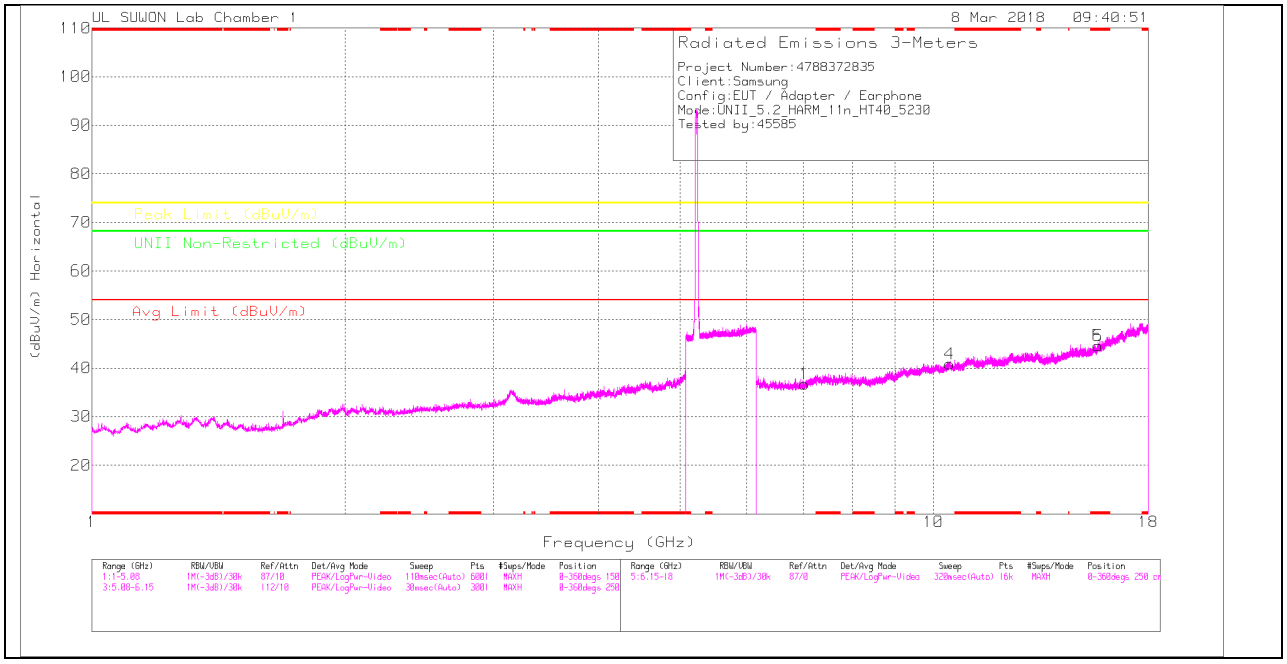
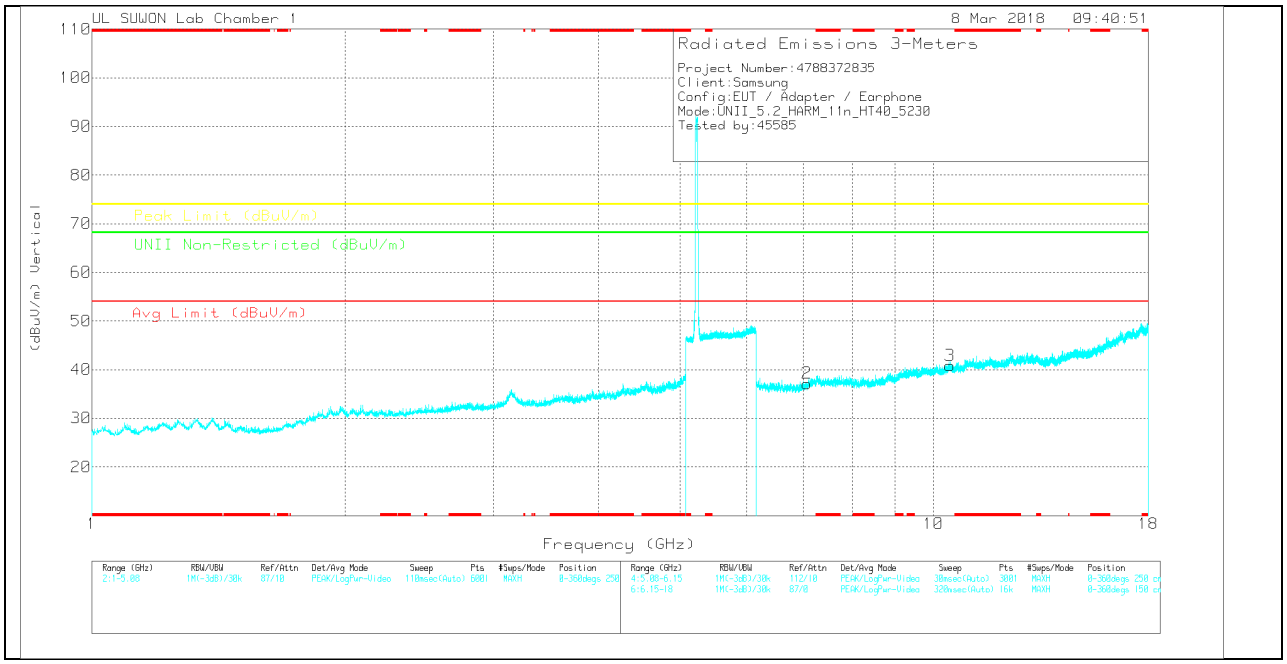
HIGH CHANNEL HORIZONTAL



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.

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HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	6GHz_HF(dB)_170809	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
1	7.026	29.08	PK	35.6	-28	0	36.68	-	-	-	-	68.2	-31.52	0-360	250	H
4	10.459	25.49	PK	37.5	-22.1	0	40.89	-	-	-	-	68.2	-27.31	0-360	150	H
5	* 15.69	26.35	PK	39.9	-21.6	0	44.65	-	-	74	-29.35	-	-	0-360	150	H
6	* 15.69	26.35	PK	39.9	-21.6	0	44.65	-	-	74	-29.35	-	-	0-360	150	H
2	7.075	29.56	PK	35.6	-28	0	37.16	-	-	-	-	68.2	-31.04	0-360	250	V
3	10.461	25.41	PK	37.5	-22.1	0	40.81	-	-	-	-	68.2	-27.39	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

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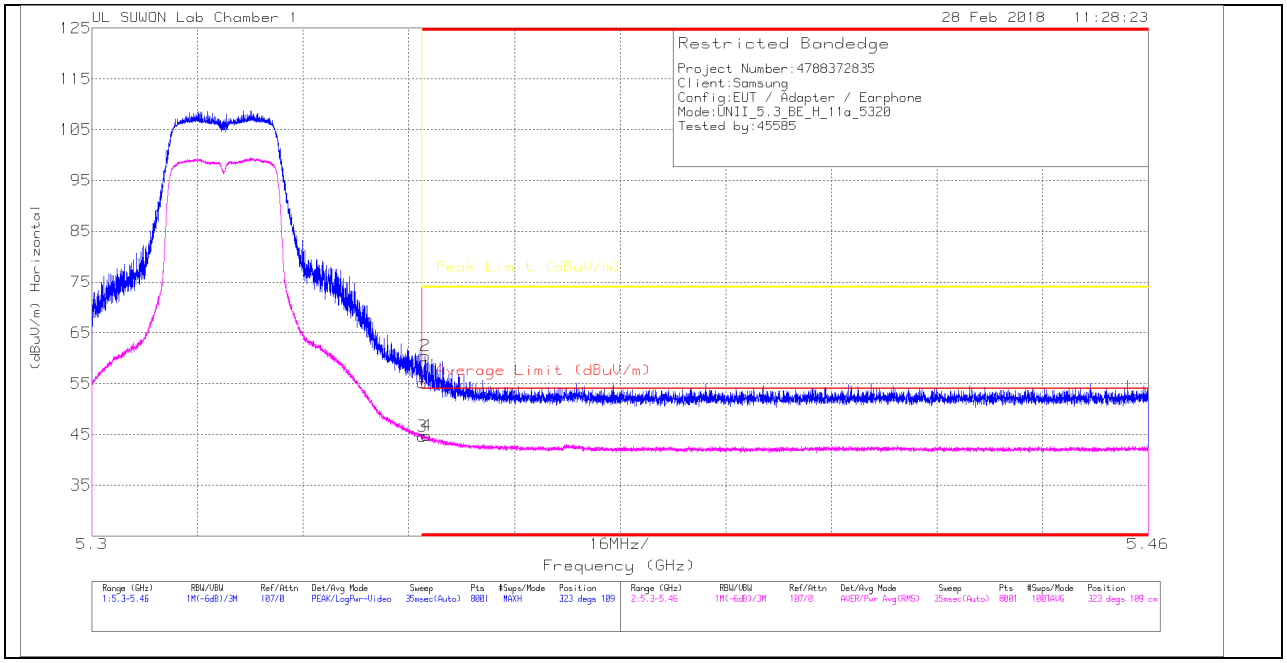
11.2. 5.3 GHz

11.2.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.3 GHz BAND AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	* 5.35	42.66	Pk	34.2	-21.7	0	55.16	-	-	74	-18.84	323	109	H
2	* 5.35	47.93	Pk	34.2	-21.7	0	60.43	-	-	74	-13.57	323	109	H
3	* 5.35	32.19	RMS	34.2	-21.7	0	44.69	54	-9.31	-	-	323	109	H
4	* 5.351	32.31	RMS	34.2	-21.7	0	44.81	54	-9.19	-	-	323	109	H

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

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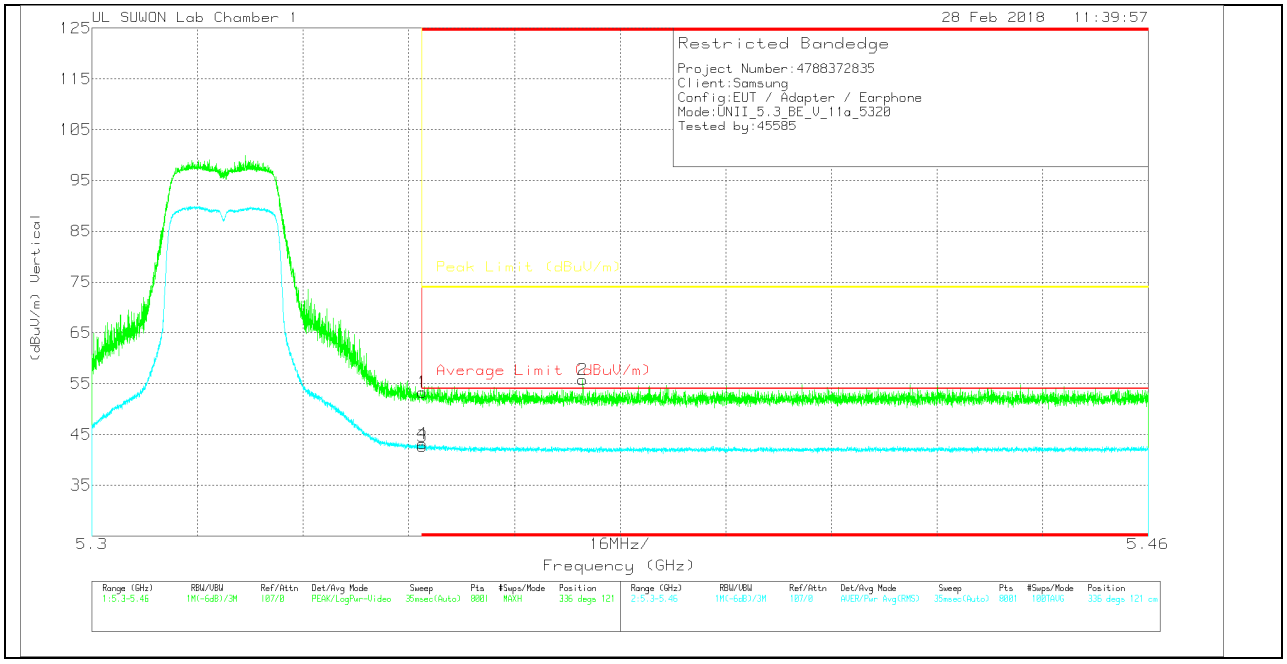
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	* 5.35	40.74	Pk	34.2	-21.7	0	53.24	-	-	74	-20.76	336	121	V
2	* 5.374	43.27	Pk	34.2	-21.7	0	55.77	-	-	74	-18.23	336	121	V
3	* 5.35	30.2	RMS	34.2	-21.7	0	42.7	54	-11.3	-	-	336	121	V
4	* 5.35	30.62	RMS	34.2	-21.7	0	43.12	54	-10.88	-	-	336	121	V

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

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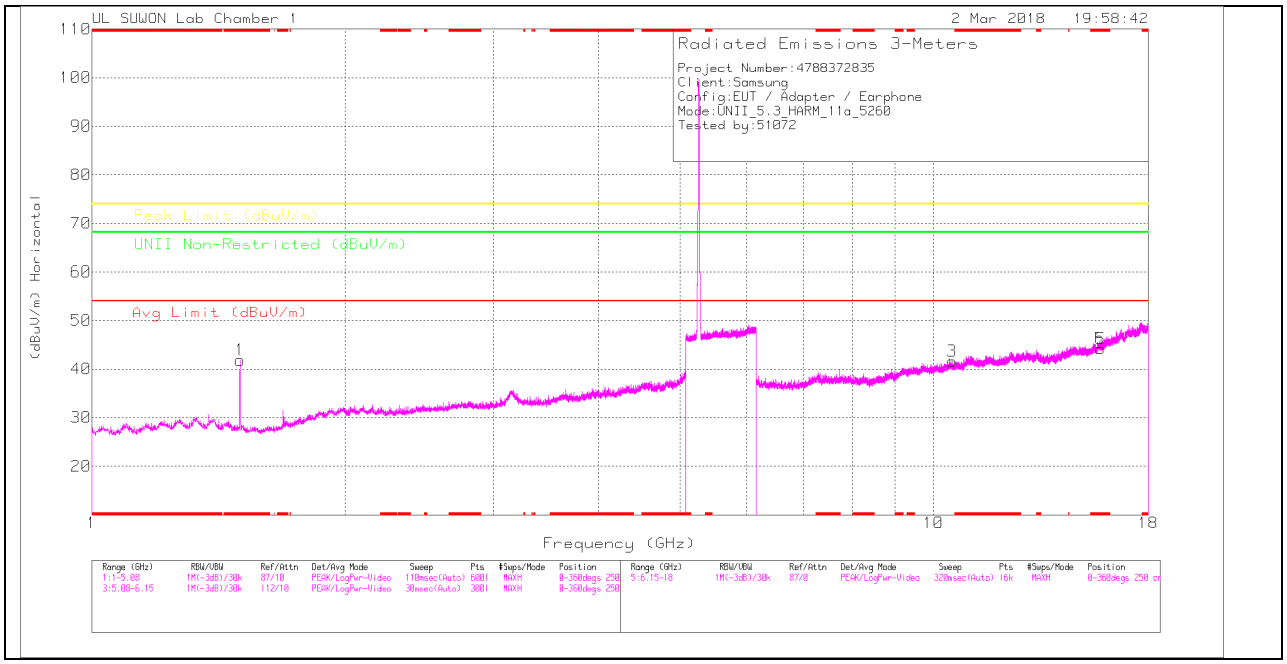
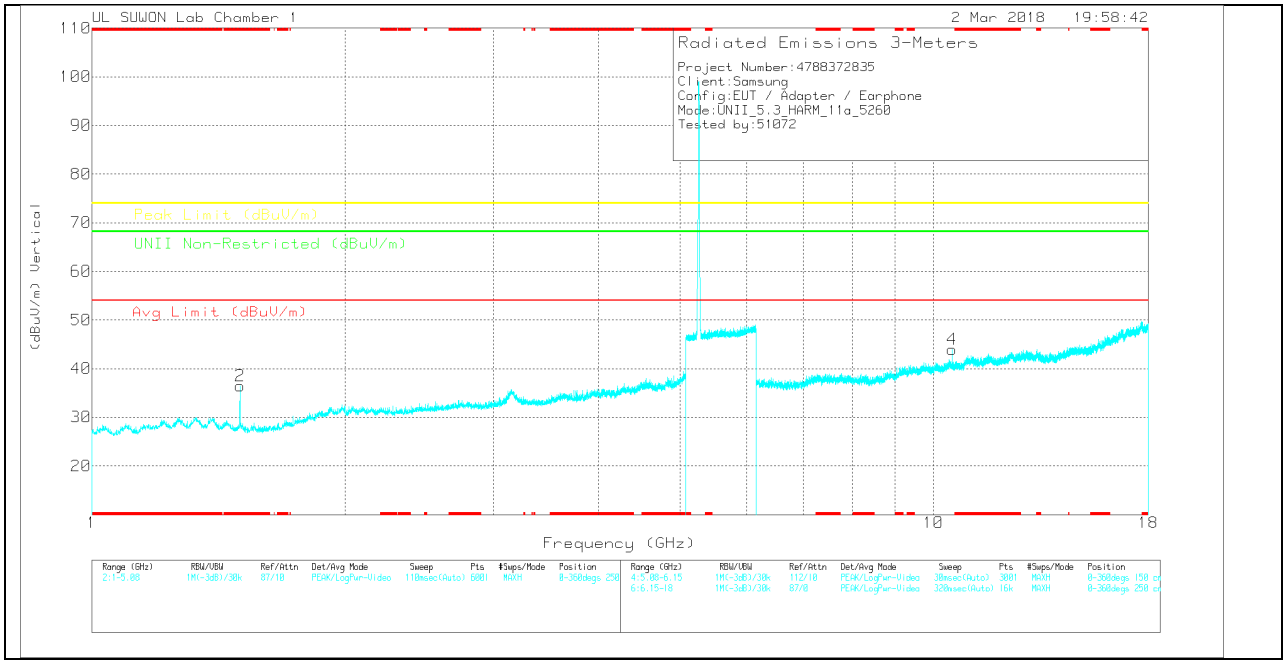
HARMONICS AND SPURIOUS EMISSIONS

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.

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LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	5GHz_LP(dB)_170809	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
1	* 1.499	50.12	PK	28.3	-36.6	0	41.82	-	-	74	-32.18	-	-	0-360	150	H
2	* 1.5	44.72	PK	28.3	-36.6	0	36.42	-	-	74	-37.58	-	-	0-360	250	V
3	10.52	27.16	PK	37.5	-23	0	41.66	-	-	-	-	68.2	-26.54	0-360	250	H
5	* 15.78	25.36	PK	40.1	-21.3	0	44.16	-	-	74	-29.84	-	-	0-360	250	H
6	* 15.78	25.36	PK	40.1	-21.3	0	44.16	-	-	74	-29.84	-	-	0-360	250	H
4	10.519	29.35	PK	37.5	-22.9	0	43.95	-	-	-	-	68.2	-24.25	0-360	250	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168 717	5GHz_LP(dB)_170809	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
* 1.499	52.91	PK-U	28.3	-36.6	0	44.61	-	-	74	-29.39	-	-	183	170	H
* 1.5	37.45	ADR	28.3	-36.6	0	29.15	54	-24.85	-	-	-	-	183	170	H
* 1.5	48.53	PK-U	28.3	-36.6	0	40.23	-	-	74	-33.77	-	-	226	360	V
* 1.499	35.36	ADR	28.3	-36.6	0	27.06	54	-26.94	-	-	-	-	226	360	V
10.519	36.94	PK-U	37.5	-22.9	0	51.54	-	-	-	-	68.2	-16.66	39	100	H
10.519	37.03	PK-U	37.5	-22.9	0	51.63	-	-	-	-	68.2	-16.57	278	106	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

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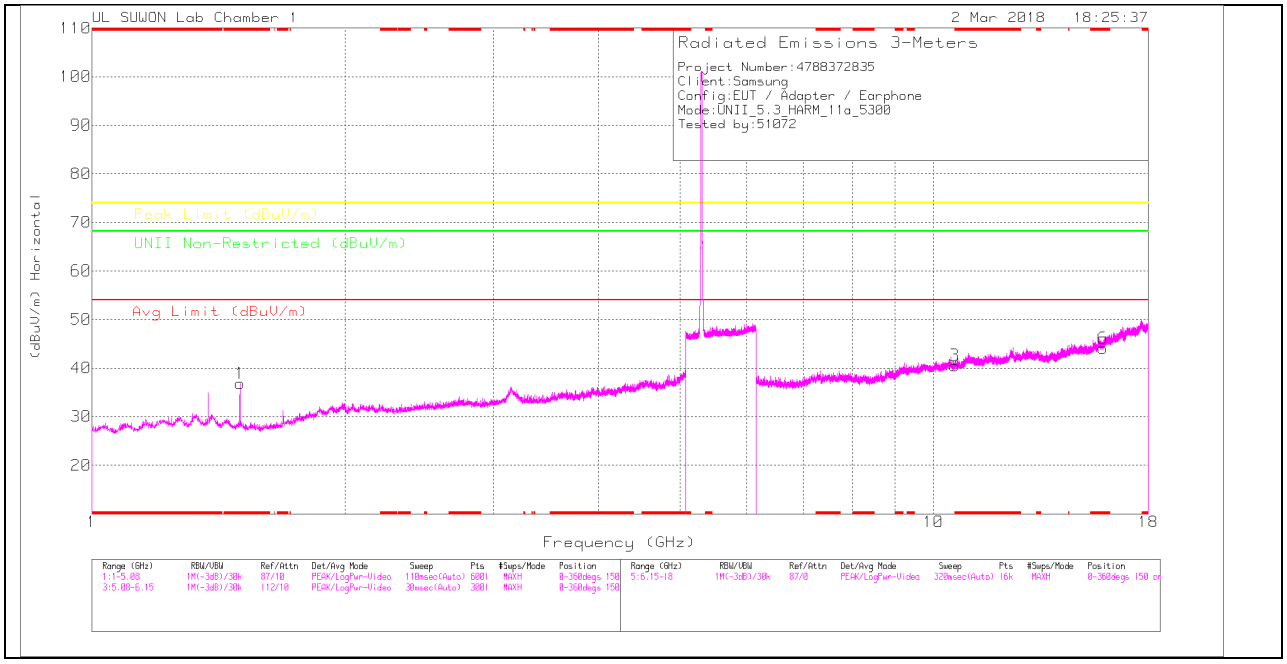
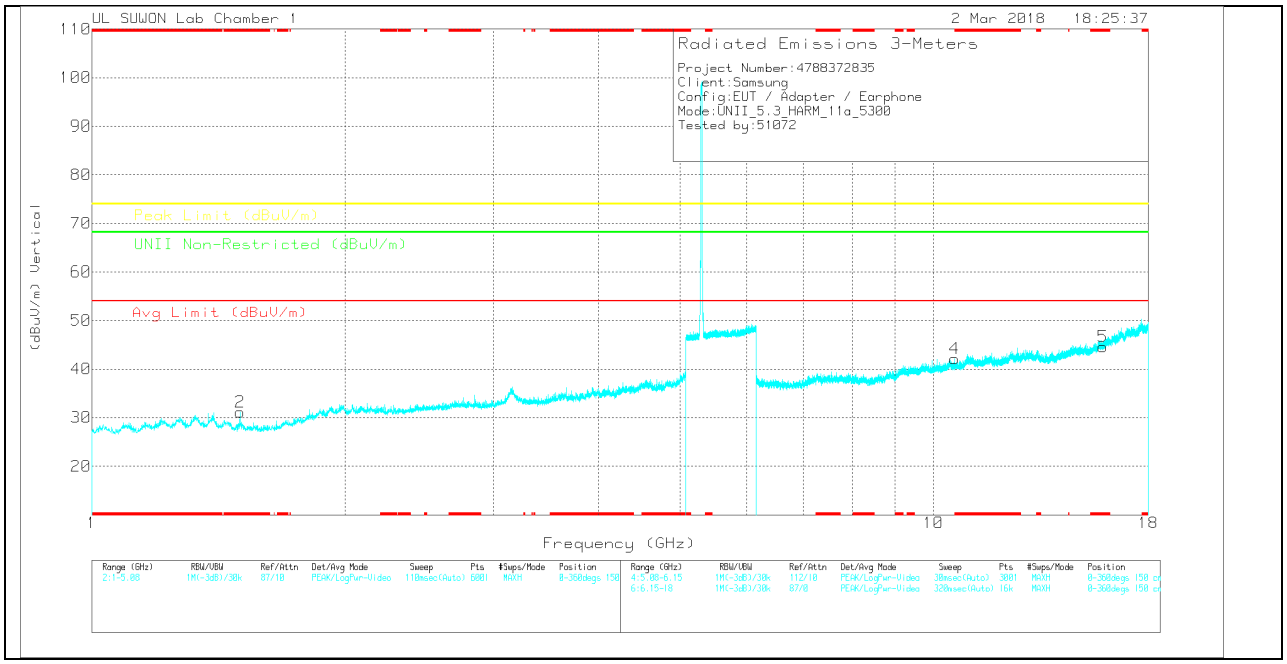
MID CHANNEL HORIZONTAL



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.

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MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
1	* 1.5	45.08	PK	28.3	-36.6	0	36.78	-	-	74	-37.22	-	-	0-360	150	H
2	* 1.499	39.41	PK	28.3	-36.6	0	31.11	-	-	74	-42.89	-	-	0-360	150	V
3	* 10.6	25.72	PK	37.6	-22.8	0	40.52	-	-	74	-33.48	-	-	0-360	250	H
6	* 15.9	25.3	PK	40.3	-21.5	0	44.1	-	-	74	-29.9	-	-	0-360	150	H
4	* 10.6	27.28	PK	37.6	-22.8	0	42.08	-	-	74	-31.92	-	-	0-360	250	V
5	* 15.9	25.81	PK	40.3	-21.5	0	44.61	-	-	74	-29.39	-	-	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
* 1.5	51.66	PK-U	28.3	-36.6	0	43.36	-	-	74	-30.64	-	-	205	175	H
* 1.5	37.07	ADR	28.3	-36.6	0	28.77	54	-25.23	-	-	-	-	205	175	H
* 1.5	49.84	PK-U	28.3	-36.6	0	41.54	-	-	74	-32.46	-	-	5	400	V
* 1.5	35.68	ADR	28.3	-36.6	0	27.38	54	-26.62	-	-	-	-	5	400	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

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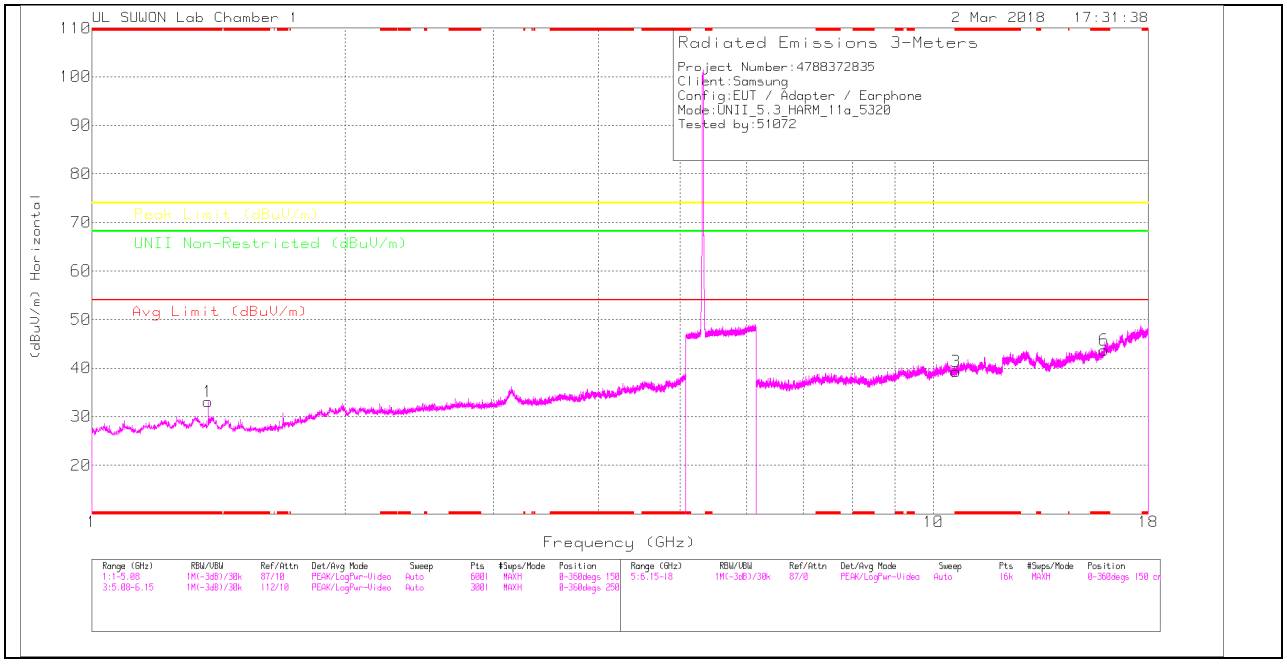
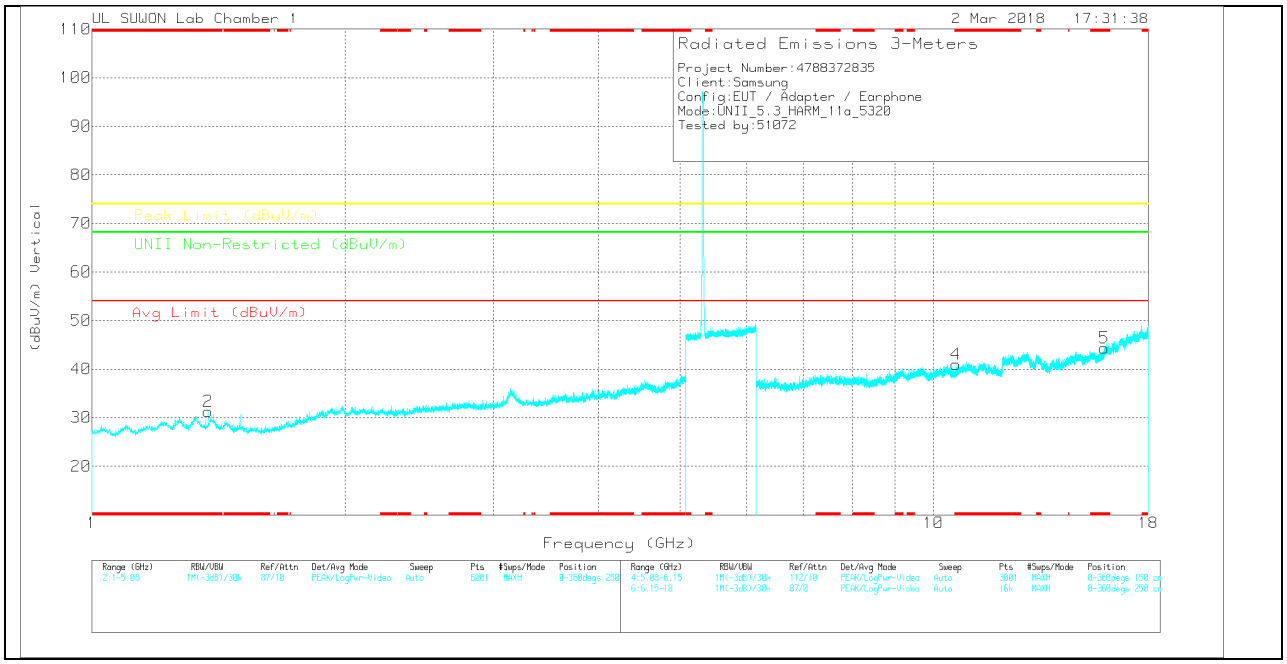
HIGH CHANNEL HORIZONTAL



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.

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HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	5GHz_LP(dB)_170809	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
1	* 1.375	40.03	PK	29.4	-36.4	0	33.03	-	-	74	-40.97	-	-	0-360	150	H
2	* 1.374	38.4	PK	29.4	-36.5	0	31.3	-	-	74	-42.7	-	-	0-360	150	V
3	* 10.64	24.11	PK	37.7	-22.5	0	39.31	-	-	74	-34.69	-	-	0-360	150	H
6	* 15.962	24.31	PK	40.4	-21	0	43.71	-	-	74	-30.29	-	-	0-360	150	H
4	* 10.64	25.83	PK	37.7	-22.5	0	41.03	-	-	74	-32.97	-	-	0-360	250	V
5	* 15.961	24.93	PK	40.4	-21	0	44.33	-	-	74	-29.67	-	-	0-360	250	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168 717	5GHz_LP(dB)_170809	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
* 1.374	47.26	PK-U	29.4	-36.4	0	40.26	-	-	74	-33.74	-	-	168	277	H
* 1.375	34.44	ADR	29.4	-36.4	0	27.44	54	-26.56	-	-	-	-	168	277	H
* 1.375	47.04	PK-U	29.4	-36.4	0	40.04	-	-	74	-33.96	-	-	178	376	V
* 1.375	34.54	ADR	29.4	-36.4	0	27.54	54	-26.46	-	-	-	-	178	376	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

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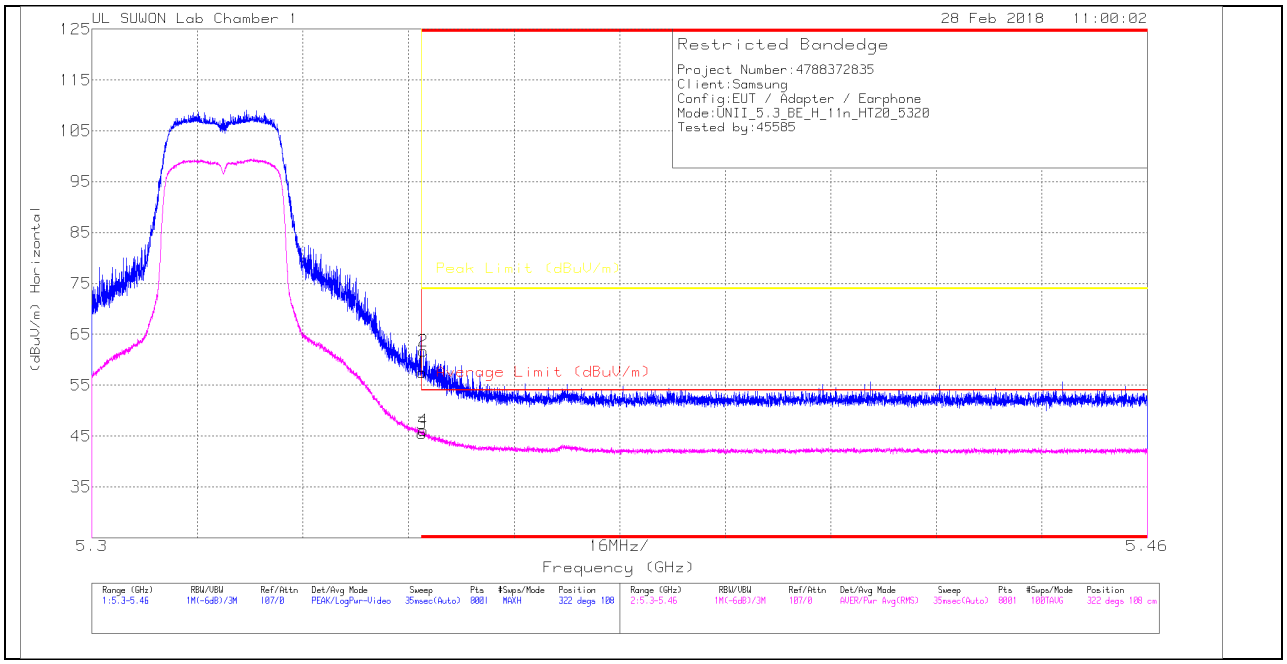
11.2.2. TX ABOVE 1GHz 802.11n HT20 MODE IN THE 5.3GHz BAND

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	* 5.35	44.99	Pk	34.2	-21.7	0	57.49	-	-	74	-16.51	322	108	H
2	* 5.35	49.2	Pk	34.2	-21.7	0	61.7	-	-	74	-12.3	322	108	H
3	* 5.35	32.97	RMS	34.2	-21.7	0	45.47	54	-8.53	-	-	322	108	H
4	* 5.35	33.57	RMS	34.2	-21.7	0	46.07	54	-7.93	-	-	322	108	H

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

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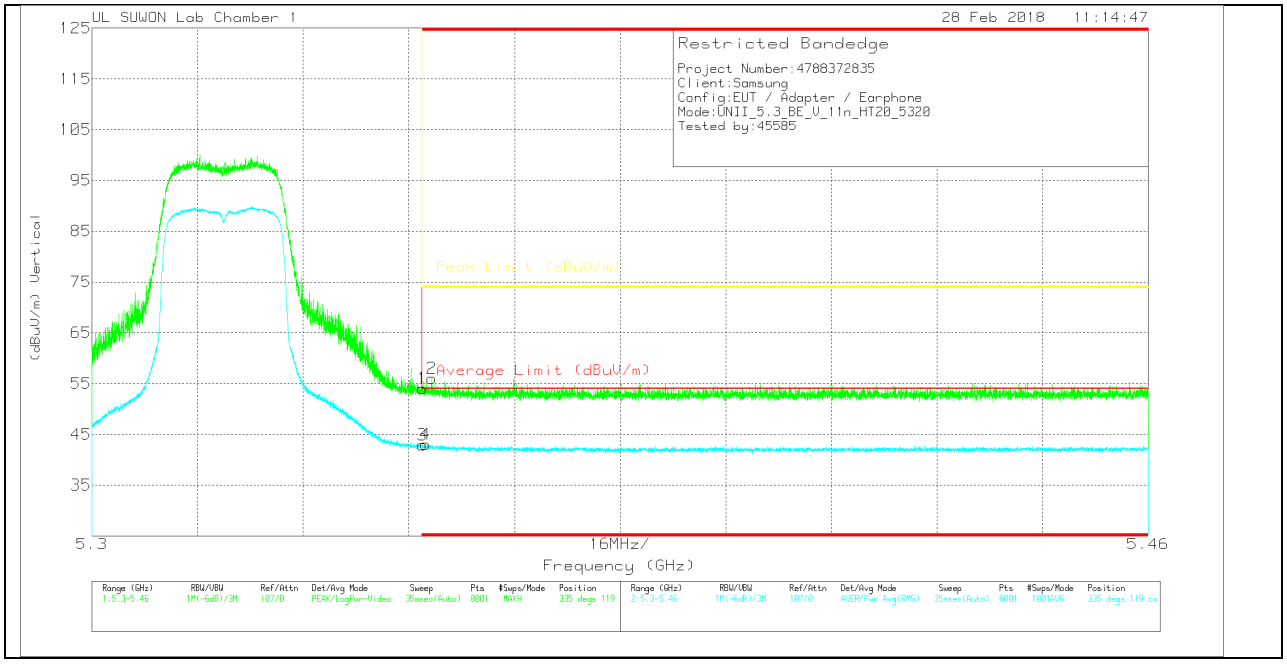
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	* 5.35	41.49	Pk	34.2	-21.7	0	53.99	-	-	74	-20.01	335	119	V
2	* 5.351	43.48	Pk	34.2	-21.7	0	55.98	-	-	74	-18.02	335	119	V
3	* 5.35	30.42	RMS	34.2	-21.7	0	42.92	54	-11.08	-	-	335	119	V
4	* 5.351	30.55	RMS	34.2	-21.7	0	43.05	54	-10.95	-	-	335	119	V

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

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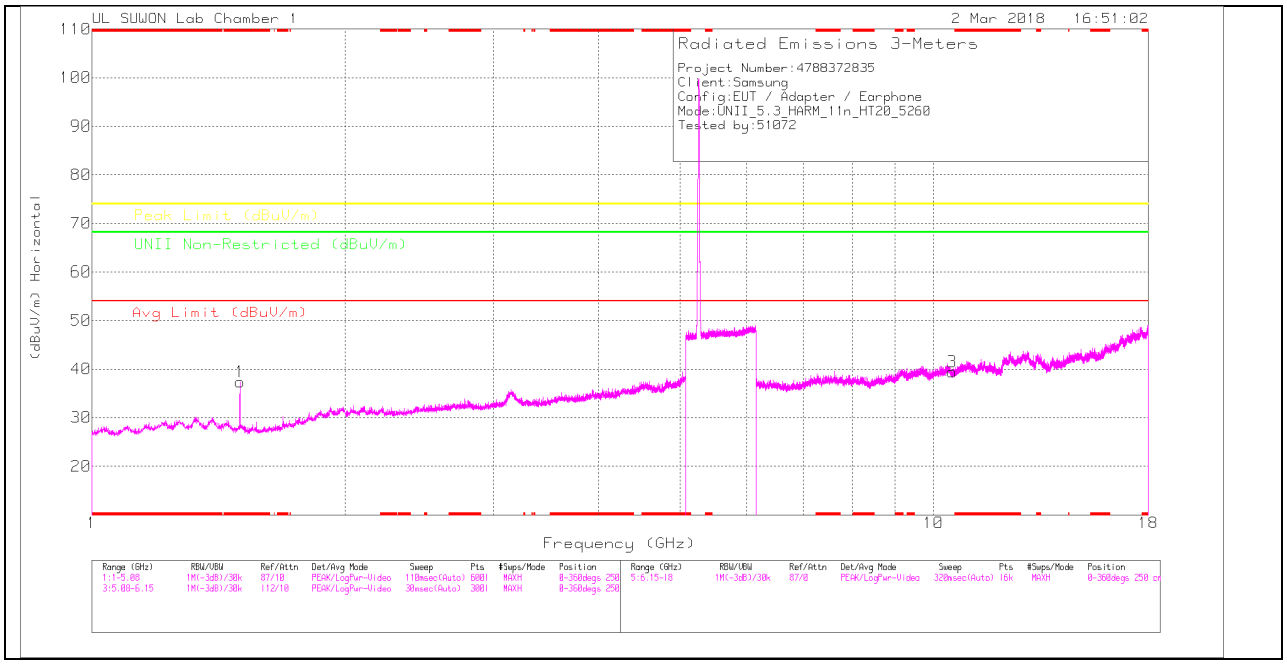
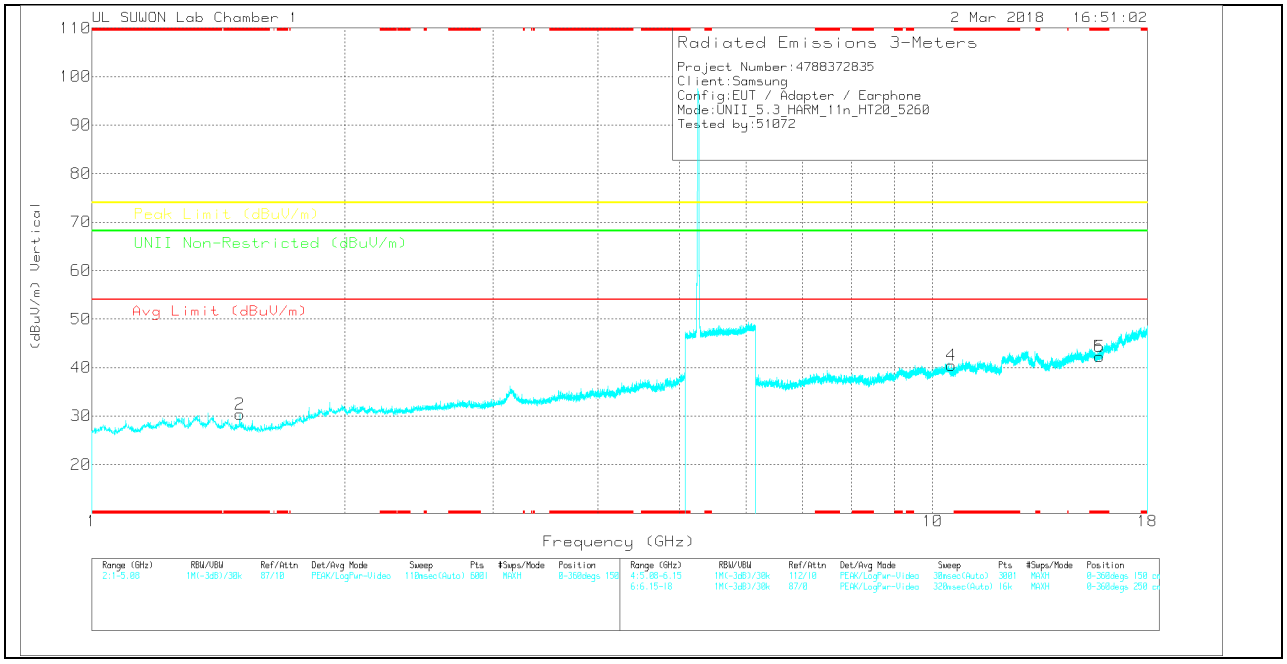
HARMONICS AND SPURIOUS EMISSIONS

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.

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LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
1	* 1.5	45.67	Avg	28.3	-36.6	0	37.37	-	-	74	-36.63	-	-	0-360	150	H
2	* 1.499	38.67	Avg	28.3	-36.6	0	30.37	-	-	74	-43.63	-	-	0-360	250	V
3	10.521	24.87	Avg	37.5	-23	0	39.37	-	-	-	-	68.2	-28.83	0-360	250	H
4	10.521	25.95	Avg	37.5	-23	0	40.45	-	-	-	-	68.2	-27.75	0-360	250	V
5	* 15.78	23.45	Avg	40.1	-21.3	0	42.25	-	-	74	-31.75	-	-	0-360	250	V
6	* 15.78	23.45	Avg	40.1	-21.3	0	42.25	-	-	74	-31.75	-	-	0-360	250	V

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

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
* 1.5	52.47	PK-U	28.3	-36.6	0	44.17	-	-	74	-29.83	-	-	302	100	H
* 1.5	35.54	ADR	28.3	-36.6	0	27.24	54	-26.76	-	-	-	-	302	100	H
* 1.5	49.24	PK-U	28.3	-36.6	0	40.94	-	-	74	-33.06	-	-	53	295	V
* 1.5	35.75	ADR	28.3	-36.6	0	27.45	54	-26.55	-	-	-	-	53	295	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

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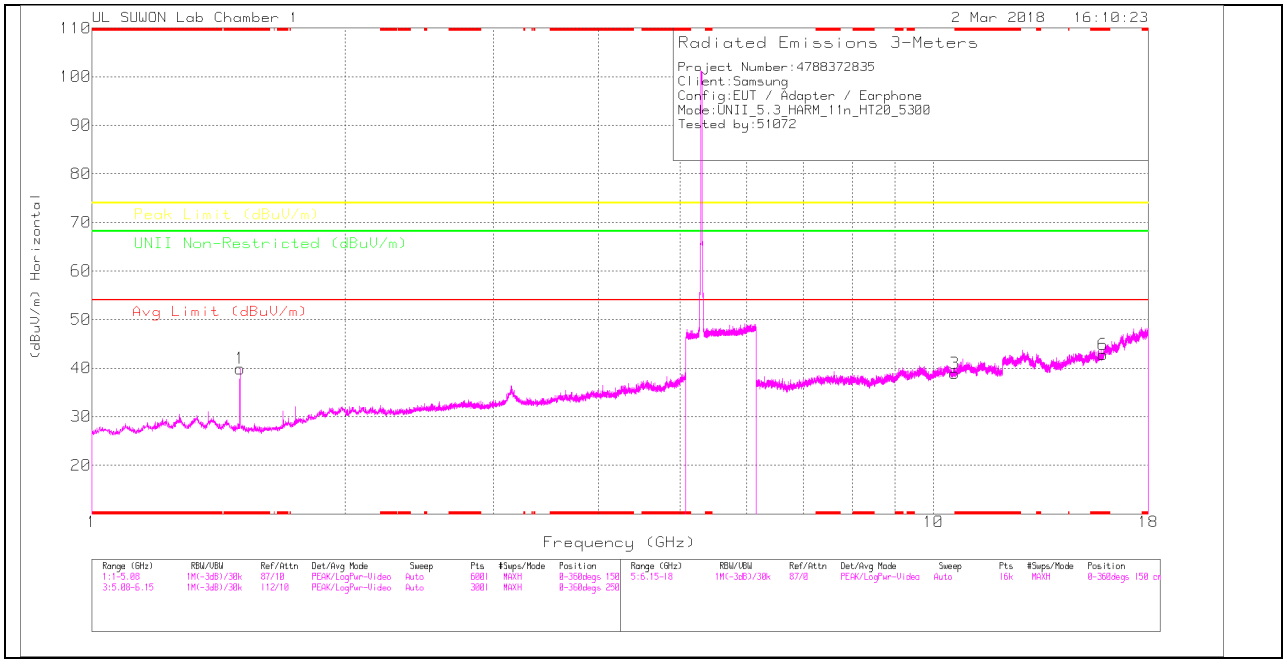
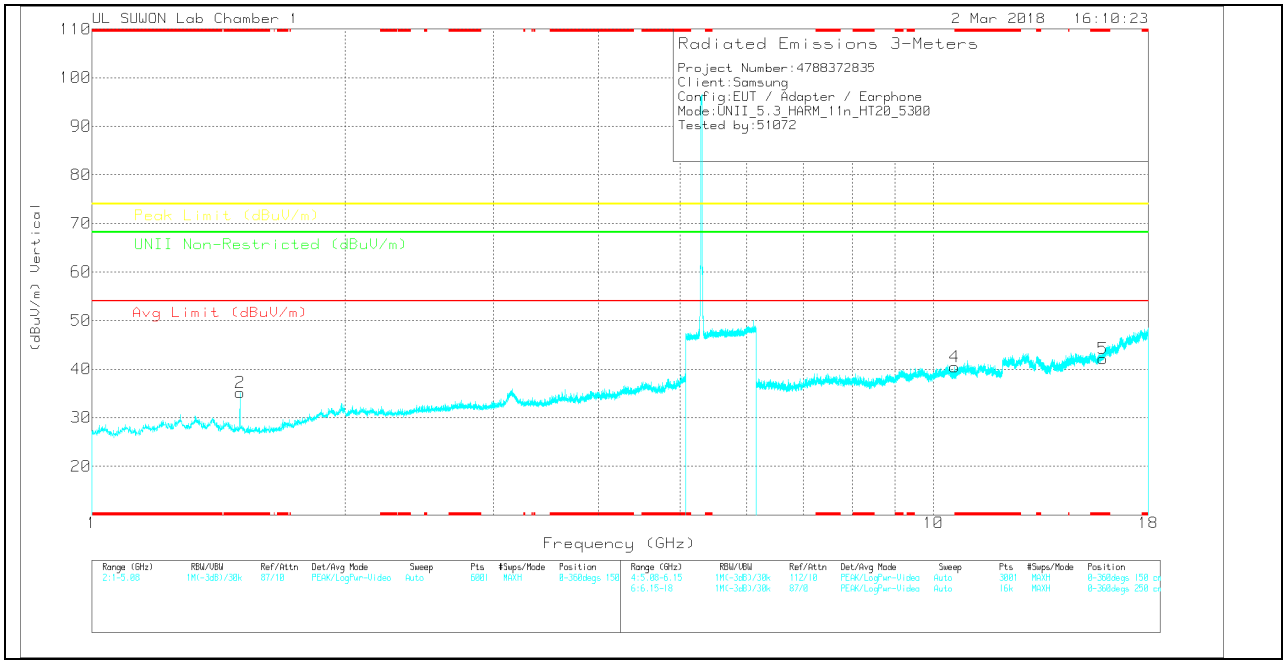
MID CHANNEL HORIZONTAL



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.

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MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
1	* 1.499	48.18	PK	28.3	-36.6	0	39.88	-	-	74	-34.12	-	-	0-360	150	H
2	* 1.5	43.47	PK	28.3	-36.6	0	35.17	-	-	74	-38.83	-	-	0-360	250	V
3	* 10.6	24.06	PK	37.6	-22.8	0	38.86	-	-	74	-35.14	-	-	0-360	250	H
6	* 15.9	23.99	PK	40.3	-21.5	0	42.79	-	-	74	-31.21	-	-	0-360	250	H
4	10.599	25.63	PK	37.6	-22.8	0	40.43	-	-	-	-	68.2	-27.77	0-360	150	V
5	* 15.9	23.39	PK	40.3	-21.5	0	42.19	-	-	74	-31.81	-	-	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
* 1.499	50.47	PK-U	28.3	-36.6	0	42.17	-	-	74	-31.83	-	-	208	185	H
* 1.503	35.23	ADR	28.3	-36.6	0	26.93	54	-27.07	-	-	-	-	208	185	H
* 1.499	49.03	PK-U	28.3	-36.6	0	40.73	-	-	74	-33.27	-	-	50	300	V
* 1.5	35.68	ADR	28.3	-36.6	0	27.38	54	-26.62	-	-	-	-	50	300	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

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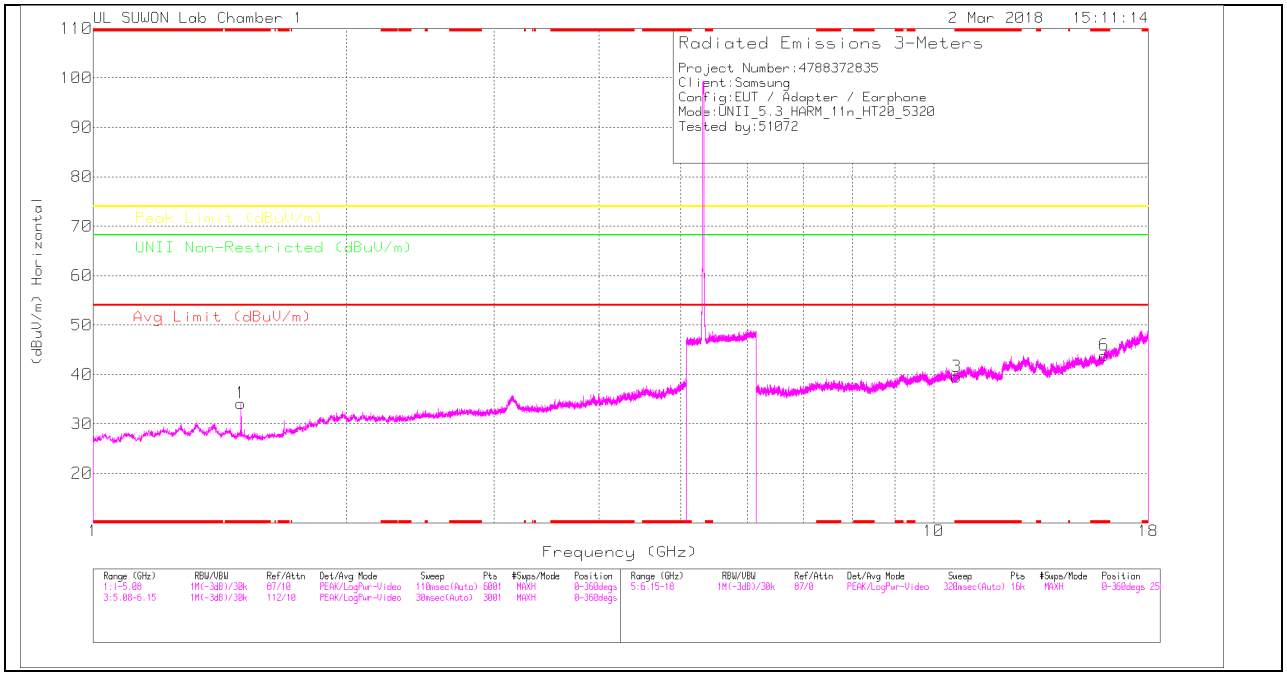
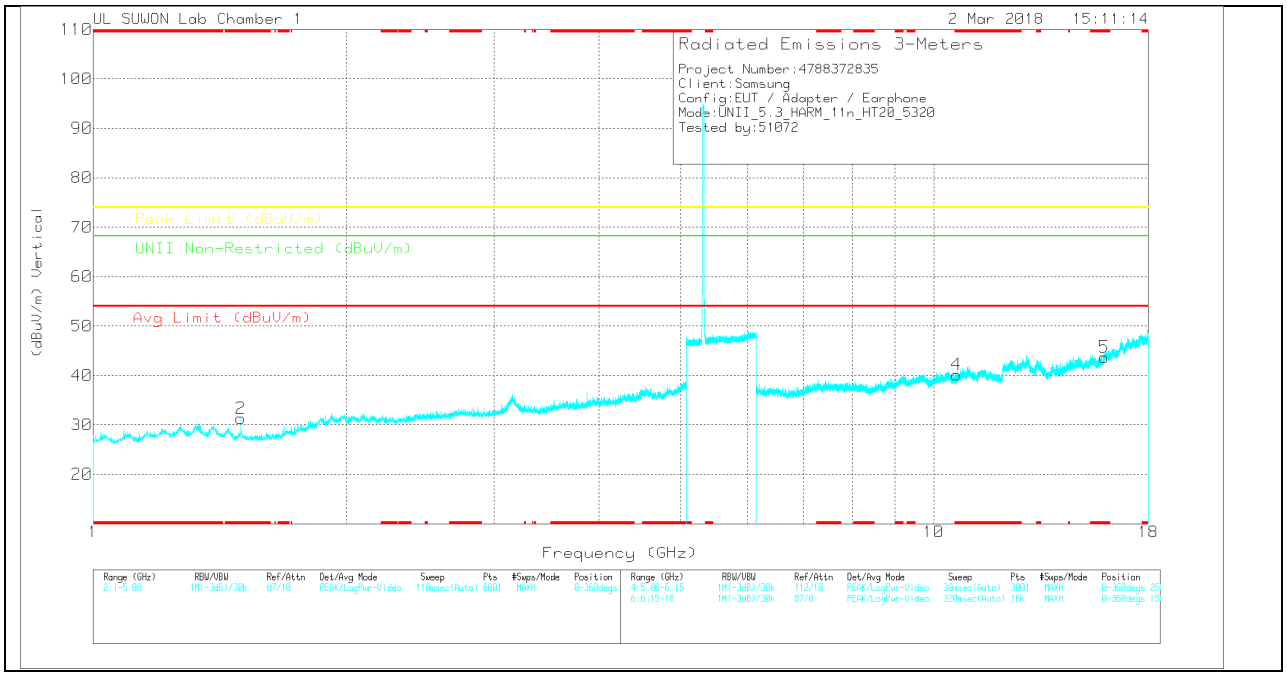
HIGH CHANNEL HORIZONTAL



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.

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HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
1	* 1.499	42.49	Avg	28.3	-36.6	0	34.19	-	-	74	-39.81	-	-	0-360	250	H
2	* 1.499	39.61	Avg	28.3	-36.6	0	31.31	-	-	74	-42.69	-	-	0-360	150	V
3	* 10.64	24.35	Avg	37.7	-22.5	0	39.55	-	-	74	-34.45	-	-	0-360	150	H
6	* 15.961	24.46	Avg	40.4	-21	0	43.86	-	-	74	-30.14	-	-	0-360	150	H
4	* 10.64	24.95	Avg	37.7	-22.5	0	40.15	-	-	74	-33.85	-	-	0-360	250	V
5	* 15.961	24.29	Avg	40.4	-21	0	43.69	-	-	74	-30.31	-	-	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
* 1.5	47.57	PK-U	28.3	-36.6	0	39.27	-	-	74	-34.73	-	-	139	348	H
* 1.505	35.24	ADR	28.2	-36.6	0	26.84	54	-27.16	-	-	-	-	139	348	H
* 1.501	49.05	PK-U	28.3	-36.6	0	40.75	-	-	74	-33.25	-	-	28	299	V
* 1.5	35.54	ADR	28.3	-36.6	0	27.24	54	-26.76	-	-	-	-	28	299	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

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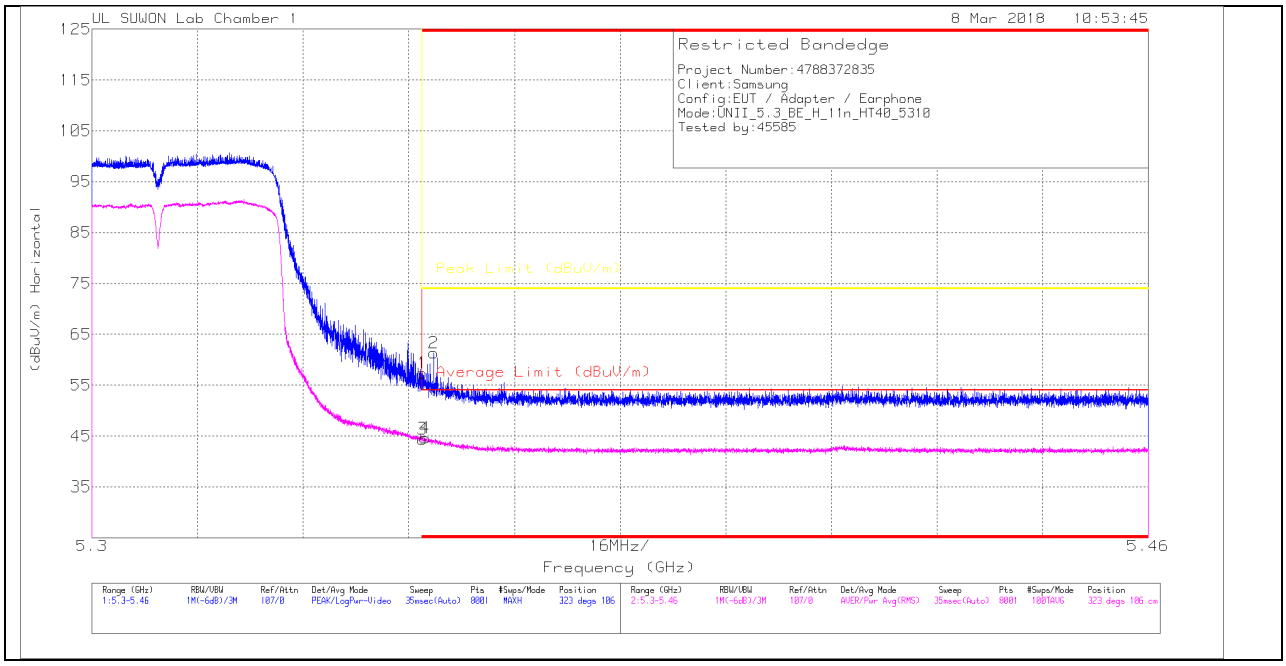
11.2.3. TX ABOVE 1GHz 802.11n HT40 MODE IN THE 5.3GHz BAND AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	* 5.35	44.88	Pk	34.2	-21.7	0	57.38	-	-	74	-16.62	323	106	H
2	* 5.352	48.86	Pk	34.2	-21.7	0	61.36	-	-	74	-12.64	323	106	H
3	* 5.35	31.77	RMS	34.2	-21.7	.18	44.45	54	-9.55	-	-	323	106	H
4	* 5.35	31.97	RMS	34.2	-21.7	.18	44.65	54	-9.35	-	-	323	106	H

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

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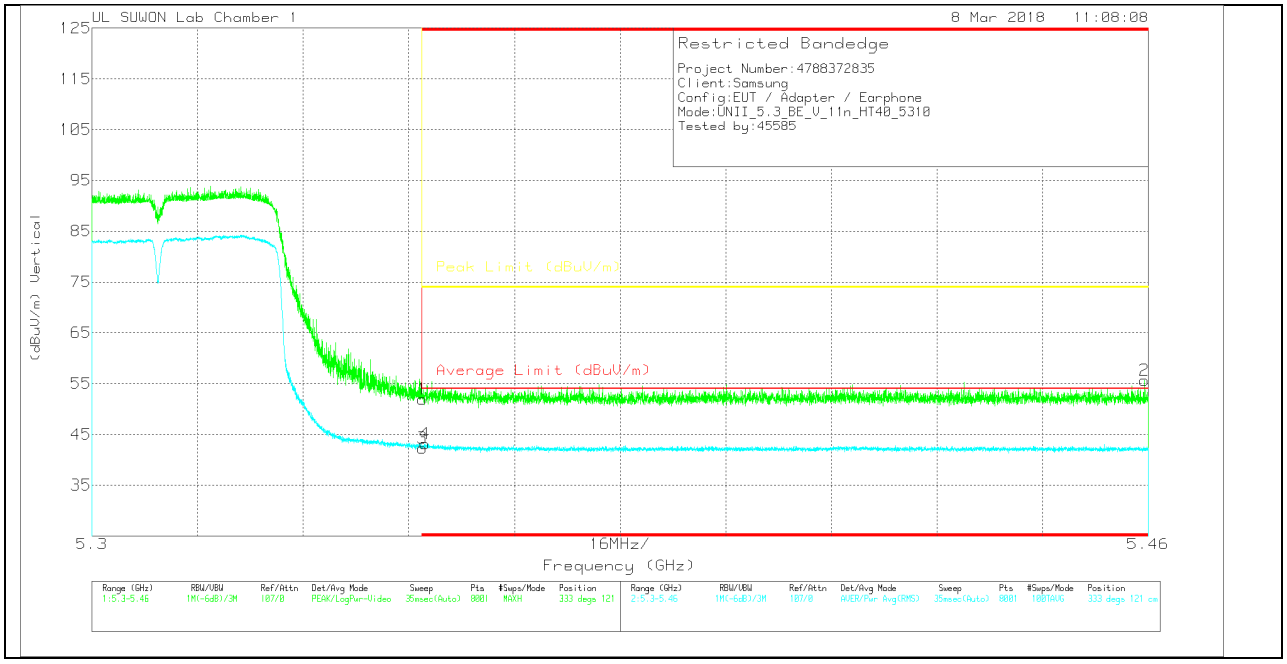
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	* 5.35	39.43	Pk	34.2	-21.7	0	51.93	-	-	74	-22.07	333	121	V
2	* 5.459	42.82	Pk	34.3	-21.5	0	55.62	-	-	74	-18.38	333	121	V
3	* 5.35	29.64	RMS	34.2	-21.7	.18	42.32	54	-11.68	-	-	333	121	V
4	* 5.35	30.48	RMS	34.2	-21.7	.18	43.16	54	-10.84	-	-	333	121	V

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

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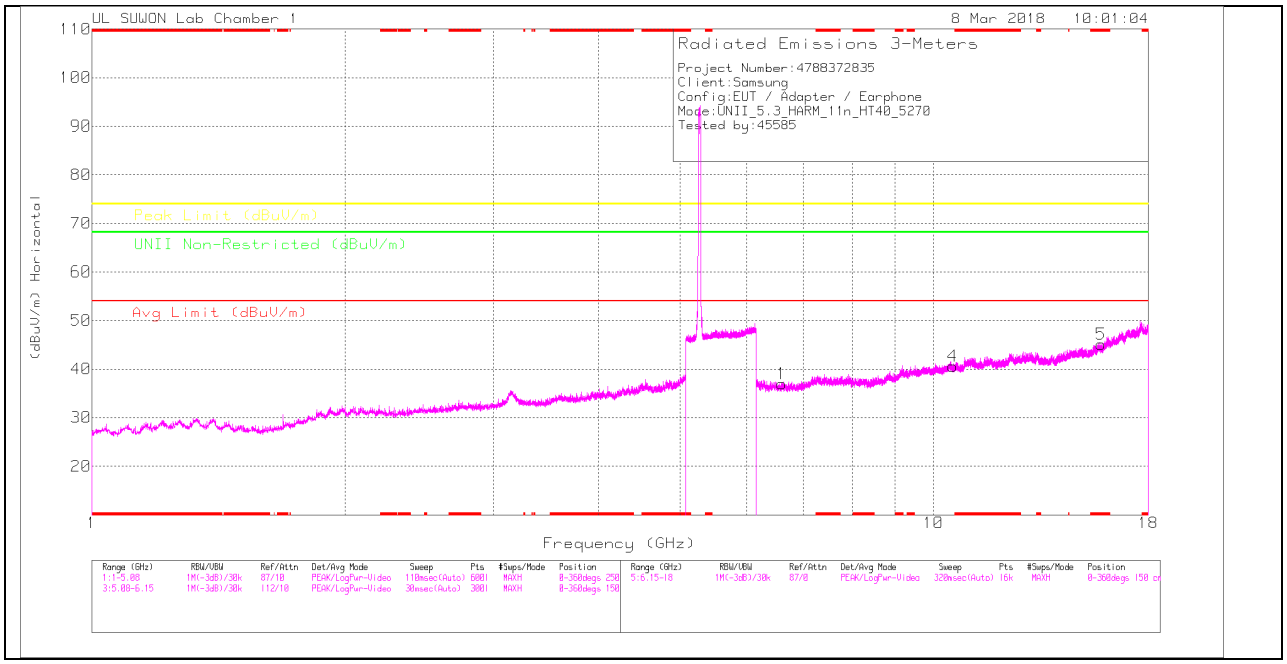
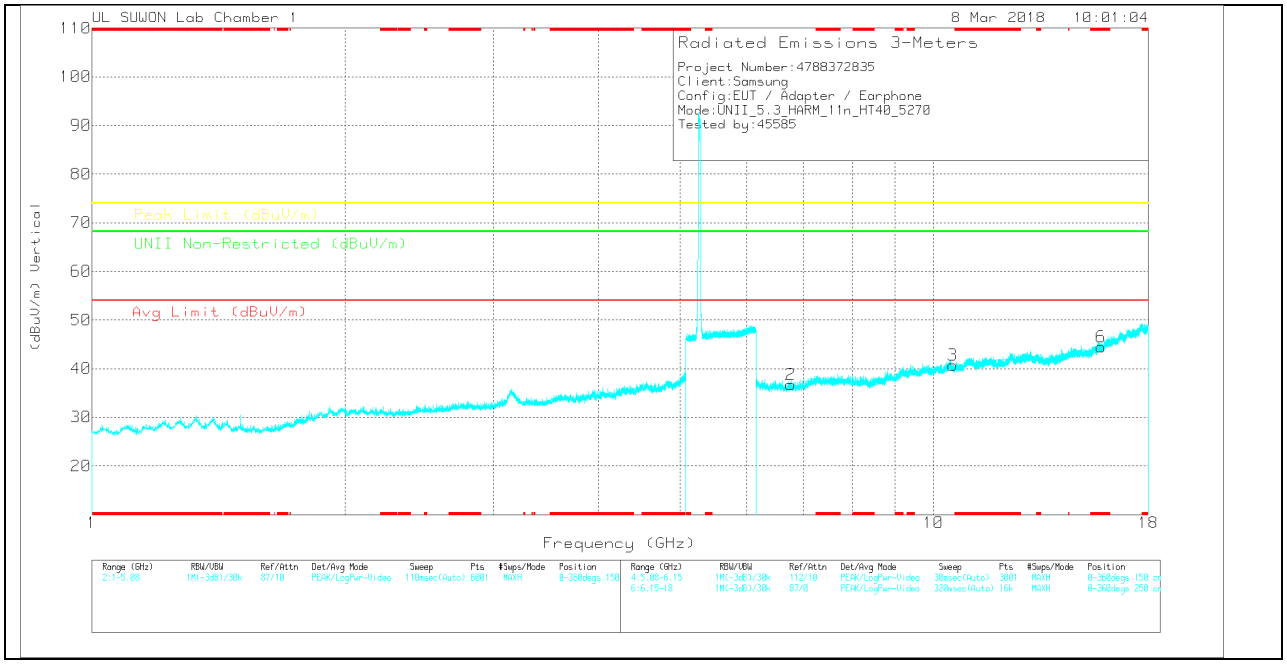
HARMONICS AND SPURIOUS EMISSIONS

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.

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LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	6GHz_HP(dB)_17080 9	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
1	6.601	30.35	PK	35.1	-28.5	0	36.95	-	-	-	-	68.2	-31.25	0-360	250	H
4	10.541	26.03	PK	37.6	-23.1	0	40.53	-	-	-	-	68.2	-27.67	0-360	150	H
5	* 15.811	26.32	PK	40.1	-21.3	0	45.12	-	-	74	-28.88	-	-	0-360	250	H
2	6.766	30.03	PK	35.3	-28.6	0	36.73	-	-	-	-	68.2	-31.47	0-360	150	V
3	10.541	26.27	PK	37.6	-23.1	0	40.77	-	-	-	-	68.2	-27.43	0-360	250	V
6	* 15.811	25.64	PK	40.1	-21.3	0	44.44	-	-	74	-29.56	-	-	0-360	250	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

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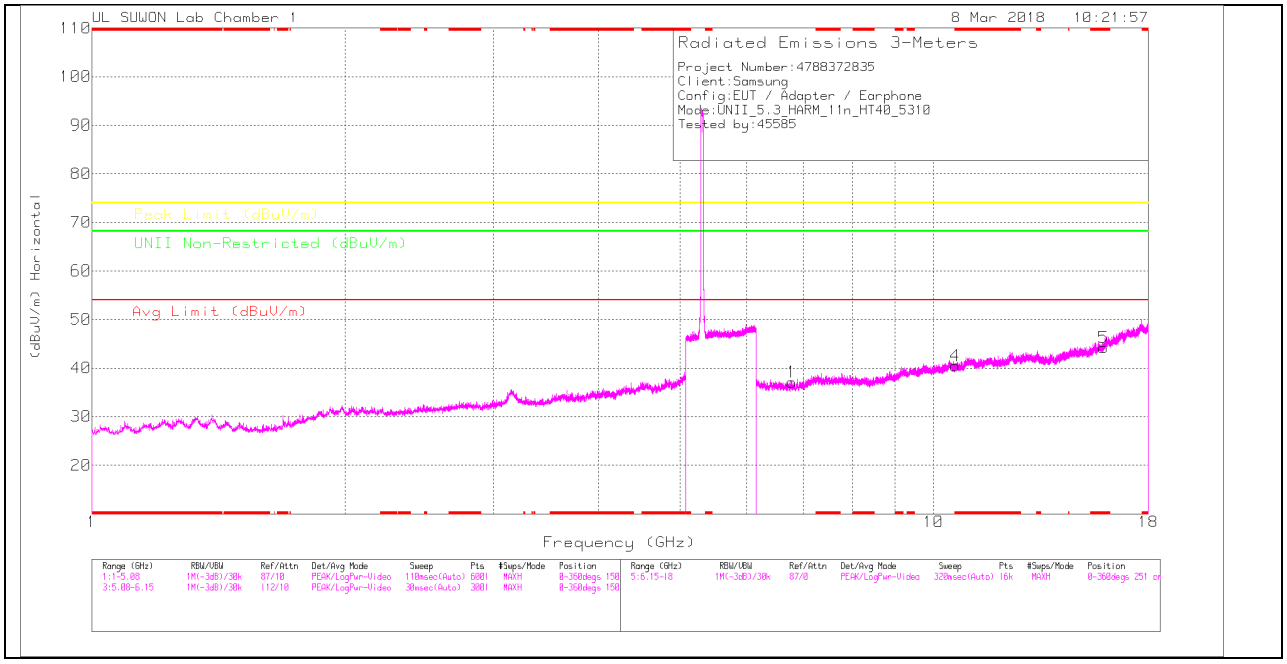
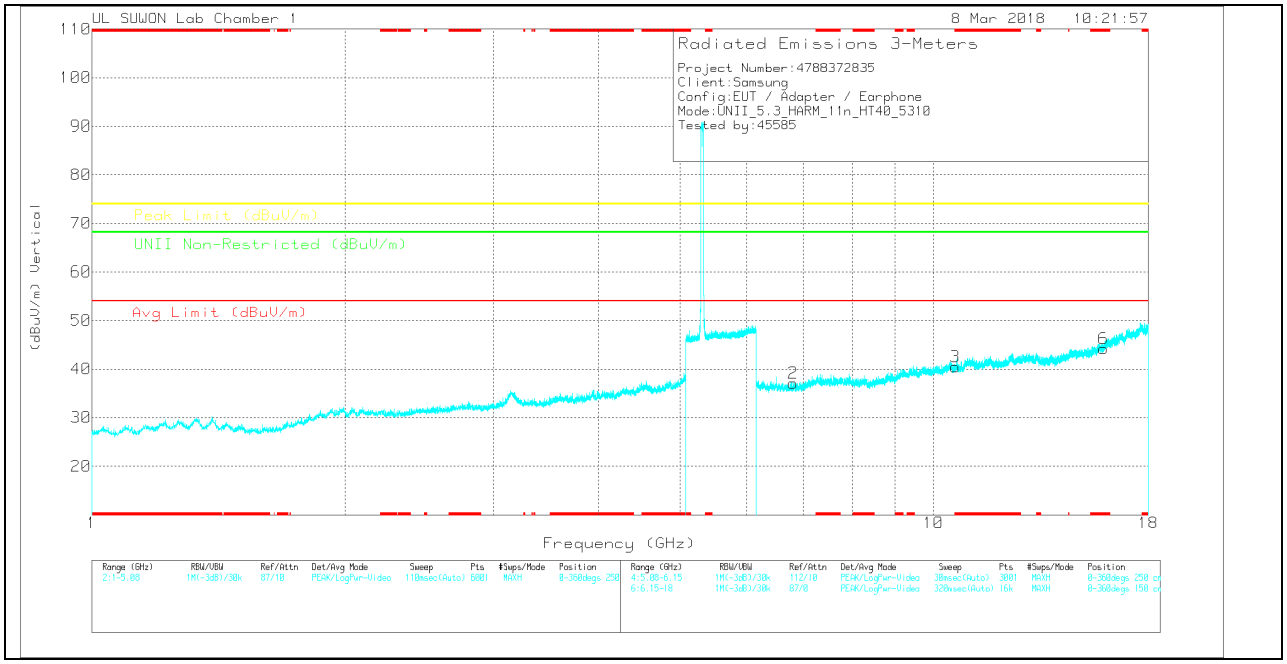
HIGH CHANNEL HORIZONTAL



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.

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HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	6GHz_HP(dB)_17080 9	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
1	6.788	30.05	PK	35.3	-28.3	0	37.05	-	-	-	-	68.2	-31.15	0-360	251	H
4	* 10.621	25.5	PK	37.6	-22.6	0	40.5	-	-	74	-33.5	-	-	0-360	251	H
5	* 15.93	25.1	PK	40.4	-21.3	0	44.2	-	-	74	-29.8	-	-	0-360	251	H
2	6.813	29.97	PK	35.3	-28.2	0	37.07	-	-	-	-	68.2	-31.13	0-360	150	V
3	* 10.621	25.44	PK	37.6	-22.6	0	40.44	-	-	74	-33.56	-	-	0-360	150	V
6	* 15.93	25.13	PK	40.4	-21.3	0	44.23	-	-	74	-29.77	-	-	0-360	251	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

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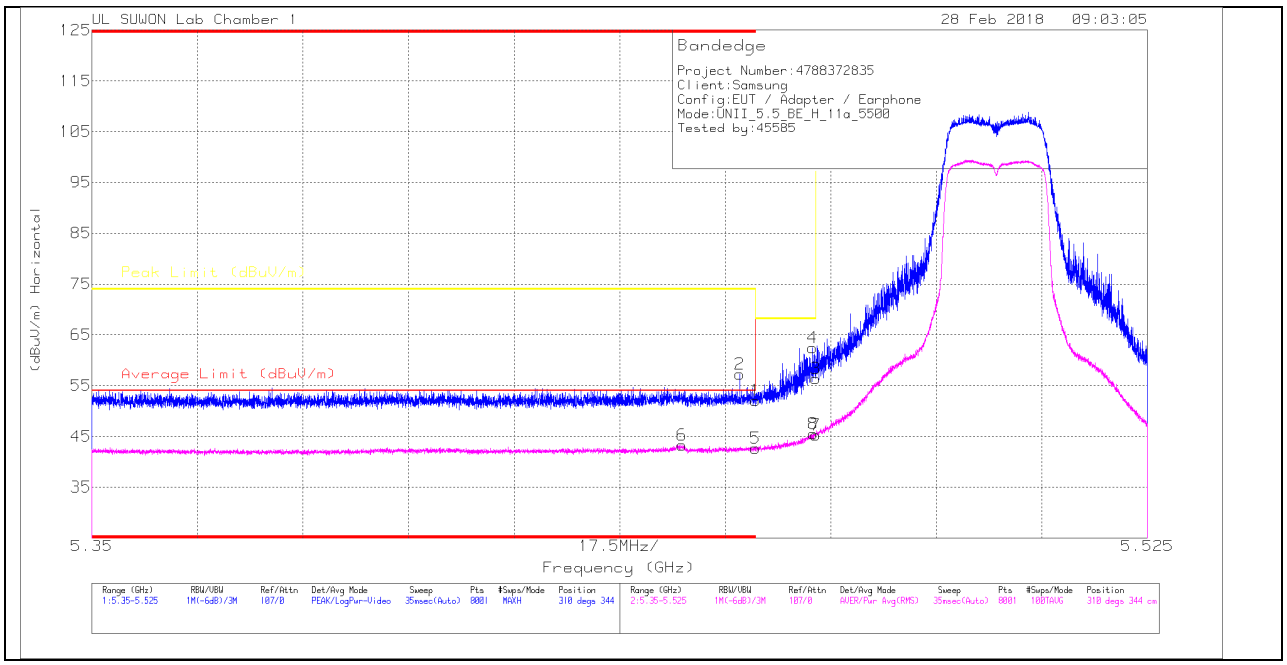
11.3. 5.5-5.6 GHz

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

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	* 5.46	39.22	Pk	34.3	-21.5	0	52.02	-	-	74	-21.98	310	344	H
2	* 5.457	44.51	Pk	34.3	-21.6	0	57.21	-	-	74	-16.79	310	344	H
3	5.47	43.54	Pk	34.3	-21.5	0	56.34	-	-	68.2	-11.86	310	344	H
4	5.469	49.72	Pk	34.3	-21.6	0	62.42	-	-	68.2	-5.78	310	344	H
5	* 5.46	29.91	RMS	34.3	-21.5	0	42.71	54	-11.29	-	-	310	344	H
6	* 5.448	30.44	RMS	34.3	-21.5	0	43.24	54	-10.76	-	-	310	344	H

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

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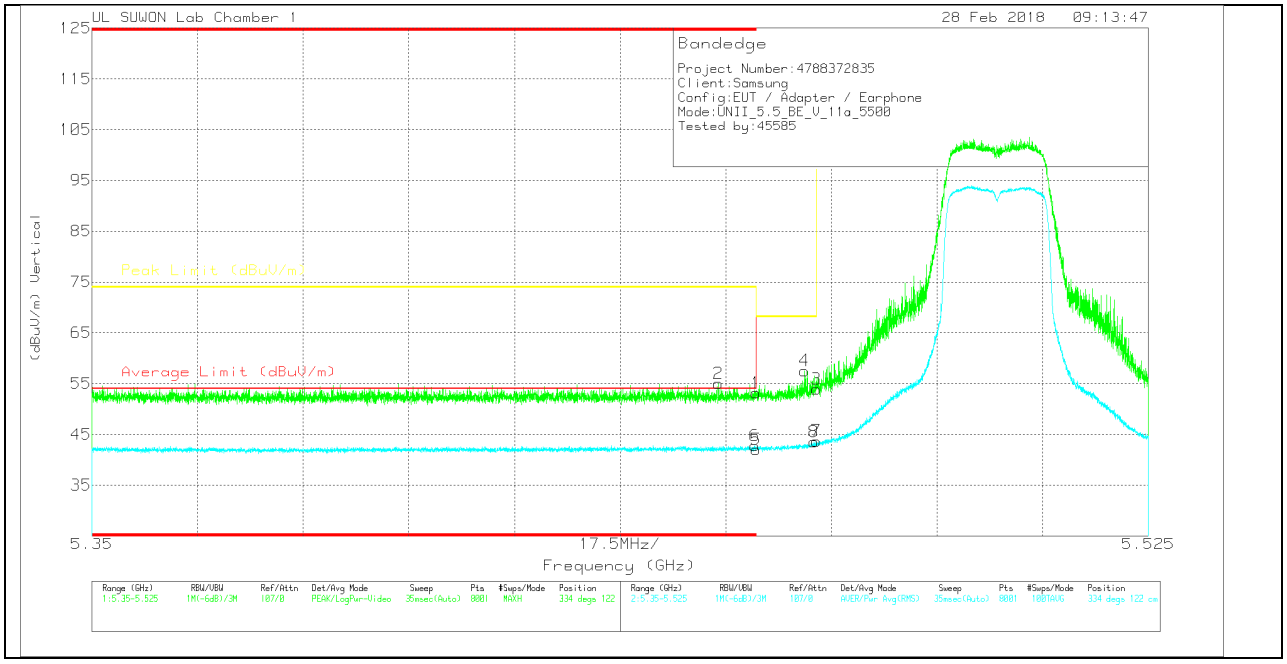
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	* 5.46	40.4	Pk	34.3	-21.5	0	53.2	-	-	74	-20.8	334	122	V
2	* 5.454	42.38	Pk	34.3	-21.6	0	55.08	-	-	74	-18.92	334	122	V
3	5.47	41.14	Pk	34.3	-21.5	0	53.94	-	-	68.2	-14.26	334	122	V
4	5.468	44.86	Pk	34.3	-21.6	0	57.56	-	-	68.2	-10.64	334	122	V
5	* 5.46	29.25	RMS	34.3	-21.5	0	42.05	54	-11.95	-	-	334	122	V
6	* 5.46	30.01	RMS	34.3	-21.5	0	42.81	54	-11.19	-	-	334	122	V

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

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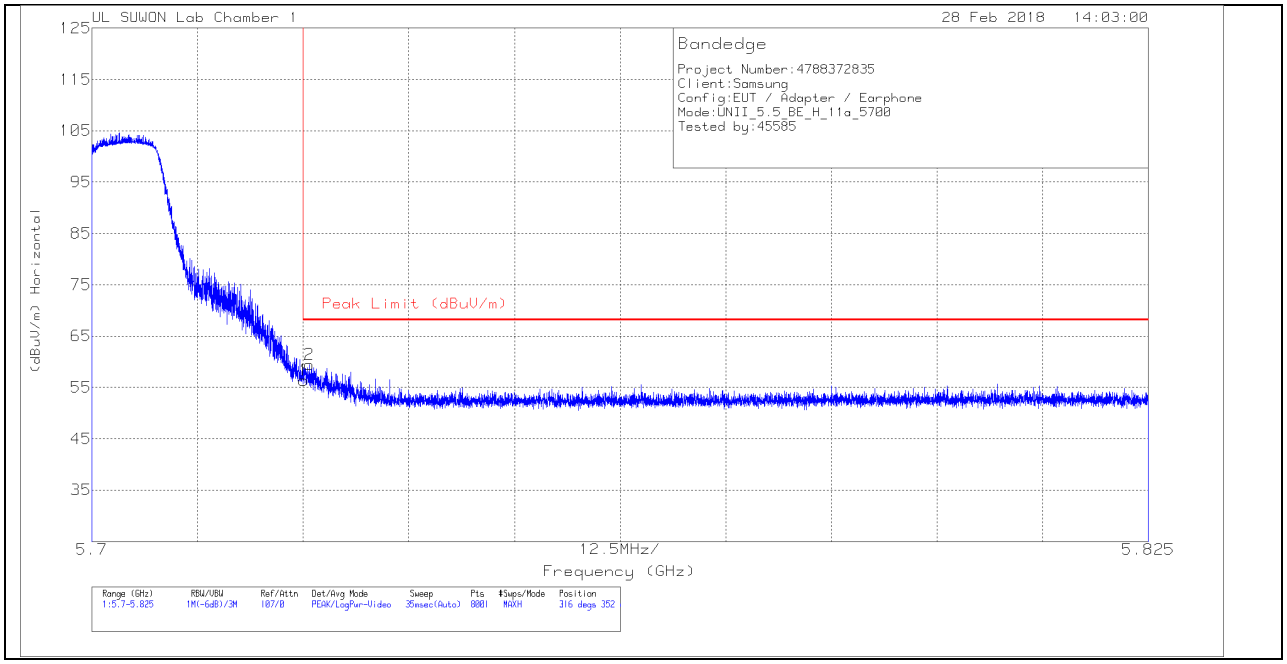
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_0 0168717	10dB_ATT(dB)_17 0809	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	43.14	Pk	34.4	-21.2	0	56.34	68.2	-11.86	316	352	H
2	5.726	46.25	Pk	34.4	-21.2	0	59.45	68.2	-8.75	316	352	H

Pk - Peak detector

UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675 Korea TEL: (031) 337-9902,FAX: (031) 213-5433
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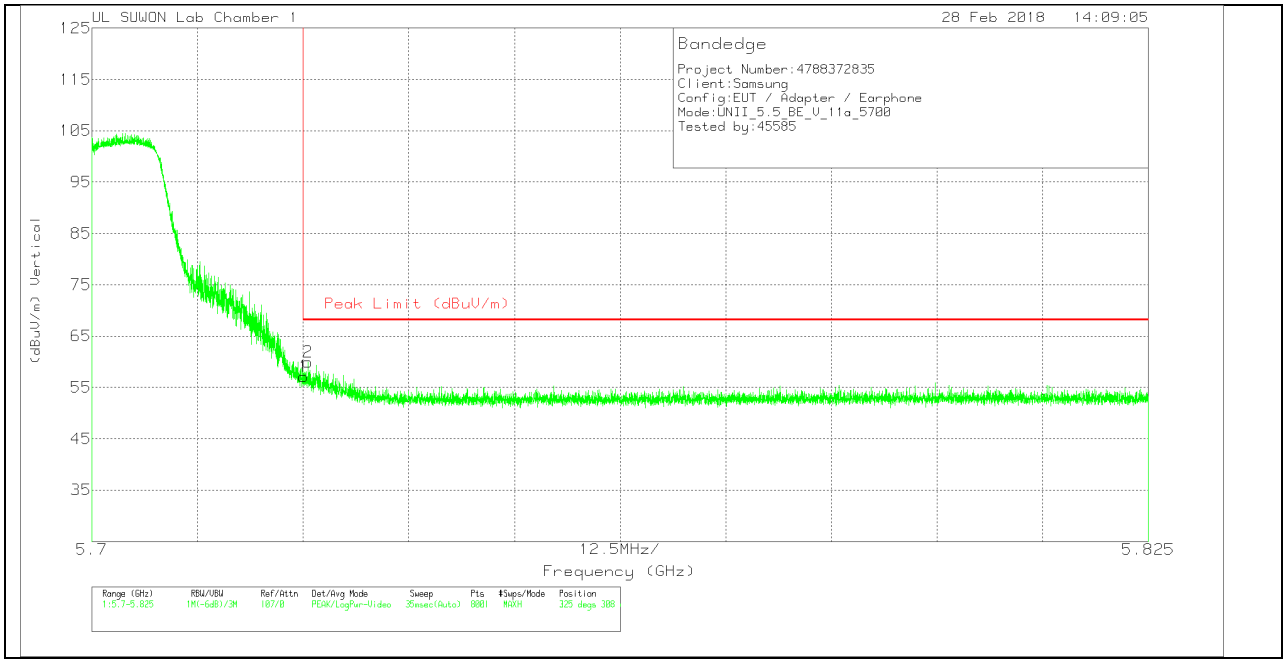
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_0 0168717	10dB_ATT(dB)_17 0809	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	43.95	Pk	34.4	-21.2	0	57.15	68.2	-11.05	325	308	V
2	5.726	46.73	Pk	34.4	-21.2	0	59.93	68.2	-8.27	325	308	V

Pk - Peak detector

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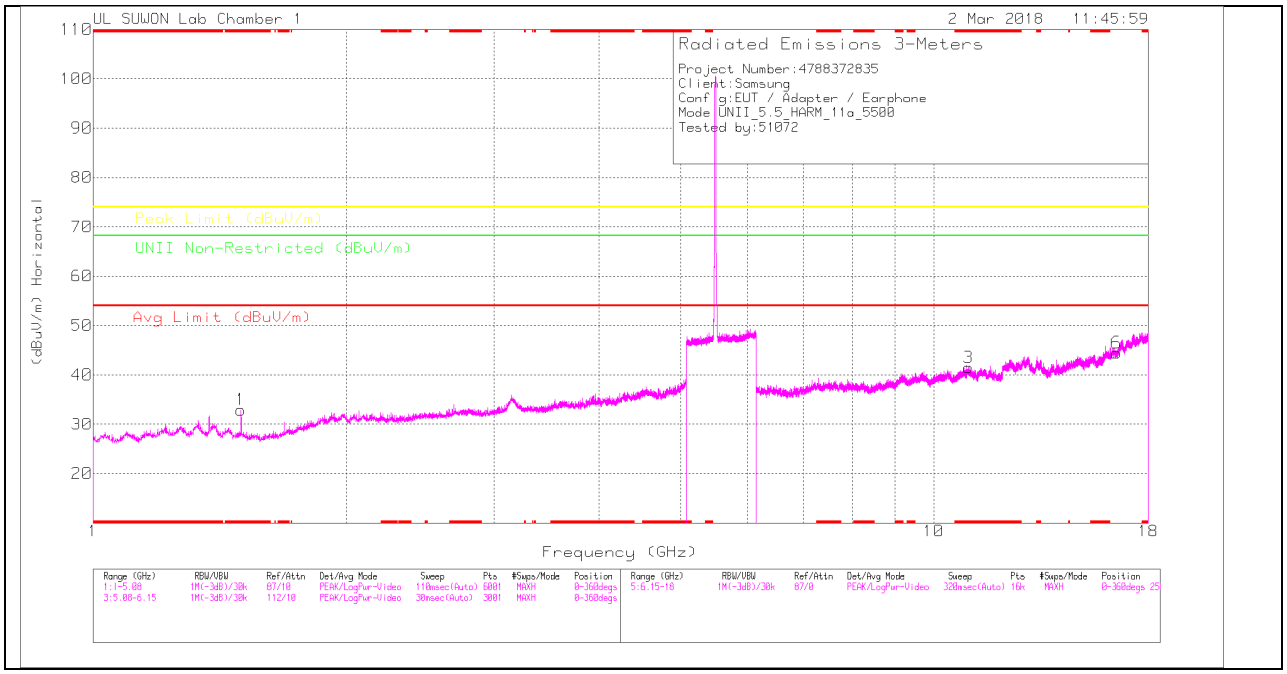
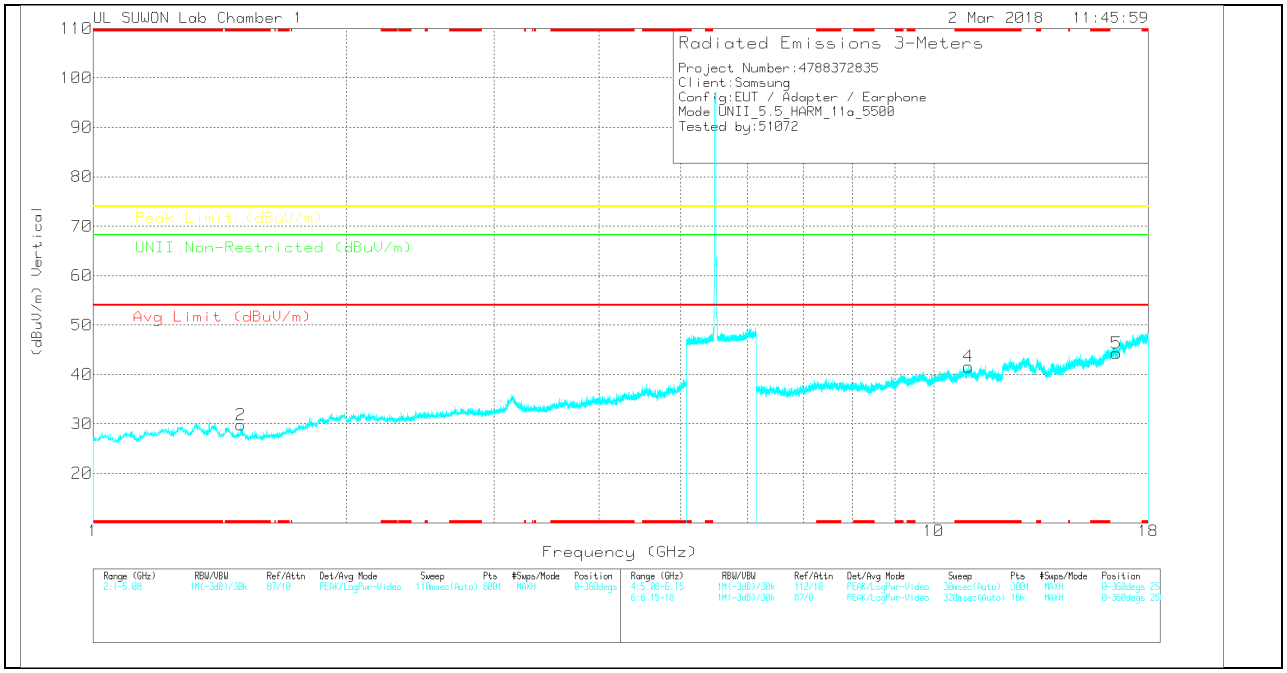
HARMONICS AND SPURIOUS EMISSIONS

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.

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LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
1	* 1.5	41.22	PK	28.3	-36.6	0	32.92	-	-	74	-41.08	-	-	0-360	250	H
2	* 1.499	38.07	PK	28.3	-36.6	0	29.77	-	-	74	-44.23	-	-	0-360	150	V
3	* 11.002	25.49	PK	38	-22	0	41.49	-	-	74	-32.51	-	-	0-360	250	H
6	16.5	23.75	PK	40.7	-20	0	44.45	-	-	-	-	68.2	-23.75	0-360	150	H
4	* 11.001	25.59	PK	38	-22	0	41.59	-	-	74	-32.41	-	-	0-360	250	V
5	16.5	23.57	PK	40.7	-20	0	44.27	-	-	-	-	68.2	-23.93	0-360	250	V

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

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
* 1.499	49.98	PK-U	28.3	-36.6	0	41.68	-	-	74	-32.32	-	-	358	294	H
* 1.5	35.68	ADR	28.3	-36.6	0	27.38	54	-26.62	-	-	-	-	358	294	H
* 1.5	52.39	PK-U	28.3	-36.6	0	44.09	-	-	74	-29.91	-	-	8	301	V
* 1.5	37.14	ADR	28.3	-36.6	0	28.84	54	-25.16	-	-	-	-	8	301	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

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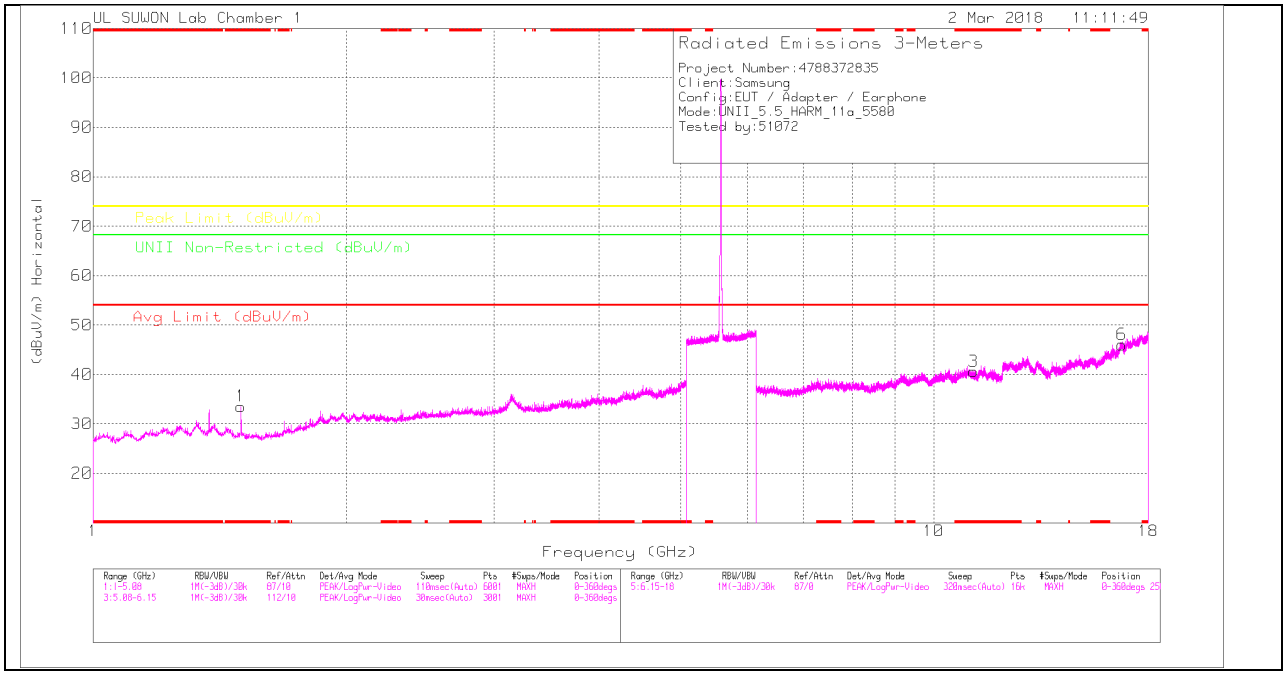
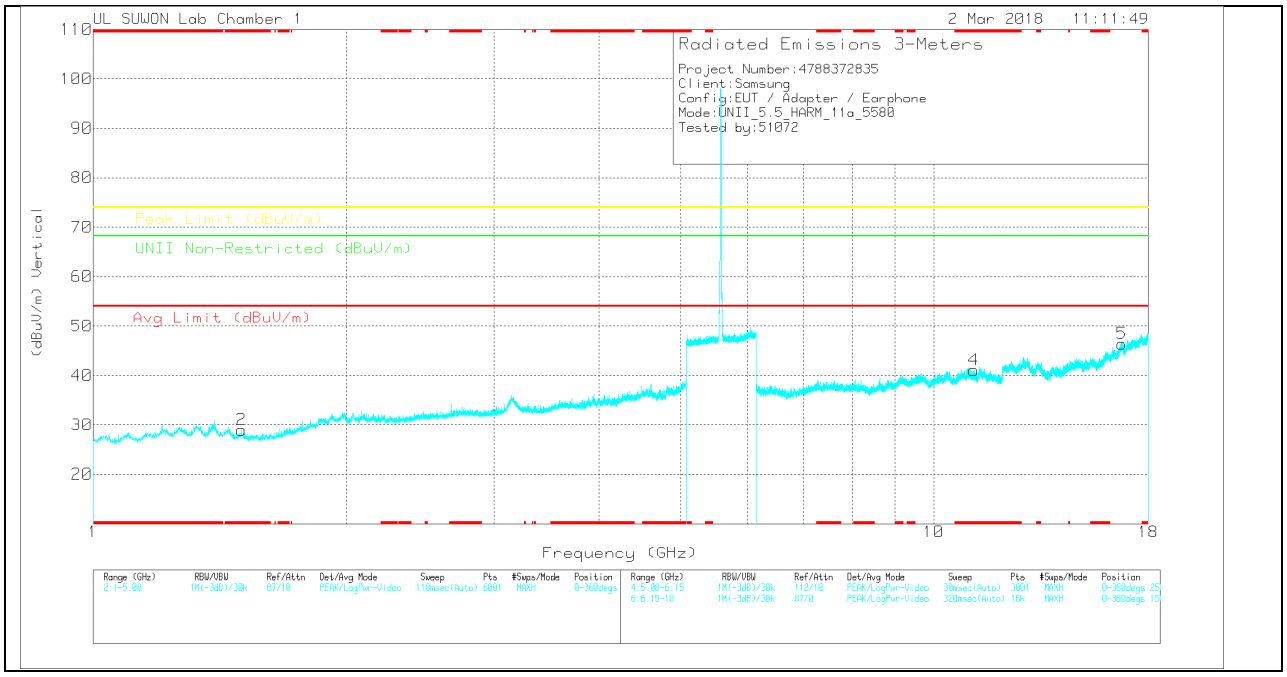
MID CHANNEL HORIZONTAL



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.

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MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	5GHz_LP(dB)_170809	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
1	* 1.499	41.85	Avg	28.3	-36.6	0	33.55	-	-	74	-40.45	-	-	0-360	150	H
2	* 1.502	37.29	Avg	28.3	-36.6	0	28.99	-	-	74	-45.01	-	-	0-360	149	V
3	* 11.159	25.38	Avg	37.9	-22.7	0	40.58	-	-	74	-33.42	-	-	0-360	250	H
6	16.742	23.33	Avg	40.9	-18.2	0	46.03	-	-	-	-	68.2	-22.17	0-360	250	H
4	* 11.162	25.87	Avg	37.9	-22.7	0	41.07	-	-	74	-32.93	-	-	0-360	250	V
5	16.742	23.71	Avg	40.9	-18.2	0	46.41	-	-	-	-	68.2	-21.79	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168 717	5GHz_LP(dB)_170809	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
* 1.5	51.69	PK-U	28.3	-36.6	0	43.39	-	-	74	-30.61	-	-	307	132	H
* 1.503	35.17	ADR	28.3	-36.6	0	26.87	54	-27.13	-	-	-	-	307	132	H
* 1.5	49.38	PK-U	28.3	-36.6	0	41.08	-	-	74	-32.92	-	-	50	350	V
* 1.5	35.95	ADR	28.3	-36.6	0	27.65	54	-26.35	-	-	-	-	50	350	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

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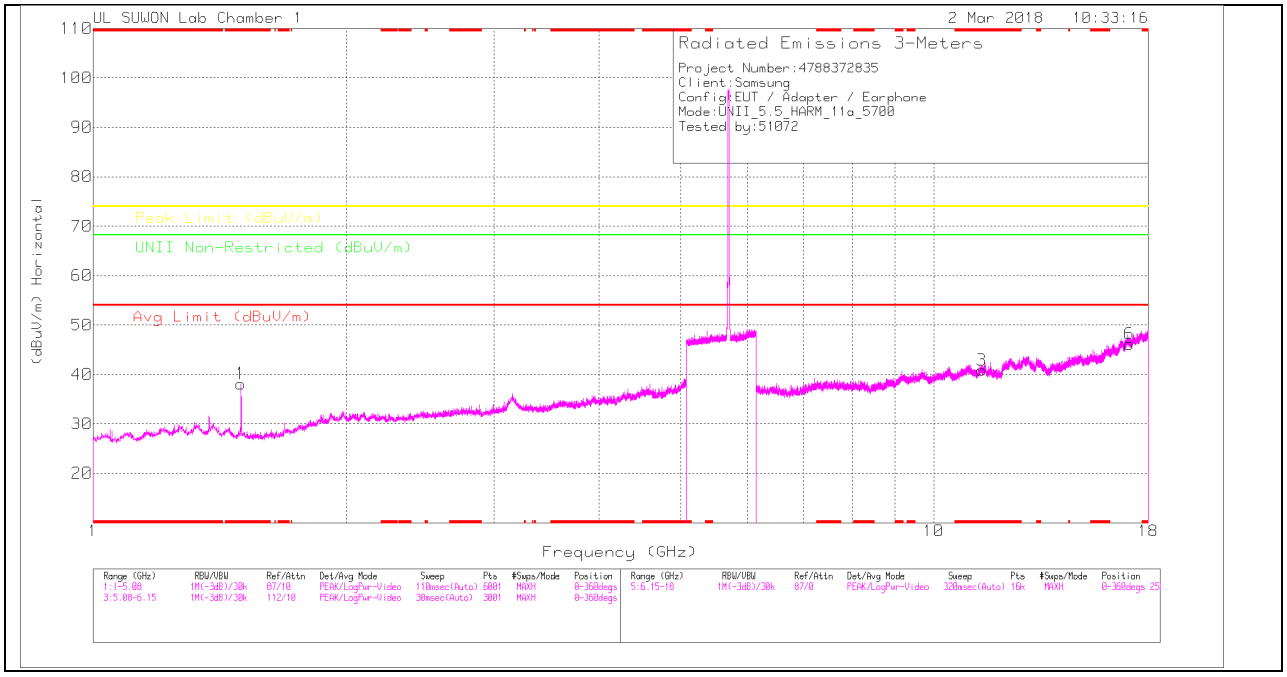
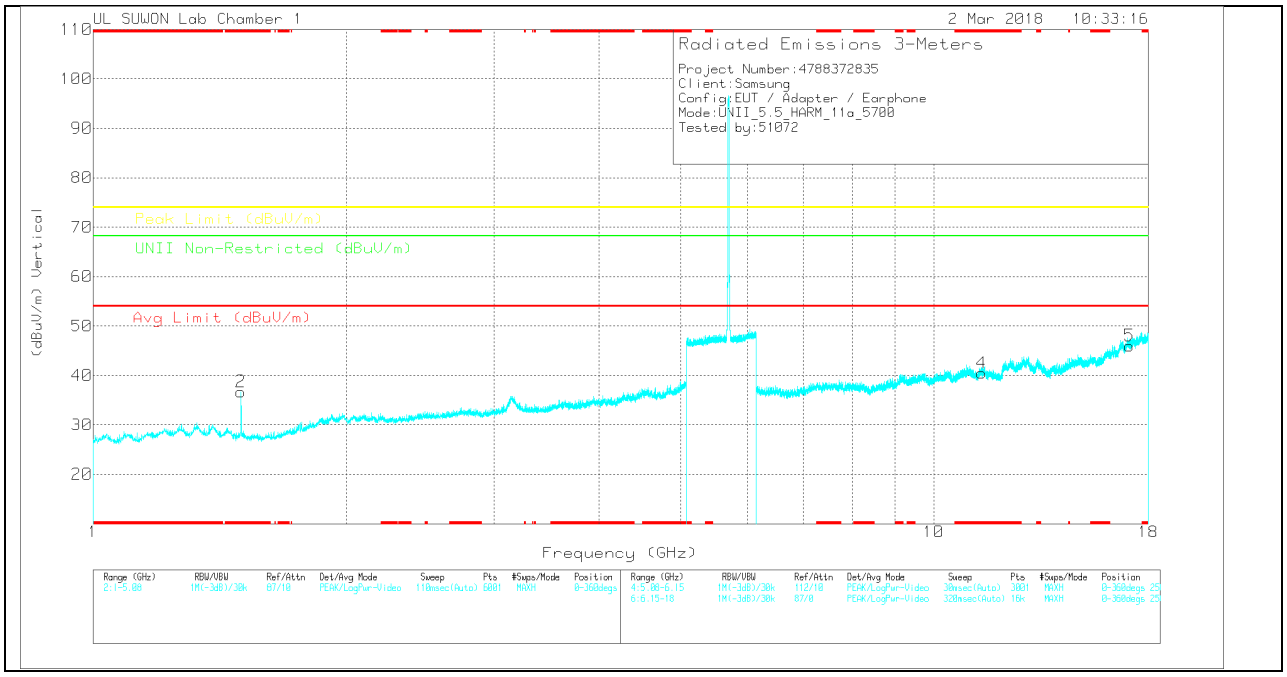
HIGH CHANNEL HORIZONTAL



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.

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HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	5GHz_LP(dB)_170809	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
1	* 1.499	46.42	PK	28.3	-36.6	0	38.12	-	-	74	-35.88	-	-	0-360	150	H
2	* 1.499	45	PK	28.3	-36.6	0	36.7	-	-	74	-37.3	-	-	0-360	250	V
3	* 11.401	25.48	PK	38.1	-22.7	0	40.88	-	-	74	-33.12	-	-	0-360	150	H
6	17.099	22.96	PK	41.3	-18.1	0	46.16	-	-	-	-	68.2	-22.04	0-360	150	H
4	* 11.401	25.1	PK	38.1	-22.7	0	40.5	-	-	74	-33.5	-	-	0-360	250	V
5	17.1	22.81	PK	41.3	-18.1	0	46.01	-	-	-	-	68.2	-22.19	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168 717	5GHz_LP(dB)_170809	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
* 1.5	50.21	PK-U	28.3	-36.6	0	41.91	-	-	74	-32.09	-	-	3	142	H
* 1.5	35.69	ADR	28.3	-36.6	0	27.39	54	-26.61	-	-	-	-	3	142	H
* 1.499	47.45	PK-U	28.3	-36.6	0	39.15	-	-	74	-34.85	-	-	87	388	V
* 1.503	35.13	ADR	28.3	-36.6	0	26.83	54	-27.17	-	-	-	-	87	388	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

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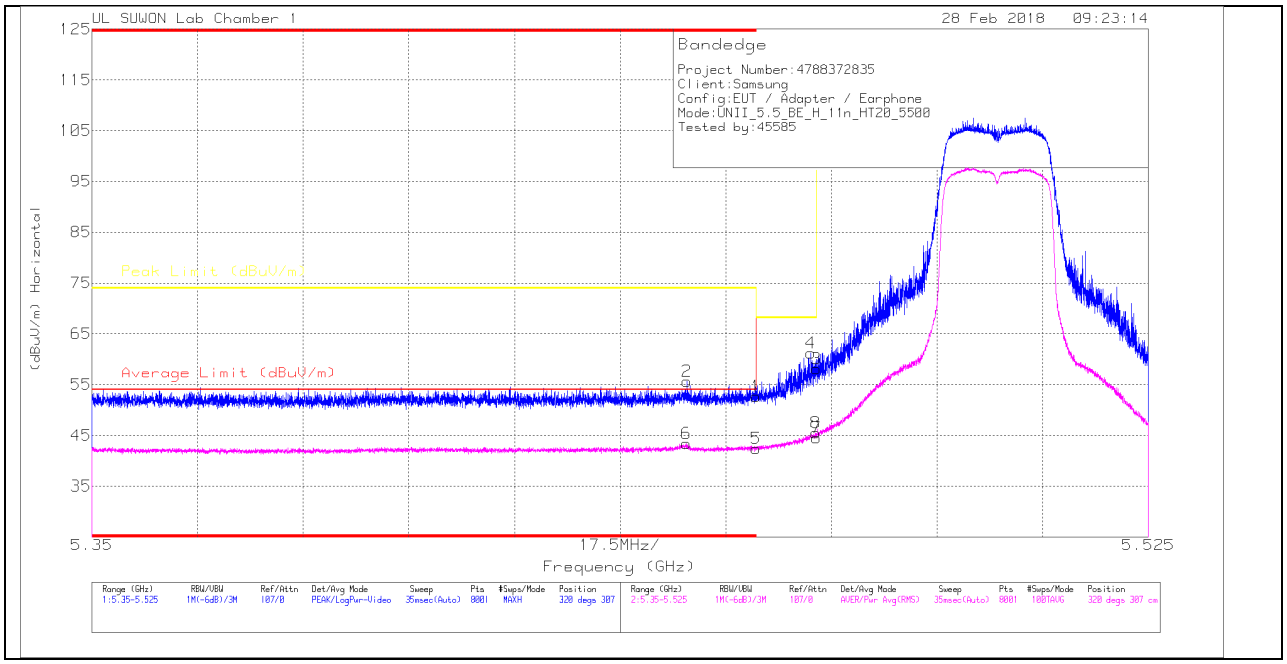
11.3.2. TX ABOVE 1GHz 802.11n HT20 MODE IN THE 5.5GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	* 5.46	39.83	Pk	34.3	-21.5	0	52.63	-	-	74	-21.37	320	307	H
2	* 5.449	42.81	Pk	34.3	-21.5	0	55.61	-	-	74	-18.39	320	307	H
3	5.47	45.34	Pk	34.3	-21.5	0	58.14	-	-	68.2	-10.06	320	307	H
4	5.469	48.49	Pk	34.3	-21.6	0	61.19	-	-	68.2	-7.01	320	307	H
5	* 5.46	29.66	RMS	34.3	-21.5	0	42.46	54	-11.54	-	-	320	307	H
6	* 5.448	30.57	RMS	34.3	-21.5	0	43.37	54	-10.63	-	-	320	307	H

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

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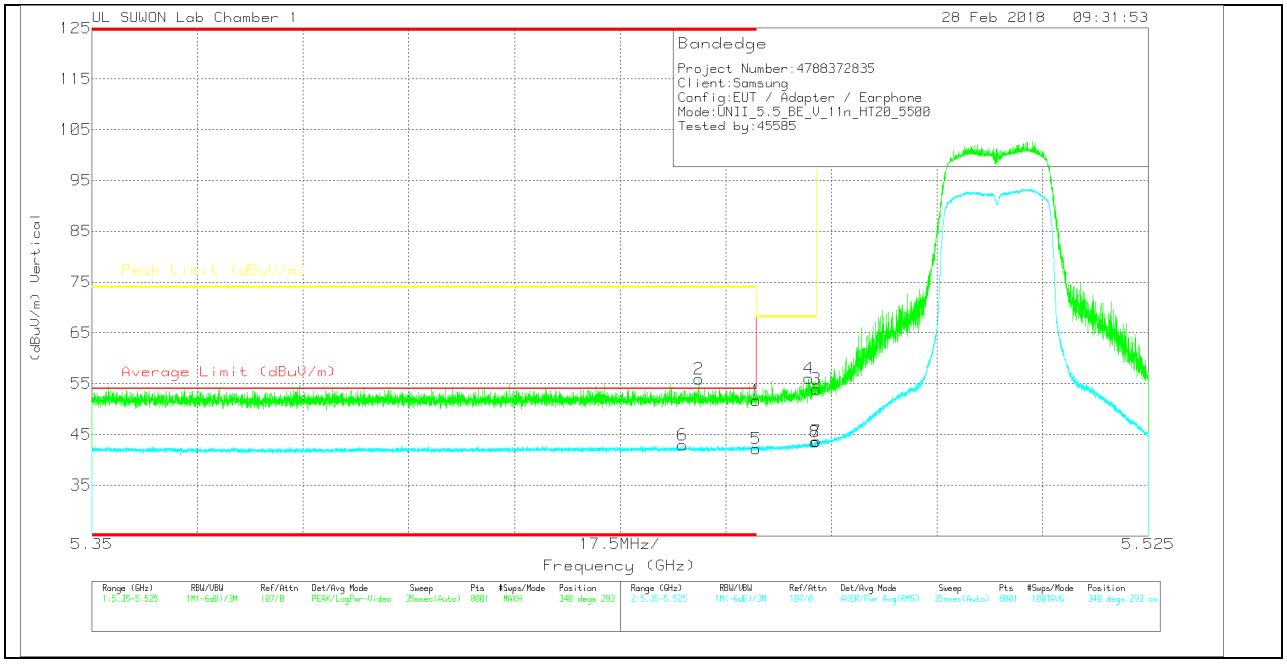
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	* 5.46	38.88	Pk	34.3	-21.5	0	51.68	-	-	74	-22.32	340	293	V
2	* 5.451	43.11	Pk	34.3	-21.5	0	55.91	-	-	74	-18.09	340	293	V
3	5.47	41.1	Pk	34.3	-21.5	0	53.9	-	-	68.2	-14.3	340	293	V
4	5.469	43.37	Pk	34.3	-21.6	0	56.07	-	-	68.2	-12.13	340	293	V
5	* 5.46	29.42	RMS	34.3	-21.5	0	42.22	54	-11.78	-	-	340	293	V
6	* 5.448	30.14	RMS	34.3	-21.5	0	42.94	54	-11.06	-	-	340	293	V

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

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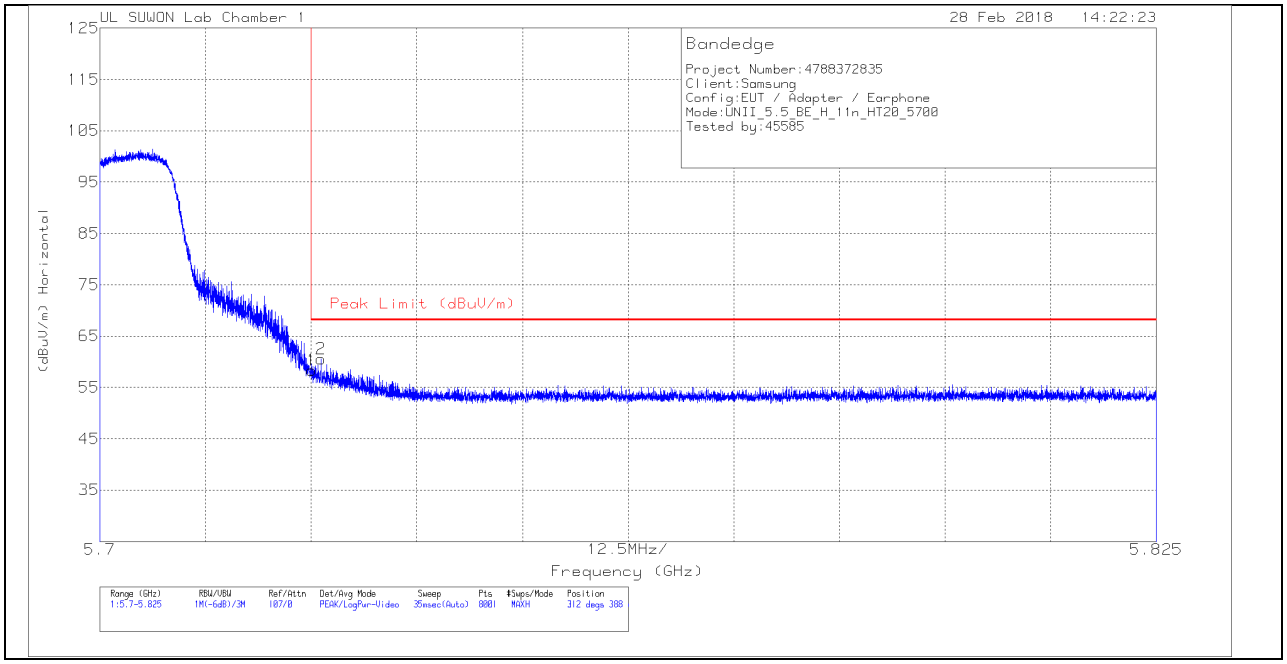
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_0 0168717	10dB_ATT(dB)_17 0809	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	45.15	Pk	34.4	-21.2	0	58.35	68.2	-9.85	312	388	H
2	5.726	47.4	Pk	34.4	-21.2	0	60.6	68.2	-7.6	312	388	H

Pk - Peak detector

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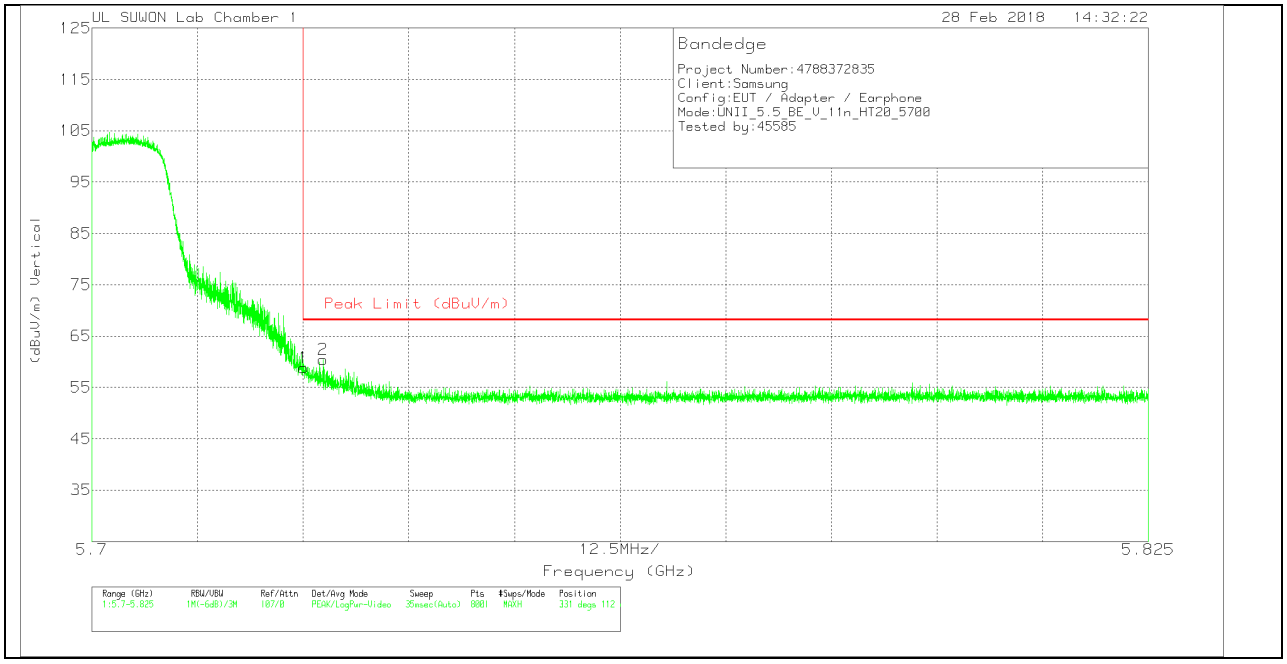
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_0 0168717	10dB_ATT(dB)_17 0809	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	45.68	Pk	34.4	-21.2	0	58.88	68.2	-9.32	331	112	V
2	5.727	47.22	Pk	34.4	-21.2	0	60.42	68.2	-7.78	331	112	V

Pk - Peak detector

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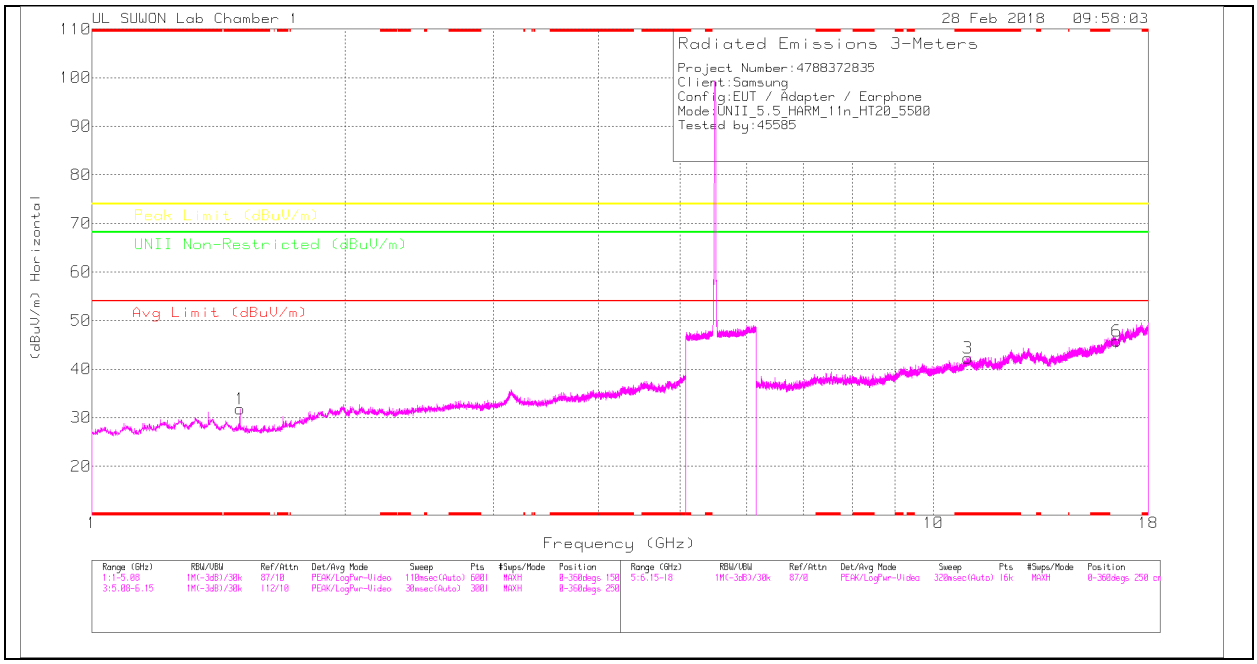
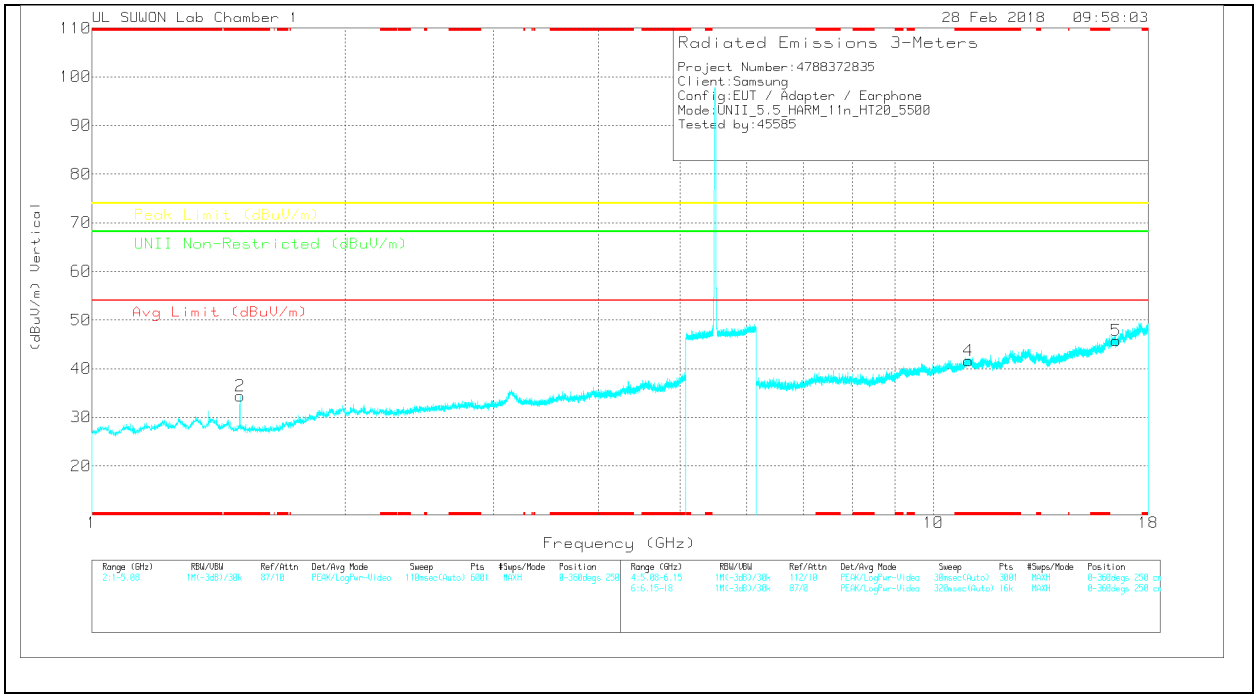
HARMONICS AND SPURIOUS EMISSIONS

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.

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LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	5GHz_LP(dB)_170809	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
1	* 1.499	40.14	PK	28.3	-36.6	0	31.84	-	-	74	-42.16	-	-	0-360	250	H
2	* 1.499	42.67	PK	28.3	-36.6	0	34.37	-	-	74	-39.63	-	-	0-360	250	V
3	* 10.995	26.29	PK	38	-22	0	42.29	-	-	74	-31.71	-	-	0-360	250	H
6	16.5	25.07	PK	40.7	-20	0	45.77	-	-	-	-	68.2	-22.43	0-360	250	H
4	* 11	25.64	PK	38	-22	0	41.64	-	-	74	-32.36	-	-	0-360	150	V
5	16.497	25.07	PK	40.7	-20	0	45.77	-	-	-	-	68.2	-22.43	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168 717	5GHz_LP(dB)_170809	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
* 1.5	51.93	PK-U	28.3	-36.6	0	43.63	-	-	74	-30.37	-	-	169	106	H
* 1.5	36.39	ADR	28.3	-36.6	0	28.09	54	-25.91	-	-	-	-	169	106	H
* 1.5	50.4	PK-U	28.3	-36.6	0	42.1	-	-	74	-31.9	-	-	139	123	V
* 1.499	35.69	ADR	28.3	-36.6	0	27.39	54	-26.61	-	-	-	-	139	123	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

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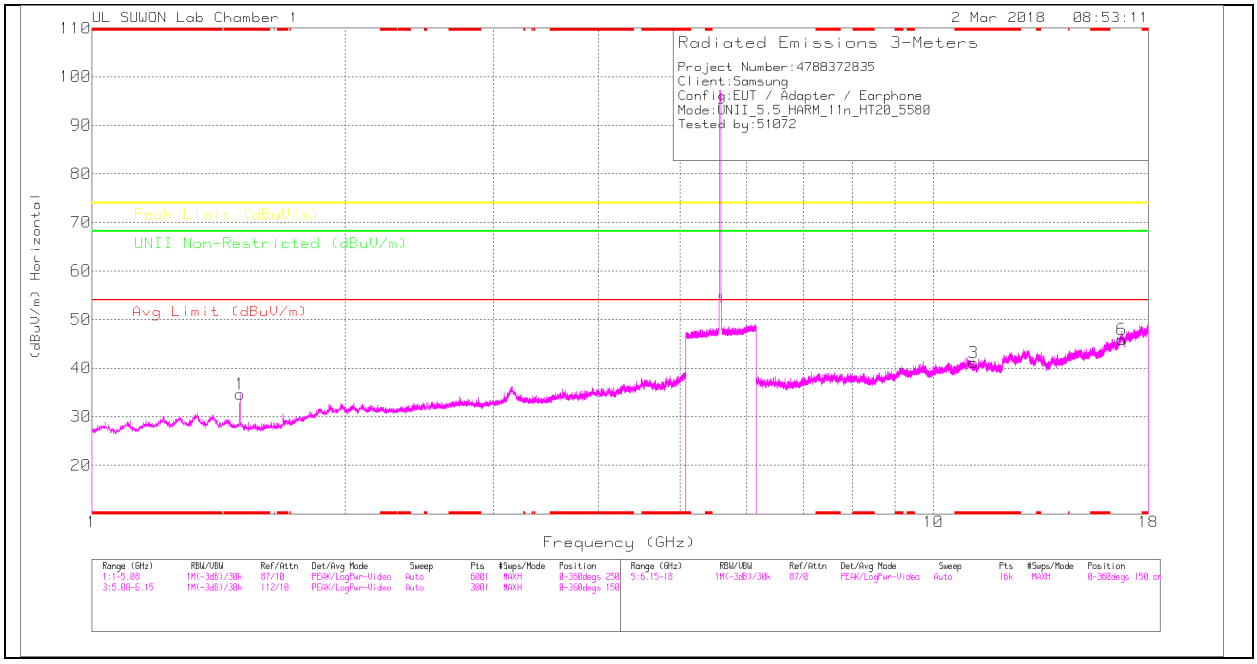
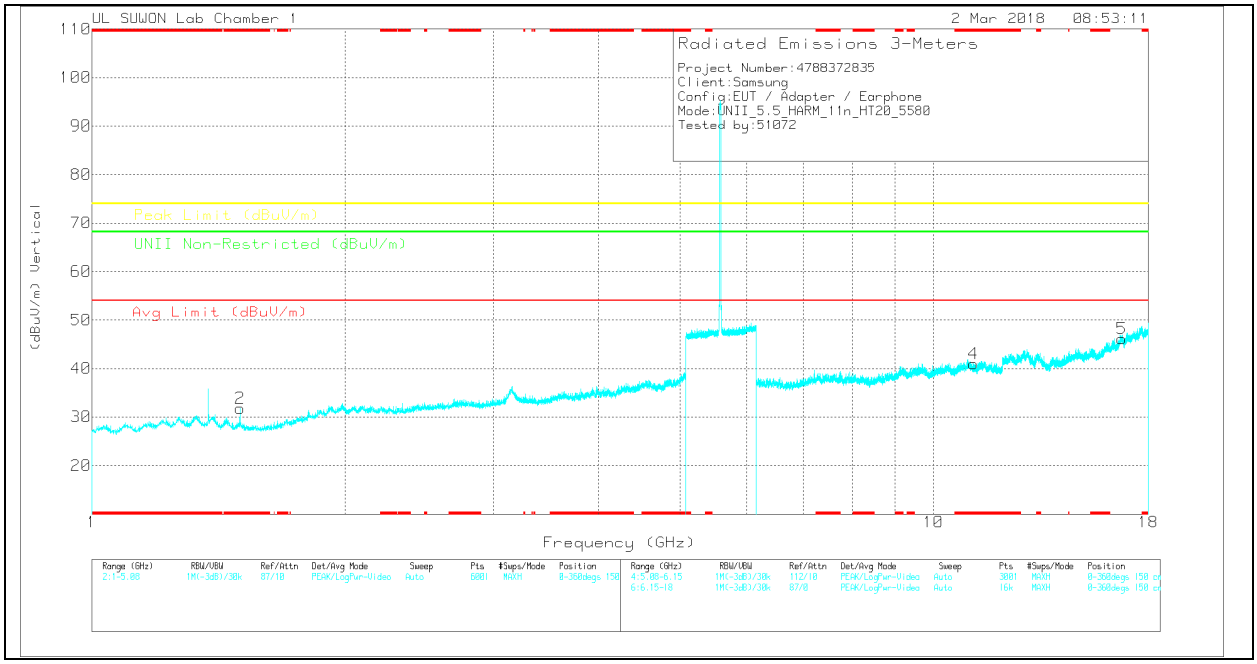
MID CHANNEL HORIZONTAL



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.

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MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	5GHz_LP(dB)_170809	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
1	* 1.499	42.9	PK	28.3	-36.6	0	34.6	-	-	74	-39.4	-	-	0-360	150	H
2	* 1.5	40.1	PK	28.3	-36.6	0	31.8	-	-	74	-42.2	-	-	0-360	150	V
3	* 11.159	25.87	PK	37.9	-22.7	0	41.07	-	-	74	-32.93	-	-	0-360	250	H
6	16.74	23.03	PK	40.9	-18.1	0	45.83	-	-	-	-	68.2	-22.37	0-360	250	H
4	* 11.16	25.76	PK	37.9	-22.7	0	40.96	-	-	74	-33.04	-	-	0-360	250	V
5	16.74	23.29	PK	40.9	-18.1	0	46.09	-	-	-	-	68.2	-22.11	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168 717	5GHz_LP(dB)_170809	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
* 1.5	51.61	PK-U	28.3	-36.6	0	43.31	-	-	74	-30.69	-	-	20	203	H
* 1.5	35.75	ADR	28.3	-36.6	0	27.45	54	-26.55	-	-	-	-	20	203	H
* 1.5	51.53	PK-U	28.3	-36.6	0	43.23	-	-	74	-30.77	-	-	16	357	V
* 1.5	36.53	ADR	28.3	-36.6	0	28.23	54	-25.77	-	-	-	-	16	357	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

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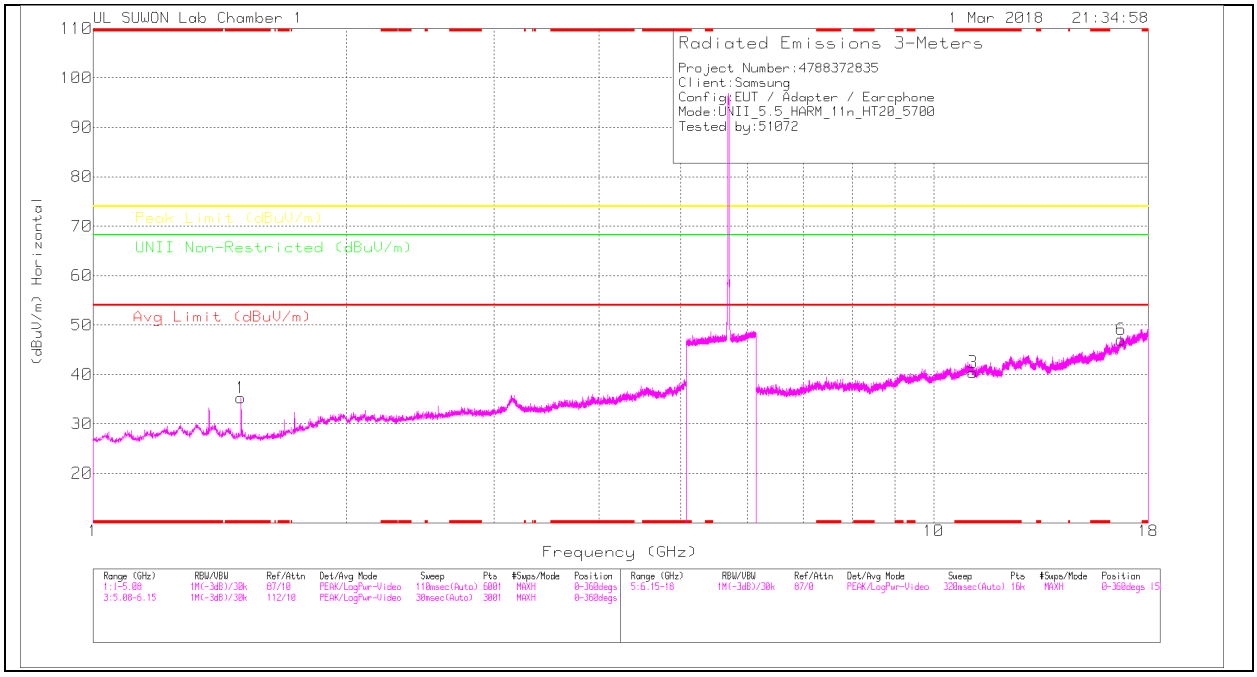
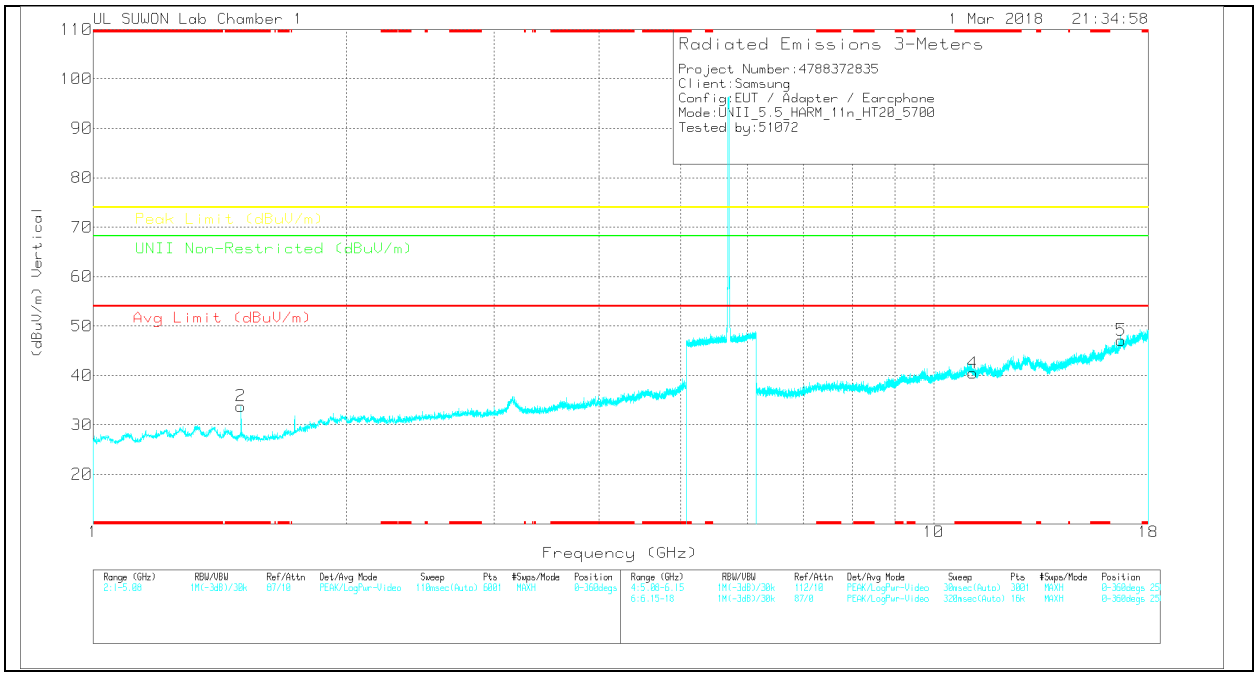
HIGH CHANNEL HORIZONTAL



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.

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HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
1	* 1.5	43.57	PK	28.3	-36.6	0	35.27	-	-	74	-38.73	-	-	0-360	250	H
2	* 1.5	42.11	PK	28.3	-36.6	0	33.81	-	-	74	-40.19	-	-	0-360	250	V
3	* 11.141	25.18	PK	37.9	-22.7	0	40.38	-	-	74	-33.62	-	-	0-360	150	H
6	16.71	24.45	PK	41	-18.4	0	47.05	-	-	-	-	68.2	-21.15	0-360	150	H
4	* 11.141	25.26	PK	37.9	-22.7	0	40.46	-	-	74	-33.54	-	-	0-360	250	V
5	16.71	24.53	PK	41	-18.4	0	47.13	-	-	-	-	68.2	-21.07	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
* 1.5	48.98	PK-U	28.3	-36.6	0	40.68	-	-	74	-33.32	-	-	199	117	H
* 1.5	35.54	ADR	28.3	-36.6	0	27.24	54	-26.76	-	-	-	-	199	117	H
* 1.5	49.94	PK-U	28.3	-36.6	0	41.64	-	-	74	-32.36	-	-	110	247	V
* 1.503	35.16	ADR	28.3	-36.6	0	26.86	54	-27.14	-	-	-	-	110	247	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

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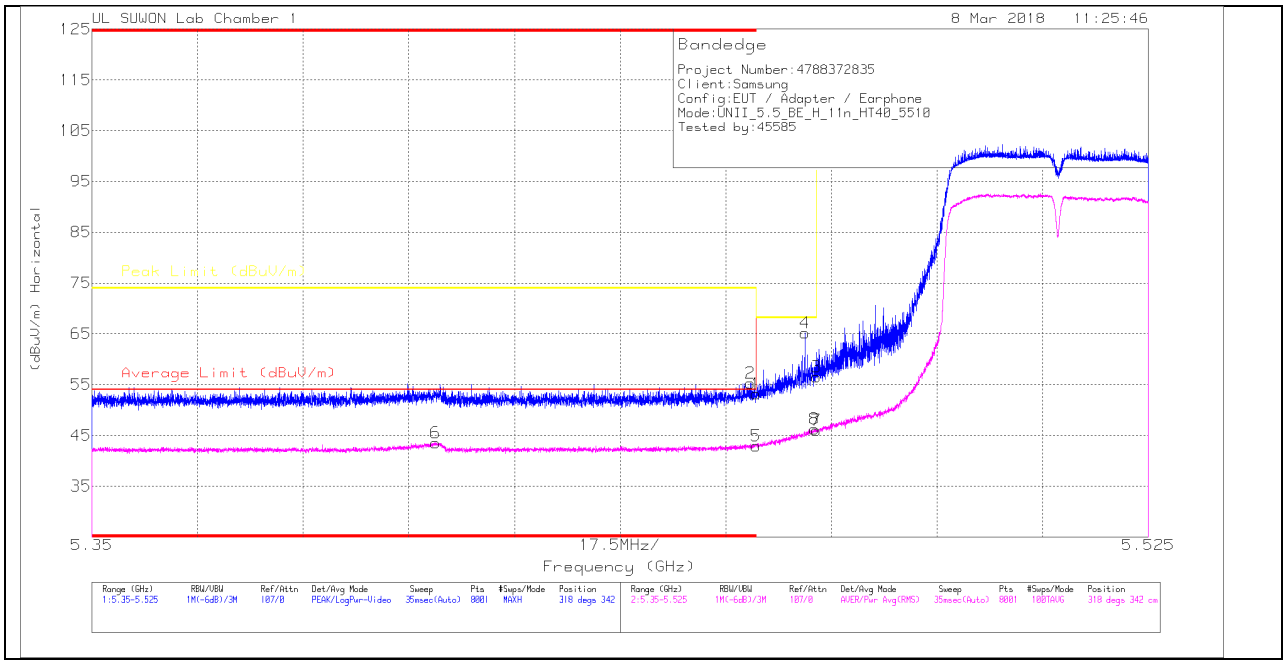
11.3.3. TX ABOVE 1GHz 802.11n HT40 MODE IN THE 5.5GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	* 5.46	40.35	Pk	34.3	-21.5	0	53.15	-	-	74	-20.85	318	342	H
2	* 5.459	42.58	Pk	34.3	-21.6	0	55.28	-	-	74	-18.72	318	342	H
3	5.47	43.66	Pk	34.3	-21.5	0	56.46	-	-	68.2	-11.74	318	342	H
4	5.468	52.44	Pk	34.3	-21.6	0	65.14	-	-	68.2	-3.06	318	342	H
5	* 5.46	29.98	RMS	34.3	-21.5	.18	42.96	54	-11.04	-	-	318	342	H
6	* 5.407	30.78	RMS	34.2	-21.6	.18	43.56	54	-10.44	-	-	318	342	H

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

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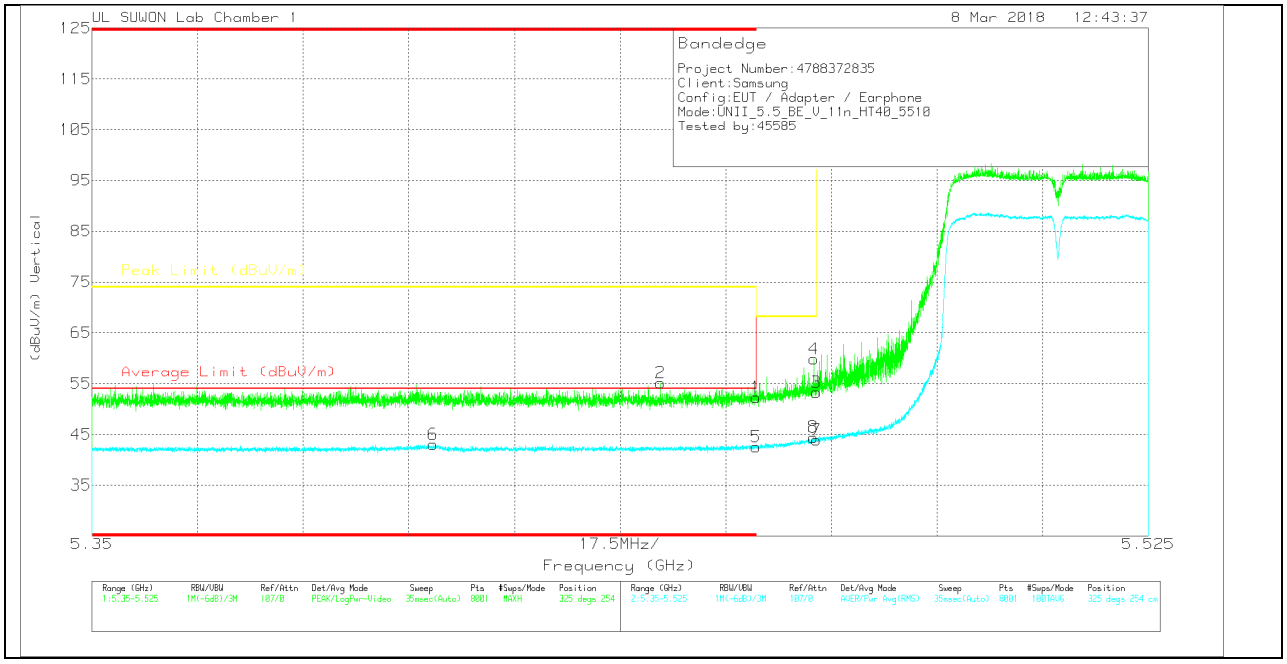
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	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	* 5.46	39.45	Pk	34.3	-21.5	0	52.25	-	-	74	-21.75	325	254	V
2	* 5.444	42.47	Pk	34.3	-21.6	0	55.17	-	-	74	-18.83	325	254	V
3	5.47	40.51	Pk	34.3	-21.5	0	53.31	-	-	68.2	-14.89	325	254	V
4	5.47	47.02	Pk	34.3	-21.5	0	59.82	-	-	68.2	-8.38	325	254	V
5	* 5.46	29.59	RMS	34.3	-21.5	.18	42.57	54	-11.43	-	-	325	254	V
6	* 5.407	30.3	RMS	34.2	-21.6	.18	43.08	54	-10.92	-	-	325	254	V

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

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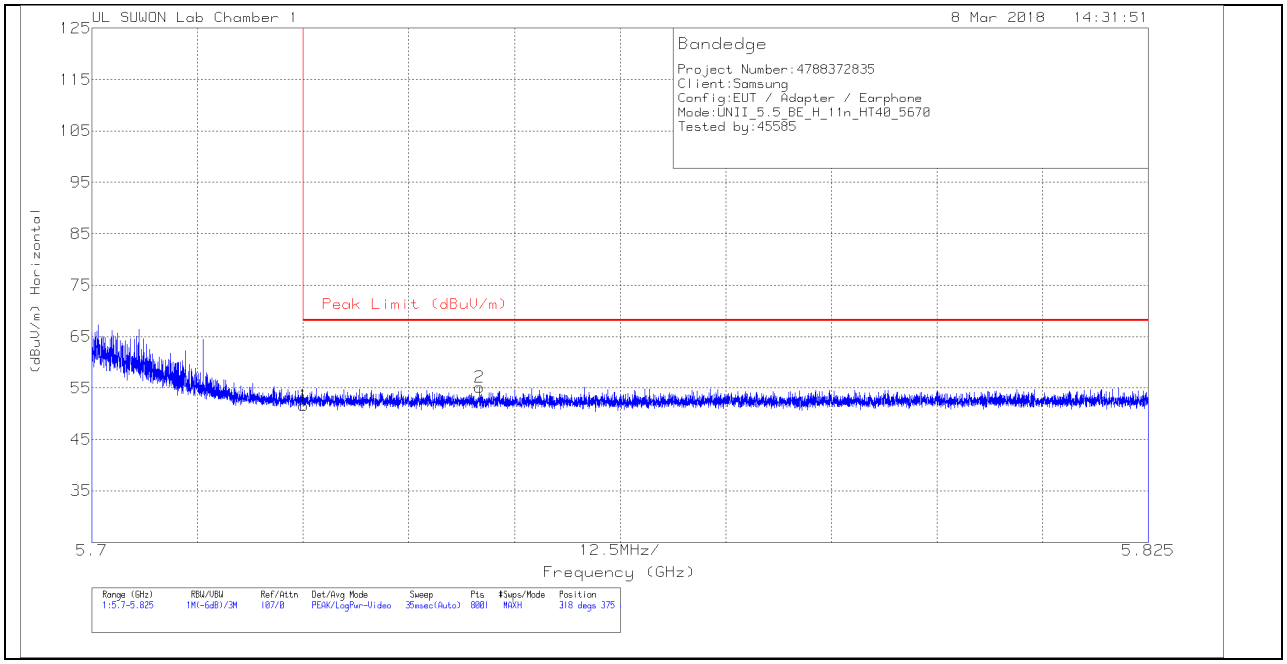
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	38.41	Pk	34.4	-21.2	0	51.61	68.2	-16.59	318	375	H
2	5.746	42.02	Pk	34.4	-21.2	0	55.22	68.2	-12.98	318	375	H

Pk - Peak detector

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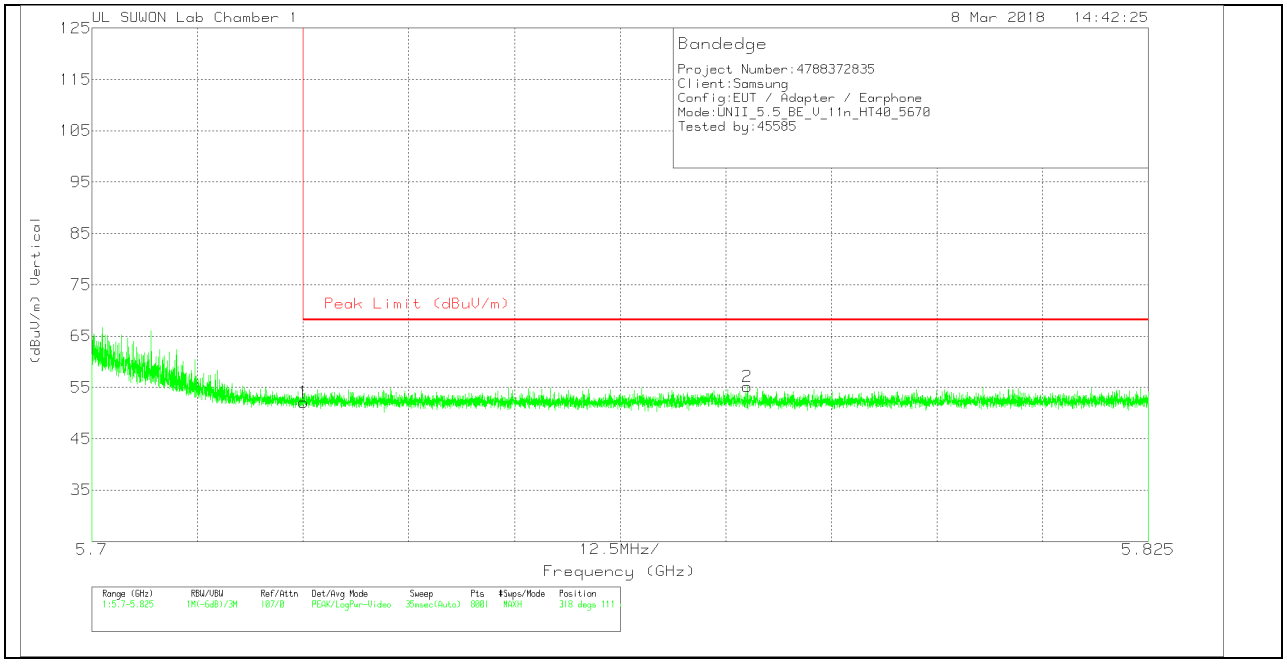
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_0 0168717	10dB_ATT(dB)_17 0809	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	38.89	Pk	34.4	-21.2	0	52.09	68.2	-16.11	318	111	V
2	5.778	41.86	Pk	34.5	-21.2	0	55.16	68.2	-13.04	318	111	V

Pk - Peak detector

UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675 Korea TEL: (031) 337-9902,FAX: (031) 213-5433
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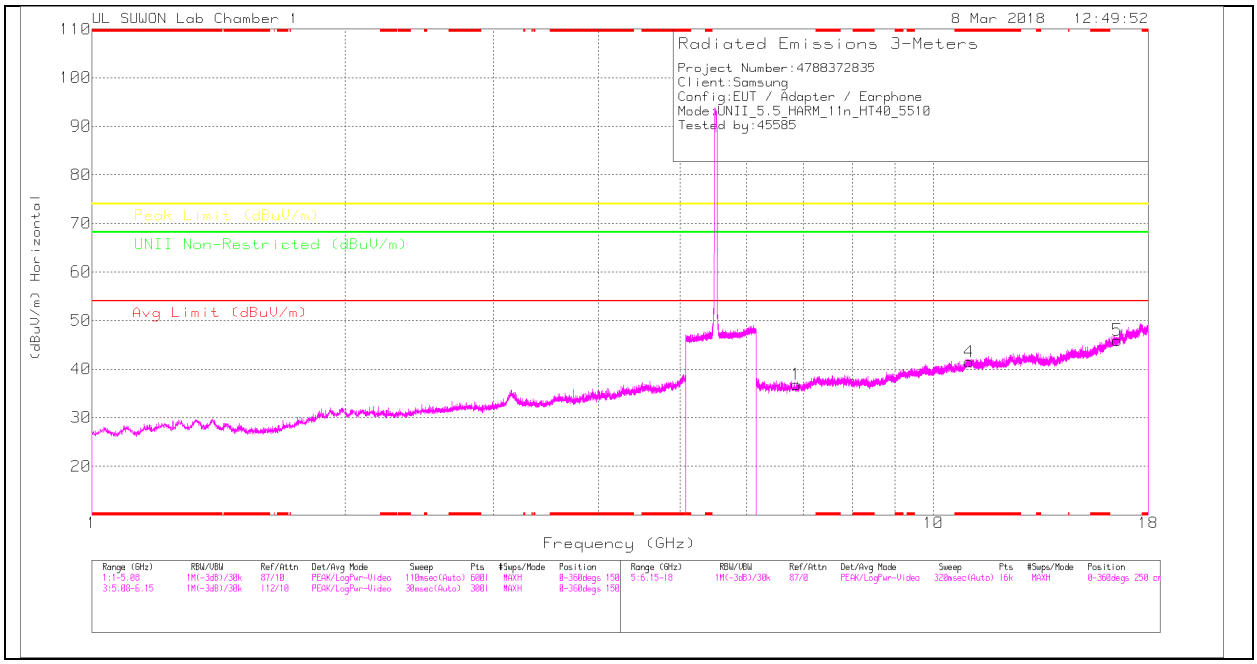
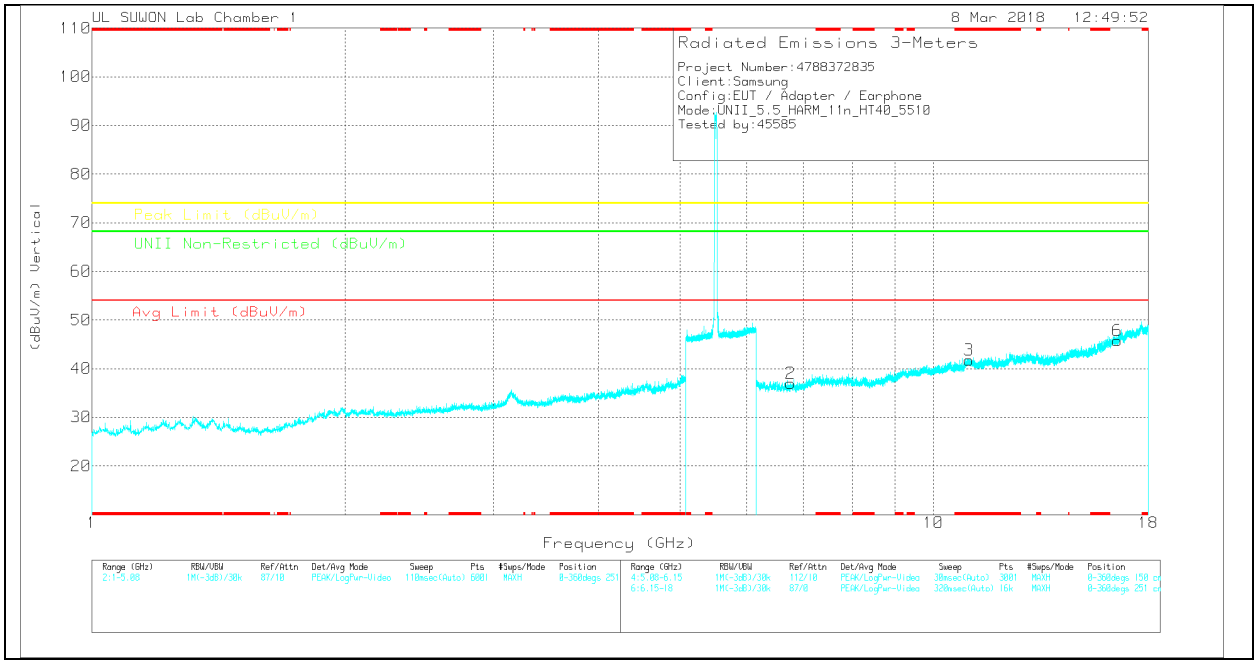
HARMONICS AND SPURIOUS EMISSIONS

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.

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LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	6GHz_HP(dB)_17080 9	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
1	6.869	29.9	PK	35.4	-28.5	0	36.8	-	-	-	-	68.2	-31.4	0-360	250	H
4	* 11.019	25.52	PK	38	-22	0	41.52	-	-	74	-32.48	-	-	0-360	150	H
5	16.531	25.15	PK	40.7	-19.9	0	45.95	-	-	-	-	68.2	-22.25	0-360	250	H
2	6.762	30.26	PK	35.3	-28.6	0	36.96	-	-	-	-	68.2	-31.24	0-360	251	V
3	* 11.021	25.7	PK	38	-22	0	41.7	-	-	74	-32.3	-	-	0-360	150	V
6	16.53	25.01	PK	40.7	-19.9	0	45.81	-	-	-	-	68.2	-22.39	0-360	251	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

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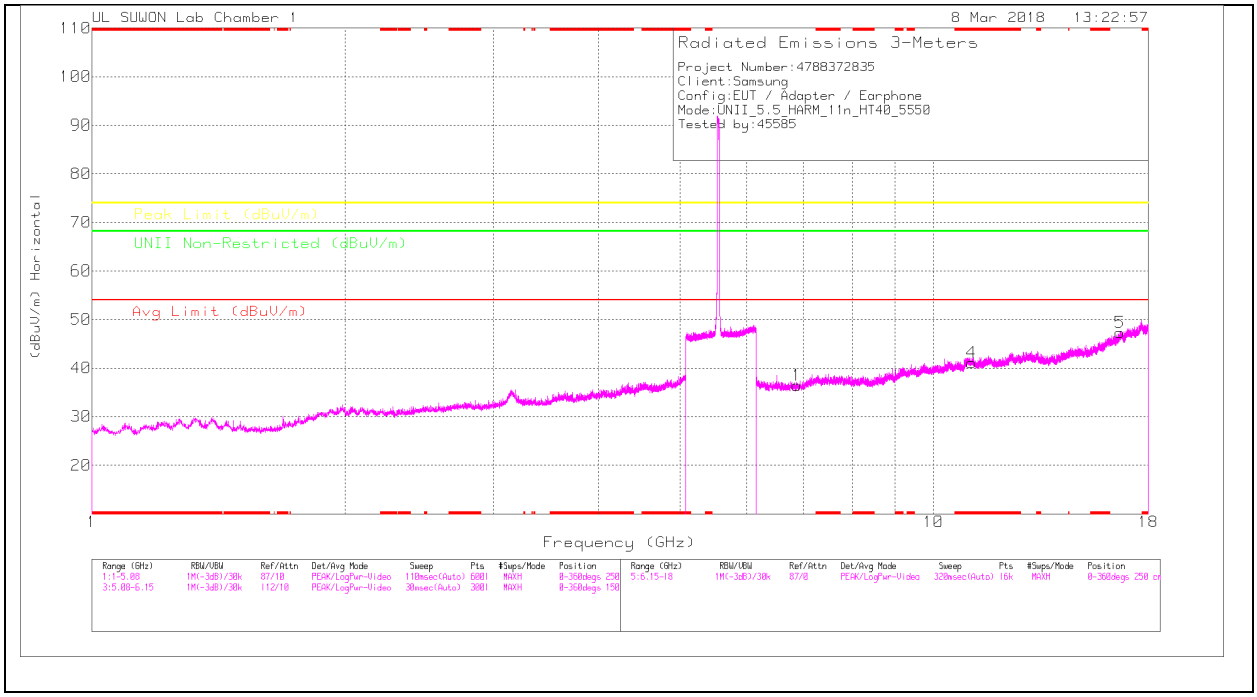
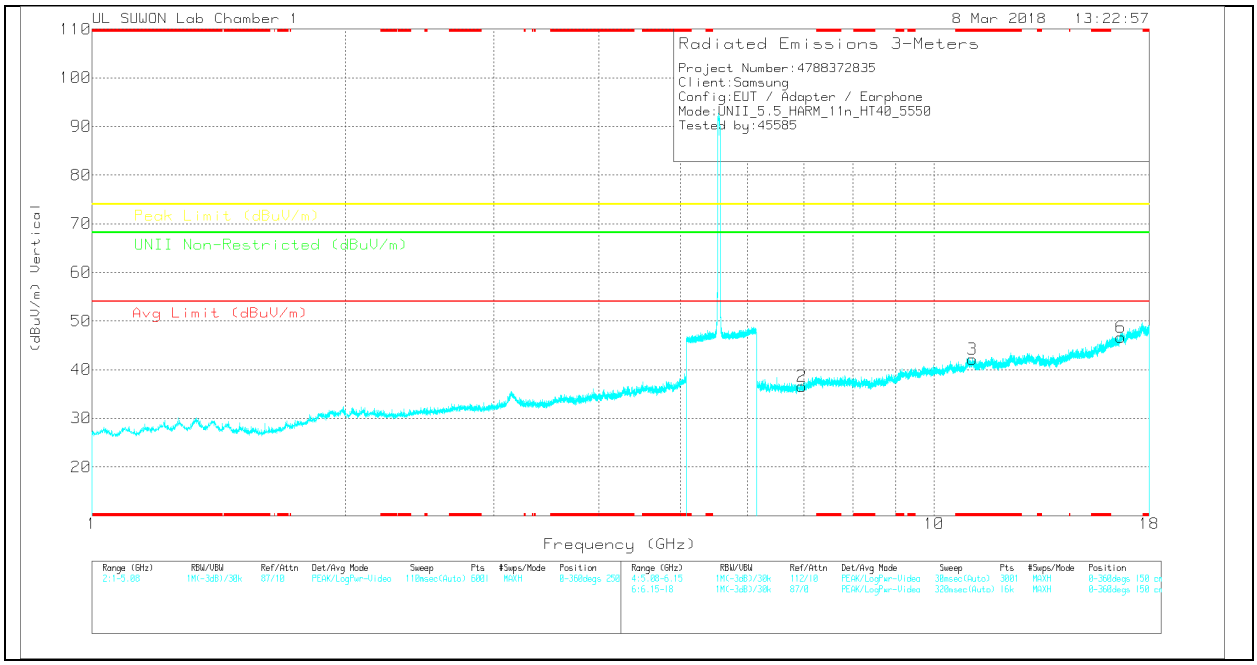
MID CHANNEL HORIZONTAL



MID CHANNELVERTICAL



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

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MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	6GHz_HP(dB)_17080 9	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
1	6.879	29.49	PK	35.5	-28.6	0	36.39	-	-	-	-	68.2	-31.81	0-360	250	H
4	* 11.101	25.67	PK	38	-22.6	0	41.07	-	-	74	-32.93	-	-	0-360	150	H
5	16.65	25.26	PK	40.9	-18.9	0	47.26	-	-	-	-	68.2	-20.94	0-360	150	H
2	6.967	29.22	PK	35.5	-28.1	0	36.62	-	-	-	-	68.2	-31.58	0-360	250	V
3	* 11.101	26.75	PK	38	-22.6	0	42.15	-	-	74	-31.85	-	-	0-360	250	V
6	16.65	24.68	PK	40.9	-18.9	0	46.68	-	-	-	-	68.2	-21.52	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

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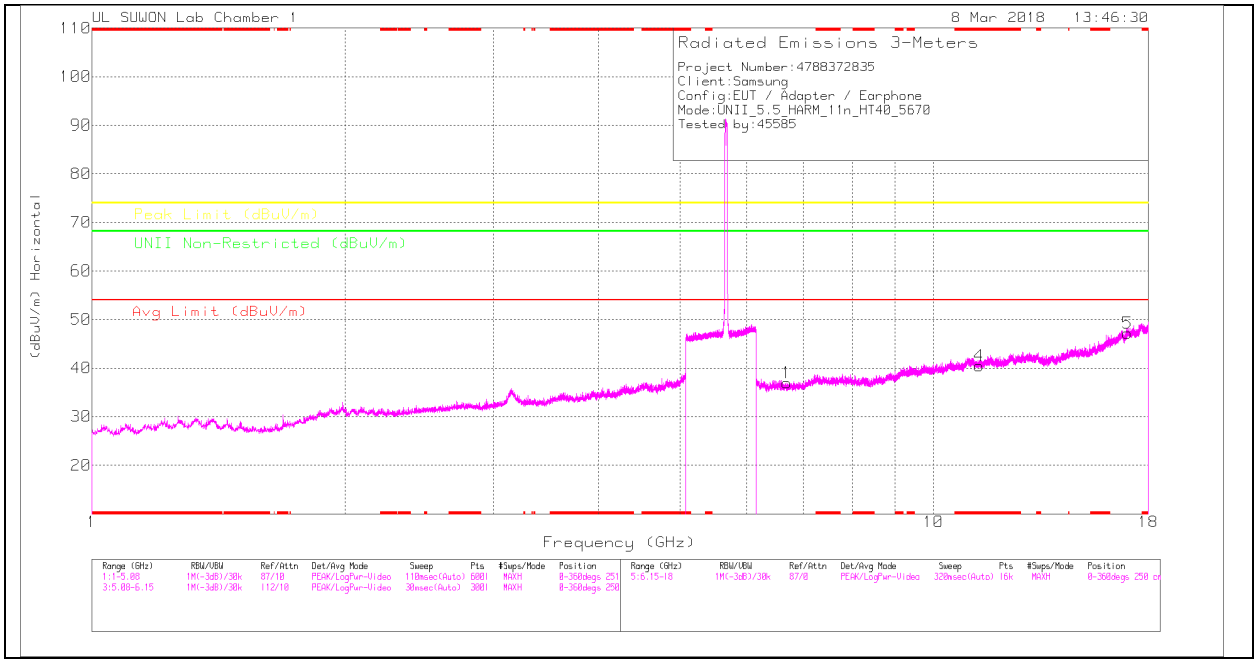
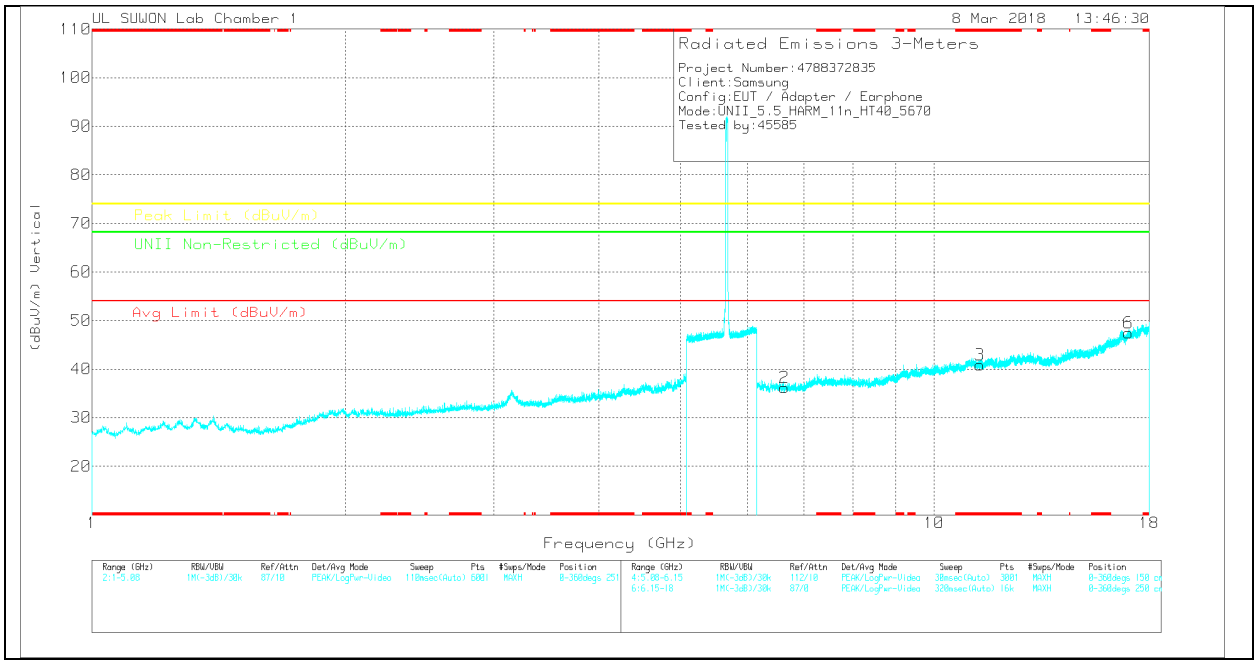
HIGH CHANNEL HORIZONTAL



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.

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HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	6GHz_HP(dB)_17080 9	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
1	6.694	30.67	PK	35.2	-28.9	0	36.97	-	-	-	-	68.2	-31.23	0-360	250	H
4	* 11.341	25.03	PK	38	-22.6	0	40.43	-	-	74	-33.57	-	-	0-360	150	H
5	17.011	23.79	PK	41.2	-17.8	0	47.19	-	-	-	-	68.2	-21.01	0-360	150	H
2	6.637	29.61	PK	35.2	-28.6	0	36.21	-	-	-	-	68.2	-31.99	0-360	150	V
3	* 11.341	25.45	PK	38	-22.6	0	40.85	-	-	74	-33.15	-	-	0-360	150	V
6	17.011	24.02	PK	41.2	-17.8	0	47.42	-	-	-	-	68.2	-20.78	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

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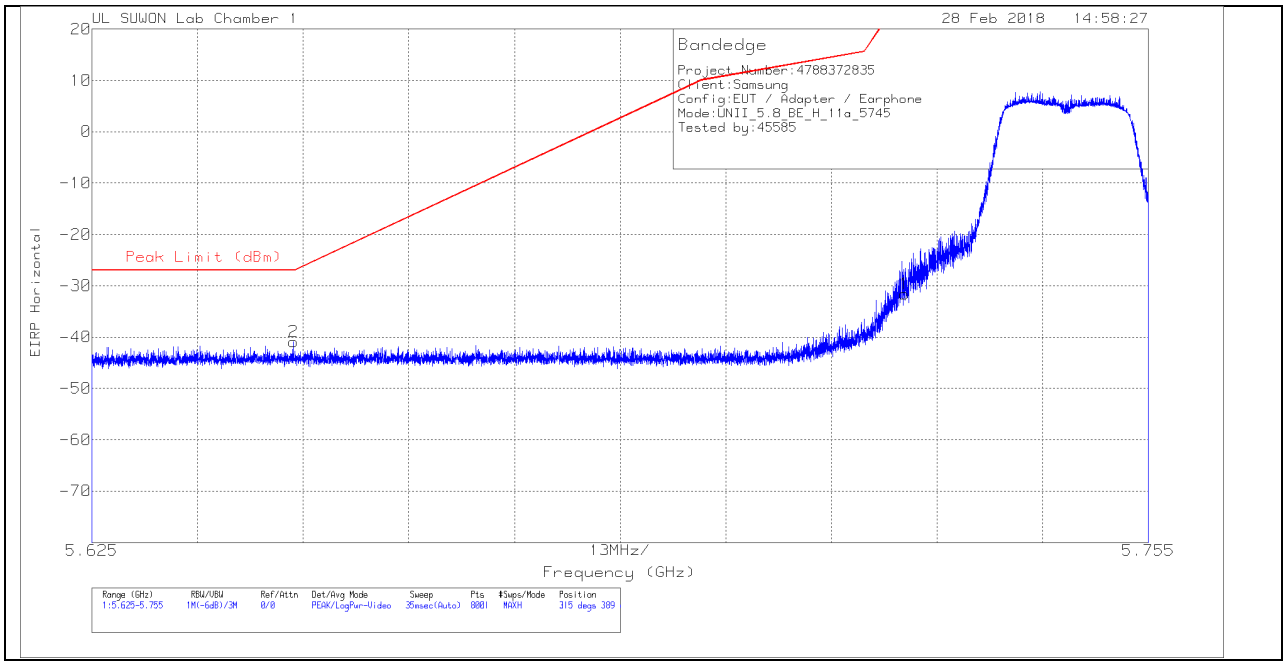
11.4. 5.8 GHz

11.4.1. TX ABOVE 1GHz 802.11a MODE IN THE 5.8GHz BAND BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117(00168717) _150619	10dB_Att(dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-55.34	Pk	34.8	-22.9	11.8	0	-31.64	26.97	-58.61	315	389	H
2	5.65	-64.48	Pk	34.8	-23	11.8	0	-40.88	-27	-13.88	315	389	H

Pk - Peak detector

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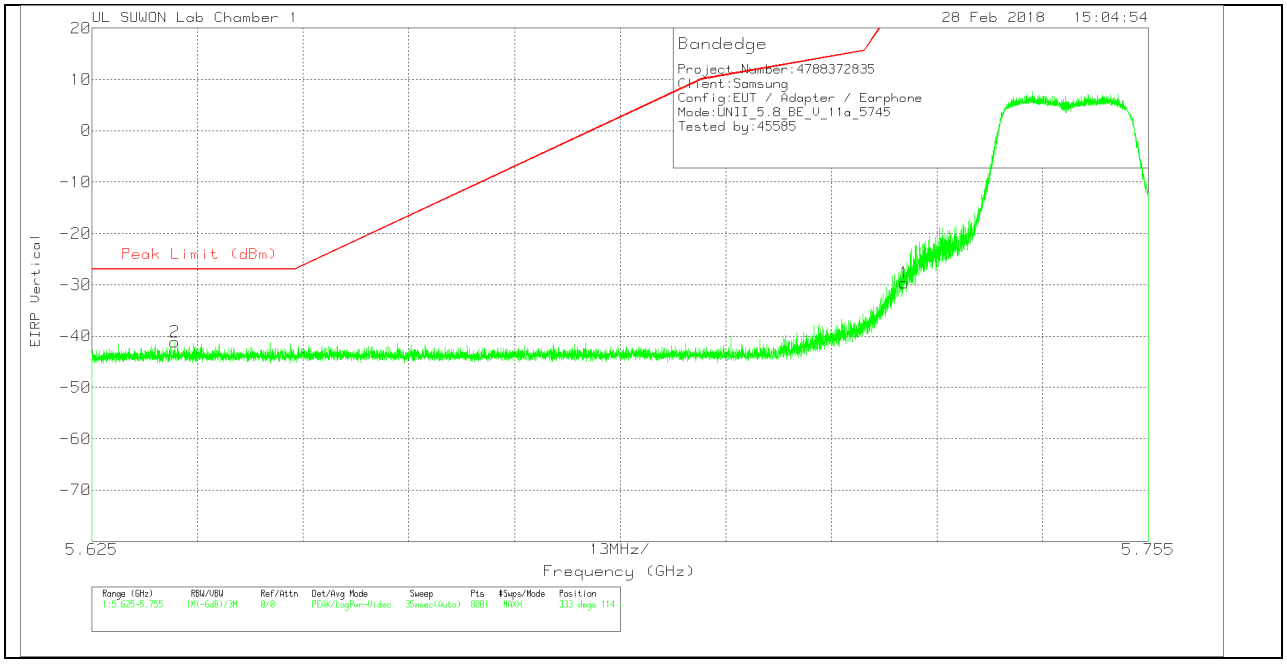
VERTICAL PEAK PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117(00168717) _150619	10dB_Att(dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-53.33	Pk	34.8	-22.9	11.8	0	-29.63	26.97	-56.6	333	114	V
2	5.635	-64.73	Pk	34.8	-23	11.8	0	-41.13	-27	-14.13	333	114	V

Pk - Peak detector

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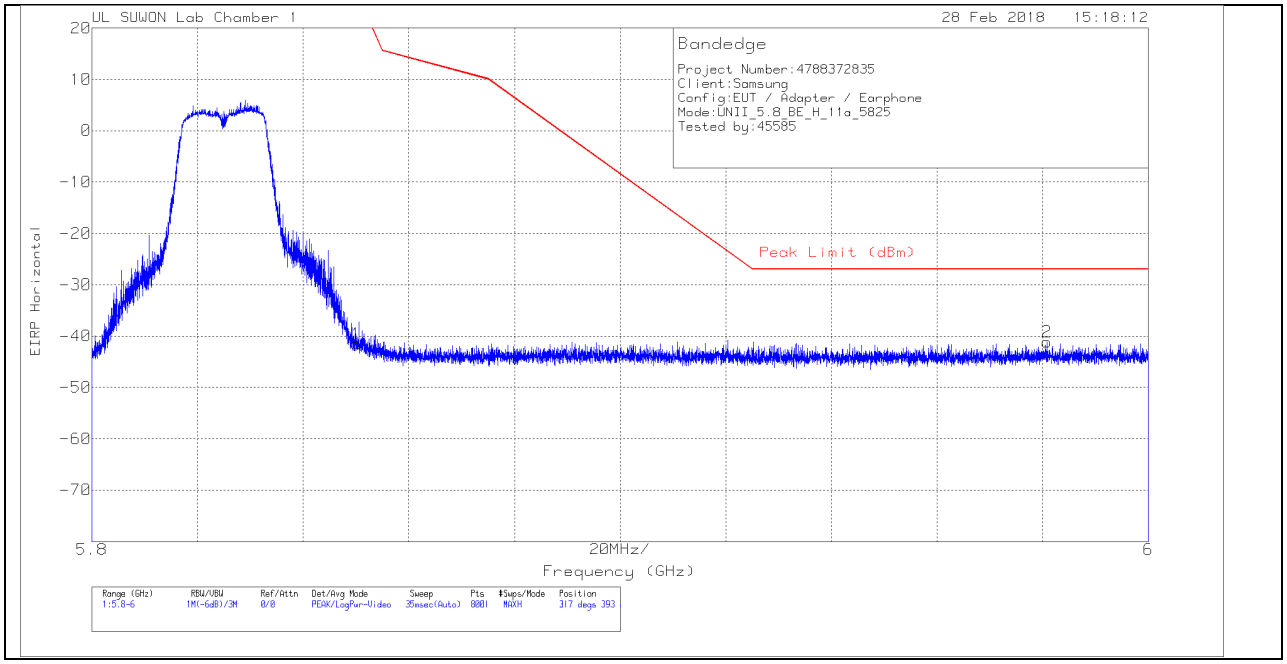
BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117(00168717) _150619	10dB_Att(dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-65.96	Pk	34.9	-22.3	11.8	0	-41.56	26.94	-68.5	317	393	H
2	5.981	-65.61	Pk	34.9	-22.2	11.8	0	-41.11	-27	-14.11	317	393	H

Pk - Peak detector

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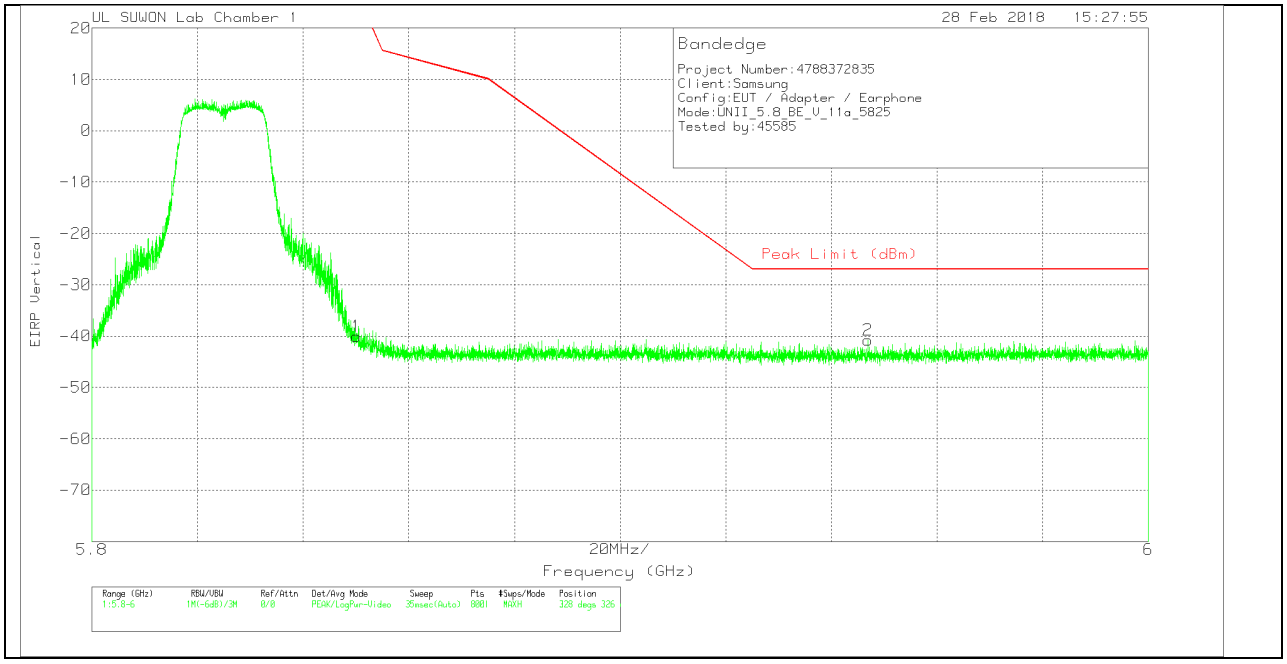
VERTICAL PEAK PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117(00168717) _150619	10dB_Att(dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-64.4	Pk	34.9	-22.3	11.8	0	-40	26.94	-66.94	328	326	V
2	5.947	-64.85	Pk	34.9	-22.6	11.8	0	-40.75	-27	-13.75	328	326	V

Pk - Peak detector

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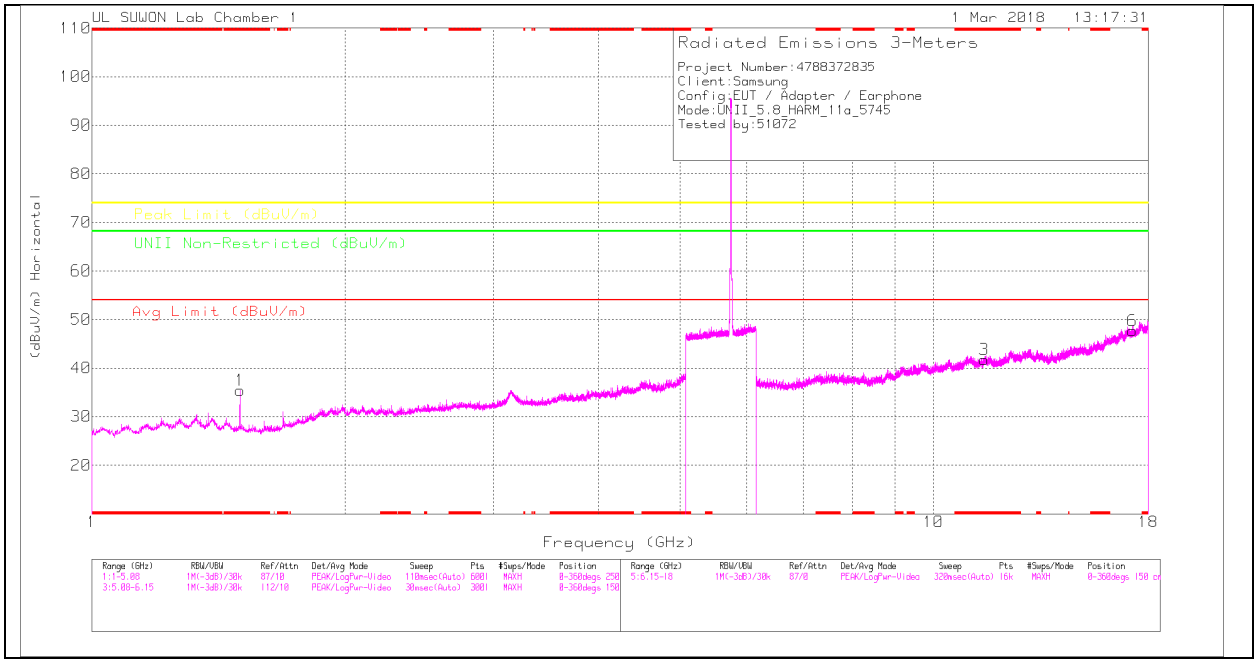
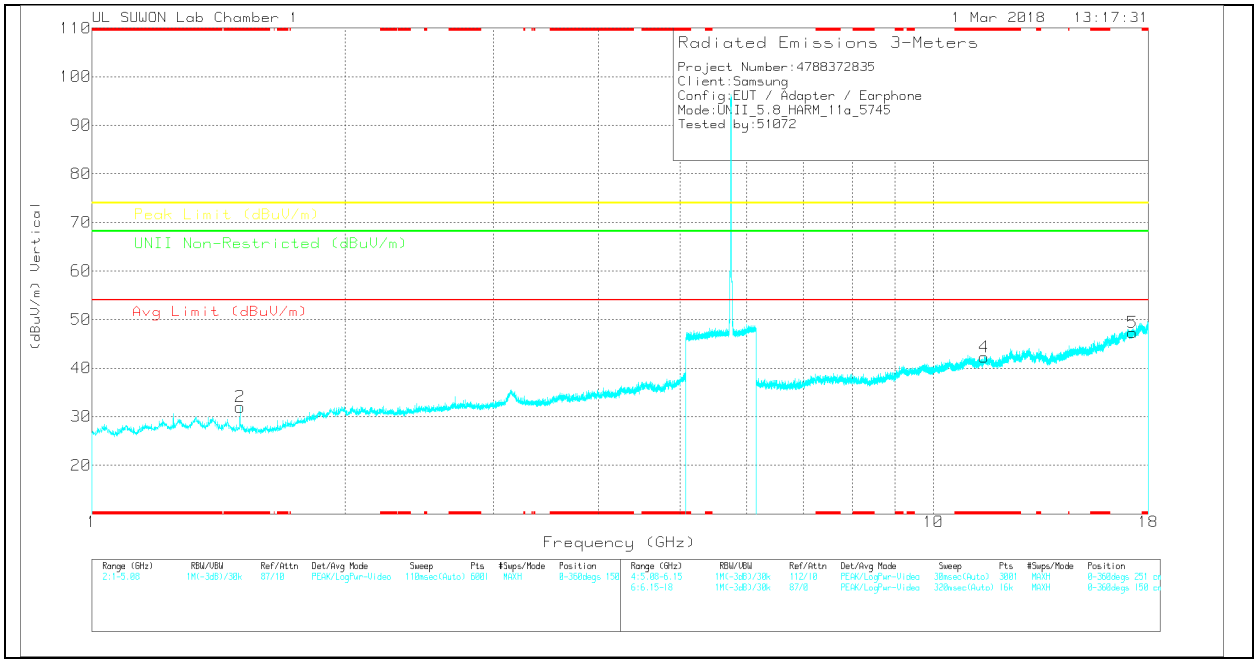
LOW CHANNEL HORIZONTAL



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.

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LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	5GHz_LP(dB)_170809	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
1	* 1.5	43.72	PK	28.3	-36.6	0	35.42	-	-	74	-38.58	-	-	0-360	250	H
2	* 1.5	40.29	PK	28.3	-36.6	0	31.99	-	-	74	-42.01	-	-	0-360	250	V
3	* 11.491	26.31	PK	38.2	-22.8	0	41.71	-	-	74	-32.29	-	-	0-360	250	H
6	17.237	24.23	PK	41.6	-18.1	0	47.73	-	-	-	-	68.2	-20.47	0-360	250	H
4	* 11.491	26.89	PK	38.2	-22.8	0	42.29	-	-	74	-31.71	-	-	0-360	150	V
5	17.236	23.77	PK	41.6	-18.1	0	47.27	-	-	-	-	68.2	-20.93	0-360	250	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detecor

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168 717	5GHz_LP(dB)_170809	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
* 1.5	38.1	PK-U	28.3	-36.6	0	29.8	-	-	74	-44.2	-	-	346	327	H
* 1.499	35.17	ADR	28.3	-36.6	0	26.87	54	-27.13	-	-	-	-	346	327	H
* 1.5	47.25	PK-U	28.3	-36.6	0	38.95	-	-	74	-35.05	-	-	53	202	V
* 1.5	34.96	ADR	28.3	-36.6	0	26.66	54	-27.34	-	-	-	-	53	202	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

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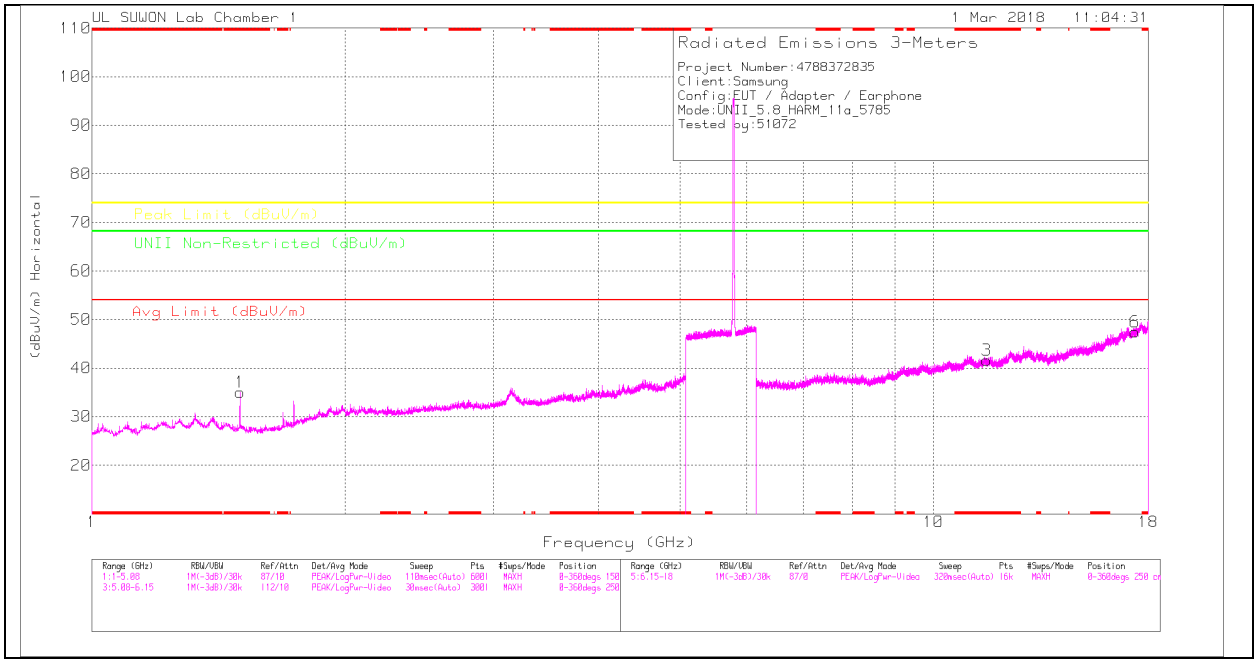
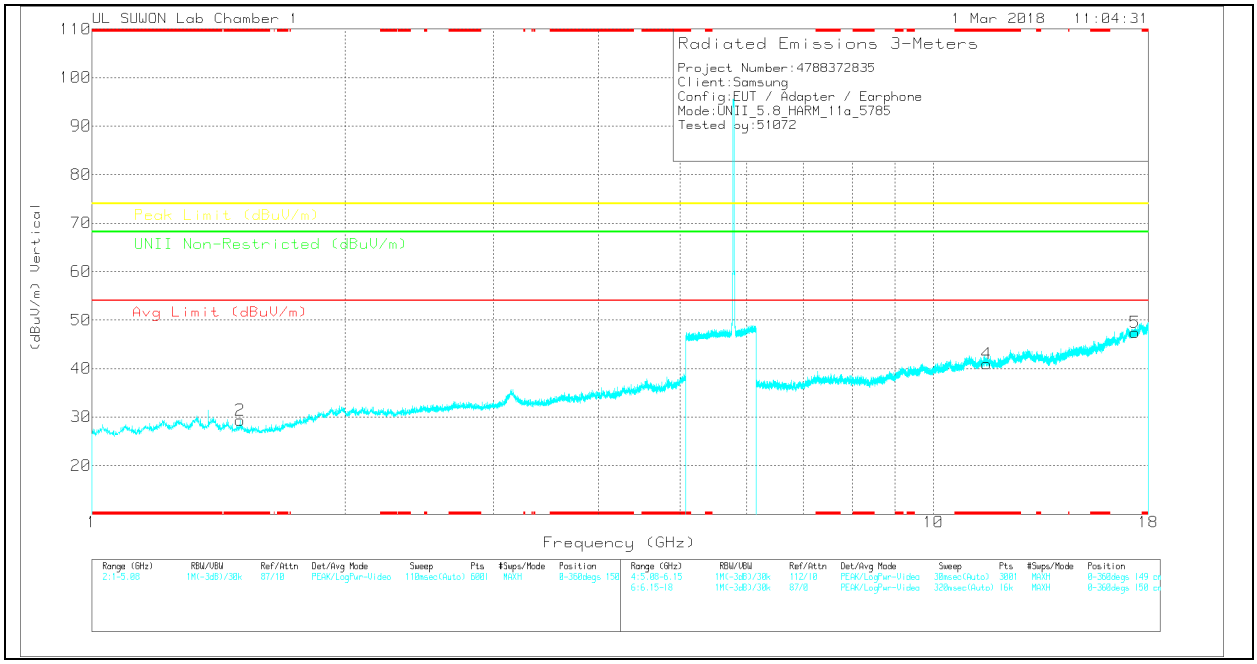
MID CHANNEL HORIZONTAL



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.

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MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	5GHz_LP(dB)_170809	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
1	* 1.5	43.3	PK	28.3	-36.6	0	35	-	-	74	-39	-	-	0-360	250	H
2	* 1.499	37.63	PK	28.3	-36.6	0	29.33	-	-	74	-44.67	-	-	0-360	150	V
3	* 11.57	26.27	PK	38.2	-22.9	0	41.57	-	-	74	-32.43	-	-	0-360	250	H
6	17.356	24.06	PK	41.4	-18	0	47.46	-	-	-	-	68.2	-20.74	0-360	250	H
4	* 11.57	25.73	PK	38.2	-22.9	0	41.03	-	-	74	-32.97	-	-	0-360	250	V
5	17.356	24.02	PK	41.4	-18	0	47.42	-	-	-	-	68.2	-20.78	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168 717	5GHz_LP(dB)_170809	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
* 1.5	50.2	PK-U	28.3	-36.6	0	41.9	-	-	74	-32.1	-	-	31	392	H
* 1.5	35.49	ADR	28.3	-36.6	0	27.19	54	-26.81	-	-	-	-	31	392	H
* 1.5	49.49	PK-U	28.3	-36.6	0	41.19	-	-	74	-32.81	-	-	284	224	V
* 1.5	35.18	ADR	28.3	-36.6	0	26.88	54	-27.12	-	-	-	-	284	224	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

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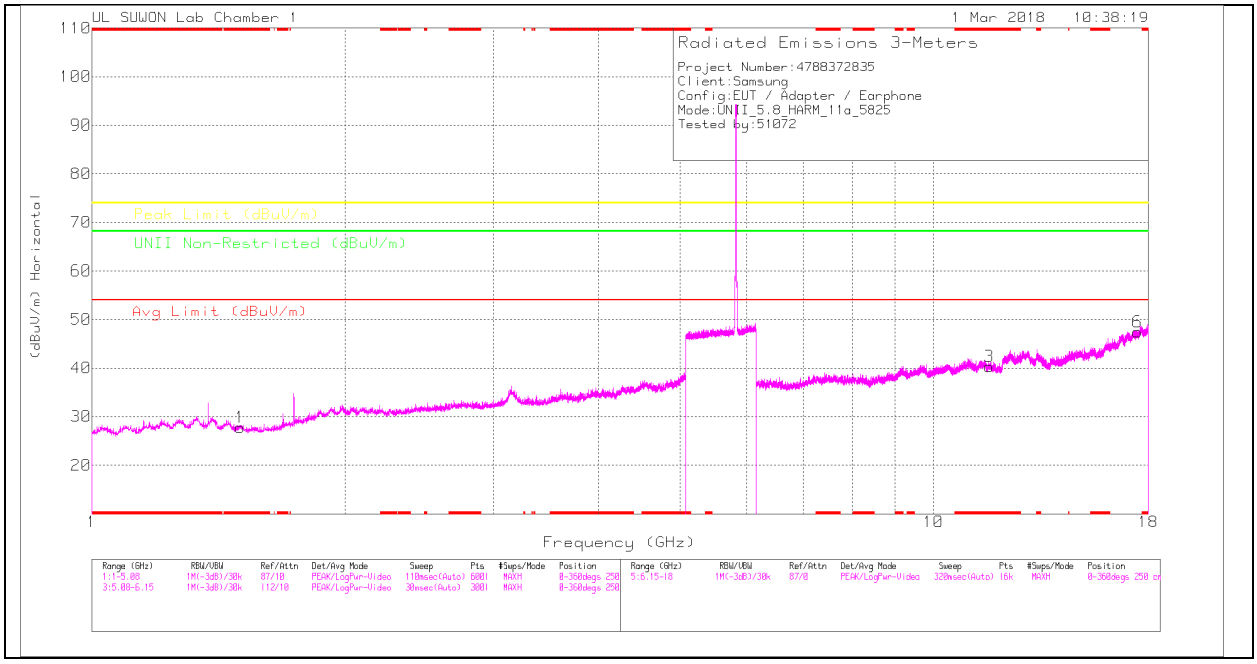
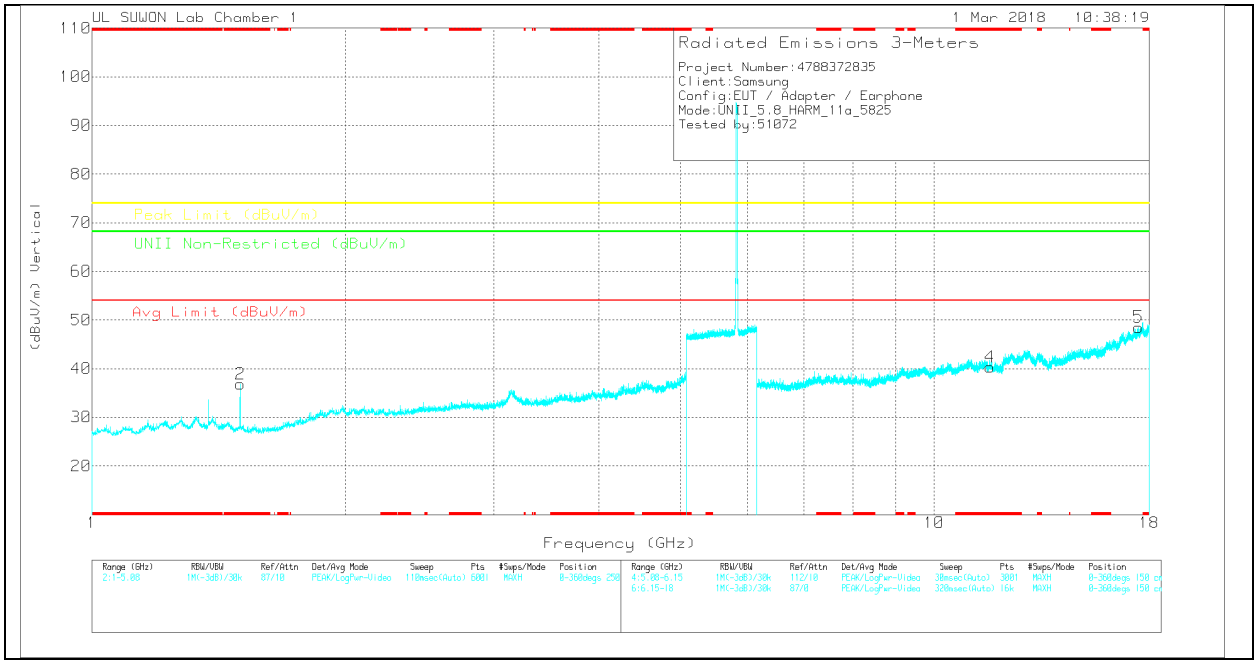
HIGH CHANNEL HORIZONTAL



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.

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HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
1	* 1.5	36.06	PK	28.3	-36.6	0	27.76	-	-	74	-46.24	-	-	0-360	150	H
2	* 1.499	45.18	PK	28.3	-36.6	0	36.88	-	-	74	-37.12	-	-	0-360	250	V
3	* 11.651	24.35	PK	38.1	-22.1	0	40.35	-	-	74	-33.65	-	-	0-360	150	H
6	17.476	23.98	PK	41.2	-17.7	0	47.48	-	-	-	-	68.2	-20.72	0-360	150	H
4	* 11.651	24.29	PK	38.1	-22.1	0	40.29	-	-	74	-33.71	-	-	0-360	250	V
5	17.476	25.04	PK	41.2	-17.7	0	48.54	-	-	-	-	68.2	-19.66	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
* 1.5	53.59	PK-U	28.3	-36.6	0	45.29	-	-	74	-28.71	-	-	276	193	H
* 1.5	37.85	ADR	28.3	-36.6	0	29.55	54	-24.45	-	-	-	-	276	193	H
* 1.499	47.91	PK-U	28.3	-36.6	0	39.61	-	-	74	-34.39	-	-	304	389	V
* 1.5	35.05	ADR	28.3	-36.6	0	26.75	54	-27.25	-	-	-	-	304	389	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

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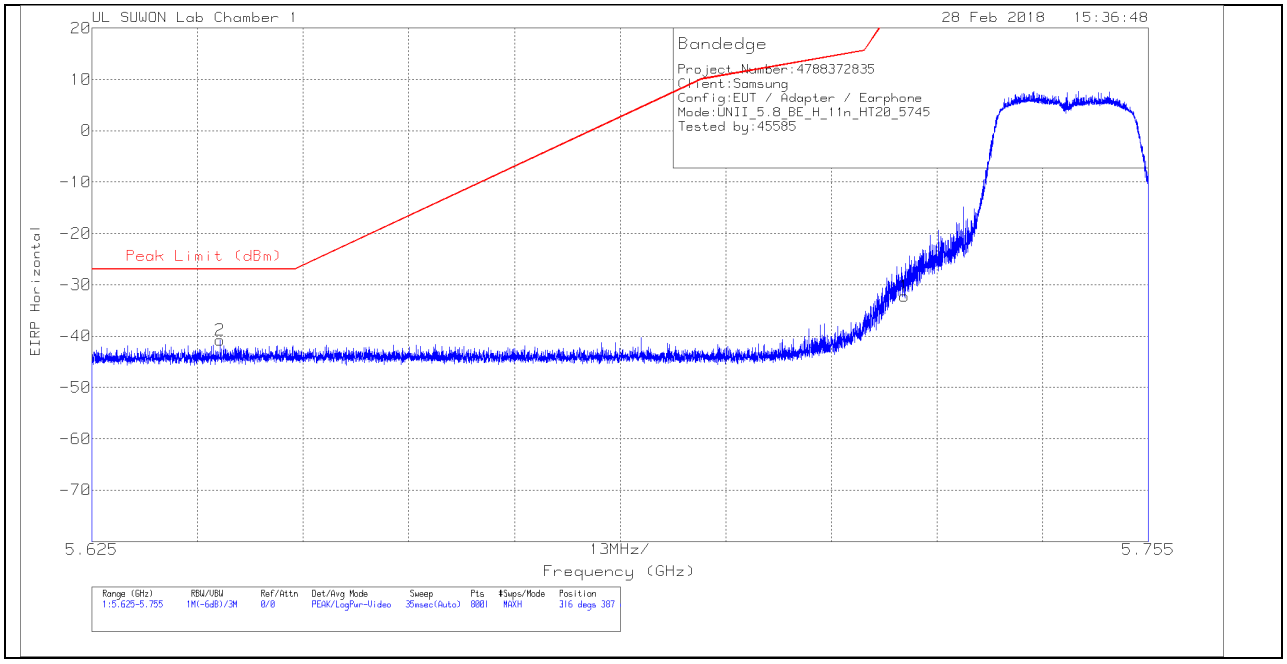
11.4.2. TX ABOVE 1GHz 802.11n HT20 MODE IN THE 5.8GHz BAND BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117(00168717) _150619	10dB_Att(dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-55.94	Pk	34.8	-22.9	11.8	0	-32.24	26.97	-59.21	316	387	H
2	5.641	-64.33	Pk	34.8	-23.1	11.8	0	-40.83	-27	-13.83	316	387	H

Pk - Peak detector

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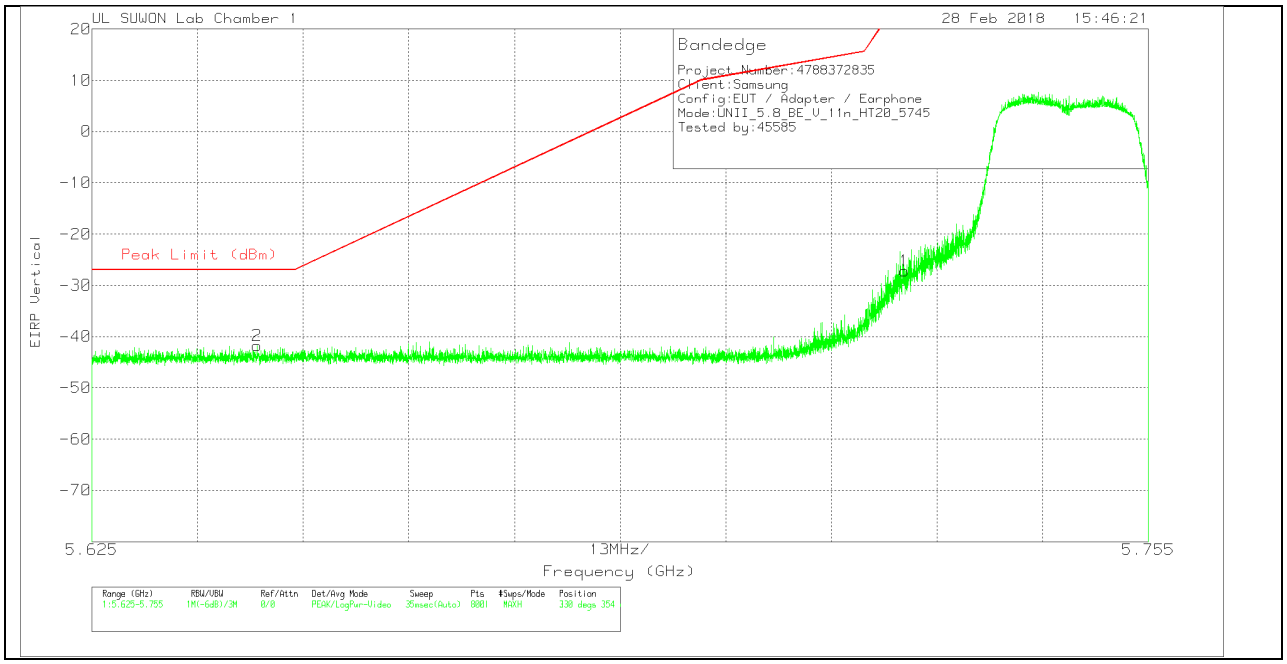
VERTICAL PEAK PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117(00168717) _150619	10dB_Att(dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-50.9	Pk	34.8	-22.9	11.8	0	-27.2	26.97	-54.17	330	354	V
2	5.645	-65.27	Pk	34.8	-23.1	11.8	0	-41.77	-27	-14.77	330	354	V

Pk - Peak detector

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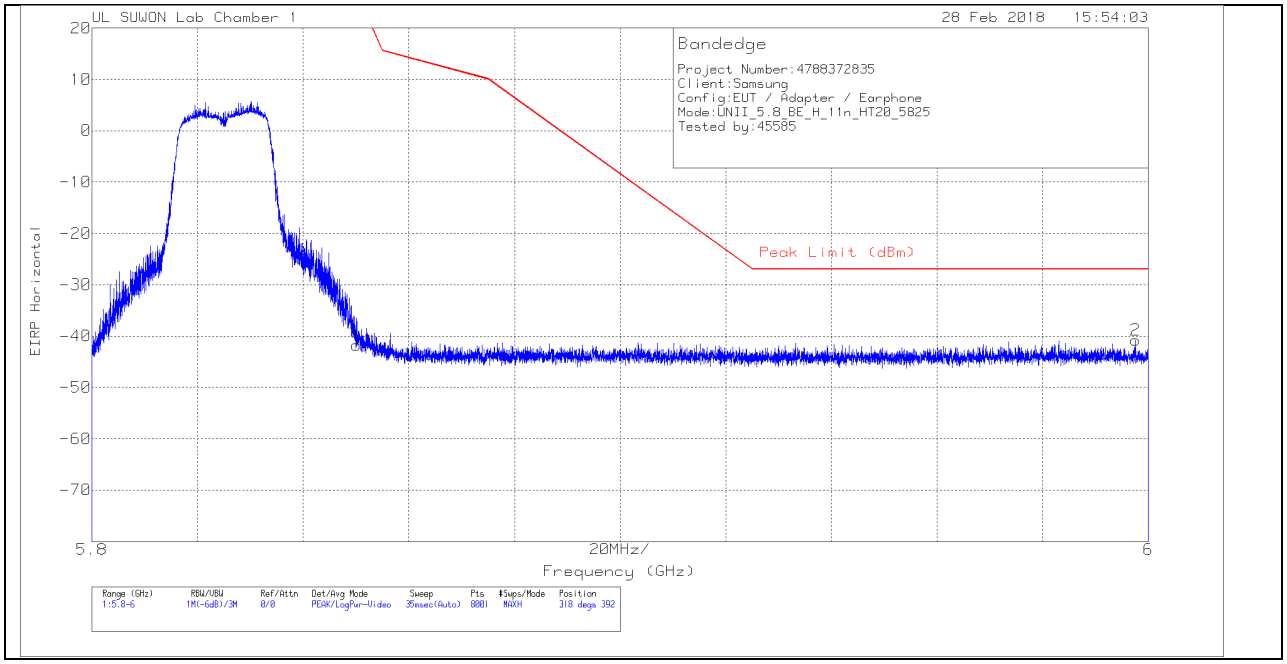
BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117(00168717) _150619	10dB_Att(dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-66.12	Pk	34.9	-22.3	11.8	0	-41.72	26.94	-68.66	318	392	H
2	5.998	-65.06	Pk	34.9	-22.4	11.8	0	-40.76	-27	-13.76	318	392	H

Pk - Peak detector

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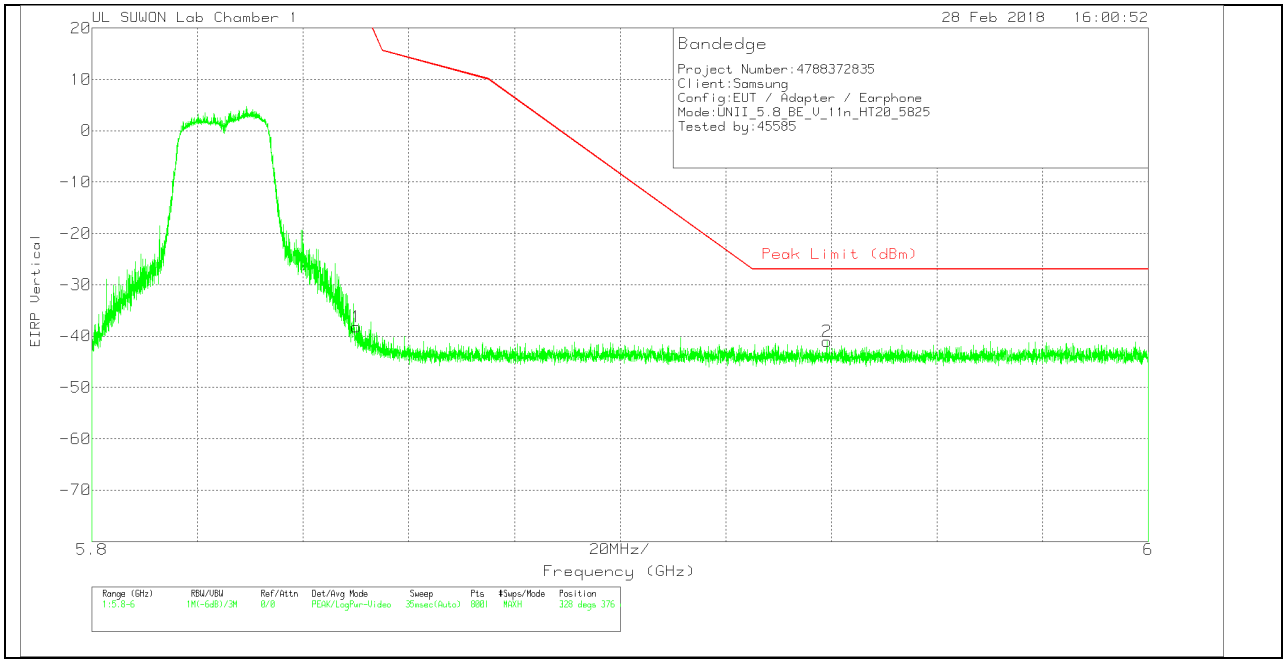
VERTICAL PEAK PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117(00168717) _150619	10dB_Att(dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-62.58	Pk	34.9	-22.3	11.8	0	-38.18	26.94	-65.12	328	376	V
2	5.939	-65.08	Pk	34.9	-22.6	11.8	0	-40.98	-27	-13.98	328	376	V

Pk - Peak detector

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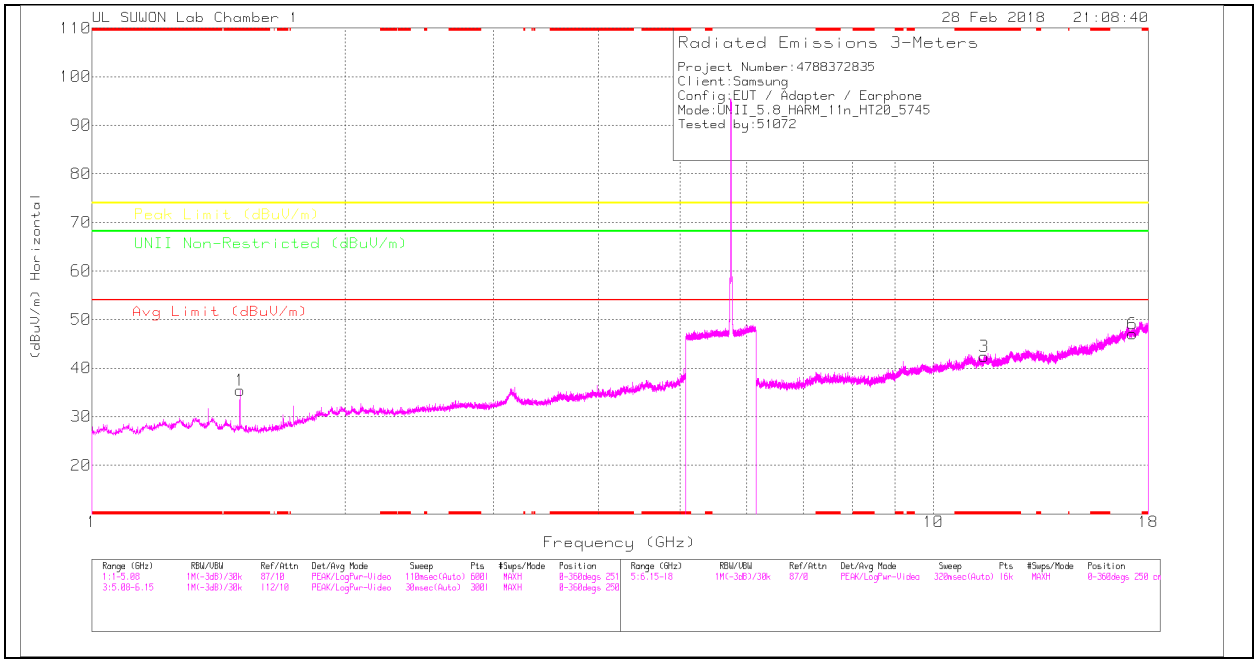
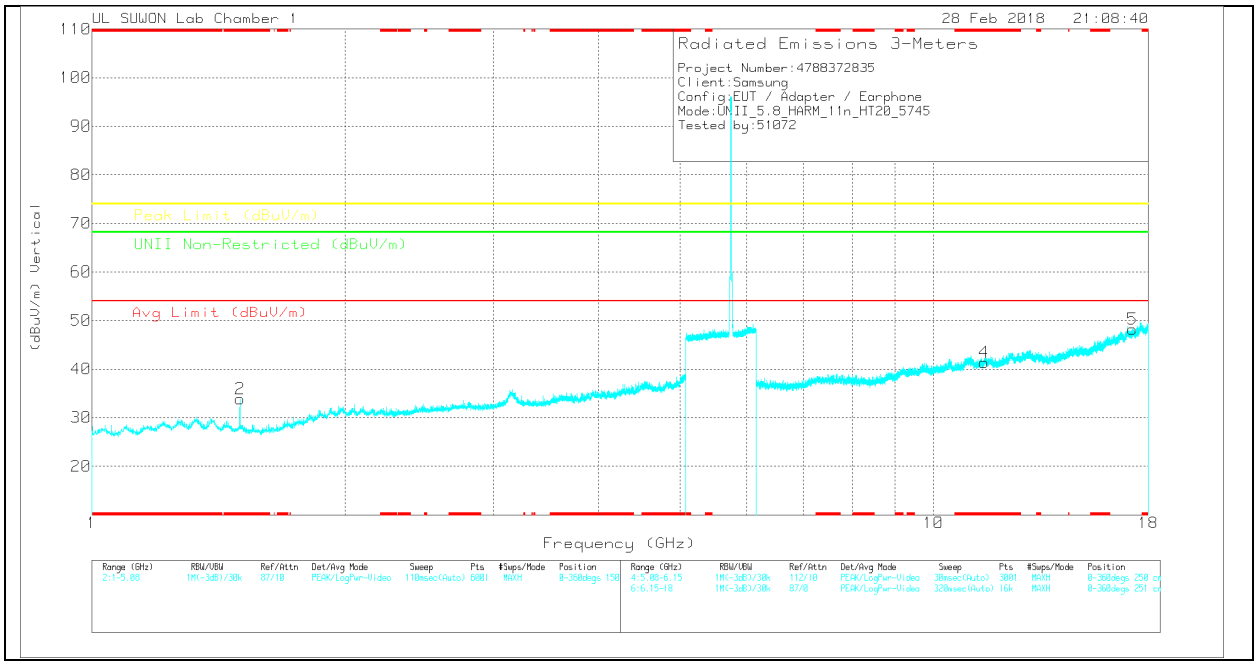
LOW CHANNEL HORIZONTAL



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.

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LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	5GHz_LP(dB)_170809	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
1	* 1.499	43.75	PK	28.3	-36.6	0	35.45	-	-	74	-38.55	-	-	0-360	251	H
2	* 1.499	42.15	PK	28.3	-36.6	0	33.85	-	-	74	-40.15	-	-	0-360	251	V
3	* 11.49	27.02	PK	38.2	-22.8	0	42.42	-	-	74	-31.58	-	-	0-360	150	H
6	17.236	23.53	PK	41.6	-18.1	0	47.03	-	-	-	-	68.2	-21.17	0-360	150	H
4	* 11.49	25.99	PK	38.2	-22.8	0	41.39	-	-	74	-32.61	-	-	0-360	150	V
5	17.236	24.76	PK	41.6	-18.1	0	48.26	-	-	-	-	68.2	-19.94	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168 717	5GHz_LP(dB)_170809	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
* 1.503	47.85	PK-U	28.3	-36.6	0	39.55	-	-	74	-34.45	-	-	306	309	H
* 1.5	35.01	ADR	28.3	-36.6	0	26.71	54	-27.29	-	-	-	-	306	309	H
* 1.5	47.92	PK-U	28.3	-36.6	0	39.62	-	-	74	-34.38	-	-	177	319	V
* 1.5	35.14	ADR	28.3	-36.6	0	26.84	54	-27.16	-	-	-	-	177	319	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

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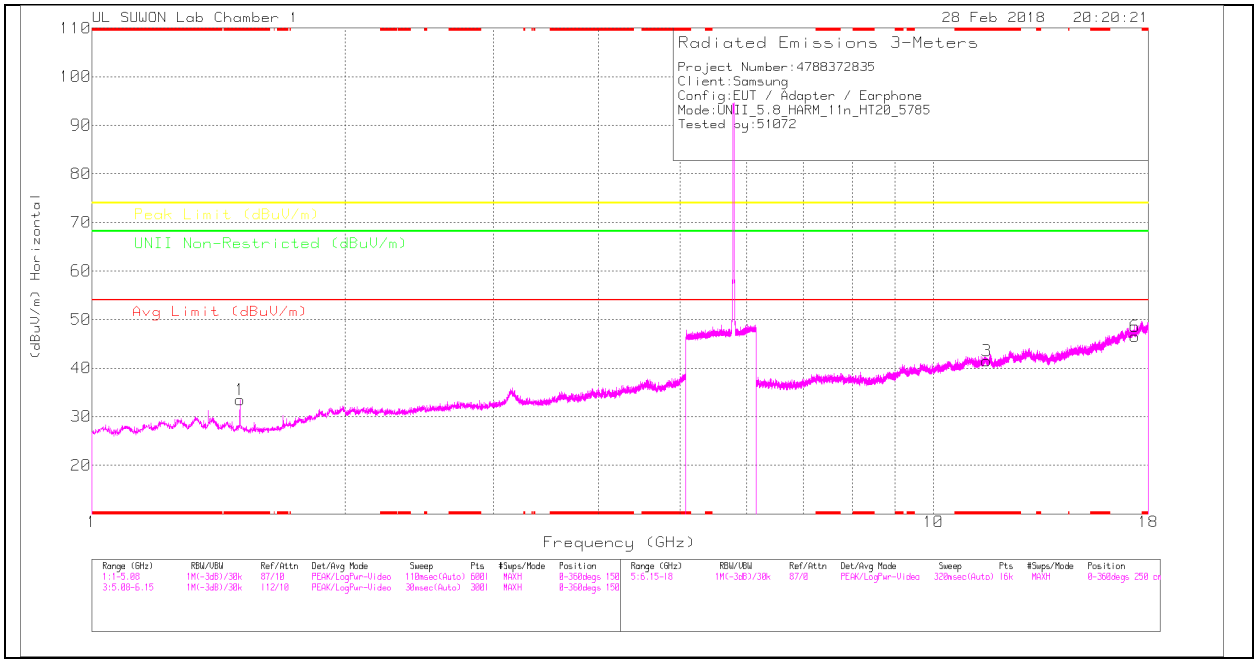
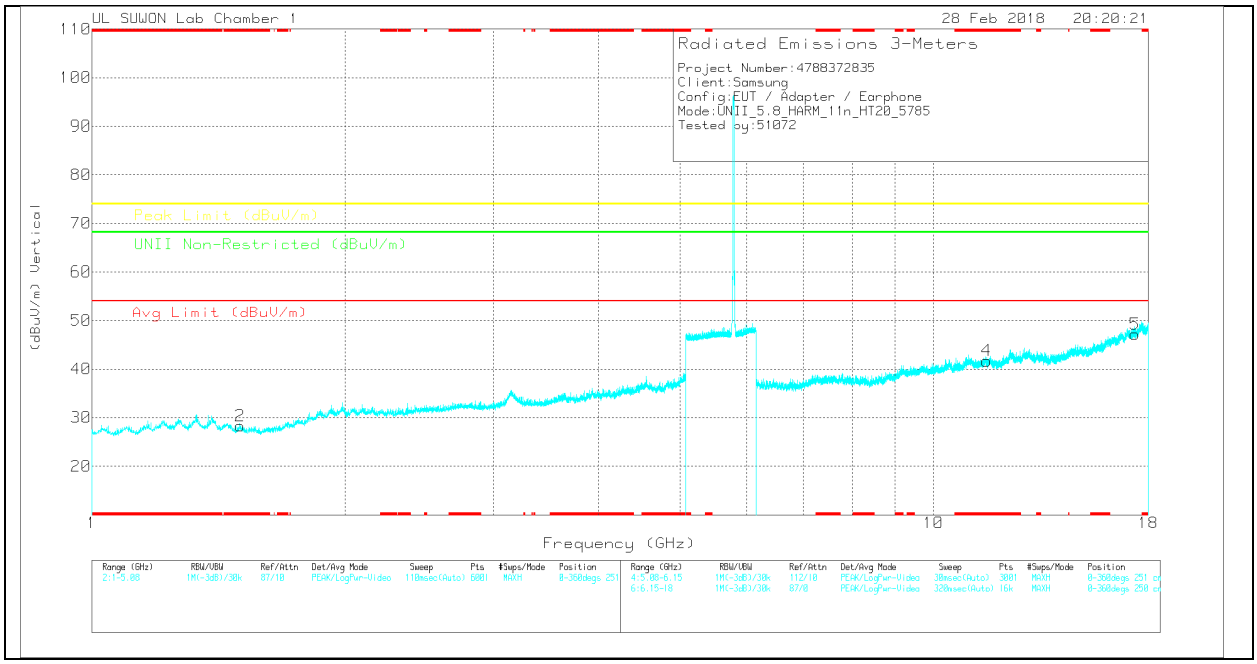
MID CHANNEL HORIZONTAL



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.

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MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
1	* 1.499	41.83	PK	28.3	-36.6	0	33.53	-	-	74	-40.47	-	-	0-360	150	H
2	* 1.499	36.63	PK	28.3	-36.6	0	28.33	-	-	74	-45.67	-	-	0-360	251	V
3	* 11.57	26.23	PK	38.2	-22.9	0	41.53	-	-	74	-32.47	-	-	0-360	250	H
6	17.356	23.18	PK	41.4	-18	0	46.58	-	-	-	-	68.2	-21.62	0-360	150	H
4	* 11.57	26.39	PK	38.2	-22.9	0	41.69	-	-	74	-32.31	-	-	0-360	250	V
5	17.356	23.79	PK	41.4	-18	0	47.19	-	-	-	-	68.2	-21.01	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168717	5GHz_LP(dB)_170809	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
* 1.5	50.12	PK-U	28.3	-36.6	0	41.82	-	-	74	-32.18	-	-	209	277	H
* 1.5	35.22	ADR	28.3	-36.6	.18	27.1	54	-26.9	-	-	-	-	209	277	H
* 1.5	49.6	PK-U	28.3	-36.6	0	41.3	-	-	74	-32.7	-	-	251	380	V
* 1.499	35.44	ADR	28.3	-36.6	.18	27.32	54	-26.68	-	-	-	-	251	380	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

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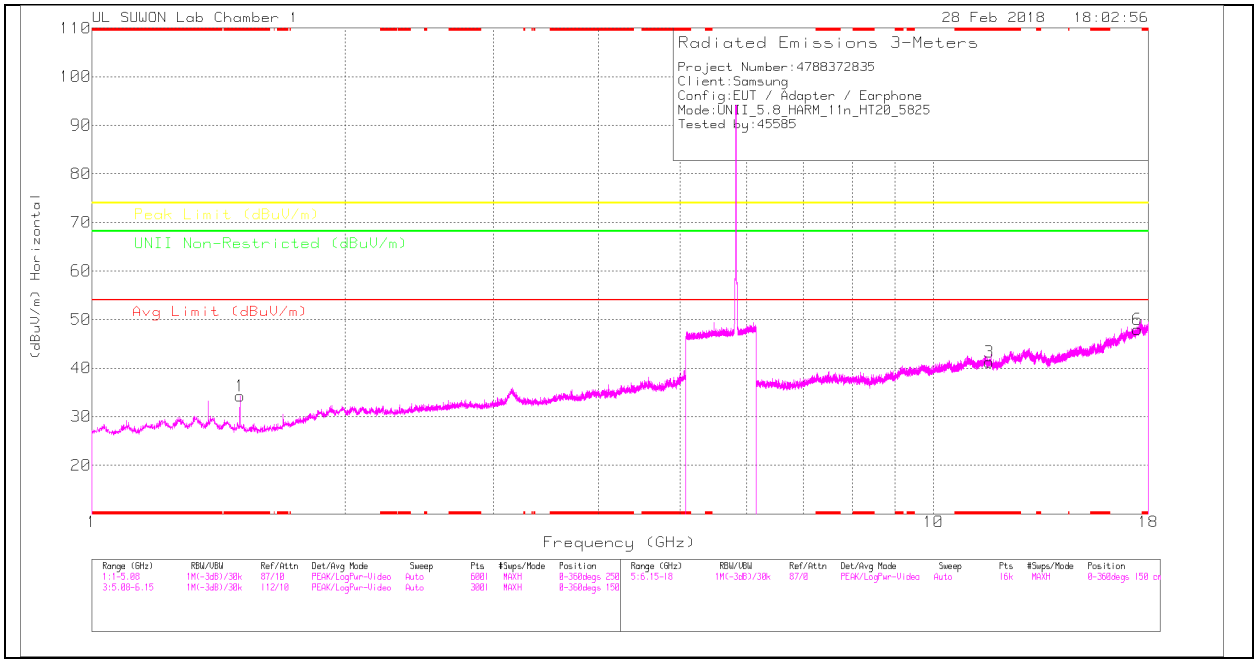
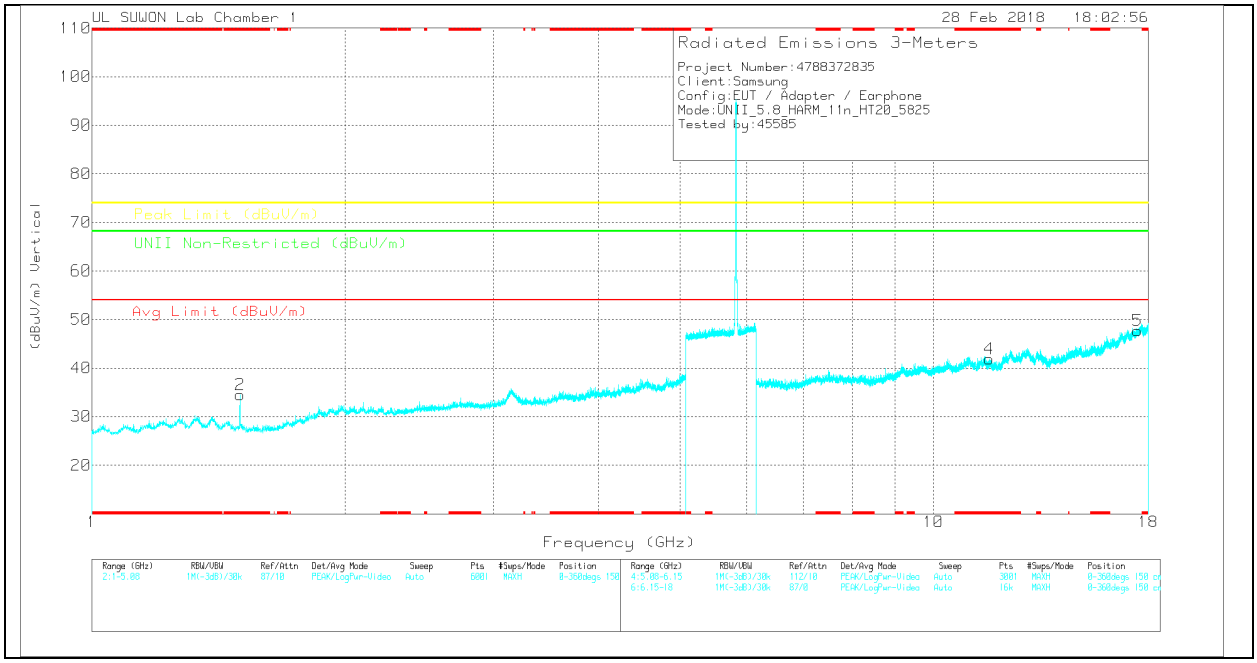
HIGH CHANNEL HORIZONTAL



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.

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HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	5GHz_LP(dB)_170809	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
1	* 1.5	42.6	PK	28.3	-36.6	0	34.3	-	-	74	-39.7	-	-	0-360	150	H
2	* 1.5	42.78	PK	28.3	-36.6	0	34.48	-	-	74	-39.52	-	-	0-360	250	V
3	* 11.645	25.39	PK	38.1	-22.2	0	41.29	-	-	74	-32.71	-	-	0-360	250	H
6	17.476	24.44	PK	41.2	-17.7	0	47.94	-	-	-	-	68.2	-20.26	0-360	150	H
4	* 11.65	25.96	PK	38.1	-22.2	0	41.86	-	-	74	-32.14	-	-	0-360	250	V
5	17.476	24.25	PK	41.2	-17.7	0	47.75	-	-	-	-	68.2	-20.45	0-360	250	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_00168 717	5GHz_LP(dB)_170809	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
* 1.5	49.56	PK-U	28.3	-36.6	0	41.26	-	-	74	-32.74	-	-	128	118	H
* 1.5	36.32	ADR	28.3	-36.6	0	28.02	54	-25.98	-	-	-	-	128	118	H
* 1.5	51.05	PK-U	28.3	-36.6	0	42.75	-	-	74	-31.25	-	-	98	239	V
* 1.5	36.74	ADR	28.3	-36.6	0	28.44	54	-25.56	-	-	-	-	98	239	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

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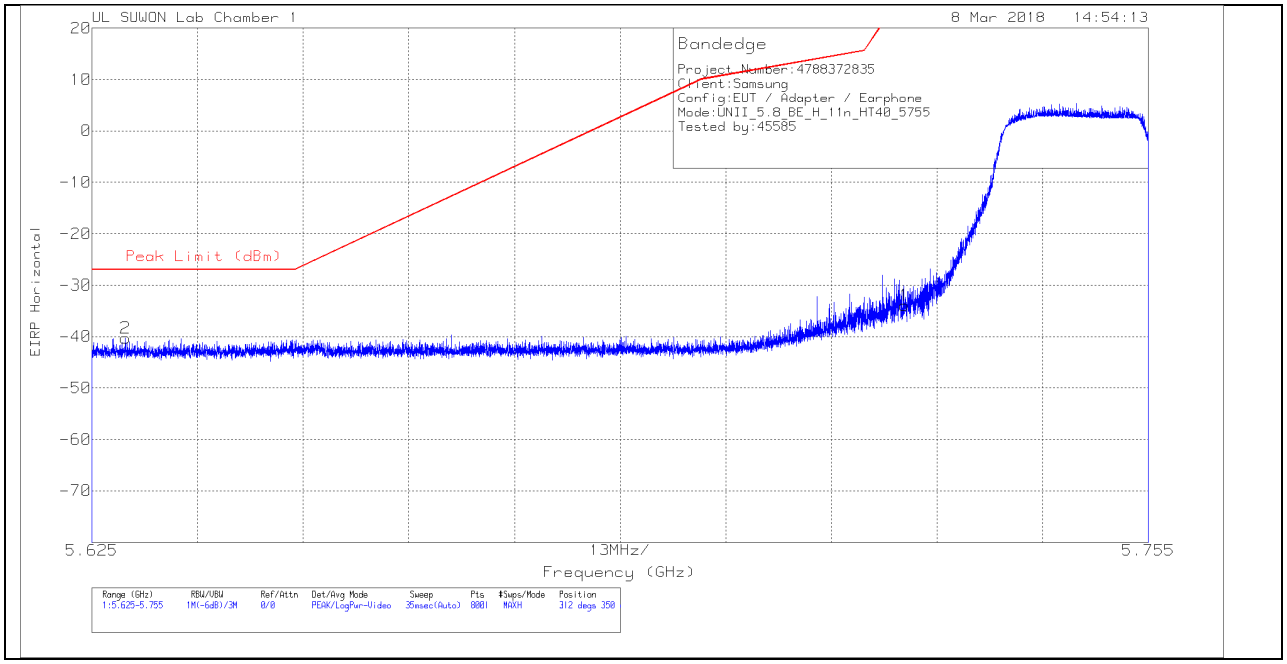
11.4.3. TX ABOVE 1GHz 802.11n HT40 MODE IN THE 5.8GHz BAND BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-59.04	Pk	34.5	-21.2	11.8	0	-33.94	26.97	-60.91	312	350	H
2	5.629	-65.2	Pk	34.4	-21.3	11.8	0	-40.3	-27	-13.3	312	350	H

Pk - Peak detector

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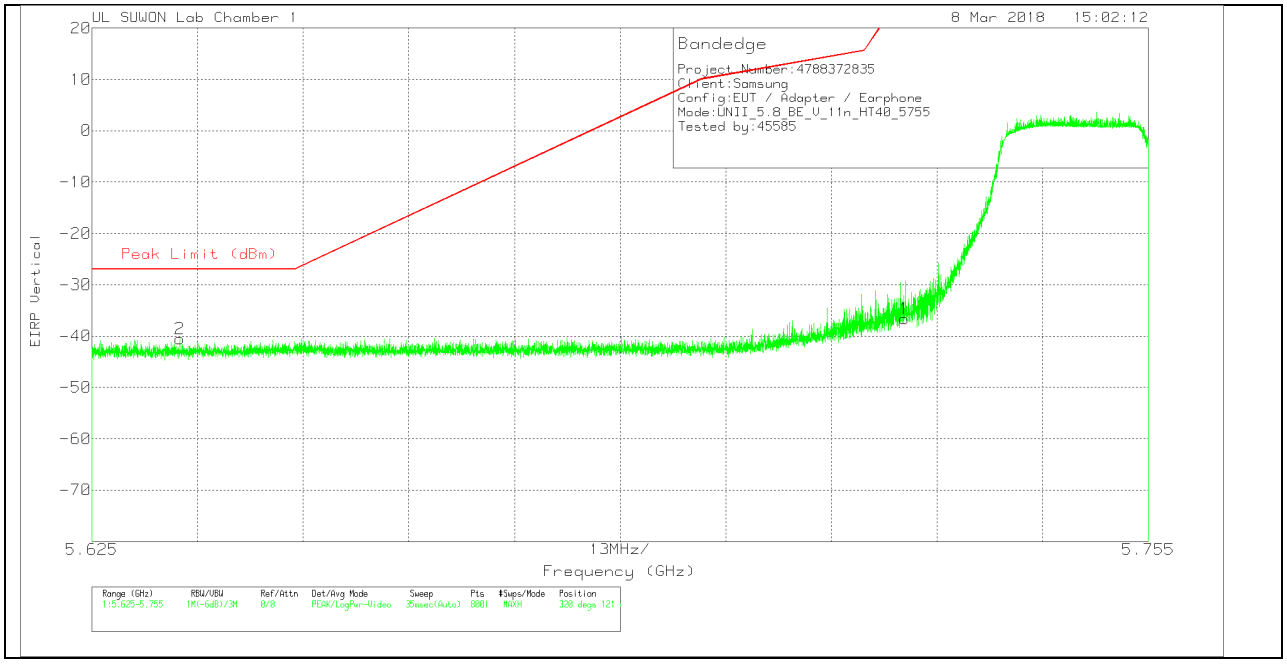
VERTICAL PEAK PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-61.68	Pk	34.5	-21.2	11.8	0	-36.58	26.97	-63.55	320	121	V
2	5.636	-65.39	Pk	34.4	-21.3	11.8	0	-40.49	-27	-13.49	320	121	V

Pk - Peak detector

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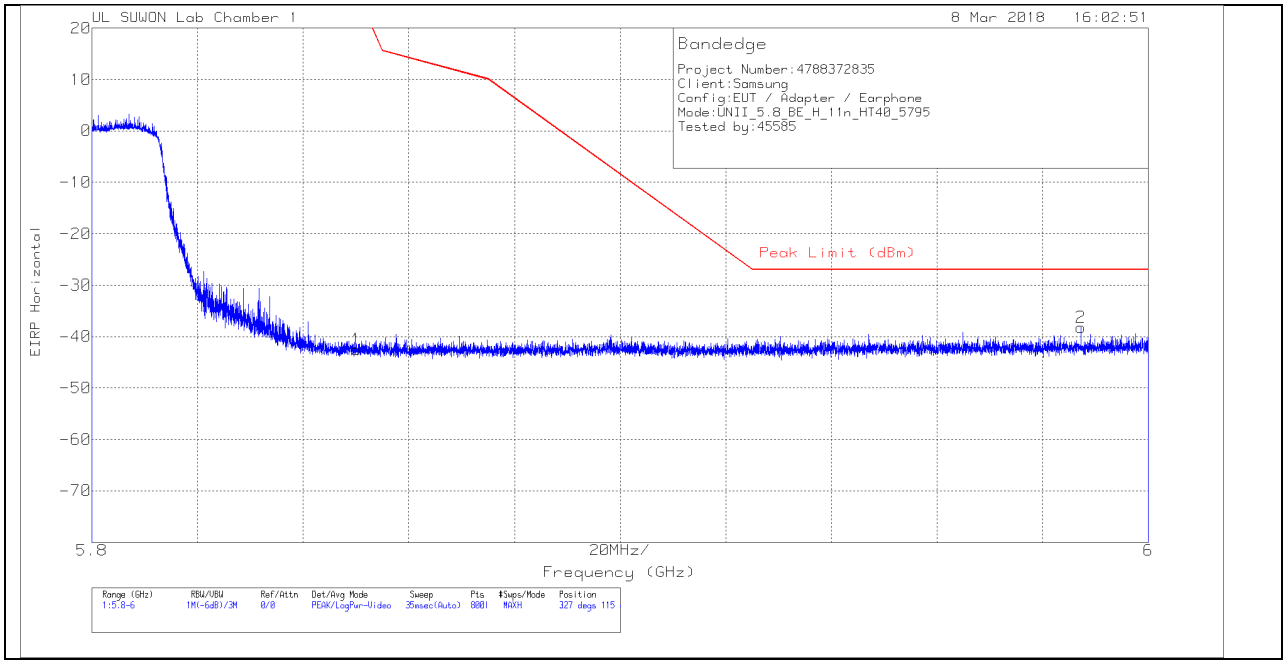
BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	20170531_3117 _00168717	10dB_ATT(dB)_1 70809	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.73	Pk	34.5	-21.1	11.8	0	-42.53	26.94	-69.47	327	115	H
2	5.987	-63.84	Pk	34.7	-20.9	11.8	0	-38.24	-27	-11.24	327	115	H

Pk - Peak detector

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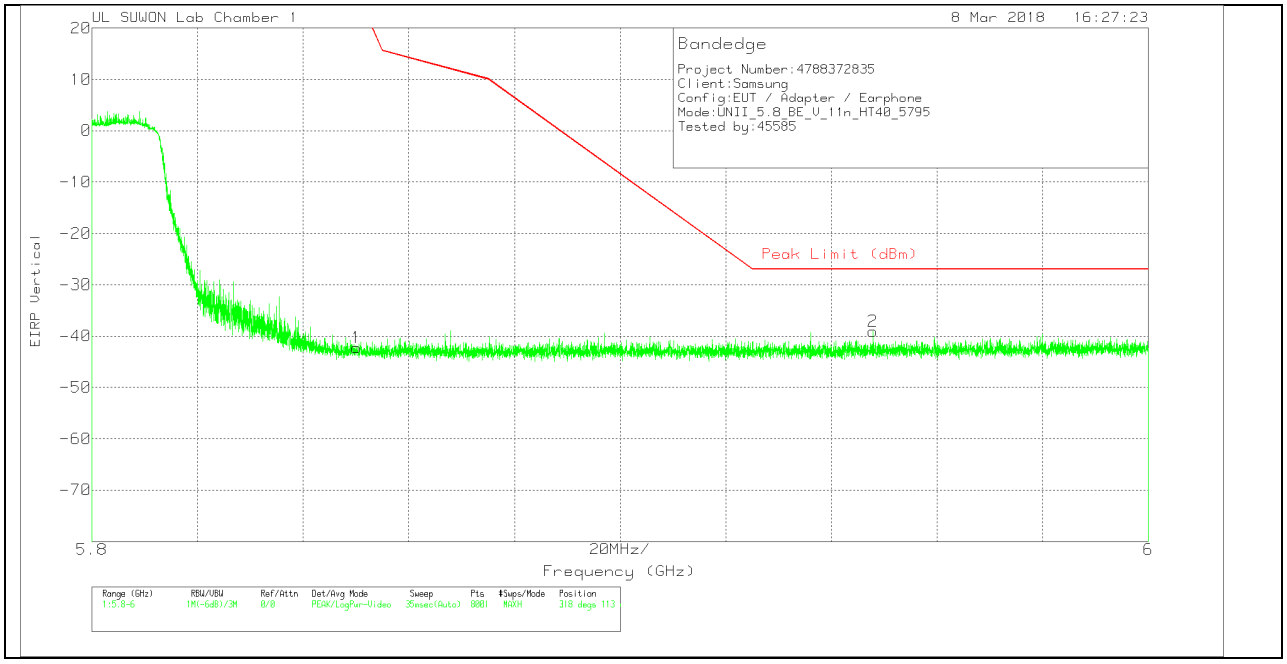
VERTICAL PEAK PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	20170531_3117_00168717	10dB_ATT(dB)_170809	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.4	Pk	34.5	-21.1	11.8	0	-42.2	26.94	-69.14	318	113	V
2	5.948	-64.51	Pk	34.6	-21	11.8	0	-39.11	-27	-12.11	318	113	V

Pk - Peak detector

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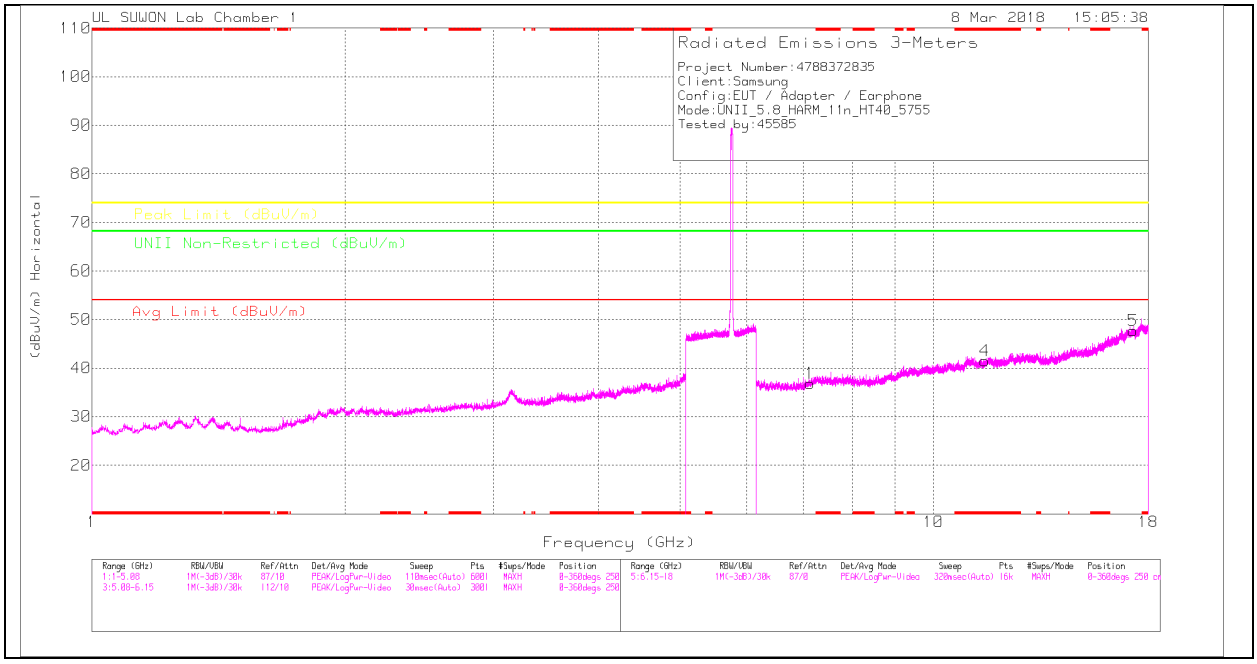
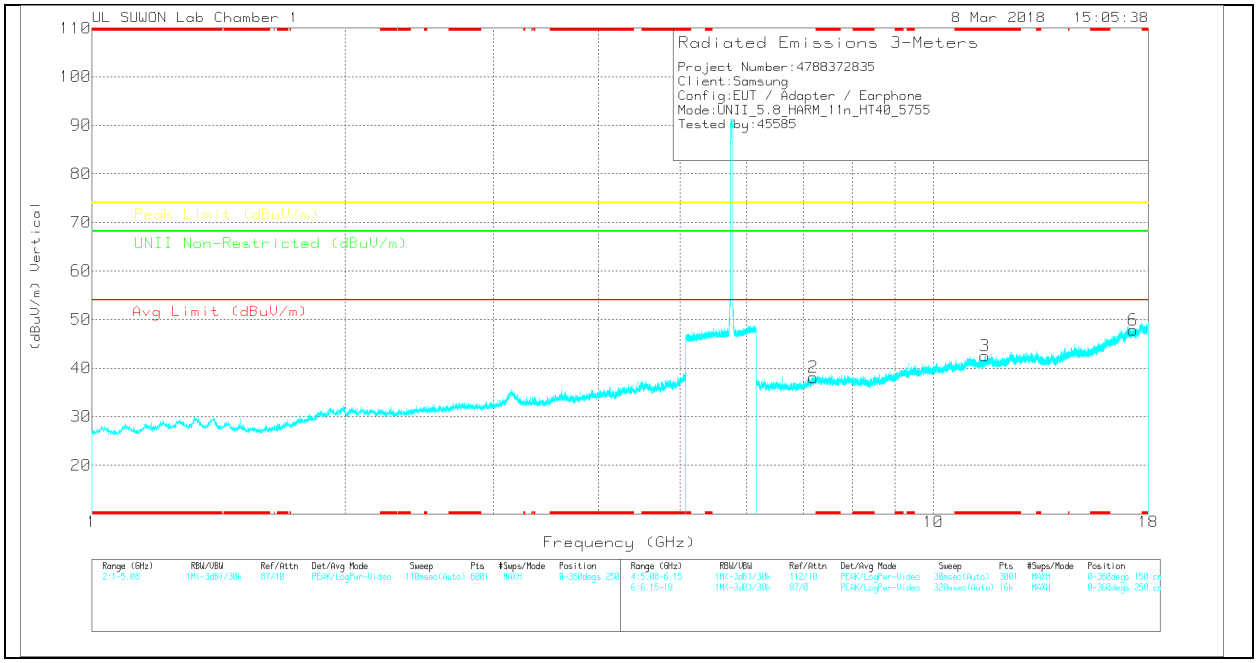
LOW CHANNEL HORIZONTAL



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.

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LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	6GHz_HP(dB)_17080 9	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
1	7.139	29.13	PK	35.8	-28.1	0	36.83	-	-	-	-	68.2	-31.37	0-360	250	H
4	* 11.509	26.14	PK	38.2	-22.8	0	41.54	-	-	74	-32.46	-	-	0-360	150	H
5	17.265	24.01	PK	41.5	-17.8	0	47.71	-	-	-	-	68.2	-20.49	0-360	150	H
2	7.199	29.97	PK	35.9	-27.8	0	38.07	-	-	-	-	68.2	-30.13	0-360	150	V
3	* 11.51	27.11	PK	38.2	-22.8	0	42.51	-	-	74	-31.49	-	-	0-360	150	V
6	17.266	24.09	PK	41.5	-17.8	0	47.79	-	-	-	-	68.2	-20.41	0-360	250	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

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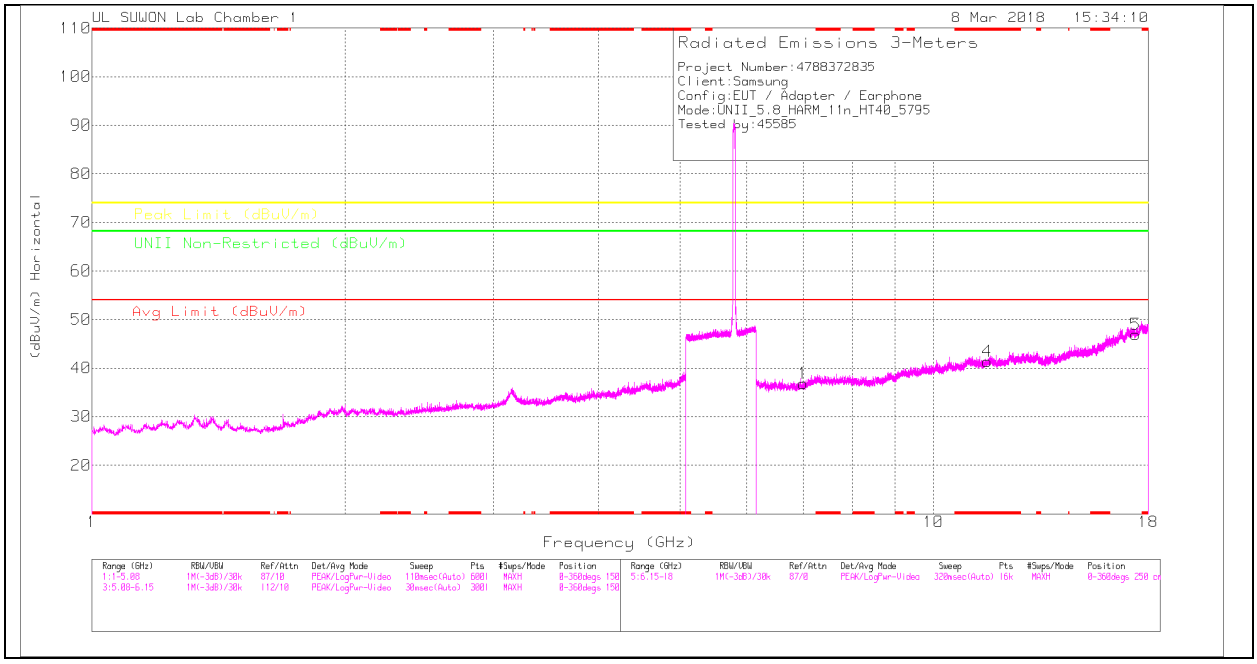
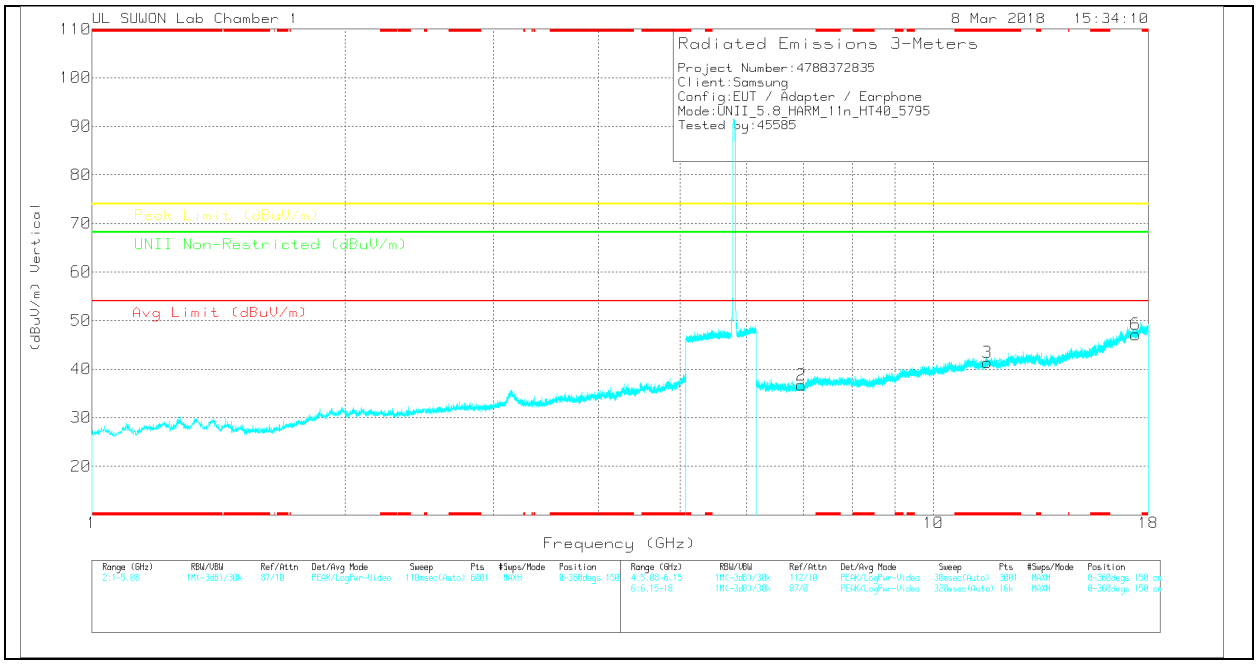
HIGH CHANNEL HORIZONTAL



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.

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HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20170531_3117_001 68717	6GHz_HP(dB)_17080 9	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
1	7.001	29.31	PK	35.6	-28.1	0	36.81	-	-	-	-	68.2	-31.39	0-360	149	H
4	* 11.593	26.02	PK	38.2	-22.8	0	41.42	-	-	74	-32.58	-	-	0-360	250	H
5	17.385	23.64	PK	41.3	-18	0	46.94	-	-	-	-	68.2	-21.26	0-360	250	H
2	6.965	29.34	PK	35.5	-28.1	0	36.74	-	-	-	-	68.2	-31.46	0-360	150	V
3	* 11.593	26	PK	38.2	-22.8	0	41.4	-	-	74	-32.6	-	-	0-360	250	V
6	17.385	23.82	PK	41.3	-18	0	47.12	-	-	-	-	68.2	-21.08	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

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