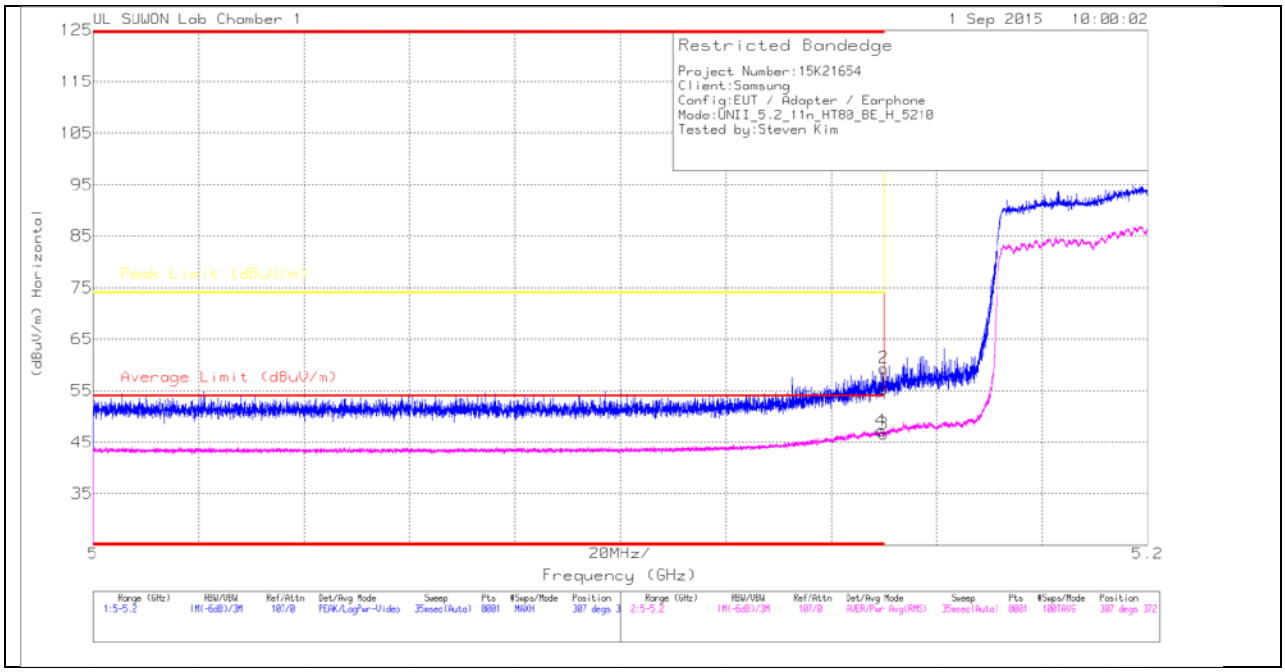
11.1.4. TX ABOVE 1GHz 802.11ac VHT80 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2_10dB	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	40.57	Pk	34.2	-19.4	0	55.37	-	-	74	-18.63	307	372	H
2	* 5.15	44.59	Pk	34.2	-19.4	0	59.39	-	-	74	-14.61	307	372	H
3	* 5.15	30.64	RMS	34.2	-19.4	1.16	46.6	54	-7.4	-	-	307	372	H
4	* 5.149	31.26	RMS	34.2	-19.4	1.16	47.22	54	-6.78	-	-	307	372	H

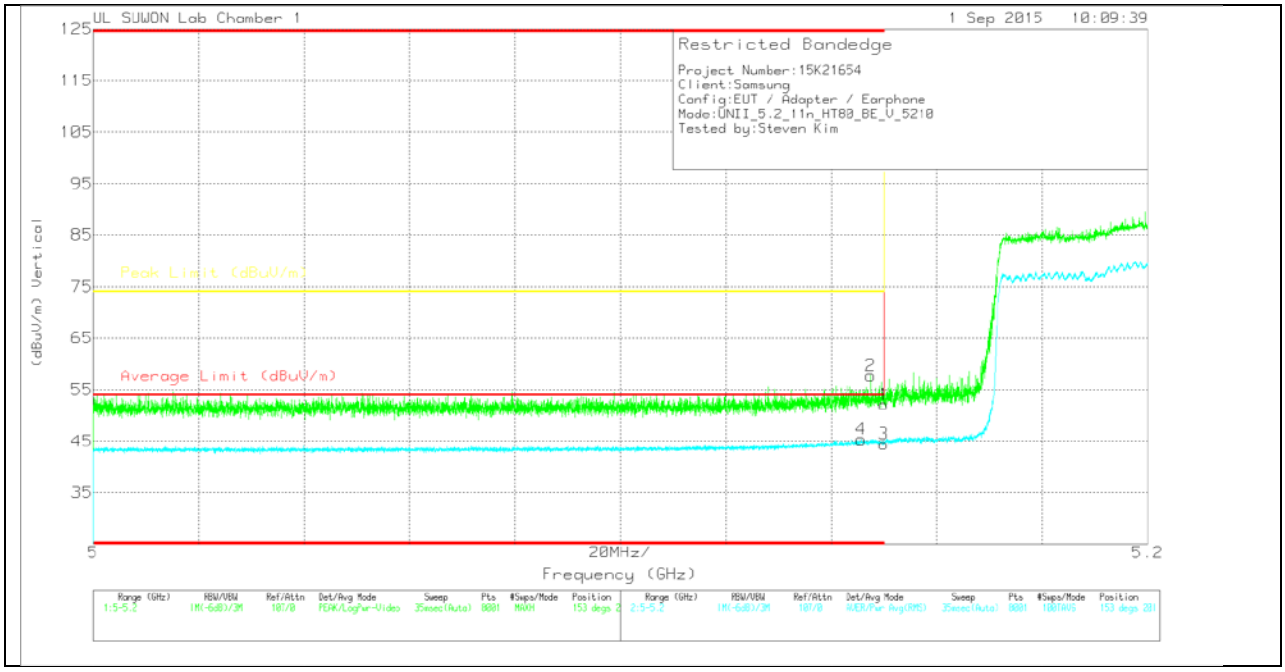
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2_10dB	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	37.33	Pk	34.2	-19.4	0	52.13	-	-	74	-21.87	153	201	V
2	* 5.147	42.9	Pk	34.2	-19.4	0	57.7	-	-	74	-16.3	153	201	V
3	* 5.15	28.5	RMS	34.2	-19.4	1.16	44.46	54	-9.54	-	-	153	201	V
4	* 5.146	29.39	RMS	34.2	-19.4	1.16	45.35	54	-8.65	-	-	153	201	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

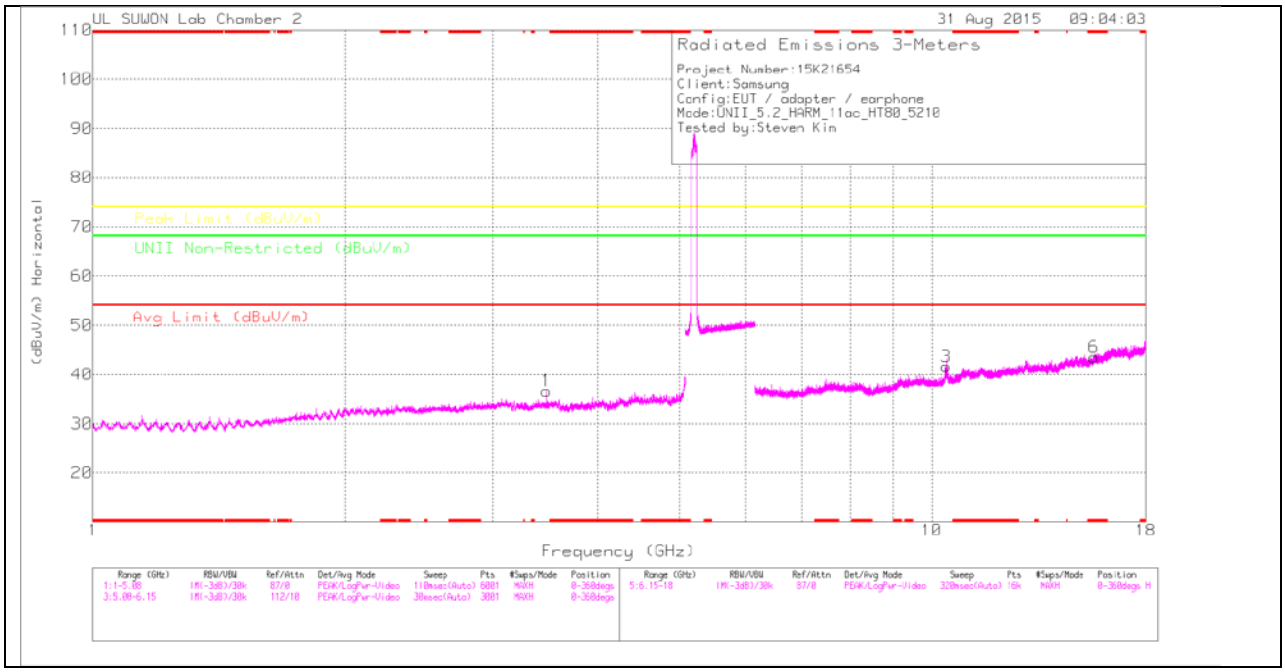
Pk - Peak detector

RMS - RMS detection

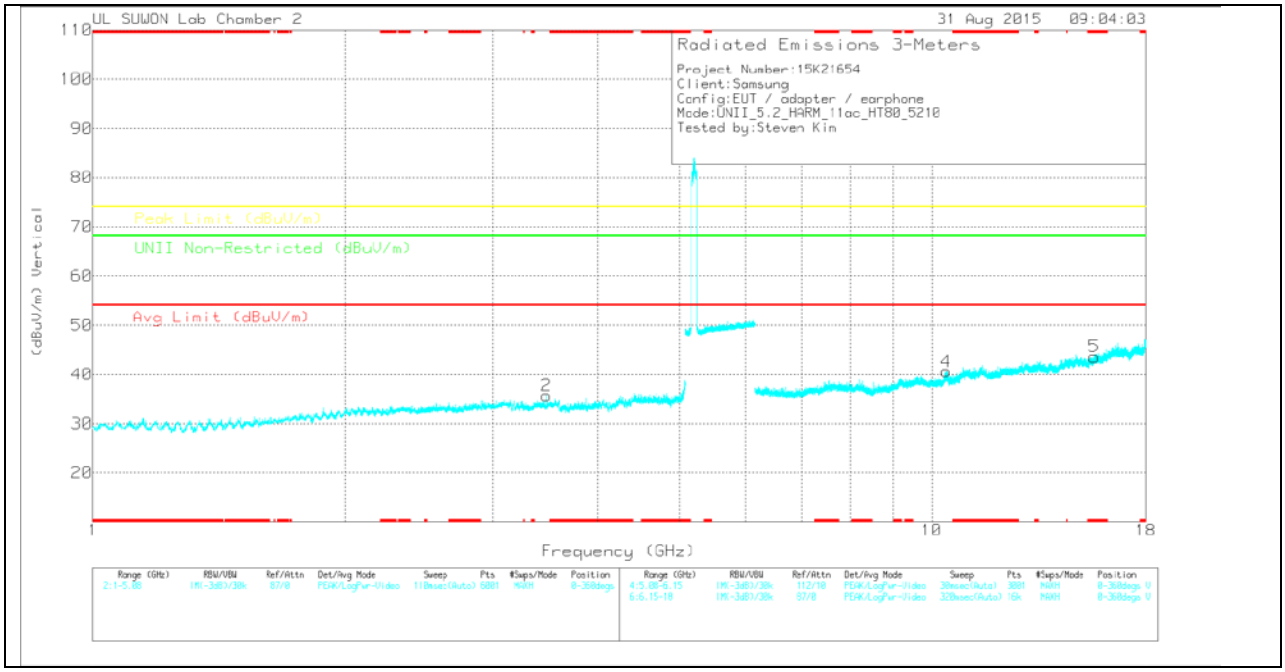
UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902 FAX: (031) 213-5433
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



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

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	3.473	29.66	PK	32.7	-25.7	0	36.66	-	-	-	-	68.2	-31.54	0-360	200	H
2	3.473	28.74	PK	32.7	-25.7	0	35.74	-	-	-	-	68.2	-32.46	0-360	200	V
3	10.412	21.82	PK	37.6	-17.8	0	41.62	-	-	-	-	68.2	-26.58	0-360	200	H
6	* 15.627	19.88	PK	40	-16.4	0	43.48	-	-	74	-30.52	-	-	0-360	200	H
4	10.414	20.75	PK	37.6	-17.8	0	40.55	-	-	-	-	68.2	-27.65	0-360	200	V
5	* 15.629	19.99	PK	40	-16.4	0	43.59	-	-	74	-30.41	-	-	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
3.472	38.1	PK-U	32.7	-25.7	0	45.1	-	-	-	-	68.2	-23.1	323	241	H
3.475	37.39	PK-U	32.7	-25.7	0	44.39	-	-	-	-	68.2	-23.81	329	201	V
10.431	33.16	PK-U	37.6	-17.8	0	52.96	-	-	-	-	68.2	-15.24	207	164	H
10.418	32.39	PK-U	37.6	-17.8	0	52.19	-	-	-	-	68.2	-16.01	322	356	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

AD1 - KDB789033 Method: AD Primary Power Average

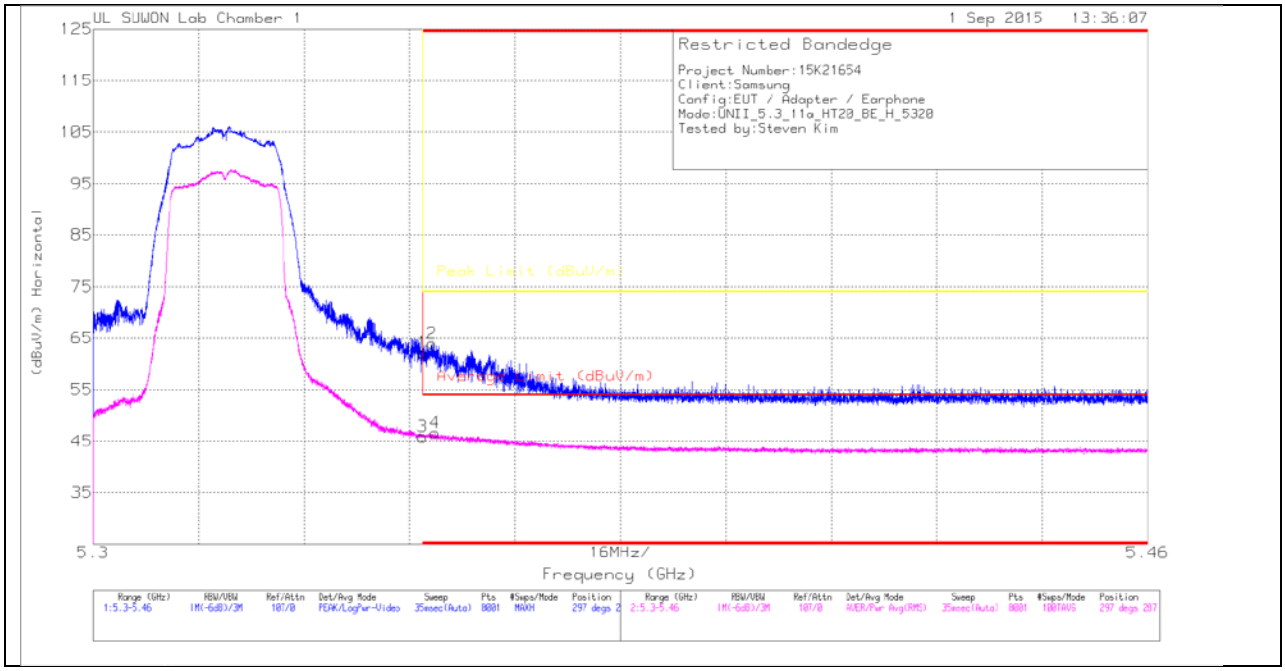
Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902 FAX: (031) 213-5433
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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	3117(00168717)_150619	Path_2_10dB	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	47.25	Pk	34.5	-19.6	0	62.15	-	-	74	-11.85	297	287	H
2	* 5.351	49.08	Pk	34.5	-19.6	0	63.98	-	-	74	-10.02	297	287	H
3	* 5.35	30.69	RMS	34.5	-19.6	.3	45.89	54	-8.11	-	-	297	287	H
4	* 5.352	31.41	RMS	34.5	-19.6	.3	46.61	54	-7.39	-	-	297	287	H

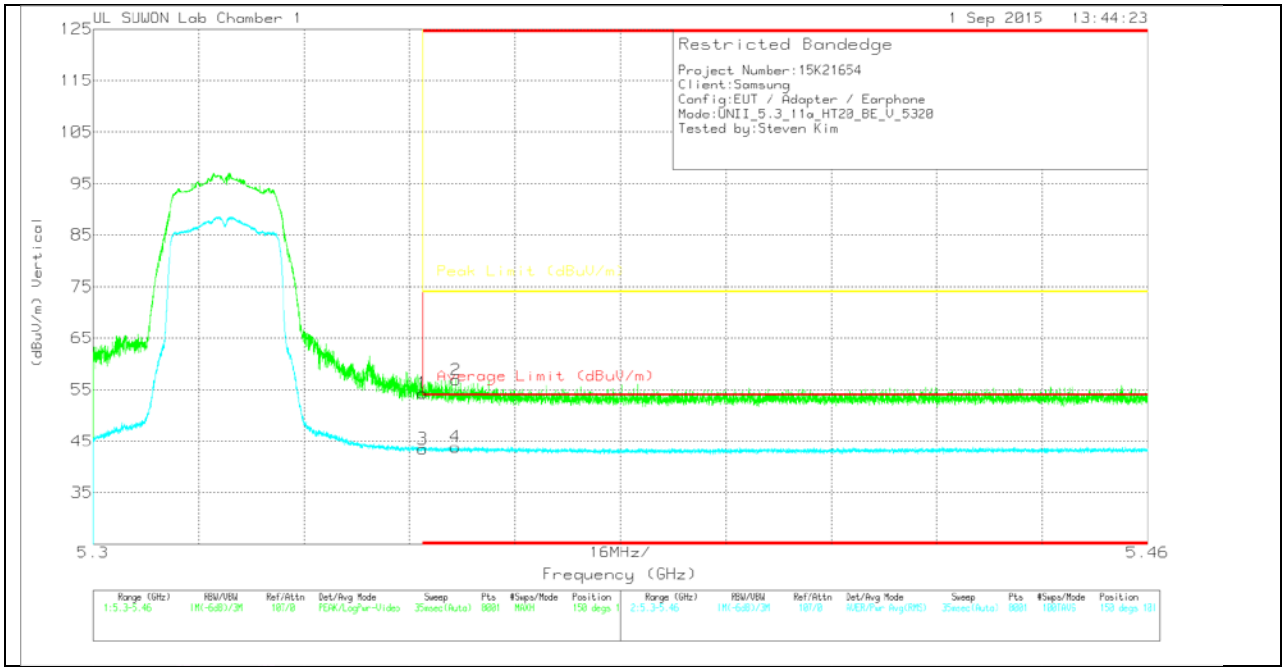
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2_10dB	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	39.39	Pk	34.5	-19.6	0	54.29	-	-	74	-19.71	150	101	V
2	* 5.355	41.98	Pk	34.5	-19.6	0	56.88	-	-	74	-17.12	150	101	V
3	* 5.35	28.29	RMS	34.5	-19.6	.3	43.49	54	-10.51	-	-	150	101	V
4	* 5.355	28.67	RMS	34.5	-19.6	.3	43.87	54	-10.13	-	-	150	101	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

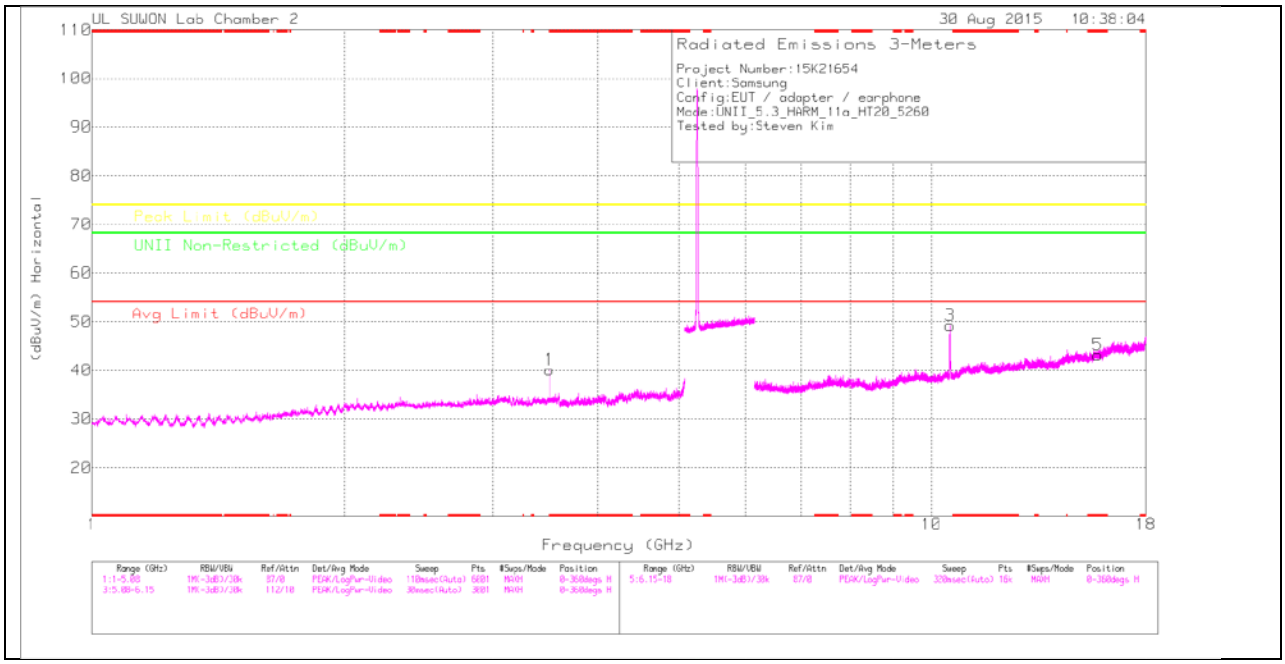
Pk - Peak detector

RMS - RMS detection

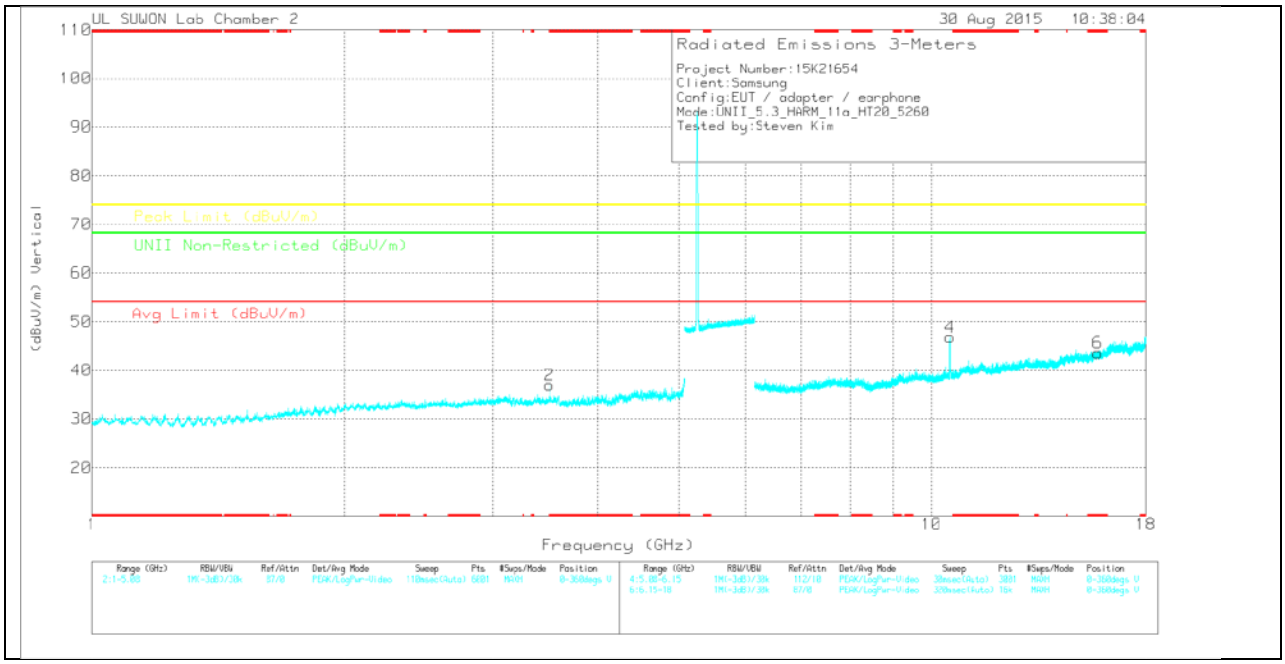
UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902 FAX: (031) 213-5433
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.507	32.83	PK	32.7	-25.4	0	40.13	-	-	74	-33.87	-	-	0-360	200	H
2	* 3.506	29.72	PK	32.7	-25.4	0	37.02	-	-	74	-36.98	-	-	0-360	200	V
3	10.522	29.59	PK	37.7	-18	0	49.29	-	-	-	-	68.2	-18.91	0-360	200	H
5	* 15.781	19.58	PK	40.2	-16.6	0	43.18	-	-	74	-30.82	-	-	0-360	200	H
4	10.518	27.09	PK	37.7	-18	0	46.79	-	-	-	-	68.2	-21.41	0-360	200	V
6	* 15.78	19.92	PK	40.2	-16.6	0	43.52	-	-	74	-30.48	-	-	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.507	39.14	PK-U	32.7	-25.4	0	46.44	-	-	74	-27.56	-	-	335	152	H
* 3.506	38.98	PK-U	32.7	-25.4	0	46.28	-	-	74	-27.72	-	-	172	141	V
* 3.507	29.53	ADR	32.7	-25.4	0	36.83	54	-17.17	-	-	-	-	172	141	V
* 3.507	29.73	ADR	32.7	-25.4	0	37.03	54	-16.97	-	-	-	-	335	152	H
* 11.002	23.26	ADR	38	-17.6	0	43.66	54	-10.34	-	-	-	-	260	343	V
10.52	41.47	PK-U	37.7	-18	0	61.17	-	-	-	-	68.2	-7.03	238	338	H
10.522	38.76	PK-U	37.7	-18	0	58.46	-	-	-	-	68.2	-9.74	259	241	V
* 10.999	36.53	PK-U	38	-17.6	0	56.93	-	-	74	-17.07	-	-	260	343	V

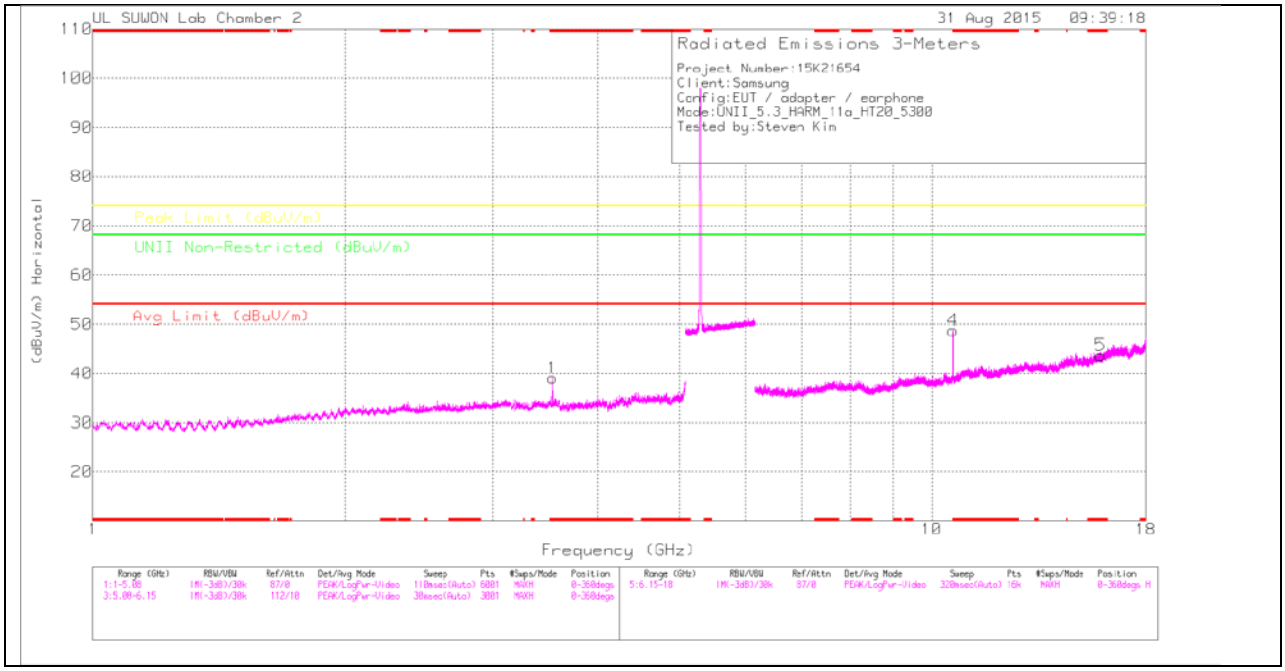
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

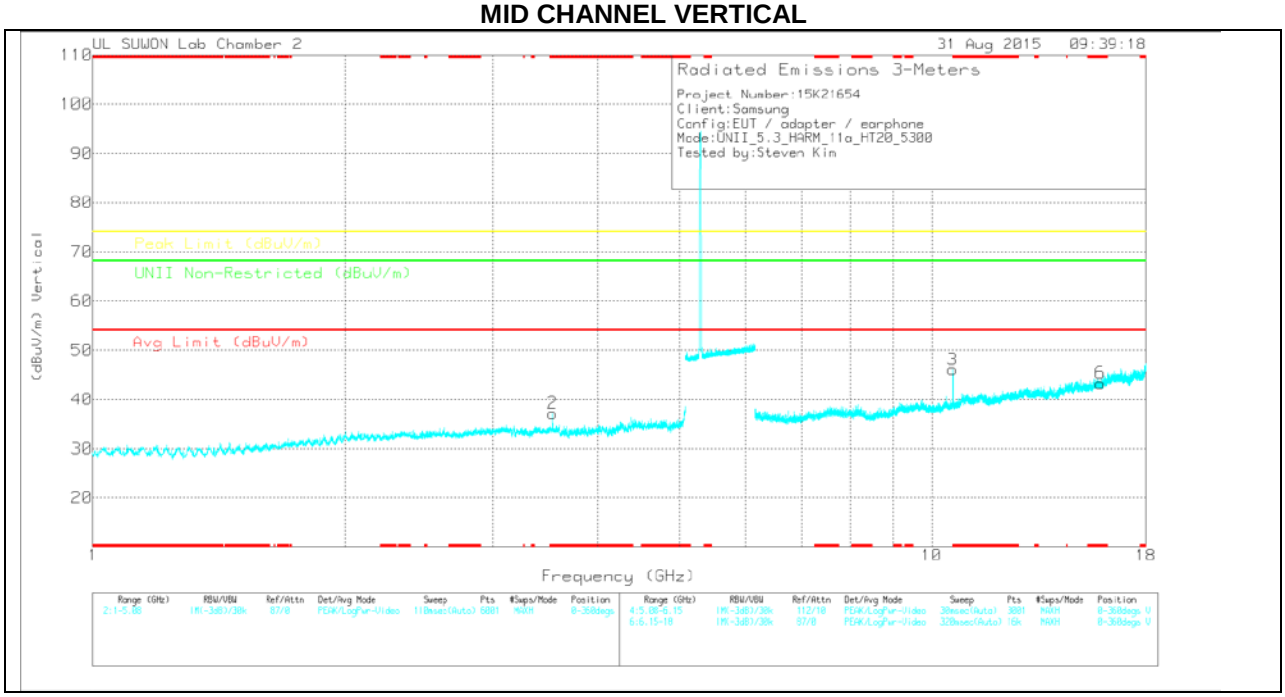
ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.533	31.74	PK	32.8	-25.5	0	39.04	-	-	74	-34.96	-	-	0-360	200	H
2	* 3.533	29.87	PK	32.8	-25.5	0	37.17	-	-	74	-36.83	-	-	0-360	200	V
4	* 10.602	28.97	PK	37.8	-18	0	48.77	-	-	74	-25.23	-	-	0-360	200	H
5	* 15.9	19.58	PK	40.4	-16.3	0	43.68	-	-	74	-30.32	-	-	0-360	200	H
3	* 10.601	26.27	PK	37.8	-18	0	46.07	-	-	74	-27.93	-	-	0-360	200	V
6	* 15.898	19.21	PK	40.4	-16.3	0	43.31	-	-	74	-30.69	-	-	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.533	39.92	PK-U	32.8	-25.5	0	47.22	-	-	74	-26.78	-	-	257	356	H
* 3.533	31.12	ADR	32.8	-25.5	0	38.42	54	-15.58	-	-	-	-	257	356	H
* 3.533	38.7	PK-U	32.8	-25.5	0	46	-	-	74	-28	-	-	178	148	V
* 3.533	29.74	ADR	32.8	-25.5	0	37.04	54	-16.96	-	-	-	-	178	148	V
* 10.602	23.12	ADR	37.8	-18	.3	43.22	54	-10.78	-	-	-	-	263	146	V
* 10.602	28.13	ADR	37.8	-18	.3	48.23	54	-5.77	-	-	-	-	239	312	H
* 10.601	38.03	PK-U	37.8	-18	0	57.83	-	-	74	-16.17	-	-	263	146	V
* 10.601	41.47	PK-U	37.8	-18	0	61.27	-	-	74	-12.73	-	-	239	312	H

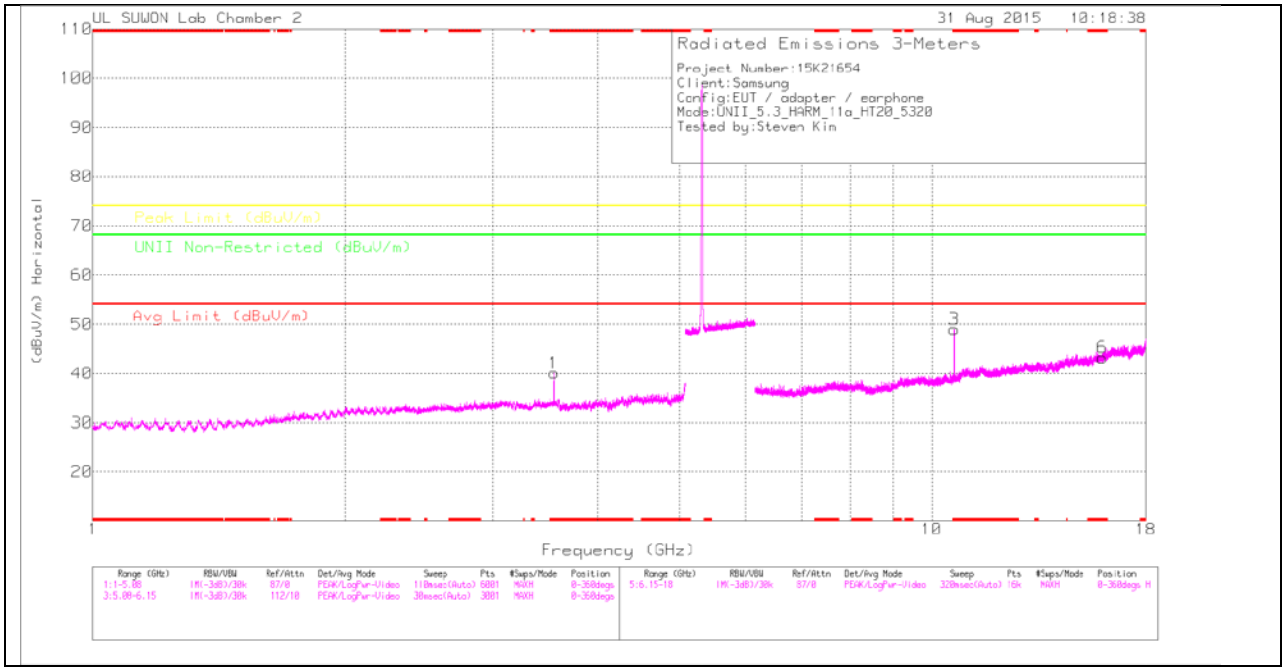
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

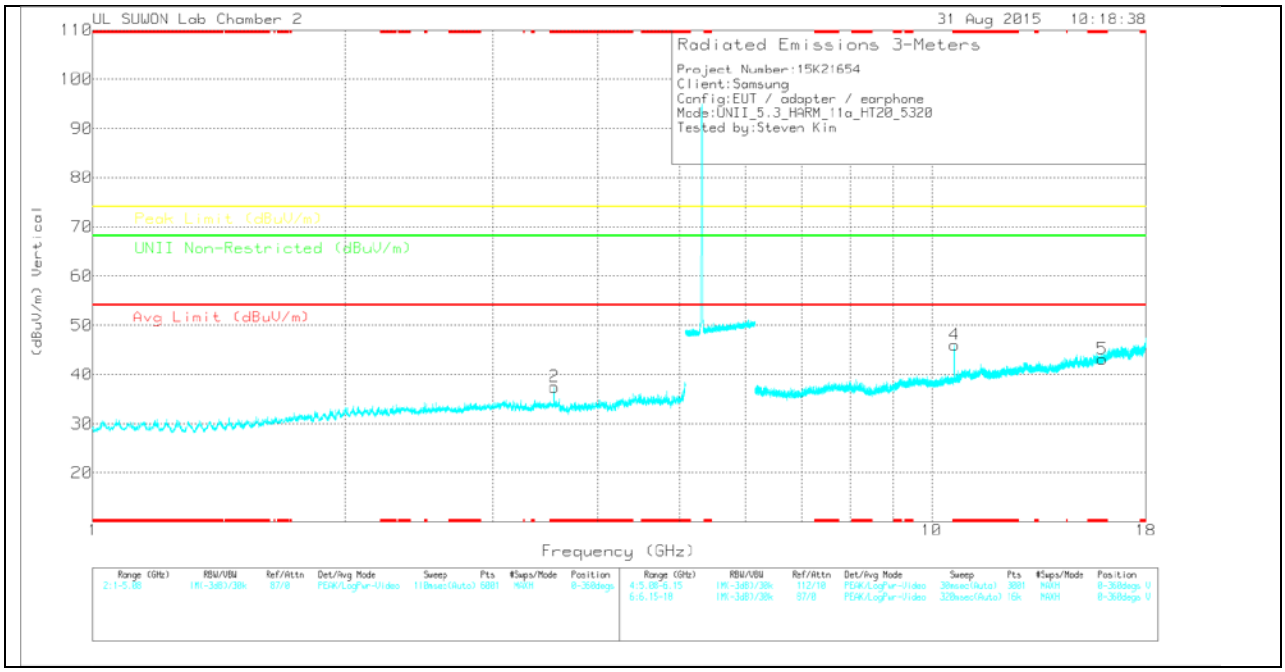
ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.547	32.78	PK	32.8	-25.5	0	40.08	-	-	74	-33.92	-	-	0-360	200	H
2	* 3.547	30.15	PK	32.8	-25.5	0	37.45	-	-	74	-36.55	-	-	0-360	200	V
3	* 10.639	29.09	PK	37.8	-17.9	0	48.99	-	-	74	-25.01	-	-	0-360	200	H
6	* 15.969	18.8	PK	40.5	-16.1	0	43.2	-	-	74	-30.8	-	-	0-360	200	H
4	* 10.642	26.1	PK	37.8	-17.9	0	46	-	-	74	-28	-	-	0-360	200	V
5	* 15.96	18.84	PK	40.4	-16.1	0	43.14	-	-	74	-30.86	-	-	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.546	38.5	PK-U	32.8	-25.5	0	45.8	-	-	74	-28.2	-	-	329	103	H
* 3.547	29.73	ADR	32.8	-25.5	0	37.03	54	-16.97	-	-	-	-	329	103	H
* 3.547	38.85	PK-U	32.8	-25.5	0	46.15	-	-	74	-27.85	-	-	191	239	V
* 3.547	29.18	ADR	32.8	-25.5	0	36.48	54	-17.52	-	-	-	-	191	239	V
* 10.641	25.95	ADR	37.8	-17.9	.3	46.15	54	-7.85	-	-	-	-	260	144	V
* 10.643	27.56	ADR	37.8	-17.9	.3	47.76	54	-6.24	-	-	-	-	239	326	H
* 10.641	39.21	PK-U	37.8	-17.9	0	59.11	-	-	74	-14.89	-	-	260	144	V
* 10.645	40.57	PK-U	37.8	-17.9	0	60.47	-	-	74	-13.53	-	-	239	326	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

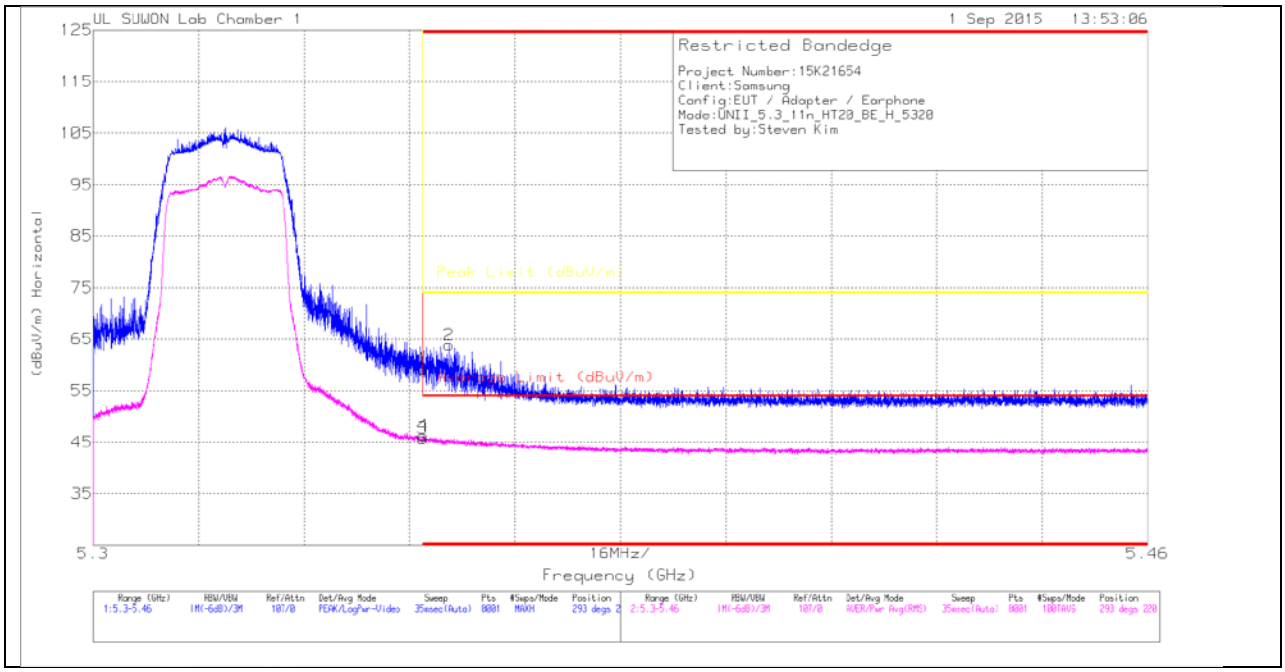
ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

11.2.2. TX ABOVE 1 GHz 802.11n HT20 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	3117(00168717)_150619	Path_2_10dB	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	44.26	Pk	34.5	-19.6	0	59.16	-	-	74	-14.84	293	220	H
2	* 5.354	48.93	Pk	34.5	-19.6	0	63.83	-	-	74	-10.17	293	220	H
3	* 5.35	30.54	RMS	34.5	-19.6	.32	45.76	54	-8.24	-	-	293	220	H
4	* 5.35	31.02	RMS	34.5	-19.6	.32	46.24	54	-7.76	-	-	293	220	H

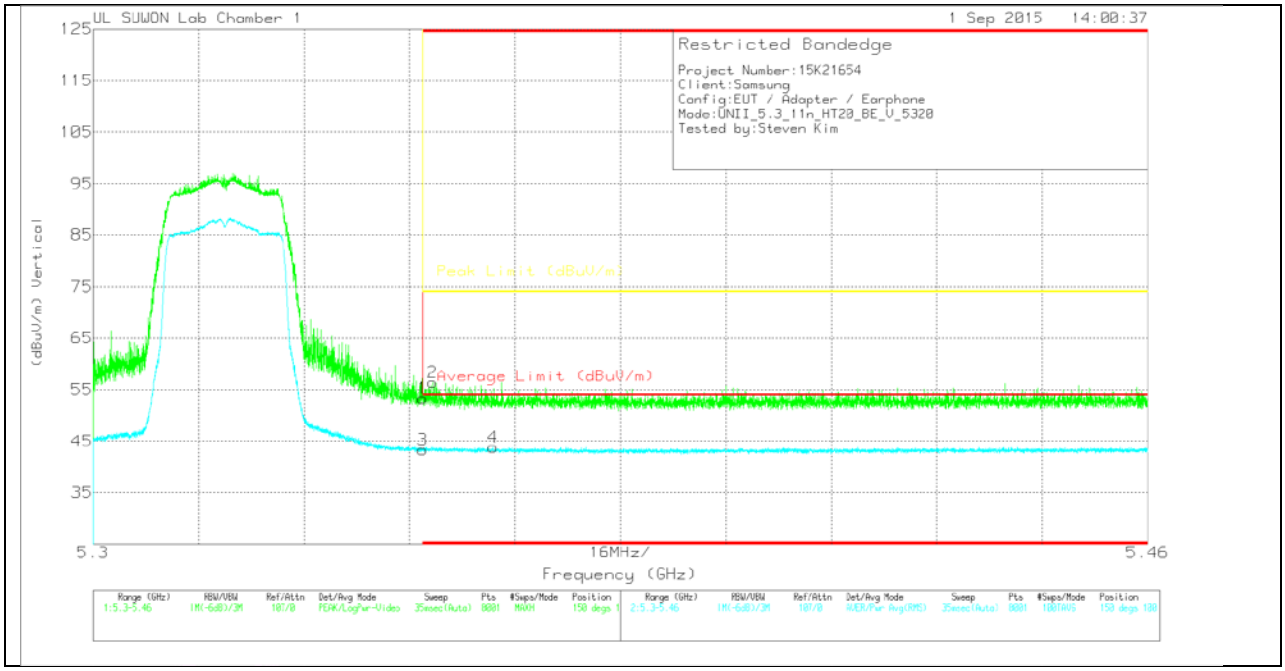
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2_10dB	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	38.42	Pk	34.5	-19.6	0	53.32	-	-	74	-20.68	150	100	V
2	* 5.352	41.47	Pk	34.5	-19.6	0	56.37	-	-	74	-17.63	150	100	V
3	* 5.35	28.09	RMS	34.5	-19.6	.32	43.31	54	-10.69	-	-	150	100	V
4	* 5.361	28.61	RMS	34.5	-19.6	.32	43.83	54	-10.17	-	-	150	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

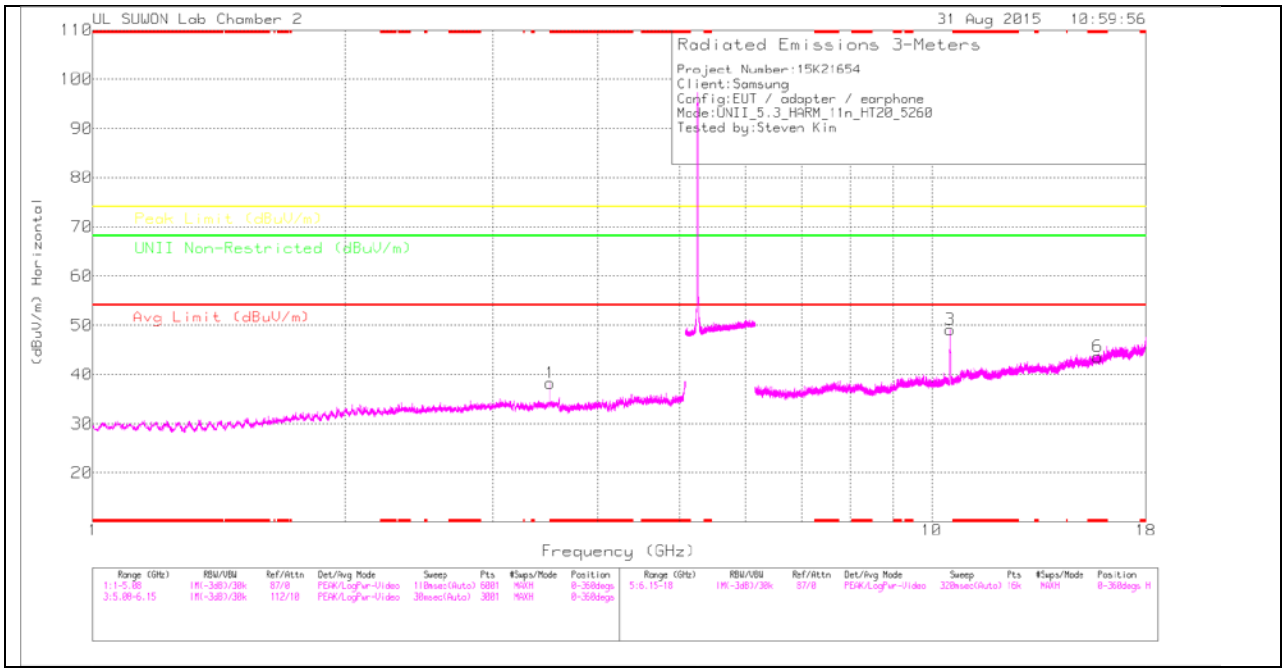
Pk - Peak detector

RMS - RMS detection

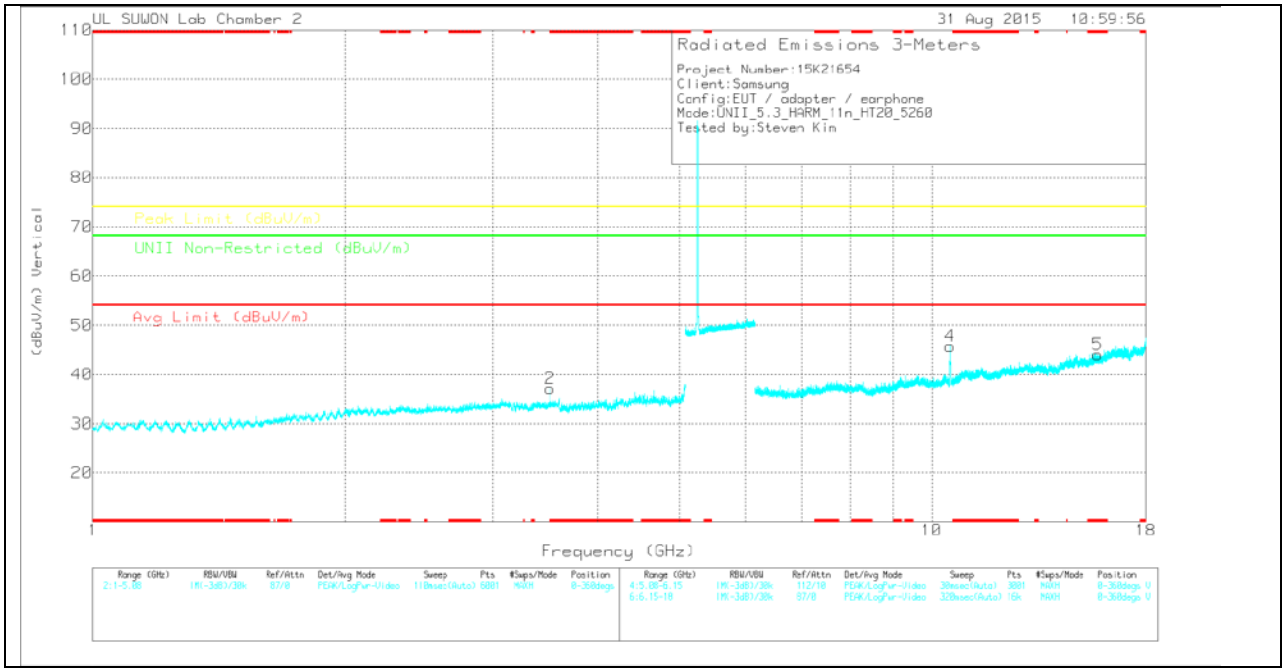
UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902 FAX: (031) 213-5433
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.506	30.93	PK	32.7	-25.4	0	38.23	-	-	74	-35.77	-	-	0-360	200	H
2	* 3.507	29.83	PK	32.7	-25.4	0	37.13	-	-	74	-36.87	-	-	0-360	200	V
3	10.52	29.4	PK	37.7	-18	0	49.1	-	-	-	-	68.2	-19.1	0-360	200	H
6	* 15.778	19.99	PK	40.2	-16.6	0	43.59	-	-	74	-30.41	-	-	0-360	100	H
4	10.519	26.02	PK	37.7	-18	0	45.72	-	-	-	-	68.2	-22.48	0-360	200	V
5	* 15.781	20.4	PK	40.2	-16.6	0	44	-	-	74	-30	-	-	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.507	38.76	PK-U	32.7	-25.4	0	46.06	-	-	74	-27.94	-	-	332	252	H
* 3.507	30.18	ADR	32.7	-25.4	0	37.48	54	-16.52	-	-	-	-	332	252	H
* 3.507	38.73	PK-U	32.7	-25.4	0	46.03	-	-	74	-27.97	-	-	182	182	V
* 3.507	30.6	ADR	32.7	-25.4	0	37.9	54	-16.1	-	-	-	-	182	182	V
10.523	38.83	PK-U	37.7	-18	0	58.53	-	-	-	-	68.2	-9.67	5	211	V
10.522	43.13	PK-U	37.7	-18	0	62.83	-	-	-	-	68.2	-5.37	202	162	H

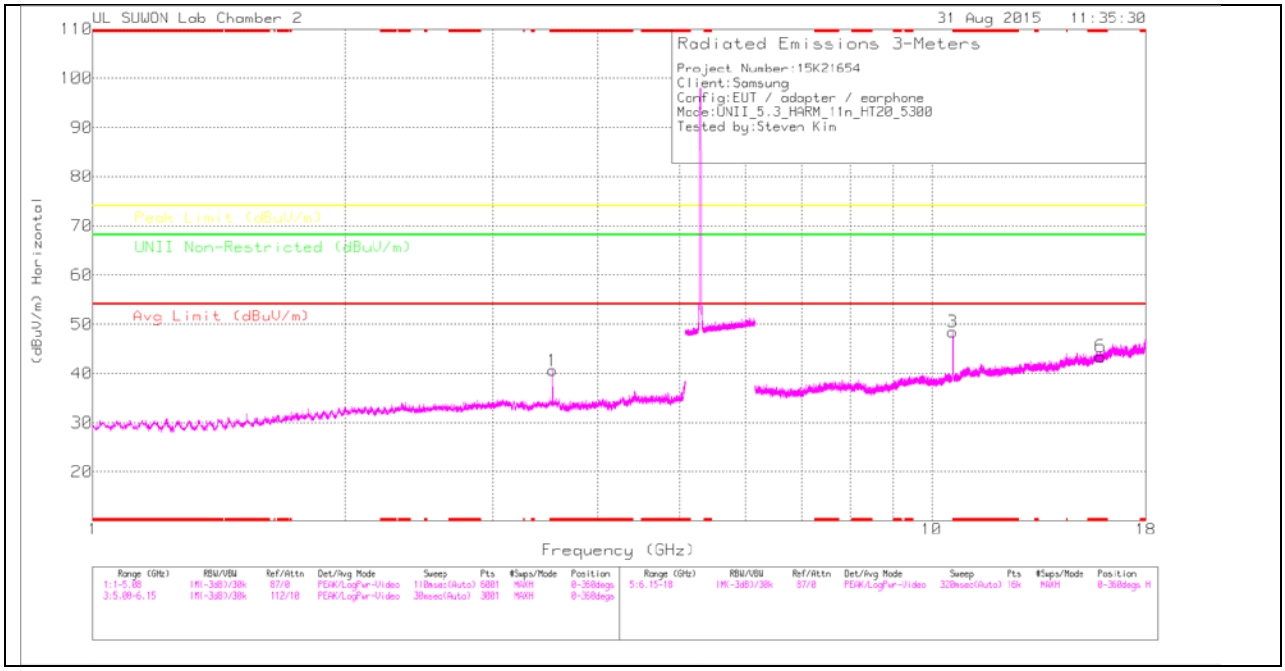
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

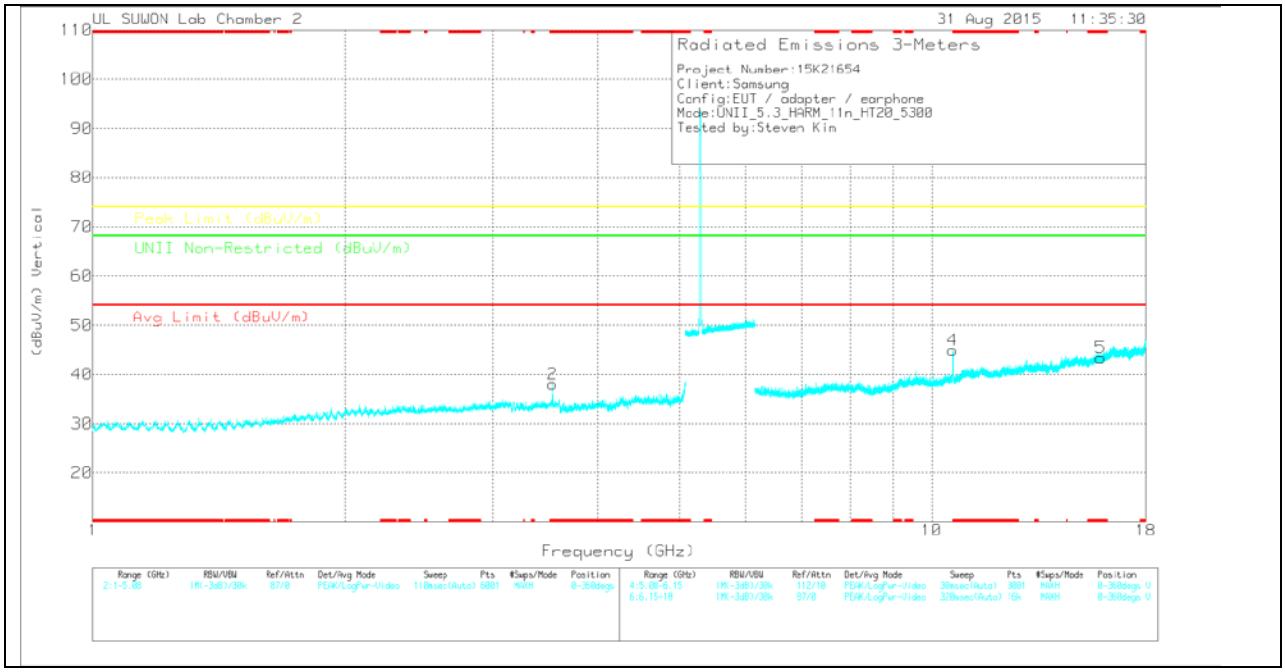
ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.534	33.3	PK	32.8	-25.5	0	40.6	-	-	74	-33.4	-	-	0-360	200	H
2	* 3.534	30.68	PK	32.8	-25.5	0	37.98	-	-	74	-36.02	-	-	0-360	200	V
3	* 10.601	28.65	PK	37.8	-18	0	48.45	-	-	74	-25.55	-	-	0-360	200	H
6	* 15.901	19.34	PK	40.4	-16.3	0	43.44	-	-	74	-30.56	-	-	0-360	200	H
4	* 10.6	25.09	PK	37.8	-18	0	44.89	-	-	74	-29.11	-	-	0-360	200	V
5	* 15.901	19.27	PK	40.4	-16.3	0	43.37	-	-	74	-30.63	-	-	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.533	39.66	PK-U	32.8	-25.5	0	46.96	-	-	74	-27.04	-	-	257	355	H
* 3.533	31.48	ADR	32.8	-25.5	0	38.78	54	-15.22	-	-	-	-	257	355	H
* 3.533	38.91	PK-U	32.8	-25.5	0	46.21	-	-	74	-27.79	-	-	178	210	V
* 3.533	29.84	ADR	32.8	-25.5	0	37.14	54	-16.86	-	-	-	-	178	210	V
* 10.601	25.45	ADR	37.8	-18	.32	45.57	54	-8.43	-	-	-	-	76	228	V
* 10.6	27.26	ADR	37.8	-18	.32	47.38	54	-6.62	-	-	-	-	208	343	H
* 10.603	43.28	PK-U	37.8	-18	0	63.08	-	-	74	-10.92	-	-	76	228	V
* 10.602	45.73	PK-U	37.8	-18	0	65.53	-	-	74	-8.47	-	-	208	343	H

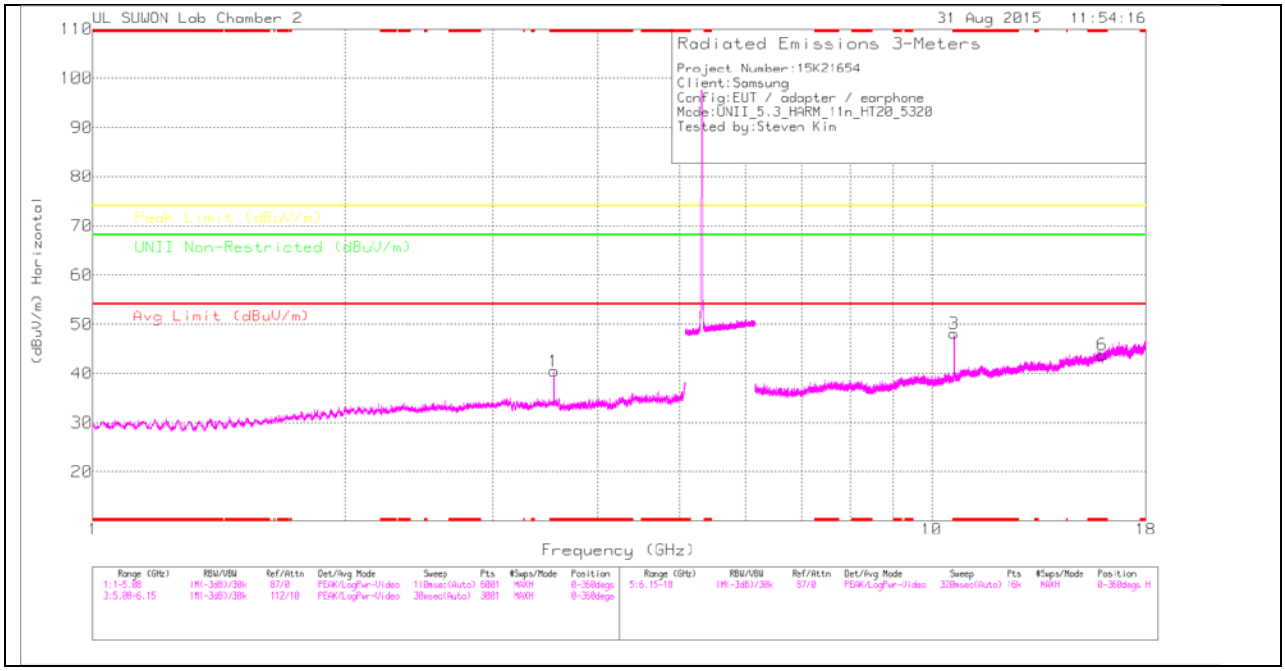
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

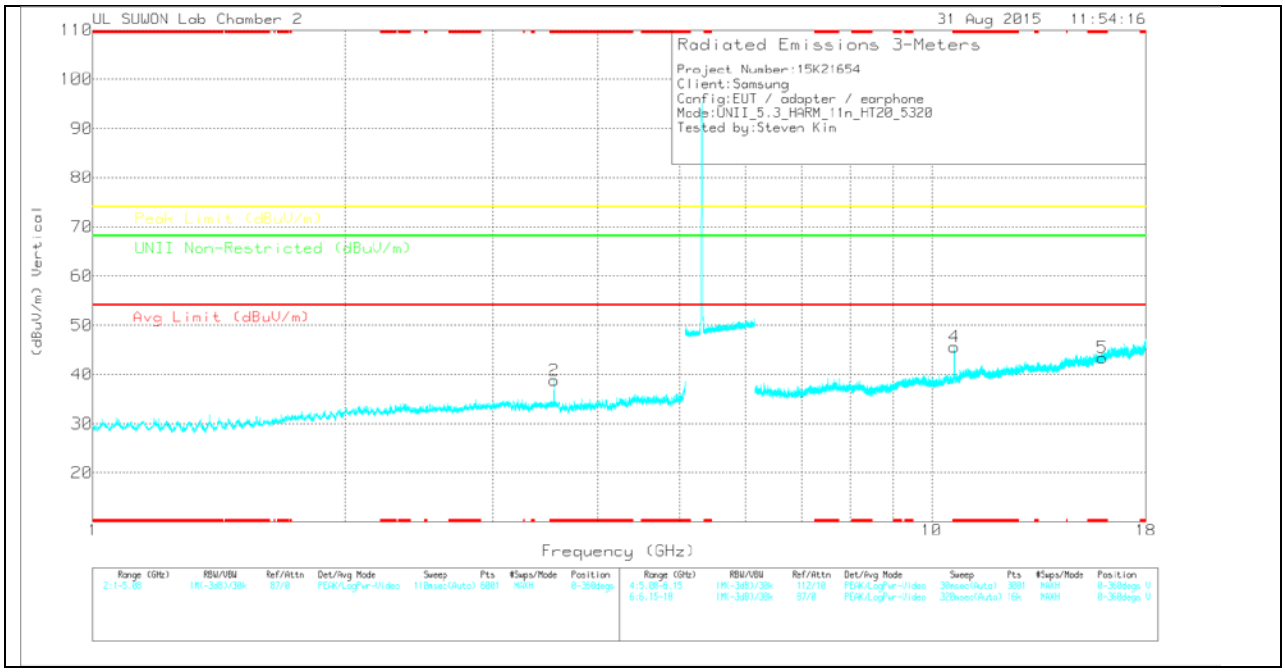
ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.547	33.16	PK	32.8	-25.5	0	40.46	-	-	74	-33.54	-	-	0-360	200	H
2	* 3.547	31.47	PK	32.8	-25.5	0	38.77	-	-	74	-35.23	-	-	0-360	100	V
3	* 10.638	28.22	PK	37.8	-17.9	0	48.12	-	-	74	-25.88	-	-	0-360	200	H
6	* 15.963	19.45	PK	40.4	-16.1	0	43.75	-	-	74	-30.25	-	-	0-360	200	H
4	* 10.64	25.69	PK	37.8	-17.9	0	45.59	-	-	74	-28.41	-	-	0-360	200	V
5	* 15.962	19.1	PK	40.4	-16.1	0	43.4	-	-	74	-30.6	-	-	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.547	40.12	PK-U	32.8	-25.5	0	47.42	-	-	74	-26.58	-	-	257	358	H
* 3.547	32.71	ADR	32.8	-25.5	0	40.01	54	-13.99	-	-	-	-	257	358	H
* 3.547	39.71	PK-U	32.8	-25.5	0	47.01	-	-	74	-26.99	-	-	182	249	V
* 3.547	32.24	ADR	32.8	-25.5	0	39.54	54	-14.46	-	-	-	-	182	249	V
* 10.64	23.57	ADR	37.8	-17.9	.32	43.79	54	-10.21	-	-	-	-	25	181	V
* 10.64	26.13	ADR	37.8	-17.9	.32	46.35	54	-7.65	-	-	-	-	209	358	H
* 10.642	41.3	PK-U	37.8	-17.9	0	61.2	-	-	74	-12.8	-	-	25	181	V
* 10.643	43.75	PK-U	37.8	-17.9	0	63.65	-	-	74	-10.35	-	-	209	358	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

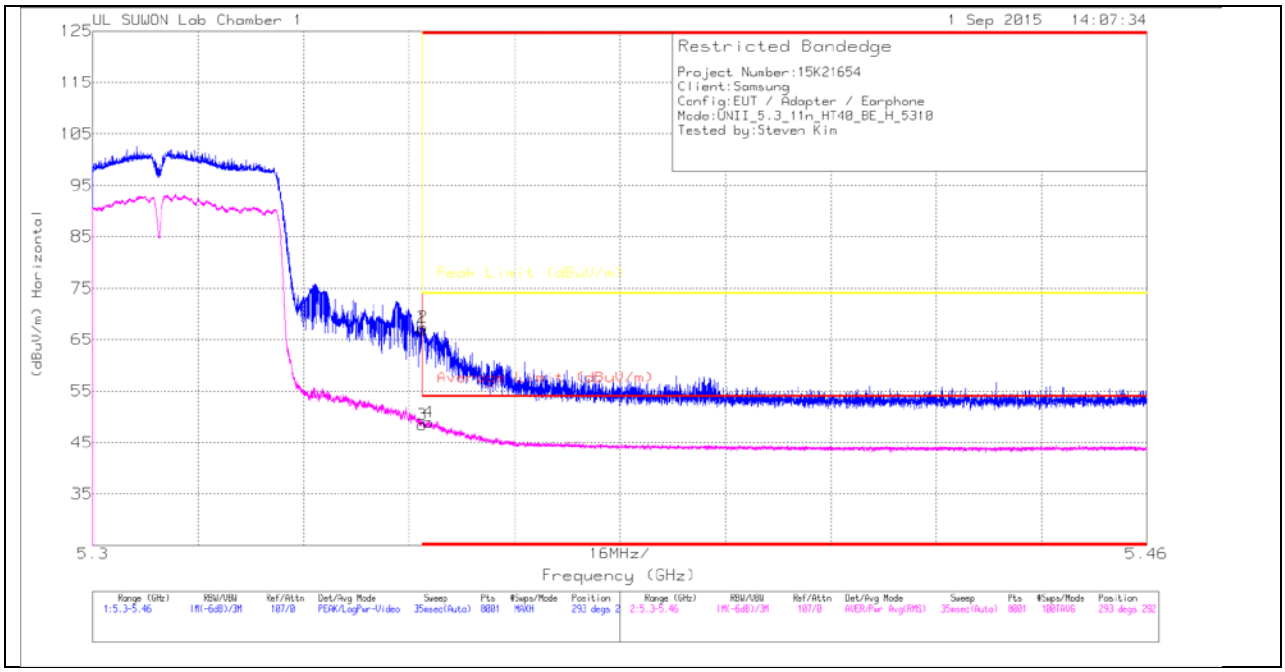
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

11.2.3. TX ABOVE 1 GHz 802.11n HT40 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	3117(00168717)_150619	Path_2_10dB	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	52.17	Pk	34.5	-19.6	0	67.07	-	-	74	-6.93	293	292	H
2	* 5.35	52.51	Pk	34.5	-19.6	0	67.41	-	-	74	-6.59	293	292	H
3	* 5.35	33.23	RMS	34.5	-19.6	.62	48.75	54	-5.25	-	-	293	292	H
4	* 5.351	33.71	RMS	34.5	-19.6	.62	49.23	54	-4.77	-	-	293	292	H

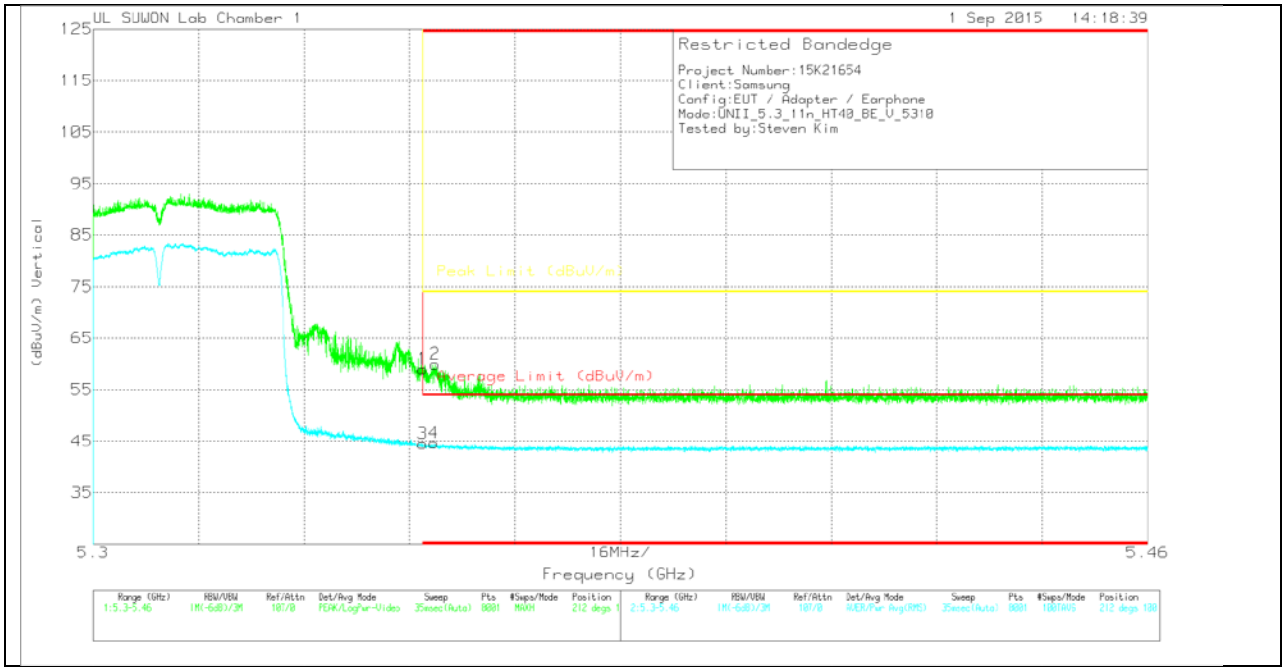
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2_10dB	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	44.11	Pk	34.5	-19.6	0	59.01	-	-	74	-14.99	212	100	V
2	* 5.352	45.07	Pk	34.5	-19.6	0	59.97	-	-	74	-14.03	212	100	V
3	* 5.35	28.99	RMS	34.5	-19.6	.62	44.51	54	-9.49	-	-	212	100	V
4	* 5.352	29.13	RMS	34.5	-19.6	.62	44.65	54	-9.35	-	-	212	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

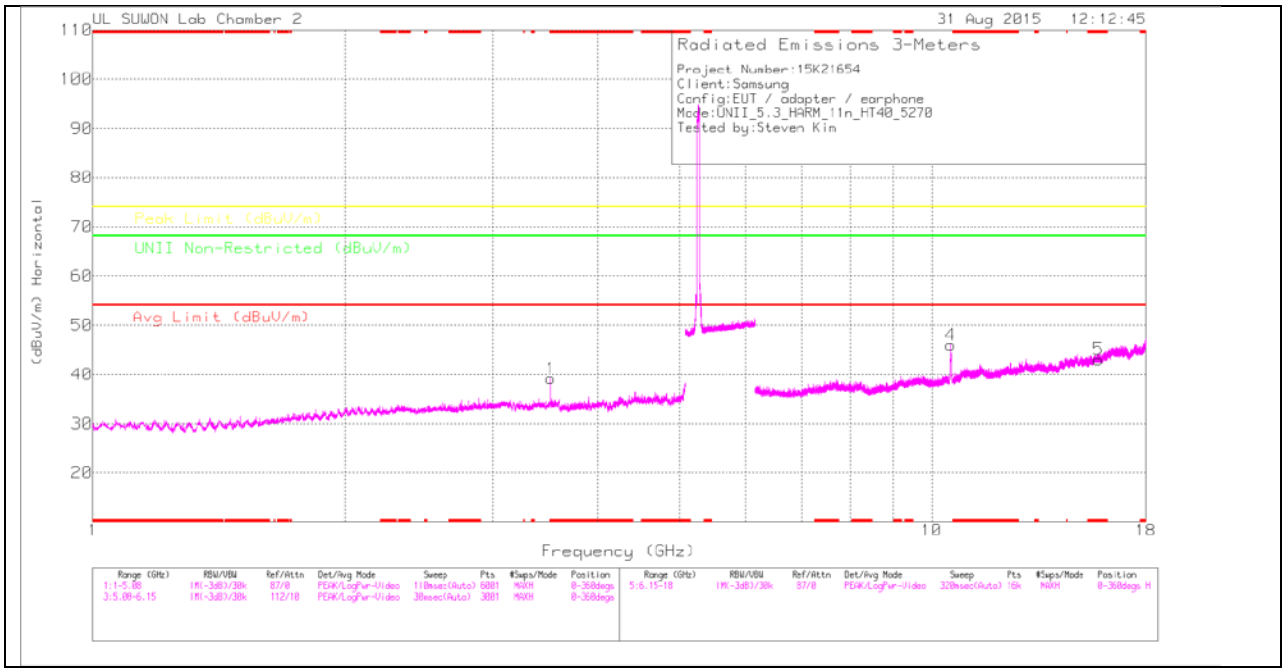
Pk - Peak detector

RMS - RMS detection

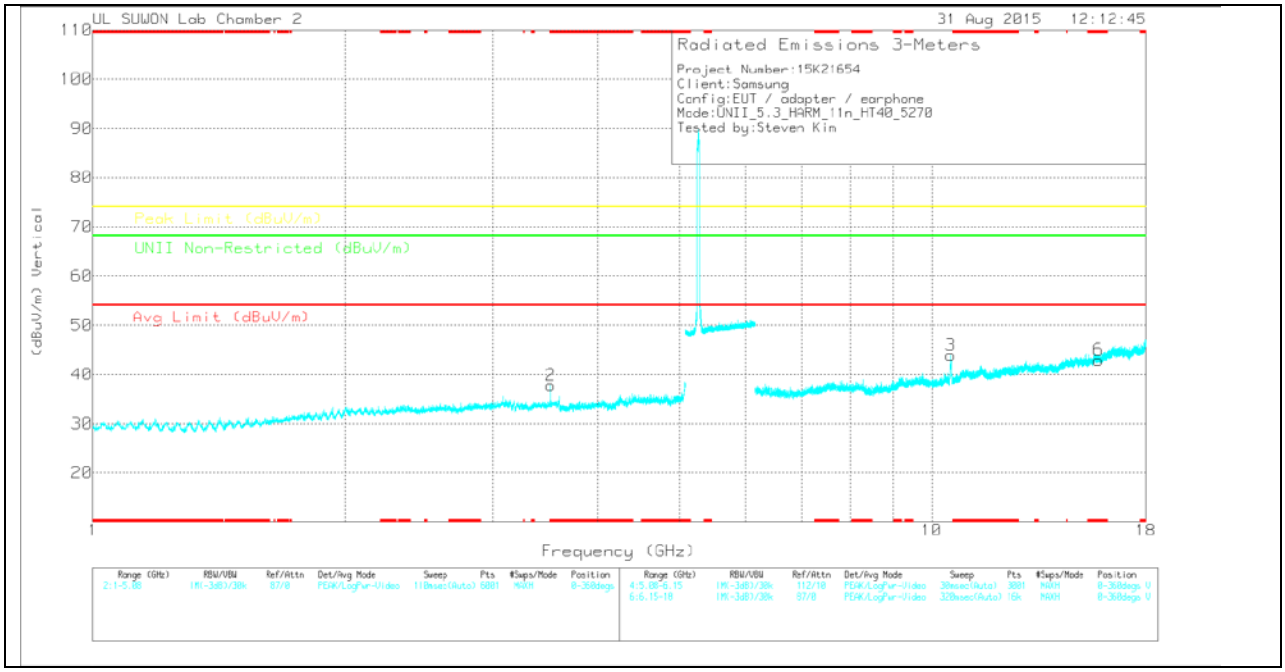
UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902 FAX: (031) 213-5433
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.513	31.87	PK	32.7	-25.4	0	39.17	-	-	74	-34.83	-	-	0-360	200	H
2	* 3.513	30.49	PK	32.7	-25.4	0	37.79	-	-	74	-36.21	-	-	0-360	100	V
4	10.544	26.27	PK	37.7	-18	0	45.97	-	-	-	-	68.2	-22.23	0-360	200	H
5	* 15.812	19.24	PK	40.3	-16.5	0	43.04	-	-	74	-30.96	-	-	0-360	100	H
3	10.542	24.19	PK	37.7	-18	0	43.89	-	-	-	-	68.2	-24.31	0-360	200	V
6	* 15.809	19.12	PK	40.3	-16.5	0	42.92	-	-	74	-31.08	-	-	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.513	38.44	PK-U	32.7	-25.4	0	45.74	-	-	74	-28.26	-	-	338	246	H
* 3.513	28.39	ADR	32.7	-25.4	0	35.69	54	-18.31	-	-	-	-	338	246	H
* 3.513	38.78	PK-U	32.7	-25.4	0	46.08	-	-	74	-27.92	-	-	182	176	V
* 3.513	30.8	ADR	32.7	-25.4	0	38.1	54	-15.9	-	-	-	-	182	176	V
10.54	36.82	PK-U	37.7	-18	0	56.52	-	-	-	-	68.2	-11.68	22	172	V
10.534	40.44	PK-U	37.7	-18	0	60.14	-	-	-	-	68.2	-8.06	233	134	H

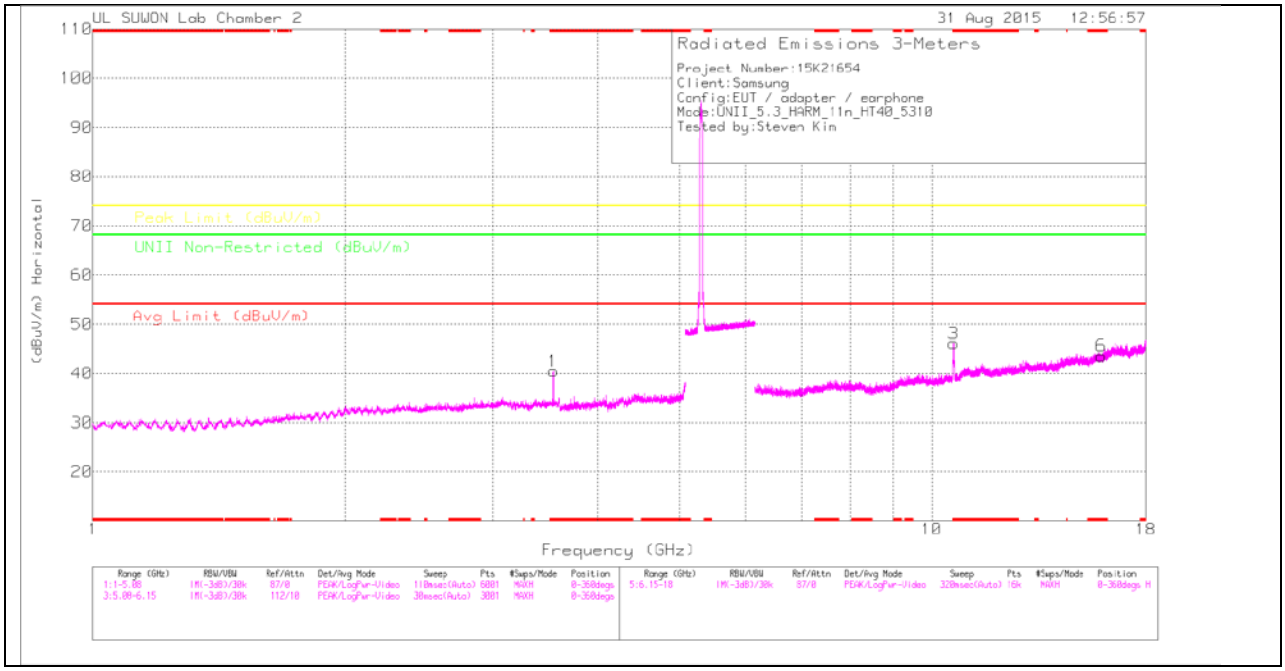
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

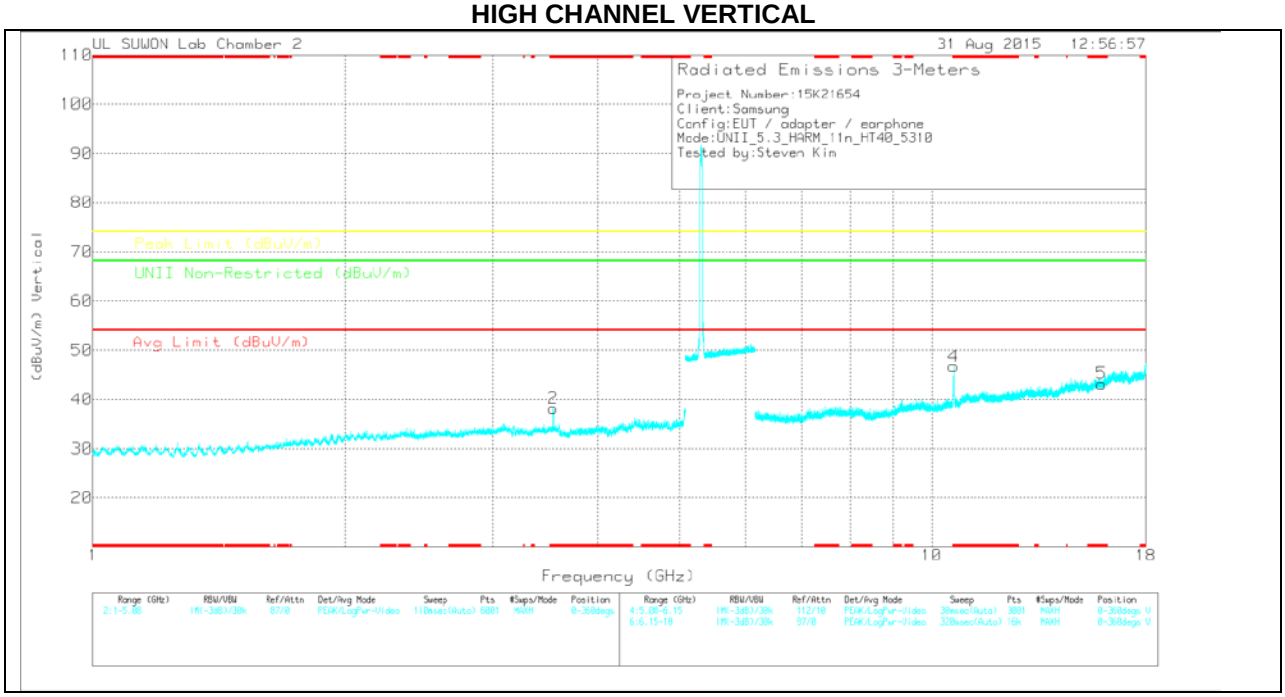
ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.54	33.11	PK	32.8	-25.5	0	40.41	-	-	74	-33.59	-	-	0-360	200	H
2	* 3.54	30.88	PK	32.8	-25.5	0	38.18	-	-	74	-35.82	-	-	0-360	200	V
3	* 10.621	26.28	PK	37.8	-18	0	46.08	-	-	74	-27.92	-	-	0-360	200	H
6	* 15.928	19.34	PK	40.4	-16.2	0	43.54	-	-	74	-30.46	-	-	0-360	200	H
4	* 10.621	26.88	PK	37.8	-18	0	46.68	-	-	74	-27.32	-	-	0-360	200	V
5	* 15.932	18.99	PK	40.4	-16.2	0	43.19	-	-	74	-30.81	-	-	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.54	39.57	PK-U	32.8	-25.5	0	46.87	-	-	74	-27.13	-	-	329	240	H
* 3.54	30.93	ADR	32.8	-25.5	0	38.23	54	-15.77	-	-	-	-	329	240	H
* 3.54	39.05	PK-U	32.8	-25.5	0	46.35	-	-	74	-27.65	-	-	178	247	V
* 3.54	30.61	ADR	32.8	-25.5	0	37.91	54	-16.09	-	-	-	-	178	247	V
* 10.621	23.94	ADR	37.8	-18	.62	44.36	54	-9.64	-	-	-	-	63	366	V
* 10.621	25.34	ADR	37.8	-18	.62	45.76	54	-8.24	-	-	-	-	215	304	H
* 10.625	40.45	PK-U	37.8	-18	0	60.25	-	-	74	-13.75	-	-	63	366	V
* 10.628	41.24	PK-U	37.8	-18	0	61.04	-	-	74	-12.96	-	-	215	304	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

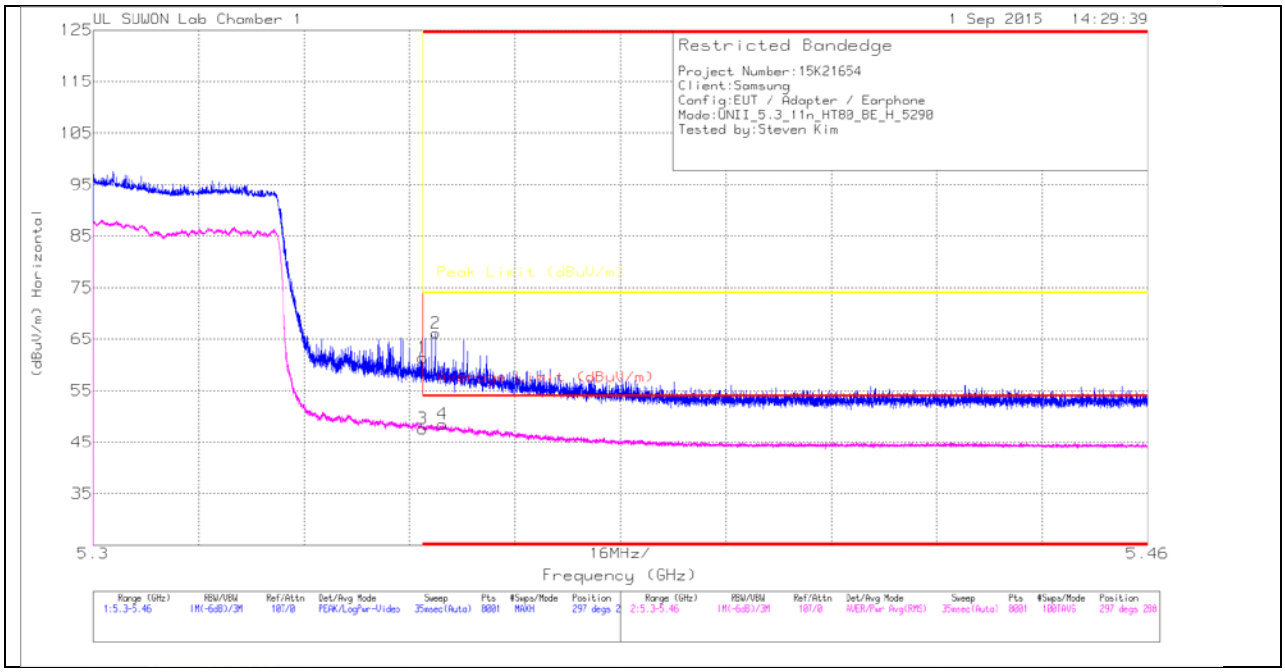
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

11.2.4. TX ABOVE 1 GHz 802.11ac VHT80 MODE IN THE 5.3 GHz BAND RESTRICTED BANDEDGE (High CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2_10dB	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	46.51	Pk	34.5	-19.6	0	61.41	-	-	74	-12.59	297	288	H
2	* 5.352	51.29	Pk	34.5	-19.6	0	66.19	-	-	74	-7.81	297	288	H
3	* 5.35	31.52	RMS	34.5	-19.6	1.16	47.58	54	-6.42	-	-	297	288	H
4	* 5.353	32.44	RMS	34.5	-19.6	1.16	48.5	54	-5.5	-	-	297	288	H

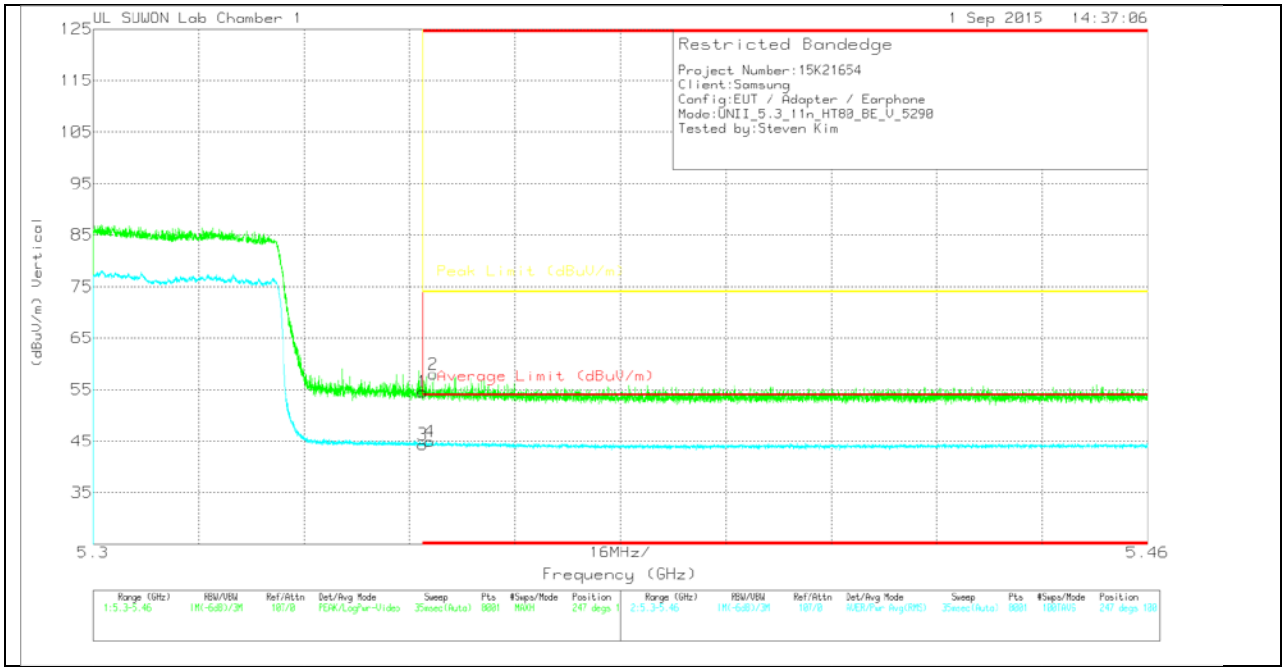
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2_10dB	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	39.68	Pk	34.5	-19.6	0	54.58	-	-	74	-19.42	247	100	V
2	* 5.352	43.09	Pk	34.5	-19.6	0	57.99	-	-	74	-16.01	247	100	V
3	* 5.35	28.28	RMS	34.5	-19.6	1.16	44.34	54	-9.66	-	-	247	100	V
4	* 5.351	28.86	RMS	34.5	-19.6	1.16	44.92	54	-9.08	-	-	247	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

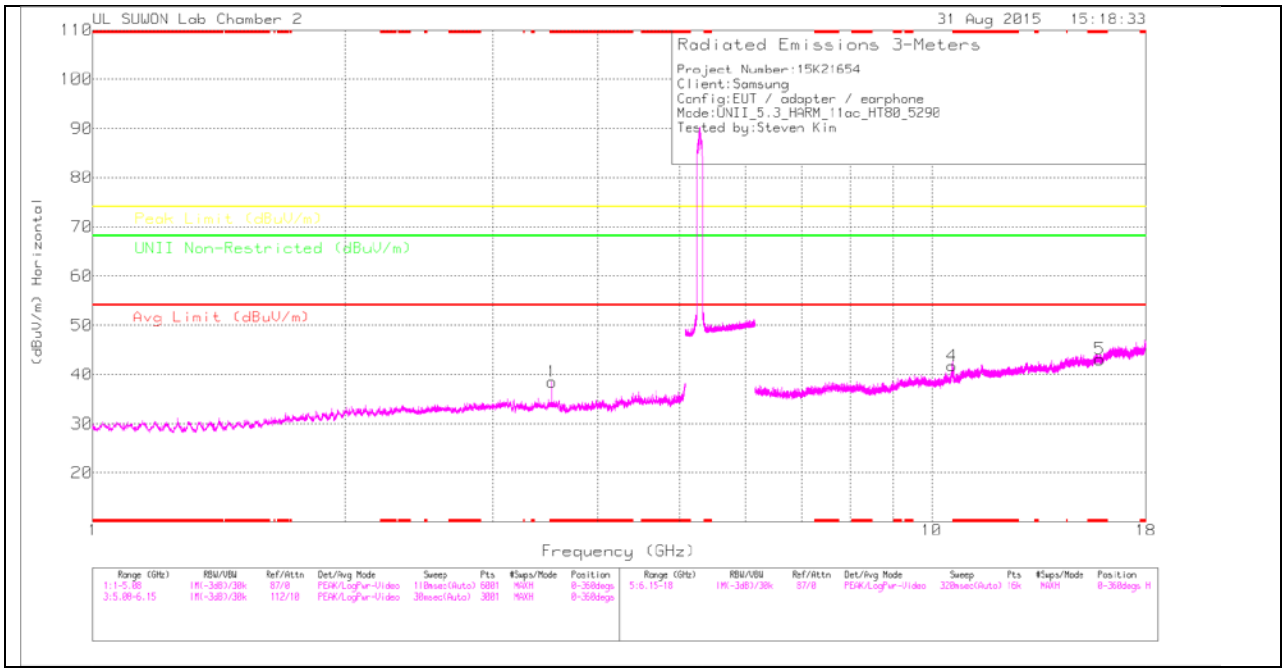
Pk - Peak detector

RMS - RMS detection

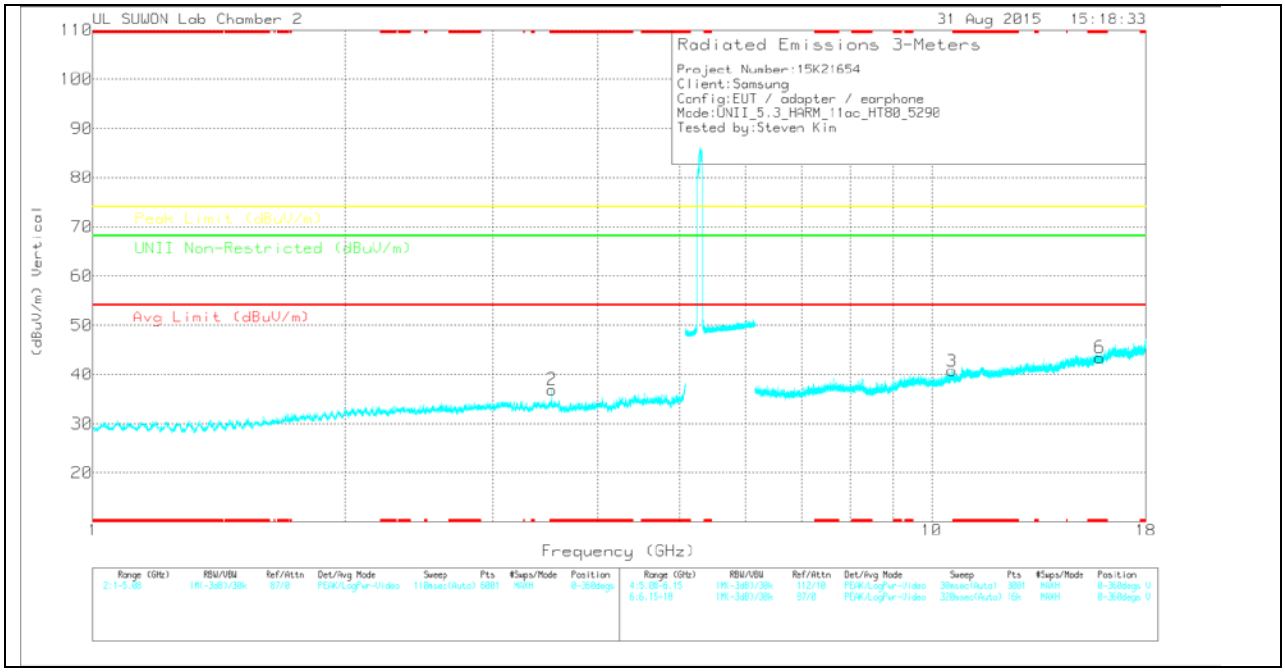
UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902 FAX: (031) 213-5433
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



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

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.527	31.28	PK	32.7	-25.5	0	38.48	-	-	74	-35.52	-	-	0-360	200	H
2	* 3.527	29.7	PK	32.7	-25.5	0	36.9	-	-	74	-37.1	-	-	0-360	200	V
4	10.581	21.91	PK	37.8	-18	0	41.71	-	-	-	-	68.2	-26.49	0-360	200	H
5	* 15.87	19.18	PK	40.3	-16.4	0	43.08	-	-	74	-30.92	-	-	0-360	100	H
3	10.581	20.92	PK	37.8	-18	0	40.72	-	-	-	-	68.2	-27.48	0-360	200	V
6	* 15.871	19.54	PK	40.3	-16.4	0	43.44	-	-	74	-30.56	-	-	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.526	38.9	PK-U	32.7	-25.5	0	46.1	-	-	74	-27.9	-	-	335	180	H
* 3.527	29.94	ADR	32.7	-25.5	0	37.14	54	-16.86	-	-	-	-	335	180	H
* 3.527	39.22	PK-U	32.7	-25.5	0	46.42	-	-	74	-27.58	-	-	184	212	V
* 3.527	30.25	ADR	32.7	-25.5	0	37.45	54	-16.55	-	-	-	-	184	212	V
10.592	31.56	PK-U	37.8	-18	0	51.36	-	-	-	-	68.2	-16.84	12	168	V
10.578	33.67	PK-U	37.8	-18	0	53.47	-	-	-	-	68.2	-14.73	206	348	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

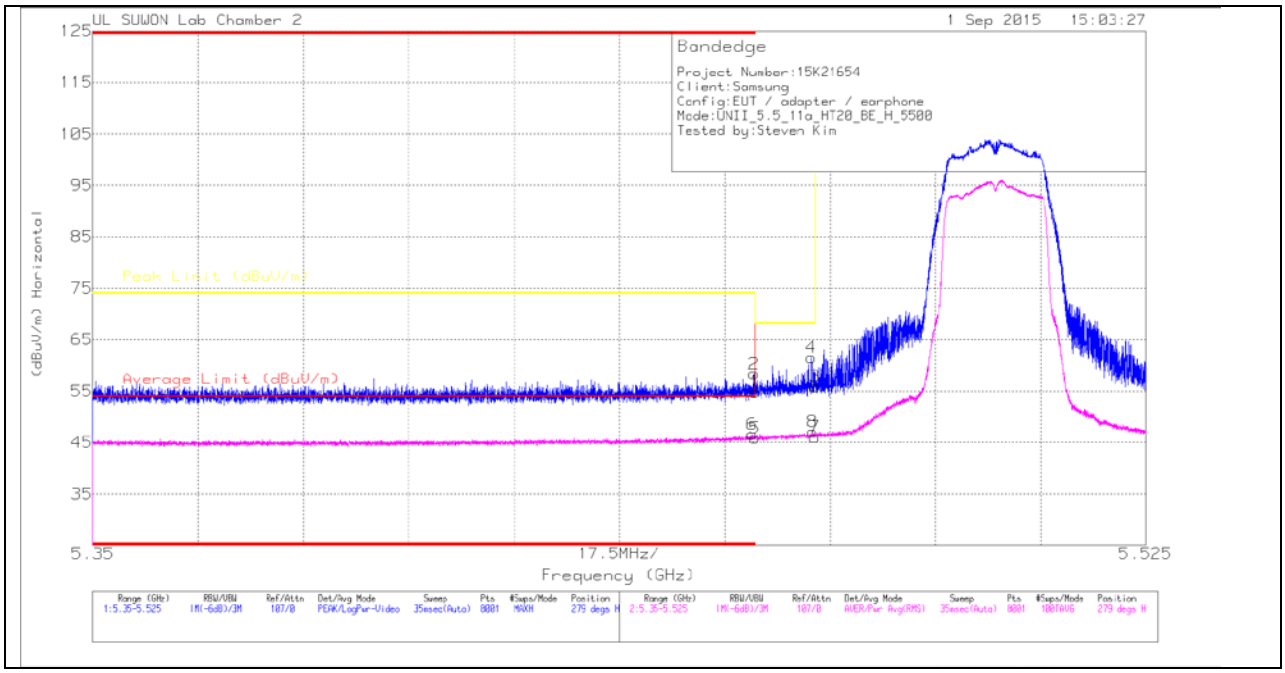
UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902 FAX: (031) 213-5433
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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	3117(00168724)_150619	Path_2_10dB	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	36.57	Pk	34.5	-16.2	0	54.87	-	-	74	-19.13	279	295	H
2	* 5.46	40.02	Pk	34.5	-16.2	0	58.32	-	-	74	-15.68	279	295	H
3	5.47	37.63	Pk	34.5	-16.2	0	55.93	-	-	68.2	-12.27	279	295	H
4	5.469	43.22	Pk	34.5	-16.2	0	61.52	-	-	68.2	-6.68	279	295	H
5	* 5.46	27.26	RMS	34.5	-16.2	.3	45.86	54	-8.14	-	-	279	295	H
6	* 5.46	28	RMS	34.5	-16.2	.3	46.6	54	-7.4	-	-	279	295	H
7	5.47	27.46	RMS	34.5	-16.2	.3	46.06	-	-	-	-	279	295	H
8	5.47	28.48	RMS	34.5	-16.2	.3	47.08	-	-	-	-	279	295	H

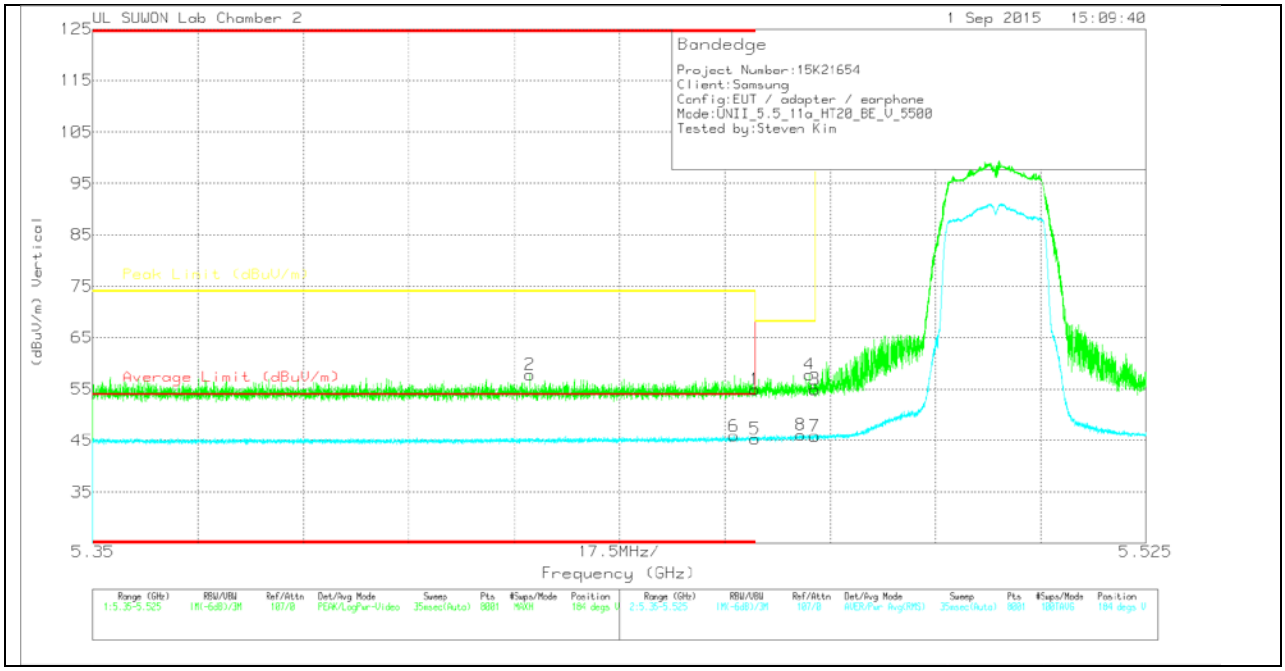
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_2_10dB	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	36.64	Pk	34.5	-16.2	0	54.94	-	-	74	-19.06	184	196	V
2	* 5.423	39.7	Pk	34.4	-16.3	0	57.8	-	-	74	-16.2	184	196	V
3	5.47	36.66	Pk	34.5	-16.2	0	54.96	-	-	68.2	-13.24	184	196	V
4	5.469	39.51	Pk	34.5	-16.2	0	57.81	-	-	68.2	-10.39	184	196	V
5	* 5.46	26.73	RMS	34.5	-16.2	.3	45.33	54	-8.67	-	-	184	196	V
6	* 5.457	27.29	RMS	34.5	-16.2	.3	45.89	54	-8.11	-	-	184	196	V
7	5.47	27.25	RMS	34.5	-16.2	.3	45.85	-	-	-	-	184	196	V
8	5.468	27.48	RMS	34.5	-16.2	.3	46.08	-	-	-	-	184	196	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

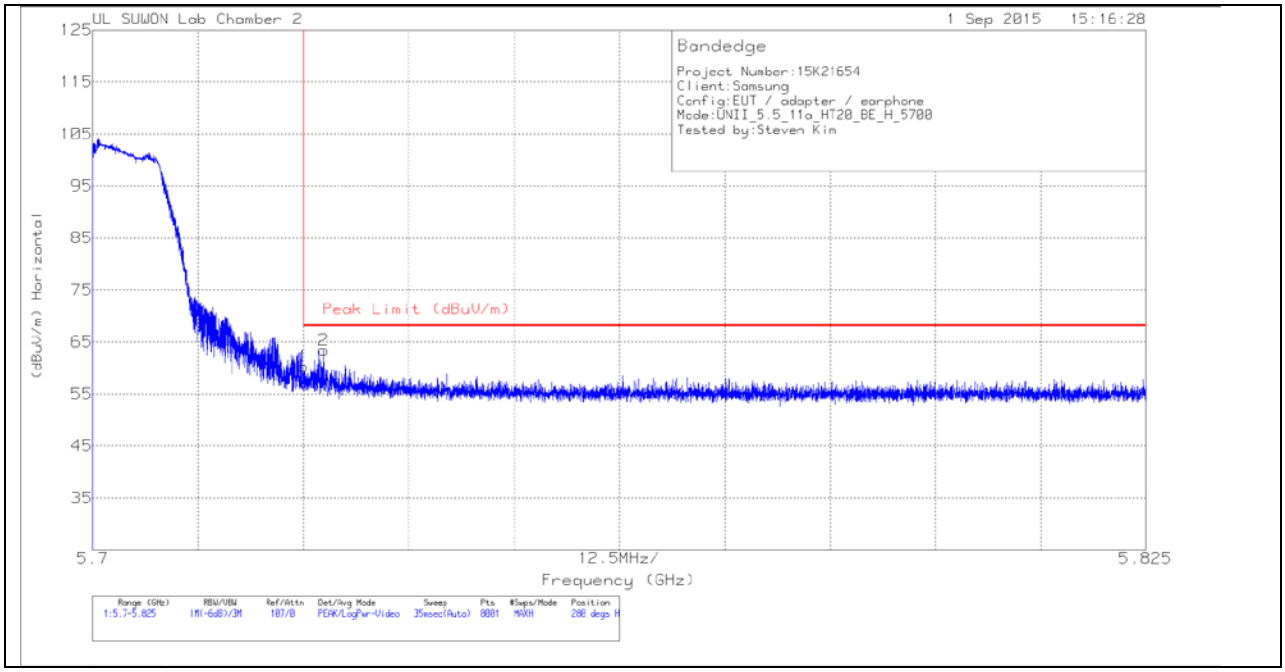
Pk - Peak detector

RMS - RMS detection

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

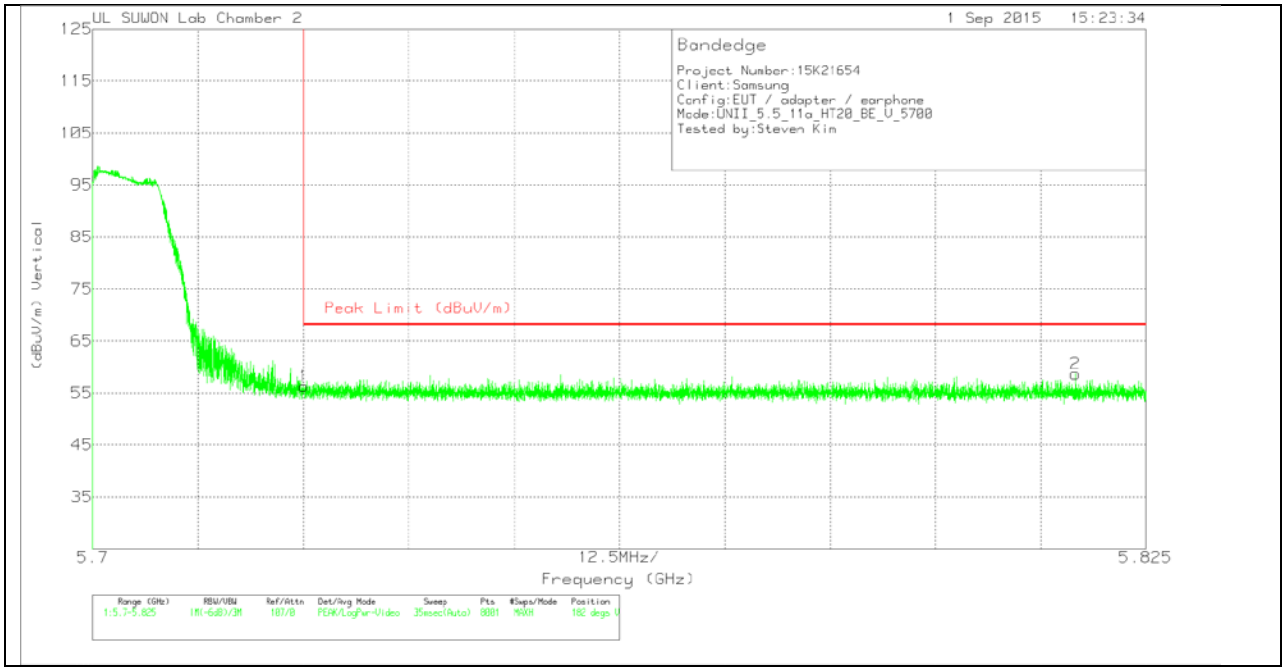
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_2_10 dB	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	41.18	Pk	34.7	-15.6	0	60.28	68.2	-7.92	280	336	H
2	5.727	44.29	Pk	34.7	-15.6	0	63.39	68.2	-4.81	280	336	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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

TRACE MARKERS

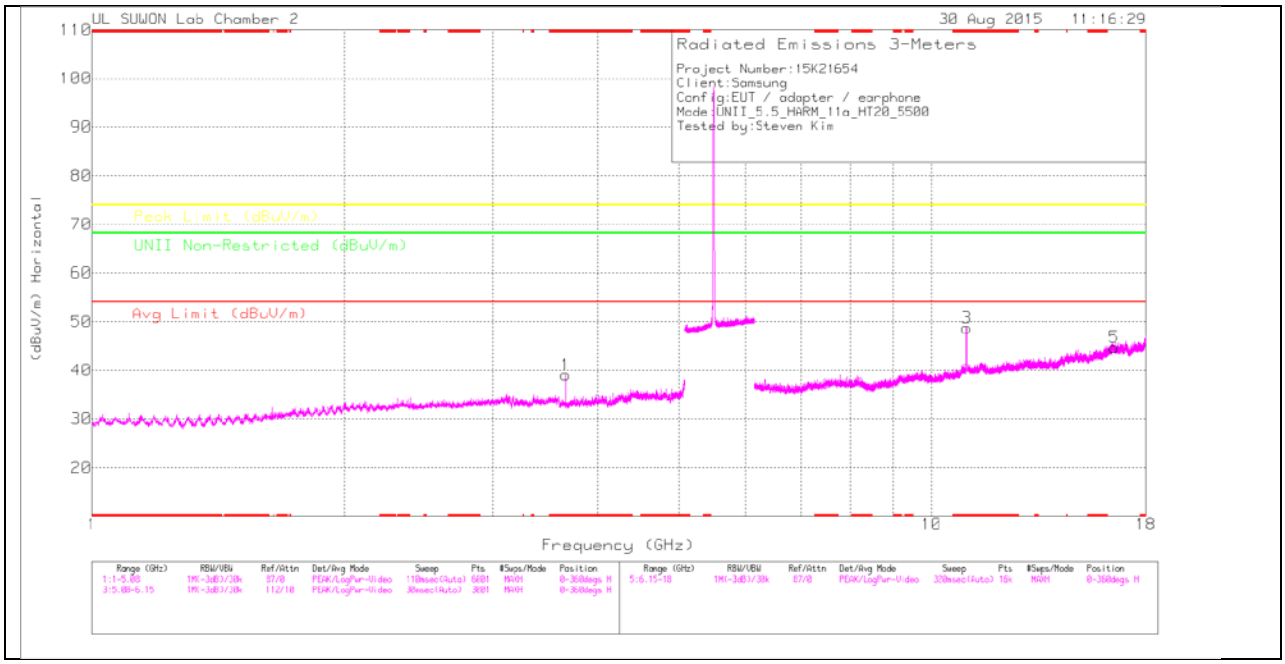
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_2_10 dB	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	37.21	Pk	34.7	-15.6	0	56.31	68.2	-11.89	182	103	V
2	5.817	39.36	Pk	34.7	-15.4	0	58.66	68.2	-9.54	182	103	V

Pk - Peak detector

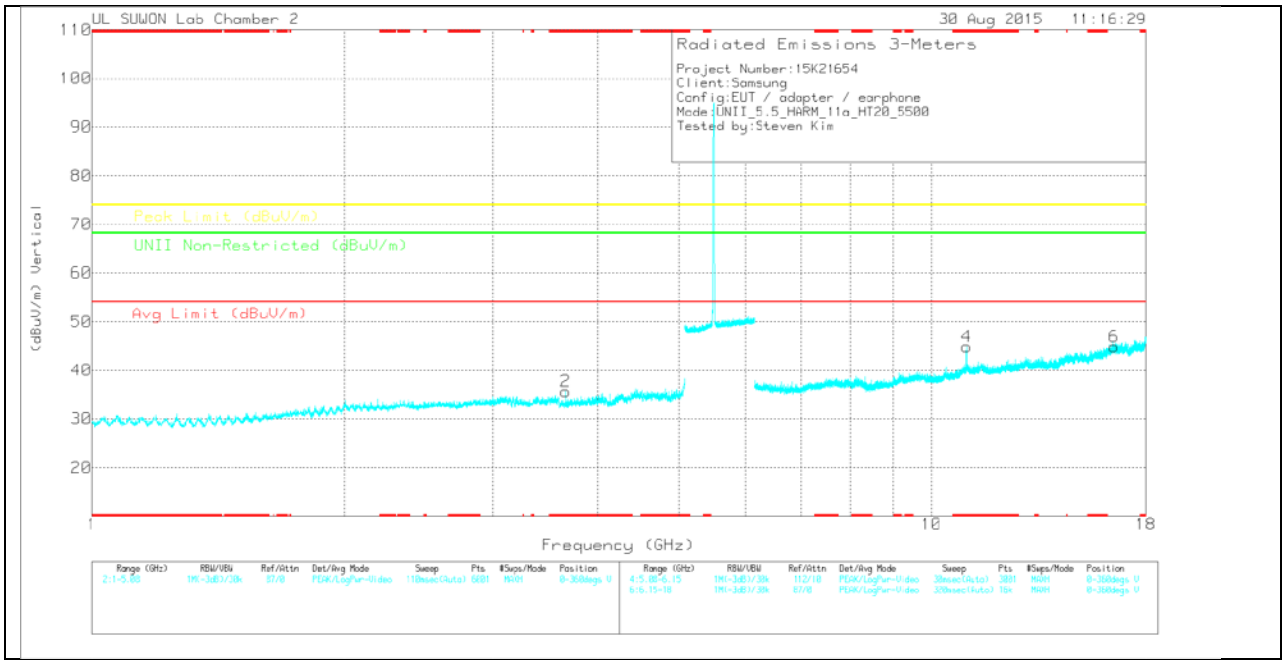
UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902 FAX: (031) 213-5433
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.666	32.25	PK	32.9	-26.1	0	39.05	-	-	74	-34.95	-	-	0-360	200	H
2	* 3.667	28.82	PK	32.9	-26.1	0	35.62	-	-	74	-38.38	-	-	0-360	200	V
3	* 11.004	28.39	PK	38	-17.6	0	48.79	-	-	74	-25.21	-	-	0-360	200	H
5	16.509	19.84	PK	41	-16.1	0	44.74	-	-	-	-	68.2	-23.46	0-360	200	H
4	* 11.004	24.42	PK	38	-17.6	0	44.82	-	-	74	-29.18	-	-	0-360	200	V
6	16.512	19.9	PK	41	-16.1	0	44.8	-	-	-	-	68.2	-23.4	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.666	39.31	PK-U	32.9	-26.1	0	46.11	-	-	74	-27.89	-	-	262	328	H
* 3.667	29.96	ADR	32.9	-26.1	0	36.76	54	-17.24	-	-	-	-	262	328	H
* 3.667	38.29	PK-U	32.9	-26.1	0	45.09	-	-	74	-28.91	-	-	213	182	V
* 3.667	28.14	ADR	32.9	-26.1	0	34.94	54	-19.06	-	-	-	-	213	182	V
* 11.002	25.79	ADR	38	-17.6	.3	46.49	54	-7.51	-	-	-	-	220	153	H
* 11.002	23.26	ADR	38	-17.6	.3	43.96	54	-10.04	-	-	-	-	260	343	V
* 10.999	39.83	PK-U	38	-17.6	0	60.23	-	-	74	-13.77	-	-	220	153	H
* 10.999	36.53	PK-U	38	-17.6	0	56.93	-	-	74	-17.07	-	-	260	343	V

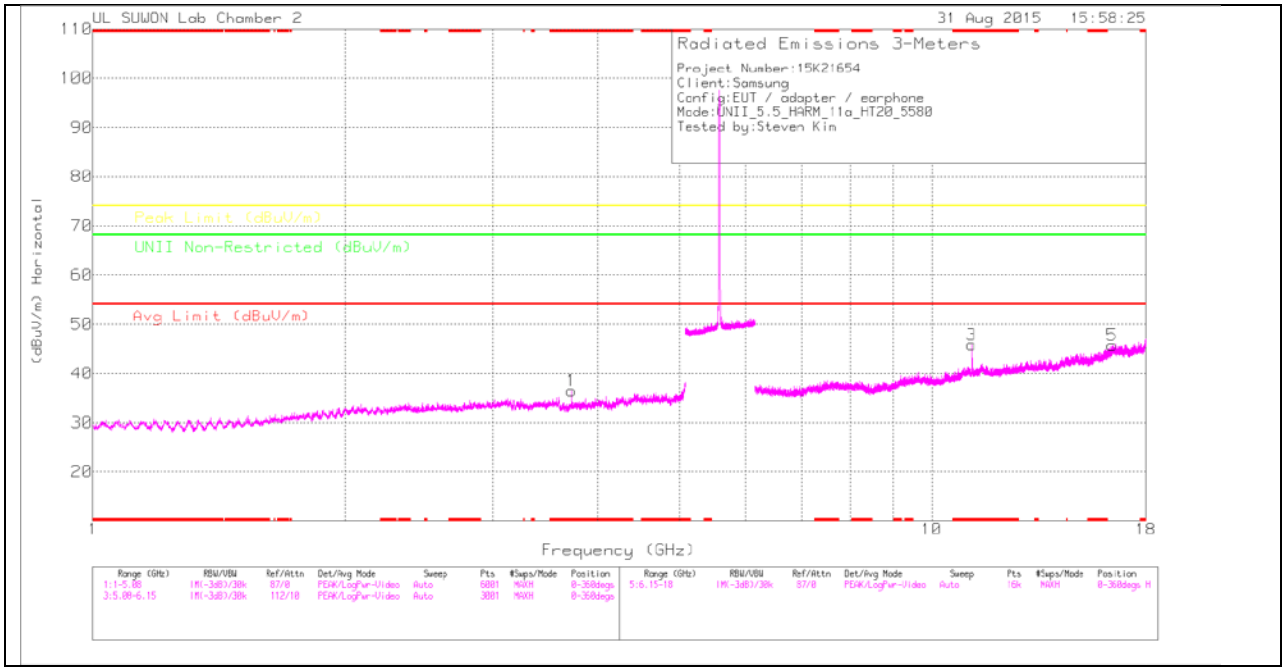
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

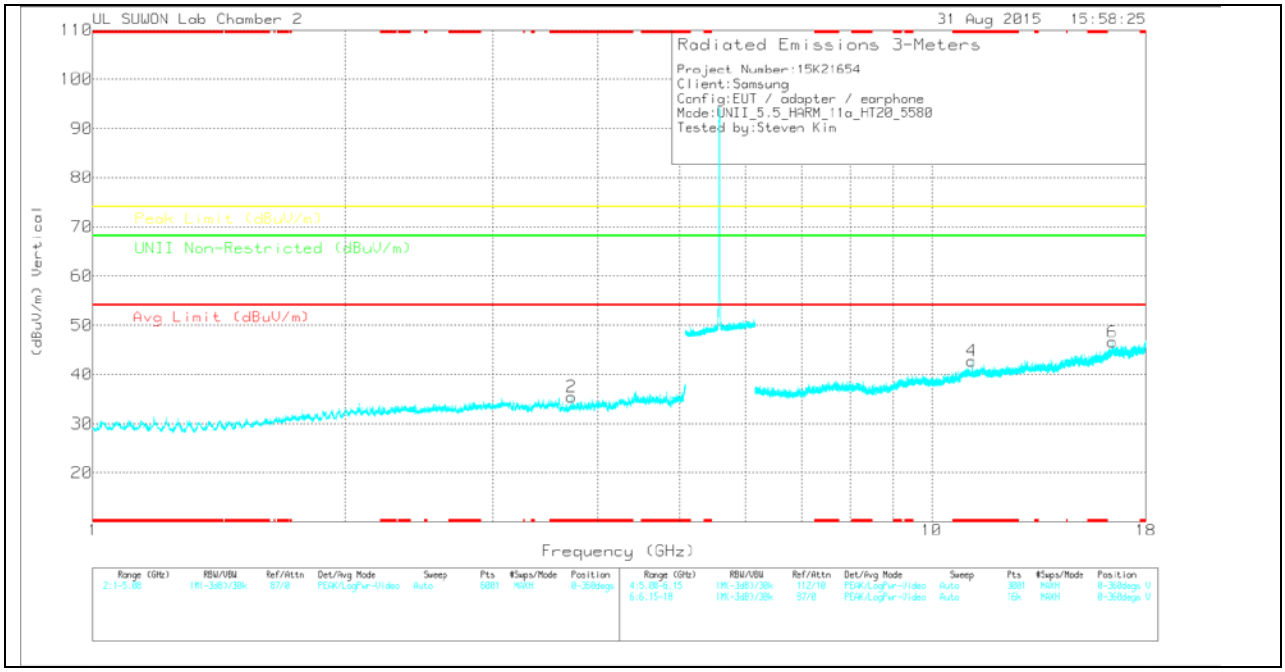
ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.72	29.5	PK	33	-26	0	36.5	-	-	74	-37.5	-	-	0-360	200	H
2	* 3.72	28.48	PK	33	-26	0	35.48	-	-	74	-38.52	-	-	0-360	100	V
3	* 11.161	25.39	PK	38.1	-17.7	0	45.79	-	-	74	-28.21	-	-	0-360	200	H
5	16.406	20.92	PK	40.9	-16.1	0	45.72	-	-	-	-	68.2	-22.48	0-360	200	H
4	* 11.161	22.34	PK	38.1	-17.7	0	42.74	-	-	74	-31.26	-	-	0-360	200	V
6	16.409	21.79	PK	40.9	-16.1	0	46.59	-	-	-	-	68.2	-21.61	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.72	38.47	PK-U	33	-26	0	45.47	-	-	74	-28.53	-	-	335	221	H
* 3.72	28.73	ADR	33	-26	0	35.73	54	-18.27	-	-	-	-	335	221	H
* 3.72	38.76	PK-U	33	-26	0	45.76	-	-	74	-28.24	-	-	154	242	V
* 3.72	28.69	ADR	33	-26	0	35.69	54	-18.31	-	-	-	-	154	242	V
* 11.162	24.86	ADR	38.1	-17.7	.3	45.56	54	-8.44	-	-	-	-	239	191	H
* 11.162	18.74	ADR	38.1	-17.7	.3	39.44	54	-14.56	-	-	-	-	106	179	V
* 11.161	37.91	PK-U	38.1	-17.7	0	58.31	-	-	74	-15.69	-	-	239	191	H
16.404	30.01	PK-U	40.9	-16.1	0	54.81	-	-	-	-	68.2	-13.39	98	397	H
* 11.161	33.22	PK-U	38.1	-17.7	0	53.62	-	-	74	-20.38	-	-	106	179	V
16.407	30.01	PK-U	40.9	-16.1	0	54.81	-	-	-	-	68.2	-13.39	296	397	V

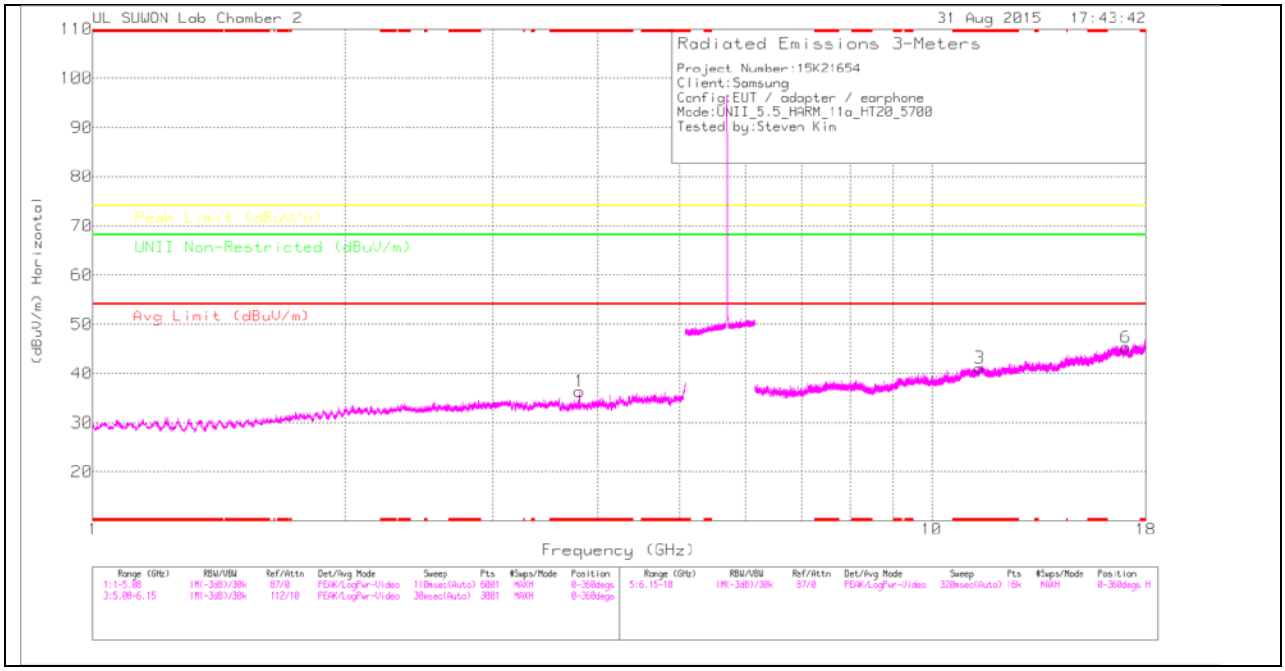
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

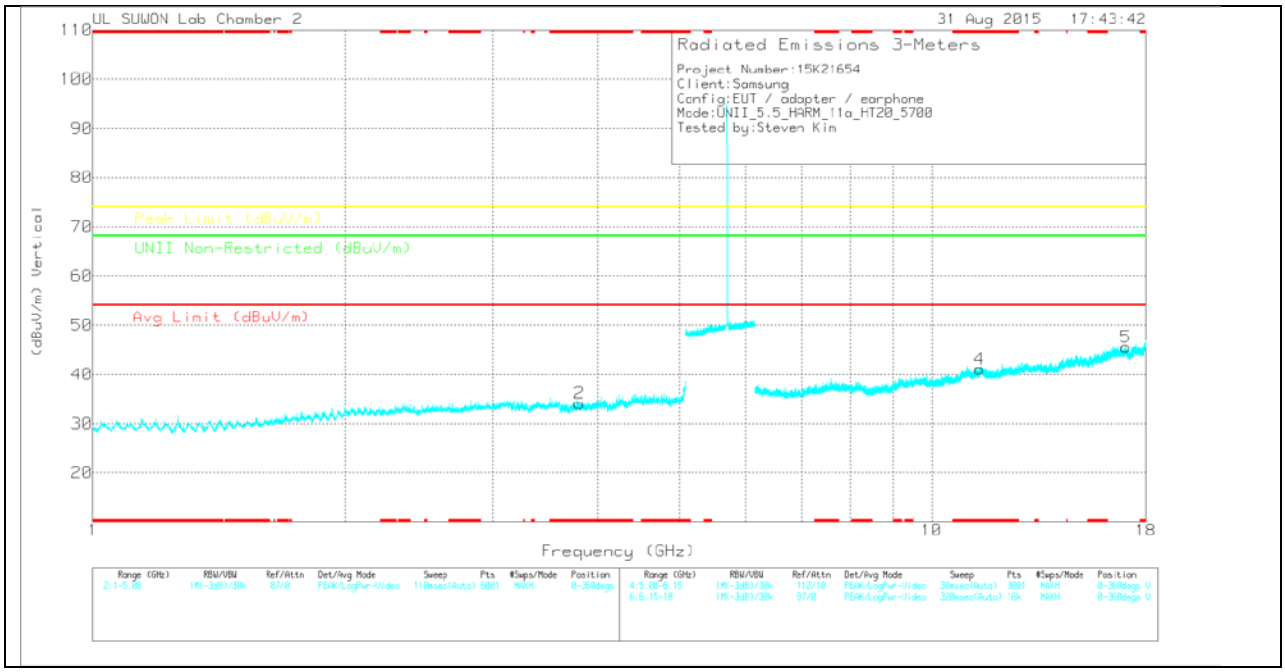
ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.8	29.12	PK	33.1	-25.9	0	36.32	-	-	74	-37.68	-	-	0-360	200	H
2	* 3.8	26.92	PK	33.1	-25.9	0	34.12	-	-	74	-39.88	-	-	0-360	200	V
3	* 11.402	20.02	PK	38.3	-17.2	0	41.12	-	-	74	-32.88	-	-	0-360	100	H
6	17.056	19.52	PK	41.1	-15.3	0	45.32	-	-	-	-	68.2	-22.88	0-360	200	H
4	* 11.401	20.01	PK	38.3	-17.2	0	41.11	-	-	74	-32.89	-	-	0-360	100	V
5	17.064	19.78	PK	41.1	-15.3	0	45.58	-	-	-	-	68.2	-22.62	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.8	37.18	PK-U	33.1	-25.9	0	44.38	-	-	74	-29.62	-	-	249	153	H
* 3.8	27.21	ADR	33	-25.9	0	34.31	54	-19.69	-	-	-	-	249	153	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

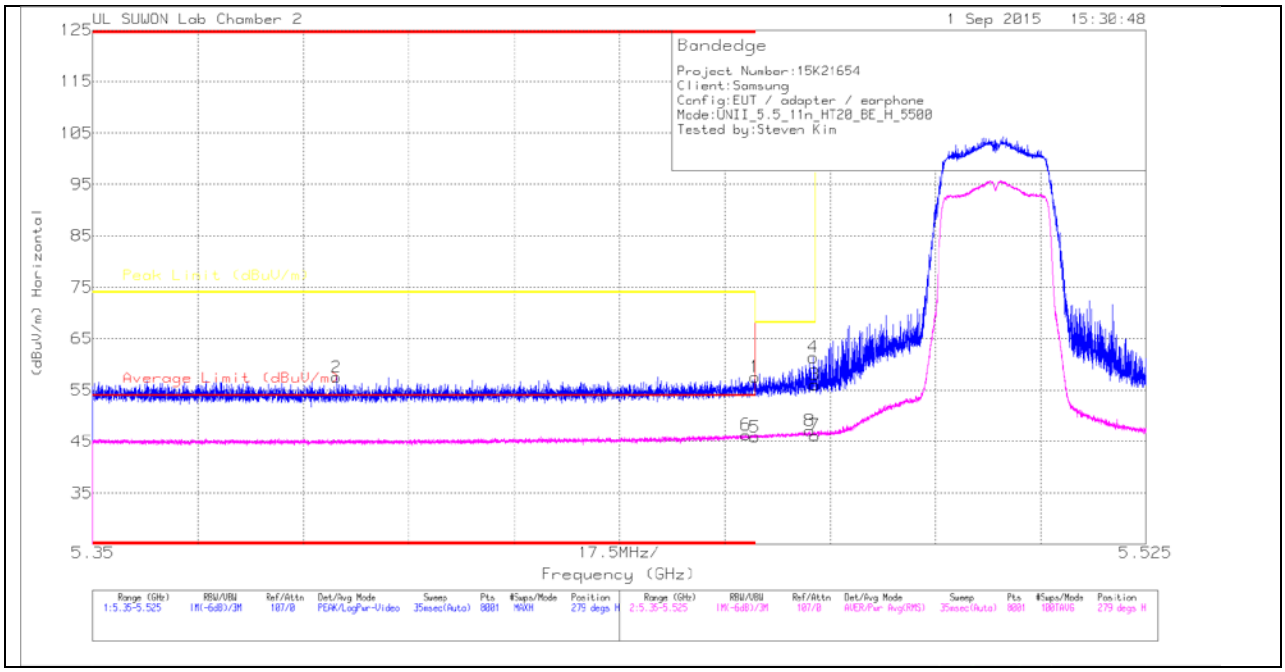
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

11.3.2. TX ABOVE 1 GHz 802.11n HT20 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	3117(00168724)_150619	Path_2_10dB	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	39.25	Pk	34.5	-16.2	0	57.55	-	-	74	-16.45	279	296	H
2	* 5.39	39.41	Pk	34.4	-16.3	0	57.51	-	-	74	-16.49	279	296	H
3	5.47	37.76	Pk	34.5	-16.2	0	56.06	-	-	68.2	-12.14	279	296	H
4	5.47	43.07	Pk	34.5	-16.2	0	61.37	-	-	68.2	-6.83	279	296	H
5	* 5.46	27.25	RMS	34.5	-16.2	.32	45.87	54	-8.13	-	-	279	296	H
6	* 5.459	27.69	RMS	34.5	-16.2	.32	46.31	54	-7.69	-	-	279	296	H
7	5.47	27.58	RMS	34.5	-16.2	.32	46.2	-	-	-	-	279	296	H
8	5.469	28.51	RMS	34.5	-16.2	.32	47.13	-	-	-	-	279	296	H

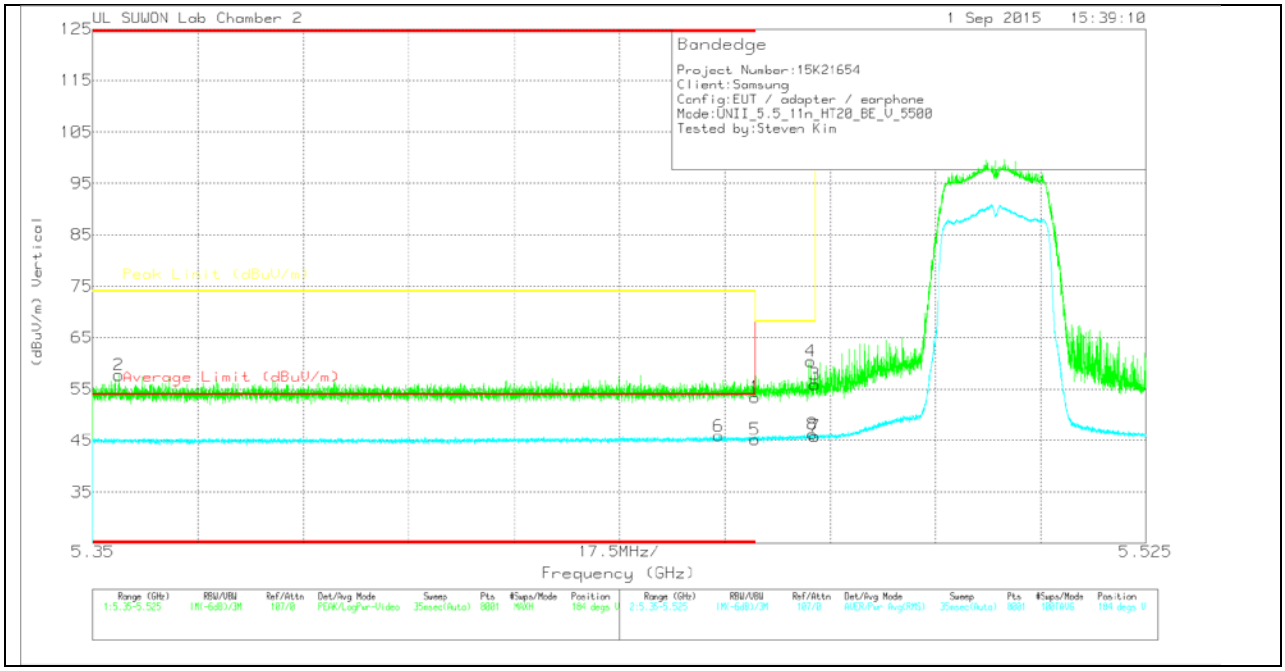
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_2_10dB	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	35.09	Pk	34.5	-16.2	0	53.39	-	-	74	-20.61	184	196	V
2	* 5.354	39.6	Pk	34.4	-16.3	0	57.7	-	-	74	-16.3	184	196	V
3	5.47	37.65	Pk	34.5	-16.2	0	55.95	-	-	68.2	-12.25	184	196	V
4	5.469	42.12	Pk	34.5	-16.2	0	60.42	-	-	68.2	-7.78	184	196	V
5	* 5.46	26.57	RMS	34.5	-16.2	.32	45.19	54	-8.81	-	-	184	196	V
6	* 5.454	27.29	RMS	34.5	-16.2	.32	45.91	54	-8.09	-	-	184	196	V
7	5.47	27.18	RMS	34.5	-16.2	.32	45.8	-	-	-	-	184	196	V
8	5.47	27.65	RMS	34.5	-16.2	.32	46.27	-	-	-	-	184	196	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

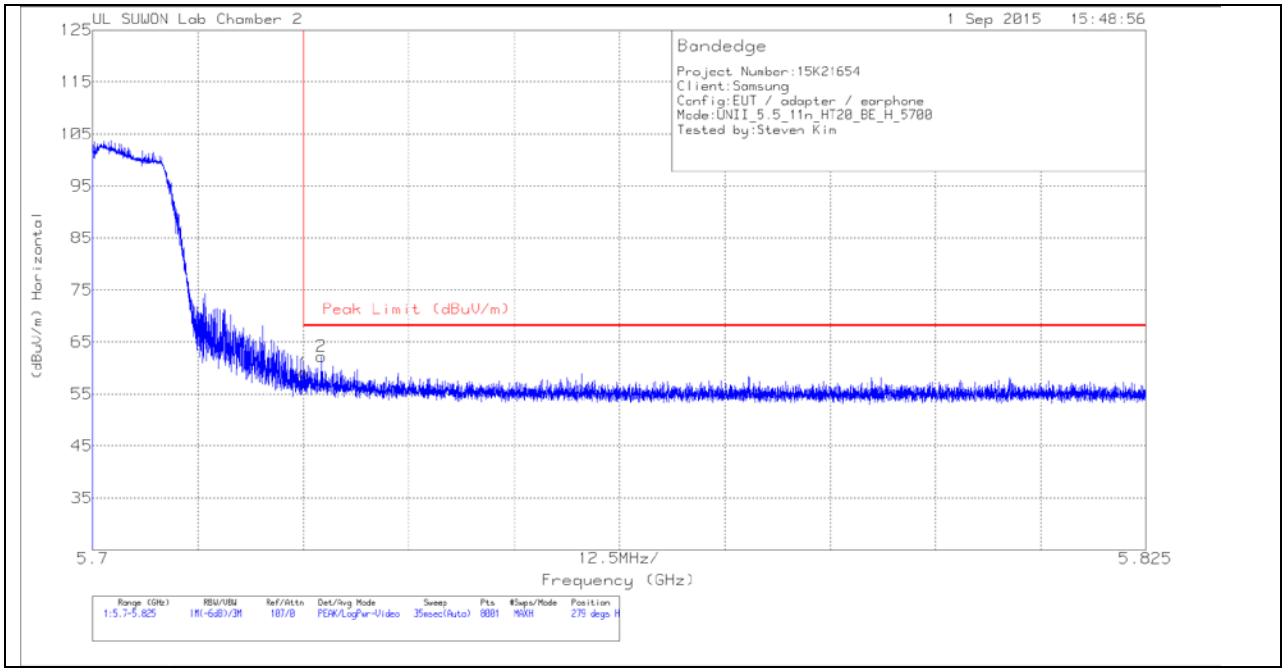
Pk - Peak detector

RMS - RMS detection

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

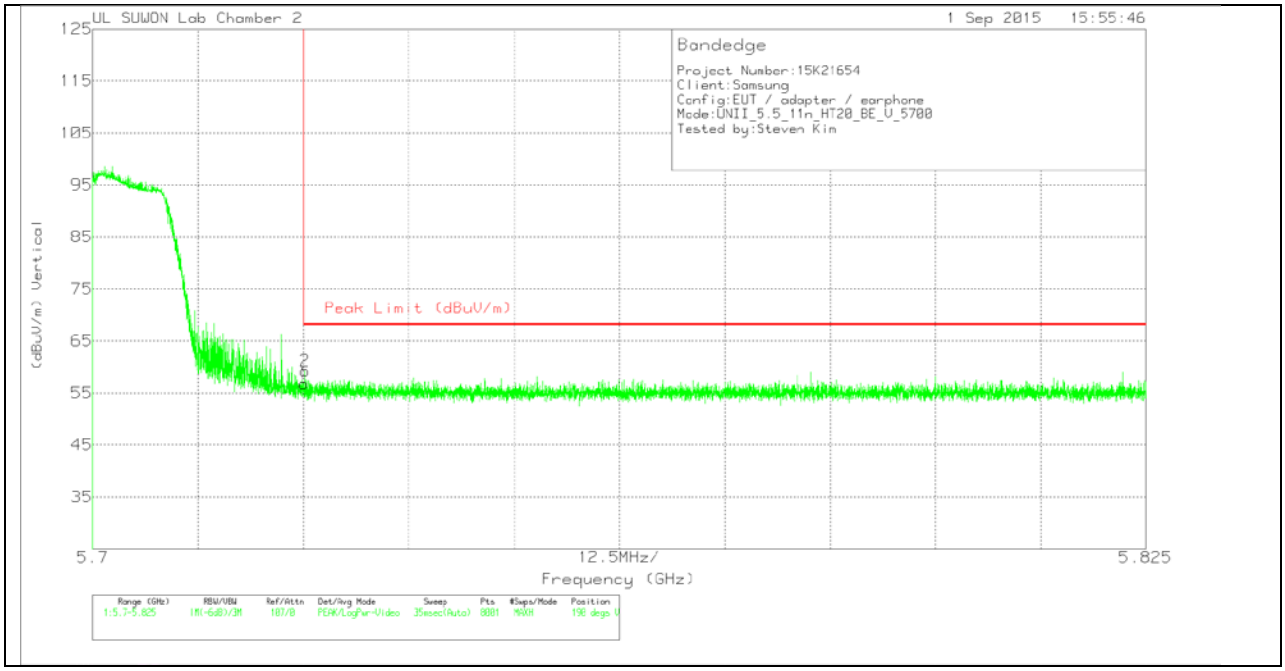
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_2_10 dB	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	39.98	Pk	34.7	-15.6	0	59.08	68.2	-9.12	279	335	H
2	5.727	43.14	Pk	34.7	-15.6	0	62.24	68.2	-5.96	279	335	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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

TRACE MARKERS

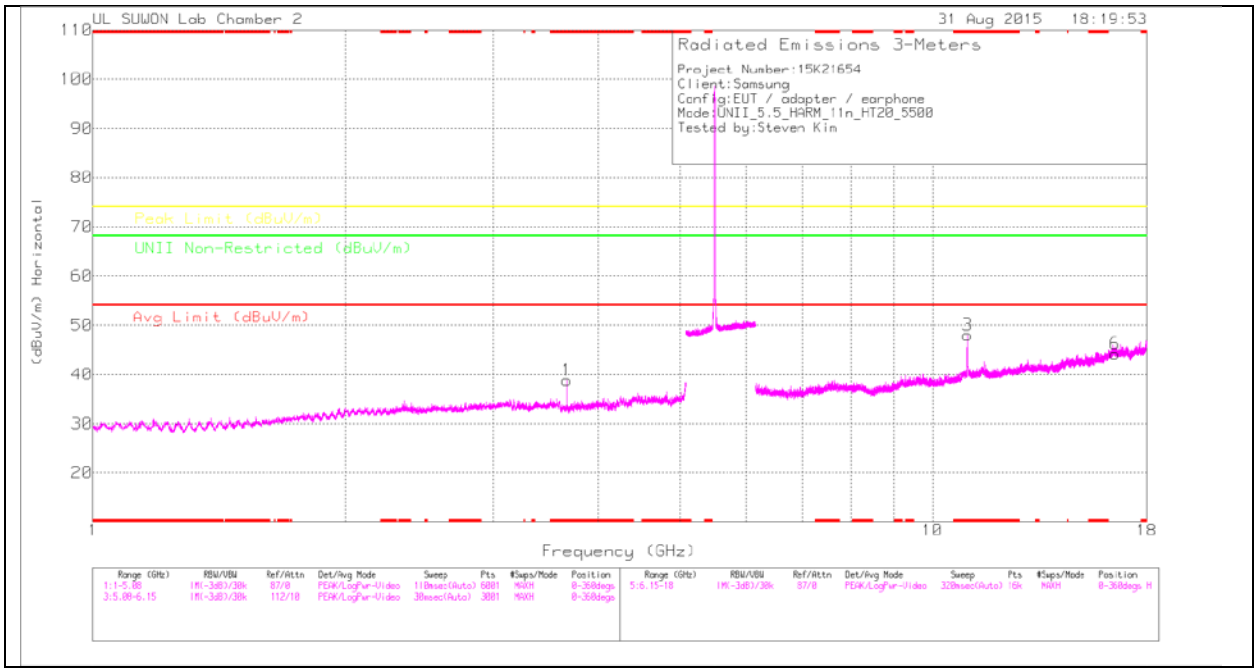
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_2_10 dB	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	37.73	Pk	34.7	-15.6	0	56.83	68.2	-11.37	190	103	V
2	5.725	40.14	Pk	34.7	-15.6	0	59.24	68.2	-8.96	190	103	V

Pk - Peak detector

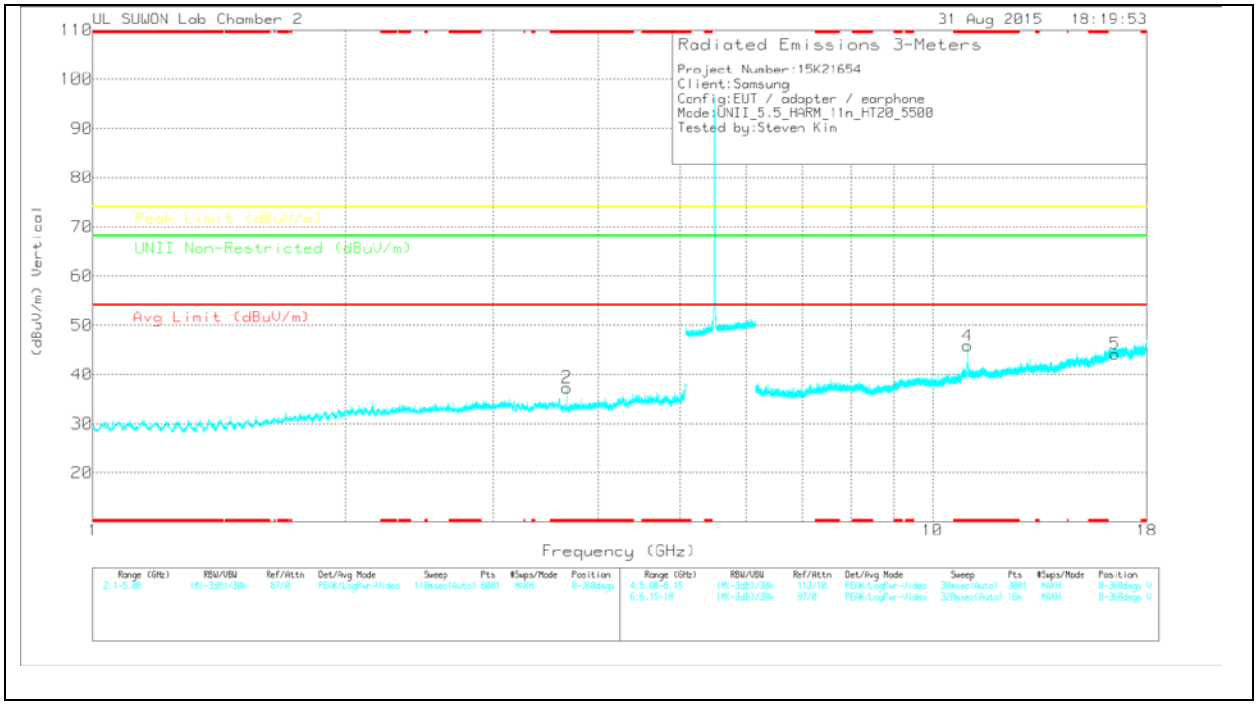
UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902 FAX: (031) 213-5433
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.667	32.03	PK	32.9	-26.1	0	38.83	-	-	74	-35.17	-	-	0-360	200	H
2	* 3.667	30.49	PK	32.9	-26.1	0	37.29	-	-	74	-36.71	-	-	0-360	200	V
3	* 11.001	27.63	PK	38	-17.6	0	48.03	-	-	74	-25.97	-	-	0-360	200	H
6	16.497	19.28	PK	41	-16.1	0	44.18	-	-	-	-	68.2	-24.02	0-360	100	H
4	* 11.002	25.39	PK	38	-17.6	0	45.79	-	-	74	-28.21	-	-	0-360	200	V
5	16.5	19.25	PK	41	-16.1	0	44.15	-	-	-	-	68.2	-24.05	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.667	39.15	PK-U	32.9	-26.1	0	45.95	-	-	74	-28.05	-	-	325	189	H
* 3.667	30.49	ADR	32.9	-26.1	0	37.29	54	-16.71	-	-	-	-	325	189	H
* 3.667	39.35	PK-U	32.9	-26.1	0	46.15	-	-	74	-27.85	-	-	177	238	V
* 3.667	30.36	ADR	32.9	-26.1	0	37.16	54	-16.84	-	-	-	-	177	238	V
* 11	20.54	ADR	38	-17.6	.32	41.26	54	-12.74	-	-	-	-	213	102	H
* 11	20.96	ADR	38	-17.6	.32	41.68	54	-12.32	-	-	-	-	111	345	V
* 11.002	34.87	PK-U	38	-17.6	0	55.27	-	-	74	-18.73	-	-	213	102	H
* 11.002	36.5	PK-U	38	-17.6	0	56.9	-	-	74	-17.1	-	-	111	345	V

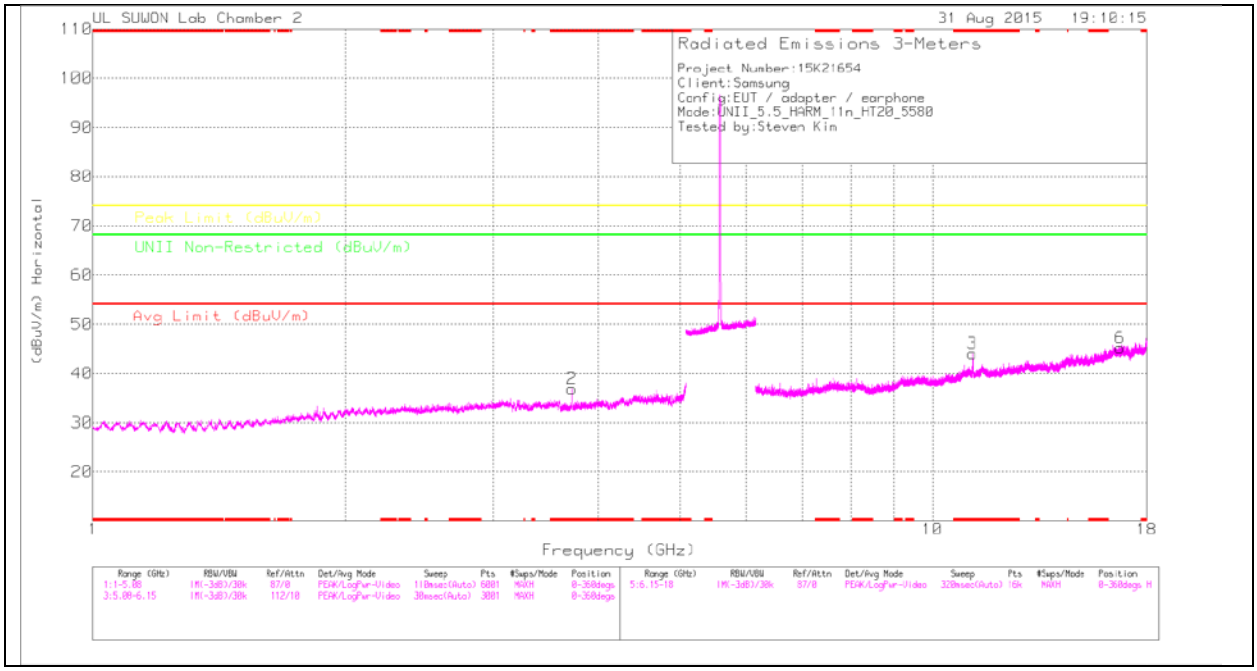
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

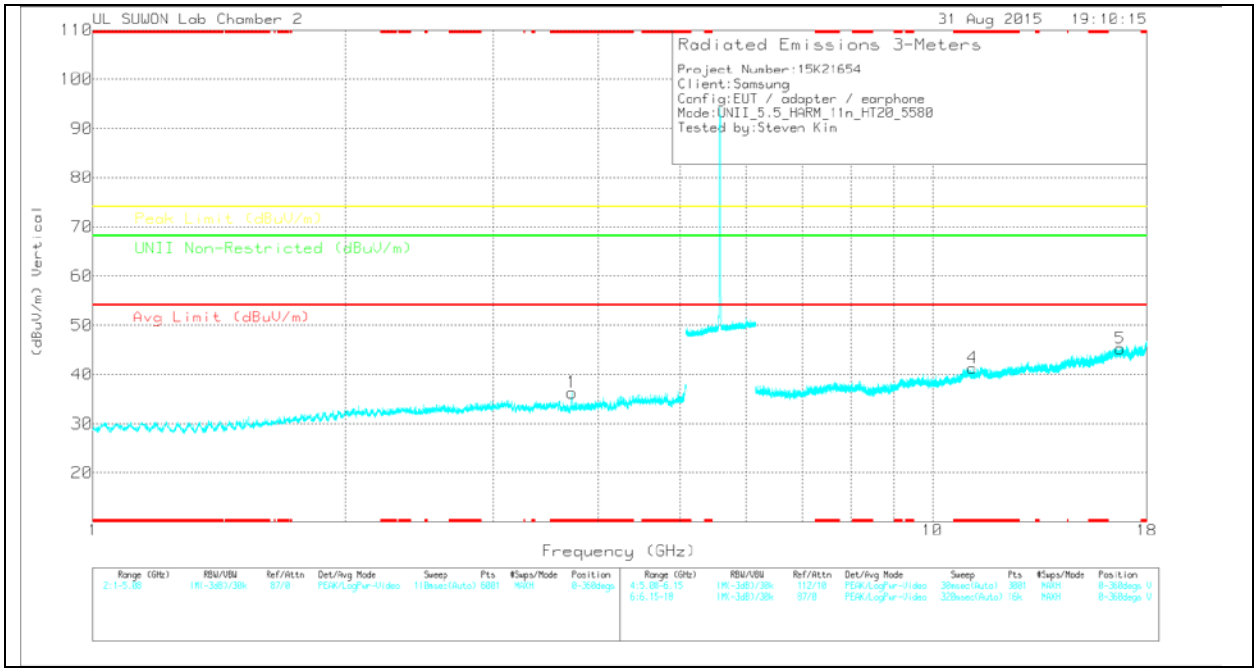
ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
2	* 3.72	29.87	PK	33	-26	0	36.87	-	-	74	-37.13	-	-	0-360	200	H
1	* 3.72	29.31	PK	33	-26	0	36.31	-	-	74	-37.69	-	-	0-360	200	V
3	* 11.161	23.61	PK	38.1	-17.7	0	44.01	-	-	74	-29.99	-	-	0-360	200	H
6	16.739	19.79	PK	41	-15.6	0	45.19	-	-	-	-	68.2	-23.01	0-360	100	H
4	* 11.16	20.9	PK	38.1	-17.7	0	41.3	-	-	74	-32.7	-	-	0-360	200	V
5	16.74	19.85	PK	41	-15.6	0	45.25	-	-	-	-	68.2	-22.95	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.72	39.62	PK-U	33	-26	0	46.62	-	-	74	-27.38	-	-	258	324	H
* 3.72	30.85	ADR	33	-26	0	37.85	54	-16.15	-	-	-	-	258	324	H
* 3.72	38.66	PK-U	33	-26	0	45.66	-	-	74	-28.34	-	-	168	305	V
* 3.72	28.05	ADR	33	-26	0	35.05	54	-18.95	-	-	-	-	168	305	V
* 11.16	20.81	ADR	38.1	-17.7	.32	41.53	54	-12.47	-	-	-	-	209	262	H
* 11.159	20.02	ADR	38.1	-17.7	.32	40.74	54	-13.26	-	-	-	-	55	351	V
* 11.163	35.75	PK-U	38.1	-17.7	0	56.15	-	-	74	-17.85	-	-	209	262	H
* 11.159	33.99	PK-U	38.1	-17.7	0	54.39	-	-	74	-19.61	-	-	55	351	V

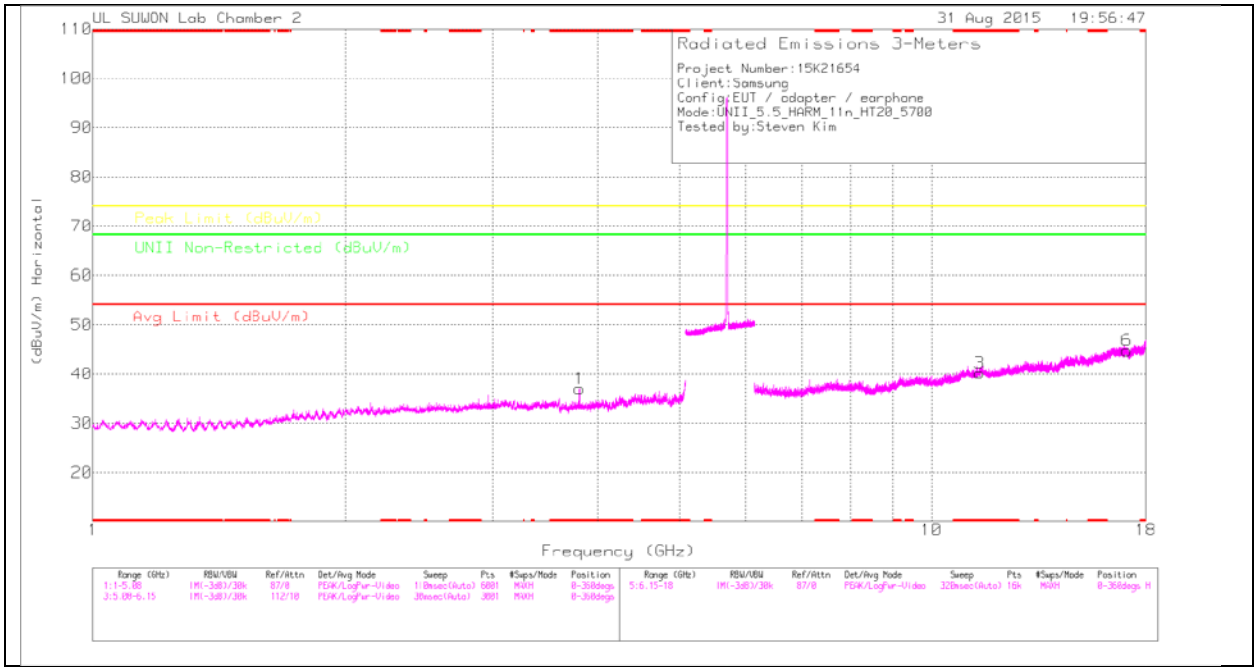
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

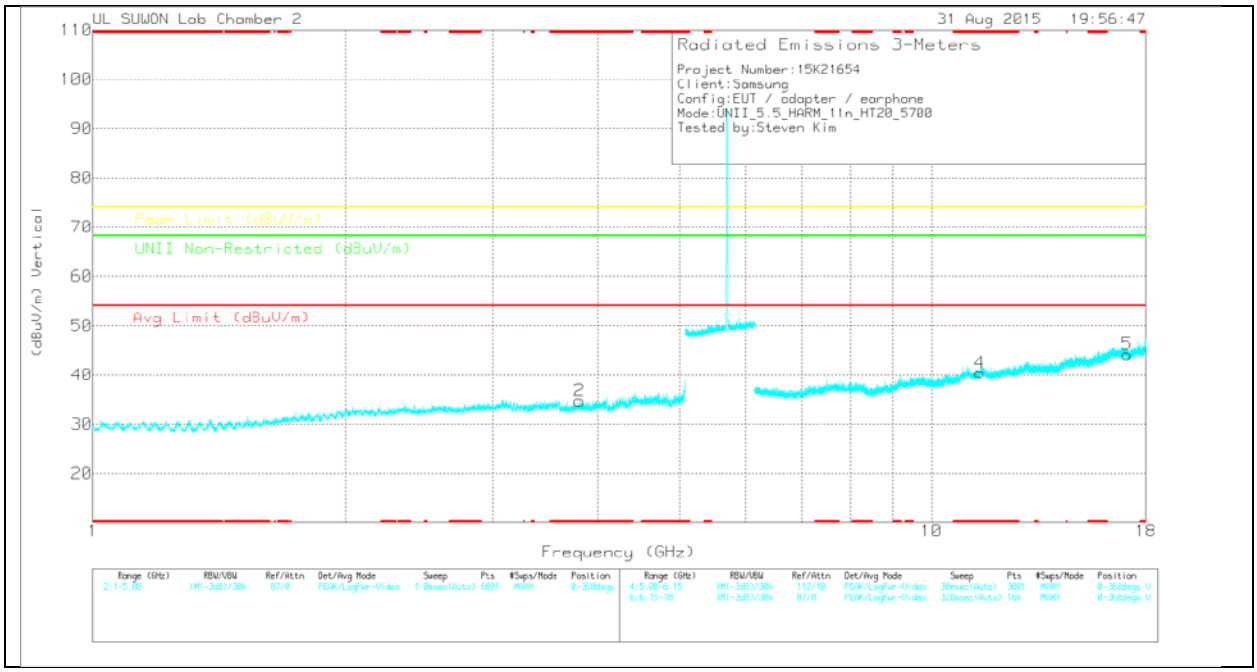
ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.8	29.81	PK	33.1	-25.9	0	37.01	-	-	74	-36.99	-	-	0-360	200	H
2	* 3.8	27.58	PK	33.1	-25.9	0	34.78	-	-	74	-39.22	-	-	0-360	200	V
3	* 11.398	19.11	PK	38.3	-17.2	0	40.21	-	-	74	-33.79	-	-	0-360	200	H
6	17.099	18.95	PK	41.1	-15.3	0	44.75	-	-	-	-	68.2	-23.45	0-360	200	H
4	* 11.402	19.34	PK	38.3	-17.2	0	40.44	-	-	74	-33.56	-	-	0-360	100	V
5	17.099	18.4	PK	41.1	-15.3	0	44.2	-	-	-	-	68.2	-24	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.799	38.37	PK-U	33	-25.9	0	45.47	-	-	74	-28.53	-	-	334	173	H
* 3.8	27.52	ADR	33.1	-25.9	0	34.72	54	-19.28	-	-	-	-	334	173	H
* 3.8	26.19	ADR	33.1	-25.9	0	33.39	54	-20.61	-	-	-	-	165	179	V
* 3.8	30.96	ADR	33.1	-25.9	0	38.16	54	-15.84	-	-	-	-	165	179	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

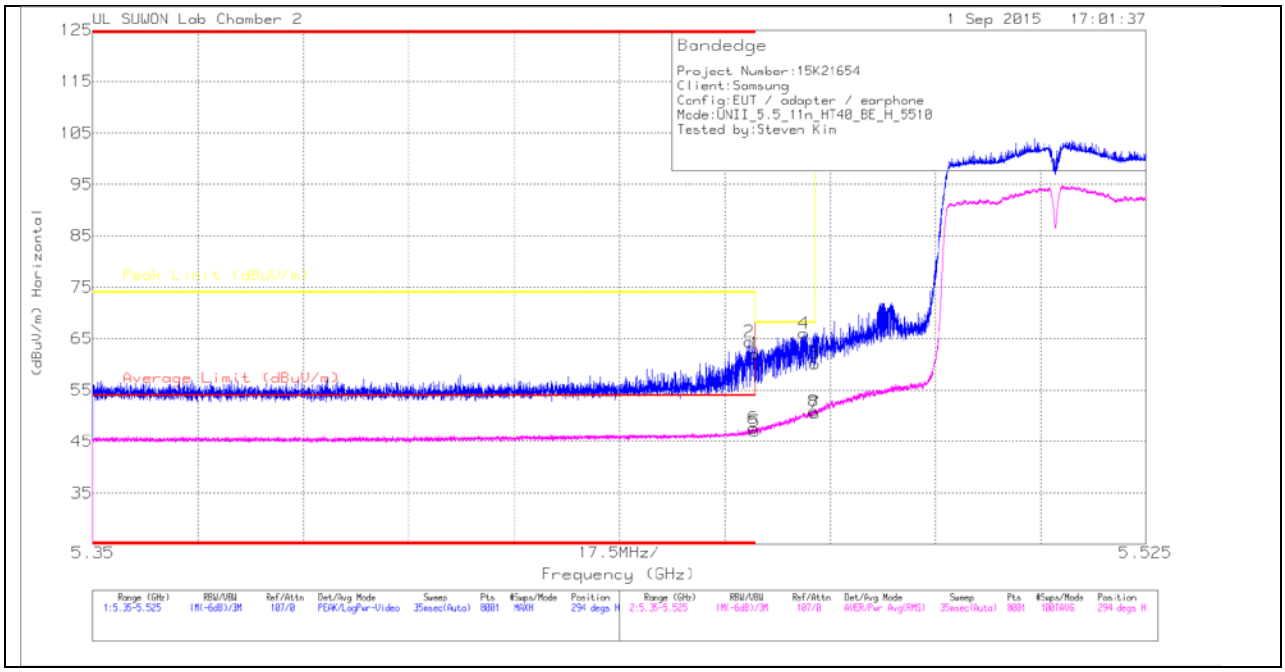
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

11.3.3. TX ABOVE 1 GHz 802.11n HT40 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	3117(00168724)_150619	Path_2_10dB	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	43.77	Pk	34.5	-16.2	0	62.07	-	-	74	-11.93	294	243	H
2	* 5.459	46.08	Pk	34.5	-16.2	0	64.38	-	-	74	-9.62	294	243	H
3	5.47	41.95	Pk	34.5	-16.2	0	60.25	-	-	68.2	-7.95	294	243	H
4	5.468	47.72	Pk	34.5	-16.2	0	66.02	-	-	68.2	-2.18	294	243	H
5	* 5.46	28.08	RMS	34.5	-16.2	.62	47	54	-7	-	-	294	243	H
6	* 5.46	28.7	RMS	34.5	-16.2	.62	47.62	54	-6.38	-	-	294	243	H
7	5.47	31.63	RMS	34.5	-16.2	.62	50.55	-	-	-	-	294	243	H
8	5.47	31.98	RMS	34.5	-16.2	.62	50.9	-	-	-	-	294	243	H

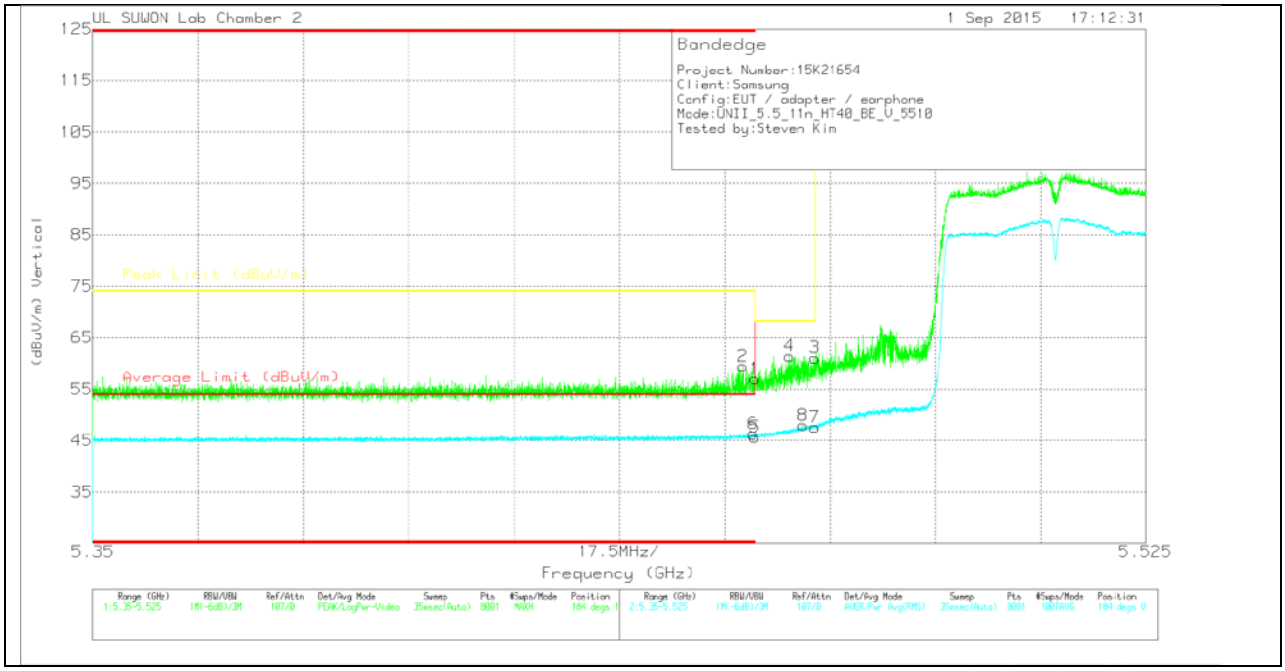
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_2_10dB	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	38.74	Pk	34.5	-16.2	0	57.04	-	-	74	-16.96	184	197	V
2	* 5.458	41.13	Pk	34.5	-16.2	0	59.43	-	-	74	-14.57	184	197	V
3	5.47	42.81	Pk	34.5	-16.2	0	61.11	-	-	68.2	-7.09	184	197	V
4	5.466	43.15	Pk	34.5	-16.2	0	61.45	-	-	68.2	-6.75	184	197	V
5	* 5.46	26.78	RMS	34.5	-16.2	.62	45.7	54	-8.3	-	-	184	197	V
6	* 5.46	27.42	RMS	34.5	-16.2	.62	46.34	54	-7.66	-	-	184	197	V
7	5.47	28.7	RMS	34.5	-16.2	.62	47.62	-	-	-	-	184	197	V
8	5.468	29.07	RMS	34.5	-16.2	.62	47.99	-	-	-	-	184	197	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

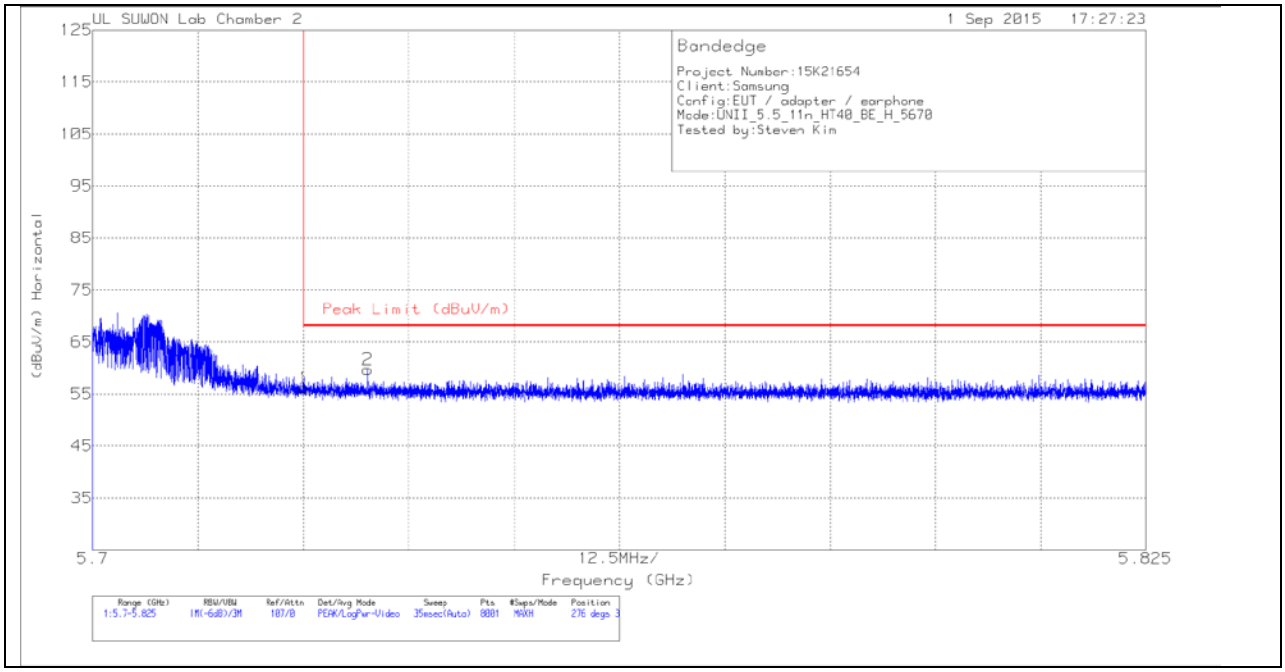
Pk - Peak detector

RMS - RMS detection

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

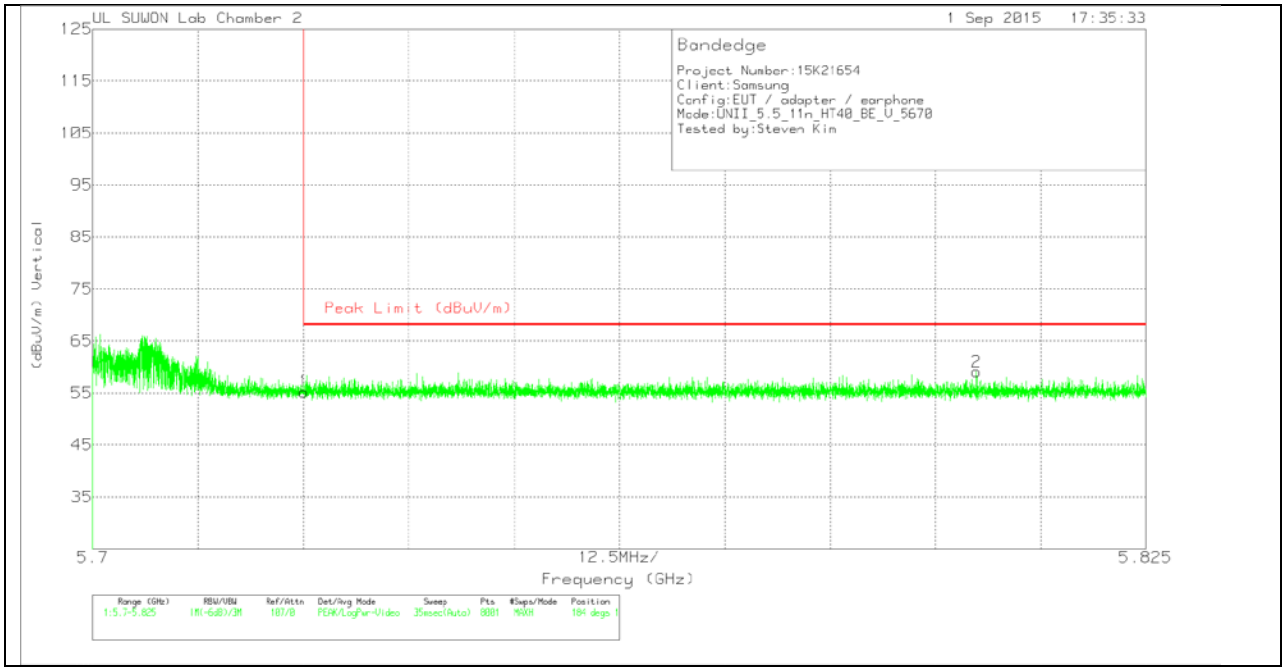
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_2_10 dB	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	37.04	Pk	34.7	-15.6	0	56.14	68.2	-12.06	276	341	H
2	5.733	40.51	Pk	34.7	-15.5	0	59.71	68.2	-8.49	276	341	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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

TRACE MARKERS

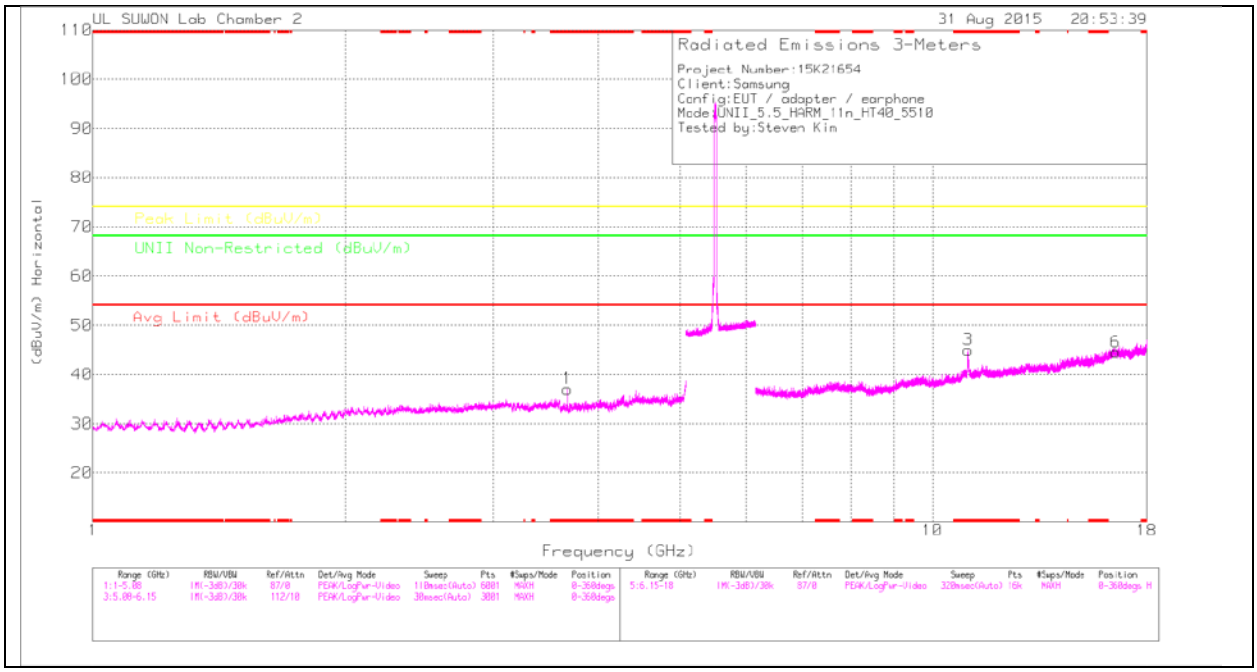
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_2_10 dB	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	36.14	Pk	34.7	-15.6	0	55.24	68.2	-12.96	184	102	V
2	5.805	39.78	Pk	34.7	-15.4	0	59.08	68.2	-9.12	184	102	V

Pk - Peak detector

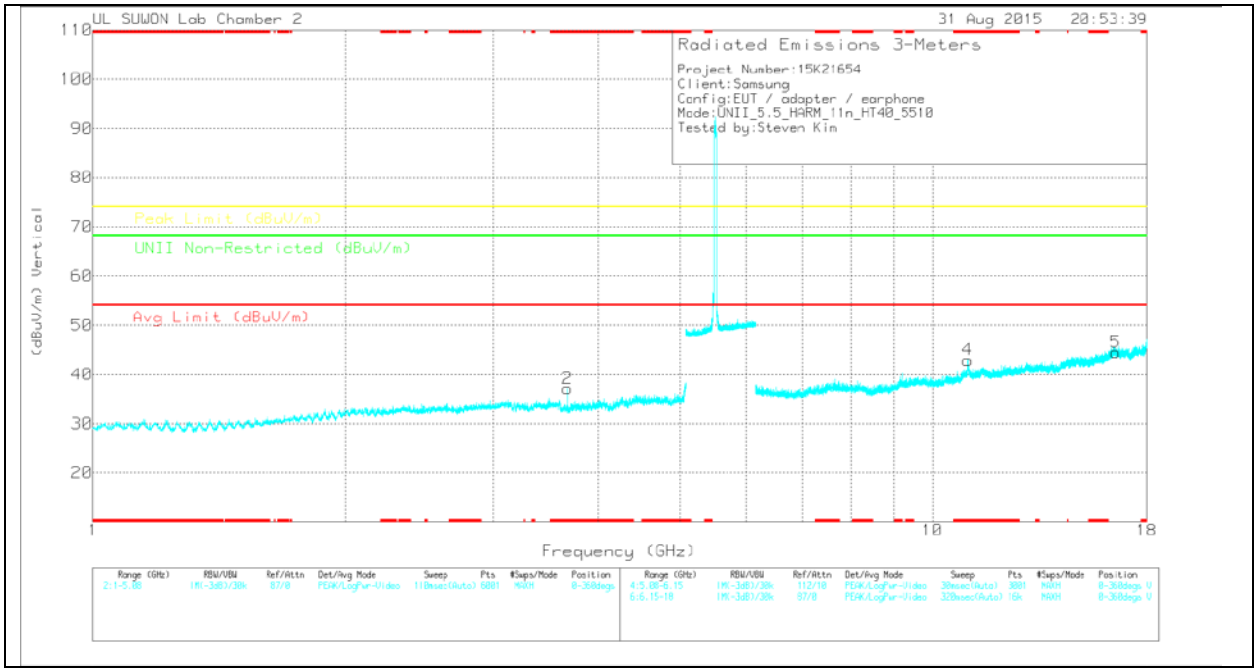
UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902 FAX: (031) 213-5433
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.674	30.26	PK	32.9	-26.1	0	37.06	-	-	74	-36.94	-	-	0-360	200	H
2	* 3.674	30.31	PK	32.9	-26.1	0	37.11	-	-	74	-36.89	-	-	0-360	200	V
3	* 11.017	24.58	PK	38	-17.6	0	44.98	-	-	74	-29.02	-	-	0-360	200	H
6	16.52	19.61	PK	41	-16.1	0	44.51	-	-	-	-	68.2	-23.69	0-360	200	H
4	* 11.012	22.54	PK	38	-17.6	0	42.94	-	-	74	-31.06	-	-	0-360	100	V
5	16.524	19.58	PK	41	-16.1	0	44.48	-	-	-	-	68.2	-23.72	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.673	38.73	PK-U	32.9	-26.1	0	45.53	-	-	74	-28.47	-	-	339	305	H
* 3.673	29.62	ADR	32.9	-26.1	0	36.42	54	-17.58	-	-	-	-	339	305	H
* 3.673	39.44	PK-U	32.9	-26.1	0	46.24	-	-	74	-27.76	-	-	181	276	V
* 3.673	29.53	ADR	32.9	-26.1	0	36.33	54	-17.67	-	-	-	-	181	276	V
* 11.019	22.05	ADR	38	-17.6	.62	43.07	54	-10.93	-	-	-	-	212	179	H
* 11.014	18.91	ADR	38	-17.6	.62	39.93	54	-14.07	-	-	-	-	29	280	V
* 11.016	37.02	PK-U	38	-17.6	0	57.42	-	-	74	-16.58	-	-	212	179	H
* 11.011	31.33	PK-U	38	-17.6	0	51.73	-	-	74	-22.27	-	-	29	280	V

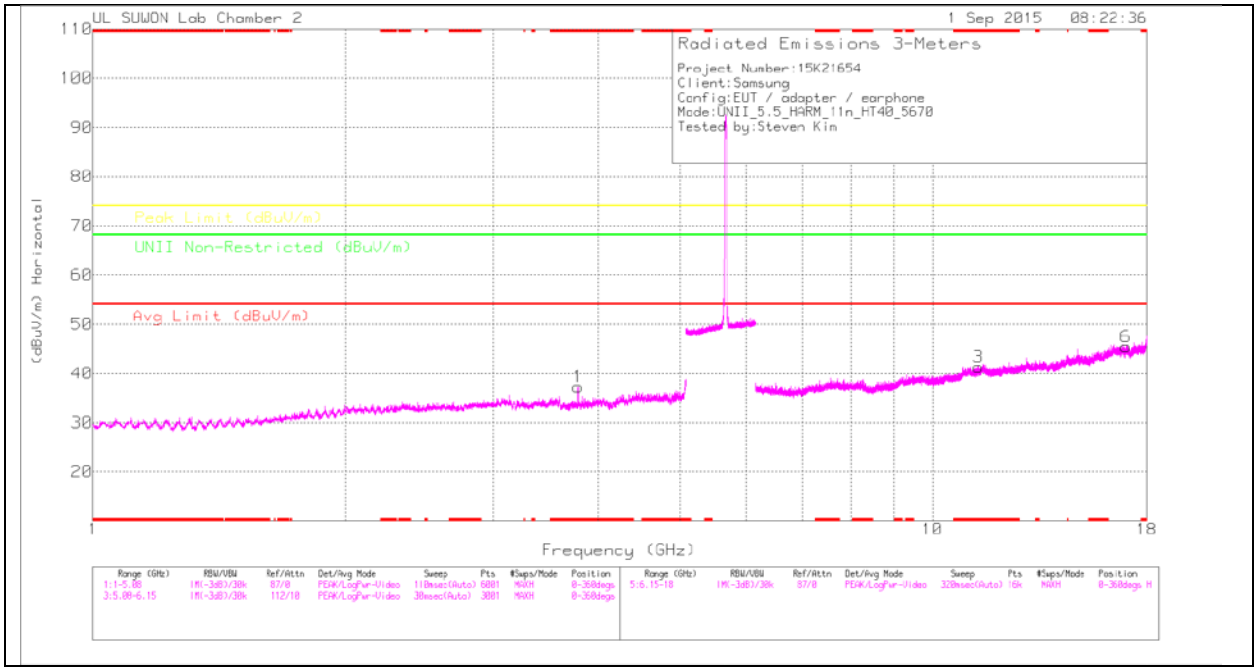
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

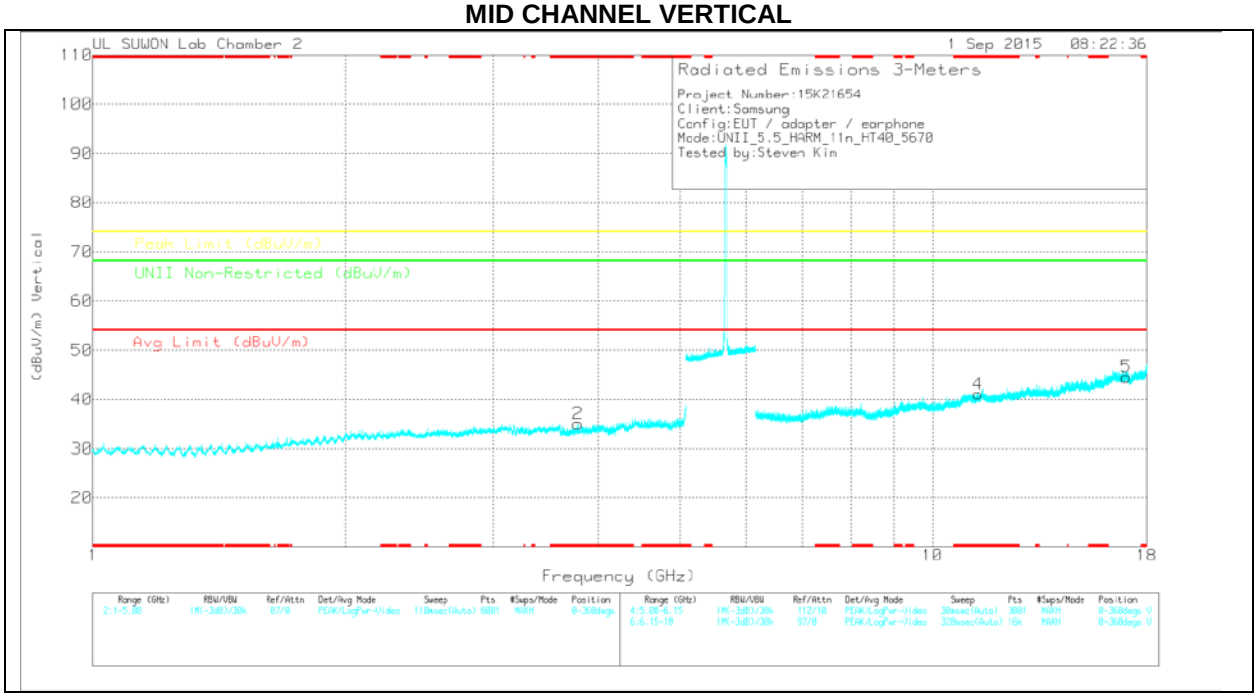
ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.781	30.12	PK	33	-25.9	0	37.22	-	-	74	-36.78	-	-	0-360	200	H
2	* 3.78	27.93	PK	33	-25.9	0	35.03	-	-	74	-38.97	-	-	0-360	200	V
3	* 11.34	20.19	PK	38.2	-17.1	0	41.29	-	-	74	-32.71	-	-	0-360	200	H
6	17.011	19.5	PK	41.1	-15.2	0	45.4	-	-	-	-	68.2	-22.8	0-360	200	H
4	* 11.338	19.95	PK	38.2	-17.1	0	41.05	-	-	74	-32.95	-	-	0-360	200	V
5	17.012	18.69	PK	41.1	-15.2	0	44.59	-	-	-	-	68.2	-23.61	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.78	38.79	PK-U	33	-25.9	0	45.89	-	-	74	-28.11	-	-	263	234	H
* 3.78	29.53	ADR	33	-25.9	0	36.63	54	-17.37	-	-	-	-	263	234	H
* 3.78	38.3	PK-U	33	-25.9	0	45.4	-	-	74	-28.6	-	-	222	208	V
* 3.78	26.79	ADR	33	-25.9	0	33.89	54	-20.11	-	-	-	-	222	208	V

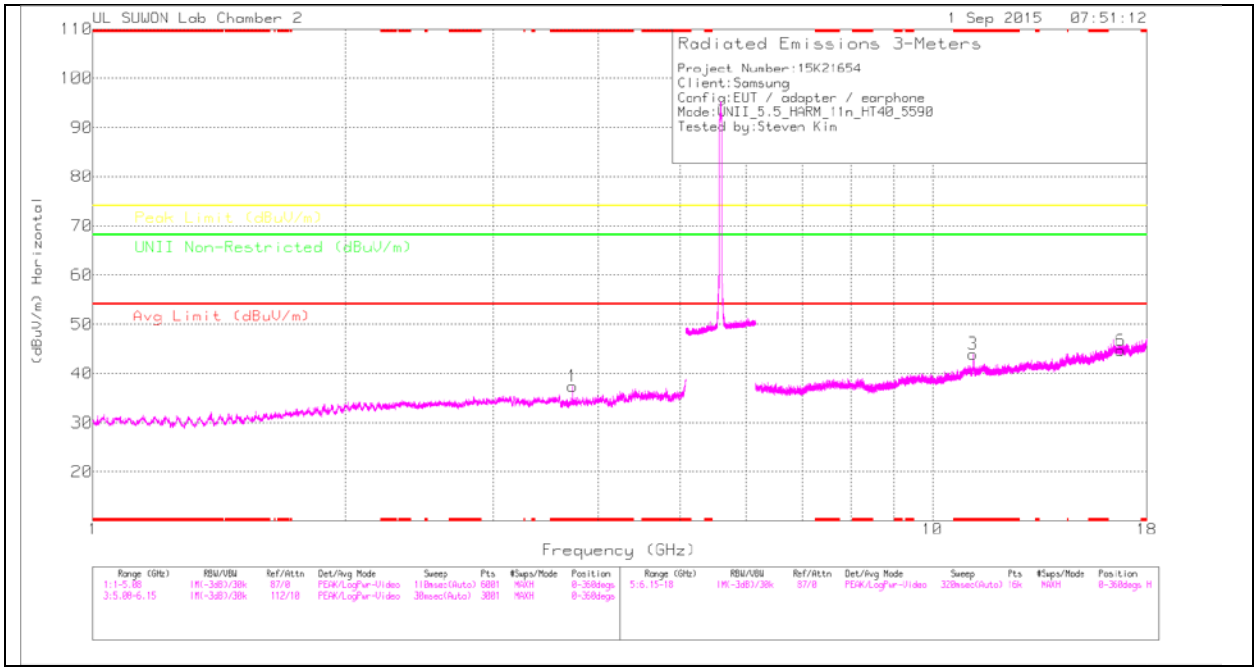
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

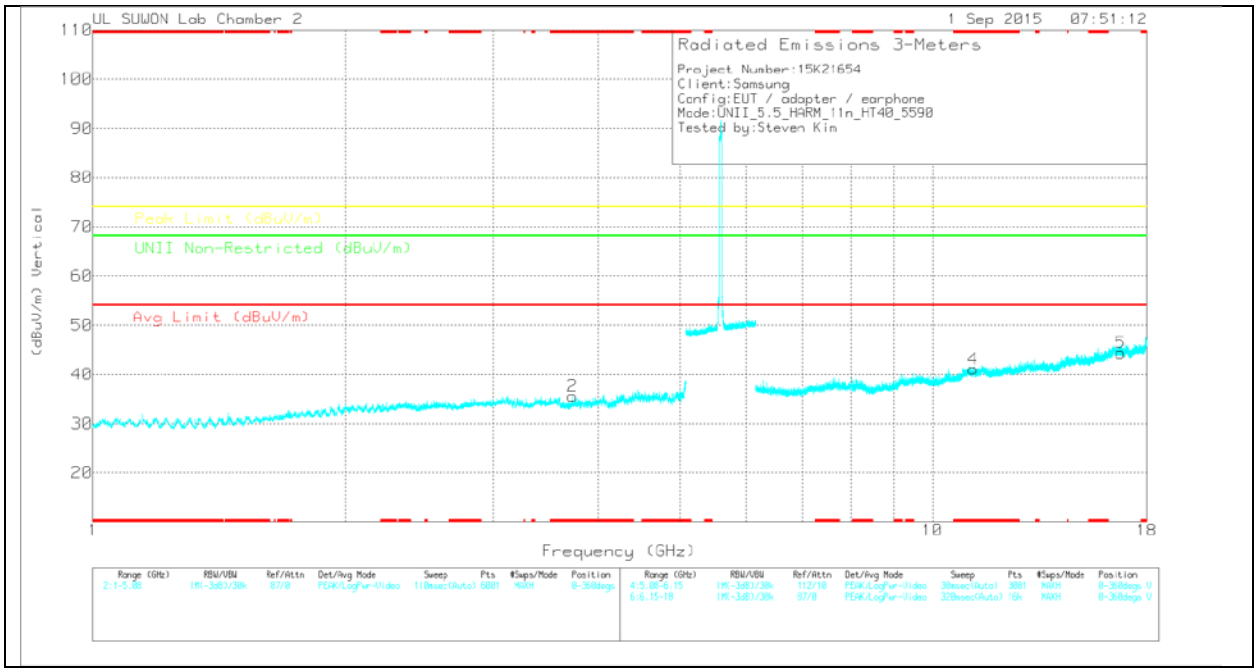
ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.727	30.39	PK	33	-26	0	37.39	-	-	74	-36.61	-	-	0-360	200	H
2	* 3.727	28.59	PK	33	-26	0	35.59	-	-	74	-38.41	-	-	0-360	200	V
3	* 11.181	23.53	PK	38.1	-17.7	0	43.93	-	-	74	-30.07	-	-	0-360	200	H
6	16.769	19.14	PK	41	-15.5	0	44.64	-	-	-	-	68.2	-23.56	0-360	200	H
4	* 11.185	20.66	PK	38.1	-17.7	0	41.06	-	-	74	-32.94	-	-	0-360	200	V
5	16.771	18.85	PK	41	-15.5	0	44.35	-	-	-	-	68.2	-23.85	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.726	38.61	PK-U	33	-26	0	45.61	-	-	74	-28.39	-	-	327	217	H
* 3.727	28.88	ADR	33	-26	0	35.88	54	-18.12	-	-	-	-	327	217	H
* 3.727	38.8	PK-U	33	-26	0	45.8	-	-	74	-28.2	-	-	147	275	V
* 3.727	28.82	ADR	33	-26	0	35.82	54	-18.18	-	-	-	-	147	275	V
* 11.179	20.67	ADR	38.1	-17.7	.62	41.69	54	-12.31	-	-	-	-	243	142	H
* 11.188	36.2	PK-U	38.1	-17.7	0	56.6	-	-	74	-17.4	-	-	243	142	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

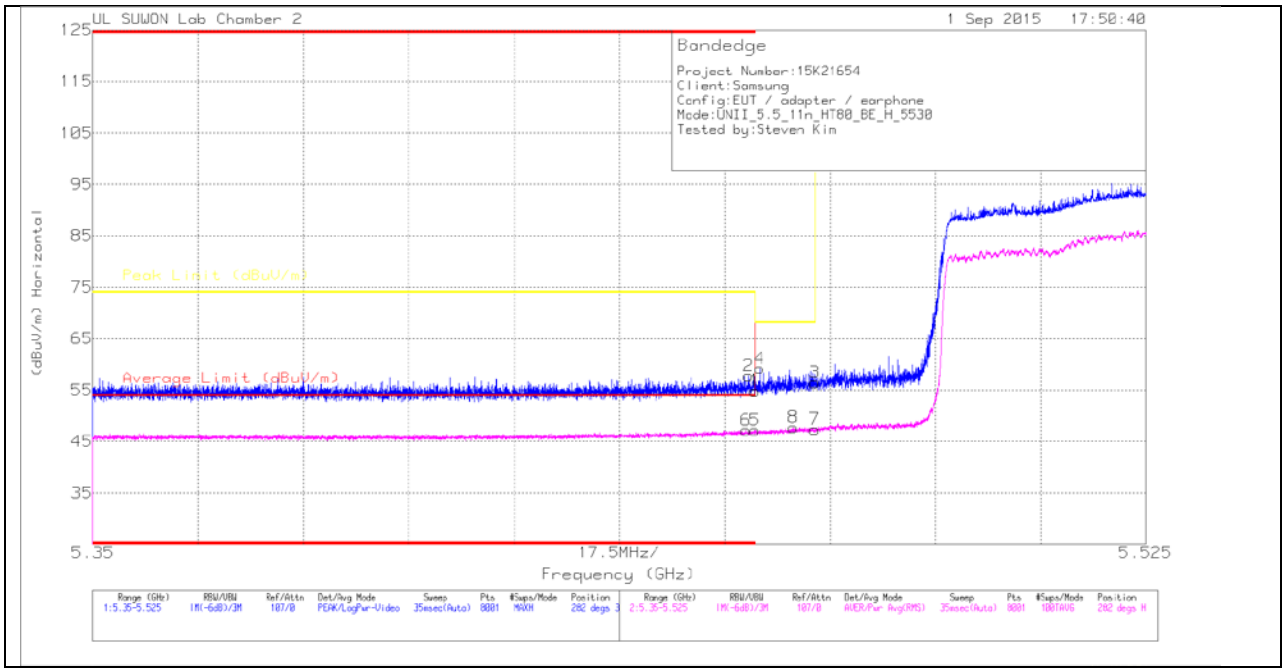
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

11.3.4. TX ABOVE 1 GHz 802.11ac VHT80 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	3117(00168724)_150619	Path_2_10dB	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	36.57	Pk	34.5	-16.2	0	54.87	-	-	74	-19.13	282	357	H
2	* 5.459	39.48	Pk	34.5	-16.2	0	57.78	-	-	74	-16.22	282	357	H
3	5.47	38.18	Pk	34.5	-16.2	0	56.48	-	-	68.2	-11.72	282	357	H
4	5.461	40.91	Pk	34.5	-16.2	0	59.21	-	-	68.2	-8.99	282	357	H
5	* 5.46	27.77	RMS	34.5	-16.2	1.16	47.23	54	-6.77	-	-	282	357	H
6	* 5.459	27.75	RMS	34.5	-16.2	1.16	47.21	54	-6.79	-	-	282	357	H
7	5.47	27.94	RMS	34.5	-16.2	1.16	47.4	-	-	-	-	282	357	H
8	5.466	28.31	RMS	34.5	-16.2	1.16	47.77	-	-	-	-	282	357	H

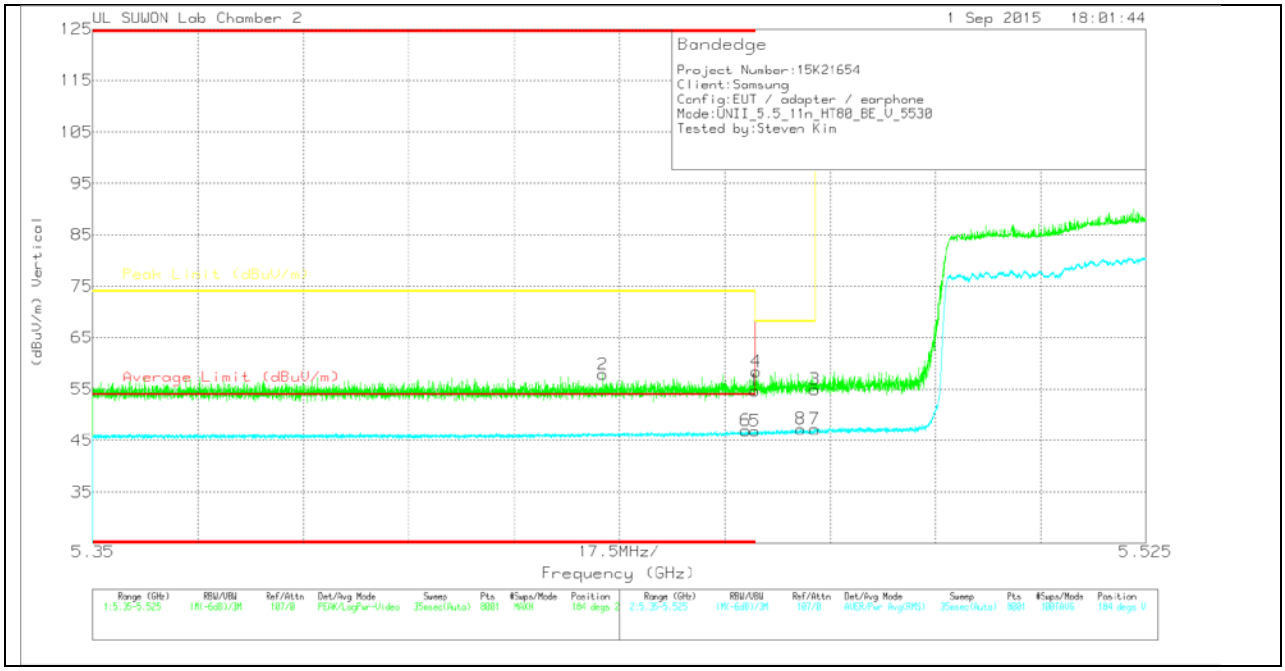
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_2_10dB	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	36.43	Pk	34.5	-16.2	0	54.73	-	-	74	-19.27	184	214	V
2	* 5.435	39.65	Pk	34.5	-16.3	0	57.85	-	-	74	-16.15	184	214	V
3	5.47	36.63	Pk	34.5	-16.2	0	54.93	-	-	68.2	-13.27	184	214	V
4	5.46	40.11	Pk	34.5	-16.2	0	58.41	-	-	68.2	-9.79	184	214	V
5	* 5.46	27.41	RMS	34.5	-16.2	1.16	46.87	54	-7.13	-	-	184	214	V
6	* 5.459	27.49	RMS	34.5	-16.2	1.16	46.95	54	-7.05	-	-	184	214	V
7	5.47	27.73	RMS	34.5	-16.2	1.16	47.19	-	-	-	-	184	214	V
8	5.468	27.81	RMS	34.5	-16.2	1.16	47.27	-	-	-	-	184	214	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

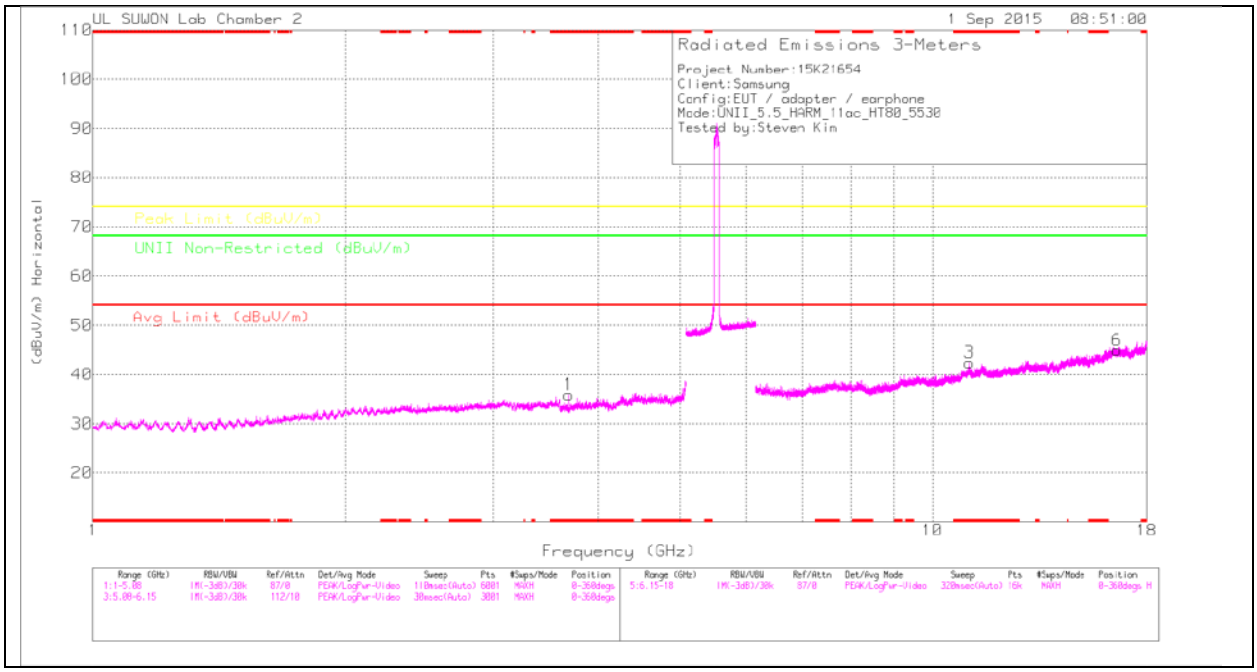
Pk - Peak detector

RMS - RMS detection

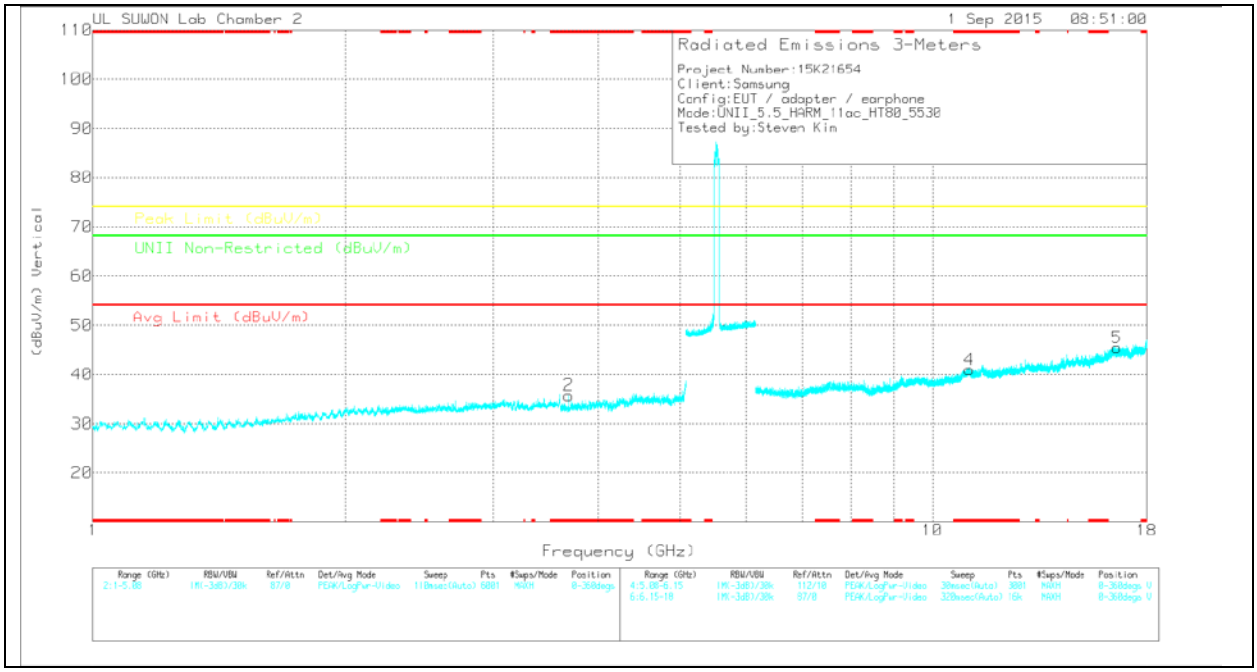
UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902 FAX: (031) 213-5433
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.687	28.99	PK	32.9	-26	0	35.89	-	-	74	-38.11	-	-	0-360	100	H
2	* 3.687	28.86	PK	32.9	-26	0	35.76	-	-	74	-38.24	-	-	0-360	200	V
3	* 11.06	22.02	PK	38.1	-17.7	0	42.42	-	-	74	-31.58	-	-	0-360	200	H
6	16.594	19.8	PK	41	-15.9	0	44.9	-	-	-	-	68.2	-23.3	0-360	200	H
4	* 11.06	20.53	PK	38.1	-17.7	0	40.93	-	-	74	-33.07	-	-	0-360	200	V
5	16.59	20.32	PK	41	-15.9	0	45.42	-	-	-	-	68.2	-22.78	0-360	200	V

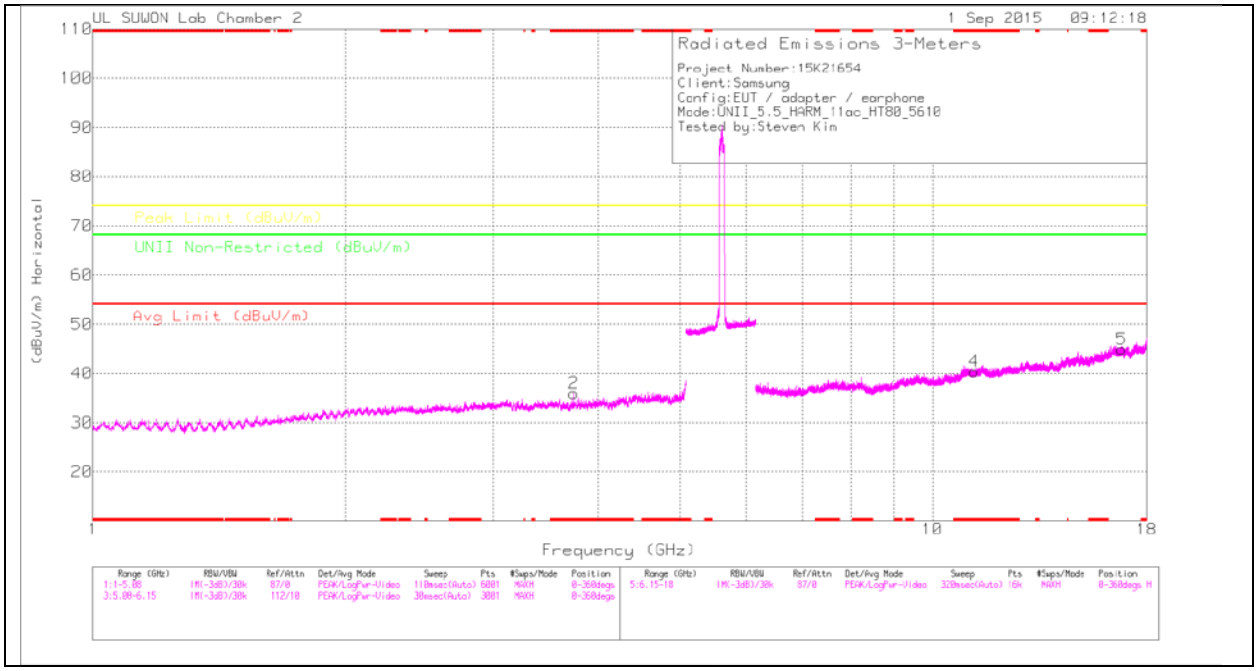
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

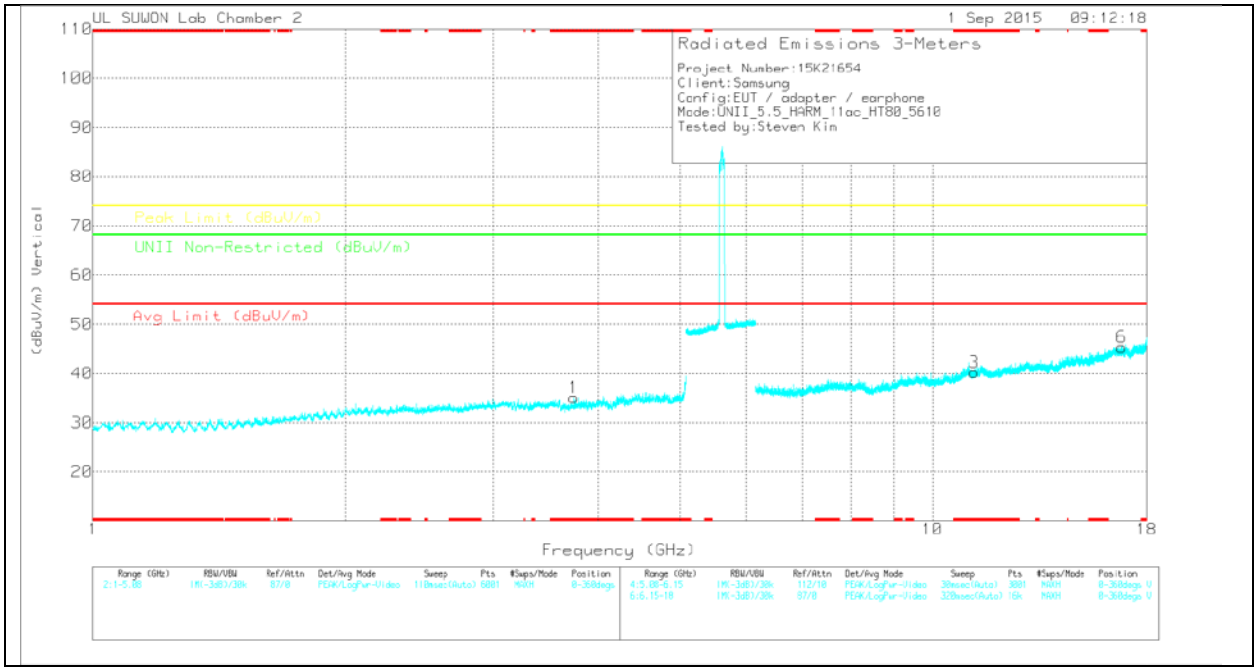
Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902 FAX: (031) 213-5433
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
2	* 3.74	28.97	PK	33	-26	0	35.97	-	-	74	-38.03	-	-	0-360	200	H
1	* 3.74	28.07	PK	33	-26	0	35.07	-	-	74	-38.93	-	-	0-360	200	V
4	* 11.218	19.78	PK	38.2	-17.6	0	40.38	-	-	74	-33.62	-	-	0-360	200	H
5	16.829	19.23	PK	41.1	-15.4	0	44.93	-	-	-	-	68.2	-23.27	0-360	200	H
3	* 11.219	19.62	PK	38.2	-17.6	0	40.22	-	-	74	-33.78	-	-	0-360	200	V
6	16.829	19.64	PK	41.1	-15.4	0	45.34	-	-	-	-	68.2	-22.86	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

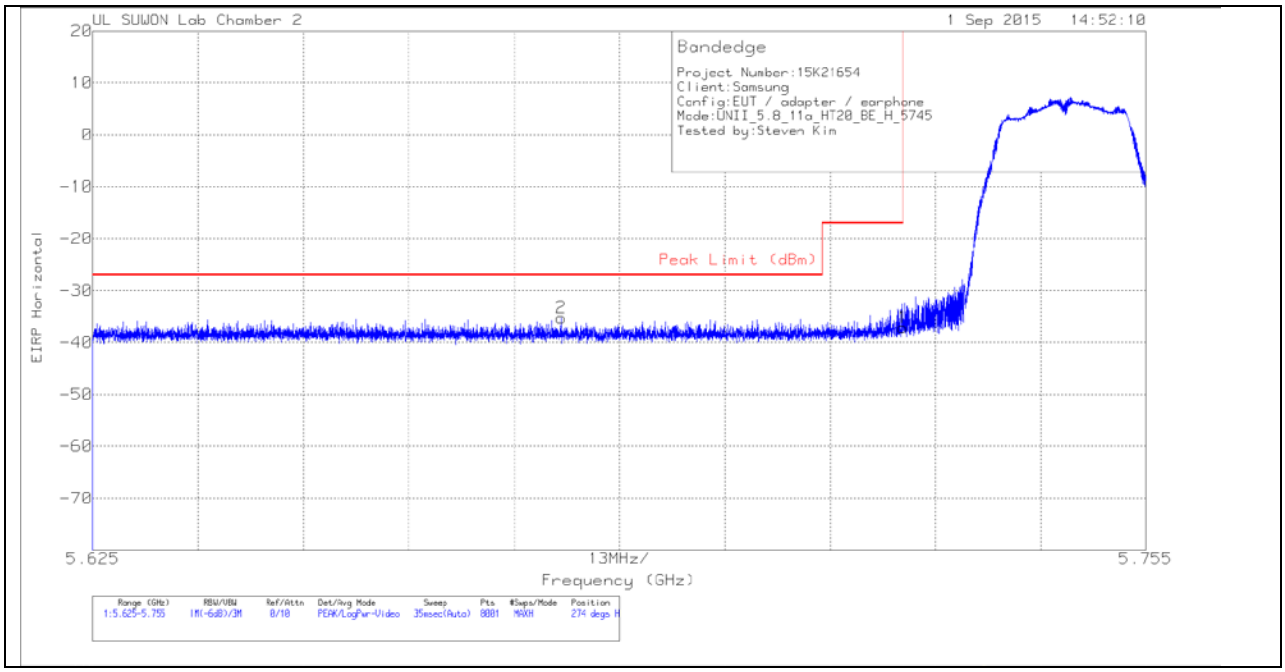
Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902 FAX: (031) 213-5433
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

11.4. 5.8 GHz

11.4.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.8 GHz BAND HARMONICS AND SPURIOUS EMISSIONS

HORIZONTAL PEAK PLOT



HORIZONTAL DATA

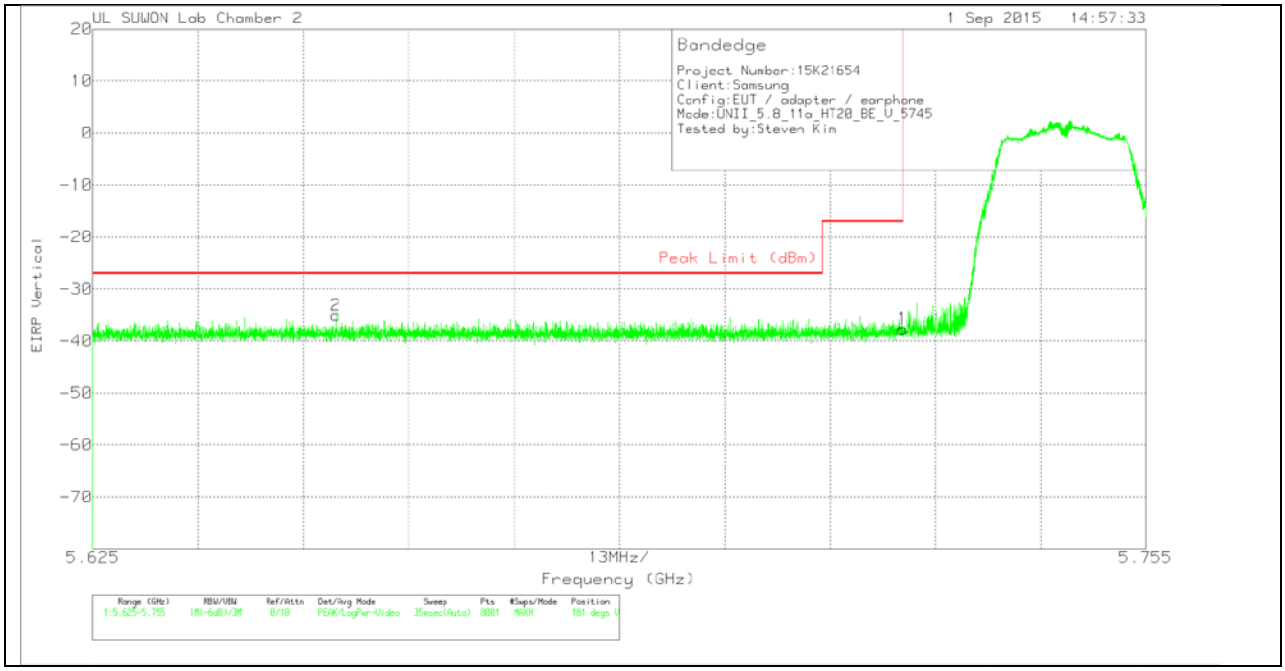
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117(00168724)_150619	Path_2_10 dB	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-68.01	Pk	34.7	-15.6	11.8	0	-37.11	-17	-20.11	274	324	H
2	5.683	-66.04	Pk	34.6	-15.6	11.8	0	-35.24	-27	-8.24	274	324	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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

VERTICAL PEAK PLOT



VERTICAL DATA

TRACE MARKERS

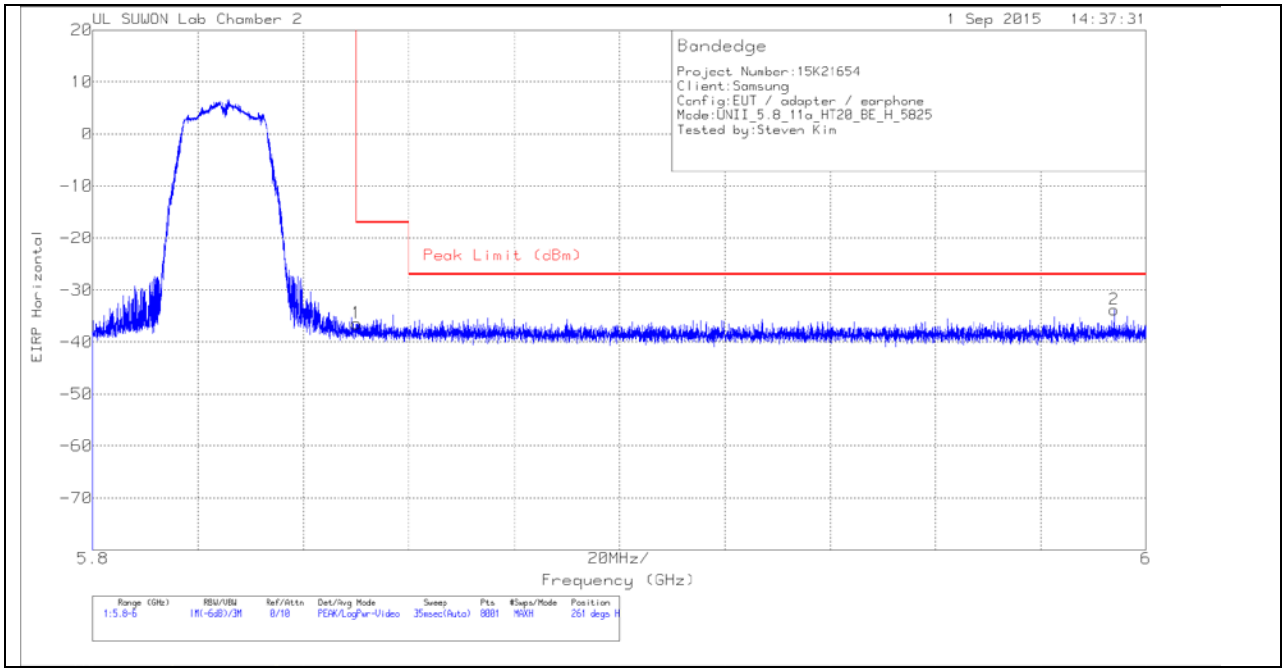
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117(0016 8724)_150 619	Path_2_10 dB	Conversio n Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-68.57	Pk	34.7	-15.6	11.8	0	-37.67	-17	-20.67	181	118	V
2	5.655	-65.73	Pk	34.6	-15.7	11.8	0	-35.03	-27	-8.03	181	118	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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK PLOT



HORIZONTAL DATA

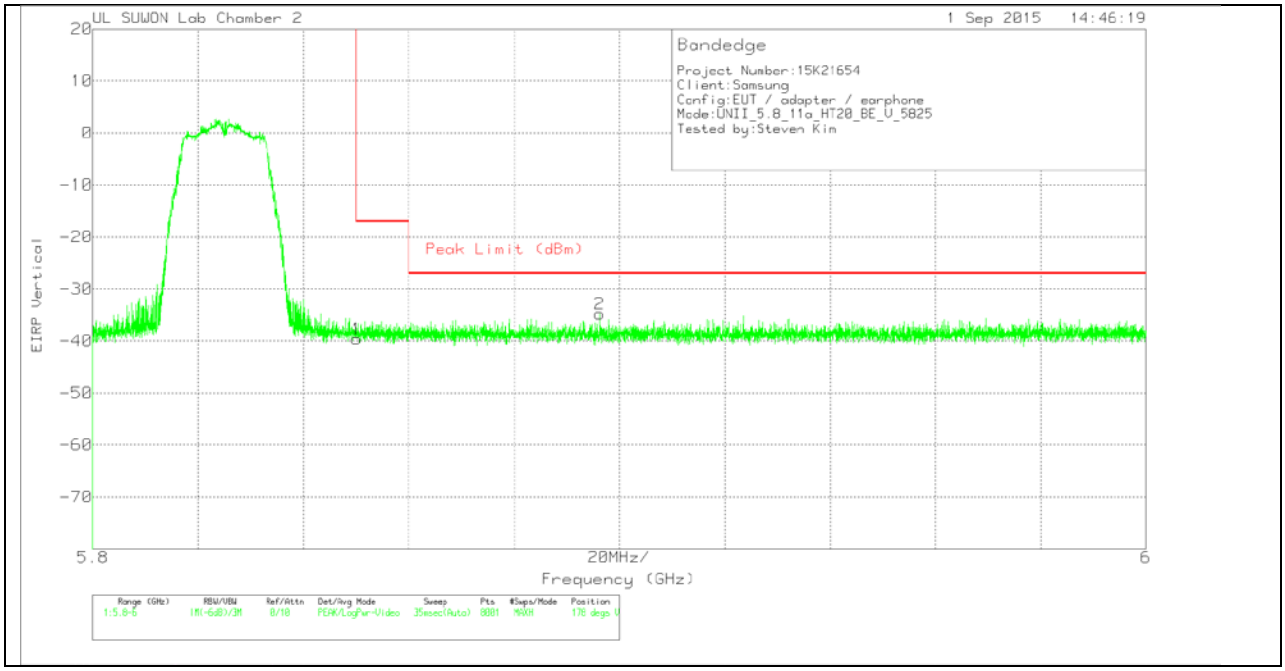
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117(00168724)_150619	Path_2_10 dB	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.43	Pk	34.7	-15.5	11.8	0	-36.43	-17	-19.43	261	287	H
2	5.994	-64.98	Pk	34.8	-15.4	11.8	0	-33.78	-27	-6.78	261	287	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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

VERTICAL PEAK PLOT



VERTICAL DATA

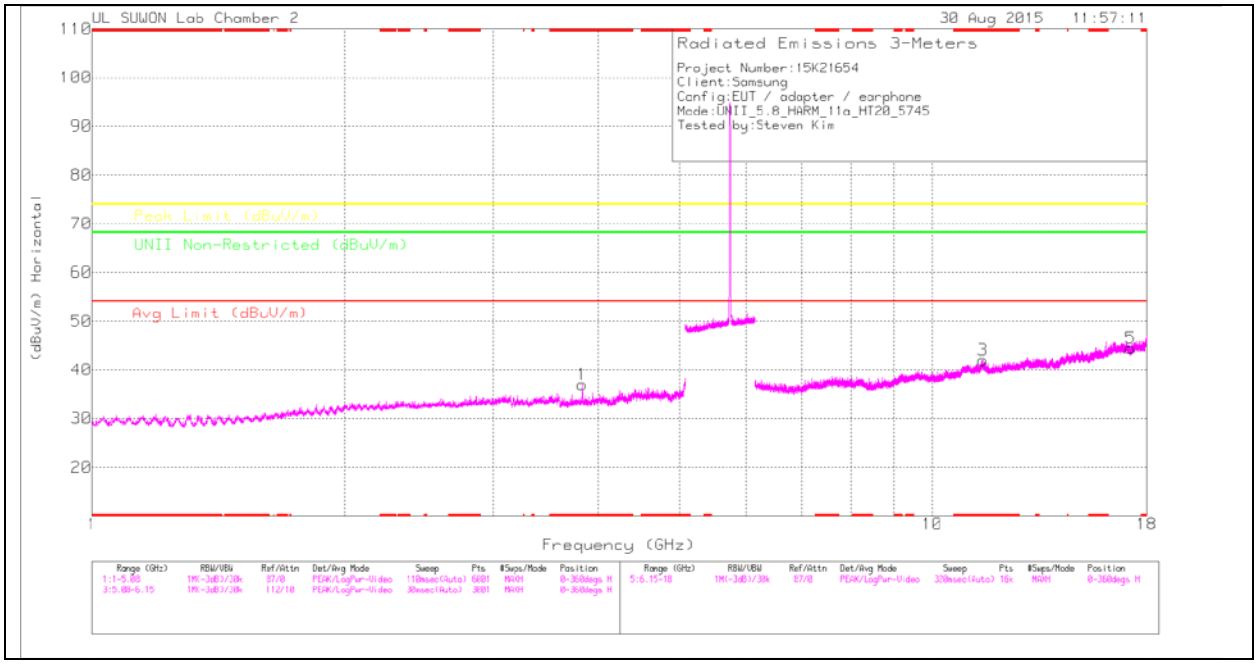
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117(00168724)_150619	Path_2_10 dB	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-70.65	Pk	34.7	-15.5	11.8	0	-39.65	-17	-22.65	178	153	V
2	5.896	-65.94	Pk	34.8	-15.5	11.8	0	-34.84	-27	-7.84	178	153	V

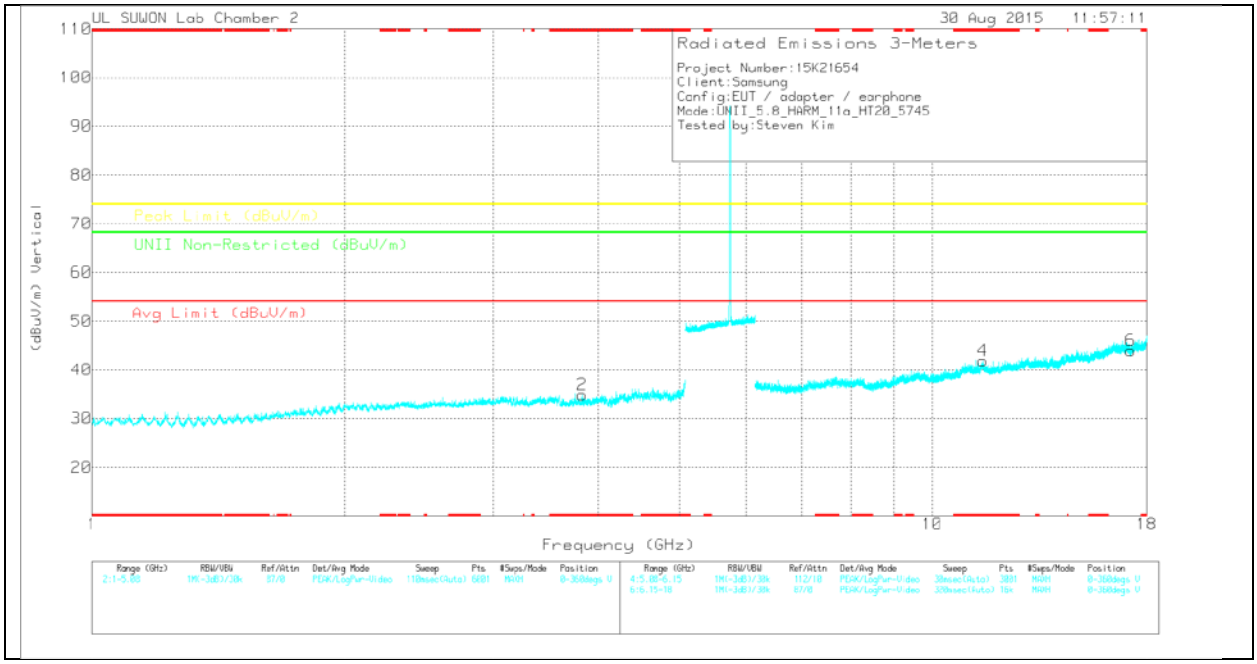
Pk - Peak detector

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.83	29.55	PK	33.1	-25.7	0	36.95	-	-	74	-37.05	-	-	0-360	200	H
2	* 3.83	27.53	PK	33.1	-25.7	0	34.93	-	-	74	-39.07	-	-	0-360	200	V
3	* 11.494	21.2	PK	38.3	-17.5	0	42	-	-	74	-32	-	-	0-360	200	H
5	17.234	18.43	PK	41.2	-15.2	0	44.43	-	-	-	-	68.2	-23.77	0-360	200	H
4	* 11.493	21.1	PK	38.3	-17.5	0	41.9	-	-	74	-32.1	-	-	0-360	100	V
6	17.233	17.96	PK	41.2	-15.2	0	43.96	-	-	-	-	68.2	-24.24	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
* 3.83	38.3	PK-U	33.1	-25.7	0	45.7	-	-	74	-28.3	-	-	247	307	H
* 3.83	28.45	ADR	33.1	-25.7	0	35.85	54	-18.15	-	-	-	-	247	307	H
* 3.83	38.41	PK-U	33.1	-25.7	0	45.81	-	-	74	-28.19	-	-	166	258	V
* 3.83	27.7	ADR	33.1	-25.7	0	35.1	54	-18.9	-	-	-	-	166	258	V

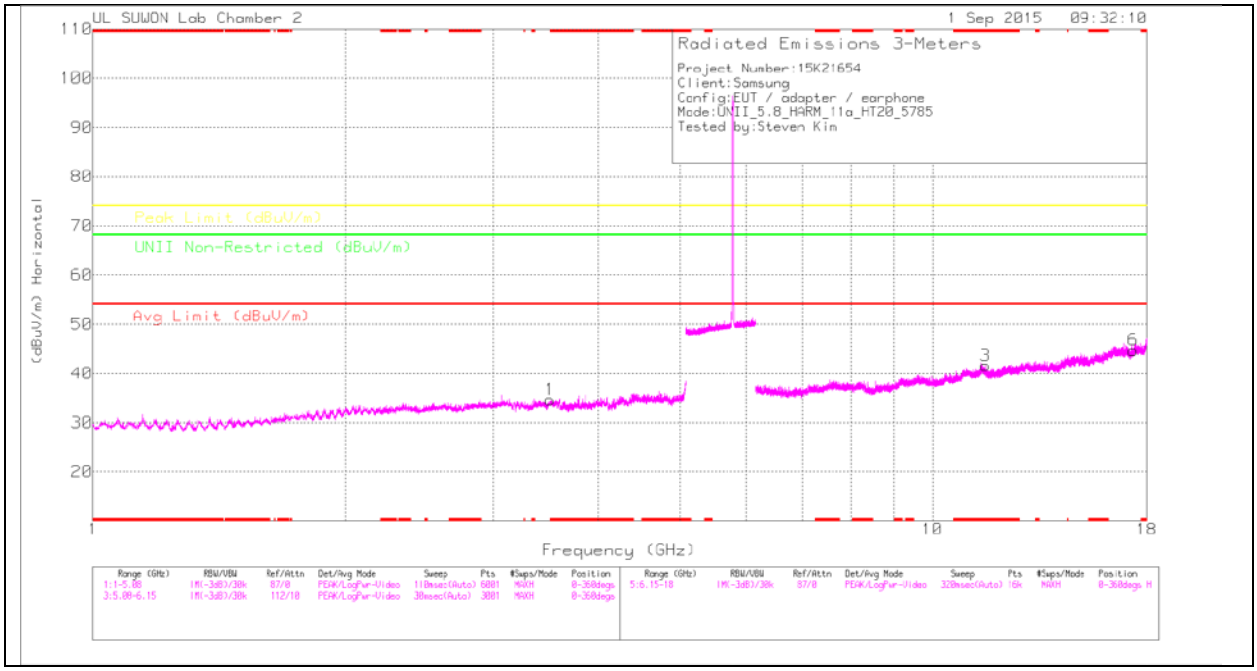
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

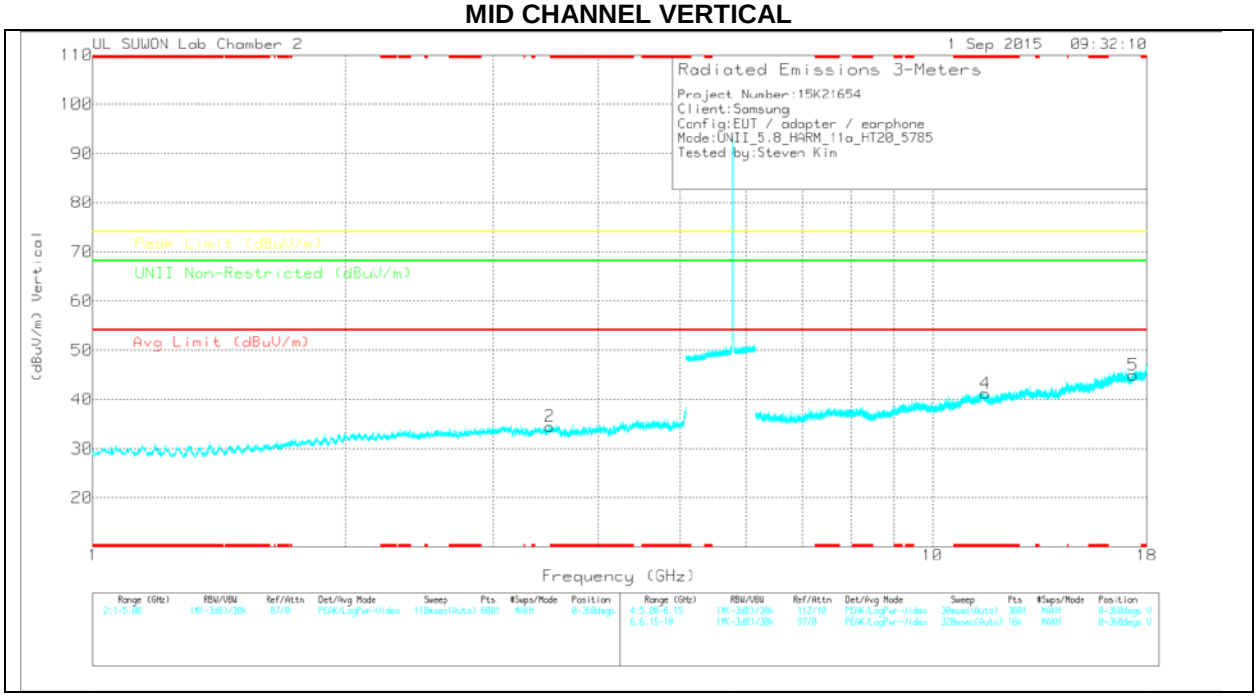
ADR - U-NII AD primary method, RMS average

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

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.

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
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	* 3.504	27.34	PK	32.7	-25.4	0	34.64	-	-	74	-39.36	-	-	0-360	200	H
2	* 3.502	27.21	PK	32.7	-25.4	0	34.51	-	-	74	-39.49	-	-	0-360	100	V
3	* 11.569	20.68	PK	38.4	-17.5	0	41.58	-	-	74	-32.42	-	-	0-360	200	H
6	17.354	18.63	PK	41.2	-15.1	0	44.73	-	-	-	-	68.2	-23.47	0-360	100	H
4	* 11.57	20.32	PK	38.4	-17.5	0	41.22	-	-	74	-32.78	-	-	0-360	100	V
5	17.354	18.85	PK	41.2	-15.1	0	44.95	-	-	-	-	68.2	-23.25	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 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
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902 FAX: (031) 213-5433
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.