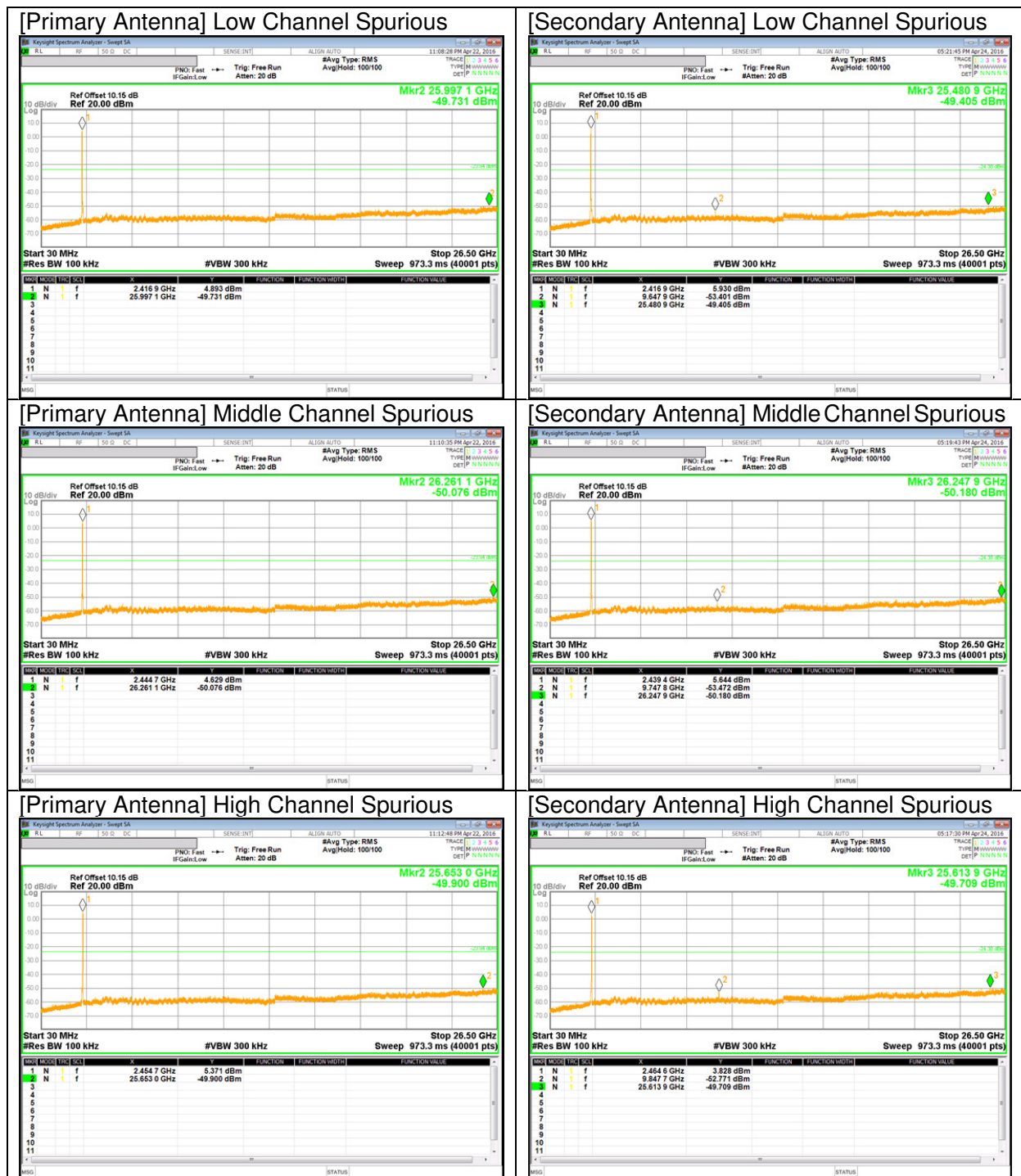
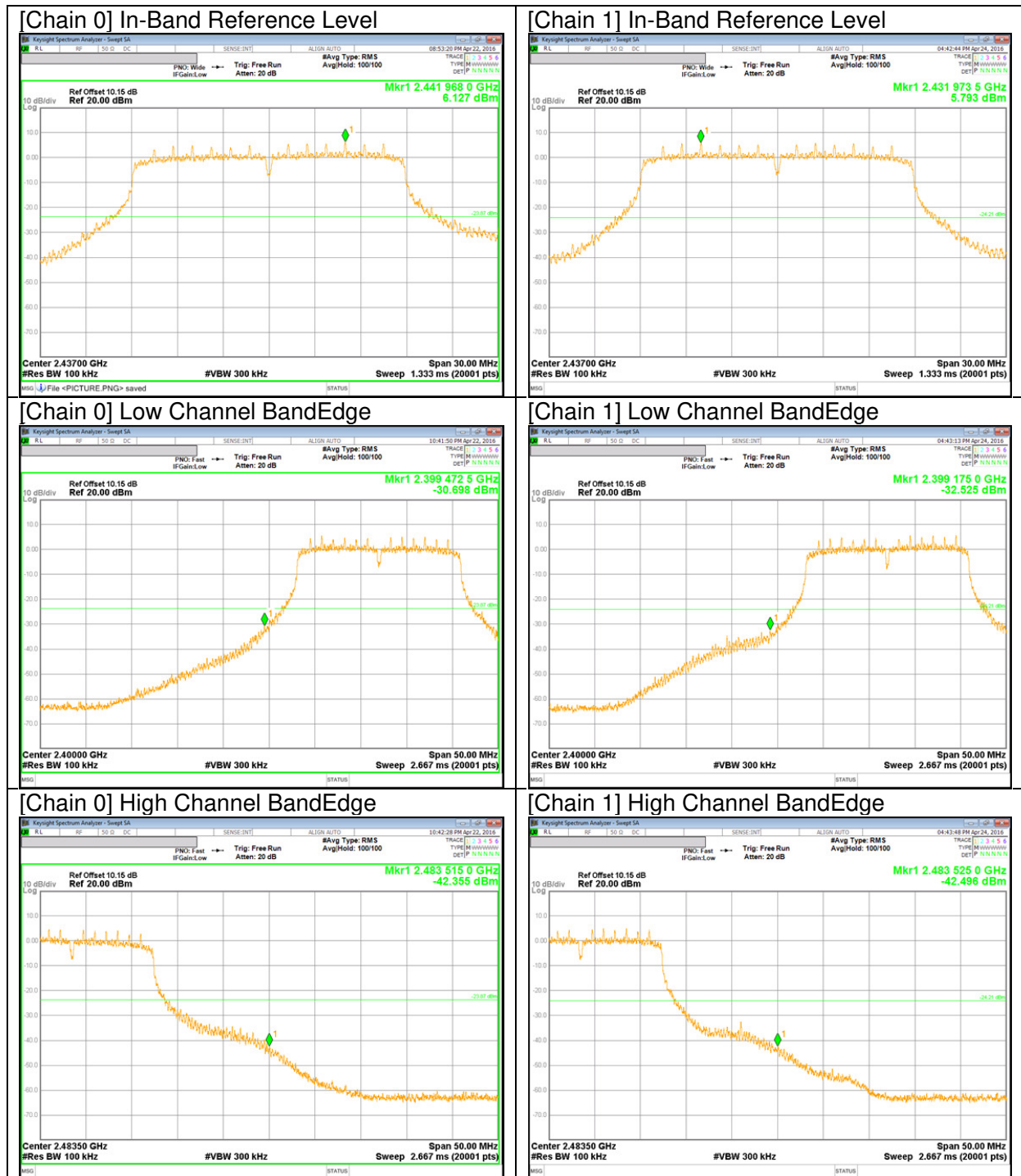
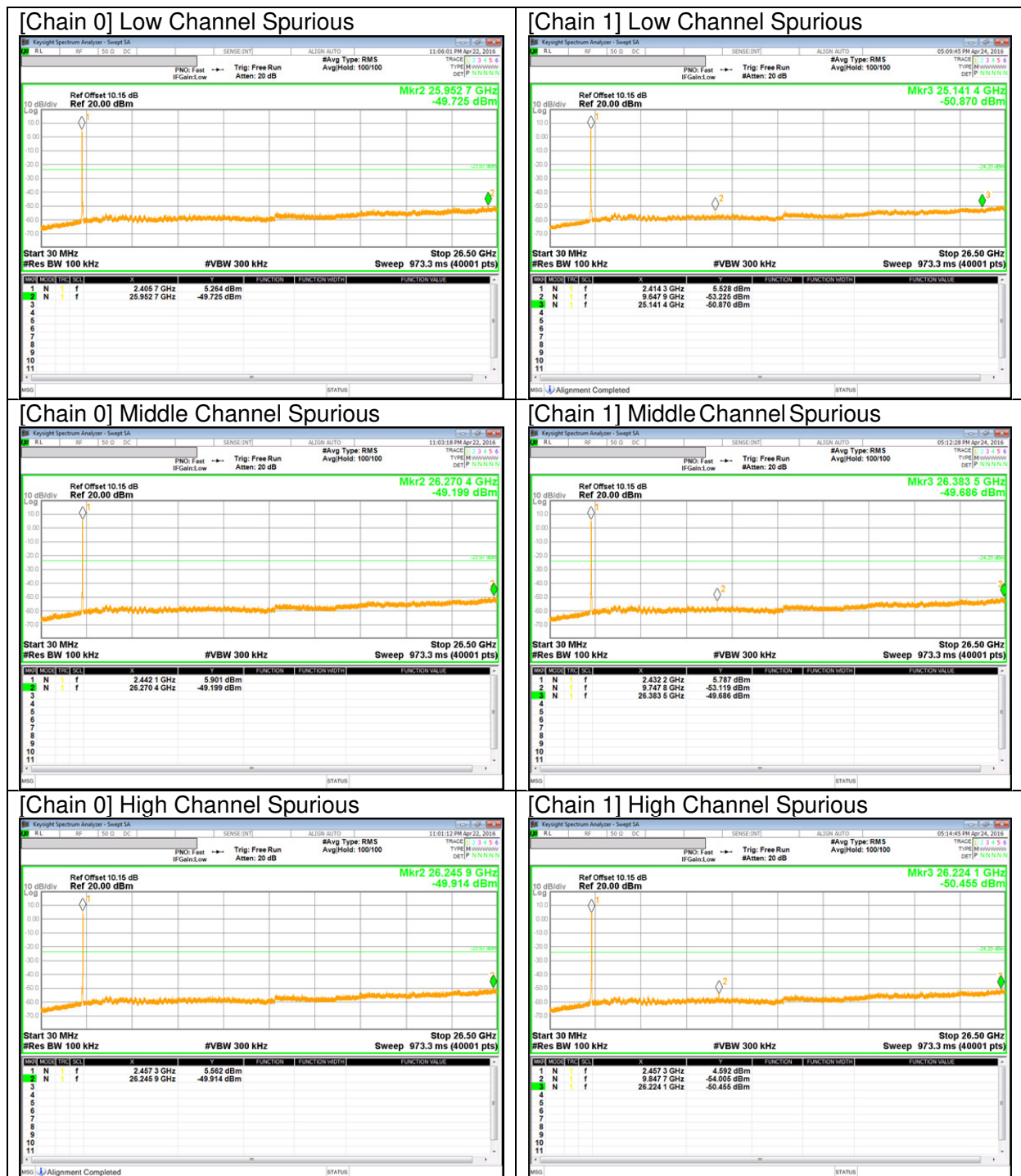




10.5.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND





11. RADIATED TEST RESULTS

11.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters.

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

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor for average measurements. Duty cycle factor = $10\log(1/x)$ For this sample B mode = 0dB (duty cycle >98%); G mode = 0.31dB; N mode = 0.33dB.

The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

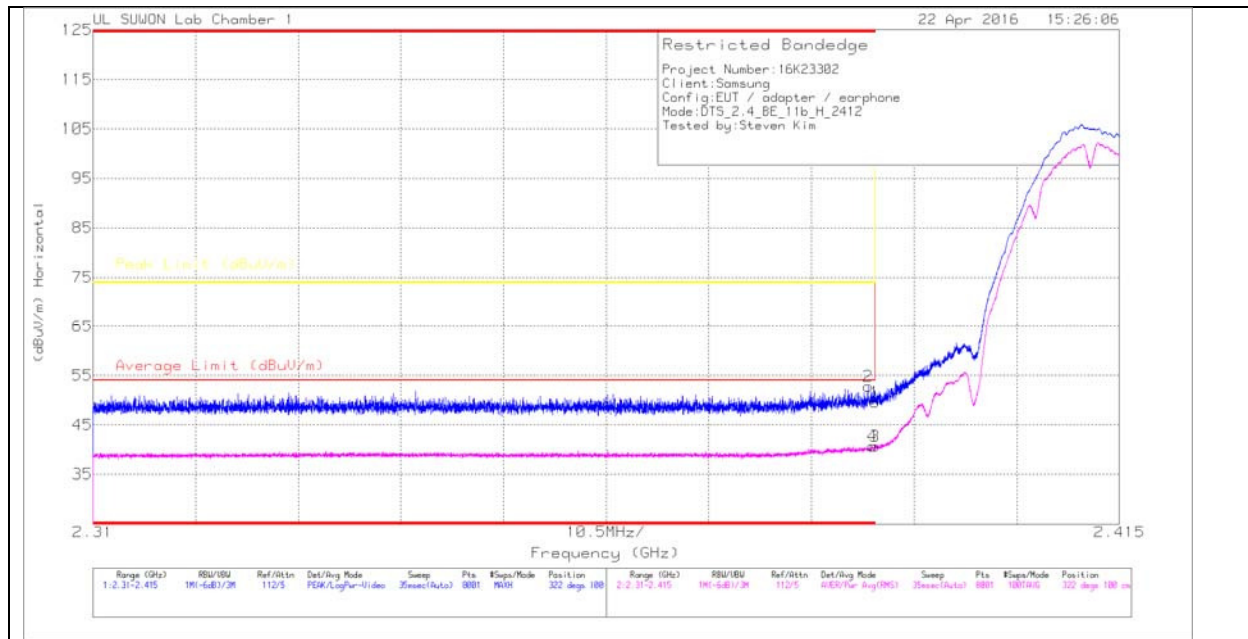
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

11.2. TRANSMITTER ABOVE 1 GHz

11.2.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

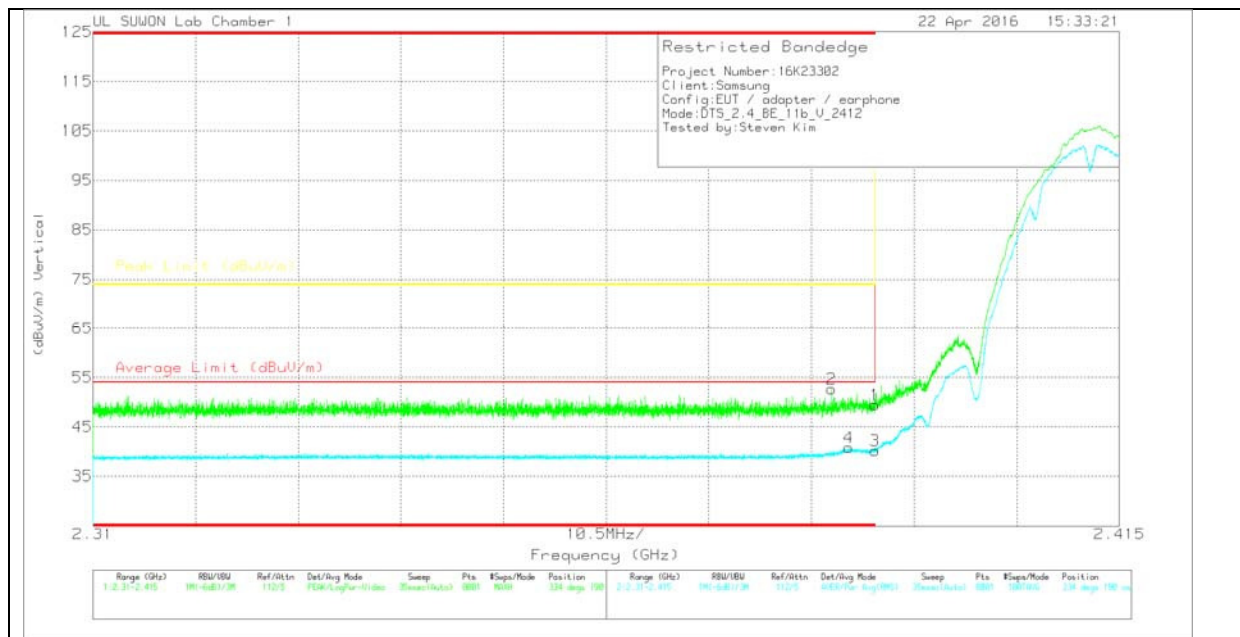
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17)_150619	Path_2	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	46.81	Pk	31.8	-29	0	49.61	-	-	74	-24.39	322	100	H
2	* 2.389	50.05	Pk	31.8	-29	0	52.85	-	-	74	-21.15	322	100	H
3	* 2.39	37.86	RMS	31.8	-29	0	40.66	54	-13.34	-	-	322	100	H
4	* 2.39	37.92	RMS	31.8	-29	0	40.72	54	-13.28	-	-	322	100	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17)_150619	Path_2	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	* 2.39	46.65	Pk	31.8	-29	0	49.45	-	-	74	-24.55	334	190	V
2	* 2.386	49.85	Pk	31.8	-29	0	52.65	-	-	74	-21.35	334	190	V
3	* 2.39	37.43	RMS	31.8	-29	0	40.23	54	-13.77	-	-	334	190	V
4	* 2.387	38.02	RMS	31.8	-29	0	40.82	54	-13.18	-	-	334	190	V

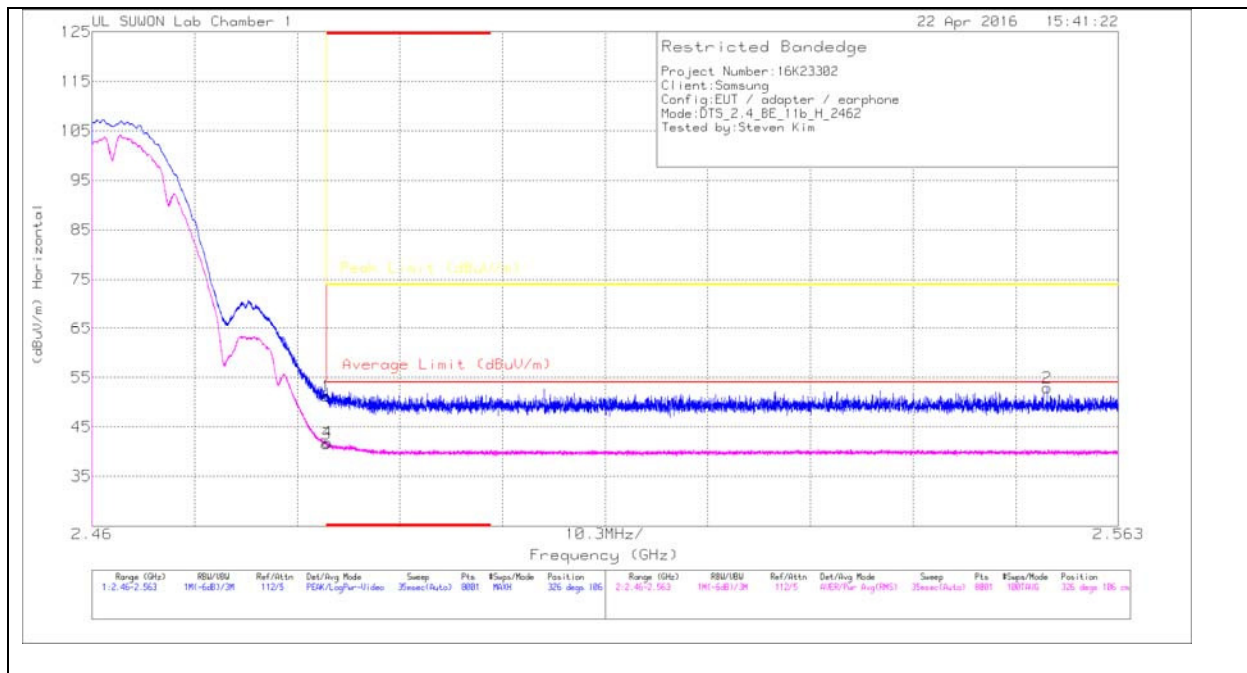
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

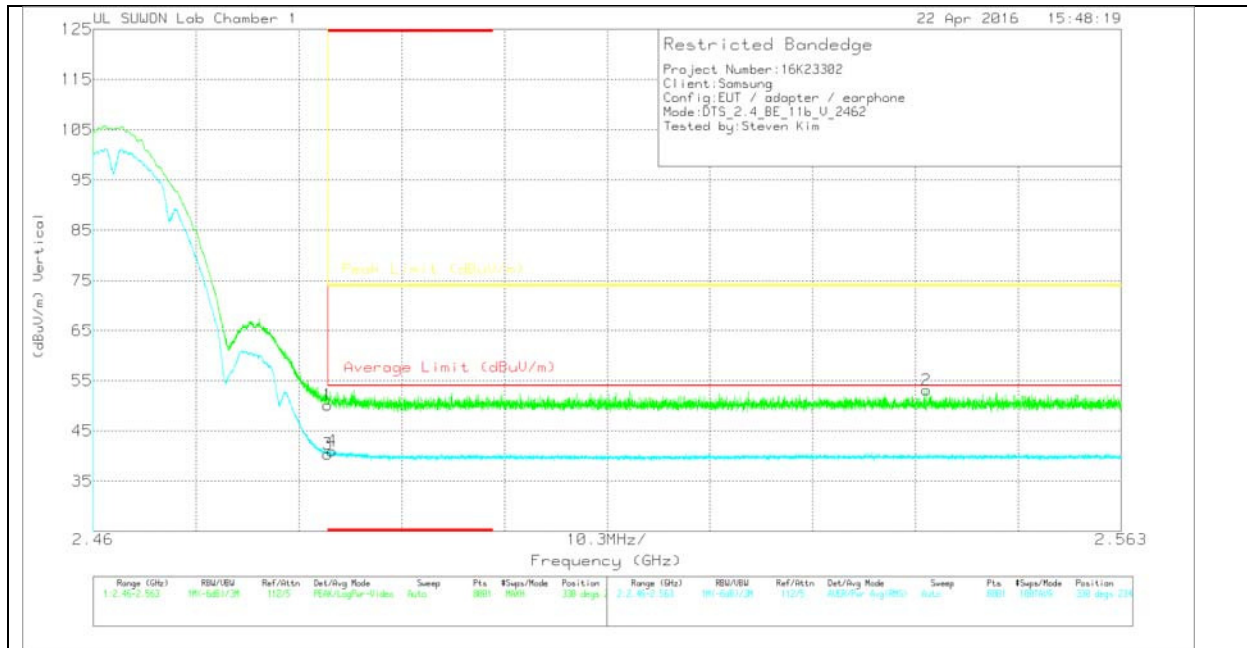
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17_150619)	Path_2	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	47.47	Pk	32	-28.3	0	51.17	-	-	74	-22.83	326	106	H
2	2.556	49.14	Pk	32	-28.2	0	52.94	-	-	74	-21.06	326	106	H
3	* 2.484	37.82	RMS	32	-28.3	0	41.52	54	-12.48	-	-	326	106	H
4	* 2.484	38.15	RMS	32	-28.3	0	41.85	54	-12.15	-	-	326	106	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17)_150619	Path_2	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	* 2.484	46.45	Pk	32	-28.3	0	50.15	-	-	74	-23.85	330	234	V
2	2.543	49.35	Pk	32	-28.2	0	53.15	-	-	74	-20.85	330	234	V
3	* 2.484	36.73	RMS	32	-28.3	0	40.43	54	-13.57	-	-	330	234	V
4	* 2.484	37.33	RMS	32	-28.3	0	41.03	54	-12.97	-	-	330	234	V

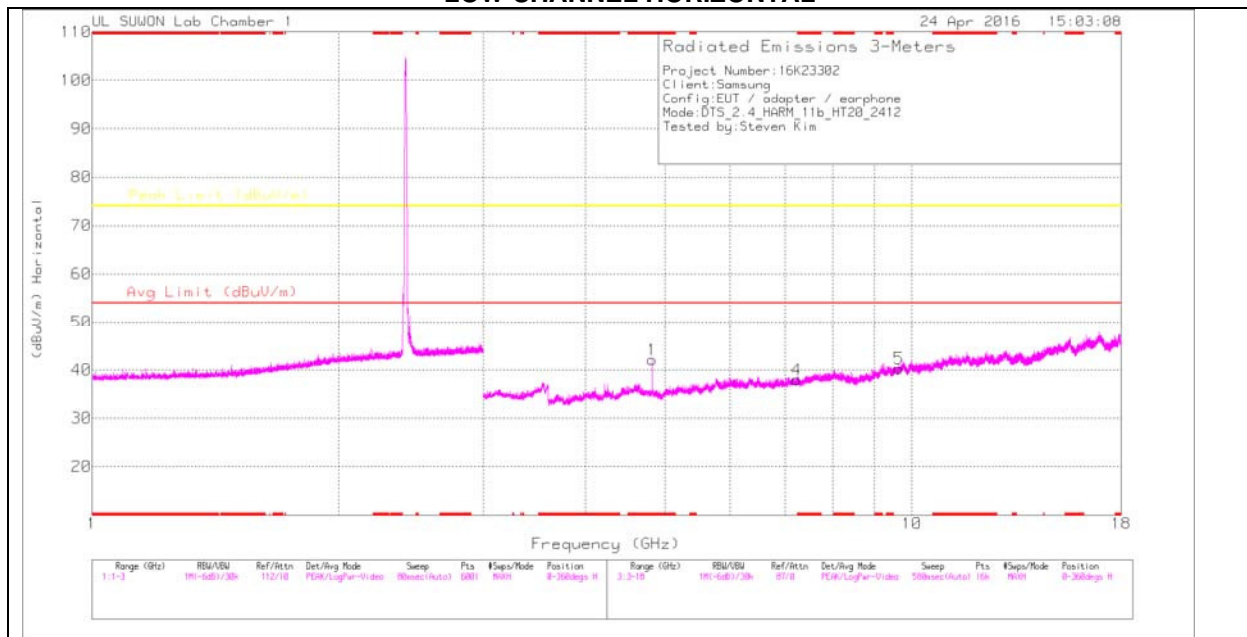
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

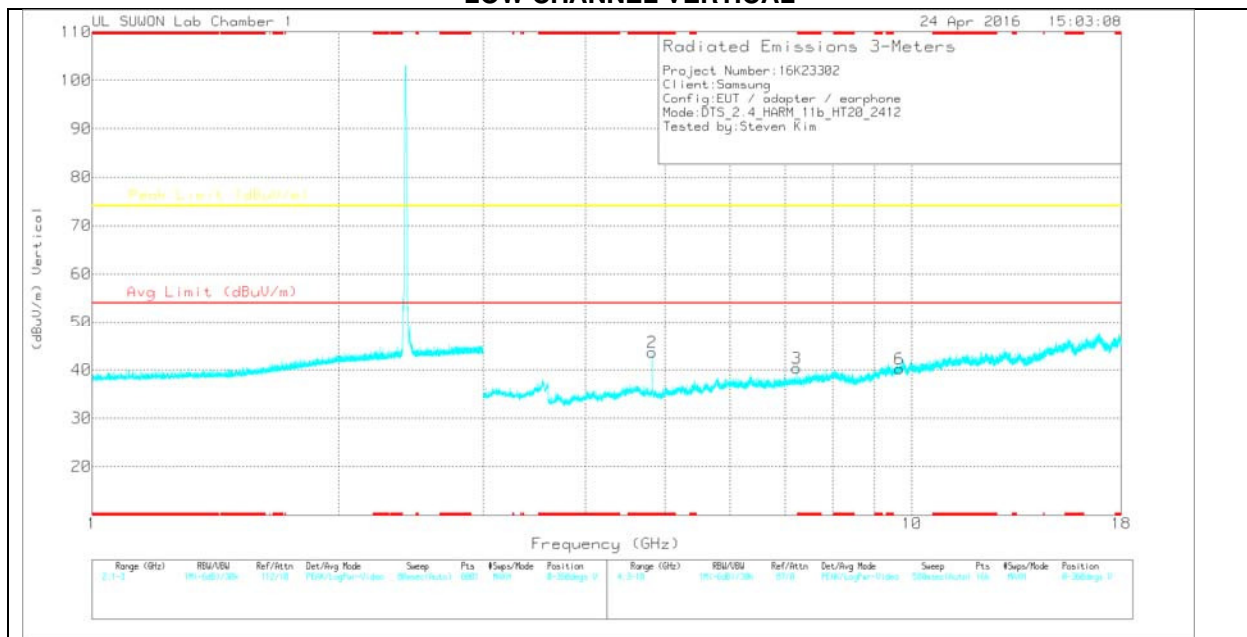
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17)_150619	Path_3	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.823	41.98	PK	34	-33.8	0	42.18	-	-	74	-31.82	0-360	200	H
4	7.234	33.2	PK	35.7	-30.9	0	38	-	-	74	-36	0-360	200	H
5	9.645	30.6	PK	37.1	-27.4	0	40.3	-	-	74	-33.7	0-360	100	H
2	* 4.823	43.4	PK	34	-33.8	0	43.6	-	-	74	-30.4	0-360	200	V
3	7.235	35.54	PK	35.7	-30.9	0	40.34	-	-	74	-33.66	0-360	200	V
6	9.65	30.59	PK	37.1	-27.4	0	40.29	-	-	74	-33.71	0-360	100	V

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

PK – Peak Detector

Radiated Emissions

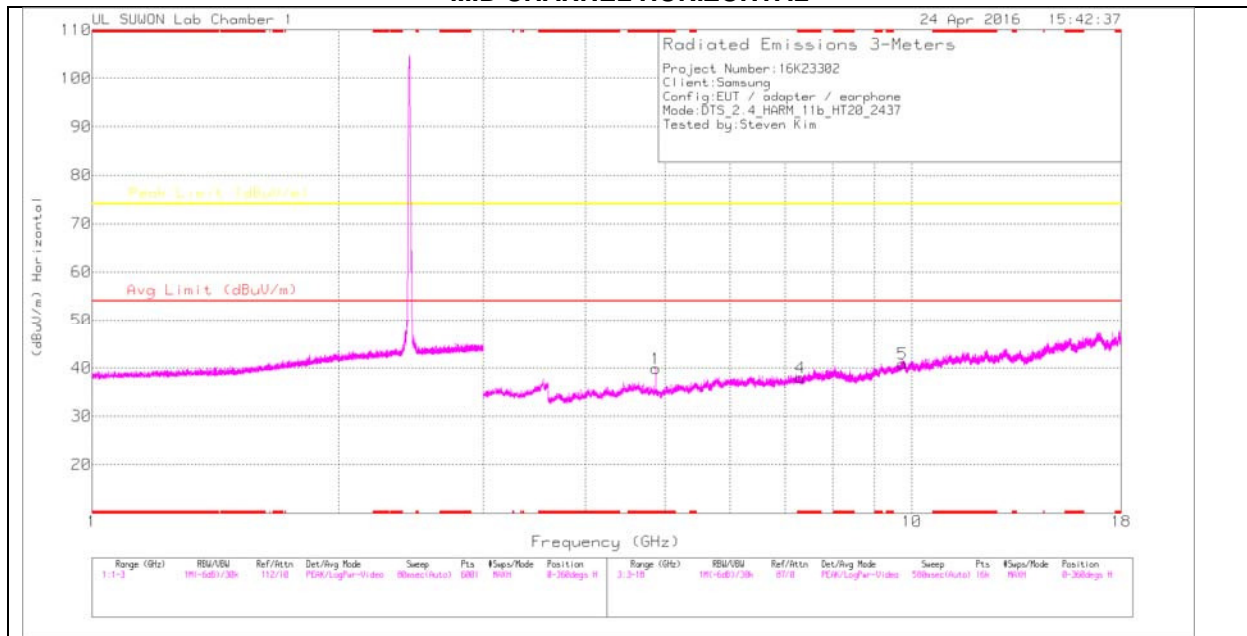
Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001 68717)_1 50619	Path_3	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.824	50.7	PK2	34	-33.8	0	50.9	-	-	74	-23.1	240	350	H
* 4.824	44	MAv1	34	-33.8	0	44.2	54	-9.8	-	-	240	350	H
* 4.824	50.79	PK2	34	-33.8	0	50.99	-	-	74	-23.01	161	305	V
* 4.824	43.72	MAv1	34	-33.8	0	43.92	54	-10.08	-	-	161	305	V
7.234	44.08	PK2	35.7	-30.9	0	48.88	-	-	74	-25.12	236	365	V
7.227	43.8	PK2	35.7	-31	0	48.5	-	-	74	-25.5	214	105	H

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

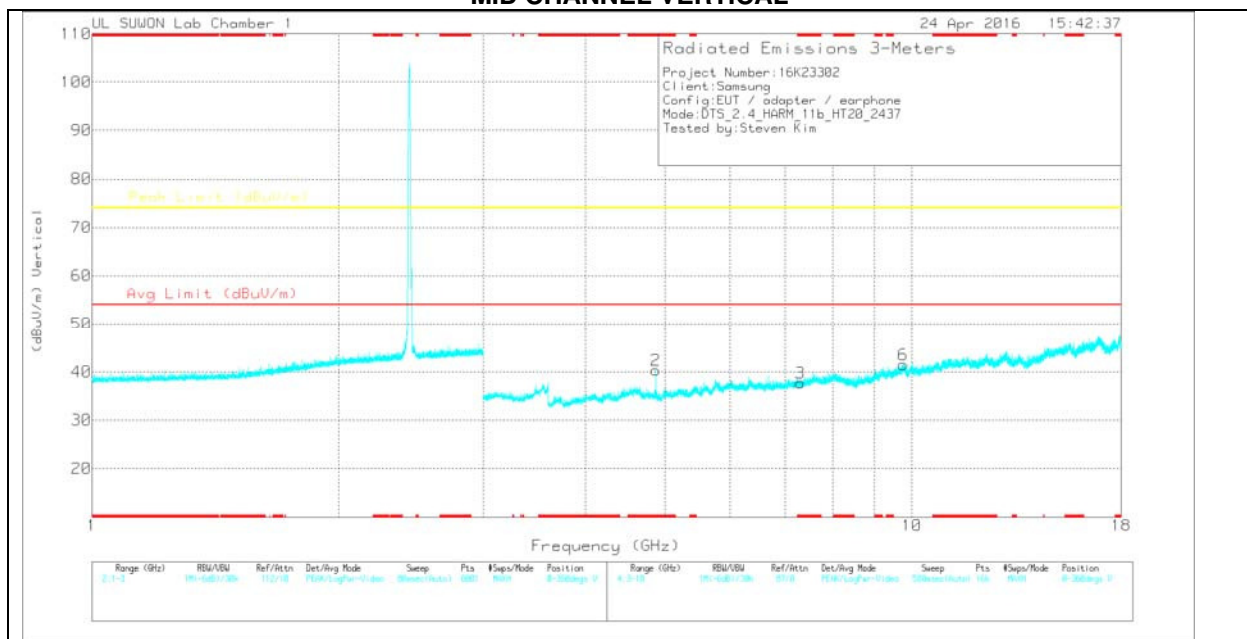
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17)_150619	Path_3	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.874	39.87	PK	34	-34	0	39.87	-	-	74	-34.13	0-360	200	H
4	* 7.305	33.11	PK	35.7	-30.9	0	37.91	-	-	74	-36.09	0-360	100	H
5	9.748	30.5	PK	37.2	-26.8	0	40.9	-	-	74	-33.1	0-360	200	H
2	* 4.874	40.4	PK	34	-34	0	40.4	-	-	74	-33.6	0-360	200	V
3	* 7.31	32.93	PK	35.7	-30.9	0	37.73	-	-	74	-36.27	0-360	100	V
6	9.754	30.99	PK	37.2	-26.7	0	41.49	-	-	74	-32.51	0-360	100	V

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

PK – Peak Detector

Radiated Emissions

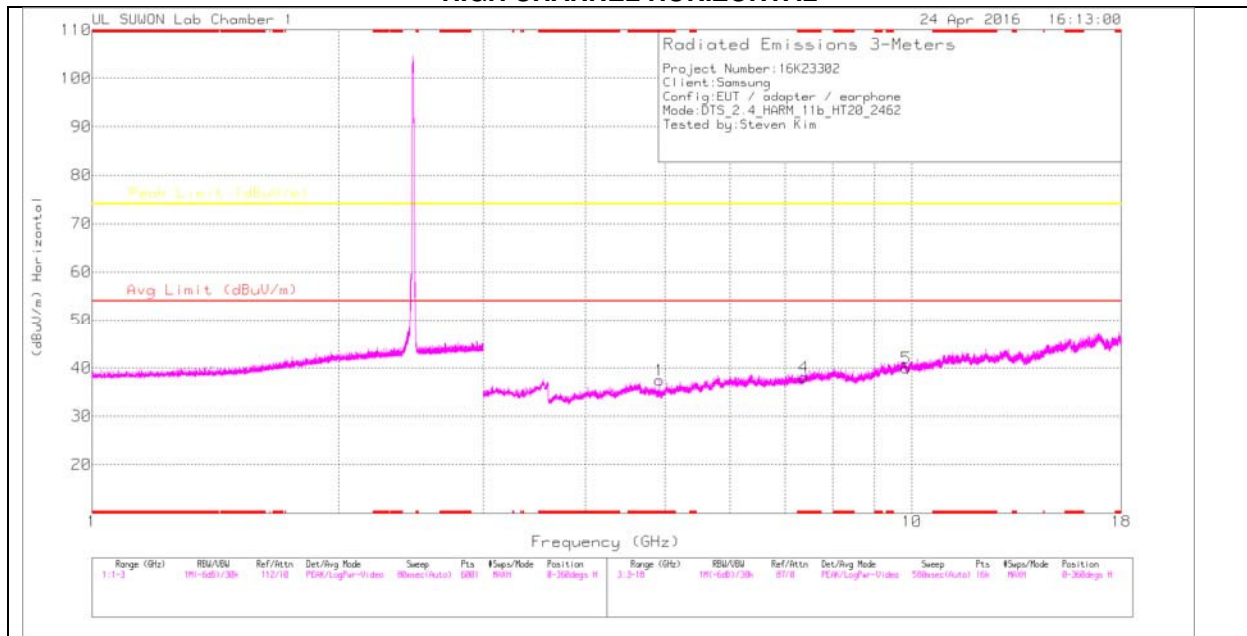
Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001 68717)_1 50619	Path_3	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.874	49.88	PK2	34	-34	0	49.88	-	-	74	-24.12	243	339	H
* 4.874	42.06	MAv1	34	-34	0	42.06	54	-11.94	-	-	243	339	H
* 4.874	49.98	PK2	34	-34	0	49.98	-	-	74	-24.02	142	335	V
* 4.874	42.81	MAv1	34	-34	0	42.81	54	-11.19	-	-	142	335	V

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

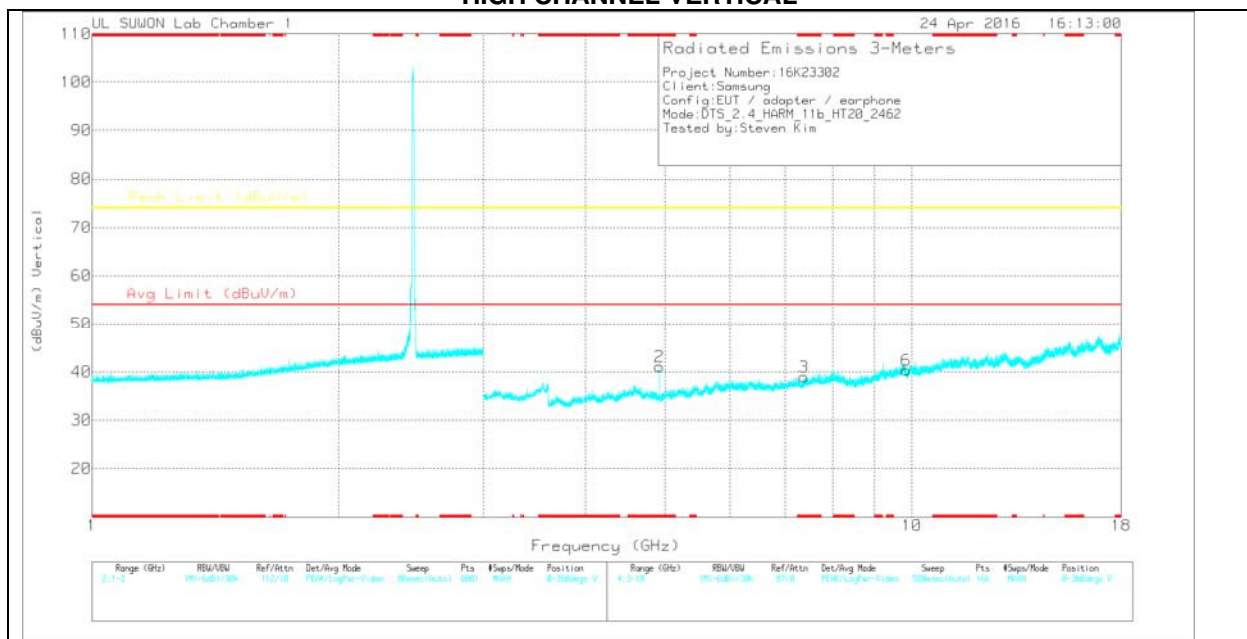
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17)_150619	Path_3	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.924	37.4	PK	34	-34	0	37.4	-	-	74	-36.6	0-360	100	H
4	* 7.388	33.03	PK	35.8	-30.7	0	38.13	-	-	74	-35.87	0-360	100	H
5	9.848	30.29	PK	37.3	-27.6	0	39.99	-	-	74	-34.01	0-360	200	H
2	* 4.924	41.18	PK	34	-34	0	41.18	-	-	74	-32.82	0-360	100	V
3	* 7.389	33.9	PK	35.8	-30.7	0	39	-	-	74	-35	0-360	100	V
6	9.845	30.55	PK	37.3	-27.5	0	40.35	-	-	74	-33.65	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(001 68717)_1 50619	Path_3	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.924	48.32	PK2	34	-34	0	48.32	-	-	74	-25.68	240	366	H
* 4.924	37.15	MAv1	34	-34	0	37.15	54	-16.85	-	-	240	366	H
* 4.924	50.05	PK2	34	-34	0	50.05	-	-	74	-23.95	144	328	V
* 4.924	42.16	MAv1	34	-34	0	42.16	54	-11.84	-	-	144	328	V

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

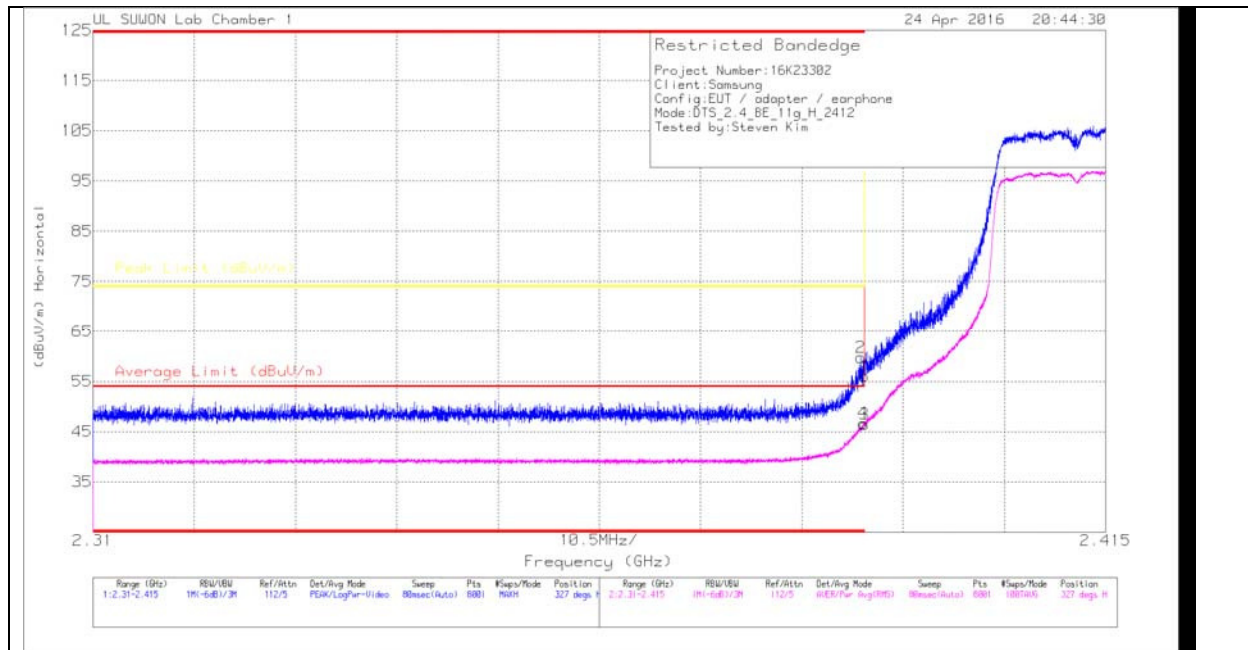
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

11.2.2. TX ABOVE 1 GHz 802.11g 2TX CDD MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

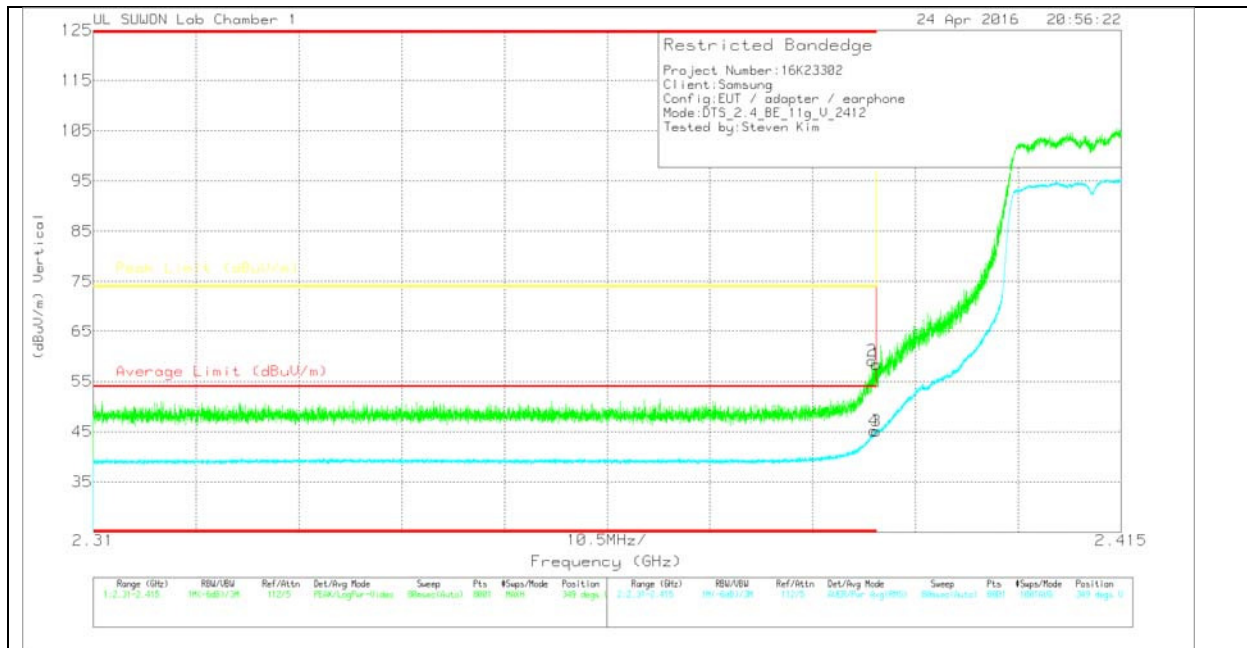
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17_150619)	Path_2	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	53.22	Pk	31.8	-29	0	56.02	-	-	74	-17.98	327	101	H
2	* 2.39	56.97	Pk	31.8	-29	0	59.77	-	-	74	-14.23	327	101	H
3	* 2.39	43.4	RMS	31.8	-29	.31	46.51	54	-7.49	-	-	327	101	H
4	* 2.39	43.61	RMS	31.8	-29	.31	46.72	54	-7.28	-	-	327	101	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17_150619)	Path_2	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	* 2.39	55.58	PK	31.8	-29	0	58.38	-	-	74	-15.62	349	306	V
2	* 2.39	56.32	PK	31.8	-29	0	59.12	-	-	74	-14.88	349	306	V
3	* 2.39	42.04	RMS	31.8	-29	.31	45.15	54	-8.85	-	-	349	306	V
4	* 2.39	42.07	RMS	31.8	-29	.31	45.18	54	-8.82	-	-	349	306	V

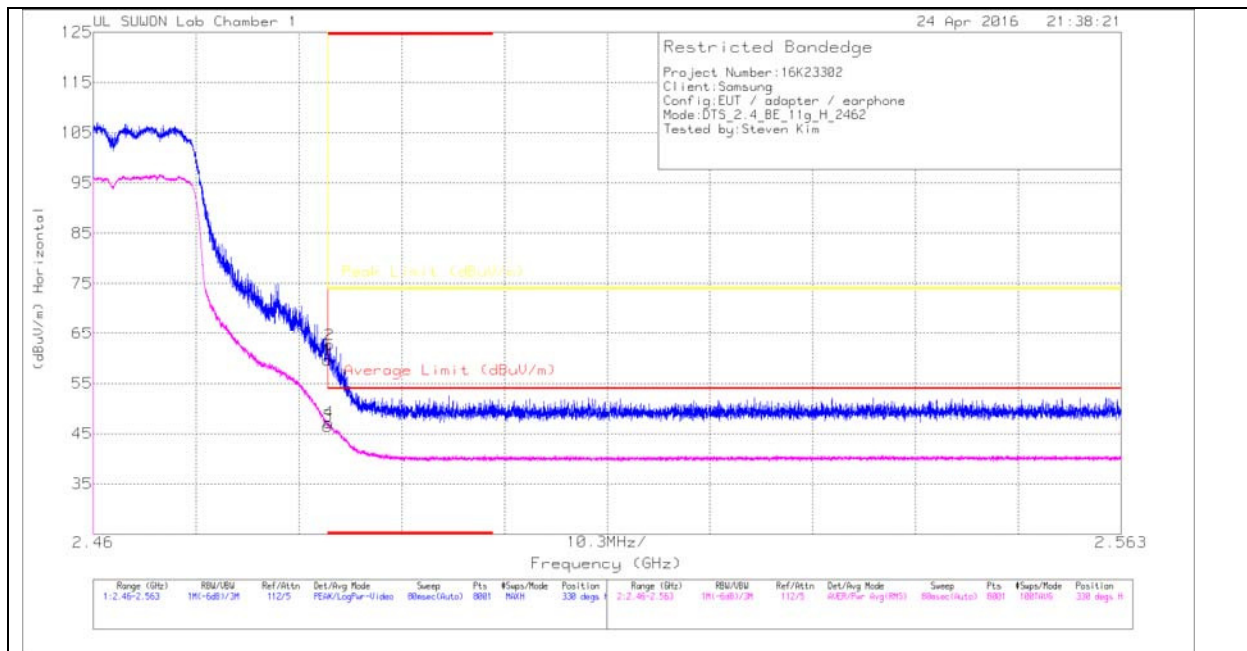
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

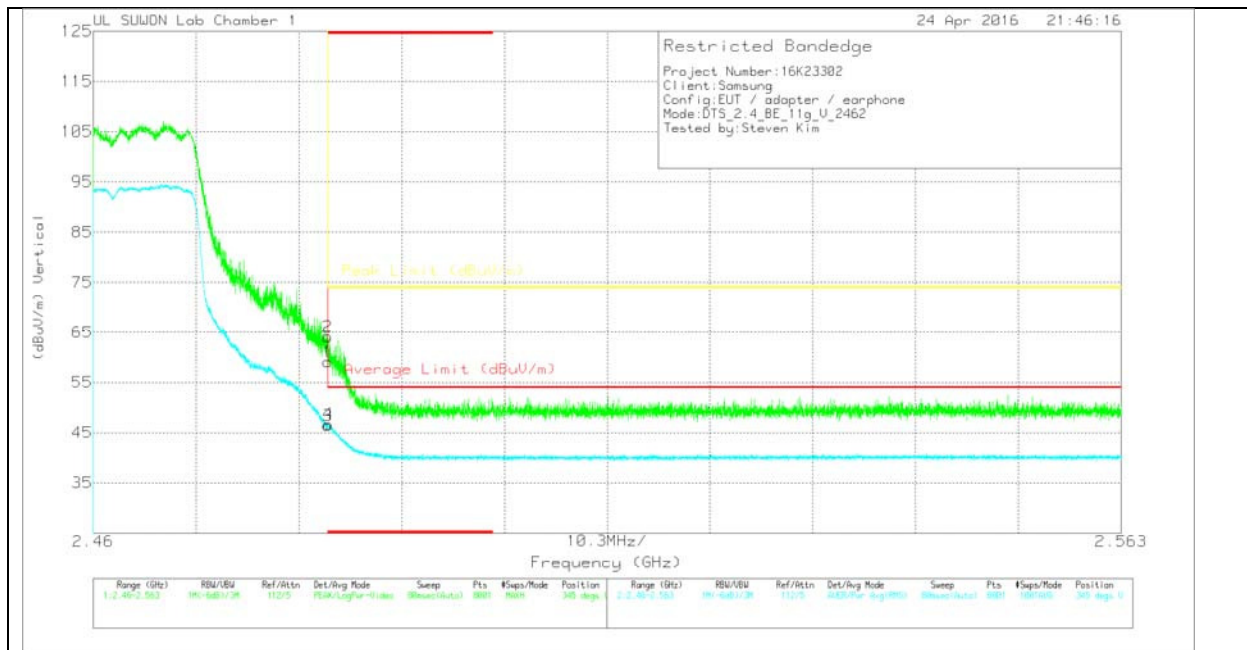
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17)_150619	Path_2	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	55.94	Pk	32	-28.3	0	59.64	-	-	74	-14.36	330	104	H
2	* 2.484	59	Pk	32	-28.3	0	62.7	-	-	74	-11.3	330	104	H
3	* 2.484	42.49	RMS	32	-28.3	.31	46.5	54	-7.5	-	-	330	104	H
4	* 2.484	43.21	RMS	32	-28.3	.31	47.22	54	-6.78	-	-	330	104	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17)_150619	Path_2	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	* 2.484	55.36	Pk	32	-28.3	0	59.06	-	-	74	-14.94	345	290	V
2	* 2.484	60.44	Pk	32	-28.3	0	64.14	-	-	74	-9.86	345	290	V
3	* 2.484	42.43	RMS	32	-28.3	.31	46.44	54	-7.56	-	-	345	290	V
4	* 2.484	42.71	RMS	32	-28.3	.31	46.72	54	-7.28	-	-	345	290	V

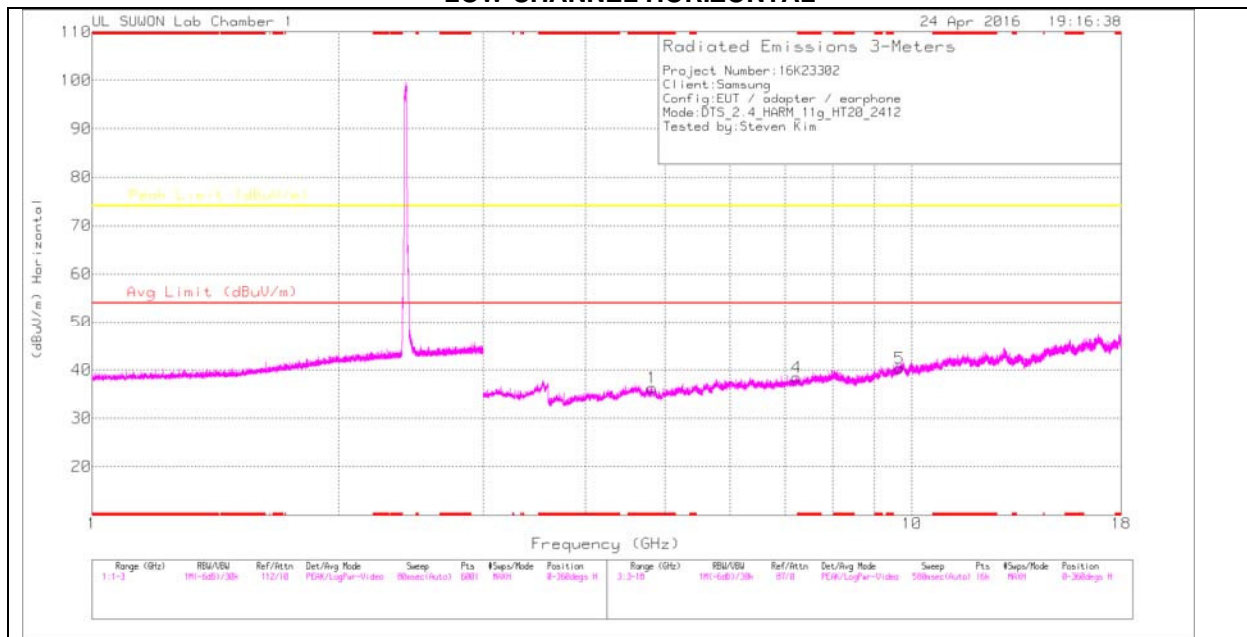
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

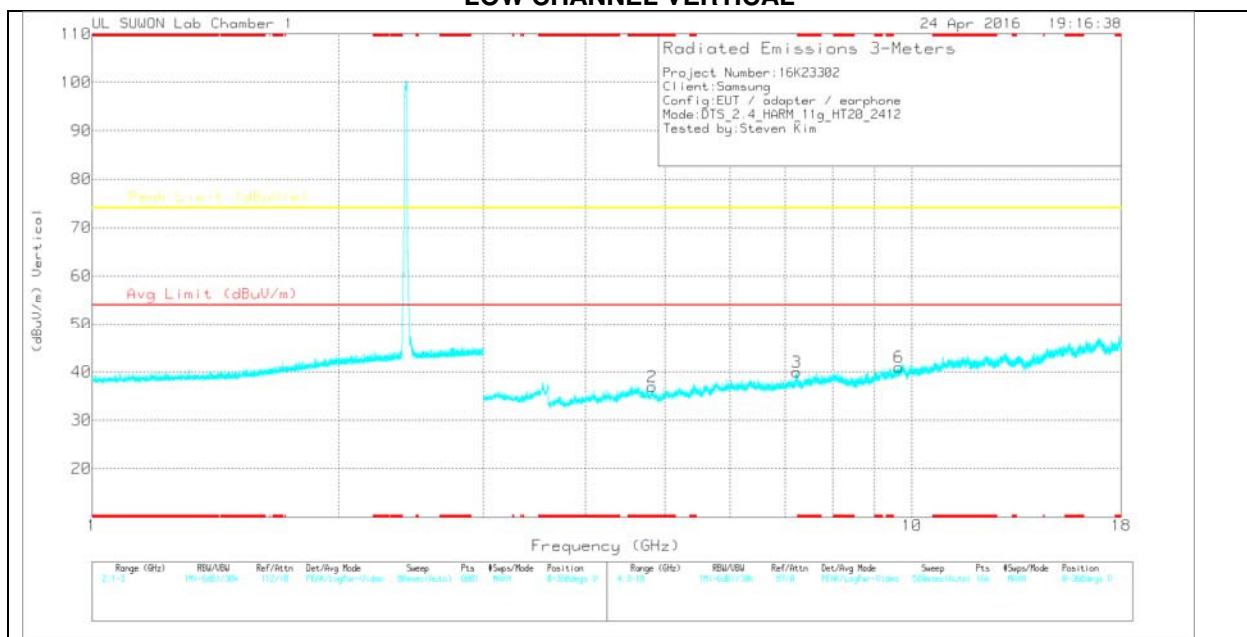
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Trace Markers

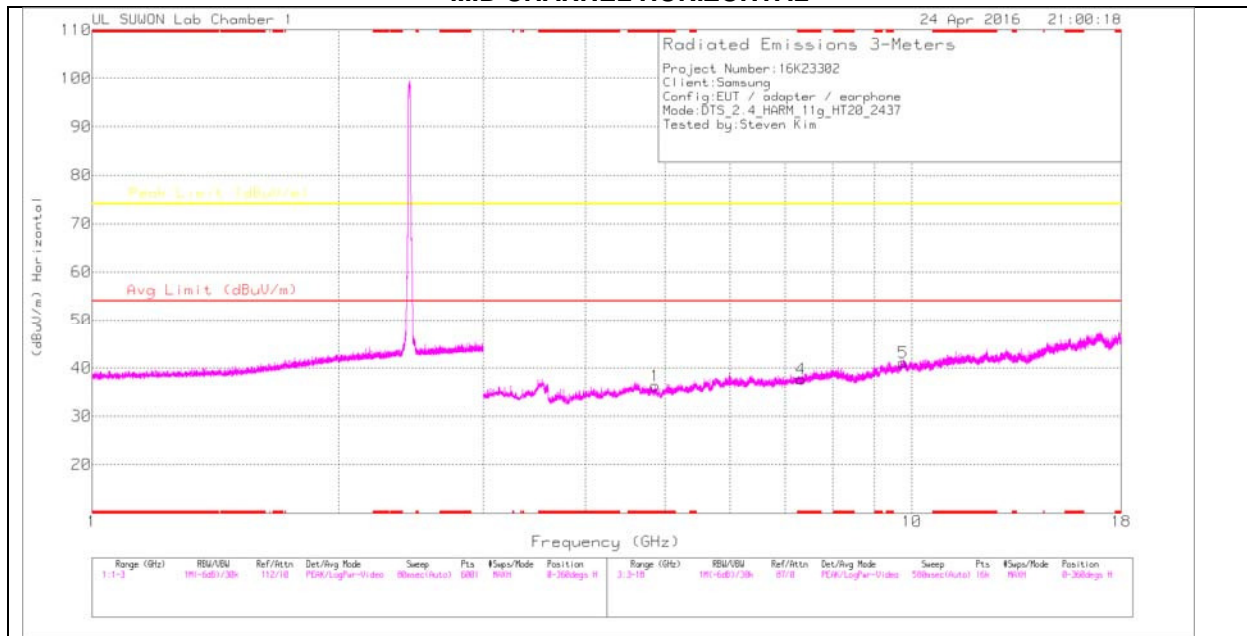
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17)_150619	Path_3	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.823	36.12	PK	34	-33.8	0	36.32	-	-	74	-37.68	0-360	200	H
4	7.233	33.65	PK	35.7	-30.9	0	38.45	-	-	74	-35.55	0-360	100	H
5	9.65	30.7	PK	37.1	-27.4	0	40.4	-	-	74	-33.6	0-360	100	H
2	* 4.822	36.72	PK	34	-33.8	0	36.92	-	-	74	-37.08	0-360	200	V
3	7.239	35.24	PK	35.7	-30.9	0	40.04	-	-	74	-33.96	0-360	100	V
6	9.648	31.3	PK	37.1	-27.4	0	41	-	-	74	-33	0-360	100	V

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

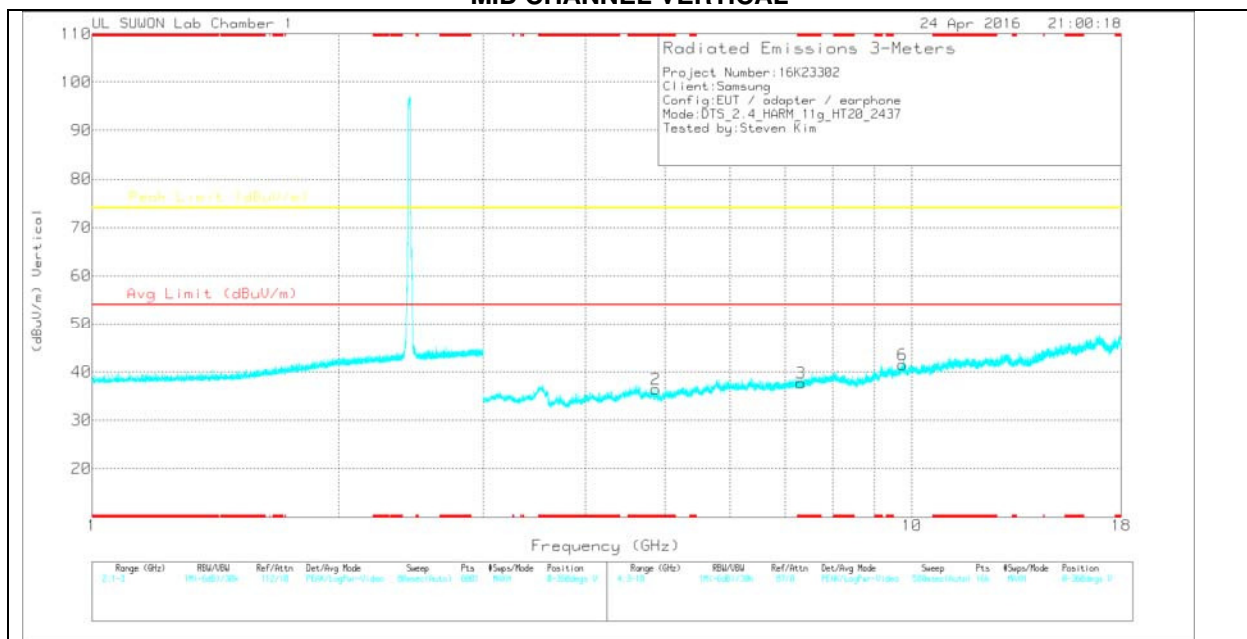
PK – Peak detector

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

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Trace Markers

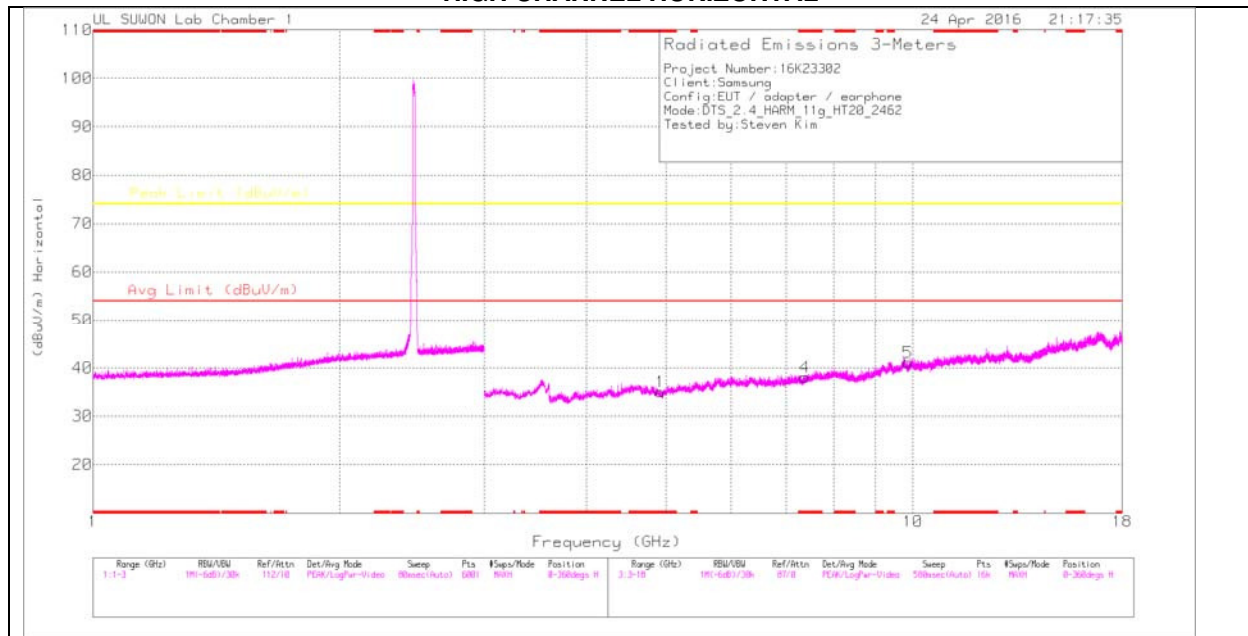
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17)_150619	Path_3	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.866	36.37	PK	34	-34	0	36.37	-	-	74	-37.63	0-360	200	H
4	* 7.317	32.86	PK	35.8	-30.9	0	37.76	-	-	74	-36.24	0-360	200	H
5	9.75	30.69	PK	37.2	-26.8	0	41.09	-	-	74	-32.91	0-360	100	H
2	* 4.869	36.41	PK	34	-34	0	36.41	-	-	74	-37.59	0-360	100	V
3	* 7.319	32.76	PK	35.8	-30.9	0	37.66	-	-	74	-36.34	0-360	100	V
6	9.746	31.22	PK	37.2	-26.9	0	41.52	-	-	74	-32.48	0-360	200	V

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

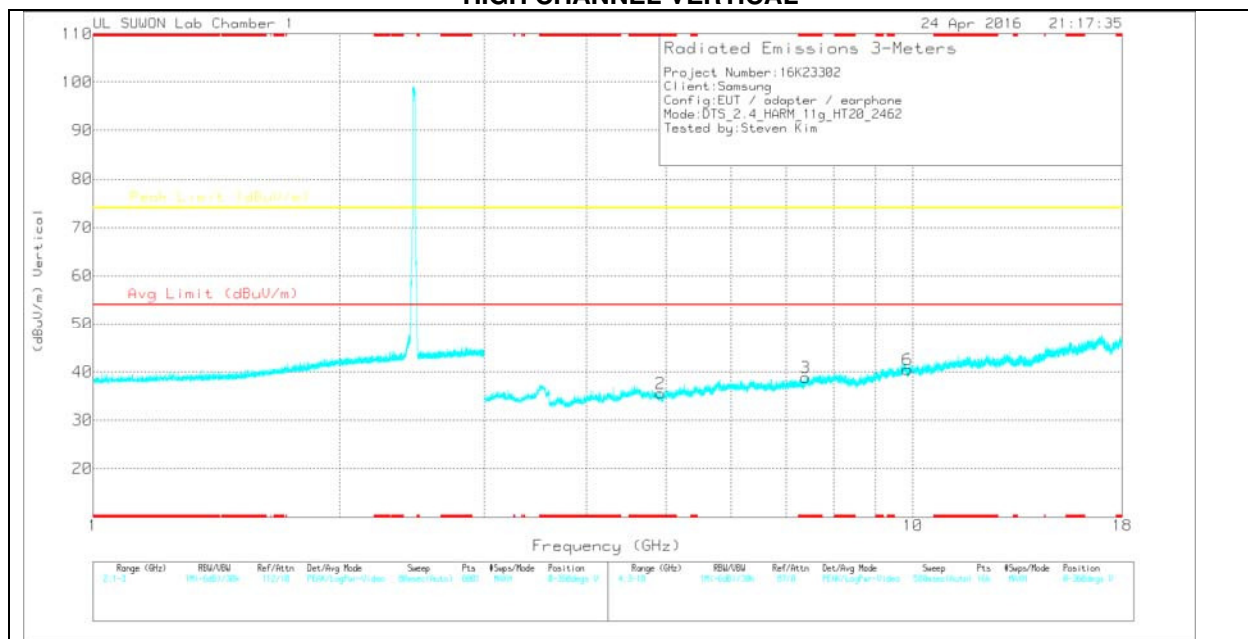
PK – Peak detector

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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17)_150619	Path_3	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.924	35.02	PK	34	-34	0	35.02	-	-	74	-38.98	0-360	200	H
4	* 7.385	32.98	PK	35.8	-30.7	0	38.08	-	-	74	-35.92	0-360	200	H
5	9.854	31.48	PK	37.3	-27.7	0	41.08	-	-	74	-32.92	0-360	200	H
2	* 4.919	35.58	PK	34	-34	0	35.58	-	-	74	-38.42	0-360	200	V
3	* 7.396	33.61	PK	35.8	-30.6	0	38.81	-	-	74	-35.19	0-360	100	V
6	9.85	30.91	PK	37.3	-27.7	0	40.51	-	-	74	-33.49	0-360	100	V

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

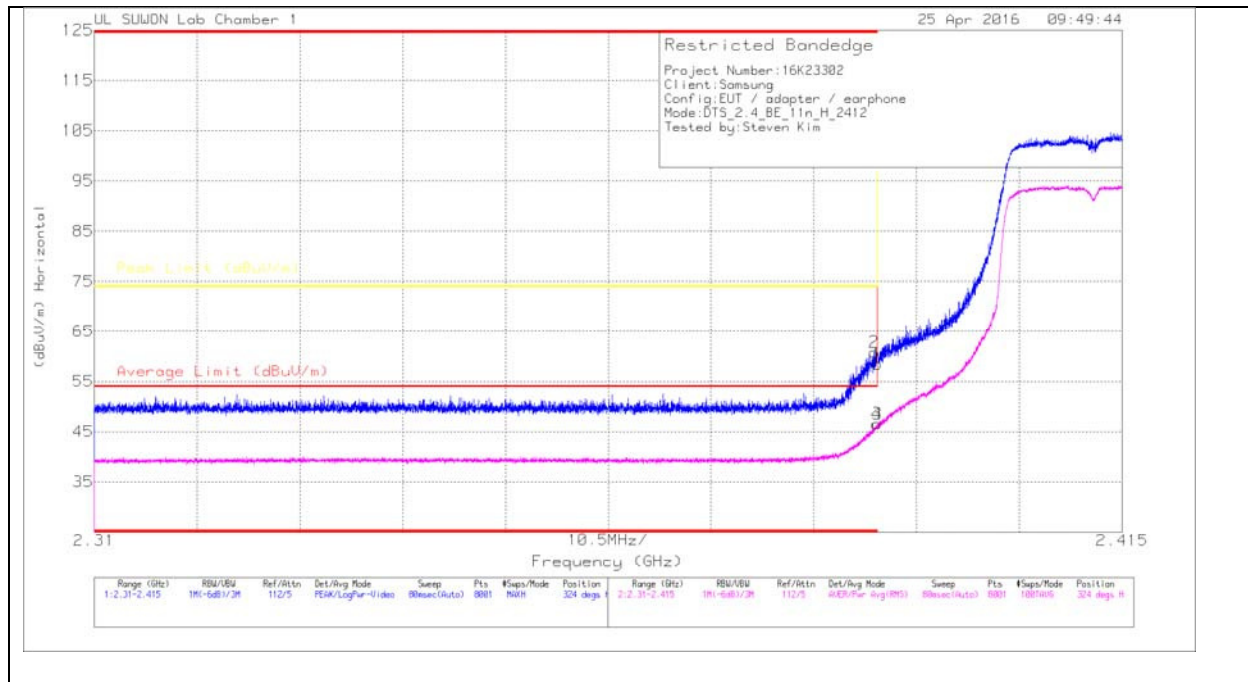
PK – Peak detector

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

11.2.3. TX ABOVE 1 GHz 802.11n HT20 2TX CDD MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

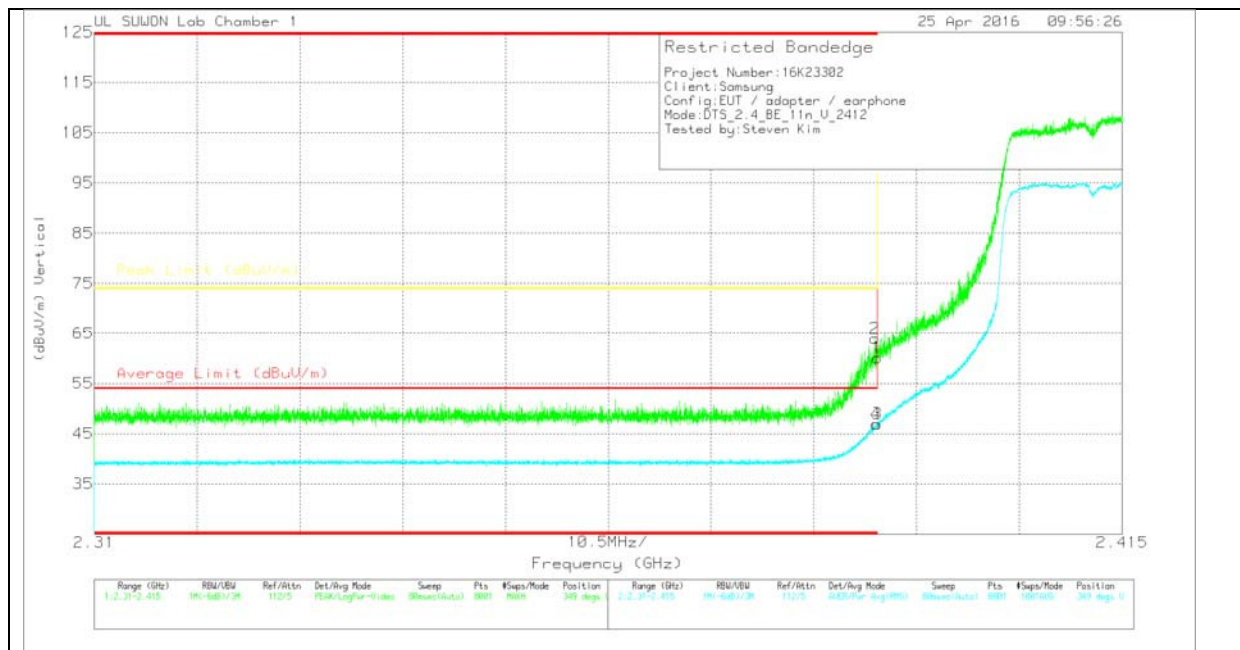
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17_150619)	Path_2	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	55.63	Pk	31.8	-29	0	58.43	-	-	74	-15.57	324	101	H
2	* 2.39	58.02	Pk	31.8	-29	0	60.82	-	-	74	-13.18	324	101	H
3	* 2.39	43.46	RMS	31.8	-29	.33	46.59	54	-7.41	-	-	324	101	H
4	* 2.39	43.41	RMS	31.8	-29	.33	46.54	54	-7.46	-	-	324	101	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17_150619)	Path_2	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	* 2.39	57.31	Pk	31.8	-29	0	60.11	-	-	74	-13.89	349	306	V
2	* 2.39	61.18	Pk	31.8	-29	0	63.98	-	-	74	-10.02	349	306	V
3	* 2.39	43.84	RMS	31.8	-29	.33	46.97	54	-7.03	-	-	349	306	V
4	* 2.39	43.8	RMS	31.8	-29	.33	46.93	54	-7.07	-	-	349	306	V

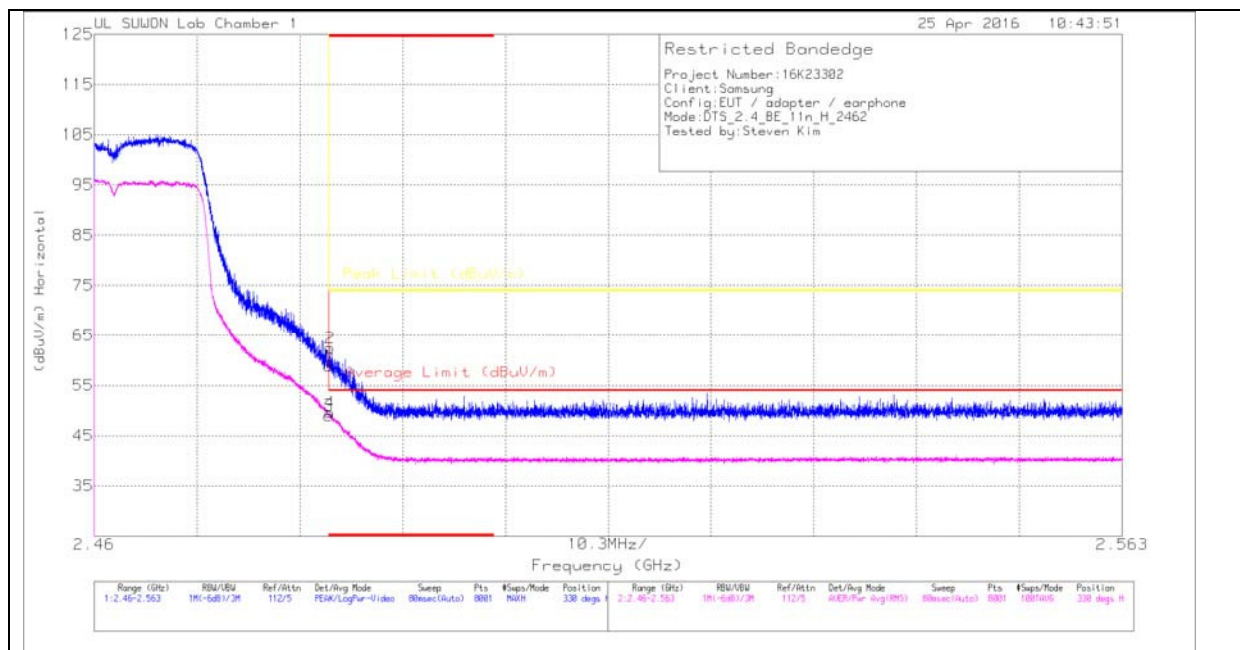
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

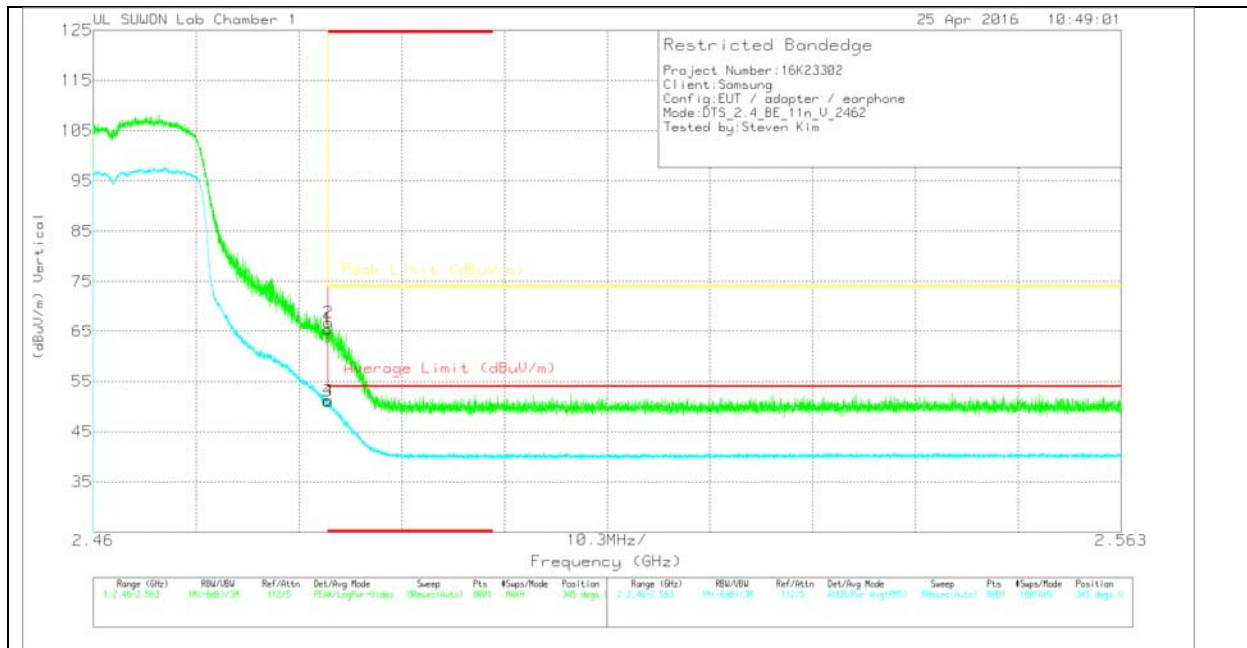
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17)_150619	Path_2	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	55.12	PK	32	-28.3	0	58.82	-	-	74	-15.18	330	104	H
2	* 2.484	58.75	PK	32	-28.3	0	62.45	-	-	74	-11.55	330	104	H
3	* 2.484	44.97	RMS	32	-28.3	.33	49	54	-5	-	-	330	104	H
4	* 2.484	45.54	RMS	32	-28.3	.33	49.57	54	-4.43	-	-	330	104	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17_150619)	Path_2	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	* 2.484	61.76	PK	32	-28.3	0	65.46	-	-	74	-8.54	345	290	V
2	* 2.484	63.16	PK	32	-28.3	0	66.86	-	-	74	-7.14	345	290	V
3	* 2.484	47.09	RMS	32	-28.3	.33	51.12	54	-2.88	-	-	345	290	V
4	* 2.484	47.23	RMS	32	-28.3	.33	51.26	54	-2.74	-	-	345	290	V

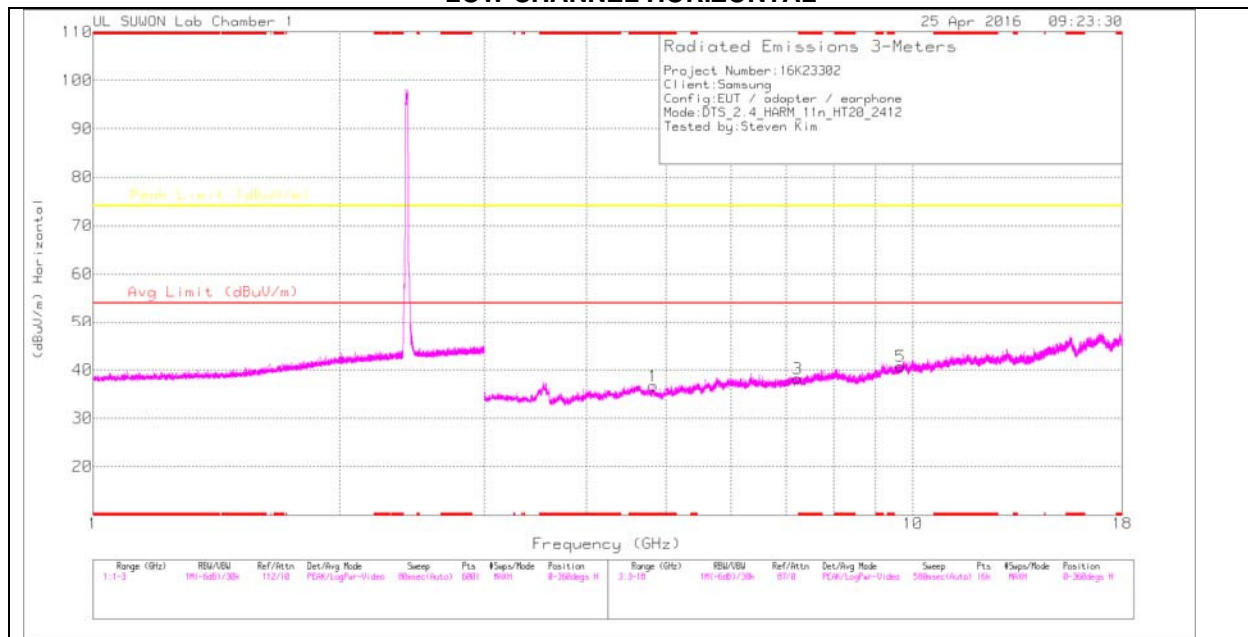
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

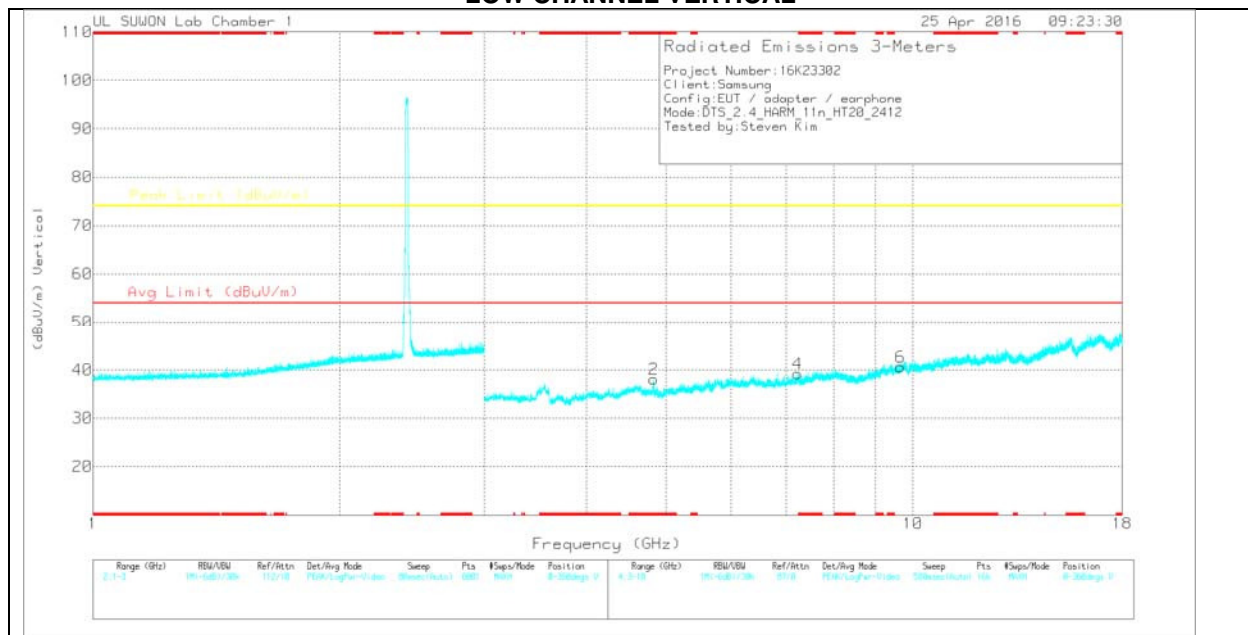
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Trace Markers

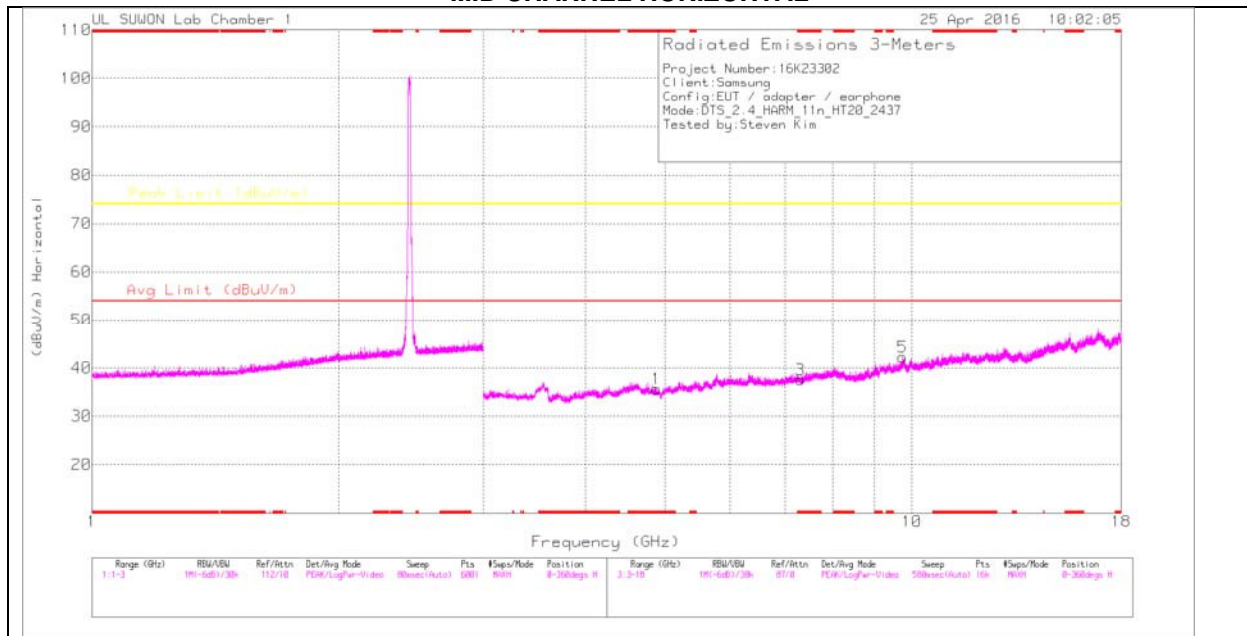
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17)_150619	Path_3	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.822	36.54	PK	34	-33.8	0	36.74	-	-	74	-37.26	0-360	100	H
3	7.237	33.47	PK	35.7	-30.9	0	38.27	-	-	74	-35.73	0-360	100	H
5	9.653	31.12	PK	37.1	-27.5	0	40.72	-	-	74	-33.28	0-360	200	H
2	* 4.826	37.86	PK	34	-33.8	0	38.06	-	-	74	-35.94	0-360	200	V
4	7.236	34.4	PK	35.7	-30.9	0	39.2	-	-	74	-34.8	0-360	200	V
6	9.654	30.98	PK	37.1	-27.5	0	40.58	-	-	74	-33.42	0-360	200	V

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

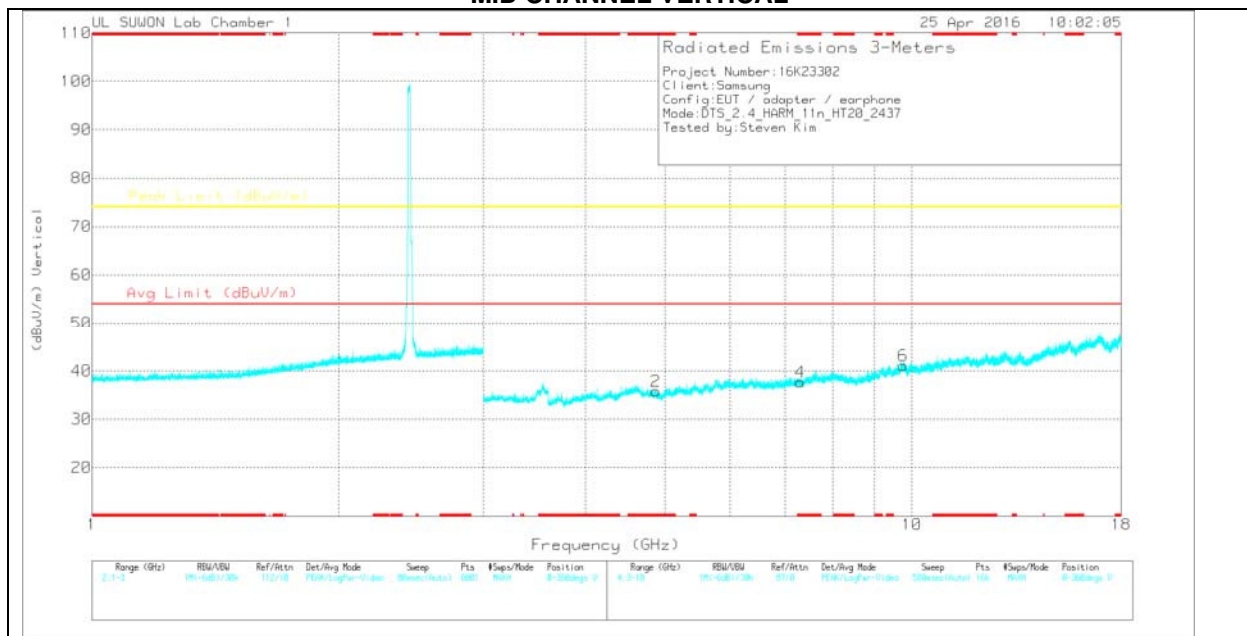
PK – Peak detector

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

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Trace Markers

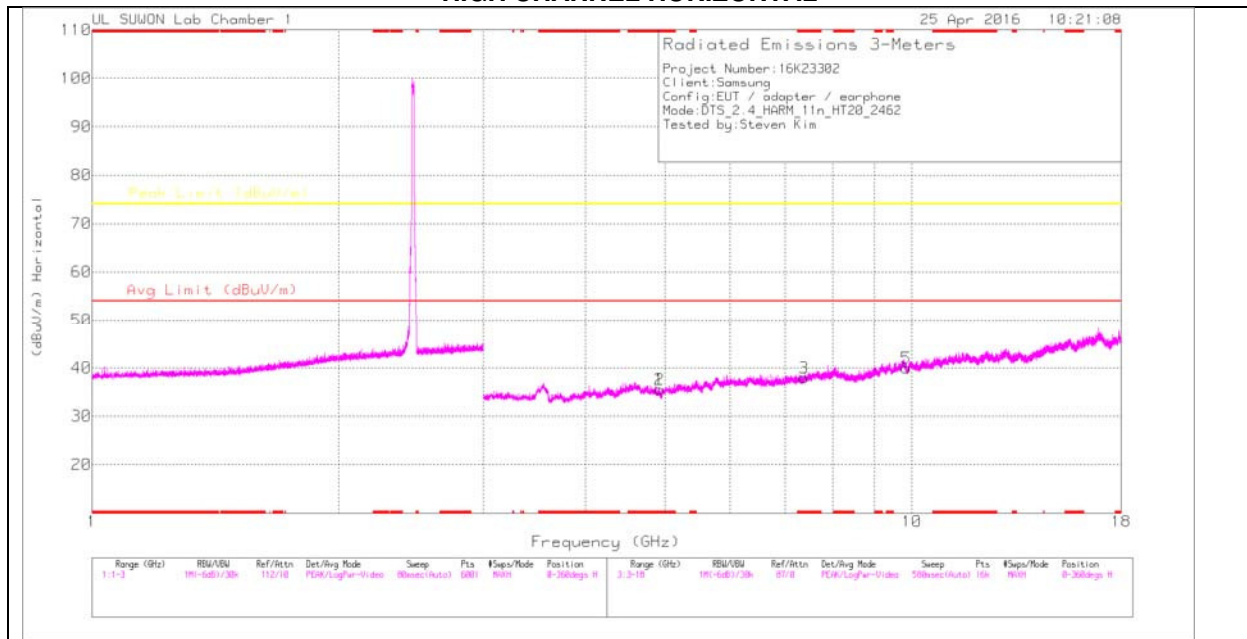
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17)_150619	Path_3	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.876	35.67	PK	34	-34	0	35.67	-	-	74	-38.33	0-360	200	H
3	* 7.312	32.79	PK	35.7	-30.9	0	37.59	-	-	74	-36.41	0-360	200	H
5	9.747	31.97	PK	37.2	-26.9	0	42.27	-	-	74	-31.73	0-360	200	H
2	* 4.872	35.77	PK	34	-34	0	35.77	-	-	74	-38.23	0-360	200	V
4	* 7.306	32.91	PK	35.7	-30.9	0	37.71	-	-	74	-36.29	0-360	200	V
6	9.753	30.6	PK	37.2	-26.7	0	41.1	-	-	74	-32.9	0-360	200	V

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

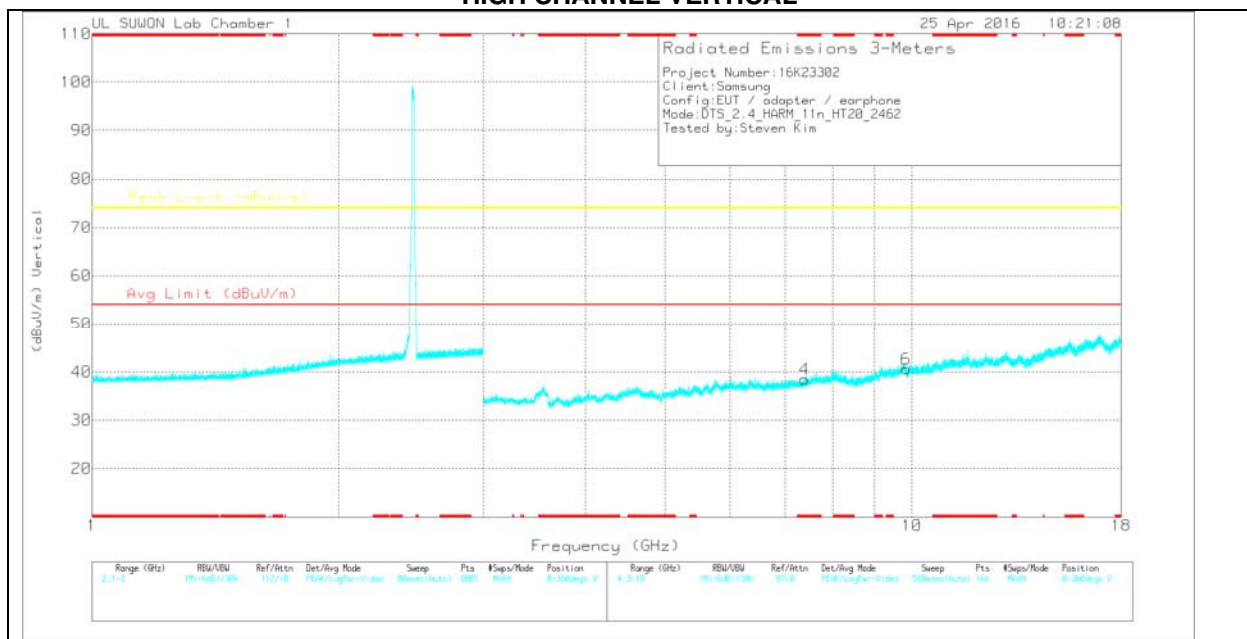
PK – Peak detector

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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(001687 17)_150619	Path_3	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.926	35.61	PK	34	-34	0	35.61	-	-	74	-38.39	0-360	200	H
2	* 4.926	35.61	PK	34	-34	0	35.61	-	-	74	-38.39	0-360	200	H
3	* 7.388	32.88	PK	35.8	-30.7	0	37.98	-	-	74	-36.02	0-360	100	H
5	9.849	30.25	PK	37.3	-27.6	0	39.95	-	-	74	-34.05	0-360	100	H
4	* 7.393	33.31	PK	35.8	-30.6	0	38.51	-	-	74	-35.49	0-360	200	V
6	9.846	30.95	PK	37.3	-27.6	0	40.65	-	-	74	-33.35	0-360	100	V

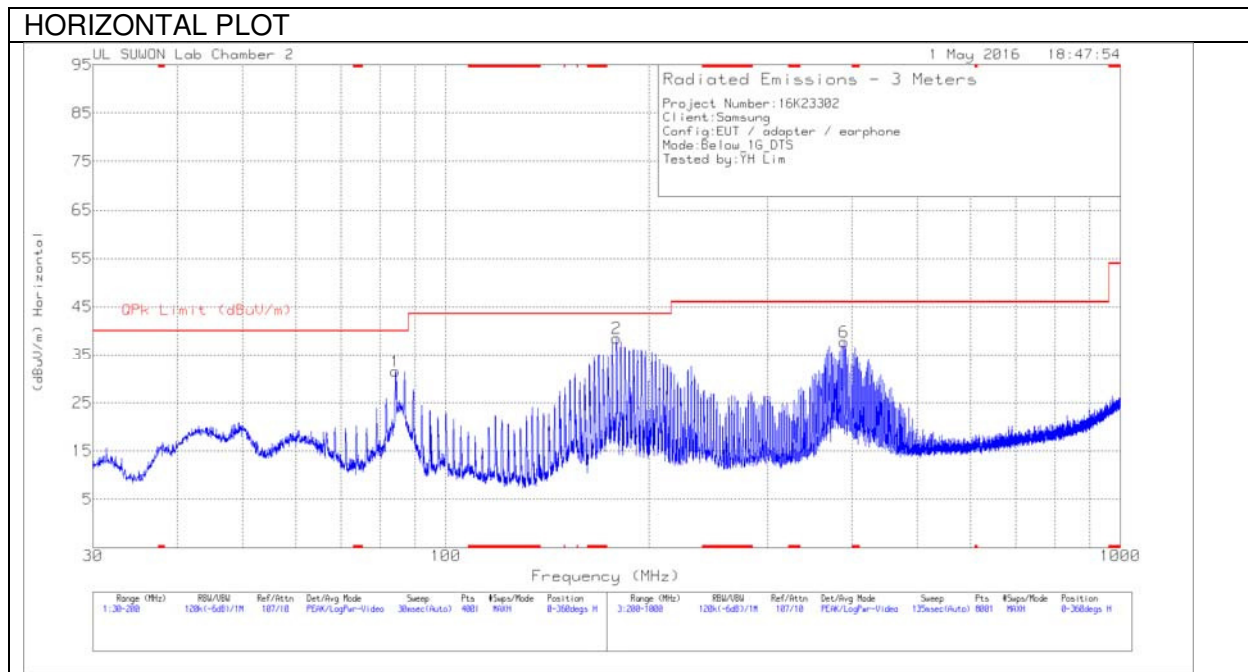
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

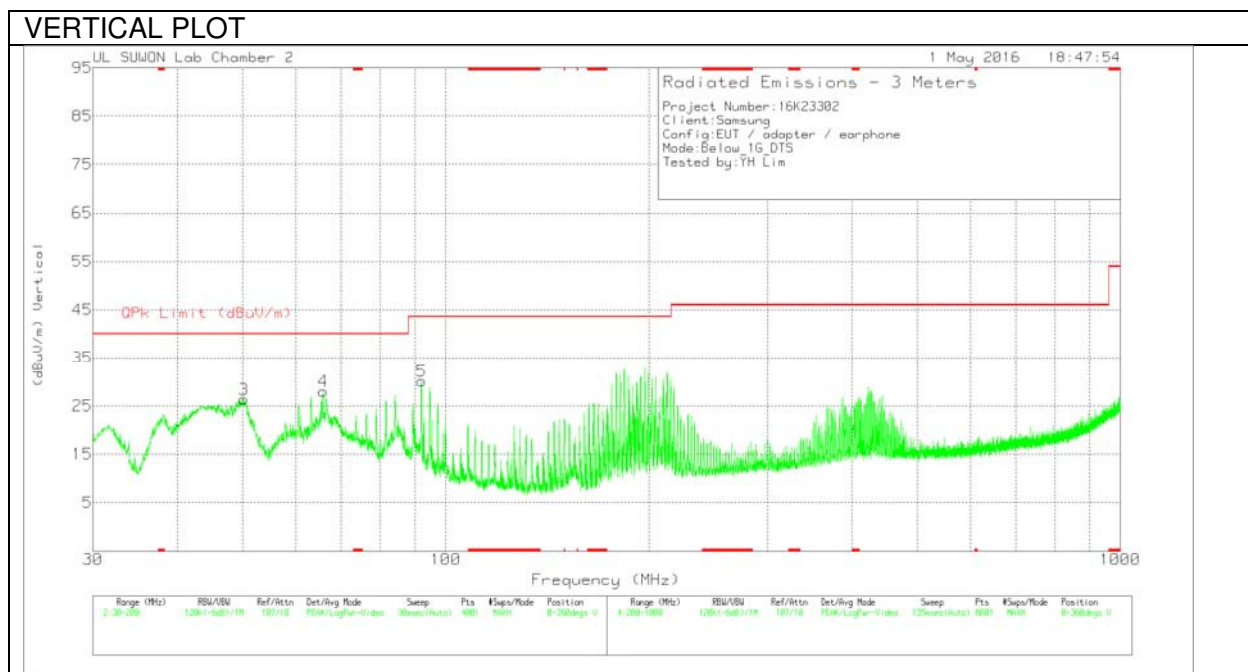
Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

11.3. WORST-CASE BELOW 1 GHz

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



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



Below 1G Data

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163-749	Below_1G	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	84.2725	54.08	Pk	8.1	-30.6	31.58	40	-8.42	0-360	200	H
2	179.1325	59.39	Pk	9.4	-30.3	38.49	43.52	-5.03	0-360	200	H
3	50.1875	43.02	Pk	14.1	-30.7	26.42	40	-13.58	0-360	100	V
4	65.785	47.78	Pk	11	-30.7	28.08	40	-11.92	0-360	100	V
5	92.05	50.62	Pk	10	-30.5	30.12	43.52	-13.4	0-360	100	V
6	389	52.39	Pk	15.1	-29.7	37.79	46.02	-8.23	0-360	100	H

Pk - Peak detector

12. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

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

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

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10 2009.

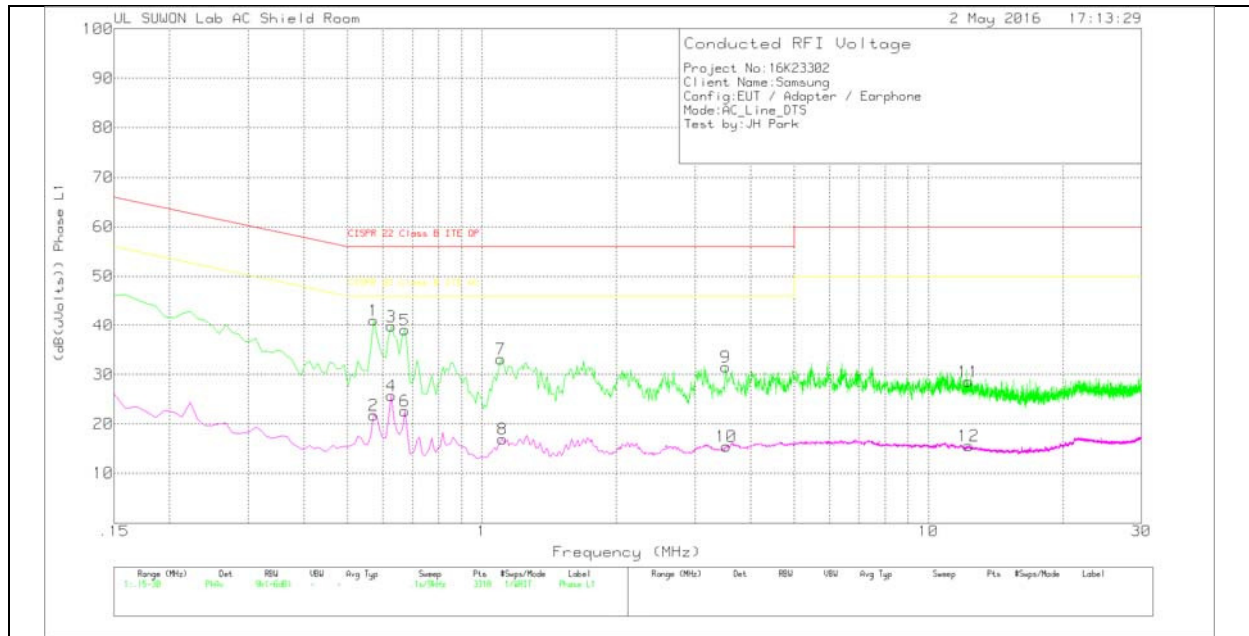
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT



LINE 1 RESULTS

Trace Markers

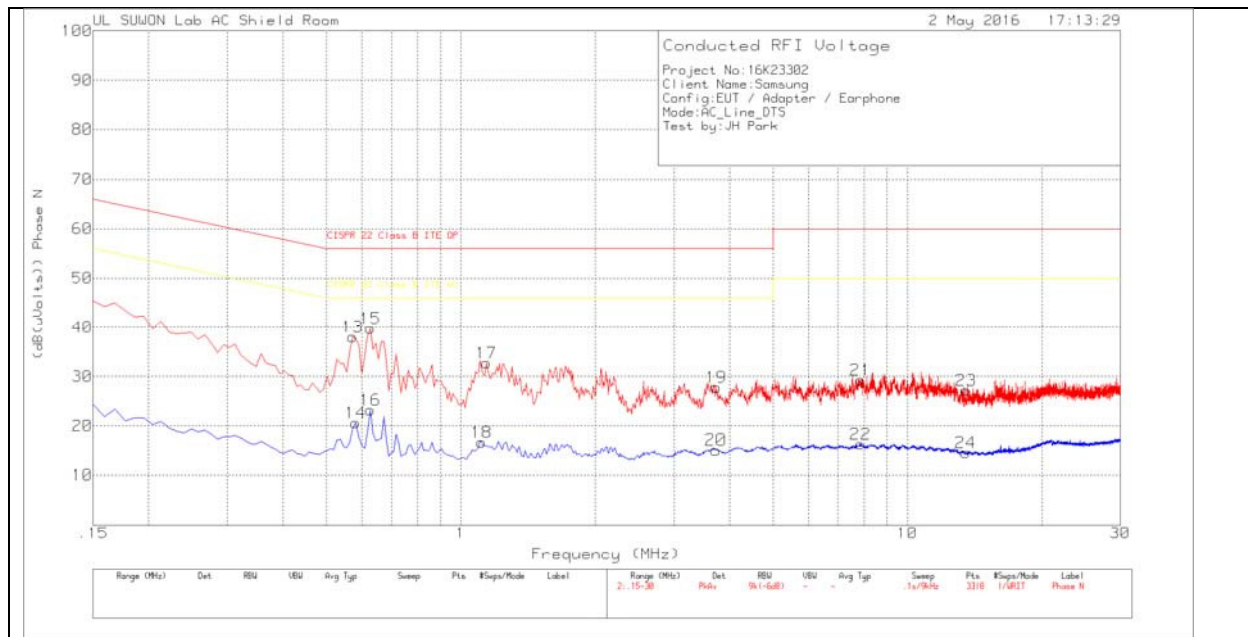
Phase L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101837_w ith ex- cord_L1	CE Shield Room	Corrected Reading (dB(uVolts)	CISPR 22 Class B ITE QP	Margin (dB)	CISPR 22 Class B ITE AV	Margin (dB)
1	.573	30.9	Pk	10.1	0	41	56	-15	-	-
2	.573	11.64	Av	10.1	0	21.74	-	-	46	-24.26
3	.627	29.69	Pk	10.1	0	39.79	56	-16.21	-	-
4	.627	15.6	Av	10.1	0	25.7	-	-	46	-20.3
5	.672	28.98	Pk	10.1	0	39.08	56	-16.92	-	-
6	.672	12.54	Av	10.1	0	22.64	-	-	46	-23.36
7	1.104	23.18	Pk	9.9	0	33.08	56	-22.92	-	-
8	1.113	6.96	Av	9.9	0	16.86	-	-	46	-29.14
9	3.516	21.65	Pk	9.8	.1	31.55	56	-24.45	-	-
10	3.525	5.55	Av	9.8	.1	15.45	-	-	46	-30.55
11	12.291	18.28	Pk	10.1	.2	28.58	60	-31.42	-	-
12	12.309	5.26	Av	10.1	.2	15.56	-	-	50	-34.44

Pk - Peak detector

Av - Average detection

LINE 2 PLOT



LINE 2 RESULTS

Trace Markers

Phase N .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101837_w ith ex- cord_N	CE Shield Room	Corrected Reading (dB(uVolts)	CISPR 22 Class B ITE QP	Margin (dB)	CISPR 22 Class B ITE AV	Margin (dB)
13	.573	27.95	Pk	10.1	0	38.05	56	-17.95	-	-
14	.582	10.48	Av	10.1	0	20.58	-	-	46	-25.42
15	.627	29.72	Pk	10.1	0	39.82	56	-16.18	-	-
16	.627	13.14	Av	10.1	0	23.24	-	-	46	-22.76
17	1.14	22.9	Pk	9.8	0	32.7	56	-23.3	-	-
18	1.113	6.81	Av	9.9	0	16.71	-	-	46	-29.29
19	3.732	17.92	Pk	9.8	.1	27.82	56	-28.18	-	-
20	3.7275	5.22	Av	9.8	.1	15.12	-	-	46	-30.88
21	7.845	19.33	Pk	9.9	.1	29.33	60	-30.67	-	-
22	7.845	6.28	Av	9.9	.1	16.28	-	-	50	-33.72
23	13.551	16.81	Pk	10.2	.2	27.21	60	-32.79	-	-
24	13.506	4.2	Av	10.2	.2	14.6	-	-	50	-35.4

Pk - Peak detector

Av - Average detection