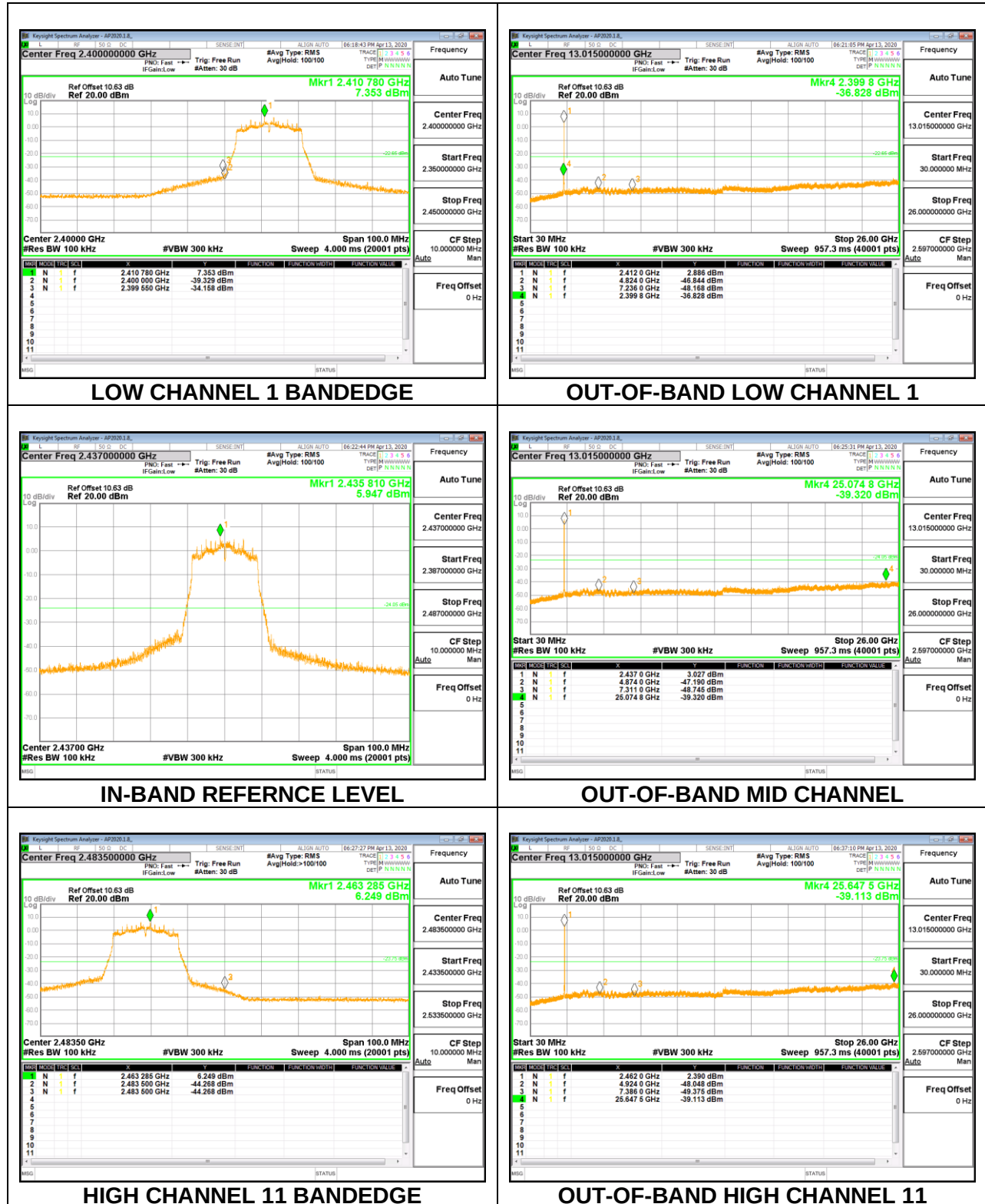


1TX Antenna 2 MODE



10. RADIATED TEST RESULTS

FCC §15.205 and §15.209

Limits for radiated disturbance of an intentional radiator		
Frequency range (MHz)	Limits (µV/m)	Measurement Distance (m)
0.009 – 0.490	2400 / F (kHz)	300
0.490 – 1.705	24000 / F (kHz)	30
1.705 – 30.0	30	30
30 – 88	100**	3
88 - 216	150**	3
216 – 960	200**	3
Above 960	500	3

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

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

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

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

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1 GHz and 150 cm for above 1 GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

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

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. (Restricted bandedge, Final detection of spurious harmonic emissions)

Duty cycle factor = $10\log(1/x)$ For this sample B mode = 0dB (duty cycle >98%); G mode = 0dB (duty cycle >98%); N mode = 0dB (duty cycle >98%).

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

The spectrum from 1 GHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.
(From 30MHz to 1GHz, test was performed with the EUT set to transmit at the channel with highest output power)

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

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

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

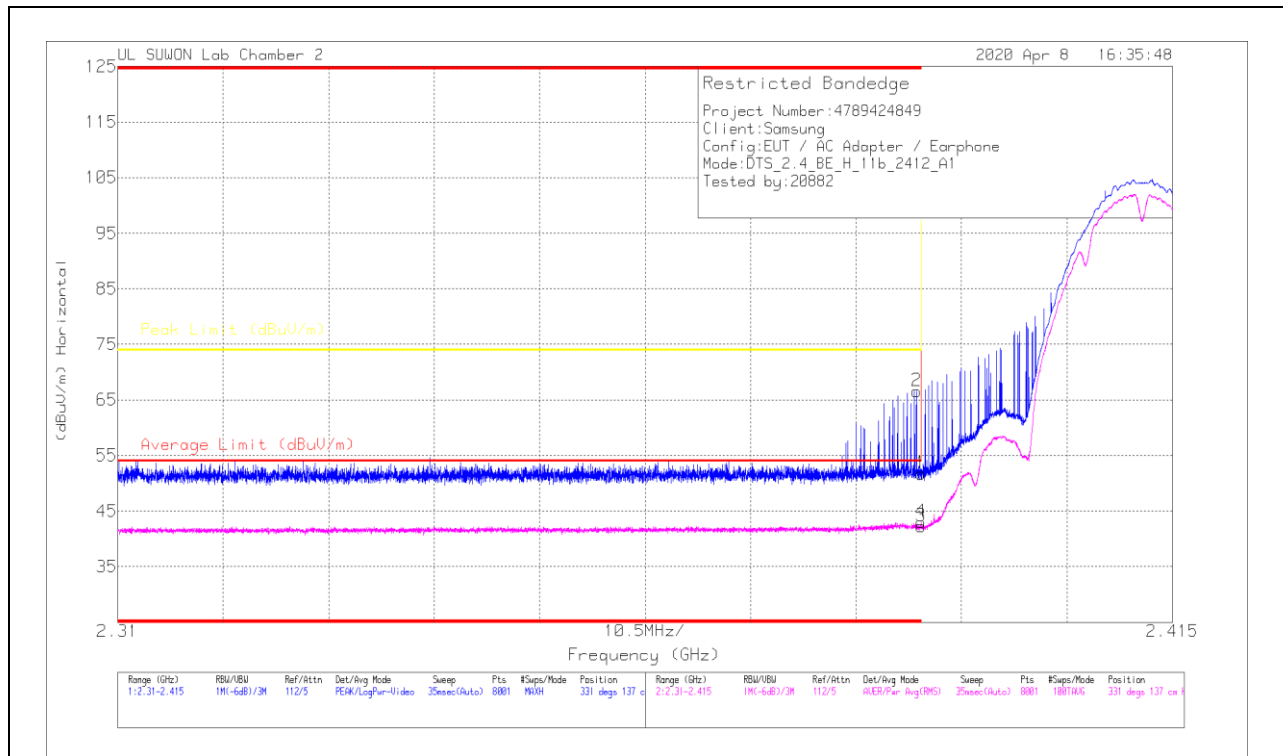
10.1. TRANSMITTER ABOVE 1 GHz

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

1TX Antenna 1 MODE

BANDEDGE (LOW CHANNEL, CH 1)

HORIZONTAL RESULT



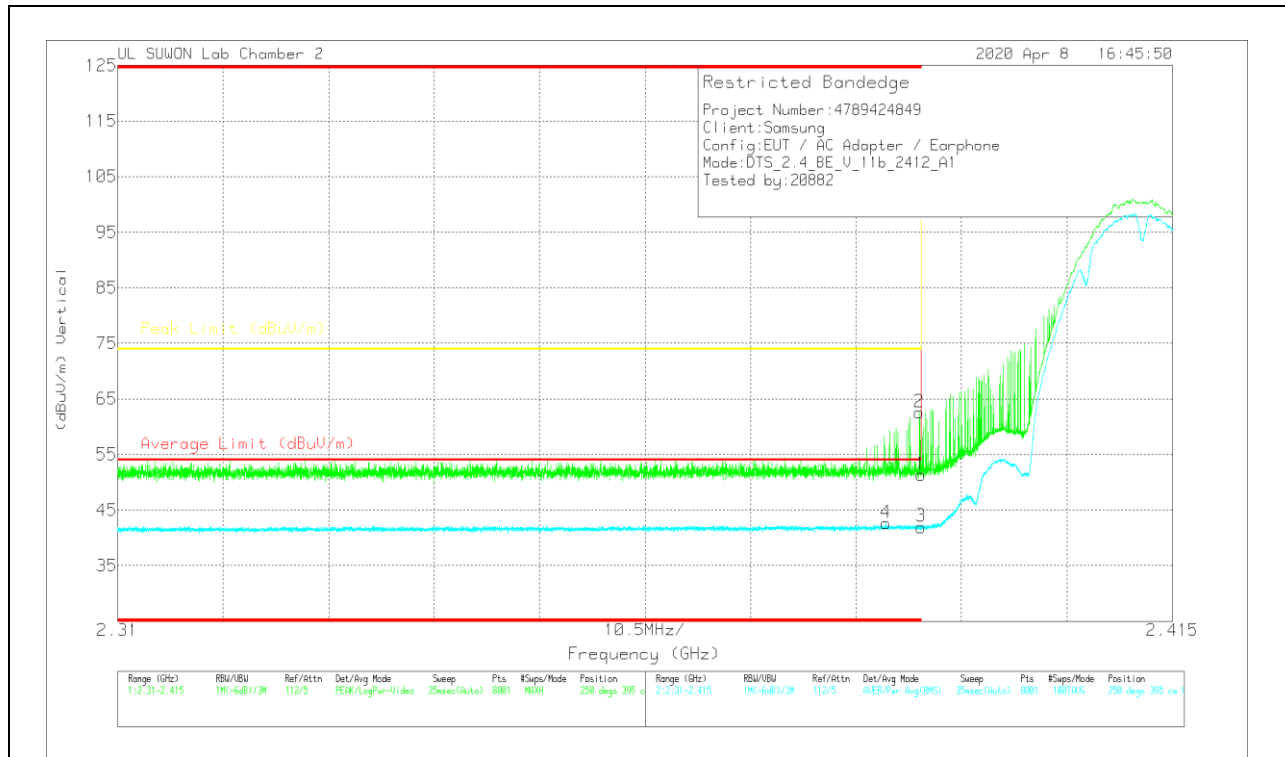
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 2.39	40.8	PK	31.6	-20.6	0	51.8	-	-	74	-22.2	331	137	H
2	* 2.38955	55.61	PK	31.6	-20.6	0	66.61	-	-	74	-7.39	331	137	H
3	* 2.39	31.3	RMS	31.6	-20.6	0	42.3	54	-11.7	-	-	331	137	H
4	* 2.38996	32.08	RMS	31.6	-20.6	0	43.08	54	-10.92	-	-	331	137	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (Dops)	Height (cm)	Polarity
1	* 2.39	40.43	PK	31.6	-20.6	0	51.43	-	-	74	-22.57	250	395	V
2	* 2.38981	51.63	PK	31.6	-20.6	0	62.63	-	-	74	-11.37	250	395	V
3	* 2.39	30.97	RMS	31.6	-20.6	0	41.97	54	-12.03	-	-	250	395	V
4	* 2.38651	31.63	RMS	31.6	-20.6	0	42.63	54	-11.37	-	-	250	395	V

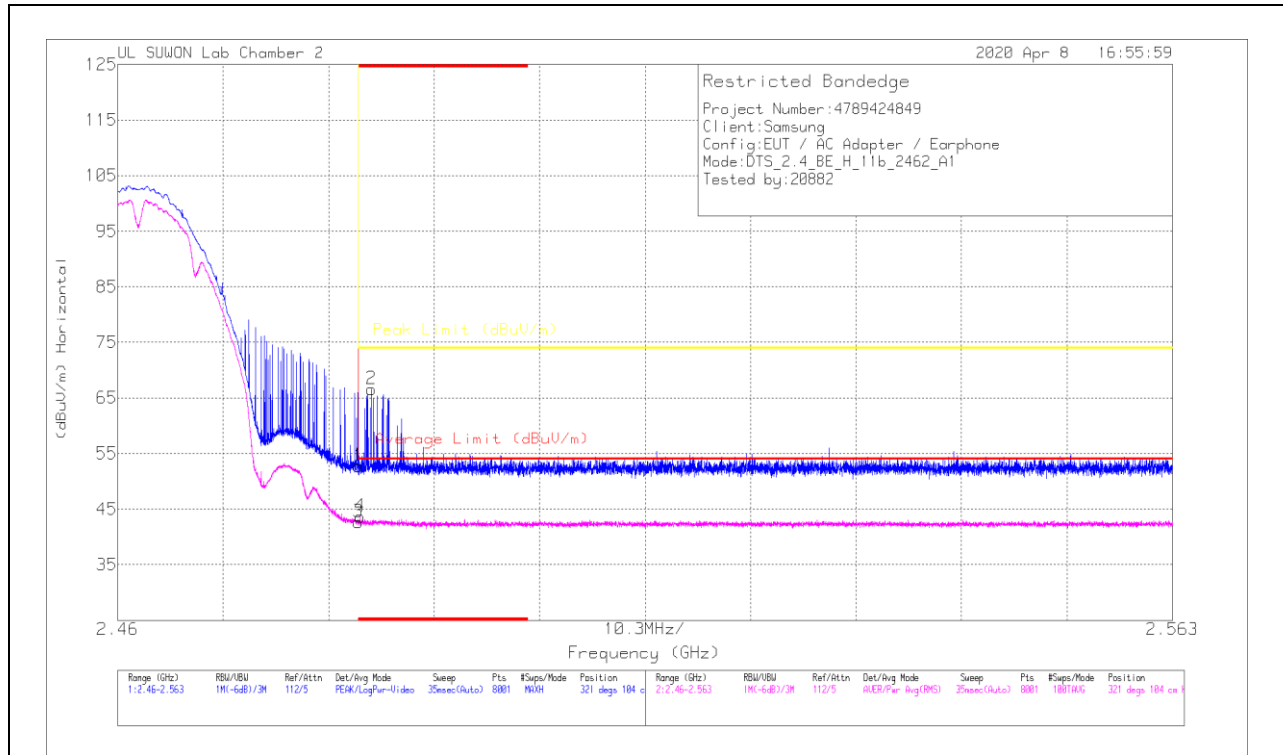
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 11)

HORIZONTAL RESULT



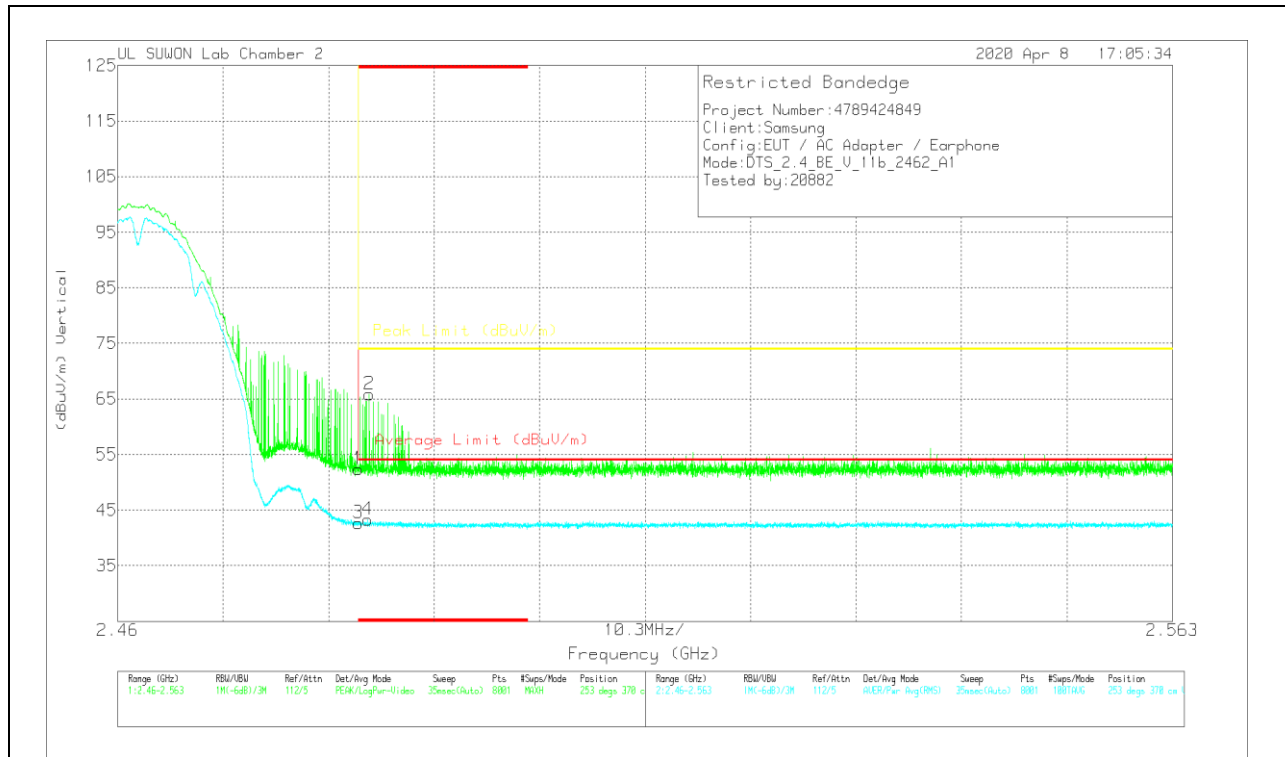
Marker	Frequency (GHz)	Meas Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 2.48351	41.24	PK		-20.4	0	62.74	-	-	74	-21.26	321	104	H
2	* 2.48477	55.08	PK		-20.4	0	66.58	-	-	74	-7.42	321	104	H
3	* 2.48351	31.15	RMS		-20.4	0	42.65	54	-11.35	-	-	321	104	H
4	* 2.48369	32.13	RMS		-20.4	0	43.63	54	-10.37	-	-	321	104	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBUV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBUV/m)	Average Limit (dBUV/m)	Margin (dB)	Peak Limit (dBUV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	40.92	PK	31.9	-20.4	0	52.42	-	-	74	-21.58	253	370	V
2	* 2.48457	54.28	PK	31.9	-20.4	0	65.78	-	-	74	-8.22	253	370	V
3	* 2.48351	31.16	RMS	31.9	-20.4	0	42.66	54	-11.34	-	-	253	370	V
4	* 2.48442	31.75	RMS	31.9	-20.4	0	43.25	54	-10.75	-	-	253	370	V

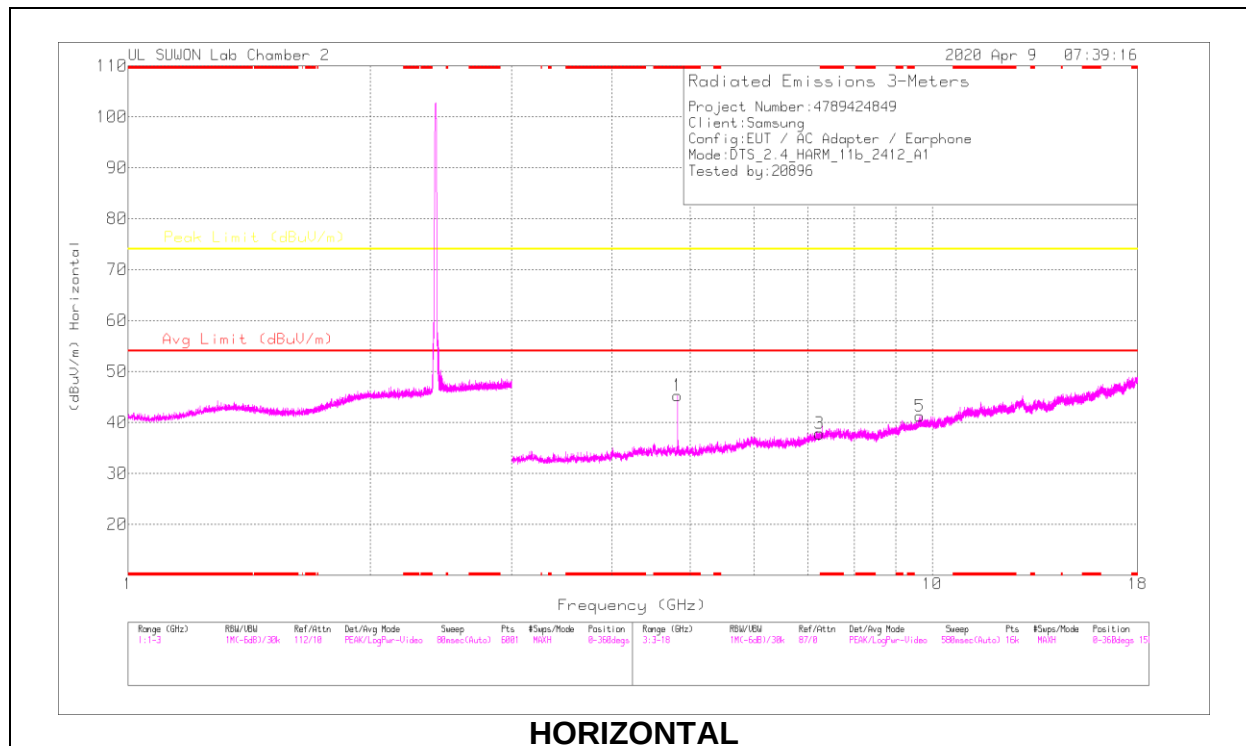
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

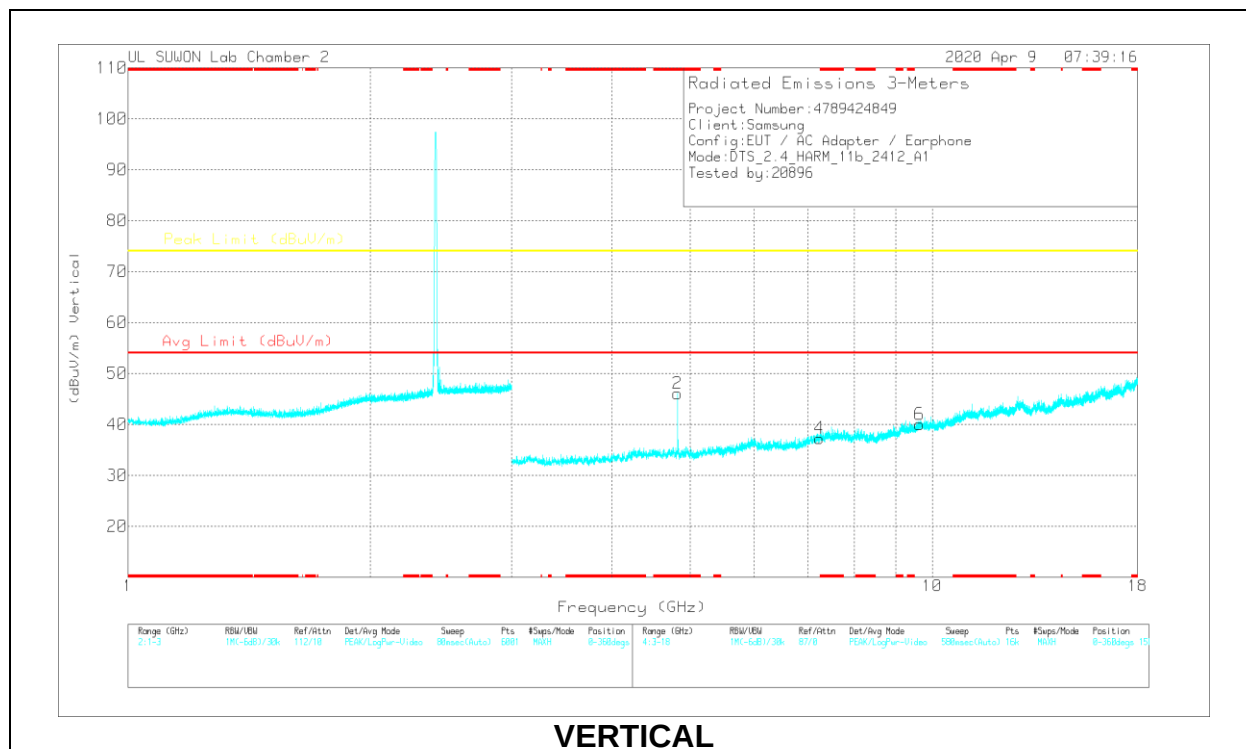
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

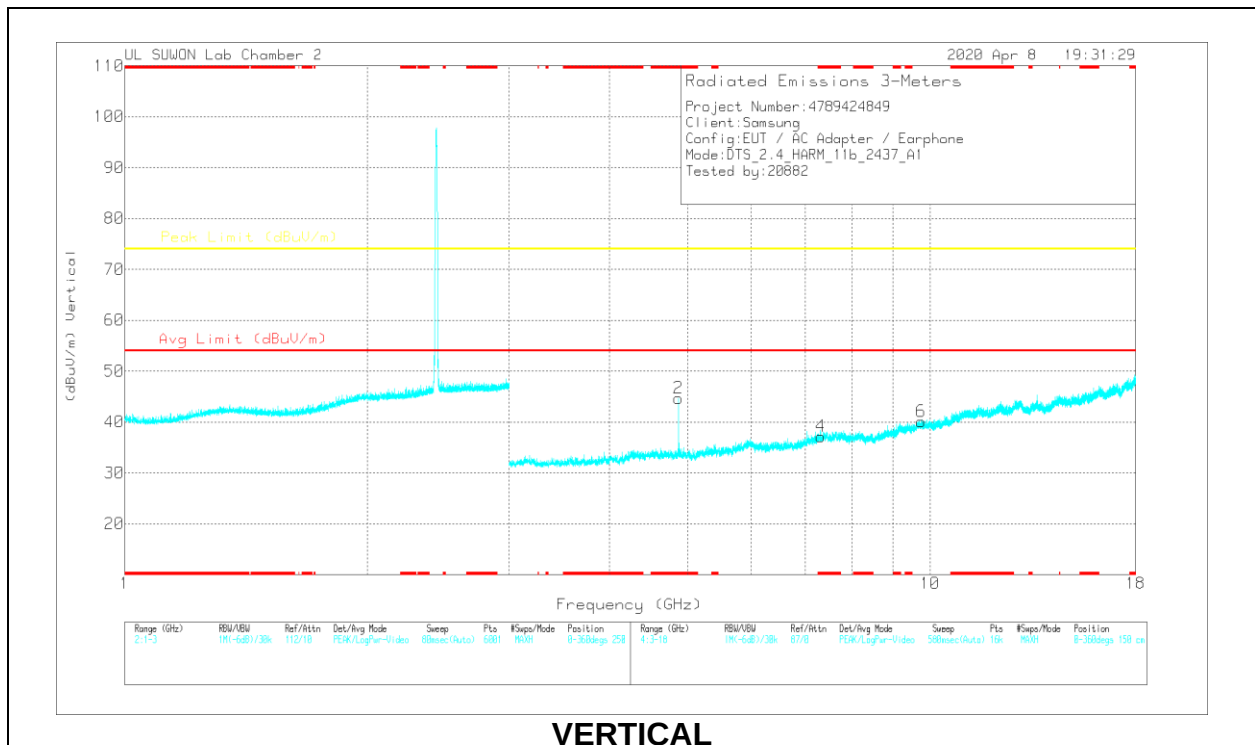
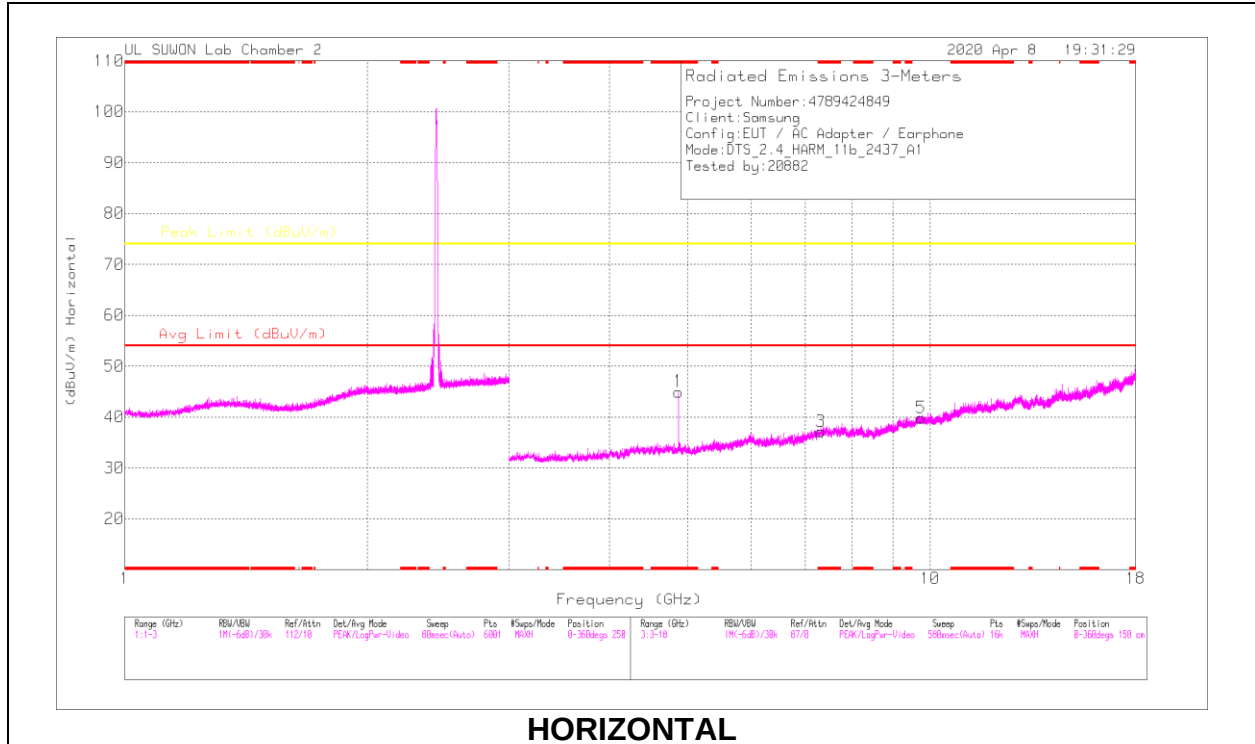
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 -4	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.824	44.21	PK2	34	-28.1	0	50.11	-	-	74	-23.89	145	103	H
* 4.824	40.64	MAv1	34	-28.1	0	46.54	54	-7.46	-	-	145	103	H
* 4.82396	44.78	PK2	34	-28.1	0	50.68	-	-	74	-23.32	279	100	V
* 4.82396	41.33	MAv1	34	-28.1	0	47.23	54	-6.77	-	-	279	100	V
7.23625	35.59	PK2	36.1	-25.4	0	46.29	-	-	74	-27.71	360	100	H
7.2365	35.72	PK2	36.1	-25.4	0	46.42	-	-	74	-27.58	360	100	V
9.65082	32.89	PK2	37.1	-21.4	0	48.59	-	-	74	-25.41	360	100	H
9.64831	33.23	PK2	37	-21.5	0	48.73	-	-	74	-25.27	360	100	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL, CH 6 RESULTS



RADIATED EMISSIONS

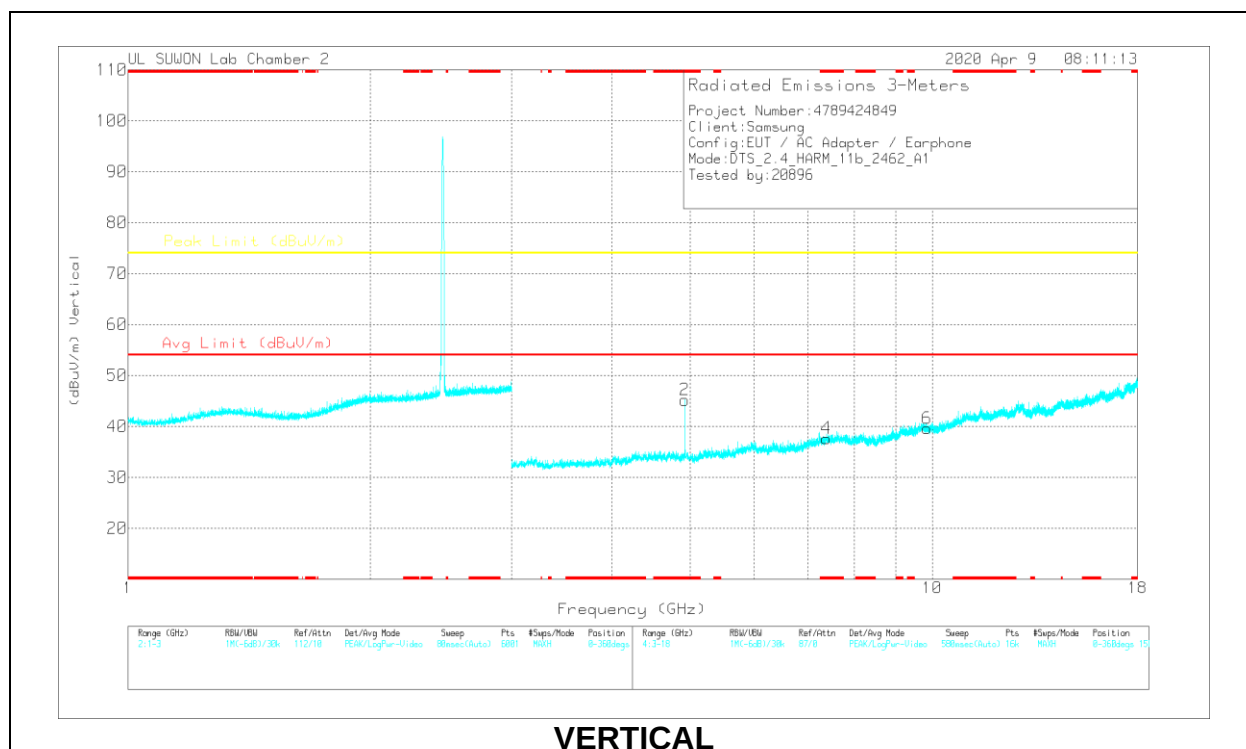
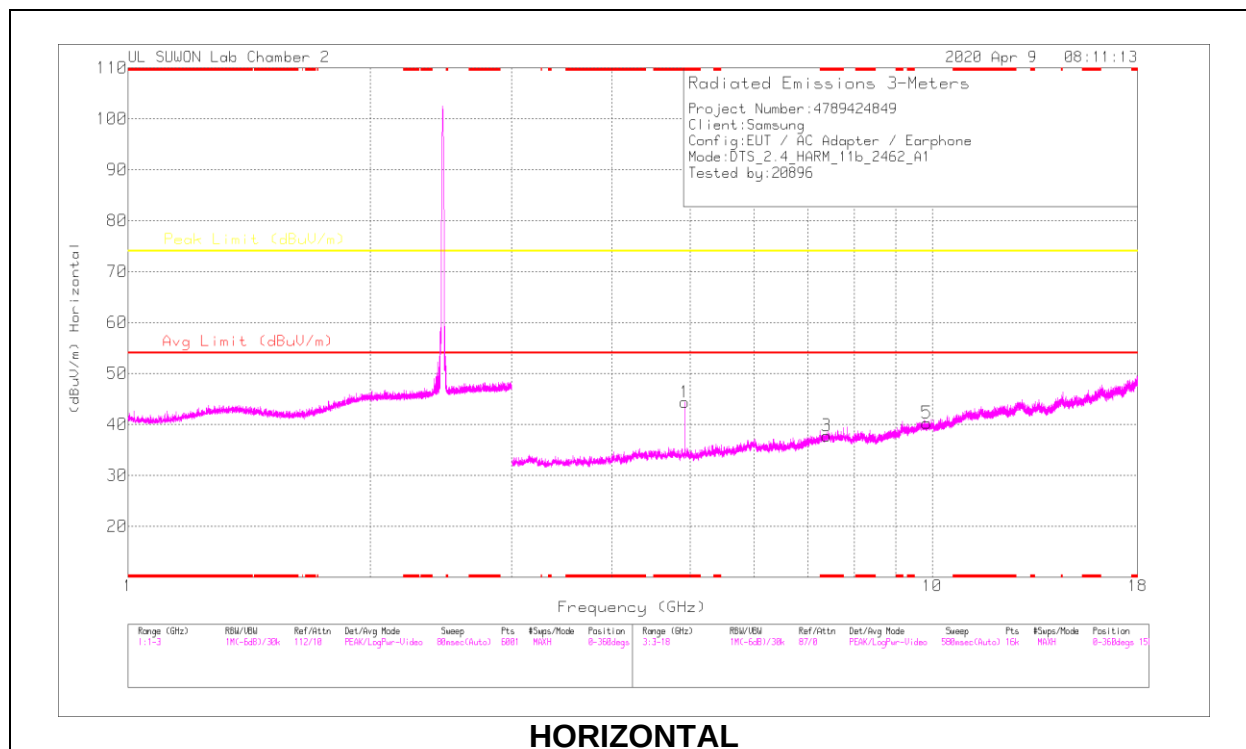
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 -4	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.87402	43.78	PK2	34	-27.9	0	49.88	-	-	74	-24.12	146	101	H
* 4.87396	39.62	MAv1	34	-27.9	0	45.72	54	-8.28	-	-	146	101	H
* 4.874	43.87	PK2	34	-27.9	0	49.97	-	-	74	-24.03	281	106	V
* 4.87398	40.25	MAv1	34	-27.9	0	46.35	54	-7.65	-	-	281	106	V
* 7.31245	35.28	PK2	36.2	-24.8	0	46.68	-	-	74	-27.32	360	100	H
* 7.31132	35.29	PK2	36.2	-24.9	0	46.59	-	-	74	-27.41	360	100	V
9.75014	32.57	PK2	37.2	-21.2	0	48.57	-	-	74	-25.43	360	100	H
9.75119	32.21	PK2	37.2	-21.2	0	48.21	-	-	74	-25.79	360	100	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL, CH 11 RESULTS



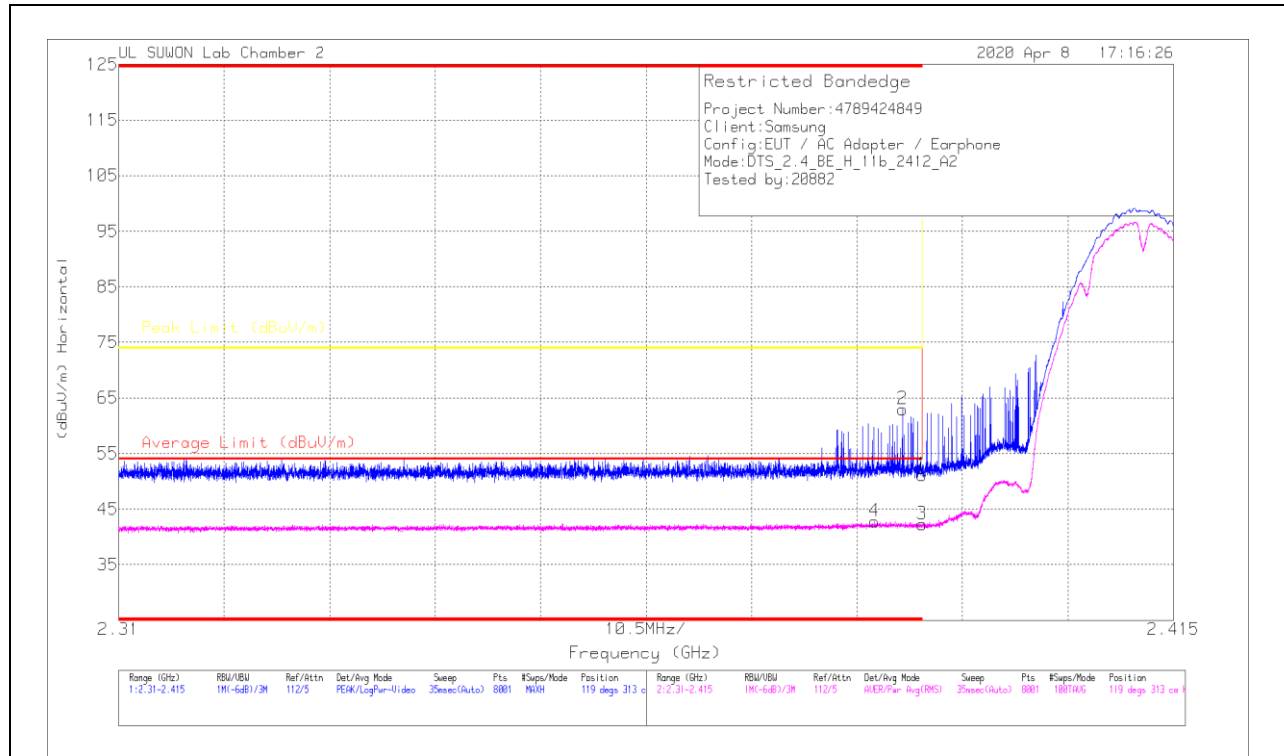
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.92393	42.09	PK2	34	-27.2	0	49.89	-	-	74	-25.11	143	278	H
* 4.92397	37.53	MAv1	34	-27.2	0	44.33	54	-9.67	-	-	143	278	H
* 4.92401	44.21	PK2	34	-27.2	0	51.01	-	-	74	-22.99	272	100	V
* 4.92397	40.51	MAv1	34	-27.2	0	47.31	54	-6.69	-	-	272	100	V
* 7.38891	34.74	PK2	36.2	-24.2	0	46.74	-	-	74	-27.26	360	100	H
* 7.38977	35.29	PK2	36.2	-24.2	0	47.29	-	-	74	-26.71	360	100	V
9.84419	32.61	PK2	37.3	-21.6	0	48.31	-	-	74	-25.69	360	100	H
9.84395	32.68	PK2	37.3	-21.6	0	48.38	-	-	74	-25.62	360	100	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

1TX Antenna 2 MODE**BANDEDGE (LOW CHANNEL, CH 1)****HORIZONTAL RESULT**

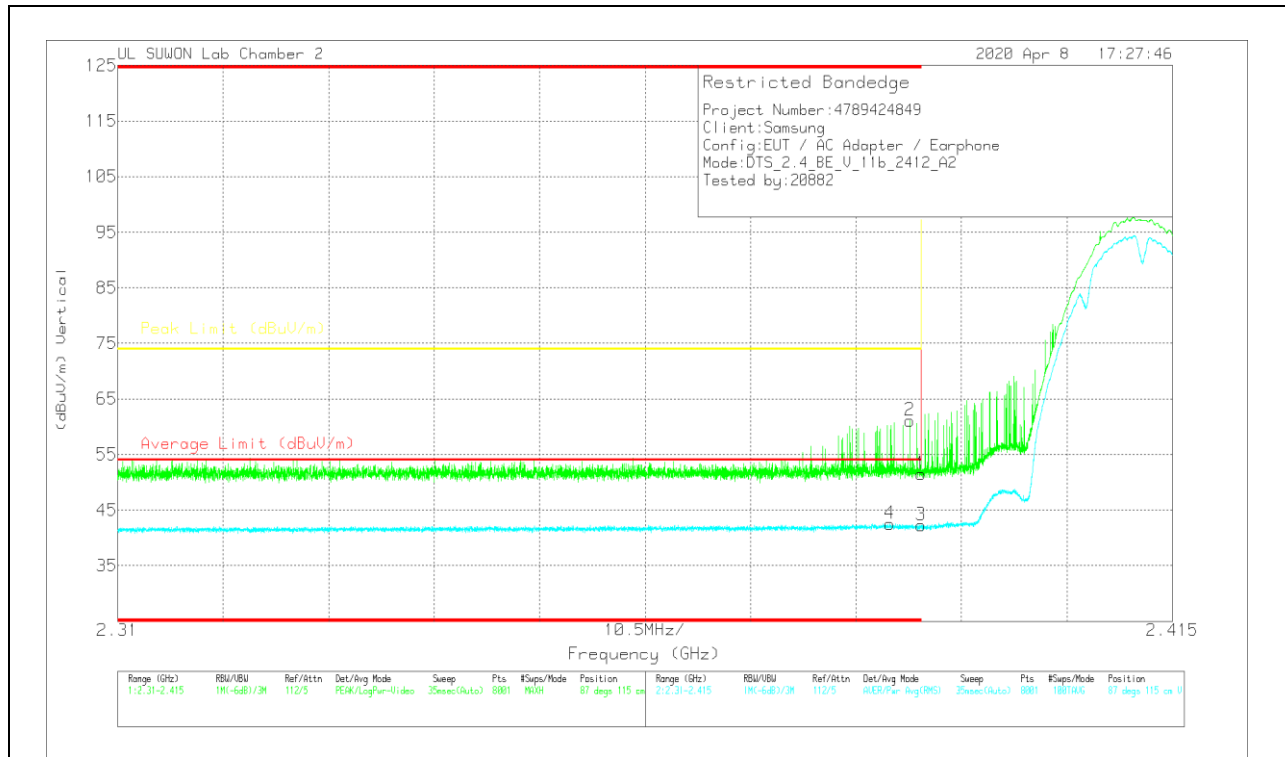
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (m)	Polarity
1	* 2.39	40.14	PK	31.6	-20.6	0	51.14	-	-	74	-22.86	119	313	H
2	* 2.38802	51.94	PK	31.6	-20.6	0	62.34	-	-	74	-11.06	119	313	H
3	* 2.39	31.33	RMS	31.6	-20.6	0	42.33	54	-11.67	-	-	119	313	H
4	* 2.38523	31.82	RMS	31.6	-20.6	0	42.82	54	-11.18	-	-	119	313	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	40.53	PK	31.6	-20.6	0	61.53	-	-	74	-22.47	87	115	V
2	* 2.38884	50.05	PK	31.6	-20.6	0	61.05	-	-	74	-12.95	87	115	V
3	* 2.39	31.23	RMS	31.6	-20.6	0	42.23	54	-11.77	-	-	87	115	V
4	* 2.38689	31.51	RMS	31.6	-20.6	0	42.51	54	-11.49	-	-	87	115	V

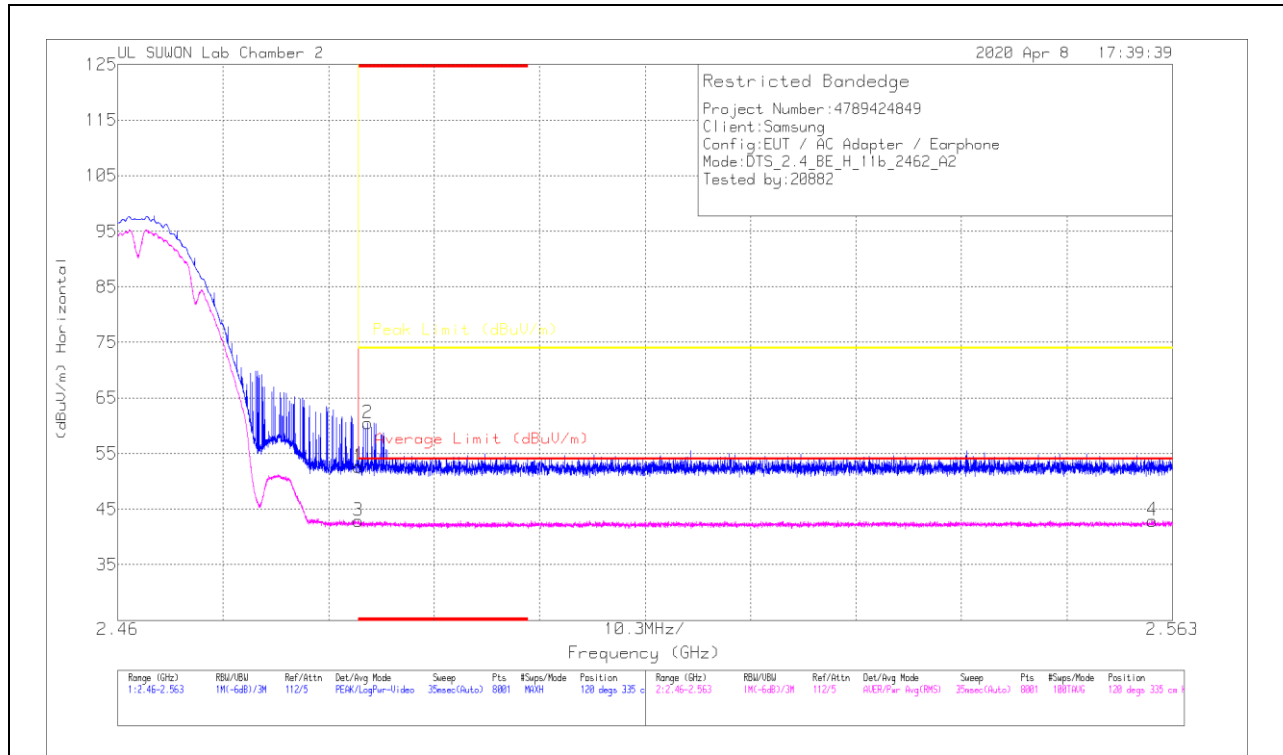
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 11)

HORIZONTAL RESULT



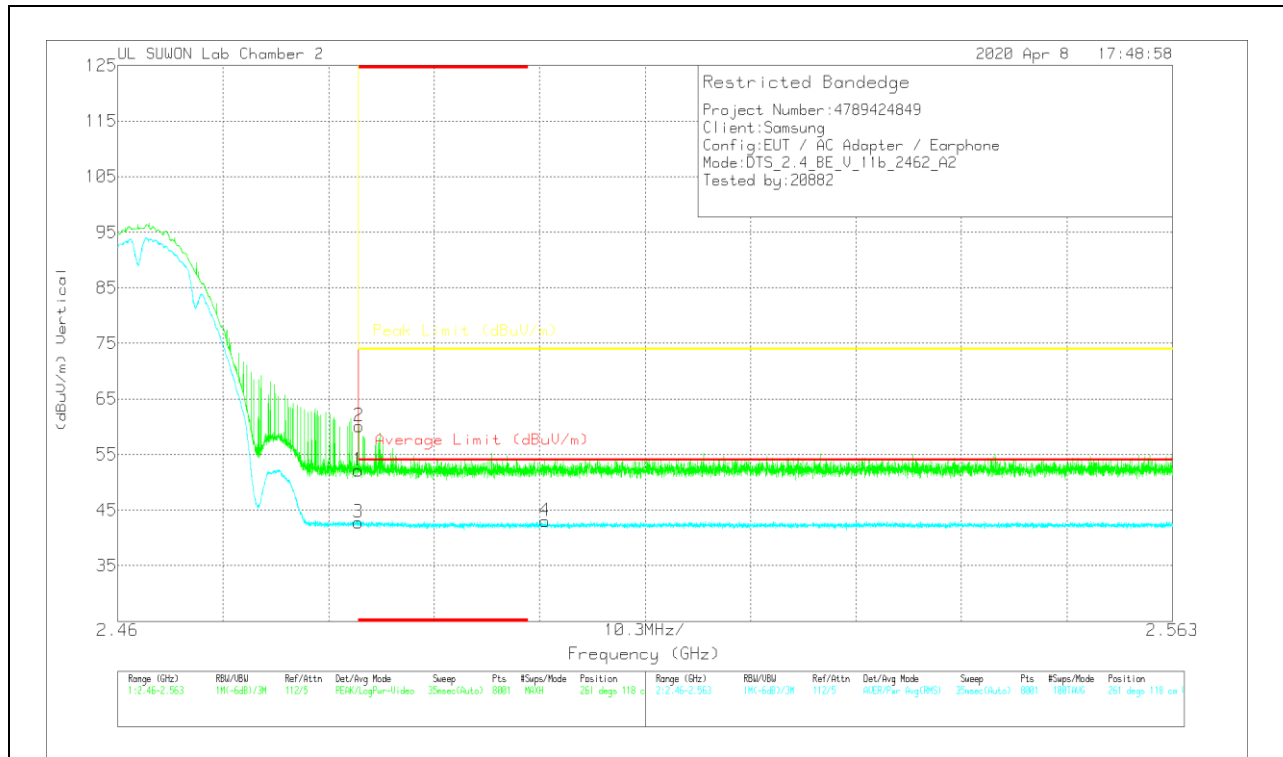
Marker	Frequency (GHz)	Meas Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 2.48351	41.14	Pk	31.9	-20.4	0	52.64	-	-	74	-21.36	120	335	H
2	* 2.4844	48.99	Pk	31.9	-20.4	0	60.49	-	-	74	-13.51	120	335	H
3	* 2.48351	31.38	RMS	31.9	-20.4	0	42.98	54	-11.12	-	-	120	335	H
4	2.56103	31.26	RMS	32	-20.3	0	42.96	54	-11.04	-	-	120	335	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	40.68	PK	31.9	-20.4	0	52.18	-	-	74	-21.92	261	118	V
2	* 2.48354	48.6	PK	31.9	-20.4	0	60.1	-	-	74	-13.9	261	118	V
3	* 2.48351	31.25	RMS	31.9	-20.4	0	42.75	54	-11.25	-	-	261	118	V
4	2.50173	31.58	RMS	31.9	-20.4	0	43.08	54	-10.92	-	-	261	118	V

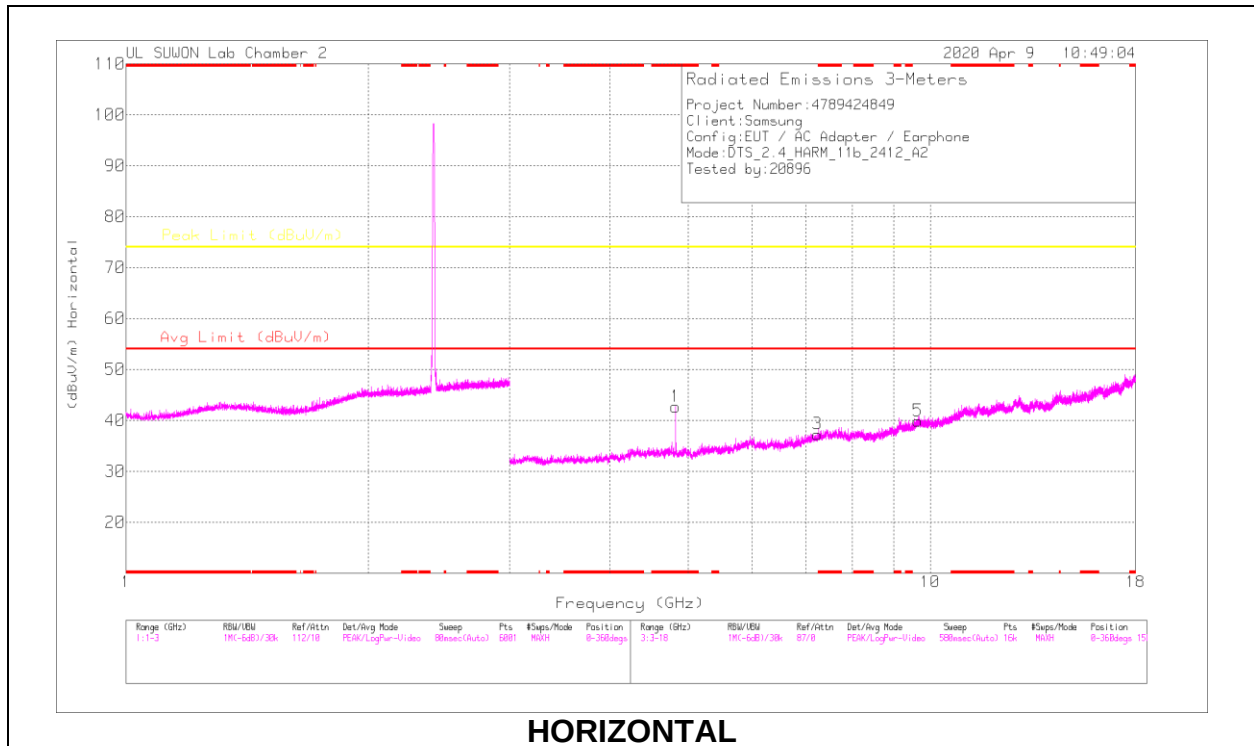
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

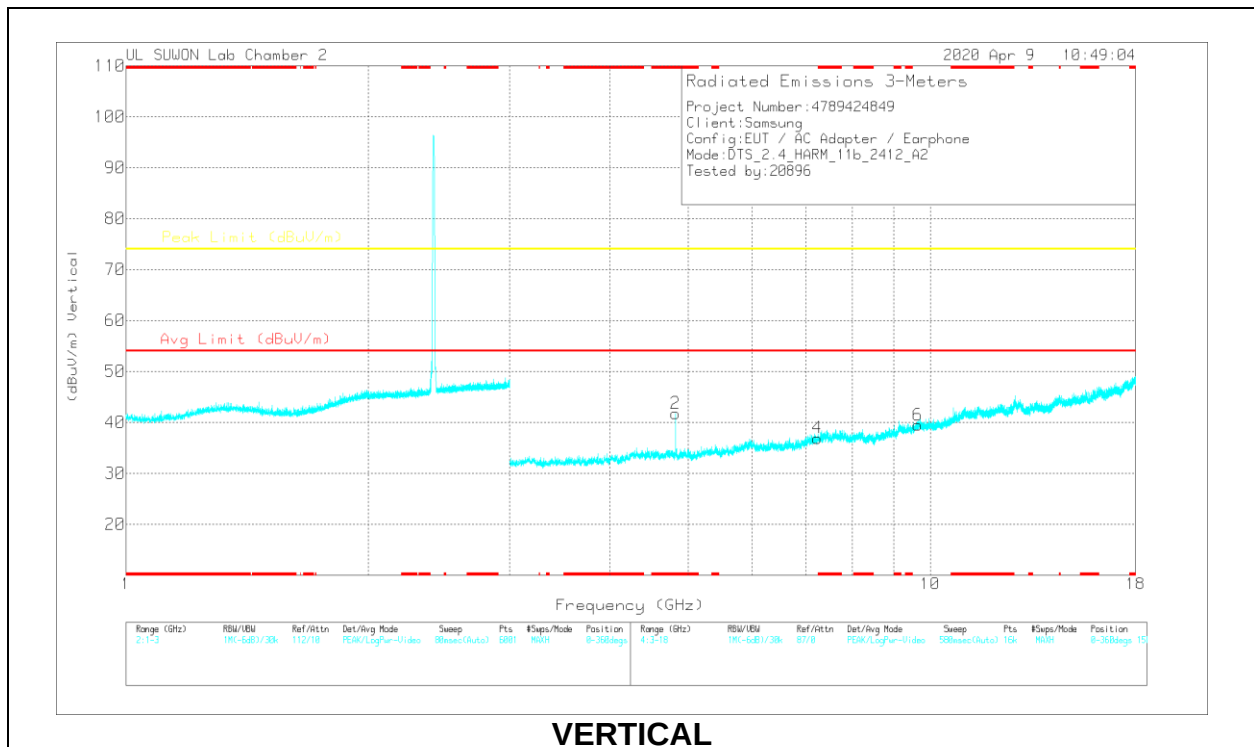
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

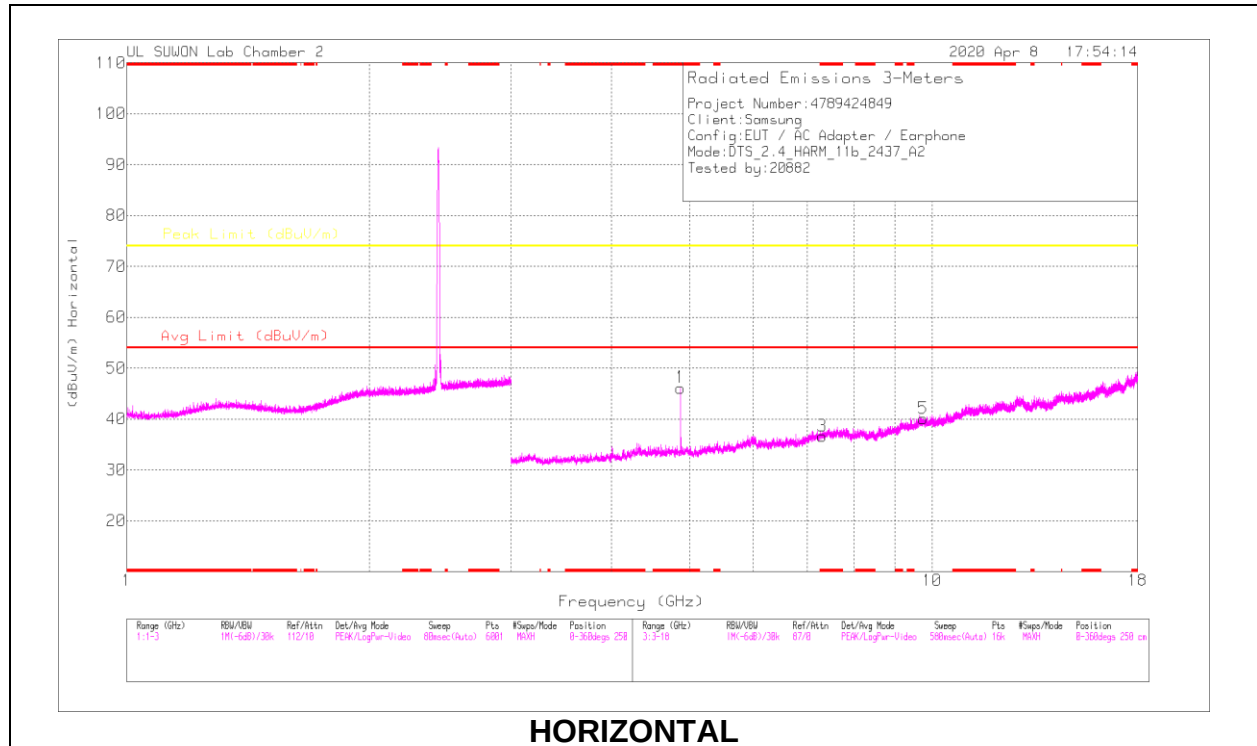
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.82396	42.04	PK2	34	-28.1	0	47.94	-	-	74	-26.06	115	177	H
* 4.824	37.59	MAv1	34	-28.1	0	43.49	54	-10.51	-	-	115	177	H
* 4.82388	42.02	PK2	34	-28.1	0	47.92	-	-	74	-26.08	78	109	V
* 4.82396	36.92	MAv1	34	-28.1	0	42.82	54	-11.18	-	-	78	109	V
7.24059	35.23	PK2	36.1	-25.4	0	45.93	-	-	74	-28.07	0	100	H
7.23986	34.99	PK2	36.1	-25.4	0	45.69	-	-	74	-28.31	0	100	V
9.64569	32.68	PK2	37	-21.5	0	48.18	-	-	74	-25.82	0	100	H
9.64264	32.91	PK2	37	-21.5	0	48.41	-	-	74	-25.59	0	100	V

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

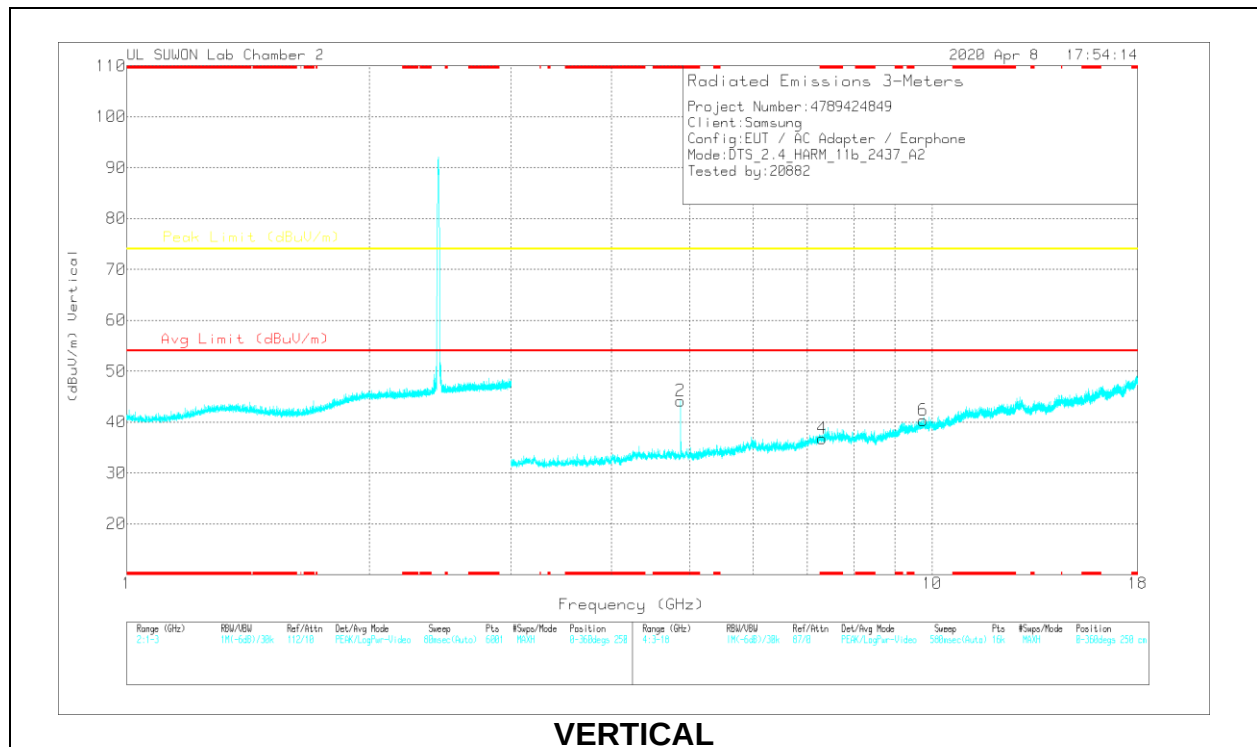
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

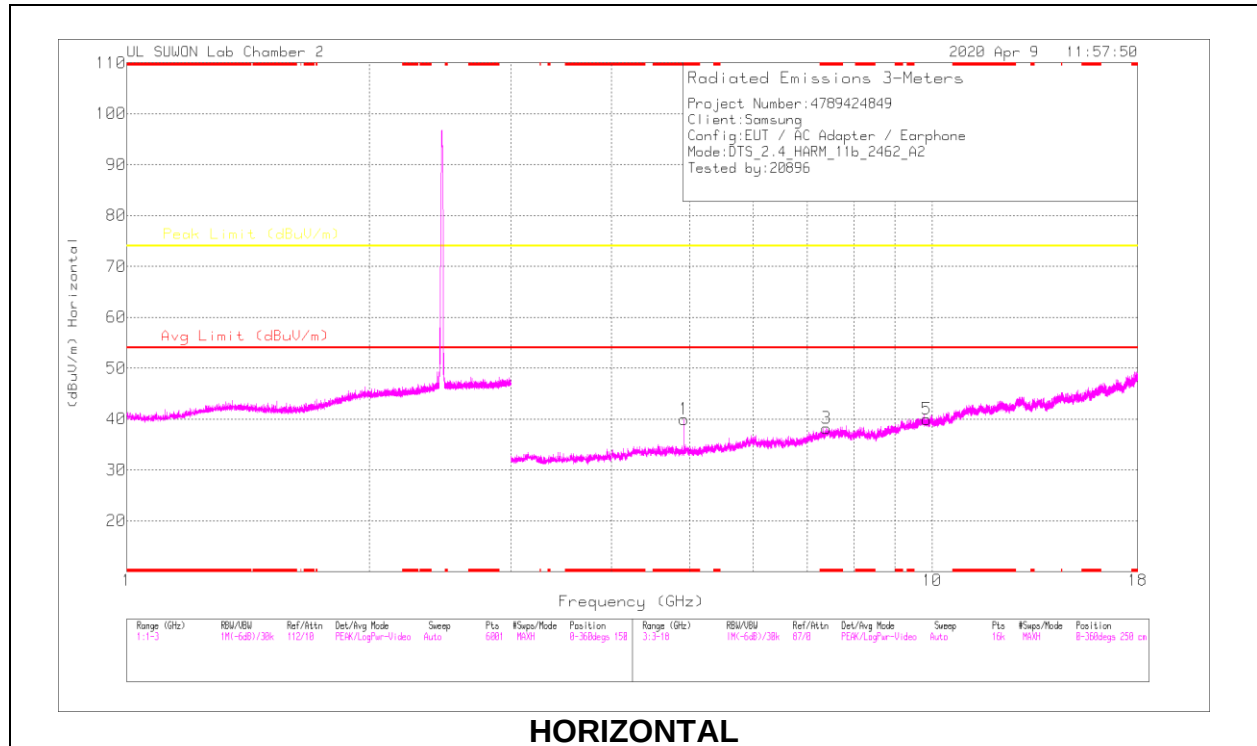
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 -4	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.87385	44.33	PK2	34	-27.9	0	50.43	-	-	74	-23.57	107	279	H
* 4.87396	41.09	MAv1	34	-27.9	0	47.19	54	-6.81	-	-	107	279	H
* 4.87398	43.58	PK2	34	-27.9	0	49.68	-	-	74	-24.32	87	100	V
* 4.87398	39.78	MAv1	34	-27.9	0	45.88	54	-8.12	-	-	87	100	V
* 7.30553	35.33	PK2	36.2	-25	0	46.53	-	-	74	-27.47	0	100	H
* 7.30658	35.11	PK2	36.2	-24.9	0	46.41	-	-	74	-27.59	0	100	V
9.74841	32.92	PK2	37.2	-21.2	0	48.92	-	-	74	-25.08	0	100	H
9.74671	32.46	PK2	37.2	-21.2	0	48.46	-	-	74	-25.54	0	100	V

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

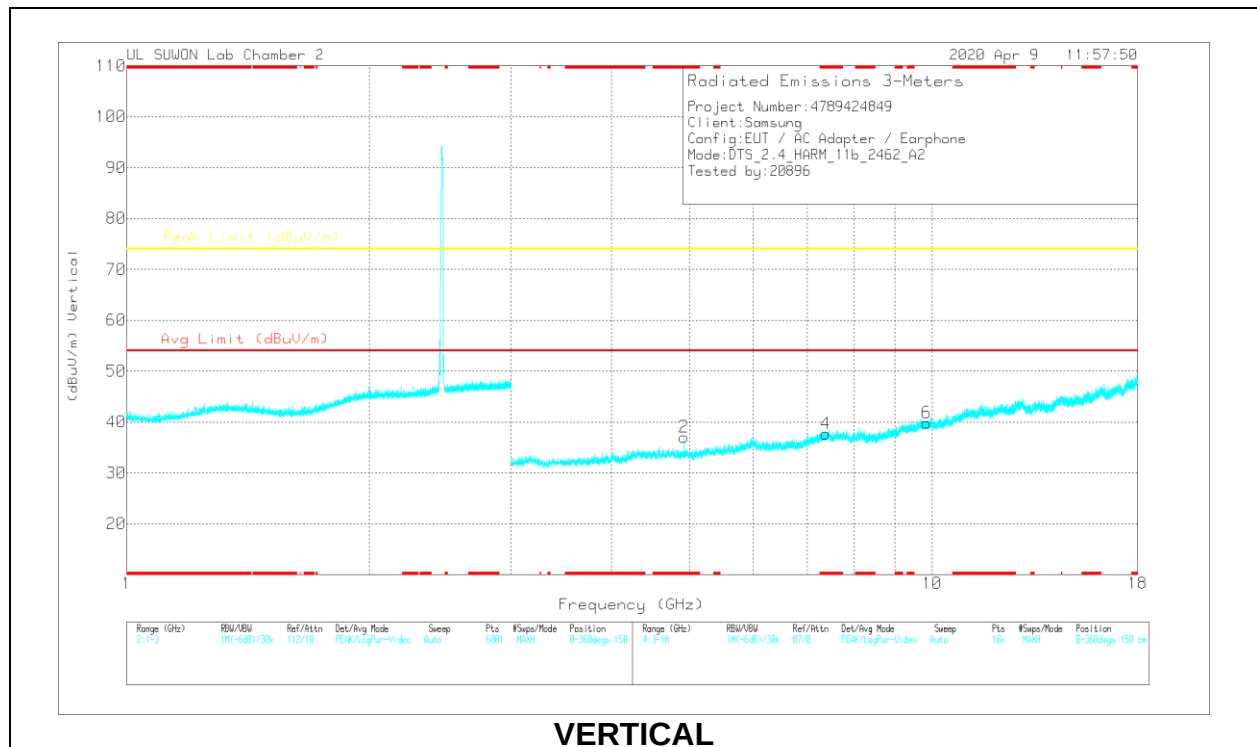
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.92387	38.06	PK2	34	-27.2	0	44.86	-	-	74	-29.14	26	100	H
* 4.92395	30.51	MAv1	34	-27.2	0	37.31	54	-16.69	-	-	26	100	H
* 4.92391	38.8	PK2	34	-27.2	0	45.6	-	-	74	-28.4	82	100	V
* 4.92395	31.77	MAv1	34	-27.2	0	38.57	54	-15.43	-	-	82	100	V
* 7.39042	34.86	PK2	36.2	-24.2	0	46.86	-	-	74	-27.14	0	100	H
* 7.38944	35.07	PK2	36.2	-24.2	0	47.07	-	-	74	-26.93	0	100	V
9.85077	32.56	PK2	37.4	-21.6	0	48.36	-	-	74	-25.64	0	100	H
9.85132	32.26	PK2	37.4	-21.6	0	48.06	-	-	74	-25.94	0	100	V

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

PK2 - KDB558074 Method: Maximum Peak

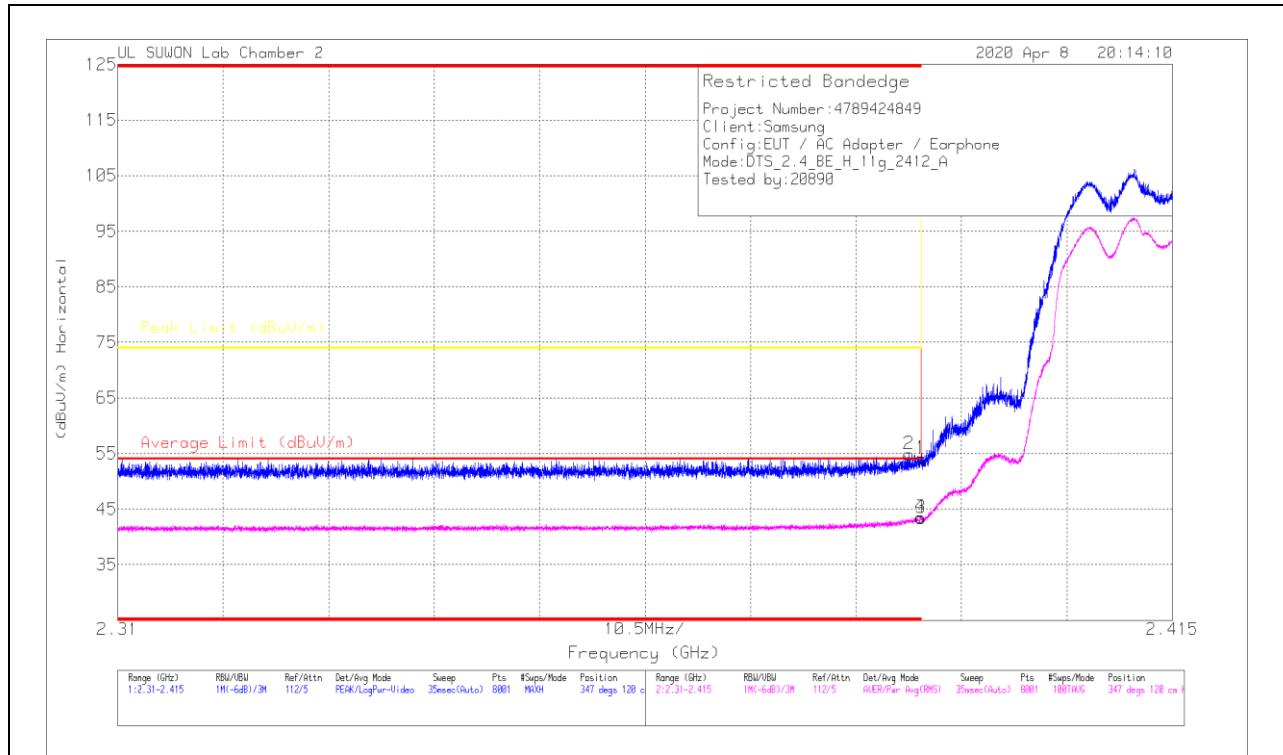
MAv1 - KDB558074 Option 1 Maximum RMS Average

10.1.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

BANDEDGE (LOW CHANNEL, CH 1)

HORIZONTAL RESULT



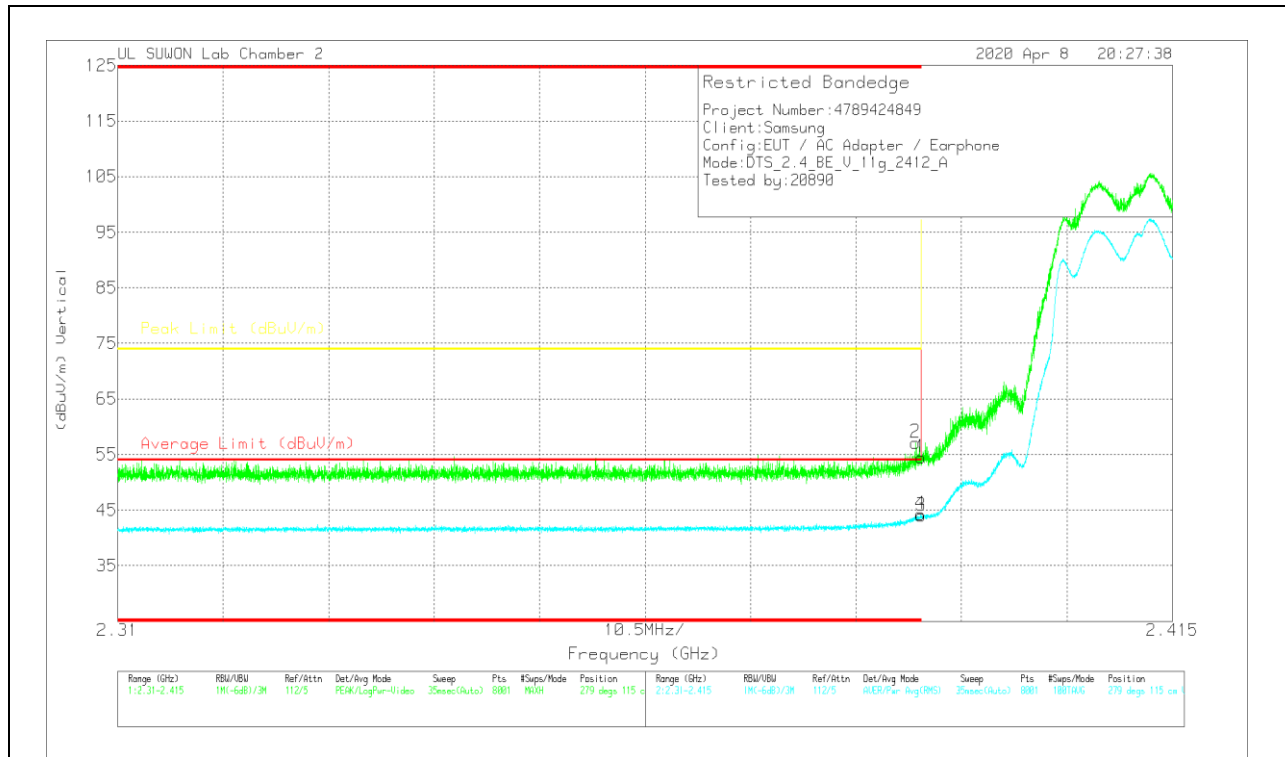
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Acimuth (Degs)	Height (cm)	Polarity
1	* 2.39	43.1	Pk	31.6	-20.6	0	54.1	-	-	74	-19.9	347	120	H
2	* 2.38876	43.83	Pk	31.6	-20.6	0	54.83	-	-	74	-19.17	347	120	H
3	* 2.39	32.38	RMS	31.6	-20.6	0	43.38	54	-10.62	-	-	347	120	H
4	* 2.38992	32.54	RMS	31.6	-20.6	0	43.54	54	-10.46	-	-	347	120	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	43.47	PK	31.6	-20.6	0	54.47	-	-	74	-19.53	279	115	V
2	* 2.38939	46.17	PK	31.6	-20.6	0	57.17	-	-	74	-16.83	279	115	V
3	* 2.39	33	RMS	31.6	-20.6	0	44	54	-10	-	-	279	115	V
4	* 2.38989	33.25	RMS	31.6	-20.6	0	44.25	54	-9.75	-	-	279	115	V

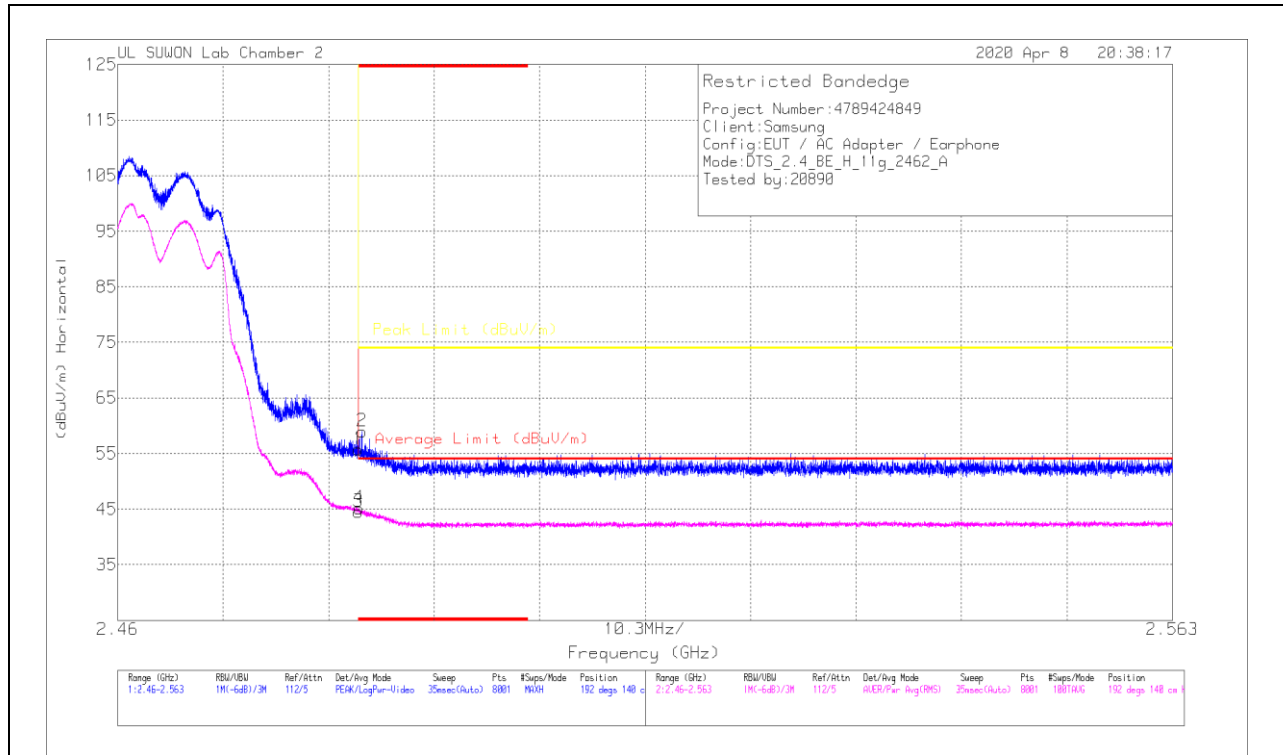
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 11)

HORIZONTAL RESULT



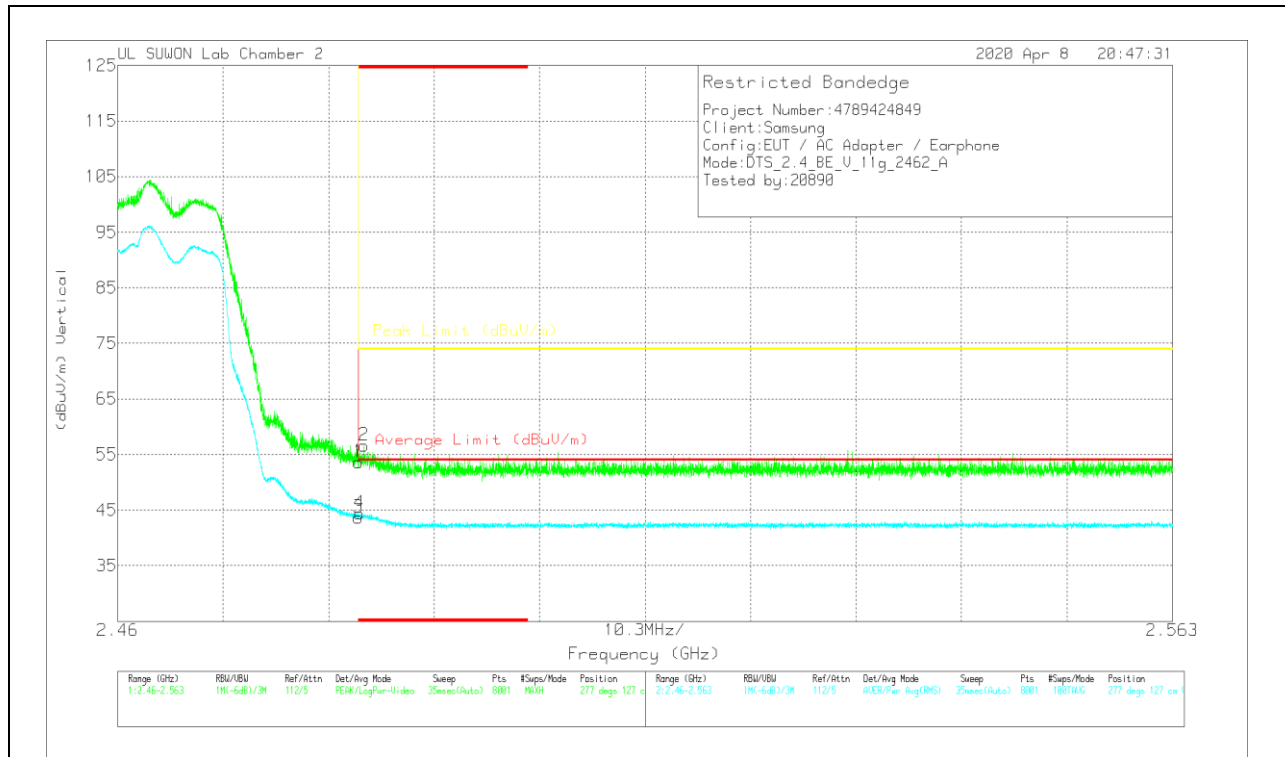
Marker	Frequency (GHz)	Meas Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 2.48351	44.21	Pk		-20.4	0	55.71	-	-	74	-18.29	192	140	H
2	* 2.48387	47.51	Pk		-20.4	0	59.01	-	-	74	-14.99	192	140	H
3	* 2.48351	33.01	RMS		-20.4	0	44.51	54	-9.49	-	-	192	140	H
4	* 2.48355	33.68	RMS		-20.4	0	45.18	54	-8.82	-	-	192	140	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	42.13	PK	31.9	-20.4	0	53.63	-	-	74	-20.37	277	127	V
2	* 2.48406	45.16	PK	31.9	-20.4	0	56.66	-	-	74	-17.34	277	127	V
3	* 2.48351	32.12	RMS	31.9	-20.4	0	43.62	54	-10.38	-	-	277	127	V
4	* 2.48363	32.86	RMS	31.9	-20.4	0	44.36	54	-9.64	-	-	277	127	V

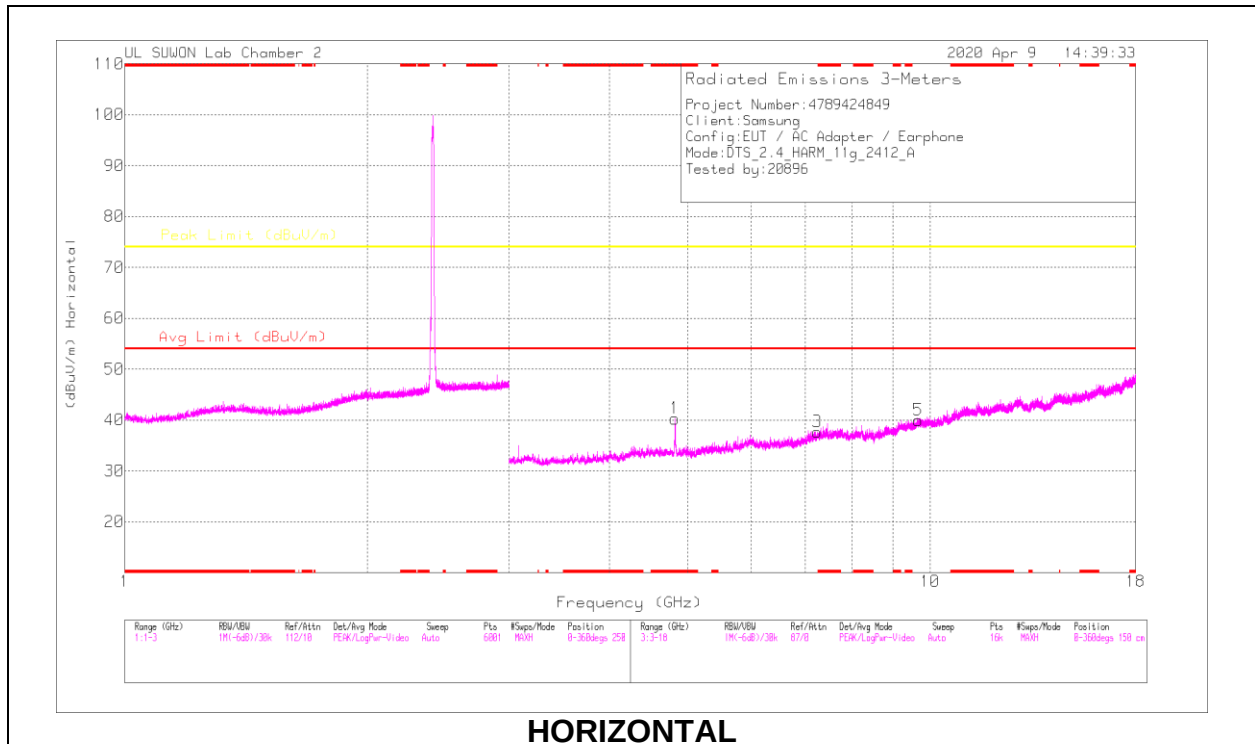
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

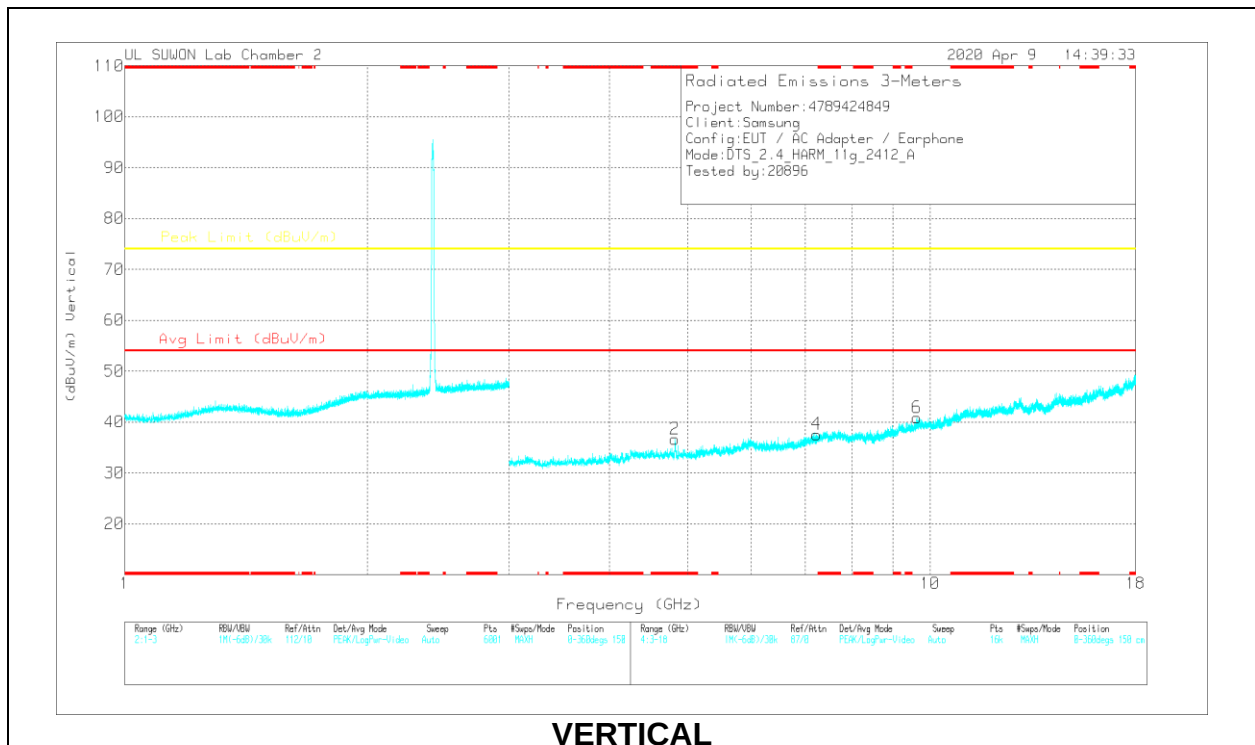
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

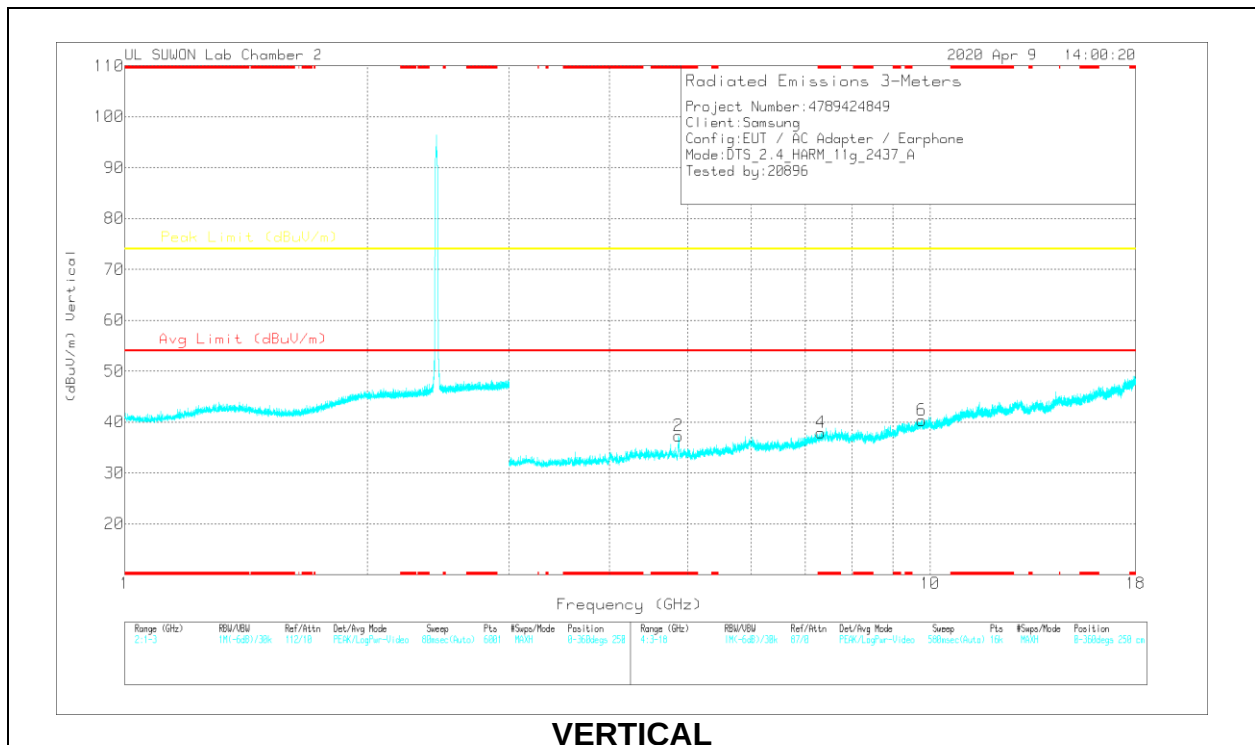
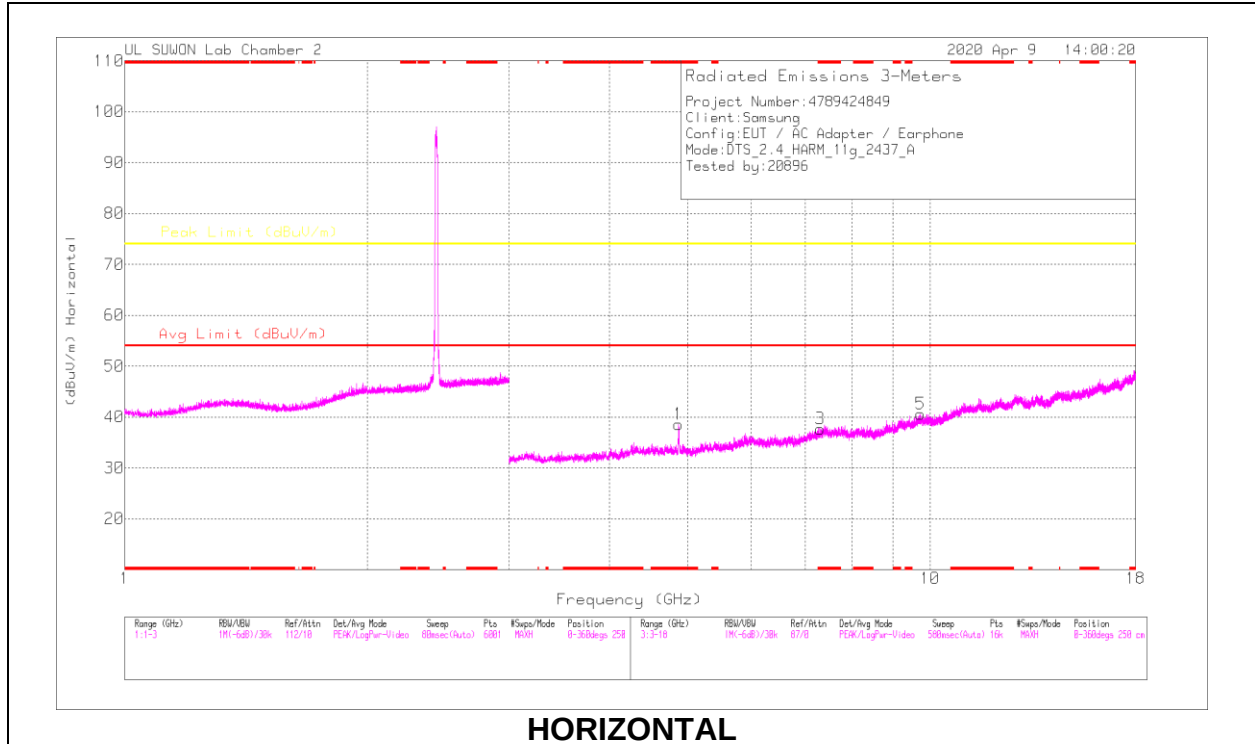
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.828	43.35	PK2	34	-28.1	0	49.25	-	-	74	-24.75	203	100	H
* 4.82352	31.68	MAv1	34	-28.1	0	37.58	54	-16.42	-	-	203	100	H
* 4.82772	40.96	PK2	34	-28.1	0	46.86	-	-	74	-27.14	208	103	V
* 4.82764	29.01	MAv1	34	-28.1	0	34.91	54	-19.09	-	-	208	103	V
7.23646	34.96	PK2	36.1	-25.4	0	45.66	-	-	74	-28.34	360	100	V
7.23698	34.73	PK2	36.1	-25.4	0	45.43	-	-	74	-28.57	360	100	H
9.66336	32.7	PK2	37.1	-21.4	0	48.4	-	-	74	-25.6	360	100	H
9.66321	32.62	PK2	37.1	-21.4	0	48.32	-	-	74	-25.68	360	100	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL, CH 6 RESULTS



RADIATED EMISSIONS

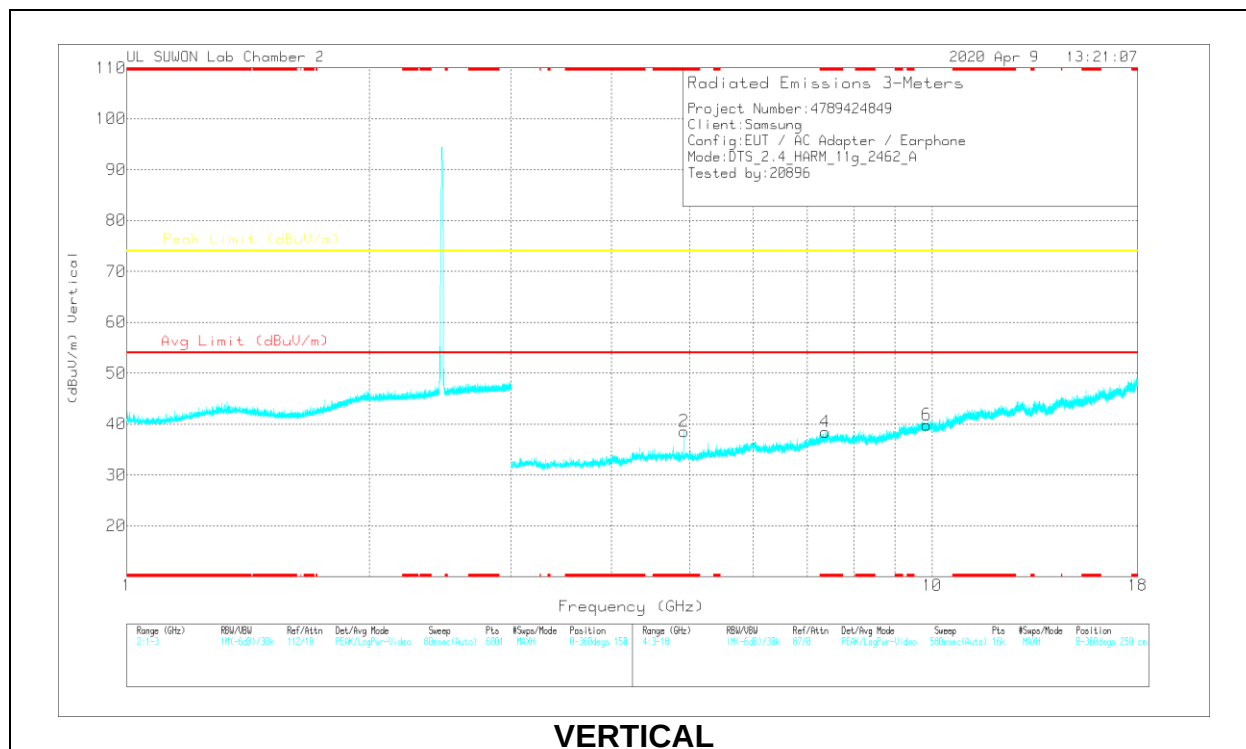
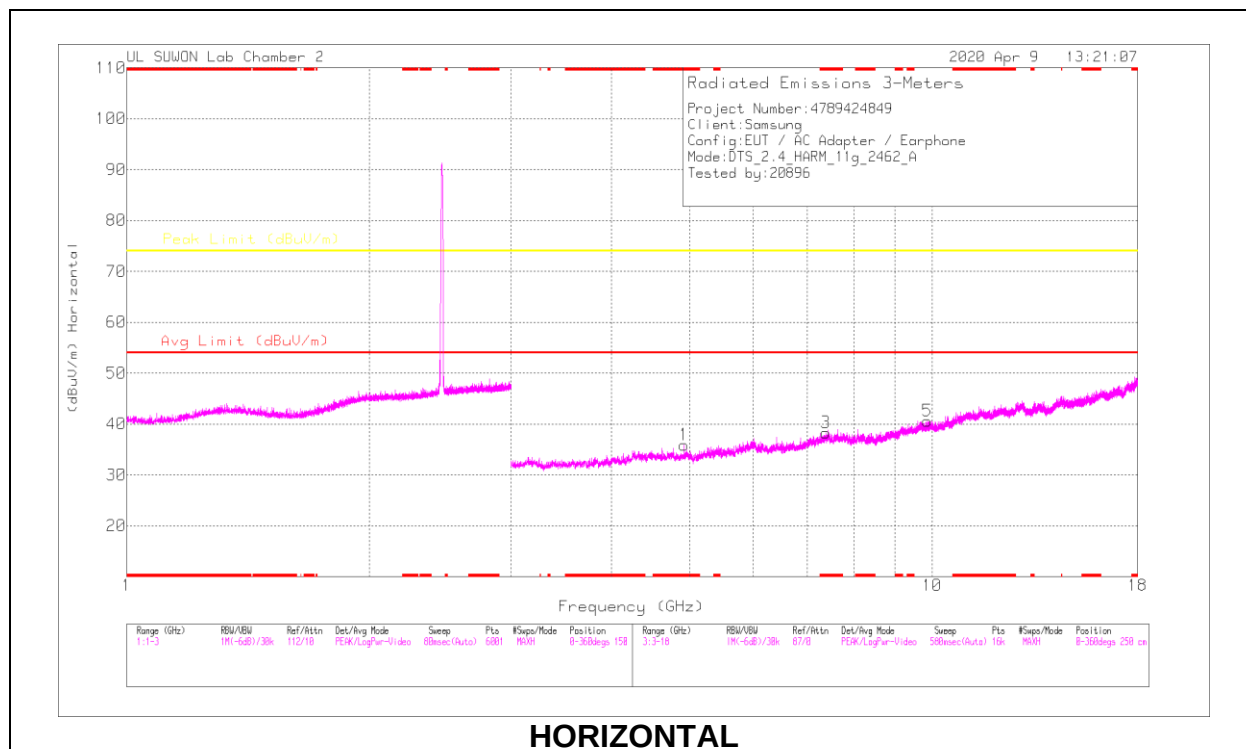
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872_4	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.87445	43.02	PK2	34	-27.9	0	49.12	-	-	74	-24.88	171	234	H
* 4.87365	31.11	MAv1	34	-27.9	0	37.21	54	-16.79	-	-	171	234	H
* 4.87321	42.45	PK2	34	-27.9	0	48.55	-	-	74	-25.45	205	118	V
* 4.87249	30.1	MAv1	34	-27.9	0	36.2	54	-17.8	-	-	205	118	V
* 7.30235	35.48	PK2	36.2	-24.9	0	46.78	-	-	74	-27.22	360	100	H
* 7.30576	35.26	PK2	36.2	-24.9	0	46.56	-	-	74	-27.44	360	100	V
9.72787	32.73	PK2	37.2	-21.2	0	48.73	-	-	74	-25.27	360	100	H
9.72765	32.42	PK2	37.2	-21.2	0	48.42	-	-	74	-25.58	360	100	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL, CH 11 RESULTS



RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.92403	37.95	PK2	34	-27.2	0	44.75	-	-	74	-29.25	49	207	H
* 4.92403	28.97	MAv1	34	-27.2	0	35.77	54	-18.23	-	-	49	207	H
* 4.92395	38.51	PK2	34	-27.2	0	45.31	-	-	74	-28.69	190	145	V
* 4.92395	31.03	MAv1	34	-27.2	0	37.83	54	-16.17	-	-	190	145	V
* 7.38528	34.52	PK2	36.2	-24.1	0	46.62	-	-	74	-27.38	360	100	H
* 7.38154	34.51	PK2	36.2	-24.2	0	46.51	-	-	74	-27.49	360	100	V
9.86473	32.88	PK2	37.4	-21.4	0	48.88	-	-	74	-25.12	360	100	H
9.86453	33.16	PK2	37.4	-21.4	0	49.16	-	-	74	-24.84	360	100	V

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

PK2 - KDB558074 Method: Maximum Peak

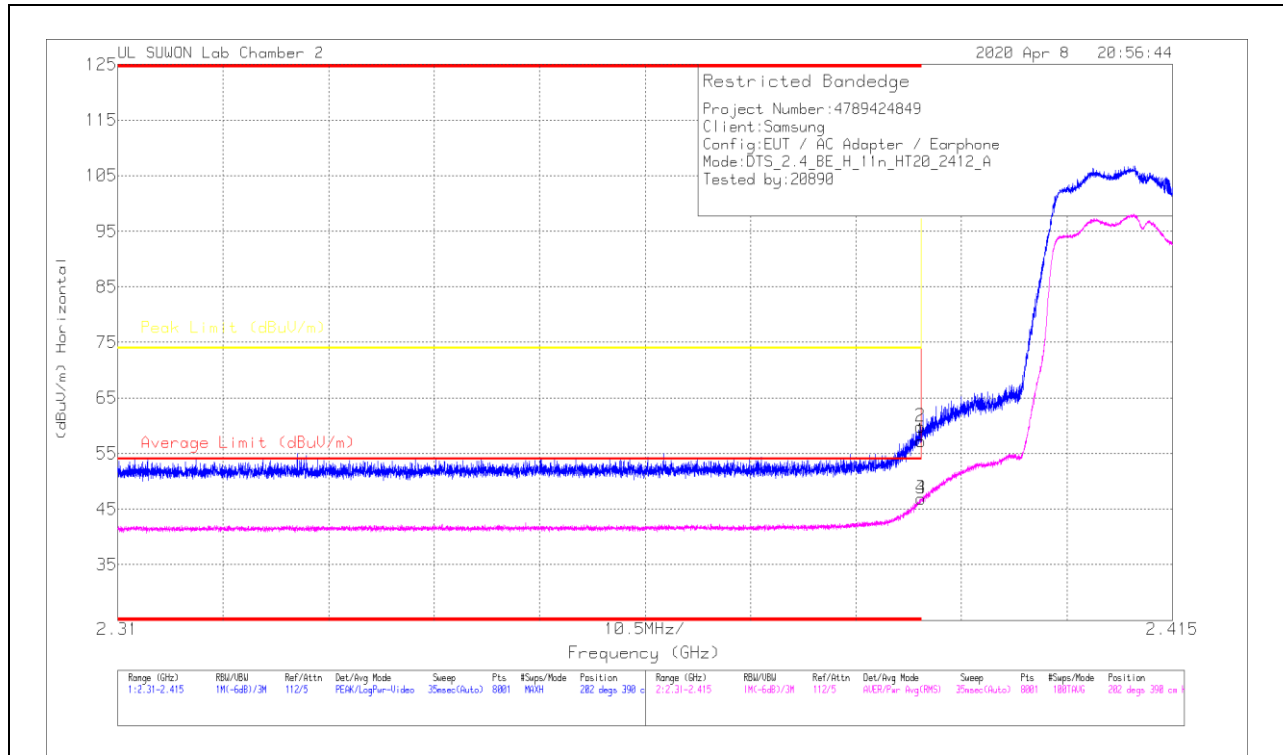
MAv1 - KDB558074 Option 1 Maximum RMS Average

10.1.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

BANDEDGE (LOW CHANNEL, CH 1)

HORIZONTAL RESULT



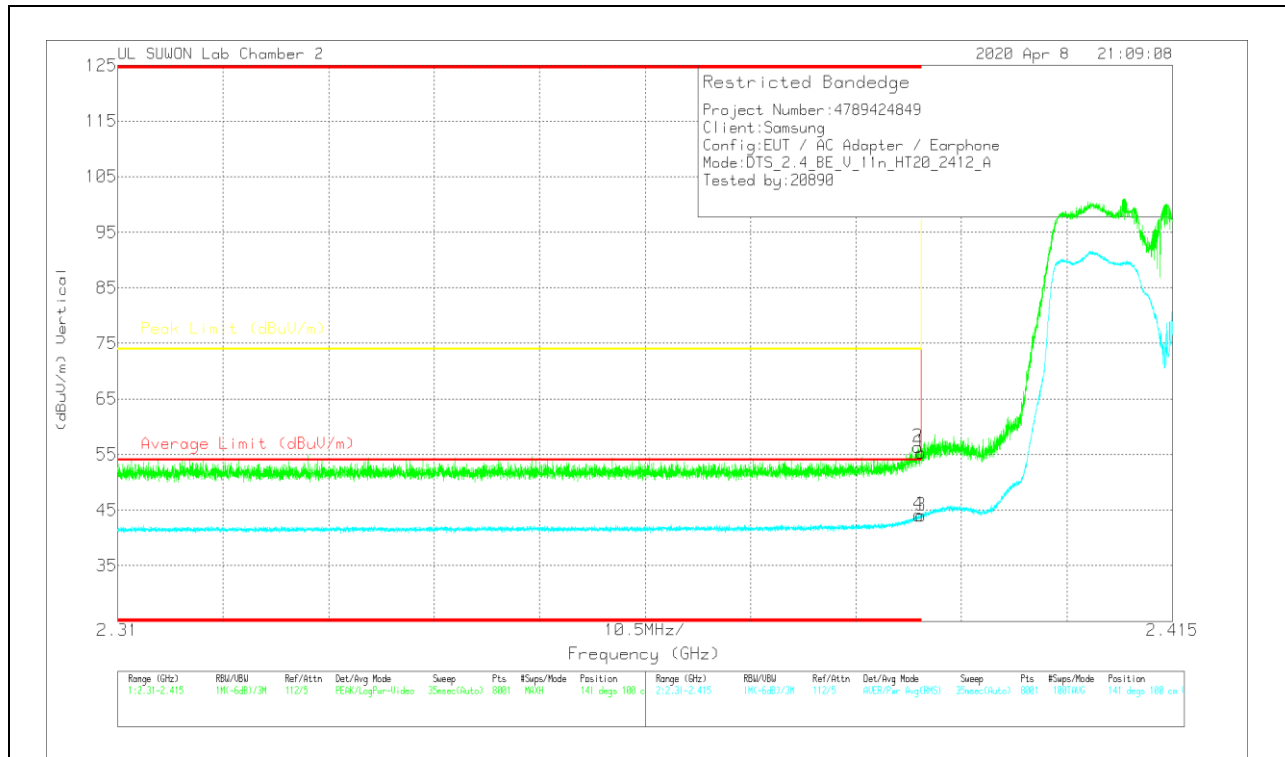
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Pk Margin (dB)	Acimuth (Degs)	Height (cm)	Polarity
1	* 2.39	46.18	Pk	31.6	-20.6	0	57.18	-	-	74	-16.82	202	390	H
2	* 2.38989	46.86	Pk	31.6	-20.6	0	59.86	-	-	74	-14.14	202	390	H
3	* 2.39	35.89	RMS	31.6	-20.6	0	46.89	54	-7.11	-	-	202	390	H
4	* 2.38996	35.84	RMS	31.6	-20.6	0	46.84	54	-7.16	-	-	202	390	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	44.36	Pk	31.6	-20.6	0	55.36	-	-	74	-19.64	141	100	V
2	* 2.3897	45.35	Pk	31.6	-20.6	0	56.35	-	-	74	-17.65	141	100	V
3	* 2.39	33.07	RMS	31.6	-20.6	0	44.07	54	-9.93	-	-	141	100	V
4	* 2.38975	33.09	RMS	31.6	-20.6	0	44.09	54	-9.91	-	-	141	100	V

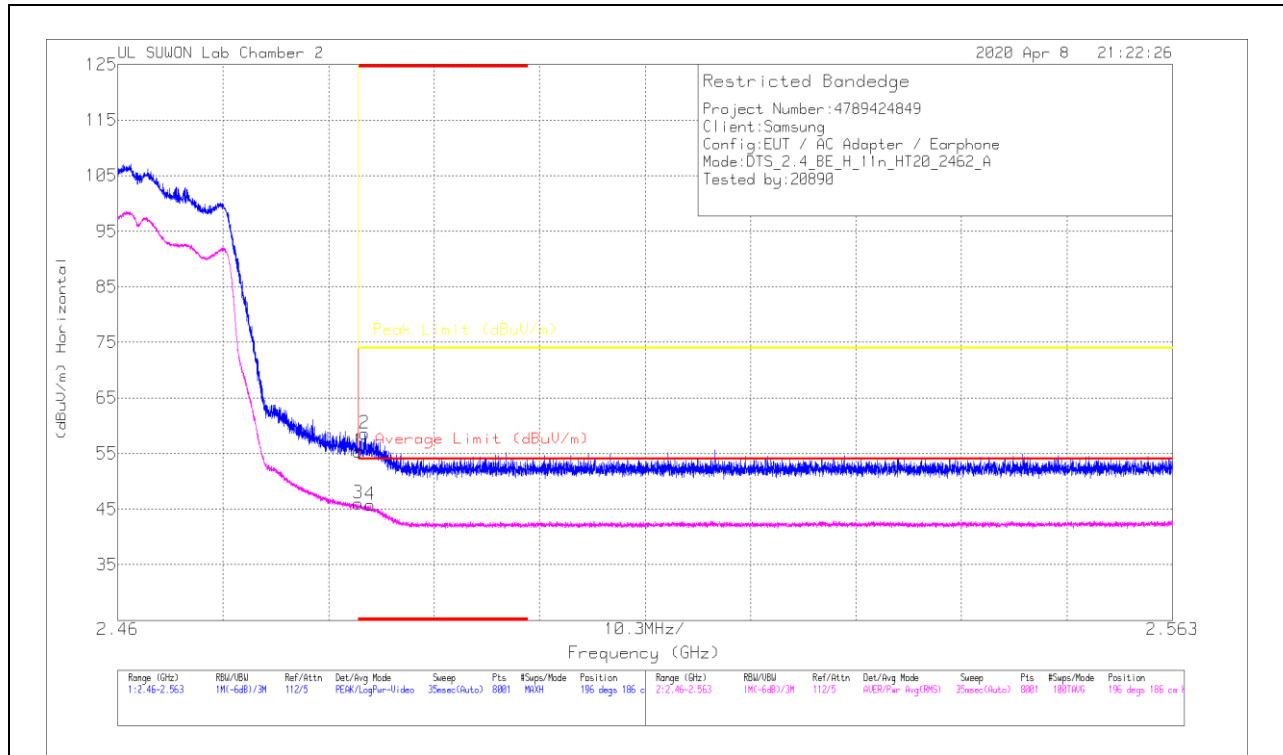
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 11)

HORIZONTAL RESULT



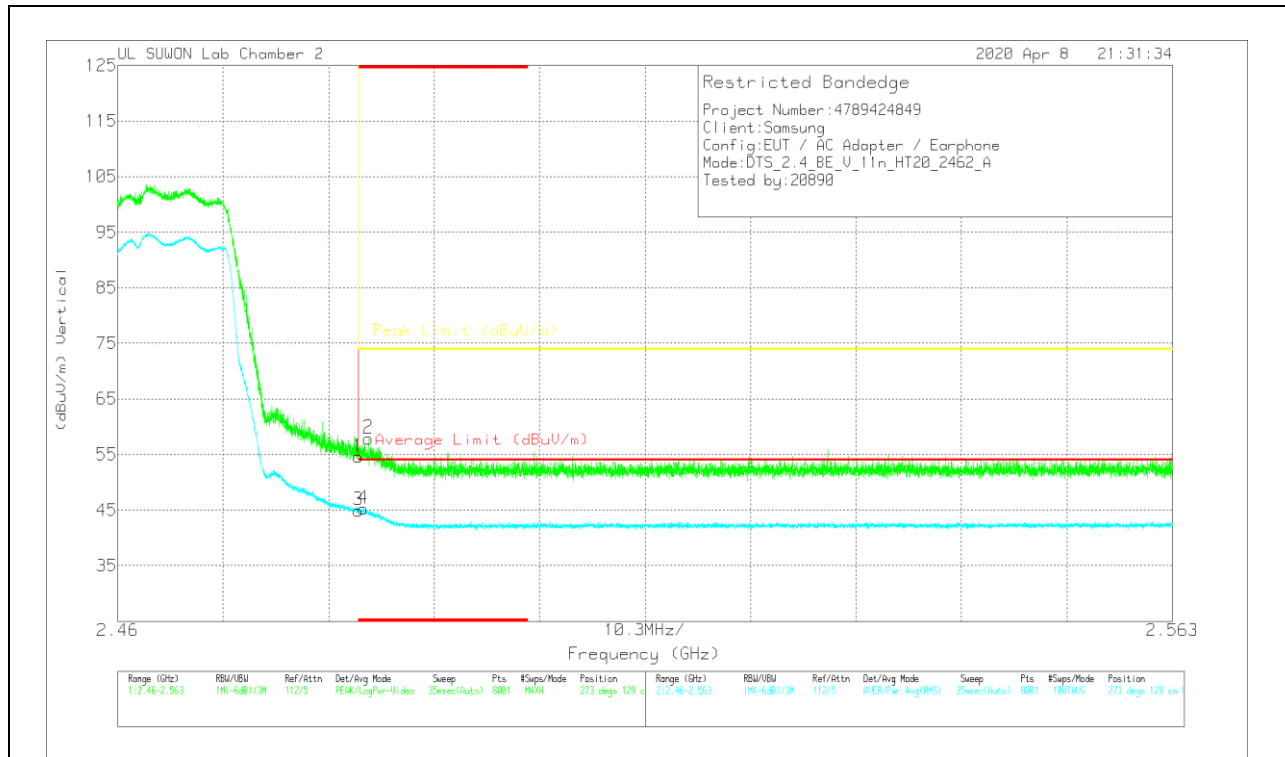
Marker	Frequency (GHz)	Meas Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 2.48351	43.82	Pk	31.9	-20.4	0	55.32	-	-	74	-18.68	196	186	H
2	* 2.48411	47.13	Pk	31.9	-20.4	0	58.63	-	-	74	-15.37	196	186	H
3	* 2.48351	34.5	RMS	31.9	-20.4	0	46	54	-8	-	-	196	186	H
4	* 2.48466	34.29	RMS	31.9	-20.4	0	45.79	54	-8.21	-	-	196	186	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	43.06	PK	31.9	-20.4	0	54.58	-	-	74	-19.42	273	129	V
2	* 2.48446	46.42	PK	31.9	-20.4	0	57.92	-	-	74	-16.08	273	129	V
3	* 2.48351	33.46	RMS	31.9	-20.4	0	44.96	54	-9.04	-	-	273	129	V
4	* 2.48399	33.8	RMS	31.9	-20.4	0	45.3	54	-8.7	-	-	273	129	V

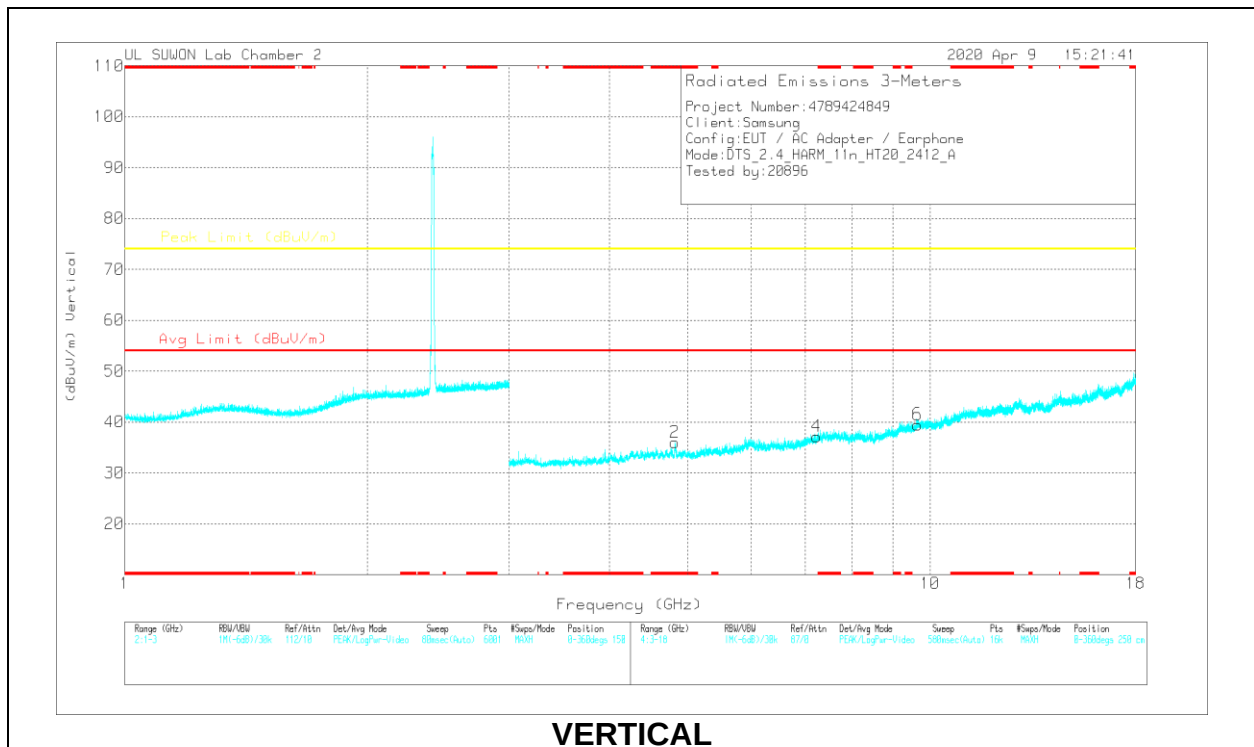
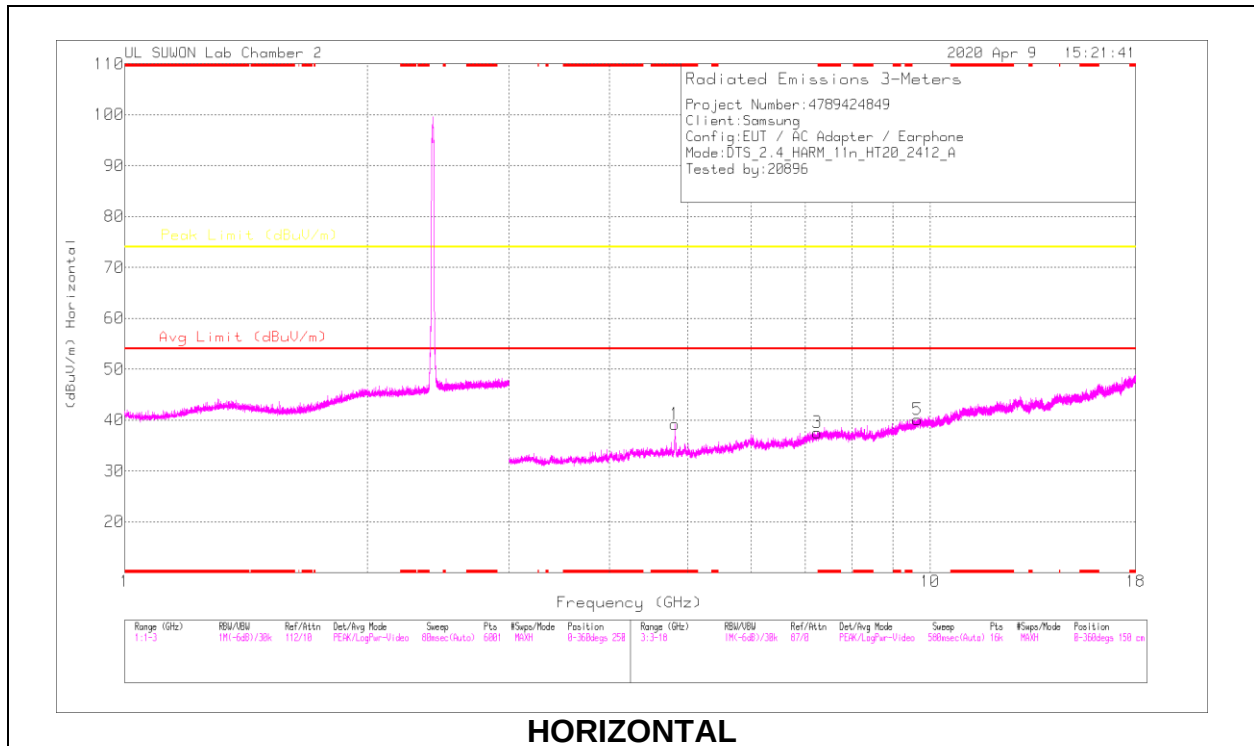
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



RADIATED EMISSIONS

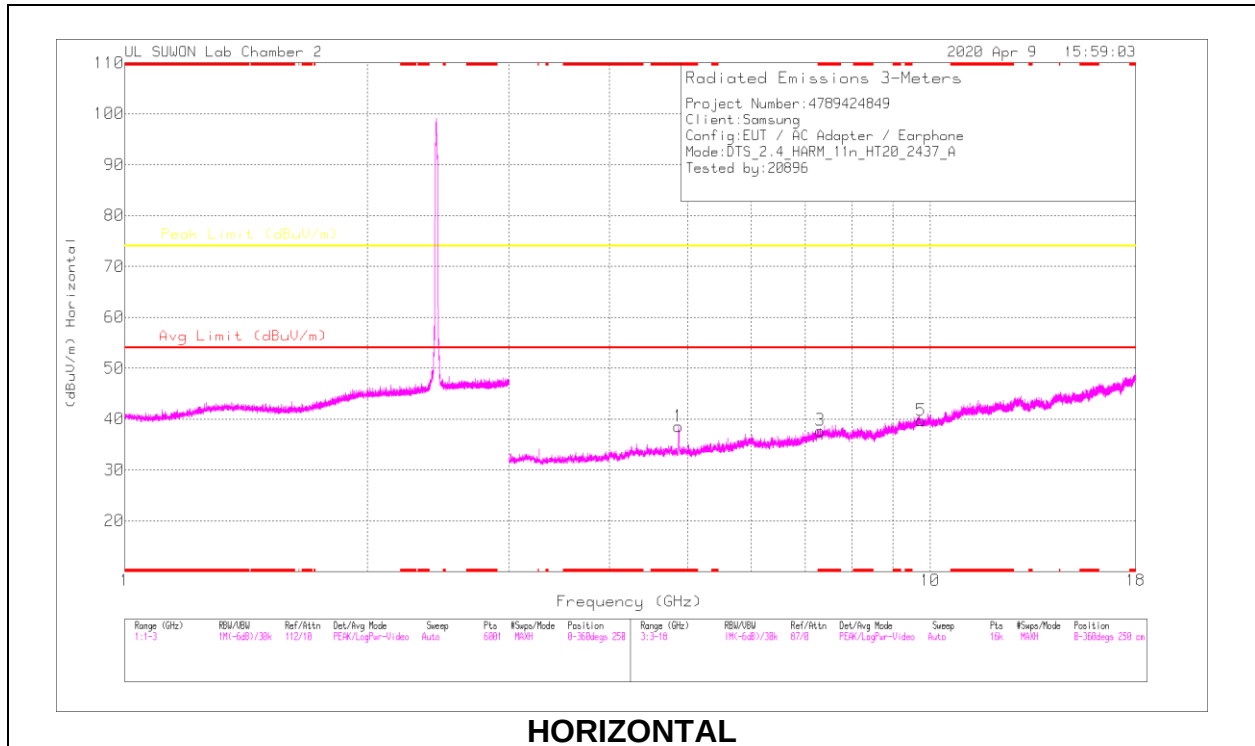
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.82478	44.11	PK2	34	-28.1	0	50.01	-	-	74	-23.99	204	100	H
* 4.82386	31.24	MAv1	34	-28.1	0	37.14	54	-16.86	-	-	204	100	H
* 4.8225	40.71	PK2	34	-28.1	0	46.61	-	-	74	-27.39	83	300	V
* 4.82398	28.21	MAv1	34	-28.1	0	34.11	54	-19.89	-	-	83	300	V
7.24204	35.85	PK2	36.1	-25.3	0	46.65	-	-	74	-27.35	0	100	H
7.24027	35.75	PK2	36.1	-25.4	0	46.45	-	-	74	-27.55	0	100	V
9.65305	32.57	PK2	37.1	-21.4	0	48.27	-	-	74	-25.73	0	100	H
9.6512	32.5	PK2	37.1	-21.4	0	48.2	-	-	74	-25.8	0	100	V

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

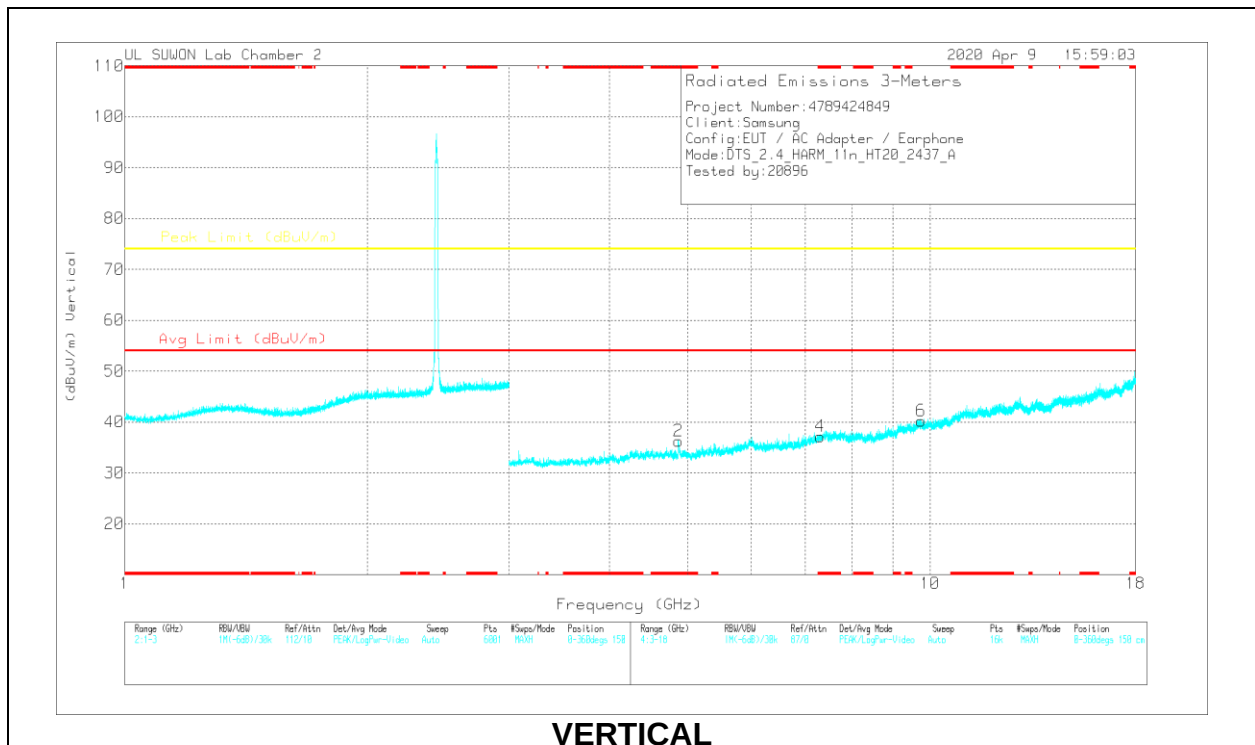
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

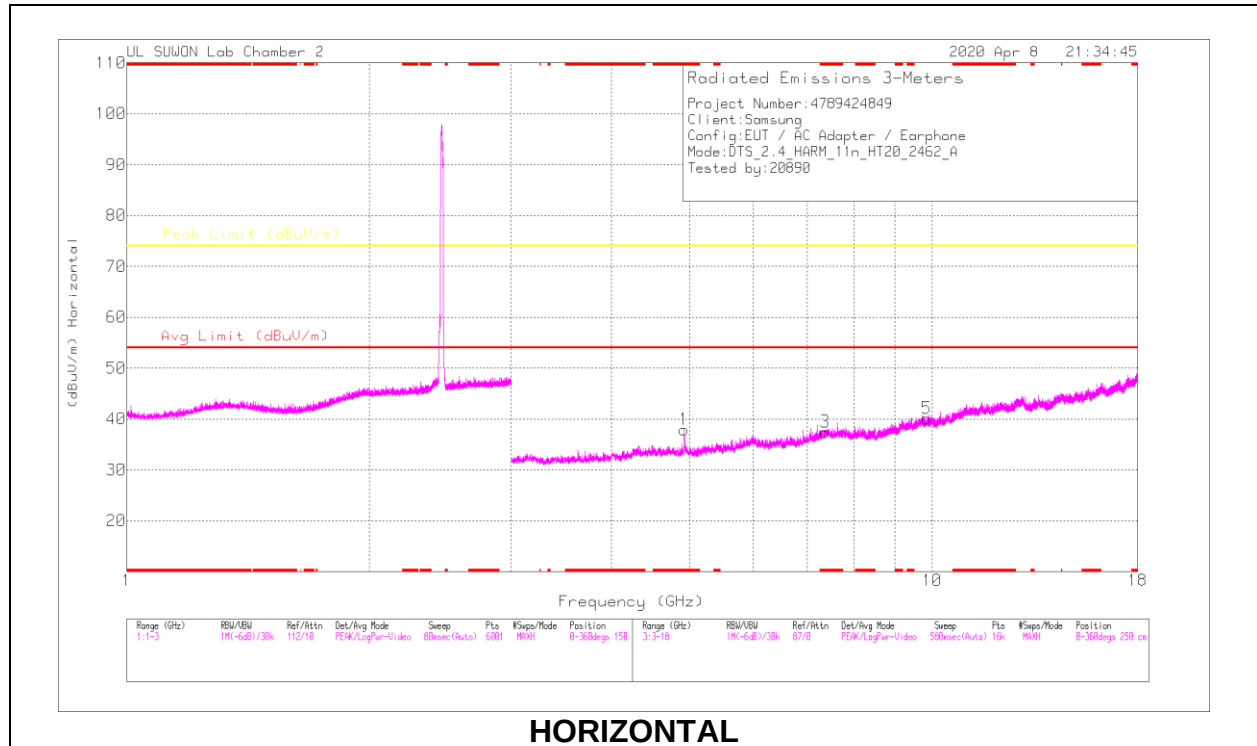
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.87498	44.14	PK2	34	-27.9	0	50.24	-	-	74	-23.76	200	100	H
* 4.87458	31.14	MAv1	34	-27.9	0	37.24	54	-16.76	-	-	200	100	H
* 4.86964	40.87	PK2	34	-27.9	0	46.97	-	-	74	-27.03	222	103	V
* 4.87064	28.34	MAv1	34	-28	0	34.34	54	-19.66	-	-	222	103	V
* 7.3111	35.14	PK2	36.2	-24.9	0	46.44	-	-	74	-27.56	360	100	H
* 7.31048	35.11	PK2	36.2	-24.9	0	46.41	-	-	74	-27.59	360	100	V
9.74797	32.21	PK2	37.2	-21.2	0	48.21	-	-	74	-25.79	360	100	H
9.74616	32.38	PK2	37.2	-21.2	0	48.38	-	-	74	-25.62	360	100	V

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

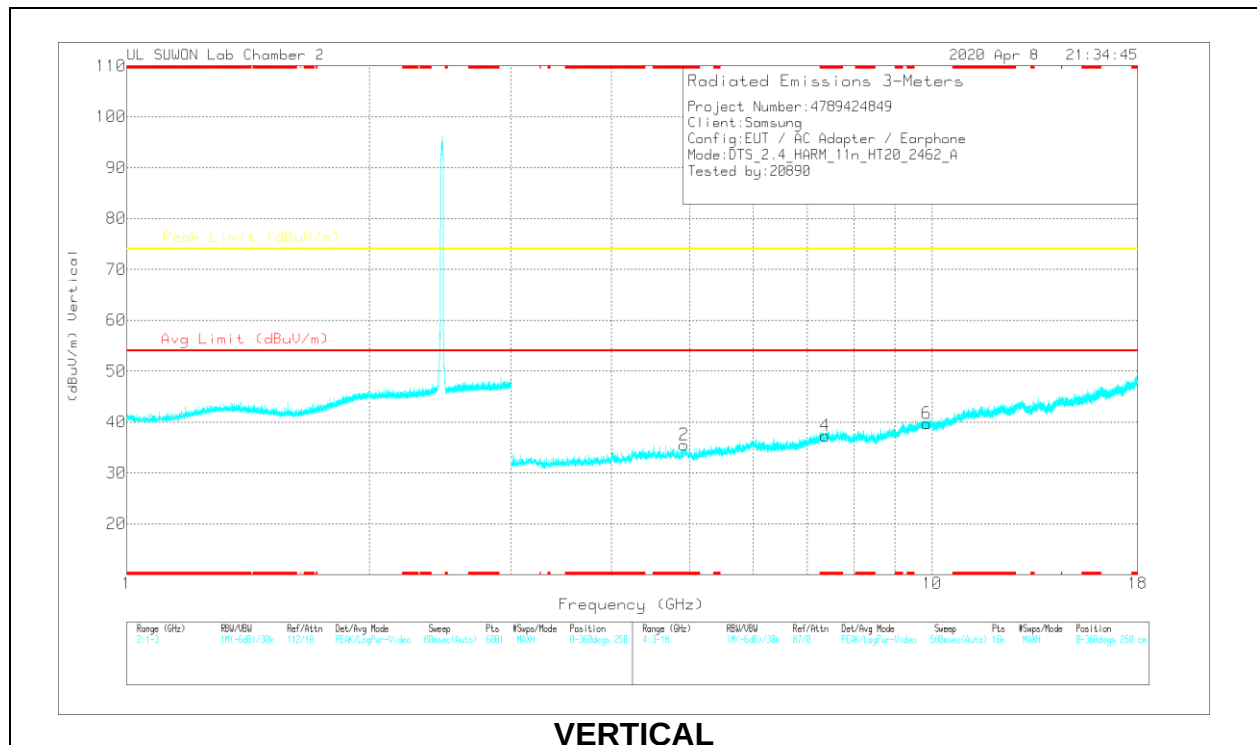
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

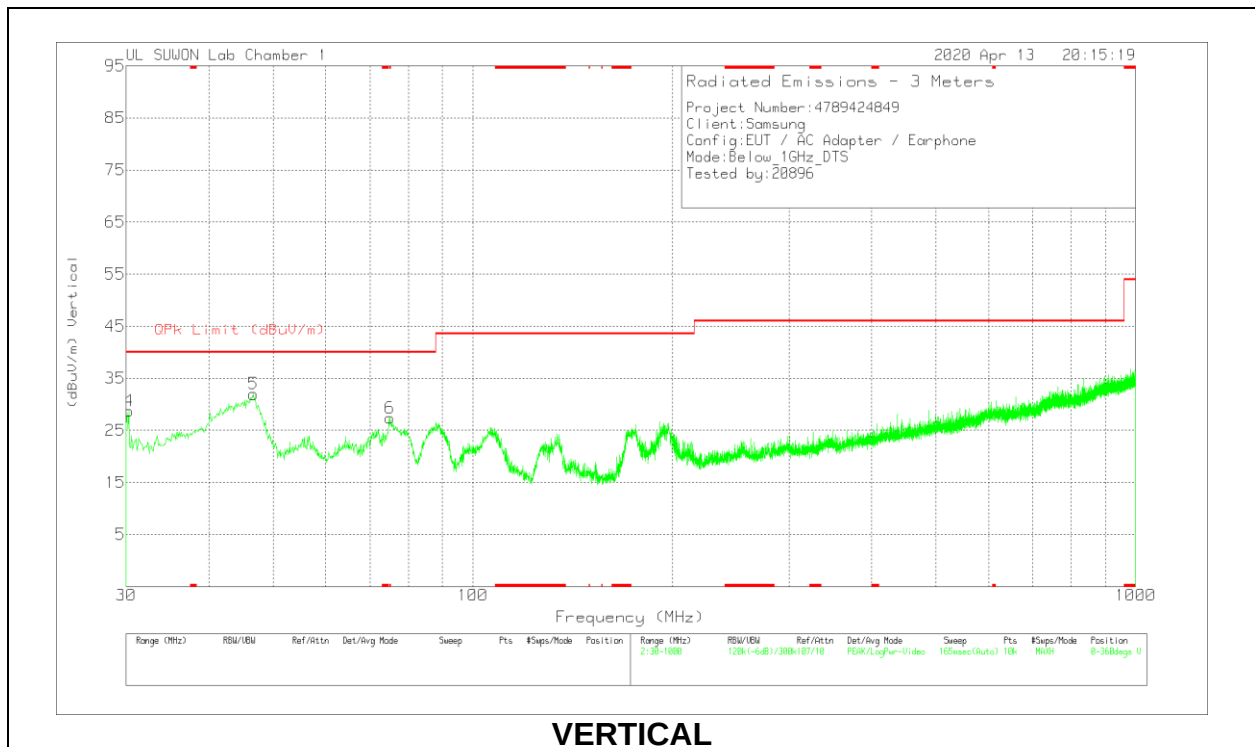
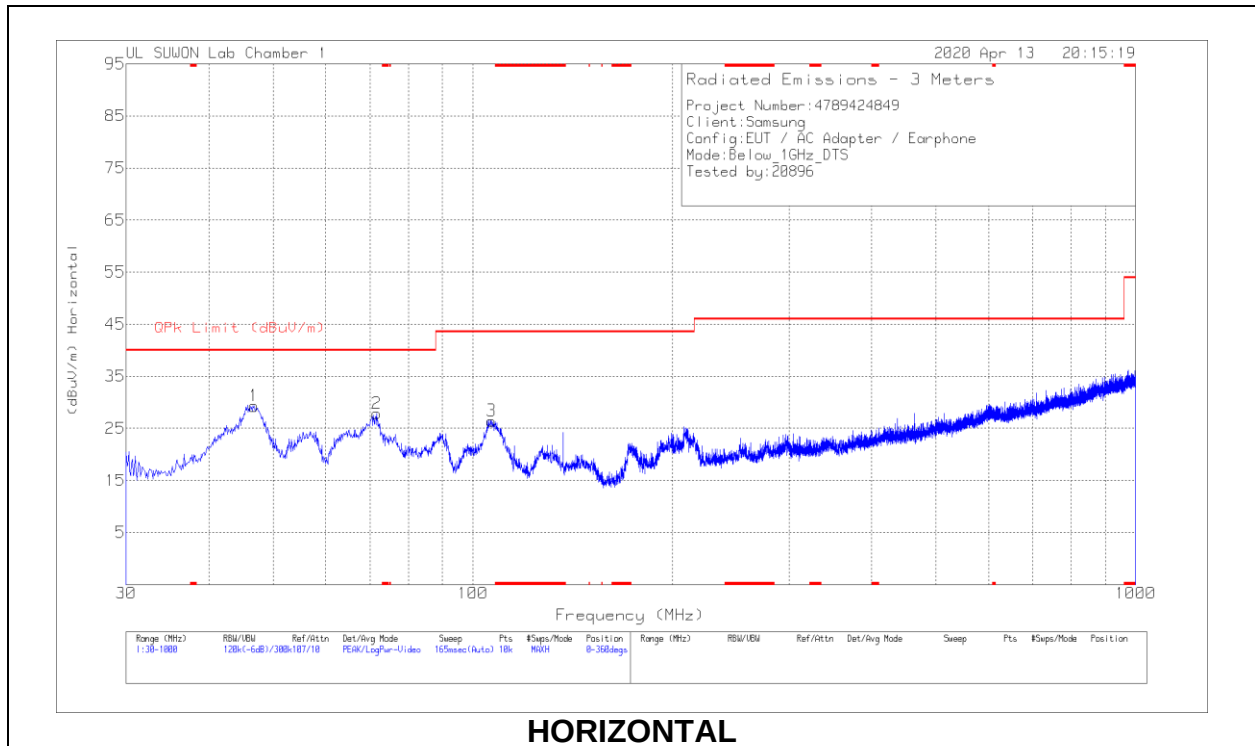
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.9244	40.51	PK2	34	-27.2	0	47.31	-	-	74	-26.69	260	102	H
* 4.92382	27.87	MAv1	34	-27.2	0	34.67	54	-19.33	-	-	260	102	H
* 4.9212	38.77	PK2	34	-27.2	0	45.57	-	-	74	-28.43	215	100	V
* 4.92008	26.09	MAv1	34	-27.2	0	32.89	54	-21.11	-	-	215	100	V
* 7.3711	34.84	PK2	36.2	-24.2	0	46.84	-	-	74	-27.16	360	100	H
* 7.37013	34.89	PK2	36.2	-24.2	0	46.89	-	-	74	-27.11	360	100	V
9.84735	32.24	PK2	37.3	-21.6	0	47.94	-	-	74	-26.06	360	100	H
9.84802	32.41	PK2	37.3	-21.6	0	48.11	-	-	74	-25.89	360	100	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

10.2. WORST CASE BELOW 1 GHZ



Below 1GHz DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_750	Below_1G[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	46.781	39.99	Pk	19.8	-30.5	0	29.29	40	-10.71	0-360	400	H
2	71.613	43.04	Pk	14.9	-30.1	0	27.84	40	-12.16	0-360	300	H
3	106.824	38.22	Pk	17.7	-29.5	0	26.42	43.52	-17.1	0-360	200	H
4	30.291	42.82	Pk	16	-30.1	0	28.72	40	-11.28	0-360	100	V
5	46.684	41.87	Pk	19.7	-29.6	0	31.97	40	-8.03	0-360	100	V
6	* 75.008	43.05	Pk	13.5	-29.2	0	27.35	40	-12.65	0-360	100	V

11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

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

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

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

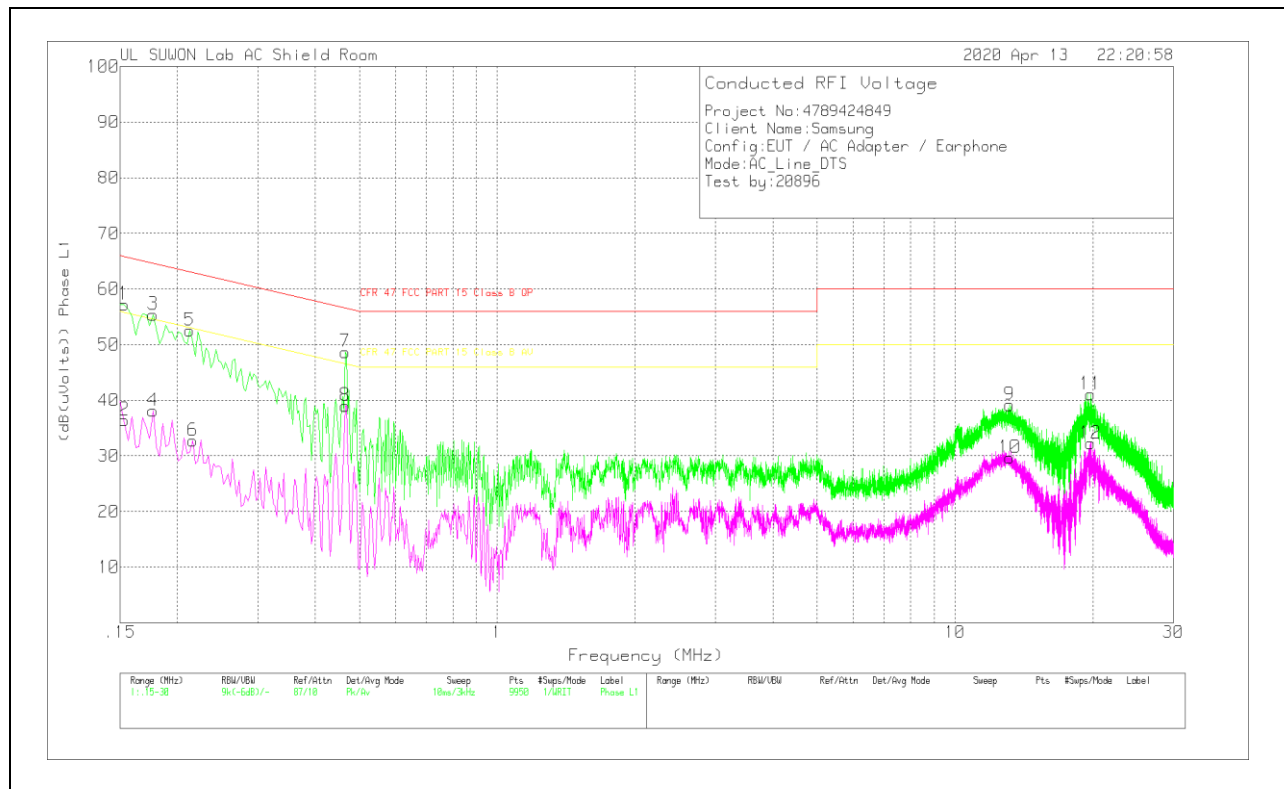
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

11.1.1. AC Power Line

LINE 1 RESULTS



Range 1: Phase L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_Wit h Ex_L1[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
1	.153	47.34	Pk	9.8	.1	57.24	65.84	-8.6	-	-
2	.153	26.52	Av	9.8	.1	36.42	-	-	55.84	-19.42
3	.177	45.21	Pk	10	.2	55.41	64.63	-9.22	-	-
4	.177	27.92	Av	10	.2	38.12	-	-	54.63	-16.51
5	.213	42.42	Pk	9.9	.2	52.52	63.09	-10.57	-	-
6	.216	22.72	Av	9.8	.2	32.72	-	-	52.97	-20.25
7	.465	38.59	Pk	9.9	.2	48.69	56.6	-7.91	-	-
8	.465	28.89	Av	9.9	.2	38.99	-	-	46.6	-7.61
9	13.173	28.67	Pk	10.1	.4	39.17	60	-20.83	-	-
10	13.176	19.18	Av	10.1	.4	29.68	-	-	50	-20.32
11	19.761	30.36	Pk	10.3	.4	41.06	60	-18.94	-	-
12	19.761	21.55	Av	10.3	.4	32.25	-	-	50	-17.75

Pk - Peak detector

Av - Average detection

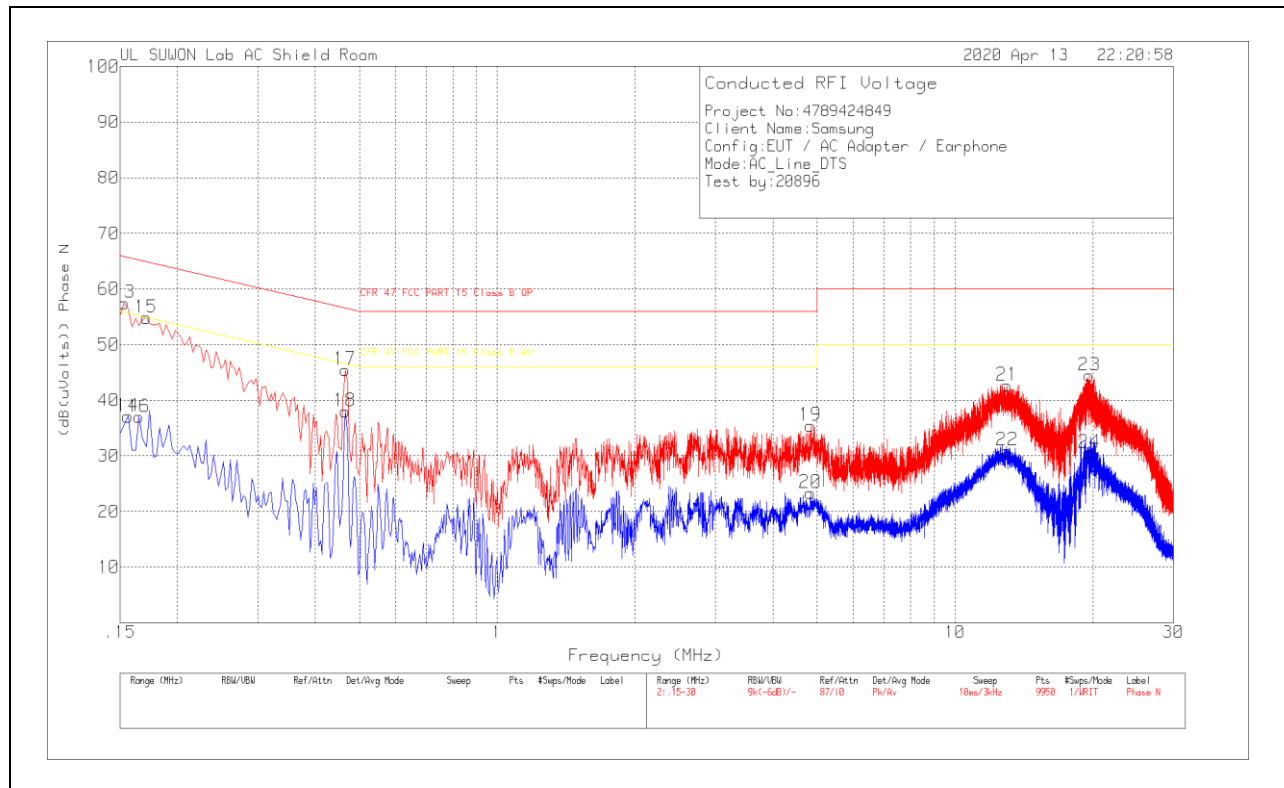
Quasi-Peak Emissions

Range 1: Phase L1 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_Wit h Ex_L1[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
.15315	42.34	Qp	9.8	.1	52.24	65.83	-13.59	-	-
.17715	39.77	Qp	10	.2	49.97	64.62	-14.65	-	-
.21615	35.57	Qp	9.8	.2	45.57	62.97	-17.4	-	-

Qp - Quasi-Peak detector

LINE 2 RESULTS



Range 2: Phase N .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_Wit h EX_N[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
13	.153	47.6	Pk	9.8	.1	57.5	65.84	-8.34	-	-
14	.156	27.1	Av	9.9	.1	37.1	-	-	55.67	-18.57
15	.171	44.53	Pk	10.1	.2	54.83	64.91	-10.08	-	-
16	.165	26.92	Av	10	.1	37.02	-	-	55.21	-18.19
17	.465	35.4	Pk	9.9	.2	45.5	56.6	-11.1	-	-
18	.465	27.94	Av	9.9	.2	38.04	-	-	46.6	-8.56
19	4.833	25.38	Pk	9.8	.3	35.48	56	-20.52	-	-
20	4.833	13.27	Av	9.8	.3	23.37	-	-	46	-22.63
21	13.005	32.16	Pk	10.1	.4	42.66	60	-17.34	-	-
22	13.005	20.46	Av	10.1	.4	30.96	-	-	50	-19.04
23	19.671	33.75	Pk	10.3	.4	44.45	60	-15.55	-	-
24	19.671	19.85	Av	10.3	.4	30.55	-	-	50	-19.45

Pk - Peak detector

Av - Average detection

Quasi-Peak Emissions

Range 2: Phase N .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_Wit h EX_N[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
.15315	42.24	Qp	9.8	.1	52.14	65.83	-13.69	-	-

Qp - Quasi-Peak detector

END OF TEST REPORT