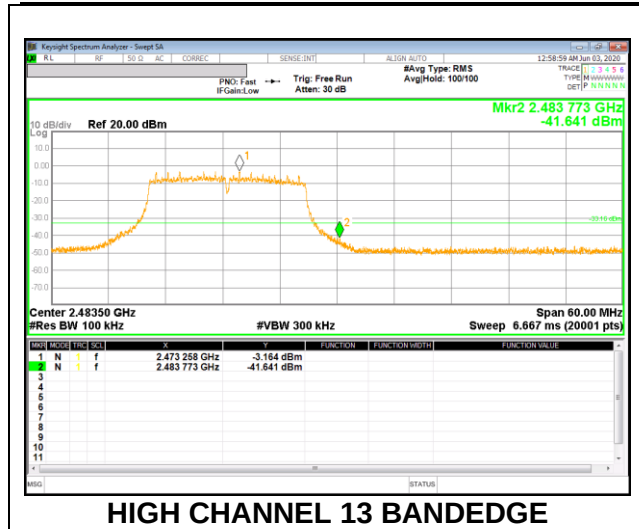
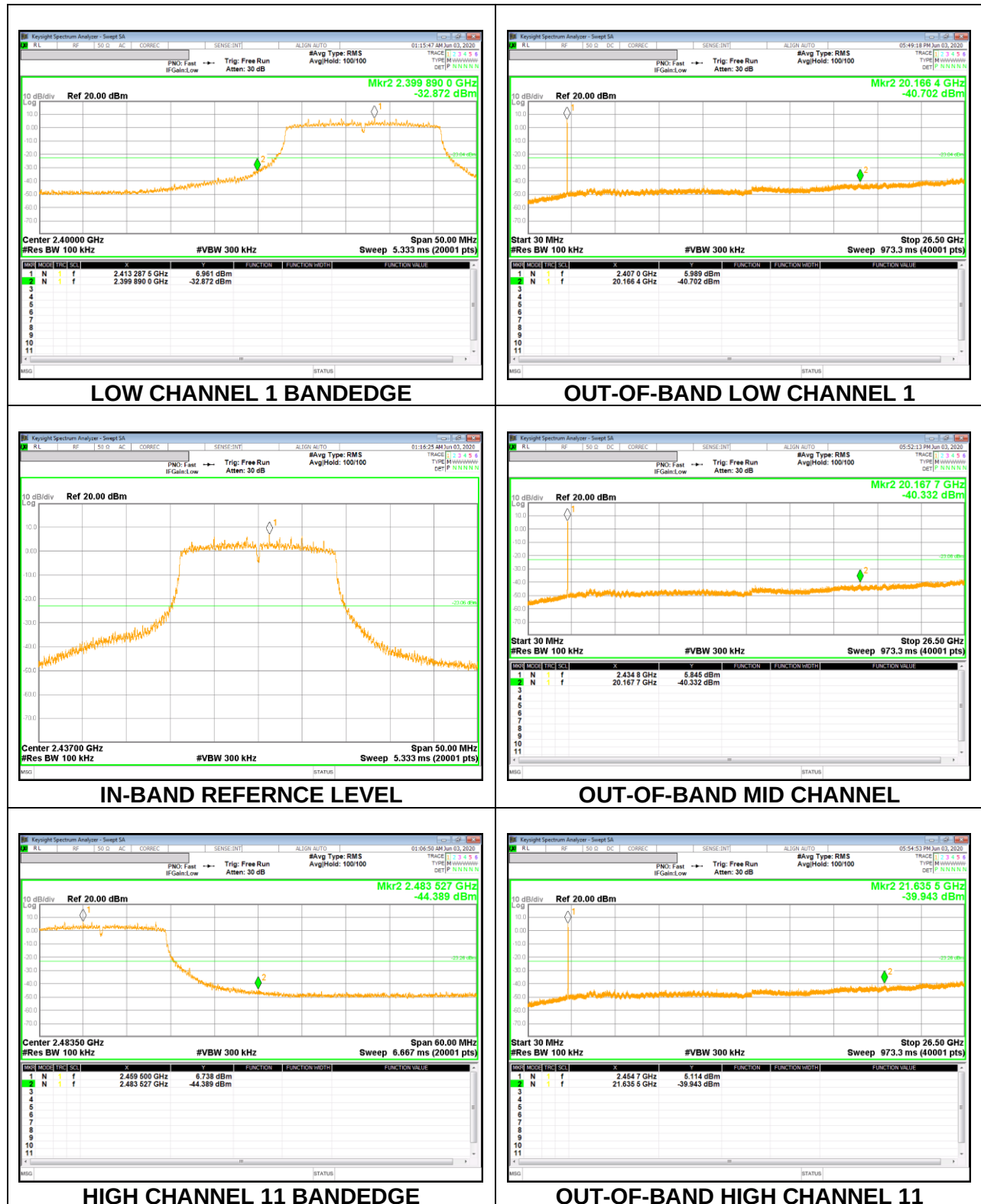
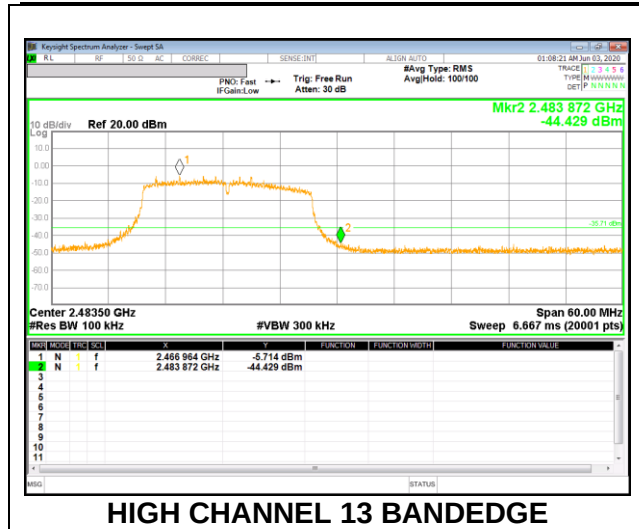




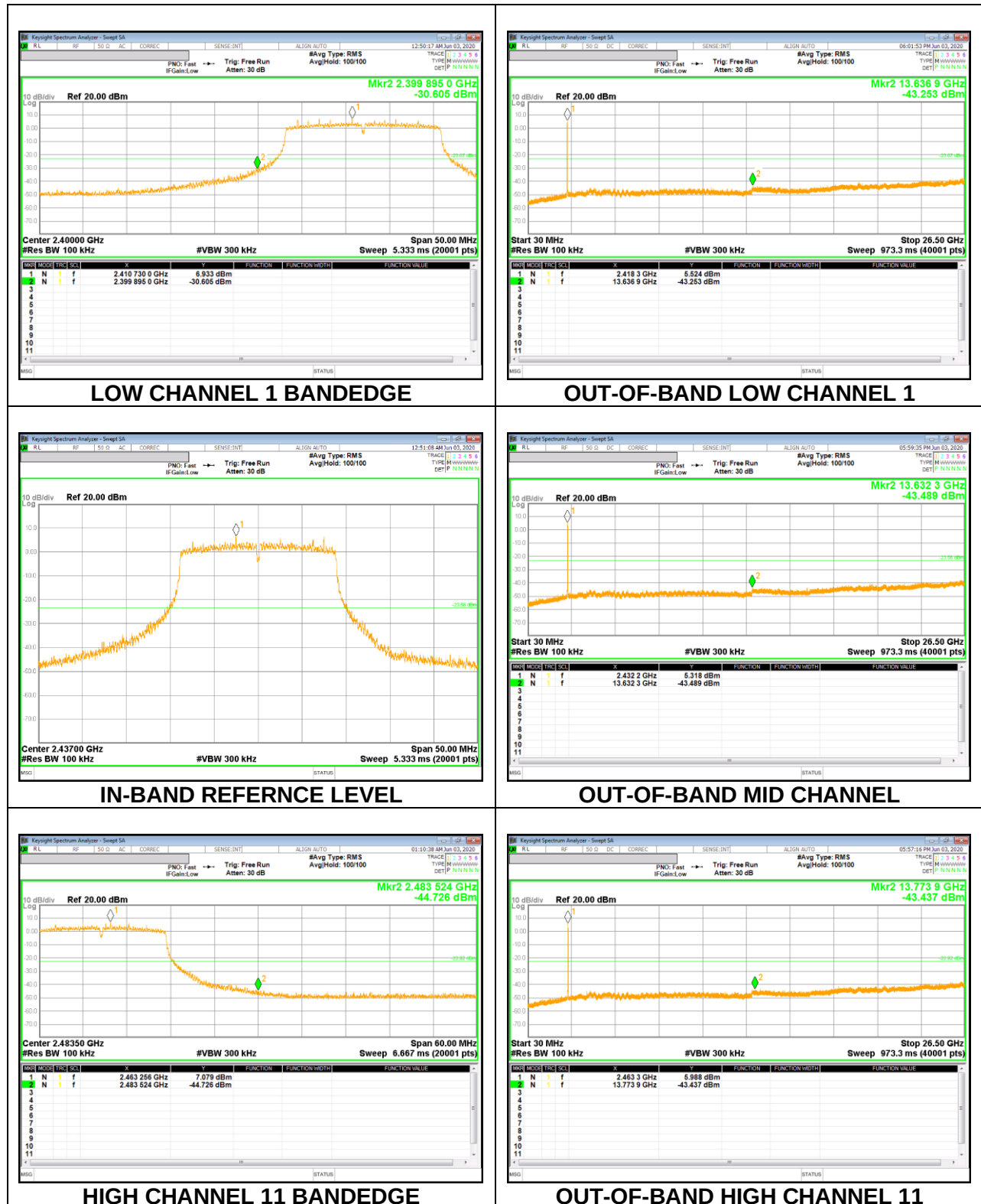
9.5.3. 802.11n HT20 MODE

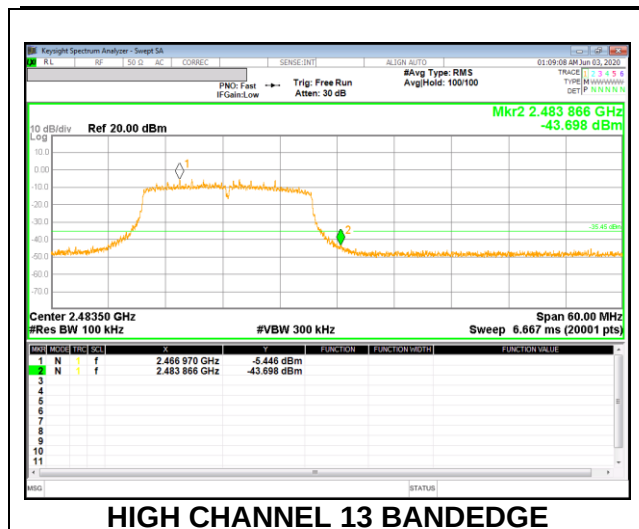
2TX Antenna 1 MODE





2TX Antenna 2 MODE





10. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209

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

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

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

MHz	MHz	MHz	MHz	GHz	GHz
0.009 ~ 0.110	8.41425 ~ 8.41475	108 ~ 121.94	1300 ~ 1427	4.5 ~ 5.15	14.47 ~ 14.5
0.495 ~ 0.505	12.29 ~ 12.293	123 ~ 138	1435 ~ 1626.5	5.35 ~ 5.46	15.35 ~ 16.2
2.1735 ~ 2.1905	12.51975 ~ 12.52025	149.9 ~ 150.05	1645.5 ~ 1646.5	7.25 ~ 7.75	17.7 ~ 21.4
4.125 ~ 4.128	12.57675 ~ 12.57725	156.52475 ~	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 802.11b mode = 0dB (duty cycle >98%); 802.11g mode = 0dB (duty cycle >98%); 802.11n(HT20) 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.

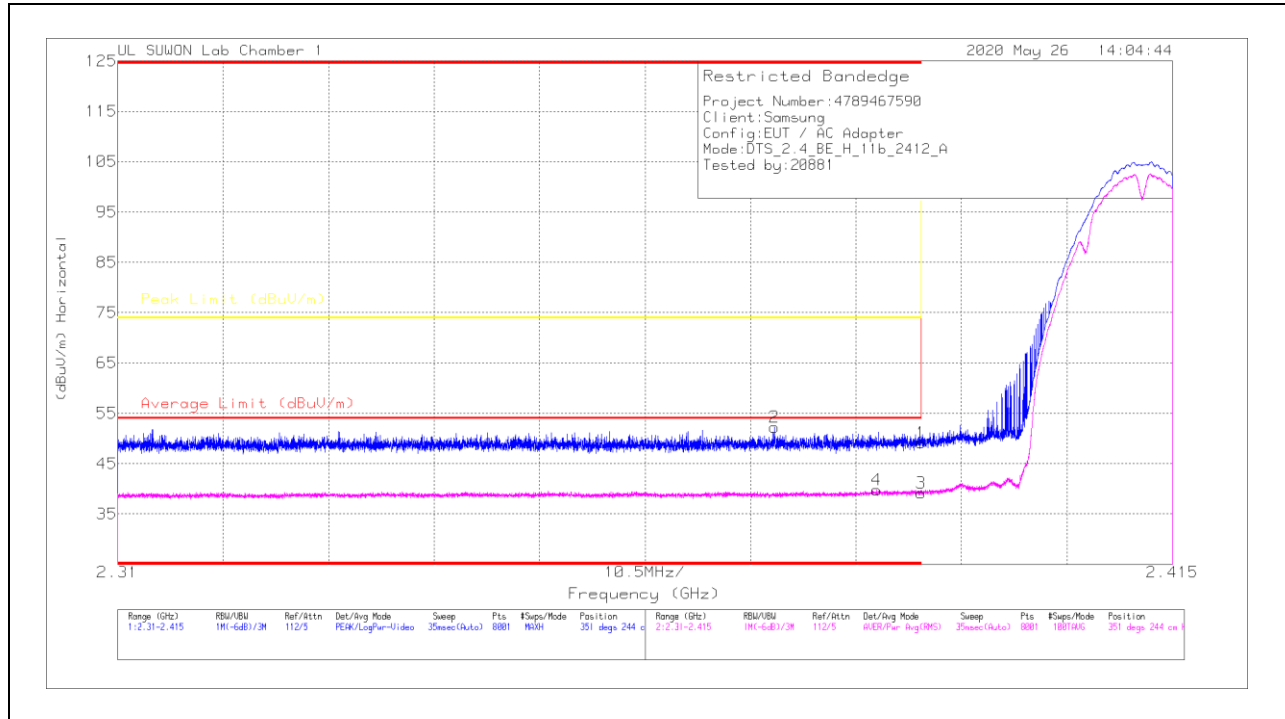
10.1. TRANSMITTER ABOVE 1 GHz

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

2TX Antenna 1 + Antenna 2 MODE

BANDEDGE (LOW CHANNEL, CH 1)

HORIZONTAL RESULT



Trace Markers

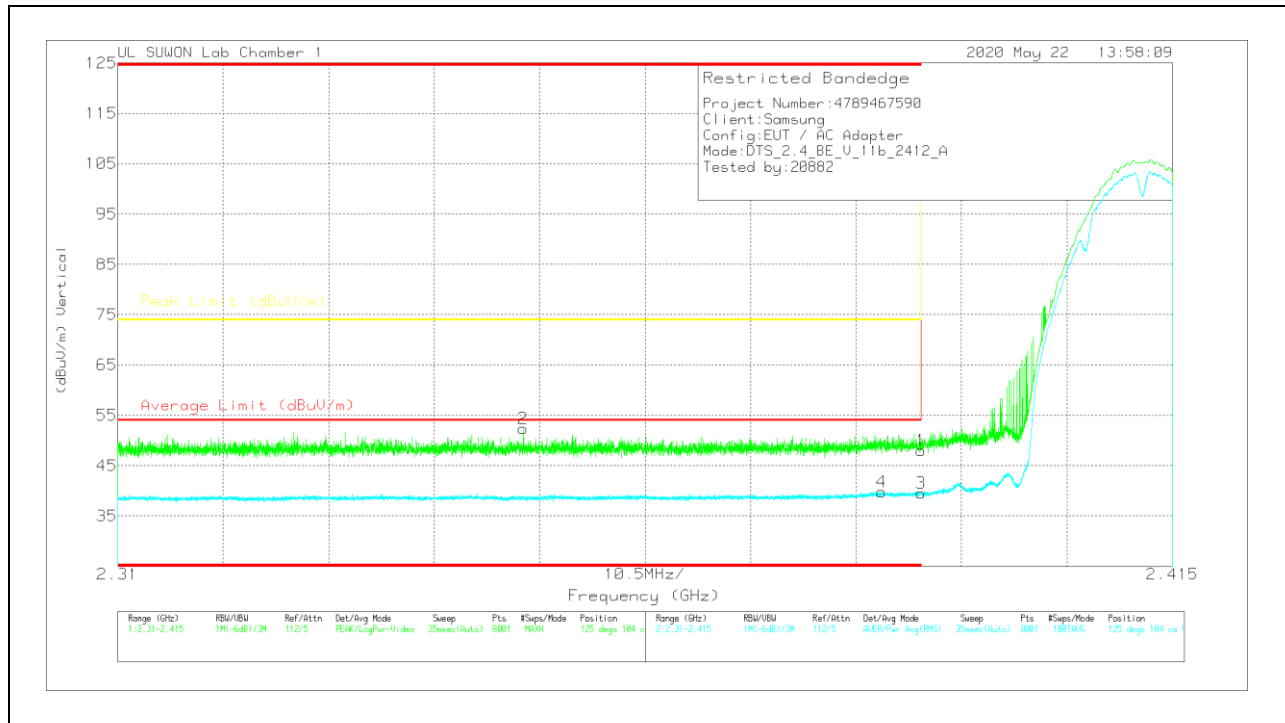
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	42.98	Pk		-25.5	0	49.18	-	-	74	-24.82	351	244	H
2	* 2.37535	46.28	Pk		-25.6	0	52.28	-	-	74	-21.72	351	244	H
3	* 2.39	32.93	RMS		-25.5	0	39.13	54	-14.87	-	-	351	244	H
4	* 2.38552	33.58	RMS		-25.5	0	39.78	54	-14.22	-	-	351	244	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	41.93	Pk	31.7	-25.5	0	46.13	-	-	74	-25.97	125	104	V
2	* 2.35036	46.35	Pk	31.6	-25.6	0	52.35	-	-	74	-21.65	125	104	V
3	* 2.39	33.35	RMS	31.7	-25.5	0	39.55	54	-14.45	-	-	125	104	V
4	* 2.38606	33.6	RMS	31.7	-25.5	0	39.8	54	-14.2	-	-	125	104	V

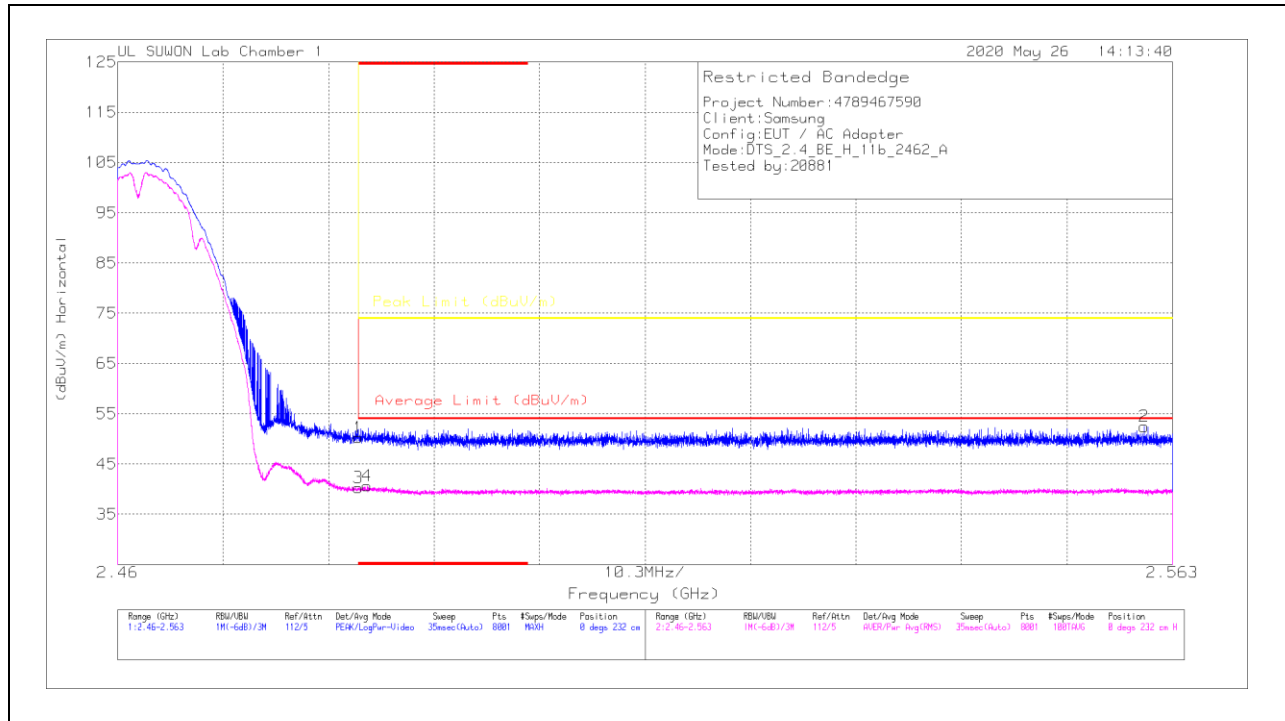
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 11)

HORIZONTAL RESULT



Trace Markers

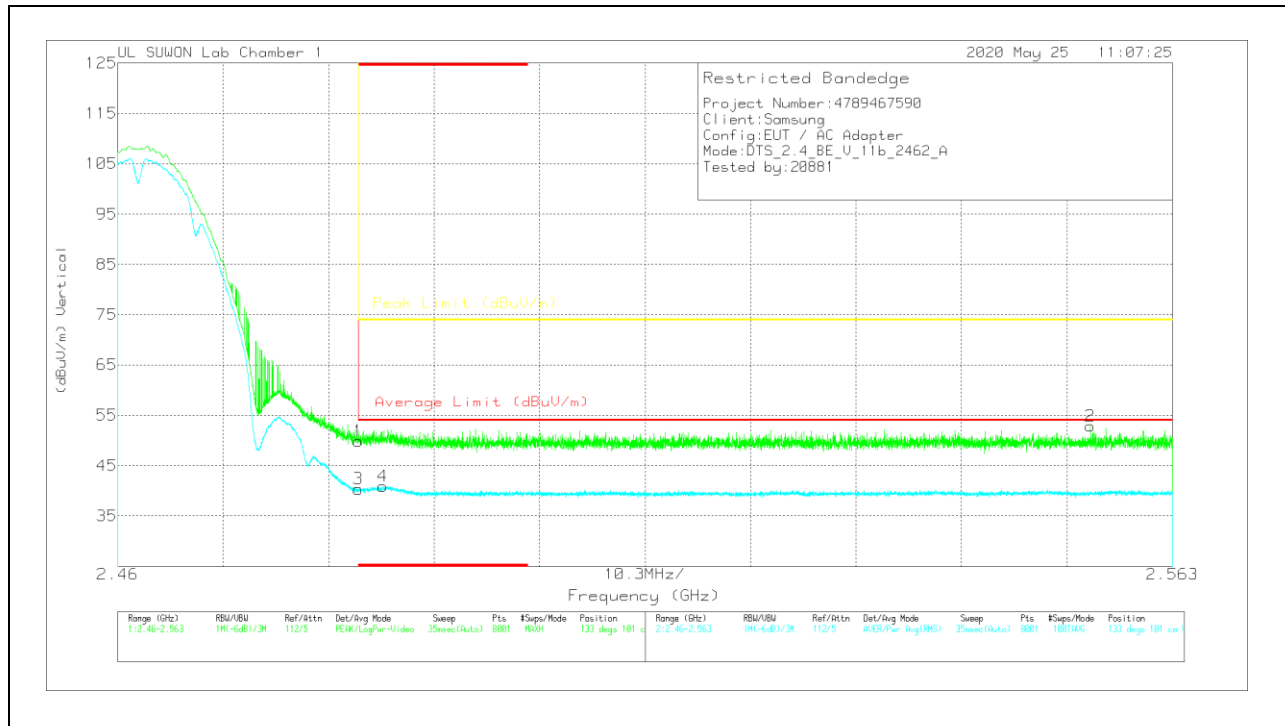
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	43.61	PK	31.9	-25.2	0	50.31	-	-	74	-23.69	0	232	H
2	2.56023	45.64	PK	32	-25.2	0	52.44	-	-	74	-21.56	0	232	H
3	* 2.48351	33.55	RMS	31.9	-25.2	0	40.25	54	-13.75	-	-	0	232	H
4	* 2.48437	33.94	RMS	31.9	-25.2	0	40.64	54	-13.36	-	-	0	232	H

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

PK - Peak detector

RMS - RMS detection

VERTICAL RESULT



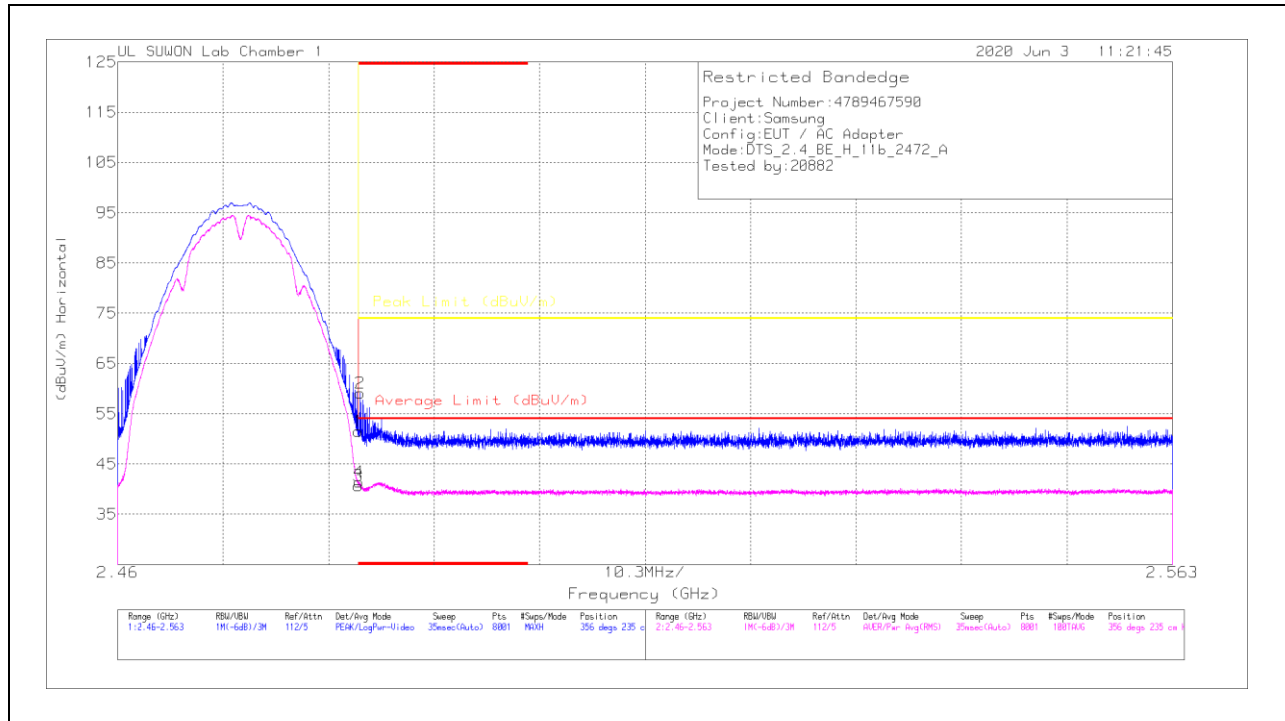
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	43.14	Pk	31.9	-25.2	0	49.34	-	-	74	-24.16	133	101	V
2	2.55498	45.96	Pk	32	-25.1	0	52.86	-	-	74	-21.14	133	101	V
3	* 2.48351	33.65	RMS	31.9	-25.2	0	40.35	54	-13.65	-	-	133	101	V
4	* 2.48587	34.26	RMS	31.9	-25.2	0	40.96	54	-13.04	-	-	133	101	V

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

BANDEDGE (HIGH CHANNEL, CH 13)

HORIZONTAL RESULT



Trace Markers

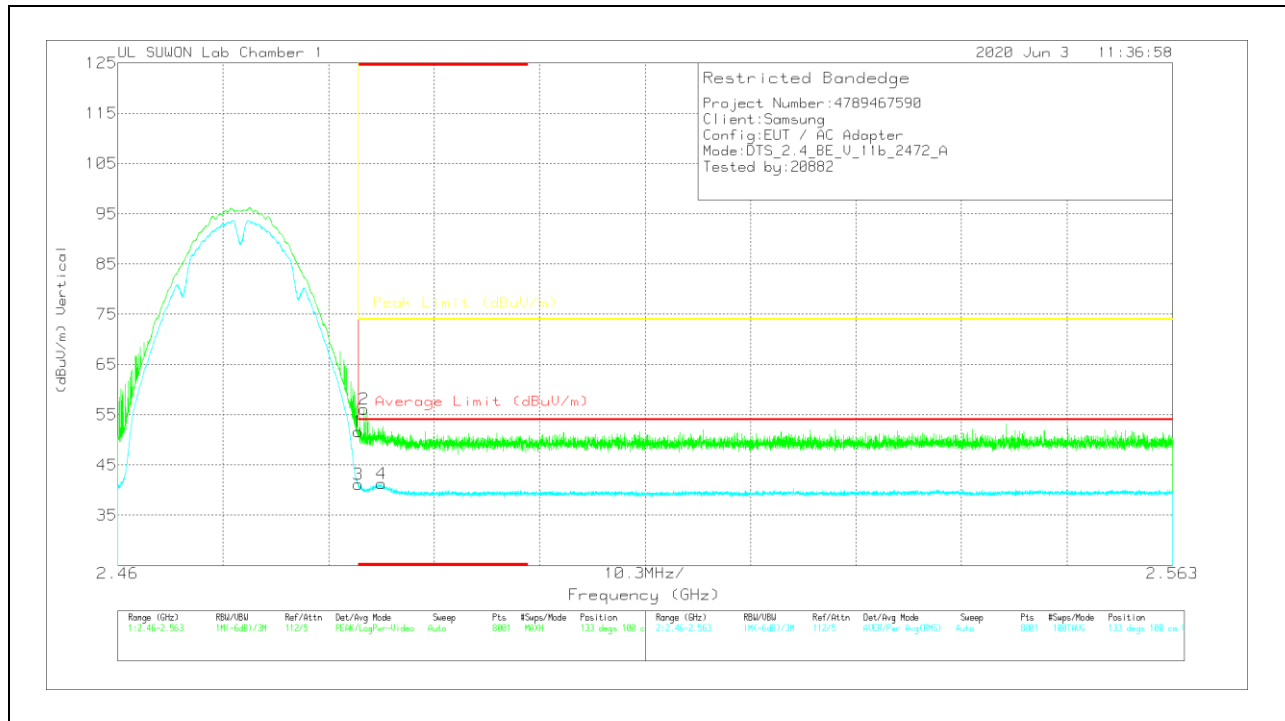
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (Degs)	Height (m)	Polarity
1	* 2.48351	44.81	PK	31.9	-25.2	0	51.51	-	-	74	-22.49	356	235	H
2	* 2.48365	52.45	PK	31.9	-25.2	0	59.15	-	-	74	-14.85	356	235	H
3	* 2.48351	33.97	RMS	31.9	-25.2	0	40.67	54	-13.33	-	-	356	235	H
4	* 2.48354	34.67	RMS	31.9	-25.2	0	41.37	54	-12.63	-	-	356	235	H

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

PK - Peak detector

RMS - RMS detection

VERTICAL RESULT



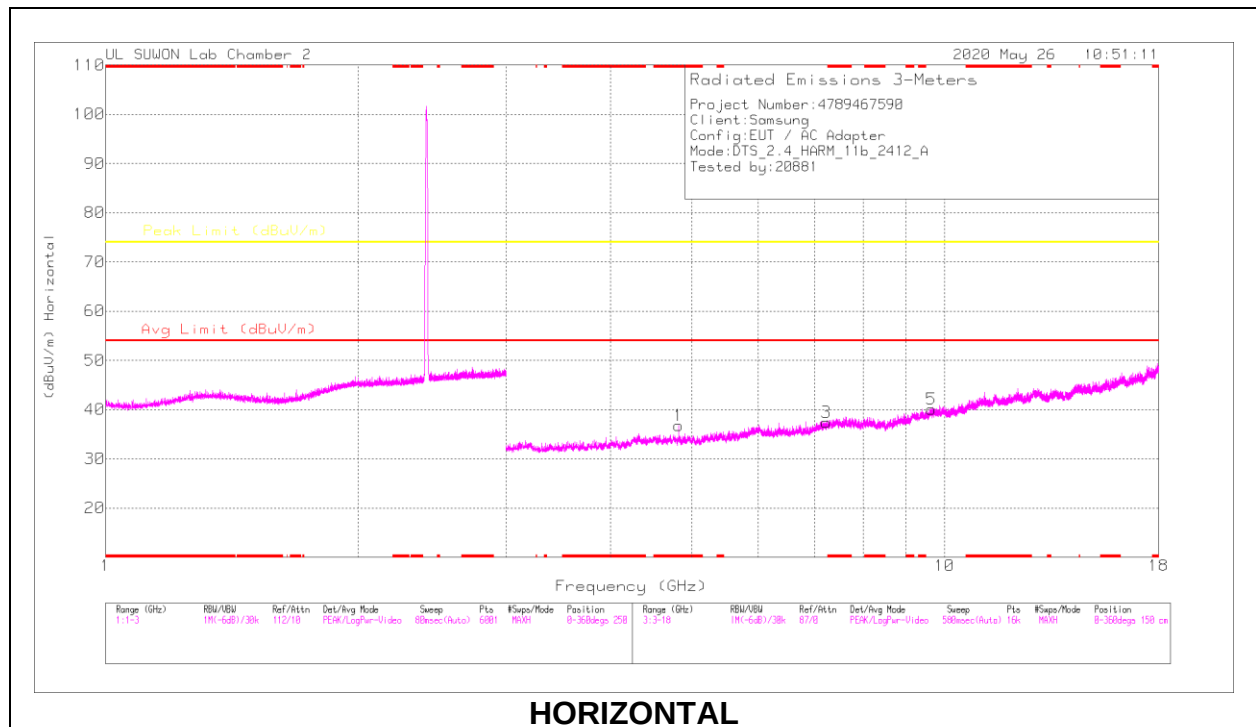
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	44.92	Pk	31.9	-25.2	0	51.92	-	-	74	-22.38	133	100	V
2	* 2.48406	49.32	Pk	31.9	-25.1	0	56.12	-	-	74	-17.88	133	100	V
3	* 2.48351	34.47	RMS	31.9	-25.2	0	41.17	54	-12.83	-	-	133	100	V
4	* 2.48579	34.55	RMS	31.9	-25.2	0	41.25	54	-12.75	-	-	133	100	V

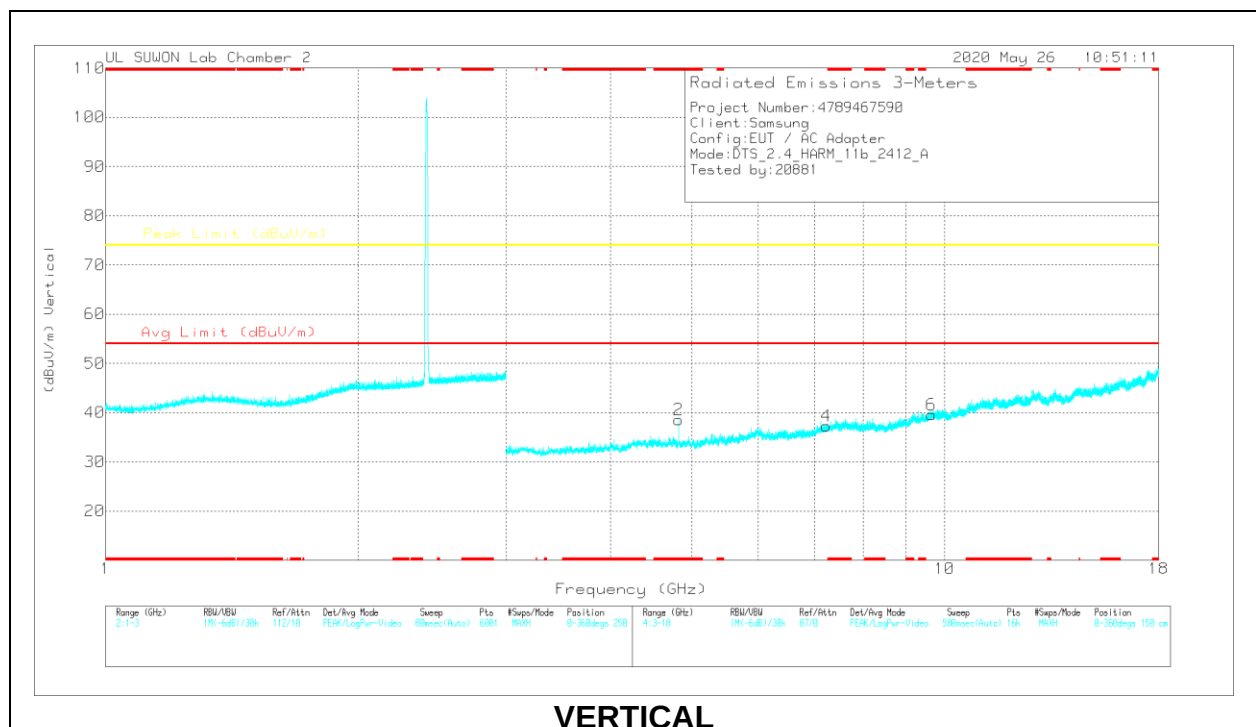
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



VERTICAL

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

RADIATED EMISSIONS

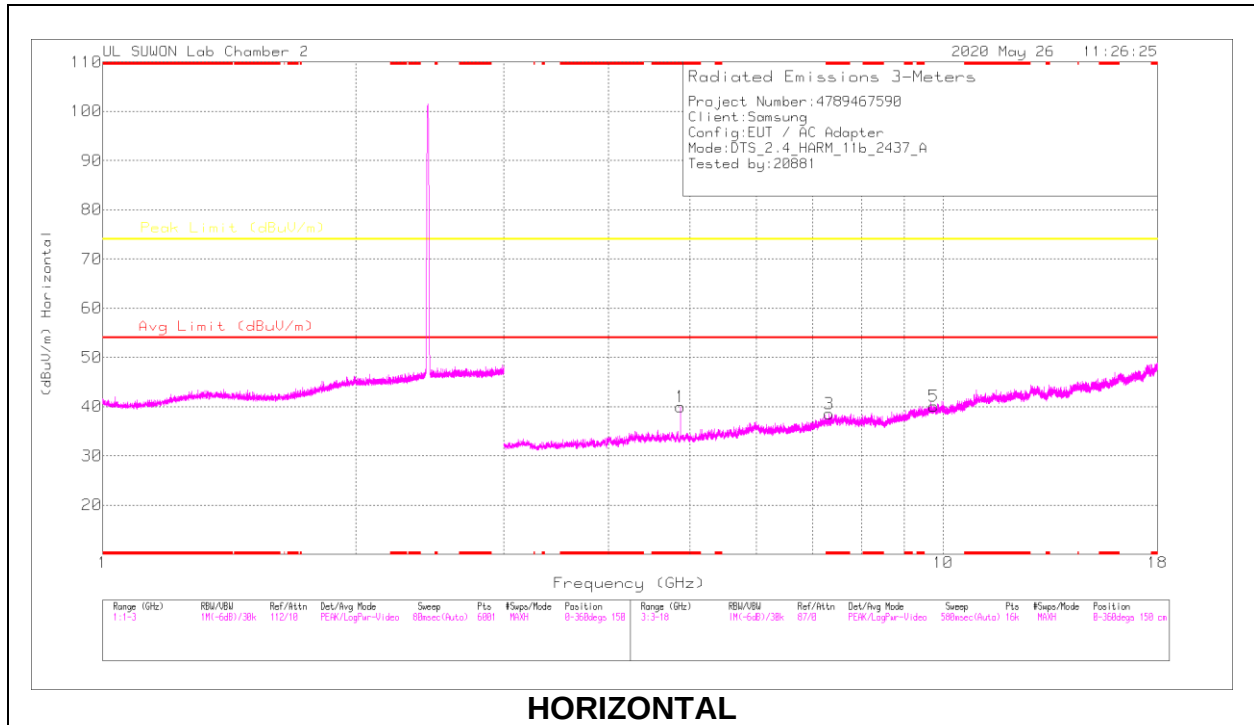
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872 4	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.82406	39.7	PK2	34	-28.1	0	45.6	-	-	74	-28.4	152	372	H
* 4.82396	31.83	MAv1	34	-28.1	0	37.73	54	-16.27	-	-	152	372	H
* 4.82392	38.82	PK2	34	-28.1	0	44.72	-	-	74	-29.28	164	127	V
* 4.82402	30.66	MAv1	34	-28.1	0	36.56	54	-17.44	-	-	164	127	V
7.23741	35.47	PK2	36.1	-25.4	0	46.17	-	-	74	-27.83	0	100	H
7.23498	35.19	PK2	36.1	-25.4	0	45.89	-	-	74	-28.11	0	100	V
9.64958	33.23	PK2	37	-21.4	0	48.83	-	-	74	-25.17	0	100	H
9.64703	33.13	PK2	37	-21.5	0	48.63	-	-	74	-25.37	0	100	V

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

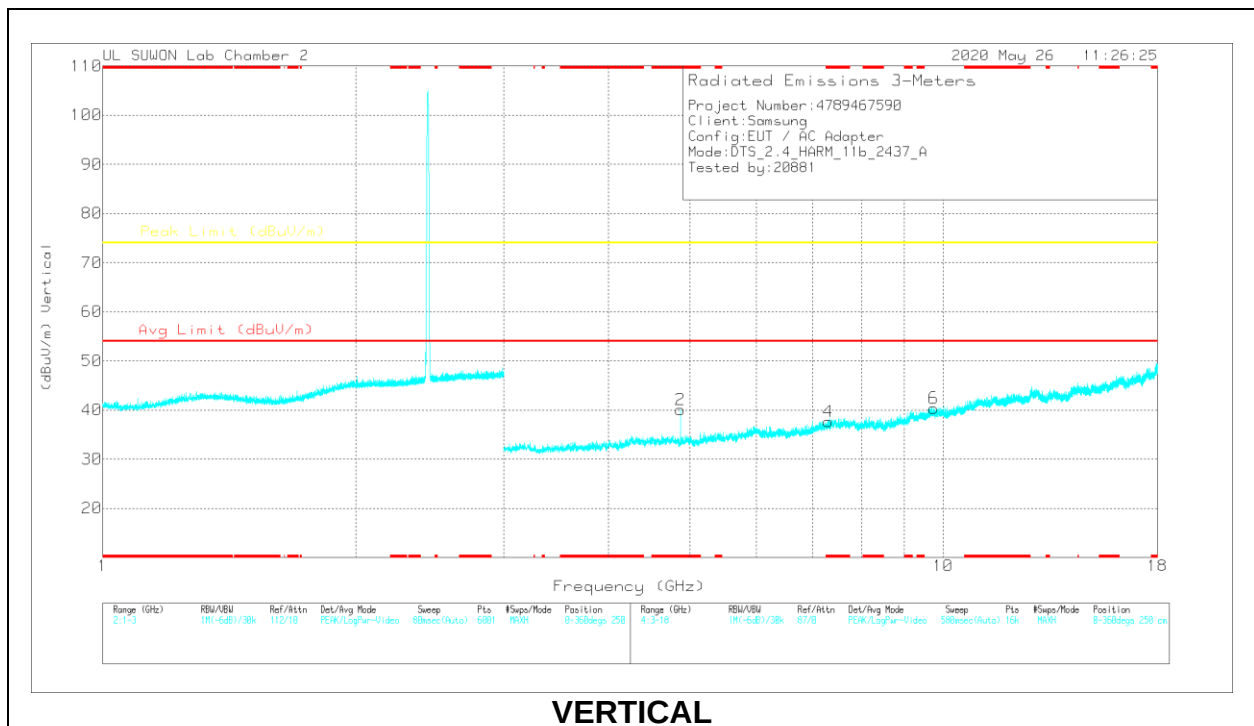
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

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

RADIATED EMISSIONS

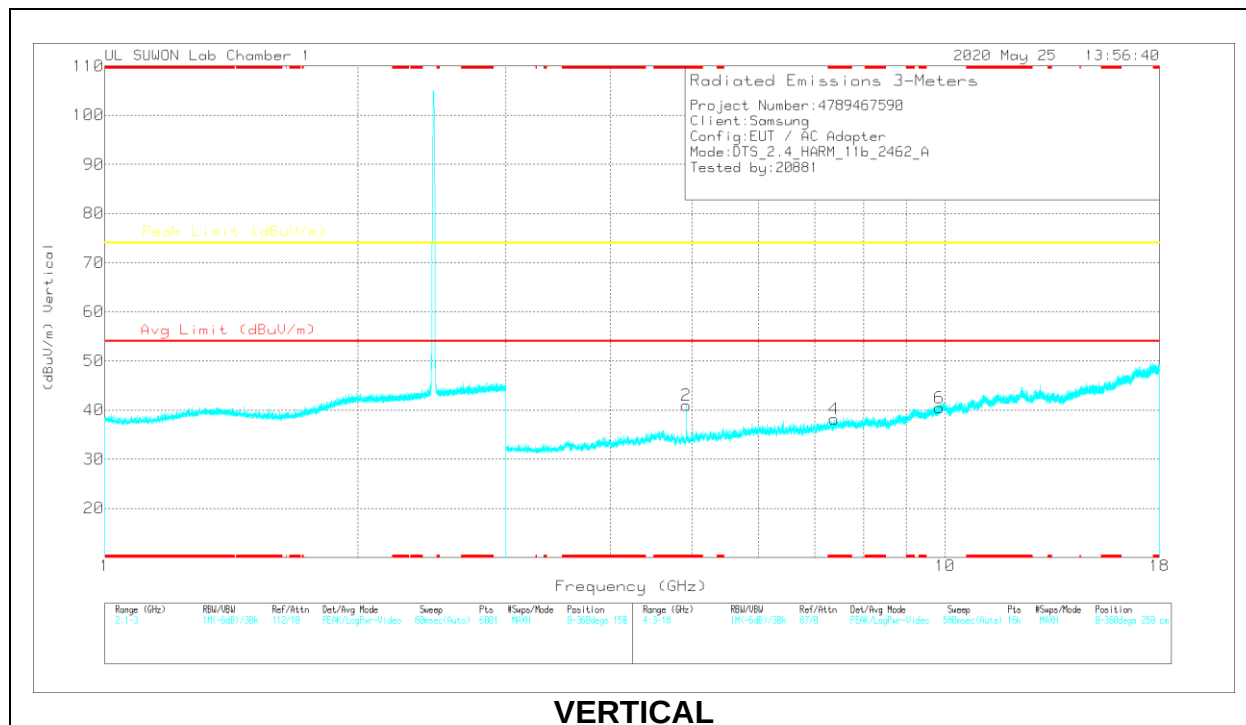
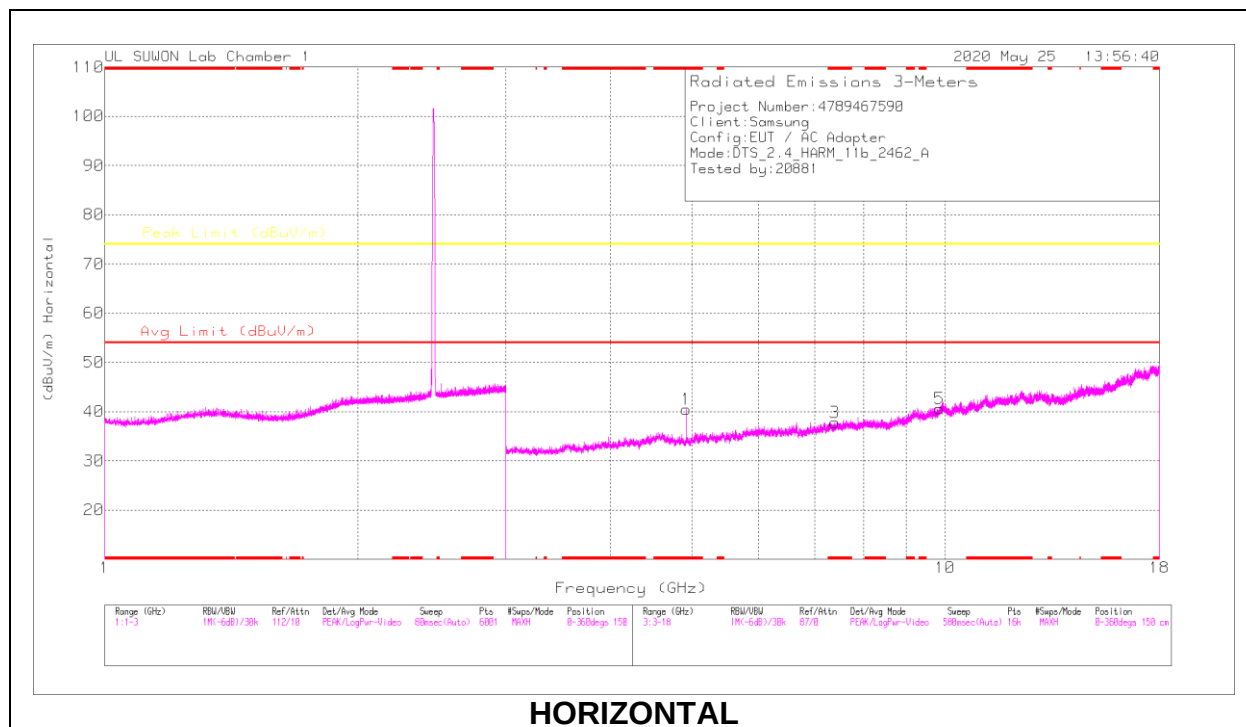
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016872_4	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.87412	40.18	PK2	34	-27.9	0	46.28	-	-	74	-27.72	327	326	H
* 4.87398	32.82	MAv1	34	-27.9	0	38.92	54	-15.08	-	-	327	326	H
* 4.87398	39.54	PK2	34	-27.9	0	45.64	-	-	74	-28.36	189	168	V
* 4.87393	33.64	MAv1	34	-27.9	0	39.74	54	-14.26	-	-	189	168	V
* 7.31307	35.03	PK2	36.2	-24.9	0	46.33	-	-	74	-27.67	0	100	H
* 7.31713	35.27	PK2	36.2	-24.8	0	46.67	-	-	74	-27.33	0	100	V
9.74699	32.6	PK2	37.2	-21.2	0	48.6	-	-	74	-25.4	0	100	H
9.74764	32.56	PK2	37.2	-21.2	0	48.56	-	-	74	-25.44	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



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

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016871 7	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
* 4.92405	45.37	PK2	34.2	-31.6	0	47.97	-	-	74	-26.03	324	313	H
* 4.92397	39.19	MAv1	34.2	-31.6	0	41.79	54	-12.21	-	-	324	313	H
* 4.92401	44.57	PK2	34.2	-31.6	0	47.17	-	-	74	-26.83	132	200	V
* 4.92397	38.77	MAv1	34.2	-31.6	0	41.37	54	-12.63	-	-	132	200	V
* 7.38881	37.84	PK2	35.8	-26.9	0	46.74	-	-	74	-27.26	0	100	H
* 7.38731	37.72	PK2	35.8	-26.9	0	46.62	-	-	74	-27.38	0	100	V
9.84716	34.4	PK2	37.4	-23.1	0	48.7	-	-	74	-25.3	0	100	H
9.84416	34.47	PK2	37.4	-23.2	0	48.67	-	-	74	-25.33	0	100	V

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

PK2 - KDB558074 Method: Maximum Peak

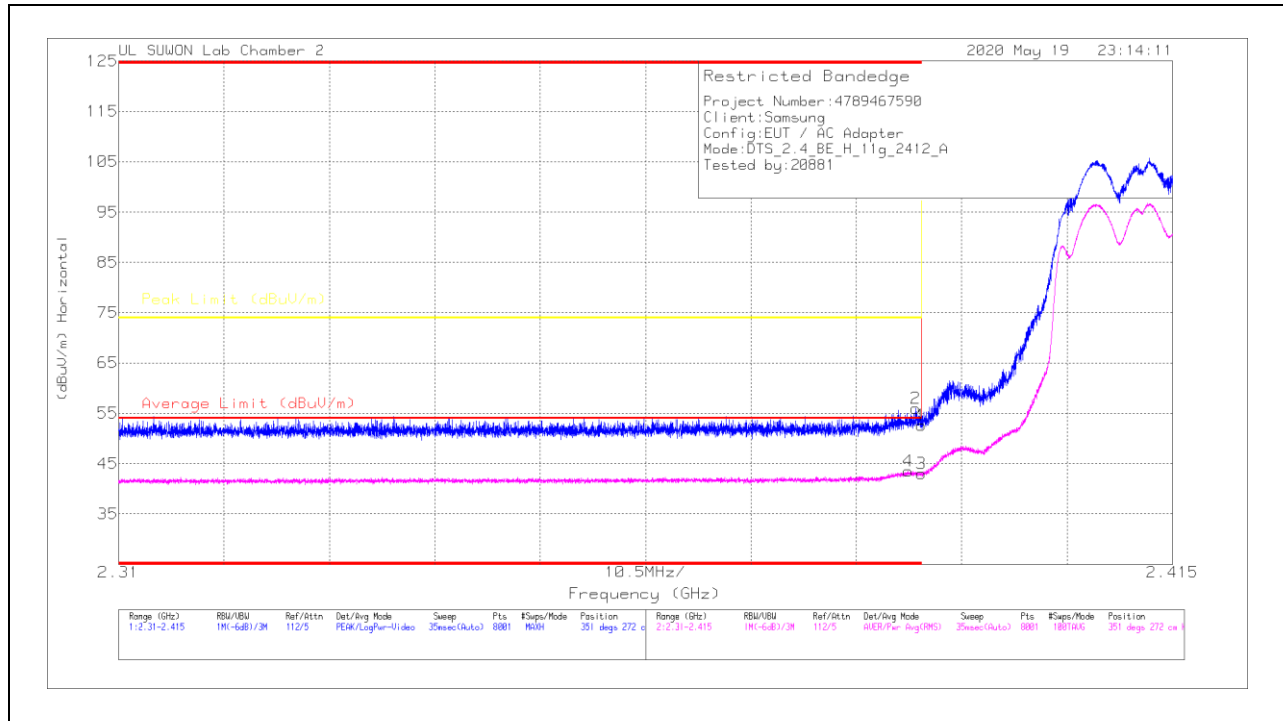
MAv1 - KDB558074 Option 1 Maximum RMS Average

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

2TX Antenna 1 + Antenna 2 MODE

BANDEDGE (LOW CHANNEL, CH 1)

HORIZONTAL RESULT



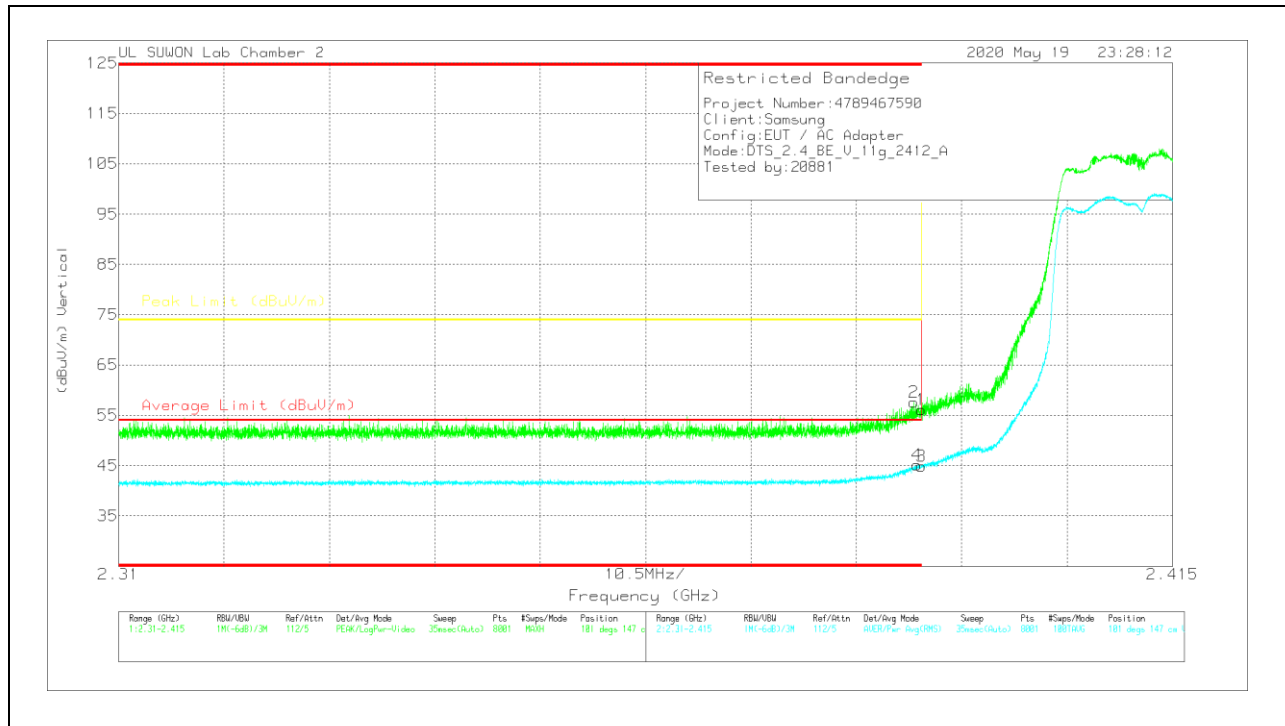
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	1048_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	41.65	Pk	31.6	-20.6	0	52.65	-	-	74	-21.35	351	272	H
2	* 2.38945	44.96	Pk	31.6	-20.6	0	55.96	-	-	74	-18.04	351	272	H
3	* 2.39	31.98	RMS	31.6	-20.6	0	42.98	54	-11.02	-	-	351	272	H
4	* 2.3887	32.56	RMS	31.6	-20.6	0	43.56	54	-10.44	-	-	351	272	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	45.11	Pk	31.6	-20.6	0	56.11	-	-	74	-17.89	101	147	V
2	* 2.38925	46.62	Pk	31.6	-20.6	0	57.62	-	-	74	-16.38	101	147	V
3	* 2.39	33.93	RMS	31.6	-20.6	0	44.93	54	-9.07	-	-	101	147	V
4	* 2.38954	34.2	RMS	31.6	-20.6	0	45.2	54	-8.8	-	-	101	147	V

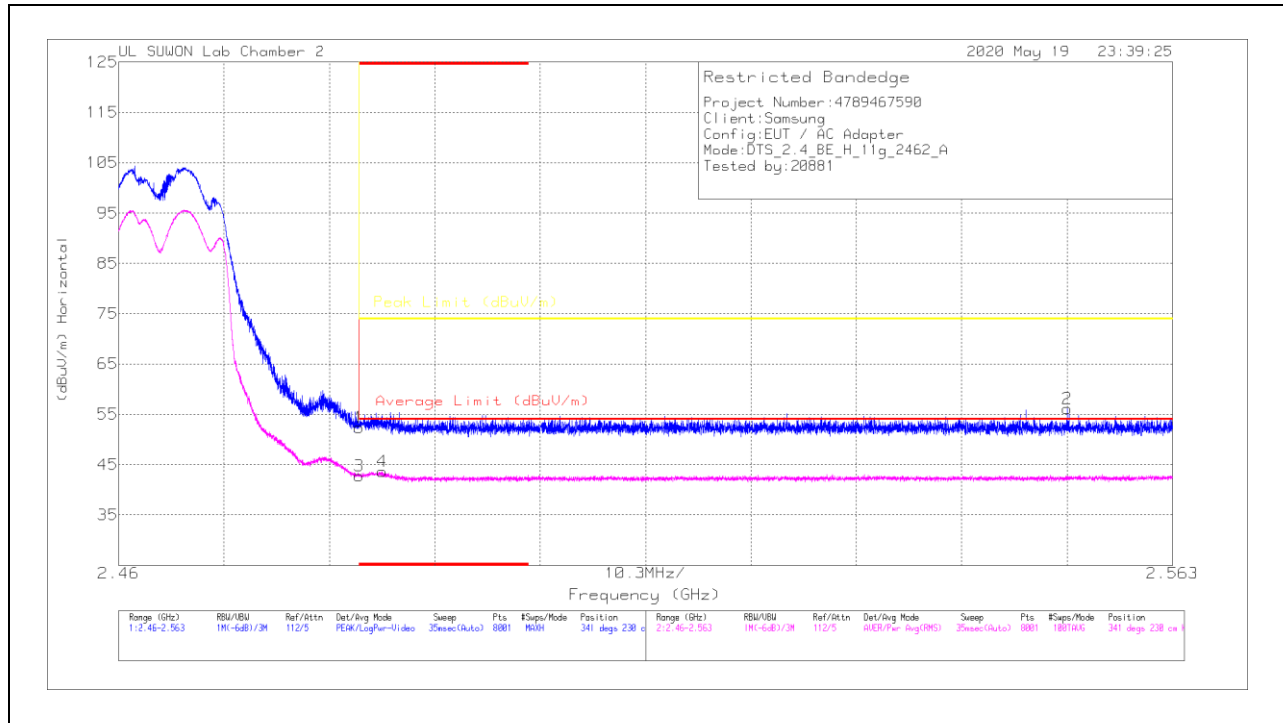
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 11)

HORIZONTAL RESULT



Trace Markers

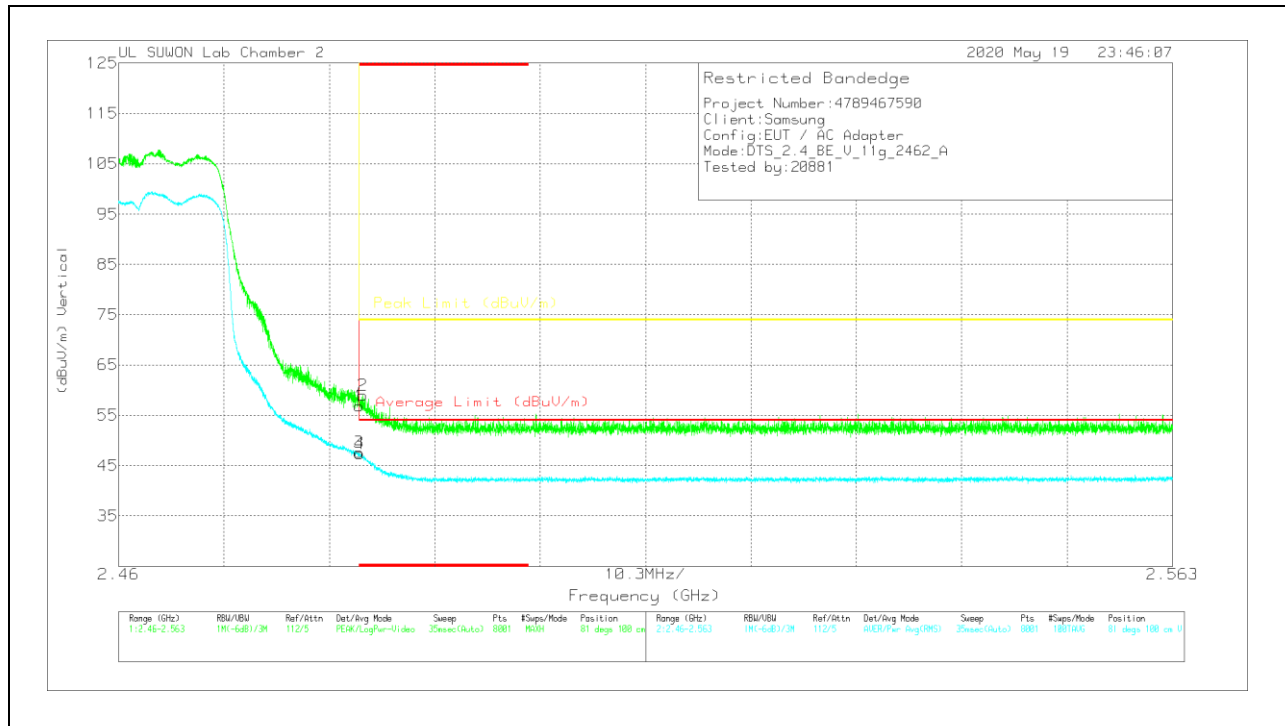
Marker	Frequency (GHz)	Meas Reading (dBuV)	Det	3117_00168724	10dB_ATT[98]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	40.82	Pk	31.9	-20.4	0	52.32	-	-	74	-21.68	341	230	H
2	2.55269	44.46	Pk	32	-20.4	0	56.06	-	-	74	-17.94	341	230	H
3	* 2.48351	31.25	RMS	31.9	-20.4	0	42.75	54	-11.25	-	-	341	230	H
4	* 2.48579	32.21	RMS	31.9	-20.5	0	43.61	54	-10.39	-	-	341	230	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (m)	Height (cm)	Polarity
1	* 2.48351	45.32	Pk	31.9	-20.4	0	56.82	-	-	74	-17.18	81	100	V
2	* 2.48388	47.53	Pk	31.9	-20.4	0	59.03	-	-	74	-14.97	81	100	V
3	* 2.48351	36.09	RMS	31.9	-20.4	0	47.59	54	-6.41	-	-	81	100	V
4	* 2.48355	35.84	RMS	31.9	-20.4	0	47.34	54	-6.66	-	-	81	100	V

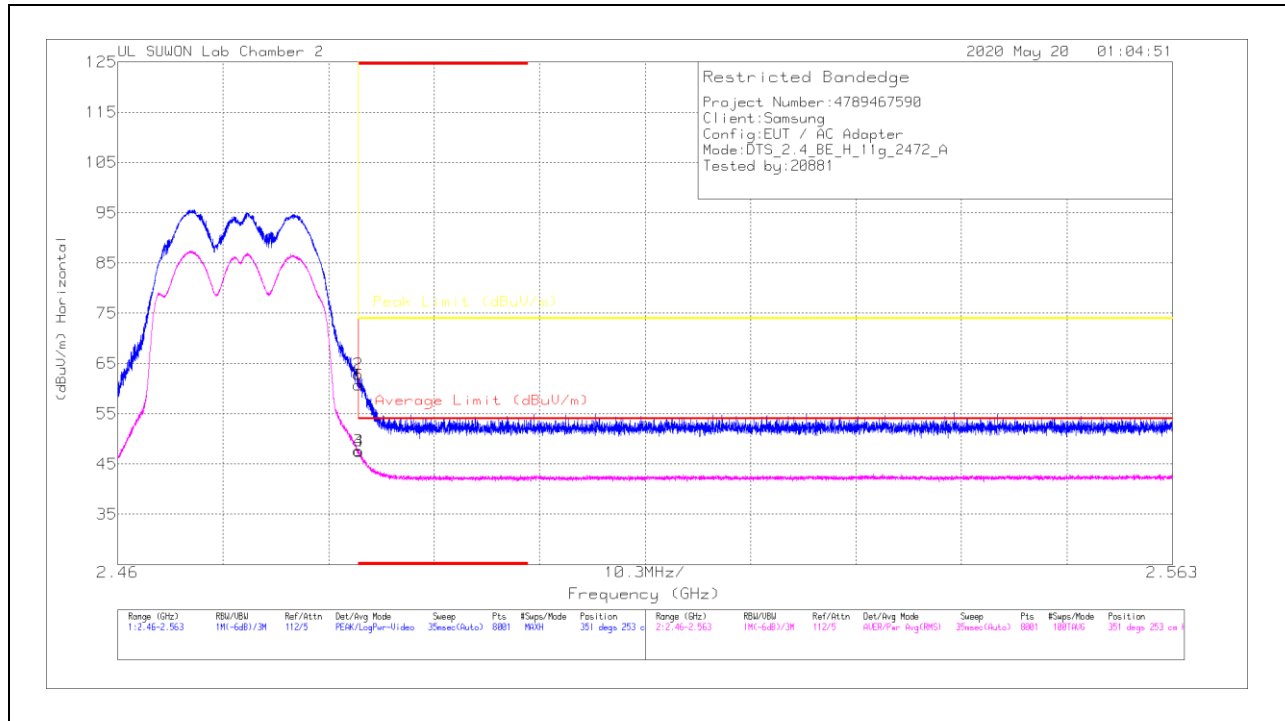
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 13)

HORIZONTAL RESULT



Trace Markers

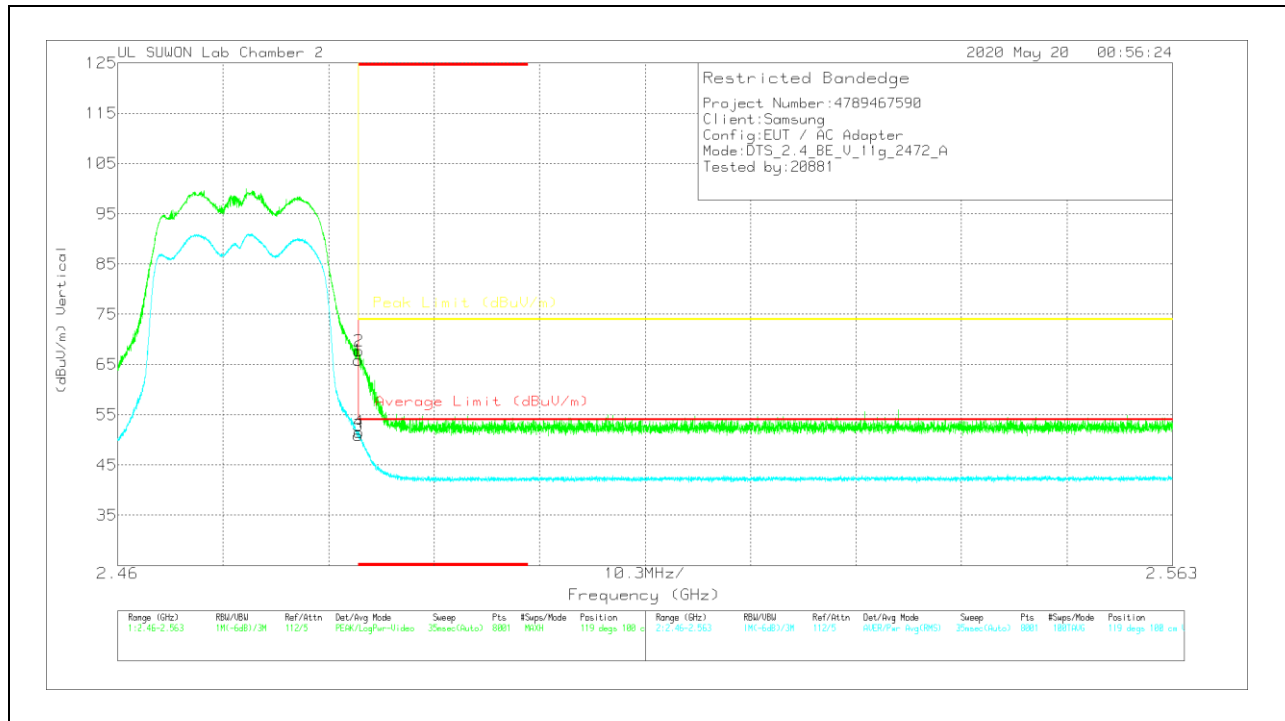
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 2.48351	49.27	Pk	31.9	-20.4	0	60.77	-	-	74	-13.23	351	253	H
2	* 2.48352	51.30	Pk	31.9	-20.4	0	62.80	-	-	74	-11.12	351	253	H
3	* 2.48351	36.11	RMS	31.9	-20.4	0	47.61	54	-6.39	-	-	351	253	H
4	* 2.48355	36	RMS	31.9	-20.4	0	47.5	54	-6.5	-	-	351	253	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



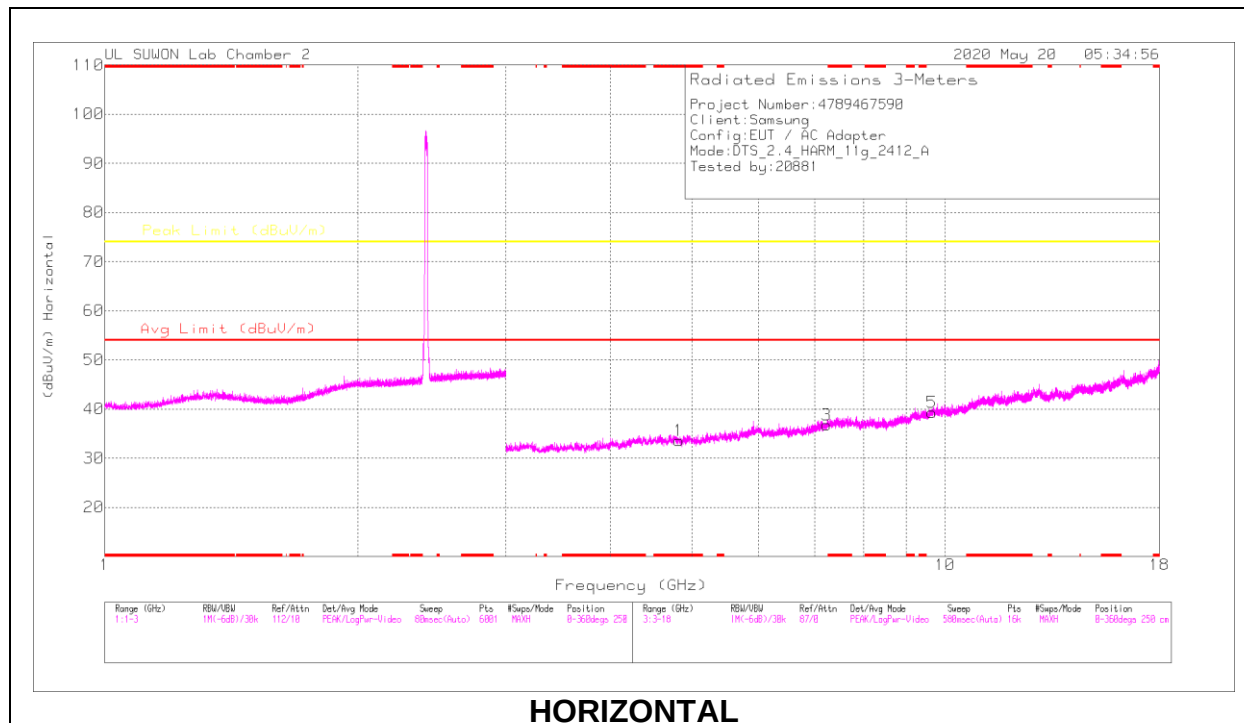
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	54.35	Pk	31.9	-20.4	0	65.95	-	-	74	-8.14	119	100	V
2	* 2.48355	56.22	Pk	31.9	-20.4	0	67.72	-	-	74	-6.28	119	100	V
3	* 2.48351	39.43	RMS	31.9	-20.4	0	50.93	54	-3.07	-	-	119	100	V
4	* 2.48354	40.06	RMS	31.9	-20.4	0	51.56	54	-2.44	-	-	119	100	V

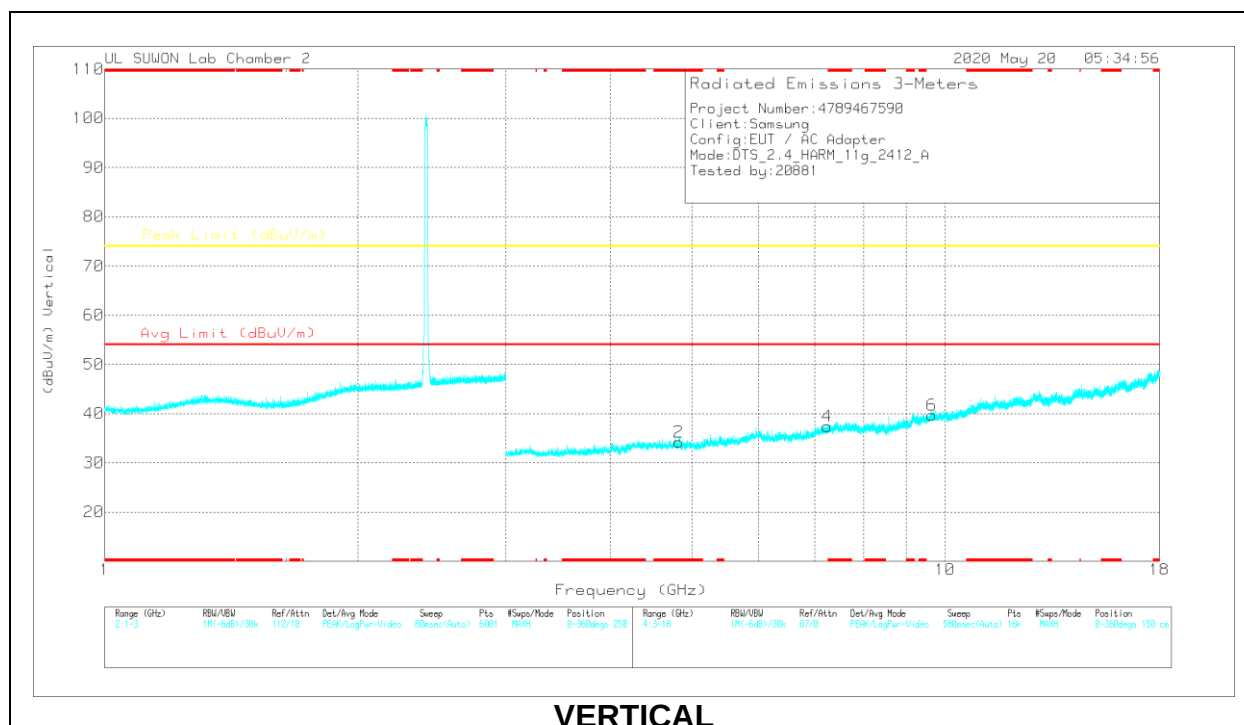
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



VERTICAL

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

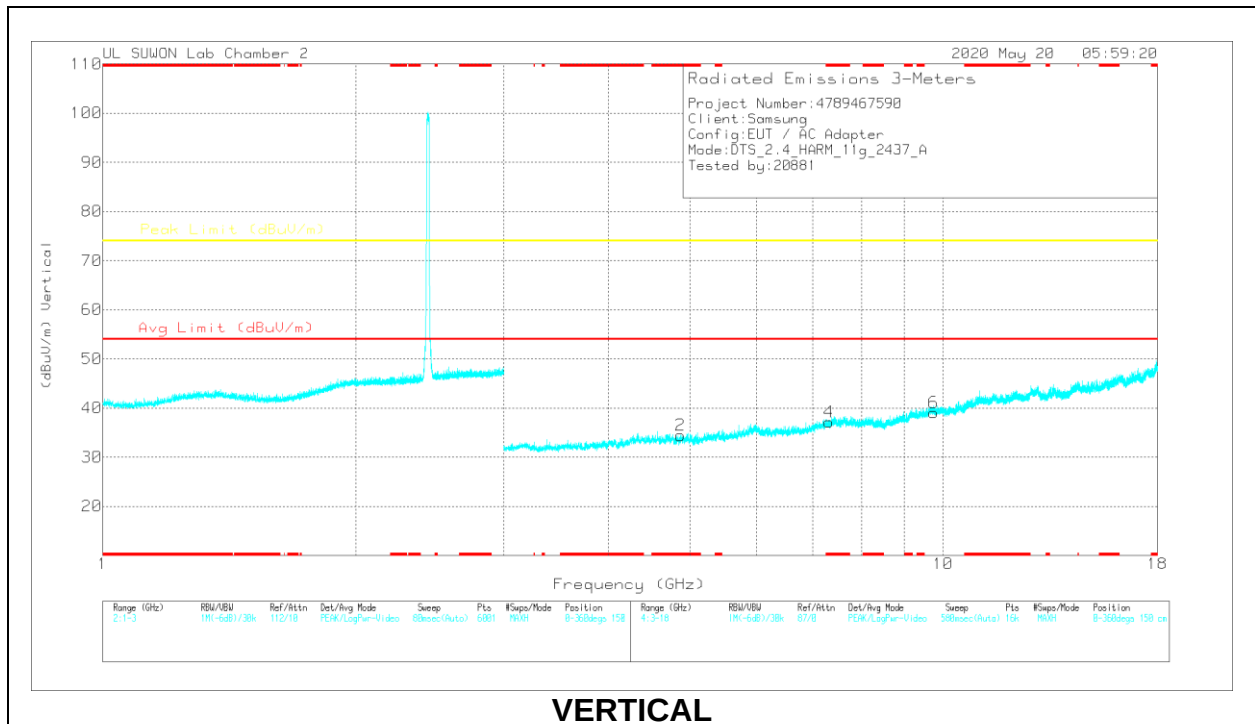
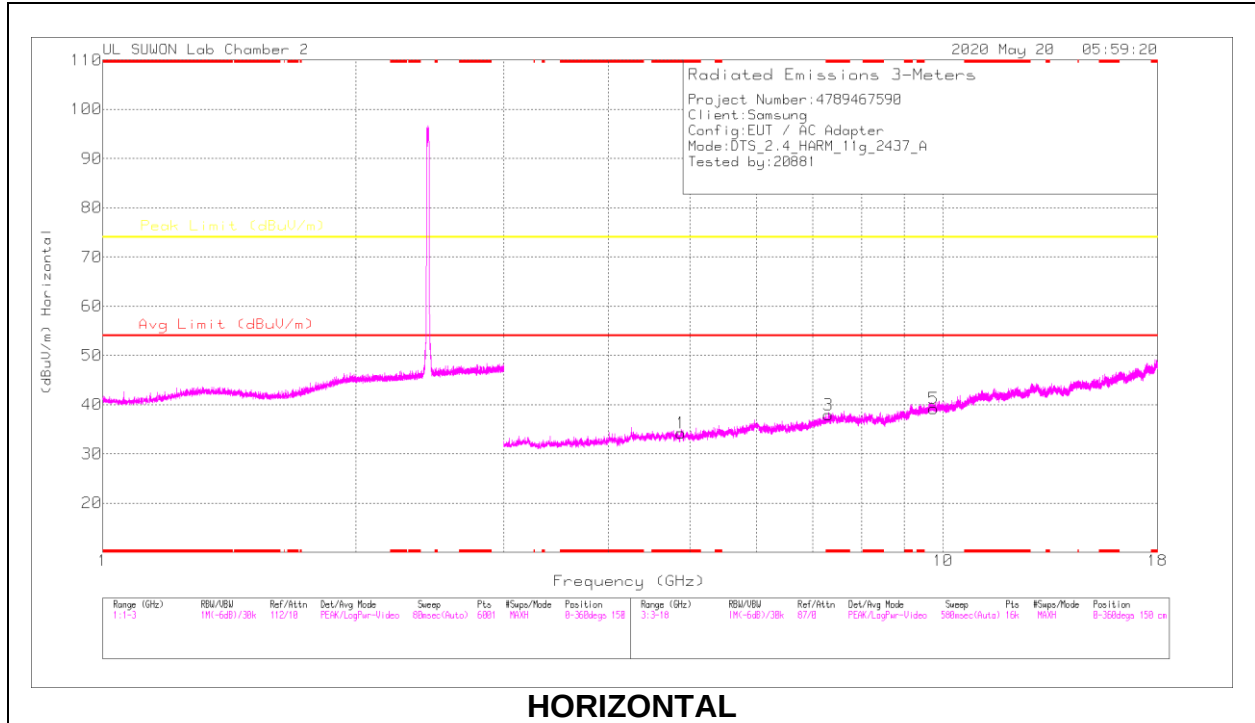
RADIATED EMISSIONS

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
* 4.82392	37.31	PK2	34	-28.1	0	43.21	-	-	74	-30.79	360	100	H
* 4.82588	37.02	PK2	34	-28.1	0	42.92	-	-	74	-31.08	360	100	V
7.24064	34.87	PK2	36.1	-25.4	0	45.57	-	-	74	-28.43	360	100	H
7.2362	36.13	PK2	36.1	-25.4	0	46.83	-	-	74	-27.17	360	100	V
9.64589	33.22	PK2	37	-21.5	0	48.72	-	-	74	-25.28	360	100	H
9.64583	32.74	PK2	37	-21.5	0	48.24	-	-	74	-25.76	360	100	V

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

PK2 - KDB558074 Method: Maximum Peak

MID CHANNEL, CH 6 RESULTS



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

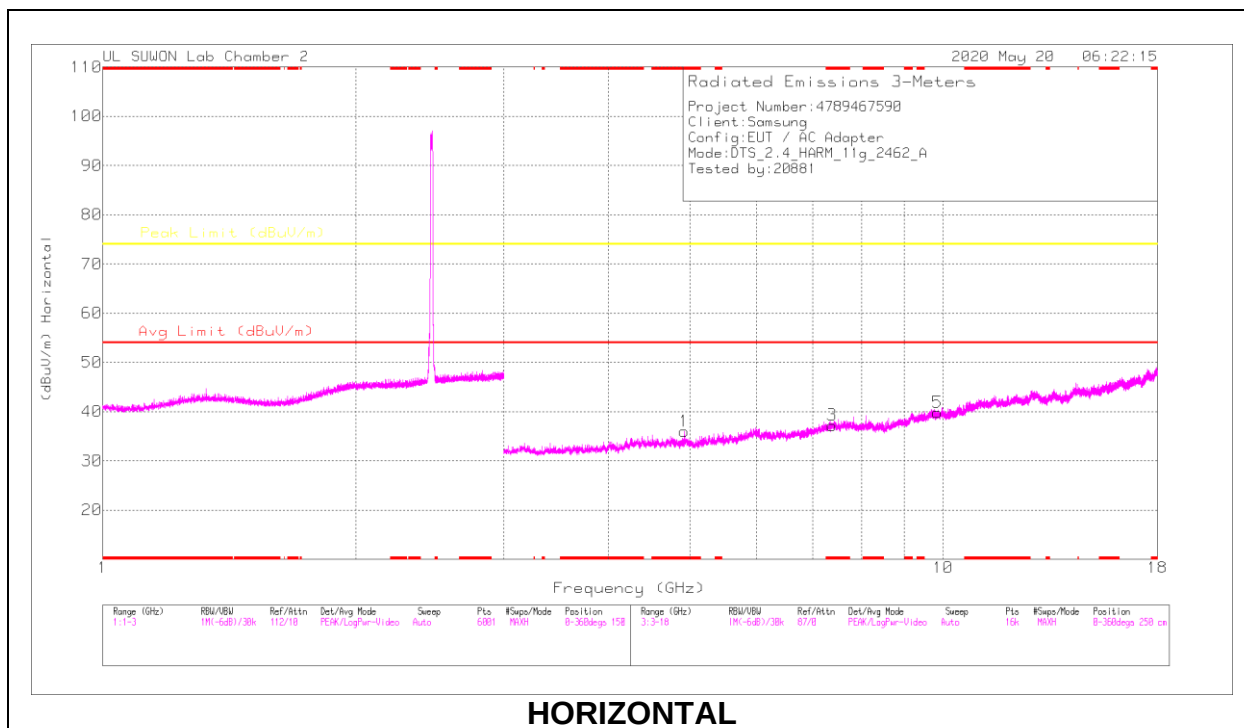
RADIATED EMISSIONS

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
* 4.87599	36.77	PK2	34	-27.9	0	42.87	-	-	74	-31.13	360	100	H
* 4.8756	37.46	PK2	34	-27.9	0	43.56	-	-	74	-30.44	360	100	V
* 7.31151	35.09	PK2	36.2	-24.8	0	46.49	-	-	74	-27.51	360	100	H
* 7.31255	35.03	PK2	36.2	-24.9	0	46.33	-	-	74	-27.67	360	100	V
9.74939	32.37	PK2	37.2	-21.2	0	48.37	-	-	74	-25.63	360	100	H
9.7472	32.66	PK2	37.2	-21.2	0	48.66	-	-	74	-25.34	360	100	V

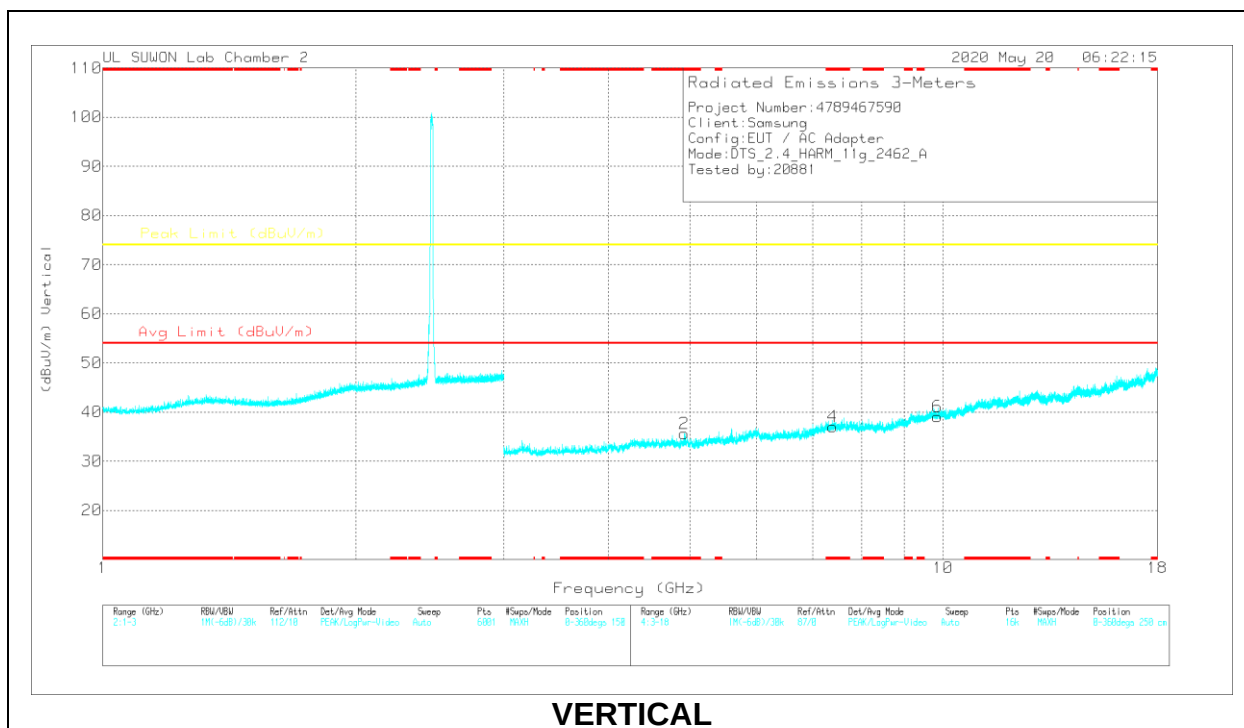
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - KDB558074 Method: Maximum Peak

HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



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.

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
* 4.92628	37.02	PK2	34	-27.1	0	43.92	-	-	74	-30.08	79	101	H
* 4.92542	25.01	MAv1	34	-27.2	0	31.81	54	-22.19	-	-	79	101	H
* 4.9204	38.47	PK2	34	-27.2	0	45.27	-	-	74	-28.73	185	113	V
* 4.9253	26.22	MAv1	34	-27.2	0	33.02	54	-20.98	-	-	185	113	V
* 7.38495	34.32	PK2	36.2	-24.2	0	46.32	-	-	74	-27.68	0	100	H
* 7.38695	35.11	PK2	36.2	-24.2	0	47.11	-	-	74	-26.89	0	100	V
9.84796	32.21	PK2	37.3	-21.6	0	47.91	-	-	74	-26.09	0	100	H
9.84995	32.56	PK2	37.3	-21.6	0	48.26	-	-	74	-25.74	0	100	V

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

PK2 - KDB558074 Method: Maximum Peak

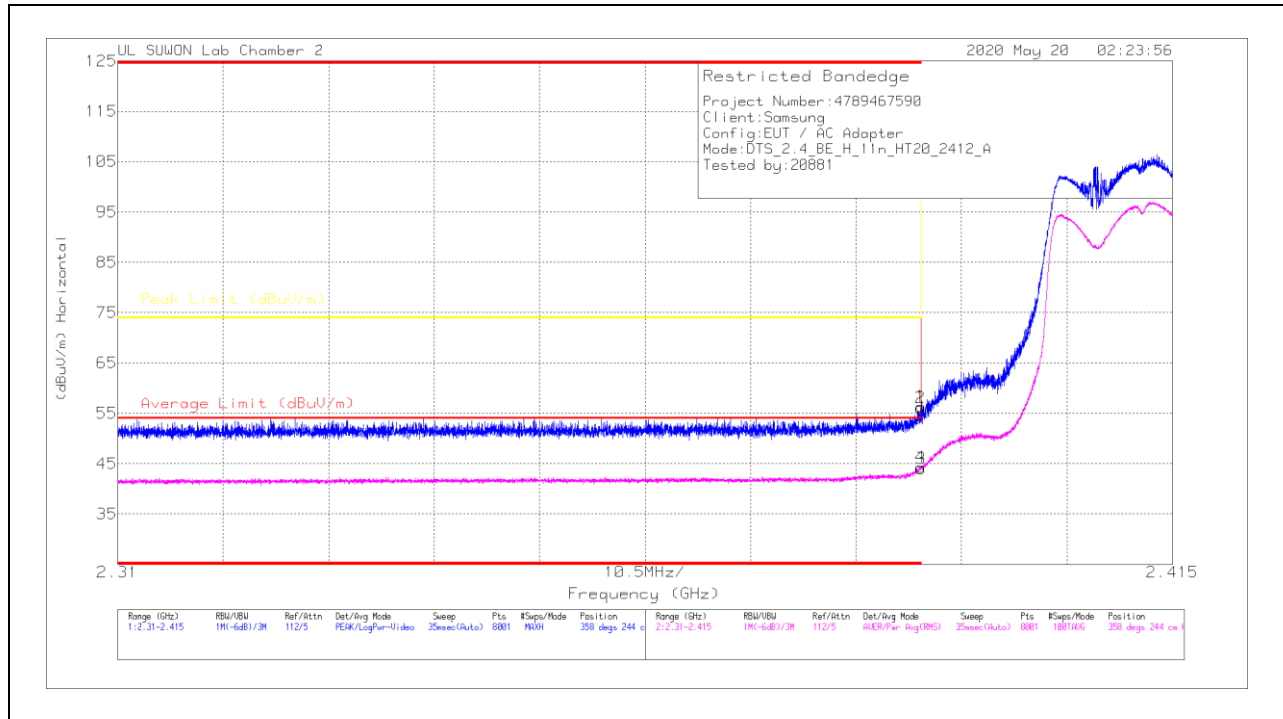
MAv1 - KDB558074 Option 1 Maximum RMS Average

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

2TX Antenna 1 + Antenna 2 MODE

BANDEDGE (LOW CHANNEL, CH 1)

HORIZONTAL RESULT



Trace Markers

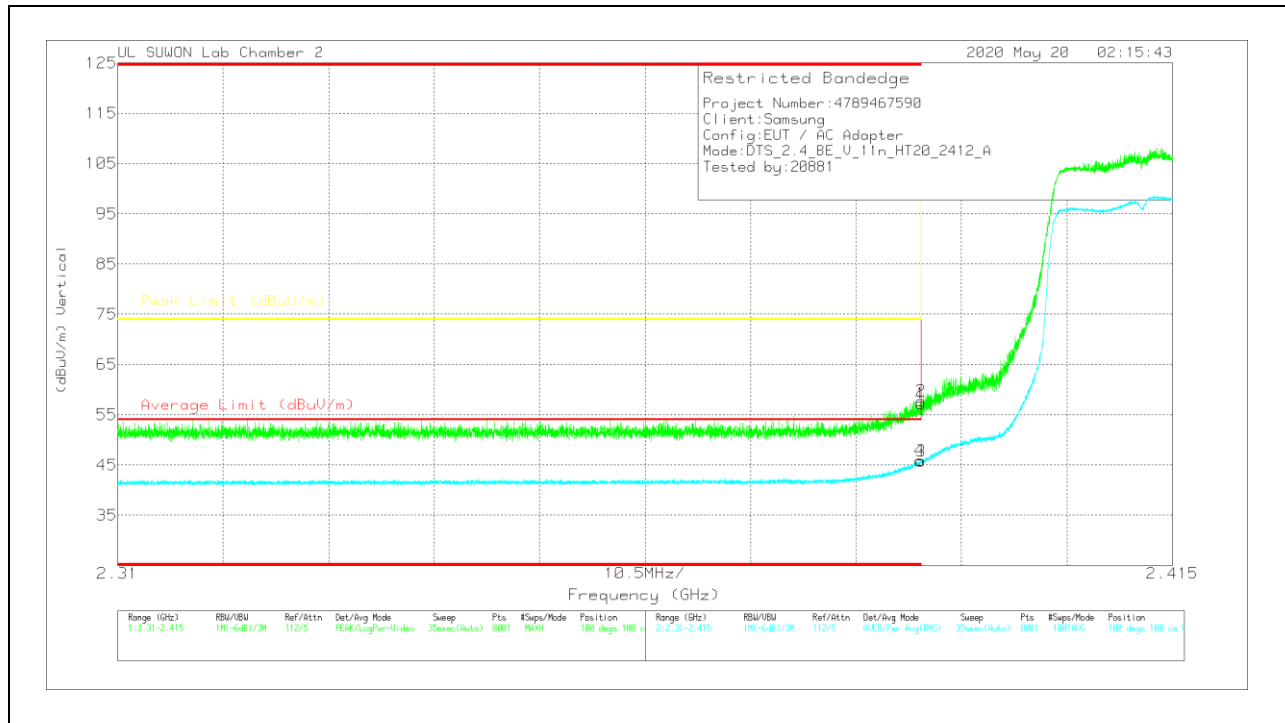
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	45.38	PK	31.6	-20.6	0	56.38	-	-	74	-17.62	358	244	H
2	* 2.38993	45.13	PK	31.6	-20.6	0	56.13	-	-	74	-17.87	358	244	H
3	* 2.39	32.99	RMS	31.6	-20.6	0	43.99	54	-10.01	-	-	358	244	H
4	* 2.38989	33.31	RMS	31.6	-20.6	0	44.31	54	-9.69	-	-	358	244	H

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

PK - Peak detector

RMS - RMS detection

VERTICAL RESULT



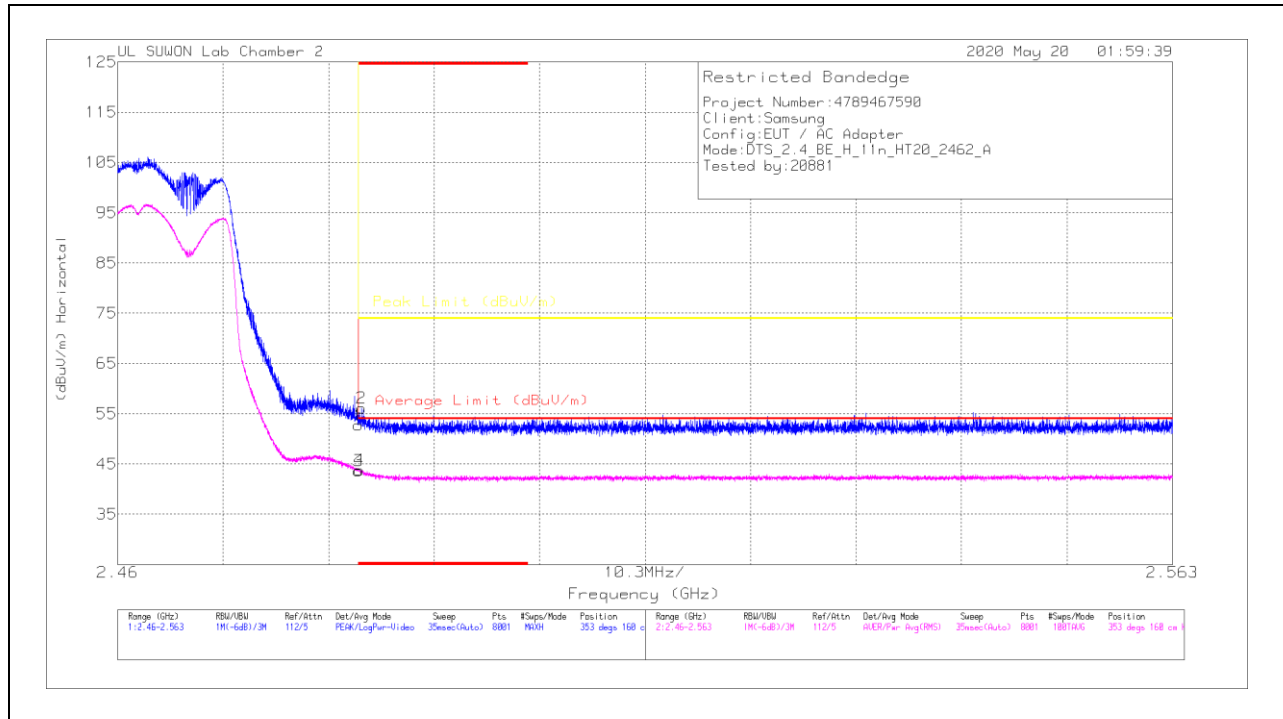
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBu/m)	Average Limit (dBu/m)	Margin (dB)	Peak Limit (dBu/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	46.2	Pk	31.6	-20.6	0	57.2	-	-	74	-16.8	100	100	V
2	* 2.38996	46.79	Pk	31.6	-20.6	0	57.79	-	-	74	-16.21	100	100	V
3	* 2.39	34.74	RMS	31.6	-20.6	0	45.74	54	-8.26	-	-	100	100	V
4	* 2.38983	34.86	RMS	31.6	-20.6	0	45.86	54	-8.14	-	-	100	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



Trace Markers

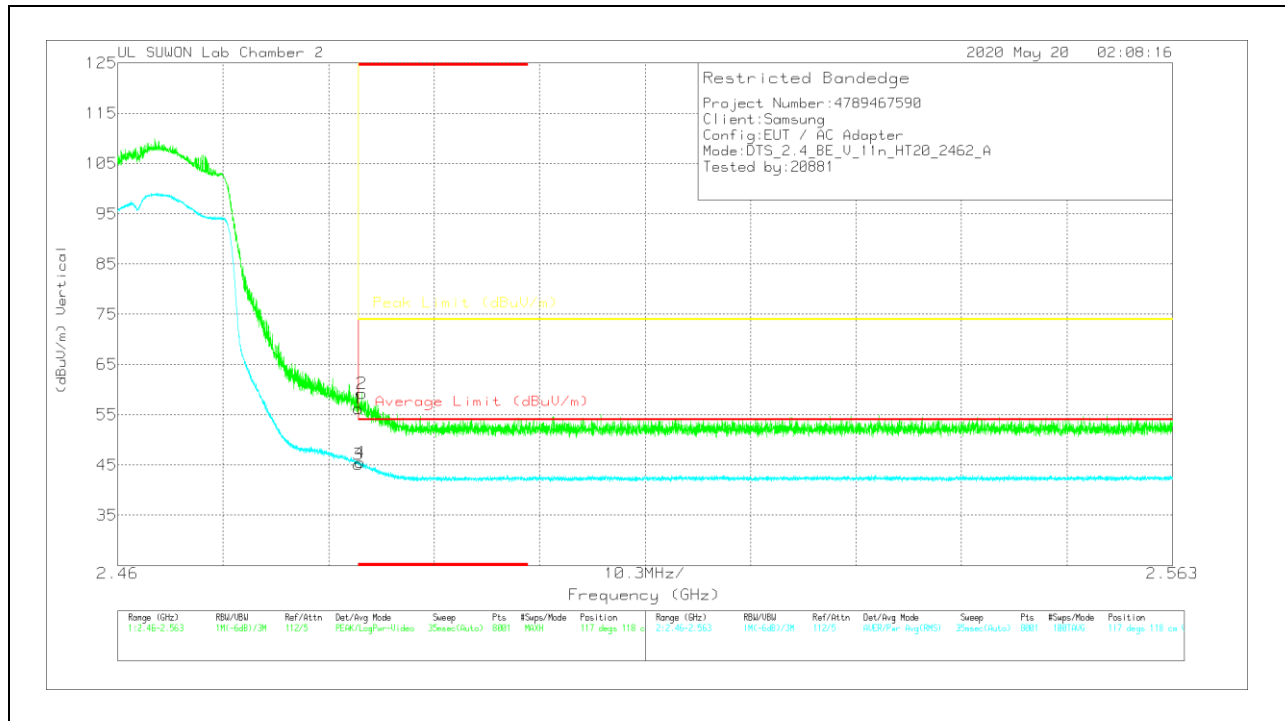
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	41.3	PK	31.9	-20.4	0	52.8	-	-	74	-21.2	353	160	H
2	* 2.48362	44.56	PK	31.9	-20.4	0	56.06	-	-	74	-17.94	353	160	H
3	* 2.48351	32.14	RMS	31.9	-20.4	0	43.64	54	-10.36	-	-	353	160	H
4	* 2.48359	32.33	RMS	31.9	-20.4	0	43.83	54	-10.17	-	-	353	160	H

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

PK - Peak detector

RMS - RMS detection

VERTICAL RESULT



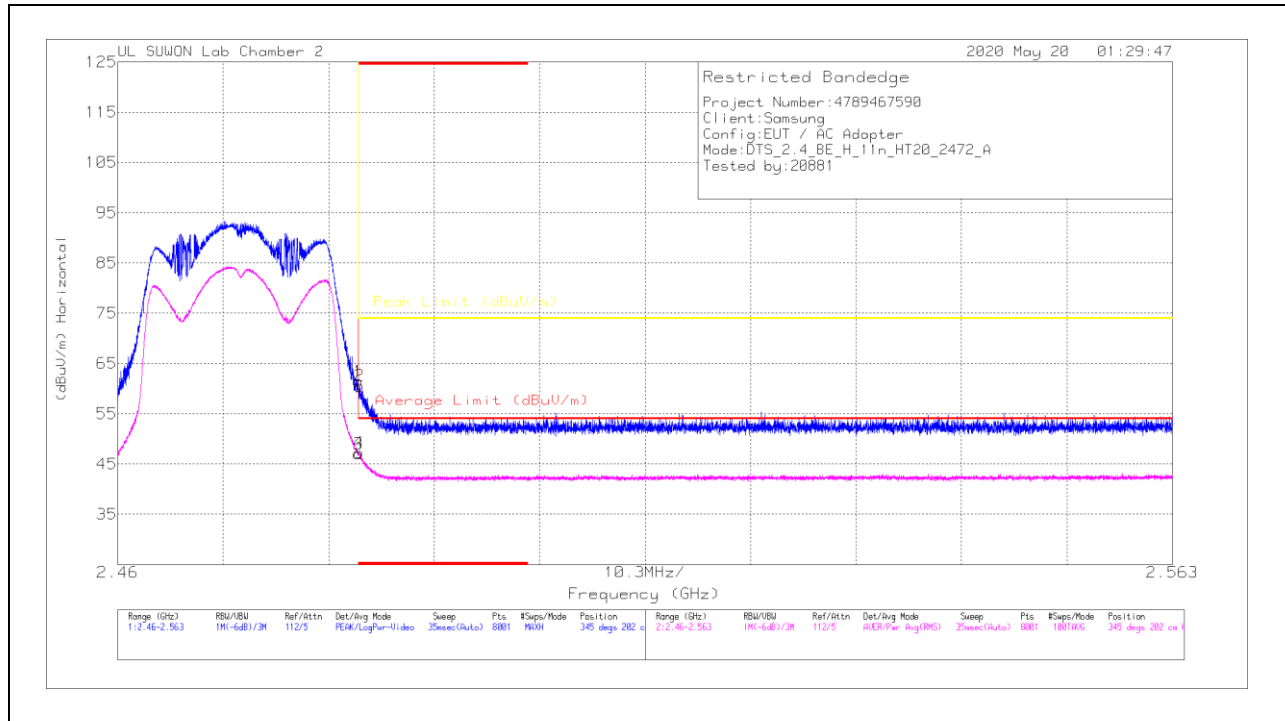
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	44.78	Pk	31.9	-20.4	0	56.28	-	-	74	-17.72	117	118	V
2	* 2.48383	47.72	Pk	31.9	-20.4	0	59.22	-	-	74	-14.78	117	118	V
3	* 2.48351	33.61	RMS	31.9	-20.4	0	45.11	54	-8.89	-	-	117	118	V
4	* 2.48366	33.99	RMS	31.9	-20.4	0	45.49	54	-8.51	-	-	117	118	V

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

BANDEDGE (HIGH CHANNEL, CH 13)

HORIZONTAL RESULT



Trace Markers

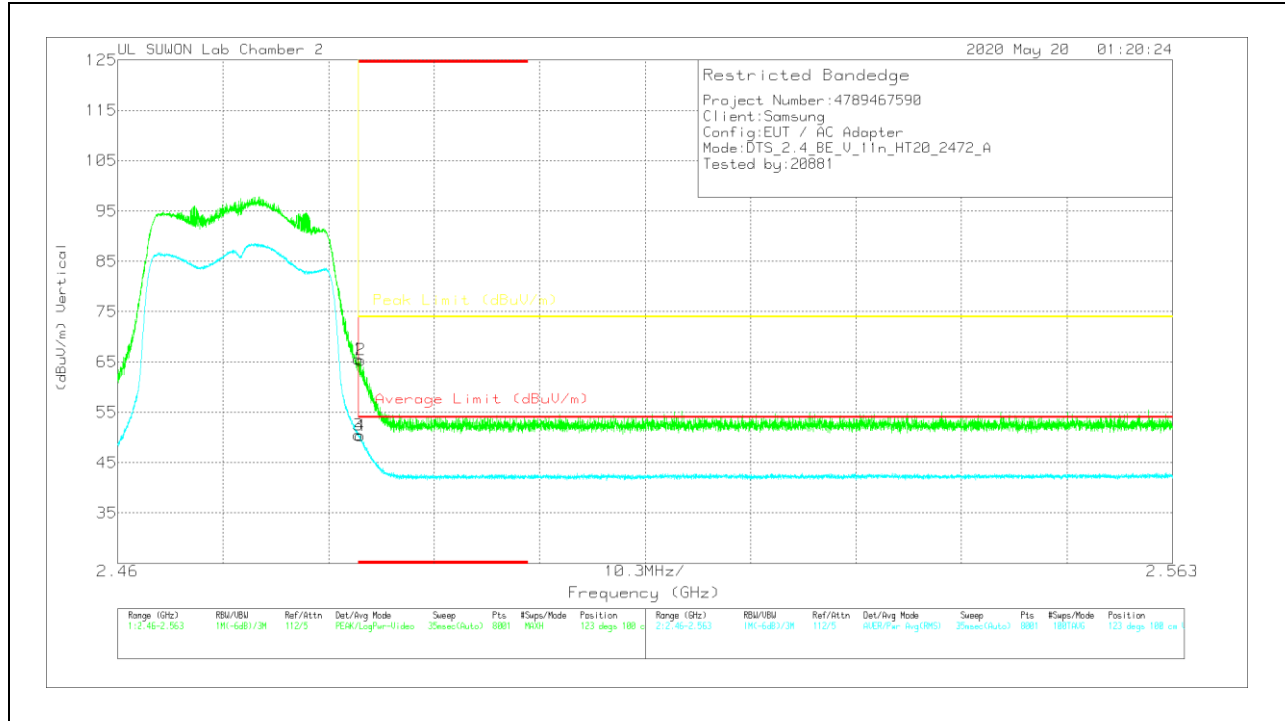
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	49.93	Pk	31.9	-20.4	0	61.43	-	-	74	-12.57	345	202	H
2	* 2.48353	49.04	Pk	31.9	-20.4	0	60.54	-	-	74	-13.46	345	202	H
3	* 2.48351	35.49	RMS	31.9	-20.4	0	46.99	54	-7.01	-	-	345	202	H
4	* 2.48355	35.82	RMS	31.9	-20.4	0	47.32	54	-6.68	-	-	345	202	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBu/m)	Average Limit (dBu/m)	Margin (dB)	Peak Limit (dBu/m)	PK Margin (dB)	Altitude (m)	Height (m)	Polarity
1	* 2.48351	54.07	Pk	31.9	-20.4	0	65.57	-	-	74	-8.43	123	100	V
2	* 2.48375	53.9	Pk	31.9	-20.4	0	65.4	-	-	74	-8.6	123	100	V
3	* 2.48351	39.06	RMS	31.9	-20.4	0	50.56	54	-3.44	-	-	123	100	V
4	* 2.48368	38.87	RMS	31.9	-20.4	0	50.37	54	-3.63	-	-	123	100	V

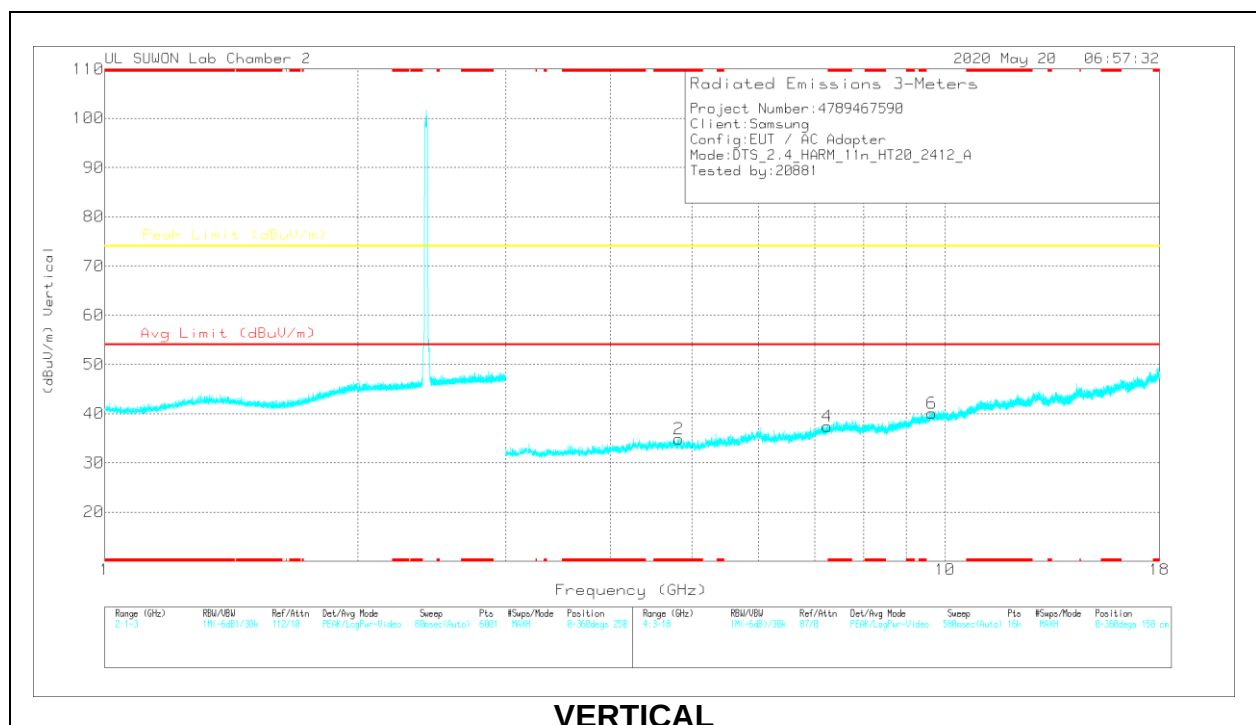
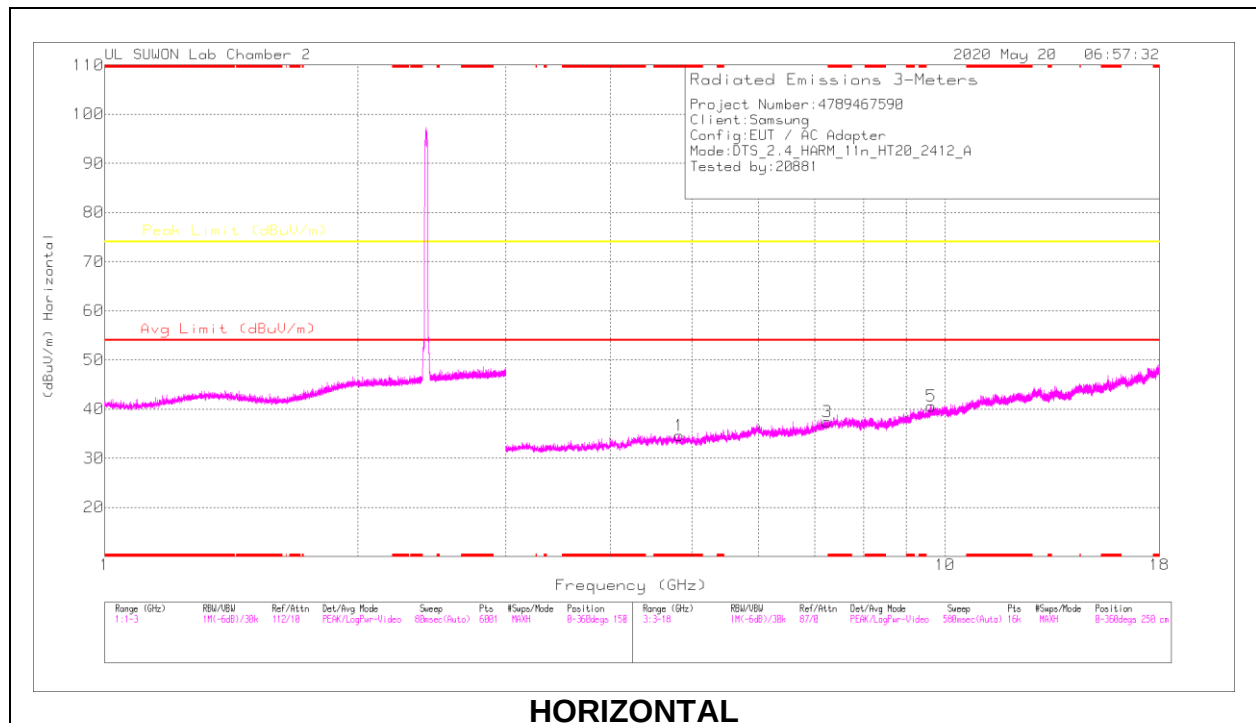
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



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

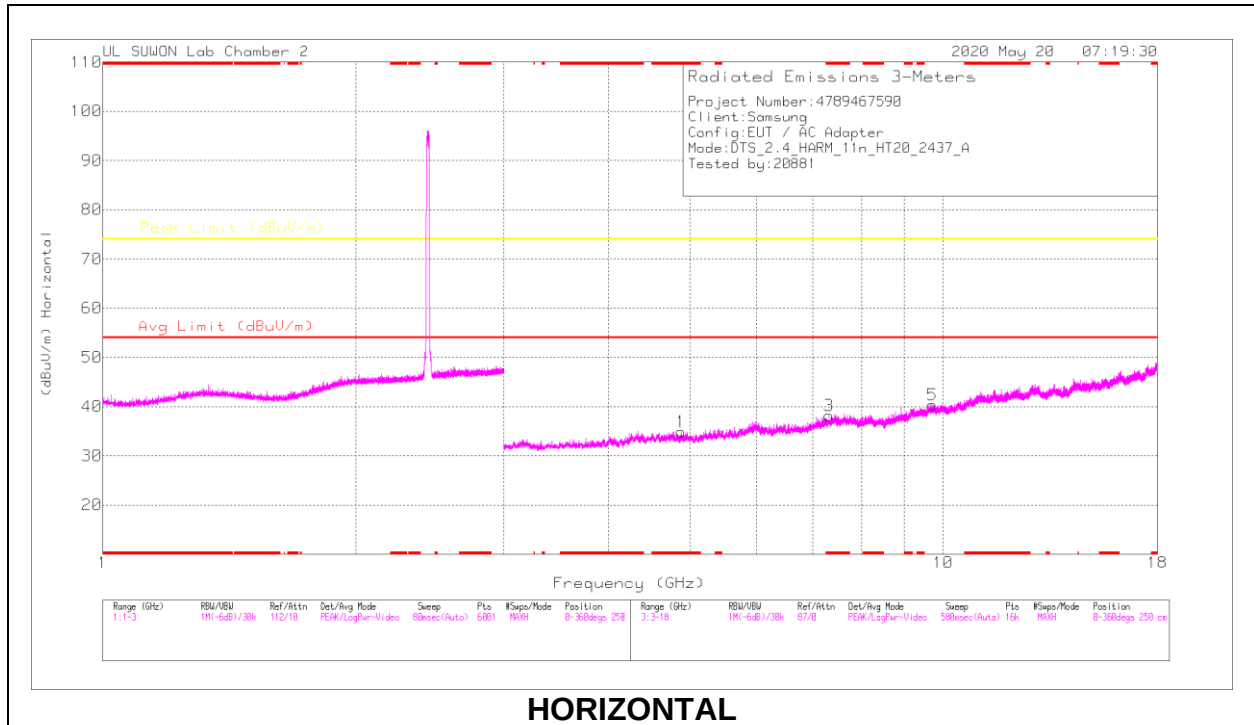
RADIATED EMISSIONS

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
* 4.82727	37.31	PK2	34	-28.1	0	43.21	-	-	74	-30.79	0	100	H
* 4.82696	36.95	PK2	34	-28.1	0	42.85	-	-	74	-31.15	0	100	V
7.24368	35.59	PK2	36.1	-25.3	0	46.39	-	-	74	-27.61	0	100	H
7.24474	35.71	PK2	36.1	-25.4	0	46.41	-	-	74	-27.59	0	100	V
9.63718	32.97	PK2	37	-21.5	0	48.47	-	-	74	-25.53	0	100	H
9.63846	32.76	PK2	37	-21.5	0	48.26	-	-	74	-25.74	0	100	V

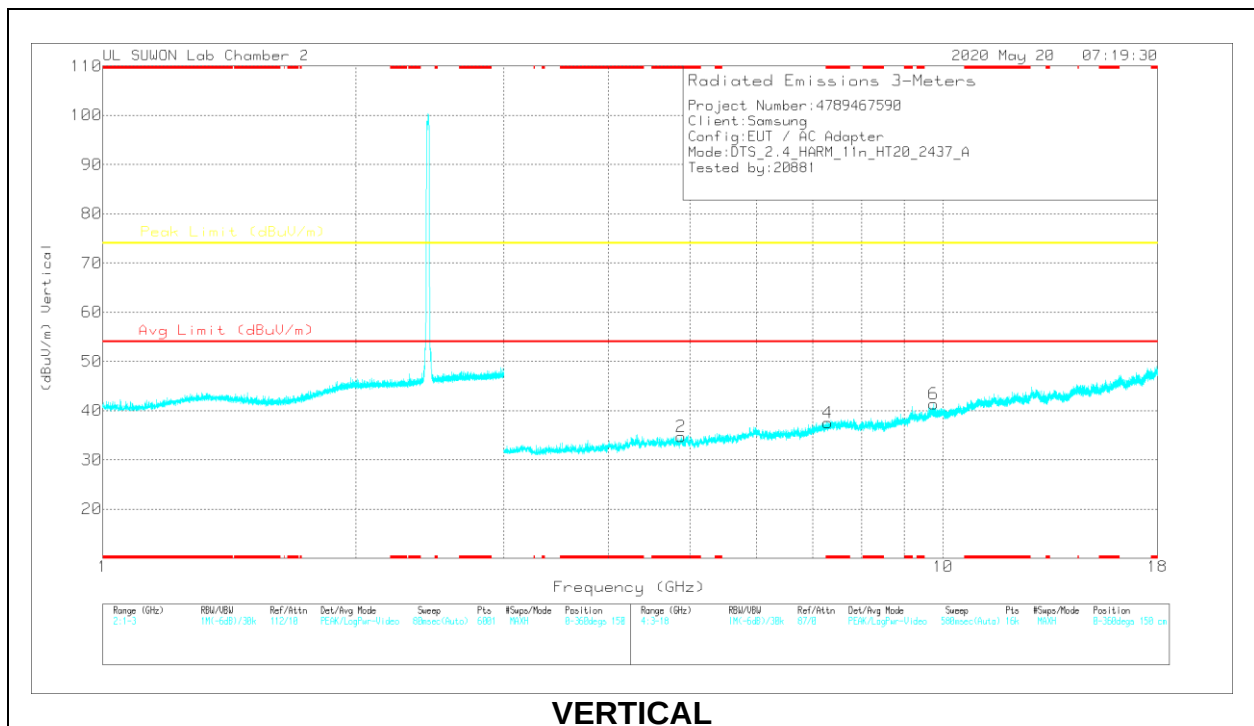
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

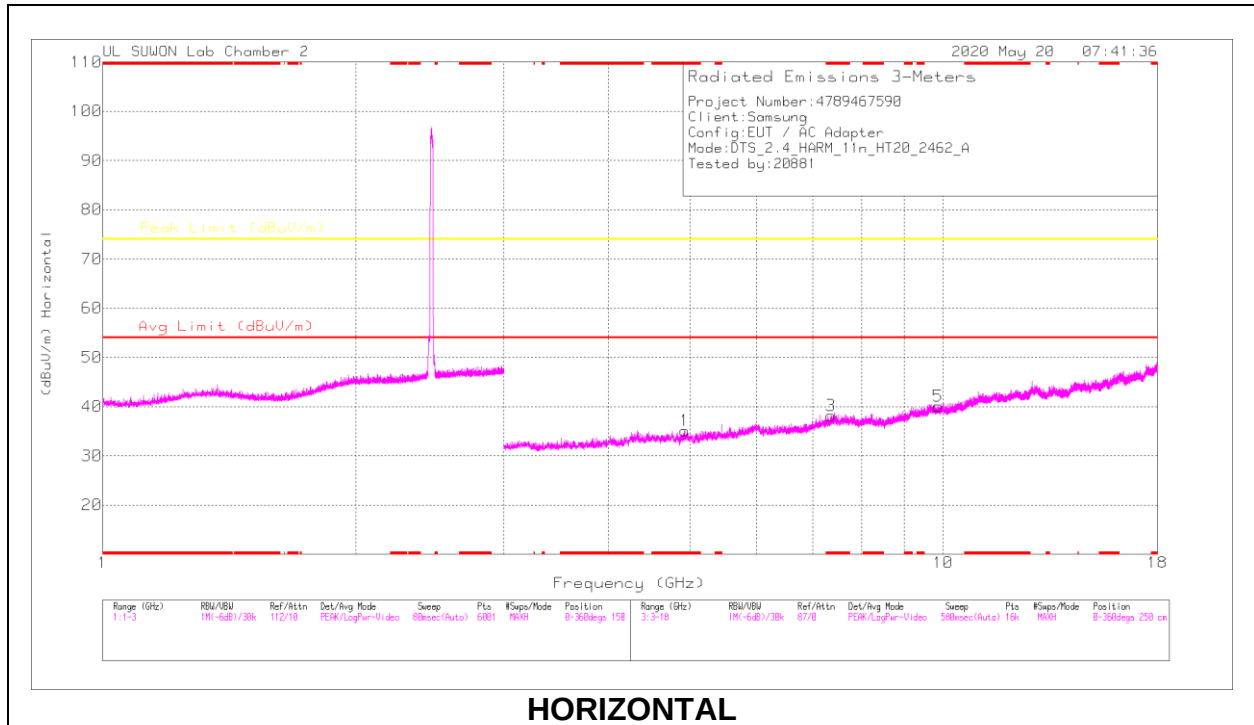
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

RADIATED EMISSIONS

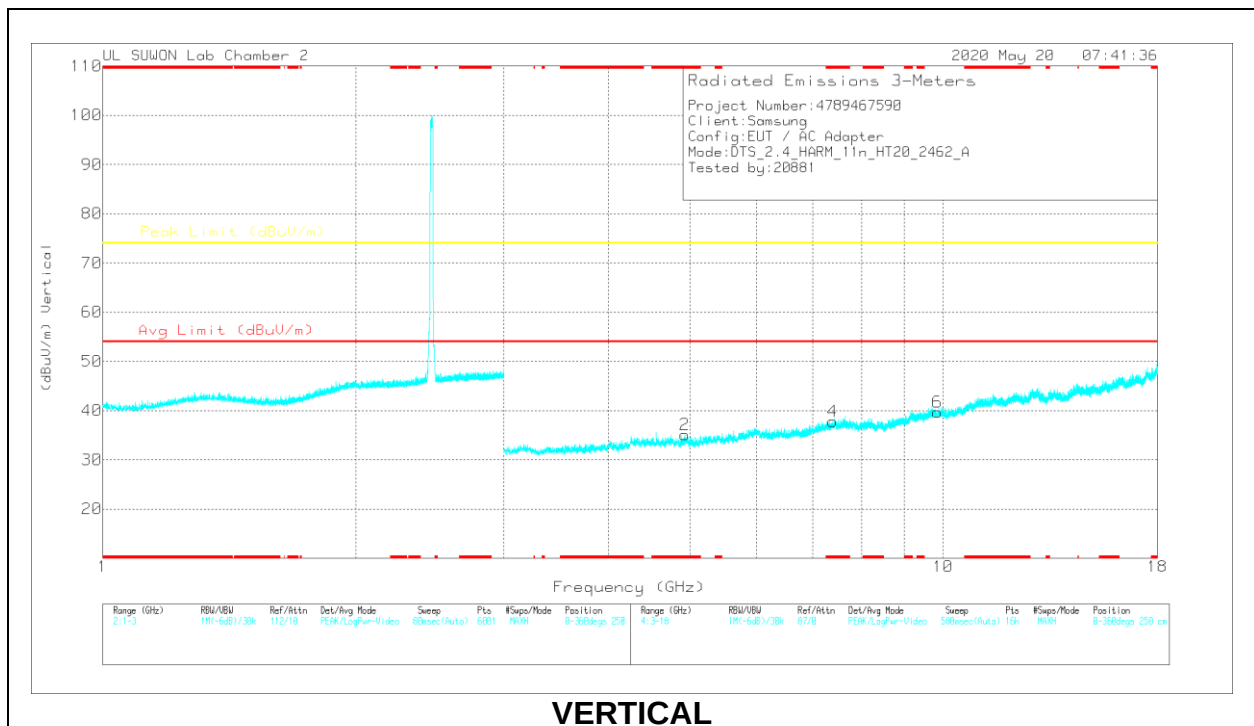
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.87841	37.46	PK2	34	-27.8	0	43.66	-	-	74	-30.34	0	100	H
* 4.87678	37.23	PK2	34	-27.8	0	43.43	-	-	74	-30.57	0	100	V
* 7.31874	35.04	PK2	36.2	-24.8	0	46.44	-	-	74	-27.56	0	100	H
* 7.29909	34.76	PK2	36.2	-25	0	45.96	-	-	74	-26.04	0	100	V
9.72332	32.3	PK2	37.2	-21.2	0	48.3	-	-	74	-25.7	0	100	H
9.72343	32.48	PK2	37.2	-21.2	0	48.48	-	-	74	-25.52	0	100	V

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

HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



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.

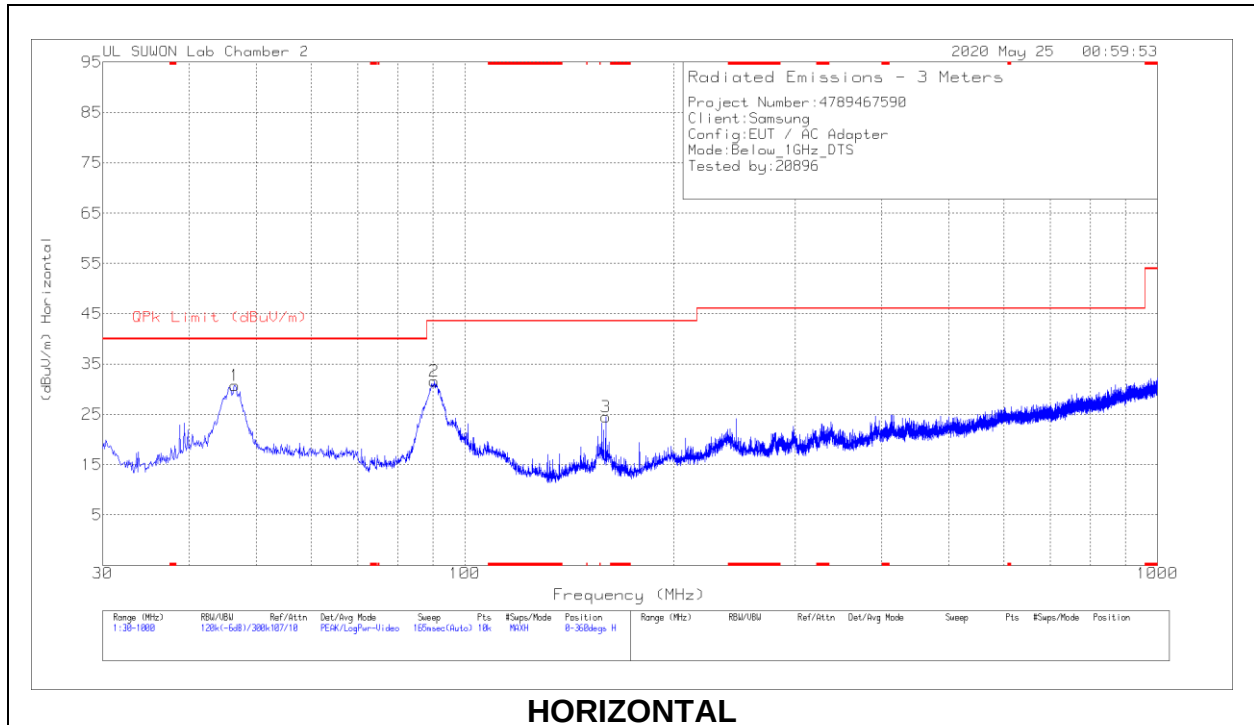
RADIATED EMISSIONS

Radiated Emissions

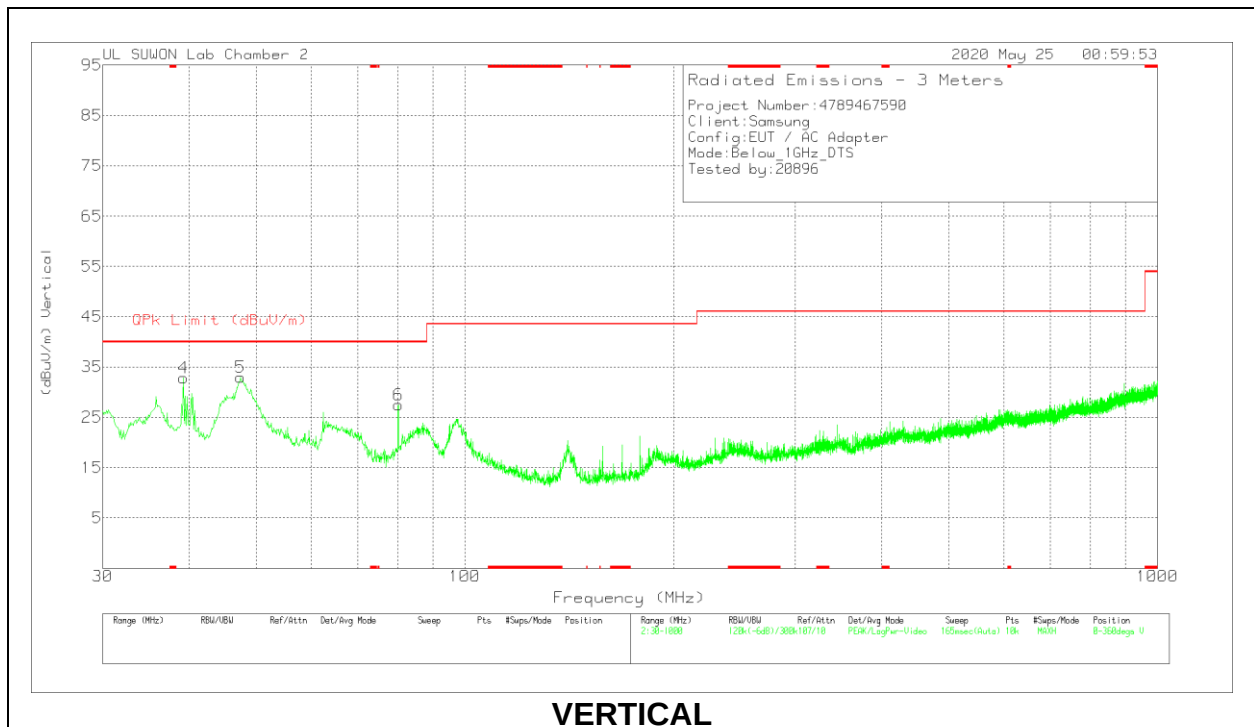
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.9252	36.42	PK2	34	-27.2	0	43.22	-	-	74	-30.78	0	100	H
* 4.92711	36.63	PK2	34	-27.2	0	43.43	-	-	74	-30.57	0	100	V
* 7.35999	34.27	PK2	36.2	-24.3	0	46.17	-	-	74	-27.83	0	100	H
* 7.3875	34.64	PK2	36.2	-24.1	0	46.74	-	-	74	-27.26	0	100	V
9.87518	33.63	PK2	37.4	-21.3	0	49.73	-	-	74	-24.27	0	100	H
9.87417	32.59	PK2	37.4	-21.3	0	48.69	-	-	74	-25.31	0	100	V

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

10.2. WORST CASE BELOW 1 GHZ



HORIZONTAL



VERTICAL

Below 1GHz DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	46.587	42.83	Pk	19.8	-31.9	0	30.73	40	-9.27	0-360	400	H
2	90.334	47.18	Pk	15.8	-31.4	0	31.58	43.52	-11.94	0-360	300	H
3	159.689	40.95	Pk	14.6	-31	0	24.55	43.52	-18.97	0-360	200	H
4	39.215	46.15	Pk	18.5	-31.8	0	32.85	40	-7.15	0-360	100	V
5	47.46	44.93	Pk	19.8	-31.8	0	32.93	40	-7.07	0-360	200	V
6	80.149	46.31	Pk	12.6	-31.4	0	27.51	40	-12.49	0-360	400	V

Pk - Peak detector

11. 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.

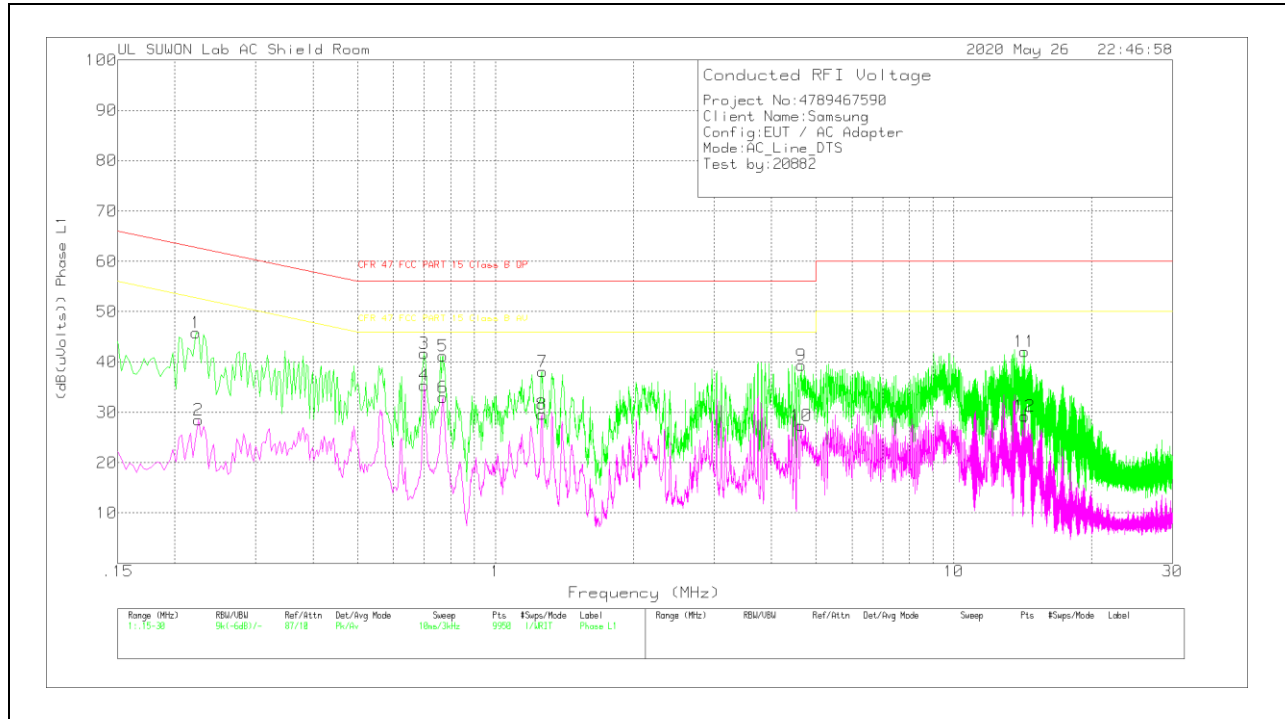
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

11.1.1. AC Power Line

LINE 1 RESULTS



Trace Markers

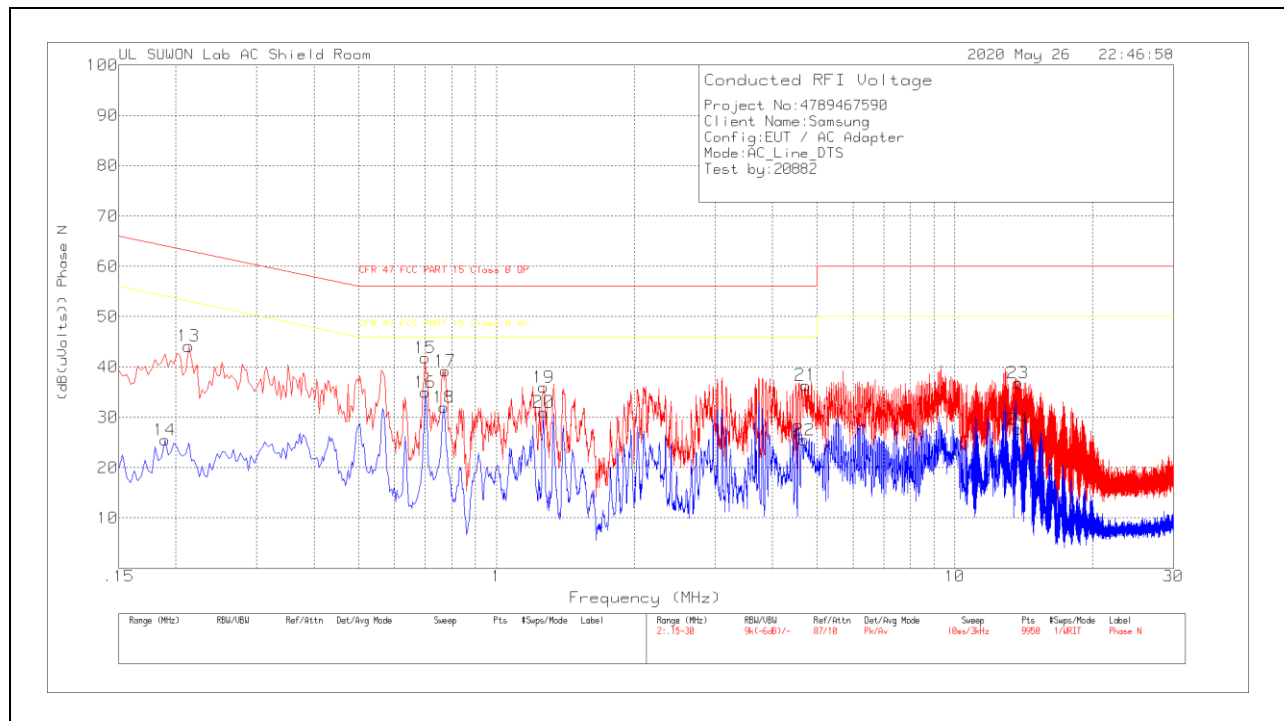
Range 1: Phase L1 .15 - 30MHz

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	.222	35.82	Pk	9.8	.2	45.82	62.74	-16.92	-	-
2	.225	18.48	Av	9.8	.2	28.48	-	-	52.63	-24.15
3	.699	31.55	Pk	9.9	.2	41.65	56	-14.35	-	-
4	.699	25.29	Av	9.9	.2	35.39	-	-	46	-10.61
5	.768	31.11	Pk	9.9	.2	41.21	56	-14.79	-	-
6	.768	22.93	Av	9.9	.2	33.03	-	-	46	-12.97
7	1.269	28	Pk	9.8	.3	38.1	56	-17.9	-	-
8	1.263	19.54	Av	9.8	.3	29.64	-	-	46	-16.36
9	4.647	29.21	Pk	9.8	.3	39.31	56	-16.69	-	-
10	4.65	17.26	Av	9.8	.3	27.36	-	-	46	-18.64
11	14.253	31.59	Pk	10.1	.4	42.09	60	-17.91	-	-
12	14.25	18.74	Av	10.1	.4	29.24	-	-	50	-20.76

Pk - Peak detector

Av - Average detection

LINE 2 RESULTS



Trace Markers

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	.213	34.04	Pk	9.9	.2	44.14	63.09	-18.95	-	-
14	.189	15.33	Av	10	.2	25.53	-	-	54.08	-28.55
15	.699	31.72	Pk	9.9	.2	41.82	56	-14.18	-	-
16	.699	24.86	Av	9.9	.2	34.96	-	-	46	-11.04
17	.774	29.07	Pk	9.9	.2	39.17	56	-16.83	-	-
18	.768	21.85	Av	9.9	.2	31.95	-	-	46	-14.05
19	1.266	25.91	Pk	9.8	.3	36.01	56	-19.99	-	-
20	1.266	20.95	Av	9.8	.3	31.05	-	-	46	-14.95
21	4.725	26.31	Pk	9.8	.3	36.41	56	-19.59	-	-
22	4.689	15.41	Av	9.8	.3	25.51	-	-	46	-20.49
23	13.752	26.31	Pk	10.1	.4	36.81	60	-23.19	-	-
24	13.752	17.16	Av	10.1	.4	27.66	-	-	50	-22.34

Pk - Peak detector

Av - Average detection

END OF TEST REPORT