

10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

Limits for radiated disturbance of an intentional radiator		
Frequency range (MHz)	Limits ($\mu\text{V}/\text{m}$)	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.

TEST PROCEDURE

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

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

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor for average measurements. (Restricted band-edge, Final detection of spurious harmonic emissions)
Duty cycle factor = $10 \log(1/x)$. For this sample: For 1 Mbps, DCF = $10\log(1/0.6208)=2.070$ dB (Spectrum Analyzer round it up to 2.07 dB) and for 2 Mbps, DCF = $10\log(1/0.3256)=4.873$ dB (Spectrum Analyzer round it up to 4.87 dB).

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 the 2.4 GHz 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 9kHz to 30MHz; 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.

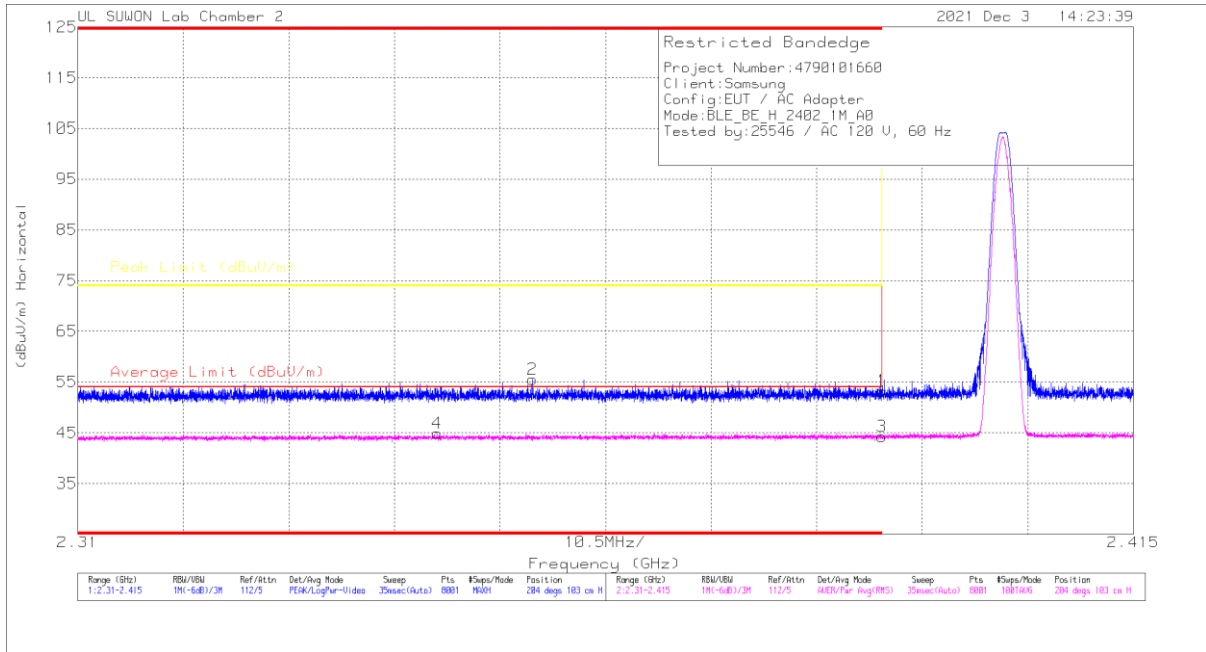
Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open are test site.
Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the one of tests made in an open field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

10.2. TRANSMITTER ABOVE 1 GHz

10.2.1. 1 Mbps

ANT1 BANDEDGE (0 CHANNEL)

HORIZONTAL RESULT

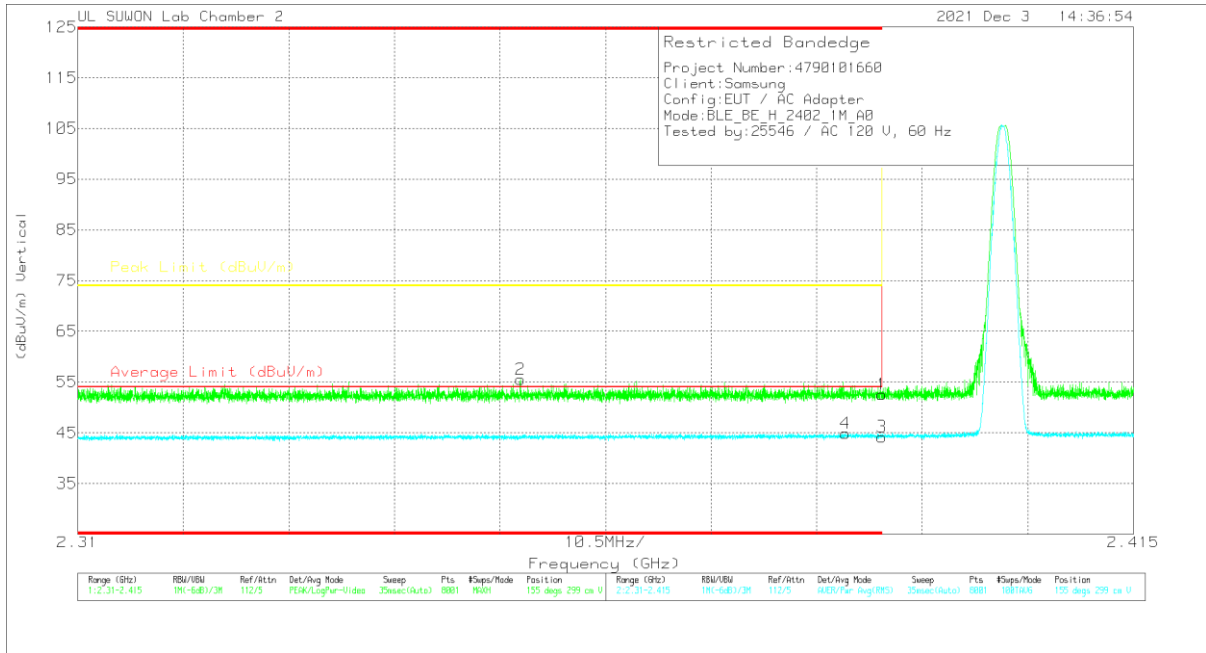


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_001660/24	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Acimuh (Degs)	Height (cm)	Polarity
1	* 2.39	41.93	Pk	31.9	-20.6	0	53.23	-	-	74	-20.77	204	103	H
2	* 2.35526	44.36	Pk	31.8	-20.6	0	55.56	-	-	74	-18.44	204	103	H
3	* 2.39	30.95	RMS	31.9	-20.6	2.07	44.32	54	-9.68	-	-	204	103	H
4	* 2.34574	31.59	RMS	31.8	-20.6	2.07	44.86	54	-9.14	-	-	204	103	H

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

VERTICAL RESULT



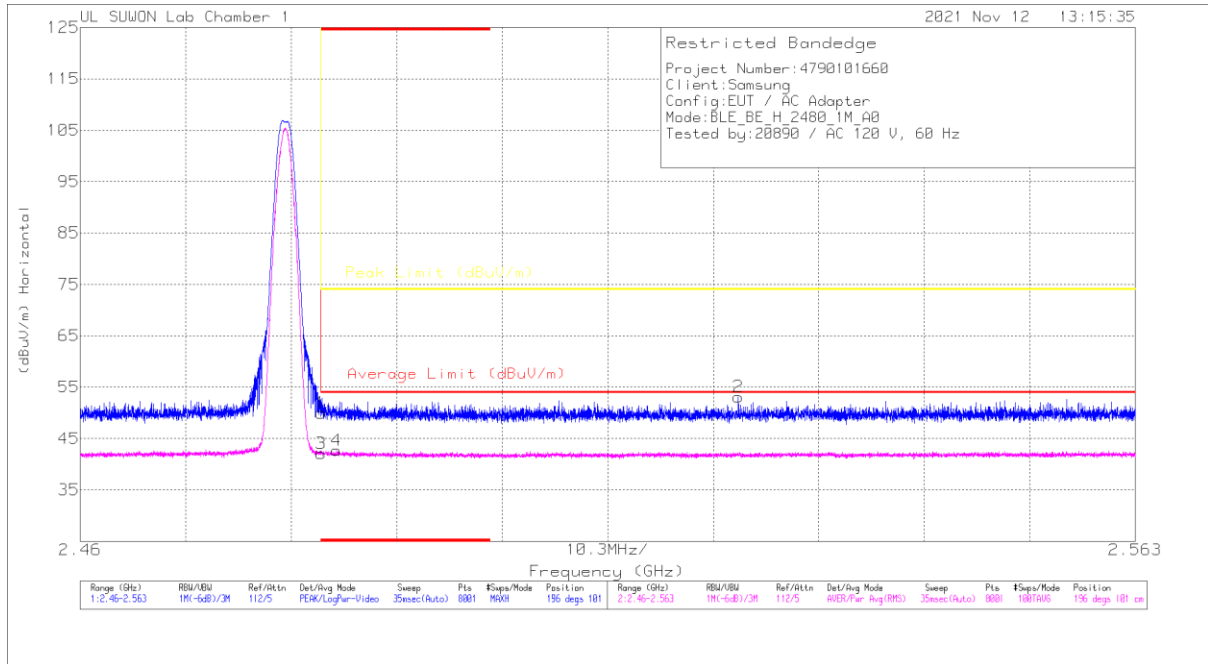
Trace Markers

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1	* 2.39	41.28	Pk	31.9	-20.6	0	52.58	-	-	74	-21.42	155	299	V
2	* 2.35402	44.31	Pk	31.8	-20.6	0	55.51	-	-	74	-18.49	155	299	V
3	* 2.39	30.83	RMS	31.9	-20.6	2.07	44.2	54	-9.8	-	-	155	299	V
4	* 2.38635	31.53	RMS	31.9	-20.6	2.07	44.9	54	-9.1	-	-	155	299	V

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 Pk - Peak detector
 RMS - RMS detection

BANDEDGE (39 CHANNEL)

HORIZONTAL RESULT

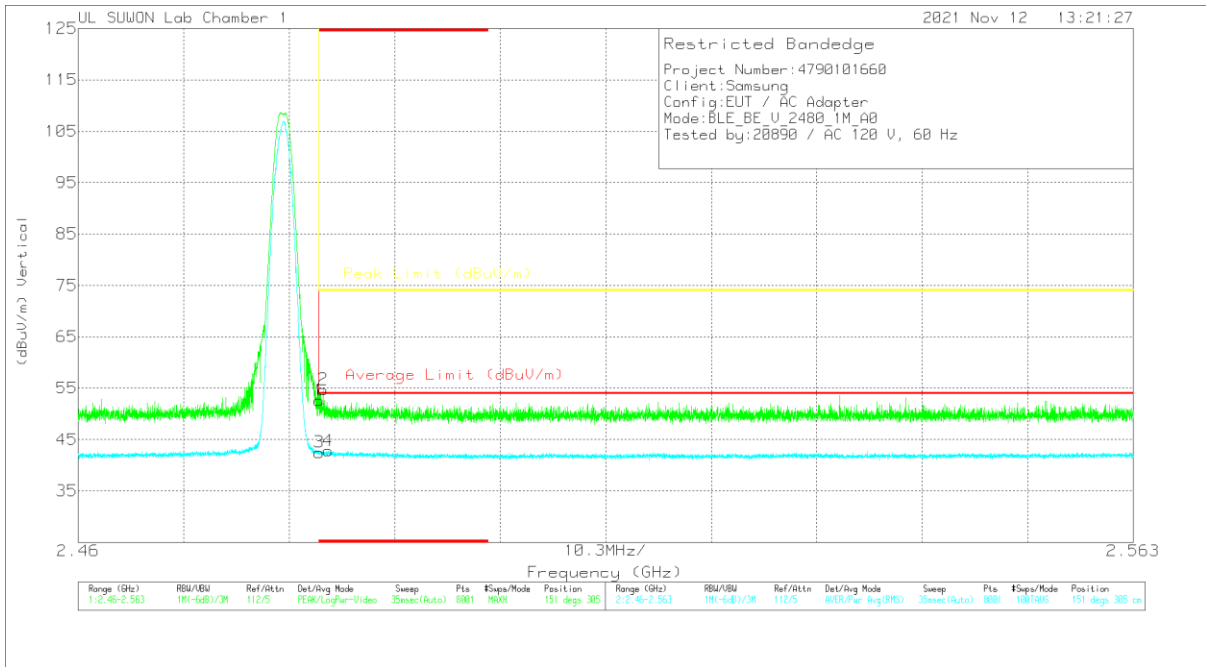


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu/m)	Det	3117_00166717	10dB_ATT[dB]	DC Cor (dB)	Corrected Reading (dBu/m)	Average Limit (dBu/m)	Margin (dB)	Peak Limit (dBu/m)	Pk Margin (dB)	Acimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	43.09	Pk	32	-25.1	0	49.99	-	-	74	-24.01	196	101	H
2	2.52425	46.1	Pk	32	-25	0	53.1	-	-	74	-20.9	196	101	H
3	* 2.48351	33.1	RMS	32	-25.1	2.07	42.07	54	-11.93	-	-	196	101	H
4	* 2.48502	33.63	RMS	32	-25	2.07	42.7	54	-11.3	-	-	196	101	H

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 Pk - Peak detector
 RMS - RMS detection

VERTICAL RESULT



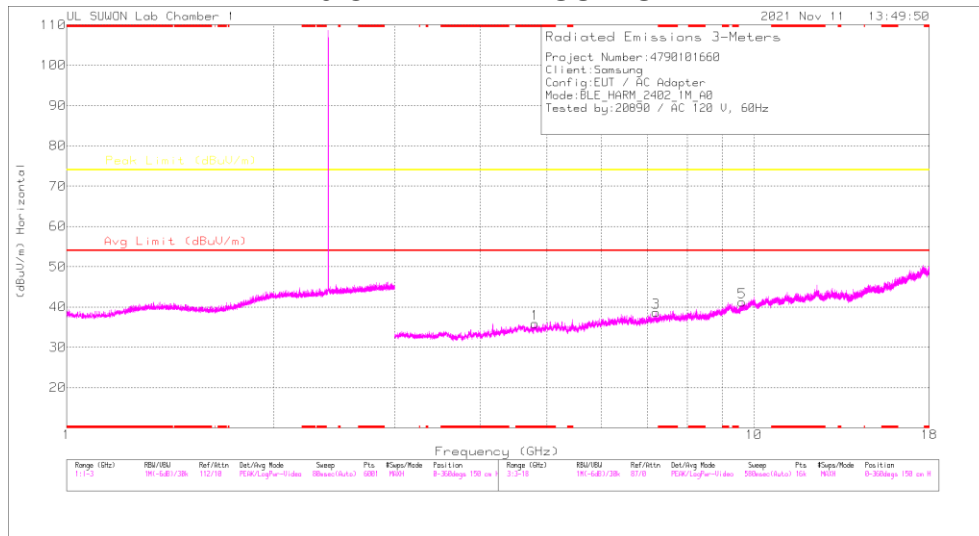
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00166717	10dB_ATT[dB]	DC Cor (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	45.71	PK	32	-25.1	0	52.61	-	-	74	-21.39	151	305	V
2	* 2.48392	47.82	PK	32	-25.1	0	54.72	-	-	74	-19.28	151	305	V
3	* 2.48351	33.55	RMS	32	-25.1	2.07	42.52	54	-11.48	-	-	151	305	V
4	* 2.48439	33.85	RMS	32	-25.1	2.07	42.82	54	-11.18	-	-	151	305	V

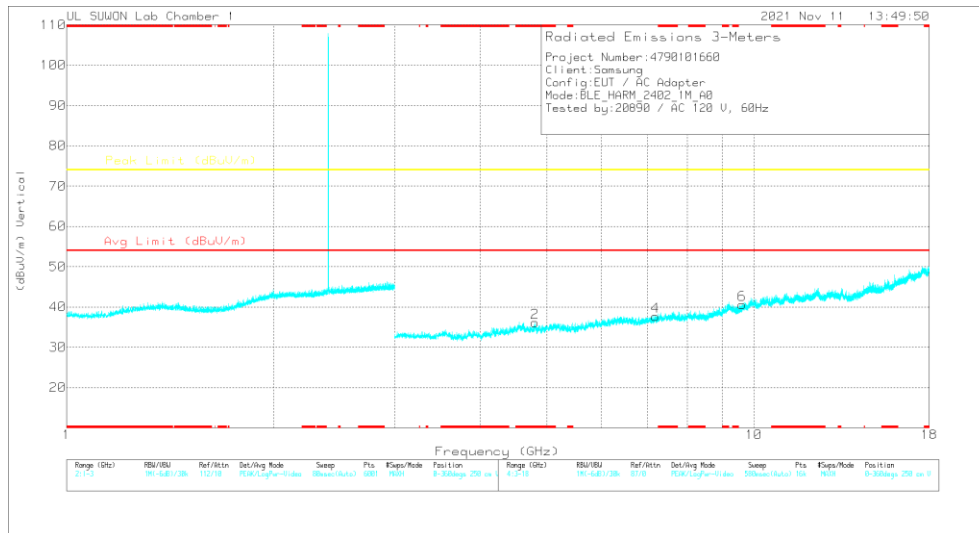
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak detector
 RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

0 CHANNEL RESULTS



HORIZONTAL



VERTICAL

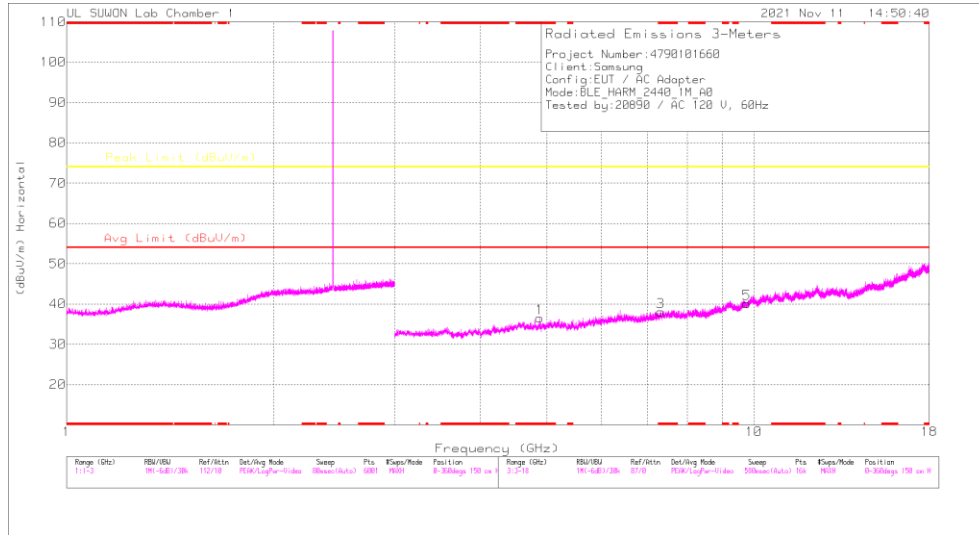
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

RADIATED EMISSIONS

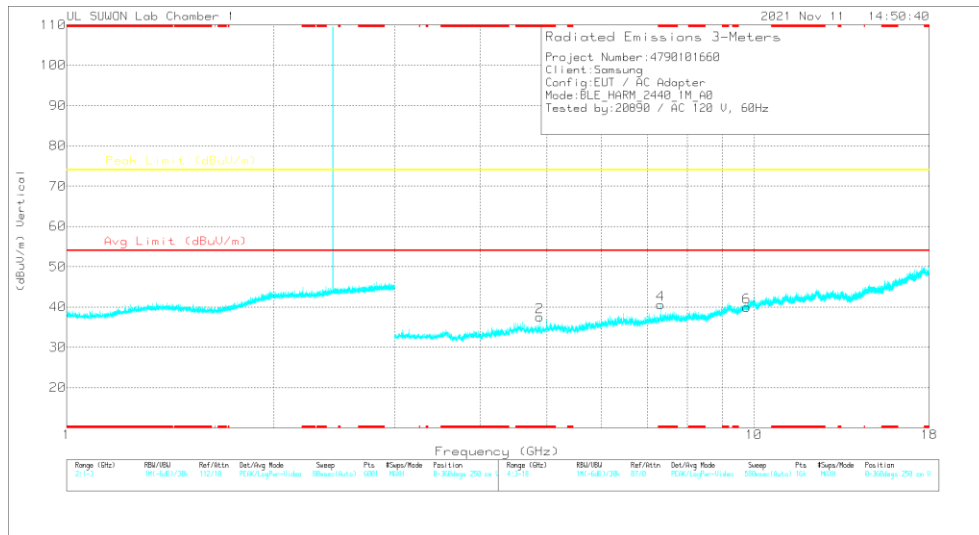
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.80347	41.28	PK2	34.1	-31.2	0	44.18	-	-	74	-29.82	360	100	H
* 4.81121	41.59	PK2	34.1	-31.2	0	44.49	-	-	74	-29.51	360	100	V
7.21337	37.95	PK2	35.9	-27.5	0	46.35	-	-	74	-27.65	360	100	H
7.20658	38.37	PK2	35.9	-27.5	0	46.77	-	-	74	-27.23	360	100	V
9.60947	34.65	PK2	37.1	-22.9	0	48.85	-	-	74	-25.15	360	100	H
9.62026	35.02	PK2	37.2	-22.9	0	49.32	-	-	74	-24.68	360	100	V

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

19 CHANNEL RESULTS



HORIZONTAL



VERTICAL

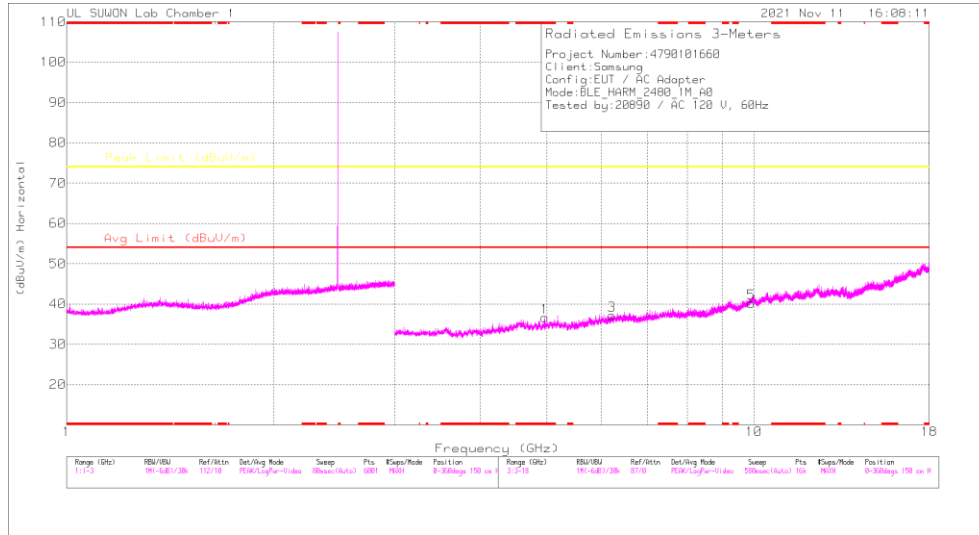
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

RADIATED EMISSIONS

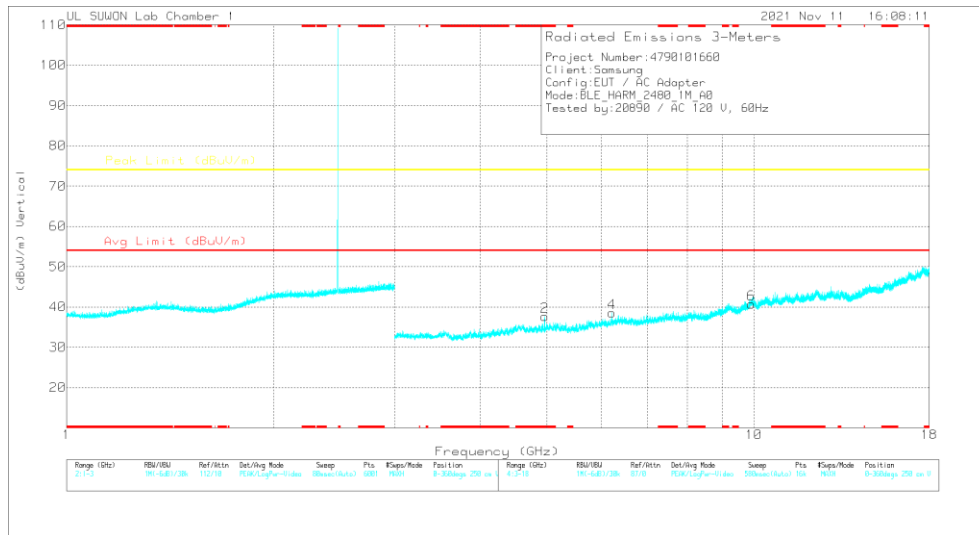
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016871 7	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.88025	42.49	PK2	34.1	-31.3	0	45.29	-	-	74	-28.71	176	104	H
* 4.87991	31.65	MAv1	34.1	-31.3	2.07	36.52	54	-17.48	-	-	176	104	H
* 4.88049	43.1	PK2	34.1	-31.3	0	45.9	-	-	74	-28.1	166	241	V
* 4.87979	31.79	MAv1	34.1	-31.3	2.07	36.66	54	-17.34	-	-	166	241	V
* 7.31031	38.81	PK2	35.8	-27.3	0	47.31	-	-	74	-26.69	72	148	H
* 7.31163	25.99	MAv1	35.8	-27.2	2.07	36.66	54	-17.34	-	-	72	148	H
* 7.32073	39.41	PK2	35.8	-27.1	0	48.11	-	-	74	-25.89	145	338	V
* 7.31685	26	MAv1	35.8	-27.2	2.07	36.67	54	-17.33	-	-	145	338	V
9.75381	35.73	PK2	37.4	-23.6	0	49.53	-	-	74	-24.47	0	100	H
9.77023	34.7	PK2	37.5	-23.6	0	48.6	-	-	74	-25.4	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

39 CHANNEL 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.

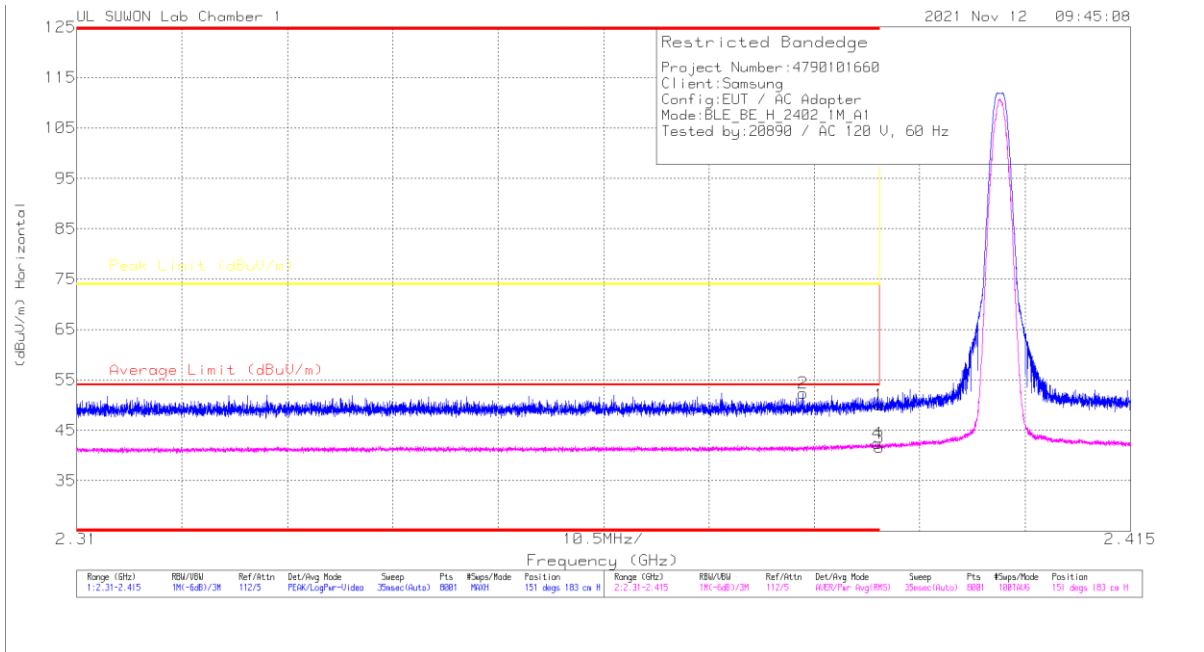
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_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
* 4.96007	43.11	PK2	34.1	-31.4	0	45.81	-	-	74	-28.19	173	100	H
* 4.95983	32.72	MAv1	34.1	-31.4	2.07	37.49	54	-16.51	-	-	173	100	H
* 4.95983	43.46	PK2	34.1	-31.4	0	46.16	-	-	74	-27.84	181	263	V
* 4.95983	33.8	MAv1	34.1	-31.4	2.07	38.57	54	-15.43	-	-	181	263	V
6.21662	39.62	PK2	35.5	-29	0	46.12	-	-	74	-27.88	264	256	H
6.20654	27.06	MAv1	35.5	-29.1	2.07	35.53	-	-	-	-	264	256	H
6.20788	38.89	PK2	35.5	-29.1	0	45.29	-	-	74	-28.71	147	287	V
6.2081	27.02	MAv1	35.5	-29.1	2.07	35.49	-	-	-	-	147	287	V
9.9182	33.99	PK2	37.7	-21.5	0	50.19	-	-	74	-23.81	0	100	H
9.92303	34.02	PK2	37.7	-21.4	0	50.32	-	-	74	-23.68	0	100	V

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 PK2 - KDB558074 Method: Maximum Peak
 MAv1 - KDB558074 Option 1 Maximum RMS Average

ANT2
BANDEDGE (0 CHANNEL)

HORIZONTAL RESULT

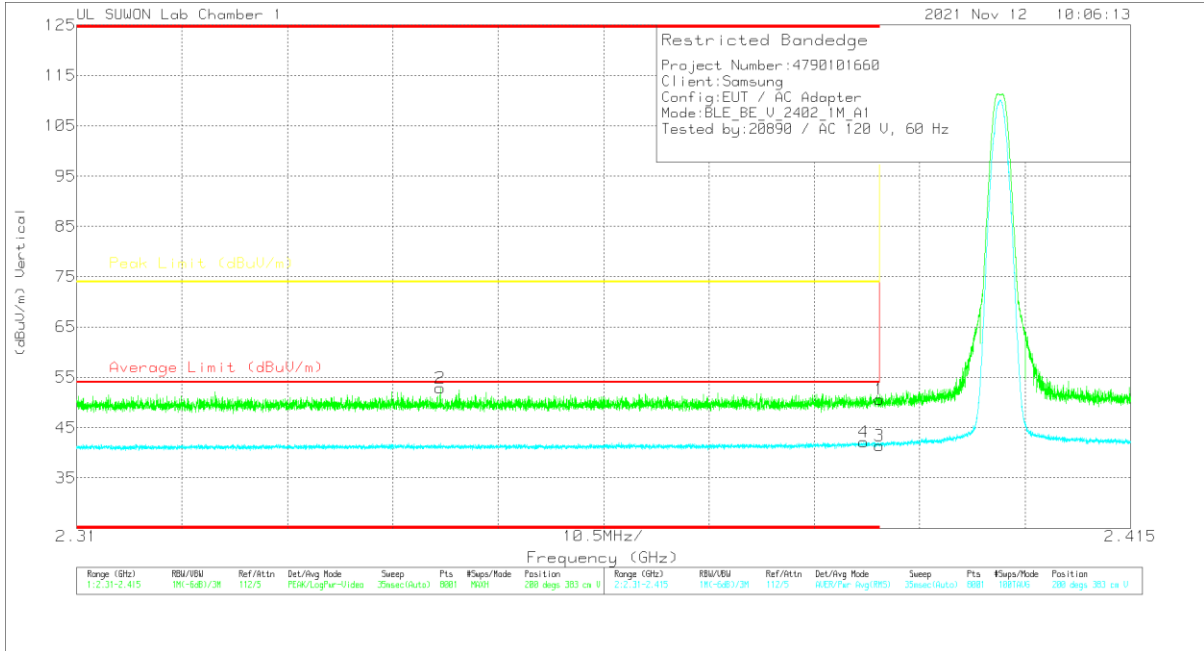


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00166717	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	43.5	Pk	31.8	-25.3	0	50	-	-	74	-24	151	183	H
2	* 2.38238	45.93	Pk	31.8	-25.3	0	52.43	-	-	74	-21.57	151	183	H
3	* 2.39	33.13	RMS	31.8	-25.3	2.07	41.77	54	-12.3	-	-	151	183	H
4	* 2.38977	33.8	RMS	31.8	-25.3	2.07	42.37	54	-11.63	-	-	151	183	H

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 Pk - Peak detector
 RMS - RMS detection

VERTICAL RESULT



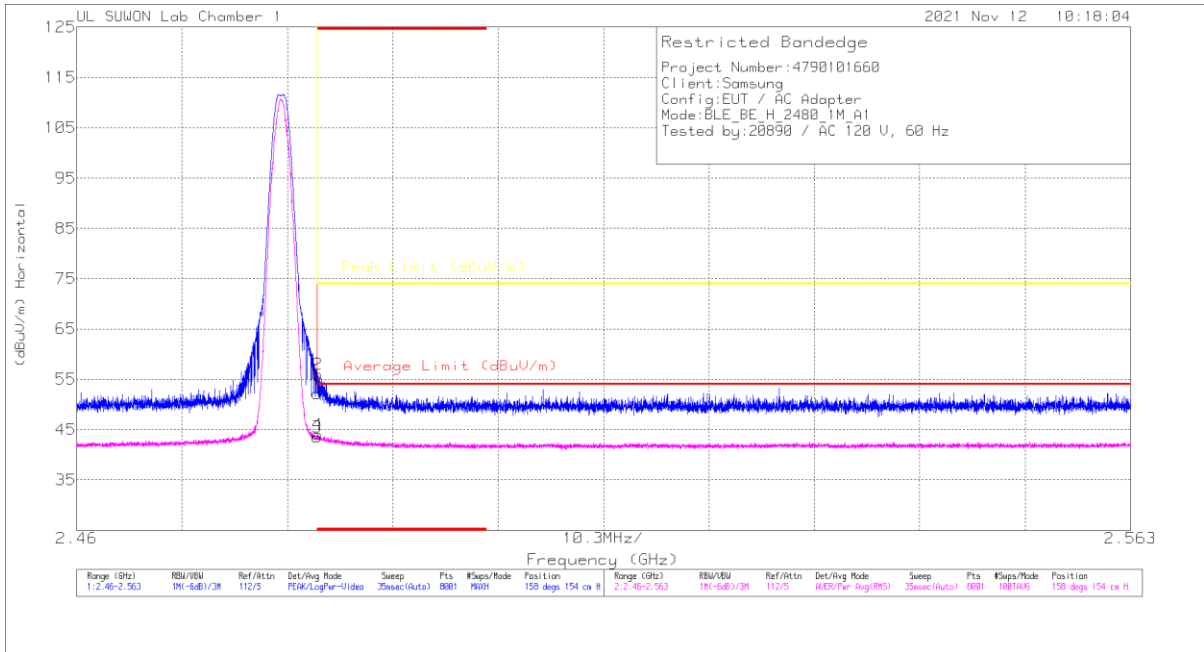
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu/m)	Det	3117_001660717	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	44.11	Pk	31.8	-25.3	0	50.61	-	-	74	-23.39	200	383	V
2	* 2.34621	46.66	Pk	31.7	-25.5	0	52.86	-	-	74	-21.14	200	383	V
3	* 2.39	32.83	RMS	31.8	-25.3	2.07	41.4	54	-12.6	-	-	200	383	V
4	* 2.3884	33.64	RMS	31.8	-25.3	2.07	42.21	54	-11.79	-	-	200	383	V

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 PK - Peak detector
 RMS - RMS detection

BANDEDGE (39 CHANNEL)

HORIZONTAL RESULT

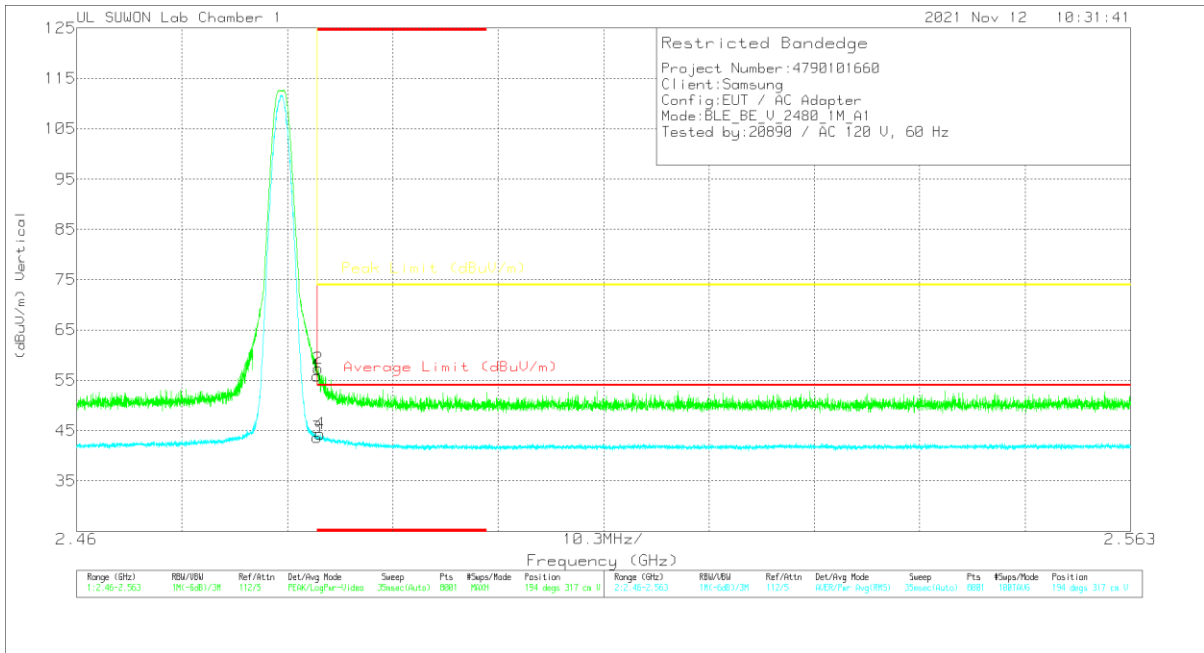


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu/m)	Det	3117_00166017	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	* 2.48351	45.28	Pk	32	-25.1	0	52.18	-	-	74	-21.82	158	154	H
2	* 2.48355	49.03	Pk	32	-25.1	0	55.93	-	-	74	-18.07	158	154	H
3	* 2.48351	34.52	RMS	32	-25.1	2.07	43.49	54	-10.51	-	-	158	154	H
4	* 2.48357	35.06	RMS	32	-25.1	2.07	44.03	54	-9.97	-	-	158	154	H

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 PK - Peak detector
 RMS - RMS detection

VERTICAL RESULT



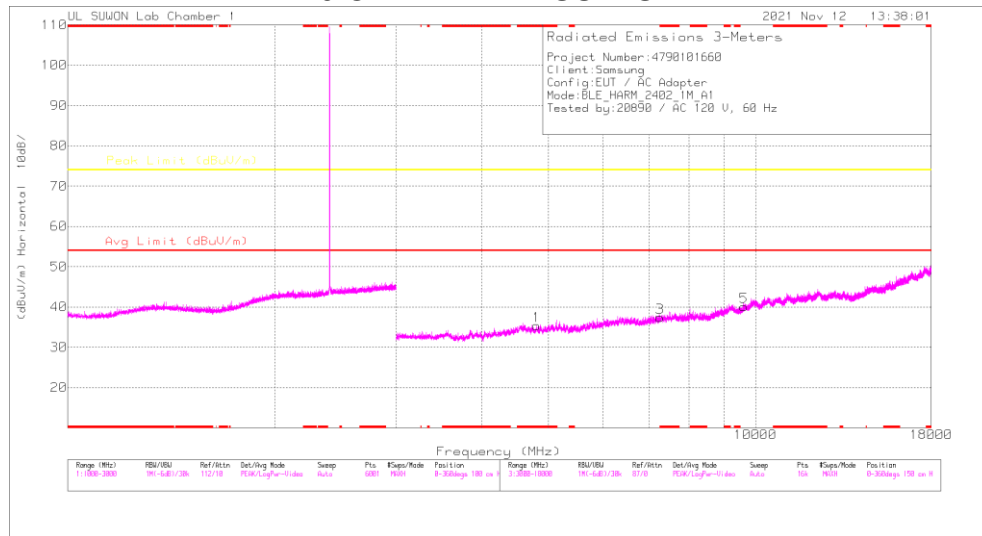
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_001660717	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	48.97	Pk	32	-25.1	0	55.87	-	-	74	-18.13	194	317	V
2	* 2.48363	50.47	Pk	32	-25.1	0	57.37	-	-	74	-16.63	194	317	V
3	* 2.48351	34.73	RMS	32	-25.1	2.07	43.7	54	-10.3	-	-	194	317	V
4	* 2.48382	35.37	RMS	32	-25.1	2.07	44.34	54	-9.66	-	-	194	317	V

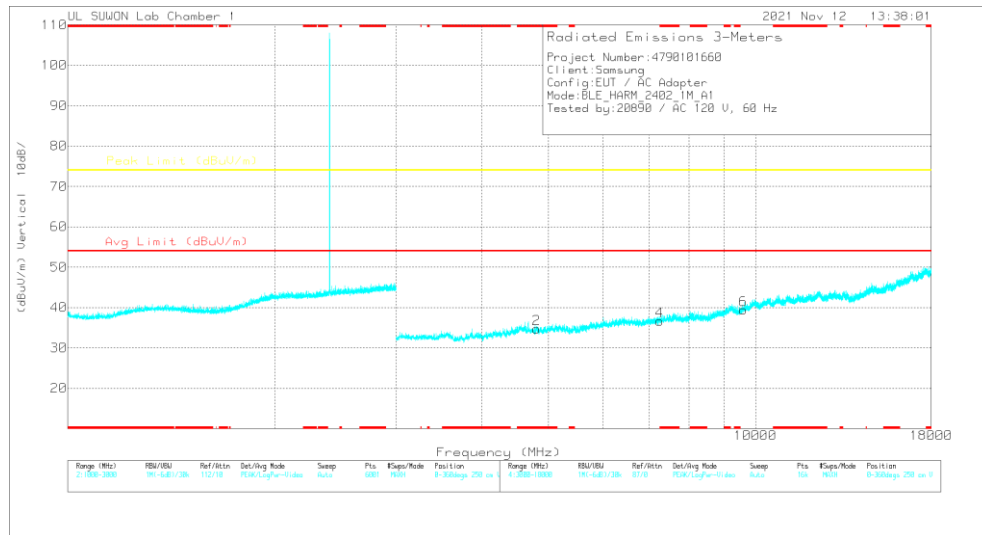
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
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HARMONICS AND SPURIOUS EMISSIONS

0 CHANNEL RESULTS



HORIZONTAL



VERTICAL

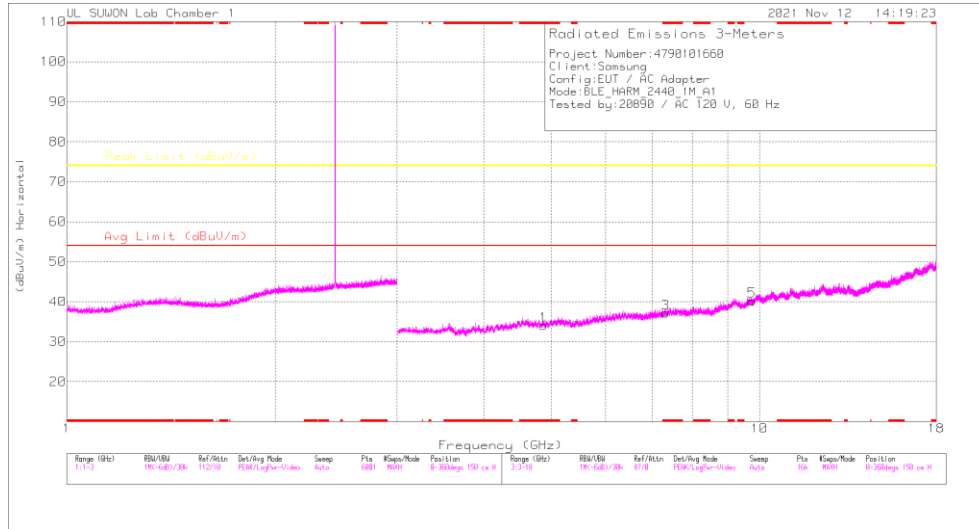
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

RADIATED EMISSIONS

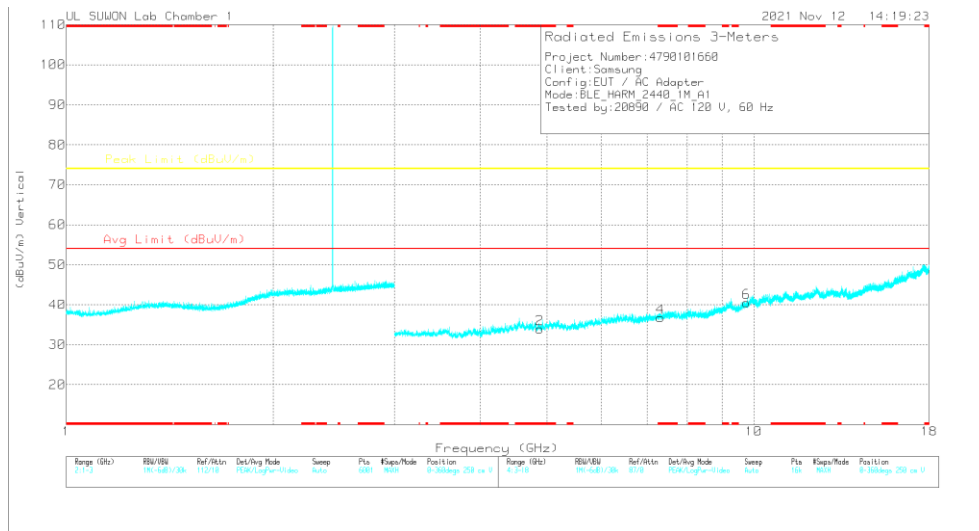
Frequency (MHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4802.2865	41.48	PK2	34.1	-31.2	0	44.38	-	-	74	-29.62	0	100	H
* 4809.329	41.35	PK2	34.1	-31.2	0	44.25	-	-	74	-29.75	0	100	V
* 7263.2793	37.94	PK2	35.8	-27.4	0	46.34	-	-	74	-27.66	0	100	H
* 7253.8333	37.78	PK2	35.8	-27.4	0	46.18	-	-	74	-27.82	0	100	V
9600.6341	34.72	PK2	37.1	-22.8	0	49.02	-	-	74	-24.98	0	100	H
9610.4767	34.59	PK2	37.1	-22.9	0	48.79	-	-	74	-25.21	0	100	V

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

19 CHANNEL RESULTS



HORIZONTAL



VERTICAL

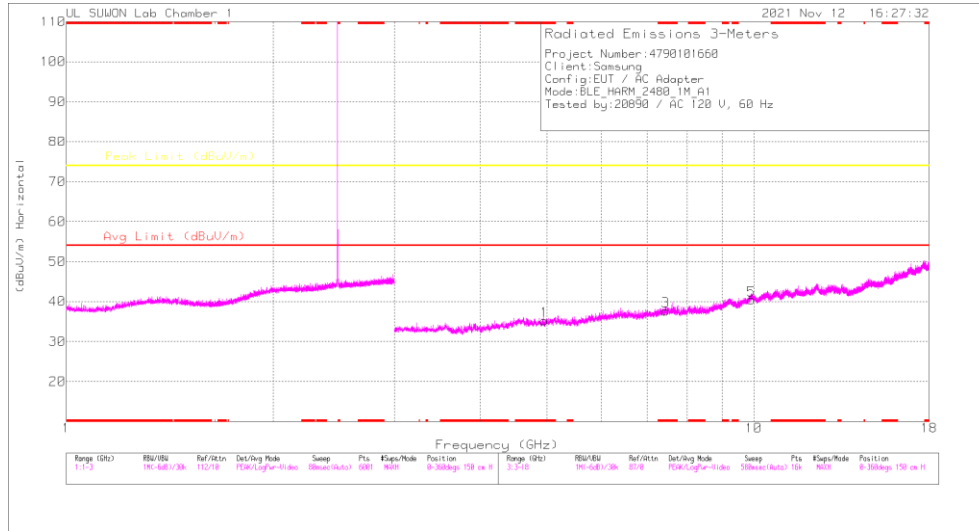
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

RADIATED EMISSIONS

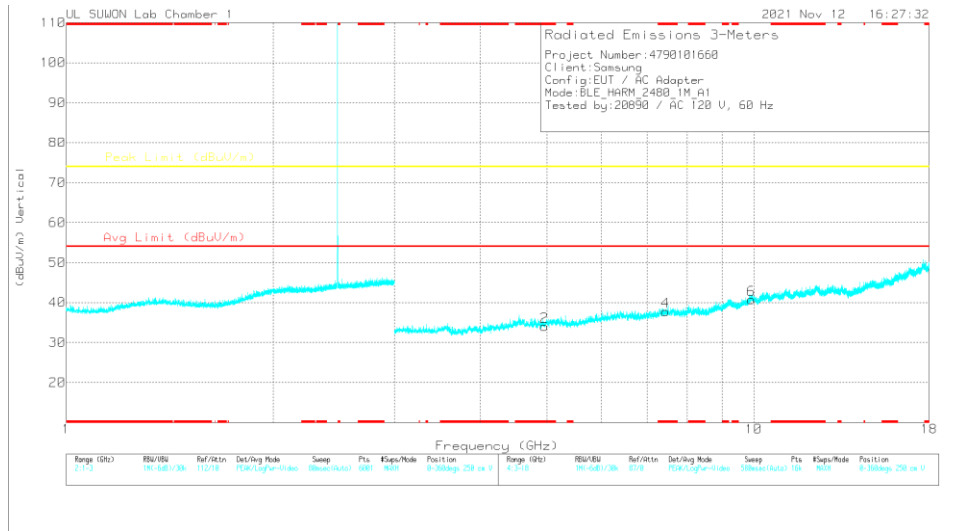
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.87823	41.92	PK2	34.1	-31.3	0	44.72	-	-	74	-29.28	0	100	H
* 4.87369	41.28	PK2	34.1	-31.3	0	44.08	-	-	74	-29.92	0	100	V
* 7.32378	38.02	PK2	35.8	-27.1	0	46.72	-	-	74	-27.28	0	100	H
* 7.31805	38.02	PK2	35.8	-27.2	0	46.62	-	-	74	-27.38	0	100	V
9.75091	34.93	PK2	37.4	-23.5	0	48.83	-	-	74	-25.17	0	100	H
9.75551	35.12	PK2	37.4	-23.5	0	49.02	-	-	74	-24.98	0	100	V

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 PK2 - KDB558074 Method: Maximum Peak

39 CHANNEL 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

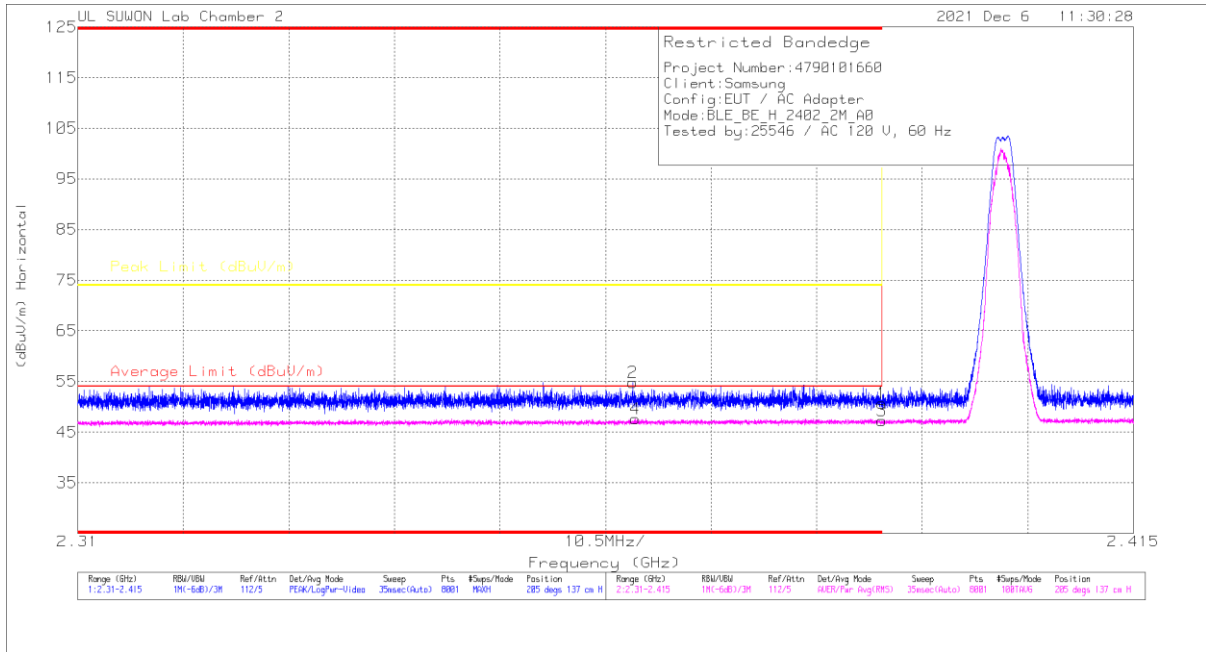
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.96255	41.07	PK2	34.1	-31.4	0	43.77	-	-	74	-30.23	0	100	H
* 4.95373	41.4	PK2	34.1	-31.4	0	44.1	-	-	74	-29.9	0	100	V
* 7.44884	38.54	PK2	35.8	-26.7	0	47.64	-	-	74	-26.36	0	100	H
* 7.44191	37.68	PK2	35.8	-26.7	0	46.78	-	-	74	-27.22	0	100	V
9.92007	33.86	PK2	37.7	-21.5	0	50.06	-	-	74	-23.94	0	100	H
9.92061	33.57	PK2	37.7	-21.5	0	49.77	-	-	74	-24.23	0	100	V

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

10.2.2. 2 Mbps

**ANT1
 BANDEDGE (0 CHANNEL)**

HORIZONTAL RESULT

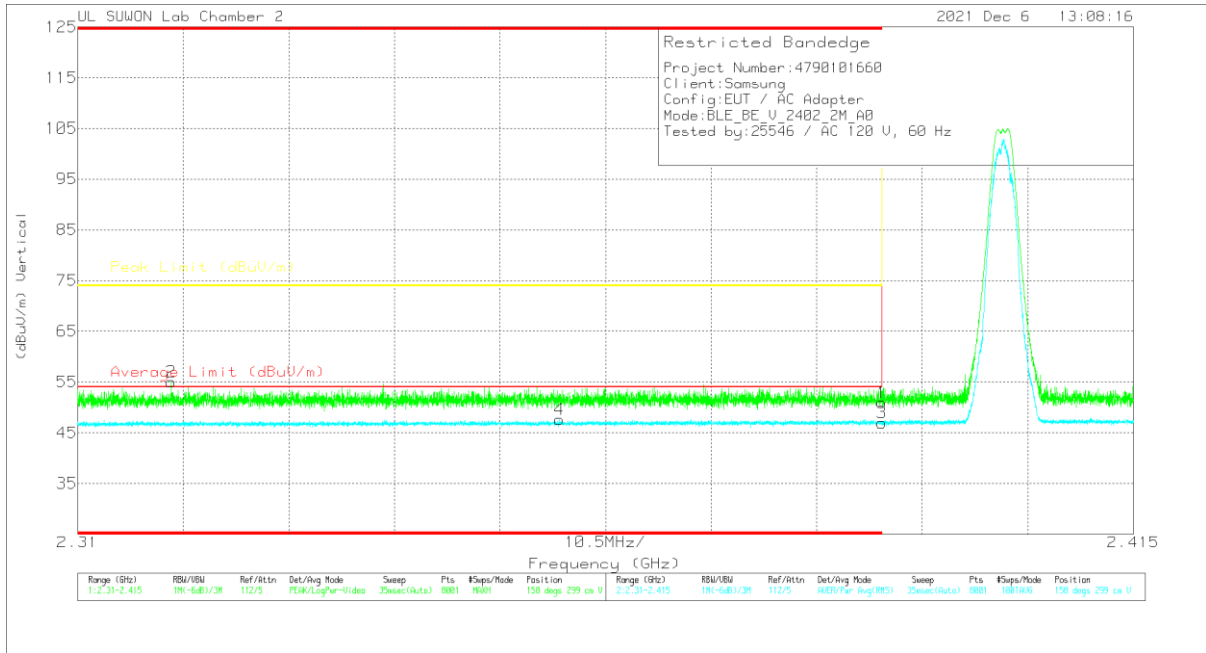


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Cor (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	39.35	PK	31.9	-20.6	0	50.65	-	-	74	-23.35	205	137	H
2	* 2.38519	43.58	PK	31.8	-20.6	0	54.78	-	-	74	-19.22	205	137	H
3	* 2.39	31.01	RMS	31.9	-20.6	4.87	47.18	54	-8.82	-	-	205	137	H
4	* 2.38547	31.59	RMS	31.8	-20.6	4.87	47.66	54	-6.34	-	-	205	137	H

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

VERTICAL RESULT



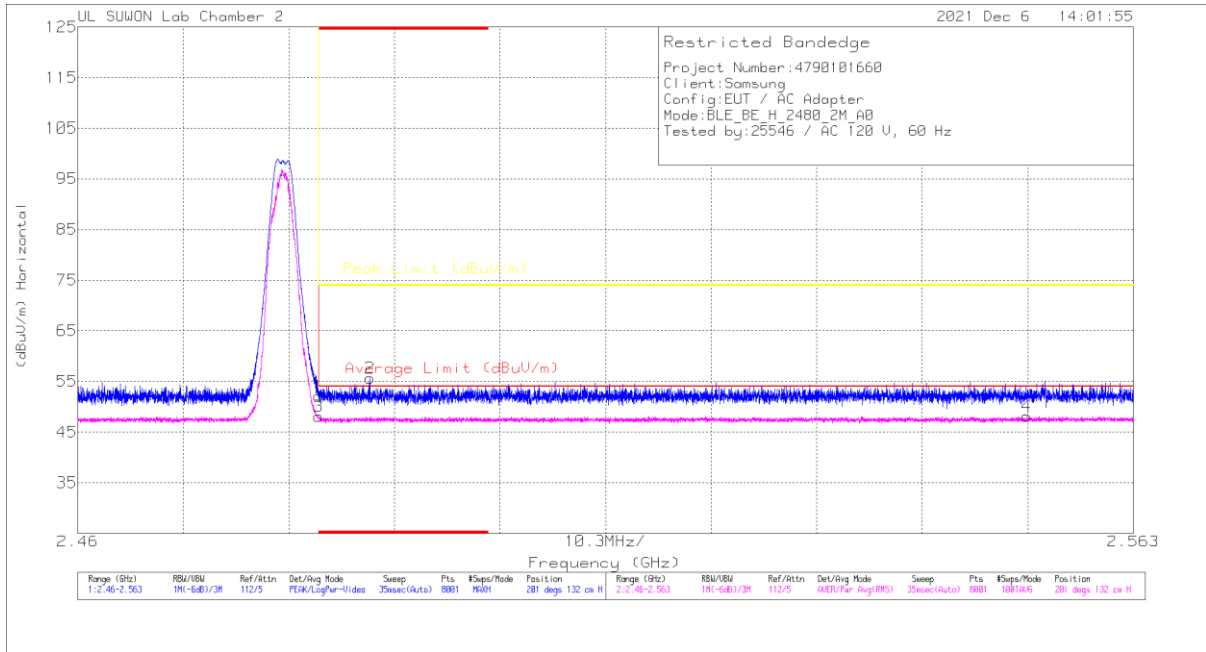
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_001660724	10dB_ATT[dB]	DC Cor (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	39.6	Pk	31.9	-20.6	0	50.9	-	-	74	-23.1	158	299	V
2	* 2.31928	44.03	Pk	31.7	-20.7	0	55.03	-	-	74	-18.97	158	299	V
3	* 2.39	30.76	RMS	31.9	-20.6	4.87	46.93	54	-7.07	-	-	158	299	V
4	* 2.35789	31.55	RMS	31.8	-20.6	4.87	47.62	54	-6.38	-	-	158	299	V

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

BANDEDGE (39 CHANNEL)

HORIZONTAL RESULT

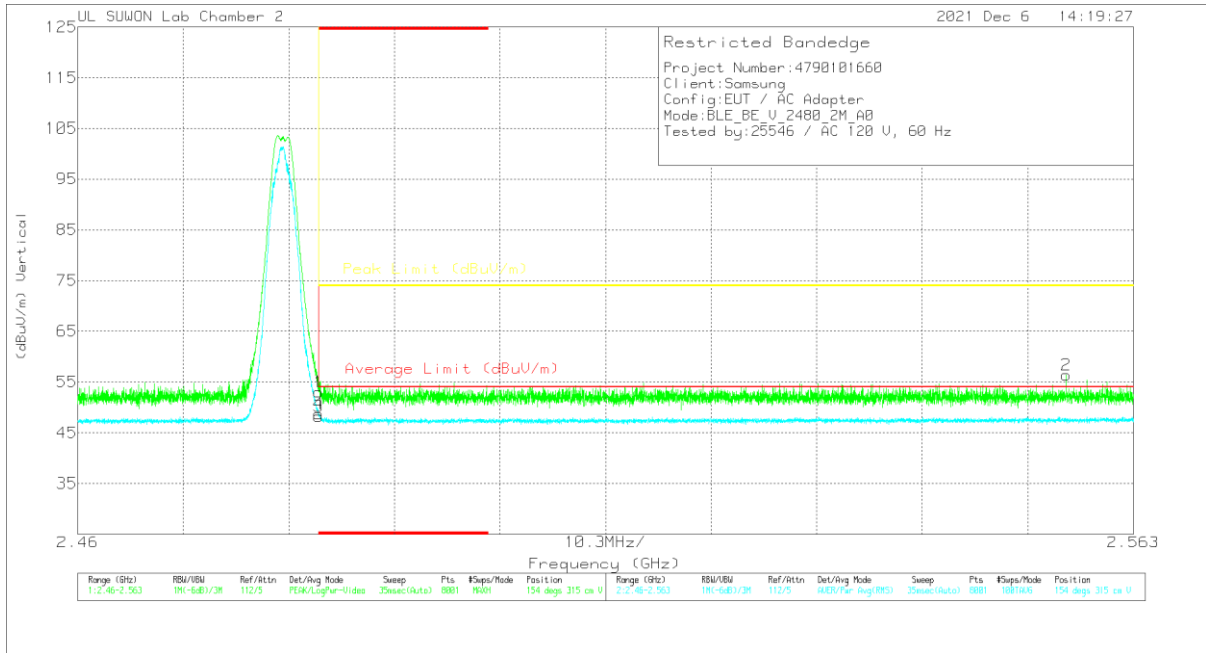


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00166724	10dB_ATT[dB]	DC Cor (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	40.43	PK	32	-20.4	0	52.03	-	-	74	-21.97	201	132	H
2	* 2.48849	44	PK	32.1	-20.4	0	55.7	-	-	74	-18.3	201	132	H
3	* 2.48351	31.59	RMS	32	-20.4	4.87	48.06	54	-5.94	-	-	201	132	H
4	2.5526	31.36	RMS	32.2	-20.3	4.87	48.13	54	-5.87	-	-	201	132	H

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

VERTICAL RESULT



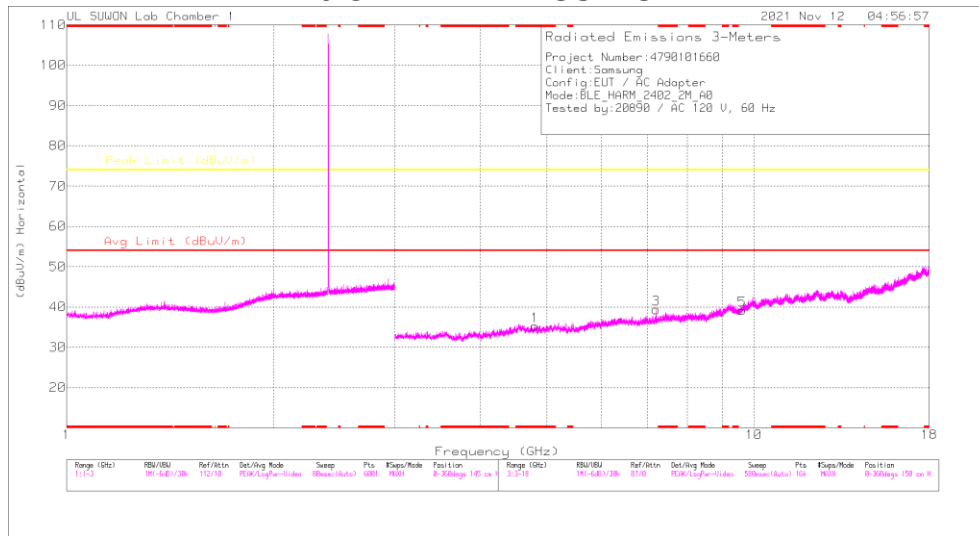
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_001668724	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	* 2.48351	41.45	Pk	32	-20.4	0	53.05	-	-	74	-20.95	154	315	V
2	2.55646	44.5	Pk	32.2	-20.3	0	56.4	-	-	74	-17.6	154	315	V
3	* 2.48351	31.71	RMS	32	-20.4	4.87	48.18	54	-5.82	-	-	154	315	V
4	* 2.48352	32.2	RMS	32	-20.4	4.87	48.67	54	-5.33	-	-	154	315	V

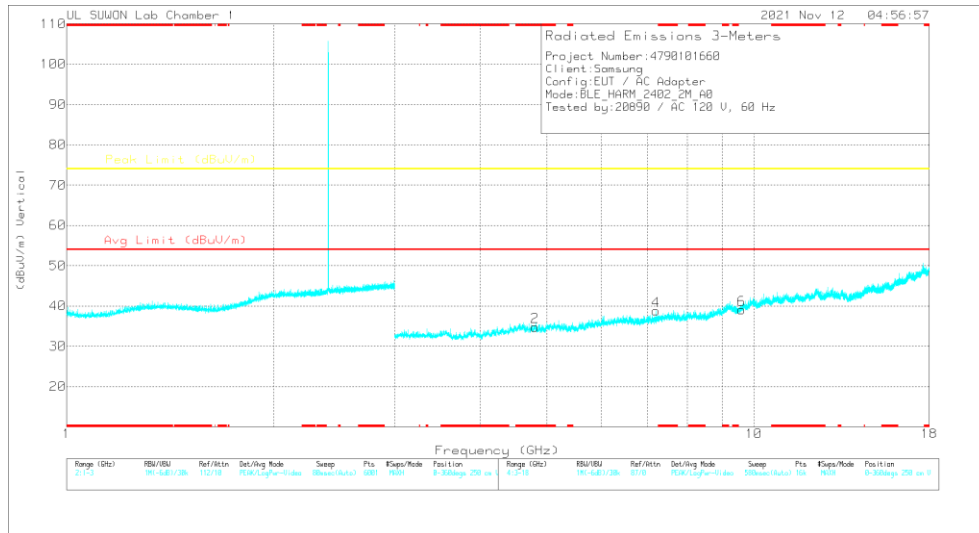
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

0 CHANNEL RESULTS



HORIZONTAL



VERTICAL

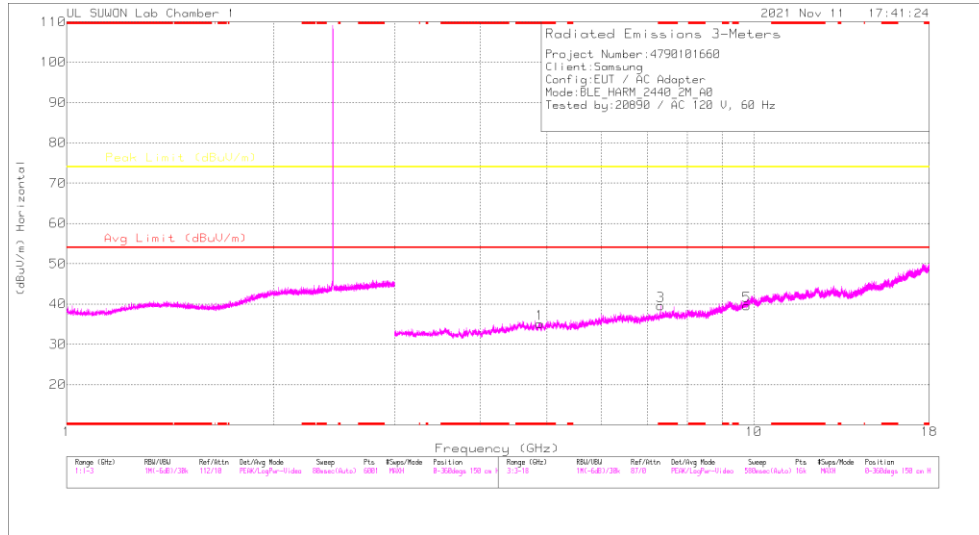
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

RADIATED EMISSIONS

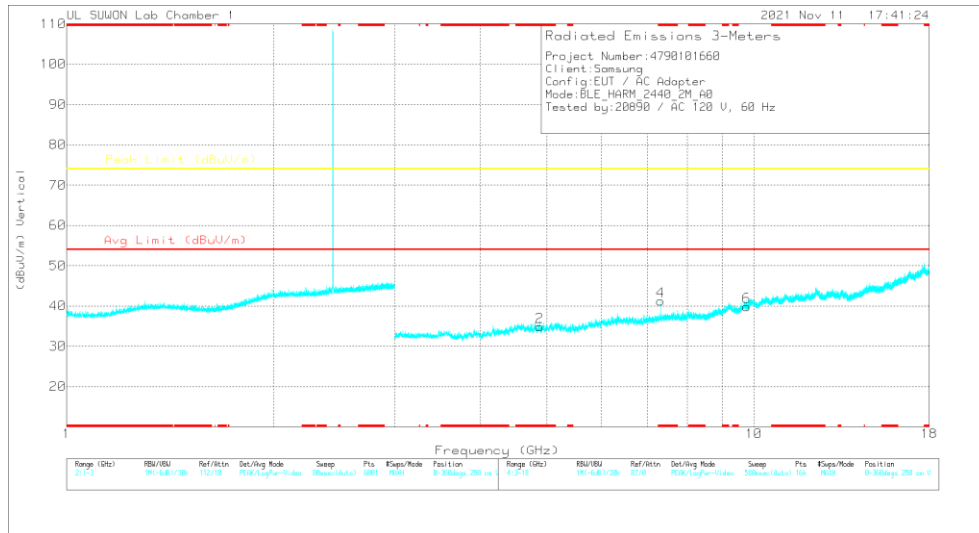
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.80289	42.15	PK2	34.1	-31.2	0	45.05	-	-	74	-28.95	360	100	H
* 4.80184	41.18	PK2	34.1	-31.2	0	44.08	-	-	74	-29.92	0	100	V
7.21067	37.66	PK2	35.9	-27.5	0	46.06	-	-	74	-27.94	62	232	H
7.20745	38.92	PK2	35.9	-27.5	0	47.32	-	-	74	-26.68	331	100	V
9.60334	34.33	PK2	37.1	-22.9	0	48.53	-	-	74	-25.47	360	100	H
9.61472	34.42	PK2	37.2	-22.9	0	48.72	-	-	74	-25.28	0	100	V

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

19 CHANNEL RESULTS



HORIZONTAL



VERTICAL

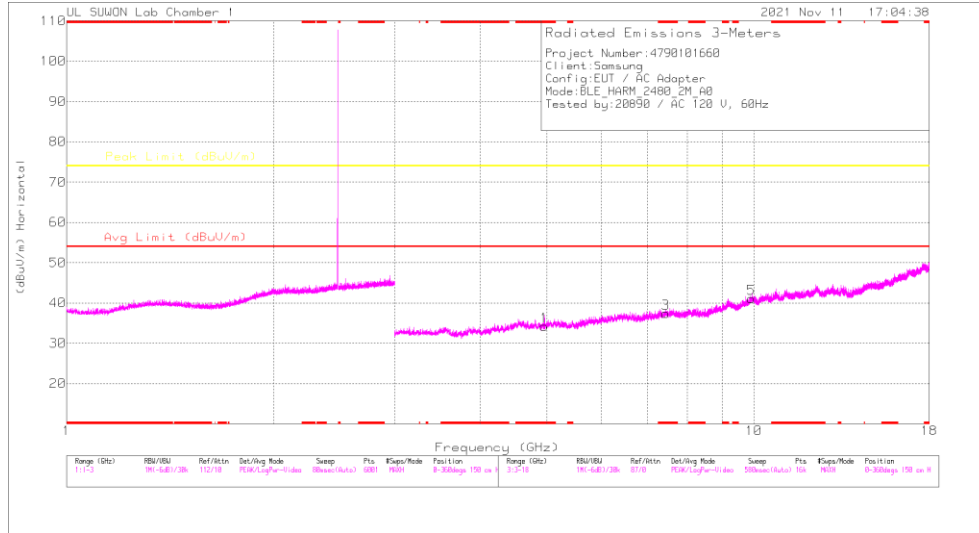
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

RADIATED EMISSIONS

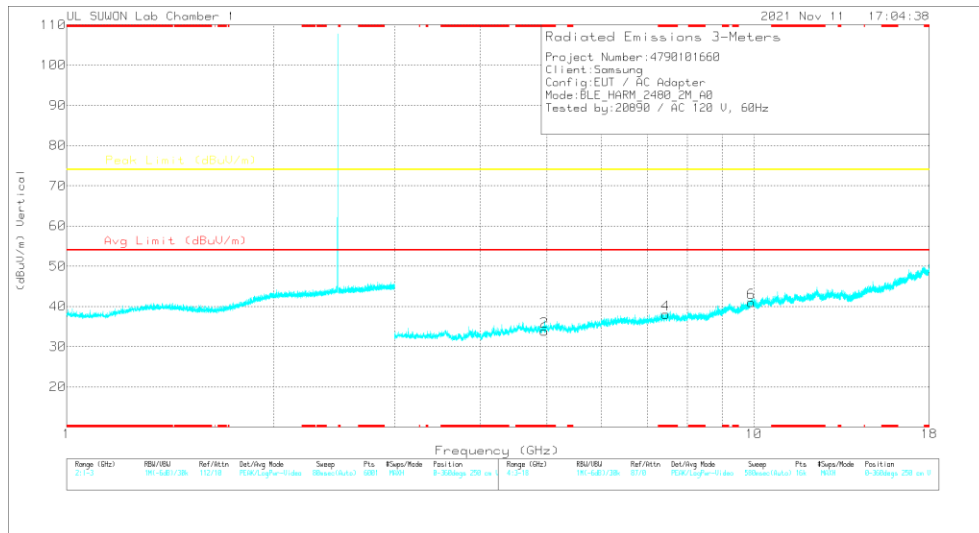
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0016871 7	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.88153	41.77	PK2	34.1	-31.3	0	44.57	-	-	74	-29.43	0	100	H
* 4.87665	41.14	PK2	34.1	-31.3	0	43.94	-	-	74	-30.06	0	100	V
* 7.31853	38.41	PK2	35.8	-27.2	0	47.01	-	-	74	-26.99	353	145	H
* 7.31853	26.96	MAv1	35.8	-27.2	4.87	40.43	54	-13.57	-	-	353	145	H
* 7.32163	42.14	PK2	35.8	-27.1	0	50.84	-	-	74	-23.16	154	100	V
* 7.31853	30.65	MAv1	35.8	-27.2	4.87	44.12	54	-9.88	-	-	154	100	V
9.75802	34.63	PK2	37.4	-23.6	0	48.43	-	-	74	-25.57	0	100	H
9.76945	34.52	PK2	37.5	-23.6	0	48.42	-	-	74	-25.58	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

39 CHANNEL 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.

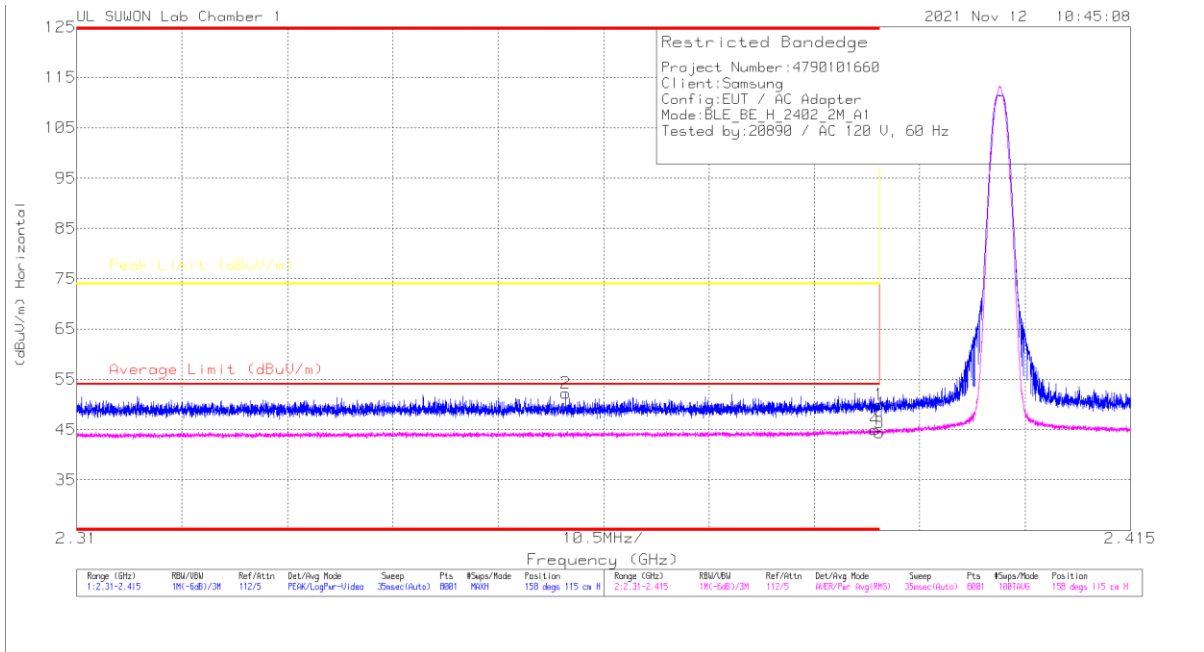
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HPI(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
* 4.94944	41.03	PK2	34.1	-31.4	0	43.73	-	-	74	-30.27	0	100	H
* 4.95264	40.96	PK2	34.1	-31.4	0	43.66	-	-	74	-30.34	0	100	V
* 7.44689	37.78	PK2	35.8	-26.7	0	46.88	-	-	74	-27.12	0	100	H
* 7.43982	37.67	PK2	35.8	-26.7	0	46.77	-	-	74	-27.23	0	100	V
9.912	34.23	PK2	37.7	-21.6	0	50.33	-	-	74	-23.67	0	100	H
9.92911	33.93	PK2	37.7	-21.4	0	50.23	-	-	74	-23.77	0	100	V

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

ANT2
BANDEGE (0 CHANNEL)

HORIZONTAL RESULT

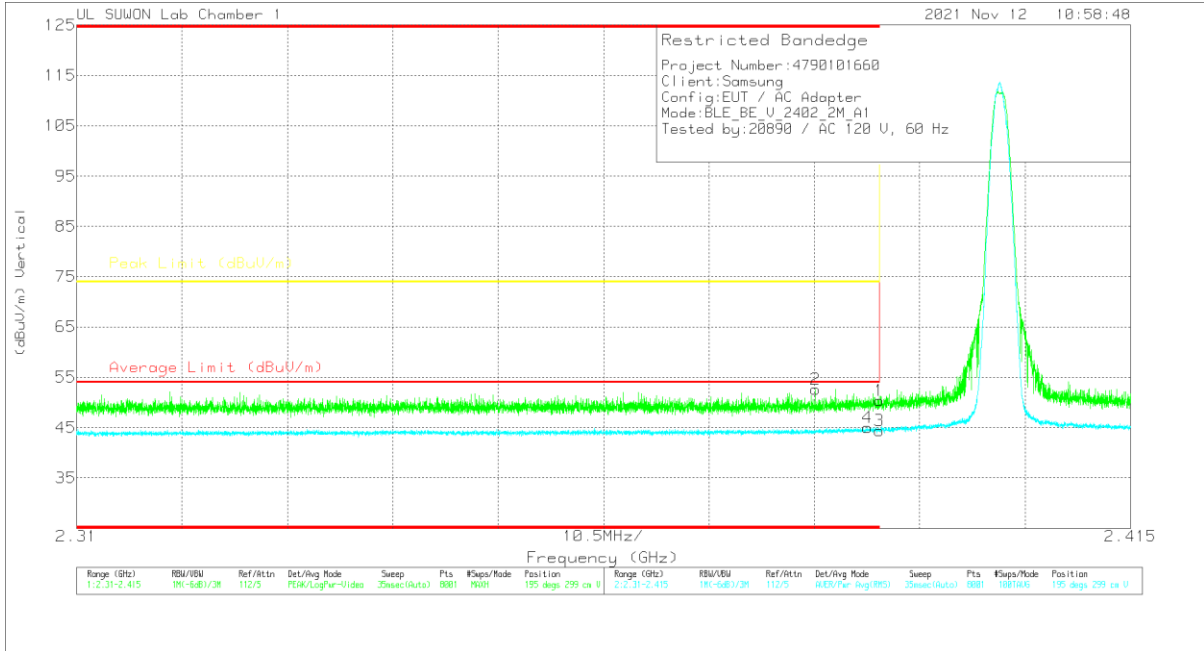


Trace Markers

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	43.48	PK	31.8	-25.3	0	49.98	-	-	74	-24.02	158	115	H
2	* 2.38873	46.08	PK	31.7	-25.5	0	52.28	-	-	74	-21.72	158	115	H
3	* 2.39	33	RMS	31.8	-25.3	4.87	44.37	54	-9.83	-	-	158	115	H
4	* 2.38955	33.67	RMS	31.8	-25.3	4.87	45.04	54	-8.96	-	-	158	115	H

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

VERTICAL RESULT



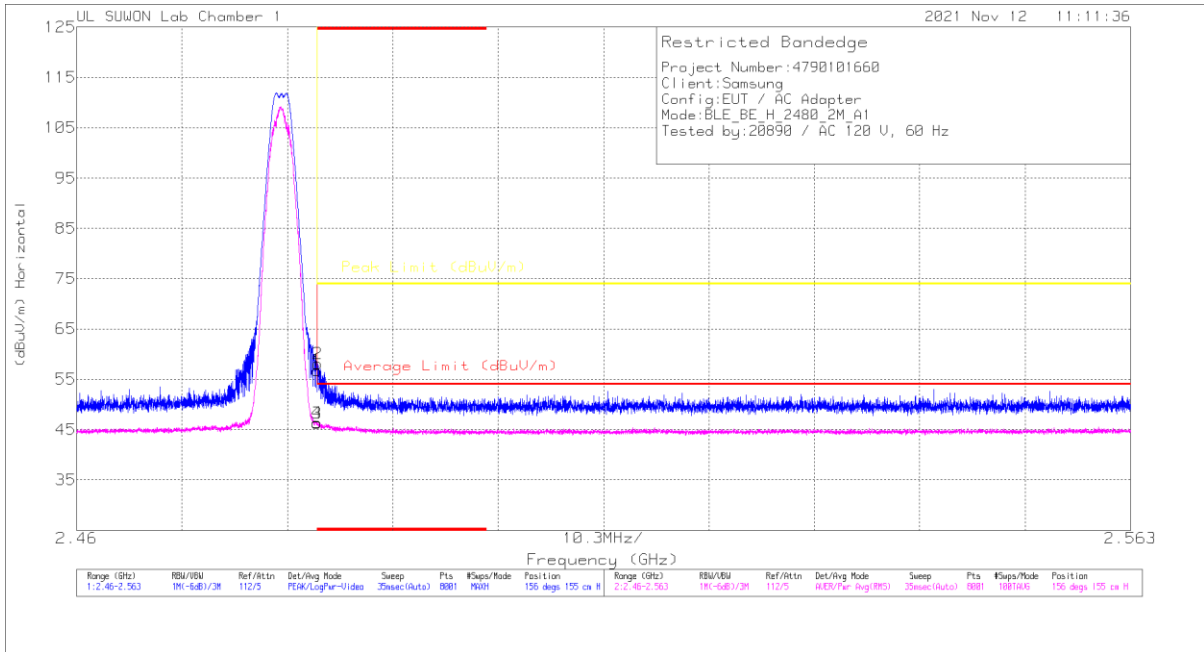
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu/m)	Det	3117_001660717	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	43.85	Pk	31.8	-25.3	0	50.35	-	-	74	-23.65	195	299	V
2	* 2.38361	46.17	Pk	31.8	-25.3	0	52.67	-	-	74	-21.33	195	299	V
3	* 2.39	33.08	RMS	31.8	-25.3	4.87	44.45	54	-9.55	-	-	195	299	V
4	* 2.38882	33.69	RMS	31.8	-25.3	4.87	45.06	54	-8.94	-	-	195	299	V

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

BANDEDGE (39 CHANNEL)

HORIZONTAL RESULT

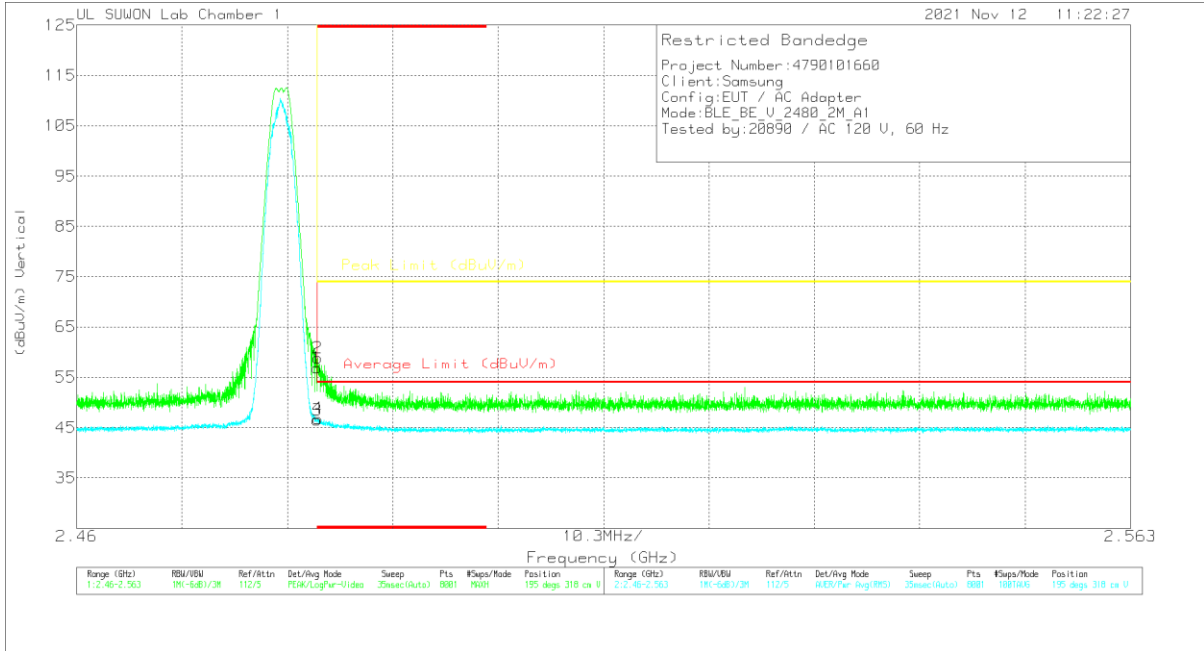


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00166017	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	49.81	Pk	32	-25.1	0	58.71	-	-	74	-17.29	156	155	H
2	* 2.48355	51.22	Pk	32	-25.1	0	58.12	-	-	74	-15.88	156	155	H
3	* 2.48351	34.47	RMS	32	-25.1	4.87	46.24	54	-7.76	-	-	156	155	H
4	* 2.48352	34.66	RMS	32	-25.1	4.87	46.43	54	-7.57	-	-	156	155	H

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

VERTICAL RESULT



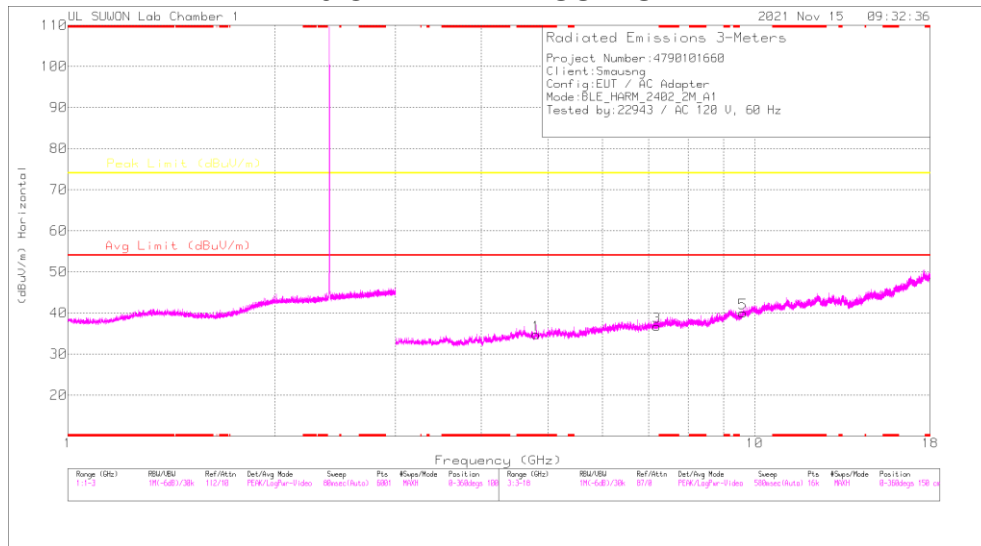
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_001660717	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	49.97	Pk	32	-25.1	0	56.87	-	-	74	-17.13	195	318	V
2	* 2.48355	51.99	Pk	32	-25.1	0	58.89	-	-	74	-15.11	195	318	V
3	* 2.48351	34.78	RMS	32	-25.1	4.87	46.55	54	-7.45	-	-	195	318	V
4	* 2.48355	35.06	RMS	32	-25.1	4.87	46.83	54	-7.17	-	-	195	318	V

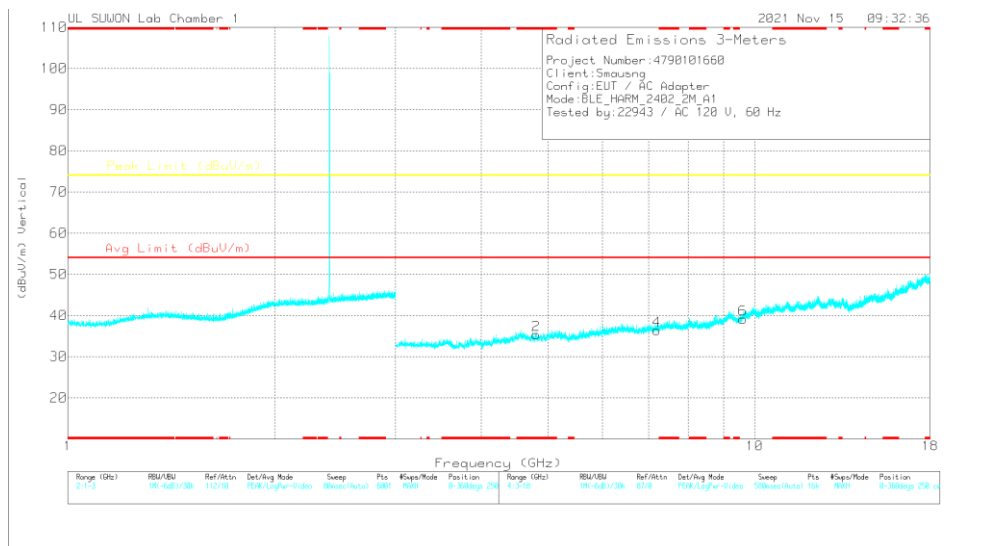
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak detector
 RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

0 CHANNEL RESULTS



HORIZONTAL



VERTICAL

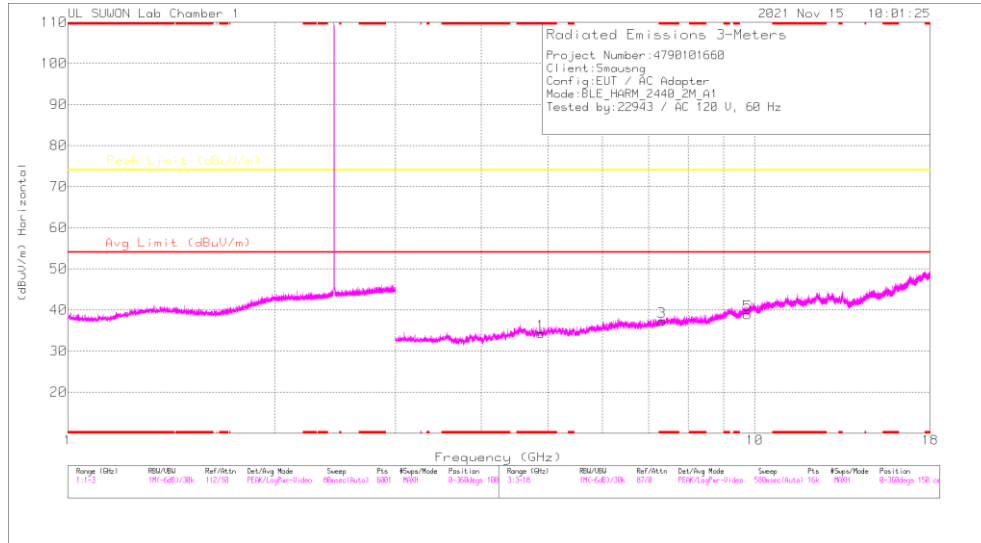
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

RADIATED EMISSIONS

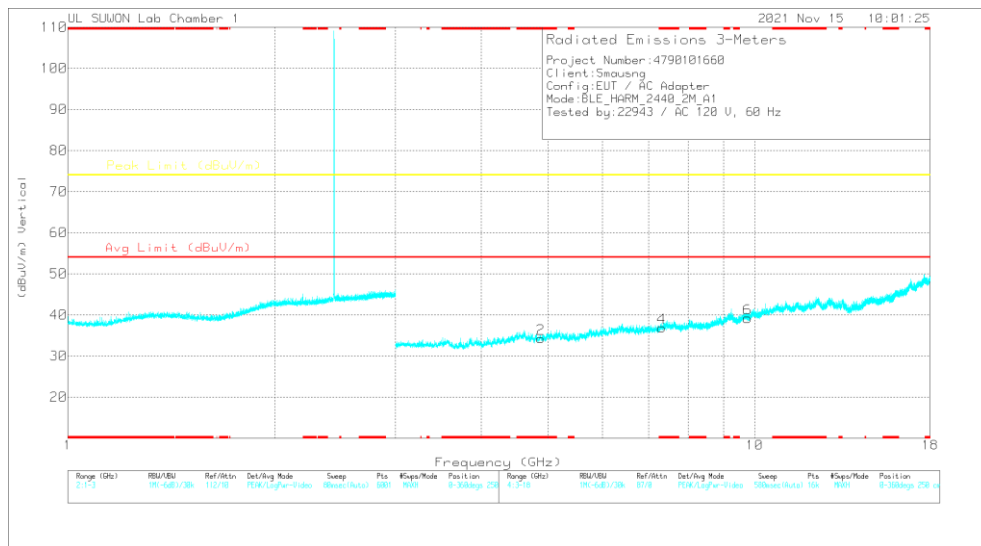
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.80431	41.56	PK2	34.1	-31.2	0	44.46	-	-	74	-29.54	0	100	H
* 4.7995	41.56	PK2	34.1	-31.2	0	44.46	-	-	74	-29.54	0	100	V
7.20004	37.48	PK2	35.9	-27.5	0	45.88	-	-	74	-28.12	0	100	H
7.2012	38.59	PK2	35.9	-27.5	0	46.99	-	-	74	-27.01	0	100	V
9.61143	34.51	PK2	37.1	-22.8	0	48.81	-	-	74	-25.19	0	100	H
9.60707	34.45	PK2	37.1	-22.8	0	48.75	-	-	74	-25.25	0	100	V

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

19 CHANNEL RESULTS



HORIZONTAL



VERTICAL

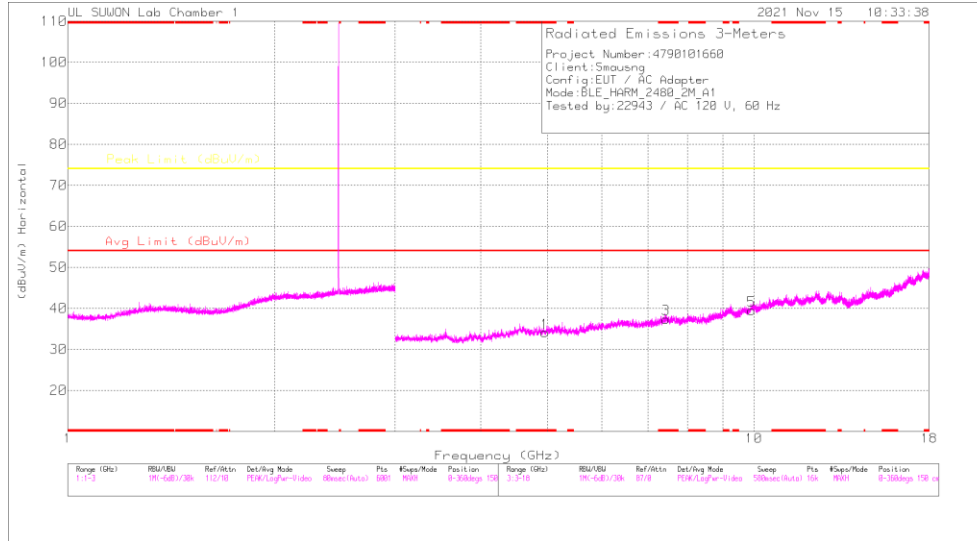
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

RADIATED EMISSIONS

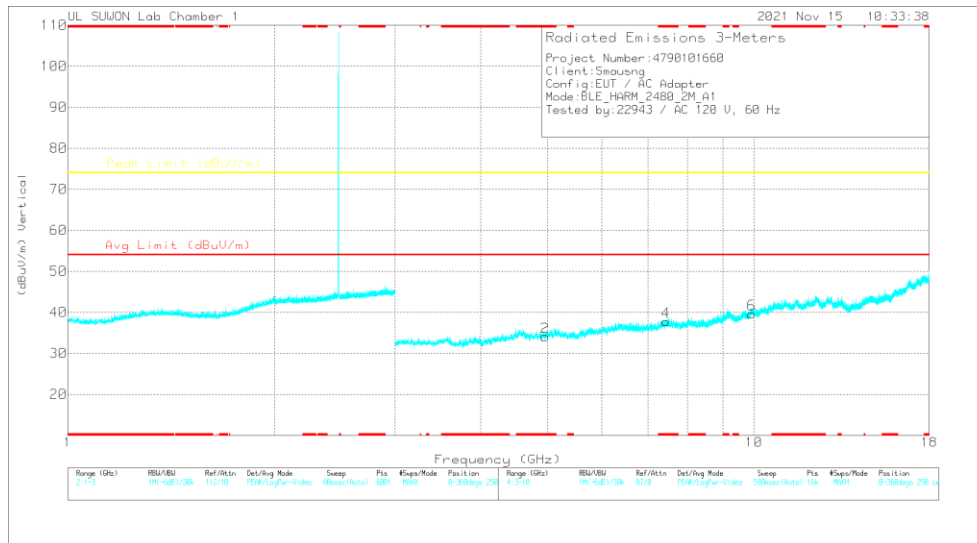
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HPI(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.87294	41.12	PK2	34.1	-31.3	0	43.92	-	-	74	-30.08	0	100	H
* 4.87552	42.39	PK2	34.1	-31.3	0	45.19	-	-	74	-28.81	0	100	V
* 7.31476	37.74	PK2	35.8	-27.2	0	46.34	-	-	74	-27.66	0	100	H
* 7.31653	38.26	PK2	35.8	-27.2	0	46.86	-	-	74	-27.14	0	100	V
9.76307	35.36	PK2	37.4	-23.6	0	49.16	-	-	74	-24.84	0	100	H
9.75343	34.56	PK2	37.4	-23.6	0	48.36	-	-	74	-25.64	0	100	V

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

39 CHANNEL 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.

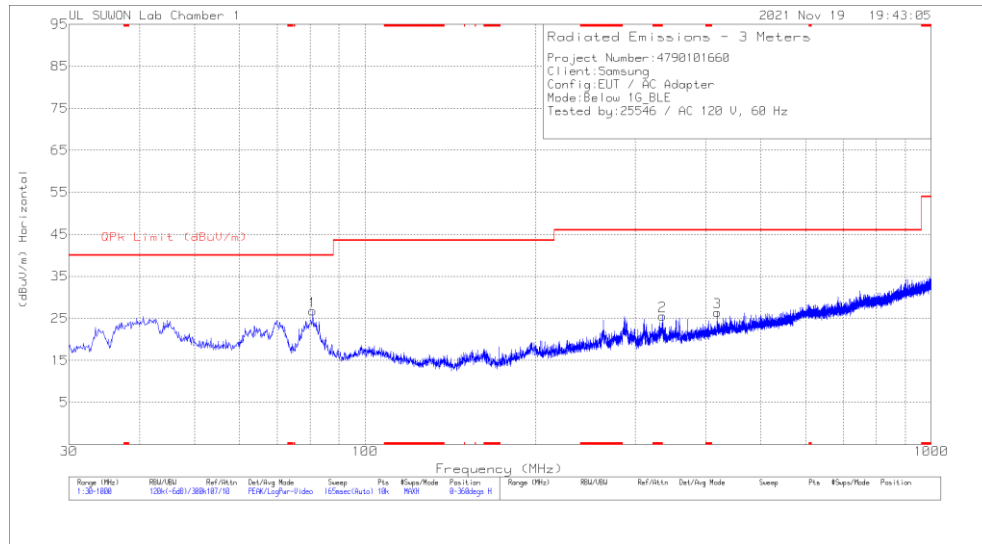
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	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
* 4.95574	40.62	PK2	34.1	-31.4	0	43.32	-	-	74	-30.68	0	100	H
* 4.9556	40.65	PK2	34.1	-31.4	0	43.35	-	-	74	-30.65	0	100	V
* 7.44115	37.26	PK2	35.8	-26.7	0	46.36	-	-	74	-27.64	0	100	H
* 7.43796	37.61	PK2	35.8	-26.6	0	46.81	-	-	74	-27.19	0	100	V
9.92988	33.67	PK2	37.7	-21.4	0	49.97	-	-	74	-24.03	0	100	H
9.91289	34.23	PK2	37.7	-21.6	0	50.33	-	-	74	-23.67	0	100	V

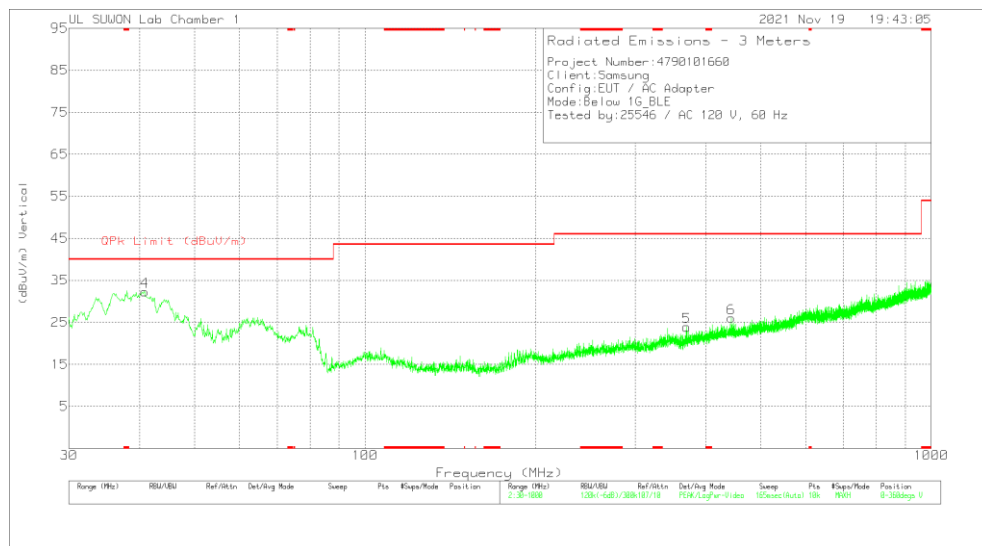
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK2 - KDB558074 Method: Maximum Peak

10.3. WORST CASE BELOW 1 GHZ

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



HORIZONTAL



VERTICAL

Below 1GHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_750	Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	80.925	44.34	Pk	12.8	-30.4	26.74	40	-13.26	0-360	300	H
2	335.55	33.69	Pk	20.3	-28.4	25.59	46.02	-20.43	0-360	200	H
3	419.455	32.36	Pk	21.9	-27.8	26.46	46.02	-19.56	0-360	200	H
4	40.864	44.41	Pk	18.9	-31	32.31	40	-7.69	0-360	100	V
5	369.985	31.4	Pk	20.7	-28.2	23.9	46.02	-22.12	0-360	100	V
6	443.511	31.72	Pk	22.1	-27.8	26.02	46.02	-20	0-360	100	V

Pk - Peak detector

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.

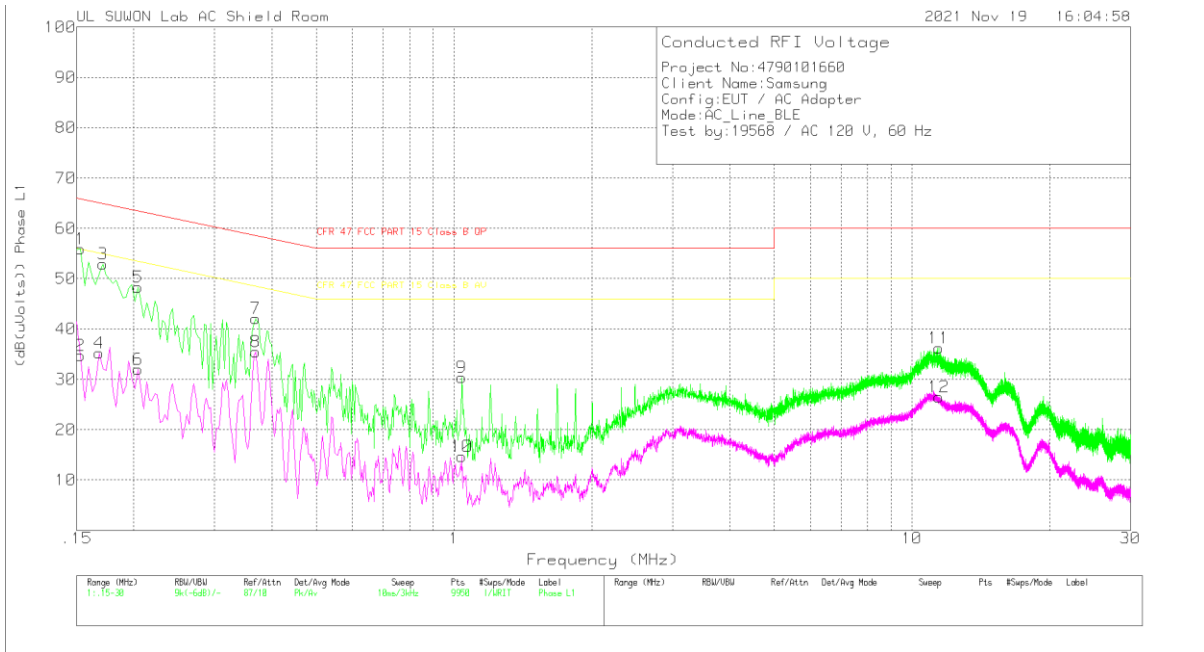
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

11.1.1. AC Power Line

LINE 1 RESULTS



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	.153	45.96	Pk	9.8	.1	55.86	65.84	-9.98	-	-
2	.153	24.83	Av	9.8	.1	34.73	-	-	55.84	-21.11
3	.171	42.74	Pk	10	.2	52.94	64.91	-11.97	-	-
4	.168	25.14	Av	10	.1	35.24	-	-	55.06	-19.82
5	.204	38.29	Pk	9.8	.2	48.29	63.45	-15.16	-	-
6	.204	21.97	Av	9.8	.2	31.97	-	-	53.45	-21.48
7	.369	32.1	Pk	9.8	.2	42.1	58.52	-16.42	-	-
8	.369	25.51	Av	9.8	.2	35.51	-	-	48.52	-13.01
9	1.041	20.39	Pk	9.7	.3	30.39	56	-25.61	-	-
10	1.041	4.63	Av	9.7	.3	14.63	-	-	46	-31.37
11	11.457	25.99	Pk	9.9	.3	36.19	60	-23.81	-	-
12	11.454	16.34	Av	9.9	.3	26.54	-	-	50	-23.46

Pk - Peak detector

Av - Average detection

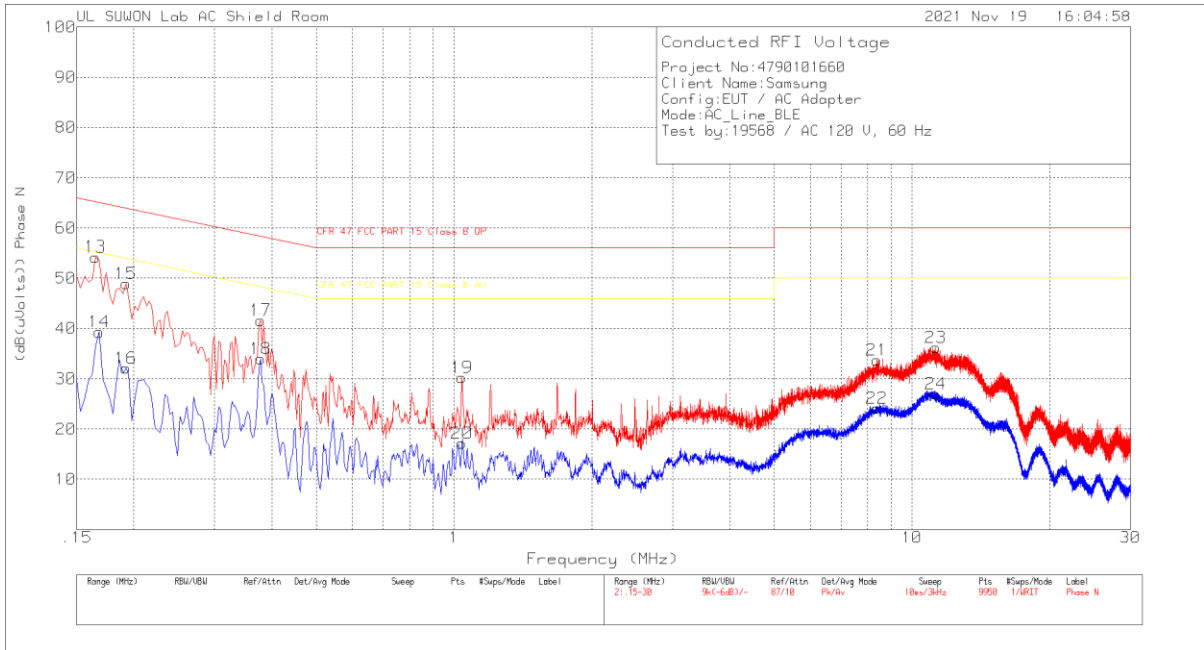
Quasi-Peak Emissions

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)
.15	37.24	Qp	9.7	.1	47.04	66	-18.96	-	-

Qp - Quasi-Peak detector

LINE 2 RESULTS



Trace Markers

Range 2: Phase N .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With 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	.165	44.23	Pk	9.9	.1	54.23	65.21	-10.98	-	-
14	.168	29.18	Av	10	.1	39.28	-	-	55.06	-15.78
15	.192	38.87	Pk	9.9	.2	48.97	63.95	-14.98	-	-
16	.192	22.03	Av	9.9	.2	32.13	-	-	53.95	-21.82
17	.378	31.64	Pk	9.8	.2	41.64	58.32	-16.68	-	-
18	.378	23.95	Av	9.8	.2	33.95	-	-	48.32	-14.37
19	1.041	20.27	Pk	9.7	.3	30.27	56	-25.73	-	-
20	1.041	7.13	Av	9.7	.3	17.13	-	-	46	-28.87
21	8.388	23.63	Pk	9.8	.3	33.73	60	-26.27	-	-
22	8.379	14.05	Av	9.8	.3	24.15	-	-	50	-25.85
23	11.256	26.08	Pk	9.9	.3	36.28	60	-23.72	-	-
24	11.256	16.76	Av	9.9	.3	26.96	-	-	50	-23.04

Pk - Peak detector
 Av - Average detection

Quasi-Peak Emissions

Range 2: Phase N .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With 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)
.15	37.8	Qp	9.7	.1	47.6	66	-18.4	-	-

Qp - Quasi-Peak detector

END OF TEST REPORT