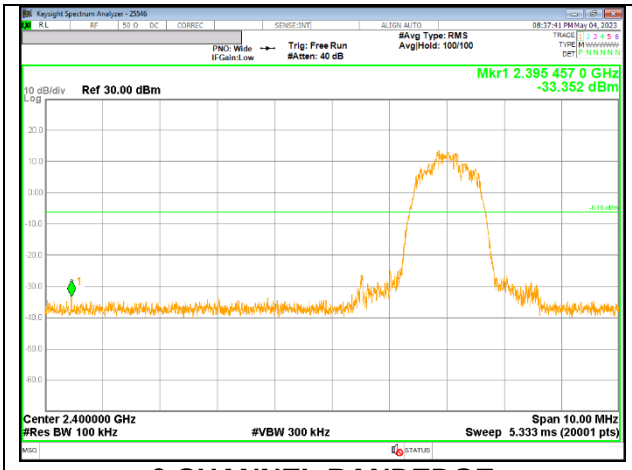
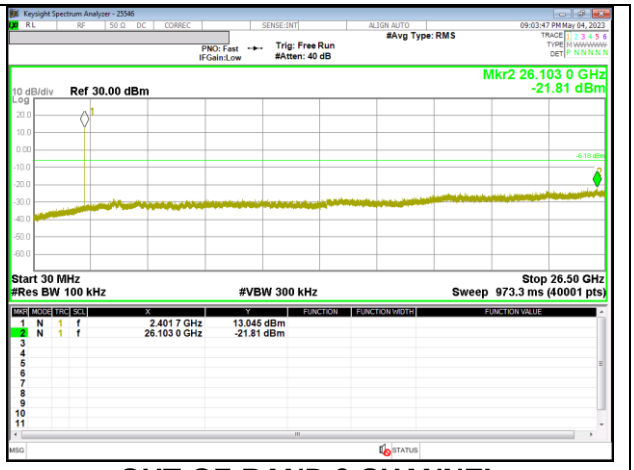
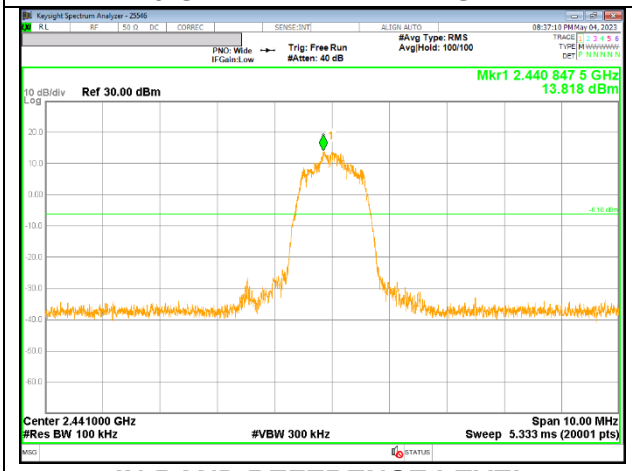
SPURIOUS EMISSIONS, NON-HOPPING - ANT2



0 CHANNEL BANDEDGE

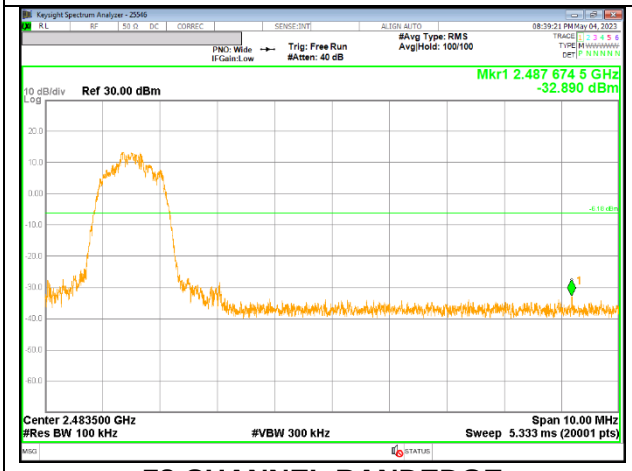


OUT-OF-BAND 0 CHANNEL

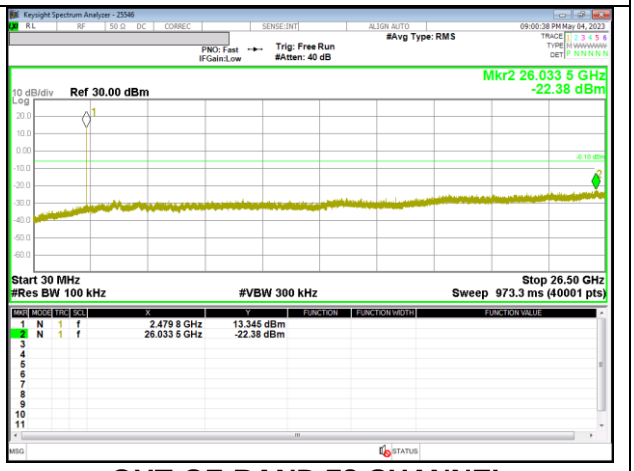


IN-BAND REFERENCE LEVEL

OUT-OF-BAND 39 CHANNEL

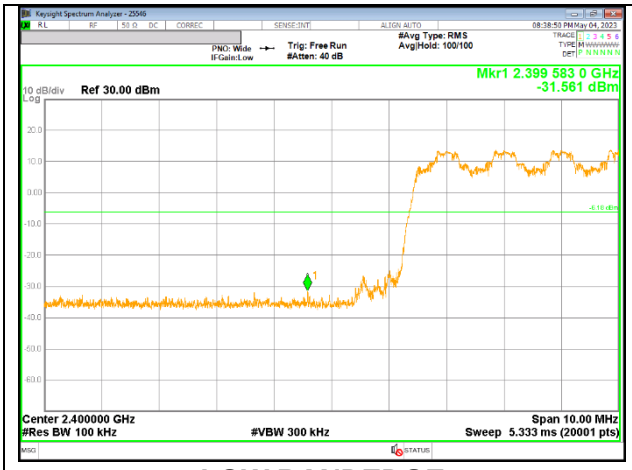


78 CHANNEL BANDEDGE



OUT-OF-BAND 78 CHANNEL

SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON



LOW BANDEDGE

HIGH BANDEDGE

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 1GHz and 150 cm for above 1GHz. 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.(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.)

For band edge 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 1/T (on time) for average measurement.

GFSK = 1/T = 1 / 0.00287s = 348Hz.

The minimum VBW was 347Hz, but test receiver(ESU40) couldn’t set value 348Hz. Due to this reason, testing VBW was set to 500Hz(Worst cases).

The spectrum from 1GHz 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.

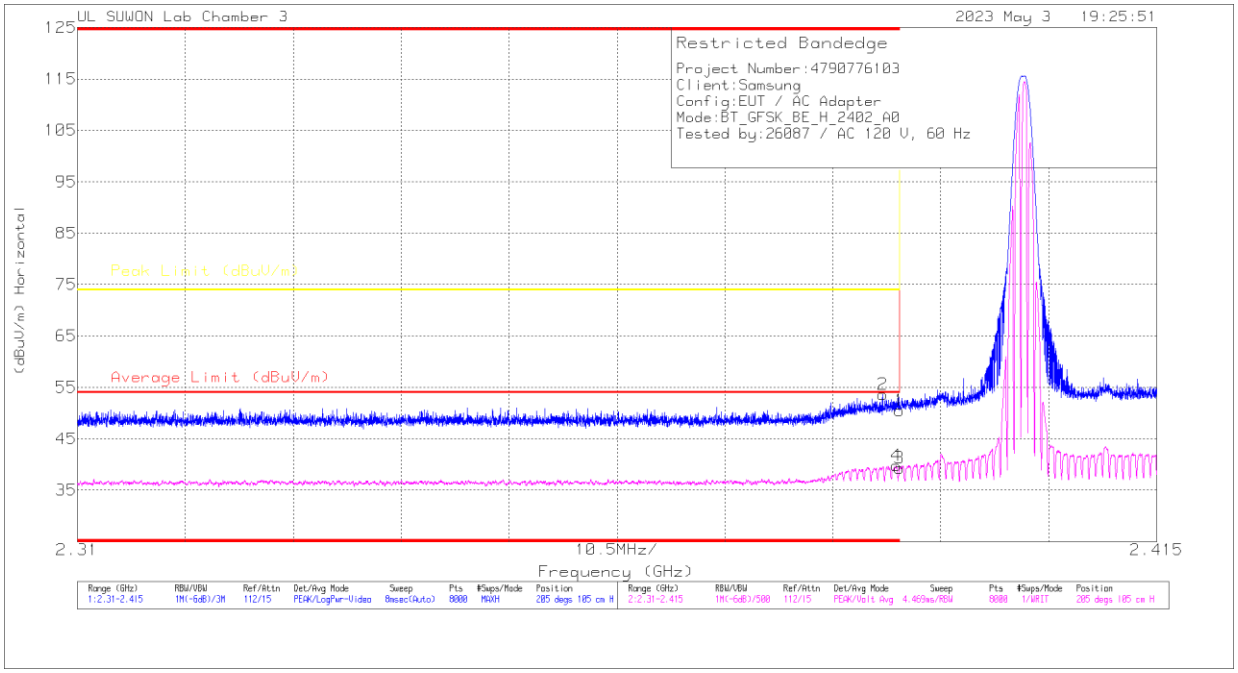
Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open are test site.
Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the one of tests made in an open field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

10.1. TRANSMITTER ABOVE 1 GHz

10.1.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION

- ANT1
BANDEDGE (0 CHANNEL)

HORIZONTAL RESULT

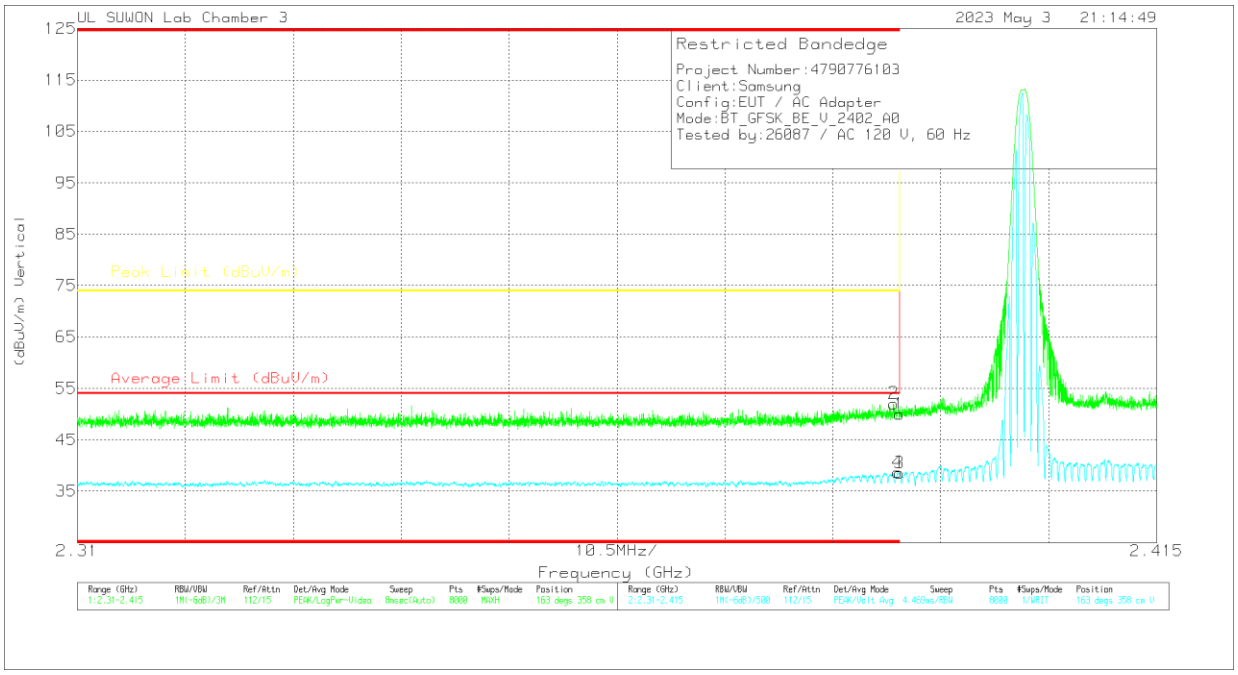


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(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	43.56	Pk	32.1	-25.1	50.56	-	-	74	-23.44	205	105	H
2	* 2.38833	46.64	Pk	32.1	-25.1	53.64	-	-	74	-20.36	205	105	H
3	* 2.39	32.24	VA1T	32.1	-25.1	39.24	54	-14.76	-	-	205	105	H
4	* 2.38969	32.77	VA1T	32.1	-25.1	39.77	54	-14.23	-	-	205	105	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

VERTICAL RESULT



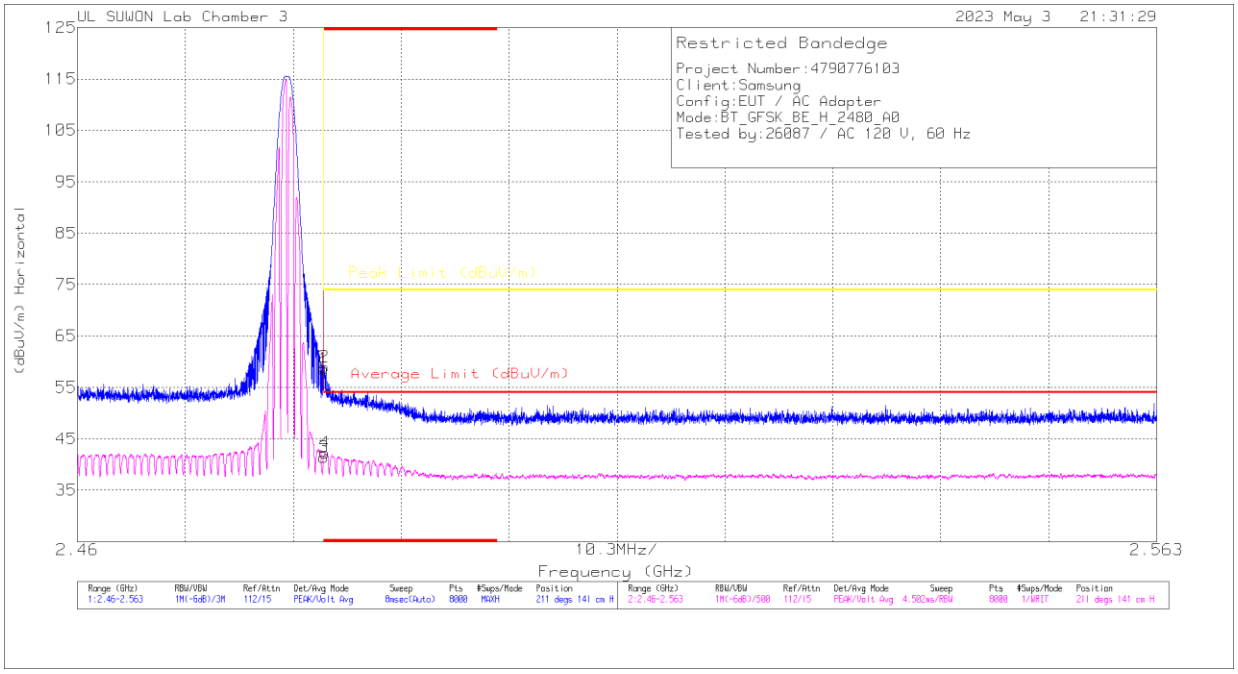
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(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	42.99	Pk	32.1	-25.1	49.99	-	-	74	-24.01	163	358	V
2	* 2.38939	45.06	Pk	32.1	-25.1	52.06	-	-	74	-21.94	163	358	V
3	* 2.39	31.49	VA1T	32.1	-25.1	38.49	54	-15.51	-	-	163	358	V
4	* 2.38977	31.66	VA1T	32.1	-25.1	38.66	54	-15.34	-	-	163	358	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

BANDEDGE (78 CHANNEL)

HORIZONTAL RESULT

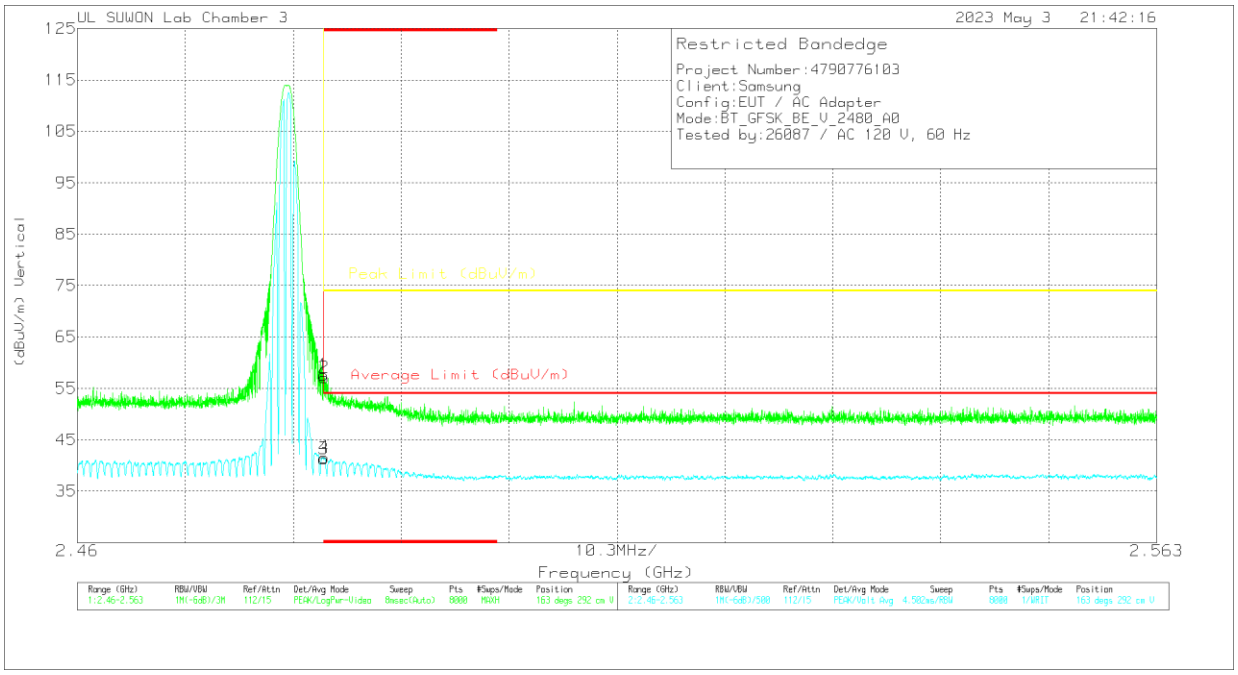


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	51.23	Pk	32.4	-25	58.63	-	-	74	-15.37	211	141	H
2	* 2.48353	51.63	Pk	32.4	-25	59.03	-	-	74	-14.97	211	141	H
3	* 2.4835	34.03	VA1T	32.4	-25	41.43	54	-12.57	-	-	211	141	H
4	* 2.4836	34.83	VA1T	32.4	-25	42.23	54	-11.77	-	-	211	141	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

VERTICAL RESULT



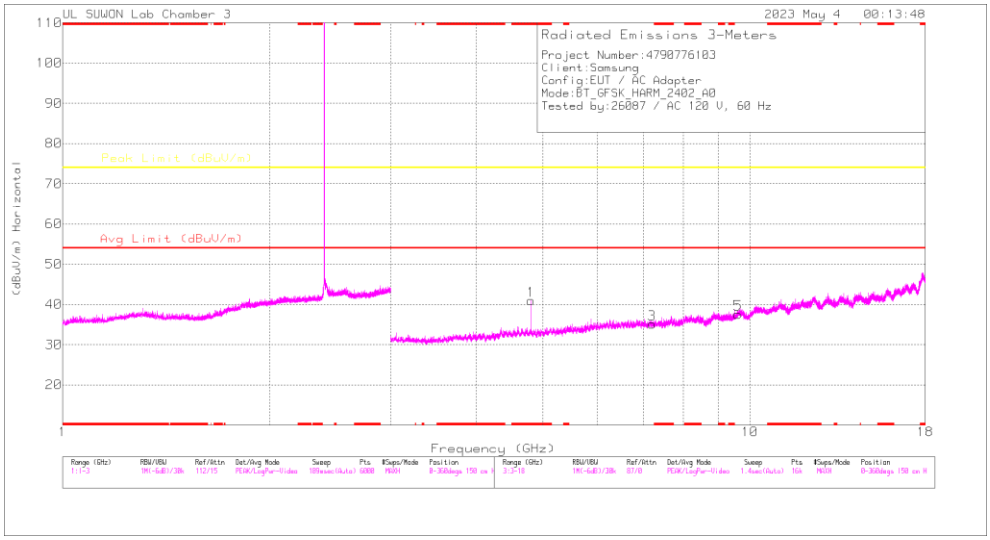
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	50.21	Pk	32.4	-25	57.61	-	-	74	-16.39	163	292	V
2	* 2.48356	49.69	Pk	32.4	-25	57.09	-	-	74	-16.91	163	292	V
3	* 2.4835	33.94	VA1T	32.4	-25	41.34	54	-12.66	-	-	163	292	V
4	* 2.48356	34.19	VA1T	32.4	-25	41.59	54	-12.41	-	-	163	292	V

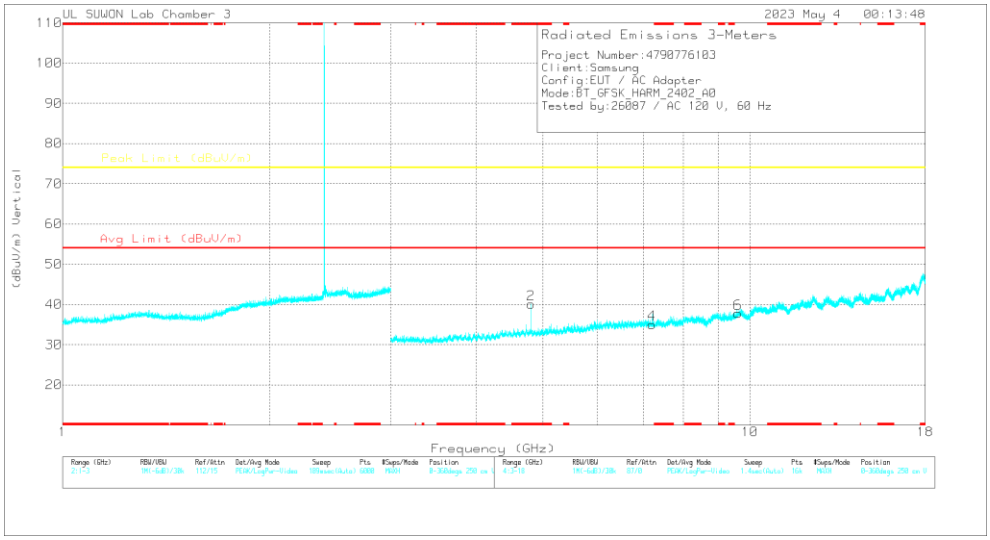
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

HARMONICS AND SPURIOUS EMISSIONS

0 CHANNEL RESULTS



HORIZONTAL



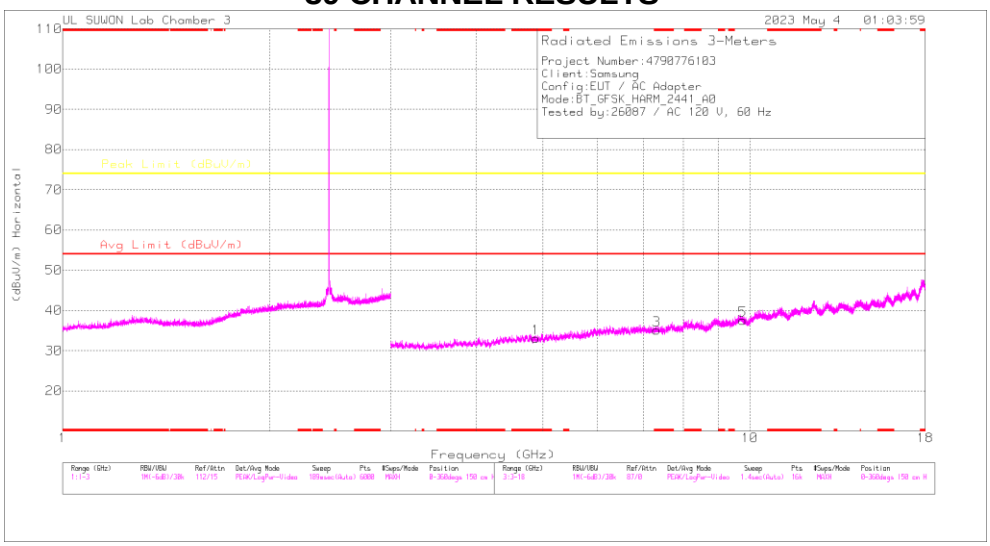
VERTICAL

RADIATED EMISSIONS

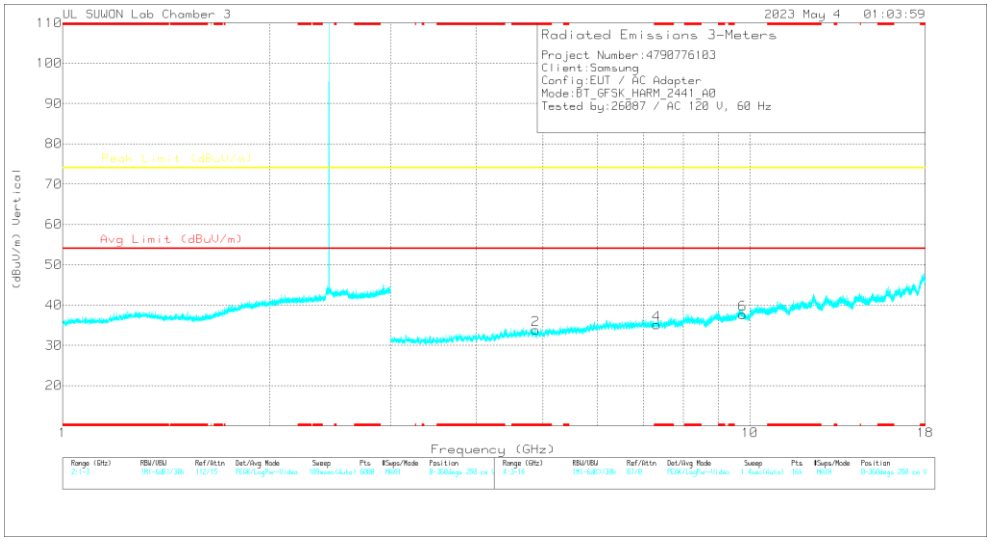
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0021895 7	3GHz_HP(dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.80426	42.56	PKFH	34.3	-30.1	46.76	-	-	74	-27.24	203	101	H
* 4.80388	36.59	VA1T	34.3	-30.1	40.79	54	-13.21	-	-	203	101	H
* 4.80424	42.1	PKFH	34.3	-30.1	46.3	-	-	74	-27.7	170	286	V
* 4.80402	35.71	VA1T	34.3	-30.1	39.91	54	-14.09	-	-	170	286	V
7.19891	34.34	PKFH	35.8	-25.9	44.24	-	-	74	-29.76	0	100	H
7.19658	34.19	PKFH	35.8	-25.8	44.19	-	-	74	-29.81	0	100	V
9.61317	30.74	PKFH	36.7	-21.5	45.94	-	-	74	-28.06	0	100	H
9.61486	30.63	PKFH	36.7	-21.5	45.83	-	-	74	-28.17	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

39 CHANNEL RESULTS



HORIZONTAL



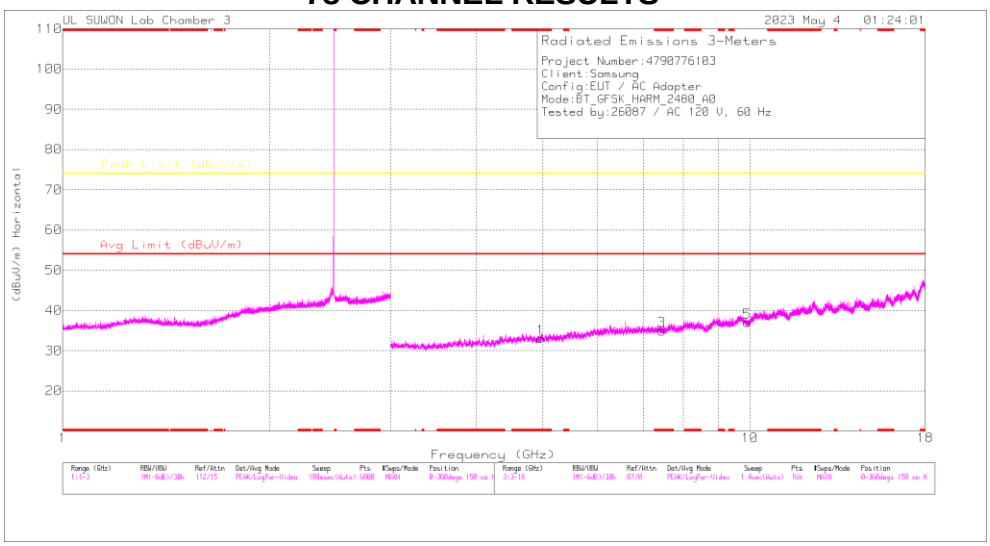
VERTICAL

RADIATED EMISSIONS

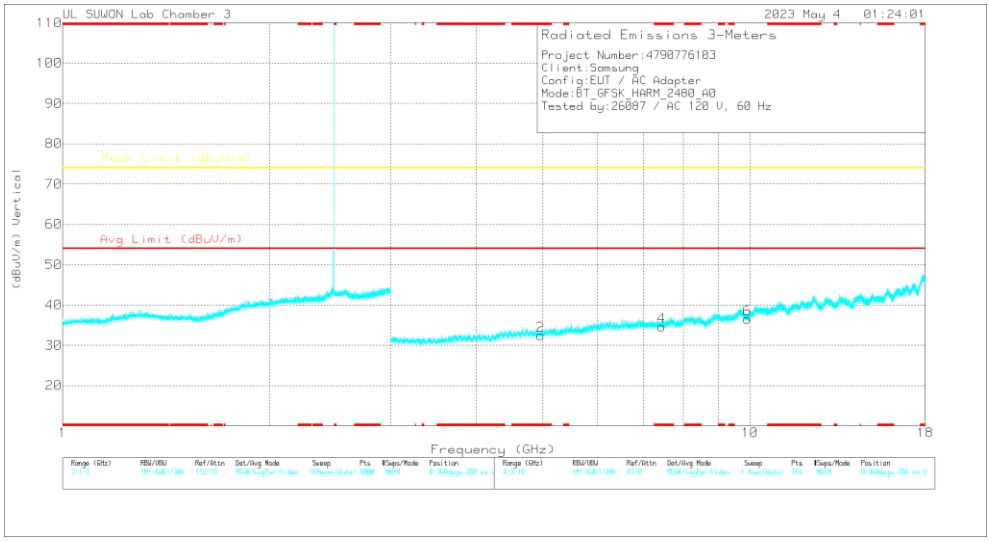
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	3GHz_HP(dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.8726	37.56	PKFH	34.2	-30.8	40.96	-	-	74	-33.04	0	100	H
* 4.87986	38.05	PKFH	34.2	-30.9	41.35	-	-	74	-32.65	0	100	V
* 7.33261	33.42	PKFH	35.8	-25.2	44.02	-	-	74	-29.98	0	100	H
* 7.31722	32.81	PKFH	35.8	-25.4	43.21	-	-	74	-30.79	0	100	V
9.76612	30.24	PKFH	36.9	-21.1	46.04	-	-	74	-27.96	0	100	H
9.77055	30.75	PKFH	36.9	-21.2	46.45	-	-	74	-27.55	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak

78 CHANNEL RESULTS



HORIZONTAL



VERTICAL

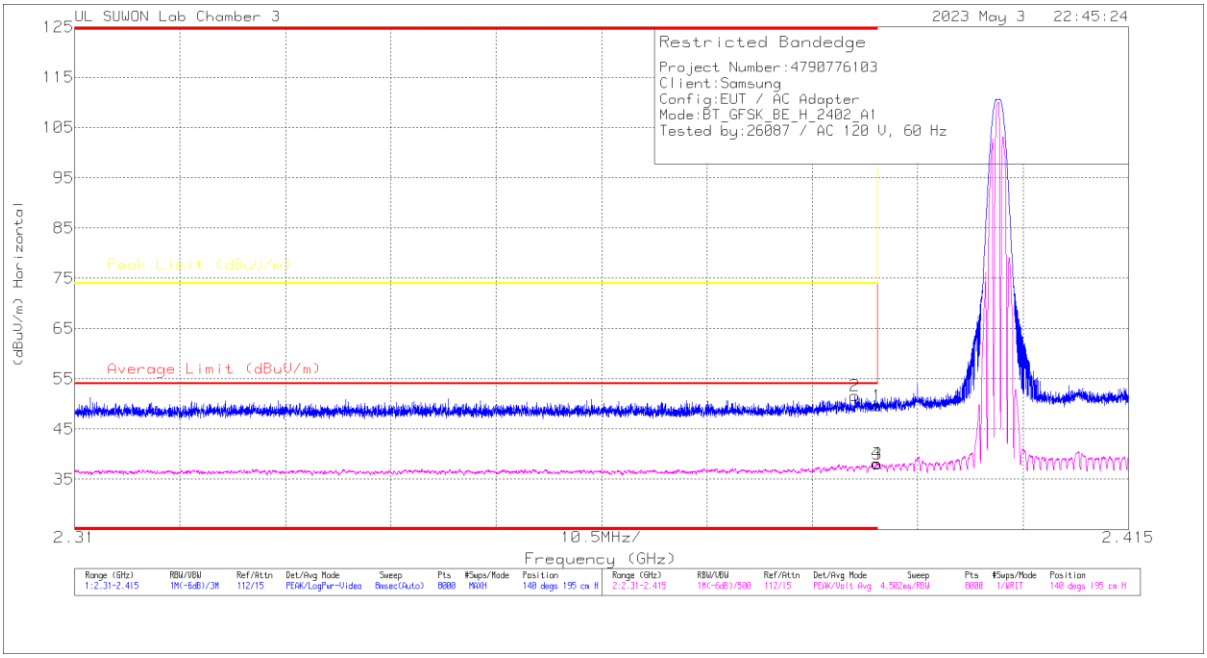
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	3GHz_HP(dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.96959	37.95	PKFH	34.3	-30.4	41.85	-	-	74	-32.15	0	100	H
* 4.96041	37.82	PKFH	34.3	-30.5	41.62	-	-	74	-32.38	0	100	V
* 7.43921	33.37	PKFH	35.7	-25.1	43.97	-	-	74	-30.03	0	100	H
* 7.43429	33.53	PKFH	35.7	-25	44.23	-	-	74	-29.77	0	100	V
9.91139	30.72	PKFH	37.1	-21.2	46.62	-	-	74	-27.38	0	100	H
9.9249	29.24	PKFH	37.1	-21.4	44.94	-	-	74	-29.06	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak

- ANT2
BANDEDGE (0 CHANNEL)

HORIZONTAL RESULT

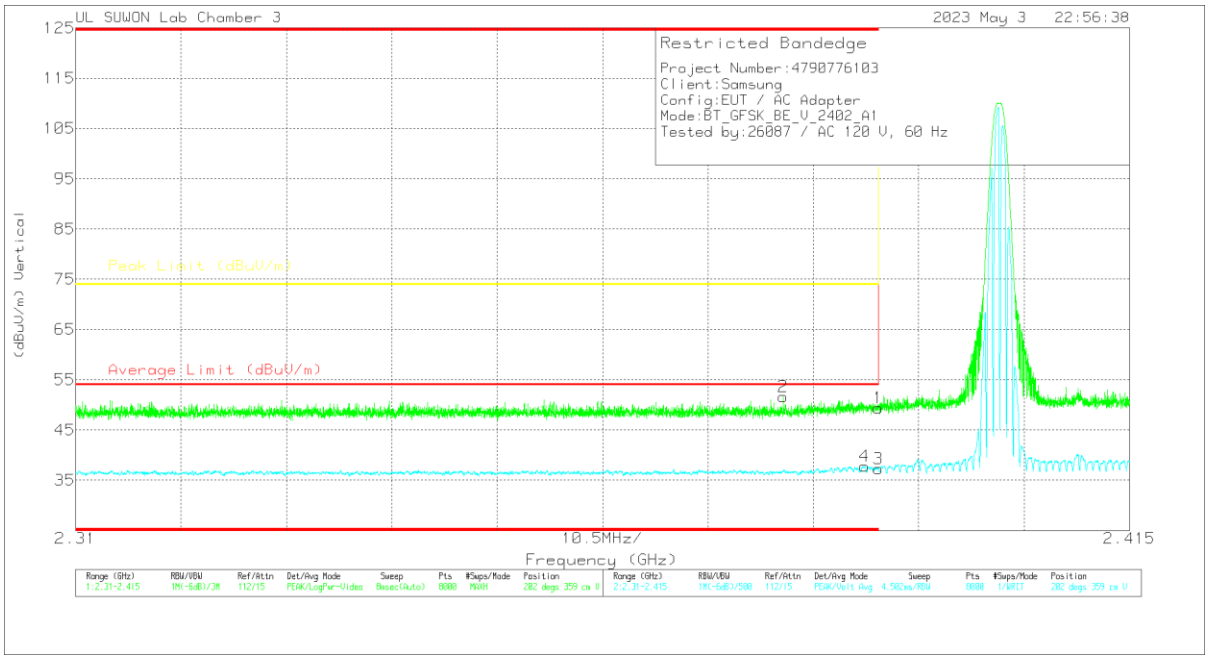


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(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	42.68	Pk	32.1	-25.1	49.68	-	-	74	-24.32	140	195	H
2	* 2.38775	44.59	Pk	32.1	-25.1	51.59	-	-	74	-22.41	140	195	H
3	* 2.39	31	VA1T	32.1	-25.1	38	54	-16	-	-	140	195	H
4	* 2.38989	31.14	VA1T	32.1	-25.1	38.14	54	-15.86	-	-	140	195	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

VERTICAL RESULT



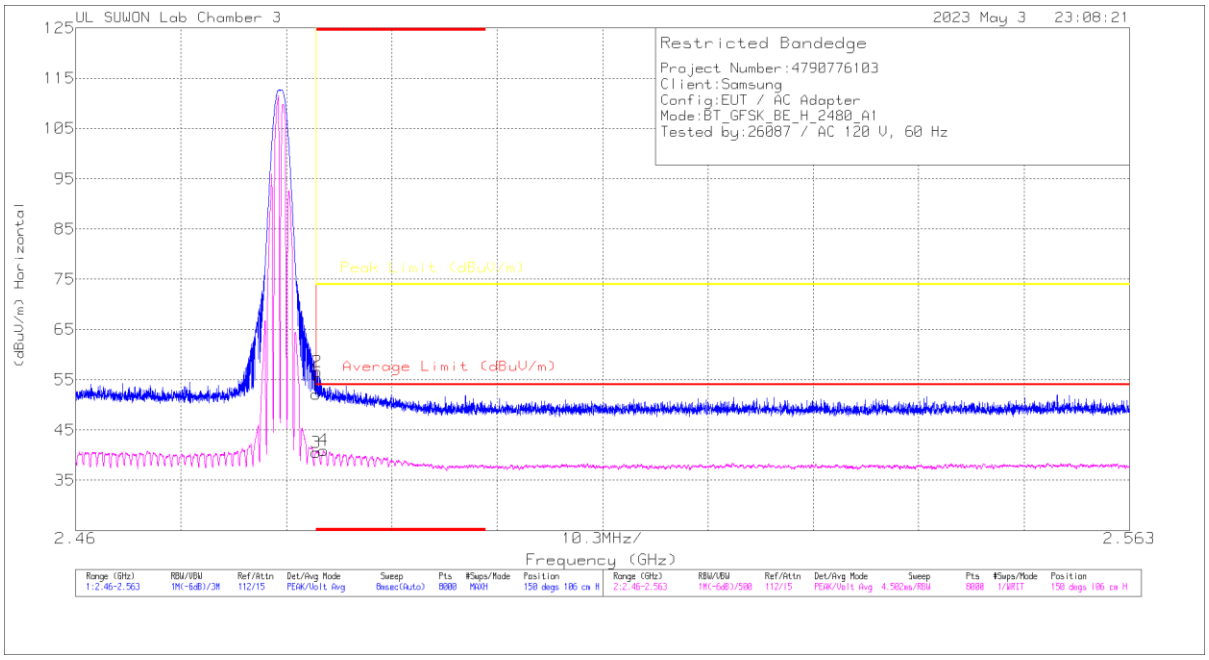
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(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	42.42	Pk	32.1	-25.1	49.42	-	-	74	-24.58	202	359	V
2	* 2.38049	44.58	Pk	32.1	-25.1	51.58	-	-	74	-22.42	202	359	V
3	* 2.39	30.3	VA1T	32.1	-25.1	37.3	54	-16.7	-	-	202	359	V
4	* 2.38863	30.78	VA1T	32.1	-25.1	37.78	54	-16.22	-	-	202	359	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

BANDEDGE (78 CHANNEL)

HORIZONTAL RESULT

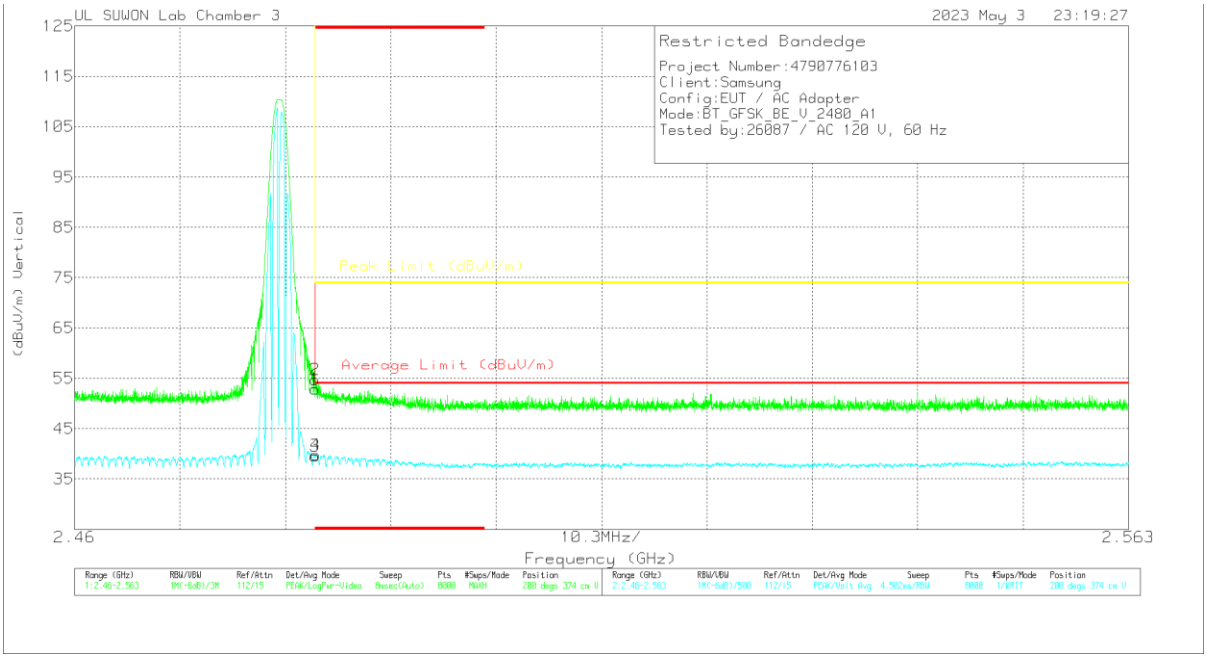


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	44.69	Pk	32.4	-25	52.09	-	-	74	-21.91	150	106	H
2	* 2.48362	49.19	Pk	32.4	-25	56.59	-	-	74	-17.41	150	106	H
3	* 2.4835	33.12	VA1T	32.4	-25	40.52	54	-13.48	-	-	150	106	H
4	* 2.48423	33.57	VA1T	32.4	-25	40.97	54	-13.03	-	-	150	106	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

VERTICAL RESULT



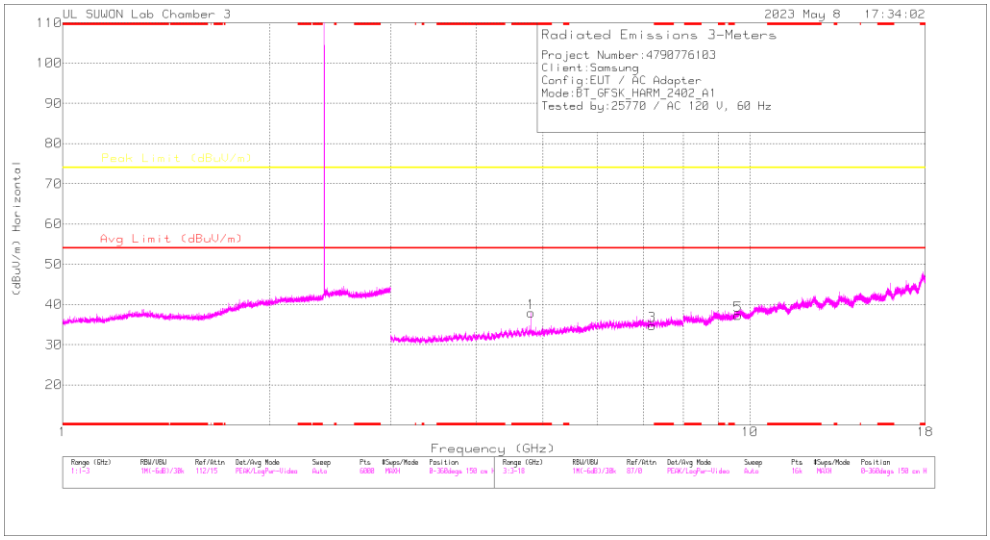
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	45.52	Pk	32.4	-25	52.92	-	-	74	-21.08	200	374	V
2	* 2.48351	47.31	Pk	32.4	-25	54.71	-	-	74	-19.29	200	374	V
3	* 2.4835	32.2	VA1T	32.4	-25	39.6	54	-14.4	-	-	200	374	V
4	* 2.48355	32.41	VA1T	32.4	-25	39.81	54	-14.19	-	-	200	374	V

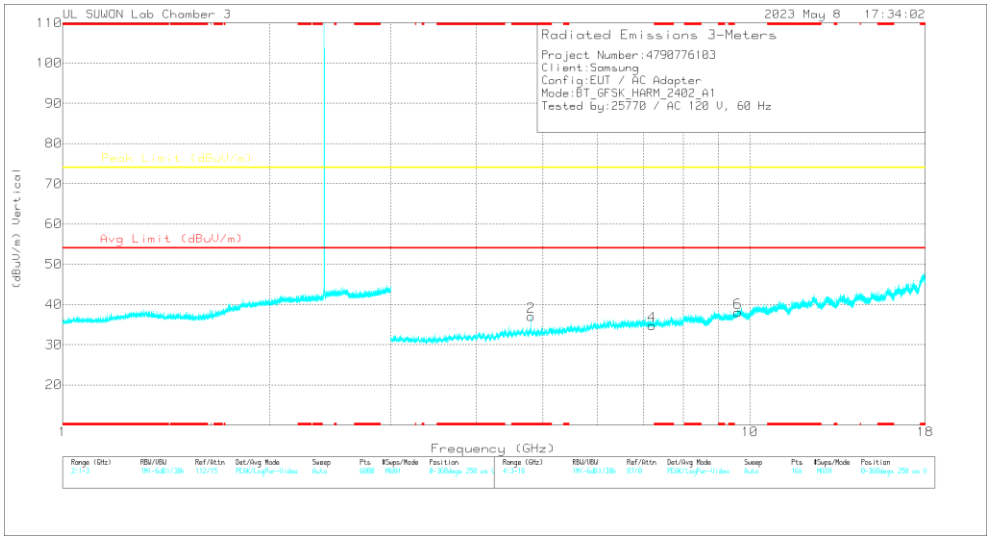
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

HARMONICS AND SPURIOUS EMISSIONS

0 CHANNEL RESULTS



HORIZONTAL



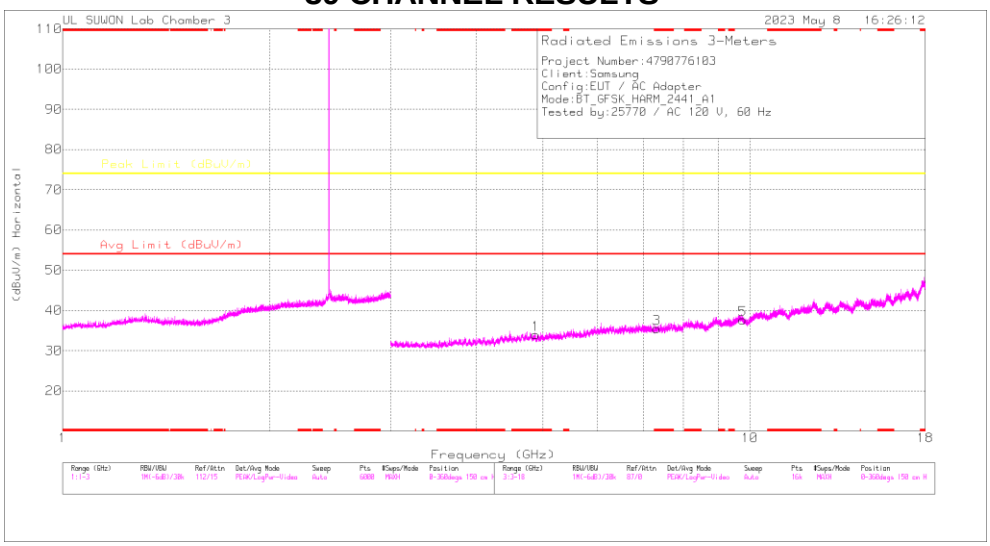
VERTICAL

RADIATED EMISSIONS

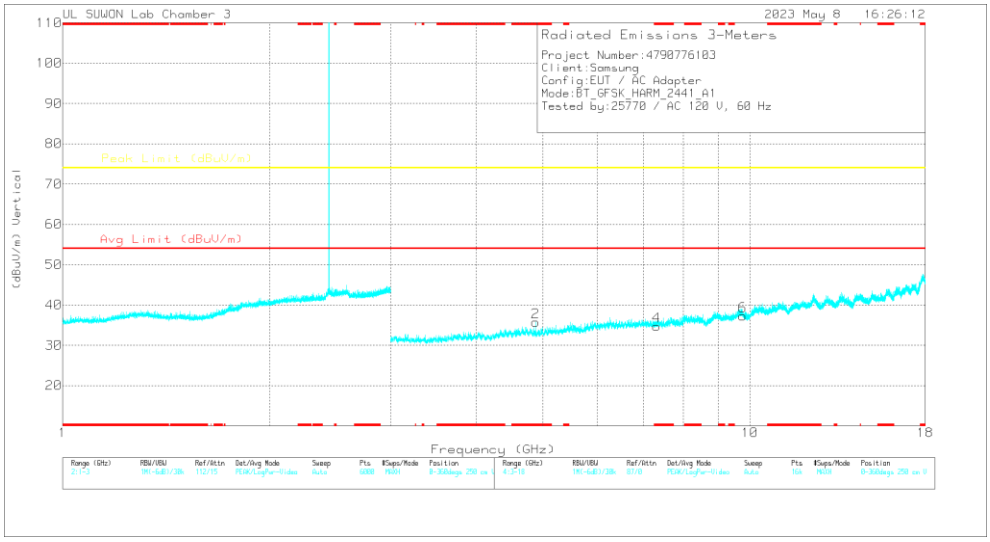
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0021895 7	3GHz_HP(dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.80412	40.75	PKFH	34.3	-30.1	44.95	-	-	74	-29.05	200	115	H
* 4.804	32.58	VA1T	34.3	-30.1	36.78	54	-17.22	-	-	200	115	H
* 4.80369	39.48	PKFH	34.3	-30.1	43.68	-	-	74	-30.32	164	246	V
* 4.80399	31.45	VA1T	34.3	-30.1	35.65	54	-18.35	-	-	164	246	V
7.20675	33.43	PKFH	35.8	-25.8	43.43	-	-	74	-30.57	0	100	H
7.20512	33.16	PKFH	35.8	-25.8	43.16	-	-	74	-30.84	0	100	V
9.60757	31.25	PKFH	36.7	-21.7	46.25	-	-	74	-27.75	0	100	H
9.60722	30.77	PKFH	36.7	-21.7	45.77	-	-	74	-28.23	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

39 CHANNEL RESULTS



HORIZONTAL



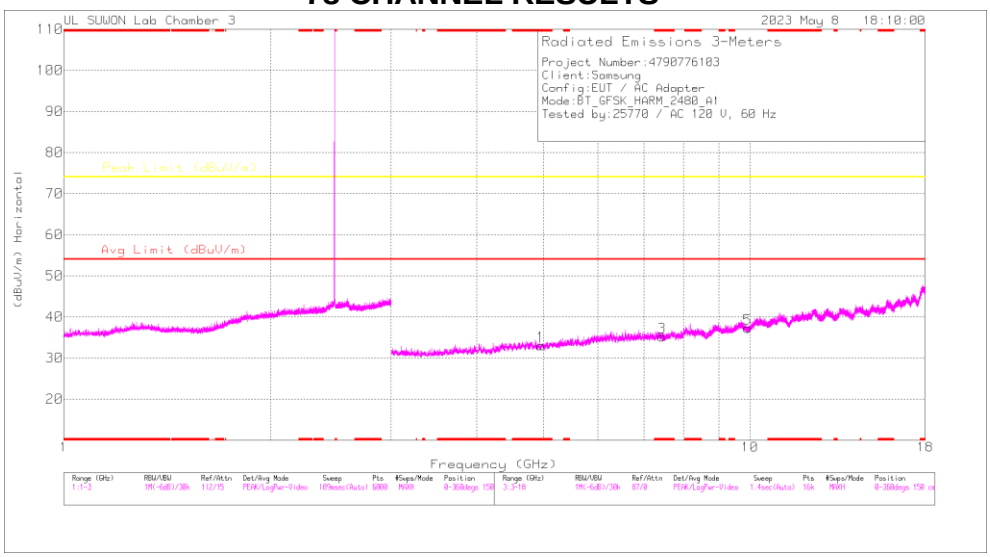
VERTICAL

RADIATED EMISSIONS

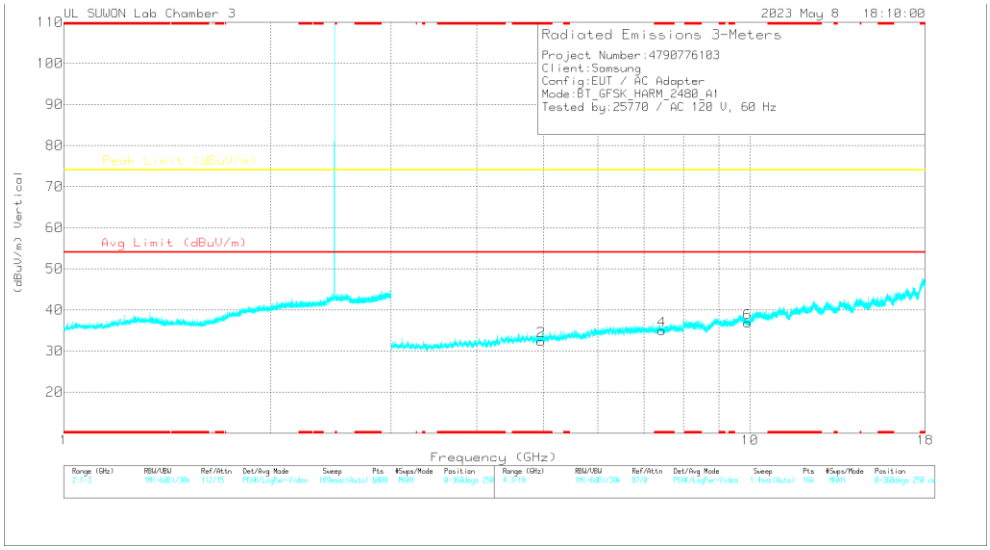
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	3GHz_HP[dB]	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.88023	39.37	PKFH	34.2	-30.9	42.67	-	-	74	-31.33	213	114	H
* 4.88014	28.56	VA1T	34.2	-30.9	31.86	54	-22.14	-	-	213	114	H
* 4.87736	37.29	PKFH	34.2	-30.8	40.69	-	-	74	-33.31	149	230	V
* 4.88006	26.22	VA1T	34.2	-30.9	29.52	54	-24.48	-	-	149	230	V
* 7.31925	34.63	PKFH	35.8	-25.4	45.03	-	-	74	-28.97	0	100	H
* 7.31997	32.86	PKFH	35.8	-25.3	43.36	-	-	74	-30.64	0	100	V
9.75919	29.72	PKFH	36.9	-21.2	45.42	-	-	74	-28.58	0	100	H
9.75894	29.67	PKFH	36.9	-21.1	45.47	-	-	74	-28.53	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

78 CHANNEL RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

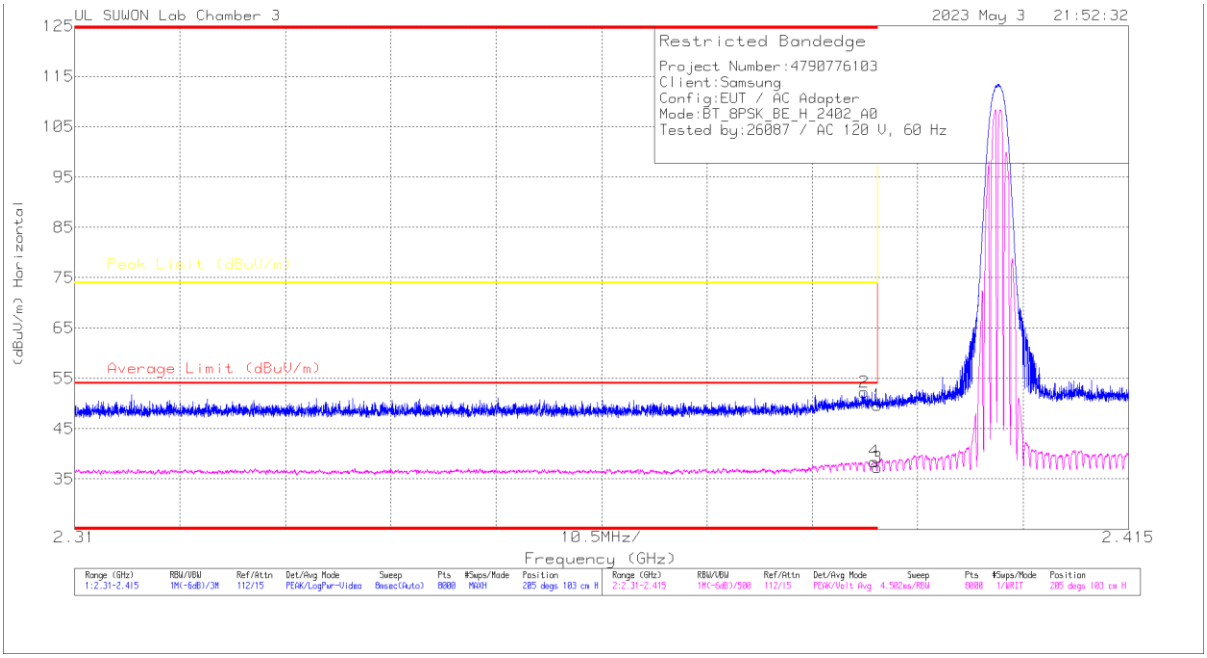
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0021895 7	3GHz_HP(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.96173	37.03	PKFH	34.3	-30.6	0	40.73	-	-	74	-33.27	0	100	H
* 4.96128	37.36	PKFH	34.3	-30.5	0	41.16	-	-	74	-32.84	0	100	V
* 7.43882	33.33	PKFH	35.7	-25.1	0	43.93	-	-	74	-30.07	0	100	H
* 7.44248	32.43	PKFH	35.7	-25.1	0	43.03	-	-	74	-30.97	0	100	V
9.91776	29	PKFH	37.1	-21.3	0	44.8	-	-	74	-29.2	0	100	H
9.92055	28.86	PKFH	37.1	-21.4	0	44.56	-	-	74	-29.44	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak

10.1.2. BLUETOOTH ENHANCED DATA RATE 8PSK MODULATION

- ANT1
BANDEDGE (0 CHANNEL)

HORIZONTAL RESULT

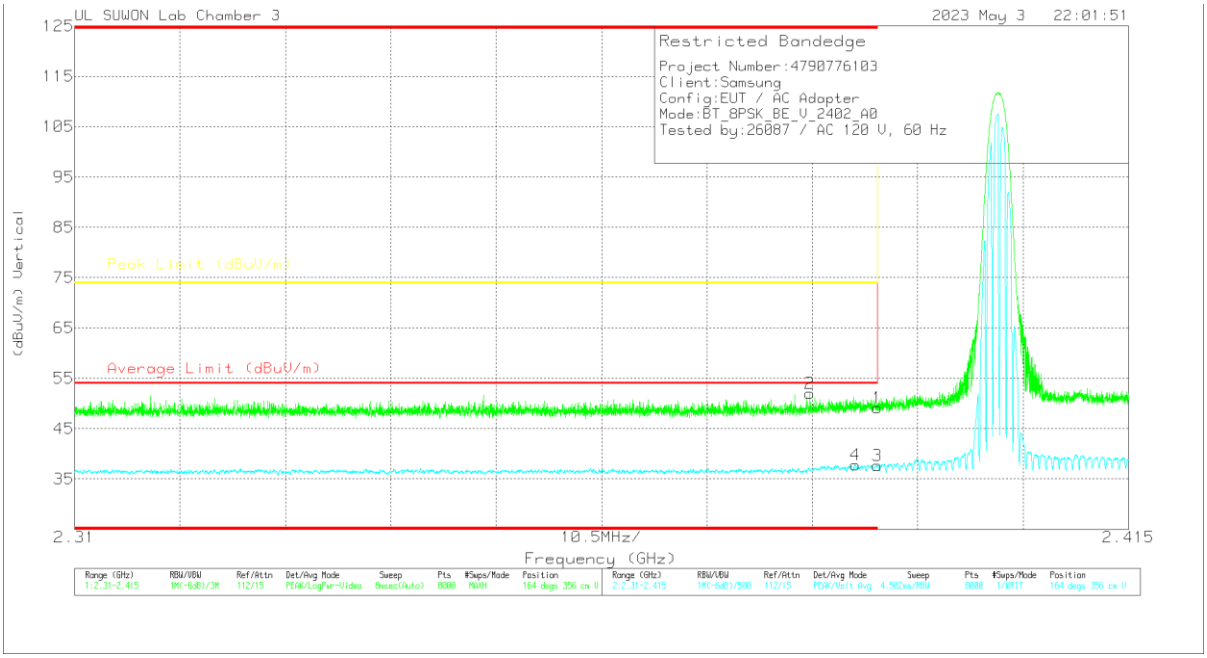


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(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	42.69	Pk	32.1	-25.1	49.69	-	-	74	-24.31	205	103	H
2	* 2.38864	45.3	Pk	32.1	-25.1	52.3	-	-	74	-21.7	205	103	H
3	* 2.39	30.24	VA1T	32.1	-25.1	37.24	54	-16.76	-	-	205	103	H
4	* 2.38967	31.48	VA1T	32.1	-25.1	38.48	54	-15.52	-	-	205	103	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

VERTICAL RESULT



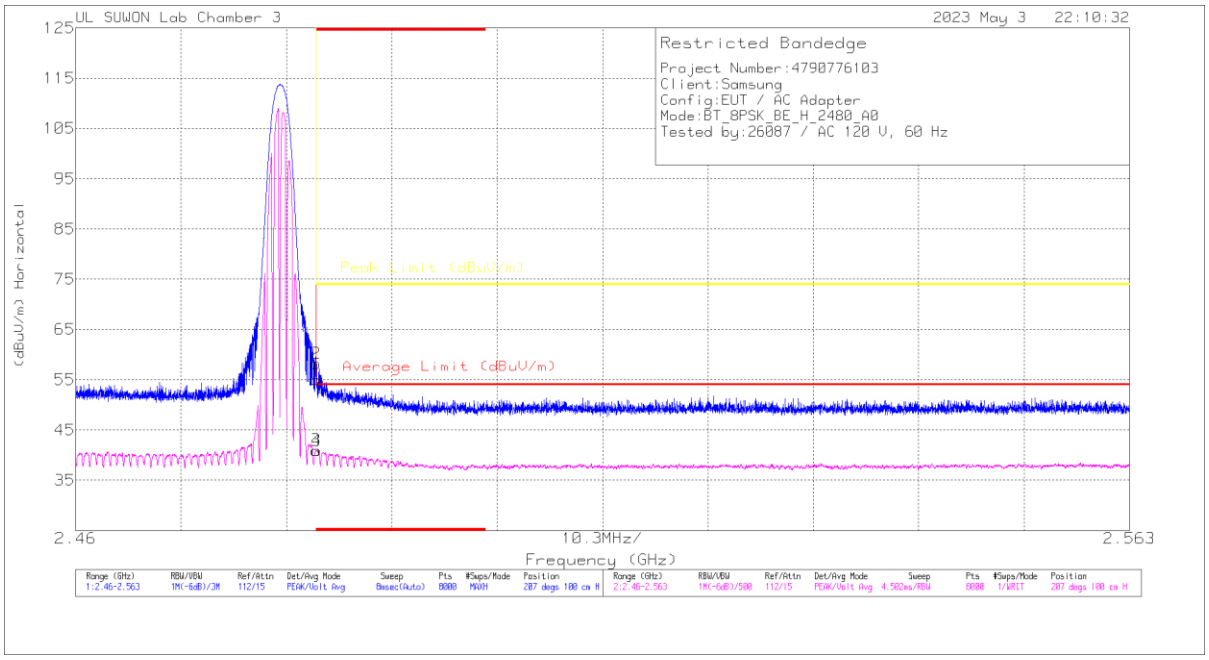
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(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	42.1	Pk	32.1	-25.1	49.1	-	-	74	-24.9	164	356	V
2	* 2.38325	44.96	Pk	32.1	-25.1	51.96	-	-	74	-22.04	164	356	V
3	* 2.39	30.68	VA1T	32.1	-25.1	37.68	54	-16.32	-	-	164	356	V
4	* 2.38779	30.84	VA1T	32.1	-25.1	37.84	54	-16.16	-	-	164	356	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

BANDEDGE (78 CHANNEL)

HORIZONTAL RESULT

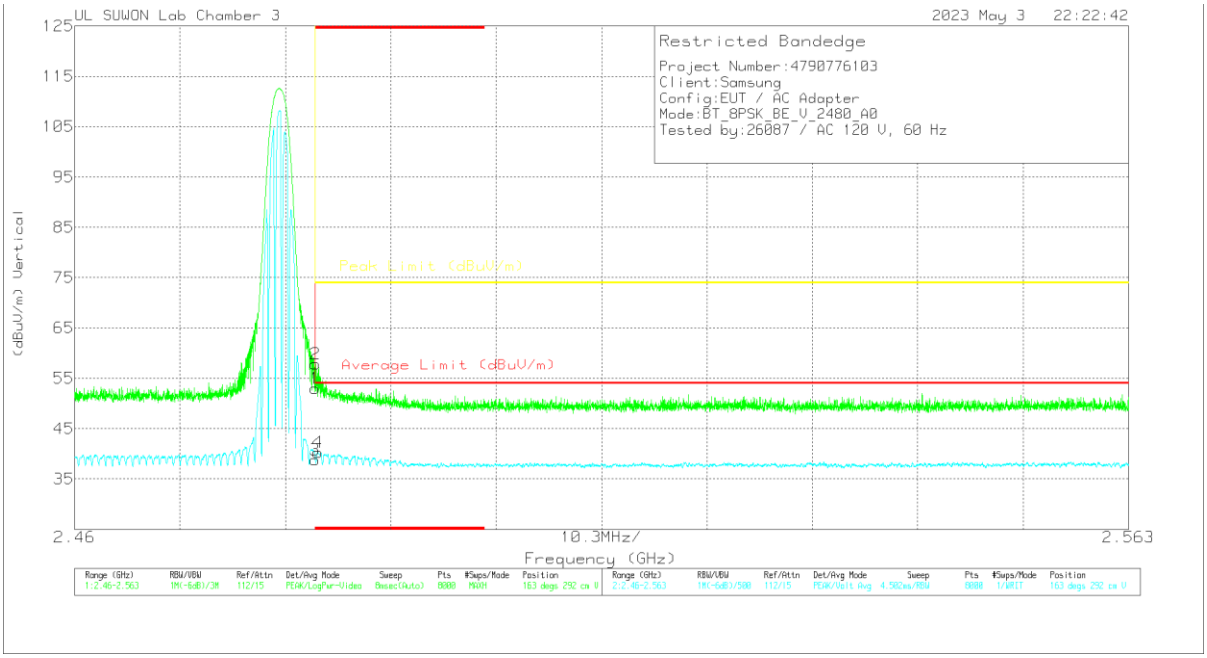


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	47.6	Pk	32.4	-25	55	-	-	74	-19	207	100	H
2	* 2.48351	50.78	Pk	32.4	-25	58.18	-	-	74	-15.82	207	100	H
3	* 2.4835	33.57	VA1T	32.4	-25	40.97	54	-13.03	-	-	207	100	H
4	* 2.48355	33.56	VA1T	32.4	-25	40.96	54	-13.04	-	-	207	100	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

VERTICAL RESULT



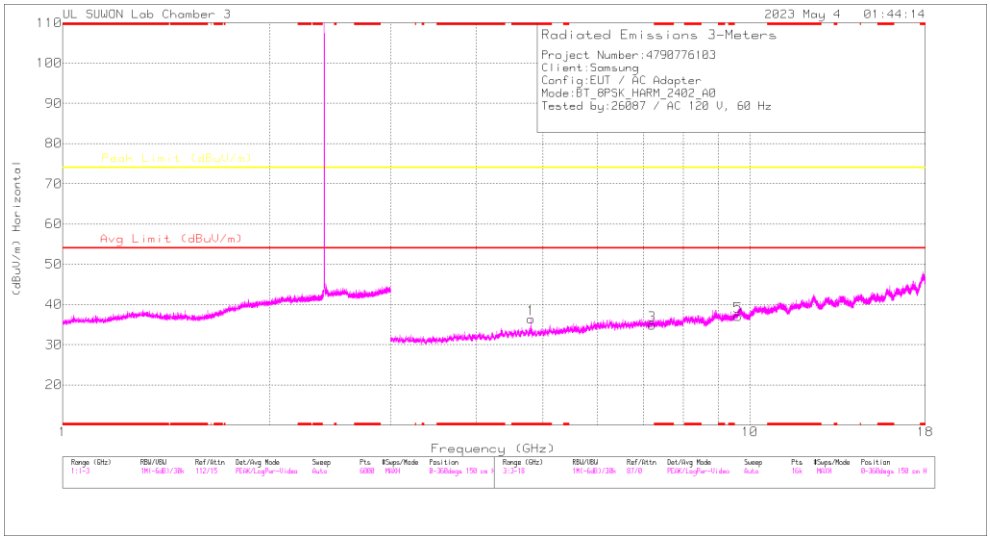
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	45.58	Pk	32.4	-25	52.98	-	-	74	-21.02	163	292	V
2	* 2.48353	50.47	Pk	32.4	-25	57.87	-	-	74	-16.13	163	292	V
3	* 2.4835	31.38	VA1T	32.4	-25	38.78	54	-15.22	-	-	163	292	V
4	* 2.48377	32.91	VA1T	32.4	-25	40.31	54	-13.69	-	-	163	292	V

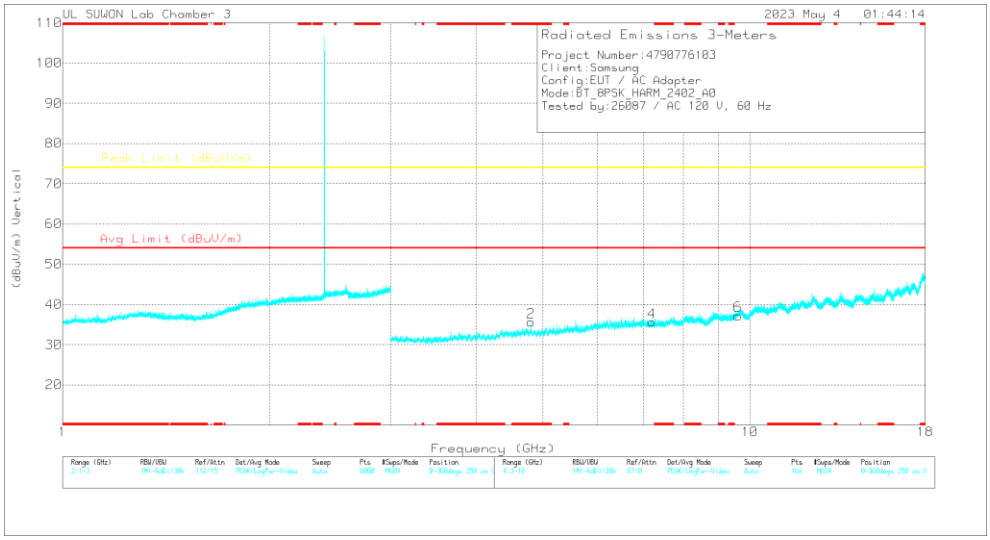
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

HARMONICS AND SPURIOUS EMISSIONS

0 CHANNEL RESULTS



HORIZONTAL



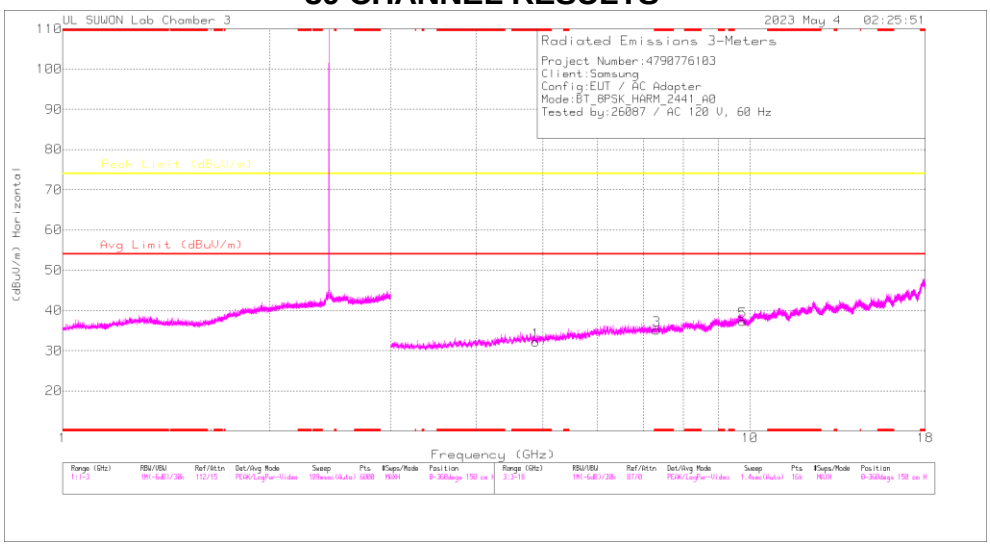
VERTICAL

RADIATED EMISSIONS

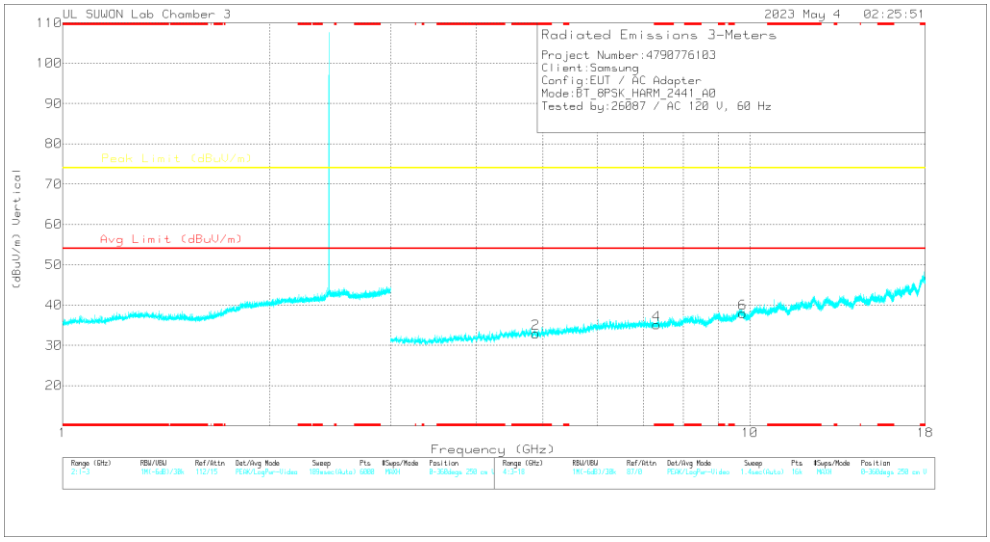
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0021895 7	3GHz_HP(dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.8042	40.84	PKFH	34.3	-30.1	45.04	-	-	74	-28.96	203	101	H
* 4.80374	29.95	VA1T	34.3	-30.1	34.15	54	-19.85	-	-	203	101	H
* 4.80408	40	PKFH	34.3	-30.1	44.2	-	-	74	-29.8	172	289	V
* 4.80392	29.23	VA1T	34.3	-30.1	33.43	54	-20.57	-	-	172	289	V
7.20343	33.63	PKFH	35.8	-25.8	43.63	-	-	74	-30.37	0	100	H
7.20939	33.74	PKFH	35.8	-25.8	43.74	-	-	74	-30.26	0	100	V
9.6044	30.55	PKFH	36.7	-21.7	45.55	-	-	74	-28.45	0	100	H
9.60112	31.72	PKFH	36.7	-21.7	46.72	-	-	74	-27.28	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

39 CHANNEL RESULTS



HORIZONTAL



VERTICAL

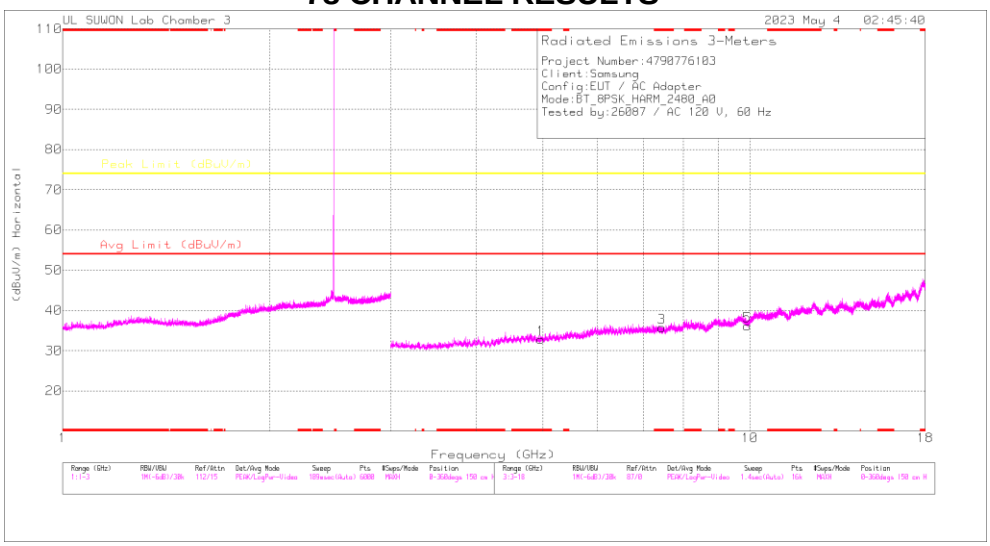
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	3GHz_HP(dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.88041	38.17	PKFH	34.2	-30.9	41.47	-	-	74	-32.53	0	100	H
* 4.88788	37.6	PKFH	34.2	-30.9	40.9	-	-	74	-33.1	0	100	V
* 7.31341	33.18	PKFH	35.8	-25.5	43.48	-	-	74	-30.52	0	100	H
* 7.31335	33.88	PKFH	35.8	-25.5	44.18	-	-	74	-29.82	0	100	V
9.77151	30.42	PKFH	36.9	-21.2	46.12	-	-	74	-27.88	0	100	H
9.75576	30.51	PKFH	36.9	-21.2	46.21	-	-	74	-27.79	0	100	V

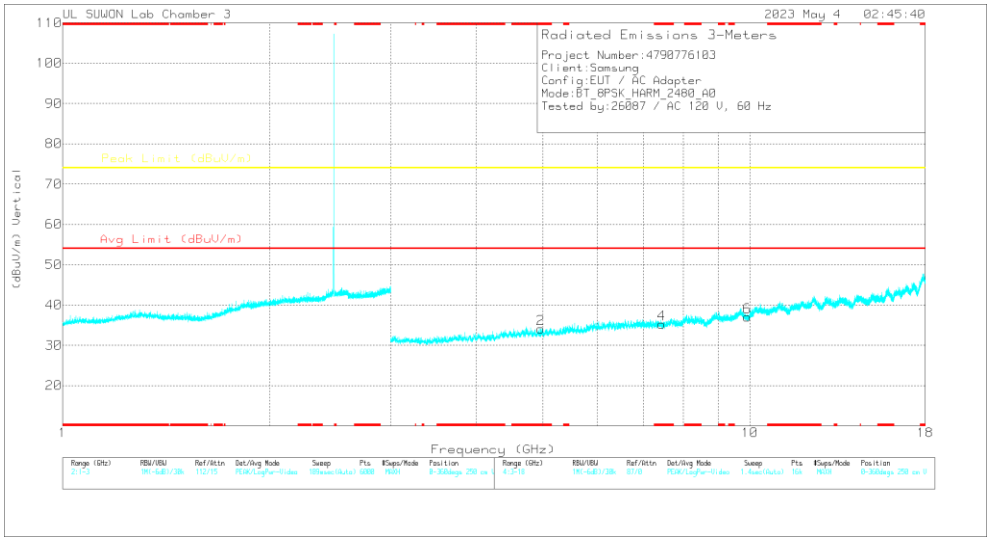
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak

UL KOREA LTD. Suwon Laboratory FORM ID: FCC_15C(05)
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea TEL: (031) 337-9902 FAX: (031) 213-5433

78 CHANNEL RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

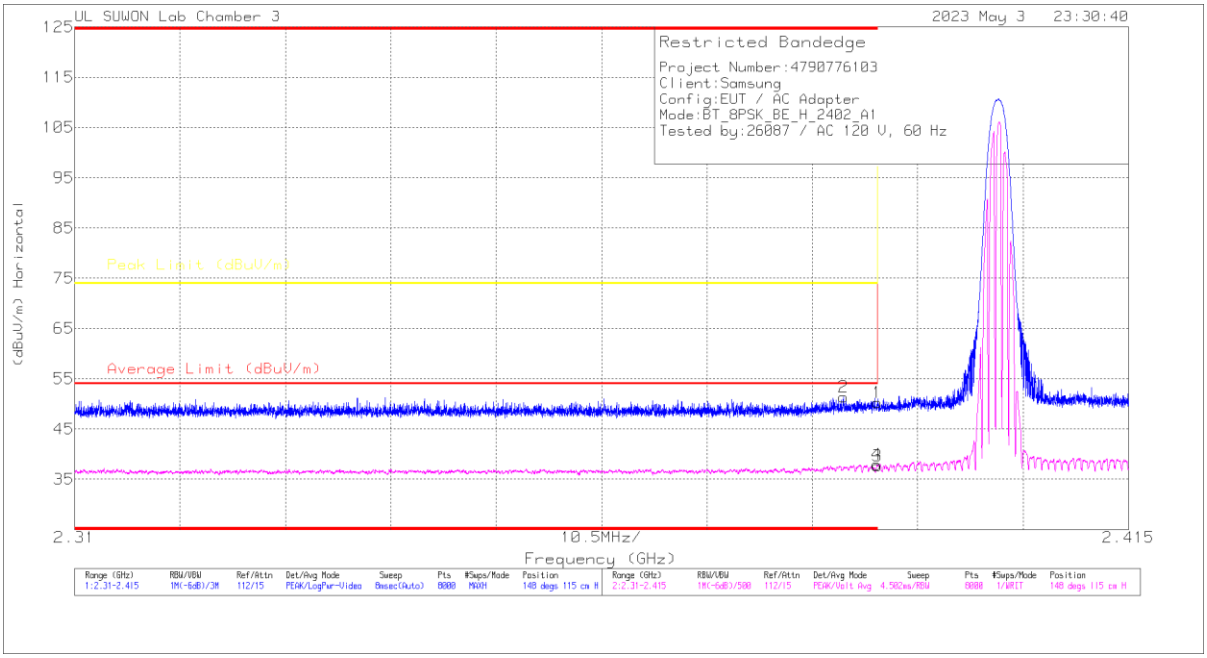
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	3GHz_HP(dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.96566	38.23	PKFH	34.3	-30.4	42.13	-	-	74	-31.87	0	100	H
* 4.95944	37.56	PKFH	34.3	-30.5	41.36	-	-	74	-32.64	0	100	V
* 7.44882	33.19	PKFH	35.7	-25.2	43.69	-	-	74	-30.31	0	100	H
* 7.44418	33.92	PKFH	35.7	-25.2	44.42	-	-	74	-29.58	0	100	V
9.91528	29.55	PKFH	37.1	-21.3	45.35	-	-	74	-28.65	0	100	H
9.91307	29.37	PKFH	37.1	-21.2	45.27	-	-	74	-28.73	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak

UL KOREA LTD. Suwon Laboratory FORM ID: FCC_15C(05)
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea TEL: (031) 337-9902 FAX: (031) 213-5433

- ANT2
BANDEDGE (0 CHANNEL)

HORIZONTAL RESULT

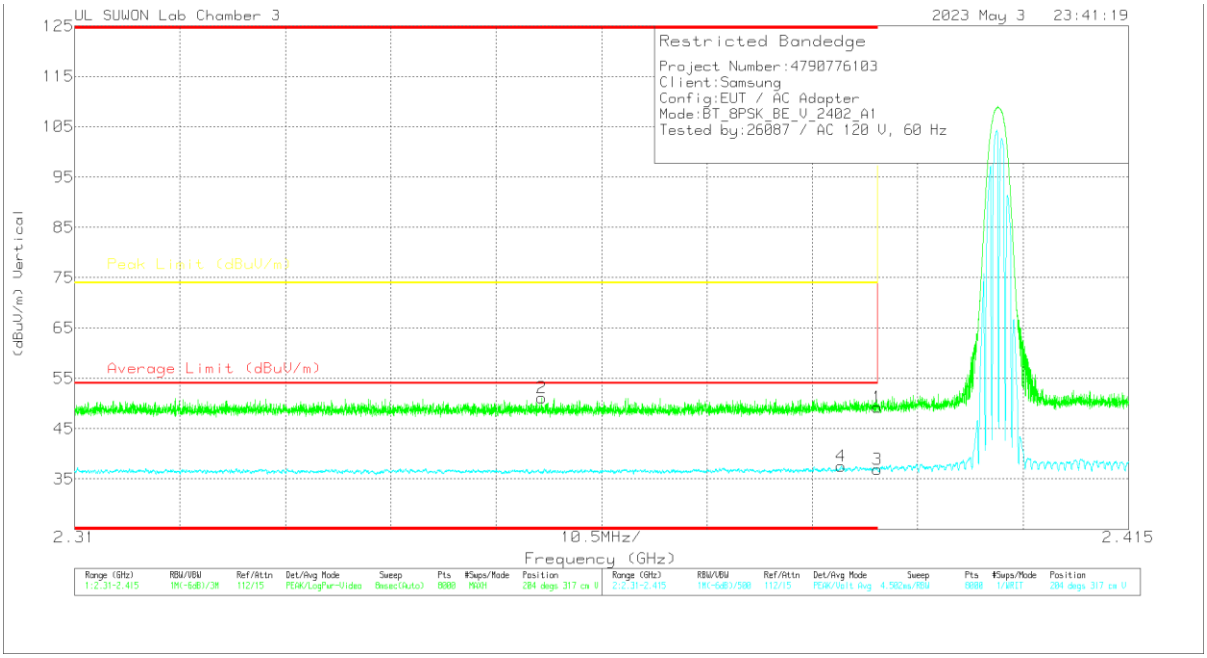


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(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	43.3	Pk	32.1	-25.1	50.3	-	-	74	-23.7	148	115	H
2	* 2.38658	44.34	Pk	32.1	-25.1	51.34	-	-	74	-22.66	148	115	H
3	* 2.39	30.7	VA1T	32.1	-25.1	37.7	54	-16.3	-	-	148	115	H
4	* 2.38994	30.89	VA1T	32.1	-25.1	37.89	54	-16.11	-	-	148	115	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

VERTICAL RESULT



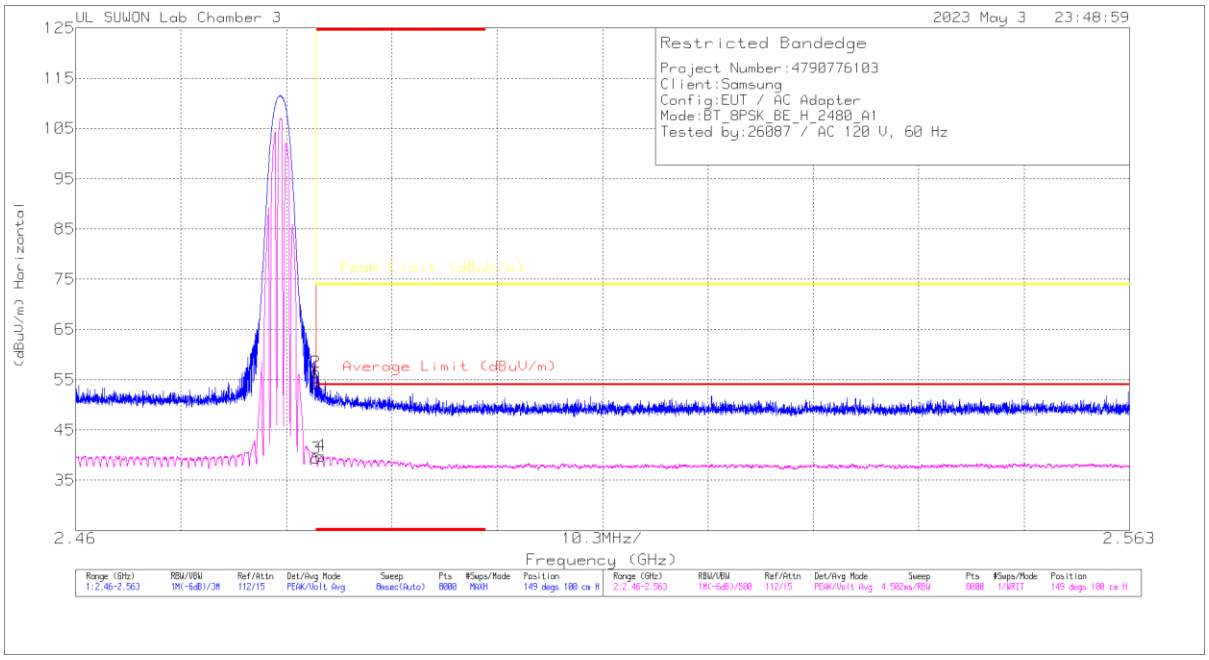
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[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	42.31	Pk	32.1	-25.1	49.31	-	-	74	-24.69	204	317	V
2	* 2.35655	44.23	Pk	32	-25.1	51.13	-	-	74	-22.87	204	317	V
3	* 2.39	29.87	VA1T	32.1	-25.1	36.87	54	-17.13	-	-	204	317	V
4	* 2.38636	30.57	VA1T	32.1	-25.1	37.57	54	-16.43	-	-	204	317	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

BANDEDGE (78 CHANNEL)

HORIZONTAL RESULT

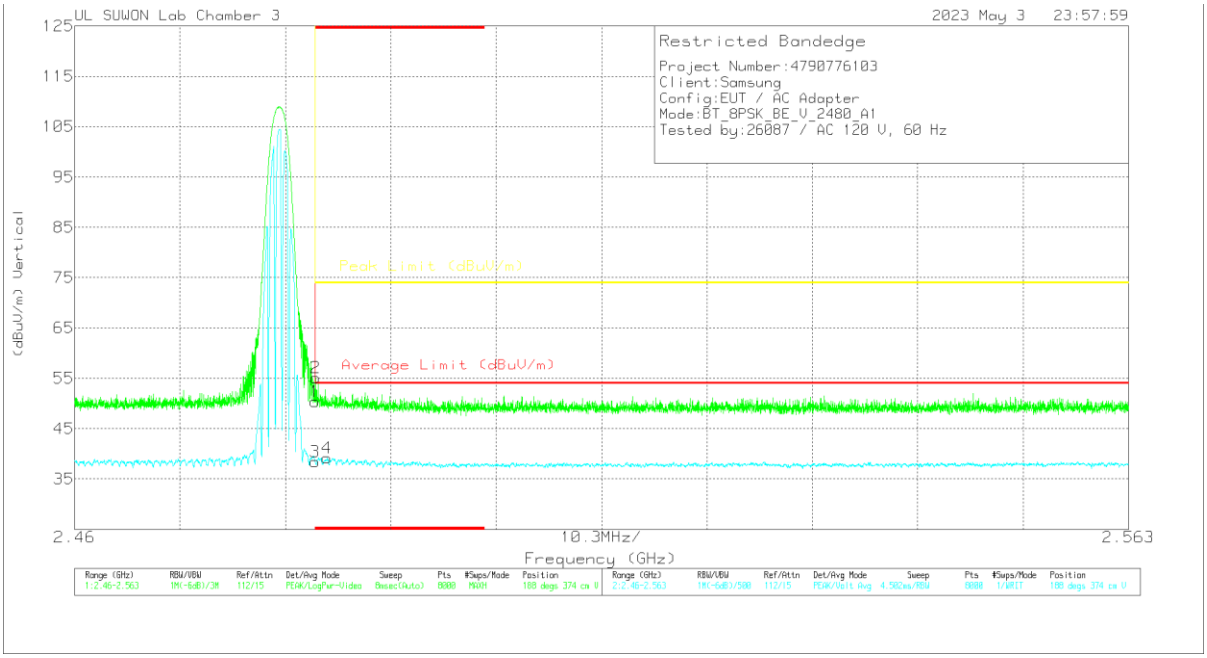


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	46.75	Pk	32.4	-25	54.15	-	-	74	-19.85	149	100	H
2	* 2.48351	49.08	Pk	32.4	-25	56.48	-	-	74	-17.52	149	100	H
3	* 2.4835	32	VA1T	32.4	-25	39.4	54	-14.6	-	-	149	100	H
4	* 2.484	32.45	VA1T	32.4	-25	39.85	54	-14.15	-	-	149	100	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

VERTICAL RESULT



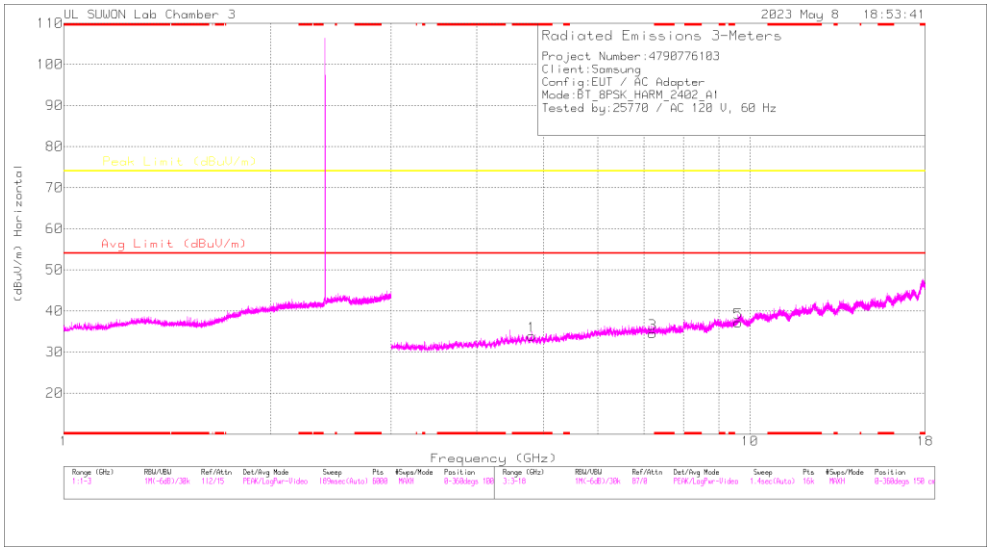
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	42.95	Pk	32.4	-25	50.35	-	-	74	-23.65	188	374	V
2	* 2.48358	47.7	Pk	32.4	-25	55.1	-	-	74	-18.9	188	374	V
3	* 2.4835	31.03	VA1T	32.4	-25	38.43	54	-15.57	-	-	188	374	V
4	* 2.48469	31.8	VA1T	32.4	-25	39.2	54	-14.8	-	-	188	374	V

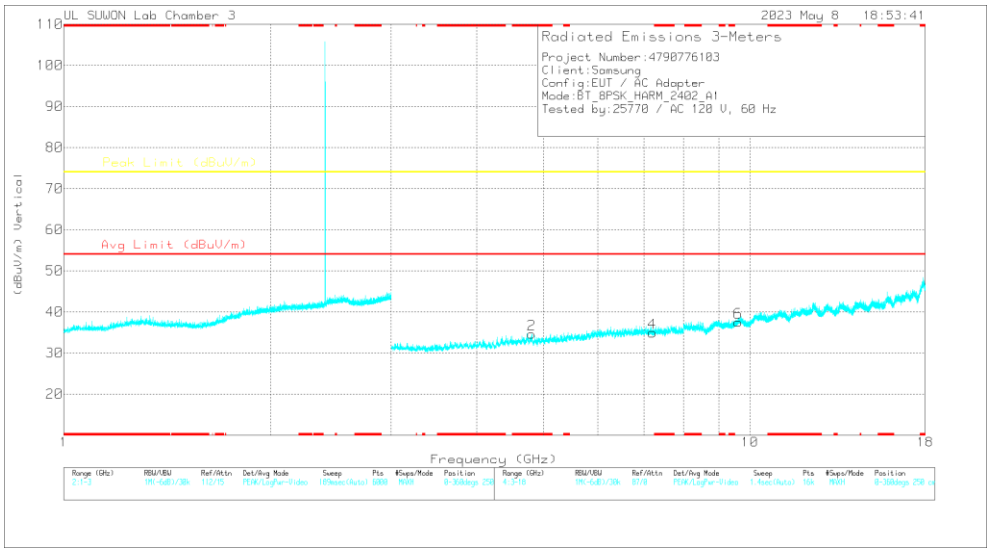
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

HARMONICS AND SPURIOUS EMISSIONS

0 CHANNEL RESULTS



HORIZONTAL



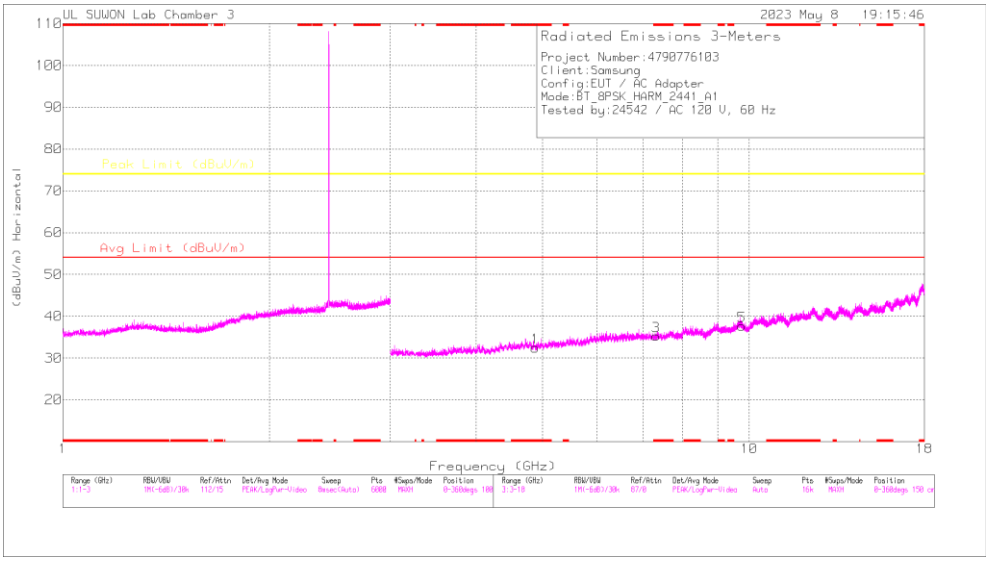
VERTICAL

RADIATED EMISSIONS

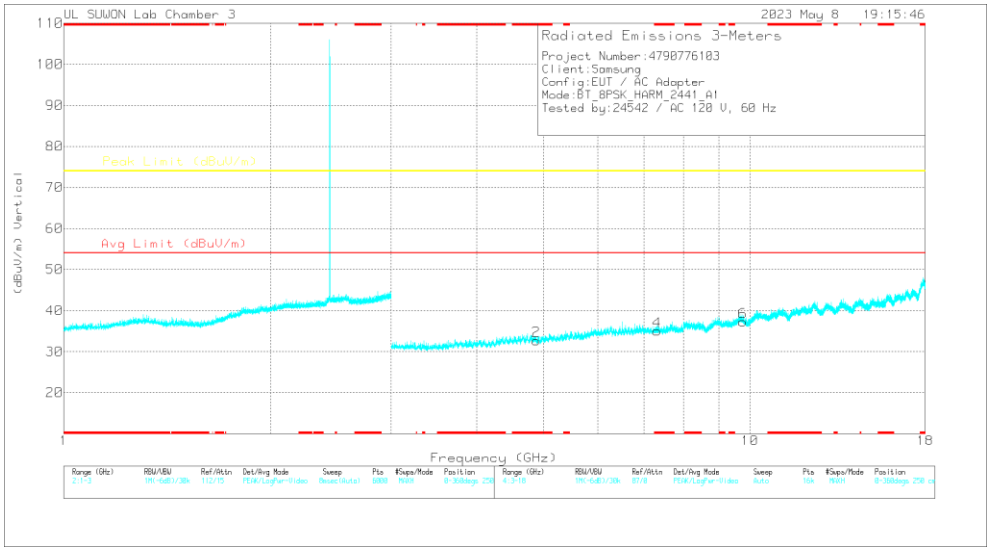
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	3GHz_HP[dB]	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.80533	38.02	PKFH	34.3	-30.1	41.48	-	-	74	-31.78	0	100	H
* 4.8043	37.9	PKFH	34.3	-30.1	41.29	-	-	74	-31.9	0	100	V
7.20467	33.62	PKFH	35.8	-25.8	44.83	-	-	74	-30.38	0	100	H
7.20481	33.19	PKFH	35.8	-25.8	45.14	-	-	74	-30.81	0	100	V
9.60998	30.97	PKFH	36.7	-21.7	48.5	-	-	74	-28.03	0	100	H
9.60682	30.06	PKFH	36.7	-21.6	47.85	-	-	74	-28.84	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak

39 CHANNEL RESULTS



HORIZONTAL



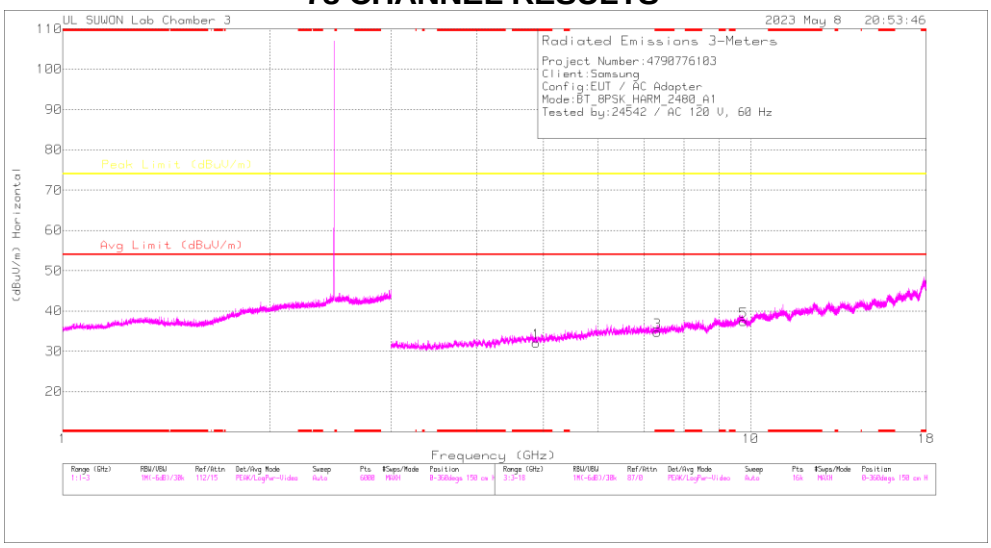
VERTICAL

RADIATED EMISSIONS

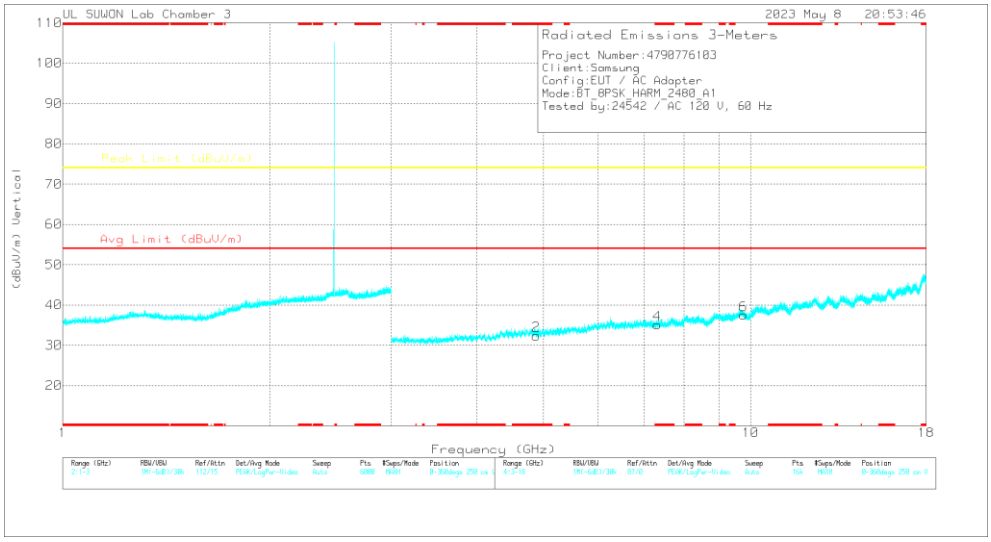
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	3GHz_HP[dB]	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.87968	37.12	PKFH	34.2	-30.9	40.42	-	-	74	-33.58	0	100	H
* 4.87924	37.73	PKFH	34.2	-30.8	41.13	-	-	74	-32.87	0	100	V
* 7.32055	32.44	PKFH	35.8	-25.3	42.94	-	-	74	-31.06	0	100	H
* 7.32179	32.58	PKFH	35.8	-25.4	42.98	-	-	74	-31.02	0	100	V
9.76175	30.49	PKFH	36.9	-21.1	46.29	-	-	74	-27.71	0	100	H
9.75848	30.23	PKFH	36.9	-21.1	46.03	-	-	74	-27.97	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak

78 CHANNEL RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	3GHz_HP(dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.8804	38.31	PKFH	34.2	-30.9	41.61	-	-	74	-32.39	0	100	H
* 4.88171	36.97	PKFH	34.2	-30.9	40.27	-	-	74	-33.73	0	100	V
* 7.32021	33.47	PKFH	35.8	-25.3	43.97	-	-	74	-30.03	0	100	H
* 7.32083	32.55	PKFH	35.8	-25.3	43.05	-	-	74	-30.95	0	100	V
9.76064	31.07	PKFH	36.9	-21.2	46.77	-	-	74	-27.23	0	100	H
9.76118	29.92	PKFH	36.9	-21.2	45.62	-	-	74	-28.38	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak

10.1.3. Spurious Emissions for Simultaneous Transmission

Worst test case RSDB condition

Case 1	2.4 GHz Bluetooth ANT2	5GHz WLAN ANT1 + ANT2
Mode	BDR	802.11ax_HE40
Channel	28	134
Frequency[MHz]	2430	5670
Tone	-	65
RU	-	484
Data Rate	1 Mbps	MCS0
Axis (Worst)	X & X	

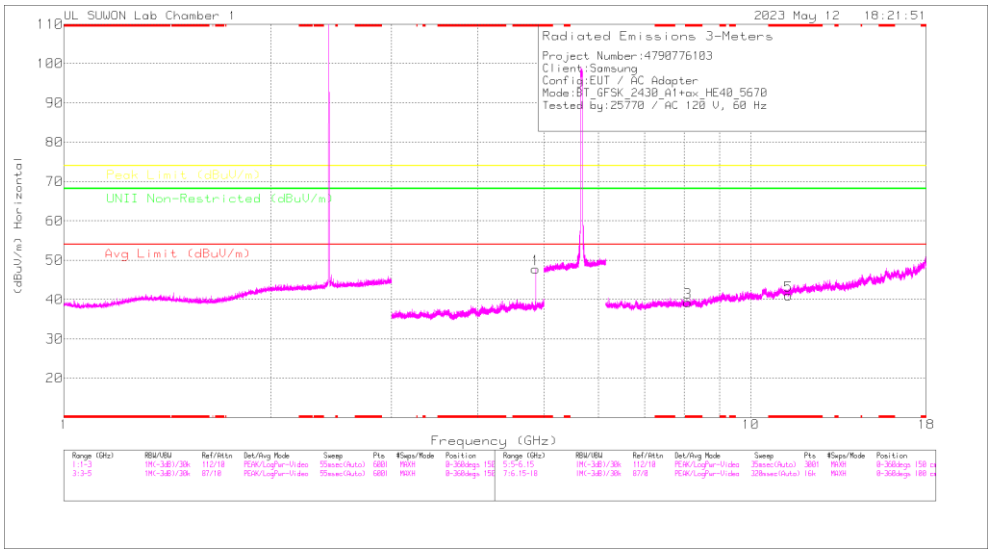
Case 2	2.4 GHz WLAN ANT1 + ANT2	5GHz WLAN ANT1 + ANT2
Mode	802.11b	802.11ax_HE40
Channel	6	134
Frequency[MHz]	2437	5670
Tone	-	65
RU	-	484
Data Rate	1 Mbps	MCS0
Axis (Worst)	X & X	

NOTE
The lowest margin condition among the channels and modes were selected for test.
Low, mid, and high channels of 2.4GHz WLAN were tested, and the worst case configuration & data were listed in the test report.

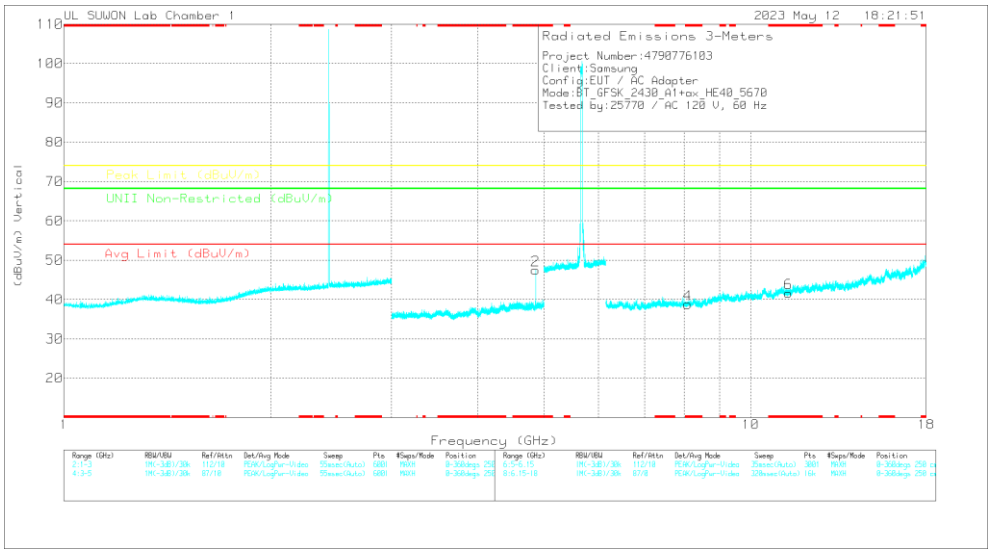
Test Results

Spurious emission for Simultaneous Transmission

Case1. - X axis



HORIZONTAL



VERTICAL

Radiated Emissions

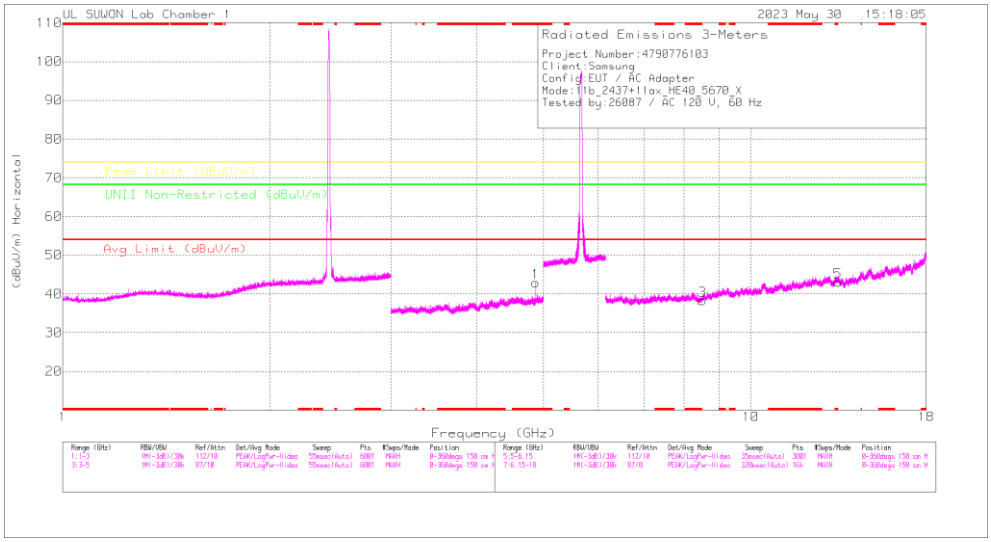
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	5GHz_LP(dB)	DTS Notch(dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.86016	51.24	PKFH	34.2	-33	.6	53.04	-	-	74	-20.96	-	-	194	123	H
* 4.86004	45.62	VA1T	34.2	-33	.6	47.42	54	-6.58	-	-	-	-	194	123	H
* 4.86	51.22	PKFH	34.2	-33	.6	53.02	-	-	74	-20.98	-	-	172	266	V
* 4.86002	45.53	VA1T	34.2	-33	.6	47.33	54	-6.67	-	-	-	-	172	266	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

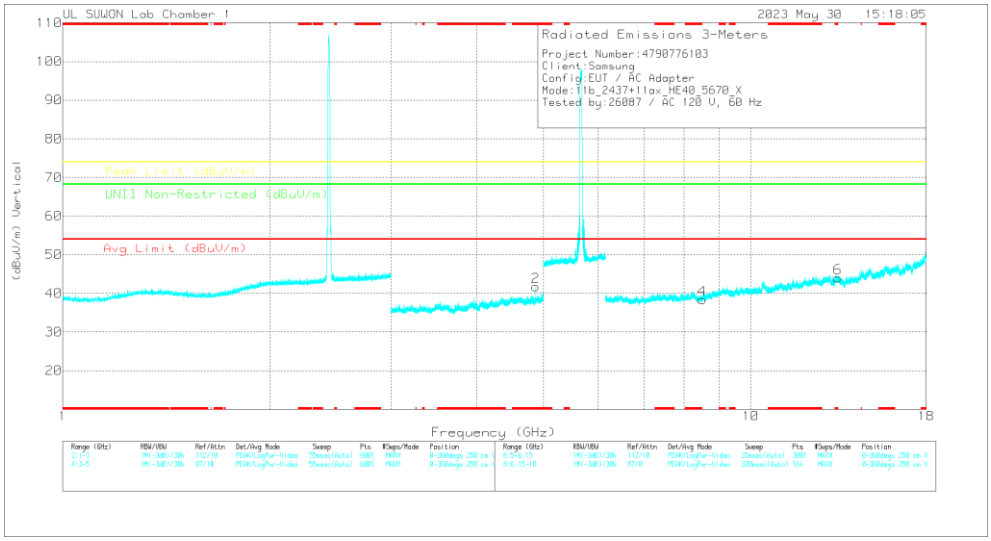
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	6GHz_HP(dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 8.10697	42.45	PK-U	36.2	-29.1	49.55	-	-	74	-24.45	-	-	0	100	H
* 8.1026	42.67	PK-U	36.2	-29.1	49.77	-	-	74	-24.23	-	-	0	100	V
* 11.33703	41.61	PK-U	38.4	-27.3	52.71	-	-	74	-21.29	-	-	0	100	H
* 11.33125	41.38	PK-U	38.4	-27.4	52.38	-	-	74	-21.62	-	-	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak

Spurious emission for Simultaneous Transmission Case2. - X axis



HORIZONTAL



VERTICAL

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	5GHz_LP(dB)	DTS Notch(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.8741	50.44	PK2	34.2	-32.8	.6	0	52.44	-	-	74	-21.56	-	-	202	130	H
* 4.87403	42.07	MAv1	34.2	-32.8	.6	0	44.07	54	-9.93	-	-	-	-	202	130	H
* 4.874	49.36	PK2	34.2	-32.8	.6	0	51.36	-	-	74	-22.64	-	-	166	293	V
* 4.874	40.97	MAv1	34.2	-32.8	.6	0	42.97	54	-11.03	-	-	-	-	166	293	V

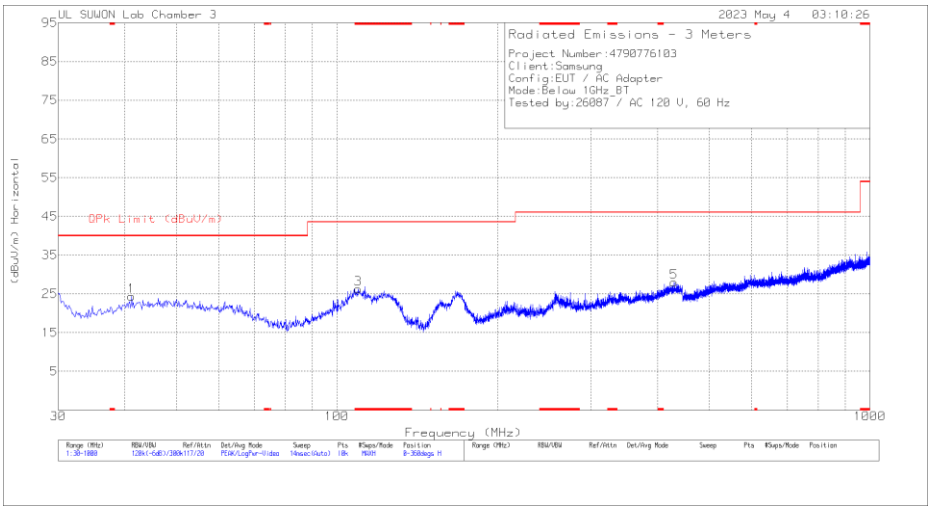
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	6GHz_HP(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
8.50683	42.11	PK-U	36.1	-28.6	0	49.61	-	-	-	-	68.2	-18.59	0	100	H
13.40072	39.6	PK-U	38.5	-24.2	0	53.9	-	-	-	-	68.2	-14.3	0	100	H
* 13.39937	40.05	PK-U	38.5	-24.2	0	54.35	-	-	74	-19.65	-	-	0	100	V
8.50436	42.13	PK-U	36.1	-28.7	0	49.53	-	-	-	-	68.2	-18.67	0	100	V

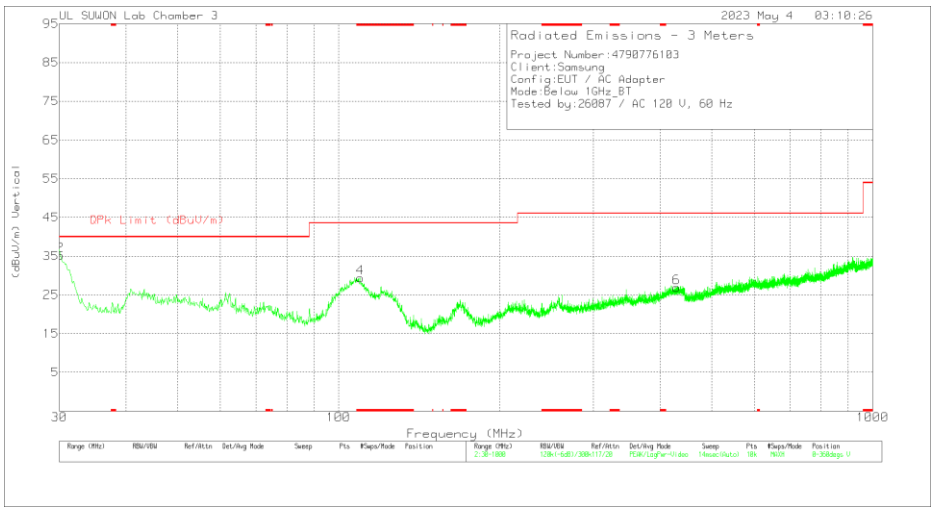
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak

10.2. 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_845	Below_1G(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	41.1562	37.46	Pk	18.9	-32	0	24.36	40	-15.64	0-360	300	H
3	* 109.6452	40.23	Pk	17.4	-31.4	0	26.23	43.52	-17.29	0-360	200	H
5	428.8081	36.44	Pk	21.6	-30	0	28.04	46.02	-17.98	0-360	100	H
2	30.097	51.33	Pk	15.9	-32	0	35.23	40	-4.77	0-360	100	V
4	* 109.8392	43.48	Pk	17.3	-31.4	0	29.38	43.52	-14.14	0-360	100	V
6	429.4872	35.32	Pk	21.6	-30.1	0	26.82	46.02	-19.2	0-360	100	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_845	Below_1G(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
30.097	46.21	Qp	15.9	-32	2.93	33.04	40	-6.96	258	106	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Qp - Quasi-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 C63.4.

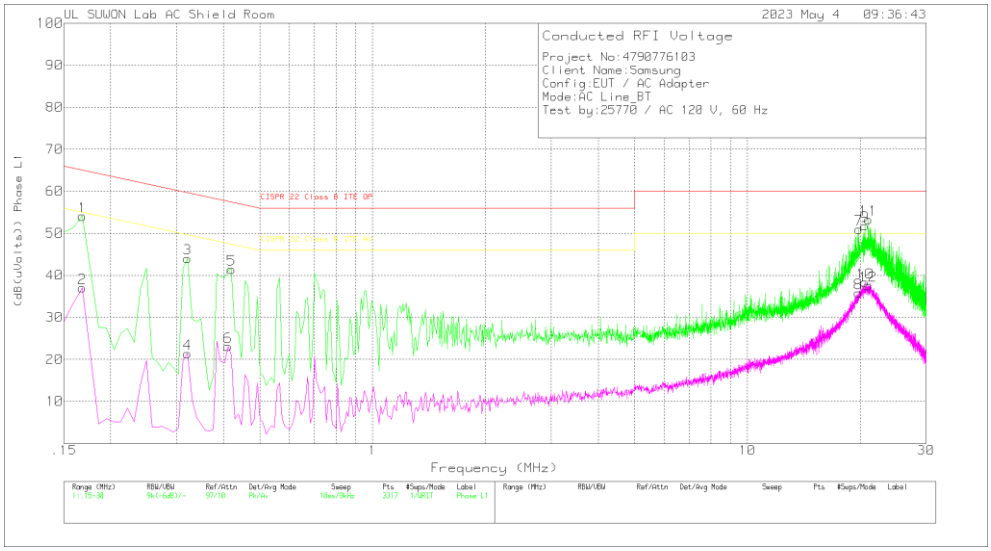
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

11.1.1. AC Power Line(C to C)

LINE 1 RESULTS



Trace Markers

Range 1: Phase L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_L1[dB]	CABLELOSS(dB)	Corrected Reading (dB(uVolts))	CISPR 22 Class B ITE QP	Margin (dB)	CISPR 22 Class B ITE AV	Margin (dB)
1	.168	43.99	Pk	10	.1	54.09	65.06	-10.97	-	-
2	.168	26.94	Av	10	.1	37.04	-	-	55.06	-18.02
3	.321	34.15	Pk	9.7	.2	44.05	59.68	-15.63	-	-
4	.321	11.49	Av	9.7	.2	21.39	-	-	49.68	-28.29
5	.42	31.46	Pk	9.8	.2	41.46	57.45	-15.99	-	-
6	.411	13.06	Av	9.8	.2	23.06	-	-	47.63	-24.57
7	19.815	40.37	Pk	10.2	.4	50.97	60	-9.03	-	-
8	19.788	25.21	Av	10.2	.4	35.81	-	-	50	-14.19
9	20.616	41.23	Pk	10.2	.4	51.83	60	-8.17	-	-
10	20.616	27.74	Av	10.2	.4	38.34	-	-	50	-11.66
11	21.039	42.73	Pk	10.2	.4	53.33	60	-6.67	-	-
12	21.003	26.99	Av	10.2	.4	37.59	-	-	50	-12.41

Pk - Peak detector
Av - Average detection

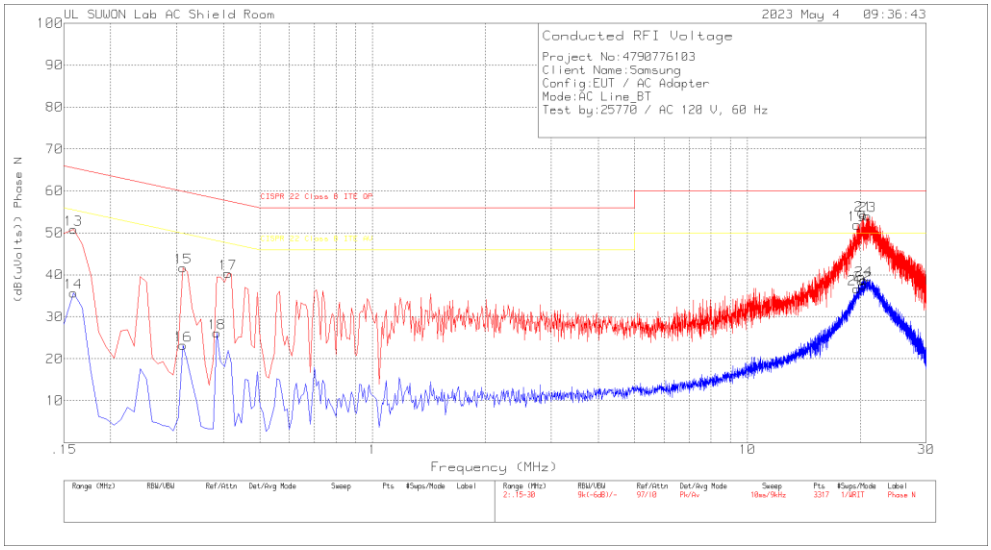
Quasi-Peak Emissions

Range 1: Phase L1 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_L1[dB]	CABLELOSS(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)
19.8128	32.31	Qp	10.2	.4	42.91	60	-17.09	-	-
20.6138	33.67	Qp	10.2	.4	44.27	60	-15.73	-	-
21.0413	33.76	Qp	10.2	.4	44.36	60	-15.64	-	-
21.0035	33.87	Qp	10.2	.4	44.47	60	-15.53	-	-

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]	CABLELOSS(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	.159	40.91	Pk	9.8	.1	50.81	65.52	-14.71	-	-
14	.159	25.83	Av	9.8	.1	35.73	-	-	55.52	-19.79
15	.312	31.82	Pk	9.7	.2	41.72	59.92	-18.2	-	-
16	.312	13.3	Av	9.7	.2	23.2	-	-	49.92	-26.72
17	.411	30.32	Pk	9.8	.2	40.32	57.63	-17.31	-	-
18	.384	16.13	Av	9.8	.2	26.13	-	-	48.19	-22.06
19	19.617	41.29	Pk	10.2	.4	51.89	60	-8.11	-	-
20	19.59	26.03	Av	10.2	.4	36.63	-	-	50	-13.37
21	20.4	43.56	Pk	10.3	.4	54.26	60	-5.74	-	-
22	20.364	26.9	Av	10.3	.4	37.6	-	-	50	-12.4
23	20.922	43.38	Pk	10.3	.4	54.08	60	-5.92	-	-
24	20.472	28.03	Av	10.3	.4	38.73	-	-	50	-11.27

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]	CABLELOSS(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)
19.6184	34.55	Qp	10.2	.4	45.15	60	-14.85	-	-
20.4014	36.33	Qp	10.3	.4	47.03	60	-12.97	-	-
20.9243	36.57	Qp	10.3	.4	47.27	60	-12.73	-	-

Qp - Quasi-Peak detector

END OF TEST REPORT