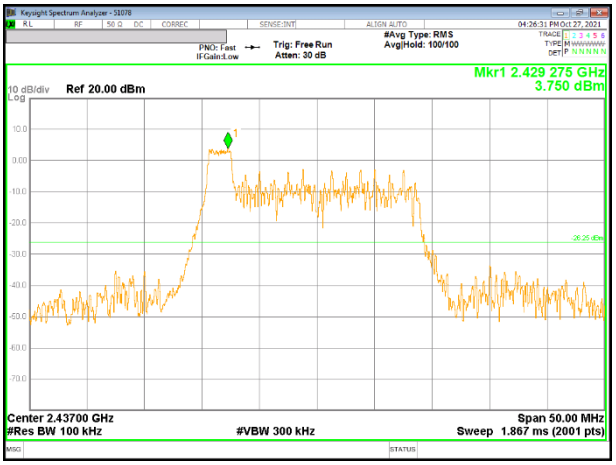
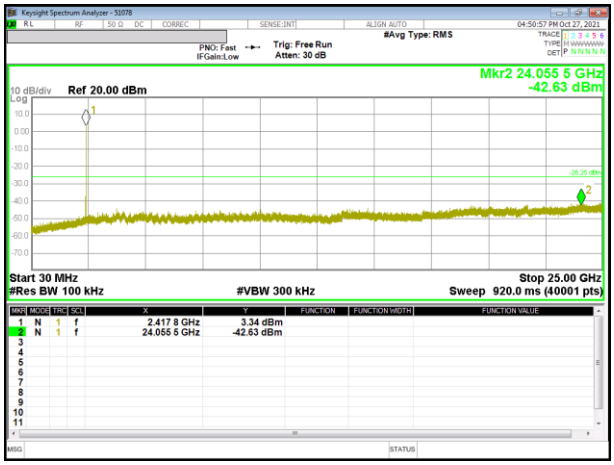
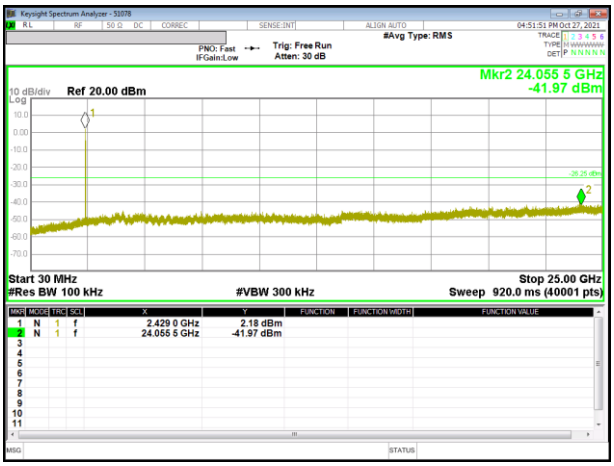
2TX Antenna 2 MODE



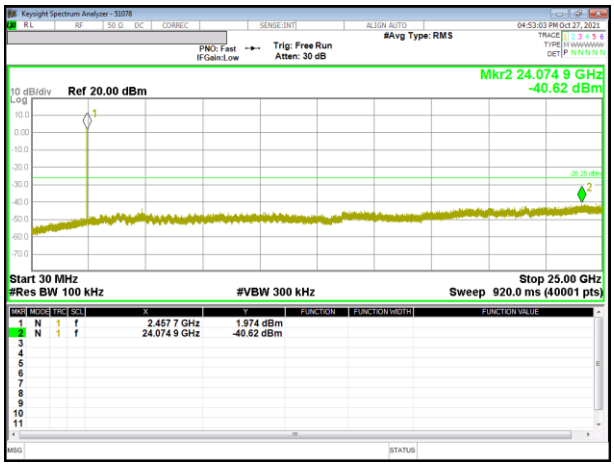
In-Band Reference Level



Out-Of-Band 2 Channel(4RU)



Out-Of-Band 6 Channel(0RU)



Out-Of-Band 10 Channel(4RU)

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

Duty cycle factor = 10log (1/x) For this sample:

802.11b SISO mode = 0 dB (duty cycle > 98%);
802.11g MIMO mode = 0.16 dB (96.43%);
802.11n(HT20) MIMO mode = 0.17 dB (96.16%);
802.11ax(HE20) MIMO SU mode = 0.42 dB (90.75%);
802.11ax(HE20) MIMO 26 Tone mode = 0 dB (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 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.

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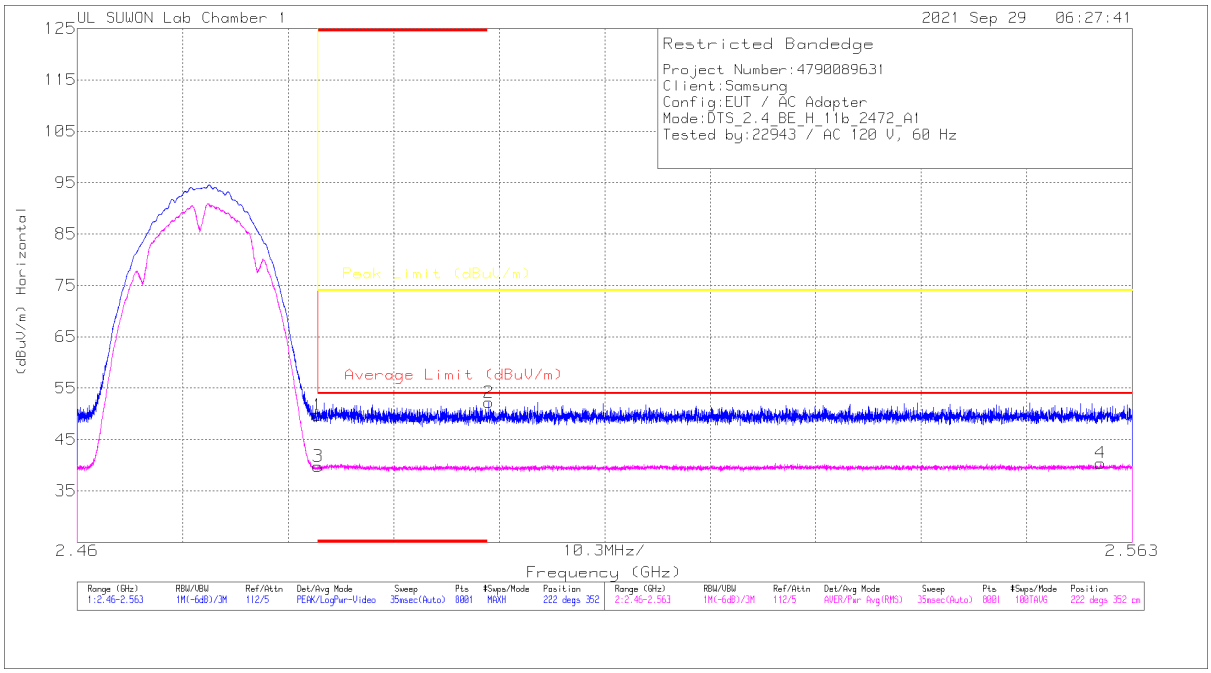
10.1. TRANSMITTER ABOVE 1 GHz

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

BANDEDGE(ANT1 WORST CASE: 13 CHANNEL)

HORIZONTAL RESULT



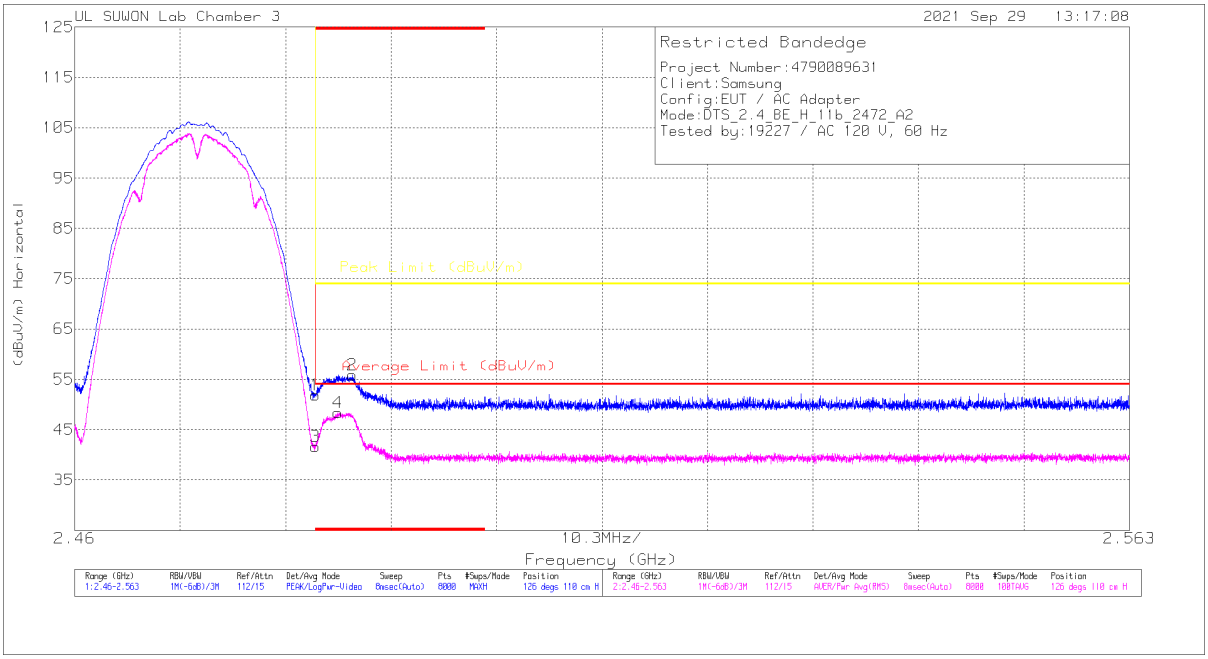
Trace Markers

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	* 2.48351	42.84	Pk	32	-25.1	0	49.74	-	-	74	-24.26	222	352	H
2	2.50018	45.23	Pk	32	-25	0	52.23	-	-	74	-21.77	222	352	H
3	* 2.48351	32.9	RMS	32	-25.1	0	39.8	54	-14.2	-	-	222	352	H
4	2.5599	33.24	RMS	32.1	-24.9	0	40.44	54	-13.56	-	-	222	352	H

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

BANDEDGE(ANT2 WORST CASE: 13 CHANNEL)

HORIZONTAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	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	* 2.4835	44.31	Pk	32.9	-25.3	0	51.91	-	-	74	-22.09	126	110	H
2	* 2.48708	48.31	Pk	32.9	-25.3	0	55.91	-	-	74	-18.09	126	110	H
3	* 2.4835	34.04	RMS	32.9	-25.3	0	41.64	54	-12.36	-	-	126	110	H
4	* 2.4857	40.77	RMS	32.9	-25.3	0	48.37	54	-5.63	-	-	126	110	H

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

BANDEDGE TEST DATA

Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
2412	ANT1	* 2.39	41.91	Pk	31.80	-25.30	0.00	48.41	-	-	74.00	-25.59	231	384	H
		* 2.36703	45.62	Pk	31.70	-25.40	0.00	51.92	-	-	74.00	-22.08	231	384	H
		* 2.39	32.48	RMS	31.80	-25.30	0.00	38.98	54.00	-15.02	-	-	231	384	H
		* 2.38879	33.23	RMS	31.80	-25.30	0.00	39.73	54.00	-14.27	-	-	231	384	H
		* 2.39	42.25	Pk	31.80	-25.30	0.00	48.75	-	-	74.00	-25.25	355	378	V
		* 2.31807	46.37	Pk	31.60	-25.60	0.00	52.37	-	-	74.00	-21.63	355	378	V
		* 2.39	32.72	RMS	31.80	-25.30	0.00	39.22	54.00	-14.78	-	-	355	378	V
		* 2.38195	33.25	RMS	31.80	-25.30	0.00	39.75	54.00	-14.25	-	-	355	378	V
2462	ANT1	* 2.48351	42.43	Pk	32.00	-25.10	0.00	49.33	-	-	74.00	-24.67	219	329	H
		2.543	45.29	Pk	32.00	-25.00	0.00	52.29	-	-	74.00	-21.71	219	329	H
		* 2.48351	32.43	RMS	32.00	-25.10	0.00	39.33	54.00	-14.67	-	-	219	329	H
		2.546	33.23	RMS	32.00	-25.00	0.00	40.23	54.00	-13.77	-	-	219	329	H
		* 2.48351	42.15	Pk	32.00	-25.10	0.00	49.05	-	-	74.00	-24.95	346	108	V
		2.561	45.48	Pk	32.10	-24.90	0.00	52.68	-	-	74.00	**-21.32**	346	108	V
		* 2.48351	32.67	RMS	32.00	-25.10	0.00	39.57	54.00	-14.43	-	-	346	108	V
		2.516	33.28	RMS	32.00	-24.90	0.00	40.38	54.00	-13.62	-	-	346	108	V
2467	ANT1	* 2.48351	42.49	Pk	32.00	-25.10	0.00	49.39	-	-	74.00	-24.61	216	327	H
		2.563	45.17	Pk	32.10	-24.90	0.00	52.37	-	-	74.00	-21.63	216	327	H
		* 2.48351	32.60	RMS	32.00	-25.10	0.00	39.50	54.00	-14.50	-	-	216	327	H
		2.517	33.18	RMS	32.00	-24.90	0.00	40.28	54.00	-13.72	-	-	216	327	H
		* 2.48351	43.28	Pk	32.00	-25.10	0.00	50.18	-	-	74.00	-23.82	329	315	V
		2.524	45.52	Pk	32.00	-25.00	0.00	52.52	-	-	74.00	-21.48	329	315	V
		* 2.48351	33.00	RMS	32.00	-25.10	0.00	39.90	54.00	-14.10	-	-	329	315	V
		2.506	33.30	RMS	32.00	-24.90	0.00	40.40	54.00	-13.60	-	-	329	315	V
2472	ANT1	* 2.48351	42.84	Pk	32.00	-25.10	0.00	49.74	-	-	74.00	-24.26	222	352	H
		2.500	45.23	Pk	32.00	-25.00	0.00	52.23	-	-	74.00	-21.77	222	352	H
		* 2.48351	32.90	RMS	32.00	-25.10	0.00	39.80	54.00	-14.20	-	-	222	352	H
		2.560	33.24	RMS	32.10	-24.90	0.00	40.44	54.00	**-13.56**	-	-	222	352	H
		* 2.48351	41.86	Pk	32.00	-25.10	0.00	48.76	-	-	74.00	-25.24	299	394	V
		* 2.48724	45.17	Pk	32.00	-25.00	0.00	52.17	-	-	74.00	-21.83	299	394	V
		* 2.48351	32.95	RMS	32.00	-25.10	0.00	39.85	54.00	-14.15	-	-	299	394	V
		* 2.49317	33.22	RMS	32.00	-25.00	0.00	40.22	54.00	-13.78	-	-	299	394	V

Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
2412	ANT2	* 2.39	42.54	Pk	32.80	-25.40	0.00	49.94	-	-	74.00	-24.06	125	139	H
		* 2.38732	45.09	Pk	32.70	-25.40	0.00	52.39	-	-	74.00	-21.61	125	139	H
		* 2.39	32.29	RMS	32.80	-25.40	0.00	39.69	54.00	-14.31	-	-	125	139	H
		* 2.38782	33.23	RMS	32.80	-25.30	0.00	40.73	54.00	-13.27	-	-	125	139	H
		* 2.39	42.17	Pk	32.80	-25.40	0.00	49.57	-	-	74.00	-24.43	199	388	V
		* 2.38734	45.04	Pk	32.70	-25.40	0.00	52.34	-	-	74.00	-21.66	199	388	V
		* 2.39	32.43	RMS	32.80	-25.40	0.00	39.83	54.00	-14.17	-	-	199	388	V
		* 2.38784	32.79	RMS	32.80	-25.30	0.00	40.29	54.00	-13.71	-	-	199	388	V
2462	ANT2	* 2.4835	42.85	Pk	32.90	-25.30	0.00	50.45	-	-	74.00	-23.55	127	117	H
		2.517	44.85	Pk	32.90	-25.20	0.00	52.55	-	-	74.00	-21.45	127	117	H
		* 2.4835	31.76	RMS	32.90	-25.30	0.00	39.36	54.00	-14.64	-	-	127	117	H
		* 2.48779	33.17	RMS	32.90	-25.20	0.00	40.87	54.00	-13.13	-	-	127	117	H
		* 2.4835	43.29	Pk	32.90	-25.30	0.00	50.89	-	-	74.00	-23.11	210	360	V
		2.535	44.99	Pk	32.90	-25.20	0.00	52.69	-	-	74.00	-21.31	210	360	V
		* 2.4835	32.23	RMS	32.90	-25.30	0.00	39.83	54.00	-14.17	-	-	210	360	V
		* 2.48708	33.23	RMS	32.90	-25.30	0.00	40.83	54.00	-13.17	-	-	210	360	V
2467	ANT2	* 2.4835	45.37	Pk	32.90	-25.30	0.00	52.97	-	-	74.00	-21.03	124	110	H
		* 2.48387	47.50	Pk	32.90	-25.30	0.00	55.10	-	-	74.00	-18.90	124	110	H
		* 2.4835	36.55	RMS	32.90	-25.30	0.00	44.15	54.00	-9.85	-	-	124	110	H
		* 2.48421	38.10	RMS	32.90	-25.30	0.00	45.70	54.00	-8.30	-	-	124	110	H
		* 2.4835	44.07	Pk	32.90	-25.30	0.00	51.67	-	-	74.00	-22.33	225	363	V
		* 2.48445	45.39	Pk	32.90	-25.30	0.00	52.99	-	-	74.00	-21.01	225	363	V
		* 2.4835	33.37	RMS	32.90	-25.30	0.00	40.97	54.00	-13.03	-	-	225	363	V
		* 2.48395	34.58	RMS	32.90	-25.30	0.00	42.18	54.00	-11.82	-	-	225	363	V
2472	ANT2	* 2.4835	44.31	Pk	32.90	-25.30	0.00	51.91	-	-	74.00	-22.09	126	110	H
		* 2.48708	48.31	Pk	32.90	-25.30	0.00	55.91	-	-	74.00	**-18.09**	126	110	H
		* 2.4835	34.04	RMS	32.90	-25.30	0.00	41.64	54.00	-12.36	-	-	126	110	H
		* 2.4857	40.77	RMS	32.90	-25.30	0.00	48.37	54.00	**-5.63**	-	-	126	110	H
		* 2.4835	42.40	Pk	32.90	-25.30	0.00	50.00	-	-	74.00	-24.00	220	354	V
		* 2.48622	44.94	Pk	32.90	-25.30	0.00	52.54	-	-	74.00	-21.46	220	354	V
		* 2.4835	32.34	RMS	32.90	-25.30	0.00	39.94	54.00	-14.06	-	-	220	354	V
		* 2.48687	34.68	RMS	32.90	-25.30	0.00	42.28	54.00	-11.72	-	-	220	354	V

Note1. Pk - Peak detector, RMS - RMS detectior
Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

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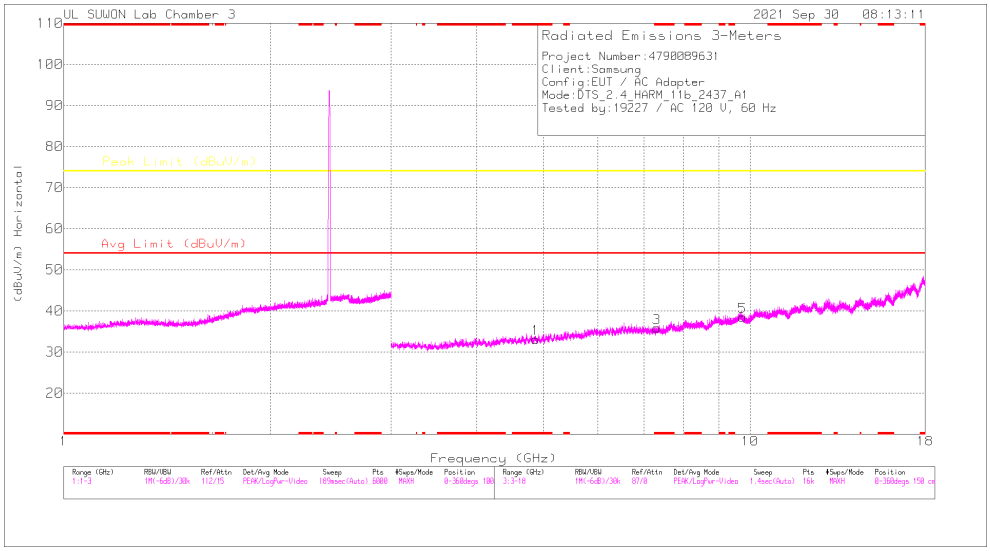
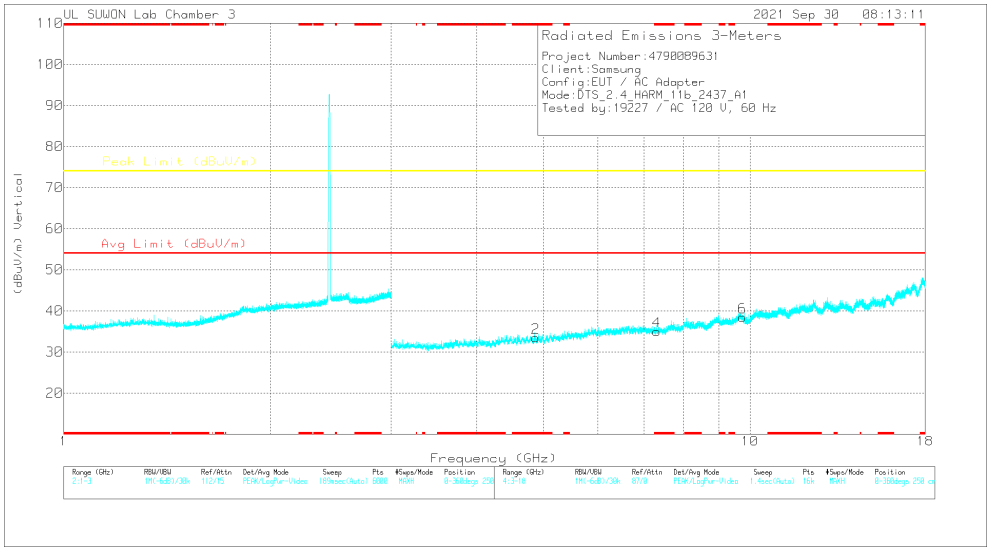
HARMONICS AND SPURIOUS EMISSIONS(ANT1 WORST CASE: 6 CHANNEL)

CH 6 RESULTS



HORIZONTAL



VERTICAL

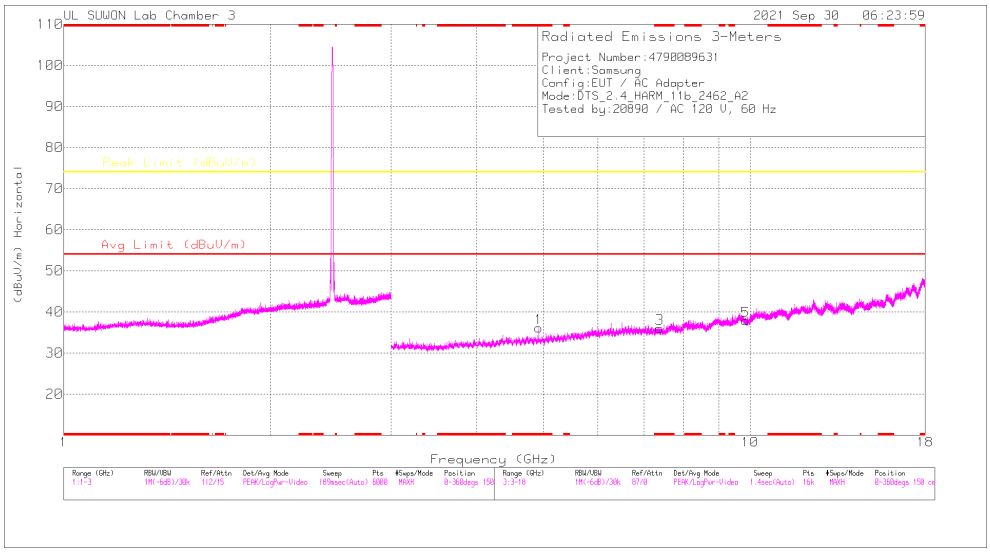
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	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
* 4.87364	40.01	PK2	34.6	-31.1	0	43.51	-	-	74	-30.49	0	100	H
* 4.87373	39.75	PK2	34.6	-31.1	0	43.25	-	-	74	-30.75	0	100	V
* 7.31117	34.93	PK2	36	-25.6	0	45.33	-	-	74	-28.67	0	100	H
* 7.30846	34.66	PK2	36	-25.6	0	45.06	-	-	74	-28.94	0	100	V
9.74841	32.52	PK2	37.5	-21.7	0	48.32	-	-	74	-25.68	0	100	H
9.748	33.07	PK2	37.5	-21.7	0	48.87	-	-	74	-25.13	0	100	V

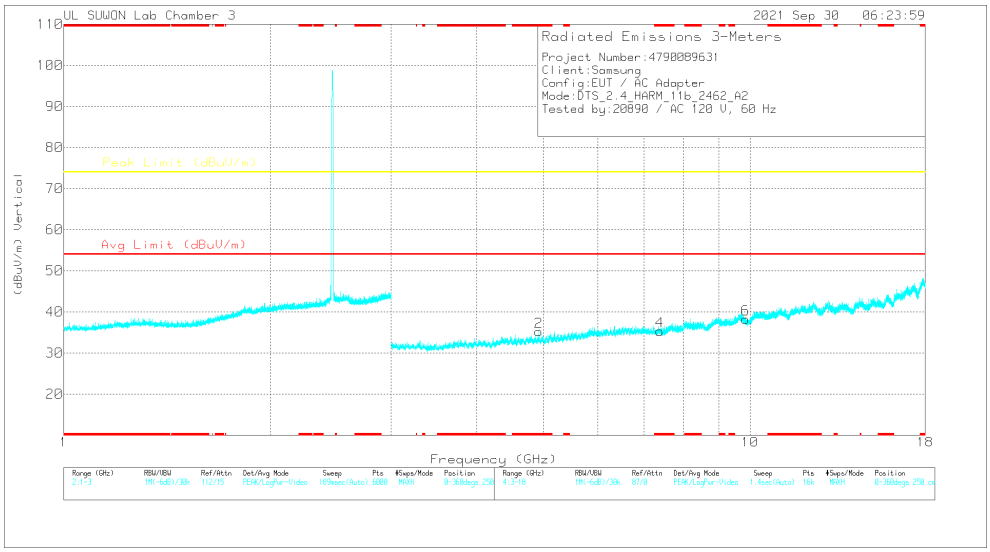
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak

HARMONICS AND SPURIOUS EMISSIONS(ANT2 WORST CASE: 11 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_00218957	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
* 4.92385	41.1	PK2	34.7	-31.2	0	44.6	-	-	74	-29.4	149	115	H
* 4.92399	32.29	MAv1	34.7	-31.2	0	35.79	54	-18.21	-	-	149	115	H
* 4.92409	40.46	PK2	34.7	-31.2	0	43.96	-	-	74	-30.04	110	104	V
* 4.92391	31.06	MAv1	34.7	-31.2	0	34.56	54	-19.44	-	-	110	104	V
* 7.37796	34.45	PK2	36	-25.1	0	45.35	-	-	74	-28.65	0	100	H
* 7.38883	35.35	PK2	36	-25	0	46.35	-	-	74	-27.65	0	100	V
9.85776	32.83	PK2	37.7	-21.9	0	48.63	-	-	74	-25.37	0	100	H
9.85927	31.86	PK2	37.7	-21.9	0	47.66	-	-	74	-26.34	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

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
2412	ANT1	* 4.82392	39.10	PK2	34.60	-30.70	0.00	43.00	-	-	74.00	-31.00	0	100	H
		* 4.82323	39.11	PK2	34.60	-30.70	0.00	43.01	-	-	74.00	-30.99	0	100	V
		7.237	35.62	PK2	36.00	-26.10	0.00	45.52	-	-	74.00	-28.48	0	100	H
		7.237	35.60	PK2	36.00	-26.10	0.00	45.50	-	-	74.00	-28.50	0	100	V
		9.649	32.71	PK2	37.40	-21.90	0.00	48.21	-	-	74.00	-25.79	0	100	H
		9.647	33.10	PK2	37.40	-21.90	0.00	48.60	-	-	74.00	-25.40	0	100	V
2437	ANT1	* 4.87364	40.01	PK2	34.60	-31.10	0.00	43.51	-	-	74.00	-30.49	0	100	H
		* 4.87373	39.75	PK2	34.60	-31.10	0.00	43.25	-	-	74.00	-30.75	0	100	V
		* 7.31117	34.93	PK2	36.00	-25.60	0.00	45.33	-	-	74.00	-28.67	0	100	H
		* 7.30846	34.66	PK2	36.00	-25.60	0.00	45.06	-	-	74.00	-28.94	0	100	V
		9.748	32.52	PK2	37.50	-21.70	0.00	48.32	-	-	74.00	-25.68	0	100	H
		9.748	33.07	PK2	37.50	-21.70	0.00	48.87	-	-	74.00	**-25.13**	0	100	V
2462	ANT1	* 4.9345	39.97	PK2	34.70	-31.30	0.00	43.37	-	-	74.00	-30.63	1	100	H
		* 4.91882	39.50	PK2	34.70	-31.30	0.00	42.90	-	-	74.00	-31.10	1	100	V
		* 7.37967	34.46	PK2	36.00	-25.10	0.00	45.36	-	-	74.00	-28.64	0	100	H
		* 7.37832	34.75	PK2	36.00	-25.10	0.00	45.65	-	-	74.00	-28.35	0	100	V
		9.843	32.11	PK2	37.70	-21.90	0.00	47.91	-	-	74.00	-26.09	0	100	H
		9.834	31.63	PK2	37.70	-21.90	0.00	47.43	-	-	74.00	-26.57	0	100	V

Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
2412	ANT2	* 4.829	39.61	PK2	34.60	-30.70	0.00	43.51	-	-	74.00	-30.49	360	100	H
		* 4.83252	39.21	PK2	34.60	-30.80	0.00	43.01	-	-	74.00	-30.99	360	100	V
		7.229	35.52	PK2	36.00	-26.10	0.00	45.42	-	-	74.00	-28.58	360	100	H
		7.228	35.73	PK2	36.00	-26.10	0.00	45.63	-	-	74.00	-28.37	360	100	V
		9.641	33.47	PK2	37.40	-22.00	0.00	48.87	-	-	74.00	**-25.13**	360	100	H
		9.653	32.81	PK2	37.40	-21.90	0.00	48.31	-	-	74.00	-25.69	360	100	V
2437	ANT2	* 4.87403	40.04	PK2	34.60	-31.10	0.00	43.54	-	-	74.00	-30.46	360	100	H
		* 4.86661	40.35	PK2	34.60	-31.10	0.00	43.85	-	-	74.00	-30.15	360	100	V
		* 7.29463	35.88	PK2	36.00	-25.80	0.00	46.08	-	-	74.00	-27.92	360	100	H
		* 7.29919	35.29	PK2	36.00	-25.80	0.00	45.49	-	-	74.00	-28.51	360	100	V
		9.743	32.33	PK2	37.50	-21.70	0.00	48.13	-	-	74.00	-25.87	360	100	H
		9.757	32.54	PK2	37.50	-21.70	0.00	48.34	-	-	74.00	-25.66	360	100	V
2462	ANT2	* 4.92385	41.10	PK2	34.70	-31.20	0.00	44.60	-	-	74.00	-29.40	149	115	H
		* 4.92399	32.29	MAv1	34.70	-31.20	0.00	35.79	54.00	**-18.21**	-	-	149	115	H
		* 4.92409	40.46	PK2	34.70	-31.20	0.00	43.96	-	-	74.00	-30.04	110	104	V
		* 4.92391	31.06	MAv1	34.70	-31.20	0.00	34.56	54.00	-19.44	-	-	110	104	V
		* 7.37796	34.45	PK2	36.00	-25.10	0.00	45.35	-	-	74.00	-28.65	0	100	H
		* 7.38883	35.35	PK2	36.00	-25.00	0.00	46.35	-	-	74.00	-27.65	0	100	V
		9.858	32.83	PK2	37.70	-21.90	0.00	48.63	-	-	74.00	-25.37	0	100	H
		9.859	31.86	PK2	37.70	-21.90	0.00	47.66	-	-	74.00	-26.34	0	100	V

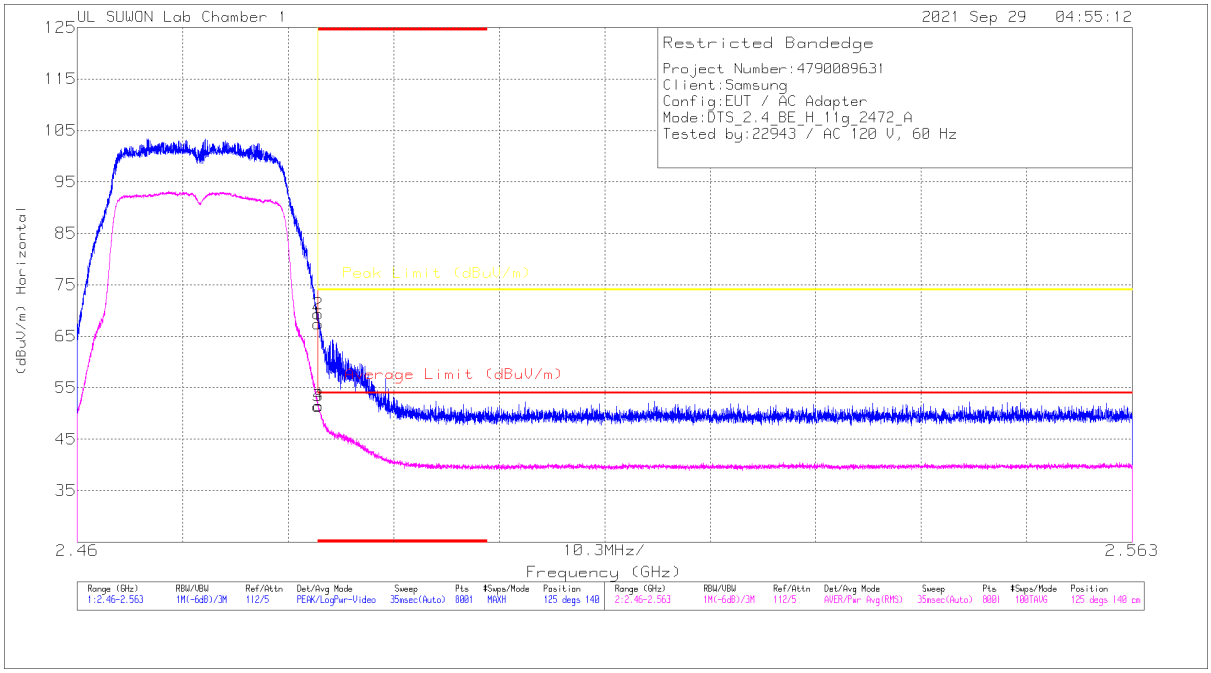
Note1. PK2 - KDB558074 Method: Maximum Peak / MAv1 - KDB558074 Option 1 Maximum RMS Average
Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

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

2TX Antenna 1 + Antenna 2

BANDEDGE (WORST CASE: 13 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	* 2.48351	60.52	Pk	32	-25.1	0	67.42	-	-	74	-6.58	125	140	H
2	* 2.48352	62.45	Pk	32	-25.1	0	69.35	-	-	74	-4.65	125	140	H
3	* 2.48351	44.38	RMS	32	-25.1	.16	51.44	54	-2.56	-	-	125	140	H
4	* 2.48354	44.5	RMS	32	-25.1	.16	51.56	54	-2.44	-	-	125	140	H

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

BANDEDGE TEST DATA

Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
2412	MIMO	* 2.39	49.80	Pk	31.90	-20.60	0.00	61.10	-	-	74.00	-12.90	123	147	H
		* 2.38997	50.53	Pk	31.90	-20.60	0.00	61.83	-	-	74.00	-12.17	123	147	H
		* 2.39	34.60	RMS	31.90	-20.60	0.16	46.06	54.00	-7.94	-	-	123	147	H
		* 2.38973	34.73	RMS	31.90	-20.60	0.16	46.19	54.00	-7.81	-	-	123	147	H
		* 2.39	45.24	Pk	31.90	-20.60	0.00	56.54	-	-	74.00	-17.46	202	395	V
		* 2.38942	47.19	Pk	31.90	-20.60	0.00	58.49	-	-	74.00	-15.51	202	395	V
		* 2.39	32.86	RMS	31.90	-20.60	0.16	44.32	54.00	-9.68	-	-	202	395	V
		* 2.38998	33.31	RMS	31.90	-20.60	0.16	44.77	54.00	-9.23	-	-	202	395	V
2462	MIMO	* 2.48351	51.33	Pk	32.00	-20.40	0.00	62.93	-	-	74.00	-11.07	125	189	H
		* 2.48404	54.26	Pk	32.00	-20.40	0.00	65.86	-	-	74.00	-8.14	125	189	H
		* 2.48351	35.33	RMS	32.00	-20.40	0.16	47.09	54.00	-6.91	-	-	125	189	H
		* 2.48359	35.51	RMS	32.00	-20.40	0.16	47.27	54.00	-6.73	-	-	125	189	H
		* 2.48351	47.66	Pk	32.00	-20.40	0.00	59.26	-	-	74.00	-14.74	209	373	V
		* 2.48386	53.18	Pk	32.00	-20.40	0.00	64.78	-	-	74.00	-9.22	209	373	V
		* 2.48351	33.56	RMS	32.00	-20.40	0.16	45.32	54.00	-8.68	-	-	209	373	V
		* 2.48365	33.81	RMS	32.00	-20.40	0.16	45.57	54.00	-8.43	-	-	209	373	V
2467	MIMO	* 2.48351	57.89	Pk	32.00	-25.10	0.00	64.79	-	-	74.00	-9.21	125	142	H
		* 2.48357	57.78	Pk	32.00	-25.10	0.00	64.68	-	-	74.00	-9.32	125	142	H
		* 2.48351	40.84	RMS	32.00	-25.10	0.16	47.90	54.00	-6.10	-	-	125	142	H
		* 2.48378	41.37	RMS	32.00	-25.10	0.16	48.43	54.00	-5.57	-	-	125	142	H
		* 2.48351	51.42	Pk	32.00	-25.10	0.00	58.32	-	-	74.00	-15.68	215	378	V
		* 2.48352	53.61	Pk	32.00	-25.10	0.00	60.51	-	-	74.00	-13.49	215	378	V
		* 2.48351	37.26	RMS	32.00	-25.10	0.16	44.32	54.00	-9.68	-	-	215	378	V
		* 2.48356	37.46	RMS	32.00	-25.10	0.16	44.52	54.00	-9.48	-	-	215	378	V
2472	MIMO	* 2.48351	60.52	Pk	32.00	-25.10	0.00	67.42	-	-	74.00	-6.58	125	140	H
		* 2.48352	62.45	Pk	32.00	-25.10	0.00	69.35	-	-	74.00	**-4.65**	125	140	H
		* 2.48351	44.38	RMS	32.00	-25.10	0.16	51.44	54.00	-2.56	-	-	125	140	H
		* 2.48354	44.50	RMS	32.00	-25.10	0.16	51.56	54.00	**-2.44**	-	-	125	140	H
		* 2.48351	59.11	Pk	32.00	-25.10	0.00	66.01	-	-	74.00	-7.99	216	378	V
		* 2.48352	61.01	Pk	32.00	-25.10	0.00	67.91	-	-	74.00	-6.09	216	378	V
		* 2.48351	42.60	RMS	32.00	-25.10	0.16	49.66	54.00	-4.34	-	-	216	378	V
		* 2.48355	42.14	RMS	32.00	-25.10	0.16	49.20	54.00	-4.80	-	-	216	378	V

Note1. Pk - Peak detector, RMS - RMS detectior
Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15C(04)
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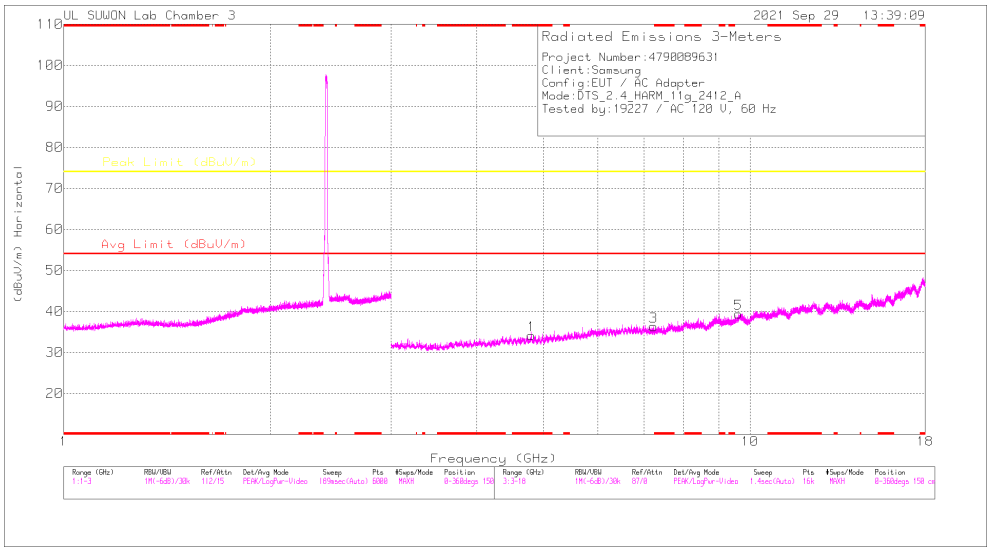
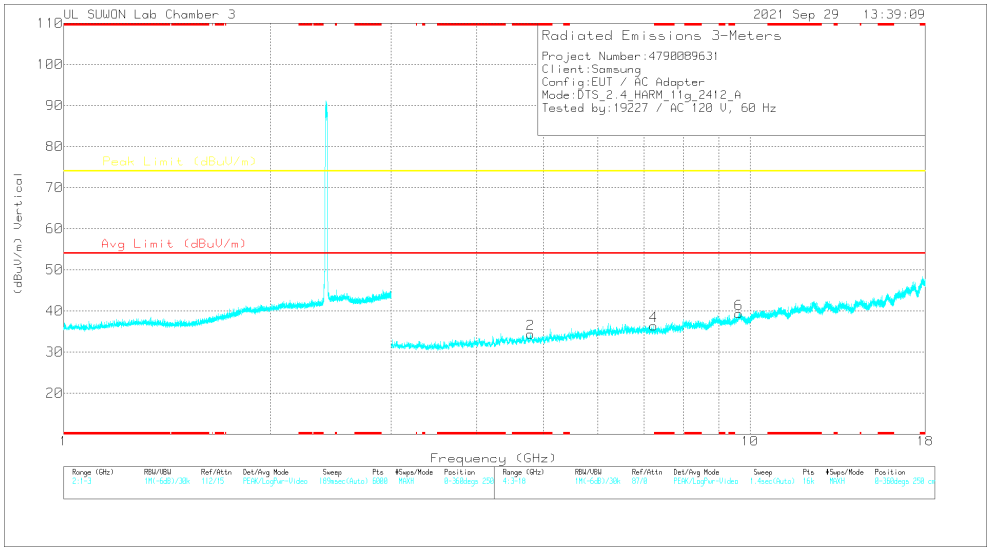
HARMONICS AND SPURIOUS EMISSIONS (WORST CASE: 1 CHANNEL)

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_00218957	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
* 4.802	39.59	Pk	34.6	-30.5	0	43.69	-	-	74	-30.31	0	100	H
* 4.80397	39.16	Pk	34.6	-30.4	0	43.36	-	-	74	-30.64	0	100	V
7.23316	36.23	PK2	36	-26	0	46.23	-	-	74	-27.77	0	100	H
7.23174	35.62	PK2	36	-26	0	45.62	-	-	74	-28.38	0	100	V
9.62259	33.83	PK2	37.3	-22	0	49.13	-	-	74	-24.87	0	100	H
9.62174	32.96	PK2	37.3	-22	0	48.26	-	-	74	-25.74	0	100	V

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

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
2412	MIMO	* 4.802	39.59	Pk	34.60	-30.50	0.00	43.69	-	-	74.00	-30.31	0	100	H
		* 4.80397	39.16	Pk	34.60	-30.40	0.00	43.36	-	-	74.00	-30.64	0	100	V
		7.233	36.23	PK2	36.00	-26.00	0.00	46.23	-	-	74.00	-27.77	0	100	H
		7.232	35.62	PK2	36.00	-26.00	0.00	45.62	-	-	74.00	-28.38	0	100	V
		9.623	33.83	PK2	37.30	-22.00	0.00	49.13	-	-	74.00	**-24.87**	0	100	H
		9.622	32.96	PK2	37.30	-22.00	0.00	48.26	-	-	74.00	-25.74	0	100	V
2437	MIMO	* 4.86498	39.97	PK2	34.60	-31.00	0.00	43.57	-	-	74.00	-30.43	360	100	H
		* 4.86887	40.93	PK2	34.60	-31.10	0.00	44.43	-	-	74.00	-29.57	360	100	V
		* 7.3018	35.50	PK2	36.00	-25.80	0.00	45.70	-	-	74.00	-28.30	360	100	H
		* 7.30449	35.13	PK2	36.00	-25.70	0.00	45.43	-	-	74.00	-28.57	360	100	V
		9.745	32.74	PK2	37.50	-21.70	0.00	48.54	-	-	74.00	-25.46	360	100	H
		9.758	32.98	PK2	37.50	-21.70	0.00	48.78	-	-	74.00	-25.22	360	100	V
2462	MIMO	* 4.92009	39.89	PK2	34.70	-31.30	0.00	43.29	-	-	74.00	-30.71	360	100	H
		* 4.92602	40.33	PK2	34.70	-31.20	0.00	43.83	-	-	74.00	-30.17	360	100	V
		* 7.37929	35.26	PK2	36.00	-25.00	0.00	46.26	-	-	74.00	-27.74	360	100	H
		* 7.37281	34.73	PK2	36.00	-25.10	0.00	45.63	-	-	74.00	-28.37	360	100	V
		9.842	32.01	PK2	37.70	-21.90	0.00	47.81	-	-	74.00	-26.19	360	100	H
		9.851	32.37	PK2	37.70	-21.90	0.00	48.17	-	-	74.00	-25.83	360	100	V

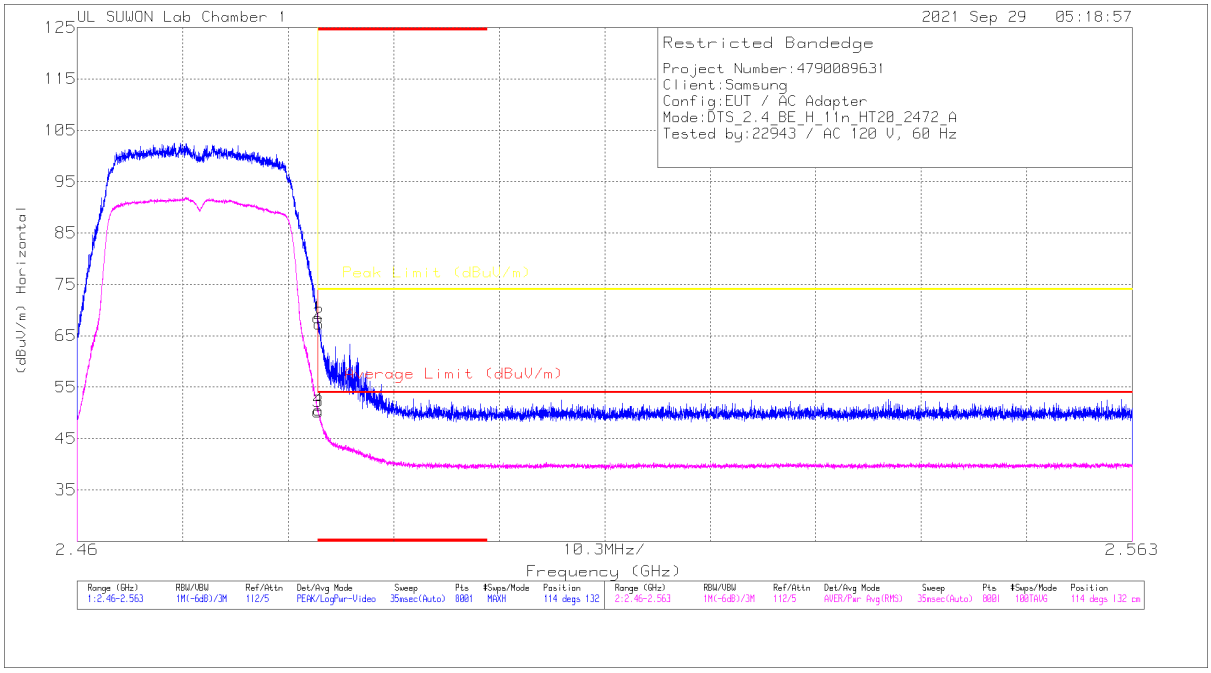
Note1. PK2 - KDB558074 Method: Maximum Peak / MAv1 - KDB558074 Option 1 Maximum RMS Average
Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

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

2TX Antenna 1 + Antenna 2

BANDEDGE (WORST CASE: 13 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	* 2.48351	61.57	Pk	32	-25.1	0	68.47	-	-	74	-5.53	114	132	H
2	* 2.48361	60.44	Pk	32	-25.1	0	67.34	-	-	74	-6.66	114	132	H
3	* 2.48351	43.17	RMS	32	-25.1	.17	50.24	54	-3.76	-	-	114	132	H
4	* 2.48354	43.5	RMS	32	-25.1	.17	50.57	54	-3.43	-	-	114	132	H

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

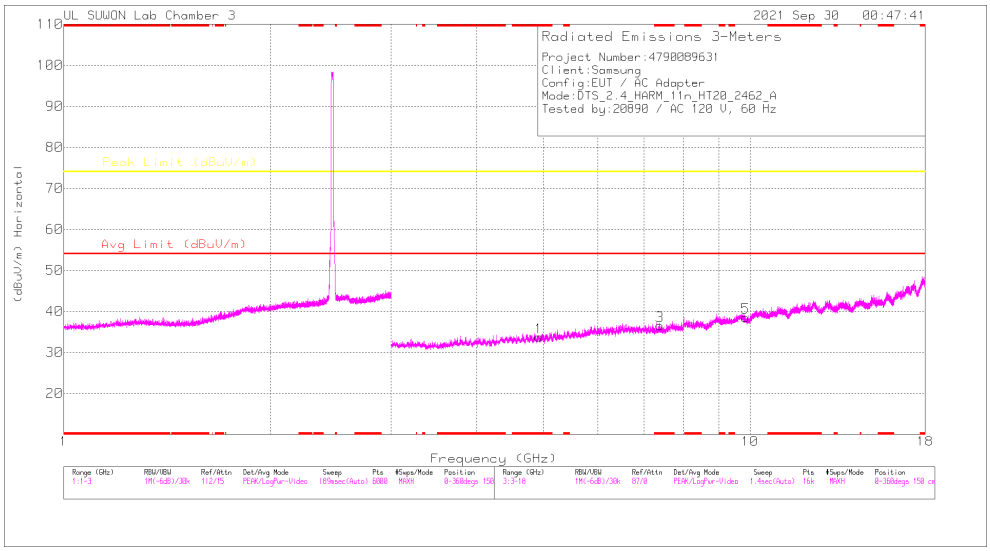
BANDEDGE TEST DATA

Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
2412	MIMO	* 2.39	50.82	Pk	31.90	-20.60	0.00	62.12	-	-	74.00	-11.88	122	123	H
		* 2.38825	55.75	Pk	31.90	-20.60	0.00	67.05	-	-	74.00	-6.95	122	123	H
		* 2.39	37.11	RMS	31.90	-20.60	0.17	48.58	54.00	-5.42	-	-	122	123	H
		* 2.38997	37.44	RMS	31.90	-20.60	0.17	48.91	54.00	-5.09	-	-	122	123	H
		* 2.39	44.96	Pk	31.90	-20.60	0.00	56.26	-	-	74.00	-17.74	202	395	V
		* 2.38872	53.54	Pk	31.90	-20.60	0.00	64.84	-	-	74.00	-9.16	202	395	V
		* 2.39	34.71	RMS	31.90	-20.60	0.17	46.18	54.00	-7.82	-	-	202	395	V
		* 2.3898	34.98	RMS	31.90	-20.60	0.17	46.45	54.00	-7.55	-	-	202	395	V
2462	MIMO	* 2.48351	49.77	Pk	32.00	-20.40	0.00	61.37	-	-	74.00	-12.63	128	185	H
		* 2.48413	58.24	Pk	32.00	-20.40	0.00	69.84	-	-	74.00	-4.16	128	185	H
		* 2.48351	35.46	RMS	32.00	-20.40	0.17	47.23	54.00	-6.77	-	-	128	185	H
		* 2.48369	37.46	RMS	32.00	-20.40	0.17	49.23	54.00	-4.77	-	-	128	185	H
		* 2.48351	49.42	Pk	32.00	-20.40	0.00	61.02	-	-	74.00	-12.98	209	373	V
		* 2.48373	57.72	Pk	32.00	-20.40	0.00	69.32	-	-	74.00	-4.68	209	373	V
		* 2.48351	34.04	RMS	32.00	-20.40	0.17	45.81	54.00	-8.19	-	-	209	373	V
		* 2.48352	34.97	RMS	32.00	-20.40	0.17	46.74	54.00	-7.26	-	-	209	373	V
2467	MIMO	* 2.48351	59.64	Pk	32.00	-25.10	0.00	66.54	-	-	74.00	-7.46	122	137	H
		* 2.48373	63.16	Pk	32.00	-25.10	0.00	70.06	-	-	74.00	**-3.94**	122	137	H
		* 2.48351	41.40	RMS	32.00	-25.10	0.17	48.47	54.00	-5.53	-	-	122	137	H
		* 2.48354	41.74	RMS	32.00	-25.10	0.17	48.81	54.00	-5.19	-	-	122	137	H
		* 2.48351	53.76	Pk	32.00	-25.10	0.00	60.66	-	-	74.00	-13.34	213	378	V
		* 2.48408	57.89	Pk	32.00	-25.10	0.00	64.79	-	-	74.00	-9.21	213	378	V
		* 2.48351	37.44	RMS	32.00	-25.10	0.17	44.51	54.00	-9.49	-	-	213	378	V
		* 2.48442	37.91	RMS	32.00	-25.10	0.17	44.98	54.00	-9.02	-	-	213	378	V
2472	MIMO	* 2.48351	61.57	Pk	32.00	-25.10	0.00	68.47	-	-	74.00	-5.53	114	132	H
		* 2.48361	60.44	Pk	32.00	-25.10	0.00	67.34	-	-	74.00	-6.66	114	132	H
		* 2.48351	43.17	RMS	32.00	-25.10	0.17	50.24	54.00	-3.76	-	-	114	132	H
		* 2.48354	43.50	RMS	32.00	-25.10	0.17	50.57	54.00	**-3.43**	-	-	114	132	H
		* 2.48351	58.90	Pk	32.00	-25.10	0.00	65.80	-	-	74.00	-8.20	215	376	V
		* 2.48355	59.00	Pk	32.00	-25.10	0.00	65.90	-	-	74.00	-8.10	215	376	V
		* 2.48351	41.06	RMS	32.00	-25.10	0.17	48.13	54.00	-5.87	-	-	215	376	V
		* 2.48356	40.85	RMS	32.00	-25.10	0.17	47.92	54.00	-6.08	-	-	215	376	V

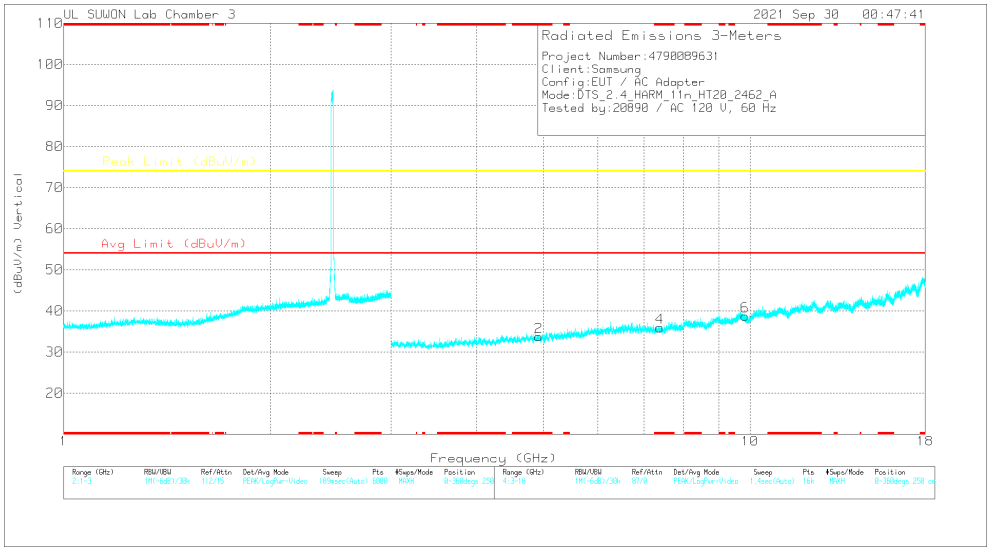
Note1. Pk - Peak detector, RMS - RMS detectior
Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

HARMONICS AND SPURIOUS EMISSIONS (WORST CASE: 11 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_00218957	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
* 4.92542	40.39	PK2	34.7	-31.3	0	43.79	-	-	74	-30.21	360	100	H
* 4.91978	40.93	PK2	34.7	-31.3	0	44.33	-	-	74	-29.67	360	100	V
* 7.3886	35.02	PK2	36	-25	0	46.02	-	-	74	-27.98	360	100	H
* 7.40404	34.74	PK2	36	-25	0	45.74	-	-	74	-28.26	360	100	V
9.84267	31.97	PK2	37.7	-21.9	0	47.77	-	-	74	-26.23	360	100	H
9.85718	33.31	PK2	37.7	-21.9	0	49.11	-	-	74	-24.89	360	100	V

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

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
2412	MIMO	* 4.82737	39.12	PK2	34.60	-30.70	0.00	43.02	-	-	74.00	-30.98	360	100	H
		* 4.83147	40.04	PK2	34.60	-30.70	0.00	43.94	-	-	74.00	-30.06	360	100	V
		7.245	35.51	PK2	36.00	-26.00	0.00	45.51	-	-	74.00	-28.49	360	100	H
		7.233	36.03	PK2	36.00	-26.00	0.00	46.03	-	-	74.00	-27.97	360	100	V
		9.651	33.43	PK2	37.40	-21.90	0.00	48.93	-	-	74.00	-25.07	360	100	H
		9.657	32.98	PK2	37.40	-21.80	0.00	48.58	-	-	74.00	-25.42	360	100	V
2437	MIMO	* 4.87023	40.22	PK2	34.60	-31.10	0.00	43.72	-	-	74.00	-30.28	360	100	H
		* 4.86553	40.76	PK2	34.60	-31.00	0.00	44.36	-	-	74.00	-29.64	360	100	V
		* 7.29665	35.57	PK2	36.00	-25.80	0.00	45.77	-	-	74.00	-28.23	360	100	H
		* 7.29575	35.64	PK2	36.00	-25.80	0.00	45.84	-	-	74.00	-28.16	360	100	V
		9.759	33.10	PK2	37.50	-21.70	0.00	48.90	-	-	74.00	-25.10	360	100	H
		9.753	32.91	PK2	37.50	-21.70	0.00	48.71	-	-	74.00	-25.29	360	100	V
2462	MIMO	* 4.92542	40.39	PK2	34.70	-31.30	0.00	43.79	-	-	74.00	-30.21	360	100	H
		* 4.91978	40.93	PK2	34.70	-31.30	0.00	44.33	-	-	74.00	-29.67	360	100	V
		* 7.3886	35.02	PK2	36.00	-25.00	0.00	46.02	-	-	74.00	-27.98	360	100	H
		* 7.40404	34.74	PK2	36.00	-25.00	0.00	45.74	-	-	74.00	-28.26	360	100	V
		9.843	31.97	PK2	37.70	-21.90	0.00	47.77	-	-	74.00	-26.23	360	100	H
		9.857	33.31	PK2	37.70	-21.90	0.00	49.11	-	-	74.00	**-24.89**	360	100	V

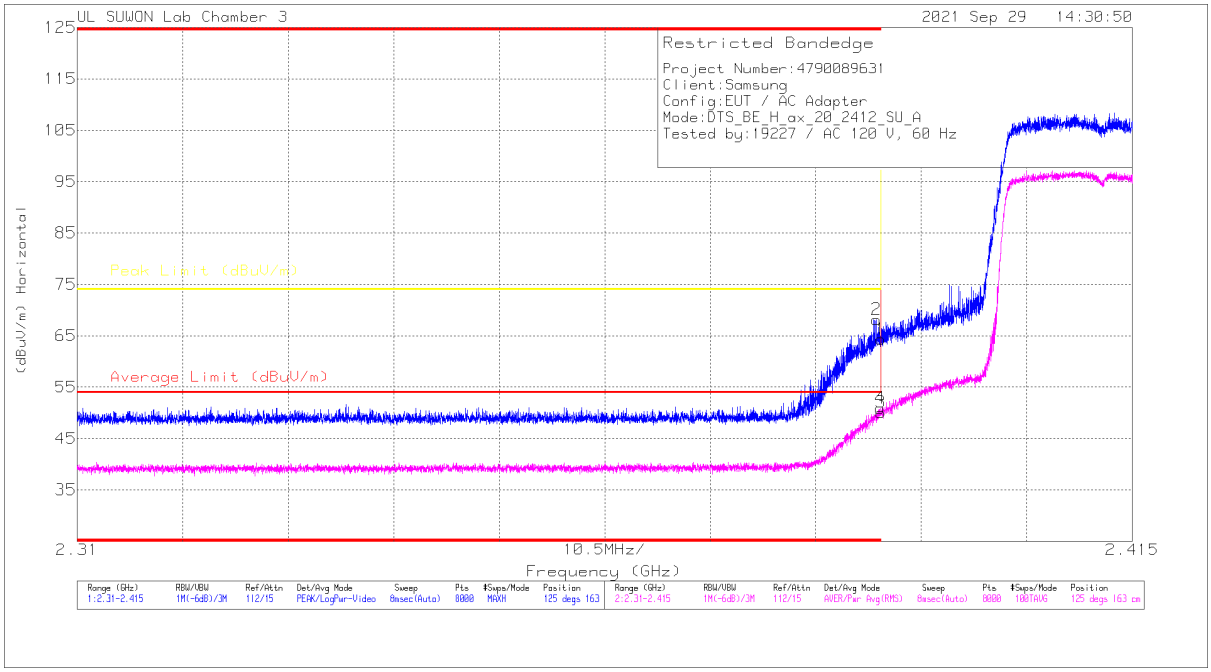
Note1. PK2 - KDB558074 Method: Maximum Peak / MAv1 - KDB558074 Option 1 Maximum RMS Average
Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

10.1.4. TX ABOVE 1 GHz 802.11ax HE20 MODE IN THE 2.4 GHz BAND

2TX Antenna 1 + Antenna 2

BANDEDGE (1 CHANNEL, SU MODE)

HORIZONTAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	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	56.92	Pk	32.8	-25.4	0	64.32	-	-	74	-9.68	125	163	H
2	* 2.38952	60.76	Pk	32.8	-25.4	0	68.16	-	-	74	-5.84	125	163	H
3	* 2.39	42.27	RMS	32.8	-25.4	.42	50.09	54	-3.91	-	-	125	163	H
4	* 2.38993	43.08	RMS	32.8	-25.4	.42	50.9	54	-3.1	-	-	125	163	H

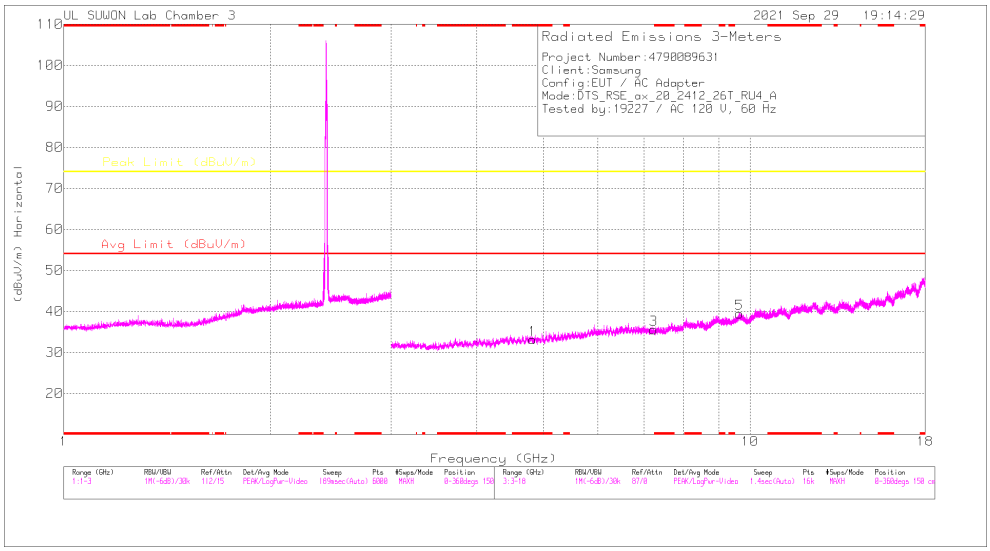
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE TEST DATA

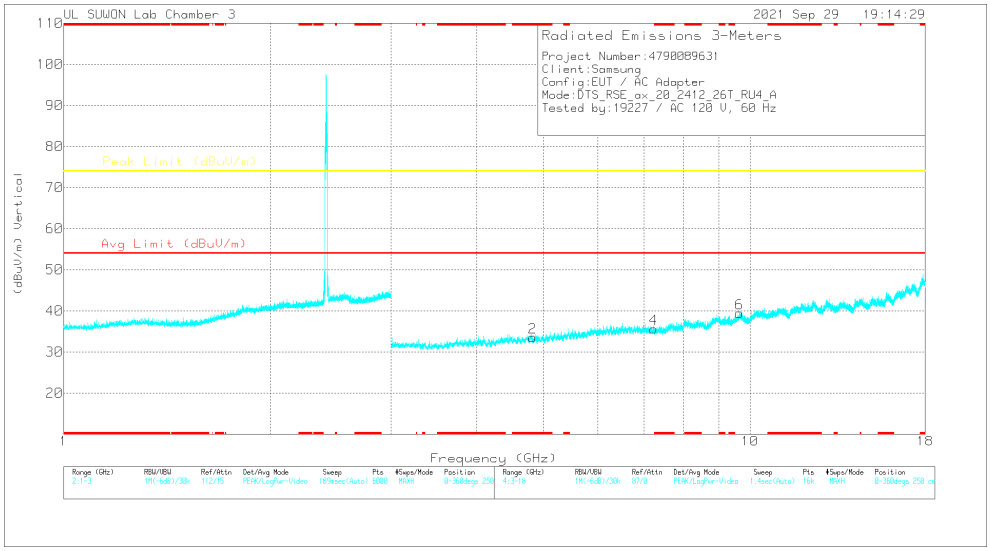
Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
2412 SU mode	MIMO	* 2.39	56.92	Pk	32.80	-25.40	0.00	64.32	-	-	74.00	-9.68	125	163	H
		* 2.38952	60.76	Pk	32.80	-25.40	0.00	68.16	-	-	74.00	-5.84	125	163	H
		* 2.39	42.27	RMS	32.80	-25.40	0.42	50.09	54.00	-3.91	-	-	125	163	H
		* 2.38993	43.08	RMS	32.80	-25.40	0.42	50.90	54.00	**-3.10**	-	-	125	163	H
		* 2.39	52.38	Pk	32.80	-25.40	0.00	59.78	-	-	74.00	-14.22	202	388	V
		* 2.38878	56.81	Pk	32.80	-25.40	0.00	64.21	-	-	74.00	-9.79	202	388	V
		* 2.39	39.94	RMS	32.80	-25.40	0.42	47.76	54.00	-6.24	-	-	202	388	V
		* 2.3896	40.35	RMS	32.80	-25.40	0.42	48.17	54.00	-5.83	-	-	202	388	V
2417 SU mode	MIMO	* 2.39	46.98	Pk	32.80	-25.40	0.00	54.38	-	-	74.00	-19.62	222	386	H
		* 2.38728	52.67	Pk	32.70	-25.40	0.00	59.97	-	-	74.00	-14.03	222	386	H
		* 2.39	32.14	RMS	32.80	-25.40	0.42	39.96	54.00	-14.04	-	-	222	386	H
		* 2.3887	33.93	RMS	32.80	-25.40	0.42	41.75	54.00	-12.25	-	-	222	386	H
		* 2.39	49.38	Pk	32.80	-25.40	0.00	56.78	-	-	74.00	-17.22	116	388	V
		* 2.38825	52.90	Pk	32.80	-25.30	0.00	60.40	-	-	74.00	-13.60	116	388	V
		* 2.39	33.28	RMS	32.80	-25.40	0.42	41.10	54.00	-12.90	-	-	116	388	V
		* 2.38871	35.25	RMS	32.80	-25.40	0.42	43.07	54.00	-10.93	-	-	116	388	V
2457 SU mode	MIMO	* 2.4835	47.08	Pk	32.90	-25.30	0.00	54.68	-	-	74.00	-19.32	217	291	H
		* 2.48408	50.30	Pk	32.90	-25.30	0.00	57.90	-	-	74.00	-16.10	217	291	H
		* 2.4835	32.88	RMS	32.90	-25.30	0.42	40.90	54.00	-13.10	-	-	217	291	H
		* 2.4836	33.52	RMS	32.90	-25.30	0.42	41.54	54.00	-12.46	-	-	217	291	H
		* 2.4835	46.90	Pk	32.90	-25.30	0.00	54.50	-	-	74.00	-19.50	136	330	V
		* 2.484	52.52	Pk	32.90	-25.30	0.00	60.12	-	-	74.00	-13.88	136	330	V
		* 2.4835	32.72	RMS	32.90	-25.30	0.42	40.74	54.00	-13.26	-	-	136	330	V
		* 2.48413	33.71	RMS	32.90	-25.30	0.42	41.73	54.00	-12.27	-	-	136	330	V
2462 SU mode	MIMO	* 2.4835	61.05	Pk	32.90	-25.30	0.00	68.65	-	-	74.00	-5.35	127	134	H
		* 2.48351	61.38	Pk	32.90	-25.30	0.00	68.98	-	-	74.00	**-5.02**	127	134	H
		* 2.4835	42.17	RMS	32.90	-25.30	0.42	50.19	54.00	-3.81	-	-	127	134	H
		* 2.48355	42.02	RMS	32.90	-25.30	0.42	50.04	54.00	-3.96	-	-	127	134	H
		* 2.4835	52.59	Pk	32.90	-25.30	0.00	60.19	-	-	74.00	-13.81	223	360	V
		* 2.48355	53.95	Pk	32.90	-25.30	0.00	61.55	-	-	74.00	-12.45	223	360	V
		* 2.4835	35.22	RMS	32.90	-25.30	0.42	43.24	54.00	-10.76	-	-	223	360	V
		* 2.4836	36.71	RMS	32.90	-25.30	0.42	44.73	54.00	-9.27	-	-	223	360	V
2467 SU mode	MIMO	* 2.4835	55.74	Pk	32.90	-25.30	0.00	63.34	-	-	74.00	-10.66	126	111	H
		* 2.48432	61.23	Pk	32.90	-25.30	0.00	68.83	-	-	74.00	-5.17	126	111	H
		* 2.4835	39.87	RMS	32.90	-25.30	0.42	47.89	54.00	-6.11	-	-	126	111	H
		* 2.48395	41.76	RMS	32.90	-25.30	0.42	49.78	54.00	-4.22	-	-	126	111	H
		* 2.4835	48.38	Pk	32.90	-25.30	0.00	55.98	-	-	74.00	-18.02	224	361	V
		* 2.48525	55.92	Pk	32.90	-25.30	0.00	63.52	-	-	74.00	-10.48	224	361	V
		* 2.4835	36.47	RMS	32.90	-25.30	0.42	44.49	54.00	-9.51	-	-	224	361	V
		* 2.48411	37.07	RMS	32.90	-25.30	0.42	45.09	54.00	-8.91	-	-	224	361	V
2472 SU mode	MIMO	* 2.4835	60.63	Pk	32.90	-25.30	0.00	68.23	-	-	74.00	-5.77	124	133	H
		* 2.48354	61.28	Pk	32.90	-25.30	0.00	68.88	-	-	74.00	-5.12	124	133	H
		* 2.4835	40.34	RMS	32.90	-25.30	0.42	48.36	54.00	-5.64	-	-	124	133	H
		* 2.48351	42.76	RMS	32.90	-25.30	0.42	50.78	54.00	-3.22	-	-	124	133	H
		* 2.4835	59.59	Pk	32.90	-25.30	0.00	67.19	-	-	74.00	-6.81	207	360	V
		* 2.48362	59.67	Pk	32.90	-25.30	0.00	67.27	-	-	74.00	-6.73	207	360	V
		* 2.4835	37.41	RMS	32.90	-25.30	0.42	45.43	54.00	-8.57	-	-	207	360	V
		* 2.48354	40.56	RMS	32.90	-25.30	0.42	48.58	54.00	-5.42	-	-	207	360	V

Note1. Pk - Peak detector, RMS - RMS detectior
Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

HARMONICS AND SPURIOUS EMISSIONS (WORST CASE: 1 CHANNEL, 4RU)
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_00218957	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
* 4.82352	39.7	PK2	34.6	-30.7	0	43.6	-	-	74	-30.4	0	100	H
* 4.82349	38.89	PK2	34.6	-30.7	0	42.79	-	-	74	-31.21	0	100	V
7.23693	35.85	PK2	36	-26.1	0	45.75	-	-	74	-28.25	0	100	H
7.23779	35.55	PK2	36	-26.1	0	45.45	-	-	74	-28.55	0	100	V
9.65171	33.32	PK2	37.4	-21.9	0	48.82	-	-	74	-25.18	0	100	H
9.64866	34.09	PK2	37.4	-21.9	0	49.59	-	-	74	-24.41	0	100	V

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

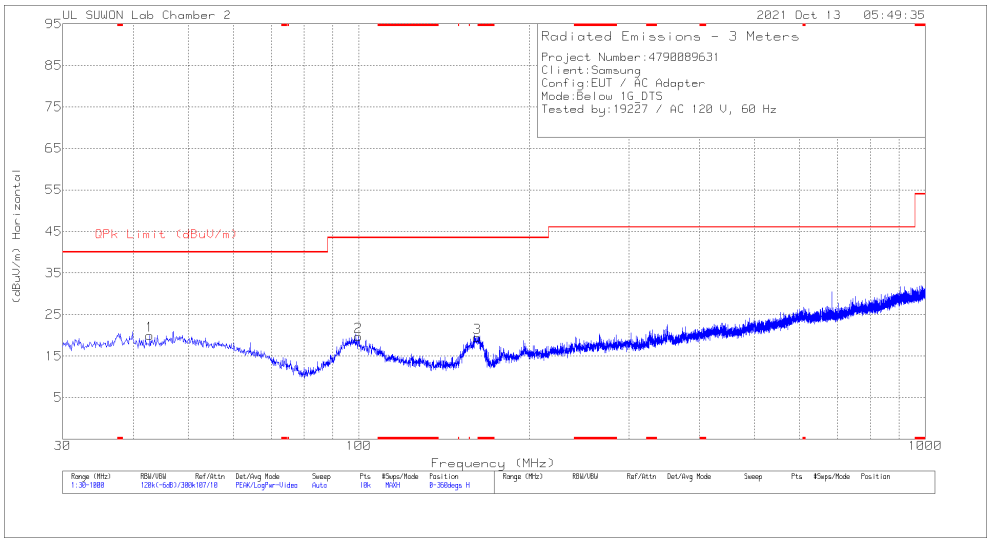
UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15C(04)
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea TEL: (031) 337-9902 FAX: (031) 213-5433

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

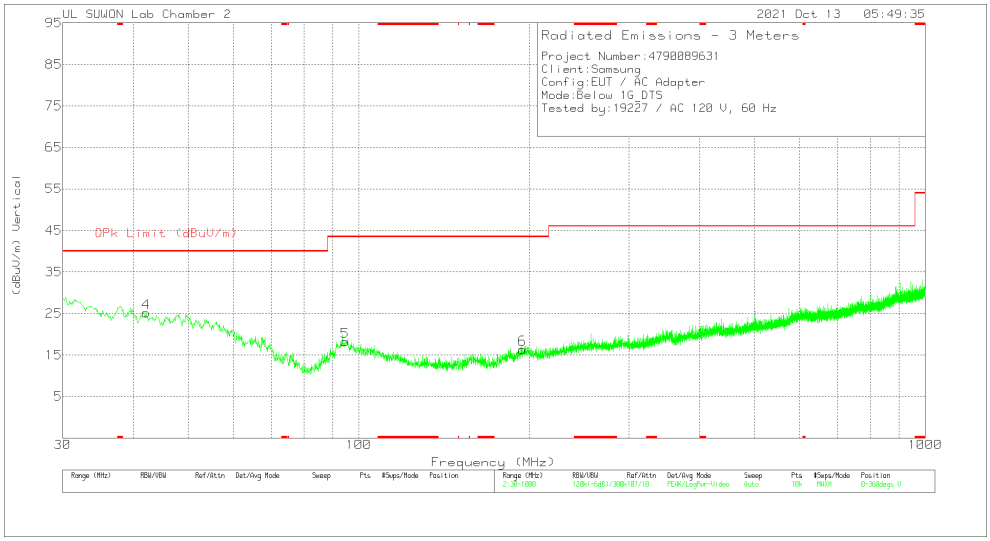
Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
2412 RU4	MIMO	* 4.82352	39.70	PK2	34.60	-30.70	0.00	43.60	-	-	74.00	-30.40	0	100	H
		* 4.82349	38.89	PK2	34.60	-30.70	0.00	42.79	-	-	74.00	-31.21	0	100	V
		7.237	35.85	PK2	36.00	-26.10	0.00	45.75	-	-	74.00	-28.25	0	100	H
		7.238	35.55	PK2	36.00	-26.10	0.00	45.45	-	-	74.00	-28.55	0	100	V
		9.652	33.32	PK2	37.40	-21.90	0.00	48.82	-	-	74.00	-25.18	0	100	H
		9.649	34.09	PK2	37.40	-21.90	0.00	49.59	-	-	74.00	**-24.41**	0	100	V
2437 RU0	MIMO	* 4.86565	40.64	PK2	34.60	-31.00	0.00	44.24	-	-	74.00	-29.76	0	100	H
		* 4.87116	41.39	PK2	34.60	-31.10	0.00	44.89	-	-	74.00	-29.11	0	100	V
		* 7.3054	35.28	PK2	36.00	-25.70	0.00	45.58	-	-	74.00	-28.42	0	100	H
		* 7.31363	35.33	PK2	36.00	-25.60	0.00	45.73	-	-	74.00	-28.27	0	100	V
		9.748	32.49	PK2	37.50	-21.70	0.00	48.29	-	-	74.00	-25.71	0	100	H
		9.747	32.29	PK2	37.50	-21.70	0.00	48.09	-	-	74.00	-25.91	0	100	V
2462 RU4	MIMO	* 4.92194	40.73	PK2	34.70	-31.30	0.00	44.13	-	-	74.00	-29.87	1	100	H
		* 4.92045	40.34	PK2	34.70	-31.30	0.00	43.74	-	-	74.00	-30.26	1	100	V
		* 7.40552	35.09	PK2	36.00	-25.00	0.00	46.09	-	-	74.00	-27.91	1	100	H
		* 7.40029	34.79	PK2	36.00	-25.00	0.00	45.79	-	-	74.00	-28.21	1	100	V
		9.853	32.49	PK2	37.70	-21.90	0.00	48.29	-	-	74.00	-25.71	1	100	H
		9.846	31.93	PK2	37.70	-21.90	0.00	47.73	-	-	74.00	-26.27	1	100	V

Note1. PK2 - KDB558074 Method: Maximum Peak / MAv1 - KDB558074 Option 1 Maximum RMS Average
Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

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	42.707	32.46	Pk	19.2	-31.7	0	19.96	40	-20.04	0-360	300	H
2	99.84	33.71	Pk	17.4	-31.4	0	19.71	43.52	-23.81	0-360	100	H
3	161.92	36.06	Pk	14.3	-30.9	0	19.46	43.52	-24.06	0-360	100	H
4	42.125	37.9	Pk	19.1	-31.8	0	25.2	40	-14.8	0-360	100	V
5	94.602	33.08	Pk	16.5	-31.3	0	18.28	43.52	-25.24	0-360	100	V
6	194.512	29.96	Pk	17.2	-30.8	0	16.36	43.52	-27.16	0-360	100	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.

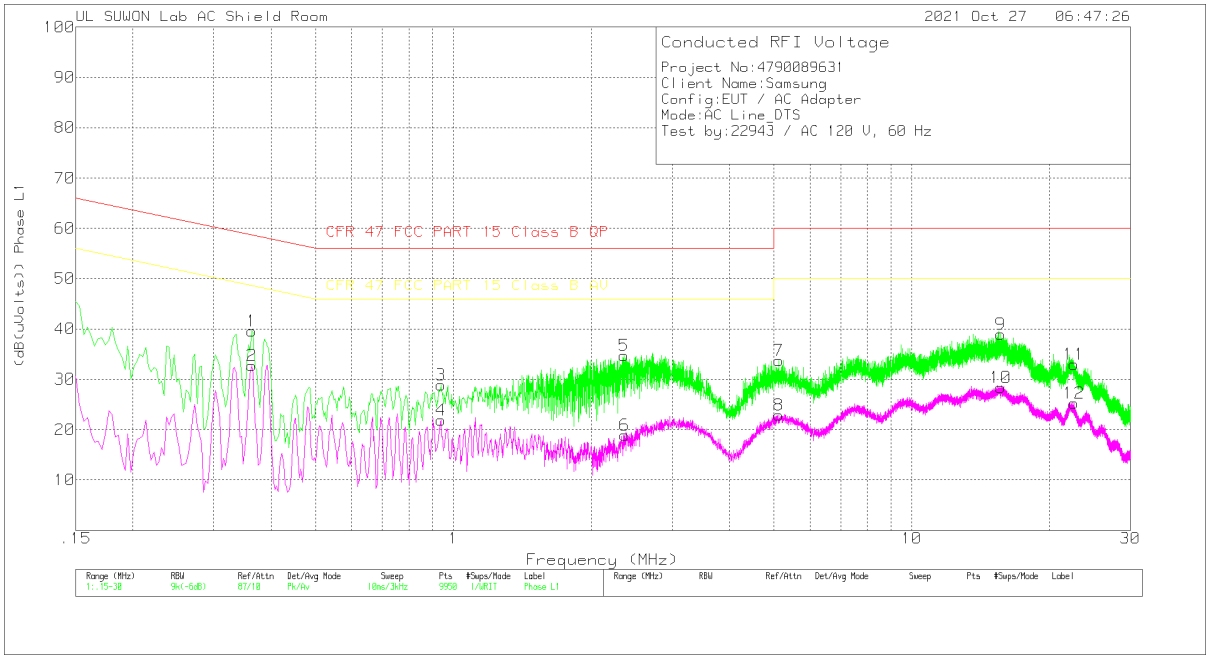
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

11.1.1. AC Power Line

LINE 1 RESULTS



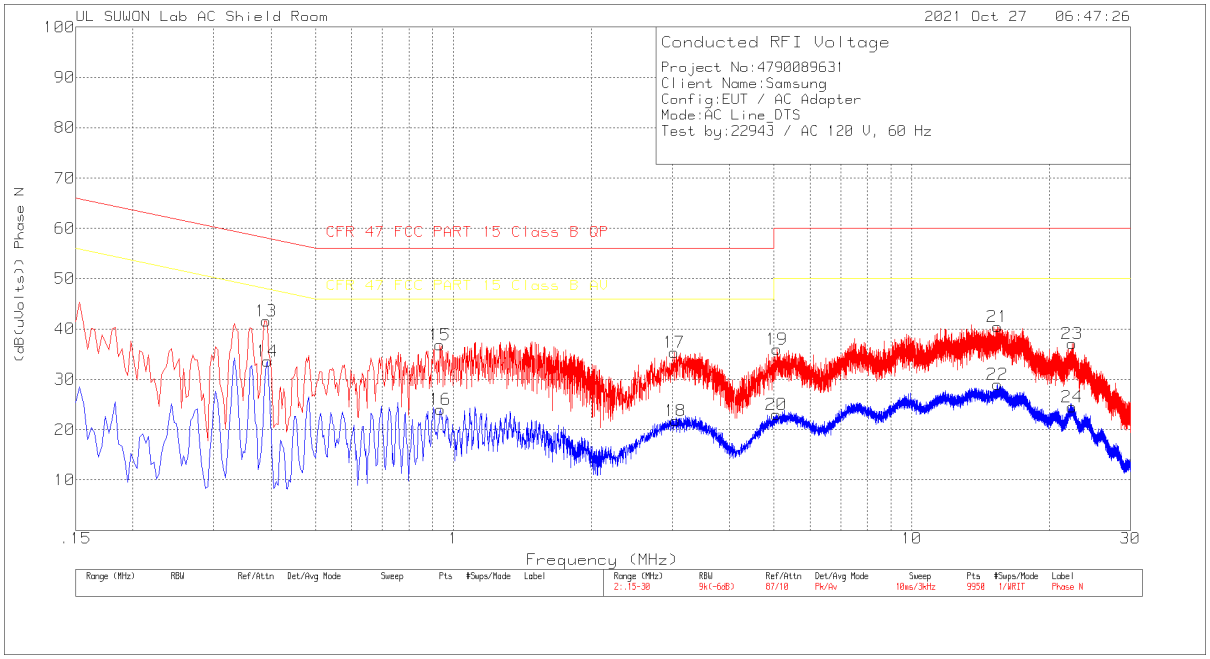
Trace Markers

Range 1: Phase L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_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)
1	.363	29.55	Pk	9.8	.2	39.55	58.66	-19.11	-	-
2	.363	22.77	Av	9.8	.2	32.77	-	-	48.66	-15.89
3	.939	18.73	Pk	9.8	.3	28.83	56	-27.17	-	-
4	.939	11.8	Av	9.8	.3	21.9	-	-	46	-24.1
5	2.355	24.7	Pk	9.7	.3	34.7	56	-21.3	-	-
6	2.364	8.85	Av	9.7	.3	18.85	-	-	46	-27.15
7	5.133	23.77	Pk	9.7	.3	33.77	60	-26.23	-	-
8	5.124	12.88	Av	9.7	.3	22.88	-	-	50	-27.12
9	15.648	28.54	Pk	10	.4	38.94	60	-21.06	-	-
10	15.654	17.98	Av	10	.4	28.38	-	-	50	-21.62
11	22.614	22.3	Pk	10.3	.4	33	60	-27	-	-
12	22.617	14.54	Av	10.3	.4	25.24	-	-	50	-24.76

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_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	.39	31.63	Pk	9.8	.2	41.63	58.06	-16.43	-	-
14	.393	23.59	Av	9.8	.2	33.59	-	-	48	-14.41
15	.933	26.72	Pk	9.8	.3	36.82	56	-19.18	-	-
16	.936	13.93	Av	9.8	.3	24.03	-	-	46	-21.97
17	3.036	25.36	Pk	9.7	.3	35.36	56	-20.64	-	-
18	3.054	11.74	Av	9.7	.3	21.74	-	-	46	-24.26
19	5.088	25.92	Pk	9.7	.3	35.92	60	-24.08	-	-
20	5.064	13.03	Av	9.7	.3	23.03	-	-	50	-26.97
21	15.411	30.01	Pk	10.1	.4	40.51	60	-19.49	-	-
22	15.381	18.46	Av	10.1	.4	28.96	-	-	50	-21.04
23	22.38	26.27	Pk	10.4	.4	37.07	60	-22.93	-	-
24	22.392	13.66	Av	10.4	.4	24.46	-	-	50	-25.54

Pk - Peak detector
Av - Average detection

END OF TEST REPORT

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