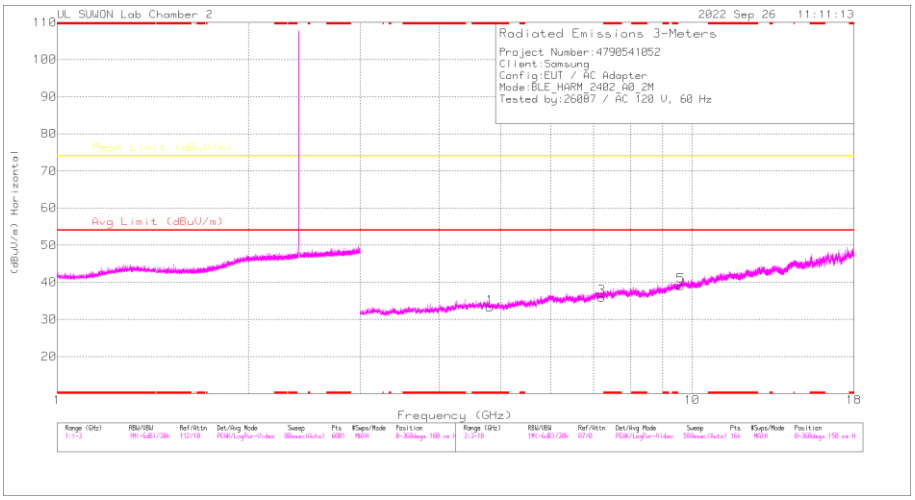
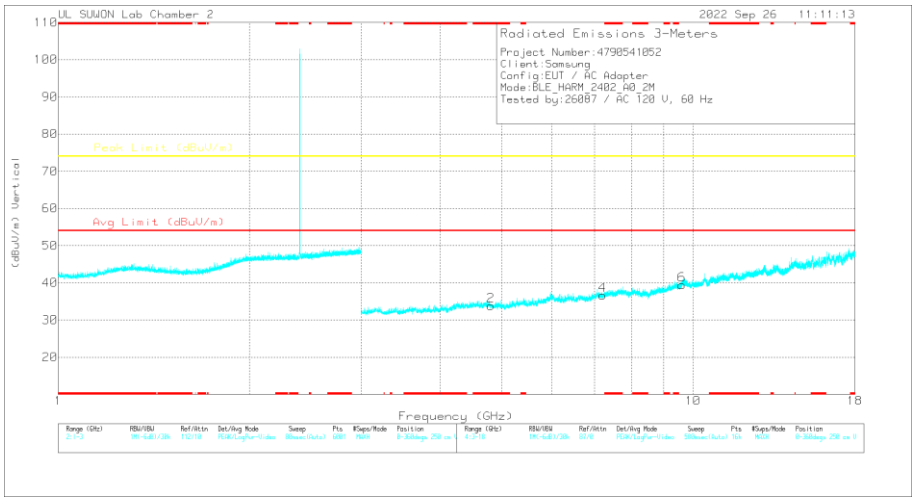
HARMONICS AND SPURIOUS EMISSIONS

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
* 4.80332	36.32	PK2	34	-27.7	42.62	-	-	74	-31.38	0	100	H
* 4.80596	36.41	PK2	34	-27.7	42.71	-	-	74	-31.29	0	100	V
7.2057	35.01	PK2	35.7	-25	45.71	-	-	74	-28.29	0	100	H
7.20487	35.47	PK2	35.7	-25	46.17	-	-	74	-27.83	0	100	V
9.60722	32.11	PK2	36.9	-21.3	47.71	-	-	74	-26.29	0	100	H
9.60939	32.69	PK2	36.9	-21.2	48.39	-	-	74	-25.61	0	100	V

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

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

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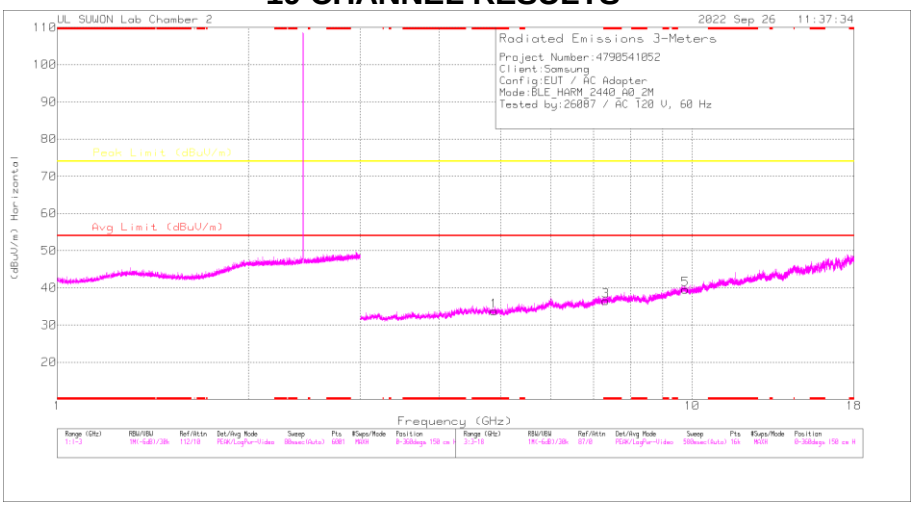
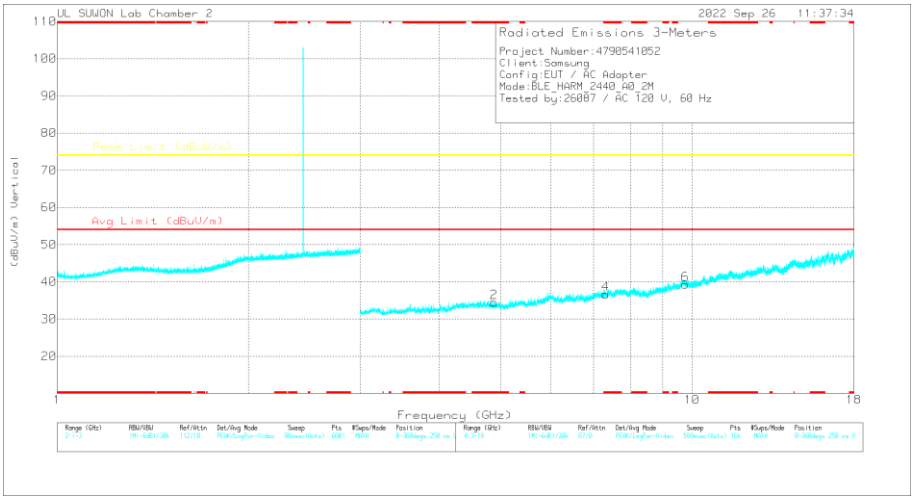
19 CHANNEL RESULTS



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
* 4.87934	38.58	PK2	34	-27.7	44.88	-	-	74	-29.12	0	100	H
* 4.8793	37.24	PK2	34	-27.7	43.54	-	-	74	-30.46	0	100	V
* 7.31874	35.41	PK2	35.7	-24.6	46.51	-	-	74	-27.49	0	100	H
* 7.31981	34.47	PK2	35.7	-24.6	45.57	-	-	74	-28.43	0	100	V
9.76048	32.41	PK2	37.1	-21	48.51	-	-	74	-25.49	0	100	H
9.75924	32.93	PK2	37.1	-20.9	49.13	-	-	74	-24.87	0	100	V

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

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

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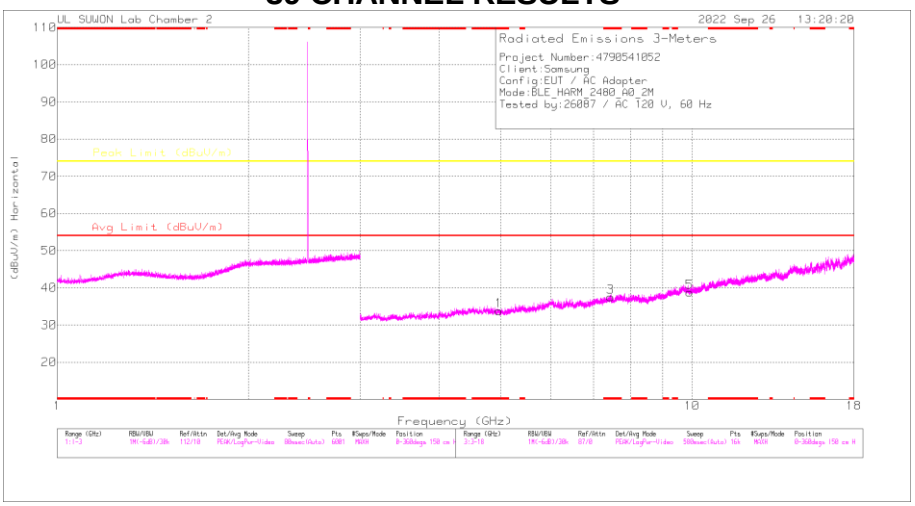
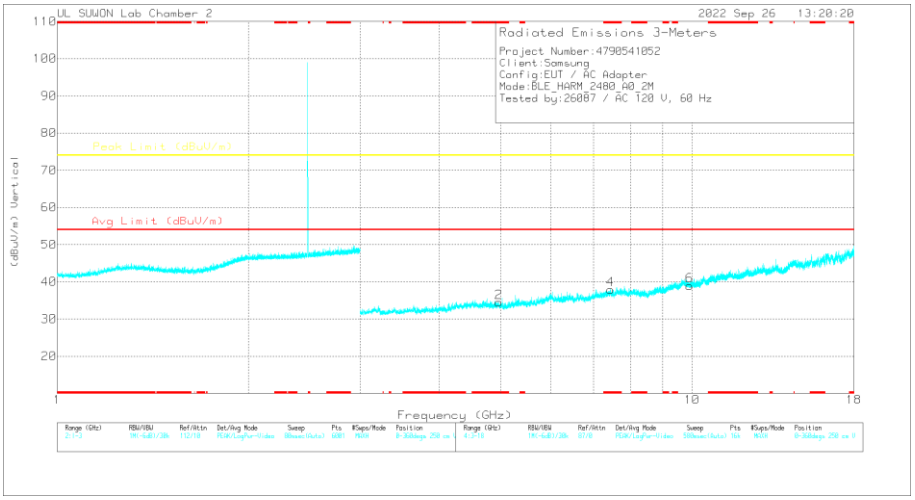
39 CHANNEL RESULTS



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
* 4.95989	35.7	PK2	34	-27	42.7	-	-	74	-31.3	0	100	H
* 4.95838	36.25	PK2	34	-27	43.25	-	-	74	-30.75	0	100	V
* 7.4393	34.63	PK2	35.7	-23.7	46.63	-	-	74	-27.37	0	100	H
* 7.44128	34.06	PK2	35.7	-23.7	46.06	-	-	74	-27.94	0	100	V
9.91902	31.95	PK2	37.3	-21.1	48.15	-	-	74	-25.85	0	100	H
9.91869	31.98	PK2	37.3	-21.1	48.18	-	-	74	-25.82	0	100	V

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

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

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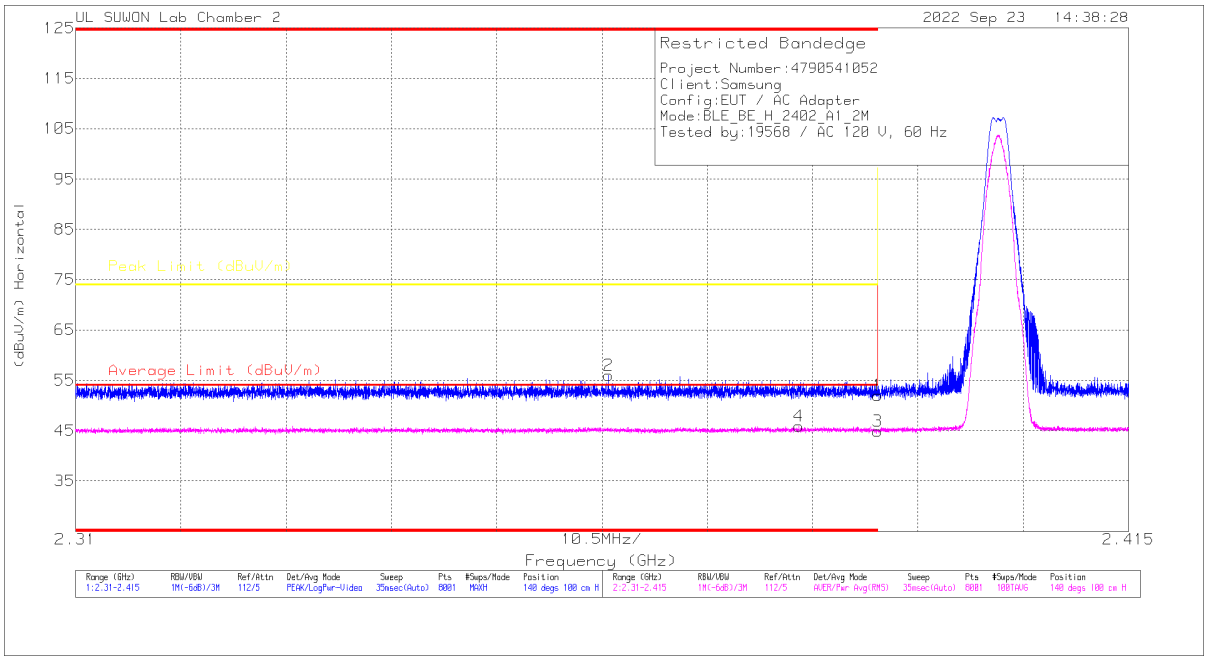
ANT2
BANDEDGE (0 CHANNEL)

HORIZONTAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	40.03	Pk	31.7	-19.7	0	52.03	-	-	74	-21.97	140	100	H
2	* 2.36316	43.96	Pk	31.6	-19.6	0	55.96	-	-	74	-18.04	140	100	H
3	* 2.39	30.48	RMS	31.7	-19.7	2.41	44.89	54	-9.11	-	-	140	100	H
4	* 2.38211	31.37	RMS	31.7	-19.6	2.41	45.88	54	-8.12	-	-	140	100	H

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

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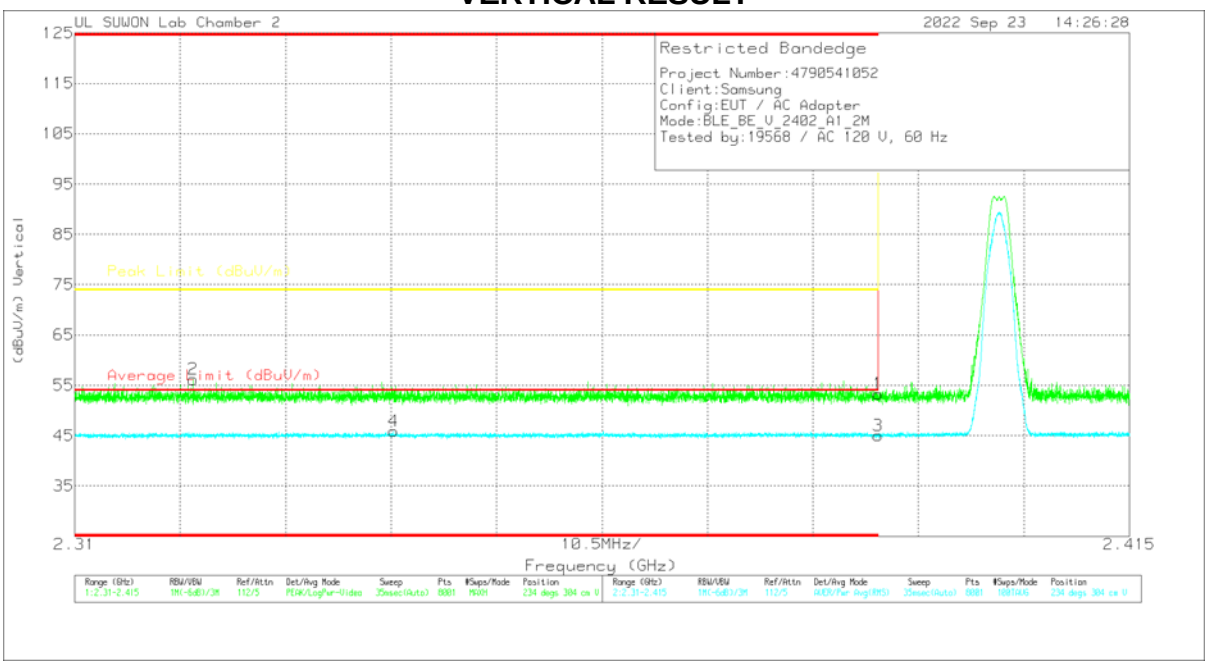
VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	41.31	Pk	31.7	-19.7	0	53.31	-	-	74	-20.69	234	304	V
2	* 2.32181	44.18	Pk	31.6	-19.6	0	56.18	-	-	74	-17.82	234	304	V
3	* 2.39	30.56	RMS	31.7	-19.7	2.41	44.97	54	-9.03	-	-	234	304	V
4	* 2.34178	31.51	RMS	31.6	-19.6	2.41	45.92	54	-8.08	-	-	234	304	V

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

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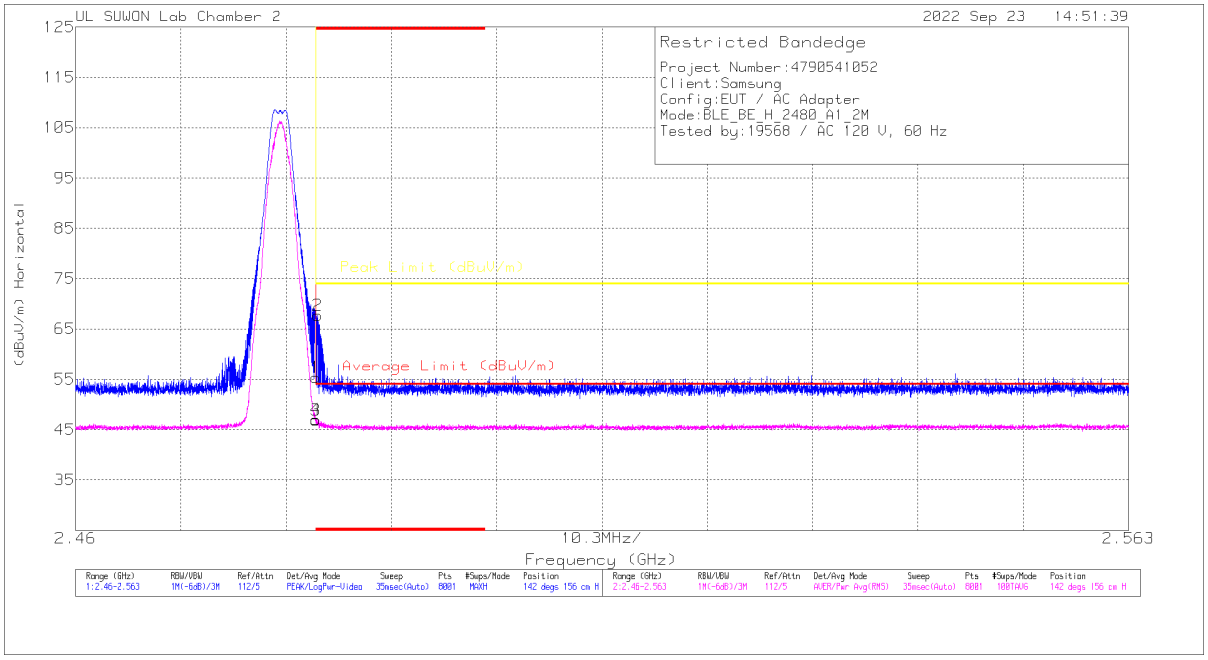
BANDEDGE (39 CHANNEL)

HORIZONTAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	43.01	Pk	31.9	-19.6	0	55.31	-	-	74	-18.69	142	156	H
2	* 2.48368	55.35	Pk	31.9	-19.6	0	67.65	-	-	74	-6.35	142	156	H
3	* 2.48351	32.19	RMS	31.9	-19.6	2.41	46.9	54	-7.1	-	-	142	156	H
4	* 2.48352	32.31	RMS	31.9	-19.6	2.41	47.02	54	-6.98	-	-	142	156	H

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

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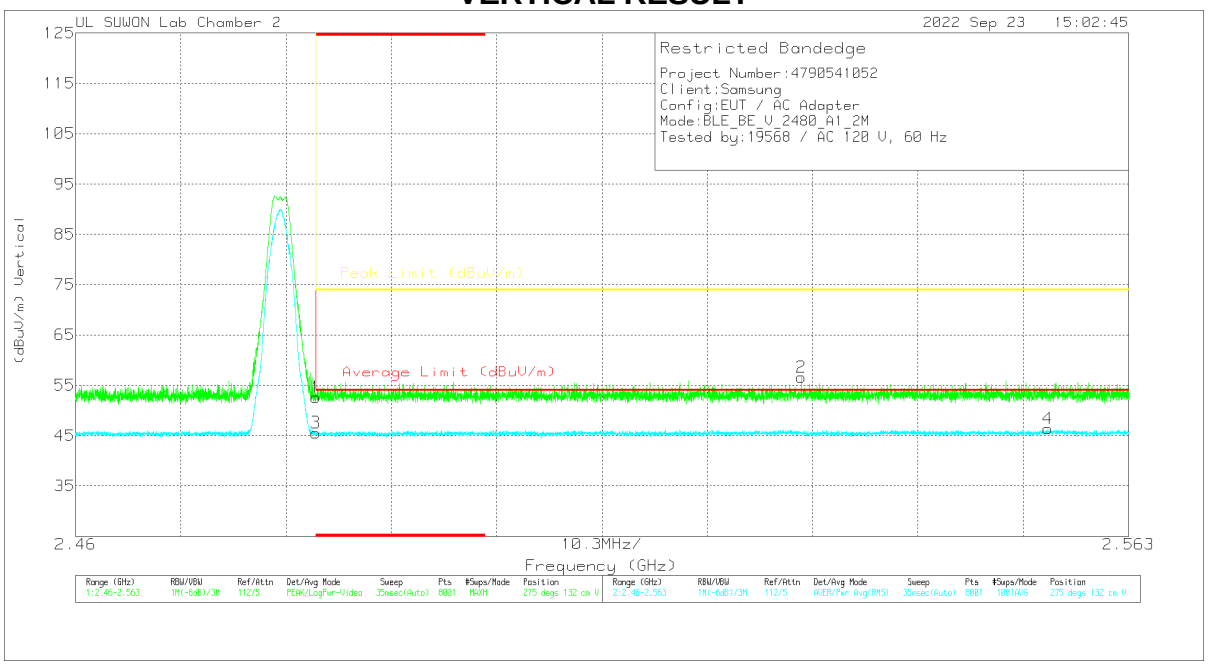
VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	40.35	Pk	31.9	-19.6	0	52.65	-	-	74	-21.35	275	132	V
2	2.53101	44.26	Pk	31.9	-19.5	0	56.66	-	-	74	-17.34	275	132	V
3	* 2.48351	30.87	RMS	31.9	-19.6	2.41	45.58	54	-8.42	-	-	275	132	V
4	2.55511	31.34	RMS	32	-19.4	2.41	46.35	54	-7.65	-	-	275	132	V

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

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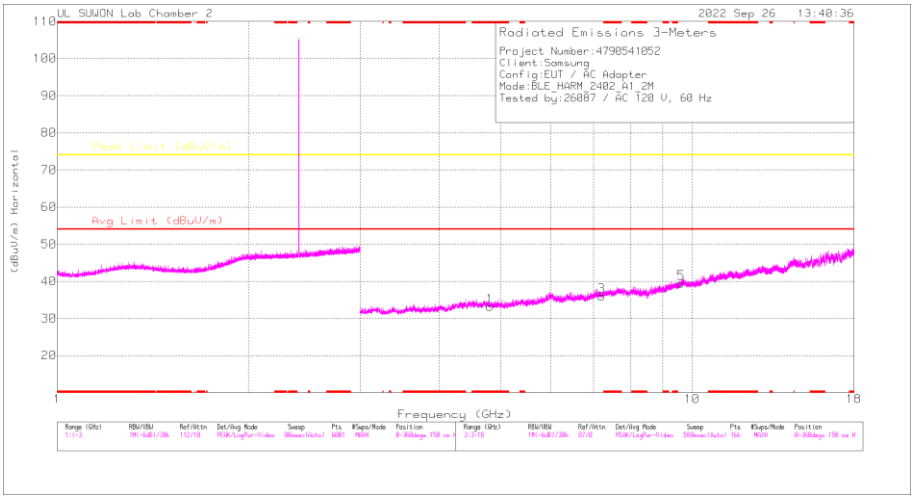
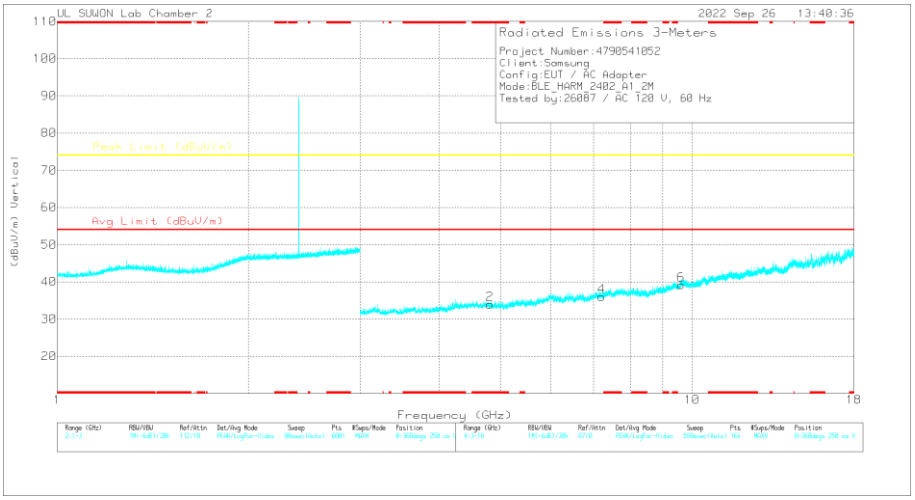
HARMONICS AND SPURIOUS EMISSIONS

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
* 4.80475	36.65	PK2	34	-27.7	42.95	-	-	74	-31.05	0	100	H
* 4.80264	36.31	PK2	34	-27.7	42.61	-	-	74	-31.39	0	100	V
7.2074	35.12	PK2	35.7	-25.1	45.72	-	-	74	-28.28	0	100	H
7.20781	35.58	PK2	35.7	-25.1	46.18	-	-	74	-27.82	0	100	V
9.61037	33	PK2	36.9	-21.2	48.7	-	-	74	-25.3	0	100	H
9.61013	32.88	PK2	36.9	-21.2	48.58	-	-	74	-25.42	0	100	V

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

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

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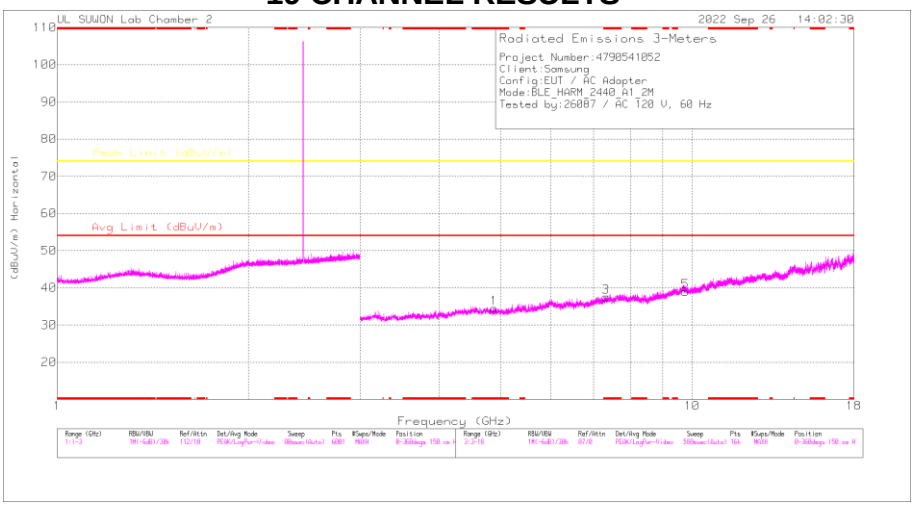
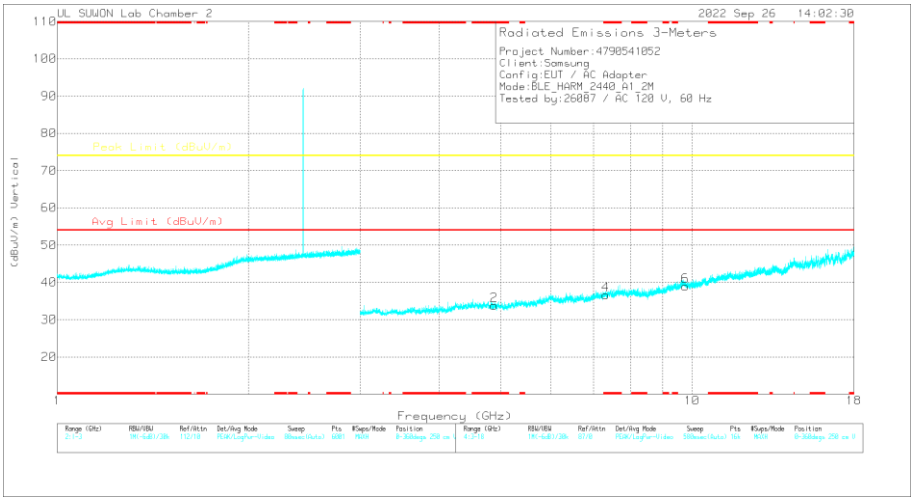
19 CHANNEL RESULTS



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
* 4.88012	36.54	PK2	34	-27.7	42.84	-	-	74	-31.16	0	100	H
* 4.87916	36.91	PK2	34	-27.7	43.21	-	-	74	-30.79	0	100	V
* 7.32071	35.15	PK2	35.7	-24.5	46.35	-	-	74	-27.65	0	100	H
* 7.32157	34.83	PK2	35.7	-24.5	46.03	-	-	74	-27.97	0	100	V
9.76066	32.21	PK2	37.1	-21	48.31	-	-	74	-25.69	0	100	H
9.75997	32.4	PK2	37.1	-21	48.5	-	-	74	-25.5	0	100	V

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

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

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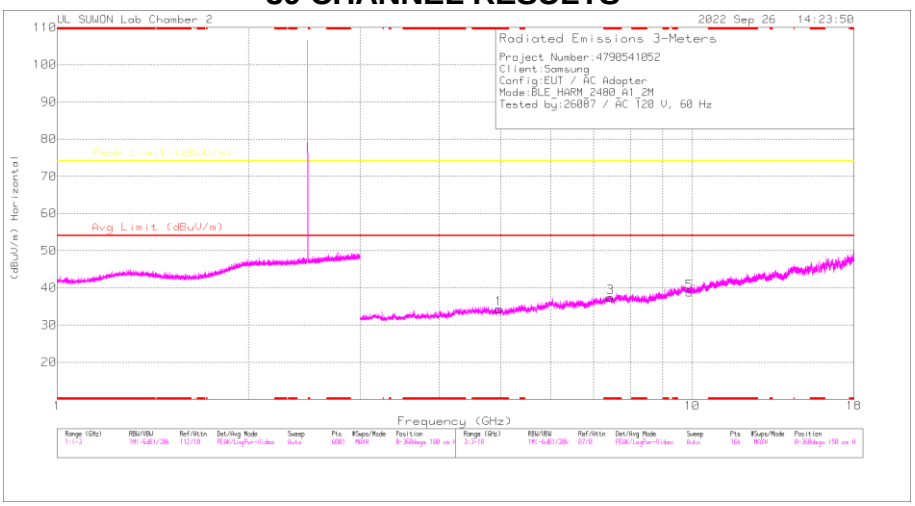
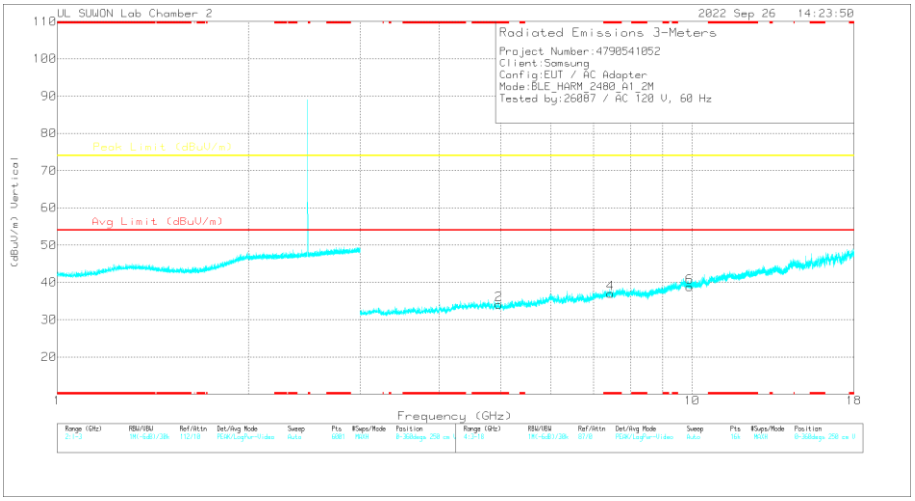
39 CHANNEL RESULTS



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
* 4.95948	35.62	PK2	34	-27	42.62	-	-	74	-31.38	360	100	H
* 4.96169	35.96	PK2	34	-27	42.96	-	-	74	-31.04	360	100	V
* 7.4402	34.38	PK2	35.7	-23.7	46.38	-	-	74	-27.62	360	100	H
* 7.4401	34.42	PK2	35.7	-23.7	46.42	-	-	74	-27.58	360	100	V
9.92015	31.63	PK2	37.3	-21.1	47.83	-	-	74	-26.17	360	100	H
9.92119	31.8	PK2	37.3	-21.1	48	-	-	74	-26	360	100	V

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

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

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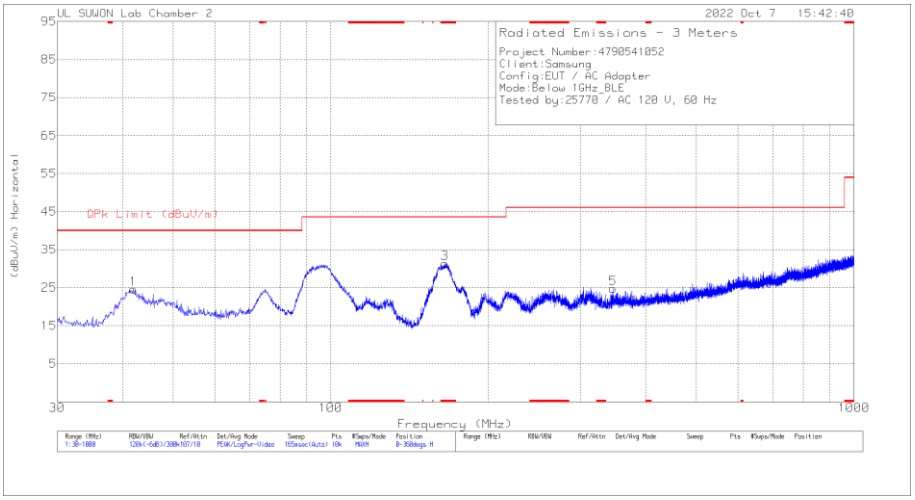
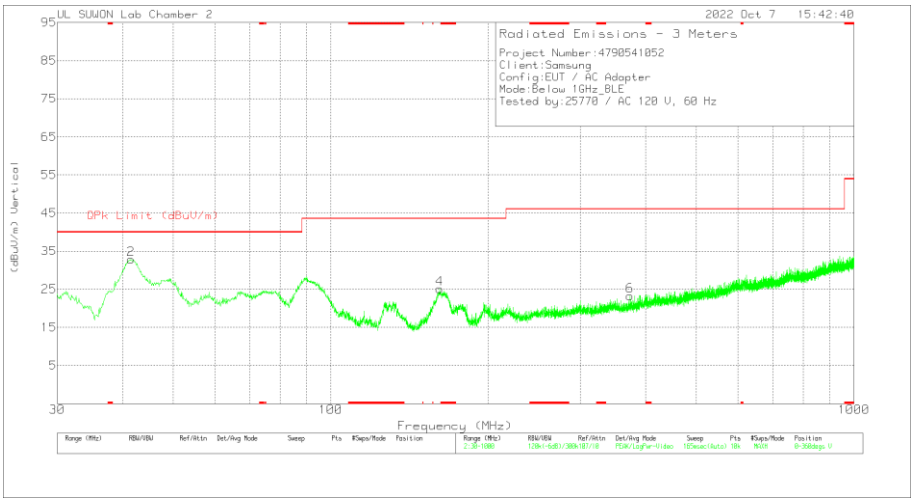
10.3. WORST CASE BELOW 1 GHz

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



HORIZONTAL



VERTICAL

Below 1GHz Data

Trace Markers

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	41.931	36.67	Pk	19.3	-31.4	0	24.57	40	-15.43	0-360	400	H
2	41.543	44.99	Pk	19.2	-31.4	0	32.79	40	-7.21	0-360	100	V
3	* 165.315	46.91	Pk	14.5	-30	0	31.41	43.52	-12.11	0-360	300	H
4	161.629	40.71	Pk	14.4	-30	0	25.11	43.52	-18.41	0-360	100	V
5	346.511	32.79	Pk	20.7	-28.7	0	24.79	46.02	-21.23	0-360	200	H
6	373.574	31.21	Pk	20.5	-28.5	0	23.21	46.02	-22.81	0-360	100	V

Pk - Peak detector

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11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

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

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

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

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

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

RESULTS

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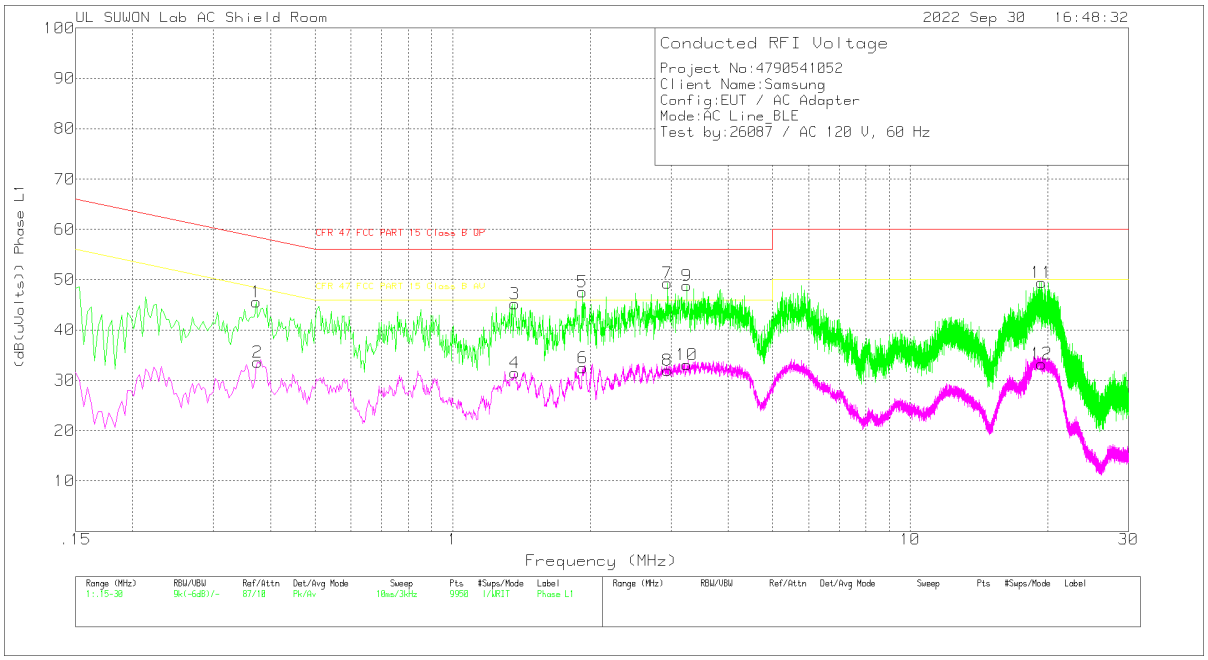
11.1. AC Power Line

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	.372	35.52	Pk	9.8	.2	45.52	58.46	-12.94	-	-
2	.375	23.55	Av	9.8	.2	33.55	-	-	48.39	-14.84
3	1.365	35.22	Pk	9.7	.3	45.22	56	-10.78	-	-
4	1.365	21.51	Av	9.7	.3	31.51	-	-	46	-14.49
5	1.92	37.57	Pk	9.7	.3	47.57	56	-8.43	-	-
6	1.926	22.48	Av	9.7	.3	32.48	-	-	46	-13.52
7	2.949	39.32	Pk	9.7	.3	49.32	56	-6.68	-	-
8	2.949	22.01	Av	9.7	.3	32.01	-	-	46	-13.99
9	3.249	38.76	Pk	9.7	.3	48.76	56	-7.24	-	-
10	3.252	23.1	Av	9.7	.3	33.1	-	-	46	-12.9
11	19.38	38.9	Pk	10.1	.4	49.4	60	-10.6	-	-
12	19.38	22.79	Av	10.1	.4	33.29	-	-	50	-16.71

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)
1.92075	28.54	Qp	9.7	.3	38.54	56	-17.46	-	-
2.94975	30.53	Qp	9.7	.3	40.53	56	-15.47	-	-
3.24975	30.8	Qp	9.7	.3	40.8	56	-15.2	-	-

Qp - Quasi-Peak detector

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
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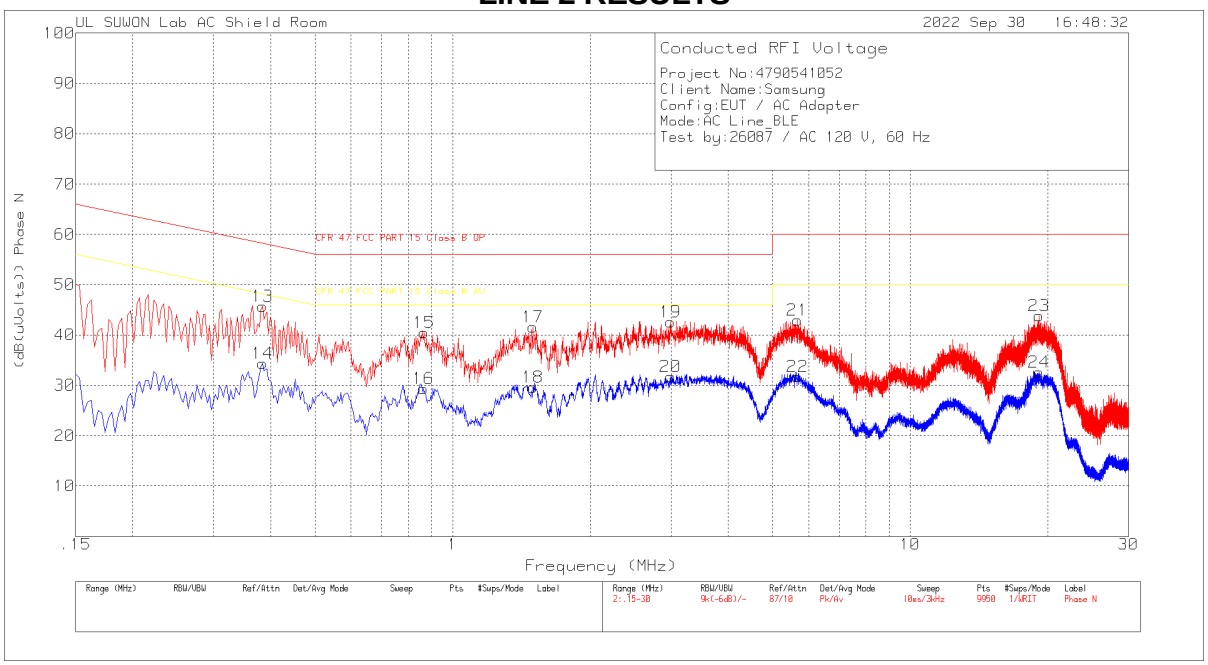
LINE 2 RESULTS



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	.384	35.75	Pk	9.8	.2	45.75	58.19	-12.44	-	-
14	.384	24.32	Av	9.8	.2	34.32	-	-	48.19	-13.87
15	.867	30.4	Pk	9.8	.3	40.5	56	-15.5	-	-
16	.864	19.29	Av	9.8	.3	29.39	-	-	46	-16.61
17	1.497	31.57	Pk	9.7	.3	41.57	56	-14.43	-	-
18	1.497	19.63	Av	9.7	.3	29.63	-	-	46	-16.37
19	2.991	32.54	Pk	9.7	.3	42.54	56	-13.46	-	-
20	2.991	21.75	Av	9.7	.3	31.75	-	-	46	-14.25
21	5.67	32.97	Pk	9.7	.3	42.97	60	-17.03	-	-
22	5.67	21.74	Av	9.7	.3	31.74	-	-	50	-18.26
23	19.146	33.23	Pk	10.2	.4	43.83	60	-16.17	-	-
24	19.143	22	Av	10.2	.4	32.6	-	-	50	-17.4

Pk - Peak detector
Av - Average detection

END OF TEST REPORT

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