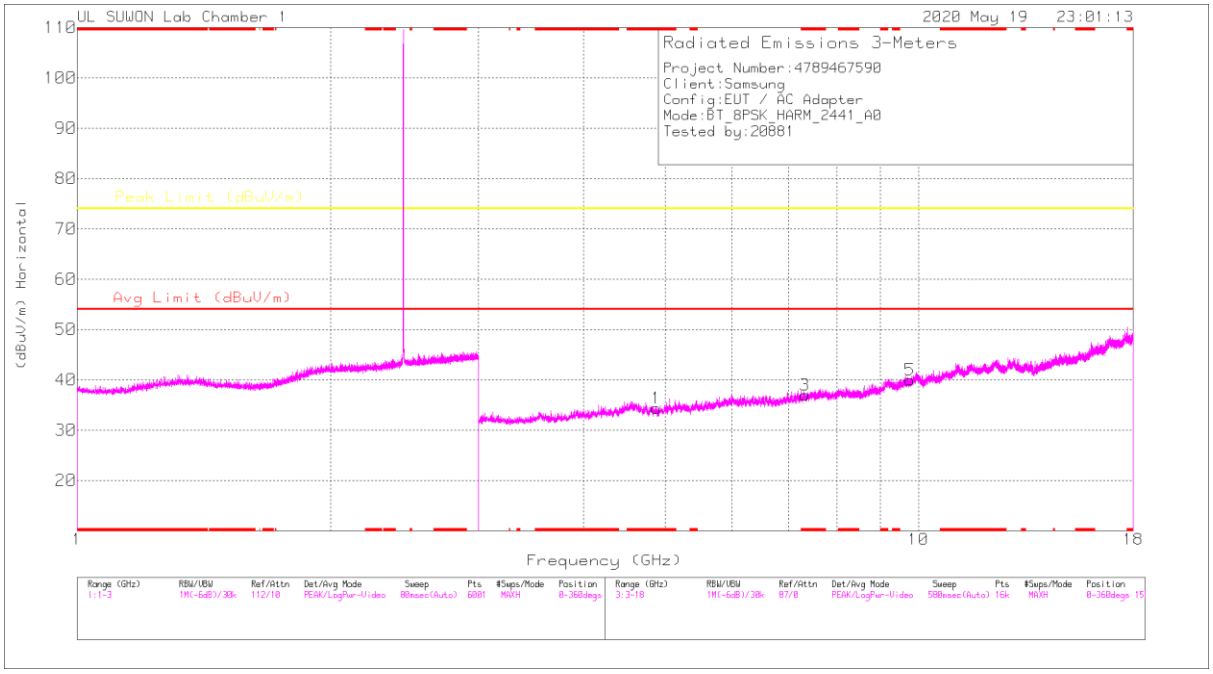
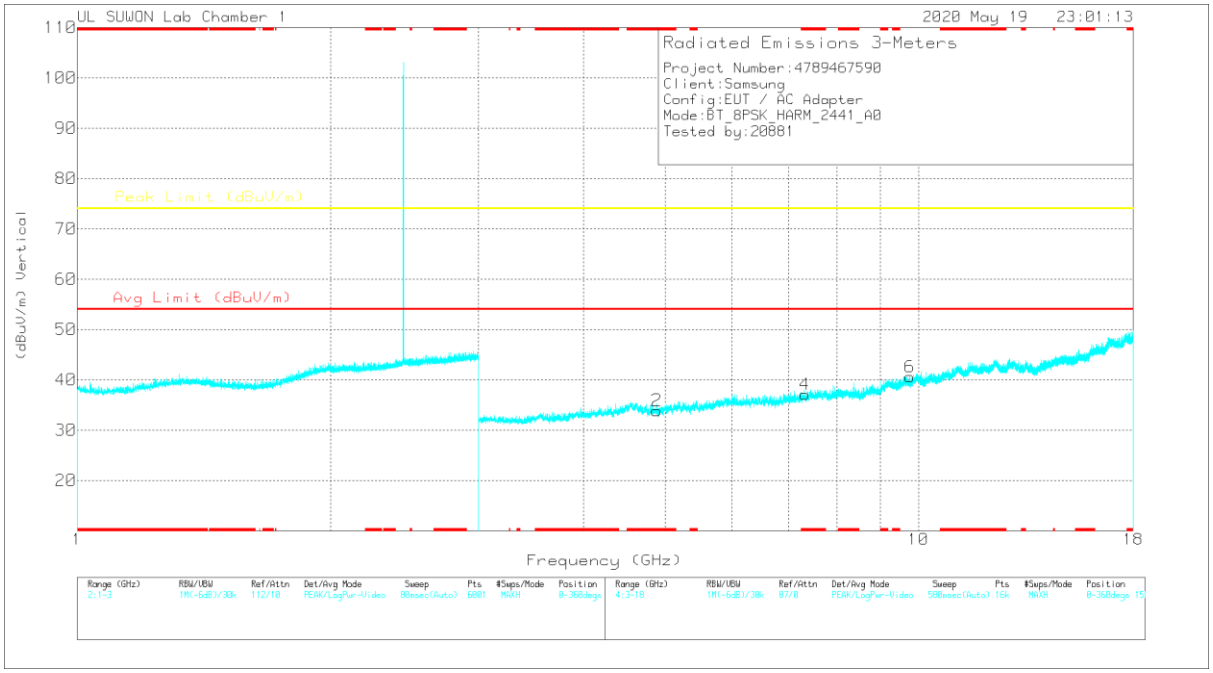
Antenna 1 / 39 CHANNEL RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.8824	39.22	PKFH	34.2	-31.6	41.82	-	-	74	-32.18	360	100	H
* 4.88041	39.74	PKFH	34.2	-31.6	42.34	-	-	74	-31.66	360	100	V
* 7.32187	36	PKFH	35.8	-27.2	44.6	-	-	74	-29.4	360	100	H
* 7.32424	35.28	PKFH	35.8	-27.2	43.88	-	-	74	-30.12	360	100	V
9.76421	33.73	PKFH	37.2	-24	46.93	-	-	74	-27.07	360	100	H
9.7636	34.51	PKFH	37.2	-24	47.71	-	-	74	-26.29	360	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

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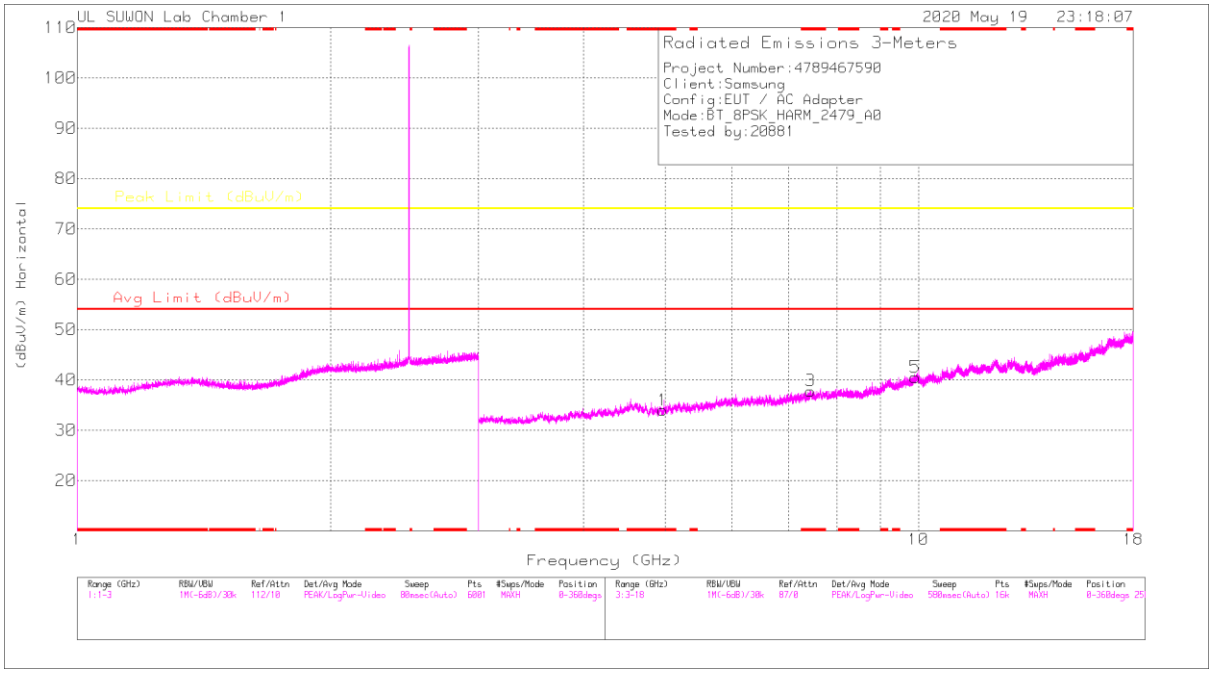
Antenna 1 / 77 CHANNEL RESULTS



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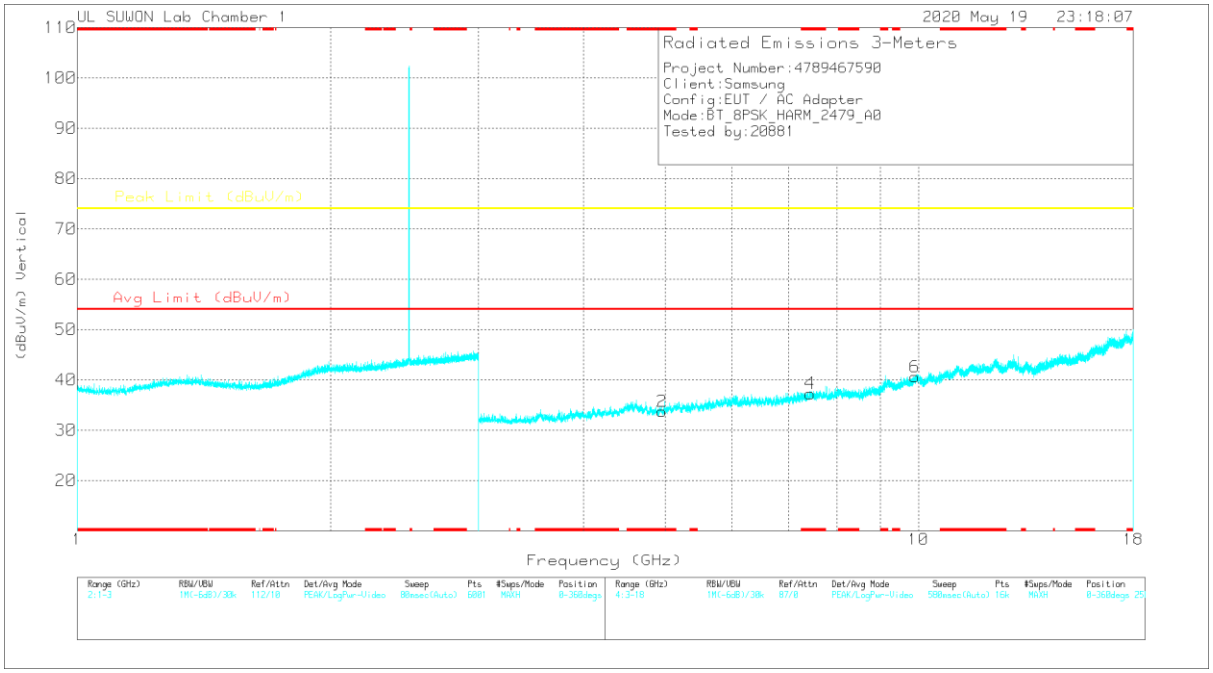

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RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.96235	38.92	PKFH	34.2	-31.5	41.62	-	-	74	-32.38	360	100	H
* 4.95788	38.61	PKFH	34.2	-31.6	41.21	-	-	74	-32.79	360	100	V
* 7.43577	35.64	PKFH	35.8	-27.1	44.34	-	-	74	-29.66	360	100	H
* 7.43679	36.54	PKFH	35.8	-27.1	45.24	-	-	74	-28.76	360	100	V
9.91742	32.44	PKFH	37.5	-22.1	47.84	-	-	74	-26.16	360	100	H
9.91594	33.32	PKFH	37.5	-22.1	48.72	-	-	74	-25.28	360	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

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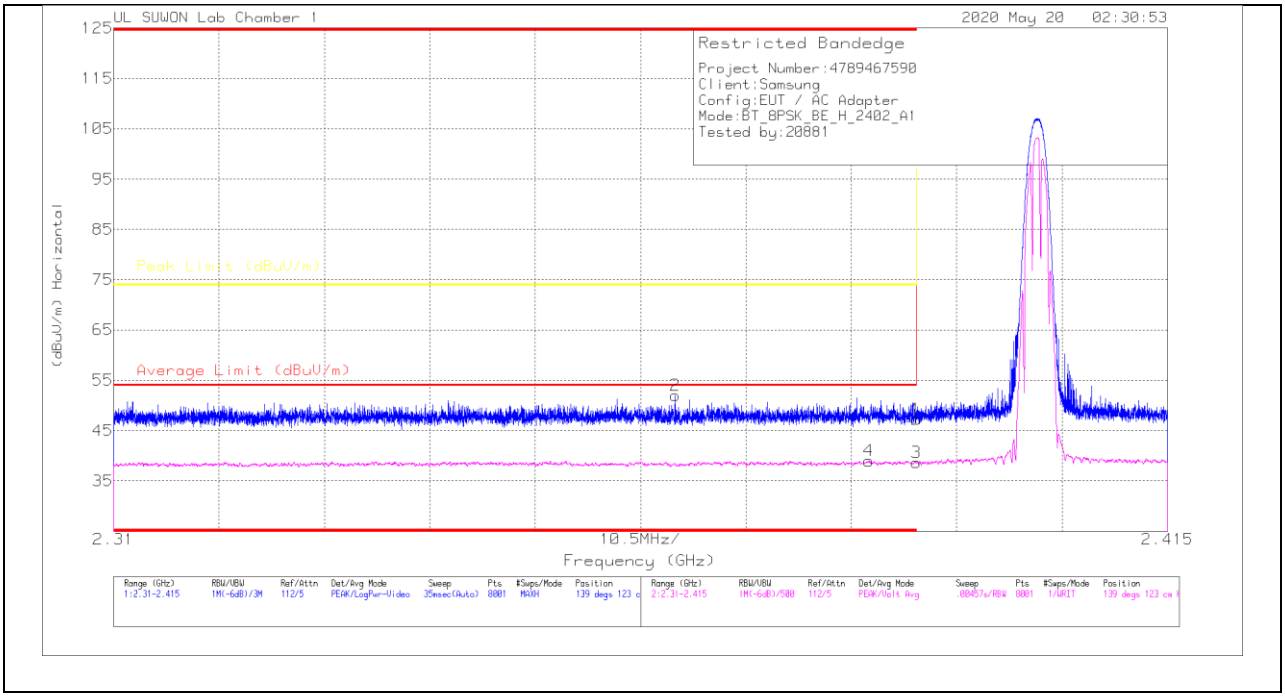
Antenna 2 / BANDEDGE (0 CHANNEL)

HORIZONTAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	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	41.08	Pk	31.7	-25.5	47.28	-	-	74	-26.72	139	123	H
2	* 2.36594	46.12	Pk	31.6	-25.7	52.02	-	-	74	-21.98	139	123	H
3	* 2.39	32.52	VA1T	31.7	-25.5	38.72	54	-15.28	-	-	139	123	H
4	* 2.38522	32.78	VA1T	31.7	-25.5	38.98	54	-15.02	-	-	139	123	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

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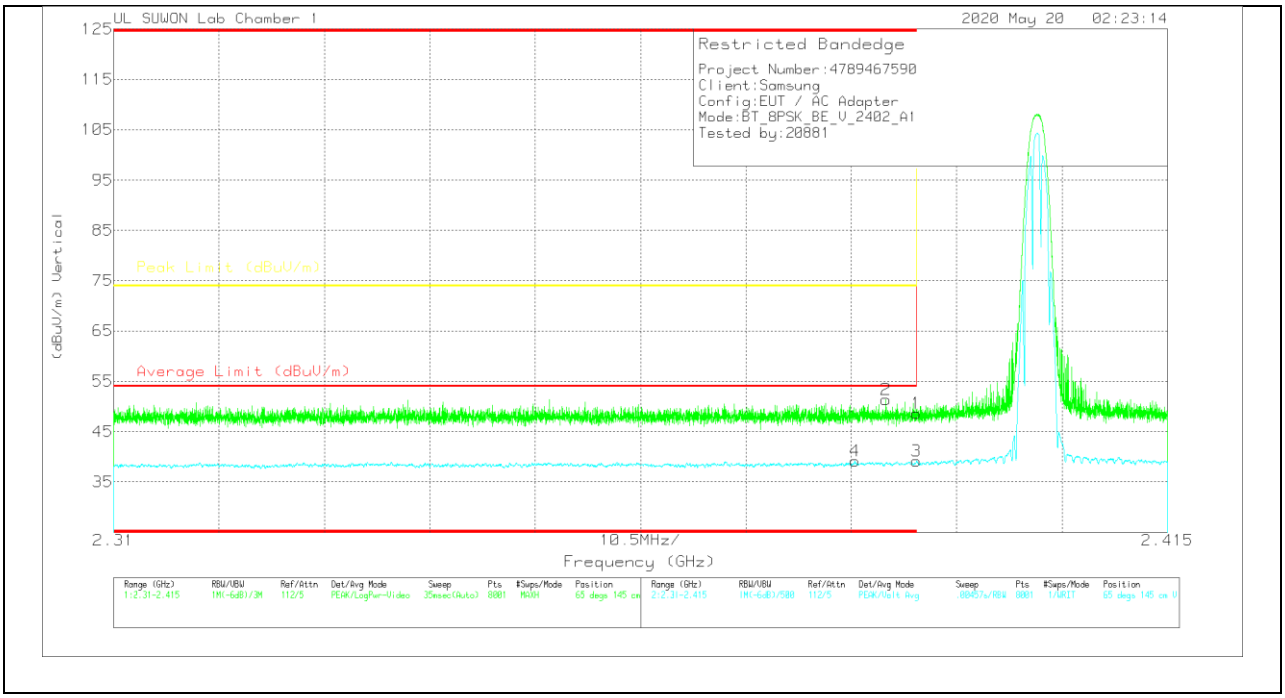
VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	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	42.4	Pk	31.7	-25.5	48.6	-	-	74	-25.4	65	145	V
2	* 2.38695	45.2	Pk	31.7	-25.5	51.4	-	-	74	-22.6	65	145	V
3	* 2.39	32.91	VA1T	31.7	-25.5	39.11	54	-14.89	-	-	65	145	V
4	* 2.38384	32.94	VA1T	31.7	-25.5	39.14	54	-14.86	-	-	65	145	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

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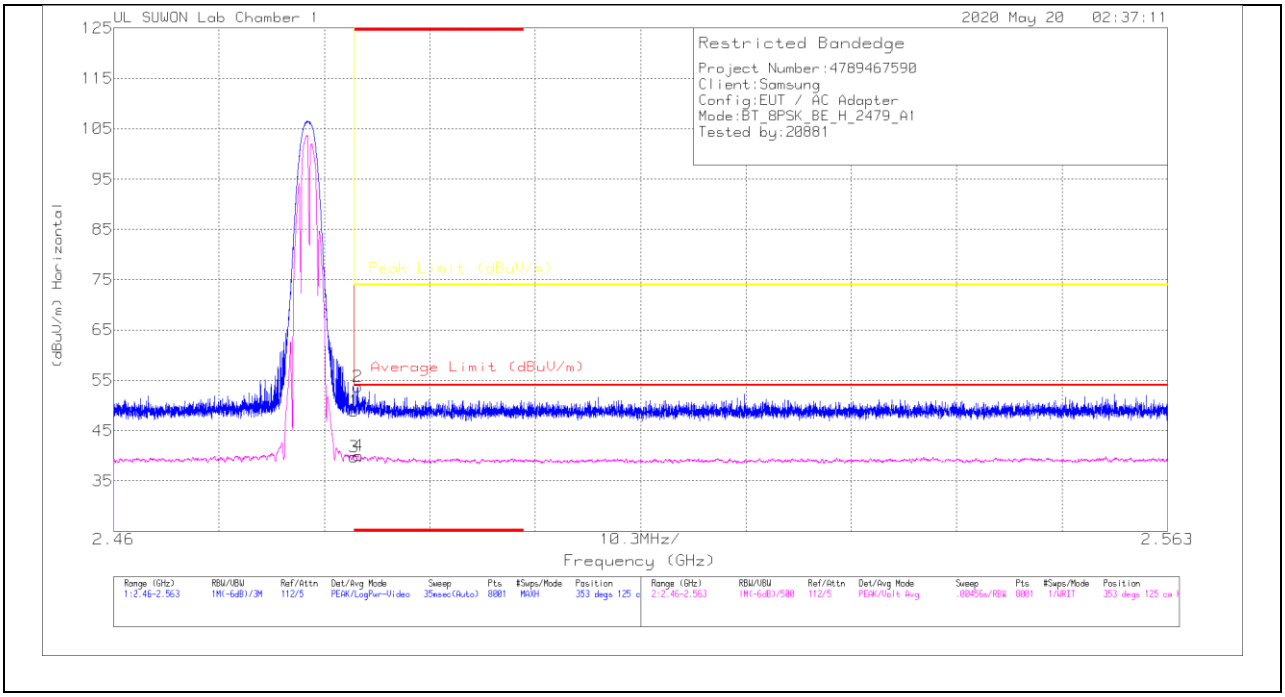
Antenna 2 / BANDEDGE (77 CHANNEL)

HORIZONTAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	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	* 2.48351	42.24	Pk	31.9	-25.2	48.94	-	-	74	-25.06	353	125	H
2	* 2.48387	47.09	Pk	31.9	-25.2	53.79	-	-	74	-20.21	353	125	H
3	* 2.48351	33.07	VA1T	31.9	-25.2	39.77	54	-14.23	-	-	353	125	H
4	* 2.4839	33.38	VA1T	31.9	-25.2	40.08	54	-13.92	-	-	353	125	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

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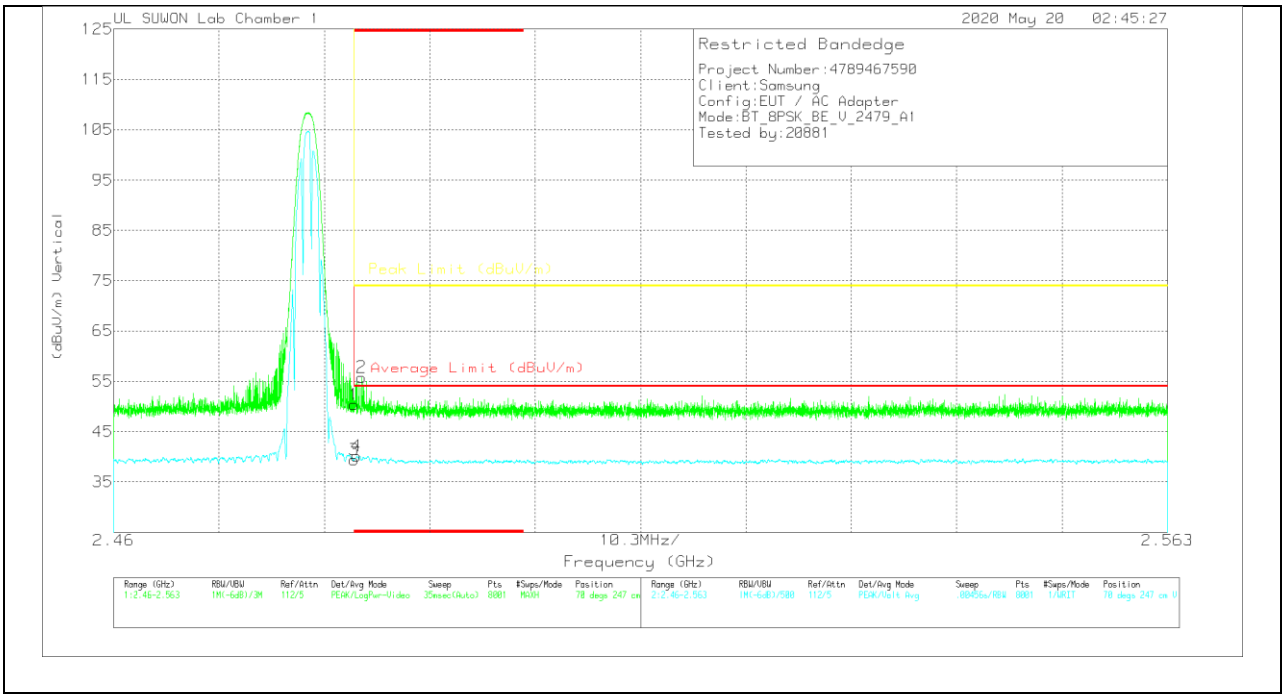
VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	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	* 2.48351	43.64	Pk	31.9	-25.2	50.34	-	-	74	-23.66	70	247	V
2	* 2.48424	49	Pk	31.9	-25.1	55.8	-	-	74	-18.2	70	247	V
3	* 2.48351	32.72	VA1T	31.9	-25.2	39.42	54	-14.58	-	-	70	247	V
4	* 2.48374	33.41	VA1T	31.9	-25.2	40.11	54	-13.89	-	-	70	247	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

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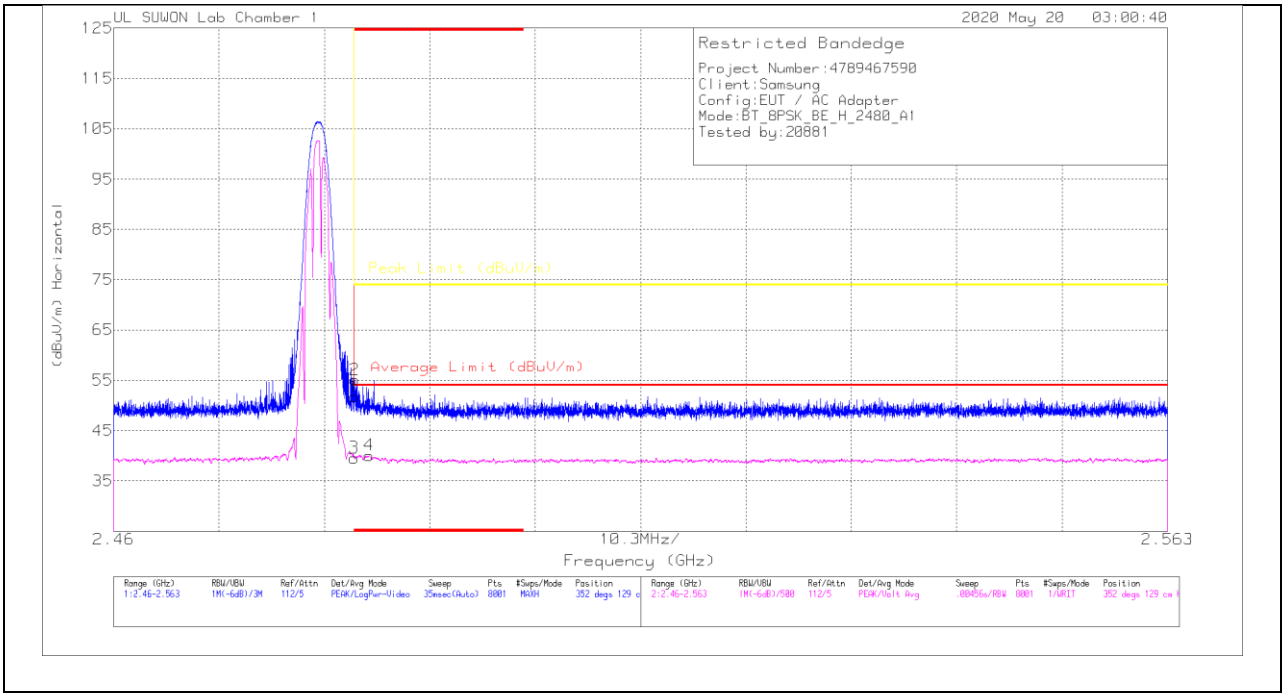
Antenna 2 / BANDEDGE (78 CHANNEL)

HORIZONTAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	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	* 2.48351	45.01	Pk	31.9	-25.2	51.71	-	-	74	-22.29	352	129	H
2	* 2.48354	48.42	Pk	31.9	-25.2	55.12	-	-	74	-18.88	352	129	H
3	* 2.48351	32.9	VA1T	31.9	-25.2	39.6	54	-14.4	-	-	352	129	H
4	* 2.48495	33.4	VA1T	31.9	-25.2	40.1	54	-13.9	-	-	352	129	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

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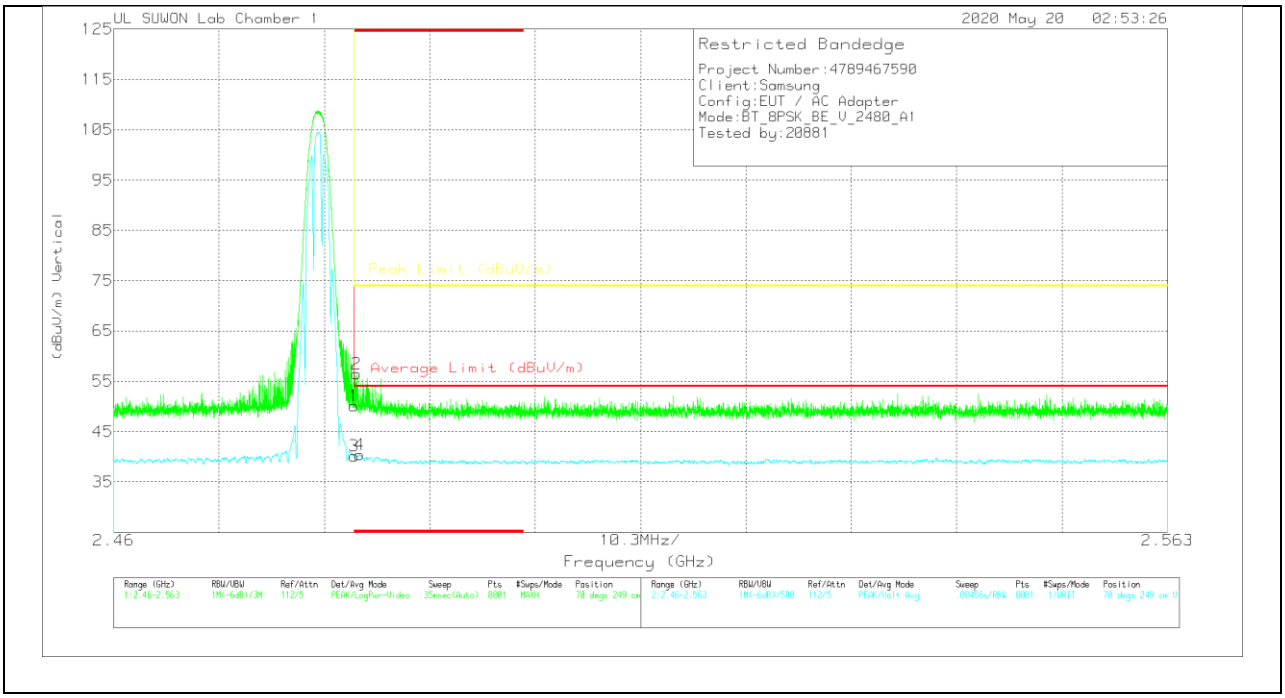
VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	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	* 2.48351	43.39	Pk	31.9	-25.2	50.09	-	-	74	-23.91	70	249	V
2	* 2.48375	49.8	Pk	31.9	-25.2	56.5	-	-	74	-17.5	70	249	V
3	* 2.48351	33.42	VA1T	31.9	-25.2	40.12	54	-13.88	-	-	70	249	V
4	* 2.48402	33.65	VA1T	31.9	-25.1	40.45	54	-13.55	-	-	70	249	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

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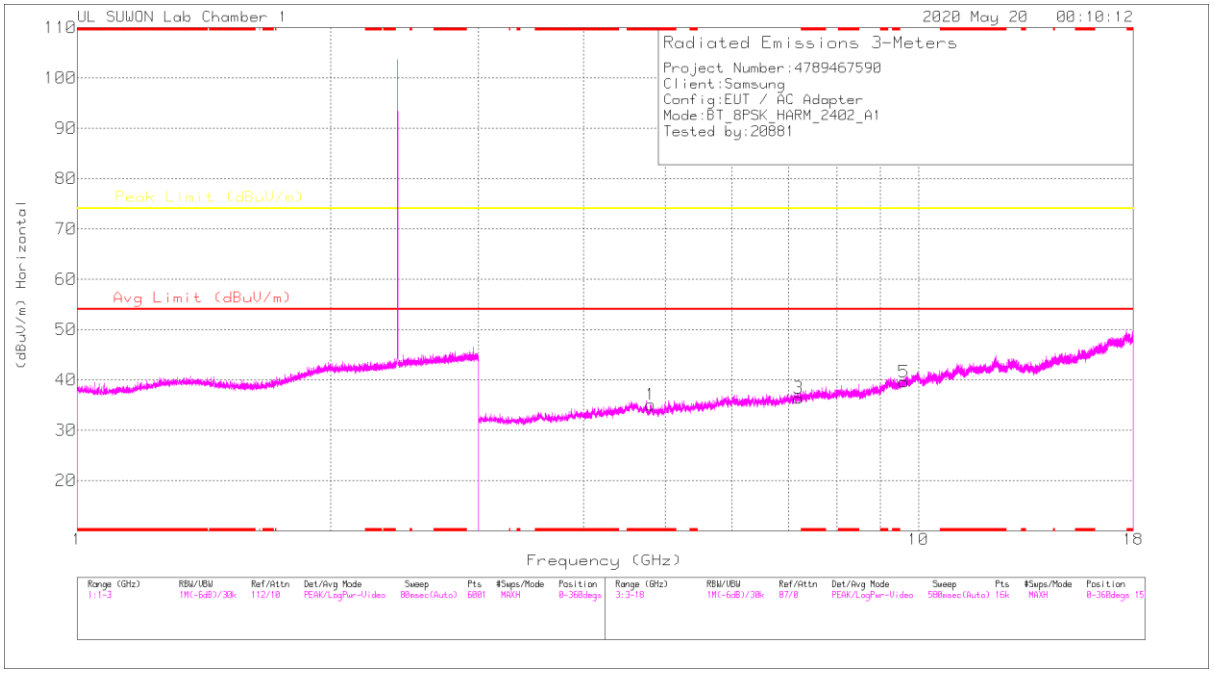
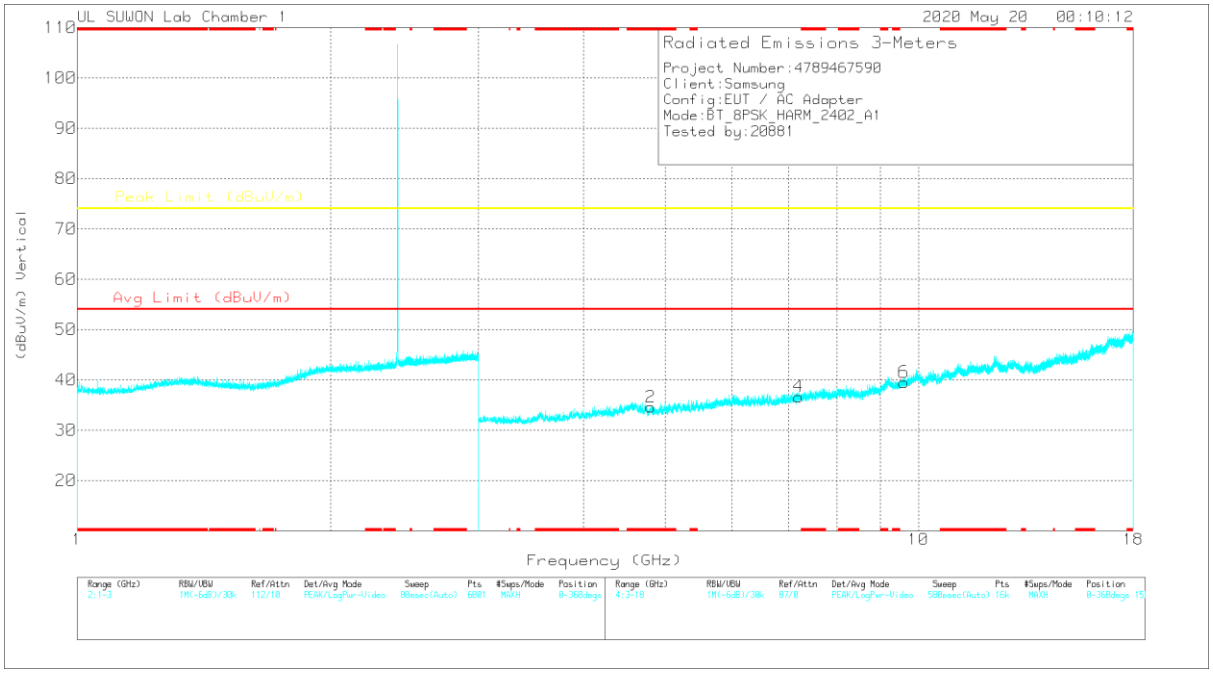
HARMONICS AND SPURIOUS EMISSIONS

Antenna 2 / 0 CHANNEL RESULTS



HORIZONTAL



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RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.80668	39.42	PKFH	34.2	-31.5	42.12	-	-	74	-31.88	360	100	H
* 4.80496	39.75	PKFH	34.2	-31.5	42.45	-	-	74	-31.55	360	100	V
7.20721	35.81	PKFH	35.8	-27.8	43.81	-	-	74	-30.19	360	100	H
7.2071	35.71	PKFH	35.8	-27.8	43.71	-	-	74	-30.29	360	100	V
9.60985	33.95	PKFH	37	-23.2	47.75	-	-	74	-26.25	360	100	H
9.60707	33.44	PKFH	37	-23.2	47.24	-	-	74	-26.76	360	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

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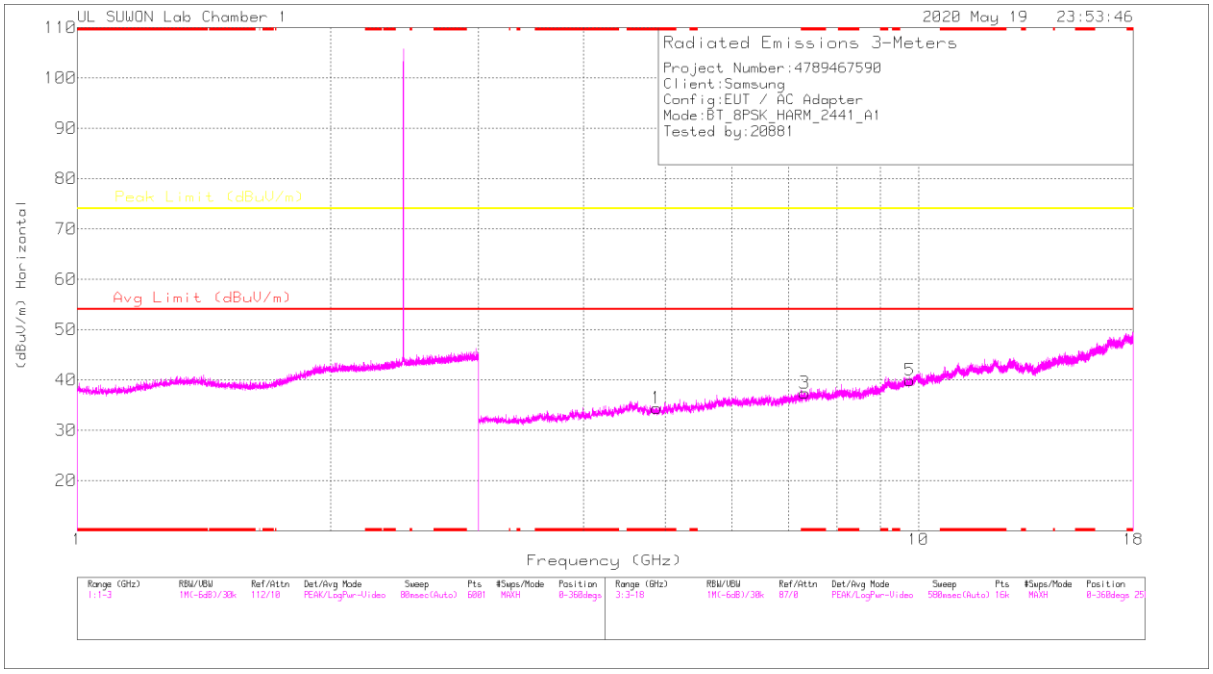
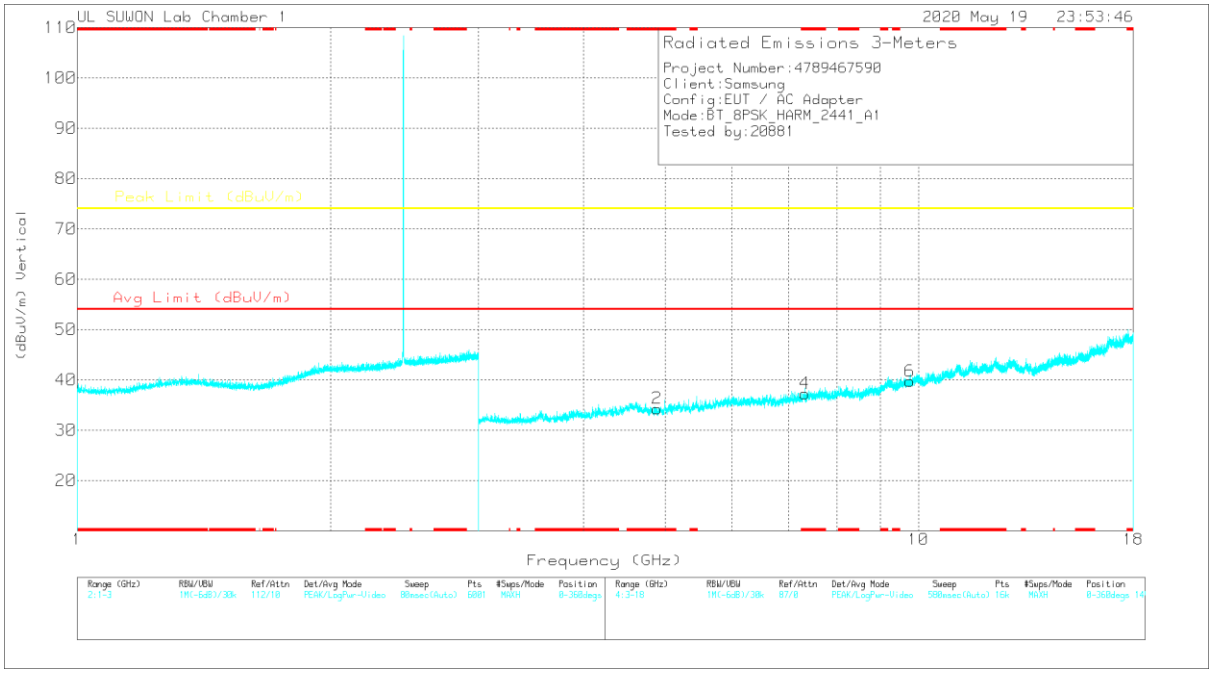
Antenna 2 / 39 CHANNEL RESULTS



HORIZONTAL



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RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.88285	38.86	PKFH	34.2	-31.6	41.46	-	-	74	-32.54	360	100	H
* 4.88291	39.87	PKFH	34.2	-31.6	42.47	-	-	74	-31.53	360	100	V
* 7.3249	36.39	PKFH	35.8	-27.3	44.89	-	-	74	-29.11	360	100	H
* 7.32106	36.26	PKFH	35.8	-27.2	44.86	-	-	74	-29.14	360	100	V
9.76596	33.08	PKFH	37.2	-23.9	46.38	-	-	74	-27.62	360	100	H
9.76512	33.48	PKFH	37.2	-23.9	46.78	-	-	74	-27.22	360	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

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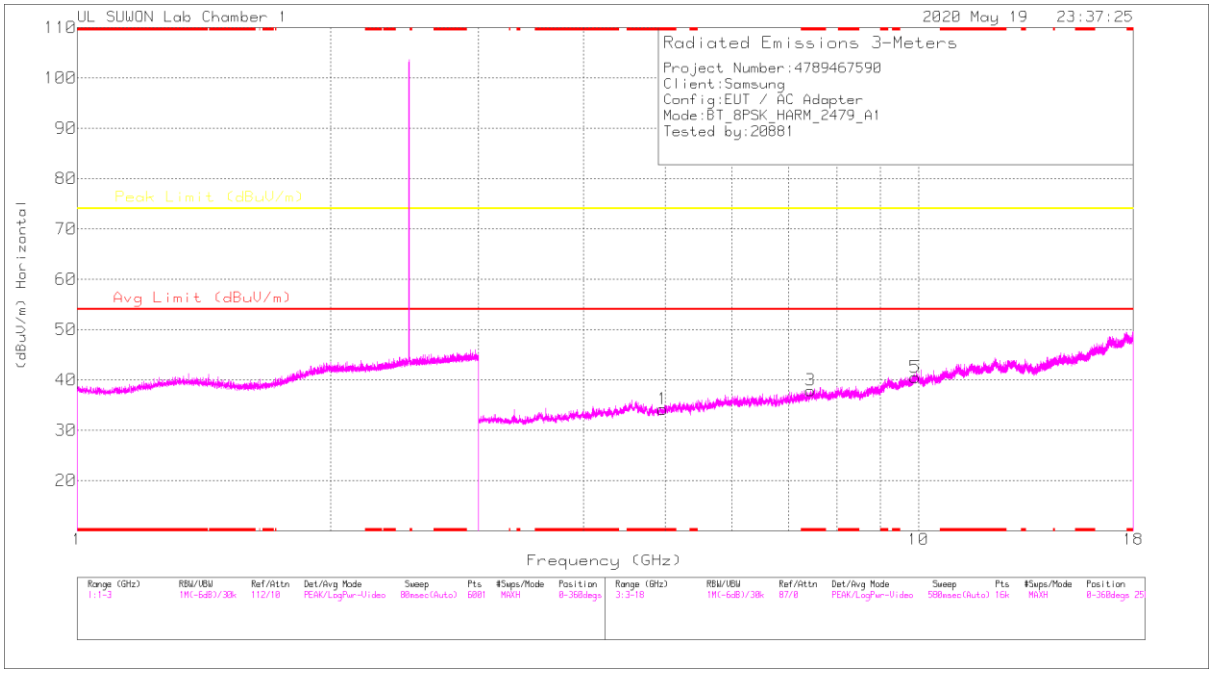
Antenna 2 / 77 CHANNEL RESULTS



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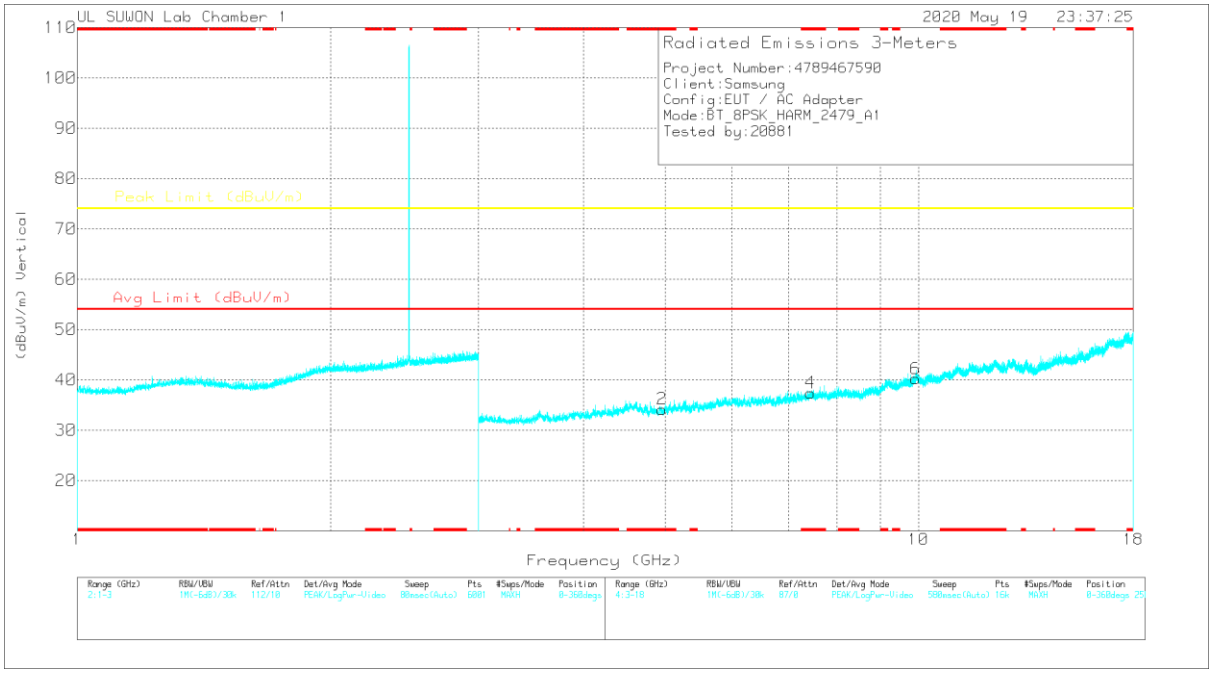

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RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.96403	38.39	PKFH	34.2	-31.5	41.09	-	-	74	-32.91	360	100	H
* 4.95905	39.09	PKFH	34.2	-31.6	41.69	-	-	74	-32.31	360	100	V
* 7.43899	36.31	PKFH	35.8	-27.1	45.01	-	-	74	-28.99	360	100	H
* 7.43753	35.63	PKFH	35.8	-27.1	44.33	-	-	74	-29.67	360	100	V
9.91743	32.62	PKFH	37.5	-22.1	48.02	-	-	74	-25.98	360	100	H
9.91504	32.26	PKFH	37.5	-22.1	47.66	-	-	74	-26.34	360	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

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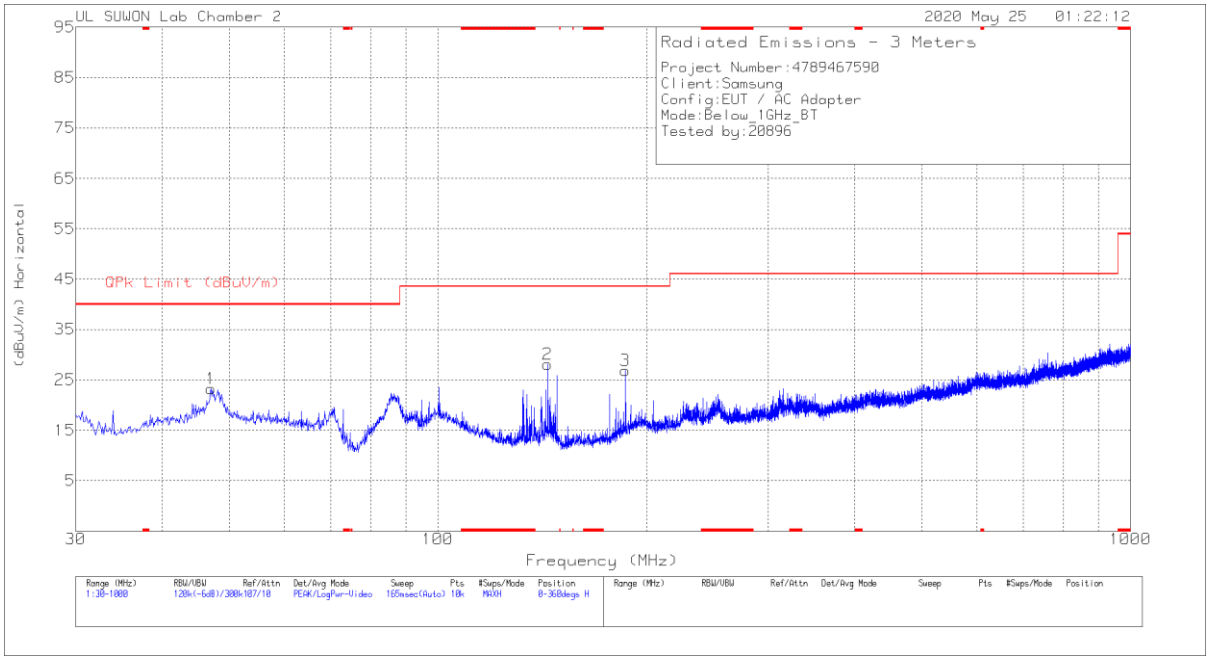
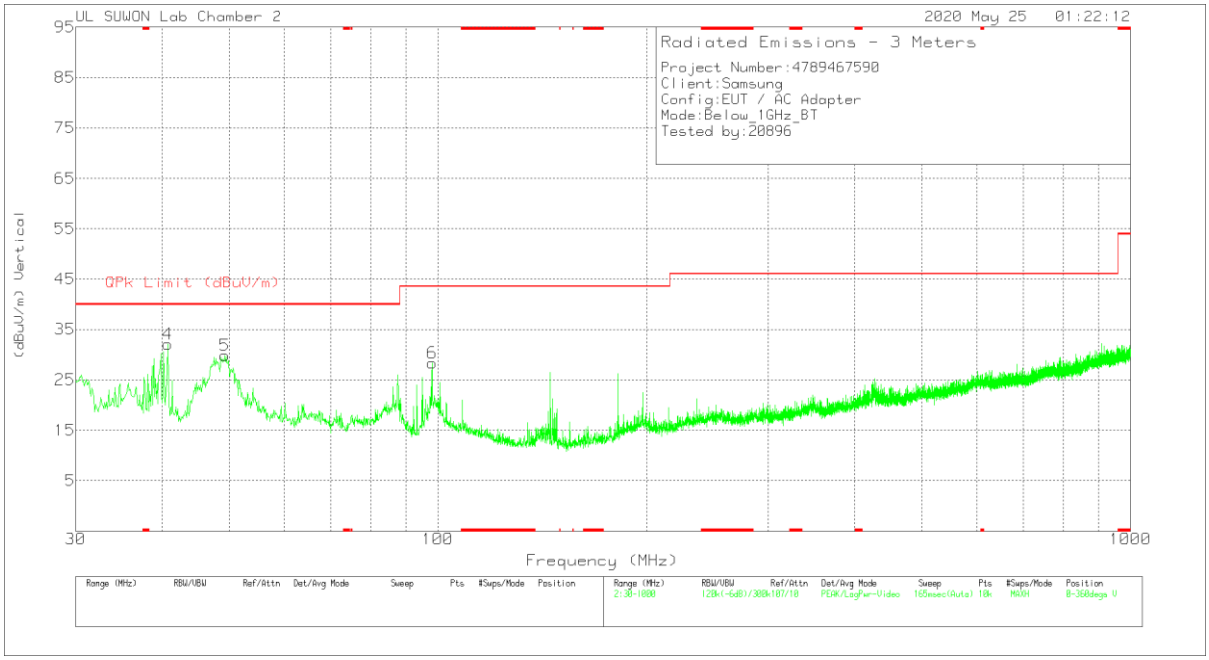
10.2. WORST CASE BELOW 1 GHZ

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



HORIZONTAL



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Below 1GHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163_749	Below_1G[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	47.072	35.28	Pk	19.8	-31.8	23.28	40	-16.72	0-360	300	H
2	143.975	45.02	Pk	14.1	-31	28.12	43.52	-15.4	0-360	300	H
3	186.655	41.23	Pk	16.6	-31	26.83	43.52	-16.69	0-360	200	H
4	40.767	44.97	Pk	18.9	-31.8	32.07	40	-7.93	0-360	100	V
5	49.206	41.81	Pk	19.8	-31.8	29.81	40	-10.19	0-360	100	V
6	98.094	42.2	Pk	17.6	-31.5	28.3	43.52	-15.22	0-360	100	V

Pk - Peak detector

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218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea TEL: (031) 337-9902 FAX: (031) 213-5433
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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 C63.4.

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

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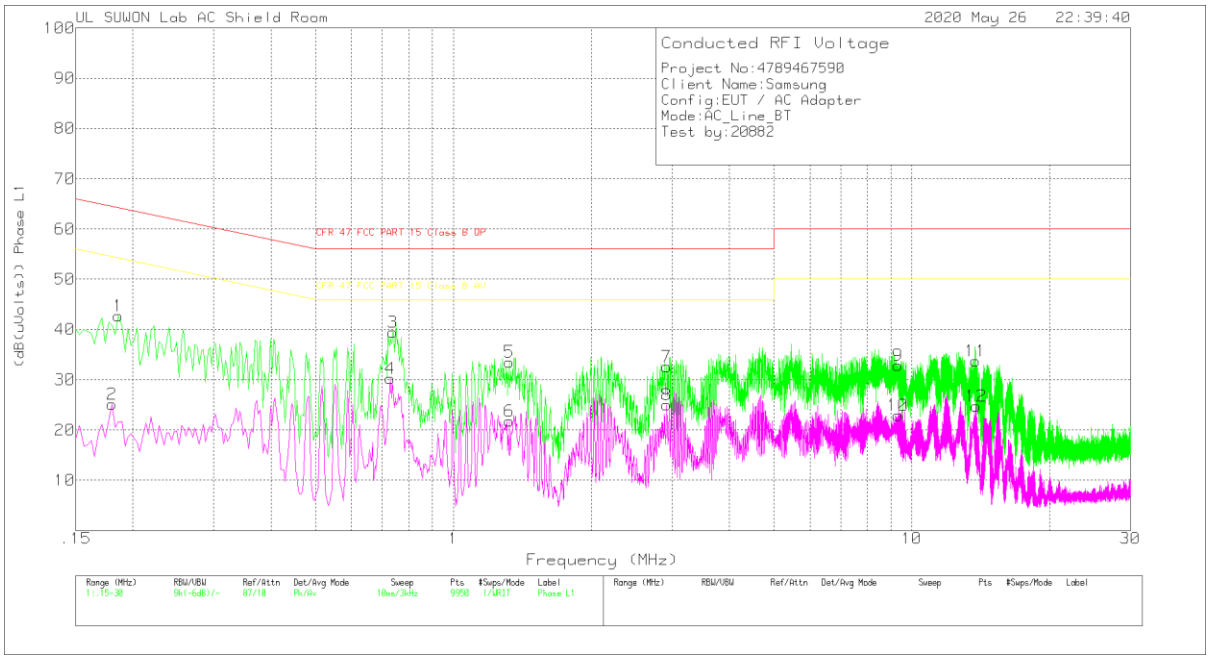
11.1.1. AC Power Line Host

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	.186	32.48	Pk	10	.2	42.68	64.21	-21.53	-	-
2	.18	14.91	Av	10	.2	25.11	-	-	54.49	-29.38
3	.738	29.42	Pk	9.9	.2	39.52	56	-16.48	-	-
4	.729	20.1	Av	9.9	.2	30.2	-	-	46	-15.8
5	1.323	23.44	Pk	9.8	.3	33.54	56	-22.46	-	-
6	1.326	11.69	Av	9.8	.3	21.79	-	-	46	-24.21
7	2.922	22.48	Pk	9.8	.3	32.58	56	-23.42	-	-
8	2.922	14.95	Av	9.8	.3	25.05	-	-	46	-20.95
9	9.315	22.54	Pk	9.9	.4	32.84	60	-27.16	-	-
10	9.315	12.61	Av	9.9	.4	22.91	-	-	50	-27.09
11	13.791	23.19	Pk	10.1	.4	33.69	60	-26.31	-	-
12	13.83	14.22	Av	10.1	.4	24.72	-	-	50	-25.28

Pk - Peak detector

Av - Average detection

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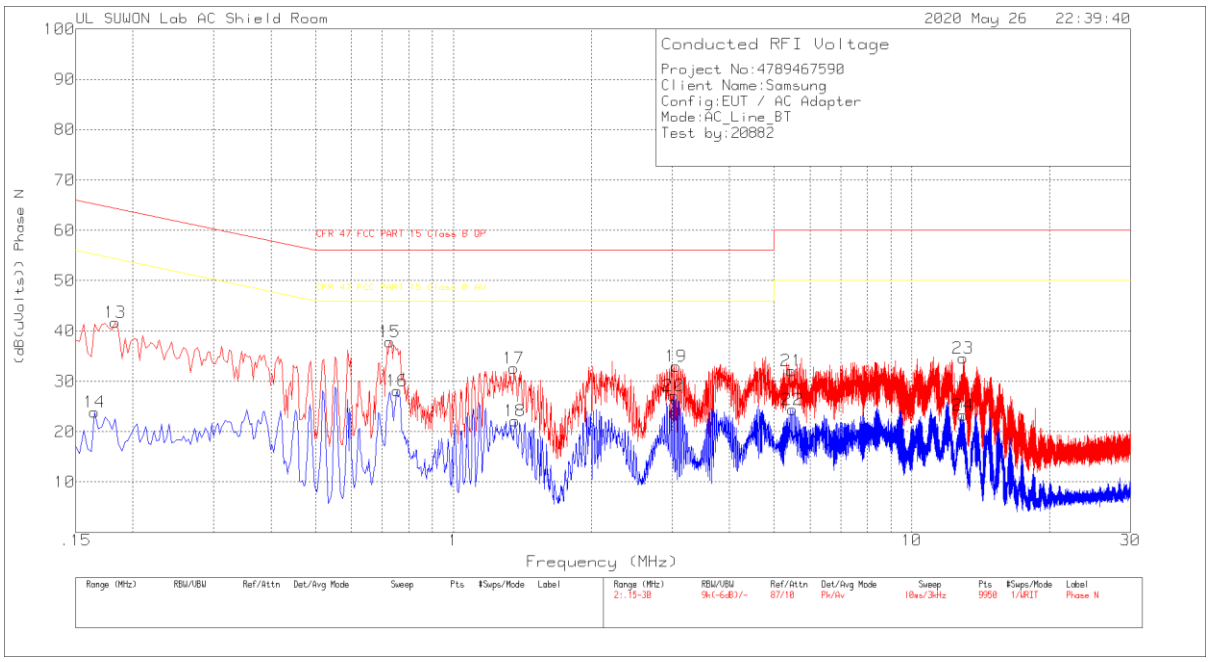
LINE 2 RESULTS



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	.183	31.45	Pk	10	.2	41.65	64.35	-22.7	-	-
14	.165	13.75	Av	10	.1	23.85	-	-	55.21	-31.36
15	.726	27.73	Pk	9.9	.2	37.83	56	-18.17	-	-
16	.753	17.98	Av	9.9	.2	28.08	-	-	46	-17.92
17	1.356	22.48	Pk	9.8	.3	32.58	56	-23.42	-	-
18	1.362	12.05	Av	9.8	.3	22.15	-	-	46	-23.85
19	3.063	22.93	Pk	9.8	.3	33.03	56	-22.97	-	-
20	3.027	17.07	Av	9.8	.3	27.17	-	-	46	-18.83
21	5.463	22.02	Pk	9.8	.3	32.12	60	-27.88	-	-
22	5.496	14.32	Av	9.8	.3	24.42	-	-	50	-25.58
23	12.942	24.14	Pk	10.1	.4	34.64	60	-25.36	-	-
24	12.942	12.78	Av	10.1	.4	23.28	-	-	50	-26.72

Pk - Peak detector
Av - Average detection

END OF TEST REPORT

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