

10.4. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

TEST PROCEDURE

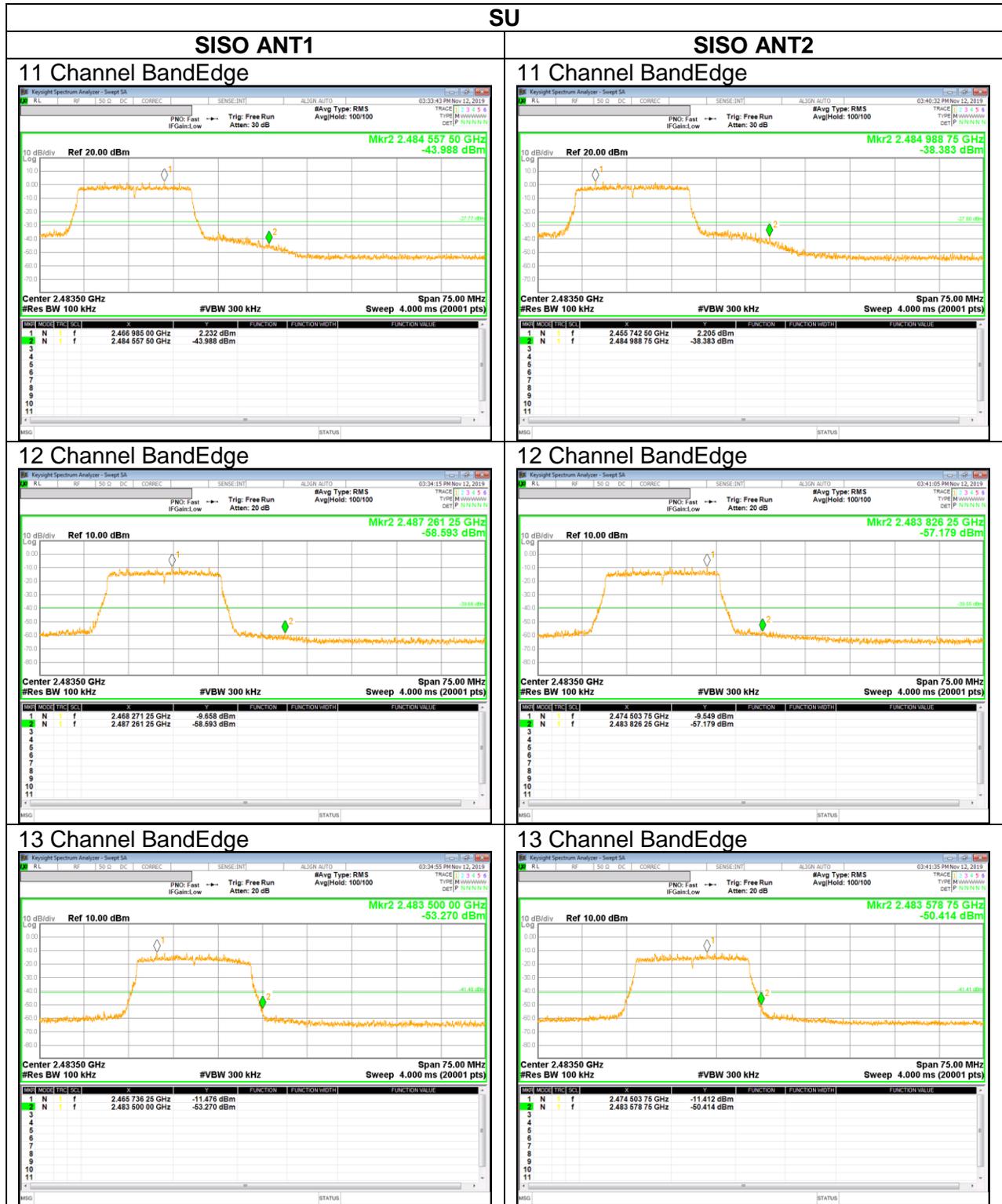
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

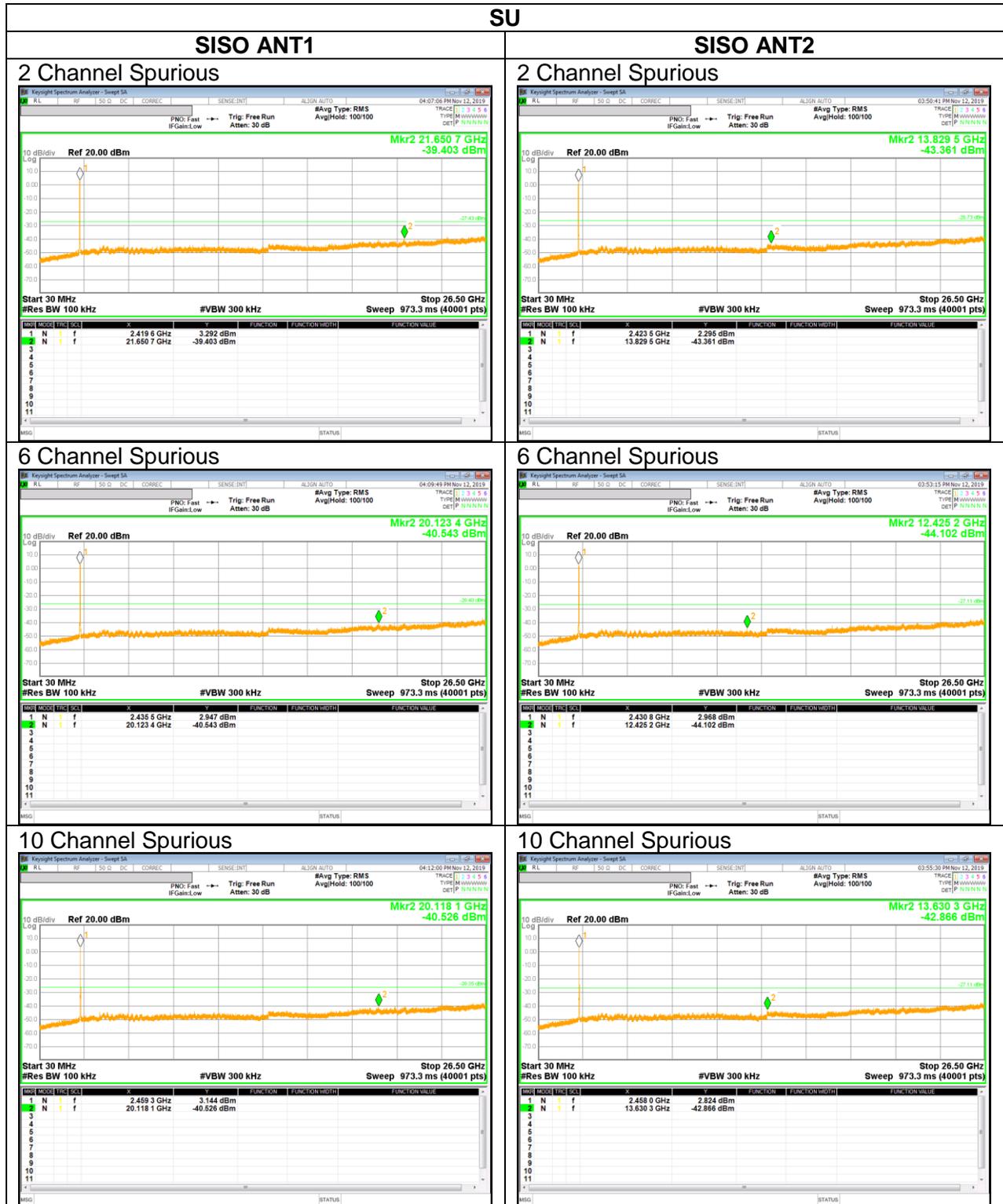
RESULTS

10.4.1. 802.11ax HE20 MODE IN THE 2.4 GHz BAND



SU







NOTE : Conducted band-edge test results of SU mode is the worse. So conducted & radiated band-edge test results of Full RU(26T) mode were covered by SU mode results.

11. 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 ~ 156.52525	1660 ~ 1710	8.025 ~ 8.5	22.01 ~ 23.12
4.17725 ~ 4.17775	13.36 ~ 13.41	156.7 ~ 156.9	1718.8 ~ 1722.2	9.0 ~ 9.2	23.6 ~ 24.0
4.20725 ~ 4.20775	16.42 ~ 16.423	162.0125 ~ 167.17	2200 ~ 2300	9.3 ~ 9.5	31.2 ~ 31.8
6.215 ~ 6.218	16.69475 ~ 16.69525	167.72 ~ 173.2	2310 ~ 2390	10.6 ~ 12.7	36.43 ~ 36.5
6.26775 ~ 6.26825	16.80425 ~ 16.80475	240 ~ 285	2483.5 ~ 2500	13.25 ~ 13.4	Above 38.6
6.31175 ~ 6.31225	25.5 ~ 25.67	322 ~ 335.4	2655 ~ 2900		
8.291 ~ 8.294	37.5 ~ 38.25	399.90 ~ 410	3260 ~ 3267		
8.362 ~ 8.366	73 ~ 74.6	608 ~ 614	3332 ~ 3339		
8.37625 ~ 8.38675	74.8 ~ 75.2	960 ~ 1240	3345.8 ~ 3358 3600 ~ 4400		

▪ 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. (Restricted bandedge, Final detection of spurious harmonic emissions)

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.

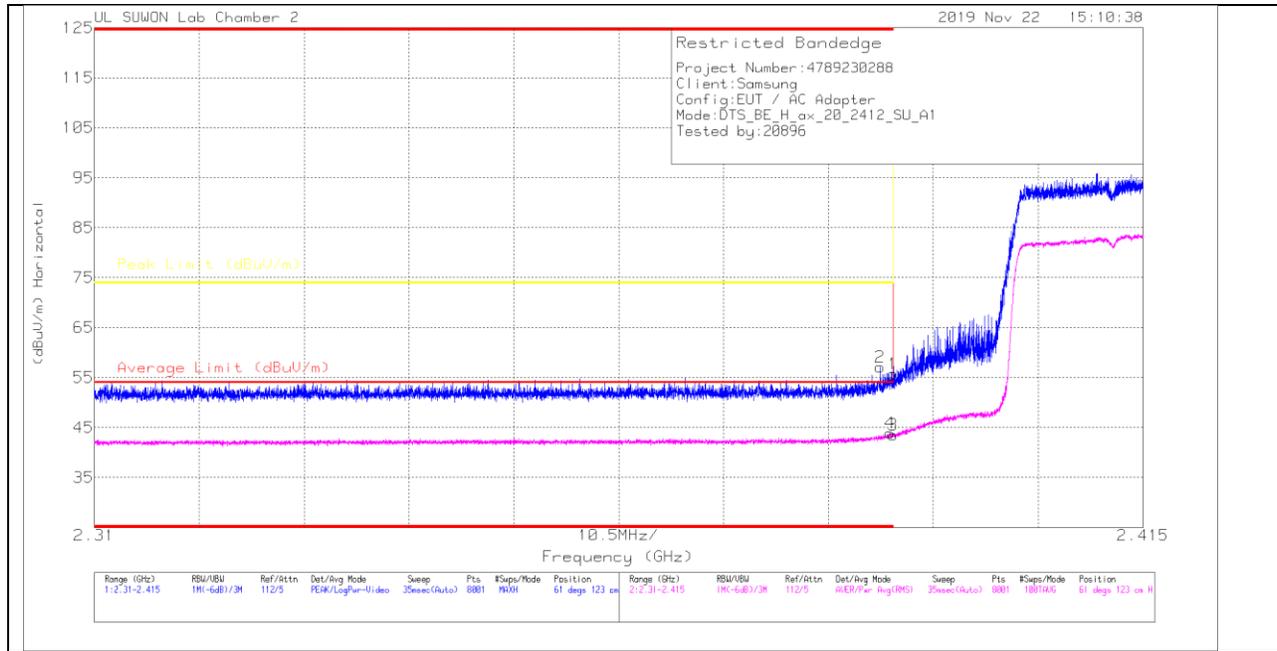
11.1. TRANSMITTER ABOVE 1 GHz_SISO

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

RESTRICTED BANDEDGE (1 CHANNEL)

SU mode (ANT_1)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

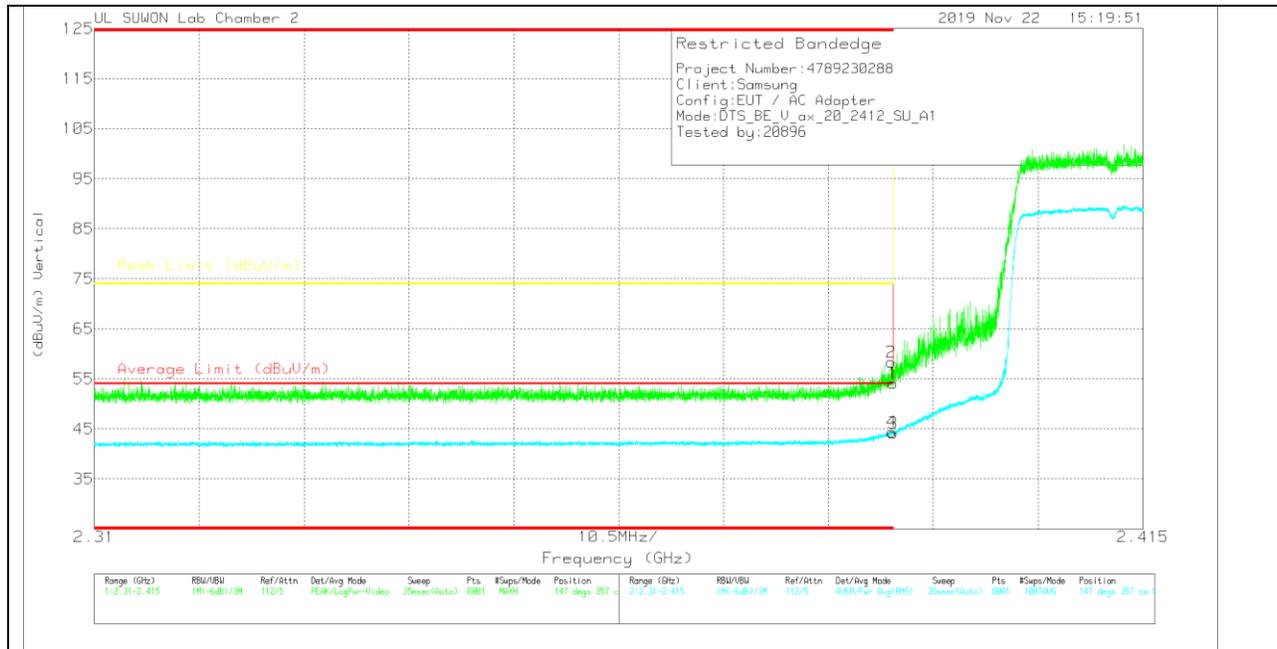
Marker	Frequency (GHz)	Meas Reading (dBuV)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	44.7	Pk	31.6	-20.6	0	55.7	-	-	74	-18.3	61	123	H
2	* 2.3887	46.16	Pk	31.6	-20.6	0	57.16	-	-	74	-16.84	61	123	H
3	* 2.39	32.11	RMS	31.6	-20.6	-4	43.51	54	-10.49	-	-	61	123	H
4	* 2.38967	32.48	RMS	31.6	-20.6	-4	43.88	54	-10.12	-	-	61	123	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

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	43.11	Pk	31.6	-20.6	0	54.11	-	-	74	-19.89	147	357	V
2	* 2.38979	47.38	Pk	31.6	-20.6	0	58.38	-	-	74	-15.62	147	357	V
3	* 2.39	32.76	RMS	31.6	-20.6	-4	44.16	54	-9.84	-	-	147	357	V
4	* 2.38985	33.02	RMS	31.6	-20.6	-4	44.42	54	-9.58	-	-	147	357	V

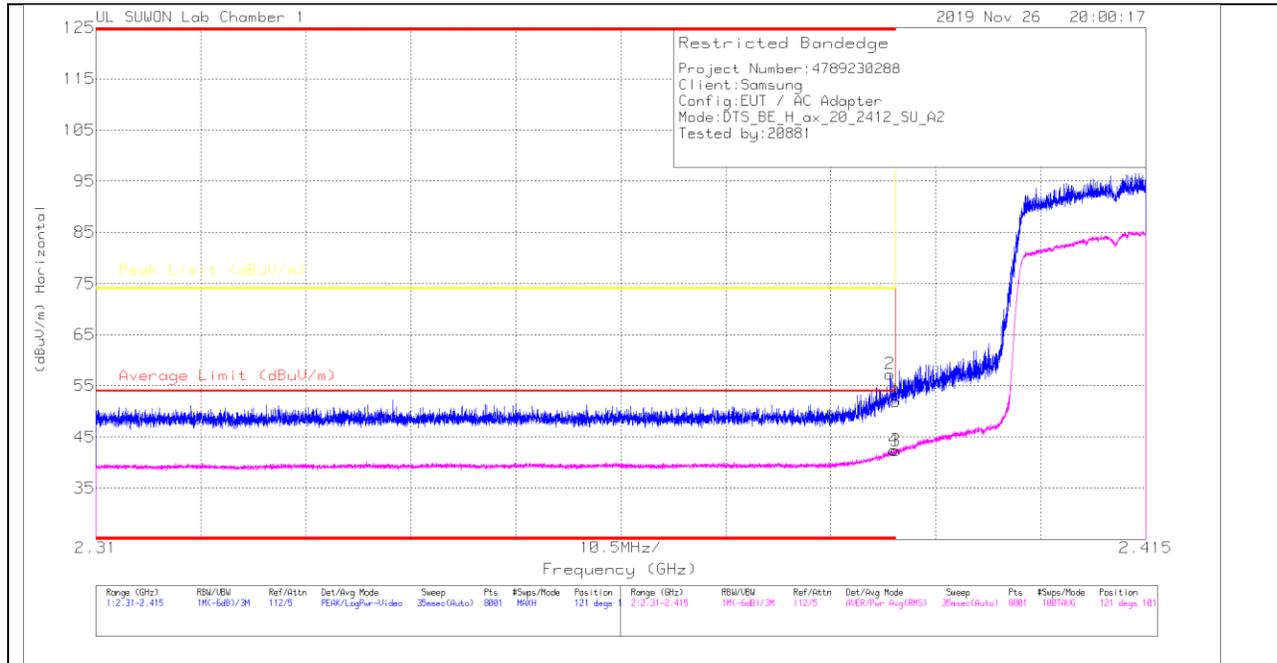
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

SU mode (ANT_2)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

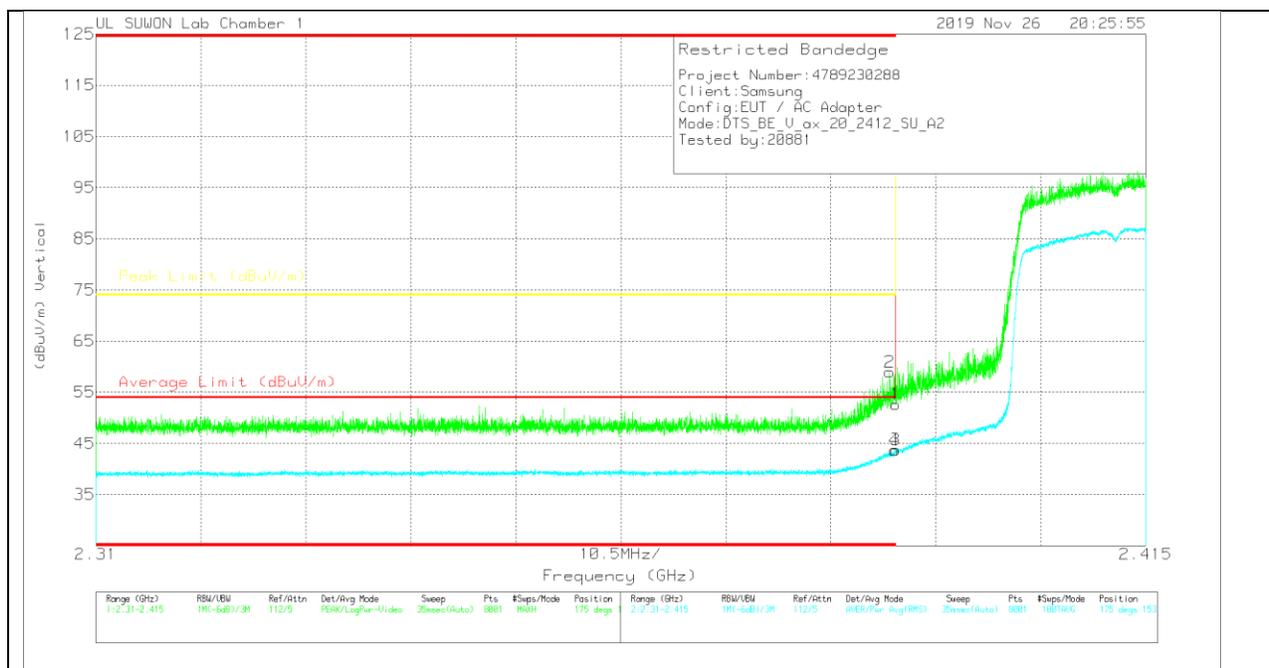
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1	* 2.39	45.76	Pk	31.7	-25.5	0	51.96	-	-	74	-22.04	121	101	H
2	* 2.38942	51.21	Pk	31.7	-25.5	0	57.51	-	-	74	-16.69	121	101	H
3	* 2.39	35.76	RMS	31.7	-25.5	.4	42.36	54	-11.64	-	-	121	101	H
4	* 2.38977	35.9	RMS	31.7	-25.5	.4	42.5	54	-11.5	-	-	121	101	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	46.43	Pk	31.7	-25.5	0	52.63	-	-	74	-21.37	175	153	V
2	* 2.38938	52.85	Pk	31.7	-25.6	0	58.95	-	-	74	-15.05	175	153	V
3	* 2.39	37.16	RMS	31.7	-25.5	.4	43.76	54	-10.24	-	-	175	153	V
4	* 2.38987	37.05	RMS	31.7	-25.5	.4	43.65	54	-10.35	-	-	175	153	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

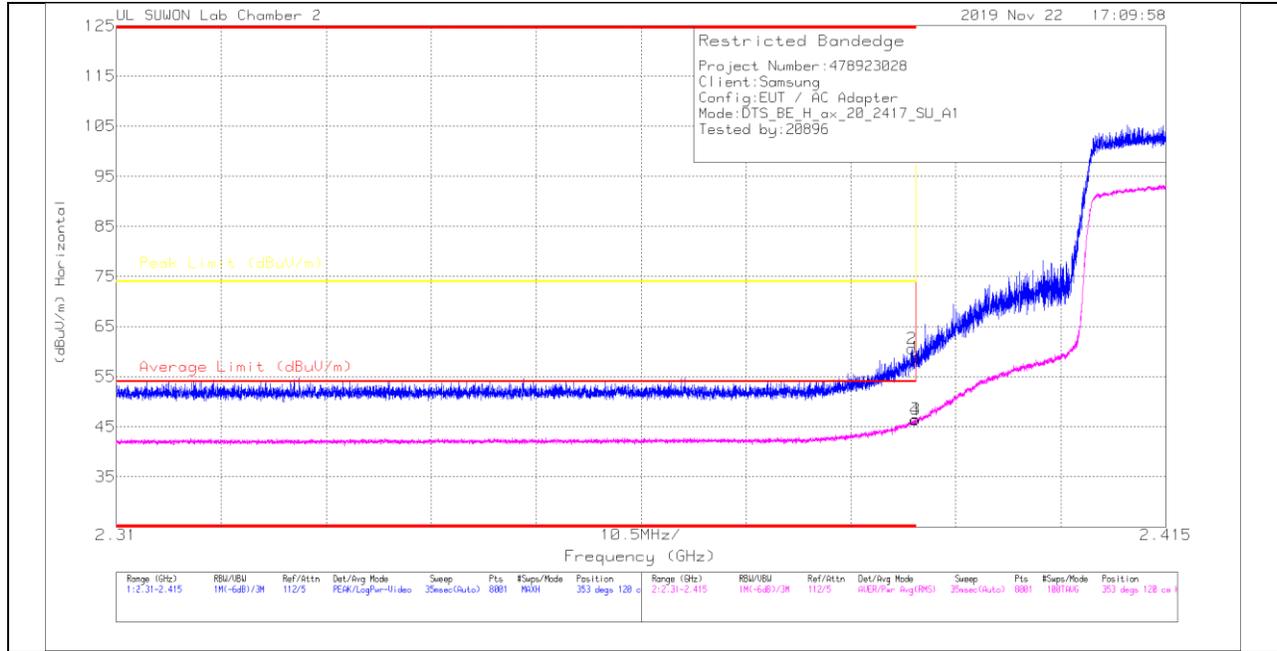
Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEGE (2 CHANNEL)

SU mode (ANT_1)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

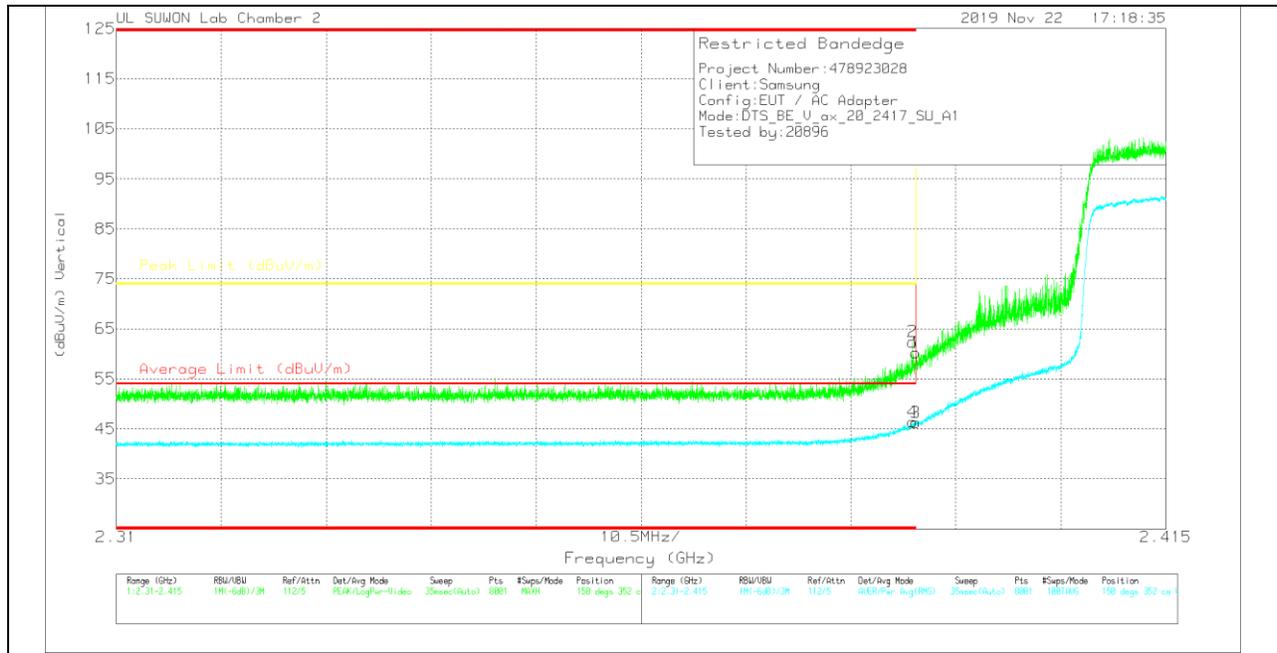
Marker	Frequency (GHz)	Meter Reading (dBu/m)	Det	3117_00168/24	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBu/m)	Average Limit (dBu/m)	Margin (dB)	Peak Limit (dBu/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	47.82	Pk	31.6	-20.6	0	58.82	-	-	74	-15.18	353	120	H
2	* 2.38958	49.55	Pk	31.6	-20.6	0	60.55	-	-	74	-13.45	353	120	H
3	* 2.39	35.12	RMS	31.6	-20.6	.4	46.52	54	-7.48	-	-	353	120	H
4	* 2.38993	34.95	RMS	31.6	-20.6	.4	46.35	54	-7.65	-	-	353	120	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu/m)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBu/m)	Average Limit (dBu/m)	Margin (dB)	Peak Limit (dBu/m)	PK Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 2.39	49.2	Pk	31.6	-20.6	0	60.2	-	-	74	-13.8	150	352	V
2	* 2.3897	51.41	Pk	31.6	-20.6	0	62.41	-	-	74	-11.59	150	352	V
3	* 2.39	34.83	RMS	31.6	-20.6	.4	46.23	54	-7.77	-	-	150	352	V
4	* 2.38967	34.95	RMS	31.6	-20.6	.4	46.35	54	-7.65	-	-	150	352	V

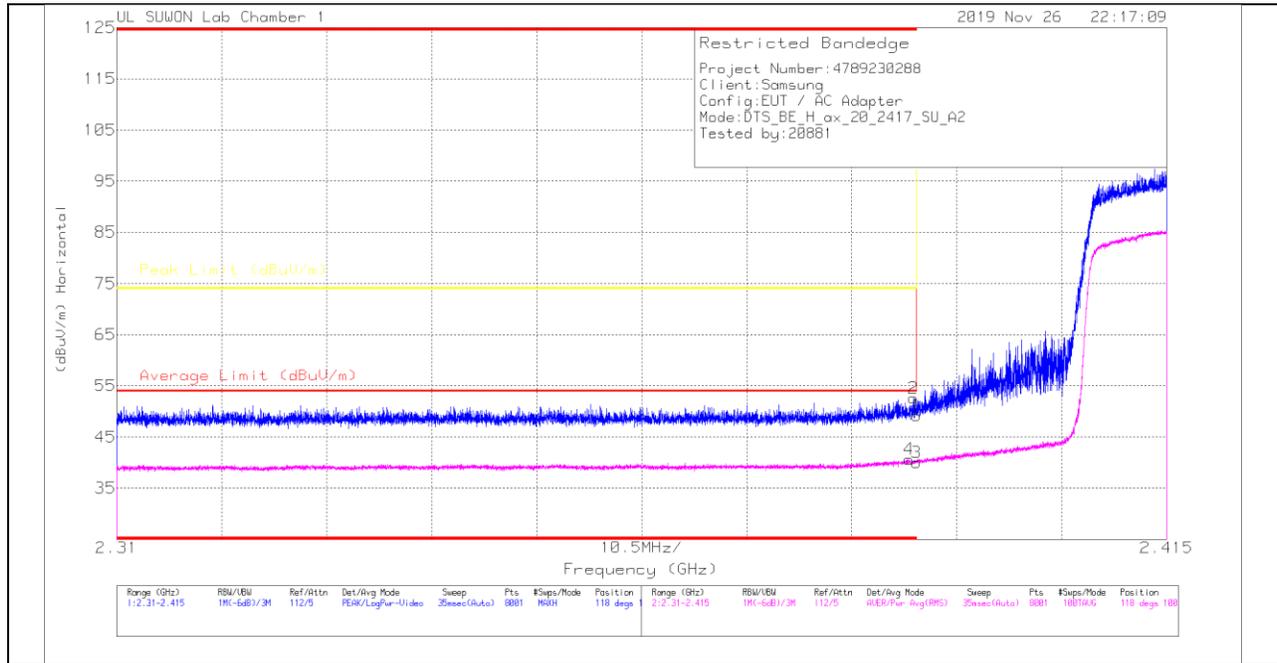
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

SU mode (ANT_2)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

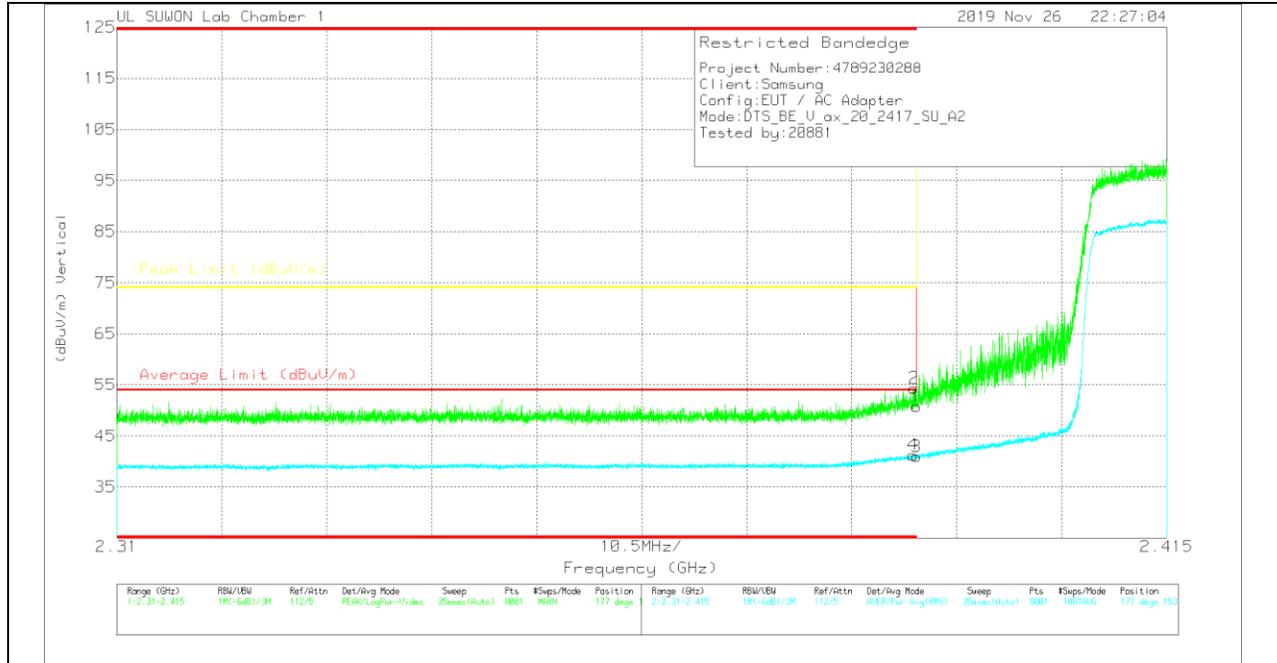
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	43.01	Pk	31.7	-25.5	0	48.21	-	-	74	-24.79	118	100	H
2	* 2.38968	46.39	Pk	31.7	-25.5	0	52.59	-	-	74	-21.41	118	100	H
3	* 2.39	33.4	RMS	31.7	-25.5	.4	40	54	-14	-	-	118	100	H
4	* 2.38924	34.14	RMS	31.7	-25.6	.4	40.64	54	-13.36	-	-	118	100	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	44.63	Pk	31.7	-25.5	0	50.83	-	-	74	-23.17	177	153	V
2	* 2.38972	48.14	Pk	31.7	-25.5	0	54.34	-	-	74	-19.66	177	153	V
3	* 2.39	34.38	RMS	31.7	-25.5	-4	40.98	54	-13.02	-	-	177	153	V
4	* 2.38963	34.69	RMS	31.7	-25.5	-4	41.29	54	-12.71	-	-	177	153	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

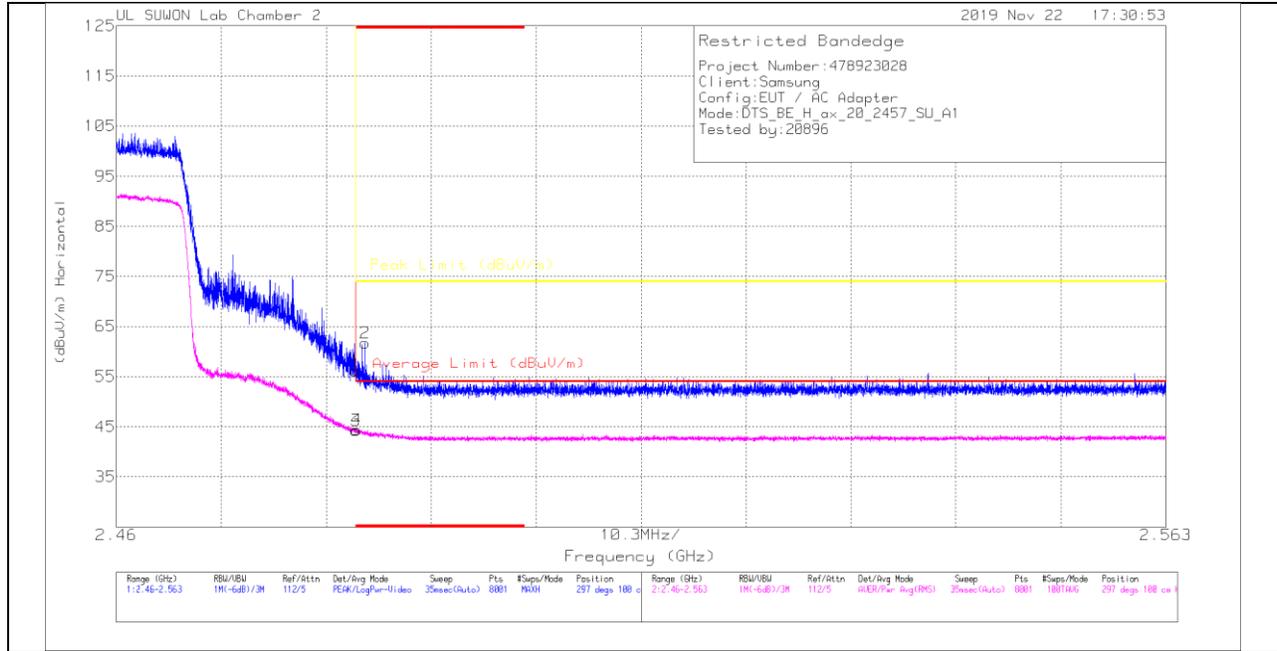
Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEGE (10 CHANNEL)

SU mode (ANT_1)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

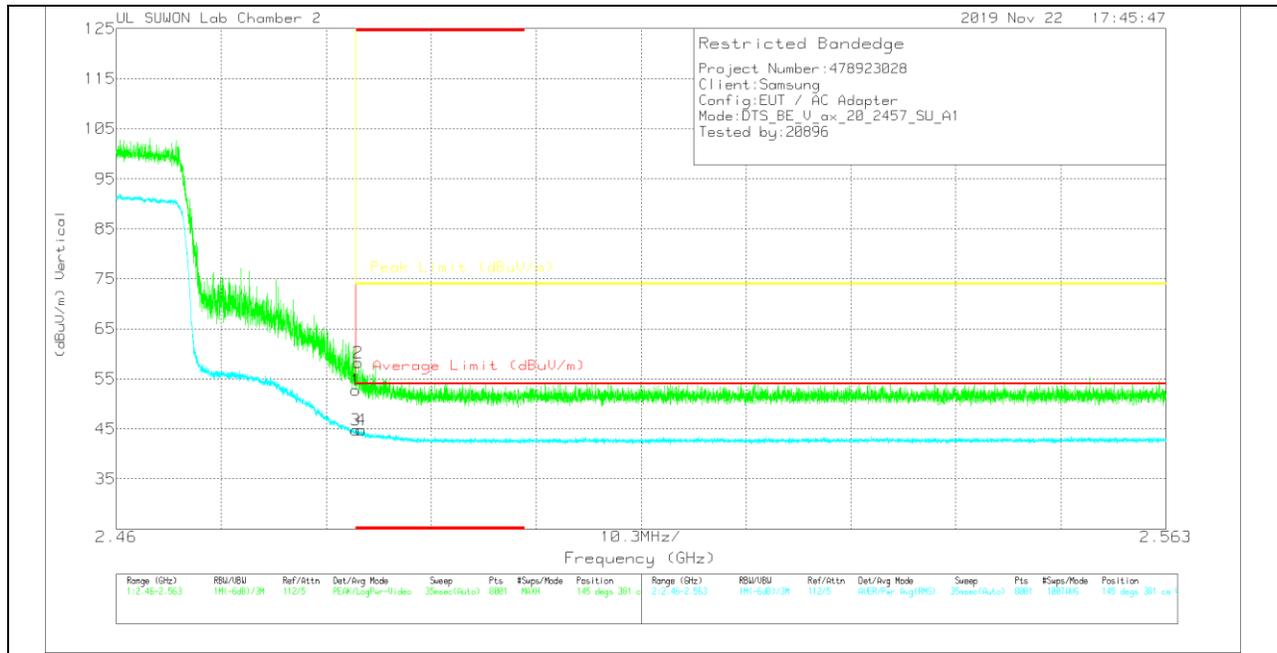
Marker	Frequency (GHz)	Meter Reading (dBu/m)	Det	3117_00168/24	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBu/m)	Average Limit (dBu/m)	Margin (dB)	Peak Limit (dBu/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	44.67	Pk	31.9	-20.4	0	66.17	-	-	74	-17.83	297	100	H
2	* 2.48441	50.26	Pk	31.9	-20.4	0	70.76	-	-	74	-12.24	297	100	H
3	* 2.48351	32.37	RMS	31.9	-20.4	.4	44.27	54	-9.73	-	-	297	100	H
4	* 2.48359	32.51	RMS	31.9	-20.4	.4	44.41	54	-9.99	-	-	297	100	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu/m)	Det	3117_00168724	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBu/m)	Average Limit (dBu/m)	Margin (dB)	Peak Limit (dBu/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	41.24	Pk	31.9	-20.4	0	52.74	-	-	74	-21.26	145	381	V
2	* 2.48374	46.68	Pk	31.9	-20.4	0	58.18	-	-	74	-15.82	145	381	V
3	* 2.48351	32.82	RMS	31.9	-20.4	-.4	44.72	54	-9.28	-	-	145	381	V
4	* 2.48402	32.83	RMS	31.9	-20.4	-.4	44.73	54	-9.27	-	-	145	381	V

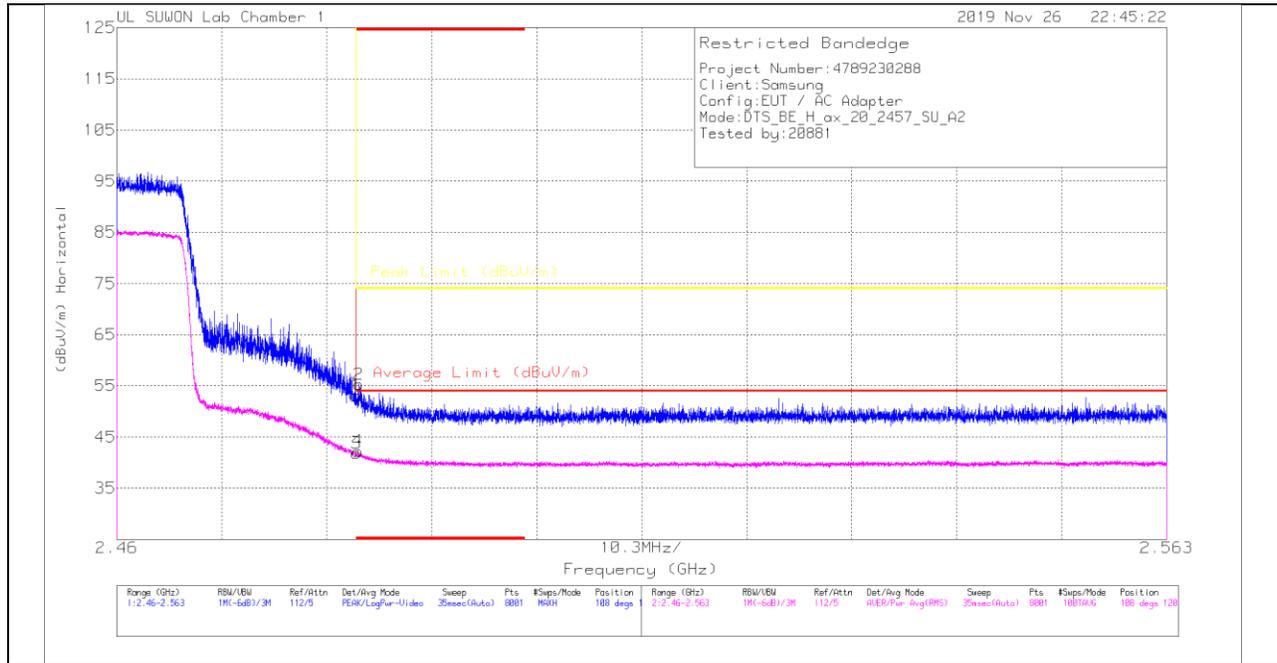
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

SU mode (ANT_2)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

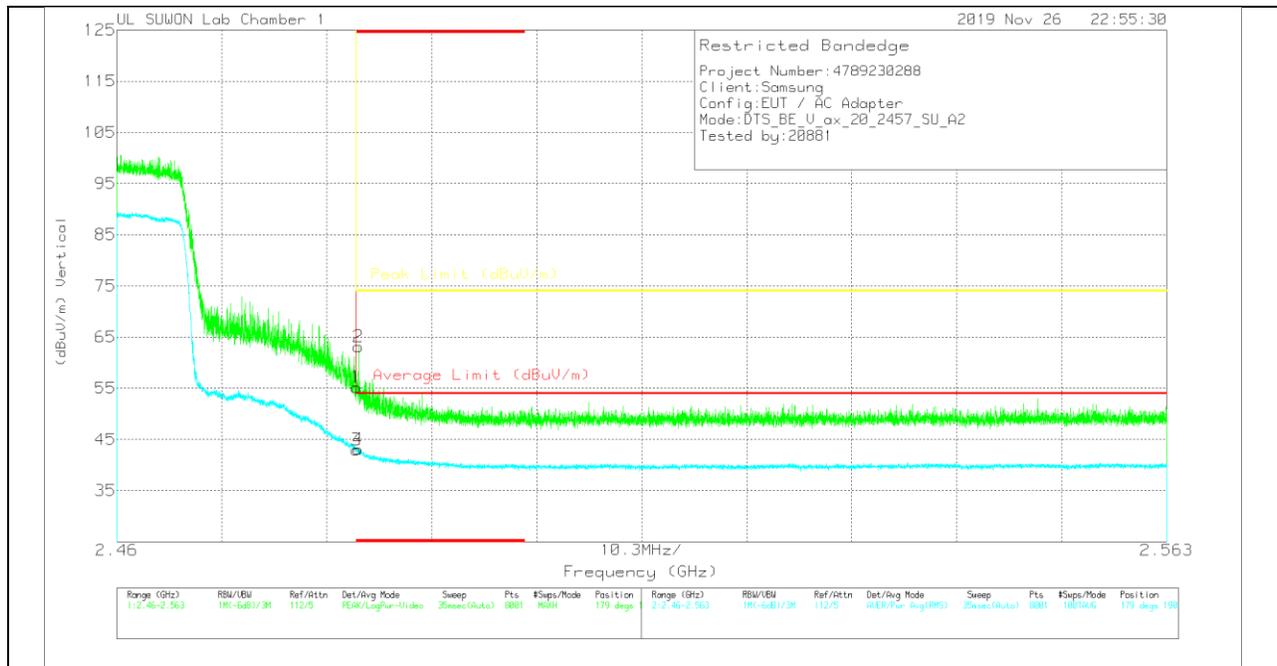
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1	* 2.48351	46.45	Pk	31.9	-25.2	0	53.15	-	-	74	-20.85	108	120	H
2	* 2.48373	48.58	Pk	31.9	-25.2	0	55.28	-	-	74	-18.72	108	120	H
3	* 2.48351	34.76	RMS	31.9	-25.2	.4	41.86	54	-12.14	-	-	108	120	H
4	* 2.48364	35.15	RMS	31.9	-25.2	.4	42.25	54	-11.75	-	-	108	120	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meas 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	48.51	Pk	31.9	-25.2	0	55.21	-	-	74	-18.79	179	190	V
2	* 2.4837	56.43	Pk	31.9	-25.2	0	63.13	-	-	74	-10.87	179	190	V
3	* 2.48351	35.86	RMS	31.9	-25.2	-4	42.36	54	-11.04	-	-	179	190	V
4	* 2.48366	35.88	RMS	31.9	-25.2	-4	43.08	54	-10.92	-	-	179	190	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

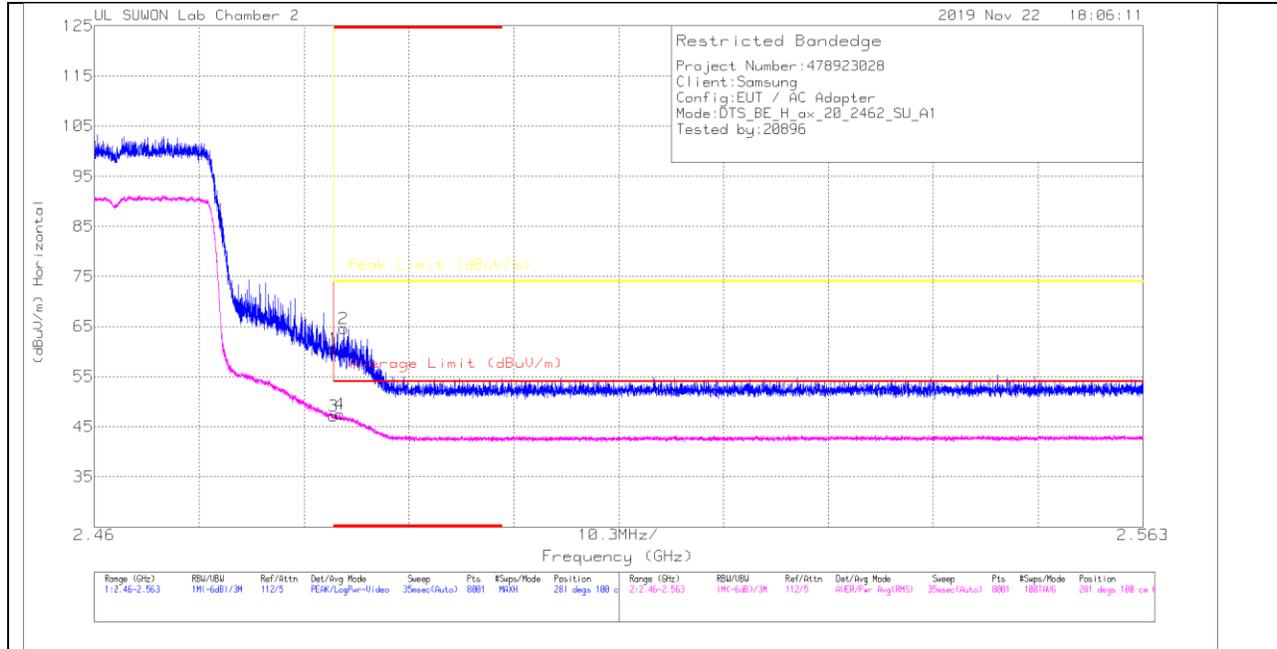
Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (11 CHANNEL)

SU mode (ANT_1)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

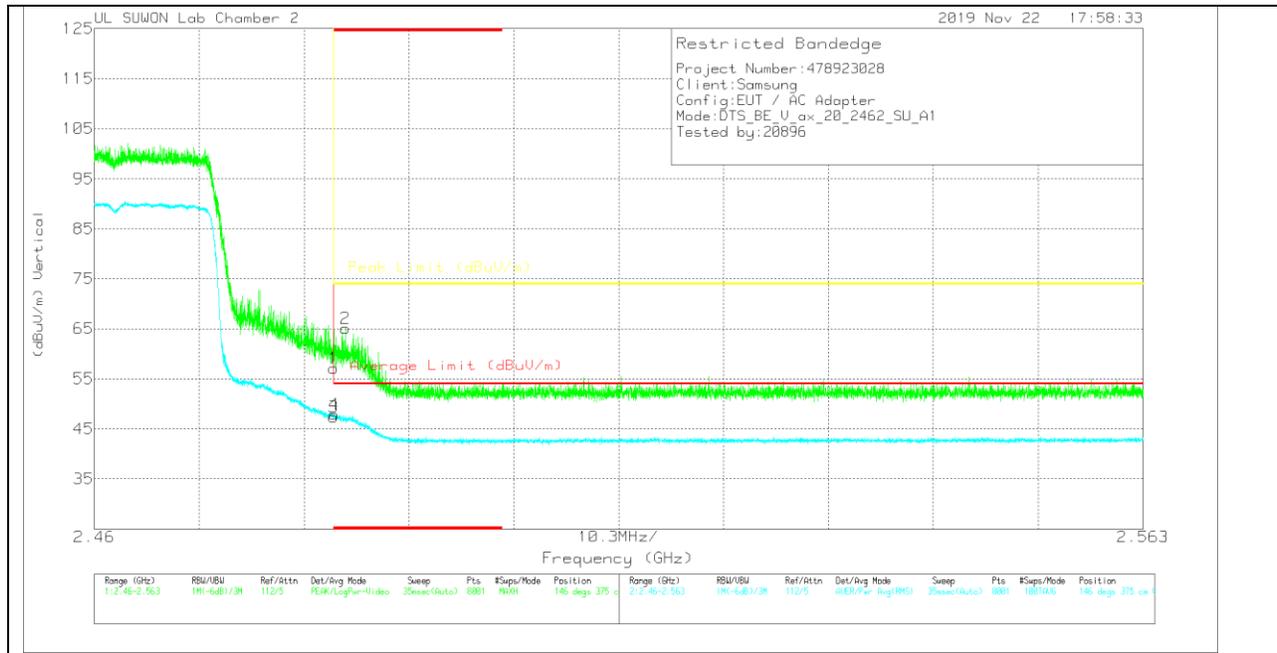
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1	* 2.48351	49.04	Pk	31.9	-20.4	0	60.54	-	-	74	-13.46	281	100	H
2	* 2.48445	53.09	Pk	31.9	-20.4	0	64.59	-	-	74	-9.41	281	100	H
3	* 2.48351	35.23	RMS	31.9	-20.4	-4	47.13	54	-6.87	-	-	281	100	H
4	* 2.48409	35.63	RMS	31.9	-20.4	-4	47.53	54	-6.47	-	-	281	100	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

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)	Altitude (Degs)	Height (cm)	Polarity
1	* 2.48351	45.61	Pk	31.9	-20.4	0	57.11	-	-	74	-16.89	146	375	V
2	* 2.48466	53.53	Pk	31.9	-20.4	0	65.03	-	-	74	-8.97	146	375	V
3	* 2.48351	35.47	RMS	31.9	-20.4	.4	47.37	54	-6.3	-	-	146	375	V
4	* 2.48355	35.96	RMS	31.9	-20.4	.4	47.86	54	-6.14	-	-	146	375	V

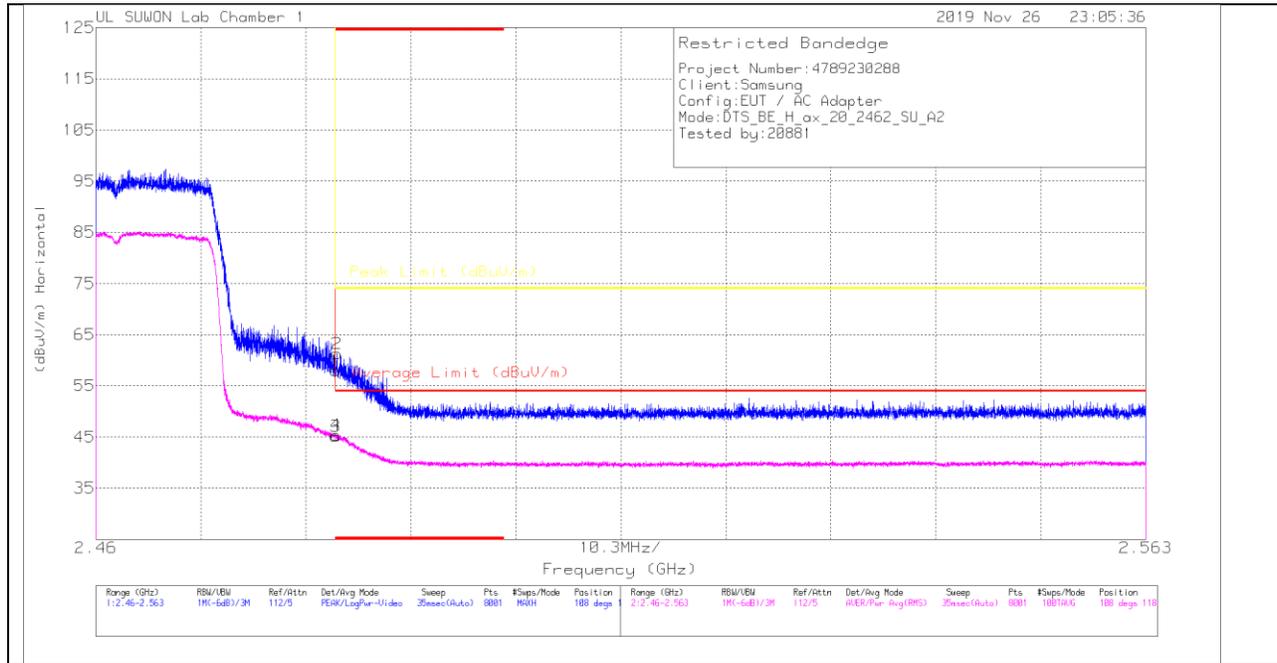
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

SU mode (ANT_2)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

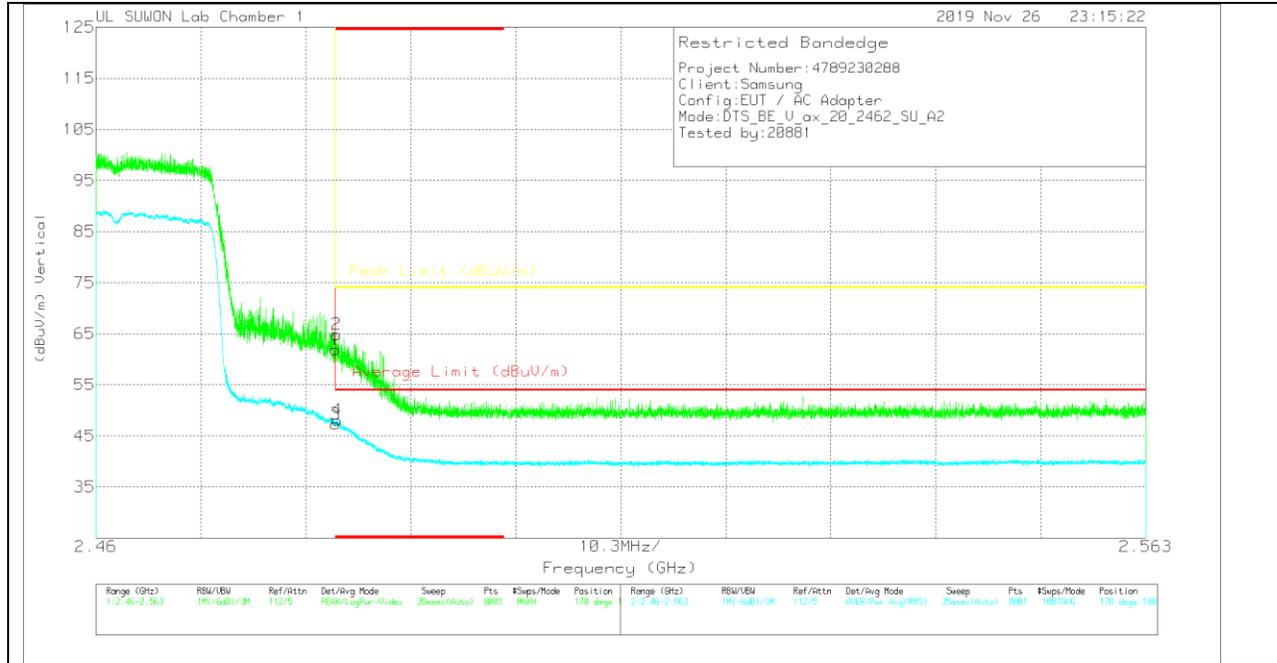
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	51.29	Pk	31.9	-25.2	0	57.99	-	-	74	-16.01	108	118	H
2	* 2.48364	54.59	Pk	31.9	-25.2	0	61.29	-	-	74	-12.71	108	118	H
3	* 2.48351	38.04	RMS	31.9	-25.2	.4	45.14	54	-8.86	-	-	108	118	H
4	* 2.48354	38.28	RMS	31.9	-25.2	.4	45.38	54	-8.62	-	-	108	118	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

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)	Altitude (Degs)	Height (cm)	Polarity
1	* 2.48351	55.22	Pk	31.9	-25.2	0	61.92	-	-	74	-12.08	178	190	V
2	* 2.4836	58.22	Pk	31.9	-25.2	0	64.92	-	-	74	-9.08	178	190	V
3	* 2.48351	40.23	RMS	31.9	-25.2	.4	47.33	54	-6.67	-	-	178	190	V
4	* 2.48368	41.04	RMS	31.9	-25.2	.4	48.14	54	-5.86	-	-	178	190	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

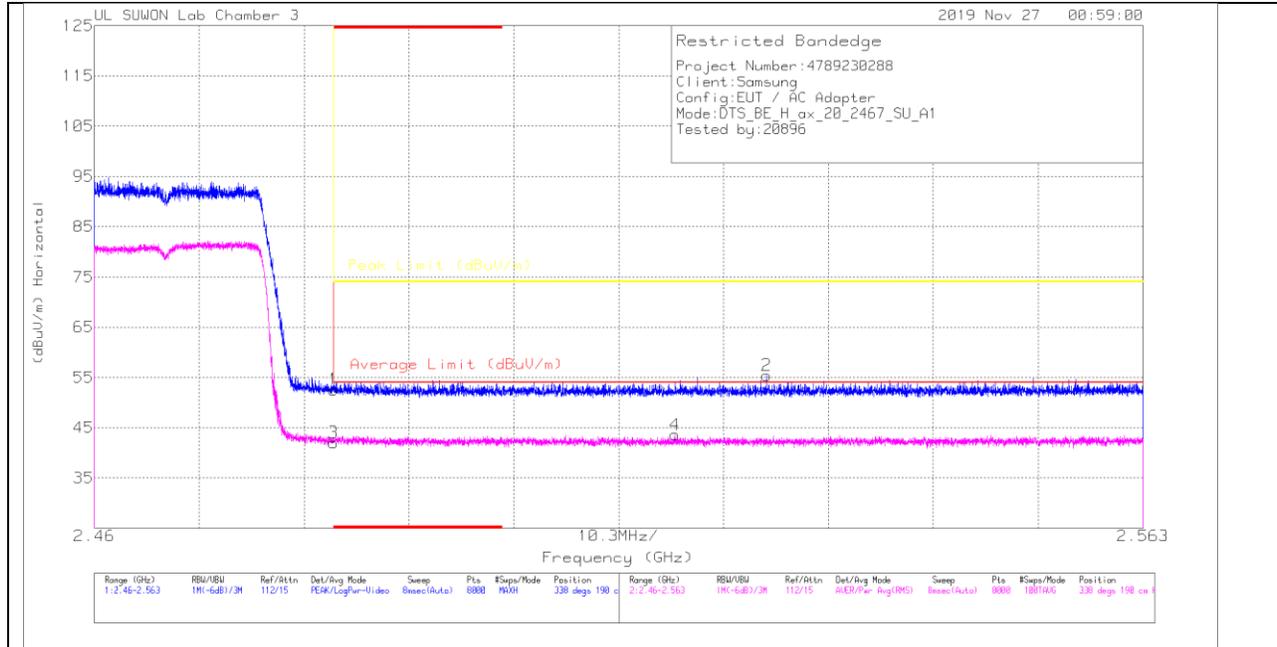
Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (12 CHANNEL)

SU mode (ANT_1)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

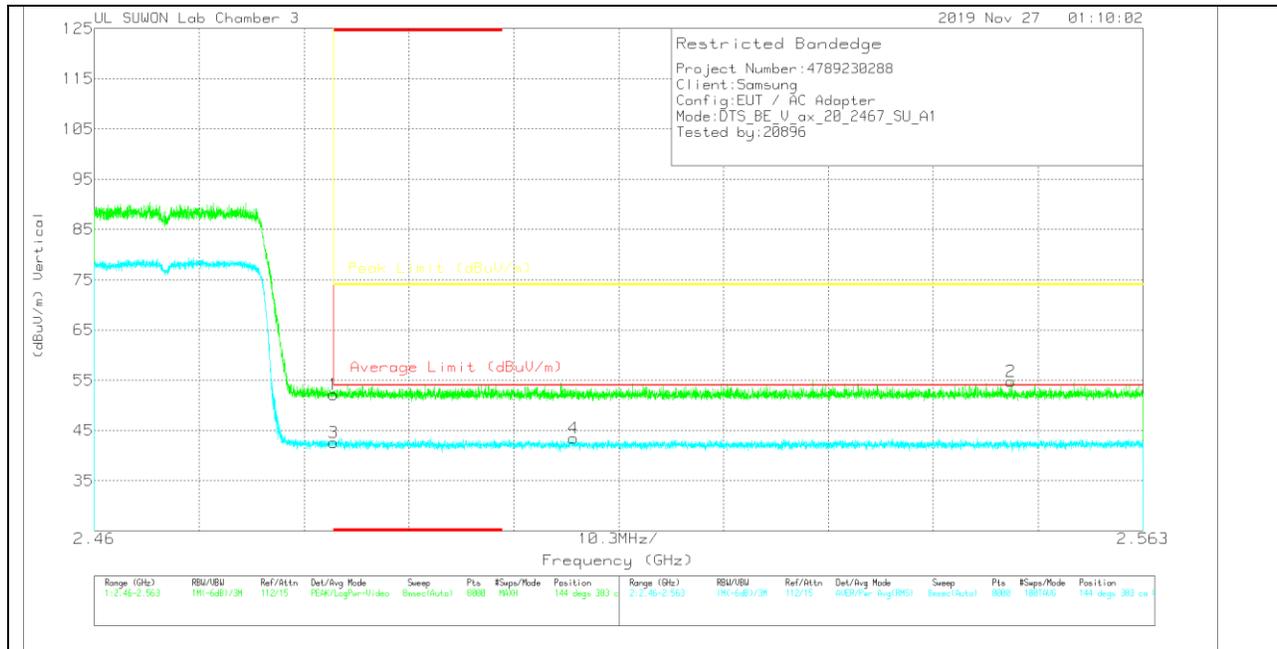
Marker	Frequency (GHz)	Meas Reading (dBuV)	Det	3117_00205969	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	43.49	PK	31.9	-22.8	0	52.59	-	-	74	-21.41	338	190	H
2	2.52603	46.14	PK	32	-22.7	0	55.44	-	-	74	-18.56	338	190	H
3	* 2.4835	32.53	RMS	31.9	-22.8	.4	42.03	54	-11.97	-	-	338	190	H
4	2.51701	33.85	RMS	32	-22.7	.4	43.55	54	-10.45	-	-	338	190	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meas Reading (dBuV)	Det	3117_00205959	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	43.03	Pk	31.9	-22.8	0	52.13	-	-	74	-21.87	144	383	V
2	2.55001	45.59	Pk	32	-22.8	0	54.79	-	-	74	-19.21	144	383	V
3	* 2.4835	33.12	RMS	31.9	-22.8	.4	42.62	54	-11.38	-	-	144	383	V
4	2.50707	33.78	RMS	32	-22.7	.4	43.48	54	-10.52	-	-	144	383	V

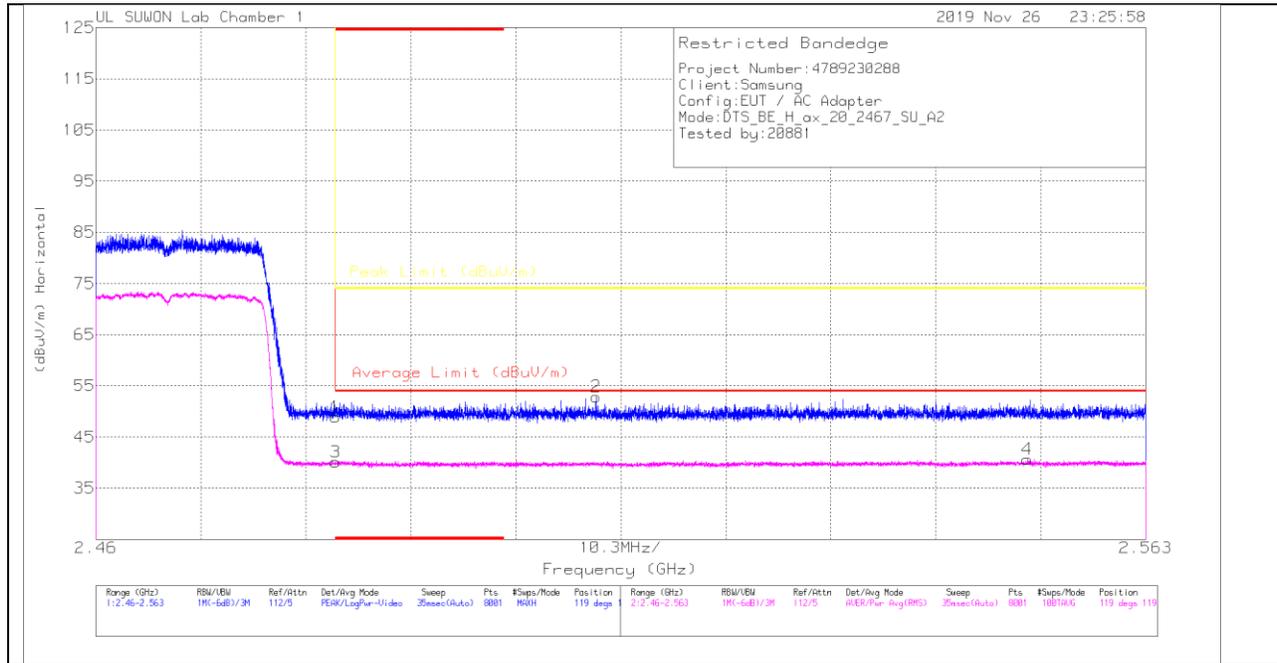
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

SU mode (ANT_2)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

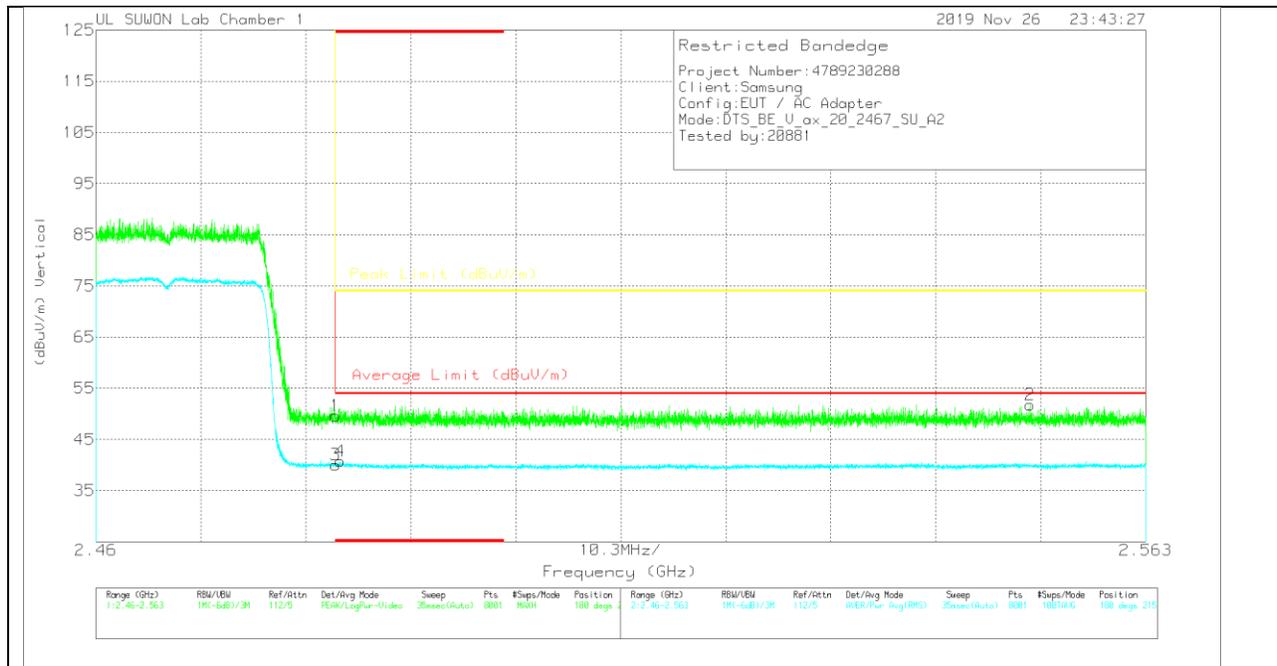
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Deg)	Height (m)	Polarity
1	* 2.48351	42.22	Pk	31.9	-25.2	0	48.92	-	-	74	-25.08	119	119	H
2	2.50905	45.95	Pk	32	-25.1	0	52.86	-	-	74	-21.14	119	119	H
3	* 2.48351	33.03	RMS	31.9	-25.2	.4	40.13	54	-13.87	-	-	119	119	H
4	2.55137	33.33	RMS	32	-25.1	.4	40.63	54	-13.37	-	-	119	119	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

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	42.92	Pk	31.9	-25.2	0	49.62	-	-	74	-24.38	180	215	V
2	2.55163	44.86	Pk	32	-25.1	0	51.76	-	-	74	-22.24	180	215	V
3	* 2.48351	32.94	RMS	31.9	-25.2	.4	40.04	54	-13.96	-	-	180	215	V
4	* 2.48397	33.55	RMS	31.9	-25.1	.4	40.75	54	-13.25	-	-	180	215	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

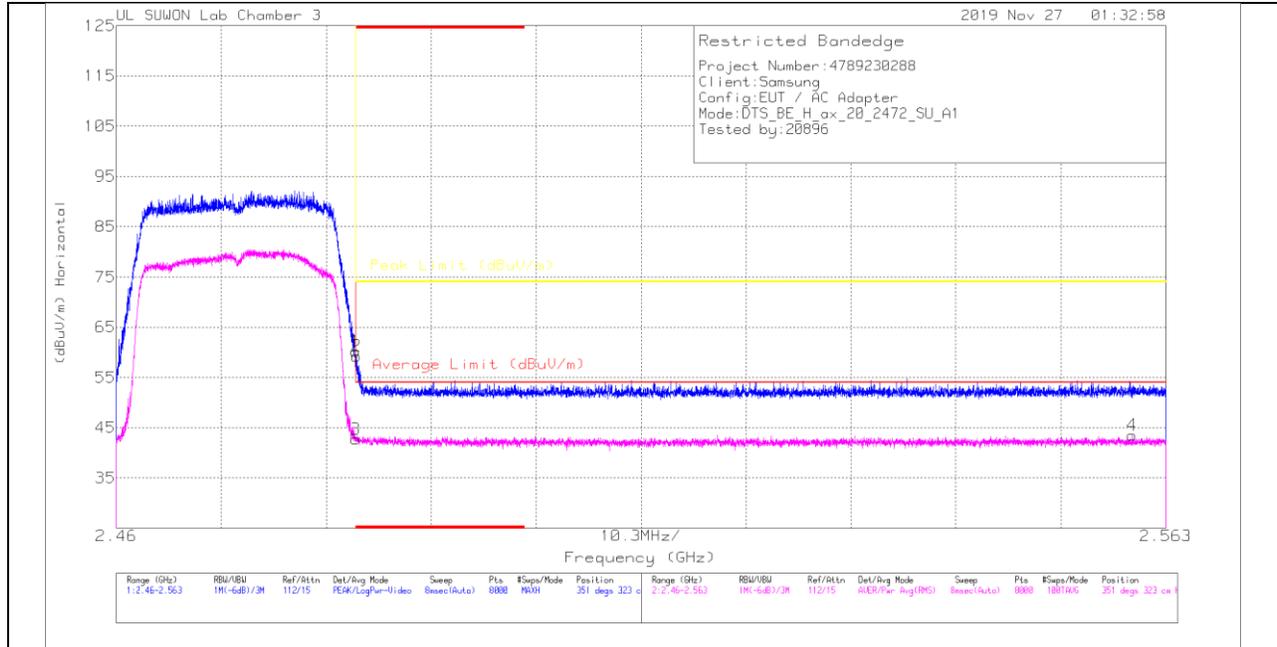
Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (13 CHANNEL)

SU mode (ANT_1)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

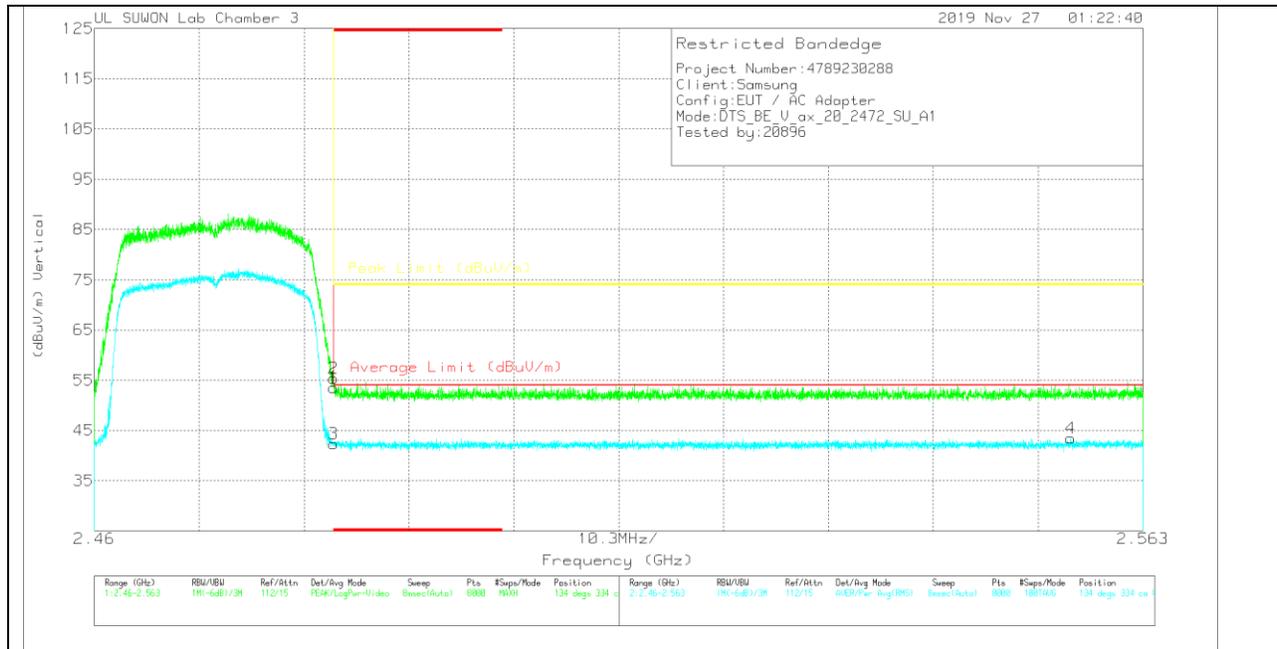
Marker	Frequency (GHz)	Meas Reading (dBuV)	Det	3117_00005959	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*2.4835	51.17	Pk	31.9	-22.8	0	60.27	-	-	74	-13.73	351	323	H
2	*2.48354	50.19	Pk	31.9	-22.8	0	59.29	-	-	74	-14.71	351	323	H
3	*2.4835	33.25	RMS	31.9	-22.8	-4	42.76	54	-11.25	-	-	351	323	H
4	2.55969	33.82	RMS	32	-22.7	-4	43.52	54	-10.48	-	-	351	323	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00209599	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	44.39	Pk		-22.8	0	53.49	-	-	74	-20.51	134	334	V
2	* 2.48351	46.33	Pk		-22.8	0	55.43	-	-	74	-18.57	134	334	V
3	* 2.4835	32.87	RMS		-22.8	-4	42.37	54	-11.63	-	-	134	334	V
4	2.5592	33.79	RMS		-22.7	-4	43.49	54	-10.51	-	-	134	334	V

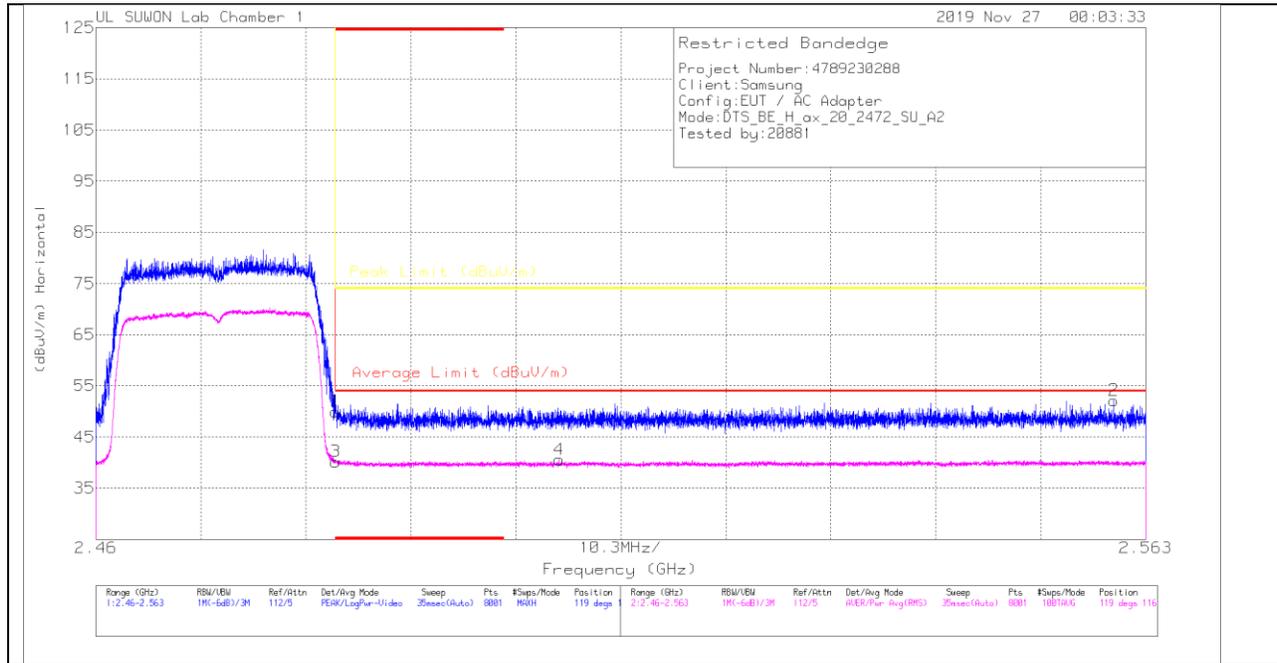
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

SU mode (ANT_2)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

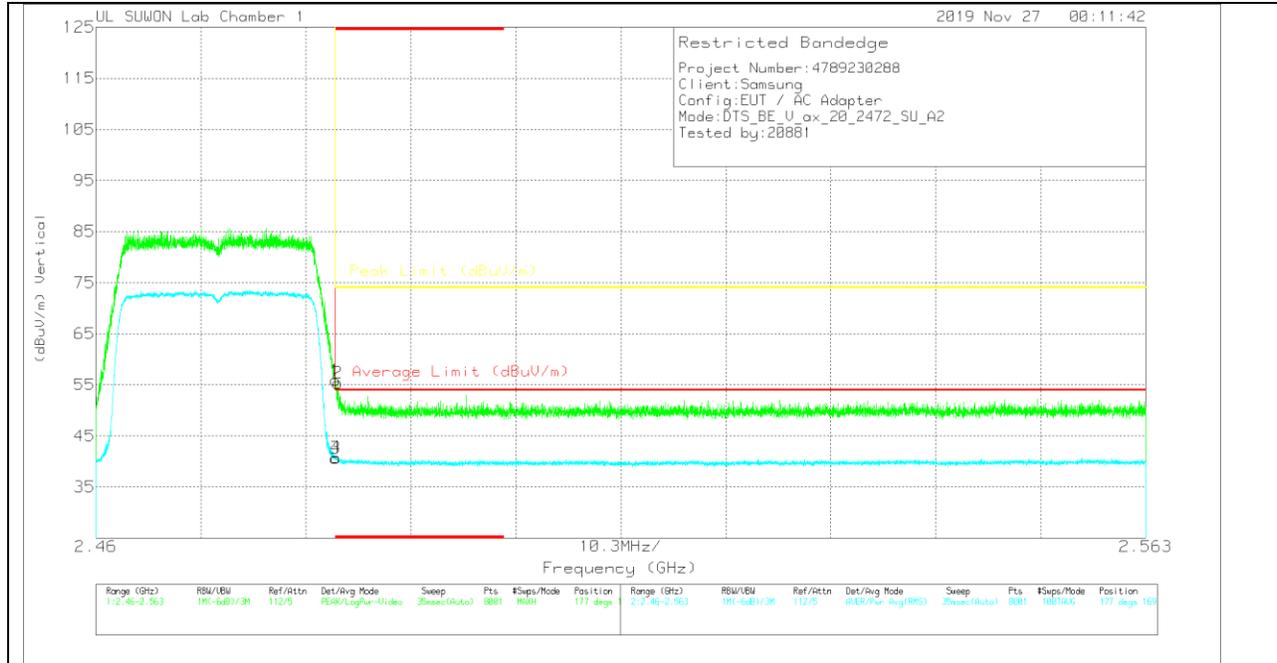
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	43.28	Pk	31.9	-25.2	0	49.98	-	-	74	-24.02	119	116	H
2	2.55986	45.25	Pk	32	-25.1	0	52.15	-	-	74	-21.85	119	116	H
3	* 2.48351	33.1	RMS	31.9	-25.2	.4	40.2	54	-13.8	-	-	119	116	H
4	2.50545	33.38	RMS	32	-25.2	.4	40.58	54	-13.42	-	-	119	116	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

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	49.18	Pk	31.9	-25.2	0	55.88	-	-	74	-18.12	177	169	V
2	* 2.48373	48.67	Pk	31.9	-25.2	0	55.37	-	-	74	-18.63	177	169	V
3	* 2.48351	33.57	RMS	31.9	-25.2	.4	40.67	54	-13.33	-	-	177	169	V
4	* 2.48356	33.66	RMS	31.9	-25.2	.4	40.76	54	-13.24	-	-	177	169	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

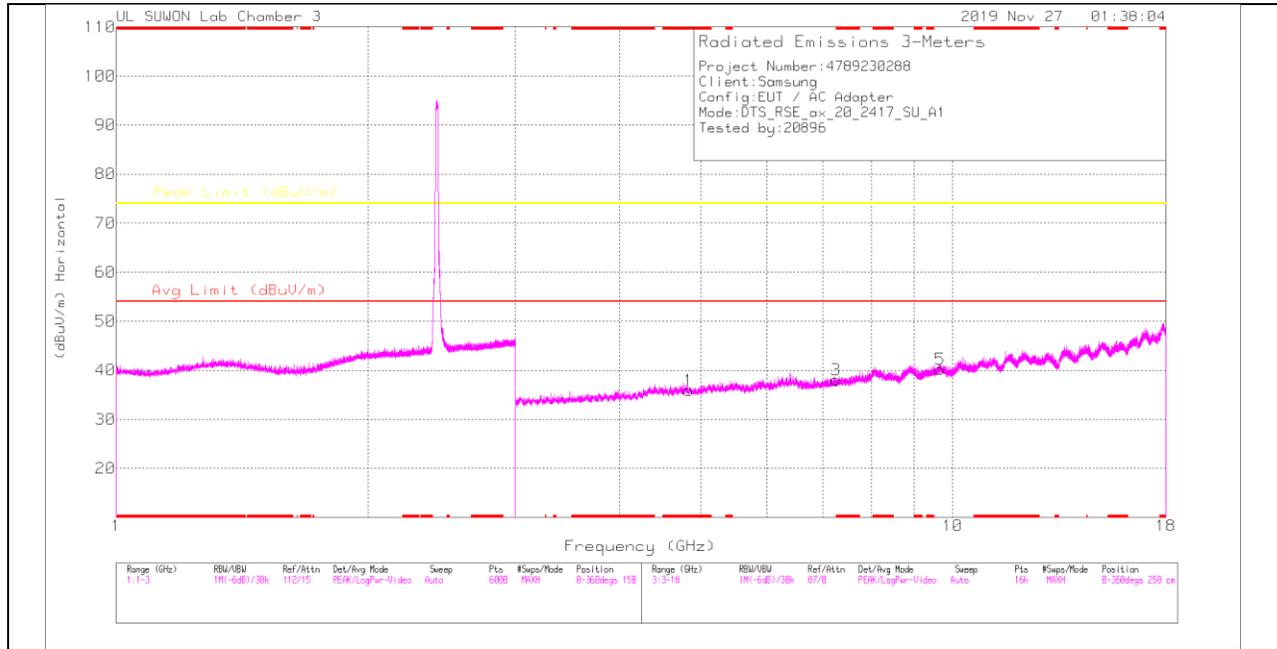
Pk - Peak detector

RMS - RMS detection

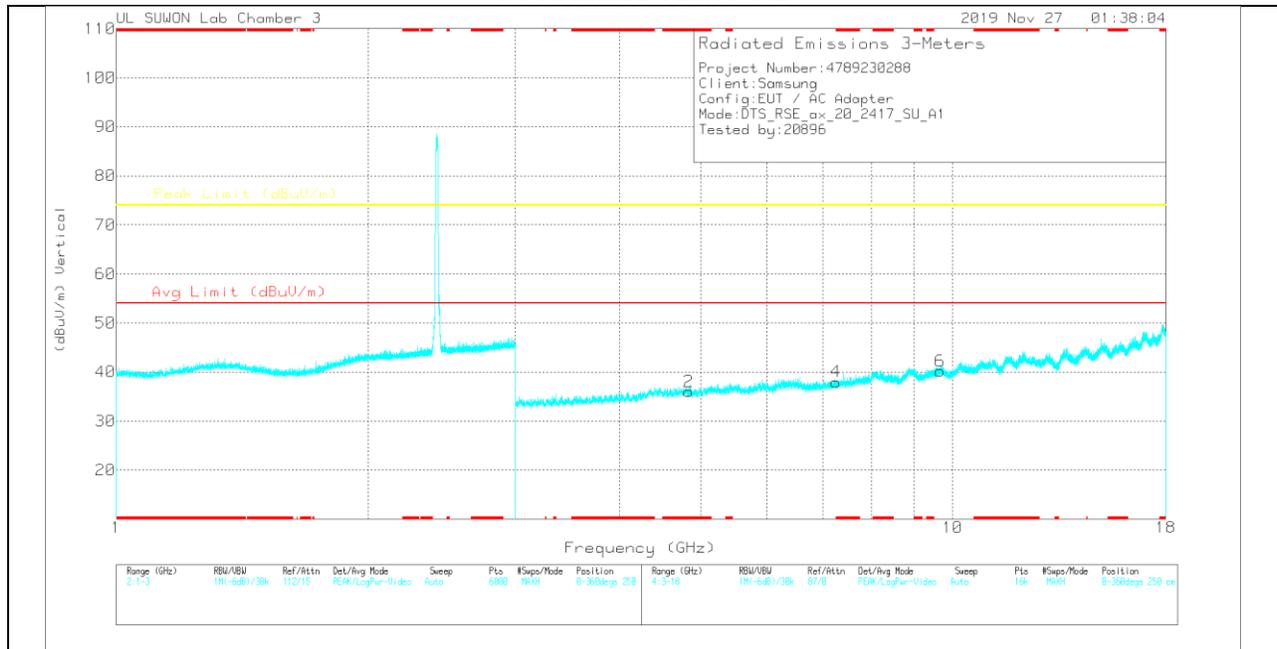
HARMONICS AND SPURIOUS EMISSIONS

SU mode (ANT_1)

2 CHANNEL HORIZONTAL



2 CHANNEL 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.

2 CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00205959	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
1	* 4.83668	30.05	PK	34.2	-28.3	0	35.95	-	-	74	-38.05	0-360	150	H
3	* 7.25746	25.92	PK	35.8	-23.6	0	38.12	-	-	74	-35.88	0-360	250	H
5	9.67073	22.56	PK	37.1	-19.4	0	40.26	-	-	74	-33.74	0-360	250	H
2	* 4.83668	30.08	PK	34.2	-28.3	0	35.98	-	-	74	-38.02	0-360	150	V
4	* 7.25089	25.8	PK	35.8	-23.6	0	38	-	-	74	-36	0-360	150	V
6	9.66979	22.5	PK	37.1	-19.4	0	40.2	-	-	74	-33.8	0-360	250	V

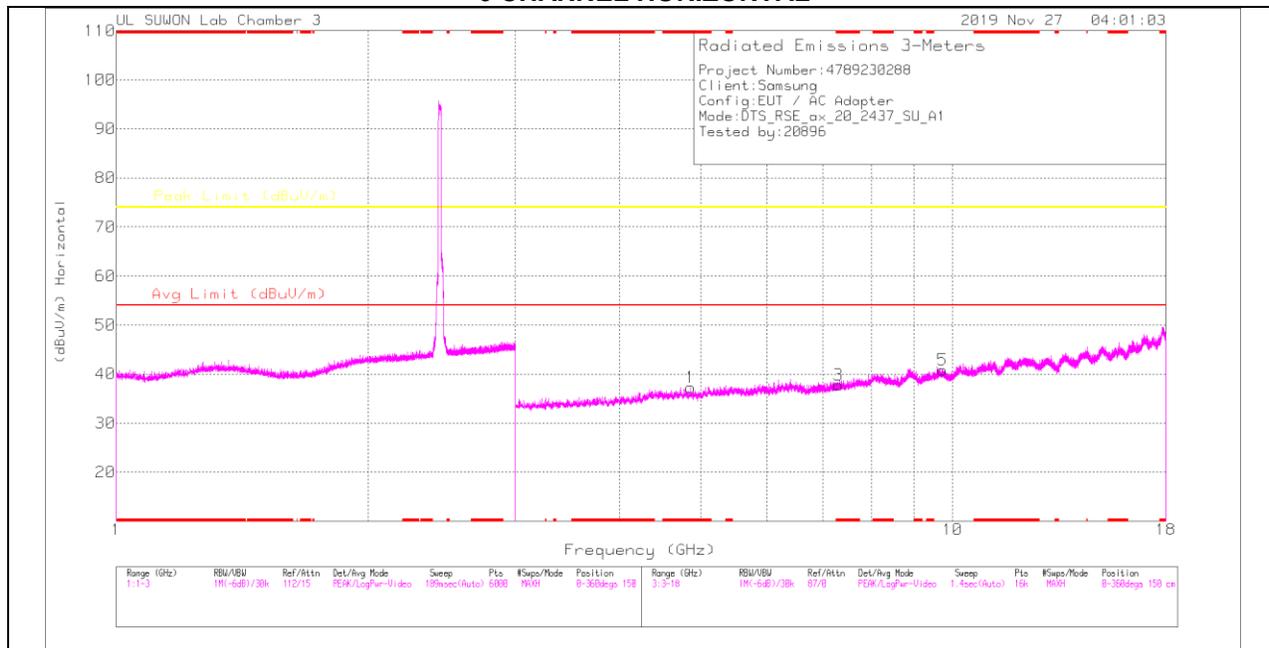
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak Detector

Radiated Emissions

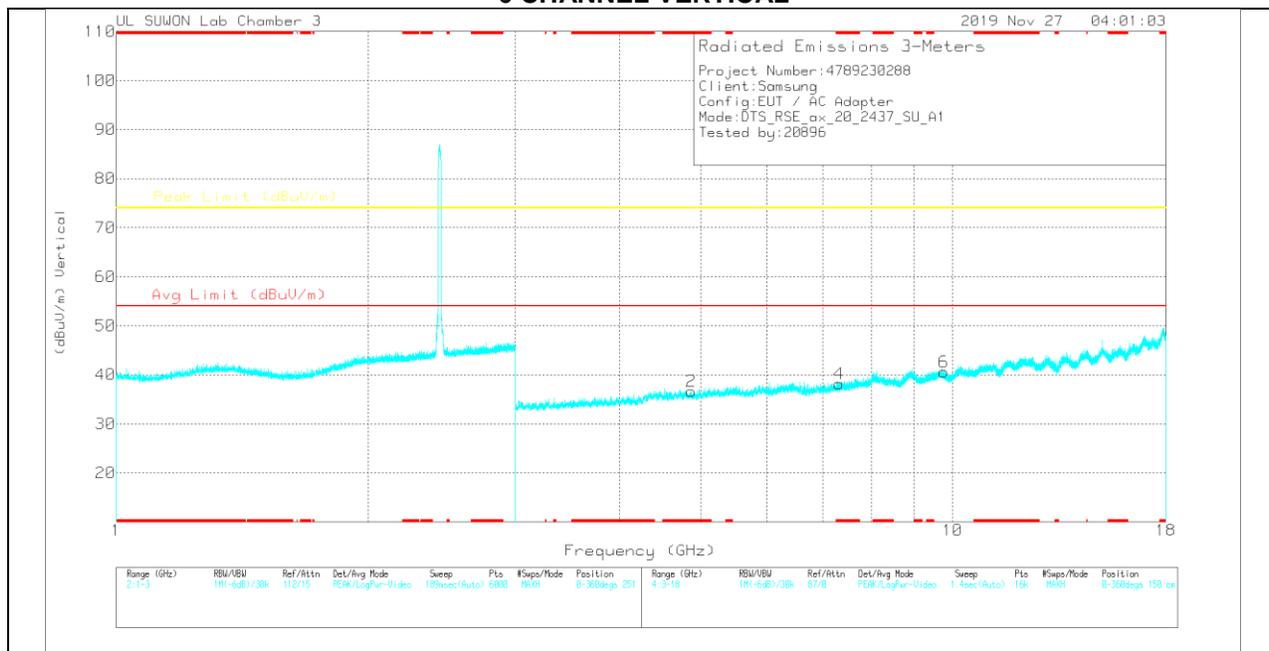
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00205959	3GHz_HP(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.85321	40.01	PK2	34.2	-28.4	0	48.81	-	-	74	-28.19	360	100	H
* 4.84855	40.55	PK2	34.2	-28.4	0	46.35	-	-	74	-27.65	360	100	V
* 7.25063	33.89	PK2	35.8	-23.6	0	46.09	-	-	74	-27.91	360	100	H
* 7.25164	34.24	PK2	35.8	-23.6	0	46.44	-	-	74	-27.56	360	100	V
9.6722	29.44	PK2	37.1	-19.3	0	47.24	-	-	74	-26.76	360	100	H
9.67031	28.75	PK2	37.1	-19.4	0	46.45	-	-	74	-27.55	360	100	V

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

6 CHANNEL HORIZONTAL



6 CHANNEL 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.

6 CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00205959	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
1	* 4.86012	31.58	PK	34.2	-28.5	0	37.28	-	-	74	-36.72	0-360	250	H
3	* 7.30527	25.43	PK	35.8	-23.4	0	37.83	-	-	74	-36.17	0-360	150	H
5	9.73167	23	PK	37.2	-19.3	0	40.9	-	-	74	-33.1	0-360	150	H
2	* 4.87324	31.18	PK	34.2	-28.7	0	36.68	-	-	74	-37.32	0-360	150	V
4	* 7.31371	25.86	PK	35.8	-23.3	0	38.16	-	-	74	-35.84	0-360	250	V
6	9.73193	22.75	PK	37.2	-19.3	0	40.65	-	-	74	-33.35	0-360	150	V

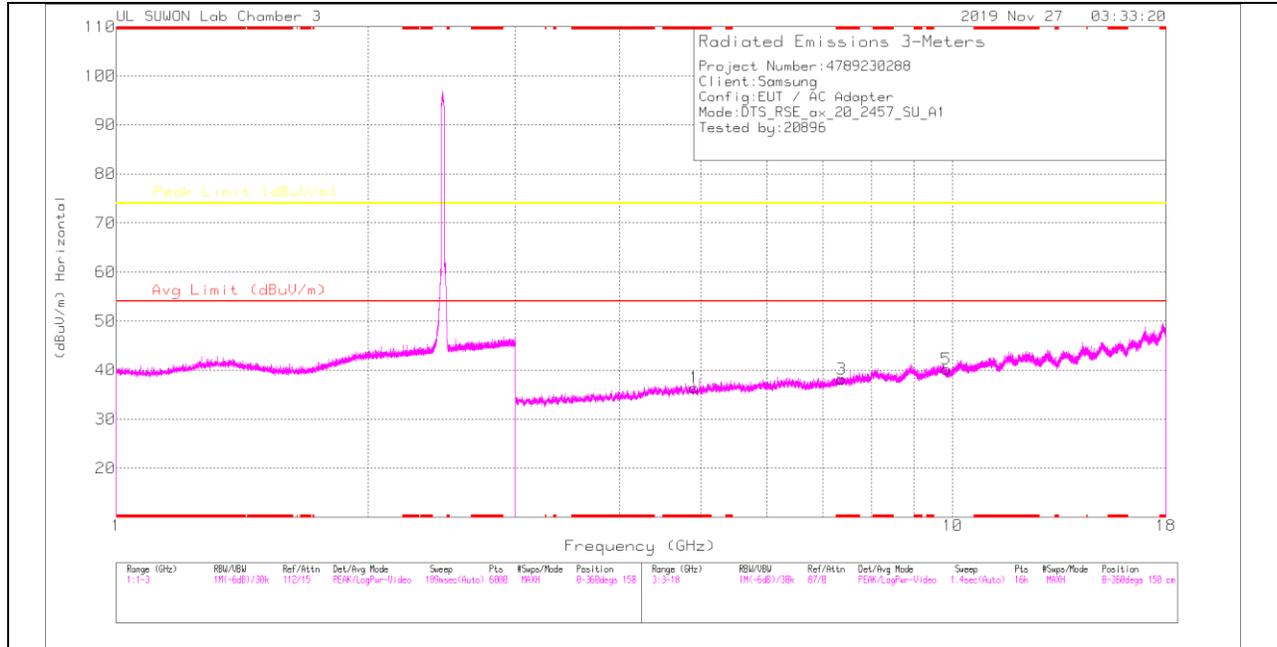
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak Detector

Radiated Emissions

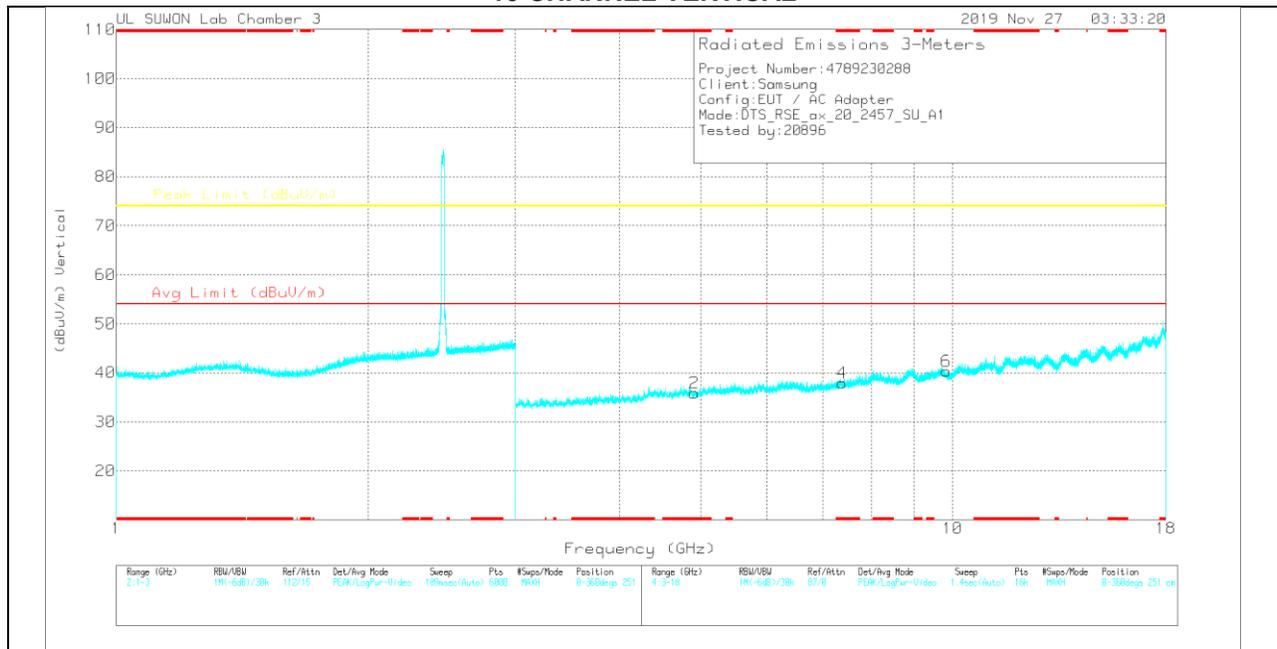
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00205959	3GHz_HP(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.85873	40.51	PK2	34.2	-28.5	0	48.21	-	-	74	-27.79	360	100	H
* 4.85936	40.8	PK2	34.2	-28.5	0	46.5	-	-	74	-27.5	360	100	V
* 7.30413	36.28	PK2	35.8	-23.4	0	48.68	-	-	74	-25.32	360	100	H
* 7.30359	36.37	PK2	35.8	-23.4	0	48.77	-	-	74	-25.23	360	100	V
9.73052	31.94	PK2	37.2	-19.3	0	49.84	-	-	74	-24.16	360	100	H
9.73123	32.13	PK2	37.2	-19.3	0	50.03	-	-	74	-23.97	360	100	V

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

10 CHANNEL HORIZONTAL



10 CHANNEL 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.

10 CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00205959	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
1	* 4.91262	31.05	PK	34.2	-28.8	0	36.45	-	-	74	-37.55	0-360	251	H
3	* 7.36996	25.24	PK	35.8	-22.9	0	38.14	-	-	74	-35.86	0-360	251	H
5	9.8273	22.19	PK	37.4	-19.4	0	40.19	-	-	74	-33.81	0-360	150	H
2	* 4.91262	30.56	PK	34.2	-28.8	0	35.96	-	-	74	-38.04	0-360	150	V
4	* 7.3784	24.92	PK	35.8	-22.8	0	37.92	-	-	74	-36.08	0-360	150	V
6	9.83199	22.39	PK	37.4	-19.5	0	40.29	-	-	74	-33.71	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak Detector

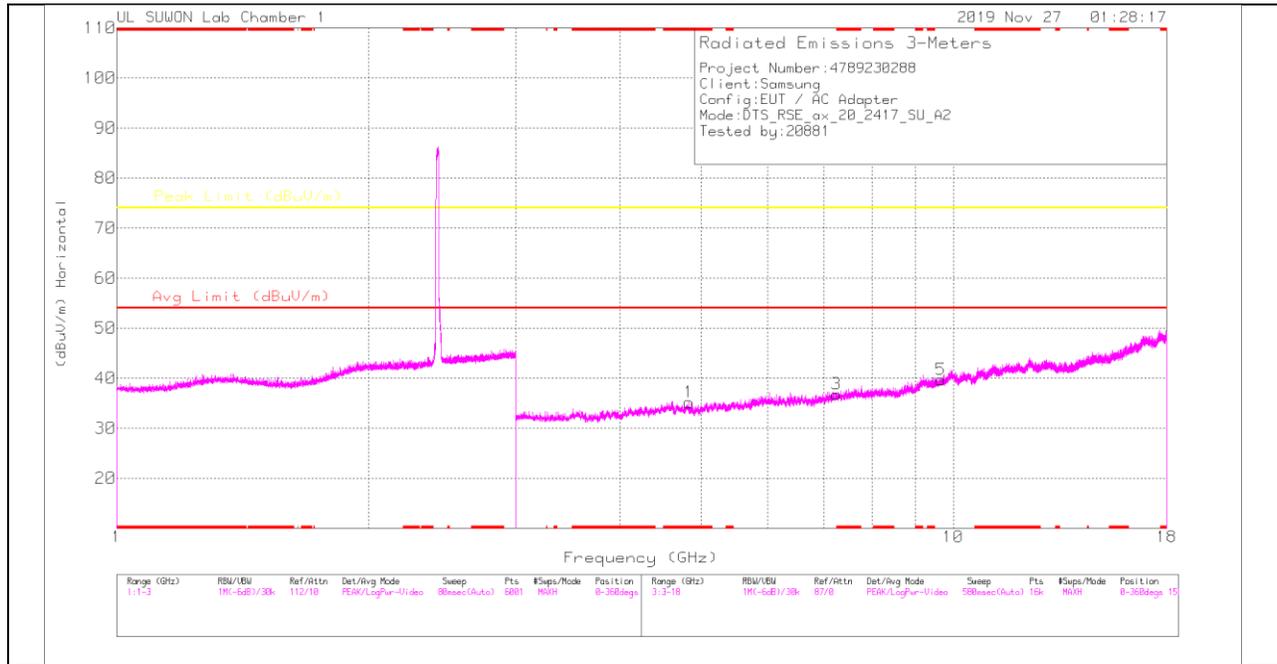
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00205959	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
* 4.91473	40.69	PK2	34.2	-28.8	0	46.09	-	-	74	-27.91	360	100	H
* 4.82751	40.36	PK2	34.2	-28.8	0	45.76	-	-	74	-28.24	360	100	V
* 7.37055	35.78	PK2	35.8	-22.9	0	48.68	-	-	74	-25.32	360	100	H
* 7.36833	36.04	PK2	35.8	-22.9	0	48.94	-	-	74	-25.06	360	100	V
9.82829	31.52	PK2	37.4	-19.5	0	49.42	-	-	74	-24.58	360	100	H
9.82757	31.79	PK2	37.4	-19.5	0	49.69	-	-	74	-24.31	360	100	V

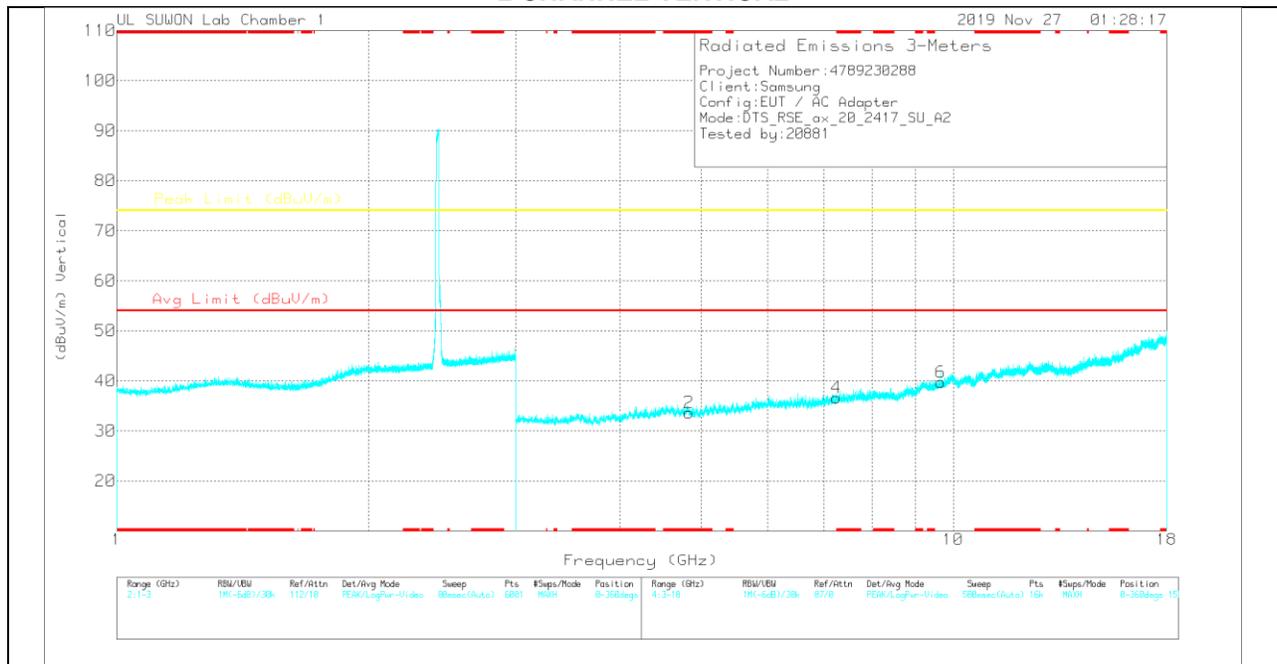
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK2 - KDB558074 Method: Maximum Peak

SU mode (ANT_2)

2 CHANNEL HORIZONTAL



2 CHANNEL 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.

2 CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.8327	32.58	PK	34.2	-31.6	0	35.18	-	-	74	-38.82	0-360	150	H
3	* 7.25223	28.59	PK	35.8	-27.6	0	36.79	-	-	74	-37.21	0-360	150	H
5	9.66521	26.09	PK	37.1	-23.5	0	36.69	-	-	74	-34.31	0-360	250	H
2	* 4.83082	31.02	PK	34.2	-31.6	0	33.62	-	-	74	-40.38	0-360	250	V
4	* 7.25036	28.43	PK	35.8	-27.6	0	36.63	-	-	74	-37.37	0-360	250	V
6	9.66614	26.12	PK	37.1	-23.5	0	39.72	-	-	74	-34.28	0-360	150	V

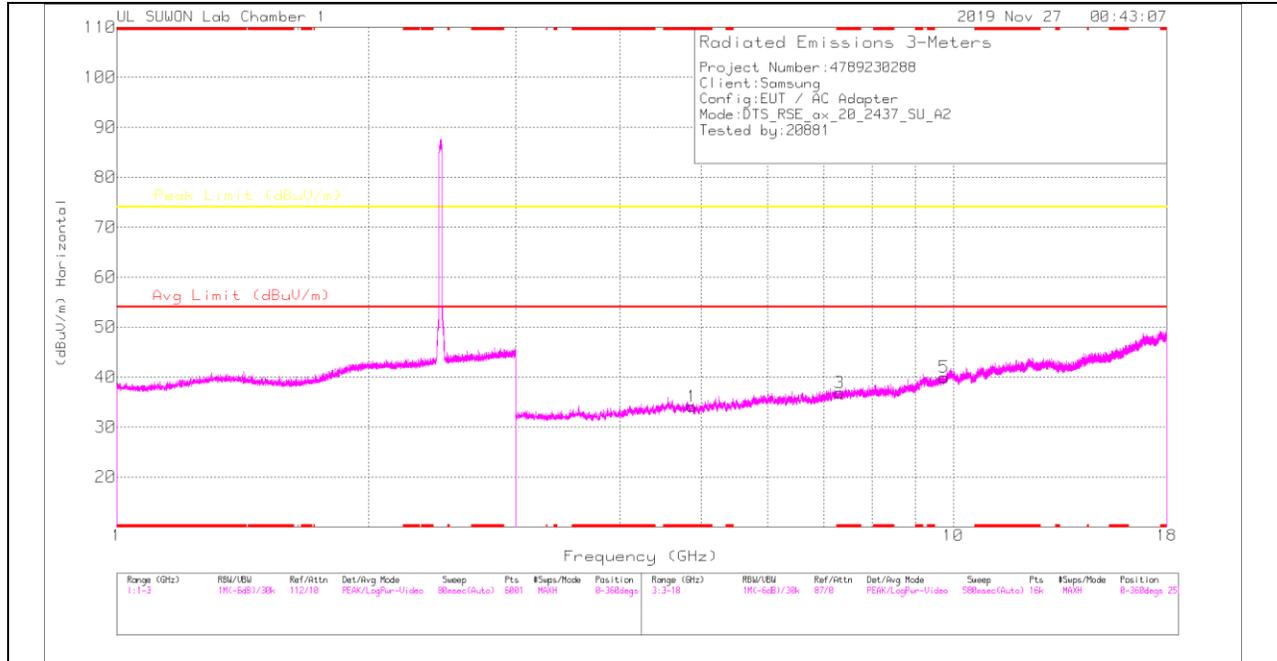
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak Detector

Radiated Emissions

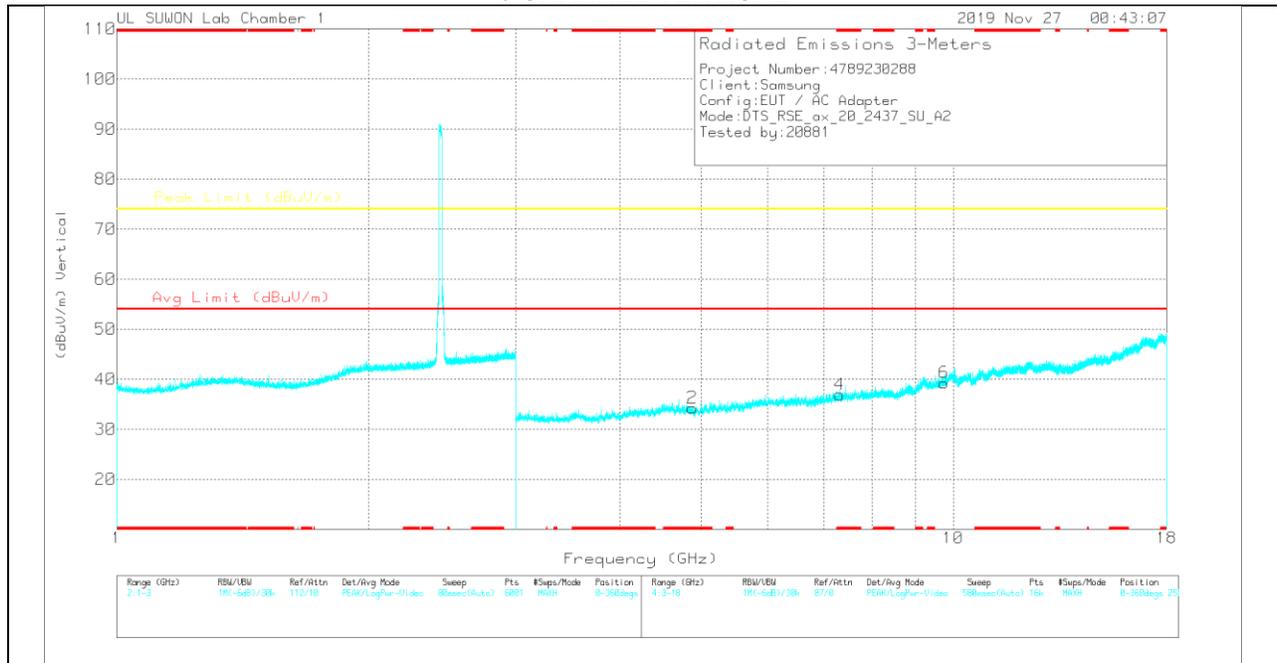
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.83459	40.32	PK2	34.2	-31.5	0	43.02	-	-	74	-30.98	0	100	H
* 4.83151	40.43	PK2	34.2	-31.6	0	43.03	-	-	74	-30.97	0	100	V
* 7.25063	37.59	PK2	35.8	-27.6	0	45.79	-	-	74	-28.21	0	100	H
* 7.25073	37.98	PK2	35.8	-27.6	0	46.18	-	-	74	-27.82	0	100	V
9.66585	34.86	PK2	37.1	-23.5	0	48.46	-	-	74	-25.54	0	100	H
9.66495	34.12	PK2	37.1	-23.5	0	47.72	-	-	74	-26.28	0	100	V

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

6 CHANNEL HORIZONTAL



6 CHANNEL 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.

6 CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.87301	31.5	PK	34.2	-31.6	0	34.1	-	-	74	-39.9	0-360	150	H
3	* 7.31035	28.56	PK	35.8	-27.5	0	36.86	-	-	74	-37.14	0-360	150	H
5	9.74676	26.53	PK	37.2	-23.8	0	39.93	-	-	74	-34.07	0-360	150	H
2	* 4.87582	31.57	PK	34.2	-31.5	0	34.27	-	-	74	-39.73	0-360	149	V
4	* 7.31129	28.64	PK	35.8	-27.5	0	36.94	-	-	74	-37.06	0-360	149	V
6	9.74676	25.89	PK	37.2	-23.8	0	39.29	-	-	74	-34.71	0-360	149	V

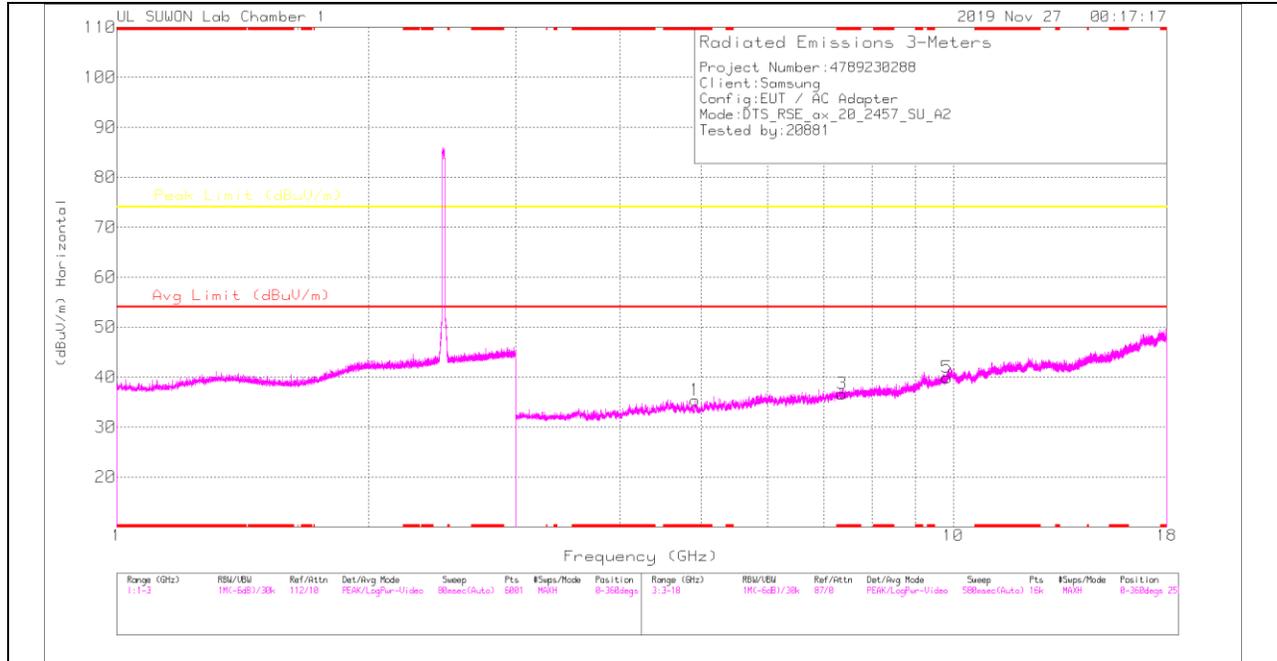
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak Detector

Radiated Emissions

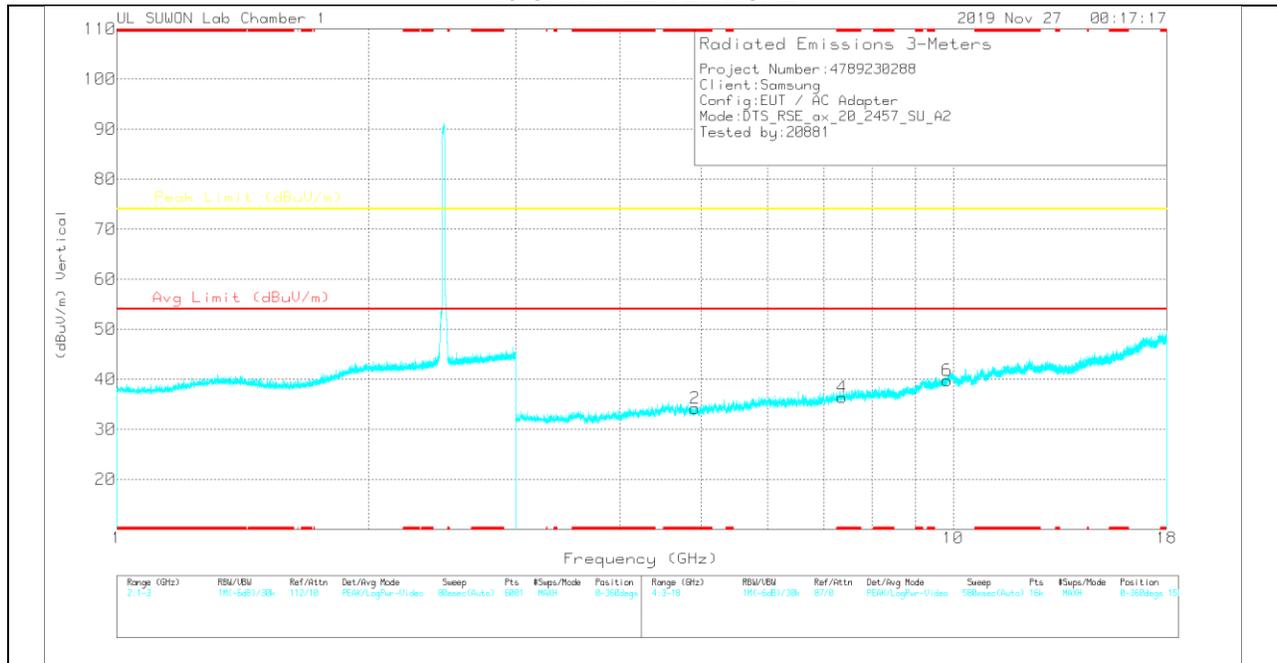
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.87205	40.77	PK2	34.2	-31.6	0	43.37	-	-	74	-30.63	0	100	H
* 4.87225	40.3	PK2	34.2	-31.6	0	42.9	-	-	74	-31.1	0	100	V
* 7.31121	38.53	PK2	35.8	-27.5	0	46.83	-	-	74	-27.17	0	100	H
* 7.30957	37.4	PK2	35.8	-27.5	0	45.7	-	-	74	-28.3	0	100	V
9.74702	34.26	PK2	37.2	-23.8	0	47.66	-	-	74	-26.34	0	100	H
9.74593	34.91	PK2	37.2	-23.8	0	48.31	-	-	74	-25.69	0	100	V

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

10 CHANNEL HORIZONTAL



10 CHANNEL 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.

10 CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.91613	32.8	PK	34.2	-31.6	0	35.4	-	-	74	-38.6	0-360	250	H
3	* 7.36754	28.17	PK	35.8	-27.3	0	36.67	-	-	74	-37.33	0-360	150	H
5	9.82832	26.14	PK	37.4	-23.6	0	39.94	-	-	74	-34.06	0-360	250	H
2	* 4.91332	31.58	PK	34.2	-31.6	0	34.18	-	-	74	-39.82	0-360	250	V
4	* 7.36754	27.88	PK	35.8	-27.3	0	36.38	-	-	74	-37.62	0-360	150	V
6	9.82926	25.97	PK	37.4	-23.6	0	39.77	-	-	74	-34.23	0-360	250	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.91701	40.64	PK2	34.2	-31.6	0	43.24	-	-	74	-30.76	0	100	H
* 4.91716	41.26	PK2	34.2	-31.6	0	43.86	-	-	74	-30.14	0	100	V
* 7.36882	36.93	PK2	35.8	-27.3	0	45.43	-	-	74	-28.57	0	100	H
* 7.36743	37.49	PK2	35.8	-27.3	0	45.99	-	-	74	-28.01	0	100	V
9.8281	34.43	PK2	37.4	-23.6	0	48.23	-	-	74	-25.77	0	100	H
9.82782	34.51	PK2	37.4	-23.6	0	48.31	-	-	74	-25.69	0	100	V

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