

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

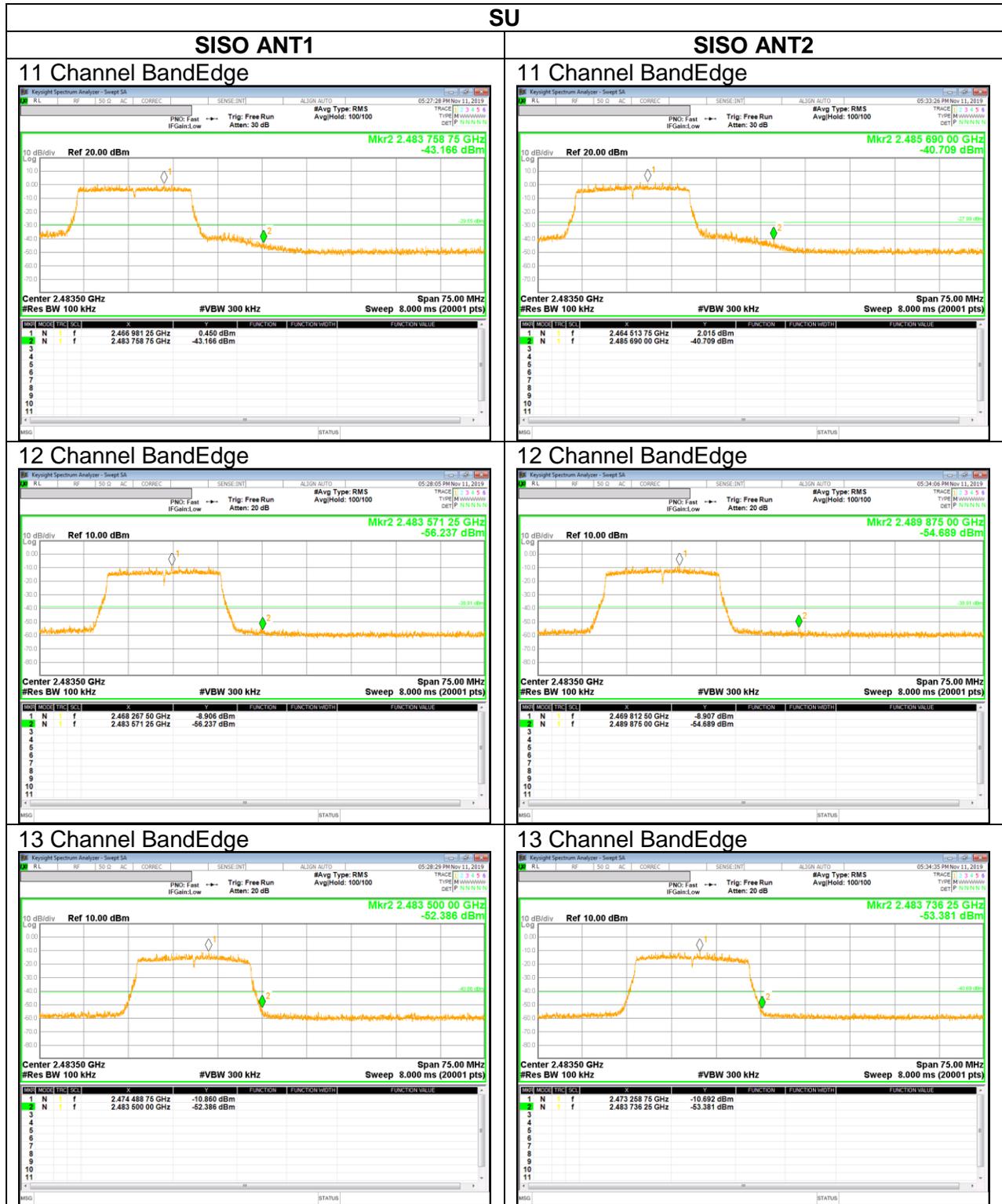
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS

10.4.1. 802.11ax HE20 MODE IN THE 2.4 GHz BAND



SU



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.

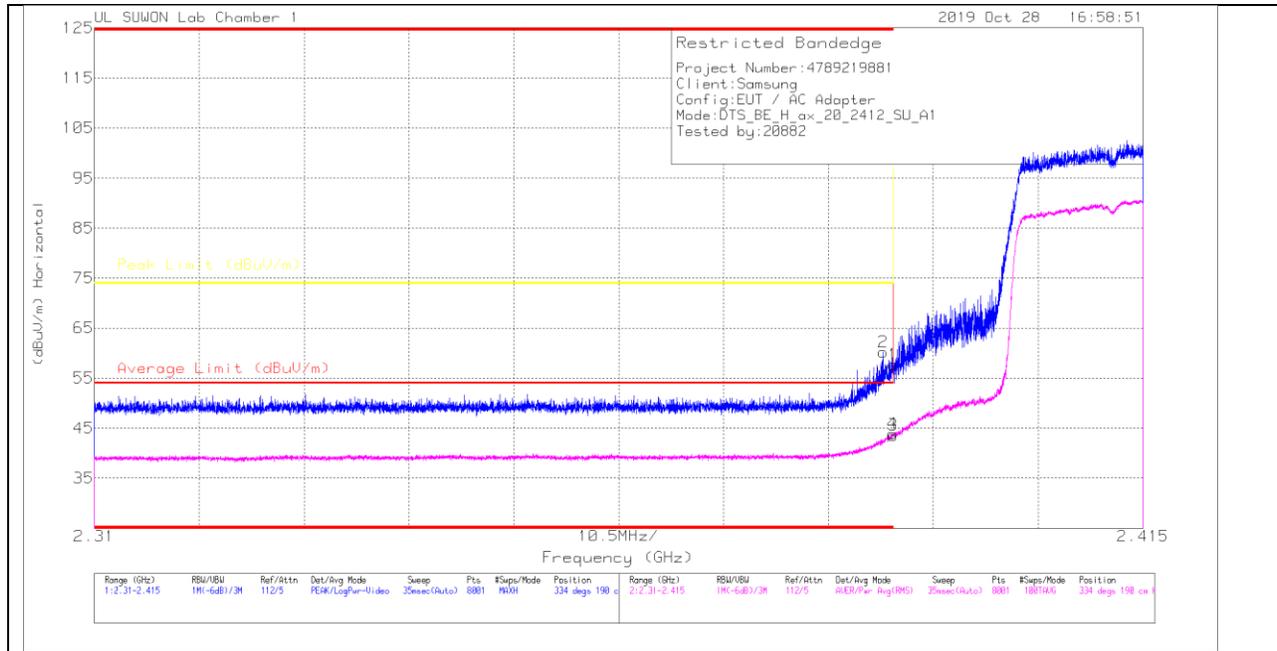
11.1. TRANSMITTER ABOVE 1 GHz_SISO

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

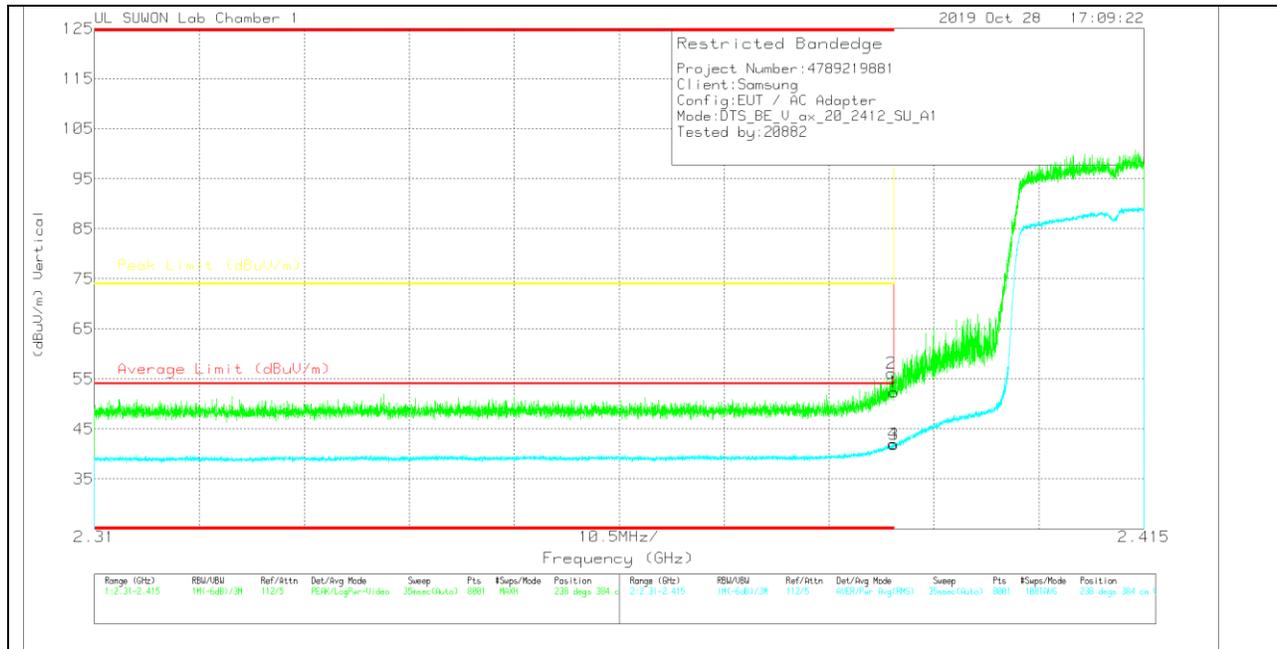
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	51.48	Pk	31.7	-25.5	0	57.68	-	-	74	-16.32	334	190	H
2	* 2.38896	54.18	Pk	31.7	-25.6	0	60.28	-	-	74	-13.72	334	190	H
3	* 2.39	36.99	RMS	31.7	-25.5	.4	43.59	54	-10.41	-	-	334	190	H
4	* 2.38989	37.27	RMS	31.7	-25.5	.4	43.87	54	-10.13	-	-	334	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

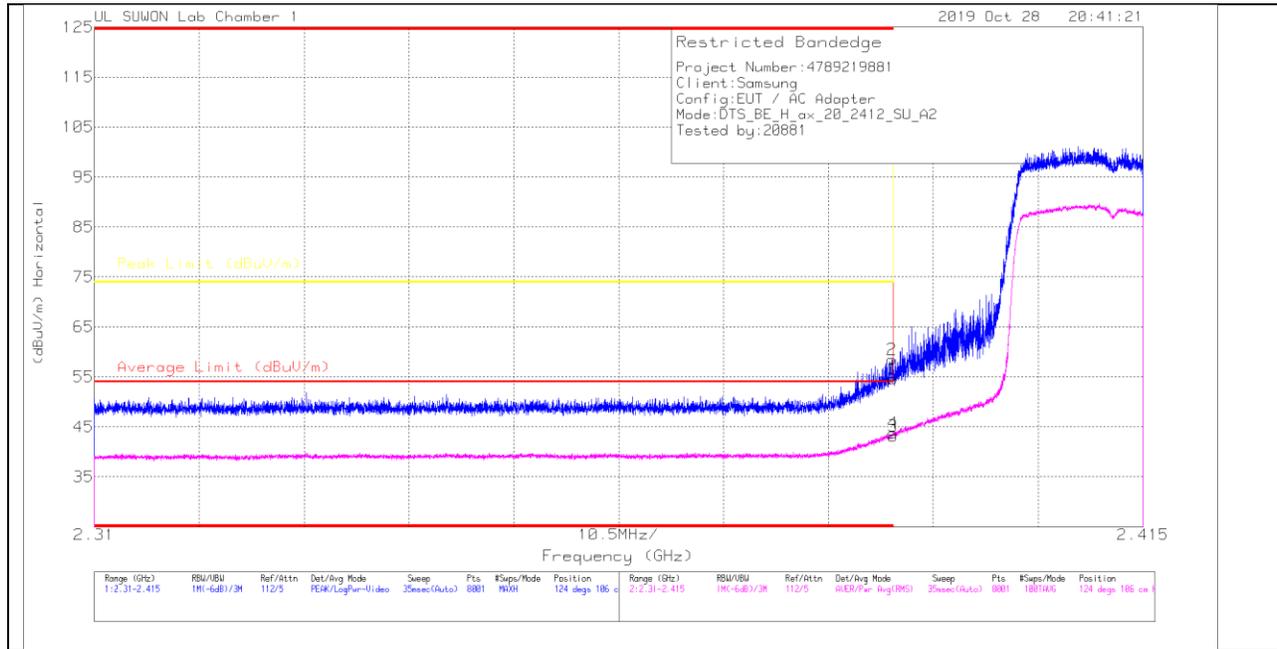
Trace Markers

Marker	Frequency (GHz)	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	46.17	Pk	31.7	-25.5	0	52.37	-	-	74	-21.63	238	384	V
2	* 2.38971	49.86	Pk	31.7	-25.5	0	56.06	-	-	74	-17.94	238	384	V
3	* 2.39	35.34	RMS	31.7	-25.5	.4	41.94	54	-12.06	-	-	238	384	V
4	* 2.38992	35.38	RMS	31.7	-25.5	.4	41.98	54	-12.02	-	-	238	384	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

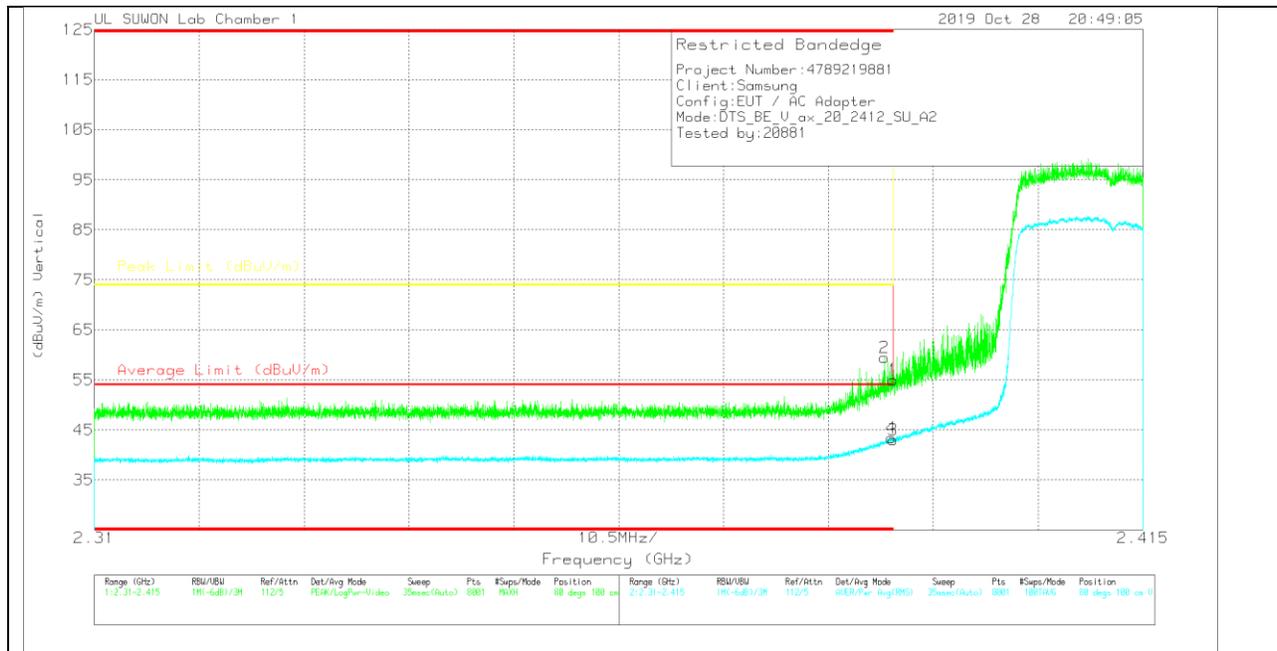
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	48.45	Pk	31.7	-25.5	0	54.65	-	-	74	-19.35	124	106	H
2	* 2.38987	52.28	Pk	31.7	-25.5	0	58.48	-	-	74	-15.52	124	106	H
3	* 2.39	36.58	RMS	31.7	-25.5	.4	43.18	54	-10.82	-	-	124	106	H
4	* 2.38996	37.15	RMS	31.7	-25.5	.4	43.75	54	-10.25	-	-	124	106	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	48.74	Pk	31.7	-25.5	0	54.94	-	-	74	-19.06	80	100	V
2	* 2.38908	53.42	Pk	31.7	-25.6	0	59.52	-	-	74	-14.48	80	100	V
3	* 2.39	36.44	RMS	31.7	-25.5	.4	43.04	54	-10.96	-	-	80	100	V
4	* 2.38981	36.79	RMS	31.7	-25.5	.4	43.39	54	-10.61	-	-	80	100	V

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

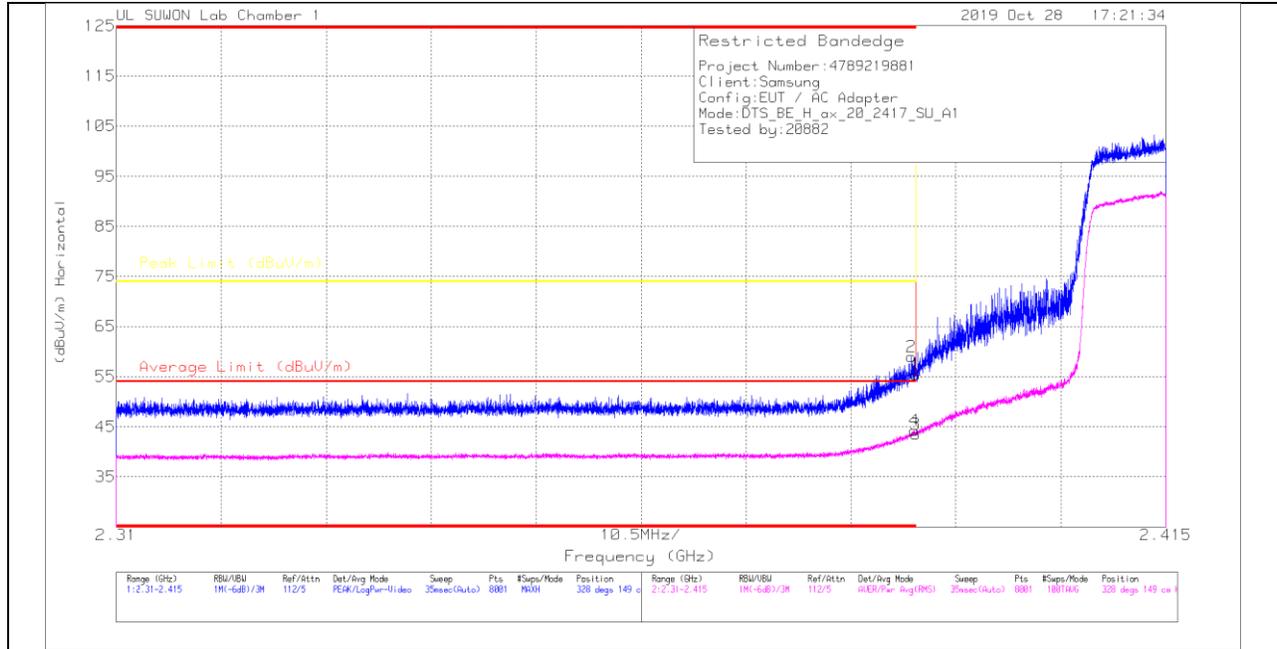
Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (2 CHANNEL)

SU mode (ANT_1)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

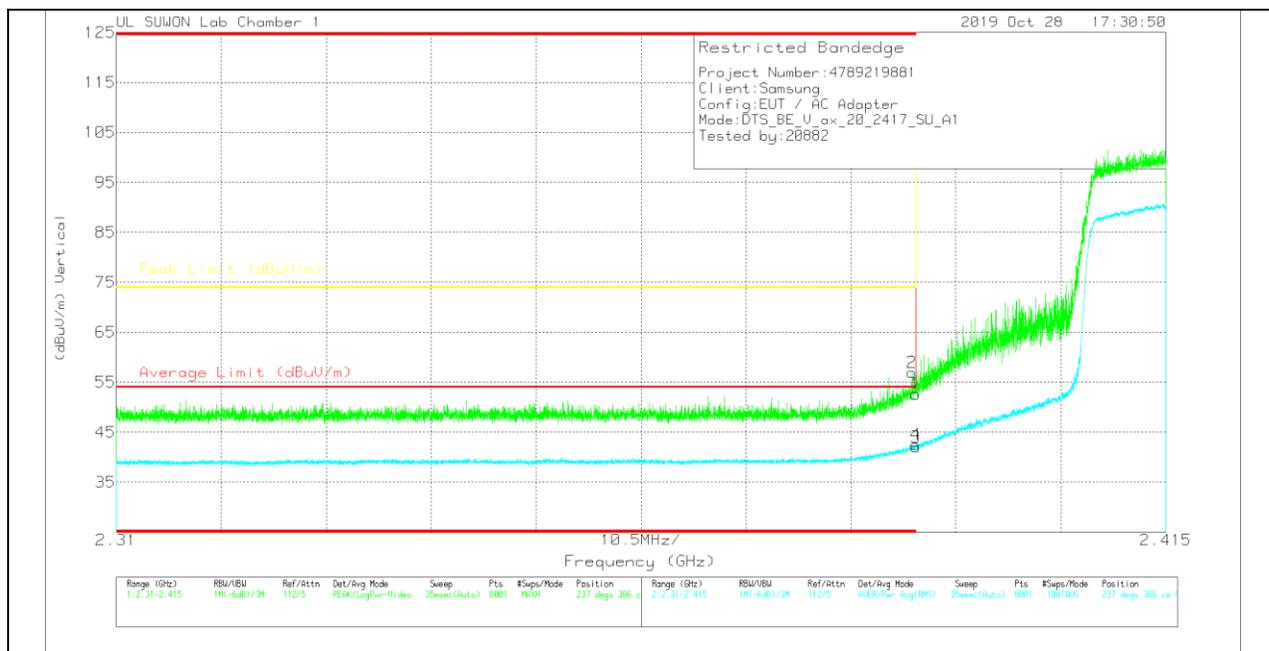
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1	* 2.39	49.18	Pk	31.7	-25.5	0	55.38	-	-	74	-18.62	328	149	H
2	* 2.38956	52.93	Pk	31.7	-25.6	0	59.03	-	-	74	-14.97	328	149	H
3	* 2.39	36.93	RMS	31.7	-25.5	.4	43.53	54	-10.47	-	-	328	149	H
4	* 2.38984	37.73	RMS	31.7	-25.5	.4	44.33	54	-9.67	-	-	328	149	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	46.49	Pk	31.7	-25.5	0	52.69	-	-	74	-21.31	237	386	V
2	* 2.38963	50.83	Pk	31.7	-25.5	0	57.03	-	-	74	-16.97	237	386	V
3	* 2.39	35.38	RMS	31.7	-25.5	.4	41.98	54	-12.02	-	-	237	386	V
4	* 2.38996	35.94	RMS	31.7	-25.5	.4	42.54	54	-11.46	-	-	237	386	V

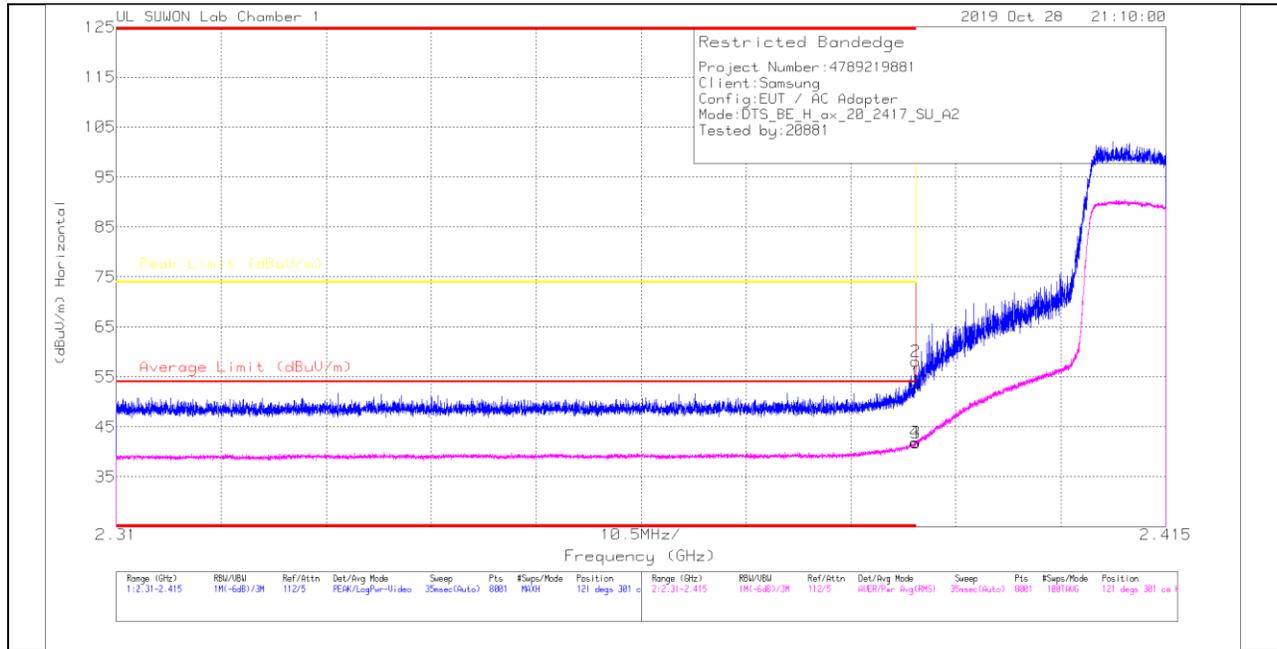
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

SU mode (ANT_2)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

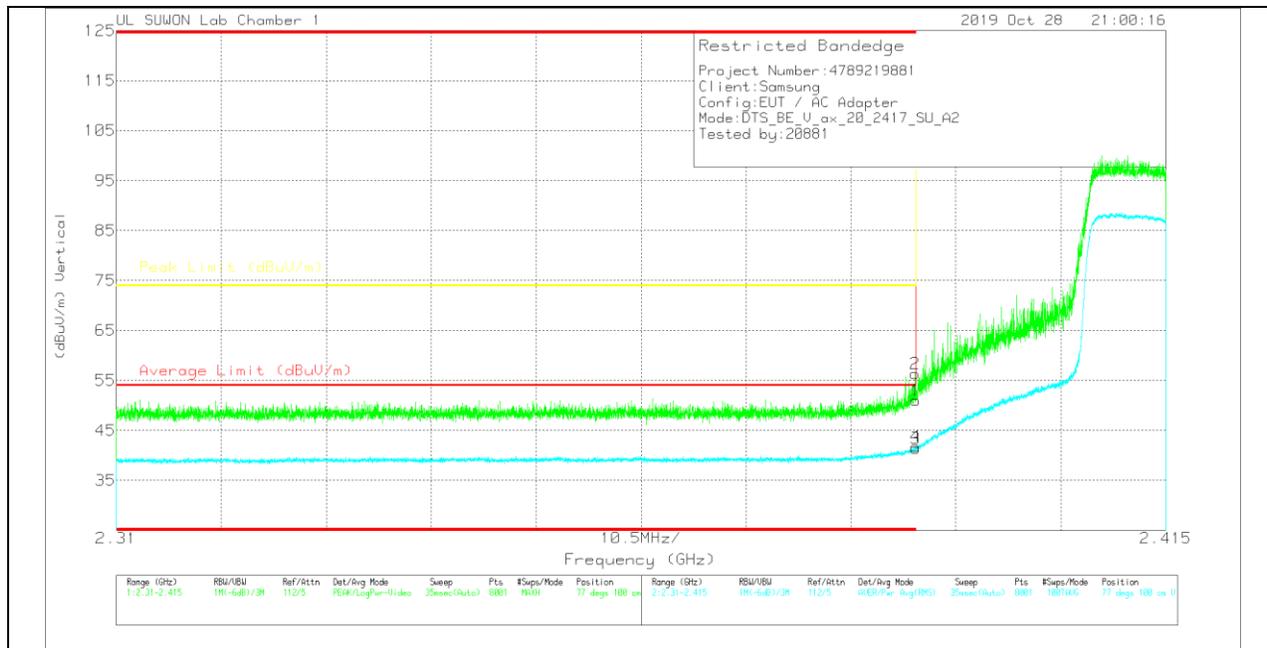
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1	* 2.39	47.54	Pk	31.7	-25.5	0	53.74	-	-	74	-20.26	121	301	H
2	* 2.38998	51.87	Pk	31.7	-25.5	0	58.07	-	-	74	-15.93	121	301	H
3	* 2.39	35.24	RMS	31.7	-25.5	.4	41.84	54	-12.16	-	-	121	301	H
4	* 2.38994	35.27	RMS	31.7	-25.5	.4	41.87	54	-12.13	-	-	121	301	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	44.75	Pk	31.7	-25.5	0	50.95	-	-	74	-23.05	77	100	V
2	* 2.38993	50.11	Pk	31.7	-25.5	0	56.31	-	-	74	-17.69	77	100	V
3	* 2.39	34.75	RMS	31.7	-25.5	.4	41.35	54	-12.65	-	-	77	100	V
4	* 2.38997	35.23	RMS	31.7	-25.5	.4	41.83	54	-12.17	-	-	77	100	V

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

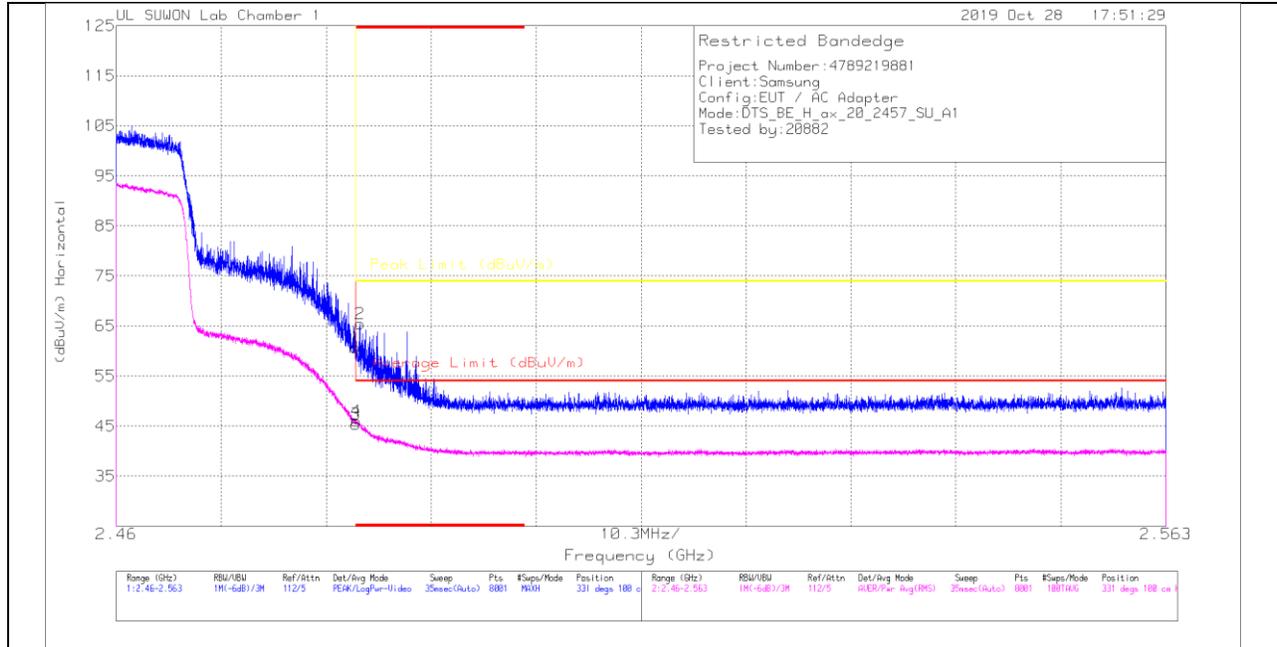
Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (10 CHANNEL)

SU mode (ANT_1)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

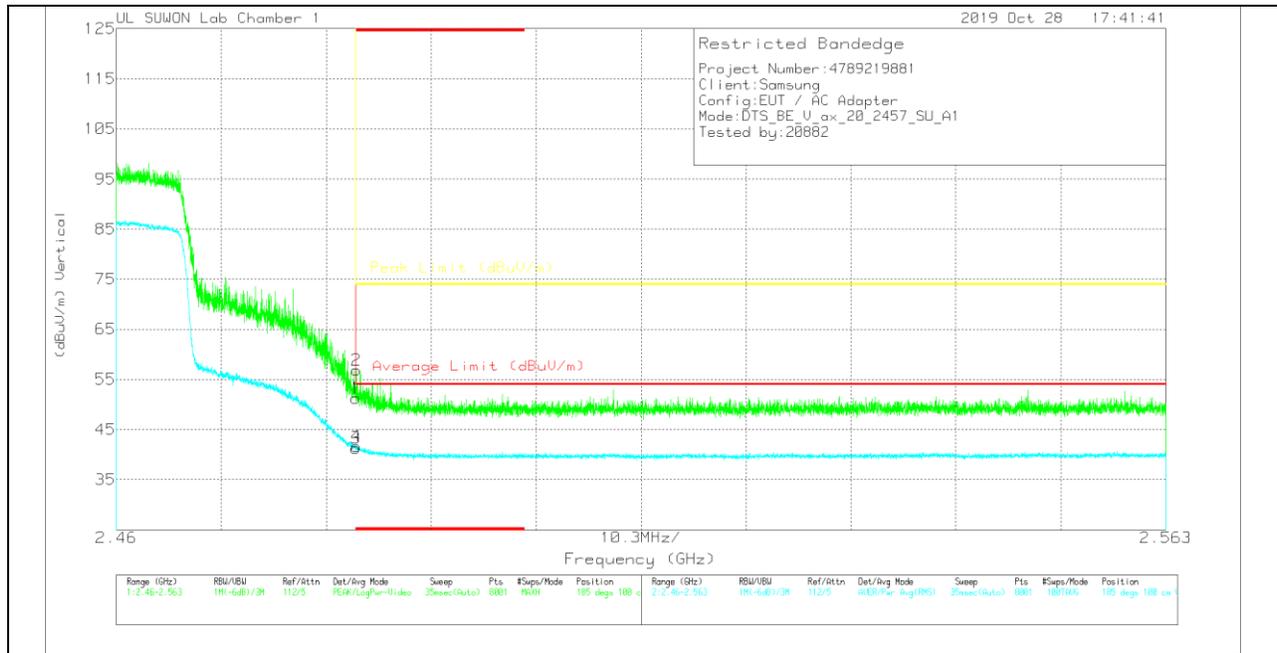
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1	* 2.48351	54	Pk	31.9	-25.2	0	60.7	-	-	74	-13.3	331	100	H
2	* 2.48391	58.8	Pk	31.9	-25.2	0	65.5	-	-	74	-8.5	331	100	H
3	* 2.48351	38.25	RMS	31.9	-25.2	.4	45.35	54	-8.65	-	-	331	100	H
4	* 2.48356	38.97	RMS	31.9	-25.2	.4	46.07	54	-7.93	-	-	331	100	H

* - 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	* 2.48351	44.58	Pk	31.9	-25.2	0	51.28	-	-	74	-22.72	185	100	V
2	* 2.48355	50.14	Pk	31.9	-25.2	0	56.84	-	-	74	-17.16	185	100	V
3	* 2.48351	34.24	RMS	31.9	-25.2	.4	41.34	54	-12.66	-	-	185	100	V
4	* 2.48357	34.56	RMS	31.9	-25.2	.4	41.66	54	-12.34	-	-	185	100	V

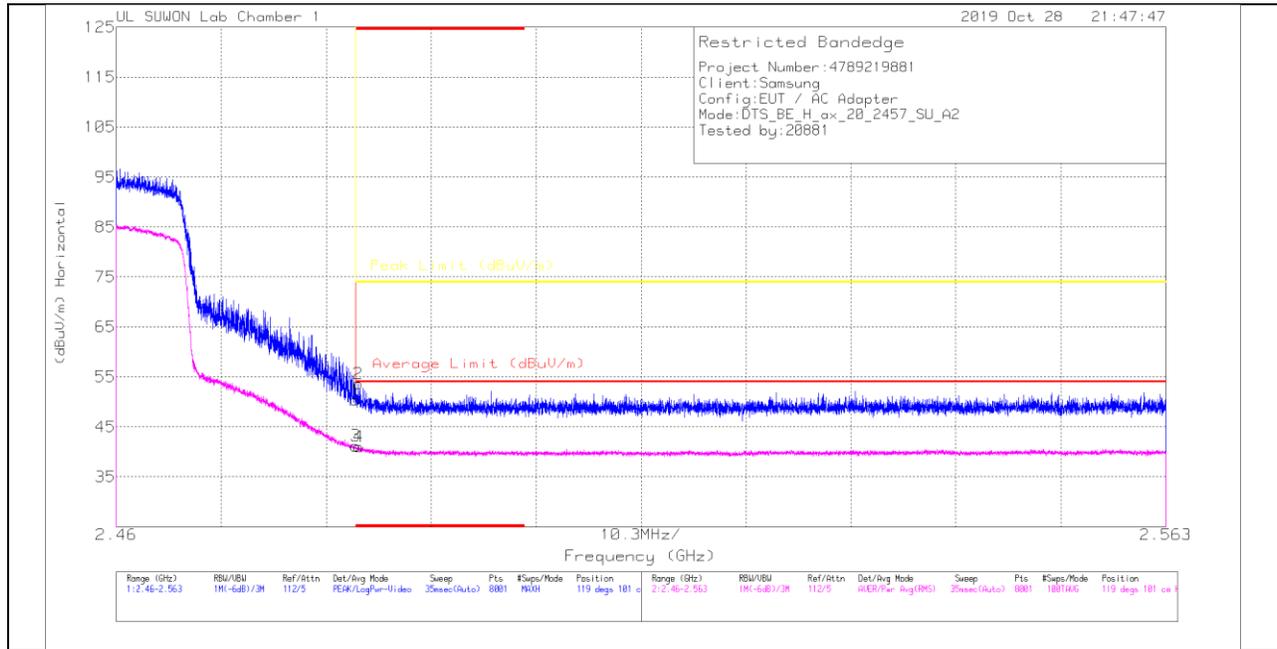
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

SU mode (ANT_2)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

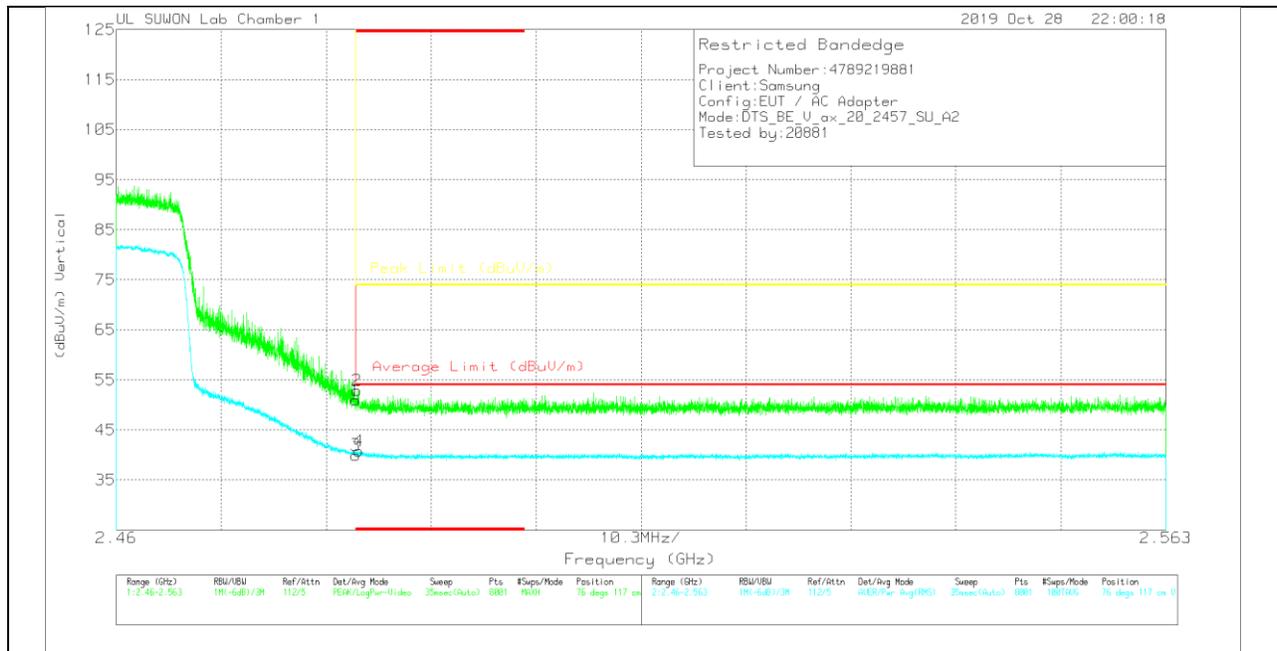
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	43.73	Pk	31.9	-25.2	0	50.43	-	-	74	-23.57	119	101	H
2	* 2.48373	46.91	Pk	31.9	-25.2	0	53.61	-	-	74	-20.39	119	101	H
3	* 2.48351	34.12	RMS	31.9	-25.2	.4	41.22	54	-12.78	-	-	119	101	H
4	* 2.48378	33.89	RMS	31.9	-25.2	.4	40.99	54	-13.01	-	-	119	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	* 2.48351	44.26	Pk	31.9	-25.2	0	50.96	-	-	74	-23.04	76	117	V
2	* 2.48363	46.23	Pk	31.9	-25.2	0	52.93	-	-	74	-21.07	76	117	V
3	* 2.48351	32.87	RMS	31.9	-25.2	.4	39.97	54	-14.03	-	-	76	117	V
4	* 2.48382	33.71	RMS	31.9	-25.2	.4	40.81	54	-13.19	-	-	76	117	V

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

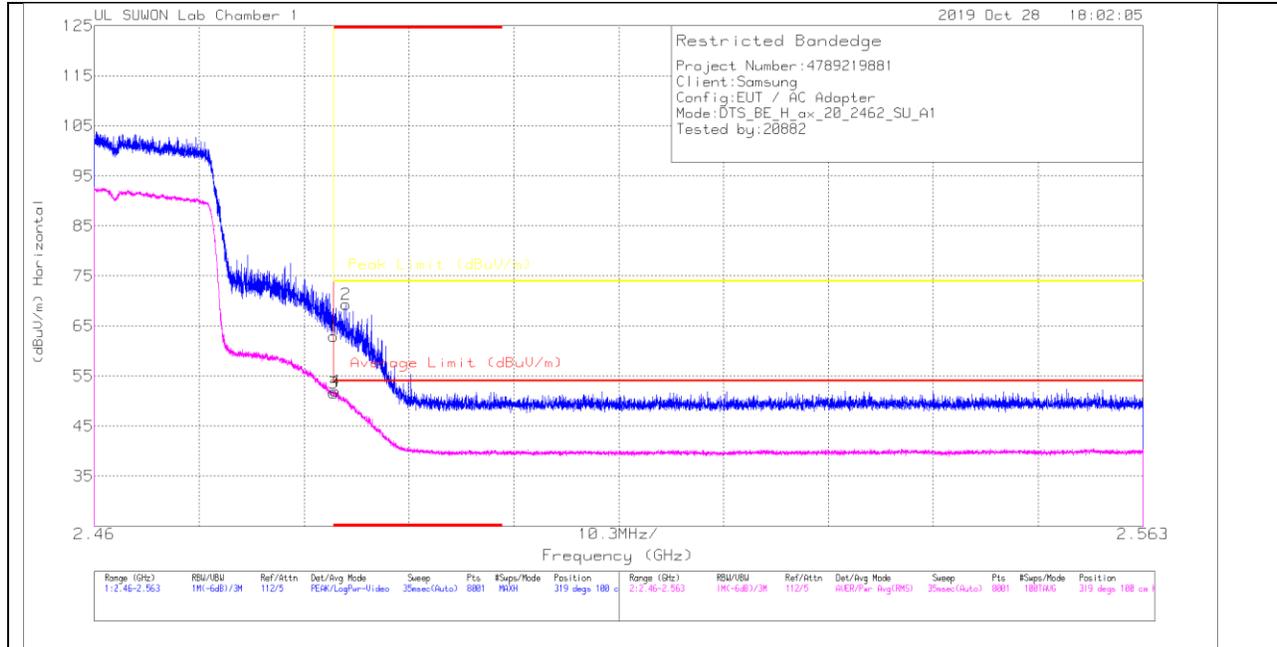
Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (11 CHANNEL)

SU mode (ANT_1)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

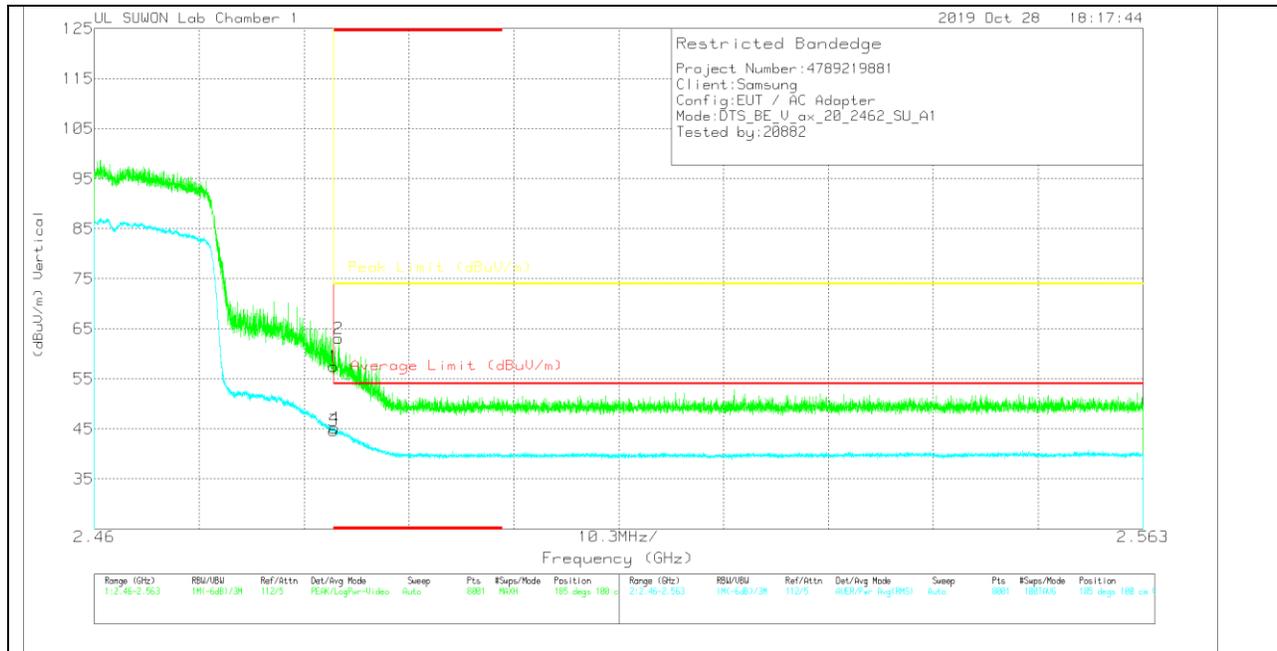
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	56.23	Pk	31.9	-25.2	0	62.93	-	-	74	-11.07	319	100	H
2	* 2.48473	62.61	Pk	31.9	-25.2	0	69.31	-	-	74	-4.69	319	100	H
3	* 2.48351	44.57	RMS	31.9	-25.2	.4	51.67	54	-2.33	-	-	319	100	H
4	* 2.4837	44.88	RMS	31.9	-25.2	.4	51.98	54	-2.02	-	-	319	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	* 2.48351	50.77	Pk	31.9	-25.2	0	57.47	-	-	74	-16.53	185	100	V
2	* 2.48401	56.28	Pk	31.9	-25.1	0	63.08	-	-	74	-10.92	185	100	V
3	* 2.48351	37.59	RMS	31.9	-25.2	.4	44.69	54	-9.31	-	-	185	100	V
4	* 2.48359	38.07	RMS	31.9	-25.2	.4	45.17	54	-8.83	-	-	185	100	V

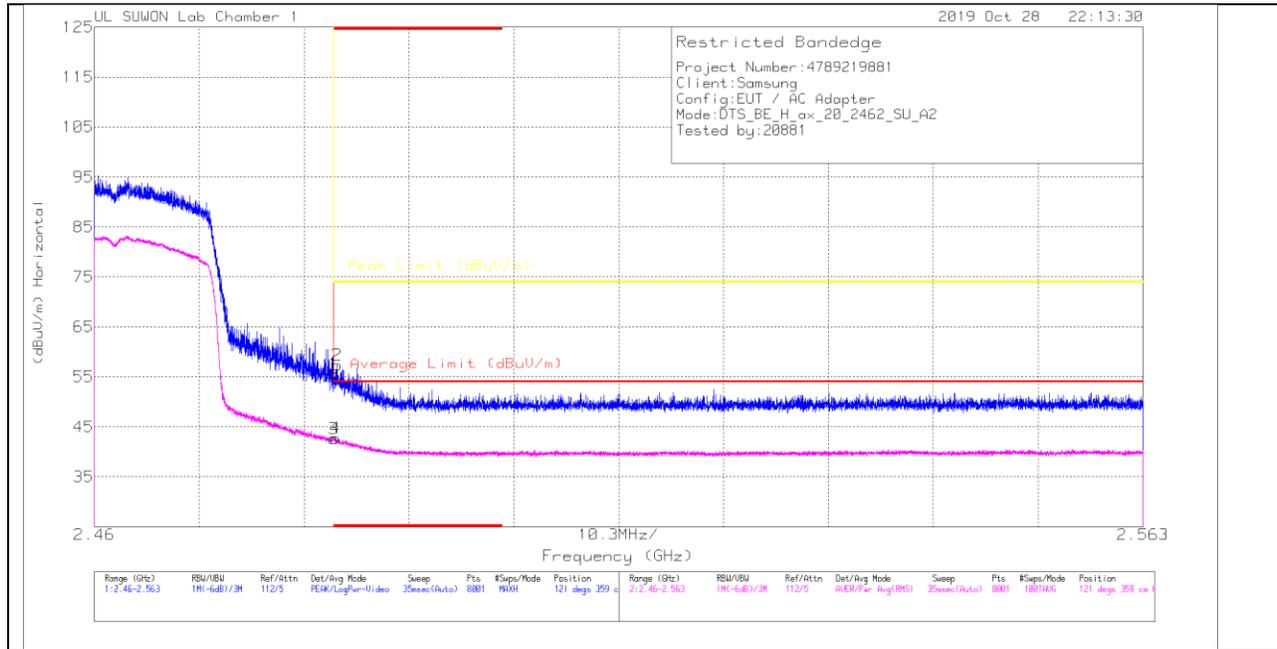
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

SU mode (ANT_2)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

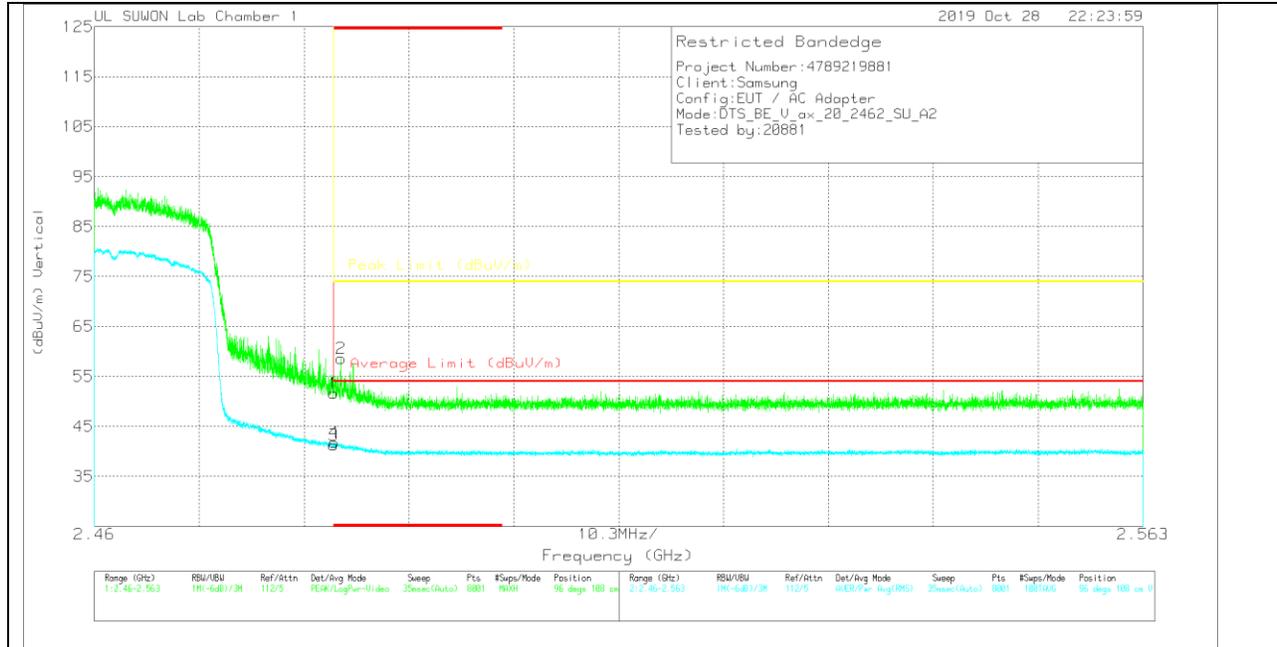
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	48.94	Pk	31.9	-25.2	0	56.64	-	-	74	-18.36	121	359	H
2	* 2.48383	50.69	Pk	31.9	-25.2	0	57.39	-	-	74	-16.61	121	359	H
3	* 2.48351	35.52	RMS	31.9	-25.2	.4	42.62	54	-11.38	-	-	121	359	H
4	* 2.48366	35.62	RMS	31.9	-25.2	.4	42.72	54	-11.28	-	-	121	359	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	44.94	Pk	31.9	-25.2	0	51.64	-	-	74	-22.36	96	108	V
2	* 2.48426	51.84	Pk	31.9	-25.1	0	58.64	-	-	74	-15.36	96	108	V
3	* 2.48351	34.2	RMS	31.9	-25.2	.4	41.3	54	-12.7	-	-	96	108	V
4	* 2.48357	34.65	RMS	31.9	-25.2	.4	41.75	54	-12.25	-	-	96	108	V

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

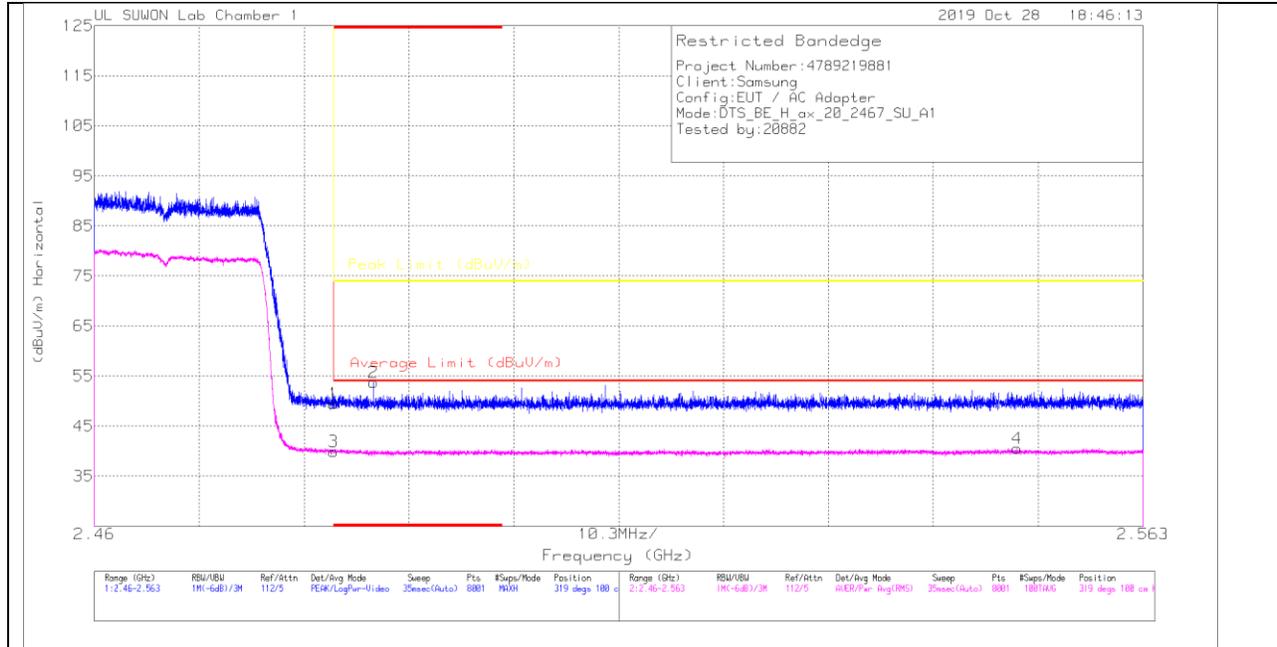
Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (12 CHANNEL)

SU mode (ANT_1)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

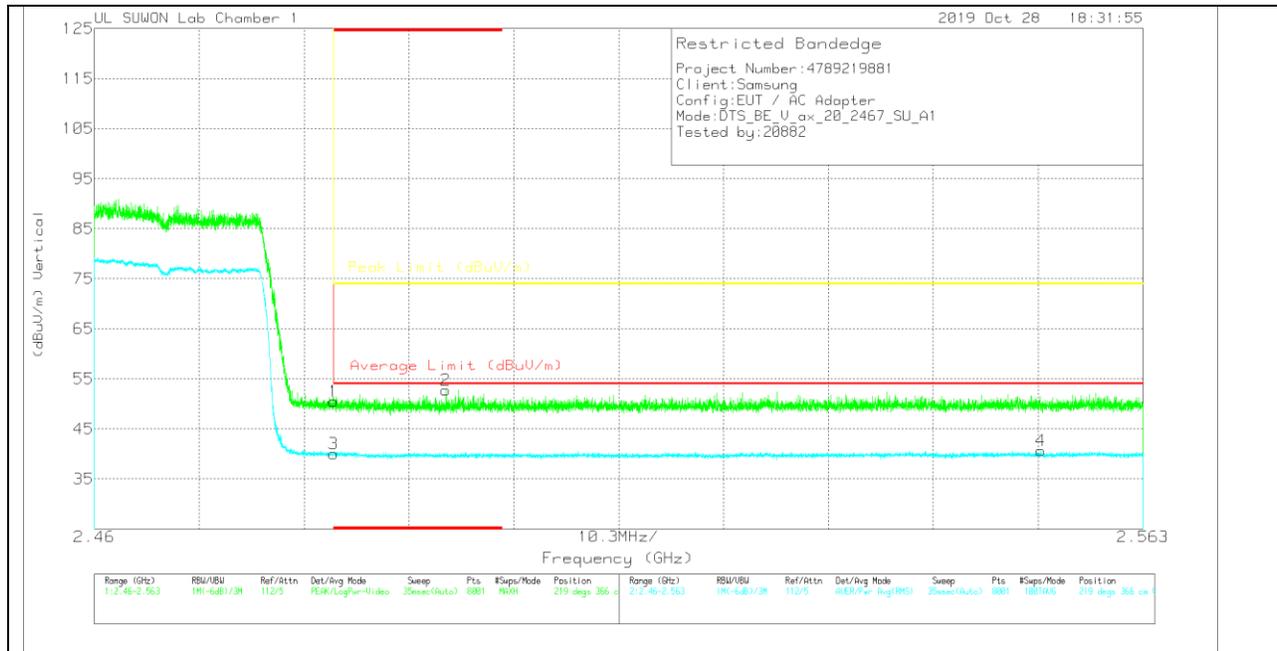
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	42.85	Pk	31.9	-25.2	0	49.55	-	-	74	-24.45	319	100	H
2	* 2.48742	47.16	Pk	31.9	-25.3	0	53.76	-	-	74	-20.24	319	100	H
3	* 2.48351	32.8	RMS	31.9	-25.2	.4	39.9	54	-14.1	-	-	319	100	H
4	2.55064	33.27	RMS	32	-25.1	.4	40.57	54	-13.43	-	-	319	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

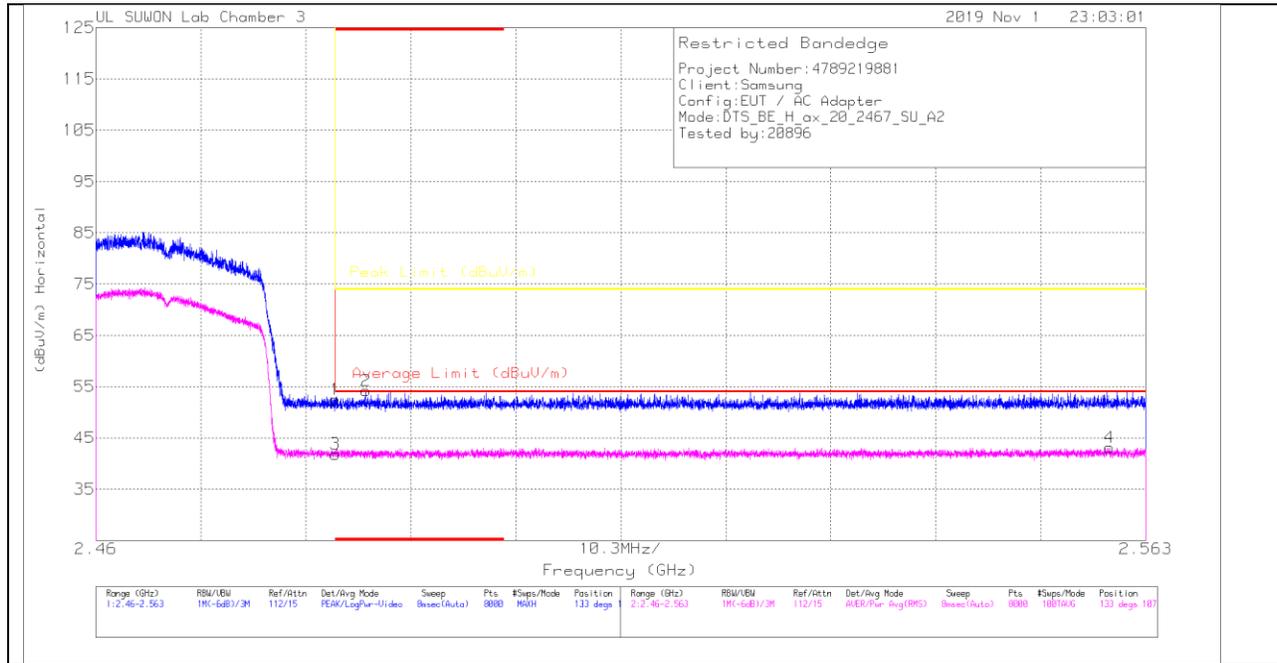
Trace Markers

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	* 2.48351	43.75	Pk	31.9	-25.2	0	50.45	-	-	74	-23.55	219	366	V
2	* 2.49452	46.13	Pk	31.9	-25.3	0	52.73	-	-	74	-21.27	219	366	V
3	* 2.48351	32.92	RMS	31.9	-25.2	.4	40.02	54	-13.98	-	-	219	366	V
4	2.55293	33.44	RMS	32	-25.2	.4	40.64	54	-13.36	-	-	219	366	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

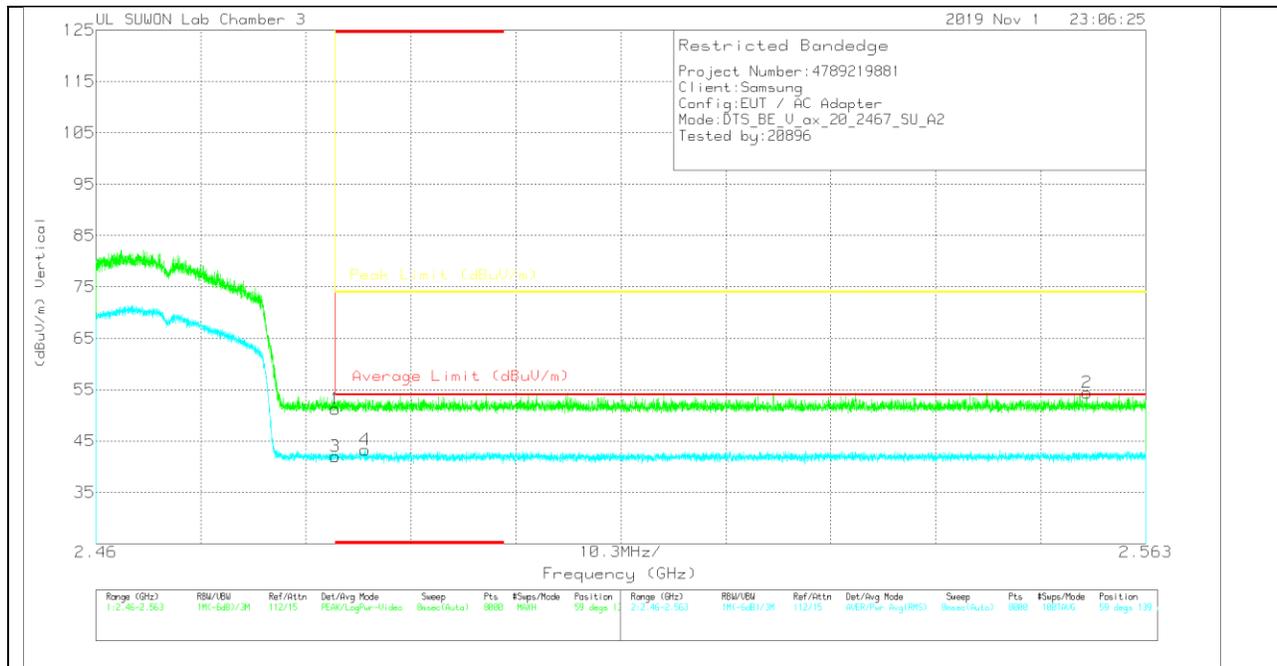
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00205959	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	43.37	Pk	31.9	-22.8	0	52.47	-	-	74	-21.53	133	107	H
2	* 2.48649	45.1	Pk	31.9	-22.8	0	54.2	-	-	74	-19.8	133	107	H
3	* 2.4835	32.34	RMS	31.9	-22.8	.4	41.84	54	-12.16	-	-	133	107	H
4	2.55944	33.42	RMS	32	-22.7	.4	43.12	54	-10.88	-	-	133	107	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_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	42.15	Pk	31.9	-22.8	0	51.25	-	-	74	-22.75	59	139	V
2	2.55722	45.12	Pk	32	-22.7	0	54.42	-	-	74	-19.58	59	139	V
3	* 2.4835	32.5	RMS	31.9	-22.8	.4	42	54	-12	-	-	59	139	V
4	* 2.4864	33.78	RMS	31.9	-22.8	.4	43.28	54	-10.72	-	-	59	139	V

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

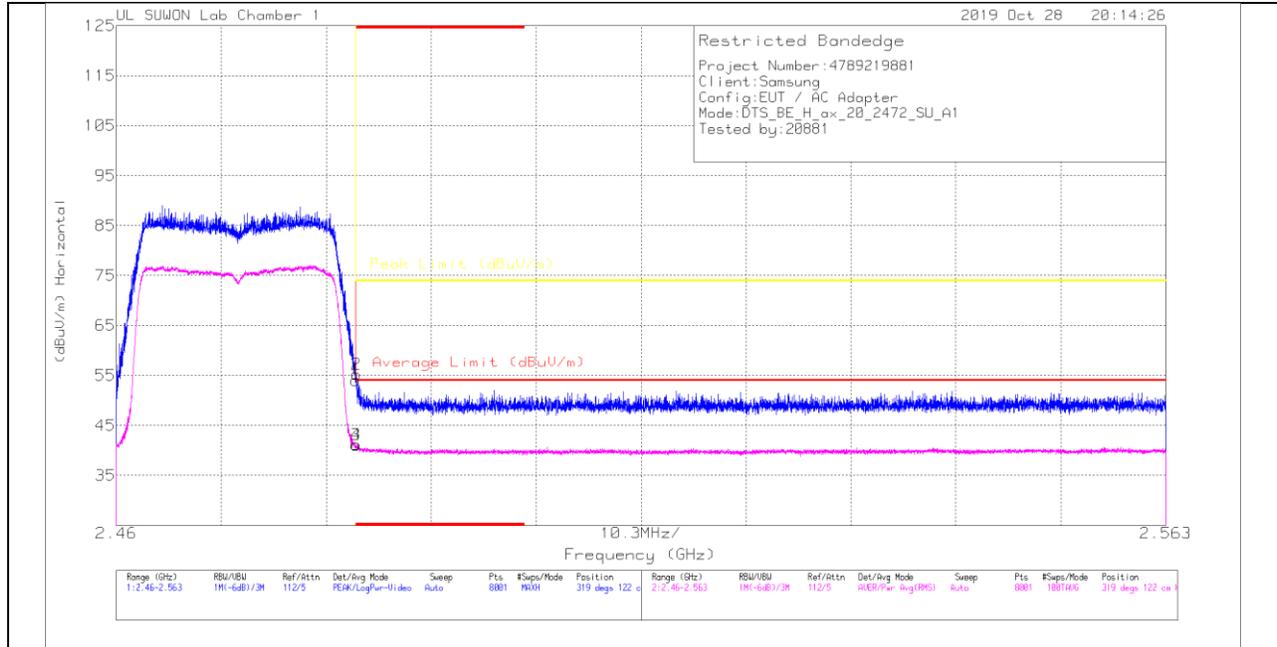
Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (13 CHANNEL)

SU mode (ANT_1)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

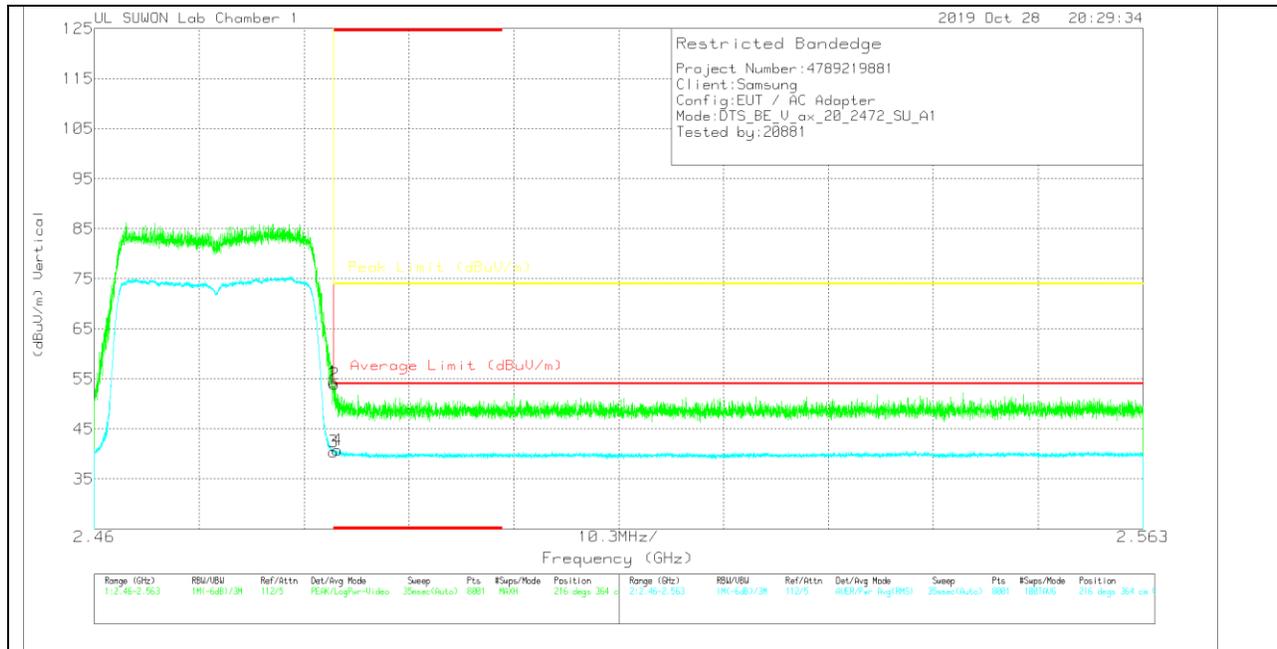
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	47.36	Pk	31.9	-25.2	0	54.06	-	-	74	-19.94	319	122	H
2	* 2.48356	48.56	Pk	31.9	-25.2	0	55.26	-	-	74	-18.74	319	122	H
3	* 2.48351	34.03	RMS	31.9	-25.2	.4	41.13	54	-12.87	-	-	319	122	H
4	* 2.48355	34	RMS	31.9	-25.2	.4	41.1	54	-12.9	-	-	319	122	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

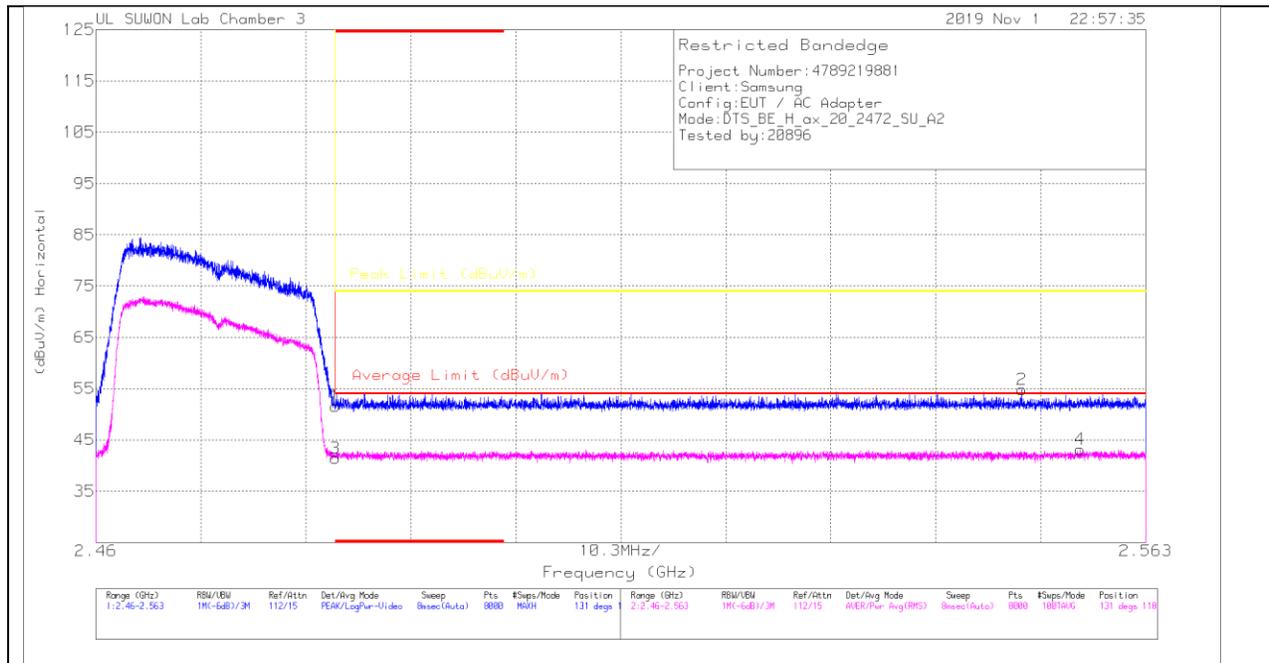
Trace Markers

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	47.72	Pk	31.9	-25.2	0	54.42	-	-	74	-19.58	216	364	V
2	* 2.48359	47.25	Pk	31.9	-25.2	0	53.95	-	-	74	-20.05	216	364	V
3	* 2.48351	33.37	RMS	31.9	-25.2	.4	40.47	54	-13.53	-	-	216	364	V
4	* 2.48387	33.65	RMS	31.9	-25.2	.4	40.75	54	-13.25	-	-	216	364	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

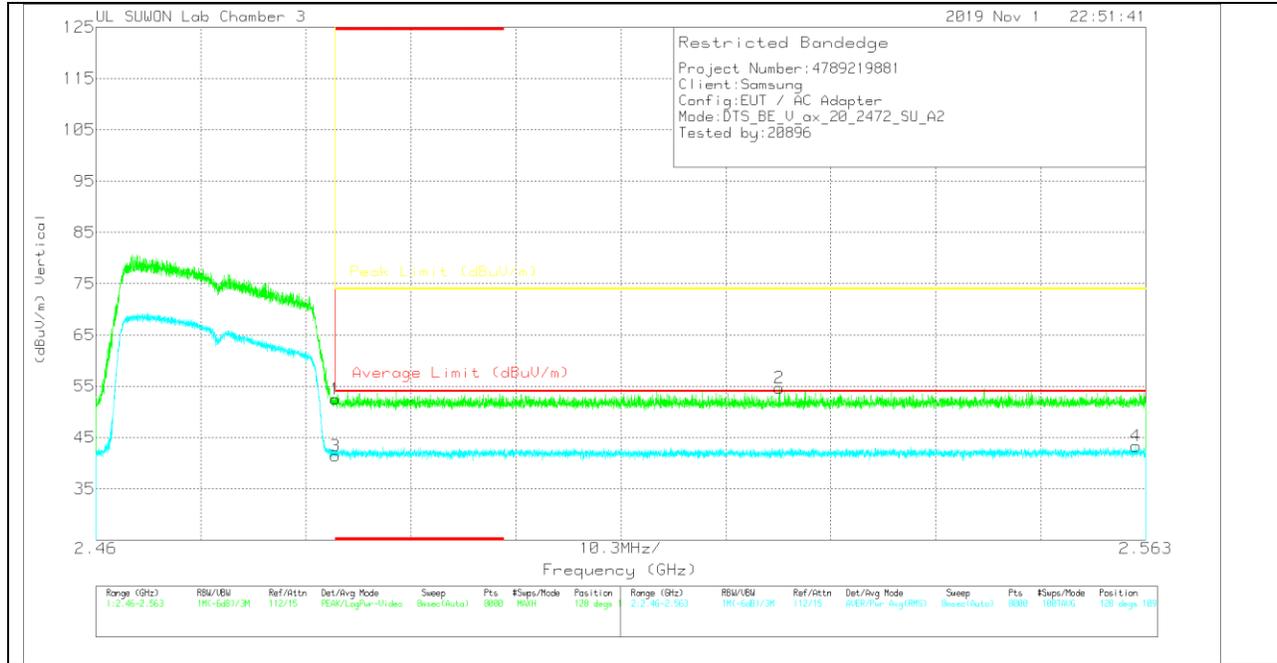
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00205959	10dB_ATT[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	42.46	Pk	31.9	-22.8	0	51.56	-	-	74	-22.44	131	118	H
2	2.55083	45.51	Pk	32	-22.7	0	54.81	-	-	74	-19.19	131	118	H
3	* 2.4835	31.92	RMS	31.9	-22.8	.4	41.42	54	-12.58	-	-	131	118	H
4	2.55654	33.45	RMS	32	-22.7	.4	43.15	54	-10.85	-	-	131	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_00205959	10dB_ATT[dB]	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	43.41	Pk	31.9	-22.8	0	52.51	-	-	74	-21.49	128	109	V
2	2.52706	45.46	Pk	32	-22.8	0	54.66	-	-	74	-19.34	128	109	V
3	* 2.4835	31.9	RMS	31.9	-22.8	.4	41.4	54	-12.6	-	-	128	109	V
4	2.56204	33.64	RMS	32	-22.7	.4	43.34	54	-10.66	-	-	128	109	V

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

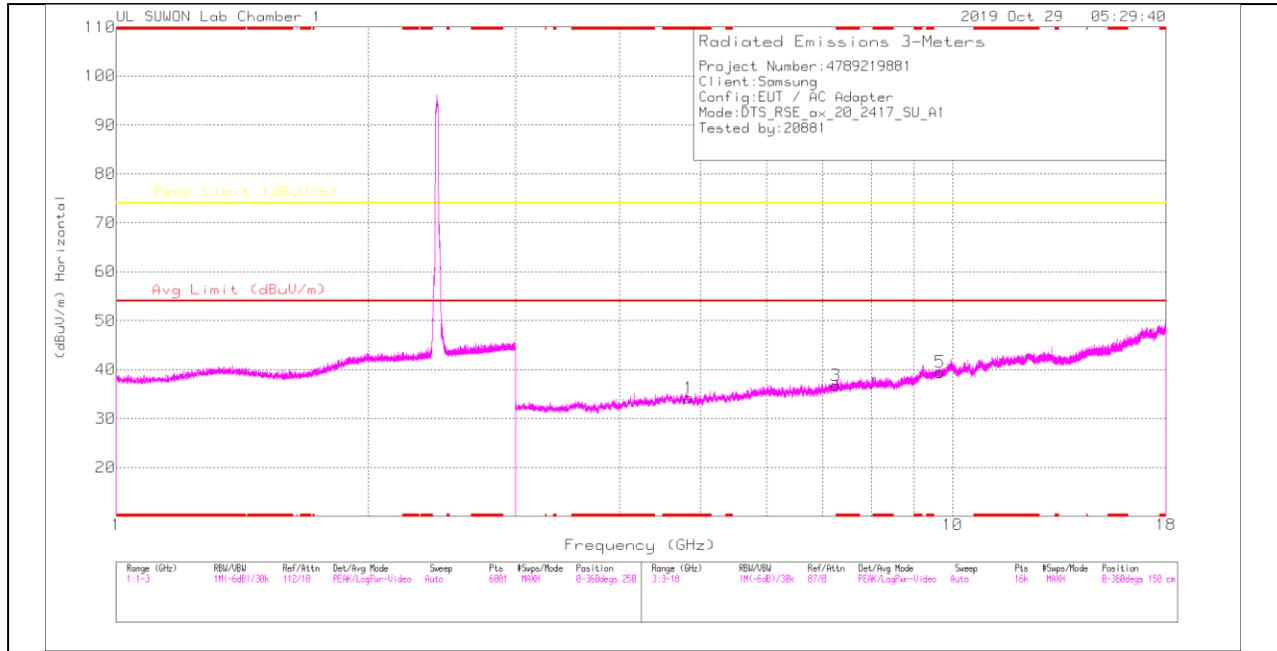
Pk - Peak detector

RMS - RMS detection

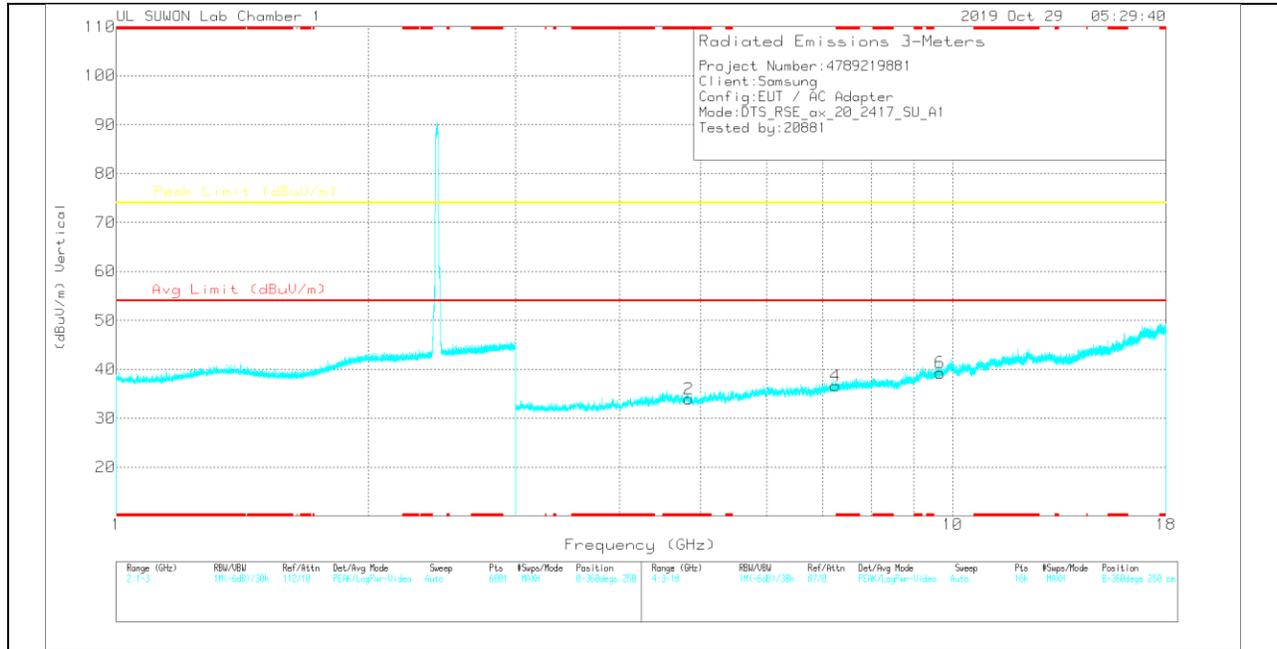
HARMONICS AND SPURIOUS EMISSIONS

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_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	* 4.83457	31.49	PK	34.2	-31.5	0	34.19	-	-	74	-39.81	0-360	150	H
3	* 7.25129	28.69	PK	35.8	-27.7	0	36.79	-	-	74	-37.21	0-360	250	H
5	9.66521	25.9	PK	37.1	-23.5	0	39.5	-	-	74	-34.5	0-360	150	H
2	* 4.8402	31.36	PK	34.2	-31.6	0	33.96	-	-	74	-40.04	0-360	149	V
4	7.24942	28.4	PK	35.8	-27.6	0	36.6	-	-	74	-37.4	0-360	149	V
6	9.66427	25.65	PK	37.1	-23.5	0	39.25	-	-	74	-34.75	0-360	250	V

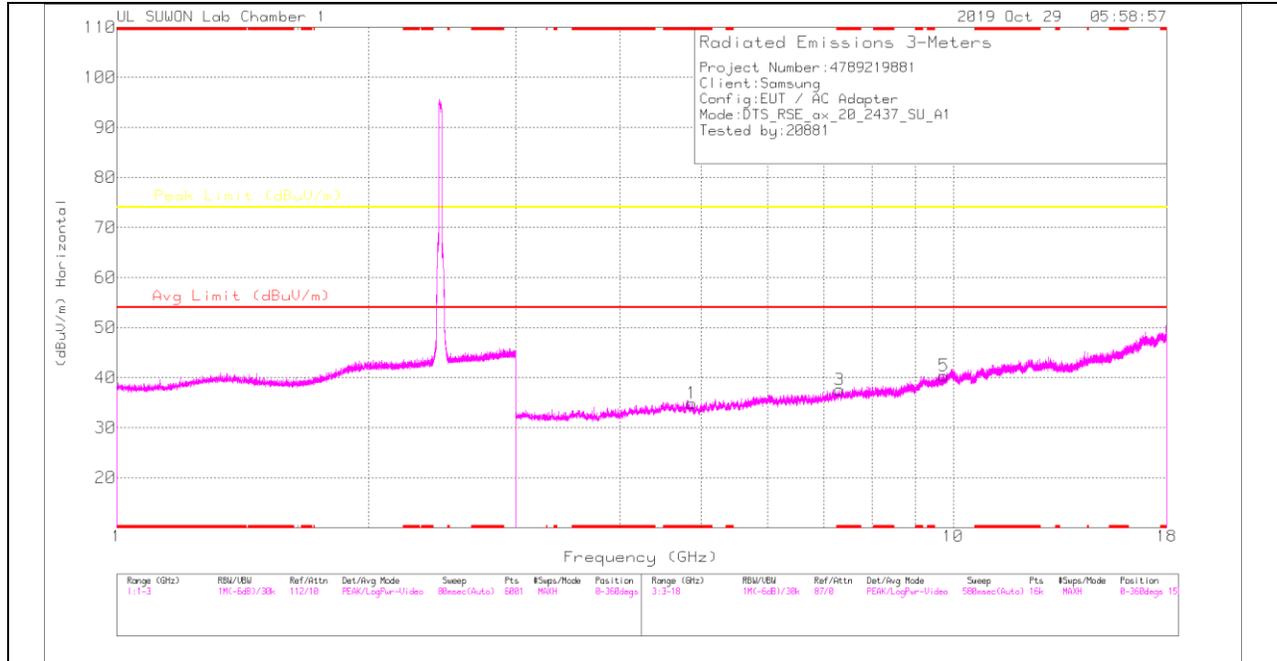
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak Detector

Radiated Emissions

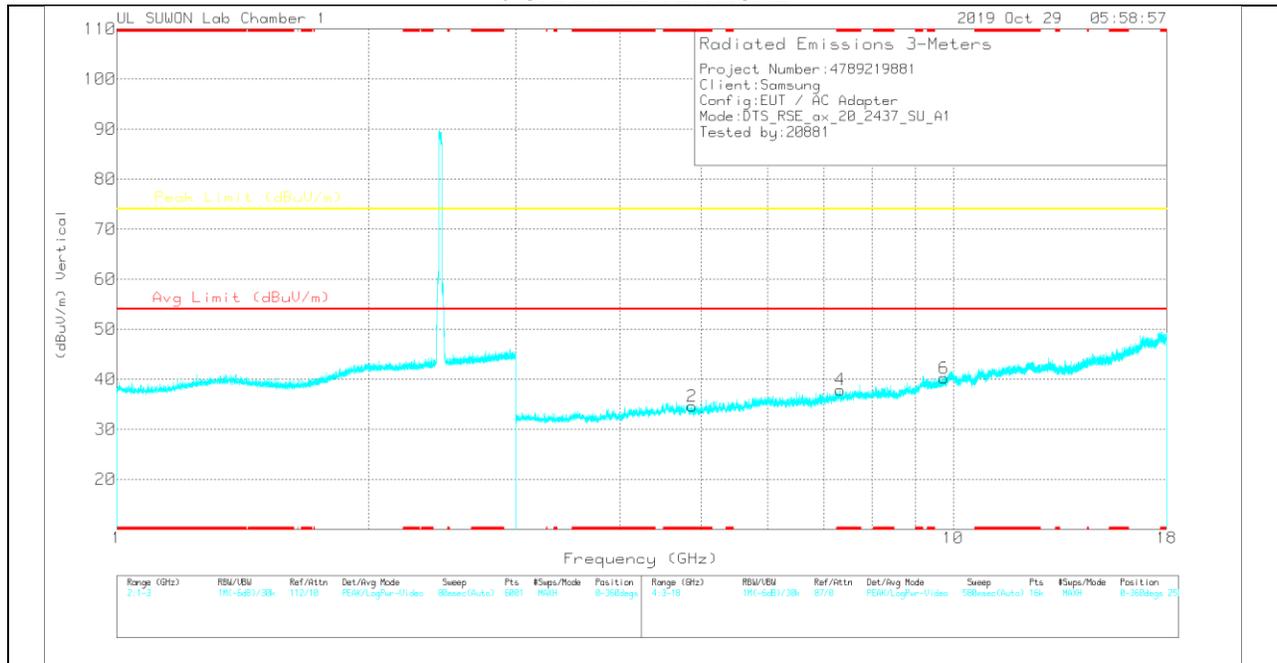
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.83284	39.76	PK2	34.2	-31.6	0	42.36	-	-	74	-31.64	360	100	H
* 4.83366	40.57	PK2	34.2	-31.5	0	43.27	-	-	74	-30.73	360	100	V
* 7.25221	37.21	PK2	35.8	-27.6	0	45.41	-	-	74	-28.59	360	100	H
* 7.25218	37.7	PK2	35.8	-27.6	0	45.9	-	-	74	-28.1	360	100	V
9.66516	34.6	PK2	37.1	-23.5	0	48.2	-	-	74	-25.8	360	100	H
9.66562	34.43	PK2	37.1	-23.5	0	48.03	-	-	74	-25.97	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_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	* 4.86832	32.28	PK	34.2	-31.6	0	34.88	-	-	74	-39.12	0-360	150	H
3	* 7.31317	29.17	PK	35.8	-27.4	0	37.57	-	-	74	-36.43	0-360	150	H
5	9.75426	26.98	PK	37.2	-23.8	0	40.38	-	-	74	-33.62	0-360	250	H
2	* 4.87301	31.98	PK	34.2	-31.6	0	34.58	-	-	74	-39.42	0-360	150	V
4	* 7.32442	29.38	PK	35.8	-27.3	0	37.88	-	-	74	-36.12	0-360	150	V
6	9.7552	26.8	PK	37.2	-23.8	0	40.2	-	-	74	-33.8	0-360	250	V

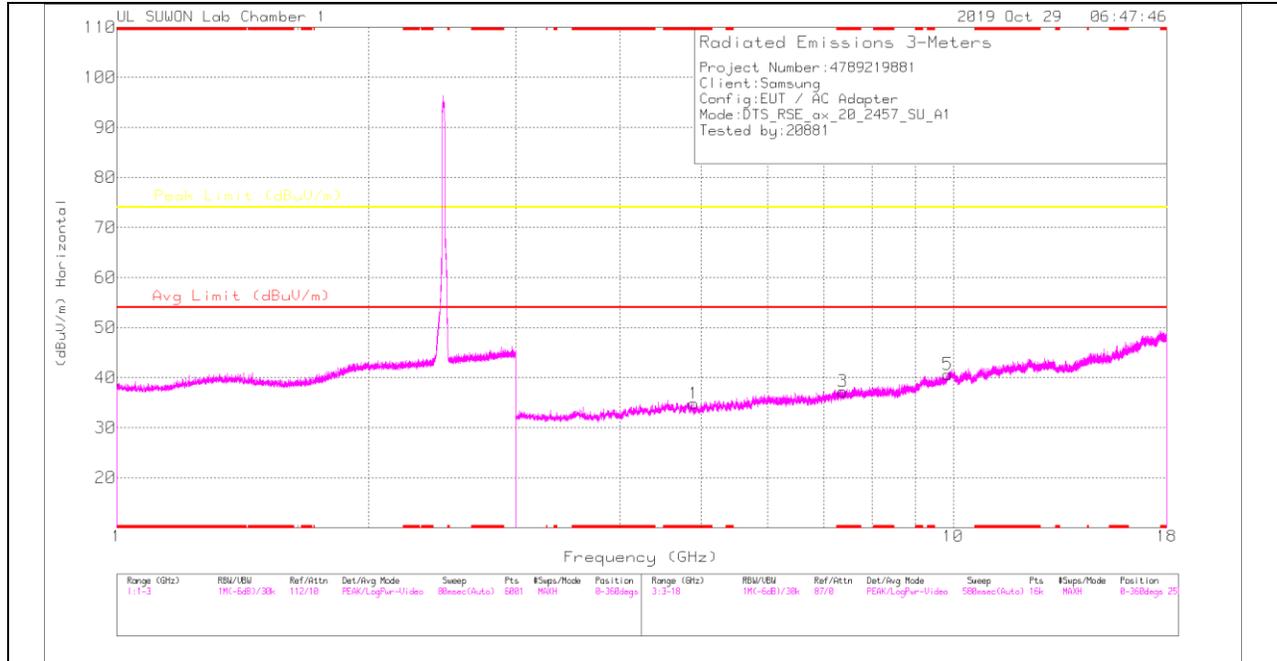
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak Detector

Radiated Emissions

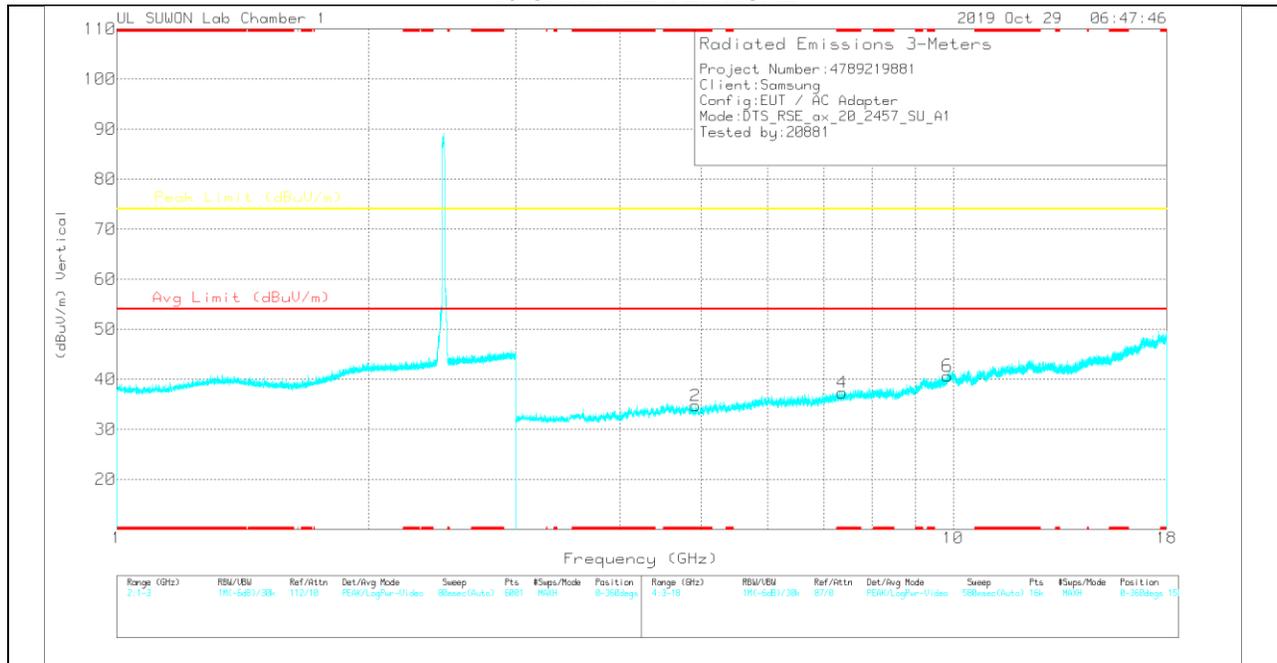
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.86807	40.61	PK2	34.2	-31.6	0	43.21	-	-	74	-30.79	360	100	H
* 4.86785	40.95	PK2	34.2	-31.6	0	43.55	-	-	74	-30.45	360	100	V
* 7.31201	37.82	PK2	35.8	-27.5	0	46.12	-	-	74	-27.88	360	100	V
* 7.31274	37.95	PK2	35.8	-27.4	0	46.35	-	-	74	-27.65	360	100	H
9.75426	34.77	PK2	37.2	-23.8	0	48.17	-	-	74	-25.83	360	100	H
9.7528	34.56	PK2	37.2	-23.8	0	47.96	-	-	74	-26.04	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_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	* 4.89832	32.34	PK	34.2	-31.7	0	34.84	-	-	74	-39.16	0-360	250	H
3	* 7.38066	28.46	PK	35.8	-27	0	37.26	-	-	74	-36.74	0-360	250	H
5	9.84988	26.35	PK	37.4	-23.1	0	40.65	-	-	74	-33.35	0-360	150	H
2	* 4.91894	32.13	PK	34.2	-31.6	0	34.73	-	-	74	-39.27	0-360	150	V
4	* 7.36285	28.82	PK	35.8	-27.3	0	37.32	-	-	74	-36.68	0-360	250	V
6	9.84332	26.43	PK	37.4	-23.2	0	40.63	-	-	74	-33.37	0-360	250	V

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

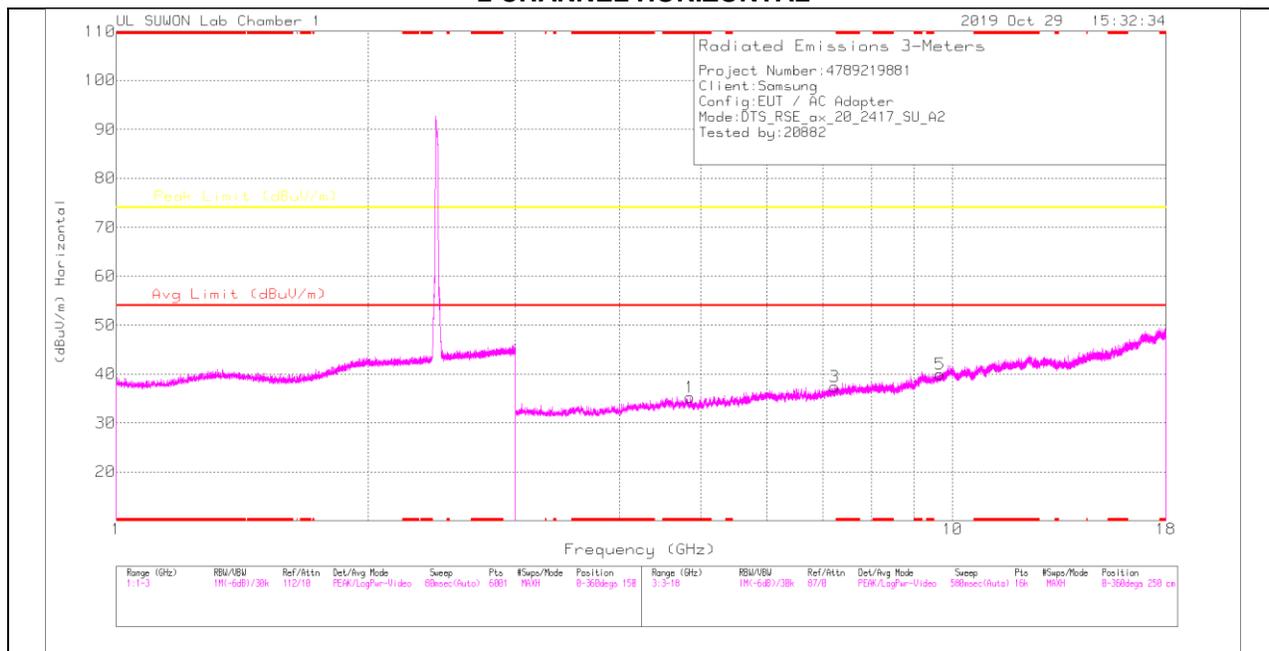
Radiated Emissions

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
* 4.89784	41.18	PK2	34.2	-31.7	0	43.68	-	-	74	-30.32	360	100	H
* 4.89733	40.76	PK2	34.2	-31.7	0	43.26	-	-	74	-30.74	360	100	V
* 7.37909	37.18	PK2	35.8	-27	0	45.98	-	-	74	-28.02	360	100	H
* 7.38242	37.59	PK2	35.8	-26.9	0	46.49	-	-	74	-27.51	360	100	V
9.84934	34.42	PK2	37.4	-23.1	0	48.72	-	-	74	-25.28	360	100	H
9.84959	34.46	PK2	37.4	-23.1	0	48.76	-	-	74	-25.24	360	100	V

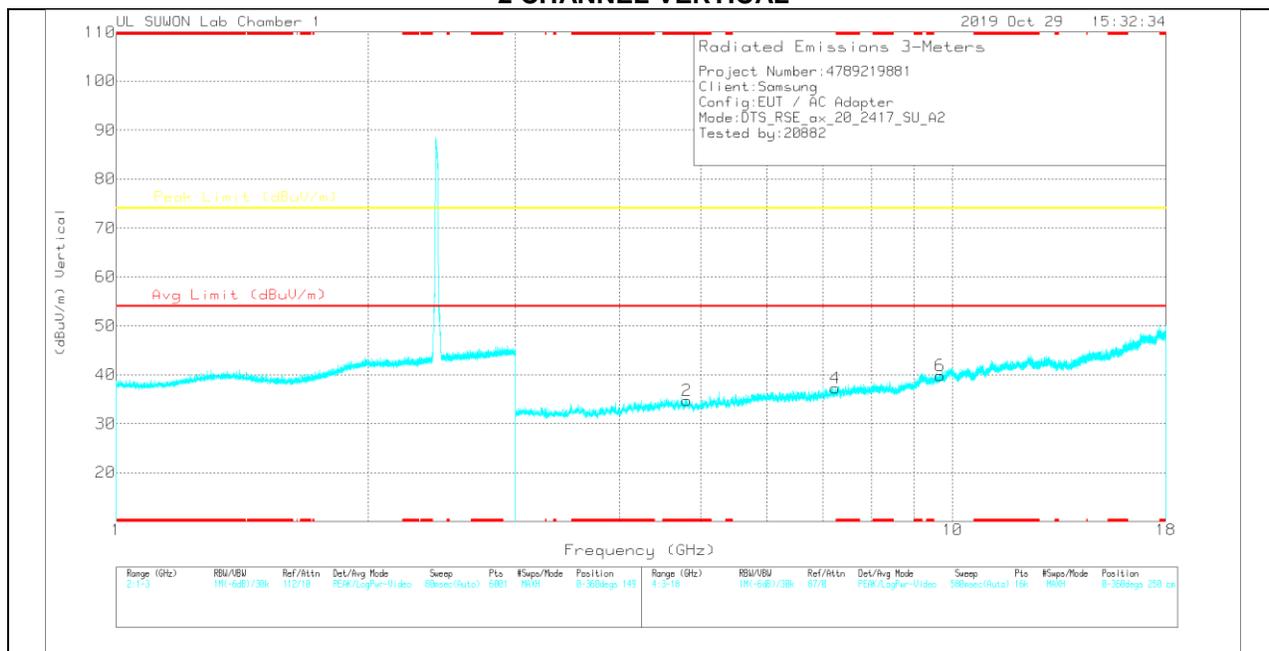
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK2 - KDB558074 Method: Maximum Peak

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	* 4.85613	32.52	PK	34.2	-31.5	0	35.22	-	-	74	-38.78	0-360	250	H
3	7.23161	29.32	PK	35.8	-27.7	0	37.42	-	-	74	-36.58	0-360	250	H
5	9.66239	26.3	PK	37.1	-23.5	0	39.9	-	-	74	-34.1	0-360	250	H
2	* 4.81582	32.1	PK	34.2	-31.6	0	34.7	-	-	74	-39.3	0-360	250	V
4	7.24473	29.16	PK	35.8	-27.7	0	37.26	-	-	74	-36.74	0-360	250	V
6	9.67271	26.37	PK	37.1	-23.6	0	39.87	-	-	74	-34.13	0-360	250	V

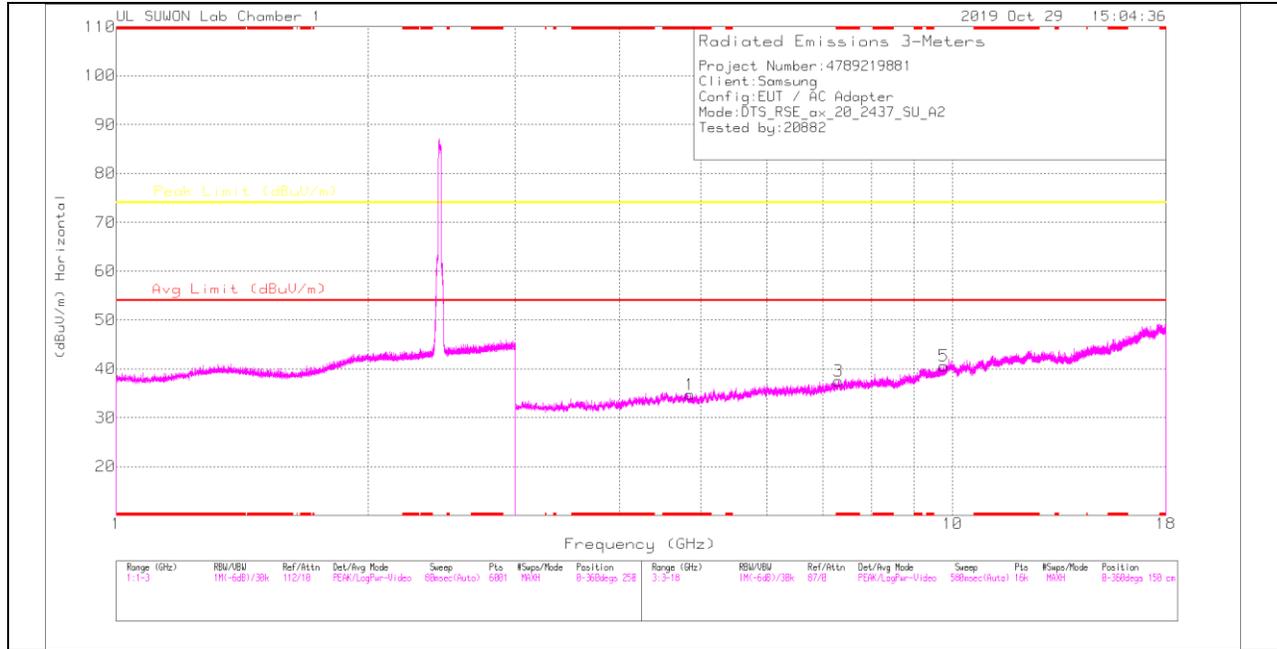
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak Detector

Radiated Emissions

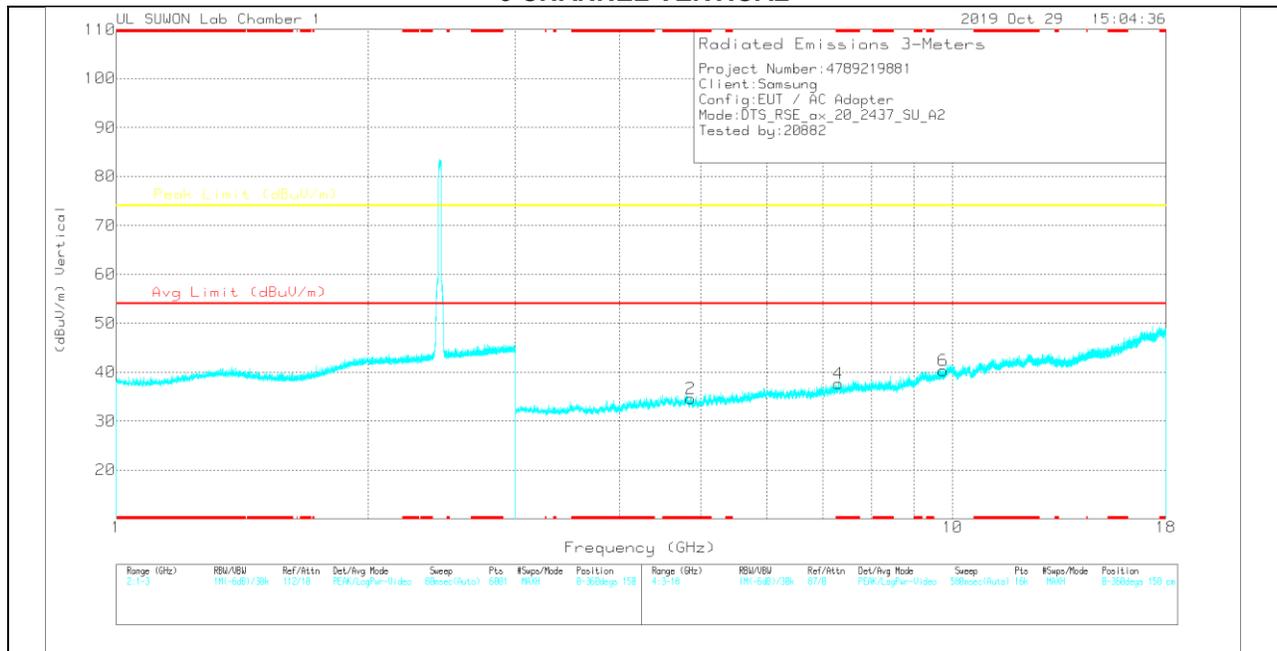
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.85508	40.72	PK2	34.2	-31.5	0	43.42	-	-	74	-30.58	360	100	H
* 4.85734	40.7	PK2	34.2	-31.5	0	43.4	-	-	74	-30.6	360	100	V
7.233	37.52	PK2	35.8	-27.7	0	45.62	-	-	74	-28.38	360	100	H
7.23309	37.43	PK2	35.8	-27.7	0	45.53	-	-	74	-28.47	360	100	V
9.66365	34.28	PK2	37.1	-23.5	0	47.88	-	-	74	-26.12	360	100	H
9.66405	34.56	PK2	37.1	-23.5	0	48.16	-	-	74	-25.84	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_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	* 4.85426	32.03	PK	34.2	-31.5	0	34.73	-	-	74	-39.27	0-360	150	H
3	* 7.30848	29.35	PK	35.8	-27.6	0	37.55	-	-	74	-36.45	0-360	250	H
5	9.76176	27.27	PK	37.2	-23.9	0	40.57	-	-	74	-33.43	0-360	250	H
2	* 4.85988	31.85	PK	34.2	-31.5	0	34.55	-	-	74	-39.45	0-360	150	V
4	* 7.30192	29.45	PK	35.8	-27.6	0	37.65	-	-	74	-36.35	0-360	250	V
6	9.74301	27.04	PK	37.2	-23.9	0	40.34	-	-	74	-33.66	0-360	250	V

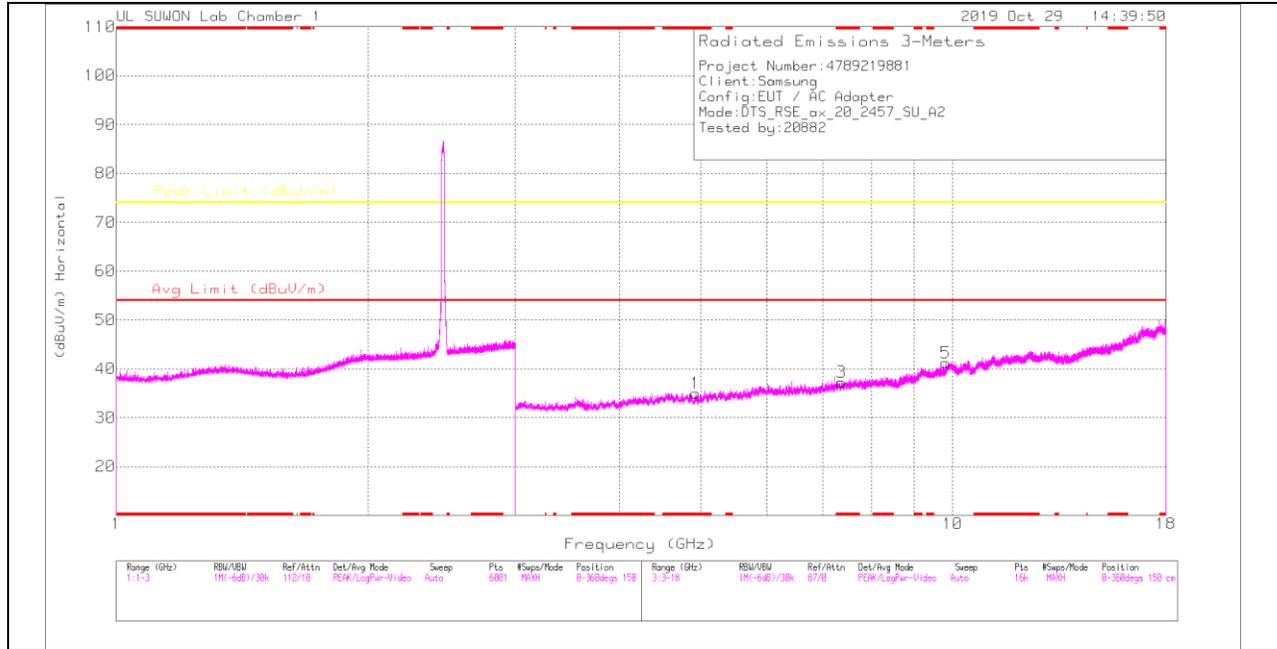
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - Peak Detector

Radiated Emissions

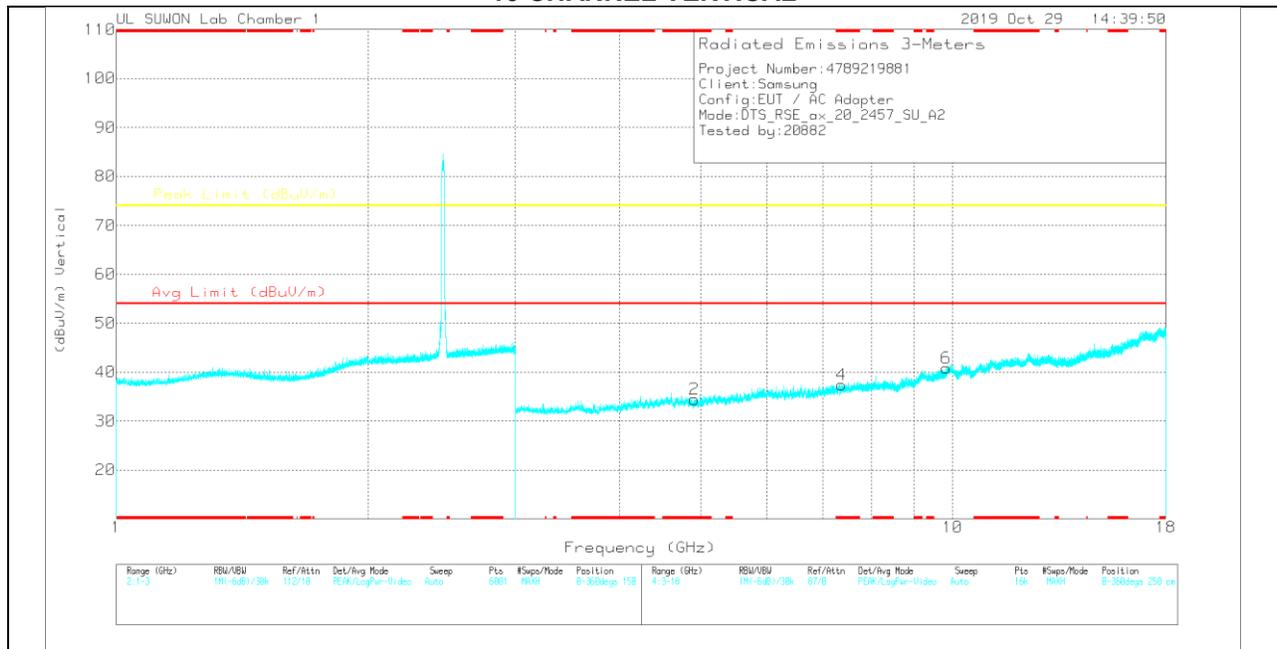
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	3GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.85398	40.75	PK2	34.2	-31.5	0	43.45	-	-	74	-30.55	360	100	H
* 4.85415	40.72	PK2	34.2	-31.5	0	43.42	-	-	74	-30.58	360	100	V
* 7.30979	37.52	PK2	35.8	-27.5	0	45.82	-	-	74	-28.18	360	100	H
* 7.30726	37.62	PK2	35.8	-27.6	0	45.82	-	-	74	-28.18	360	100	V
9.76021	34.76	PK2	37.2	-23.9	0	48.06	-	-	74	-25.94	360	100	H
9.76182	34.52	PK2	37.2	-23.9	0	47.82	-	-	74	-26.18	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_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	* 4.93394	32.35	PK	34.2	-31.6	0	34.95	-	-	74	-39.05	0-360	250	H
3	* 7.3666	28.83	PK	35.8	-27.3	0	37.33	-	-	74	-36.67	0-360	250	H
5	9.8152	27.68	PK	37.3	-23.7	0	41.28	-	-	74	-32.72	0-360	150	H
2	* 4.9105	31.91	PK	34.2	-31.7	0	34.41	-	-	74	-39.59	0-360	150	V
4	* 7.37222	28.85	PK	35.8	-27.2	0	37.45	-	-	74	-36.55	0-360	150	V
6	9.82645	27.02	PK	37.4	-23.6	0	40.82	-	-	74	-33.18	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
* 4.93219	40.95	PK2	34.2	-31.6	0	43.55	-	-	74	-30.45	360	100	H
* 4.93242	40.72	PK2	34.2	-31.6	0	43.32	-	-	74	-30.68	360	100	V
* 7.36597	37.7	PK2	35.8	-27.3	0	46.2	-	-	74	-27.8	360	100	H
* 7.36673	37.4	PK2	35.8	-27.3	0	45.9	-	-	74	-28.1	360	100	V
9.81633	34.71	PK2	37.3	-23.6	0	48.41	-	-	74	-25.59	360	100	H
9.8166	34.25	PK2	37.3	-23.6	0	47.95	-	-	74	-26.05	360	100	V

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