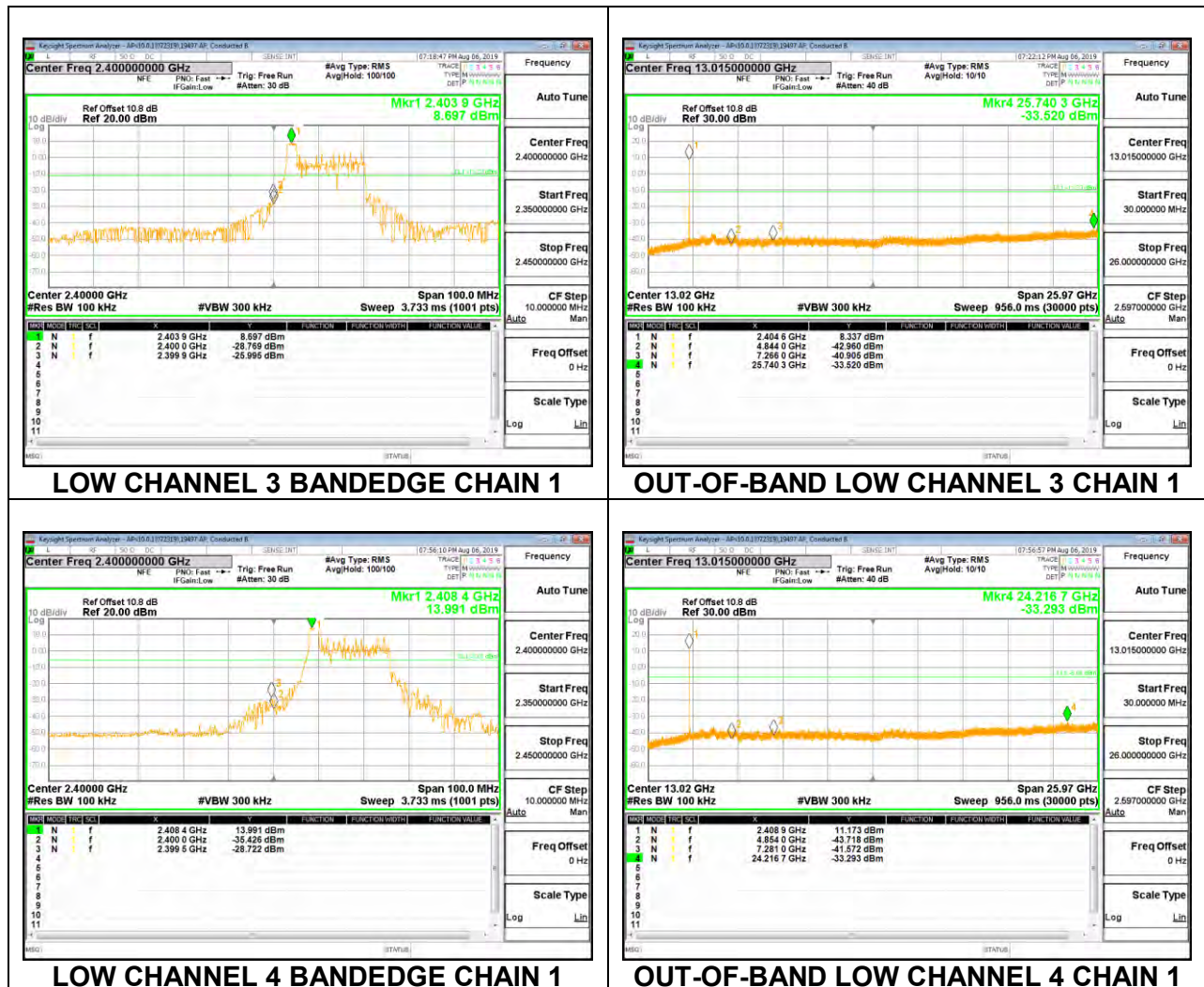
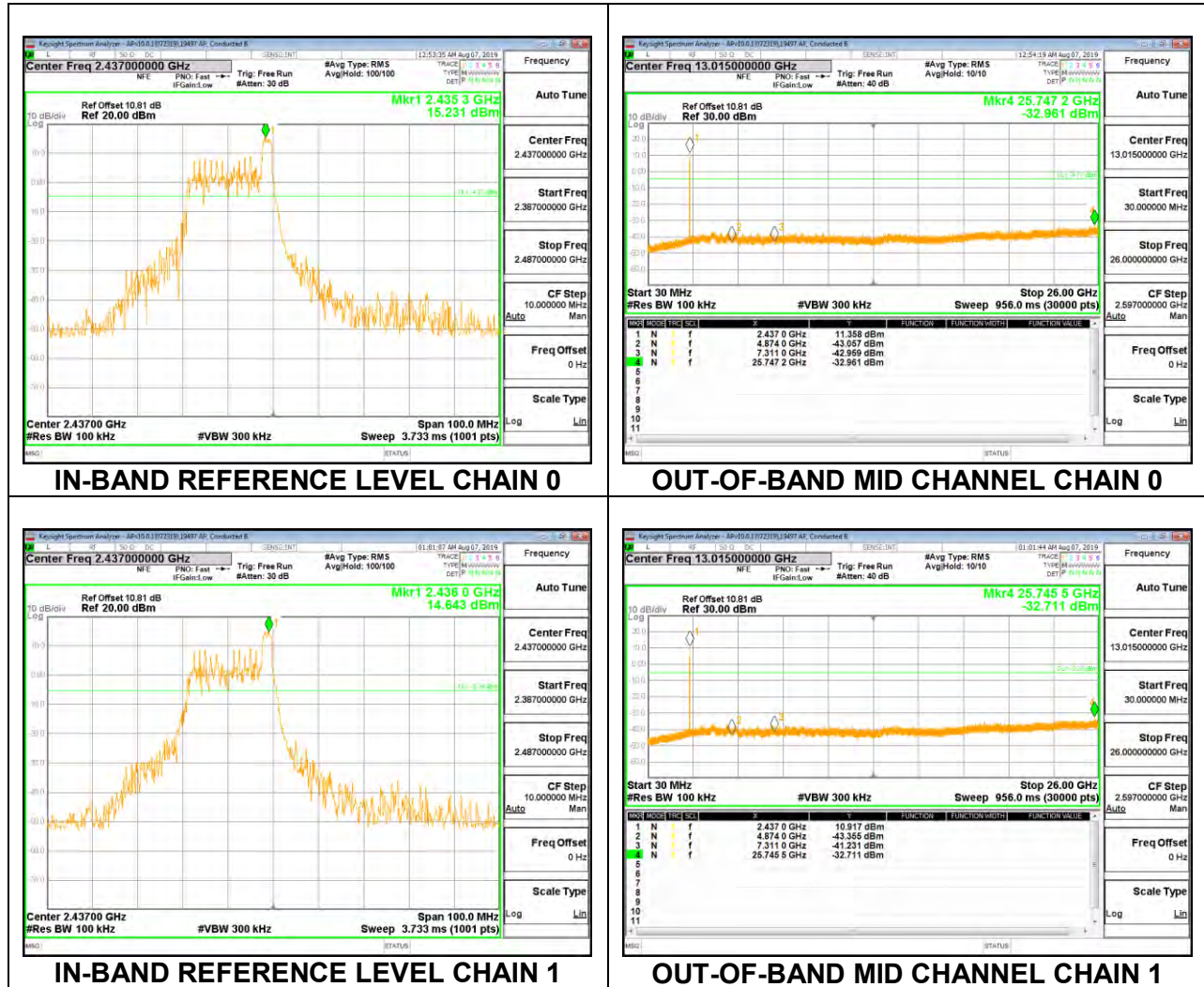
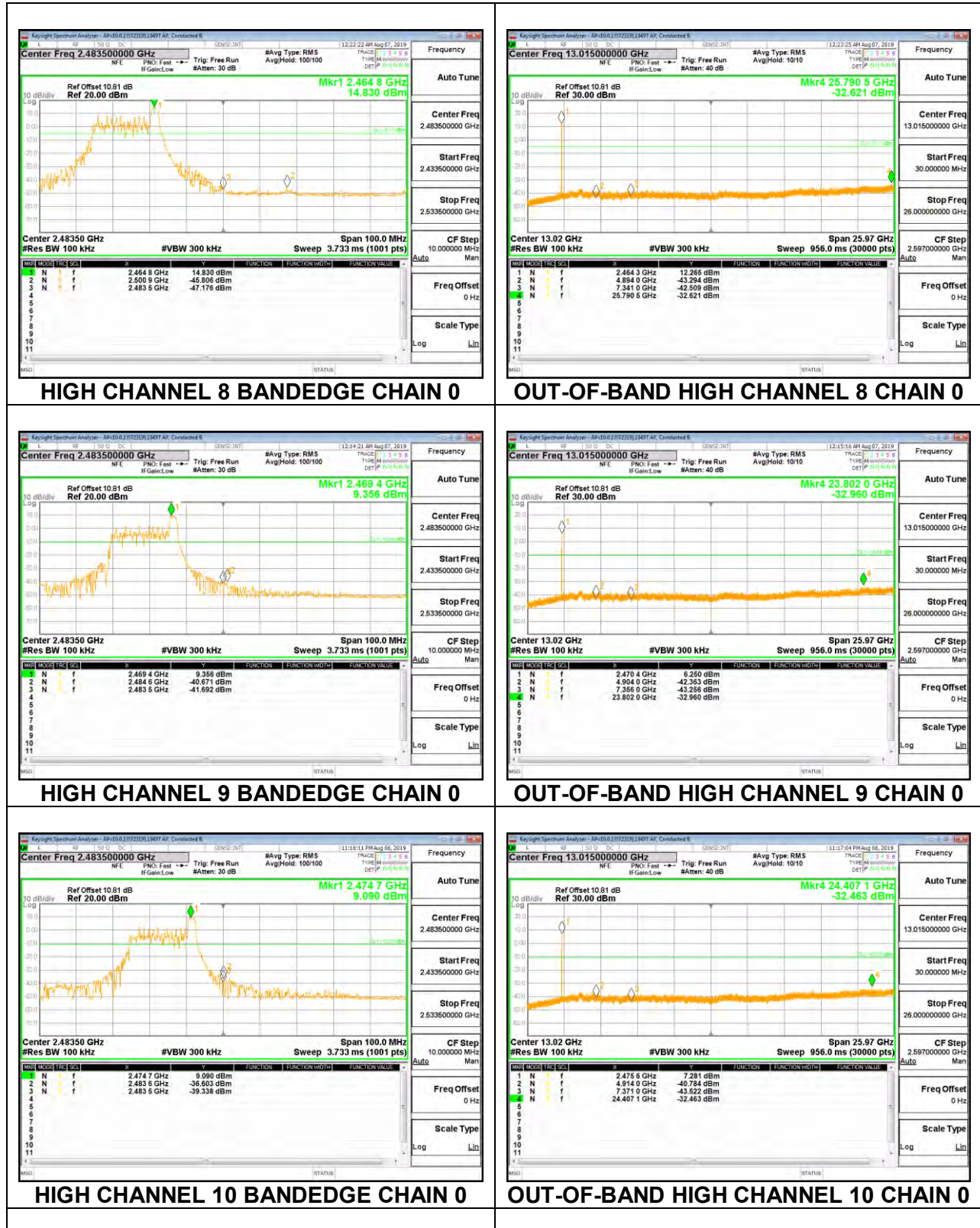


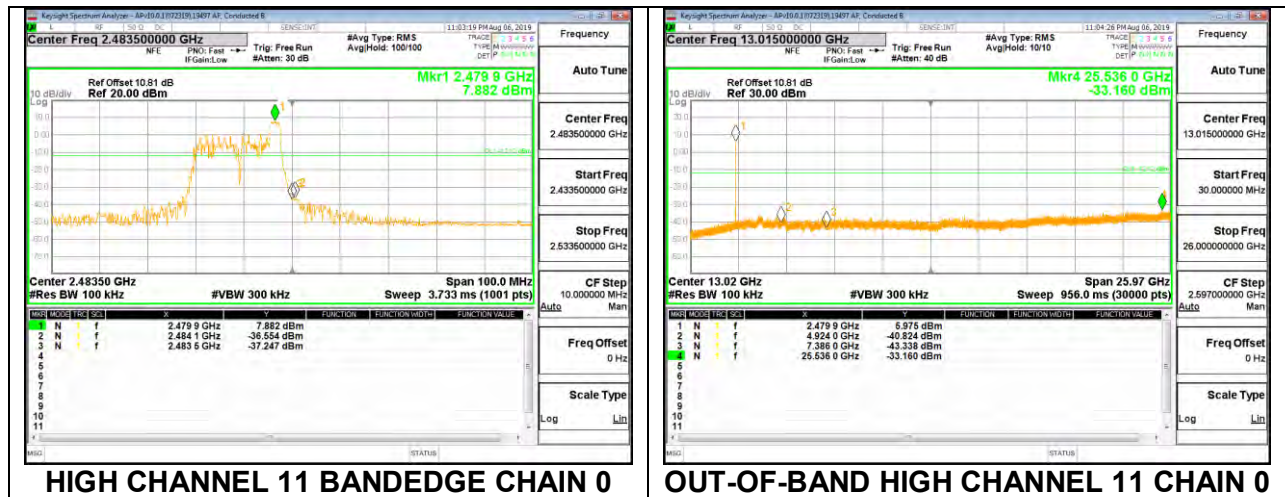


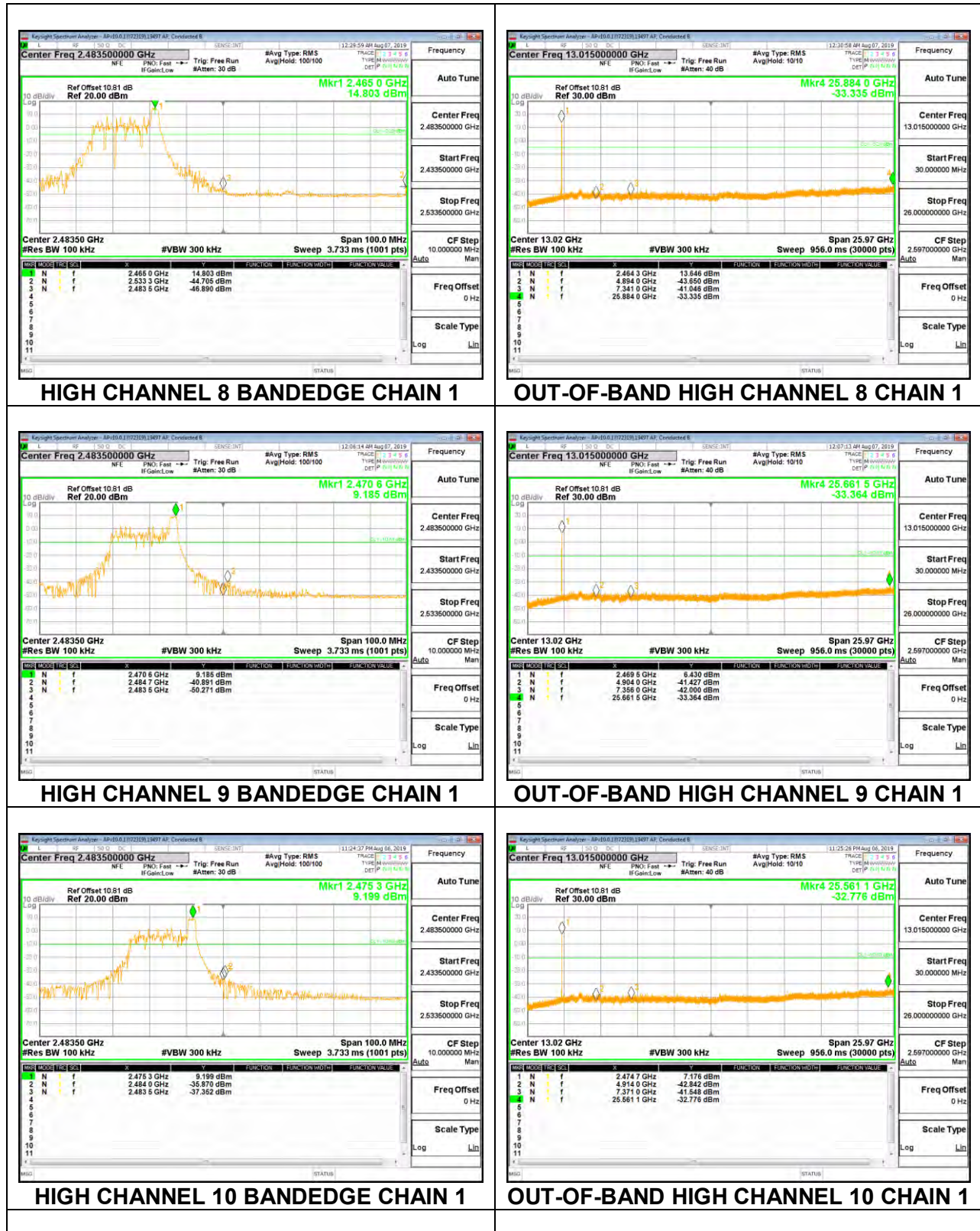
2TX Antenna 1 + Antenna 2 MODE : 26-Tone, RU index 8

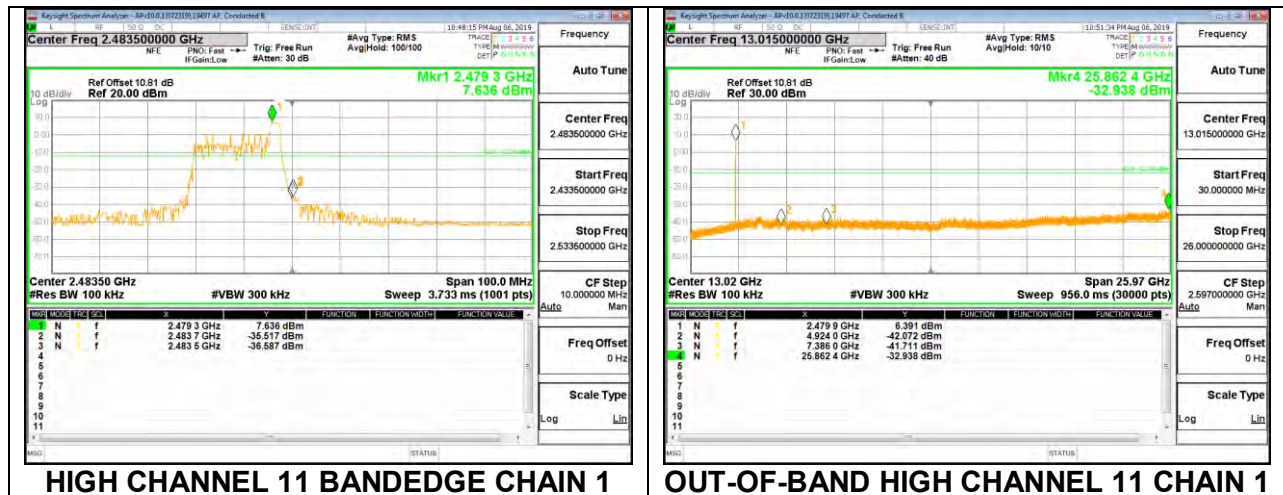


2TX Antenna 1 + Antenna 2 MODE : 26-Tone, RU index 17









9. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209

RSS-GEN, Section 8.9 and 8.10

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	2400/F(kHz) @ 300 m	-
0.490-1.705	24000/F(kHz) @ 30 m	-
1.705 - 30	30 @ 30m	-
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. 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 pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

The spectrum from 1 GHz to 18 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. Below 30MHz, below 1GHz and above 18GHz emissions, the channel with the highest output power was tested.

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.

2D antenna use - For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel), parallel and perpendicular are the worst orientations, therefore testing was performed on these two orientations only.

KDB 414788 Open Field Site(OFS) and Chamber Correlation Justification

Based on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

OFS and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

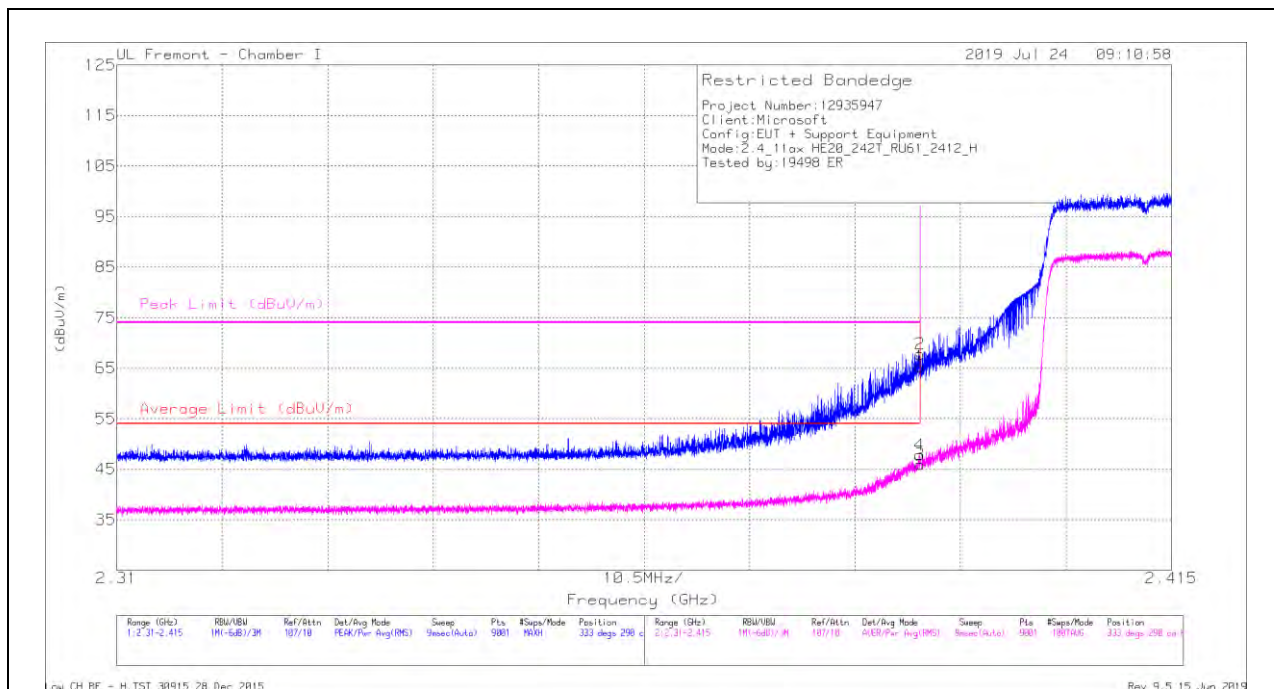
9.1. TRANSMITTER ABOVE 1 GHz

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

2TX Antenna 1 + Antenna 2 MODE: 242-Tones, RU index 61

BANDEDGE (LOW CHANNEL, CH 1)

HORIZONTAL RESULT



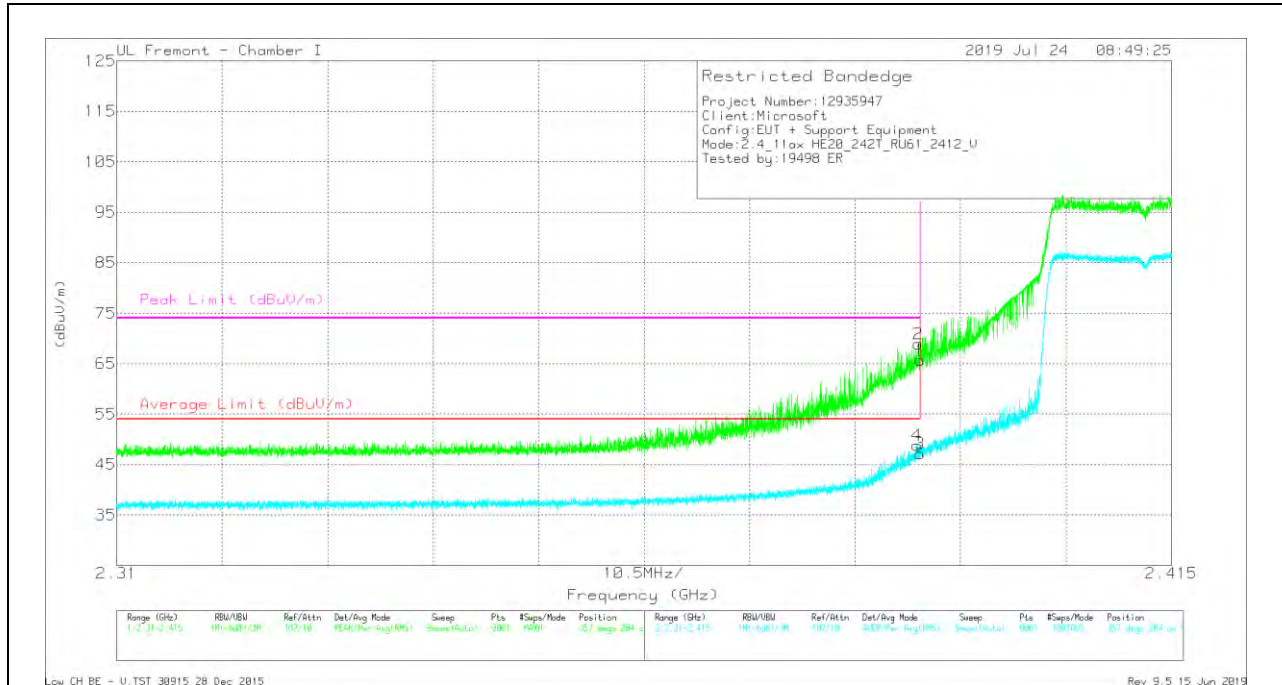
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.38999	55.05	Pk	31.9	-21.6	65.35	-	-	74	-8.65	333	290	H
2	2.38997	57.52	Pk	31.9	-21.6	67.82	-	-	74	-6.18	333	290	H
3	2.38999	35.67	RMS	31.9	-21.6	45.97	54	-8.03	-	-	333	290	H
4	2.38992	37.51	RMS	31.9	-21.6	47.81	54	-6.19	-	-	333	290	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT

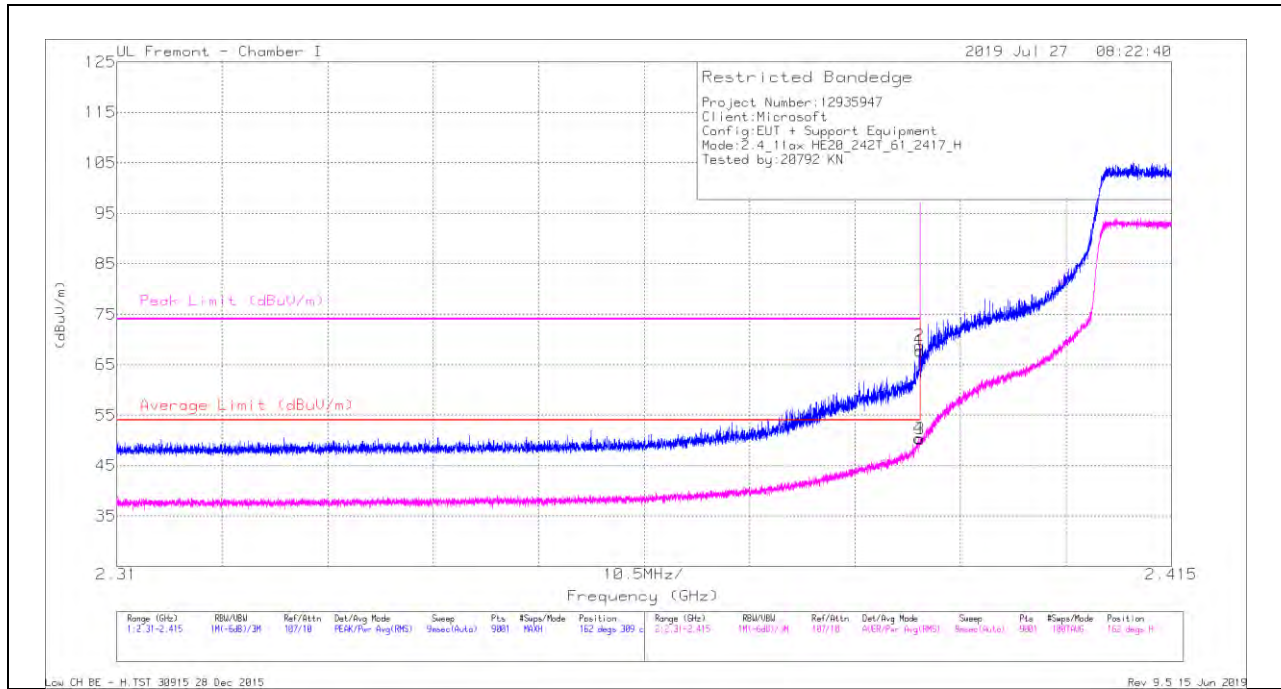


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.38999	55.44	Pk	31.9	-21.6	65.74	-	-	74	-8.26	357	284	V
2	2.38981	58.58	Pk	31.9	-21.6	68.88	-	-	74	-5.12	357	284	V
3	2.38999	36.94	RMS	31.9	-21.6	47.24	54	-6.76	-	-	357	284	V
4	2.3897	38.47	RMS	31.9	-21.6	48.77	54	-5.23	-	-	357	284	V

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

BANDEDGE (LOW CHANNEL, CH 2)

HORIZONTAL RESULT



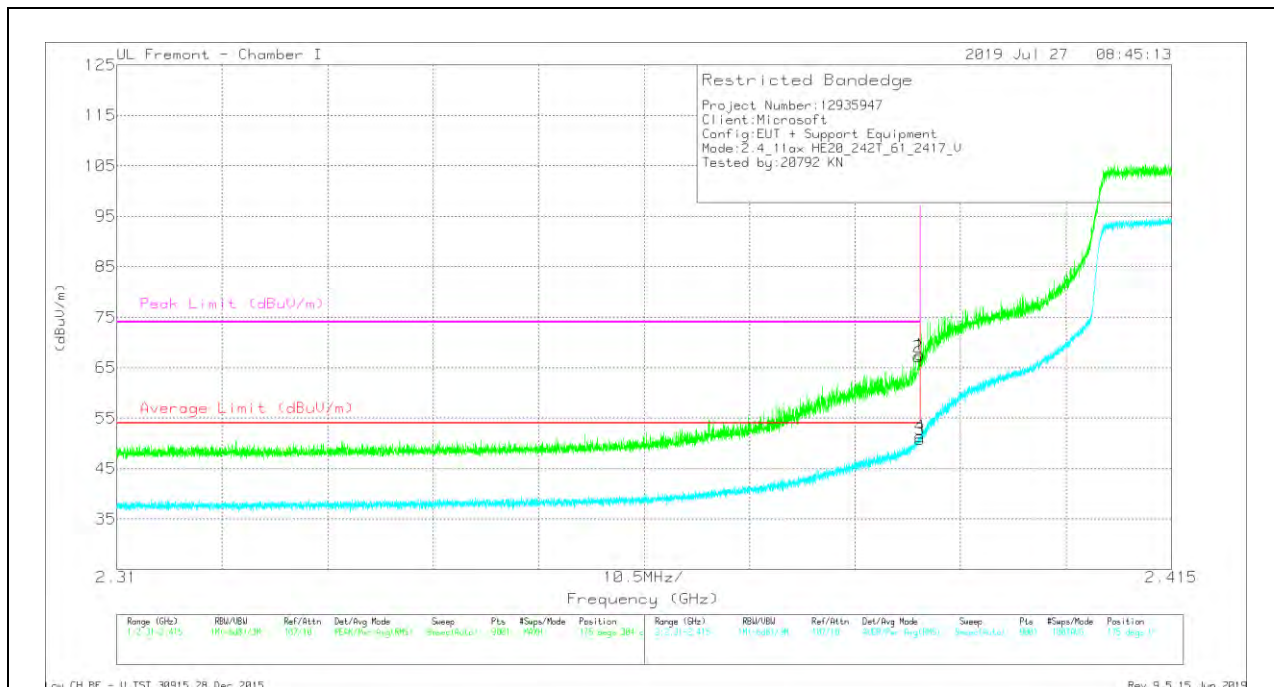
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.38999	57.44	Pk	31.9	-21.6	67.74	-	-	74	-6.26	162	309	H
2	2.38994	58.46	Pk	31.9	-21.6	68.76	-	-	74	-5.24	162	309	H
3	2.38999	39.99	RMS	31.9	-21.6	50.29	54	-3.71	-	-	162	309	H
4	2.38987	40.07	RMS	31.9	-21.6	50.37	54	-3.63	-	-	162	309	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.38999	57.23	Pk	31.9	-21.6	67.53	-	-	74	-6.47	175	304	V
2	2.38978	56.93	Pk	31.9	-21.6	67.23	-	-	74	-6.77	175	304	V
3	2.38999	40.5	RMS	31.9	-21.6	50.8	54	-3.2	-	-	175	304	V
4	2.38995	41.05	RMS	31.9	-21.6	51.35	54	-2.65	-	-	175	304	V

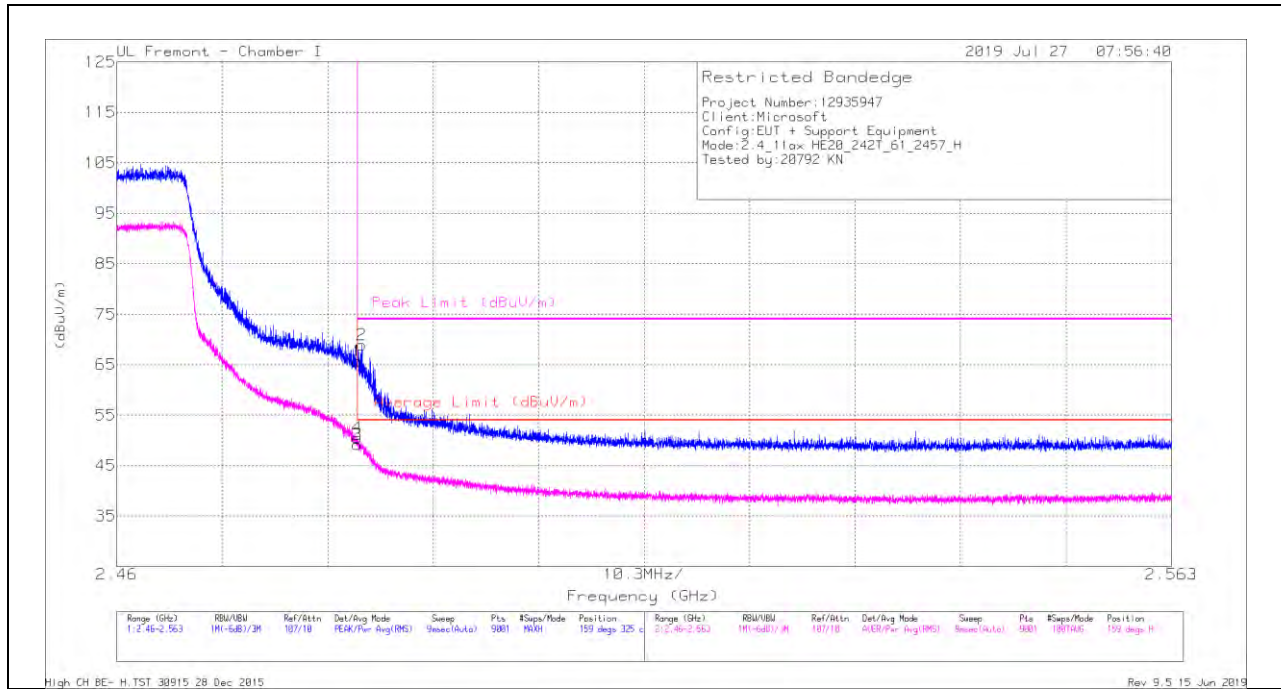
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 10)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filt r/Pad (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	55.03	Pk	32.4	-21.7	65.73	-	-	74	-8.27	159	325	H
2	2.48395	58.23	Pk	32.4	-21.7	68.93	-	-	74	-5.07	159	325	H
3	2.48351	38.46	RMS	32.4	-21.7	49.16	54	-4.84	-	-	159	325	H
4	2.48352	39.79	RMS	32.4	-21.7	50.49	54	-3.51	-	-	159	325	H

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

Pk - Peak detector

RMS - RMS detection

UL Fremont - Chamber I

2019 Jul 27 08:04:27

Restricted Bandedge

Project Number: 12935947
 Client: Microsoft
 Config: EUT + Support Equipment
 Made: 2.4.11ax HE2B_2427_61_2457_U
 Tested by: 20792 KN

Peak Limit (dBuV/m)

Average Limit (dBuV/m)

2.45 2.563

10.3MHz/
 Frequency (GHz)

Range (GHz)	RBW/1BW	Ref/Attn	Det/Avg Mode	Sweep	Pls	#Seps/Mode	Position	Range (GHz)	RBW/1BW	Ref/Attn	Det/Avg Mode	Sweep	Pls	#Seps/Mode	Position
1.2-4.0 (2.56)	100/100	107/10	PKR/Per-Avg (MS)	Sweep (Auto)	2000	1000	178 degs 312°	1.2-4.0 (2.56)	100/100	107/10	PKR/Per-Avg (MS)	Sweep (Auto)	2000	1000	178 degs 312°

High CH BE - U.TST 38915 28 Dec 2015

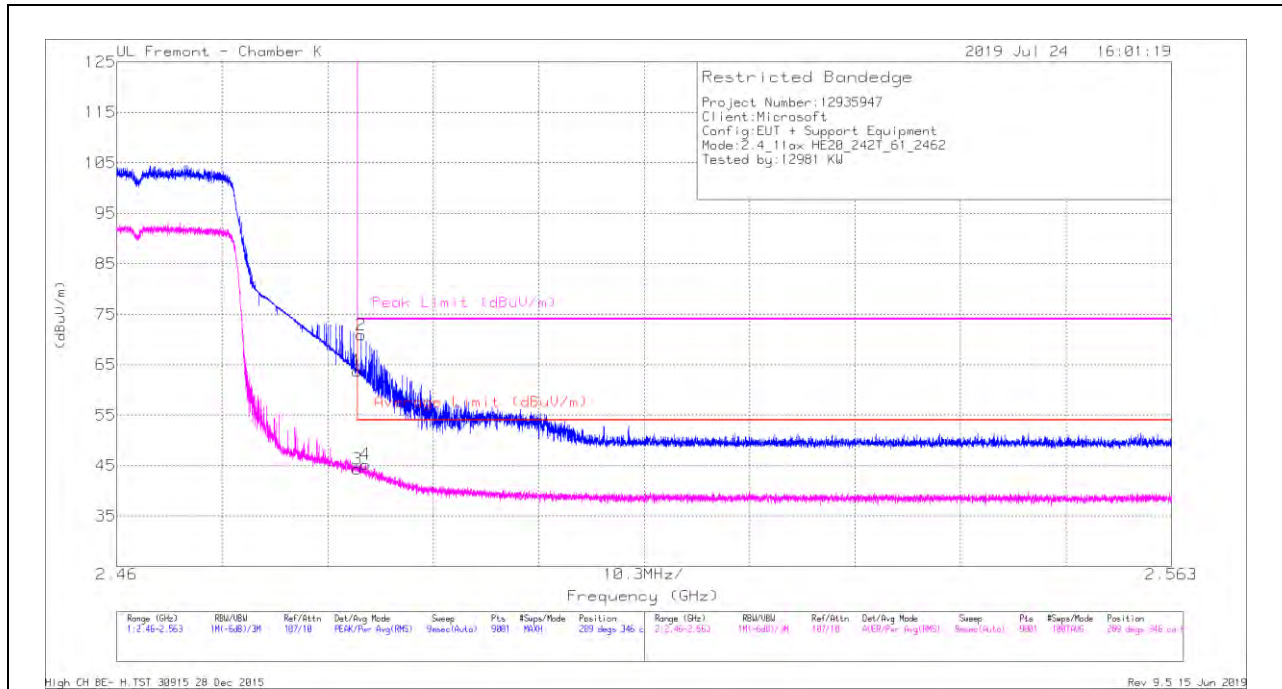
Rev 9.5 15 Jun 2019

Marker	Frequency (GHz)	Meter Reading (dBUV)	Det	AF T862 (dB/m)	Amp/Cbl/Fit r/Pad (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	53.23	Pk	32.4	-21.7	63.93	-	-	74	-10.07	178	312	V
2	2.48371	58.49	Pk	32.4	-21.7	69.19	-	-	74	-4.81	178	312	V
3	2.48351	38.65	RMS	32.4	-21.7	49.35	54	-4.65	-	-	178	312	V
4	2.4836	39.41	RMS	32.4	-21.7	50.11	54	-3.89	-	-	178	312	V

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

BANDEDGE (HIGH CHANNEL, CH 11)

HORIZONTAL RESULT



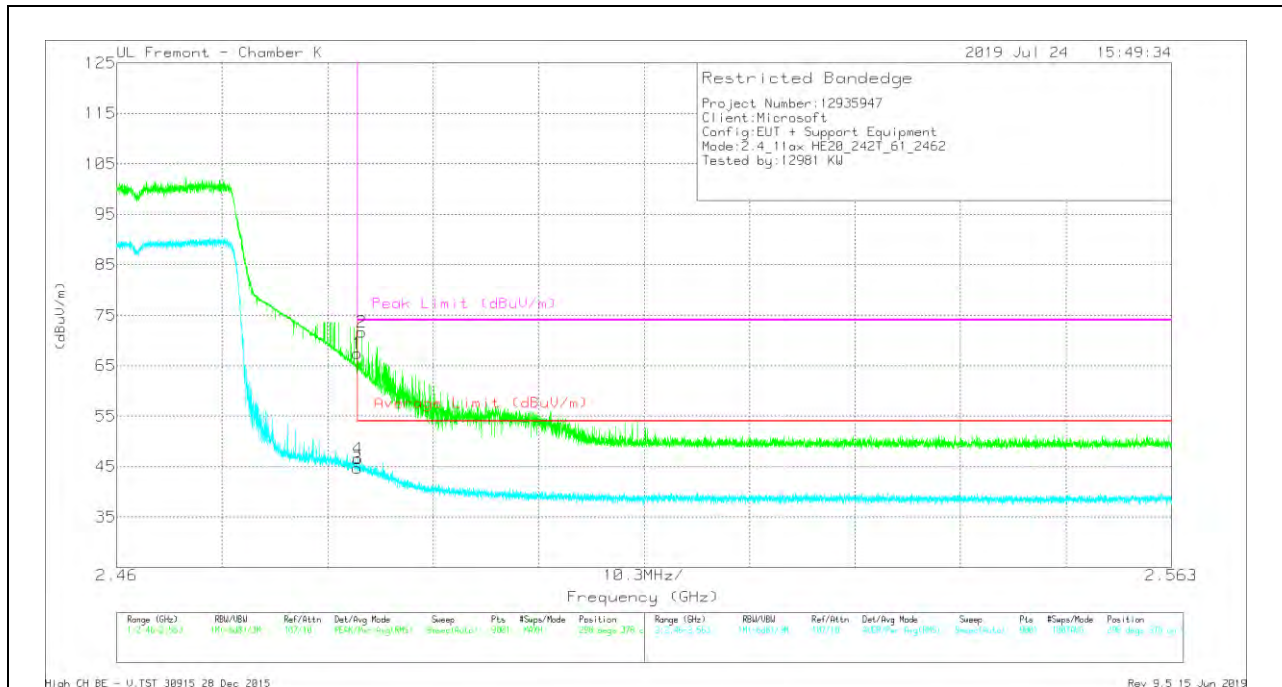
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/CbllFitr /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	56.06	Pk	32.5	-24.8	63.76	-	-	74	-10.24	289	346	H
2	* 2.48386	63.21	Pk	32.5	-24.8	70.91	-	-	74	-3.09	289	346	H
3	* 2.48351	36.63	RMS	32.5	-24.8	44.33	54	-9.67	-	-	289	346	H
4	* 2.48427	37.56	RMS	32.5	-24.8	45.26	54	-8.74	-	-	289	346	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT

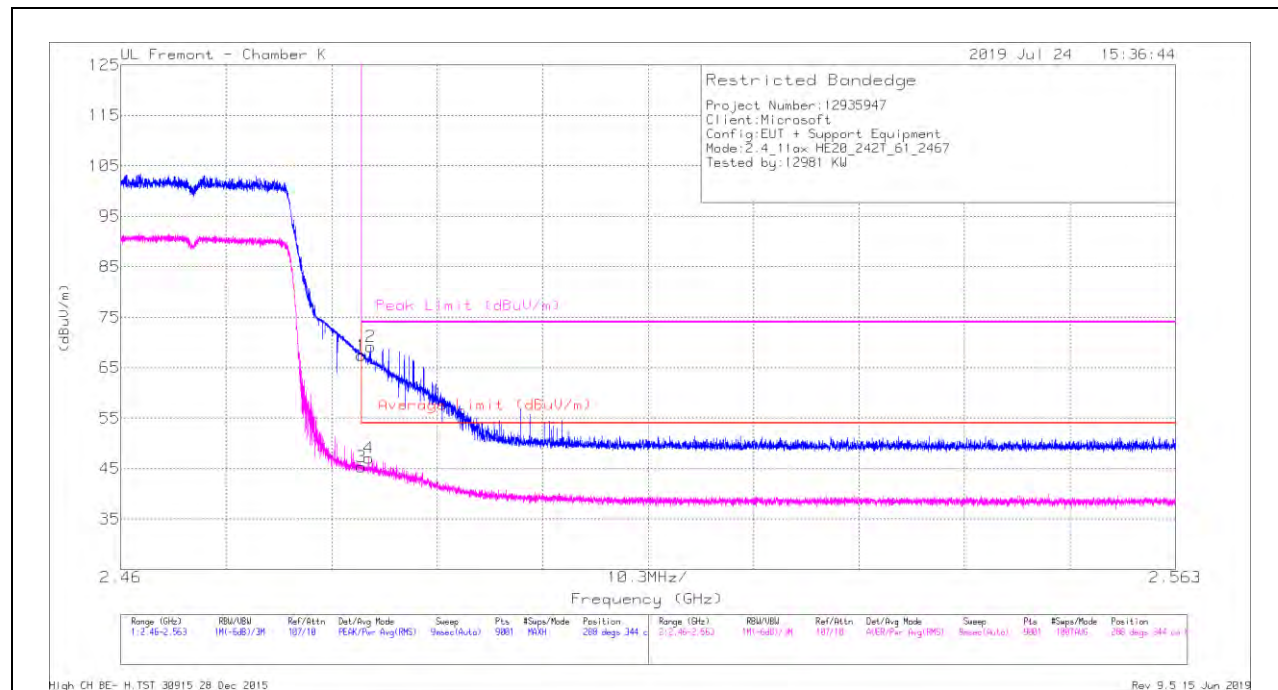


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filt /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	59.71	Pk	32.5	-24.8	67.41	-	-	74	-6.59	298	378	V
2	* 2.48391	63.93	Pk	32.5	-24.8	71.63	-	-	74	-2.37	298	378	V
3	* 2.48351	37.05	RMS	32.5	-24.8	44.75	54	-9.25	-	-	298	378	V
4	* 2.48355	38.92	RMS	32.5	-24.8	46.62	54	-7.38	-	-	298	378	V

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

BANDEDGE (HIGH CHANNEL, CH 12)

HORIZONTAL RESULT



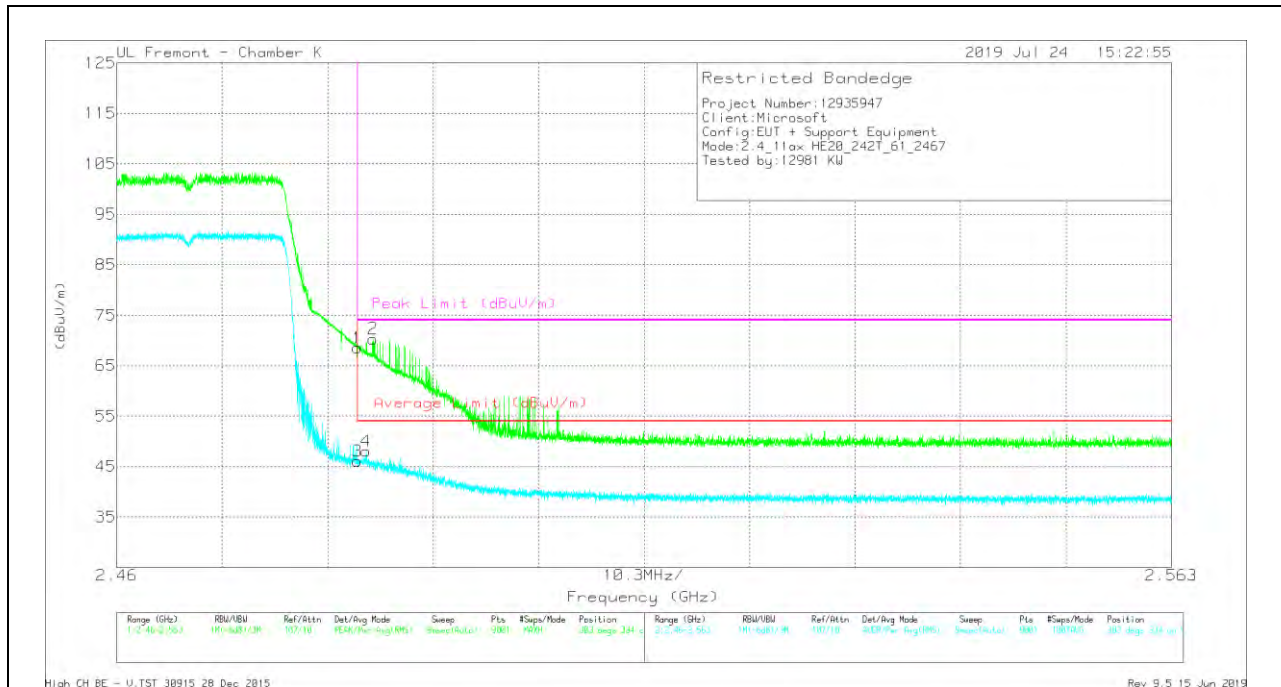
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/CbllFitr /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	59.73	Pk	32.5	-24.8	67.43	-	-	74	-6.57	288	344	H
2	* 2.48439	61.51	Pk	32.5	-24.8	69.21	-	-	74	-4.79	288	344	H
3	* 2.48351	37.62	RMS	32.5	-24.8	45.32	54	-8.68	-	-	288	344	H
4	* 2.48424	39.39	RMS	32.5	-24.8	47.09	54	-6.91	-	-	288	344	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT

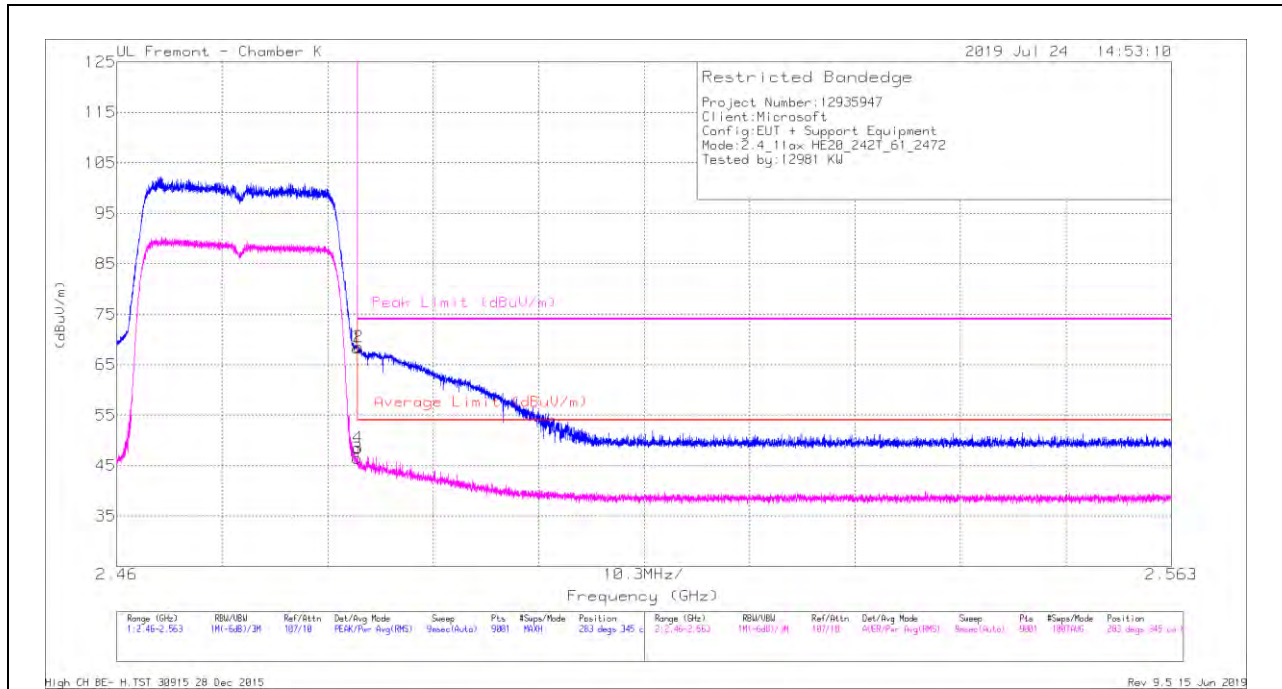


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filt /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	60.82	Pk	32.5	-24.8	68.52	-	-	74	-5.48	303	334	V
2	* 2.48505	62.64	Pk	32.5	-24.8	70.34	-	-	74	-3.66	303	334	V
3	* 2.48351	38.4	RMS	32.5	-24.8	46.1	54	-7.9	-	-	303	334	V
4	* 2.48438	40.41	RMS	32.5	-24.8	48.11	54	-5.89	-	-	303	334	V

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

BANDEDGE (HIGH CHANNEL, CH 13)

HORIZONTAL RESULT



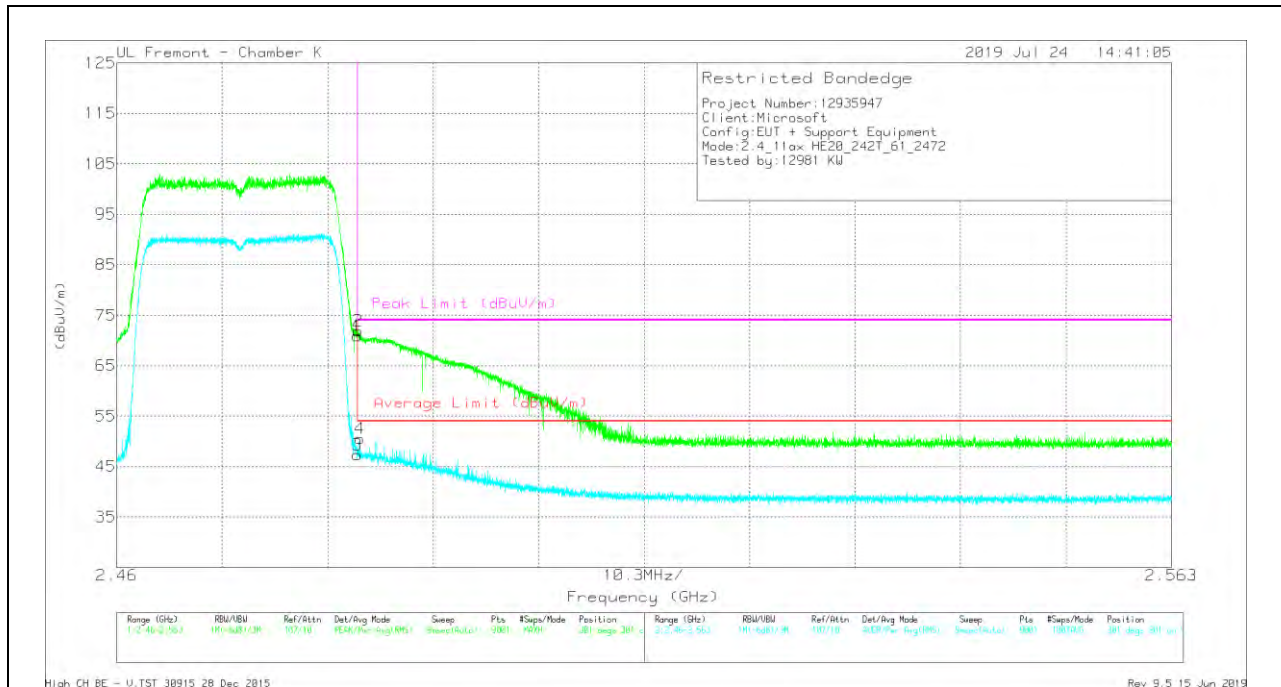
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/CbllFitr /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	60.54	Pk	32.5	-24.8	68.24	-	-	74	-5.76	283	345	H
2	* 2.48362	60.82	Pk	32.5	-24.8	68.52	-	-	74	-5.48	283	345	H
3	* 2.48351	38.69	RMS	32.5	-24.8	46.39	54	-7.61	-	-	283	345	H
4	* 2.48354	40.82	RMS	32.5	-24.8	48.52	54	-5.48	-	-	283	345	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT

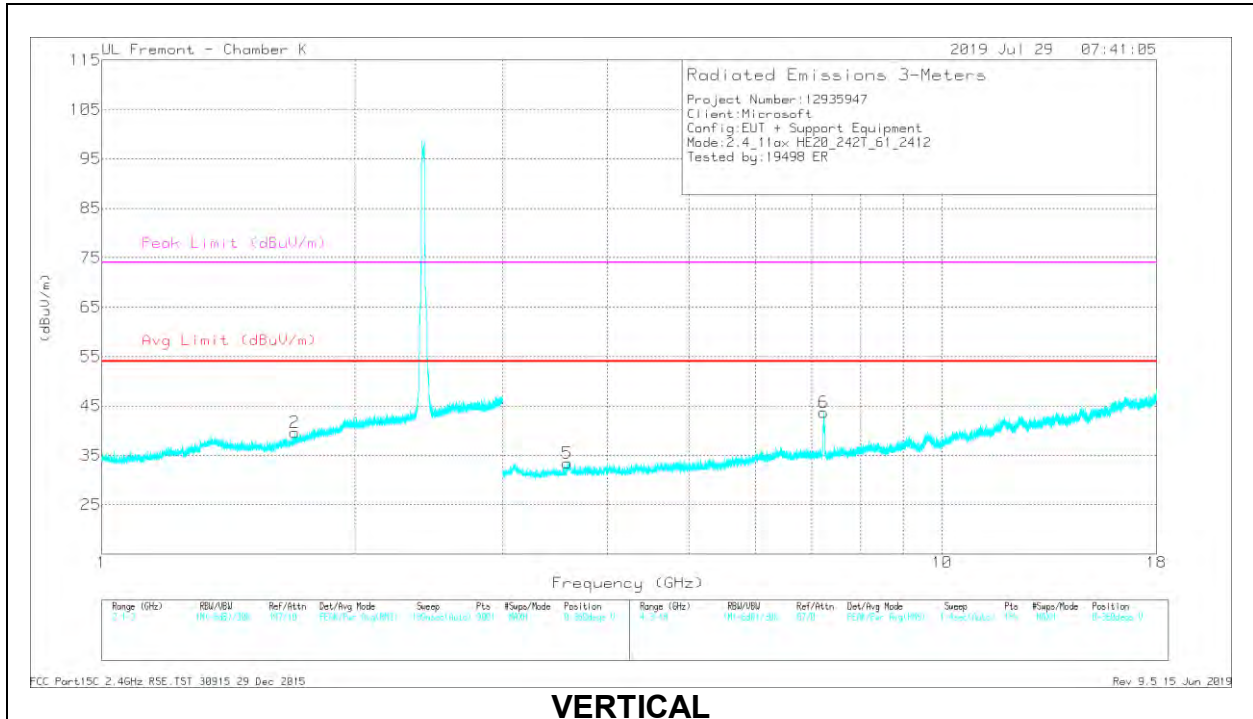
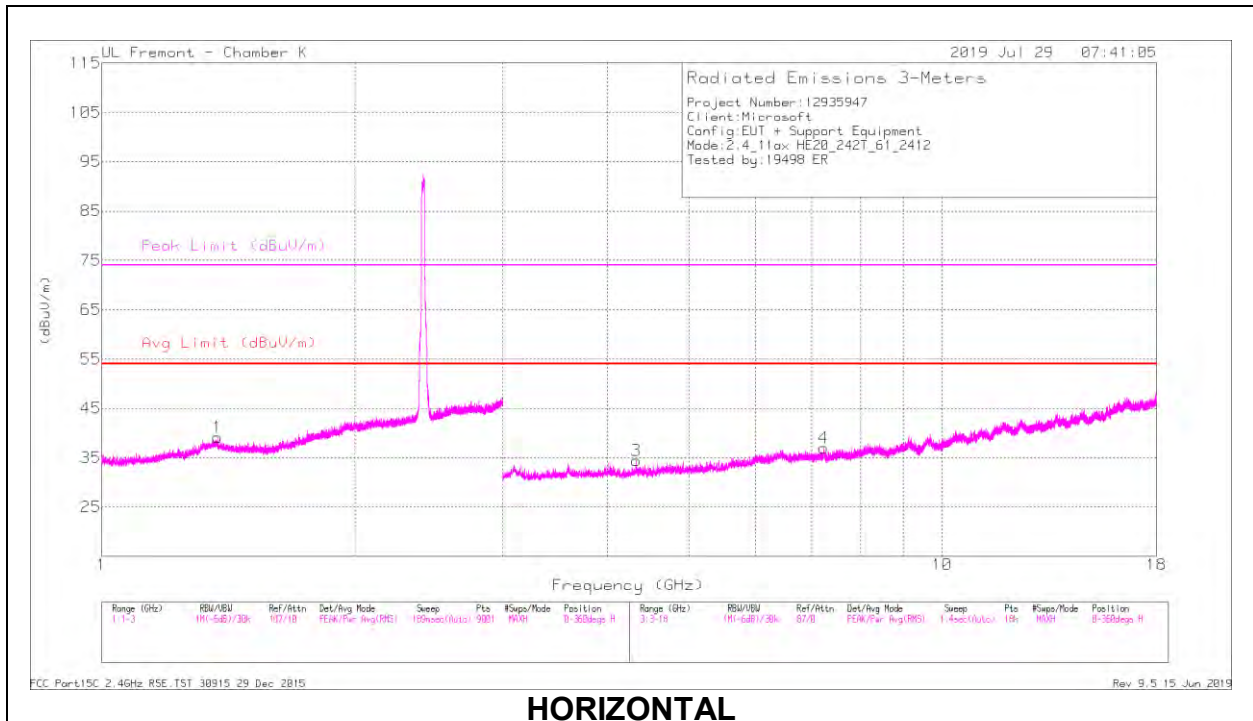


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filt /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	63.22	Pk	32.5	-24.8	70.92	-	-	74	-3.08	301	301	V
2	* 2.48353	64.19	Pk	32.5	-24.8	71.89	-	-	74	-2.11	301	301	V
3	* 2.48351	39.62	RMS	32.5	-24.8	47.32	54	-6.68	-	-	301	301	V
4	* 2.48372	42.87	RMS	32.5	-24.8	50.57	54	-3.43	-	-	301	301	V

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

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



RADIATED EMISSIONS

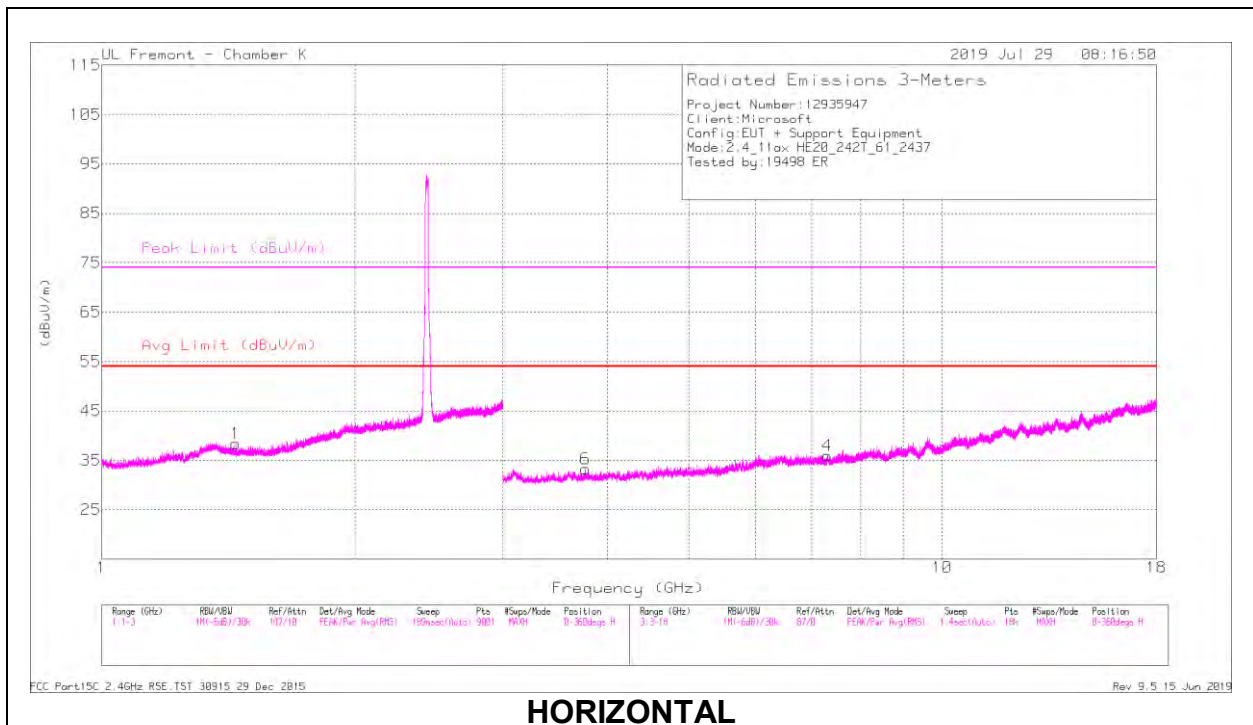
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.37356	32.72	PK2	29.4	-16.8	45.32	-	-	74	-28.68	134	220	H
	* 1.37578	22.95	MAv1	29.3	-16.9	35.35	54	-18.65	-	-	134	220	H
2	* 1.69498	32.08	PK2	29	-16	45.08	-	-	74	-28.92	305	141	V
	* 1.69844	22.29	MAv1	29	-16	35.29	54	-18.71	-	-	305	141	V
4	7.23708	40.14	PK2	35.7	-26.3	49.54	-	-	-	-	208	383	H
3	* 4.32655	40.43	PK2	33.4	-31.1	42.73	-	-	74	-31.27	299	312	H
	* 4.32479	29.04	MAv1	33.5	-31.2	31.34	54	-22.66	-	-	299	312	H
6	7.23762	46.99	PK2	35.6	-26.2	56.39	-	-	-	-	188	255	V
5	* 3.59087	40.67	PK2	34.2	-32.3	42.57	-	-	74	-31.43	3	195	V
	* 3.57769	29.33	MAv1	33.4	-32.2	30.53	54	-23.47	-	-	3	195	V

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

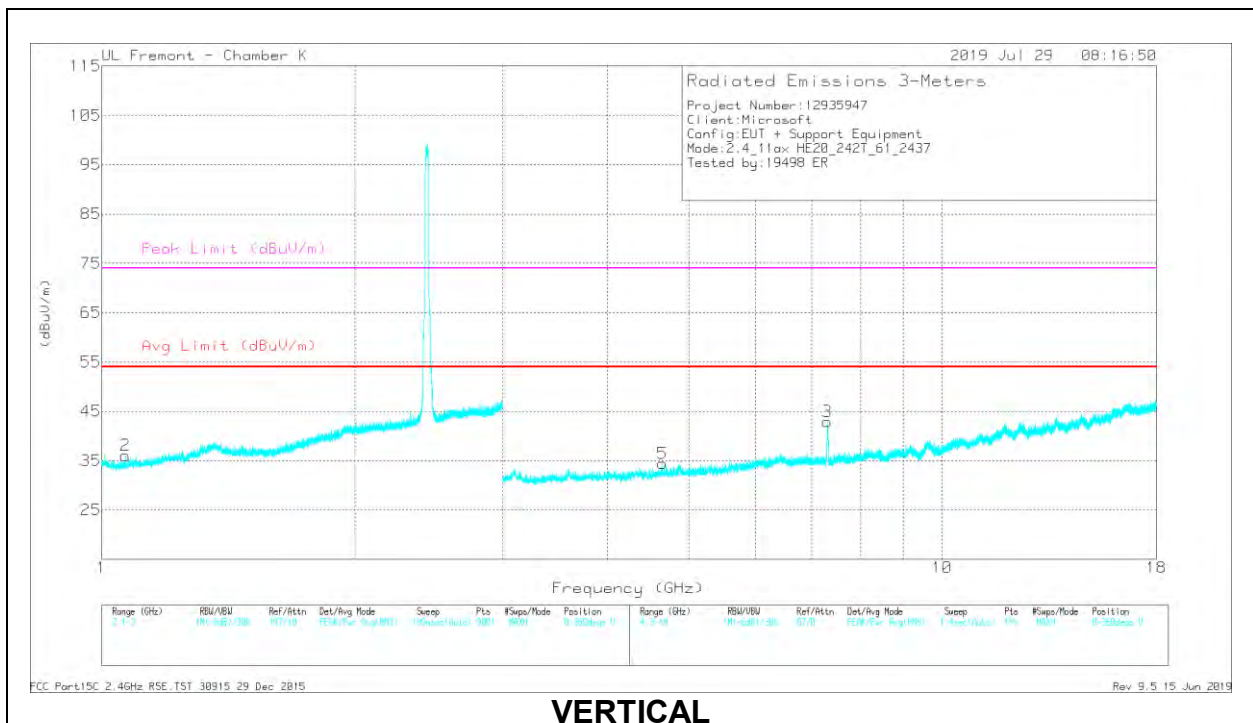
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

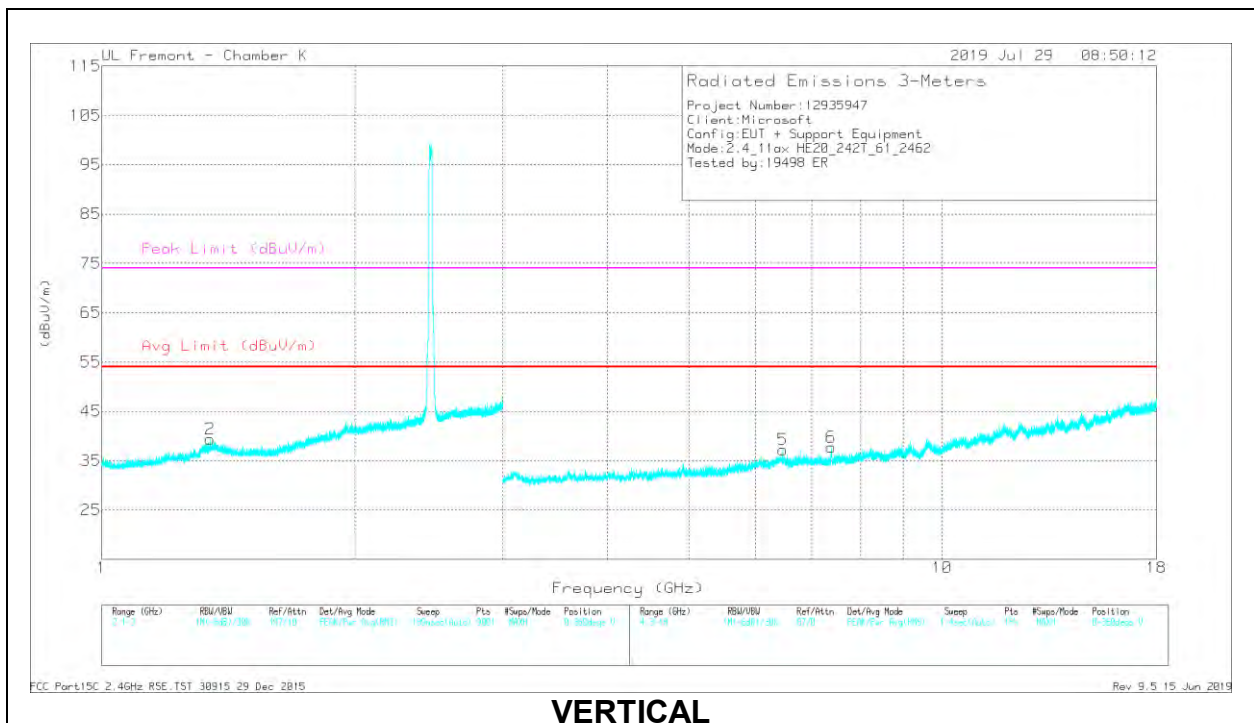
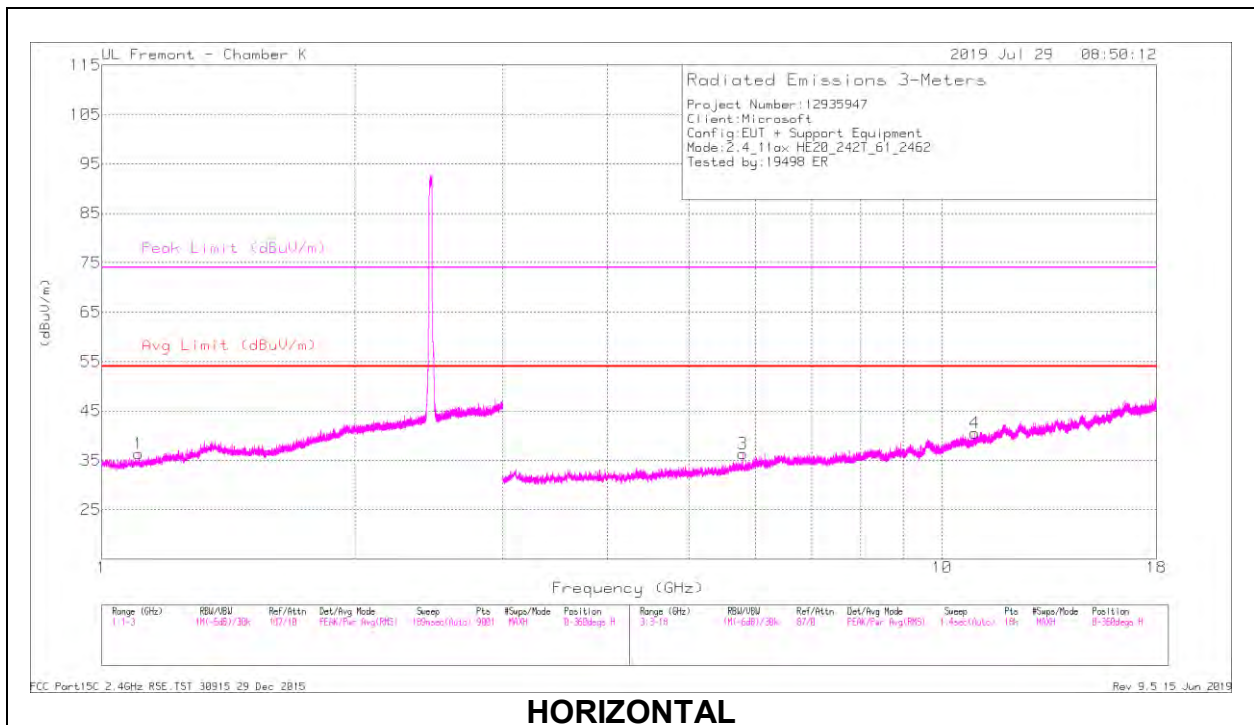
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.44297	30.78	PK2	28.5	-16.8	42.48	-	-	74	-31.52	99	130	H
	* 1.44346	23.15	MAv1	28.4	-16.8	34.75	54	-19.25	-	-	99	130	H
2	* 1.06749	35.26	PK2	27	-17.9	44.36	-	-	74	-29.64	13	217	V
	* 1.06905	24.22	MAv1	27	-17.9	33.32	54	-20.68	-	-	13	217	V
4	* 7.31103	44.9	PK2	35.6	-26.3	54.2	-	-	74	-19.8	104	300	H
	* 7.31123	33.05	MAv1	35.6	-26.3	42.35	54	-11.65	-	-	104	300	H
6	* 3.77569	40.72	PK2	33.3	-31.6	42.42	-	-	74	-31.58	48	120	H
	* 3.76548	28.92	MAv1	33.2	-31.7	30.42	54	-23.58	-	-	48	120	H
3	* 7.31369	47.91	PK2	35.6	-26.3	57.21	-	-	74	-16.79	150	244	V
	* 7.30697	35.21	MAv1	35.6	-26.3	44.51	54	-9.49	-	-	150	244	V
5	* 4.64984	39.6	PK2	33.9	-30.8	42.7	-	-	74	-31.3	324	208	V
	* 4.64037	28.54	MAv1	33.9	-30.9	31.54	54	-22.46	-	-	324	208	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL, CH 11 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.10884	31.4	PK2	27.7	-17.6	41.5	-	-	74	-32.5	266	167	H
	* 1.10788	22.45	MAv1	27.7	-17.6	32.55	54	-21.45	-	-	266	167	H
2	* 1.34525	31.91	PK2	29.4	-16.9	44.41	-	-	74	-29.59	351	127	V
	* 1.34311	22.62	MAv1	29.4	-16.9	35.12	54	-18.88	-	-	351	127	V
4	* 10.94452	31.77	PK2	37.9	-21.7	47.97	-	-	74	-26.03	62	128	H
	* 10.94272	20.59	MAv1	38	-21.7	36.89	54	-17.11	-	-	62	128	H
3	5.79868	36.61	PK2	35	-28.3	43.31	-	-	-	-	33	105	H
6	* 7.38345	38.69	PK2	35.6	-26.5	47.79	-	-	74	-26.21	144	219	V
	* 7.38797	27.1	MAv1	35.6	-26.5	36.2	54	-17.8	-	-	144	219	V
5	6.47231	34.54	PK2	35.8	-26.4	43.94	-	-	-	-	347	188	V

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

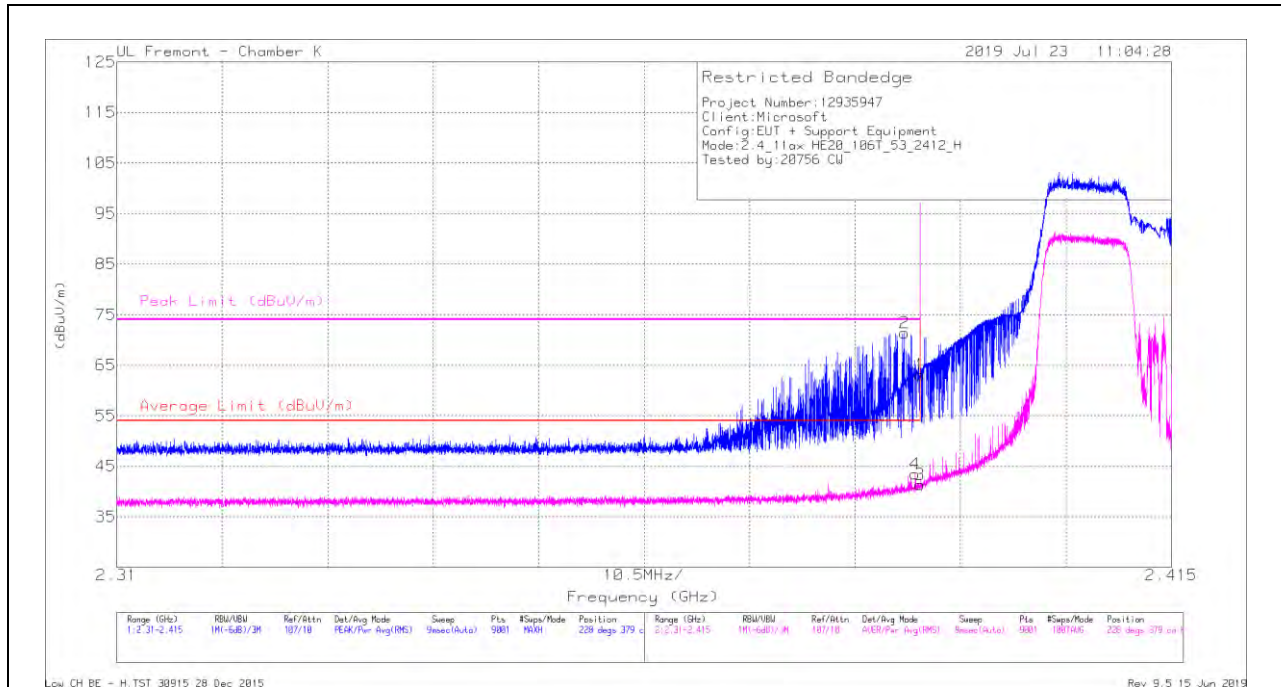
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

2TX Antenna 1 + Antenna 2 MODE: 106-Tones, RU index 53

BANDEDGE (LOW CHANNEL, CH 1)

HORIZONTAL RESULT



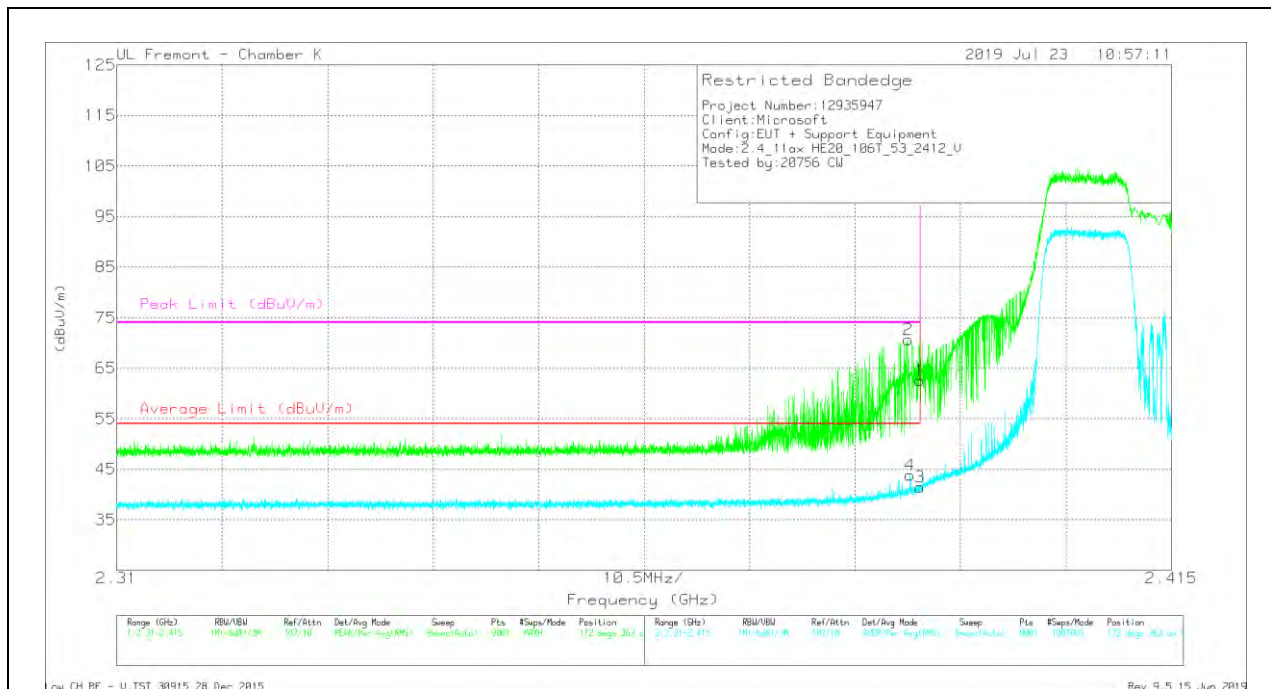
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EM C4294 (dB/m)	Amp/Cbl/Filt /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	55.88	Pk	31.9	-24.7	63.08	-	-	74	-10.92	228	379	H
2	* 2.38839	64.11	Pk	31.9	-24.6	71.41	-	-	74	-2.59	228	379	H
3	* 2.38999	34.2	RMS	31.9	-24.7	41.4	54	-12.6	-	-	228	379	H
4	* 2.3895	36.22	RMS	31.9	-24.7	43.42	54	-10.58	-	-	228	379	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EM C4294 (dB/m)	Amp/Cbl/Filt /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degr)	Height (cm)	Polarity
1	* 2.38999	55.37	Pk	31.9	-24.7	62.57	-	-	74	-11.43	172	363	V
2	* 2.38882	63.44	Pk	31.9	-24.7	70.64	-	-	74	-3.36	172	363	V
3	* 2.38999	34.24	RMS	31.9	-24.7	41.44	54	-12.56	-	-	172	363	V
4	* 2.38899	36.61	RMS	31.9	-24.7	43.81	54	-10.19	-	-	172	363	V

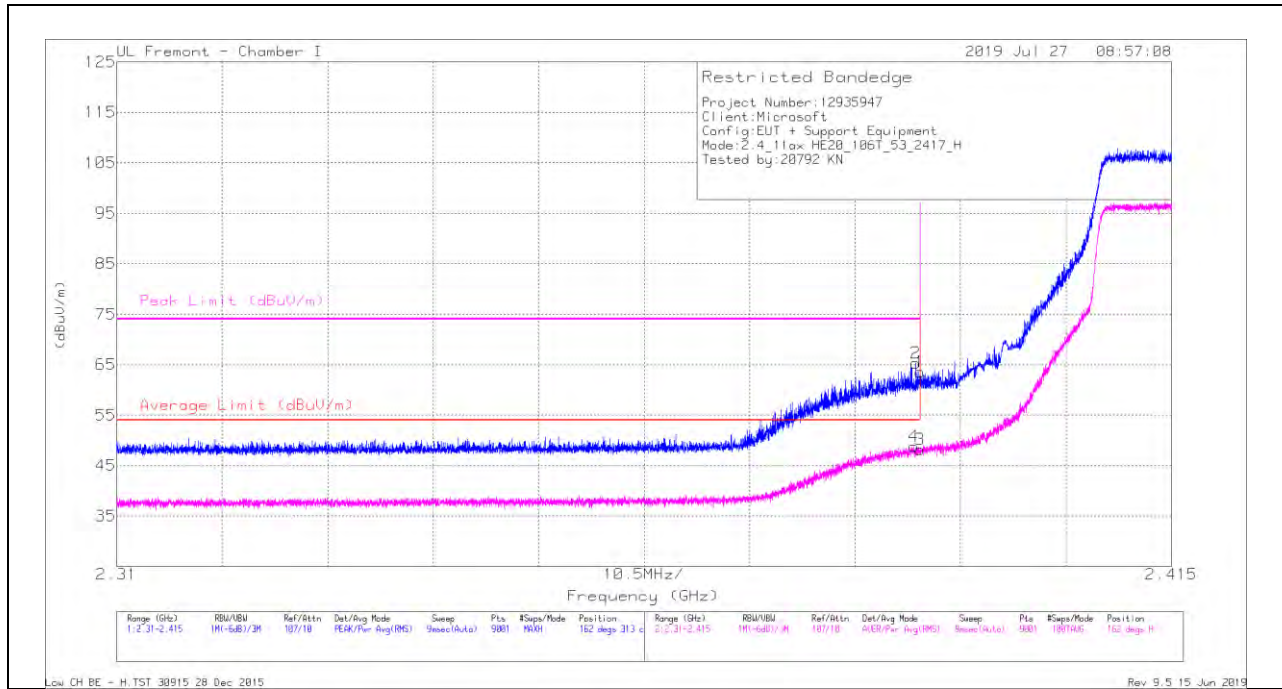
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (LOW CHANNEL, CH 2)

HORIZONTAL RESULT



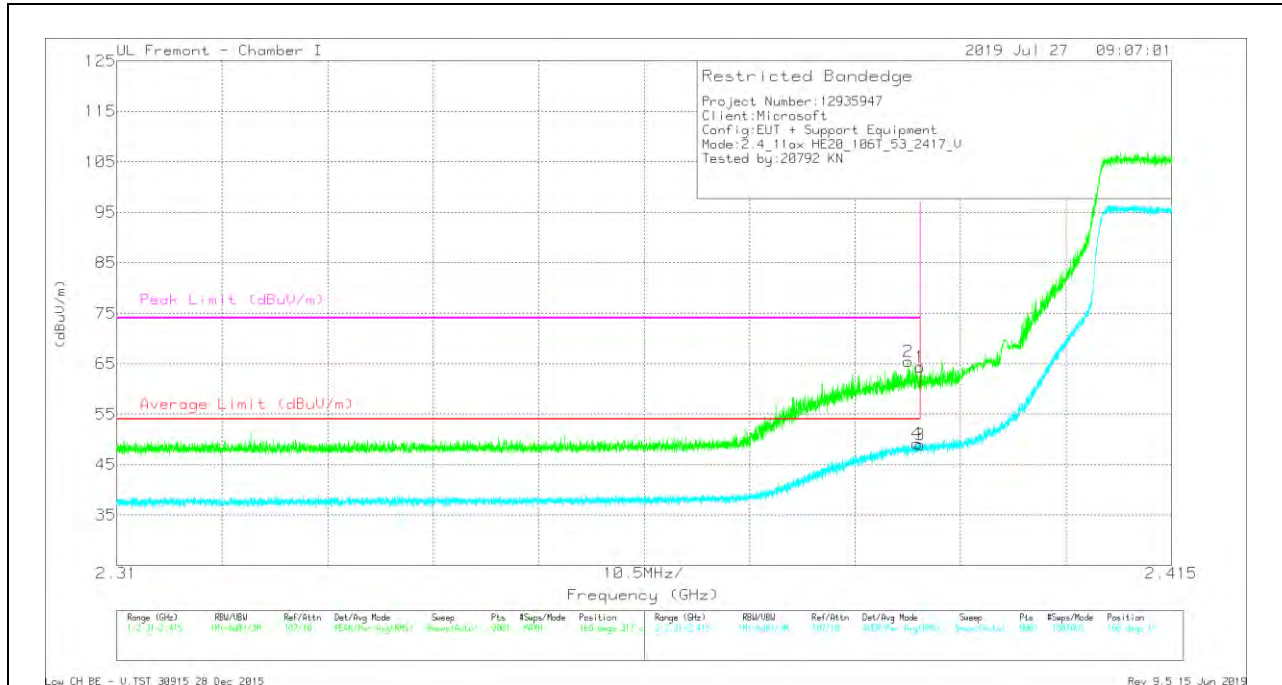
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.38999	53.28	Pk	31.9	-21.6	63.58	-	-	74	-10.42	162	313	H
2	2.38956	54.99	Pk	31.9	-21.6	65.29	-	-	74	-8.71	162	313	H
3	2.38999	37.9	RMS	31.9	-21.6	48.2	54	-5.8	-	-	162	313	H
4	2.38935	38.55	RMS	31.9	-21.6	48.85	54	-5.15	-	-	162	313	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cb/Flt r/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.38999	54.05	Pk	31.9	-21.6	64.35	-	-	74	-9.65	160	317	V
2	2.38882	55.1	Pk	31.9	-21.6	65.4	-	-	74	-8.6	160	317	V
3	2.38999	38.64	RMS	31.9	-21.6	48.94	54	-5.06	-	-	160	317	V
4	2.3897	38.85	RMS	31.9	-21.6	49.15	54	-4.85	-	-	160	317	V

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

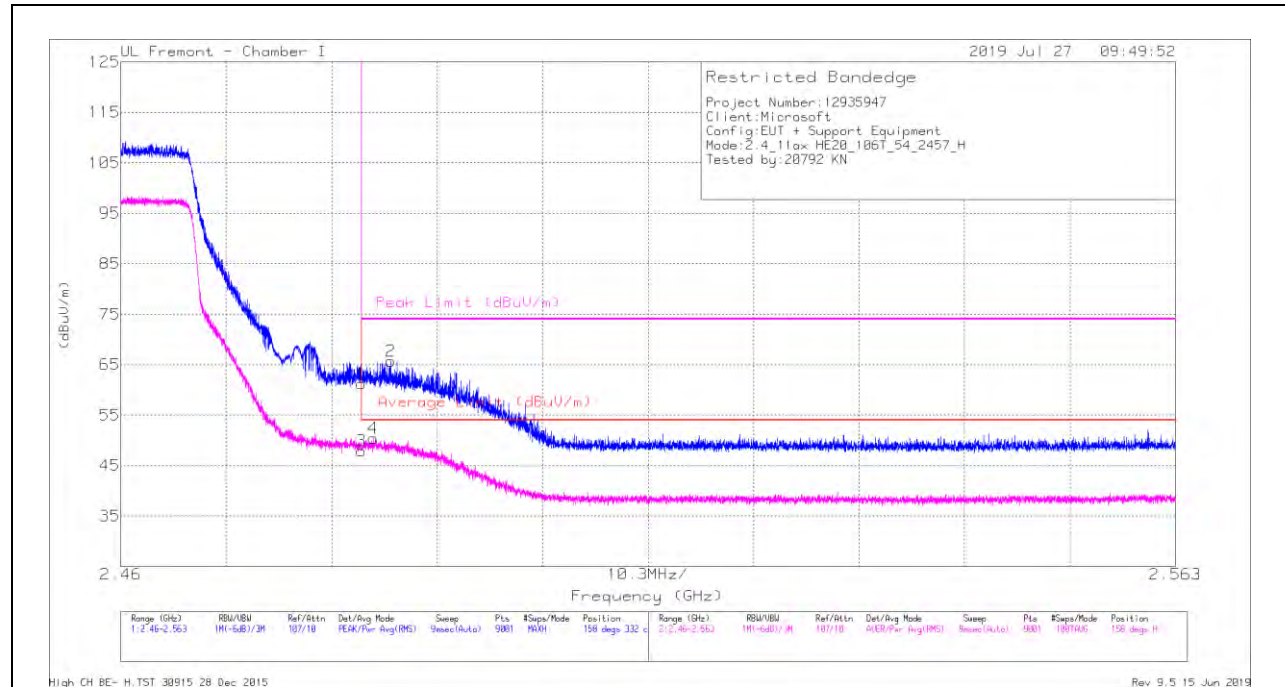
Pk - Peak detector

RMS - RMS detection

2TX Antenna 1 + Antenna 2 MODE: 106-Tones, RU index 54

BANDEDGE (HIGH CHANNEL, CH 10)

HORIZONTAL RESULT



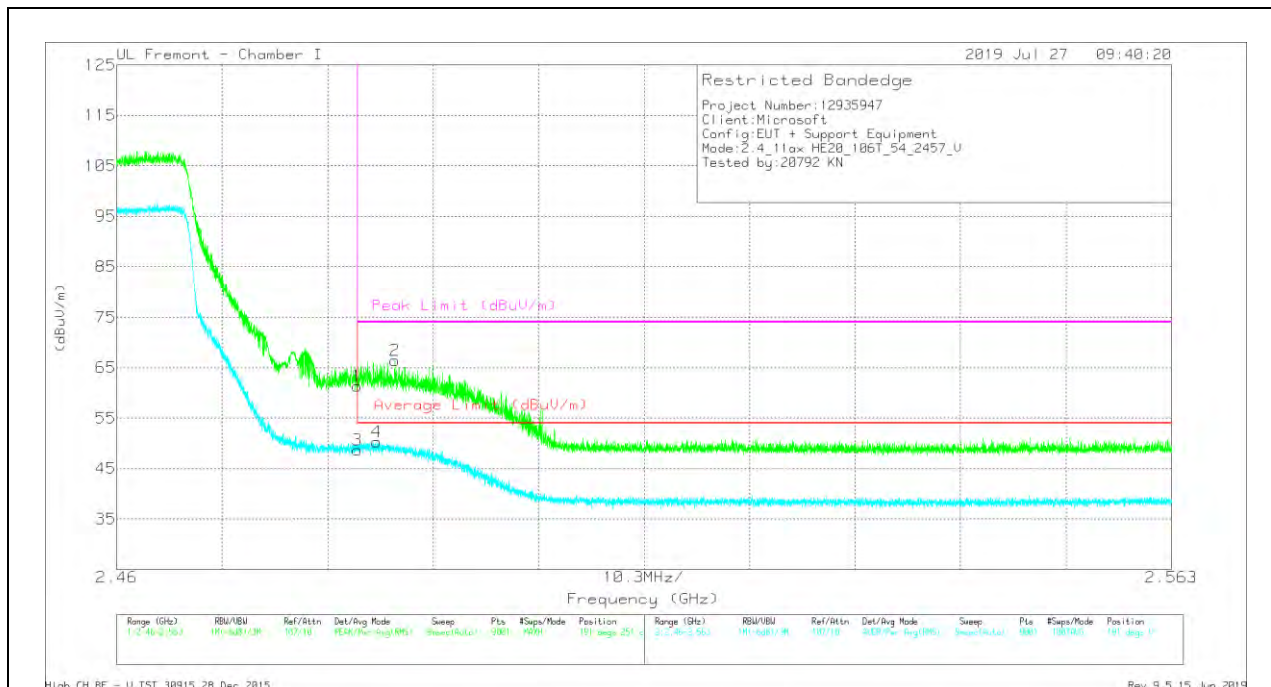
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.48351	50.57	Pk	32.4	-21.7	61.27	-	-	74	-12.73	158	332	H
2	2.48637	55.13	Pk	32.4	-21.8	65.73	-	-	74	-8.27	158	332	H
3	2.48351	37.21	RMS	32.4	-21.7	47.91	54	-6.09	-	-	158	332	H
4	2.48465	39.87	RMS	32.4	-21.8	50.47	54	-3.53	-	-	158	332	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filt r/Pad (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	50.62	Pk	32.4	-21.7	61.32	-	-	74	-12.68	191	251	V
2	2.48717	55.86	Pk	32.3	-21.7	66.46	-	-	74	-7.54	191	251	V
3	2.48351	37.99	RMS	32.4	-21.7	48.69	54	-5.31	-	-	191	251	V
4	2.48538	39.7	RMS	32.4	-21.8	50.3	54	-3.7	-	-	191	251	V

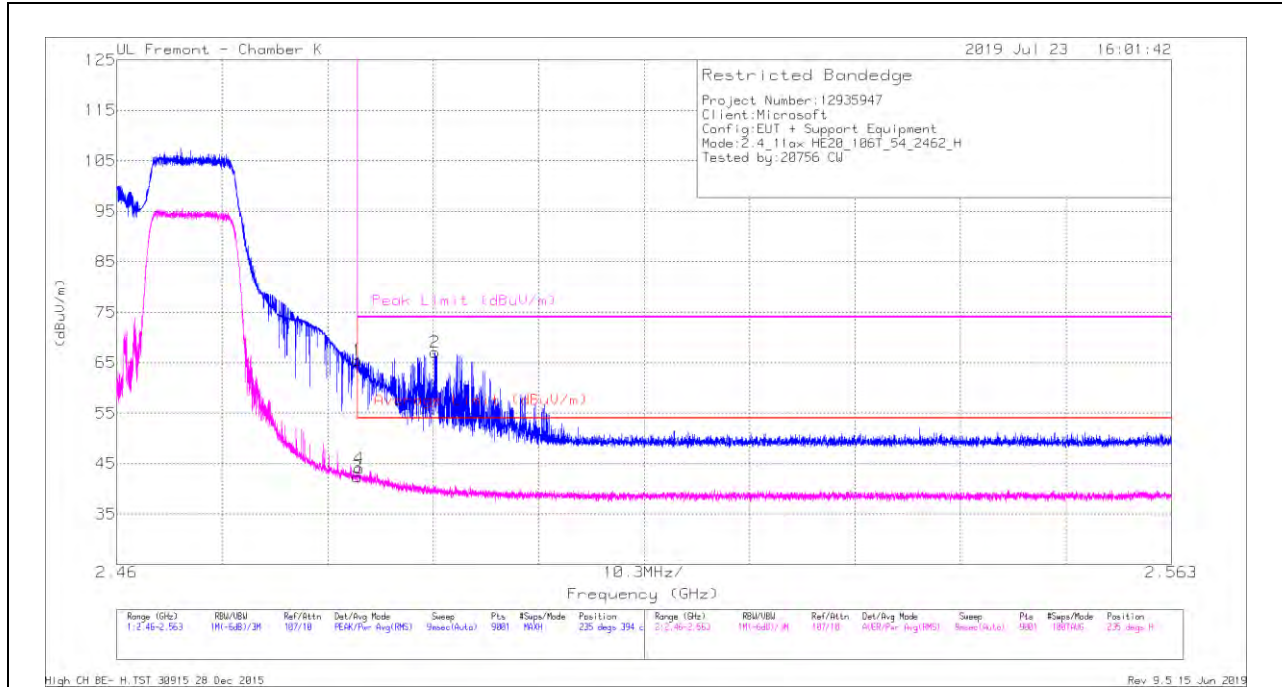
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 11)

HORIZONTAL RESULT



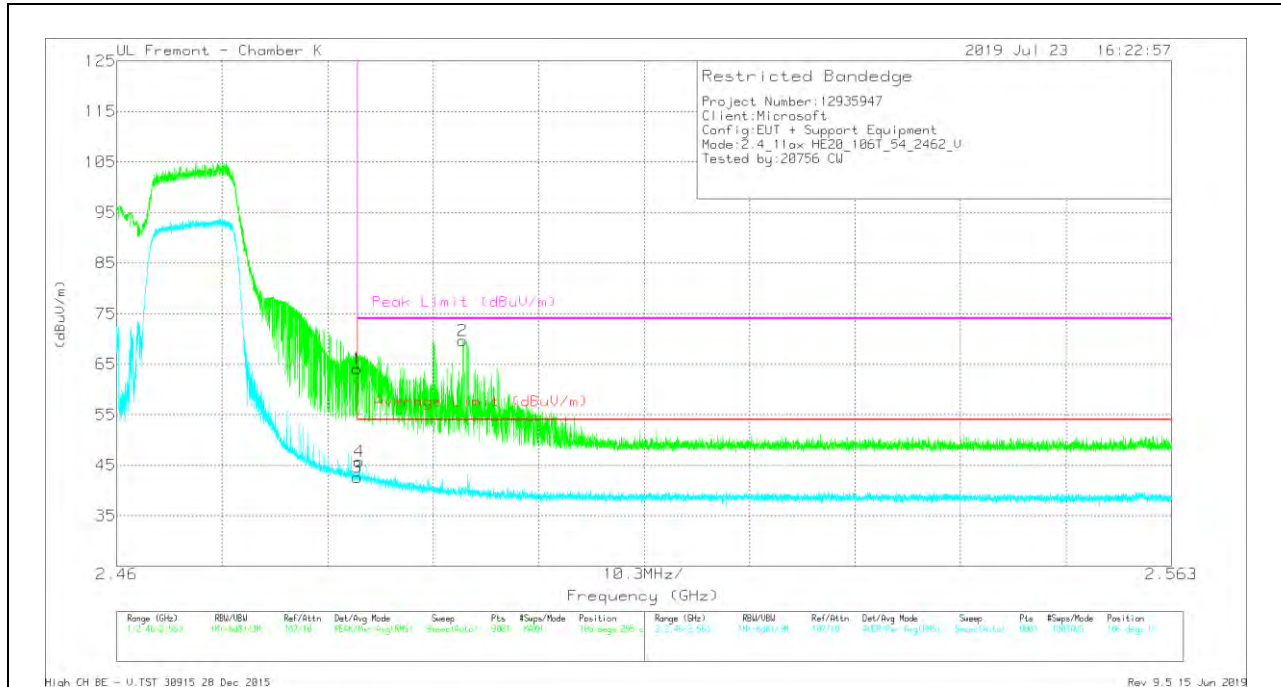
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filt /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	57.79	Pk	32.5	-24.8	65.49	-	-	74	-8.51	235	394	H
2	* 2.49111	59.36	Pk	32.5	-24.8	67.06	-	-	74	-6.94	235	394	H
3	* 2.48351	34.61	RMS	32.5	-24.8	42.31	54	-11.69	-	-	235	394	H
4	* 2.48367	36.43	RMS	32.5	-24.8	44.13	54	-9.87	-	-	235	394	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT

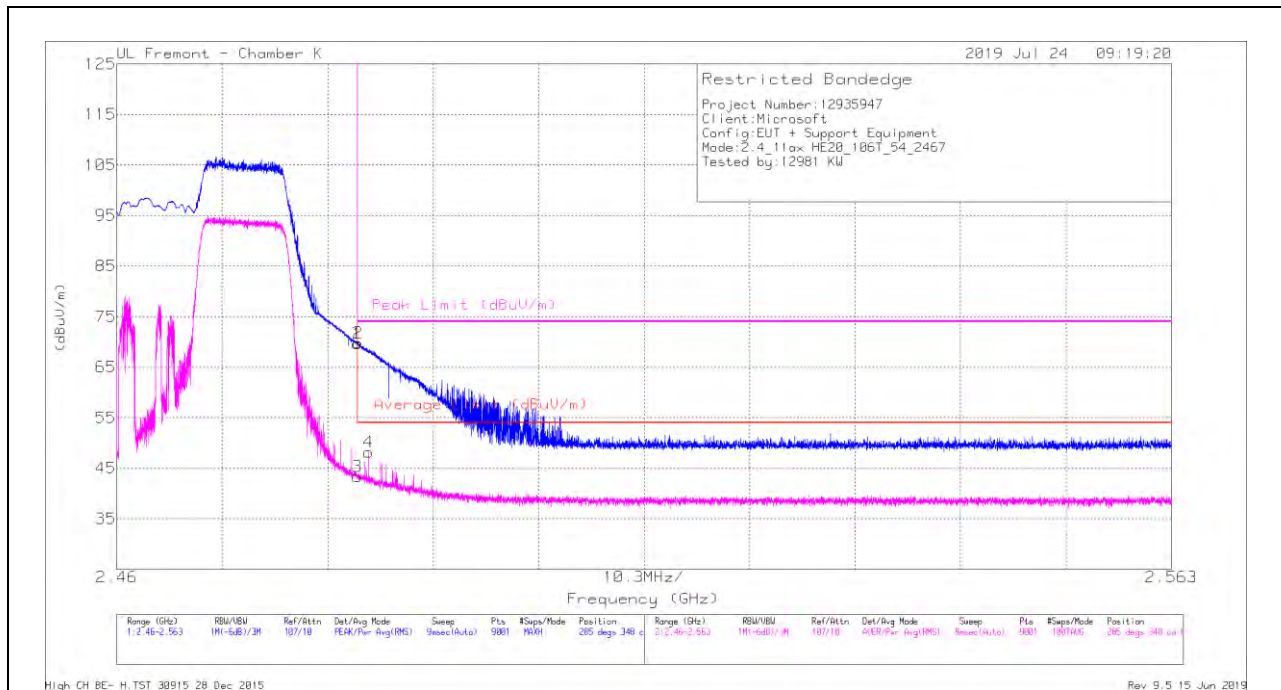


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EM C4294 (dB/m)	Amp/Cbl/Filt /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degr)	Height (cm)	Polarity
1	* 2.48351	56.39	Pk	32.5	-24.8	64.09	-	-	74	-9.91	186	295	V
2	* 2.49376	62	Pk	32.5	-24.8	69.7	-	-	74	-4.3	186	295	V
3	* 2.48351	34.87	RMS	32.5	-24.8	42.57	54	-11.43	-	-	186	295	V
4	* 2.48366	37.97	RMS	32.5	-24.8	45.67	54	-8.33	-	-	186	295	V

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

BANDEDGE (HIGH CHANNEL, CH 12)

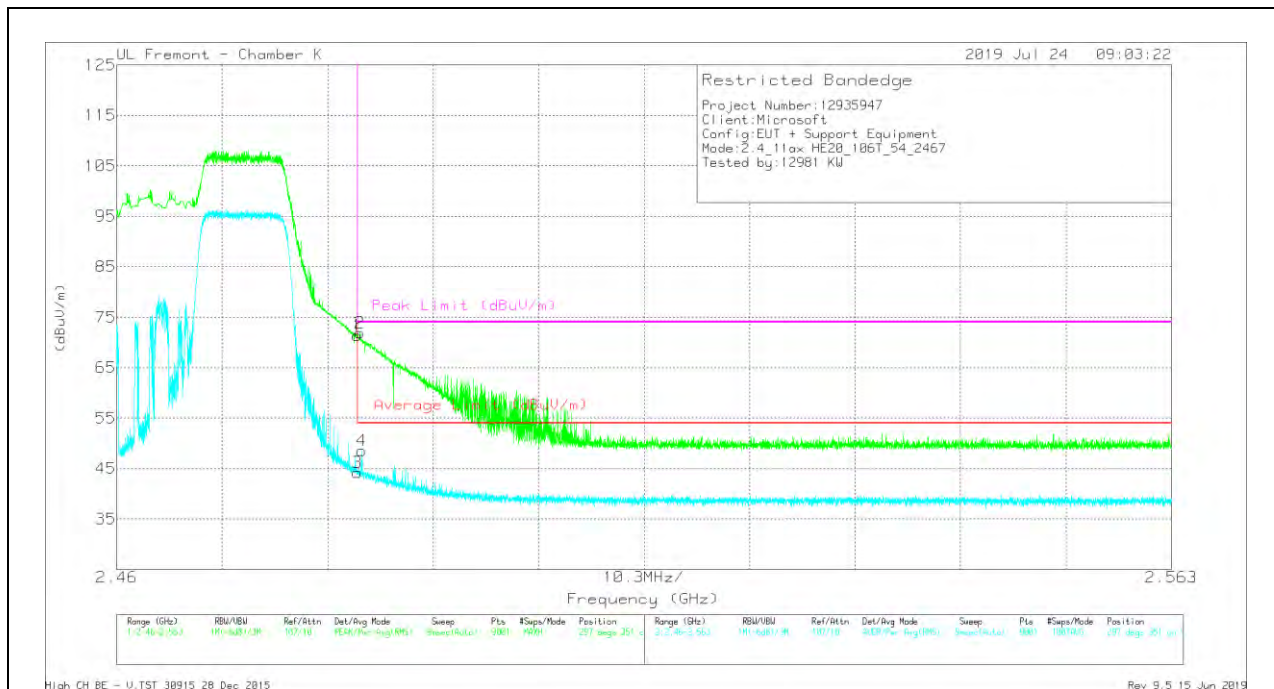
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filt /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	61.92	Pk	32.5	-24.8	69.62	-	-	74	-4.38	285	348	H
2	* 2.48358	62.12	Pk	32.5	-24.8	69.82	-	-	74	-4.18	285	348	H
3	* 2.48351	35.66	RMS	32.5	-24.8	43.36	54	-10.64	-	-	285	348	H
4	* 2.48459	40.46	RMS	32.5	-24.8	48.16	54	-5.84	-	-	285	348	H

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

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filt /Pad (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	63.65	Pk	32.5	-24.8	71.35	-	-	74	-2.65	297	351	V
2	* 2.48375	64.24	Pk	32.5	-24.8	71.94	-	-	74	-2.06	297	351	V
3	* 2.48351	36.53	RMS	32.5	-24.8	44.23	54	-9.77	-	-	297	351	V
4	* 2.4839	40.84	RMS	32.5	-24.8	48.54	54	-5.46	-	-	297	351	V

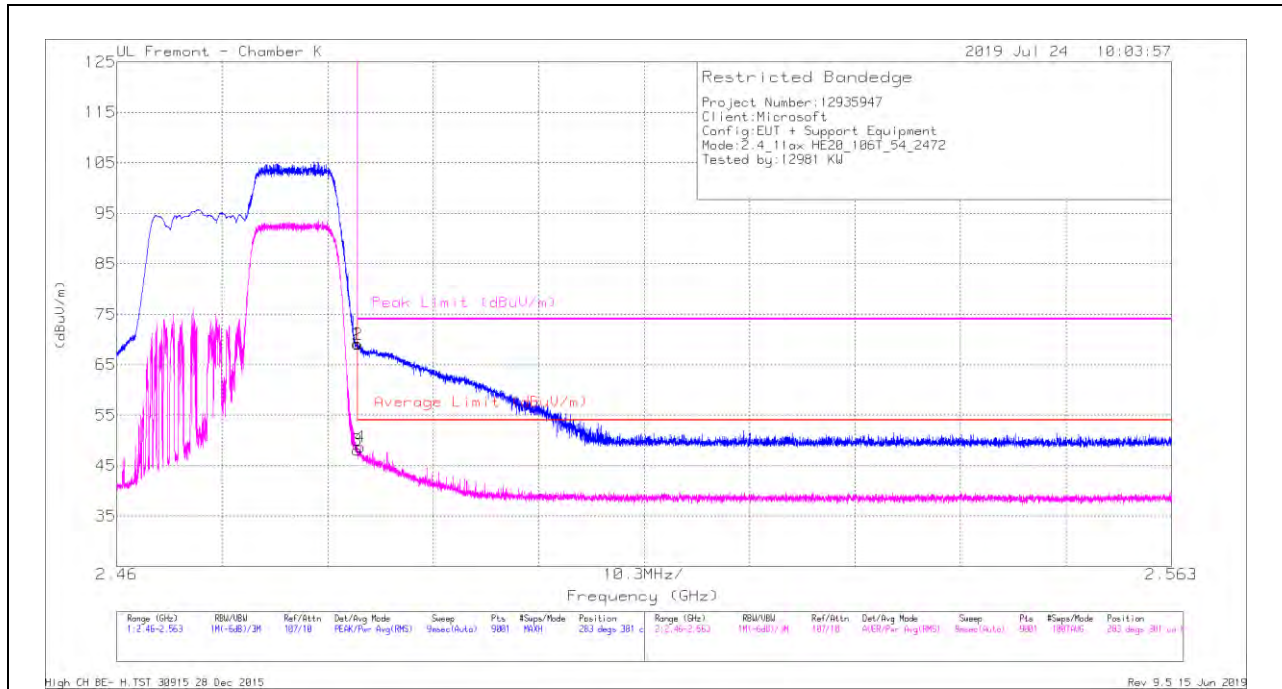
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 13)

HORIZONTAL RESULT



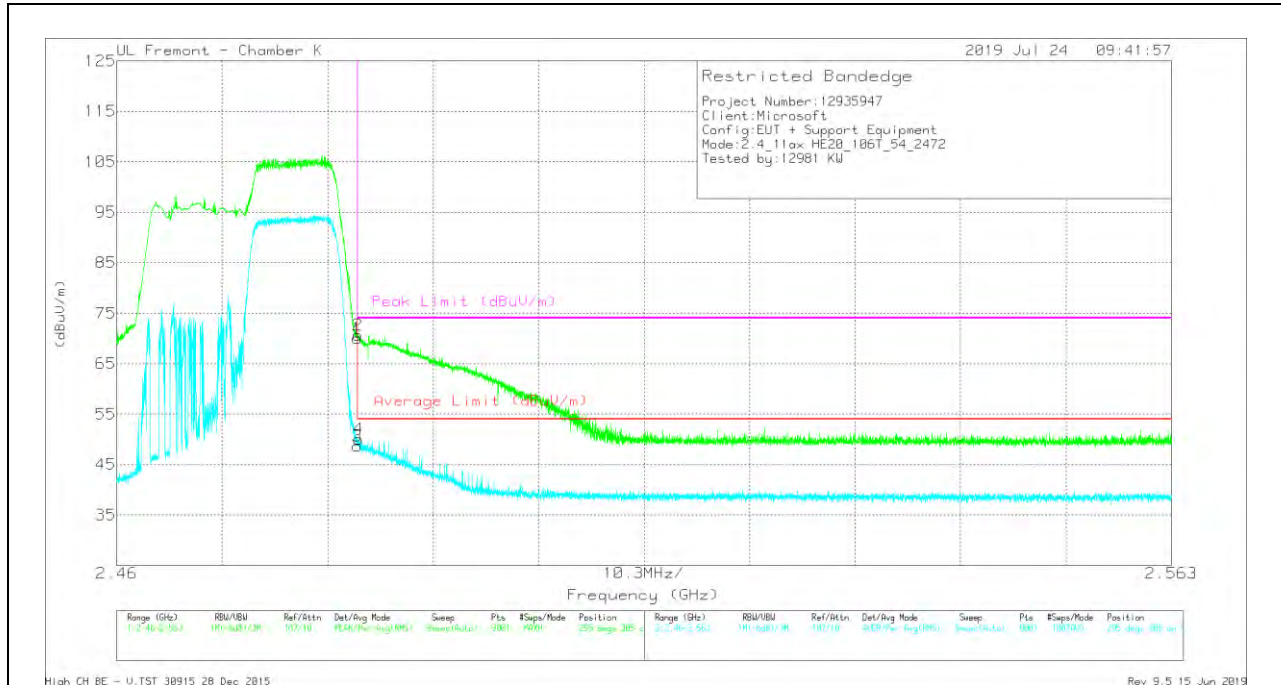
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/CbllFilt /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	61.46	Pk	32.5	-24.8	69.16	-	-	74	-4.84	283	381	H
2	* 2.48353	61.32	Pk	32.5	-24.8	69.02	-	-	74	-4.98	283	381	H
3	* 2.48351	40.38	RMS	32.5	-24.8	48.08	54	-5.92	-	-	283	381	H
4	* 2.48382	41.02	RMS	32.5	-24.8	48.72	54	-5.28	-	-	283	381	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filt /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degr)	Height (cm)	Polarity
1	* 2.48351	62.3	Pk	32.5	-24.8	70	-	-	74	-4	295	305	V
2	* 2.48358	62.96	Pk	32.5	-24.8	70.66	-	-	74	-3.34	295	305	V
3	* 2.48351	40.99	RMS	32.5	-24.8	48.69	54	-5.31	-	-	295	305	V
4	* 2.4836	42.31	RMS	32.5	-24.8	50.01	54	-3.99	-	-	295	305	V

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

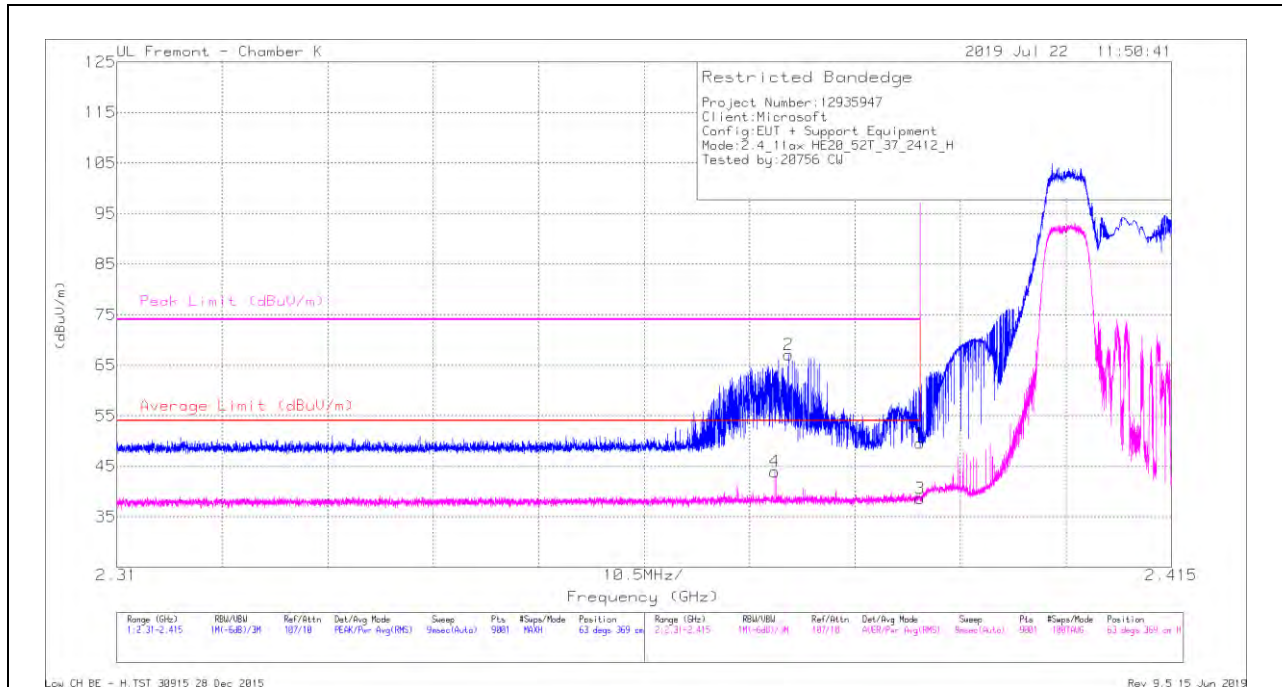
Pk - Peak detector

RMS - RMS detection

2TX Antenna 1 + Antenna 2 MODE: 52-Tones, RU index 37

BANDEDGE (LOW CHANNEL, CH 1)

HORIZONTAL RESULT



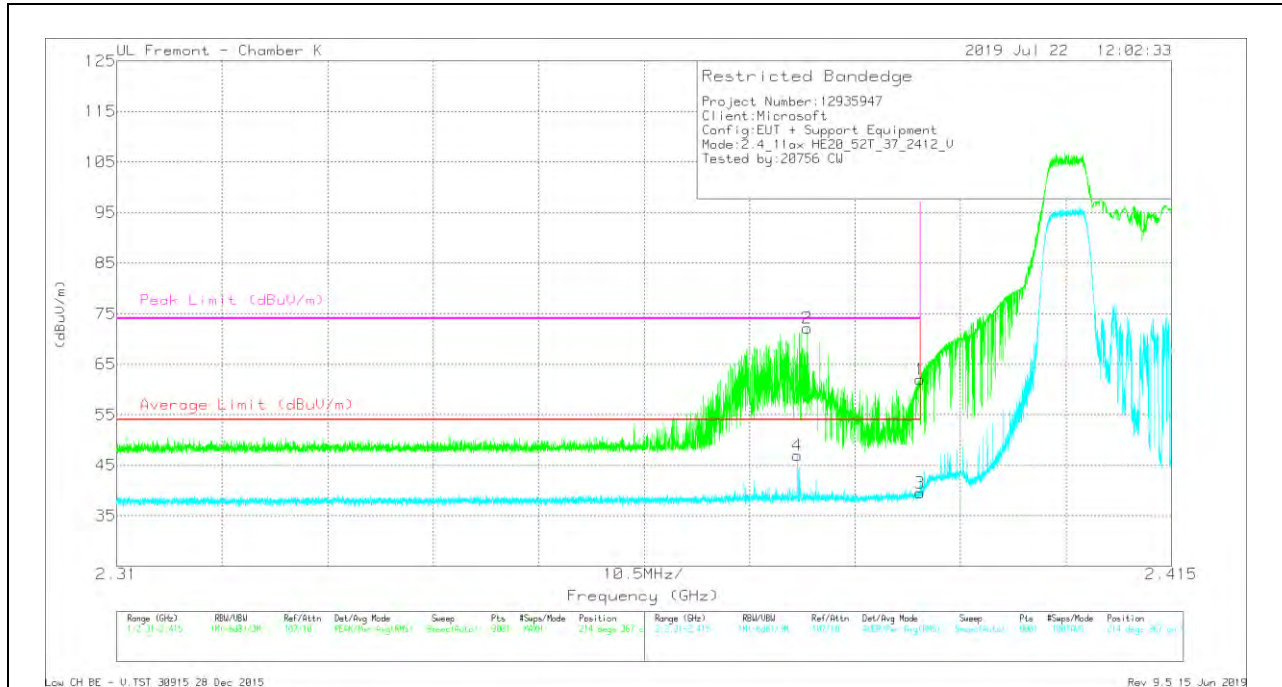
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EM C4294 (dB/m)	Amp/Cbl/Filt /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	42.32	Pk	31.9	-24.7	49.52	-	-	74	-24.48	63	369	H
2	* 2.37686	59.88	Pk	31.9	-24.7	67.08	-	-	74	-6.92	63	369	H
3	* 2.38999	31.39	RMS	31.9	-24.7	38.59	54	-15.41	-	-	63	369	H
4	* 2.37549	36.6	RMS	31.9	-24.6	43.9	54	-10.1	-	-	63	369	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EM C4294 (dB/m)	Amp/Cbl/Filt /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	54.76	Pk	31.9	-24.7	61.96	-	-	74	-12.04	214	367	V
2	* 2.37878	64.96	Pk	31.9	-24.7	72.16	-	-	74	-1.84	214	367	V
3	* 2.38999	32.34	RMS	31.9	-24.7	39.54	54	-14.46	-	-	214	367	V
4	* 2.37776	39.73	RMS	31.9	-24.7	46.93	54	-7.07	-	-	214	367	V

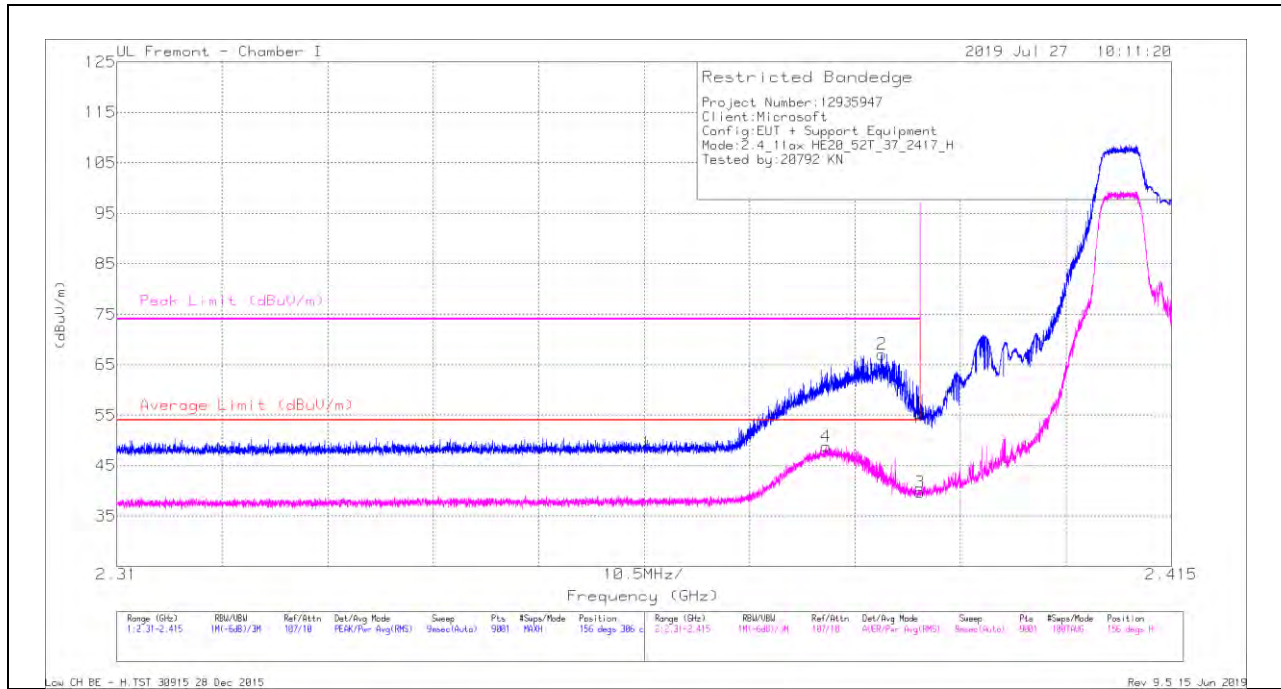
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (LOW CHANNEL, CH 2)

HORIZONTAL RESULT



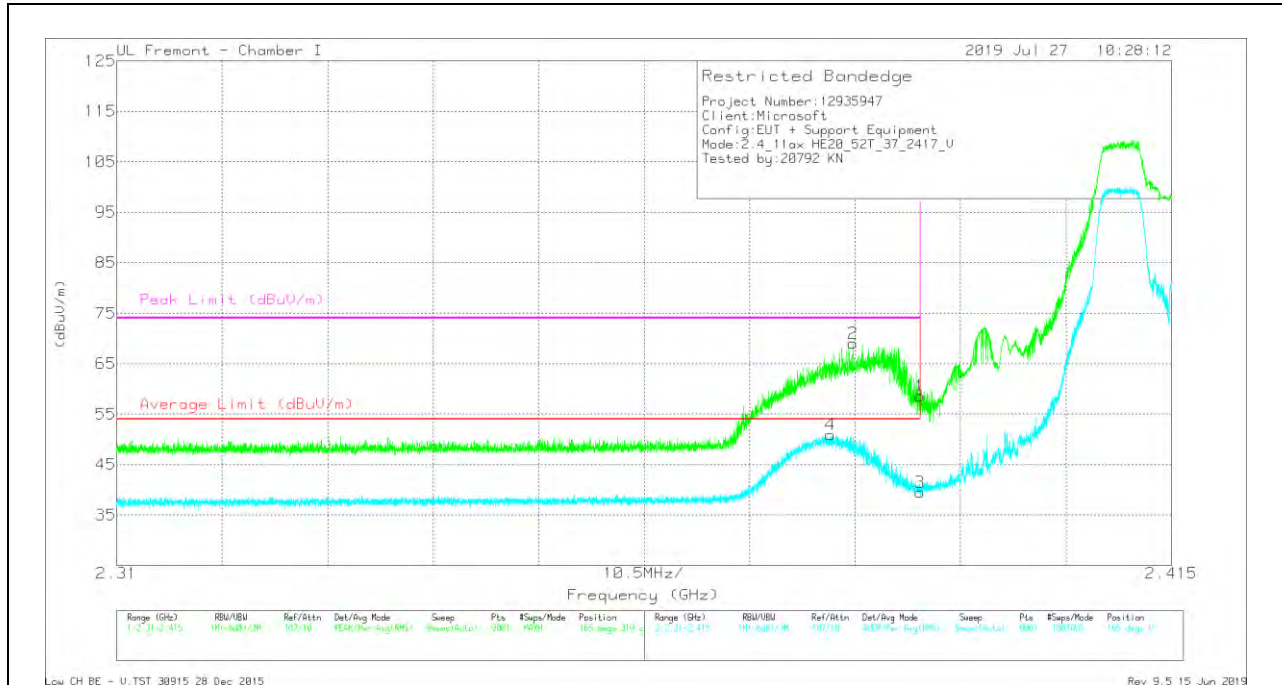
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.38999	45.03	Pk	31.9	-21.6	55.33	-	-	74	-18.67	156	306	H
2	2.38615	56.81	Pk	31.9	-21.6	67.11	-	-	74	-6.89	156	306	H
3	2.38999	29.4	RMS	31.9	-21.6	39.7	54	-14.3	-	-	156	306	H
4	2.3806	38.41	RMS	31.9	-21.5	48.81	54	-5.19	-	-	156	306	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.38999	48.26	Pk	31.9	-21.6	58.56	-	-	74	-15.44	165	319	V
2	2.38332	58.72	Pk	31.9	-21.6	69.02	-	-	74	-4.98	165	319	V
3	2.38999	29.17	RMS	31.9	-21.6	39.47	54	-14.53	-	-	165	319	V
4	2.38108	40.55	RMS	31.9	-21.5	50.95	54	-3.05	-	-	165	319	V

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

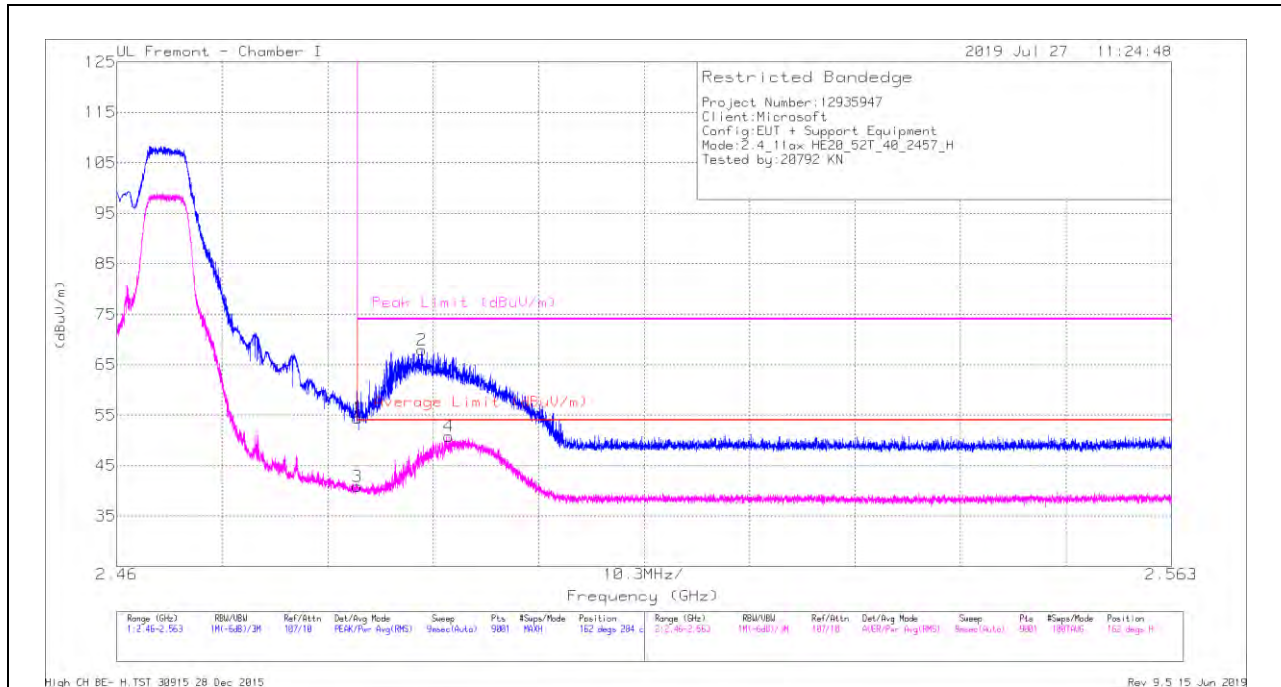
Pk - Peak detector

RMS - RMS detection

2TX Antenna 1 + Antenna 2 MODE: 52-Tones, RU index 40

BANDEDGE (HIGH CHANNEL, CH 10)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fit r/Pad (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	43.65	Pk	32.4	-21.7	54.35	-	-	74	-19.65	162	284	H
2	2.48982	57.33	Pk	32.3	-21.7	67.93	-	-	74	-6.07	162	284	H
3	2.48351	30.14	RMS	32.4	-21.7	40.84	54	-13.16	-	-	162	284	H
4	2.49244	40.16	RMS	32.3	-21.7	50.76	54	-3.24	-	-	162	284	H

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

UL Fremont - Chamber I

2019 Jul 27 11:11:48

Restricted Bandedge

Project Number:12935947
 Client:MicroSoft
 Config:EUT + Support Equipment
 Made:2.4.11ax HE28_52T_48_2457_U
 Tested by:20792 KN

CdBUU/m

Peak Limit (1dBUU/m)

Average Limit (150 U/m)

10.3MHz/

Frequency (GHz)

Range (GHz)	RBW/1BW	Ref/Attn	Det/Avg Mode	Sweep	Pls	#Seps/Mode	Position	Range (GHz)	RBW/1BW	Ref/Attn	Det/Avg Mode	Sweep	Pls	#Seps/Mode	Position
1.2-46.2 (56)	100/100 (30)	107/10	PEAK/Pre-Avg (MS)	Sweep (Auto)	1000	1000	174 deg 122 s	2.4-2.563 (56)	100/100 (30)	107/10	dB/Pre-Avg (MS)	Sweep (Auto)	1000	1000	174 deg 122 s

High CH BE - U.TST. 38915 28 Dec 2015

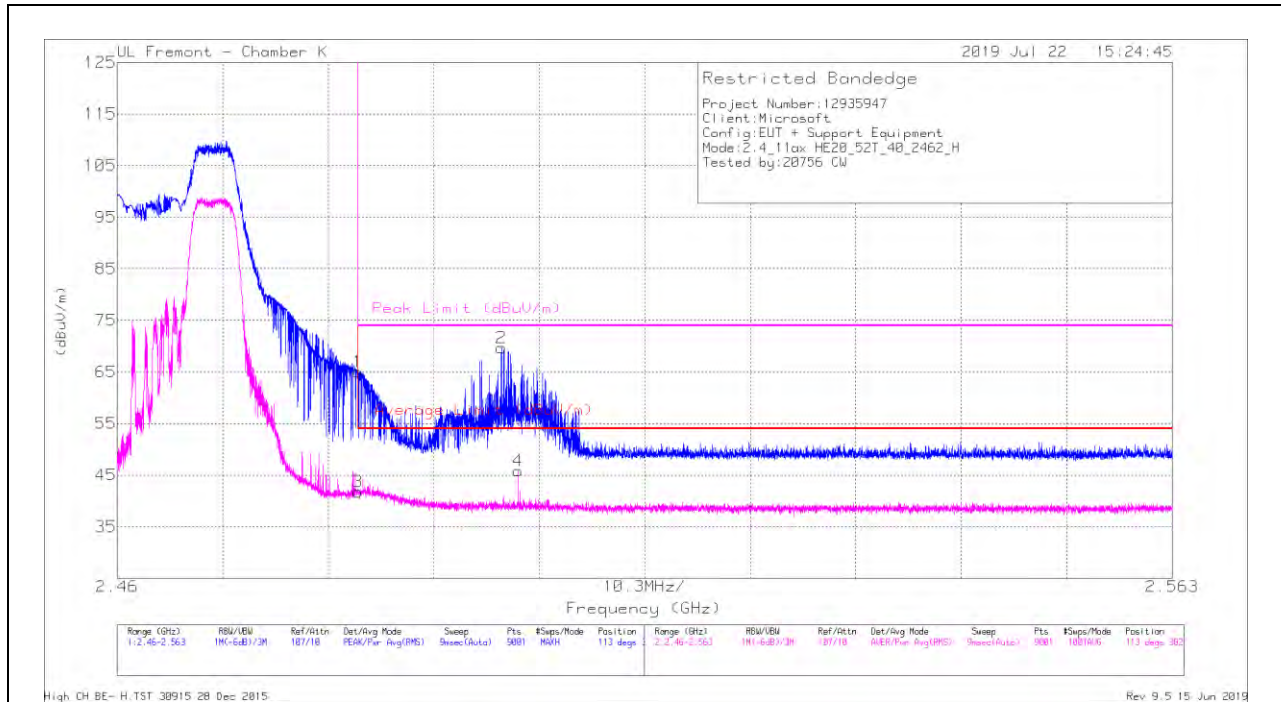
Rev 9.5 15 Jun 2019

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fit r/Pad (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	47.31	PK	32.4	-21.7	58.01	-	-	74	-15.99	174	322	V
2	2.49085	59.68	PK	32.3	-21.7	70.28	-	-	74	-3.72	174	322	V
3	2.48351	30.62	RMS	32.4	-21.7	41.32	54	-12.68	-	-	174	322	V
4	2.49268	41.79	RMS	32.3	-21.7	52.39	54	-1.61	-	-	174	322	V

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BANDEDGE (HIGH CHANNEL, CH 11)

HORIZONTAL RESULT



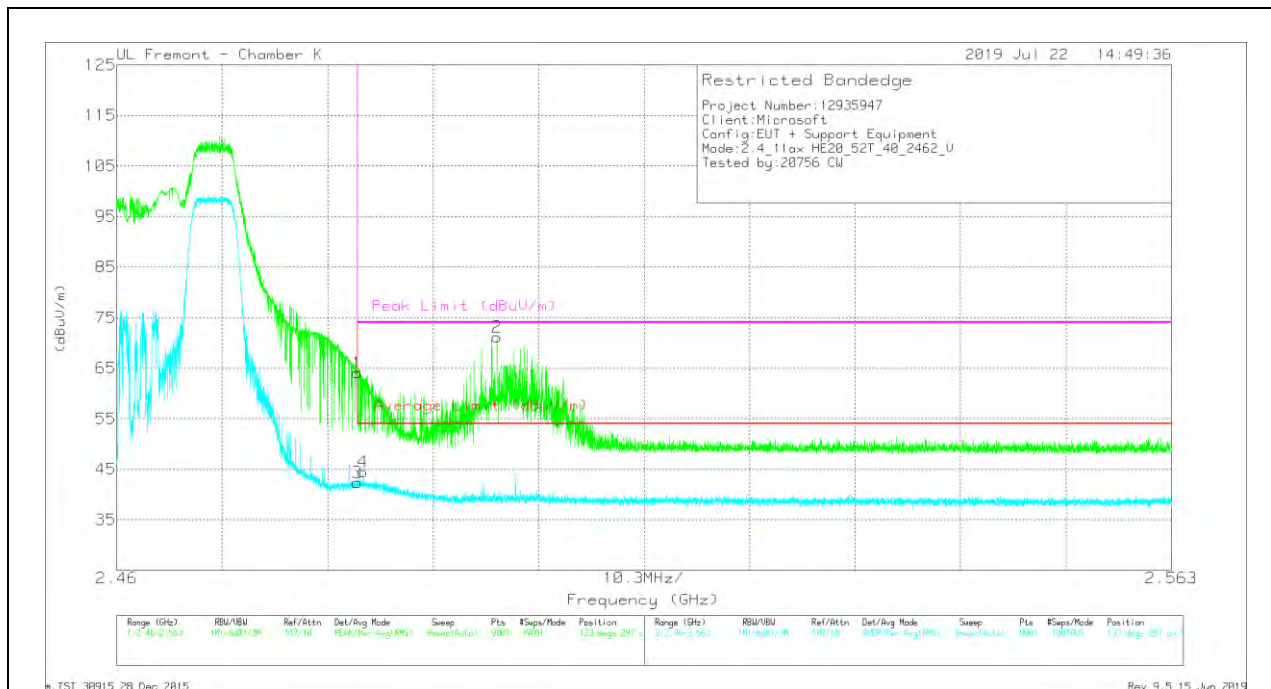
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EM C4294 (dB/m)	Amp/Cbl/Filt /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	57.35	Pk	32.5	-24.8	65.05	-	-	74	-8.95	113	382	H
2	* 2.4975	62.06	Pk	32.4	-24.8	69.66	-	-	74	-4.34	113	382	H
3	* 2.48351	34.06	RMS	32.5	-24.8	41.76	54	-12.24	-	-	113	382	H
4	* 2.49912	38.19	RMS	32.4	-24.8	45.79	54	-8.21	-	-	113	382	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EM C4294 (dB/m)	Amp/Cbl/Filt /Pad (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	56.32	Pk	32.5	-24.8	64.02	-	-	74	-9.98	133	297	V
2	* 2.49715	63.59	Pk	32.4	-24.8	71.19	-	-	74	-2.81	133	297	V
3	* 2.48351	34.62	RMS	32.5	-24.8	42.32	54	-11.68	-	-	133	297	V
4	* 2.48403	36.71	RMS	32.5	-24.8	44.41	54	-9.59	-	-	133	297	V

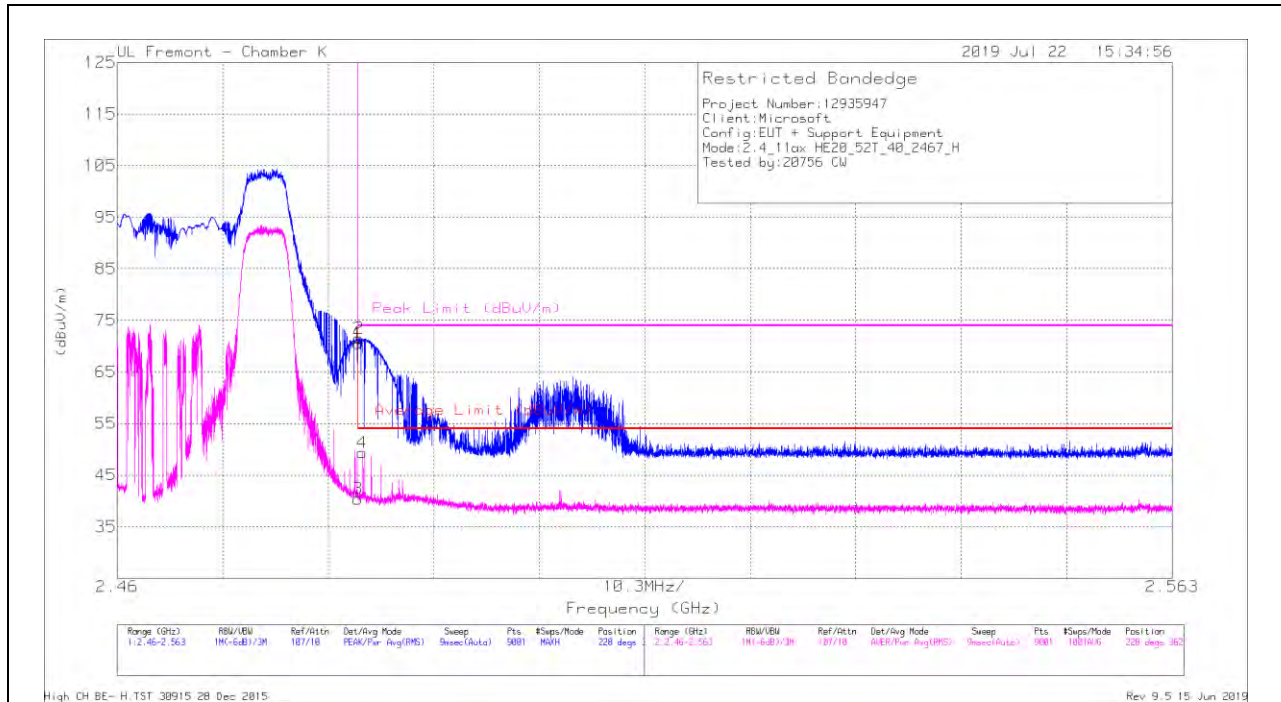
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 12)

HORIZONTAL RESULT



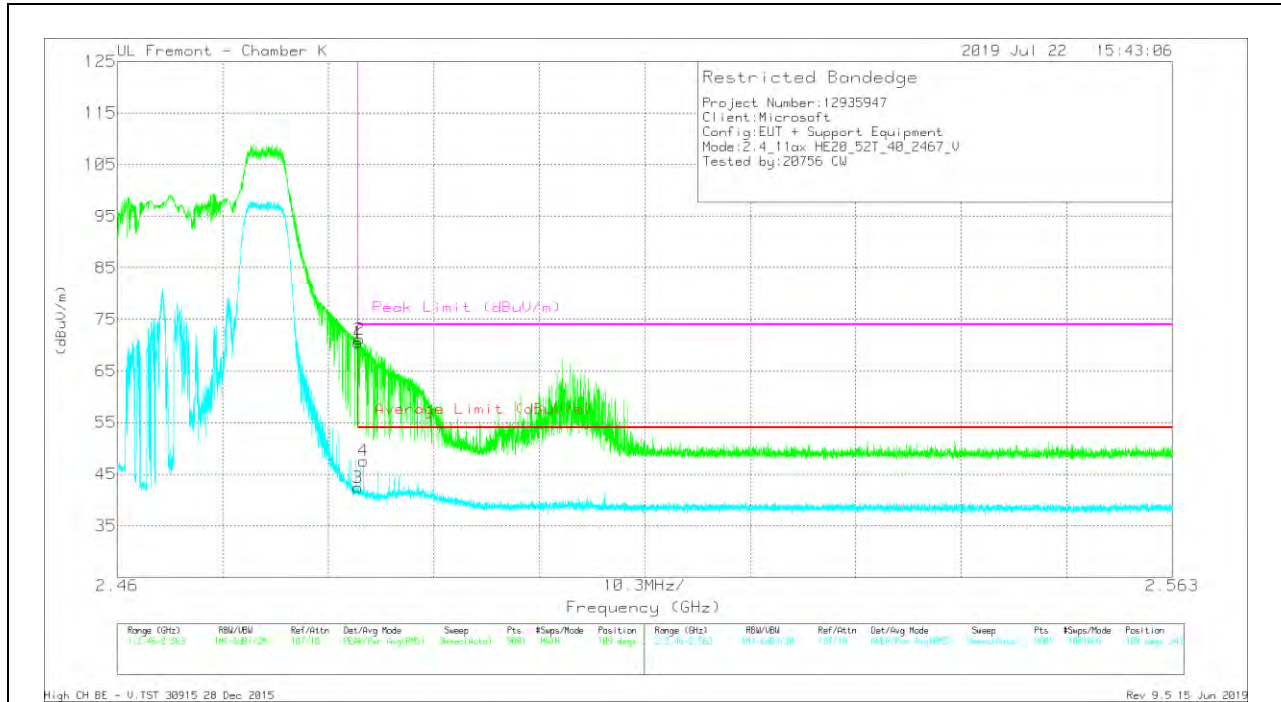
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filt /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	62.87	Pk	32.5	-24.8	70.57	-	-	74	-3.43	228	362	H
2	* 2.48358	63.8	Pk	32.5	-24.8	71.5	-	-	74	-2.5	228	362	H
3	* 2.48351	32.7	RMS	32.5	-24.8	40.4	54	-13.6	-	-	228	362	H
4	* 2.48392	41.64	RMS	32.5	-24.8	49.34	54	-4.66	-	-	228	362	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EM C4294 (dB/m)	Amp/Cbl/Filt /Pad (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	62.82	Pk	32.5	-24.8	70.52	-	-	74	-3.48	109	343	V
2	* 2.48363	63.44	Pk	32.5	-24.8	71.14	-	-	74	-2.86	109	343	V
3	* 2.48351	34.68	RMS	32.5	-24.8	42.38	54	-11.62	-	-	109	343	V
4	* 2.48402	39.88	RMS	32.5	-24.8	47.58	54	-6.42	-	-	109	343	V

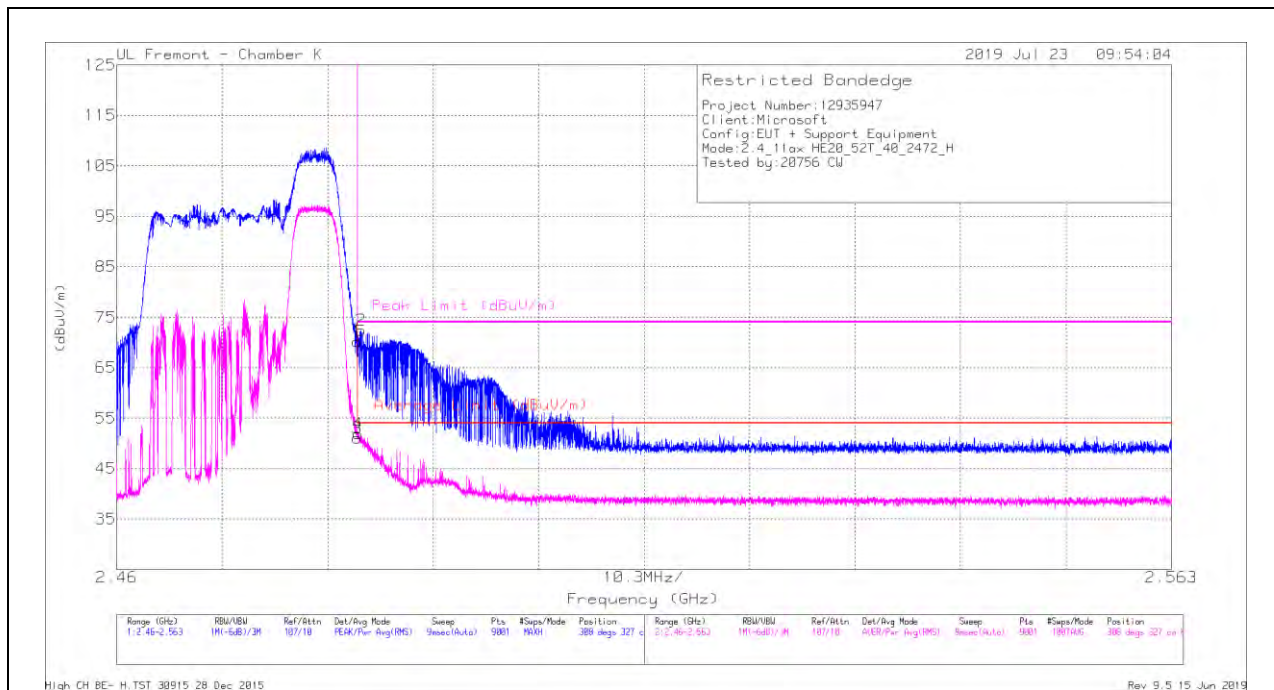
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 13)

HORIZONTAL RESULT



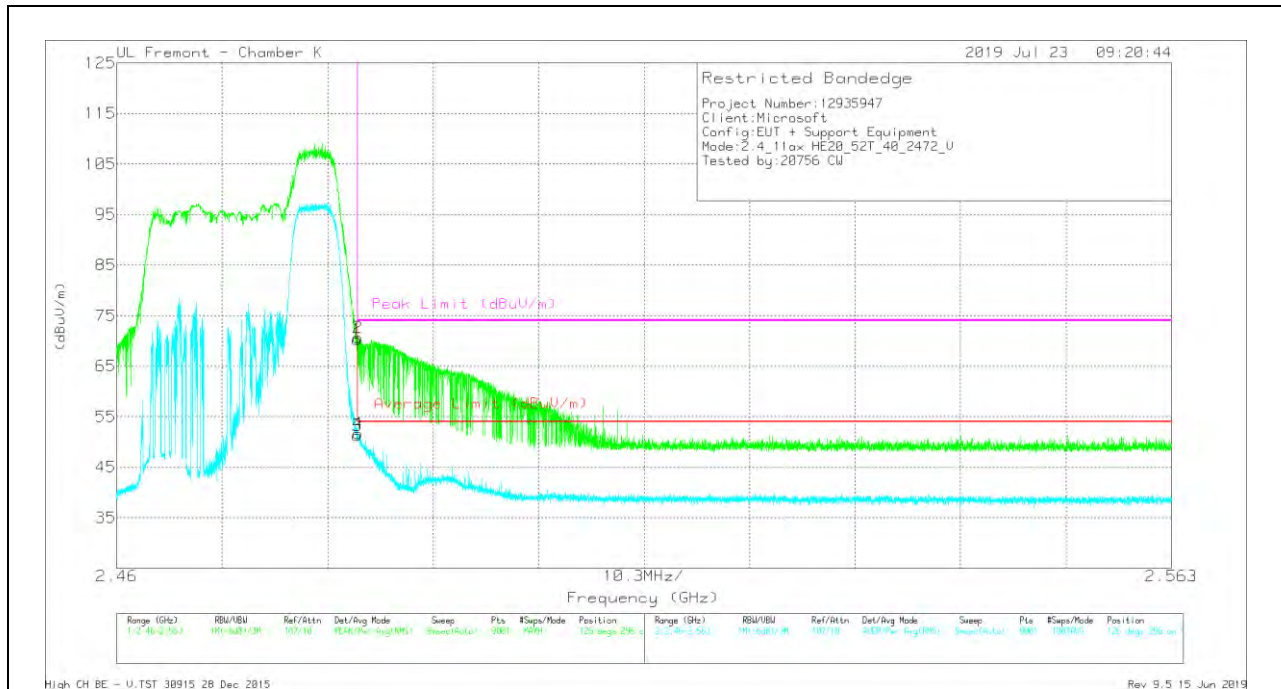
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/CbllFilt /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	62.47	Pk	32.5	-24.8	70.17	-	-	74	-3.83	308	327	H
2	* 2.48384	64.65	Pk	32.5	-24.8	72.35	-	-	74	-1.65	308	327	H
3	* 2.48351	43.34	RMS	32.5	-24.8	51.04	54	-2.96	-	-	308	327	H
4	* 2.48358	44.21	RMS	32.5	-24.8	51.91	54	-2.09	-	-	308	327	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filt /Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degr)	Height (cm)	Polarity
1	* 2.48351	62.63	Pk	32.5	-24.8	70.33	-	-	74	-3.67	126	296	V
2	* 2.48354	62.96	Pk	32.5	-24.8	70.66	-	-	74	-3.34	126	296	V
3	* 2.48351	43.57	RMS	32.5	-24.8	51.27	54	-2.73	-	-	126	296	V
4	* 2.48353	43.99	RMS	32.5	-24.8	51.69	54	-2.31	-	-	126	296	V

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