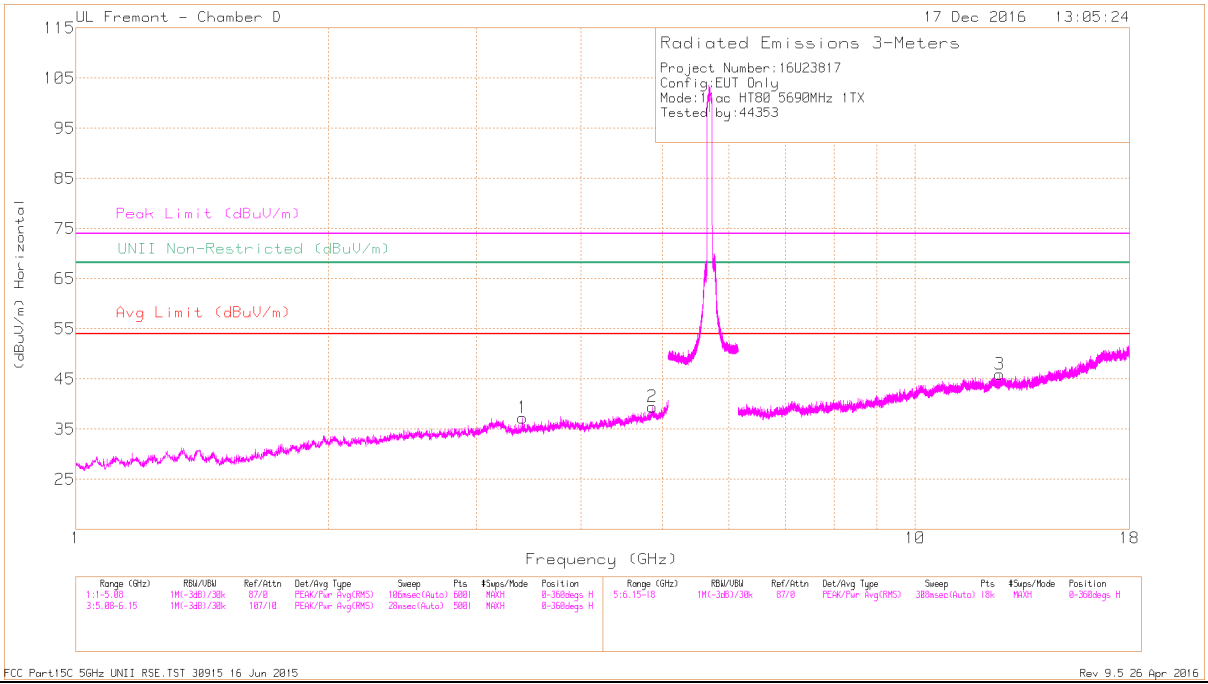
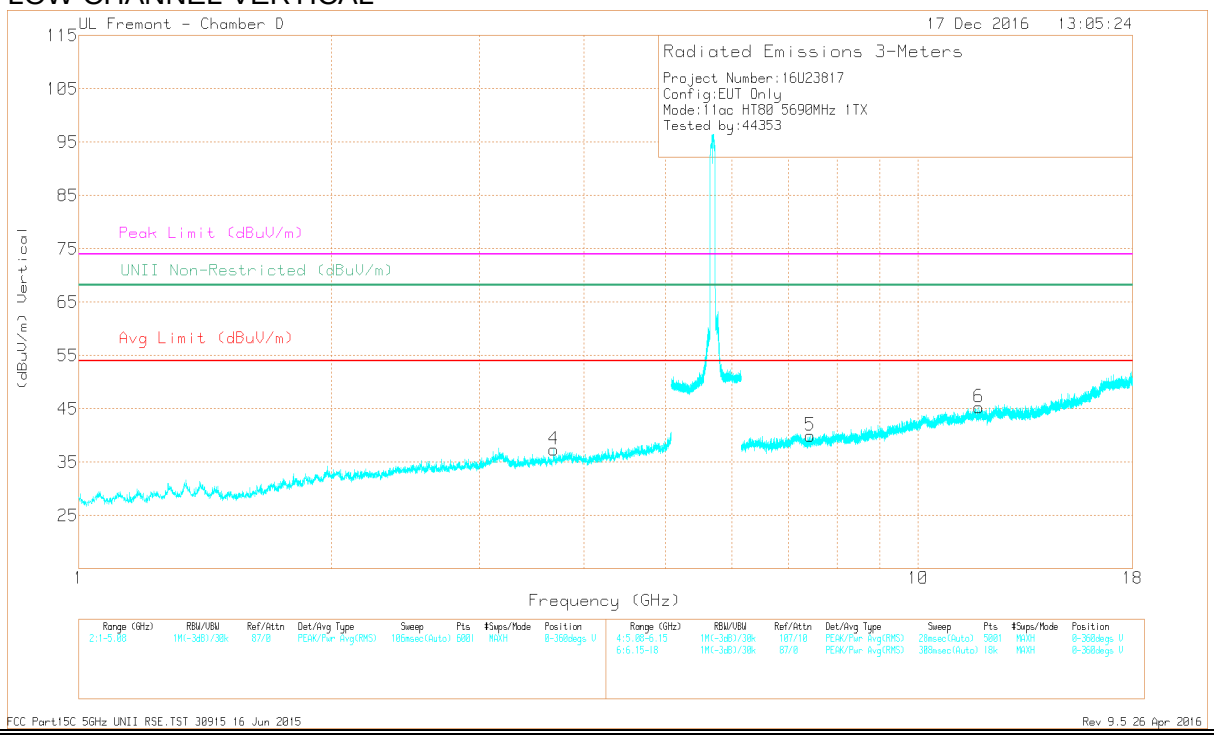
9.2.34. 11ac HT80 ANTENNA B SISO STRADDLE CHANNEL 138

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL

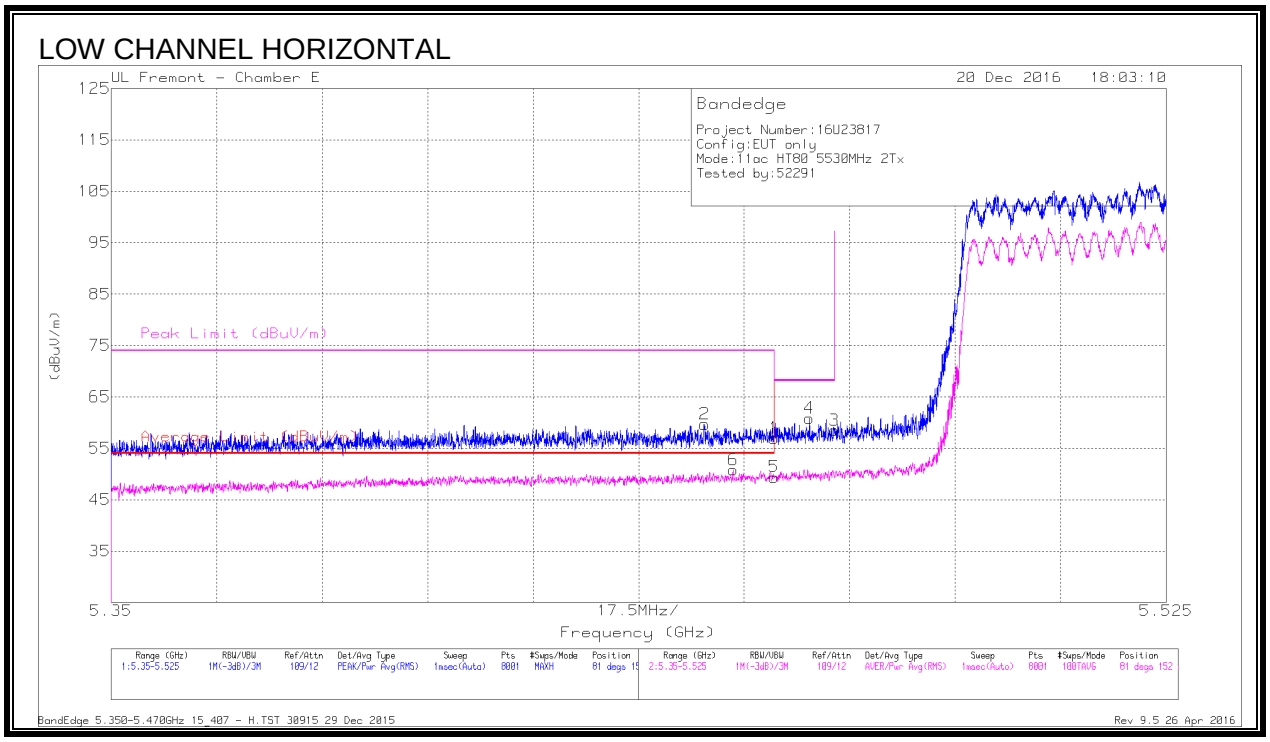


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.86	37.08	PK-U	34.1	-25.5	0	45.68	-	-	74	-28.32	-	-	257	140	H
	* 4.862	26.3	ADR	34.1	-25.4	.2	35.2	54	-18.8	-	-	-	-	257	140	H
4	* 3.682	38.71	PK-U	33.5	-28.9	0	43.31	-	-	74	-30.69	-	-	341	256	V
	* 3.681	28.36	ADR	33.5	-29	.2	33.06	54	-20.94	-	-	-	-	341	256	V
3	* 12.61	33.78	PK-U	39.1	-21.8	0	51.08	-	-	74	-22.92	-	-	288	102	H
	* 12.612	24.11	ADR	39.1	-21.9	.2	41.51	54	-12.49	-	-	-	-	288	102	H
5	* 7.439	34.46	PK-U	35.6	-24.9	0	45.16	-	-	74	-28.84	-	-	160	305	V
	* 7.442	25.06	ADR	35.6	-24.8	.2	36.06	54	-17.94	-	-	-	-	160	305	V
6	* 11.812	34.83	PK-U	38.7	-21.5	0	52.03	-	-	74	-21.97	-	-	121	186	V
	* 11.813	23.72	ADR	38.7	-21.5	.2	41.12	54	-12.88	-	-	-	-	121	186	V
1	3.406	39.1	PK-U	32.9	-29.4	0	42.6	-	-	-	-	68.2	-25.6	219	383	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

9.2.35. 11ac HT80 2TX CDD MIMO MODE IN THE 5.6GHz BAND

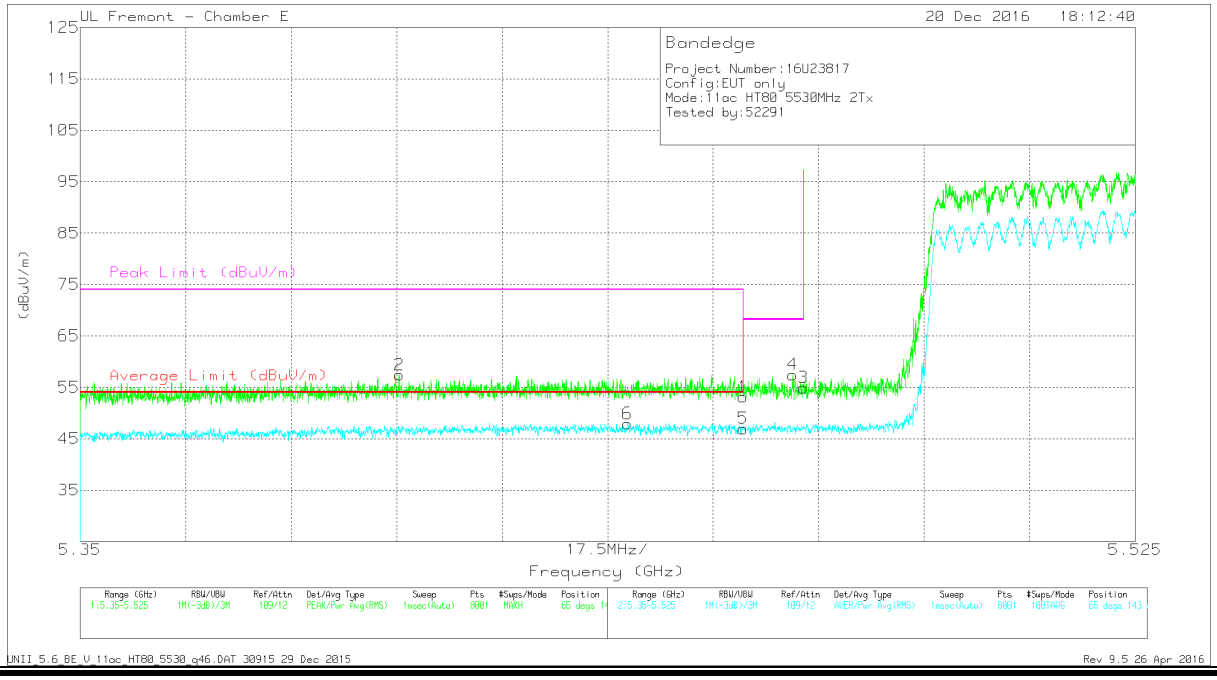
RESTRICTED BANDEDGE (LOW CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (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	* 5.46	41.86	Pk	34.4	-19.3	0	56.96	-	-	74	-17.04	81	152	H
2	* 5.448	44.58	Pk	34.4	-19.3	0	59.68	-	-	74	-14.32	81	152	H
5	* 5.46	34.11	RMS	34.4	-19.3	.2	49.41	54	-4.59	-	-	81	152	H
6	* 5.453	35.52	RMS	34.4	-19.3	.2	50.82	54	-3.18	-	-	81	152	H
4	5.466	45.85	Pk	34.4	-19.4	0	60.85	-	-	68.2	-7.35	81	152	H
3	5.47	43.51	Pk	34.4	-19.4	0	58.51	-	-	68.2	-9.69	81	152	H

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

LOW CHANNEL VERTICAL

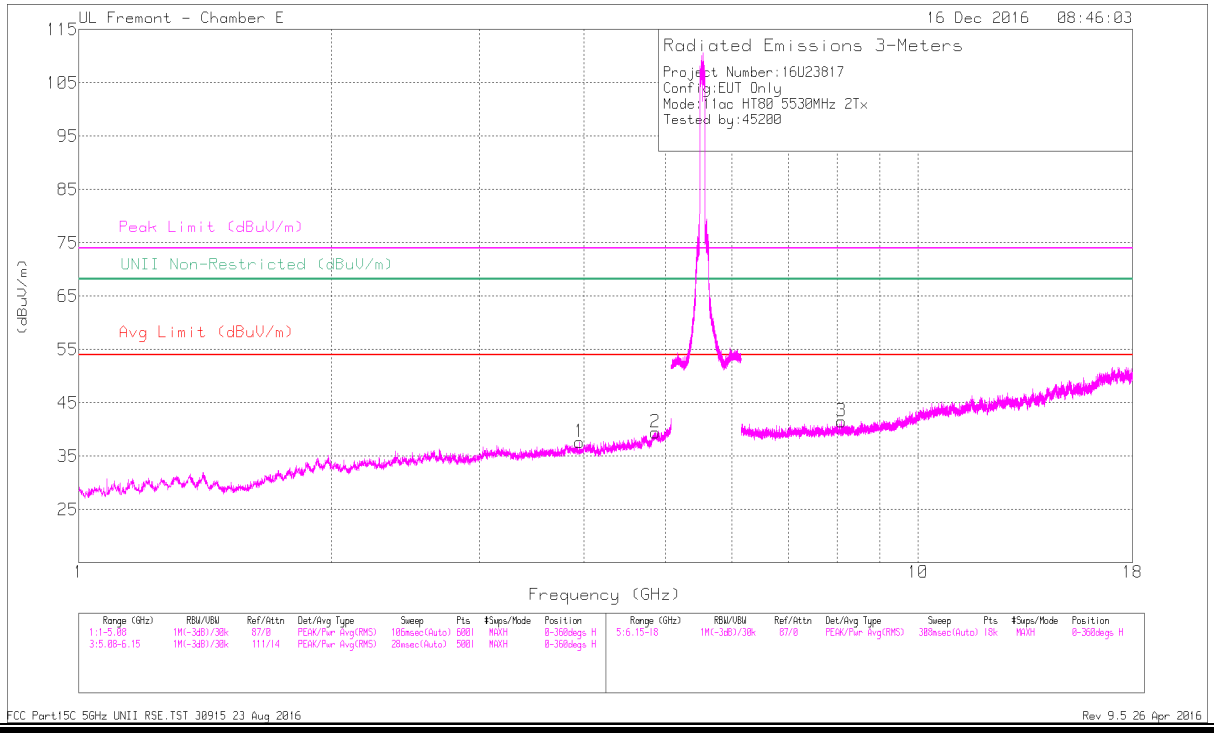


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	38.04	Pk	34.4	-19.3	0	53.14	-	-	74	-20.86	65	143	V
2	* 5.403	42.31	Pk	34.4	-19.3	0	57.41	-	-	74	-16.59	65	143	V
5	* 5.46	31.86	RMS	34.4	-19.3	.2	47.16	54	-6.84	-	-	65	143	V
6	* 5.441	32.91	RMS	34.4	-19.4	.2	48.11	54	-5.89	-	-	65	143	V
4	5.468	42.57	Pk	34.4	-19.5	0	57.47	-	-	68.2	-10.73	65	143	V
3	5.47	39.93	Pk	34.4	-19.4	0	54.93	-	-	68.2	-13.27	65	143	V

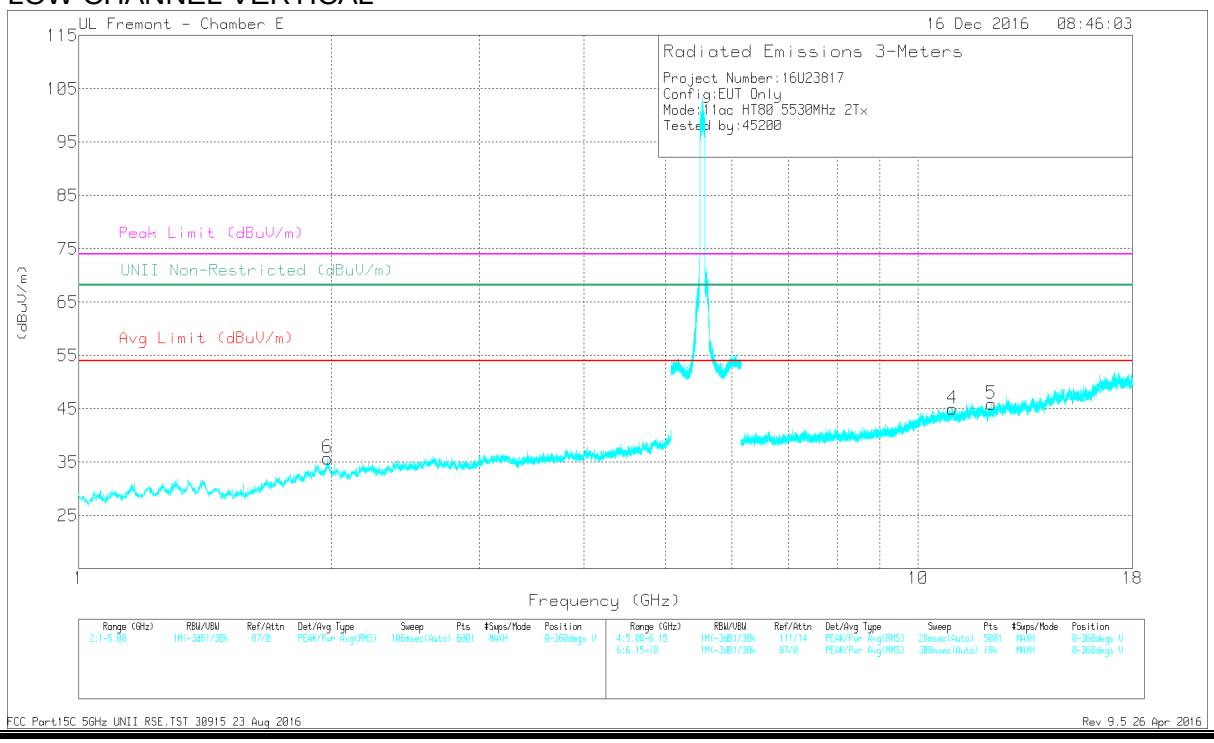
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



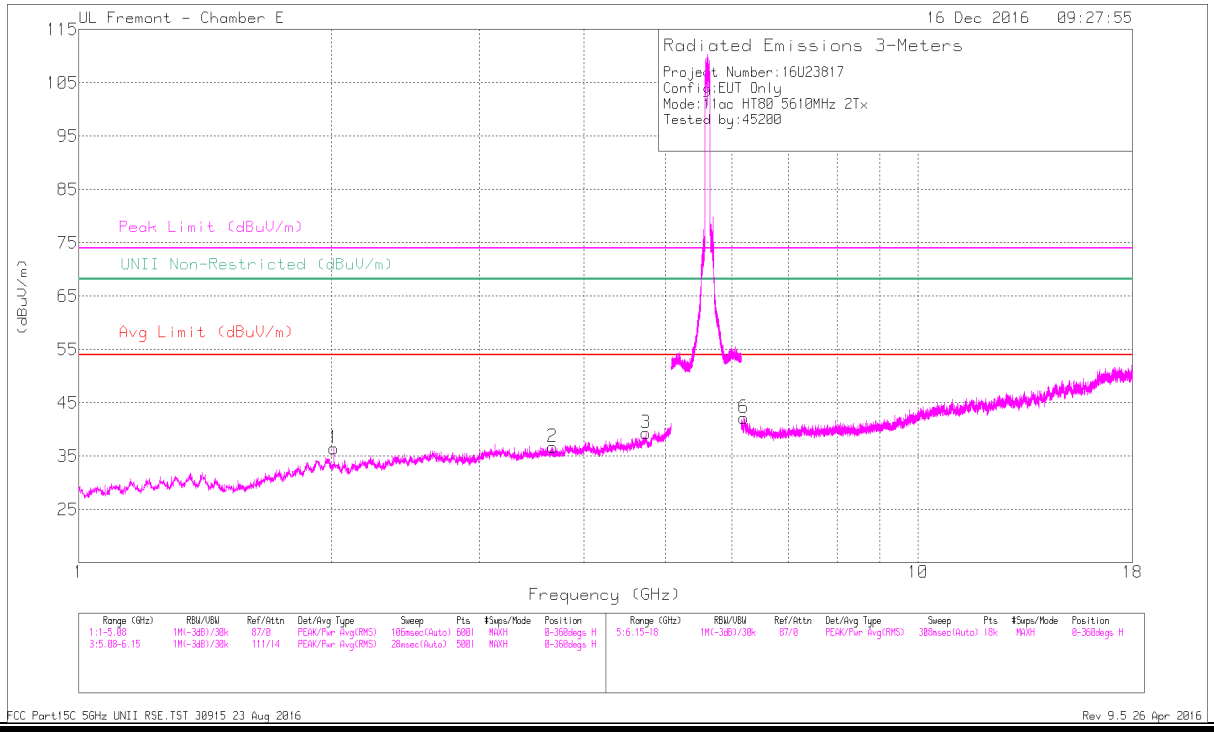
LOW CHANNEL VERTICAL



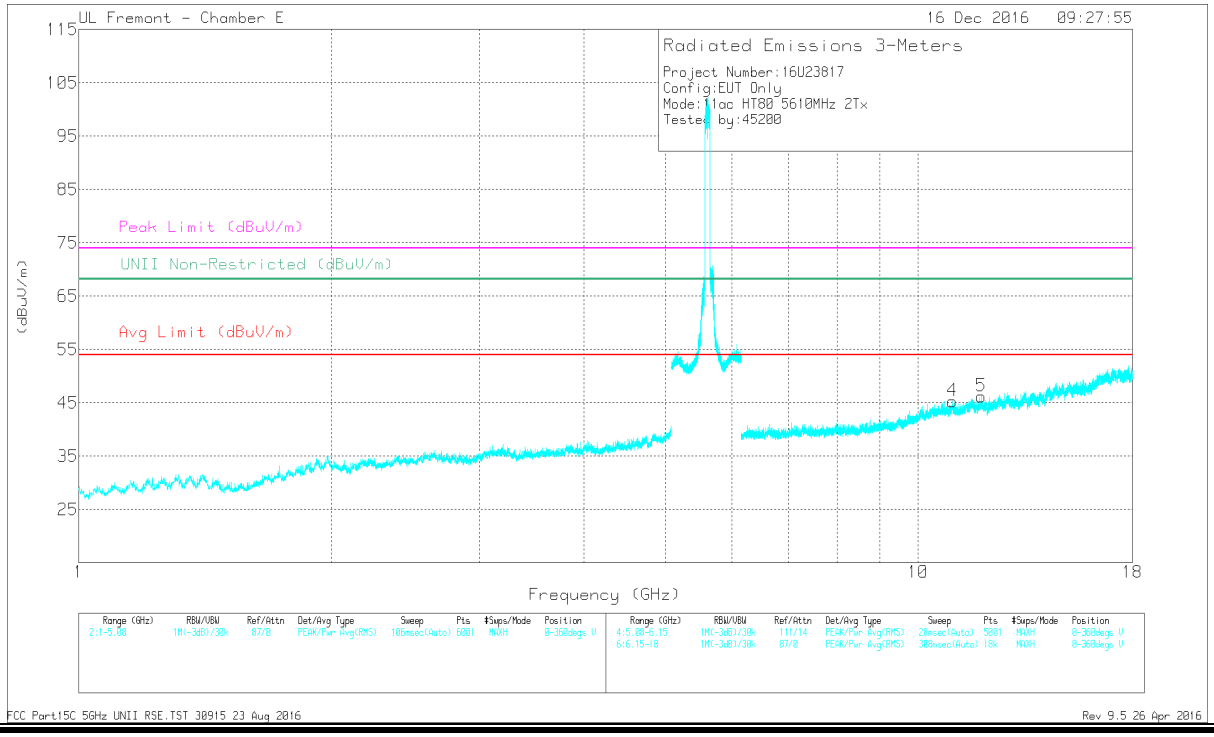
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.95	41.42	PK-U	33.2	-31.1	0	43.52	-	-	74	-30.48	-	-	188	221	H
	* 3.948	30.54	ADR	33.2	-31.1	.2	32.84	54	-21.16	-	-	-	-	188	221	H
2	* 4.863	40.72	PK-U	34	-29.3	0	45.42	-	-	74	-28.58	-	-	316	238	H
	* 4.859	30	ADR	34	-29.3	.2	34.9	54	-19.1	-	-	-	-	316	238	H
3	* 8.107	39.52	PK-U	35.6	-26.7	0	48.42	-	-	74	-25.58	-	-	233	331	H
	* 8.11	27.51	ADR	35.7	-26.6	.2	36.81	54	-17.19	-	-	-	-	233	331	H
4	* 10.981	35.98	PK-U	38	-22.1	0	51.88	-	-	74	-22.12	-	-	294	209	V
	* 10.979	25.42	ADR	38	-22	.2	41.62	54	-12.38	-	-	-	-	294	209	V
5	* 12.214	37.95	PK-U	39	-24.5	0	52.45	-	-	74	-21.55	-	-	16	310	V
	* 12.214	27	ADR	39	-24.5	.2	41.7	54	-12.3	-	-	-	-	16	310	V
6	1.976	43.35	PK-U	31.8	-33	0	42.15	-	-	-	-	68.2	-26.05	328	307	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



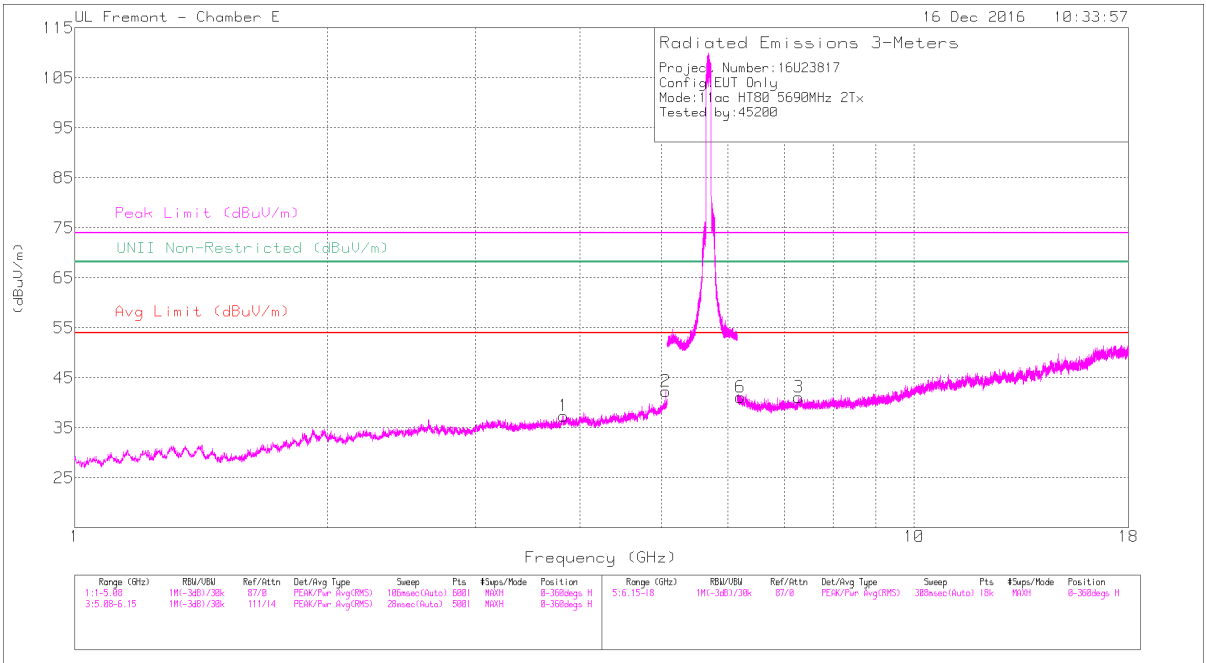
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.67	40.7	PK-U	33.1	-30.4	0	43.4	-	-	74	-30.6	-	-	177	359	H
	* 3.673	29.59	ADR	33.1	-30.4	.2	32.49	54	-21.51	-	-	-	-	177	359	H
3	* 4.742	40.52	PK-U	34	-29	0	45.52	-	-	74	-28.48	-	-	193	143	H
	* 4.74	29.35	ADR	34	-28.9	.2	34.65	54	-19.35	-	-	-	-	193	143	H
4	* 10.98	36.24	PK-U	38	-22	0	52.24	-	-	74	-21.76	-	-	209	292	V
	* 10.982	25.44	ADR	38	-22.1	.2	41.54	54	-12.46	-	-	-	-	209	292	V
5	* 11.888	36.71	PK-U	38.8	-23.1	0	52.41	-	-	74	-21.59	-	-	49	144	V
	* 11.888	26.1	ADR	38.8	-23.1	.2	42	54	-12	-	-	-	-	49	144	V
1	2.012	42.9	PK-U	31.8	-33.7	0	41	-	-	-	-	68.2	-27.2	45	225	H
6	6.199	43.04	PK-U	35.6	-28.1	0	50.54	-	-	-	-	68.2	-17.66	257	116	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average
FCC Part15C 5GHz UNII RSE.TST 30915 23 Aug 2016
Rev 9.5 26 Apr 2016

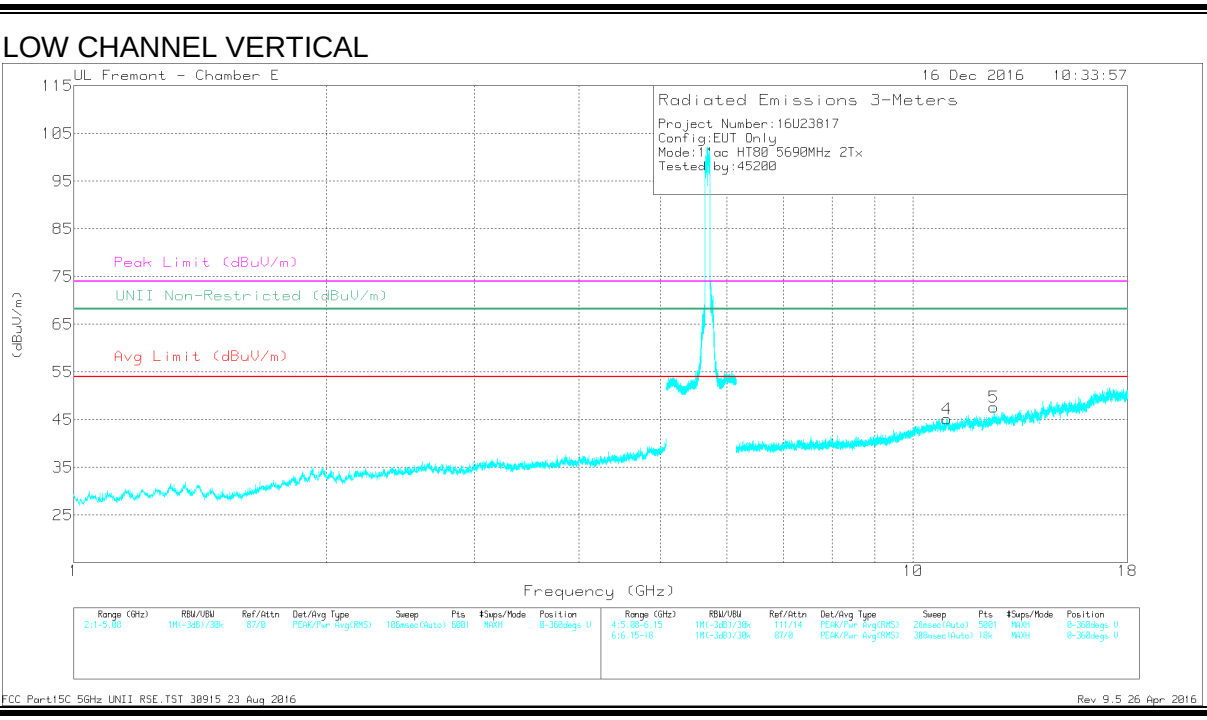
9.2.36. 11ac HT80 2TX CDD MIMO STRADDLE CHANNEL 138

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL

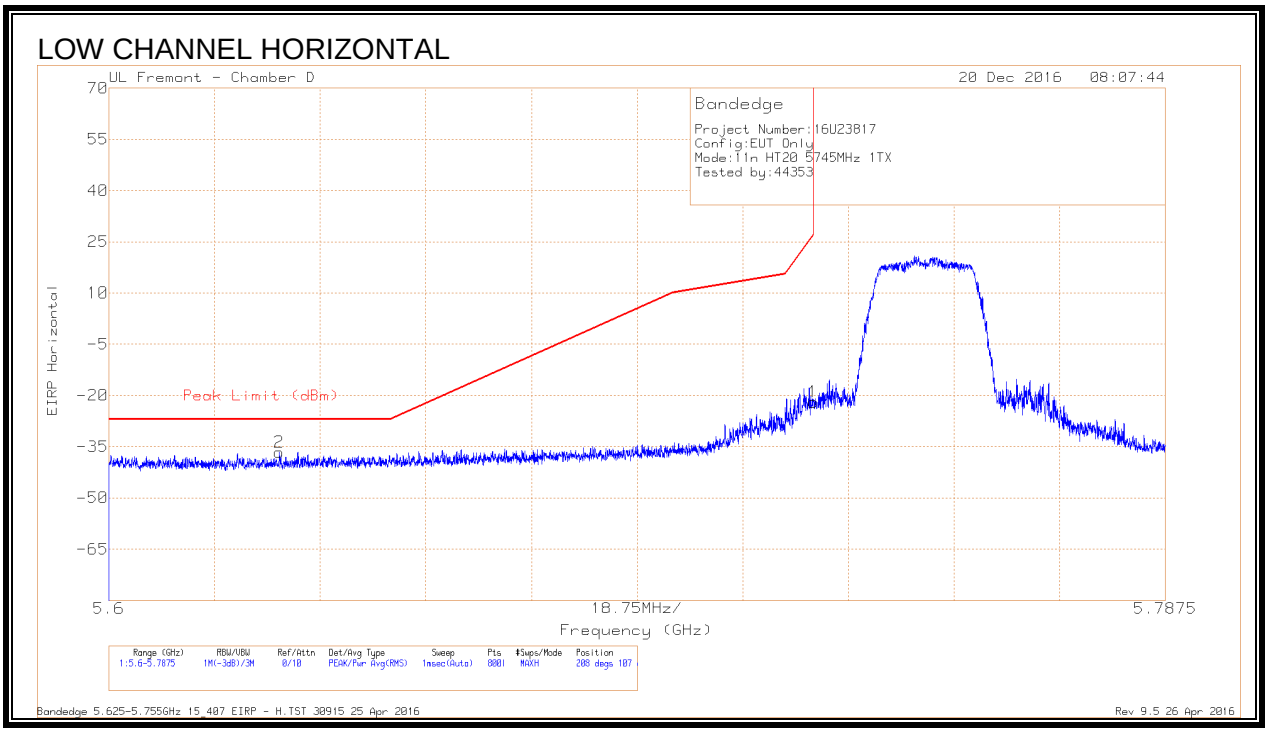


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.819	39.99	PK-U	33.1	-29.6	0	43.49	-	-	74	-30.51	-	-	246	176	H
	* 3.819	29.21	ADR	33.1	-29.6	.2	32.91	54	-21.09	-	-	-	-	246	176	H
2	* 5.058	41.11	PK-U	34	-27.9	0	47.21	-	-	74	-26.79	-	-	97	211	H
	* 5.058	31.58	ADR	34	-27.9	.2	37.88	54	-16.12	-	-	-	-	97	211	H
3	* 7.285	37.93	PK-U	35.6	-26.2	0	47.33	-	-	74	-26.67	-	-	32	359	H
	* 7.286	27.29	ADR	35.6	-26.2	.2	36.89	54	-17.11	-	-	-	-	32	359	H
4	* 10.973	35.63	PK-U	38	-22.2	0	51.43	-	-	74	-22.57	-	-	324	290	V
	* 10.974	25.24	ADR	38	-22.1	.2	41.34	54	-12.66	-	-	-	-	324	290	V
5	* 12.478	36.94	PK-U	39.1	-23.4	0	52.64	-	-	74	-21.36	-	-	232	304	V
	* 12.479	26.65	ADR	39.1	-23.4	.2	42.55	54	-11.45	-	-	-	-	232	304	V
6	6.205	40.89	PK-U	35.6	-28.1	0	48.39	-	-	-	-	68.2	-19.81	169	108	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

9.2.37. 11n HT20 ANTENNA A SISO MODE IN THE 5.8GHz BAND

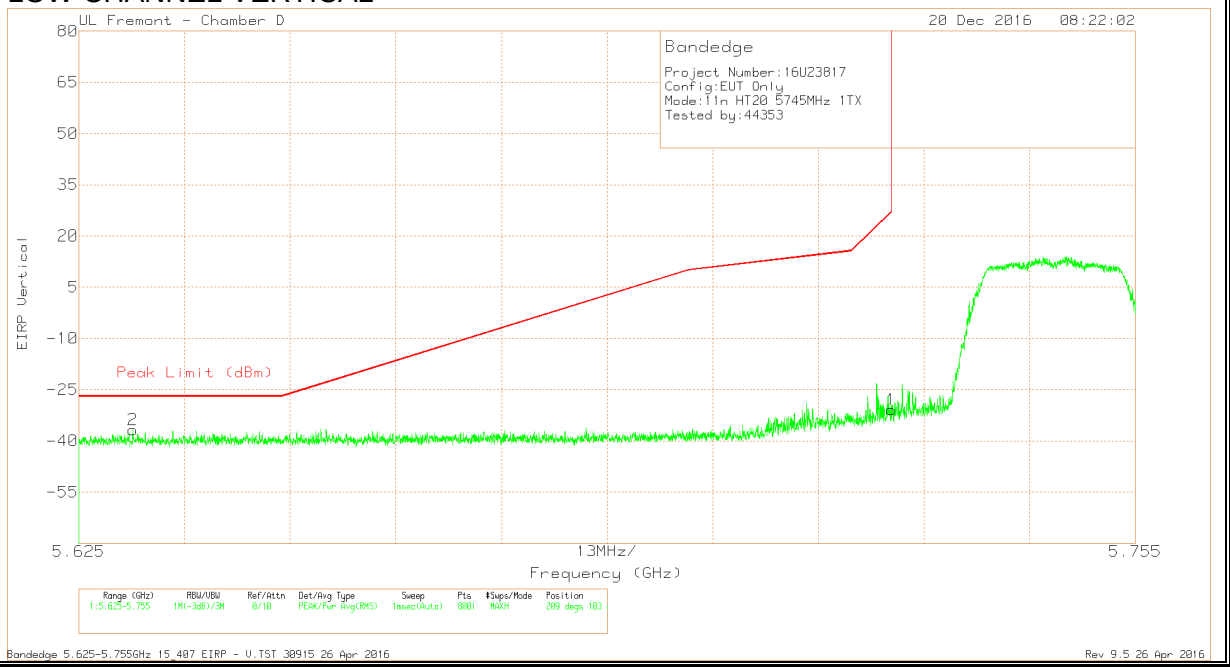
RESTRICTED BANDEDGE (LOW CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.63	-65.46	Pk	34.6	-17.6	11.8	-36.66	-27	-9.66	208	107	H
1	5.725	-51.06	Pk	34.8	-17.5	11.8	-21.96	26.99	-48.95	208	107	H

Pk - Peak detector

LOW CHANNEL VERTICAL

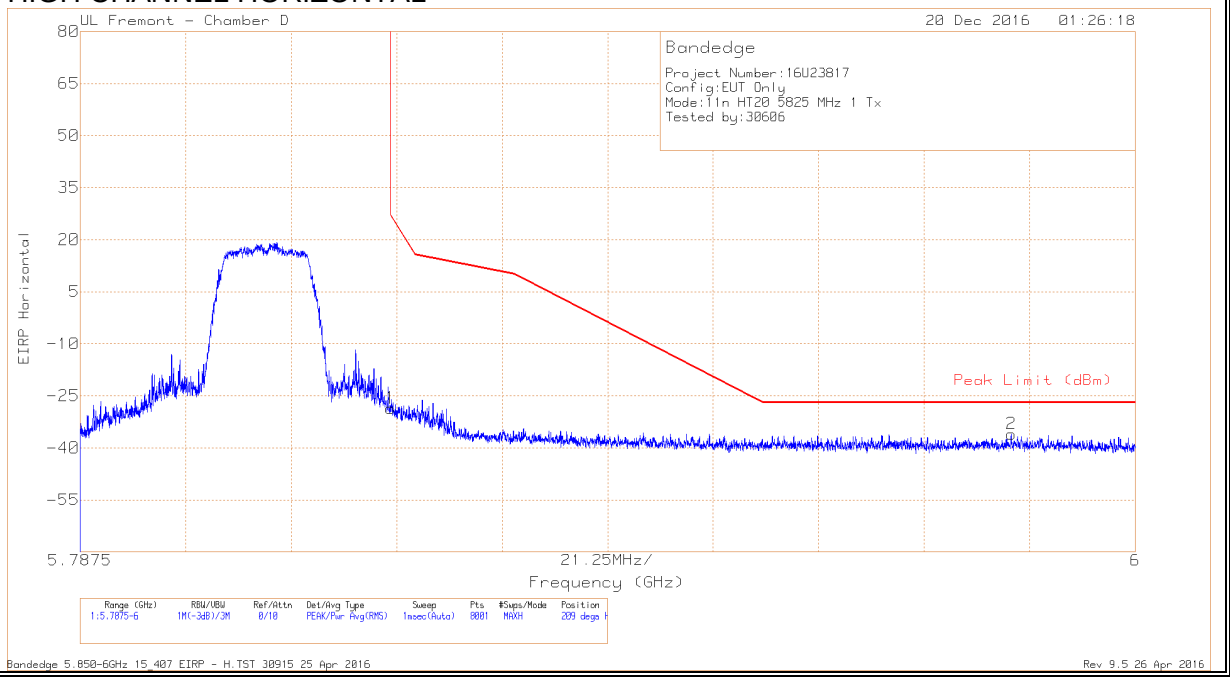


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.632	-65.71	Pk	34.6	-17.5	11.8	-36.81	-27	-9.81	209	103	V
1	5.725	-60.01	Pk	34.8	-17.5	11.8	-30.91	26.97	-57.88	209	103	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

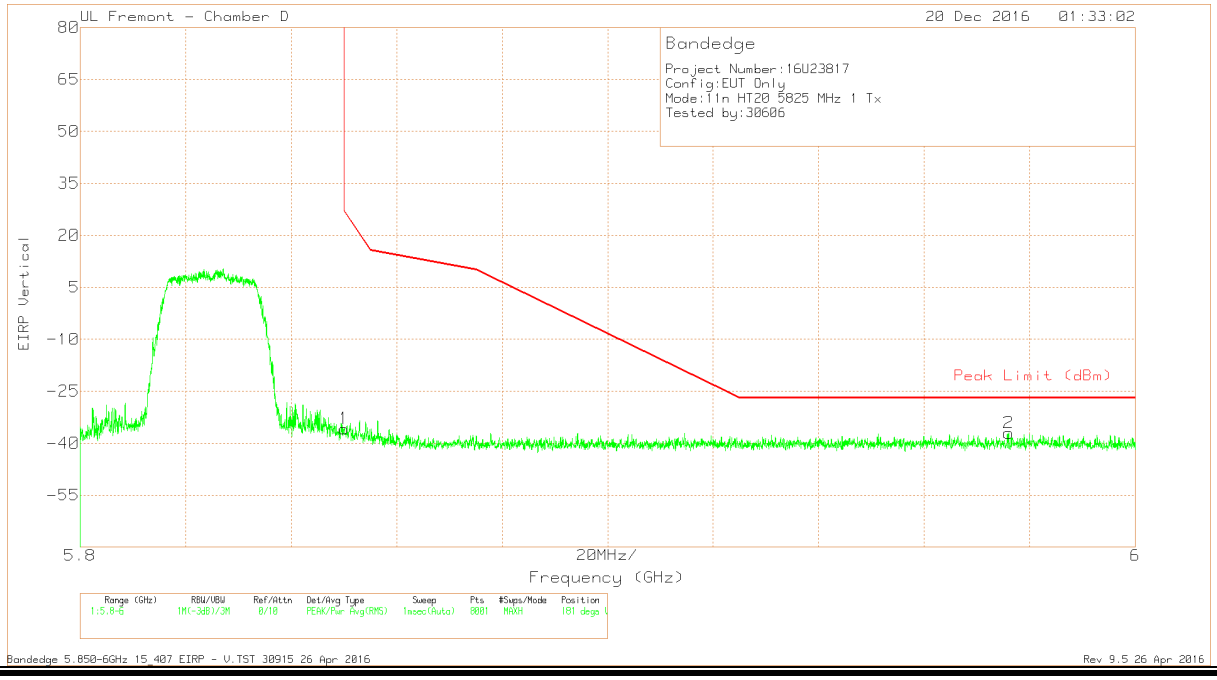
HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-57.77	Pk	34.9	-17.5	11.8	-28.57	26.99	-55.56	209	138	H
2	5.975	-65.46	Pk	35.1	-17.4	11.8	-35.96	-27	-8.96	209	138	H

Pk - Peak detector

HIGH CHANNEL VERTICAL

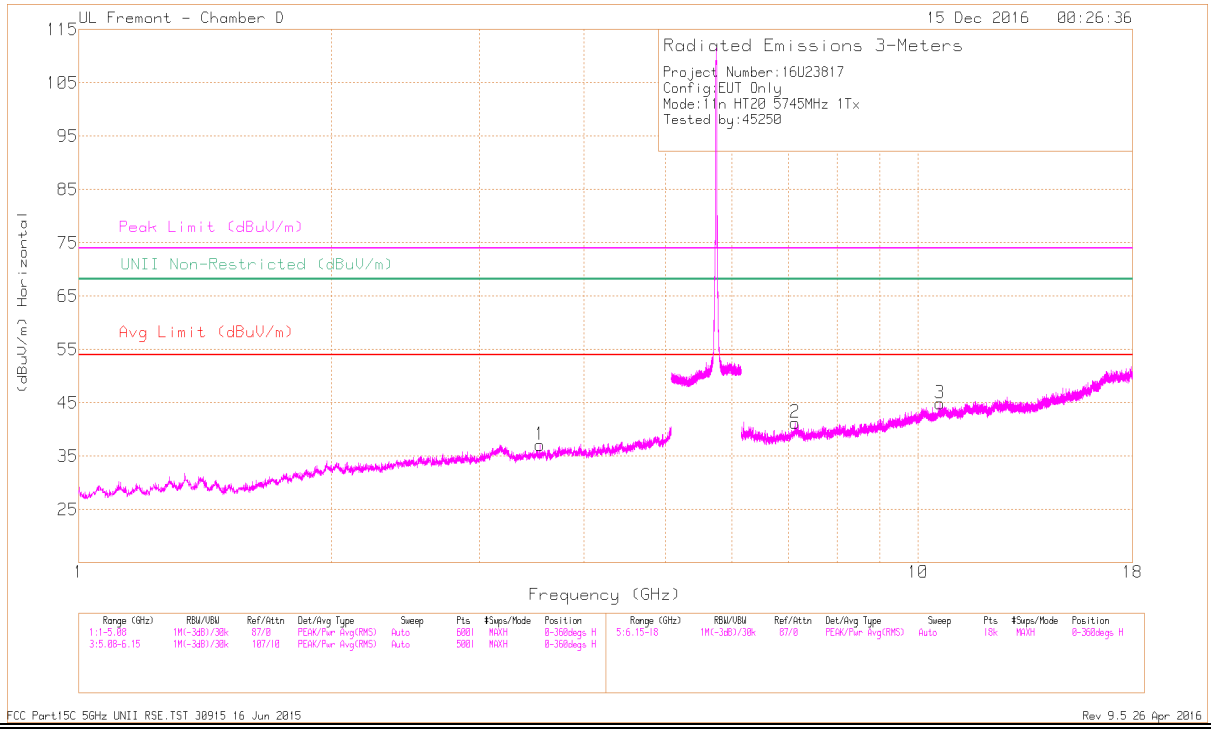


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-65	Pk	34.9	-17.5	11.8	-35.8	26.94	-62.74	181	135	V
2	5.976	-66.53	Pk	35.1	-17.4	11.8	-37.03	-27	-10.03	181	135	V

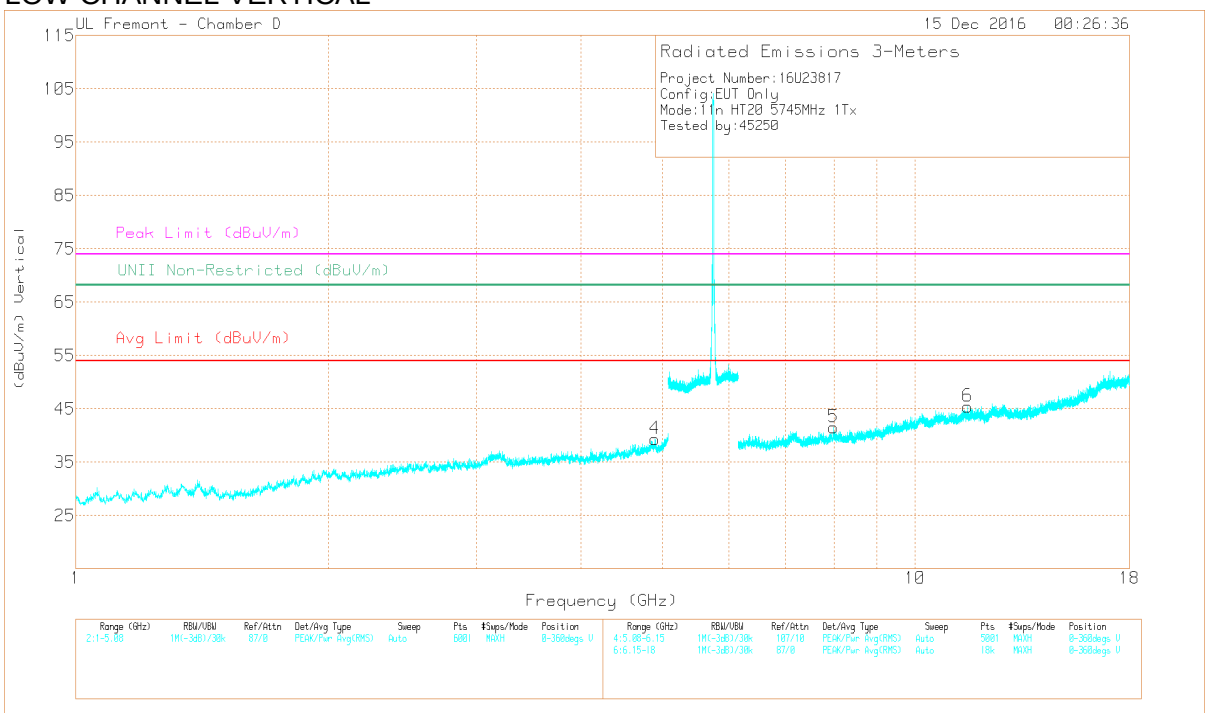
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



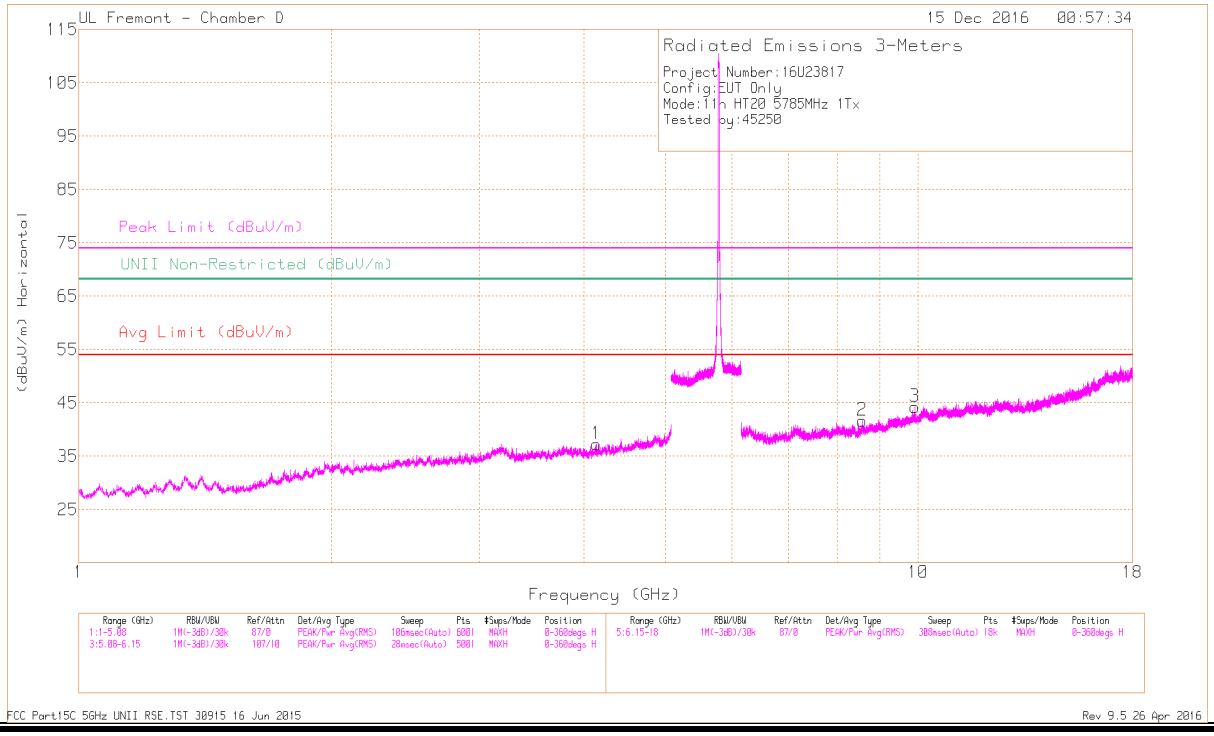
LOW CHANNEL VERTICAL



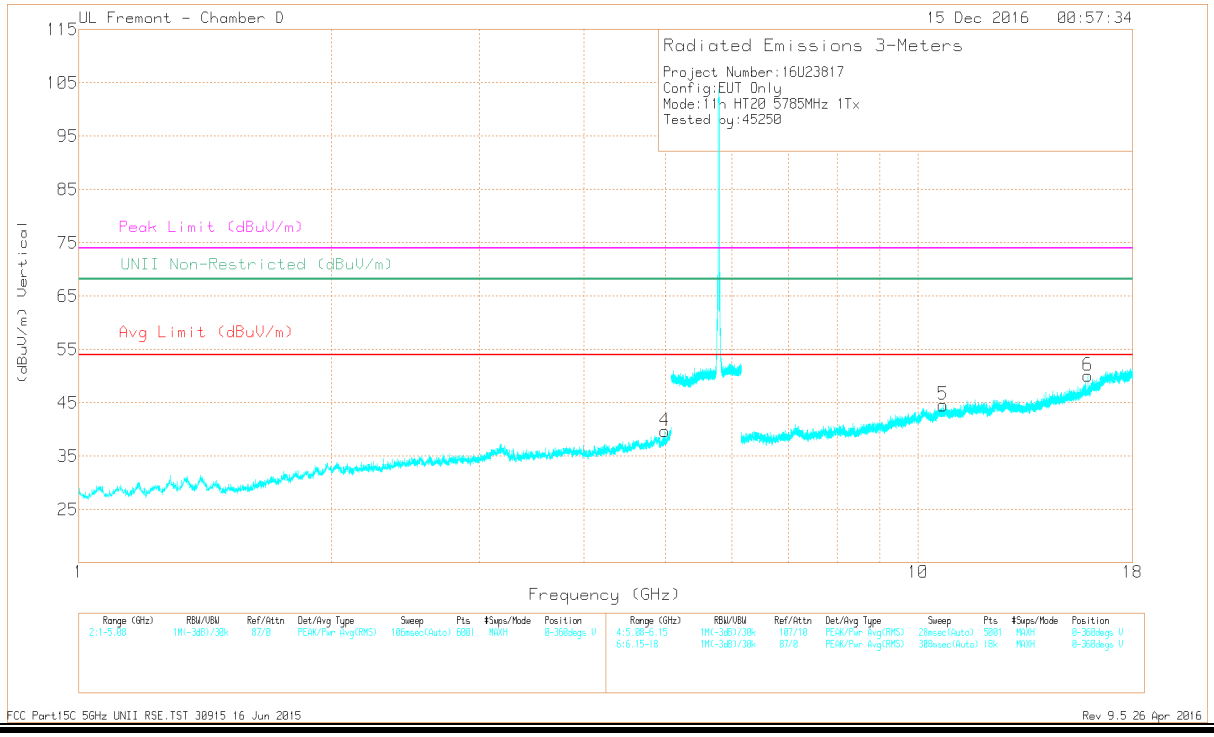
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.543	39.11	PK-U	33.1	-29.2	43.01	-	-	74	-30.99	-	-	70	231	H
	* 3.545	28.22	ADR	33.1	-29.3	32.02	54	-21.98	-	-	-	-	70	231	H
4	* 4.896	38.08	PK-U	34.1	-25.5	46.68	-	-	74	-27.32	-	-	279	267	V
	* 4.895	26.27	ADR	34.1	-25.4	34.97	54	-19.03	-	-	-	-	279	267	V
3	* 10.618	33.77	PK-U	37.8	-21.4	50.17	-	-	74	-23.83	-	-	327	134	H
	* 10.615	24.45	ADR	37.8	-21.4	40.85	54	-13.15	-	-	-	-	327	134	H
6	* 11.546	33.88	PK-U	38.4	-21.6	50.68	-	-	74	-23.32	-	-	61	121	V
	* 11.547	24.61	ADR	38.4	-21.6	41.41	54	-12.59	-	-	-	-	61	121	V
2	7.133	36.29	PK-U	35.8	-23.9	48.19	-	-	-	-	68.2	-20.01	7	210	H
5	8	35.48	PK-U	35.9	-24	47.38	-	-	-	-	68.2	-20.82	226	330	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

MID CHANNEL HORIZONTAL



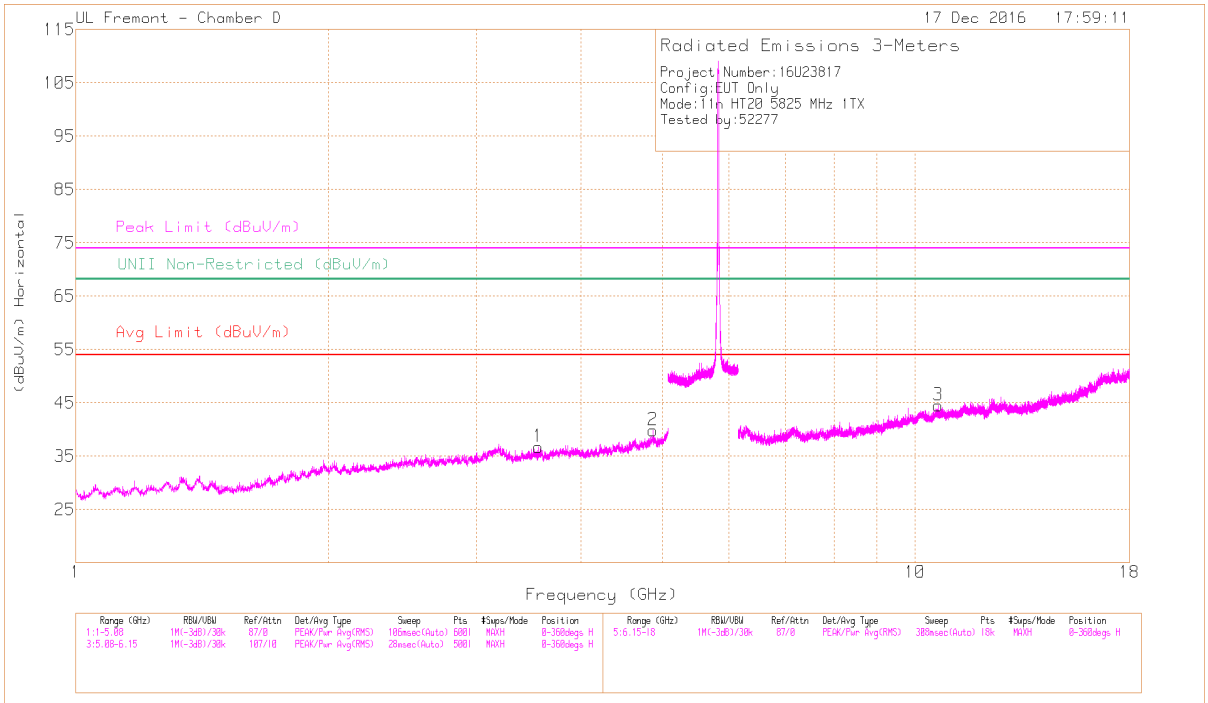
MID CHANNEL VERTICAL



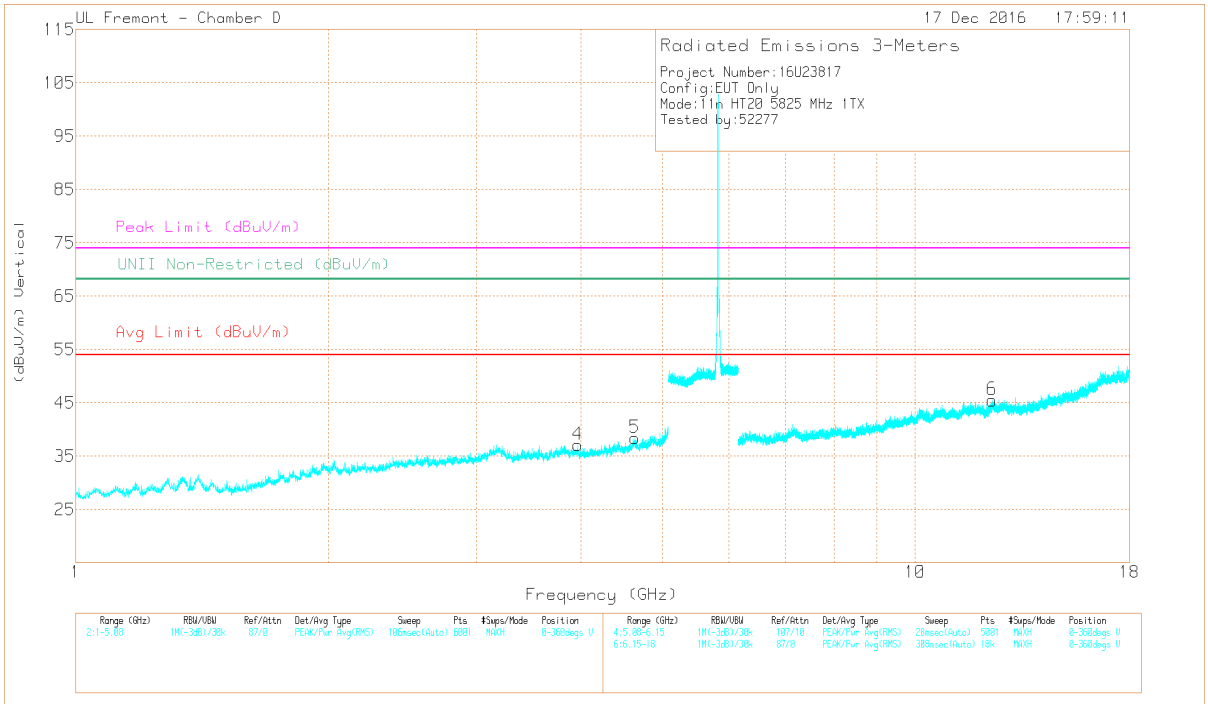
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.137	38.29	PK-U	33.5	-28.5	43.29	-	-	74	-30.71	-	-	28	143	H
	* 4.137	27.66	ADR	33.5	-28.5	32.66	54	-21.34	-	-	-	-	28	143	H
4	* 4.986	37.55	PK-U	34	-26.8	44.75	-	-	74	-29.25	-	-	170	217	V
	* 4.988	27.65	ADR	34	-26.8	34.85	54	-19.15	-	-	-	-	170	217	V
5	* 10.71	34.64	PK-U	37.9	-21.5	51.04	-	-	74	-22.96	-	-	360	281	V
	* 10.713	24.17	ADR	37.9	-21.5	40.57	54	-13.43	-	-	-	-	360	281	V
6	* 15.939	34.1	PK-U	40.4	-20.1	54.4	-	-	74	-19.6	-	-	4	224	V
	* 15.941	23.99	ADR	40.4	-20.1	44.29	54	-9.71	-	-	-	-	4	224	V
2	8.584	34.81	PK-U	35.9	-22.7	48.01	-	-	-	-	68.2	-20.19	321	311	H
3	9.913	33.46	PK-U	37.1	-20.9	49.66	-	-	-	-	68.2	-18.54	309	342	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL

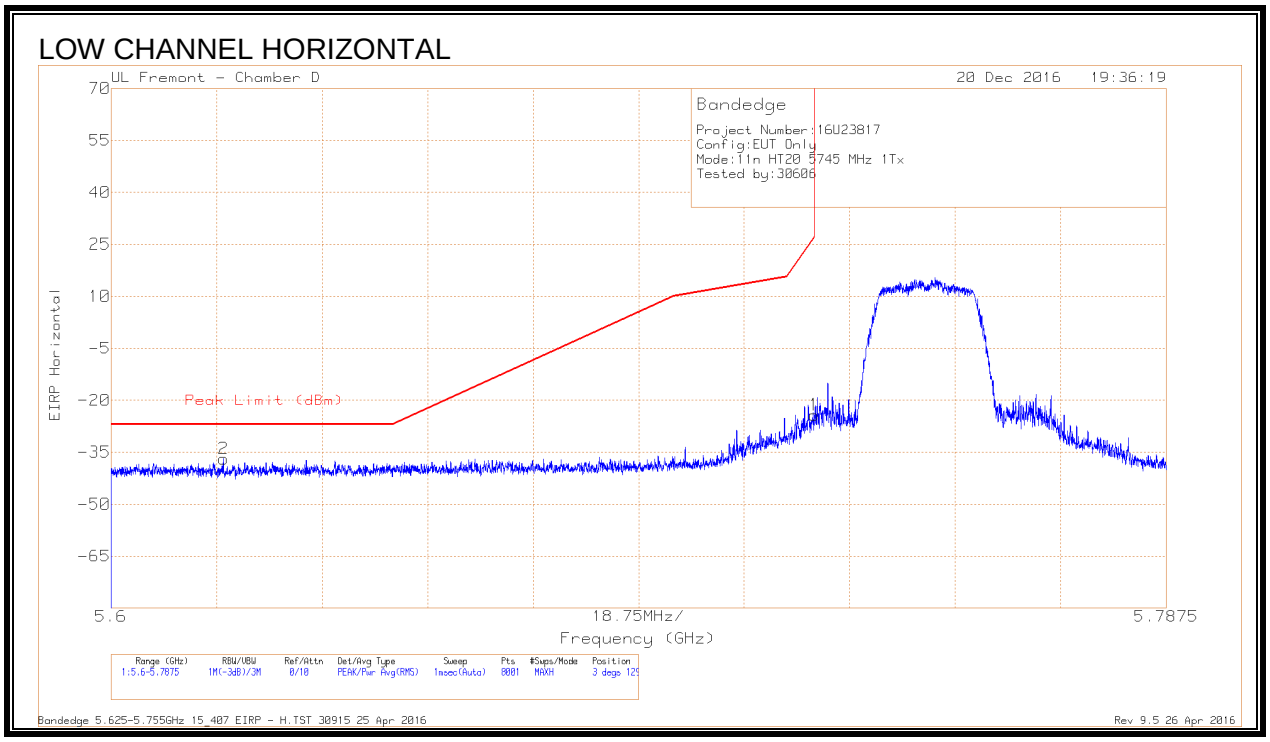


Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.556	39.15	PK-U	33.2	-29.3	0	43.05	-	-	74	-30.95	-	-	353	299	H
	* 3.558	27.78	ADR	33.2	-29.4	0	31.58	54	-22.42	-	-	-	-	353	299	H
2	* 4.874	35.94	PK-U	34.1	-25.2	0	44.84	-	-	74	-29.16	-	-	360	160	H
	* 4.873	25.55	ADR	34.1	-25.2	0	34.45	54	-19.55	-	-	-	-	360	160	H
4	* 3.96	37.7	PK-U	33.4	-28	0	43.1	-	-	74	-30.9	-	-	322	269	V
	* 3.963	27.03	ADR	33.4	-28.1	0	32.33	54	-21.67	-	-	-	-	322	269	V
5	* 4.633	37.2	PK-U	34.1	-27.1	0	44.2	-	-	74	-29.8	-	-	349	377	V
	* 4.629	26.36	ADR	34.1	-26.9	0	33.56	54	-20.44	-	-	-	-	349	377	V
3	* 10.658	34.17	PK-U	37.8	-21.8	0	50.17	-	-	74	-23.83	-	-	356	377	H
	* 10.657	23.64	ADR	37.8	-21.8	0	39.64	54	-14.36	-	-	-	-	356	377	H
6	* 12.347	33.62	PK-U	39	-21	0	51.62	-	-	74	-22.38	-	-	48	138	V
	* 12.347	23.35	ADR	39	-21	0	41.35	54	-12.65	-	-	-	-	48	138	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

9.2.38. 11n HT20 ANTENNA B SISO MODE IN THE 5.8GHz BAND

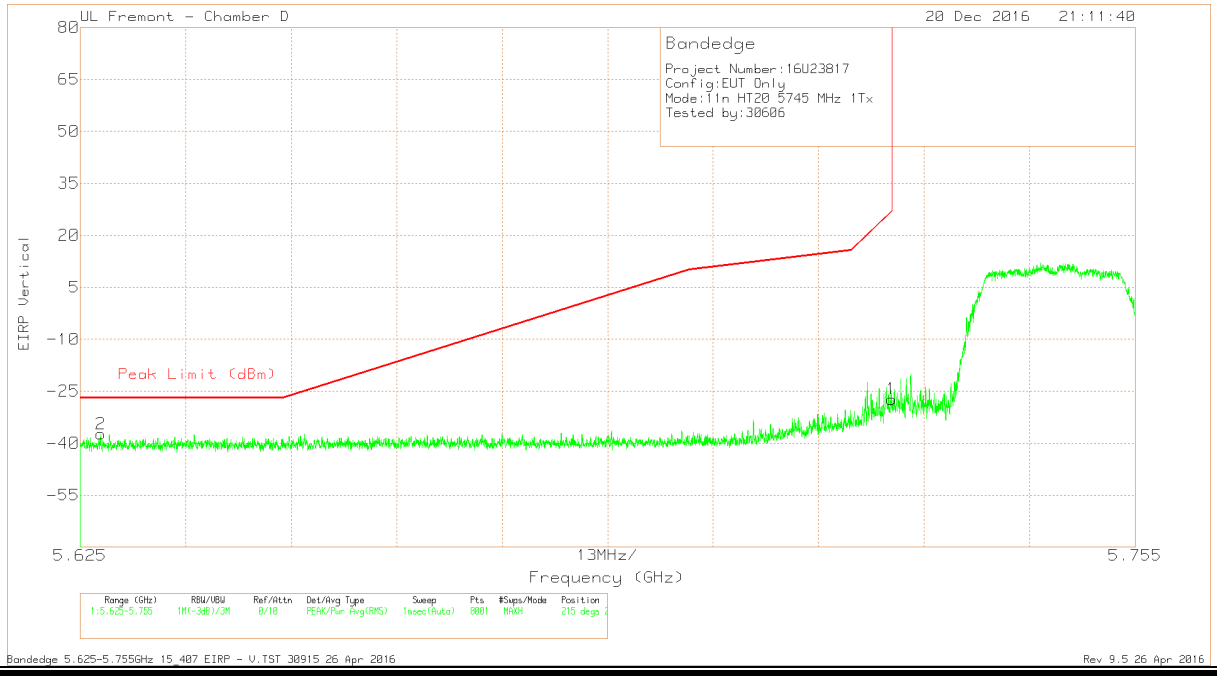
RESTRICTED BANDEDGE (LOW CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.62	-65.38	Pk	34.5	-17.8	11.8	-36.88	-27	-9.88	3	129	H
1	5.725	-53.36	Pk	34.8	-17.5	11.8	-24.26	26.99	-51.25	3	129	H

Pk - Peak detector

LOW CHANNEL VERTICAL

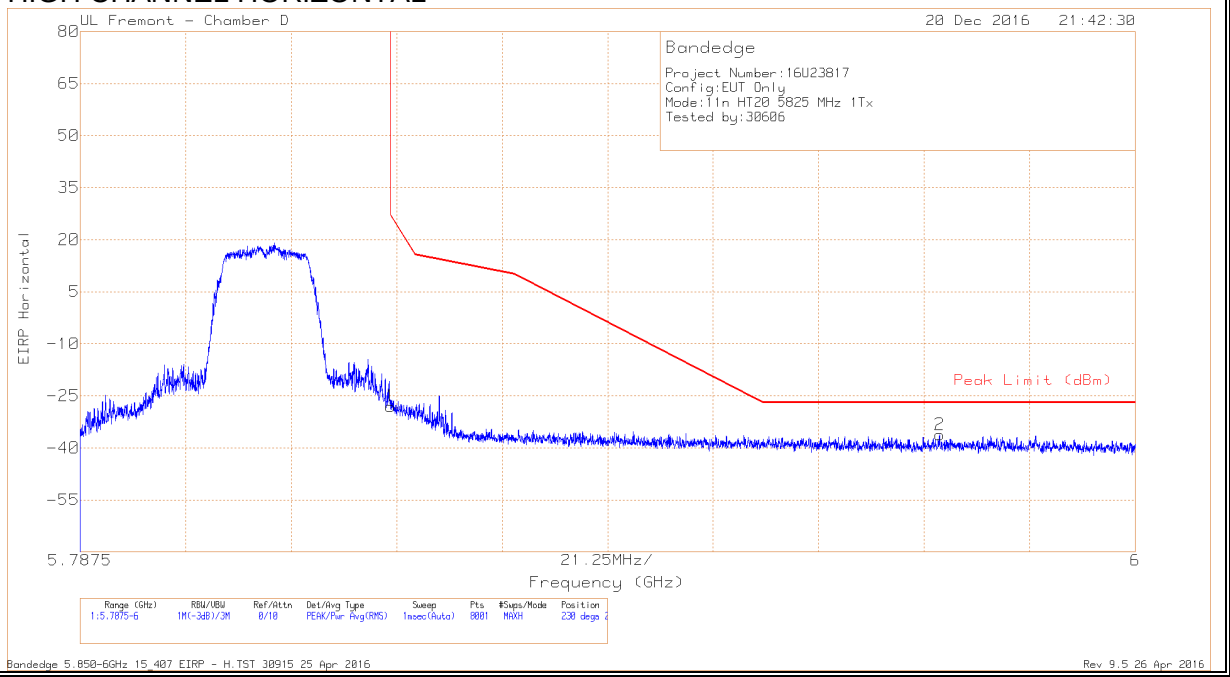


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.628	-66.07	Pk	34.6	-17.7	11.8	-37.37	-27	-10.37	215	234	V
1	5.725	-56.36	Pk	34.8	-17.5	11.8	-27.26	26.97	-54.23	215	234	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

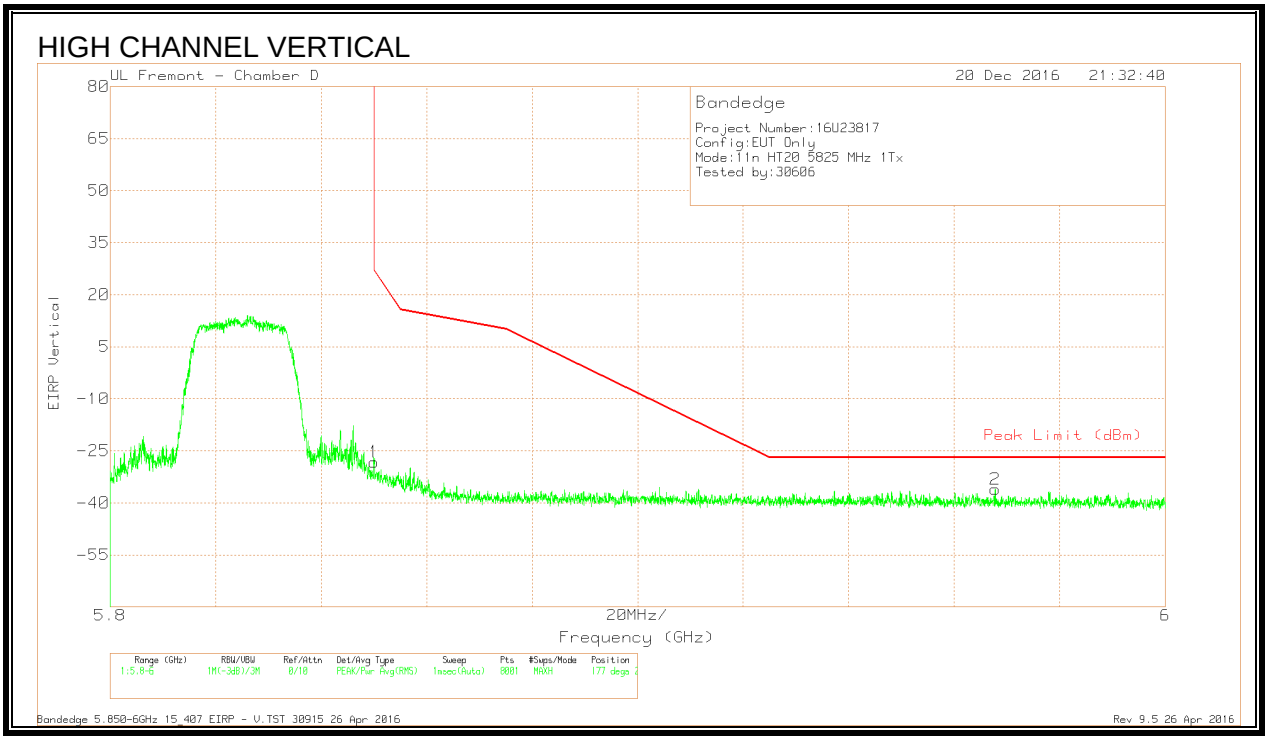
HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-57.19	Pk	34.9	-17.5	11.8	-27.99	26.99	-54.98	230	232	H
2	5.961	-65.66	Pk	35	-17.3	11.8	-36.16	-27	-9.16	230	232	H

Pk - Peak detector

HIGH CHANNEL VERTICAL

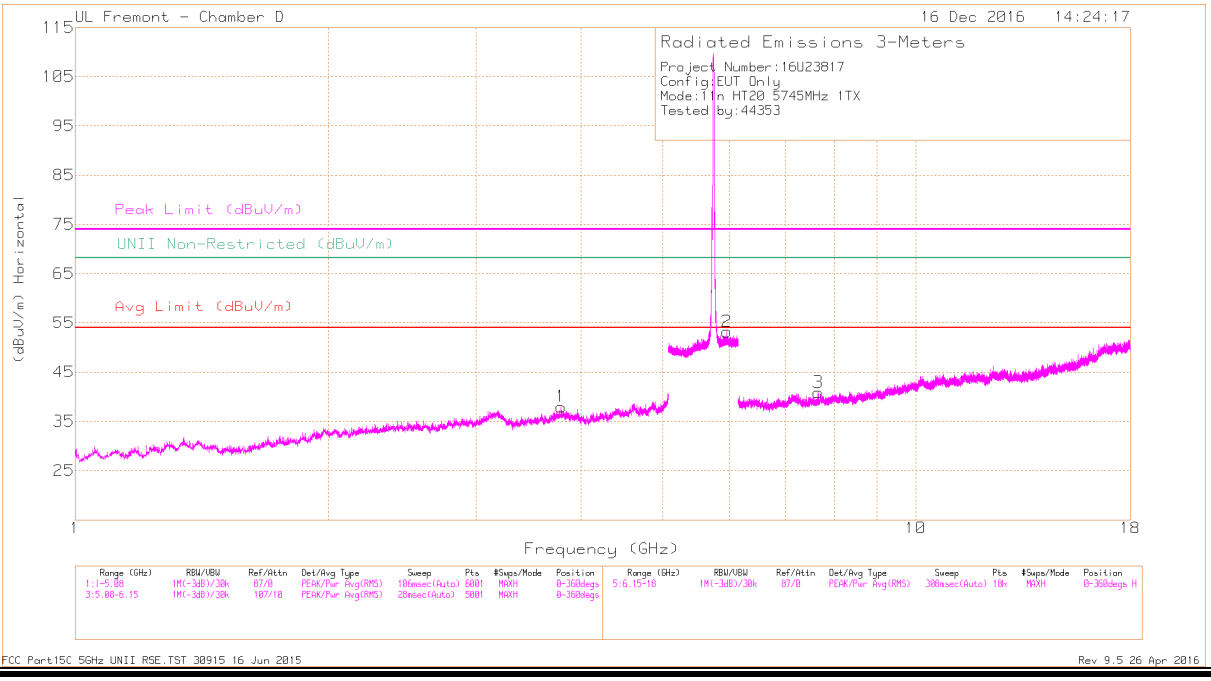


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-57.44	Pk	34.9	-17.5	11.8	-28.24	26.94	-55.18	177	254	V
2	5.968	-65.5	Pk	35	-17.4	11.8	-36.1	-27	-9.1	177	254	V

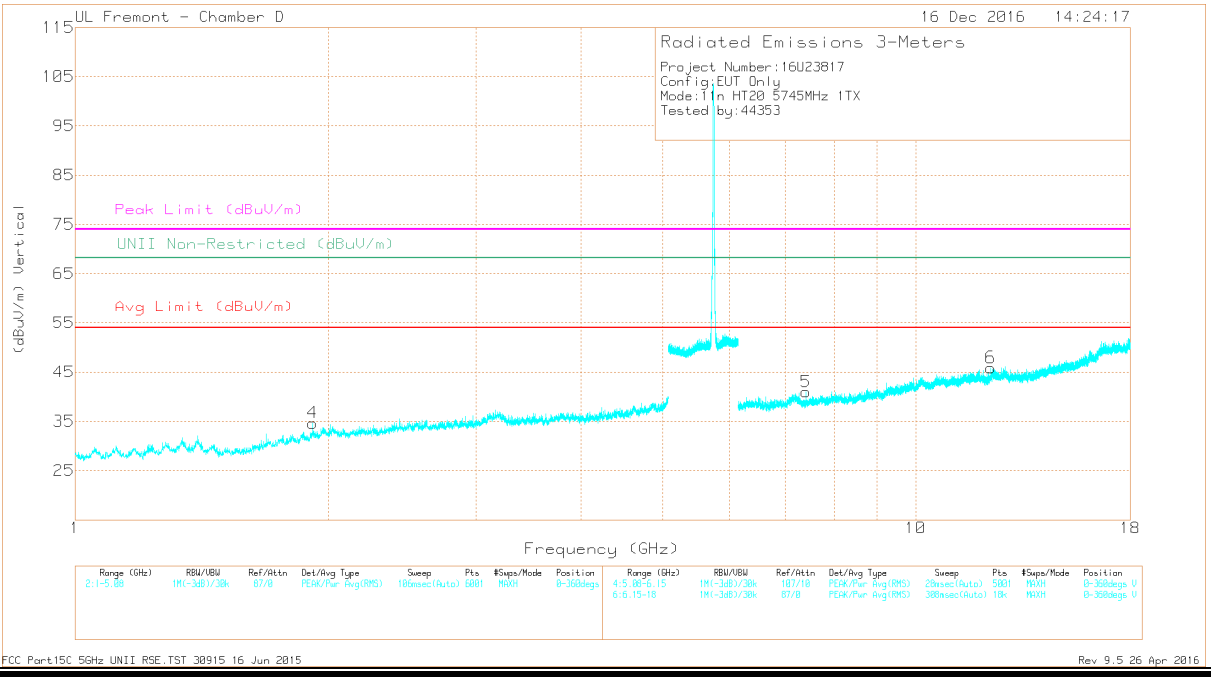
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



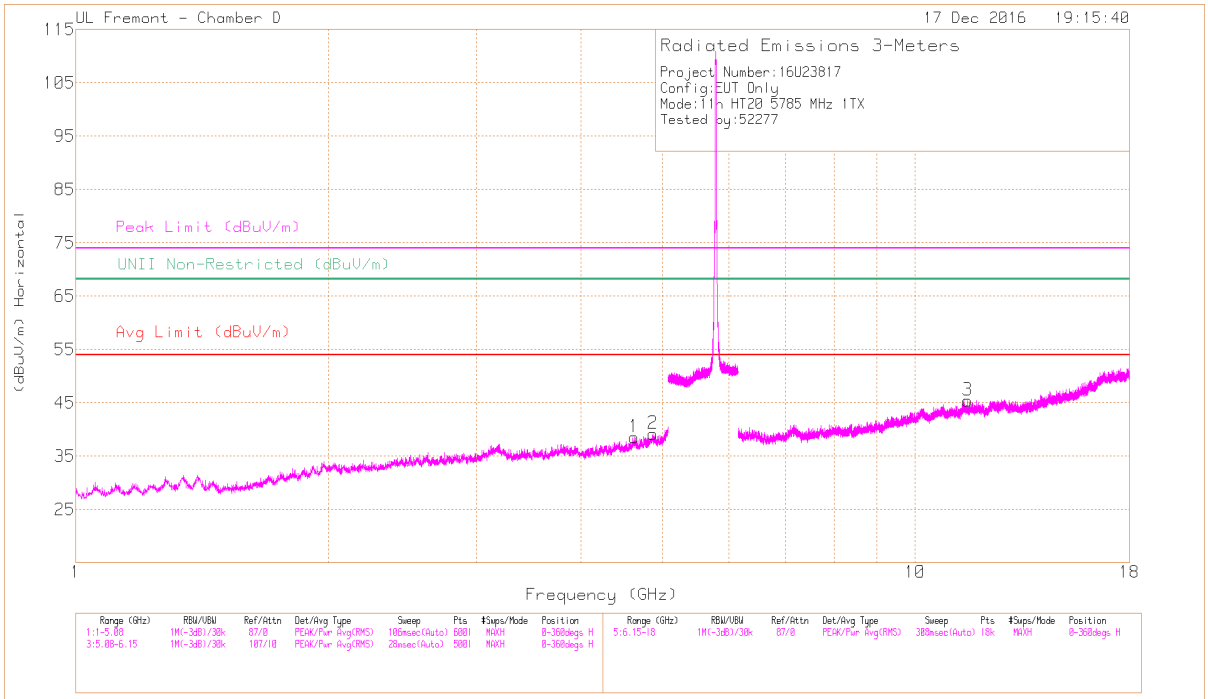
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.788	38.16	PK-U	33.5	-28.7	42.96	-	-	74	-31.04	-	-	294	322	H
	* 3.788	28.07	ADR	33.5	-28.7	32.87	54	-21.13	-	-	-	-	294	322	H
3	* 7.656	35.52	PK-U	35.8	-25.3	46.02	-	-	74	-27.98	-	-	256	191	H
	* 7.658	25.85	ADR	35.8	-25.2	36.45	54	-17.55	-	-	-	-	256	191	H
5	* 7.403	35.6	PK-U	35.6	-25.2	46	-	-	74	-28	-	-	307	276	V
	* 7.401	25.69	ADR	35.6	-25.2	36.09	54	-17.91	-	-	-	-	307	276	V
6	* 12.277	34.09	PK-U	39	-21.6	51.49	-	-	74	-22.51	-	-	88	131	V
	* 12.275	24.23	ADR	39	-21.6	41.63	54	-12.37	-	-	-	-	88	131	V
4	1.916	40.27	PK-U	31	-31.2	40.07	-	-	-	-	68.2	-28.13	101	243	V
2	5.959	40.73	PK-U	35	-17.4	58.33	-	-	-	-	68.2	-9.87	101	243	H

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

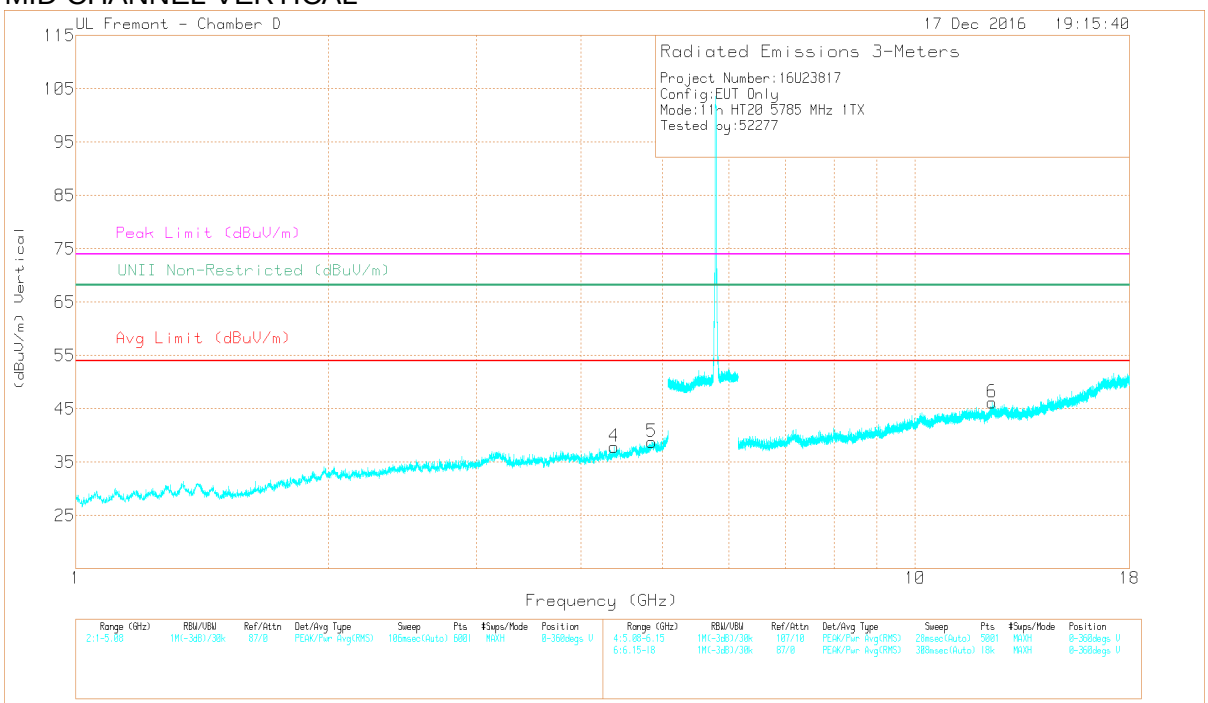
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

MID CHANNEL HORIZONTAL



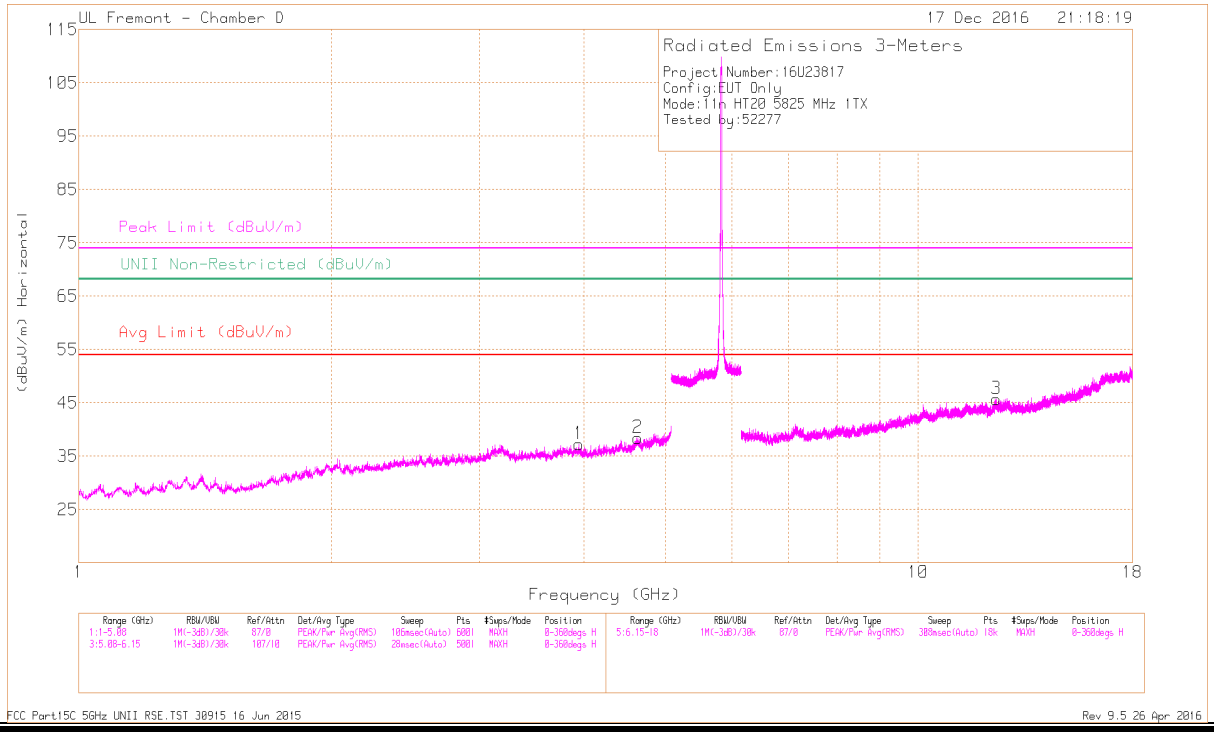
MID CHANNEL VERTICAL



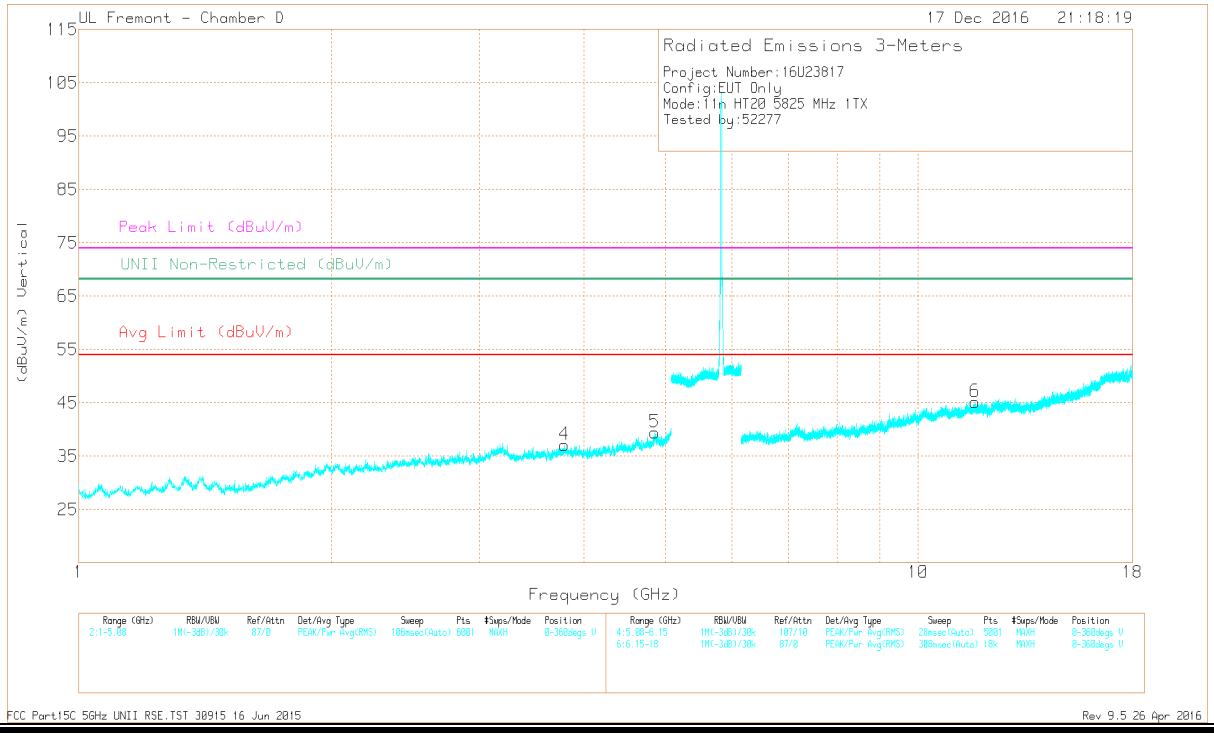
Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.631	37.14	PK-U	34.1	-26.9	0	44.34	-	-	74	-29.66	-	-	96	152	H
	* 4.628	26.6	ADR	34.1	-26.9	0	33.8	54	-20.2	-	-	-	-	96	152	H
2	* 4.872	36.75	PK-U	34.1	-25.2	0	45.65	-	-	74	-28.35	-	-	105	196	H
	* 4.872	25.7	ADR	34.1	-25.2	0	34.6	54	-19.4	-	-	-	-	105	196	H
4	* 4.379	38	PK-U	33.9	-28	0	43.9	-	-	74	-30.1	-	-	270	170	V
	* 4.377	26.95	ADR	33.9	-28	0	32.85	54	-21.15	-	-	-	-	270	170	V
5	* 4.851	36.6	PK-U	34.1	-25.8	0	44.9	-	-	74	-29.1	-	-	118	252	V
	* 4.853	26.13	ADR	34.1	-25.8	0	34.43	54	-19.57	-	-	-	-	118	252	V
3	* 11.549	33.83	PK-U	38.4	-21.6	0	50.63	-	-	74	-23.37	-	-	218	219	H
	* 11.549	23.75	ADR	38.4	-21.6	0	40.55	54	-13.45	-	-	-	-	218	219	H
6	* 12.341	34	PK-U	39	-21	0	52	-	-	74	-22	-	-	71	189	V
	* 12.342	23.55	ADR	39	-21	0	41.55	54	-12.45	-	-	-	-	71	189	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL

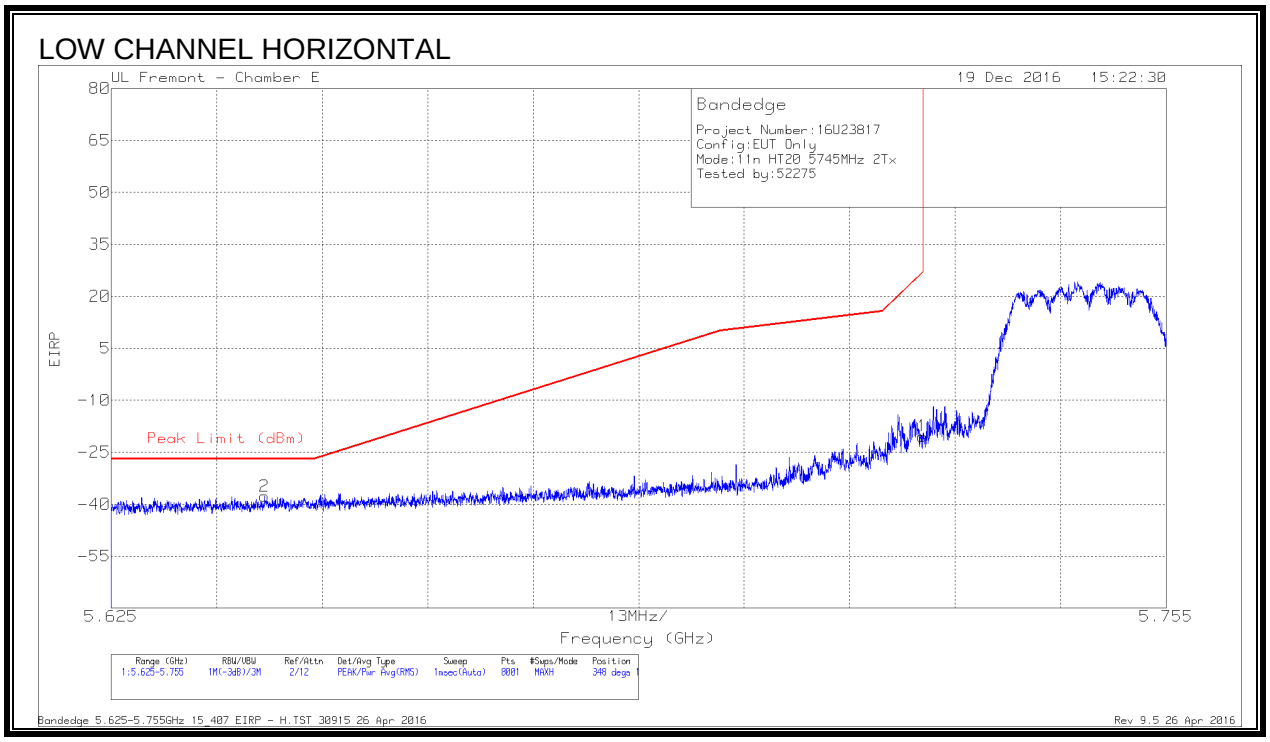


Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.942	37.61	PK-U	33.4	-28	0	43.01	-	-	74	-30.99	-	-	360	212	H
	* 3.941	26.93	ADR	33.4	-28	0	32.33	54	-21.67	-	-	-	-	360	212	H
2	* 4.637	36.91	PK-U	34.1	-27.1	0	43.91	-	-	74	-30.09	-	-	256	106	H
	* 4.638	26.39	ADR	34.1	-27.1	0	33.39	54	-20.61	-	-	-	-	256	106	H
4	* 3.794	37.99	PK-U	33.6	-28.8	0	42.79	-	-	74	-31.21	-	-	205	105	V
	* 3.793	27.46	ADR	33.5	-28.8	0	32.16	54	-21.84	-	-	-	-	205	105	V
5	* 4.851	36.5	PK-U	34.1	-25.8	0	44.8	-	-	74	-29.2	-	-	110	319	V
	* 4.851	26.08	ADR	34.1	-25.8	0	34.38	54	-19.62	-	-	-	-	110	319	V
3	* 12.384	33.97	PK-U	39	-20.9	0	52.07	-	-	74	-21.93	-	-	18	154	H
	* 12.383	23.22	ADR	39	-21	0	41.22	54	-12.78	-	-	-	-	18	154	H
5	* 11.685	33.62	PK-U	38.6	-21	0	51.22	-	-	74	-22.78	-	-	47	261	V
	* 11.685	23.05	ADR	38.6	-21	0	40.65	54	-13.35	-	-	-	-	47	261	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

9.2.39. 11n HT20 2TX CDD MIMO MODE IN THE 5.8GHz BAND

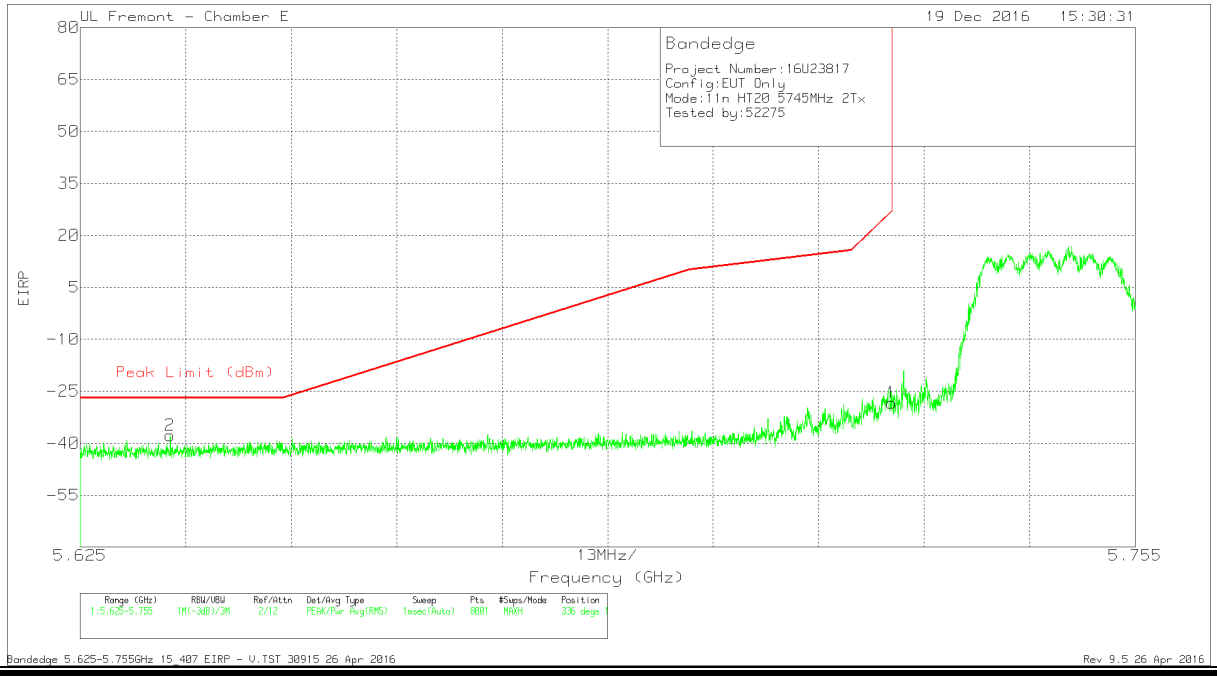
RESTRICTED BANDEDGE (LOW CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.644	-64.82	Pk	34.8	-19.5	11.8	-37.72	-27	-10.72	348	163	H
1	5.725	-47.48	Pk	34.9	-19.6	11.8	-20.38	26.97	-47.35	348	163	H

Pk - Peak detector

LOW CHANNEL VERTICAL

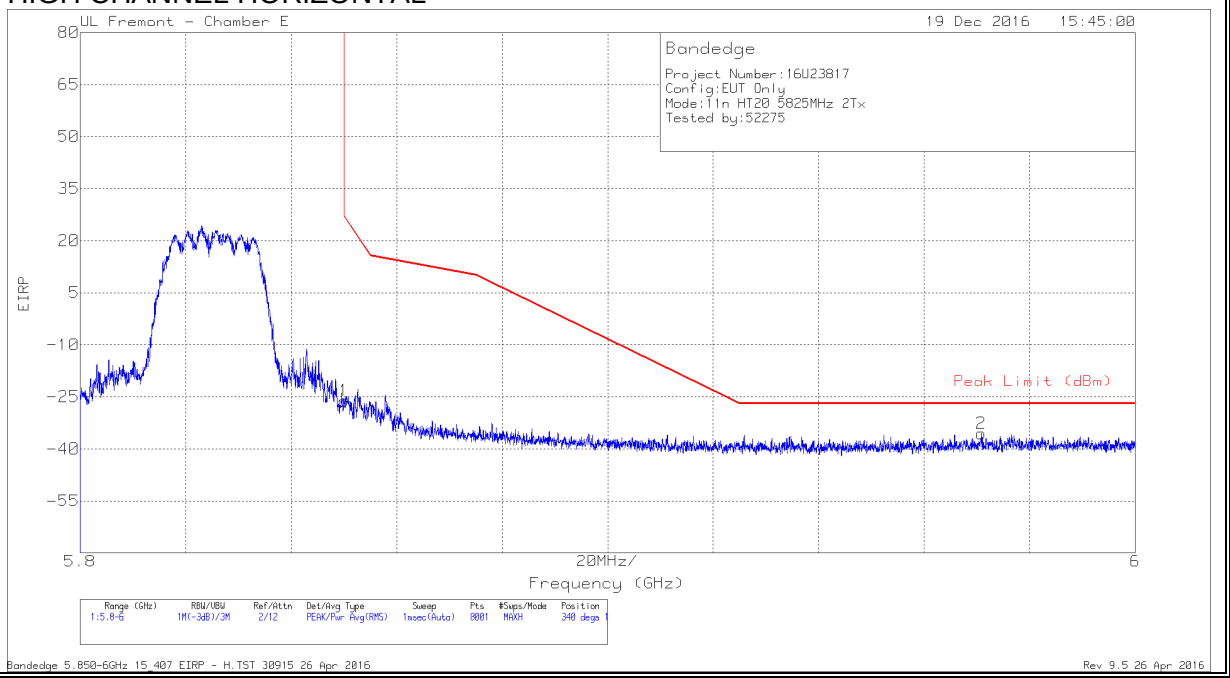


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.636	-64.76	Pk	34.8	-19.6	11.8	-37.76	-27	-10.76	336	114	V
1	5.725	-55.44	Pk	34.9	-19.6	11.8	-28.34	26.97	-55.31	336	114	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

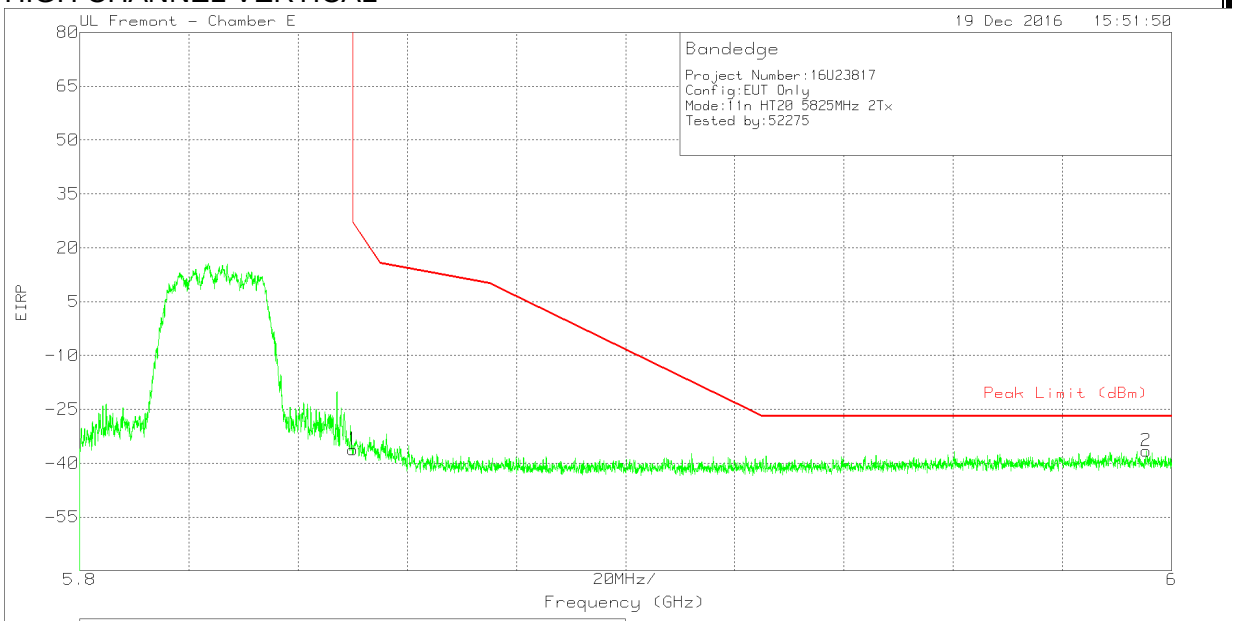
HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-53.38	Pk	34.9	-19.5	11.8	-26.18	26.94	-53.12	340	166	H
2	5.971	-63.48	Pk	35	-18.9	11.8	-35.58	-27	-8.58	340	166	H

Pk - Peak detector

HIGH CHANNEL VERTICAL

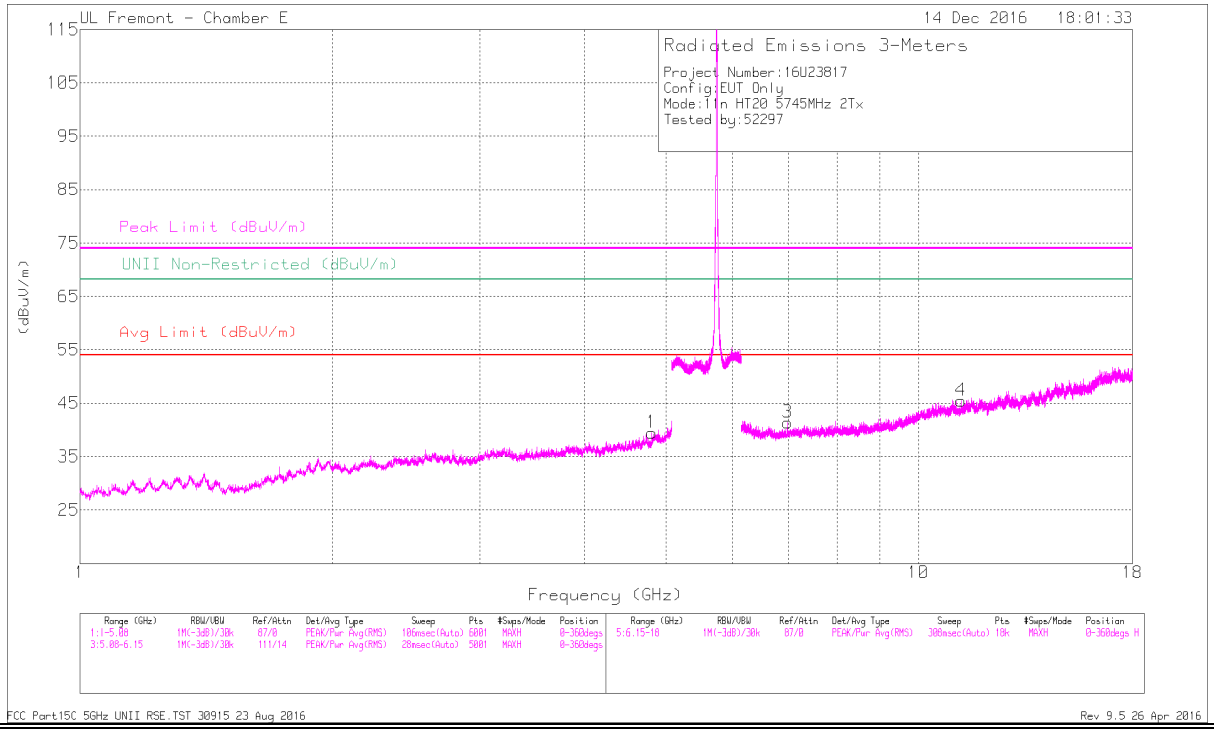


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-63.38	Pk	34.9	-19.5	11.8	-36.18	26.94	-63.12	317	184	V
2	5.995	-64.63	Pk	35.1	-18.8	11.8	-36.53	-27	-9.53	317	184	V

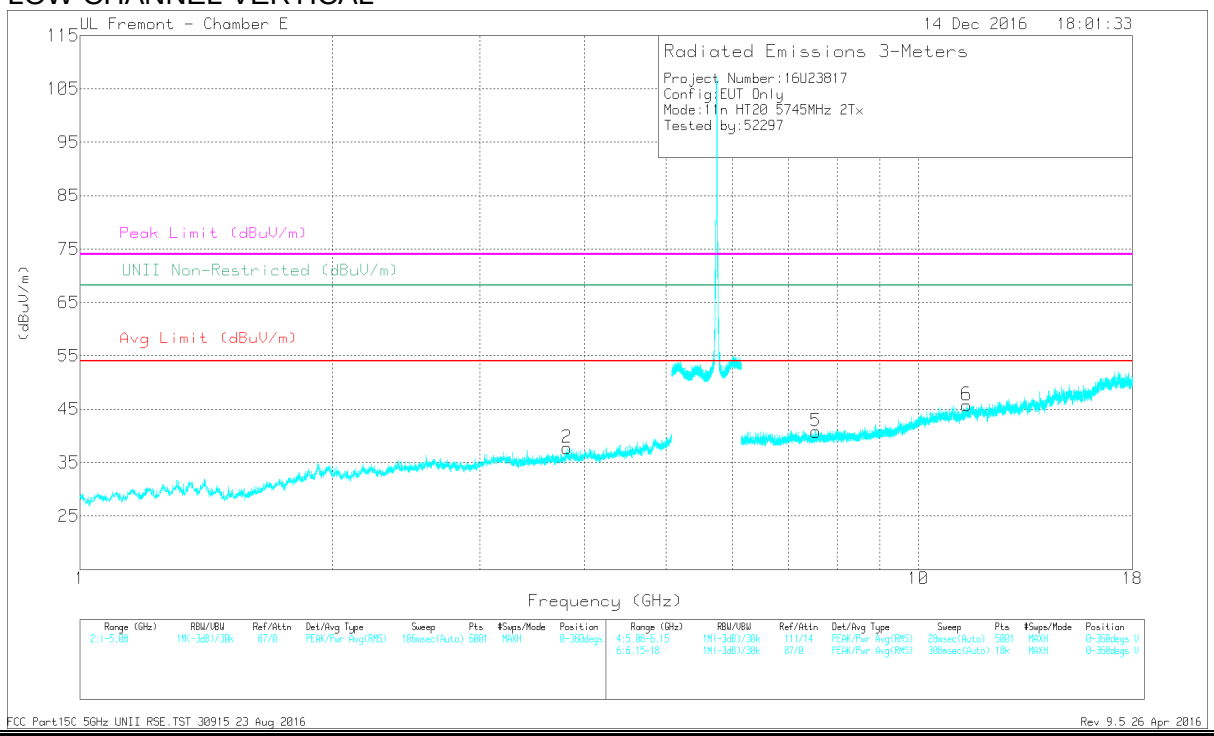
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



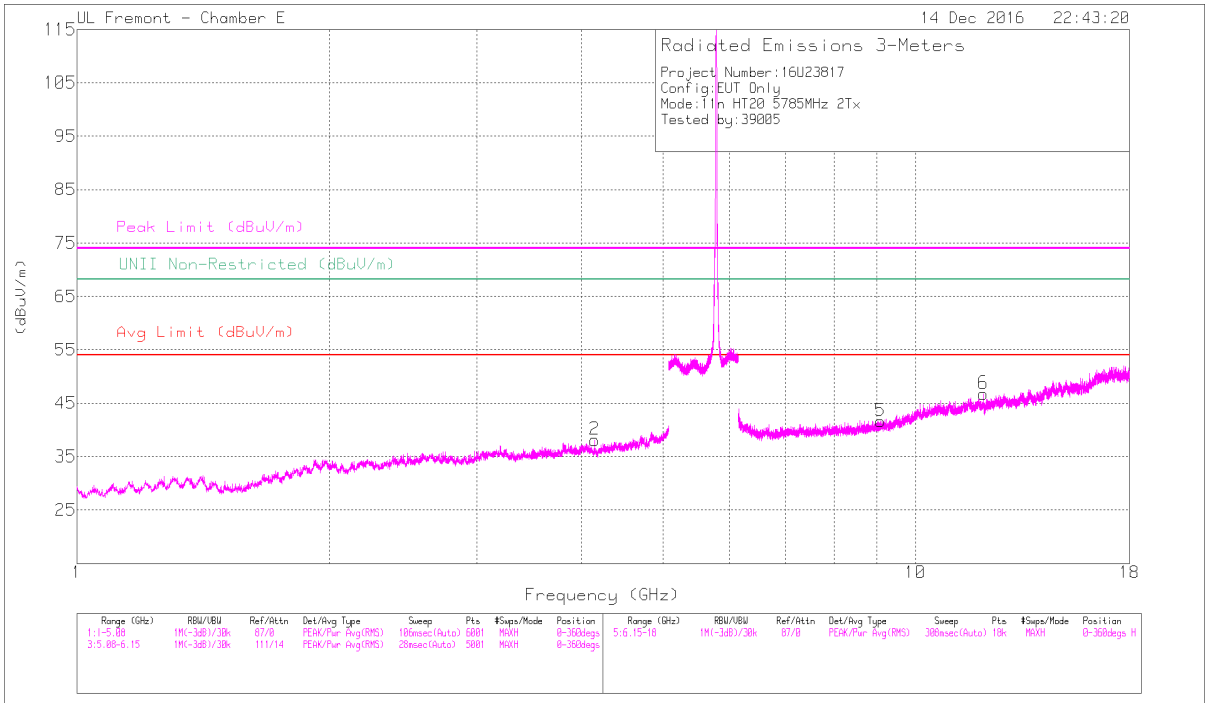
LOW CHANNEL VERTICAL



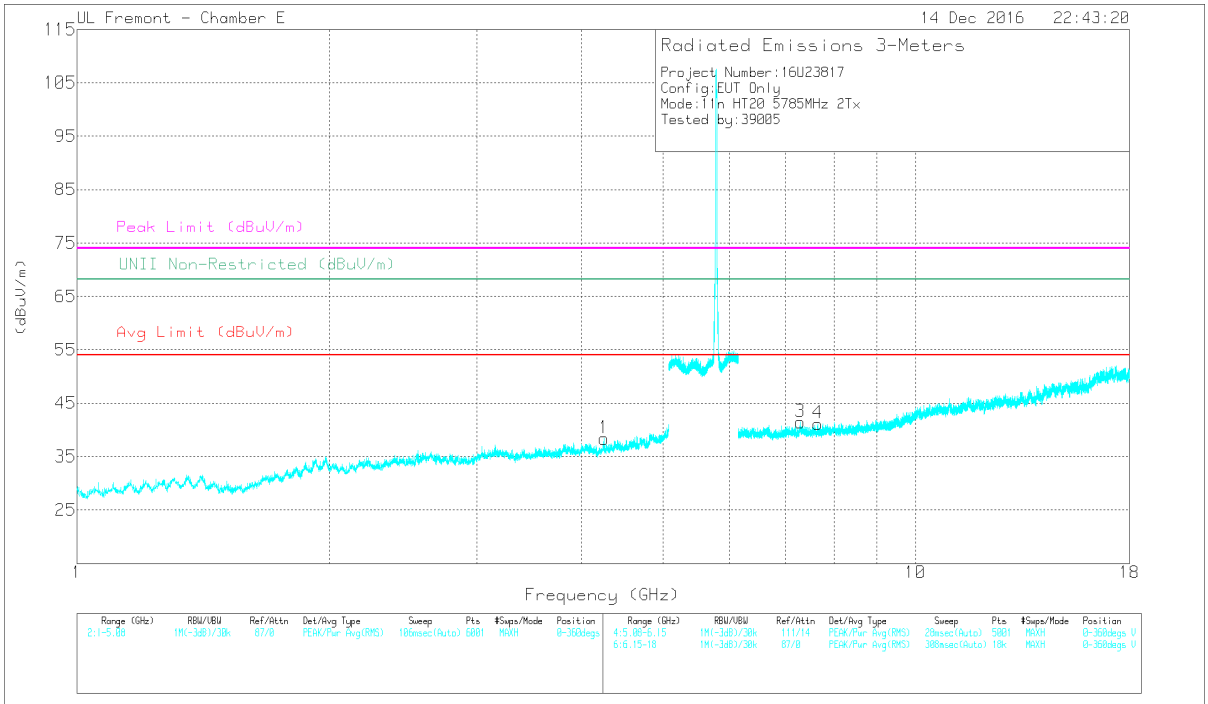
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.811	40.32	PK-U	34	-29.2	45.12	-	-	74	-28.88	-	-	344	195	H
	* 4.809	29.66	ADR	34	-29.3	34.36	54	-19.64	-	-	-	-	344	195	H
2	* 3.811	40.32	PK-U	33.1	-29.6	43.82	-	-	74	-30.18	-	-	89	103	V
	* 3.809	29.53	ADR	33.1	-29.6	33.03	54	-20.97	-	-	-	-	89	103	V
3	6.98	38.49	PK-U	35.6	-27.7	46.39	-	-	-	-	68.2	-21.81	161	204	H
4	* 11.24	36.46	PK-U	38.2	-23.9	50.76	-	-	74	-23.24	-	-	16	262	H
	* 11.242	26.14	ADR	38.2	-23.9	40.44	54	-13.56	-	-	-	-	16	262	H
5	* 7.548	37.99	PK-U	35.6	-26.5	47.09	-	-	74	-26.91	-	-	124	179	V
	* 7.55	27.28	ADR	35.6	-26.6	36.28	54	-17.72	-	-	-	-	124	179	V
6	* 11.414	37.46	PK-U	38.2	-23	52.66	-	-	74	-21.34	-	-	94	201	V
	* 11.415	25.98	ADR	38.2	-23	41.18	54	-12.82	-	-	-	-	94	201	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

MID CHANNEL HORIZONTAL



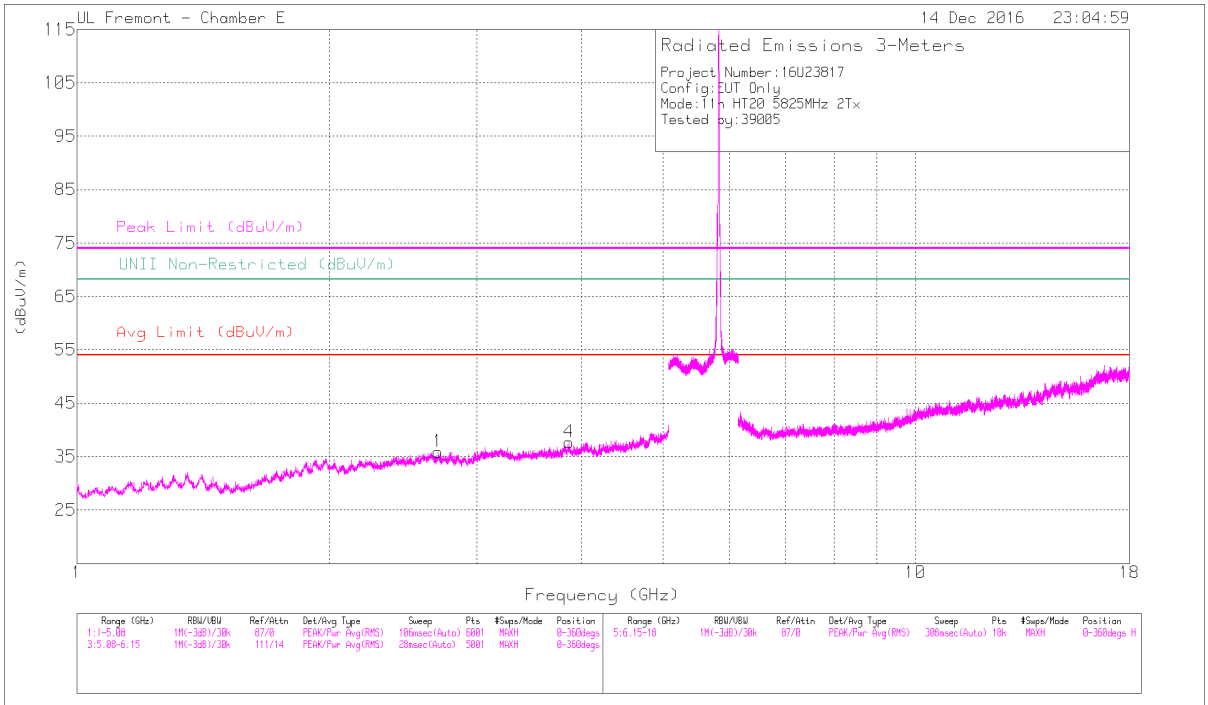
MID CHANNEL VERTICAL



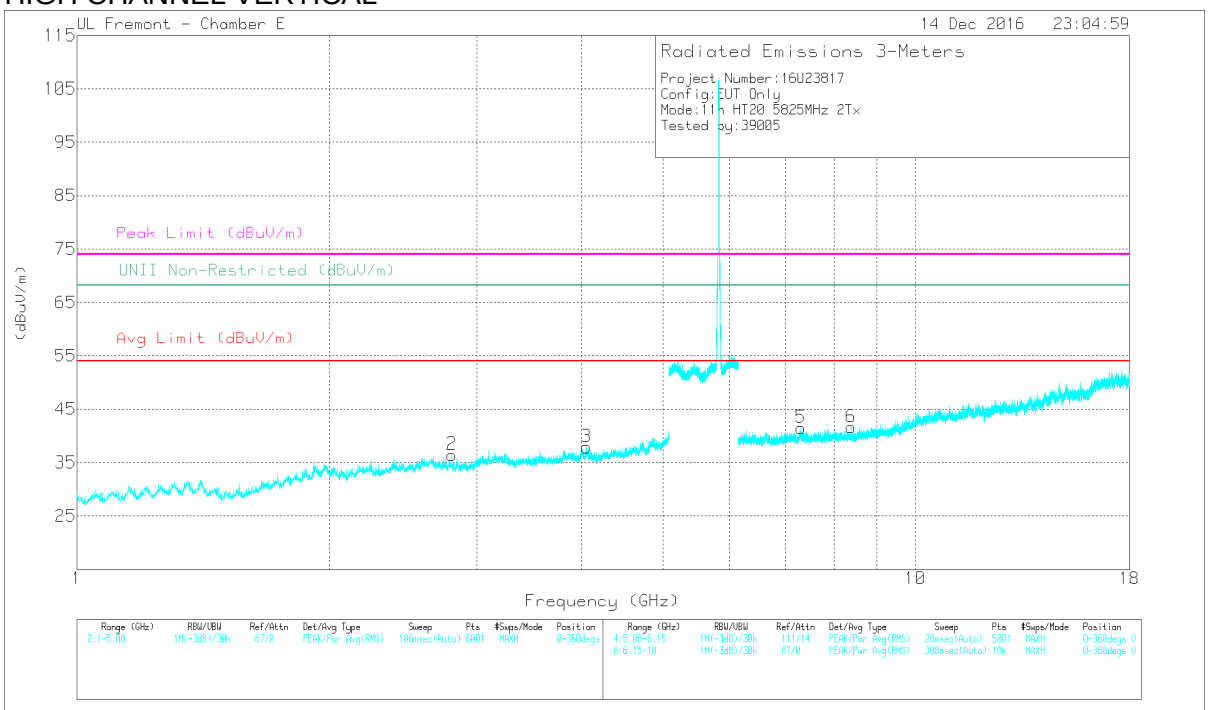
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.145	41.01	PK-U	33.3	-30.4	43.91	-	-	74	-30.09	-	-	58	267	H
* 4.145	30.47	ADR	33.3	-30.4	33.37	54	-20.63	-	-	-	-	58	267	H
* 4.252	41.88	PK-U	33.3	-29.7	45.48	-	-	74	-28.52	-	-	123	206	V
* 4.251	30.1	ADR	33.3	-29.7	33.7	54	-20.3	-	-	-	-	123	206	V
* 12.055	39.09	PK-U	39	-24.2	53.89	-	-	74	-20.11	-	-	40	291	H
* 12.055	26.79	ADR	39	-24.2	41.59	54	-12.41	-	-	-	-	40	291	H
* 9.092	38.36	PK-U	36.1	-25.9	48.56	-	-	74	-25.44	-	-	66	286	H
* 9.093	27.74	ADR	36.1	-25.9	37.94	54	-16.06	-	-	-	-	66	286	H
* 7.296	38.46	PK-U	35.6	-26.2	47.86	-	-	74	-26.14	-	-	117	237	V
* 7.294	28.43	ADR	35.6	-26.2	37.83	54	-16.17	-	-	-	-	117	237	V
* 7.655	39.34	PK-U	35.7	-27.3	47.74	-	-	74	-26.26	-	-	91	249	V
* 7.654	28.89	ADR	35.7	-27.3	37.29	54	-16.71	-	-	-	-	91	249	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL

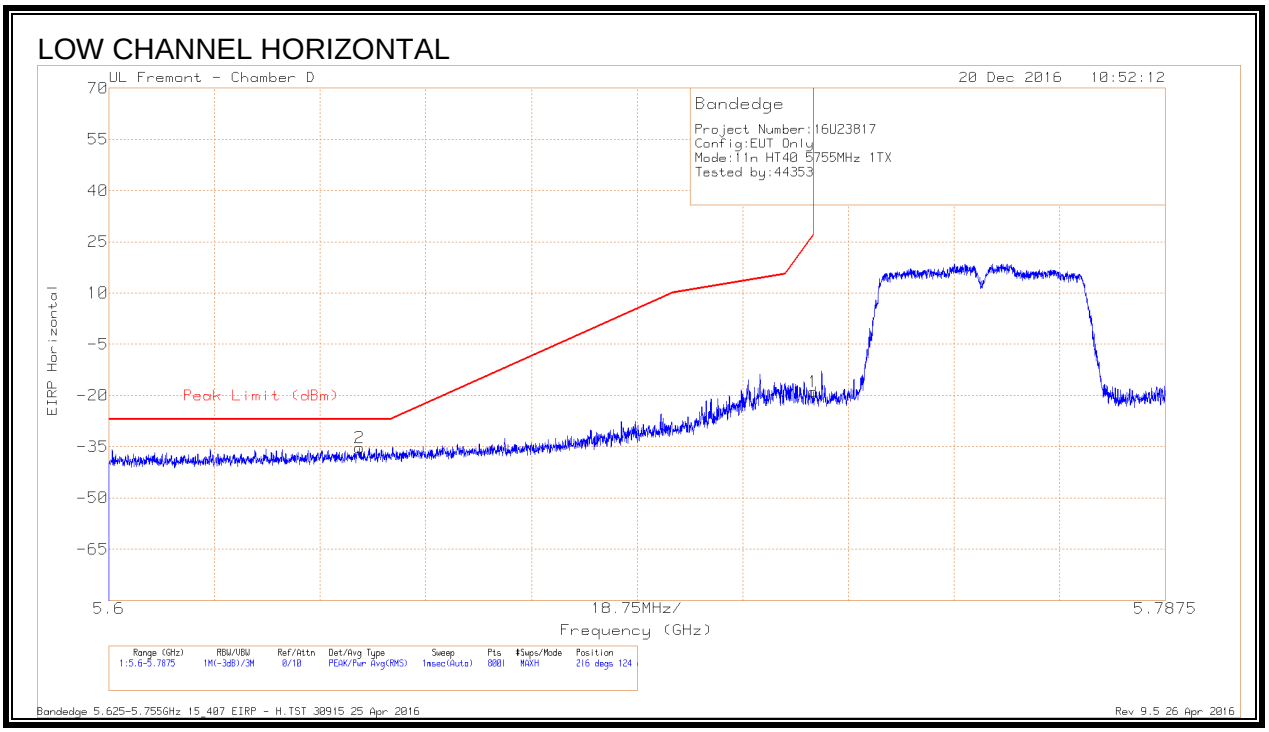


Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.697	42.54	PK-U	32.6	-32.4	42.74	-	-	74	-31.26	-	-	89	228	H
* 2.697	31.68	ADR	32.6	-32.4	31.88	54	-22.12	-	-	-	-	89	228	H
* 3.863	41.21	PK-U	33.2	-29.6	44.81	-	-	74	-29.19	-	-	111	241	H
* 3.863	30.07	ADR	33.2	-29.6	33.67	54	-20.33	-	-	-	-	111	241	H
* 2.799	42.43	PK-U	32.4	-31.9	42.93	-	-	74	-31.07	-	-	130	188	V
* 2.801	31.38	ADR	32.4	-31.8	31.98	54	-22.02	-	-	-	-	130	188	V
* 4.053	40.78	PK-U	33.3	-29.7	44.38	-	-	74	-29.62	-	-	97	198	V
* 4.053	30.26	ADR	33.3	-29.7	33.86	54	-20.14	-	-	-	-	97	198	V
* 7.301	38.48	PK-U	35.6	-26.3	47.78	-	-	74	-26.22	-	-	68	216	V
* 7.301	27.77	ADR	35.6	-26.3	37.07	54	-16.93	-	-	-	-	68	216	V
* 8.381	39.54	PK-U	35.7	-26.5	48.74	-	-	74	-25.26	-	-	89	246	V
* 8.381	28.53	ADR	35.7	-26.5	37.73	54	-16.27	-	-	-	-	89	246	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

9.2.40. 11n HT40 ANTENNA A SISO MODE IN THE 5.8GHz BAND

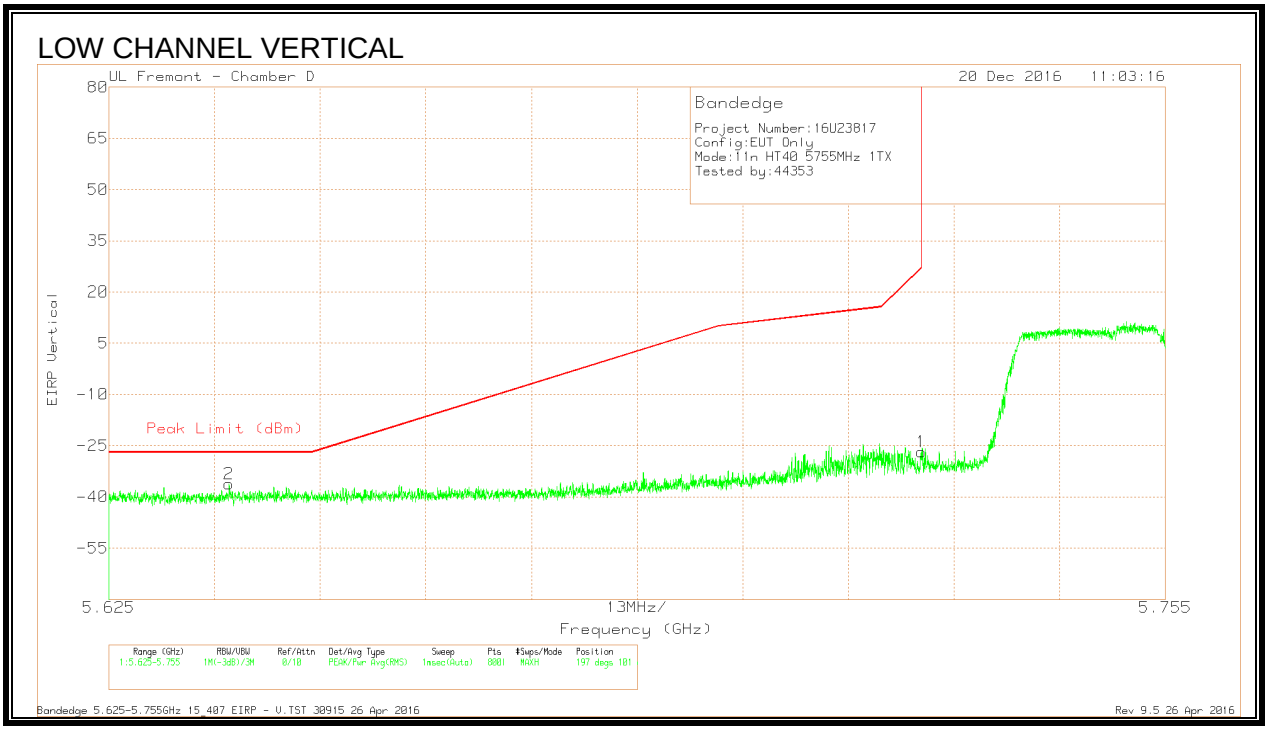
RESTRICTED BANDEDGE (LOW CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.645	-64.25	Pk	34.6	-17.5	11.8	0	-35.35	-27	-8.35	216	124	H
1	5.725	-48.08	Pk	34.8	-17.5	11.8	0	-18.98	26.99	-45.97	216	124	H

Pk - Peak detector

LOW CHANNEL VERTICAL

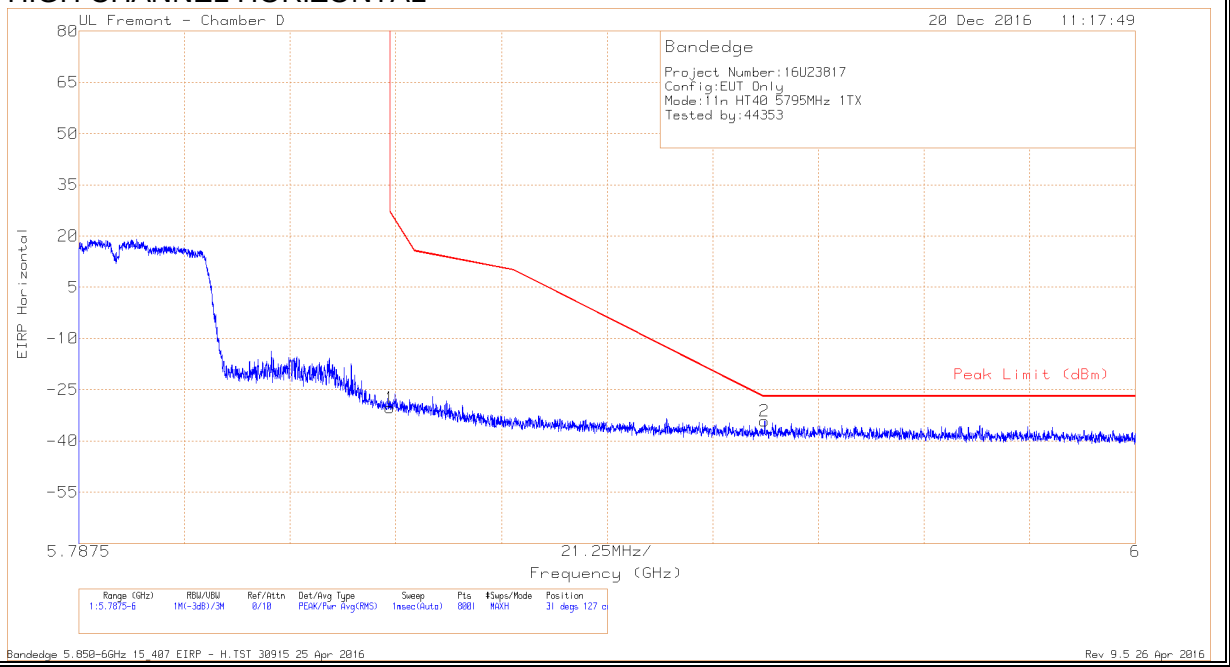


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.64	-65.06	Pk	34.6	-17.6	11.8	0	-36.26	-27	-9.26	197	101	V
1	5.725	-55.97	Pk	34.8	-17.5	11.8	0	-26.87	26.97	-53.84	197	101	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

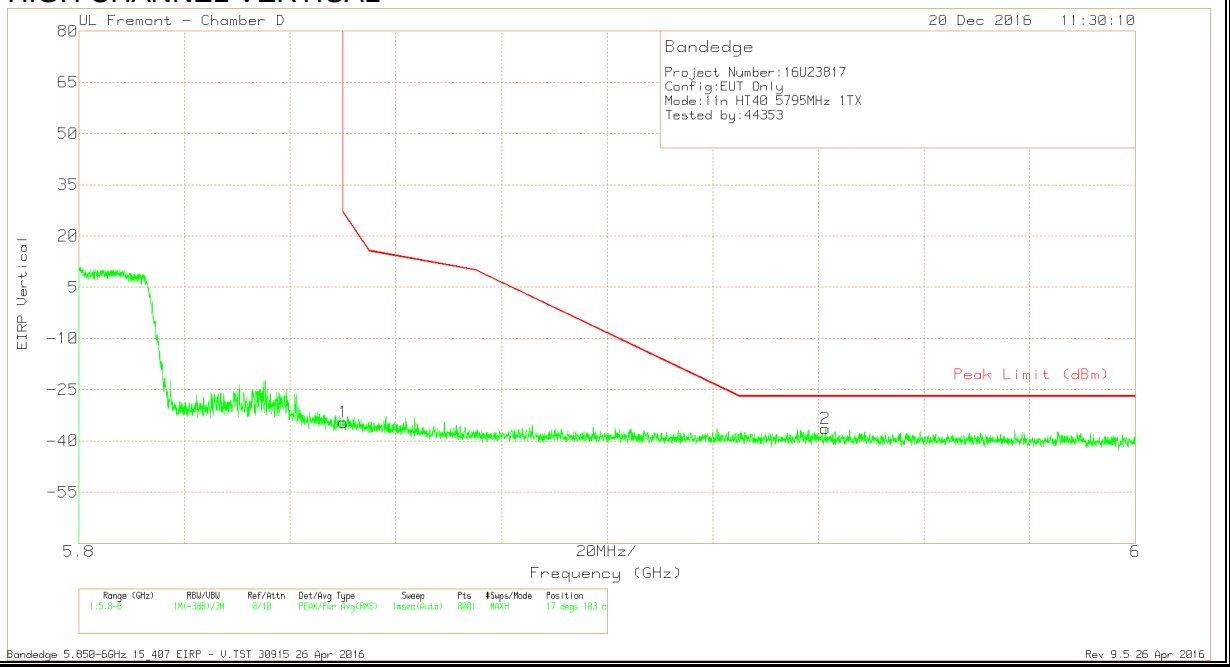
HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-59.43	Pk	34.9	-17.5	11.8	0	-30.23	26.99	-57.22	31	127	H
2	5.925	-63.5	Pk	35	-17.4	11.8	0	-34.1	-27	-7.1	31	127	H

Pk - Peak detector

HIGH CHANNEL VERTICAL

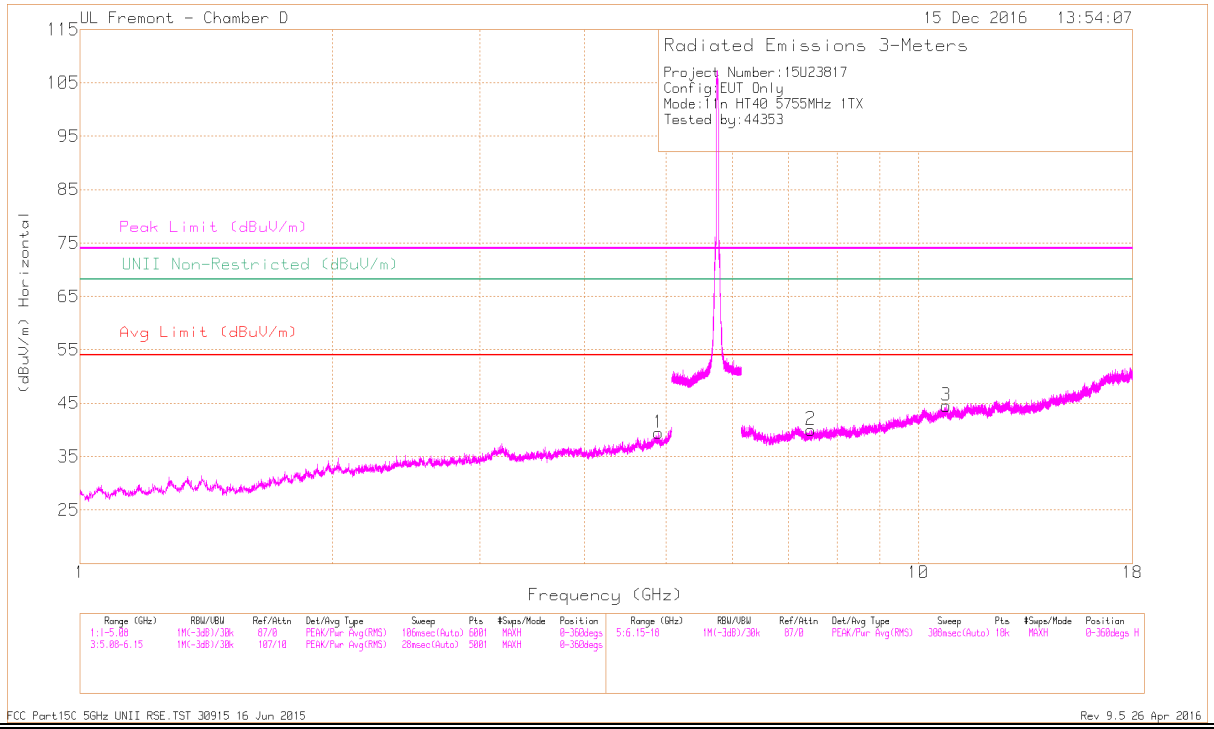


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-63.72	Pk	34.9	-17.5	11.8	0	-34.52	26.94	-61.46	17	103	V
2	5.941	-65.81	Pk	35	-17.4	11.8	0	-36.41	-27	-9.41	17	103	V

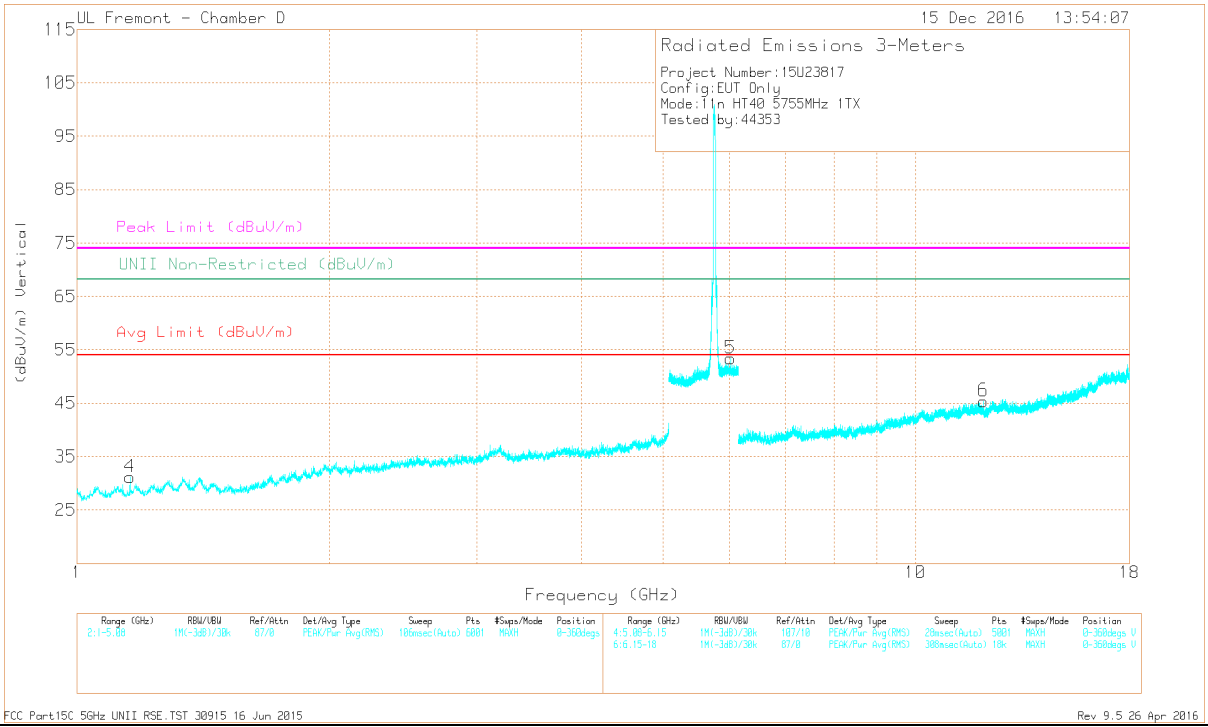
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



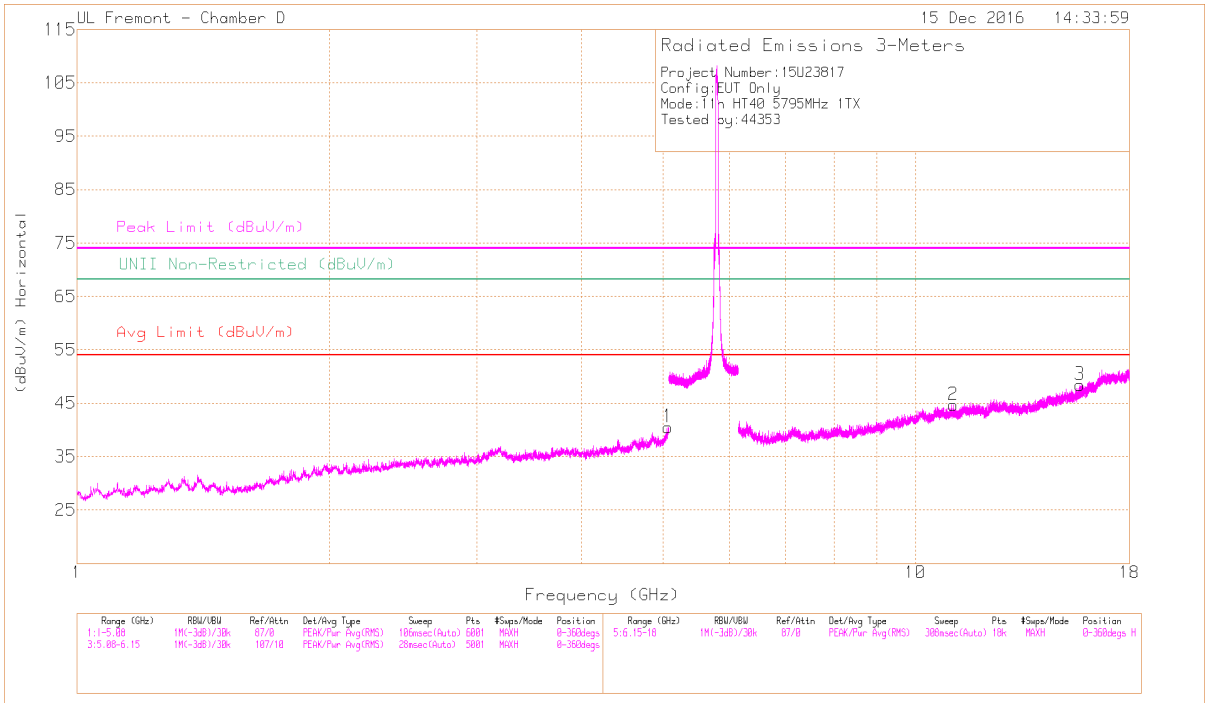
LOW CHANNEL VERTICAL



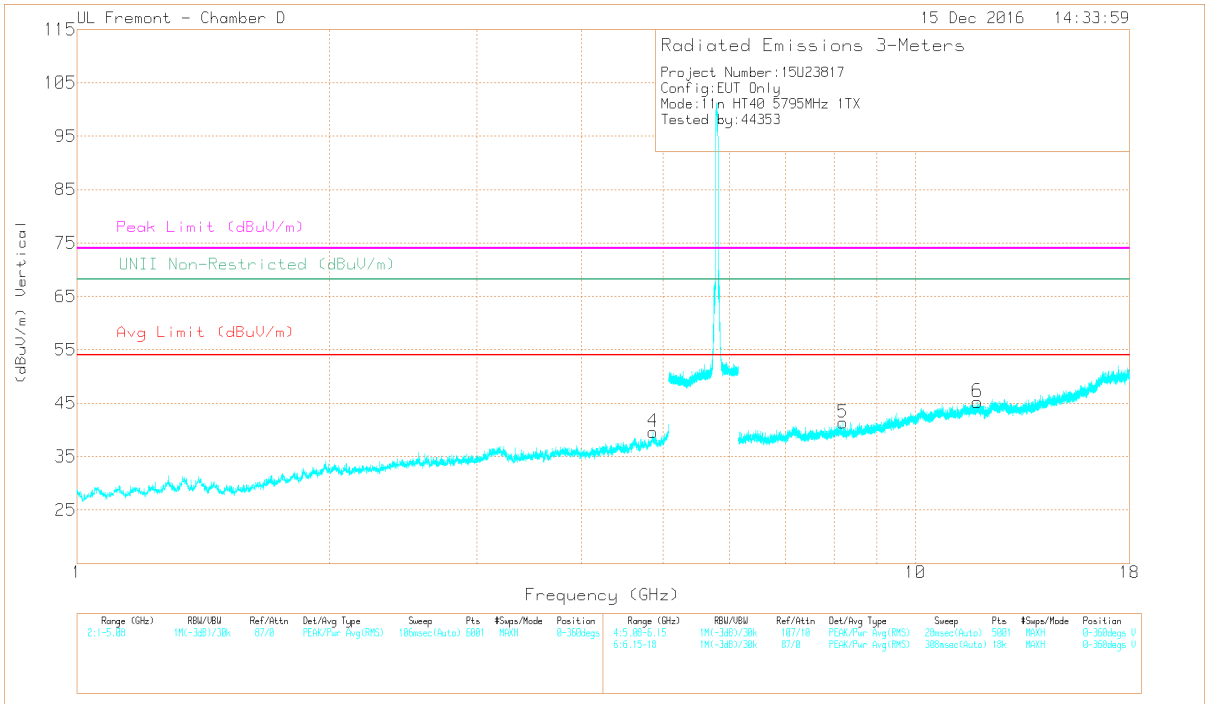
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.895	35.94	PK-U	34.1	-25.4	0	44.64	-	-	74	-29.36	-	-	72	253	H
	* 4.896	26.56	ADR	34.1	-25.4	.1	35.36	54	-18.64	-	-	-	-	72	253	H
4	* 1.16	41.17	PK-U	27.9	-32.2	0	36.87	-	-	74	-37.13	-	-	186	191	V
	* 1.159	29.07	ADR	27.9	-32.2	.1	24.87	54	-29.13	-	-	-	-	186	191	V
2	* 7.442	35.38	PK-U	35.6	-24.8	0	46.18	-	-	74	-27.82	-	-	104	231	H
	* 7.443	25.07	ADR	35.6	-24.8	.1	35.97	54	-18.03	-	-	-	-	104	231	H
3	* 10.799	33.63	PK-U	37.9	-20.6	0	50.93	-	-	74	-23.07	-	-	336	180	H
	* 10.801	23.59	ADR	37.9	-20.6	.1	40.99	54	-13.01	-	-	-	-	336	180	H
6	* 12.045	33.61	PK-U	38.9	-21.6	0	50.91	-	-	74	-23.09	-	-	289	201	V
	* 12.049	24.09	ADR	38.9	-21.7	.1	41.39	54	-12.61	-	-	-	-	289	201	V
5	6.018	40.47	PK-U	35.1	-17.5	0	58.07	-	-	-	-	68.2	-10.13	160	103	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL

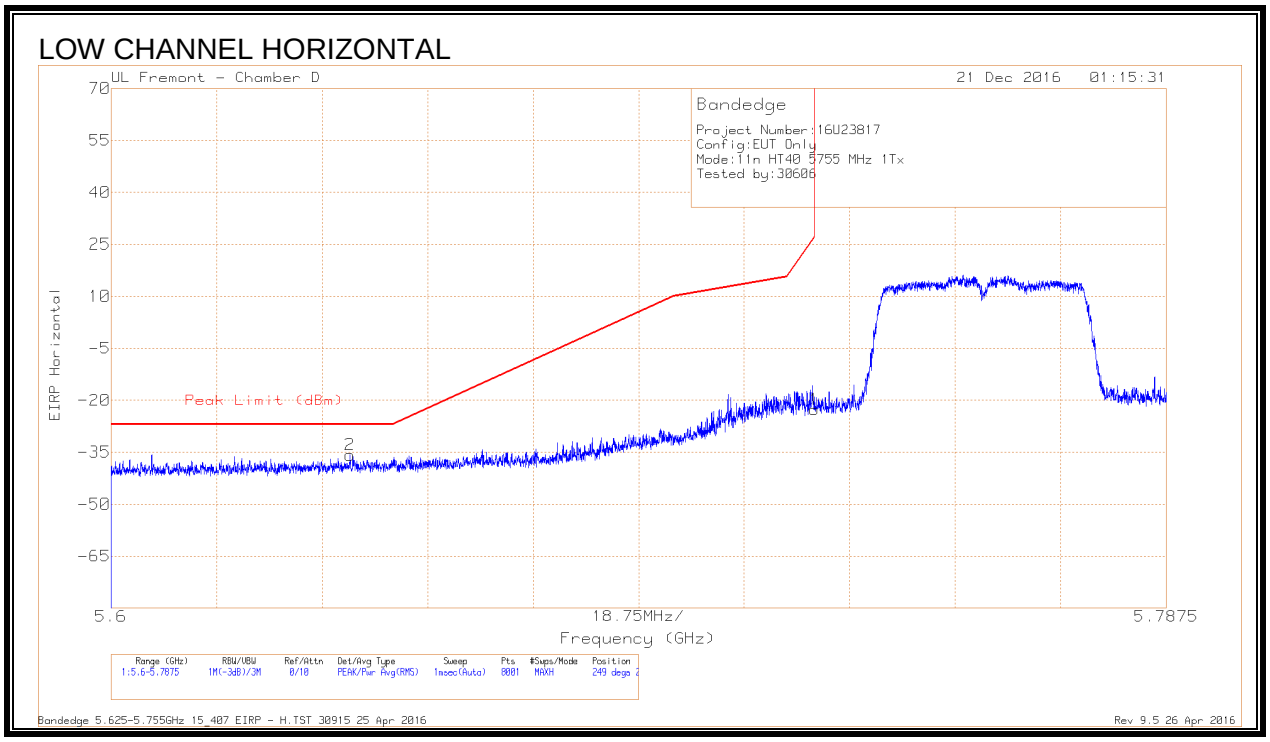


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.071	37.51	PK-U	34	-25.4	0	46.11	-	-	74	-27.89	-	-	120	176	H
	* 5.073	27.79	ADR	34	-25.1	.1	36.79	54	-17.21	-	-	-	-	120	176	H
4	* 4.866	36.67	PK-U	34.1	-25.3	0	45.47	-	-	74	-28.53	-	-	170	265	V
	* 4.864	26.22	ADR	34.1	-25.4	.1	35.02	54	-18.98	-	-	-	-	170	265	V
2	* 11.091	33.73	PK-U	38	-21.4	0	50.33	-	-	74	-23.67	-	-	26	292	H
	* 11.093	24.04	ADR	38	-21.4	.1	40.74	54	-13.26	-	-	-	-	26	292	H
3	* 15.704	34.33	PK-U	40.2	-20.4	0	54.13	-	-	74	-19.87	-	-	322	117	H
	* 15.706	24.48	ADR	40.2	-20.4	.1	44.38	54	-9.62	-	-	-	-	322	117	H
5	* 8.192	34.93	PK-U	35.9	-24.3	0	46.53	-	-	74	-27.47	-	-	258	277	V
	* 8.19	24.96	ADR	35.9	-24.3	.1	36.66	54	-17.34	-	-	-	-	258	277	V
6	* 11.857	34.24	PK-U	38.8	-21.5	0	51.54	-	-	74	-22.46	-	-	160	208	V
	* 11.857	23.96	ADR	38.8	-21.5	.1	41.36	54	-12.64	-	-	-	-	160	208	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

9.2.41. 11n HT40 ANTENNA B SISO MODE IN THE 5.8GHz BAND

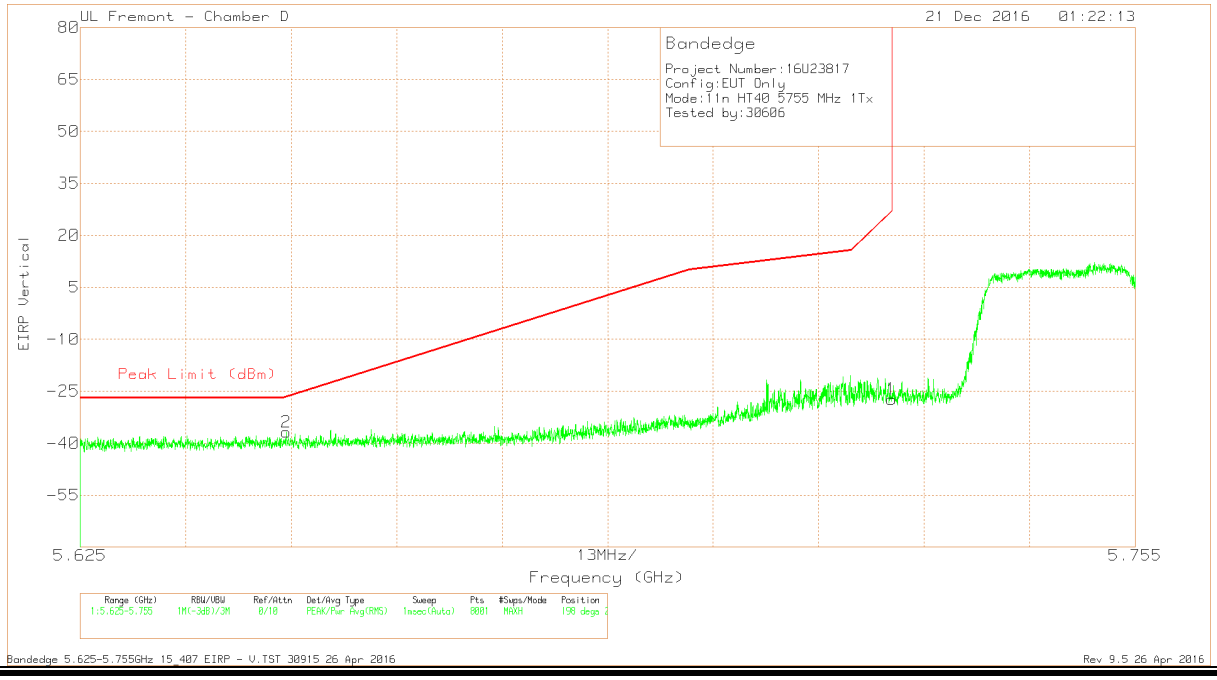
RESTRICTED BANDEDGE (LOW CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.642	-64.6	Pk	34.6	-17.6	11.8	0	-35.8	-27	-8.8	249	217	H
1	5.725	-51.8	Pk	34.8	-17.5	11.8	0	-22.7	26.99	-49.69	249	217	H

Pk - Peak detector

LOW CHANNEL VERTICAL

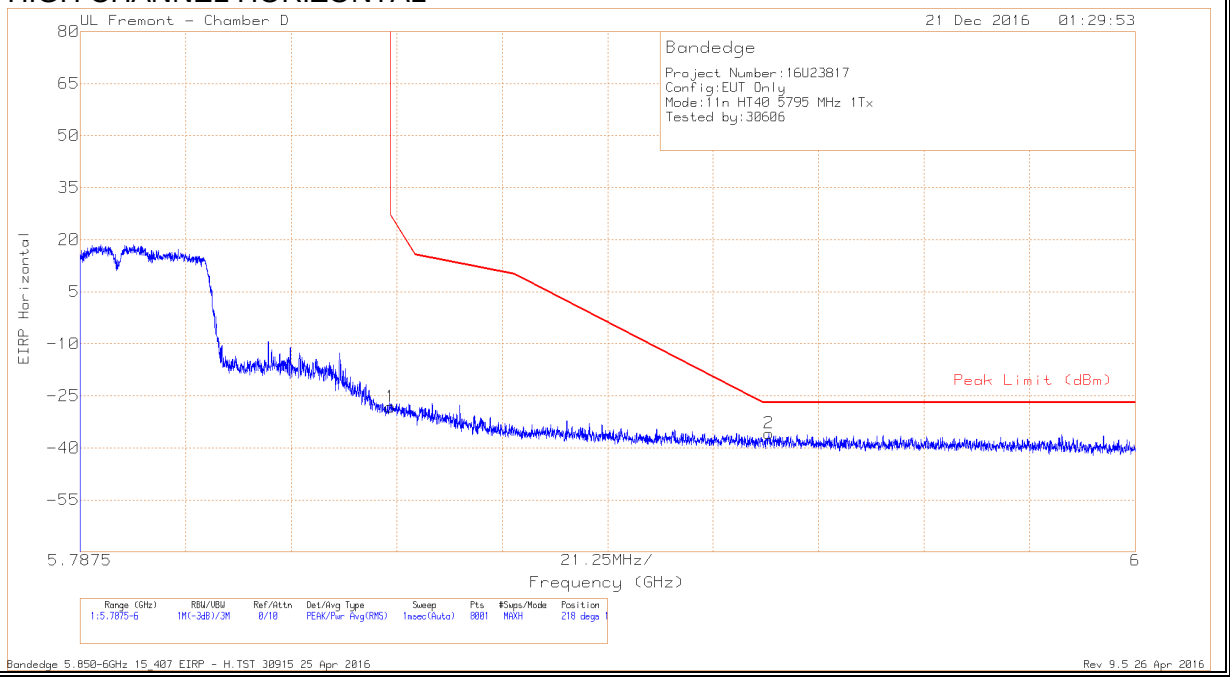


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.65	-65.67	Pk	34.6	-17.5	11.8	0	-36.77	-26.72	-10.05	198	259	V
1	5.725	-56.43	Pk	34.8	-17.5	11.8	0	-27.33	26.97	-54.3	198	259	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

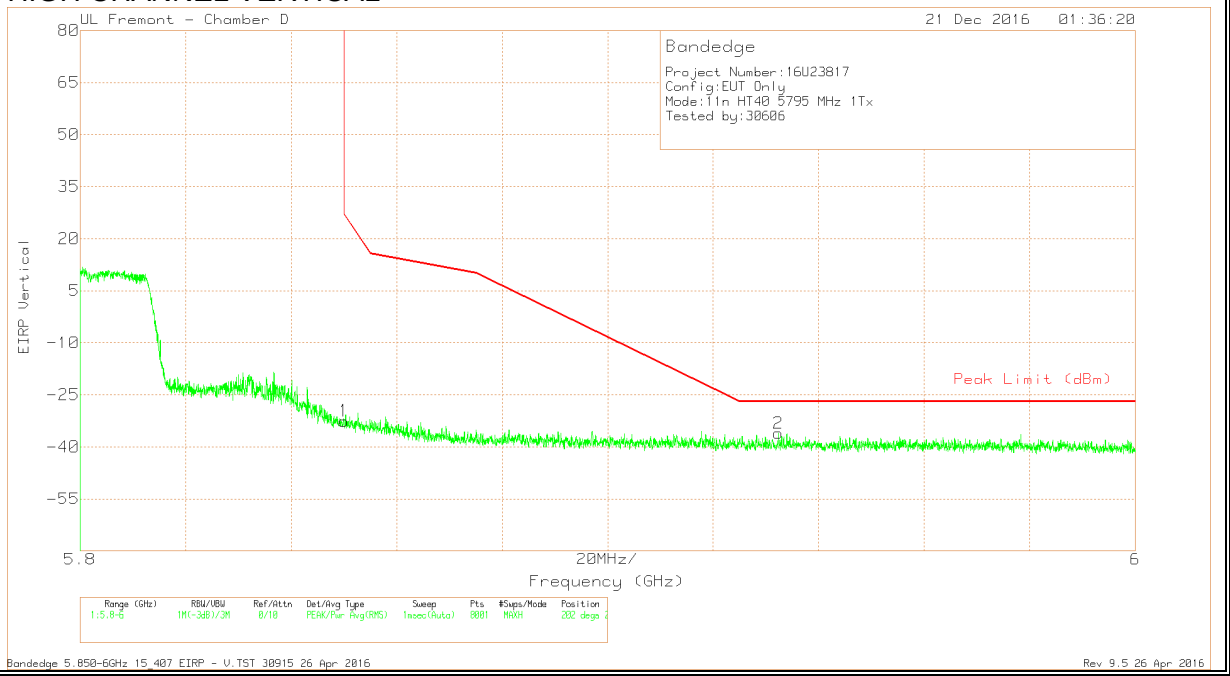
HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-57.35	Pk	34.9	-17.5	11.8	0	-28.15	26.99	-55.14	218	163	H
2	5.926	-65.18	Pk	35	-17.4	11.8	0	-35.78	-27	-8.78	218	163	H

Pk - Peak detector

HIGH CHANNEL VERTICAL

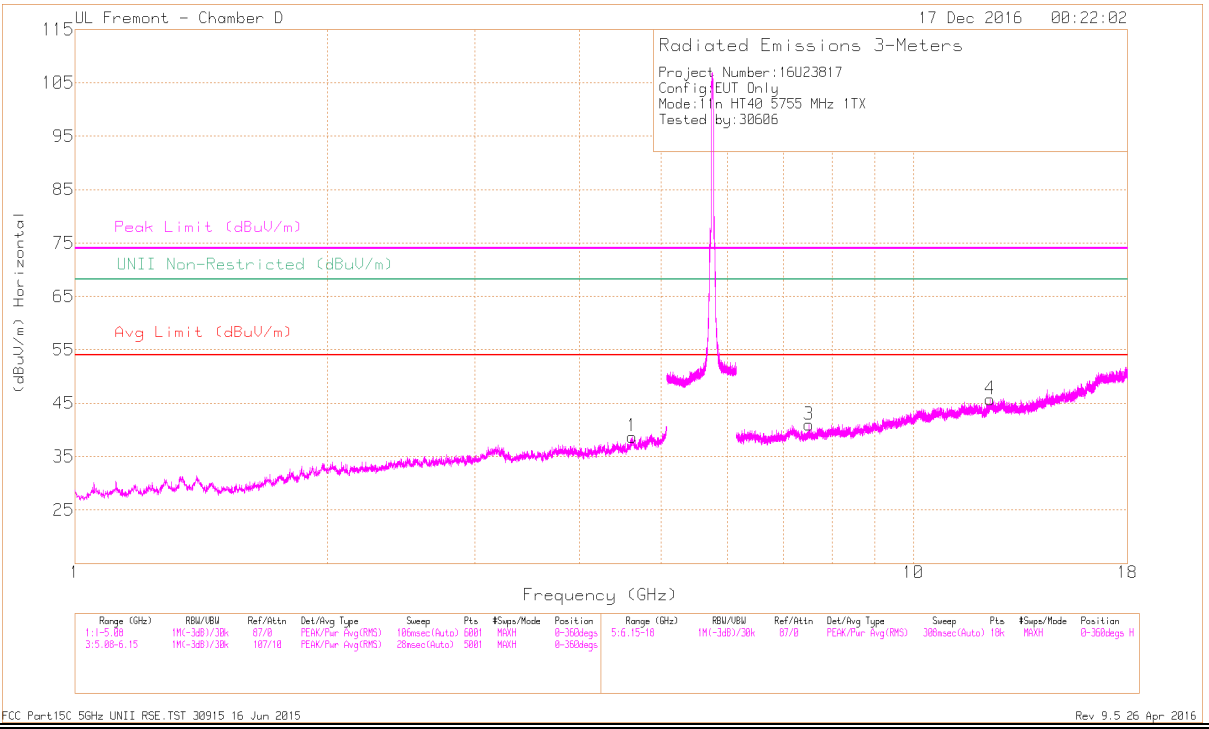


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-61.74	Pk	34.9	-17.5	11.8	0	-32.54	26.94	-59.48	202	271	V
2	5.932	-65.6	Pk	35	-17.3	11.8	0	-36.1	-27	-9.1	202	271	V

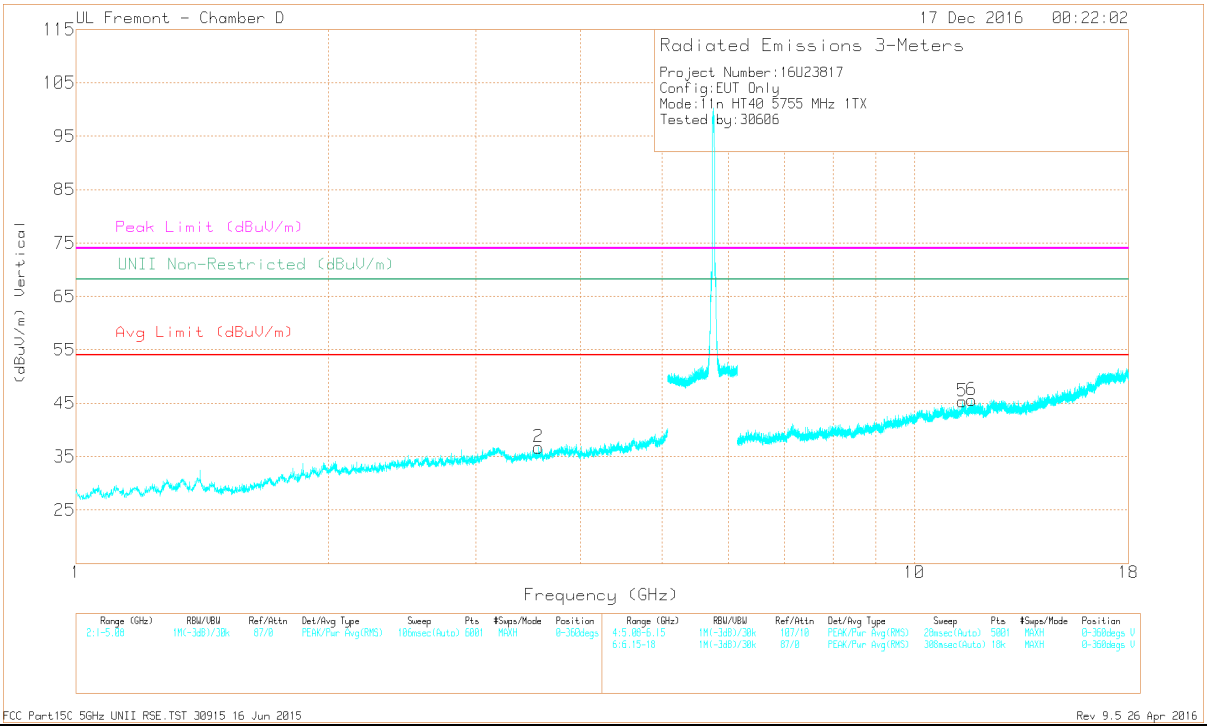
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



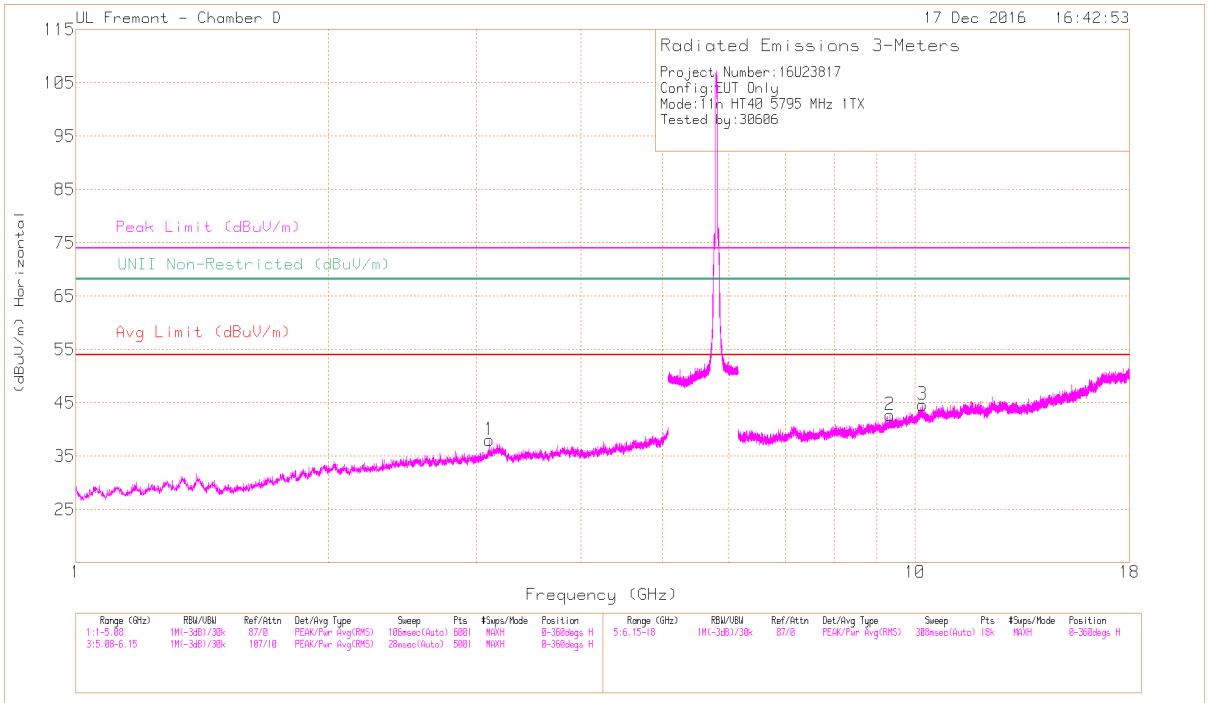
LOW CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.621	37.2	PK-U	34.1	-26.9	0	44.4	-	-	74	-29.6	-	-	247	168	H
	* 4.621	26.88	ADR	34.1	-26.9	.1	34.18	54	-19.82	-	-	-	-	247	168	H
2	* 3.564	39.18	PK-U	33.2	-29.3	0	43.08	-	-	74	-30.92	-	-	341	200	V
	* 3.566	27.9	ADR	33.2	-29.2	.1	32	54	-22	-	-	-	-	341	200	V
3	* 7.506	36.29	PK-U	35.7	-24.6	0	47.39	-	-	74	-26.61	-	-	185	200	H
	* 7.506	24.58	ADR	35.7	-24.6	.1	35.78	54	-18.22	-	-	-	-	185	200	H
4	* 12.347	34.26	PK-U	39	-21	0	52.26	-	-	74	-21.74	-	-	354	200	H
	* 12.348	23.54	ADR	39	-21	.1	41.64	54	-12.36	-	-	-	-	354	200	H
5	* 11.408	34.18	PK-U	38.3	-21.4	0	51.08	-	-	74	-22.92	-	-	262	102	V
	* 11.408	23.71	ADR	38.3	-21.4	.1	40.71	54	-13.29	-	-	-	-	262	102	V
6	* 11.706	33.74	PK-U	38.6	-20.9	0	51.44	-	-	74	-22.56	-	-	331	179	V
	* 11.704	23.13	ADR	38.6	-20.9	.1	40.93	54	-13.07	-	-	-	-	331	179	V

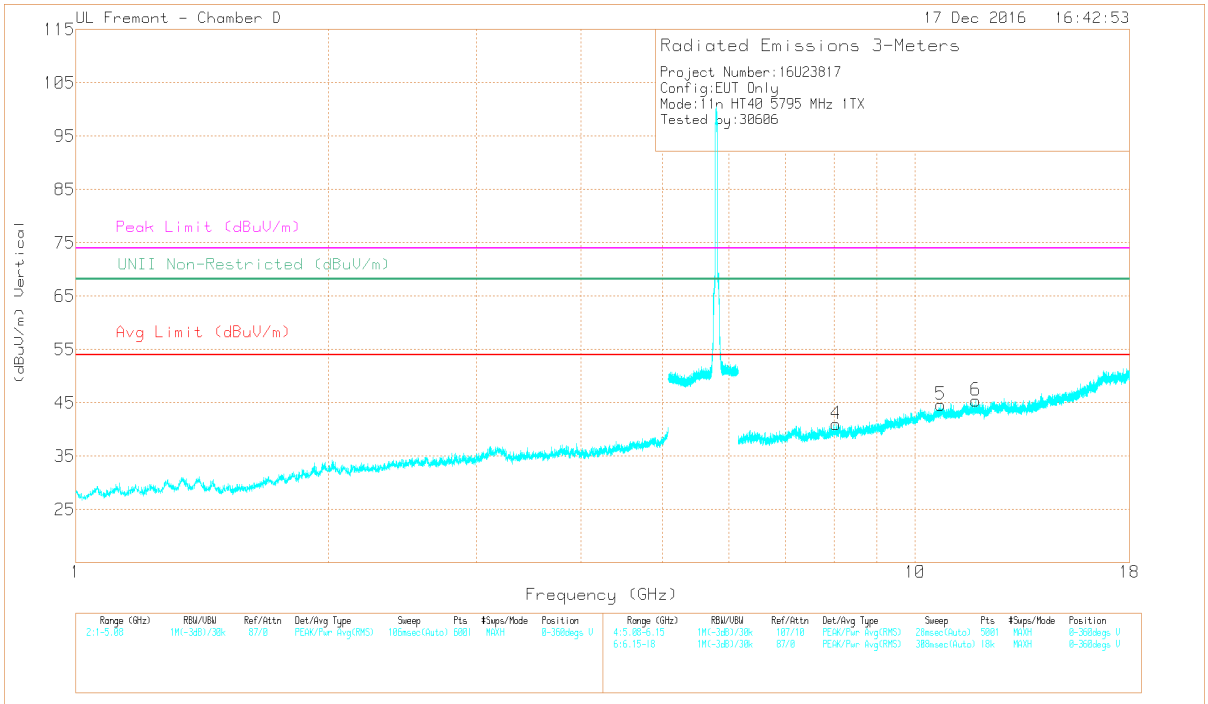
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



FCC Part15C 5GHz UNII RSE.TST 30915 16 Jun 2015 Rev 9.5 26 Apr 2016

HIGH CHANNEL VERTICAL



FCC Part15C 5GHz UNII RSE.TST 30915 16 Jun 2015 Rev 9.5 26 Apr 2016

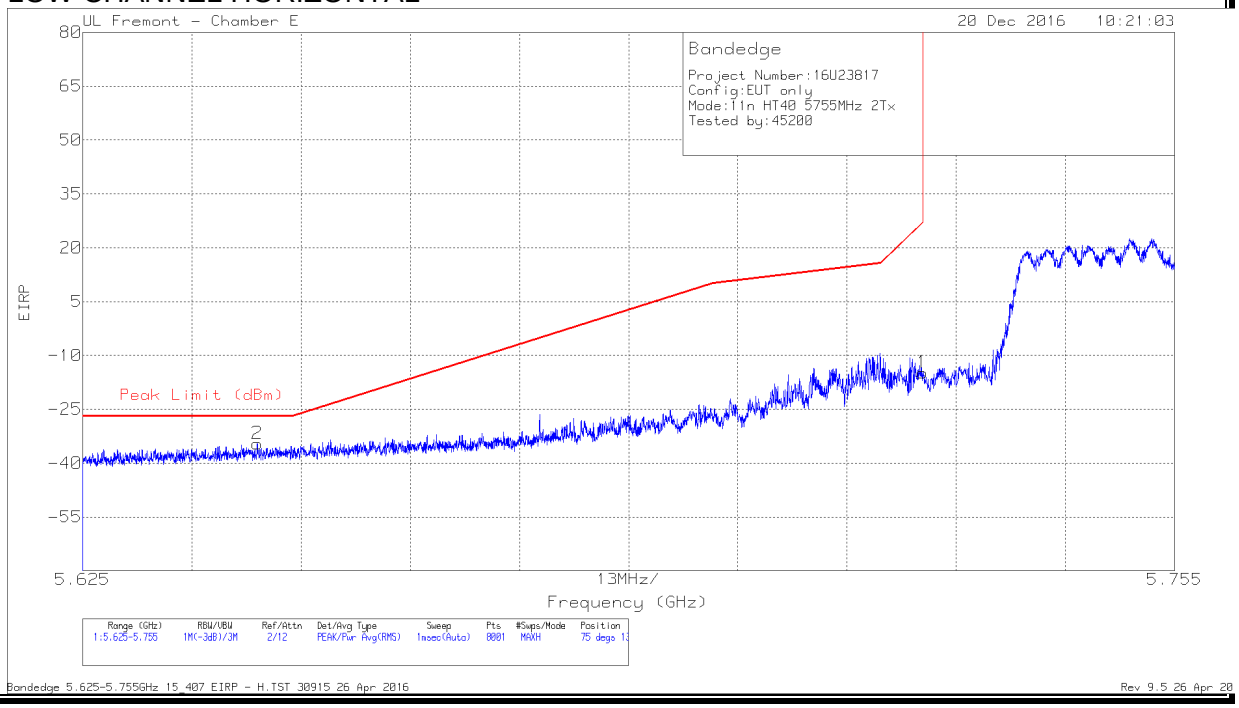
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 9.328	34.61	PK-U	36.4	-22	0	49.01	-	-	74	-24.99	-	-	302	384	H
	* 9.331	23.43	ADR	36.4	-22	.1	37.93	54	-16.07	-	-	-	-	302	384	H
4	* 8.054	36.32	PK-U	35.8	-24.4	0	47.72	-	-	74	-26.28	-	-	283	283	V
	* 8.051	24.99	ADR	35.8	-24.4	.1	36.49	54	-17.51	-	-	-	-	283	283	V
5	* 10.717	34.54	PK-U	37.9	-21.4	0	51.04	-	-	74	-22.96	-	-	278	119	V
	* 10.718	23.51	ADR	37.9	-21.4	.1	40.11	54	-13.89	-	-	-	-	278	119	V
6	* 11.8	33.68	PK-U	38.7	-21.5	0	50.88	-	-	74	-23.12	-	-	360	226	V
	* 11.799	23.26	ADR	38.7	-21.5	.1	40.56	54	-13.44	-	-	-	-	360	226	V
1	3.11	38.81	PK-U	33.2	-28.6	0	43.41	-	-	-	-	68.2	-24.79	301	371	H
	3.11	27.88	ADR	33.2	-28.6	.1	32.58	-	-	-	-	-	-	301	371	H
3	10.2	33.68	PK-U	37.5	-20.7	0	50.48	-	-	-	-	68.2	-17.72	284	245	H
	10.201	22.94	ADR	37.5	-20.7	.1	39.84	-	-	-	-	-	-	284	245	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

9.2.42. 11n HT40 2TX CDD MIMO MODE IN THE 5.8GHz BAND

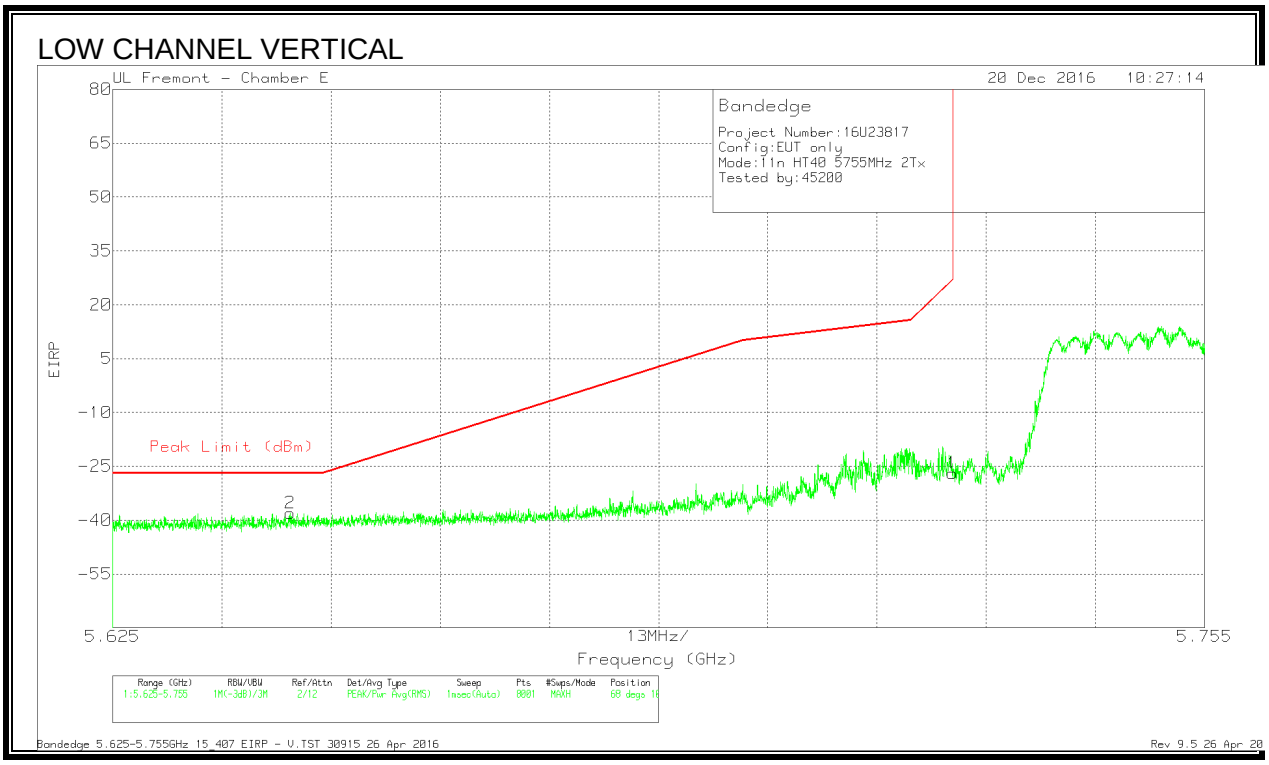
RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.646	-61.65	Pk	34.8	-19.5	11.8	0	-34.55	-27	-7.55	75	136	H
1	5.725	-41.9	Pk	34.9	-19.6	11.8	0	-14.8	26.97	-41.77	75	136	H

Pk - Peak detector

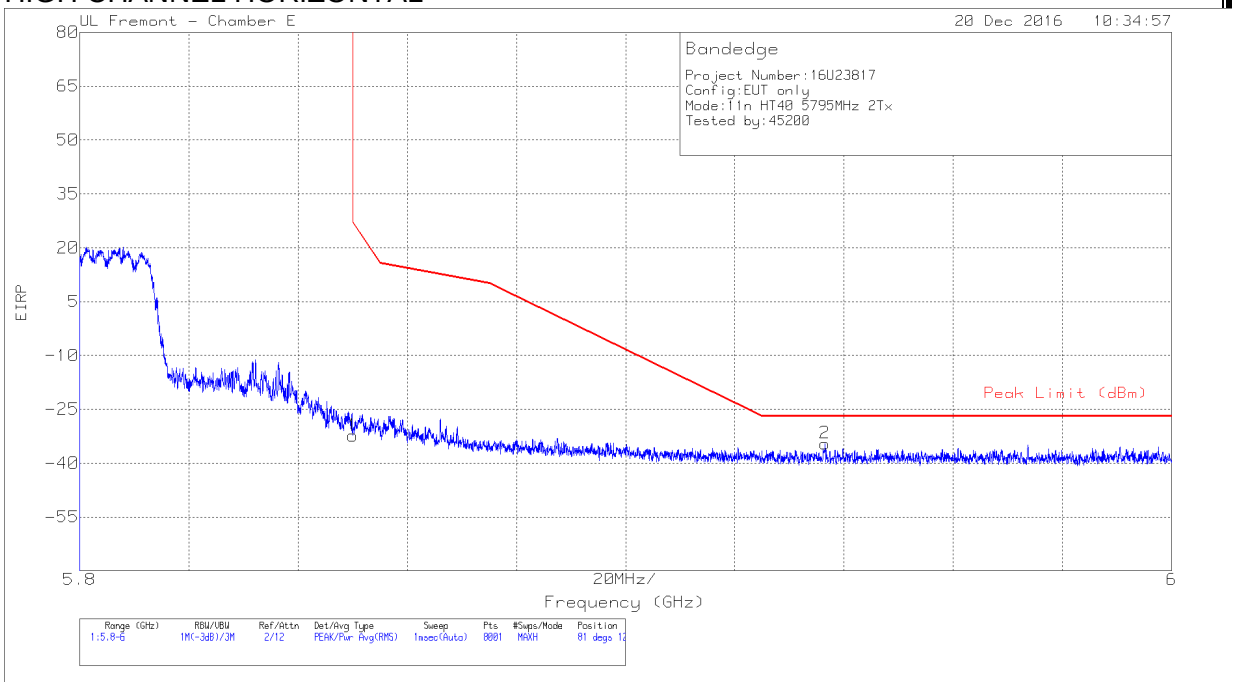


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.646	-65.14	Pk	34.8	-19.5	11.8	0	-38.04	-27	-11.04	68	104	V
1	5.725	-54.1	Pk	34.9	-19.6	11.8	0	-27	26.97	-53.97	68	104	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

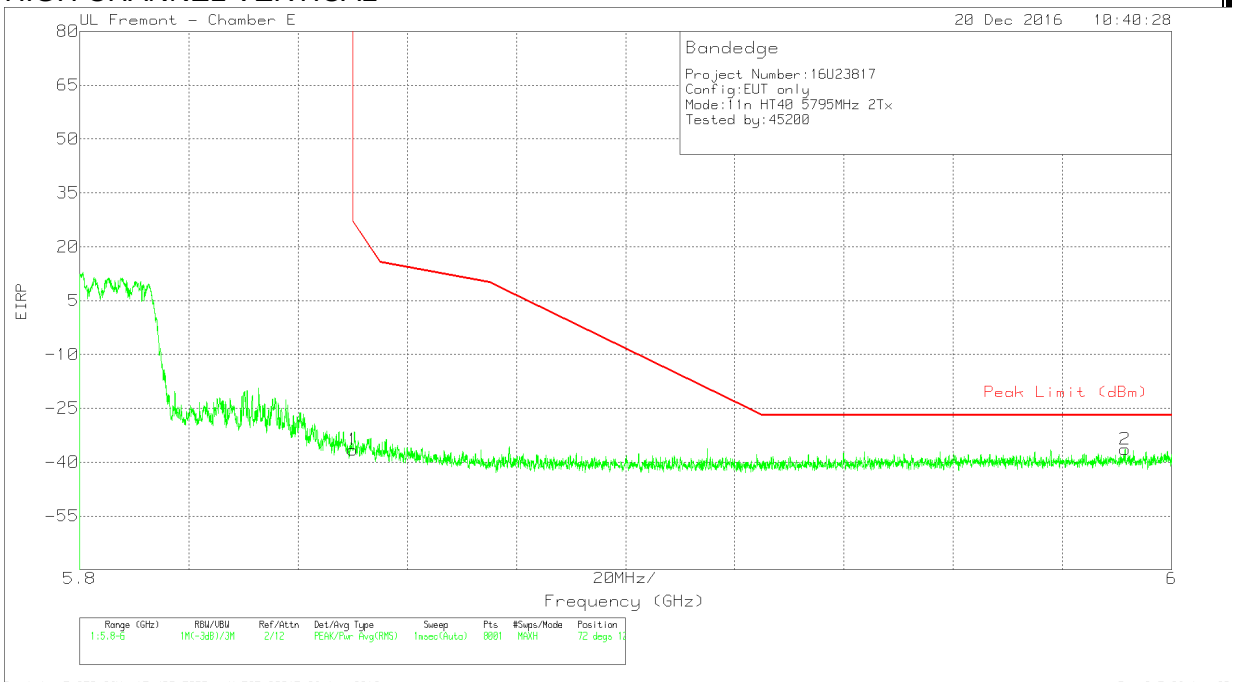
HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-59.51	Pk	34.9	-19.5	11.8	0	-32.31	26.94	-59.25	81	126	H
2	5.937	-62.01	Pk	35	-19.3	11.8	0	-34.51	-27	-7.51	81	126	H

Pk - Peak detector

HIGH CHANNEL VERTICAL

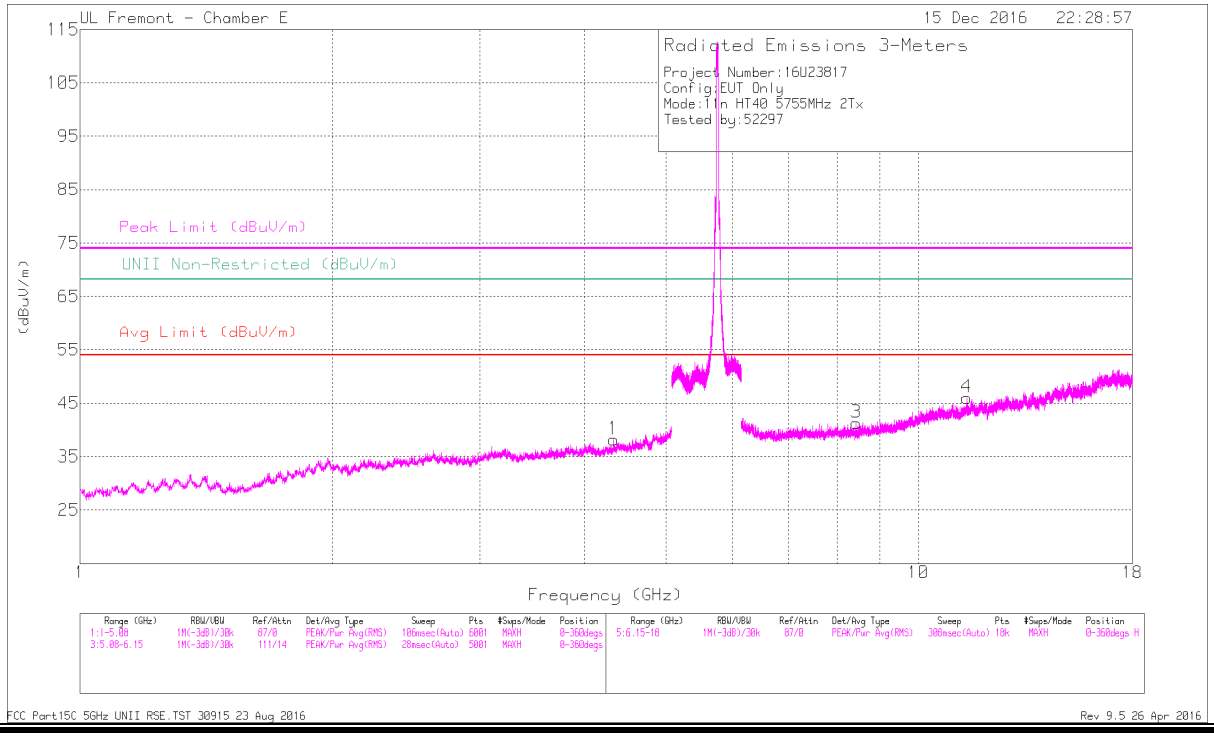


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-63.8	Pk	34.9	-19.5	11.8	0	-36.6	26.94	-63.54	72	127	V
2	5.991	-64.64	Pk	35.1	-18.7	11.8	0	-36.44	-27	-9.44	72	127	V

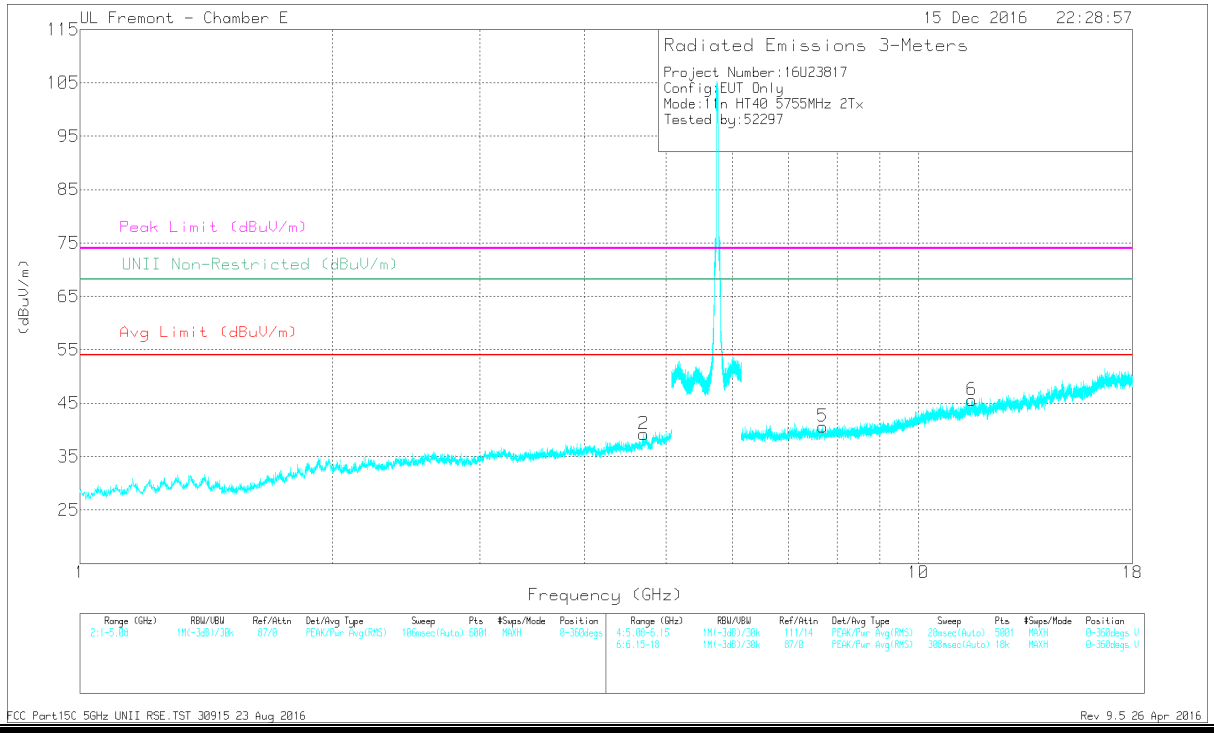
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



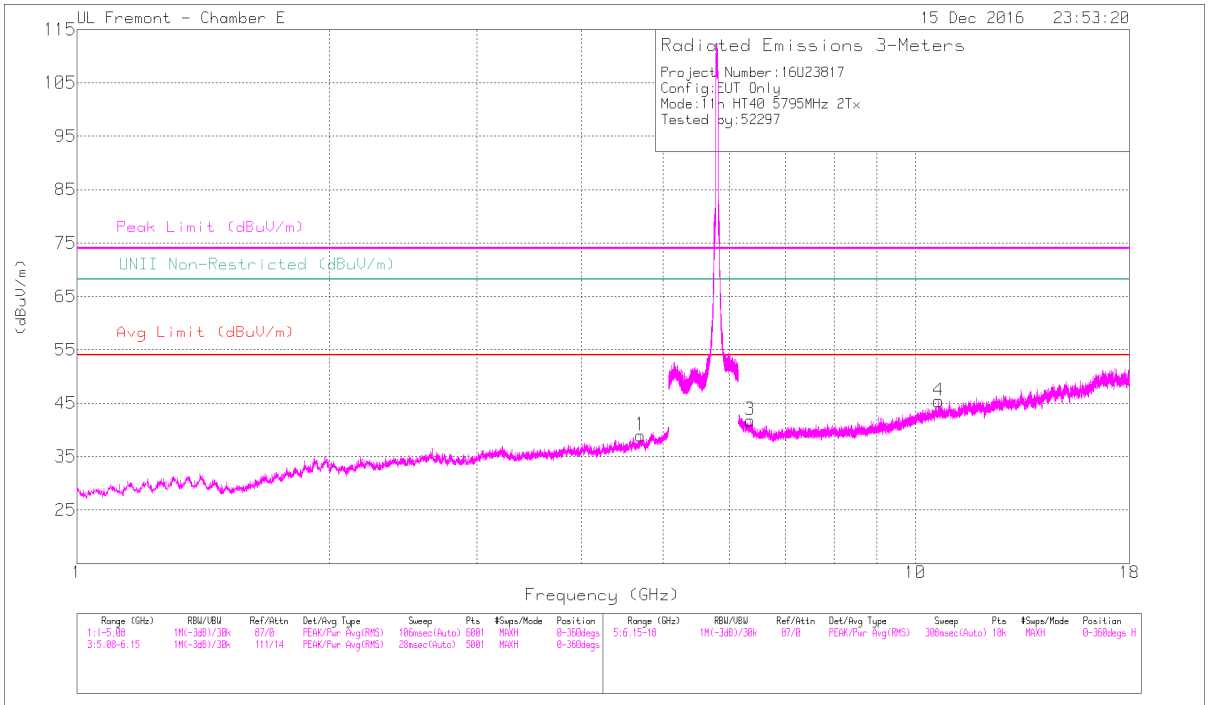
LOW CHANNEL VERTICAL



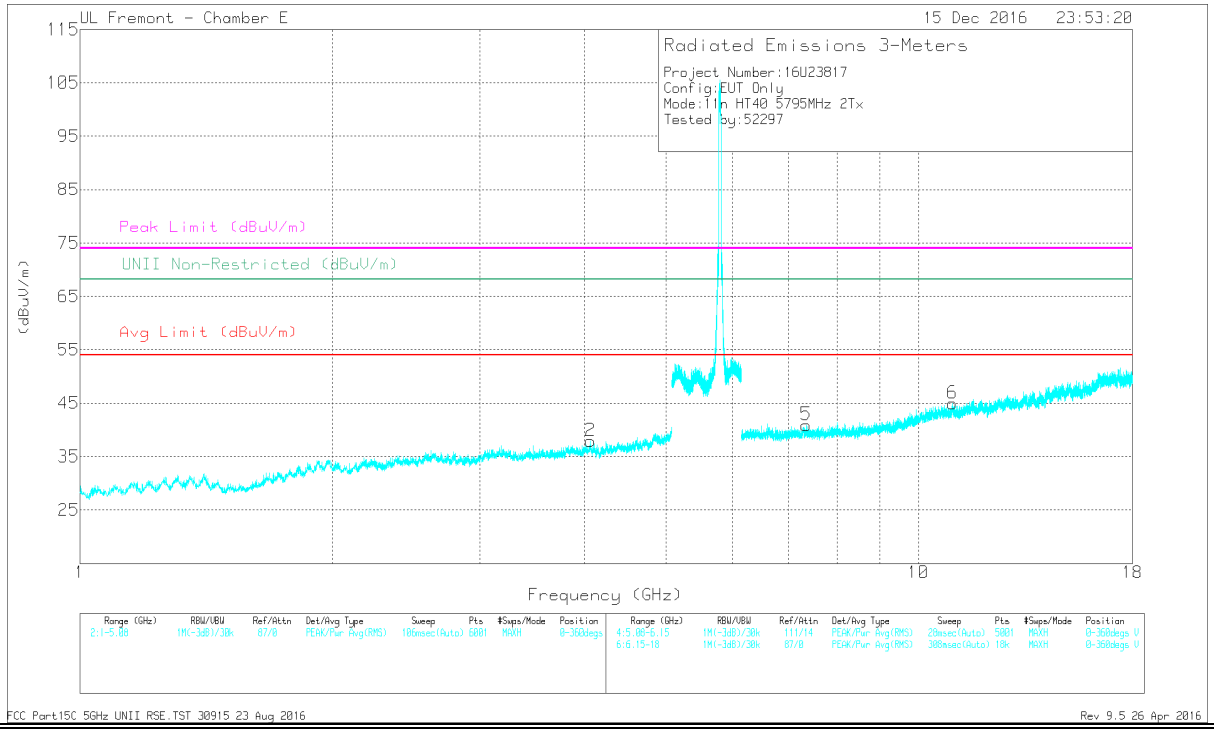
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.331	40.36	PK-U	33.5	-30.4	0	43.46	-	-	74	-30.54	-	-	278	123	H
	* 4.331	29.8	ADR	33.5	-30.4	.11	33.01	54	-20.99	-	-	-	-	278	123	H
2	* 4.704	39.84	PK-U	34	-28.8	0	45.04	-	-	74	-28.96	-	-	310	162	V
	* 4.703	29.58	ADR	34	-28.8	.11	34.89	54	-19.11	-	-	-	-	310	162	V
3	* 8.429	38.23	PK-U	35.7	-26.6	0	47.33	-	-	74	-26.67	-	-	226	267	H
	* 8.432	27.4	ADR	35.7	-26.5	.11	36.71	54	-17.29	-	-	-	-	226	267	H
4	* 11.417	36.96	PK-U	38.2	-23	0	52.16	-	-	74	-21.84	-	-	194	300	H
	* 11.416	25.81	ADR	38.2	-23	.11	41.12	54	-12.88	-	-	-	-	194	300	H
5	* 7.69	38.43	PK-U	35.7	-27	0	47.13	-	-	74	-26.87	-	-	142	225	V
	* 7.692	27.81	ADR	35.7	-27	.11	36.62	54	-17.38	-	-	-	-	142	225	V
6	* 11.578	35.2	PK-U	38.4	-21.8	0	51.8	-	-	74	-22.2	-	-	177	192	V
	* 11.574	24.85	ADR	38.4	-21.9	.11	41.46	54	-12.54	-	-	-	-	177	192	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL

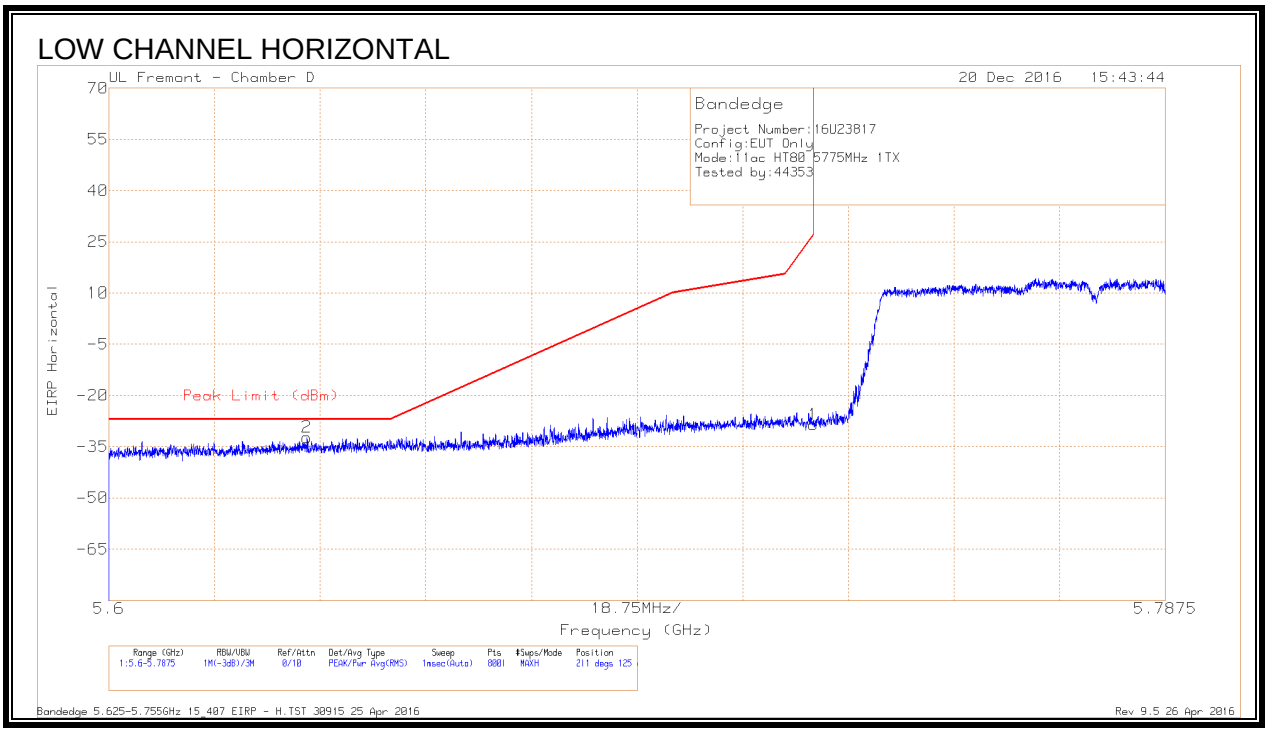


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.705	40.13	PK-U	34	-28.9	0	45.23	-	-	74	-28.77	-	-	95	143	H
	* 4.702	29.01	ADR	34	-28.8	.11	34.32	54	-19.68	-	-	-	-	95	143	H
2	* 4.063	41.44	PK-U	33.3	-29.9	0	44.84	-	-	74	-29.16	-	-	120	197	V
	* 4.062	29.82	ADR	33.3	-29.8	.11	33.43	54	-20.57	-	-	-	-	120	197	V
3	6.357	40.89	PK-U	35.6	-28.5	0	47.99	-	-	-	-	68.2	-20.21	153	247	H
4	* 10.657	36.59	PK-U	37.9	-22.9	0	51.59	-	-	74	-22.41	-	-	257	178	H
	* 10.655	25.4	ADR	37.9	-23	.11	40.41	54	-13.59	-	-	-	-	257	178	H
5	* 7.348	38.85	PK-U	35.6	-26.9	0	47.55	-	-	74	-26.45	-	-	167	214	V
	* 7.35	28.15	ADR	35.6	-27	.11	36.86	54	-17.14	-	-	-	-	167	214	V
6	* 10.988	36.11	PK-U	38	-22.1	0	52.01	-	-	74	-21.99	-	-	211	266	V
	* 10.989	25.14	ADR	38	-22.1	.11	41.15	54	-12.85	-	-	-	-	211	266	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

9.2.43. 11ac HT80 ANTENNA A SISO MODE IN THE 5.8GHz BAND

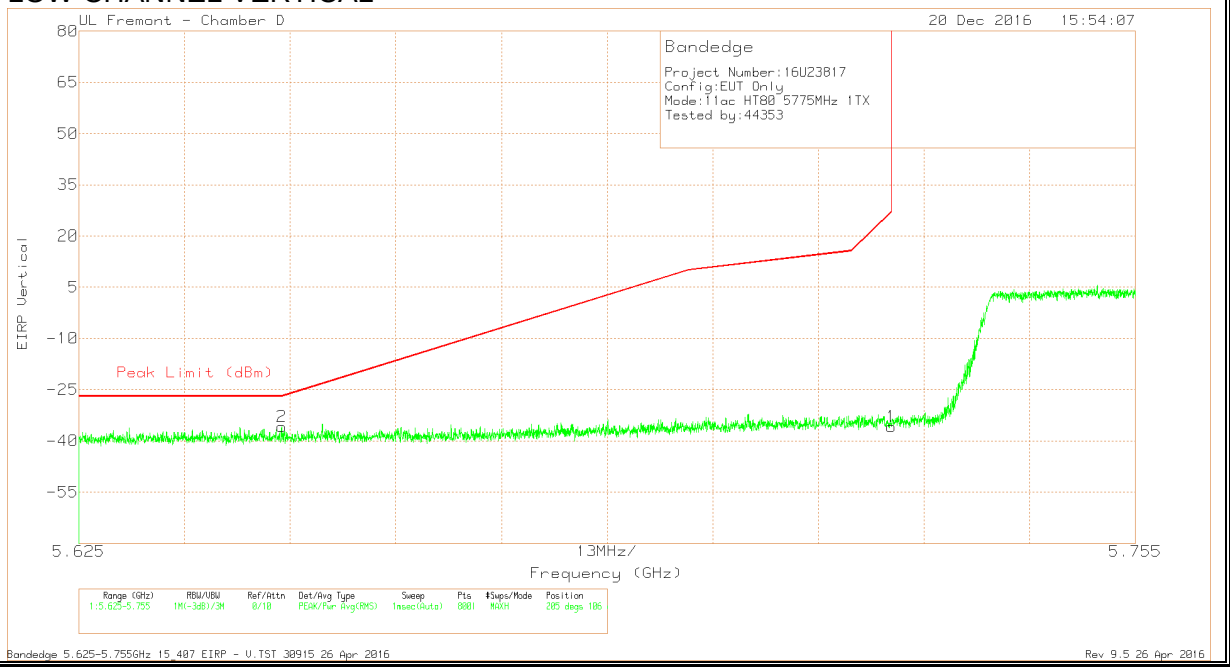
RESTRICTED BANDEDGE (LOW CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.635	-61.18	Pk	34.6	-17.5	11.8	0	-32.28	-27	-5.28	211	125	H
1	5.725	-57.56	Pk	34.8	-17.5	11.8	0	-28.46	26.99	-55.45	211	125	H

Pk - Peak detector

LOW CHANNEL VERTICAL

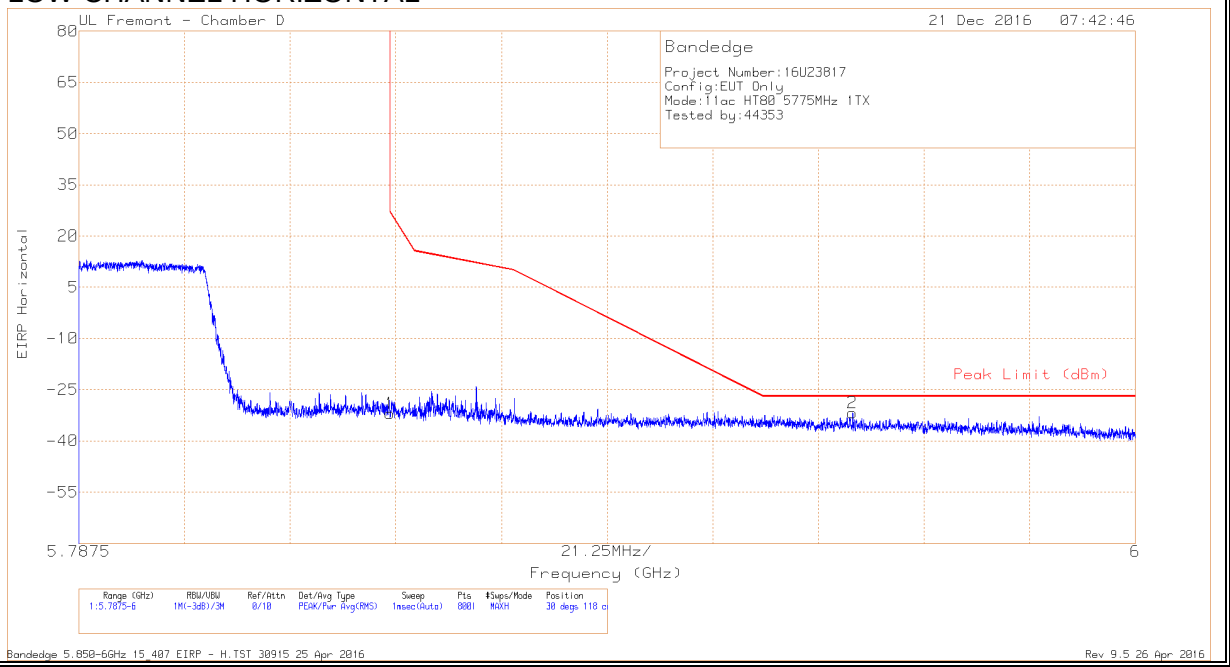


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.65	-64.69	Pk	34.6	-17.5	11.8	0	-35.79	-27	-8.79	205	106	V
1	5.725	-64.87	Pk	34.8	-17.5	11.8	0	-35.77	26.97	-62.74	205	106	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

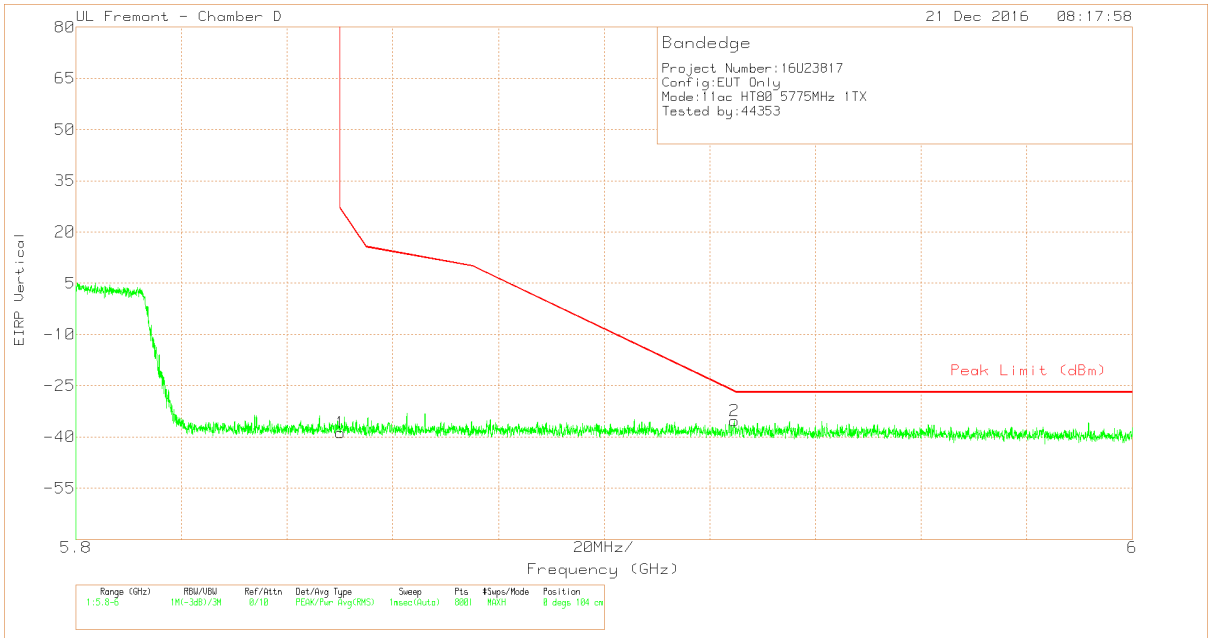
LOW CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-61.23	Pk	34.9	-17.5	11.8	0	-32.03	26.99	-59.02	30	118	H
2	5.943	-61.2	Pk	35	-17.4	11.8	0	-31.8	-27	-4.8	30	118	H

Pk - Peak detector

HIGH CHANNEL VERTICAL

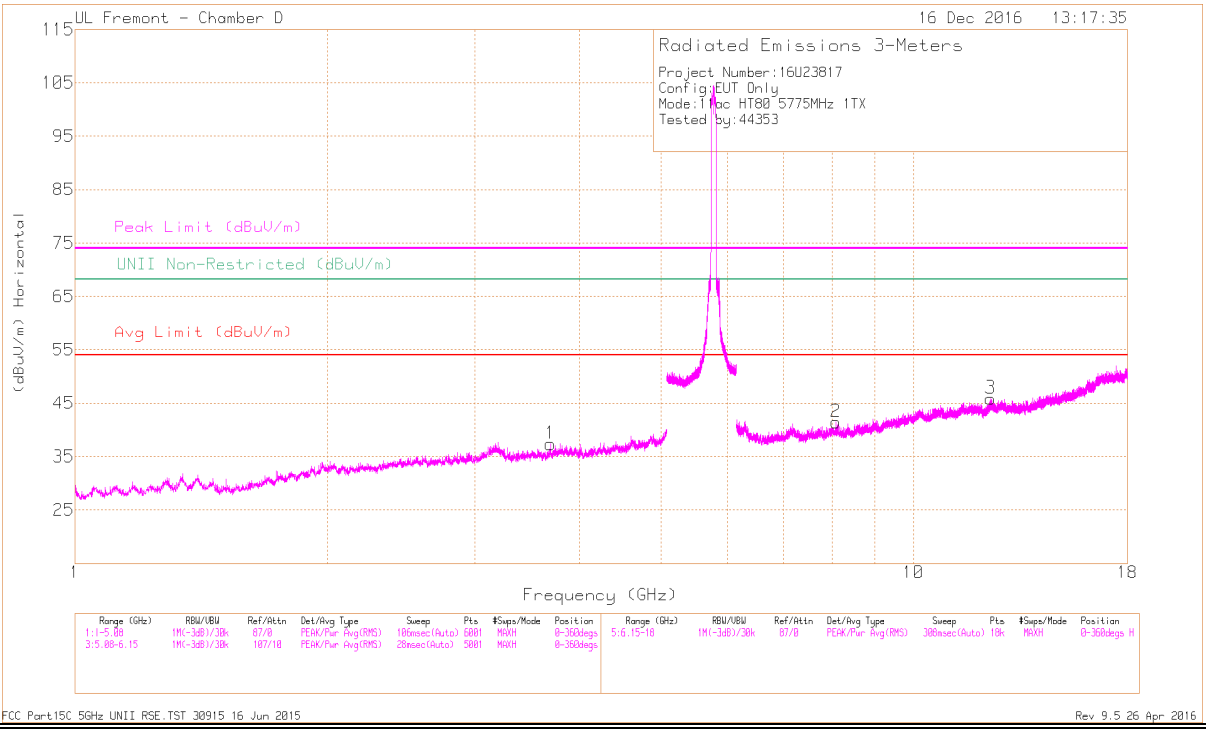


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.98	Pk	34.9	-17.5	11.8	0	-38.78	26.94	-65.72	0	104	V
2	5.925	-64.65	Pk	35	-17.4	11.8	0	-35.25	-26.76	-8.49	0	104	V

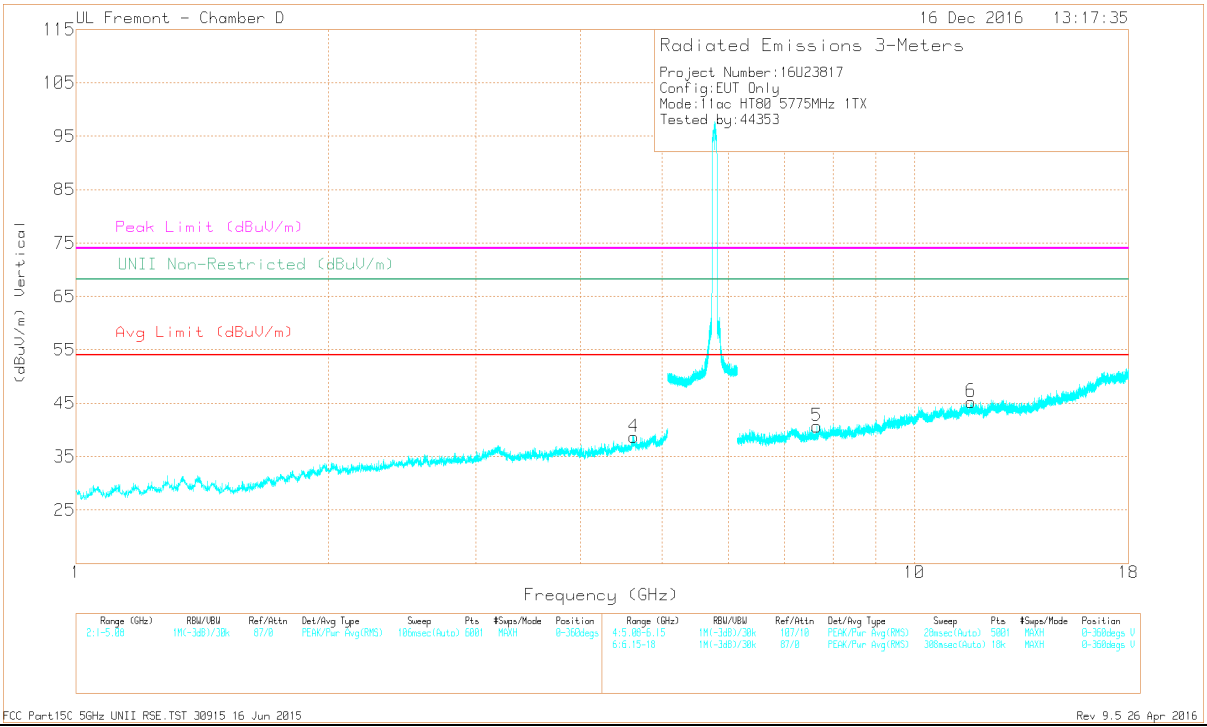
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL

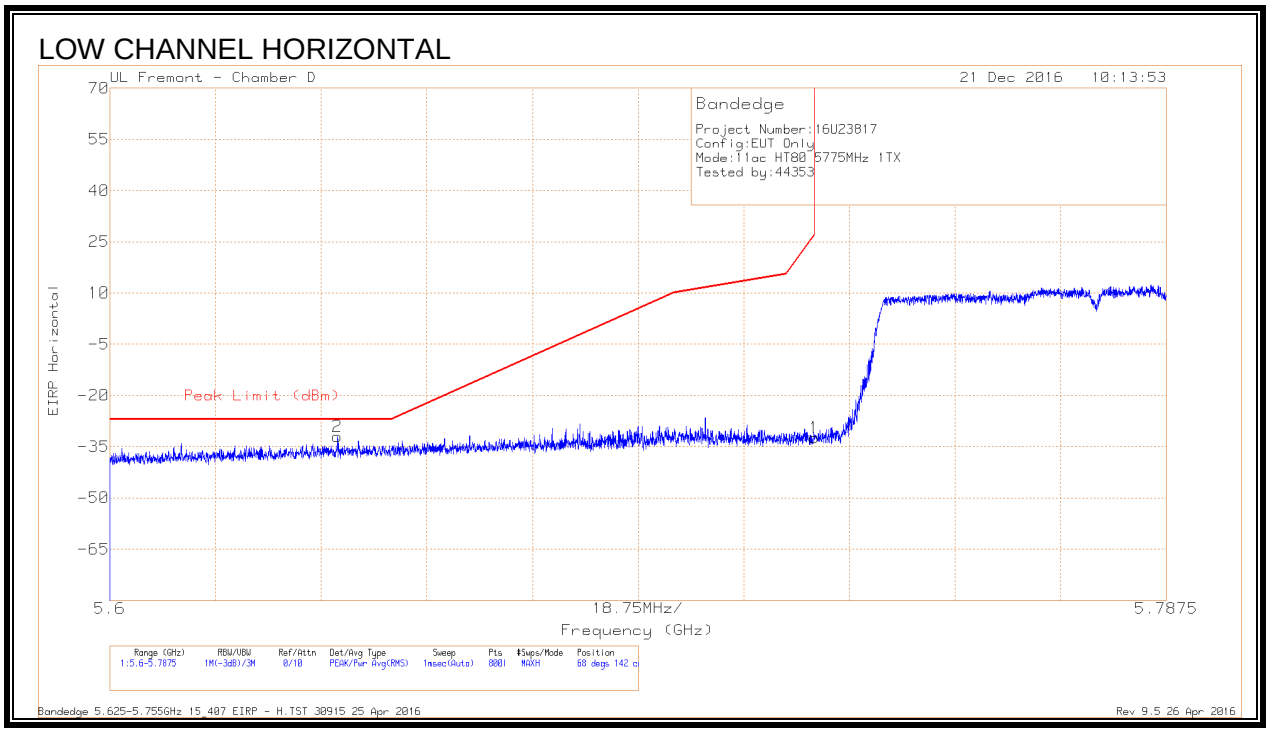


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.693	38.37	PK-U	33.5	-29.1	0	42.77	-	-	74	-31.23	-	-	291	105	H
	* 3.69	28.35	ADR	33.5	-29.1	.2	32.95	54	-21.05	-	-	-	-	291	105	H
4	* 4.63	37.4	PK-U	34.1	-26.9	0	44.6	-	-	74	-29.4	-	-	17	238	V
	* 4.629	27.07	ADR	34.1	-26.9	.2	34.47	54	-19.53	-	-	-	-	17	238	V
2	* 8.087	35.4	PK-U	35.8	-24.3	0	46.9	-	-	74	-27.1	-	-	277	182	H
	* 8.089	25.36	ADR	35.7	-24.3	.2	36.96	54	-17.04	-	-	-	-	277	182	H
3	* 12.358	34.32	PK-U	39	-21.1	0	52.22	-	-	74	-21.78	-	-	321	285	H
	* 12.357	23.94	ADR	39	-21.1	.2	42.04	54	-11.96	-	-	-	-	321	285	H
5	* 7.645	35.58	PK-U	35.8	-25.4	0	45.98	-	-	74	-28.02	-	-	106	169	V
	* 7.645	25.81	ADR	35.8	-25.4	.2	36.41	54	-17.59	-	-	-	-	106	169	V
6	* 11.689	34.12	PK-U	38.6	-20.9	0	51.82	-	-	74	-22.18	-	-	230	189	V
	* 11.691	23.65	ADR	38.6	-20.8	.2	41.65	54	-12.35	-	-	-	-	230	189	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

9.2.44. 11ac HT80 ANTENNA B SISO MODE IN THE 5.8GHz BAND

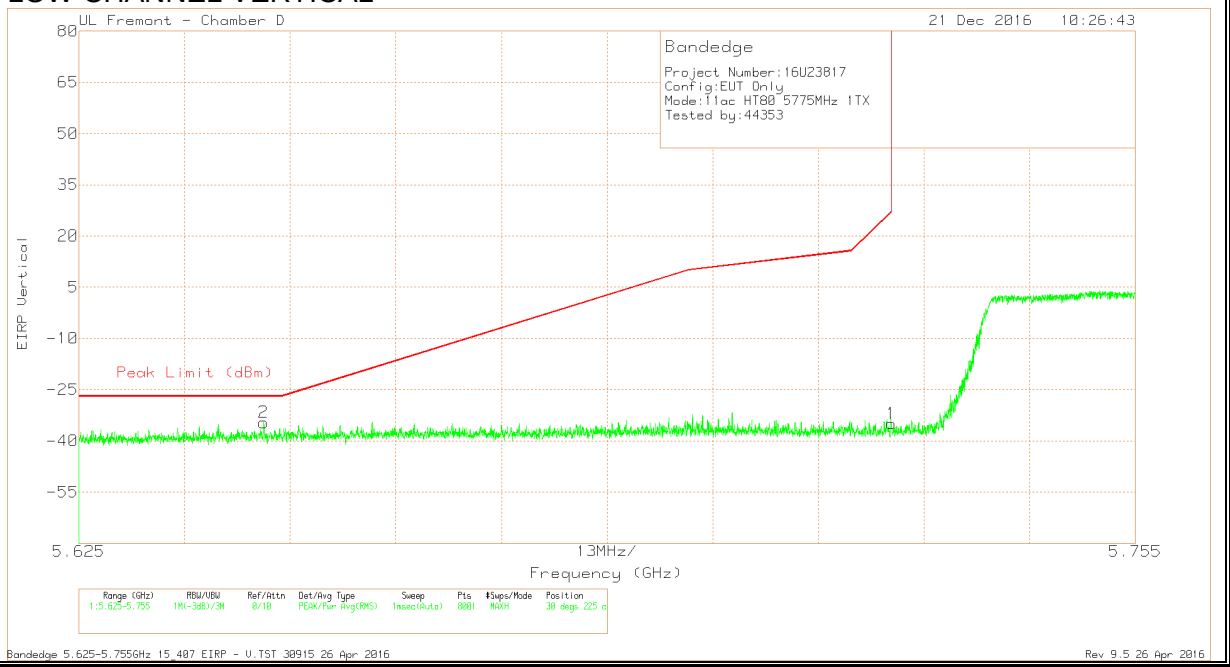
RESTRICTED BANDEDGE (LOW CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.64	-60.88	Pk	34.6	-17.6	11.8	0	-32.08	-27	-5.08	68	142	H
1	5.725	-61.49	Pk	34.8	-17.5	11.8	0	-32.39	26.99	-59.38	68	142	H

Pk - Peak detector

LOW CHANNEL VERTICAL

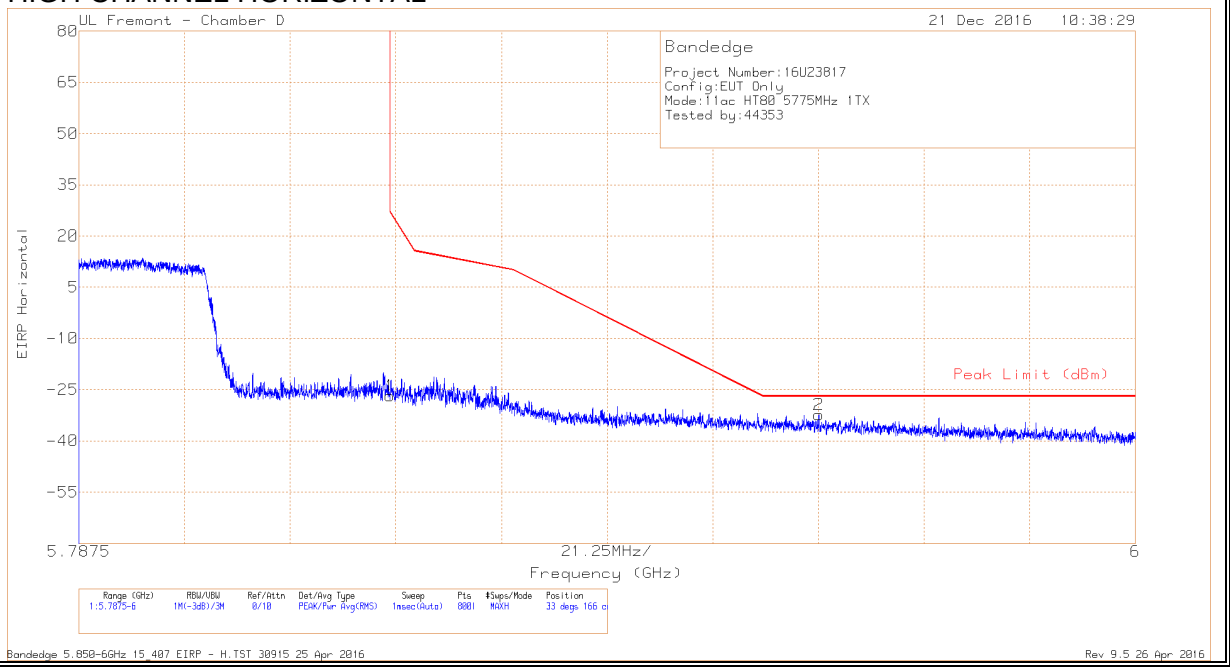


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.648	-63.52	Pk	34.6	-17.5	11.8	0	-34.62	-27	-7.62	30	225	V
1	5.725	-63.99	Pk	34.8	-17.5	11.8	0	-34.89	26.97	-61.86	30	225	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

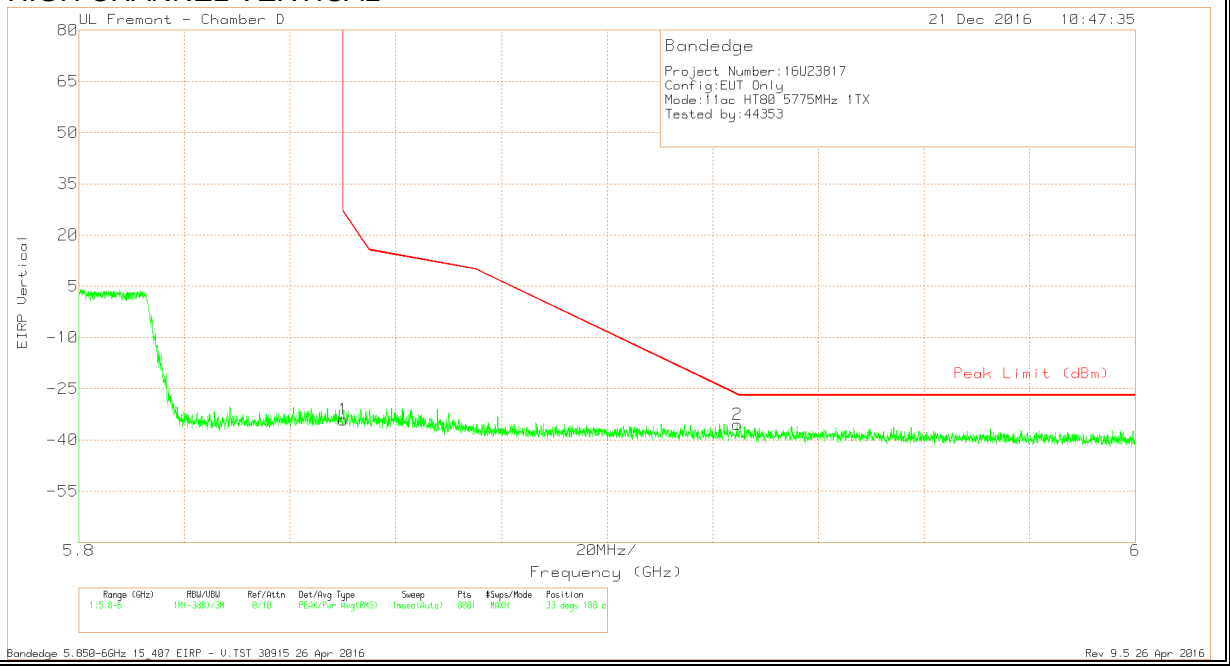
HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-56.01	Pk	34.9	-17.5	11.8	0	-26.81	26.99	-53.8	33	166	H
2	5.936	-61.64	Pk	35	-17.4	11.8	0	-32.24	-27	-5.24	33	166	H

Pk - Peak detector

HIGH CHANNEL VERTICAL

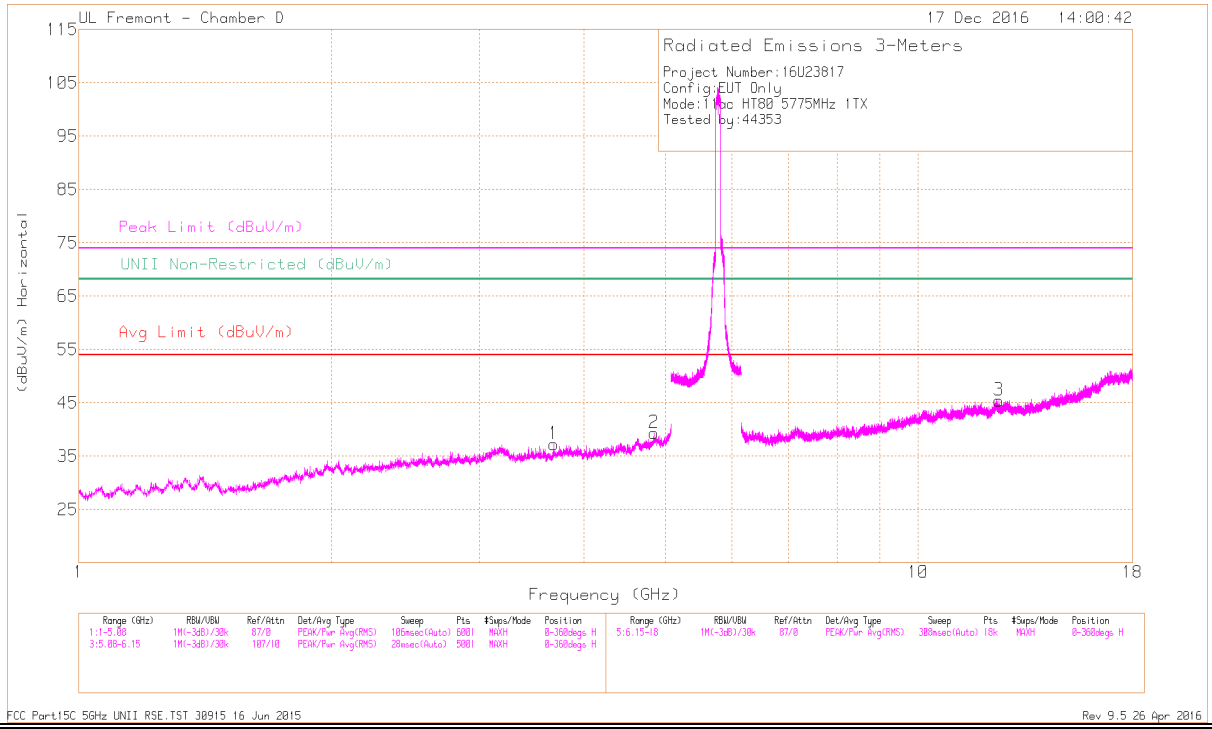


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-63.27	Pk	34.9	-17.5	11.8	0	-34.07	26.94	-61.01	33	188	V
2	5.925	-64.88	Pk	35	-17.4	11.8	0	-35.48	-26.78	-8.7	33	188	V

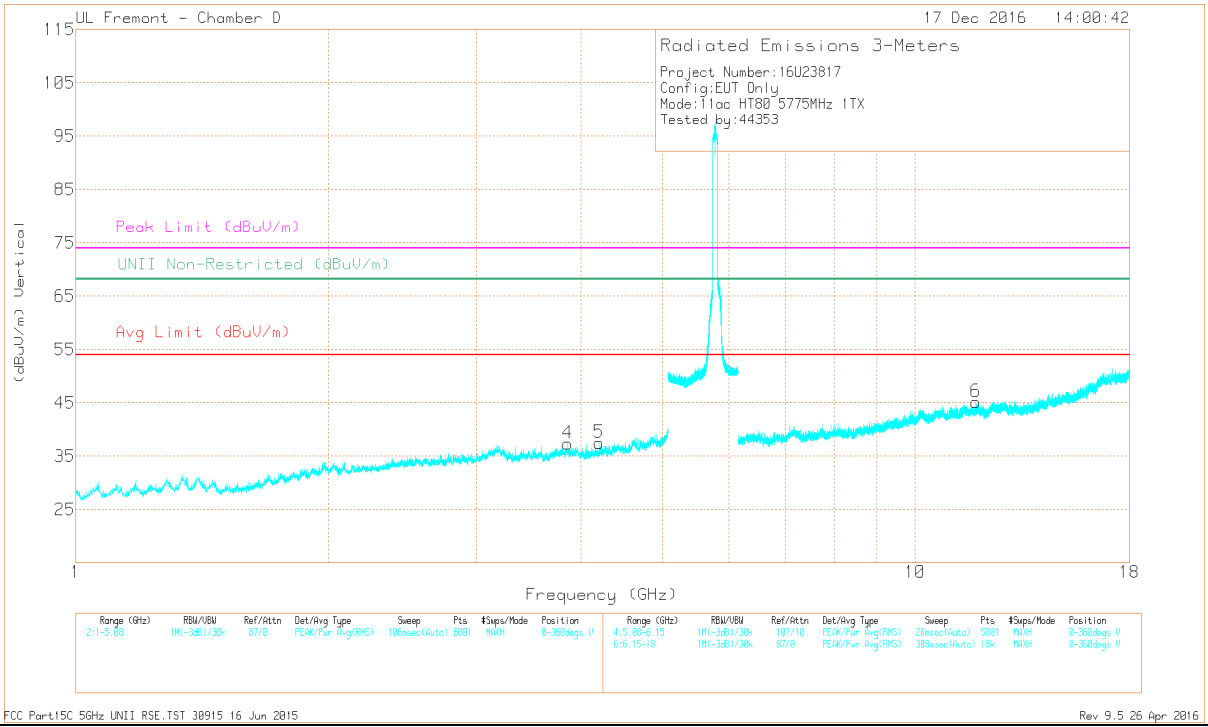
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



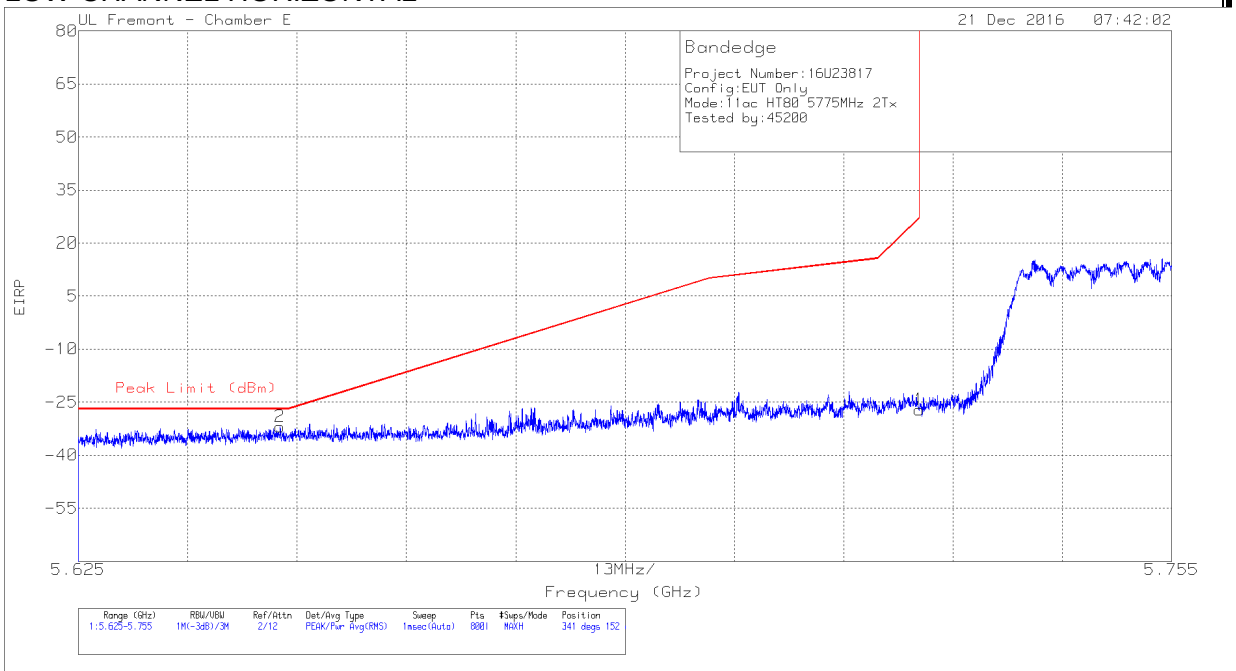
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.68	38.86	PK-U	33.5	-29	0	43.36	-	-	74	-30.64	-	-	187	239	H
	* 3.68	28.23	ADR	33.5	-29	.2	32.93	54	-21.07	-	-	-	-	187	239	H
2	* 4.848	37.2	PK-U	34.1	-25.9	0	45.4	-	-	74	-28.6	-	-	156	322	H
	* 4.848	26.51	ADR	34.1	-25.9	.2	34.91	54	-19.09	-	-	-	-	156	322	H
4	* 3.853	39.32	PK-U	33.5	-28.8	0	44.02	-	-	74	-29.98	-	-	34	138	V
	* 3.854	28.46	ADR	33.5	-28.9	.2	33.26	54	-20.74	-	-	-	-	34	138	V
5	* 4.204	37.63	PK-U	33.5	-27.8	0	43.33	-	-	74	-30.67	-	-	312	102	V
	* 4.203	27.5	ADR	33.5	-27.8	.2	33.4	54	-20.6	-	-	-	-	312	102	V
3	* 12.476	34.01	PK-U	39.1	-21.5	0	51.61	-	-	74	-22.39	-	-	266	364	H
	* 12.475	23.87	ADR	39.1	-21.5	.2	41.67	54	-12.33	-	-	-	-	266	364	H
6	* 11.817	33.56	PK-U	38.7	-21.5	0	50.76	-	-	74	-23.24	-	-	107	174	V
	* 11.818	23.99	ADR	38.7	-21.4	.2	41.49	54	-12.51	-	-	-	-	107	174	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

9.2.45. 11ac HT80 2TX CDD MIMO MODE IN THE 5.8GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

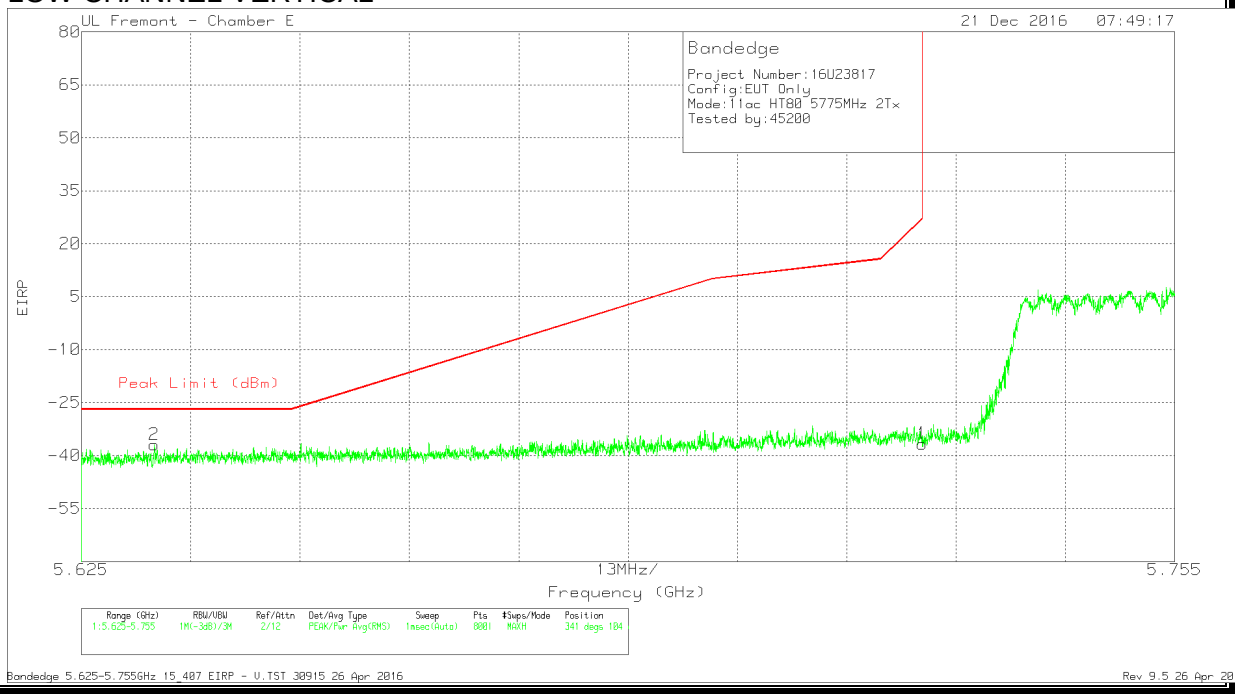
LOW CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.649	-59.11	Pk	34.8	-19.5	11.8	0	-32.01	-27	-5.01	341	152	H
1	5.725	-54.21	Pk	34.9	-19.6	11.8	0	-27.11	26.97	-54.08	341	152	H

Pk - Peak detector

LOW CHANNEL VERTICAL

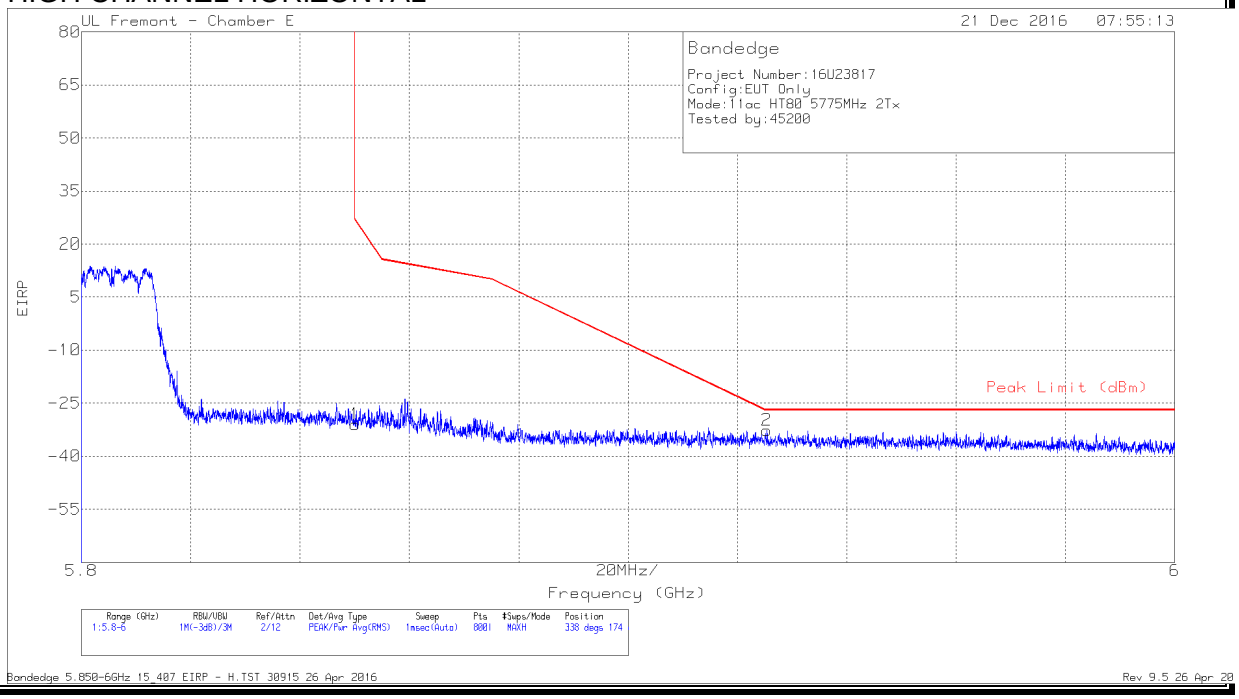


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.634	-63.87	Pk	34.8	-19.6	11.8	0	-36.87	-27	-9.87	341	104	V
1	5.725	-63.76	Pk	34.9	-19.6	11.8	0	-36.66	26.97	-63.63	341	104	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

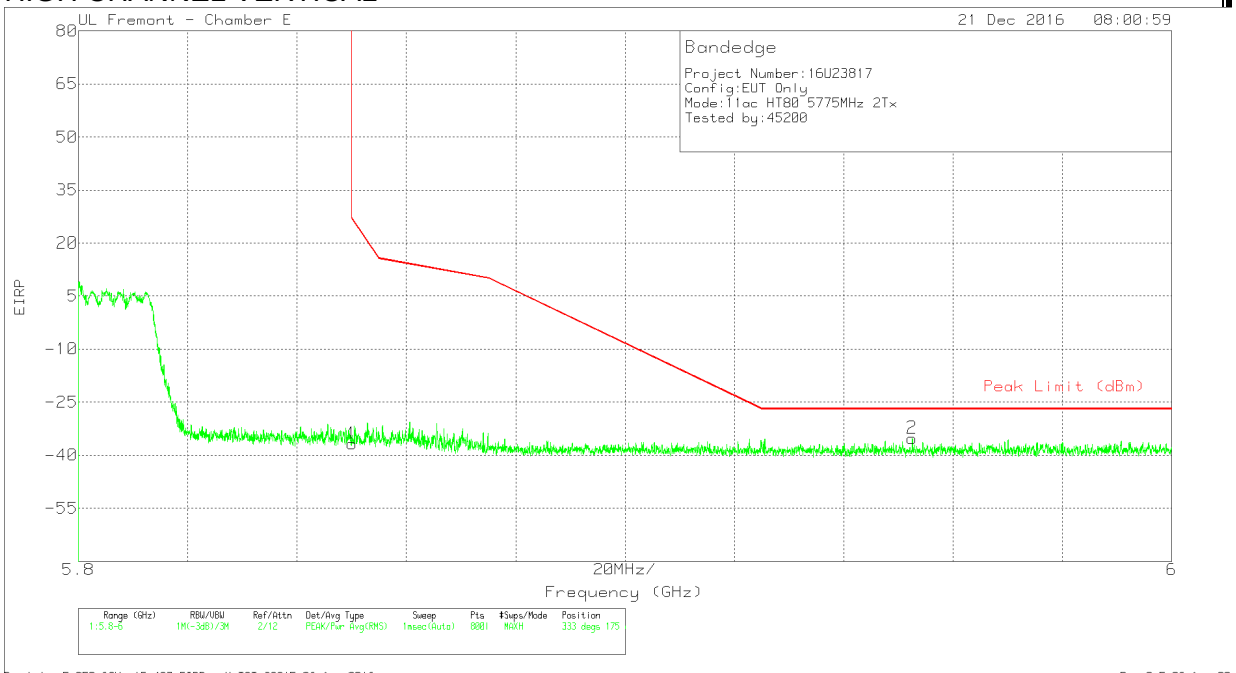
HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-58.24	Pk	34.9	-19.5	11.8	0	-31.04	26.94	-57.98	338	174	H
2	5.925	-60.3	Pk	35	-19.2	11.8	0	-32.7	-27	-5.7	338	174	H

Pk - Peak detector

HIGH CHANNEL VERTICAL

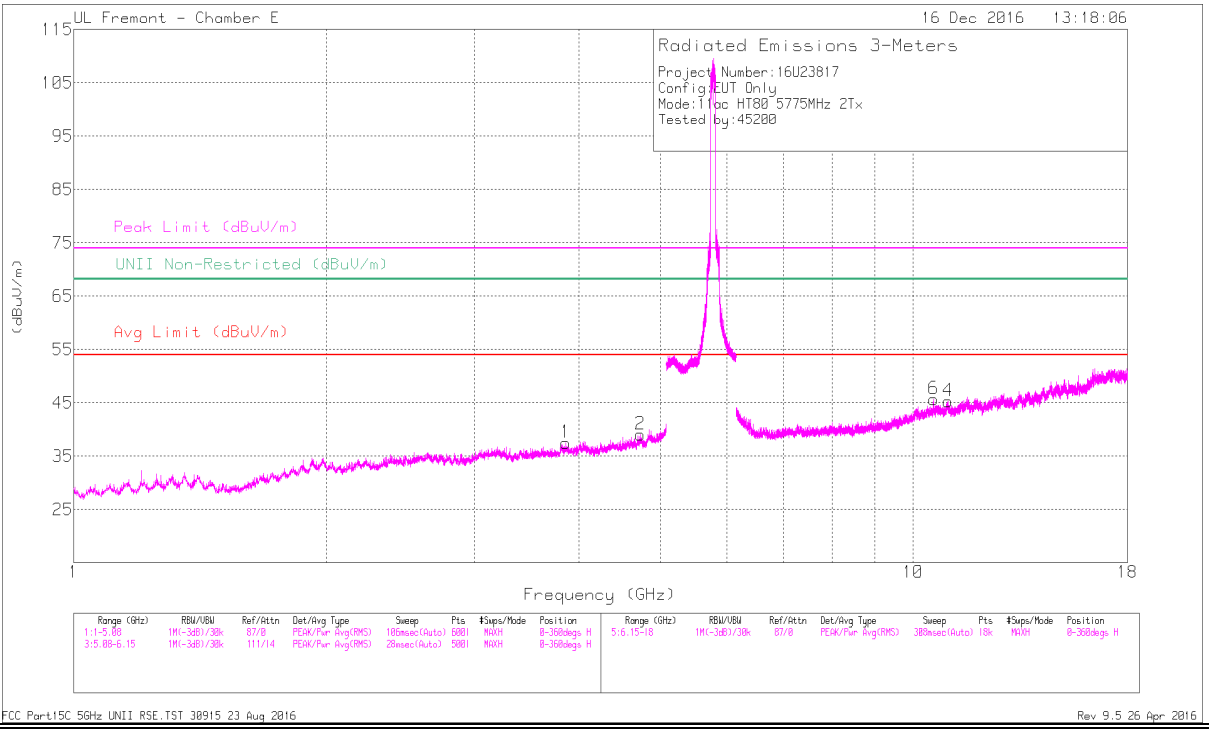


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-63.92	Pk	34.9	-19.5	11.8	0	-36.72	26.94	-63.66	333	175	V
2	5.953	-62.78	Pk	35	-19.2	11.8	0	-35.18	-27	-8.18	333	175	V

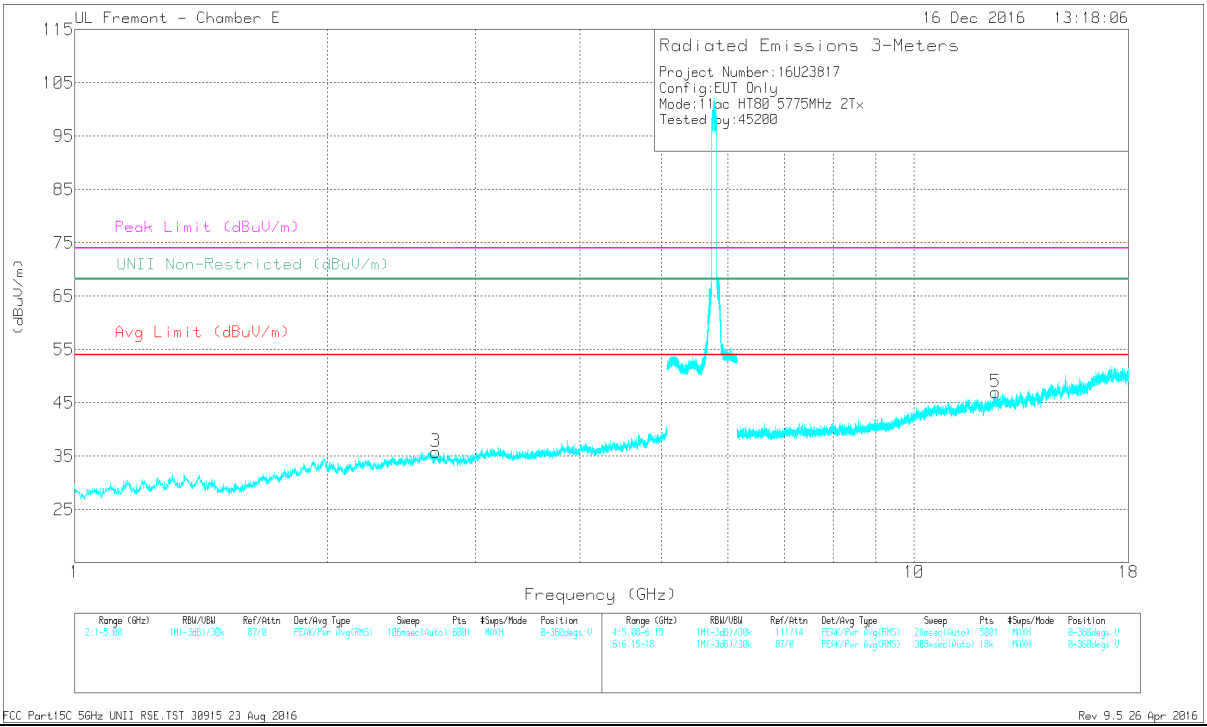
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



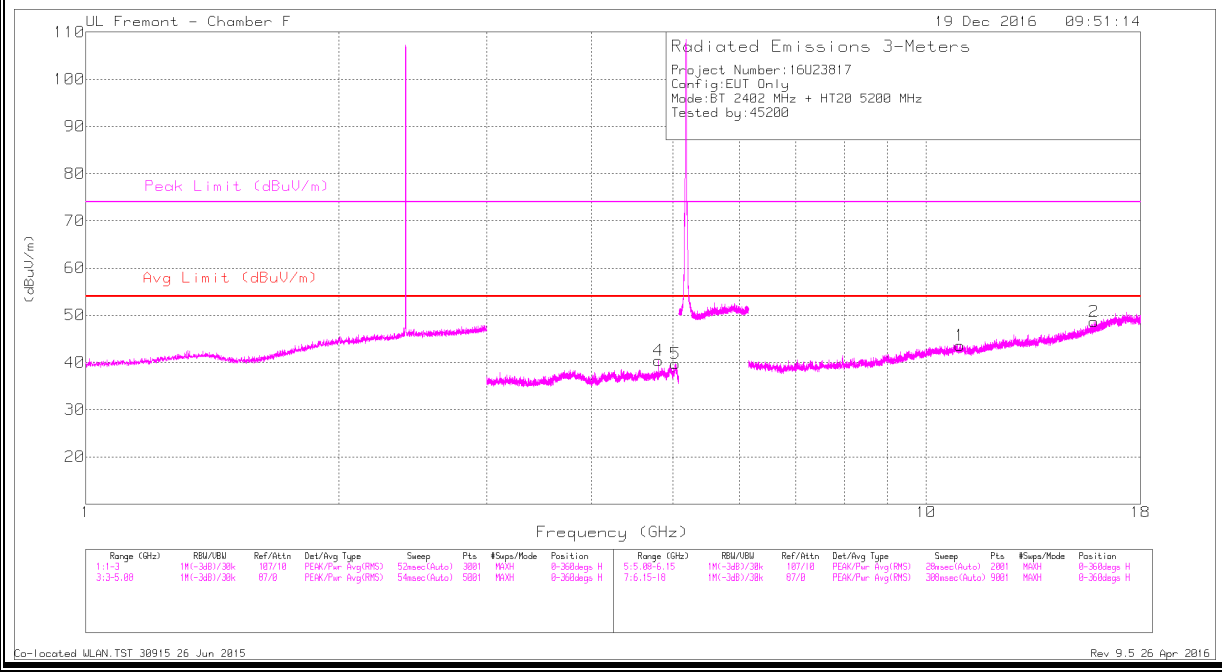
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.854	40.21	PK-U	33.2	-29.7	0	43.71	-	-	74	-30.29	-	-	204	391	H
	* 3.854	29.78	ADR	33.2	-29.7	.2	33.48	54	-20.52	-	-	-	-	204	391	H
2	* 4.734	40.55	PK-U	34	-29	0	45.55	-	-	74	-28.45	-	-	55	243	H
	* 4.731	29.3	ADR	34	-28.9	.2	34.6	54	-19.4	-	-	-	-	55	243	H
3	* 2.694	42.75	PK-U	32.6	-32.3	0	43.05	-	-	74	-30.95	-	-	33	183	V
	* 2.694	30.91	ADR	32.6	-32.3	.2	31.41	54	-22.59	-	-	-	-	33	183	V
4	* 10.998	36.52	PK-U	38	-22.3	0	52.22	-	-	74	-21.78	-	-	216	343	H
	* 10.995	25.34	ADR	38	-22.3	.2	41.24	54	-12.76	-	-	-	-	216	343	H
5	* 12.49	37.05	PK-U	39.1	-23.4	0	52.75	-	-	74	-21.25	-	-	186	363	V
	* 12.492	26.46	ADR	39.1	-23.5	.2	42.26	54	-11.74	-	-	-	-	186	363	V
6	10.572	37.13	PK-U	37.9	-24	0	51.03	-	-	-	-	68.2	-17.17	127	242	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

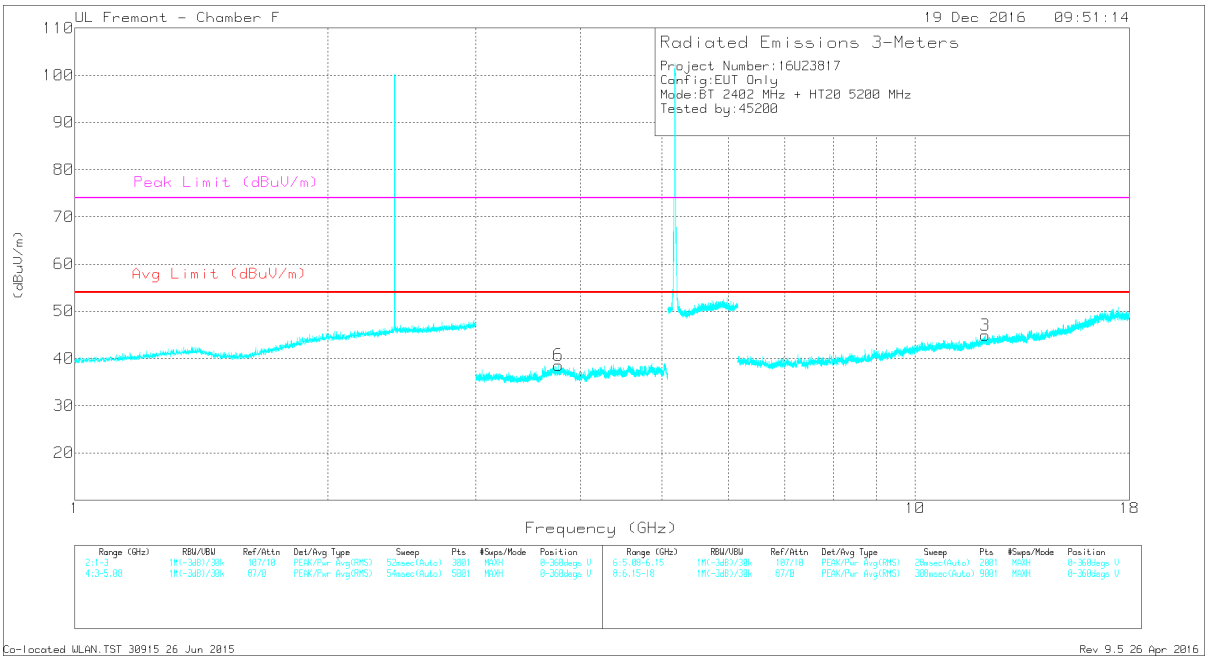
9.3. WORST-CASE CO-LOCATION

BLUETOOTH AND 802.11 HT20 2Tx CDD MODE IN THE 5.2GHz BAND

HORIZONTAL PLOT



VERTICAL PLOT



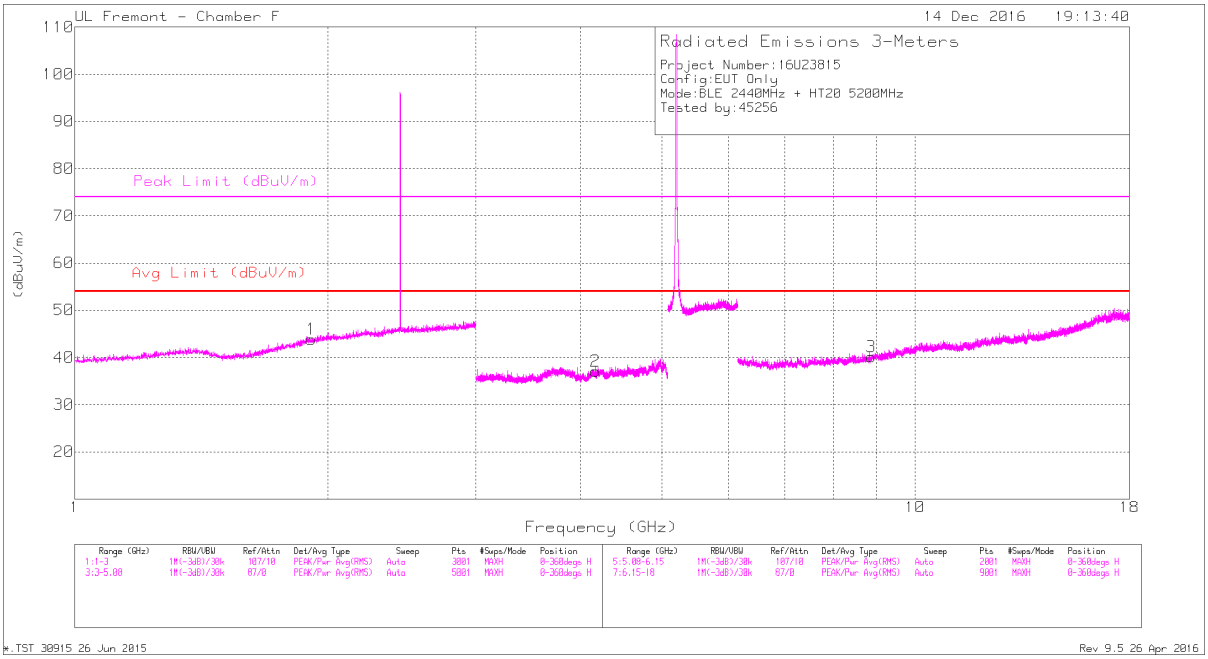
DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 4.805	39.38	PK-U	34	-27.6	45.78	-	-	74	-28.22	191	126	H
	* 4.804	31.03	ADR	34	-27.6	37.43	53.97	-16.54	-	-	191	126	H
5	* 5.03	41.04	PK-U	34.2	-28.6	46.64	-	-	74	-27.36	258	112	H
	* 5.029	29.79	ADR	34.2	-28.6	35.39	53.97	-18.58	-	-	258	112	H
6	* 3.762	39.05	PK-U	33.4	-29	43.45	-	-	74	-30.55	118	135	V
	* 3.763	28.46	ADR	33.4	-29	32.86	53.97	-21.11	-	-	118	135	V
1	* 10.978	34.09	PK-U	37.9	-22.1	49.89	-	-	74	-24.11	143	263	H
	* 10.98	23.14	ADR	37.9	-22.1	38.94	53.97	-15.03	-	-	143	263	H
2	* 15.86	35.43	PK-U	40.9	-21.9	54.43	-	-	74	-19.57	125	272	H
	* 15.861	24.67	ADR	40.9	-21.9	43.67	53.97	-10.3	-	-	125	272	H
3	* 12.129	34.12	PK-U	38.9	-22.3	50.72	-	-	74	-23.28	294	146	V
	* 12.126	23.64	ADR	38.9	-22.3	40.24	53.97	-13.73	-	-	294	146	V

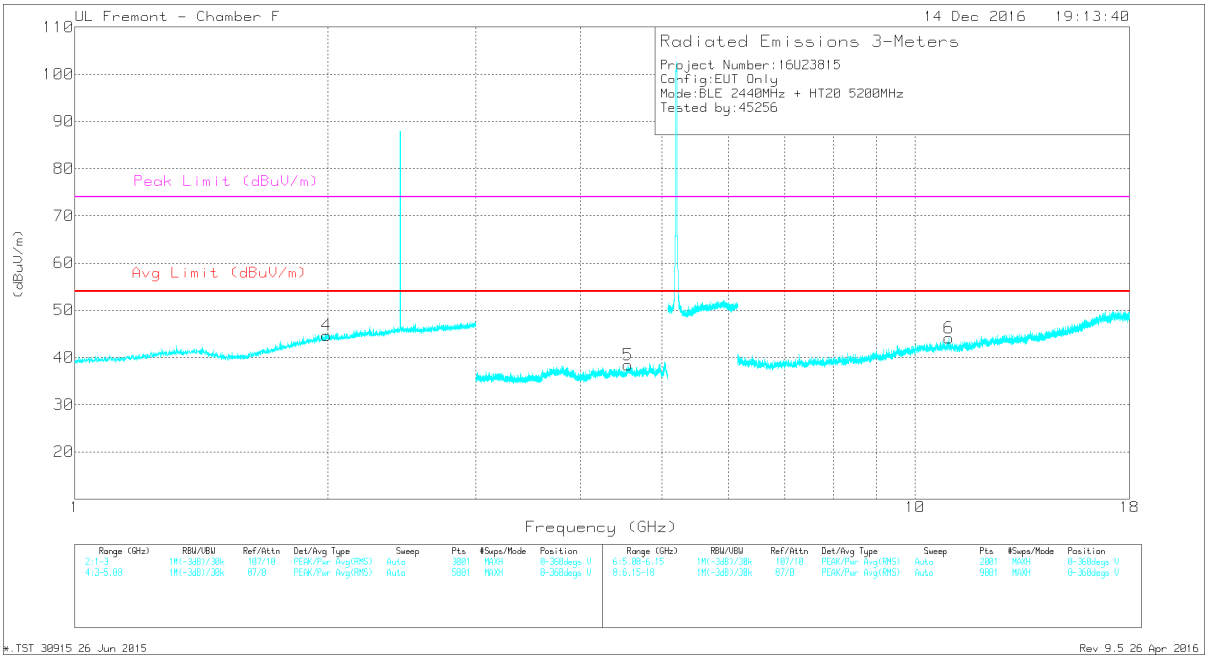
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

BLUETOOTH LOW ENERGY AND 802.11 HT20 2Tx CDD MODE IN THE 5.2GHz BAND

HORIZONTAL PLOT



VERTICAL PLOT



DATA

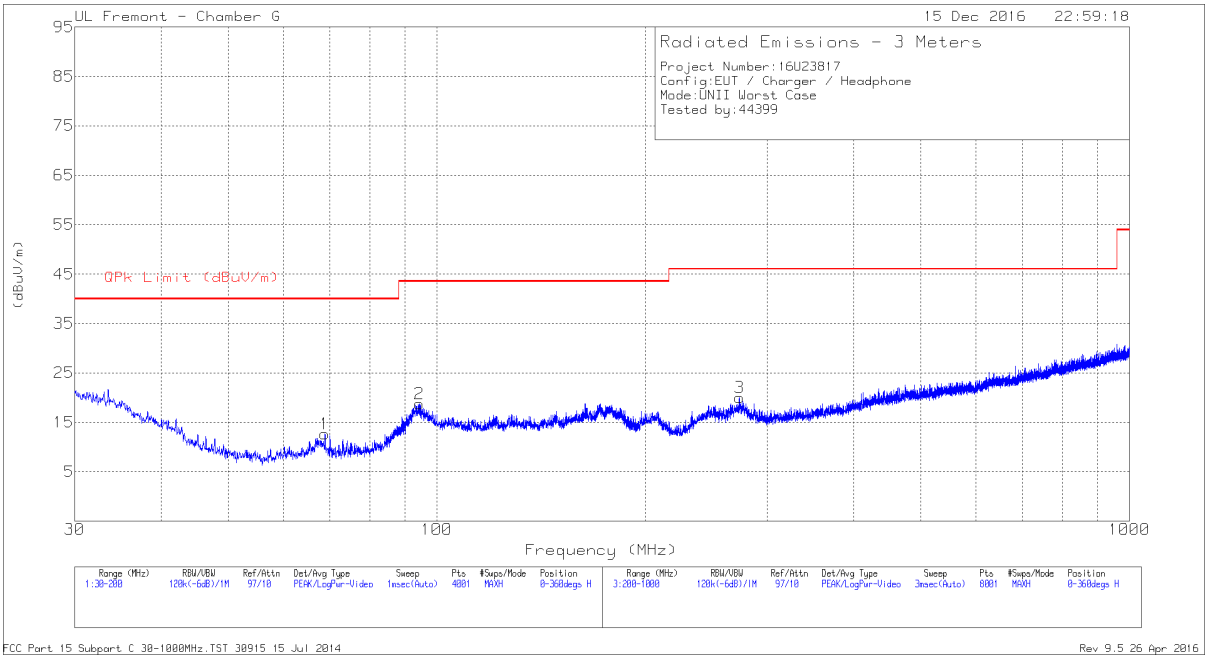
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/ Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.911	41.24	PK-U	31	-21.4	0	50.84	53.97	-3.13	74	-23.16	10	381	H
1.994	41.39	PK-U	31.5	-21.4	0	51.49	53.97	-2.48	74	-22.51	64	118	V
* 4.169	37.38	PK-U	33.7	-28.6	0	42.48	53.97	-11.49	74	-31.52	181	119	H
* 4.166	27.01	ADR	33.7	-28.6	0	32.11	-	-	-	-	181	119	H
* 4.554	38.41	PK-U	34.1	-27.8	0	44.71	53.97	-9.26	74	-29.29	194	206	V
* 4.554	27.64	ADR	34.1	-27.8	0	33.94	-	-	-	-	194	206	V
8.873	34.28	PK-U	35.9	-23.6	0	46.58	53.97	-7.39	74	-27.42	100	365	H
* 10.98	34.13	PK-U	37.9	-22.1	0	49.93	53.97	-4.04	74	-24.07	238	259	V
* 10.982	22.98	ADR	37.9	-22.1	0	38.78	-	-	-	-	238	259	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average
*.TST 30915 26 Jun 2015
Rev 9.5 26 Apr 2016

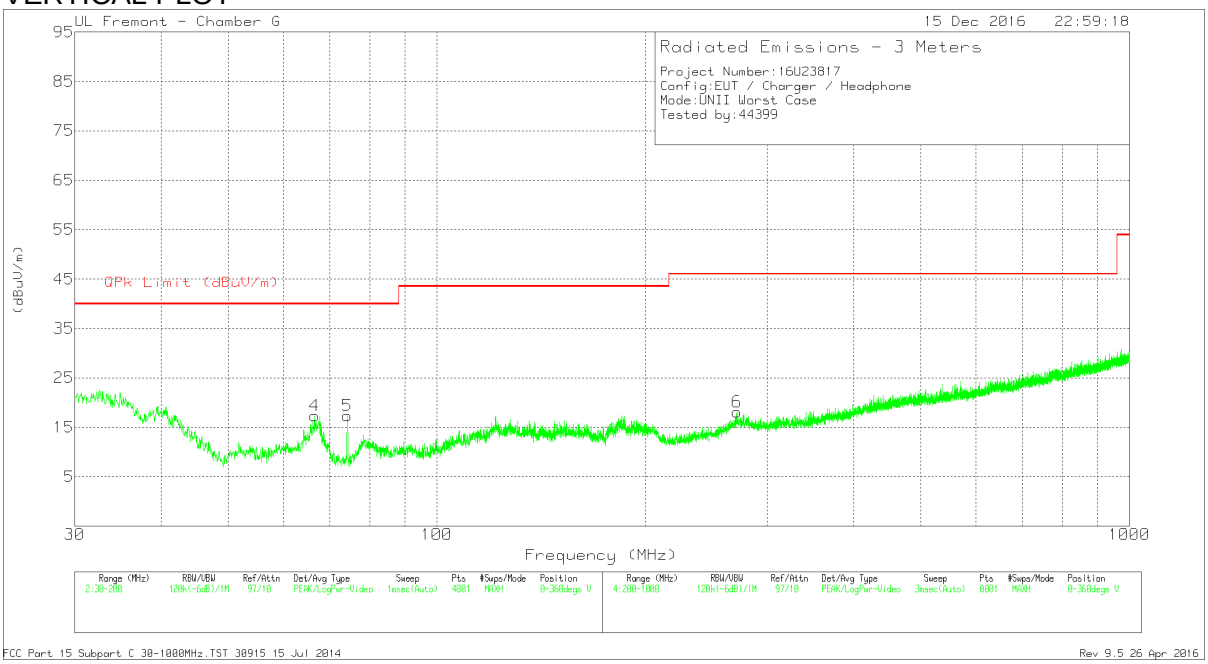
9.4. WORST-CASE BELOW 1 GHz

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

HORIZONTAL PLOT



VERTICAL PLOT



DATA

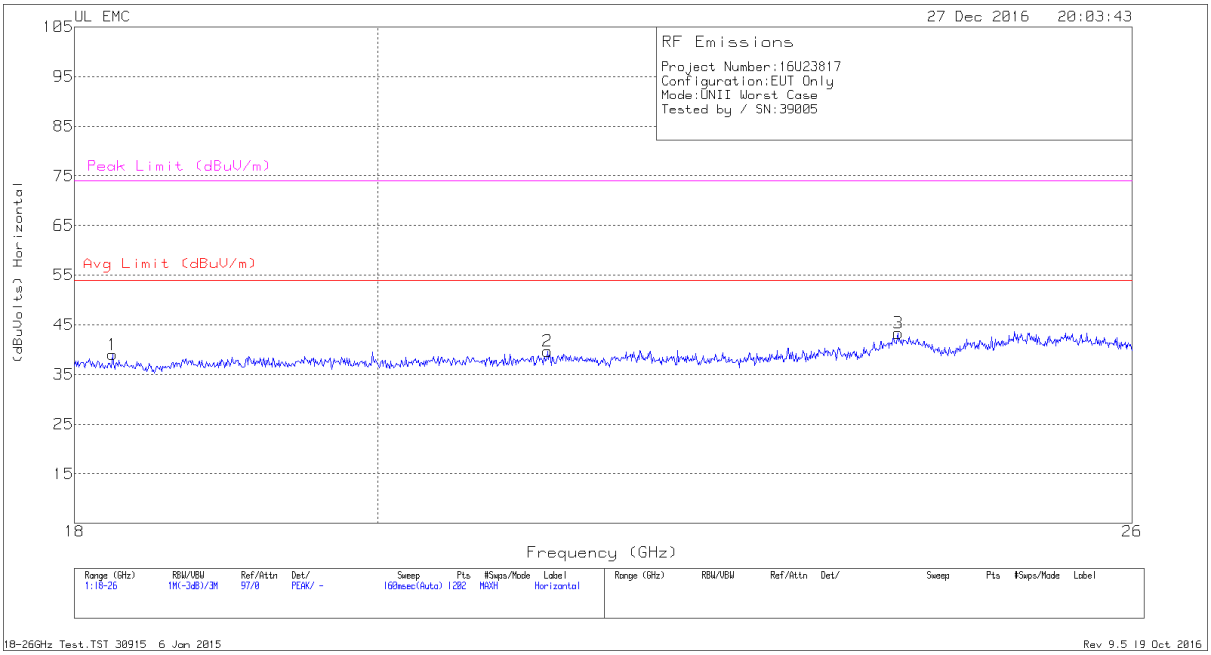
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 74.2425	36.03	Pk	12	-30.7	17.33	40	-22.67	0-360	100	V
3	* 273.5	31.9	Pk	17.2	-29.1	20	46.02	-26.02	0-360	100	H
6	* 271.1	30.06	Pk	17.1	-29.1	18.06	46.02	-27.96	0-360	100	V
4	66.5925	35.91	Pk	12.2	-30.8	17.31	40	-22.69	0-360	100	V
1	68.93	31.22	Pk	12.2	-30.8	12.62	40	-27.38	0-360	199	H
2	94.345	36.65	Pk	12.6	-30.5	18.75	43.52	-24.77	0-360	300	H

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

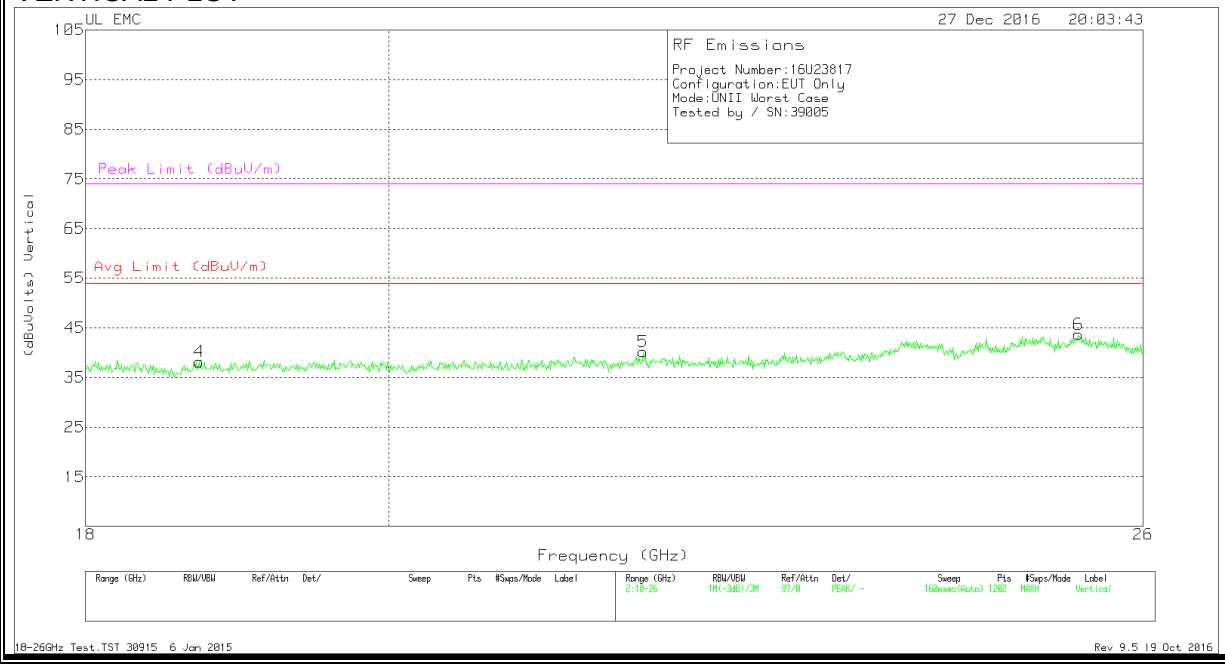
9.5. WORST-CASE 18 to 26 GHz

SPURIOUS EMISSIONS 18 TO 26 GHz (WORST-CASE CONFIGURATION, HORIZONTAL & VERTICAL)

HORIZONTAL PLOT



VERTICAL PLOT



DATA

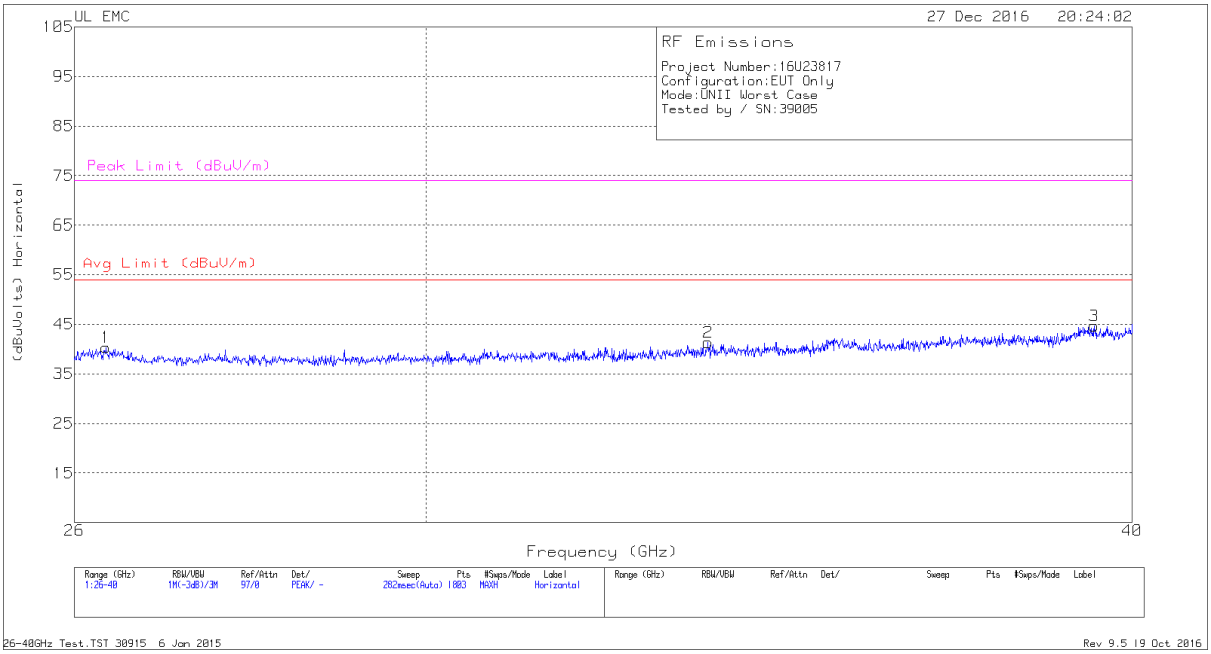
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T449 (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	18.24	41.7	Pk	32.3	-25.5	-9.5	39	54	-15	74	-35
2	21.217	40.87	Pk	33.1	-24.8	-9.5	39.66	54	-14.33	74	-34.33
3	23.968	43.03	Pk	34	-24.2	-9.5	43.33	54	-10.66	74	-30.66
4	18.726	39.97	Pk	32.4	-24.7	-9.5	38.16	54	-15.83	74	-35.83
5	21.85	41.07	Pk	33.3	-24.7	-9.5	40.16	54	-13.83	74	-33.83
6	25.42	43.17	Pk	34.3	-24.3	-9.5	43.66	54	-10.33	74	-30.33

Pk - Peak detector

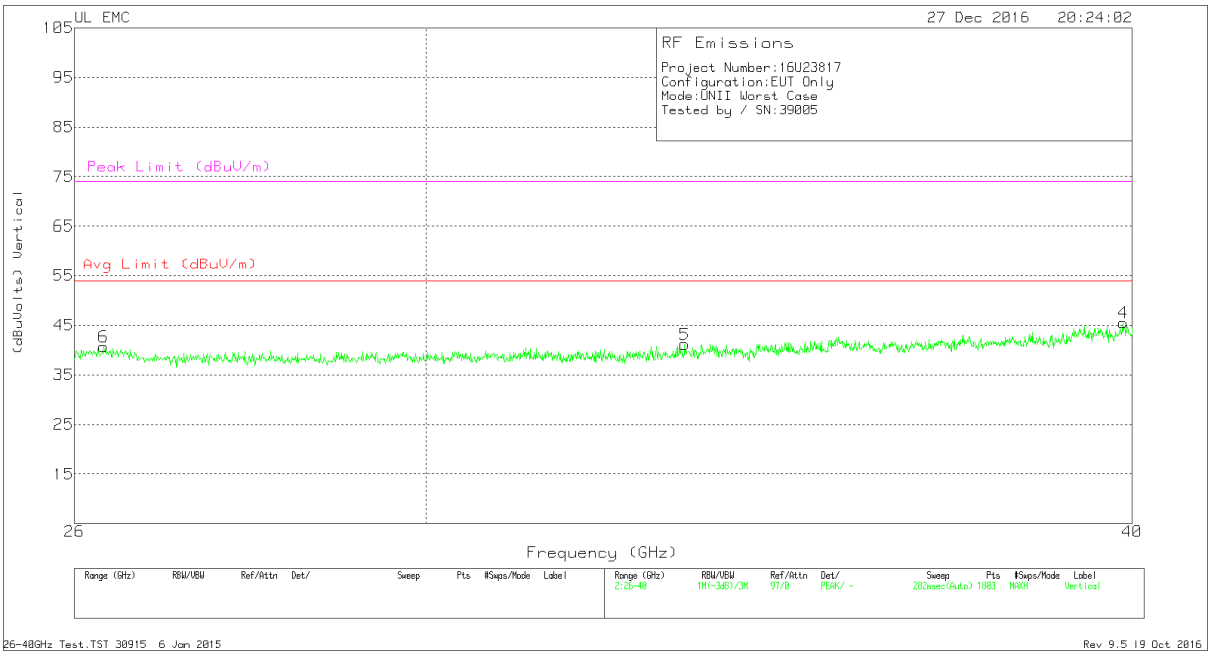
9.6. WORST-CASE 26 to 40 GHz

SPURIOUS EMISSIONS 26 TO 40 GHz (WORST-CASE CONFIGURATION)

HORIZONTAL PLOT



VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T90 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	26.334	45.43	Pk	35.6	-31.2	-9.5	40.33	54	-13.66	74	-33.66
2	33.653	47.13	Pk	36.9	-33.2	-9.5	41.33	54	-12.66	74	-32.66
3	39.386	48.37	Pk	37.9	-32.1	-9.5	44.66	54	-9.33	74	-29.33
4	39.852	49	Pk	37.3	-31.3	-9.5	45.5	54	-8.5	74	-28.5
5	33.334	47.17	Pk	37	-33.5	-9.5	41.166	54	-12.83	74	-32.83
6	26.311	45.67	Pk	35.6	-31.1	-9.5	40.66	54	-13.33	74	-33.33

Pk - Peak detector

10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

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

*Decreases with the logarithm of the frequency.

TEST PROCEDURE

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

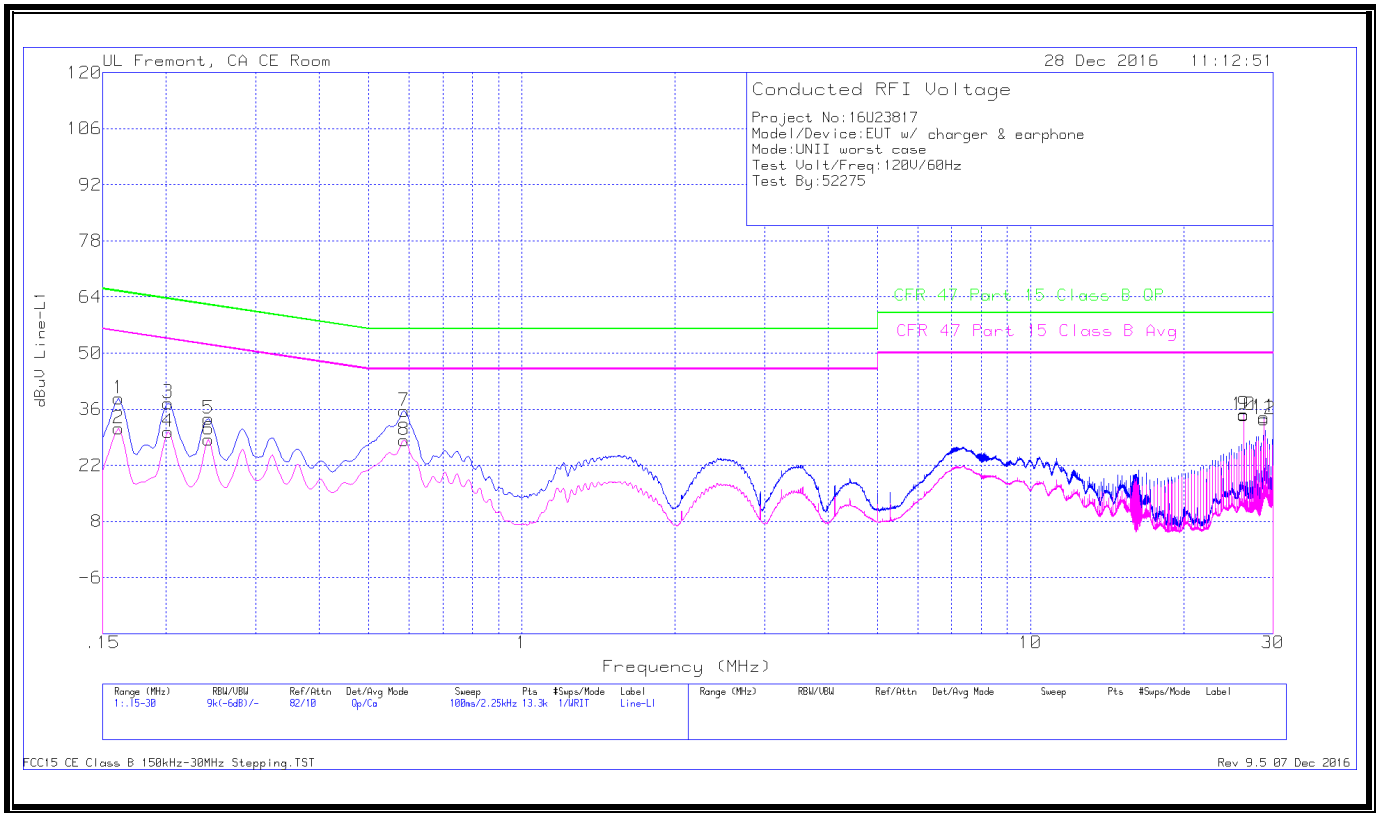
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

10.1. EUT POWERED BY AC/DC ADAPTER VIA USB CABLE

LINE 1 RESULTS



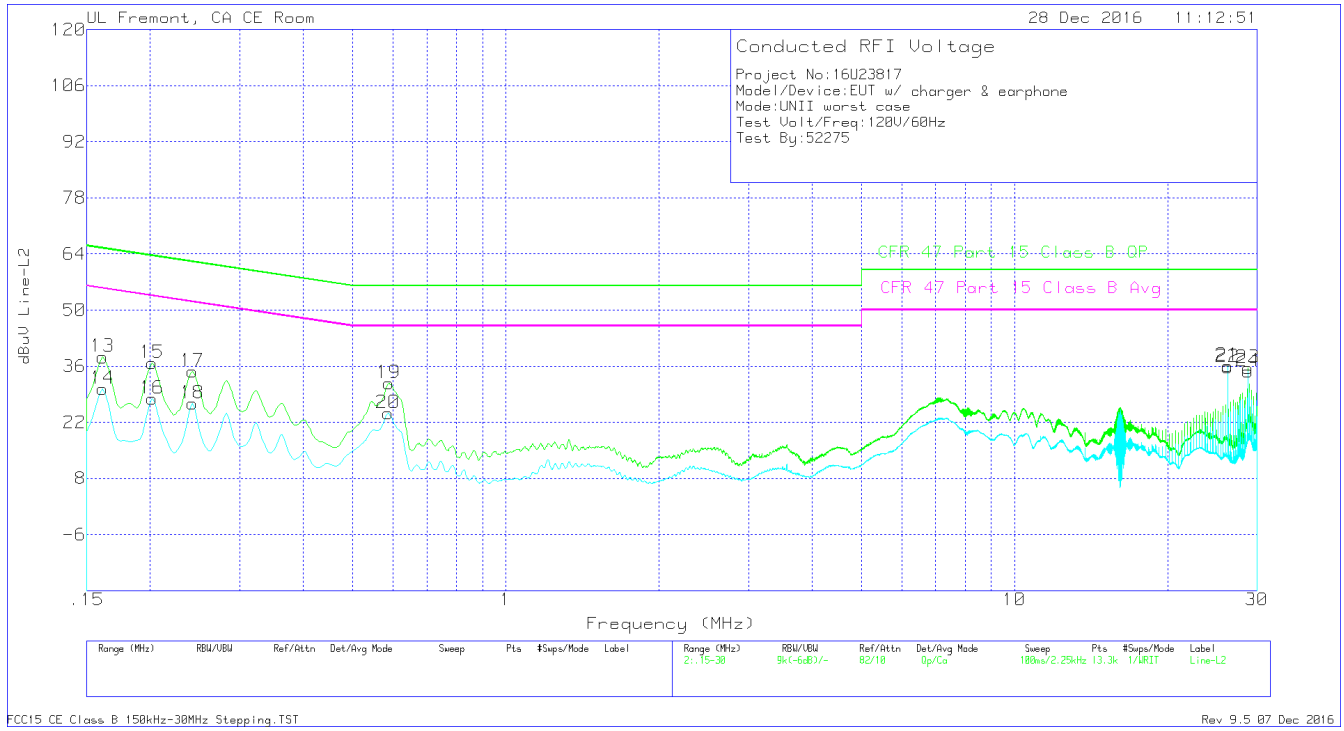
WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables 1&3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
1	.16125	28.53	Qp	0	0	10.1	38.63	65.4	-26.77	-	-
2	.16125	21.17	Ca	0	0	10.1	31.27	-	-	55.4	-24.13
3	.20175	27.47	Qp	0	0	10.1	37.57	63.54	-25.97	-	-
4	.20175	20.27	Ca	0	0	10.1	30.37	-	-	53.54	-23.17
5	.24225	23.61	Qp	0	0	10.1	33.71	62.02	-28.31	-	-
6	.24225	18.36	Ca	0	0	10.1	28.46	-	-	52.02	-23.56
7	.5865	25.52	Qp	0	0	10.1	35.62	56	-20.38	-	-
8	.5865	18.23	Ca	0	0	10.1	28.33	-	-	46	-17.67
9	26.25	23.79	Qp	.1	.3	10.5	34.69	60	-25.31	-	-
10	26.25	23.6	Ca	.1	.3	10.5	34.5	-	-	50	-15.5
11	28.74975	23.15	Qp	.1	.3	10.4	33.95	60	-26.05	-	-
12	28.74975	22.63	Ca	.1	.3	10.4	33.43	-	-	50	-16.57

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

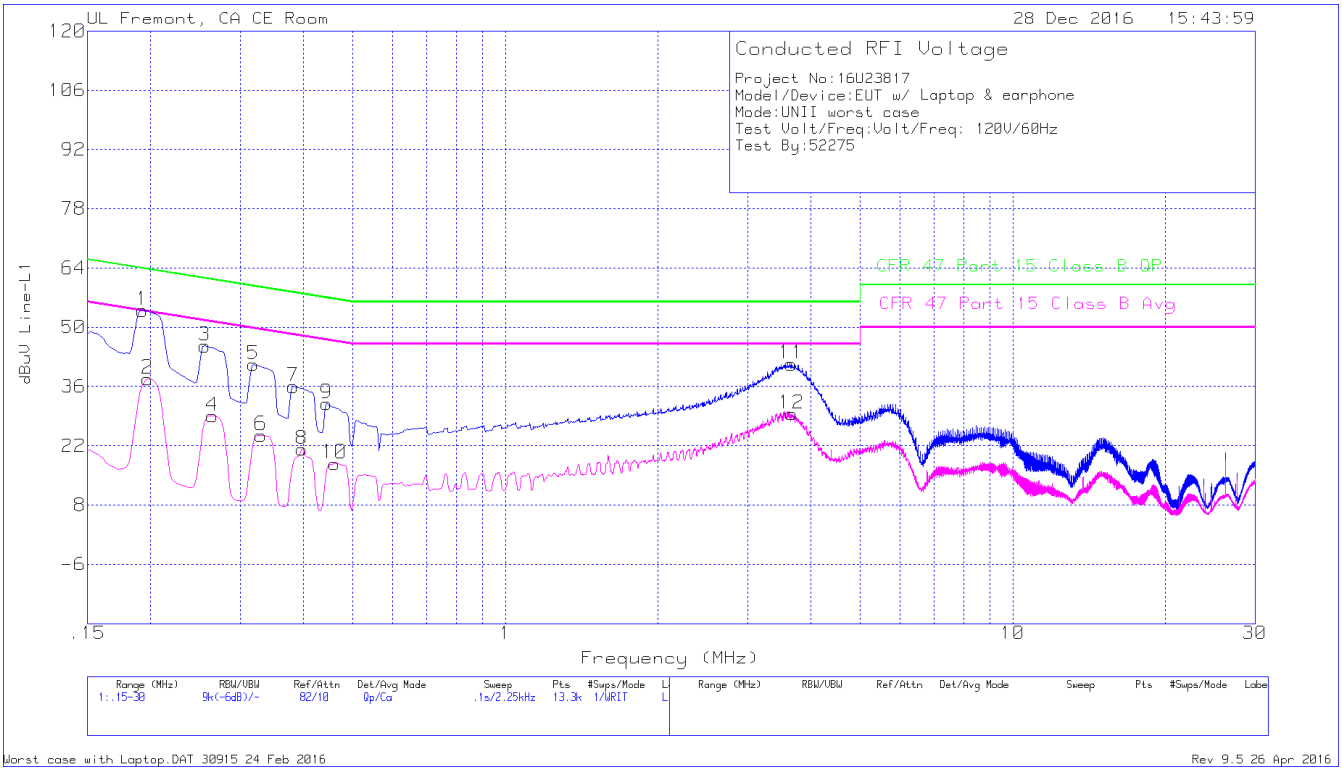
Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L2	LC Cables 2&3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
13	.16125	28.17	Qp	0	0	10.1	38.27	65.4	-27.13	-	-
14	.16125	20.2	Ca	0	0	10.1	30.3	-	-	55.4	-25.1
15	.20175	26.63	Qp	0	0	10.1	36.73	63.54	-26.81	-	-
16	.20175	17.77	Ca	0	0	10.1	27.87	-	-	53.54	-25.67
17	.24225	24.6	Qp	0	0	10.1	34.7	62.02	-27.32	-	-
18	.24225	16.68	Ca	0	0	10.1	26.78	-	-	52.02	-25.24
19	.58875	21.67	Qp	0	0	10.1	31.77	56	-24.23	-	-
20	.5865	14.11	Ca	0	0	10.1	24.21	-	-	46	-21.79
21	26.25	25.13	Qp	.1	.3	10.5	36.03	60	-23.97	-	-
22	26.25	24.85	Ca	.1	.3	10.5	35.75	-	-	50	-14.25
23	28.74975	24.79	Qp	.1	.3	10.4	35.59	60	-24.41	-	-
24	28.74975	23.9	Ca	.1	.3	10.4	34.7	-	-	50	-15.3

Qp - Quasi-Peak detector
Ca - CISPR average detection

10.2. EUT POWERED BY HOST PC VIA USB CABLE

LINE 1 RESULTS



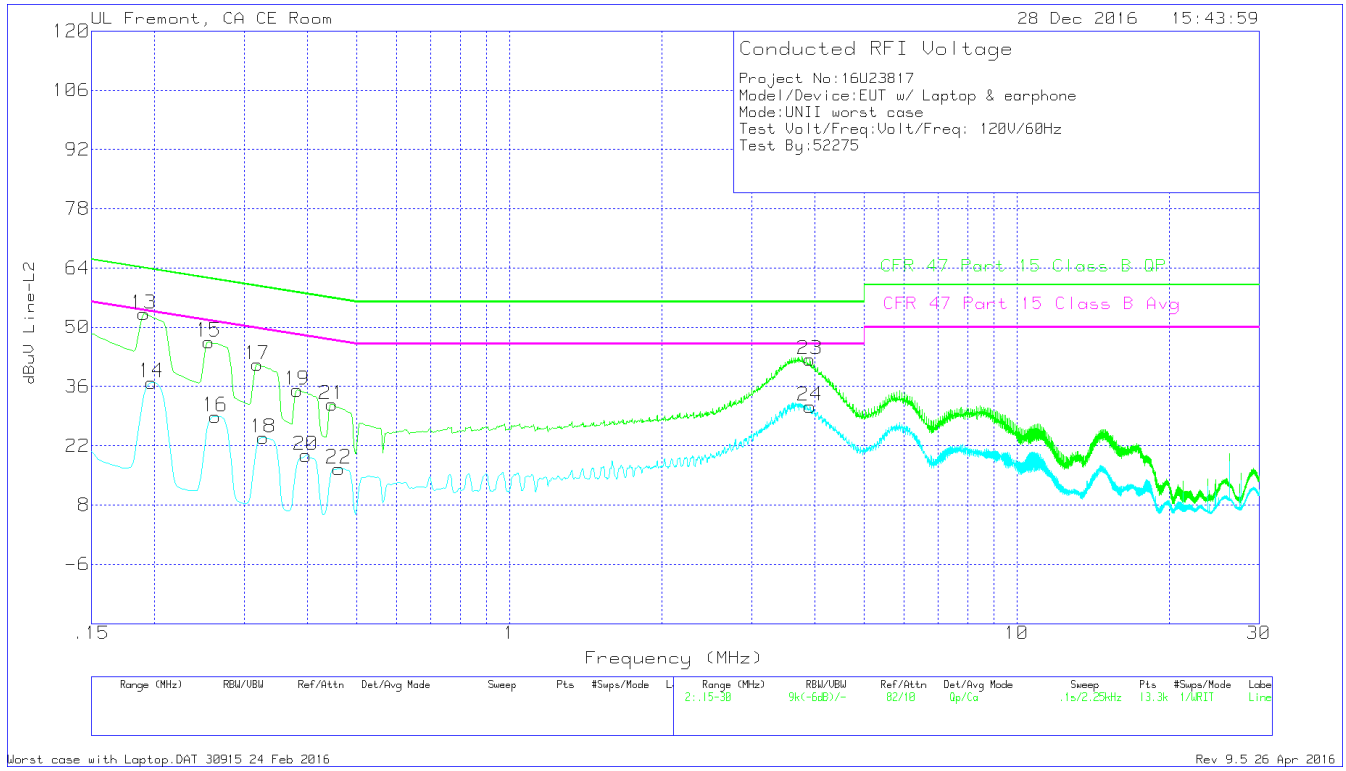
WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables 1&3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
1	.19275	43.88	Qp	0	0	10.1	53.98	63.92	-9.94	-	-
2	.19725	27.71	Ca	0	0	10.1	37.81	-	-	53.73	-15.92
3	.25575	35.48	Qp	0	0	10.1	45.58	61.57	-15.99	-	-
4	.26475	18.96	Ca	0	0	10.1	29.06	-	-	51.28	-22.22
5	.31875	31.07	Qp	0	0	10.1	41.17	59.74	-18.57	-	-
6	.33	14.39	Ca	0	0	10.1	24.49	-	-	49.45	-24.96
7	.38175	25.9	Qp	0	0	10.1	36	58.24	-22.24	-	-
8	.3975	11.03	Ca	0	0	10.1	21.13	-	-	47.91	-26.78
9	.44475	21.88	Qp	0	0	10.1	31.98	56.97	-24.99	-	-
10	.4605	7.7	Ca	0	0	10.1	17.8	-	-	46.68	-28.88
11	3.66225	31.11	Qp	0	.1	10.1	41.31	56	-14.69	-	-
12	3.66675	19.36	Ca	0	.1	10.1	29.56	-	-	46	-16.44

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L2	LC Cables 2&3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
13	.1905	43.04	Qp	0	0	10.1	53.14	64.01	-10.87	-	-
14	.19725	26.88	Ca	0	0	10.1	36.98	-	-	53.73	-16.75
15	.25575	36.45	Qp	0	0	10.1	46.55	61.57	-15.02	-	-
16	.26363	18.84	Ca	0	0	10.1	28.94	-	-	51.32	-22.38
17	.31875	31.12	Qp	0	0	10.1	41.22	59.74	-18.52	-	-
18	.32775	13.82	Ca	0	0	10.1	23.92	-	-	49.51	-25.59
19	.38175	25.04	Qp	0	0	10.1	35.14	58.24	-23.1	-	-
20	.3975	9.63	Ca	0	0	10.1	19.73	-	-	47.91	-28.18
21	.447	21.68	Qp	0	0	10.1	31.78	56.93	-25.15	-	-
22	.46162	6.49	Ca	0	0	10.1	16.59	-	-	46.66	-30.07
23	3.912	32.18	Qp	0	.1	10.1	42.38	56	-13.62	-	-
24	3.91425	21.16	Ca	0	.1	10.1	31.36	-	-	46	-14.64

Qp - Quasi-Peak detector
Ca - CISPR average detection

11. DYNAMIC FREQUENCY SELECTION

11.1. OVERVIEW

11.1.1. LIMITS

FCC

§15.407 (h), FCC KDB 905462 D02 “COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVICES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION” and KDB 905462 D03 “U-NII CLIENT DEVICES WITHOUT RADAR DETECTION CAPABILITY”.

Table 1: Applicability of DFS requirements prior to use of a channel

Requirement	Operational Mode		
	Master	Client (without radar detection)	Client (with radar detection)
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode		
	Master	Client **(without DFS)**	Client **(with DFS)**
DFS Detection Threshold	Yes	Not required	Yes
Channel Closing Transmission Time	Yes	Yes	Yes
Channel Move Time	Yes	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required	Yes

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar DFS	Client (without DFS)
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in all 20 MHz channel blocks and a null frequency between the bonded 20 MHz channel blocks.		

Table 3: Interference Threshold values, Master or Client incorporating In-Service Monitoring

Maximum Transmit Power	Value (see notes)
E.I.R.P. ≥ 200 milliwatt	-64 dBm
E.I.R.P. < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
E.I.R.P. < 200 milliwatt that do not meet power spectral density requirement	-64 dBm

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna
Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.
Note 3: E.I.R.P. is based on the highest antenna gain. For MIMO devices refer to KDB publication 662911 D01.

Table 4: DFS Response requirement values

Parameter	Value
Non-occupancy period	30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds (See Note 1)
Channel Closing Transmission Time	200 milliseconds + approx. 60 milliseconds over remaining 10 second period. (See Notes 1 and 2)
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. (See Note 3)

Note 1: *Channel Move Time* and the *Channel Closing Transmission Time* should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.
Note 2: The *Channel Closing Transmission Time* is comprised of 200 milliseconds starting at the beginning of the *Channel Move Time* plus any additional intermittent control signals required to facilitate a *Channel* move (an aggregate of 60 milliseconds) during the remainder of the 10-second period. The aggregate duration of control signals will not count quiet periods in between transmissions.
Note 3: During the *U-NII Detection Bandwidth* detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (usec)	PRI (usec)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in table 5a	Roundup: {(1/360) x (19 x 10^6 PRI_{usec})}	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 usec. With a minimum increment of 1 usec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

Note 1: Short Pulse Radar Type 0 should be used for the *Detection Bandwidth* test, *Channel Move Time*, and *Channel Closing Time* tests.

Table 6 – Long Pulse Radar Test Signal

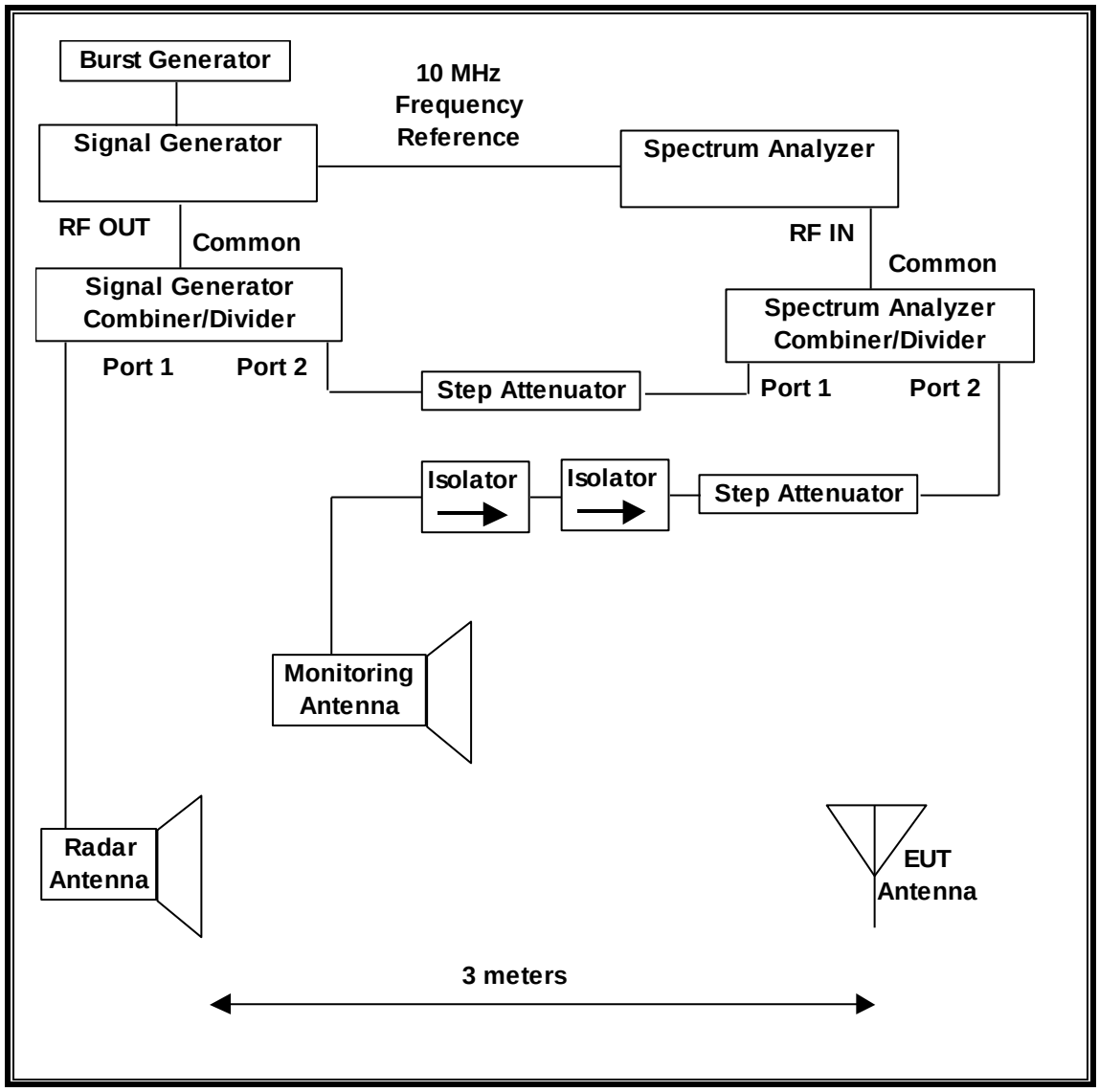
Radar Waveform Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

Table 7 – Frequency Hopping Radar Test Signal

Radar Waveform Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Trials
6	1	333	9	0.333	300	70%	30

11.1.2. TEST AND MEASUREMENT SYSTEM

RADIATED METHOD SYSTEM BLOCK DIAGRAM



SYSTEM OVERVIEW

The short pulse and long pulse signal generating system utilizes the NTIA software. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

The short pulse types 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of KDB 905462 D02. The frequency of the signal generator is incremented in 1 MHz steps from F_L to F_H for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold.

SYSTEM CALIBRATION

A 50-ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to a horn antenna via a coaxial cable, with the reference level offset set to (horn antenna gain – coaxial cable loss). The signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of –64 dBm as measured on the spectrum analyzer.

Without changing any of the instrument settings, the spectrum analyzer is reconnected to the Common port of the Spectrum Analyzer Combiner/Divider. The Reference Level Offset of the spectrum analyzer is adjusted so that the displayed amplitude of the signal is –64 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –64 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

ADJUSTMENT OF DISPLAYED TRAFFIC LEVEL

A link is established between the Master and Slave and the distance between the units is adjusted as needed to provide a suitable received level at the Master and Slave devices. The video test file is streamed to generate WLAN traffic. The monitoring antenna is adjusted so that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold.

TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the DFS tests documented in this report:

TEST EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Asset Number**	**Cal Due**
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight	N9030A	US51350187	06/13/17
Signal Generator, MXG X-Series RF Vector	Agilent	N5172B	MY51350337	03/11/17

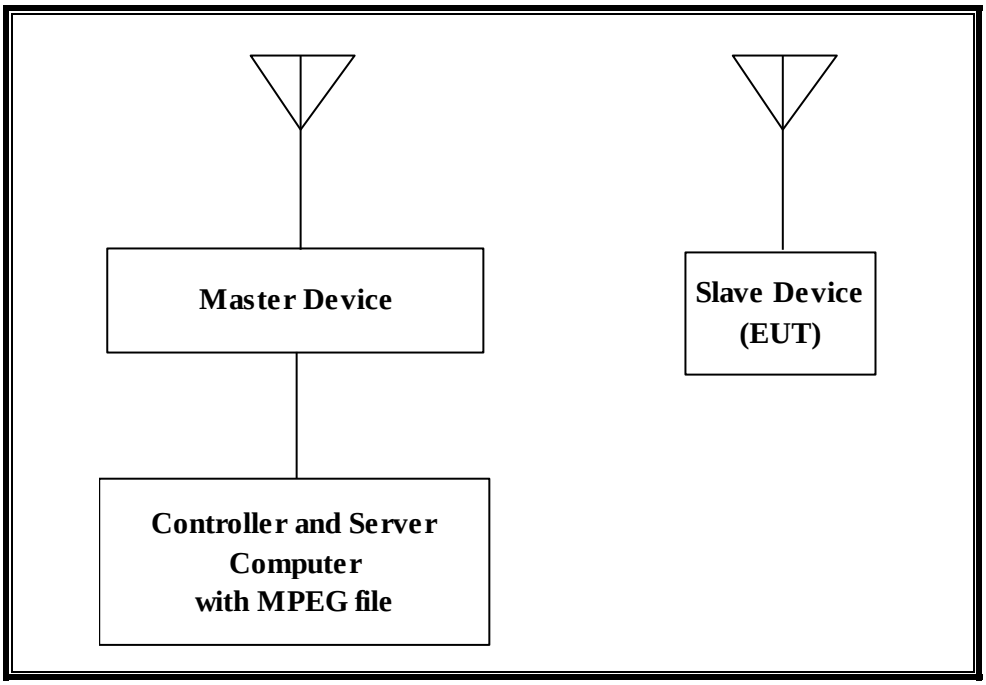
11.1.3. TEST AND MEASUREMENT SOFTWARE

The following test and measurement software was utilized for the tests documented in this report:

TEST SOFTWARE LIST		
Name	**Version**	**Test / Function**
Aggregate Time-PXA	3.0.0.9	Channel Loading and Aggregate Closing Time
PXA Read	3.0	Signal Generator Screen Capture
SGXProject.exe	1.7	Radar Waveform Generation and Download

11.1.4. SETUP OF EUT (CLIENT MODE)

RADIATED METHOD EUT TEST SETUP



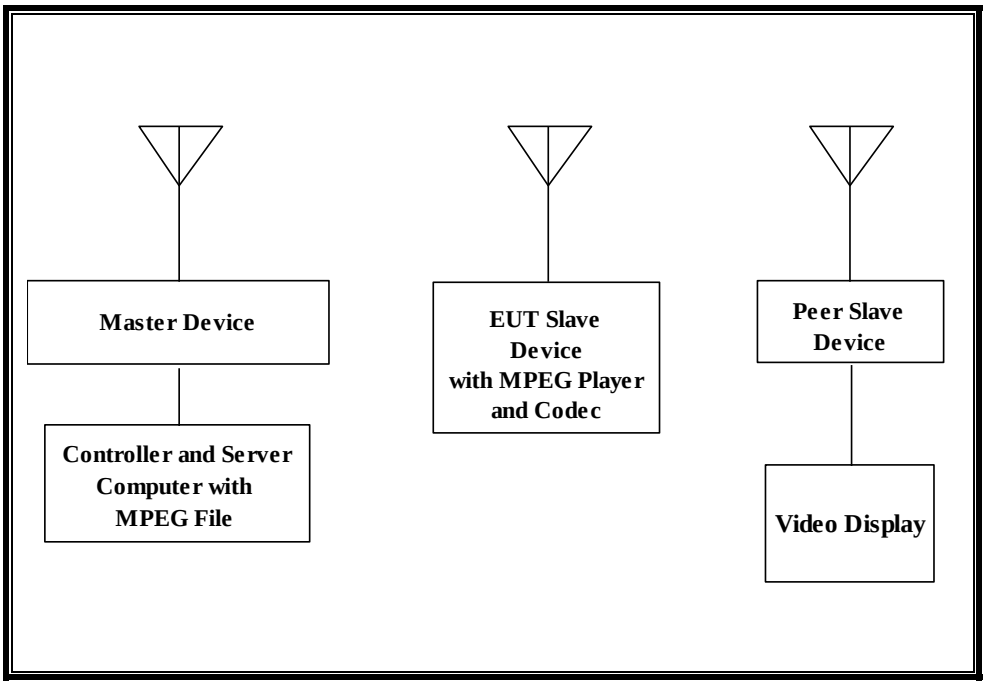
SUPPORT EQUIPMENT

The following support equipment was utilized for the DFS tests documented in this report:

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
3x3 MIMO Base Station (Master Device)	Apple	A1521	C86L3BA8FJ1R	BCGA1521
Notebook PC (Controller/Server)	Apple	A1181	4H629022WLV	DoC
AC Adapter (Controller/Server PC)	Delta Electronics	A1344	MV05104CNAL1A	DoC

11.1.5. SETUP OF EUT (CLIENT-TO-CLIENT COMMUNICATIONS MODE)

RADIATED METHOD EUT TEST SETUP



SUPPORT EQUIPMENT

The following support equipment was utilized for the DFS tests documented in this report:

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
3x3 MIMO Base Station (Master Device)	Apple	A1521	C86L3BA8FJ1R	BCGA1521
Notebook PC (Controller/Server)	Apple	A1181	4H629022WLV	DoC
AC Adapter (Controller/Server PC)	Delta Electronics	A1344	MV05104CNAL1A	DoC
Apple TV (Peer Slave Device)	Apple	A1625	C07PR001GPWK	BCGA1625
Video Display	Polaroid	TLX-01511C	02006	DoC

11.1.6. DESCRIPTION OF EUT

For FCC the EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges.

The EUT is a Slave Device without Radar Detection.

The highest power level within these bands is 22.28 dBm EIRP in the 5250-5350 MHz band and 21.74 dBm EIRP in the 5470-5725 MHz band.

The only antenna assembly utilized with the EUT is composed of two antennas with respective gains of 2.28 dBi and 2.81 dBi in the 5250-5350 MHz band and 3.77 dBi and 3.10 dBi in the 5470-5725 MHz band.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is –64 dBm. After correction for procedural adjustments, the required radiated threshold at the antenna port is –64 + 1 = -63 dBm.

The calibrated radiated DFS Detection Threshold level is set to –64 dBm. The tested level is lower than the required level hence it provides a margin to the limit.

The EUT uses two transmitter/receiver chains connected to an antenna to perform radiated tests.

In standard client mode WLAN traffic that meets or exceeds the minimum required loading was generated by streaming the compressed version of the video test file “6 ½ Magic Hours” from the Master to the Slave

In client to client mode WLAN traffic is generated by streaming the compressed version of the video test file “6 ½ Magic Hours” from the Master to the Slave and then on to the peer slave device in full motion video mode using QuickTime media player and embedded proprietary AirPlay software.

TPC is not required since the maximum EIRP is less than 500 mW (27 dBm).

The EUT utilizes the 802.11ac architecture. Three nominal channel bandwidths are implemented: 20 MHz, 40 MHz and 80 MHz.

The software installed in the EUT is version 10.3 (14E222).

The software installed in the access point is 7.7.2d0 dev.

UNIFORM CHANNEL SPREADING

This function is not applicable Slave Devices.

OVERVIEW OF MASTER DEVICE WITH RESPECT TO §15.407 (h) REQUIREMENTS

The Master Device is an Apple, Inc. Access Point, FCC ID: BCGA1521. The minimum antenna gain for the Master Device is 1.4 dBi.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is –64 dBm. After correction for procedural adjustments, the required radiated threshold at the antenna port is –64 + 1 = -63 dBm.

The calibrated radiated DFS Detection Threshold level is set to –64 dBm. The tested level is lower than the required level hence it provides a margin to the limit.

The software installed in the access point is 7.7.2d0 dev.

11.2. CLIENT MODE RESULTS FOR 20 MHz BANDWIDTH

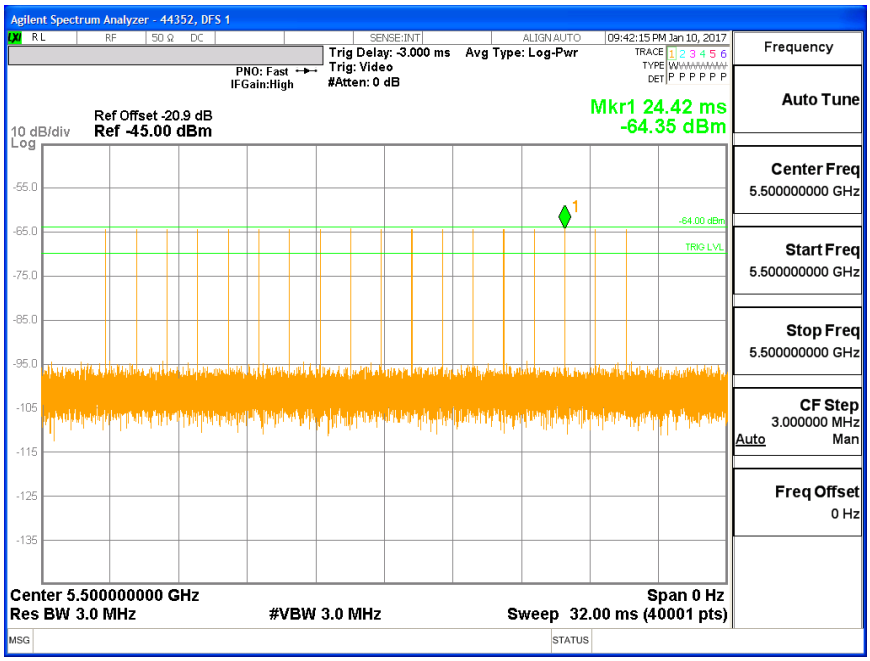
11.2.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5500 MHz.

11.2.2. RADAR WAVEFORM AND TRAFFIC

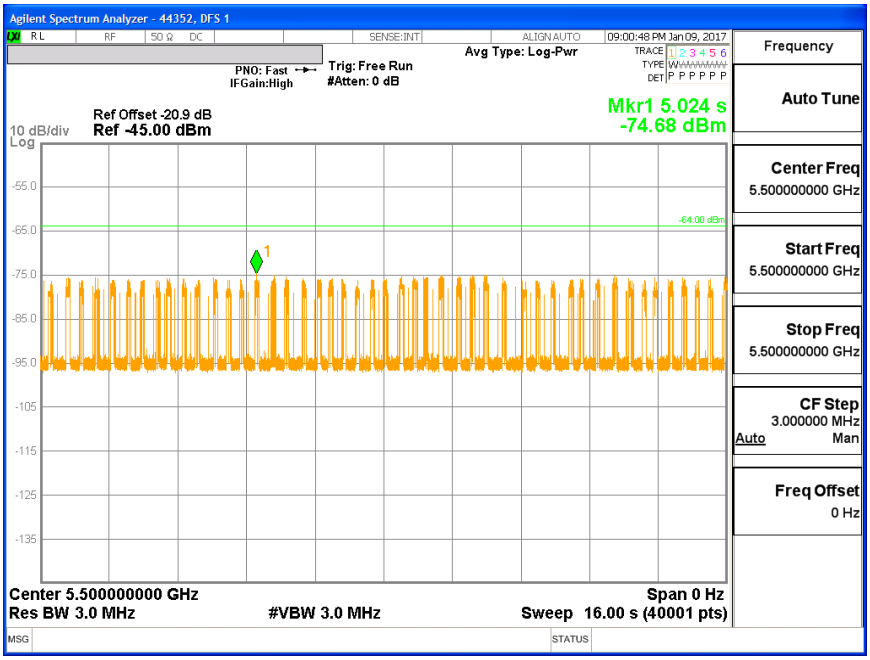
RADAR WAVEFORM

SHORT PULSE RADAR TYPE 0 AT MASTER

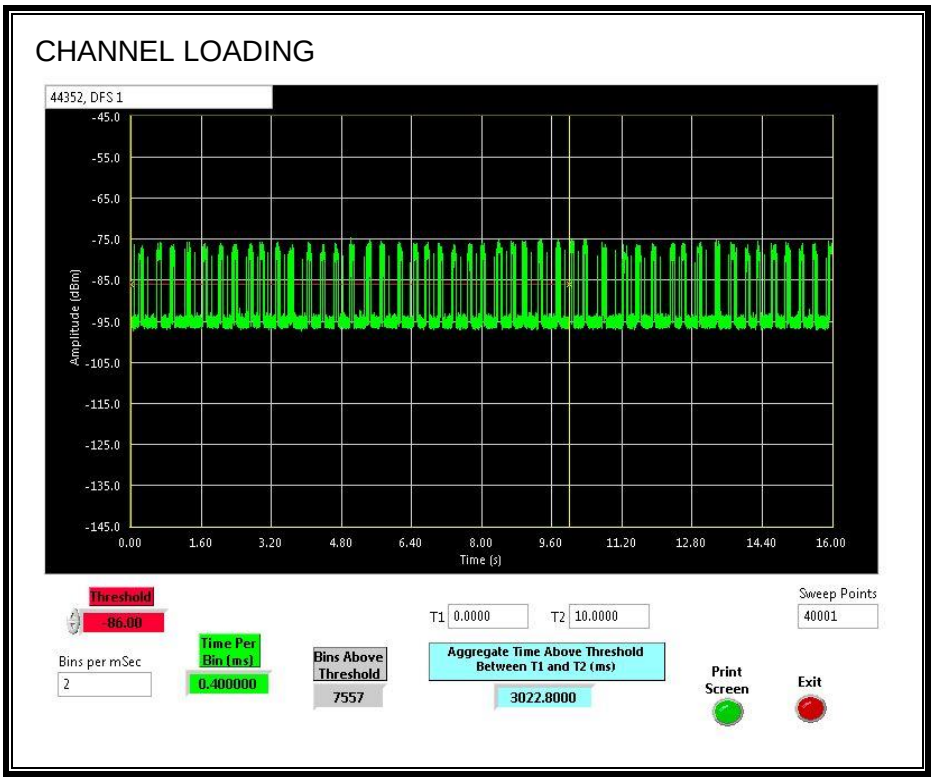


TRAFFIC

SLAVE TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 30.228%

11.2.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

11.2.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

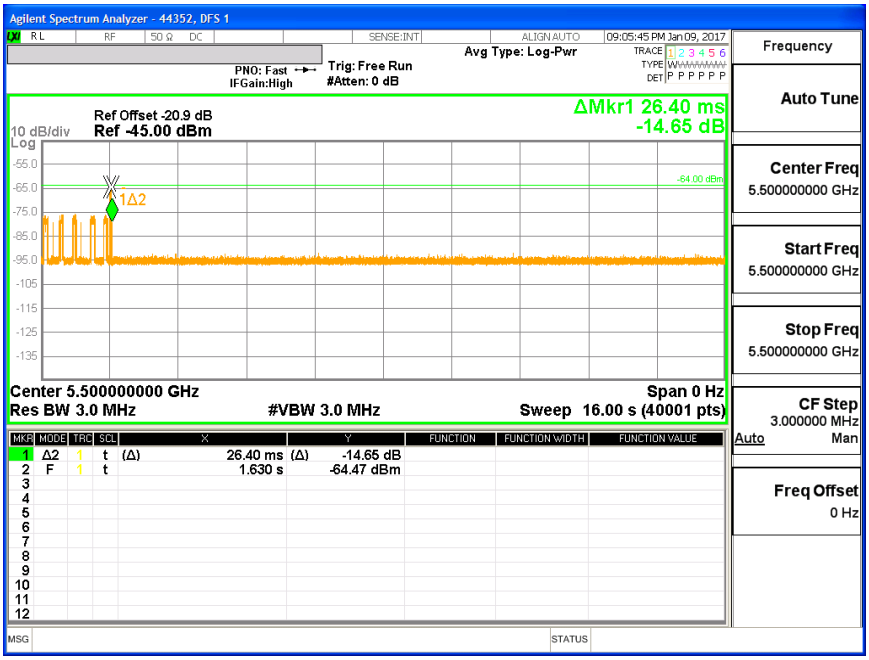
RESULTS

Channel Move Time (sec)	Limit (sec)
0.0264	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0.0	60

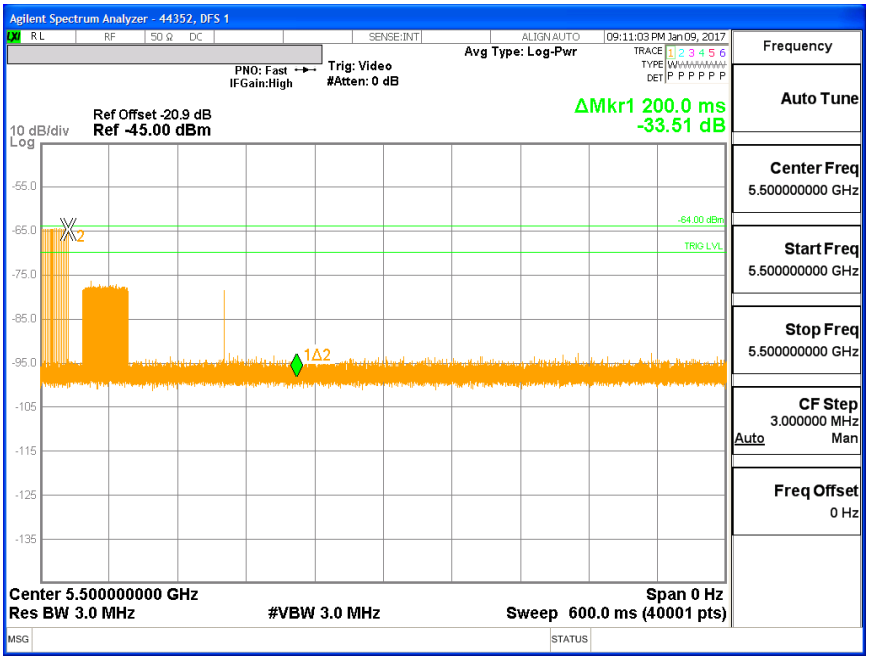
MOVE TIME

MOVE TIME



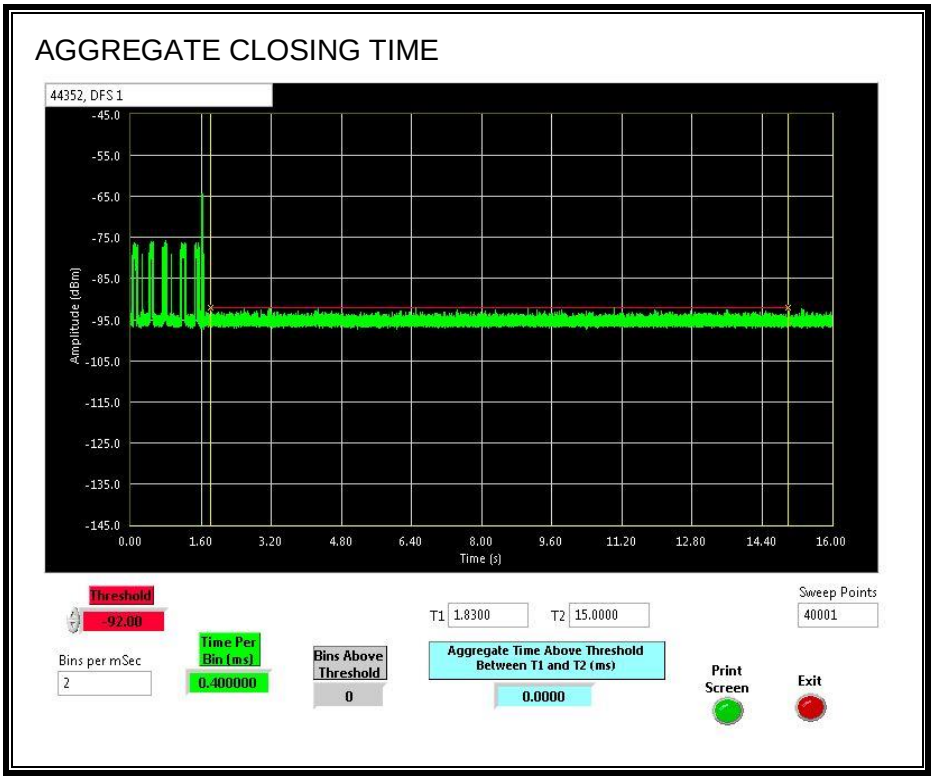
CHANNEL CLOSING TIME

CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.



11.3. CLIENT MODE RESULTS FOR 40 MHz BANDWIDTH

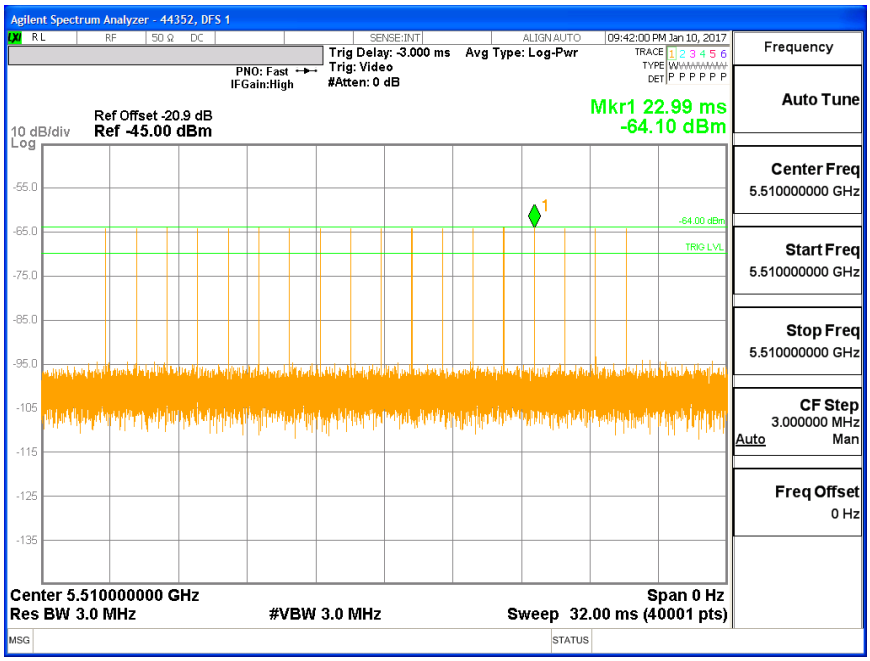
11.3.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5510 MHz.

11.3.2. RADAR WAVEFORM AND TRAFFIC

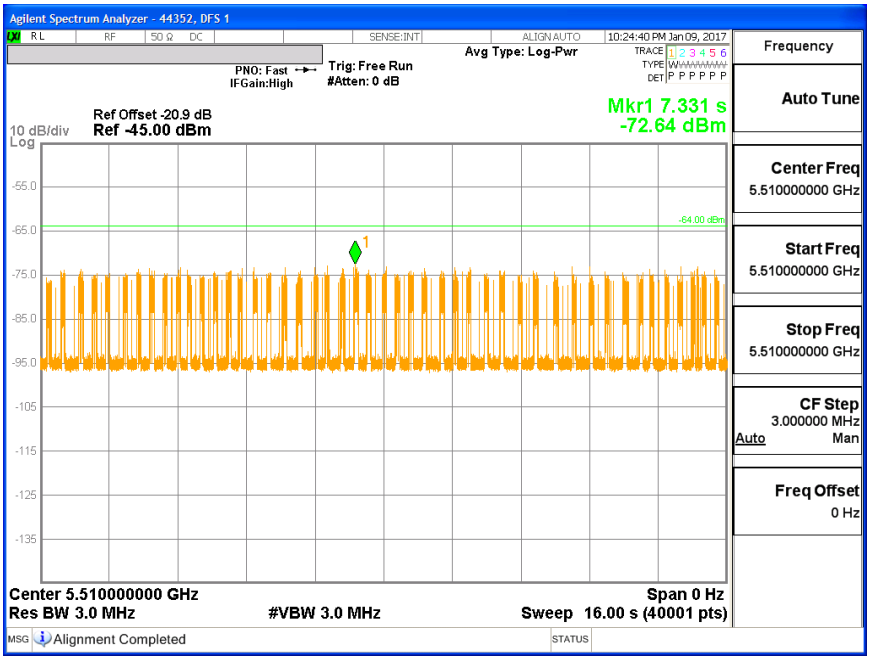
RADAR WAVEFORM

SHORT PULSE RADAR TYPE 0 AT MASTER

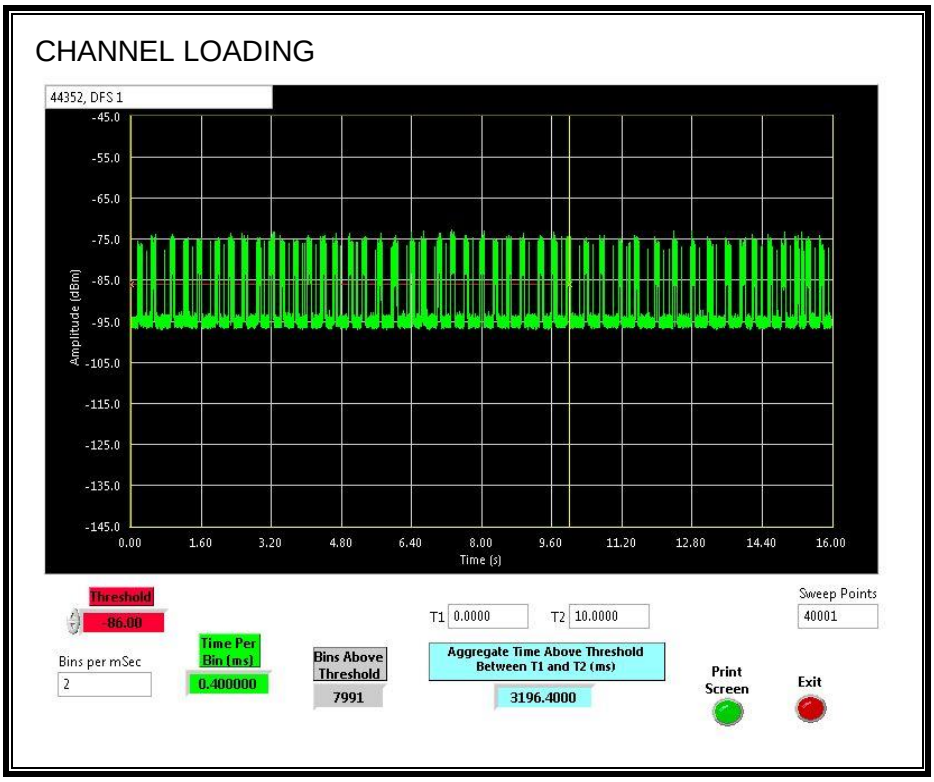


TRAFFIC

SLAVE TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 31.964%

11.3.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

11.3.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

Channel Move Time (sec)	Limit (sec)
0.1436	10

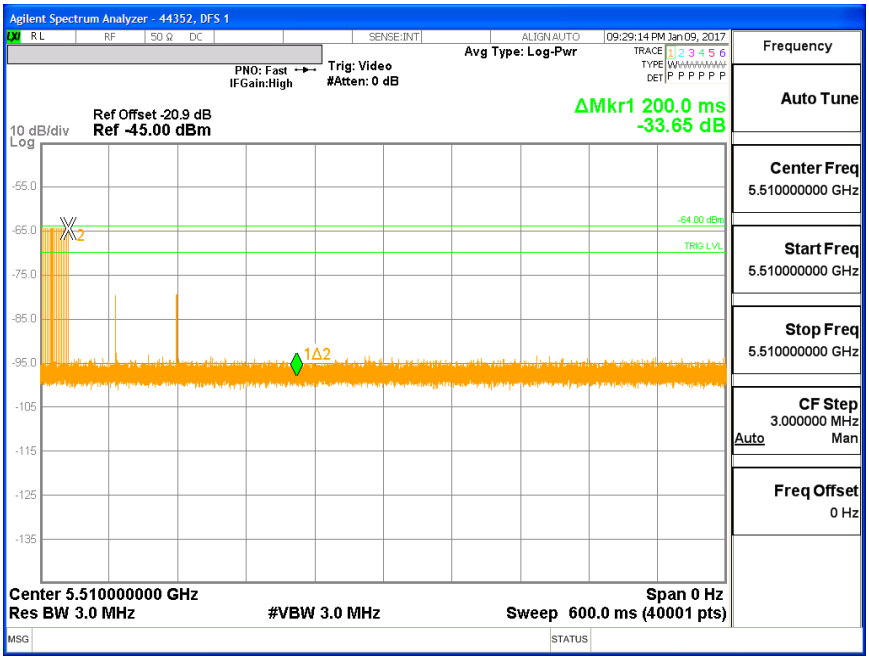
Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0.0	60

MOVE TIME

MOVE TIME

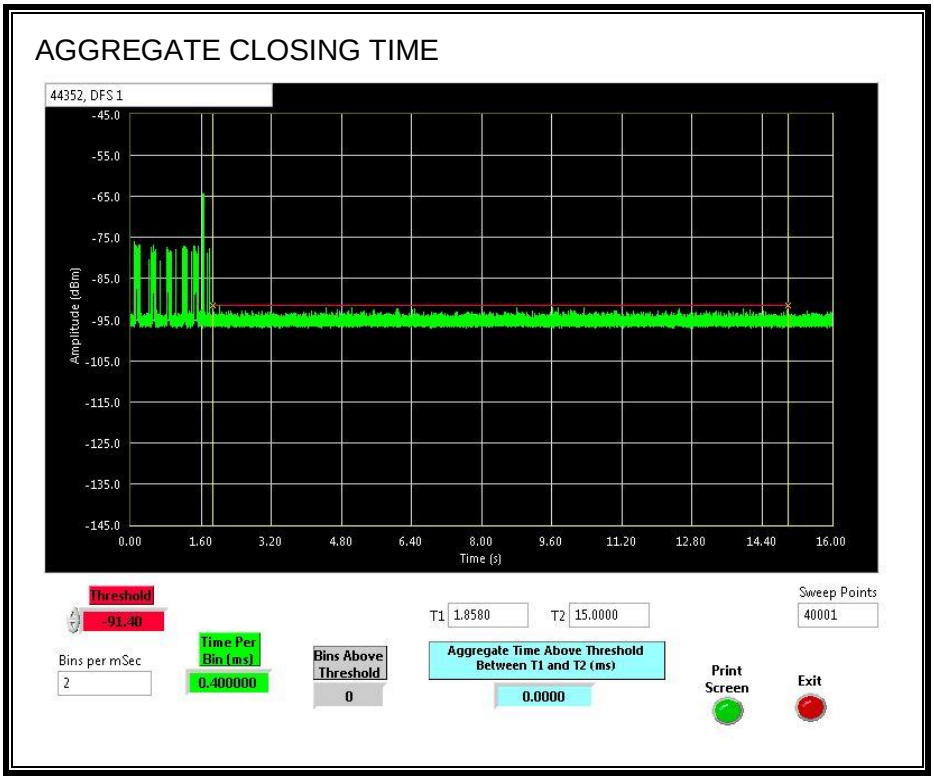
CHANNEL CLOSING TIME

CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.



11.4. CLIENT MODE RESULTS FOR 80 MHz BANDWIDTH

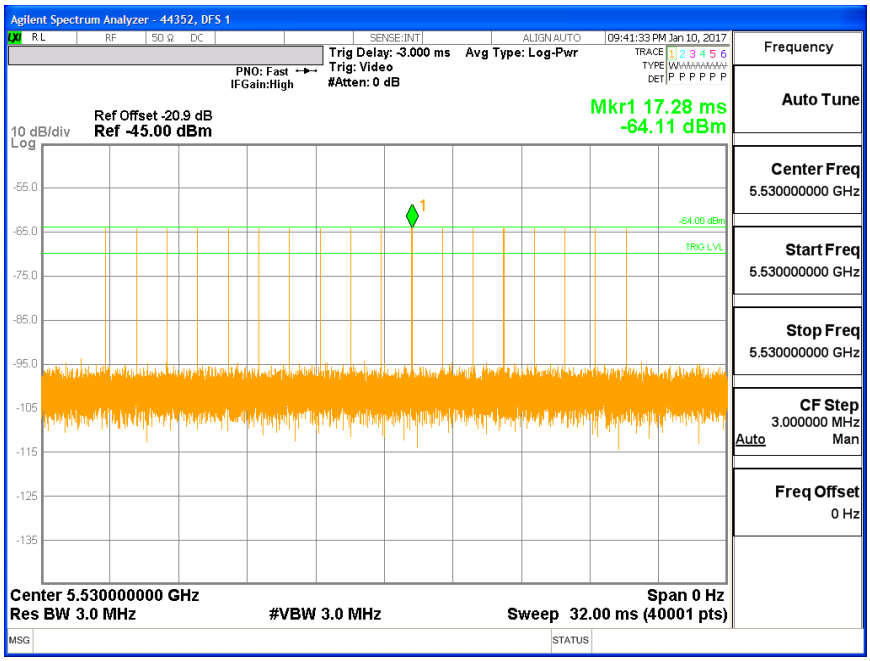
11.4.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5530 MHz.

11.4.2. RADAR WAVEFORM AND TRAFFIC

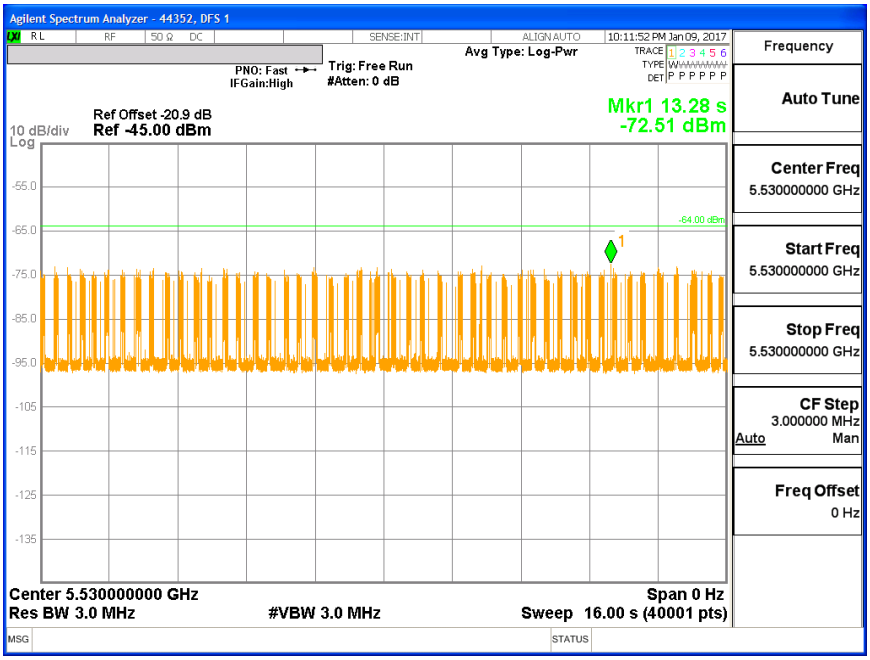
RADAR WAVEFORM

SHORT PULSE RADAR TYPE 0 AT MASTER

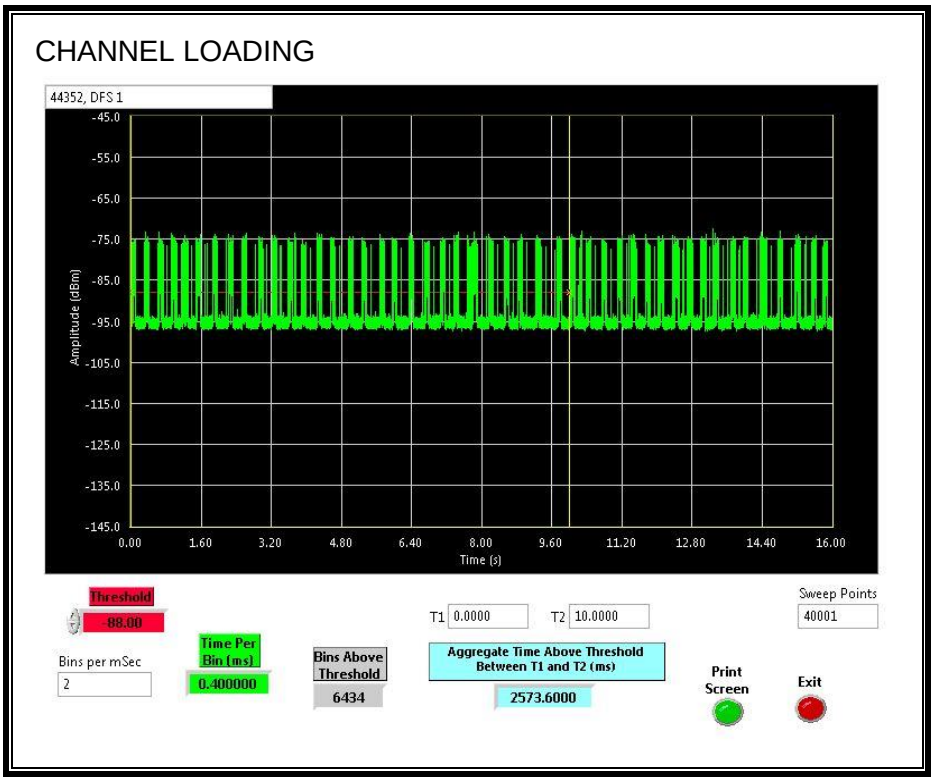


TRAFFIC

SLAVE TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 25.736%

11.4.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

11.4.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

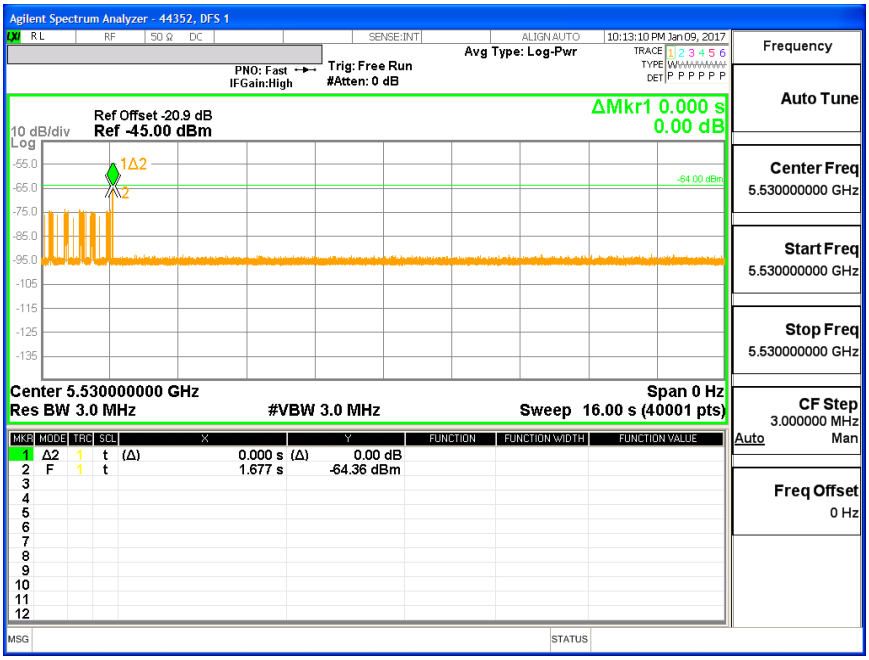
RESULTS

Channel Move Time (sec)	Limit (sec)
0.000	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0.0	60

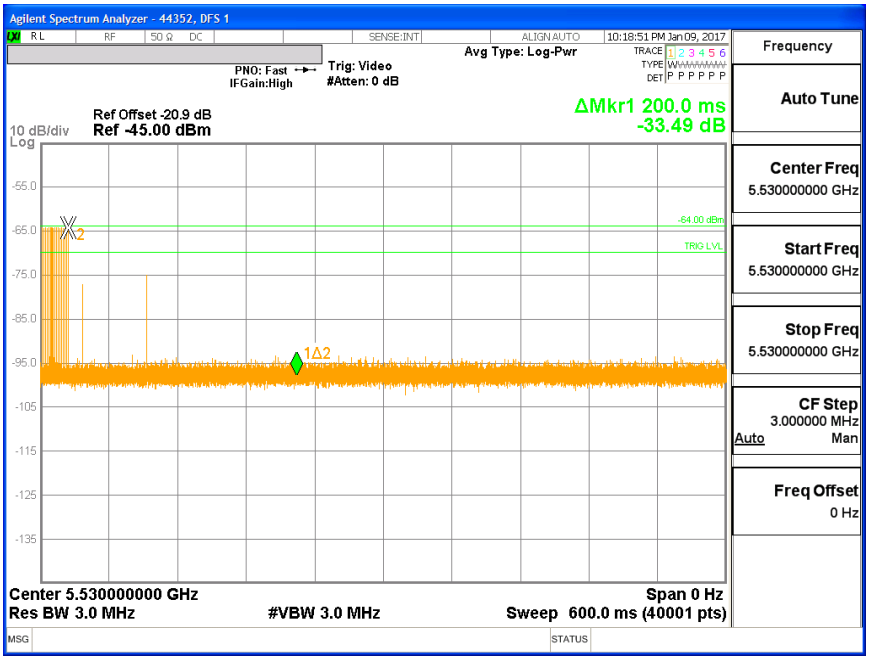
MOVE TIME

MOVE TIME



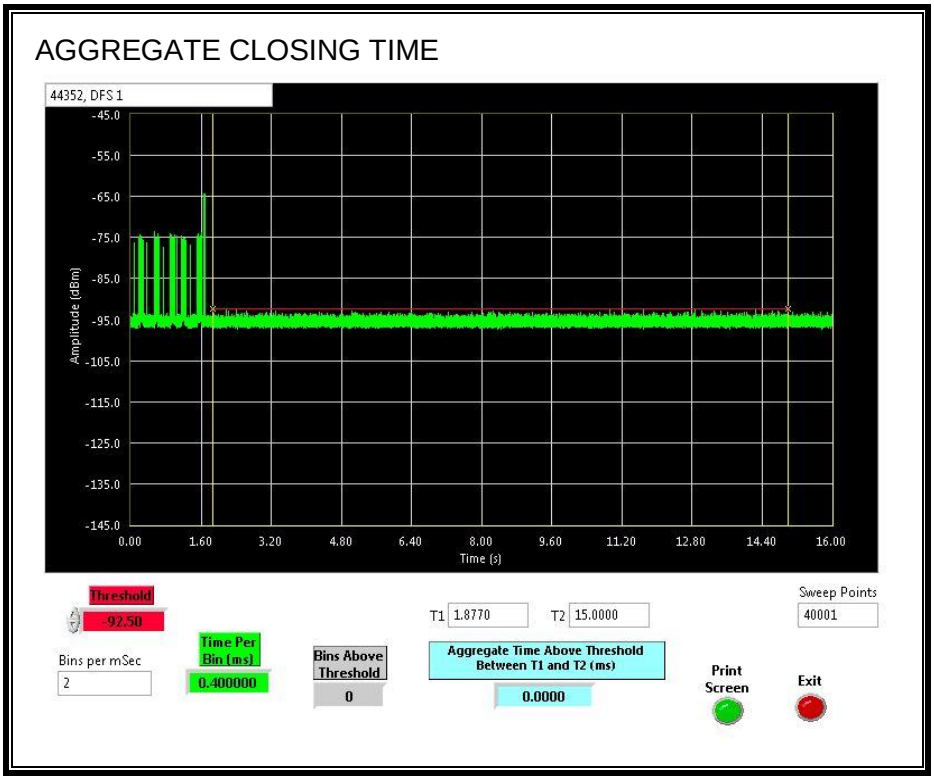
CHANNEL CLOSING TIME

CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

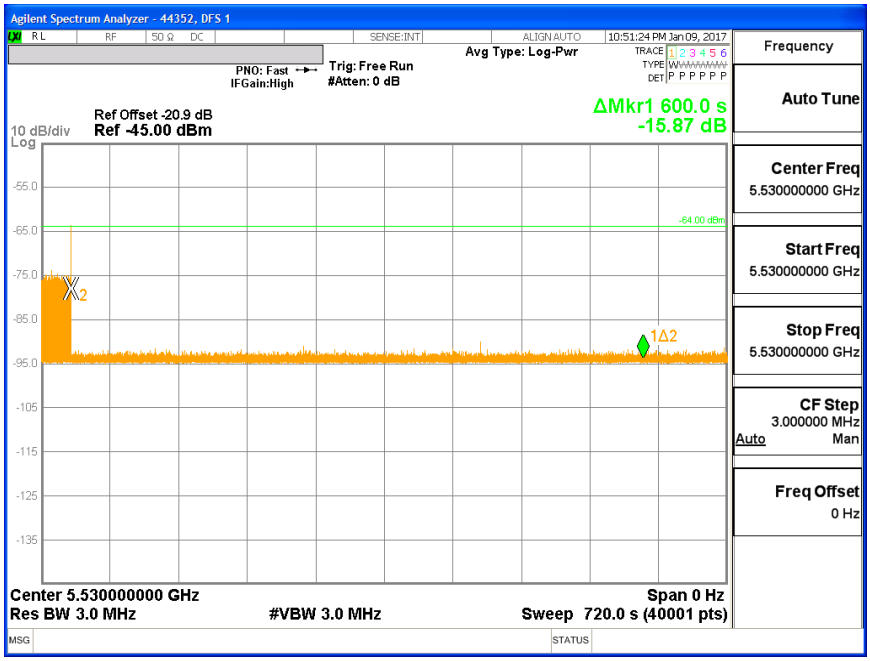


11.4.5. 10-MINUTE CLIENT Tx MONITORING PERIOD

RESULTS

No EUT transmissions were observed on the test channel during the 10-minute observation time.

10-MINUTE CLIENT Tx MONITORING PERIOD



11.5. CLIENT-TO-CLIENT COMMUNICATIONS MODE RESULTS FOR 20 MHz BANDWIDTH

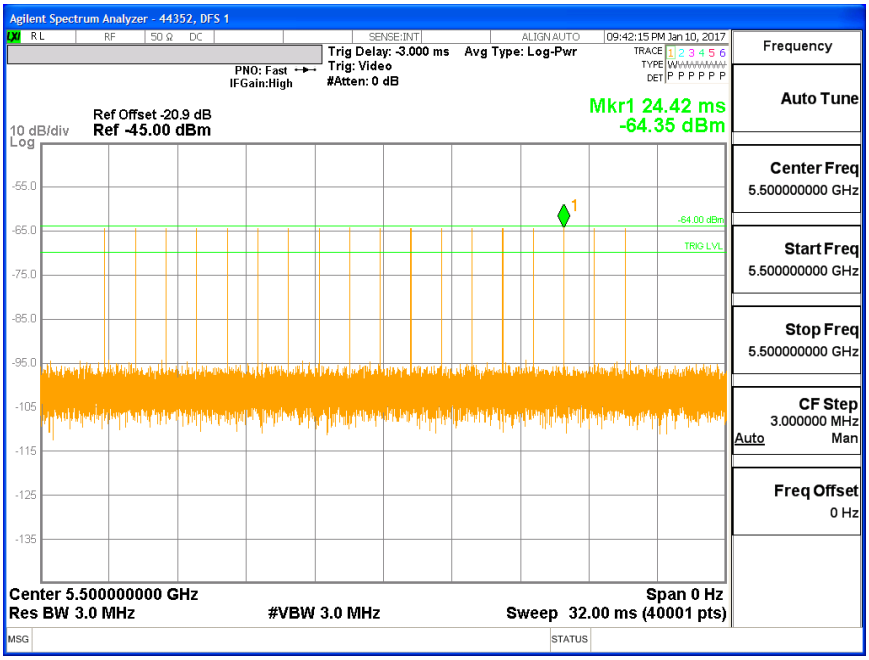
11.5.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5500 MHz.

11.5.2. RADAR WAVEFORM AND TRAFFIC

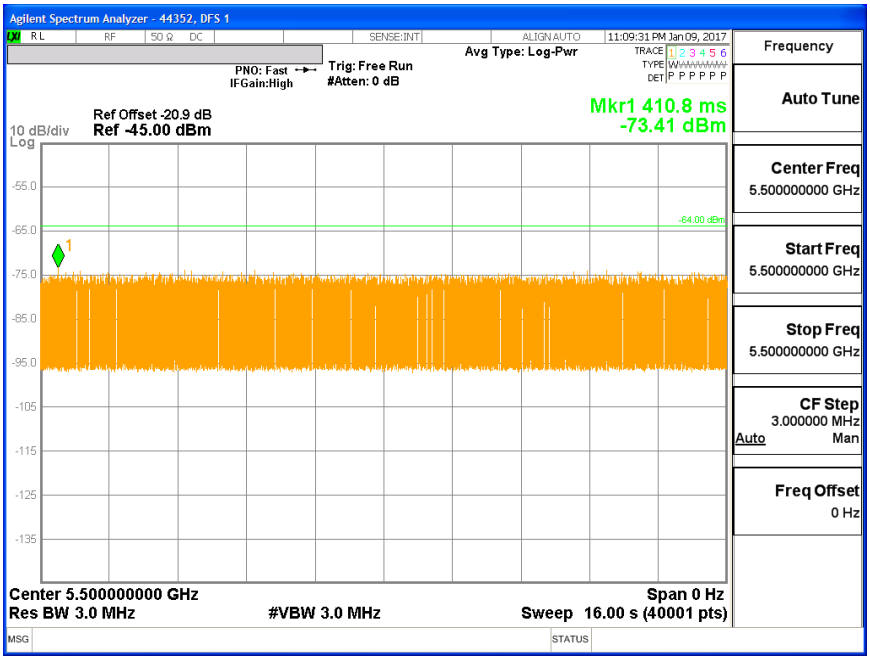
RADAR WAVEFORM

SHORT PULSE RADAR TYPE 0 AT MASTER

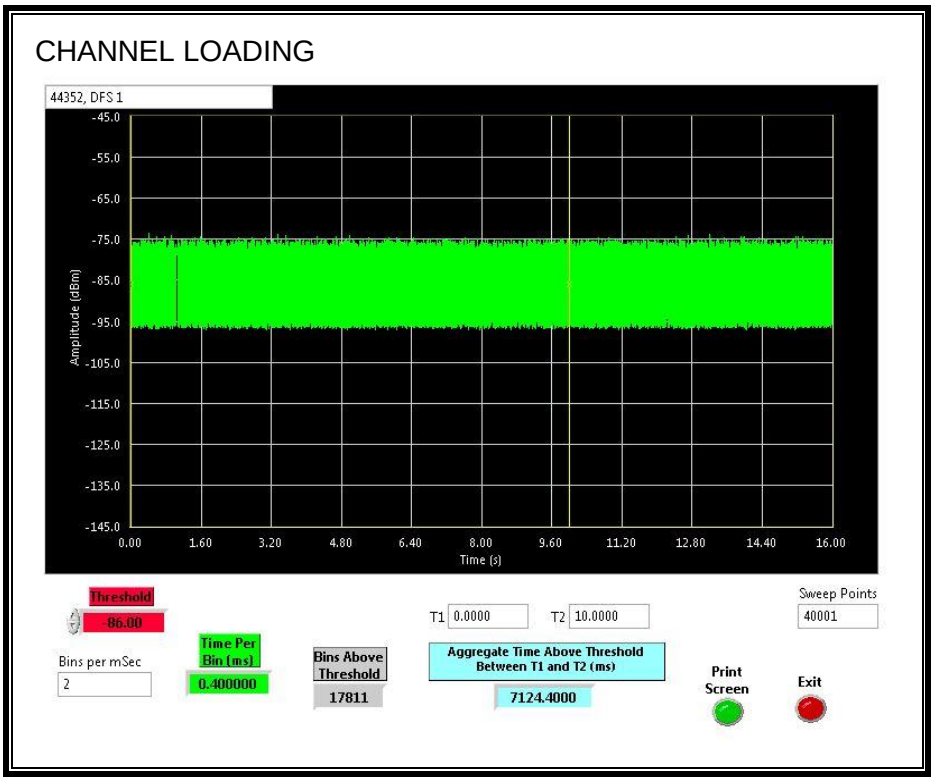


TRAFFIC

SLAVE TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 71.244%

11.5.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

11.5.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

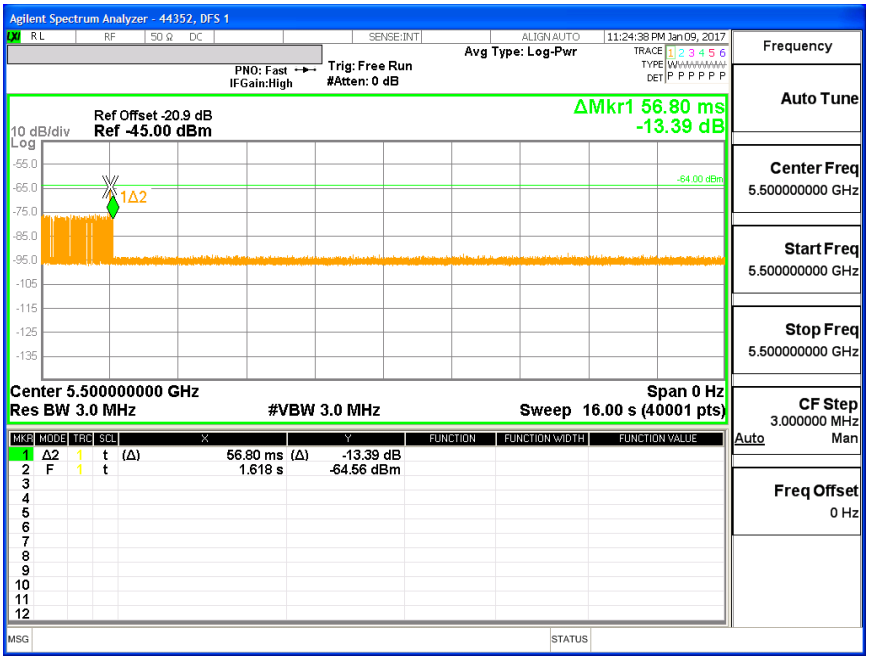
RESULTS

Channel Move Time (sec)	Limit (sec)
0.057	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0.0	60

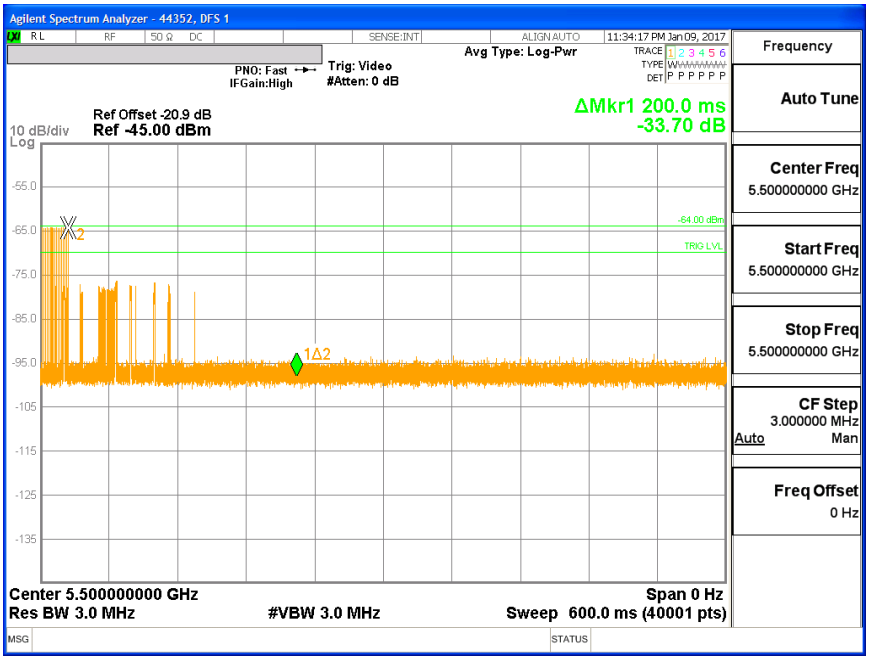
MOVE TIME

MOVE TIME



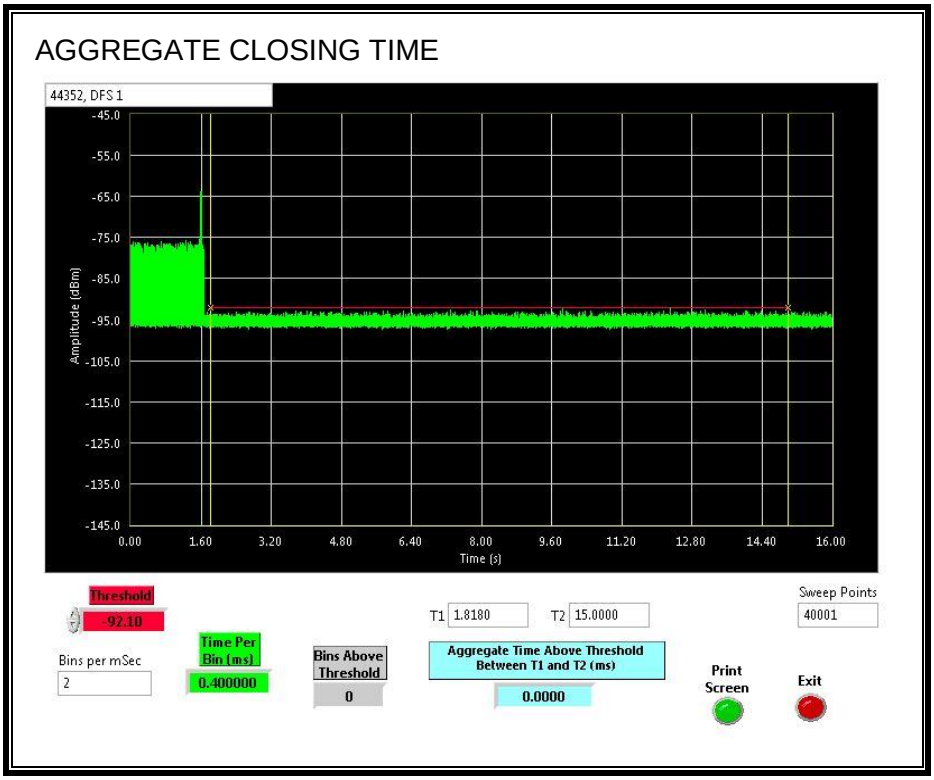
CHANNEL CLOSING TIME

CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.



11.6. CLIENT-TO-CLIENT COMMUNICATIONS MODE RESULTS FOR 40 MHz BANDWIDTH

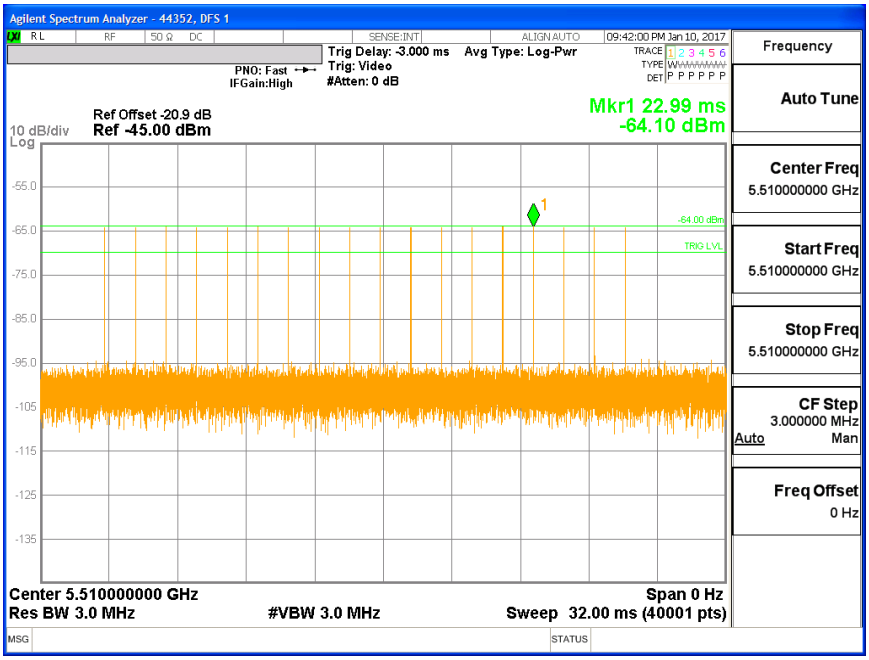
11.6.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5510 MHz.

11.6.2. RADAR WAVEFORM AND TRAFFIC

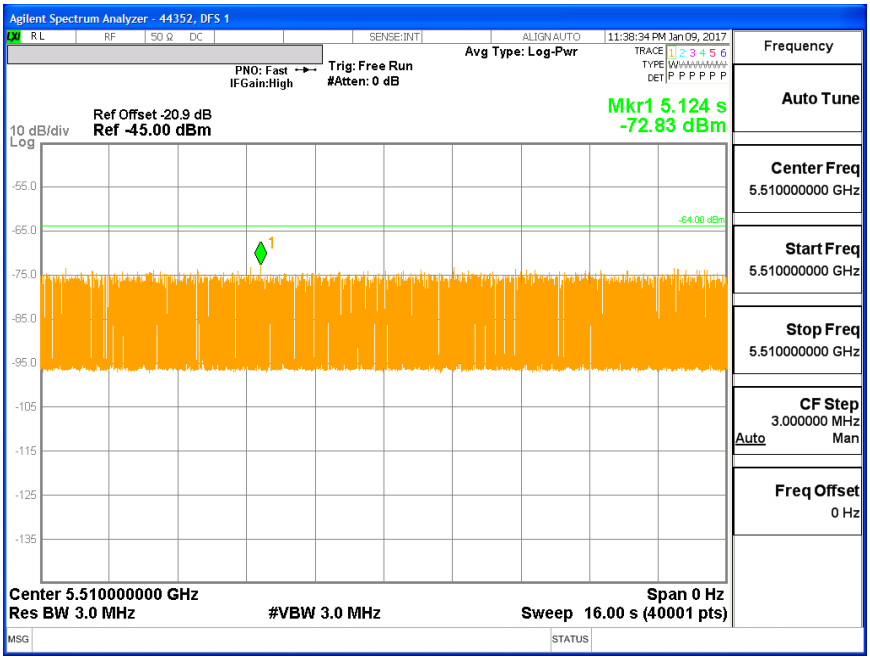
RADAR WAVEFORM

SHORT PULSE RADAR TYPE 0 AT MASTER

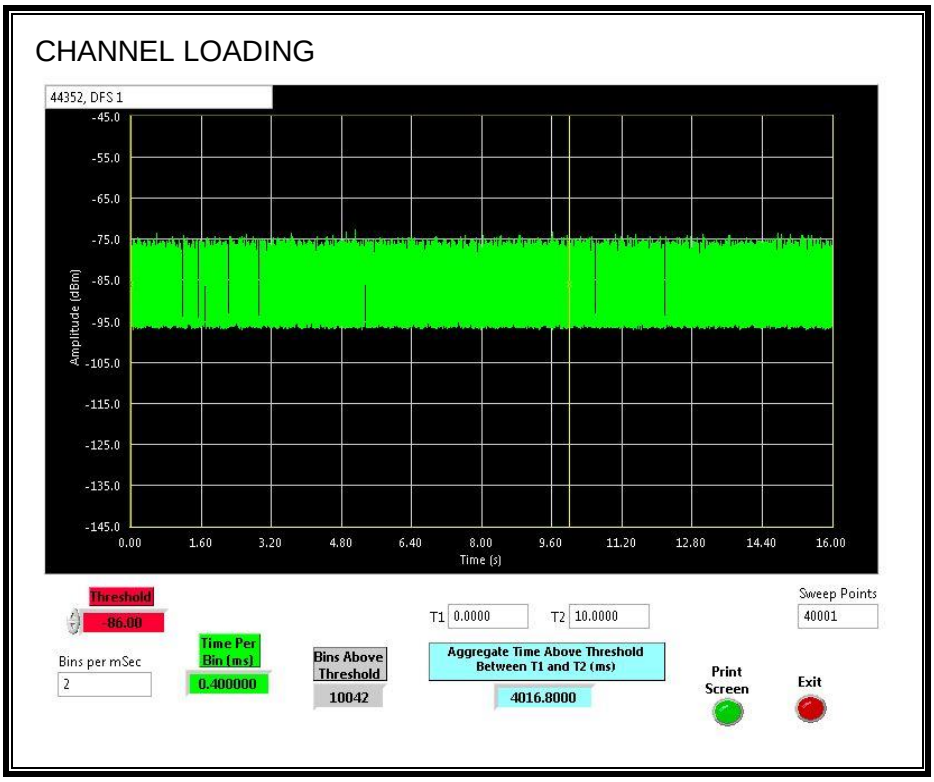


TRAFFIC

SLAVE TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 40.168%

11.6.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

11.6.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

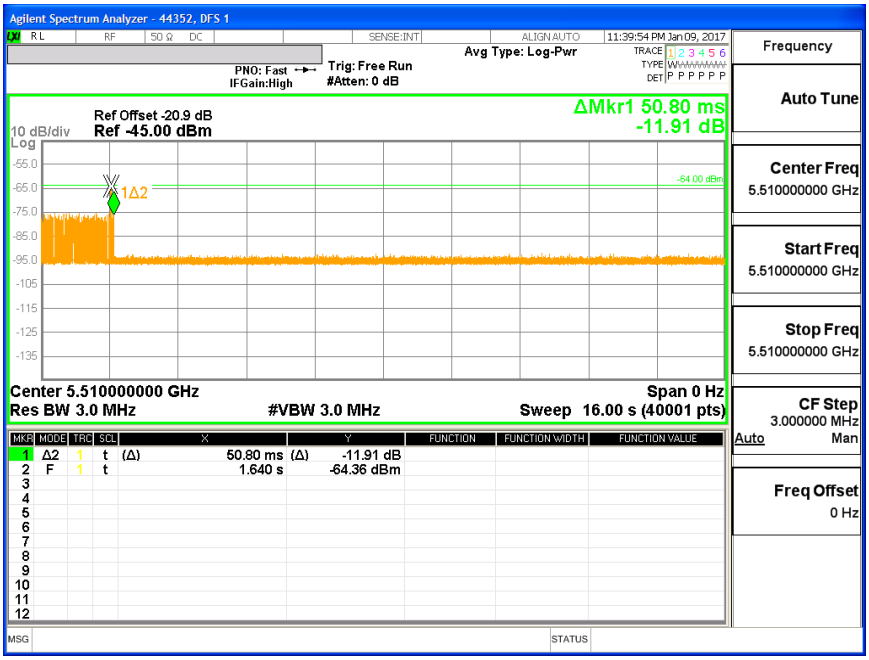
RESULTS

Channel Move Time (sec)	Limit (sec)
0.0508	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0.0	60

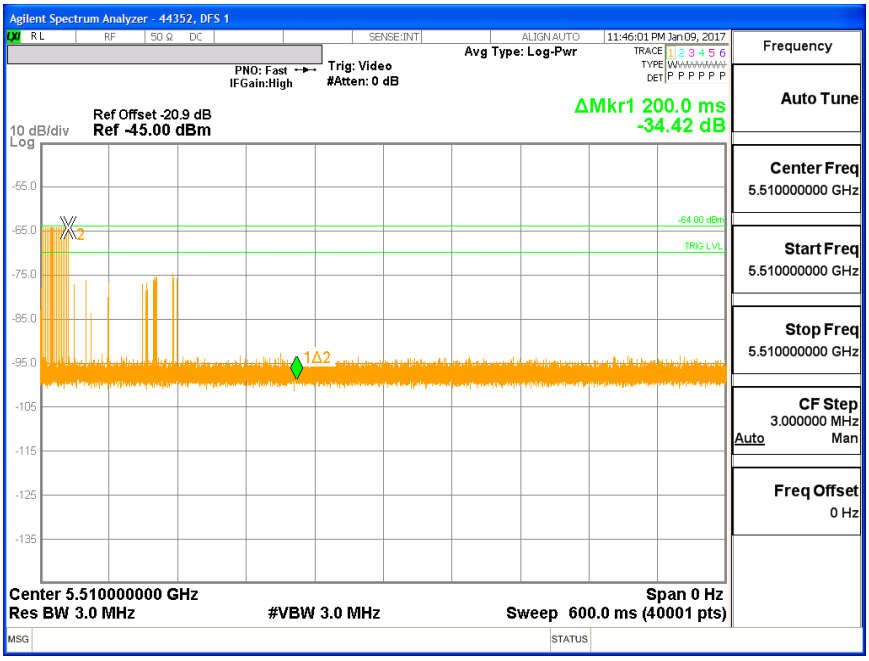
MOVE TIME

MOVE TIME



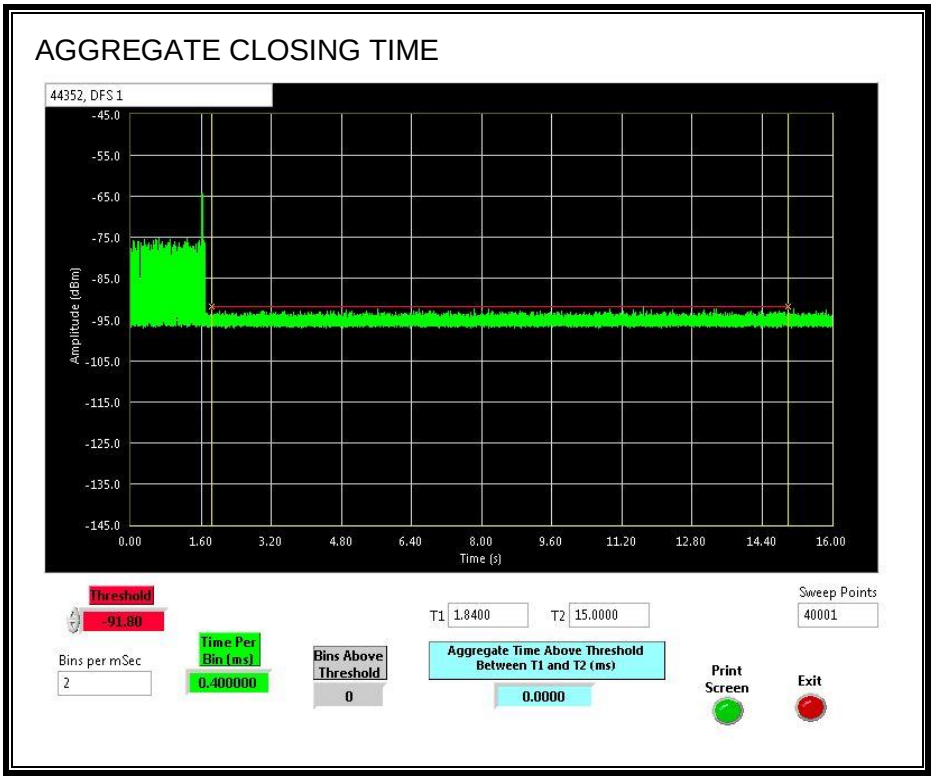
CHANNEL CLOSING TIME

CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.



11.7. CLIENT-TO-CLIENT COMMUNICATIONS MODE RESULTS FOR 80 MHz BANDWIDTH

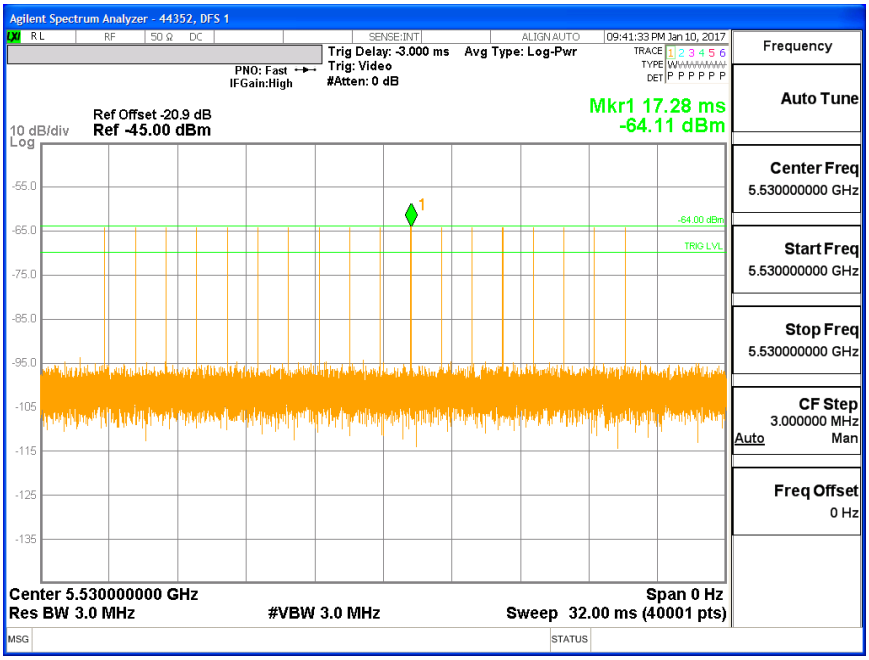
11.7.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5530 MHz.

11.7.2. RADAR WAVEFORM AND TRAFFIC

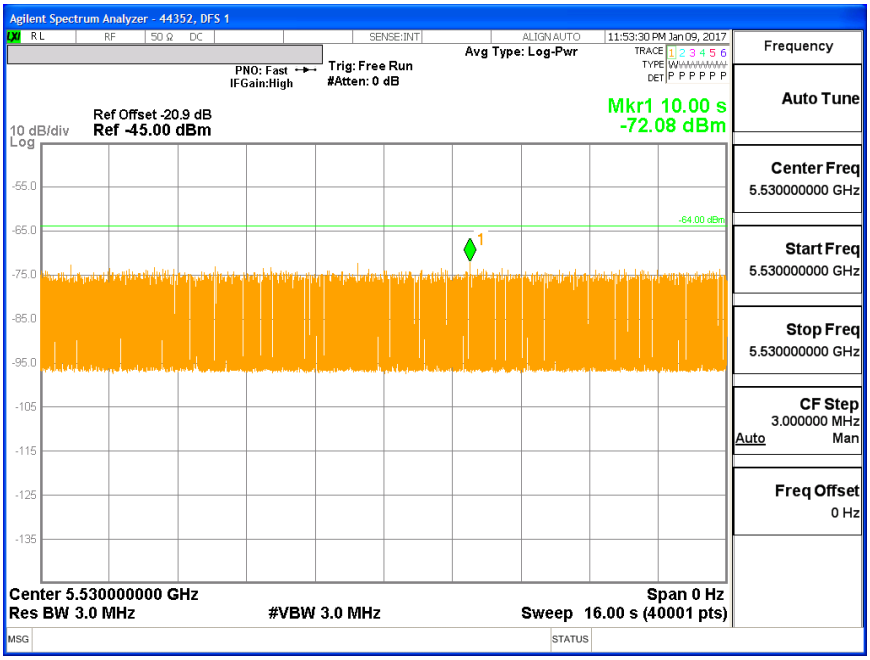
RADAR WAVEFORM

SHORT PULSE RADAR TYPE 0 AT MASTER

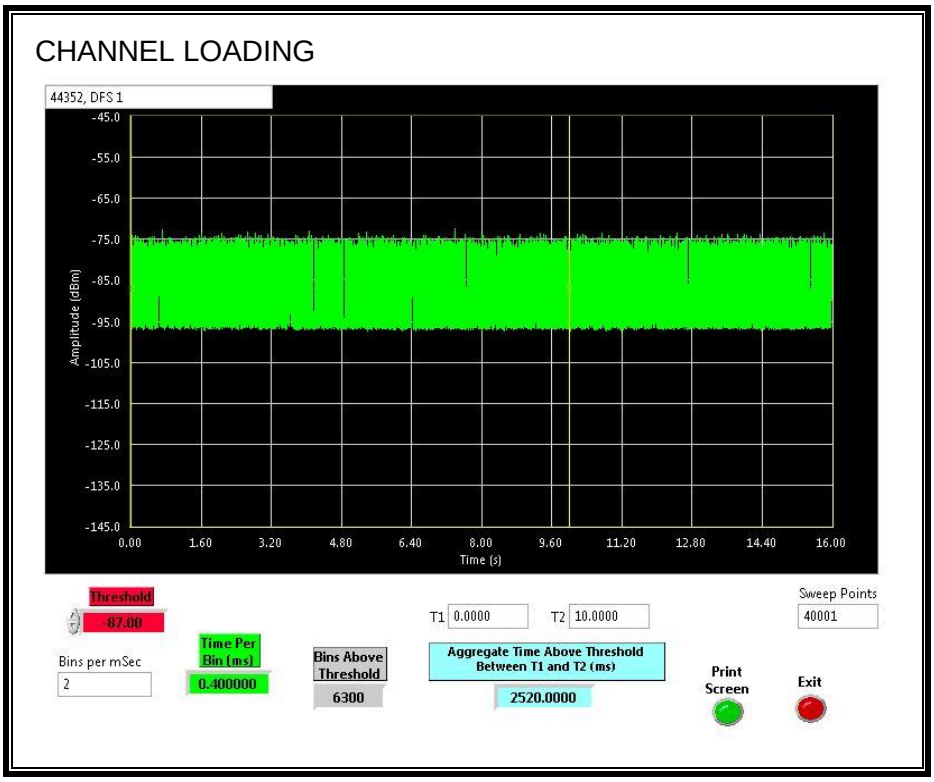


TRAFFIC

SLAVE TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 25.2%

11.7.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

11.7.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

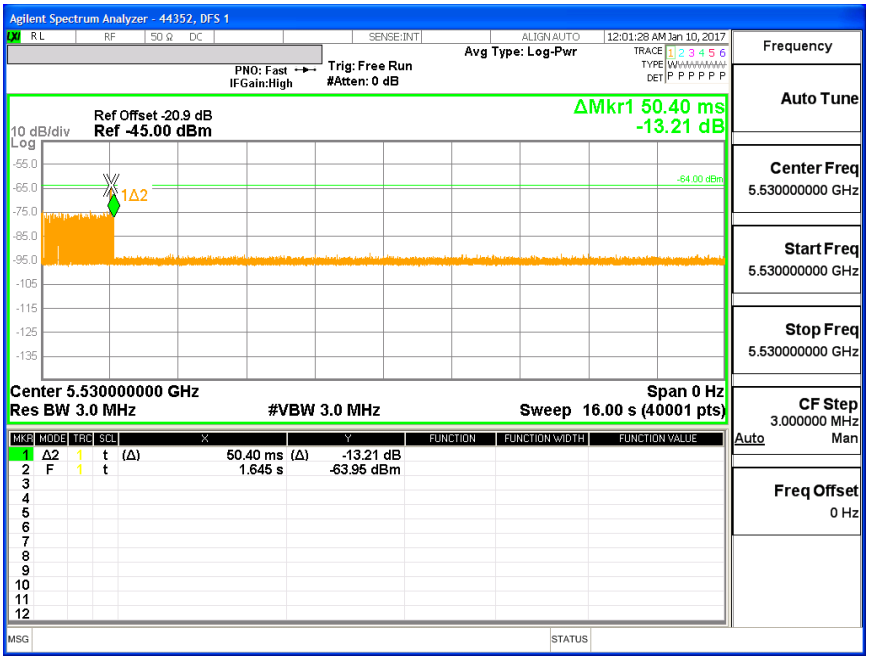
RESULTS

Channel Move Time (sec)	Limit (sec)
0.0504	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0.0	60

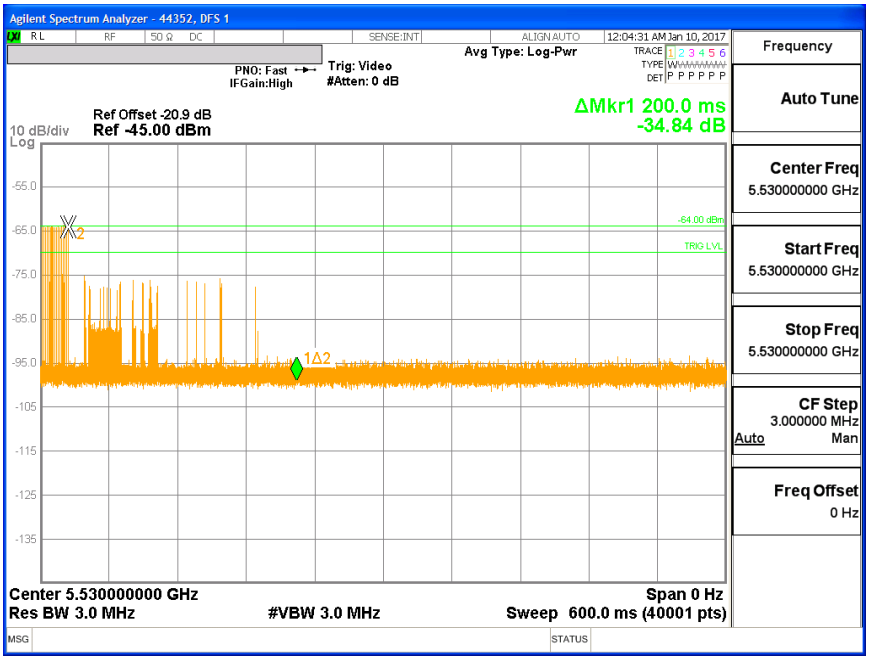
MOVE TIME

MOVE TIME



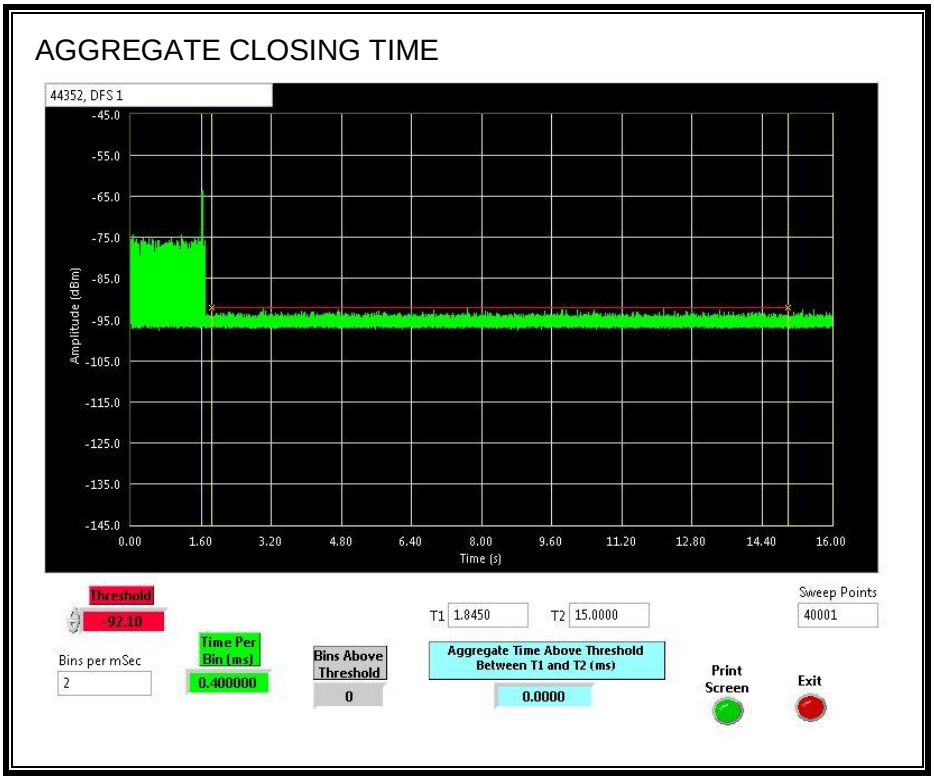
CHANNEL CLOSING TIME

CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the aggregate monitoring period.



11.7.5. 10-MINUTE CLIENT Tx MONITORING PERIOD

RESULTS

No EUT transmissions were observed on the test channel during the 10-minute observation time.

10-MINUTE CLIENT Tx MONITORING PERIOD