DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (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	* 3.667	46.34	PK1	33.3	-30.9	48.74	-	-	74	-25.26	-	-	344	233	H
	* 3.667	42.07	AD1	33.3	-30.9	44.47	54	-9.53	-	-	-	-	344	233	H
2	* 5.042	43.82	PK1	34.1	-28.8	49.12	-	-	74	-24.88	-	-	214	277	H
	* 5.042	35.07	AD1	34.1	-28.8	40.37	54	-13.63	-	-	-	-	214	277	H
4	* 3.667	49.92	PK1	33.3	-30.9	52.32	-	-	74	-21.68	-	-	35	209	V
	* 3.667	46.38	AD1	33.3	-30.9	48.78	54	-5.22	-	-	-	-	35	209	V
5	* 4.583	45.58	PK1	34.1	-30.9	48.78	-	-	74	-25.22	-	-	154	217	V
	* 4.583	39.71	AD1	34.1	-30.9	42.91	54	-11.09	-	-	-	-	154	217	V
6	* 4.812	44.72	PK1	34.1	-30.3	48.52	-	-	74	-25.48	-	-	172	226	V
	* 4.813	38.11	AD1	34.1	-30.3	41.91	54	-12.09	-	-	-	-	172	226	V
7	* 5.041	47.83	PK1	34.1	-28.8	53.13	-	-	74	-20.87	-	-	155	189	V
	* 5.042	41.25	AD1	34.1	-28.8	46.55	54	-7.45	-	-	-	-	155	189	V
3	1.884	42.28	PK1	30.9	-33.4	39.78	-	-	-	-	68.2	-28.42	90	339	V
8	5.273	45.21	PK1	34.3	-21.3	58.21	-	-	-	-	68.2	-9.99	167	183	V
9	5.724	46.95	PK1	34.8	-20.8	60.95	-	-	-	-	68.2	-7.25	120	192	V
10	5.953	46.16	PK1	35.2	-20.8	60.56	-	-	-	-	68.2	-7.64	109	184	V

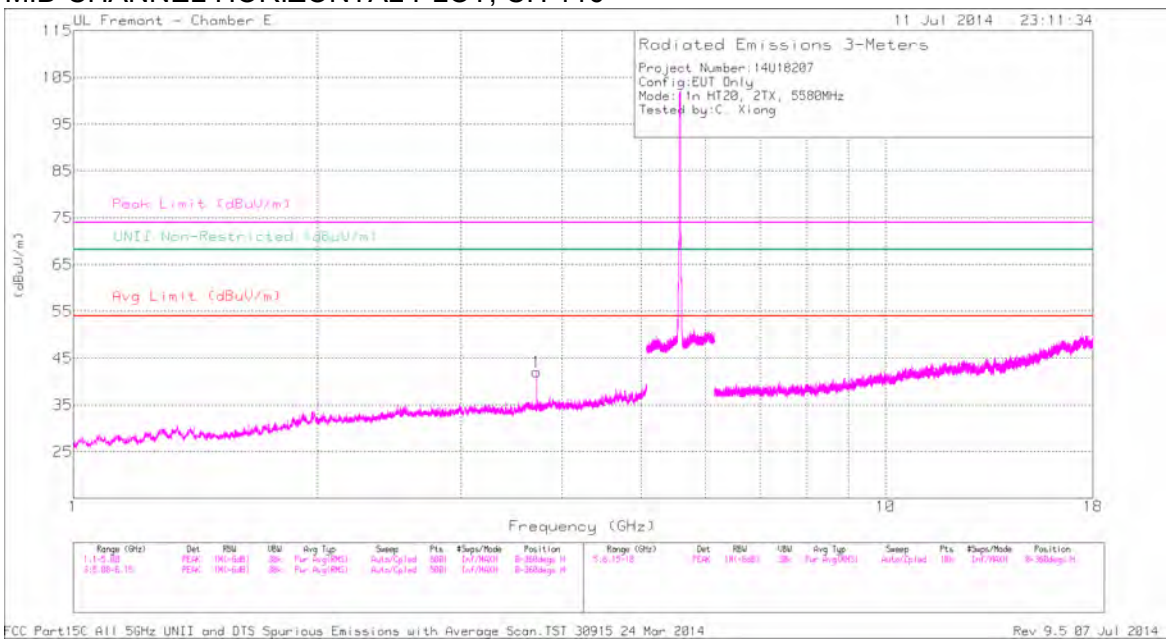
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

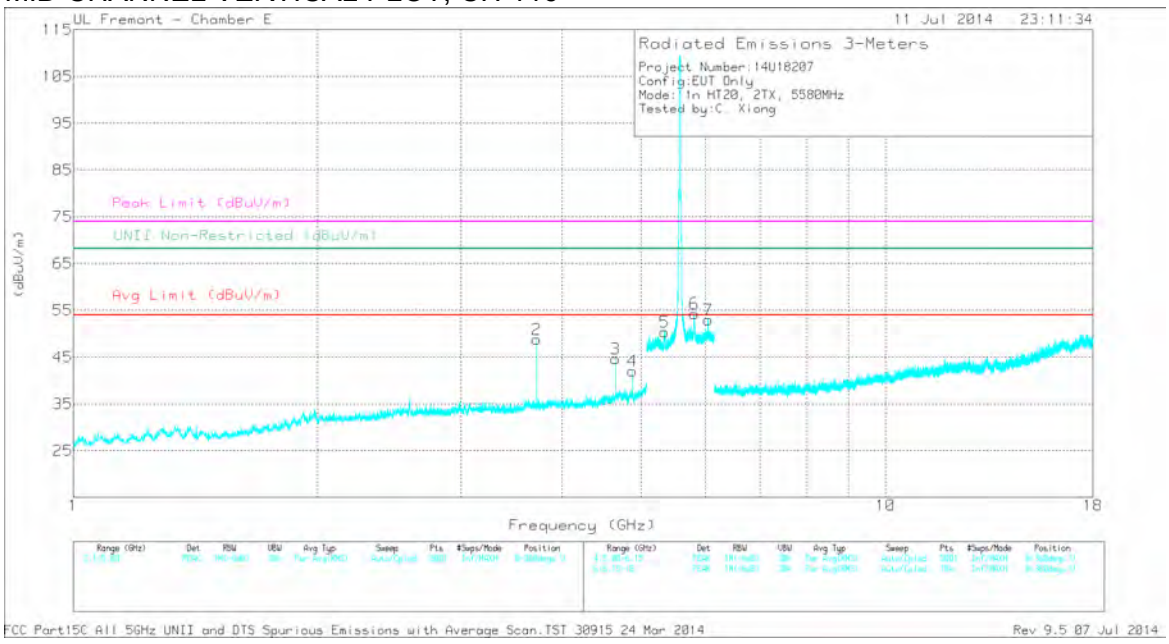
AD1 - KDB789033 Method: AD Primary Power Average

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT, CH 116



MID CHANNEL VERTICAL PLOT, CH 116



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (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	* 3.72	47.05	PK1	33.3	-31.8	48.55	-	-	74	-25.45	-	-	13	350	H
	* 3.72	41.08	AD1	33.3	-31.8	42.58	54	-11.42	-	-	-	-	13	350	H
2	* 3.72	51	PK1	33.3	-31.8	52.5	-	-	74	-21.5	-	-	39	230	V
	* 3.72	47.36	AD1	33.3	-31.8	48.86	54	-5.14	-	-	-	-	39	230	V
3	* 4.65	45.53	PK1	34.1	-29.8	49.83	-	-	74	-24.17	-	-	157	210	V
	* 4.65	40.12	AD1	34.1	-29.8	44.42	54	-9.58	-	-	-	-	157	210	V
4	* 4.883	45.04	PK1	34	-30.2	48.84	-	-	74	-25.16	-	-	167	180	V
	* 4.882	37.53	AD1	34	-30.2	41.33	54	-12.67	-	-	-	-	167	180	V
5	5.346	47.07	PK1	34.4	-21.4	60.07	-	-	-	-	68.2	-8.13	177	189	V
6	5.81	48.21	PK1	34.9	-20.3	62.81	-	-	-	-	68.2	-5.39	113	191	V
7	6.042	46.49	PK1	35.3	-20.5	61.29	-	-	-	-	68.2	-6.91	116	174	V

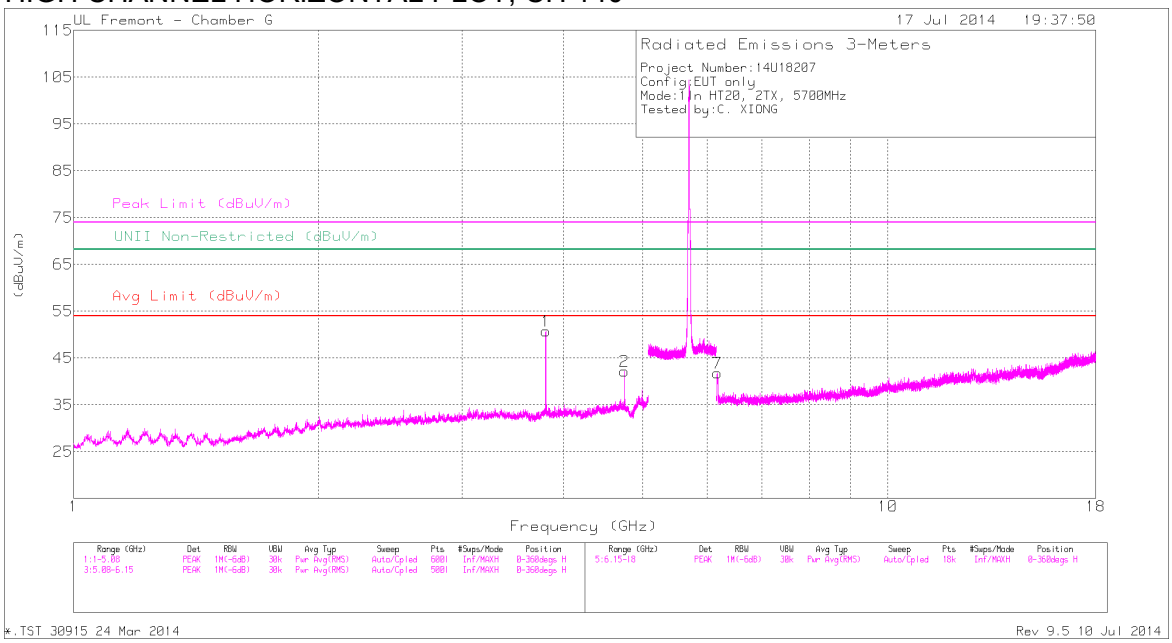
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

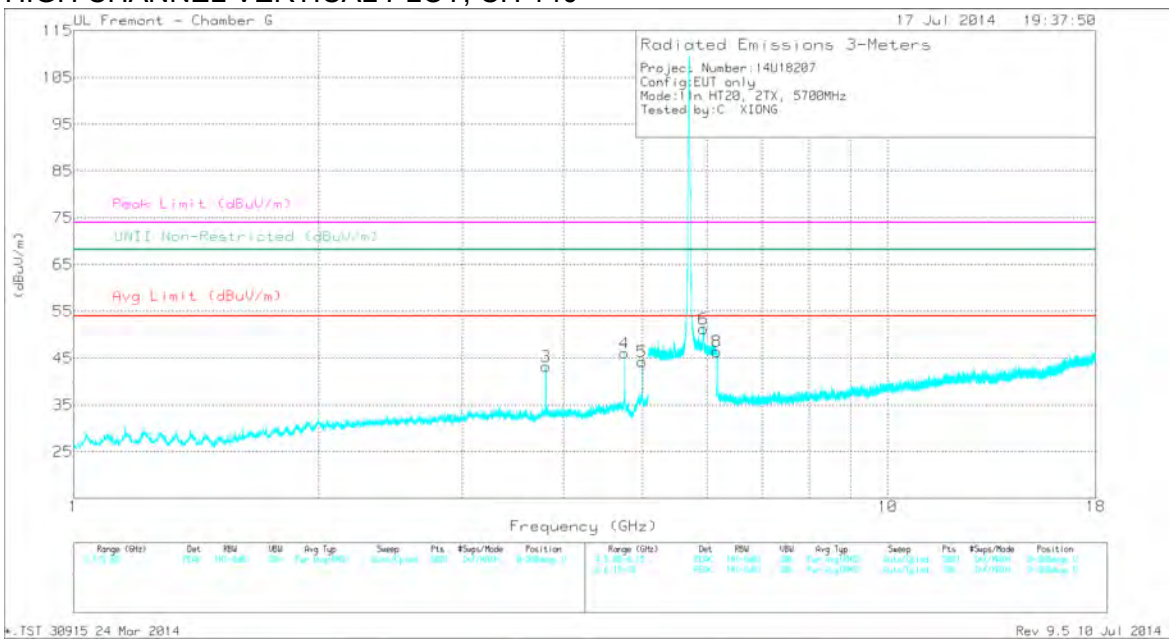
AD1 - KDB789033 Method: AD Primary Power Average

HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT, CH 140



HIGH CHANNEL VERTICAL PLOT, CH 140



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	* 3.8	53.95	PK1	33	-33.4	53.55	-	-	74	-20.45	-	-	5	200	H
	* 3.8	50.52	AD1	33	-33.4	50.12	54	-3.88	-	-	-	-	5	200	H
2	* 4.75	46.73	PK1	34.1	-32.8	48.03	-	-	74	-25.97	-	-	24	129	H
	* 4.75	40.7	AD1	34.1	-32.8	42	54	-12	-	-	-	-	24	129	H
3	* 3.8	50.43	PK1	33	-33.4	50.03	-	-	74	-23.97	-	-	9	308	V
	* 3.8	46.11	AD1	33	-33.4	45.71	54	-8.29	-	-	-	-	9	308	V
4	* 4.75	49.88	PK1	34.1	-32.8	51.18	-	-	74	-22.82	-	-	41	123	V
	* 4.75	45.14	AD1	34.1	-32.8	46.44	54	-7.56	-	-	-	-	41	123	V
5	* 4.987	47.91	PK1	34.1	-31.9	50.11	-	-	74	-23.89	-	-	48	191	V
	* 4.987	41.07	AD1	34.1	-31.9	43.27	54	-10.73	-	-	-	-	48	191	V
6	5.93	48.09	PK1	35.1	-23.6	59.59	-	-	-	-	68.2	-8.61	26	111	V
7	6.17	51.32	PK1	35.5	-32.3	54.52	-	-	-	-	68.2	-13.68	330	349	H
8	6.17	49.72	PK1	35.4	-29.4	55.72	-	-	-	-	68.2	-12.48	113	160	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

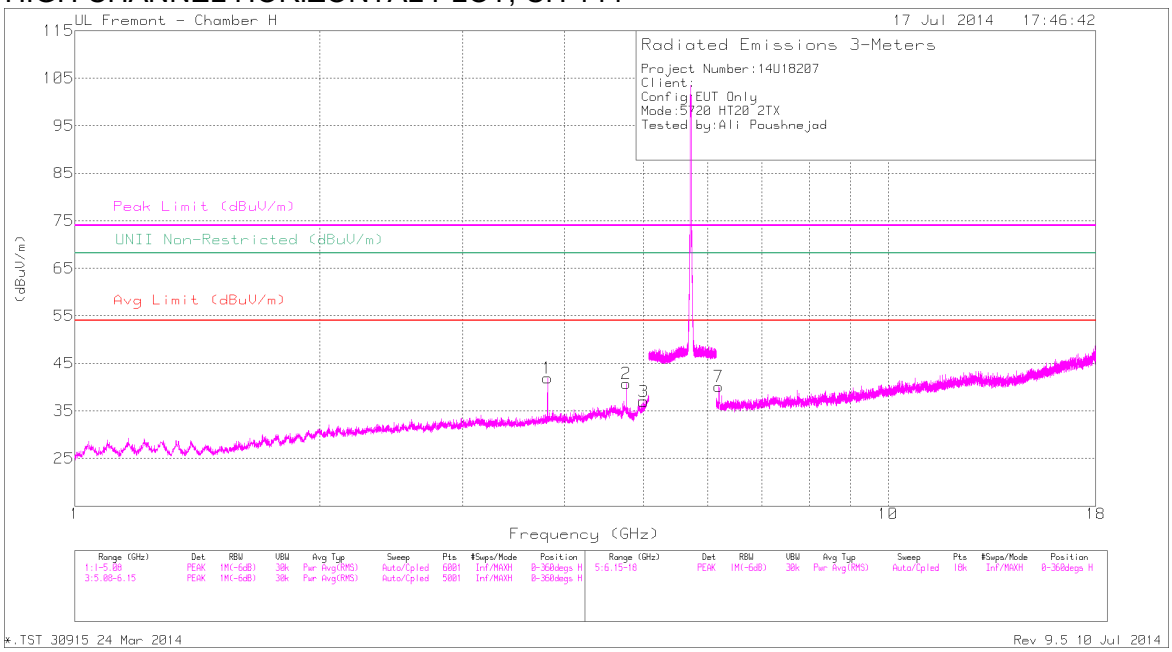
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

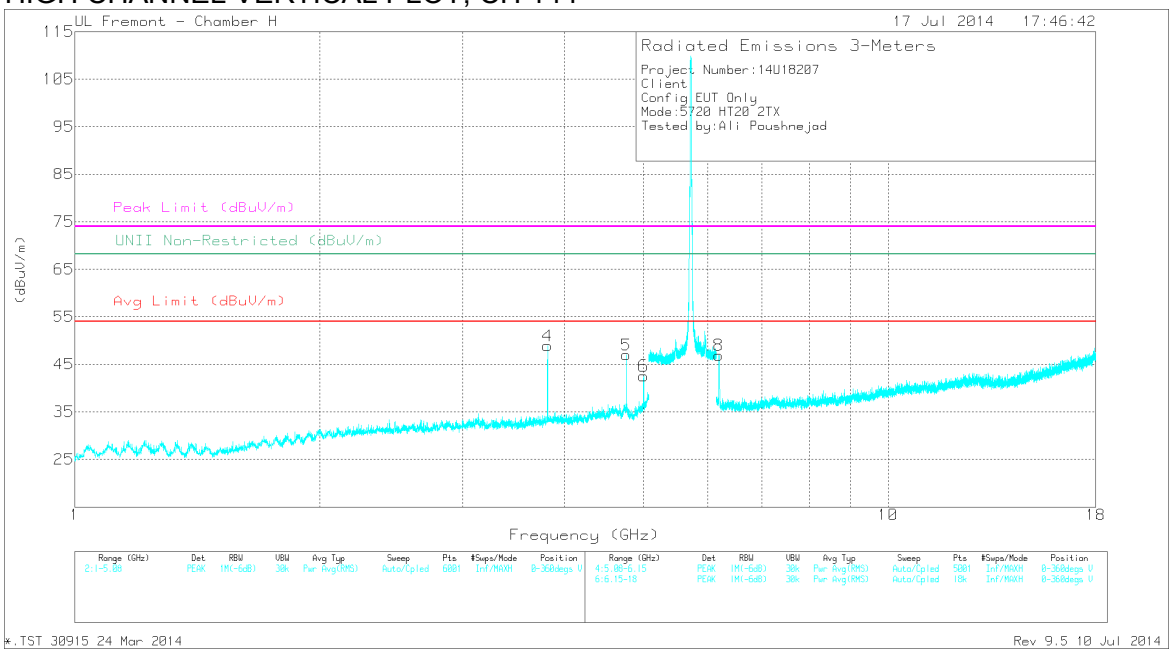
10.2.15. TX ABOVE 1 GHz 802.11n HT20 MODE, CHANNEL 144, 5.6 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT, CH 144



HIGH CHANNEL VERTICAL PLOT, CH 144



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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	* 3.813	45.78	PK1	33.3	-32.7	46.38	-	-	74	-27.62	-	-	159	212	H
	* 3.813	40.03	AD1	33.3	-32.7	40.63	54	-13.37	-	-	-	-	159	212	H
2	* 4.766	44.24	PK1	34.3	-31.8	46.74	-	-	74	-27.26	-	-	297	251	H
	* 4.767	36.24	AD1	34.3	-31.8	38.74	54	-15.26	-	-	-	-	297	251	H
3	* 5.005	42.55	PK1	34.3	-31.4	45.45	-	-	74	-28.55	-	-	347	271	H
	* 5.005	33.05	AD1	34.3	-31.4	35.95	54	-18.05	-	-	-	-	347	271	H
4	* 3.813	52.29	PK1	33.3	-32.7	52.89	-	-	74	-21.11	-	-	176	222	V
	* 3.813	48.98	AD1	33.3	-32.7	49.58	54	-4.42	-	-	-	-	176	222	V
5	* 4.767	49.69	PK1	34.3	-31.8	52.19	-	-	74	-21.81	-	-	292	188	V
	* 4.767	45.47	AD1	34.3	-31.8	47.97	54	-6.03	-	-	-	-	292	188	V
6	* 5.005	46.05	PK1	34.3	-31.4	48.95	-	-	74	-25.05	-	-	300	178	V
	* 5.005	39.05	AD1	34.3	-31.4	41.95	54	-12.05	-	-	-	-	300	178	V
8	6.19	51.62	PK1	35.4	-30.4	56.62	-	-	-	-	68.2	-11.58	245	179	V
7	6.194	45.93	PK1	35.4	-30.4	50.93	-	-	-	-	68.2	-17.27	219	312	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

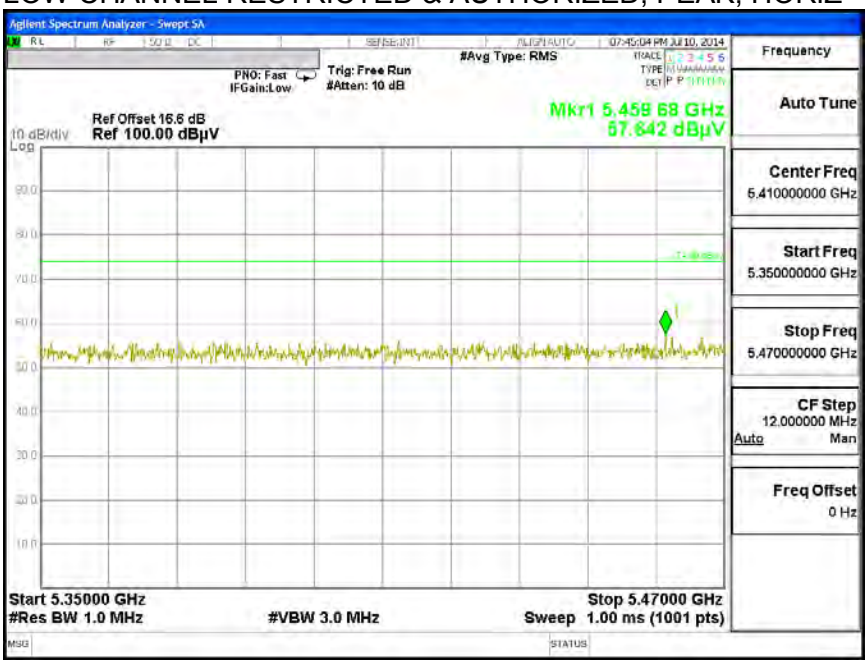
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

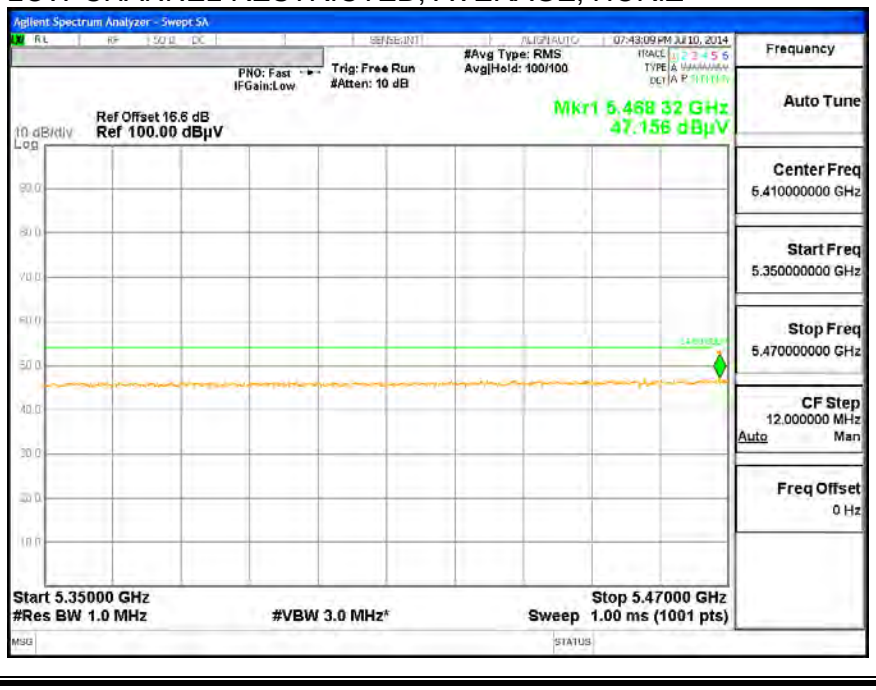
10.2.16. TX ABOVE 1 GHz 802.11n HT40 1TX MODE IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

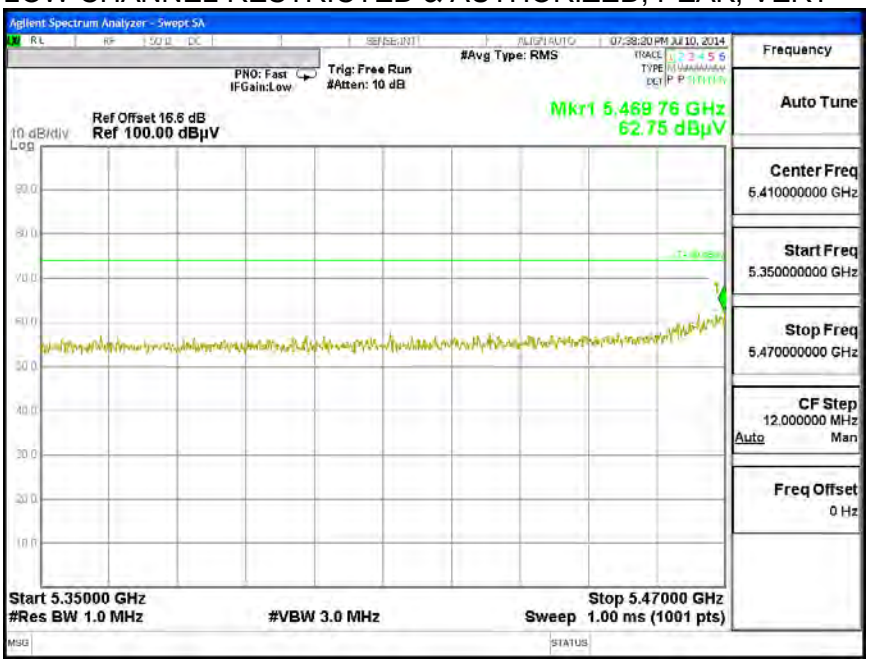
LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, HORIZ



LOW CHANNEL RESTRICTED, AVERAGE, HORIZ



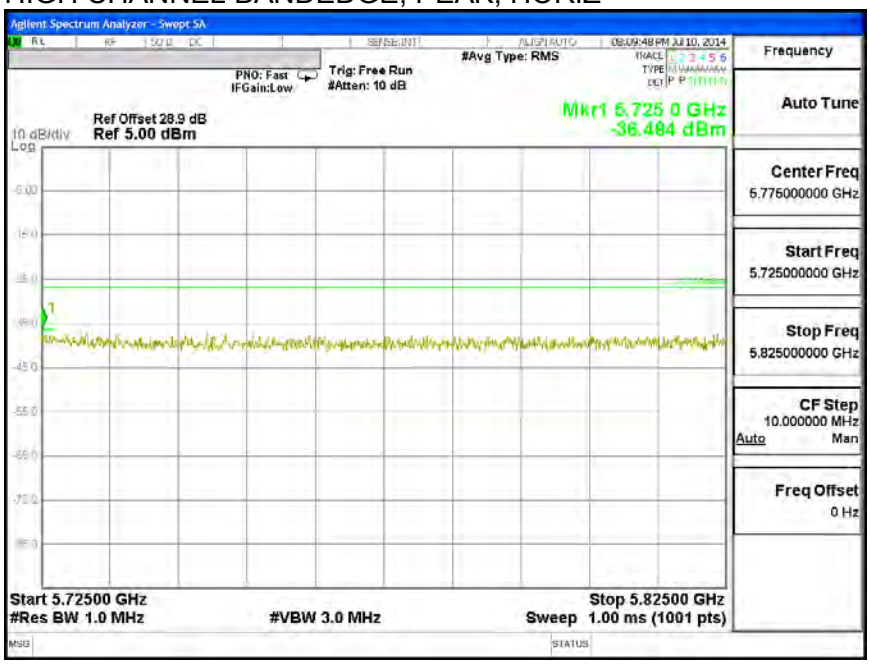
LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT



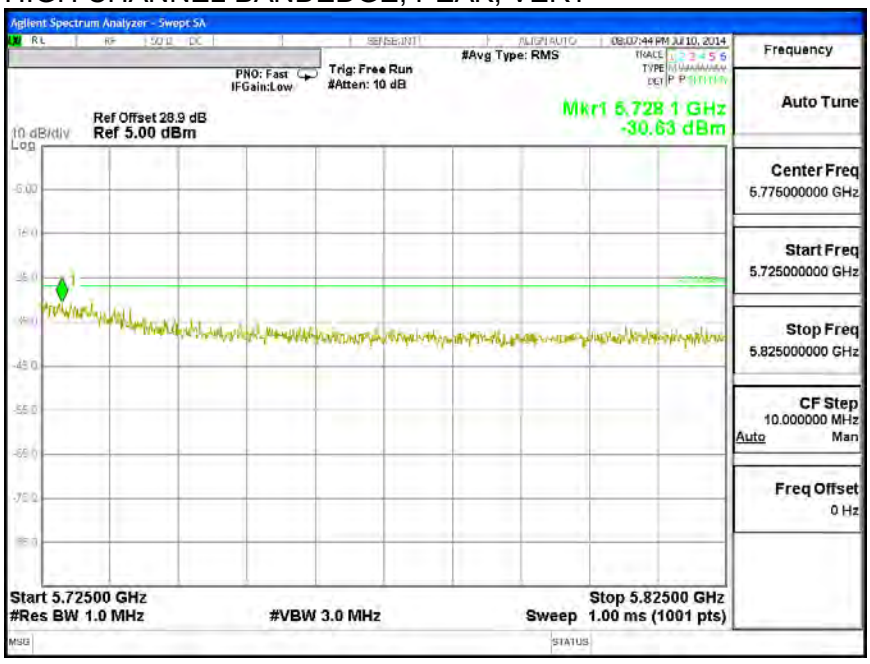
LOW CHANNEL RESTRICTED, AVERAGE, VERT

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

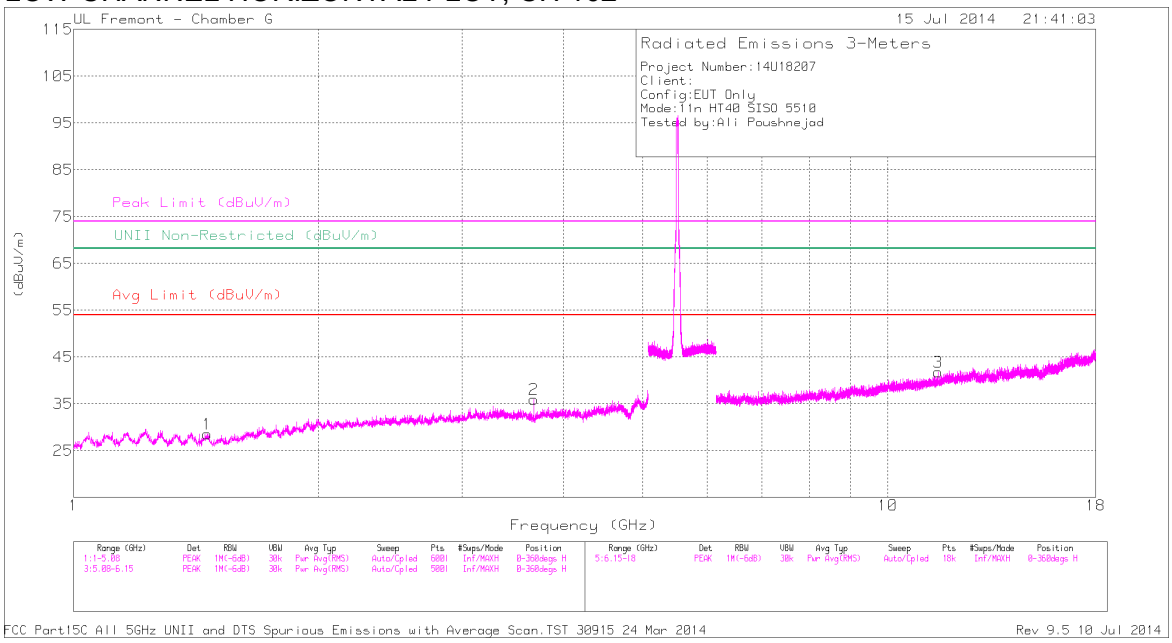


HIGH CHANNEL BANDEDGE, PEAK, VERT

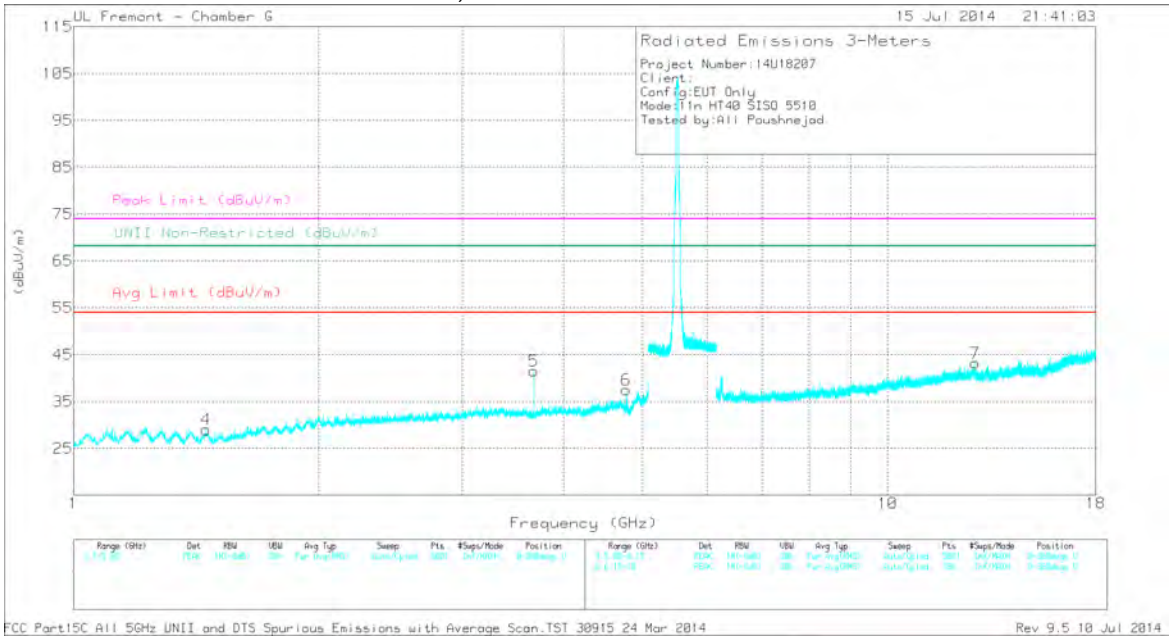


HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT, CH 102



LOW CHANNEL VERTICAL PLOT, CH 102



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	* 1.459	43.68	PK1	28.1	-34.9	36.88	-	-	74	-37.12	-	-	147	354	H
	* 1.458	31.76	AD1	28.1	-34.9	24.96	54	-29.04	-	-	-	-	147	354	H
2	* 3.674	43.39	PK1	32.9	-33.6	42.69	-	-	74	-31.31	-	-	321	201	H
	* 3.673	35.47	AD1	32.9	-33.6	34.77	54	-19.23	-	-	-	-	321	201	H
4	* 1.456	44.56	PK1	28.1	-34.9	37.76	-	-	74	-36.24	-	-	312	210	V
	* 1.453	31.84	AD1	28.1	-34.9	25.04	54	-28.96	-	-	-	-	312	210	V
5	* 3.673	46.4	PK1	32.9	-33.6	45.7	-	-	74	-28.3	-	-	58	269	V
	* 3.673	40.68	AD1	32.9	-33.6	39.98	54	-14.02	-	-	-	-	58	269	V
6	* 4.775	43.52	PK1	34.1	-32.8	44.82	-	-	74	-29.18	-	-	119	189	V
	* 4.775	34.91	AD1	34.1	-32.8	36.21	54	-17.79	-	-	-	-	119	189	V
3	* 11.525	36.82	PK1	38.3	-26.6	48.52	-	-	74	-25.48	-	-	120	394	H
	* 11.523	25.26	AD1	38.3	-26.6	36.96	54	-17.04	-	-	-	-	120	394	H
7	12.809	30.28	PK1	39.1	-26.1	43.28	-	-	-	-	68.2	-24.92	0-360	101	V

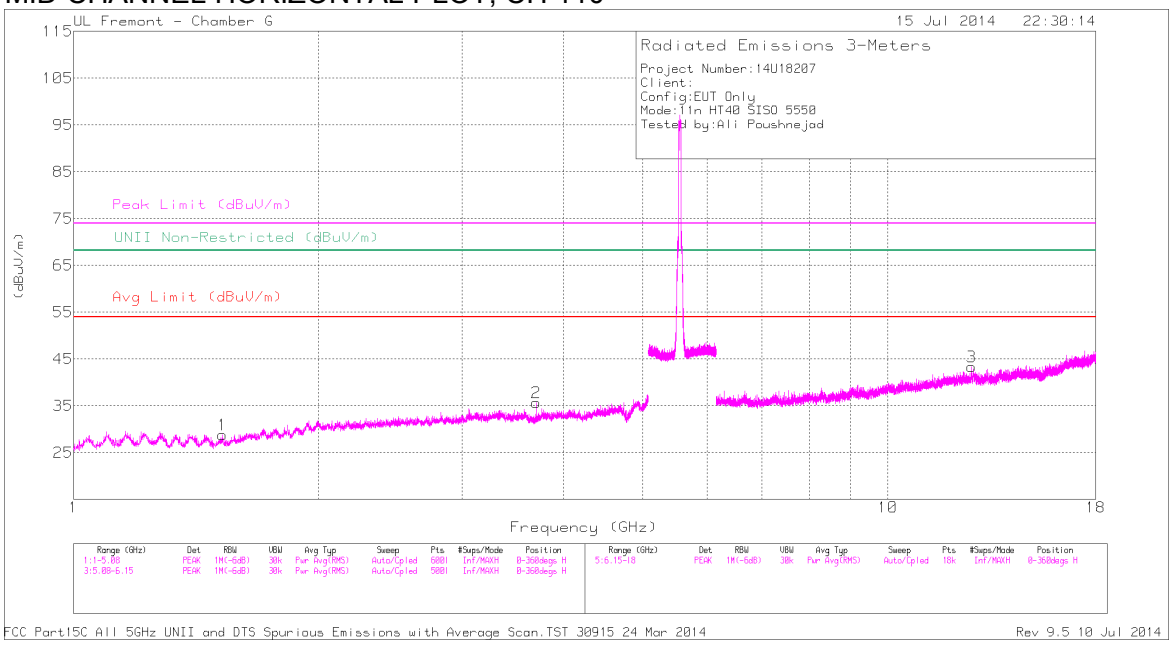
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

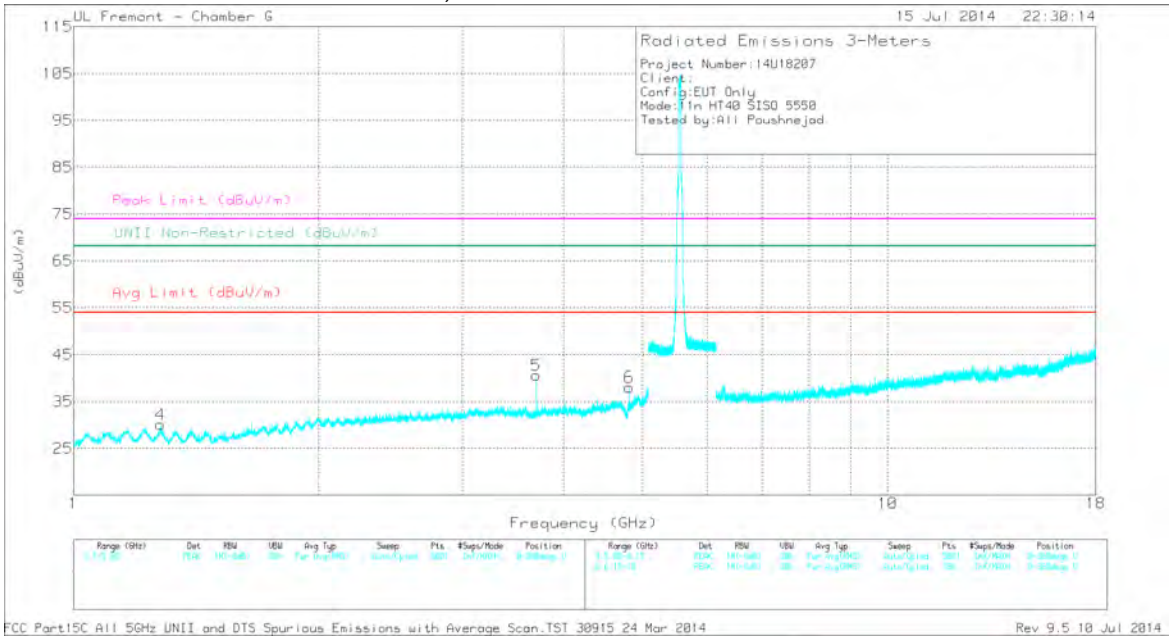
AD1 - KDB789033 Method: AD Primary Power Average

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT, CH 110



MID CHANNEL VERTICAL PLOT, CH 110



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	* 1.525	43.41	PK1	28.1	-35.5	36.01	-	-	74	-37.99	-	-	128	120	H
	* 1.522	31.68	AD1	28.1	-35.5	24.28	54	-29.72	-	-	-	-	128	120	H
2	* 3.7	43.49	PK1	32.9	-33.3	43.09	-	-	74	-30.91	-	-	182	240	H
	* 3.7	35.67	AD1	32.9	-33.3	35.27	54	-18.73	-	-	-	-	182	240	H
4	* 1.276	44.29	PK1	29.1	-35.8	37.59	-	-	74	-36.41	-	-	156	185	V
	* 1.277	32.3	AD1	29.1	-35.9	25.5	54	-28.5	-	-	-	-	156	185	V
5	* 3.7	46.49	PK1	32.9	-33.3	46.09	-	-	74	-27.91	-	-	56	175	V
	* 3.7	40.64	AD1	32.9	-33.3	40.24	54	-13.76	-	-	-	-	56	175	V
6	* 4.81	42.81	PK1	34.1	-32.8	44.11	-	-	74	-29.89	-	-	136	208	V
	* 4.81	34.2	AD1	34.1	-32.8	35.5	54	-18.5	-	-	-	-	136	208	V
3	* 12.671	36.57	PK1	39.1	-26	49.67	-	-	74	-24.33	-	-	250	202	H
	* 12.671	25.36	AD1	39.1	-26	38.46	54	-15.54	-	-	-	-	250	202	H

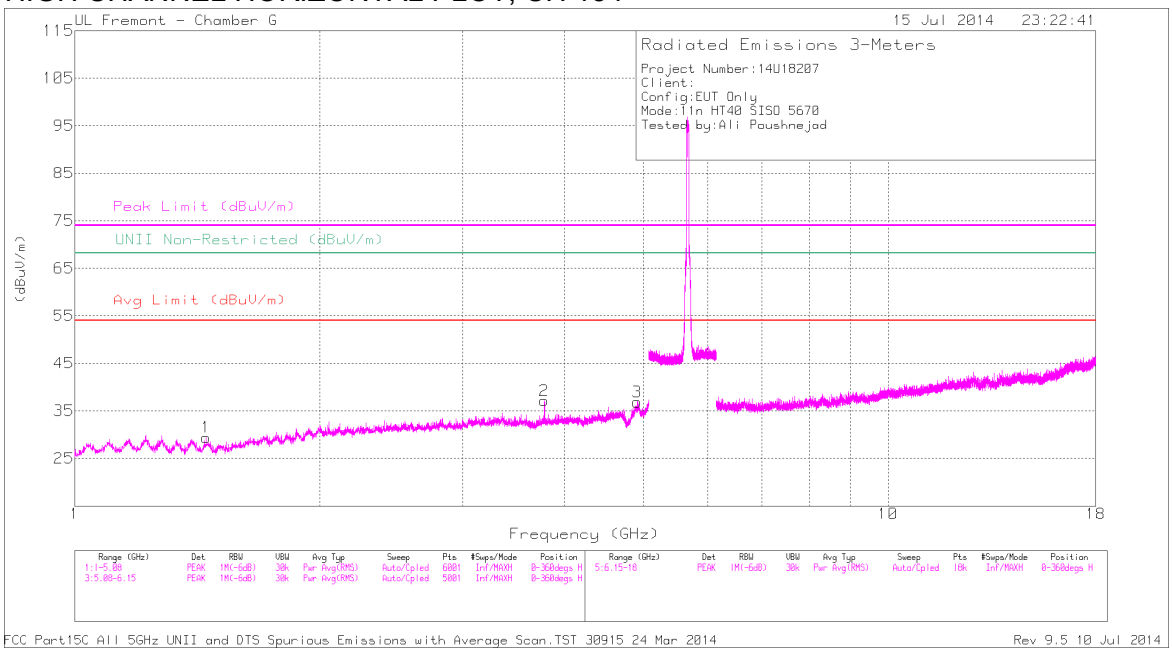
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

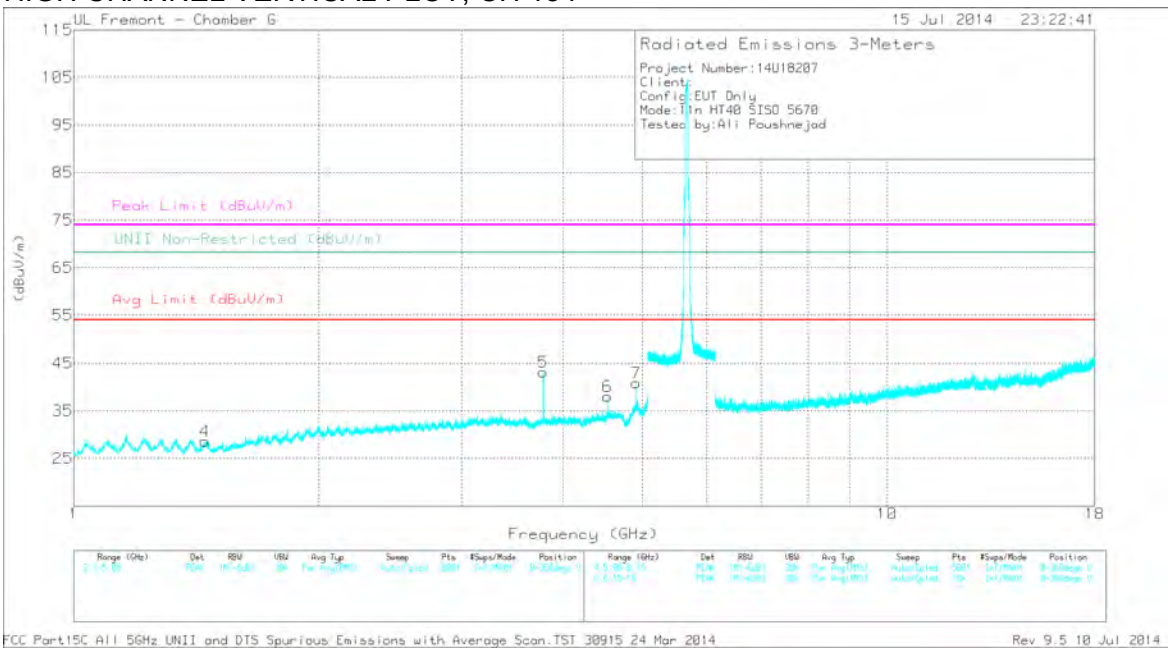
AD1 - KDB789033 Method: AD Primary Power Average

HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT, CH 134



HIGH CHANNEL VERTICAL PLOT, CH 134



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	* 1.449	43.52	PK1	28.2	-34.9	36.82	-	-	74	-37.18	-	-	66	114	H
	* 1.452	31.8	AD1	28.1	-34.9	25	54	-29	-	-	-	-	66	114	H
2	* 3.78	44.5	PK1	33	-33.5	44	-	-	74	-30	-	-	141	260	H
	* 3.78	37.52	AD1	33	-33.5	37.02	54	-16.98	-	-	-	-	141	260	H
3	* 4.914	41.71	PK1	34.1	-32	43.81	-	-	74	-30.19	-	-	301	255	H
	* 4.914	32.17	AD1	34.1	-32	34.27	54	-19.73	-	-	-	-	301	255	H
4	* 1.453	43.61	PK1	28.1	-34.9	36.81	-	-	74	-37.19	-	-	111	383	V
	* 1.453	31.81	AD1	28.1	-34.9	25.01	54	-28.99	-	-	-	-	111	383	V
5	* 3.78	49.26	PK1	33	-33.5	48.76	-	-	74	-25.24	-	-	196	228	V
	* 3.78	44.13	AD1	33	-33.5	43.63	54	-10.37	-	-	-	-	196	228	V
6	* 4.536	44.29	PK1	33.8	-33	45.09	-	-	74	-28.91	-	-	319	199	V
	* 4.536	37.11	AD1	33.8	-33	37.91	54	-16.09	-	-	-	-	319	199	V
7	* 4.914	44.48	PK1	34.1	-32	46.58	-	-	74	-27.42	-	-	315	199	V
	* 4.914	36.96	AD1	34.1	-32	39.06	54	-14.94	-	-	-	-	315	199	V

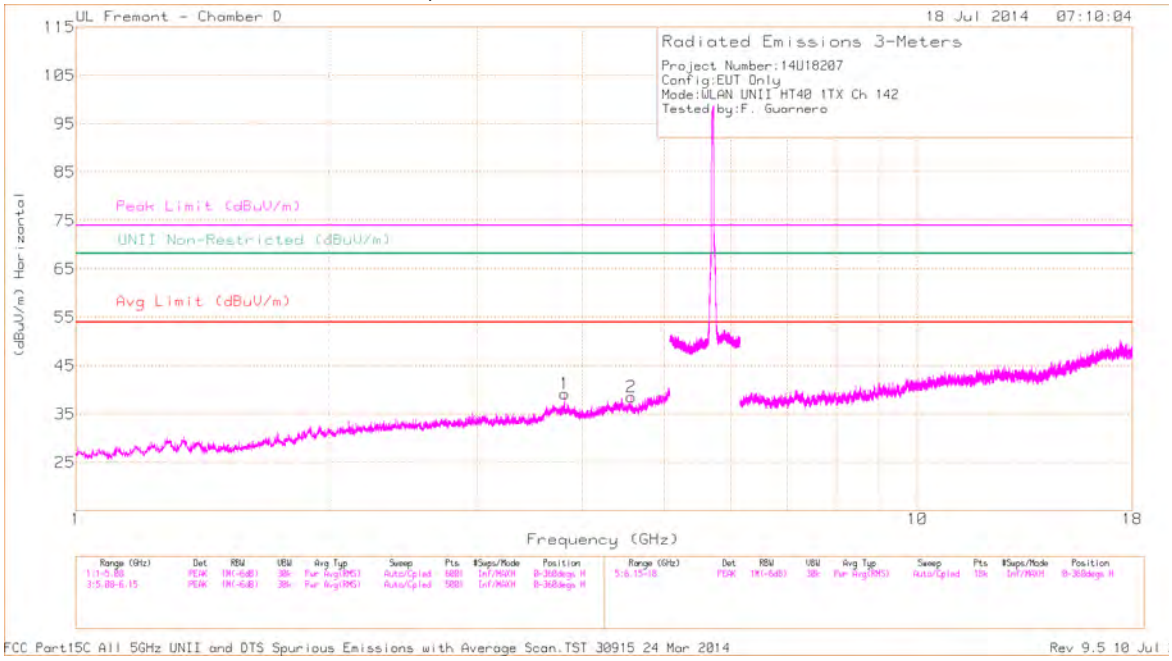
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

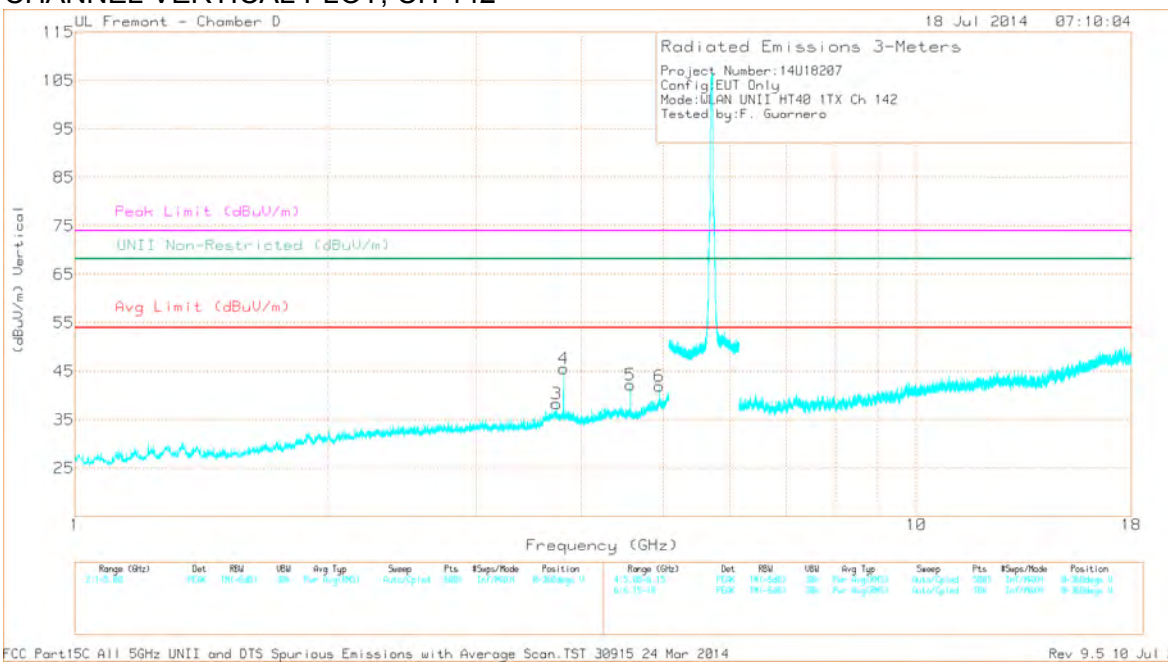
AD1 - KDB789033 Method: AD Primary Power Average

HARMONICS AND SPURIOUS EMISSIONS

CHANNEL HORIZONTAL PLOT, CH 142



CHANNEL VERTICAL PLOT, CH 142



DATA

Radiated Emissions

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)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.807	41.59	PK1	33.4	-28.9	46.09	-	-	74	-27.91	-	-	86	228	H
* 3.807	33.25	AD1	33.4	-28.9	37.75	54	-16.25	-	-	-	-	86	228	H
* 4.568	40.33	PK1	34	-27.8	46.53	-	-	74	-27.47	-	-	208	268	H
* 4.568	31.27	AD1	34	-27.8	37.47	54	-16.53	-	-	-	-	208	268	H
* 3.734	38.01	PK1	33.3	-28.8	42.51	-	-	74	-31.49	-	-	360	323	V
* 3.735	26.78	AD1	33.3	-28.8	31.28	54	-22.72	-	-	-	-	360	323	V
* 3.806	44.6	PK1	33.4	-28.9	49.1	-	-	74	-24.9	-	-	100	221	V
* 3.807	39.81	AD1	33.4	-28.9	44.31	54	-9.69	-	-	-	-	100	221	V
* 4.568	41.84	PK1	34	-27.8	48.04	-	-	74	-25.96	-	-	220	214	V
* 4.568	35.74	AD1	34	-27.8	41.94	54	-12.06	-	-	-	-	220	214	V
* 4.949	40.42	PK1	34.2	-26.2	48.42	-	-	74	-25.58	-	-	174	212	V
* 4.949	31.6	AD1	34.2	-26.2	39.6	54	-14.4	-	-	-	-	174	212	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

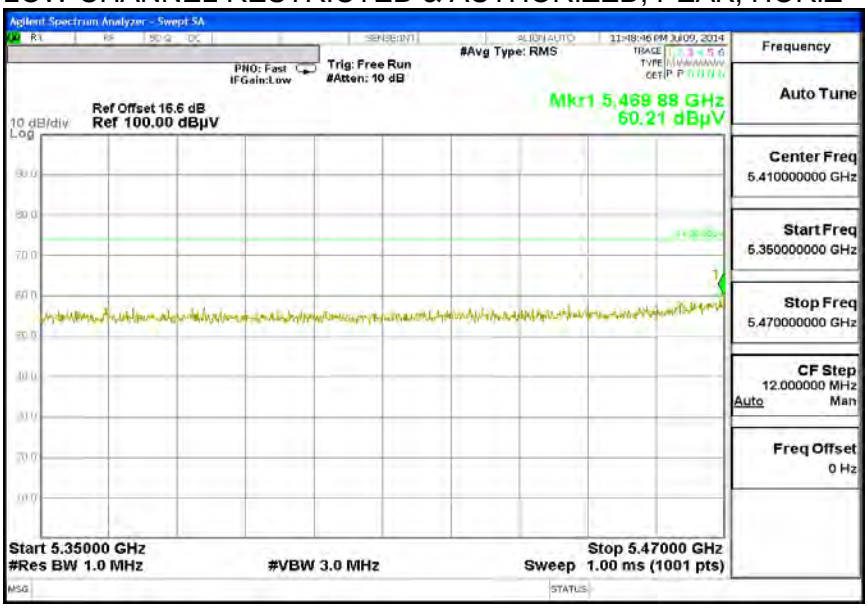
AD1 - KDB789033 Method: AD Primary Power Average

10.2.17. TX ABOVE 1 GHz 802.11n HT40 CDD 2TX MODE IN THE 5.6 GHz BAND

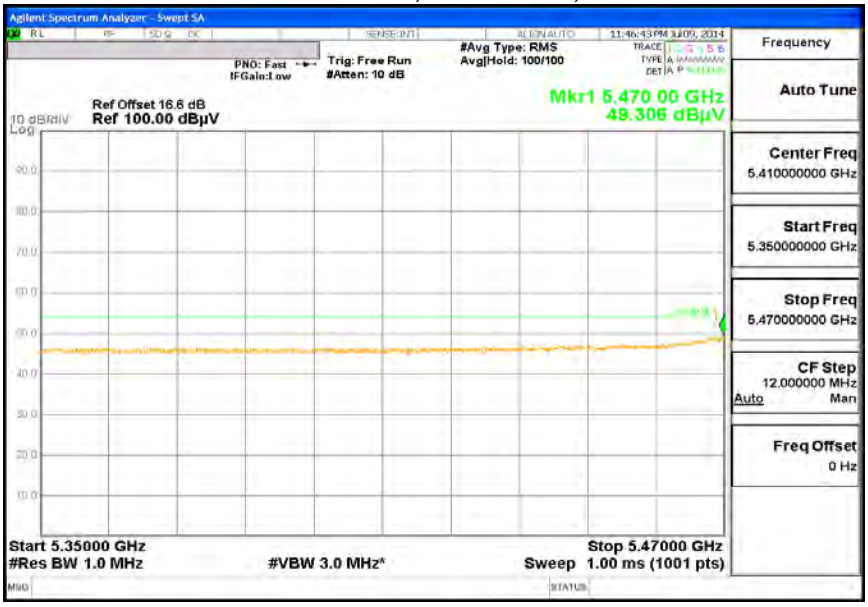
All radiated tests for 802.11n HT20 were conducted with CDD mode at the elevated power of STBC mode. This configuration is considered representative of both modes.

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

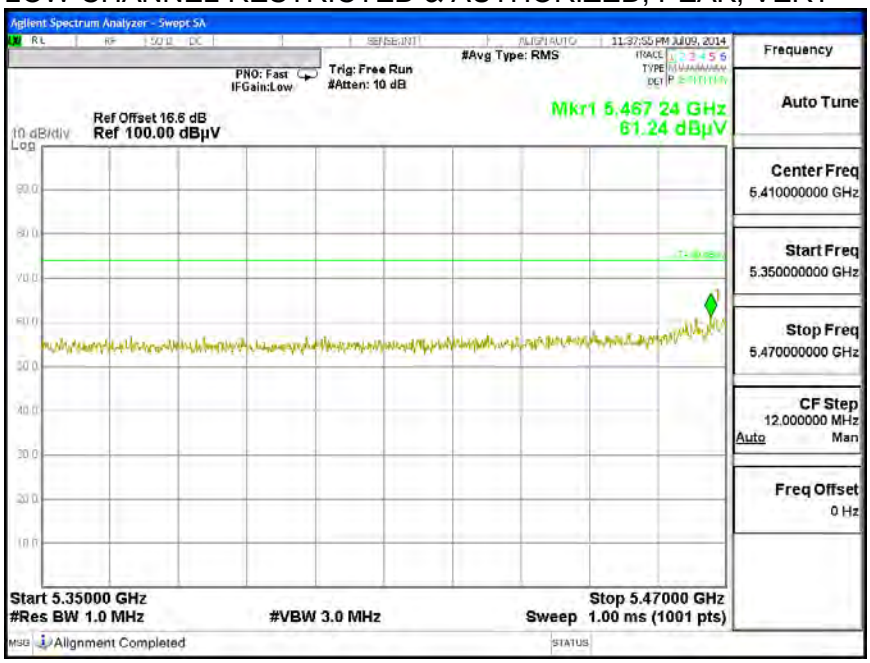
LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, HORIZ



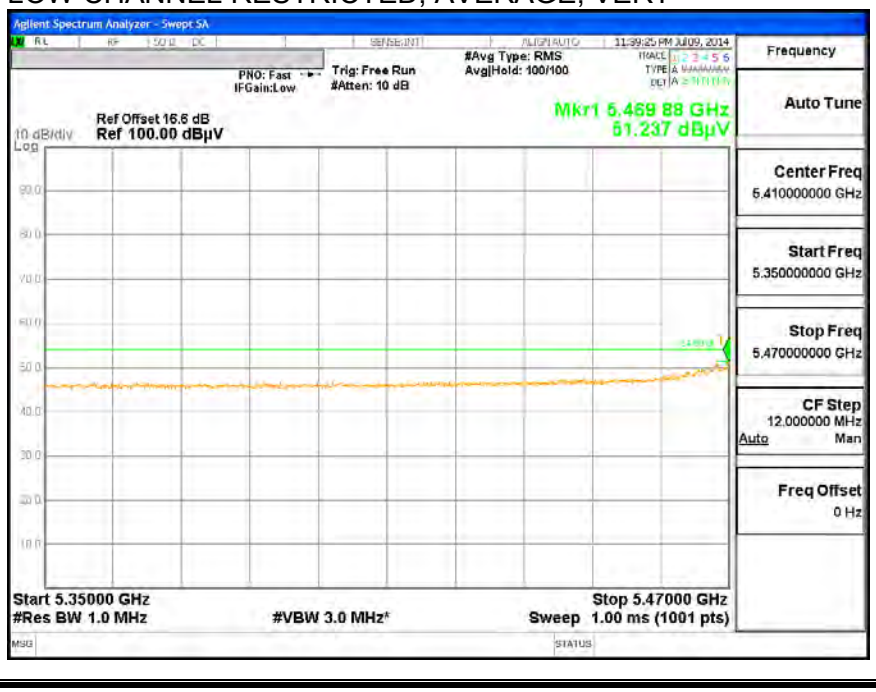
LOW CHANNEL RESTRICTED, AVERAGE, HORIZ



LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT

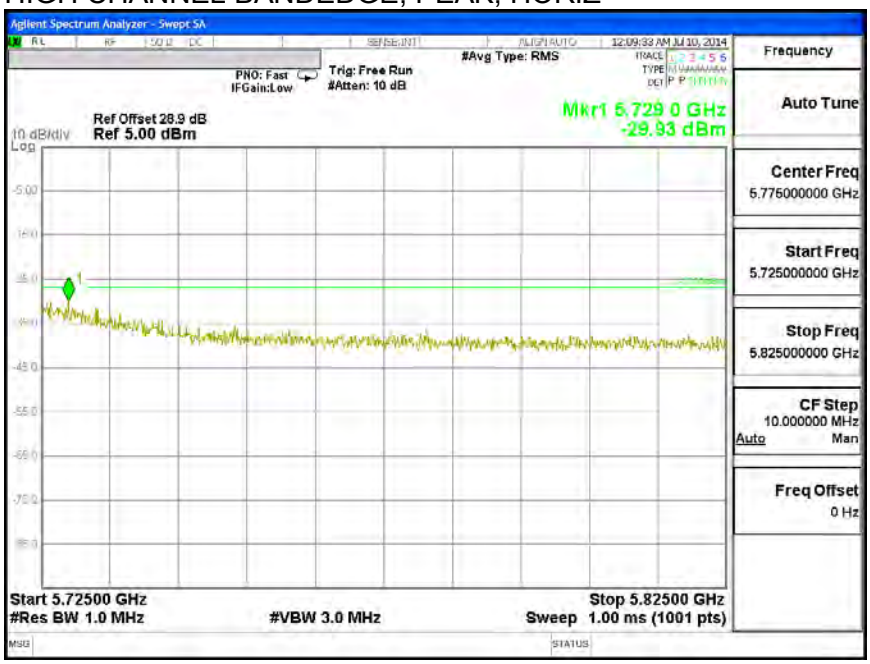


LOW CHANNEL RESTRICTED, AVERAGE, VERT

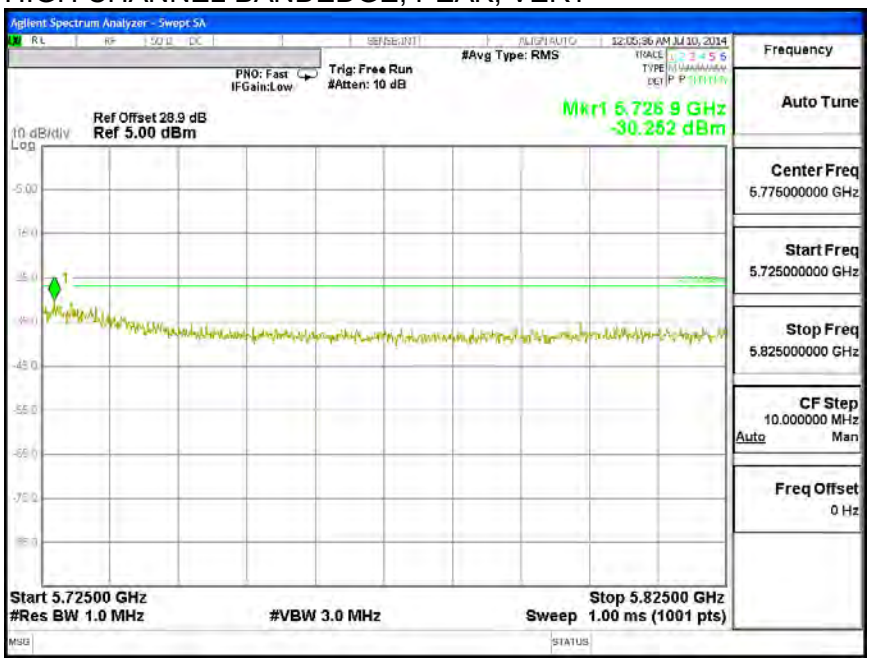


AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

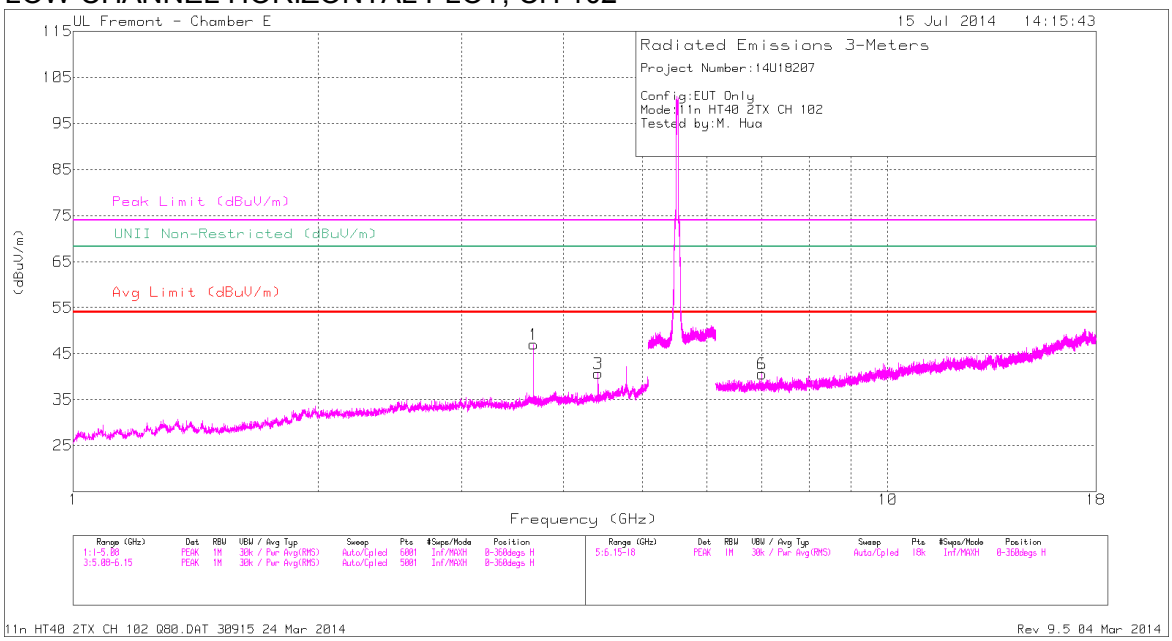


HIGH CHANNEL BANDEDGE, PEAK, VERT

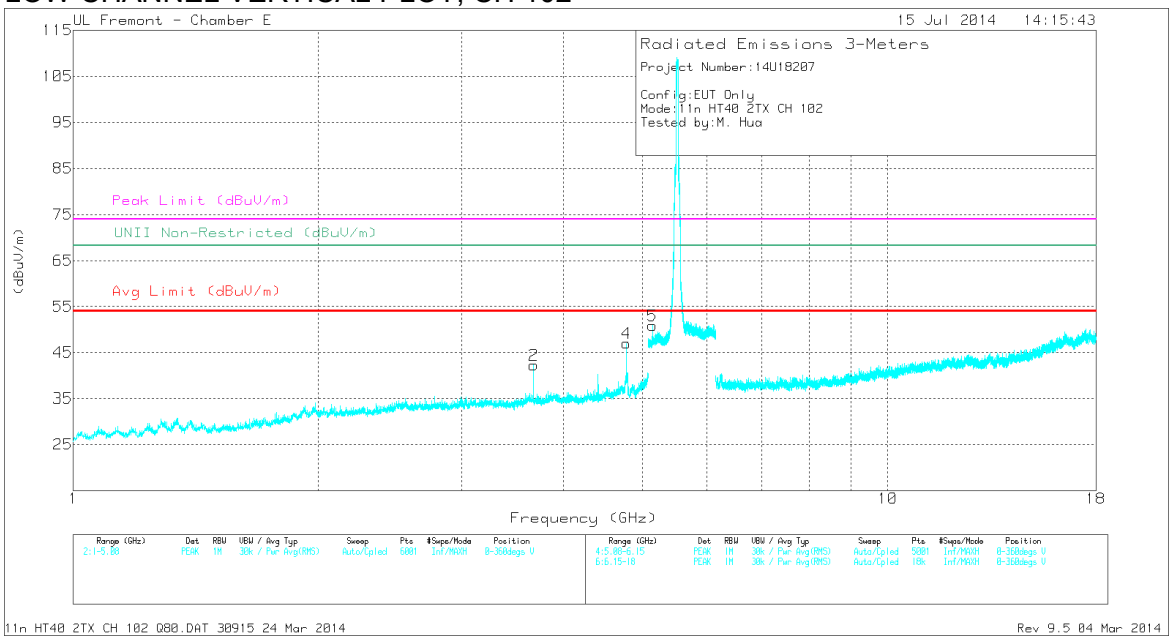


HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT, CH 102



LOW CHANNEL VERTICAL PLOT, CH 102



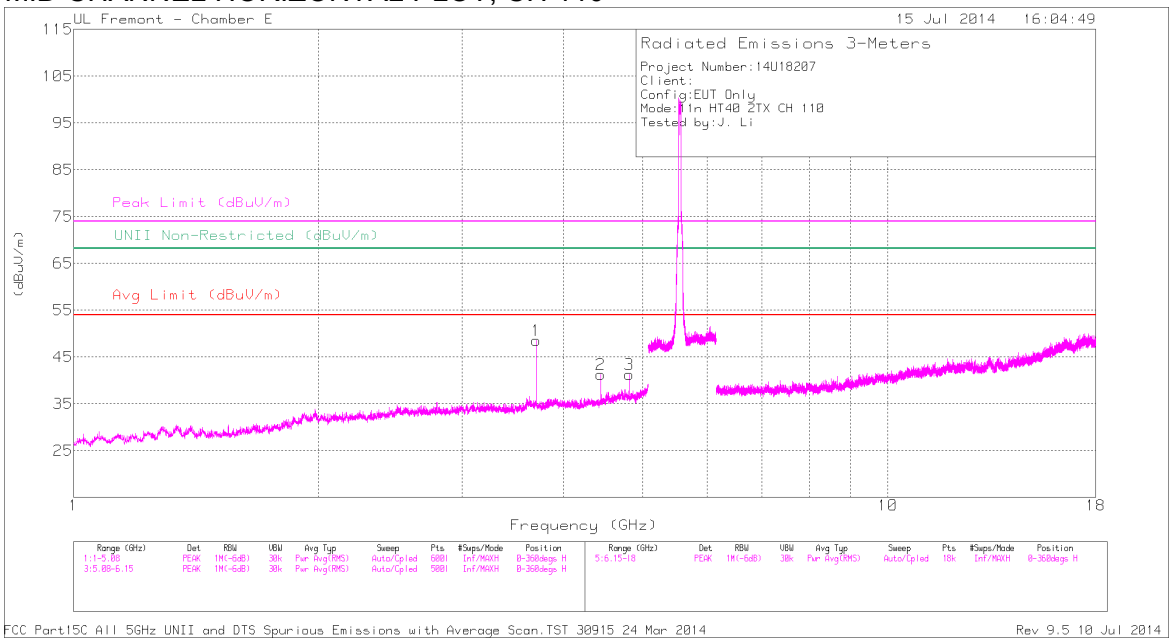
DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (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	* 3.673	49.48	PK1	33.3	-31.1	51.68	-	-	74	-22.32	-	-	334	207	H
	* 3.673	44.29	AD1	33.3	-31.1	46.49	54	-7.51	-	-	-	-	334	207	H
2	* 3.673	45.73	PK1	33.3	-31.1	47.93	-	-	74	-26.07	-	-	305	378	V
	* 3.673	40.33	AD1	33.3	-31.1	42.53	54	-11.47	-	-	-	-	305	378	V
4	* 4.775	48.53	PK1	34.1	-30.4	52.23	-	-	74	-21.77	-	-	358	104	V
	* 4.775	43.06	AD1	34.1	-30.4	46.76	54	-7.24	-	-	-	-	358	104	V
5	* 5.143	45.44	PK1	34.2	-21.6	58.04	-	-	74	-15.96	-	-	332	382	V
	* 5.143	35.91	AD1	34.2	-21.6	48.51	54	-5.49	-	-	-	-	332	382	V
3	4.408	44.22	PK1	33.7	-31.2	46.72	-	-	-	-	68.2	-21.48	320	170	H
6	7.005	39.03	PK1	35.9	-28.6	46.33	-	-	-	-	68.2	-21.87	264	200	H

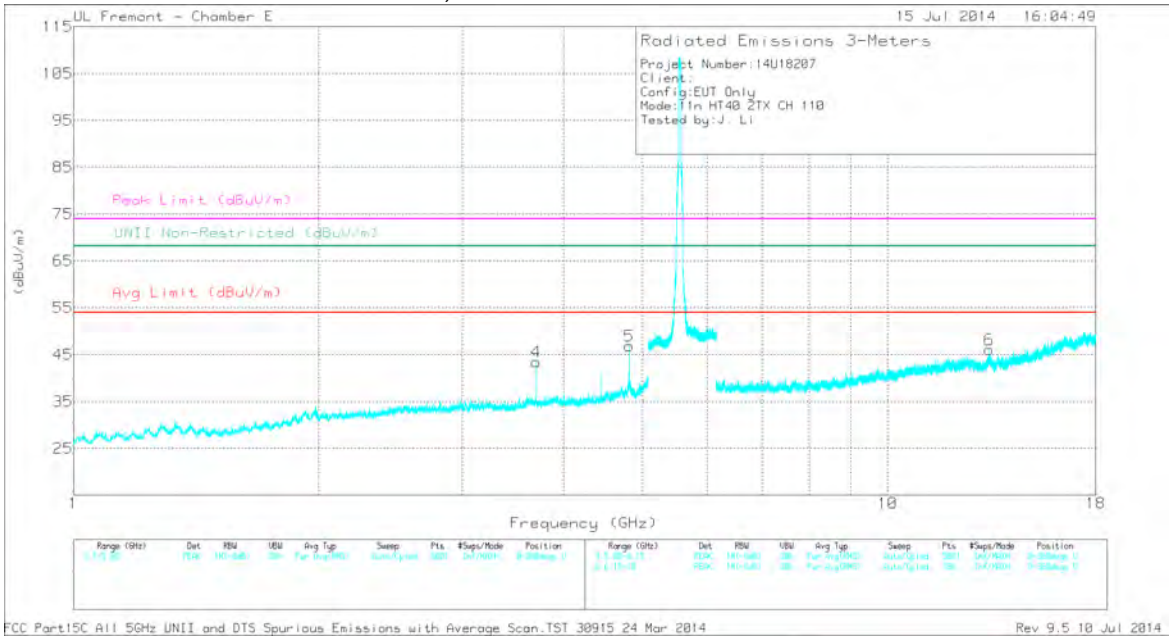
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT, CH 110



MID CHANNEL VERTICAL PLOT, CH 110



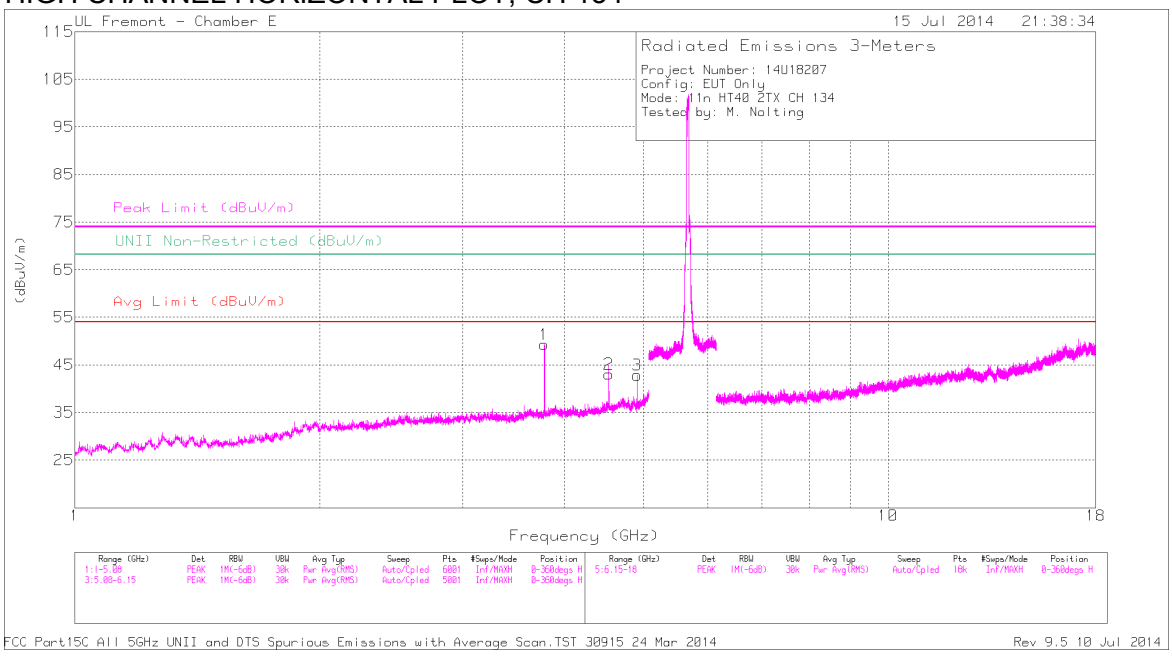
DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (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	* 3.7	50.61	PK1	33.3	-31.6	52.31	-	-	74	-21.69	-	-	337	211	H
	* 3.7	45.47	AD1	33.3	-31.6	47.17	54	-6.83	-	-	-	-	337	211	H
3	* 4.81	45.34	PK1	34.1	-30.3	49.14	-	-	74	-24.86	-	-	332	157	H
	* 4.81	38.14	AD1	34.1	-30.3	41.94	54	-12.06	-	-	-	-	332	157	H
4	* 3.7	46.89	PK1	33.3	-31.6	48.59	-	-	74	-25.41	-	-	301	365	V
	* 3.7	42.1	AD1	33.3	-31.6	43.8	54	-10.2	-	-	-	-	301	365	V
5	* 4.81	47.41	PK1	34.1	-30.3	51.21	-	-	74	-22.79	-	-	310	133	V
	* 4.81	42.31	AD1	34.1	-30.3	46.11	54	-7.89	-	-	-	-	310	133	V
6	* 13.328	36.66	PK1	39.2	-24.2	51.66	-	-	74	-22.34	-	-	278	166	V
	* 13.331	26	AD1	39.2	-24.2	41	54	-13	-	-	-	-	278	166	V
2	4.44	38.23	PK	33.8	-30.8	41.23	-	-	-	-	68.2	-26.97	0-360	200	H
	4.44	42.95	PK1	33.8	-30.8	45.95	-	-	-	-	68.2	-22.25	356	101	H

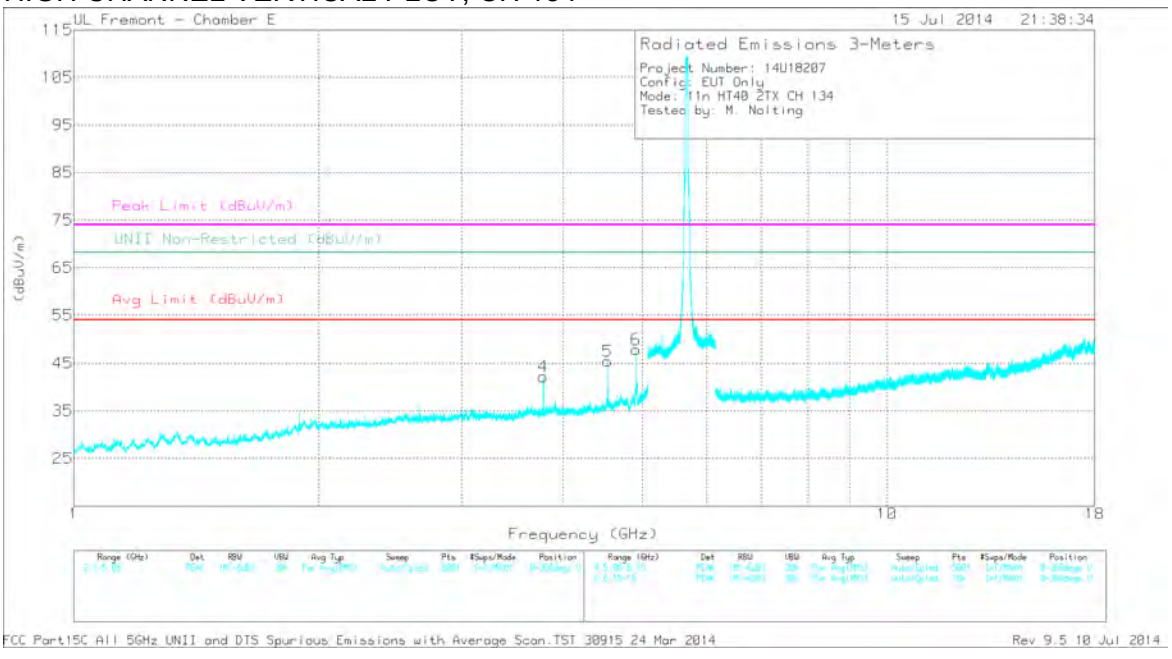
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT, CH 134



HIGH CHANNEL VERTICAL PLOT, CH 134



DATA

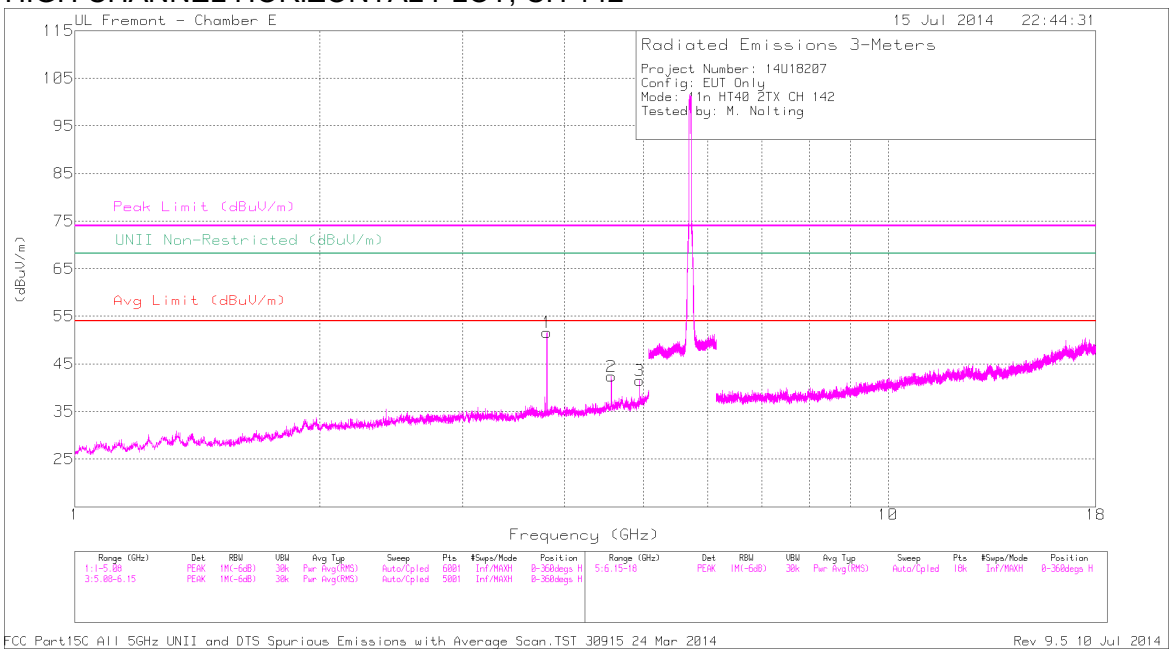
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.78	52.09	PK1	33.4	-31.9	53.59	-	-	74	-20.41	-	-	2	162	H
	* 3.78	46.81	AD1	33.4	-31.9	48.31	54	-5.69	-	-	-	-	2	162	H
2	* 4.536	47.76	PK1	34	-30.6	51.16	-	-	74	-22.84	-	-	314	156	H
	* 4.536	42.25	AD1	34	-30.6	45.65	54	-8.35	-	-	-	-	314	156	H
3	* 4.914	44.53	PK1	34	-29.7	48.83	-	-	74	-25.17	-	-	333	155	H
	* 4.914	37.62	AD1	34	-29.7	41.92	54	-12.08	-	-	-	-	333	155	H
4	* 3.78	50.81	PK1	33.4	-31.9	52.31	-	-	74	-21.69	-	-	316	153	V
	* 3.78	45.84	AD1	33.4	-31.9	47.34	54	-6.66	-	-	-	-	316	153	V
5	* 4.536	48.67	PK1	34	-30.6	52.07	-	-	74	-21.93	-	-	338	148	V
	* 4.536	44.24	AD1	34	-30.6	47.64	54	-6.36	-	-	-	-	338	148	V
6	* 4.914	49.52	PK1	34	-29.7	53.82	-	-	74	-20.18	-	-	349	135	V
	* 4.914	44.49	AD1	34	-29.7	48.79	54	-5.21	-	-	-	-	349	135	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

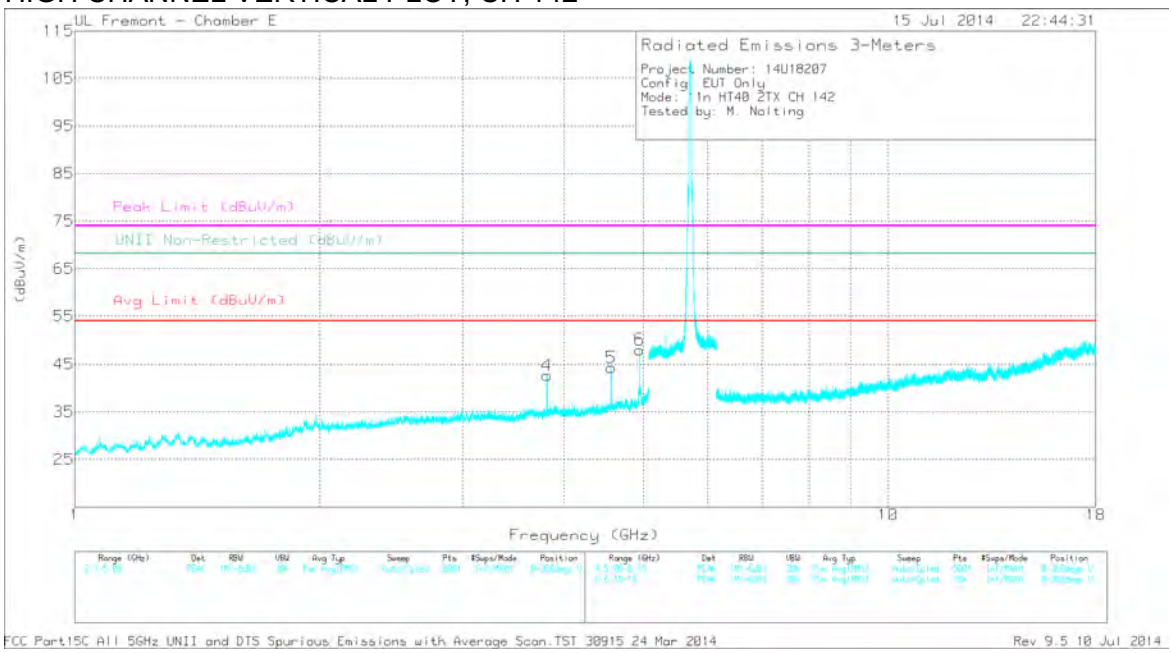
10.2.18. TX ABOVE 1 GHz 802.11n HT40 2TX MODE, CHANNEL 142, 5.6 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT, CH 142



HIGH CHANNEL VERTICAL PLOT, CH 142



DATA

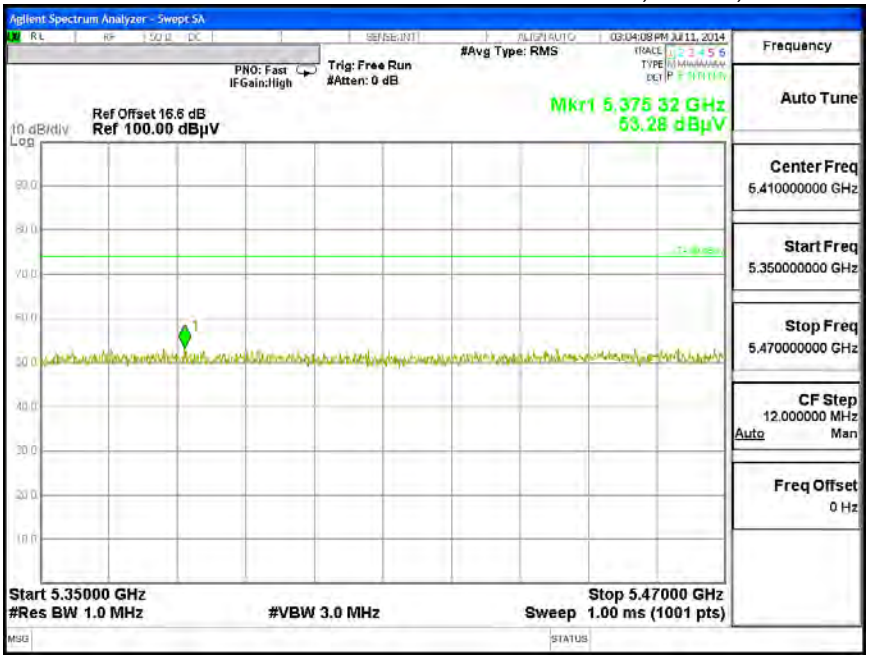
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.807	53.27	PK1	33.4	-31.9	54.77	-	-	74	-19.23	-	-	304	177	H
	* 3.807	49.21	AD1	33.4	-31.9	50.71	54	-3.29	-	-	-	-	304	177	H
2	* 4.568	45.99	PK1	34	-30.7	49.29	-	-	74	-24.71	-	-	316	124	H
	* 4.568	39.45	AD1	34	-30.7	42.75	54	-11.25	-	-	-	-	316	124	H
3	* 4.949	45.6	PK1	34.1	-29.7	50	-	-	74	-24	-	-	30	355	H
	* 4.949	39.13	AD1	34.1	-29.7	43.53	54	-10.47	-	-	-	-	30	355	H
4	* 3.807	49.38	PK1	33.4	-31.9	50.88	-	-	74	-23.12	-	-	304	300	V
	* 3.807	43.62	AD1	33.4	-31.9	45.12	54	-8.88	-	-	-	-	304	300	V
5	* 4.568	46.7	PK1	34	-30.7	50	-	-	74	-24	-	-	339	147	V
	* 4.568	41.37	AD1	34	-30.7	44.67	54	-9.33	-	-	-	-	339	147	V
6	* 4.948	48.38	PK1	34.1	-29.7	52.78	-	-	74	-21.22	-	-	332	102	V
	* 4.949	43.22	AD1	34.1	-29.7	47.62	54	-6.38	-	-	-	-	332	102	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

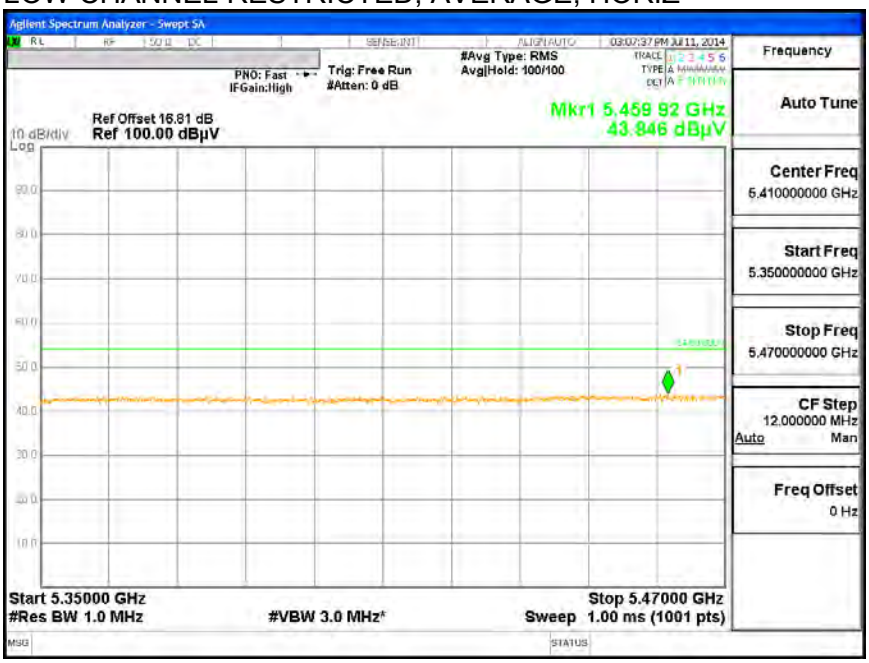
10.2.19. TX ABOVE 1G 802.11ac 80MHz 1TX MODE IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL, 106)

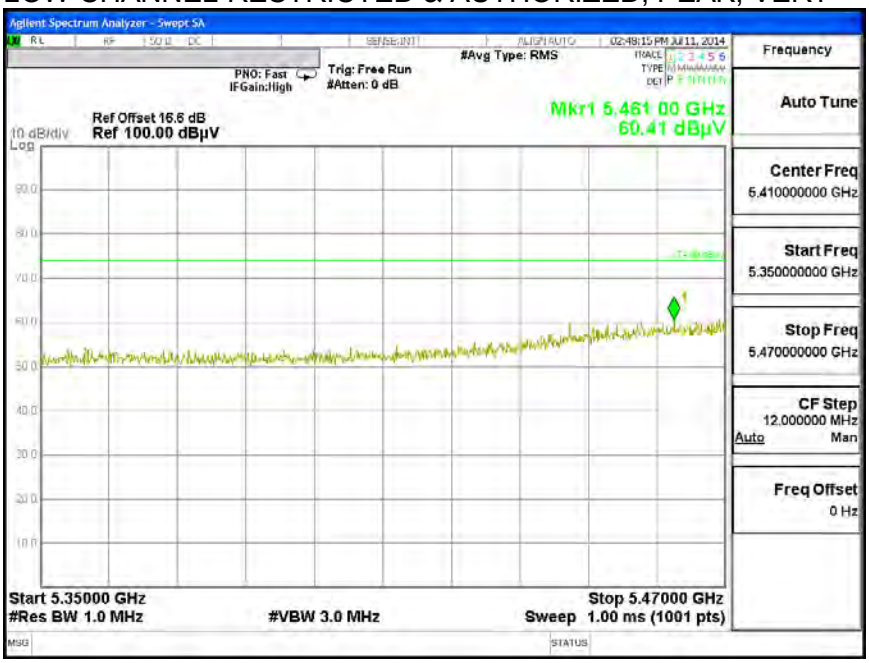
LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, HORIZ



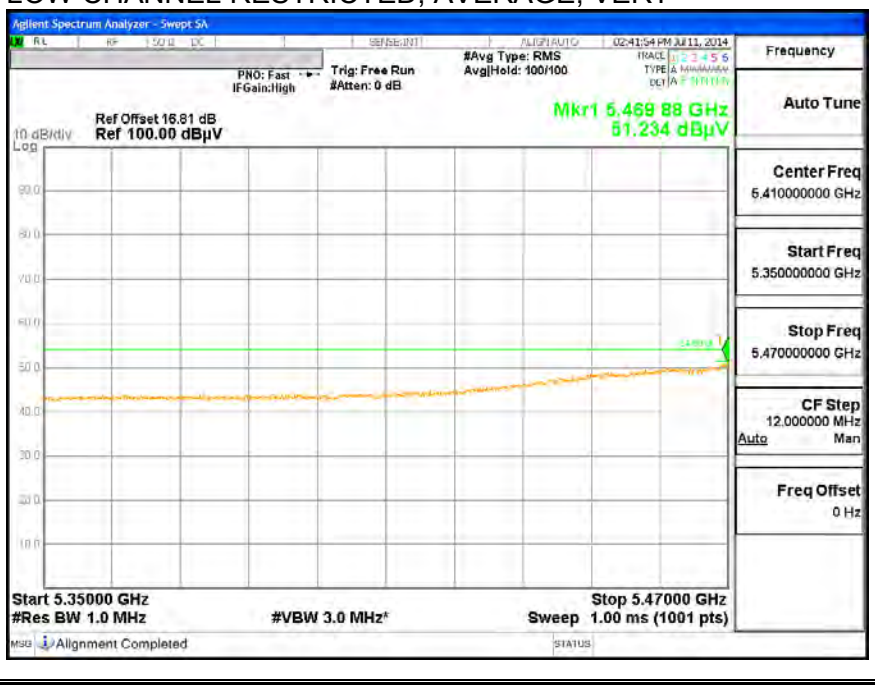
LOW CHANNEL RESTRICTED, AVERAGE, HORIZ



LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT

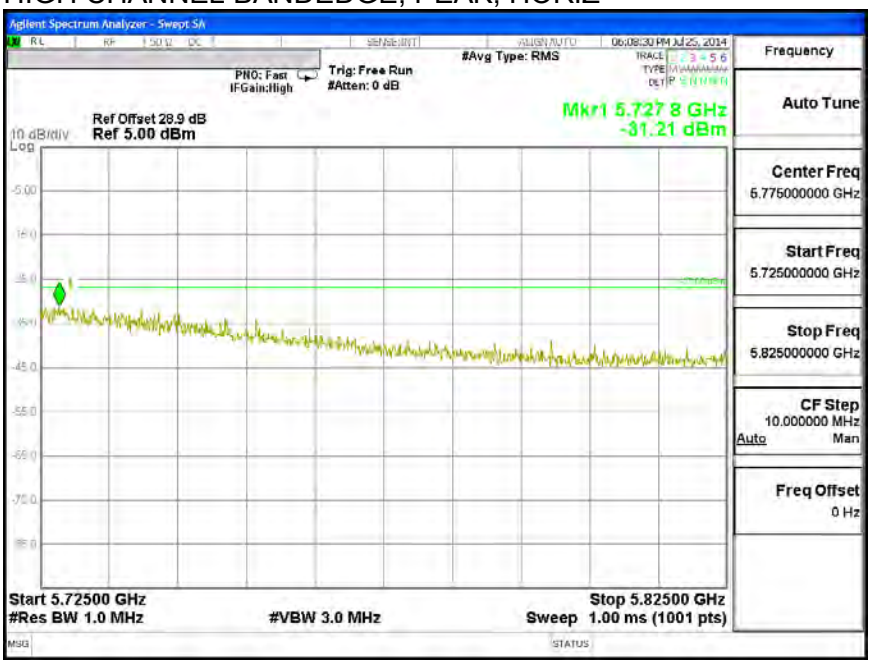


LOW CHANNEL RESTRICTED, AVERAGE, VERT

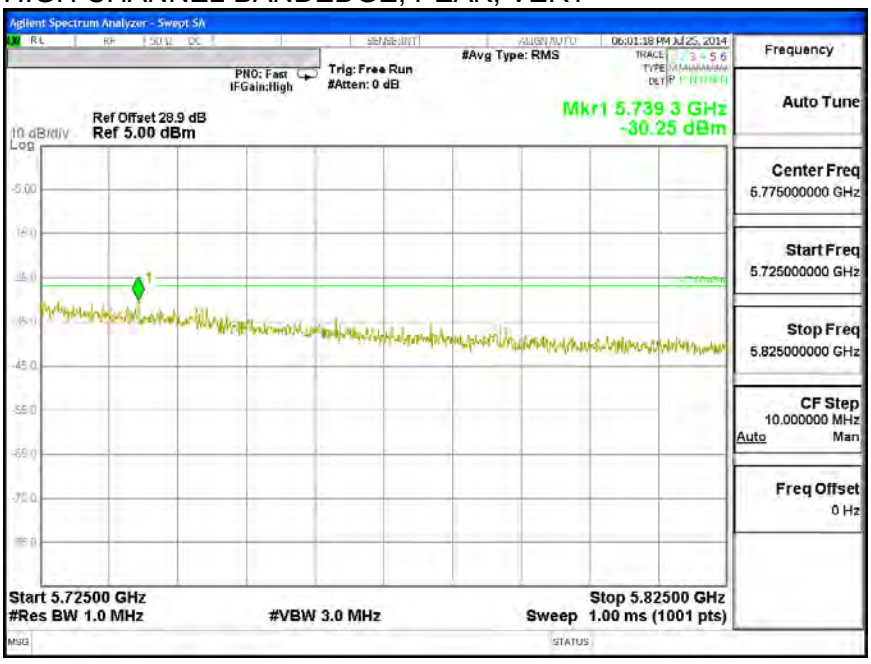


AUTHORIZED BANDEDGE (HIGH CHANNEL, 138)

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

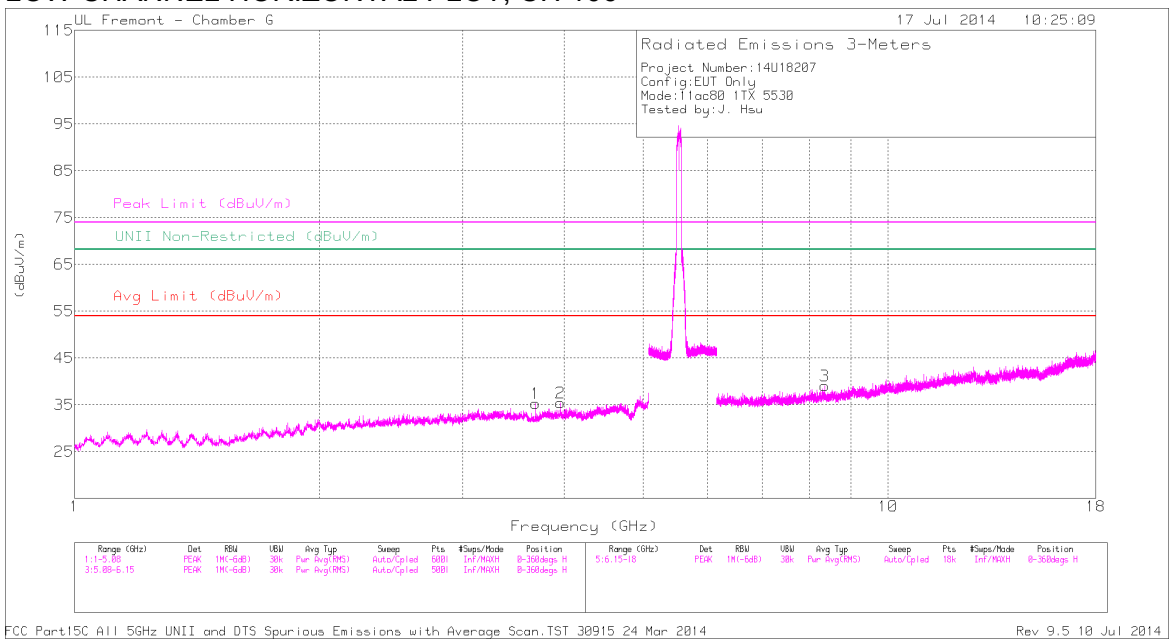


HIGH CHANNEL BANDEDGE, PEAK, VERT

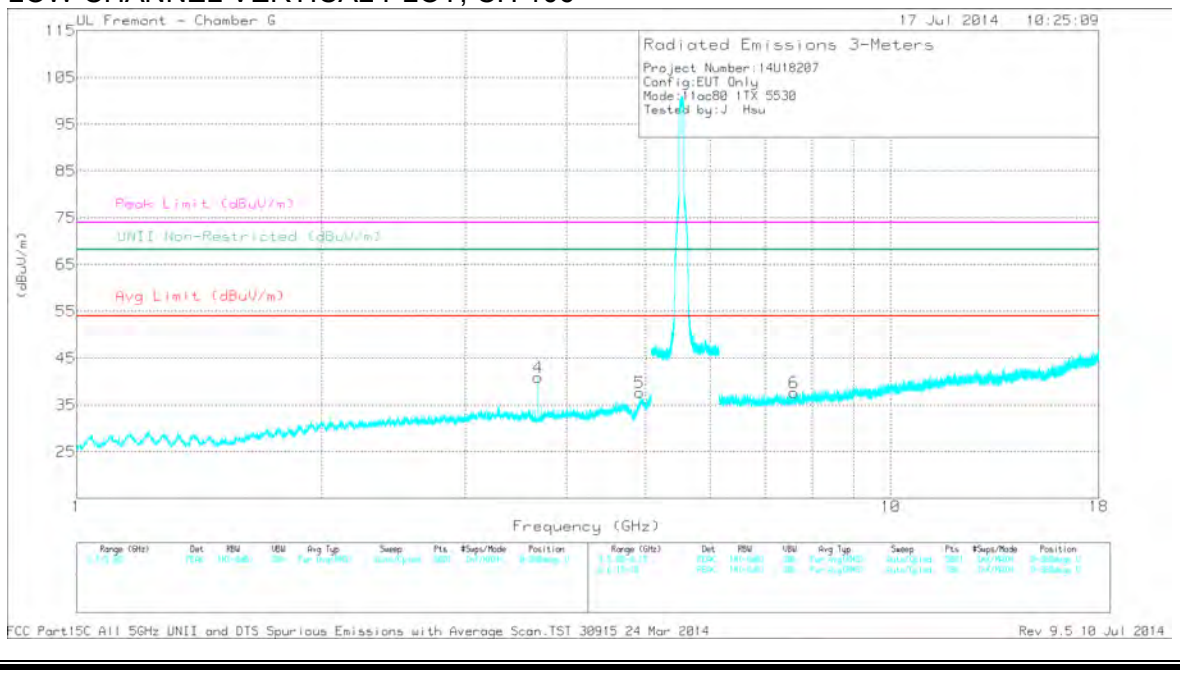


HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT, CH 106



LOW CHANNEL VERTICAL PLOT, CH 106



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	* 3.687	42.14	PK1	32.9	-33.5	0	41.54	-	-	74	-32.46	-	-	310	130	H
	* 3.687	31.91	AD1	32.9	-33.5	.21	31.52	54	-22.48	-	-	-	-	310	130	H
2	* 3.955	42.06	PK1	33.3	-33.5	0	41.86	-	-	74	-32.14	-	-	310	130	H
	* 3.955	30.72	AD1	33.3	-33.5	.21	30.73	54	-23.27	-	-	-	-	310	130	H
4	* 3.687	47.17	PK1	32.9	-33.5	0	46.57	-	-	74	-27.43	-	-	190	203	V
	* 3.687	41.33	AD1	32.9	-33.5	.21	40.94	54	-13.06	-	-	-	-	190	203	V
5	* 4.916	41.63	PK1	34.1	-31.9	0	43.83	-	-	74	-30.17	-	-	279	229	V
	* 4.916	31.13	AD1	34.1	-31.9	.21	33.54	54	-20.46	-	-	-	-	279	229	V
3	* 8.352	39.51	PK1	35.8	-29.4	0	45.91	-	-	74	-28.09	-	-	219	195	H
	* 8.351	28.35	AD1	35.8	-29.4	.21	34.96	54	-19.04	-	-	-	-	219	195	H
6	* 7.604	40.26	PK1	35.6	-30.9	0	44.96	-	-	74	-29.04	-	-	265	173	V
	* 7.604	28.95	AD1	35.6	-30.9	.21	33.86	54	-20.14	-	-	-	-	265	173	V

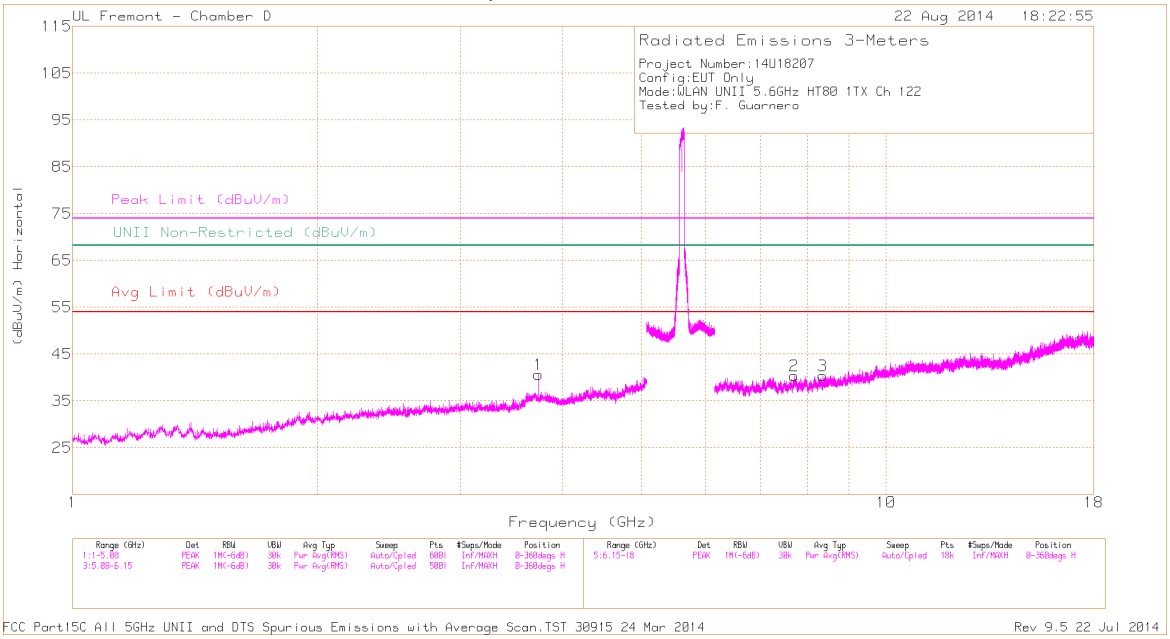
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

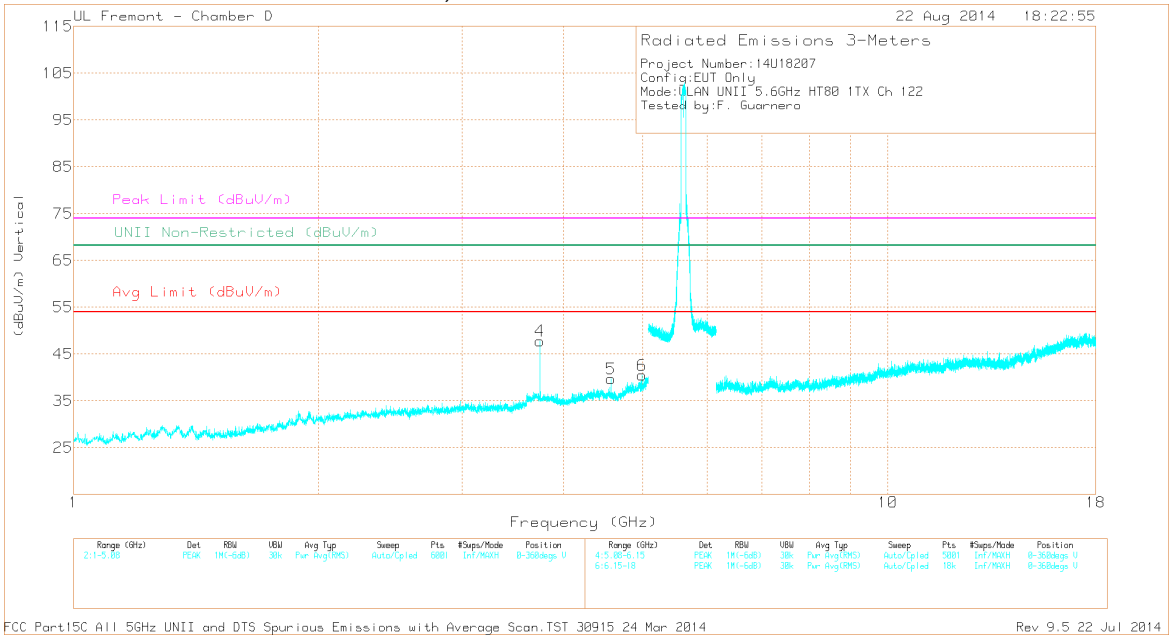
AD1 - KDB789033 Method: AD Primary Power Average

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT, CH 122



MID CHANNEL VERTICAL PLOT, CH 122



DATA

Marker	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)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.74	41.02	PK1	33.3	-28.8	0	45.52	-	-	74	-28.48	-	-	80	241	H
	* 3.74	33.49	AD1	33.3	-28.8	.21	38.2	54	-15.8	-	-	-	-	80	241	H
4	* 3.74	46.32	PK1	33.3	-28.8	0	50.82	-	-	74	-23.18	-	-	90	227	V
	* 3.74	41.31	AD1	33.3	-28.8	.21	46.02	54	-7.98	-	-	-	-	90	227	V
5	* 4.571	40.4	PK1	34	-27.8	0	46.6	-	-	74	-27.4	-	-	203	194	V
	* 4.571	31.36	AD1	34	-27.8	.21	37.77	54	-16.23	-	-	-	-	203	194	V
6	* 4.987	39.03	PK1	34.2	-26	0	47.23	-	-	74	-26.77	-	-	194	193	V
	* 4.987	29.41	AD1	34.2	-26	.21	37.82	54	-16.18	-	-	-	-	194	193	V
2	* 7.716	35.37	PK1	35.8	-24	0	47.17	-	-	74	-26.83	-	-	252	199	H
	* 7.715	24.29	AD1	35.8	-24	.21	36.3	54	-17.7	-	-	-	-	252	199	H
3	* 8.363	34.81	PK1	35.8	-24.3	0	46.31	-	-	74	-27.69	-	-	256	210	H
	* 8.363	23.65	AD1	35.8	-24.3	.21	35.36	54	-18.64	-	-	-	-	256	210	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

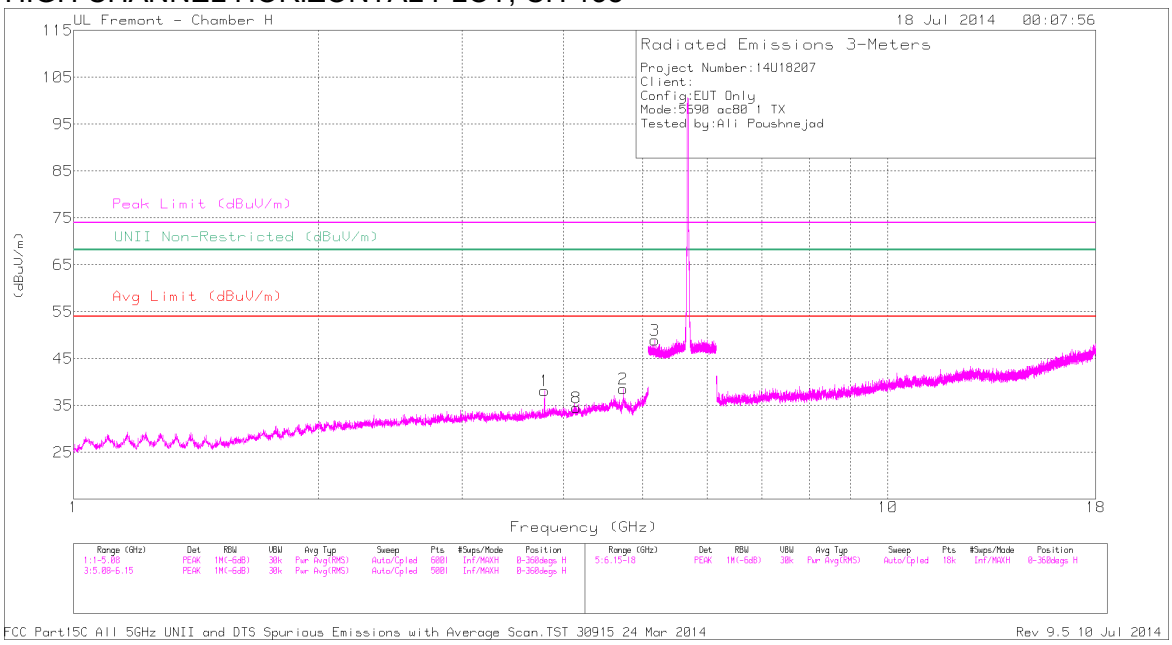
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

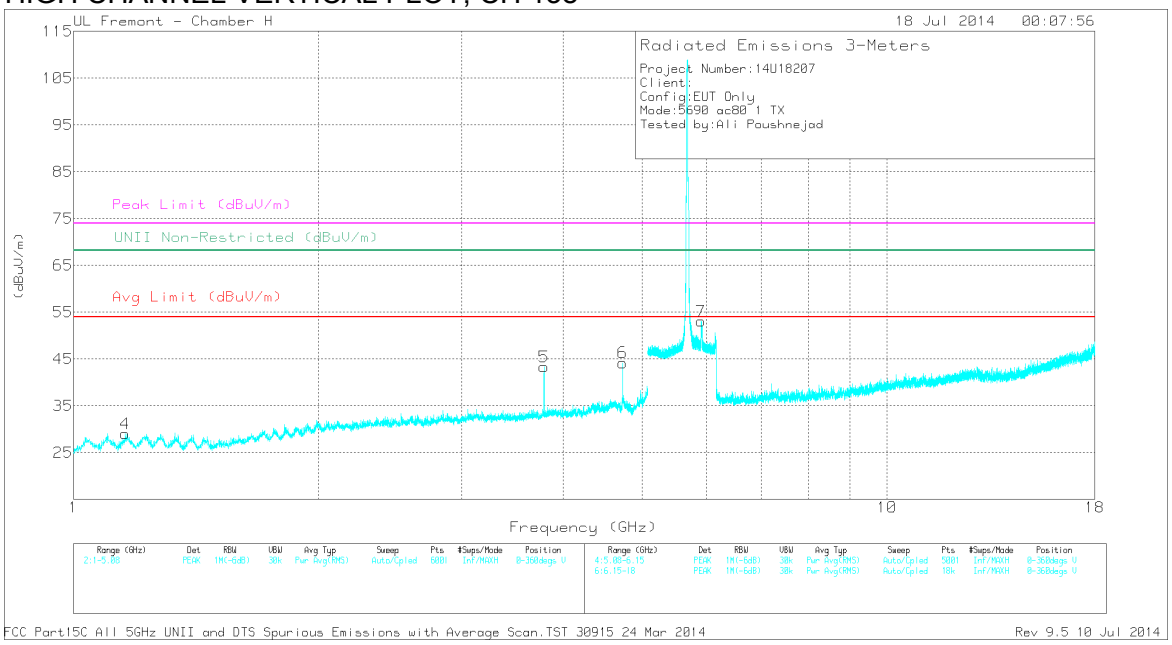
10.2.20. TX ABOVE 1 GHz 802.11n ac80 1TX MODE, CHANNEL 138, 5.6 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT, CH 138



HIGH CHANNEL VERTICAL PLOT, CH 138



DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
* 3.786	45.21	PK1	33.2	-33.1	45.31	-	-	74	-28.69	-	-	116	297	H
* 3.787	38.51	AD1	33.2	-33.1	38.61	54	-15.39	-	-	-	-	116	297	H
* 4.733	42.9	PK1	34.3	-31.5	45.7	-	-	74	-28.3	-	-	274	268	H
* 4.733	35.2	AD1	34.3	-31.5	38	54	-16	-	-	-	-	274	268	H
* 4.144	41.43	PK1	33.5	-32.1	42.83	-	-	74	-31.17	-	-	260	230	H
* 4.14	29.85	AD1	33.5	-32.2	31.15	54	-22.85	-	-	-	-	260	230	H
* 1.159	44.42	PK1	28.5	-35.6	37.32	-	-	74	-36.68	-	-	255	106	V
* 1.159	32.09	AD1	28.5	-35.6	24.99	54	-29.01	-	-	-	-	255	106	V
* 3.786	48.6	PK1	33.2	-33.1	48.7	-	-	74	-25.3	-	-	169	233	V
* 3.787	43.62	AD1	33.2	-33.1	43.72	54	-10.28	-	-	-	-	169	233	V
* 4.733	47.07	PK1	34.3	-31.5	49.87	-	-	74	-24.13	-	-	278	207	V
* 4.733	40.98	AD1	34.3	-31.5	43.78	54	-10.22	-	-	-	-	278	207	V
5.173	43.82	PK1	34.6	-22.8	55.62	-	-	-	-	68.2	-12.58	236	111	H
5.175	43.45	PK1	34.6	-22.7	55.35	-	-	-	-	68.2	-12.85	236	111	H
5.175	44.51	PK1	34.6	-22.7	56.41	-	-	-	-	68.2	-11.79	236	111	H

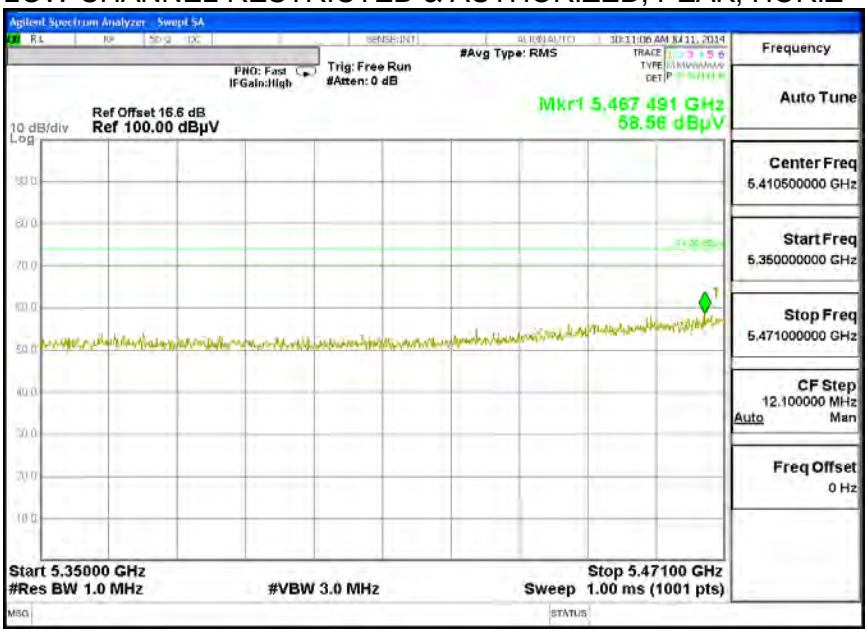
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

10.2.21. TX ABOVE 1G 802.11ac 80MHz 2TX MODE IN THE 5.6 GHz BAND

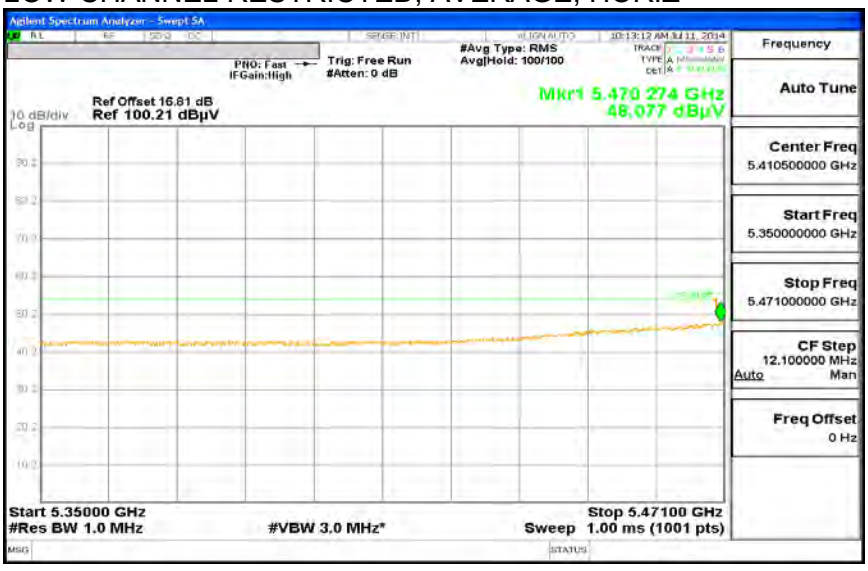
All radiated tests for 802.11ac VHT80 were conducted with CDD mode at the elevated power of STBC mode. This configuration is considered representative of both modes.

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL, 106)

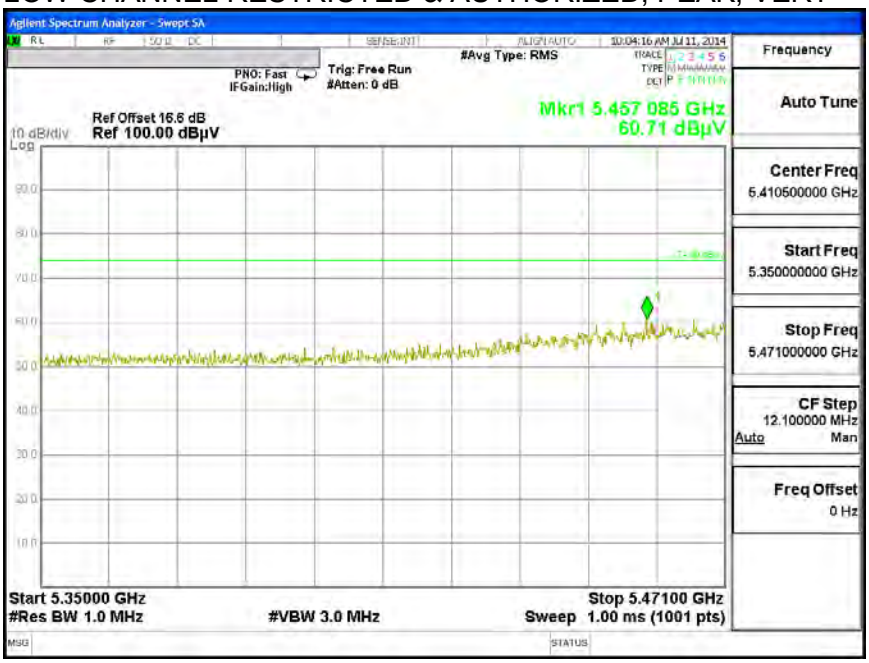
LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, HORIZ



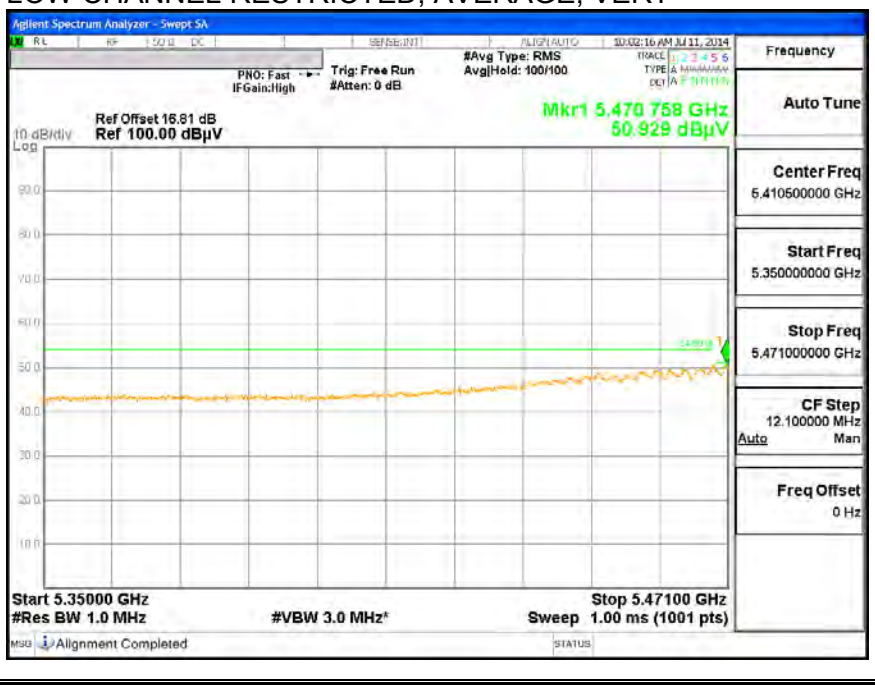
LOW CHANNEL RESTRICTED, AVERAGE, HORIZ



LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT

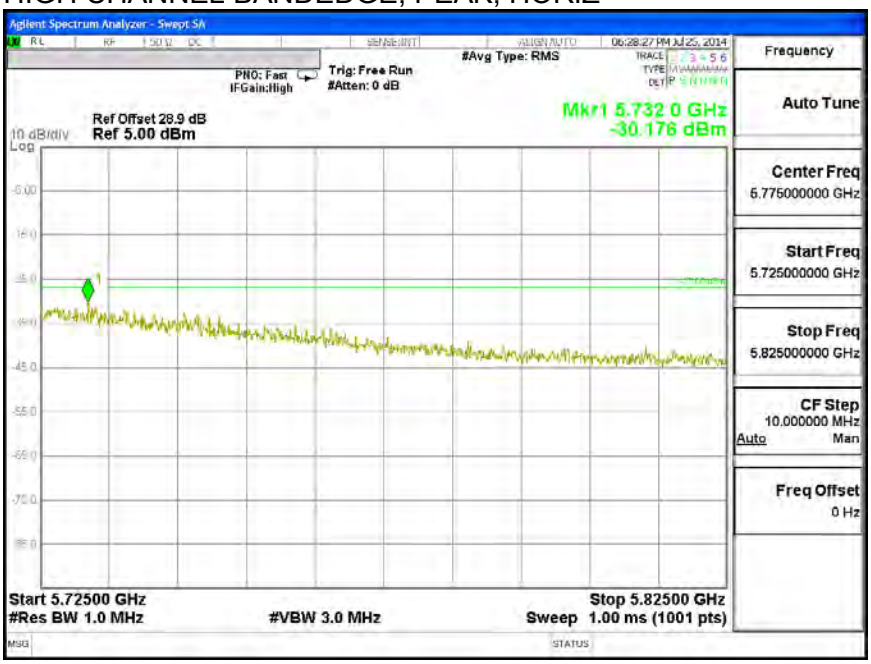


LOW CHANNEL RESTRICTED, AVERAGE, VERT

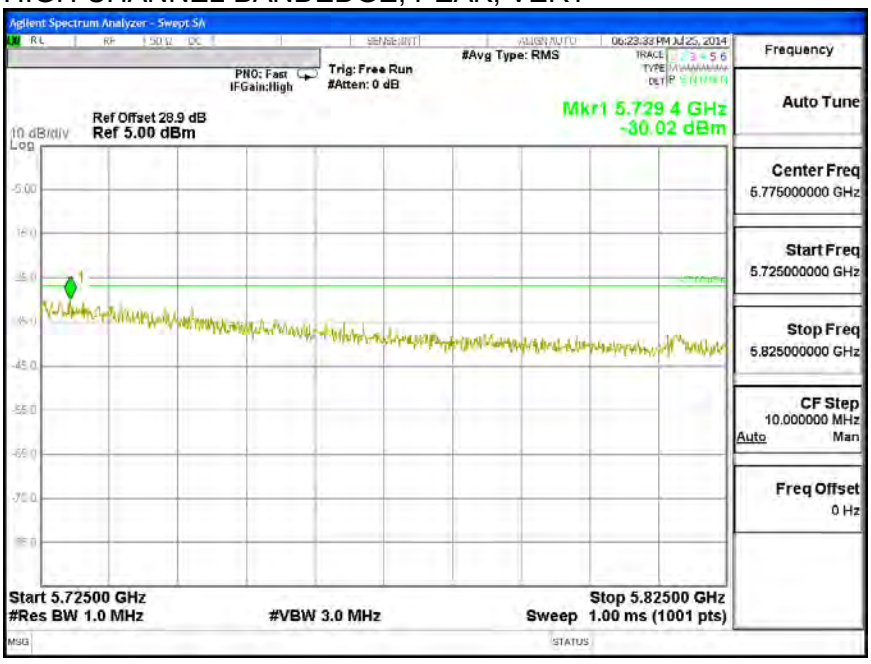


AUTHORIZED BANDEDGE (HIGH CHANNEL, 138)

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

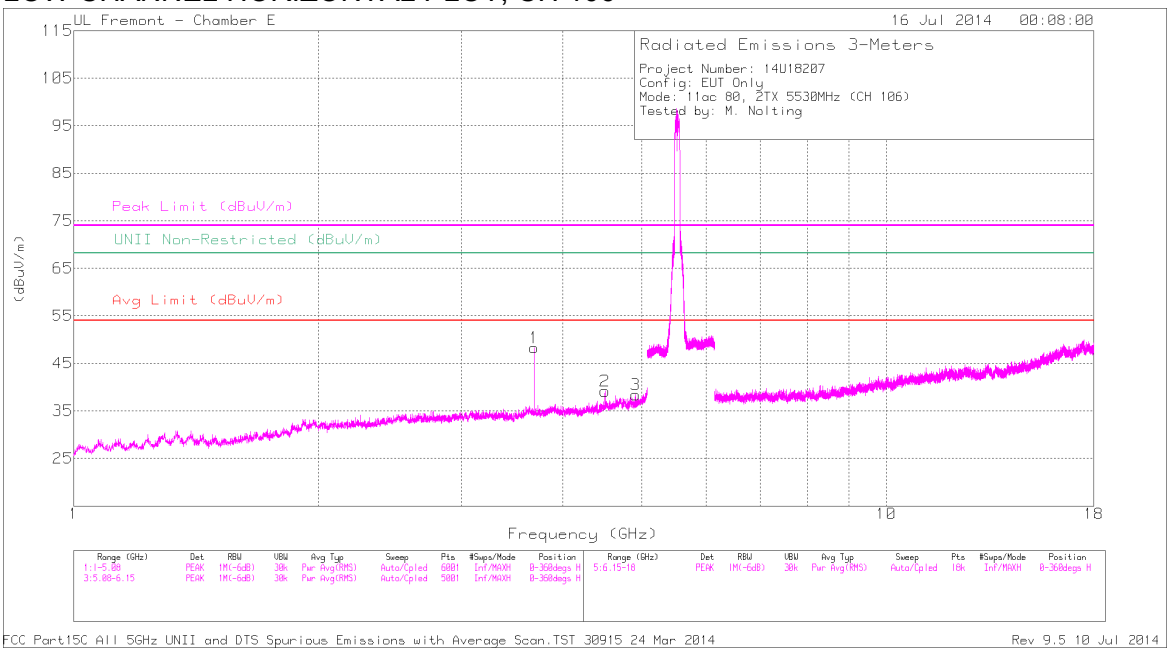


HIGH CHANNEL BANDEDGE, PEAK, VERT

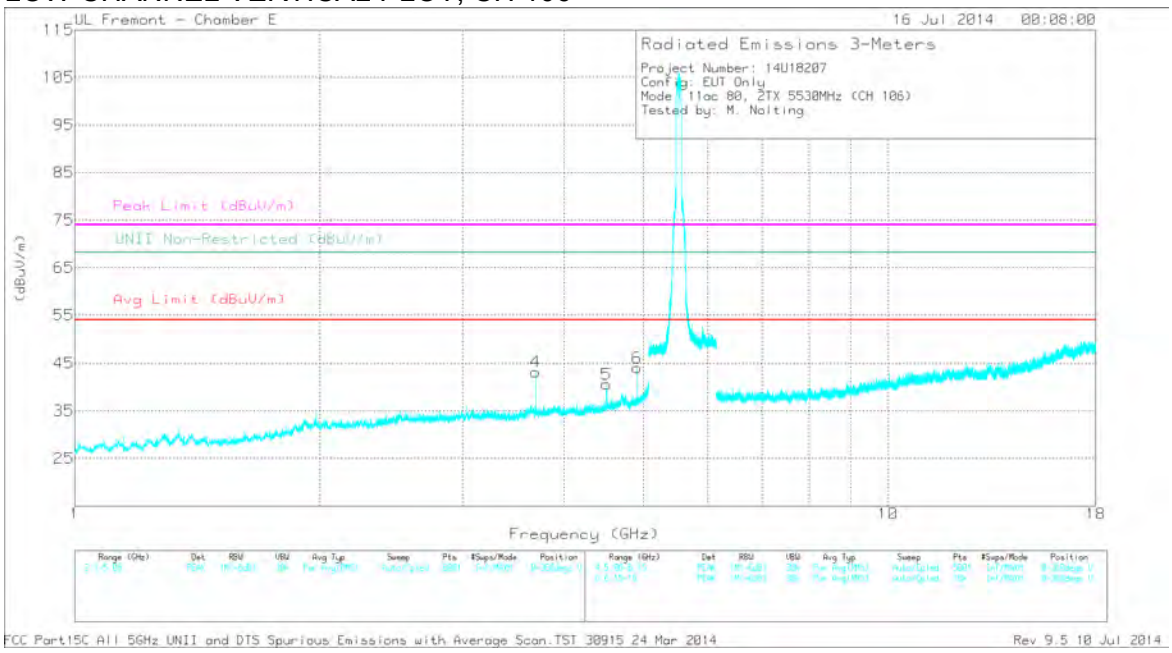


HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT, CH 106



LOW CHANNEL VERTICAL PLOT, CH 106



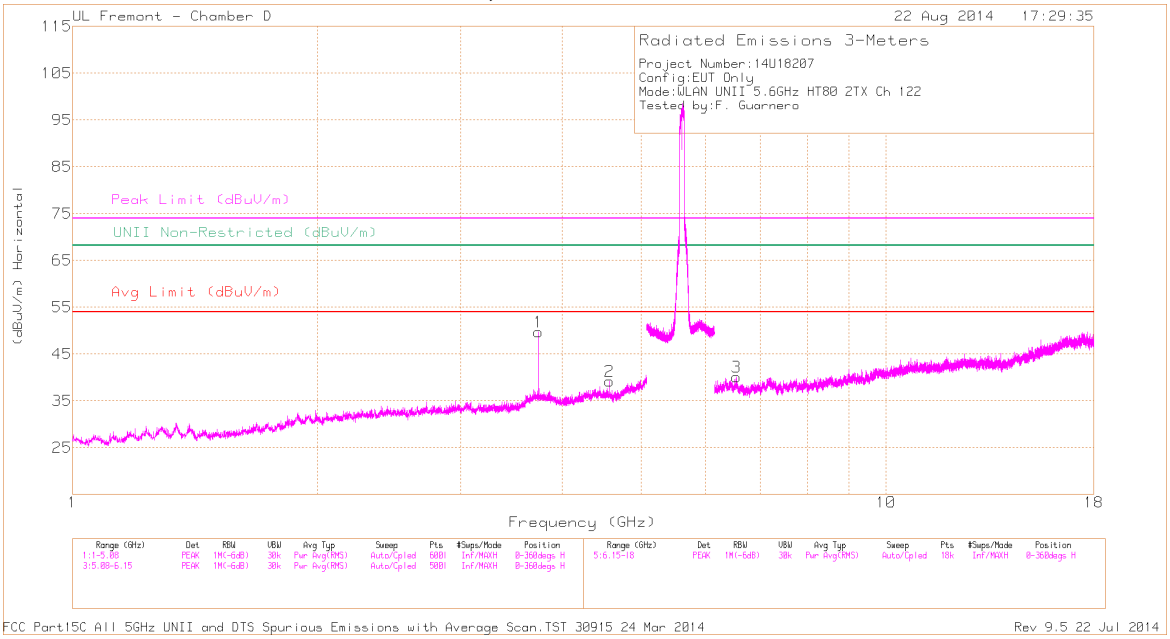
DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (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	* 3.687	51.35	PK1	33.3	-31.3	0	53.35	-	-	74	-20.65	-	-	340	225	H
	* 3.687	45.94	AD 1	33.3	-31.3	.21	48.15	54	-5.85	-	-	-	-	340	225	H
2	* 4.506	44.29	PK1	33.9	-30	0	48.19	-	-	74	-25.81	-	-	317	108	H
	* 4.506	34.28	AD 1	33.9	-30	.21	38.39	54	-15.61	-	-	-	-	317	108	H
3	* 4.916	41.72	PK1	34	-29.7	0	46.02	-	-	74	-27.98	-	-	351	138	H
	* 4.915	31.13	AD 1	34	-29.7	.21	35.64	54	-18.36	-	-	-	-	351	138	H
4	* 3.687	48.06	PK1	33.3	-31.3	0	50.06	-	-	74	-23.94	-	-	307	370	V
	* 3.687	41.69	AD 1	33.3	-31.3	.21	43.9	54	-10.1	-	-	-	-	307	370	V
5	* 4.506	43.59	PK1	33.9	-30	0	47.49	-	-	74	-26.51	-	-	339	155	V
	* 4.506	35.48	AD 1	33.9	-30	.21	39.59	54	-14.41	-	-	-	-	339	155	V
6	* 4.915	45.08	PK1	34	-29.7	0	49.38	-	-	74	-24.62	-	-	327	102	V
	* 4.916	36.27	AD 1	34	-29.7	.21	40.78	54	-13.22	-	-	-	-	327	102	V

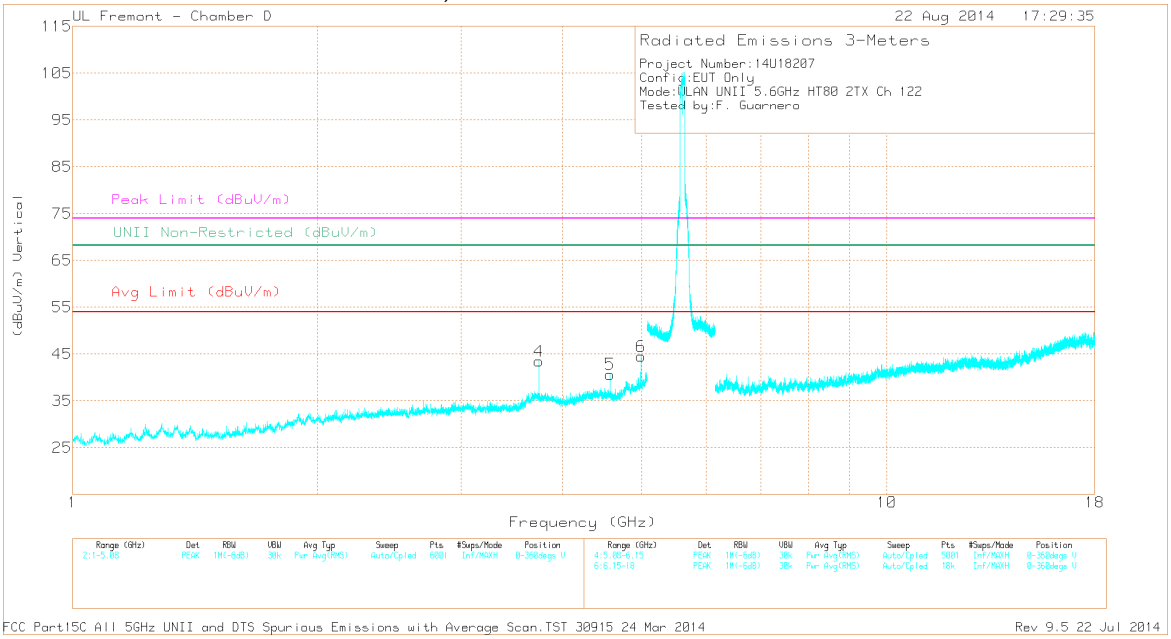
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT, CH 122



MID CHANNEL VERTICAL PLOT, CH 122



DATA

Marker	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)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.74	47.93	PK1	33.3	-28.8	0	52.43	-	-	74	-21.57	-	-	355	204	H
	* 3.74	43.11	AD1	33.3	-28.8	.21	47.82	54	-6.18	-	-	-	-	355	204	H
2	* 4.571	40.33	PK1	34	-27.8	0	46.53	-	-	74	-27.47	-	-	9	327	H
	* 4.571	31.97	AD1	34	-27.8	.21	38.38	54	-15.62	-	-	-	-	9	327	H
4	* 3.74	43.84	PK1	33.3	-28.8	0	48.34	-	-	74	-25.66	-	-	355	311	V
	* 3.74	37.2	AD1	33.3	-28.8	.21	41.91	54	-12.09	-	-	-	-	355	311	V
5	* 4.571	41.84	PK1	34	-27.8	0	48.04	-	-	74	-25.96	-	-	25	147	V
	* 4.571	35.24	AD1	34	-27.8	.21	41.65	54	-12.35	-	-	-	-	25	147	V
6	* 4.987	41.91	PK1	34.2	-26	0	50.11	-	-	74	-23.89	-	-	19	176	V
	* 4.987	33.28	AD1	34.2	-26	.21	41.69	54	-12.31	-	-	-	-	19	176	V
3	6.55	37.13	PK1	35.6	-25.3	0	47.43	-	-	-	-	68.2	-20.77	360	271	H
	6.551	25.1	AD1	35.6	-25.3	.21	35.61	-	-	-	-	-	-	360	271	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

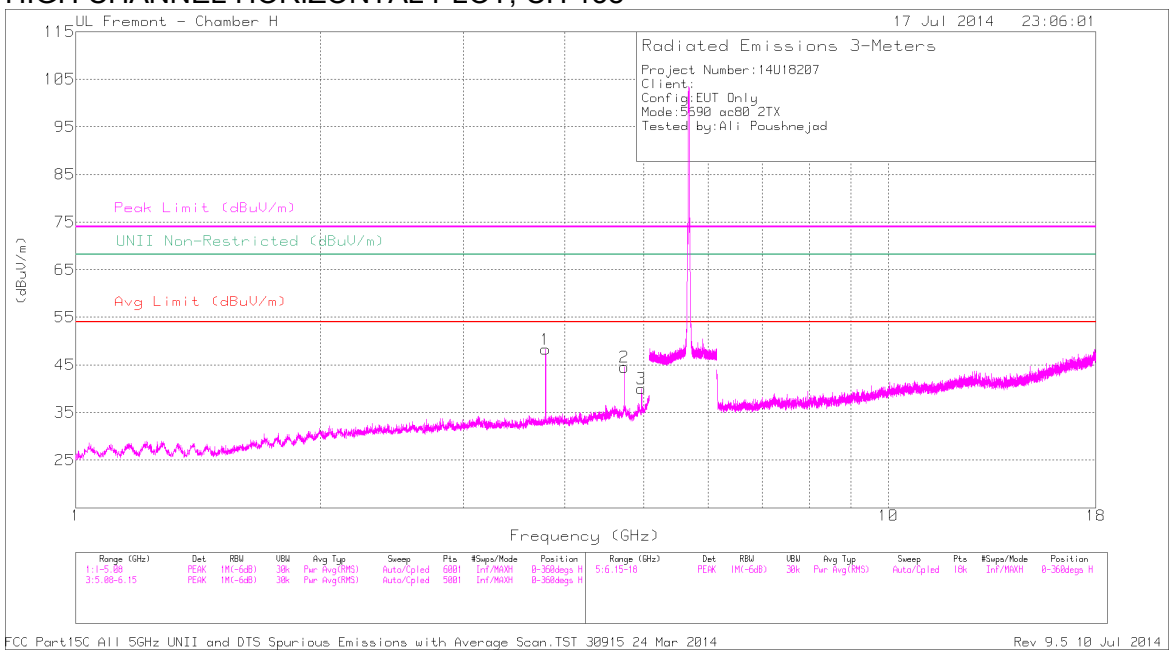
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

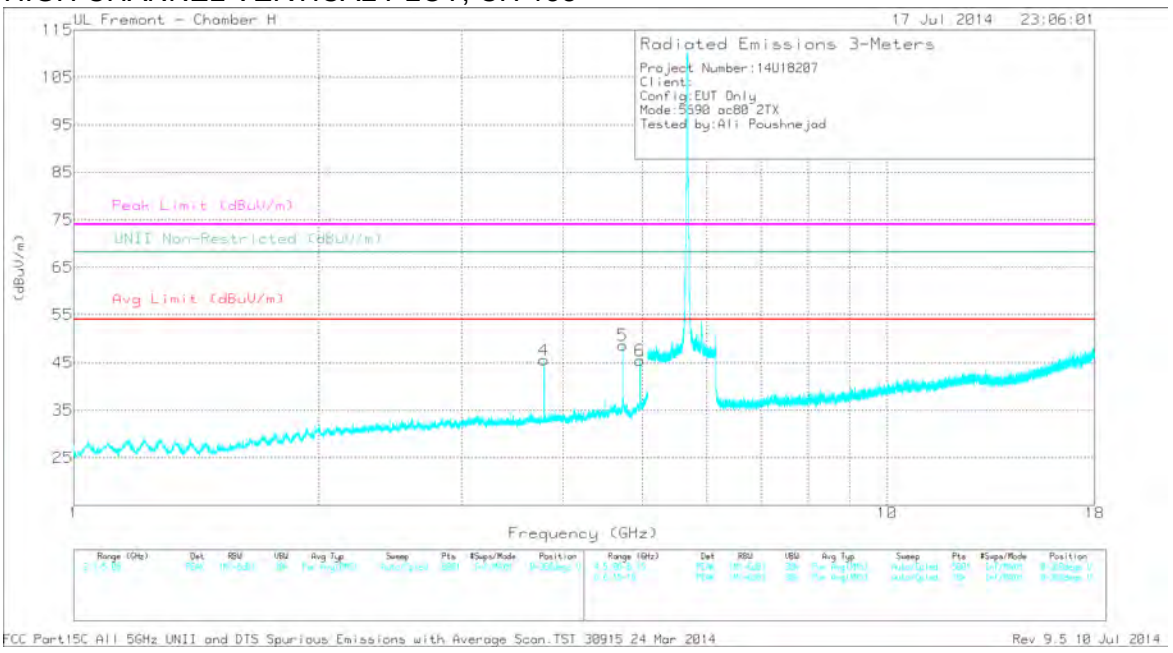
10.2.22. TX ABOVE 1G 802.11ac 80MHz 2TX MODE, CHANNEL 138, 5.6 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT, CH 138



HIGH CHANNEL VERTICAL PLOT, CH 138



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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	* 3.787	51.58	PK1	33.2	-33.1	51.68	-	-	74	-22.32	-	-	218	194	H
	* 3.787	48.01	AD1	33.2	-33.1	48.11	54	-5.89	-	-	-	-	218	194	H
2	* 4.733	46.98	PK1	34.3	-31.5	49.78	-	-	74	-24.22	-	-	270	324	H
	* 4.733	41.75	AD1	34.3	-31.5	44.55	54	-9.45	-	-	-	-	270	324	H
3	* 4.97	44.32	PK1	34.3	-31	47.62	-	-	74	-26.38	-	-	335	366	H
	* 4.97	37.76	AD1	34.3	-31	41.06	54	-12.94	-	-	-	-	335	366	H
4	* 3.787	51.02	PK1	33.2	-33.1	51.12	-	-	74	-22.88	-	-	266	235	V
	* 3.787	47.34	AD1	33.2	-33.1	47.44	54	-6.56	-	-	-	-	266	235	V
5	* 4.733	50.58	PK1	34.3	-31.5	53.38	-	-	74	-20.62	-	-	287	336	V
	* 4.733	46.69	AD1	34.3	-31.5	49.49	54	-4.51	-	-	-	-	287	336	V
6	* 4.97	48.01	PK1	34.3	-31	51.31	-	-	74	-22.69	-	-	285	334	V
	* 4.97	42.64	AD1	34.3	-31	45.94	54	-8.06	-	-	-	-	285	334	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

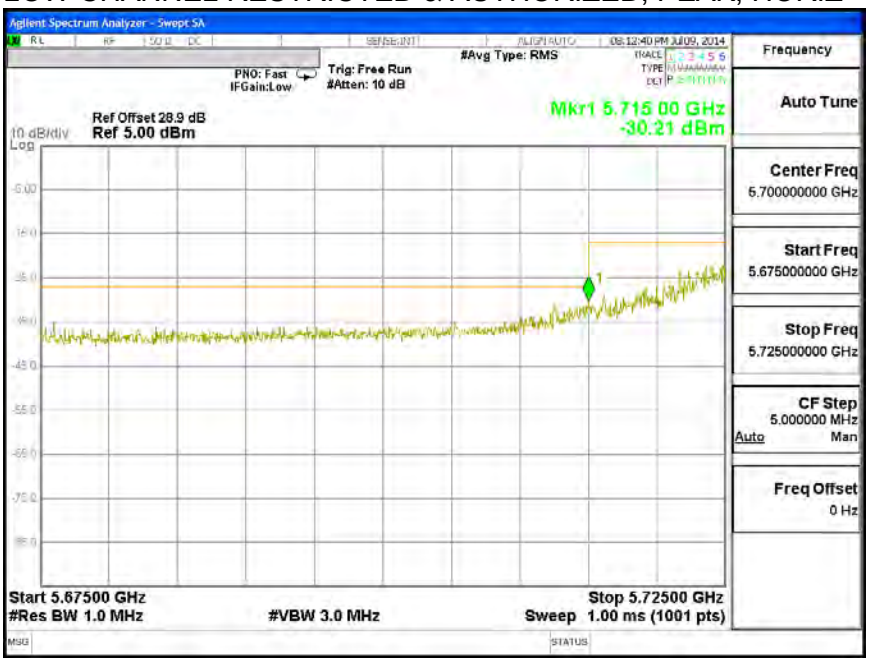
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

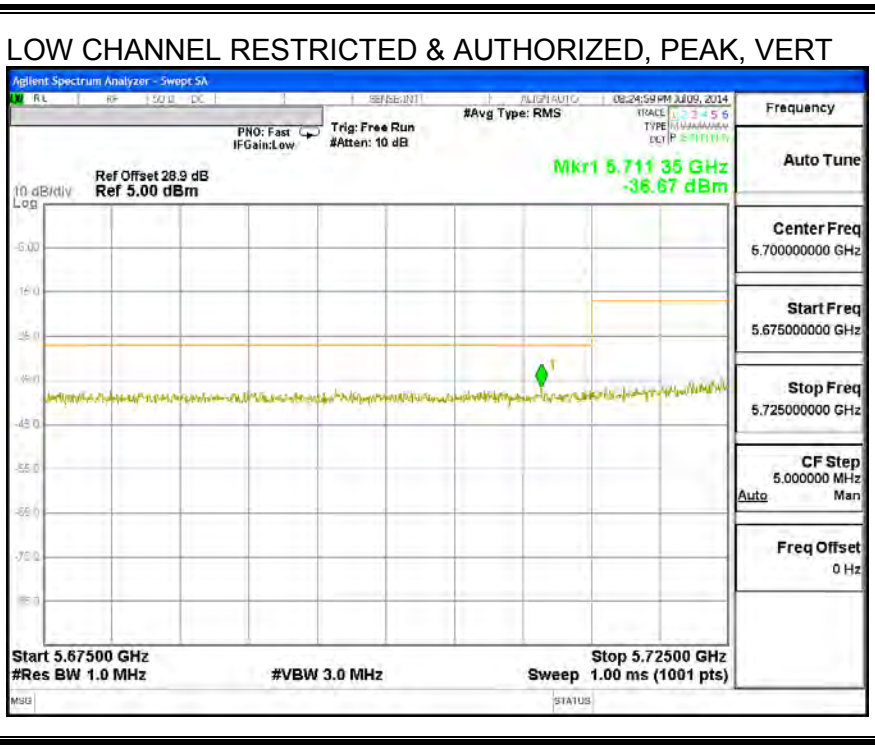
10.2.23. TX ABOVE 1 GHz 802.11a 1TX MODE IN THE 5.8 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, HORIZ

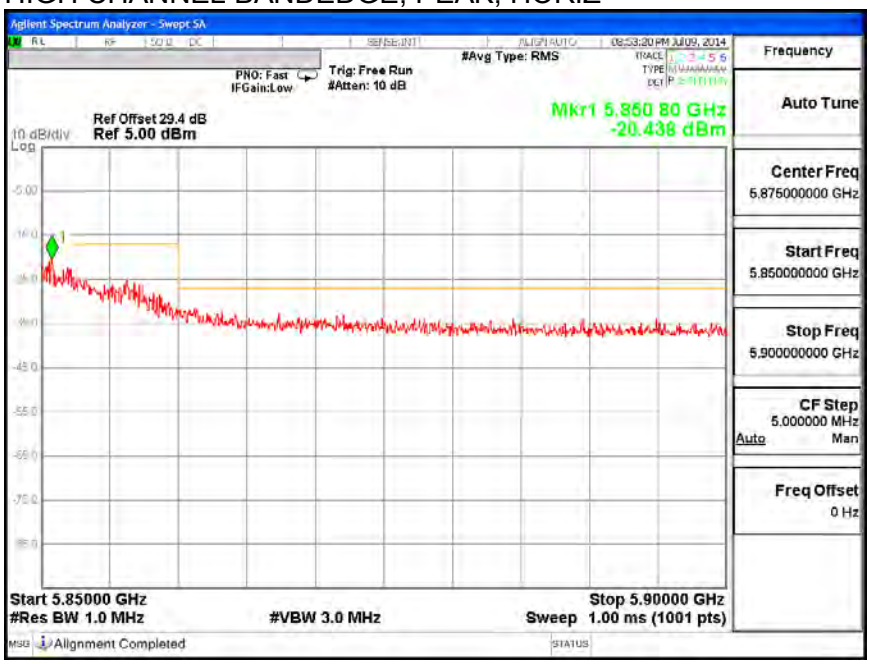


LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT

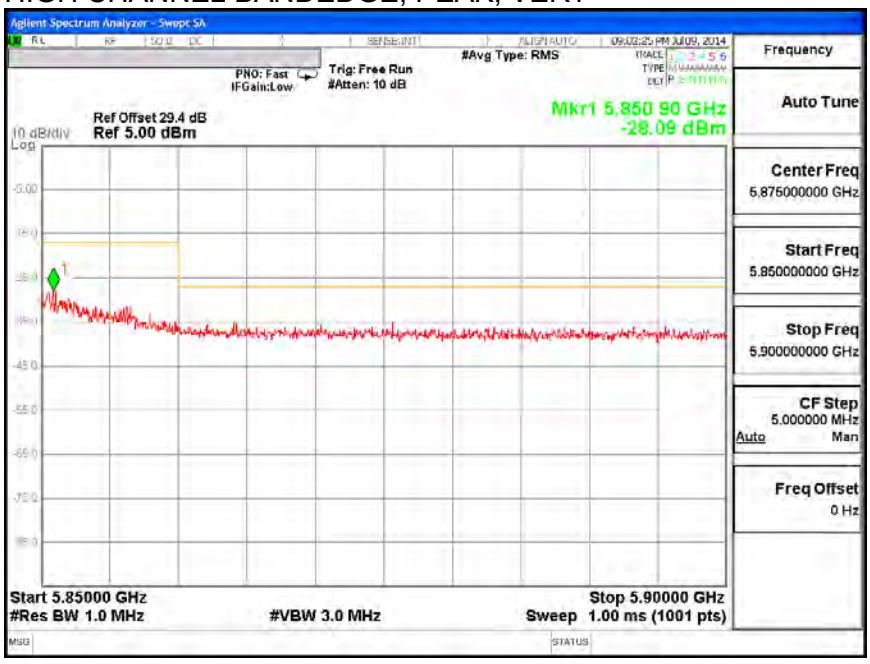


AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

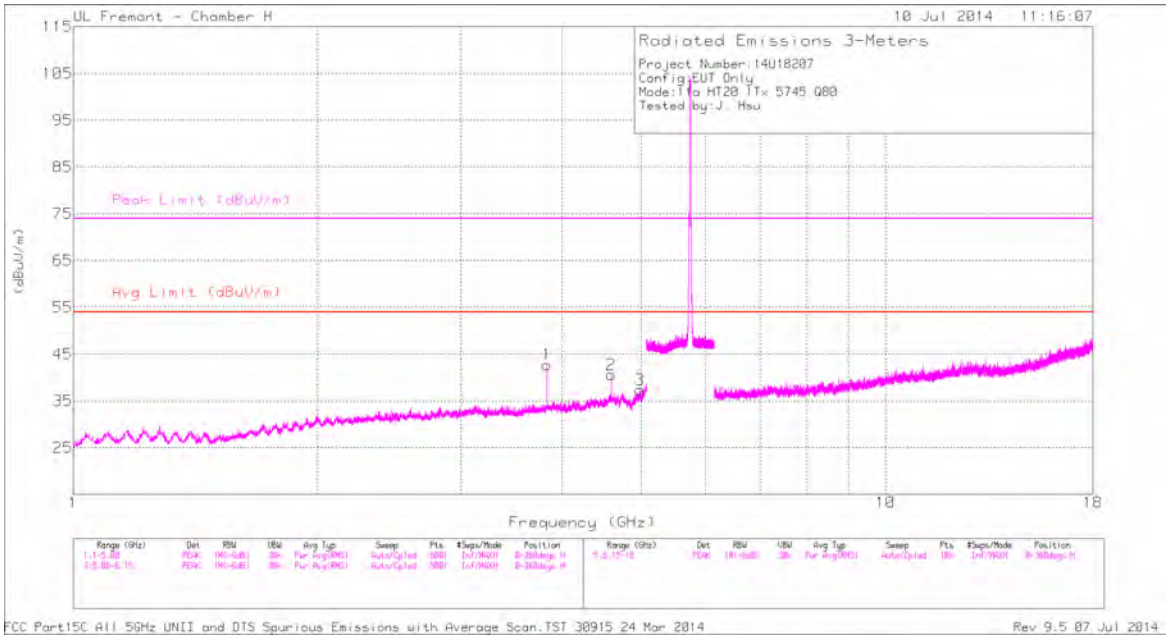


HIGH CHANNEL BANDEDGE, PEAK, VERT

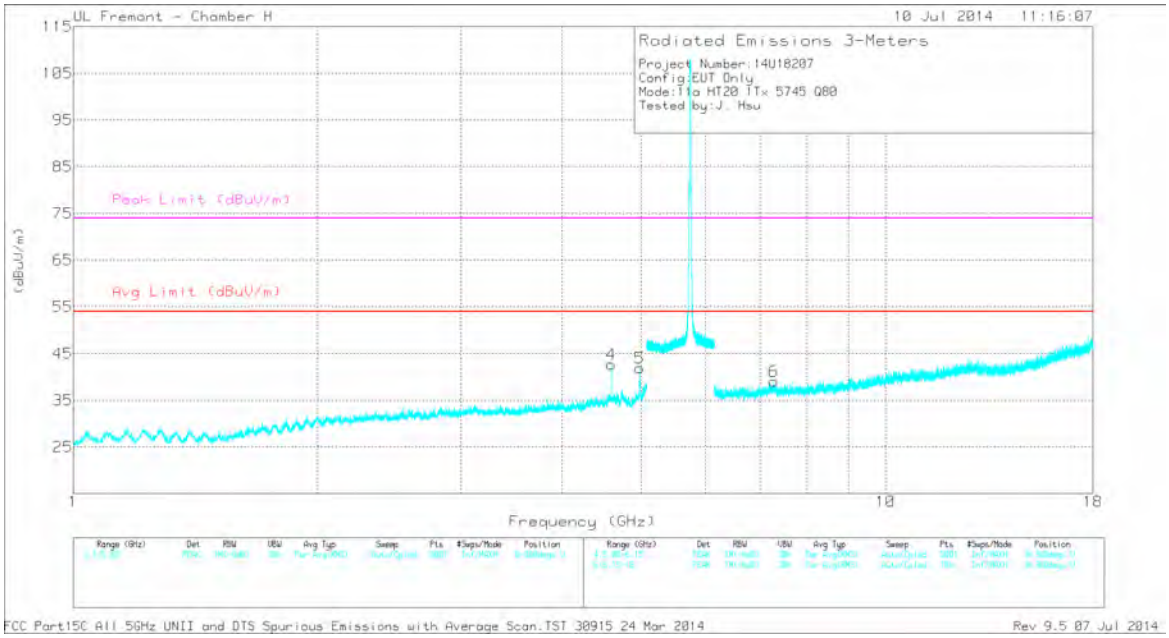


HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
1	* 3.83	49.44	PK1	33.3	-32.7	50.04	-	-	74	-23.96	127	159	H
	* 3.83	44.78	AD1	33.3	-32.7	45.38	54	-8.62	-	-	127	159	H
2	* 4.596	42.27	PK1	34.1	-31.8	44.57	-	-	74	-29.43	257	388	H
	* 4.596	32.23	AD1	34.1	-31.8	34.53	54	-19.47	-	-	257	388	H
3	* 4.979	42.31	PK1	34.3	-31	45.61	-	-	74	-28.39	170	124	H
	* 4.979	32.72	AD1	34.3	-31	36.02	54	-17.98	-	-	170	124	H
4	* 4.596	46.84	PK1	34.1	-31.8	49.14	-	-	74	-24.86	199	387	V
	* 4.596	40.93	AD1	34.1	-31.8	43.23	54	-10.77	-	-	199	387	V
5	* 4.979	46.39	PK1	34.3	-31	49.69	-	-	74	-24.31	169	151	V
	* 4.979	37.43	AD1	34.3	-31	40.73	54	-13.27	-	-	169	151	V
6	* 7.289	39.66	PK1	36.2	-29.6	46.26	-	-	74	-27.74	60	176	V
	* 7.286	28.82	AD1	36.2	-29.5	35.52	54	-18.48	-	-	60	176	V

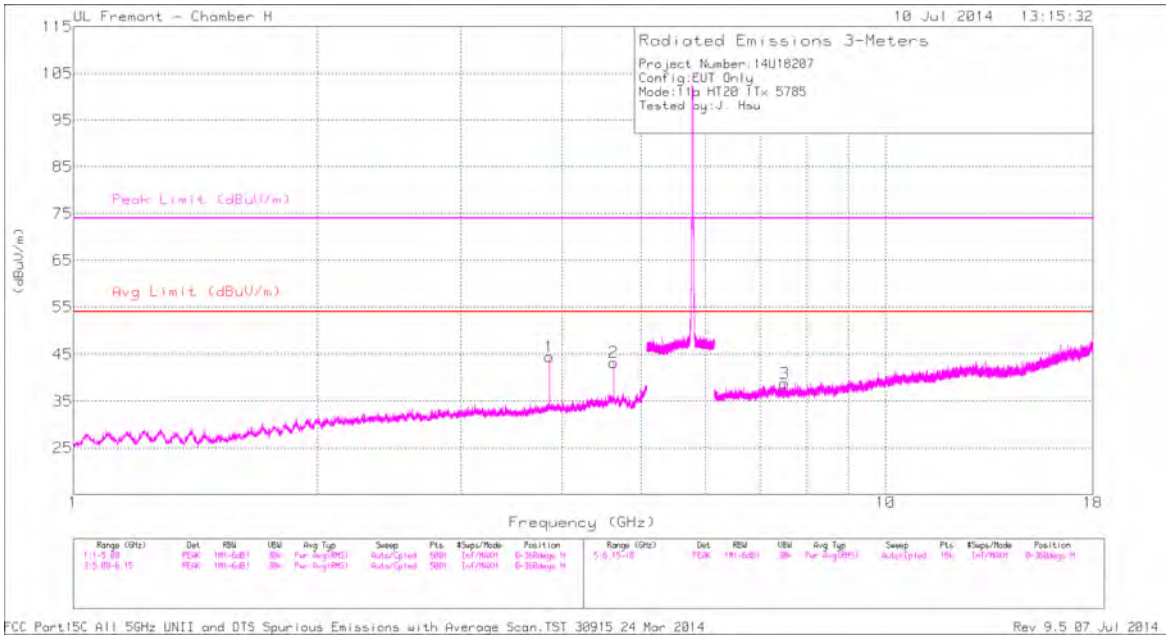
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

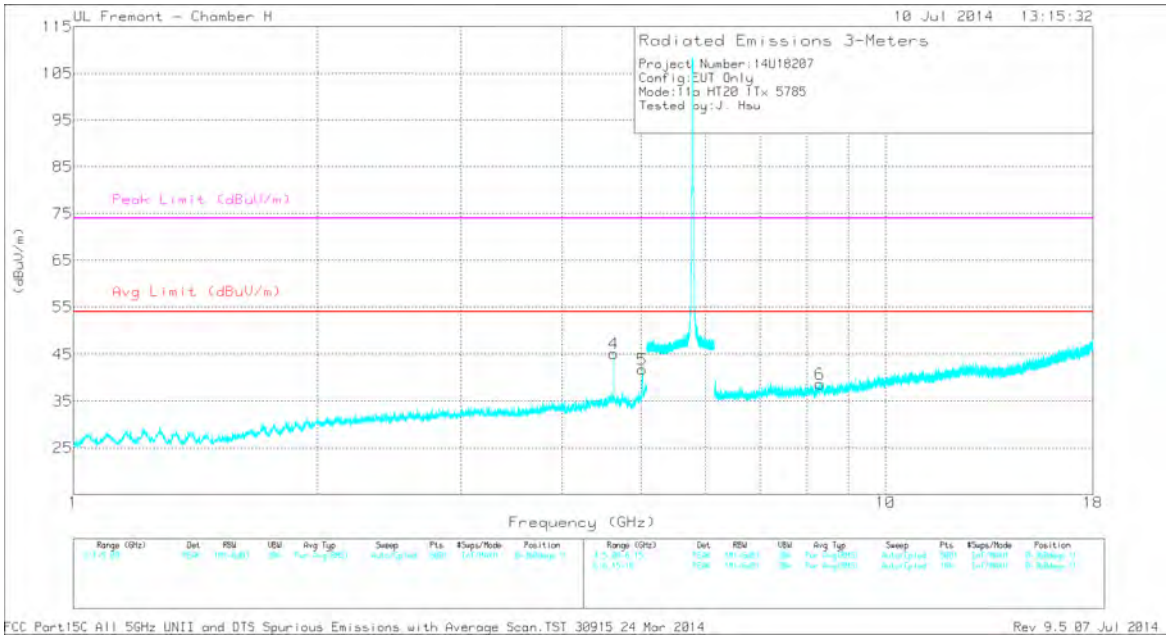
AD1 - KDB789033 Method: AD Primary Power Average

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
1	* 3.857	48.83	PK1	33.3	-32.8	49.33	-	-	74	-24.67	138	136	H
	* 3.857	44.32	AD1	33.3	-32.8	44.82	54	-9.18	-	-	138	136	H
2	* 4.628	46.91	PK1	34.2	-32	49.11	-	-	74	-24.89	134	346	H
	* 4.628	41.89	AD1	34.2	-32	44.09	54	-9.91	-	-	134	346	H
3	* 4.628	47.64	PK1	34.2	-32	49.84	-	-	74	-24.16	188	134	V
	* 4.628	42.44	AD1	34.2	-32	44.64	54	-9.36	-	-	188	134	V
4	* 5.014	46.46	PK1	34.3	-31.3	49.46	-	-	74	-24.54	185	196	V
	* 5.014	37.39	AD1	34.3	-31.3	40.39	54	-13.61	-	-	185	196	V
5	* 7.508	39.36	PK1	36.1	-29.6	45.86	-	-	74	-28.14	282	234	H
	* 7.509	28.33	AD1	36.1	-29.6	34.83	54	-19.17	-	-	282	234	H
6	* 8.293	37.44	PK1	36.1	-27.5	46.04	-	-	74	-27.96	206	270	V
	* 8.294	26.78	AD1	36.1	-27.5	35.38	54	-18.62	-	-	206	270	V

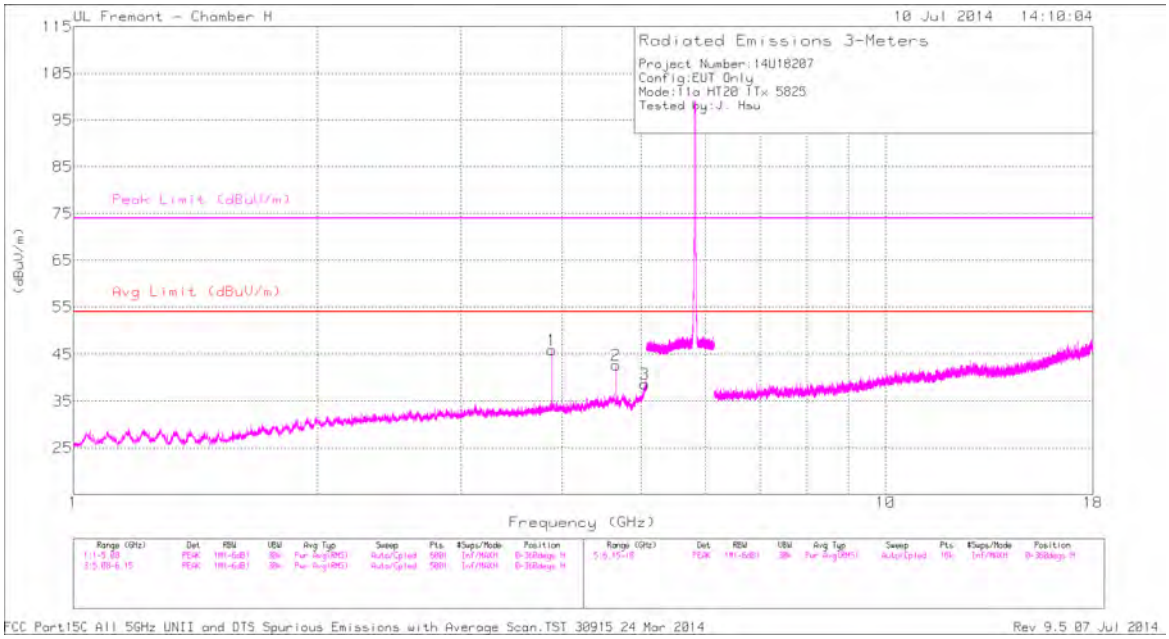
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

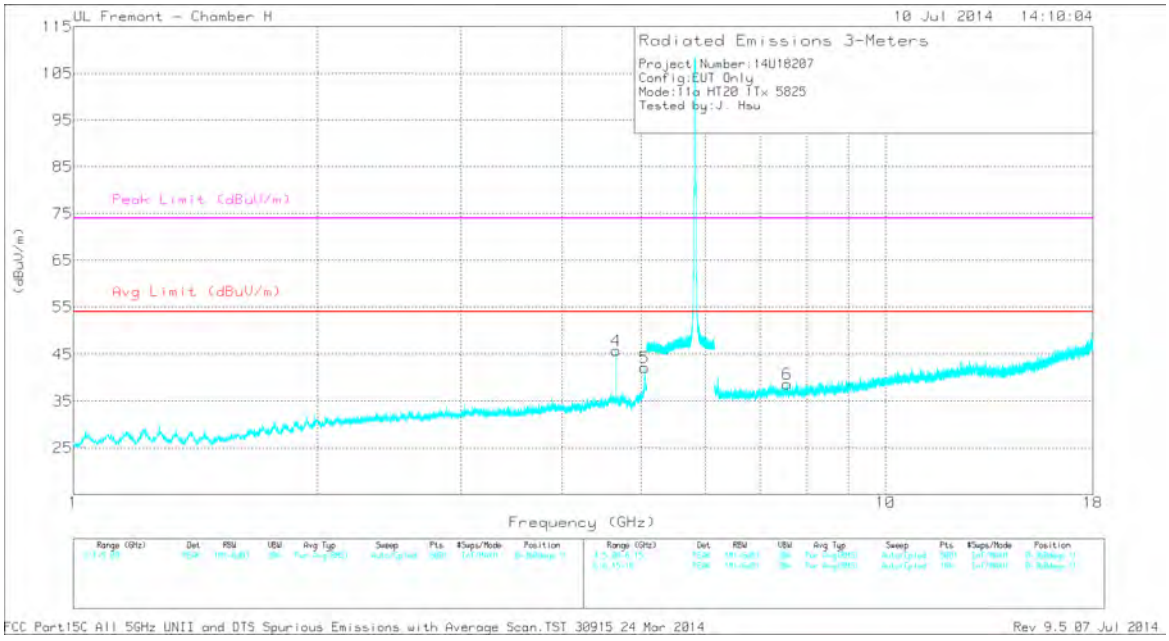
AD1 - KDB789033 Method: AD Primary Power Average

HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
1	* 3.883	50.49	PK1	33.4	-32.8	51.09	-	-	74	-22.91	133	134	H
	* 3.883	46.92	AD1	33.4	-32.8	47.52	54	-6.48	-	-	133	134	H
2	* 4.66	46.22	PK1	34.2	-32.2	48.22	-	-	74	-25.78	173	209	H
	* 4.66	41.2	AD1	34.2	-32.2	43.2	54	-10.8	-	-	173	209	H
3	* 5.048	41.52	PK1	34.4	-29.8	46.12	-	-	74	-27.88	221	177	H
	* 5.048	29.98	AD1	34.4	-29.8	34.58	54	-19.42	-	-	221	177	H
4	* 4.66	47.99	PK1	34.2	-32.2	49.99	-	-	74	-24.01	188	128	V
	* 4.66	43.64	AD1	34.2	-32.2	45.64	54	-8.36	-	-	188	128	V
5	* 5.049	46.15	PK1	34.4	-29.8	50.75	-	-	74	-23.25	181	319	V
	* 5.048	37.12	AD1	34.4	-29.8	41.72	54	-12.28	-	-	181	319	V
6	* 7.562	39.57	PK1	36.1	-29.2	46.47	-	-	74	-27.53	224	274	V
	* 7.561	28.21	AD1	36.1	-29.2	35.11	54	-18.89	-	-	224	274	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

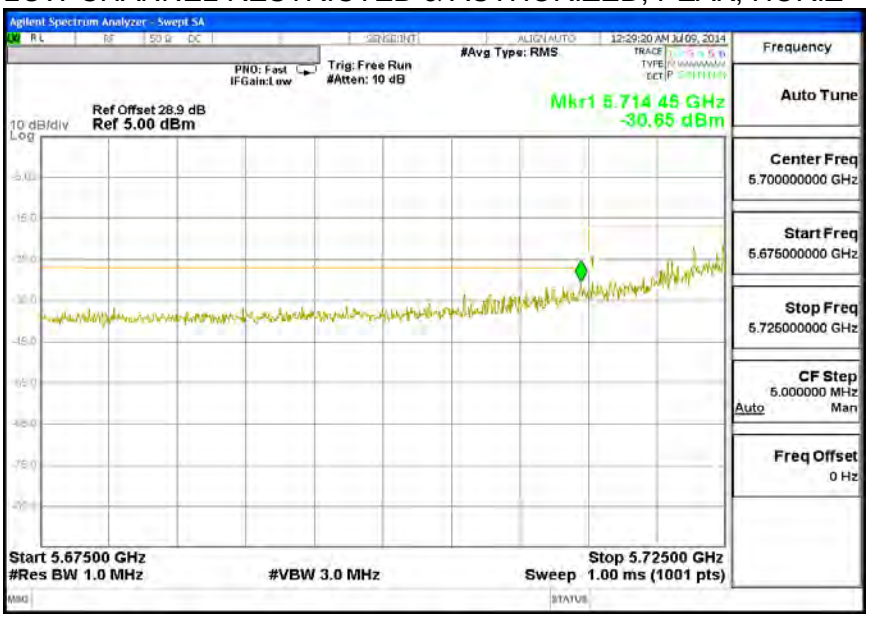
AD1 - KDB789033 Method: AD Primary Power Average

10.2.24. TX ABOVE 1 GHz 802.11n HT20 CDD 2TX MODE IN THE 5.8 GHz BAND

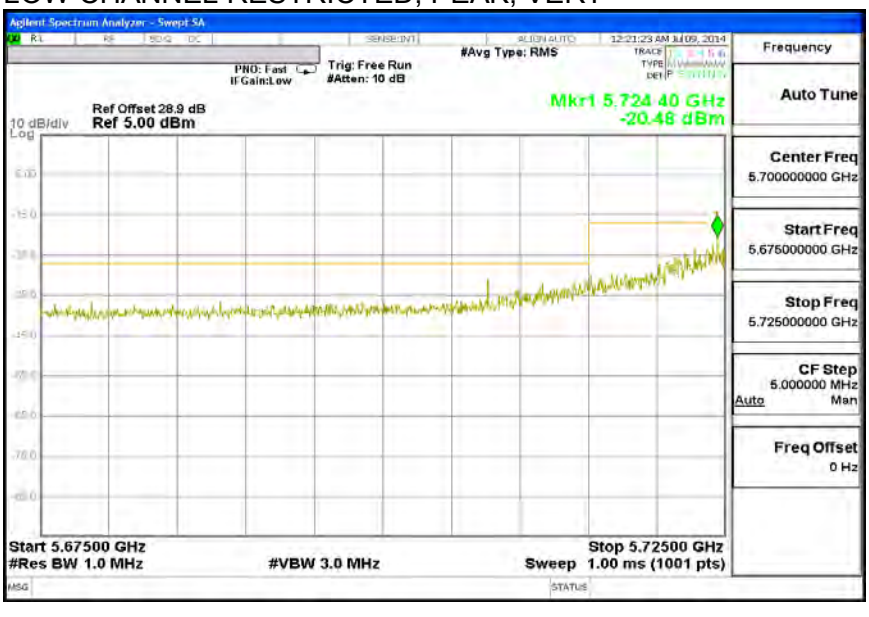
All radiated tests for 802.11n HT20 were conducted with CDD mode at the elevated power of STBC mode. This configuration is considered representative of both modes.

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, HORIZ

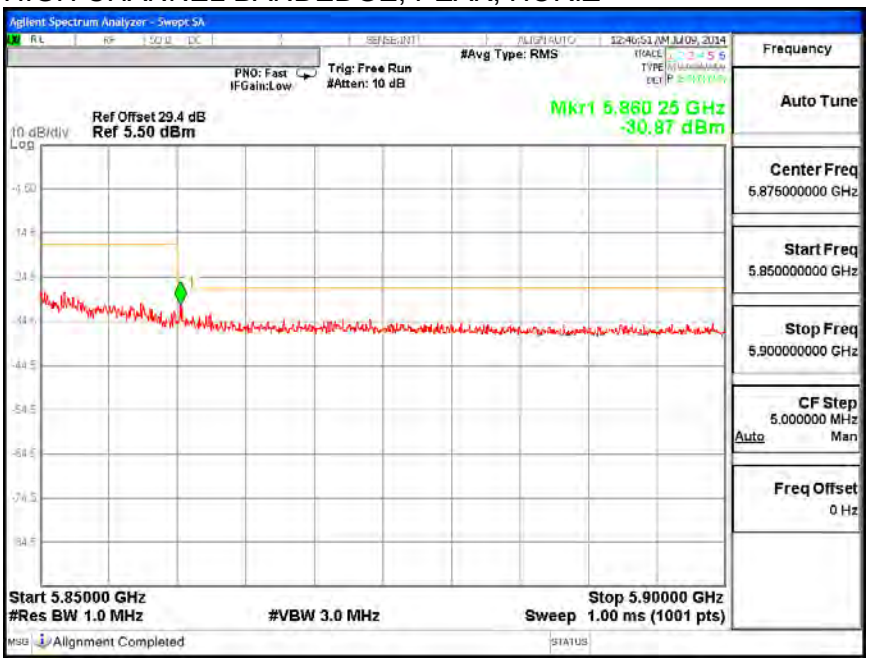


LOW CHANNEL RESTRICTED, PEAK, VERT

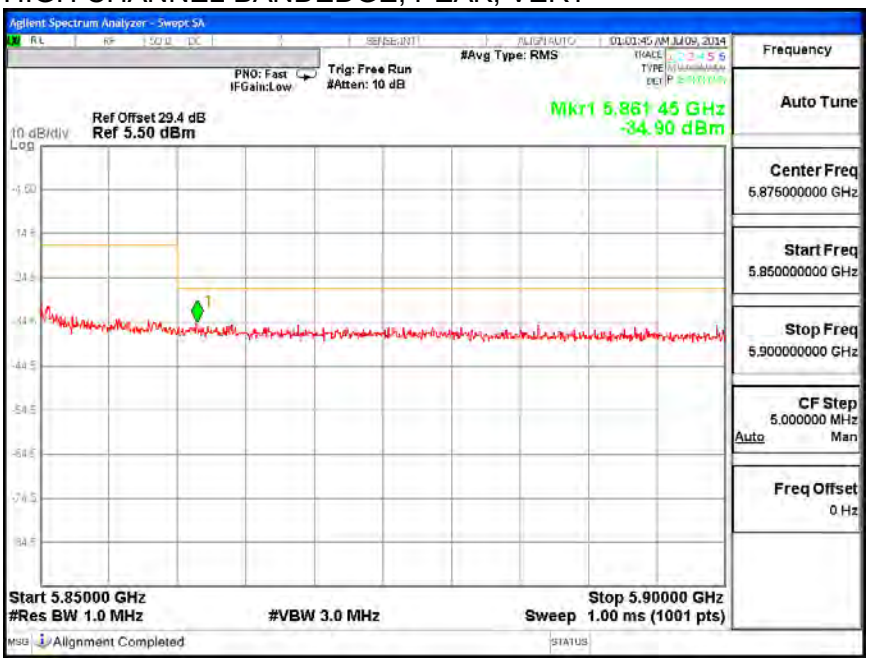


AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

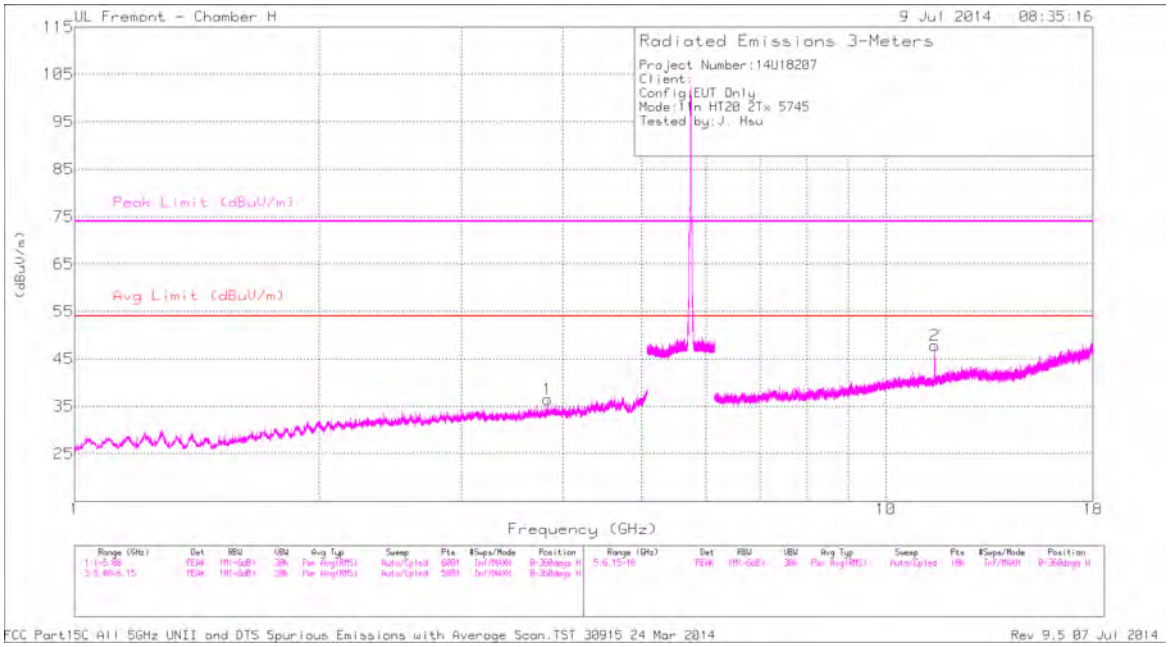


HIGH CHANNEL BANDEDGE, PEAK, VERT

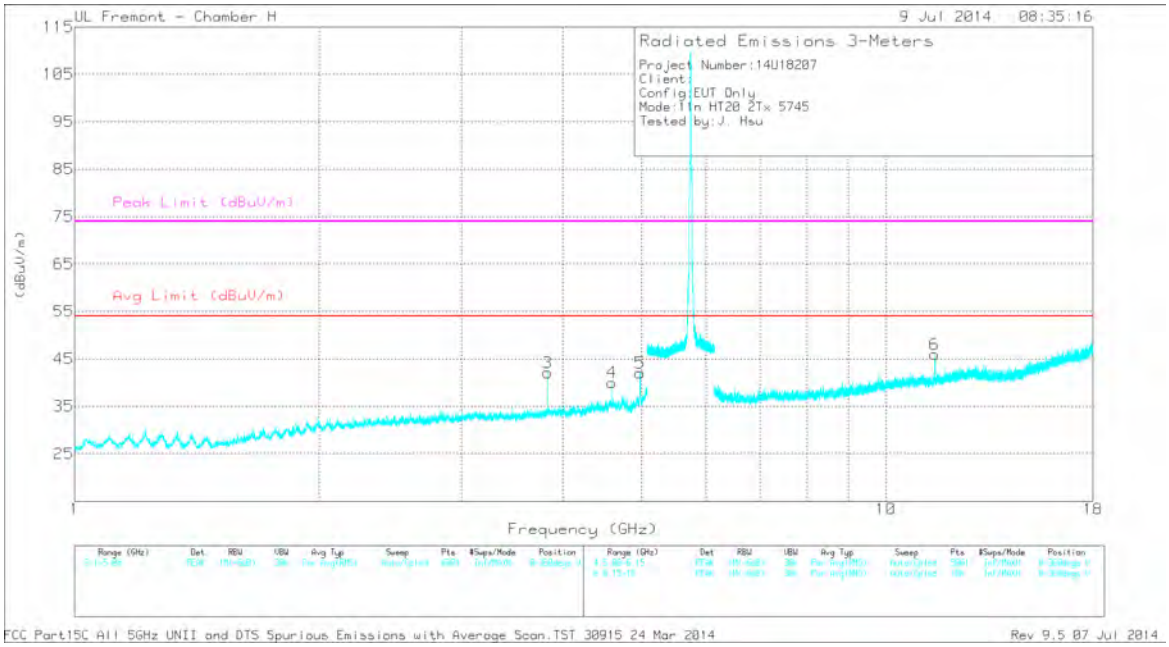


HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT CH149



LOW CHANNEL VERTICAL PLOT CH149



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
1	* 3.832	42.29	PK1	33.3	-32.8	42.79	-	-	74	-31.21	177	111	H
	* 3.83	31.12	AD1	33.3	-32.7	31.72	54	-22.28	-	-	177	111	H
3	* 3.83	47.03	PK1	33.3	-32.7	47.63	-	-	74	-26.37	358	227	V
	* 3.83	41.82	AD1	33.3	-32.7	42.42	54	-11.58	-	-	358	227	V
4	* 4.596	43.93	PK1	34.1	-31.8	46.23	-	-	74	-27.77	113	175	V
	* 4.596	36.31	AD1	34.1	-31.8	38.61	54	-15.39	-	-	113	175	V
5	* 4.979	45.33	PK1	34.3	-31	48.63	-	-	74	-25.37	135	191	V
	* 4.979	37.82	AD1	34.3	-31	41.12	54	-12.88	-	-	135	191	V
2	* 11.493	45.58	PK1	38.1	-25.9	57.78	-	-	74	-16.22	86	252	H
	* 11.49	33.69	AD1	38.1	-25.9	45.89	54	-8.11	-	-	86	252	H
6	* 11.485	45.74	PK1	38.1	-25.9	57.94	-	-	74	-16.06	163	219	V
	* 11.485	33.19	AD1	38.1	-25.9	45.39	54	-8.61	-	-	163	219	V

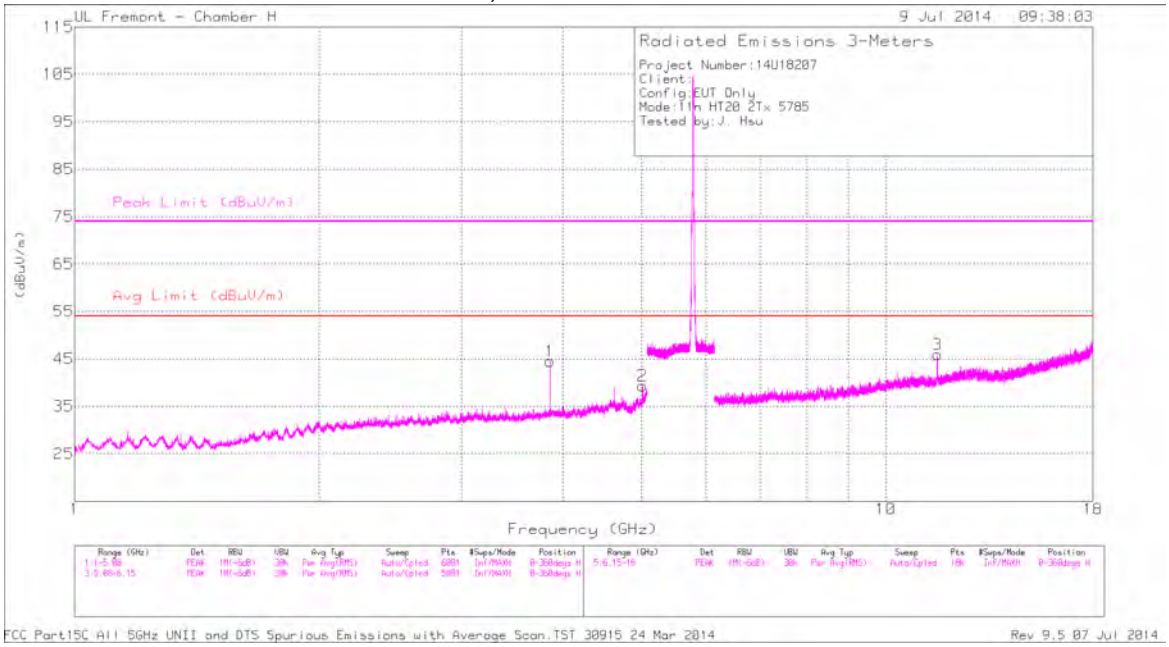
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

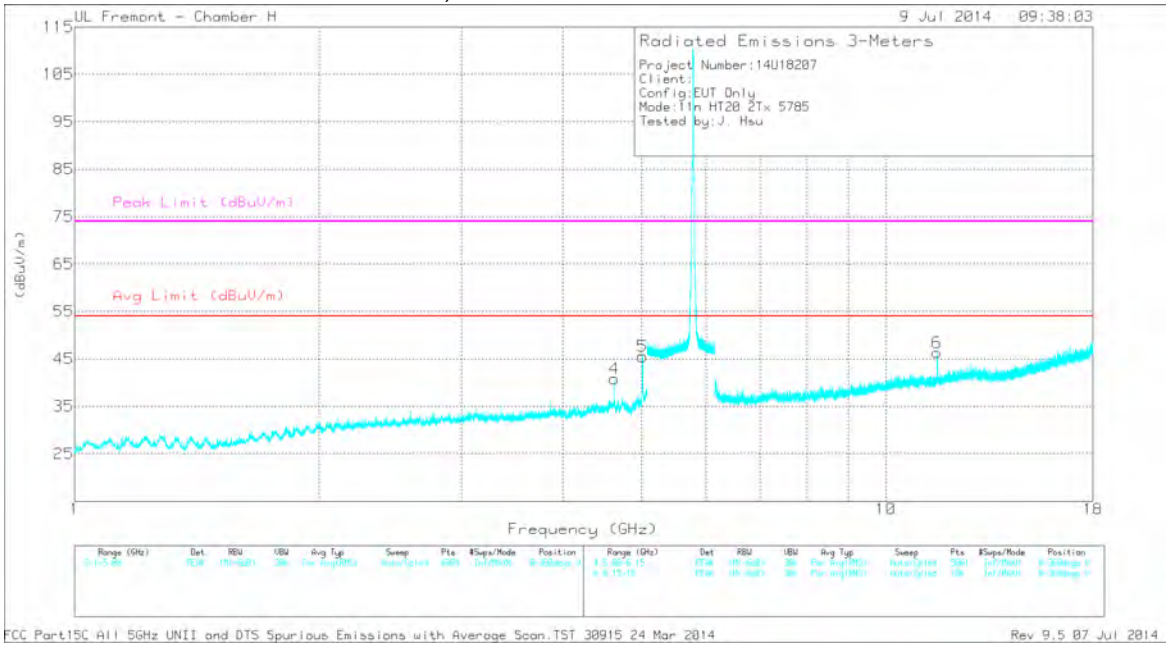
AD1 - KDB789033 Method: AD Primary Power Average

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT, CH 157



MID CHANNEL VERTICAL PLOT, CH 157



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
1	* 3.857	48.07	PK1	33.3	-32.8	48.57	-	-	74	-25.43	175	171	H
	* 3.857	43.86	AD1	33.3	-32.8	44.36	54	-9.64	-	-	175	171	H
2	* 5.013	42.5	PK1	34.3	-31.3	45.5	-	-	74	-28.5	250	157	H
	* 5.014	33.82	AD1	34.3	-31.3	36.82	54	-17.18	-	-	250	157	H
4	* 4.628	45.19	PK1	34.2	-32	47.39	-	-	74	-26.61	218	385	V
	* 4.628	38.27	AD1	34.2	-32	40.47	54	-13.53	-	-	218	385	V
5	* 5.013	48.3	PK1	34.3	-31.3	51.3	-	-	74	-22.7	203	175	V
	* 5.014	42.35	AD1	34.3	-31.3	45.35	54	-8.65	-	-	203	175	V
3	* 11.575	41.77	PK1	38.2	-25.1	54.87	-	-	74	-19.13	198	115	H
	* 11.575	29.99	AD1	38.2	-25.1	43.09	54	-10.91	-	-	198	115	H
6	* 11.571	42.5	PK1	38.2	-25.2	55.5	-	-	74	-18.5	23	100	V
	* 11.57	30.53	AD1	38.2	-25.2	43.53	54	-10.47	-	-	23	100	V

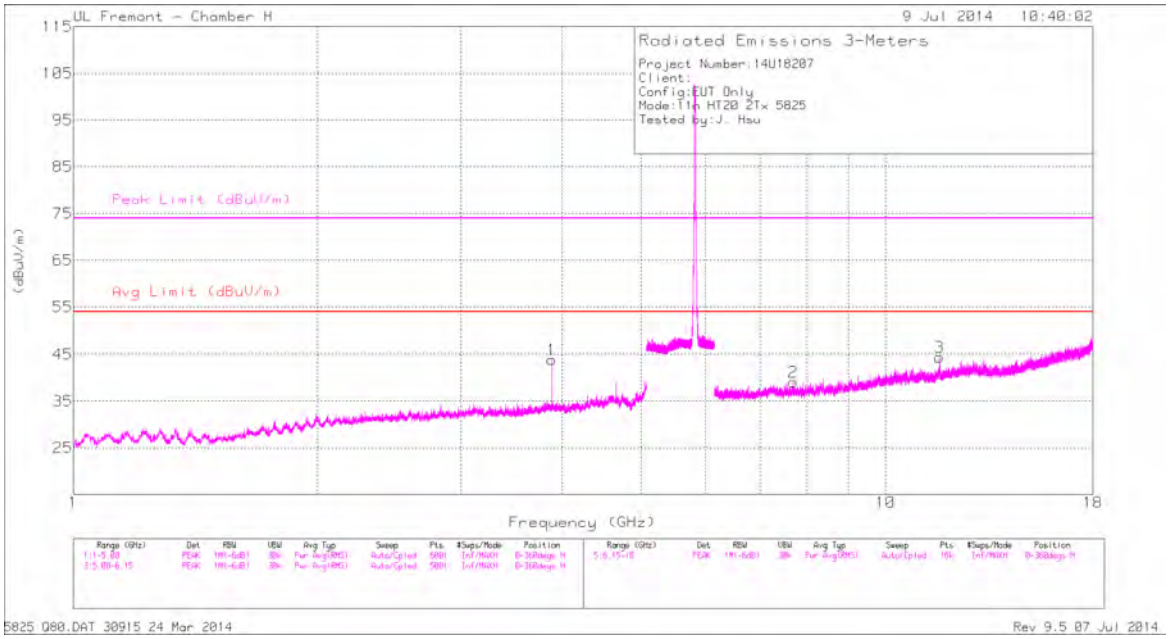
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

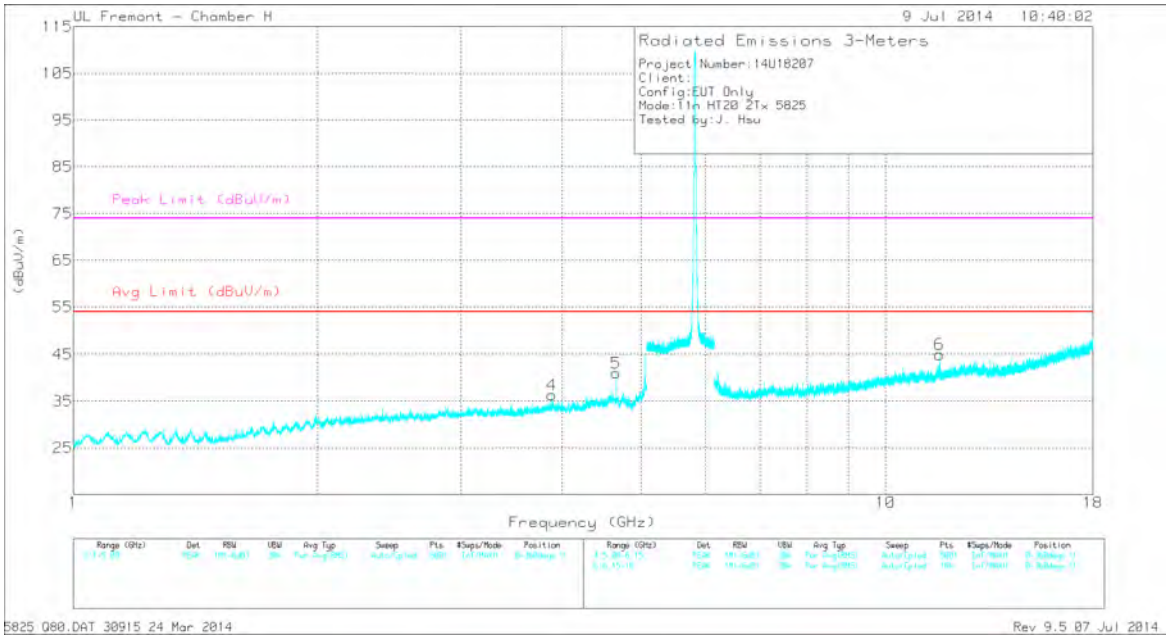
AD1 - KDB789033 Method: AD Primary Power Average

HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
1	* 3.883	47.42	PK1	33.4	-32.8	48.02	-	-	74	-25.98	179	176	H
	* 3.883	42.78	AD1	33.4	-32.8	43.38	54	-10.62	-	-	179	176	H
4	* 3.883	42.86	PK1	33.4	-32.8	43.46	-	-	74	-30.54	219	118	V
	* 3.883	33.23	AD1	33.4	-32.8	33.83	54	-20.17	-	-	219	118	V
5	* 4.66	45.42	PK1	34.2	-32.2	47.42	-	-	74	-26.58	213	146	V
	* 4.66	39.36	AD1	34.2	-32.2	41.36	54	-12.64	-	-	213	146	V
2	* 7.692	39.09	PK1	36.1	-29.4	45.79	-	-	74	-28.21	250	133	H
	* 7.69	28.37	AD1	36.1	-29.4	35.07	54	-18.93	-	-	250	133	H
3	* 11.653	36.57	PK1	38.3	-25.6	49.27	-	-	74	-24.73	280	177	H
	* 11.653	25.79	AD1	38.3	-25.6	38.49	54	-15.51	-	-	280	177	H
6	* 11.65	41.57	PK1	38.3	-25.6	54.27	-	-	74	-19.73	358	145	V
	* 11.65	28.74	AD1	38.3	-25.6	41.44	54	-12.56	-	-	358	145	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

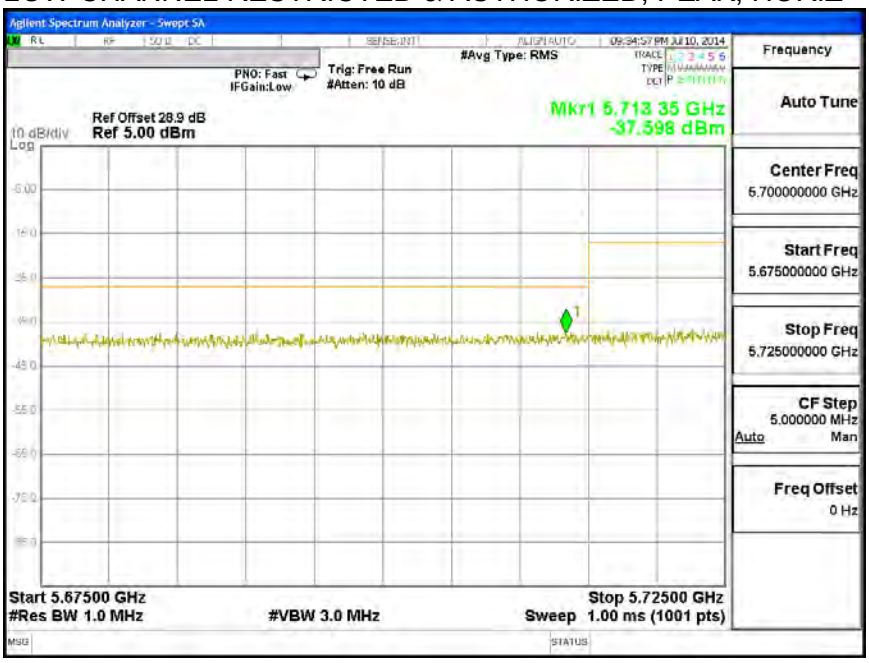
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

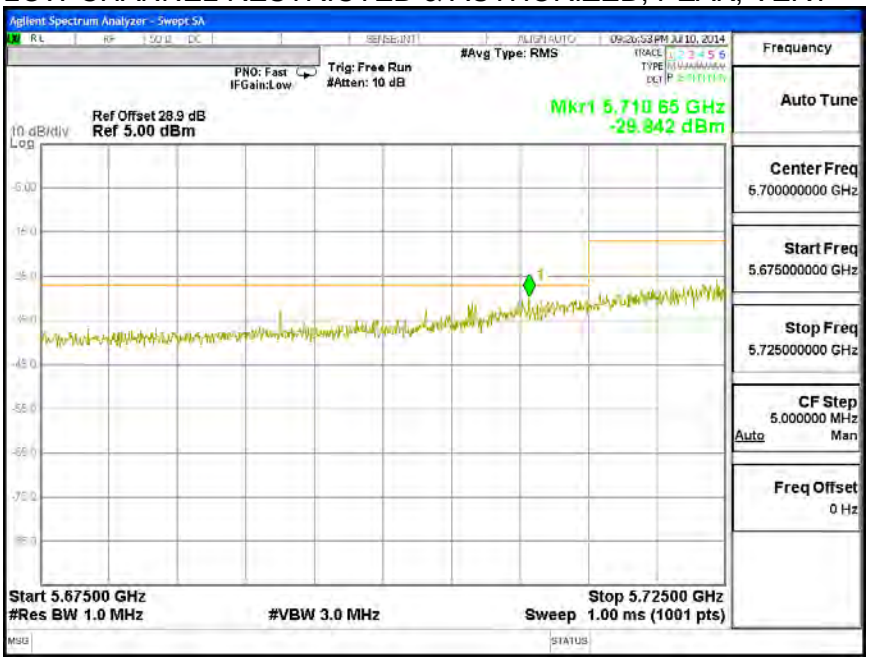
10.2.25. TX ABOVE 1 GHz 802.11n HT40 1TX MODE IN THE 5.8 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, HORIZ

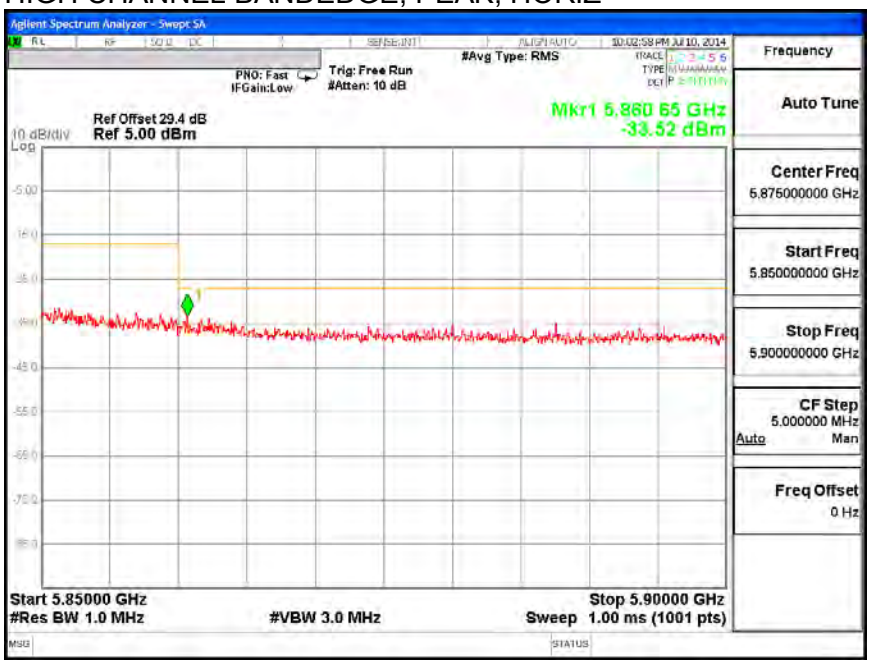


LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT

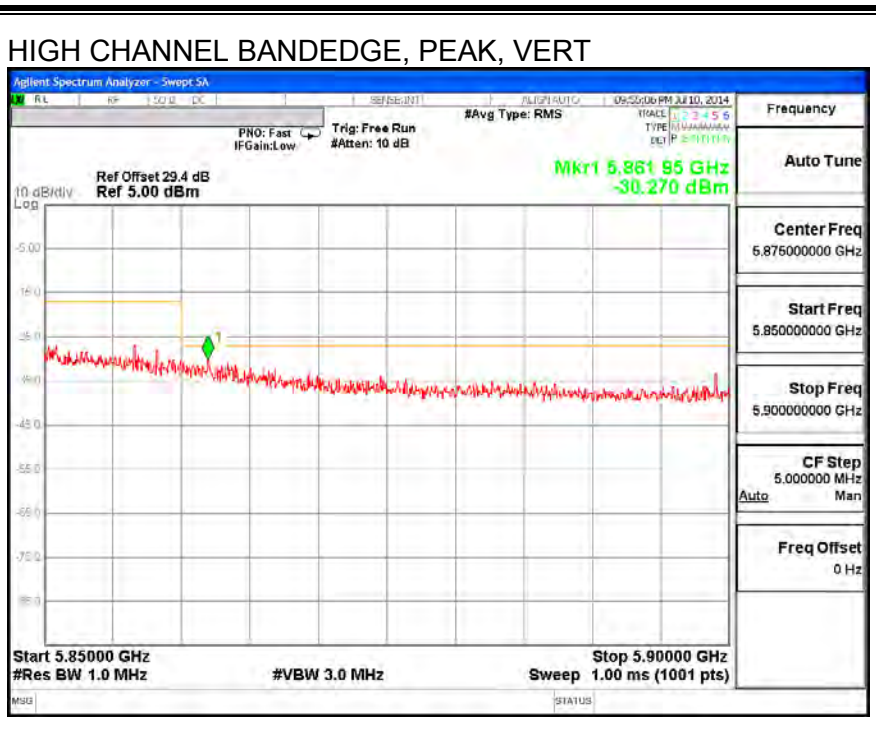


AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

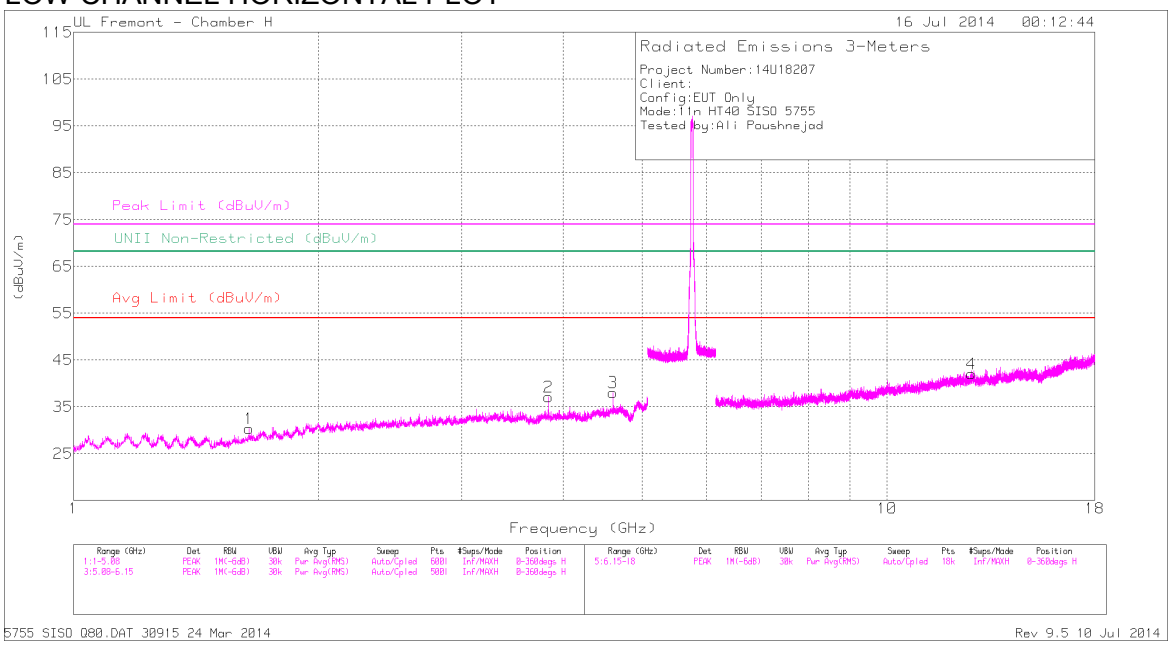


HIGH CHANNEL BANDEDGE, PEAK, VERT

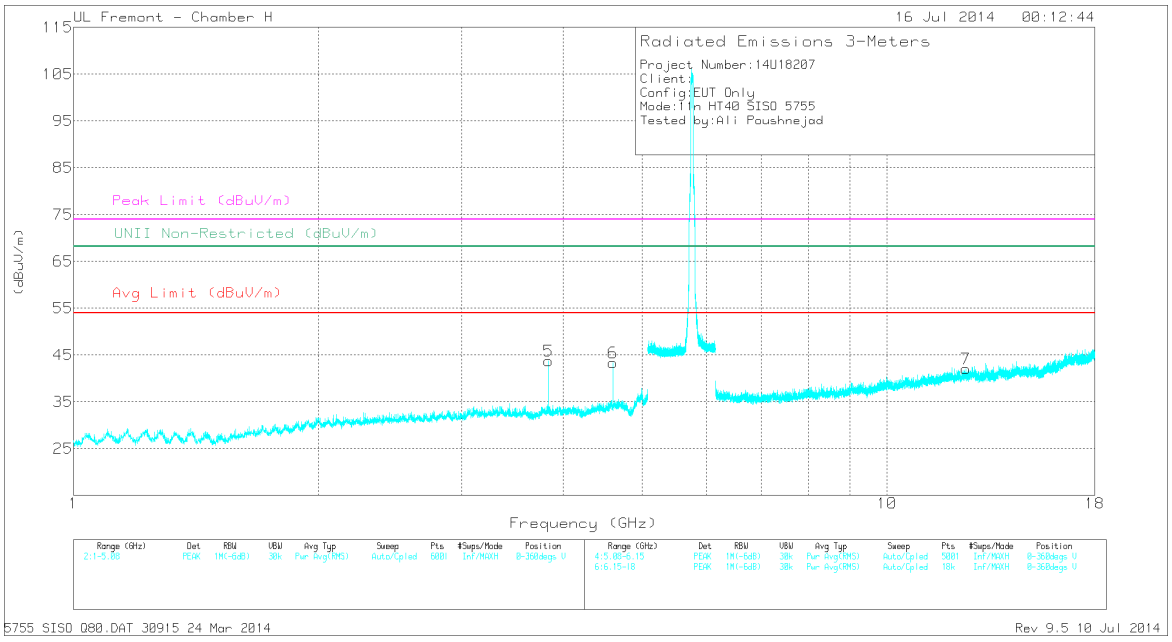


HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	* 3.837	43.38	PK1	33.1	-33.4	43.08	-	-	74	-30.92	-	-	238	202	H
	* 3.837	34.21	AD1	33.1	-33.4	33.91	54	-20.09	-	-	-	-	238	202	H
3	* 4.604	45.05	PK1	33.9	-32.7	46.25	-	-	74	-27.75	-	-	98	257	H
	* 4.604	37.26	AD1	33.9	-32.7	38.46	54	-15.54	-	-	-	-	98	257	H
5	* 3.837	49.67	PK1	33.1	-33.4	49.37	-	-	74	-24.63	-	-	355	230	V
	* 3.837	45.25	AD1	33.1	-33.4	44.95	54	-9.05	-	-	-	-	355	230	V
6	* 4.604	46.86	PK1	33.9	-32.7	48.06	-	-	74	-25.94	-	-	101	201	V
	* 4.604	41.75	AD1	33.9	-32.7	42.95	54	-11.05	-	-	-	-	101	201	V
4	* 12.698	37.11	PK1	39.1	-26.5	49.71	-	-	74	-24.29	-	-	76	187	H
	* 12.698	25.04	AD1	39.1	-26.5	37.64	54	-16.36	-	-	-	-	76	187	H
7	* 12.437	36.39	PK1	38.9	-26.6	48.69	-	-	74	-25.31	-	-	113	200	V
	* 12.439	25.17	AD1	39	-26.6	37.57	54	-16.43	-	-	-	-	113	200	V
1	1.644	43.14	PK1	28.9	-34.6	37.44	-	-	-	-	68.2	-30.76	238	171	H
	1.644	31.08	AD1	28.9	-34.6	25.38	-	-	-	-	-	-	238	171	H

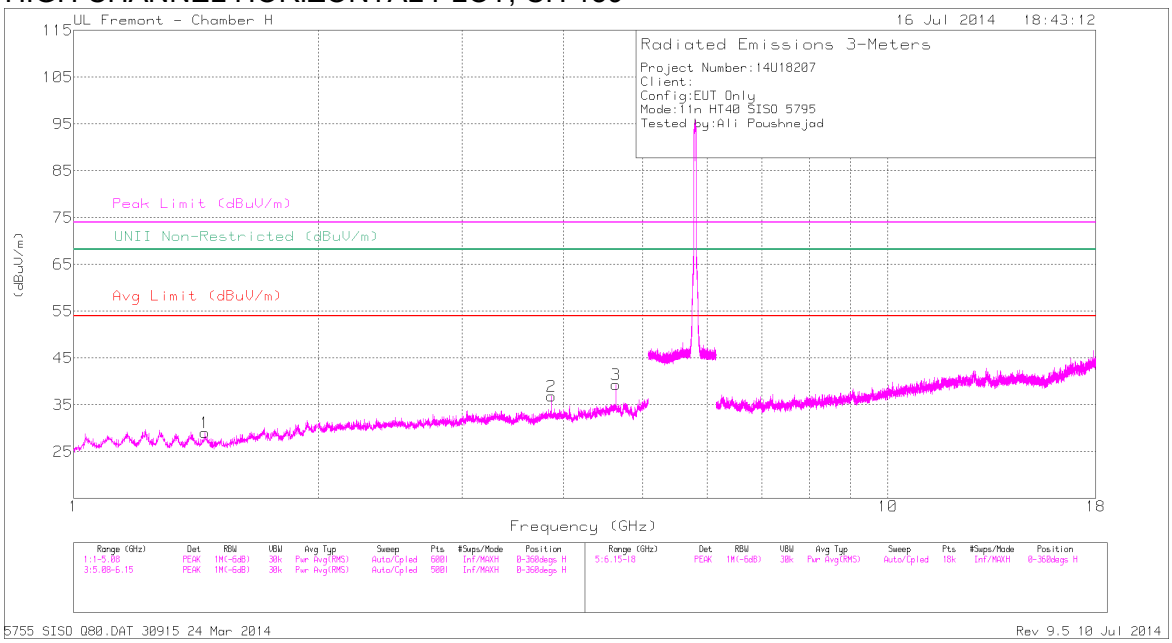
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

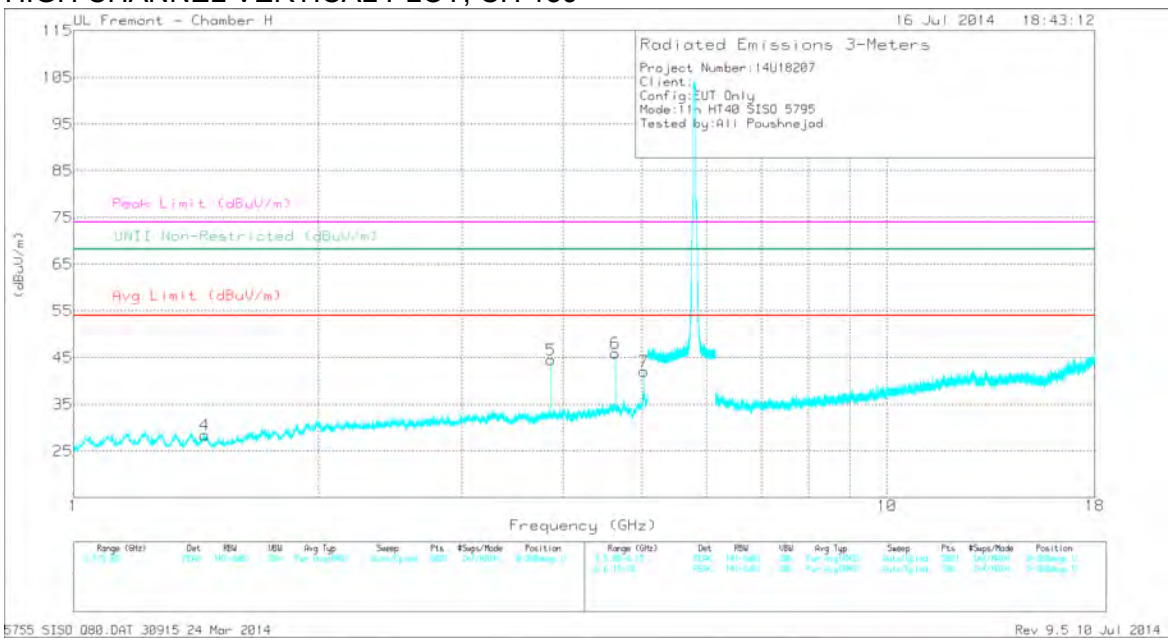
AD1 - KDB789033 Method: AD Primary Power Average

HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT, CH 159



HIGH CHANNEL VERTICAL PLOT, CH 159



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	* 1.451	43.64	PK1	28.2	-34.9	36.94	-	-	74	-37.06	-	-	220	155	H
	* 1.45	31.65	AD1	28.2	-34.9	24.95	54	-29.05	-	-	-	-	220	155	H
2	* 3.863	44.31	PK1	33.1	-33.5	43.91	-	-	74	-30.09	-	-	320	387	H
	* 3.863	37.02	AD1	33.1	-33.5	36.62	54	-17.38	-	-	-	-	320	387	H
3	* 4.636	45.9	PK1	33.9	-32.9	46.9	-	-	74	-27.1	-	-	41	395	H
	* 4.636	40.17	AD1	33.9	-32.9	41.17	54	-12.83	-	-	-	-	41	395	H
4	* 1.45	43.3	PK1	28.2	-34.9	36.6	-	-	74	-37.4	-	-	211	120	V
	* 1.449	31.7	AD1	28.2	-34.9	25	54	-29	-	-	-	-	211	120	V
5	* 3.863	49.3	PK1	33.1	-33.5	48.9	-	-	74	-25.1	-	-	355	256	V
	* 3.863	45.44	AD1	33.1	-33.5	45.04	54	-8.96	-	-	-	-	355	256	V
6	* 4.636	48.62	PK1	33.9	-32.9	49.62	-	-	74	-24.38	-	-	105	218	V
	* 4.636	44.48	AD1	33.9	-32.9	45.48	54	-8.52	-	-	-	-	105	218	V
7	* 5.023	46.15	PK1	34.1	-32	48.25	-	-	74	-25.75	-	-	79	235	V
	* 5.022	39.01	AD1	34.1	-32	41.11	54	-12.89	-	-	-	-	79	235	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

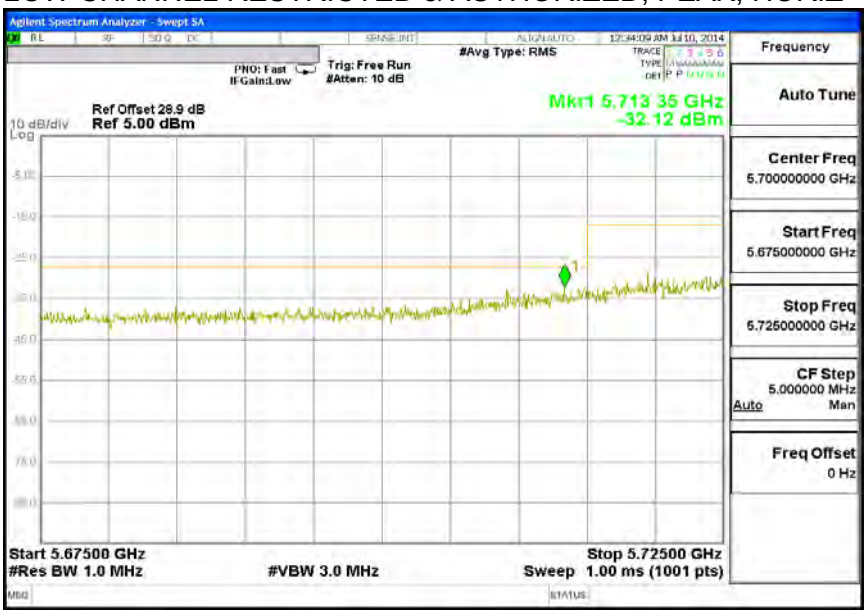
AD1 - KDB789033 Method: AD Primary Power Average

10.2.26. TX ABOVE 1 GHz 802.11n HT40 CDD 2TX MODE IN THE 5.8 GHz BAND

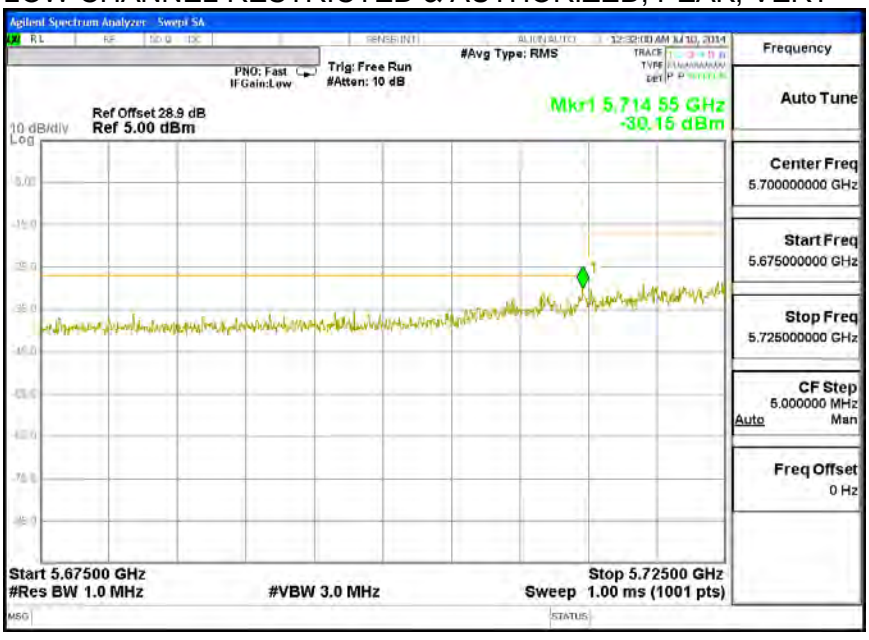
All radiated tests for 802.11n HT40 were conducted with CDD mode at the elevated power of STBC mode. This configuration is considered representative of both modes.

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, HORIZ

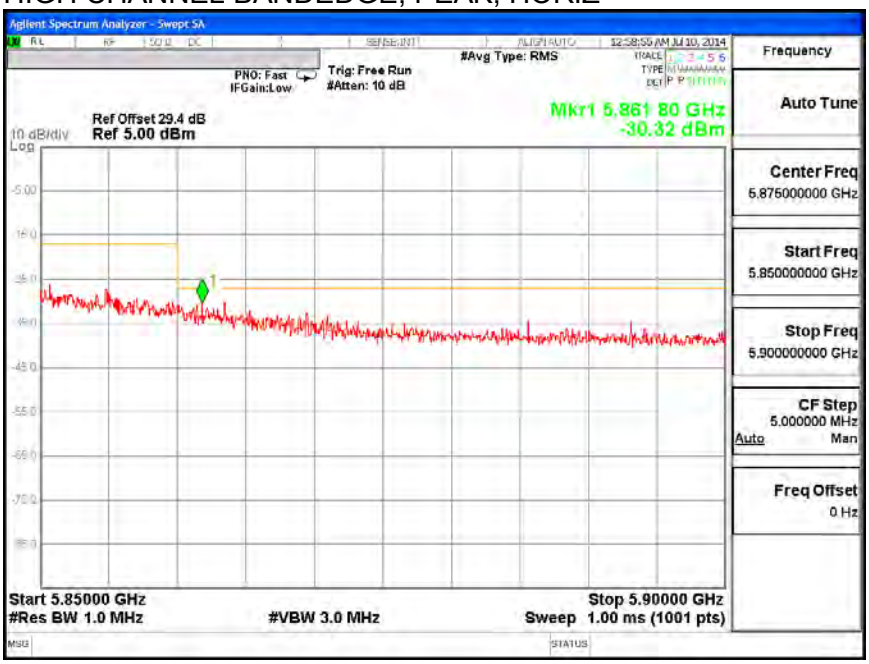


LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT

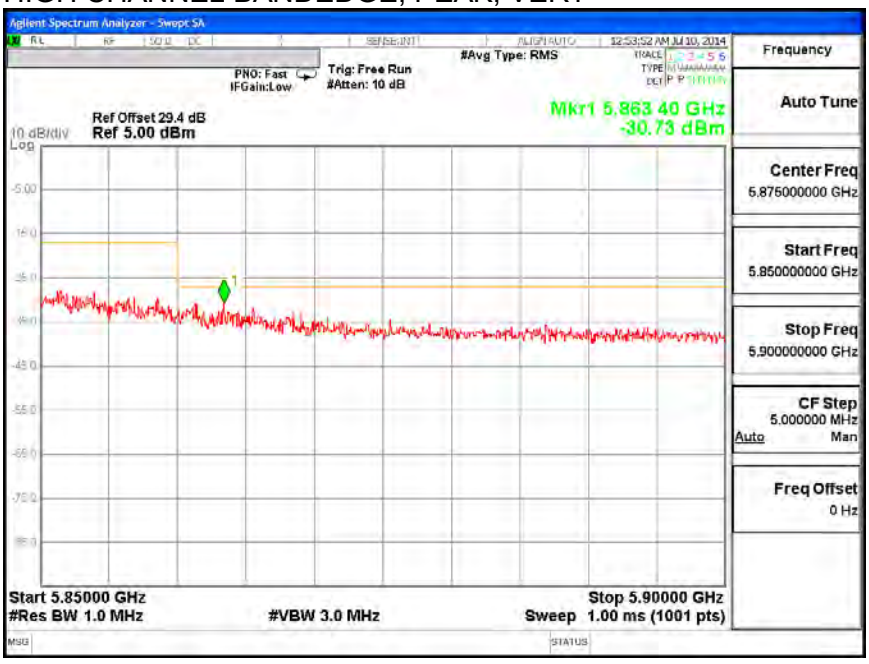


AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

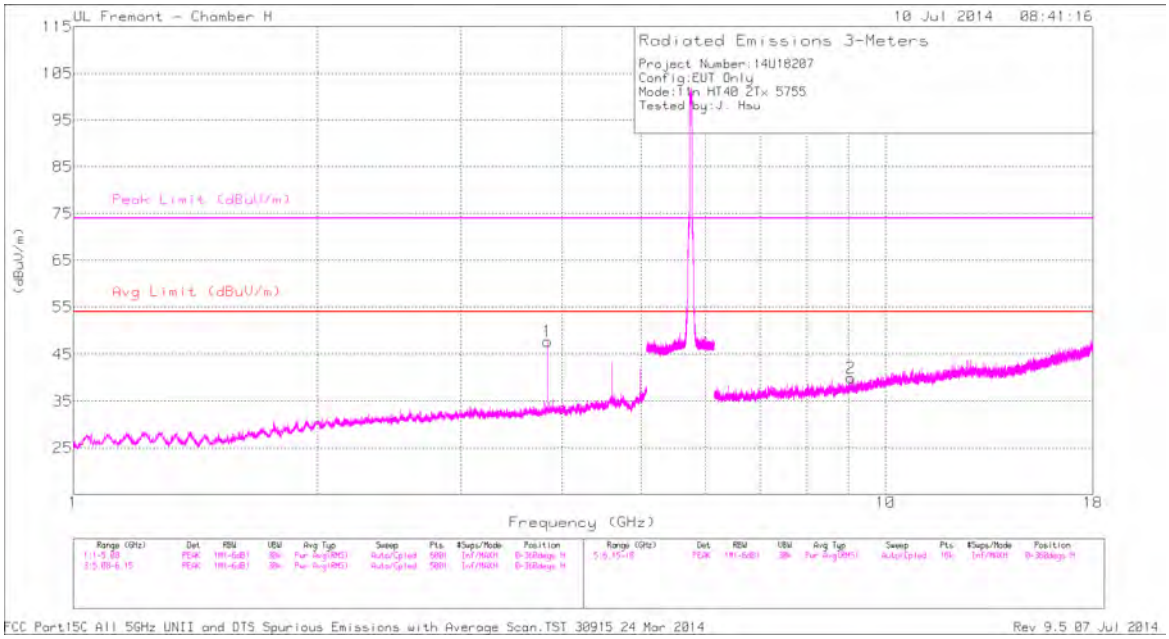


HIGH CHANNEL BANDEDGE, PEAK, VERT

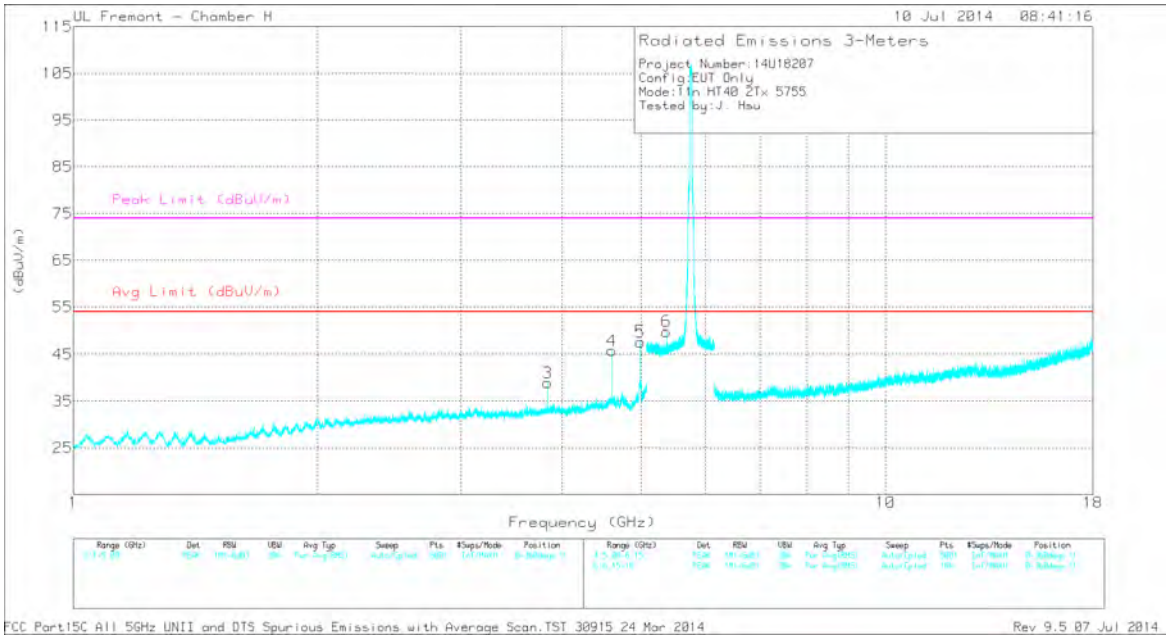


HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
1	* 3.837	51.26	PK1	33.3	-32.9	51.66	-	-	74	-22.34	169	167	H
	* 3.837	47.69	AD1	33.3	-32.9	48.09	54	-5.91	-	-	169	167	H
3	* 3.837	47.13	PK1	33.3	-32.9	47.53	-	-	74	-26.47	159	308	V
	* 3.837	41.5	AD1	33.3	-32.9	41.9	54	-12.1	-	-	159	308	V
4	* 4.604	48.33	PK1	34.1	-31.8	50.63	-	-	74	-23.37	202	386	V
	* 4.604	44.36	AD1	34.1	-31.8	46.66	54	-7.34	-	-	202	386	V
5	* 4.988	49.36	PK1	34.3	-31.1	52.56	-	-	74	-21.44	184	296	V
	* 4.988	44.76	AD1	34.3	-31.2	47.86	54	-6.14	-	-	184	296	V
6	* 5.371	44.55	PK1	34.9	-22.7	56.75	-	-	74	-17.25	205	222	V
	* 5.371	35.56	AD1	34.9	-22.7	47.76	54	-6.24	-	-	205	222	V
2	* 9.062	37.66	PK1	36.4	-26.8	47.26	-	-	74	-26.74	220	235	H
	* 9.061	26.61	AD1	36.4	-26.8	36.21	54	-17.79	-	-	220	235	H

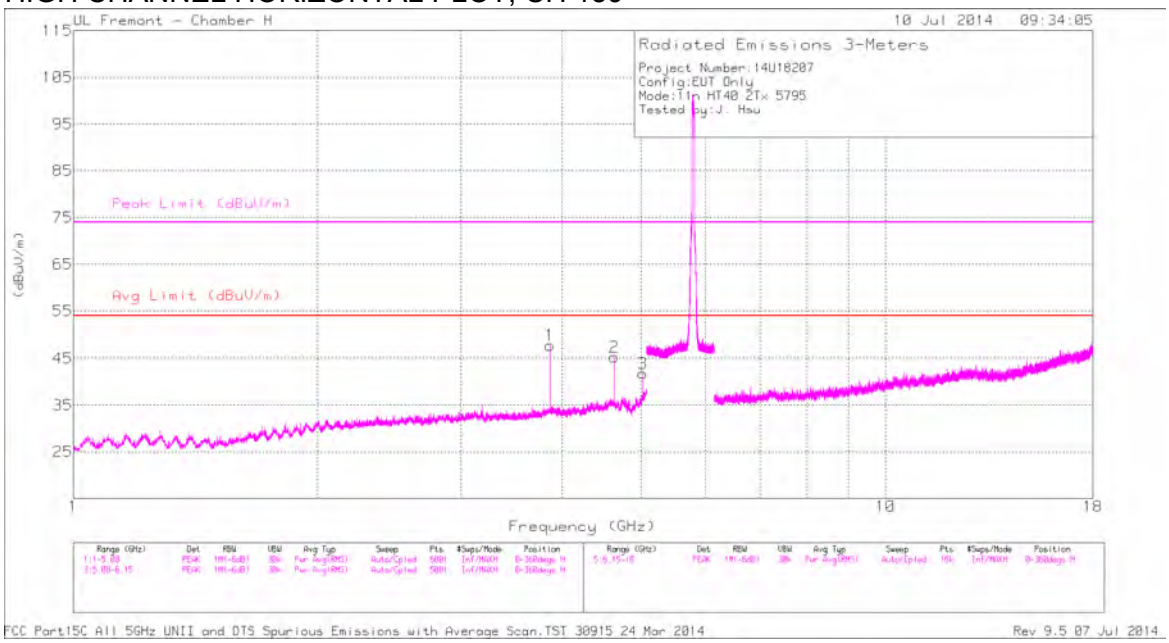
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

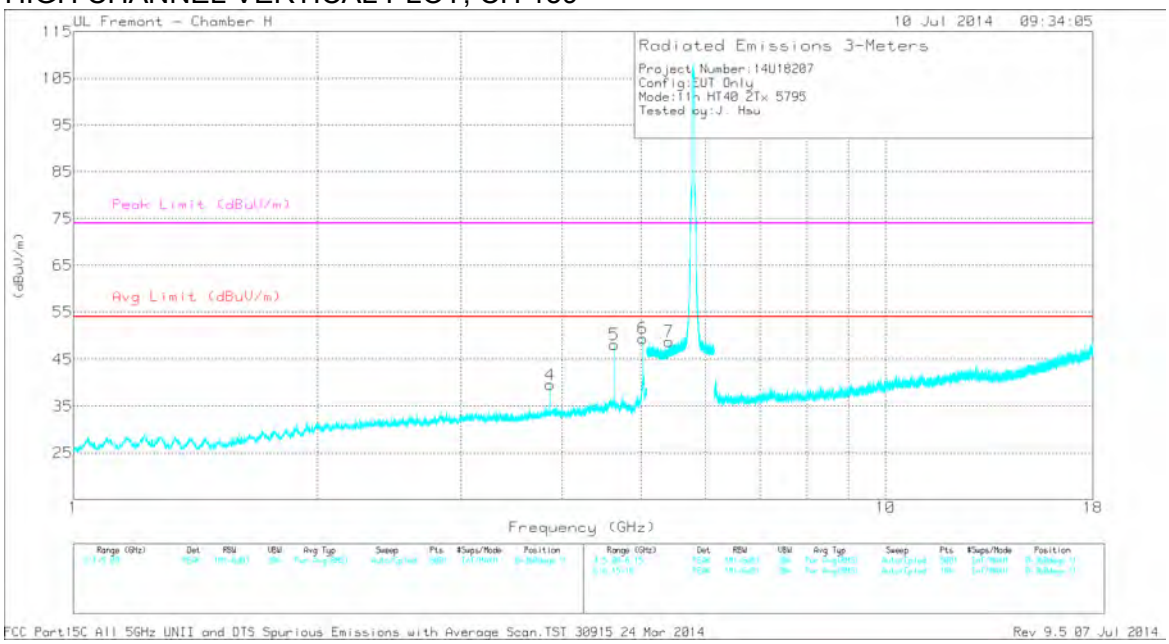
AD1 - KDB789033 Method: AD Primary Power Average

HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT, CH 159



HIGH CHANNEL VERTICAL PLOT, CH 159



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
1	* 3.863	52.2	PK1	33.3	-32.8	52.7	-	-	74	-21.3	134	161	H
	* 3.863	48.97	AD1	33.3	-32.8	49.47	54	-4.53	-	-	134	161	H
2	* 4.636	48.44	PK1	34.2	-32.1	50.54	-	-	74	-23.46	185	139	H
	* 4.636	43.89	AD1	34.2	-32.1	45.99	54	-8.01	-	-	185	139	H
3	* 5.022	44.95	PK1	34.3	-31.2	48.05	-	-	74	-25.95	211	189	H
	* 5.022	37.38	AD1	34.3	-31.2	40.48	54	-13.52	-	-	211	189	H
4	* 3.863	46.24	PK1	33.3	-32.8	46.74	-	-	74	-27.26	141	136	V
	* 3.863	39.55	AD1	33.3	-32.8	40.05	54	-13.95	-	-	141	136	V
5	* 4.636	49.99	PK1	34.2	-32.2	51.99	-	-	74	-22.01	203	376	V
	* 4.636	46.67	AD1	34.2	-32.1	48.77	54	-5.23	-	-	203	376	V
6	* 5.022	50.09	PK1	34.3	-31.2	53.19	-	-	74	-20.81	201	194	V
	* 5.022	45.55	AD1	34.3	-31.2	48.65	54	-5.35	-	-	201	194	V
7	* 5.408	43.94	PK1	35	-22.5	56.44	-	-	74	-17.56	213	227	V
	* 5.409	34.59	AD1	35	-22.5	47.09	54	-6.91	-	-	213	227	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

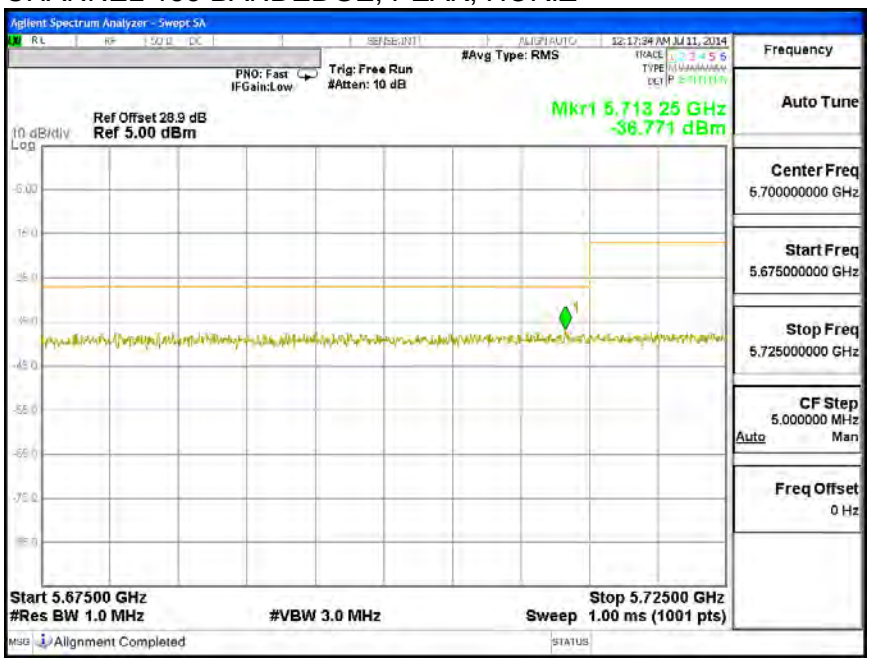
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

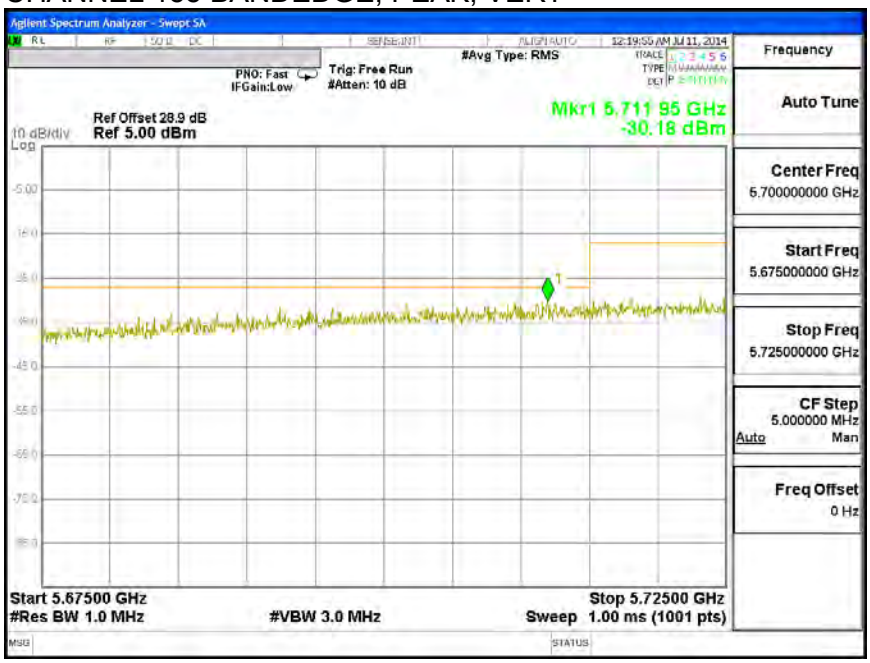
10.2.27. TX ABOVE 1G 802.11ac 80MHz 1TX MODE IN THE 5.8 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (CHANNEL, 155)

CHANNEL 155 BANDEDGE, PEAK, HORIZ

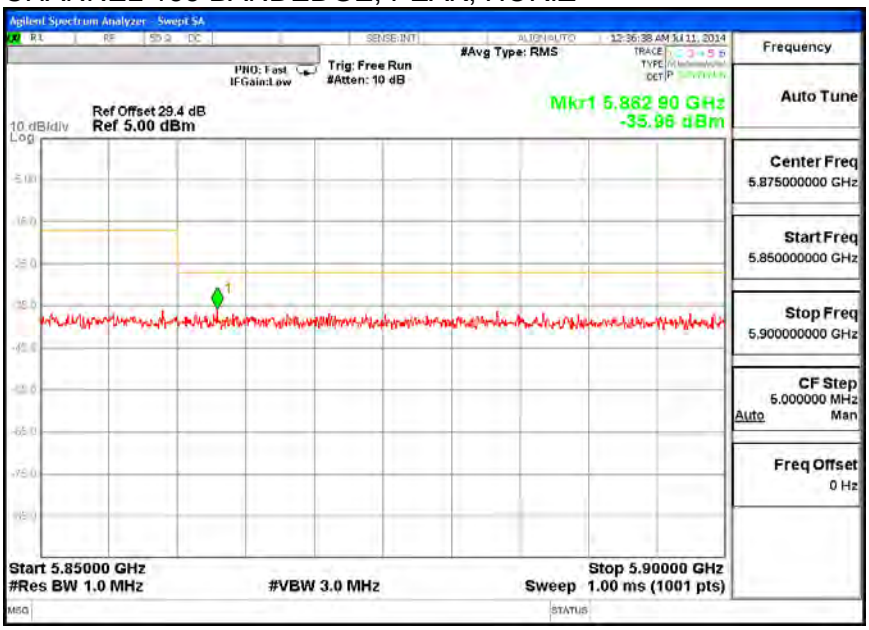


CHANNEL 155 BANDEDGE, PEAK, VERT

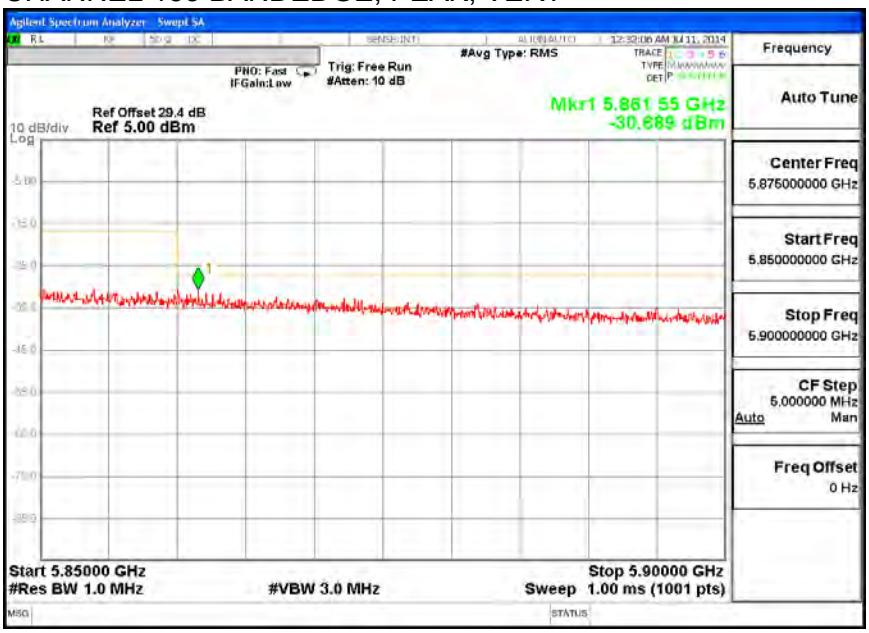


AUTHORIZED BANDEDGE (CHANNEL, 155)

CHANNEL 155 BANDEDGE, PEAK, HORIZ

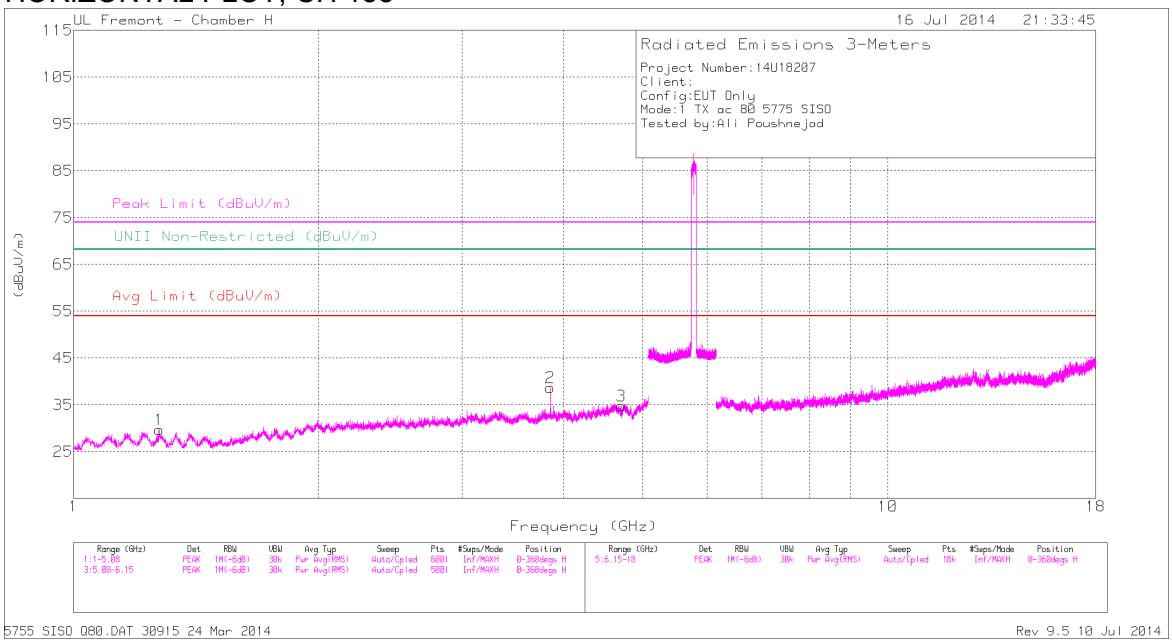


CHANNEL 155 BANDEDGE, PEAK, VERT

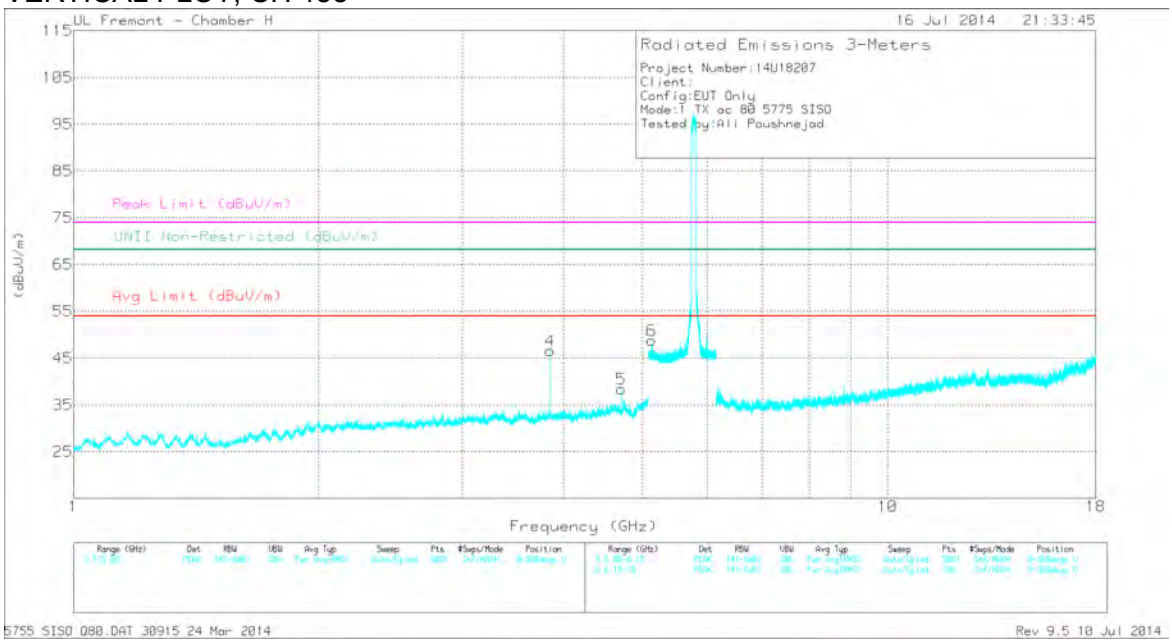


HARMONICS AND SPURIOUS EMISSIONS

HORIZONTAL PLOT, CH 155



VERTICAL PLOT, CH 155



DATA

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	* 1.273	43.96	PK1	29.1	-35.8	37.26	-	-	74	-36.74	-	-	150	151	H
	* 1.276	32.1	AD1	29.1	-35.8	25.4	54	-28.6	-	-	-	-	150	151	H
2	* 3.85	46.48	PK1	33.1	-33.5	46.08	-	-	74	-27.92	-	-	154	294	H
	* 3.85	40.93	AD1	33.1	-33.5	40.53	54	-13.47	-	-	-	-	154	294	H
3	* 4.706	42.52	PK1	34	-32.8	43.72	-	-	74	-30.28	-	-	229	357	H
	* 4.706	32.12	AD1	34	-32.8	33.32	54	-20.68	-	-	-	-	229	357	H
4	* 3.85	50.22	PK1	33.1	-33.5	49.82	-	-	74	-24.18	-	-	360	230	V
	* 3.85	46.79	AD1	33.1	-33.5	46.39	54	-7.61	-	-	-	-	360	230	V
5	* 4.705	44.35	PK1	34	-32.8	45.55	-	-	74	-28.45	-	-	100	168	V
	* 4.705	36.56	AD1	34	-32.8	37.76	54	-16.24	-	-	-	-	100	168	V
6	* 5.133	45.28	PK1	34.3	-23.6	55.98	-	-	74	-18.02	-	-	70	202	V
	* 5.133	36.78	AD1	34.3	-23.6	47.48	54	-6.52	-	-	-	-	70	202	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

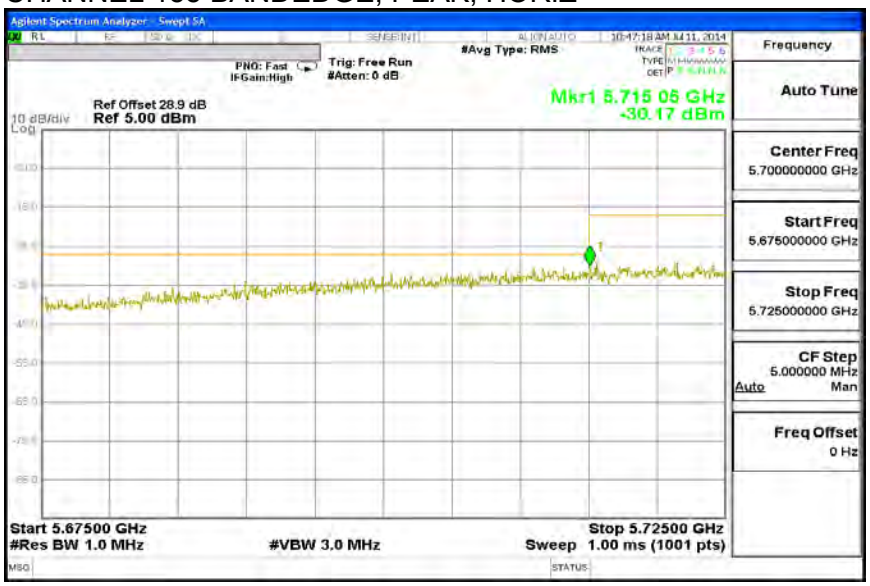
AD1 - KDB789033 Method: AD Primary Power Average

10.2.28. TX ABOVE 1G 802.11ac 80MHz 2TX MODE IN THE 5.8 GHz BAND

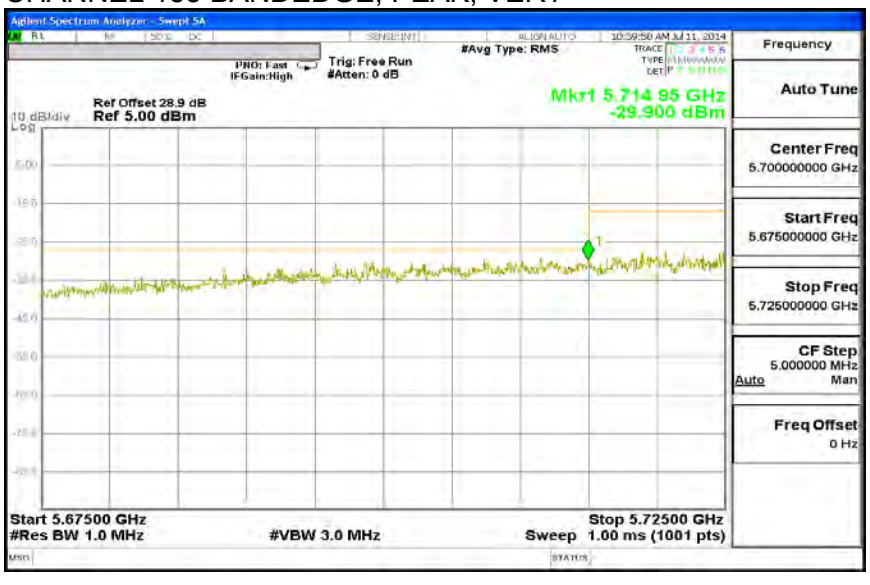
All radiated tests for 802.11ac VHT80 were conducted with CDD mode at the elevated power of STBC mode. This configuration is considered representative of both modes.

RESTRICTED & AUTHORIZED BANDEDGE (CHANNEL, 155)

CHANNEL 155 BANDEDGE, PEAK, HORIZ

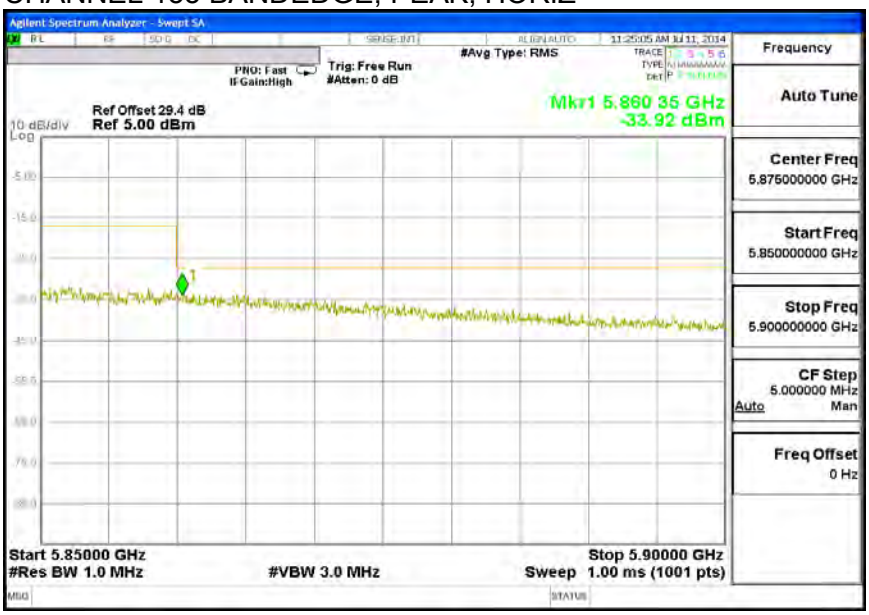


CHANNEL 155 BANDEDGE, PEAK, VERT

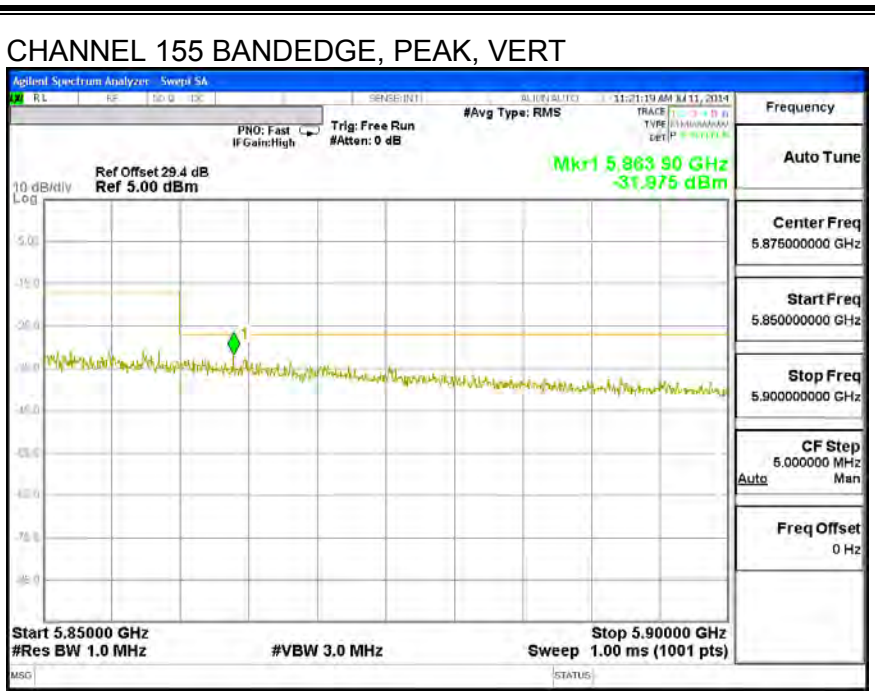


AUTHORIZED BANDEDGE (CHANNEL, 155)

CHANNEL 155 BANDEDGE, PEAK, HORIZ

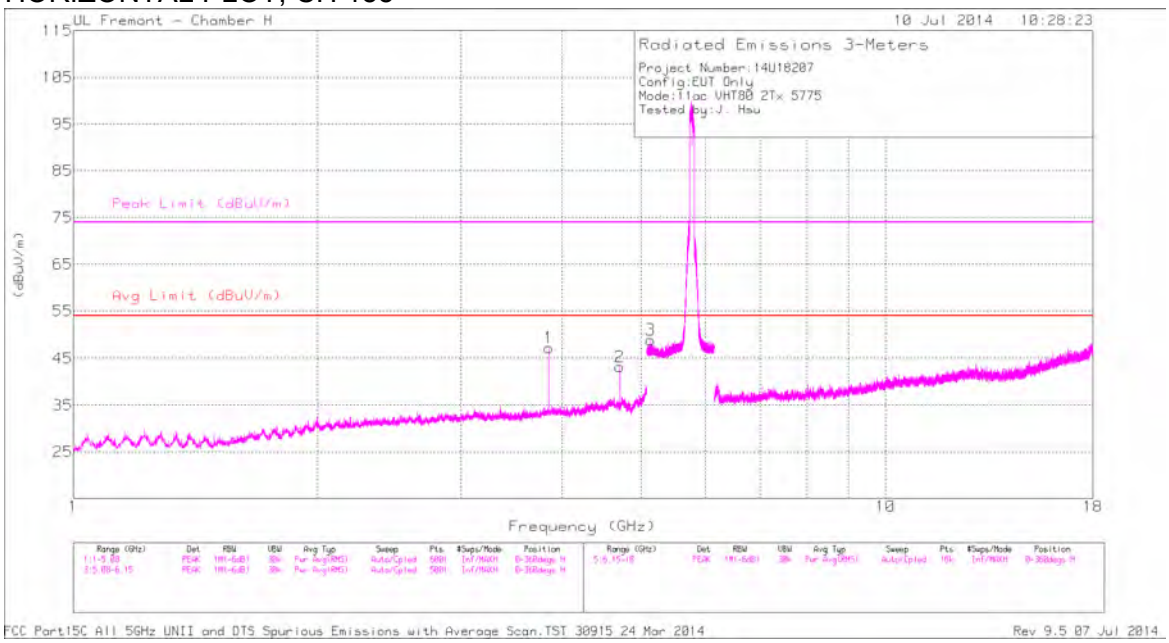


CHANNEL 155 BANDEDGE, PEAK, VERT

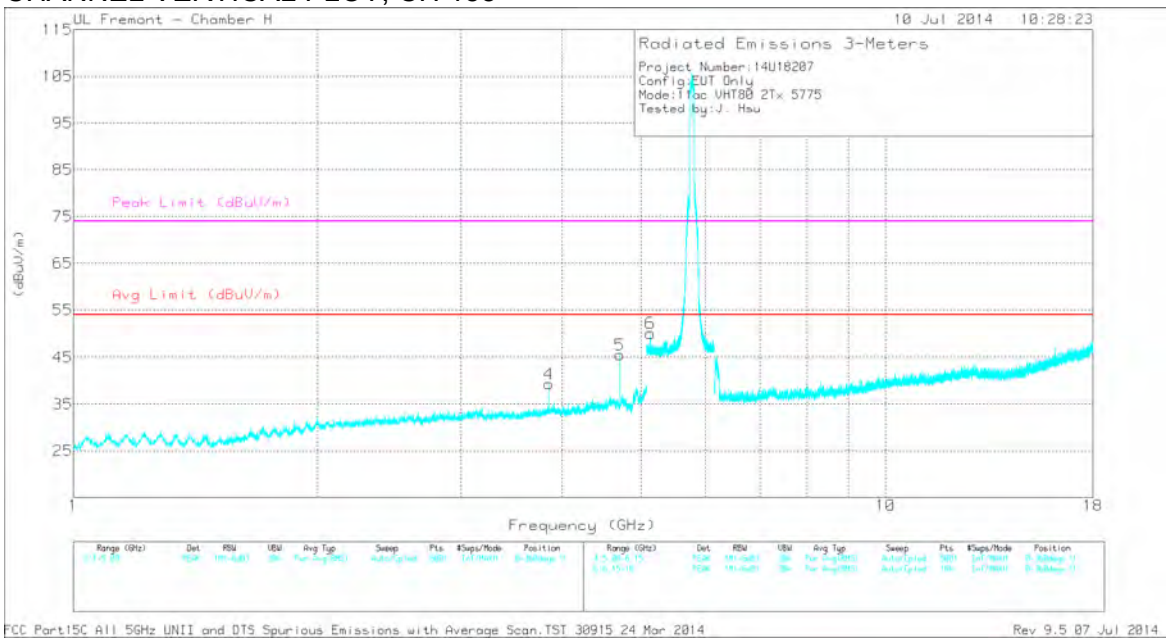


HARMONICS AND SPURIOUS EMISSIONS

HORIZONTAL PLOT, CH 155



CHANNEL VERTICAL PLOT, CH 155



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
1	* 3.85	52.35	PK1	33.3	-32.8	52.85	-	-	74	-21.15	128	166	H
	* 3.85	48.64	AD1	33.3	-32.8	49.14	54	-4.86	-	-	128	166	H
2	* 4.705	45.47	PK1	34.2	-31.8	47.87	-	-	74	-26.13	189	117	H
	* 4.706	39.76	AD1	34.2	-31.8	42.16	54	-11.84	-	-	189	117	H
4	* 3.85	46.77	PK1	33.3	-32.8	47.27	-	-	74	-26.73	154	307	V
	* 3.85	40.62	AD1	33.3	-32.8	41.12	54	-12.88	-	-	154	307	V
5	* 4.706	47.81	PK1	34.2	-31.8	50.21	-	-	74	-23.79	207	142	V
	* 4.706	43.39	AD1	34.2	-31.8	45.79	54	-8.21	-	-	207	142	V
3	* 5.137	43.86	PK1	34.5	-22.8	55.56	-	-	74	-18.44	145	153	H
	* 5.138	32.27	AD1	34.5	-22.8	43.97	54	-10.03	-	-	145	153	H
6	* 5.133	45.1	PK1	34.5	-22.8	56.8	-	-	74	-17.2	180	238	V
	* 5.133	36.32	AD1	34.5	-22.8	48.02	54	-5.98	-	-	180	238	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

10.2.29. 2.4GHZ AND 5GHZ BAND CO-LOCATION

REQUIREMENTS

FCC §15.31(h)

For a composite system that incorporates devices contained either in a single enclosure or in separate enclosures connected by wire or cable, testing for compliance with the standards in this part shall be performed with all of the devices in the system functioning. If an intentional radiator incorporates more than one antenna or other radiating source and these radiating sources are designed to emit at the same time, measurements of conducted and radiated emissions shall be performed with all radiating sources that are to be employed emitting.

TEST PROCEDURE

Bluetooth and UNII bands transmitting at same time.

Preliminary testing was performed for conducted emissions. The worst case conditions are represented in this report.

Preliminary testing was performed for radiated emissions. The worst case condition is represented in this report.

BLUETOOTH ON

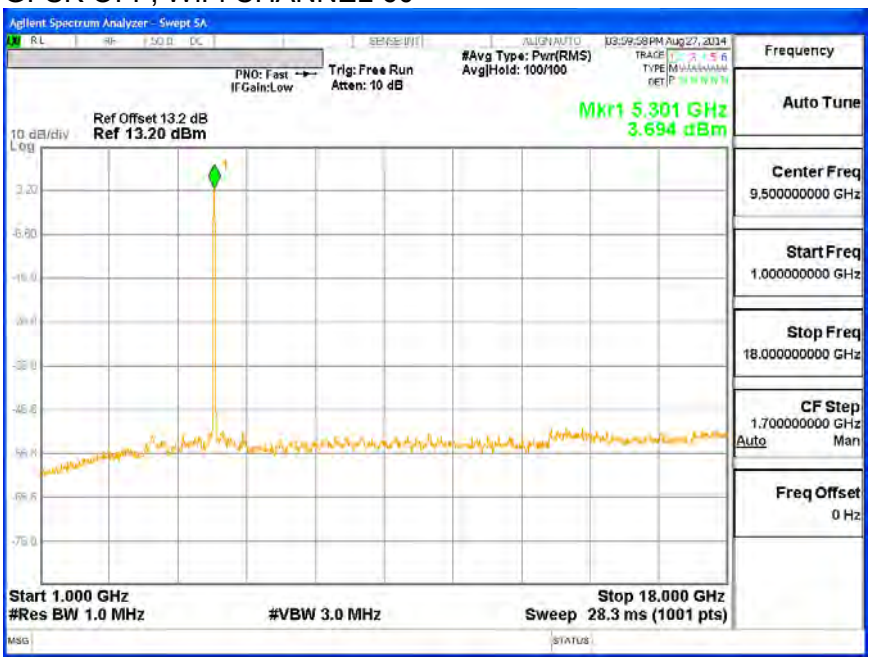
GFSK, MID CHANNEL

WiFi ON, CHANNEL 40

GFSK OFF, WIFI CHANNEL 40

WiFi ON, CHANNEL 60

GFSK OFF, WiFi CHANNEL 60

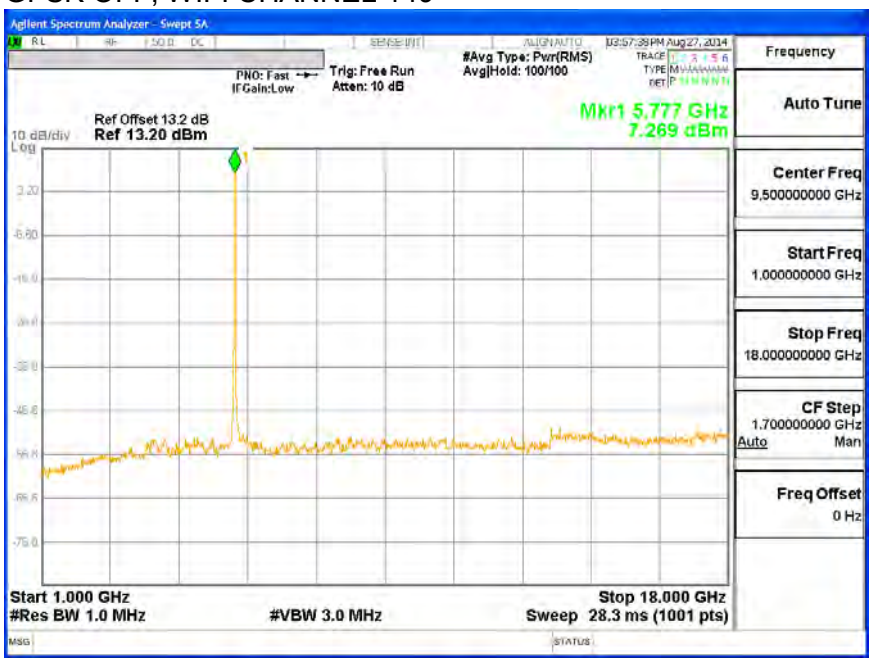


WiFi ON, CHANNEL 100

GFSK OFF, CHANNEL 100

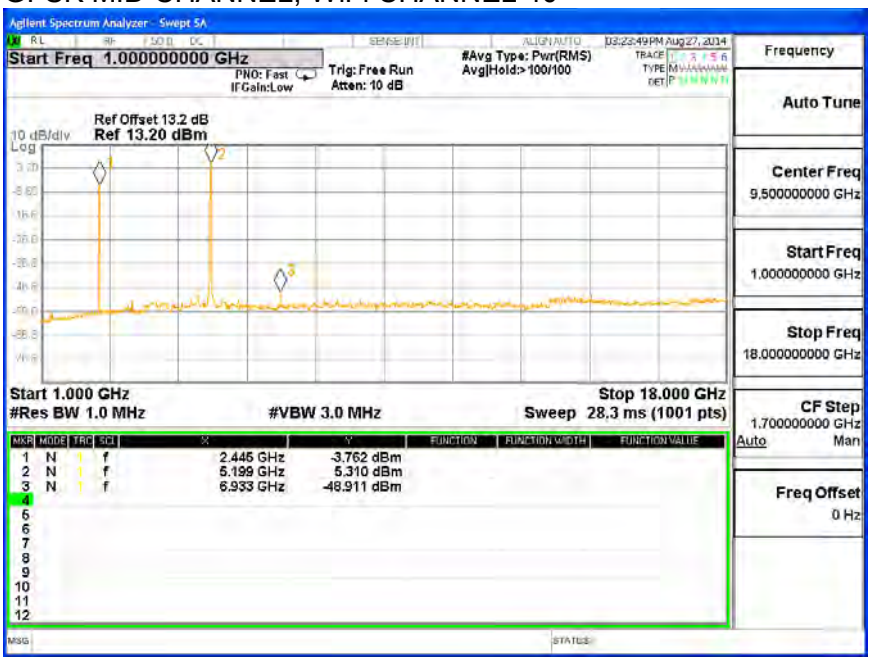
WiFi ON CHANNEL 149

GFSK OFF, WIFI CHANNEL 149



BLUETOOTH ON, WiFi ON

GFSK MID CHANNEL, WiFi CHANNEL 40



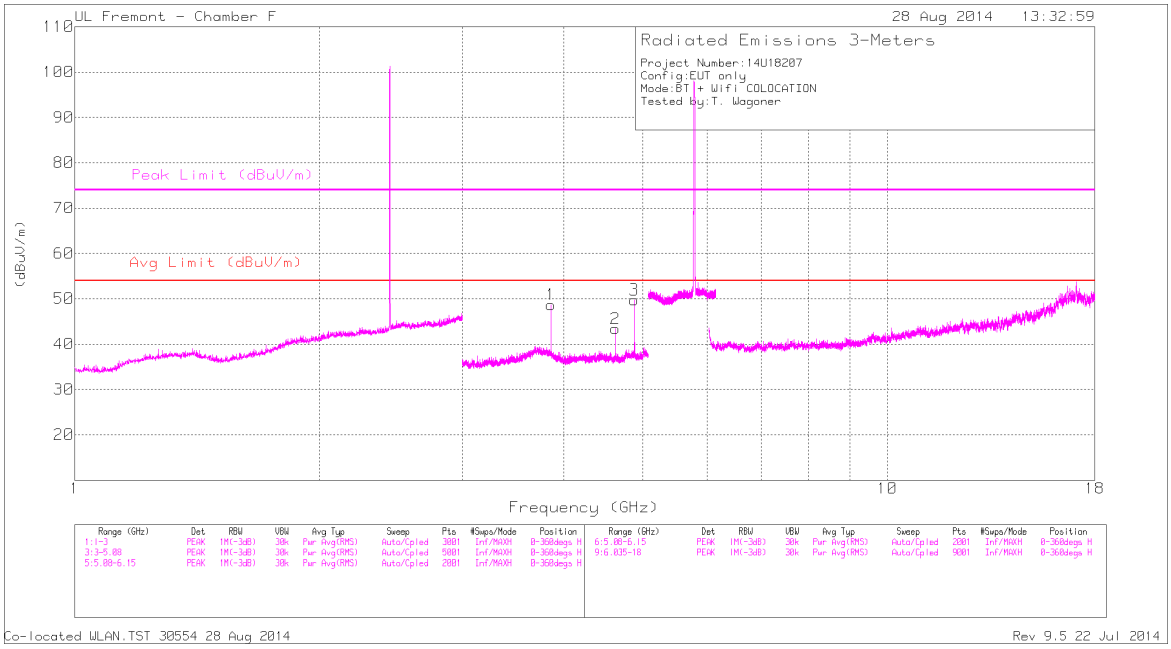
GFSK MID CHANNEL, WiFi CHANNEL 60

GFSK MID CHANNEL, WIFI CHANNEL 100

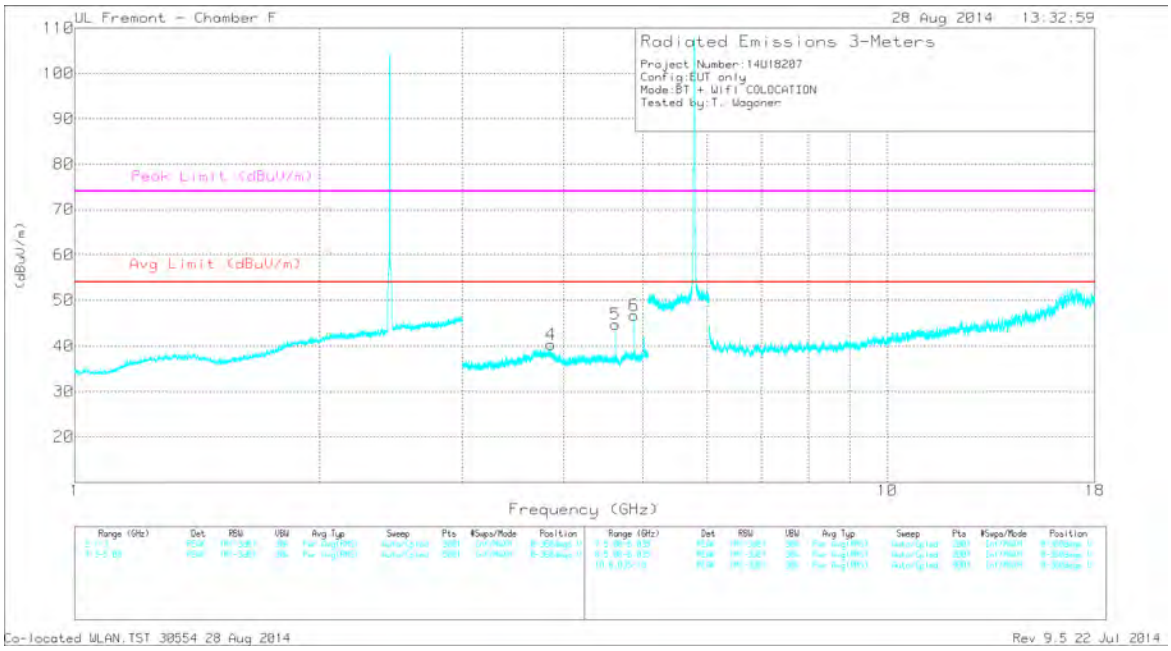
GFSK MID CHANNEL, WiFi CHANNEL 149

HARMONICS AND SPURIOUS EMISSIONS

CO-LOCATION HORIZONTAL



CO-LOCATION VERTICAL



CO-LOCATION HORIZONTAL & VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.857	43.71	PK	34.2	-29.2	48.71	53.97	-5.26	74	-25.29	0-360	201	H
2	* 4.628	38.22	PK	34.1	-28.9	43.42	53.97	-10.55	74	-30.58	0-360	101	H
3	* 4.884	43.57	PK	34.2	-28	49.77	53.97	-4.2	74	-24.23	0-360	201	H
4	* 3.857	35.32	PK	34.2	-29.2	40.32	53.97	-13.65	74	-33.68	0-360	201	V
5	* 4.628	39.5	PK	34.1	-28.9	44.7	53.97	-9.27	74	-29.3	0-360	101	V
6	* 4.884	40.49	PK	34.2	-28	46.69	53.97	-7.28	74	-27.31	0-360	101	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector

Radiated Emissions

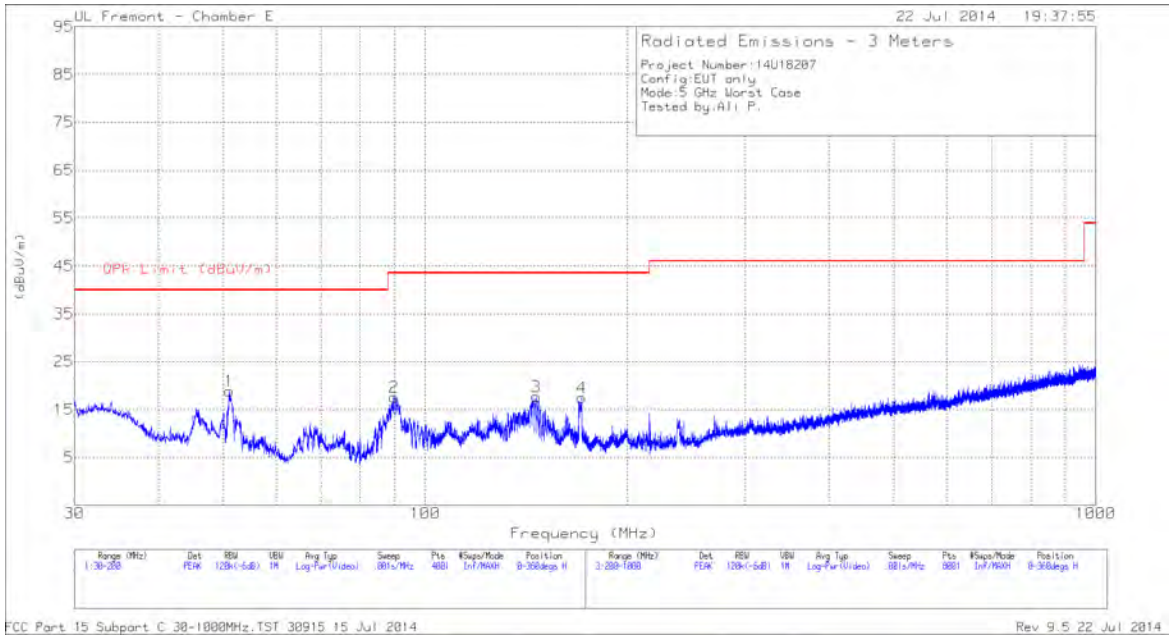
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.857	45.85	PK1	34.2	-29.2	50.85	53.97	-3.12	74	-23.15	156	157	H
* 3.857	42.49	AD1	34.2	-29.2	47.49	53.97	-6.48	74	-26.51	156	157	H
* 4.884	42.86	PK1	34.2	-28	49.06	53.97	-4.91	74	-24.94	145	167	H
* 4.884	41.45	AD1	34.2	-28	47.65	53.97	-6.32	74	-26.35	145	167	H
* 4.884	39.03	PK1	34.2	-28	45.23	53.97	-8.74	74	-28.77	190	108	V
* 4.884	37	AD1	34.2	-28	43.2	53.97	-10.77	74	-30.8	190	108	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

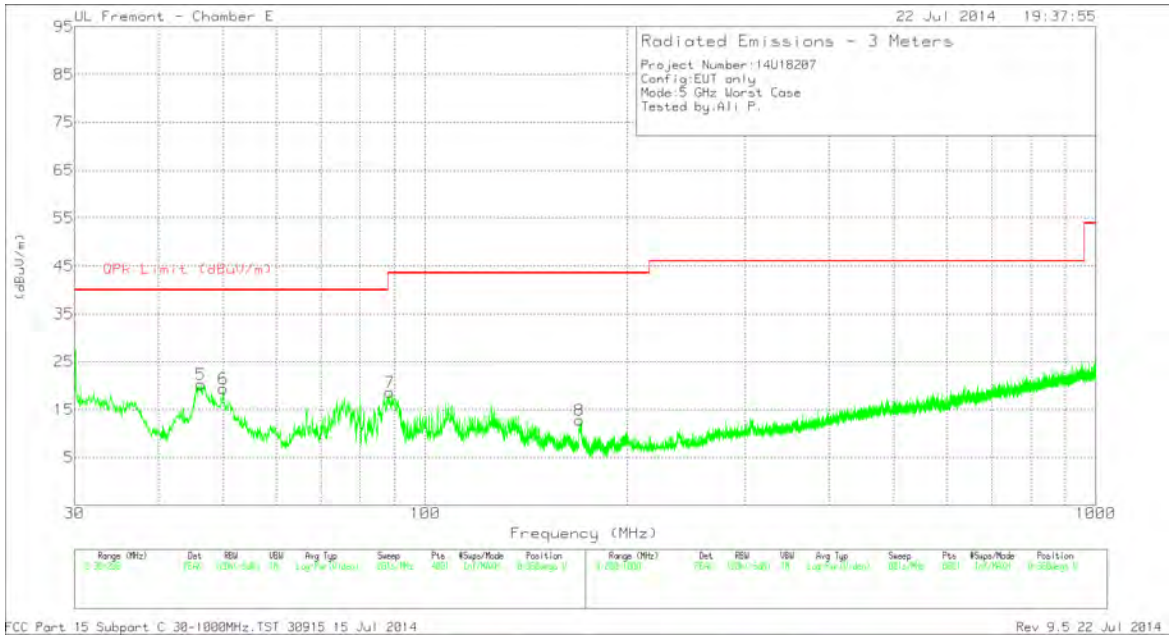
10.3. WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL & VERTICAL)

HORIZONTAL PLOT



VERTICAL PLOT



HORIZONTAL & VERTICAL DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Hybrid	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 171.0575	36.72	PK	11.7	-31	17.42	43.52	-26.1	0-360	98	H
8	* 169.655	32.03	PK	11.7	-30.9	12.83	43.52	-30.69	0-360	100	V
5	46.32	42.38	PK	9.7	-31.8	20.28	40	-19.72	0-360	100	V
6	50.0175	43.18	PK	7.9	-31.7	19.38	40	-20.62	0-360	100	V
1	51.0375	42.98	PK	7.6	-31.7	18.88	40	-21.12	0-360	401	H
7	88.565	42.46	PK	7.6	-31.4	18.66	43.52	-24.86	0-360	100	V
2	89.84	41.23	PK	7.7	-31.3	17.63	43.52	-25.89	0-360	201	H
3	146.28	35.99	PK	12.7	-31	17.69	43.52	-25.83	0-360	201	H

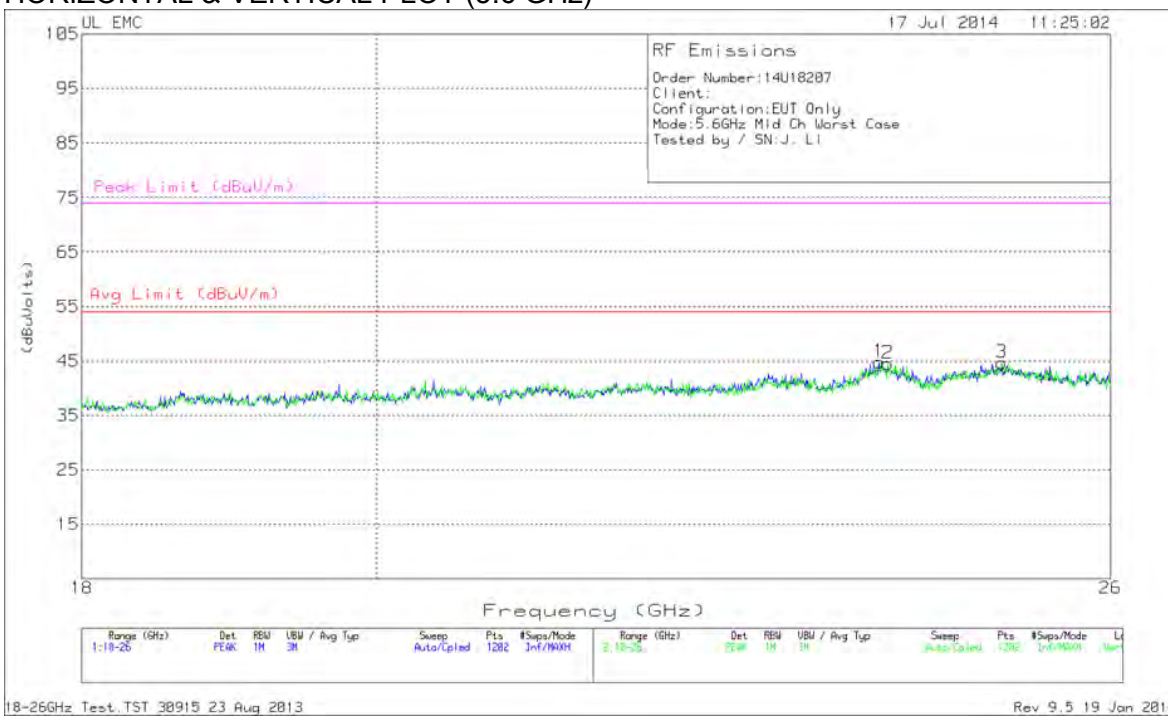
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

10.4. WORST-CASE 18 to 26 GHz

SPURIOUS EMISSIONS 18000 TO 26000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL & VERTICAL)

HORIZONTAL & VERTICAL PLOT (5.6 GHz)



HORIZONTAL & VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T89 (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	23.935	43.53	PK	33.6	-22.8	-9.5	44.83	54	-9.17	74	-29.17
2	24.008	43.2	PK	33.6	-22.8	-9.5	44.5	54	-9.5	74	-29.5
3	25.007	43.07	PK	34	-22.9	-9.5	44.67	54	-9.33	74	-29.33

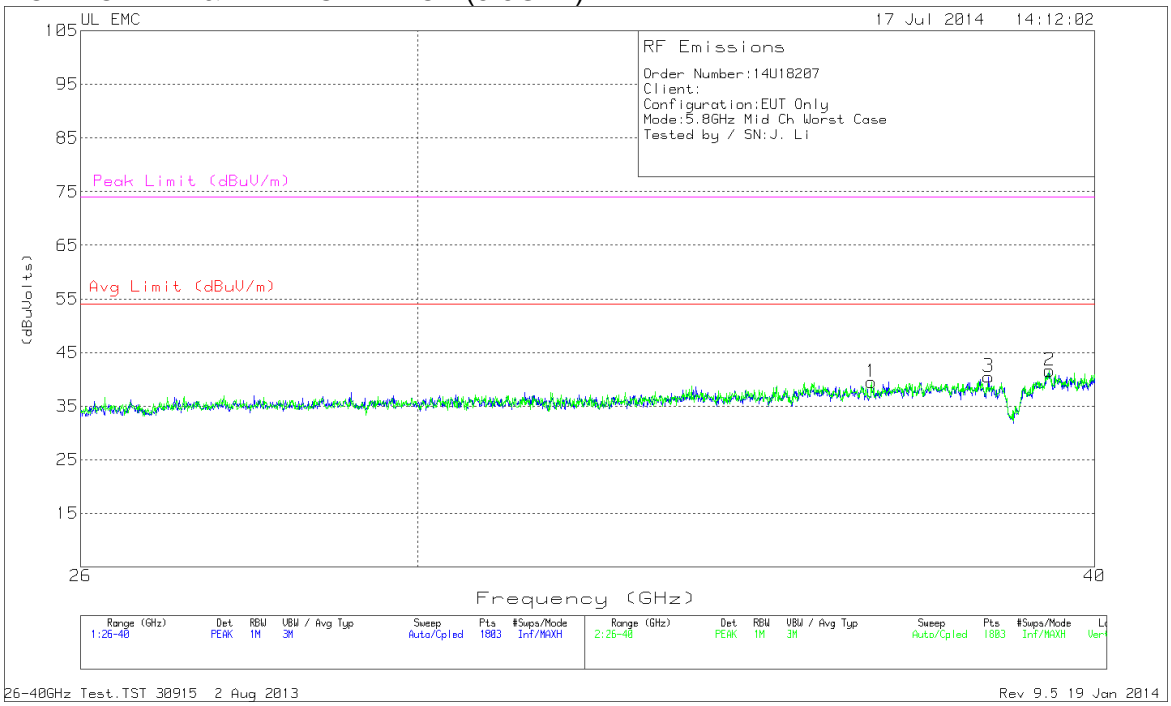
PK - Peak detector

18-26GHz Test.TST 30915 23 Aug 2013 Rev 9.5 19 Jan 2014

10.5. WORST-CASE 26 to 40 GHz

SPURIOUS EMISSIONS 26 TO 40 GHz (WORST-CASE CONFIGURATION, HORIZONTAL & VERTICAL)

HORIZONTAL & VERTICAL PLOT (5.8GHz)



HORIZONTAL & VERTICAL 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)
3	38.236	49.8	PK	37.1	-36.9	-9.5	40.5	54	-13.5	74	-33.5
1	36.38	49.6	PK	37.2	-37.8	-9.5	39.5	54	-14.5	74	-34.5
2	39.239	48.87	PK	38.5	-36.2	-9.5	41.67	54	-12.33	74	-32.33

PK - Peak detector

26-40GHz Test.TST 30915 2 Aug 2013 Rev 9.5 19 Jan 2014

11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

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

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

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

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

RESULTS

WORST EMISSIONS

Line-L1 .15 - 30MHz

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1 (dB)	LC Cables 1&3 (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin to Limit (dB)	CFR 47 Part 15 Class B Avg	Margin to Limit (dB)
1	.1995	40.53	PK	.9	0	41.43	63.6	-22.17	53.6	-12.17
2	.1995	32.16	Av	.9	0	33.06	63.6	-30.54	53.6	-20.54
3	.6	44.69	PK	.3	0	44.99	56	-11.01	46	-1.01
4	.6	32.74	Av	.3	0	33.04	56	-22.96	46	-12.96
5	1.734	35.17	PK	.2	.1	35.47	56	-20.53	46	-10.53
6	1.734	24.5	Av	.2	.1	24.8	56	-31.2	46	-21.2
7	7.71	29.34	PK	.2	.1	29.64	60	-30.36	50	-20.36
8	7.71	19.67	Av	.2	.1	19.97	60	-40.03	50	-30.03
9	29.1165	27.12	PK	.3	.3	27.72	60	-32.28	50	-22.28
10	29.1165	18.69	Av	.3	.3	19.29	60	-40.71	50	-30.71

PK - Peak detector

Av - average detection

Line-L2 .15 - 30MHz

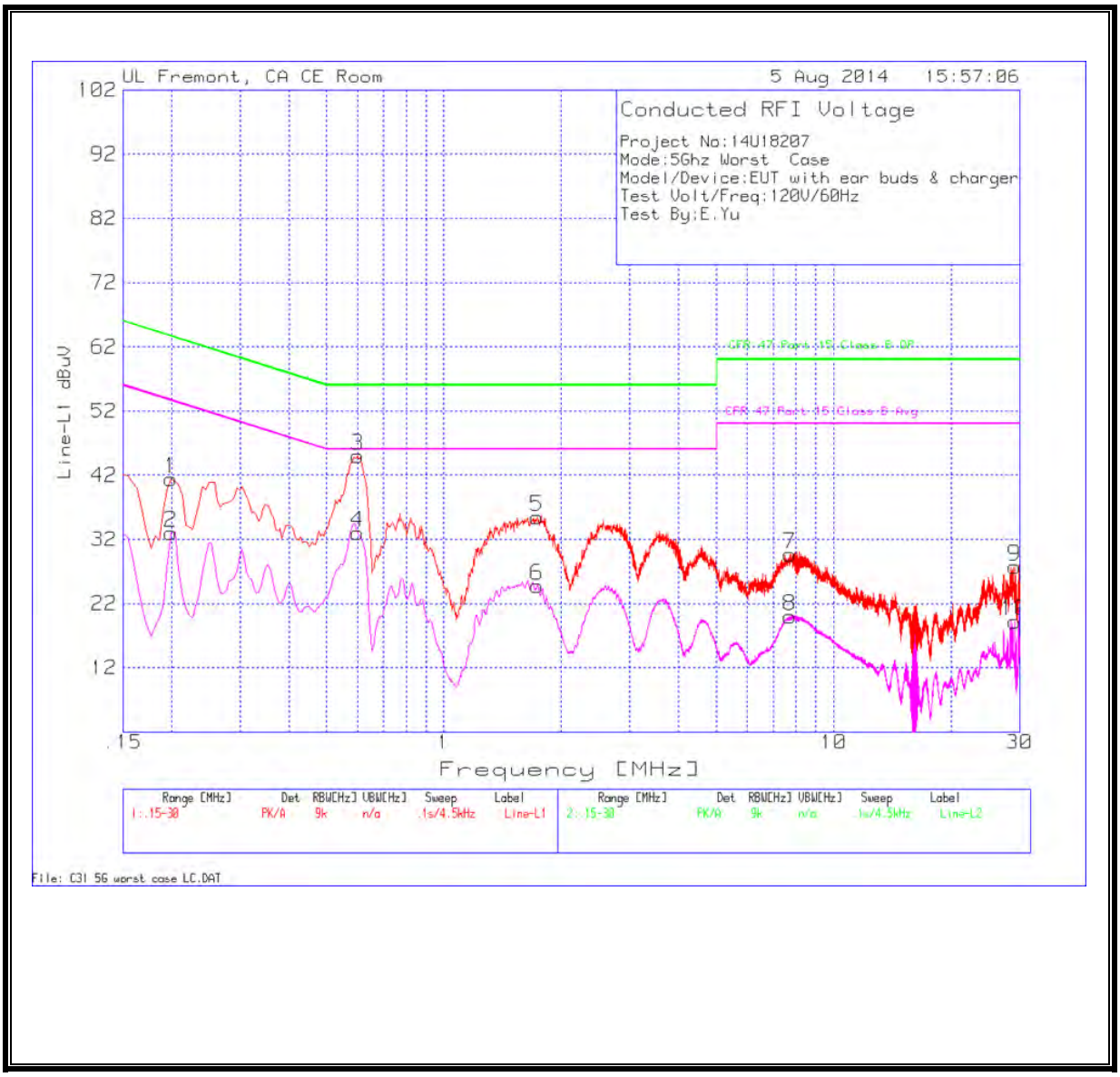
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2 (dB)	LC Cables 2&3 (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin to Limit (dB)	CFR 47 Part 15 Class B Avg	Margin to Limit (dB)
11	.204	41.74	PK	1	0	42.74	63.4	-20.66	53.4	-10.66
12	.204	29.05	Av	1	0	30.05	63.4	-33.35	53.4	-23.35
13	.591	40.89	PK	.3	0	41.19	56	-14.81	46	-4.81
14	.591	24.84	Av	.3	0	25.14	56	-30.86	46	-20.86
15	.7755	27.35	PK	.3	0	27.65	56	-28.35	46	-18.35
16	.7755	12.76	Av	.3	0	13.06	56	-42.94	46	-32.94
17	1.6935	25.73	PK	.2	.1	26.03	56	-29.97	46	-19.97
18	1.6935	10.27	Av	.2	.1	10.57	56	-45.43	46	-35.43
19	7.854	33.26	PK	.2	.1	33.56	60	-26.44	50	-16.44
20	7.854	23.32	Av	.2	.1	23.62	60	-36.38	50	-26.38
21	26.295	22.44	PK	.3	.3	23.04	60	-36.96	50	-26.96
22	26.295	11.41	Av	.3	.3	12.01	60	-47.99	50	-37.99

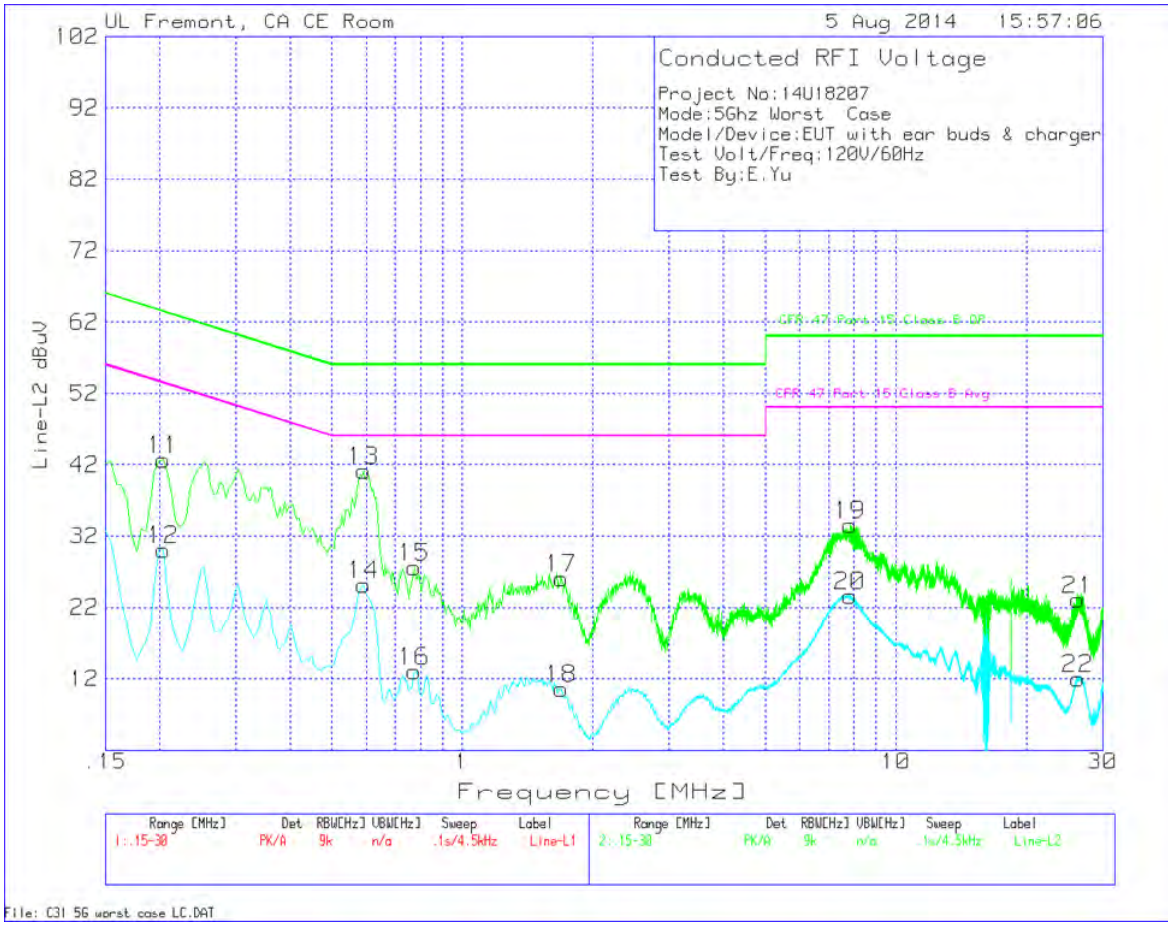
PK - Peak detector

Av - average detection

LINE 1 RESULTS



LINE 2 RESULTS



12. DYNAMIC FREQUENCY SELECTION

12.1. OVERVIEW

12.1.1. LIMITS

INDUSTRY CANADA

IC RSS-210 is closely harmonized with FCC Part 15 DFS rules. The deviations are as follows:

RSS-210 Issue 7 A9.4 (b) (ii) **Channel Availability Check Time:** …

Additional requirements for the band 5600-5650 MHz: Until further notice, devices subject to this Section shall not be capable of transmitting in the band 5600-5650 MHz, so that Environment Canada weather radars operating in this band are protected.

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

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: The instant that the *Channel Move Time* and the *Channel Closing Transmission Time* begins is as follows:
-For the Short pulse radar Test Signals this instant is the end of the *Burst*.
-For the Frequency Hopping radar Test Signal, this instant is the end of the last radar burst generated.
-For the Long Pulse radar Test Signal this instant is the end of the 12-second period defining the radar waveform.
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 channel changes (an aggregate of approximately 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, any one of radar types 0-4 can be used and for each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic. The 99% power bandwidth is measured with 100 kHz resolution bandwidth.

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 shall only be used for the channel availability and detection bandwidth tests. It should be noted that any of the radar test waveforms 0-4 can be used for the channel availability and detection bandwidth tests.

Table 6 – Long Pulse Radar Test Signal

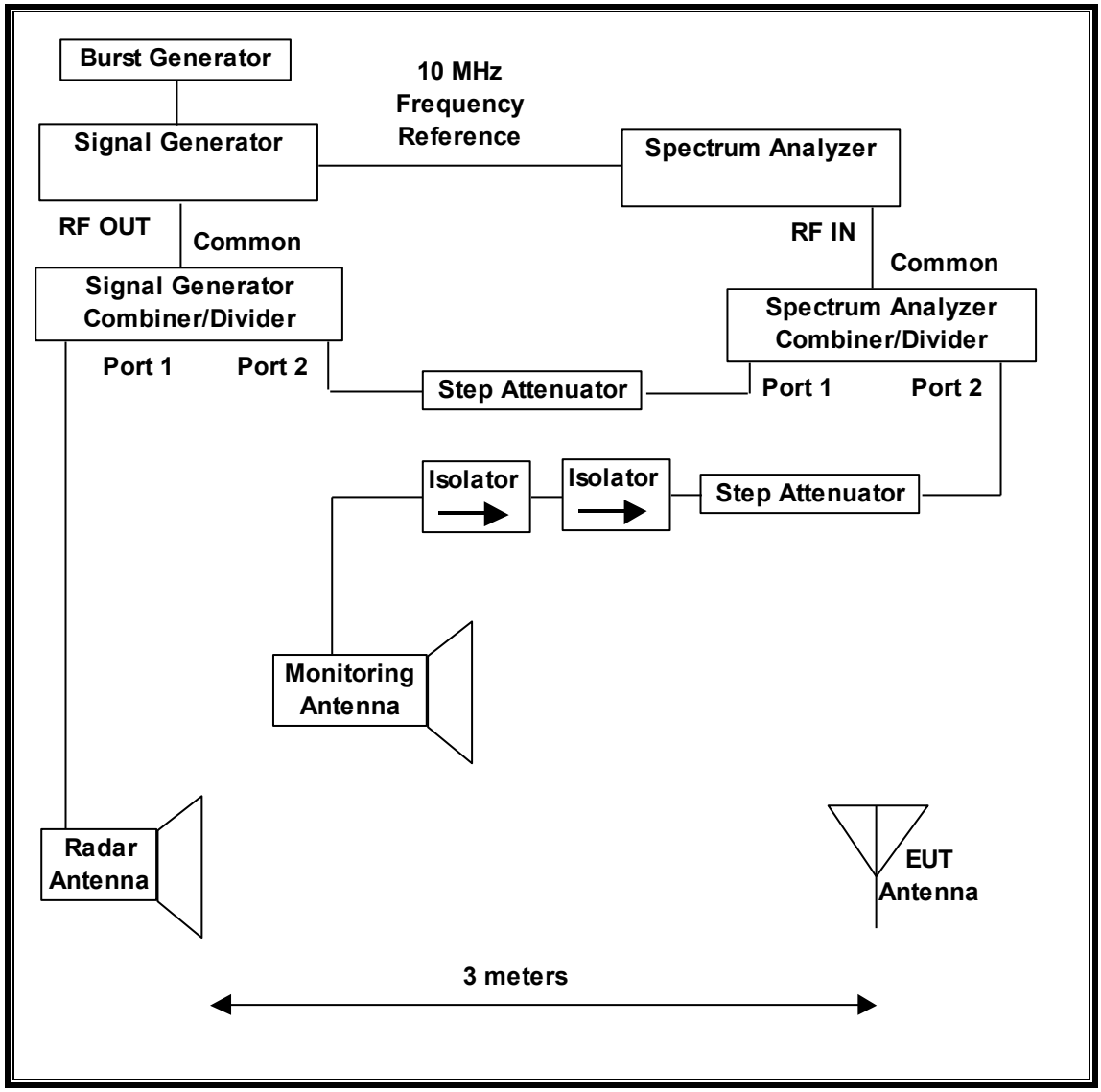
Radar Waveform Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

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

12.1.2. 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.

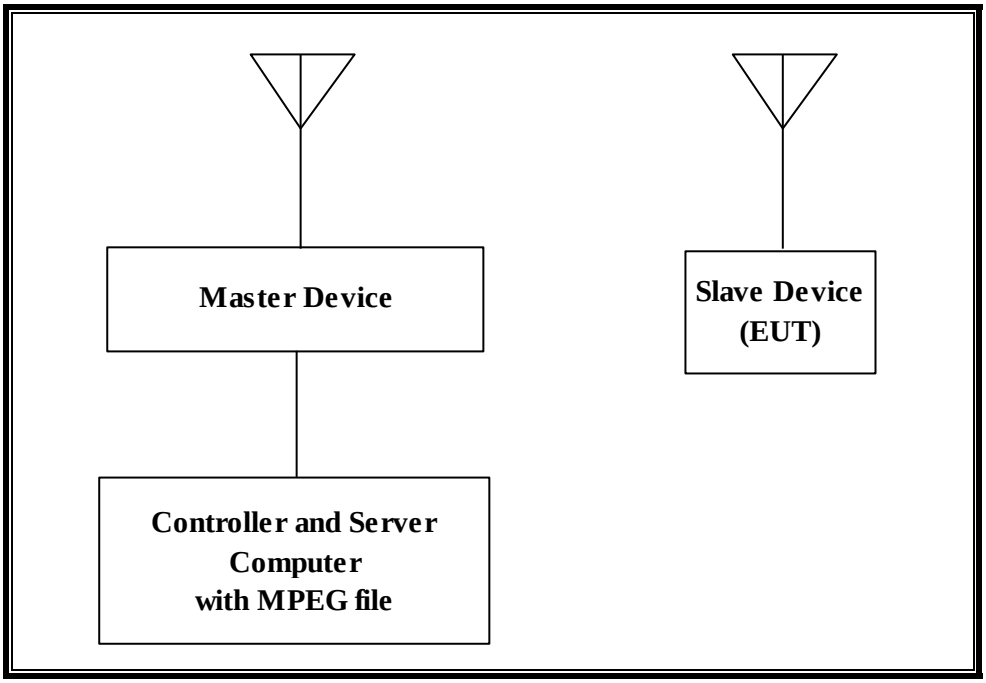
TEST AND MEASUREMENT EQUIPMENT

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, 26.5 GHz	Agilent / HP	E4440A	C01178	09/10/14
Vector Signal Generator, 20GHz	Agilent / HP	E8267C	C01066	09/12/14

12.1.3. SETUP OF EUT (CLIENT MODE)

RADIATED METHOD EUT TEST SETUP



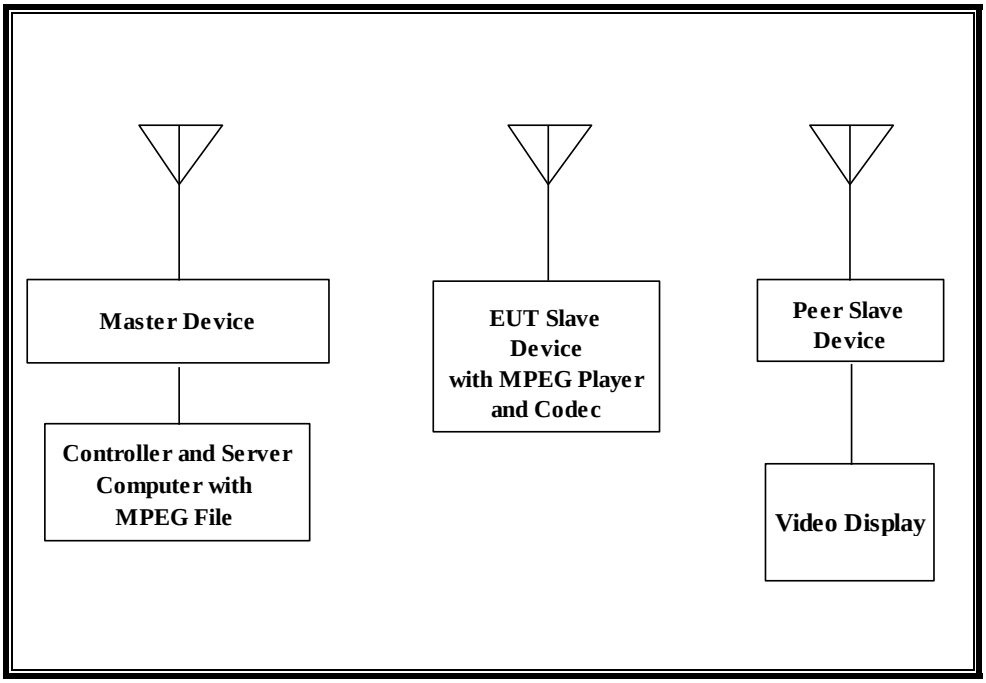
SUPPORT EQUIPMENT

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**
802.11a/b/g/n/ac Wireless Access Point 2 (Master Device)	Apple	A1470	C86KX6B5FJ1R	BCGA1470
Notebook PC (Controller/Server)	Apple	MacBook A1181	W865101LWGK	DoC
AC Adapter (Controller/Server PC)	Delta Electronics	A1244	MV01000FD9DYA	DoC

12.1.4. 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**
802.11a/b/g/n/ac Wireless Access Point 2 (Master Device)	Apple	A1470	C86KX6B5FJ1R	BCGA1470
Notebook PC (Controller/Server)	Apple	MacBook A1181	W865101LWGK	DoC
AC Adapter (Controller/Server PC)	Delta Electronics	A1244	MV01000FD9DYA	DoC
Apple TV (Peer Slave Device)	Apple	A1469	V07JV1Z7FF54	BCGA1469
Video Display	Dell	U2410f	CN-0FJ525N-72872-1B5-AGAL	DoC

12.1.5. DESCRIPTION OF EUT

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 26.55 dBm EIRP in the 5250-5350 MHz band and 27.47 dBm EIRP in the 5470-5725 MHz band.

The only antenna assembly utilized with the EUT has individual gain of 3.434 dBi and 3.875 dBi in the 5250-5350 MHz band and 4.293 dBi and 4.247 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 one transmitter/receiver chain connected to an antenna to perform radiated tests.

WLAN traffic is generated by streaming the video file TestFile.mp2 “6 ½ Magic Hours” from the Master to the Slave in full motion video mode using Safari web browser.

TPC is required since the maximum EIRP is greater than 500 mW (27 dBm).

In Client-to-Client Communications Mode the EUT utilizes the 802.11ac architecture between the EUT and the Master Device 2 where three nominal channel bandwidths are implemented: 20 MHz, 40 MHz and 80 MHz. However, 802.11a/n architecture is utilized between the EUT and the Peer Slave Device in Client-to Client Communications Mode where only two nominal channel bandwidths are implemented: 20 MHz and 40 MHz. Therefore, pursuant to FCC KDB Publication 905462 D3, “Client devices with 80 MHz BW mode can be tested with an approved master operating in 40 MHz BW mode”. Therefore, 80MHz BW DFS testing in Client-to-Client Communications Mode was not performed and has been excluded from this report.

The software revision of the master AP is **7.7.3d**

The software revision of the EUT is **7.16.126.2**

UNIFORM CHANNEL SPREADING

This requirement is not applicable to Slave radio devices.

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

The Master Device is an Apple, Inc. Access Point, FCC ID: BCGA1470. 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.d3.

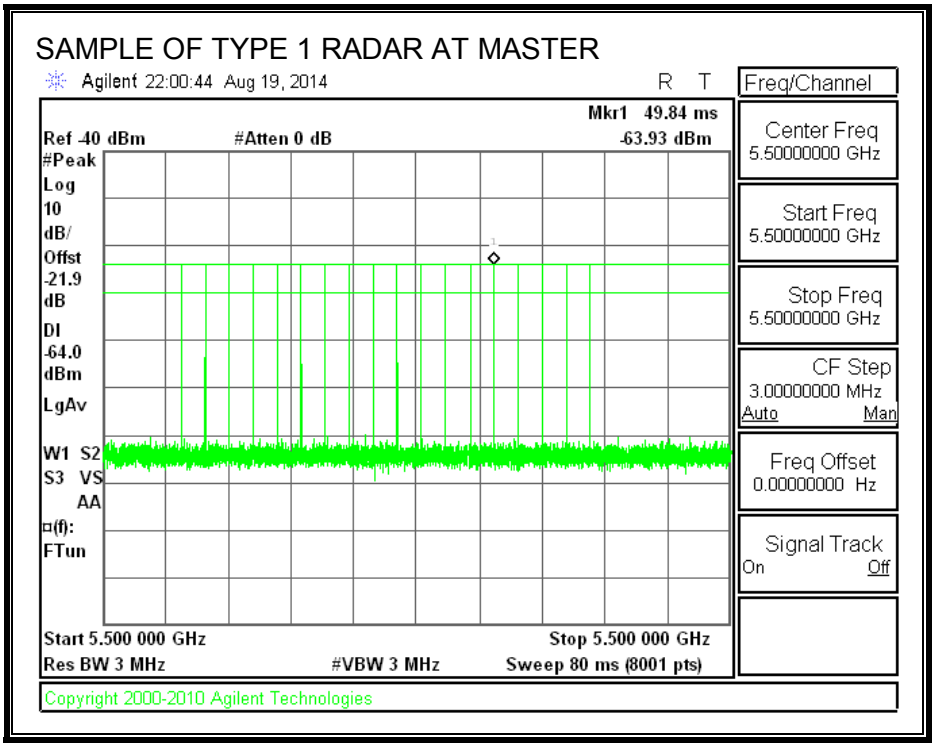
12.2. CLIENT MODE RESULTS FOR 20 MHz BANDWIDTH

12.2.1. TEST CHANNEL

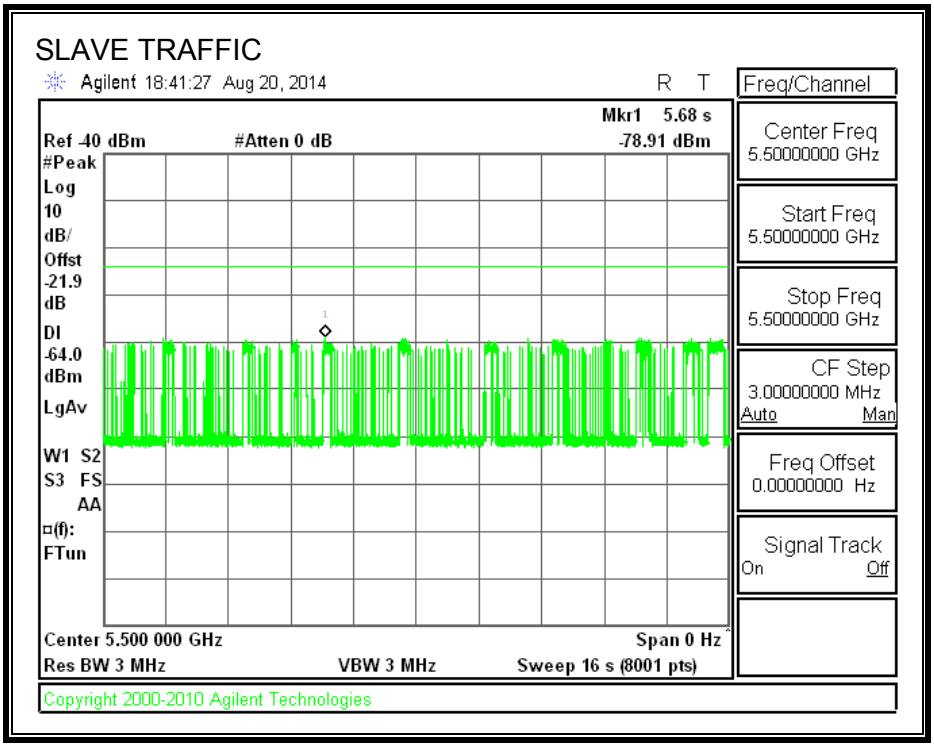
All tests were performed at a channel center frequency of 5500 MHz.

12.2.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



12.2.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

12.2.4. 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)

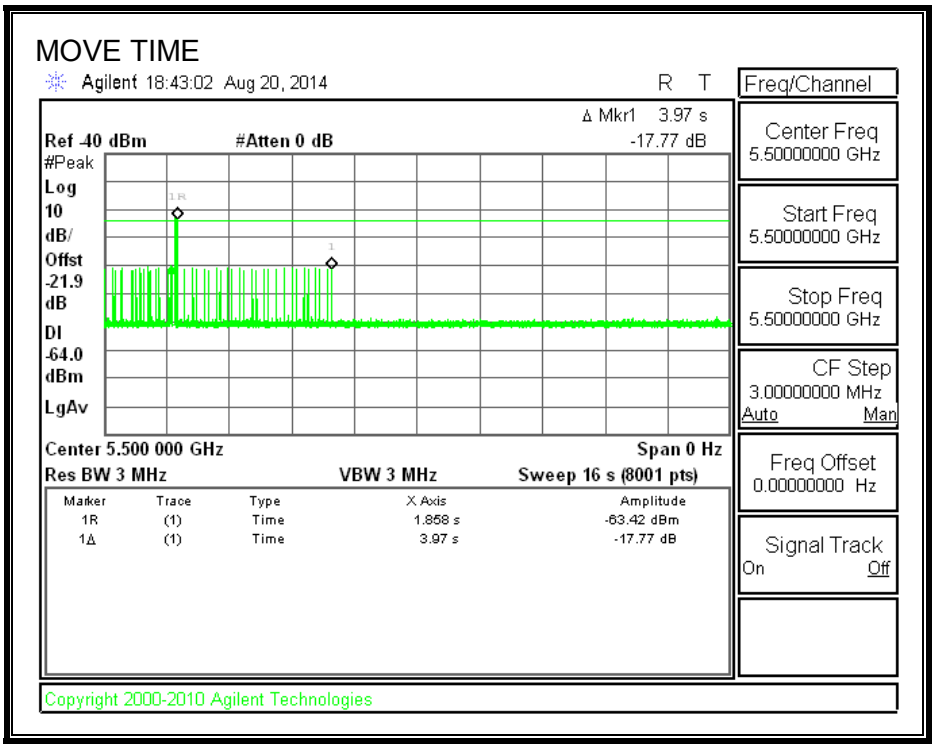
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

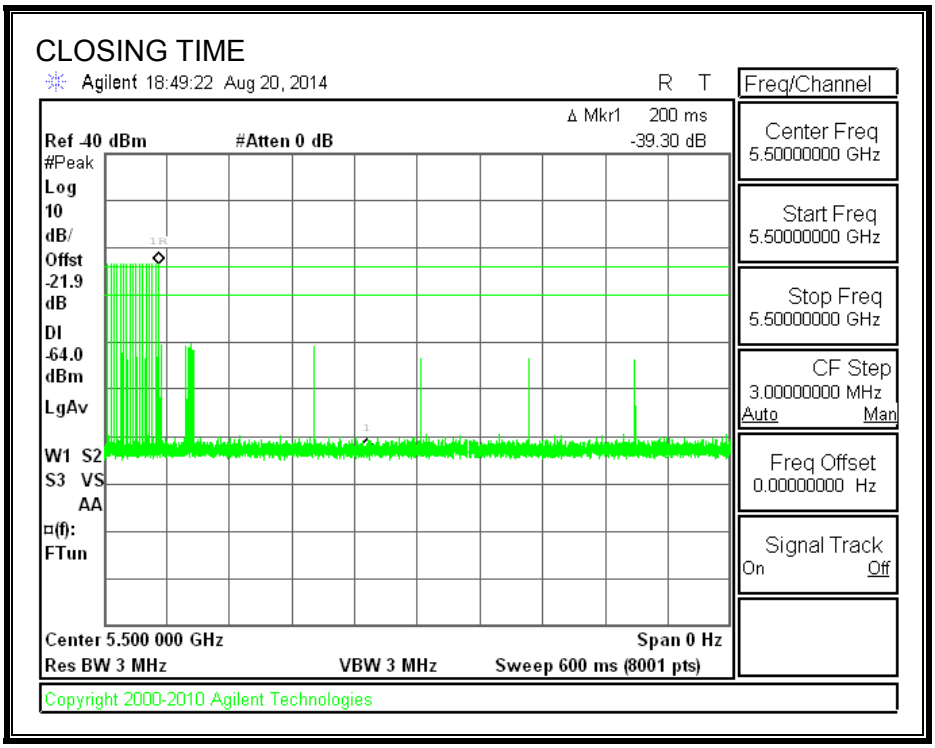
Channel Move Time (sec)	Limit (sec)
3.970	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
50.0	60

MOVE TIME



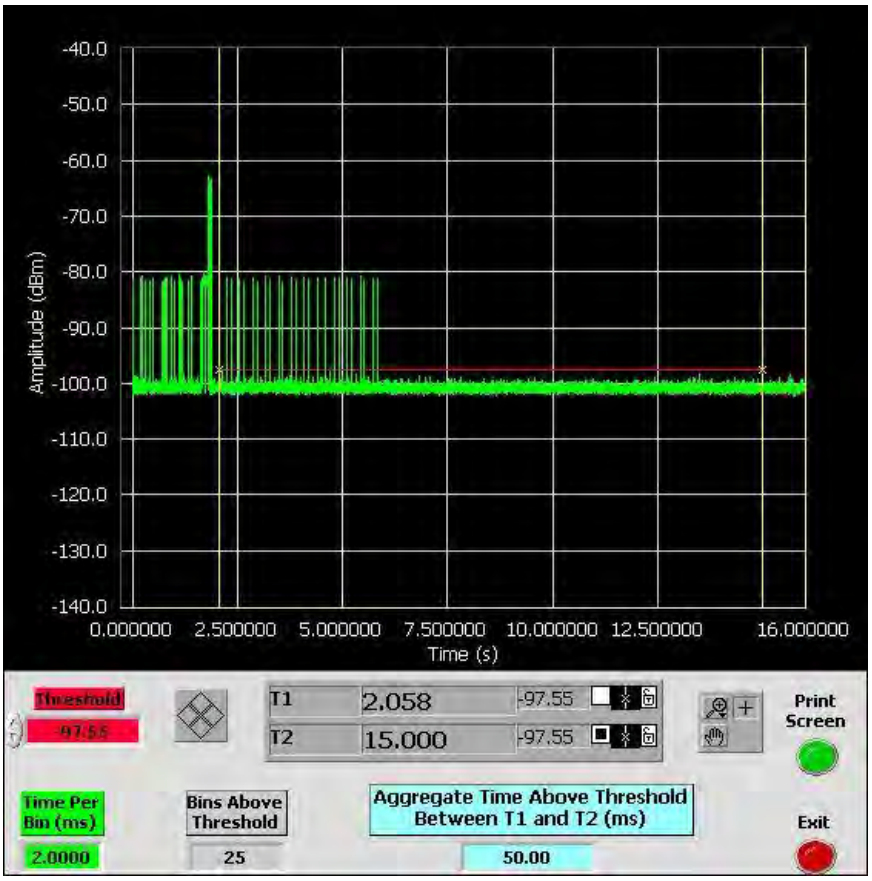
CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



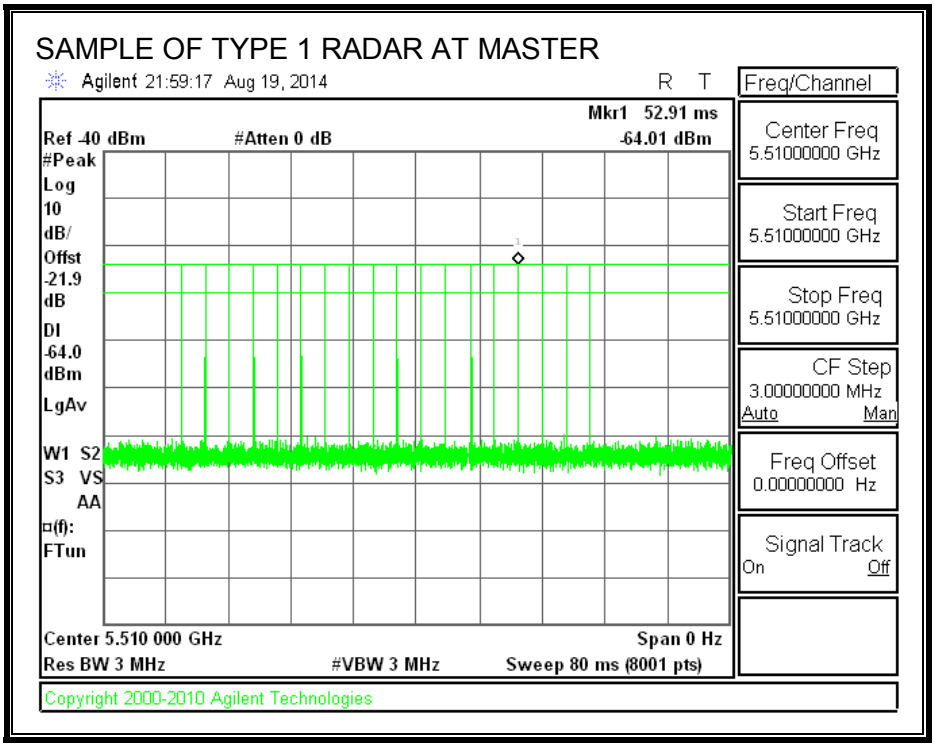
12.3. CLIENT MODE RESULTS FOR 40 MHz BANDWIDTH

12.3.1. TEST CHANNEL

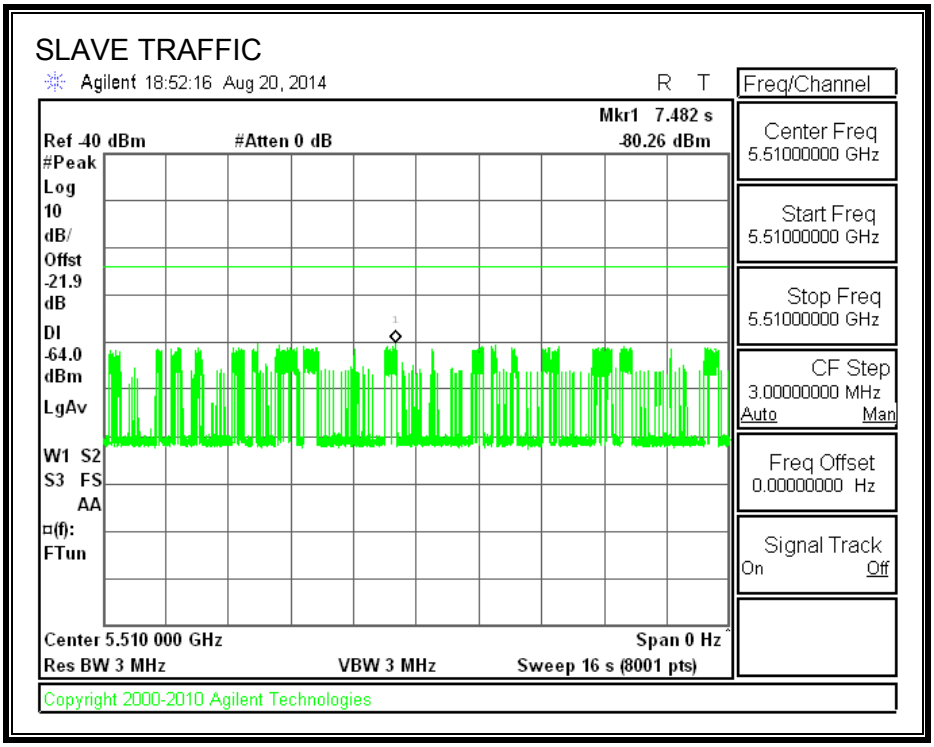
All tests were performed at a channel center frequency of 5510 MHz.

12.3.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



12.3.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

12.3.4. 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)

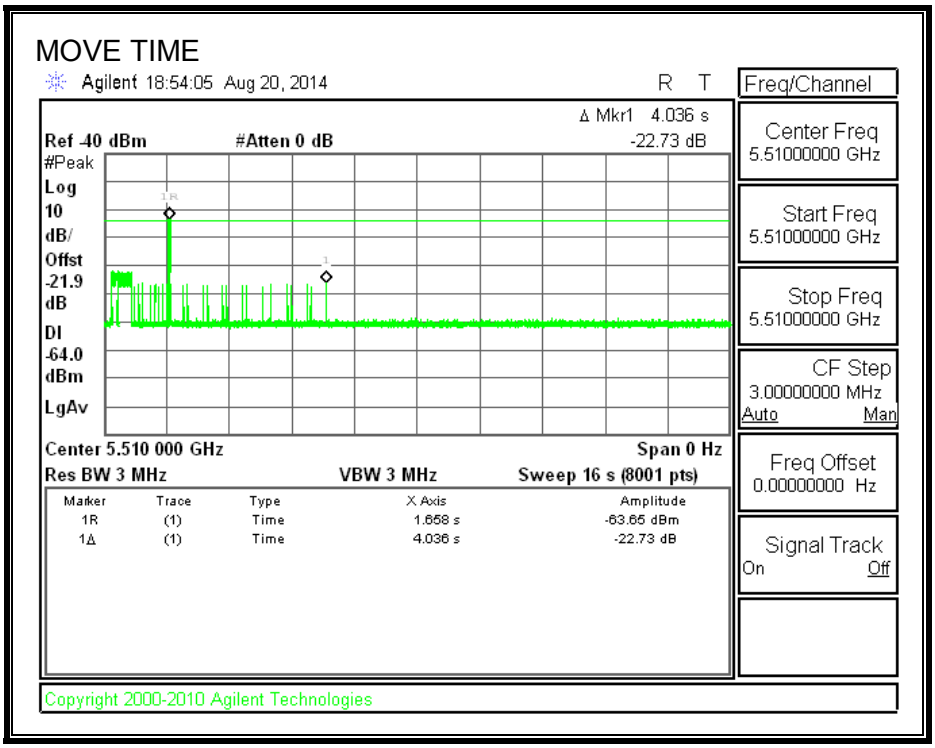
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

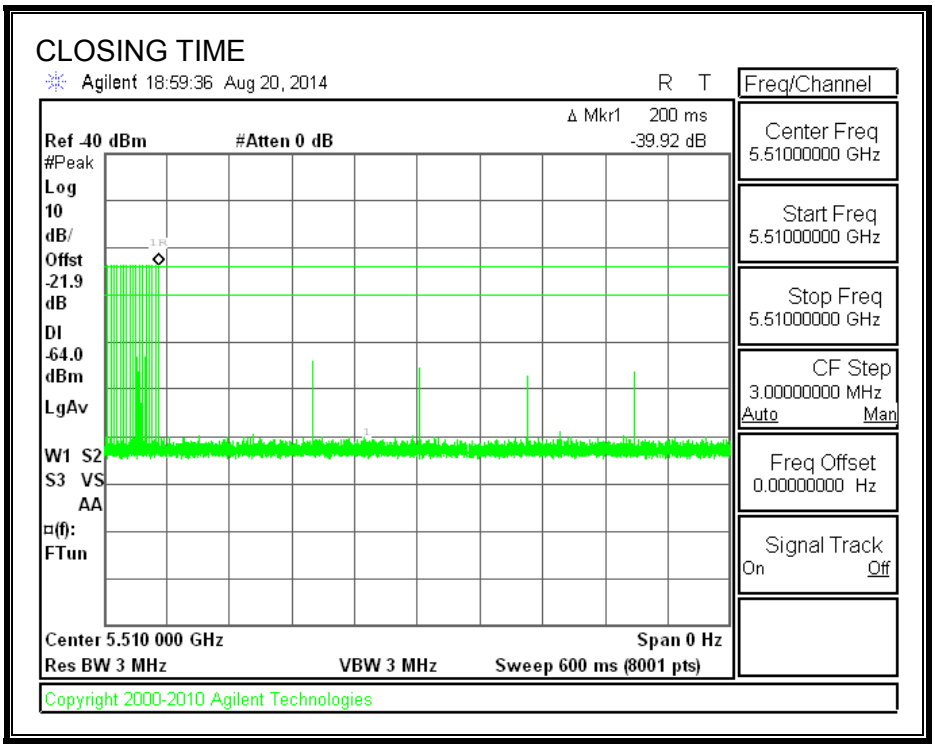
Channel Move Time (sec)	Limit (sec)
4.036	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
30.0	60

MOVE TIME



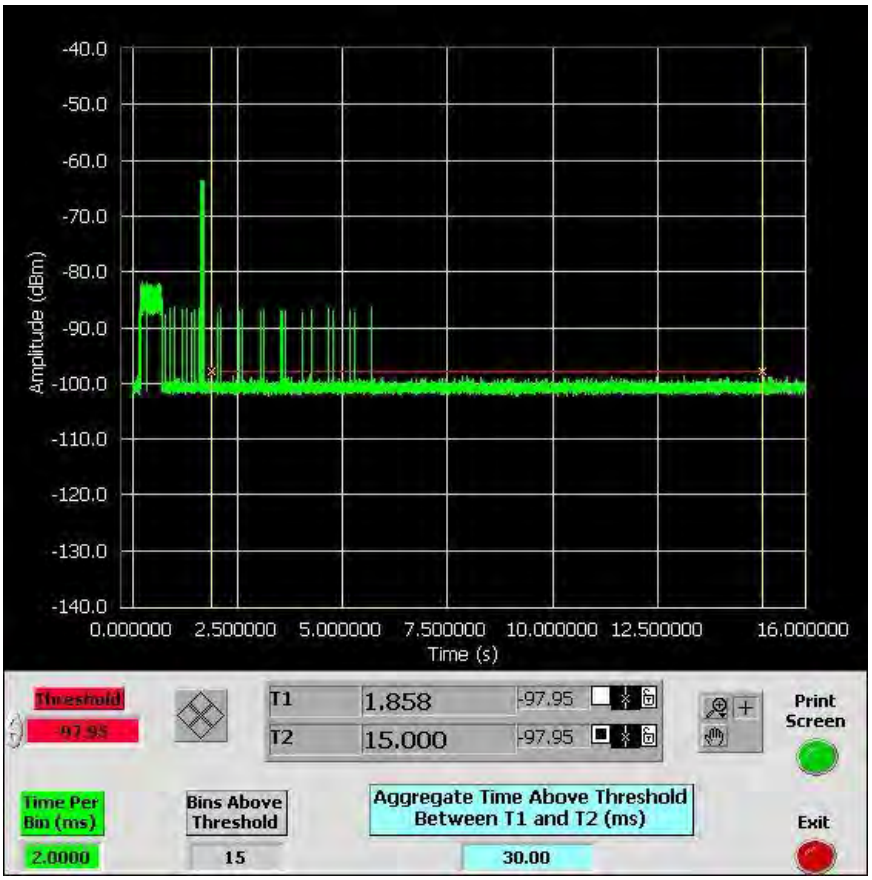
CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the aggregate monitoring period.

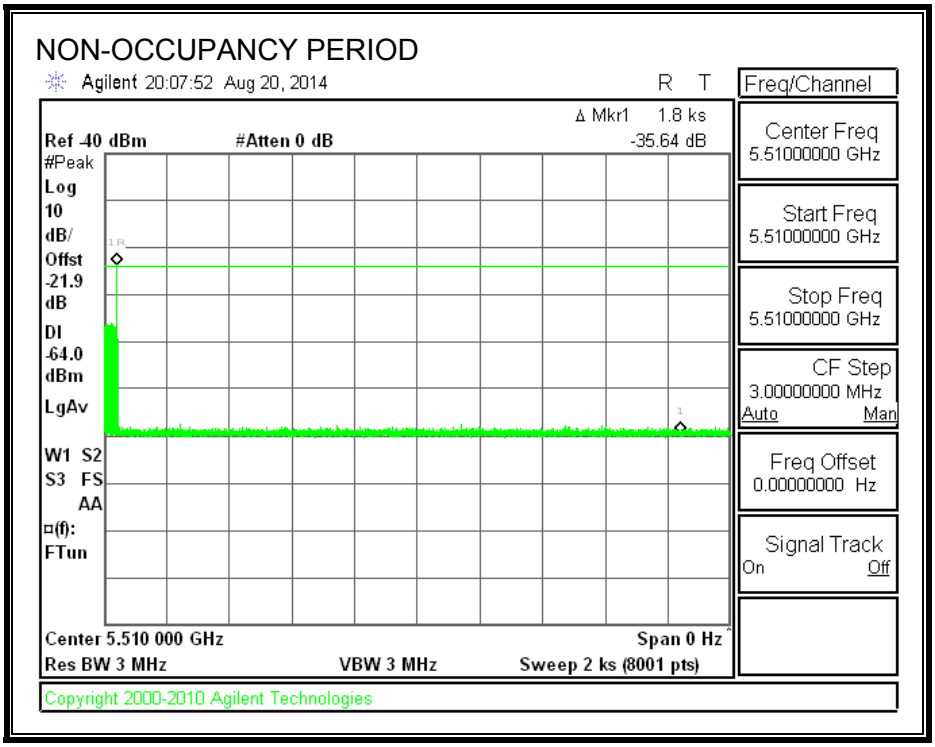
AGGREGATE CLOSING TIME



12.3.5. NON-OCCUPANCY PERIOD

RESULTS

No EUT transmissions were observed on the test channel during the 30-minute observation time.



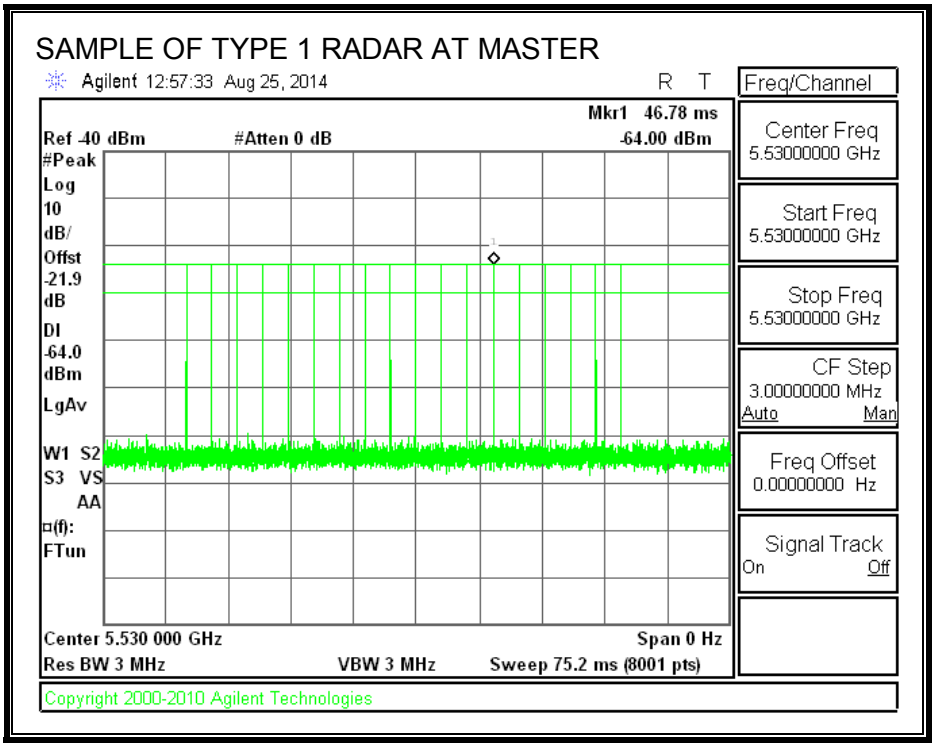
12.4. CLIENT MODE RESULTS FOR 80 MHz BANDWIDTH

12.4.1. TEST CHANNEL

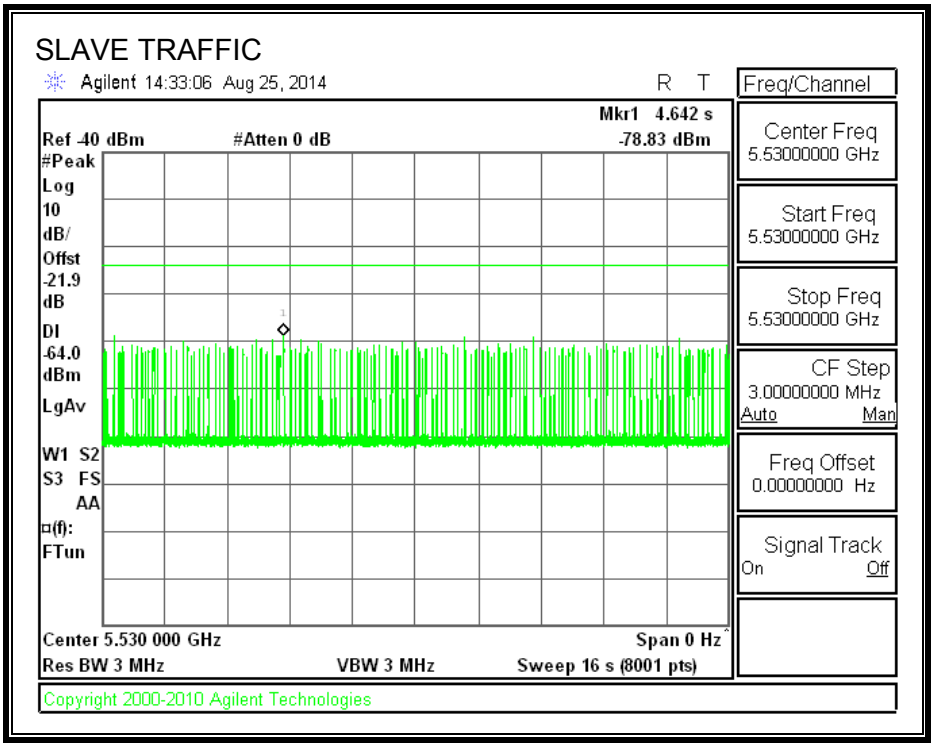
All tests were performed at a channel center frequency of 5530 MHz.

12.4.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



12.4.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

12.4.4. 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).

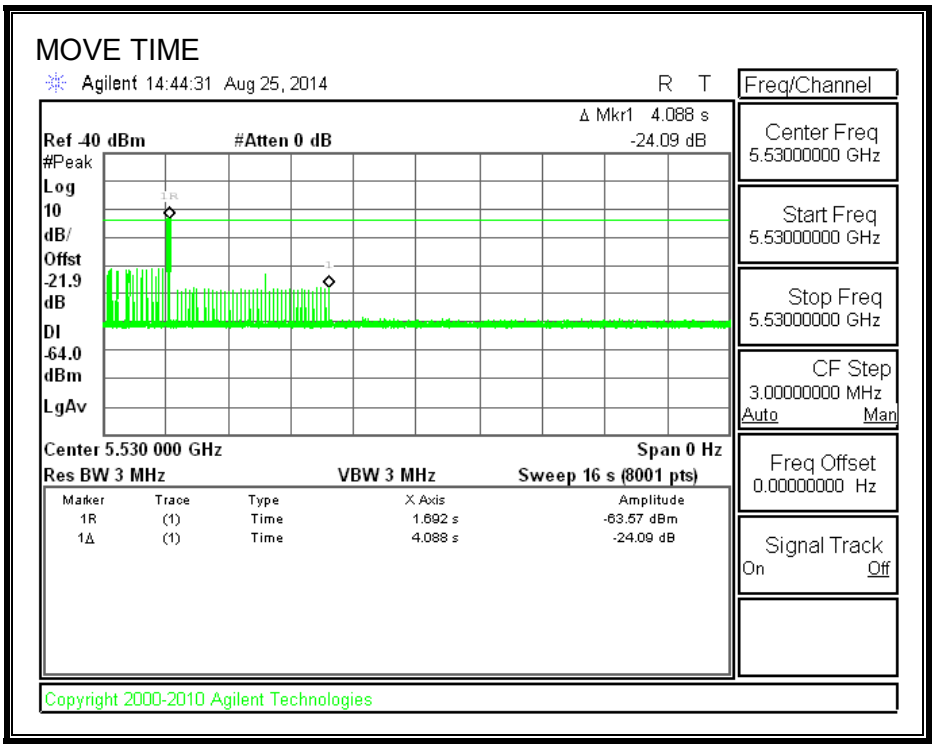
RESULTS

Channel Move Time (sec)	Limit (sec)
3.980	10

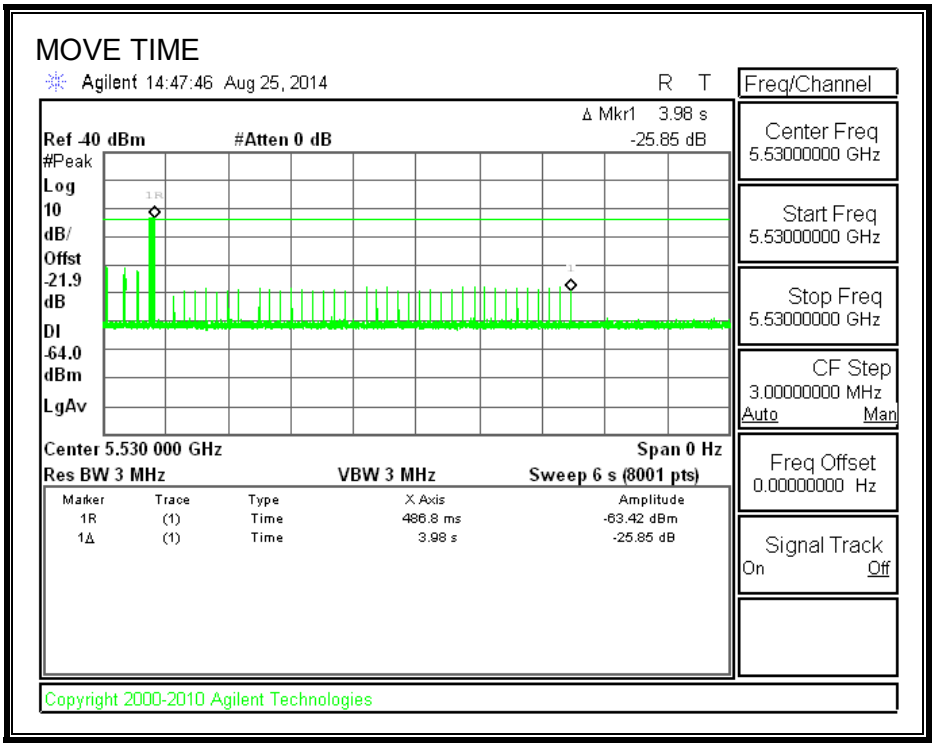
Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
27.75	60

MOVE TIME

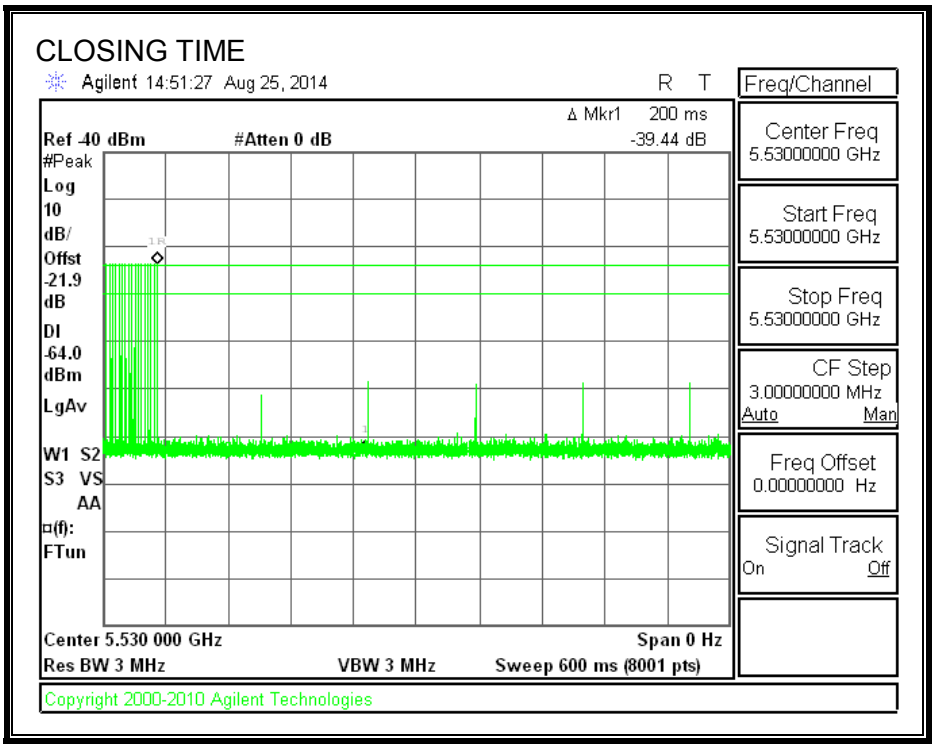
16 SECOND SWEEP:



6 SECOND SWEEP:



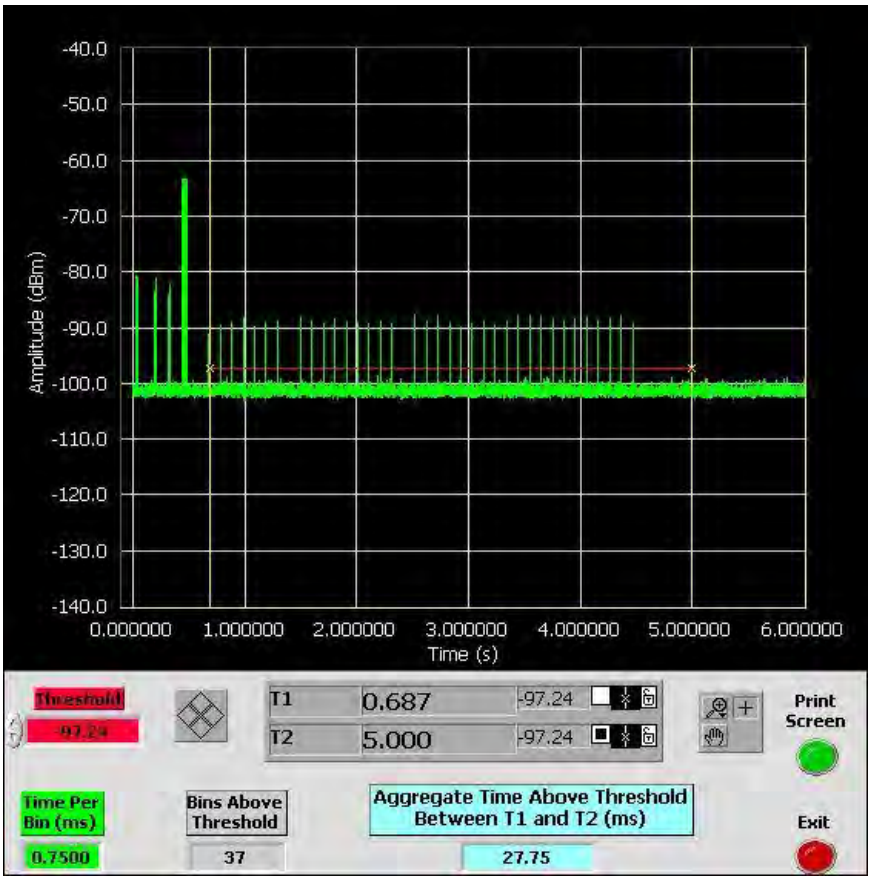
CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the aggregate monitoring period.

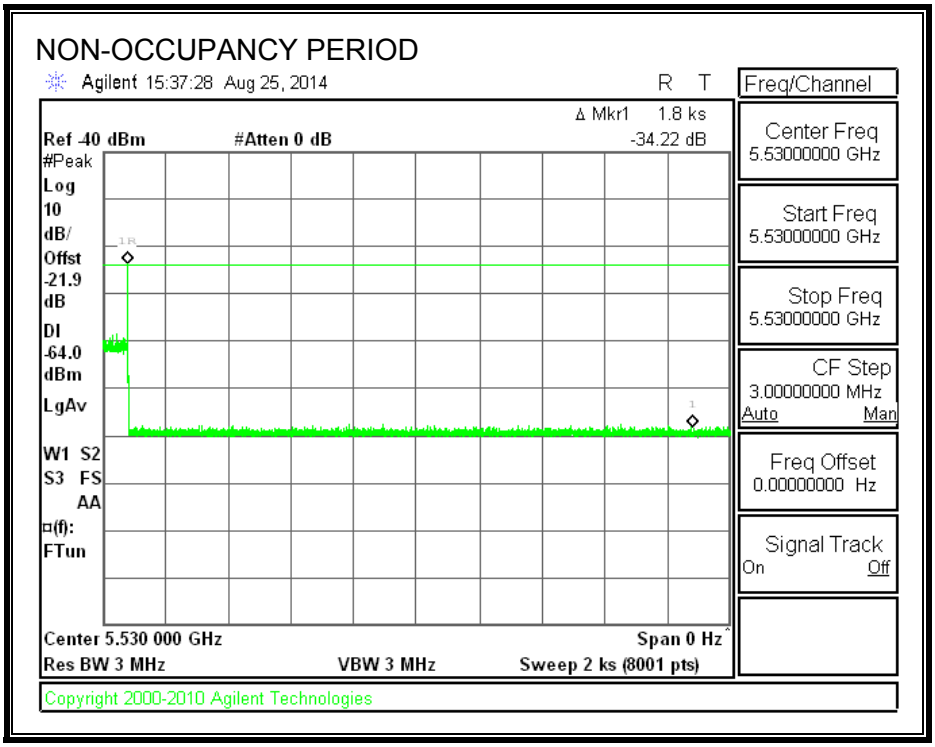
AGGREGATE CLOSING TIME



12.4.5. NON-OCCUPANCY PERIOD

RESULTS

No EUT transmissions were observed on the test channel during the 30-minute observation time.



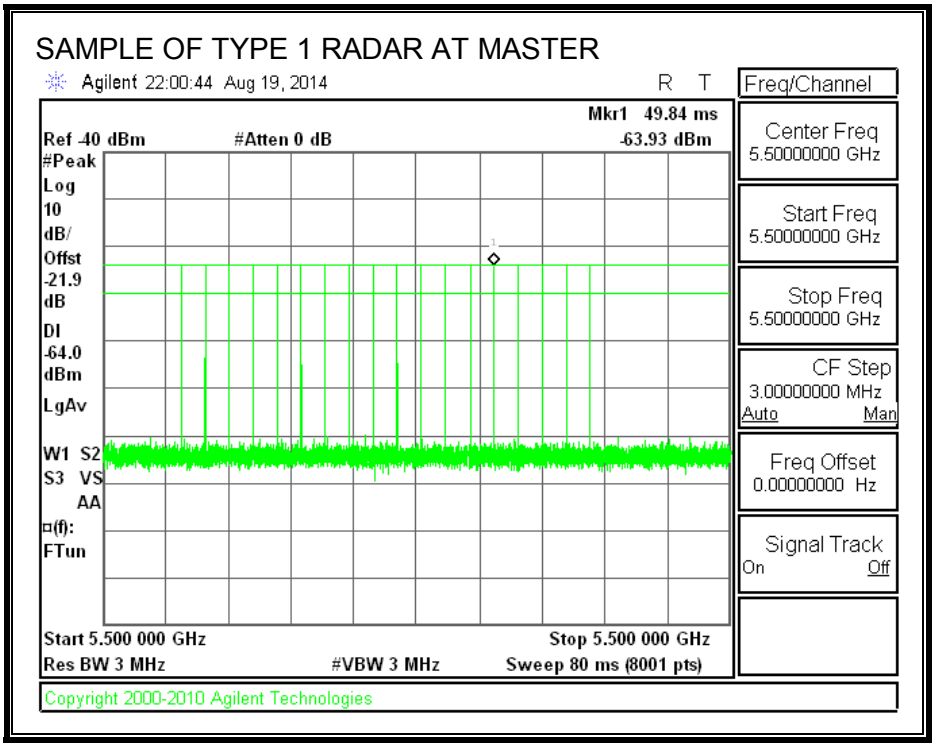
12.5. CLIENT-TO-CLIENT COMMUNICATIONS MODE RESULTS FOR 20 MHz BANDWIDTH

12.5.1. TEST CHANNEL

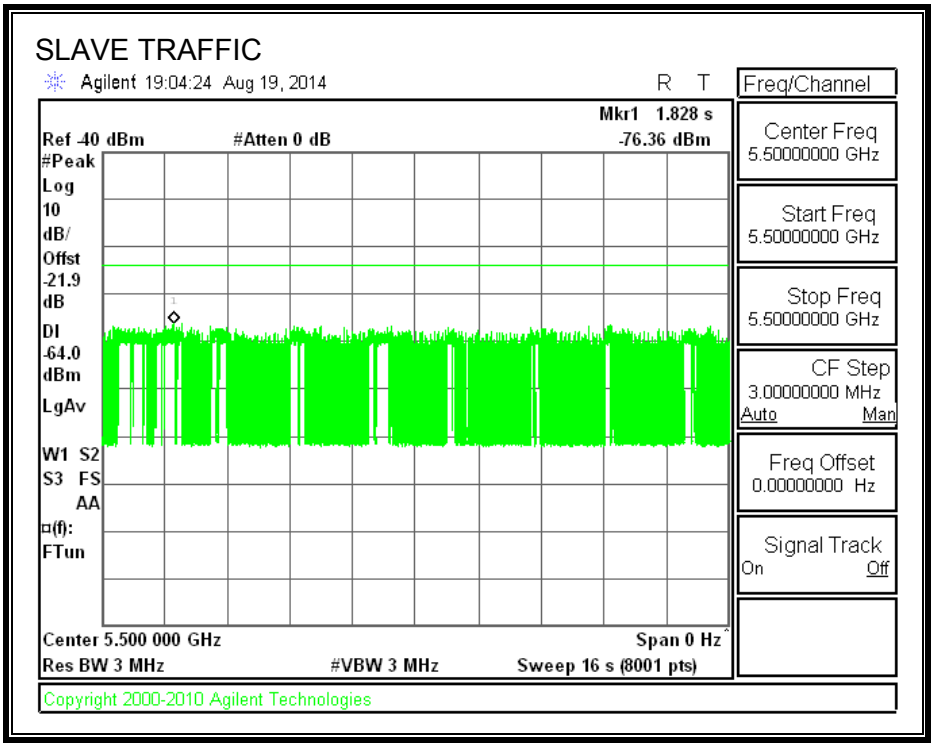
All tests were performed at a channel center frequency of 5500 MHz.

12.5.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



12.5.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

12.5.4. 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).

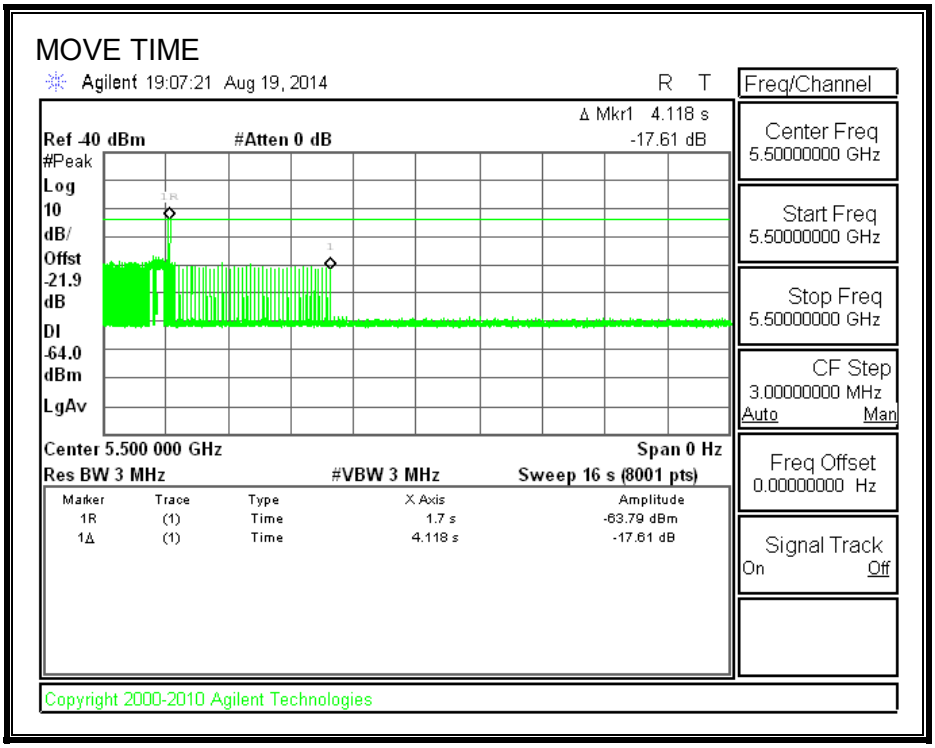
RESULTS

Channel Move Time (sec)	Limit (sec)
4.048	10

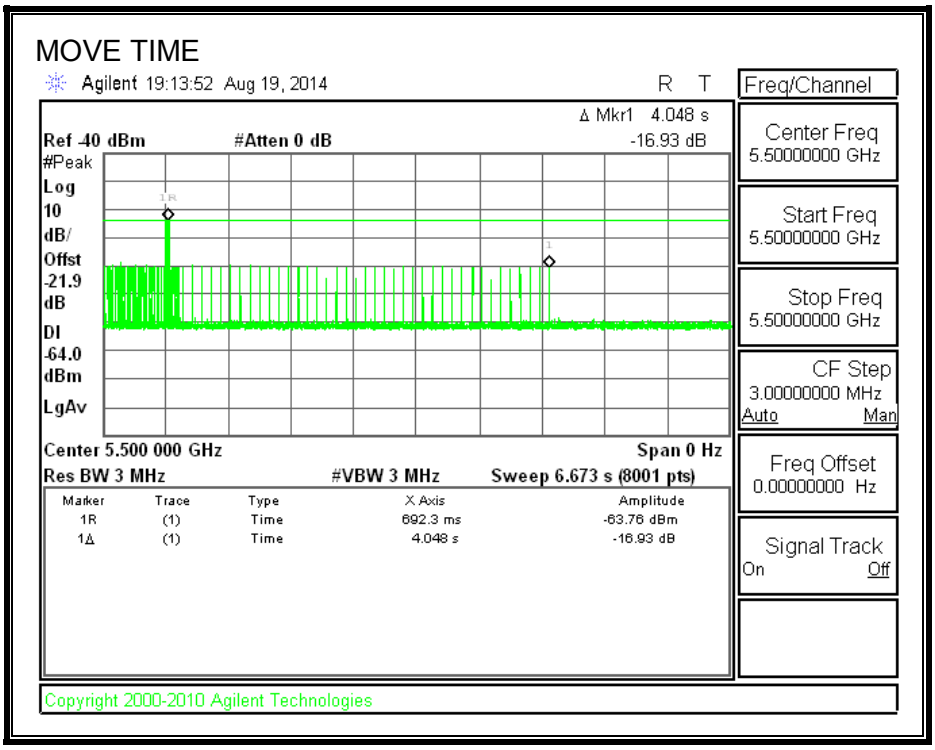
Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
41.7	60

MOVE TIME

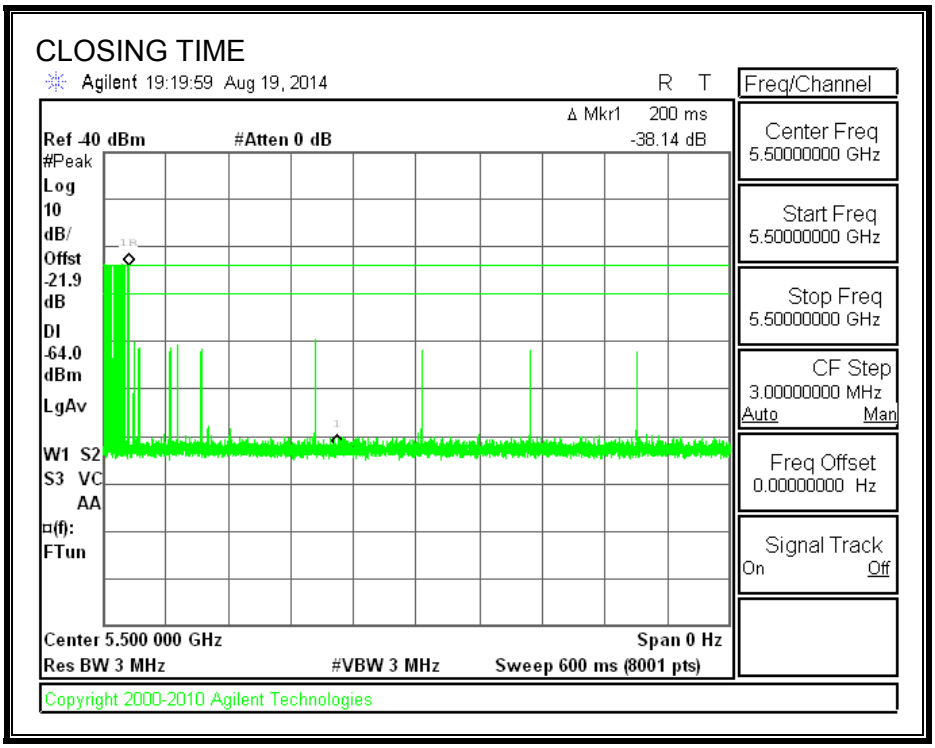
16 SECOND SWEEP:



6 SECOND SWEEP:



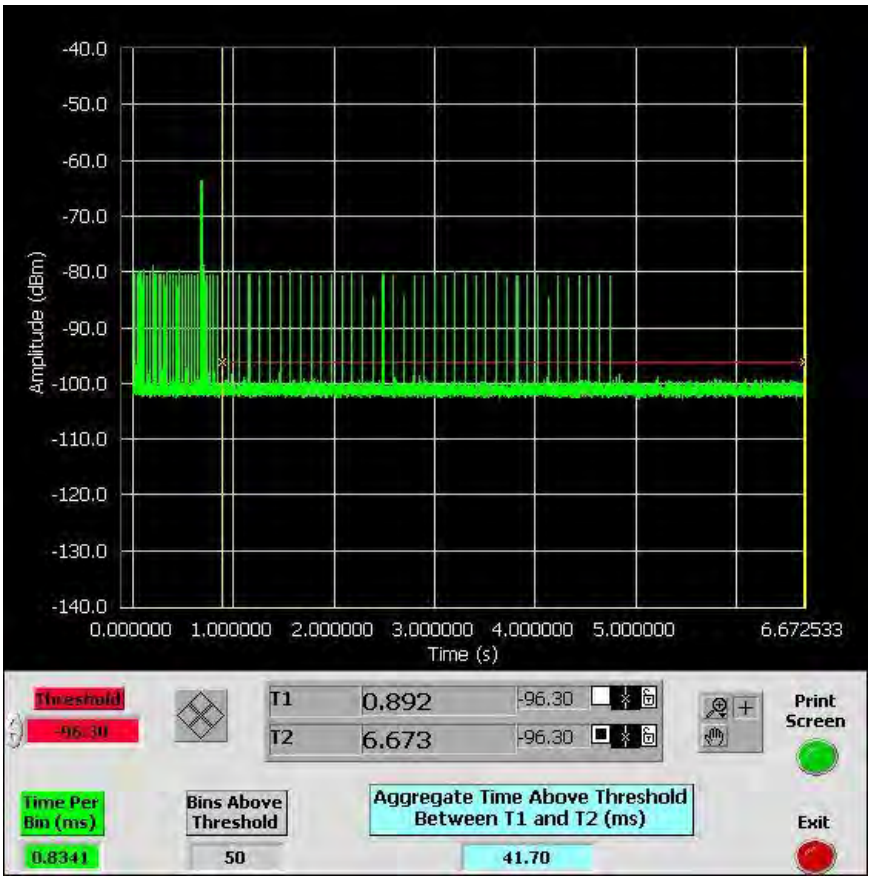
CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



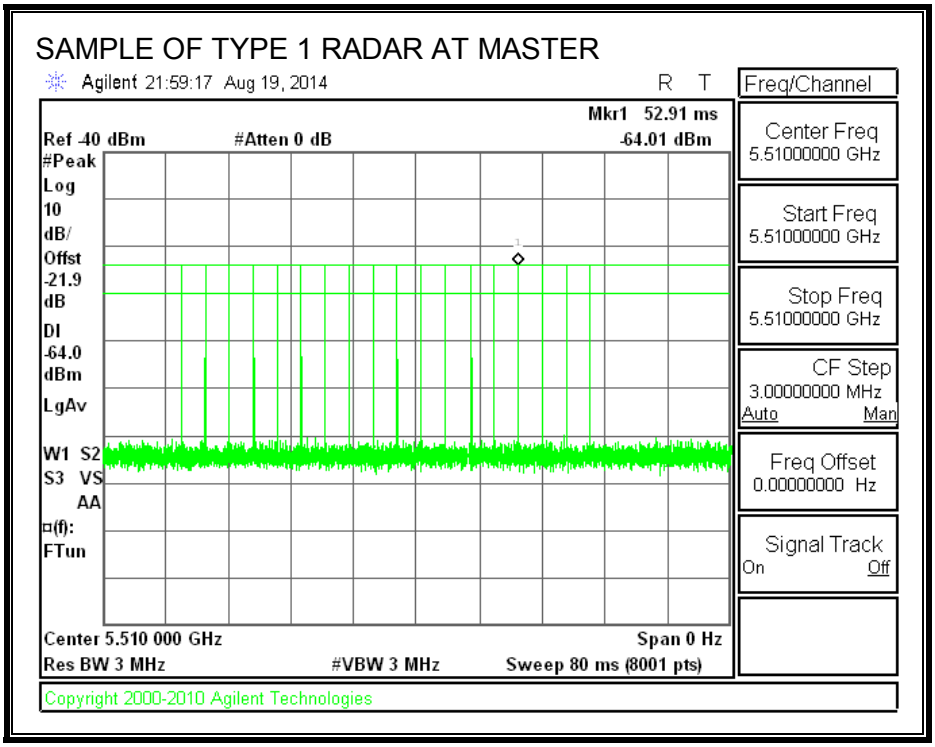
12.6. CLIENT-TO-CLIENT COMMUNICATIONS MODE RESULTS FOR 40 MHz BANDWIDTH

12.6.1. TEST CHANNEL

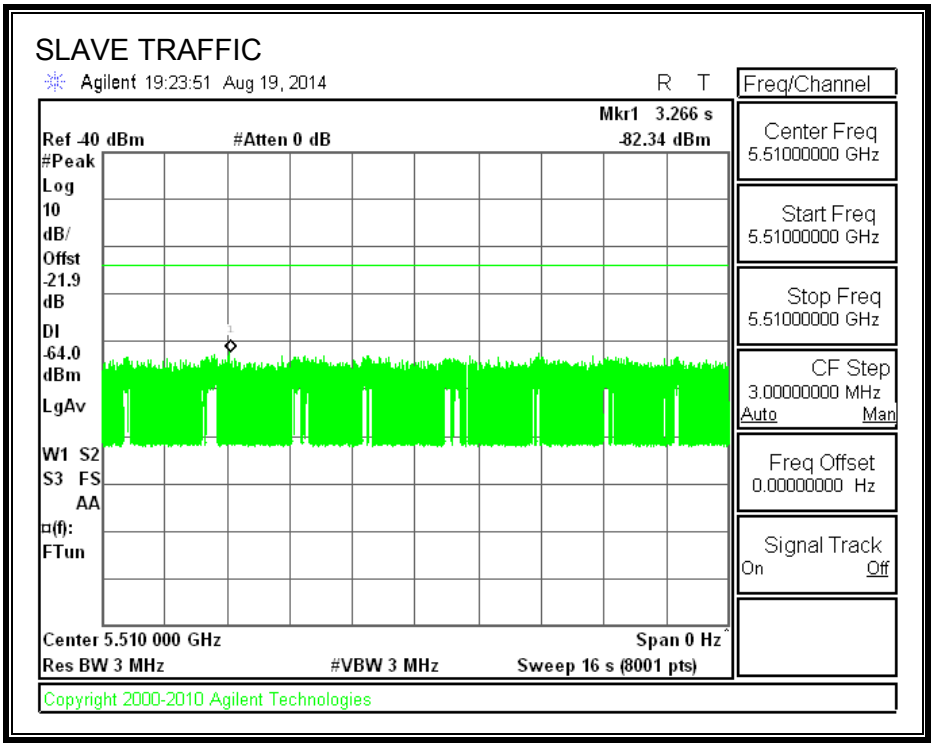
All tests were performed at a channel center frequency of 5510 MHz.

12.6.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



12.6.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

12.6.4. 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).

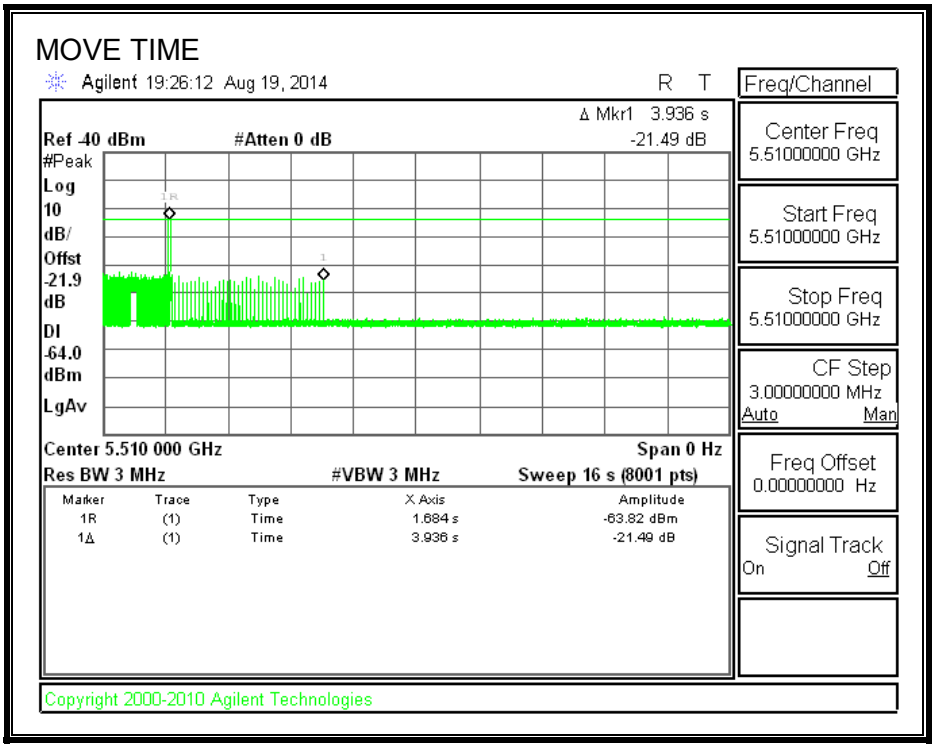
RESULTS

Channel Move Time (sec)	Limit (sec)
3.998	10

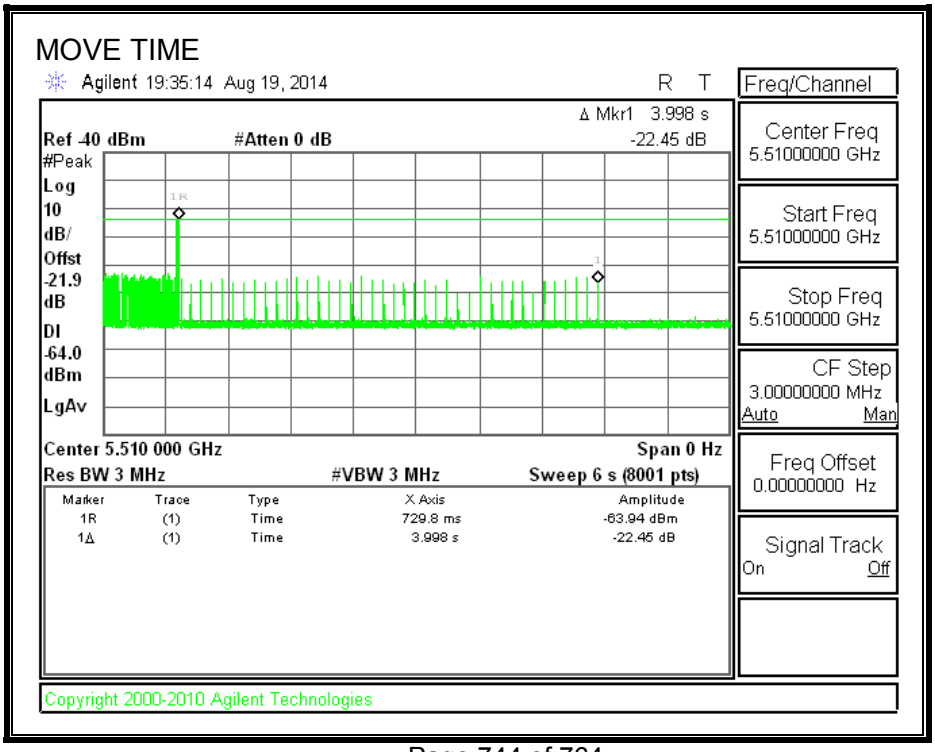
Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
35.25	60

MOVE TIME

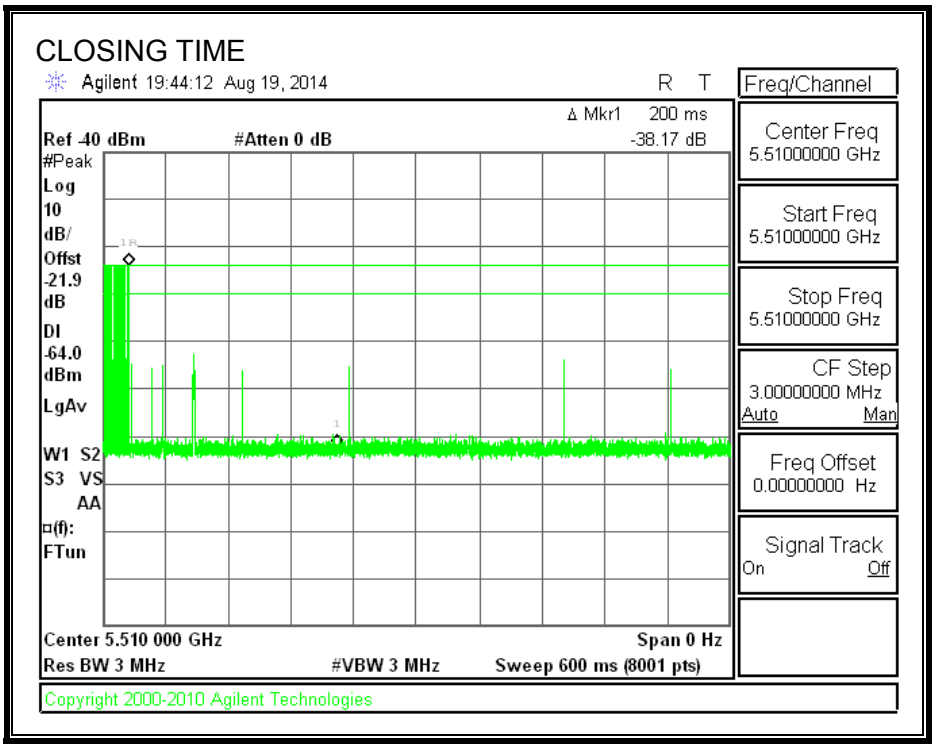
16 SECOND SWEEP:



6 SECOND SWEEP:



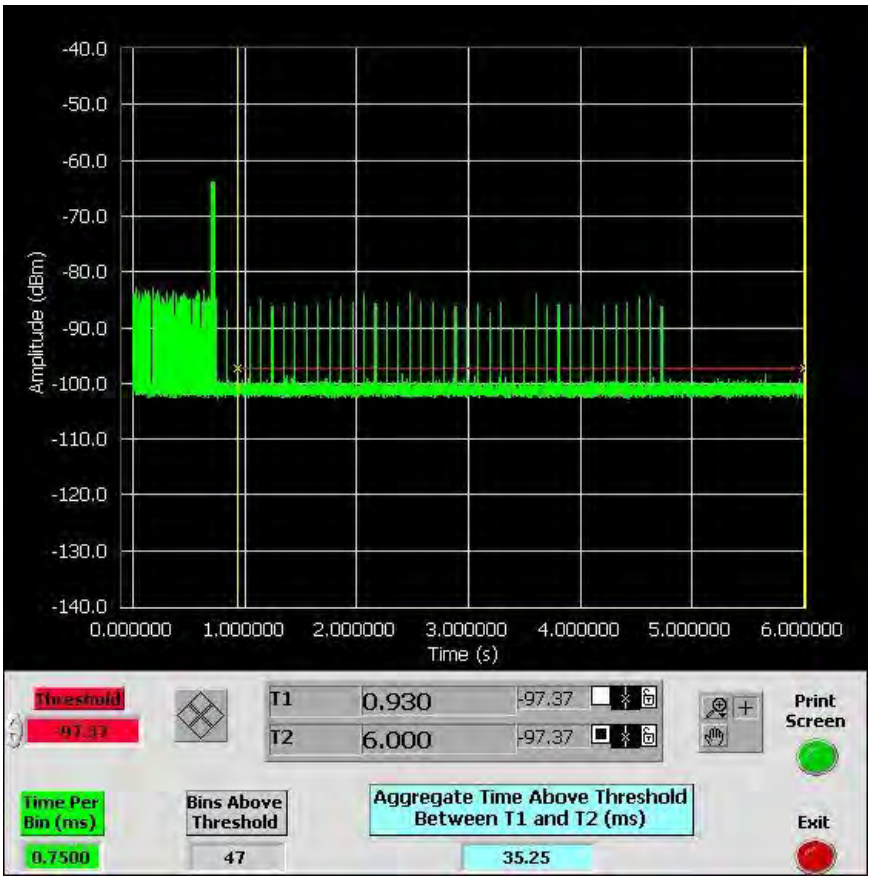
CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



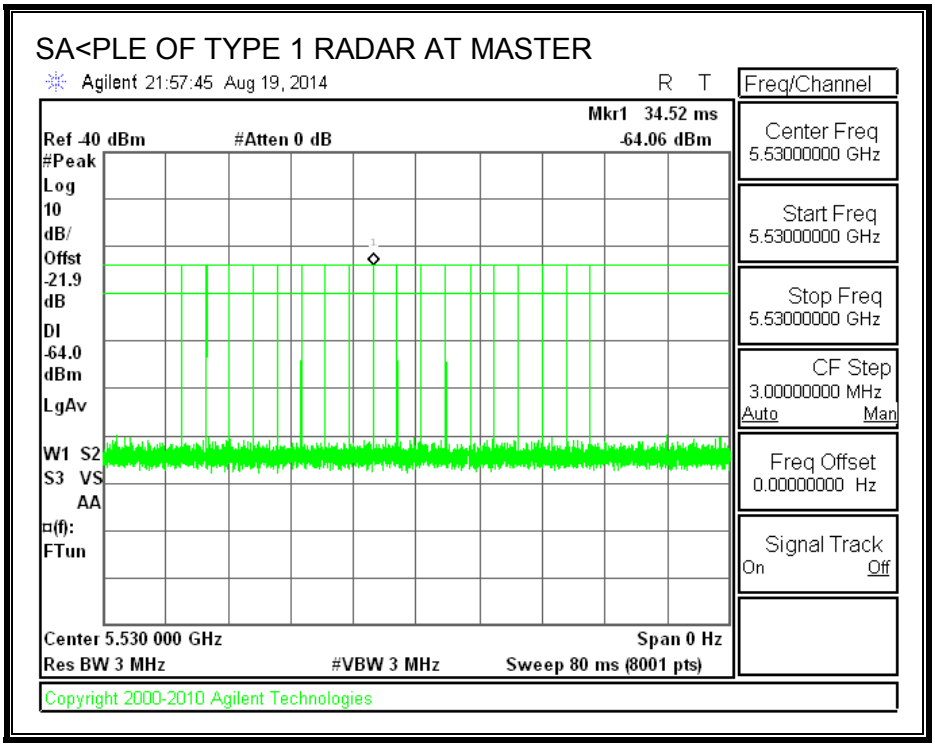
12.7. CLIENT-TO-CLIENT COMMUNICATIONS MODE RESULTS FOR 80 MHz BANDWIDTH

12.7.1. TEST CHANNEL

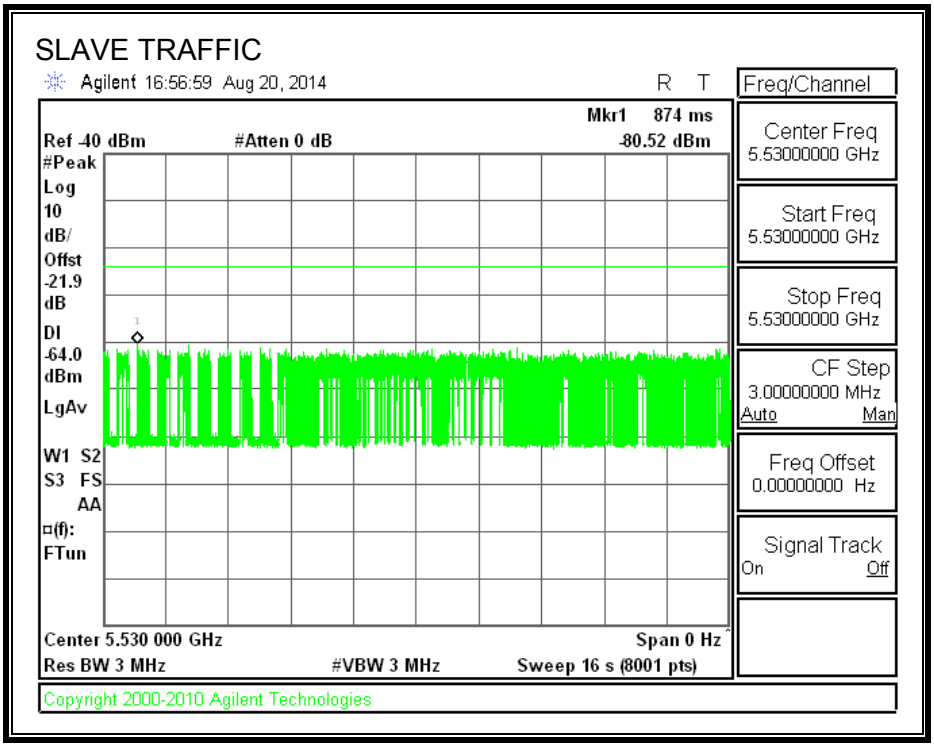
All tests were performed at a channel center frequency of 5530 MHz.

12.7.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



12.7.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

12.7.4. 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).

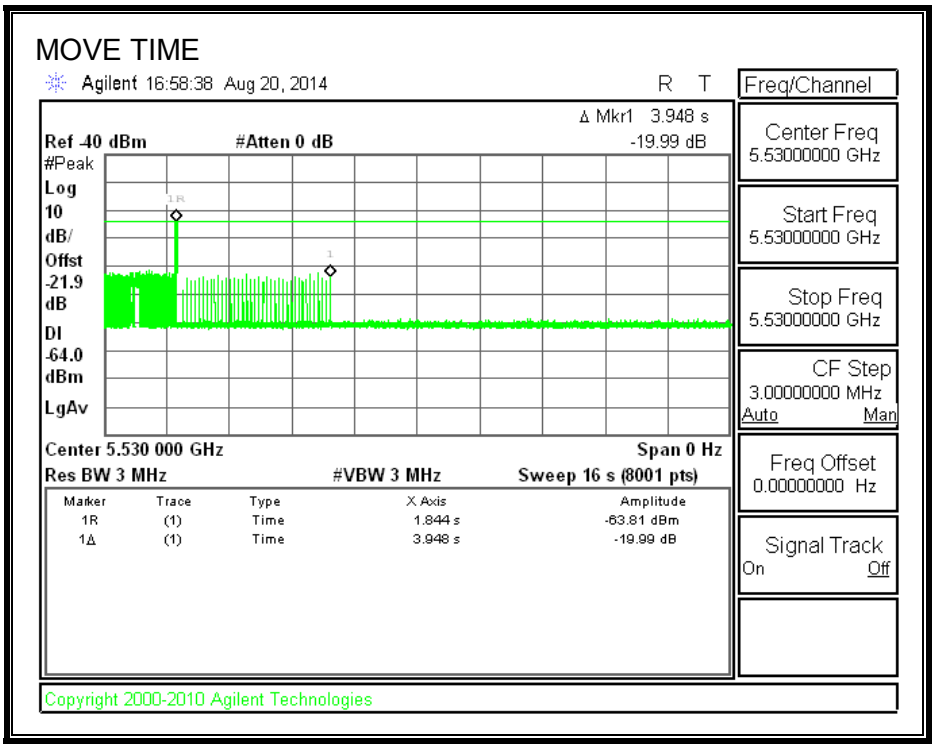
RESULTS

Channel Move Time (sec)	Limit (sec)
4.045	10

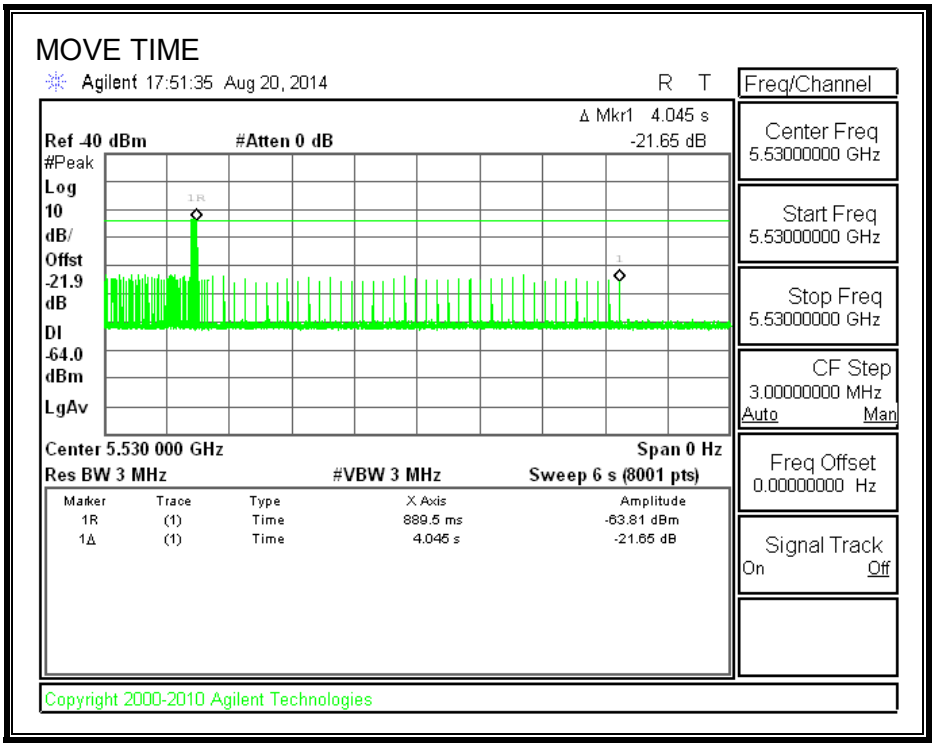
Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
35.25	60

MOVE TIME

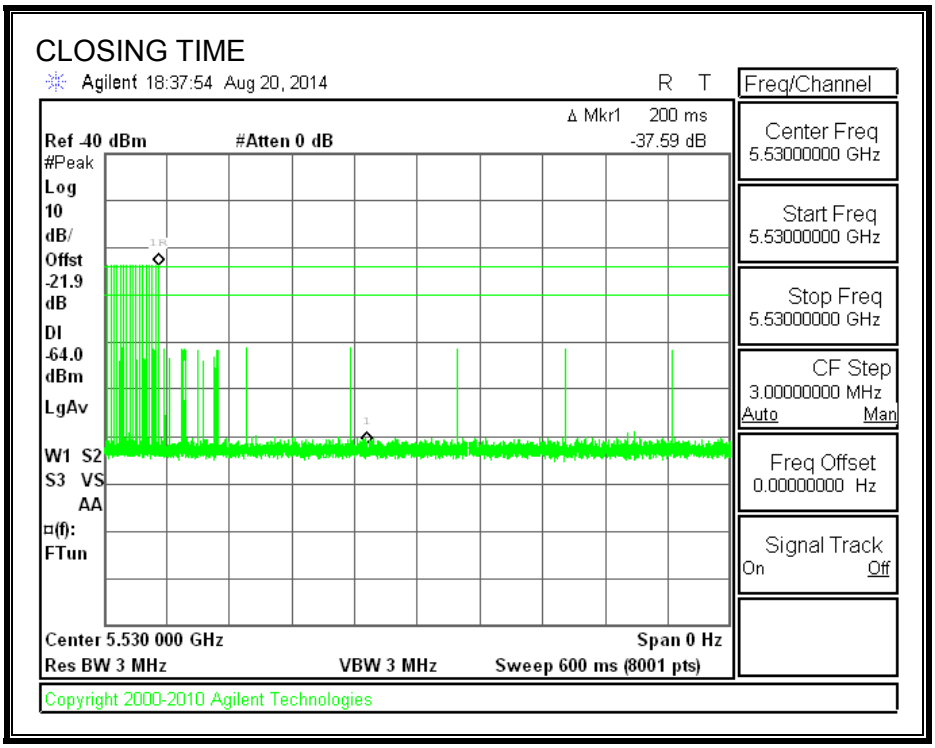
16 SECOND SWEEP:



6 SECOND SWEEP:



CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME