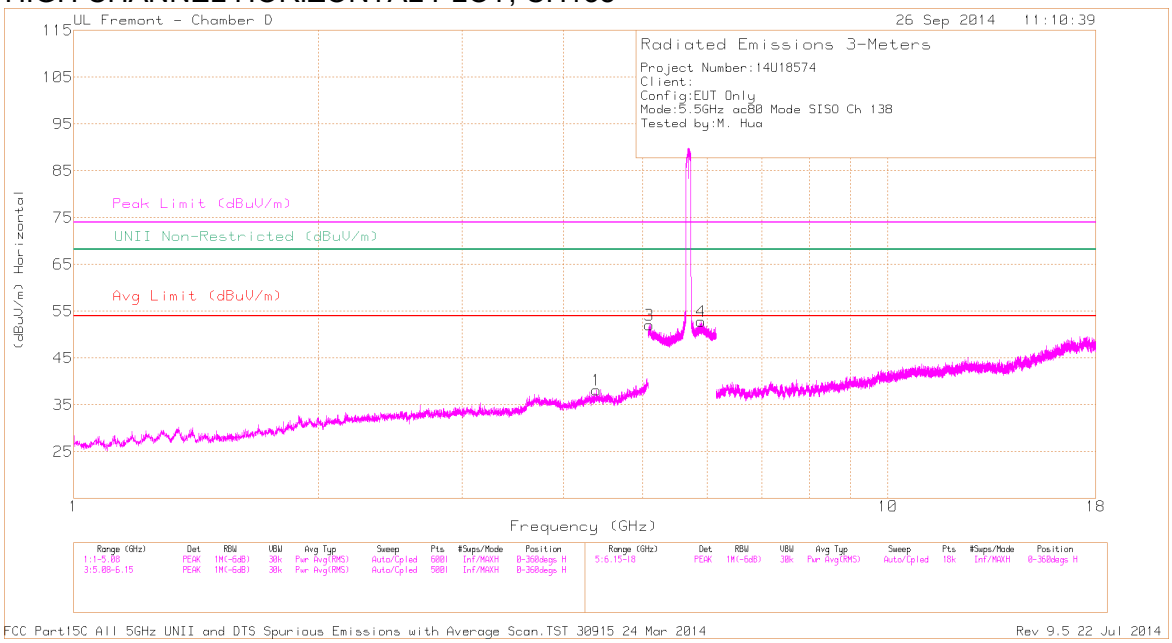
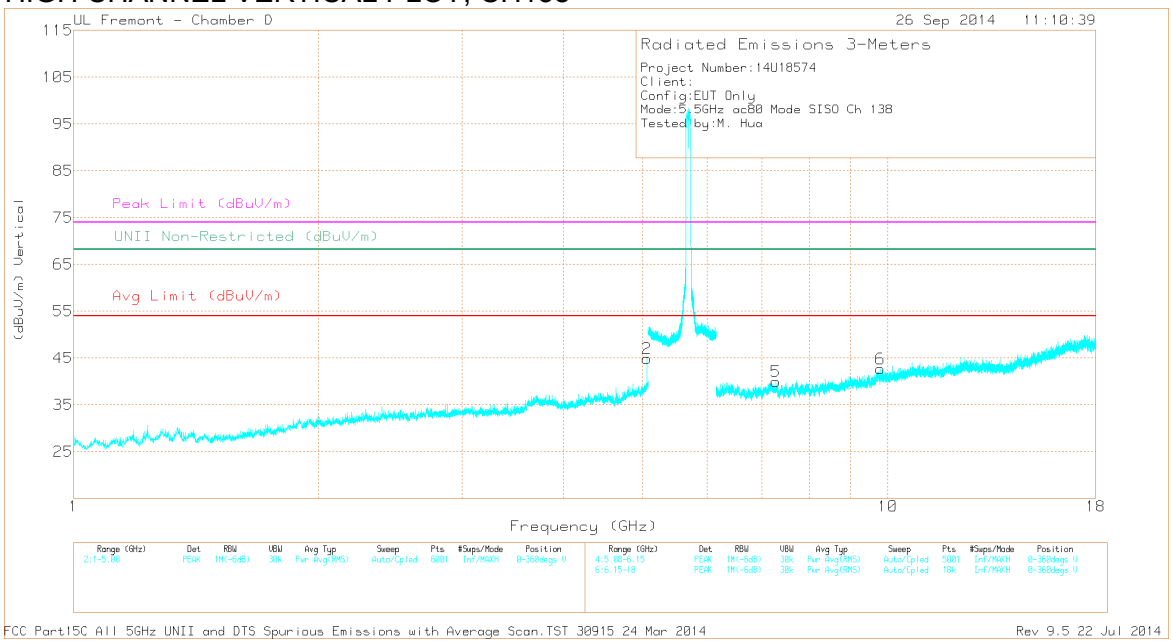
HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT, CH138



HIGH CHANNEL VERTICAL PLOT, CH138



DATA

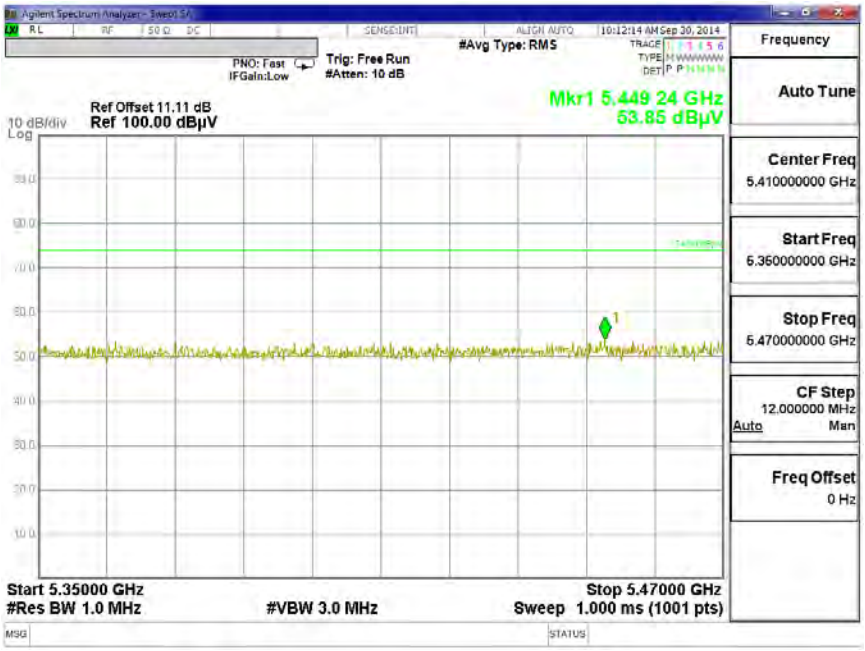
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.386	38.10	PK1	33.9	-27.9	0	44.1	-	-	74	-29.90	-	-	360	100	H
	* 4.387	27.19	AD1	33.9	-27.9	.22	33.41	54	-20.59	-	-	-	-	360	100	H
2	* 5.057	41.07	PK1	34.3	-25.1	0	50.27	-	-	74	-23.73	-	-	239	231	V
	* 5.058	33.14	AD1	34.3	-25.1	.22	42.56	54	-11.44	-	-	-	-	239	231	V
3	* 5.093	37.72	PK1	34.3	-17.9	0	54.12	-	-	74	-19.88	-	-	79	214	H
	* 5.092	26.76	AD1	34.3	-17.9	.22	43.38	54	-10.62	-	-	-	-	79	214	H
5	* 7.287	36.47	PK1	35.7	-25.3	0	46.87	-	-	74	-27.13	-	-	239	231	V
	* 7.289	25.38	AD1	35.7	-25.4	.22	35.90	54	-18.10	-	-	-	-	239	231	V
4	5.890	36.74	PK1	35.1	-16.9	0	54.94	-	-	-	-	68.2	-13.26	79	214	H
6	9.789	33.86	PK1	37.0	-21.7	0	49.16	-	-	-	-	68.2	-19.04	79	214	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

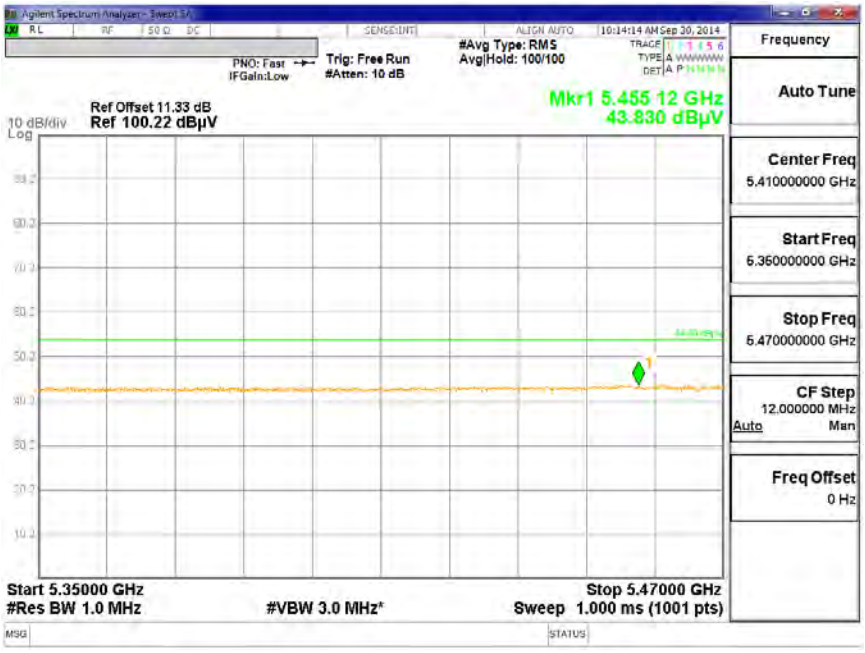
10.27. TX ABOVE 1 GHz 802.11ac VHT80 2TX CDD MODE IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED (LOW CHANNEL, CH 106)

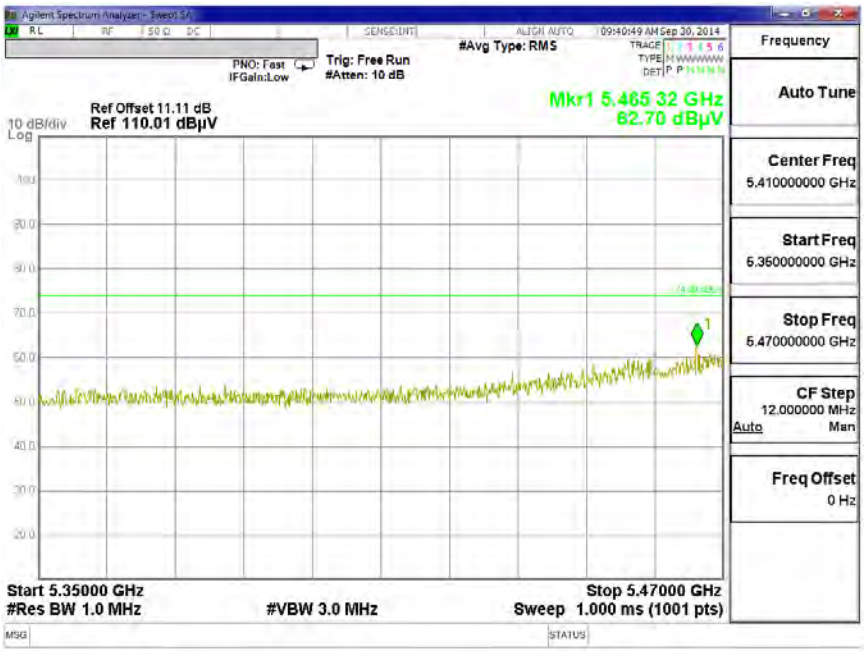
LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, HORIZ



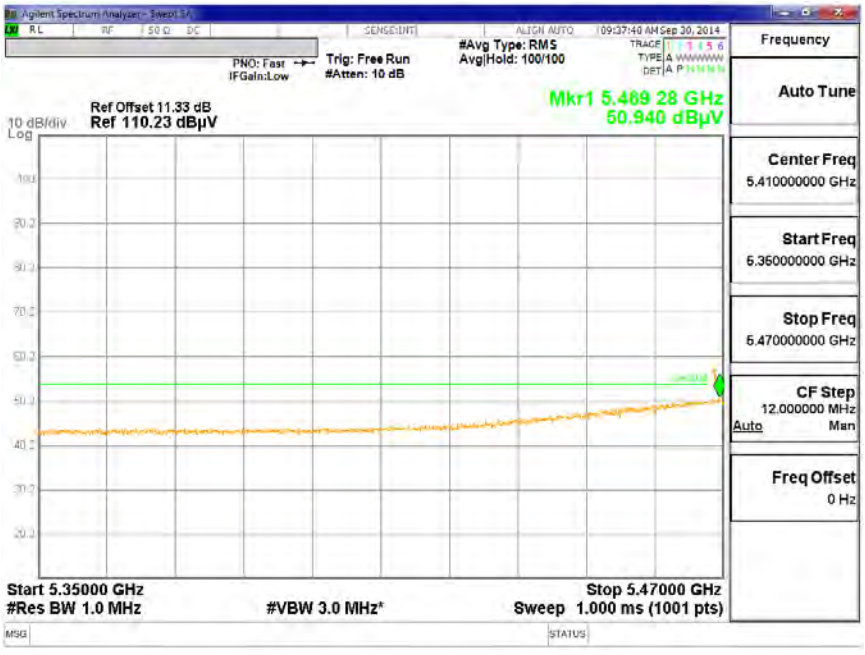
LOW CHANNEL RESTRICTED & AUTHORIZED, AVERAGE, HORIZ



LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT

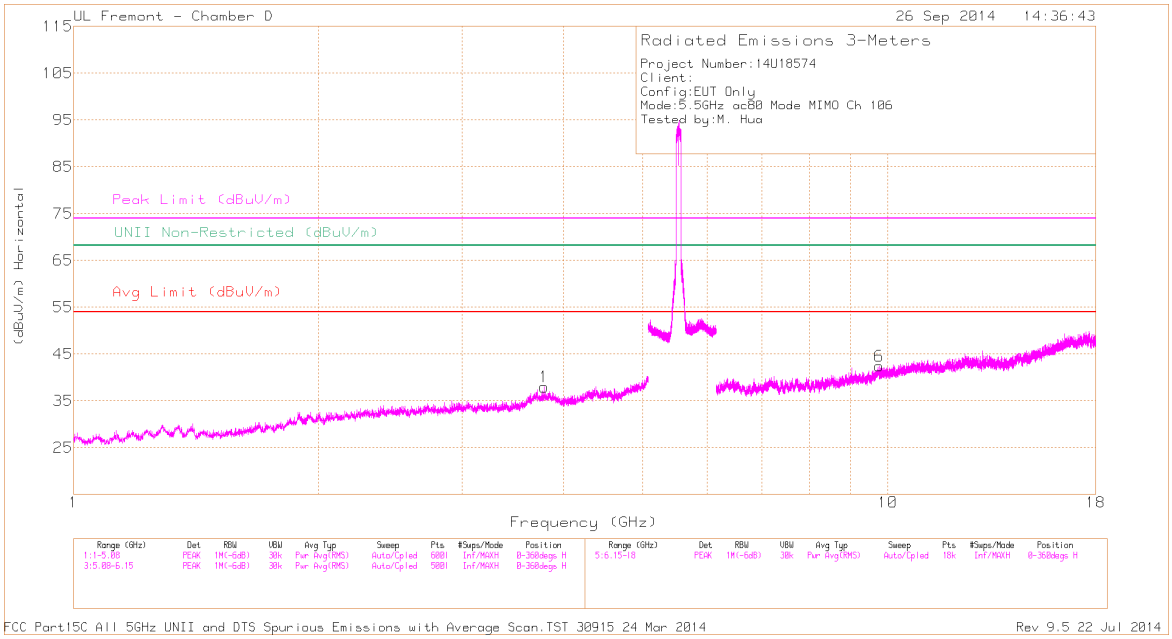


LOW CHANNEL RESTRICTED & AUTHORIZED, AVERAGE, VERT

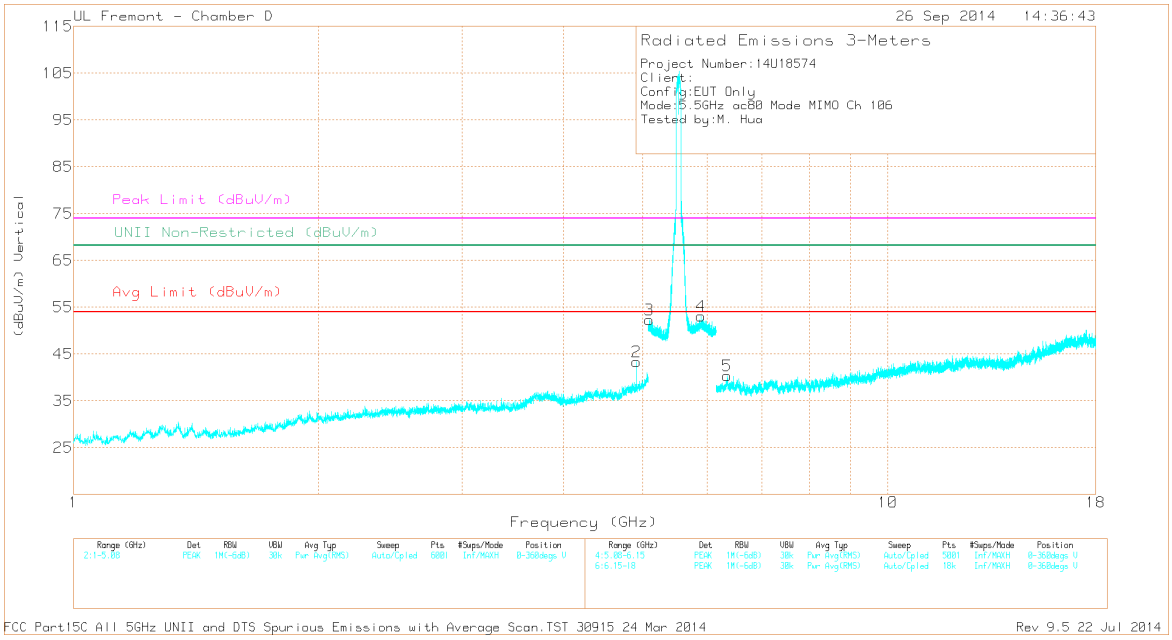


LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



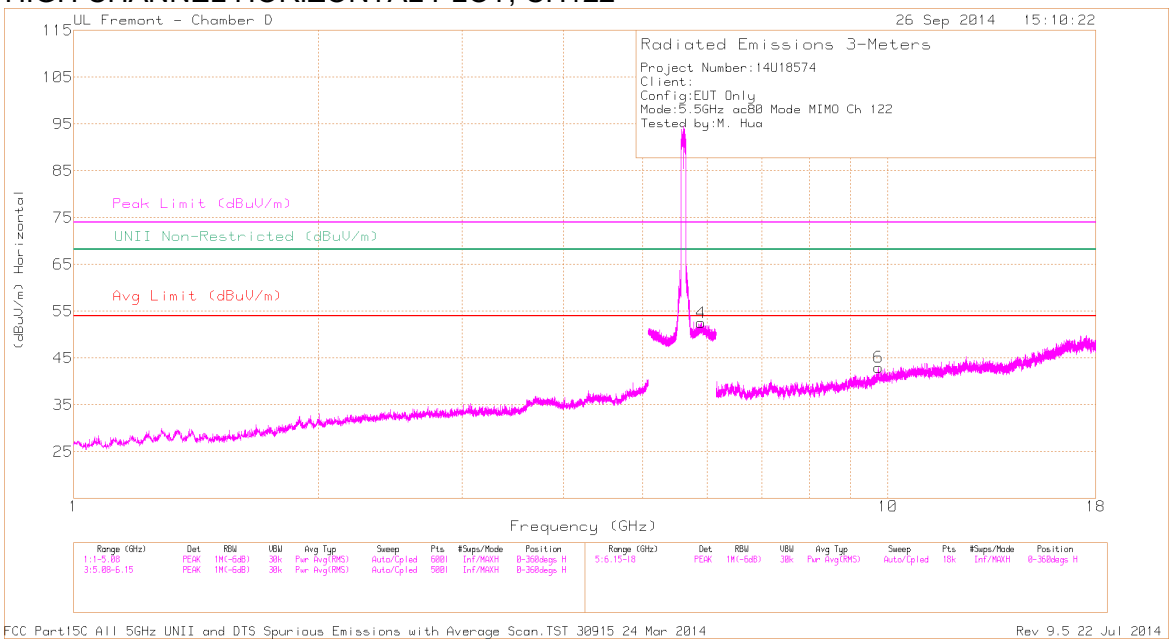
DATA

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	* 3.784	39.07	PK1	33.4	-28.8	0	43.67	-	-	74	-30.33	-	-	1	100	H
	* 3.783	27.66	AD1	33.4	-28.8	.22	32.48	54	-21.52	-	-	-	-	1	100	H
2	* 4.916	39.63	PK1	34.2	-26.4	0	47.43	-	-	74	-26.57	-	-	49	154	V
	* 4.915	31.19	AD1	34.2	-26.4	.22	39.21	54	-14.79	-	-	-	-	49	154	V
3	* 5.093	38.07	PK1	34.3	-17.9	0	54.47	-	-	74	-19.53	-	-	20	203	V
	* 5.091	27.00	AD1	34.3	-17.9	.22	43.62	54	-10.38	-	-	-	-	20	203	V
4	5.893	36.88	PK1	35.1	-16.8	0	55.18	-	-	-	-	68.2	-13.02	20	203	V
5	6.349	37.32	PK1	35.6	-25.7	0	47.22	-	-	-	-	68.2	-20.98	20	203	V
6	9.755	35.13	PK1	36.9	-21.6	0	50.43	-	-	-	-	68.2	-17.77	20	203	H

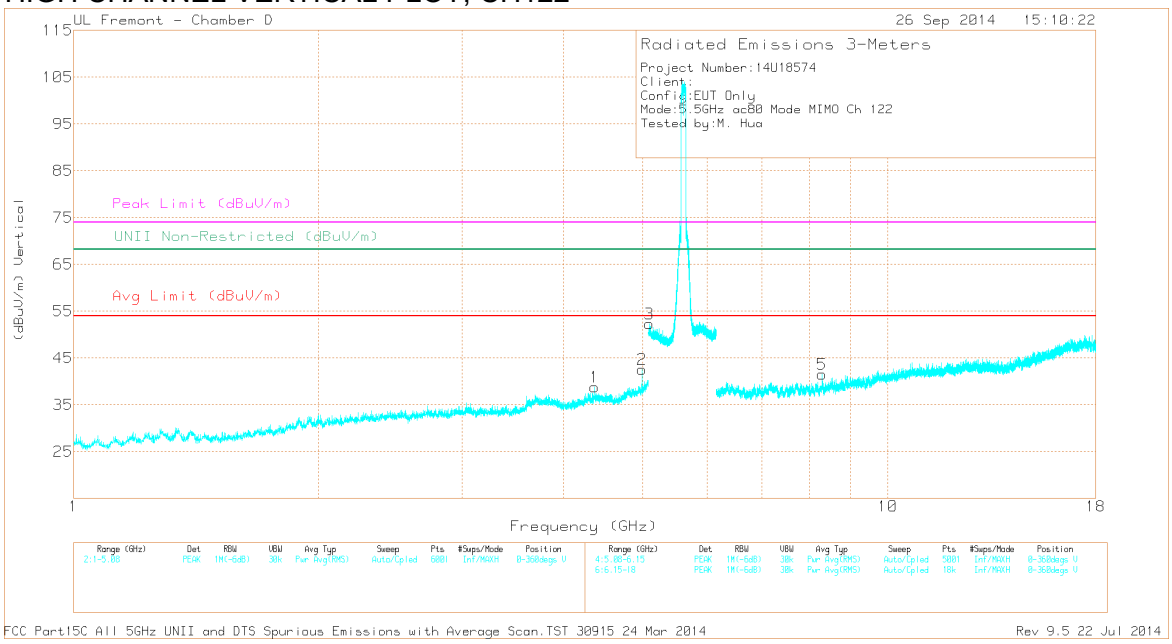
* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT, CH122



HIGH CHANNEL VERTICAL PLOT, CH122



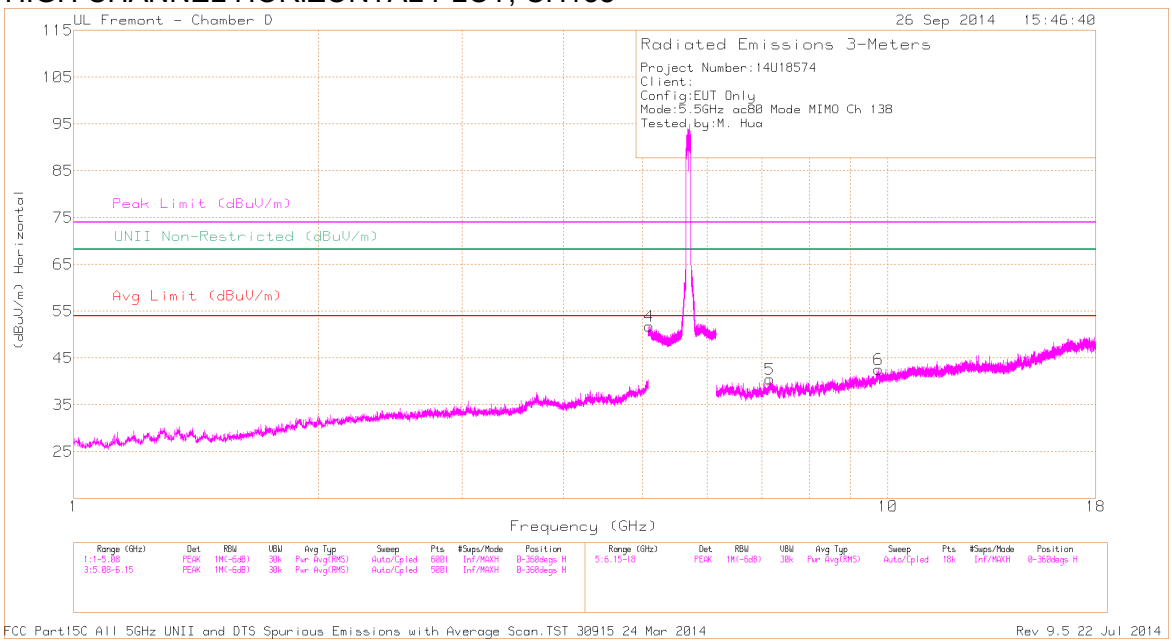
DATA

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	* 4.365	38.34	PK1	33.8	-28.0	0	44.14	-	-	74	-29.86	-	-	2	100	V
	* 4.363	27.10	AD1	33.8	-28.0	.22	33.12	54	-20.88	-	-	-	-	2	100	V
2	* 4.987	41.16	PK1	34.2	-26.0	0	49.36	-	-	74	-24.64	-	-	55	216	V
	* 4.987	32.76	AD1	34.2	-26.0	.22	41.18	54	-12.82	-	-	-	-	55	216	V
3	* 5.089	38.68	PK1	34.3	-17.9	0	55.08	-	-	74	-18.92	-	-	42	137	V
	* 5.089	26.83	AD1	34.3	-17.9	.22	43.45	54	-10.55	-	-	-	-	42	137	V
4	5.896	37.31	PK1	35.1	-16.8	0	55.61	-	-	-	-	68.2	-12.59	304	305	H
5	* 8.307	36.31	PK1	35.8	-24.1	0	48.01	-	-	74	-25.99	-	-	42	137	V
	* 8.306	24.24	AD1	35.8	-24.1	.22	36.16	54	-17.84	-	-	-	-	42	137	V
6	9.743	34.65	PK1	36.9	-21.6	0	49.95	-	-	-	-	68.2	-18.25	42	137	H

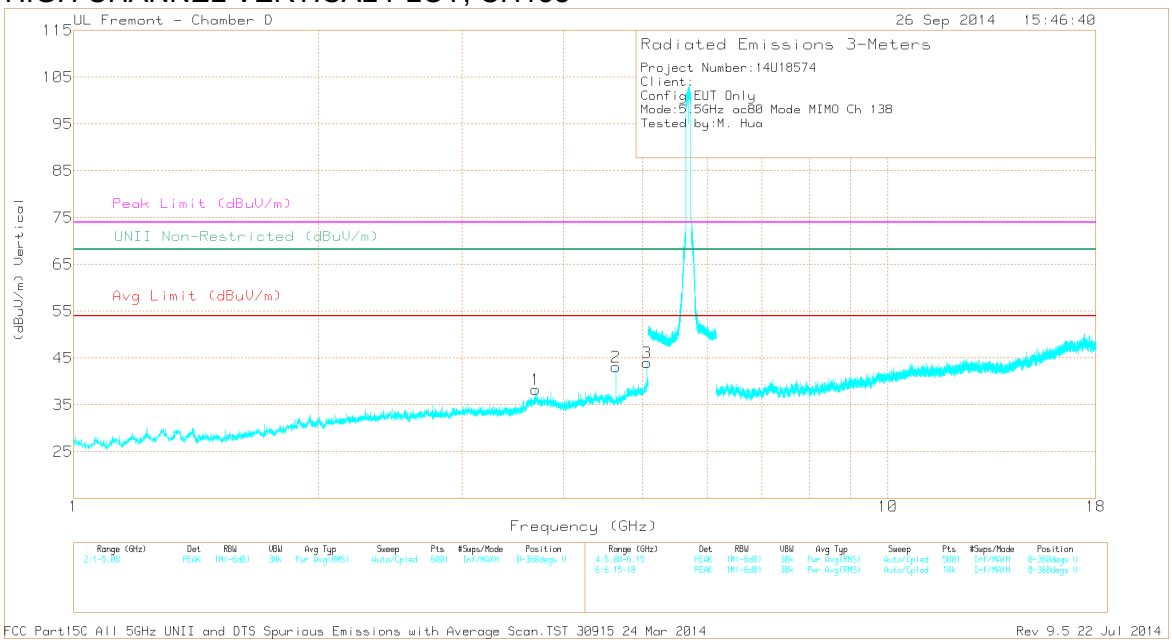
* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT, CH138



HIGH CHANNEL VERTICAL PLOT, CH138



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	* 3.694	38.31	PK1	33.2	-28.6	0	42.91	-	-	74	-31.09	-	-	360	100	V
	* 3.695	27.57	AD1	33.2	-28.6	.22	32.39	54	-21.61	-	-	-	-	360	100	V
2	* 4.636	41.50	PK1	34.1	-26.8	0	48.80	-	-	74	-25.20	-	-	20	187	V
	* 4.636	34.45	AD1	34.1	-26.8	.22	41.97	54	-12.03	-	-	-	-	20	187	V
3	* 5.058	41.84	PK1	34.3	-25.1	0	51.04	-	-	74	-22.96	-	-	56	169	V
	* 5.058	34.04	AD1	34.3	-25.1	.22	43.46	54	-10.54	-	-	-	-	56	169	V
4	* 5.095	39.07	PK1	34.3	-17.9	0	55.47	-	-	74	-18.53	-	-	31	234	H
	* 5.095	26.65	AD1	34.3	-17.9	.22	43.27	54	-10.73	-	-	-	-	31	234	H
5	7.164	36.04	PK1	35.7	-24.3	0	47.44	-	-	-	-	68.2	-20.76	31	234	H
6	9.745	34.74	PK1	36.9	-21.6	0	50.04	-	-	-	-	68.2	-18.16	31	234	H

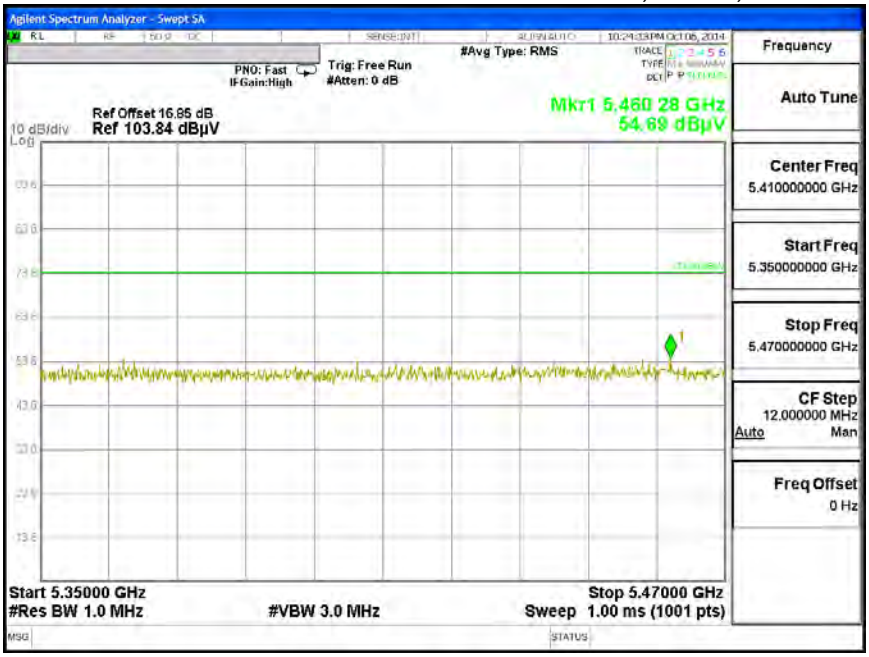
* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

10.28. TX ABOVE 1 GHz 802.11ac VHT80 2TX BF MODE IN THE 5.6 GHz BAND

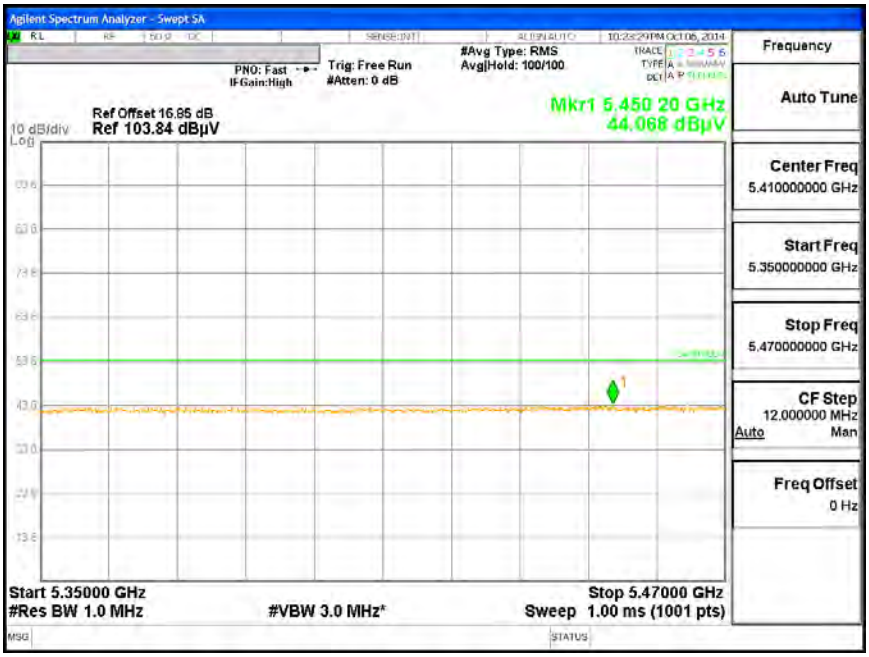
RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL, CH 106)

Note: Peak and Average BE plots include the duty cycle factor of 0.26dBm in this section.

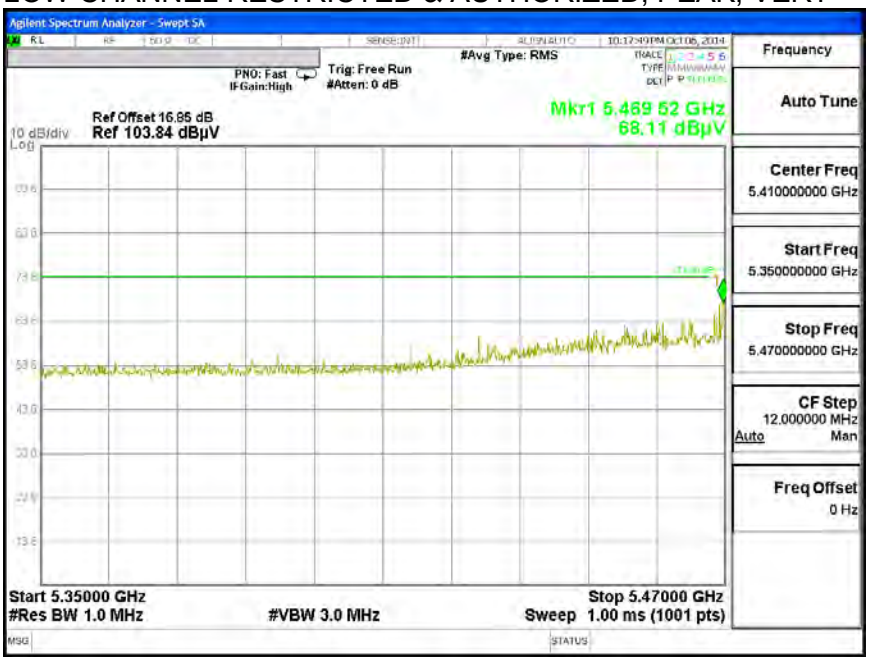
LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, HORIZ



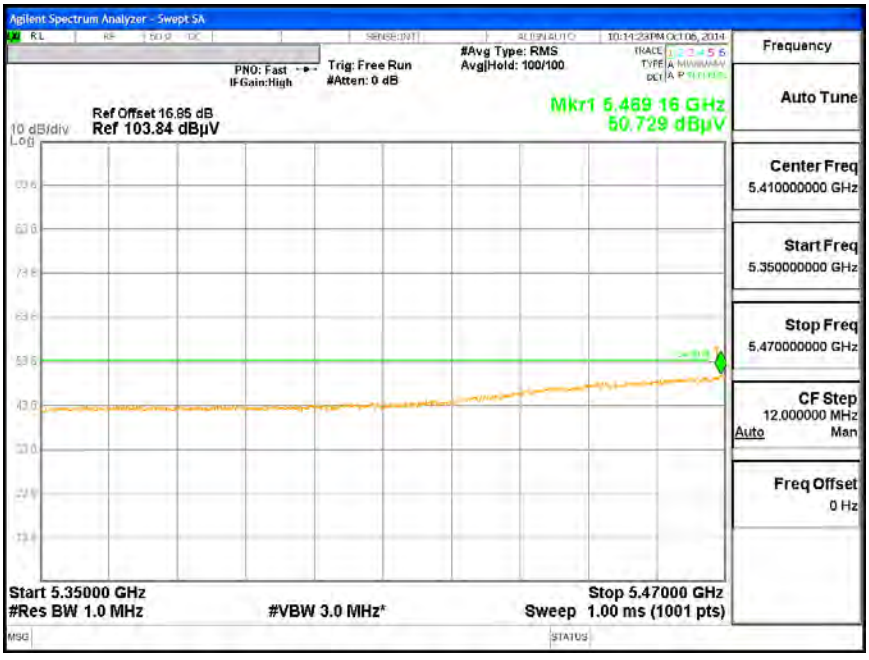
LOW CHANNEL RESTRICTED & AUTHORIZED, AVERAGE, HORIZ



LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT

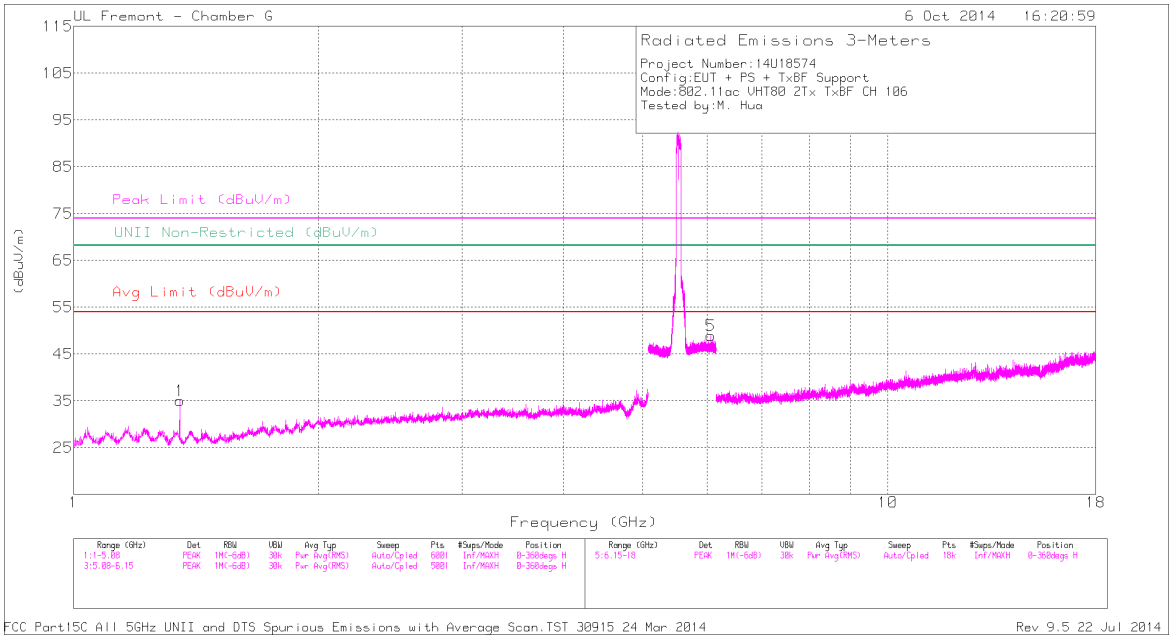


LOW CHANNEL RESTRICTED & AUTHORIZED, AVERAGE, VERT

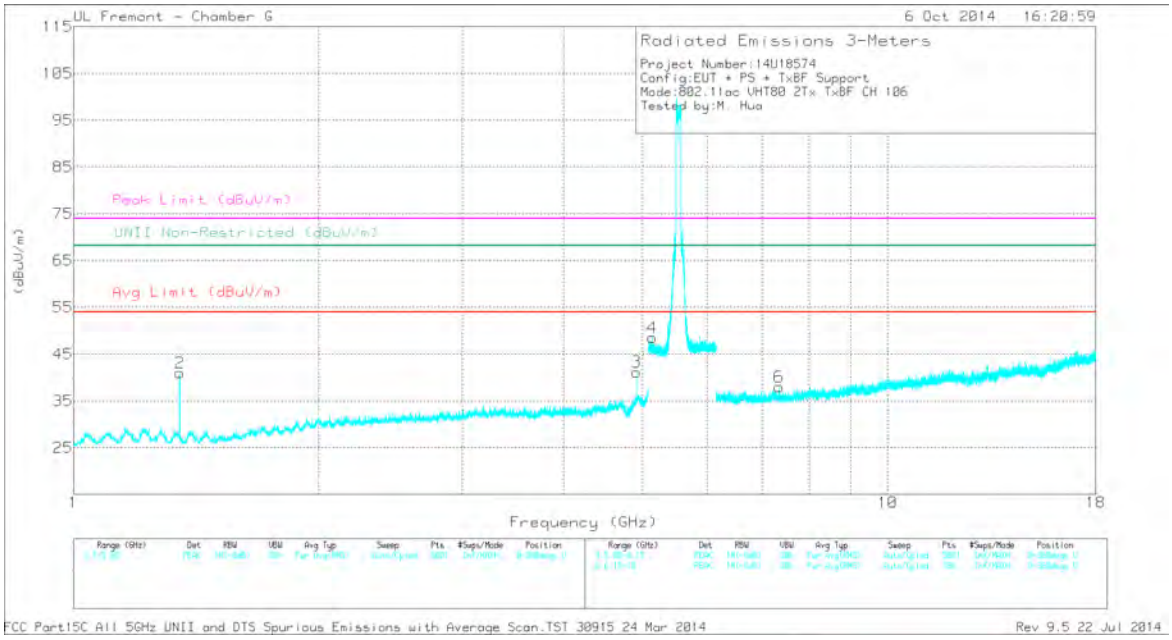


LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



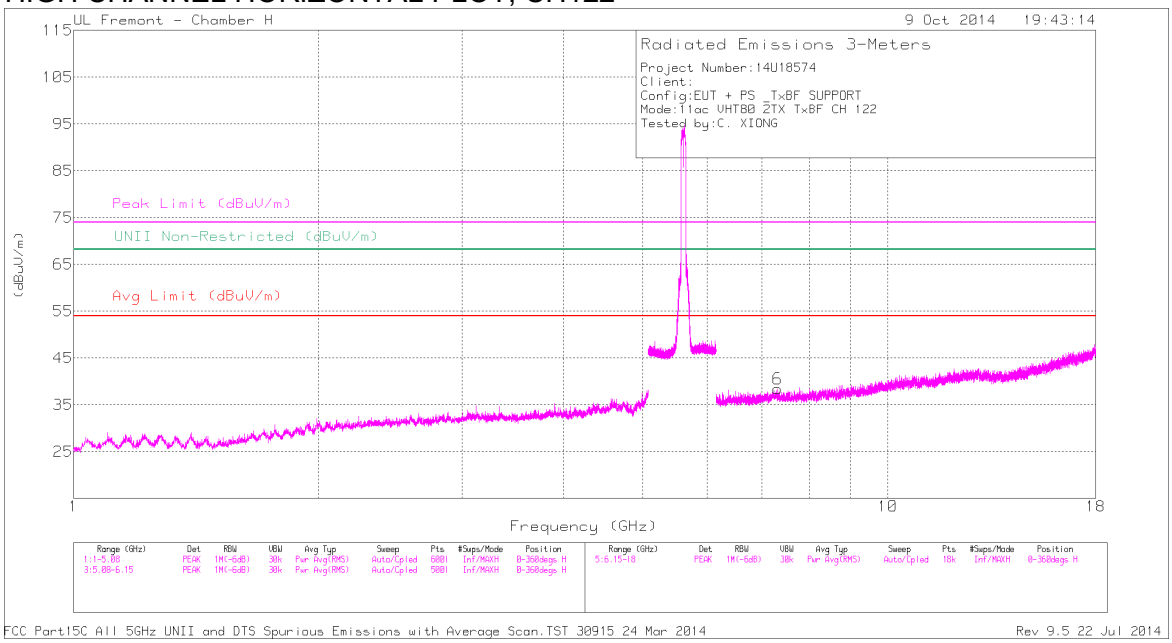
DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	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	* 1.350	48.71	PK1	28.7	-35.6	0	41.81	-	-	74	-32.19	-	-	185	207	H
	* 1.350	31.49	AD1	28.7	-35.6	.26	24.85	54	-29.15	-	-	-	-	185	207	H
2	* 1.350	43.97	PK1	28.7	-35.6	0	37.07	-	-	74	-36.93	-	-	160	107	V
	* 1.349	31.05	AD1	28.7	-35.6	.26	24.41	54	-29.59	-	-	-	-	160	107	V
3	* 4.916	45.89	PK1	34.1	-31.9	0	48.09	-	-	74	-25.91	-	-	235	187	V
	* 4.916	39.34	AD1	34.1	-31.9	.26	41.8	54	-12.20	-	-	-	-	235	187	V
4	* 5.141	41.34	PK1	34.3	-23.6	0	52.04	-	-	74	-21.96	-	-	235	187	V
	* 5.140	29.97	AD1	34.3	-23.6	.26	40.93	54	-13.07	-	-	-	-	235	187	V
5	6.061	40.93	PK1	35.3	-23.6	0	52.63	-	-	-	-	68.2	-15.57	44	100	H
6	* 7.354	40.23	PK1	35.6	-31.5	0	44.33	-	-	74	-29.67	-	-	235	187	V
	* 7.351	28.66	AD1	35.6	-31.4	.26	33.12	54	-20.88	-	-	-	-	235	187	V

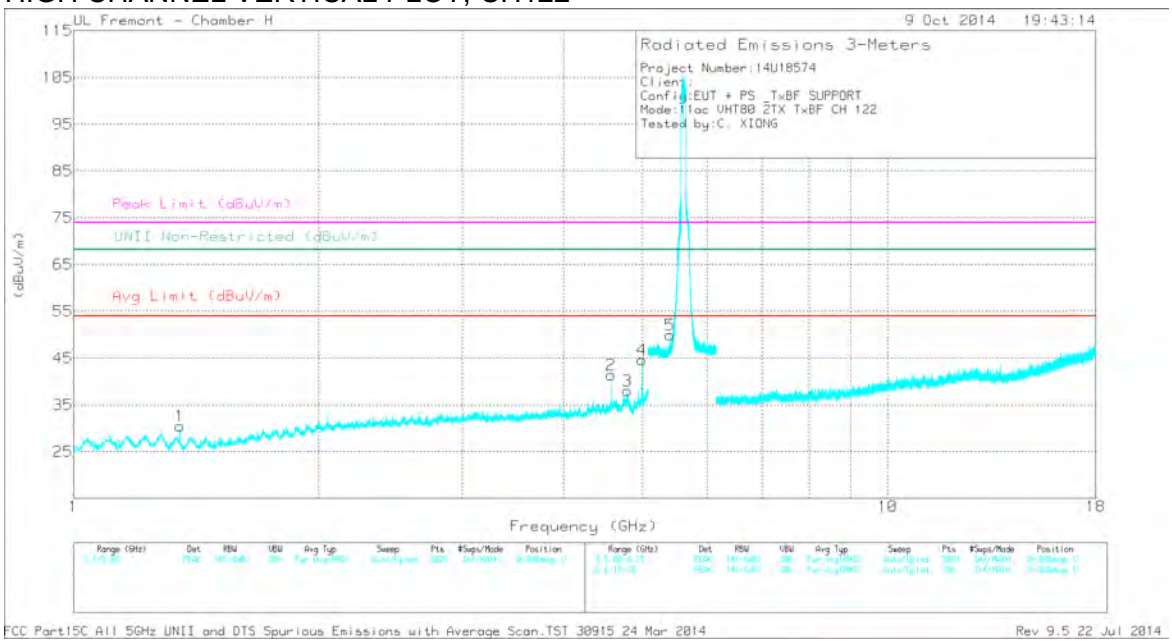
* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT, CH122



HIGH CHANNEL VERTICAL PLOT, CH122



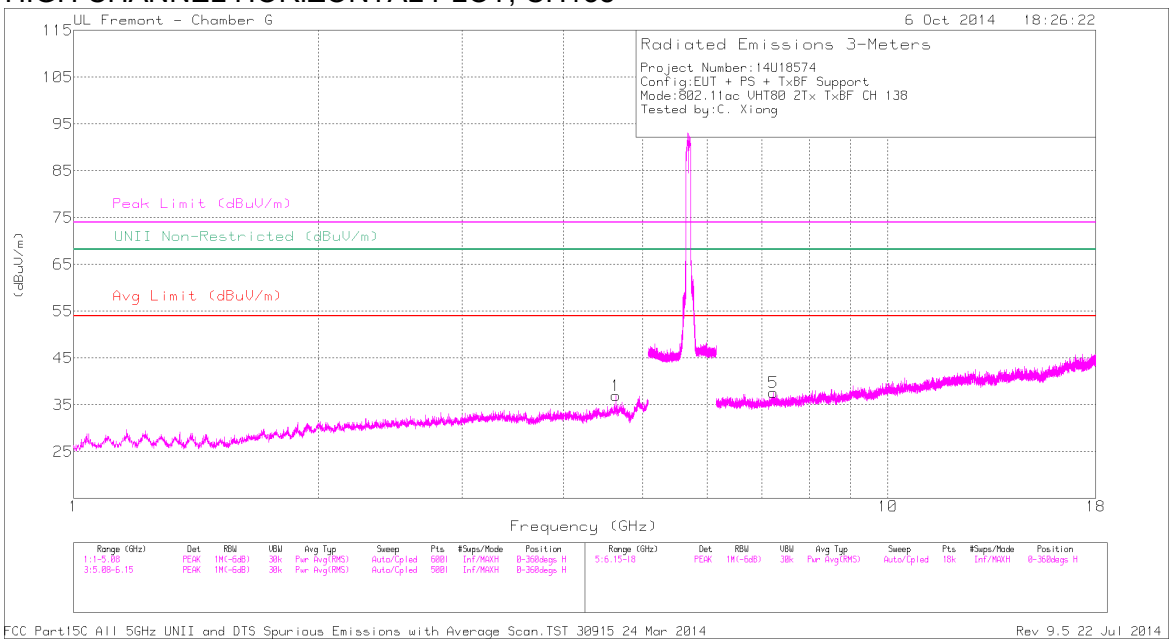
DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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	* 1.349	42.16	PK1	28.5	-35.5	0	35.16	-	-	74	-38.84	-	-	274	364	V
	* 1.349	30.87	AD1	28.5	-35.5	.26	24.13	54	-29.87	-	-	-	-	274	364	V
2	* 4.571	44.60	PK1	34.1	-31.7	0	47.00	-	-	74	-27.00	-	-	152	202	V
	* 4.571	37.11	AD1	34.1	-31.7	.26	39.77	54	-14.23	-	-	-	-	152	202	V
3	* 4.787	45.63	PK1	34.3	-32.0	0	47.93	-	-	74	-26.07	-	-	224	211	V
	* 4.787	34.84	AD1	34.3	-32.0	.26	37.40	54	-16.60	-	-	-	-	224	211	V
4	* 4.987	47.08	PK1	34.3	-31.1	0	50.28	-	-	74	-23.72	-	-	218	157	V
	* 4.987	40.06	AD1	34.3	-31.1	.26	43.52	54	-10.48	-	-	-	-	218	157	V
5	* 5.401	45.92	PK1	34.9	-22.6	0	58.22	-	-	74	-15.78	-	-	194	214	V
	* 5.402	35.27	AD1	34.9	-22.6	.26	47.83	54	-6.17	-	-	-	-	194	214	V
6	* 7.321	38.87	PK1	36.2	-29.9	0	45.17	-	-	74	-28.83	-	-	292	180	H
	* 7.321	27.55	AD1	36.2	-29.9	.26	34.11	54	-19.89	-	-	-	-	292	180	H

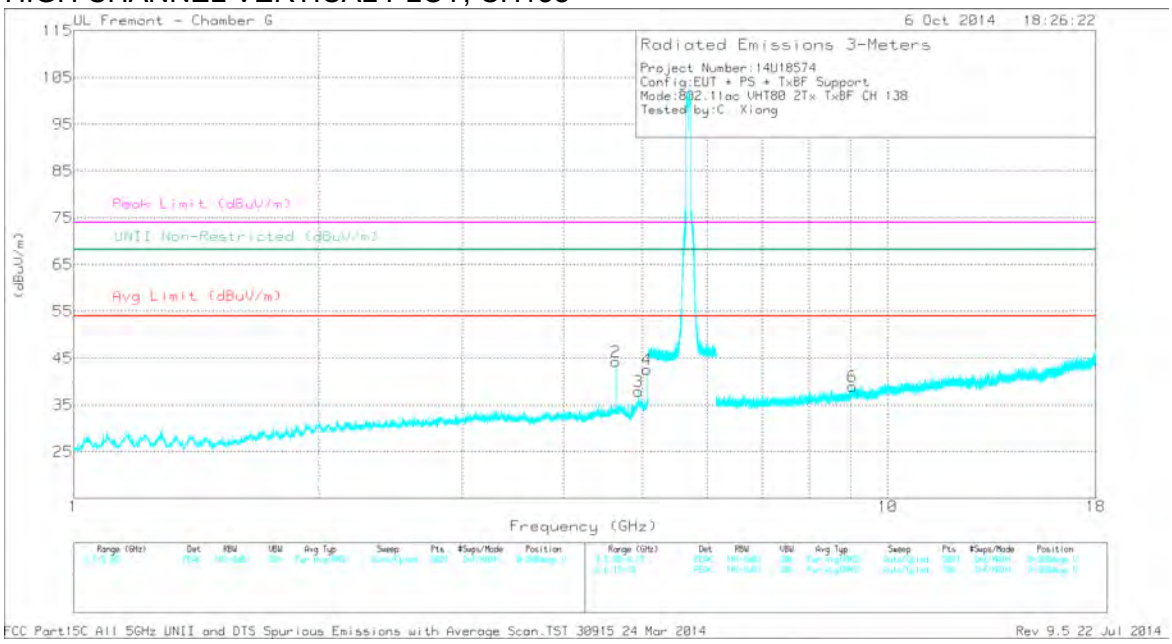
* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT, CH138



HIGH CHANNEL VERTICAL PLOT, CH138



DATA

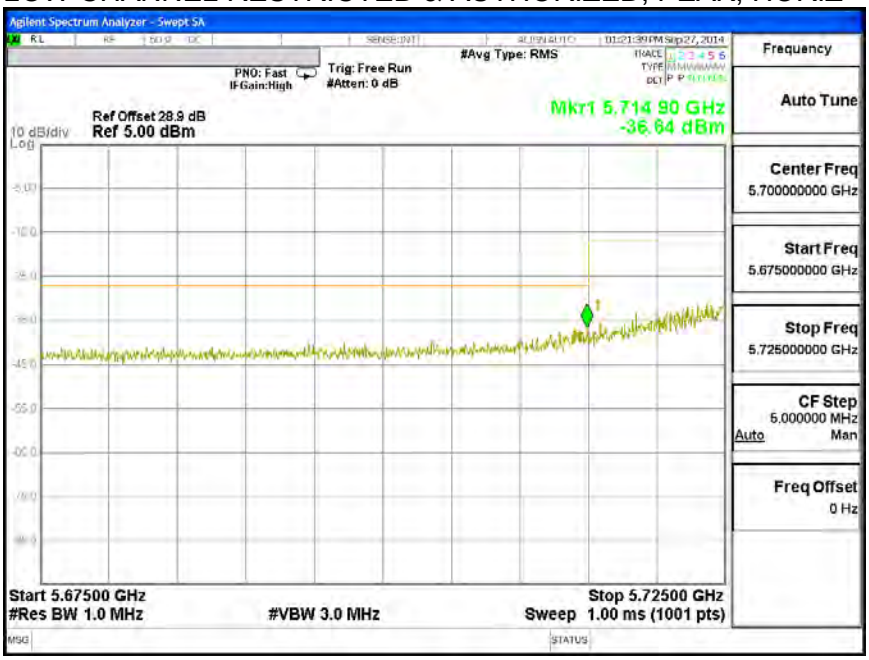
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.636	43.35	PK1	33.9	-32.9	0	44.35	-	-	74	-29.65	-	-	171	253	H
	* 4.636	35.27	AD1	33.9	-32.9	.26	36.53	54	-17.47	-	-	-	-	171	253	H
2	* 4.636	46.11	PK1	33.9	-32.9	0	47.11	-	-	74	-26.89	-	-	198	183	V
	* 4.636	40.61	AD1	33.9	-32.9	.26	41.87	54	-12.13	-	-	-	-	198	183	V
3	* 4.937	41.4	PK1	34.1	-31.7	0	43.8	-	-	74	-30.2	-	-	234	134	V
	* 4.933	30.6	AD1	34.1	-31.7	.26	33.26	54	-20.74	-	-	-	-	234	134	V
4	* 5.058	45.28	PK1	34.2	-31.1	0	48.38	-	-	74	-25.62	-	-	234	161	V
	* 5.058	37.97	AD1	34.2	-31.1	.26	41.33	54	-12.67	-	-	-	-	234	161	V
5	7.238	39.58	PK1	35.6	-30.9	0	44.28	-	-	-	-	68.2	-23.92	303	331	H
6	* 9.042	38.77	PK1	36.4	-28.5	0	46.67	-	-	74	-27.33	-	-	149	128	V
	* 9.038	27.23	AD1	36.4	-28.5	.26	35.39	54	-18.61	-	-	-	-	149	128	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

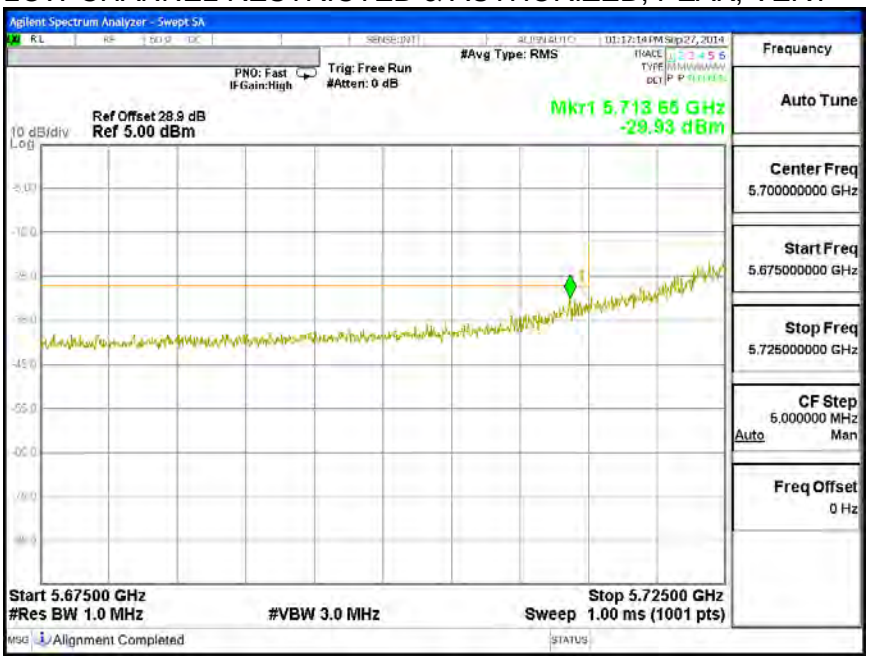
10.29. TX ABOVE 1 GHz 802.11a 1TX MODE IN THE 5.8 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, HORIZ

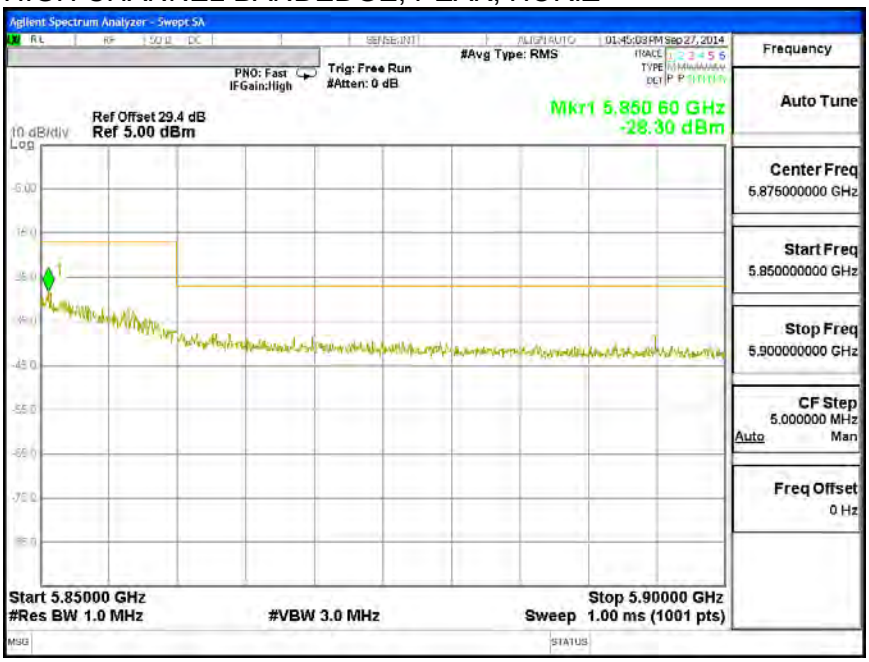


LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT

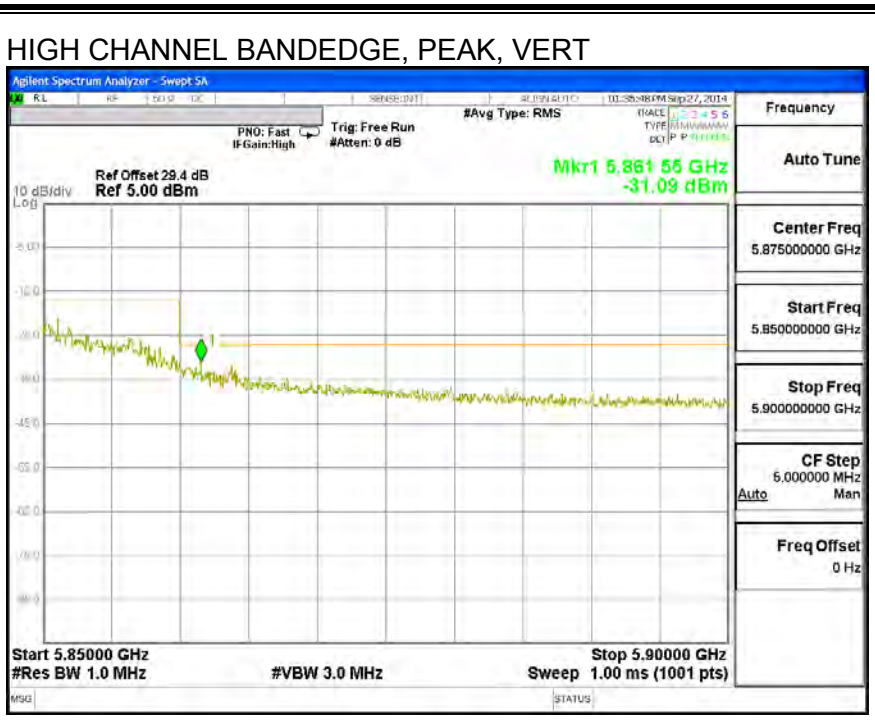


AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

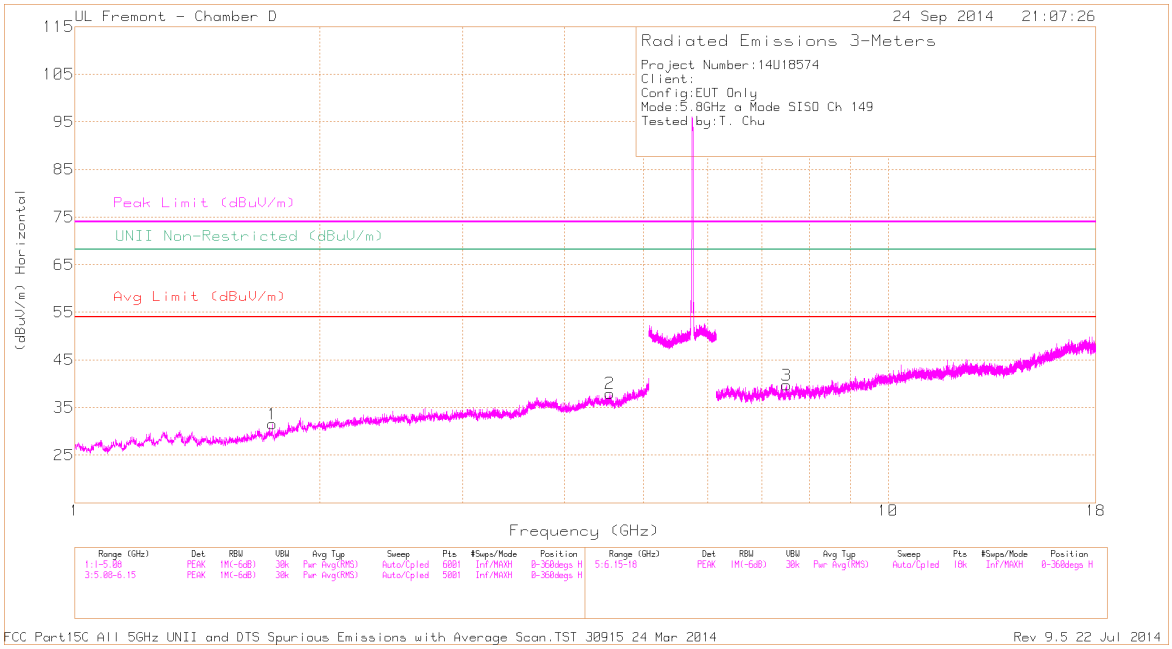


HIGH CHANNEL BANDEDGE, PEAK, VERT

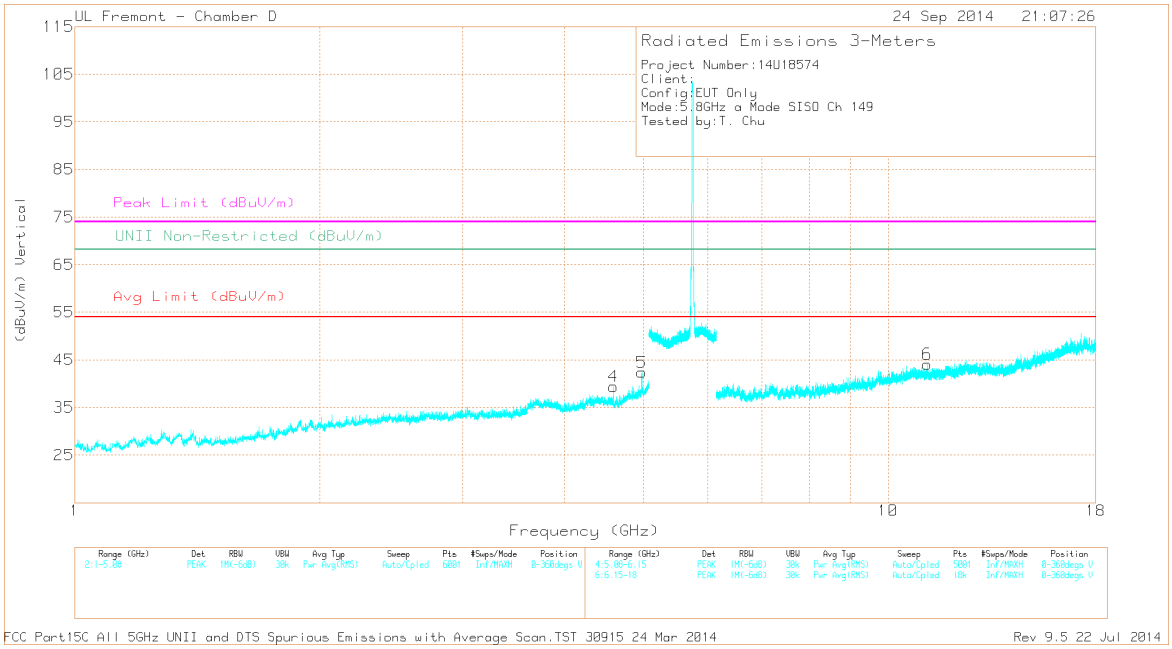


LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



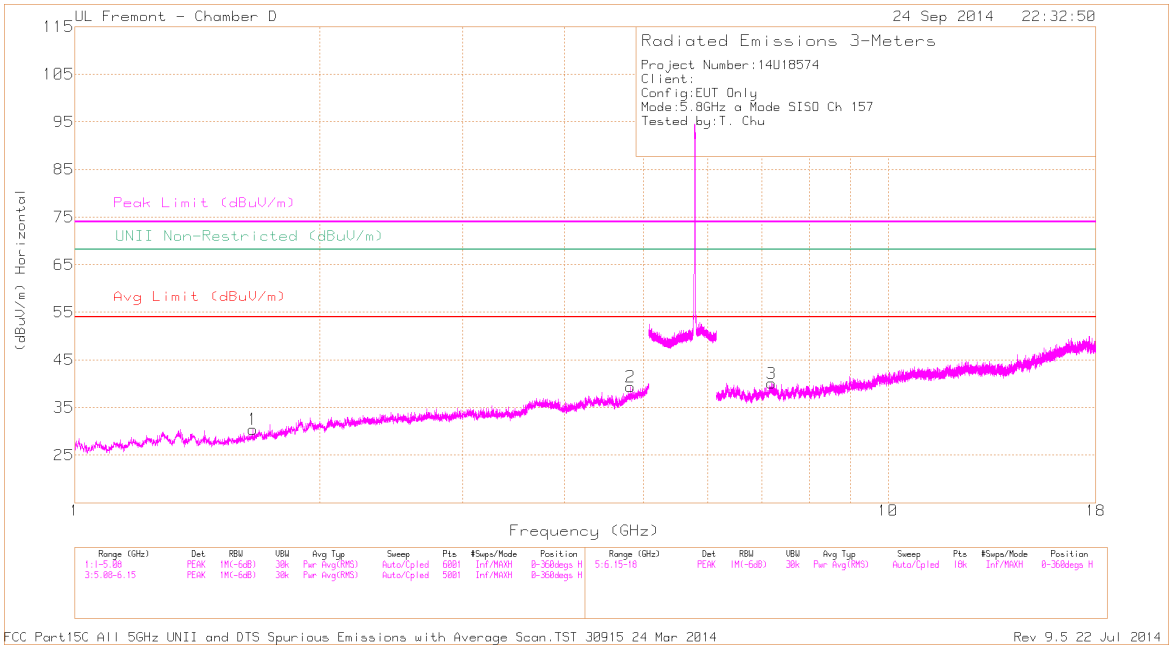
DATA

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	1.748	28.77	AD1	29.4	-31.1	0	27.11	-	-	-	-	-	-	360	100	H
	1.751	39.68	PK1	29.4	-31.1	0	37.98	-	-	-	-	68.2	-30.22	360	100	H
2	* 4.548	37.72	PK1	34.0	-27.8	0	43.92	-	-	74	-30.08	-	-	360	100	H
	* 4.548	27.28	AD1	34.0	-27.8	0	33.48	54	-20.52	-	-	-	-	360	100	H
3	* 7.501	36.13	PK1	35.6	-24.8	0	46.93	-	-	74	-27.07	-	-	232	153	H
	* 7.499	25.45	AD1	35.6	-24.9	0	36.15	54	-17.85	-	-	-	-	232	153	H
4	* 4.596	40.09	PK1	34.1	-27.8	0	46.39	-	-	74	-27.61	-	-	196	248	V
	* 4.596	30.78	AD1	34.1	-27.8	0	37.08	54	-16.92	-	-	-	-	196	248	V
5	* 4.979	41.39	PK1	34.2	-26.0	0	49.59	-	-	74	-24.41	-	-	232	153	V
	* 4.979	32.33	AD1	34.2	-26.0	0	40.53	54	-13.47	-	-	-	-	232	153	V
6	* 11.181	33.7	PK1	38.1	-21.0	0	50.80	-	-	74	-23.20	-	-	232	153	V
	* 11.179	23.03	AD1	38.1	-21.0	0	40.17	54	-13.83	-	-	-	-	232	153	V

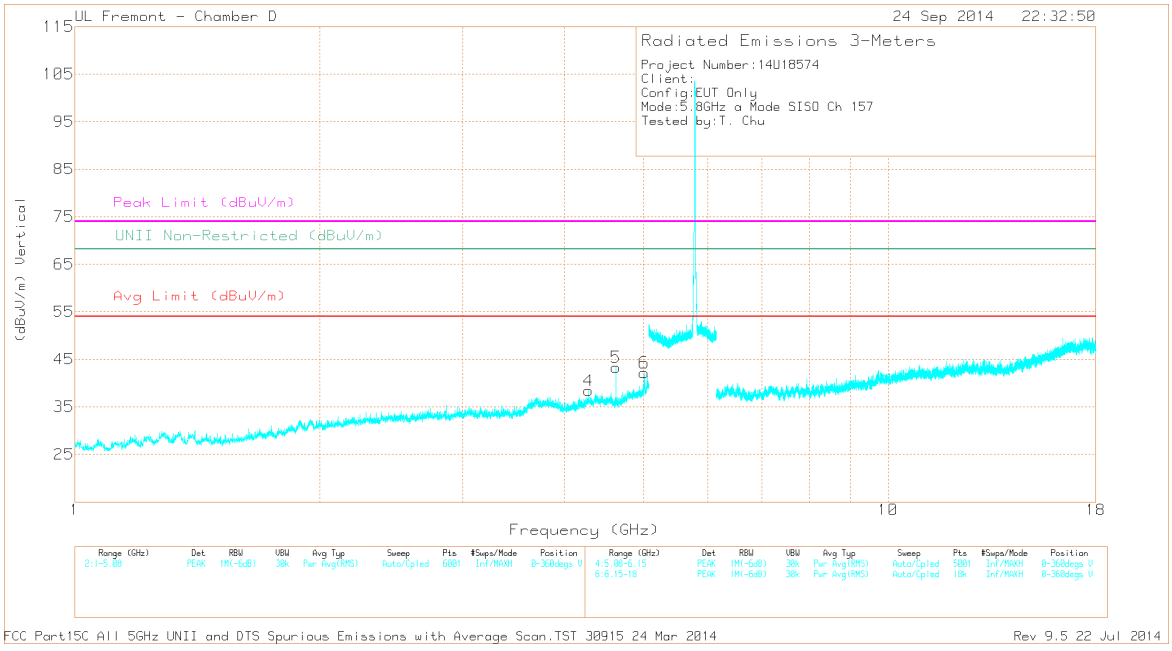
* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



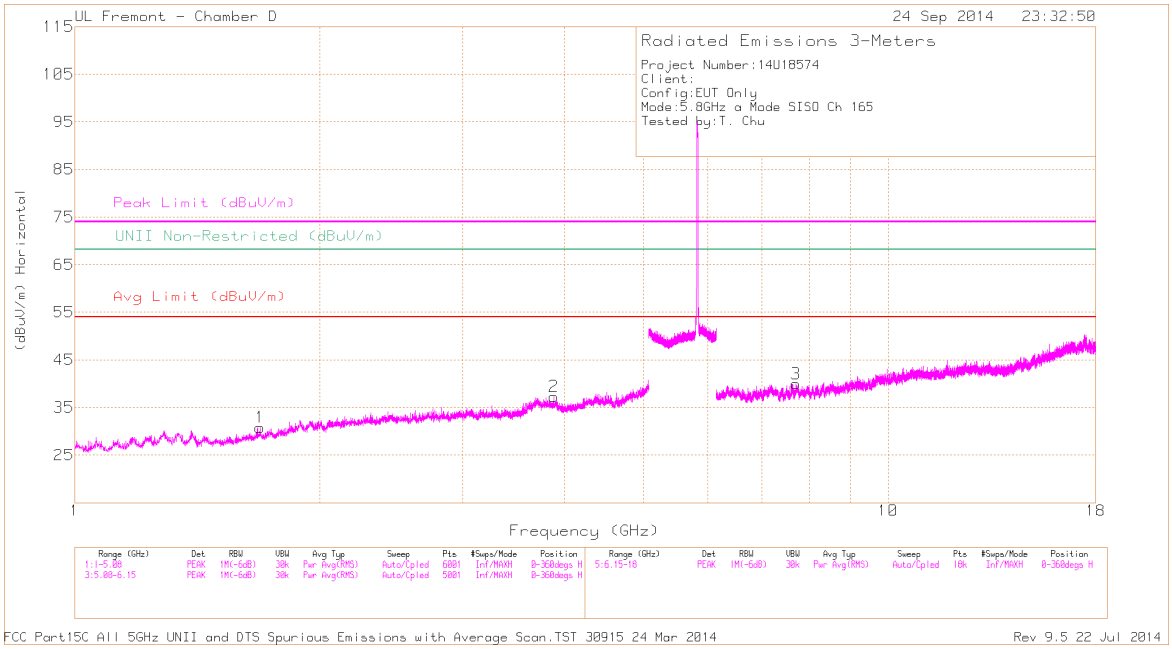
DATA

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	1.655	28.27	AD1	28.6	-30.6	0	26.27	-	-	-	-	-	-	360	100	H
	1.656	40.04	PK1	28.6	-30.6	0	38.04	-	-	-	-	68.2	-30.16	360	100	H
2	* 4.819	37.84	PK1	34.2	-27.2	0	44.84	-	-	74	-29.16	-	-	360	100	H
	* 4.823	26.89	AD1	34.2	-27.2	0	33.89	54	-20.11	-	-	-	-	360	100	H
3	7.190	36.32	PK1	35.7	-23.9	0	48.12	-	-	-	-	68.2	-20.08	231	214	H
	7.192	25.05	AD1	35.7	-23.8	0	36.95	-	-	-	-	-	-	231	214	H
4	* 4.283	37.76	PK1	33.7	-27.7	0	43.76	-	-	74	-30.24	-	-	217	114	V
	* 4.289	26.36	AD1	33.7	-27.7	0	32.36	54	-21.54	-	-	-	-	217	114	V
5	* 4.628	41.71	PK1	34.1	-26.9	0	48.91	-	-	74	-25.09	-	-	233	216	V
	* 4.628	36.53	AD1	34.1	-26.9	0	43.73	54	-10.27	-	-	-	-	233	216	V
6	* 5.013	41.57	PK1	34.2	-26.4	0	49.37	-	-	74	-24.63	-	-	231	214	V
	* 5.014	32.50	AD1	34.2	-26.4	0	40.38	54	-13.62	-	-	-	-	231	214	V

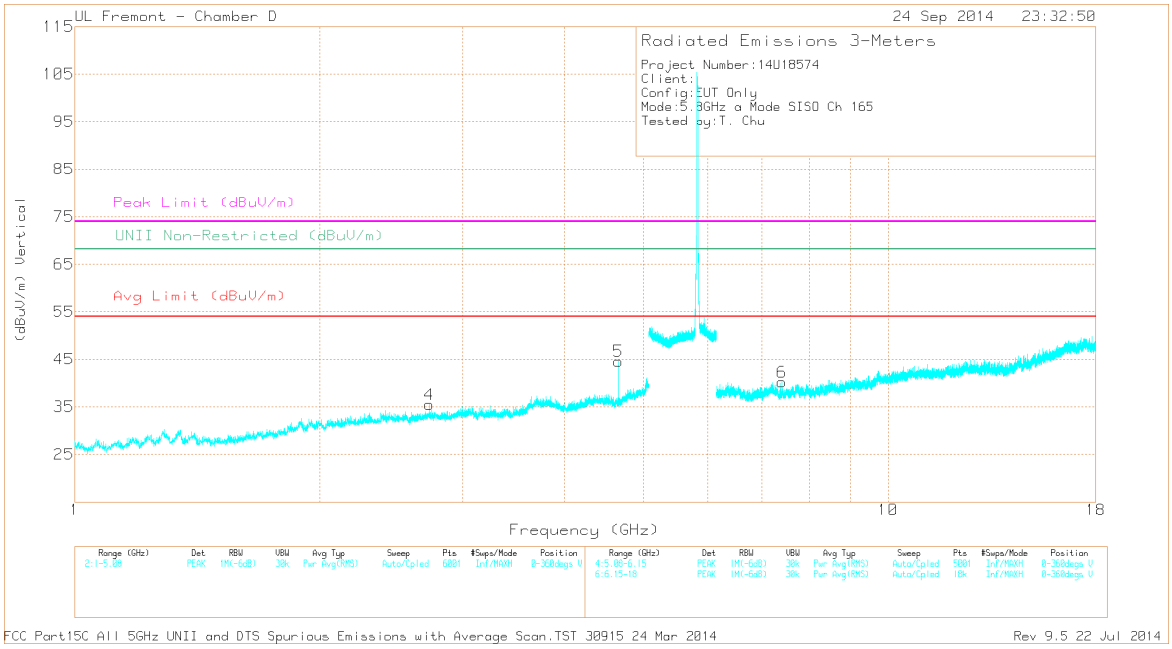
* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

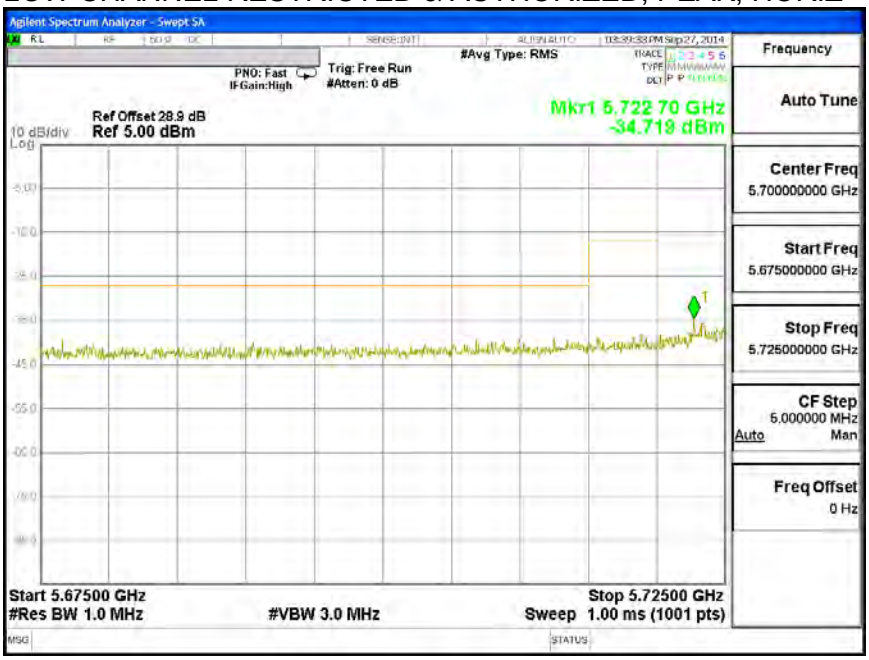
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.688	39.62	PK1	28.9	-30.7	0	37.82	-	-	74	-36.18	-	-	360	100	H
	* 1.688	28.65	AD1	28.9	-30.7	0	26.85	54	-27.15	-	-	-	-	360	100	H
2	* 3.884	38.70	PK1	33.5	-28.6	0	43.60	-	-	74	-30.40	-	-	360	100	H
	* 3.884	27.51	AD1	33.5	-28.6	0	32.41	54	-21.59	-	-	-	-	360	100	H
3	* 7.702	35.68	PK1	35.8	-24.2	0	47.28	-	-	74	-26.72	-	-	204	204	H
	* 7.704	24.64	AD1	35.8	-24.1	0	36.34	54	-17.66	-	-	-	-	204	204	H
4	* 2.732	38.68	PK1	32.4	-29.3	0	41.78	-	-	74	-32.22	-	-	360	100	V
	* 2.726	27.76	AD1	32.4	-29.3	0	30.86	54	-23.14	-	-	-	-	360	100	V
5	* 4.660	42.00	PK1	34.1	-26.9	0	49.20	-	-	74	-24.80	-	-	204	204	V
	* 4.660	37.04	AD1	34.1	-26.9	0	44.24	54	-9.76	-	-	-	-	204	204	V
6	* 7.402	36.33	PK1	35.6	-25.1	0	46.83	-	-	74	-27.17	-	-	204	204	V
	* 7.402	25.28	AD1	35.6	-25.2	0	35.68	54	-18.32	-	-	-	-	204	204	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

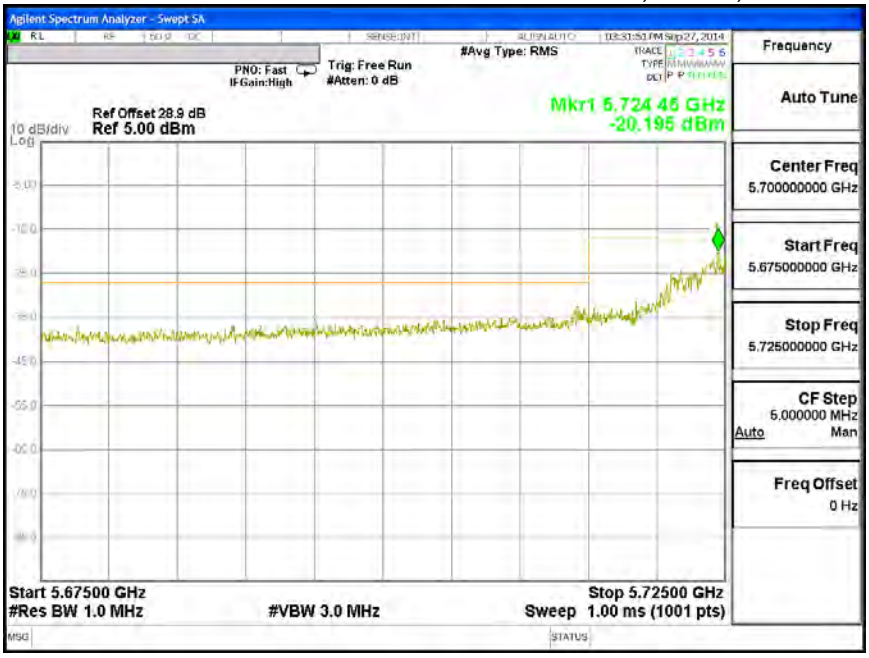
10.30. TX ABOVE 1 GHz 802.11n HT20 2TX CDD MODE IN THE 5.8 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, HORIZ

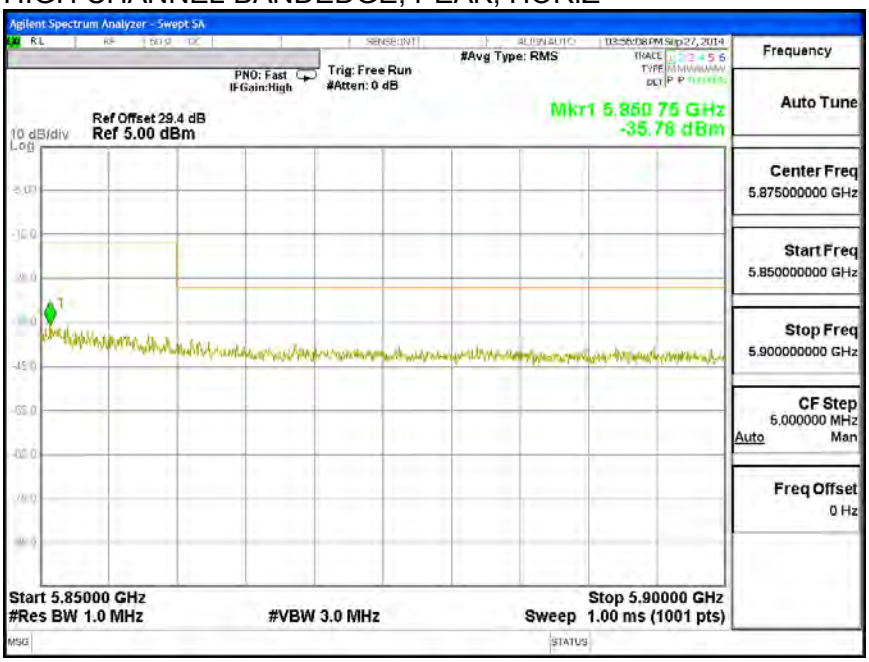


LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT

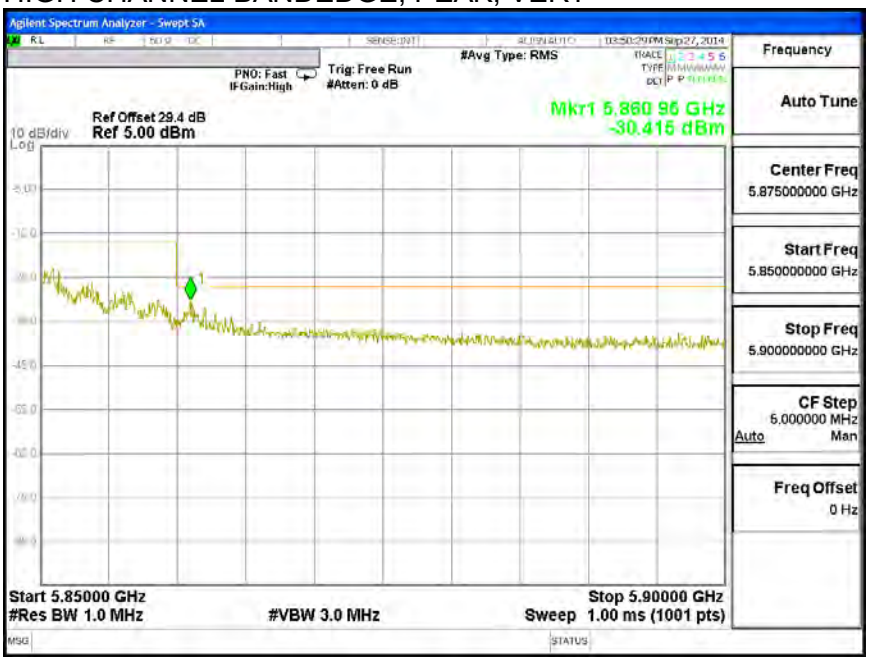


AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

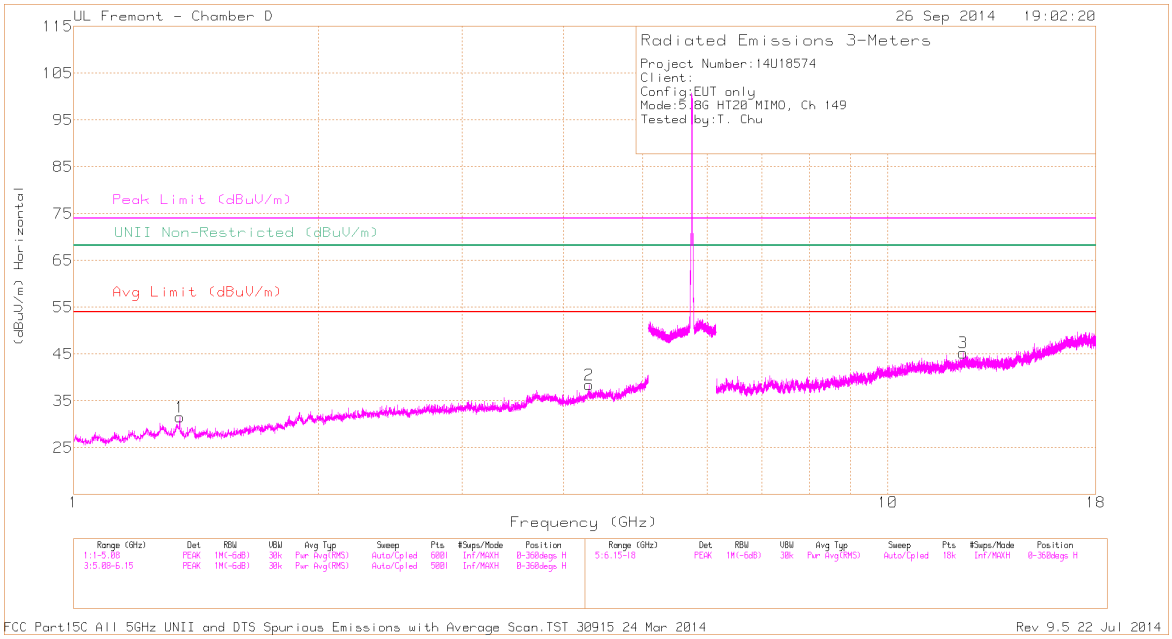


HIGH CHANNEL BANDEDGE, PEAK, VERT

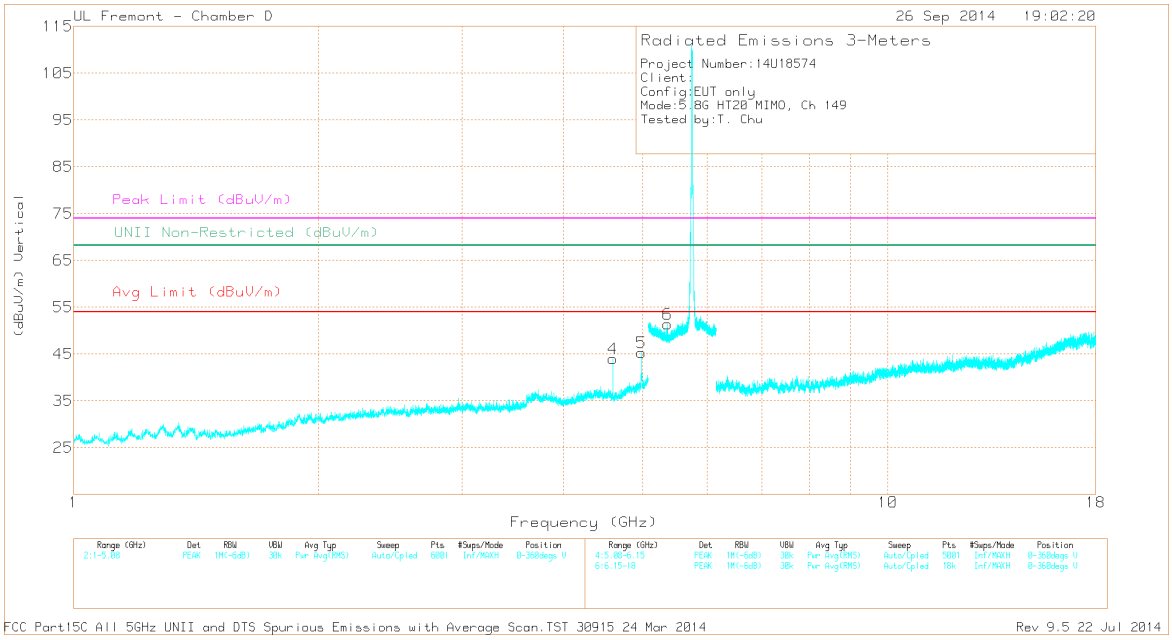


LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



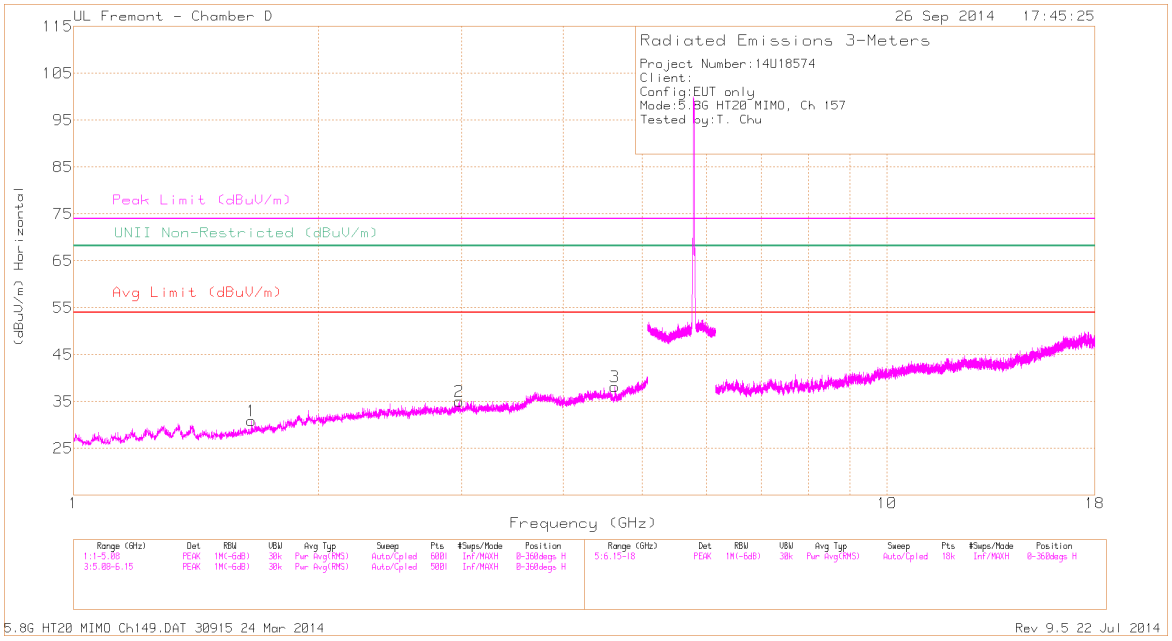
DATA

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	* 1.353	40.42	PK1	28.7	-31.2	0	37.92	-	-	74	-36.08	-	-	352	145	H
	* 1.346	28.85	AD1	28.7	-31.2	0	26.35	54	-27.65	-	-	-	-	352	145	H
2	* 4.292	37.68	PK1	33.7	-27.7	0	43.68	-	-	74	-30.32	-	-	191	127	H
	* 4.300	26.62	AD1	33.7	-27.8	0	32.52	54	-21.48	-	-	-	-	191	127	H
3	* 12.370	33.93	PK1	39.0	-22.0	0	50.93	-	-	74	-23.07	-	-	14	185	H
	* 12.373	23.67	AD1	39.0	-21.8	0	40.87	54	-13.13	-	-	-	-	14	185	H
4	* 4.596	41.94	PK1	34.1	-27.8	0	48.24	-	-	74	-25.76	-	-	22	226	V
	* 4.596	36.59	AD1	34.1	-27.8	0	42.89	54	-11.11	-	-	-	-	22	226	V
5	* 4.979	41.89	PK1	34.2	-26.0	0	50.09	-	-	74	-23.91	-	-	359	207	V
	* 4.979	35.30	AD1	34.2	-26.0	0	43.50	54	-10.50	-	-	-	-	359	207	V
6	* 5.362	42.50	PK1	34.5	-18.2	0	58.8	-	-	74	-15.20	-	-	14	185	V
	* 5.362	32.21	AD1	34.5	-18.2	0	48.51	54	-5.49	-	-	-	-	14	185	V

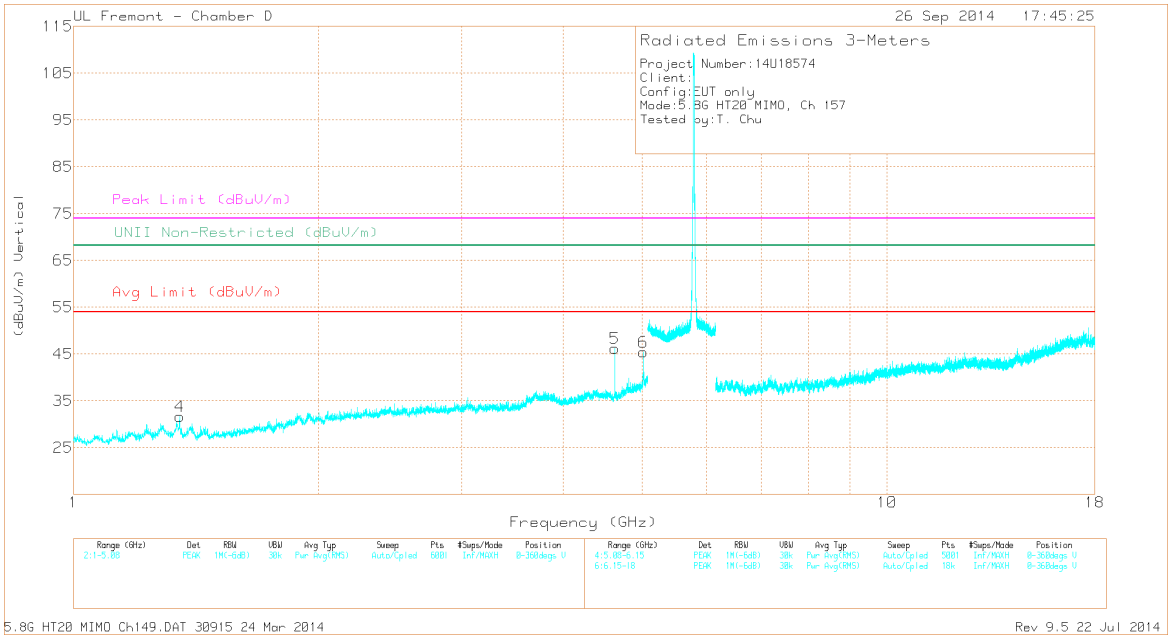
* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



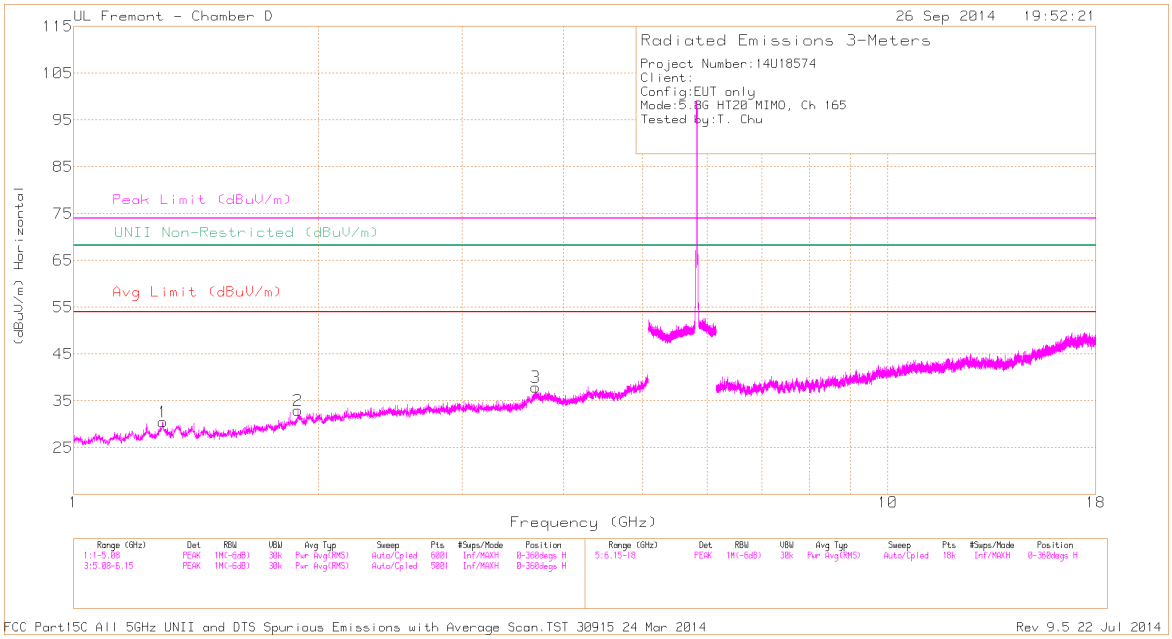
DATA

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	1.654	39.39	PK1	28.6	-30.6	0	37.39	-	-	-	-	68.2	-30.81	0	100	H
2	2.978	39.13	PK1	32.7	-29.1	0	42.73	-	-	-	-	68.2	-25.47	0	100	H
3	* 4.629	38.32	PK1	34.1	-26.8	0	45.62	-	-	74	-28.38	-	-	0	100	H
	* 4.628	27.26	AD1	34.1	-26.9	0	34.46	54	-19.54	-	-	-	-	0	100	H
4	* 1.347	40.08	PK1	28.7	-31.1	0	37.68	-	-	74	-36.32	-	-	24	280	V
	* 1.347	28.78	AD1	28.7	-31.1	0	26.38	54	-27.62	-	-	-	-	24	280	V
5	* 4.628	43.43	PK1	34.1	-26.9	0	50.63	-	-	74	-23.37	-	-	25	173	V
	* 4.628	39.00	AD1	34.1	-26.9	0	46.20	54	-7.80	-	-	-	-	25	173	V
6	* 5.014	42.30	PK1	34.2	-26.4	0	50.10	-	-	74	-23.90	-	-	4	160	V
	* 5.014	35.01	AD1	34.2	-26.4	0	42.81	54	-11.19	-	-	-	-	4	160	V

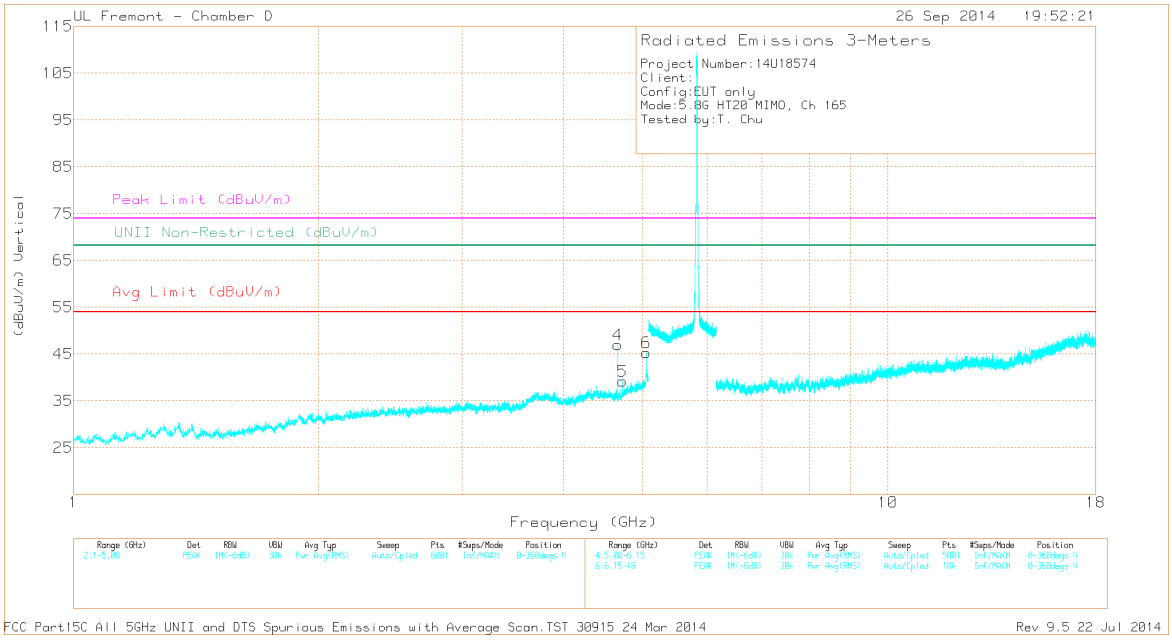
* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

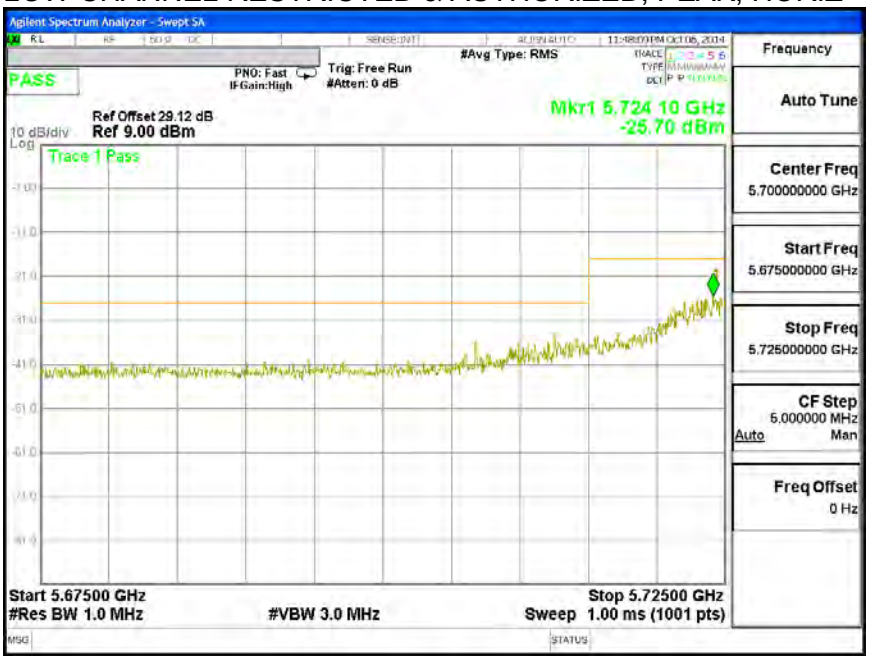
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.285	41.3	PK1	28.7	-31.3	0	38.70	-	-	74	-35.30	-	-	2	100	H
	* 1.286	29.4	AD1	28.7	-31.3	0	26.80	54	-27.20	-	-	-	-	2	100	H
2	1.891	39.99	PK1	30.8	-30.3	0	40.49	-	-	-	-	68.2	-27.71	146	291	H
3	* 3.695	38.77	PK1	33.2	-28.6	0	43.37	-	-	74	-30.63	-	-	146	291	H
	* 3.695	27.15	AD1	33.2	-28.6	0	31.75	54	-22.25	-	-	-	-	146	291	H
4	* 4.660	44.23	PK1	34.1	-26.9	0	51.43	-	-	74	-22.57	-	-	25	193	V
	* 4.660	40.41	AD1	34.1	-26.9	0	47.61	54	-6.39	-	-	-	-	25	193	V
5	* 4.726	38.97	PK1	34.1	-27.6	0	45.47	-	-	74	-28.53	-	-	50	270	V
	* 4.723	27.48	AD1	34.1	-27.6	0	33.98	54	-20.02	-	-	-	-	50	270	V
6	* 5.048	42.79	PK1	34.3	-25.1	0	51.99	-	-	74	-22.01	-	-	360	189	V
	* 5.048	35.75	AD1	34.3	-25.1	0	44.95	54	-9.05	-	-	-	-	360	189	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

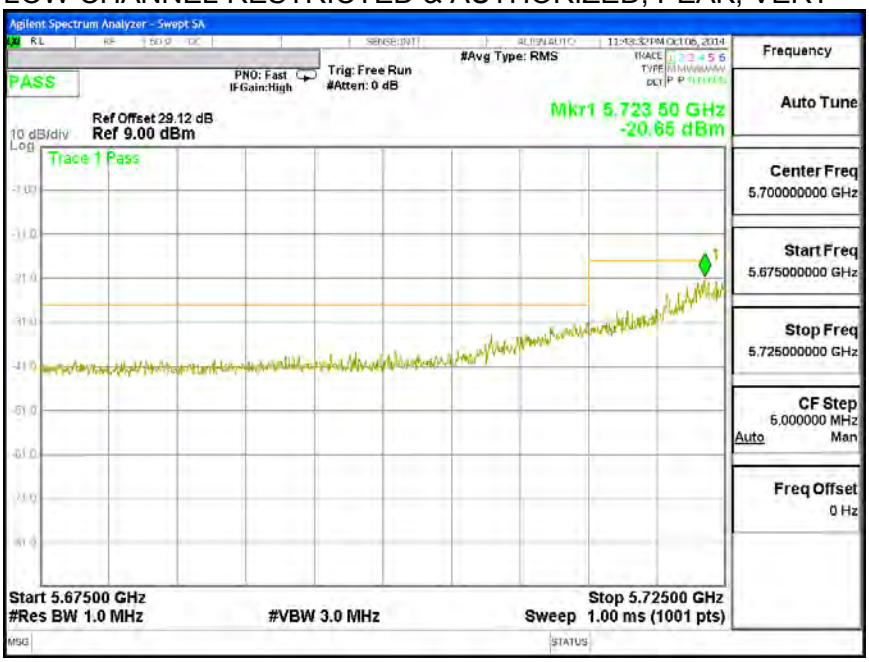
10.31. TX ABOVE 1 GHz 802.11n HT20 2TX BF MODE IN THE 5.8 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, HORIZ

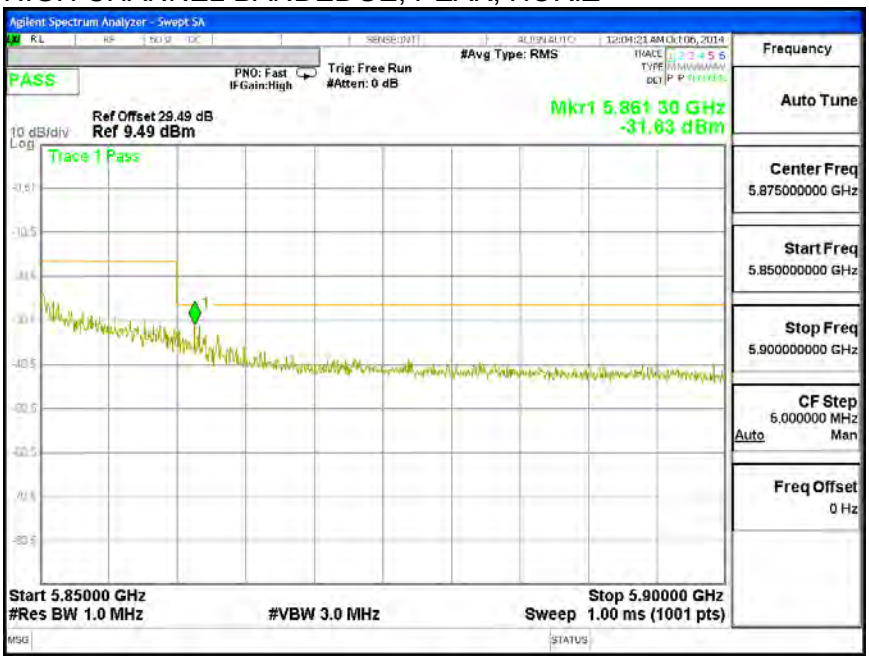


LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT

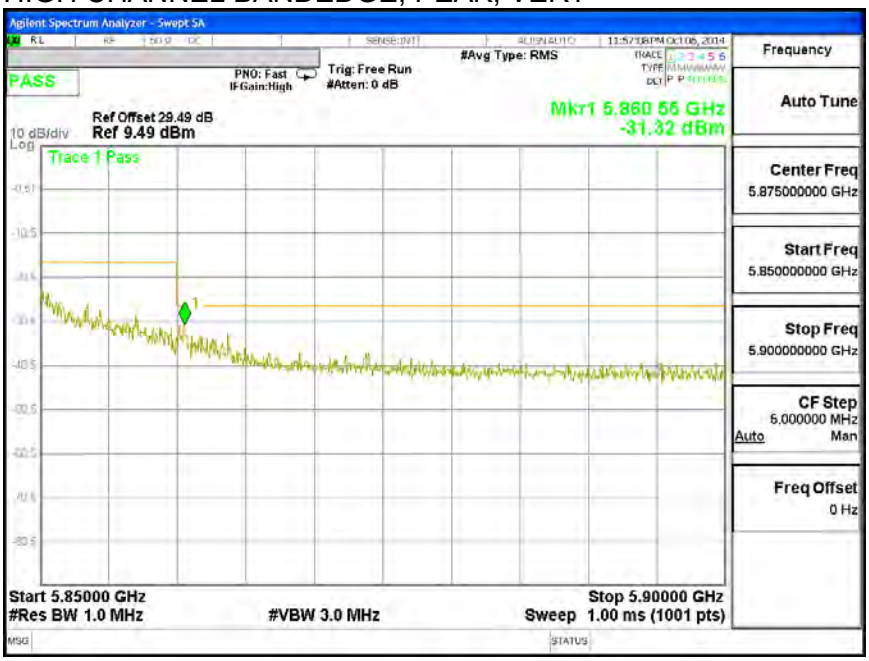


AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

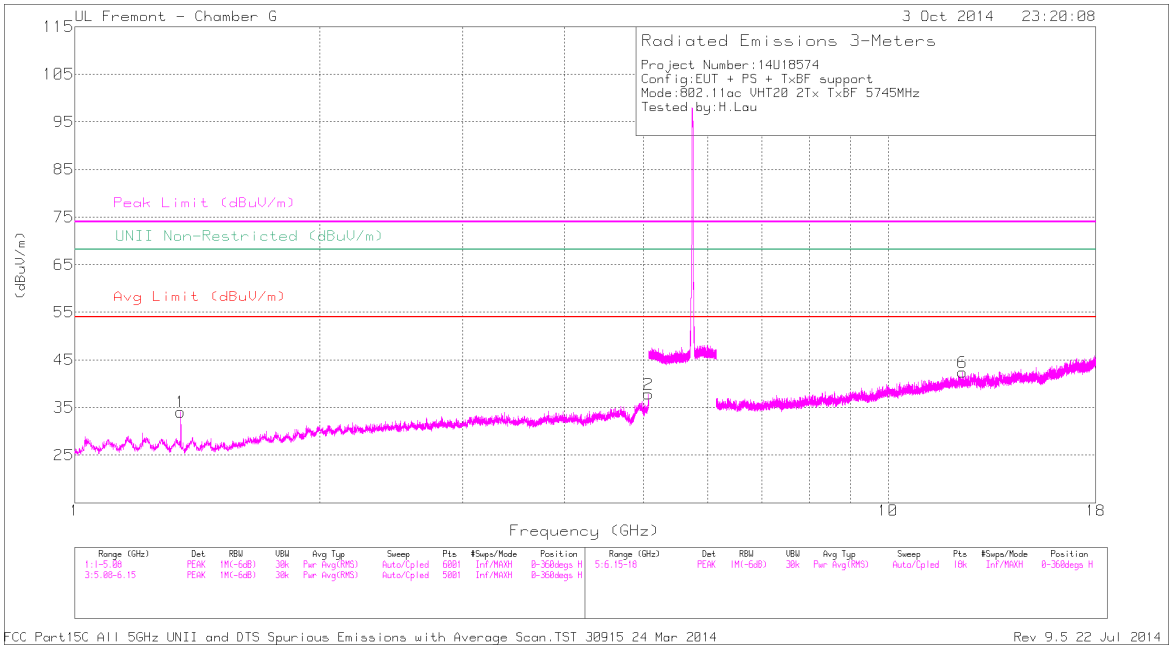


HIGH CHANNEL BANDEDGE, PEAK, VERT

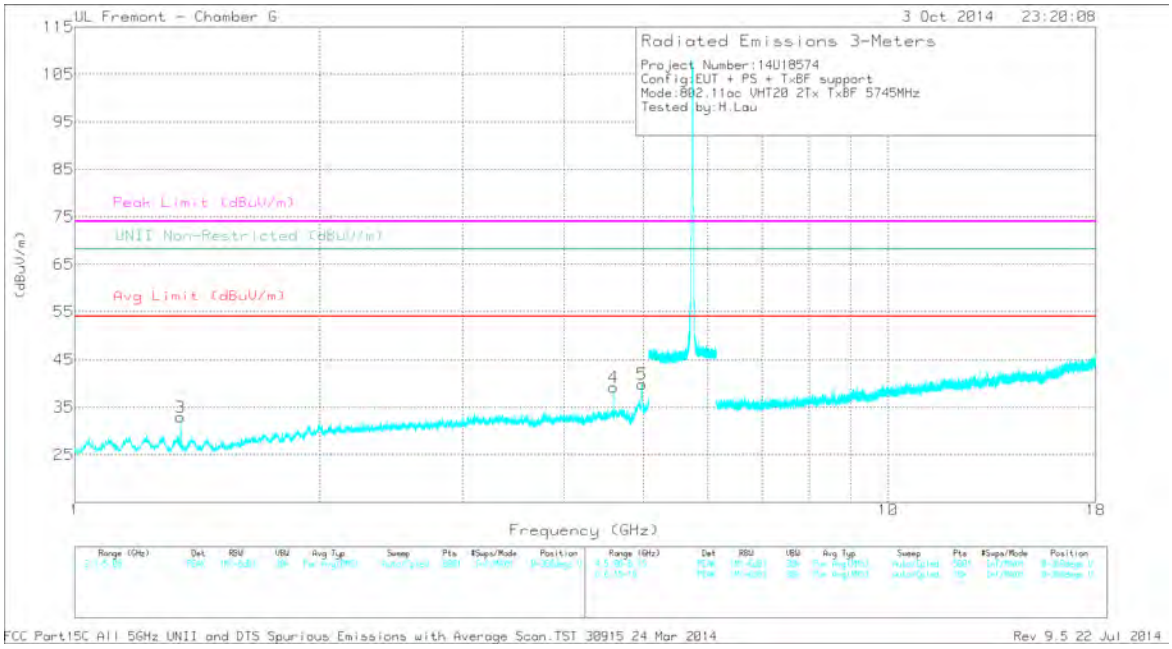


LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



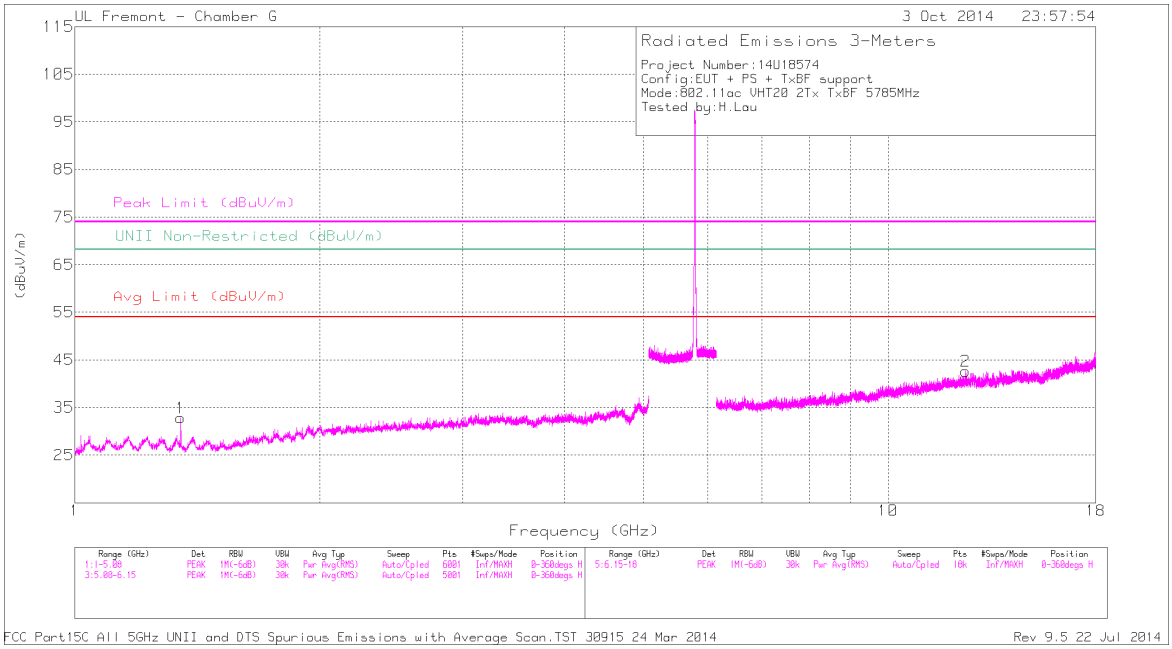
DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	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	* 1.350	44.17	PK1	28.7	-35.6	0	37.27	-	-	74	-36.73	-	-	60	279	H
	* 1.350	31.22	AD1	28.7	-35.6	.12	24.44	54	-29.56	-	-	-	-	60	279	H
2	* 5.074	40.83	PK1	34.2	-30.4	0	44.63	-	-	74	-29.37	-	-	124	146	H
	* 5.073	29.01	AD1	34.2	-30.5	.12	32.83	54	-21.17	-	-	-	-	124	146	H
3	* 1.350	44.90	PK1	28.7	-35.6	0	38.00	-	-	74	-36.00	-	-	274	119	V
	* 1.350	30.96	AD1	28.7	-35.6	.12	24.18	54	-29.82	-	-	-	-	274	119	V
4	* 4.596	44.25	PK1	33.9	-32.7	0	45.45	-	-	74	-28.55	-	-	179	205	V
	* 4.596	36.11	AD1	33.9	-32.7	.12	37.43	54	-16.57	-	-	-	-	179	205	V
5	* 4.979	43.24	PK1	34.1	-31.8	0	45.54	-	-	74	-28.46	-	-	161	173	V
	* 4.979	35.48	AD1	34.1	-31.8	.12	37.90	54	-16.10	-	-	-	-	161	173	V
6	* 12.343	37.30	PK1	38.9	-27.1	0	49.10	-	-	74	-24.90	-	-	90	162	H
	* 12.342	26.25	AD1	38.9	-27.1	.12	38.17	54	-15.83	-	-	-	-	90	162	H

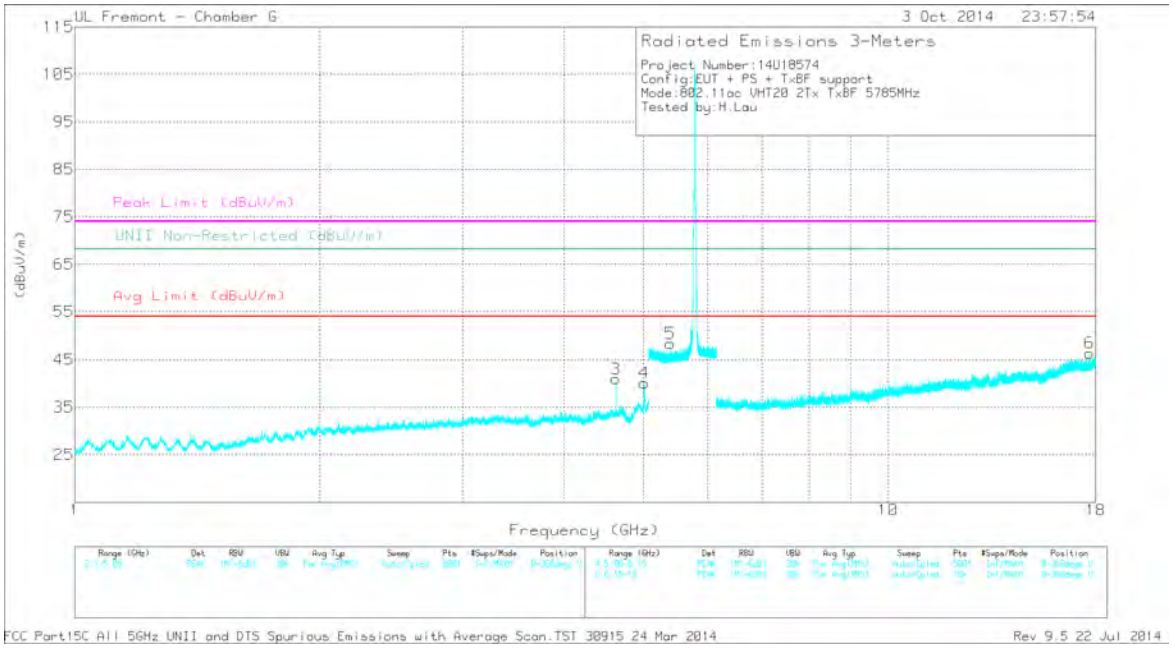
* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



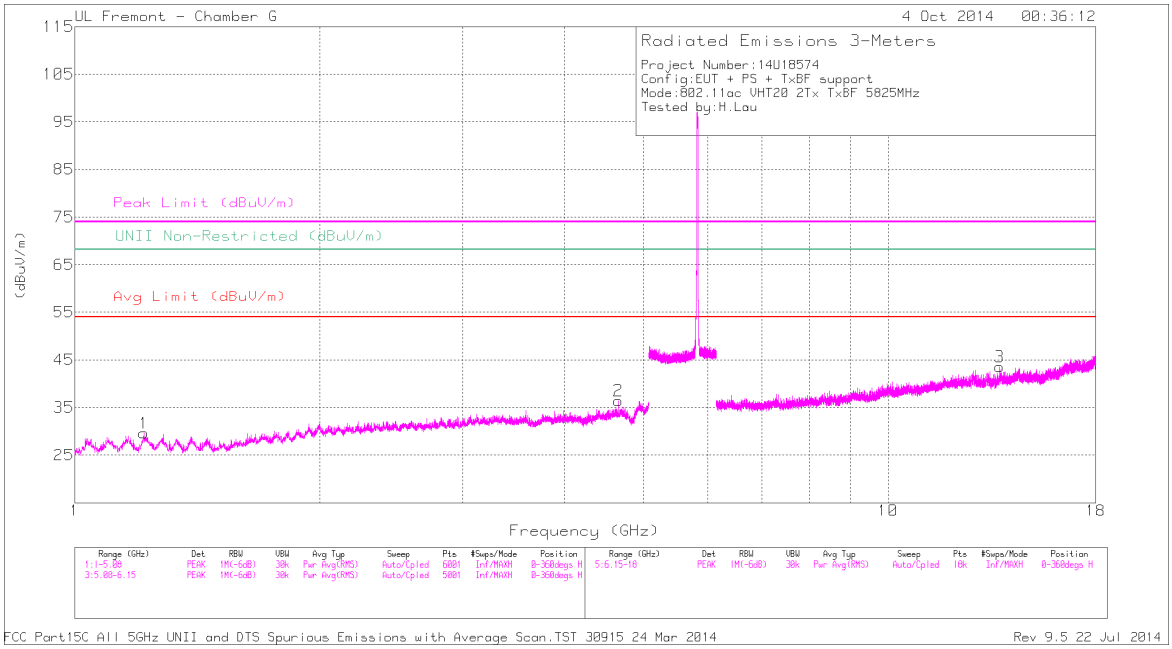
DATA

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	* 1.350	46.33	PK1	28.7	-35.6	0	39.43	-	-	74	-34.57	-	-	220	265	H
	* 1.349	31.36	AD1	28.7	-35.6	.12	24.58	54	-29.42	-	-	-	-	220	265	H
2	* 12.443	37.60	PK1	39.0	-26.7	0	49.90	-	-	74	-24.10	-	-	96	153	H
	* 12.443	25.91	AD1	39.0	-26.7	.12	38.33	54	-15.67	-	-	-	-	96	153	H
3	* 4.628	46.05	PK1	33.9	-32.8	0	47.15	-	-	74	-26.85	-	-	223	179	V
	* 4.628	39.60	AD1	33.9	-32.8	.12	40.82	54	-13.18	-	-	-	-	223	179	V
4	* 5.014	46.03	PK1	34.1	-32.2	0	47.93	-	-	74	-26.07	-	-	235	158	V
	* 5.014	38.41	AD1	34.1	-32.2	.12	40.43	54	-13.57	-	-	-	-	235	158	V
5	* 5.400	45.98	PK1	34.6	-23.6	0	56.98	-	-	74	-17.02	-	-	195	184	V
	* 5.399	34.76	AD1	34.6	-23.6	.12	45.88	54	-8.12	-	-	-	-	195	184	V
6	17.692	35.68	PK1	41.6	-24.2	0	53.08	-	-	-	-	68.2	-15.12	178	178	V

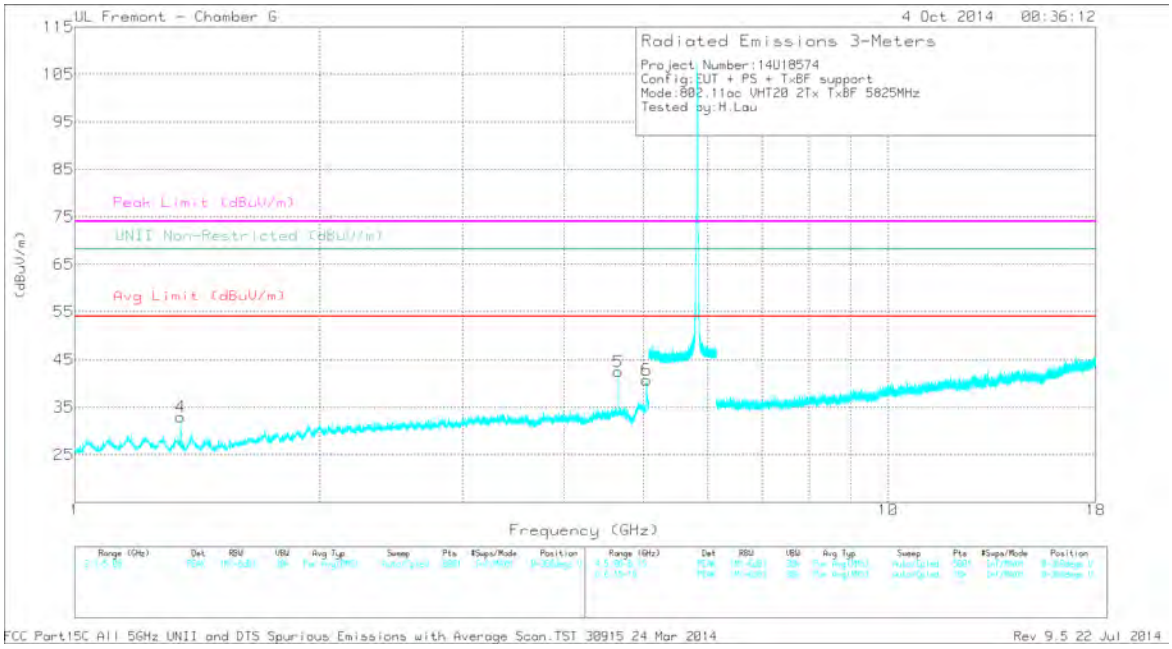
* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

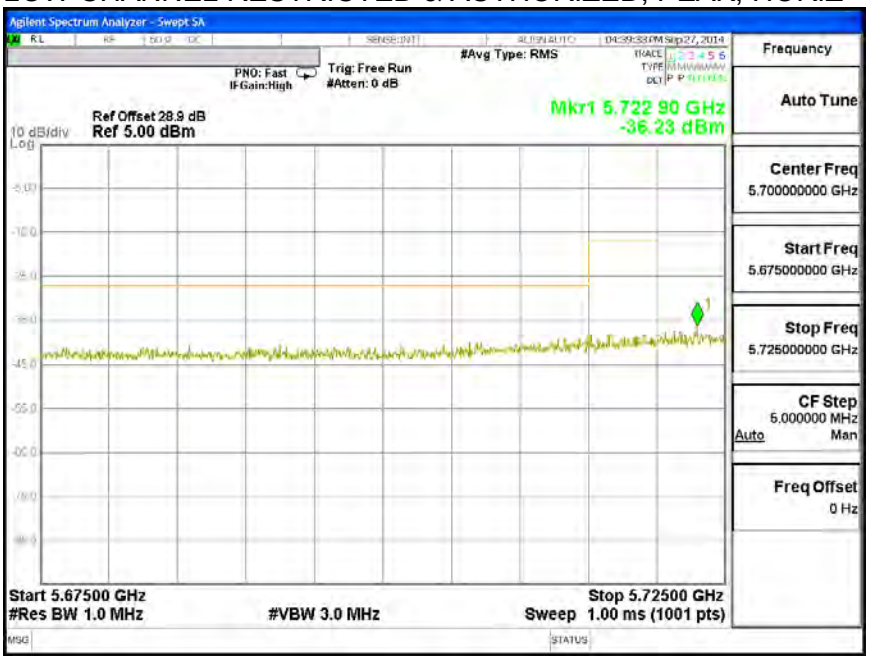
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.216	43.60	PK1	29.0	-35.6	0	37.00	-	-	74	-37.00	-	-	101	142	H
	* 1.217	32.24	AD1	29.0	-35.6	.12	25.76	54	-28.24	-	-	-	-	101	142	H
2	* 4.660	44.78	PK1	34.0	-33.0	0	45.78	-	-	74	-28.22	-	-	265	346	H
	* 4.660	37.17	AD1	34.0	-33.0	.12	38.29	54	-15.71	-	-	-	-	265	346	H
3	13.717	38.32	PK1	39.2	-26.6	0	50.92	-	-	-	-	68.2	-17.28	85	159	H
4	* 1.350	45.08	PK1	28.7	-35.6	0	38.18	-	-	74	-35.82	-	-	355	294	V
	* 1.350	31.05	AD1	28.7	-35.6	.12	24.27	54	-29.73	-	-	-	-	355	294	V
5	* 4.660	47.06	PK1	34.0	-33.0	0	48.06	-	-	74	-25.94	-	-	246	199	V
	* 4.660	41.59	AD1	34.0	-33.0	.12	42.71	54	-11.29	-	-	-	-	246	199	V
6	* 5.048	45.76	PK1	34.2	-31.4	0	48.56	-	-	74	-25.44	-	-	169	181	V
	* 5.048	36.53	AD1	34.2	-31.4	.12	39.45	54	-14.55	-	-	-	-	169	181	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

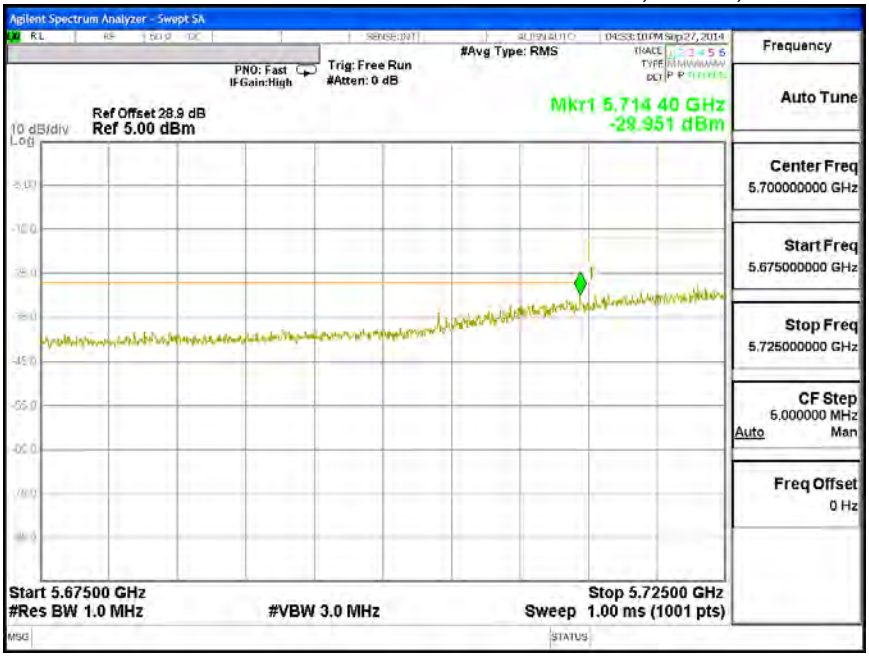
10.32. TX ABOVE 1 GHz 802.11n HT40 1TX MODE IN THE 5.8 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, HORIZ

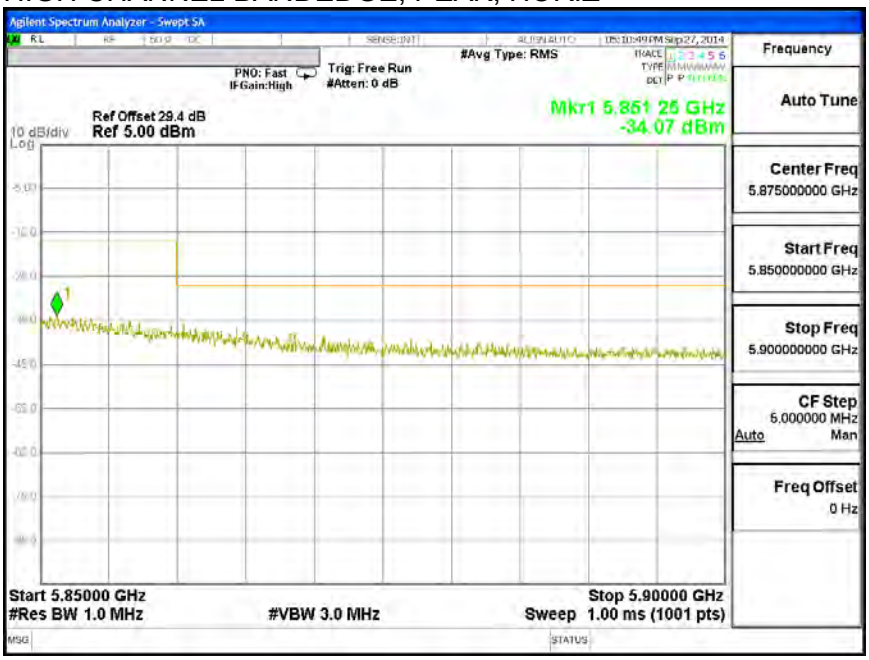


LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT

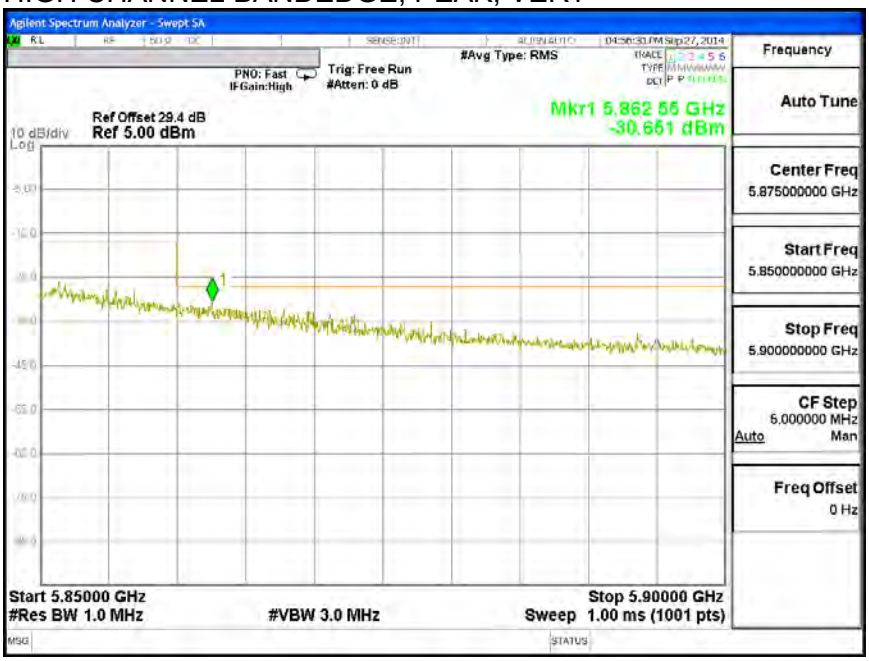


AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

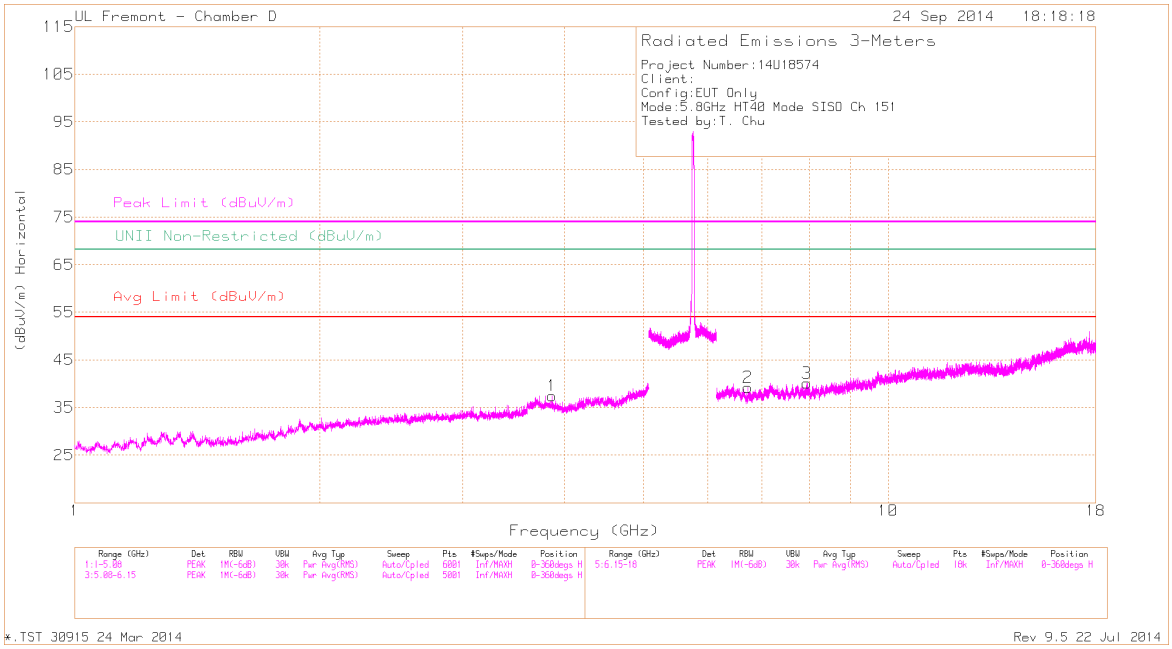


HIGH CHANNEL BANDEDGE, PEAK, VERT

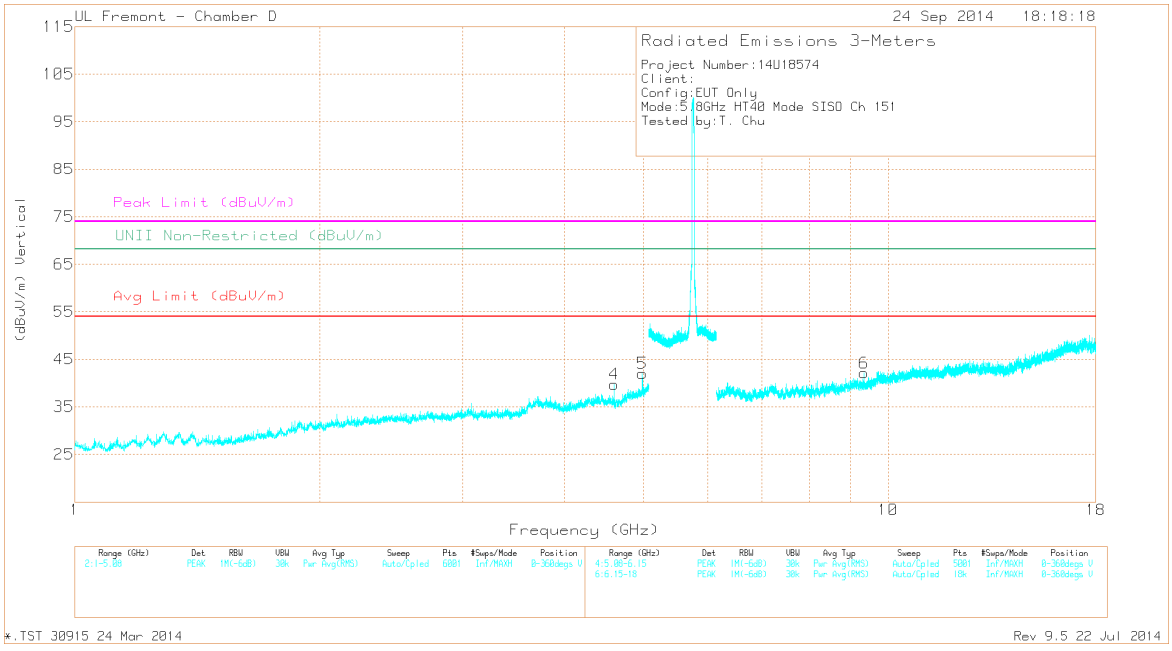


LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



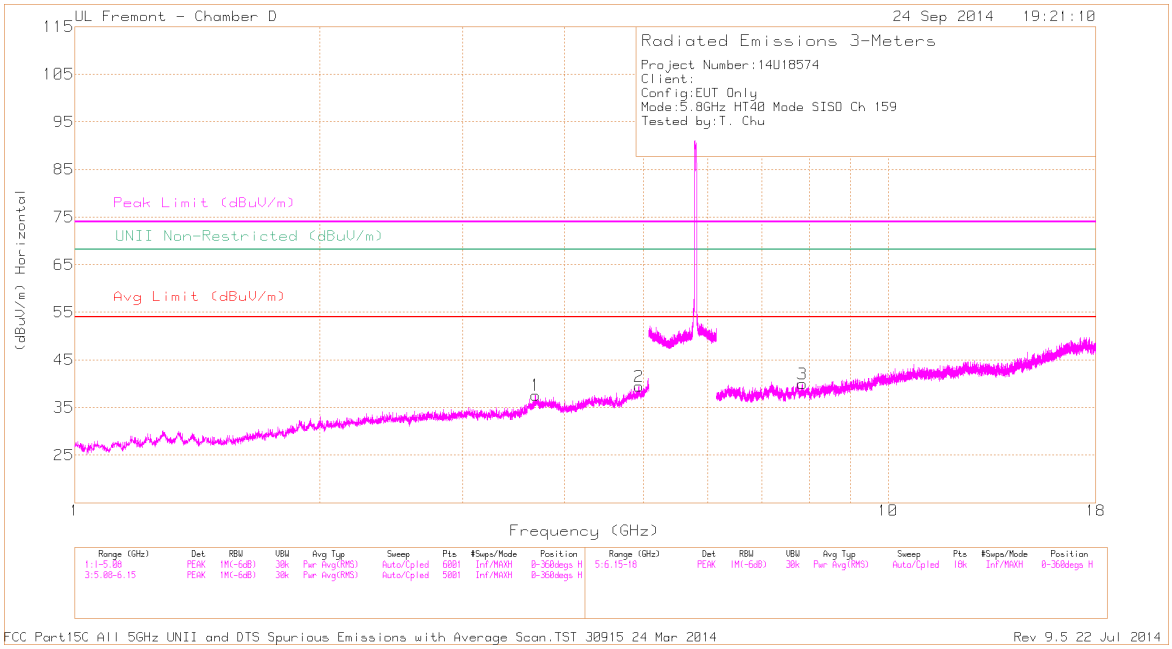
DATA

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	* 3.860	38.19	PK1	33.5	-28.7	0	42.99	-	-	74	-31.01	-	-	360	100	H
	* 3.861	27.37	AD1	33.5	-28.6	0	32.27	54	-21.73	-	-	-	-	360	100	H
2	6.721	36.41	PK1	35.6	-26.2	0	45.81	-	-	-	-	68.2	-22.39	239	196	H
3	7.951	35.78	PK1	35.8	-24.1	0	47.48	-	-	-	-	68.2	-20.72	239	196	H
4	* 4.604	40.08	PK1	34.1	-27.7	0	46.48	-	-	74	-27.52	-	-	200	198	V
	* 4.604	32.46	AD1	34.1	-27.6	0	38.96	54	-15.04	-	-	-	-	200	198	V
5	* 4.988	39.83	PK1	34.2	-26.1	0	47.93	-	-	74	-26.07	-	-	239	196	V
	* 4.988	31.92	AD1	34.2	-26.1	0	40.02	54	-13.98	-	-	-	-	239	196	V
6	* 9.345	34.17	PK1	36.4	-22.3	0	48.27	-	-	74	-25.73	-	-	211	121	V
	* 9.343	23.08	AD1	36.4	-22.2	0	37.28	54	-16.72	-	-	-	-	211	121	V

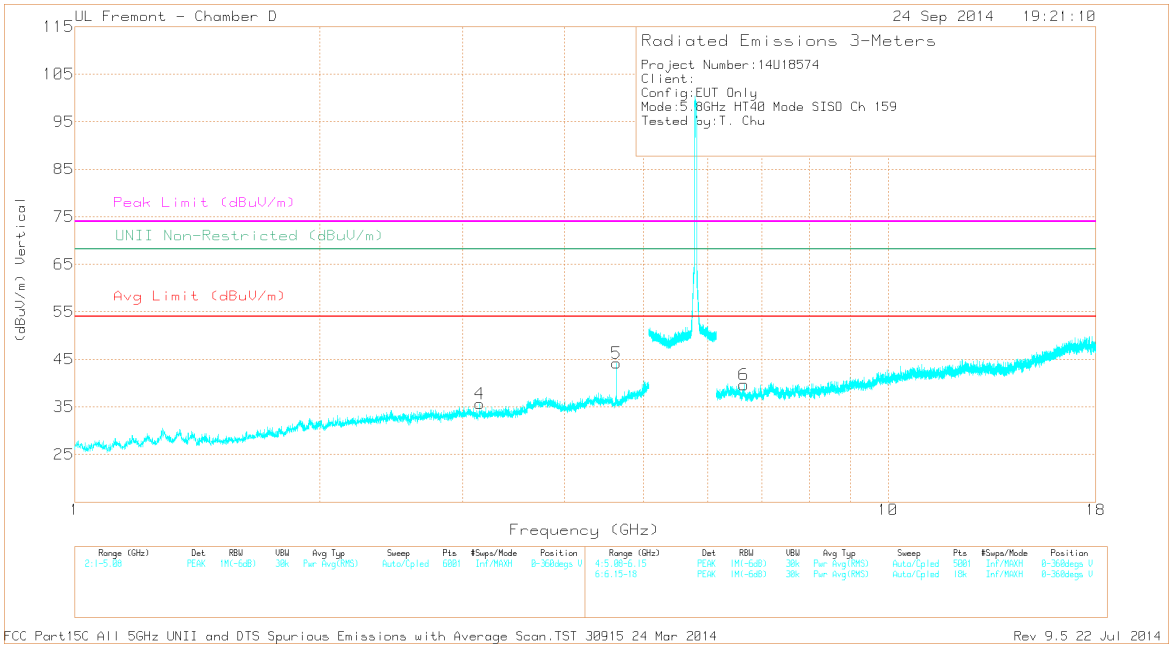
* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

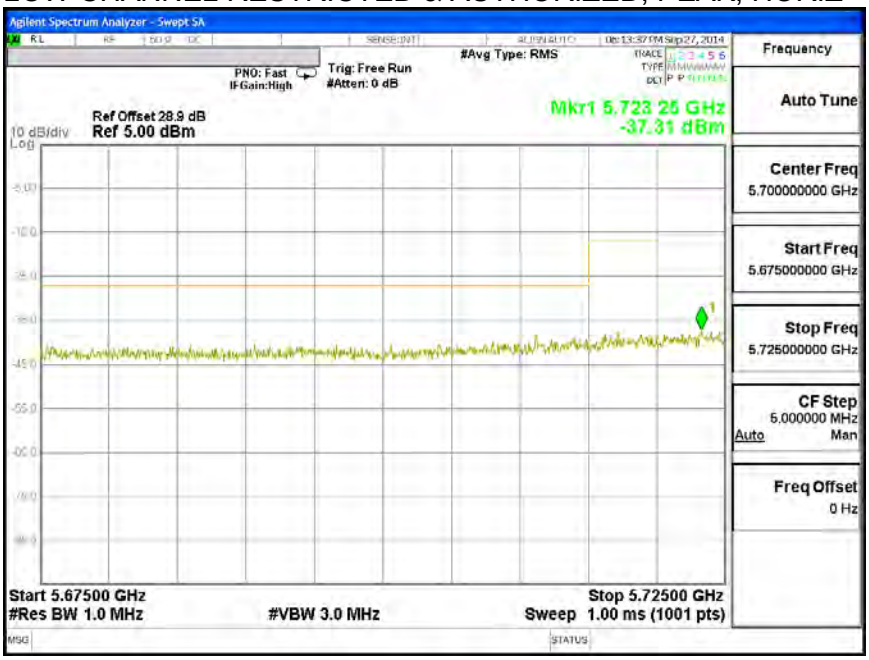
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.687	37.99	PK1	33.2	-28.6	0	42.59	-	-	74	-31.41	-	-	0	100	H
	* 3.691	27.3	AD1	33.2	-28.6	0	31.90	54	-22.10	-	-	-	-	0	100	H
2	* 4.942	37.1	PK1	34.2	-26.2	0	45.10	-	-	74	-28.90	-	-	0	100	H
	* 4.938	26.54	AD1	34.2	-26.2	0	34.54	54	-19.46	-	-	-	-	0	100	H
3	7.843	36.22	PK1	35.8	-24.8	0	47.22	-	-	-	-	68.2	-20.98	201	241	H
4	3.146	39.49	PK1	32.8	-29.8	0	42.49	-	-	-	-	68.2	-25.71	0	100	V
5	* 4.636	41.58	PK1	34.1	-26.8	0	48.88	-	-	74	-25.12	-	-	201	241	V
	* 4.636	35.2	AD1	34.1	-26.8	0	42.50	54	-11.50	-	-	-	-	201	241	V
6	6.652	36.82	PK1	35.6	-26.0	0	46.42	-	-	-	-	68.2	-21.78	201	241	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

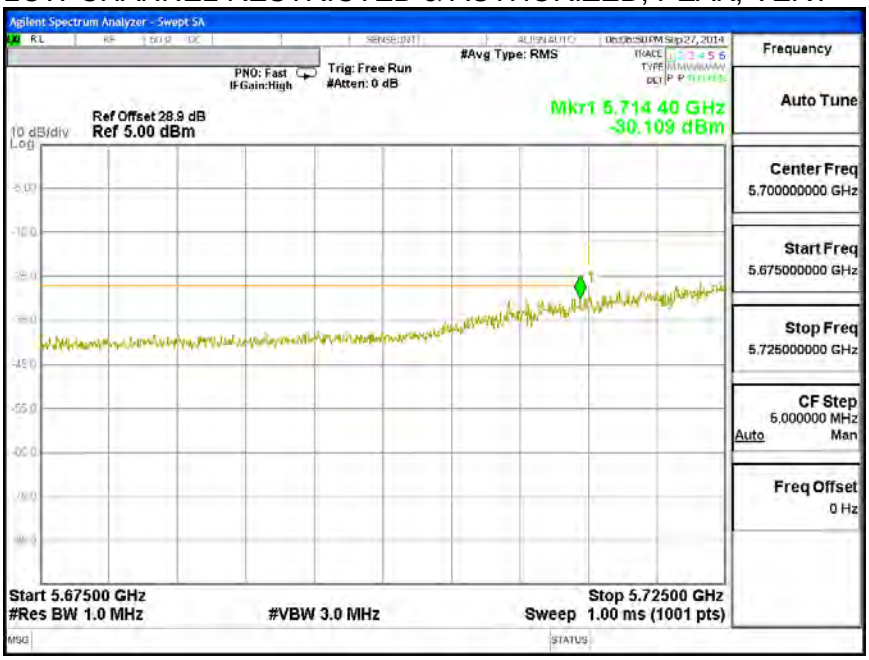
10.33. TX ABOVE 1 GHz 802.11n HT40 2TX CDD MODE IN THE 5.8 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, HORIZ

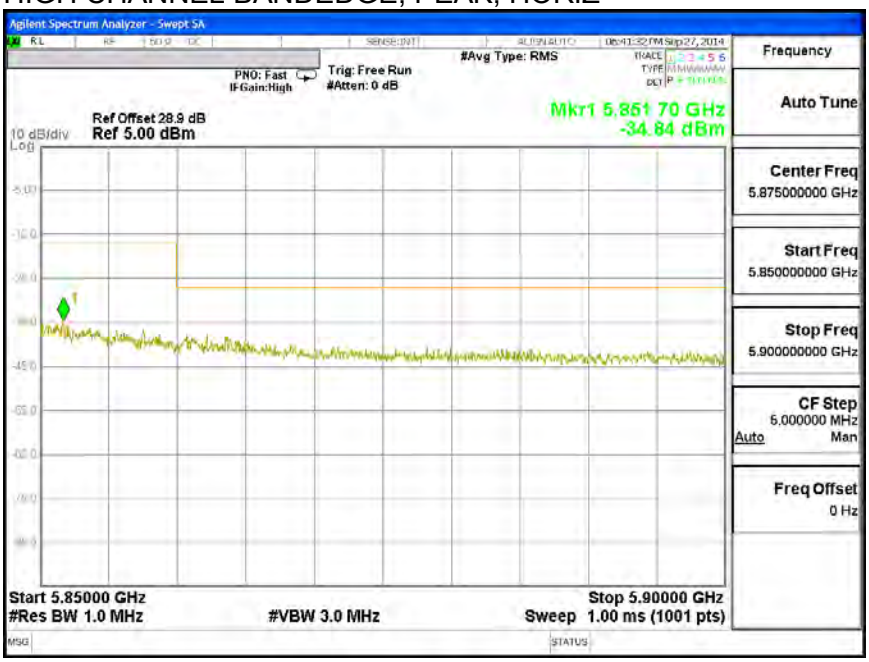


LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT

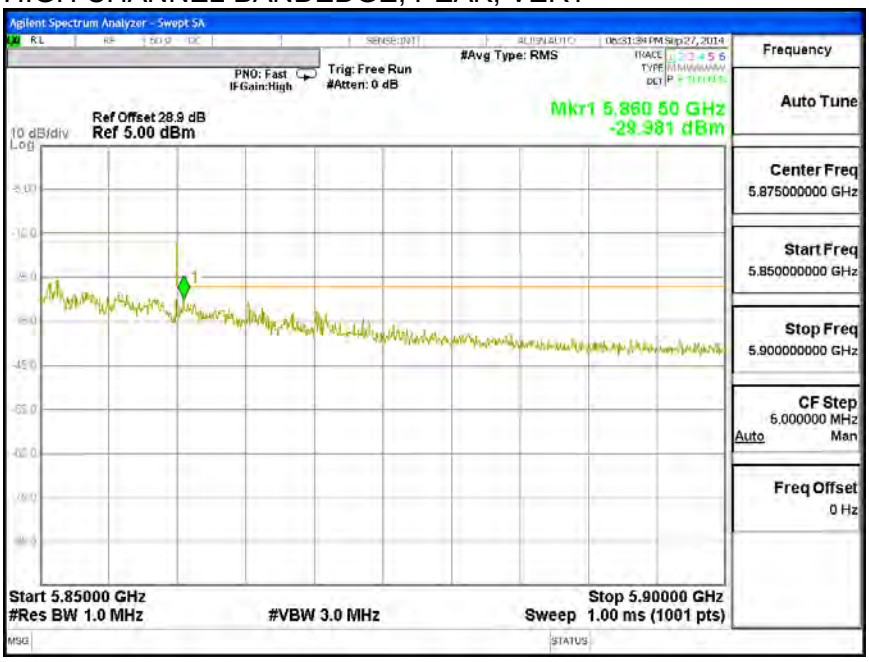


AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

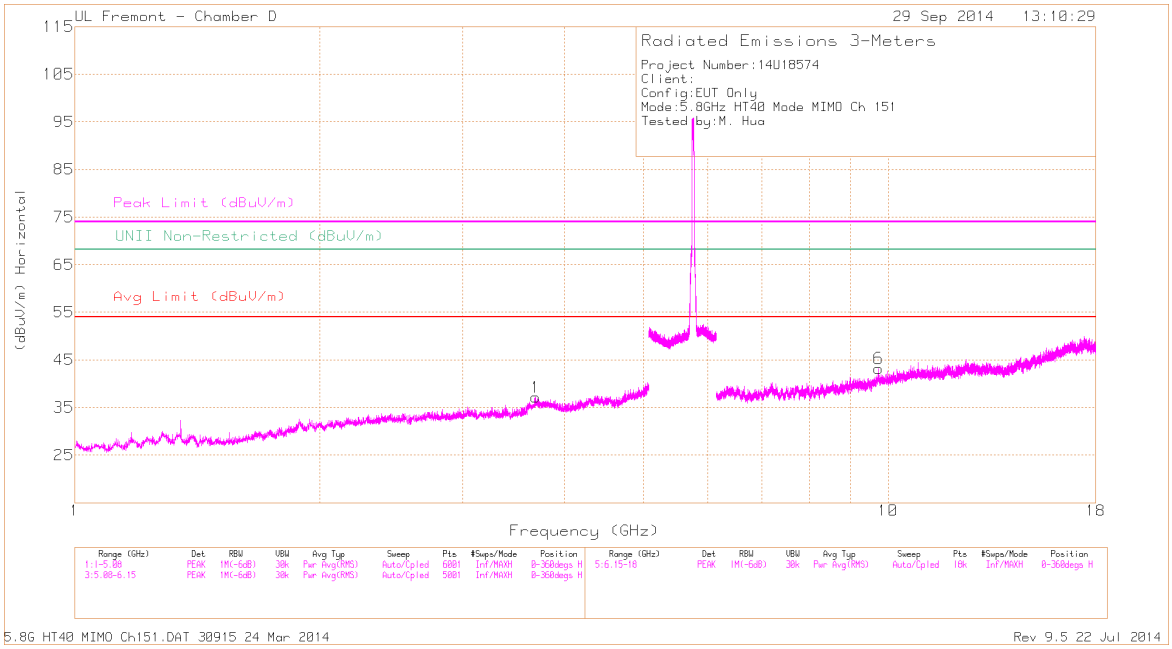


HIGH CHANNEL BANDEDGE, PEAK, VERT

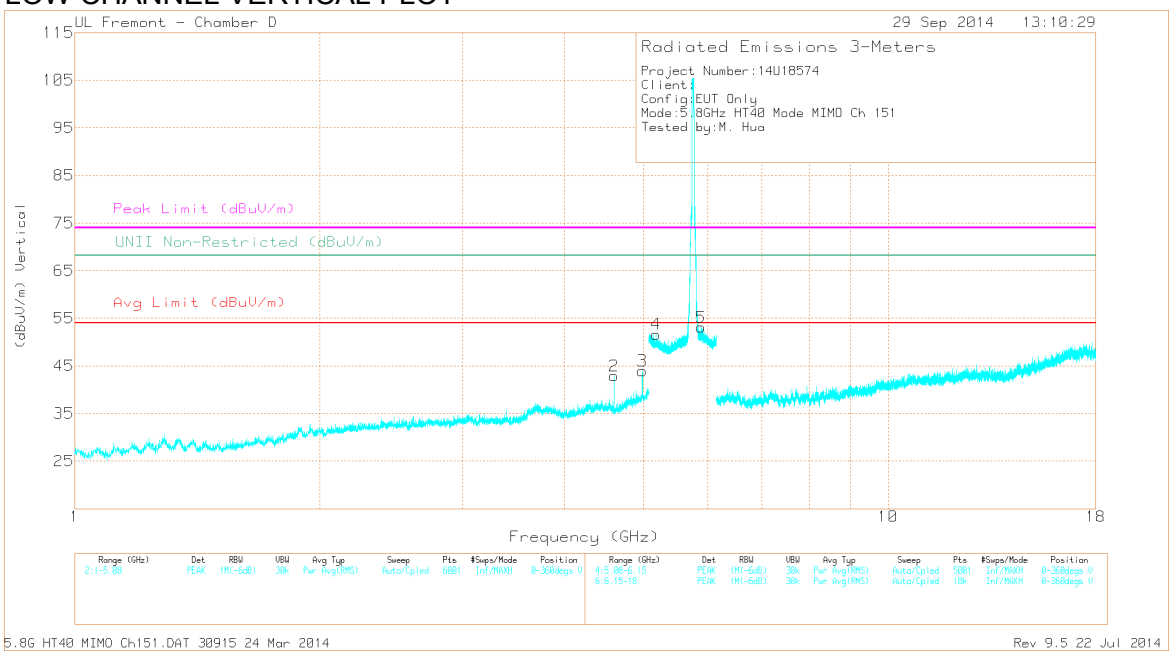


LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



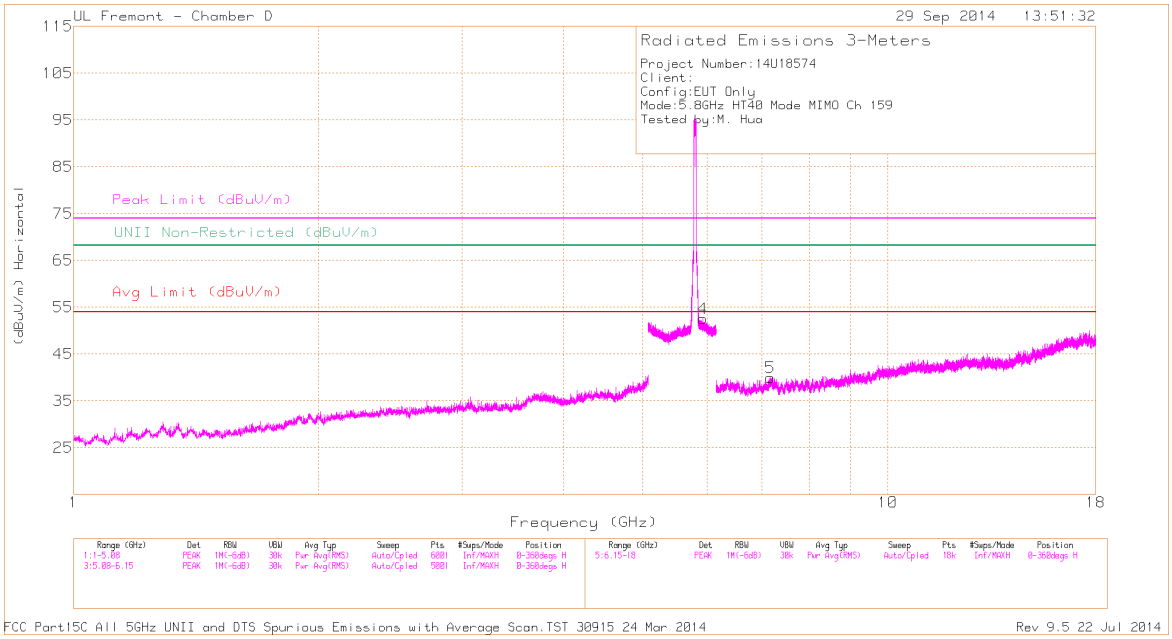
DATA

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	* 3.688	38.28	PK1	33.2	-28.6	0	42.88	-	-	74	-31.12	-	-	1	100	H
	* 3.688	27.21	AD1	33.2	-28.6	0	31.81	54	-22.19	-	-	-	-	1	100	H
2	* 4.604	41.67	PK1	34.1	-27.6	0	48.17	-	-	74	-25.83	-	-	21	205	V
	* 4.604	36.14	AD1	34.1	-27.6	0	42.64	54	-11.36	-	-	-	-	21	205	V
3	* 4.988	41.82	PK1	34.2	-26.1	0	49.92	-	-	74	-24.08	-	-	350	155	V
	* 4.988	35.08	AD1	34.2	-26.1	0	43.18	54	-10.82	-	-	-	-	350	155	V
4	5.180	37.75	PK1	34.3	-17.9	0	54.15	-	-	-	-	68.2	-14.05	126	147	V
5	5.888	36.80	PK1	35.1	-16.9	0	55.00	-	-	-	-	68.2	-13.20	126	147	V
6	9.732	34.62	PK1	36.9	-21.3	0	50.22	-	-	-	-	68.2	-17.98	126	147	H

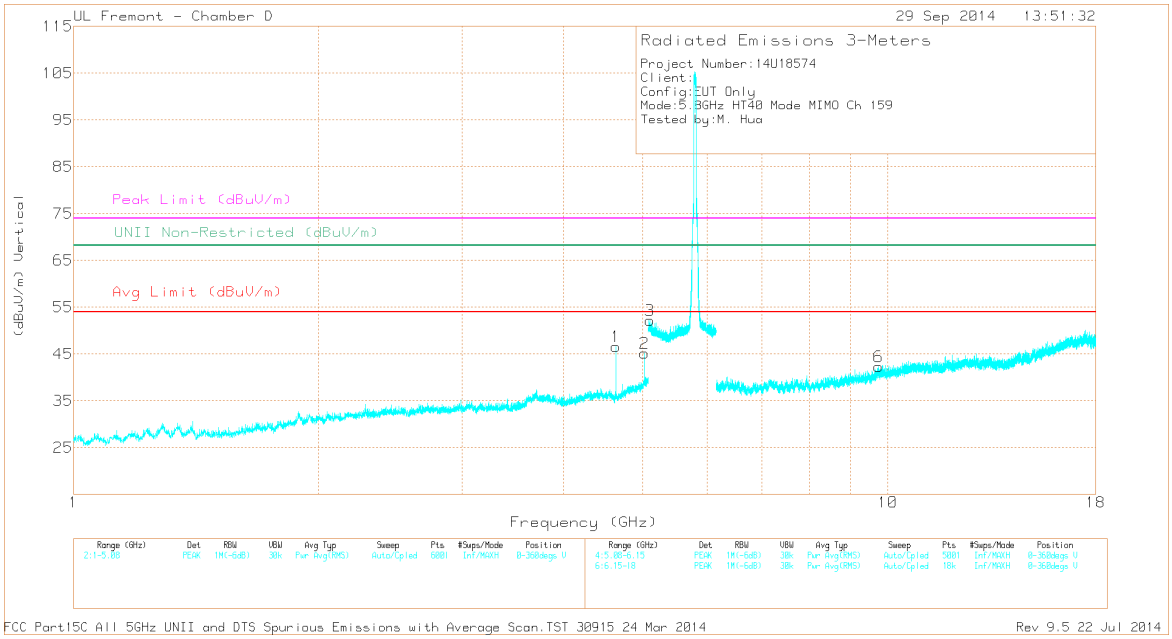
* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

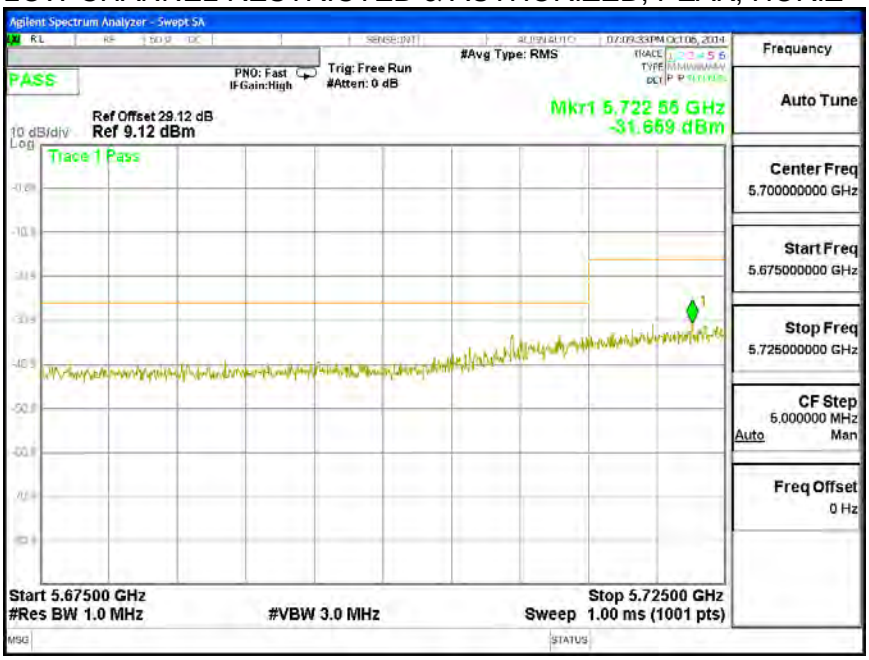
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.636	43.27	PK1	34.1	-26.8	0	50.57	-	-	74	-23.43	-	-	20	196	V
	* 4.636	38.97	AD1	34.1	-26.8	0	46.27	54	-7.73	-	-	-	-	20	196	V
2	* 5.023	42.32	PK1	34.2	-26.1	0	50.42	-	-	74	-23.58	-	-	342	154	V
	* 5.022	36.68	AD1	34.2	-26.1	0	44.78	54	-9.22	-	-	-	-	342	154	V
3	* 5.102	38.16	PK1	34.3	-18	0	54.46	-	-	74	-19.54	-	-	97	146	V
	* 5.099	26.8	AD1	34.3	-17.9	0	43.20	54	-10.80	-	-	-	-	97	146	V
4	5.921	37.78	PK1	35.1	-16.8	0	56.08	-	-	-	-	68.2	-12.12	97	146	H
5	7.171	36.73	PK1	35.7	-24.2	0	48.23	-	-	-	-	68.2	-19.97	97	146	H
6	9.737	34.13	PK1	36.9	-21.4	0	49.63	-	-	-	-	68.2	-18.57	97	146	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

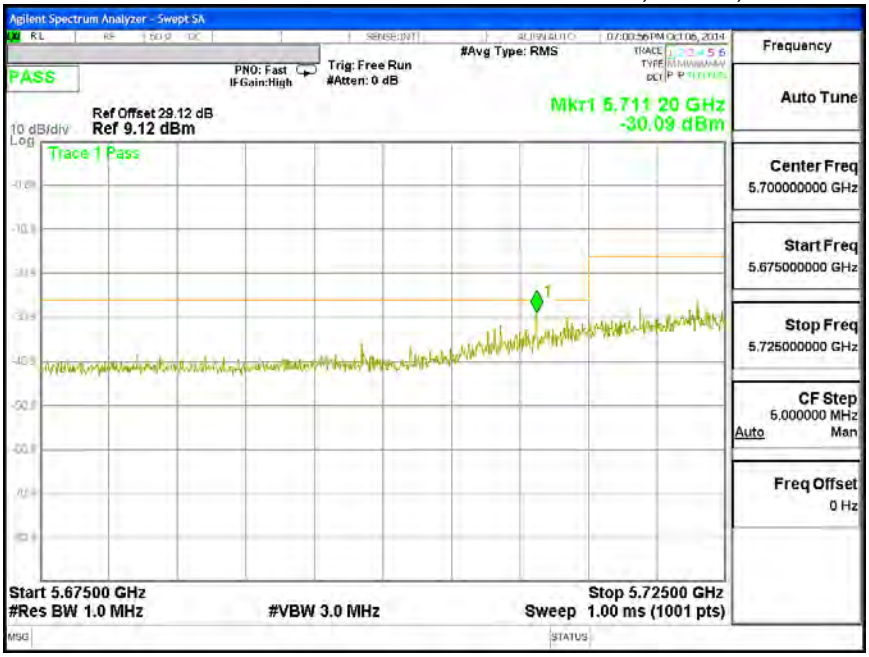
10.34. TX ABOVE 1 GHz 802.11n HT40 2TX BF MODE IN THE 5.8 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, HORIZ

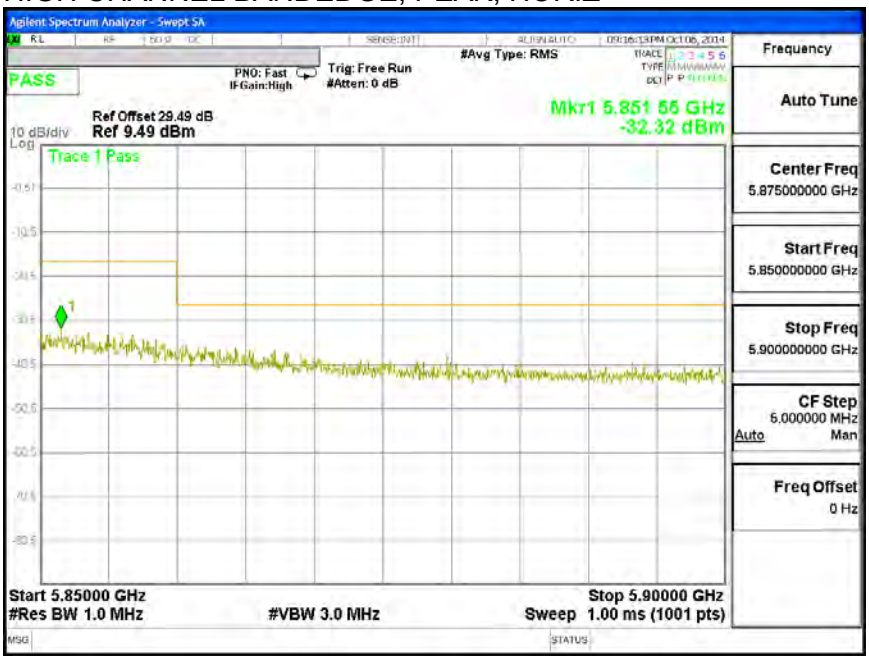


LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT

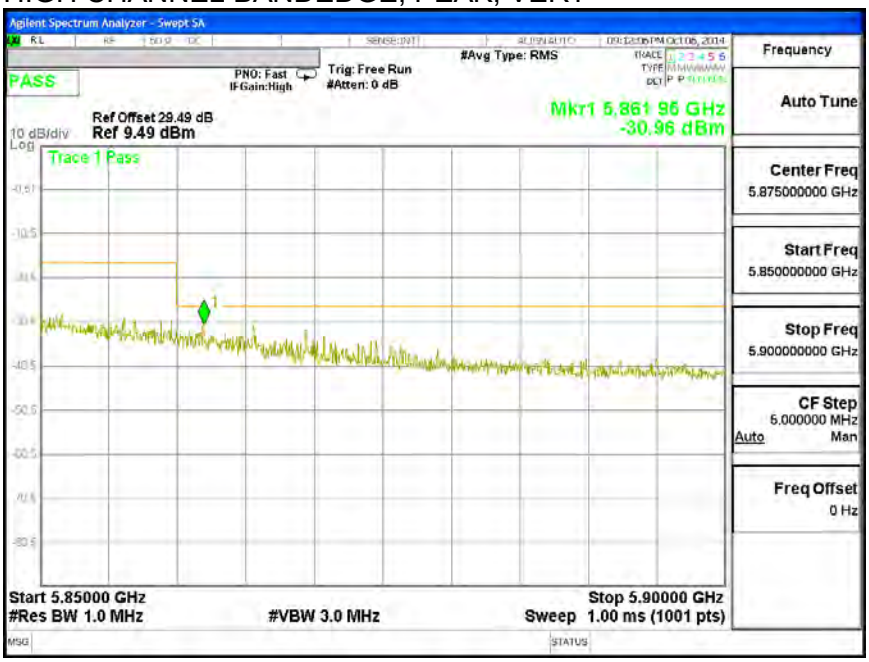


AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

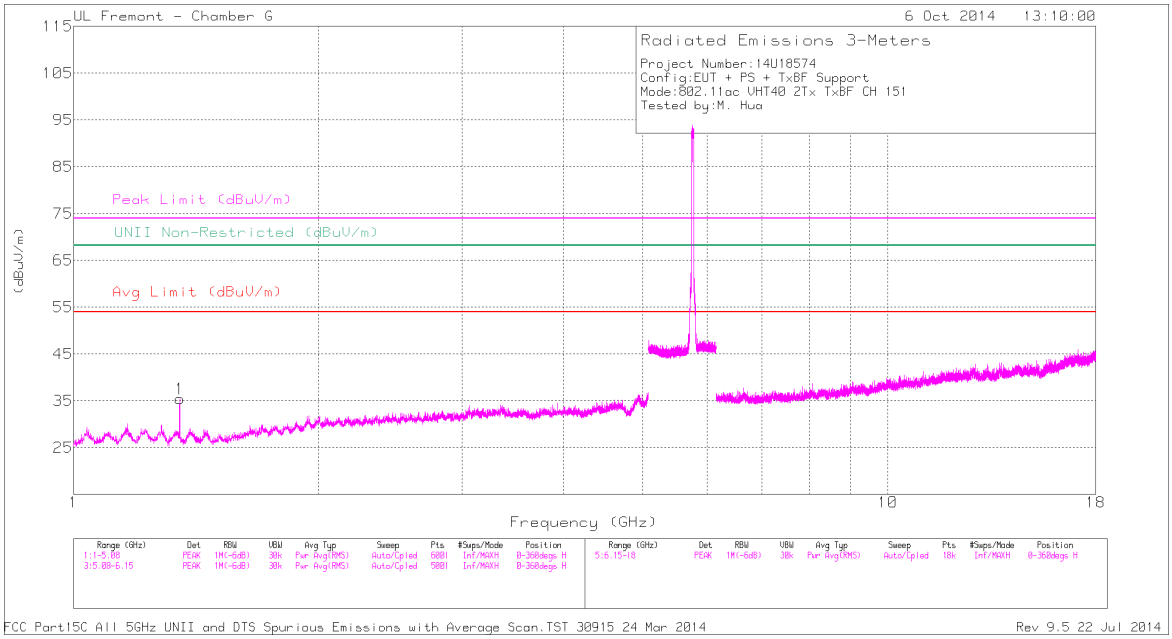


HIGH CHANNEL BANDEDGE, PEAK, VERT

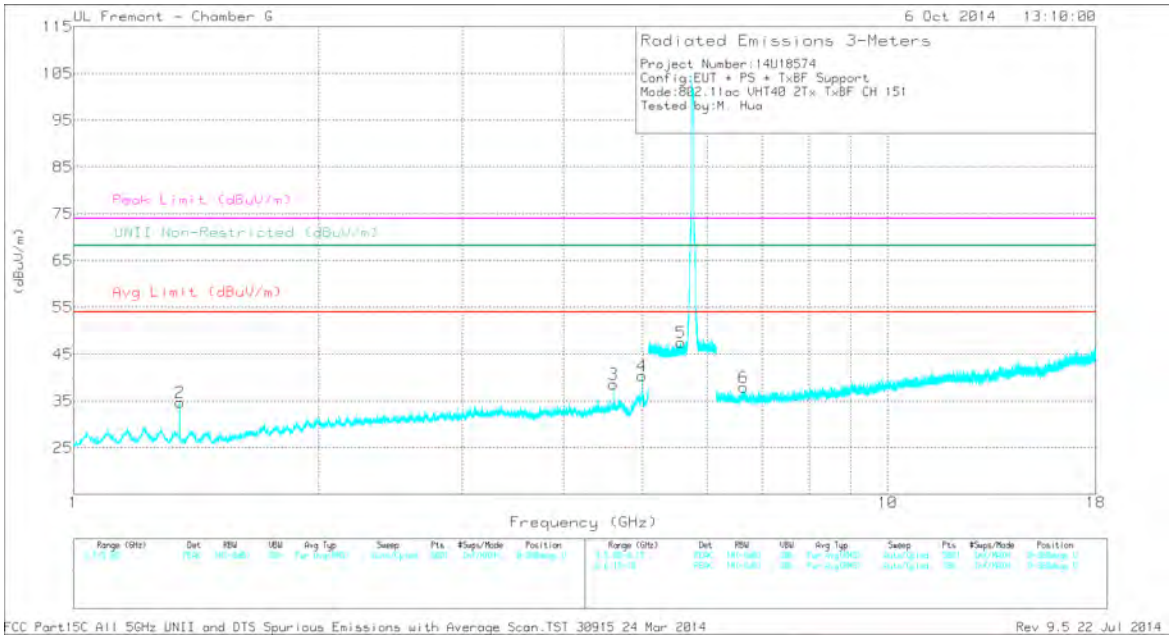


LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



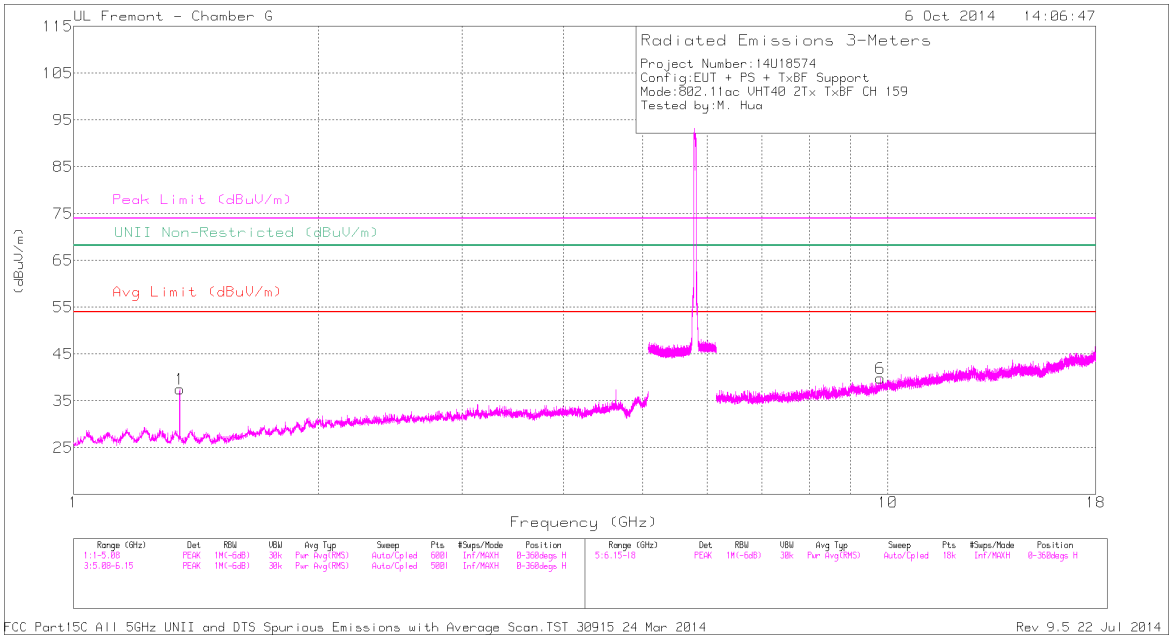
DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	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	* 1.350	47.75	PK1	28.7	-35.6	0	40.85	-	-	74	-33.15	-	-	151	217	H
	* 1.350	33.20	AD1	28.7	-35.6	.12	26.42	54	-27.58	-	-	-	-	151	217	H
2	* 1.351	47.06	PK1	28.7	-35.6	0	40.16	-	-	74	-33.84	-	-	313	170	V
	* 1.351	31.03	AD1	28.7	-35.6	.12	24.25	54	-29.75	-	-	-	-	313	170	V
3	* 4.604	43.93	PK1	33.9	-32.7	0	45.13	-	-	74	-28.87	-	-	188	158	V
	* 4.604	37.24	AD1	33.9	-32.7	.12	38.56	54	-15.44	-	-	-	-	188	158	V
4	* 4.988	44.39	PK1	34.1	-31.9	0	46.59	-	-	74	-27.41	-	-	188	158	V
	* 4.988	36.24	AD1	34.1	-31.9	.12	38.56	54	-15.44	-	-	-	-	188	158	V
5	5.568	42.35	PK1	34.7	-23.6	0	53.45	-	-	-	-	68.2	-14.75	178	202	V
6	6.651	40.76	PK1	35.6	-31.5	0	44.86	-	-	-	-	68.2	-23.34	178	202	V

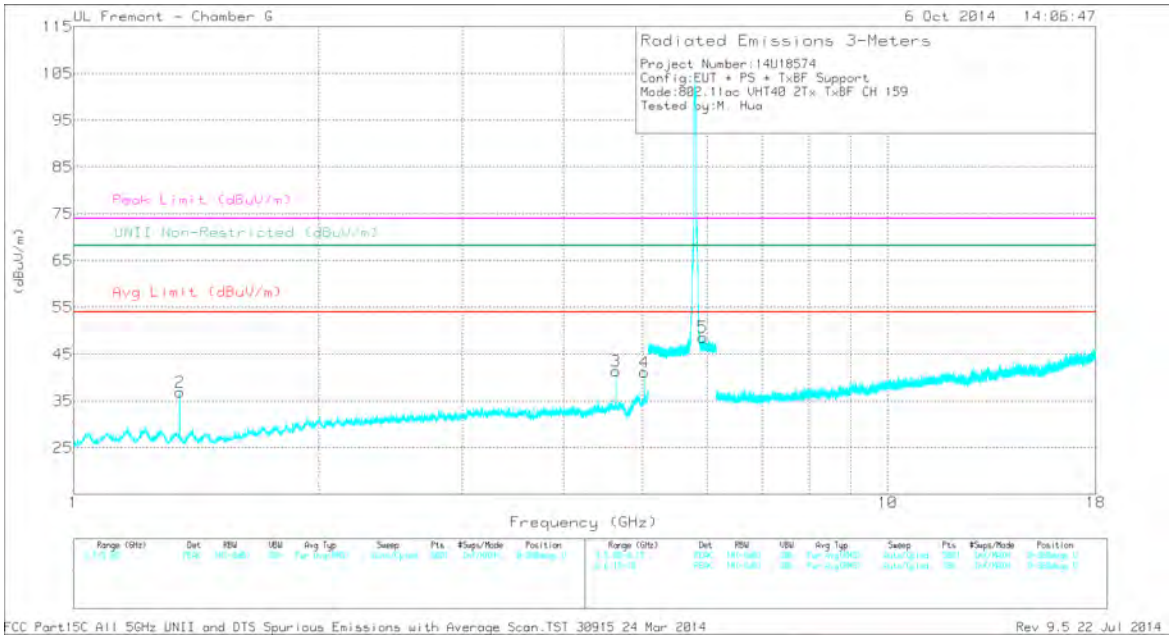
* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

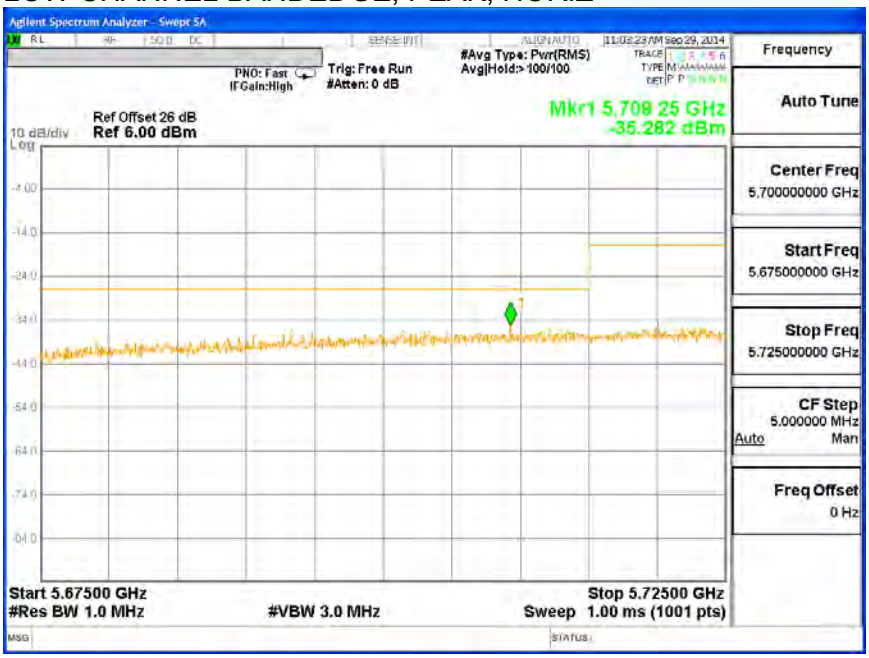
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.349	43.69	PK1	28.7	-35.6	0	36.79	-	-	74	-37.21	-	-	283	247	H
	* 1.350	31.63	AD1	28.7	-35.6	.12	24.85	54	-29.15	-	-	-	-	283	247	H
2	* 1.351	44.73	PK1	28.7	-35.6	0	37.83	-	-	74	-36.17	-	-	34	251	V
	* 1.350	31.76	AD1	28.7	-35.6	.12	24.98	54	-29.02	-	-	-	-	34	251	V
3	* 4.636	45.43	PK1	33.9	-32.9	0	46.43	-	-	74	-27.57	-	-	222	199	V
	* 4.636	39.26	AD1	33.9	-32.9	.12	40.38	54	-13.62	-	-	-	-	222	199	V
4	* 5.022	44.00	PK1	34.1	-32.0	0	46.10	-	-	74	-27.90	-	-	222	199	V
	* 5.022	34.01	AD1	34.1	-32.0	.12	36.23	54	-17.77	-	-	-	-	222	199	V
5	5.931	41.22	PK1	35.1	-23.6	0	52.72	-	-	-	-	68.2	-15.48	222	199	V
6	9.788	37.88	PK1	37.1	-28.2	0	46.78	-	-	-	-	68.2	-21.42	222	199	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

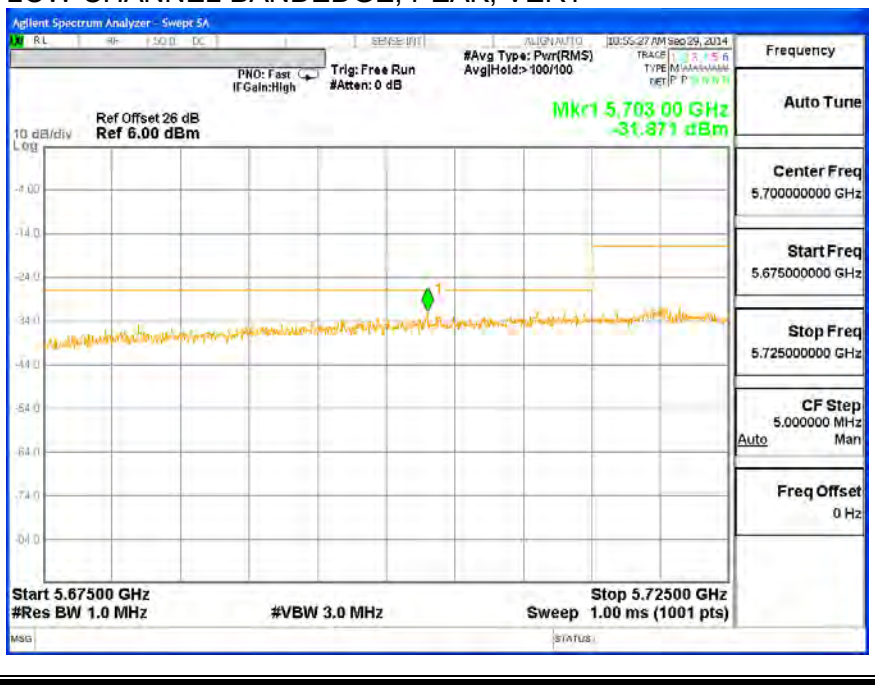
10.35. TX ABOVE 1G 802.11ac VHT80 1TX MODE IN THE 5.8 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE

LOW CHANNEL BANDEDGE, PEAK, HORIZ

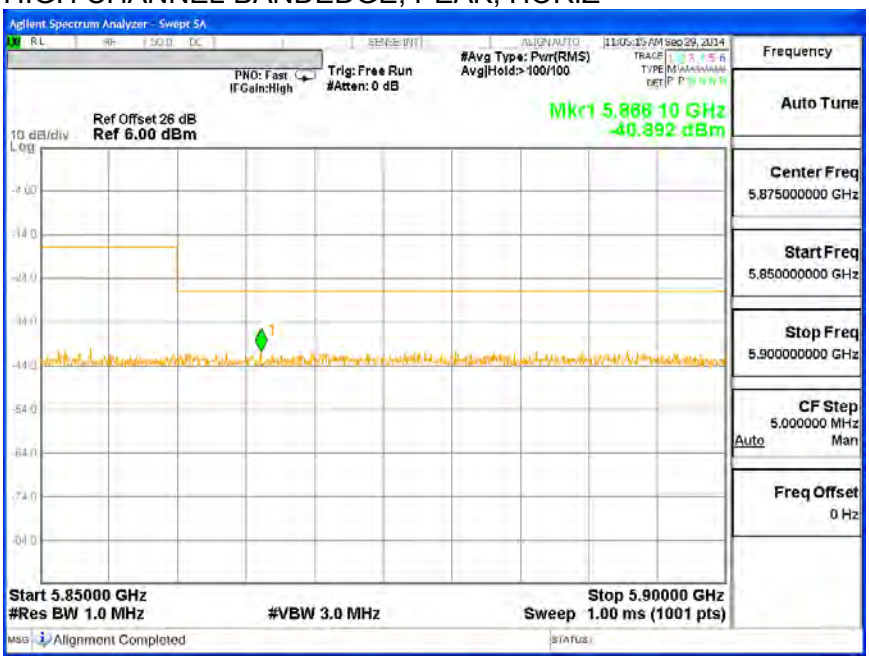


LOW CHANNEL BANDEDGE, PEAK, VERT

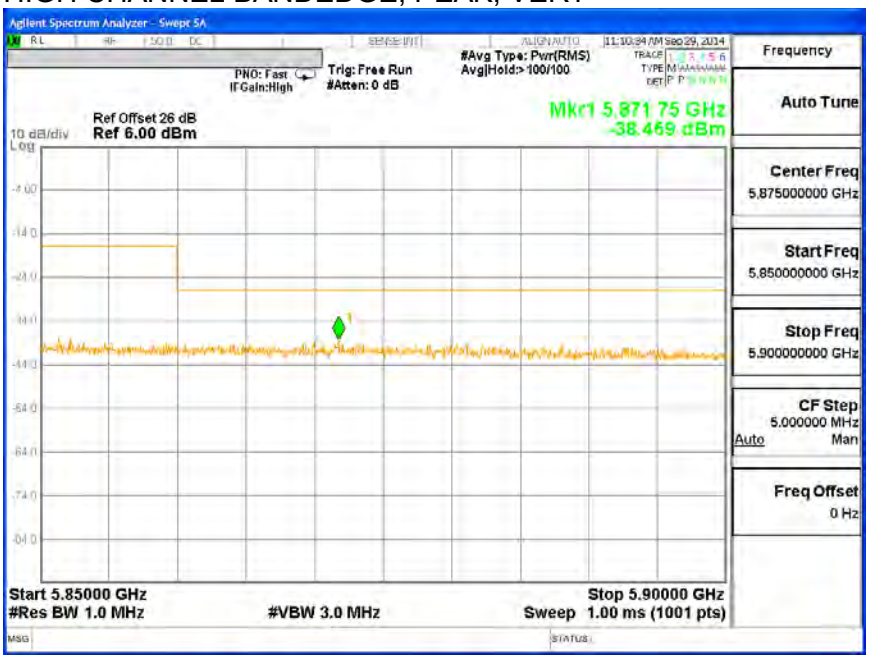


AUTHORIZED BANDEDGE

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

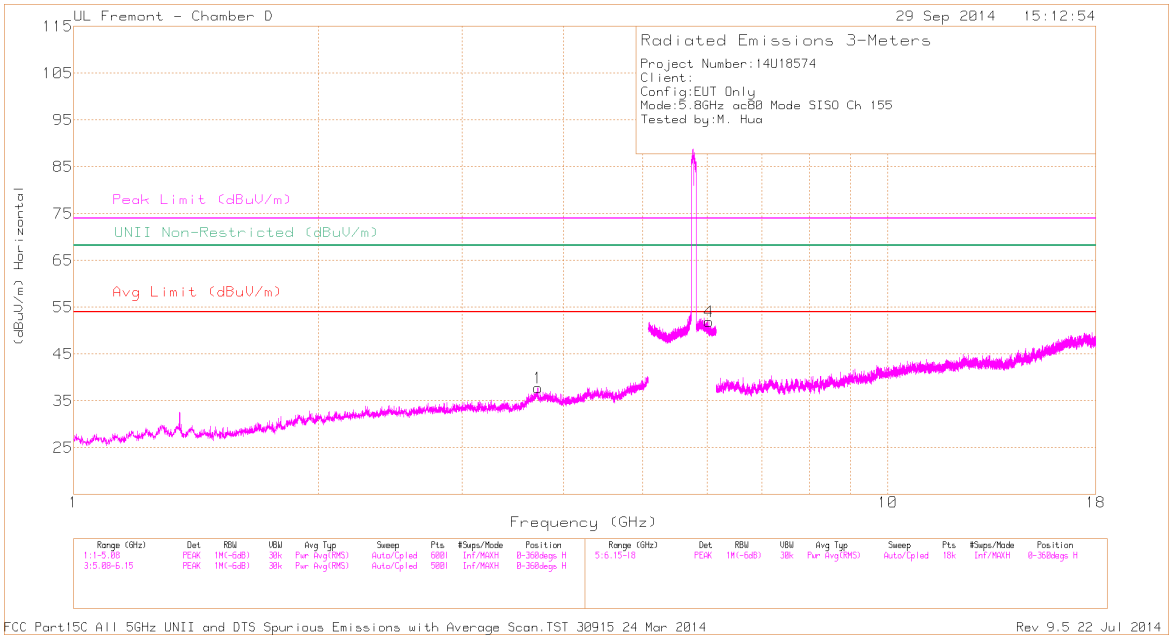


HIGH CHANNEL BANDEDGE, PEAK, VERT

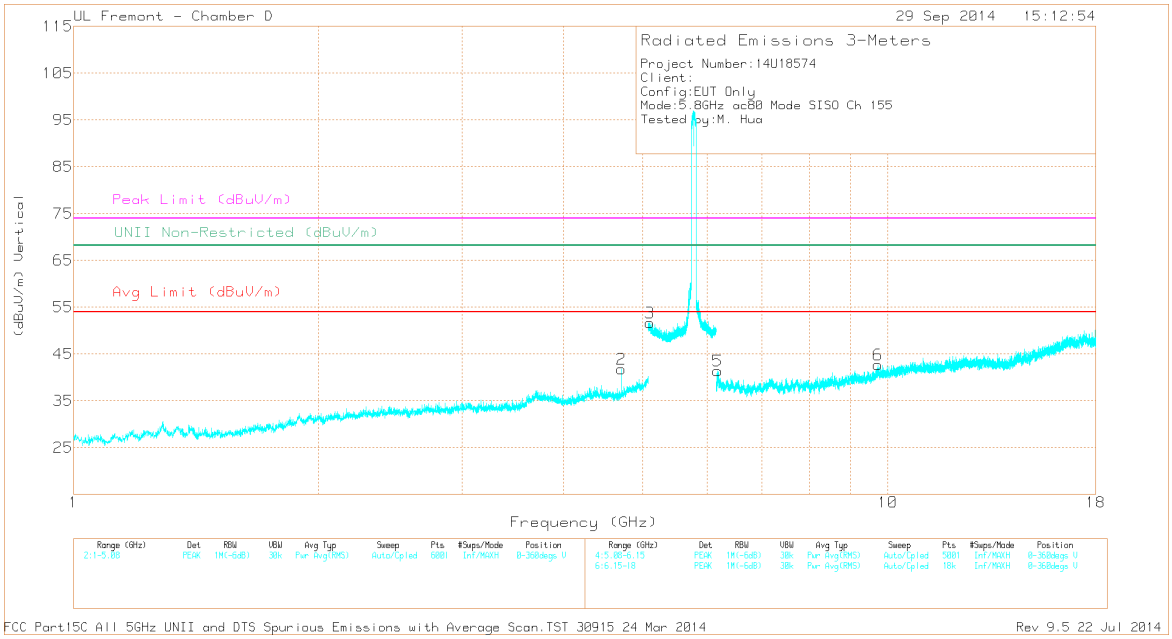


HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



DATA

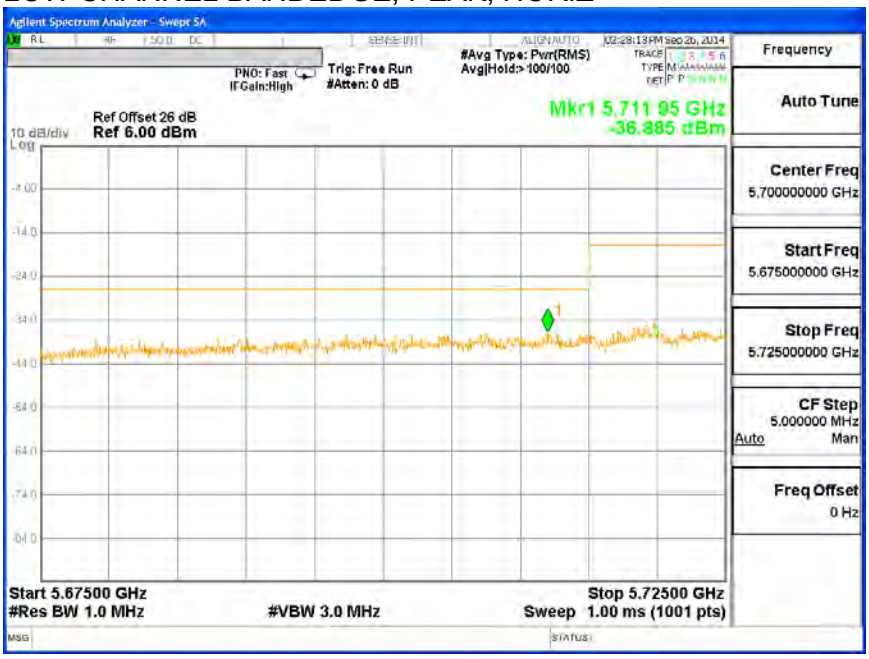
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.714	38.62	PK1	33.2	-28.5	0	43.32	-	-	74	-30.68	-	-	0	100	H
	* 3.718	27.49	AD1	33.2	-28.6	.22	32.31	54	-21.69	-	-	-	-	0	100	H
2	* 4.706	42.01	PK1	34.1	-27.6	0	48.51	-	-	74	-25.49	-	-	56	209	V
	* 4.706	33.68	AD1	34.1	-27.6	.22	40.40	54	-13.60	-	-	-	-	56	209	V
3	* 5.105	38.43	PK1	34.3	-18.0	0	54.73	-	-	74	-19.27	-	-	343	359	V
	* 5.105	26.8	AD1	34.3	-18.0	.22	43.32	54	-10.68	-	-	-	-	343	359	V
4	6.025	38.08	PK1	35.3	-17.5	0	55.88	-	-	-	-	68.2	-12.32	200	314	H
5	6.178	39.93	PK1	35.4	-26.5	0	48.83	-	-	-	-	68.2	-19.37	343	359	V
6	9.722	34.16	PK1	36.9	-21.4	0	49.66	-	-	-	-	68.2	-18.54	343	359	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

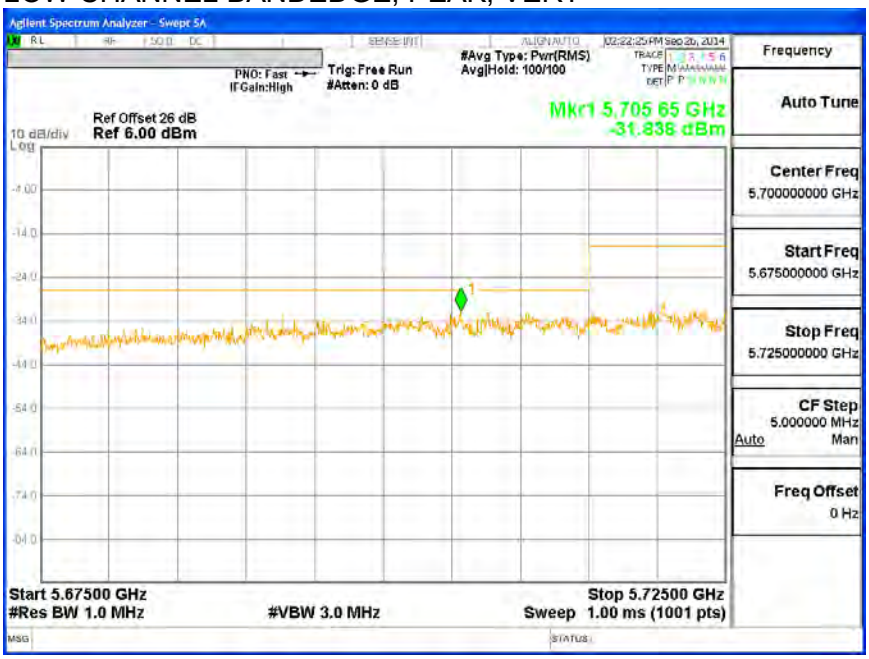
10.36. TX ABOVE 1G 802.11ac VHT80 2TX CDD MODE IN THE 5.8 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE

LOW CHANNEL BANDEDGE, PEAK, HORIZ

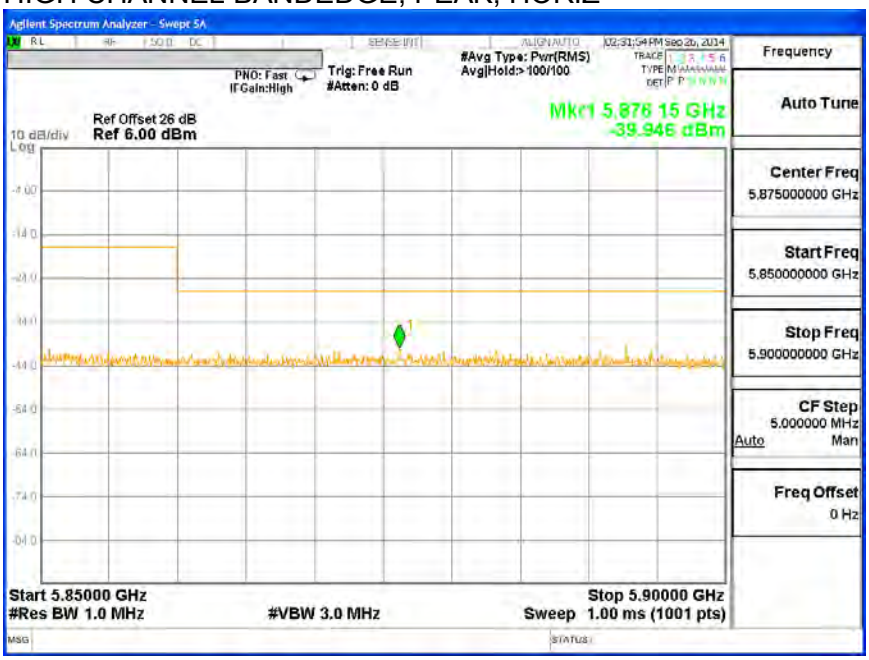


LOW CHANNEL BANDEDGE, PEAK, VERT

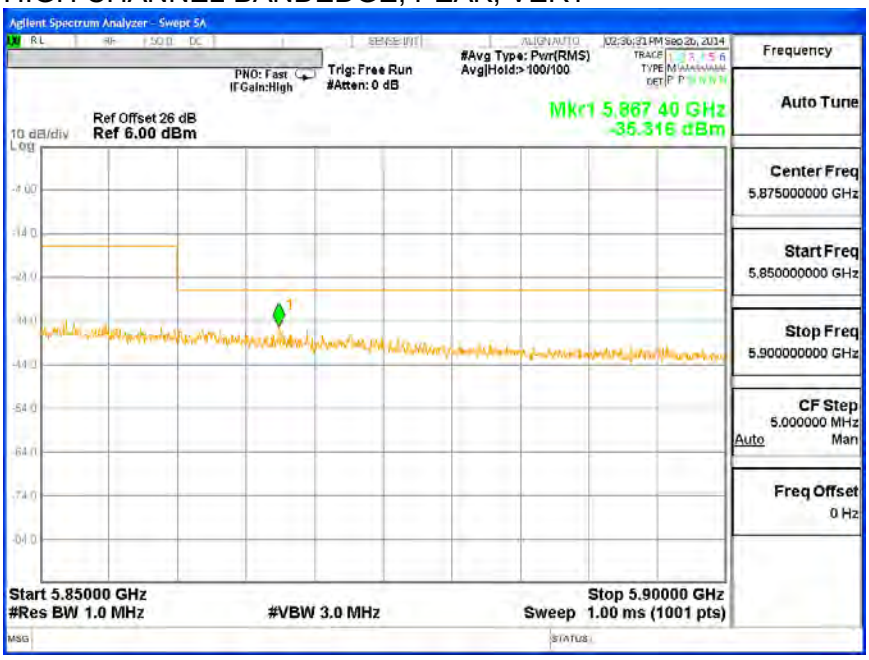


AUTHORIZED BANDEDGE

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

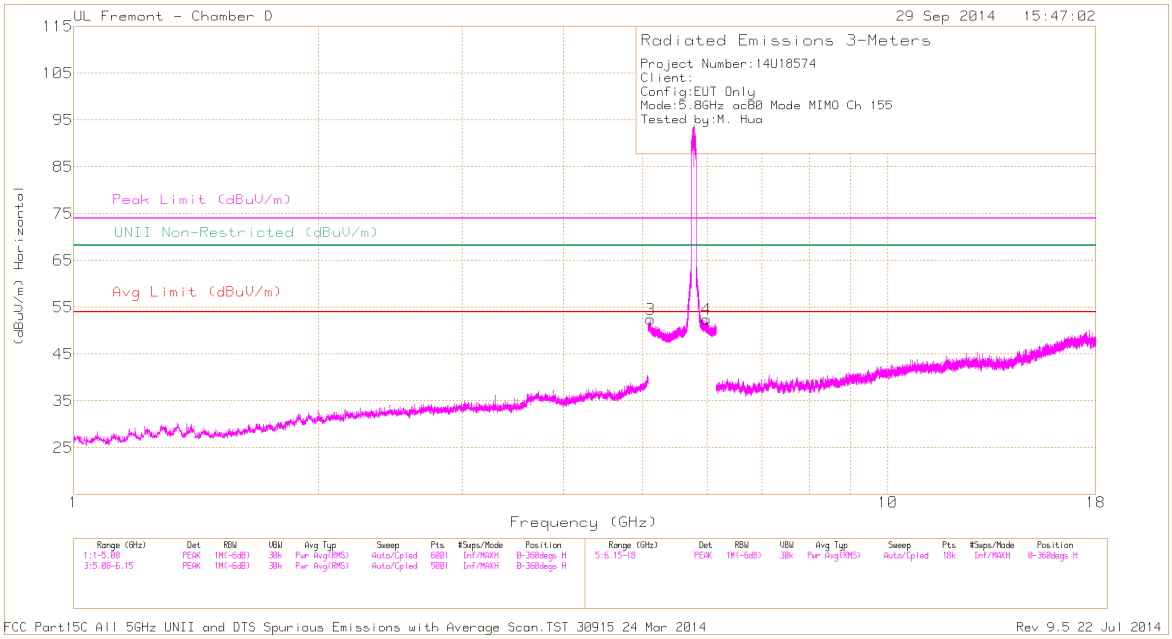


HIGH CHANNEL BANDEDGE, PEAK, VERT

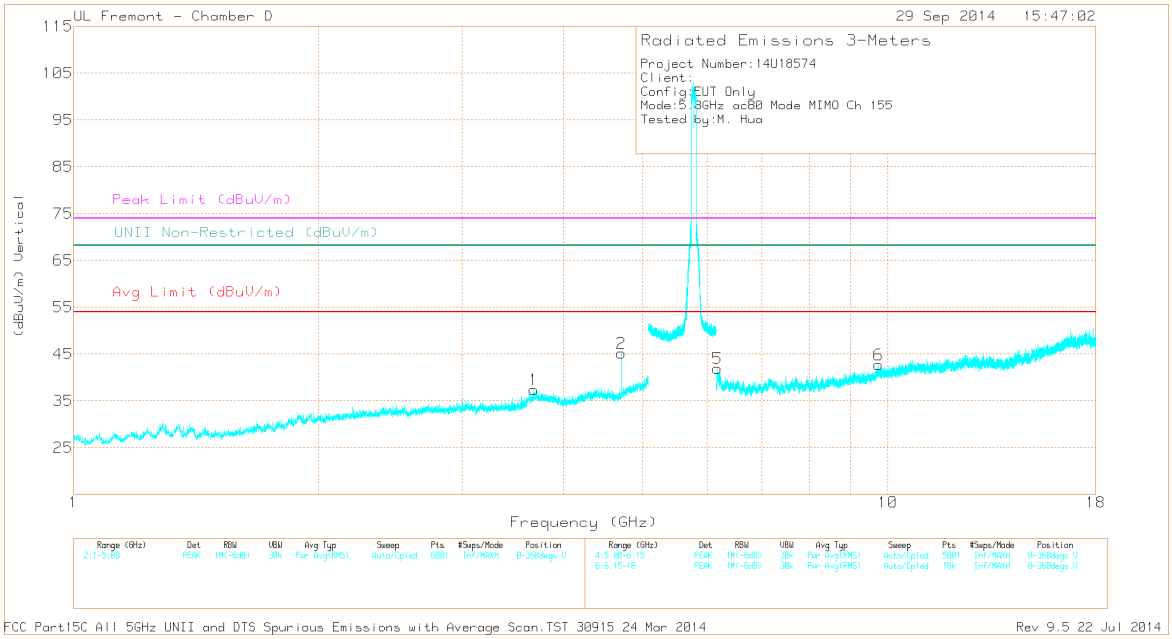


HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



DATA

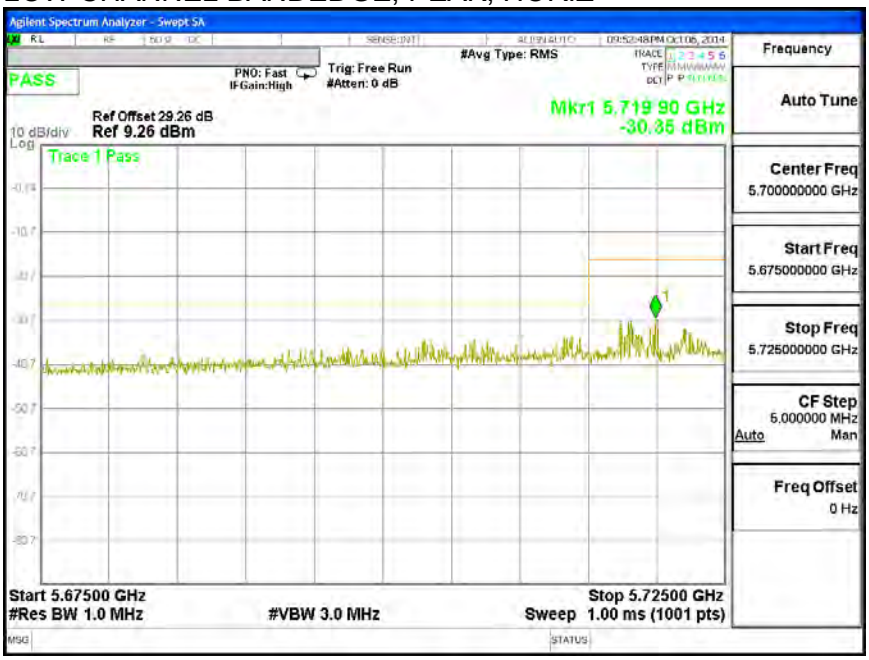
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/ m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.675	38.10	PK1	33.3	-28.5	0	42.90	-	-	74	-31.10	-	-	360	100	V
	* 3.675	27.28	AD1	33.3	-28.5	.22	32.30	54	-21.70	-	-	-	-	360	100	V
2	* 4.705	43.87	PK1	34.1	-27.6	0	50.37	-	-	74	-23.63	-	-	21	189	V
	* 4.705	38.72	AD1	34.1	-27.6	.22	45.44	54	-8.56	-	-	-	-	21	189	V
3	* 5.110	38.25	PK1	34.3	-18.0	0	54.55	-	-	74	-19.45	-	-	278	342	H
	* 5.109	26.77	AD1	34.3	-18.0	.22	43.29	54	-10.71	-	-	-	-	278	342	H
4	5.984	37.85	PK1	35.2	-17.1	0	55.95	-	-	-	-	68.2	-12.25	278	342	H
5	6.181	37.29	PK1	35.5	-26.4	0	46.39	-	-	-	-	68.2	-21.81	278	342	V
6	9.733	34.40	PK1	36.9	-21.3	0	50.00	-	-	-	-	68.2	-18.20	278	342	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

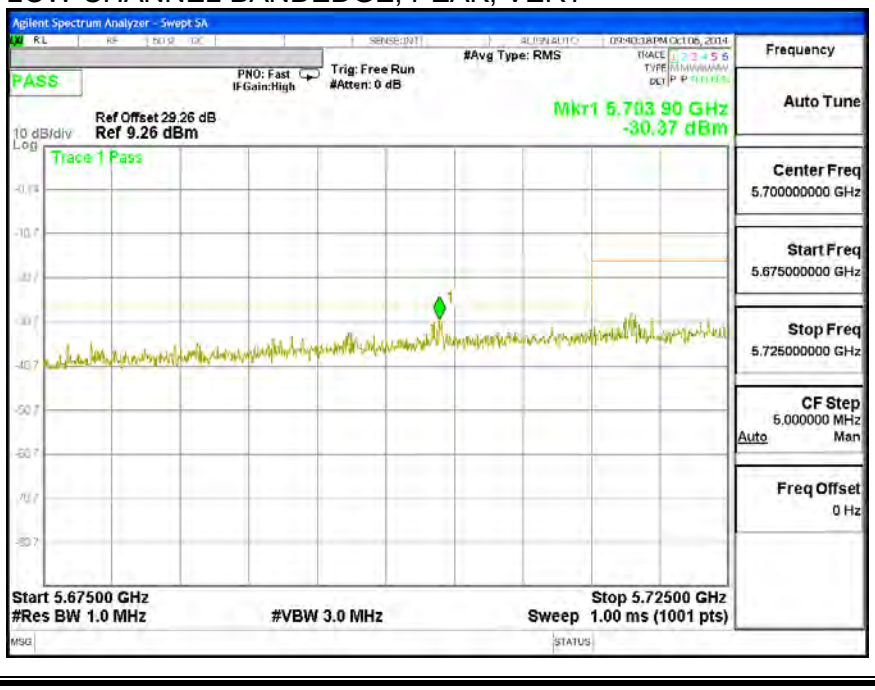
10.37. TX ABOVE 1G 802.11ac VHT80 2TX BF MODE IN THE 5.8 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE

LOW CHANNEL BANDEDGE, PEAK, HORIZ

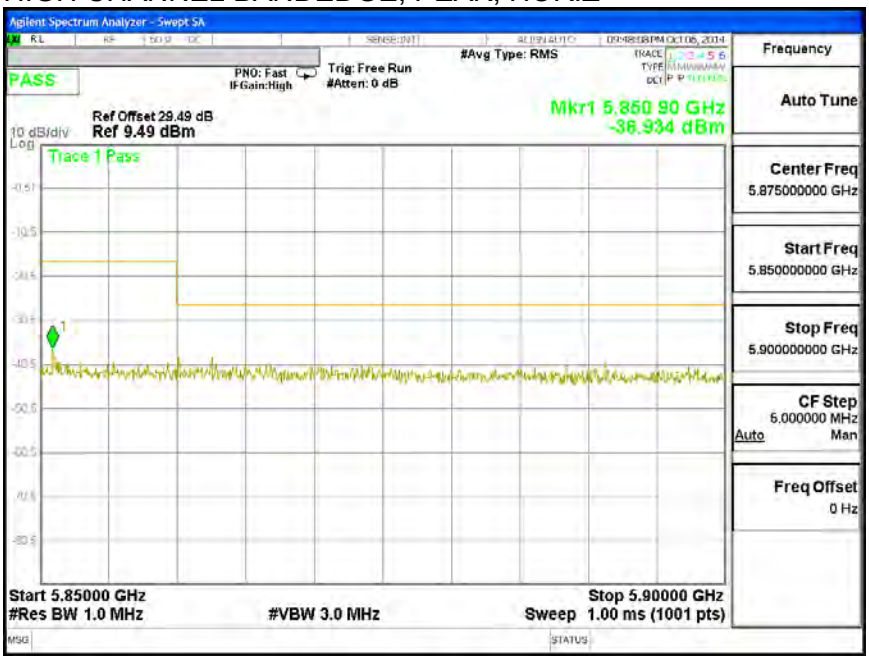


LOW CHANNEL BANDEDGE, PEAK, VERT

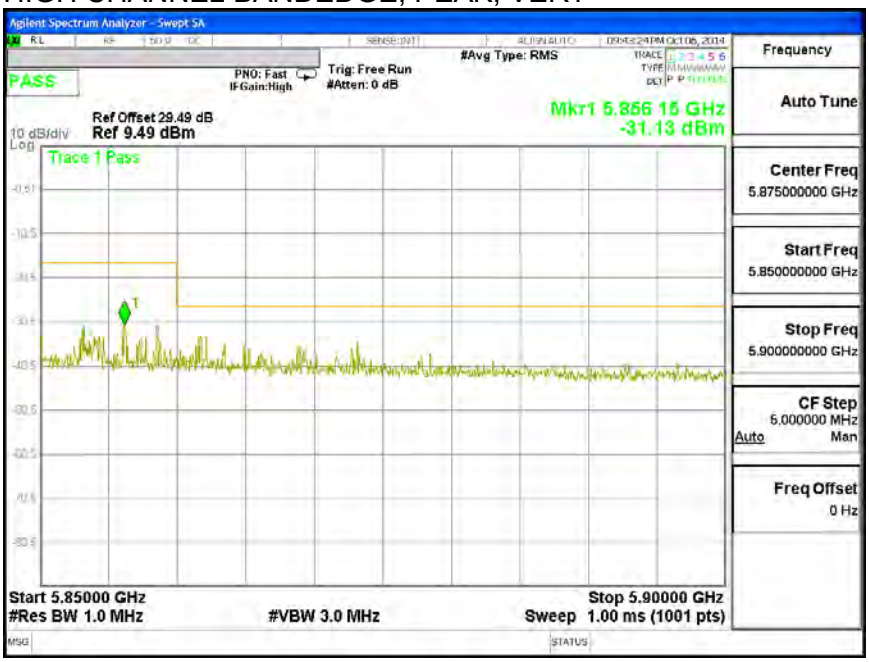


AUTHORIZED BANDEDGE

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

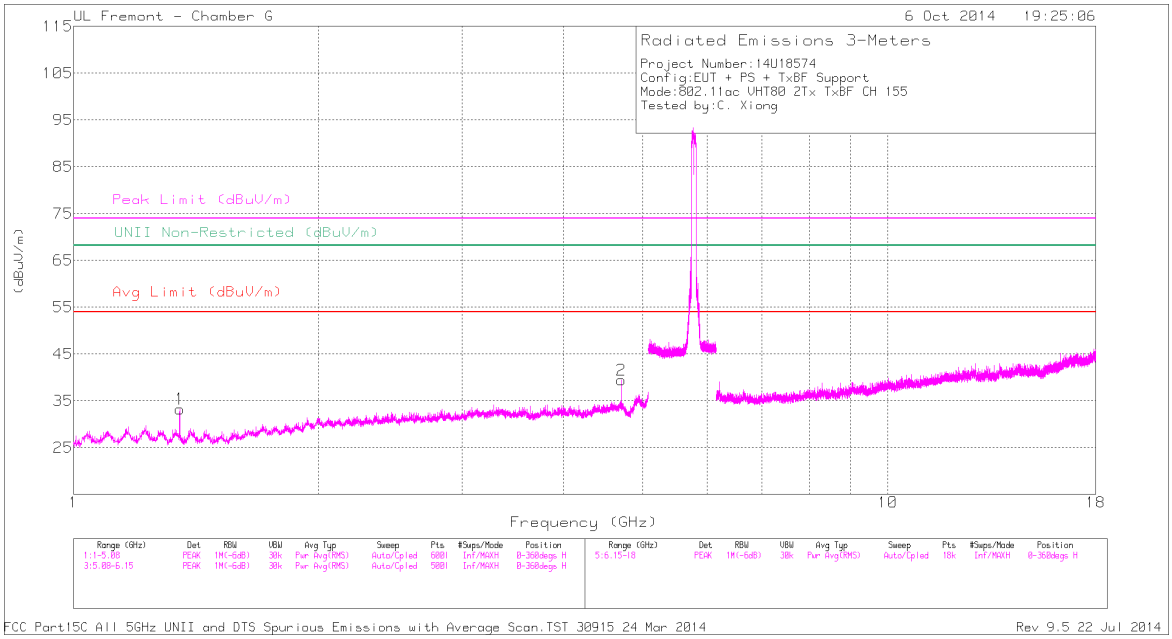


HIGH CHANNEL BANDEDGE, PEAK, VERT

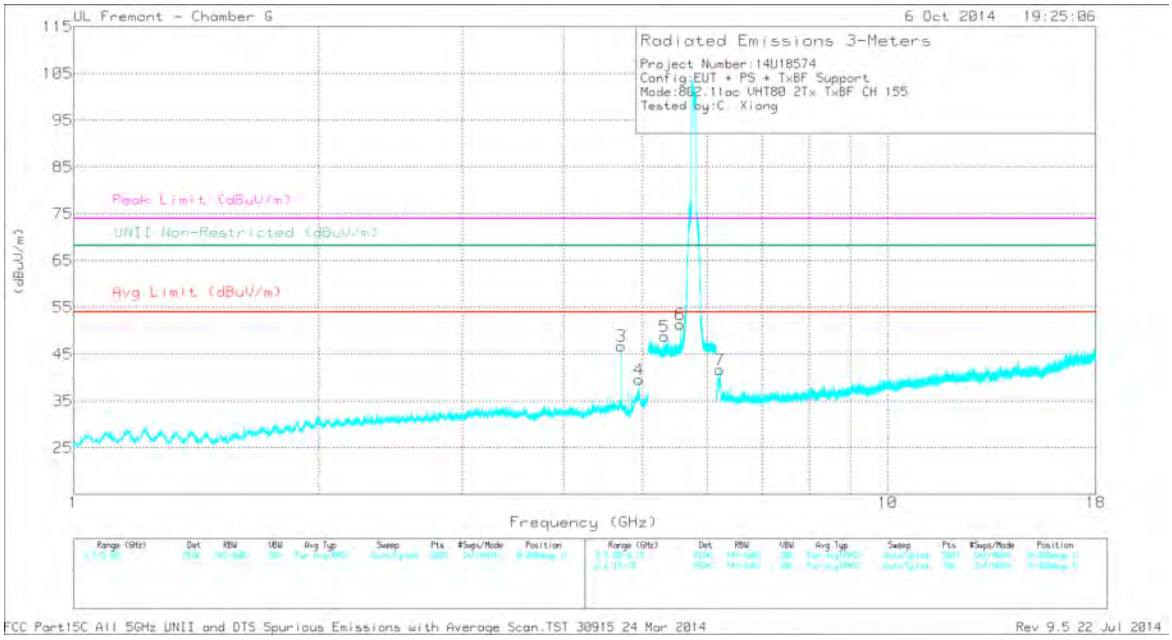


HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



DATA

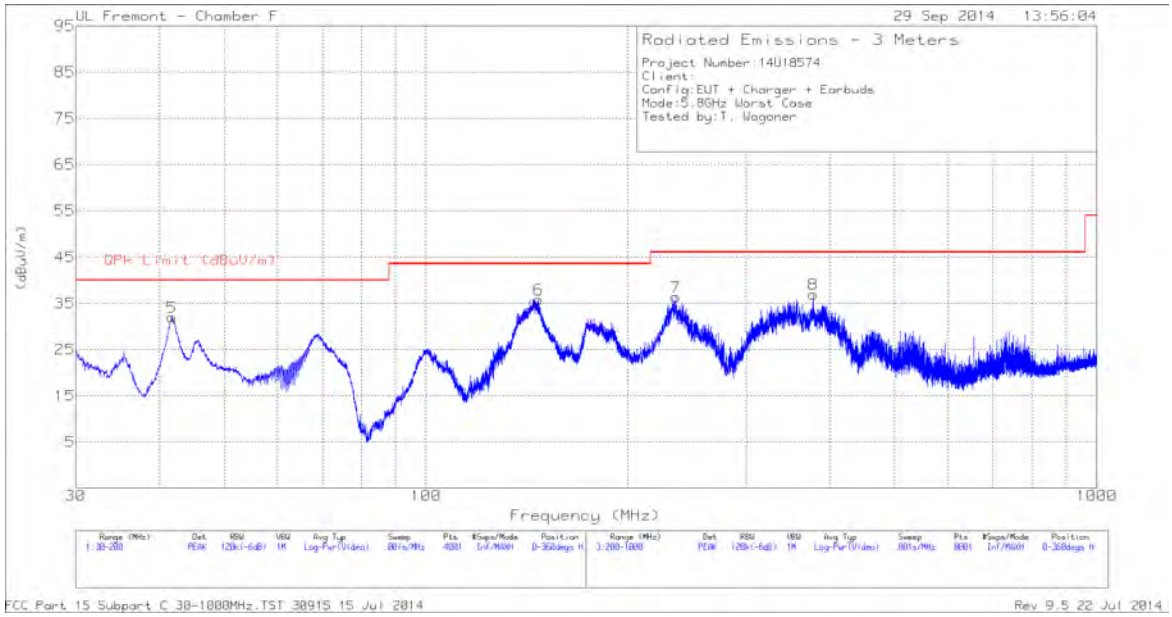
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.350	47.95	PK1	28.7	-35.6	0	41.05	-	-	74	-32.95	-	-	165	250	H
	* 1.350	31.58	AD1	28.7	-35.6	.26	24.94	54	-29.06	-	-	-	-	165	250	H
2	* 4.705	46.01	PK1	34	-32.8	0	47.21	-	-	74	-26.79	-	-	131	300	H
	* 4.706	39.78	AD1	34	-32.8	.26	41.24	54	-12.76	-	-	-	-	131	300	H
3	* 4.705	48.94	PK1	34	-32.8	0	50.14	-	-	74	-23.86	-	-	165	220	V
	* 4.705	44.72	AD1	34	-32.8	.26	46.18	54	-7.82	-	-	-	-	165	220	V
4	* 4.950	44.00	PK1	34.1	-31.8	0	46.30	-	-	74	-27.70	-	-	253	206	V
	* 4.950	31.62	AD1	34.1	-31.8	.26	34.18	54	-19.82	-	-	-	-	253	206	V
5	5.318	44.06	PK1	34.6	-23.7	0	54.96	-	-	-	-	68.2	-13.24	187	218	V
6	5.561	47.31	PK1	34.7	-23.6	0	58.41	-	-	-	-	68.2	-9.79	195	194	V
7	6.222	45.96	PK1	35.6	-32.2	0	49.36	-	-	-	-	68.2	-18.84	165	183	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

10.38. WORST-CASE BELOW 1 GHz

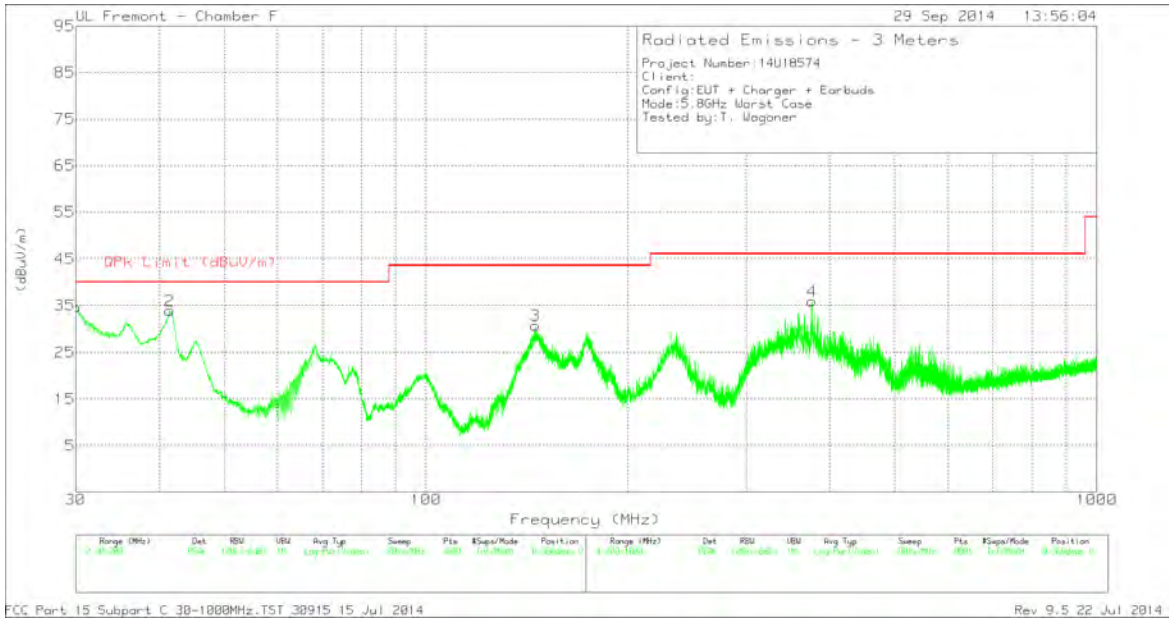
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

HORIZONTAL PLOT



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

VERTICAL PLOT



DATA

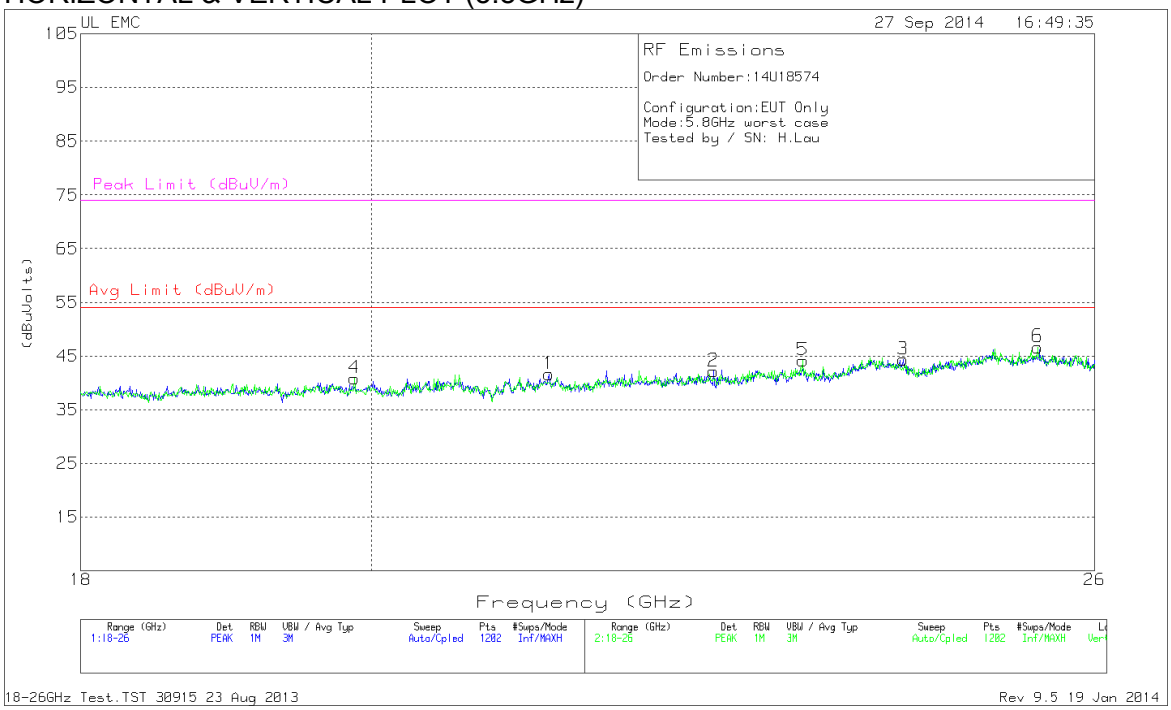
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T122 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	41.730	51.33	PK	12.6	-31.9	32.03	40.00	-7.97	0-360	401	H
6	147.045	54.42	PK	12.7	-31.3	35.82	43.52	-7.7	0-360	201	H
1	30.0850	45.51	PK	21.3	-32.1	34.71	40.00	-5.29	0-360	100	V
2	41.4325	53.06	PK	12.8	-32.0	33.86	40.00	-6.14	0-360	100	V
3	145.3875	49.24	PK	12.8	-31.3	30.74	43.52	-12.78	0-360	100	V
7	235.800	55.88	PK	11.4	-30.9	36.38	46.02	-9.64	0-360	100	H
8	377.900	52.25	PK	15.1	-30.4	36.95	46.02	-9.07	0-360	201	H
4	376.100	51.16	PK	15.1	-30.4	35.86	46.02	-10.16	0-360	100	V

PK - Peak detector

10.39. WORST-CASE 18 to 26 GHz

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

HORIZONTAL & VERTICAL PLOT (5.8GHz)



HORIZONTAL & VERTICAL DATA

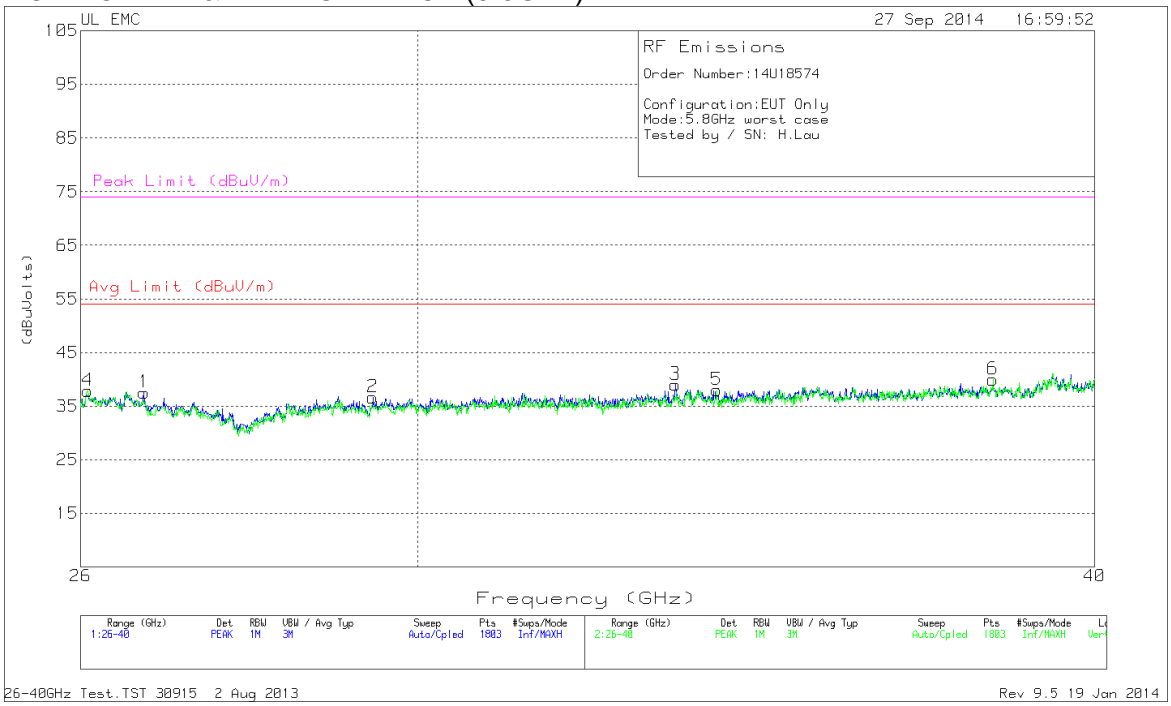
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T89 (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	21.331	41.97	PK	33.0	-23.8	-9.5	41.67	54	-12.33	74	-32.33
2	22.643	42.07	PK	33.4	-23.8	-9.5	42.17	54	-11.83	74	-31.83
3	24.255	42.83	PK	33.8	-22.8	-9.5	44.33	54	-9.67	74	-29.67
4	19.878	41.53	PK	32.8	-24.0	-9.5	40.83	54	-13.17	74	-33.17
5	23.389	42.87	PK	33.4	-22.6	-9.5	44.17	54	-9.83	74	-29.83
6	25.467	44.67	PK	34.1	-22.6	-9.5	46.67	54	-7.33	74	-27.33

PK - Peak detector

10.40. 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)
1	26.707	45.20	PK	35.3	-33.5	-9.5	37.50	54	-16.5	74	-36.5
2	29.434	46.47	PK	35.9	-36.2	-9.5	36.67	54	-17.33	74	-37.33
3	33.474	48.50	PK	37.1	-37.1	-9.5	39.00	54	-15	74	-35
4	26.078	44.83	PK	35.6	-33.1	-9.5	37.83	54	-16.17	74	-36.17
5	34.064	48.10	PK	36.9	-37.5	-9.5	38.00	54	-16	74	-36
6	38.306	50.50	PK	37.1	-38.1	-9.5	40.00	54	-14	74	-34

PK - Peak detector

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

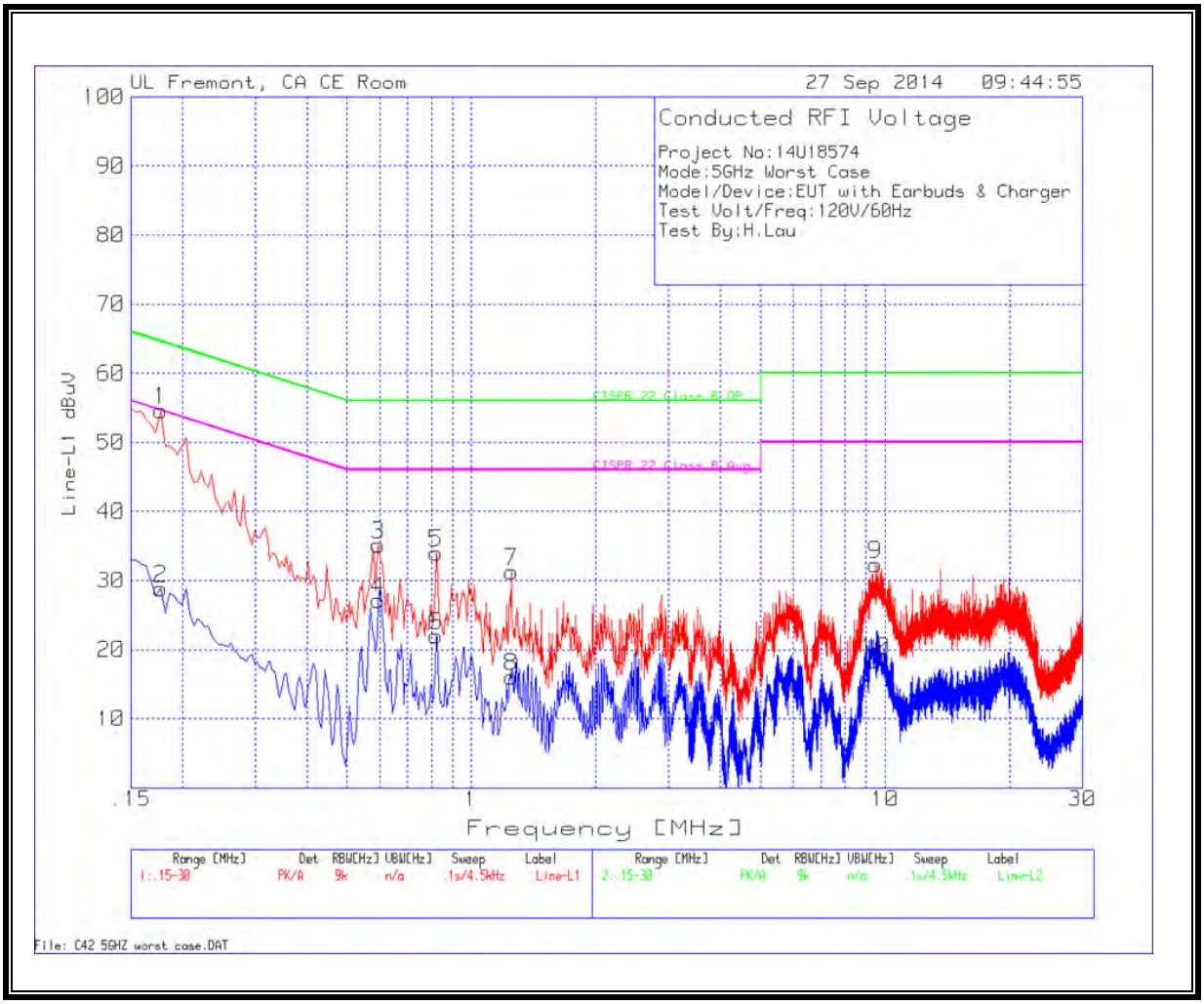
The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

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

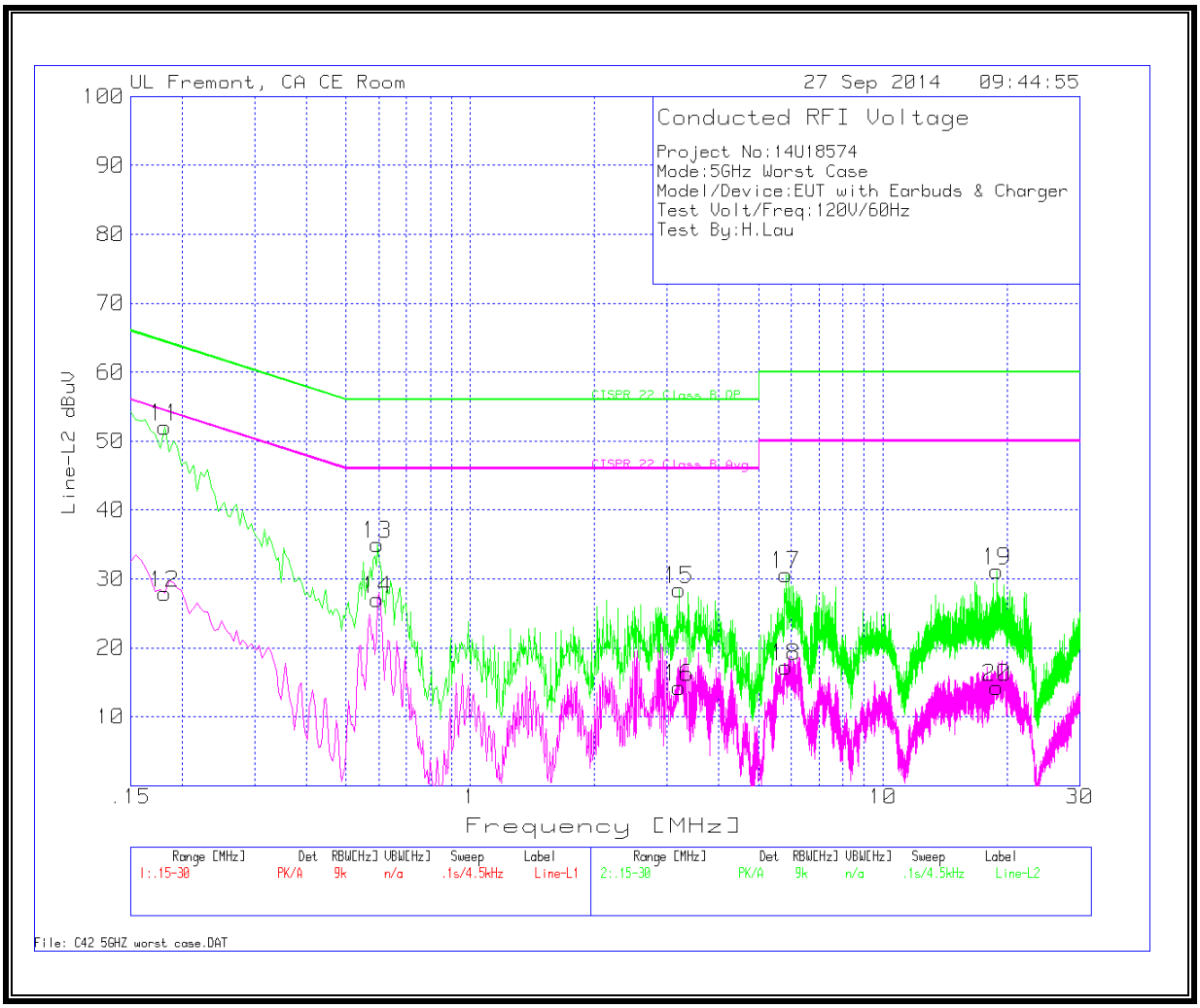
Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

LINE 1 PLOT



LINE 2 PLOT



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	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
1	.177	53.56	PK	1.1	0	54.66	64.6	-9.94	-	-
2	.177	27.72	Av	1.1	0	28.82	-	-	54.6	-25.78
3	.5955	34.86	PK	0.3	0	35.16	56.0	-20.84	-	-
4	.5955	26.87	Av	0.3	0	27.17	-	-	46.0	-18.83
5	.8205	33.72	PK	0.3	0	34.02	56.0	-21.98	-	-
6	.8205	21.7	Av	0.3	0	22	-	-	46.0	-24.00
7	1.248	31.12	PK	0.2	0	31.32	56.0	-24.68	-	-
8	1.248	15.92	Av	0.2	0	16.12	-	-	46.0	-29.88
9	9.465	31.96	PK	0.2	0.1	32.26	60.0	-27.74	-	-
10	9.465	18.06	Av	0.2	0.1	18.36	-	-	50.0	-31.64

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	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
11	.1815	50.80	PK	1.2	0	52	64.4	-12.4	-	-
12	.1815	26.67	Av	1.2	0	27.87	-	-	54.4	-26.53
13	.5955	34.75	PK	0.3	0	35.05	56.0	-20.95	-	-
14	.5955	26.74	Av	0.3	0	27.04	-	-	46.0	-18.96
15	3.2145	28.12	PK	0.2	0.1	28.42	56.0	-27.58	-	-
16	3.2145	14.02	Av	0.2	0.1	14.32	-	-	46.0	-31.68
17	5.8245	30.36	PK	0.2	0.1	30.66	60.0	-29.34	-	-
18	5.8245	16.92	Av	0.2	0.1	17.22	-	-	50.0	-32.78
19	18.915	30.64	PK	0.3	0.2	31.14	60.0	-28.86	-	-
20	18.915	13.75	Av	0.3	0.2	14.25	-	-	50.0	-35.75

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 8 A9.3

Note: For the band 5600–5650 MHz, no operation is permitted.

Until further notice, devices subject to this annex shall not be capable of transmitting in the band 5600–5650 MHz. This restriction is for the protection of Environment Canada weather radars operating in this band.

FCC

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

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

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

Table 2: Applicability of DFS requirements during normal operation

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

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

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

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

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

Table 4: DFS Response requirement values

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

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

Table 5 – Short Pulse Radar Test Waveforms

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

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

Table 6 – Long Pulse Radar Test Signal

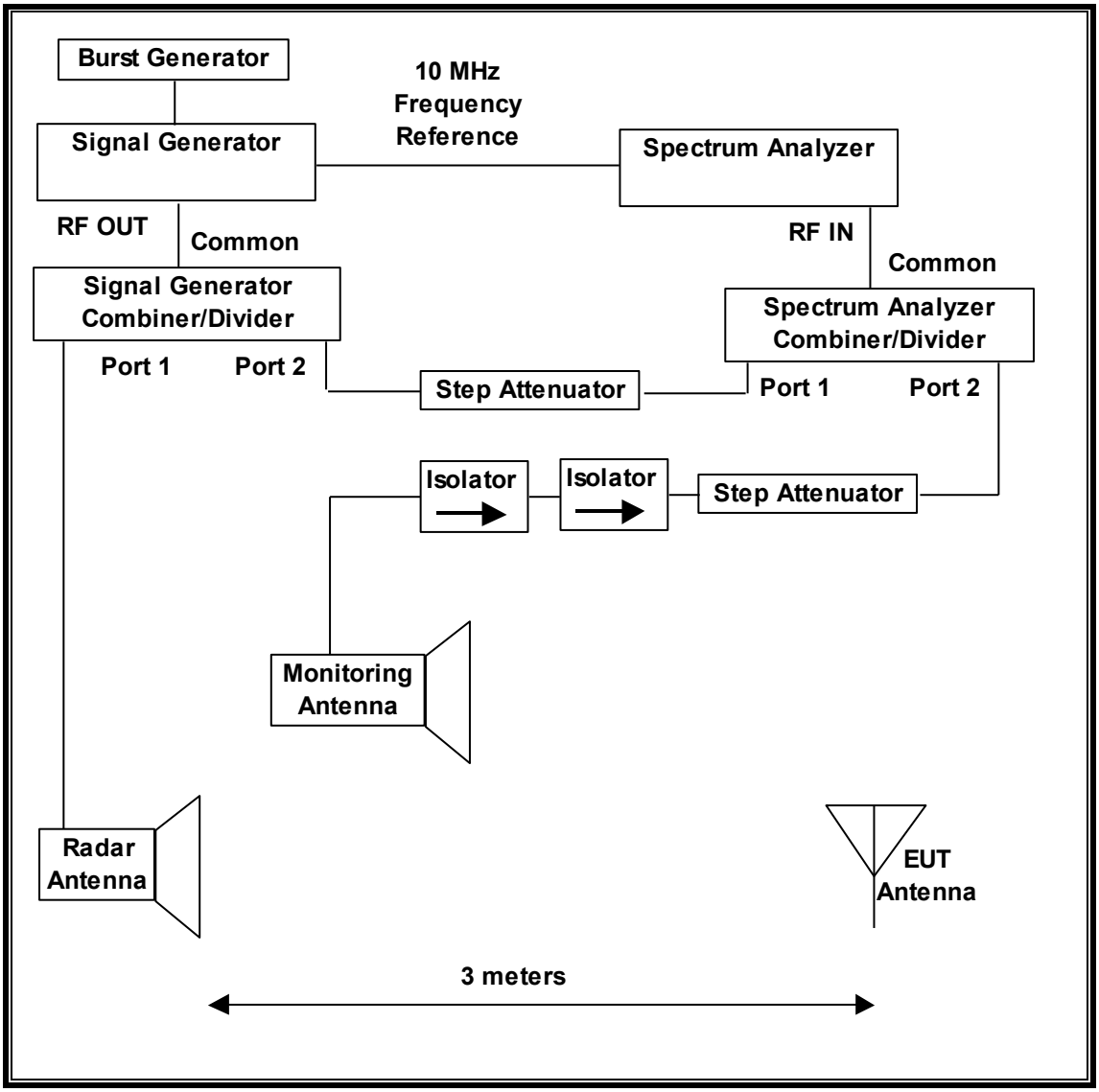
Radar Waveform Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

Table 7 – Frequency Hopping Radar Test Signal

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

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.

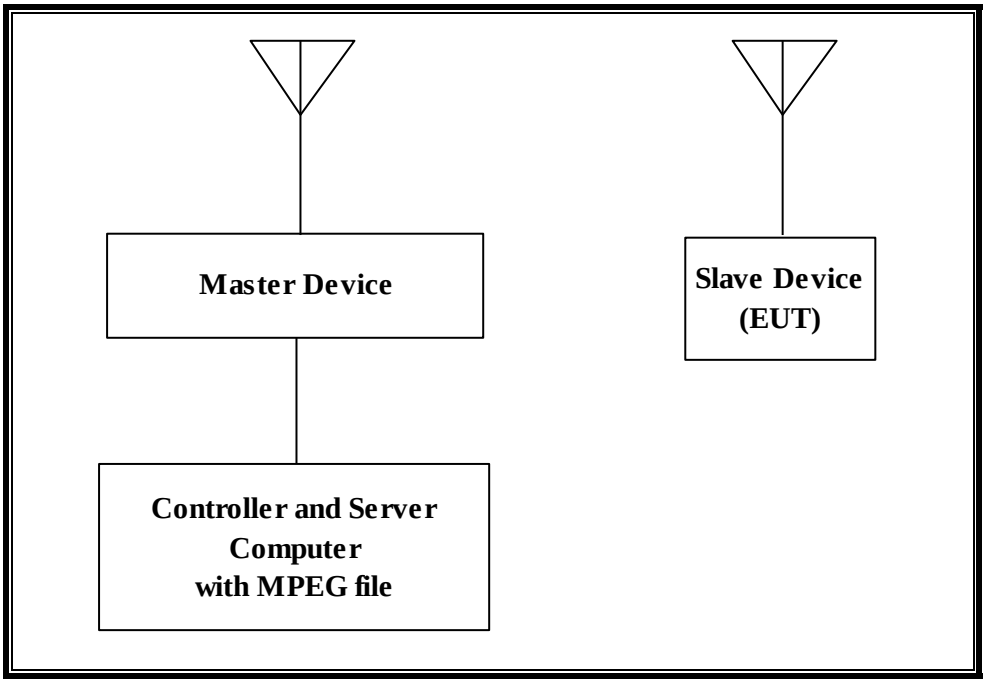
TEST AND MEASUREMENT EQUIPMENT

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	09/05/15
Vector Signal Generator, 20GHz	Agilent / HP	E8267C	C01066	09/03/15

12.1.3. SETUP OF EUT (CLIENT MODE)

RADIATED METHOD EUT TEST SETUP



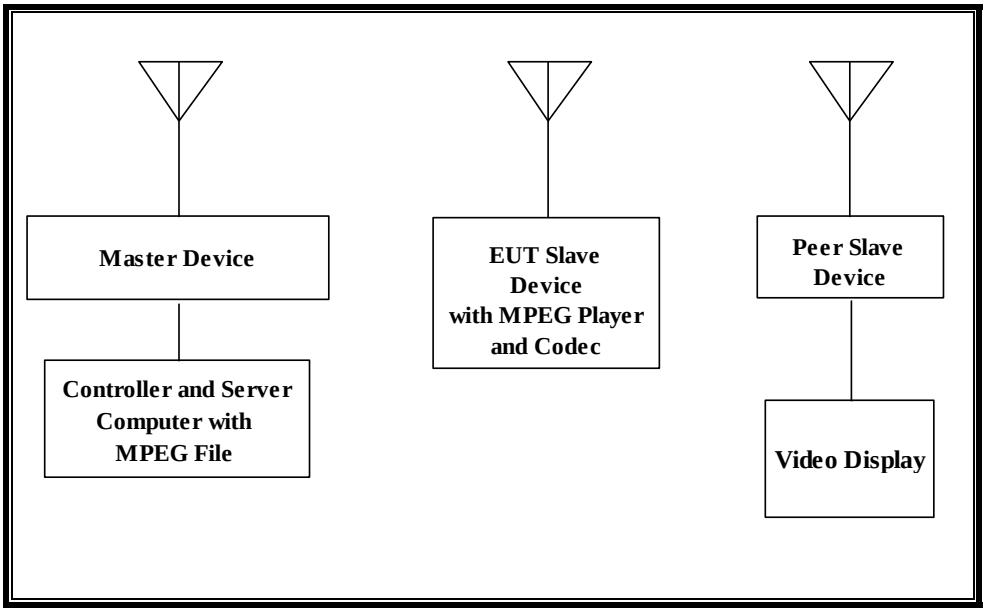
SUPPORT EQUIPMENT

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**
AC Adapter (EUT)	Apple	A1540	C4H4337009WFPWW1L	DoC
Wireless Access Point (Master Device)	Cisco	AIR-CAP3702E-A-K	FTX181570A6	LDK102087
P.O.E. Injector	Phihong	POE30U-560(G)	PHI170102N2	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**
Wireless Access Point (Master Device)	Cisco	AIR-CAP3702E-A-K	FTX181570A6	LDK102087
P.O.E. Injector	Phihong	POE30U-560(G)	PHI170102N2	DoC
AC Adapter (EUT)	Apple	A1540	C4H4337009WFPWW1L	DoC
Remove Controller (Apple TV)	Apple	N/A	C02N9002FYFG	DoC
Apple TV (Peer Slave Device)	Apple	A1469	C07JV1Z7FF54	BCGA1469
Video Display	Dell	U2410f	CN-0FJ525N-72872-1B5-AGAL	DoC

12.1.5. DESCRIPTION OF EUT

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

For IC the EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges, excluding the 5600-5650 MHz range.

The EUT is a Slave Device without Radar Detection.

The highest power level within these bands is 27.14 dBm EIRP in the 5250-5350 MHz band and 28.8 dBm EIRP in the 5470-5725 MHz band.

The only antenna assembly utilized with the EUT has a gain of 3.05 and 3.33 dBi in the 5250-5350 MHz band; and 5.0 dBi and 4.57 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.

The software installed in the EUT is OSX Yosemite 10.10.2.

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 a Cisco Access Point, FCC ID: LDK102087. The minimum antenna gain for the Master Device is 3.5 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 12.4(25d)JA1.

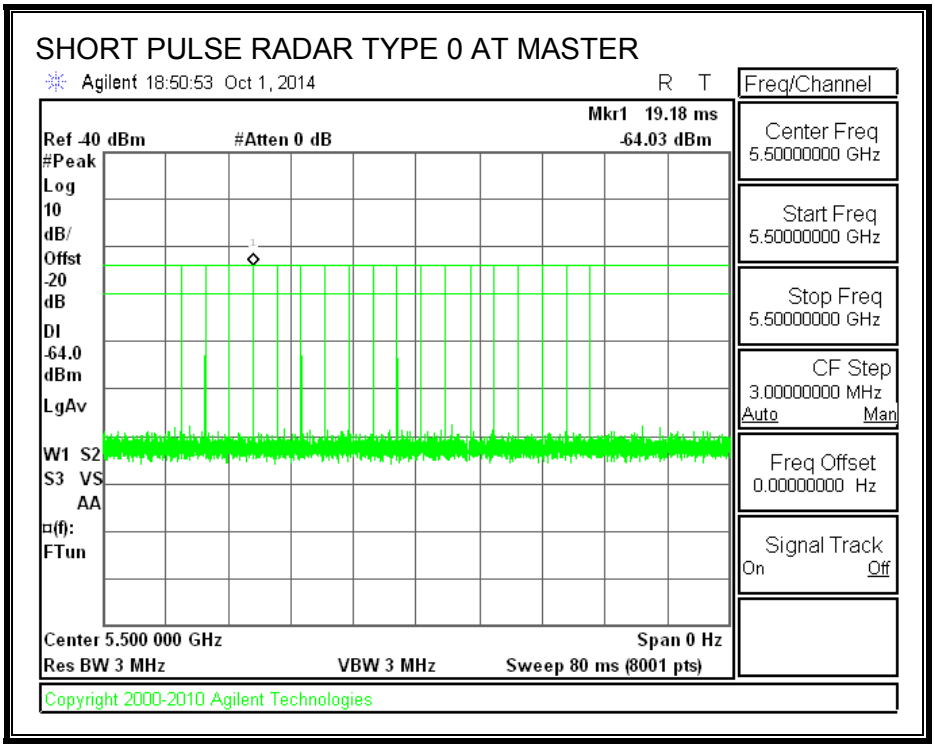
12.2. CLIENT MODE RESULTS FOR 20 MHz BANDWIDTH

12.2.1. TEST CHANNEL

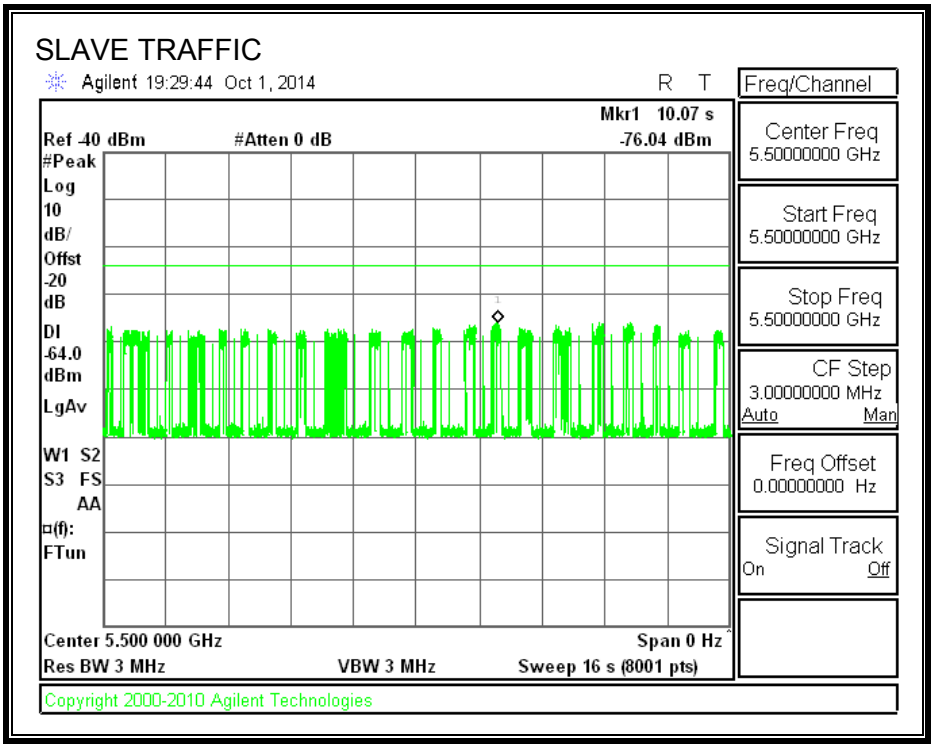
All tests were performed at a channel center frequency of 5500 MHz.

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)

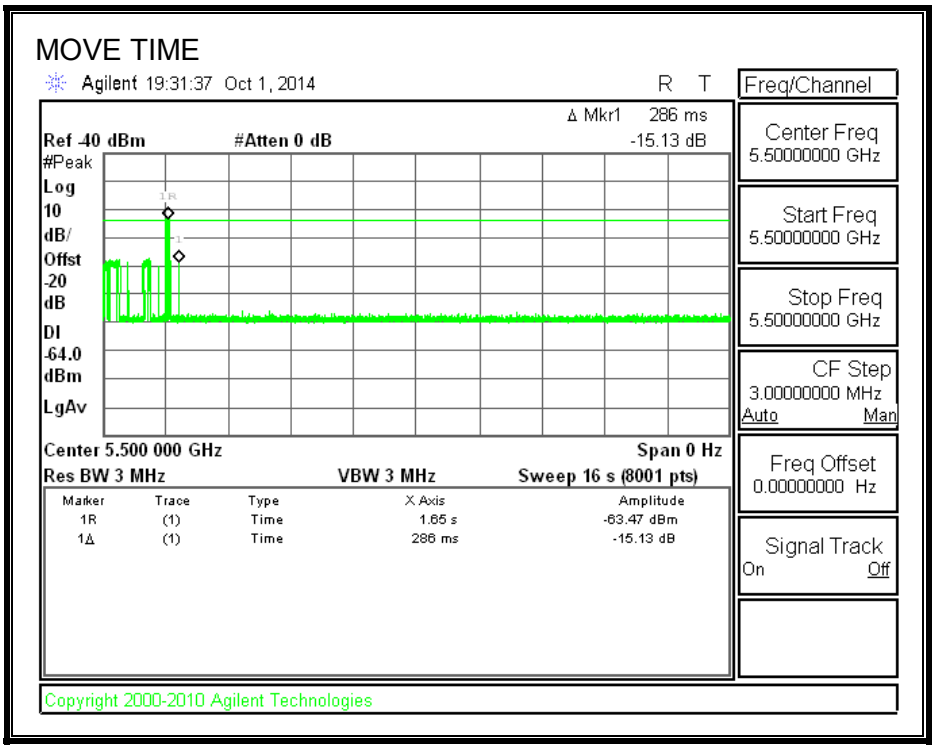
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

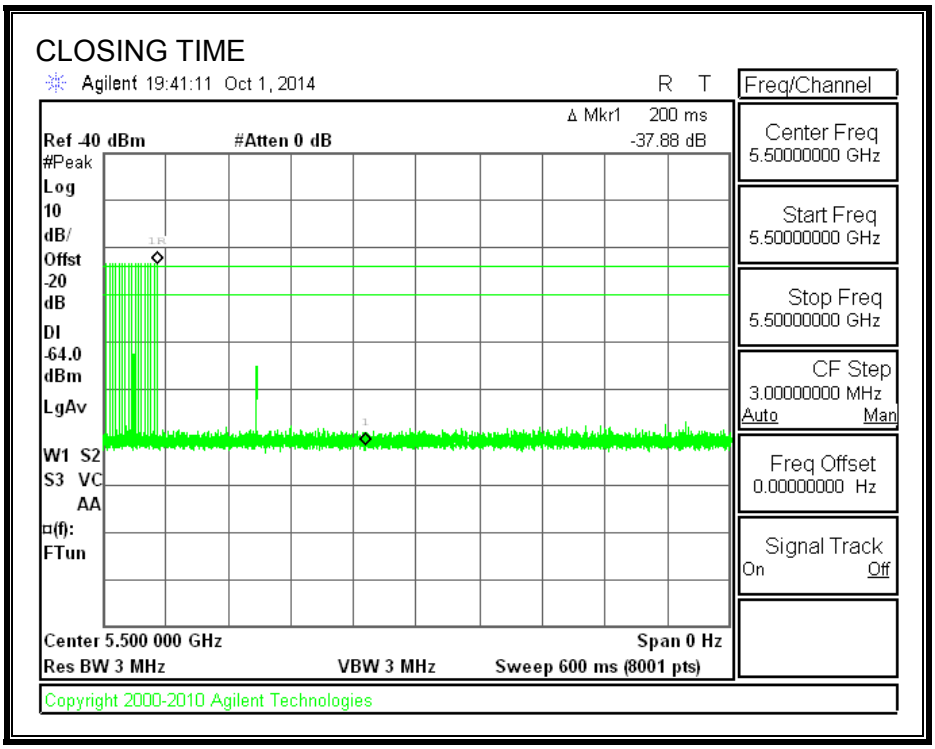
Channel Move Time (sec)	Limit (sec)
0.286	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
2.0	60

MOVE TIME

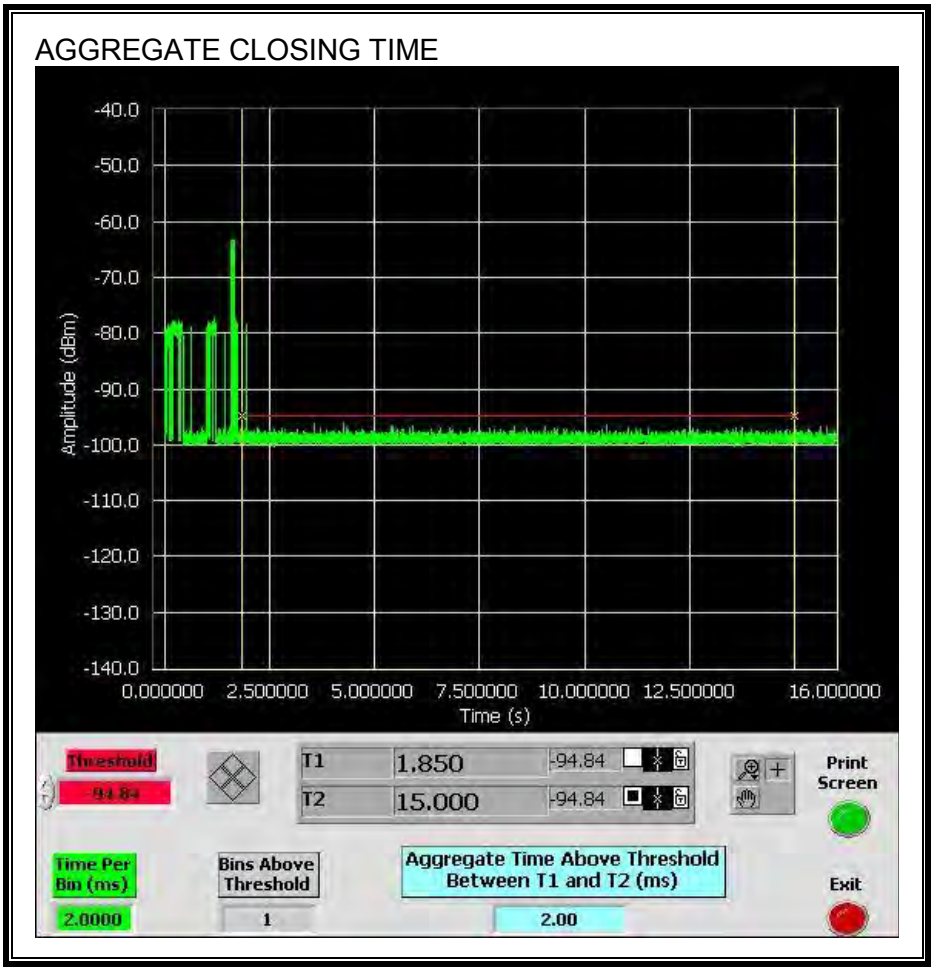


CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the aggregate monitoring period.



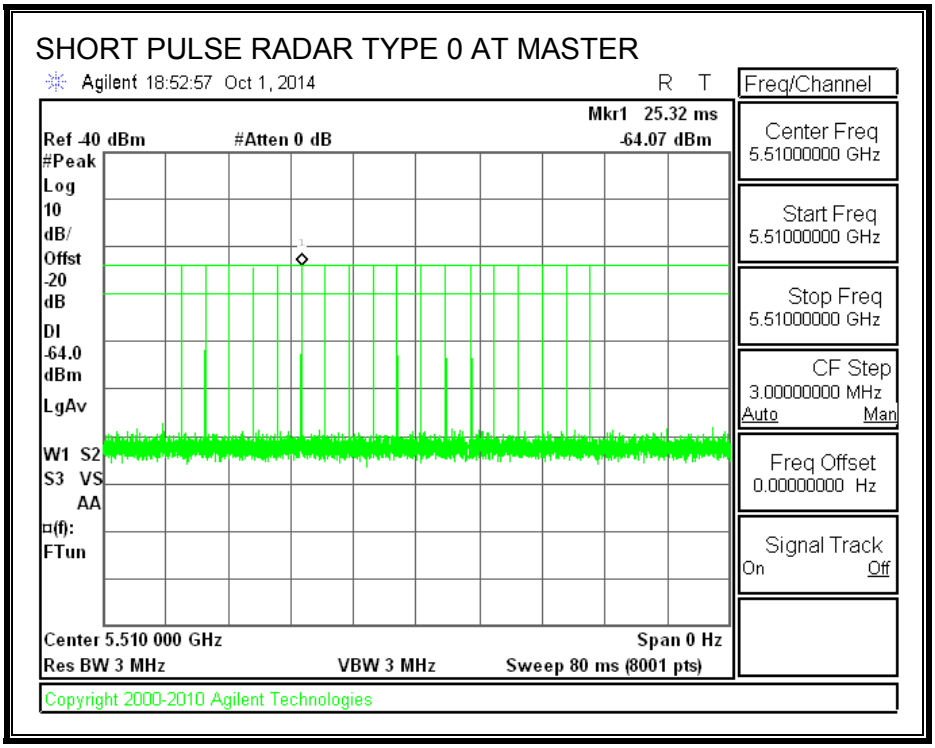
12.3. CLIENT MODE RESULTS FOR 40 MHz BANDWIDTH

12.3.1. TEST CHANNEL

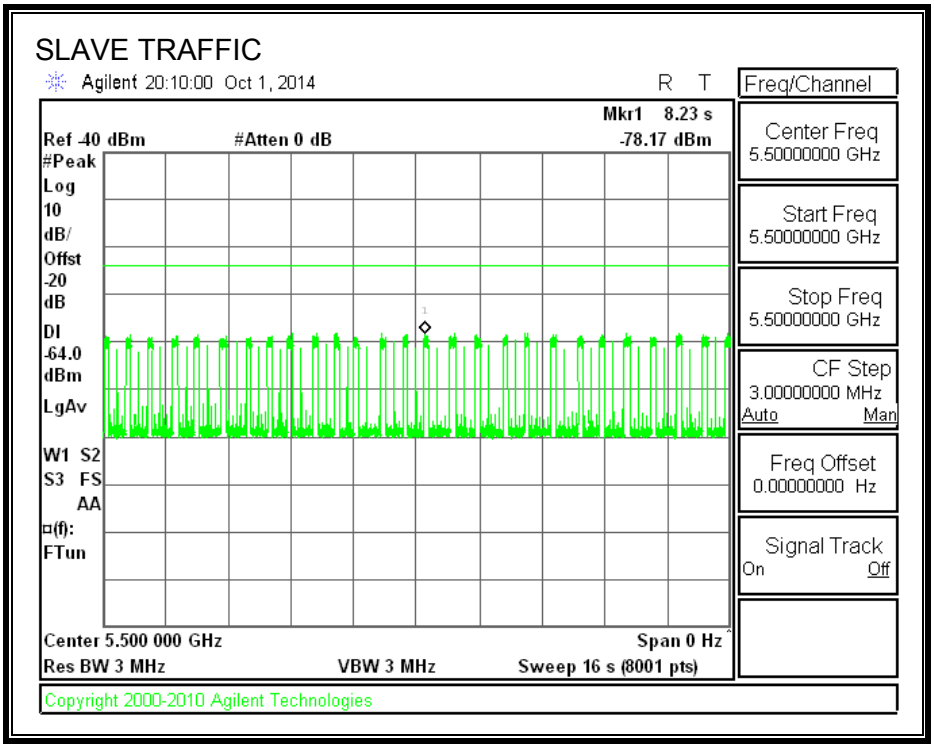
All tests were performed at a channel center frequency of 5510 MHz.

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)

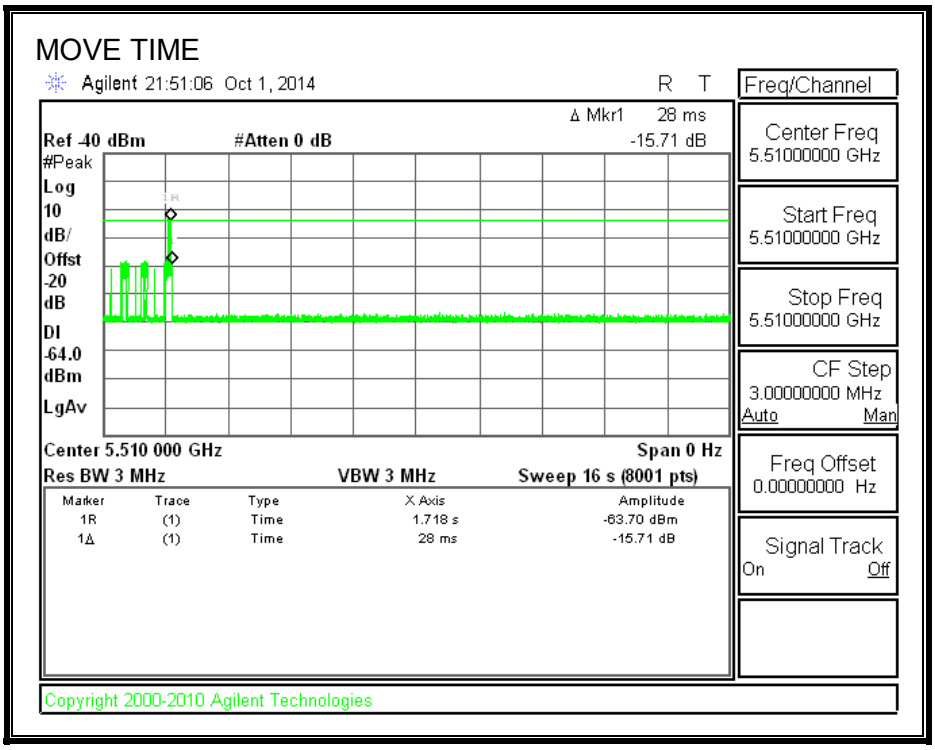
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

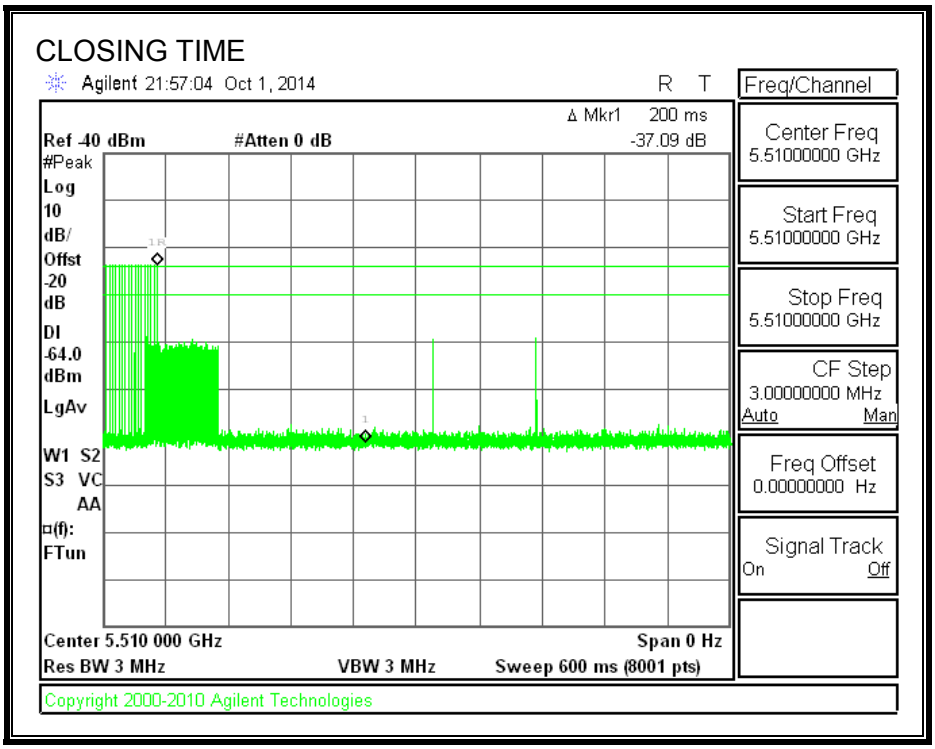
Channel Move Time (sec)	Limit (sec)
0.028	10

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

MOVE TIME

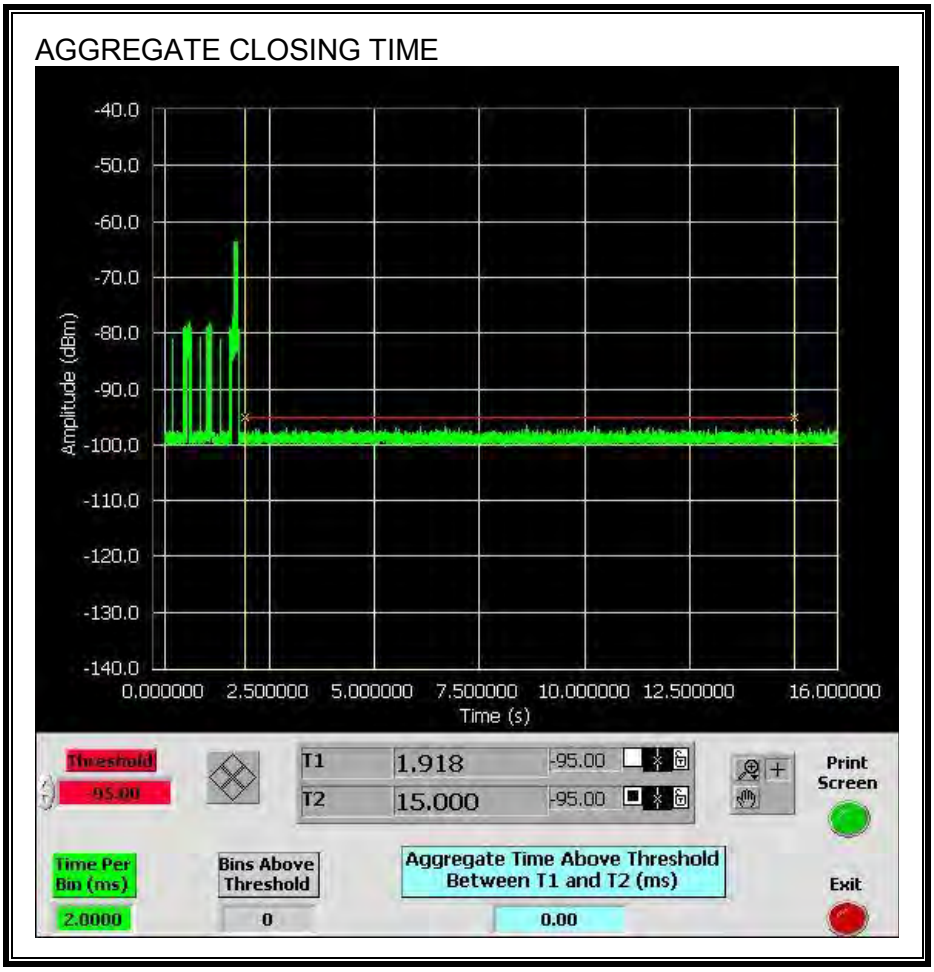


CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

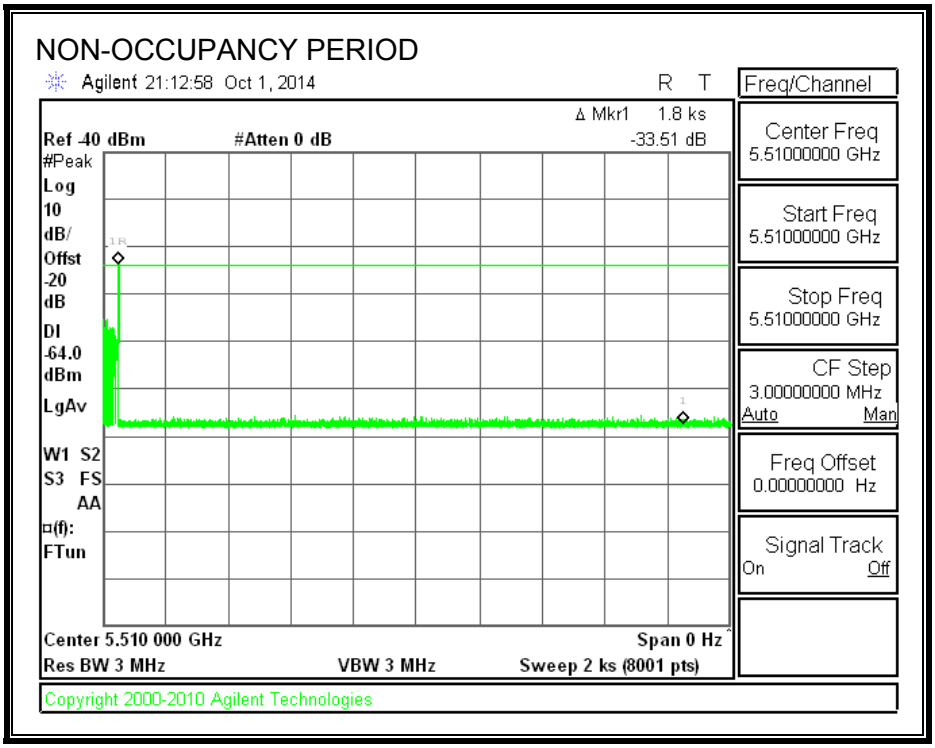
No transmissions are observed during the aggregate monitoring period.



12.3.5. NON-OCCUPANCY PERIOD

RESULTS

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



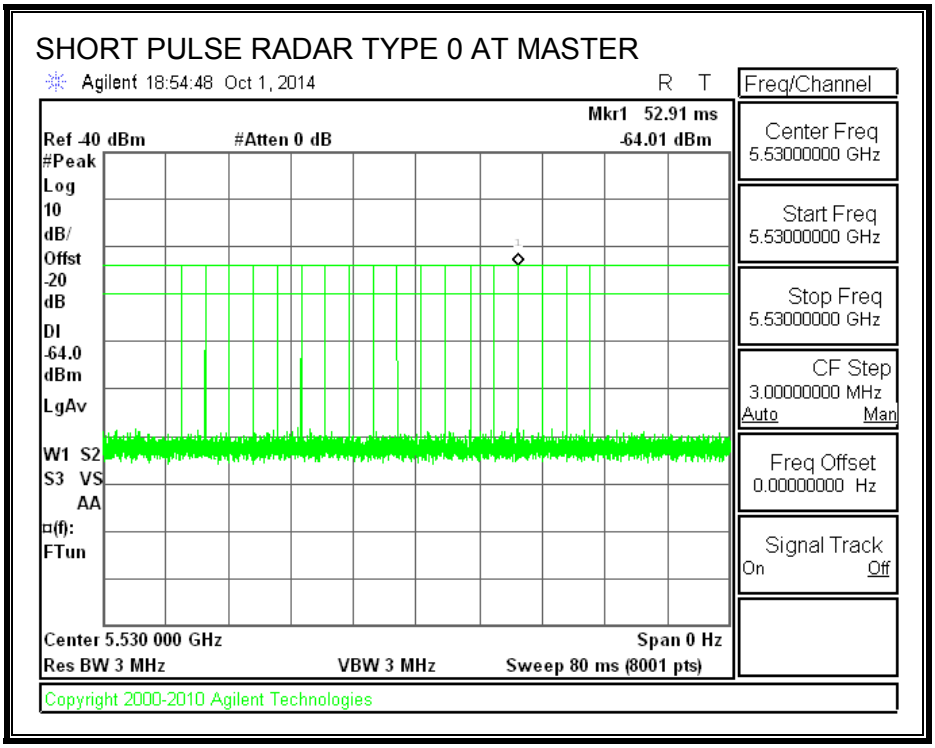
12.4. CLIENT MODE RESULTS FOR 80 MHz BANDWIDTH

12.4.1. TEST CHANNEL

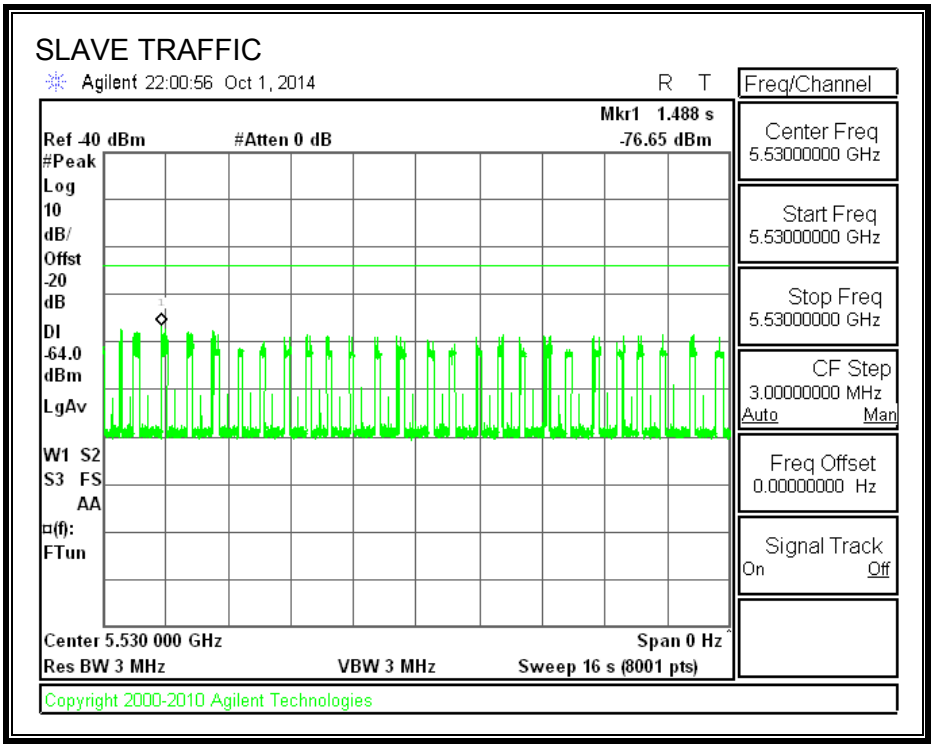
All tests were performed at a channel center frequency of 5530 MHz.

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)

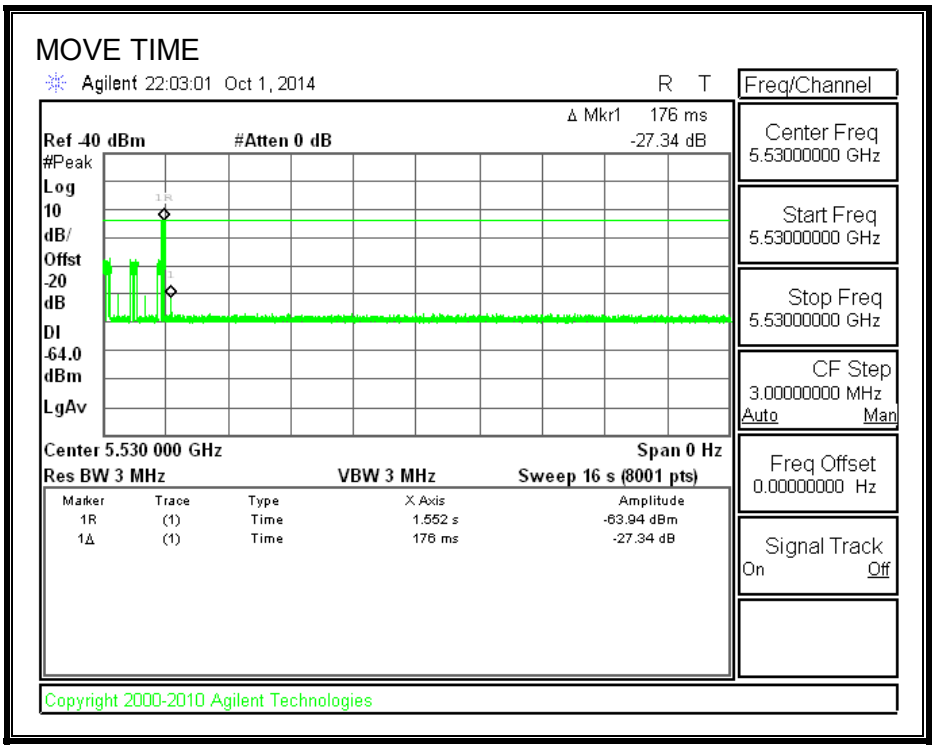
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

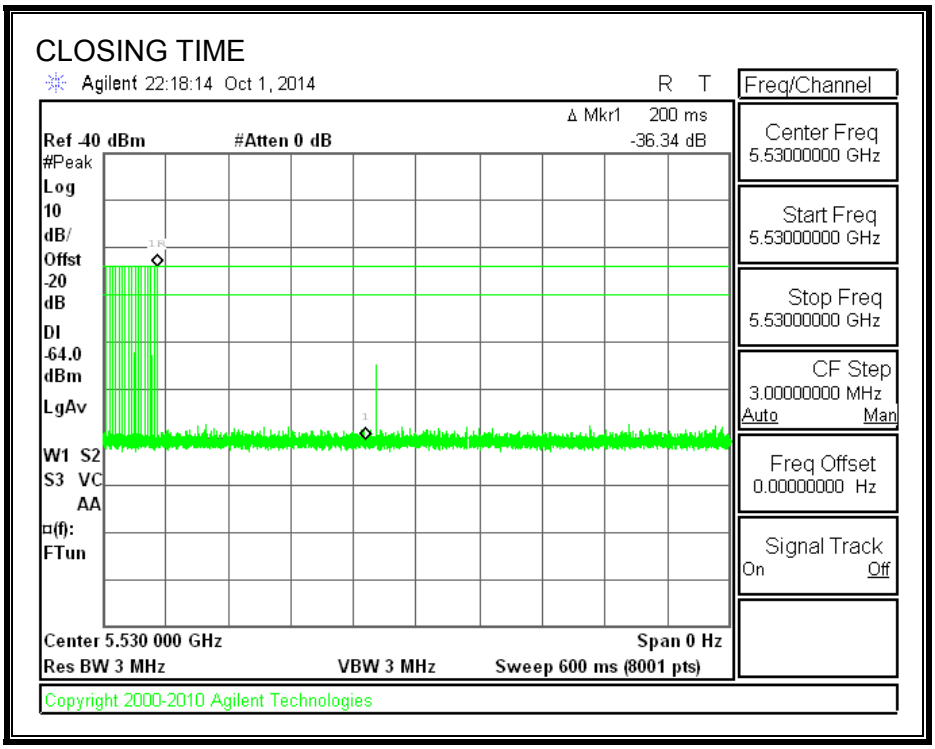
Channel Move Time (sec)	Limit (sec)
0.176	10

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

MOVE TIME



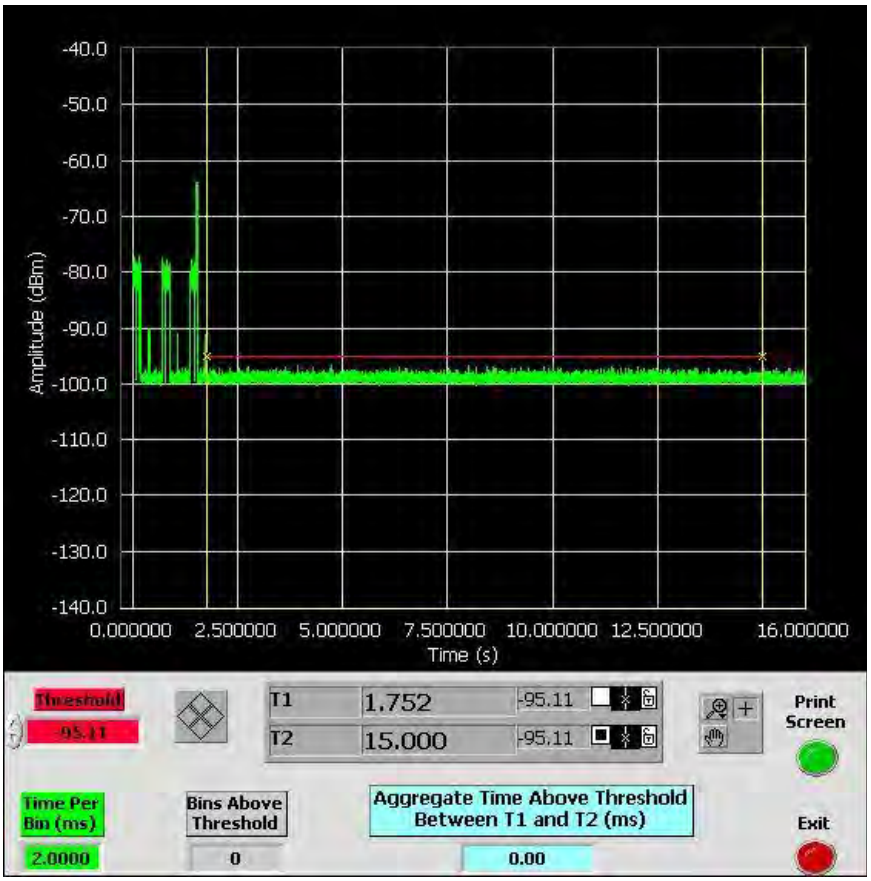
CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

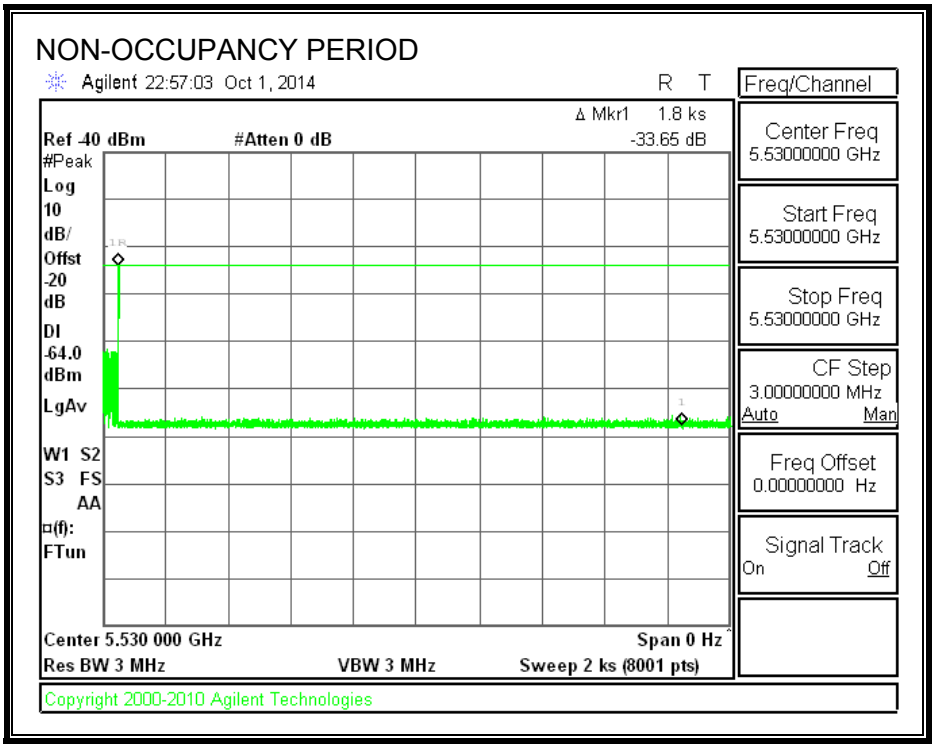
AGGREGATE CLOSING TIME



12.4.5. NON-OCCUPANCY PERIOD

RESULTS

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



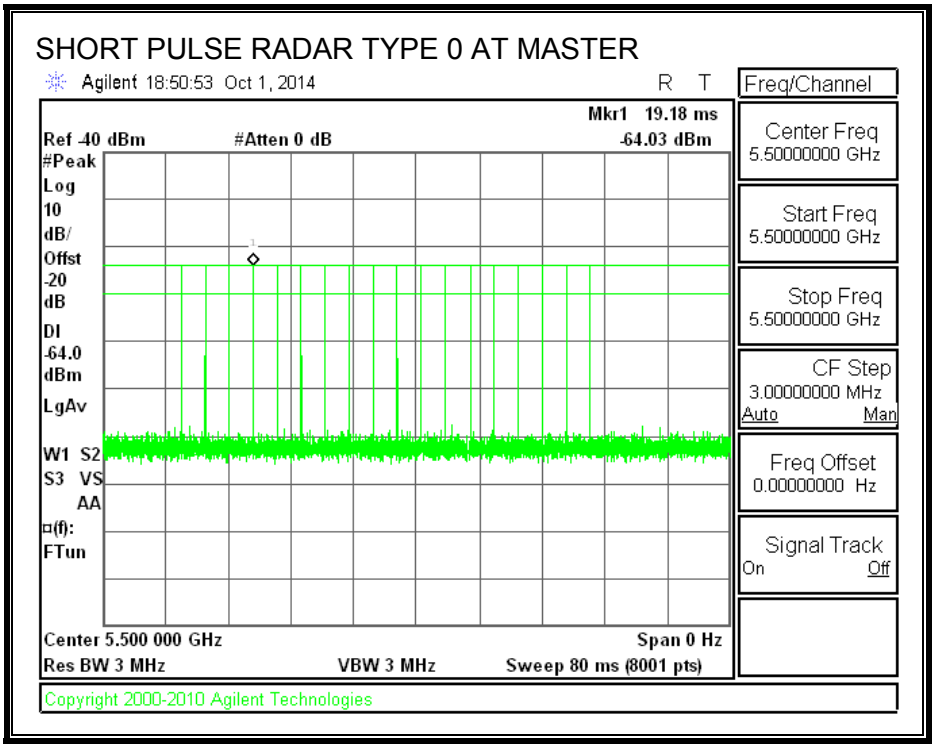
12.5. CLIENT-TO-CLIENT COMMUNICATIONS MODE RESULTS FOR 20 MHz BANDWIDTH

12.5.1. TEST CHANNEL

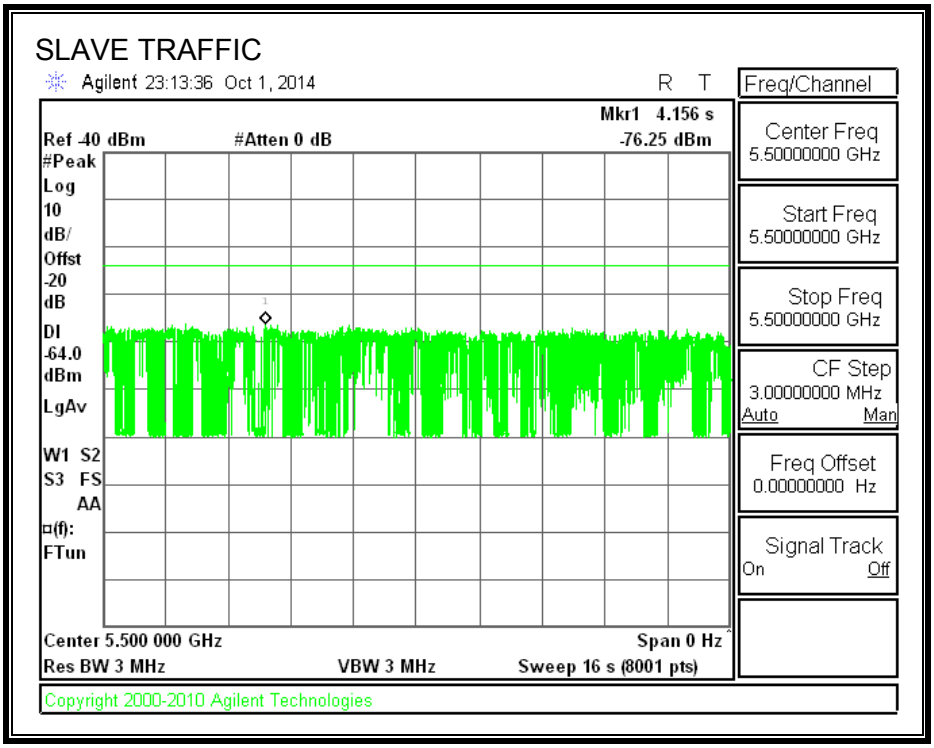
All tests were performed at a channel center frequency of 5500 MHz.

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)

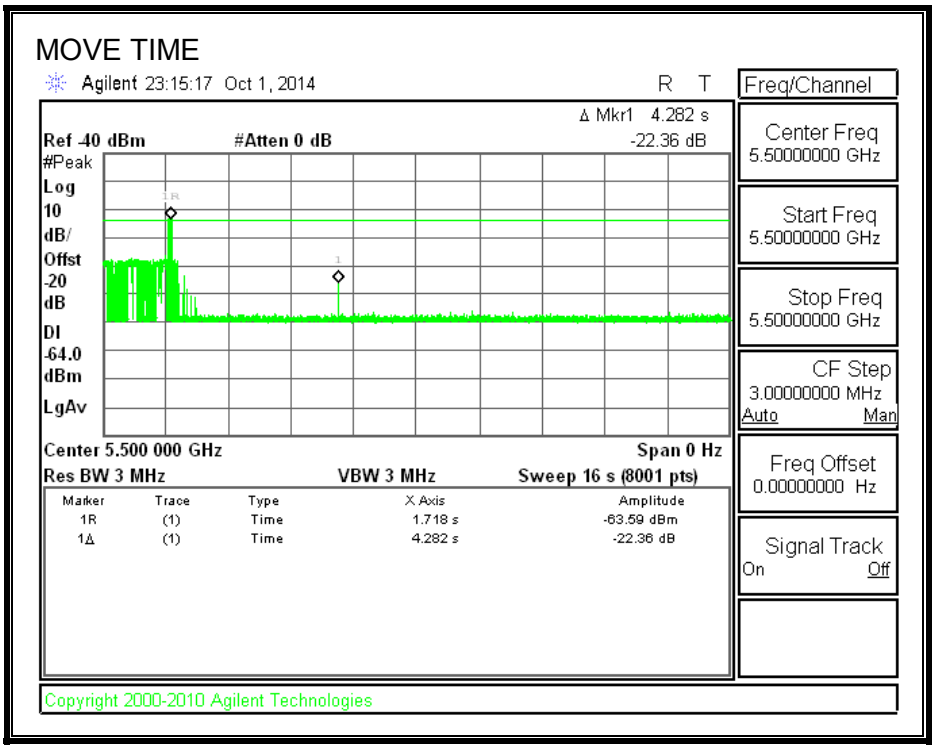
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

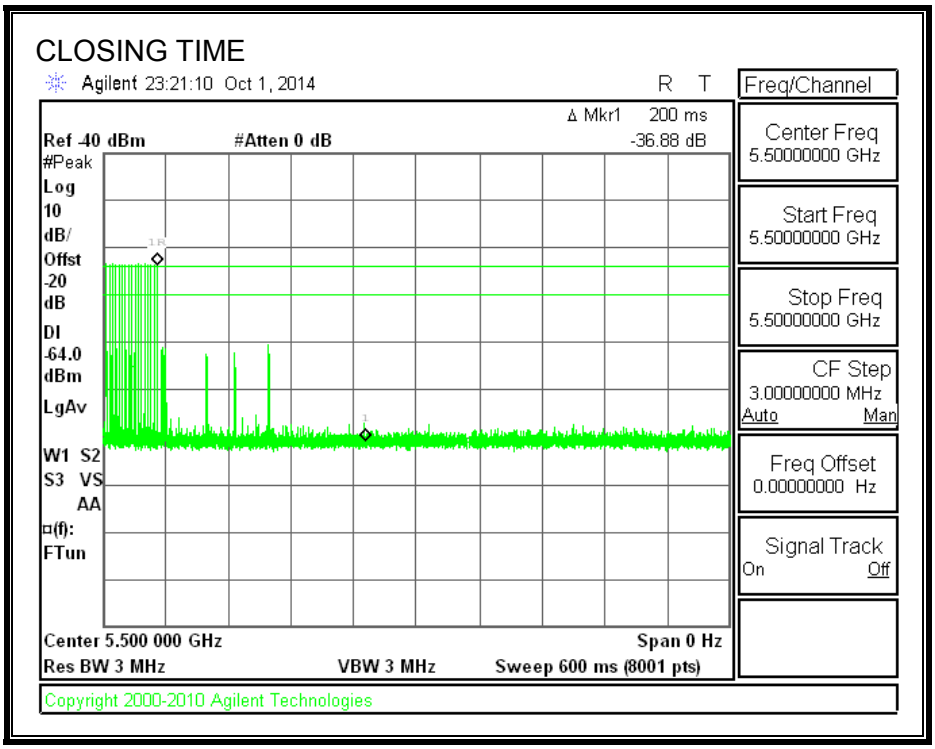
Channel Move Time (sec)	Limit (sec)
4.282	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
16.0	60

MOVE TIME

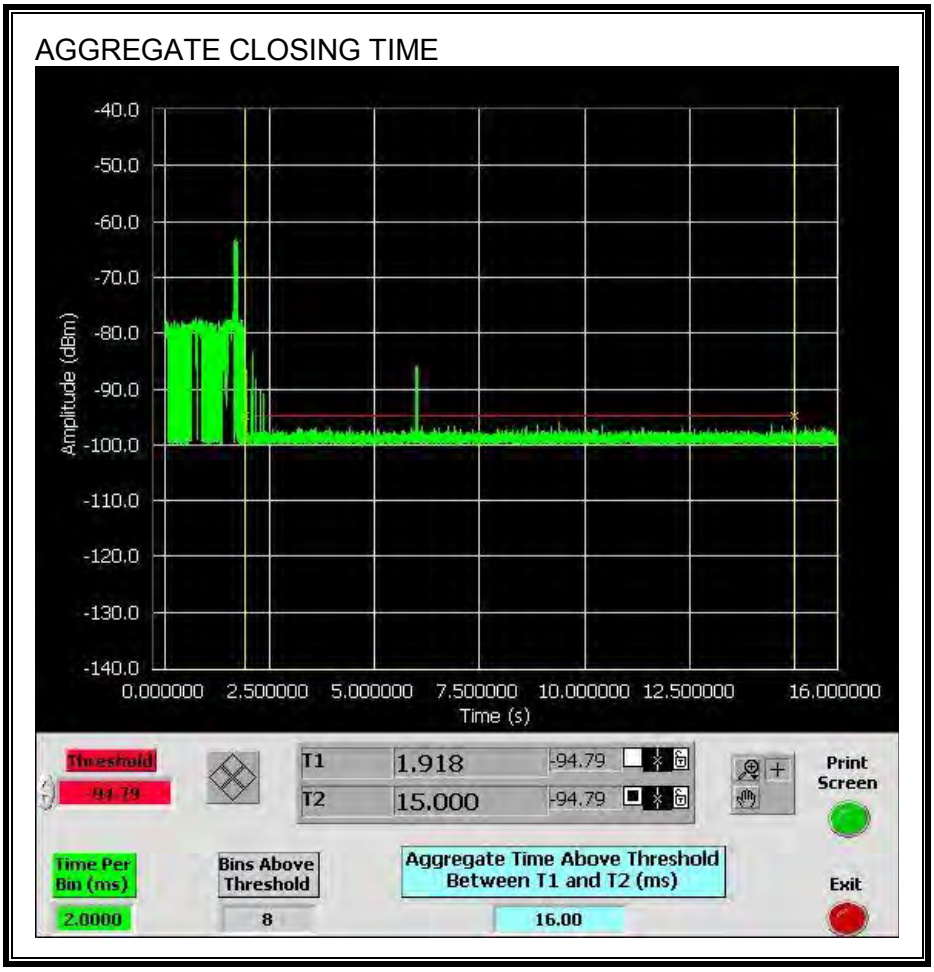


CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the aggregate monitoring period.



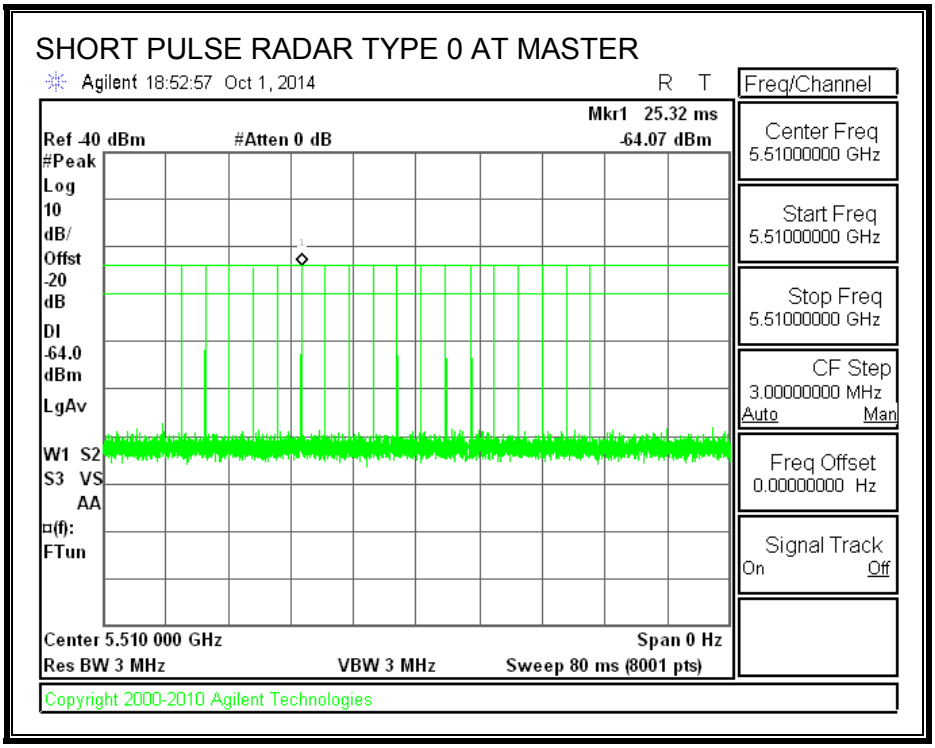
12.6. CLIENT-TO-CLIENT COMMUNICATIONS MODE RESULTS FOR 40 MHz BANDWIDTH

12.6.1. TEST CHANNEL

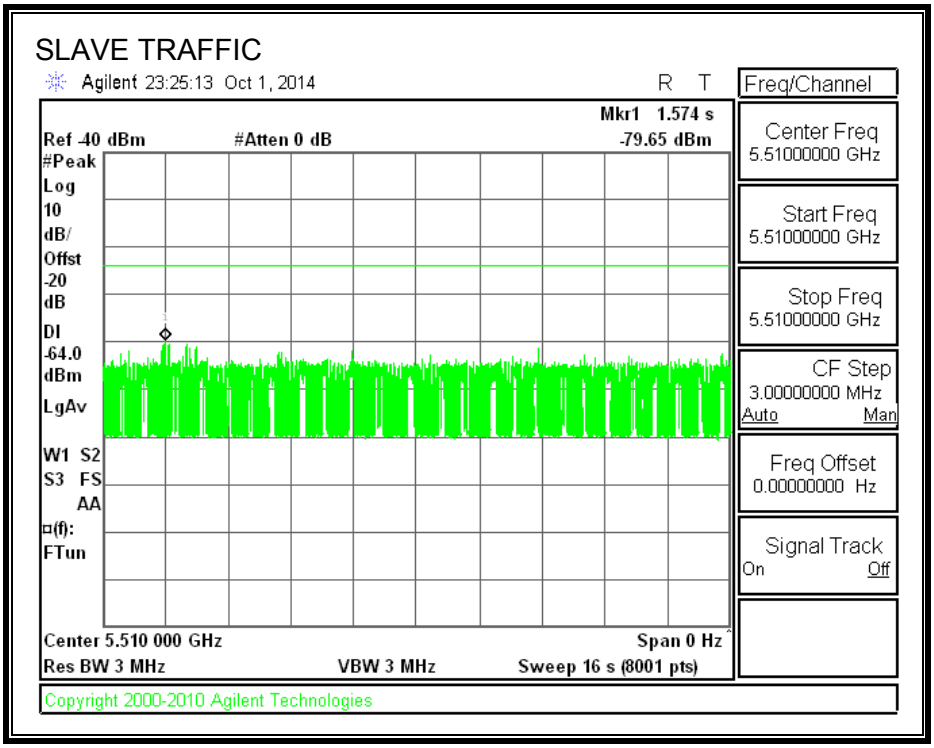
All tests were performed at a channel center frequency of 5510 MHz.

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)

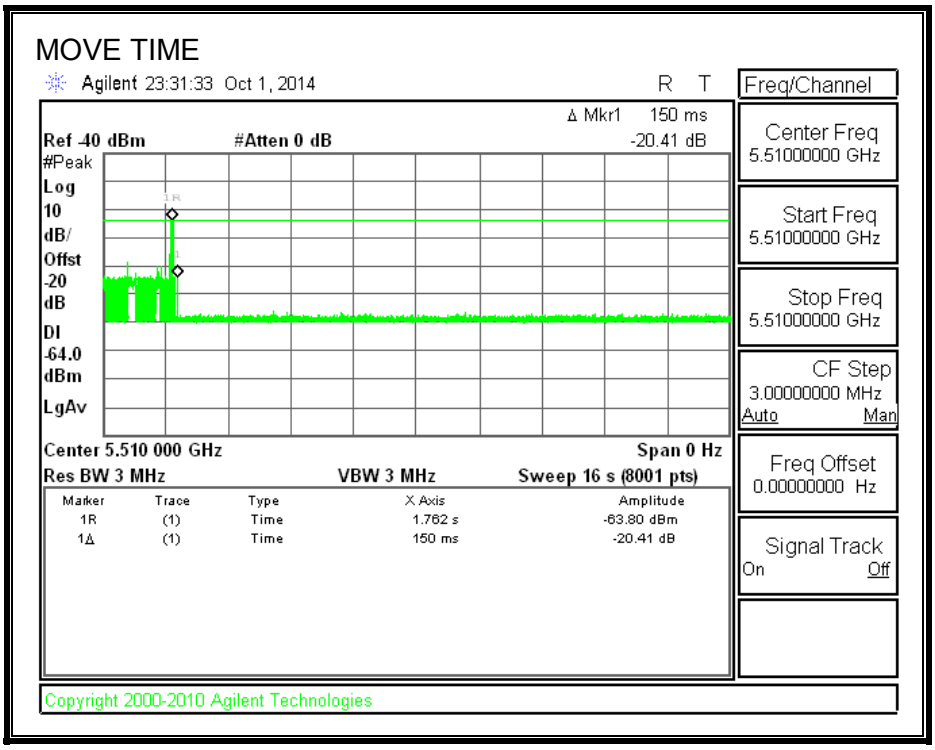
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

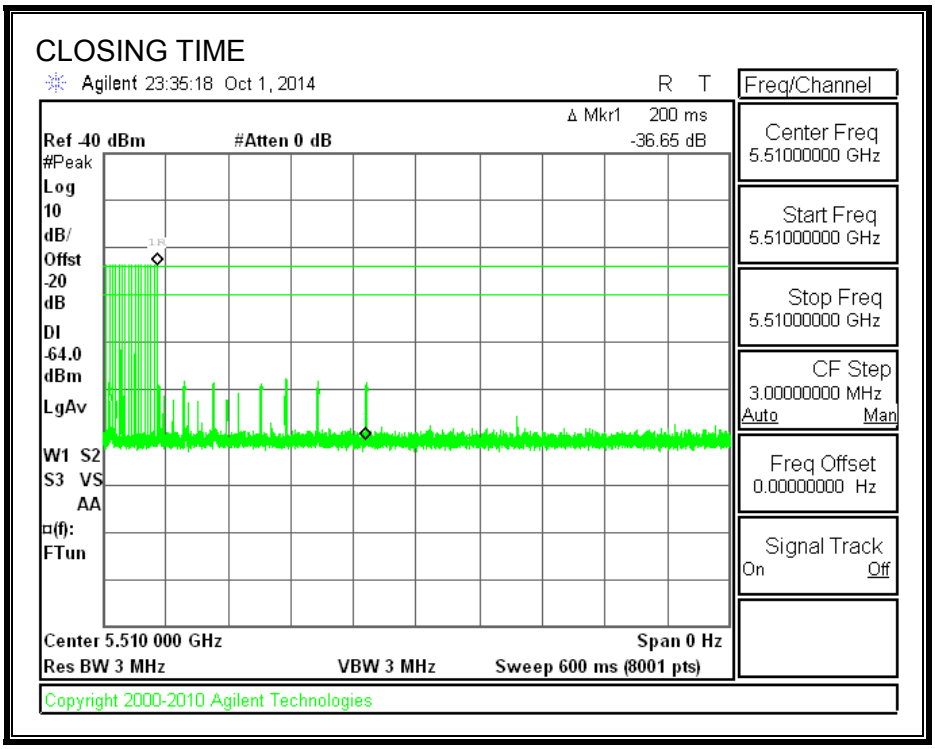
Channel Move Time (sec)	Limit (sec)
0.150	10

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

MOVE TIME



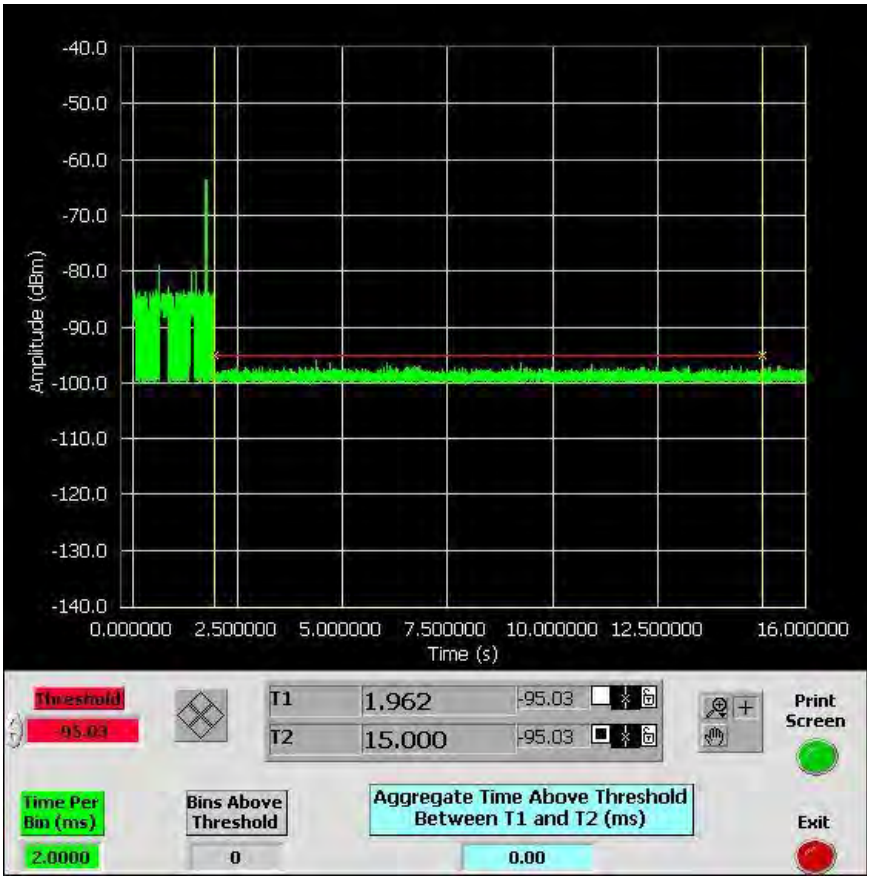
CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



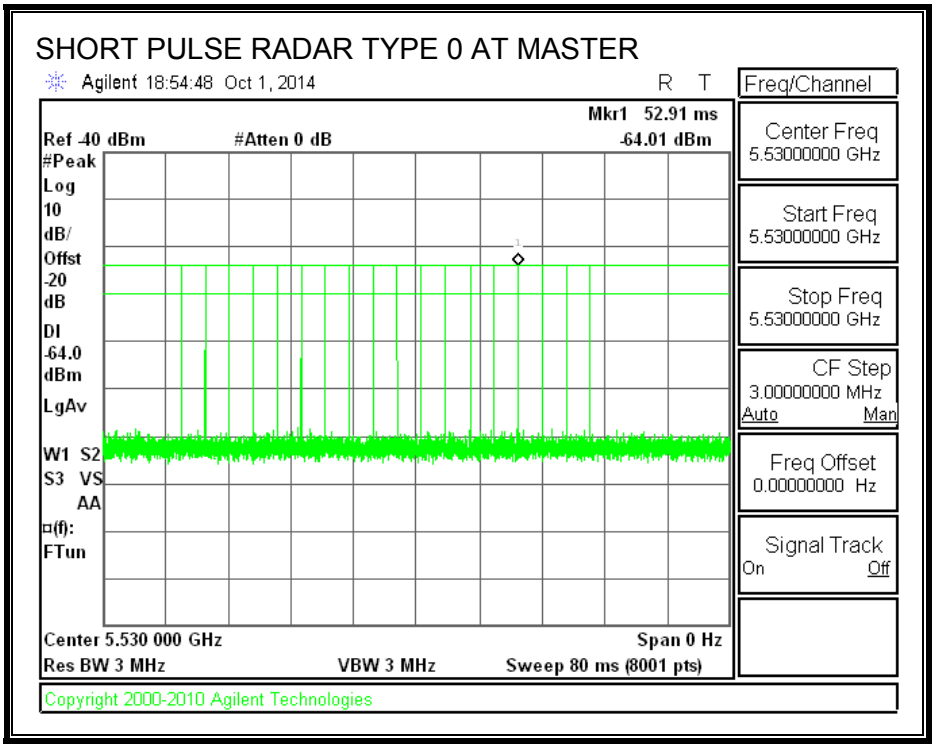
12.7. CLIENT-TO-CLIENT COMMUNICATIONS MODE RESULTS FOR 80 MHz BANDWIDTH

12.7.1. TEST CHANNEL

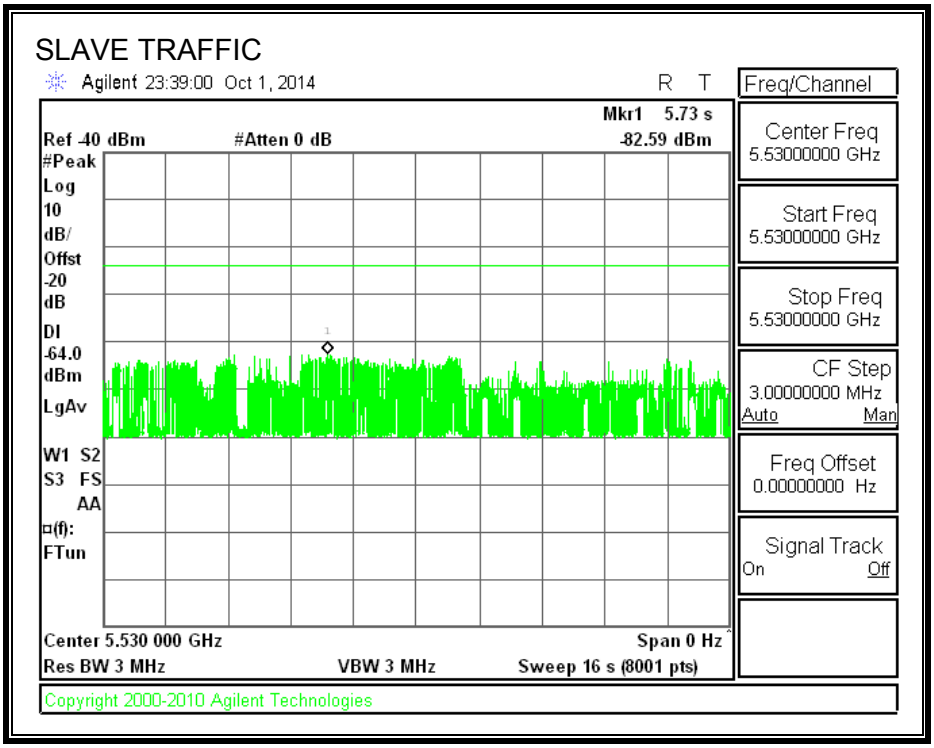
All tests were performed at a channel center frequency of 5530 MHz.

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)

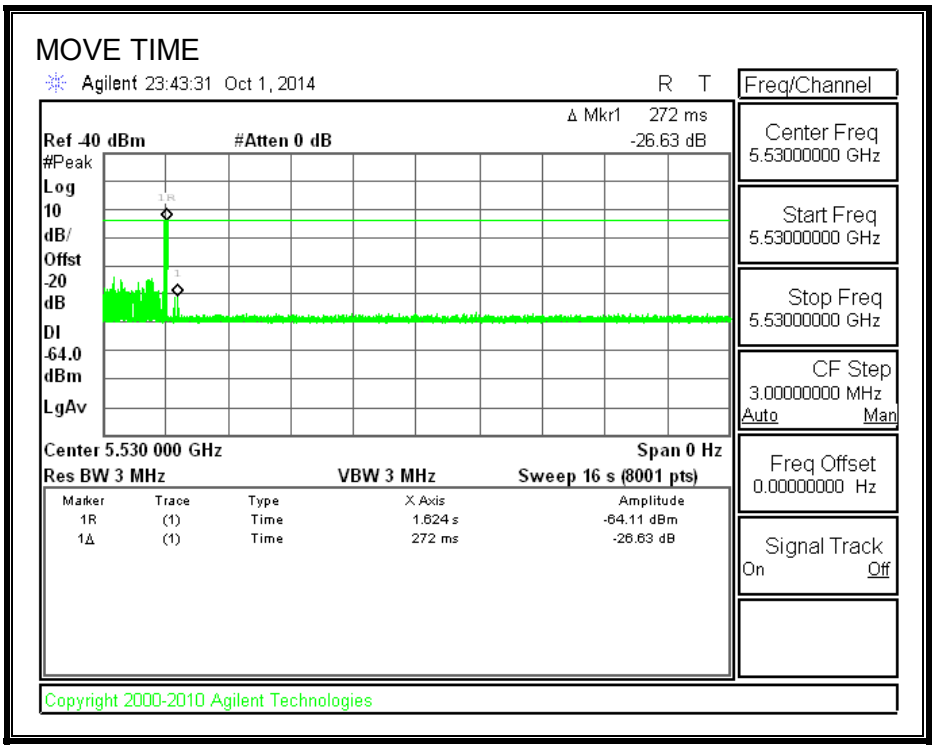
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

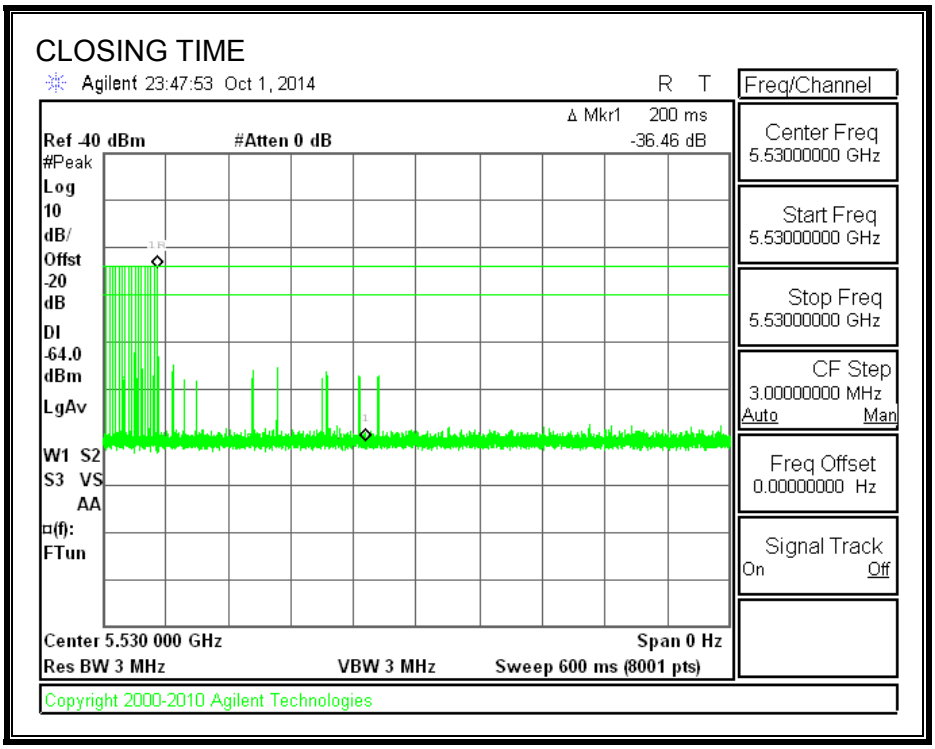
Channel Move Time (sec)	Limit (sec)
0.272	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
4.0	60

MOVE TIME



CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME