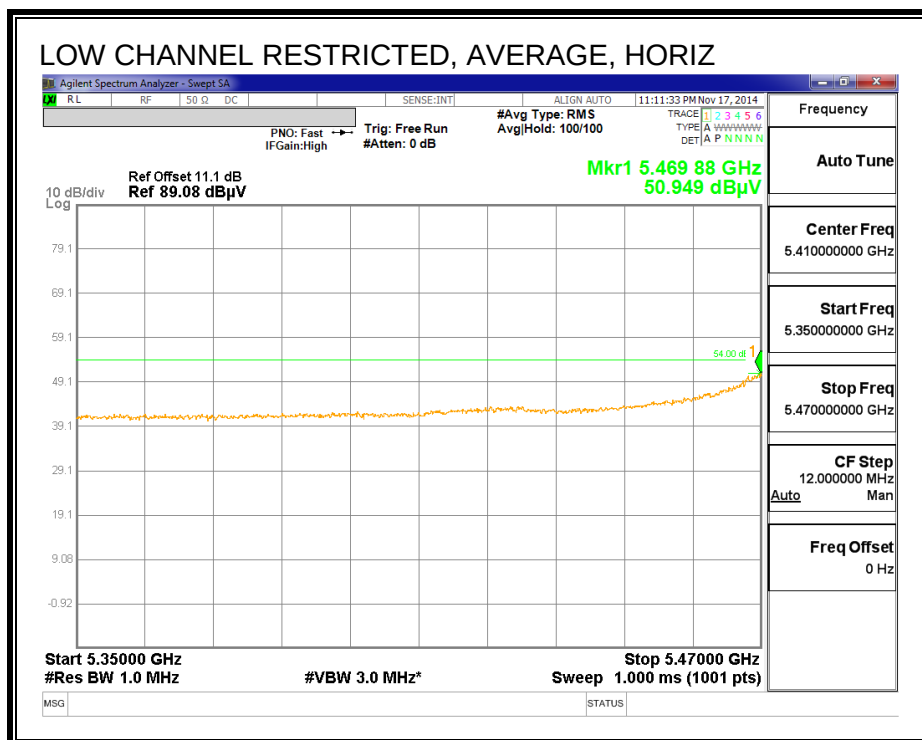
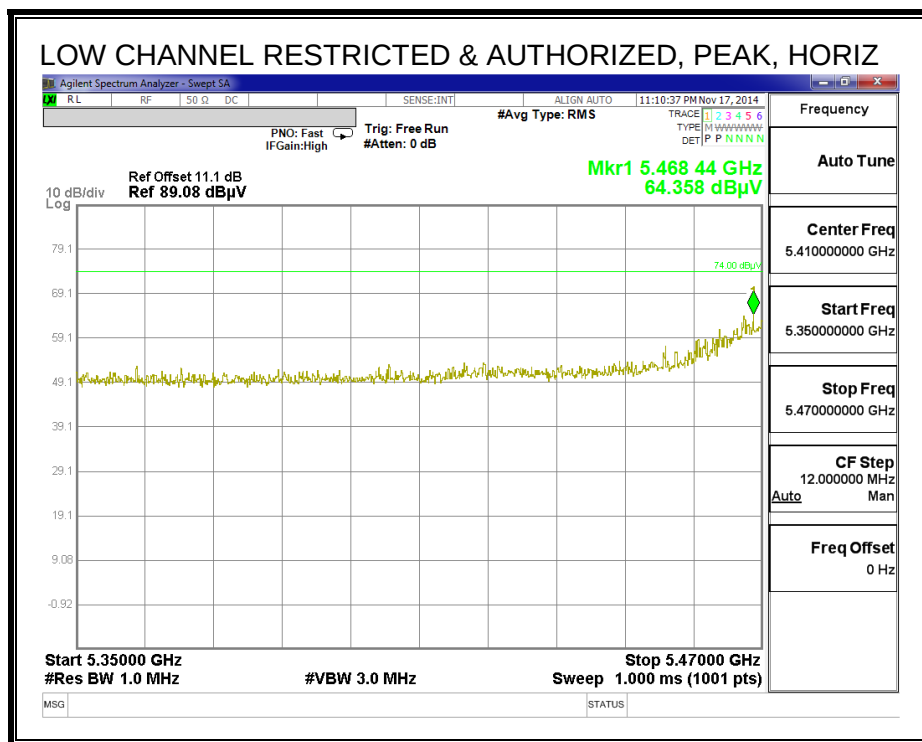
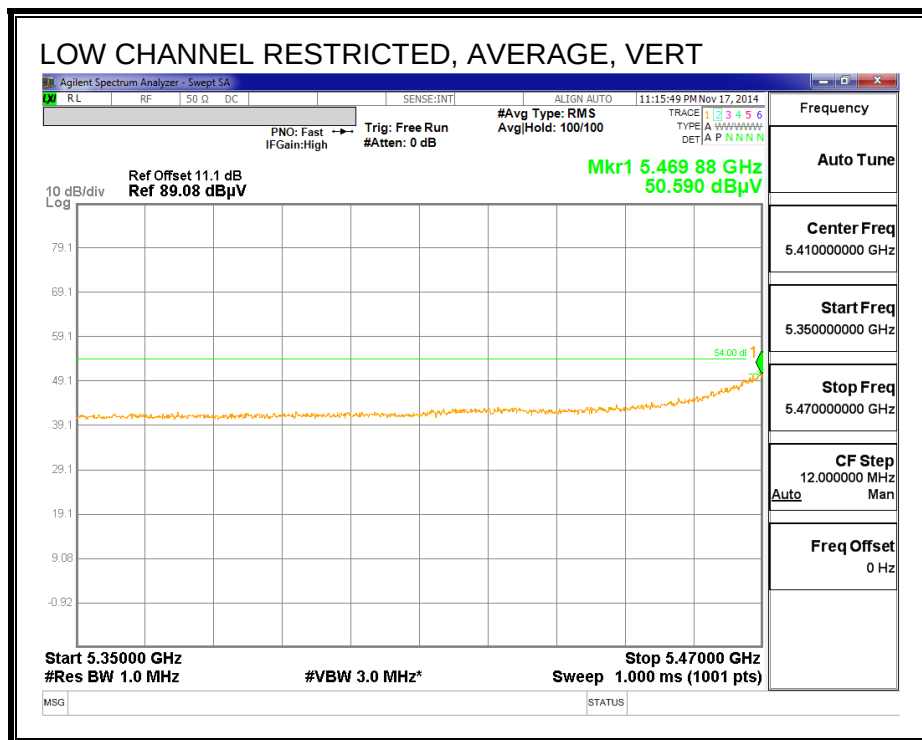
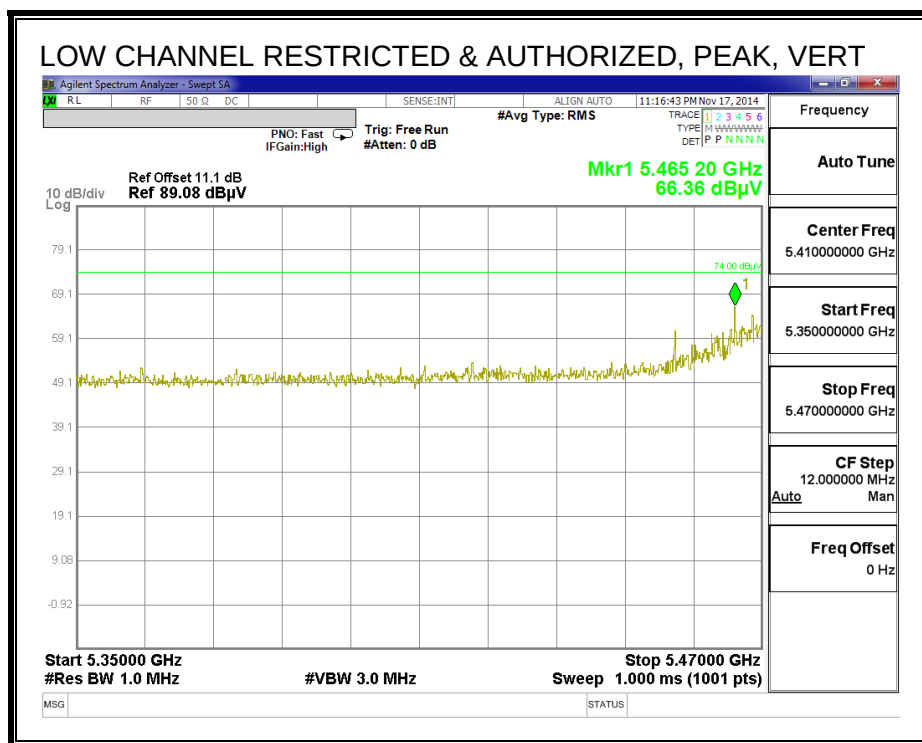


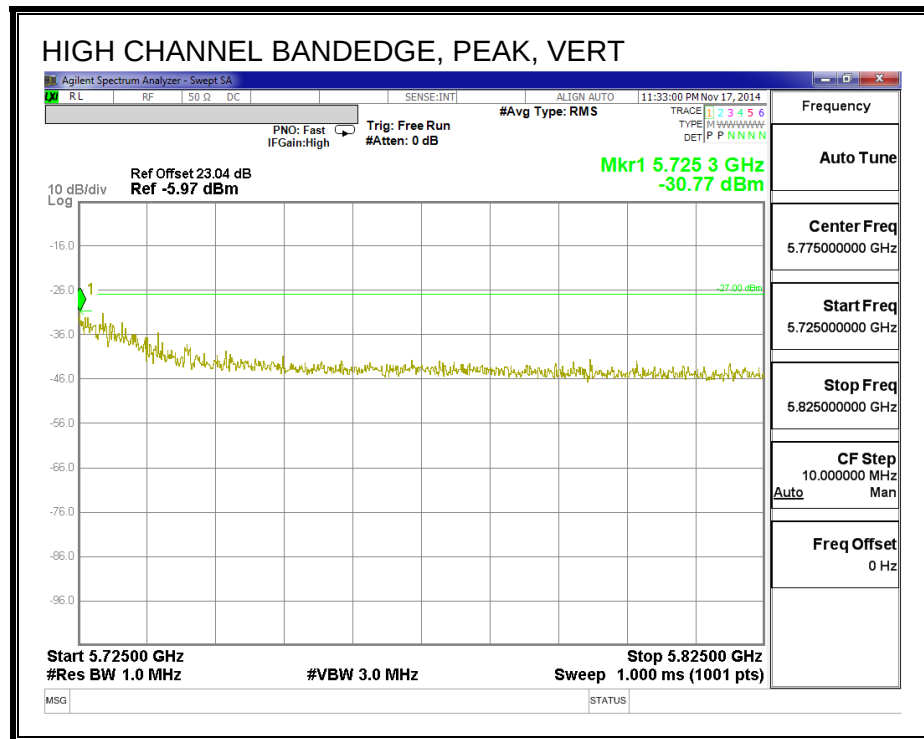
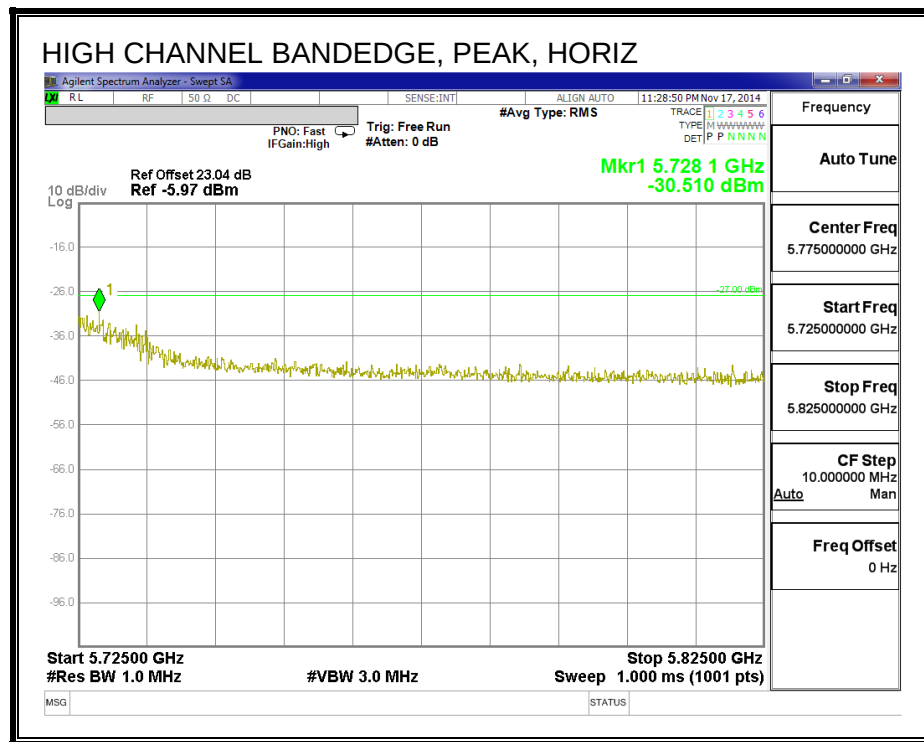
11.1.7. TX ABOVE 1 GHz 802.11a 1Tx MODE IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

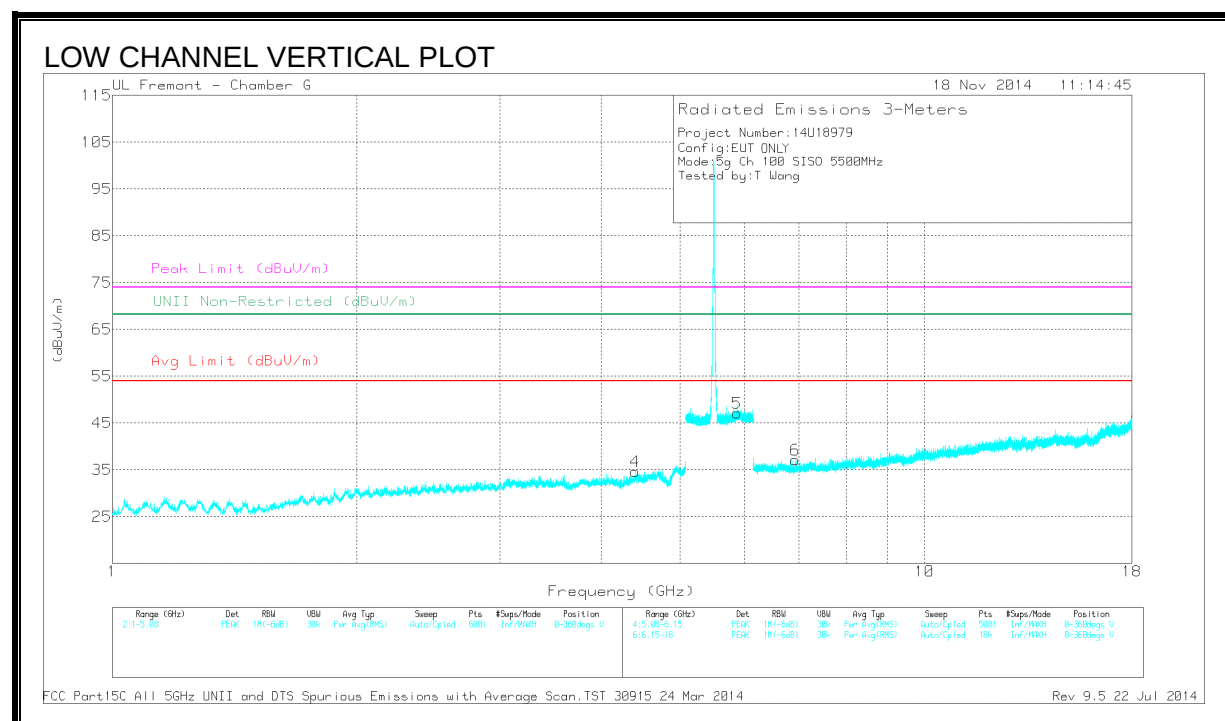
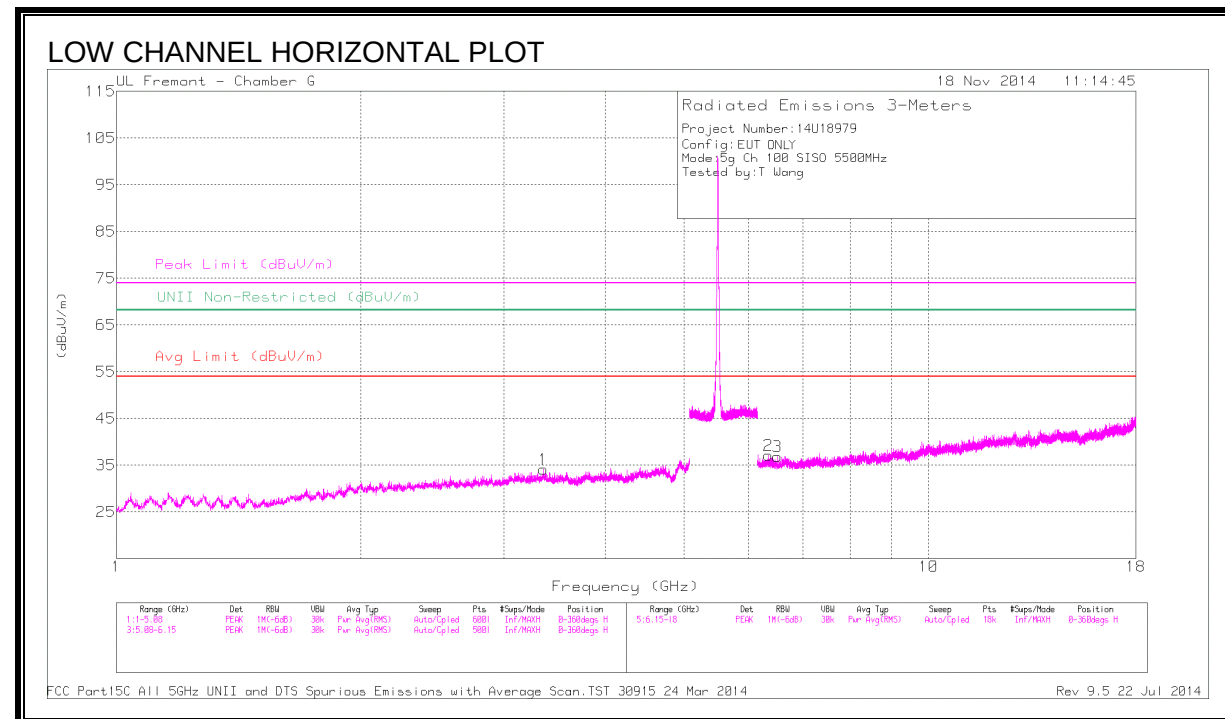




AUTHORIZED BANDEDGE (HIGH CHANNEL)



HARMONICS AND SPURIOUS EMISSIONS



DATA

Radiated Emissions

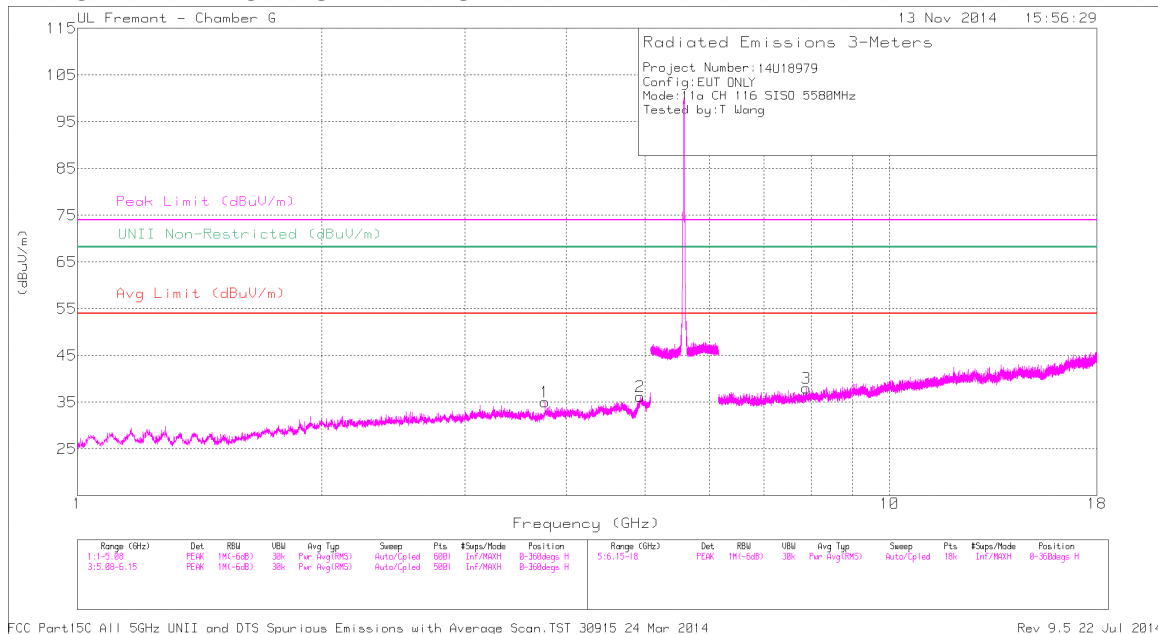
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Polarity
1	* 3.355	41.57	PK1	32.9	-33.1	41.37	-	-	74	-32.63	-	-	H
1	* 3.357	29.94	AD1	32.9	-33.2	29.64	54	-24.36	-	-	-	-	H
2	6.348	40.97	PK1	35.7	-32.4	44.27	-	-	-	-	68.2	-23.93	H
3	6.515	40.71	PK1	35.6	-32.4	43.91	-	-	-	-	68.2	-24.29	H
4	4.401	41.24	PK1	33.6	-32.5	42.34	-	-	-	-	68.2	-25.86	V
5	5.873	43.53	PK1	35.0	-23.6	54.93	-	-	-	-	68.2	-13.27	V
6	6.936	40.30	PK1	35.6	-32.0	43.90	-	-	-	-	68.2	-24.30	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

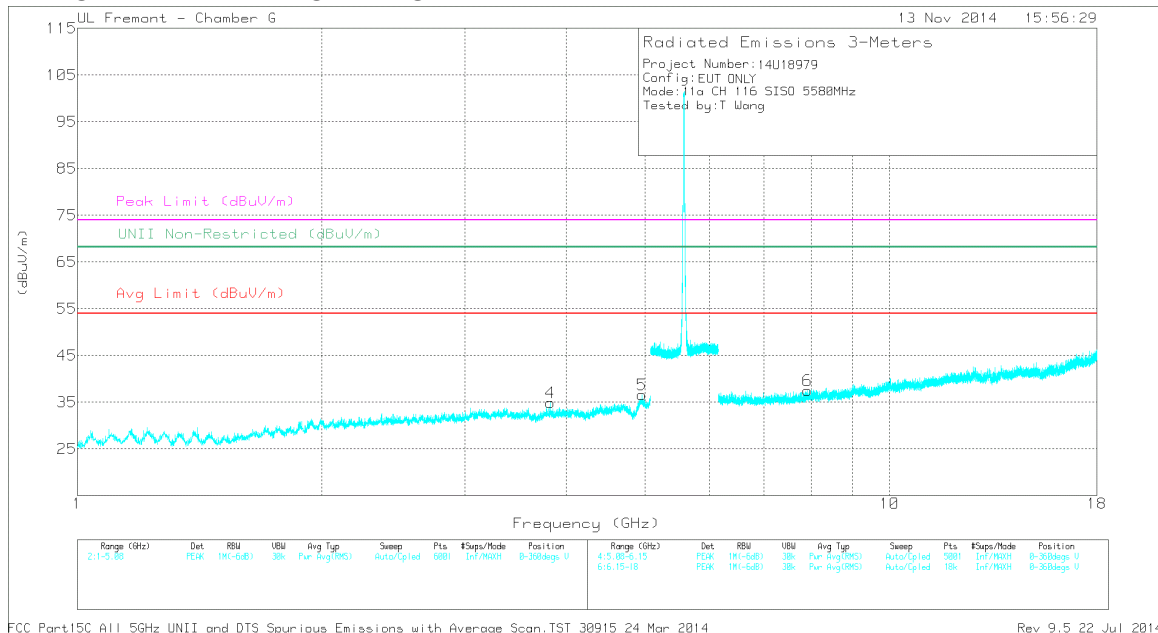
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

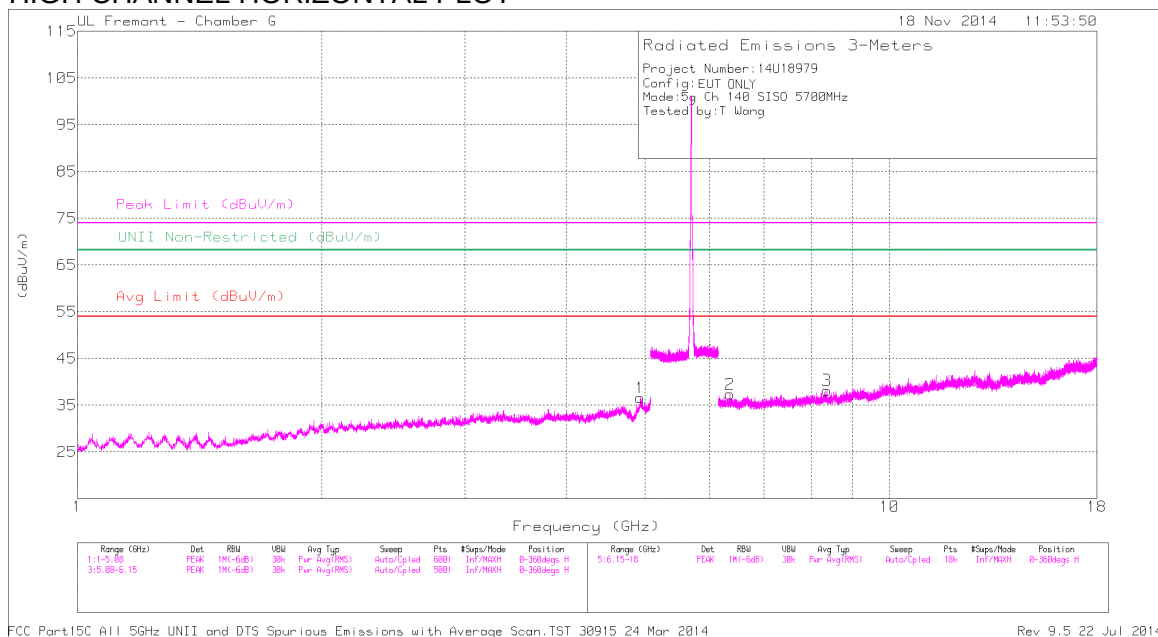
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Polarity
1	* 3.764	41.01	PK1	32.9	-33.3	40.61	-	-	74	-33.39	-	-	H
1	* 3.766	29.69	AD1	32.9	-33.4	29.19	54	-24.81	-	-	-	-	H
2	* 4.930	41.25	PK1	34.1	-31.7	43.65	-	-	74	-30.35	-	-	H
2	* 4.931	30.16	AD1	34.1	-31.7	32.56	54	-21.44	-	-	-	-	H
3	7.897	39.16	PK1	35.8	-30.6	44.36	-	-	-	-	68.2	-23.84	H
4	* 3.821	41.56	PK1	33.0	-33.2	41.36	-	-	74	-32.64	-	-	V
4	* 3.821	30.12	AD1	33.0	-33.2	29.92	54	-24.08	-	-	-	-	V
5	* 4.952	40.93	PK1	34.1	-31.9	43.13	-	-	74	-30.87	-	-	V
5	* 4.954	30.37	AD1	34.1	-31.9	32.57	54	-21.43	-	-	-	-	V
6	7.917	39.30	PK1	35.8	-30.8	44.30	-	-	-	-	68.2	-23.90	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

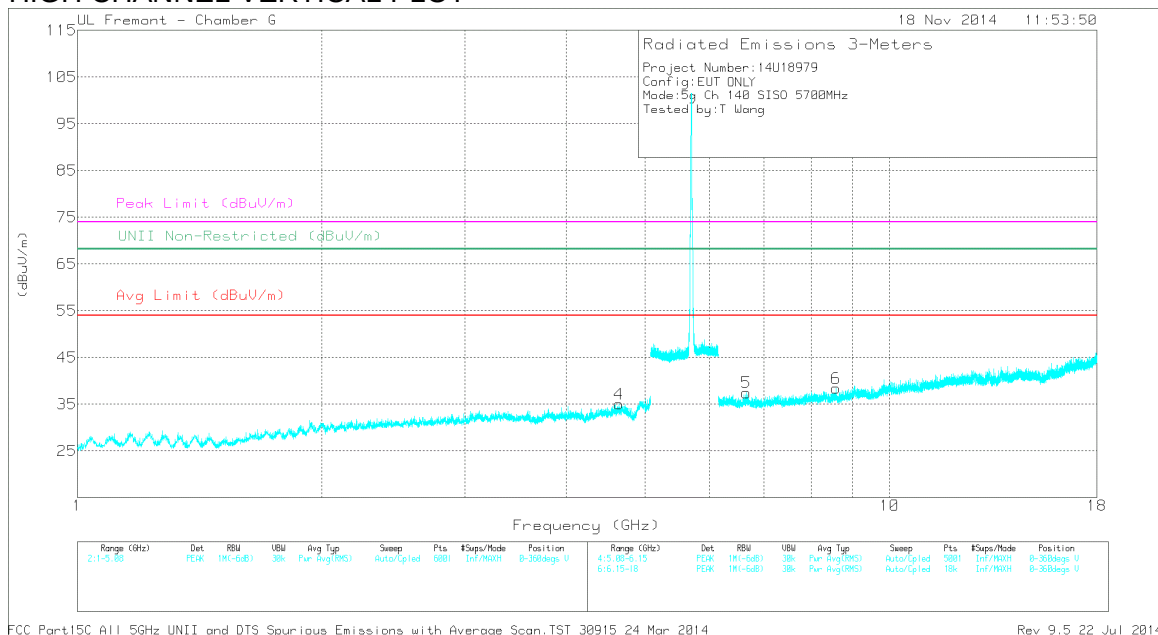
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Fitr/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)	Polarity
1	* 4.934	41.10	PK1	34.1	-31.7	43.50	-	-	74	-30.5	-	-	H
1	* 4.932	29.71	AD1	34.1	-31.7	32.11	54	-21.89	-	-	-	-	H
2	6.357	41.05	PK1	35.7	-32.3	44.45	-	-	-	-	68.2	-23.75	H
3	* 8.375	38.81	PK1	35.8	-29.6	45.01	-	-	74	-28.99	-	-	H
3	* 8.377	27.95	AD1	35.8	-29.7	34.05	54	-19.95	-	-	-	-	H
4	* 4.645	41.05	PK1	33.9	-33.0	41.95	-	-	74	-32.05	-	-	V
4	* 4.644	29.80	AD1	33.9	-33.0	30.70	54	-23.30	-	-	-	-	V
5	6.660	40.12	PK1	35.6	-31.5	44.22	-	-	-	-	68.2	-23.98	V
6	8.585	38.44	PK1	35.9	-28.9	45.44	-	-	-	-	68.2	-22.76	V

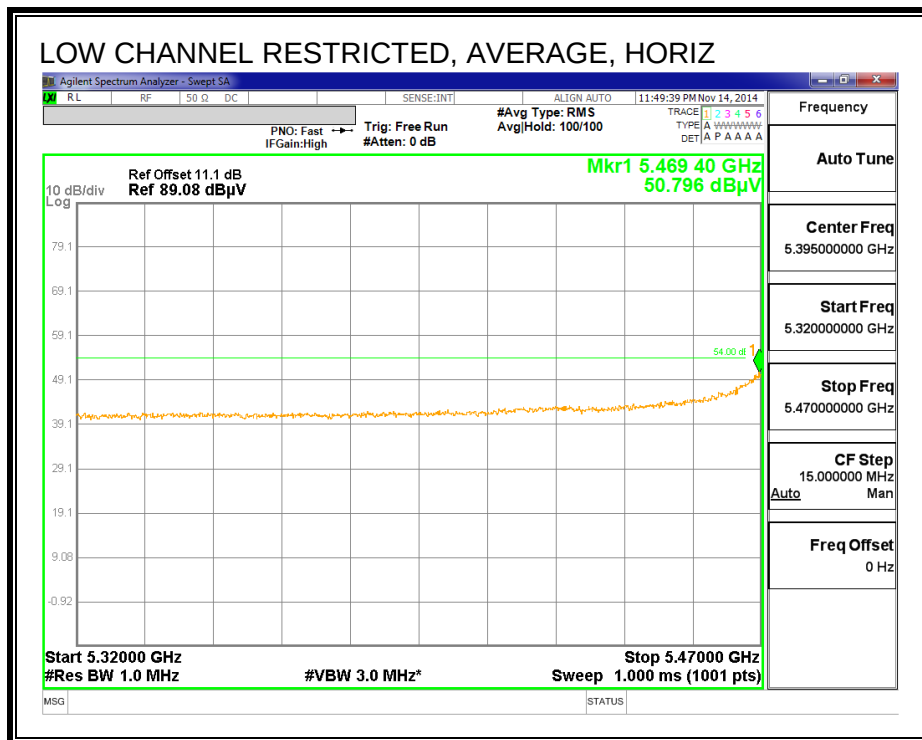
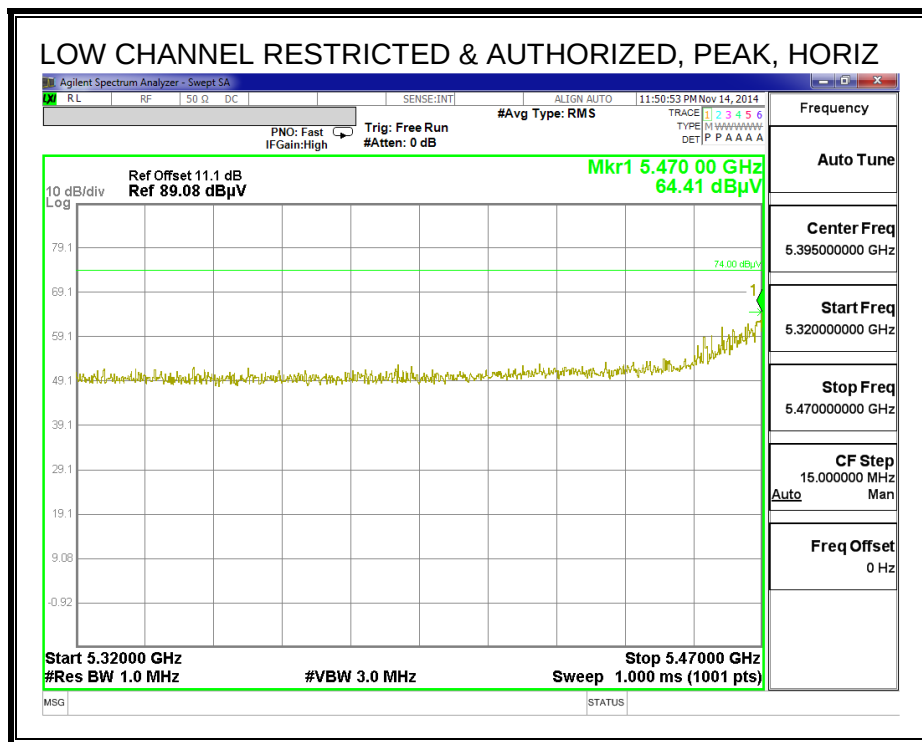
* - indicates frequency in CFR15.205/IC8.10 Restricted Band

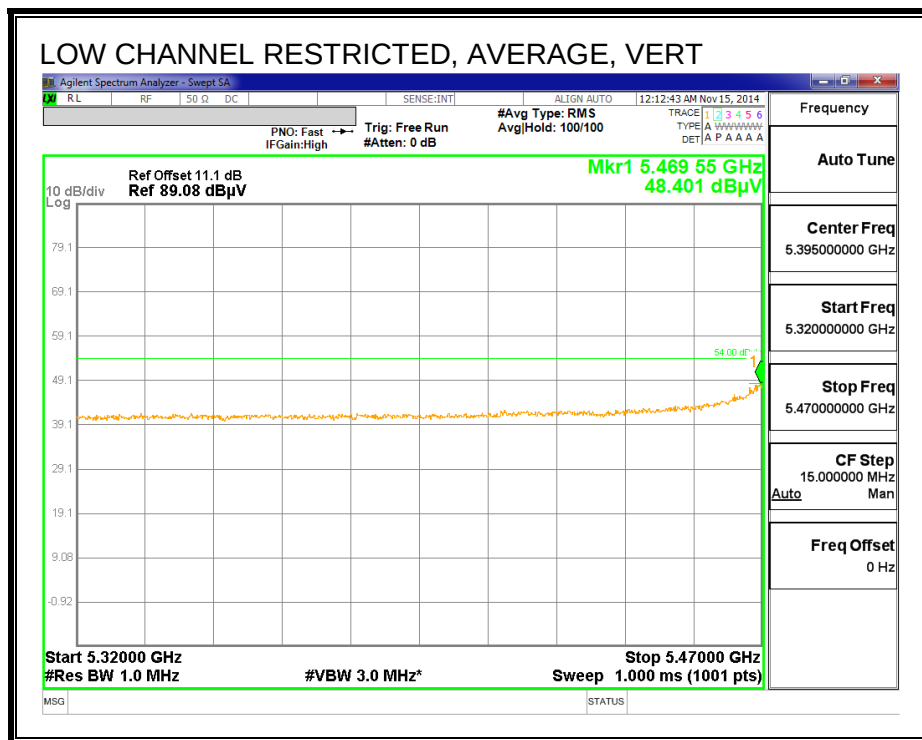
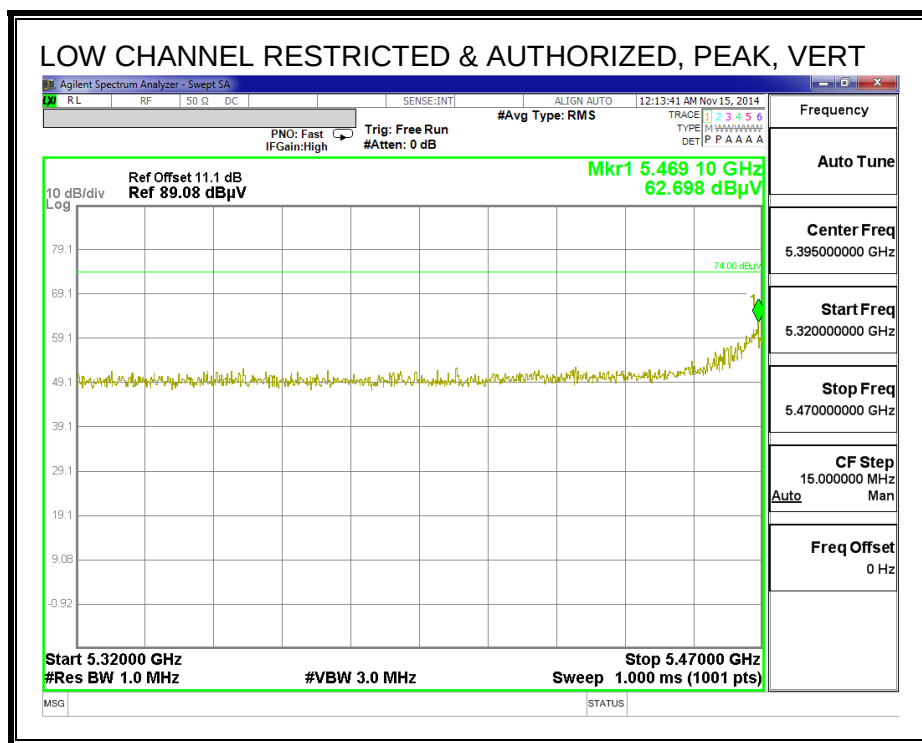
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

11.1.8. TX ABOVE 1 GHz 802.11n HT20 1Tx MODE IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)



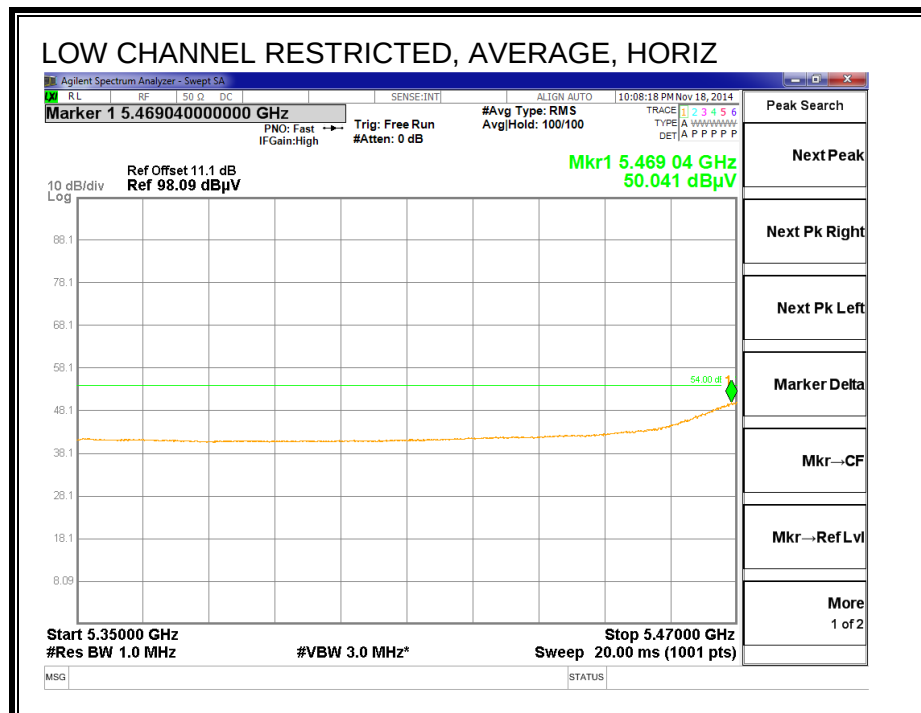
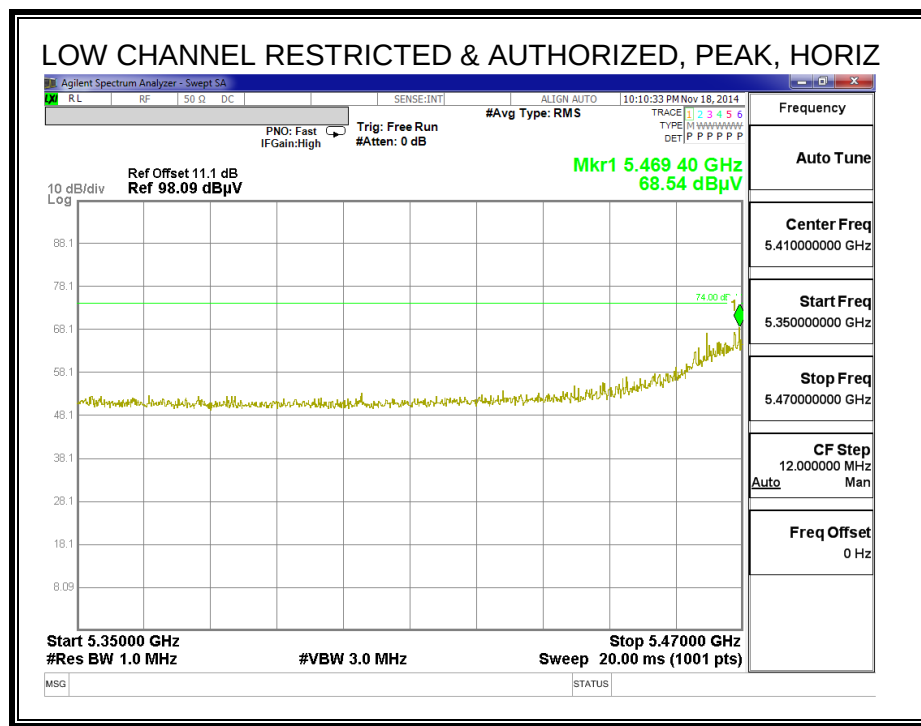


HARMONICS AND SPURIOUS EMISSIONS

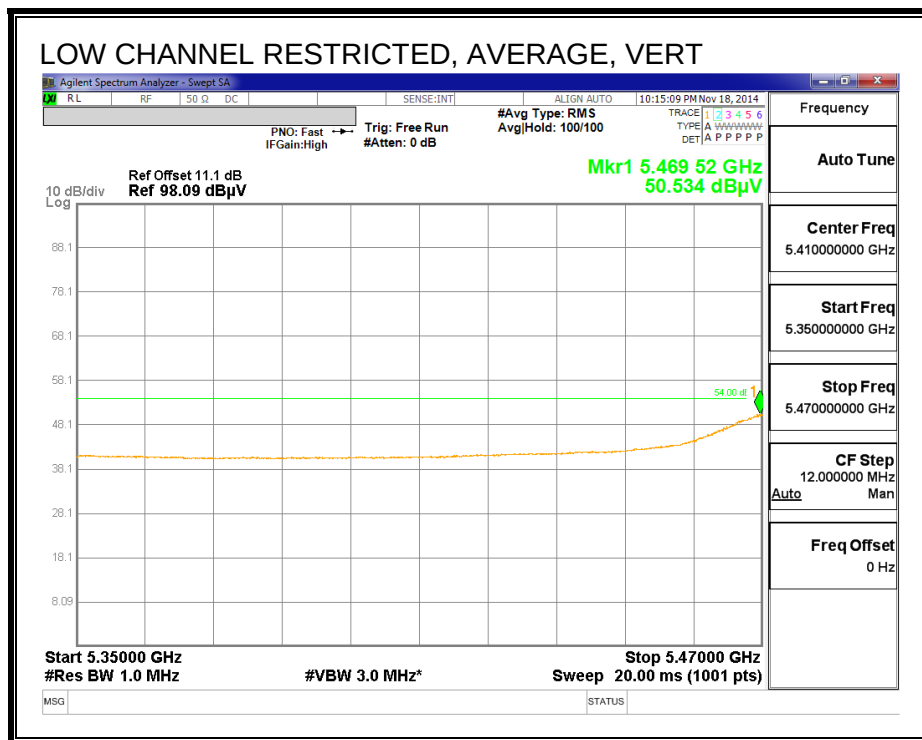
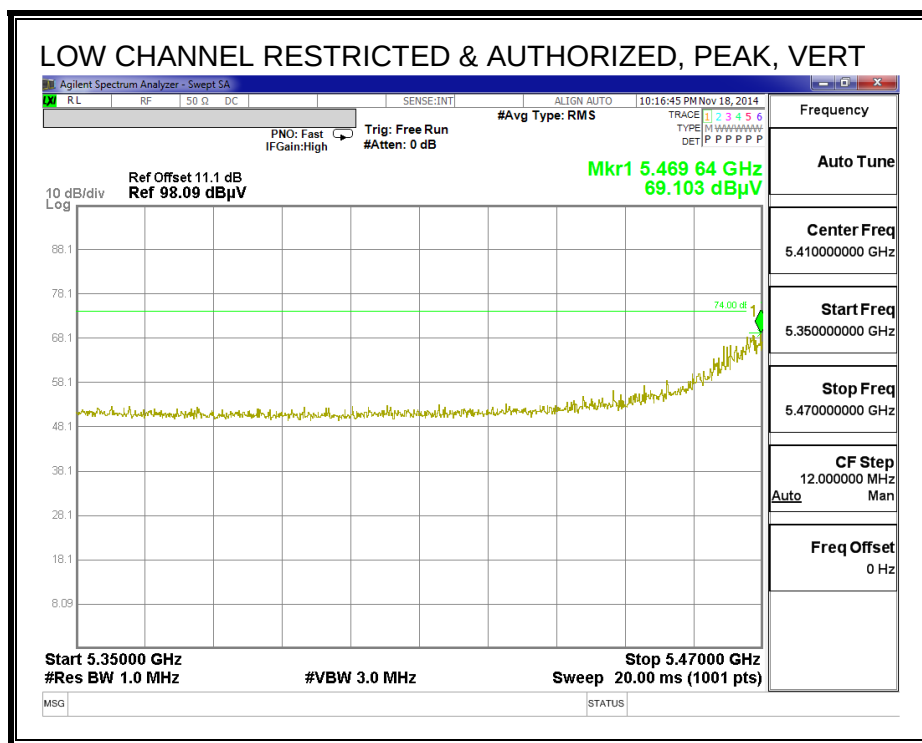
Note: this test is covered on by testing to 11a 1Tx Mode.

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

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

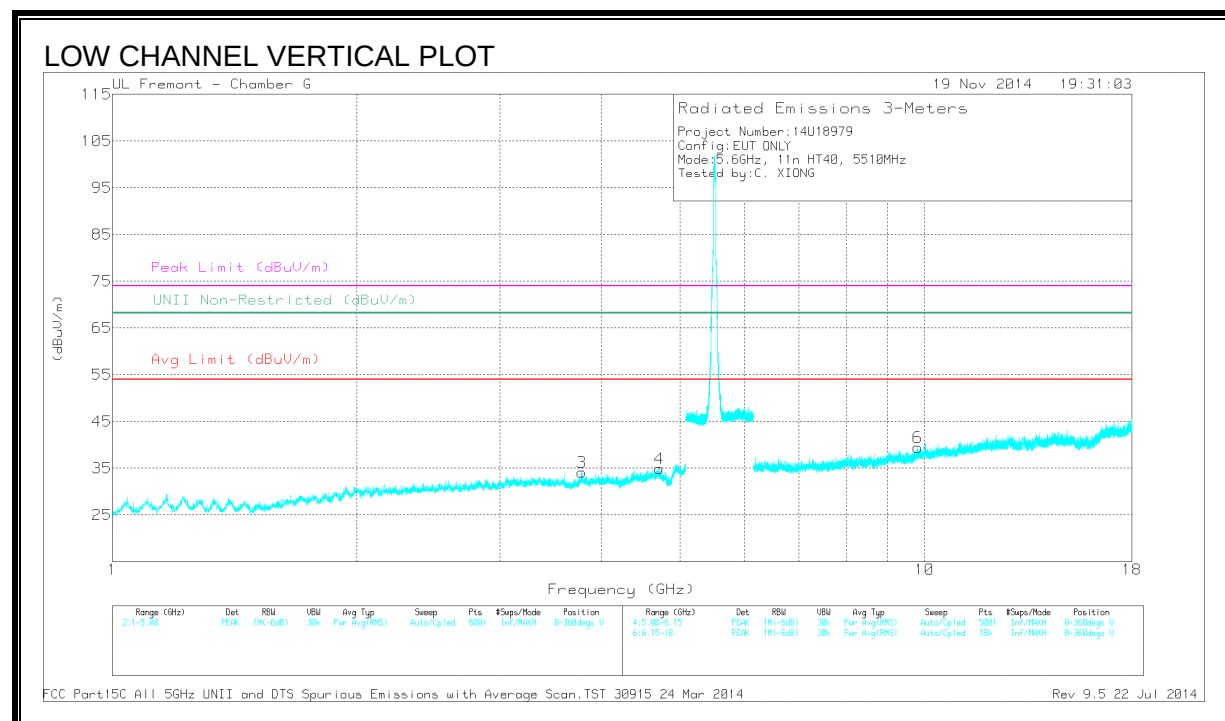
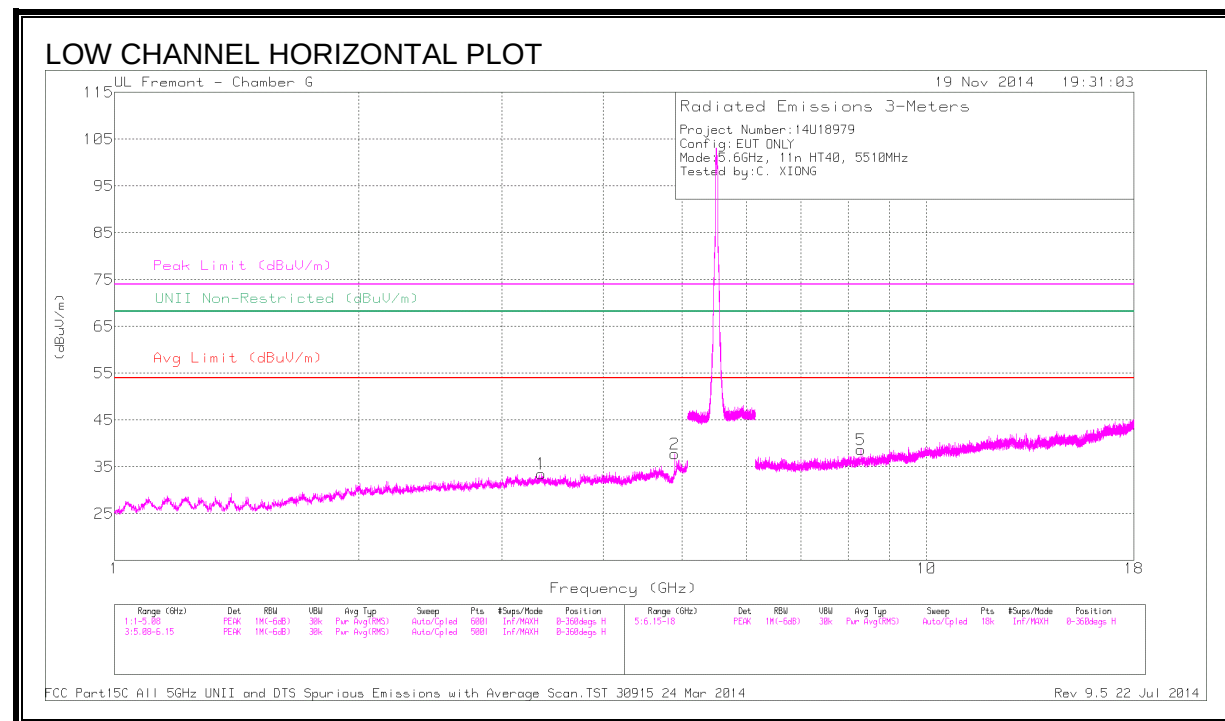


$$50.041 \text{ dB} + 0.12869337 = 50.16969337 \text{ dBuV}$$



$$50.534 \text{ dB} + 0.12869337 = 50.66269337 \text{ dBuV}$$

HARMONICS AND SPURIOUS EMISSIONS



DATA

Radiated Emissions

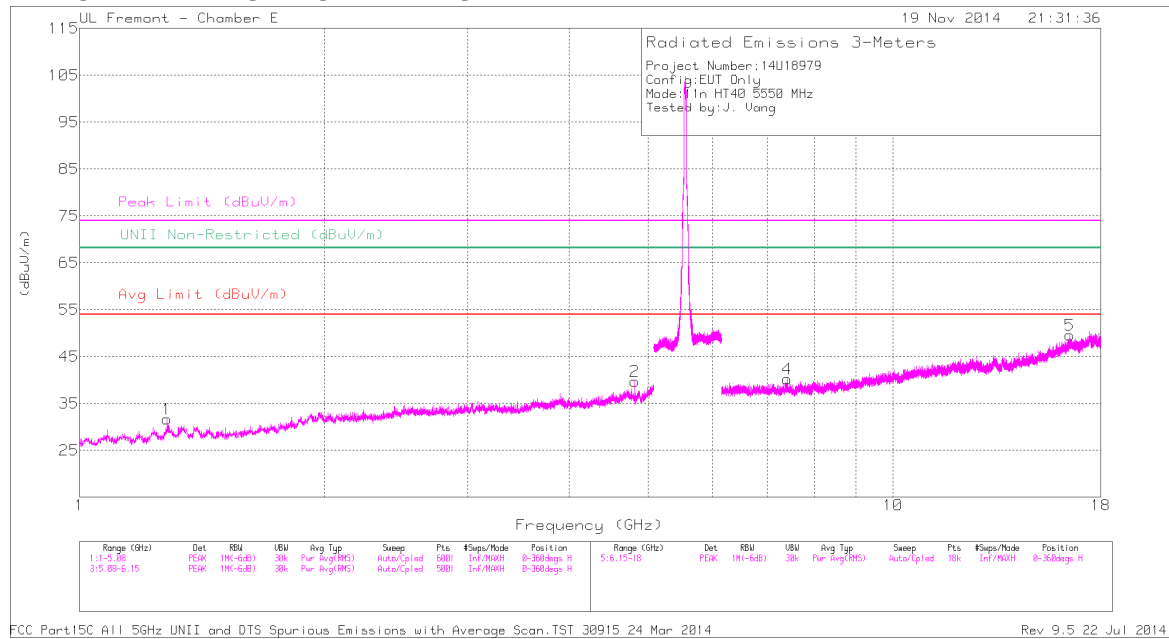
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Polarity
1	* 3.354	41.48	PK1	32.9	-33.1	0	41.28	-	-	74	-32.72	-	-	H
1	* 3.355	30.06	AD1	32.9	-33.1	.13	29.99	54	-24.01	-	-	-	-	H
2	* 4.898	43.18	PK1	34.1	-32.2	0	45.08	-	-	74	-28.92	-	-	H
2	* 4.898	33.20	AD1	34.1	-32.2	.13	35.23	54	-18.77	-	-	-	-	H
3	* 3.784	42.16	PK1	33.0	-33.5	0	41.66	-	-	74	-32.34	-	-	V
3	* 3.788	30.89	AD1	33.0	-33.5	.13	30.52	54	-23.48	-	-	-	-	V
4	* 4.716	41.15	PK1	34.0	-32.6	0	42.55	-	-	74	-31.45	-	-	V
4	* 4.713	29.88	AD1	340	-32.6	.13	31.41	54	-22.59	-	-	-	-	V
5	* 8.301	38.24	PK1	35.8	-29.3	0	44.74	-	-	74	-29.26	-	-	H
5	* 8.299	27.84	AD1	35.8	-29.3	.13	34.47	54	-19.53	-	-	-	-	H
6	9.808	37.05	PK1	37.1	-28.2	0	45.95	-	-	-	-	68.2	-22.25	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

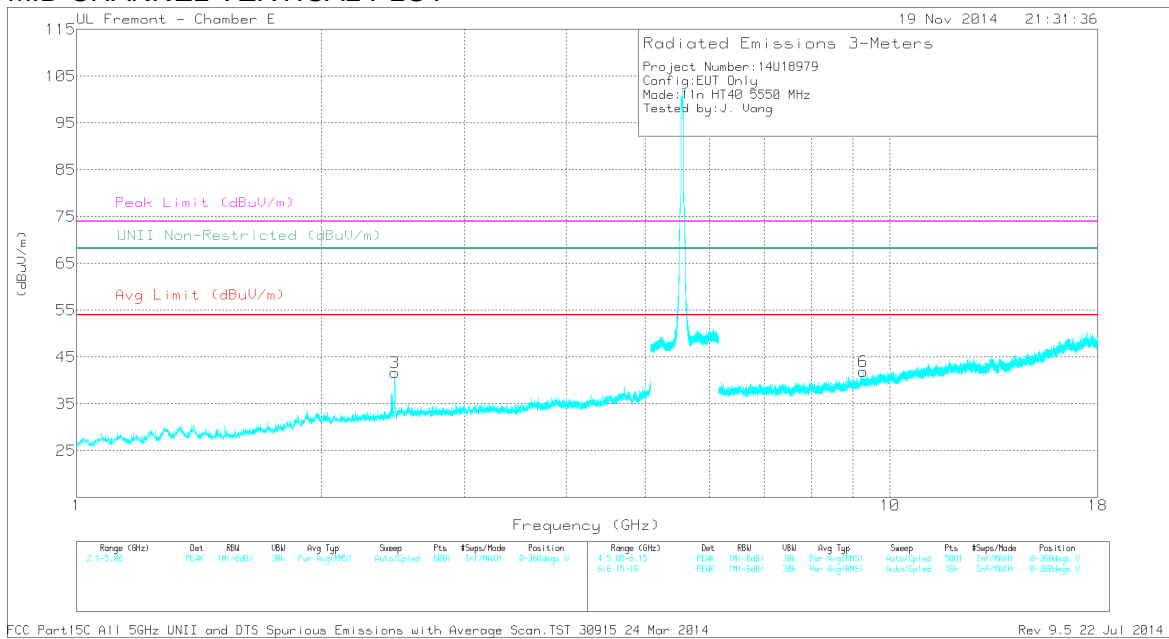
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

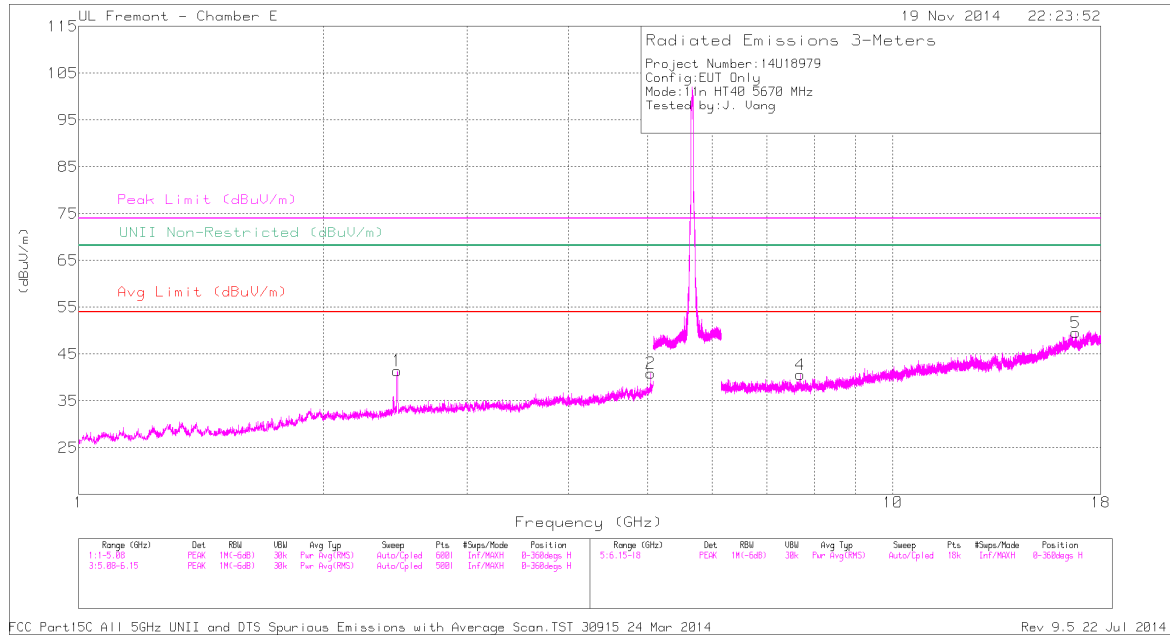
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT346 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Polarity
1	* 1.281	44.07	PK1	28.8	-34.3	0	38.57	-	-	74	-35.43	-	-	H
1	* 1.283	32.01	AD1	28.8	-34.3	.13	26.64	54	-27.36	-	-	-	-	H
2	* 4.810	43.65	PK1	34.1	-30.3	0	47.45	-	-	74	-26.55	-	-	H
2	* 4.810	34.22	AD1	34.1	-30.3	.13	38.15	54	-15.85	-	-	-	-	H
3	2.463	46.10	PK1	32.2	-32.8	0	45.50	-	-	-	-	68.2	-22.7	V
4	* 7.413	38.92	PK1	35.7	-27.8	0	46.82	-	-	74	-27.18	-	-	H
4	* 7.412	27.21	AD1	35.7	-27.8	.13	35.24	54	-18.76	-	-	-	-	H
5	16.494	35.42	PK1	41.0	-20.7	0	55.72	-	-	-	-	68.2	-12.48	H
6	9.268	36.57	PK1	36.6	-25.1	0	48.07	-	-	-	-	68.2	-20.13	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

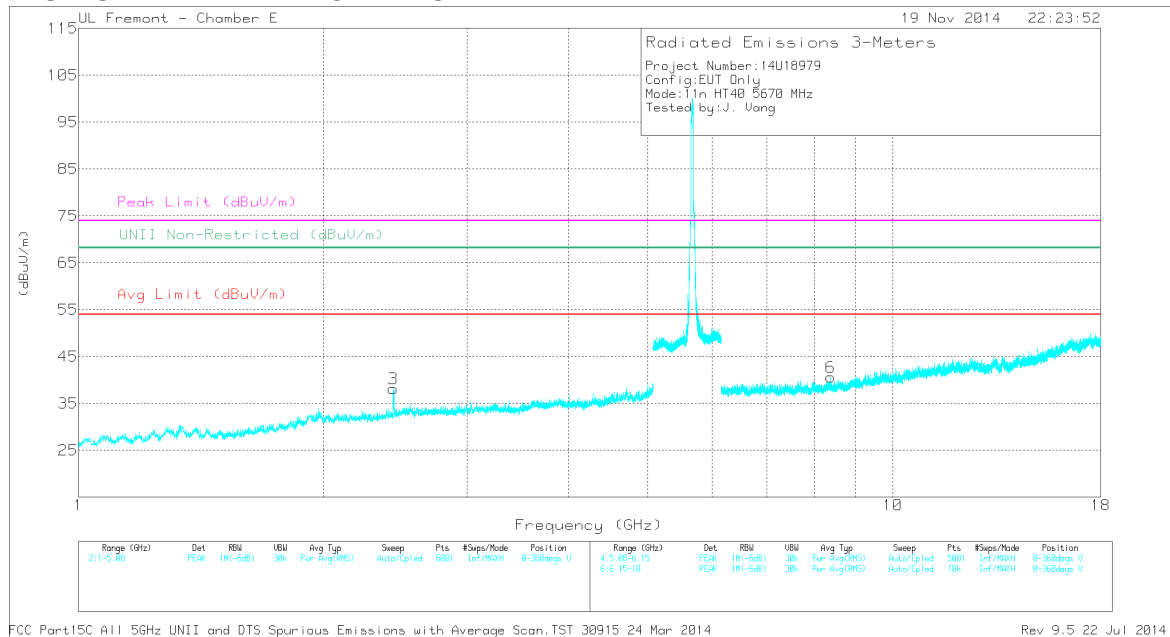
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT346 (dB/m)	Amp/Cbl /Filtr/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)	Polarity
1	2.463	42.05	PK1	32.2	-32.8	0	41.45	-	-	-	-	68.2	-26.75	H
2	* 5.040	42.90	PK1	34.1	-28.9	0	48.10	-	-	74	-25.90	-	-	H
2	* 5.040	34.12	AD1	34.1	-28.9	.13	39.45	54	-14.55	-	-	-	-	H
3	2.434	44.58	PK1	32.1	-33.1	0	43.58	-	-	-	-	68.2	-24.62	V
4	* 7.692	38.65	PK1	35.9	-27.2	0	47.35	-	-	74	-26.65	-	-	H
4	* 7.692	26.99	AD1	35.9	-27.2	.13	35.82	54	-18.18	-	-	-	-	H
5	16.773	35.55	PK1	41.0	-20.8	0	55.75	-	-	-	-	68.2	-12.45	H
6	* 8.383	35.67	PK1	35.9	-27.2	0	44.37	-	-	74	-29.63	-	-	V
6	* 8.384	24.18	AD1	35.9	-27.2	.13	33.01	54	-20.99	-	-	-	-	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

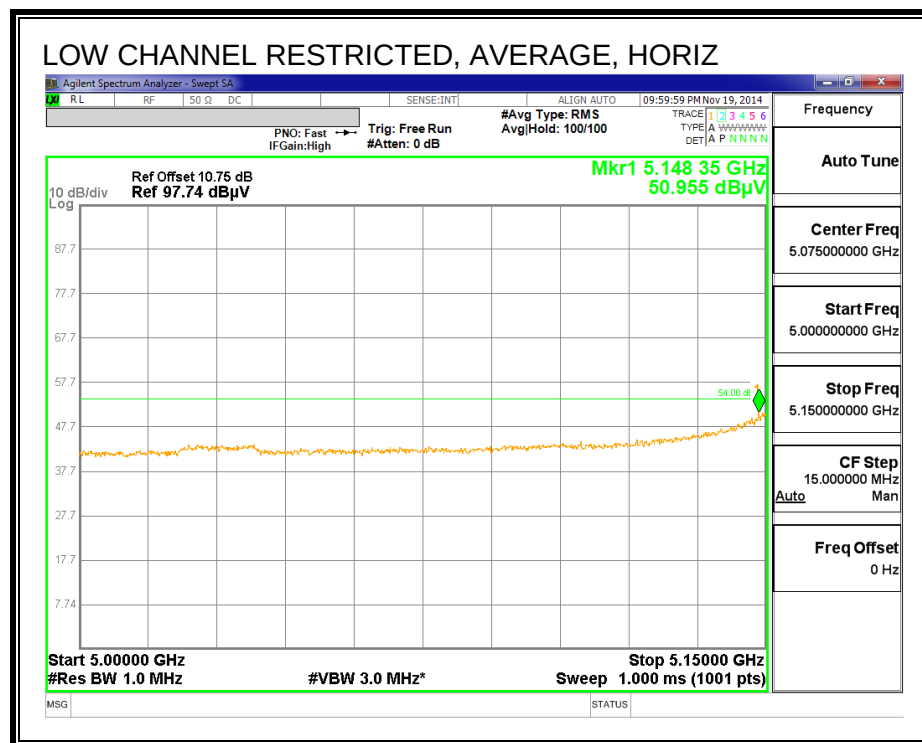
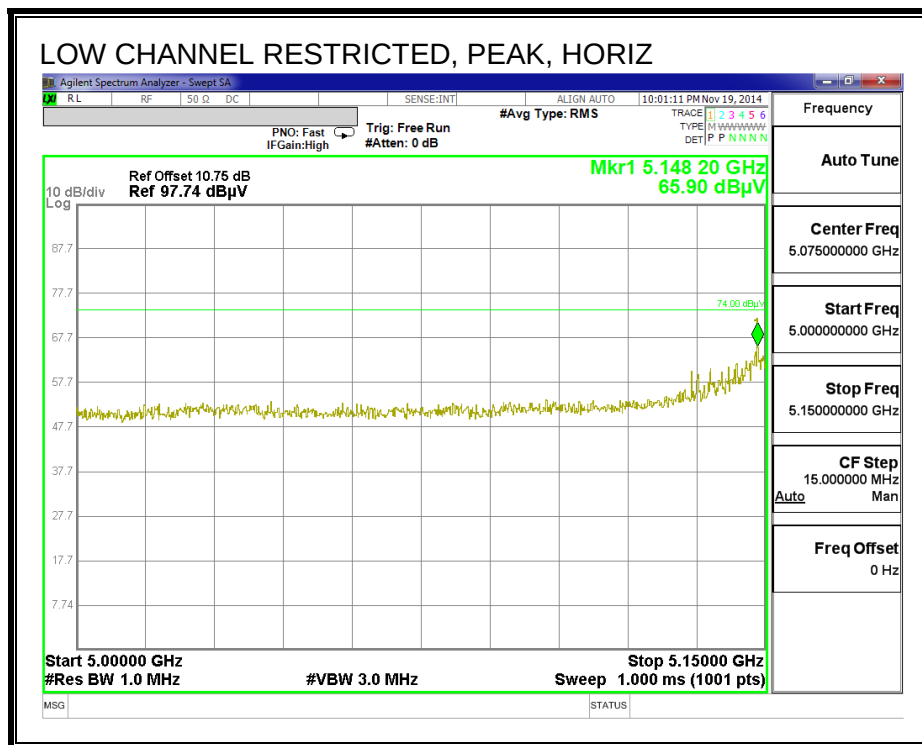
PK1 - KDB789033 Method: Peak

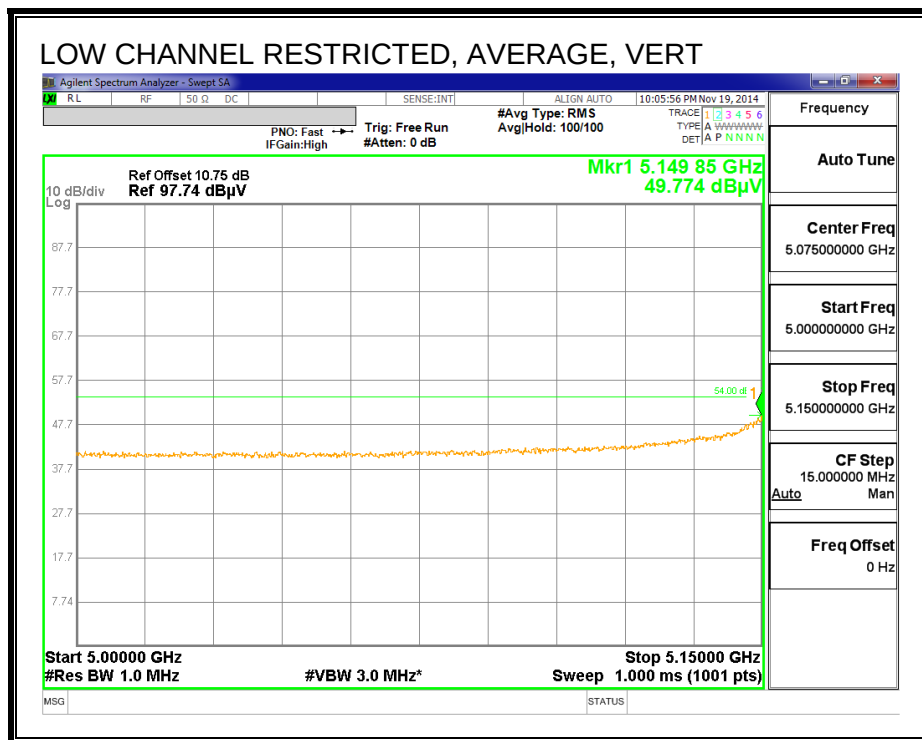
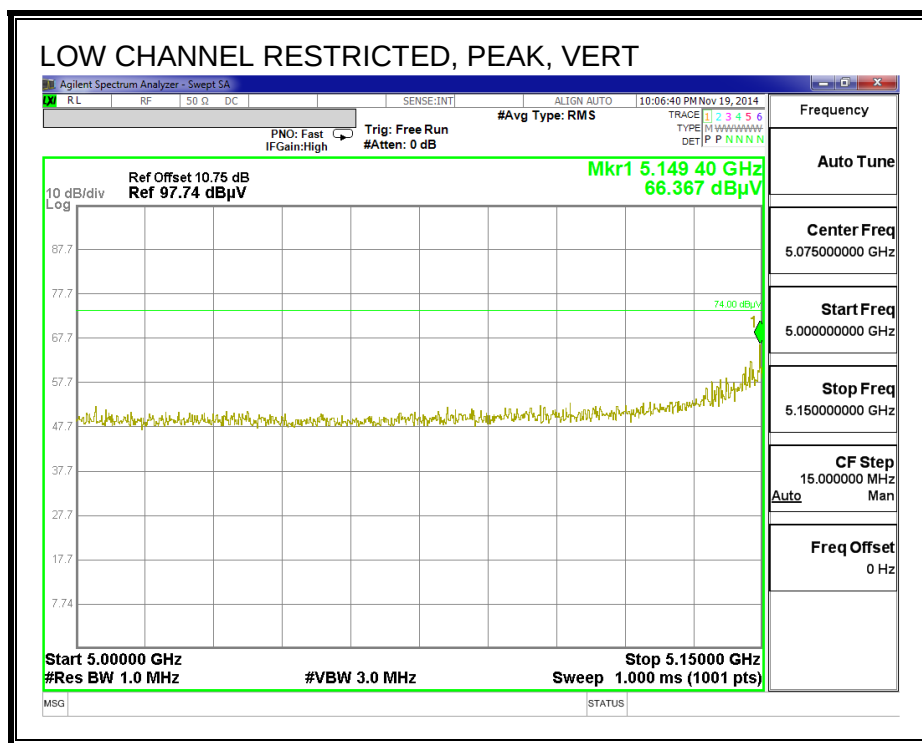
AD1 - KDB789033 Method: AD Primary Power Average

11.2. MODEL: A1623

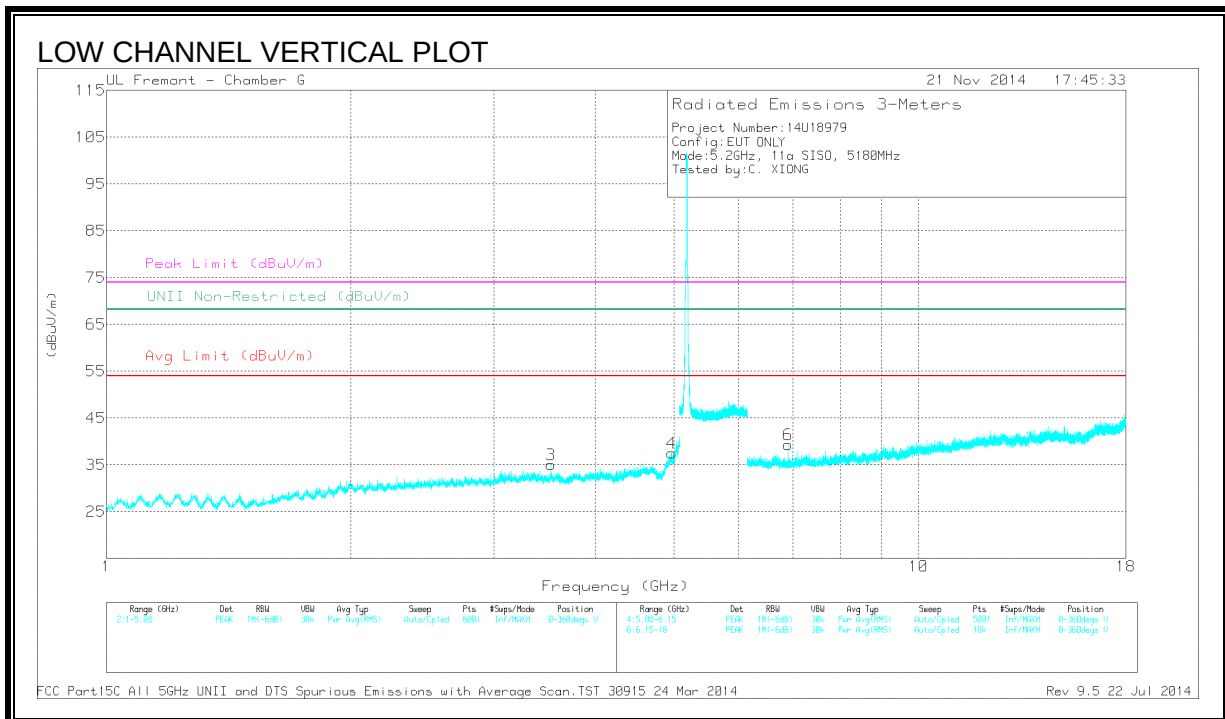
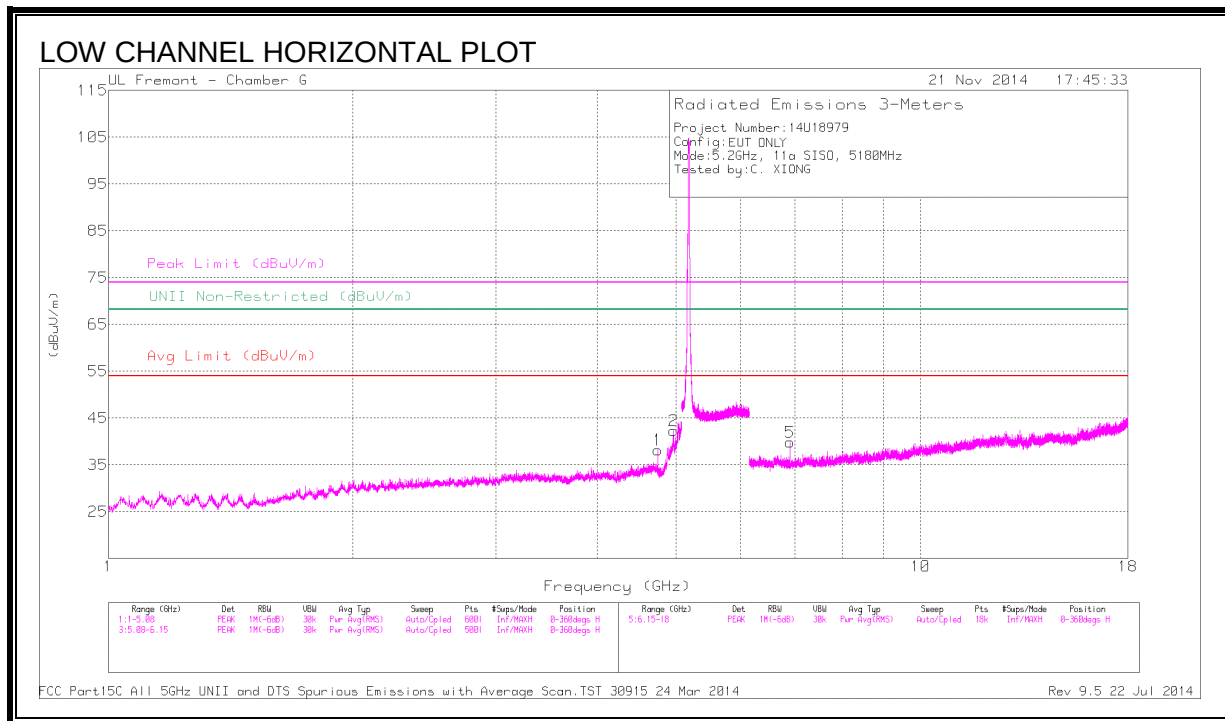
11.2.1. TX ABOVE 1 GHz 802.11a 1Tx MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)





HARMONICS AND SPURIOUS EMISSIONS



DATA

Radiated Emissions

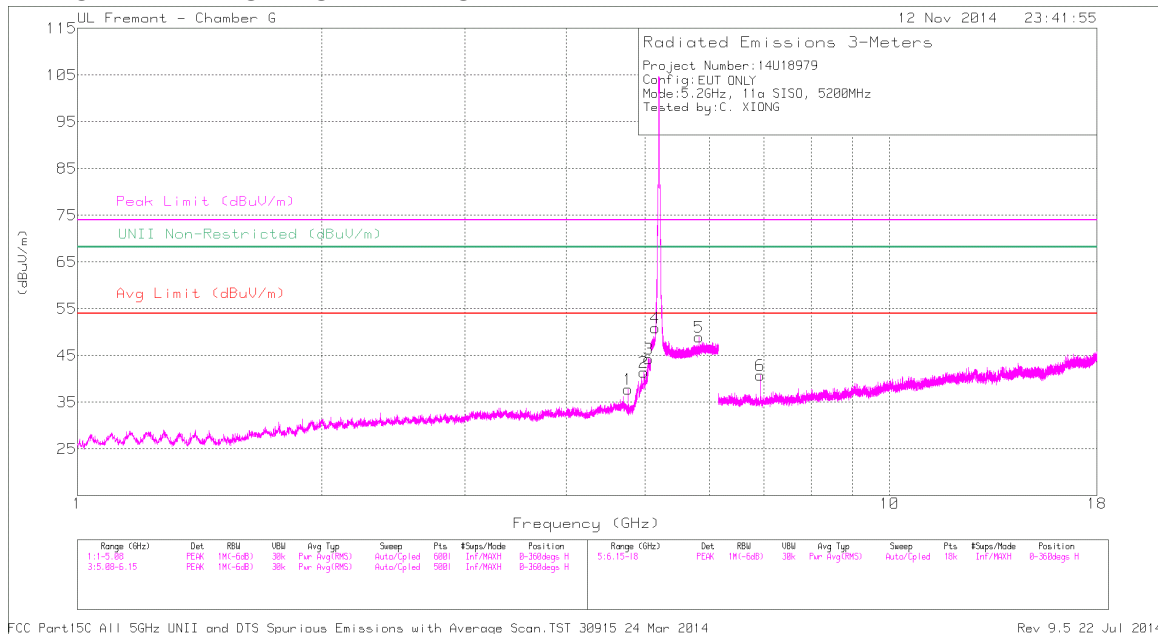
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Polarity
1	* 4.748	44.32	PK1	34.1	-32.8	45.62	-	-	74	-28.38	-	-	H
1	* 4.748	35.81	AD1	34.1	-32.8	37.11	54	-16.89	-	-	-	-	H
2	* 4.964	49.16	PK1	34.1	-31.8	51.46	-	-	74	-22.54	-	-	H
2	* 4.964	38.35	AD1	34.1	-31.8	40.65	54	-13.35	-	-	-	-	H
3	* 3.526	42.19	PK1	32.8	-33.5	41.49	-	-	74	-32.51	-	-	V
3	* 3.524	30.57	AD1	32.8	-33.5	29.87	54	-24.13	-	-	-	-	V
4	* 4.964	44.41	PK1	34.1	-31.8	46.71	-	-	74	-27.29	-	-	V
4	* 4.964	33.30	AD1	34.1	-31.8	35.60	54	-18.40	-	-	-	-	V
5	6.907	42.72	PK1	35.6	-31.8	46.52	-	-	-	-	68.2	-21.68	H
6	6.907	42.43	PK1	35.6	-31.8	46.23	-	-	-	-	68.2	-21.97	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

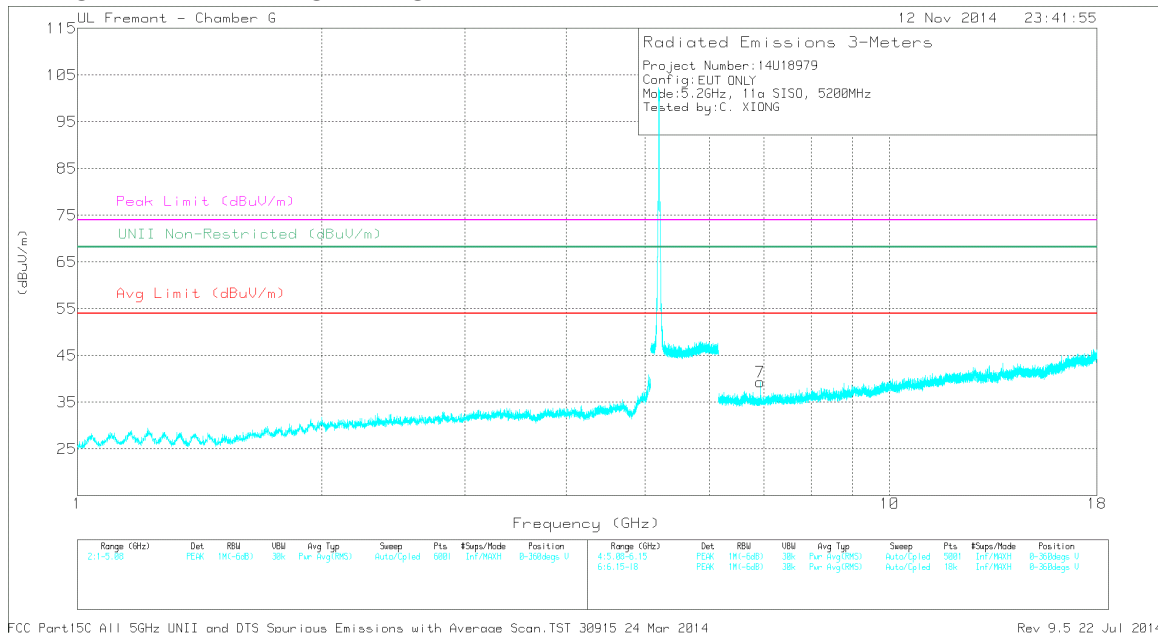
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

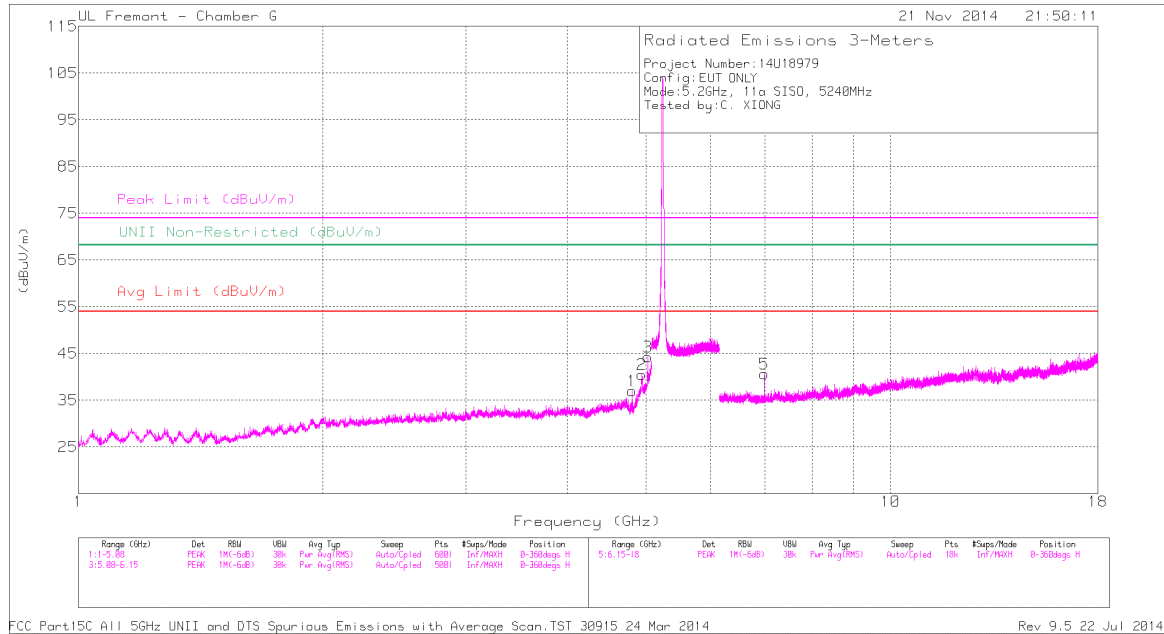
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Polarity
1	* 4.767	44.83	PK1	34.1	-32.8	46.13	-	-	74	-27.87	-	-	H
1	* 4.767	35.55	AD1	34.1	-32.8	36.85	54	-17.15	-	-	-	-	H
2	* 4.983	48.95	PK1	34.1	-31.9	51.15	-	-	74	-22.85	-	-	H
2	* 4.983	38.63	AD1	34.1	-31.9	40.83	54	-13.17	-	-	-	-	H
3	* 5.048	50.21	PK1	34.2	-31.4	53.01	-	-	74	-20.99	-	-	H
3	* 5.044	39.10	AD1	34.2	-31.5	41.80	54	-12.20	-	-	-	-	H
4	* 5.143	52.17	PK1	34.3	-23.7	62.77	-	-	74	-11.23	-	-	H
4	* 5.146	36.08	AD1	34.3	-23.6	46.78	54	-7.22	-	-	-	-	H
5	5.835	43.52	PK1	34.9	-23.6	54.82	-	-	-	-	68.2	-13.38	H
6	6.933	44.26	PK1	35.6	-31.9	47.96	-	-	-	-	68.2	-20.24	H
7	6.934	42.79	PK1	35.6	-31.9	46.49	-	-	-	-	68.2	-21.71	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

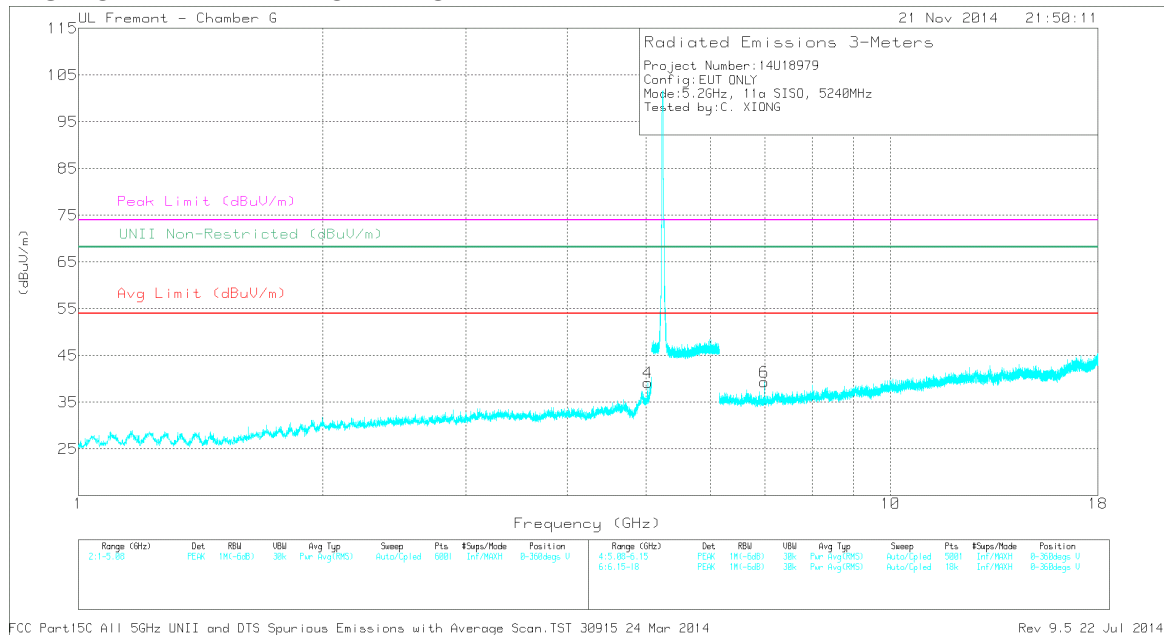
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Filtr/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)	Polarity
1	* 4.803	44.13	PK1	34.1	-32.9	45.33	-	-	74	-28.67	-	-	H
1	* 4.803	35.62	AD1	34.1	-32.9	36.82	54	-17.18	-	-	-	-	H
2	* 4.943	45.81	PK1	34.1	-31.7	48.21	-	-	74	-25.79	-	-	H
2	* 4.943	35.26	AD1	34.1	-31.7	37.66	54	-16.34	-	-	-	-	H
3	* 5.022	49.23	PK1	34.1	-32.0	51.33	-	-	74	-22.67	-	-	H
3	* 5.022	40.82	AD1	34.1	-32.1	42.82	54	-11.18	-	-	-	-	H
4	* 5.022	47.84	PK1	34.1	-32.1	49.84	-	-	74	-24.16	-	-	V
4	* 5.022	38.90	AD1	34.1	-32.1	40.9	54	-13.10	-	-	-	-	V
5	6.986	42.87	PK1	35.6	-31.7	46.77	-	-	-	-	68.2	-21.43	H
6	6.987	42.47	PK1	35.6	-31.7	46.37	-	-	-	-	68.2	-21.83	V

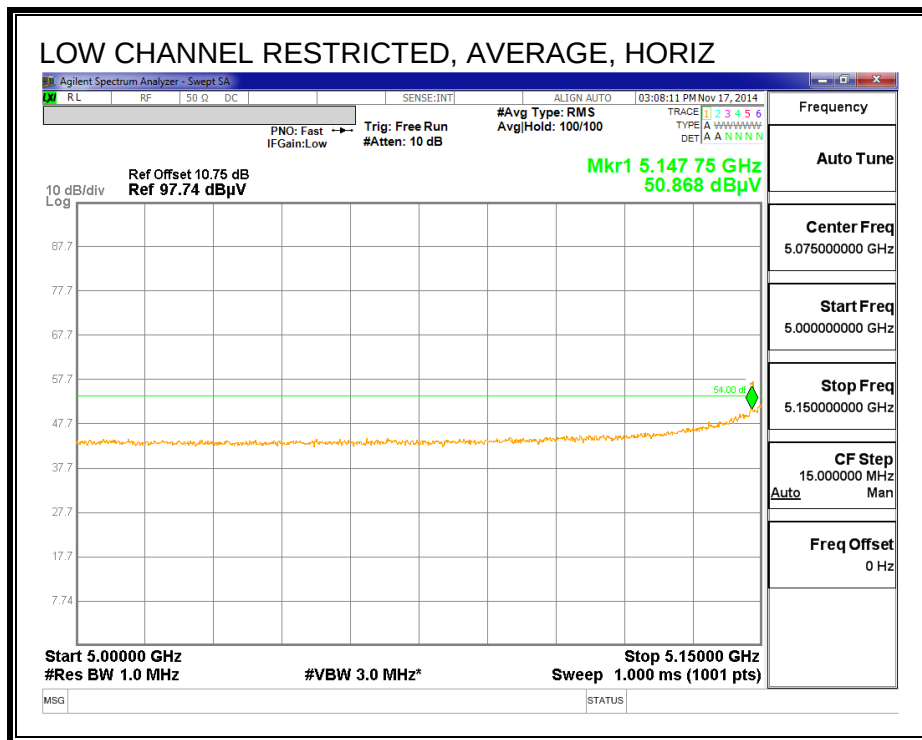
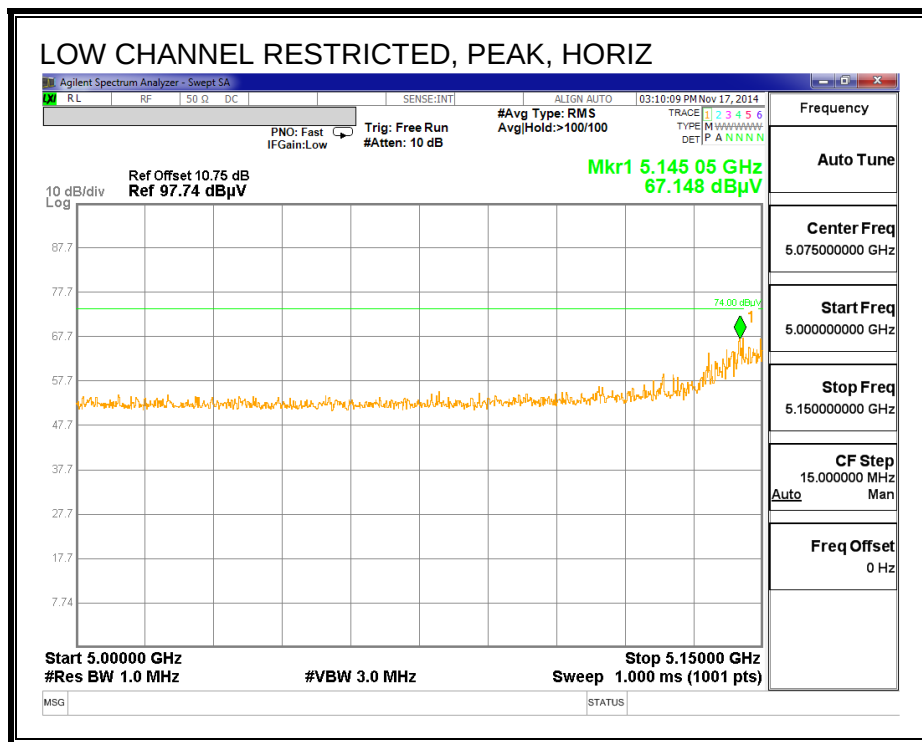
* - indicates frequency in CFR15.205/IC8.10 Restricted Band

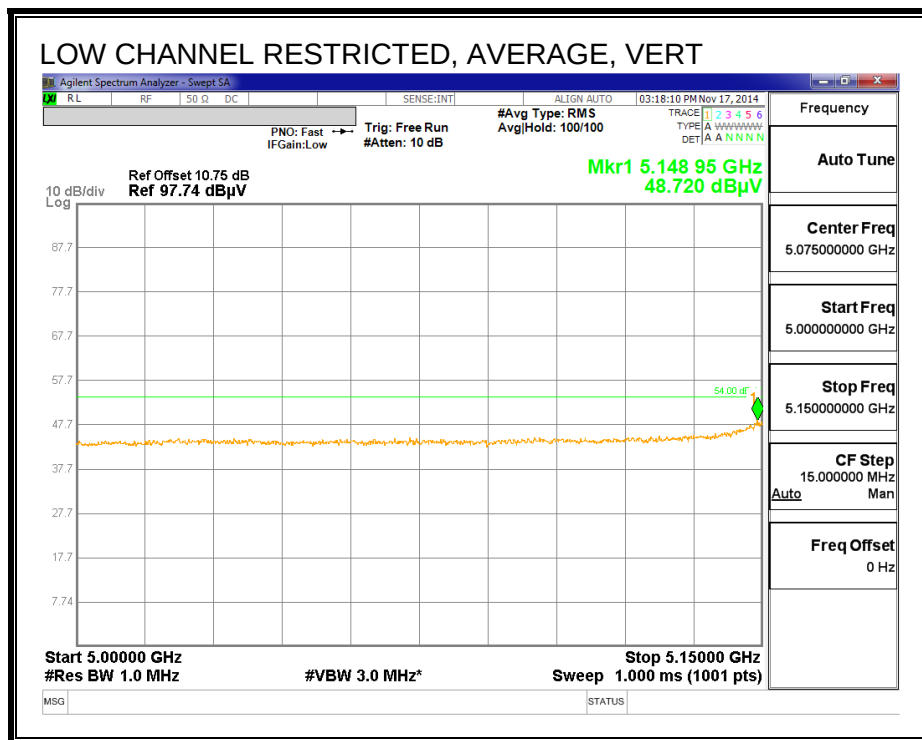
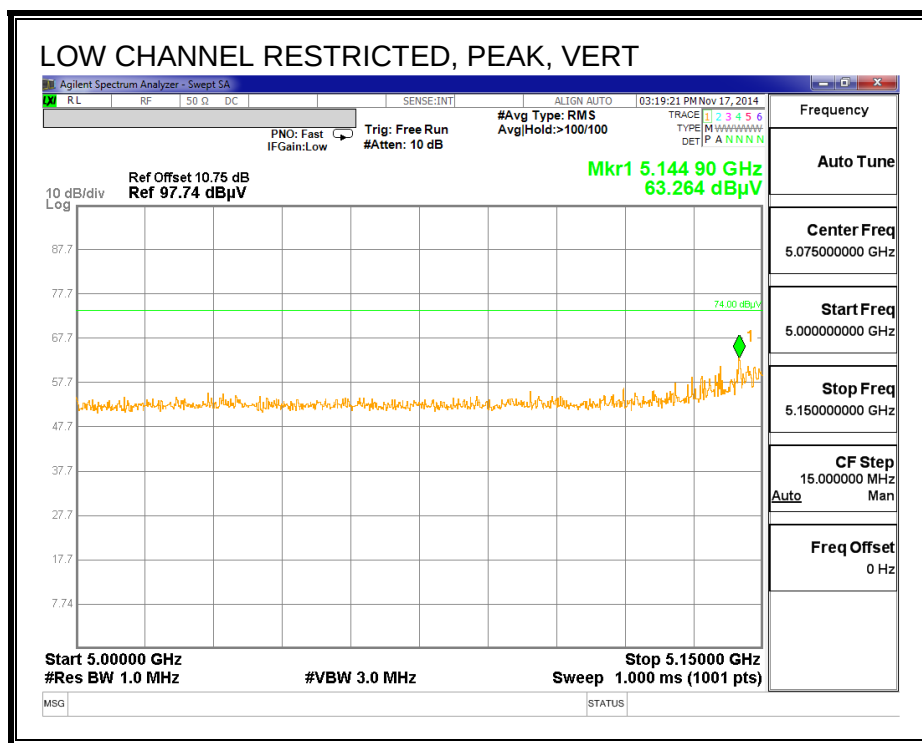
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

11.2.2. TX ABOVE 1 GHz 802.11n HT20 1Tx MODE IN THE 5.2 GHz BAND

RESTRICTED BANEDGE (LOW CHANNEL)



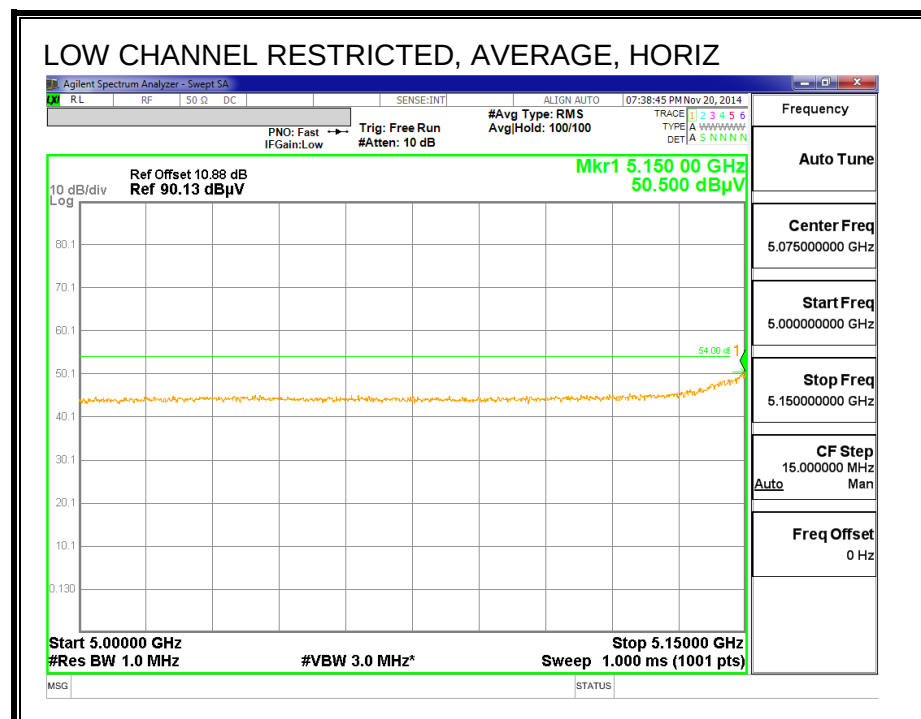
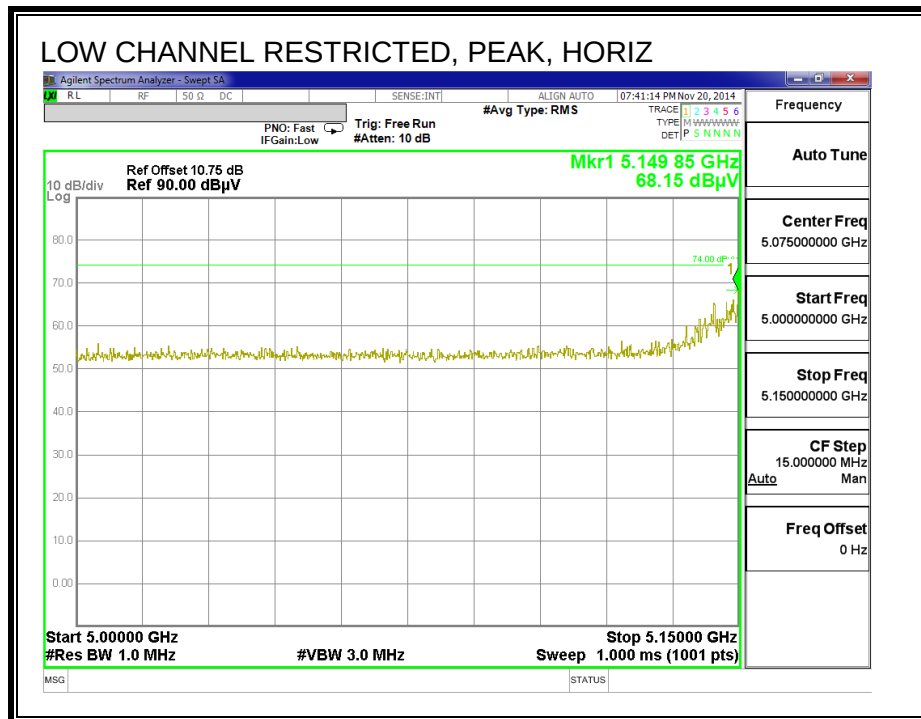


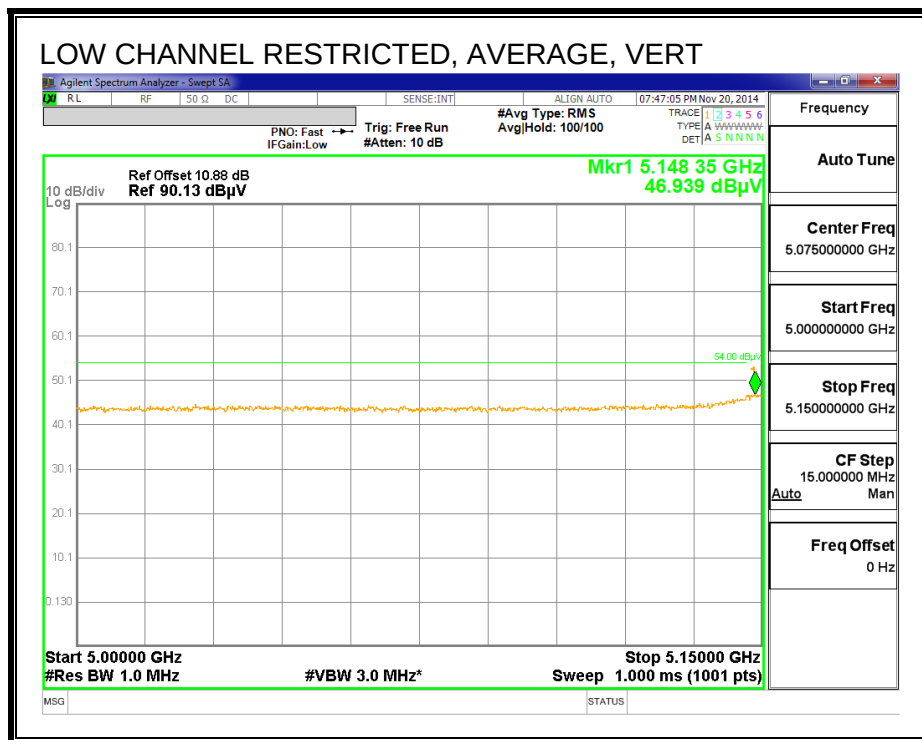
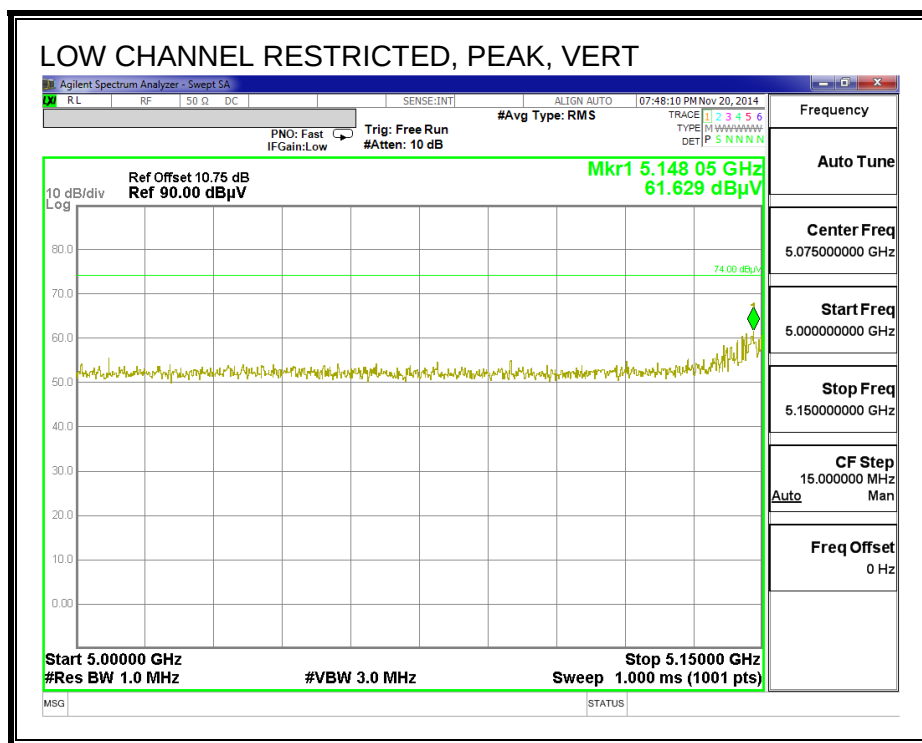
HARMONICS AND SPURIOUS EMISSIONS

Note: this test is covered on by testing to 11a 1Tx Mode.

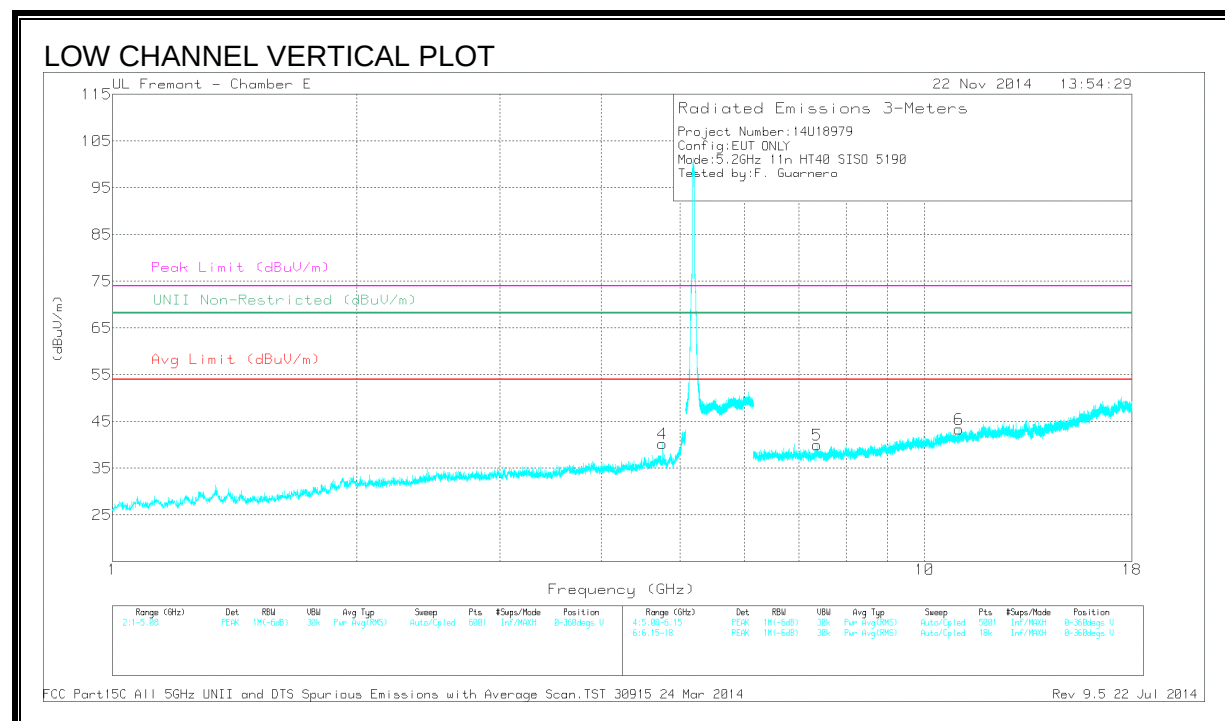
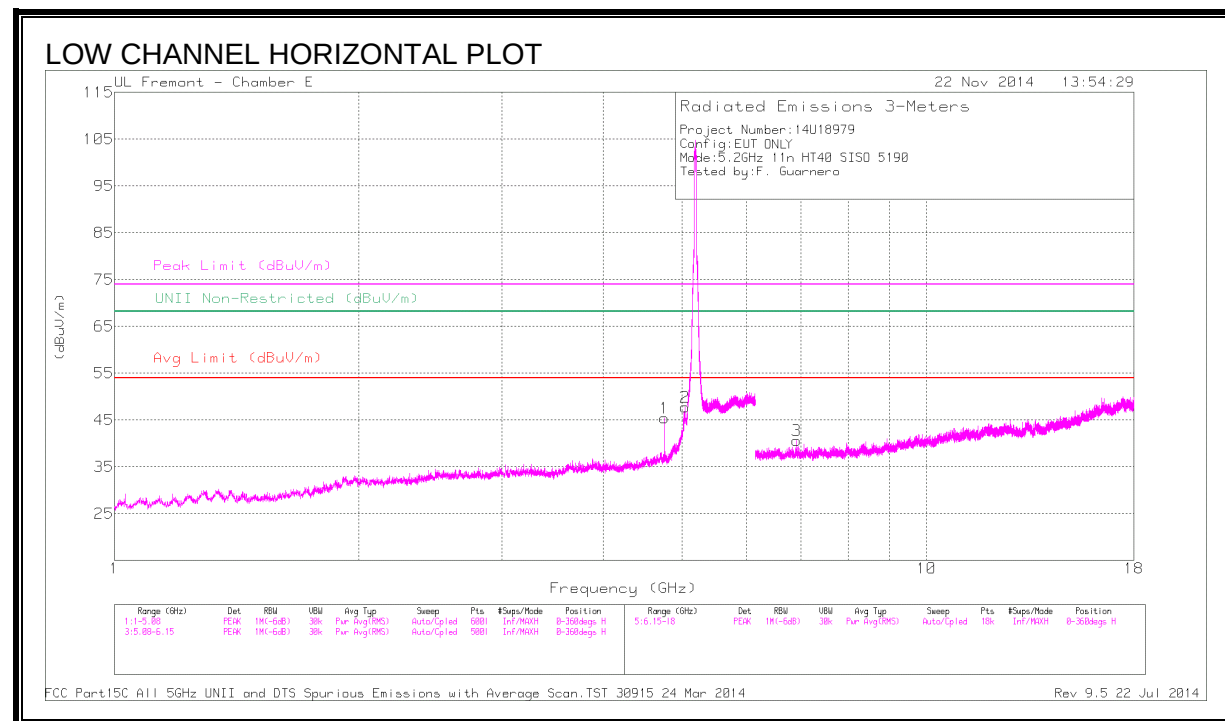
11.2.3. TX ABOVE 1 GHz 802.11n HT40 1Tx MODE IN THE 5.2 GHz BAND

RESTRICTED BANEDGE (LOW CHANNEL)





HARMONICS AND SPURIOUS EMISSIONS



DATA

Radiated Emissions

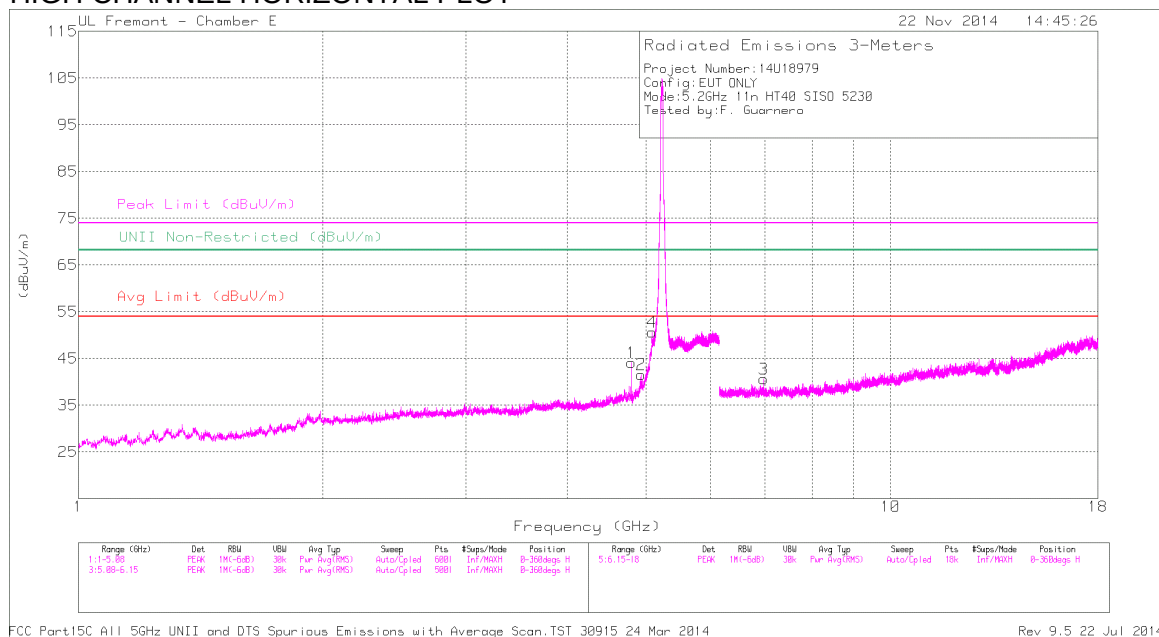
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Polarity
1	* 4.757	48.43	PK1	34.1	-30.6	0	51.93	-	-	74	-22.07	-	-	H
1	* 4.758	42.10	AD1	34.1	-30.6	.13	45.73	54	-8.27	-	-	-	-	H
2	* 5.040	50.29	PK1	34.1	-28.9	0	55.49	-	-	74	-18.51	-	-	H
2	* 5.043	39.13	AD1	34.1	-28.8	.13	44.56	54	-9.44	-	-	-	-	H
3	6.920	41.58	PK1	35.9	-28.4	0	49.08	-	-	-	-	68.2	-19.12	H
4	* 4.757	44.67	PK1	34.1	-30.6	0	48.17	-	-	74	-25.83	-	-	V
4	* 4.758	35.36	AD1	34.1	-30.6	.13	38.99	54	-15.01	-	-	-	-	V
5	* 7.378	38.91	PK1	35.7	-27.0	0	47.61	-	-	74	-26.39	-	-	V
5	* 7.377	26.86	AD1	35.7	-27.0	.13	35.69	54	-18.31	-	-	-	-	V
6	* 11.028	36.08	PK1	37.9	-24.1	0	49.88	-	-	74	-24.12	-	-	V
6	* 11.031	24.92	AD1	37.9	-24.1	.13	38.85	54	-15.15	-	-	-	-	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

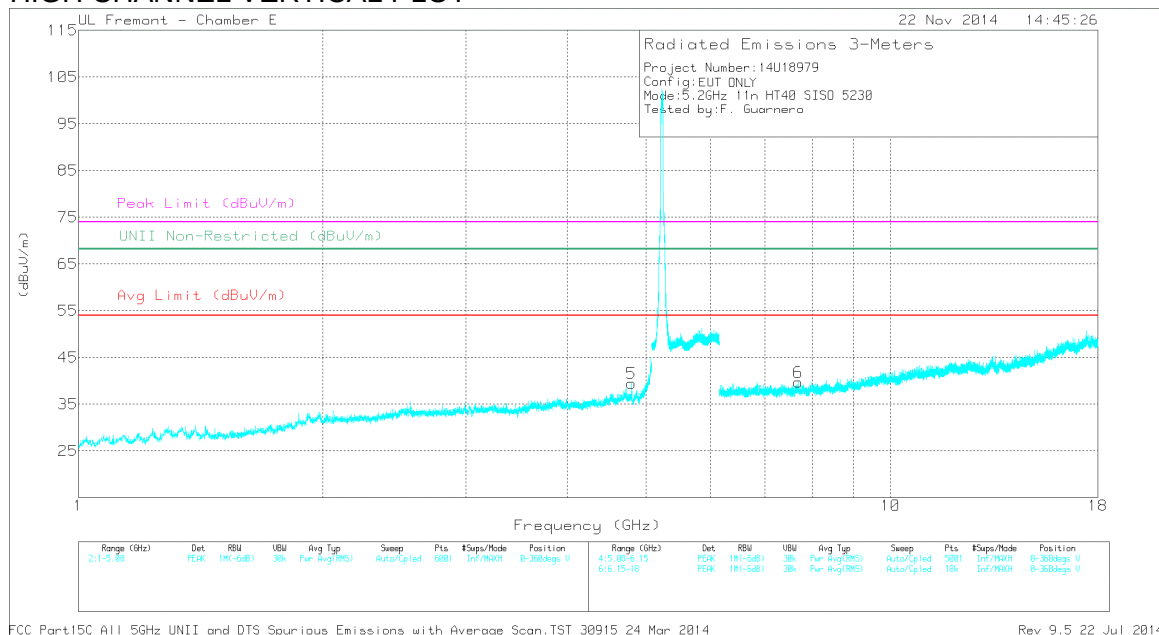
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl /Filtr/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)	Polarity
1	* 4.794	46.89	PK1	34.1	-30.2	0	50.79	-	-	74	-23.21	-	-	H
1	* 4.794	40.18	AD1	34.1	-30.2	.13	44.21	54	-9.79	-	-	-	-	H
2	* 4.933	43.53	PK1	34.1	-29.7	0	47.93	-	-	74	-26.07	-	-	H
2	* 4.932	32.80	AD1	34.1	-29.7	.13	37.33	54	-16.67	-	-	-	-	H
3	6.973	41.26	PK1	35.9	-28.3	0	48.86	-	-	-	-	68.2	-19.34	H
4	* 5.086	46.39	PK1	34.1	-21.6	0	58.89	-	-	74	-15.11	-	-	H
4	* 5.085	34.45	AD1	34.1	-21.6	.13	47.08	54	-6.92	-	-	-	-	H
5	* 4.794	43.85	PK1	34.1	-30.2	0	47.75	-	-	74	-26.25	-	-	V
5	* 4.794	34.06	AD1	34.1	-30.2	.13	38.09	54	-15.91	-	-	-	-	V
6	* 7.699	38.12	PK1	35.9	-27.4	0	46.62	-	-	74	-27.38	-	-	V
6	* 7.698	27.07	AD1	35.9	-27.4	.13	35.7	54	-18.3	-	-	-	-	V

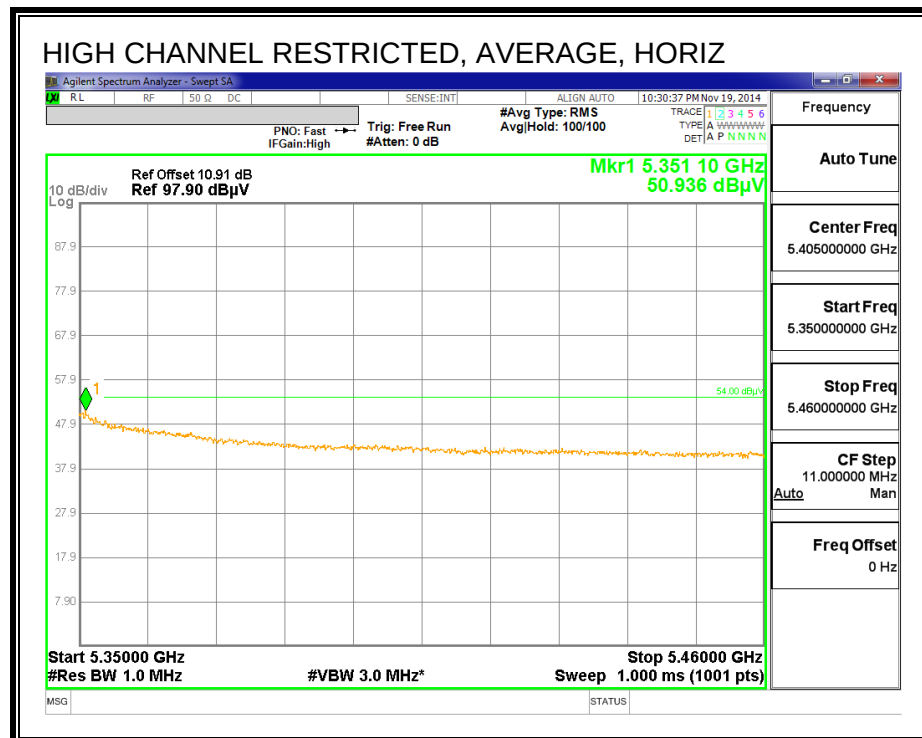
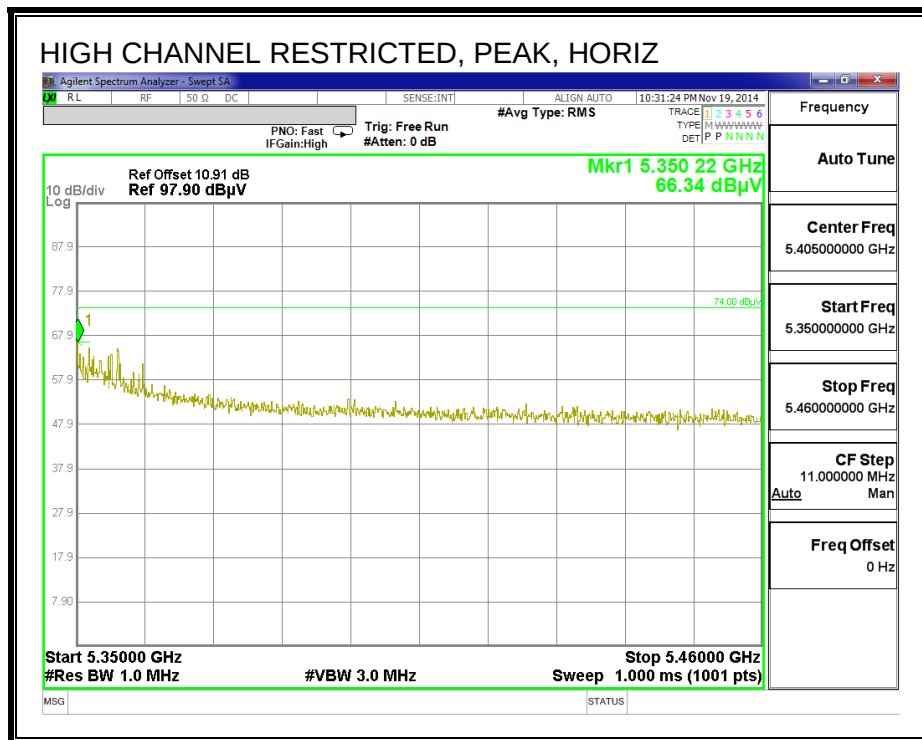
* - indicates frequency in CFR15.205/IC8.10 Restricted Band

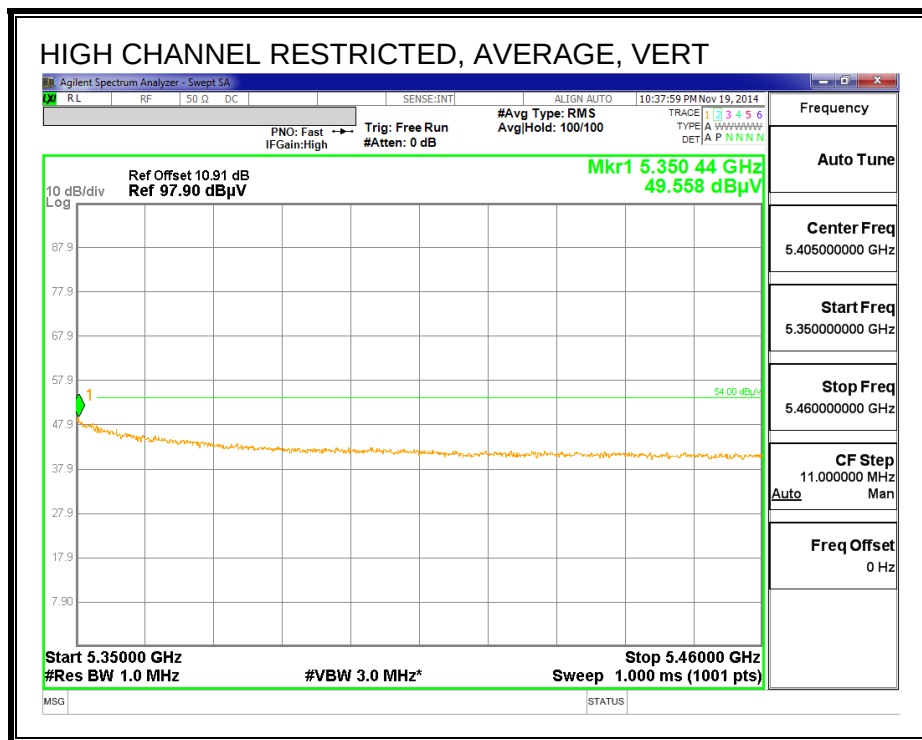
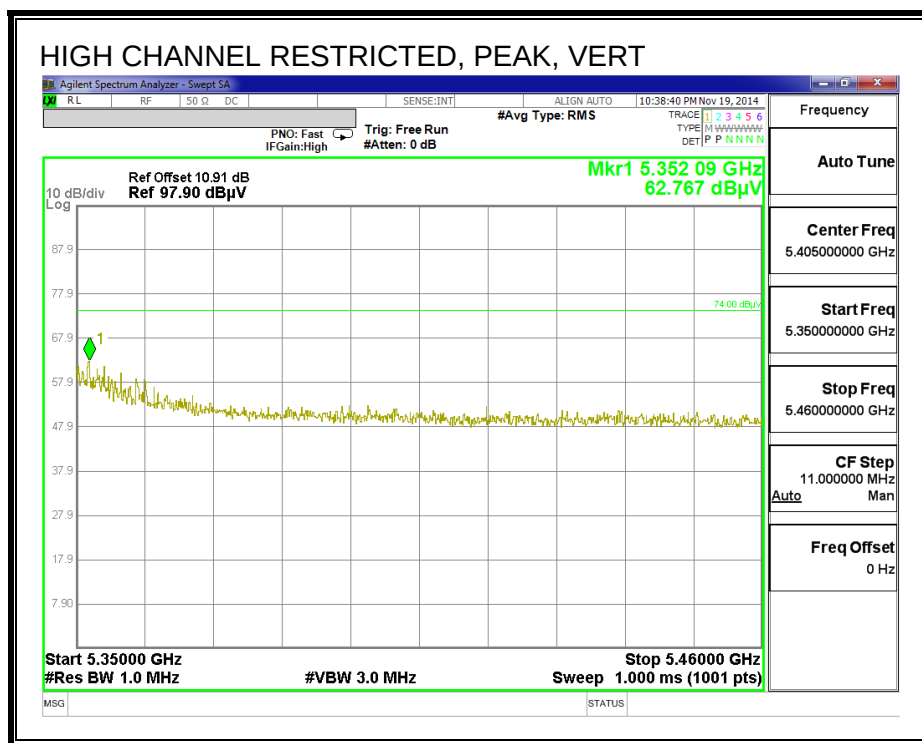
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

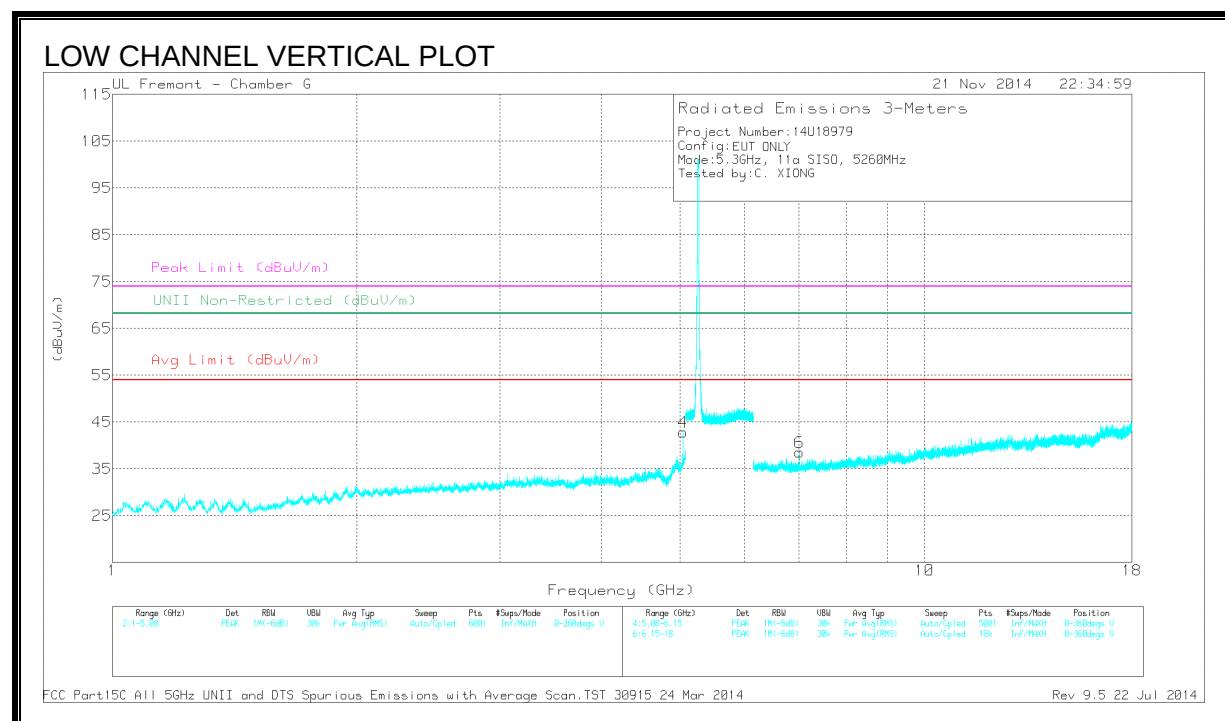
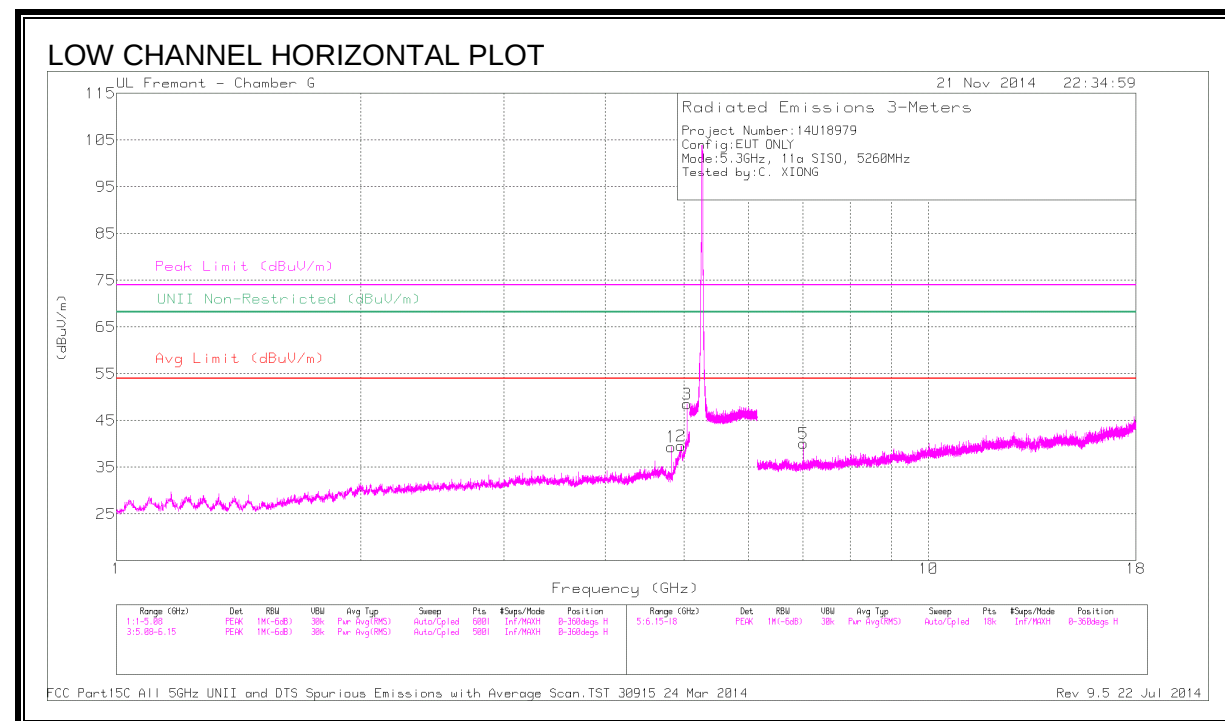
11.2.4. TX ABOVE 1 GHz 802.11a 1Tx MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)





HARMONICS AND SPURIOUS EMISSIONS



DATA

Radiated Emissions

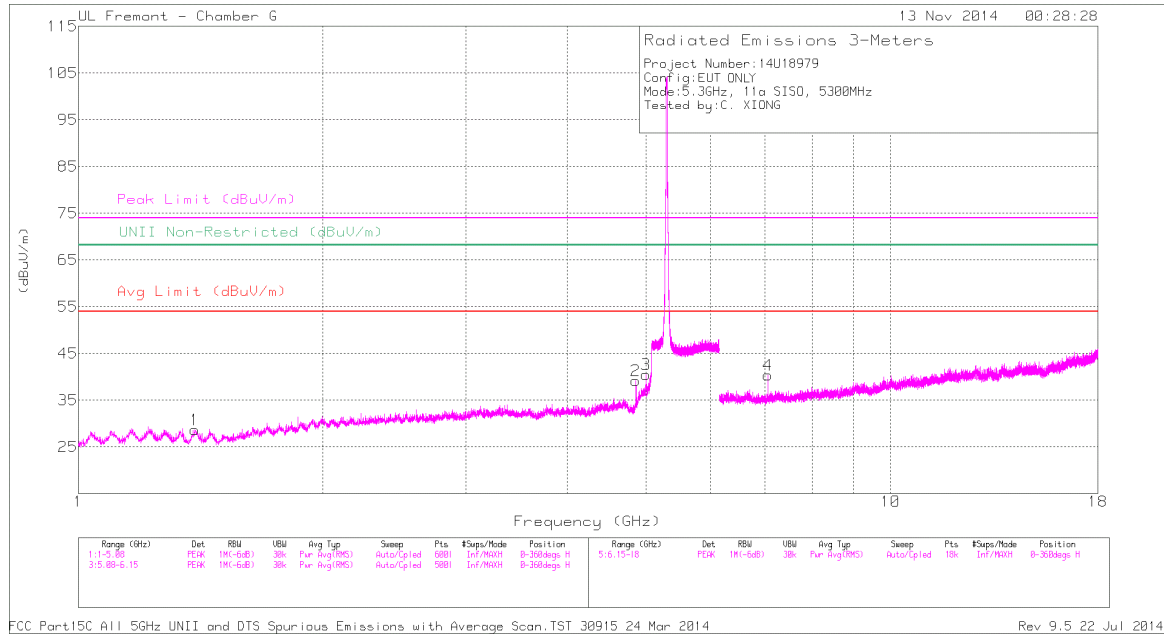
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Polarity
1	* 4.822	43.10	PK1	34.1	-32.6	44.60	-	-	74	-29.4	-	-	H
1	* 4.822	35.32	AD1	34.1	-32.6	36.82	54	-17.18	-	-	-	-	H
2	* 4.959	46.26	PK1	34.1	-31.8	48.56	-	-	74	-25.44	-	-	H
2	* 4.959	34.81	AD1	34.1	-31.9	37.01	54	-16.99	-	-	-	-	H
3	* 5.041	51.76	PK1	34.2	-31.6	54.36	-	-	74	-19.64	-	-	H
3	* 5.041	44.17	AD1	34.2	-31.6	46.77	54	-7.23	-	-	-	-	H
4	* 5.041	49.61	PK1	34.2	-31.6	52.21	-	-	74	-21.79	-	-	V
4	* 5.041	42.34	AD1	34.2	-31.6	44.94	54	-9.06	-	-	-	-	V
5	7.013	42.83	PK1	35.6	-31.6	46.83	-	-	-	-	68.2	-21.37	H
6	7.013	41.84	PK1	35.6	-31.6	45.84	-	-	-	-	68.2	-22.36	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

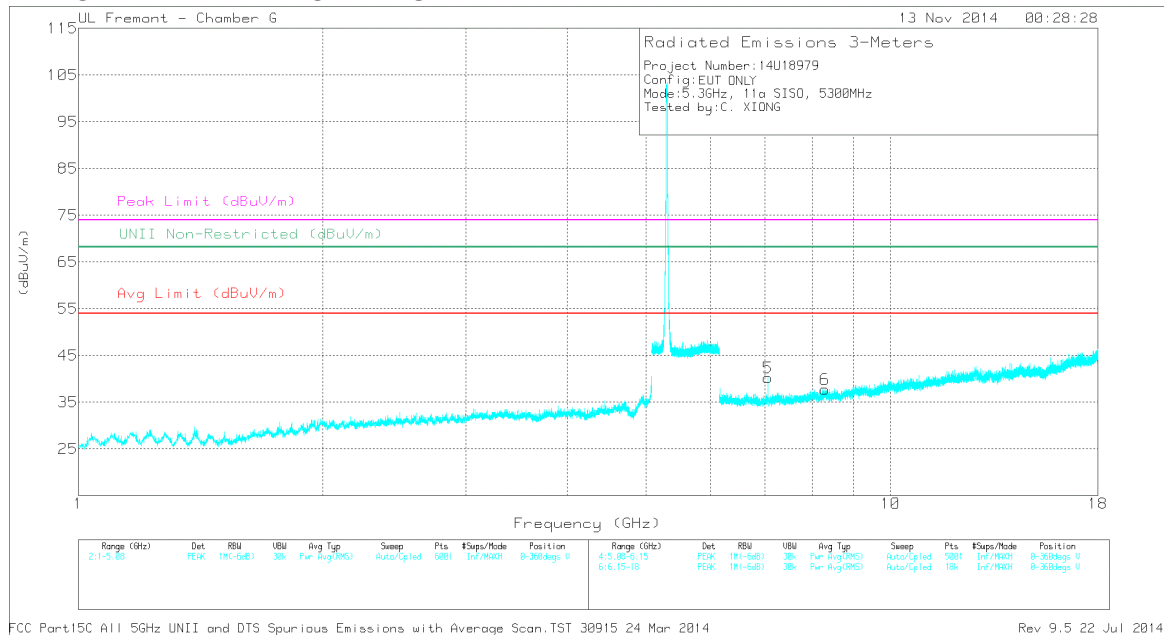
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

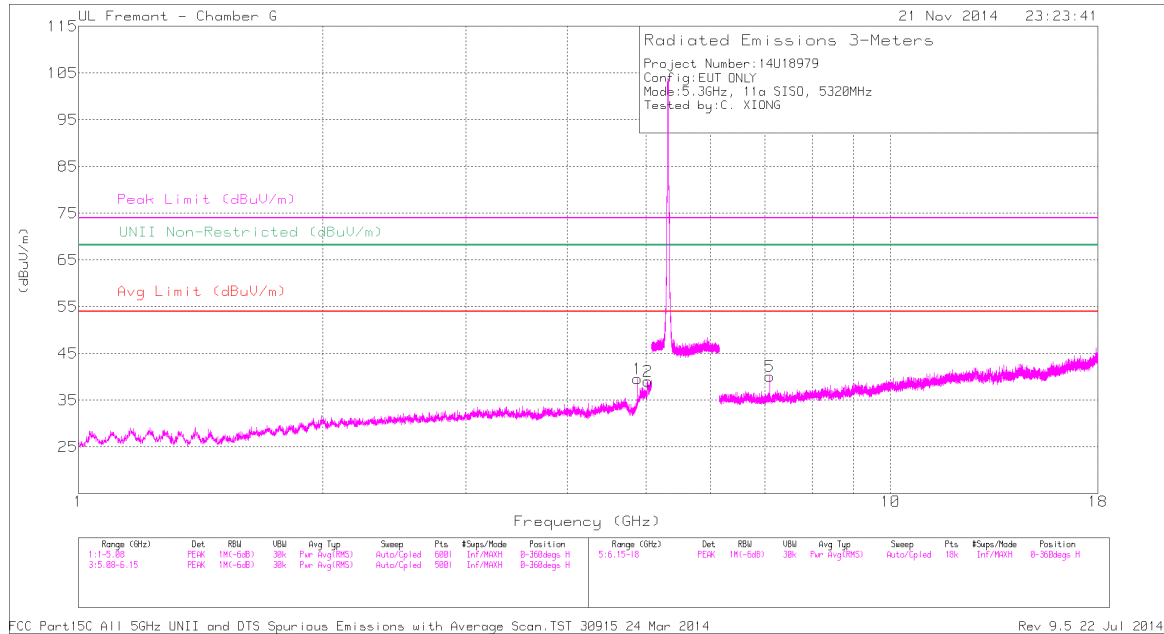
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Polarity
1	* 1.391	44.03	PK1	28.5	-35.1	37.43	-	-	74	-36.57	-	-	H
1	* 1.393	31.73	AD1	28.5	-35.1	25.13	54	-28.87	-	-	-	-	H
2	* 4.859	42.96	PK1	34.1	-32.4	44.66	-	-	74	-29.34	-	-	H
2	* 4.858	34.88	AD1	34.1	-32.4	36.58	54	-17.42	-	-	-	-	H
3	* 4.999	46.38	PK1	34.1	-32.1	48.38	-	-	74	-25.62	-	-	H
3	* 5.003	35.30	AD1	34.1	-32.2	37.20	54	-16.80	-	-	-	-	H
4	7.067	43.46	PK1	35.6	-31.8	47.26	-	-	-	-	68.2	-20.94	H
5	7.067	42.98	PK1	35.6	-31.8	46.78	-	-	-	-	68.2	-21.42	V
6	* 8.302	35.18	PK1	35.8	-29.3	41.68	-	-	74	-32.32	-	-	V
6	* 8.300	23.72	AD1	35.8	-29.3	30.22	54	-23.78	-	-	-	-	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

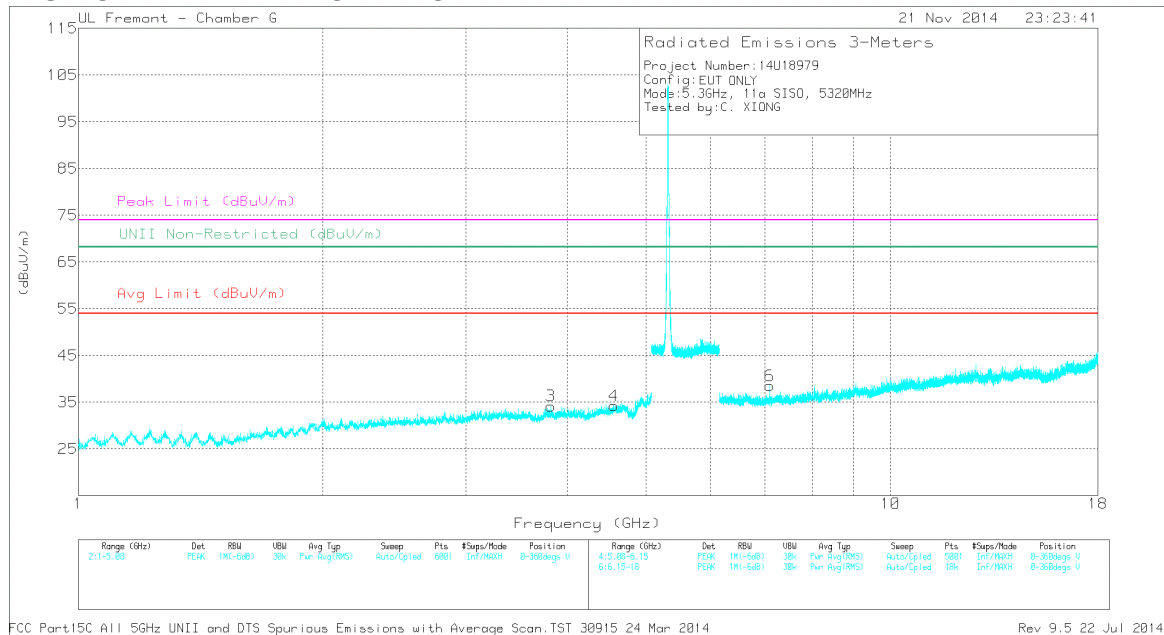
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Filtr/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)	Polarity
1	* 4.877	43.97	PK1	34.1	-32.1	45.97	-	-	74	-28.03	-	-	H
1	* 4.877	36.34	AD1	34.1	-32.1	38.34	54	-15.66	-	-	-	-	H
2	* 5.026	45.42	PK1	34.1	-32.0	47.52	-	-	74	-26.48	-	-	H
2	* 5.026	34.55	AD1	34.1	-32.0	36.65	54	-17.35	-	-	-	-	H
3	* 3.814	41.37	PK1	33.0	-33.3	41.07	-	-	74	-32.93	-	-	V
3	* 3.816	29.85	AD1	330	-33.3	29.55	54	-24.45	-	-	-	-	V
4	* 4.565	40.95	PK1	33.8	-32.7	42.05	-	-	74	-31.95	-	-	V
4	* 4.566	29.32	AD1	33.8	-32.7	30.42	54	-23.58	-	-	-	-	V
5	7.094	42.50	PK1	35.6	-31.6	46.50	-	-	-	-	68.2	-21.70	H
6	7.093	42.41	PK1	35.6	-31.6	46.41	-	-	-	-	68.2	-21.79	V

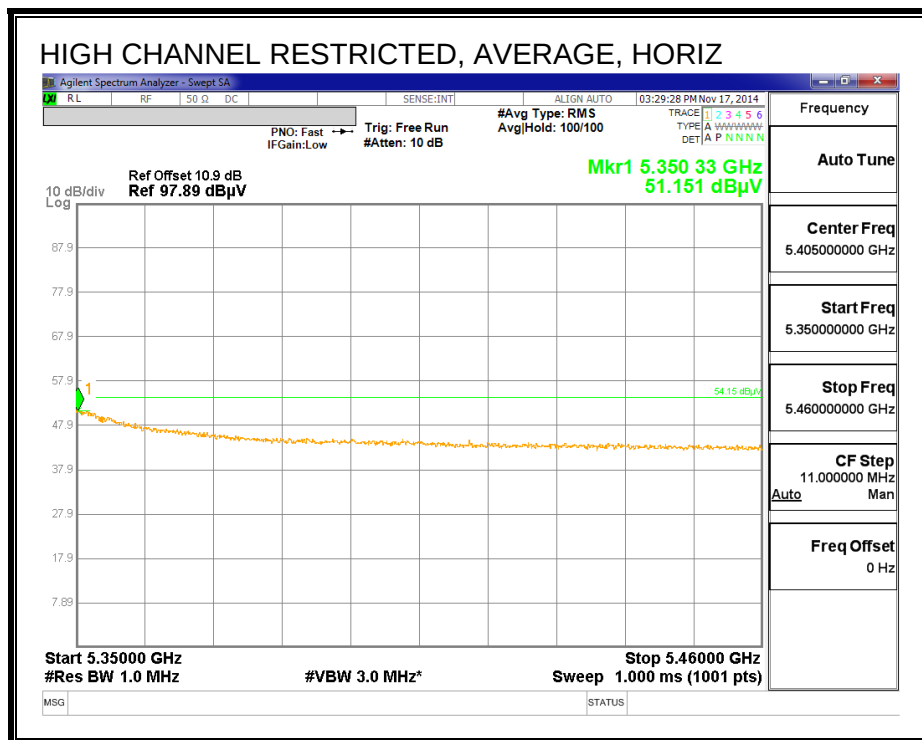
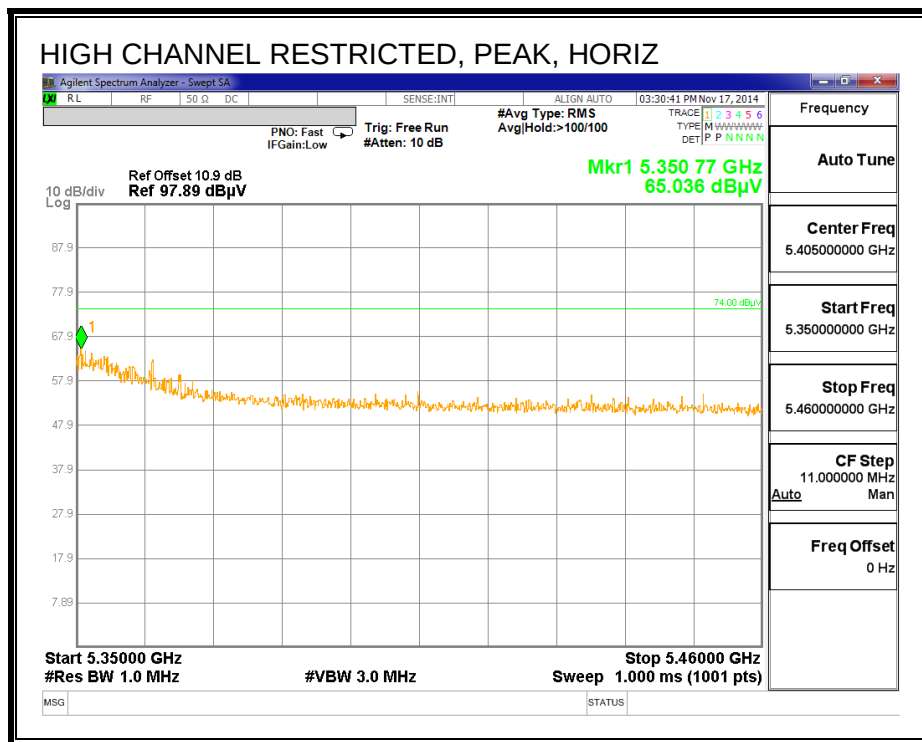
* - indicates frequency in CFR15.205/IC8.10 Restricted Band

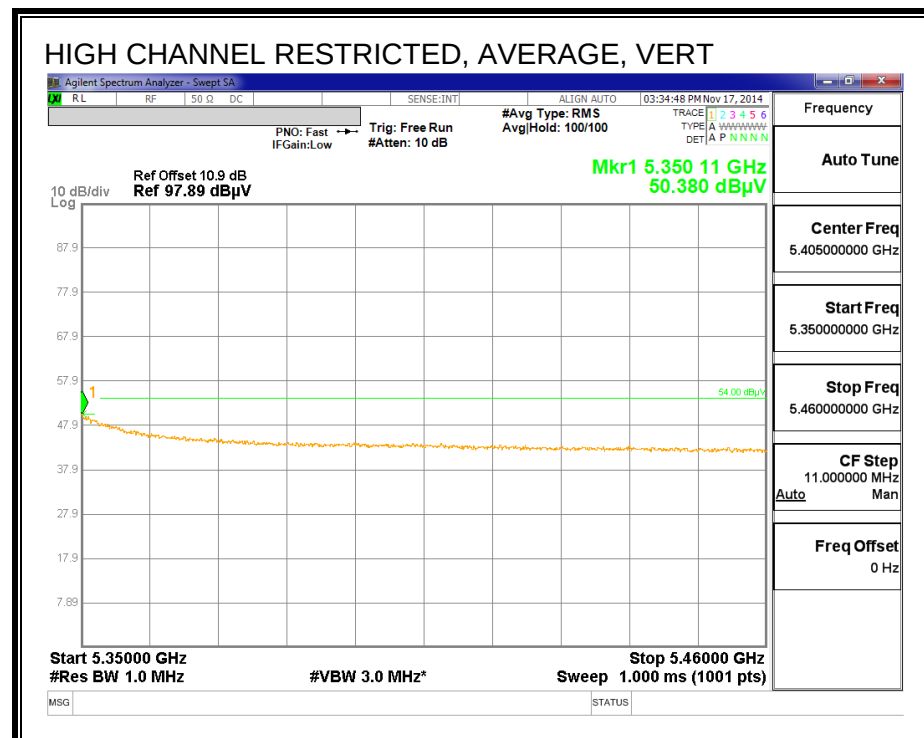
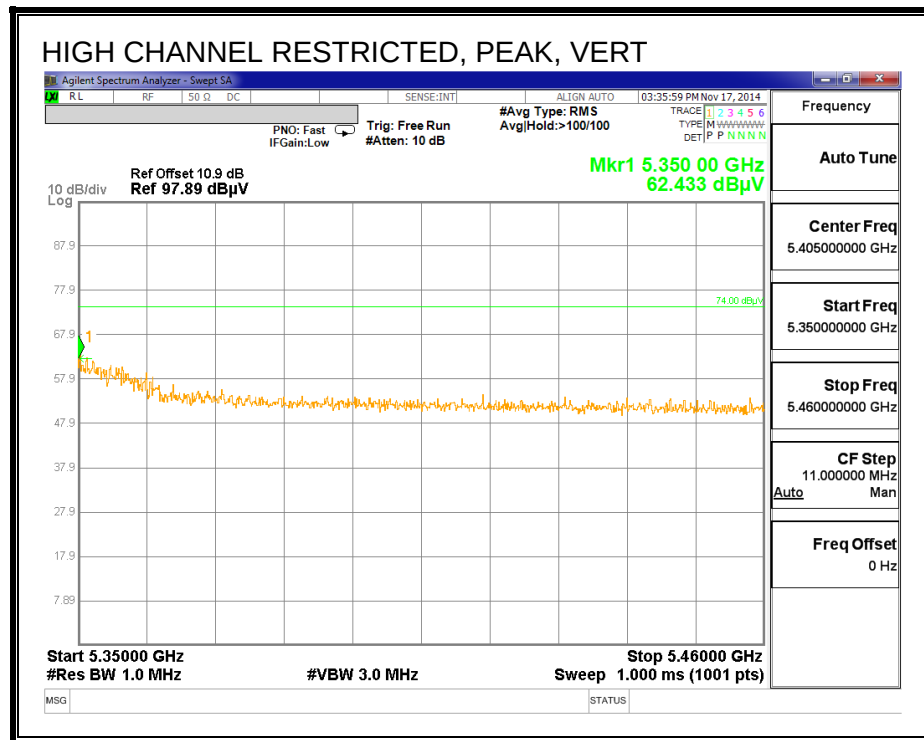
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

11.2.5. TX ABOVE 1 GHz 802.11n HT20 1Tx MODE IN THE 5.3 GHz BAND

RESTRICTED BANEDGE (HIGH CHANNEL)



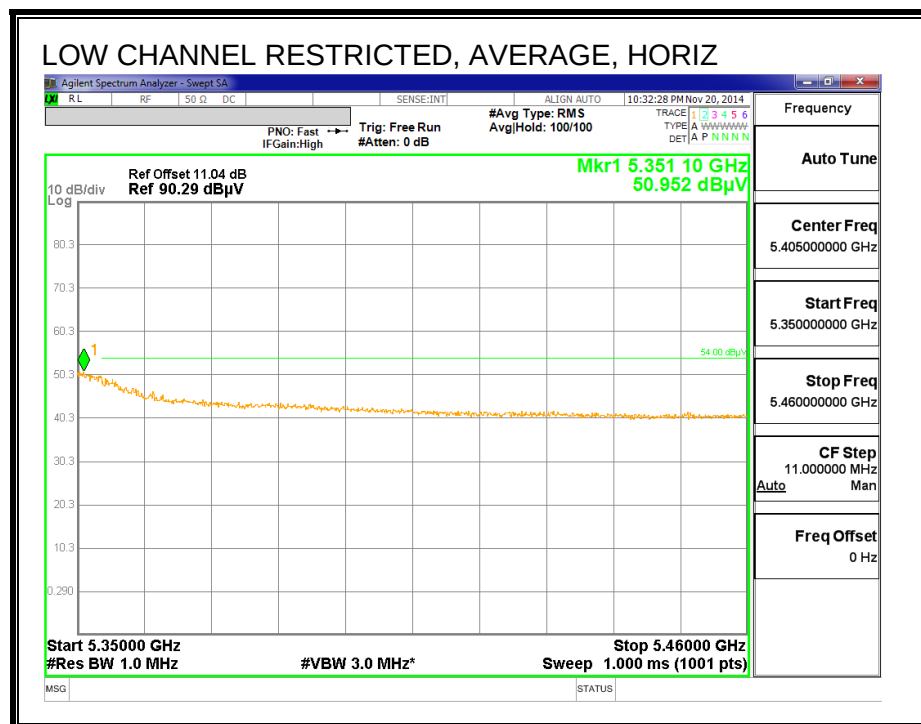
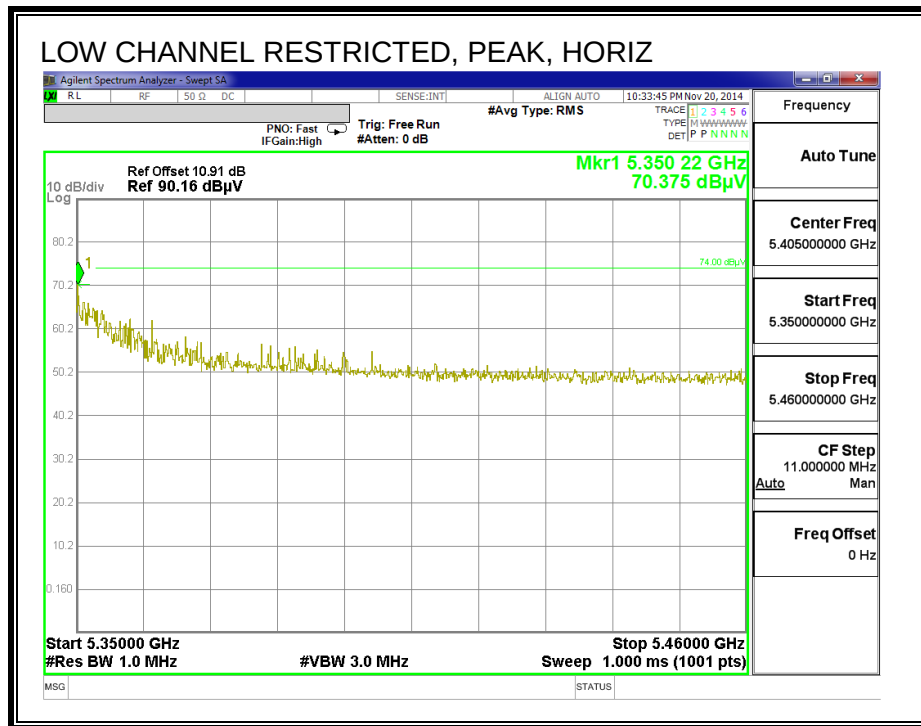


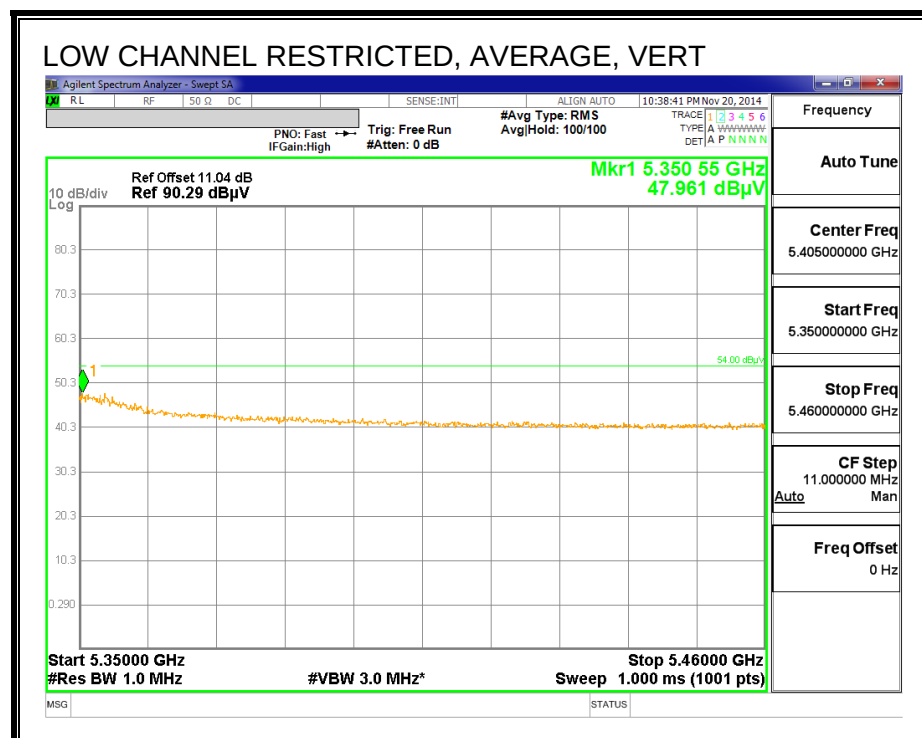
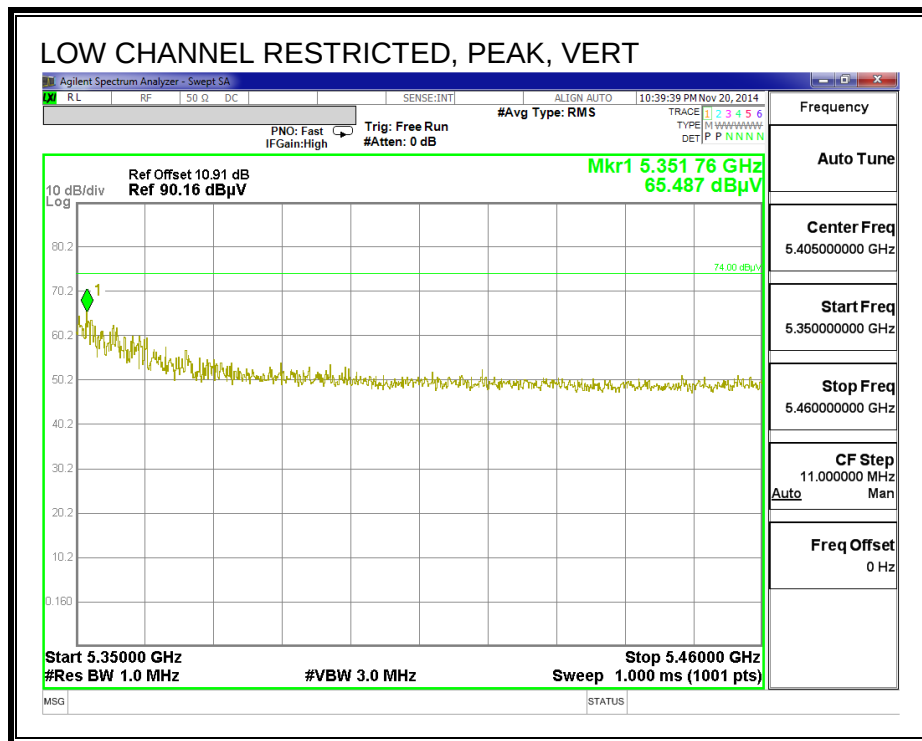
HARMONICS AND SPURIOUS EMISSIONS

Note: this test is covered on by testing to 11a 1Tx Mode.

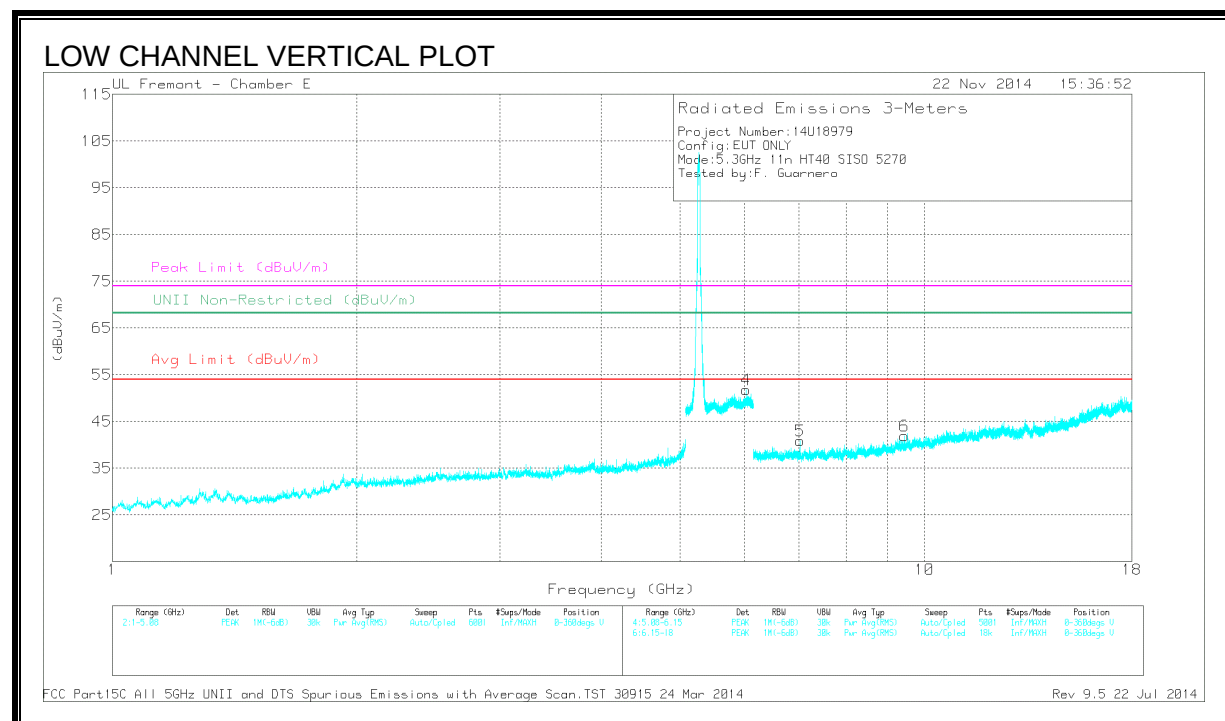
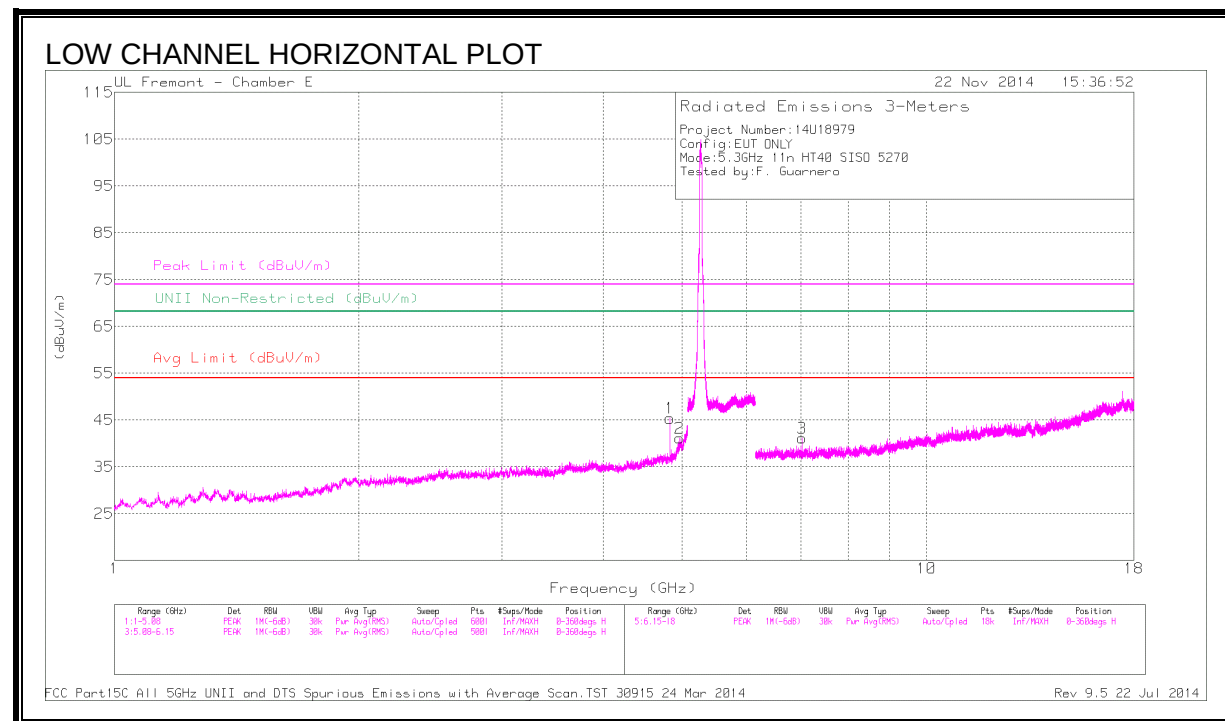
11.2.6. TX ABOVE 1 GHz 802.11n HT40 1Tx MODE IN THE 5.3 GHz BAND

RESTRICTED BANEDGE (LOW CHANNEL)





HARMONICS AND SPURIOUS EMISSIONS



DATA

Radiated Emissions

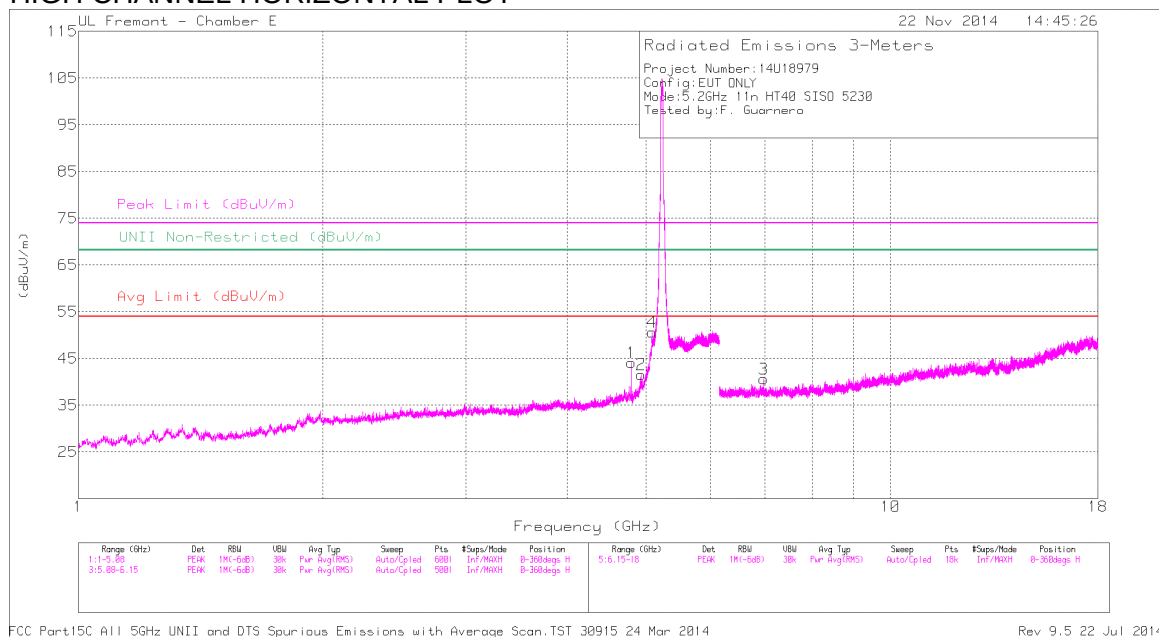
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT346 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Polarity
1	* 4.831	46.78	PK1	34.1	-30.3	0	50.58	-	-	74	-23.42	-	-	H
1	* 4.831	40.56	AD1	34.1	-30.3	.13	44.49	54	-9.51	-	-	-	-	H
2	* 4.970	44.55	PK1	34.1	-29.5	0	49.15	-	-	74	-24.85	-	-	H
2	* 4.968	33.26	AD1	34.1	-29.5	.13	37.99	54	-16.01	-	-	-	-	H
3	7.027	41.44	PK1	35.9	-28.5	0	48.84	-	-	-	-	68.2	-19.36	H
4	6.031	42.95	PK1	35.3	-20.6	0	57.65	-	-	-	-	68.2	-10.55	V
5	7.027	41.40	PK1	35.9	-28.5	0	48.80	-	-	-	-	68.2	-19.4	V
6	* 9.447	36.69	PK1	36.9	-25.9	0	47.69	-	-	74	-26.31			V
6	* 9.447	30.71	AD1	36.9	-25.9	.13	41.84	54	-12.16					V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

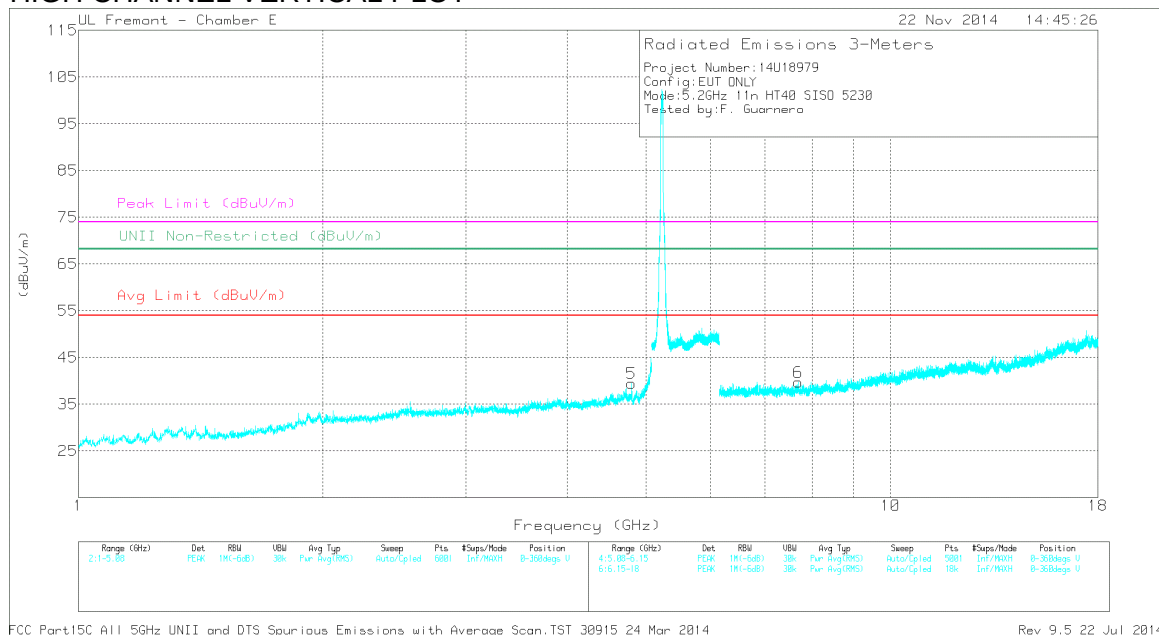
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl /Filtr/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)	Polarity
1	* 4.794	46.89	PK1	34.1	-30.2	0	50.79	-	-	74	-23.21	-	-	H
1	* 4.794	40.18	AD1	34.1	-30.2	.13	44.21	54	-9.79	-	-	-	-	H
2	* 4.933	43.53	PK1	34.1	-29.7	0	47.93	-	-	74	-26.07	-	-	H
2	* 4.932	32.80	AD1	34.1	-29.7	.13	37.33	54	-16.67	-	-	-	-	H
3	6.973	41.26	PK1	35.9	-28.3	0	48.86	-	-	-	-	68.2	-19.34	H
4	* 5.086	46.39	PK1	34.1	-21.6	0	58.89	-	-	74	-15.11	-	-	H
4	* 5.085	34.45	AD1	34.1	-21.6	.13	47.08	54	-6.92	-	-	-	-	H
5	* 4.794	43.85	PK1	34.1	-30.2	0	47.75	-	-	74	-26.25	-	-	V
5	* 4.794	34.06	AD1	34.1	-30.2	.13	38.09	54	-15.91	-	-	-	-	V
6	* 7.699	38.12	PK1	35.9	-27.4	0	46.62	-	-	74	-27.38	-	-	V
6	* 7.698	27.07	AD1	35.9	-27.4	.13	35.70	54	-18.30	-	-	-	-	V

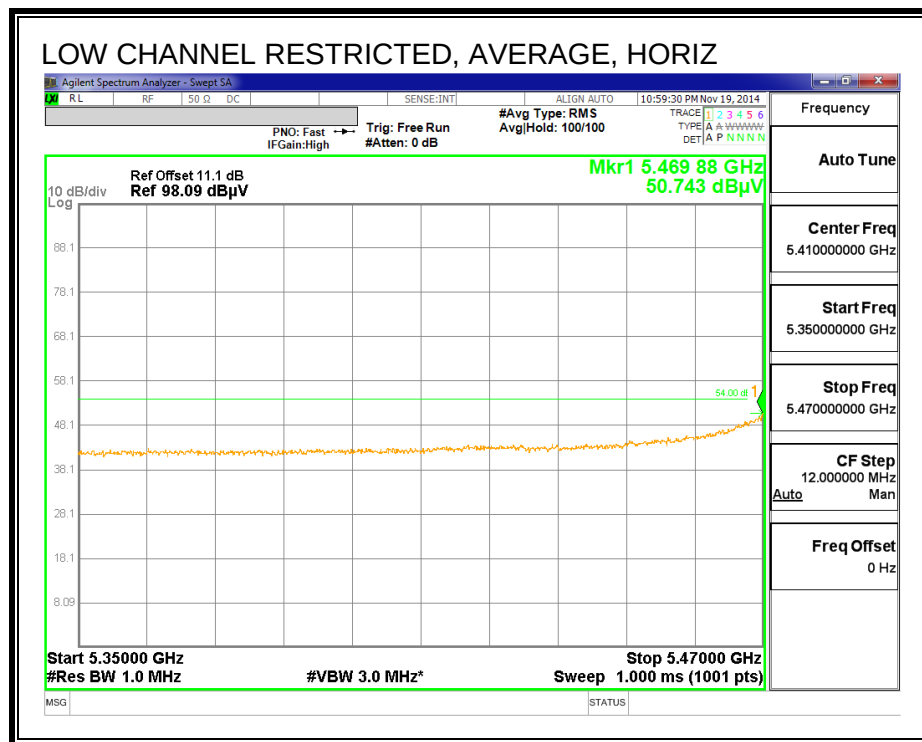
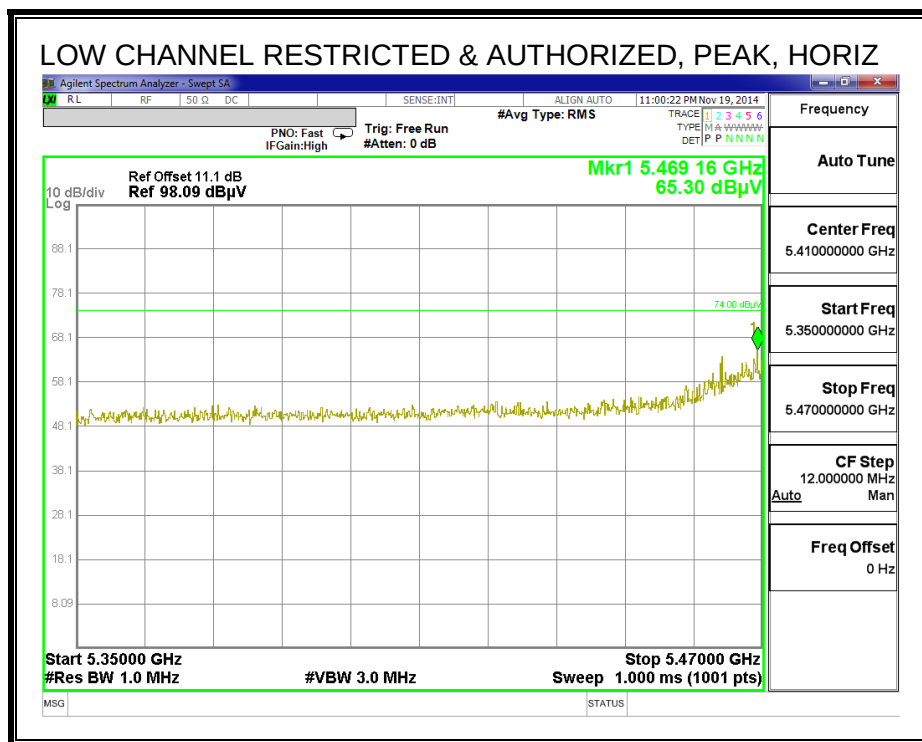
* - indicates frequency in CFR15.205/IC8.10 Restricted Band

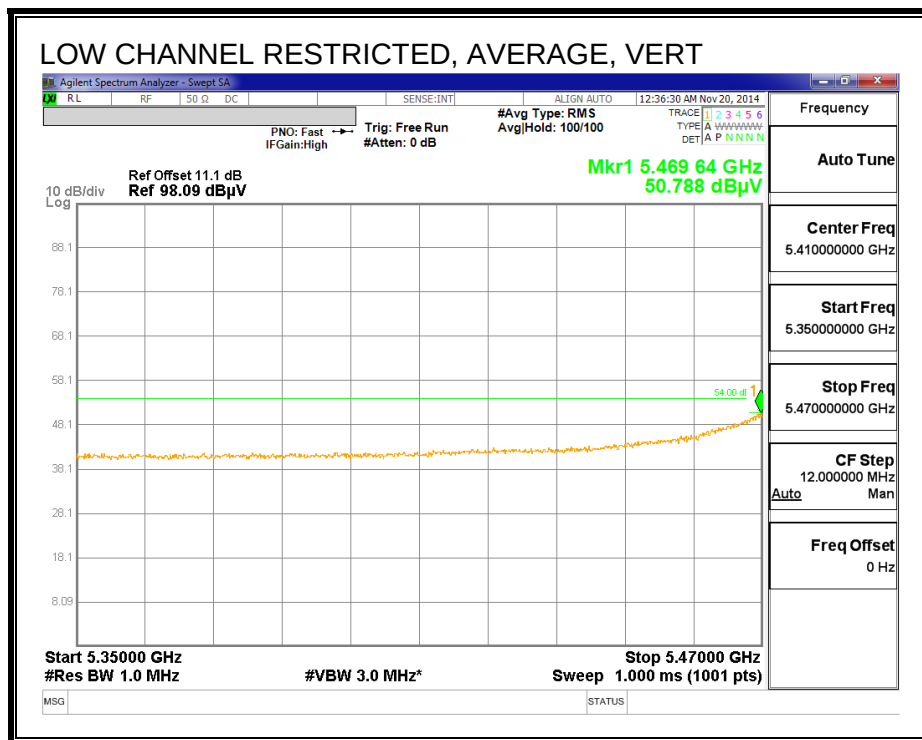
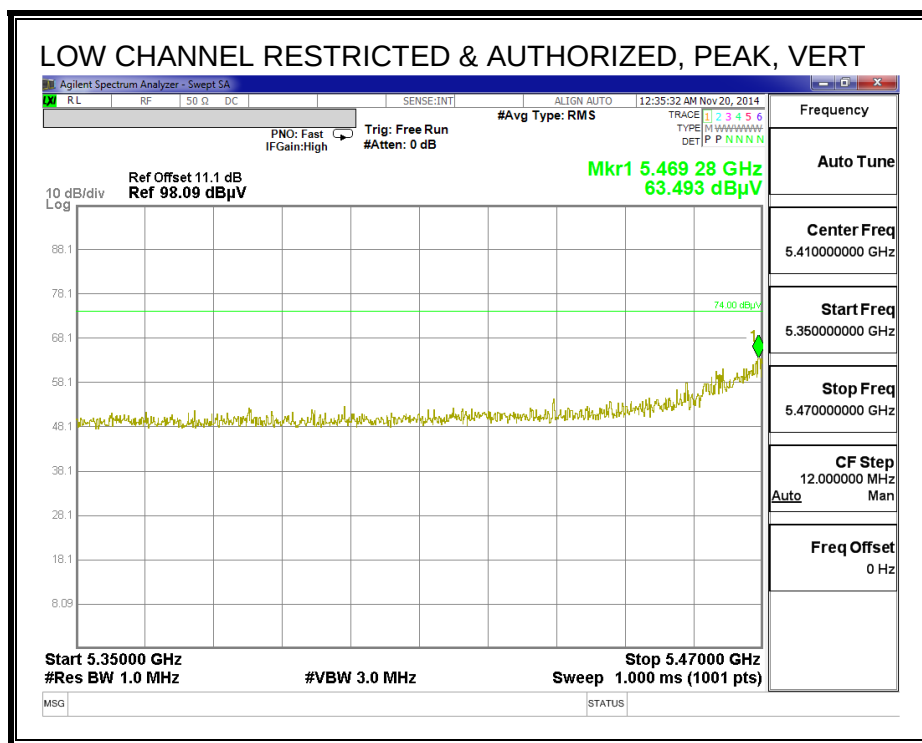
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

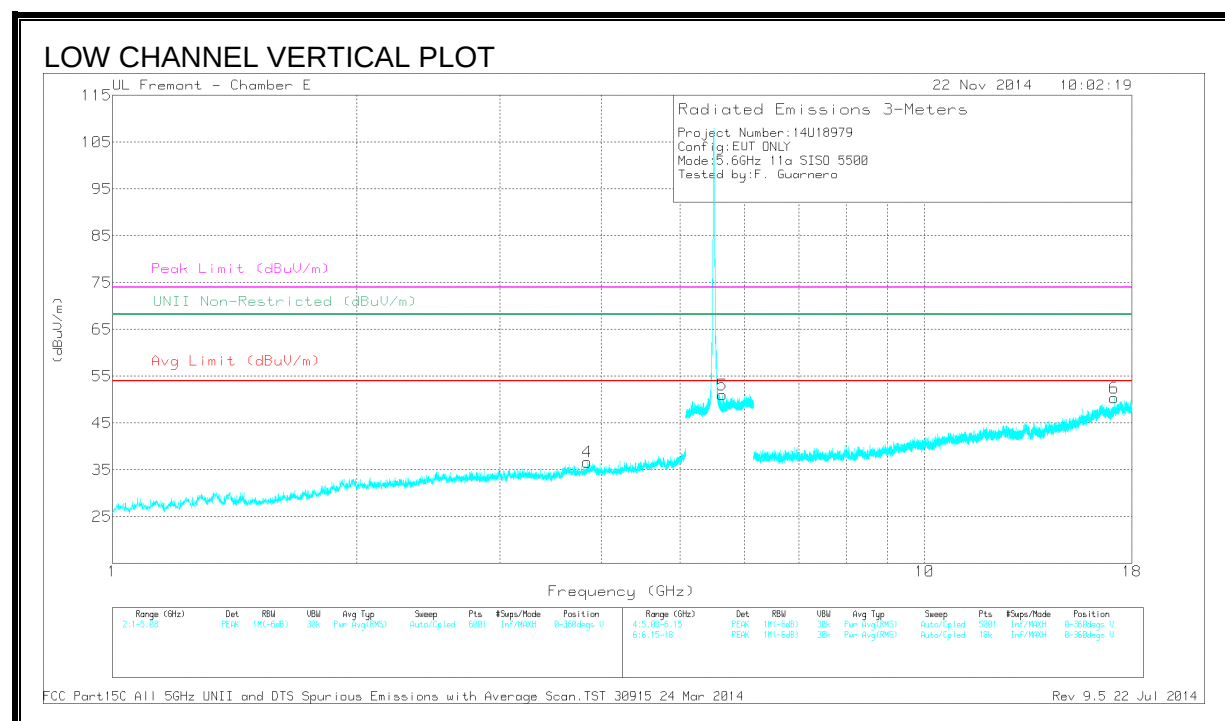
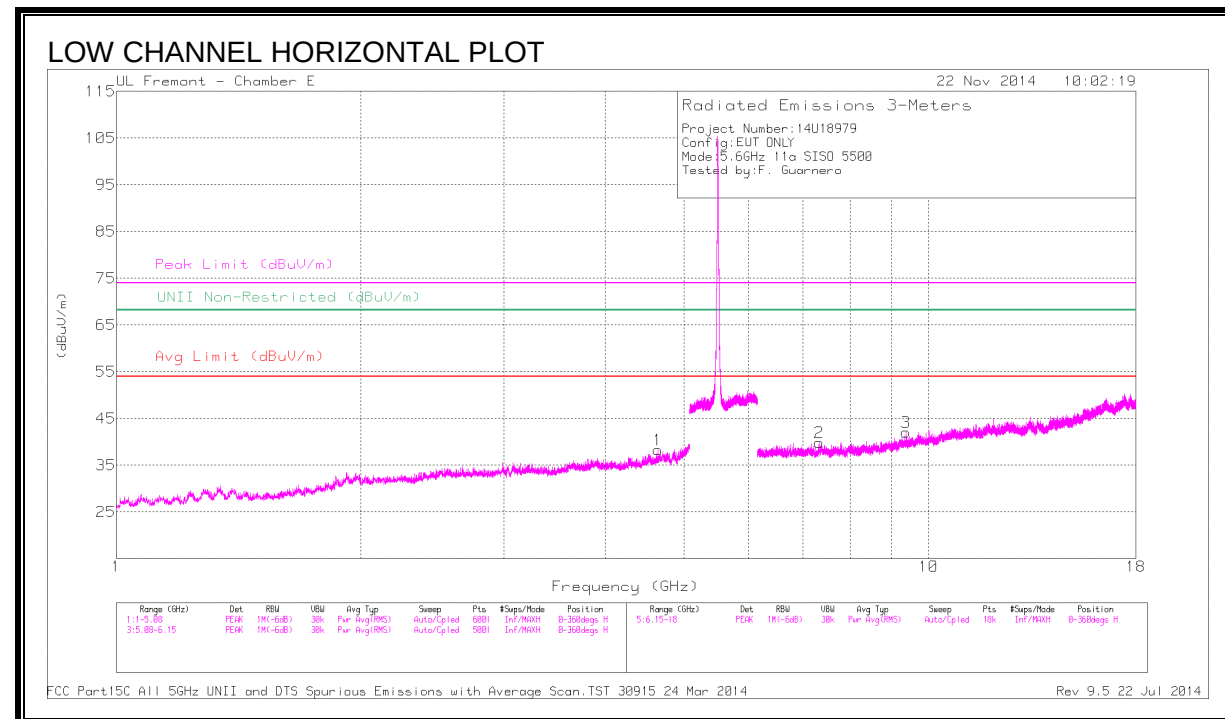
11.2.7. TX ABOVE 1 GHz 802.11a 1Tx MODE IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)





HARMONICS AND SPURIOUS EMISSIONS



DATA

Radiated Emissions

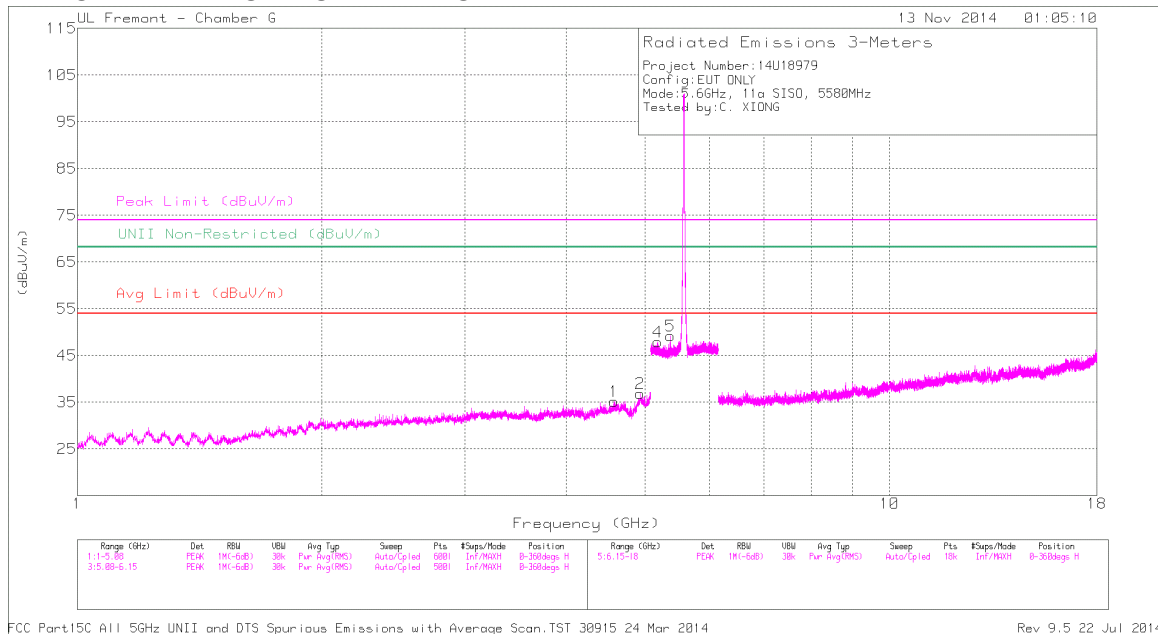
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Polarity
1	* 4.641	40.15	PK1	34.1	-29.9	44.35	-	-	74	-29.65	-	-	H
1	* 4.642	28.64	AD1	34.1	-29.9	32.84	54	-21.16	-	-	-	-	H
2	* 7.382	36.77	PK1	35.7	-27.6	46.87	-	-	74	-27.13	-	-	H
2	* 7.381	25.58	AD1	35.7	-27.6	33.68	54	-20.32	-	-	-	-	H
3	* 9.383	37.27	PK1	36.8	-25.5	48.57	-	-	74	-25.43	-	-	H
3	* 9.384	25.58	AD1	36.8	-25.5	36.88	54	-17.12	-	-	-	-	H
4	* 3.842	41.73	PK1	33.5	-31.4	43.83	-	-	74	-30.17	-	-	V
4	* 3.841	30.11	AD1	33.5	-31.4	32.21	54	-21.79	-	-	-	-	V
5	5.633	45.01	PK1	34.6	-21.0	58.61	-	-	-	-	68.2	-9.59	V
6	17.125	35.85	PK1	41.0	-20.1	56.75	-	-	-	-	68.2	-11.45	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

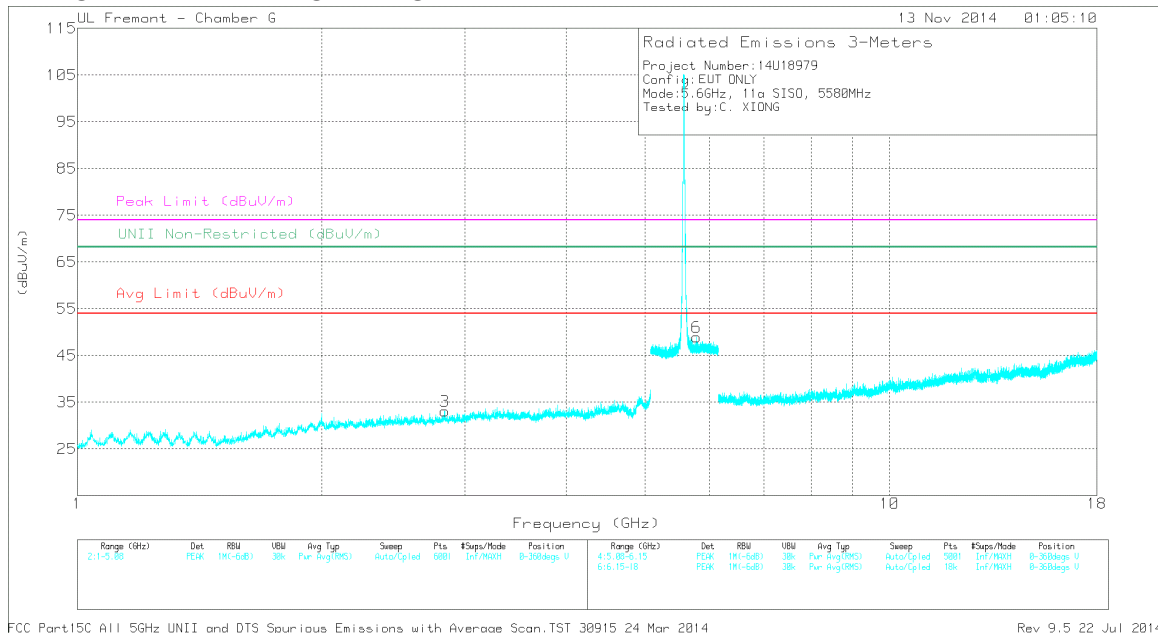
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

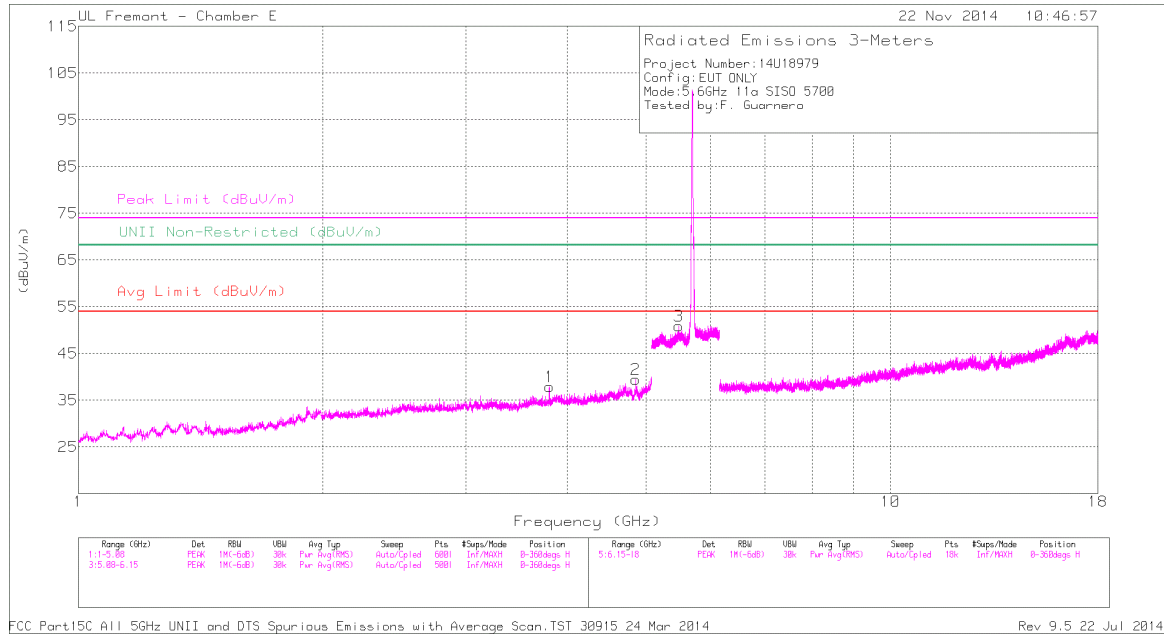
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Polarity
1	* 4.576	42.14	PK1	33.8	-32.7	43.24	-	-	74	-30.76	-	-	H
1	* 4.576	30.52	AD1	33.8	-32.7	31.62	54	-22.38	-	-	-	-	H
2	* 4.934	41.82	PK1	34.1	-31.7	44.22	-	-	74	-29.78	-	-	H
2	* 4.932	30.58	AD1	34.1	-31.7	32.98	54	-21.02	-	-	-	-	H
3	* 2.836	42.21	PK1	32.3	-33.8	40.71	-	-	74	-33.29	-	-	V
3	* 2.834	30.73	AD1	32.3	-33.7	29.33	54	-24.67	-	-	-	-	V
4	5.181	44.24	PK1	34.4	-23.6	55.04	-	-	-	-	68.2	-13.16	H
5	* 5.373	46.14	PK1	34.6	-23.7	57.04	-	-	74	-16.96	-	-	H
5	* 5.373	36.81	AD1	34.6	-23.7	47.71	54	-6.29	-	-	-	-	H
6	5.787	46.64	PK1	34.9	-23.5	58.04	-	-	-	-	68.2	-10.16	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

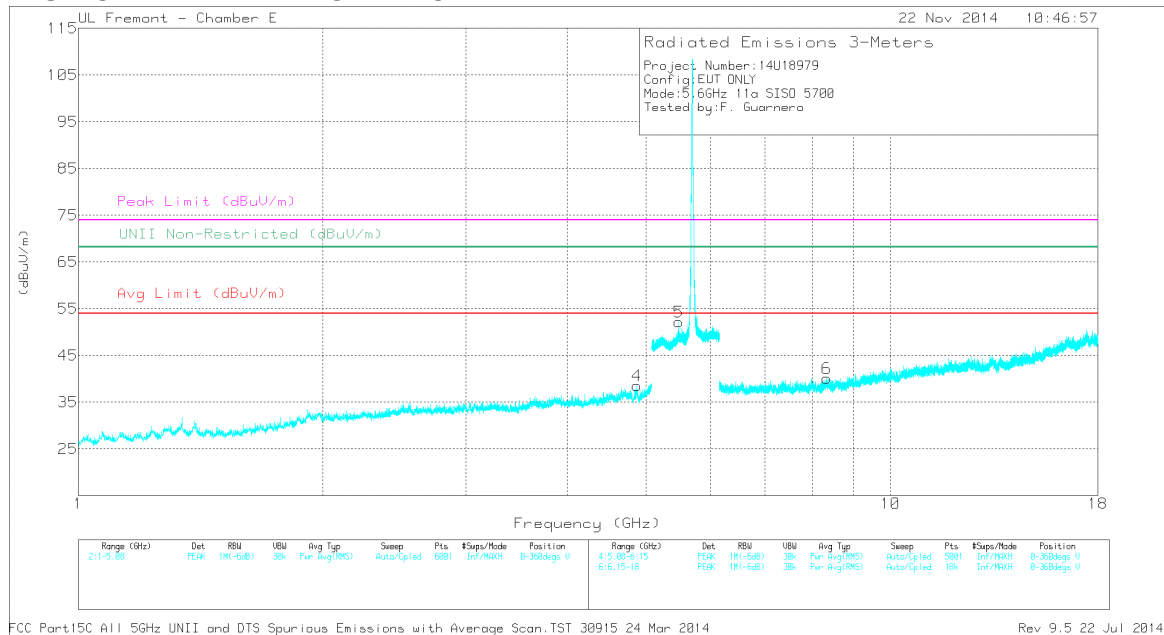
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl /Filtr/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)	Polarity
1	* 3.800	44.18	PK1	33.4	-32.0	45.58	-	-	74	-28.42	-	-	H
1	* 3.800	34.70	AD1	33.4	-32.0	36.10	54	-17.90	-	-	-	-	H
2	* 4.856	43.39	PK1	34.1	-30.5	46.99	-	-	74	-27.01	-	-	H
2	* 4.855	32.99	AD1	34.1	-30.5	36.59	54	-17.41	-	-	-	-	H
3	5.489	45.82	PK1	34.6	-20.7	59.72	-	-	-	-	68.2	-8.48	H
4	* 4.870	42.51	PK1	34.1	-30.1	46.51	-	-	74	-27.49	-	-	V
4	* 4.870	30.37	AD1	34.1	-30.1	34.37	54	-19.63	-	-	-	-	V
5	5.489	46.90	PK1	34.6	-20.7	60.80	-	-	-	-	68.2	-7.40	V
6	* 8.350	38.82	PK1	35.9	-27.3	47.42	-	-	74	-26.58	-	-	V
6	* 8.348	27.26	AD1	35.9	-27.3	35.86	54	-18.14	-	-	-	-	V

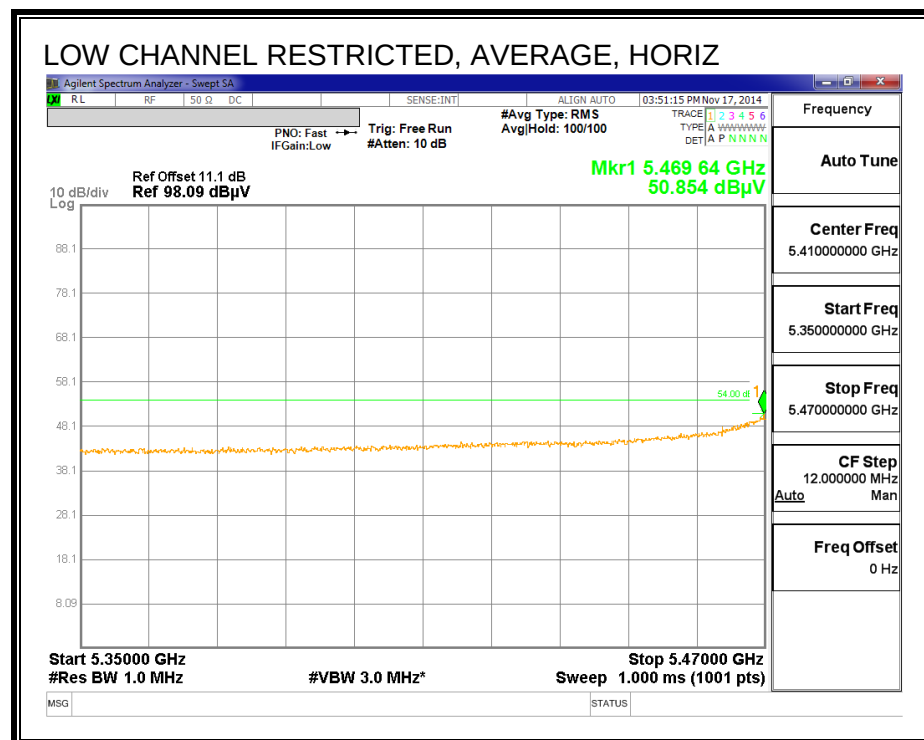
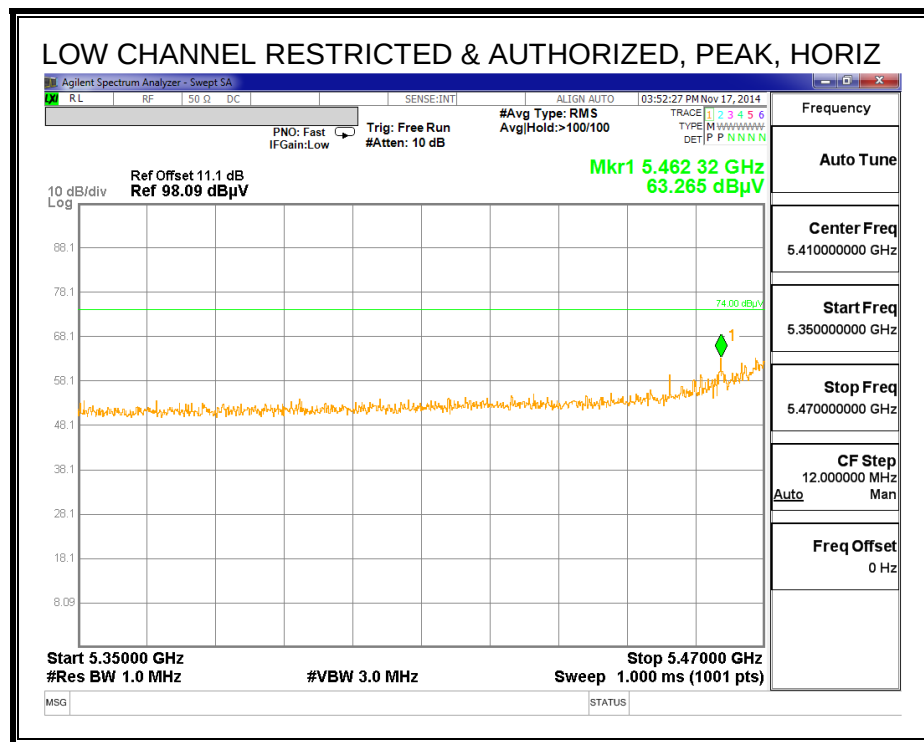
* - indicates frequency in CFR15.205/IC8.10 Restricted Band

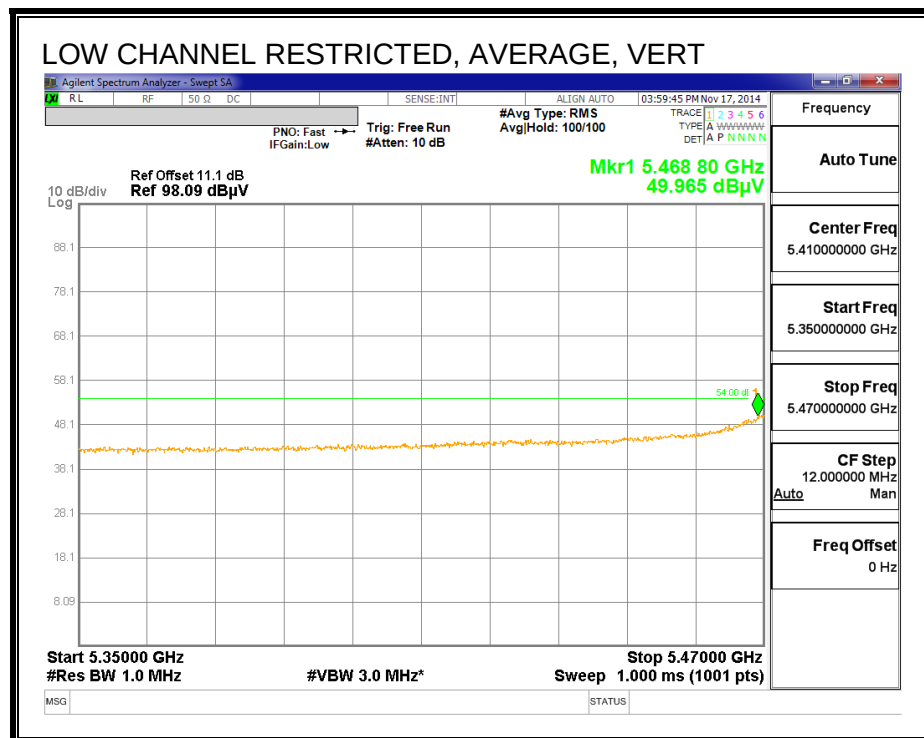
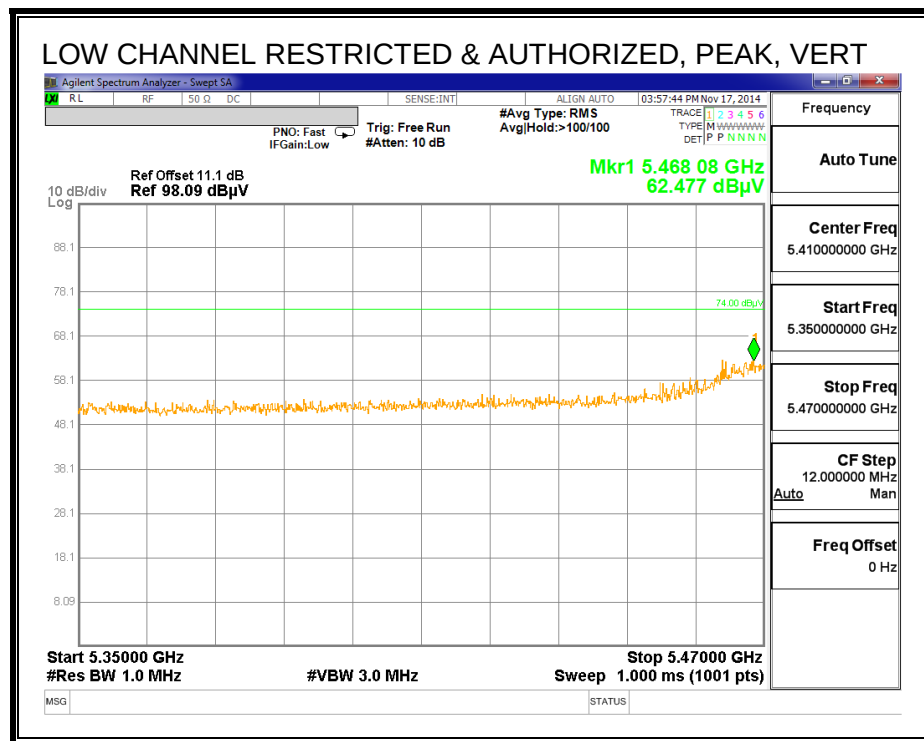
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

11.2.8. TX ABOVE 1 GHz 802.11n HT20 1Tx MODE IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)





HIGH CHANNEL BANDEDGE, PEAK, HORIZ

Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω DC SENSE:INT ALIGN: AUTO 05:47:17 PM Nov 20, 2014

PNO: Wide IFGain:High Trig: Free Run #Avg Type: RMS TYPE: 1 2 3 4 5 6 DET: P P N N N N

Ref Offset 23.04 dB
Ref 0.00 dBm

Mkr1 5.725 325 GHz
-34.90 dBm

10 dB/div
Log

-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0

-27.00 dBm

Start 5.72500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz

Stop 5.75000 GHz
Sweep 1.000 ms (1001 pts)

Auto Tune

Center Freq
5.737500000 GHz

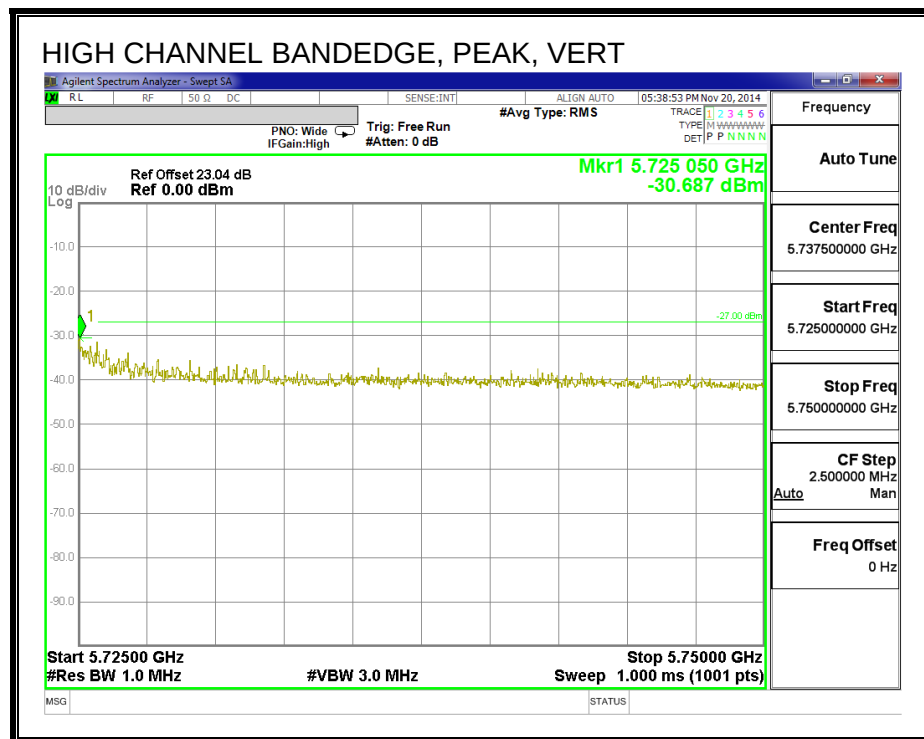
Start Freq
5.725000000 GHz

Stop Freq
5.750000000 GHz

CF Step
2.500000 MHz
Auto Man

Freq Offset
0 Hz

MSG STATUS

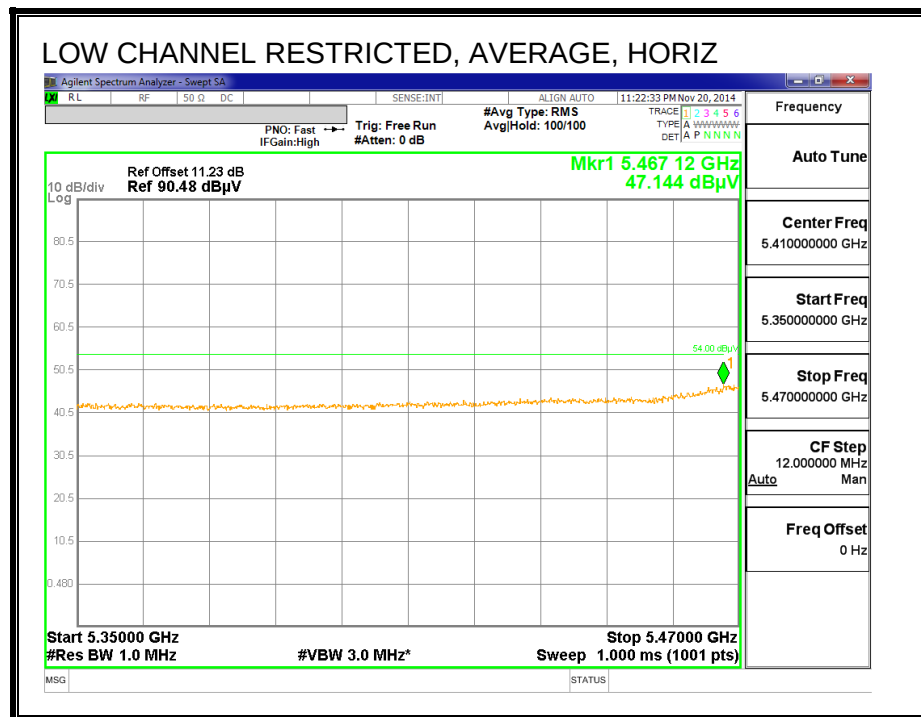
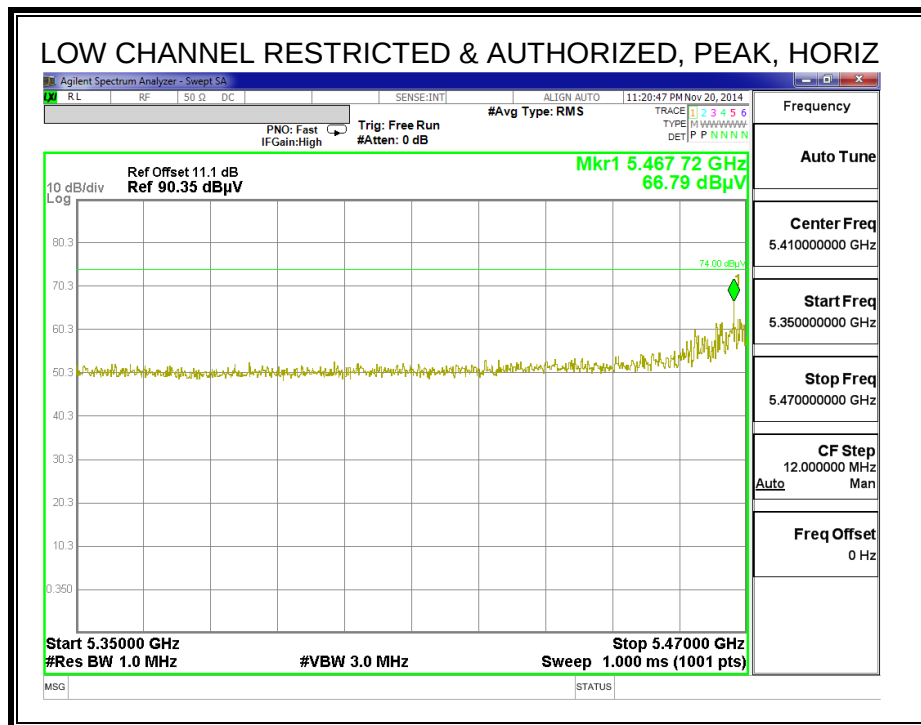


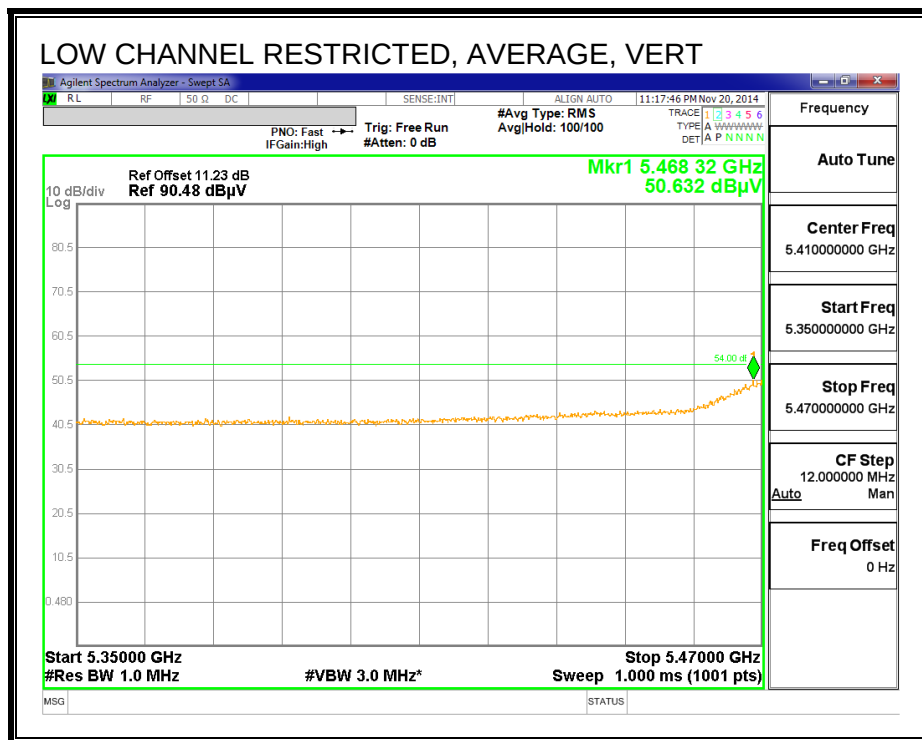
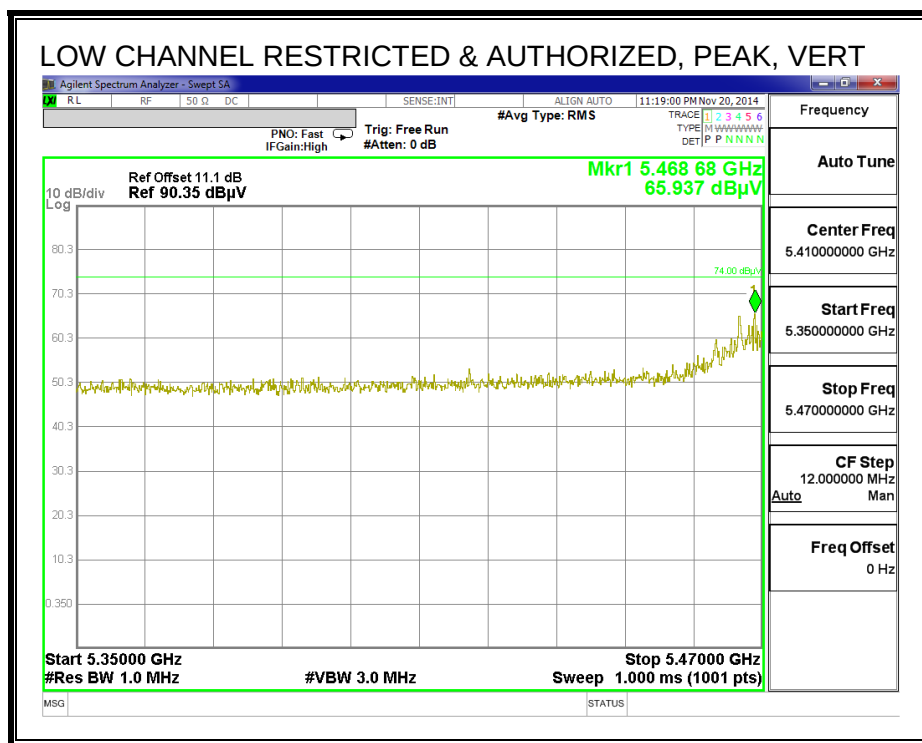
HARMONICS AND SPURIOUS EMISSIONS

Note: this test is covered on by testing to 11a 1Tx Mode.

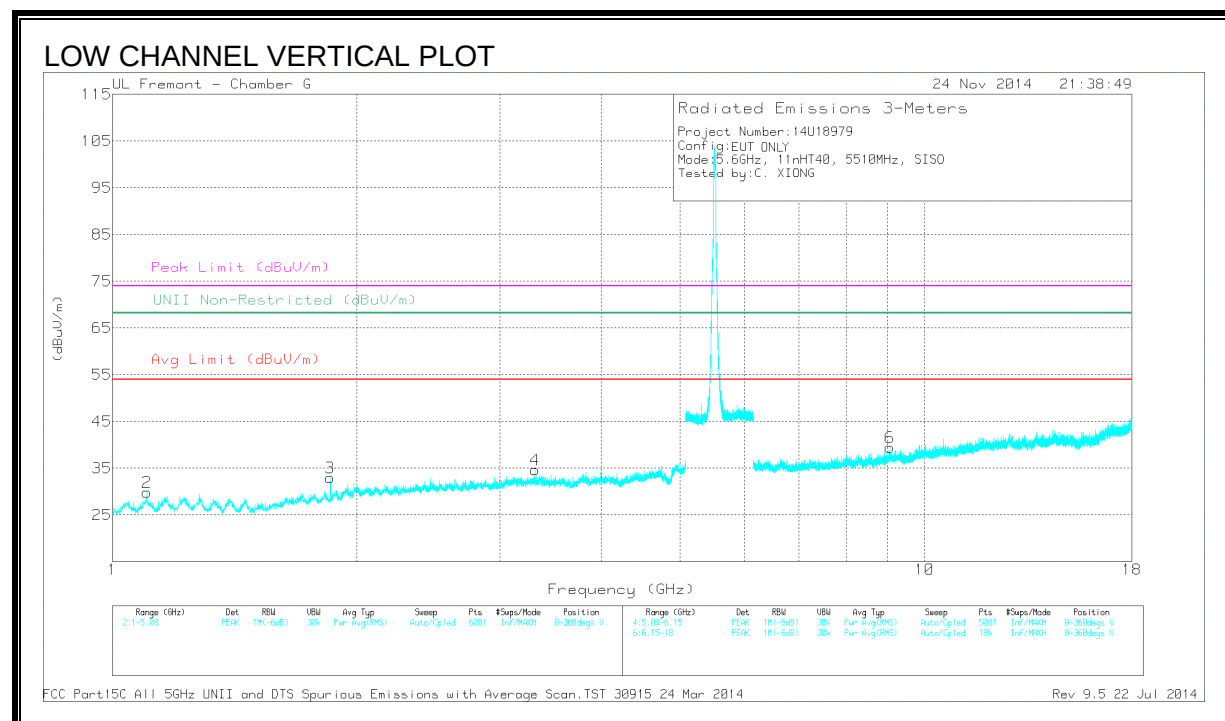
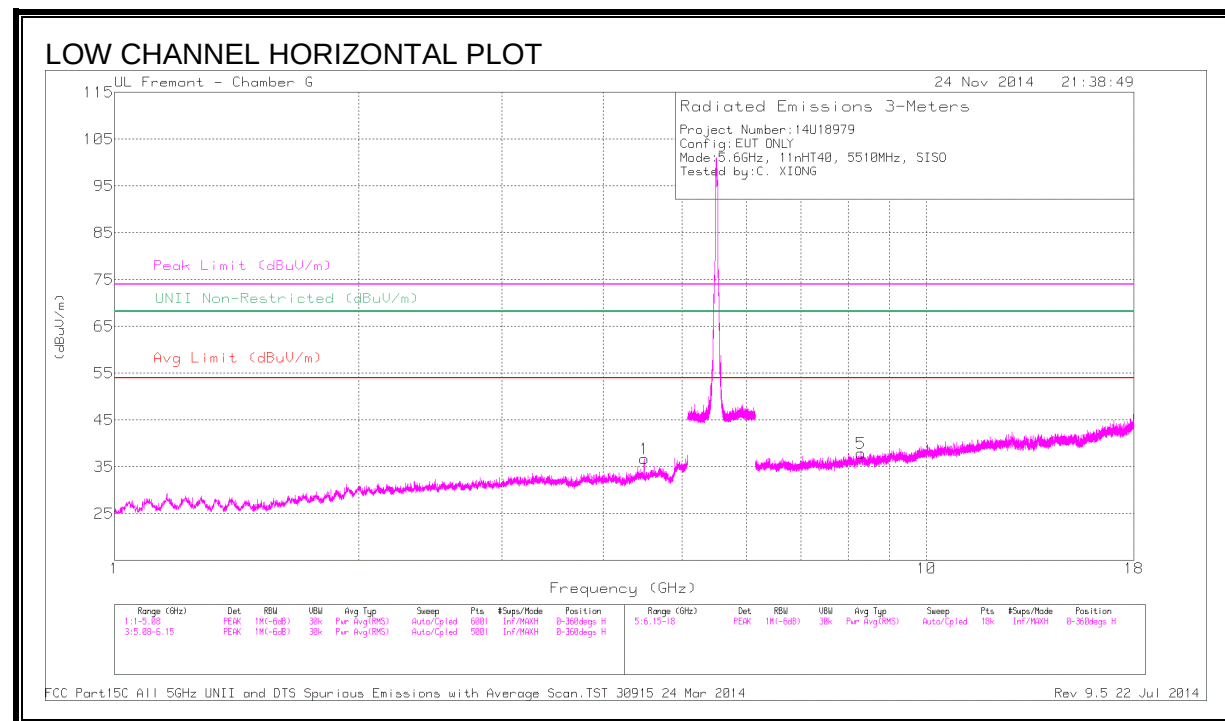
11.2.9. TX ABOVE 1 GHz 802.11n HT40 1Tx MODE IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)





HARMONICS AND SPURIOUS EMISSIONS



DATA

Radiated Emissions

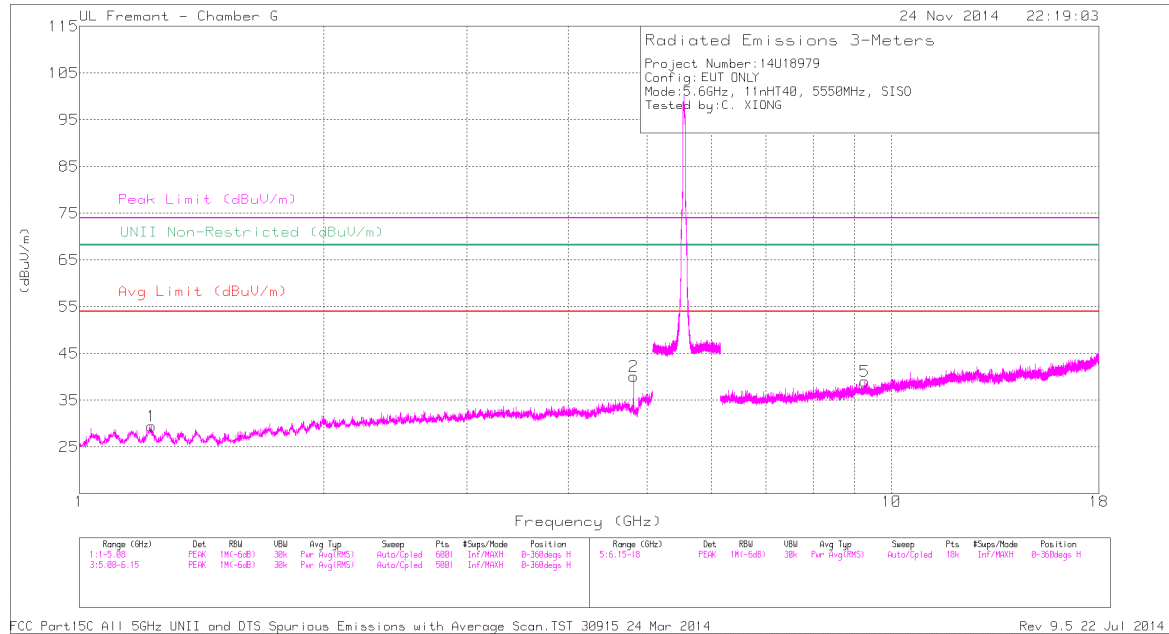
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Filt/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Polarity
1	4.489	43.72	PK1	33.7	-33.3	0	44.12	-	-	-	-	68.2	-24.08	H
2	* 1.101	44.41	PK1	28.5	-35.6	0	37.31	-	-	74	-36.69	-	-	V
2	* 1.101	32.17	AD1	28.5	-35.6	.13	25.20	54	-28.8	-	-	-	-	V
3	1.856	42.46	PK1	30.3	-35.4	0	37.36	-	-	-	-	68.2	-30.84	V
4	3.315	41.39	PK1	32.9	-33.5	0	40.79	-	-	-	-	68.2	-27.41	V
5	* 8.296	38.52	PK1	35.8	-29.4	0	44.92	-	-	74	-29.08	-	-	H
5	* 8.297	27.22	AD1	35.8	-29.4	.13	33.75	54	-20.25	-	-	-	-	H
6	* 9.064	37.73	PK1	36.4	-28.4	0	45.73	-	-	74	-28.27	-	-	V
6	* 9.062	26.53	AD1	36.4	-28.3	.13	34.76	54	-19.24	-	-	-	-	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

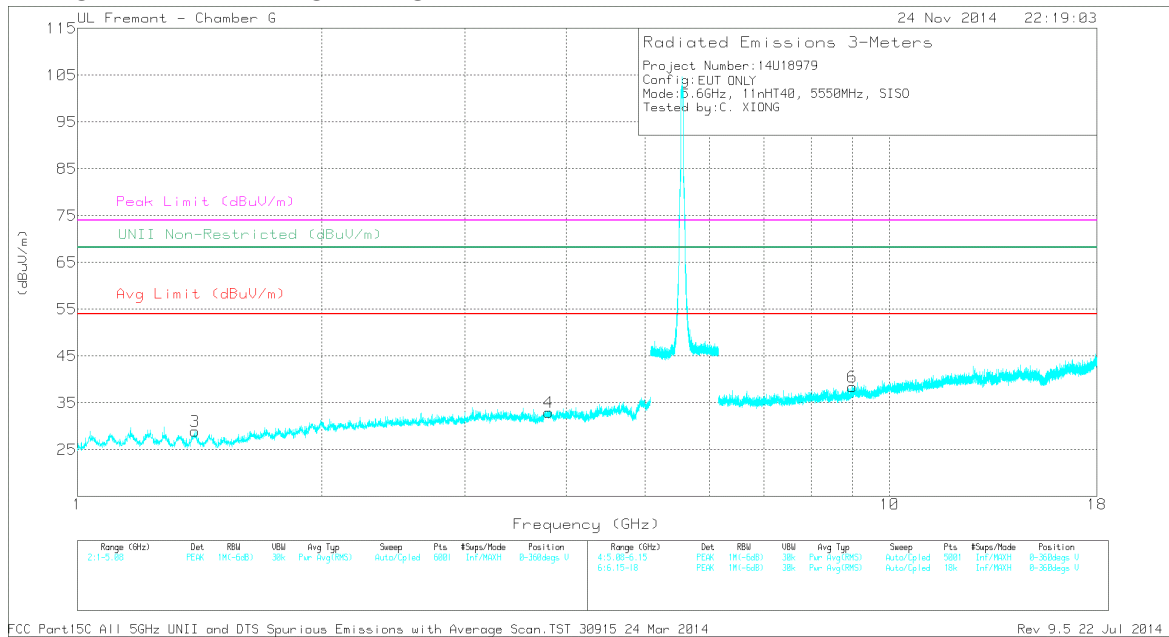
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

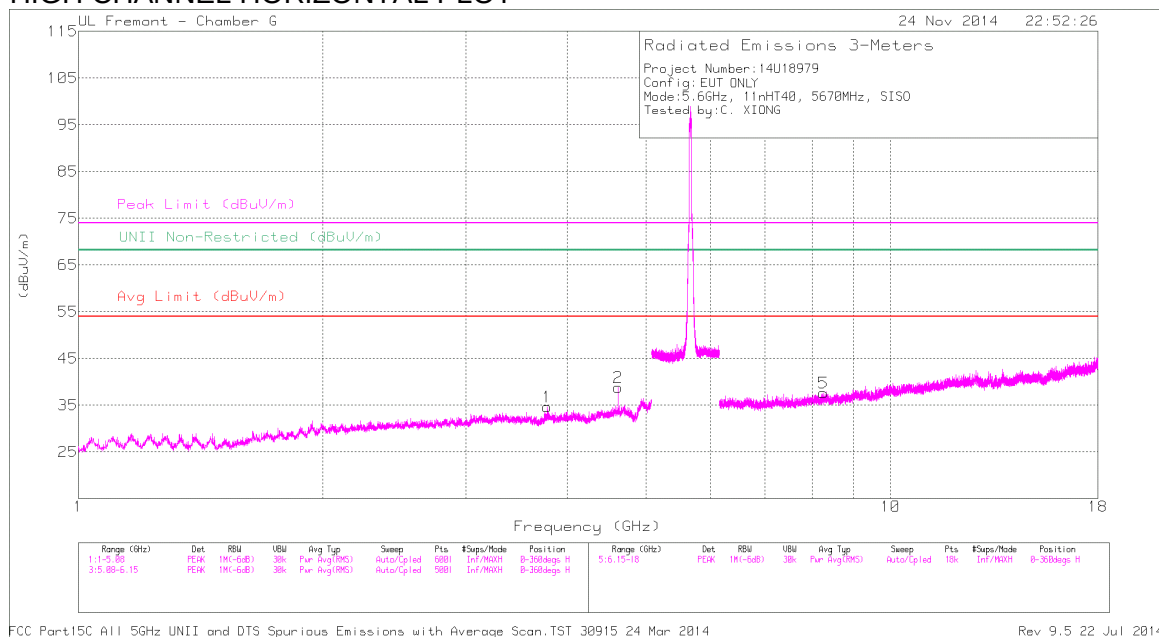
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Filt/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Polarity
1	* 1.225	43.69	PK1	29.1	-35.6	0	37.19	-	-	74	-36.81	-	-	H
1	* 1.225	32.21	AD1	29.1	-35.6	.13	25.84	54	-28.16	-	-	-	-	H
2	* 4.810	45.76	PK1	34.1	-32.8	0	47.06	-	-	74	-26.94	-	-	H
2	* 4.810	39.48	AD1	34.1	-32.8	.13	40.91	54	-13.09	-	-	-	-	H
3	* 1.394	43.27	PK1	28.5	-35.1	0	36.67	-	-	74	-37.33	-	-	V
3	* 1.395	32.12	AD1	28.4	-35.0	.13	25.65	54	-28.35	-	-	-	-	V
4	* 3.804	42.33	PK1	33.0	-33.2	0	42.13	-	-	74	-31.87	-	-	V
4	* 3.805	29.94	AD1	33.0	-33.2	.13	29.87	54	-24.13	-	-	-	-	V
5	9.271	39.52	PK1	36.5	-28.7	0	47.32	-	-	-	-	68.2	-20.88	H
6	8.997	39.93	PK1	36.4	-29.1	0	47.23	-	-	-	-	68.2	-20.97	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

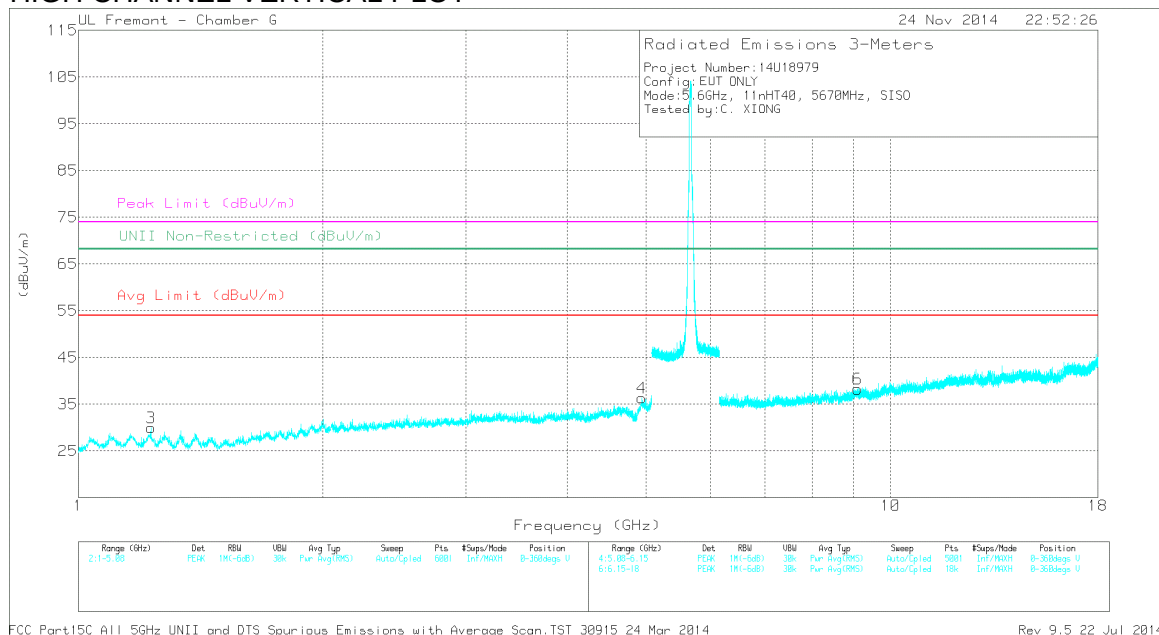
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Ftr/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)	Polarity
1	* 3.780	42.43	PK1	33.0	-33.5	0	41.93	-	-	74	-32.07	-	-	H
1	* 3.780	33.17	AD1	33.0	-33.5	.13	32.80	54	-21.2	-	-	-	-	H
2	* 4.620	44.33	PK1	33.9	-32.7	0	45.53	-	-	74	-28.47	-	-	H
2	* 4.620	36.05	AD1	33.9	-32.7	.13	37.38	54	-16.62	-	-	-	-	H
3	* 1.224	43.27	PK1	29.1	-35.6	0	36.77	-	-	74	-37.23	-	-	V
3	* 1.226	31.79	AD1	29.1	-35.6	.13	25.42	54	-28.58	-	-	-	-	V
4	* 4.942	41.05	PK1	34.1	-31.7	0	43.45	-	-	74	-30.55	-	-	V
4	* 4.942	29.89	AD1	34.1	-31.7	.13	32.42	54	-21.58	-	-	-	-	V
5	* 8.266	38.86	PK1	35.8	-29.8	0	44.86	-	-	74	-29.14	-	-	H
5	* 8.263	28.03	AD1	35.8	-29.8	.13	34.16	54	-19.84	-	-	-	-	H
6	* 9.105	38.49	PK1	36.4	-28.7	0	46.19	-	-	74	-27.81	-	-	V
6	* 9.107	27.33	AD1	36.4	-28.7	.13	35.16	54	-18.84	-	-	-	-	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

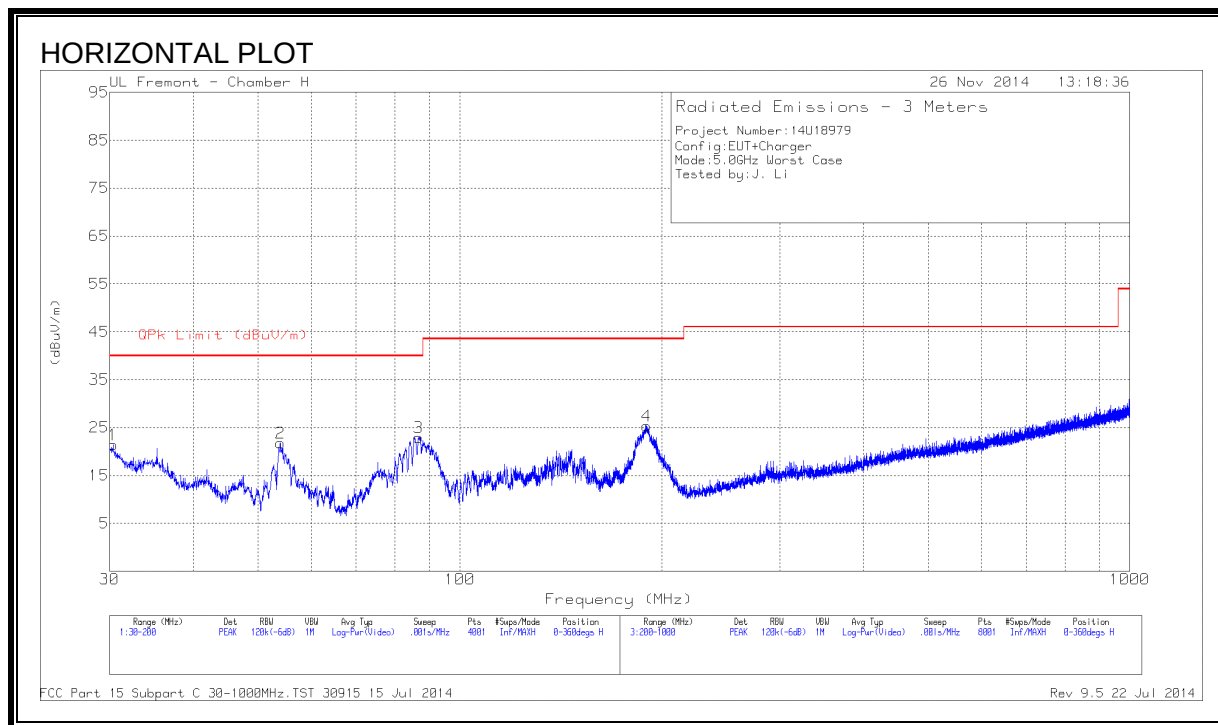
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

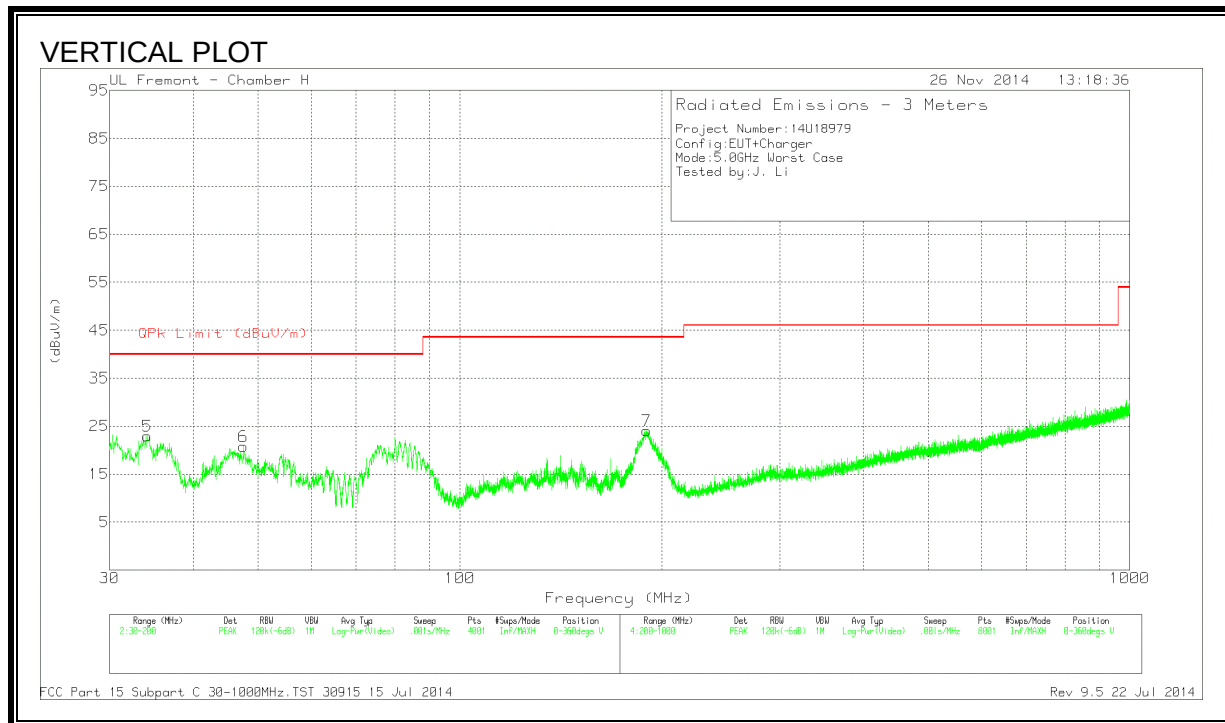
11.3. WORST-CASE BELOW 1 GHz

11.3.1. MODEL: A1622

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



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



HORIZONTAL & VERTICAL DATA

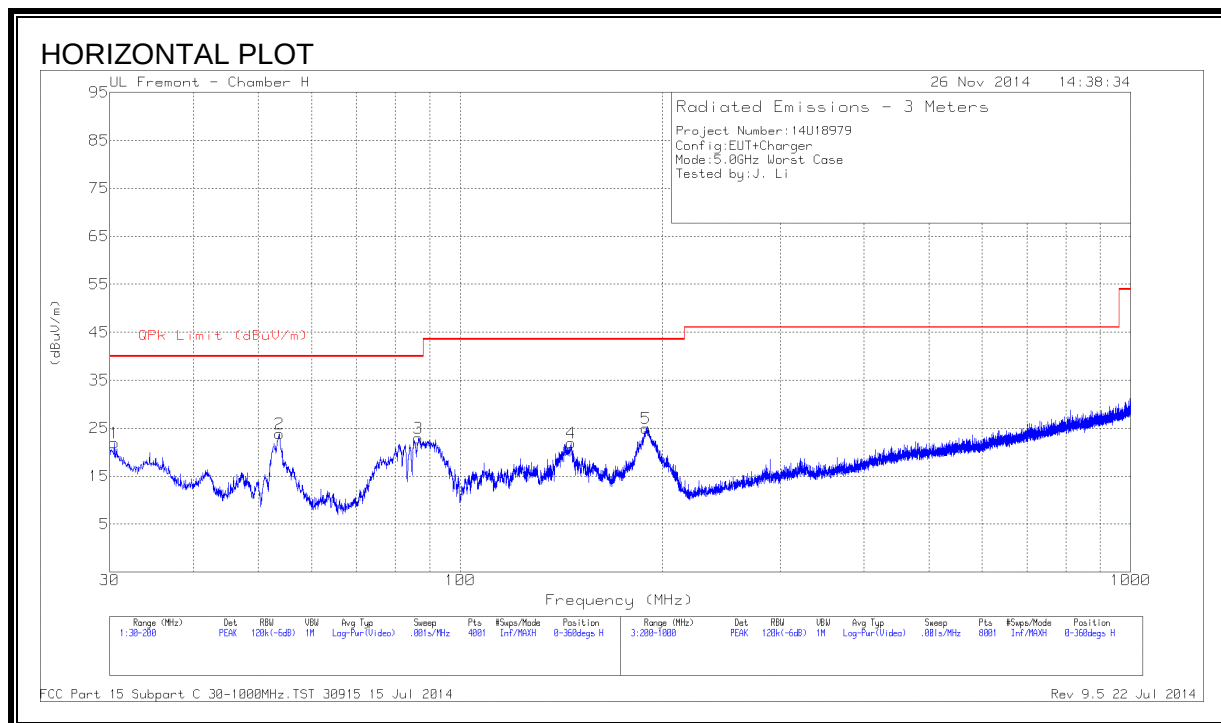
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	SS J83 SN A051314-1	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	30.3400	28.77	PK	23.7	-31.0	21.47	40.00	-18.53	0-360	301	H
2	53.9275	42.35	PK	10.1	-30.6	21.85	40.00	-18.15	0-360	401	H
3	86.7800	42.89	PK	10.3	-30.2	22.99	40.00	-17.01	0-360	201	H
4	190.0975	40.30	PK	14.3	-29.3	25.3	43.52	-18.22	0-360	100	H
5	34.1225	32.55	PK	21.3	-30.9	22.95	40.00	-17.05	0-360	100	V
6	47.5100	39.48	PK	12.0	-30.7	20.78	40.00	-19.22	0-360	100	V
7	189.800	39.12	PK	14.3	-29.4	24.02	43.52	-19.50	0-360	100	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

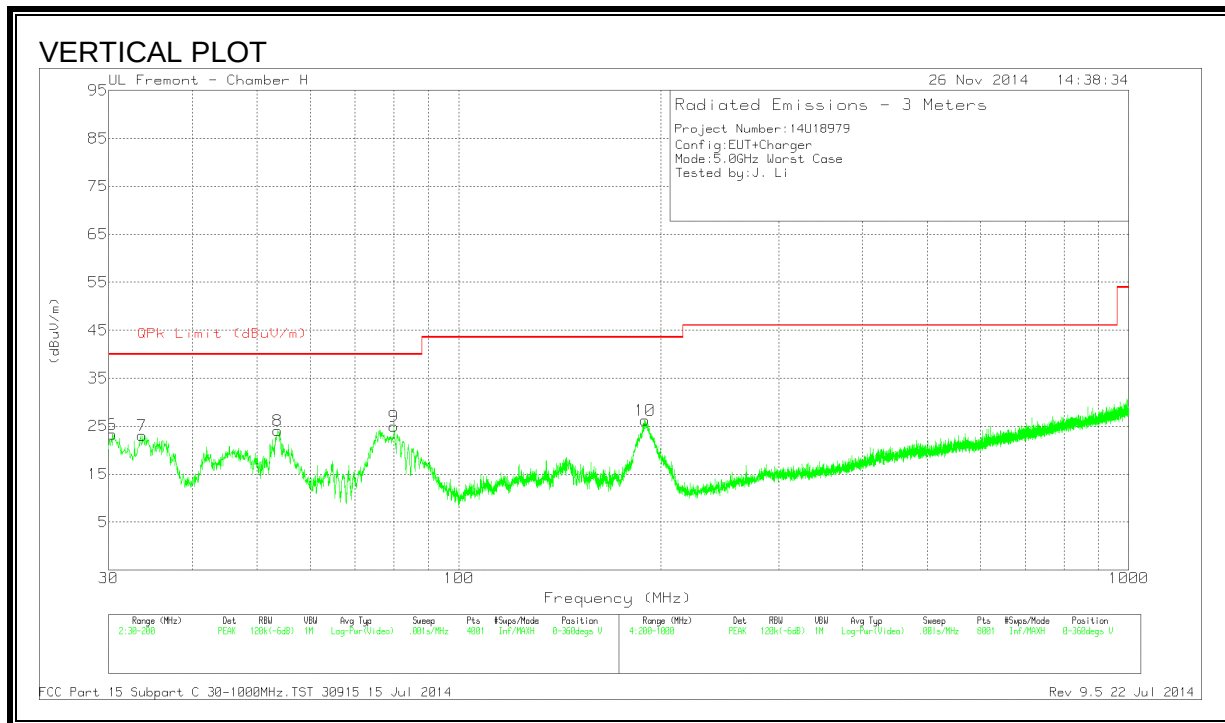
PK - Peak detector

11.3.2. MODEL: A1623

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



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



HORIZONTAL & VERTICAL DATA

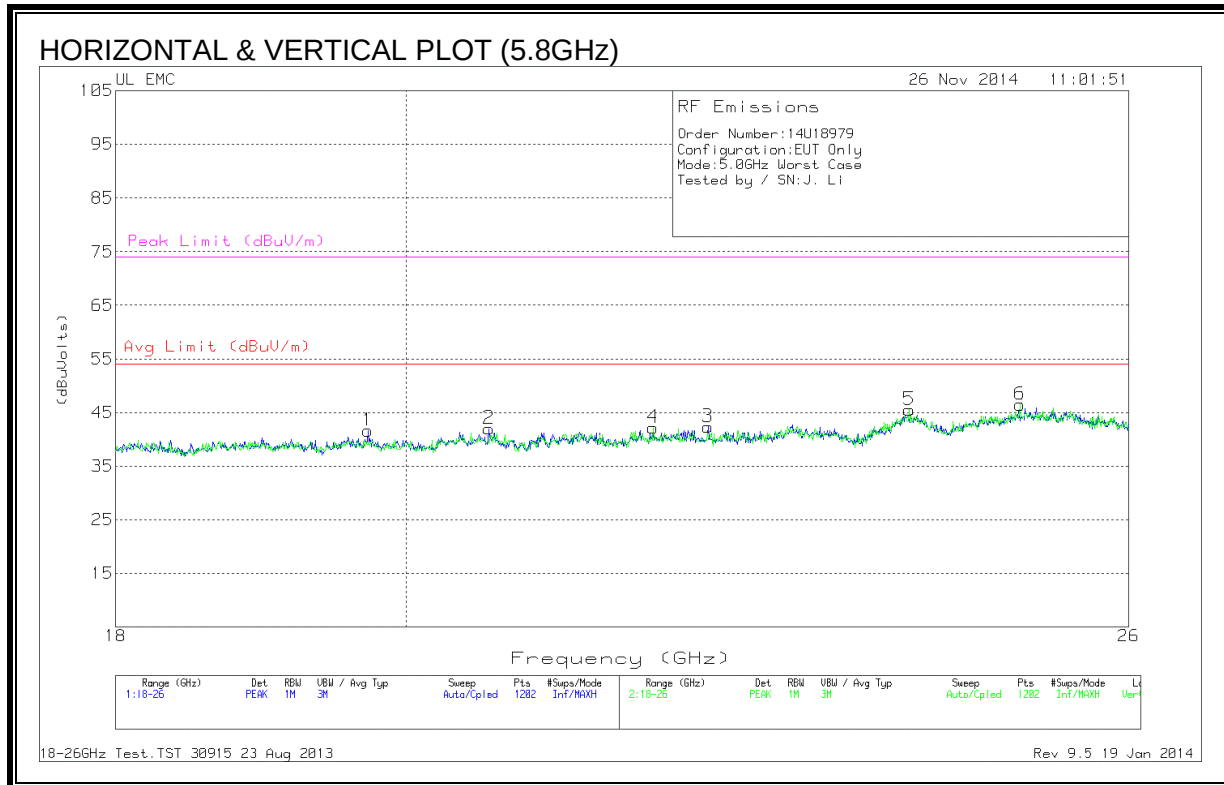
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	SS JB3 SN A051314-1	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	30.4675	29.22	PK	23.7	-31.0	21.92	40.00	-18.08	0-360	301	H
2	53.7150	44.42	PK	10.1	-30.7	23.82	40.00	-16.18	0-360	402	H
3	86.5675	42.87	PK	10.3	-30.2	22.97	40.00	-17.03	0-360	402	H
4	146.2375	35.61	PK	16.0	-29.7	21.91	43.52	-21.61	0-360	98	H
5	189.375	40.06	PK	14.3	-29.4	24.96	43.52	-18.56	0-360	98	H
6	30.3825	30.60	PK	23.7	-31.0	23.30	40.00	-16.70	0-360	100	V
7	33.6550	32.42	PK	21.6	-31.0	23.02	40.00	-16.98	0-360	100	V
8	53.6725	44.70	PK	10.1	-30.7	24.10	40.00	-15.90	0-360	100	V
9	80.0225	44.84	PK	10.4	-30.3	24.94	40.00	-15.06	0-360	100	V
10	189.4175	41.32	PK	14.3	-29.4	26.22	43.52	-17.30	0-360	100	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

PK - Peak detector

11.4. WORST-CASE 18 to 26 GHz

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



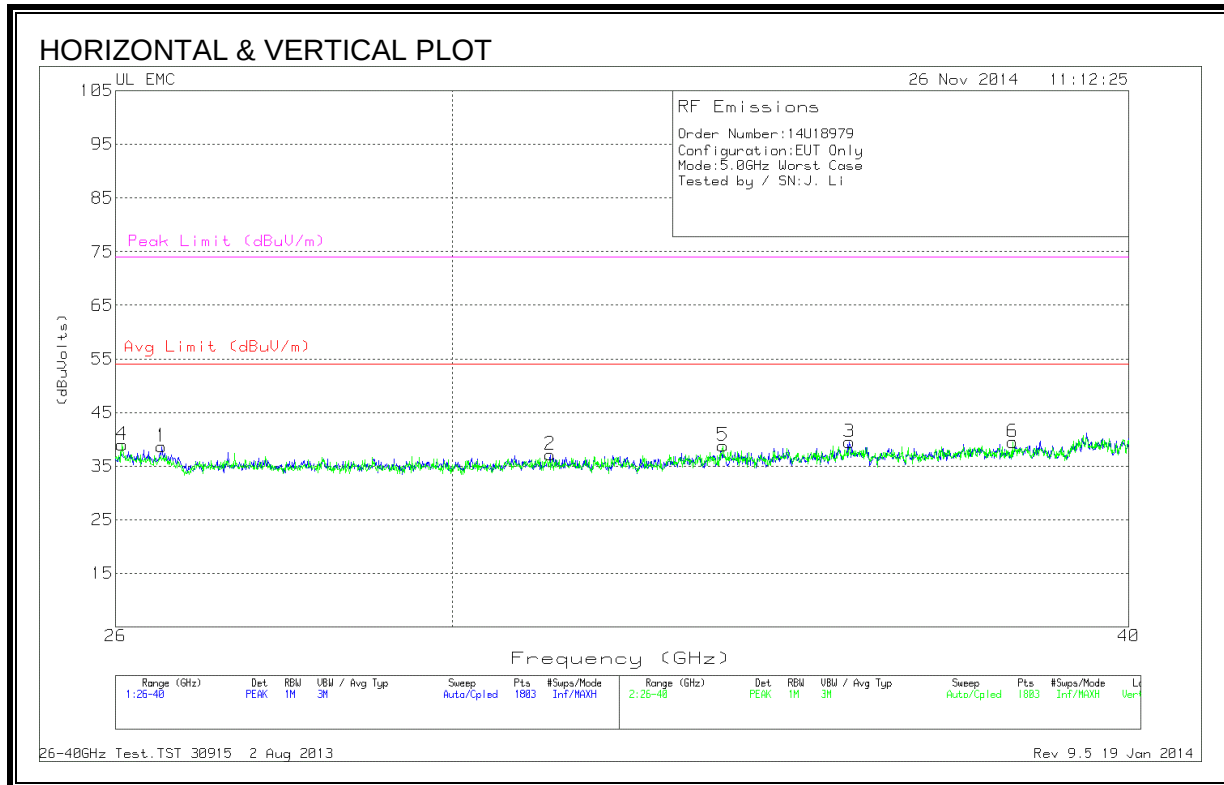
HORIZONTAL & VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T89 (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	19.725	42.37	PK	32.7	-23.9	-9.5	41.666	54	-12.33	74	-32.333
2	20.611	42.40	PK	32.9	-23.8	-9.5	42.000	54	-12.00	74	-32
3	22.316	41.63	PK	33.3	-23.1	-9.5	42.333	54	-11.66	74	-31.666
4	21.877	42.07	PK	33.3	-23.7	-9.5	42.166	54	-11.83	74	-31.833
5	24.008	44.2	PK	33.6	-22.8	-9.5	45.500	54	-8.50	74	-28.5
6	24.994	44.90	PK	34.0	-22.9	-9.5	46.500	54	-7.50	74	-27.5

PK - Peak detector

11.5. WORST-CASE 26 to 40 GHz

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



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	26.513	46.07	PK	35.5	-33.4	-9.5	38.666	54	-15.33	74	-35.333
2	31.275	47.67	PK	36.0	-37.0	-9.5	37.166	54	-16.83	74	-36.833
3	35.517	49.10	PK	37.9	-38.0	-9.5	39.500	54	-14.50	74	-34.500
4	26.070	45.90	PK	35.6	-33.0	-9.5	39.000	54	-15.00	74	-35.000
5	33.660	48.53	PK	36.9	-37.1	-9.5	38.833	54	-15.16	74	-35.166
6	38.073	50.80	PK	37.2	-39.0	-9.5	39.500	54	-14.50	74	-34.500

PK - Peak detector

12. AC POWER LINE CONDUCTED EMISSIONS (MODEL: A1489)

LIMITS

FCC §15.207 (a)

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

*Decreases with the logarithm of the frequency.

TEST PROCEDURE

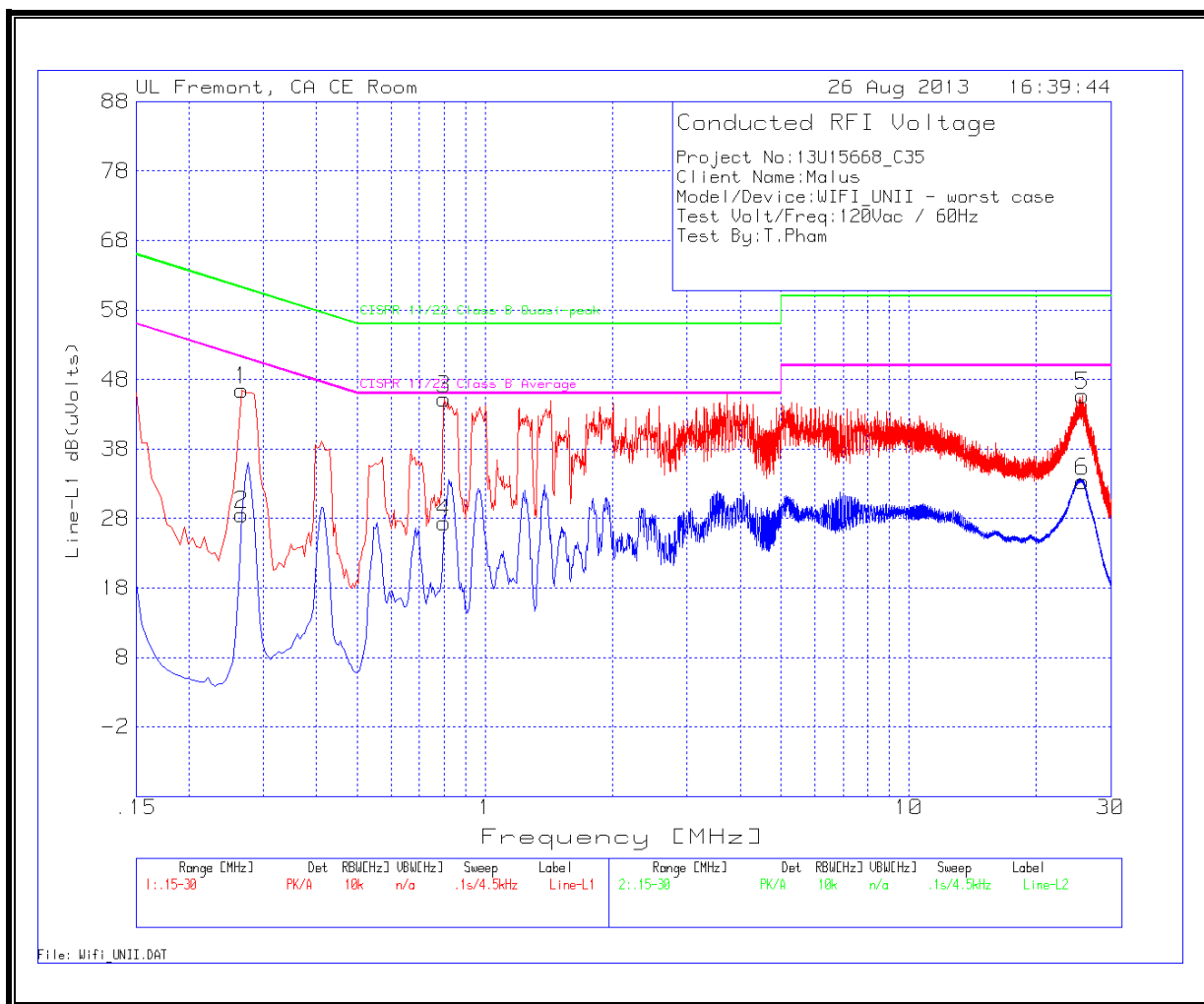
The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

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 RESULTS



WORST EMISSIONS DATA

Line-L1 .15 - 30MHz

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1 (dB)	LC Cables 1&3 (dB)	Corrected Reading dB(uVolts)	CISPR 11/22 Class B Quasi-peak	Margin to Limit (dB)	CISPR 11/22 Class B Average	Margin to Limit (dB)
1	.267	46.38	PK	.1	0	46.48	61.2	-14.72	-	-
2	.267	28.5	Av	.1	0	28.6	-	-	51.2	-22.6
3	.8025	45.05	PK	.1	0	45.15	56	-10.85	-	-
4	.8025	27.35	Av	.1	0	27.45	-	-	46	-18.55
5	25.7235	44.9	PK	.5	.3	45.7	60	-14.3	-	-
6	25.7235	32.55	Av	.5	.3	33.35	-	-	50	-16.65

Line-L2 .15 - 30MHz

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2 (dB)	LC Cables 2&3 (dB)	Corrected Reading dB(uVolts)	CISPR 11/22 Class B Quasi-peak	Margin to Limit (dB)	CISPR 11/22 Class B Average	Margin to Limit (dB)
7	.267	46.78	PK	.1	0	46.88	61.2	-14.32	-	-
8	.267	27.74	Av	.1	0	27.84	-	-	51.2	-23.36
9	3.723	45.9	PK	.1	.1	46.1	56	-9.9	-	-
10	3.723	29.15	Av	.1	.1	29.35	-	-	46	-16.65
11	5.01225	44.24	PK	.1	.1	44.44	60	-15.56	-	-
12	5.01225	28.79	Av	.1	.1	28.99	-	-	50	-21.01

PK - Peak detector

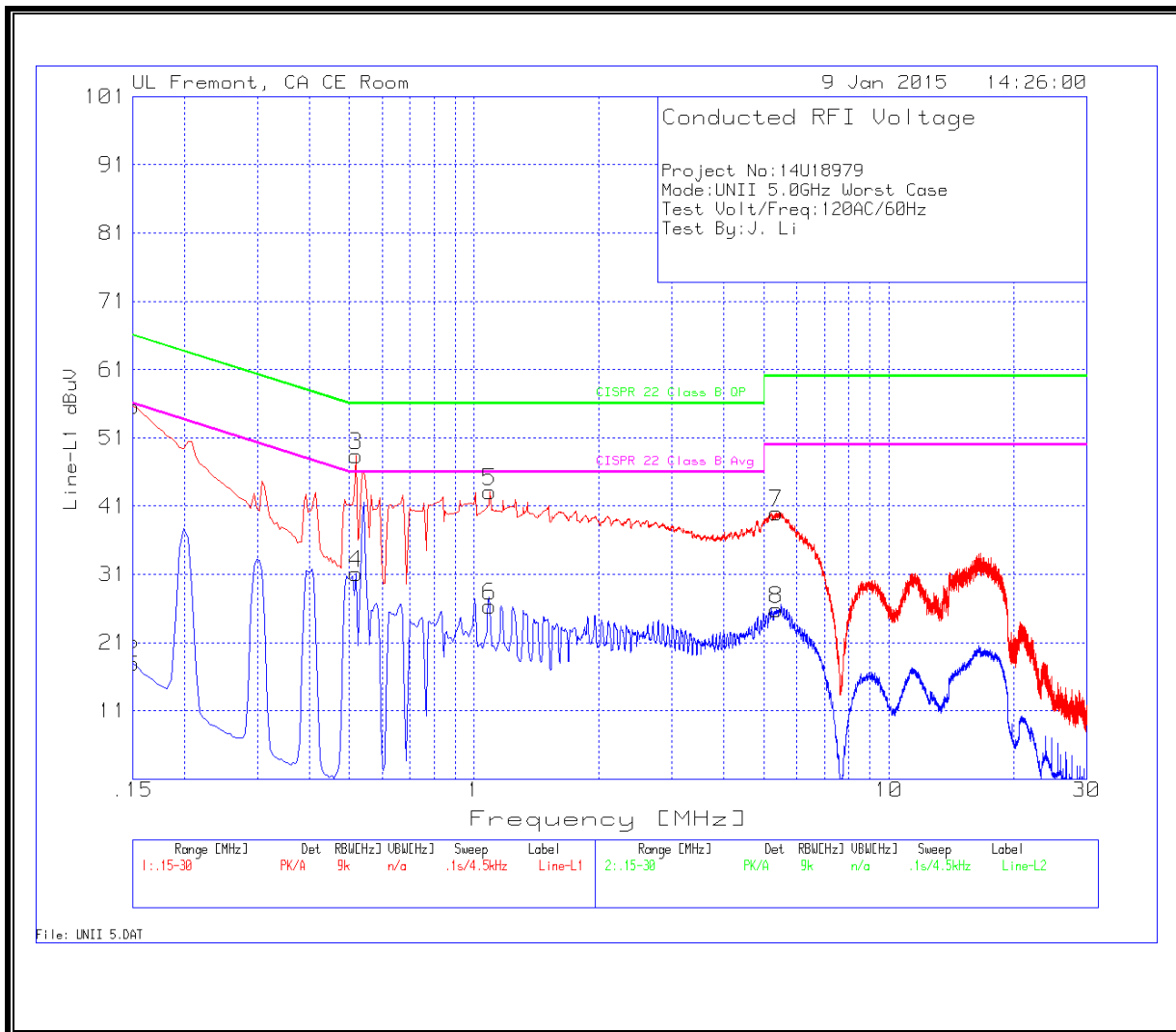
Av - average detection

13. AC POWER LINE CONDUCTED EMISSIONS (MODELS: A1622, A1623)

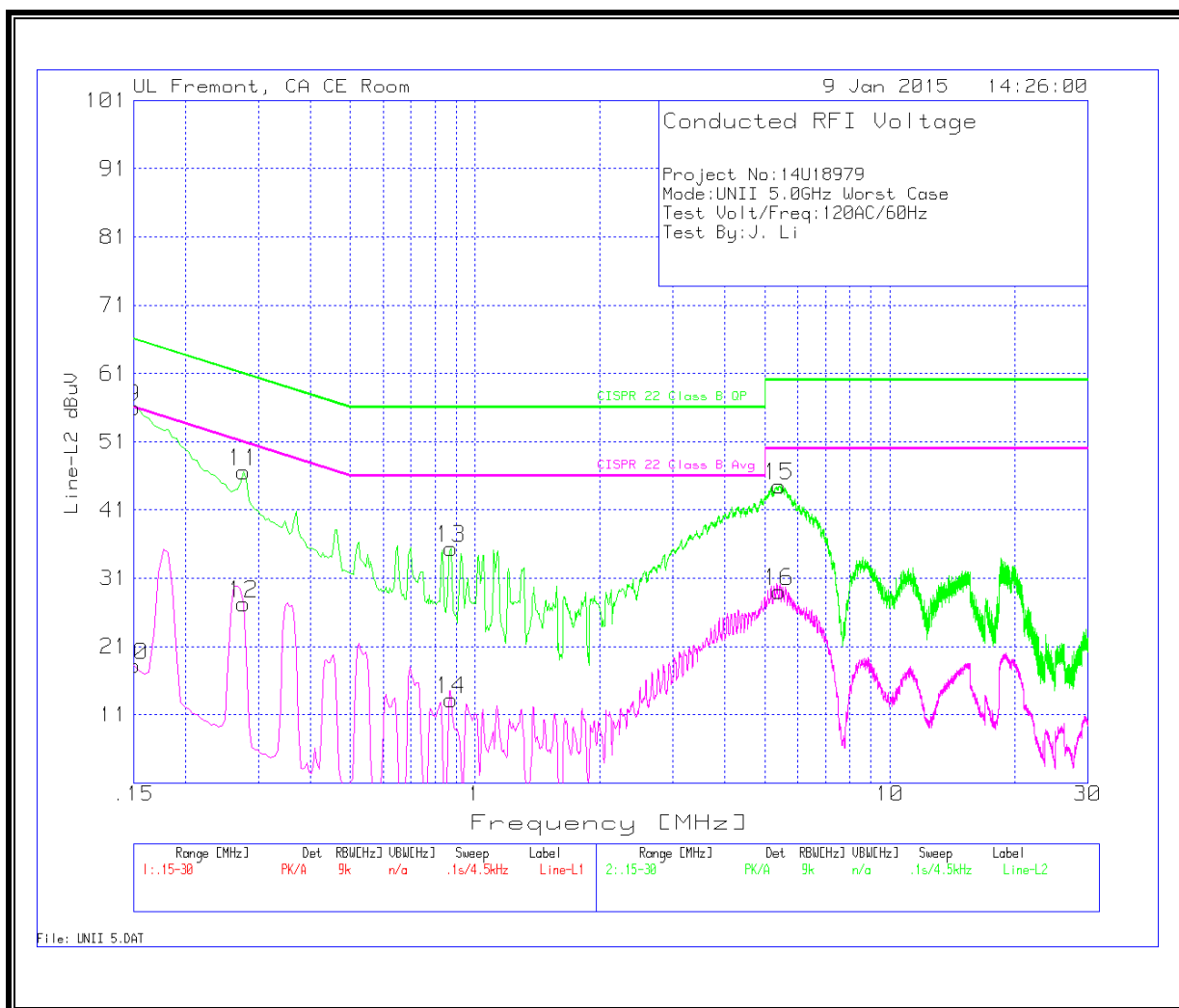
13.1. MODEL: A1622

AC/DC ADAPTER MODEL NUMBER: MD506LL/A

LINE 1 RESULT



LINE 2 RESULT



WORST EMISSIONS DATA

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	.15	54.25	PK	1.4	0	55.65	66	-10.35	-	-
2	.15	16.54	Av	1.4	0	17.94	-	-	56	-38.06
3	.519	48.15	PK	.3	0	48.45	56	-7.55	-	-
4	.519	30.88	Av	.3	0	31.18	-	-	46	-14.82
5	1.0905	42.91	PK	.2	0	43.11	56	-12.89	-	-
6	1.0905	26.19	Av	.2	0	26.39	-	-	46	-19.61
7	5.3655	39.73	PK	.2	.1	40.03	60	-19.97	-	-
8	5.3655	25.55	Av	.2	.1	25.85	-	-	50	-24.15

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)
9	.15	54.52	PK	1.5	0	56.02	66	-9.98	-	-
10	.15	16.67	Av	1.5	0	18.17	-	-	56	-37.83
11	.276	45.88	PK	.7	0	46.58	60.9	-14.32	-	-
12	.276	26.59	Av	.7	0	27.29	-	-	50.9	-23.61
13	.8745	35.12	PK	.3	0	35.42	56	-20.58	-	-
14	.8745	12.91	Av	.3	0	13.21	-	-	46	-32.79
15	5.4105	44.28	PK	.2	.1	44.58	60	-15.42	-	-
16	5.4105	28.81	Av	.2	.1	29.11	-	-	50	-20.89

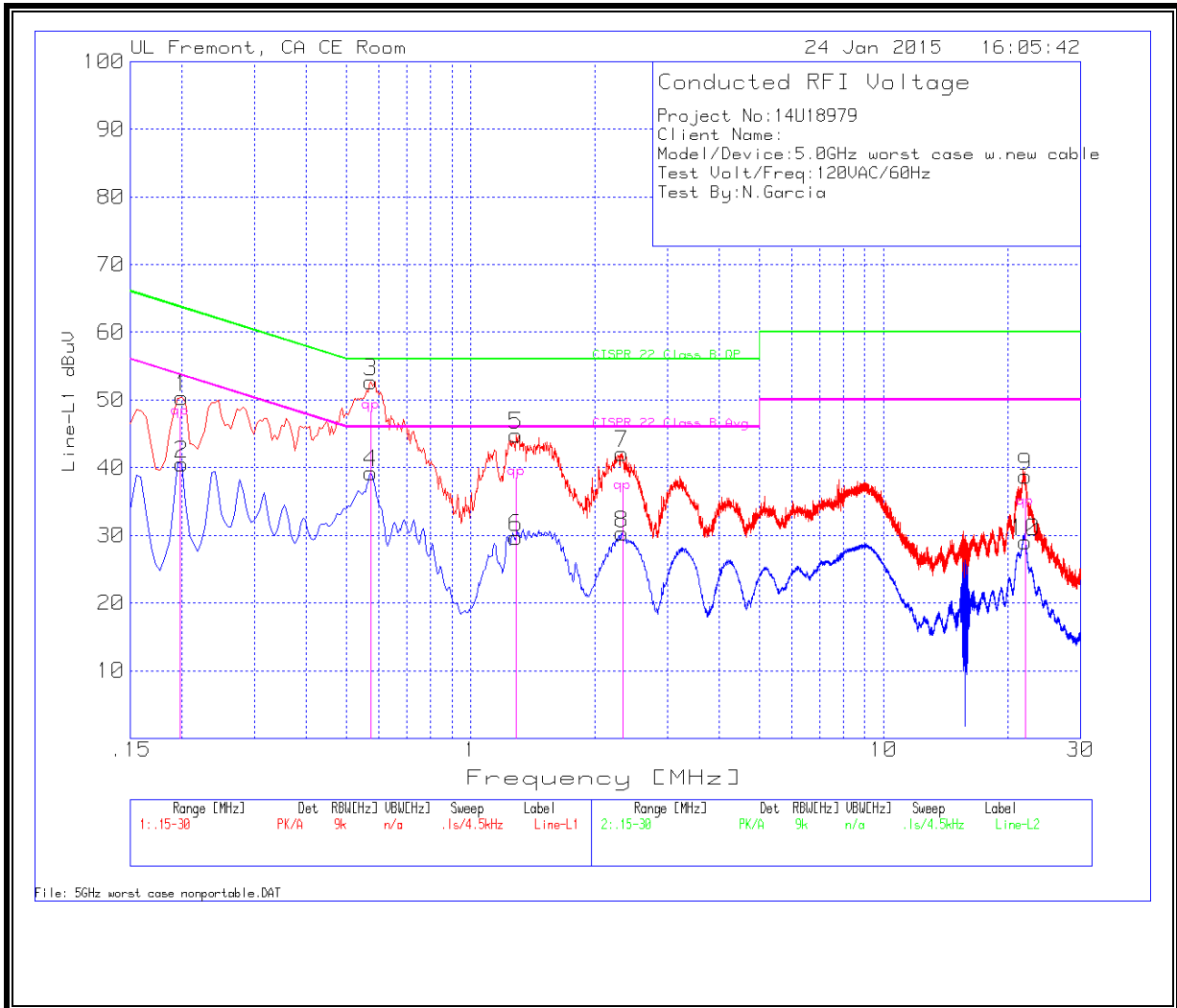
PK - Peak detector

Av - average detection

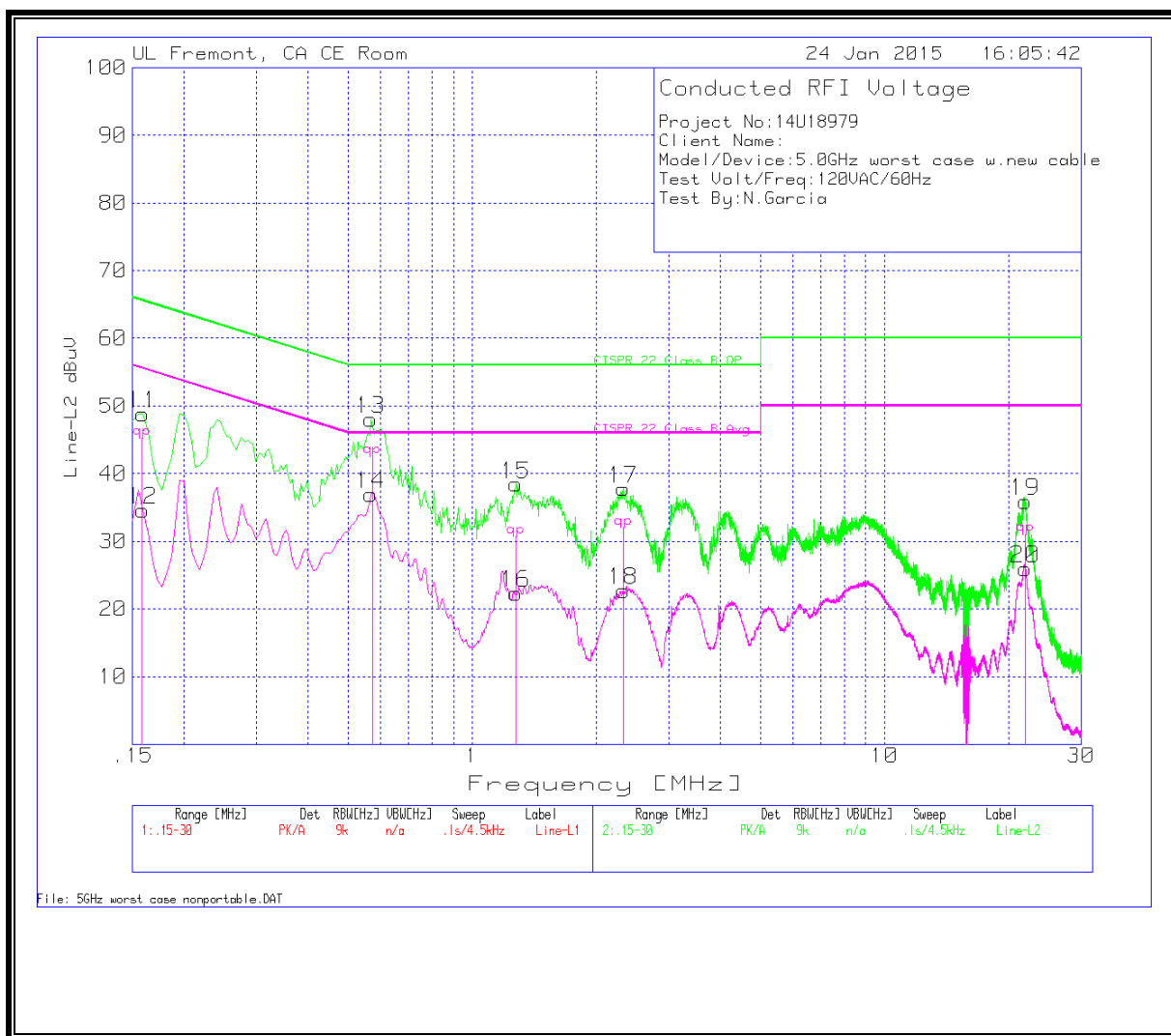
13.2. MODEL: A1623

AC/DC ADAPTER MODEL NUMBER: MD836LL/A

LINE 1 RESULT



LINE 2 RESULT



WORST EMISSIONS DATA

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	.1995	49.48	PK	.9	0	50.38	63.6	-13.22	-	-
2	.1995	39.63	Av	.9	0	40.53	-	-	53.6	-13.07
3	.573	52.43	PK	.3	0	52.73	56	-3.27	-	-
4	.573	38.92	Av	.3	0	39.22	-	-	46	-6.78
5	1.2885	44.49	PK	.2	.1	44.79	56	-11.21	-	-
6	1.2885	29.43	Av	.2	.1	29.73	-	-	46	-16.27
7	2.328	41.76	PK	.2	.1	42.06	56	-13.94	-	-
8	2.328	29.99	Av	.2	.1	30.29	-	-	46	-15.71
9	22.0515	38.27	PK	.3	.2	38.77	60	-21.23	-	-
10	22.0515	28.59	Av	.3	.2	29.09	-	-	50	-20.91

Quasi-Peak Emissions

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)
.1977	46.47	QP	.9	0	47.37	63.7	-16.33	-	-
.573	47.96	QP	.3	0	48.26	56	-7.74	-	-
1.2903	38.17	QP	.2	.1	38.47	56	-17.53	-	-
2.3325	36.09	QP	.2	.1	36.39	56	-19.61	-	-
22.0497	33.56	QP	.3	.2	34.06	60	-25.94	-	-

Line-L2 .15 - 30MHz

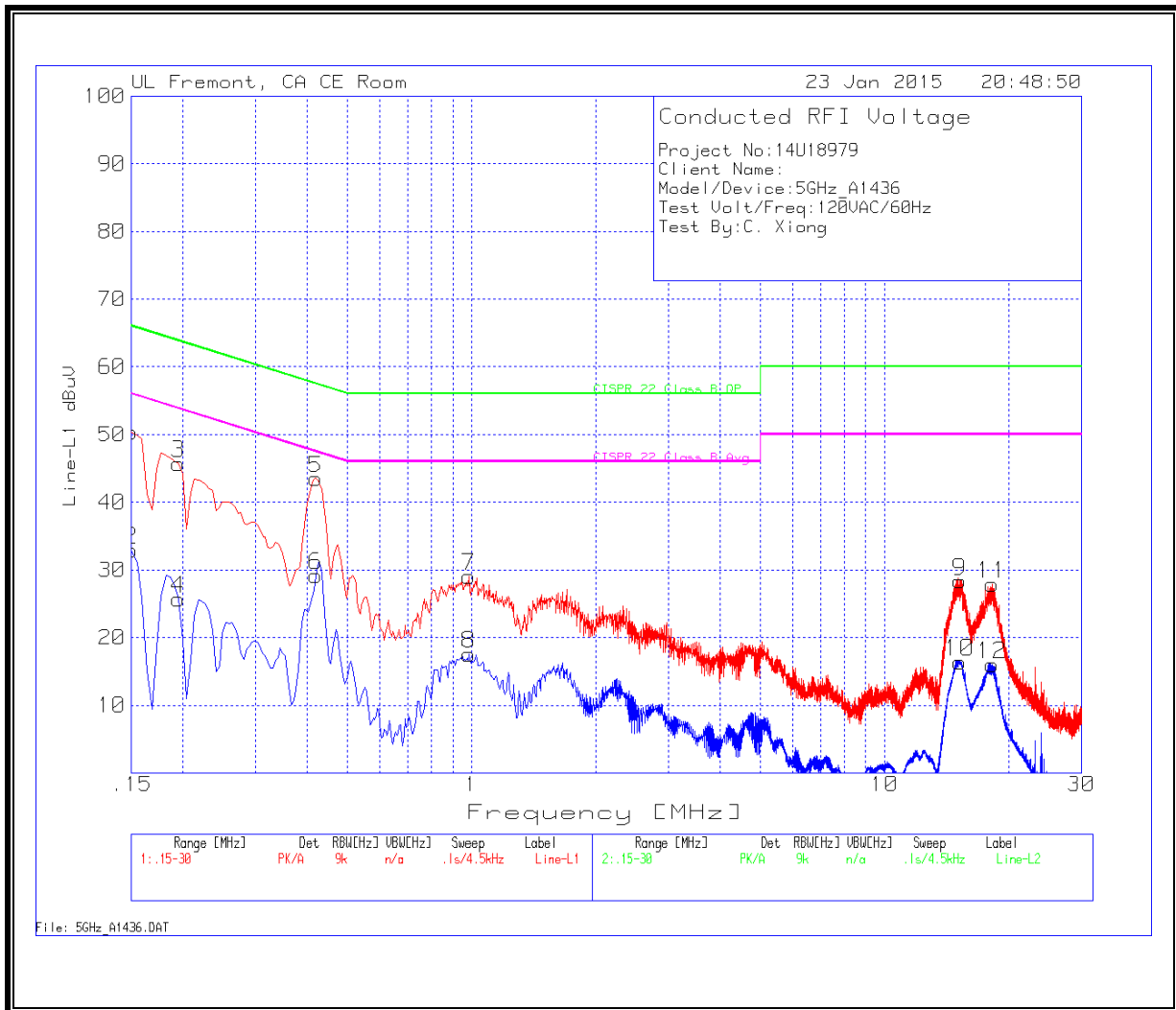
Trace Markers

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	.159	47.47	PK	1.4	0	48.87	65.5	-16.63	-	-
12	.159	33.26	Av	1.4	0	34.66	-	-	55.5	-20.84
13	.5685	47.75	PK	.3	0	48.05	56	-7.95	-	-
14	.5685	36.68	Av	.3	0	36.98	-	-	46	-9.02
15	1.275	38.13	PK	.2	.1	38.43	56	-17.57	-	-
16	1.275	22.09	Av	.2	.1	22.39	-	-	46	-23.61
17	2.3235	37.48	PK	.2	.1	37.78	56	-18.22	-	-
18	2.3235	22.41	Av	.2	.1	22.71	-	-	46	-23.29
19	21.9705	35.42	PK	.3	.2	35.92	60	-24.08	-	-
20	21.9705	25.51	Av	.3	.2	26.01	-	-	50	-23.99

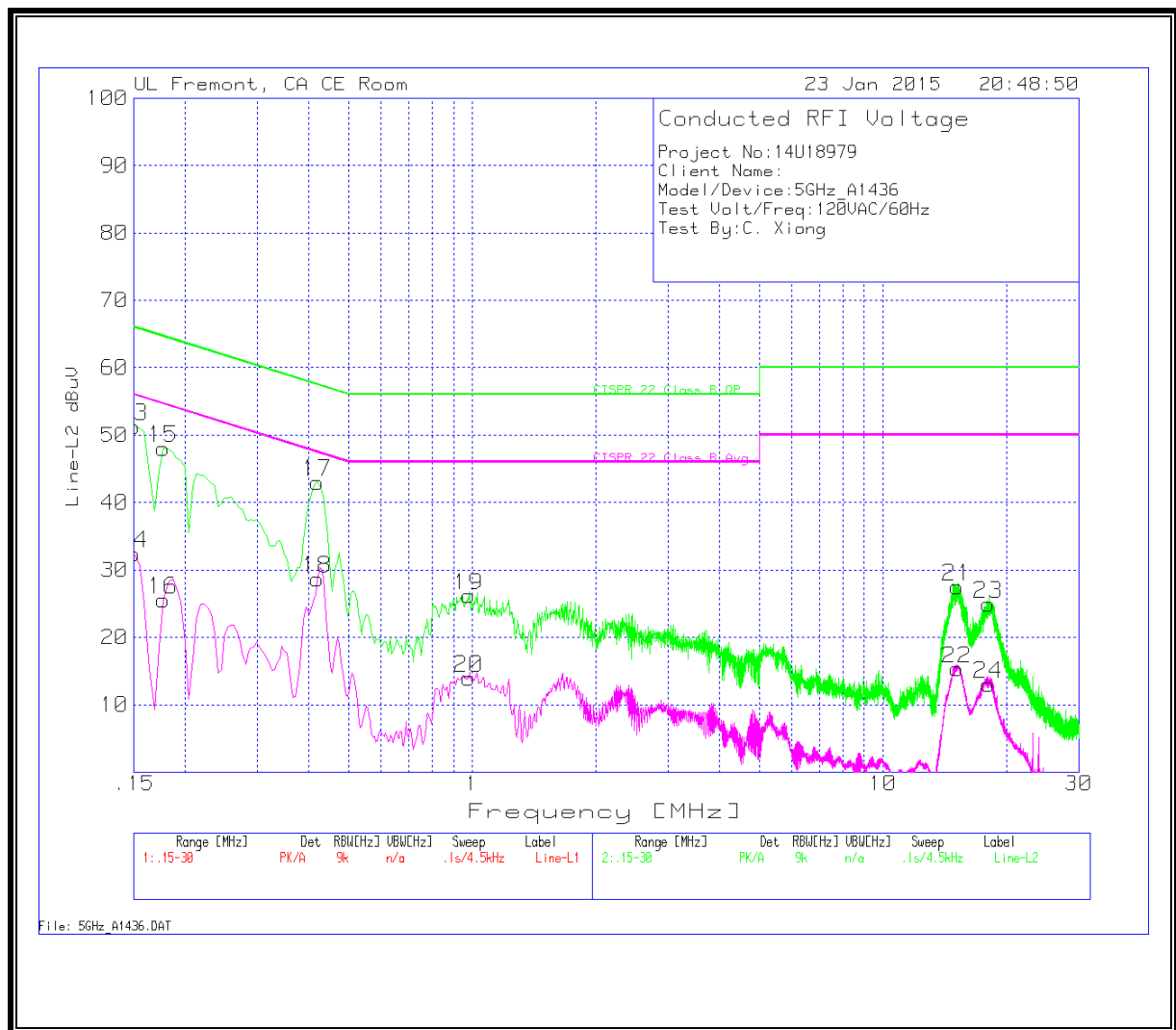
Quasi-Peak Emissions

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)
.1581	43.82	QP	1.4	0	45.22	65.6	-20.38	-	-
.5721	42.24	QP	.3	0	42.54	56	-13.46	-	-
1.2759	30.41	QP	.2	.1	30.71	56	-25.29	-	-
2.3271	31.67	QP	.2	.1	31.97	56	-24.03	-	-
21.966	30.55	QP	.3	.2	31.05	60	-28.95	-	-

QP - Quasi-Peak detector

LINE 1 RESULT

LINE 2 RESULT



WORST EMISSIONS DATA

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	.15	49.01	PK	1.4	0	50.41	66	-15.59	-	-
2	.15	31.56	Av	1.4	0	32.96	-	-	56	-23.04
3	.195	44.75	PK	1	0	45.75	63.8	-18.05	-	-
4	.195	24.73	Av	1	0	25.73	-	-	53.8	-28.07
5	.42	43.07	PK	.4	0	43.47	57.4	-13.93	-	-
6	.42	28.83	Av	.4	0	29.23	-	-	47.4	-18.17
7	.987	28.8	PK	.3	0	29.1	56	-26.9	-	-
8	.987	17.27	Av	.3	0	17.57	-	-	46	-28.43
9	15.2115	27.85	PK	.3	.2	28.35	60	-31.65	-	-
10	15.2115	15.92	Av	.3	.2	16.42	-	-	50	-33.58
11	18.2445	27.41	PK	.3	.2	27.91	60	-32.09	-	-
12	18.2445	15.47	Av	.3	.2	15.97	-	-	50	-34.03

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)
13	.15	49.82	PK	1.5	0	51.32	66	-14.68	-	-
14	.15	30.91	Av	1.5	0	32.41	-	-	56	-23.59
15	.177	46.87	PK	1.2	0	48.07	64.6	-16.53	-	-
16	.177	24.35	Av	1.2	0	25.55	-	-	54.6	-29.05
17	.42	42.6	PK	.4	0	43	57.4	-14.4	-	-
18	.42	28.24	Av	.4	0	28.64	-	-	47.4	-18.76
19	.978	25.76	PK	.3	.1	26.16	56	-29.84	-	-
20	.978	13.54	Av	.3	.1	13.94	-	-	46	-32.06
21	15.126	27.03	PK	.3	.2	27.53	60	-32.47	-	-
22	15.126	14.81	Av	.3	.2	15.31	-	-	50	-34.69
23	18.0375	24.42	PK	.3	.2	24.92	60	-35.08	-	-
24	18.0375	12.6	Av	.3	.2	13.1	-	-	50	-36.9

PK - Peak detector

Av - average detection

14. DYNAMIC FREQUENCY SELECTION

14.1. OVERVIEW

14.1.1. LIMITS

FCC

§15.407 (h) and FCC 06-96 APPENDIX "COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVICES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION".

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
Uniform Spreading	Yes	Not required	Not required

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

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

Maximum Transmit Power	Value (see note)
≥ 200 milliwatt	-64 dBm
< 200 milliwatt	-62 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.	

Table 4: DFS Response requirement values

Parameter	Value
<i>Non-occupancy period</i>	30 minutes
<i>Channel Availability Check Time</i>	60 seconds
<i>Channel Move Time</i>	10 seconds
<i>Channel Closing Transmission Time</i>	200 milliseconds + approx. 60 milliseconds over remaining 10 second period
The instant that the <i>Channel Move Time</i> and the <i>Channel Closing Transmission Time</i> begins is as follows: For the Short pulse radar Test Signals this instant is the end of the <i>Burst</i>. 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 transmission. 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.	

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (Microseconds)	PRI (Microseconds)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
1	1	1428	18	60%	30
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

Table 6 – Long Pulse Radar Test Signal

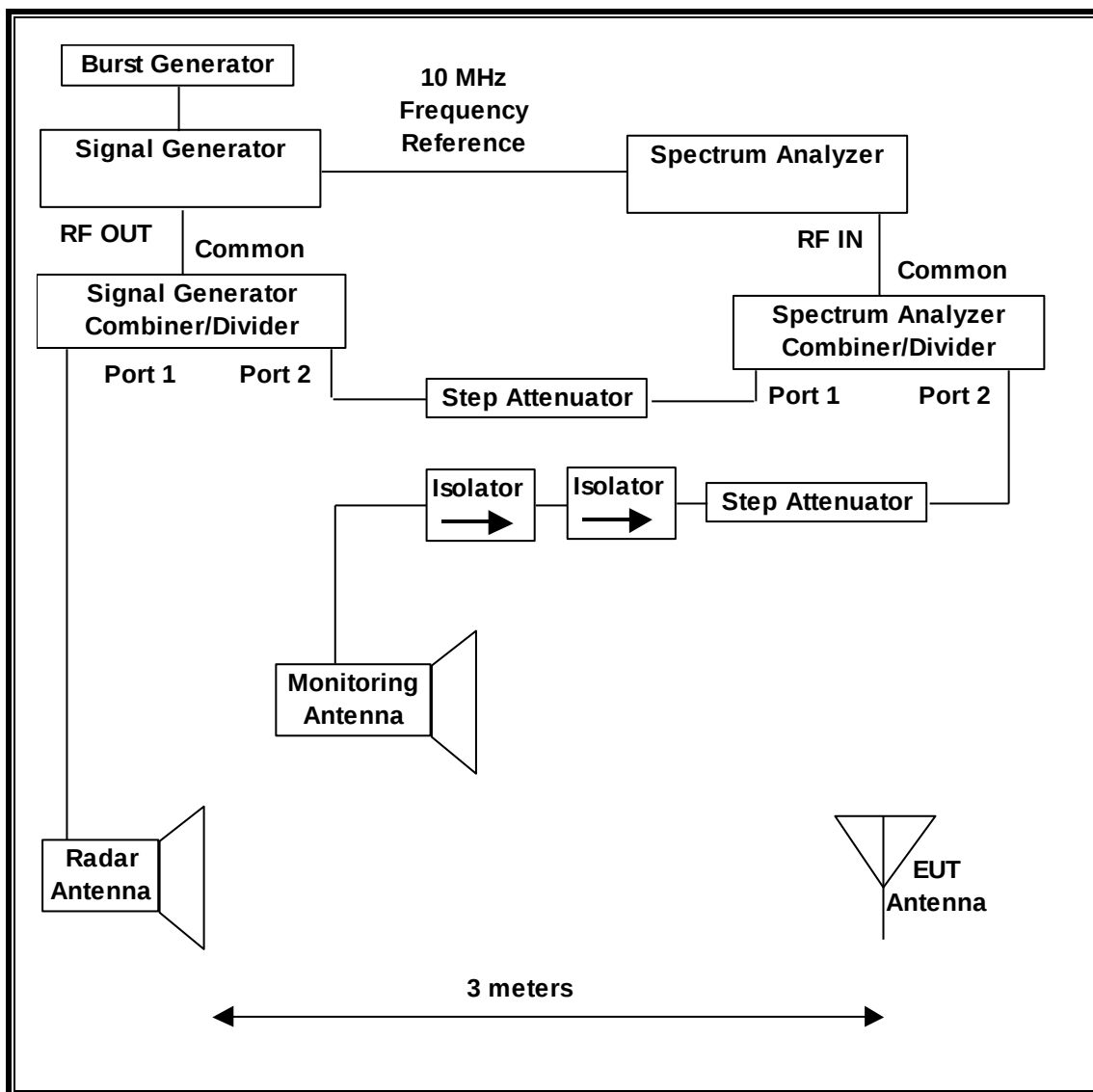
Radar Waveform	Bursts	Pulses per Burst	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Minimum Percentage of Successful Detection	Minimum Trials
5	8-20	1-3	50-100	5-20	1000-2000	80%	30

Table 7 – Frequency Hopping Radar Test Signal

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

14.1.2. 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 FCC 06-96 APPENDIX. 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.

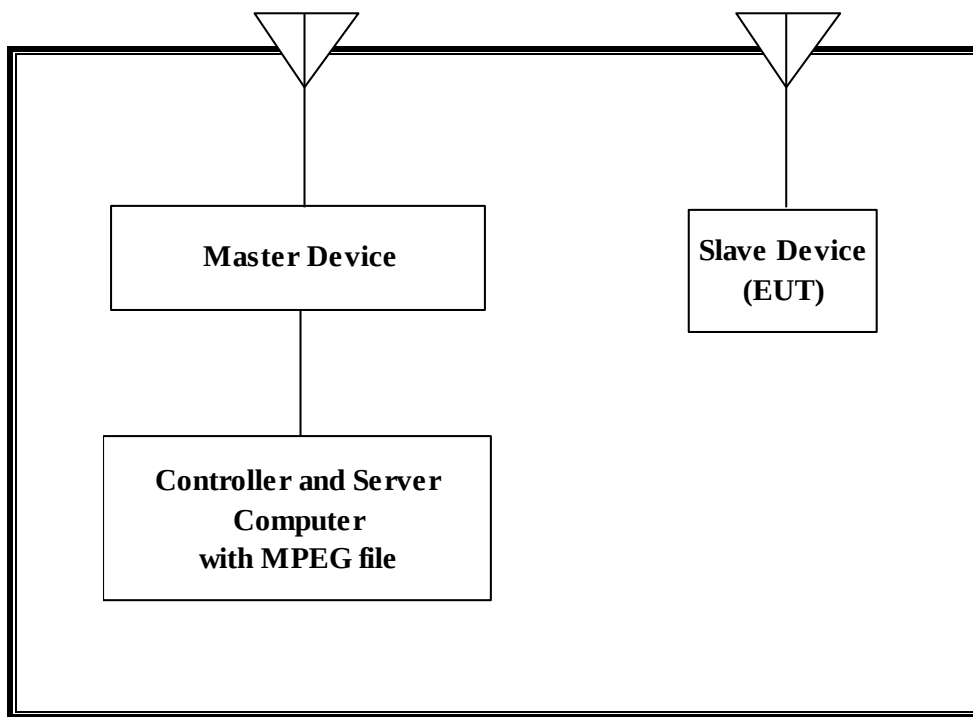
TEST AND MEASUREMENT EQUIPMENT

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	09/18/13
Vector Signal Generator, 20GHz	Agilent / HP	E8267C	C01066	11/20/13
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	95288	09/04/15
Vector Signal Generator, 6 GHz	Agilent / HP	E4438C	F00037	08/06/14

14.1.3. SETUP OF EUT (CLIENT MODE)

RADIATED METHOD EUT TEST SETUP



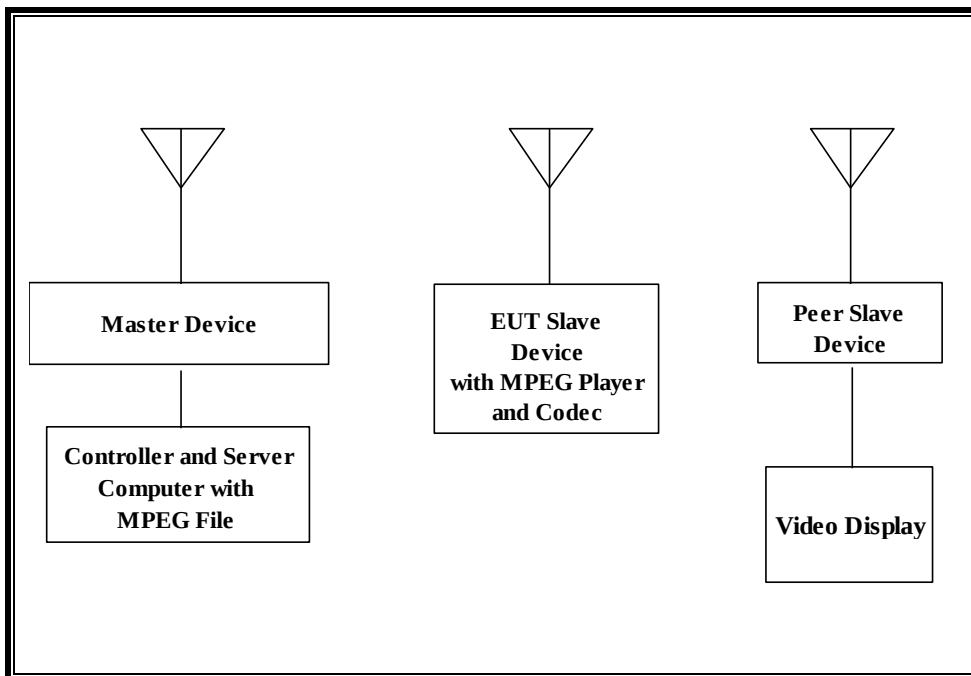
SUPPORT EQUIPMENT

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
Wireless Access Point (Master Device)	Cisco	AIR-AP1252AG-A-K9	FTX130390D9	LDK102061
AC Adapter (AP)	Delta Electronics	EADP-45BB B	DTH1049902N	DoC
Notebook PC (Controller/Server)	Apple	MacBook Pro A1150	AOU257941	DoC
AC Adapter (Controller/Server PC)	Delta Electronics	A1330	MV952157KAGKA	DoC
Apple TV (Peer Slave Device)	Apple	A1469	V07JV1Z7FF54	BCGA1469
Video Display	Dell	U2410f	CN-0FJ525N-72872-1B5-AGAL	DoC
Wireless Access Point (Master Device)	Apple	A1470	DLXL4029FPLF	BCG-A1470

14.1.4. 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-AP1252AG-A-K9	FTX130390D9	LDK102061
AC Adapter (AP)	Delta Electronics	EADP-45BB B	DTH1049902N	DoC
Notebook PC (Controller/Server)	Apple	MacBook Pro A1150	AOU257941	DoC
AC Adapter (Controller/Server PC)	Delta Electronics	A1330	MV952157KAGKA	DoC
Apple TV (Peer Slave Device)	Apple	A1469	V07JV1Z7FF54	BCGA1469
Video Display	Dell	U2410f	CN-0FJ525N-72872-1B5-AGAL	DoC
Wireless Access Point (Master Device)	Apple	A1470	DLXL4029FPLF	BCG-A1470

14.1.5. 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 24.41 dBm EIRP in the 5250-5350 MHz band and 24.97 dBm EIRP in the 5470-5725 MHz band.

The only antenna assembly consists of 2 antennas with individual gains of 0.75 dBi and 3.26 dBi in the 5250-5350 MHz band and 2.43 dBi and 4.29 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 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 not required since the maximum EIRP is less than 500 mW (27 dBm).

The EUT utilizes the 802.11a/n architecture. Two nominal channel bandwidths of 20 MHz and 40 MHz are implemented.

The software installed in the EUT is 11B451.

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: LDK102061. 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 margin to the limit.

The software installed in the (Cisco) access point is 12.4(25d)JA1.

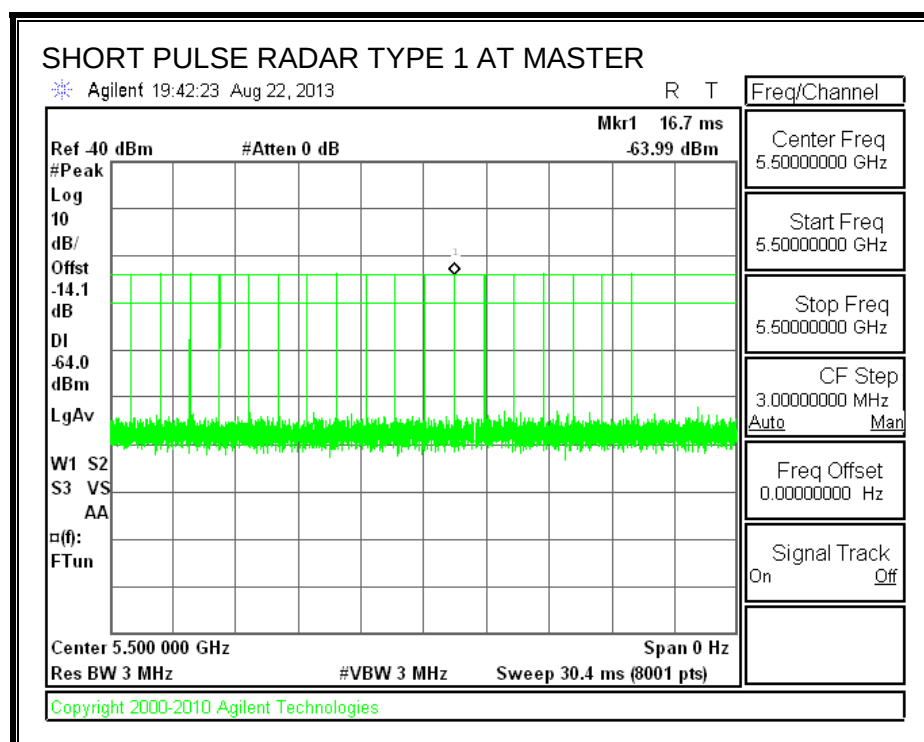
14.2. CLIENT MODE RESULTS FOR 20 MHz BANDWIDTH

14.2.1. TEST CHANNEL

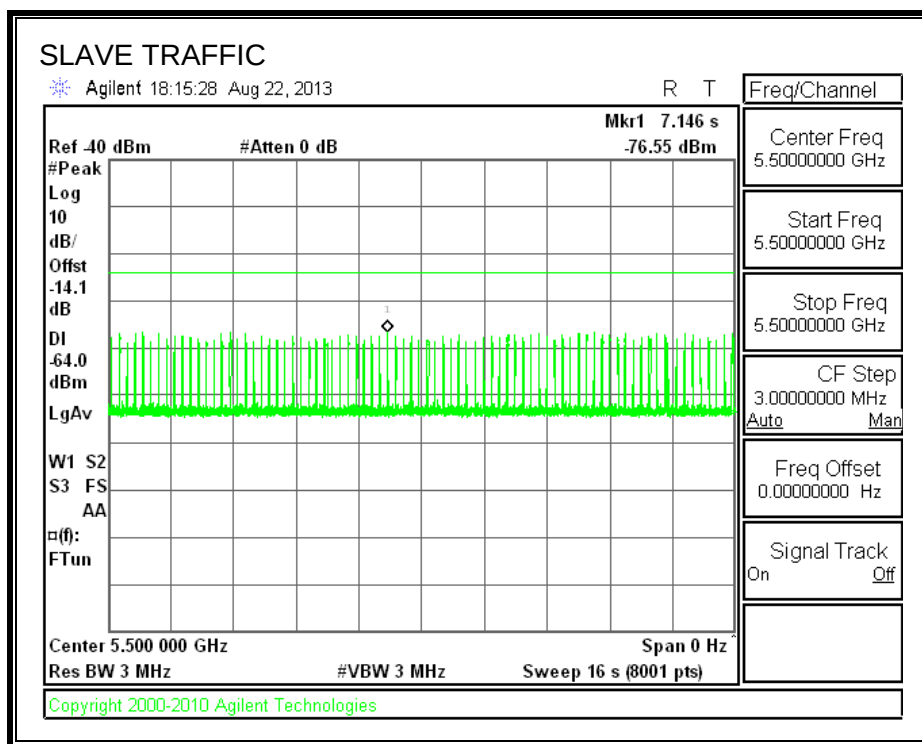
All tests were performed at a channel center frequency of 5500 MHz.

14.2.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



14.2.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

14.2.4. 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 FCC aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

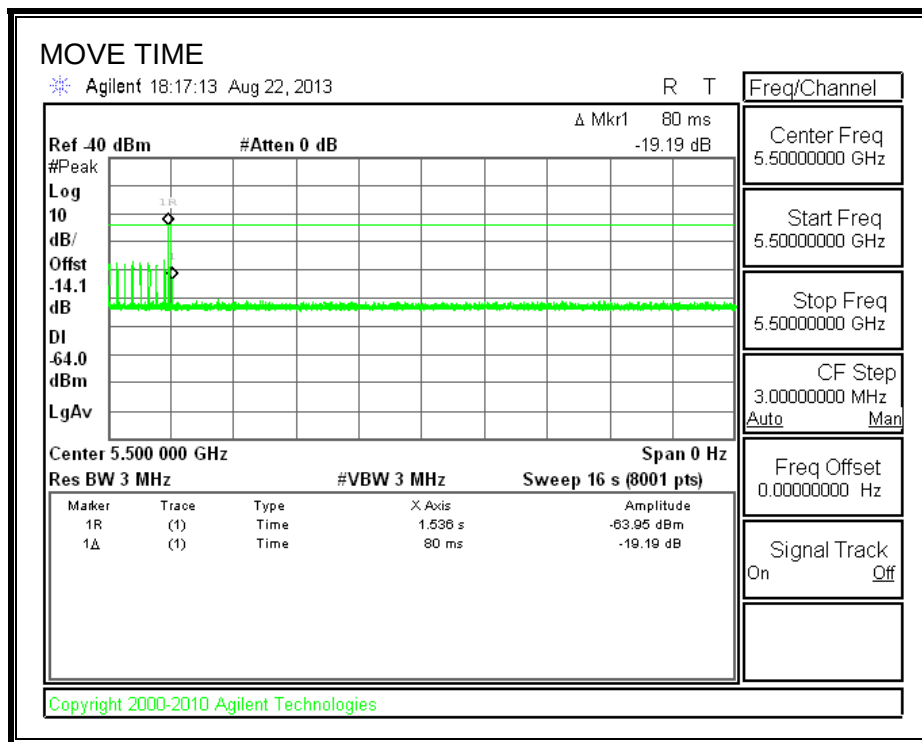
The observation period over which the IC aggregate time is calculated begins at (Reference Marker) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

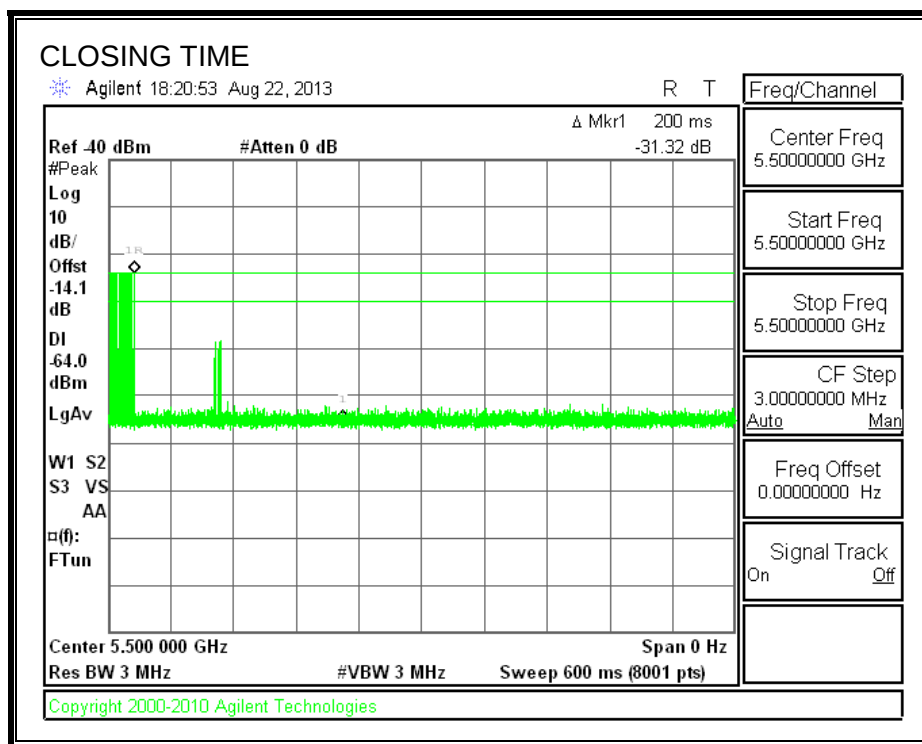
Agency	Channel Move Time (sec)	Limit (sec)
FCC / IC	0.080	10

Agency	Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
FCC	0.0	60
IC	20.0	260

MOVE TIME

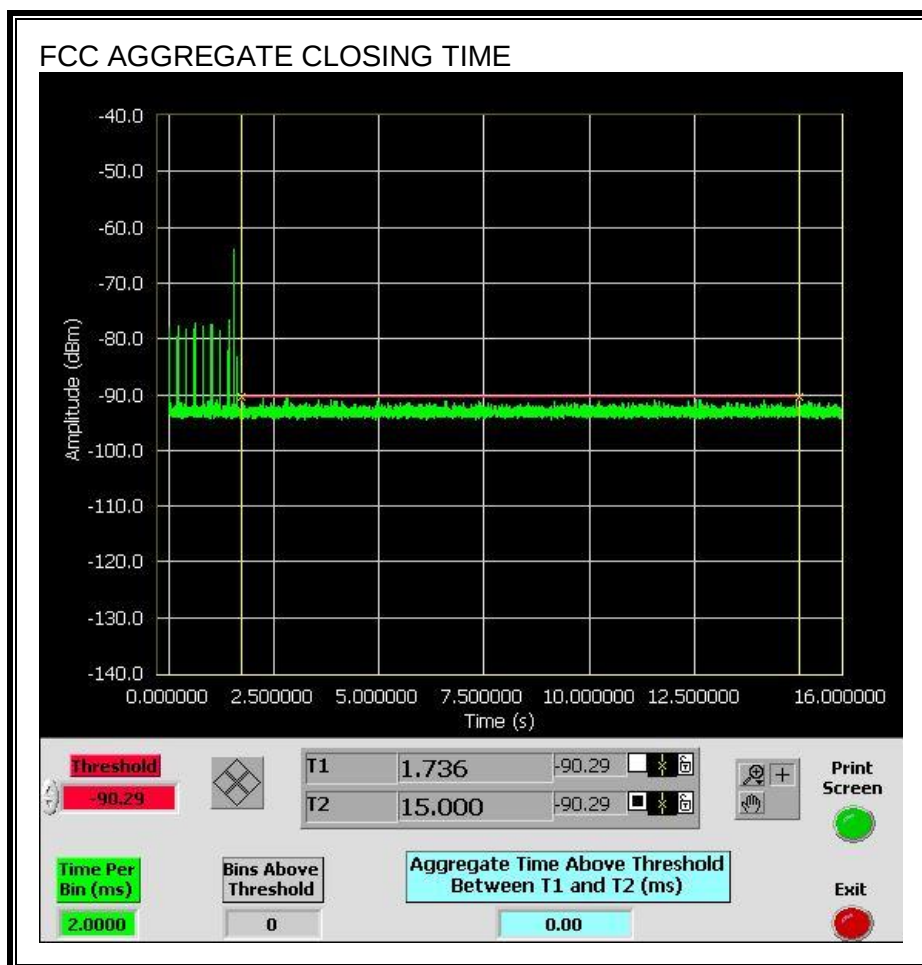


CHANNEL CLOSING TIME

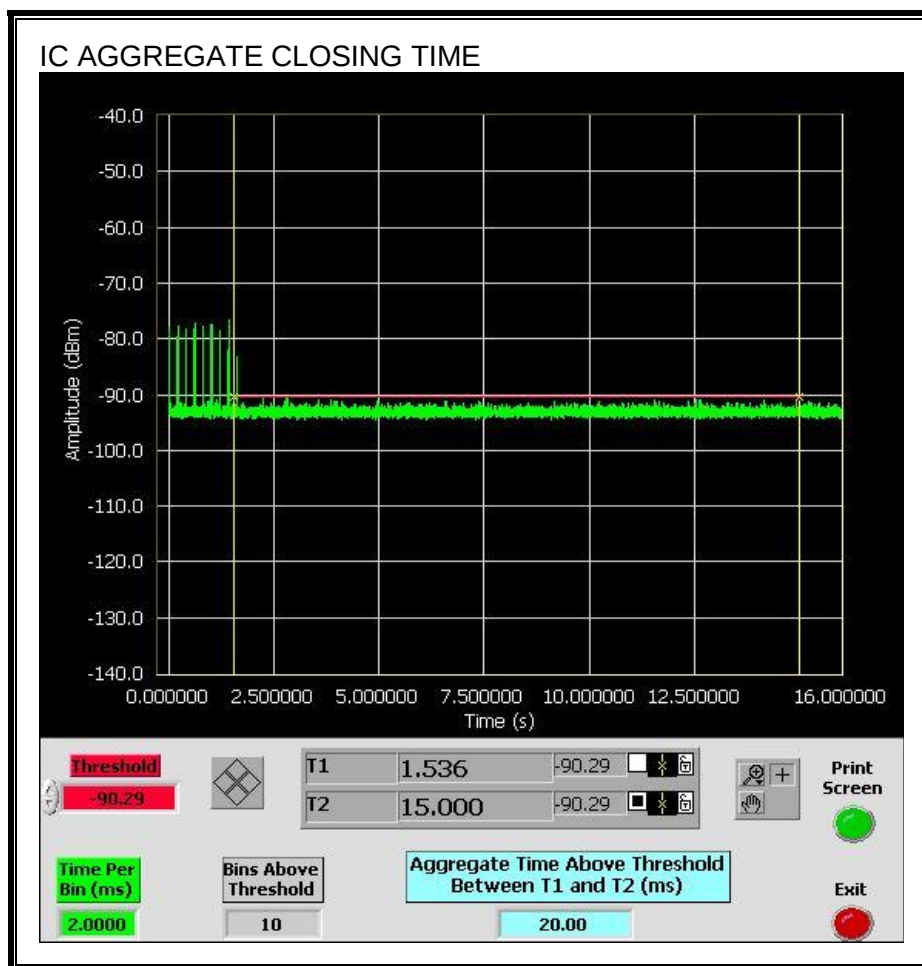


AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the FCC aggregate monitoring period.



Only intermittent transmissions are observed during the IC aggregate monitoring period.



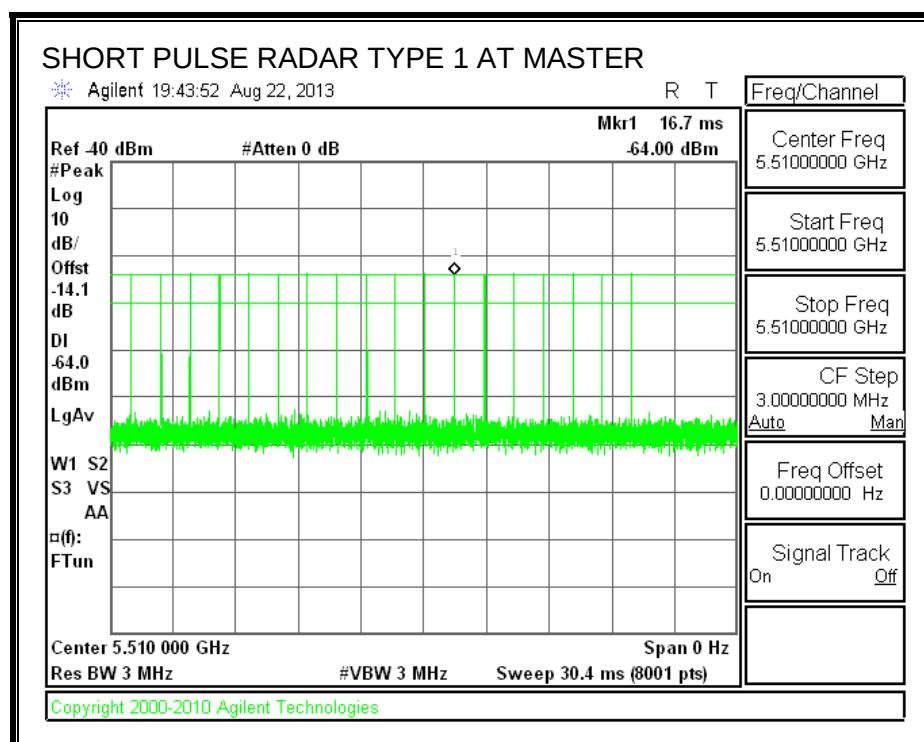
14.3. CLIENT MODE RESULTS FOR 40 MHz BANDWIDTH

14.3.1. TEST CHANNEL

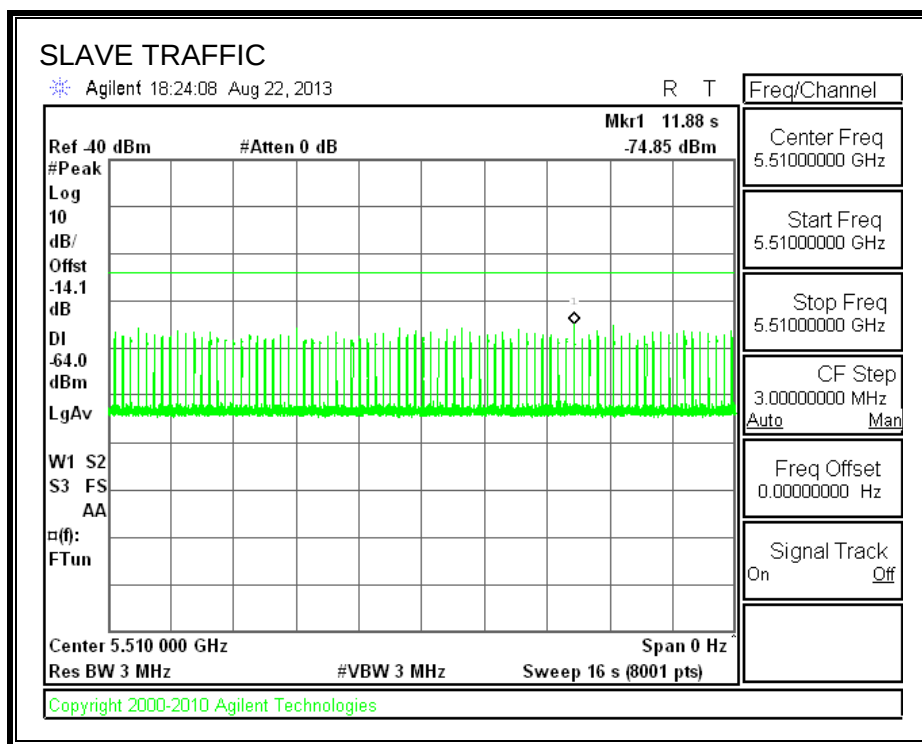
All tests were performed at a channel center frequency of 5510 MHz.

14.3.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



14.3.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

14.3.4. 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 FCC aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

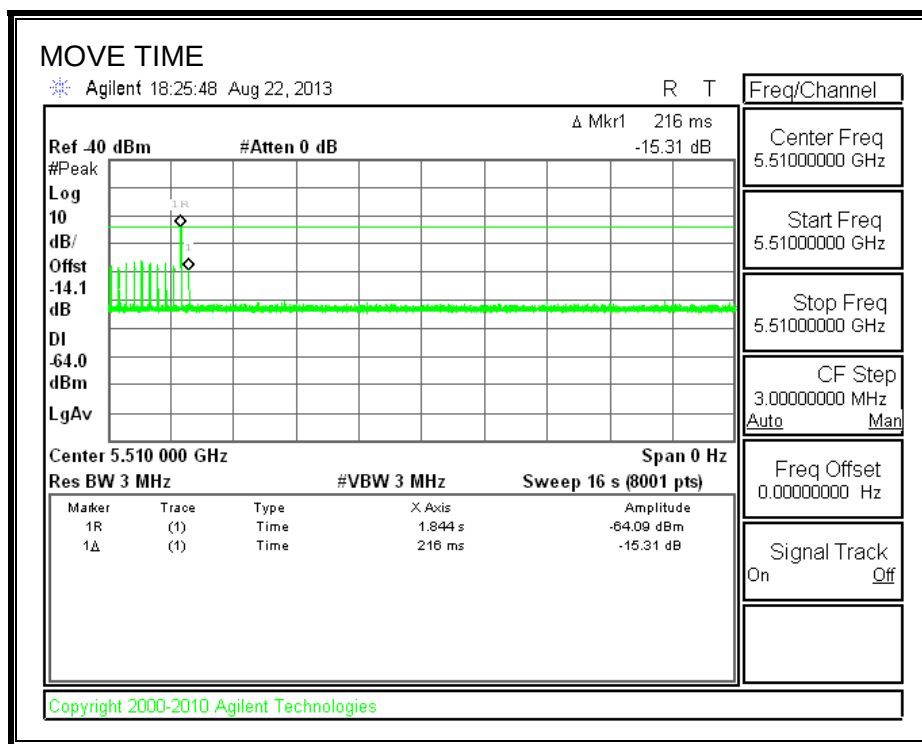
The observation period over which the IC aggregate time is calculated begins at (Reference Marker) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

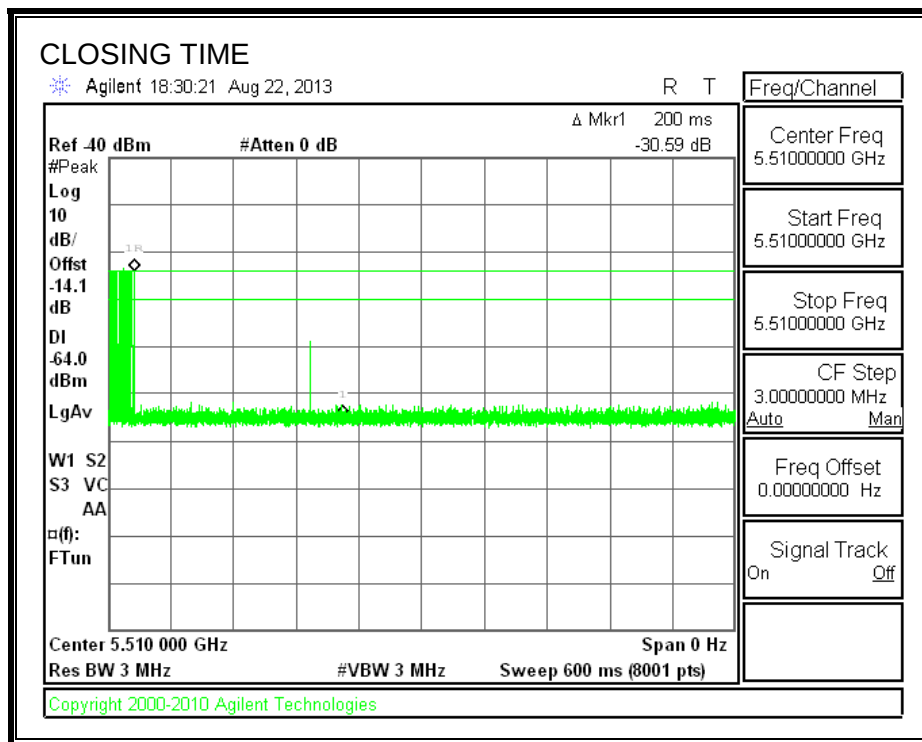
Agency	Channel Move Time (sec)	Limit (sec)
FCC / IC	0.216	10

Agency	Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
FCC	2.0	60
IC	36.0	260

MOVE TIME

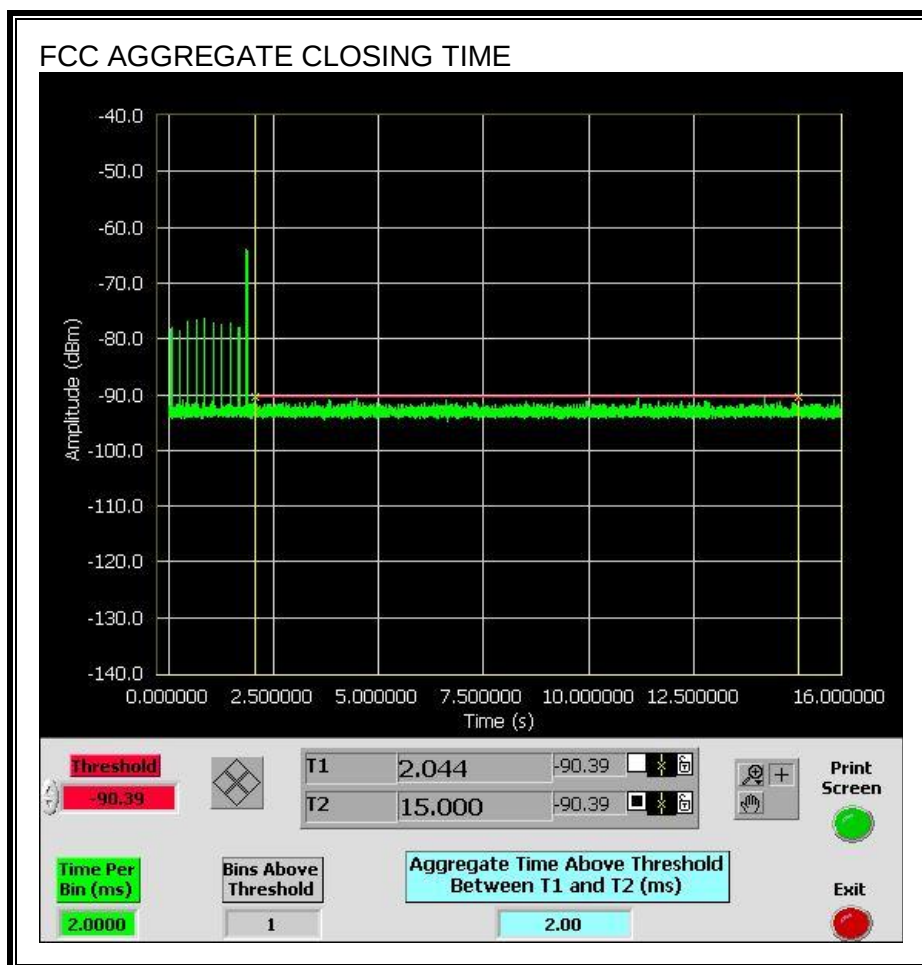


CHANNEL CLOSING TIME

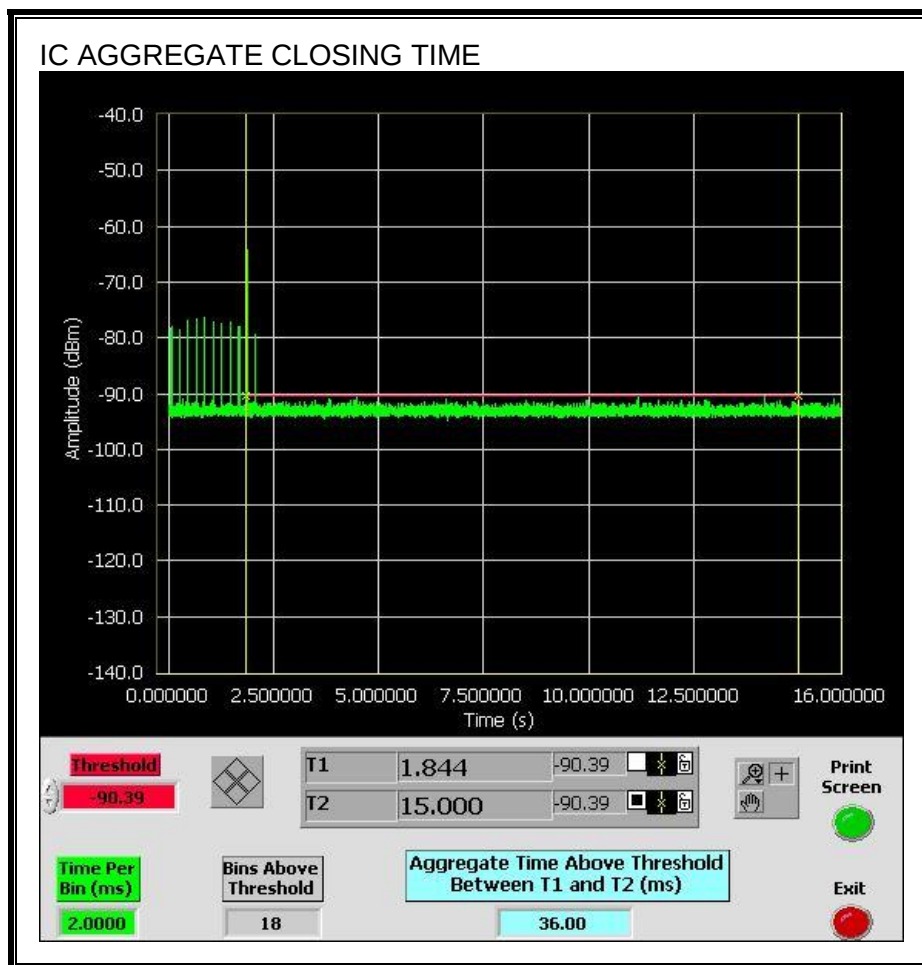


AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the FCC aggregate monitoring period.



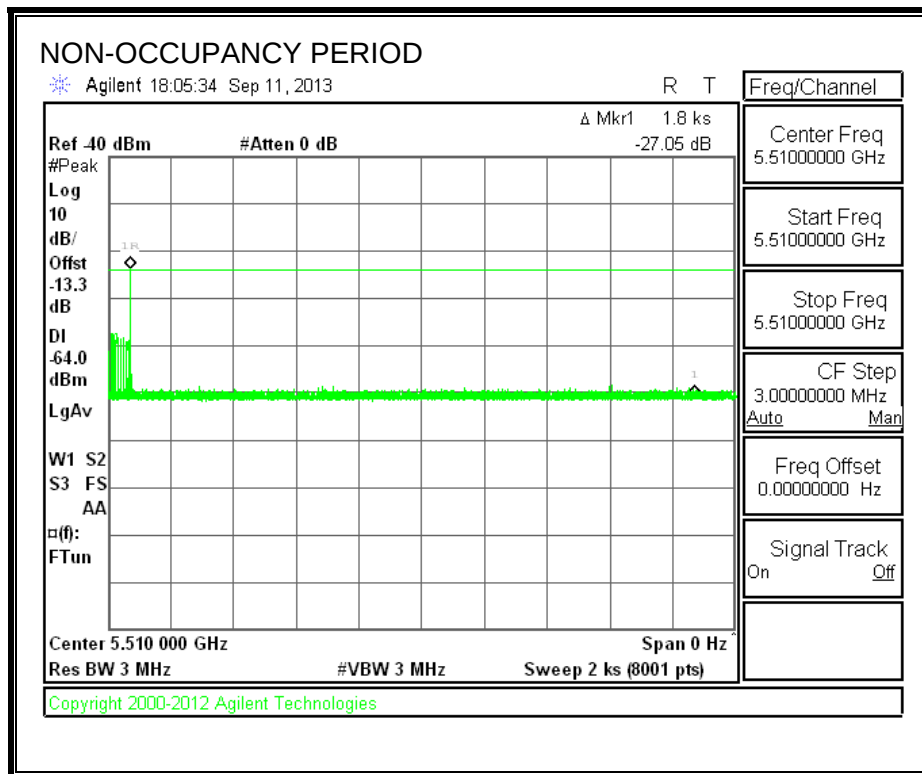
Only intermittent transmissions are observed during the IC aggregate monitoring period.



14.3.5. NON-OCCUPANCY PERIOD

RESULTS

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



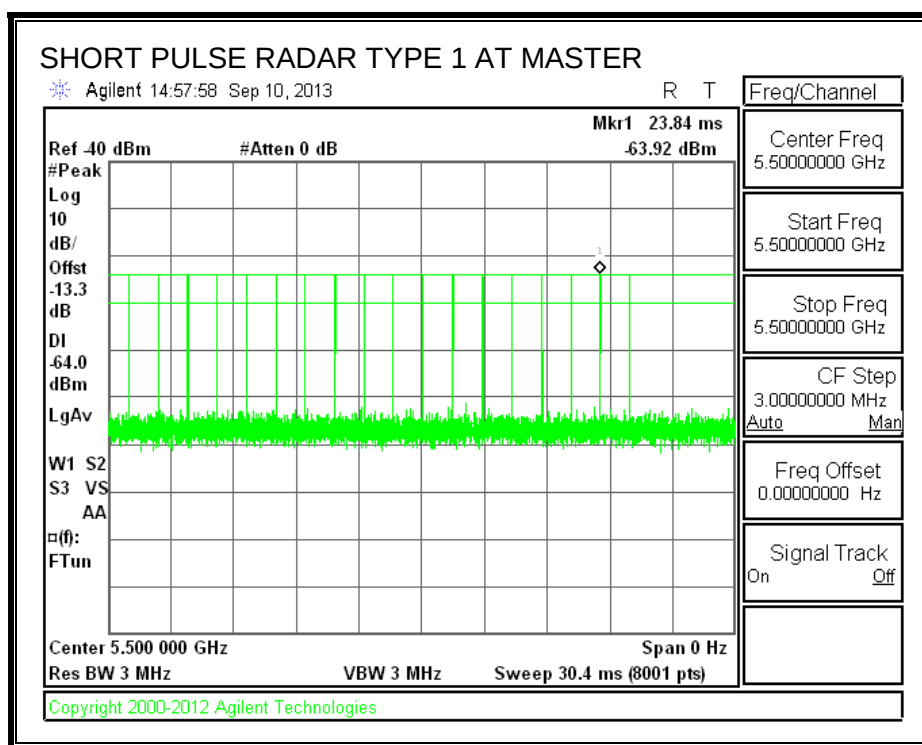
14.4. CLIENT-TO-CLIENT COMMUNICATIONS MODE RESULTS FOR 20 MHz BANDWIDTH

14.4.1. TEST CHANNEL

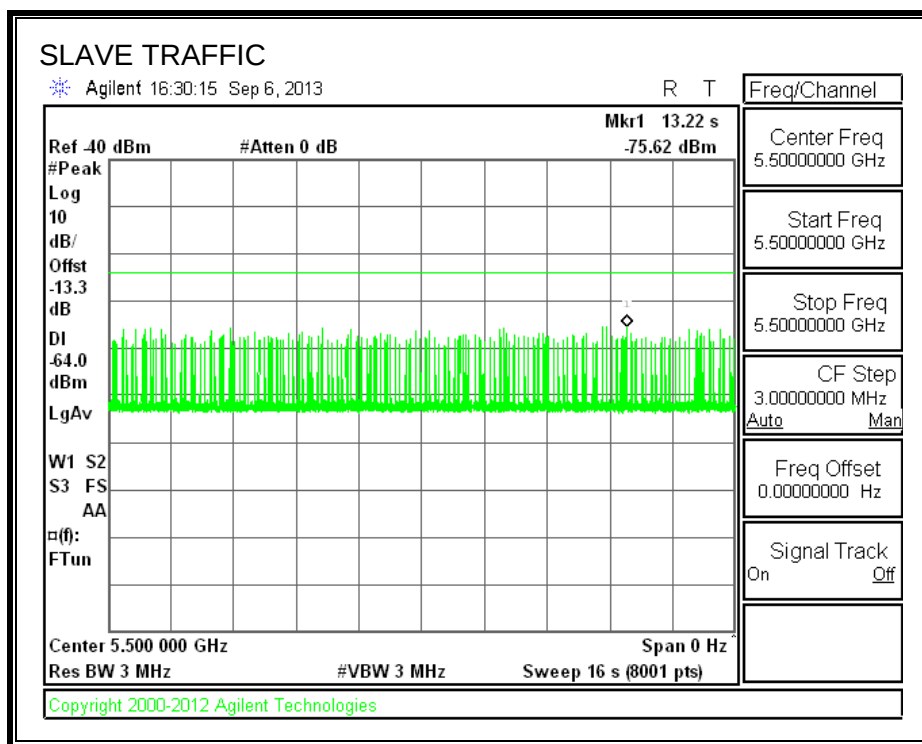
All tests were performed at a channel center frequency of 5500 MHz.

14.4.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



14.4.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

14.4.4. 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 FCC aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

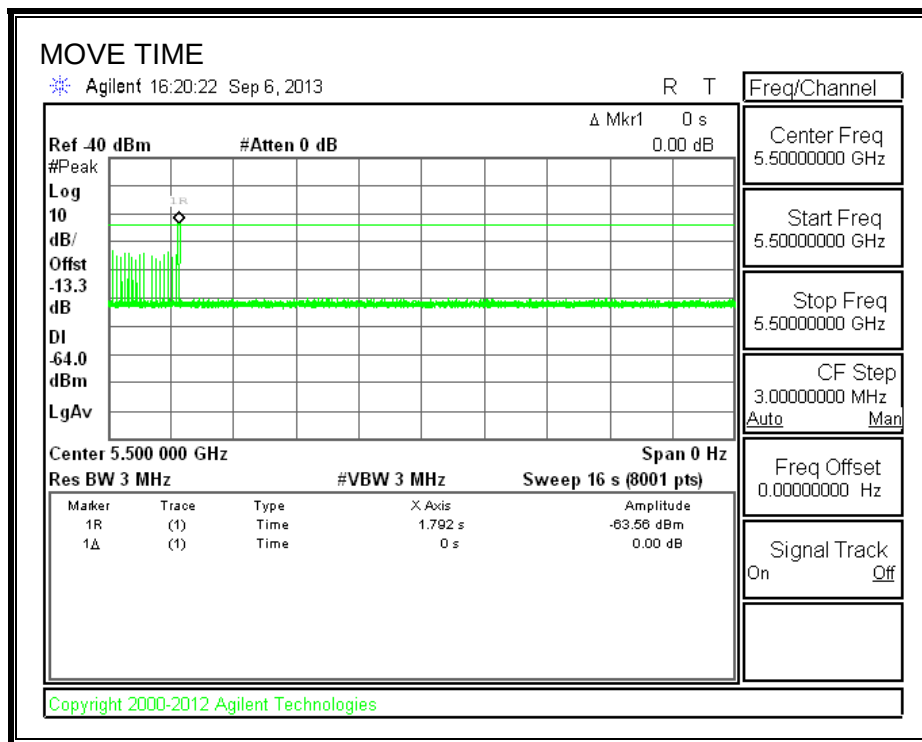
The observation period over which the IC aggregate time is calculated begins at (Reference Marker) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

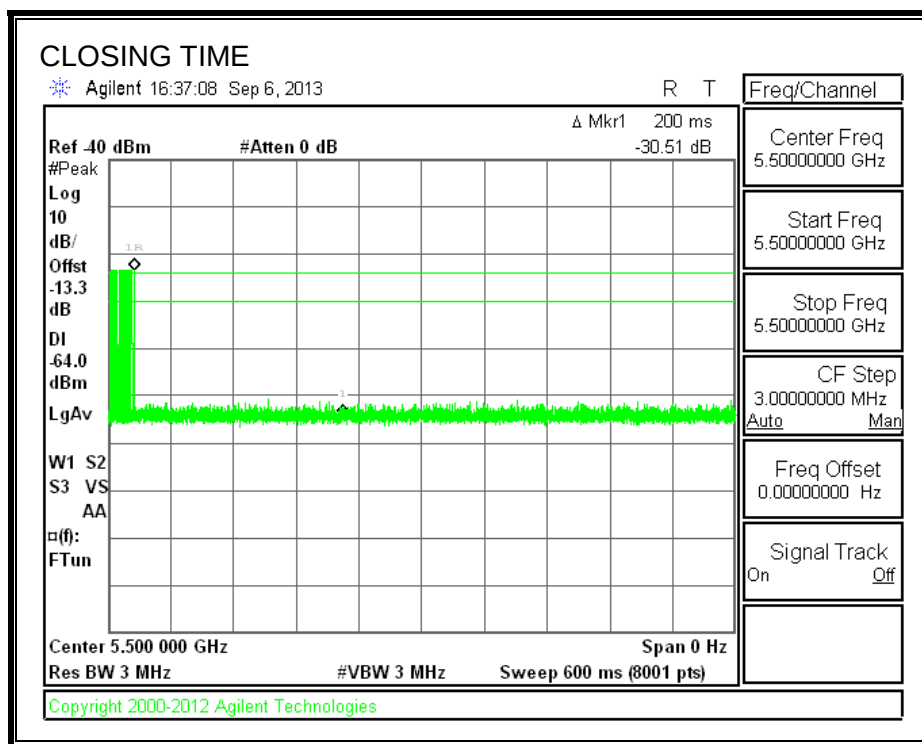
Agency	Channel Move Time (sec)	Limit (sec)
FCC / IC	0.000	10

Agency	Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
FCC	0.0	60
IC	0.0	260

MOVE TIME

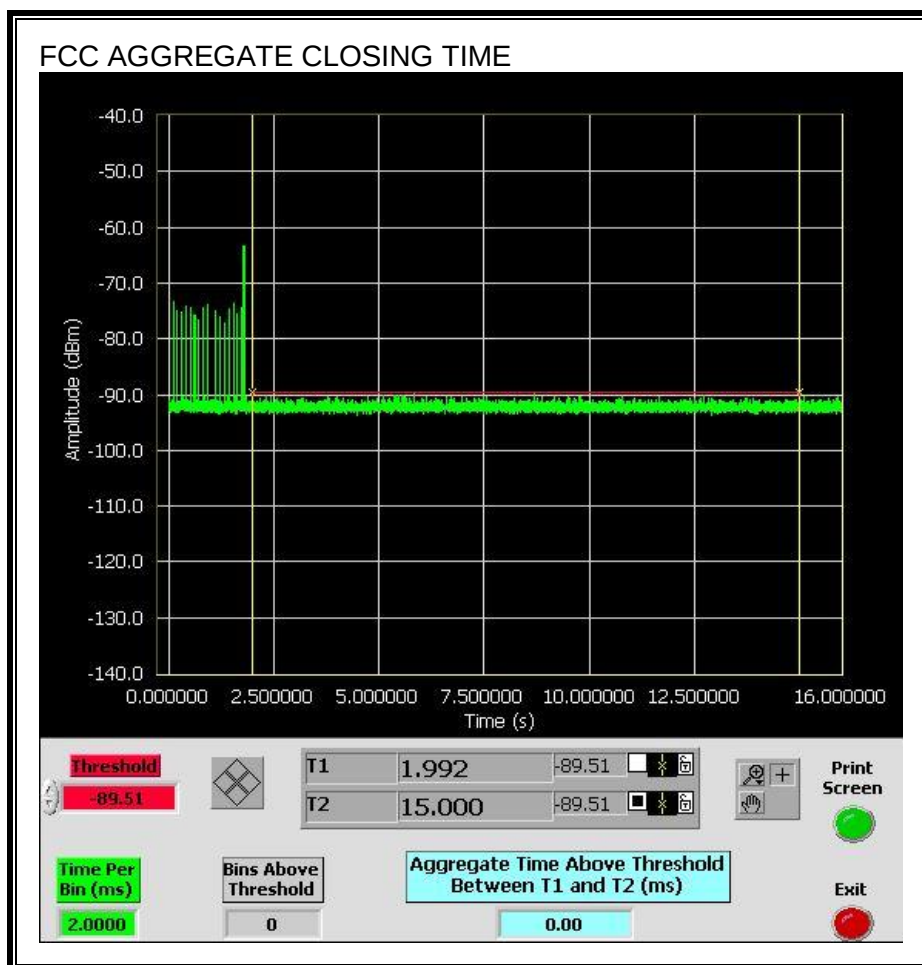


CHANNEL CLOSING TIME

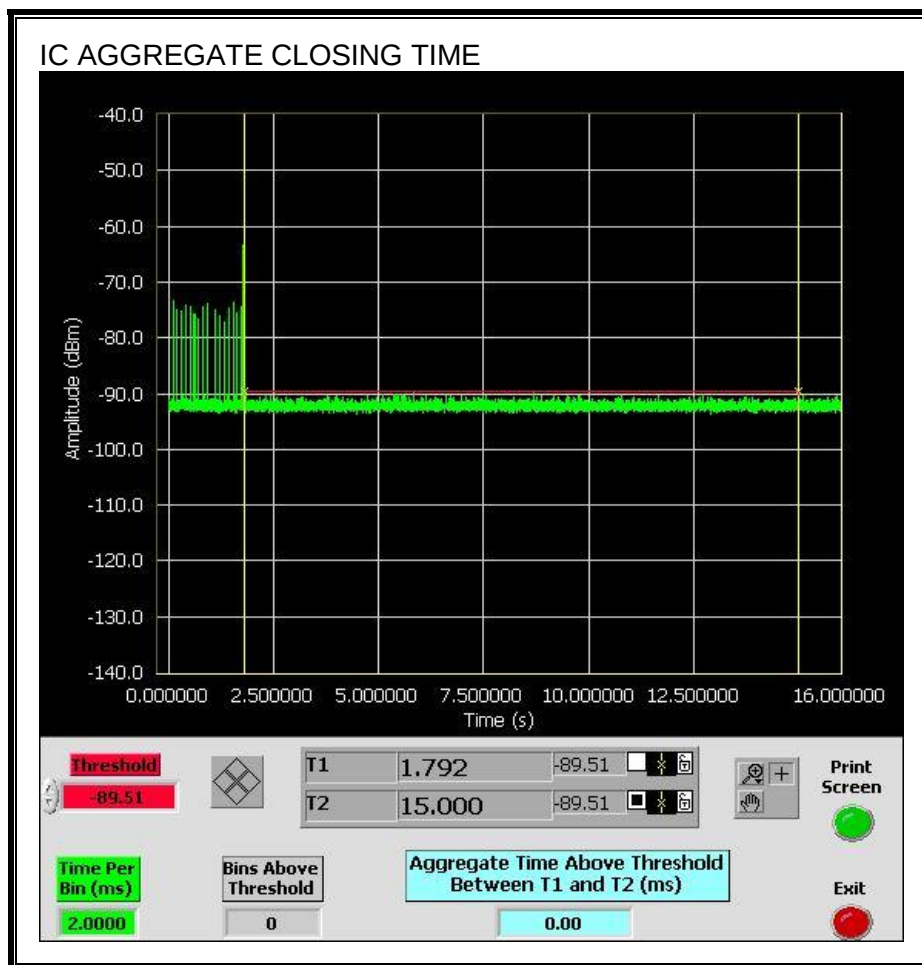


AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the FCC aggregate monitoring period.



Only transmissions are observed during the IC aggregate monitoring period.



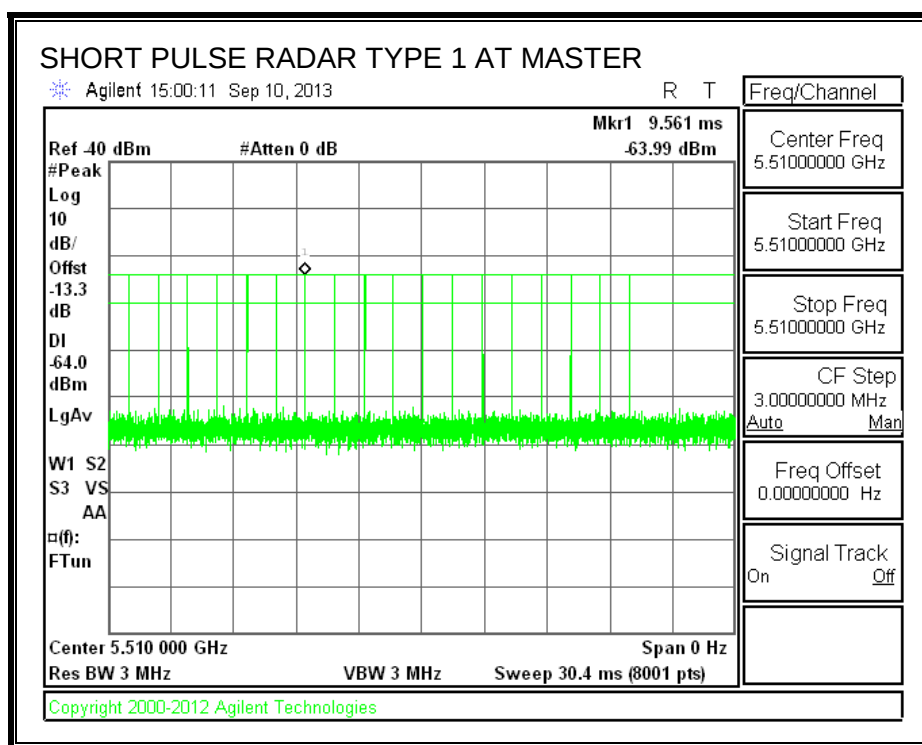
14.5. CLIENT-TO-CLIENT COMMUNICATIONS MODE RESULTS FOR 40 MHz BANDWIDTH

14.5.1. TEST CHANNEL

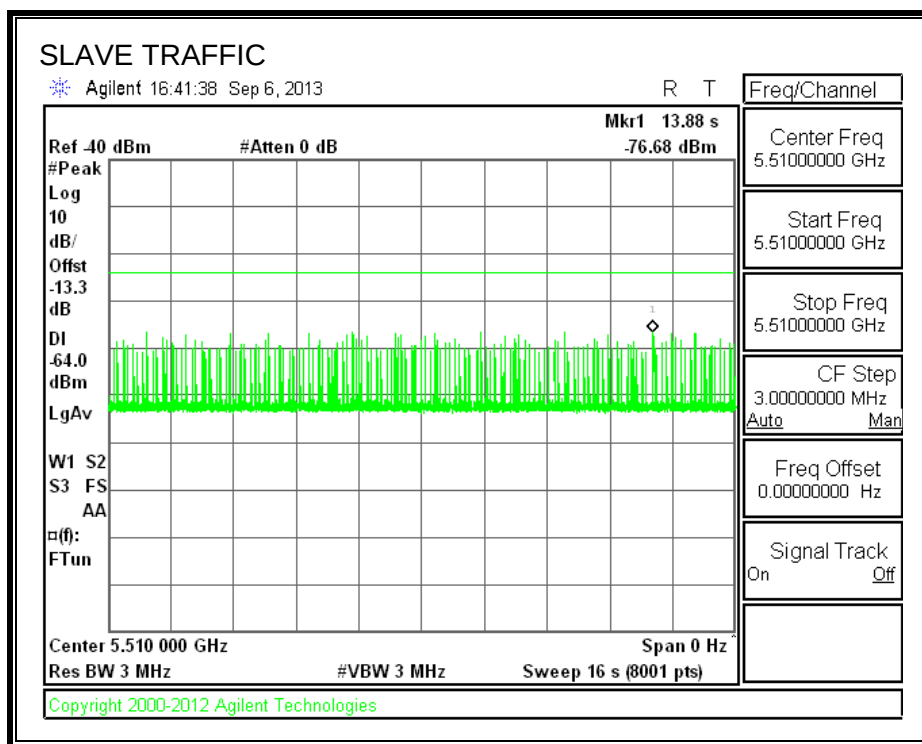
All tests were performed at a channel center frequency of 5510 MHz.

14.5.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



14.5.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

14.5.4. 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 FCC aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

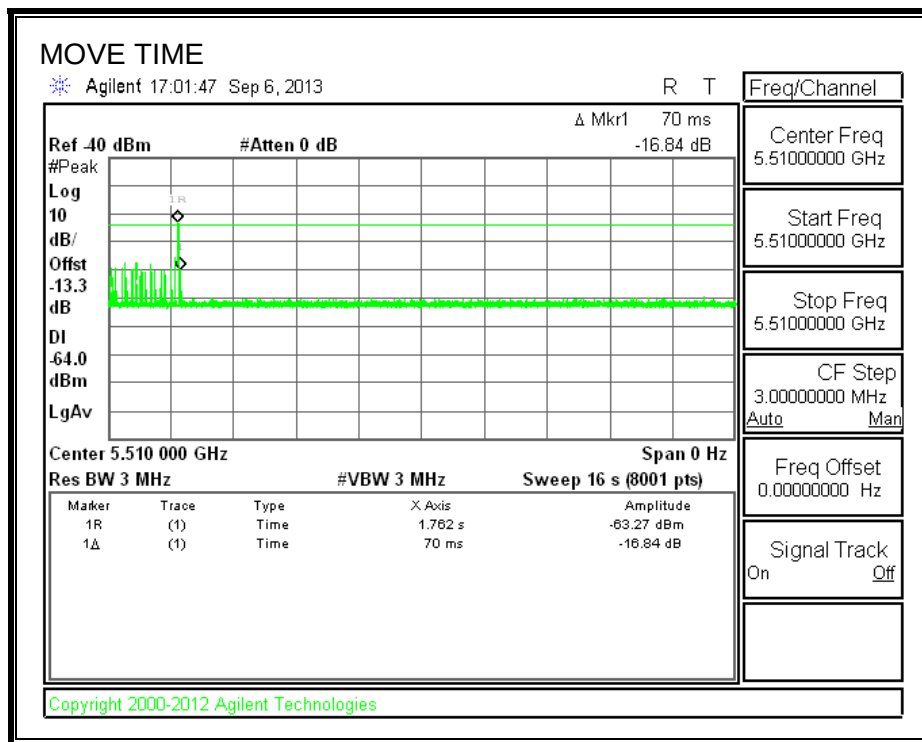
The observation period over which the IC aggregate time is calculated begins at (Reference Marker) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

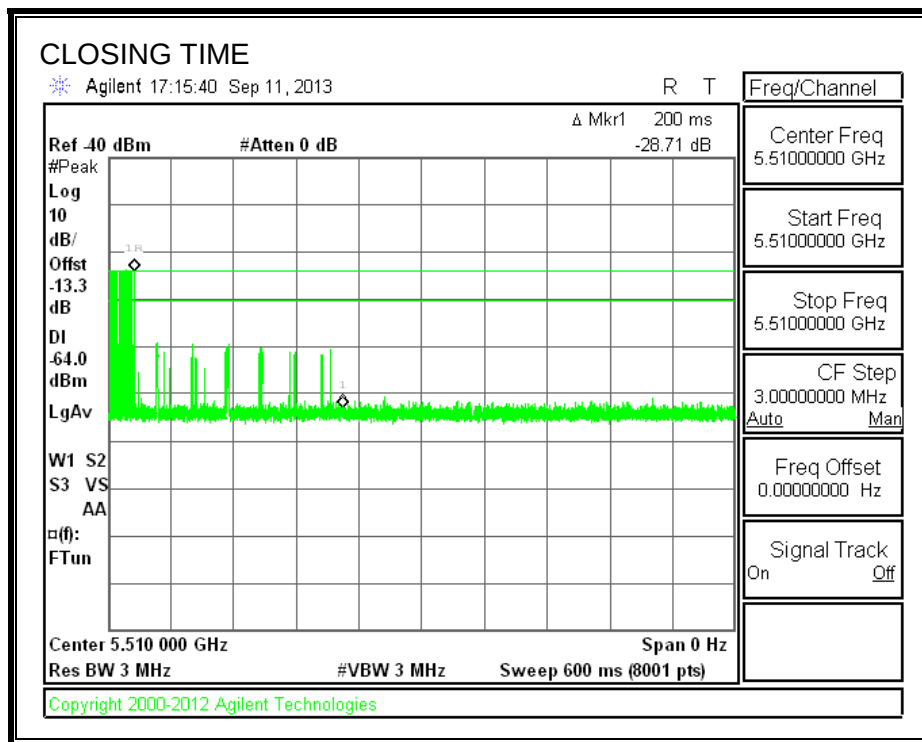
Agency	Channel Move Time (sec)	Limit (sec)
FCC / IC	0.070	10

Agency	Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
FCC	0.0	60
IC	30.0	260

MOVE TIME

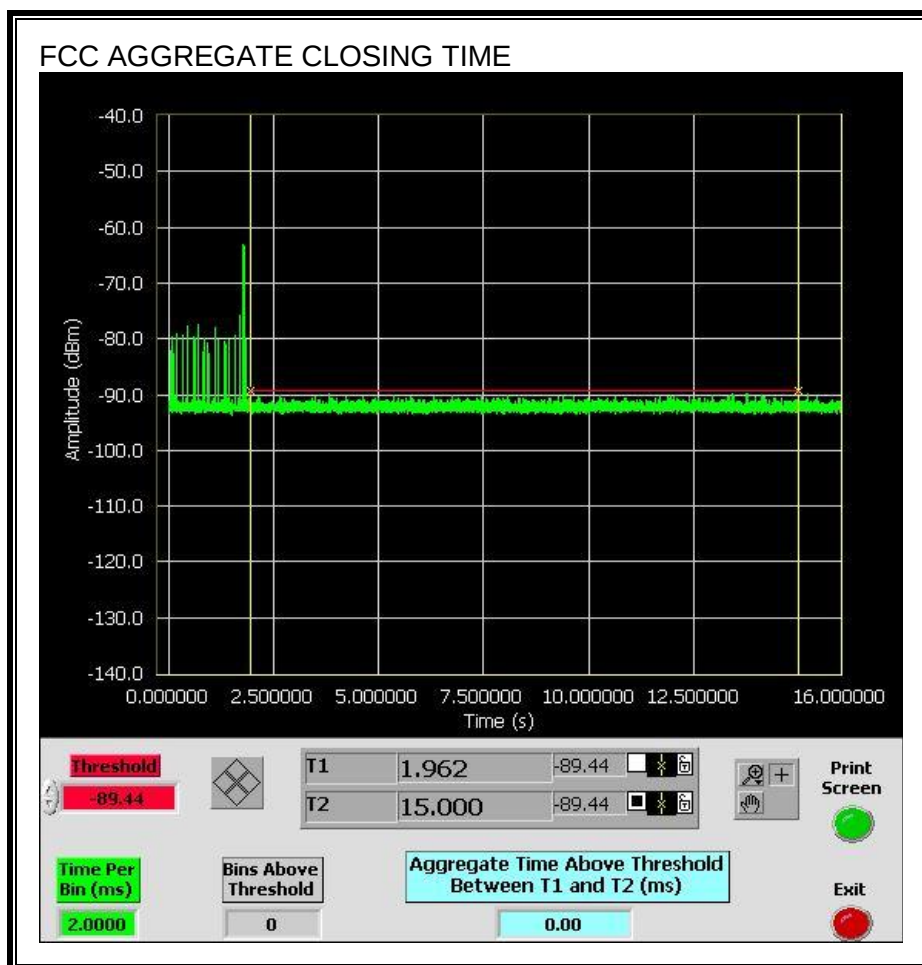


CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the FCC aggregate monitoring period.



Only intermittent transmissions are observed during the IC aggregate monitoring period.

