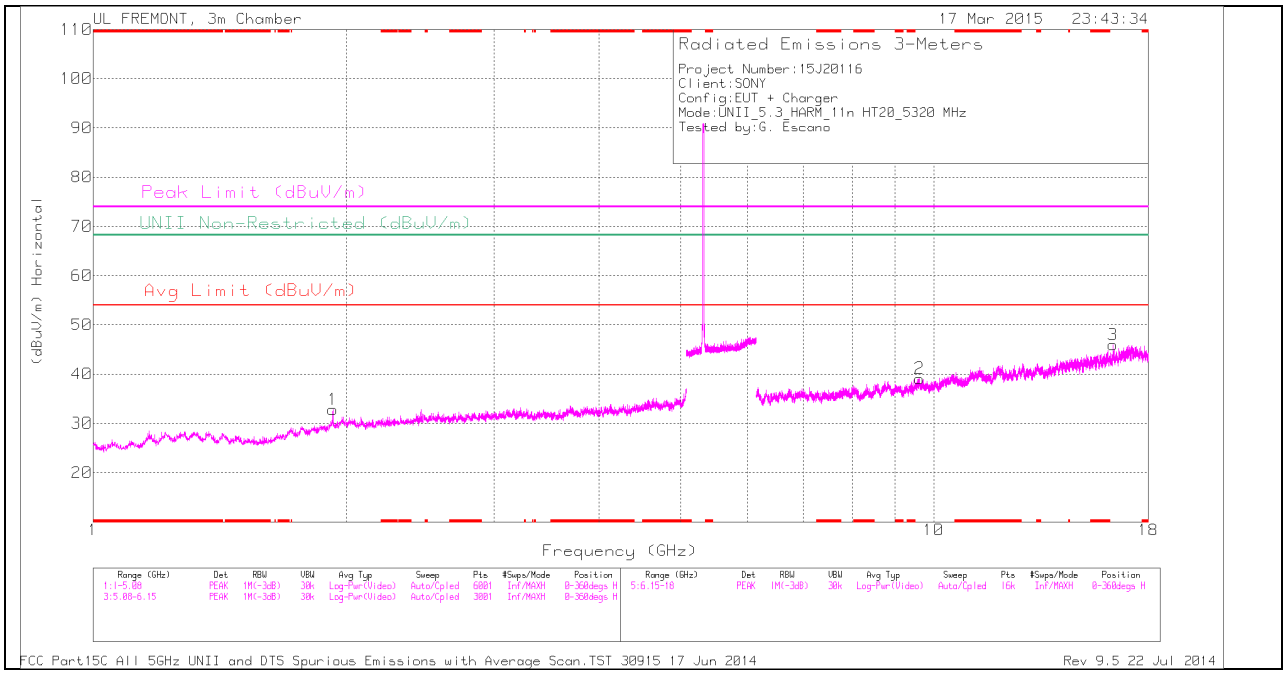
MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
4	8.569	28.9	PK	35.8	-26.2	0	38.5	-	-	-	-	68.2	-29.7	0-360	200	V
1	8.819	28.78	PK	35.9	-25.7	0	38.98	-	-	-	-	68.2	-29.22	0-360	200	H
5	12.779	28.93	PK	39.1	-25.9	0	42.13	-	-	-	-	68.2	-26.07	0-360	200	V
2	14.647	31.31	PK	39.8	-27	0	44.11	-	-	-	-	68.2	-24.09	0-360	100	H
3	16.394	29.2	PK	40.7	-24.2	0	45.7	-	-	-	-	68.2	-22.5	0-360	200	H
6	17.419	27.1	PK	41.4	-22.2	0	46.3	-	-	-	-	68.2	-21.9	0-360	200	V

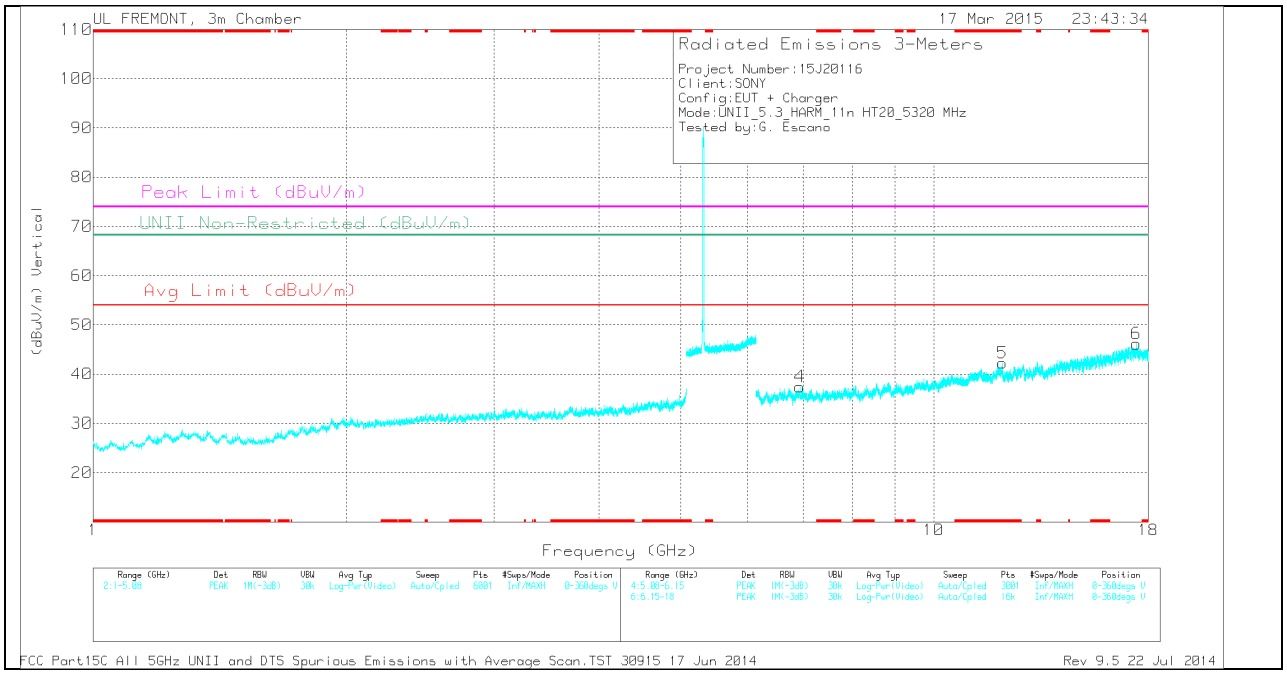
PK - Peak detector

HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
5	* 12.074	29.63	PK	39	-26.4	0	42.23	-	-	74	-31.77	-	-	0-360	100	V
1	1.929	33.98	PK	31.2	-32.4	0	32.78	-	-	-	-	68.2	-35.42	0-360	200	H
4	6.929	30.34	PK	35.6	-28.5	0	37.44	-	-	-	-	68.2	-30.76	0-360	200	V
2	9.619	27.58	PK	36.7	-25.2	0	39.08	-	-	-	-	68.2	-29.12	0-360	100	H
3	16.344	30.63	PK	40.6	-25.3	0	45.93	-	-	-	-	68.2	-22.27	0-360	100	H
6	17.415	27.18	PK	41.4	-22.4	0	46.18	-	-	-	-	68.2	-22.02	0-360	200	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
* 12.074	37.76	PK1	39	-26.4	0	50.36	-	-	74	-23.64	-	-	56	151	V
* 12.074	26.04	AD1	39	-26.4	0	38.64	54	-15.36	-	-	-	-	56	151	V

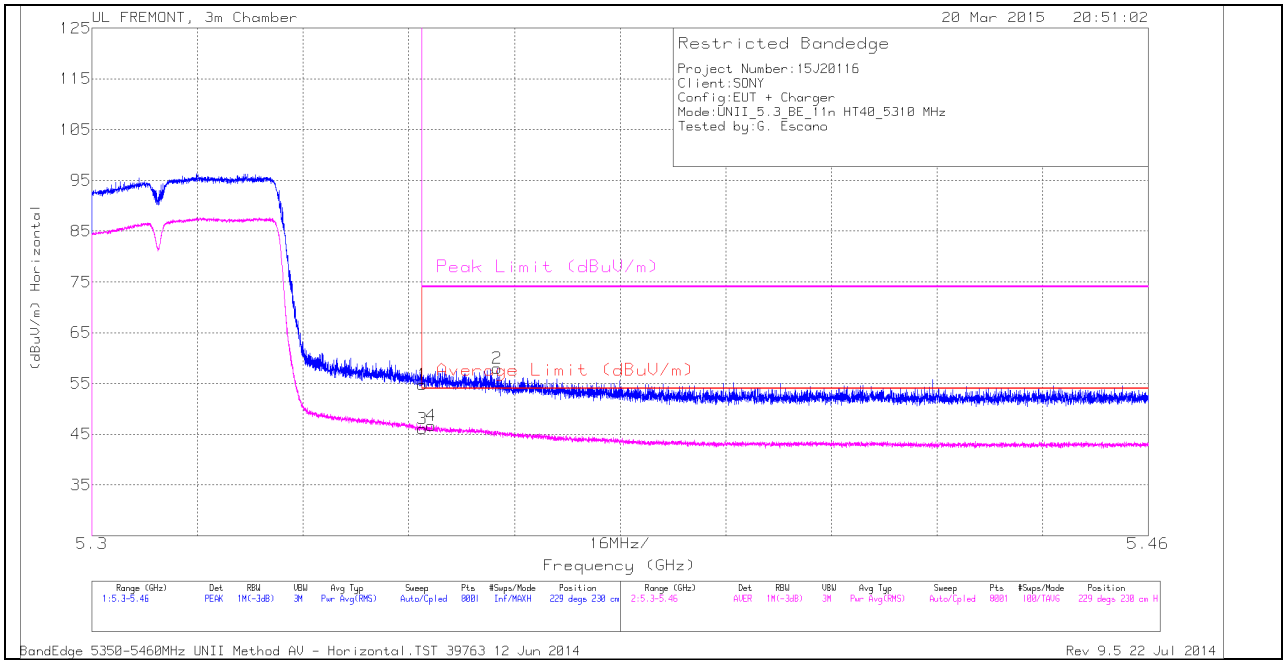
* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

11.1.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.3 GHz BAND AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



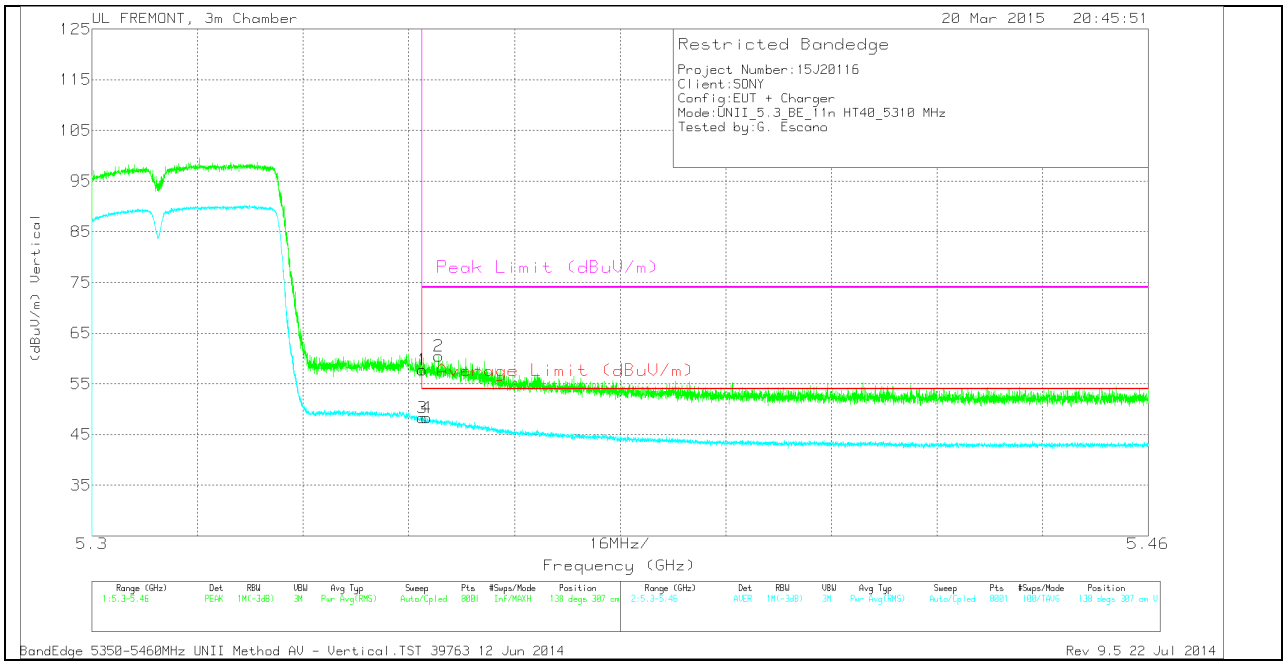
HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.35	41.62	PK	34.5	-21.4	0	54.72	-	-	74	-19.28	229	230	H
3	5.35	32.85	RMS	34.5	-21.4	0	46.02	54	-7.98	-	-	229	230	H
4	5.351	33.54	RMS	34.5	-21.4	0	46.71	54	-7.29	-	-	229	230	H
2	5.361	44.84	PK	34.5	-21.4	0	57.94	-	-	74	-16.06	229	230	H

PK - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

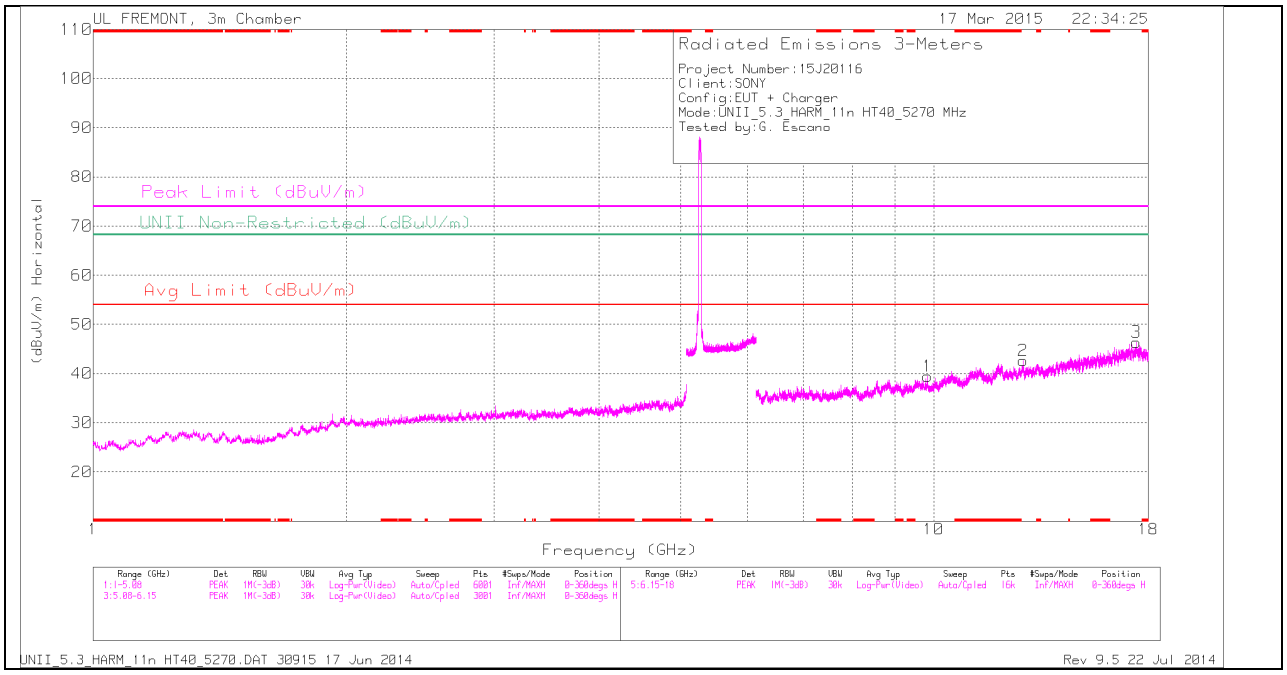
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.35	44.62	PK	34.5	-21.4	0	57.72	-	-	74	-16.28	138	307	V
3	5.35	35.15	RMS	34.5	-21.4	0	48.25	54	-5.75	-	-	138	307	V
4	5.351	35.09	RMS	34.5	-21.4	0	48.19	54	-5.81	-	-	138	307	V
2	5.353	47.42	PK	34.5	-21.4	0	60.52	-	-	74	-13.48	138	307	V

PK - Peak detector

RMS - RMS detection

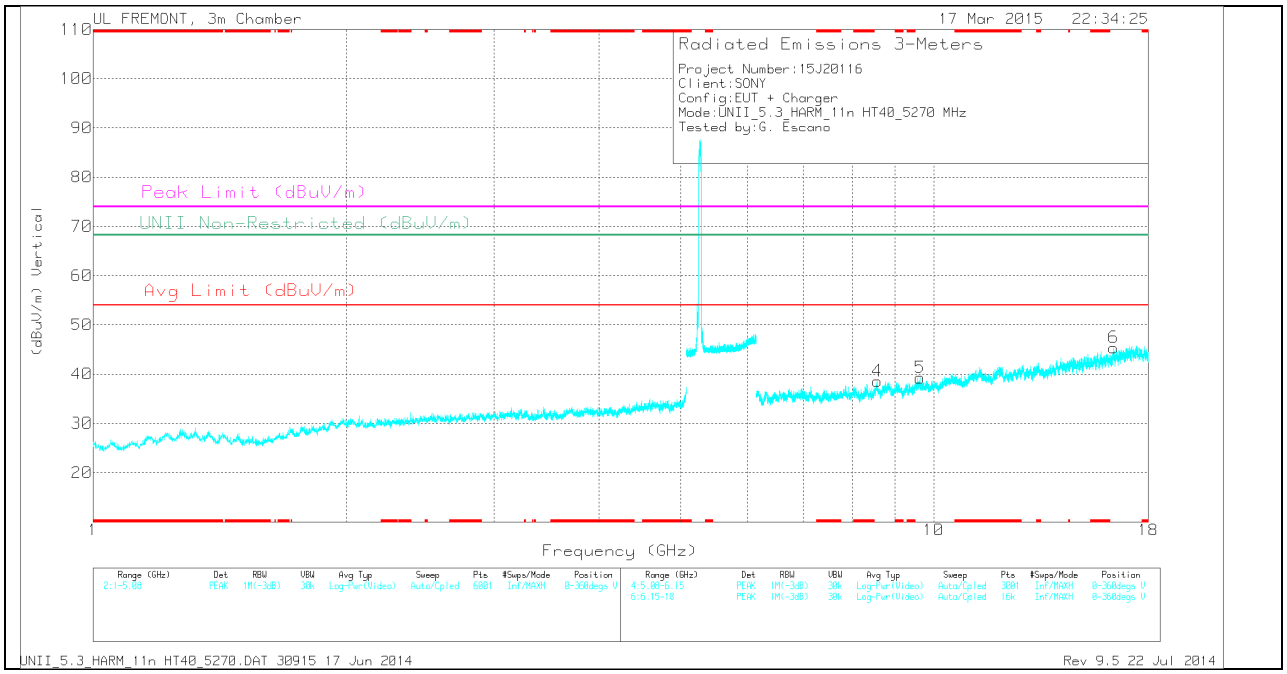
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
4	8.569	28.99	PK	35.8	-26.2	0	38.59	-	-	-	-	68.2	-29.61	0-360	200	V
5	9.633	28.38	PK	36.8	-25.9	0	39.28	-	-	-	-	68.2	-28.92	0-360	200	V
1	9.836	27.74	PK	36.9	-25.2	0	39.44	-	-	-	-	68.2	-28.76	0-360	100	H
2	12.769	29.53	PK	39.1	-26	0	42.63	-	-	-	-	68.2	-25.57	0-360	200	H
6	16.382	28.89	PK	40.7	-24.2	0	45.39	-	-	-	-	68.2	-22.81	0-360	200	V
3	17.422	27.07	PK	41.4	-22.1	0	46.37	-	-	-	-	68.2	-21.83	0-360	100	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

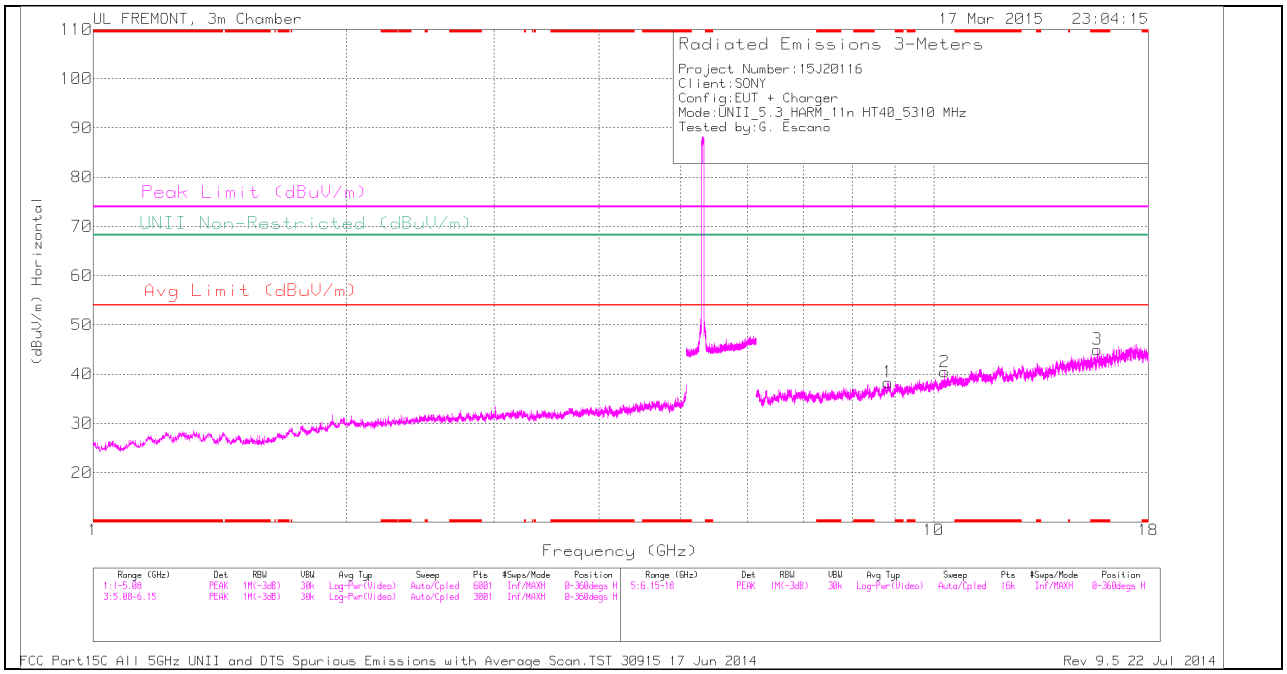
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 15.654	39.47	PK1	40.3	-26.6	0	53.17	-	-	74	-20.83	-	-	339	133	H
* 15.651	28.19	AD1	40.3	-26.6	0	41.89	54	-12.11	-	-	-	-	339	133	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

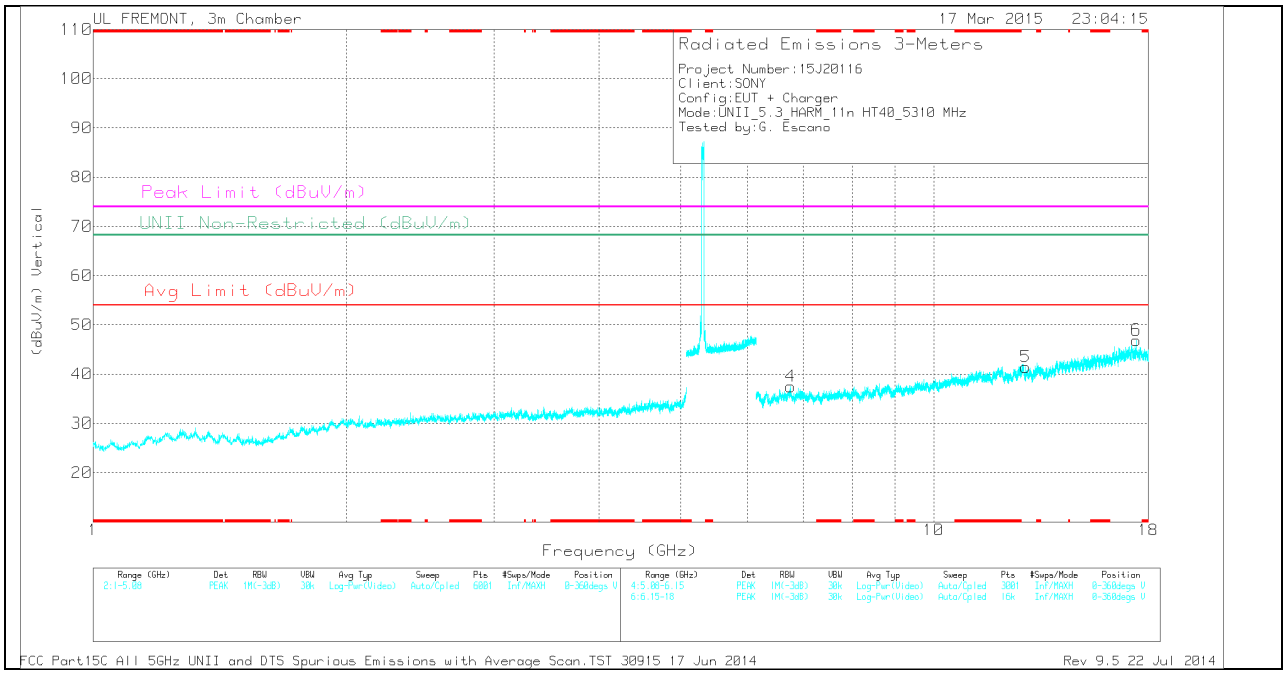
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
3	* 15.652	31.3	PK	40.3	-26.6	0	45	-	-	74	-29	-	-	0-360	100	H
4	6.762	31.48	PK	35.6	-29.6	0	37.48	-	-	-	-	68.2	-30.72	0-360	200	V
1	8.821	28.16	PK	35.9	-25.7	0	38.36	-	-	-	-	68.2	-29.84	0-360	100	H
2	10.297	28.38	PK	37.1	-25	0	40.48	-	-	-	-	68.2	-27.72	0-360	200	H
5	12.873	29.44	PK	39.1	-27.1	0	41.44	-	-	-	-	68.2	-26.76	0-360	200	V
6	17.417	27.81	PK	41.4	-22.3	0	46.91	-	-	-	-	68.2	-21.29	0-360	200	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
* 15.654	39.47	PK1	40.3	-26.6	0	53.17	-	-	74	-20.83	-	-	339	133	H
* 15.651	28.19	AD1	40.3	-26.6	.07	41.96	54	-12.04	-	-	-	-	339	133	H

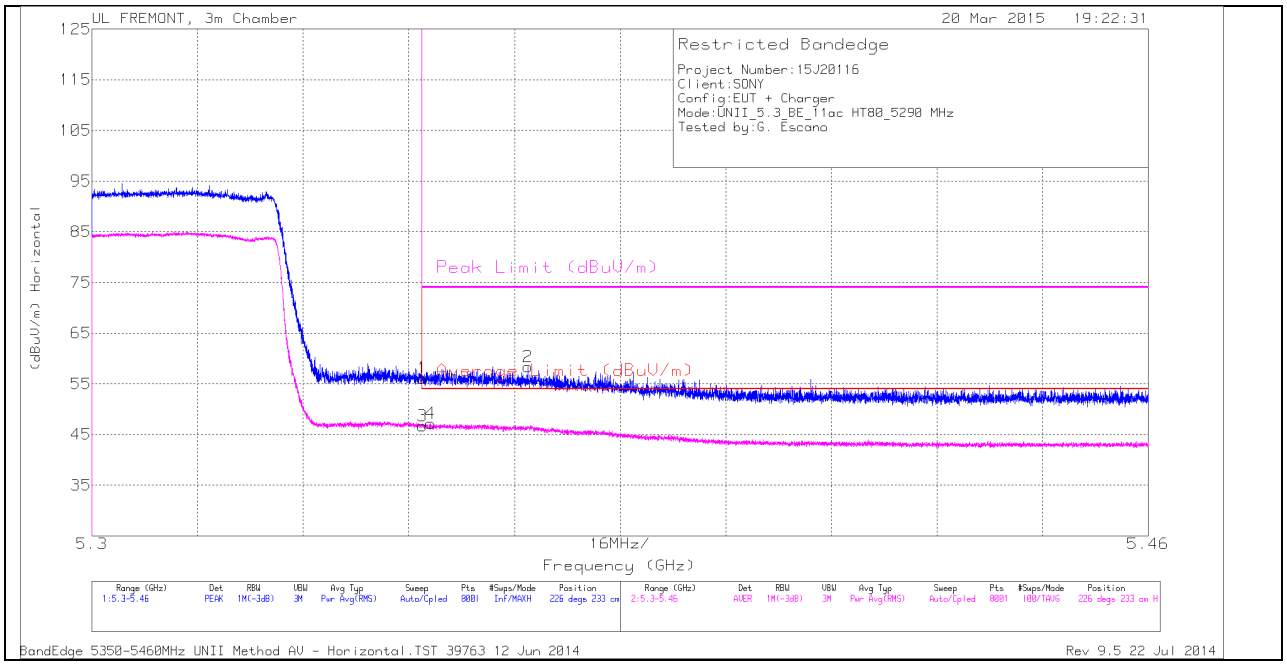
* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

11.1.4. TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.3 GHz BAND AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



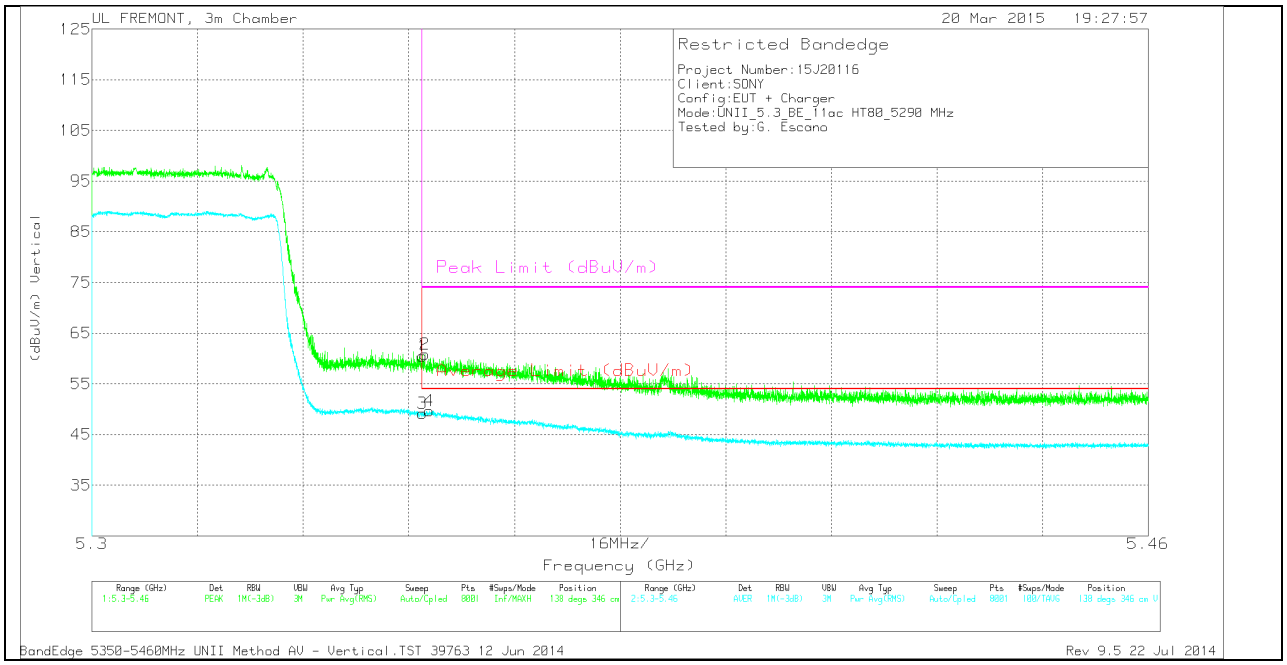
HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.35	42.99	PK	34.5	-21.4	0	56.09	-	-	74	-17.91	226	233	H
3	5.35	33.41	RMS	34.5	-21.4	.13	46.64	54	-7.36	-	-	226	233	H
4	5.351	33.93	RMS	34.5	-21.4	.13	47.16	54	-6.84	-	-	226	233	H
2	5.366	45.37	PK	34.5	-21.5	0	58.37	-	-	74	-15.63	226	233	H

PK - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

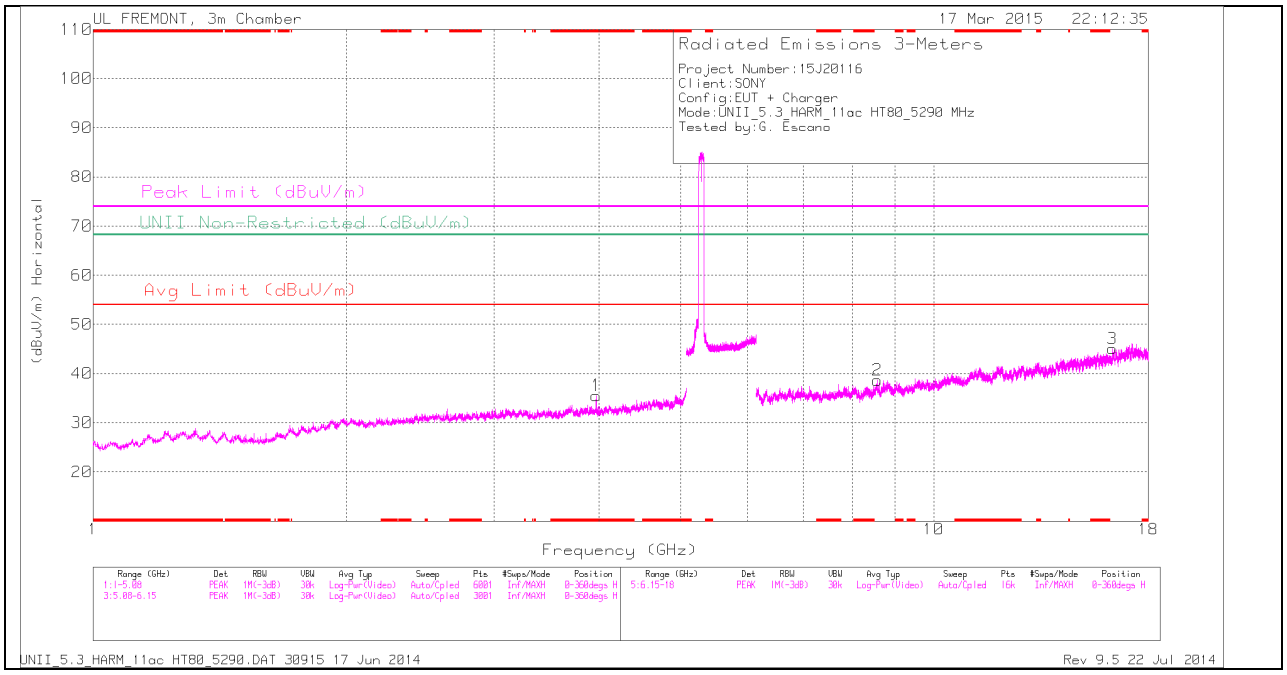
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.35	47.38	PK	34.5	-21.4	0	60.48	-	-	74	-13.52	138	346	V
2	5.35	47.73	PK	34.5	-21.4	0	60.83	-	-	74	-13.17	138	346	V
3	5.35	35.97	RMS	34.5	-21.4	.13	49.2	54	-4.8	-	-	138	346	V
4	5.351	36.43	RMS	34.5	-21.4	.13	49.66	54	-4.34	-	-	138	346	V

PK - Peak detector

RMS - RMS detection

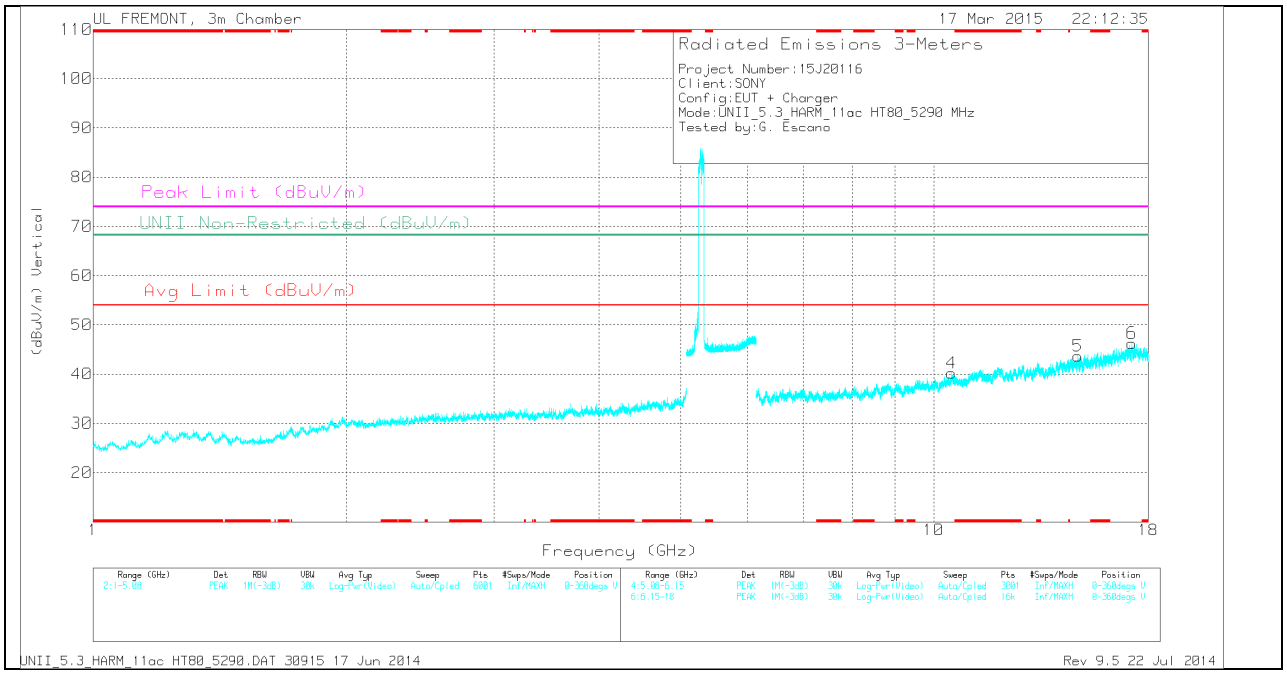
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	* 3.968	33.81	PK	33.2	-31.5	0	35.51	-	-	74	-38.49	-	-	0-360	200	H
2	8.572	29.03	PK	35.8	-26.2	0	38.63	-	-	-	-	68.2	-29.57	0-360	100	H
4	10.499	28.21	PK	37.5	-25.5	0	40.21	-	-	-	-	68.2	-27.99	0-360	100	V
5	14.836	31.05	PK	39.8	-27.2	0	43.65	-	-	-	-	68.2	-24.55	0-360	200	V
3	16.322	29.44	PK	40.6	-25	0	45.04	-	-	-	-	68.2	-23.16	0-360	100	H
6	17.205	27.87	PK	41.3	-22.9	0	46.27	-	-	-	-	68.2	-21.93	0-360	200	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
* 3.968	41.47	PK1	33.2	-31.5	0	43.17	-	-	74	-30.83	-	-	314	219	H
* 3.967	29.16	AD1	33.2	-31.5	.13	30.99	54	-23.01	-	-	-	-	314	219	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

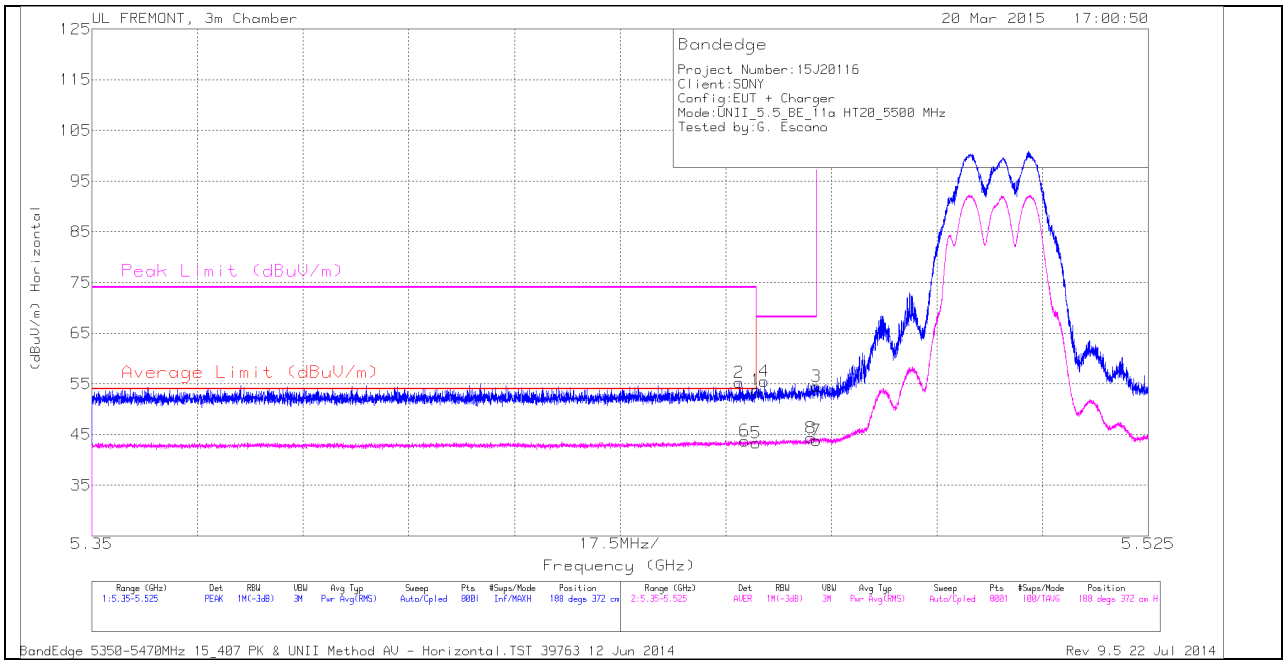
AD1 - KDB789033 Method: AD Primary Power Average

11.2. 5.5-5.6 GHz

11.2.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.5 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



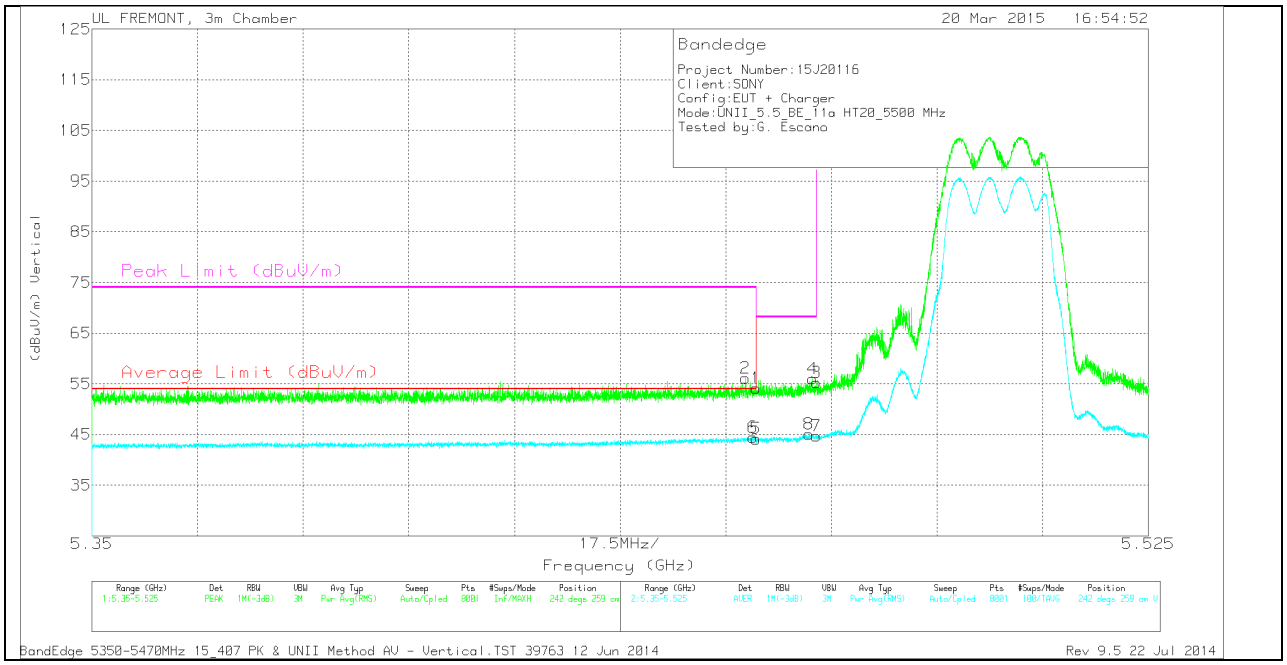
HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.457	42.04	PK	34.6	-21.4	0	55.24	-	-	74	-18.76	188	372	H
6	5.458	30.57	RMS	34.6	-21.4	0	43.77	54	-10.23	-	-	188	372	H
1	5.46	40.55	PK	34.6	-21.4	0	53.75	-	-	74	-20.25	188	372	H
5	5.46	30.09	RMS	34.6	-21.4	0	43.29	54	-10.71	-	-	188	372	H
4	5.461	42.26	PK	34.6	-21.4	0	55.46	-	-	68.2	-12.74	188	372	H
8	5.469	31.05	RMS	34.6	-21.3	0	44.35	-	-	-	-	188	372	H
3	5.47	41.23	PK	34.6	-21.3	0	54.53	-	-	68.2	-13.67	188	372	H
7	5.47	30.57	RMS	34.6	-21.3	0	43.87	-	-	-	-	188	372	H

PK - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

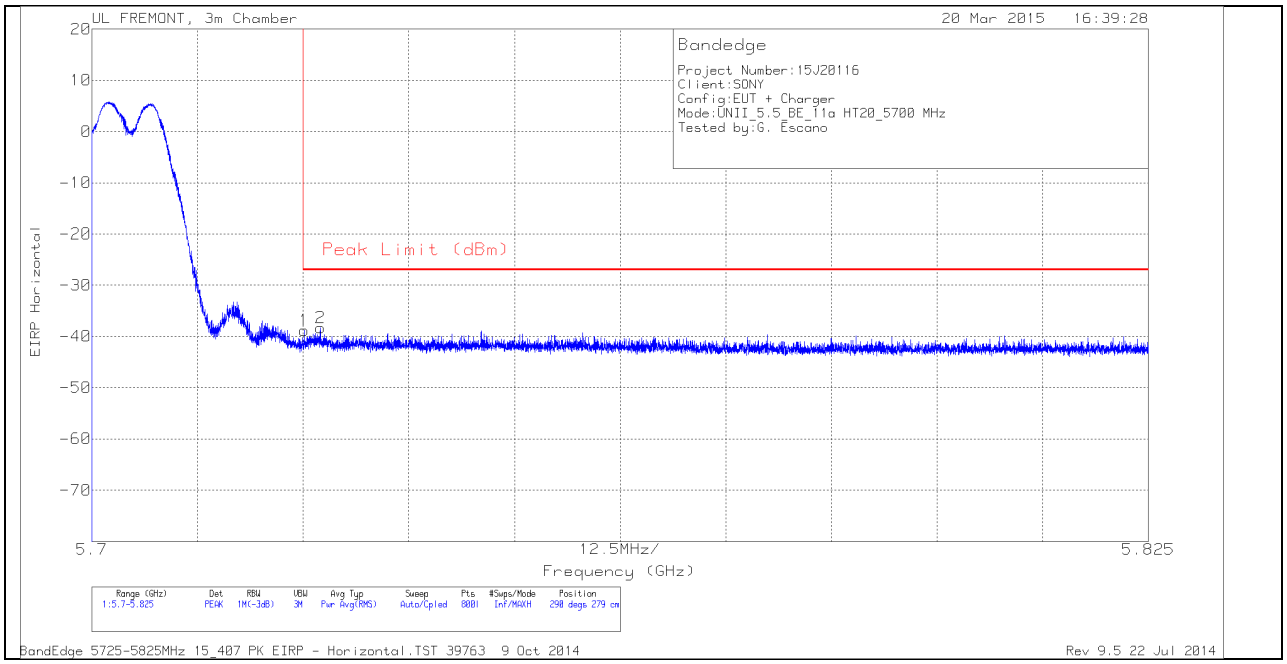
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.458	42.98	PK	34.6	-21.4	0	56.18	-	-	74	-17.82	242	259	V
1	5.46	40.89	PK	34.6	-21.4	0	54.09	-	-	74	-19.91	242	259	V
5	5.46	30.95	RMS	34.6	-21.4	0	44.15	54	-9.85	-	-	242	259	V
6	5.46	31.25	RMS	34.6	-21.4	0	44.45	54	-9.55	-	-	242	259	V
4	5.469	42.68	PK	34.6	-21.3	0	55.98	-	-	68.2	-12.22	242	259	V
8	5.469	31.72	RMS	34.6	-21.3	0	45.02	-	-	-	-	242	259	V
3	5.47	41.91	PK	34.6	-21.3	0	55.21	-	-	68.2	-12.99	242	259	V
7	5.47	31.4	RMS	34.6	-21.3	0	44.7	-	-	-	-	242	259	V

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

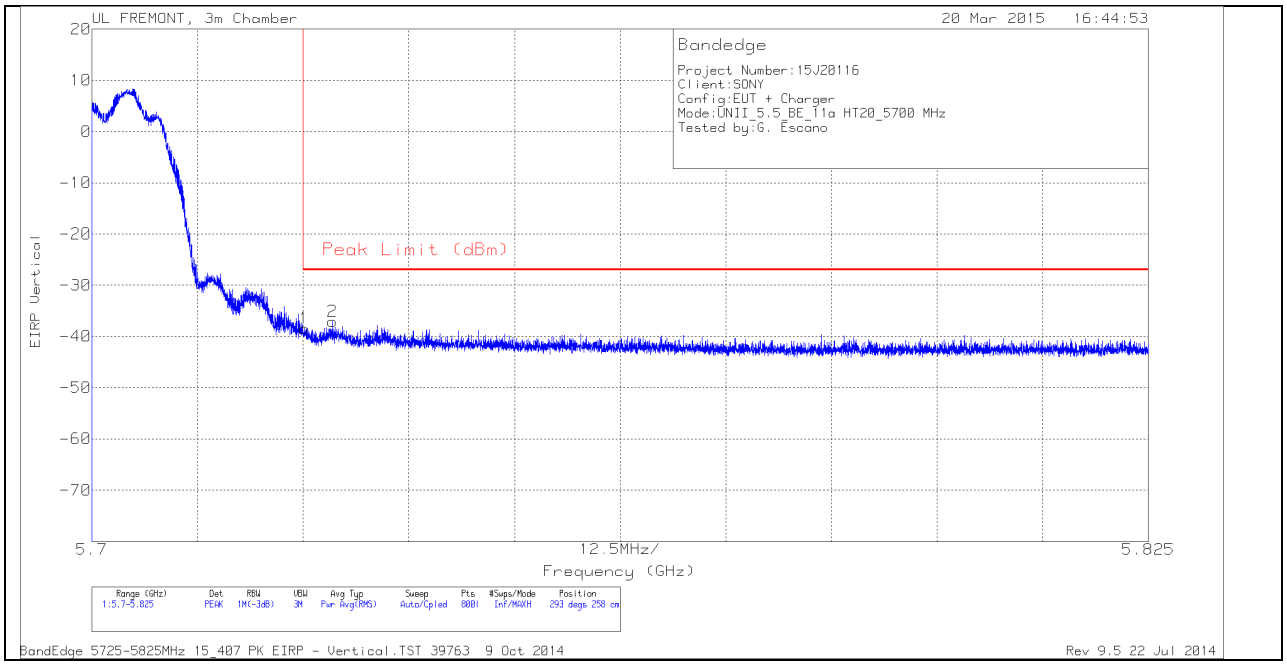


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-64.33	PK	34.8	-21.1	11.8	-38.83	-27	-11.83	290	279	H
2	5.727	-63.82	PK	34.8	-21.1	11.8	-38.32	-27	-11.32	290	279	H

PK - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



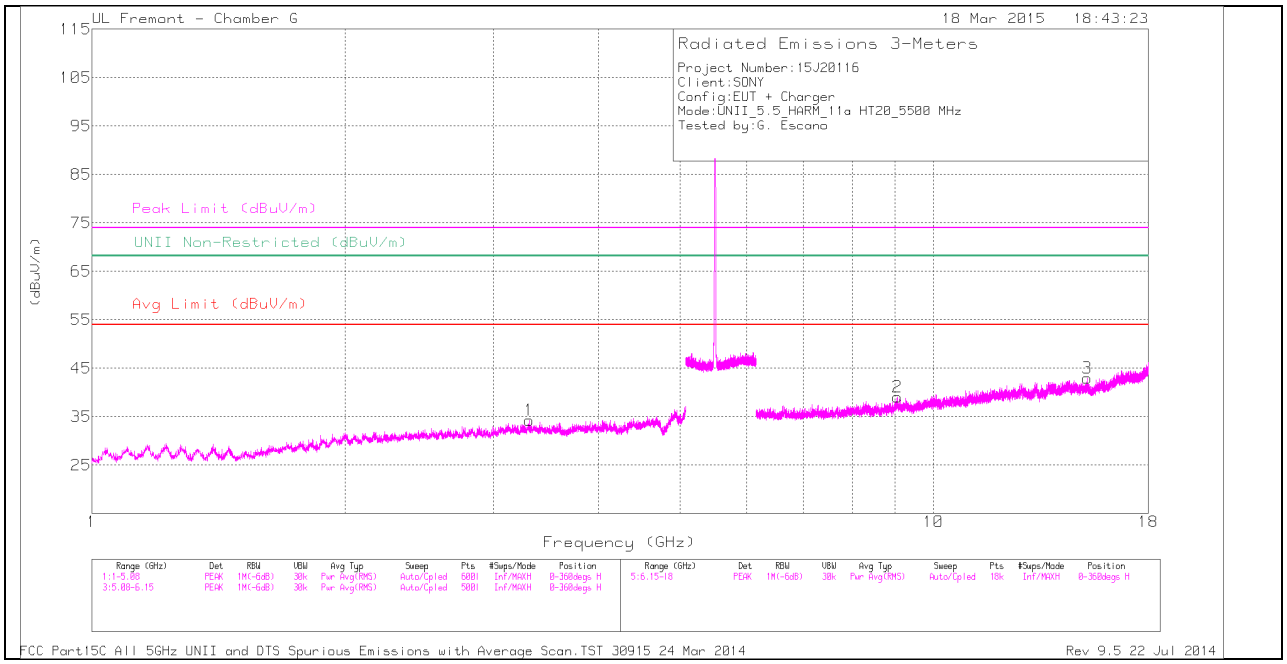
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-63.98	PK	34.8	-21.1	11.8	0	-38.48	-27	-11.48	293	258	V
2	5.728	-62.51	PK	34.8	-21.2	11.8	0	-37.11	-27	-10.11	293	258	V

PK - Peak detector

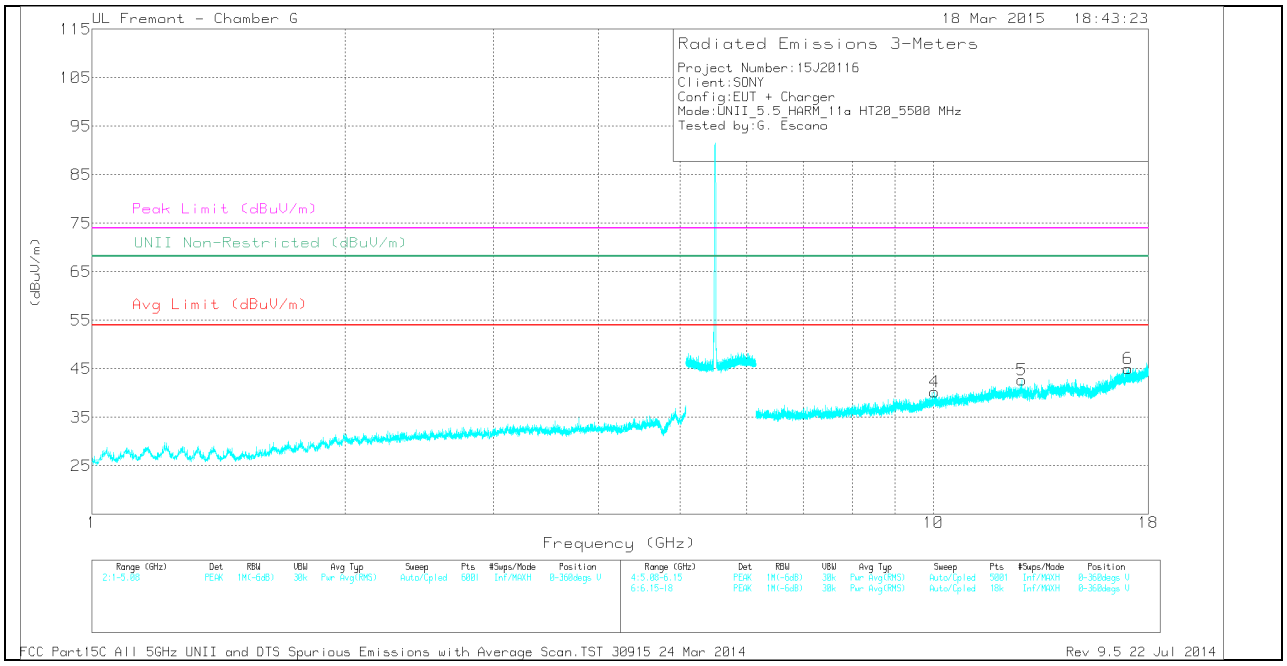
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

TRACE MARKERS

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
2	* 9.061	31.02	PK	36.4	-28.3	0	39.12	-	-	74	-34.88	-	-	0-360	201	H
1	3.306	34.67	PK	33	-33.4	0	34.27	-	-	-	-	68.2	-33.93	0-360	201	H
4	10.027	30.23	PK	37.4	-27.4	0	40.23	-	-	-	-	68.2	-27.97	0-360	201	V
5	12.731	29.13	PK	39.1	-25.5	0	42.73	-	-	-	-	68.2	-25.47	0-360	201	V
3	15.228	30.5	PK	39.8	-27.3	0	43	-	-	-	-	68.2	-25.2	0-360	201	H
6	17.042	28.45	PK	42	-25.4	0	45.05	-	-	-	-	68.2	-23.15	0-360	101	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

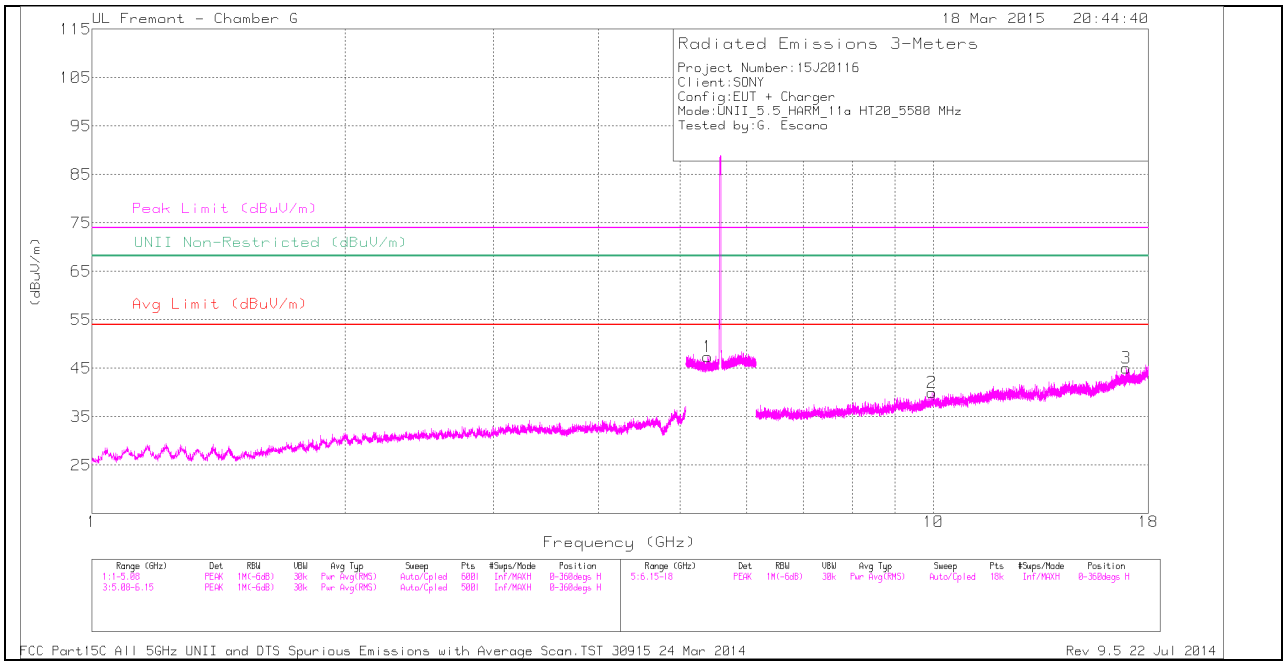
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 9.061	38.65	PK1	36.4	-28.3	0	46.75	-	-	74	-27.25	-	-	104	224	H
* 9.061	27.19	AD1	36.4	-28.3	0	35.29	54	-18.71	-	-	-	-	104	224	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

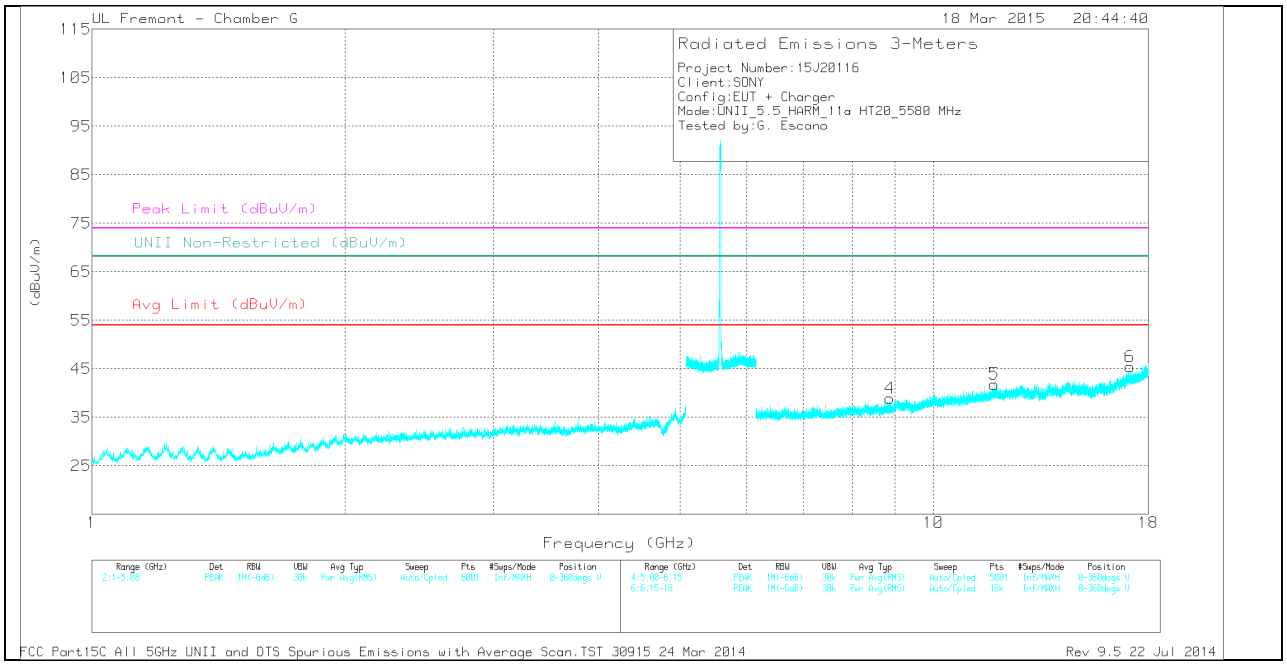
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

TRACE MARKERS

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	* 5.392	36.33	PK	34.6	-23.6	0	47.33	-	-	74	-26.67	-	-	0-360	101	H
5	* 11.811	30.27	PK	38.7	-27.1	0	41.87	-	-	74	-32.13	-	-	0-360	201	V
4	8.883	31.73	PK	36.2	-29	0	38.93	-	-	-	-	68.2	-29.27	0-360	101	V
2	9.962	31.04	PK	37.3	-28.3	0	40.04	-	-	-	-	68.2	-28.16	0-360	101	H
3	16.932	29.1	PK	42	-26.1	0	45	-	-	-	-	68.2	-23.2	0-360	201	H
6	17.113	29.1	PK	41.8	-25.5	0	45.4	-	-	-	-	68.2	-22.8	0-360	201	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

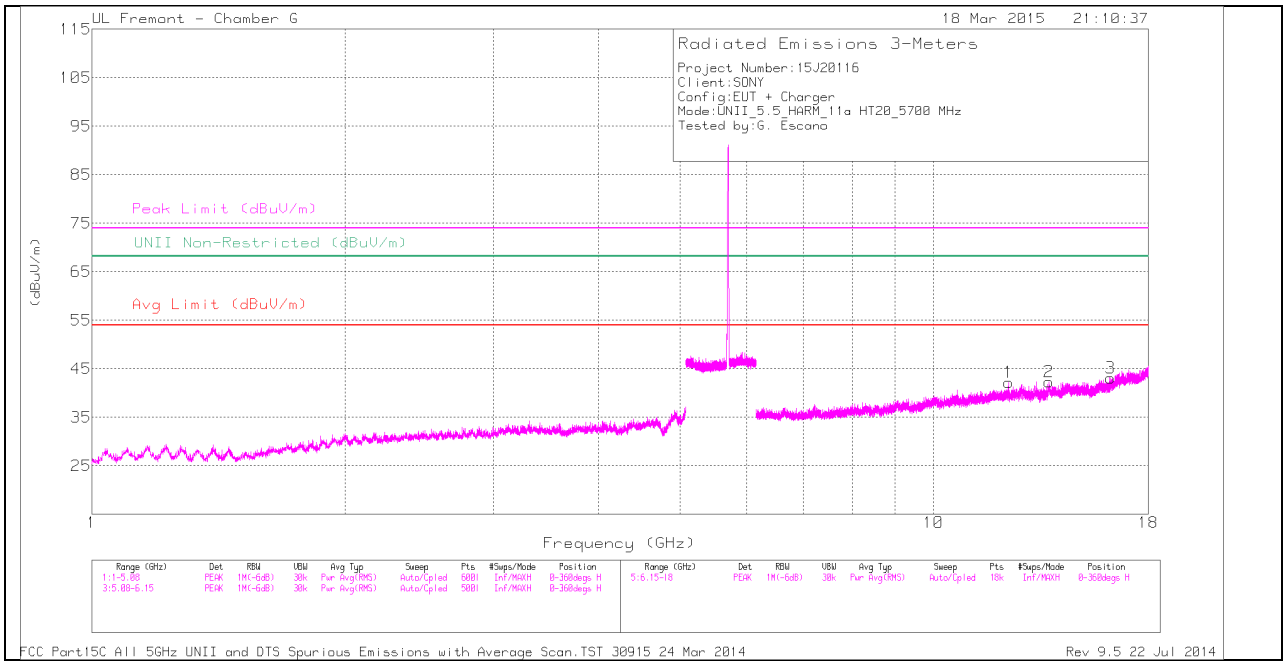
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 5.392	43.79	PK1	34.6	-23.6	0	54.79	-	-	74	-19.21	-	-	35	122	H
* 5.391	32.08	AD1	34.6	-23.6	0	43.08	54	-10.92	-	-	-	-	35	122	H
* 11.811	37.7	PK1	38.7	-27.1	0	49.3	-	-	74	-24.7	-	-	200	250	V
* 11.81	25.84	AD1	38.7	-27.1	0	37.44	54	-16.56	-	-	-	-	200	250	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

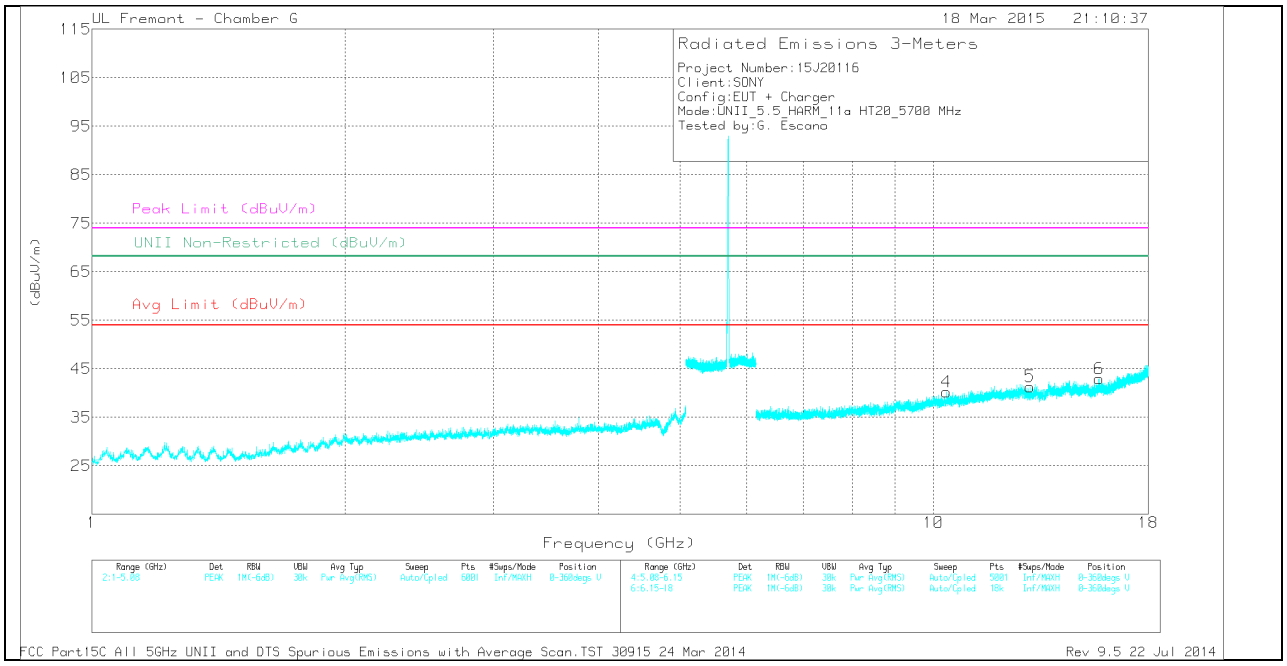
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

TRACE MARKERS

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	* 12.28	29.76	PK	38.8	-26.4	0	42.16	-	-	74	-31.84	-	-	0-360	201	H
6	* 15.724	30.16	PK	40.2	-27.4	0	42.96	-	-	74	-31.04	-	-	0-360	101	V
4	10.355	30.4	PK	37.5	-27.7	0	40.2	-	-	-	-	68.2	-28	0-360	201	V
5	13.019	29.35	PK	39	-27	0	41.35	-	-	-	-	68.2	-26.85	0-360	101	V
2	13.713	29.71	PK	39.2	-26.6	0	42.31	-	-	-	-	68.2	-25.89	0-360	201	H
3	16.229	29.02	PK	40.8	-26.7	0	43.12	-	-	-	-	68.2	-25.08	0-360	201	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

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
* 12.28	36.73	PK1	38.8	-26.4	0	49.13	-	-	74	-24.87	-	-	206	344	H
* 12.28	24.64	AD1	38.8	-26.4	0	37.04	54	-16.96	-	-	-	-	206	344	H
* 15.723	36.98	PK1	40.2	-27.4	0	49.78	-	-	74	-24.22	-	-	255	155	V
* 15.723	25.66	AD1	40.2	-27.4	0	38.46	54	-15.54	-	-	-	-	255	155	V

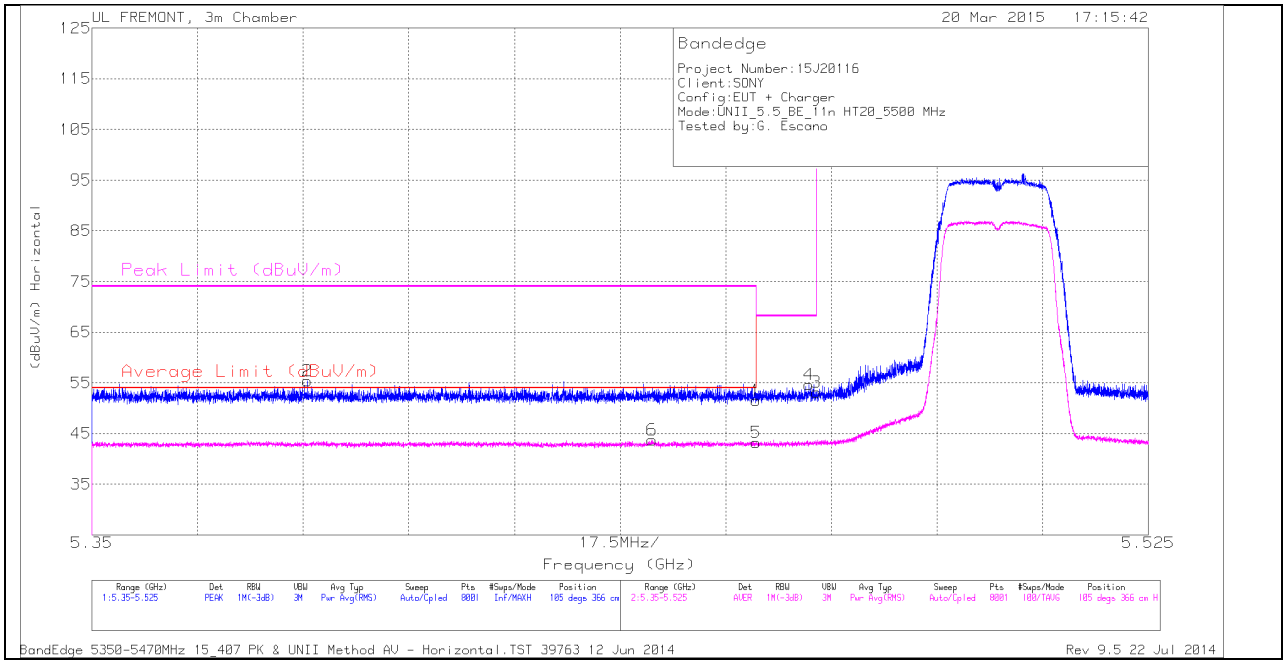
* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

11.2.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



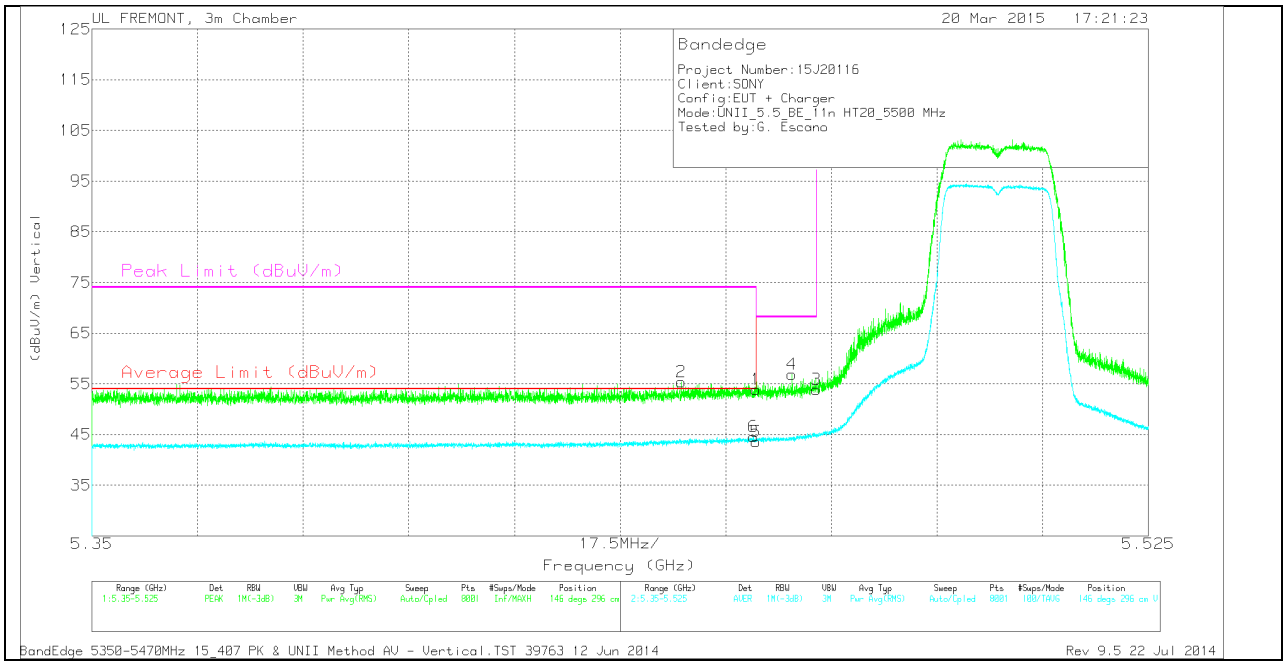
HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.386	42.18	PK	34.6	-21.4	0	55.38	-	-	74	-18.62	105	366	H
6	5.443	30.58	RMS	34.6	-21.5	0	43.68	54	-10.32	-	-	105	366	H
1	5.46	38.37	PK	34.6	-21.4	0	51.57	-	-	74	-22.43	105	366	H
5	5.46	29.96	RMS	34.6	-21.4	0	43.16	54	-10.84	-	-	105	366	H
4	5.469	41.35	PK	34.6	-21.3	0	54.65	-	-	68.2	-13.55	105	366	H
3	5.47	39.89	PK	34.6	-21.3	0	53.19	-	-	68.2	-15.01	105	366	H

PK - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

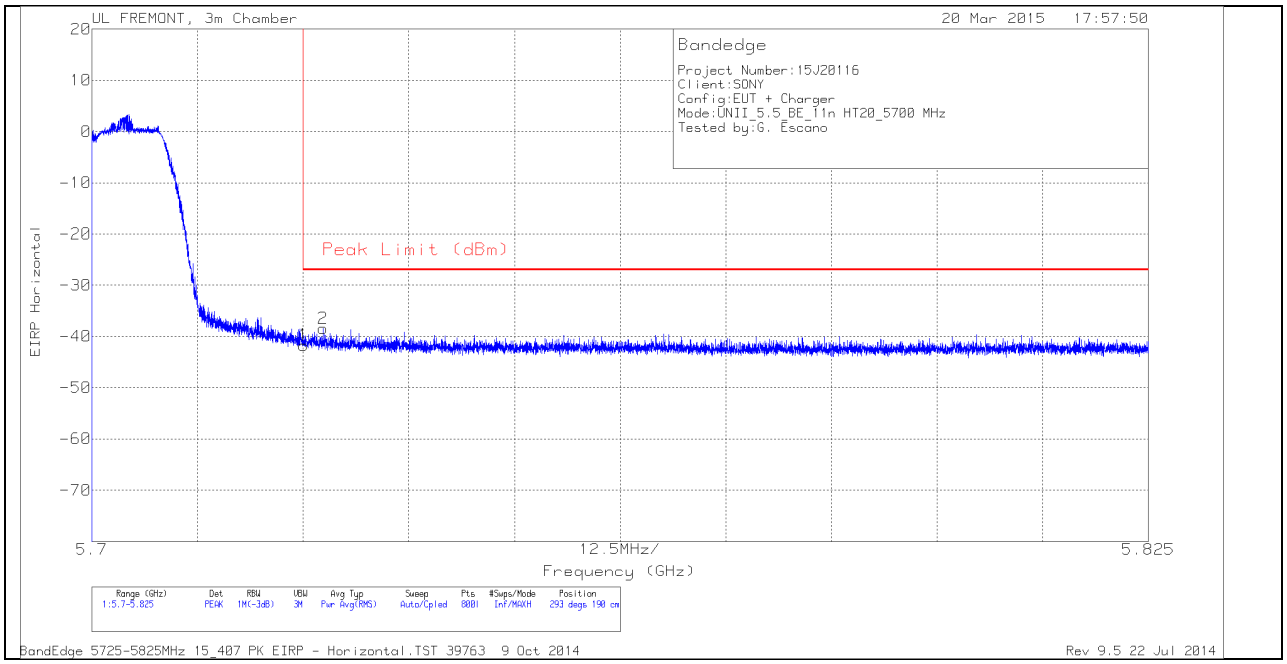
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.448	42.14	PK	34.6	-21.4	0	55.34	-	-	74	-18.66	146	296	V
1	5.46	40.7	PK	34.6	-21.4	0	53.9	-	-	74	-20.1	146	296	V
5	5.46	30.41	RMS	34.6	-21.4	0	43.61	54	-10.39	-	-	146	296	V
6	5.46	31.33	RMS	34.6	-21.4	0	44.53	54	-9.47	-	-	146	296	V
4	5.466	43.53	PK	34.6	-21.3	0	56.83	-	-	68.2	-11.37	146	296	V
3	5.47	40.59	PK	34.6	-21.3	0	53.89	-	-	68.2	-14.31	146	296	V

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

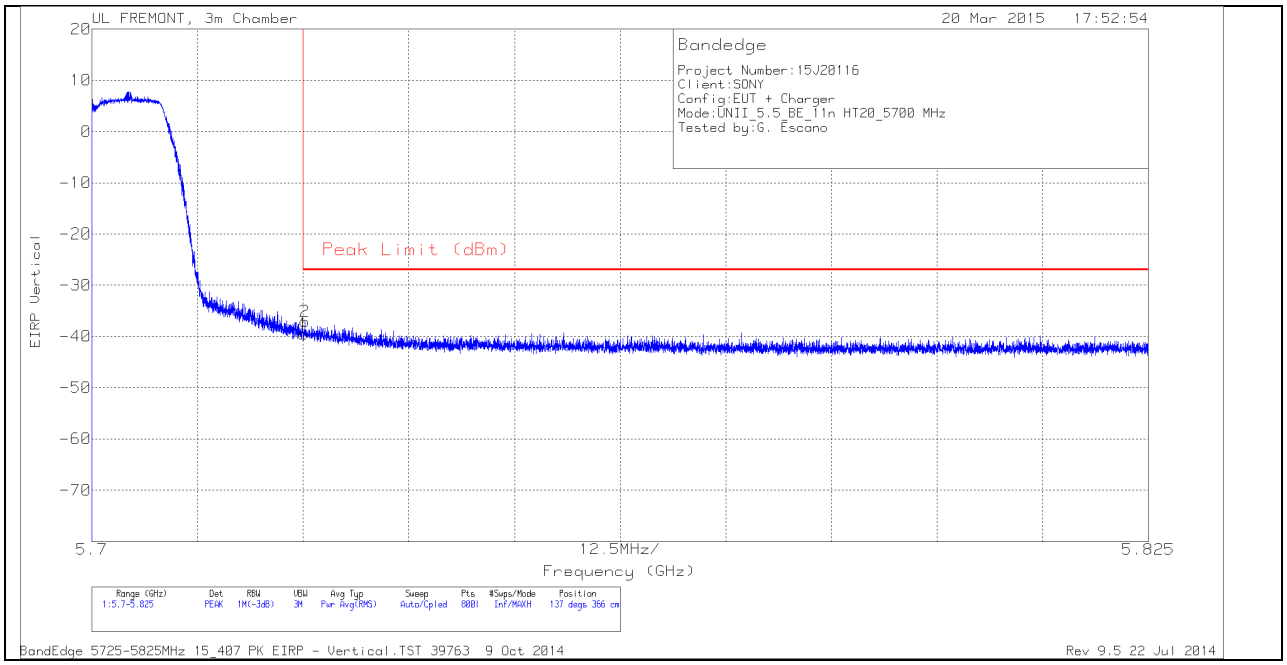


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-67.18	PK	34.8	-21.1	11.8	0	-41.68	-27	-14.68	293	190	H
2	5.727	-63.89	PK	34.8	-21.1	11.8	0	-38.39	-27	-11.39	293	190	H

PK - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



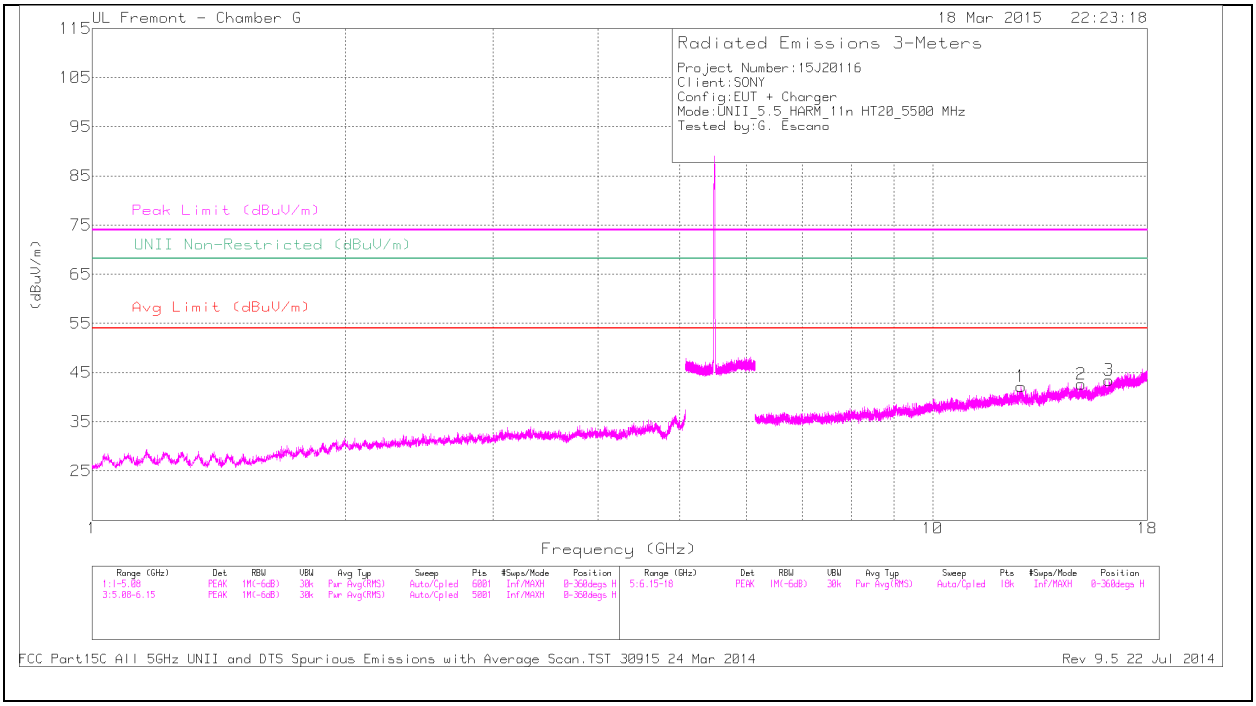
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-65	PK	34.8	-21.1	11.8	0	-39.5	-27	-12.5	137	366	V
2	5.725	-62.55	PK	34.8	-21.1	11.8	0	-37.05	-27	-10.05	137	366	V

PK - Peak detector

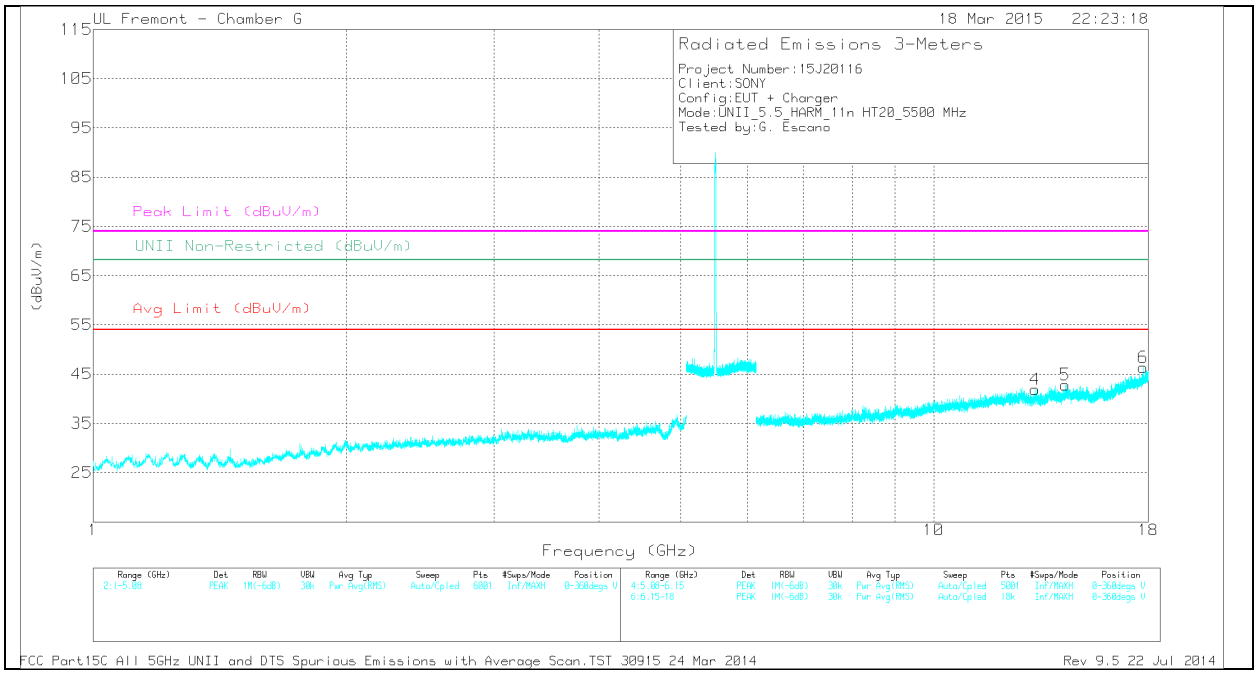
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

TRACE MARKERS

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
6	* 17.747	28.77	PK	41.7	-24.1	0	46.37	-	-	74	-27.63	-	-	0-360	101	V
1	12.742	28.48	PK	39.1	-25.4	0	42.18	-	-	-	-	68.2	-26.02	0-360	201	H
4	13.202	29	PK	39	-26.1	0	41.9	-	-	-	-	68.2	-26.3	0-360	201	V
5	14.347	30.91	PK	39.9	-28	0	42.81	-	-	-	-	68.2	-25.39	0-360	201	V
2	15.03	30.26	PK	39.8	-27.4	0	42.66	-	-	-	-	68.2	-25.54	0-360	201	H
3	16.211	29.38	PK	40.8	-26.7	0	43.48	-	-	-	-	68.2	-24.72	0-360	201	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

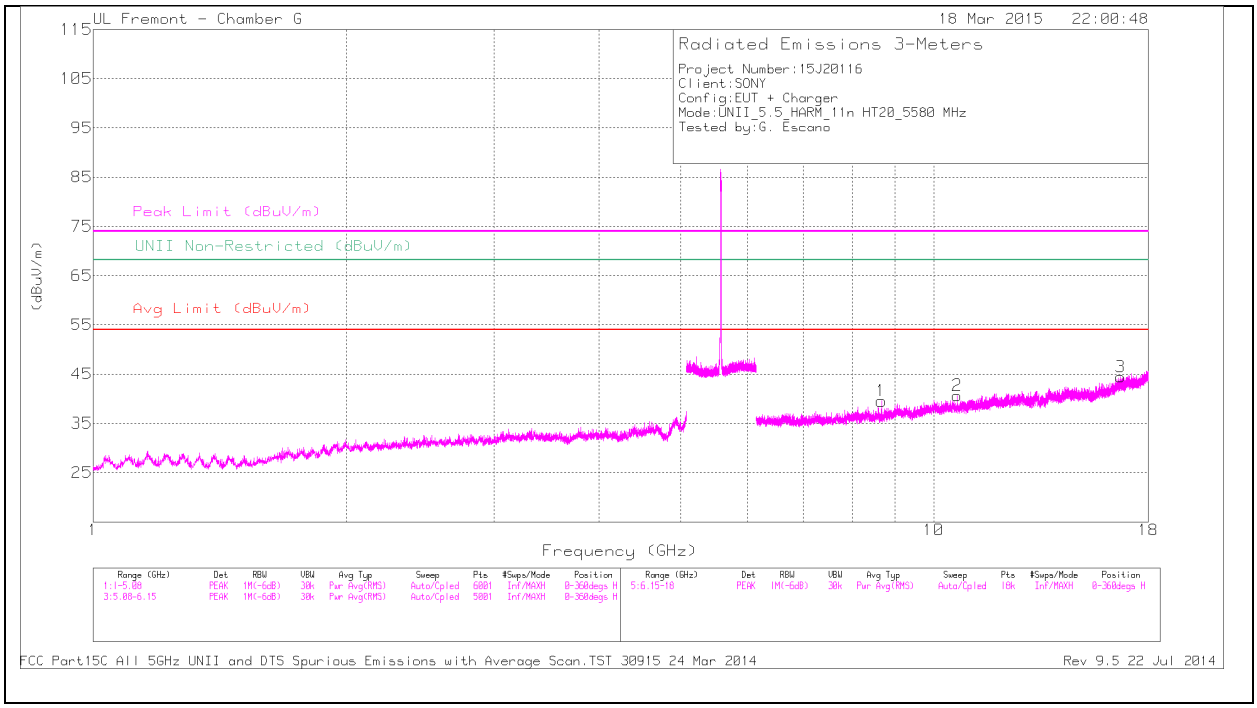
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 17.747	35.7	PK1	41.7	-24.1	0	53.3	-	-	74	-20.7	-	-	62	133	V
* 17.746	24.4	AD1	41.7	-24.1	0	42	54	-12	-	-	-	-	62	133	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

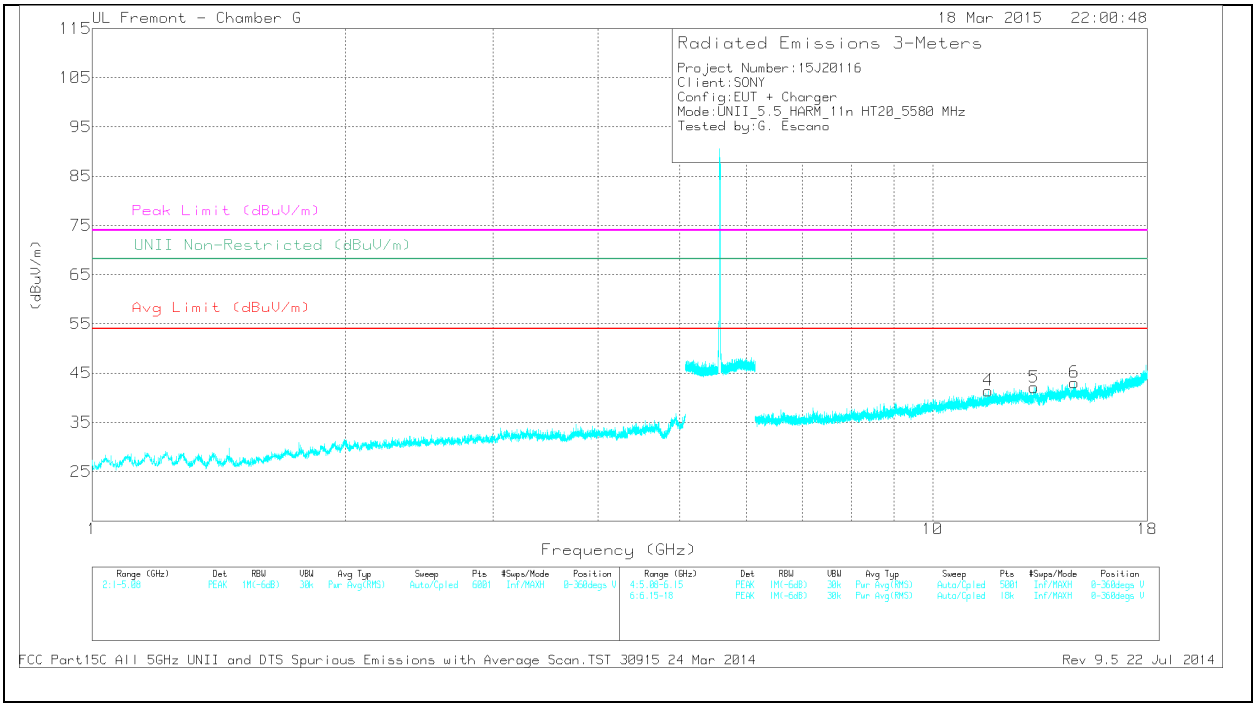
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

TRACE MARKERS

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
2	* 10.664	30.23	PK	37.7	-27.3	0	40.63	-	-	74	-33.37	-	-	0-360	201	H
4	* 11.641	29.94	PK	38.5	-27	0	41.44	-	-	74	-32.56	-	-	0-360	101	V
1	8.667	33.75	PK	35.9	-30.1	0	39.55	-	-	-	-	68.2	-28.65	0-360	101	H
5	13.196	29.31	PK	39	-26.2	0	42.11	-	-	-	-	68.2	-26.09	0-360	101	V
6	14.743	31.2	PK	40	-28.1	0	43.1	-	-	-	-	68.2	-25.1	0-360	201	V
3	16.692	29.14	PK	41.7	-26.4	0	44.44	-	-	-	-	68.2	-23.76	0-360	201	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

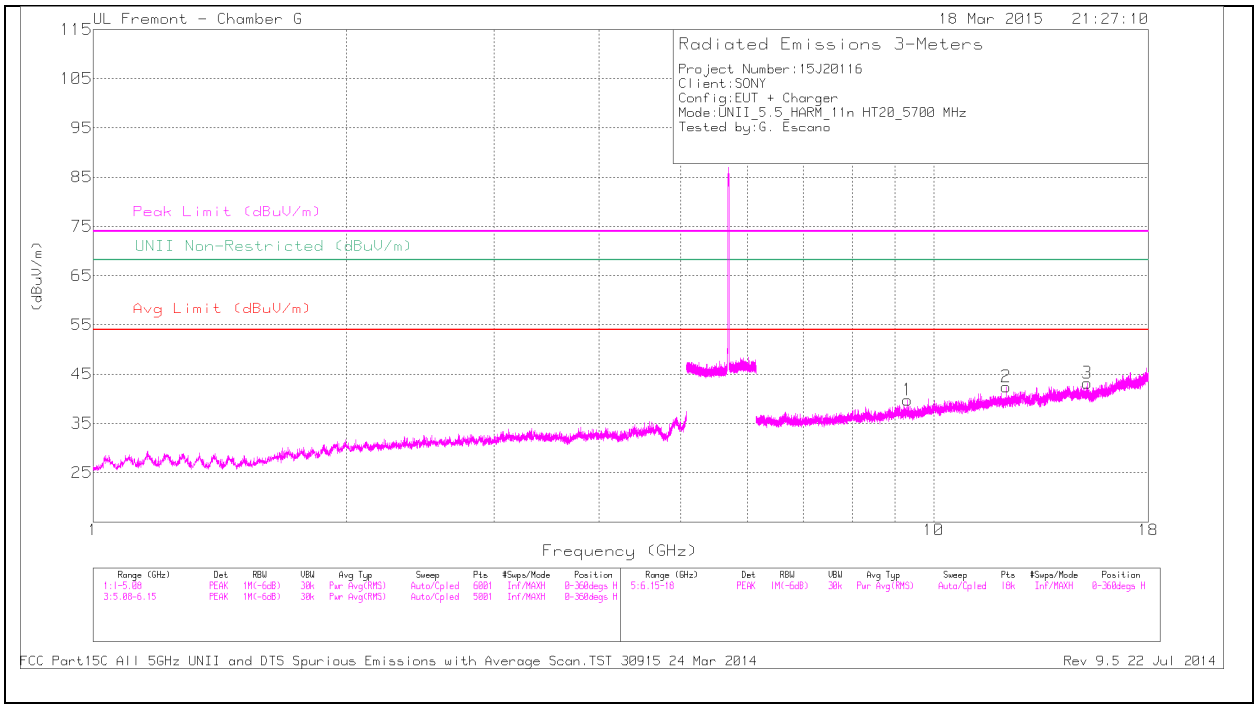
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 10.663	38.85	PK1	37.7	-27.3	0	49.25	-	-	74	-24.75	-	-	91	257	H
* 10.664	25.93	AD1	37.7	-27.3	0	36.33	54	-17.67	-	-	-	-	91	257	H
* 11.641	37.01	PK1	38.5	-27	0	48.51	-	-	74	-25.49	-	-	55	150	V
* 11.641	25.56	AD1	38.5	-27	0	37.06	54	-16.94	-	-	-	-	55	150	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

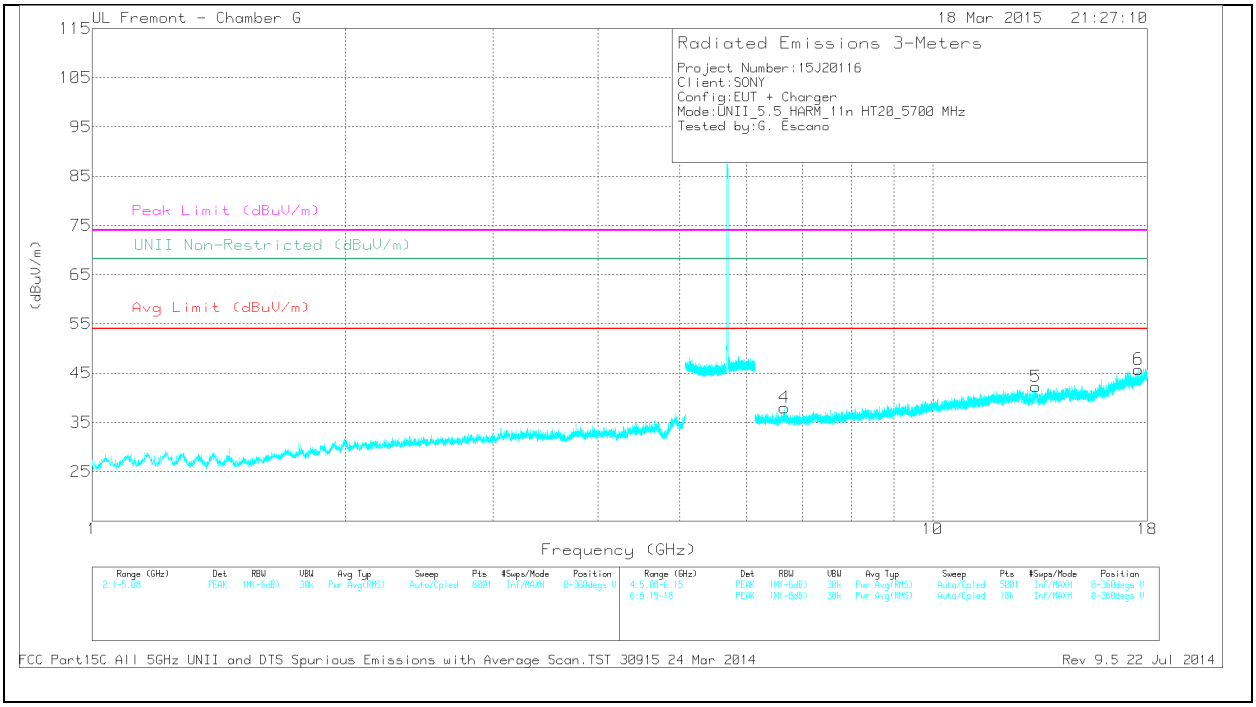
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

TRACE MARKERS

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	* 9.31	32.25	PK	36.5	-29	0	39.75	-	-	74	-34.25	-	-	0-360	201	H
2	* 12.202	29.95	PK	38.8	-26.3	0	42.45	-	-	74	-31.55	-	-	0-360	100	H
5	* 13.261	28.99	PK	39	-25.7	0	42.29	-	-	74	-31.71	-	-	0-360	201	V
4	6.66	33.89	PK	35.6	-31.5	0	37.99	-	-	-	-	68.2	-30.21	0-360	101	V
3	15.237	30.7	PK	39.8	-27.3	0	43.2	-	-	-	-	68.2	-25	0-360	100	H
6	17.565	28.47	PK	41.5	-24.2	0	45.77	-	-	-	-	68.2	-22.43	0-360	201	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

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
* 9.309	38.44	PK1	36.5	-29	0	45.94	-	-	74	-28.06	-	-	327	272	H
* 9.31	27.36	AD1	36.5	-29	0	34.86	54	-19.14	-	-	-	-	327	272	H
* 12.202	36.35	PK1	38.8	-26.3	0	48.85	-	-	74	-25.15	-	-	170	140	H
* 12.202	25.31	AD1	38.8	-26.3	0	37.81	54	-16.19	-	-	-	-	170	140	H
* 13.261	36.85	PK1	39	-25.7	0	50.15	-	-	74	-23.85	-	-	56	190	V
* 13.261	25.74	AD1	39	-25.7	0	39.04	54	-14.96	-	-	-	-	56	190	V

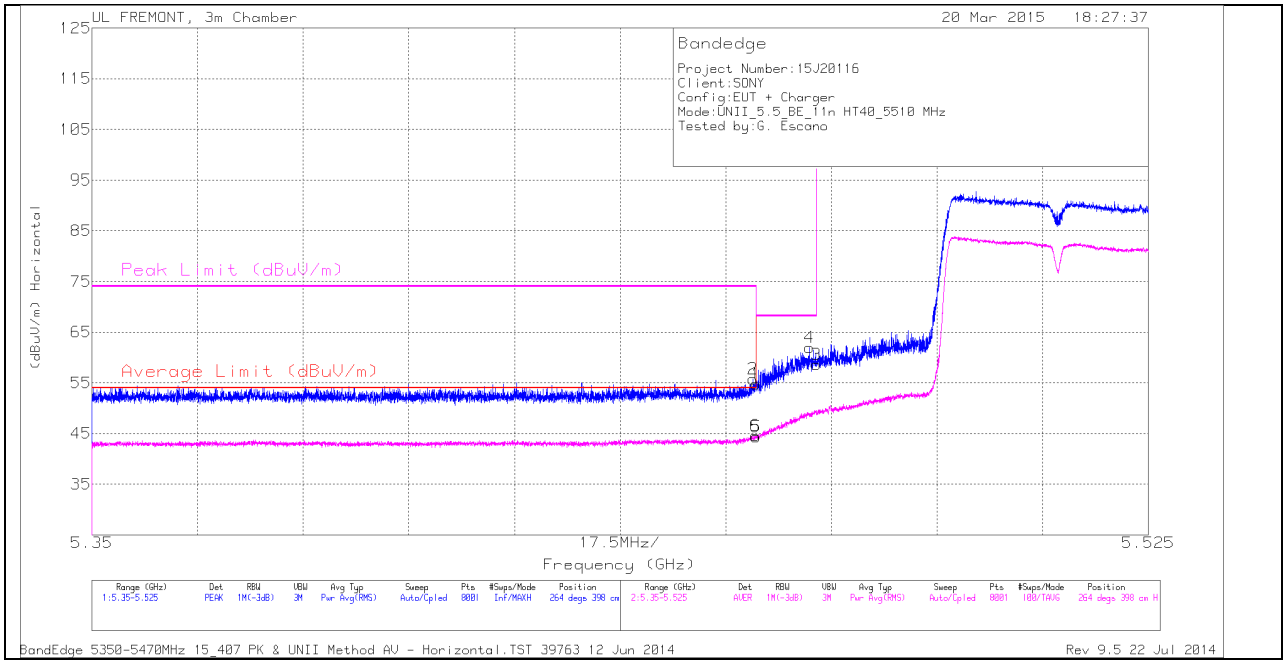
* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

11.2.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



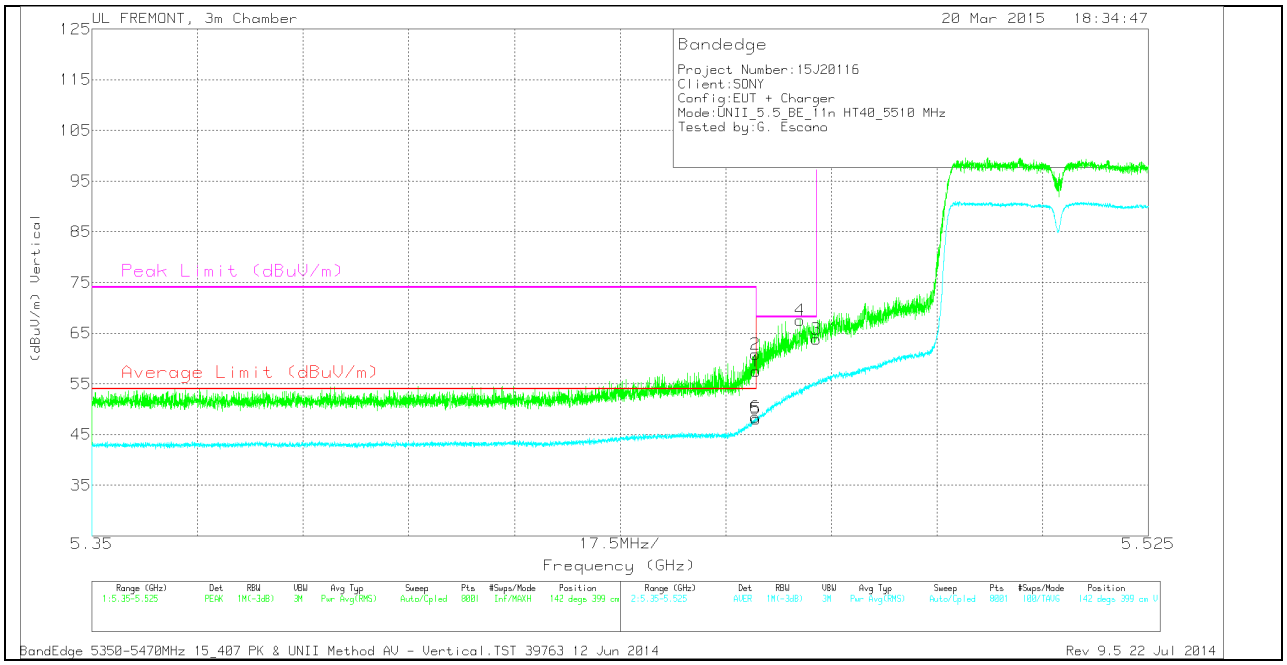
HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.46	41.51	PK	34.6	-21.4	0	54.71	-	-	74	-19.29	264	398	H
2	5.46	42.54	PK	34.6	-21.4	0	55.74	-	-	74	-18.26	264	398	H
5	5.46	31.09	RMS	34.6	-21.4	0	44.29	54	-9.71	-	-	264	398	H
6	5.46	31.28	RMS	34.6	-21.4	0	44.48	54	-9.52	-	-	264	398	H
4	5.469	48.62	PK	34.6	-21.3	0	61.92	-	-	68.2	-6.28	264	398	H
3	5.47	45.34	PK	34.6	-21.3	0	58.64	-	-	68.2	-9.56	264	398	H

PK - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

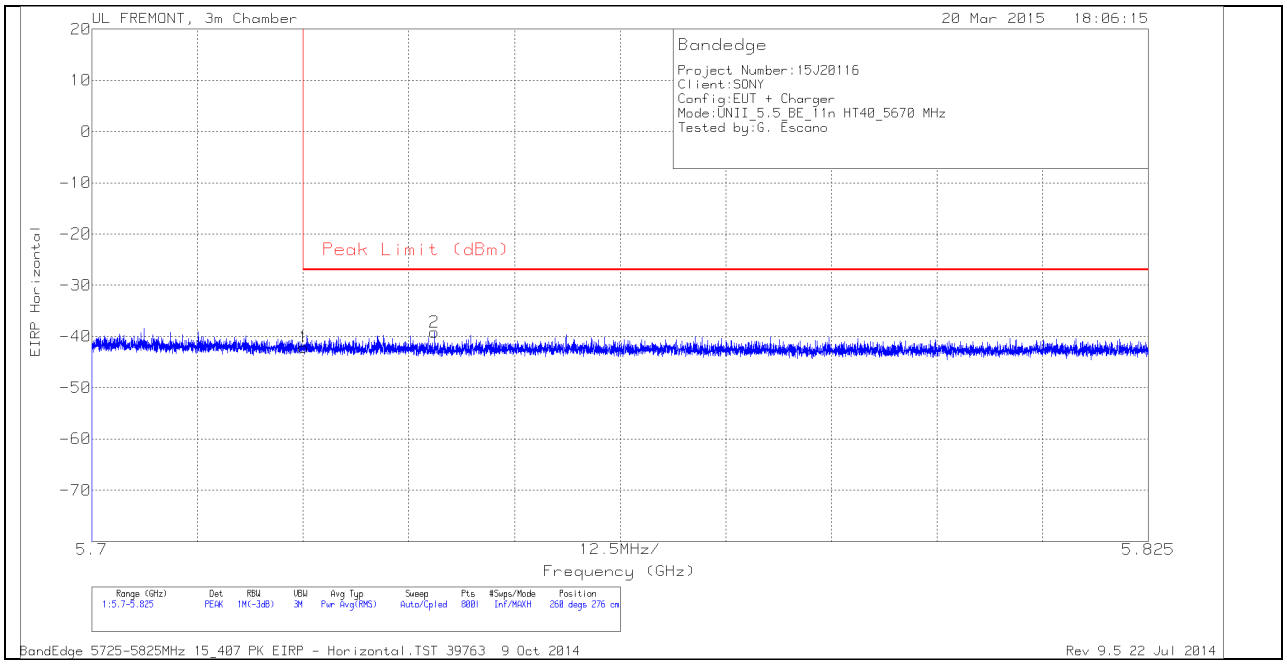
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.46	44.34	PK	34.6	-21.4	0	57.54	-	-	74	-16.46	142	399	V
2	5.46	47.66	PK	34.6	-21.4	0	60.86	-	-	74	-13.14	142	399	V
5	5.46	34.82	RMS	34.6	-21.4	0	48.02	54	-5.98	-	-	142	399	V
6	5.46	35.11	RMS	34.6	-21.4	0	48.31	54	-5.69	-	-	142	399	V
4	5.467	54.2	PK	34.6	-21.3	0	67.5	-	-	68.2	-.7	142	399	V
3	5.47	50.58	PK	34.6	-21.3	0	63.88	-	-	68.2	-4.32	142	399	V

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

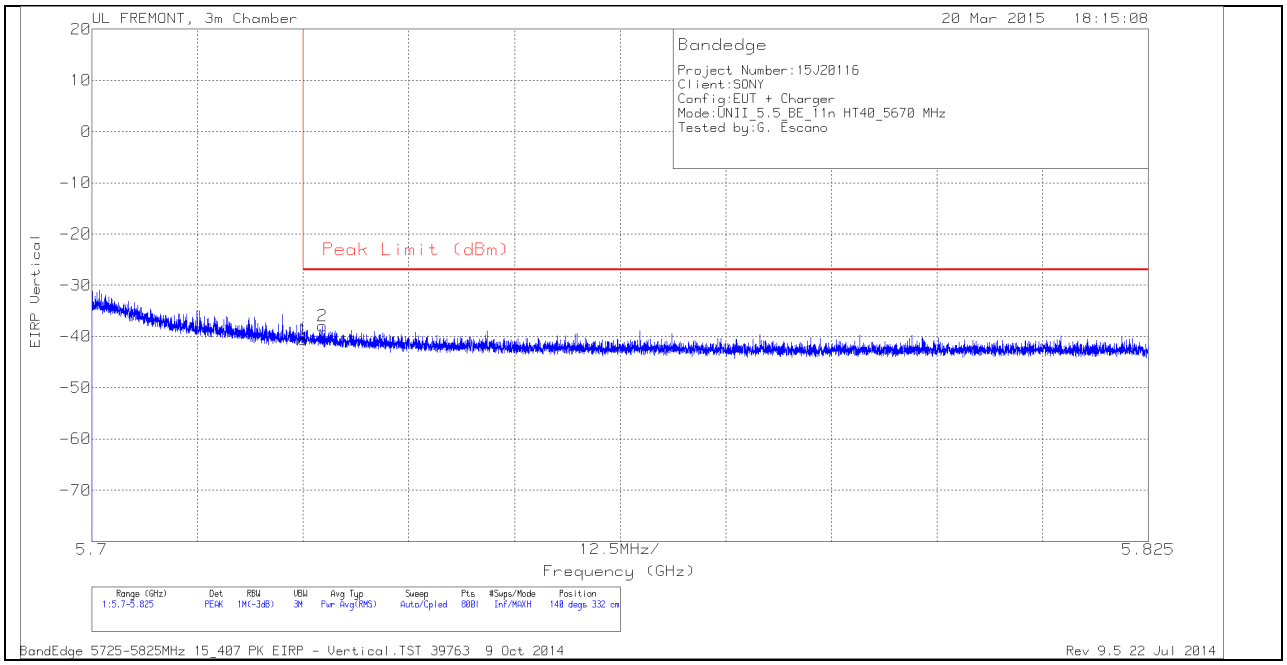


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-67.65	PK	34.8	-21.1	11.8	0	-42.15	-27	-15.15	260	276	H
2	5.741	-64.58	PK	34.8	-21.2	11.8	0	-39.18	-27	-12.18	260	276	H

PK - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



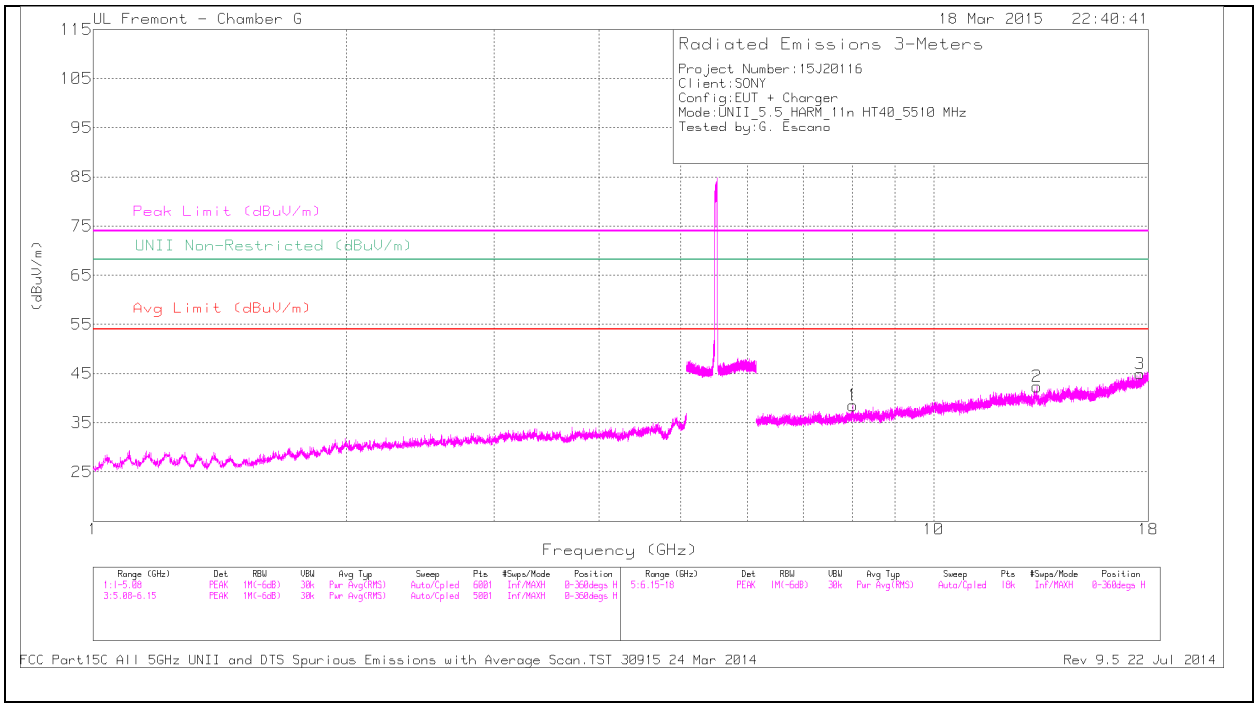
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-66.16	PK	34.8	-21.1	11.8	0	-40.66	-27	-13.66	140	332	V
2	5.727	-63.48	PK	34.8	-21.1	11.8	0	-37.98	-27	-10.98	140	332	V

PK - Peak detector

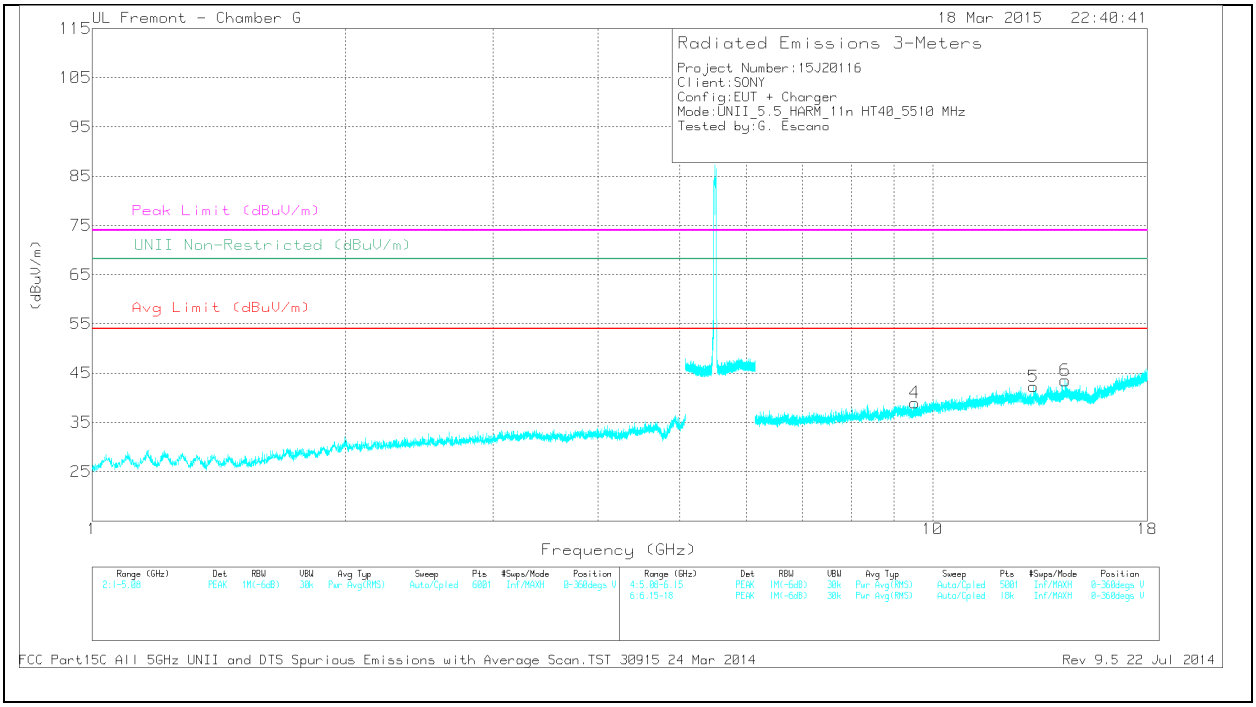
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

TRACE MARKERS

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
2	* 13.269	29.25	PK	39	-25.9	0	42.35	-	-	74	-31.65	-	-	0-360	201	H
1	8.018	33.03	PK	35.8	-30.3	0	38.53	-	-	-	-	68.2	-29.67	0-360	101	H
4	9.516	30.79	PK	36.7	-28.5	0	38.99	-	-	-	-	68.2	-29.21	0-360	101	V
5	13.183	29.86	PK	39	-26.6	0	42.26	-	-	-	-	68.2	-25.94	0-360	201	V
6	14.375	31.61	PK	39.9	-28	0	43.51	-	-	-	-	68.2	-24.69	0-360	201	V
3	17.604	27.75	PK	41.5	-24.3	0	44.95	-	-	-	-	68.2	-23.25	0-360	101	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

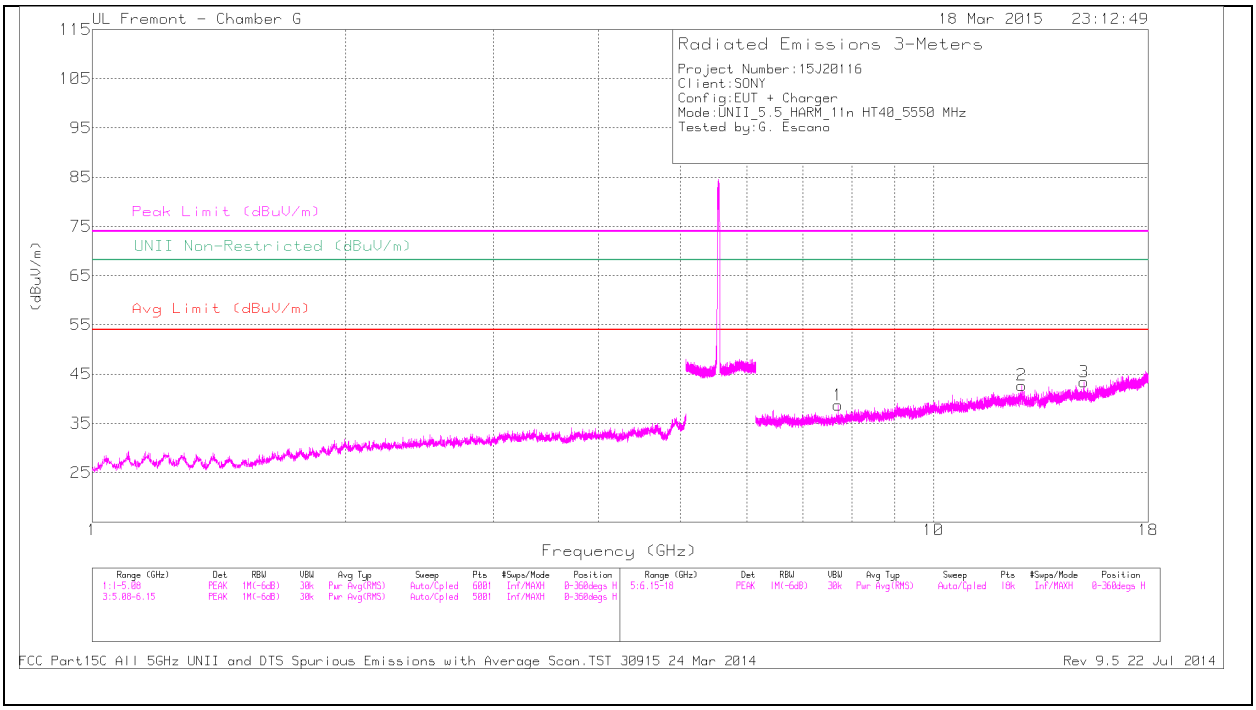
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 13.269	37.08	PK1	39	-25.9	0	50.18	-	-	74	-23.82	-	-	52	186	H
* 13.269	25.15	AD1	39	-25.9	0	38.25	54	-15.75	-	-	-	-	52	186	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

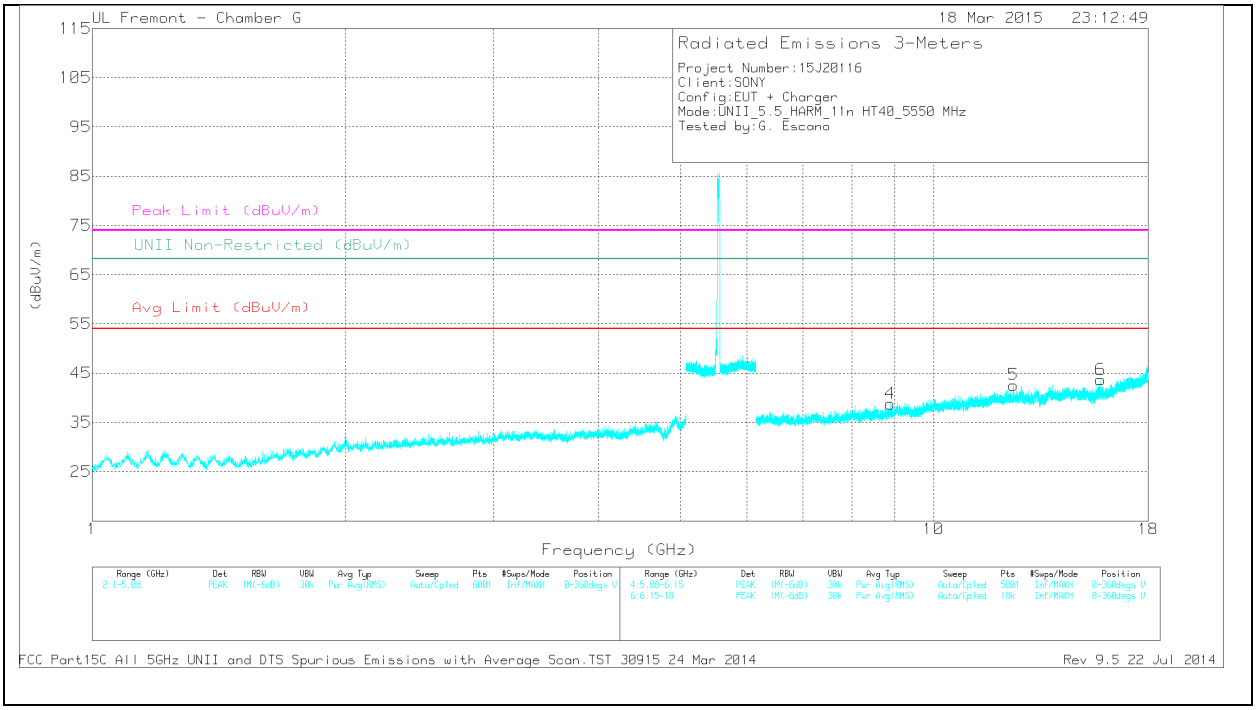
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

TRACE MARKERS

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	* 7.699	33.77	PK	35.7	-30.8	0	38.67	-	-	74	-35.33	-	-	0-360	201	H
5	* 12.443	30.3	PK	39	-26.7	0	42.6	-	-	74	-31.4	-	-	0-360	101	V
6	* 15.803	30.25	PK	40.3	-26.9	0	43.65	-	-	74	-30.35	-	-	0-360	201	V
4	8.883	31.58	PK	36.2	-29	0	38.78	-	-	-	-	68.2	-29.42	0-360	101	V
2	12.73	29.12	PK	39.1	-25.5	0	42.72	-	-	-	-	68.2	-25.48	0-360	201	H
3	15.091	31.3	PK	39.8	-27.7	0	43.4	-	-	-	-	68.2	-24.8	0-360	201	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

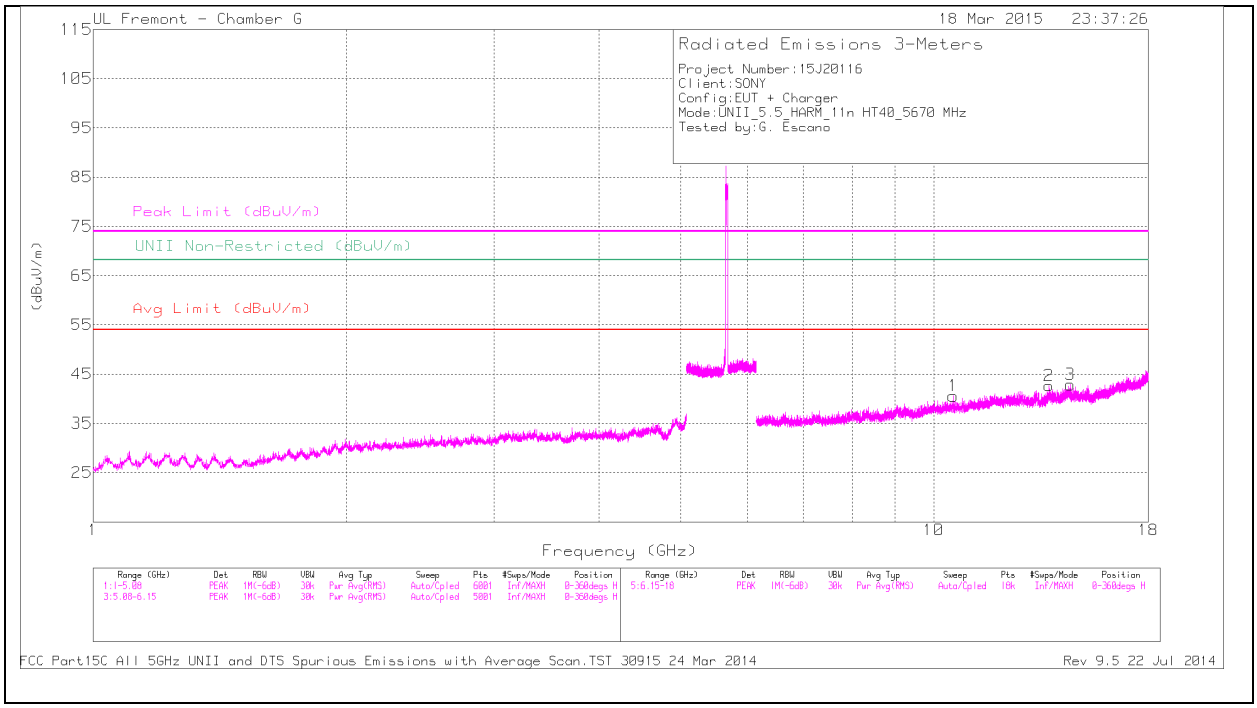
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 7.699	41.05	PK1	35.7	-30.8	0	45.95	-	-	74	-28.05	-	-	129	222	H
* 7.699	28.33	AD1	35.7	-30.8	0	33.23	54	-20.77	-	-	-	-	129	222	H
* 12.443	36.73	PK1	39	-26.7	0	49.03	-	-	74	-24.97	-	-	231	167	V
* 12.443	25.42	AD1	39	-26.7	0	37.72	54	-16.28	-	-	-	-	231	167	V
* 15.803	36.25	PK1	40.3	-26.9	0	49.65	-	-	74	-24.35	-	-	310	149	V
* 15.803	24.66	AD1	40.3	-26.9	0	38.06	54	-15.94	-	-	-	-	310	149	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

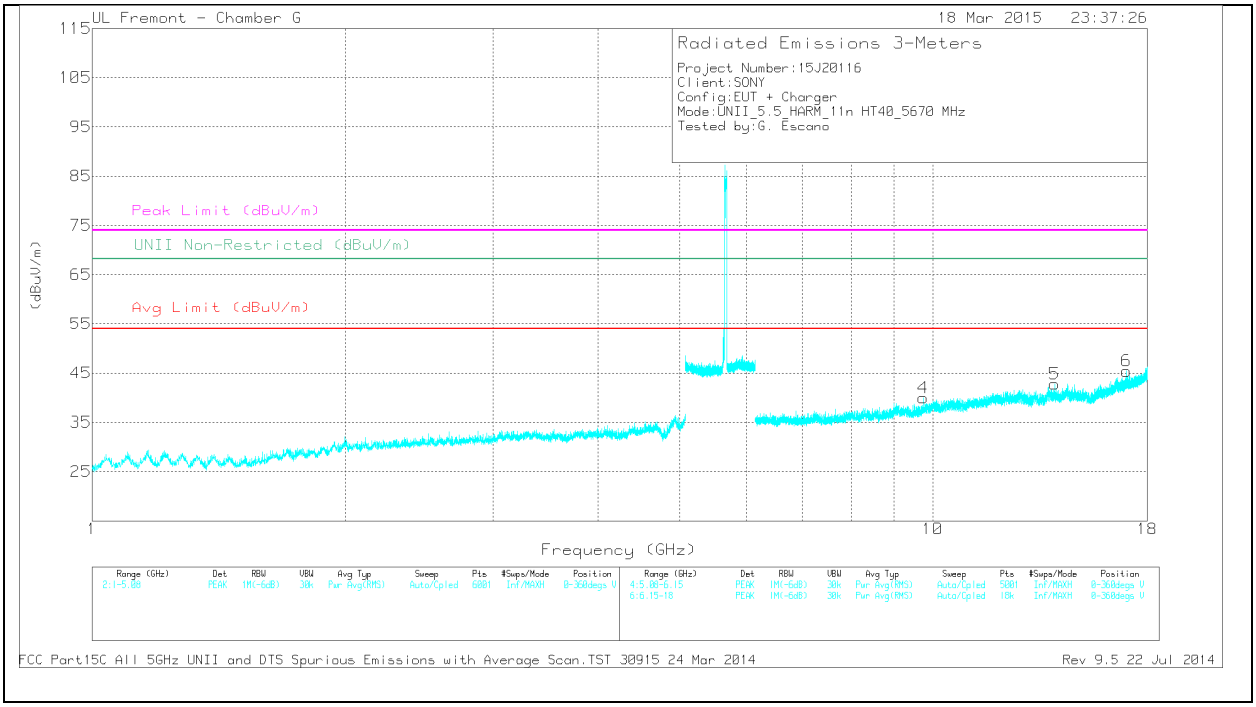
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

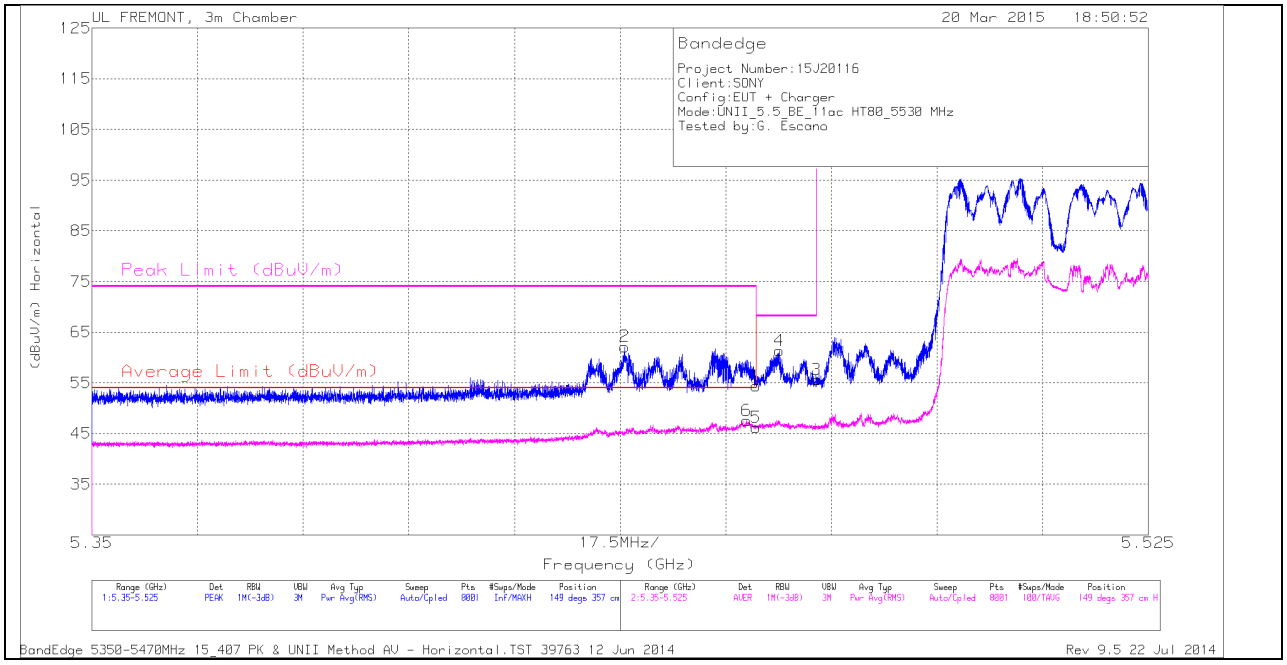
TRACE MARKERS

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
4	9.744	31.46	PK	37	-28.5	0	39.96	-	-	-	-	68.2	-28.24	0-360	201	V
1	10.548	29.87	PK	37.6	-26.9	0	40.57	-	-	-	-	68.2	-27.63	0-360	201	H
2	13.713	30.04	PK	39.2	-26.6	0	42.64	-	-	-	-	68.2	-25.56	0-360	201	H
5	13.963	30.96	PK	39.4	-27.6	0	42.76	-	-	-	-	68.2	-25.44	0-360	201	V
3	14.546	30.87	PK	40	-28	0	42.87	-	-	-	-	68.2	-25.33	0-360	101	H
6	16.999	29.12	PK	42.1	-25.8	0	45.42	-	-	-	-	68.2	-22.78	0-360	201	V

PK - Peak detector

11.2.4. TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



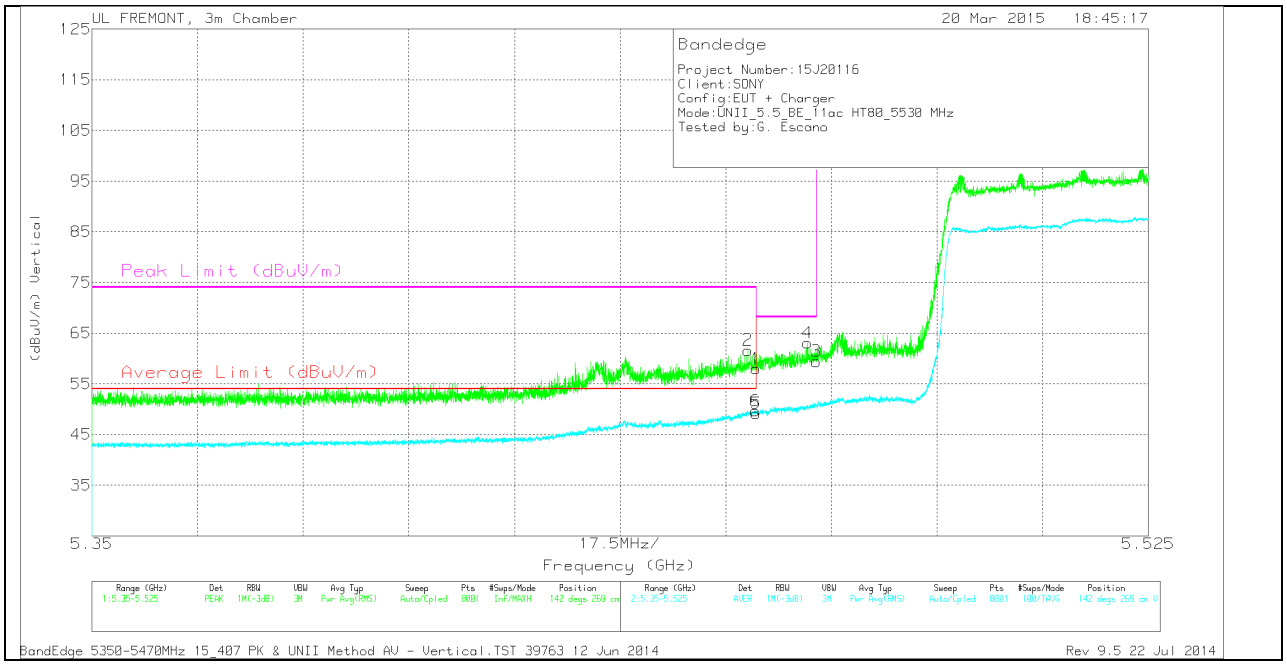
HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.438	48.95	PK	34.6	-21.4	0	62.15	-	-	74	-11.85	149	357	H
6	5.458	34.27	RMS	34.6	-21.4	.13	47.6	54	-6.4	-	-	149	357	H
1	5.46	41.24	PK	34.6	-21.4	0	54.44	-	-	74	-19.56	149	357	H
5	5.46	32.88	RMS	34.6	-21.4	.13	46.21	54	-7.79	-	-	149	357	H
4	5.464	48.09	PK	34.6	-21.4	0	61.29	-	-	68.2	-6.91	149	357	H
3	5.47	42.34	PK	34.6	-21.3	0	55.64	-	-	68.2	-12.56	149	357	H

PK - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



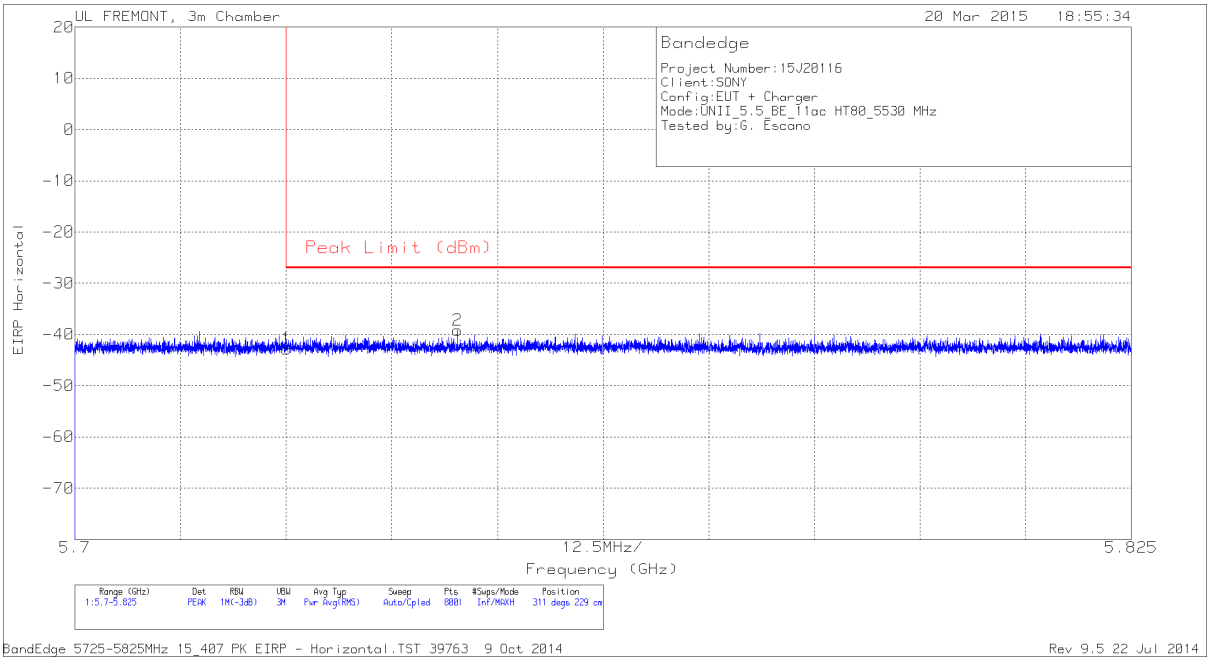
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.459	48.45	PK	34.6	-21.4	0	61.65	-	-	74	-12.35	142	269	V
1	5.46	44.82	PK	34.6	-21.4	0	58.02	-	-	74	-15.98	142	269	V
5	5.46	35.81	RMS	34.6	-21.4	.13	49.14	54	-4.86	-	-	142	269	V
6	5.46	36.31	RMS	34.6	-21.4	.13	49.64	54	-4.36	-	-	142	269	V
4	5.469	49.83	PK	34.6	-21.3	0	63.13	-	-	68.2	-5.07	142	269	V
3	5.47	46.12	PK	34.6	-21.3	0	59.42	-	-	68.2	-8.78	142	269	V

PK - Peak detector

RMS - RMS detection

HORIZONTAL PEAK PLOT

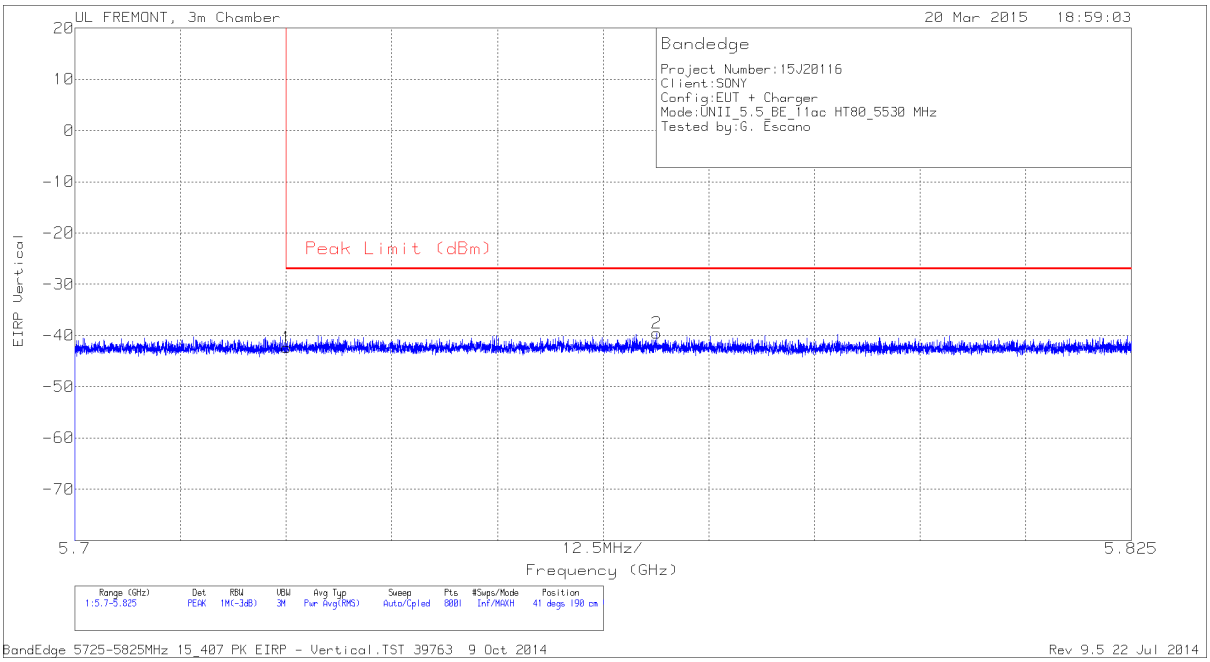


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-68.29	PK	34.8	-21.1	11.8	0	-42.79	-27	-15.79	311	229	H
2	5.745	-64.55	PK	34.8	-21.2	11.8	0	-39.15	-27	-12.15	311	229	H

PK - Peak detector

VERTICAL PEAK PLOT



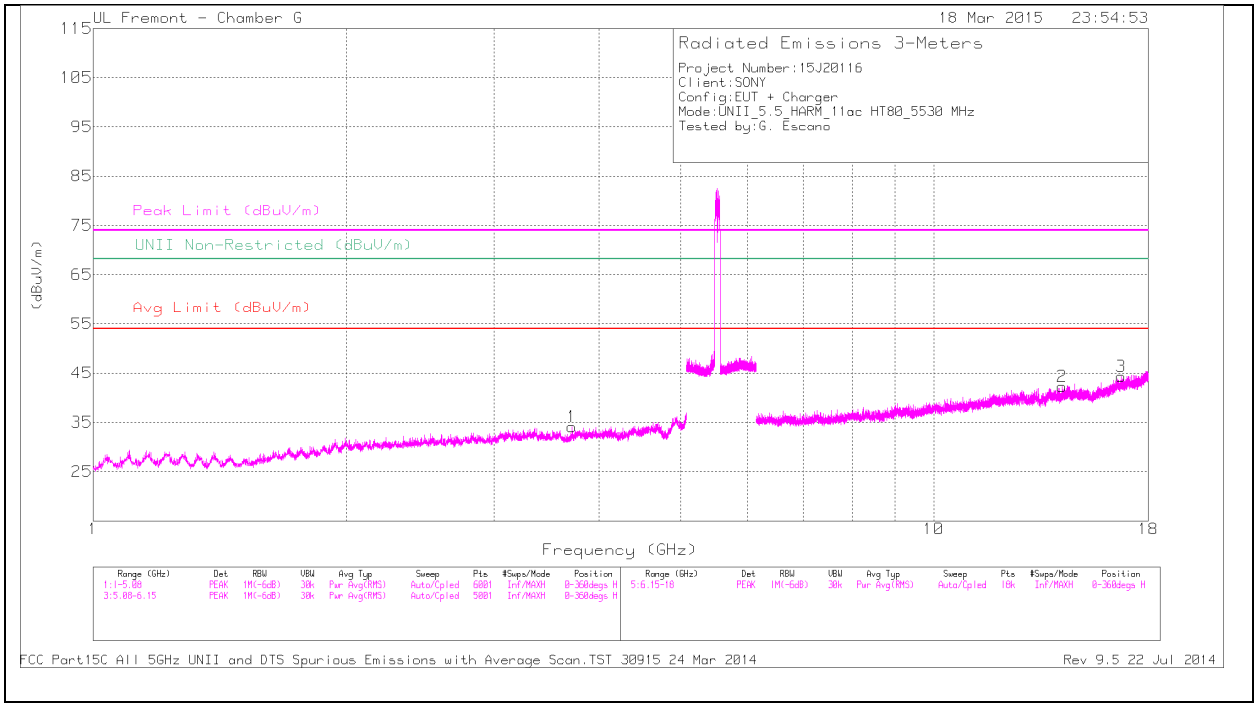
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-67.81	PK	34.8	-21.1	11.8	0	-42.31	-27	-15.31	41	190	V
2	5.769	-64.96	PK	34.8	-21.2	11.8	0	-39.56	-27	-12.56	41	190	V

PK - Peak detector

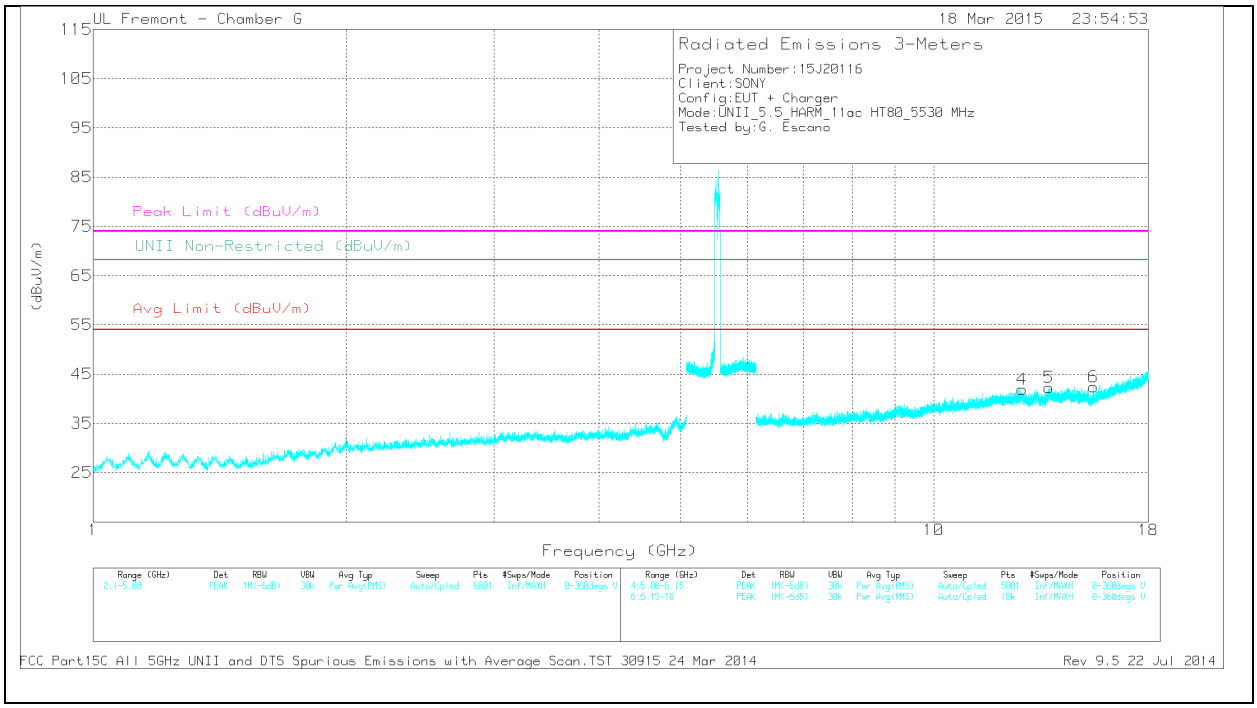
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.715	34.61	PK	32.9	-33.4	0	34.11	-	-	74	-39.89	-	-	0-360	101	H
6	* 15.487	30.28	PK	39.9	-27.8	0	42.38	-	-	74	-31.62	-	-	0-360	201	V
4	12.742	28.2	PK	39.1	-25.4	0	41.9	-	-	-	-	68.2	-26.3	0-360	101	V
5	13.718	29.69	PK	39.2	-26.6	0	42.29	-	-	-	-	68.2	-25.91	0-360	201	V
2	14.209	30.18	PK	39.7	-27.6	0	42.28	-	-	-	-	68.2	-25.92	0-360	201	H
3	16.706	29.02	PK	41.7	-26.4	0	44.32	-	-	-	-	68.2	-23.88	0-360	101	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

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
* 3.714	41	PK1	32.9	-33.4	0	40.5	-	-	74	-33.5	-	-	278	188	H
* 3.716	30.05	AD1	32.9	-33.4	.13	29.68	54	-24.32	-	-	-	-	278	188	H
* 15.488	37.3	PK1	39.9	-27.8	0	49.4	-	-	74	-24.6	-	-	193	276	V
* 15.488	26.17	AD1	39.9	-27.8	.13	38.4	54	-15.6	-	-	-	-	193	276	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

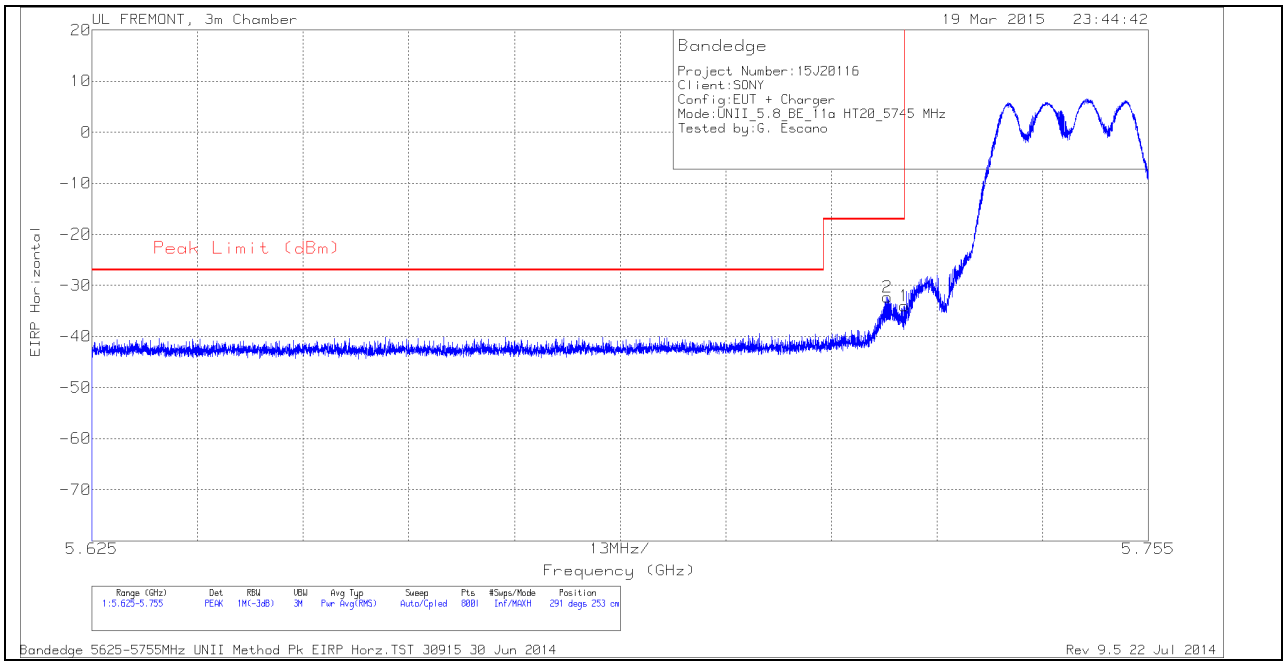
AD1 - KDB789033 Method: AD Primary Power Average

11.3. 5.8 GHz

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

HARMONICS AND SPURIOUS EMISSIONS

HORIZONTAL PEAK PLOT

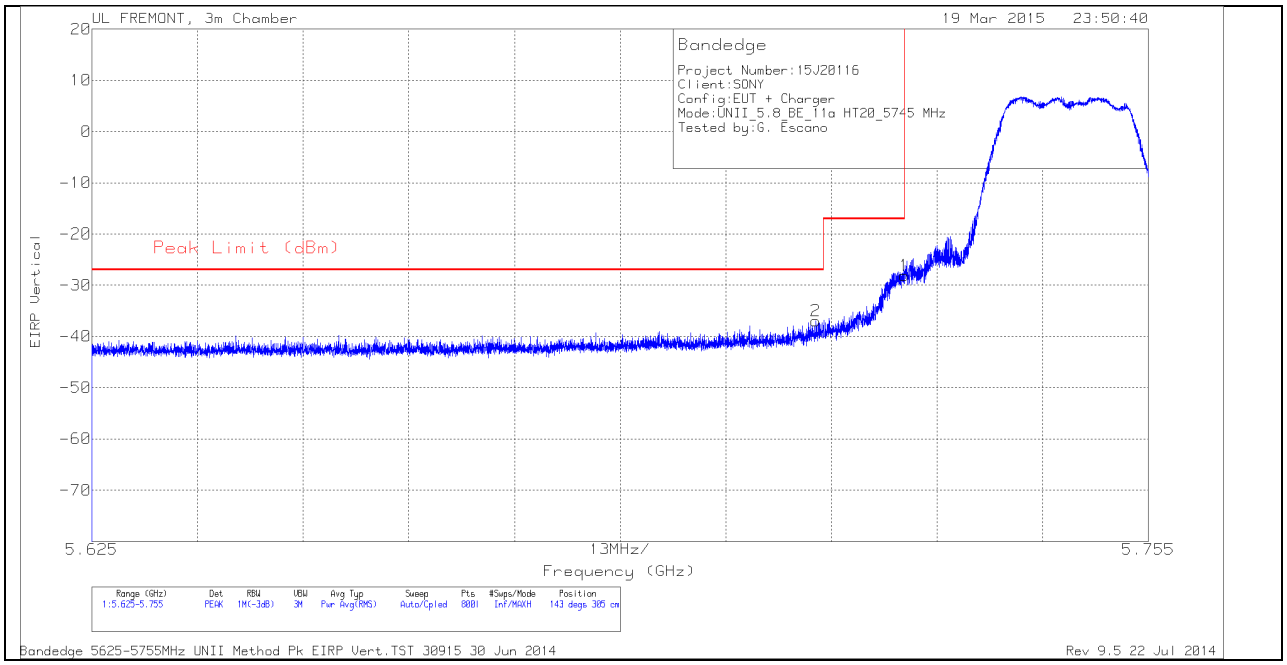


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.723	-57.87	PK	34.8	-21	11.8	-32.27	-17	-15.27	291	253	H
1	5.725	-59.53	PK	34.8	-21.1	11.8	-34.03	-17	-17.03	291	253	H

PK - Peak detector

VERTICAL PEAK PLOT



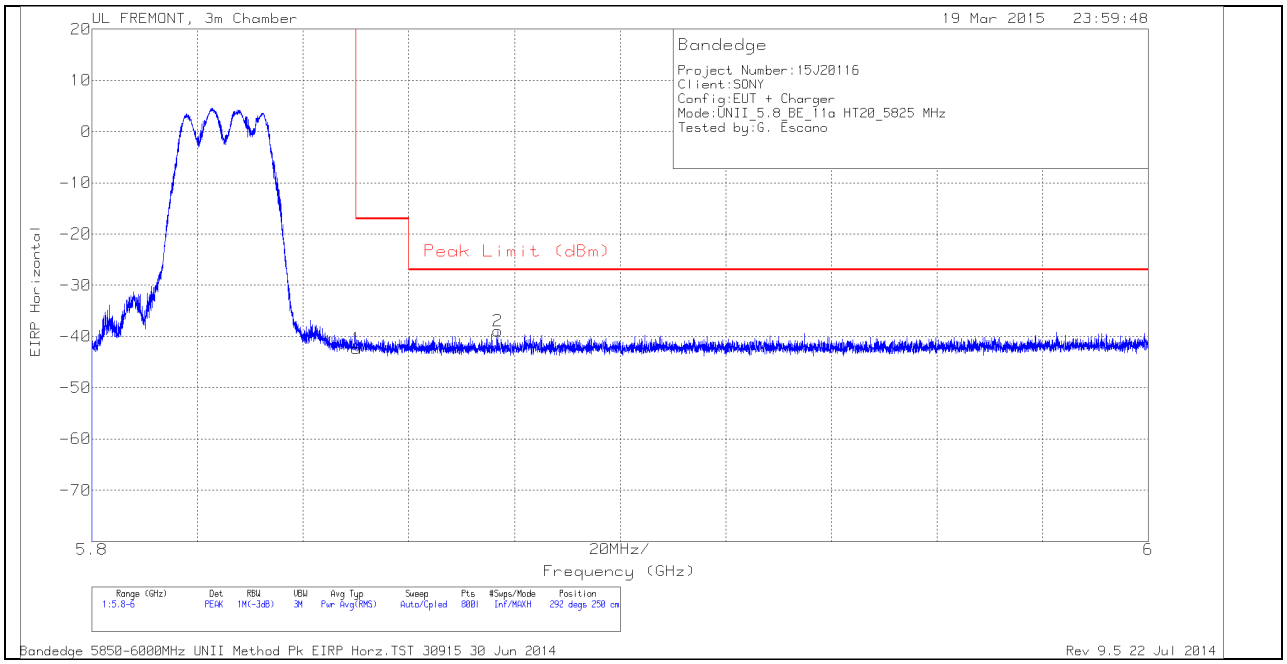
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.714	-62.5	PK	34.8	-21	11.8	-36.9	-27	-9.9	143	305	V
1	5.725	-53.6	PK	34.8	-21.1	11.8	-28.1	-17	-11.1	143	305	V

PK - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK PLOT

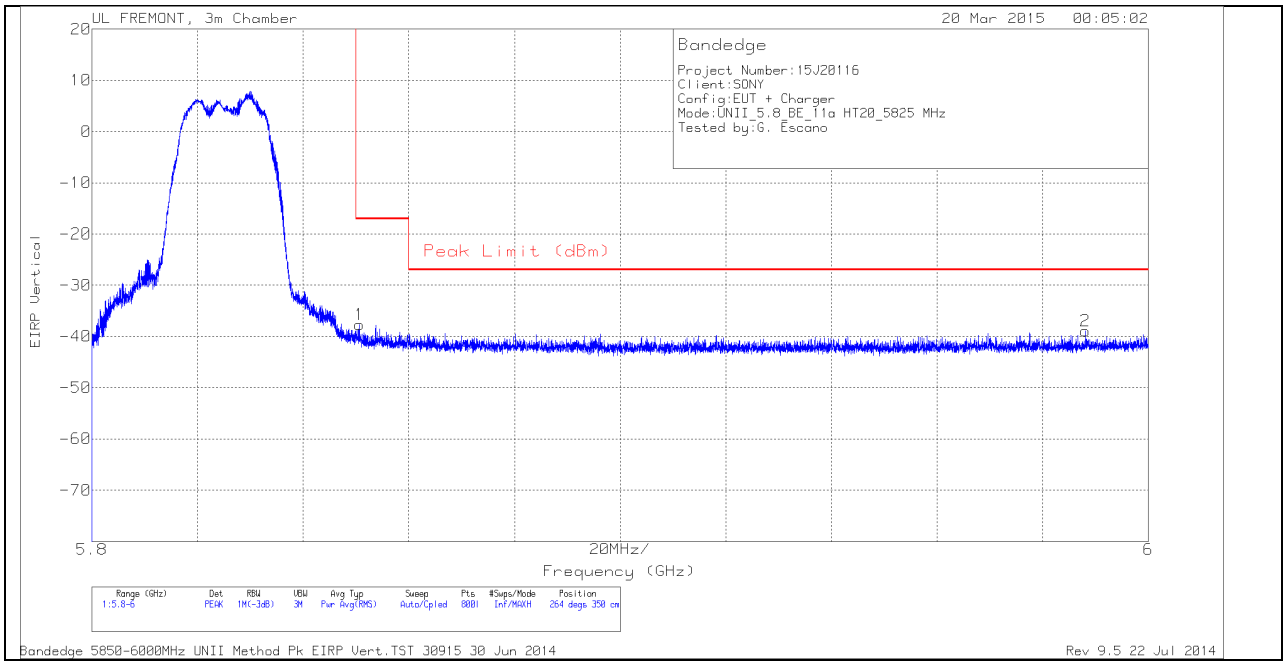


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.71	PK	34.9	-21.3	11.8	-42.31	-17	-25.31	292	250	H
2	5.877	-64.39	PK	35	-21.3	11.8	-38.89	-27	-11.89	292	250	H

PK - Peak detector

VERTICAL PEAK PLOT

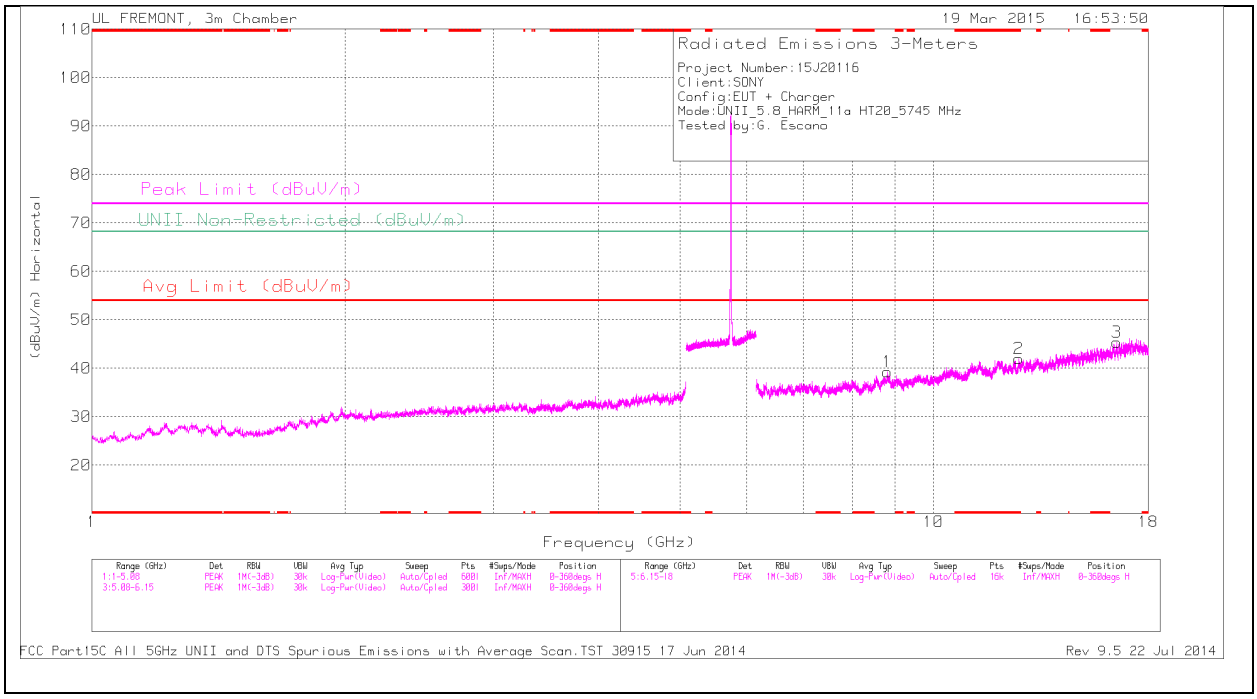


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.851	-63.04	PK	34.9	-21.3	11.8	-37.64	-17	-20.64	264	350	V
2	5.988	-64.98	PK	35.2	-20.9	11.8	-38.88	-27	-11.88	264	350	V

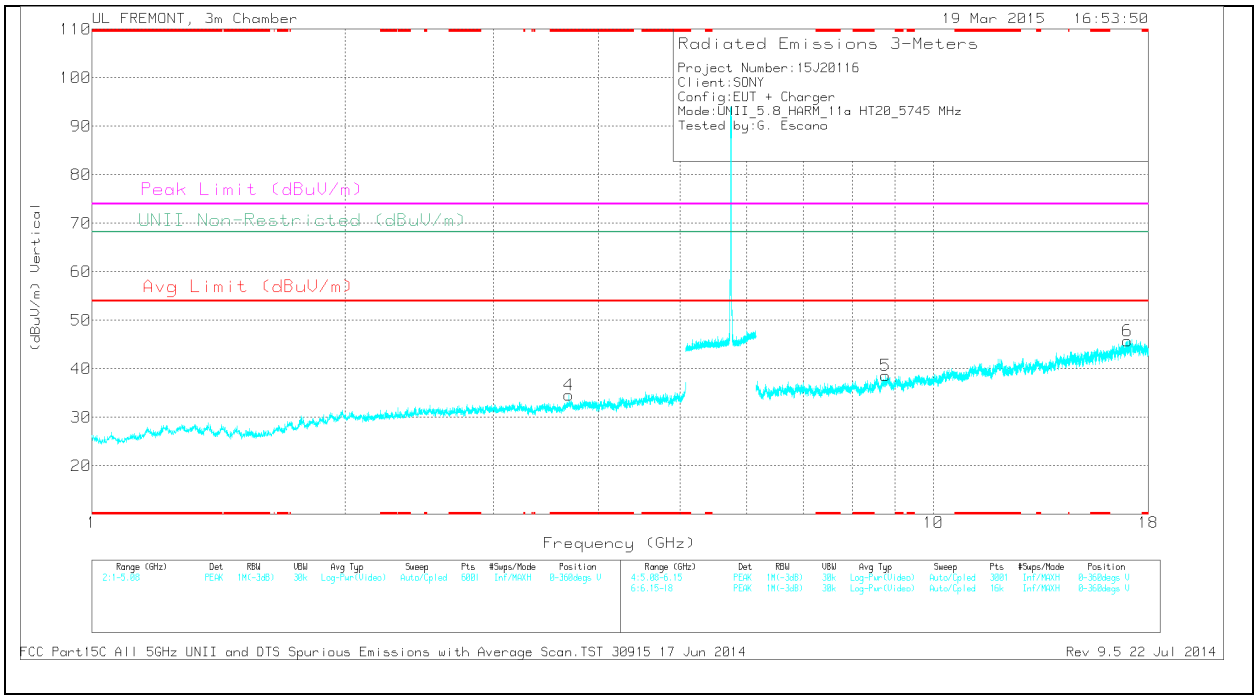
PK - Peak detector

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
4	* 3.688	32.2	PK	33	-30.6	0	34.6	-	-	74	-39.4	-	-	0-360	200	V
2	* 12.631	29.85	PK	39.1	-26.9	0	42.05	-	-	74	-31.95	-	-	0-360	200	H
5	8.764	28.72	PK	35.9	-26	0	38.62	-	-	-	-	68.2	-29.58	0-360	200	V
1	8.823	29.13	PK	35.9	-25.8	0	39.23	-	-	-	-	68.2	-28.97	0-360	100	H
3	16.503	29.22	PK	41	-24.9	0	45.32	-	-	-	-	68.2	-22.88	0-360	100	H
6	16.991	28.14	PK	41.4	-23.8	0	45.74	-	-	-	-	68.2	-22.46	0-360	100	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

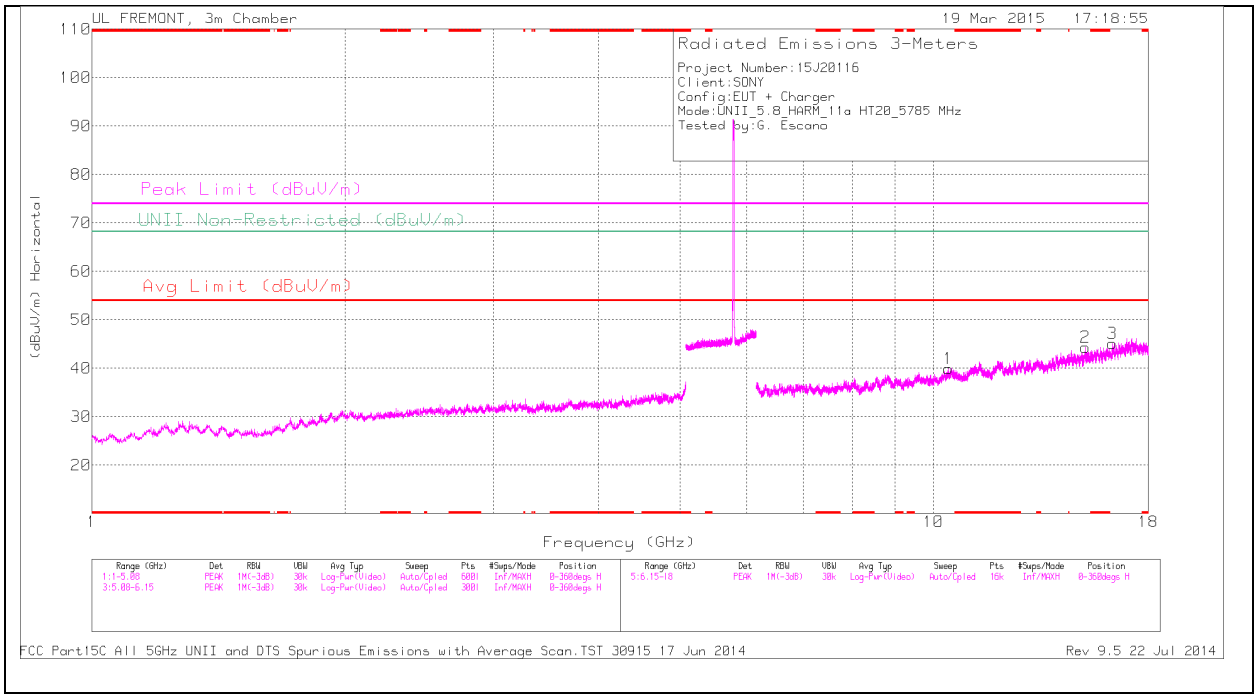
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.69	40.51	PK1	33	-30.6	0	42.91	-	-	74	-31.09	-	-	241	120	V
* 3.69	28.49	AD1	33	-30.6	0	30.89	54	-23.11	-	-	-	-	241	120	V
* 12.629	38.95	PK1	39.1	-26.9	0	51.15	-	-	74	-22.85	-	-	288	186	H
* 12.63	27.18	AD1	39.1	-26.9	0	39.38	54	-14.62	-	-	-	-	288	186	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

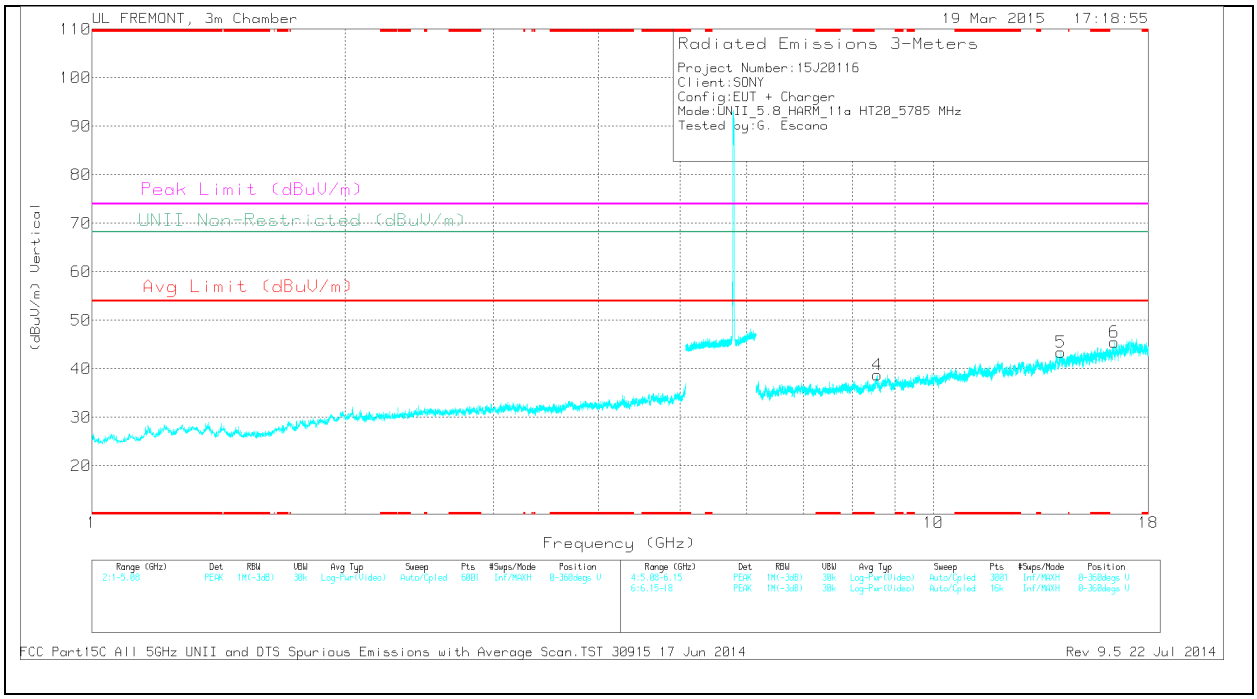
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

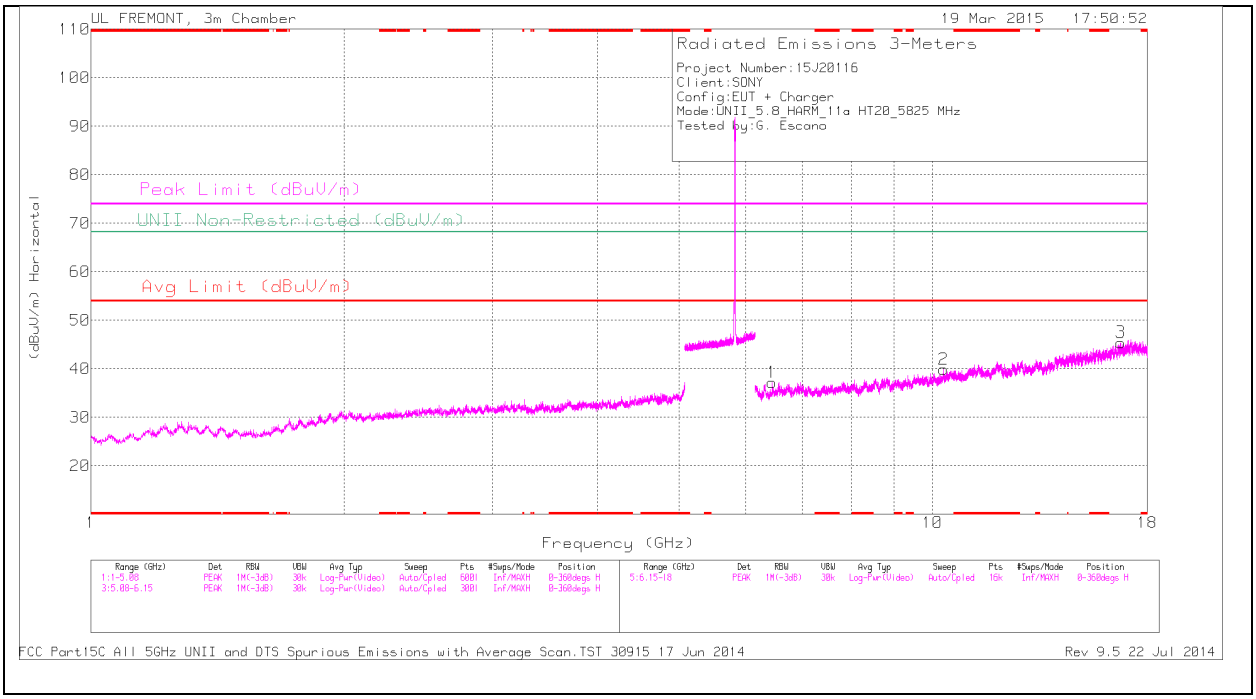
MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
4	8.57	29.06	PK	35.8	-26.1	0	38.76	-	-	-	-	68.2	-29.44	0-360	200	V
1	10.419	28.32	PK	37.3	-25.7	0	39.92	-	-	-	-	68.2	-28.28	0-360	100	H
5	14.176	31.36	PK	39.1	-27	0	43.46	-	-	-	-	68.2	-24.74	0-360	200	V
2	15.141	31.28	PK	39.9	-26.8	0	44.38	-	-	-	-	68.2	-23.82	0-360	200	H
3	16.329	29.5	PK	40.6	-25	0	45.1	-	-	-	-	68.2	-23.1	0-360	100	H
6	16.403	29.39	PK	40.7	-24.6	0	45.49	-	-	-	-	68.2	-22.71	0-360	100	V

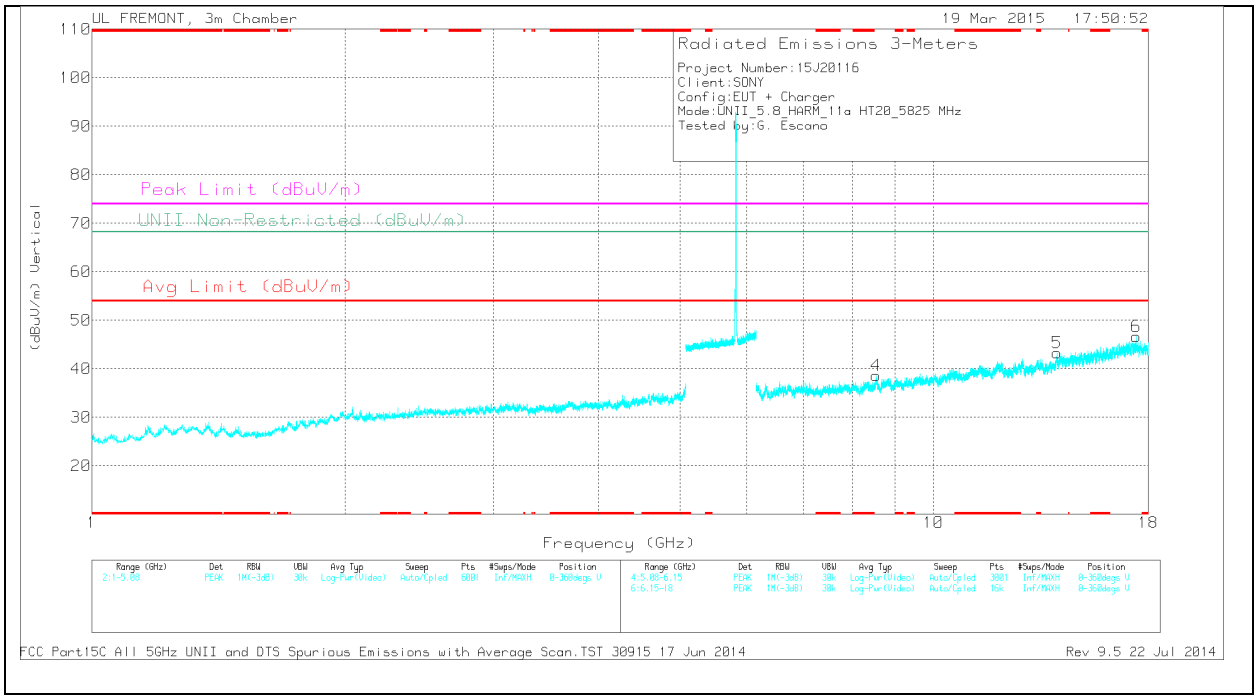
PK - Peak detector

HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

TRACE MARKERS

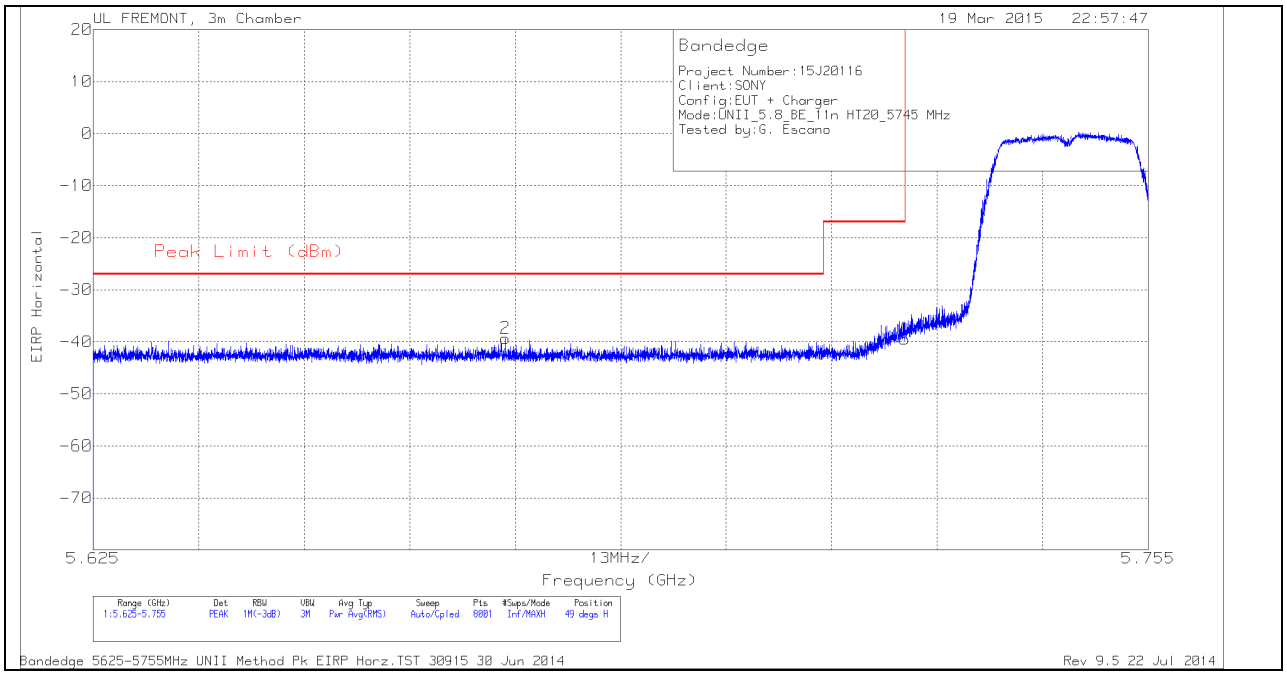
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	6.45	31.41	PK	35.5	-29.7	0	37.21	-	-	-	-	68.2	-30.99	0-360	200	H
4	8.553	28.98	PK	35.8	-26.1	0	38.68	-	-	-	-	68.2	-29.52	0-360	200	V
2	10.31	27.53	PK	37.1	-24.7	0	39.93	-	-	-	-	68.2	-28.27	0-360	100	H
5	14.022	31.87	PK	38.8	-27.4	0	43.27	-	-	-	-	68.2	-24.93	0-360	200	V
3	16.731	28.94	PK	41.2	-24.7	0	45.44	-	-	-	-	68.2	-22.76	0-360	200	H
6	17.417	27.56	PK	41.4	-22.3	0	46.66	-	-	-	-	68.2	-21.54	0-360	100	V

PK - Peak detector

11.3.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.8 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS

HORIZONTAL PEAK PLOT

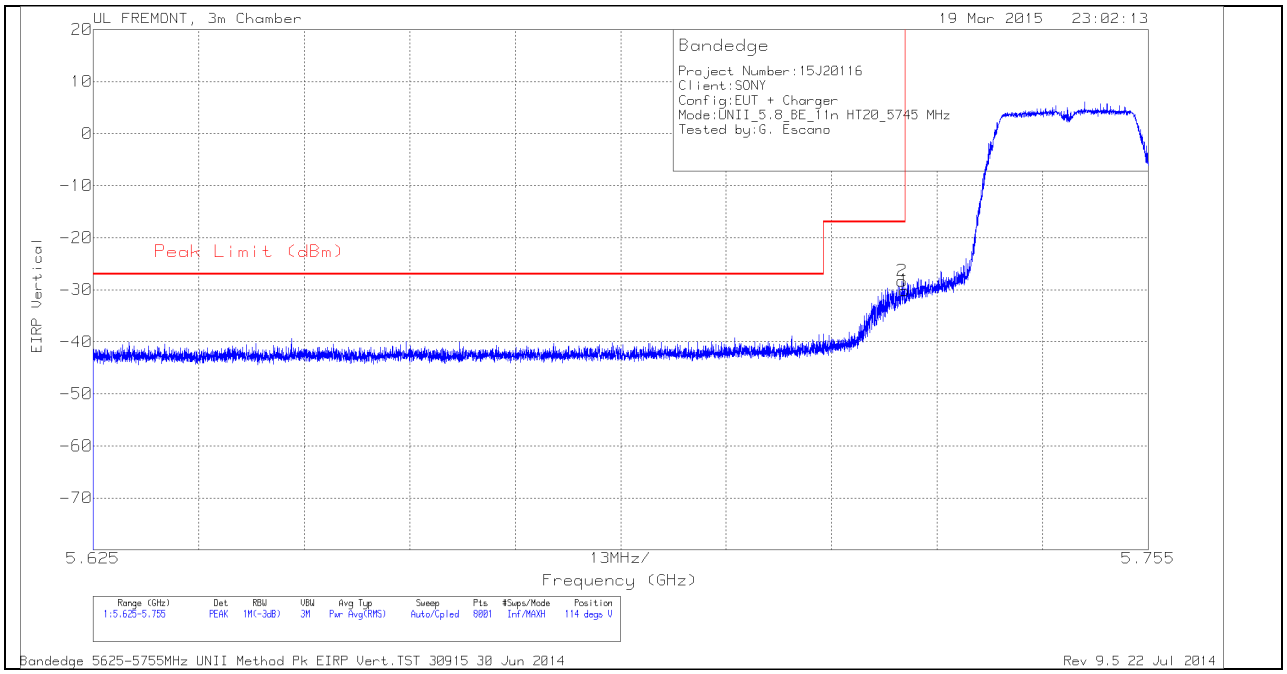


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.676	-64.83	PK	34.7	-21	11.8	-39.33	-27	-12.33	49	212	H
1	5.725	-64.93	PK	34.8	-21.1	11.8	-39.43	-17	-22.43	49	212	H

PK - Peak detector

VERTICAL PEAK PLOT



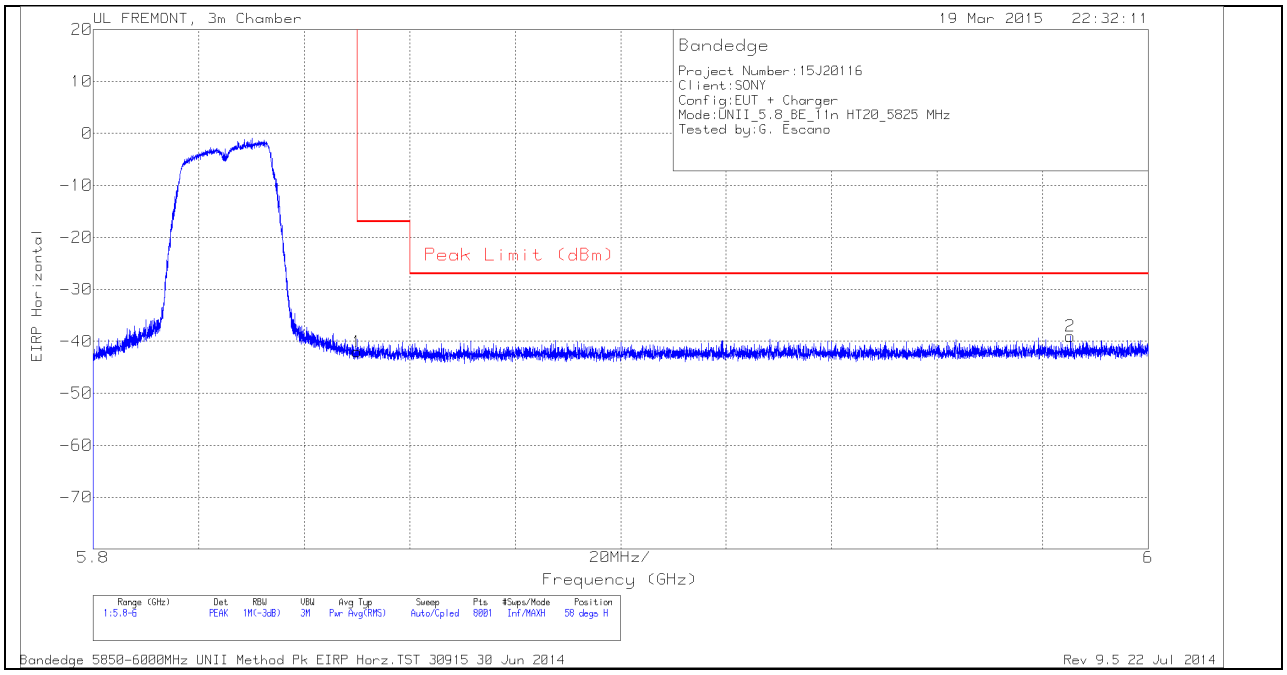
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-55.65	PK	34.8	-21.1	11.8	-30.15	-17	-13.15	114	253	V
2	5.725	-53.8	PK	34.8	-21.1	11.8	-28.3	-17	-11.3	114	253	V

PK - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

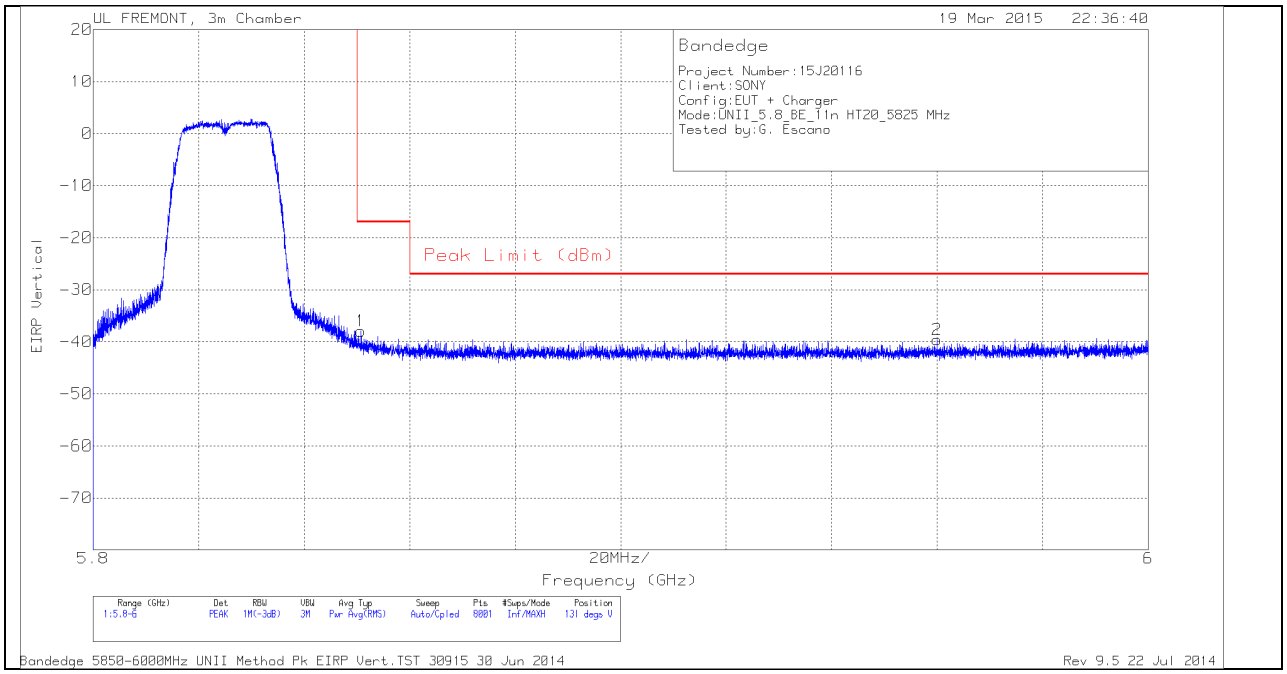


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.45	PK	34.9	-21.3	11.8	-42.05	-17	-25.05	58	291	H
2	5.985	-65.15	PK	35.2	-20.9	11.8	-39.05	-27	-12.05	58	291	H

PK - Peak detector

VERTICAL PEAK PLOT

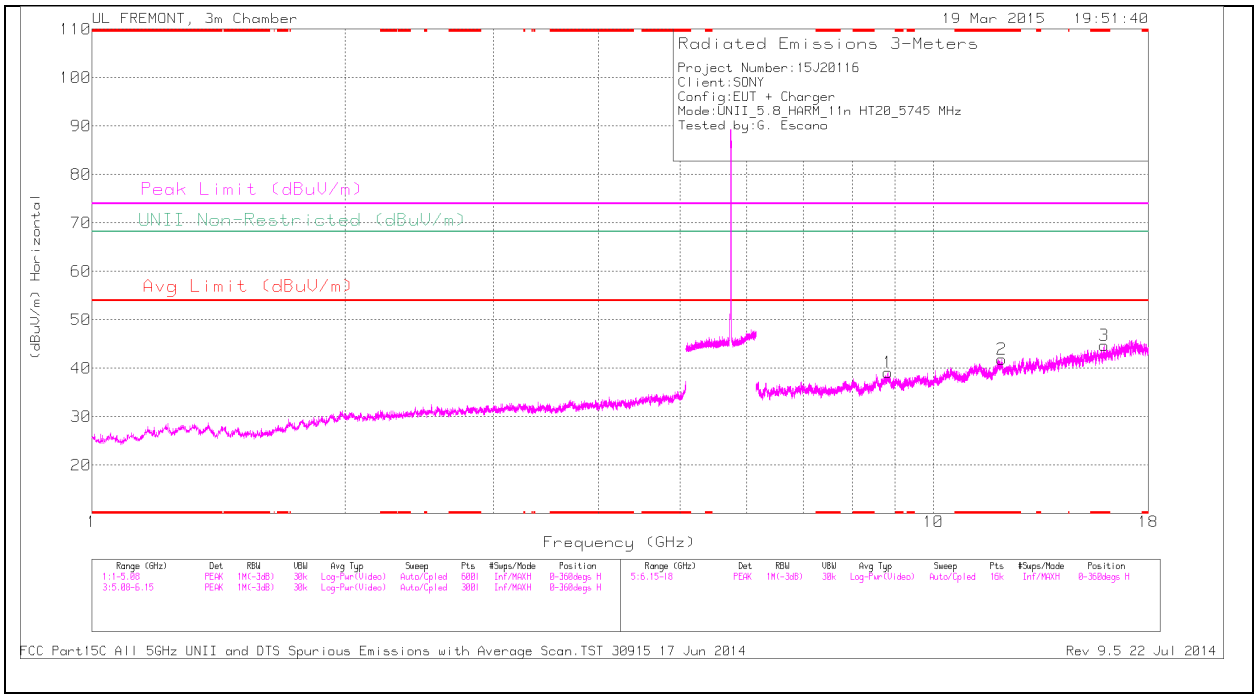


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.851	-63.35	PK	34.9	-21.3	11.8	-37.95	-17	-20.95	131	381	V
2	5.96	-65.53	PK	35.1	-21	11.8	-39.63	-27	-12.63	131	381	V

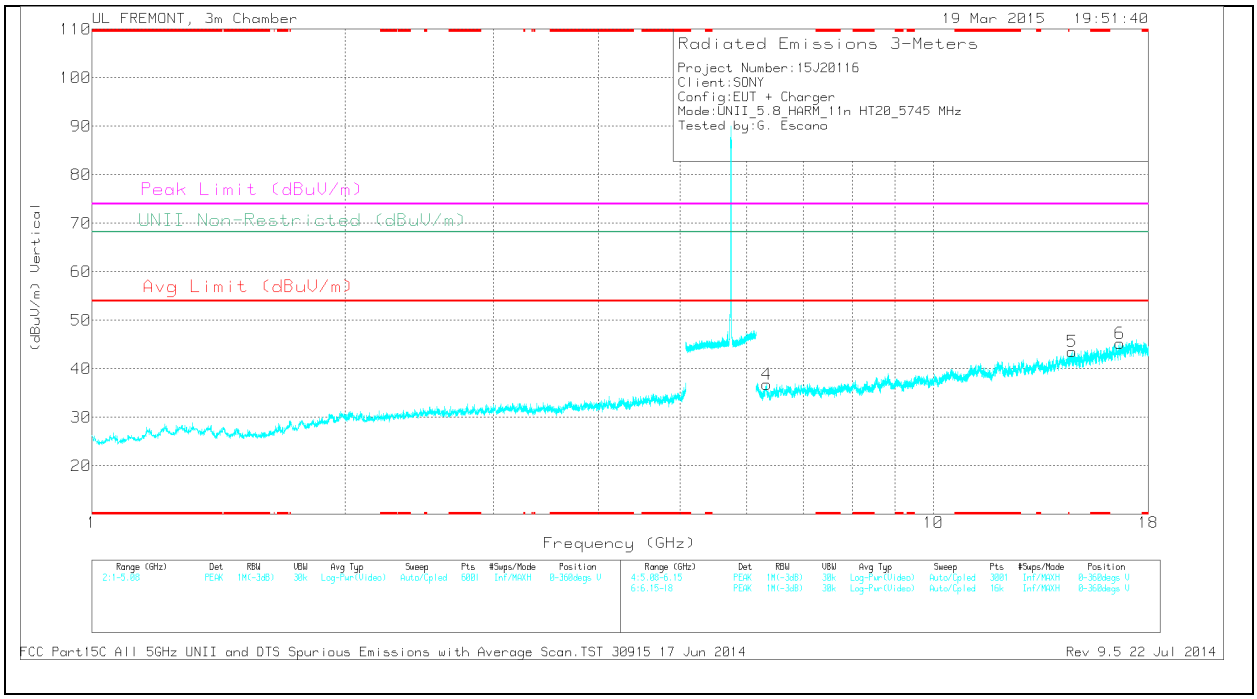
PK - Peak detector

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 12.047	28.99	PK	39.1	-26.2	0	41.89	-	-	74	-32.11	-	-	0-360	100	H
3	* 15.965	30	PK	40.3	-25.6	0	44.7	-	-	74	-29.3	-	-	0-360	100	H
4	6.333	30.83	PK	35.4	-29.4	0	36.83	-	-	-	-	68.2	-31.37	0-360	200	V
1	8.838	29.39	PK	35.9	-26.1	0	39.19	-	-	-	-	68.2	-29.01	0-360	100	H
5	14.613	31.05	PK	39.8	-27.3	0	43.55	-	-	-	-	68.2	-24.65	0-360	200	V
6	16.665	28.61	PK	41.1	-24.5	0	45.21	-	-	-	-	68.2	-22.99	0-360	100	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

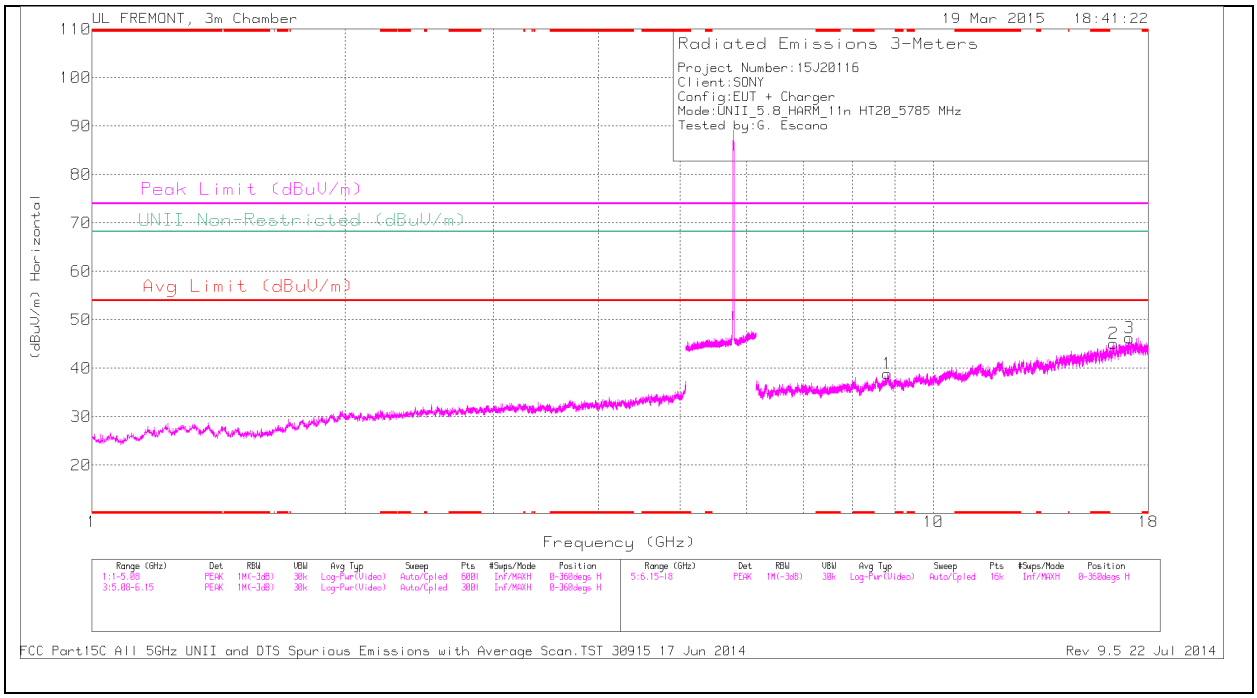
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 12.048	36.92	PK1	39.1	-26.2	0	49.82	-	-	74	-24.18	-	-	244	193	H
* 12.048	25.66	AD1	39.1	-26.2	0	38.56	54	-15.44	-	-	-	-	244	193	H
* 15.965	38.73	PK1	40.3	-25.6	0	53.43	-	-	74	-20.57	-	-	65	141	H
* 15.964	27.46	AD1	40.3	-25.7	0	42.06	54	-11.94	-	-	-	-	65	141	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

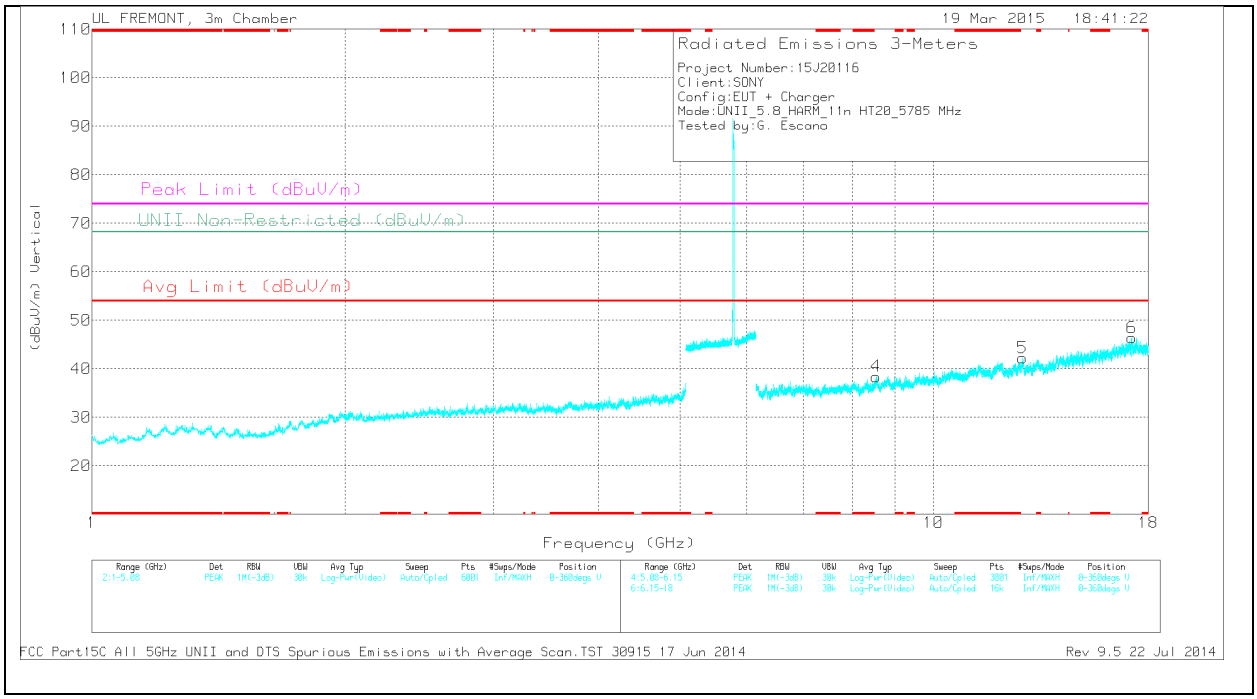
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

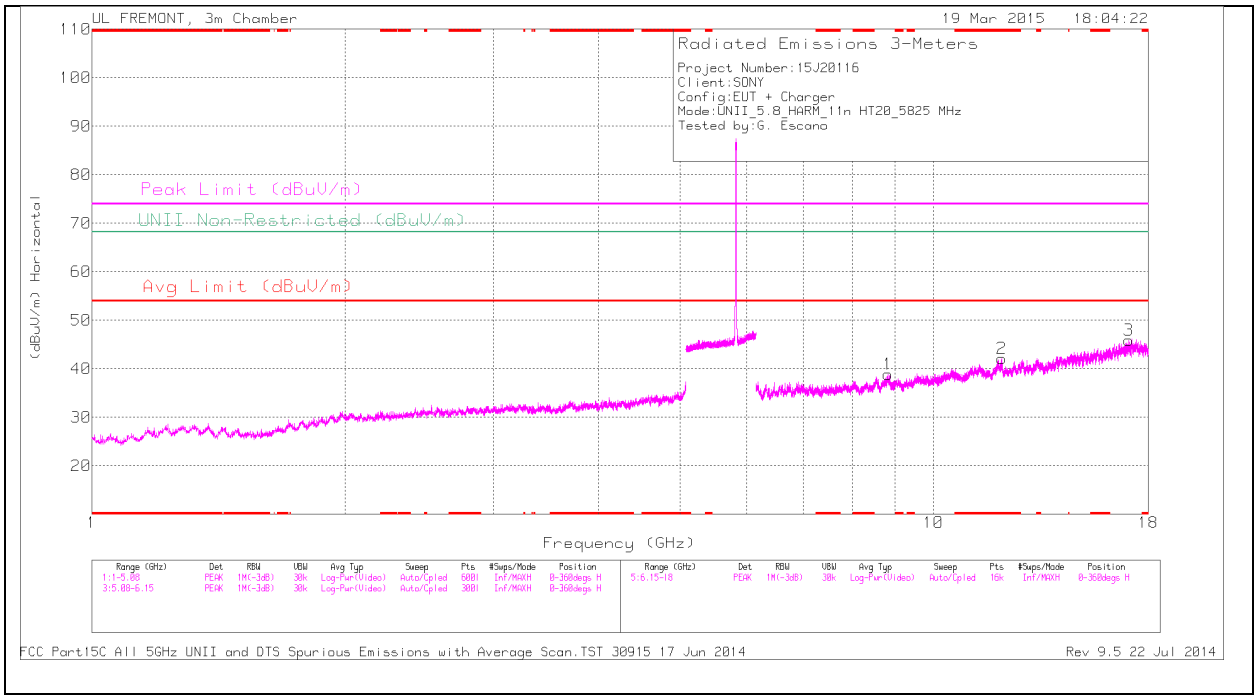
MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
4	8.551	28.63	PK	35.8	-26	0	38.43	-	-	-	-	68.2	-29.77	0-360	100	V
1	8.817	28.61	PK	35.9	-25.6	0	38.91	-	-	-	-	68.2	-29.29	0-360	200	H
5	12.765	29.27	PK	39.1	-26.1	0	42.27	-	-	-	-	68.2	-25.93	0-360	100	V
2	16.377	28.78	PK	40.7	-24.4	0	45.08	-	-	-	-	68.2	-23.12	0-360	100	H
3	17.082	28.6	PK	41.4	-23.7	0	46.3	-	-	-	-	68.2	-21.9	0-360	100	H
6	17.216	28.21	PK	41.3	-23.1	0	46.41	-	-	-	-	68.2	-21.79	0-360	100	V

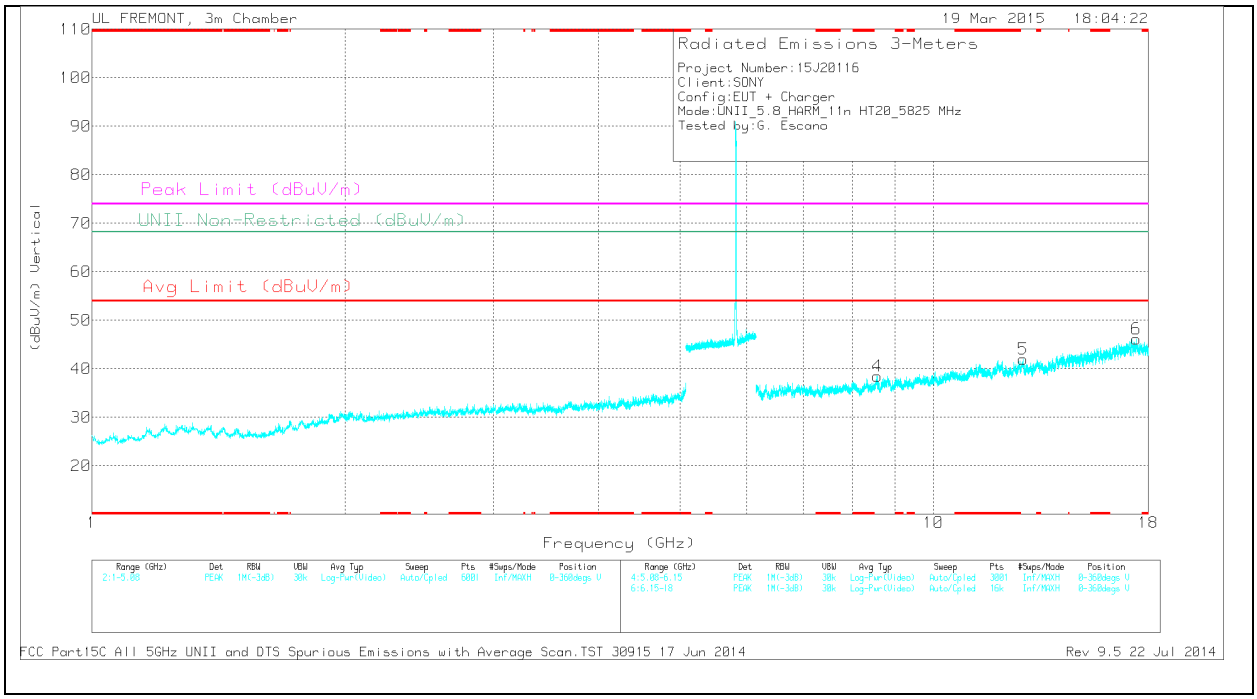
PK - Peak detector

HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 12.049	29.25	PK	39.1	-26.2	0	42.15	-	-	74	-31.85	-	-	0-360	100	H
4	8.572	28.9	PK	35.8	-26.2	0	38.5	-	-	-	-	68.2	-29.7	0-360	200	V
1	8.824	28.76	PK	35.9	-25.8	0	38.86	-	-	-	-	68.2	-29.34	0-360	100	H
5	12.791	28.75	PK	39.1	-25.9	0	41.95	-	-	-	-	68.2	-26.25	0-360	100	V
3	17.066	28.93	PK	41.4	-24.4	0	45.93	-	-	-	-	68.2	-22.27	0-360	200	H
6	17.418	27.08	PK	41.4	-22.3	0	46.18	-	-	-	-	68.2	-22.02	0-360	100	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
* 12.048	38.13	PK1	39.1	-26.2	0	51.03	-	-	74	-22.97	-	-	184	137	H
* 12.05	25.48	AD1	39.1	-26.3	0	38.28	54	-15.72	-	-	-	-	184	137	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

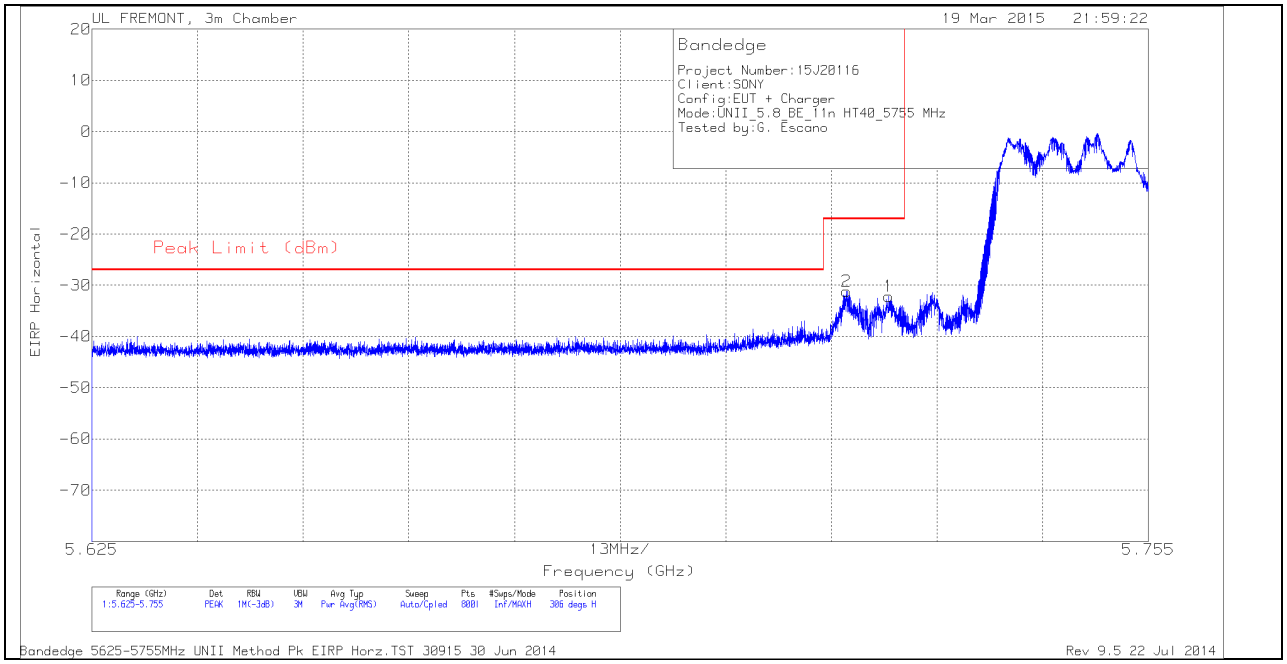
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

HARMONICS AND SPURIOUS EMISSIONS

HORIZONTAL PEAK PLOT

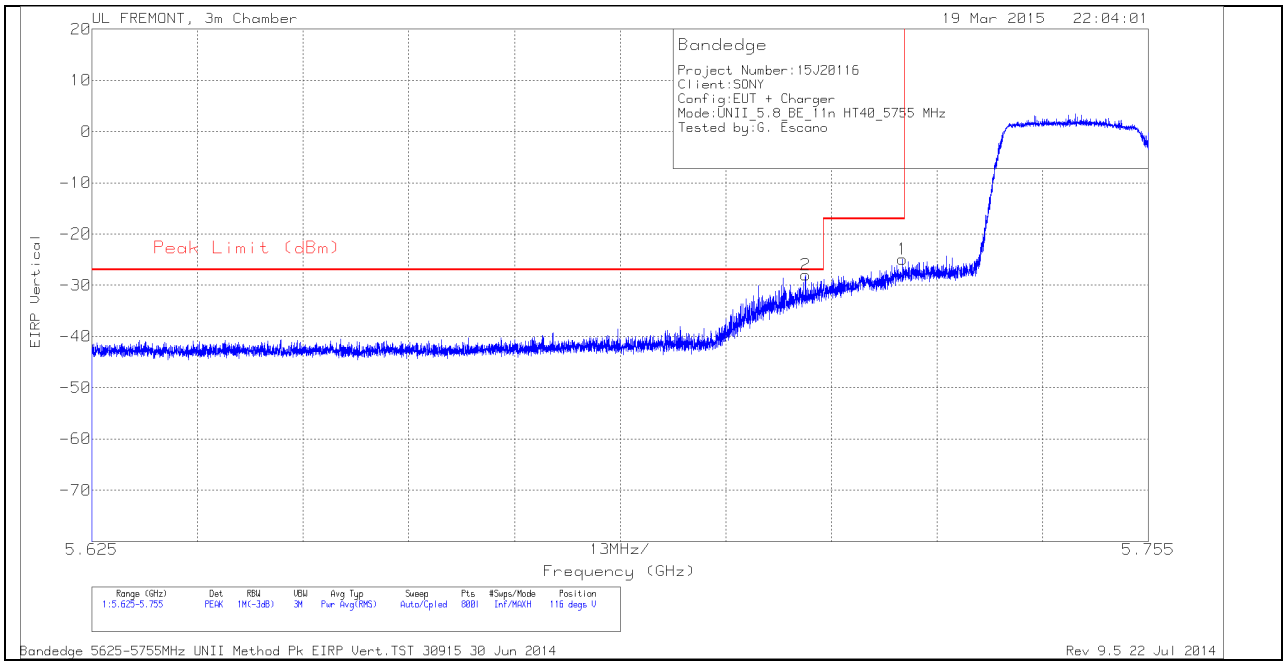


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.718	-56.64	PK	34.8	-21.1	11.8	-31.14	-17	-14.14	306	236	H
1	5.723	-57.8	PK	34.8	-21	11.8	-32.2	-17	-15.2	306	236	H

PK - Peak detector

VERTICAL PEAK PLOT



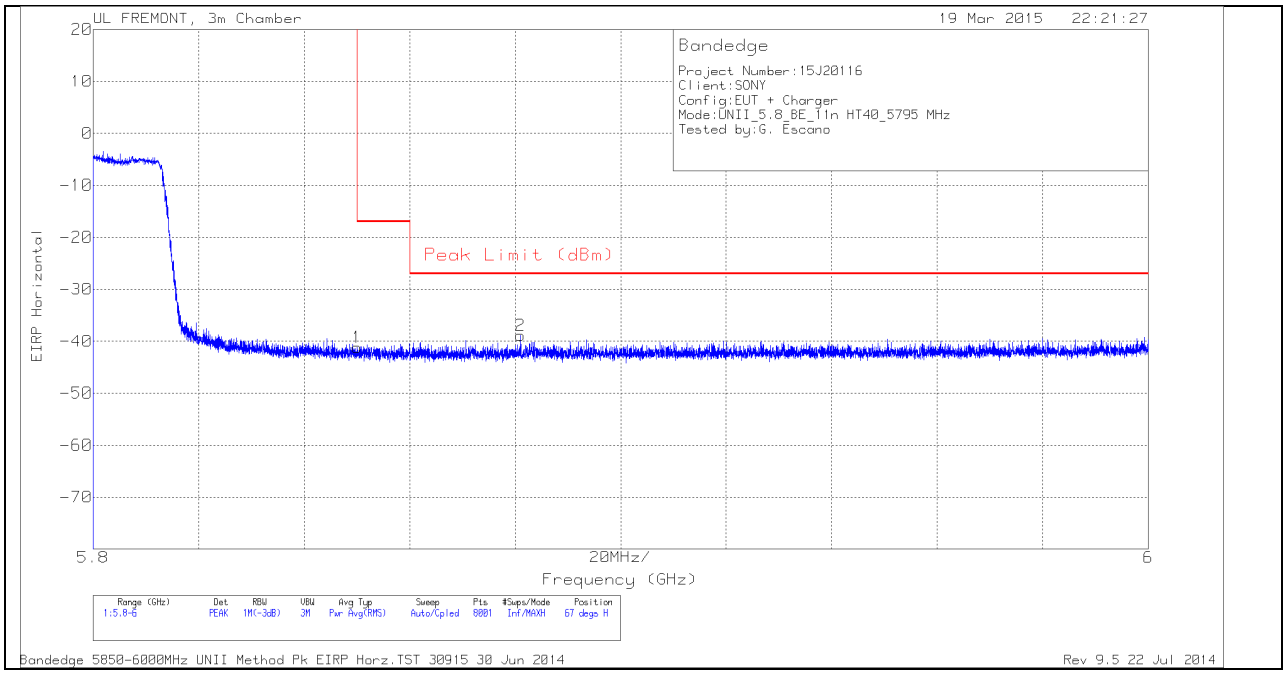
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.713	-53.56	PK	34.8	-21	11.8	-27.96	-27	-.96	116	331	V
1	5.725	-50.44	PK	34.8	-21.1	11.8	-24.94	-17	-7.94	116	331	V

PK - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK PLOT

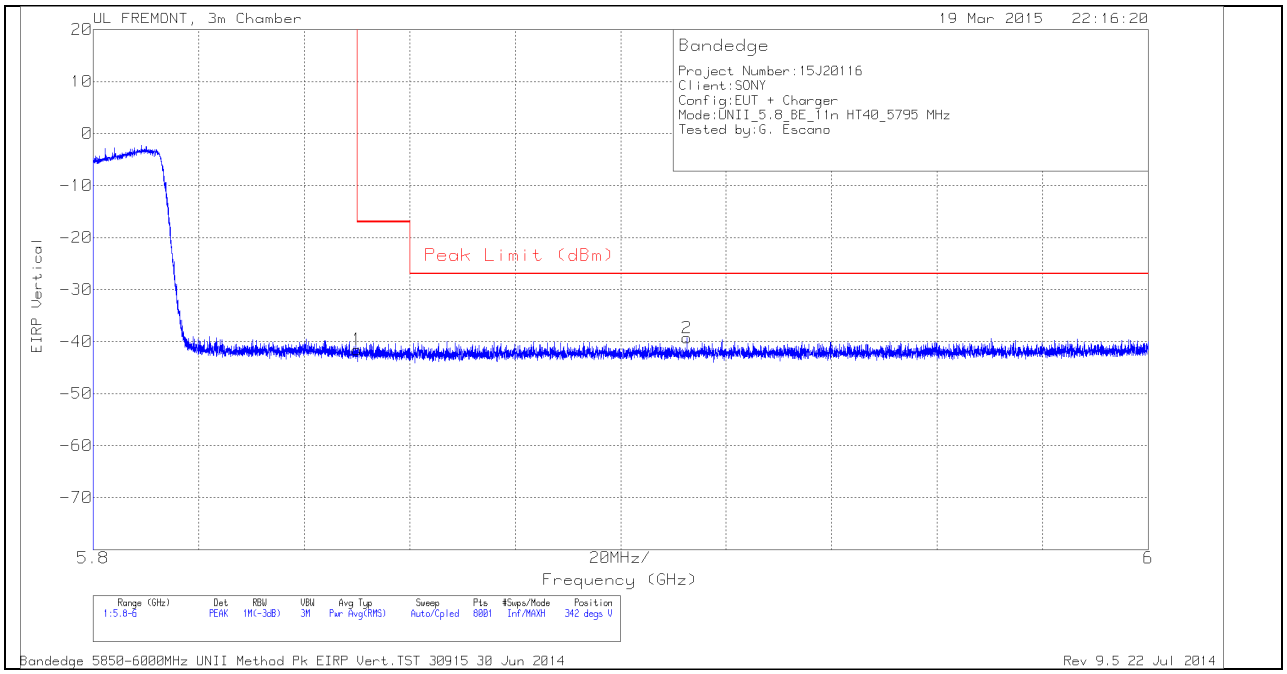


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-66.59	PK	34.9	-21.3	11.8	-41.19	-17	-24.19	67	250	H
2	5.881	-64.5	PK	35	-21.2	11.8	-38.9	-27	-11.9	67	250	H

PK - Peak detector

VERTICAL PEAK PLOT

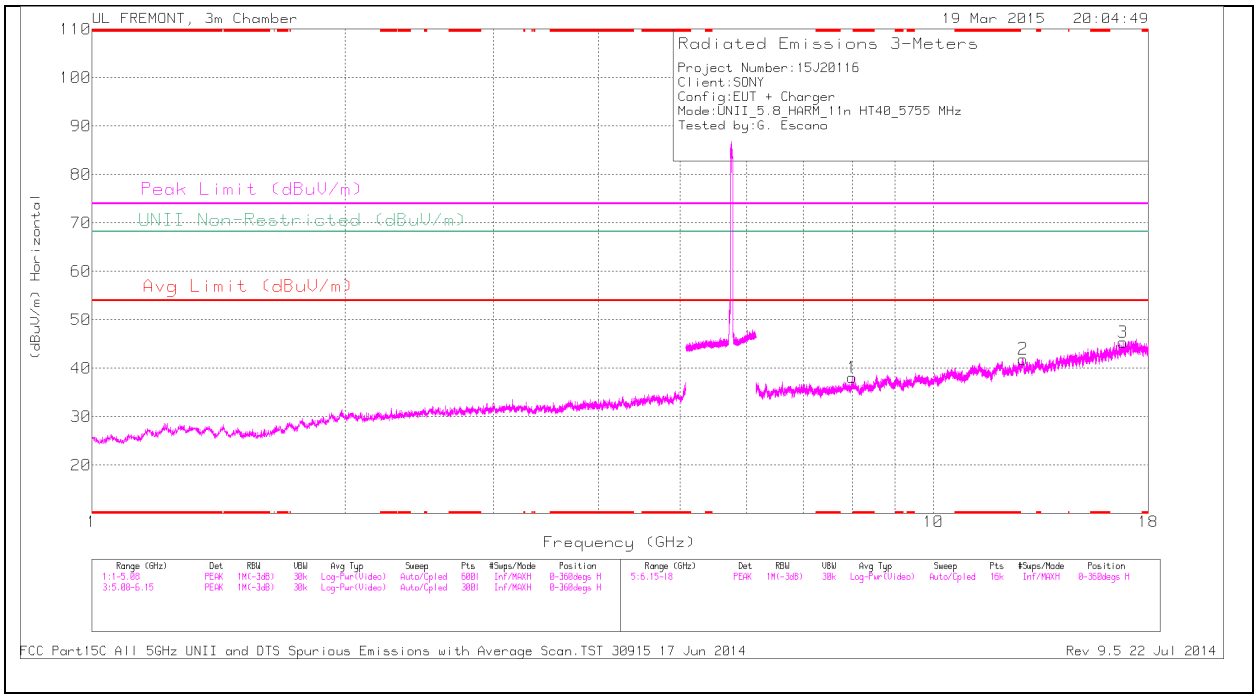


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-66.96	PK	34.9	-21.3	11.8	-41.56	-17	-24.56	342	327	V
2	5.913	-65.02	PK	35	-21.1	11.8	-39.32	-27	-12.32	342	327	V

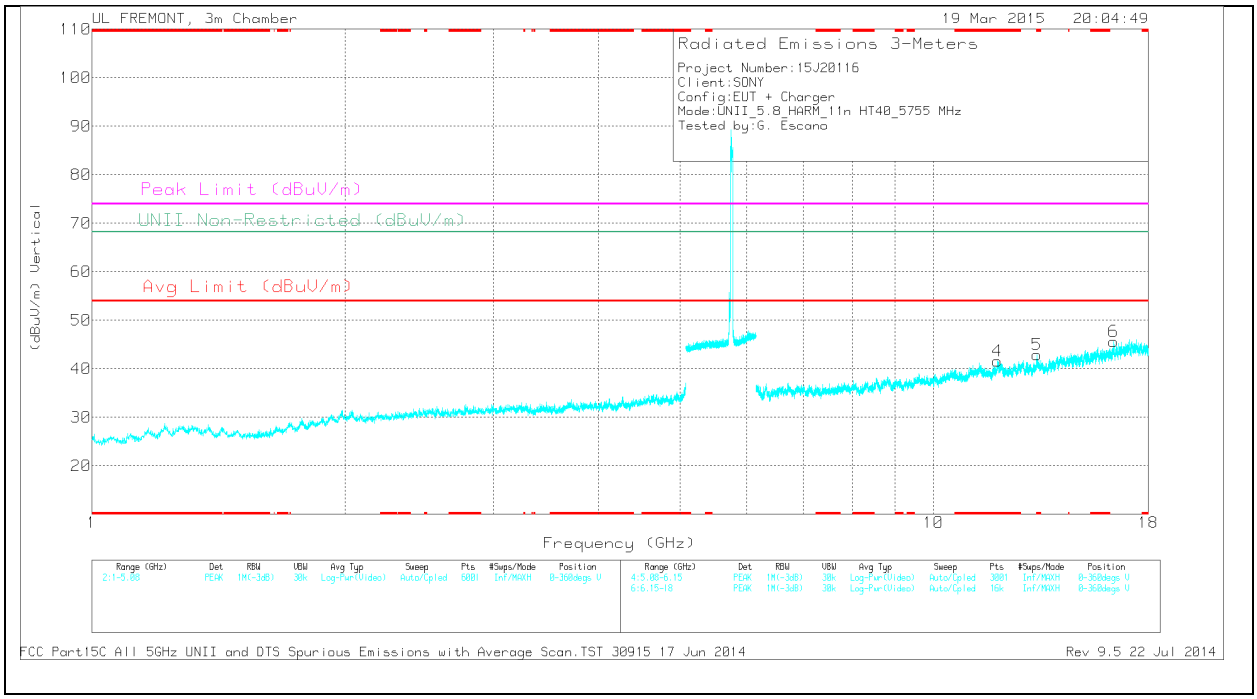
PK - Peak detector

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
4	* 11.917	28.76	PK	39.1	-26.2	0	41.66	-	-	74	-32.34	-	-	0-360	100	V
5	* 13.275	30.02	PK	39	-26.1	0	42.92	-	-	74	-31.08	-	-	0-360	200	V
1	8.008	30.31	PK	35.8	-28	0	38.11	-	-	-	-	68.2	-30.09	0-360	200	H
2	12.786	28.73	PK	39.1	-25.9	0	41.93	-	-	-	-	68.2	-26.27	0-360	200	H
6	16.385	28.88	PK	40.7	-24	0	45.58	-	-	-	-	68.2	-22.62	0-360	100	V
3	16.802	28.51	PK	41.2	-24.3	0	45.41	-	-	-	-	68.2	-22.79	0-360	100	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

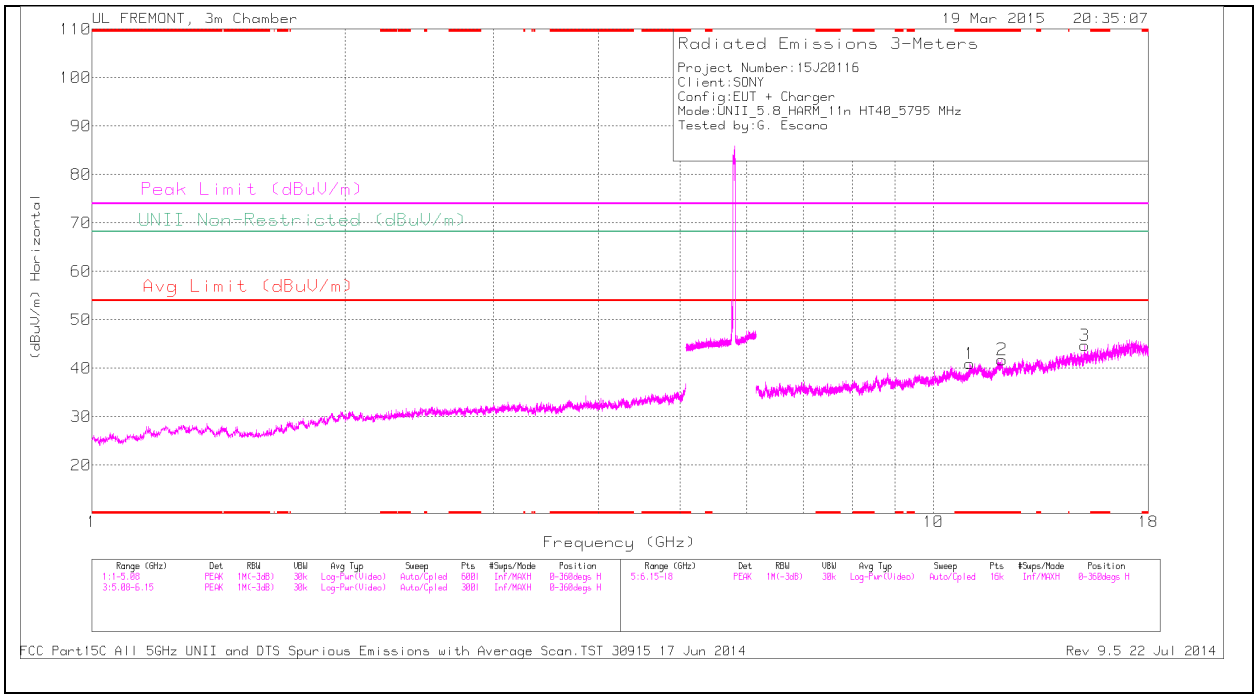
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.915	37.64	PK1	39.1	-26.2	0	50.54	-	-	74	-23.46	-	-	287	107	V
* 11.916	25.7	AD1	39.1	-26.2	0	38.60	54	-15.40	-	-	-	-	287	107	V
* 13.277	38.89	PK1	39	-26.1	0	51.79	-	-	74	-22.21	-	-	253	104	V
* 13.276	26.78	AD1	39	-26.1	0	39.68	54	-14.32	-	-	-	-	253	104	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

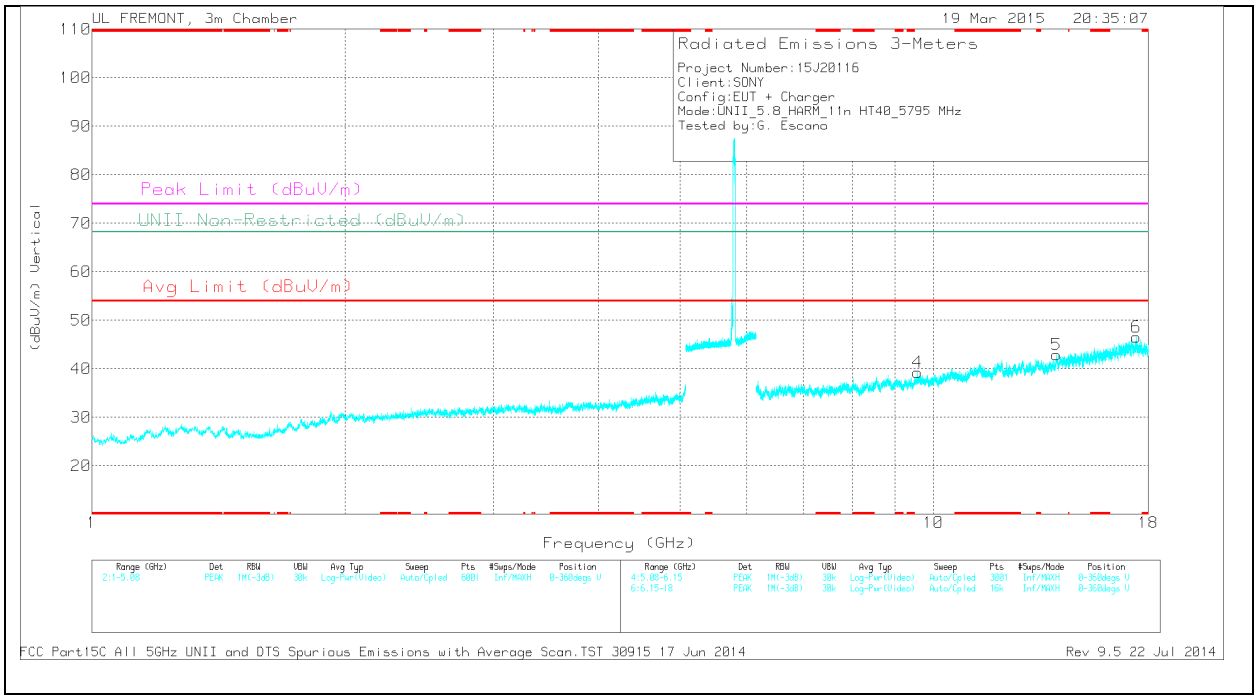
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	* 11.051	28.33	PK	37.8	-25.2	0	40.93	-	-	74	-33.07	-	-	0-360	100	H
2	* 12.065	29.2	PK	39	-26.4	0	41.8	-	-	74	-32.2	-	-	0-360	100	H
4	9.58	27.77	PK	36.7	-25.2	0	39.27	-	-	-	-	68.2	-28.93	0-360	100	V
5	13.996	31.95	PK	38.8	-27.8	0	42.95	-	-	-	-	68.2	-25.25	0-360	100	V
3	15.117	31.87	PK	39.8	-26.9	0	44.77	-	-	-	-	68.2	-23.43	0-360	100	H
6	17.422	27.21	PK	41.4	-22.1	0	46.51	-	-	-	-	68.2	-21.69	0-360	200	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
* 11.052	36.5	PK1	37.8	-25.2	0	49.1	-	-	74	-24.9	-	-	217	121	H
* 11.053	25.19	AD1	37.8	-25.2	0	37.79	54	-16.21	-	-	-	-	217	121	H
* 12.066	36.99	PK1	39	-26.5	0	49.49	-	-	74	-24.51	-	-	75	134	H
* 12.067	25.69	AD1	39	-26.5	0	38.19	54	-15.81	-	-	-	-	75	134	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

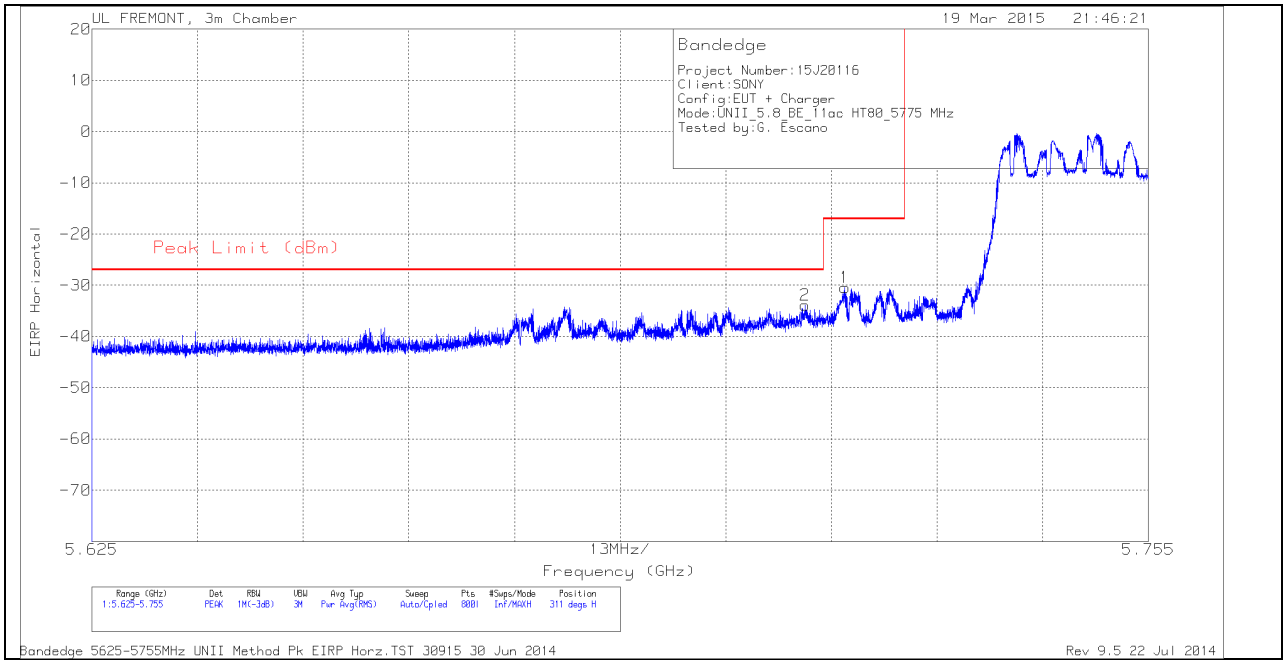
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

11.3.4. TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.8 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS

HORIZONTAL PEAK PLOT

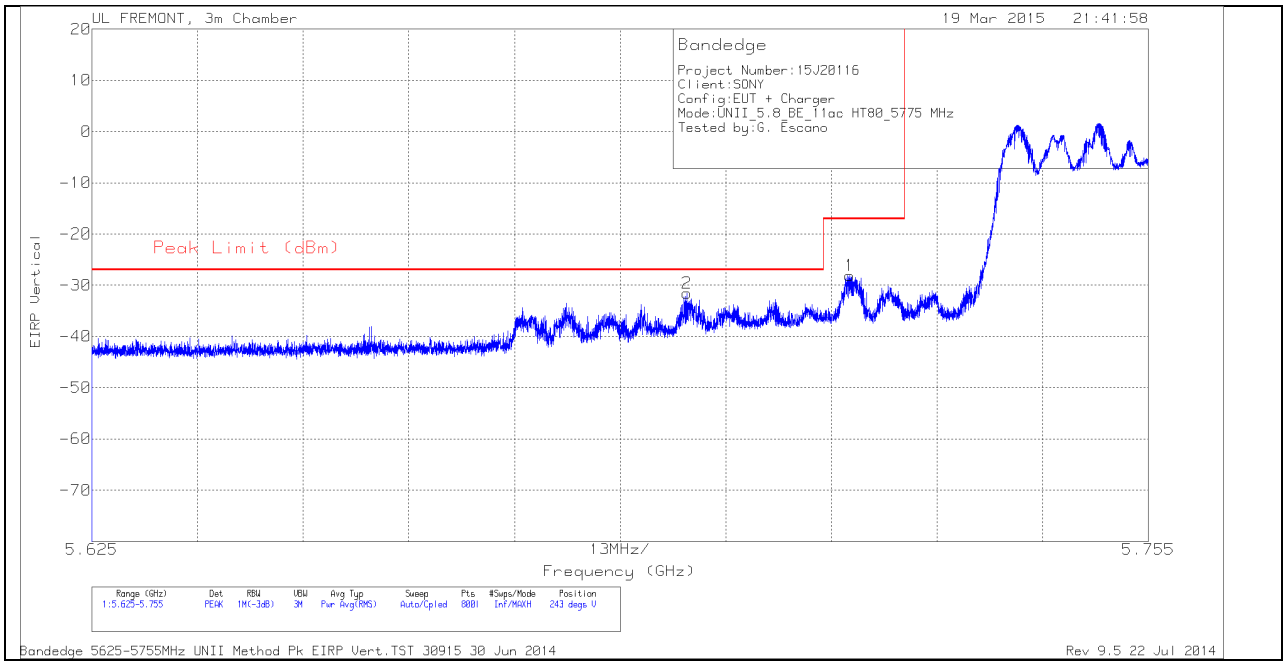


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.713	-59.47	PK	34.8	-21	11.8	-33.87	-27	-6.87	311	213	H
1	5.718	-55.94	PK	34.8	-21.1	11.8	-30.44	-17	-13.44	311	213	H

PK - Peak detector

VERTICAL PEAK PLOT



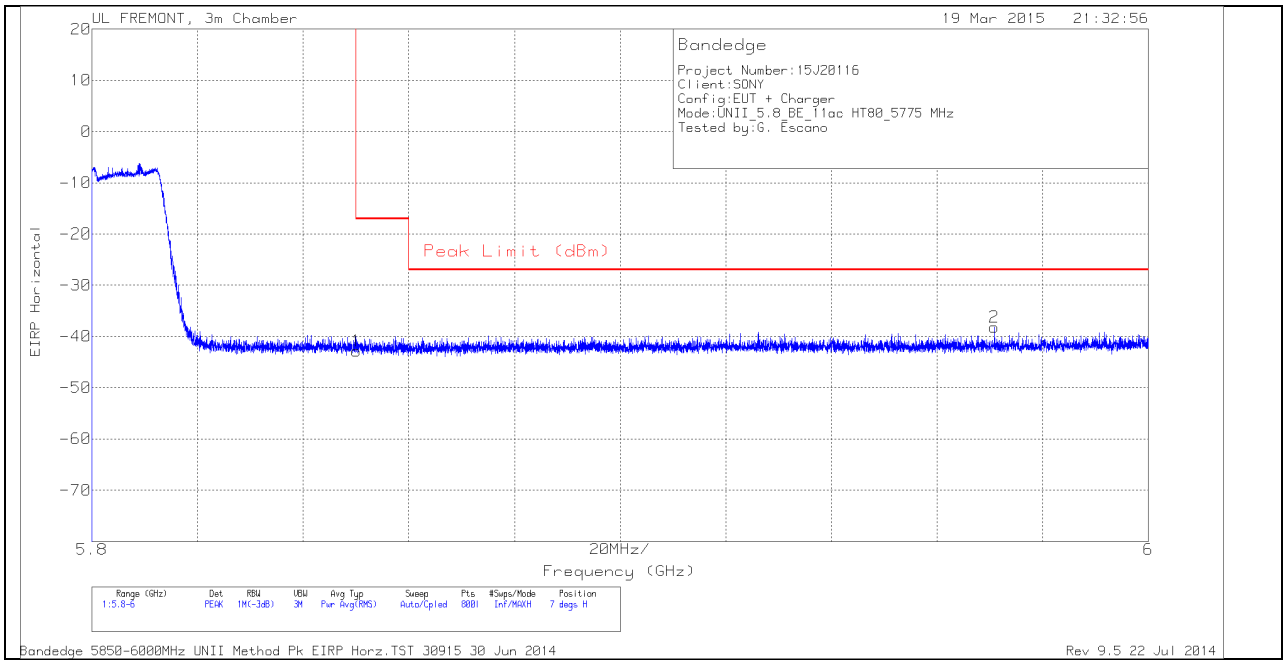
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.698	-57.1	PK	34.7	-21	11.8	-31.6	-27	-4.6	243	308	V
1	5.718	-53.59	PK	34.8	-21.1	11.8	-28.09	-17	-11.09	243	308	V

PK - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK PLOT

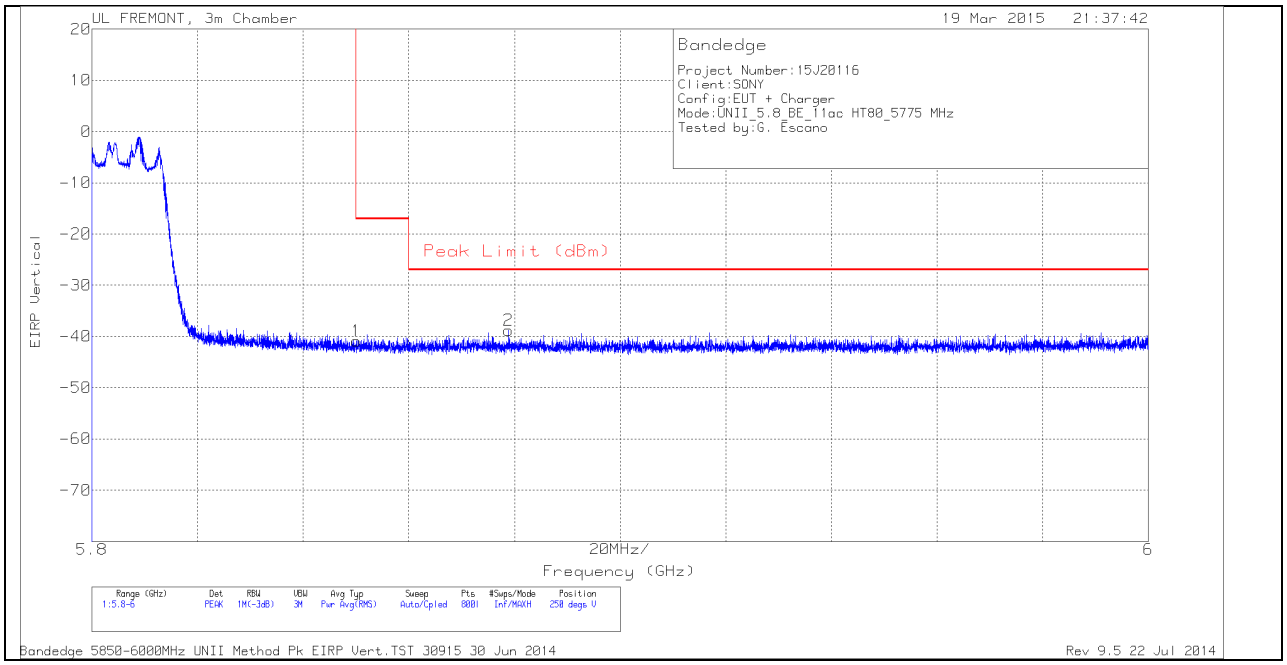


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-68.23	PK	34.9	-21.3	11.8	0	-42.83	-17	-25.83	7	105	H
2	5.971	-64.2	PK	35.1	-20.9	11.8	0	-38.2	-27	-11.2	7	105	H

PK - Peak detector

VERTICAL PEAK PLOT

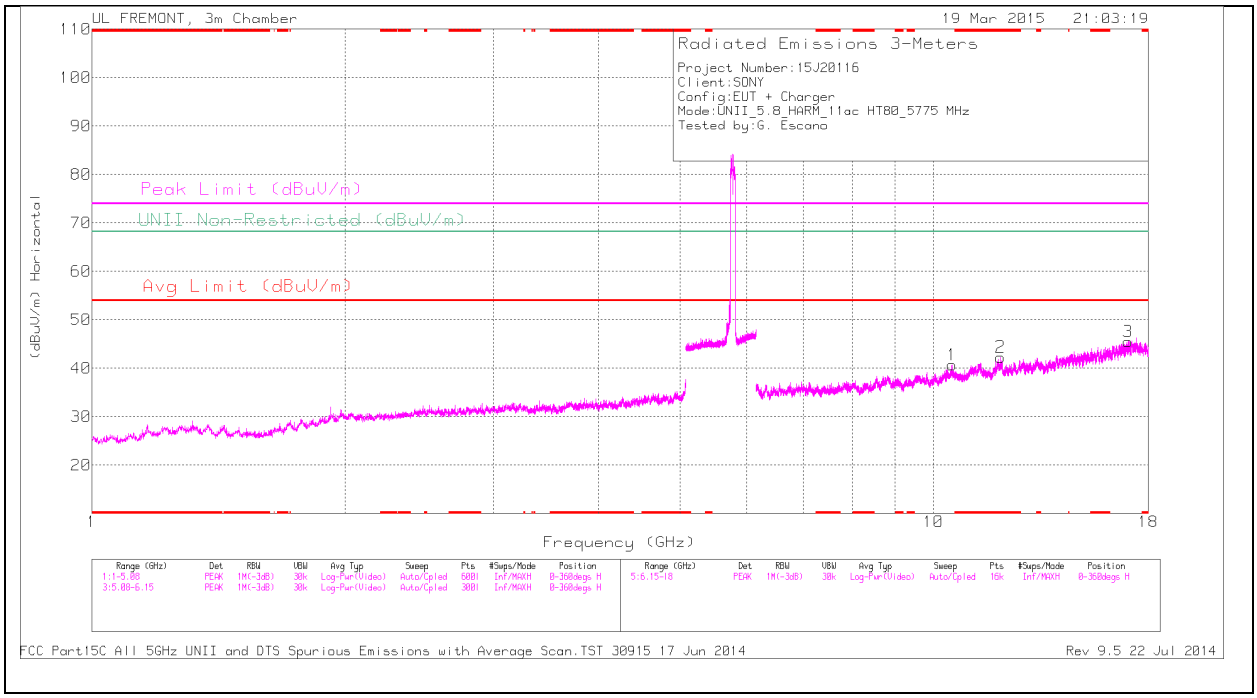


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-66.26	PK	34.9	-21.3	11.8	-40.86	-17	-23.86	250	198	V
2	5.879	-64.45	PK	35	-21.2	11.8	-38.85	-27	-11.85	250	198	V

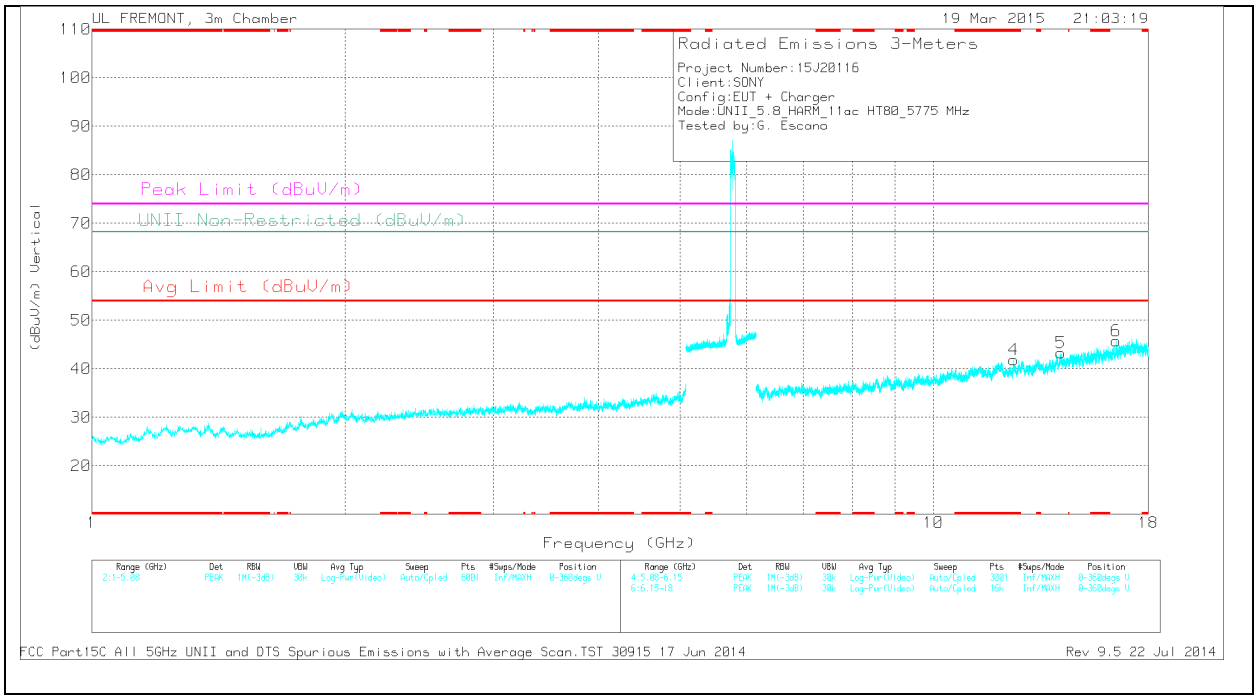
PK - Peak detector

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 12.01	29.52	PK	39.1	-26.3	0	42.32	-	-	74	-31.68	-	-	0-360	100	H
4	* 12.459	29.26	PK	39	-26.4	0	41.86	-	-	74	-32.14	-	-	0-360	100	V
1	10.52	28.19	PK	37.5	-25	0	40.69	-	-	-	-	68.2	-27.51	0-360	100	H
5	14.162	31.51	PK	39.1	-27.3	0	43.31	-	-	-	-	68.2	-24.89	0-360	200	V
6	16.477	30.17	PK	40.9	-25.3	0	45.77	-	-	-	-	68.2	-22.43	0-360	100	V
3	17.023	28.45	PK	41.4	-24.3	0	45.55	-	-	-	-	68.2	-22.65	0-360	200	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
* 12.012	36.78	PK1	39.1	-26.3	0	49.58	-	-	74	-24.42	-	-	258	375	H
* 12.012	24.85	AD1	39.1	-26.2	.13	37.88	54	-16.12	-	-	-	-	258	375	H
* 12.461	37.67	PK1	39	-26.4	0	50.27	-	-	74	-23.73	-	-	288	323	V
* 12.461	25.95	AD1	39	-26.4	.13	38.68	54	-15.32	-	-	-	-	288	323	V

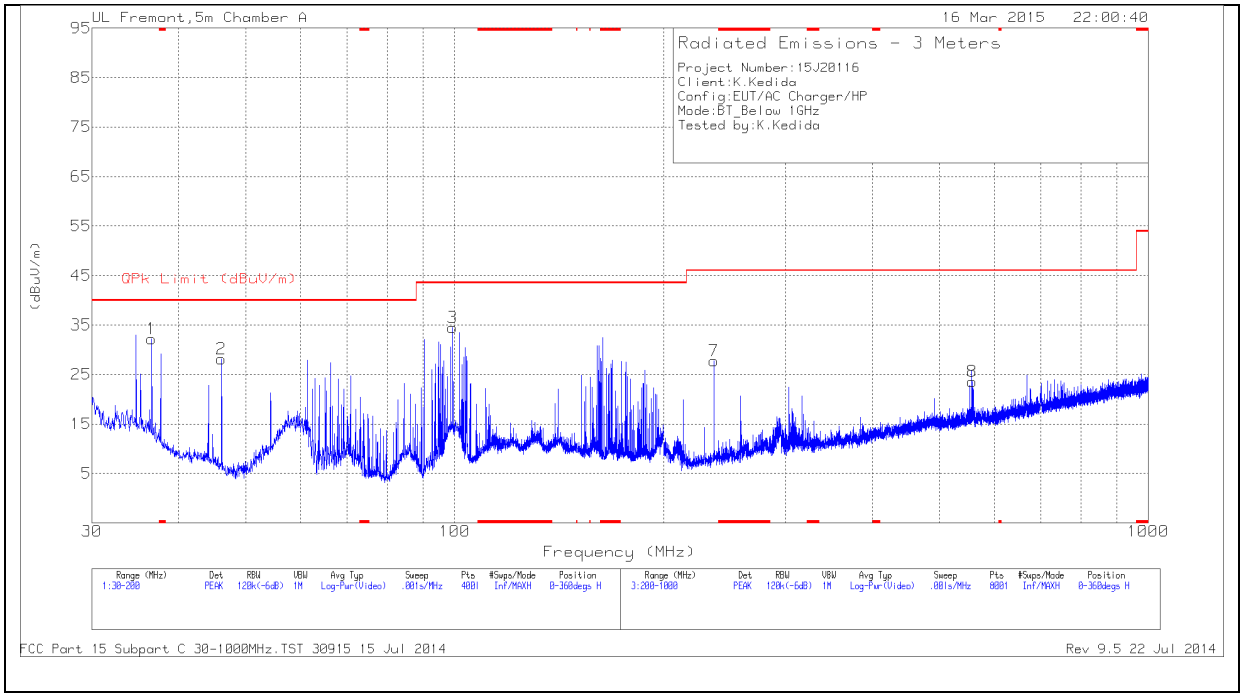
* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

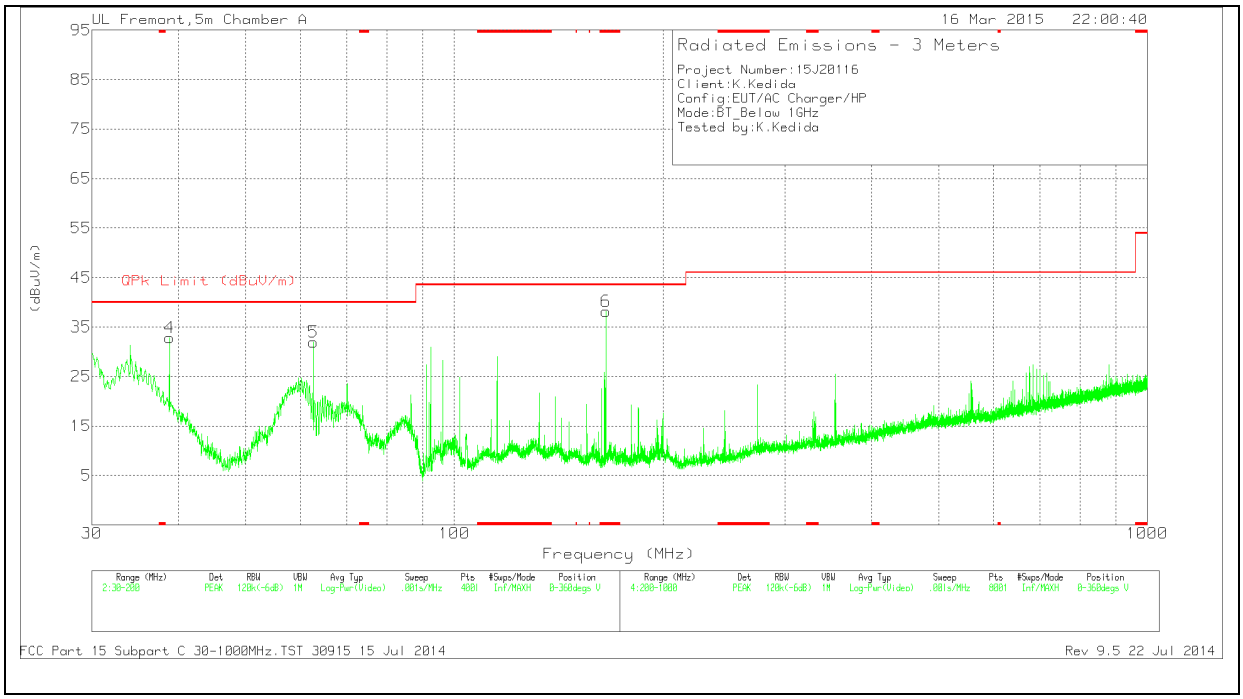
AD1 - KDB789033 Method: AD Primary Power Average

12. WORST-CASE BELOW 1 GHz (in the 5.3 GHz Band)

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



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



Below 1G Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 165.405	56.67	PK	11.7	-30.2	38.17	43.52	-5.35	0-360	101	V
1	36.5875	46.81	PK	16.6	-31.2	32.21	40	-7.79	0-360	100	H
4	38.84	48.99	PK	15	-31.1	32.89	40	-7.11	0-360	101	V
2	46.1075	49.28	PK	9.9	-31	28.18	40	-11.82	0-360	200	H
5	62.64	54.93	PK	7.8	-30.8	31.93	40	-8.07	0-360	101	V
3	99.4025	55.73	PK	9.3	-30.6	34.43	43.52	-9.09	0-360	200	H
7	236.5	46.09	PK	11.4	-29.7	27.79	46.02	-18.23	0-360	101	H
8	558	33.72	PK	18.5	-28.6	23.62	46.02	-22.4	0-360	101	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

13. 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.

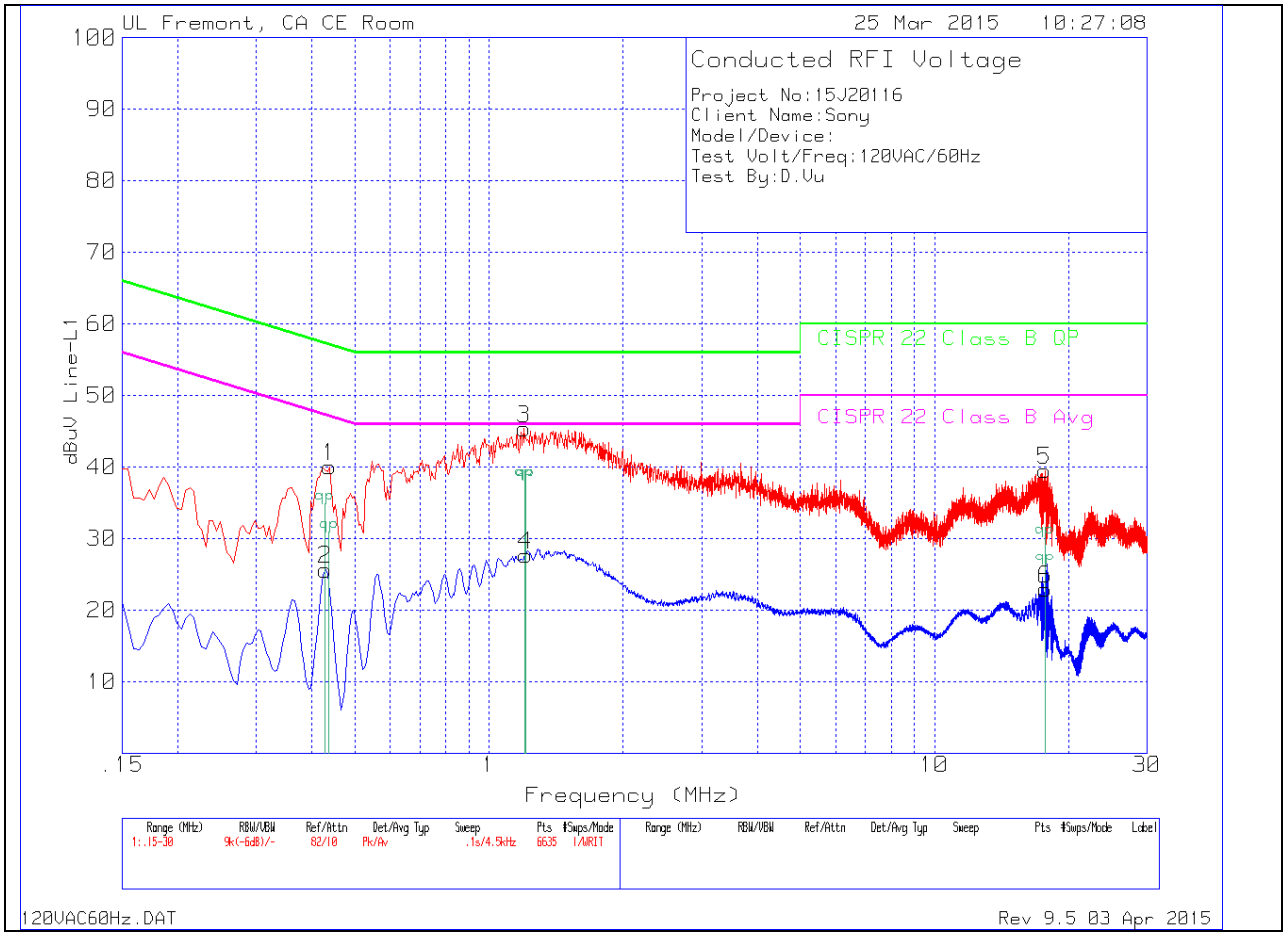
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT



LINE 1 RESULTS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.213	42.61	Pk	.9	0	43.51	63.09	-19.58	-	-
2	.1905	24.39	Av	1	0	25.39	-	-	54.01	-28.62
3	1.356	44.46	Pk	.2	.1	44.76	56	-11.24	-	-
4	1.3695	26.86	Av	.2	.1	27.16	-	-	46	-18.84
5	3.2775	39.14	Pk	.2	.1	39.44	56	-16.56	-	-
6	3.246	21.54	Av	.2	.1	21.84	-	-	46	-24.16

Pk - Peak detector

Av - Average detection

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1815	34.24	Pk	1.2	0	35.44	64.42	-28.98	-	-
8	.1905	17	Av	1.1	0	18.1	-	-	54.01	-35.91
9	1.338	41.29	Pk	.2	.1	41.59	56	-14.41	-	-
10	1.3515	25.42	Av	.2	.1	25.72	-	-	46	-20.28
11	3.345	36.48	Pk	.2	.1	36.78	56	-19.22	-	-
12	3.363	20.17	Av	.2	.1	20.47	-	-	46	-25.53

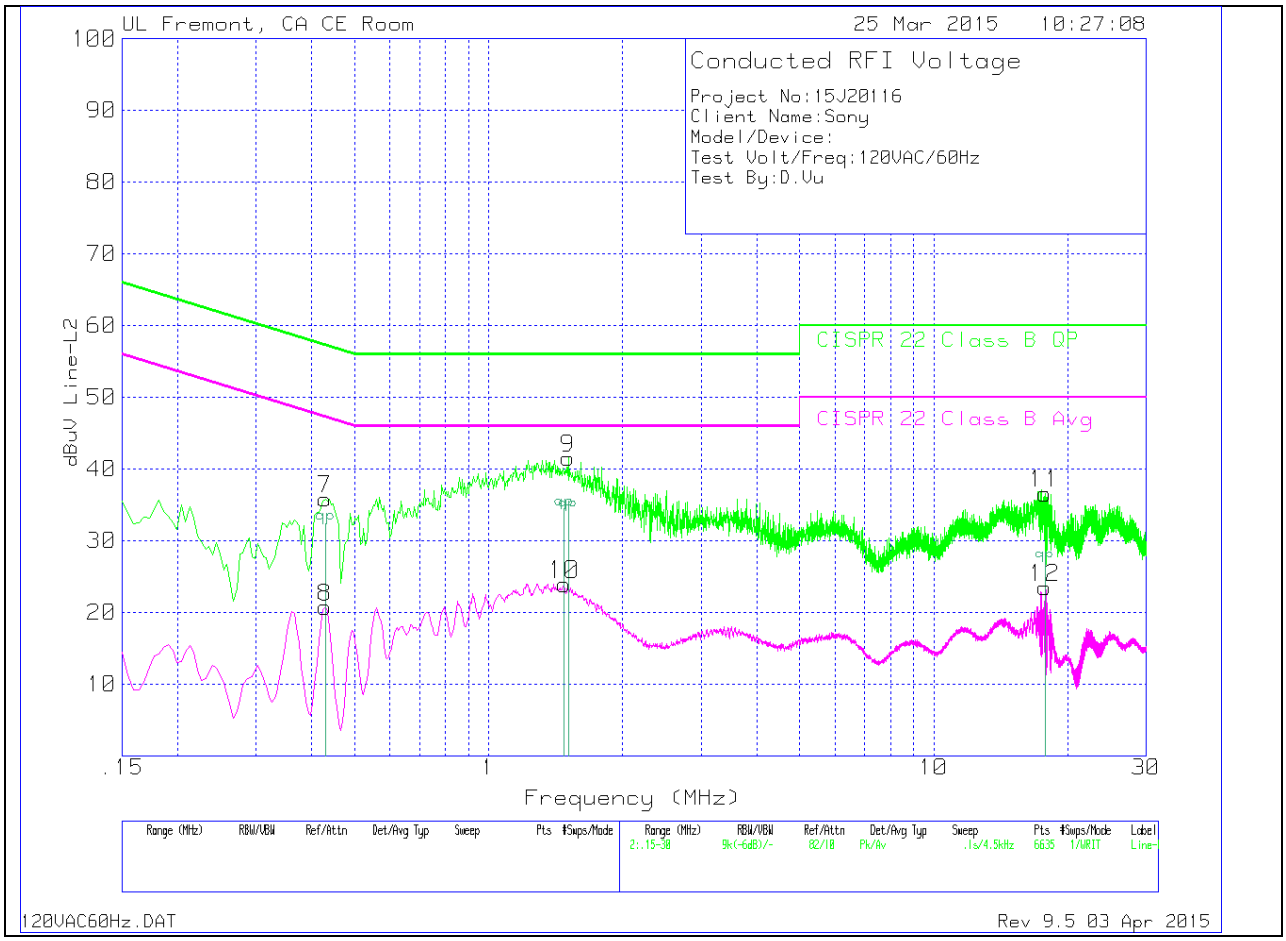
Pk - Peak detector

Av - Average detection

Av - Average detection

Quasi-Peak Emissions

LINE 2 PLOT



LINE 2 RESULTS

Range 1: Line-L1 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.21188	28.41	Qp	.9	0	29.31	63.13	-33.82	53.13	-23.82
.18938	27.59	Qp	1	0	28.59	64.06	-35.47	54.06	-25.47
1.35578	36.5	Qp	.2	.1	36.8	56	-19.2	46	-9.2
1.37063	36.75	Qp	.2	.1	37.05	56	-18.95	46	-8.95
3.27863	31.14	Qp	.2	.1	31.44	56	-24.56	46	-14.56
3.24578	30.43	Qp	.2	.1	30.73	56	-25.27	46	-15.27

Qp - Quasi-Peak detector

Range 2: Line-L2 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.18038	24.46	Qp	1.2	0	25.66	64.47	-38.81	54.47	-28.81
.18938	24.18	Qp	1.1	0	25.28	64.06	-38.78	54.06	-28.78
1.33913	33.87	Qp	.2	.1	34.17	56	-21.83	46	-11.83
1.35038	33.86	Qp	.2	.1	34.16	56	-21.84	46	-11.84
3.34478	28.05	Qp	.2	.1	28.35	56	-27.65	46	-17.65
3.36368	28.12	Qp	.2	.1	28.42	56	-27.58	46	-17.58

Qp - Quasi-Peak detector

120VAC60Hz.DAT

Rev 9.5 20 Mar 2015

14. DYNAMIC FREQUENCY SELECTION

14.1. OVERVIEW

14.1.1. 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 frequency between the bonded 20 MHz channel blocks.		

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

Maximum Transmit Power	Value (see notes)
E.I.R.P. ≥ 200 mill watt	-64 dBm
E.I.R.P. < 200 mill watt and power spectral density < 10 dBm/MHz	-62 dBm
E.I.R.P. < 200 mill watt 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

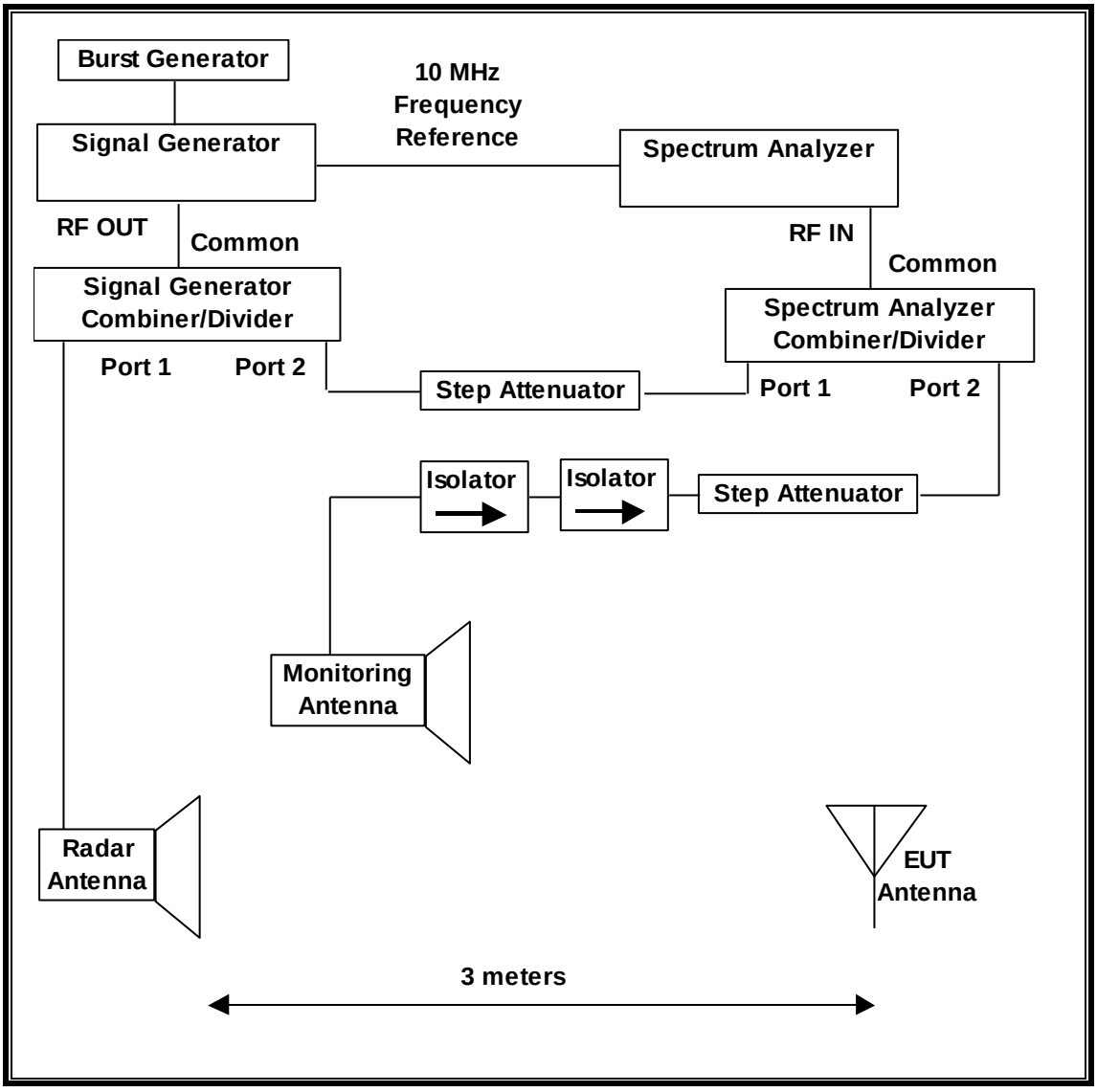
Radar Waveform Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

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

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 1, 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.

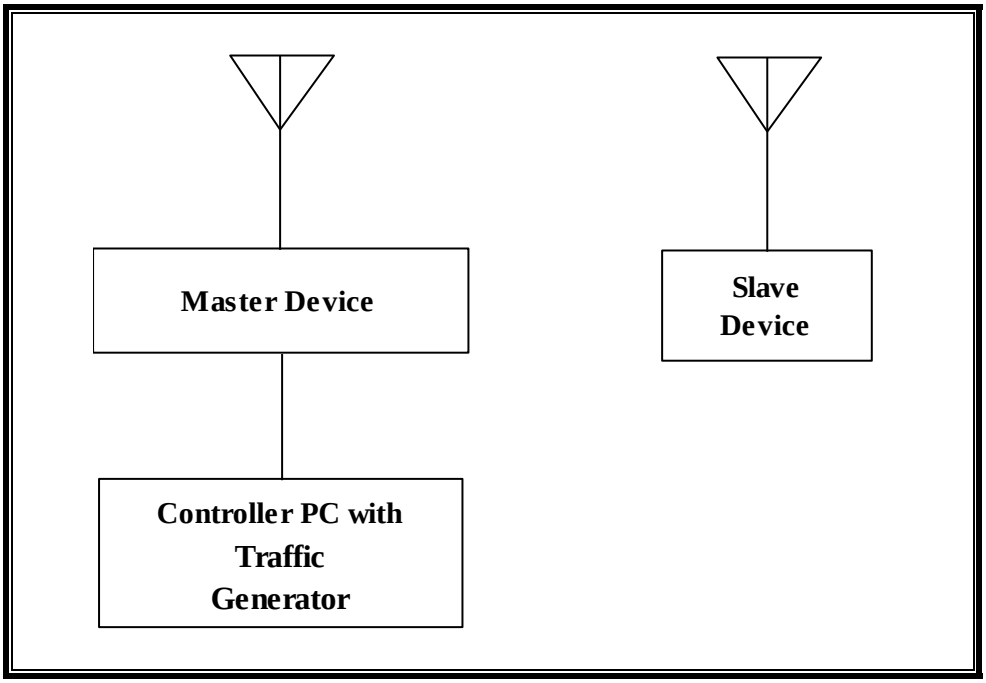
TEST AND MEASUREMENT EQUIPMENT

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

14.1.3. SETUP OF EUT

RADIATED METHOD EUT TEST SETUP



SUPPORT EQUIPMENT

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

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
802.11ac Dual Band Wireless Access Point (Master Device)	Cisco	AIR-CAP3702E-A-K9	FTX181570A6	LDK102087
P.O.E. Injector (Master)	Phihong	POE30U-560(G)	PHI170102N2	DoC
Notebook PC (Controller)	Lenovo	Type 4236-B92	PB-HEX04 12/05	DoC
AC Adapter (Controller PC)	Lenovo	42T4418	11S42T4418Z1ZG WG08R90M	DoC

14.1.4. DESCRIPTION OF EUT

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

The EUT is a Slave Device without Radar Detection.

The highest power level within these bands is 11.74 dBm EIRP in the 5250-5350 MHz band and 12.27 dBm EIRP in the 5470-5725 MHz band.

The highest gain antenna assembly utilized with the EUT has a gain of -2.7 dBi in the 5250-5350 MHz band and -2.8 dBi in the 5470-5725 MHz band. The lowest gain antenna assembly utilized with the EUT has a gain of -2.7 dBi in the 5250-5350 MHz band and -2.8 dBi in the 5470-5725 MHz band.

Two identical antennas are utilized to meet the diversity and MIMO operational requirements.

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

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

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

WLAN traffic that meets or exceeds the minimum required loading was generated by transferring a data stream from the controller/server PC to the EUT using iPerf version 2.0.5 software package.

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

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

The software installed in the access point is AP3G2-K9W7-M version 15.2(4)JB4.

UNIFORM CHANNEL SPREADING

This is requirement not applicable to Slave 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 6 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.

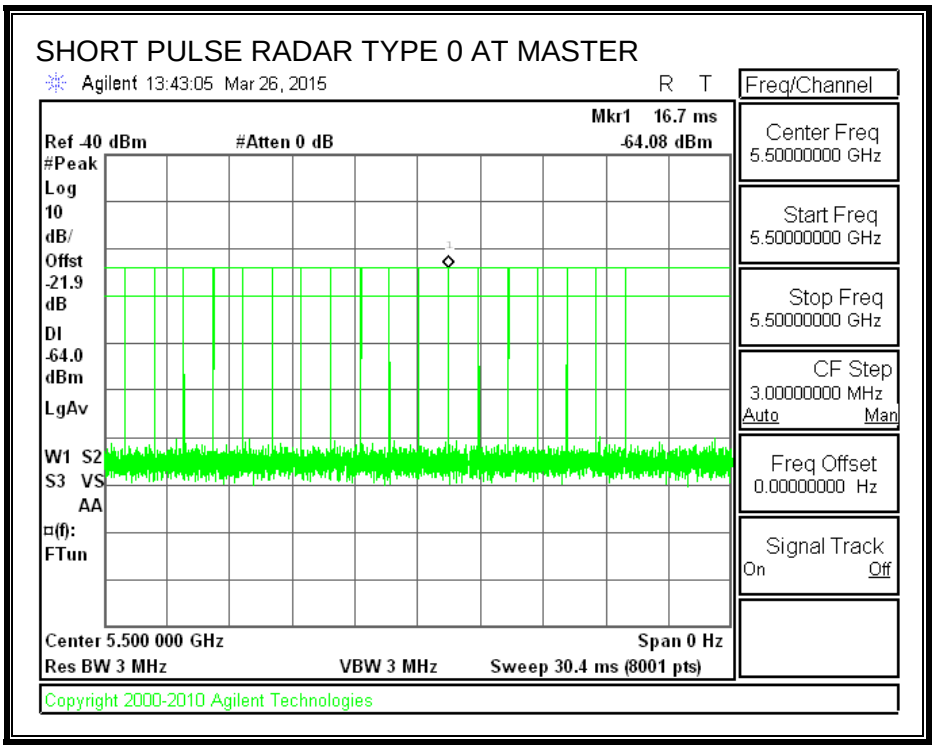
14.2. RESULTS FOR 20 MHz BANDWIDTH

14.2.1. TEST CHANNEL

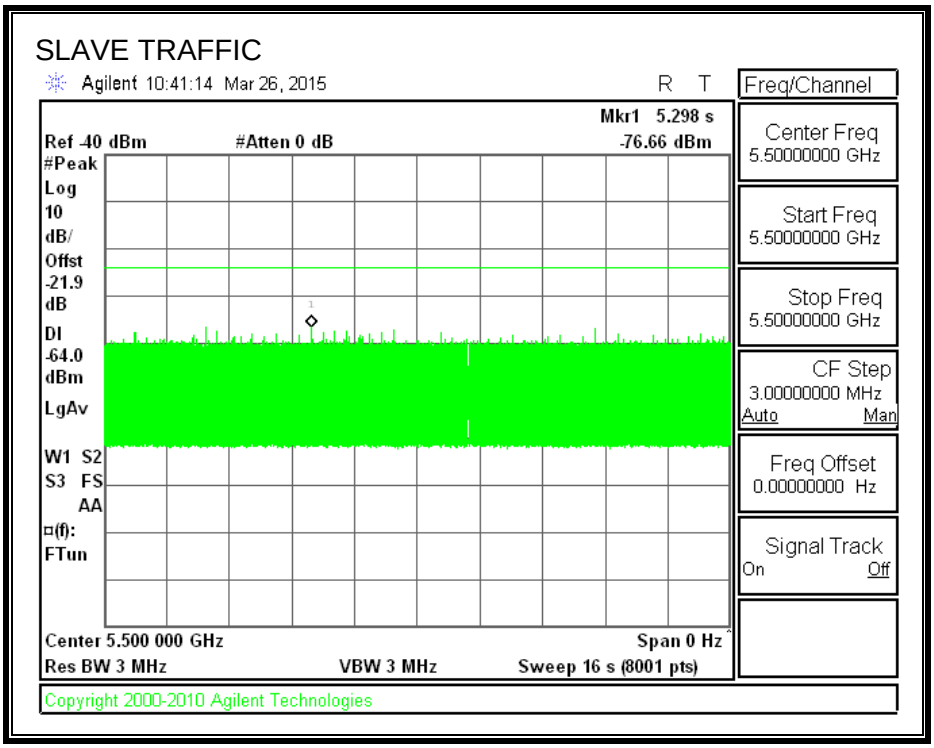
All tests were performed at a channel center frequency of 5500 MHz.

14.2.2. RADAR WAVEFORM AND TRAFFIC

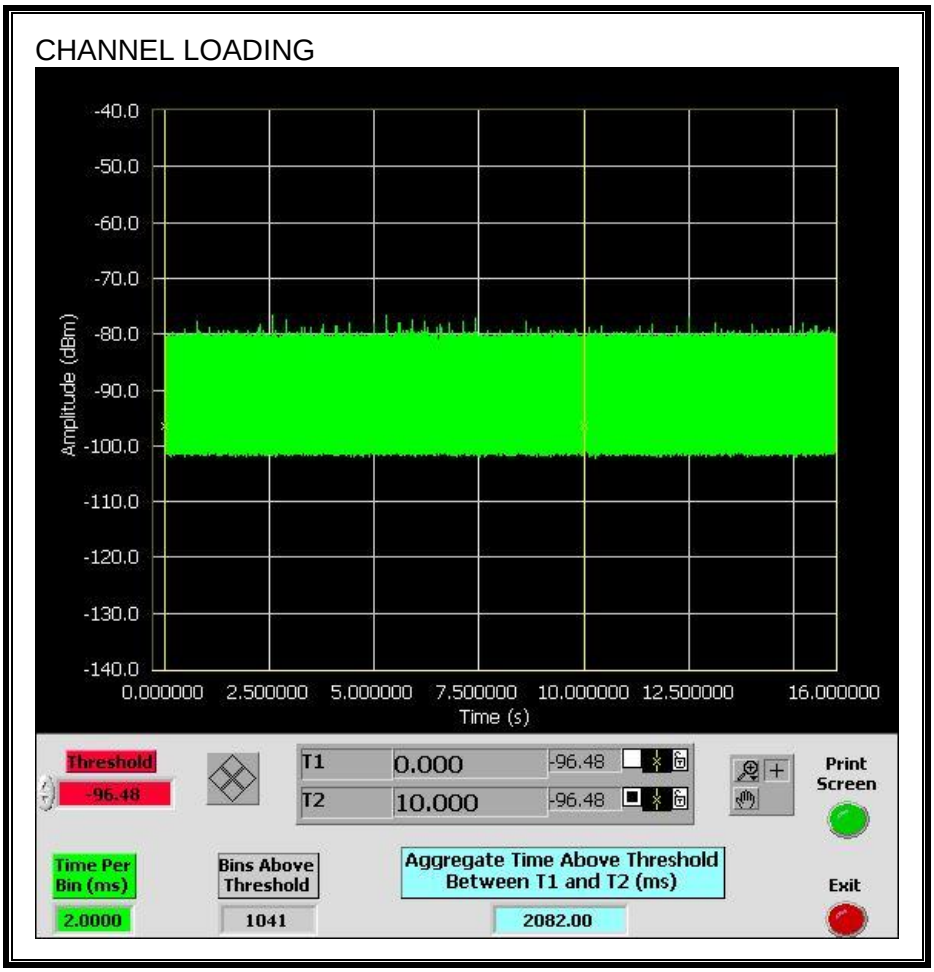
RADAR WAVEFORM



TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 20.82%

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)

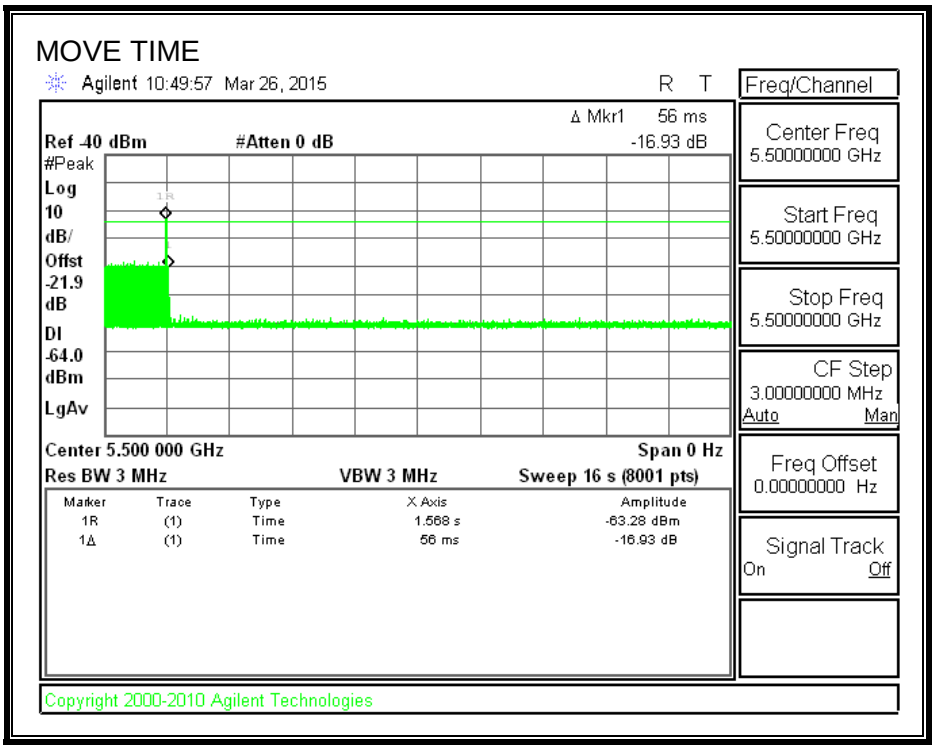
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

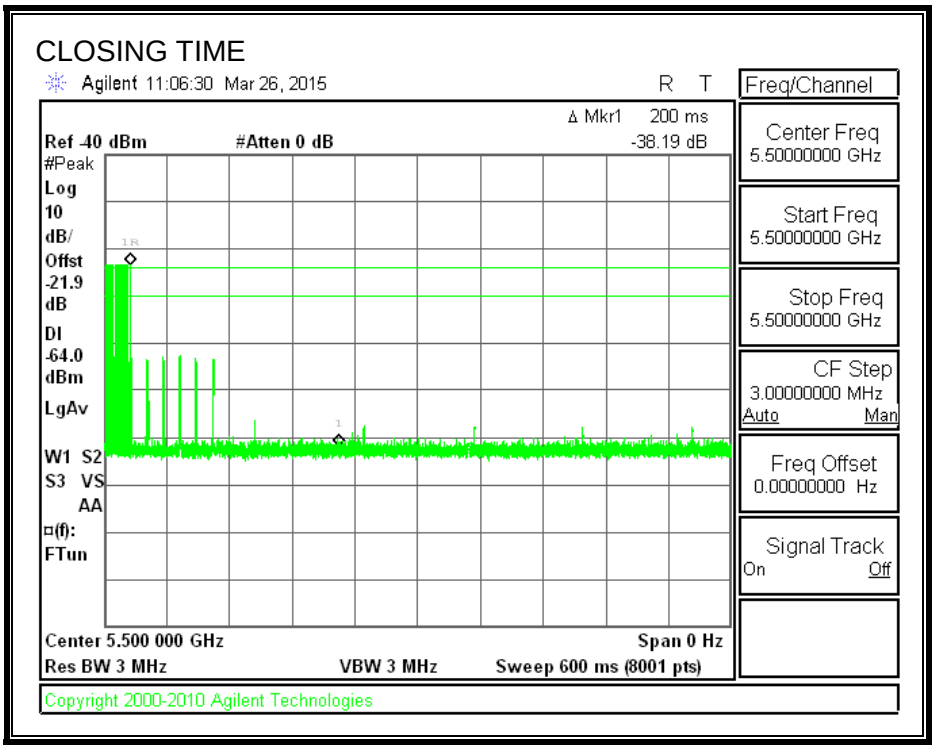
Channel Move Time (sec)	Limit (sec)
0.056	10

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

MOVE TIME

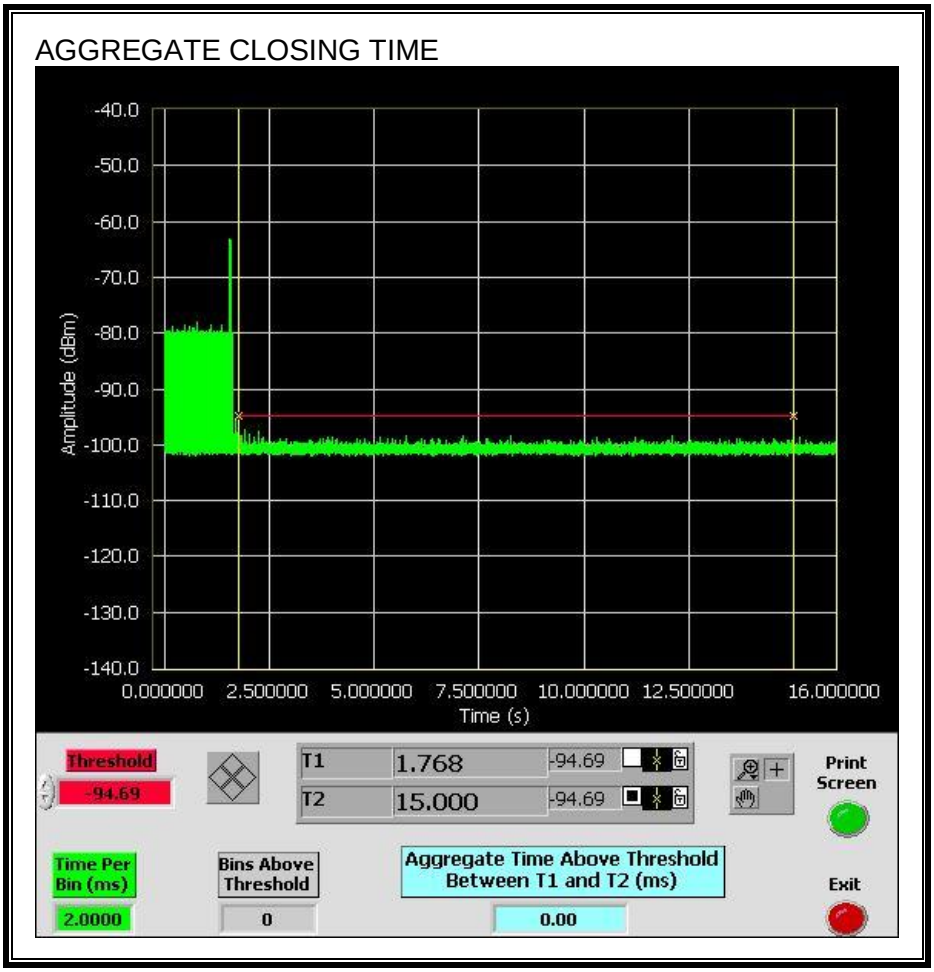


CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.



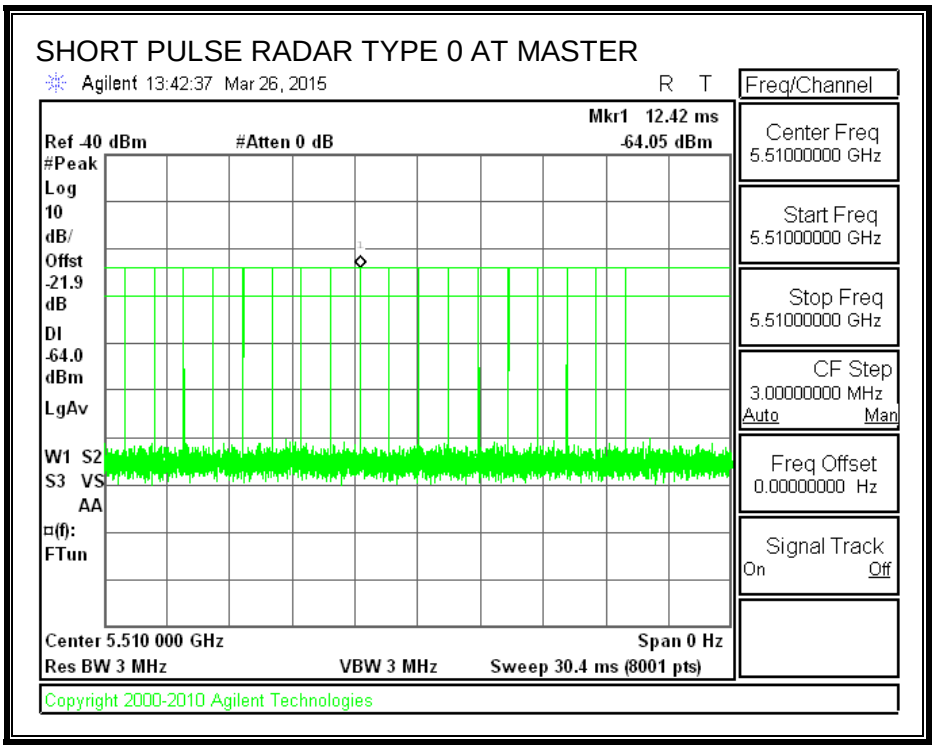
14.3. RESULTS FOR 40 MHz BANDWIDTH

14.3.1. TEST CHANNEL

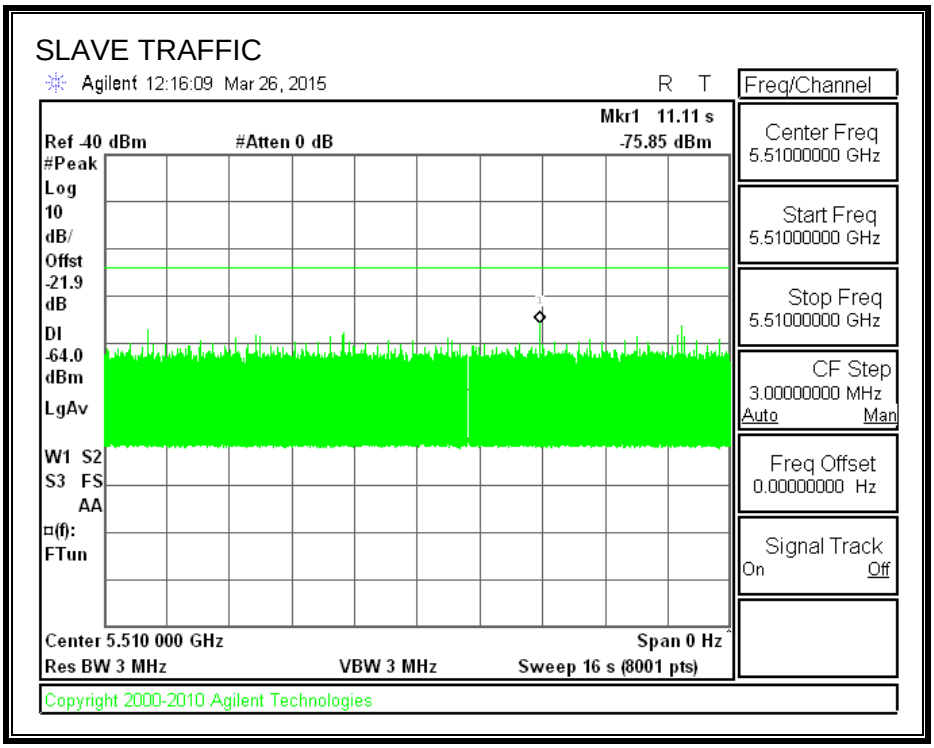
All tests were performed at a channel center frequency of 5510 MHz.

14.3.2. RADAR WAVEFORM AND TRAFFIC

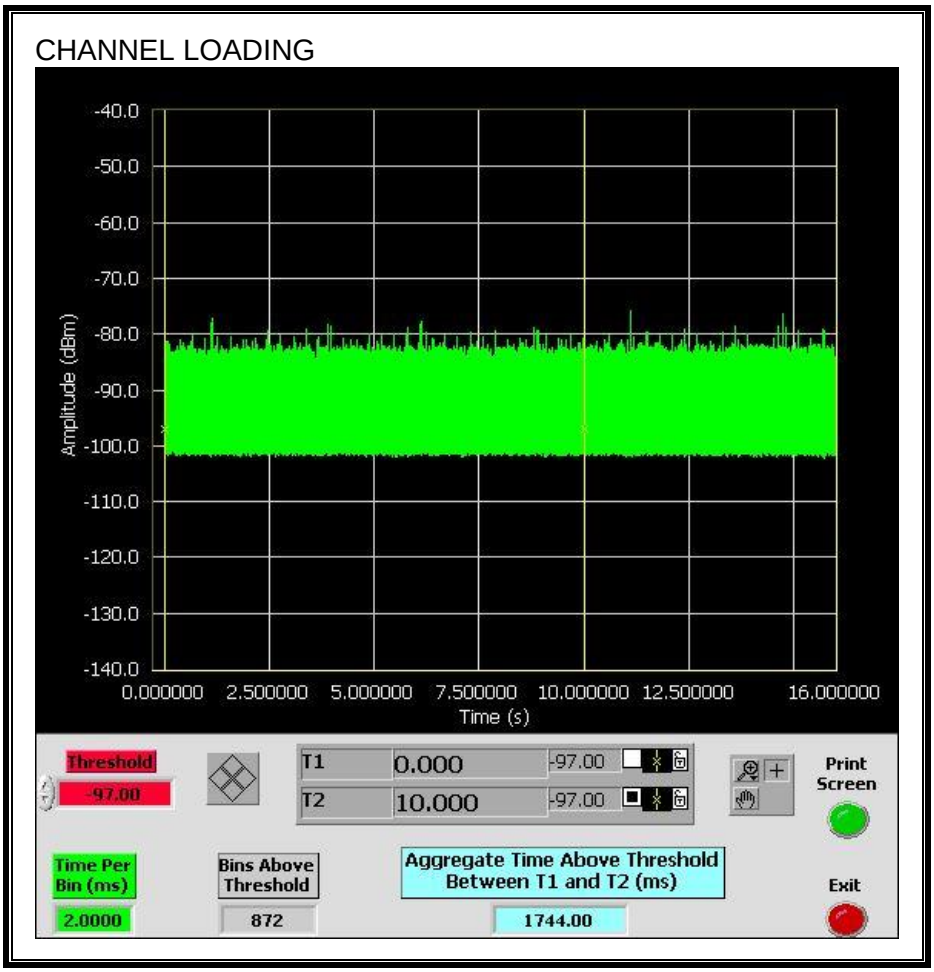
RADAR WAVEFORM



TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 17.44%

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)

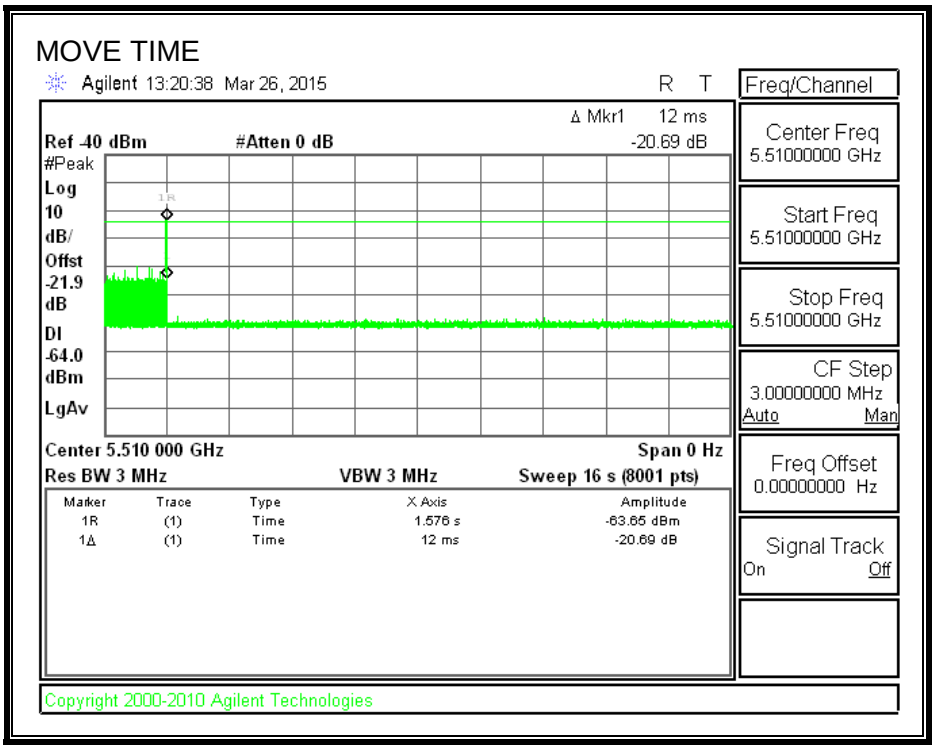
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

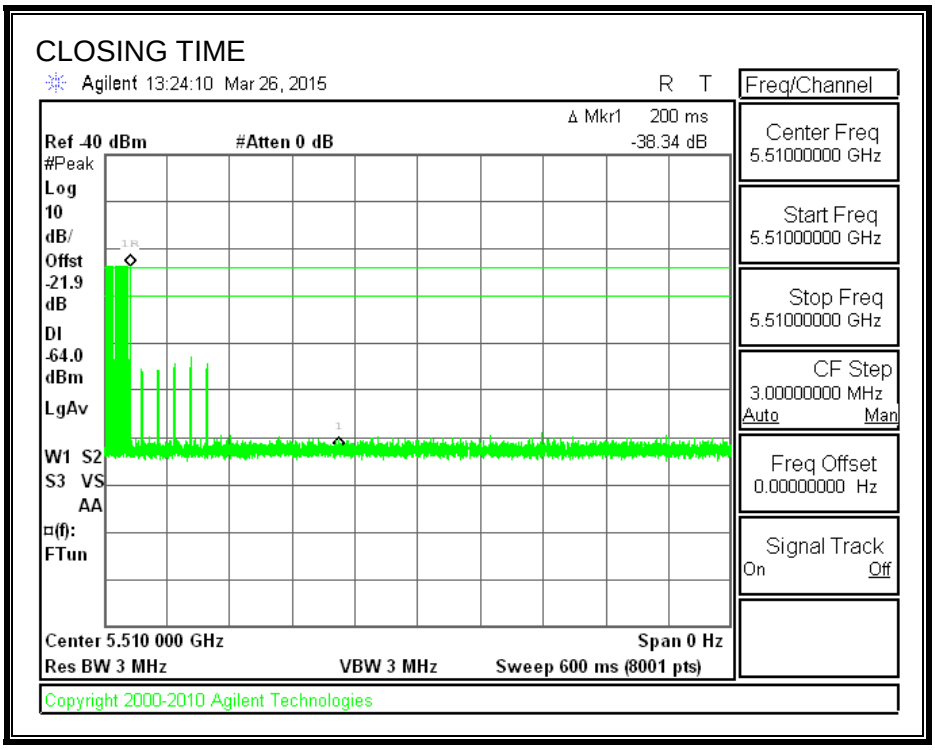
Channel Move Time (sec)	Limit (sec)
0.012	10

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

MOVE TIME

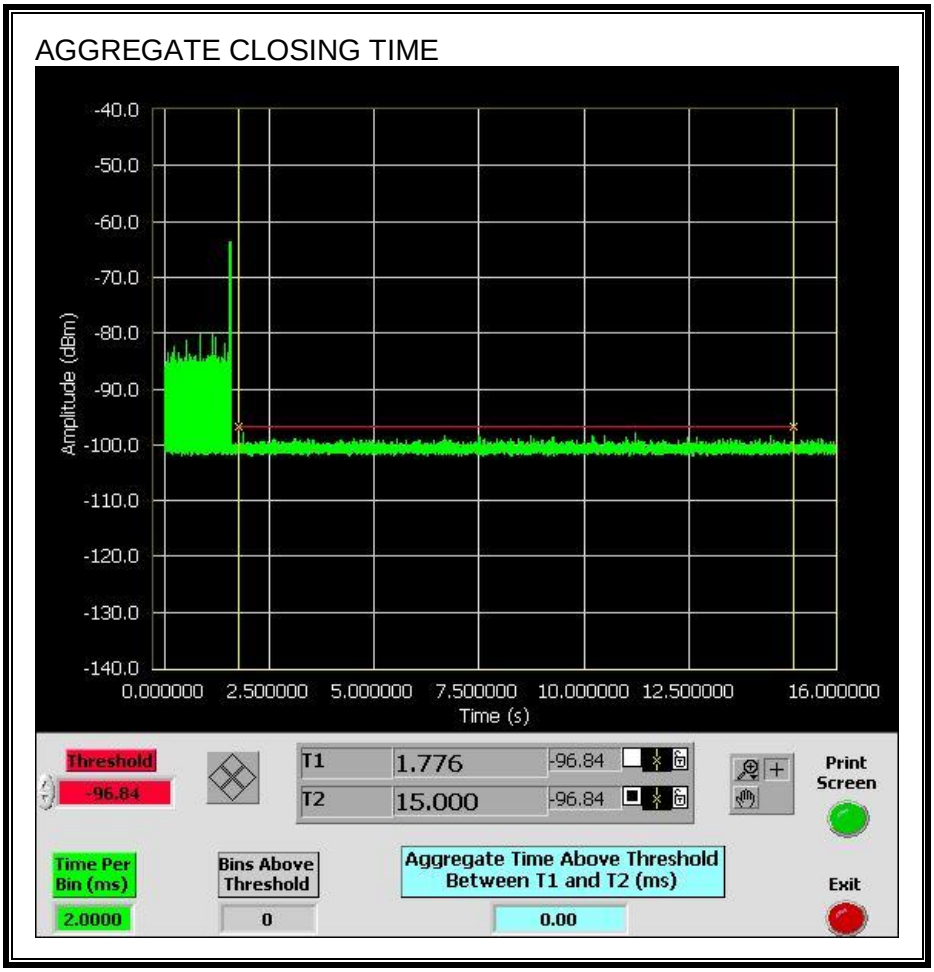


CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

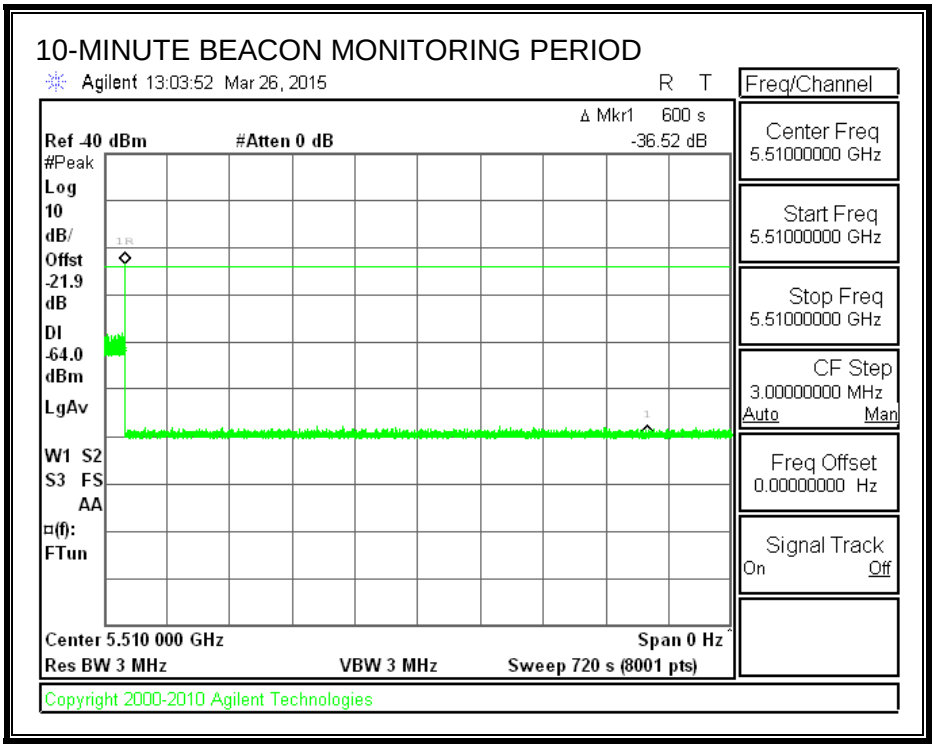
No transmissions are observed during the aggregate monitoring period.



14.3.5. 10-MINUTE BEACON MONITORING PERIOD

RESULTS

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



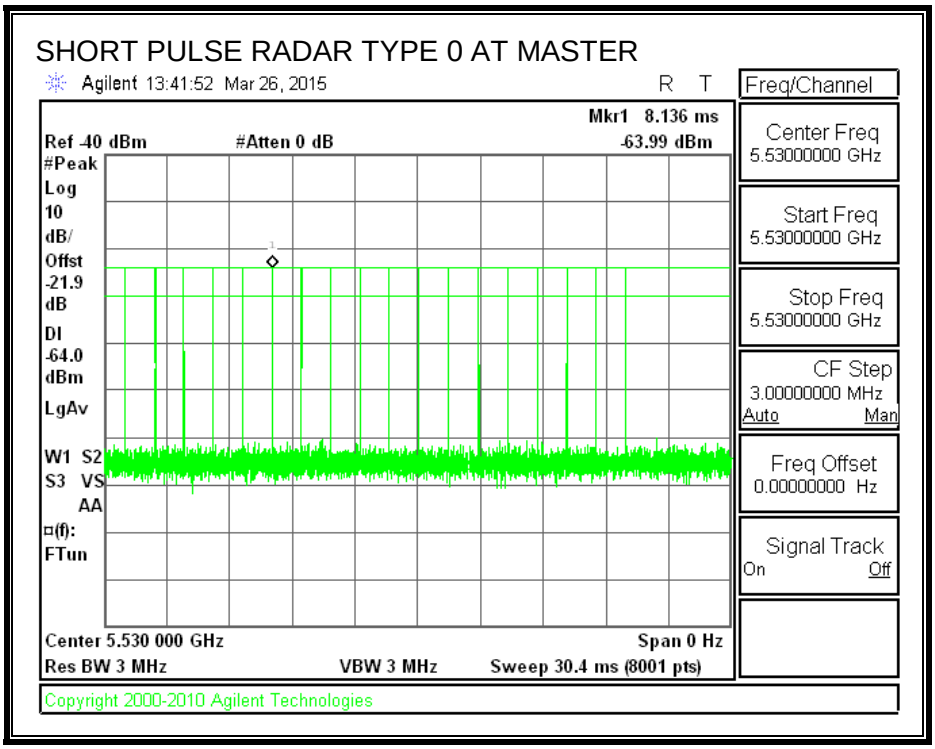
14.4. RESULTS FOR 80 MHz BANDWIDTH

14.4.1. TEST CHANNEL

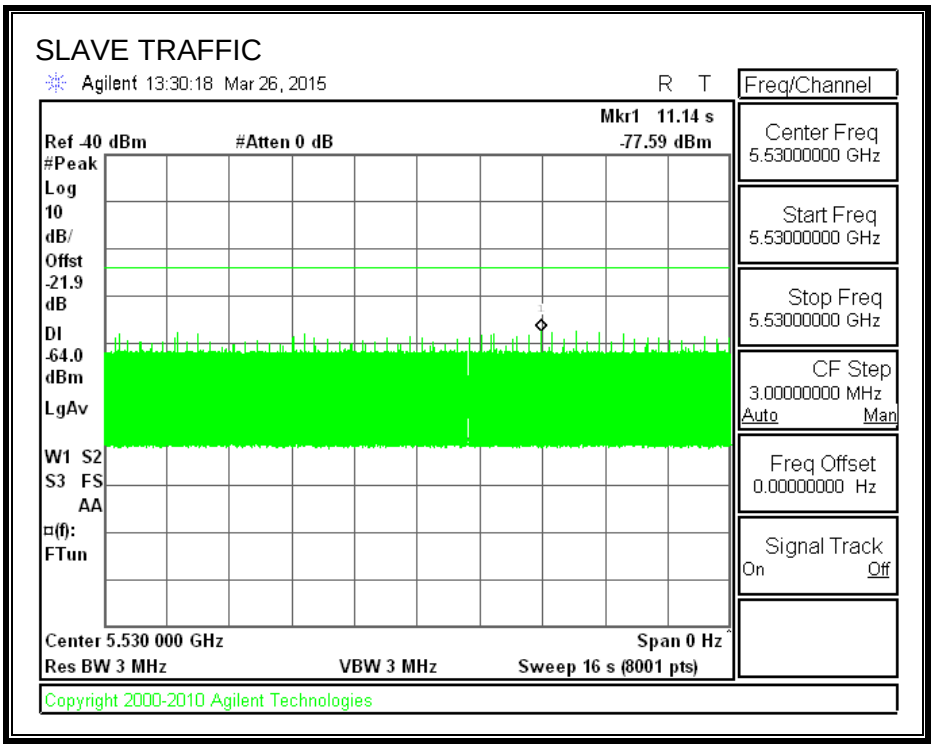
All tests were performed at a channel center frequency of 5530 MHz.

14.4.2. RADAR WAVEFORM AND TRAFFIC

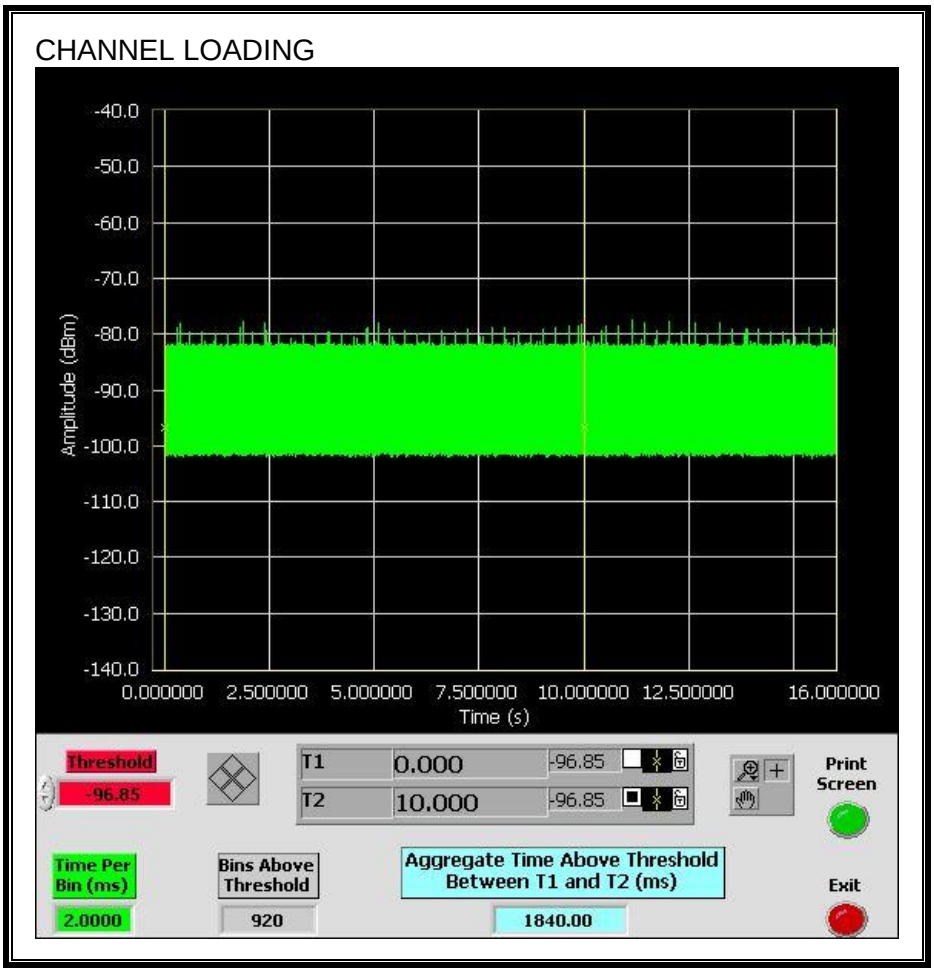
RADAR WAVEFORM



TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 18.4%

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)

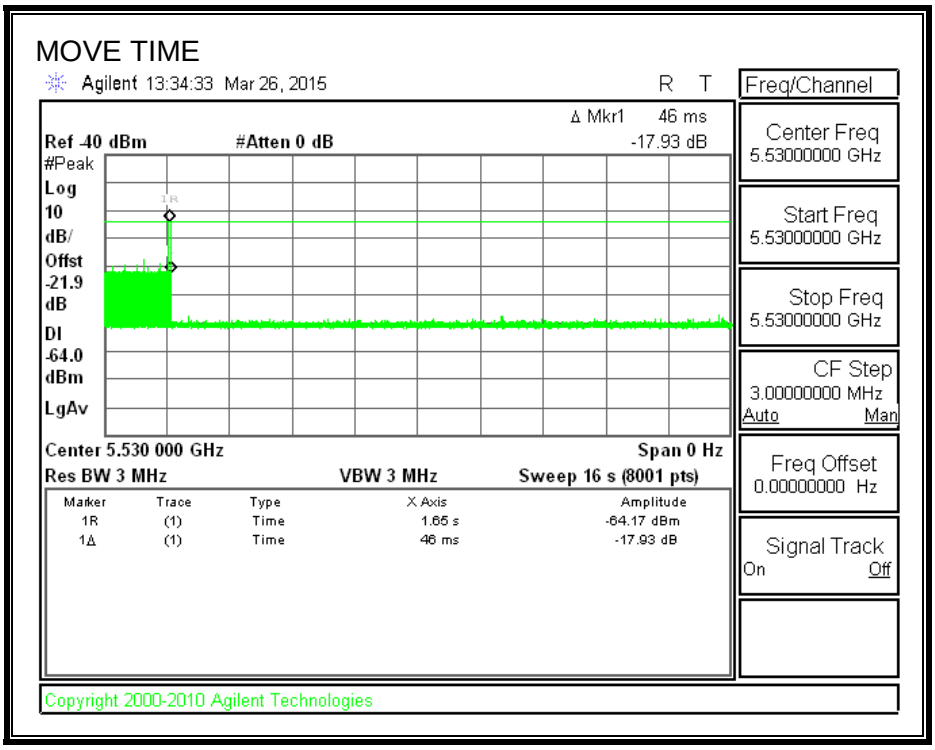
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

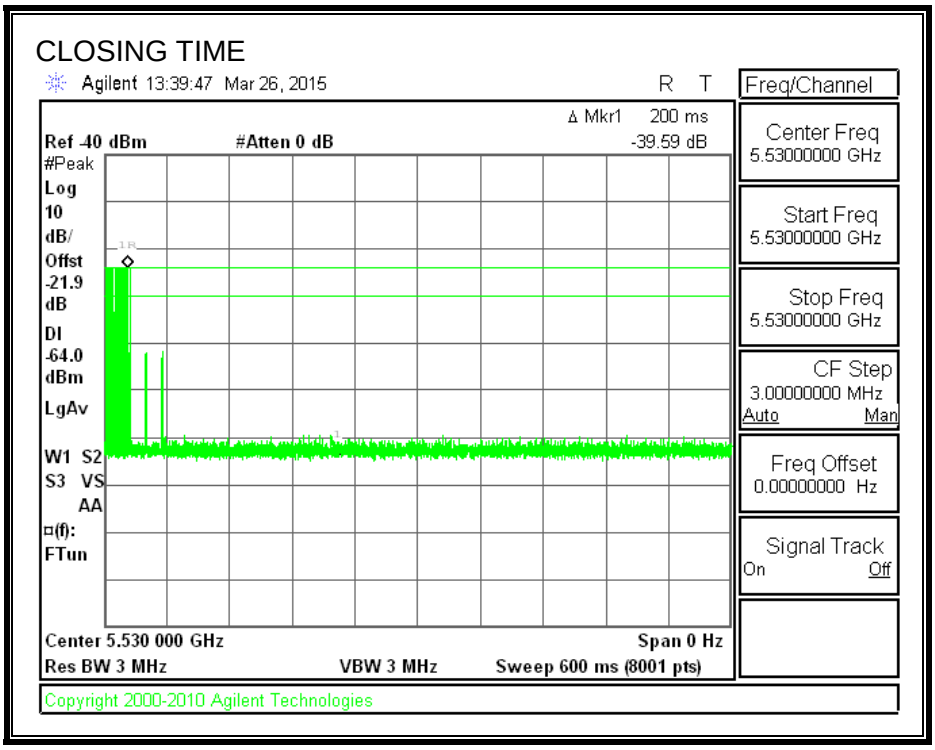
Channel Move Time (sec)	Limit (sec)
0.046	10

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

MOVE TIME

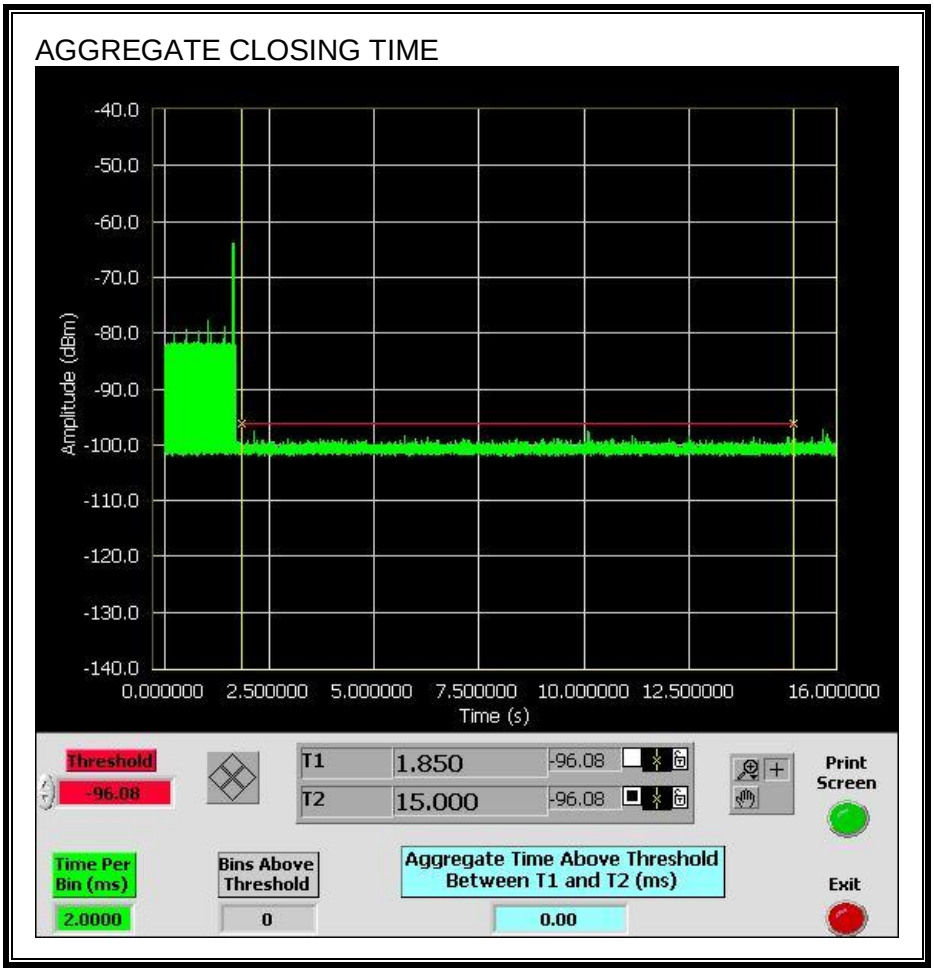


CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.



14.4.5. 10-MINUTE BEACON MONITORING PERIOD

RESULTS

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