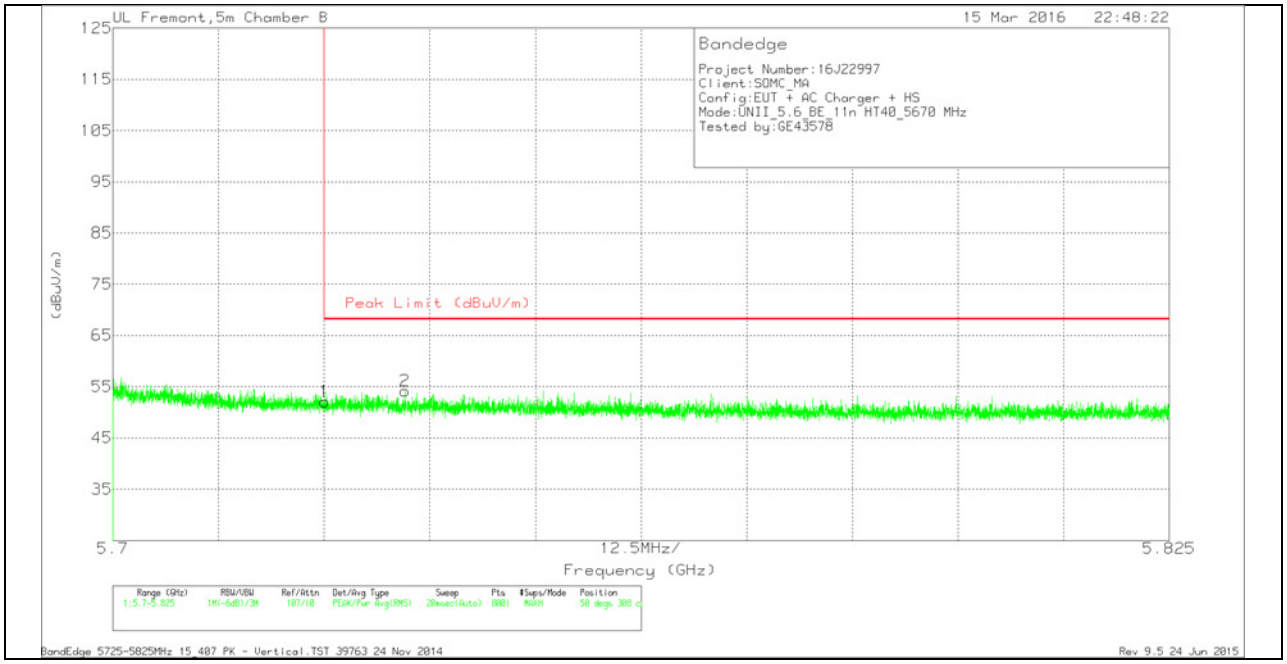
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	38.84	Pk	34.9	-21.7	52.04	68.2	-16.16	50	308	V
2	5.735	41	Pk	34.9	-21.7	54.2	68.2	-14	50	308	V

Pk - Peak detector

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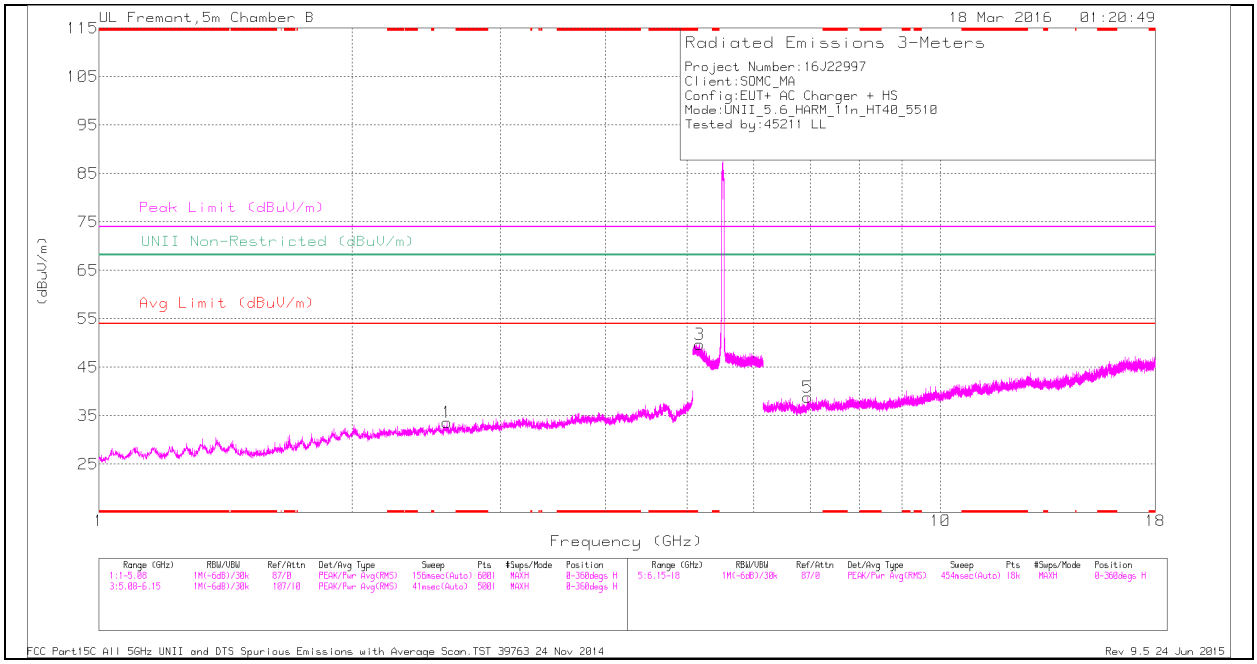
HARMONICS AND SPURIOUS EMISSIONS

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.

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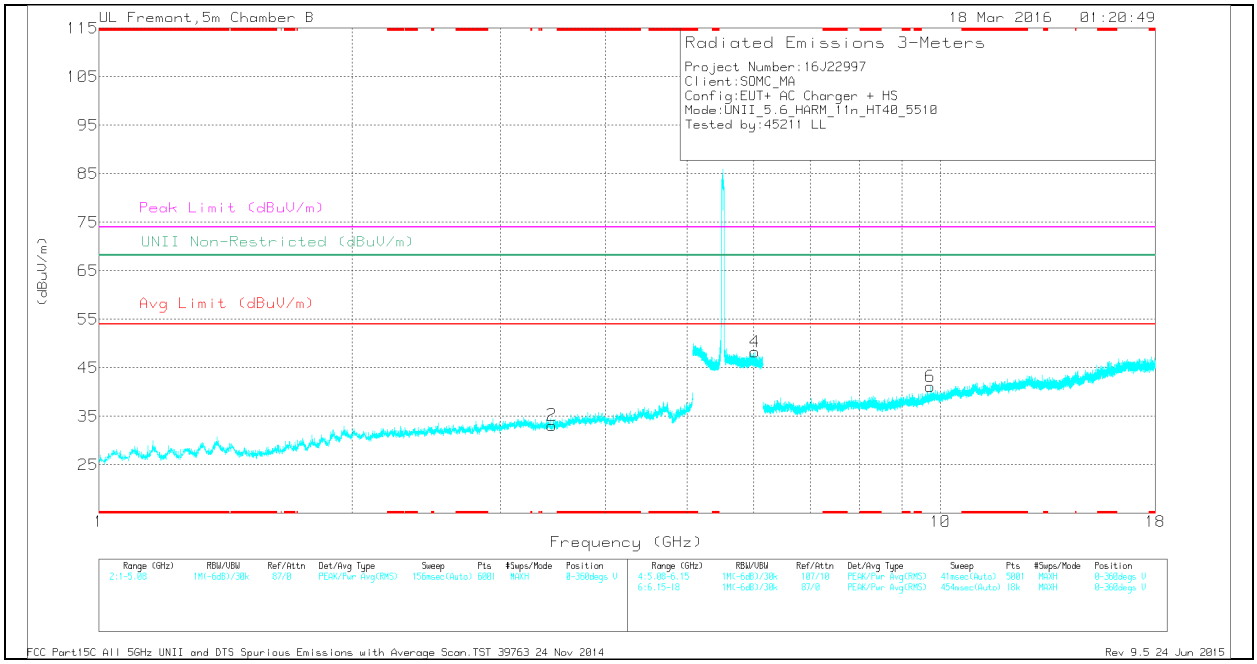
LOW CHANNEL VERTICAL



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

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.59	35.19	Pk	32.2	-33.8	0	33.59	-	-	-	-	68.2	-34.61	0-360	101	H
2	3.456	34.07	Pk	32.9	-33.8	0	33.17	-	-	-	-	68.2	-35.03	0-360	199	V
3	5.174	34.86	Pk	34.3	-19.4	0	49.76	-	-	-	-	68.2	-18.44	0-360	101	H
4	6.02	34.18	Pk	35.5	-21.4	0	48.28	-	-	-	-	68.2	-19.92	0-360	199	V
5	6.956	33.47	Pk	35.5	-30.2	0	38.77	-	-	-	-	68.2	-29.43	0-360	199	H
6	9.717	31.61	Pk	36.7	-27.2	0	41.11	-	-	-	-	68.2	-27.09	0-360	199	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fl tr/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
2.59	43.1	PK-U	32.2	-33.8	0	41.5	-	-	-	-	68.2	-26.7	360	101	H
3.456	42.85	PK-U	32.9	-33.8	0	41.95	-	-	-	-	68.2	-26.25	360	199	V
5.172	42.1	PK-U	34.3	-19.7	0	56.7	-	-	-	-	68.2	-11.5	360	102	H
6.019	41.03	PK-U	35.5	-21.5	0	55.03	-	-	-	-	68.2	-13.17	360	198	V
6.955	40.63	PK-U	35.5	-30.2	0	45.93	-	-	-	-	68.2	-22.27	360	198	H
9.715	38.41	PK-U	36.7	-27.2	0	47.91	-	-	-	-	68.2	-20.29	360	198	V

PK-U - U-NII: Maximum Peak

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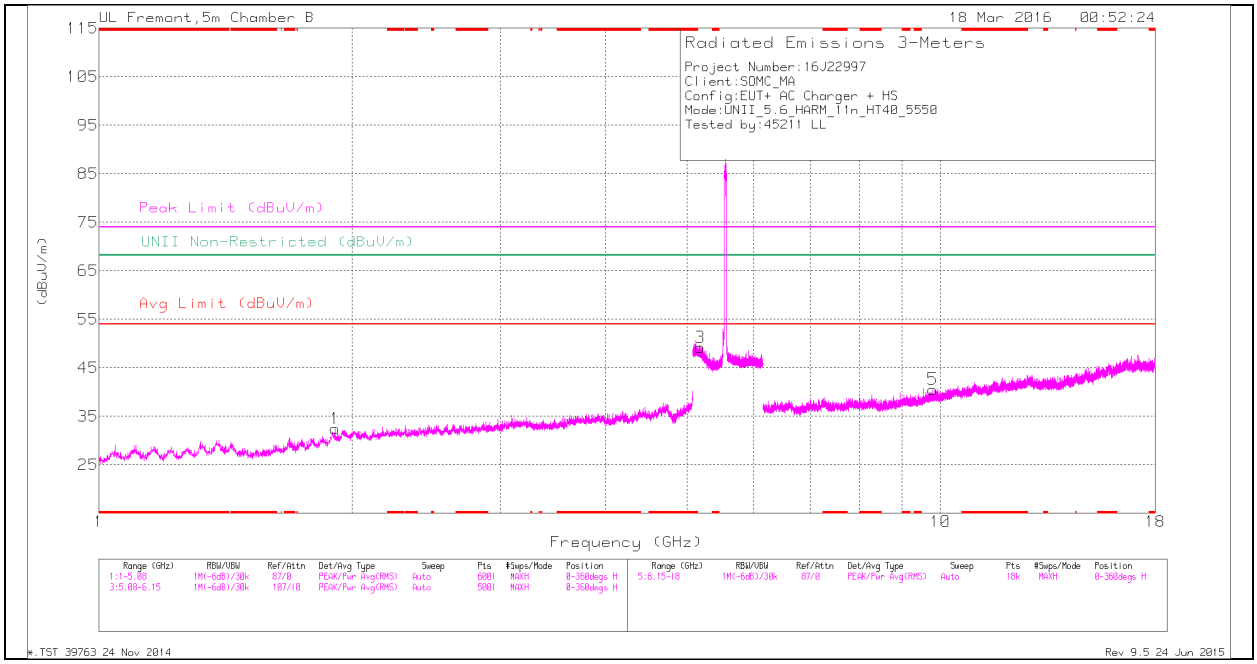
MID CHANNEL HORIZONTAL



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

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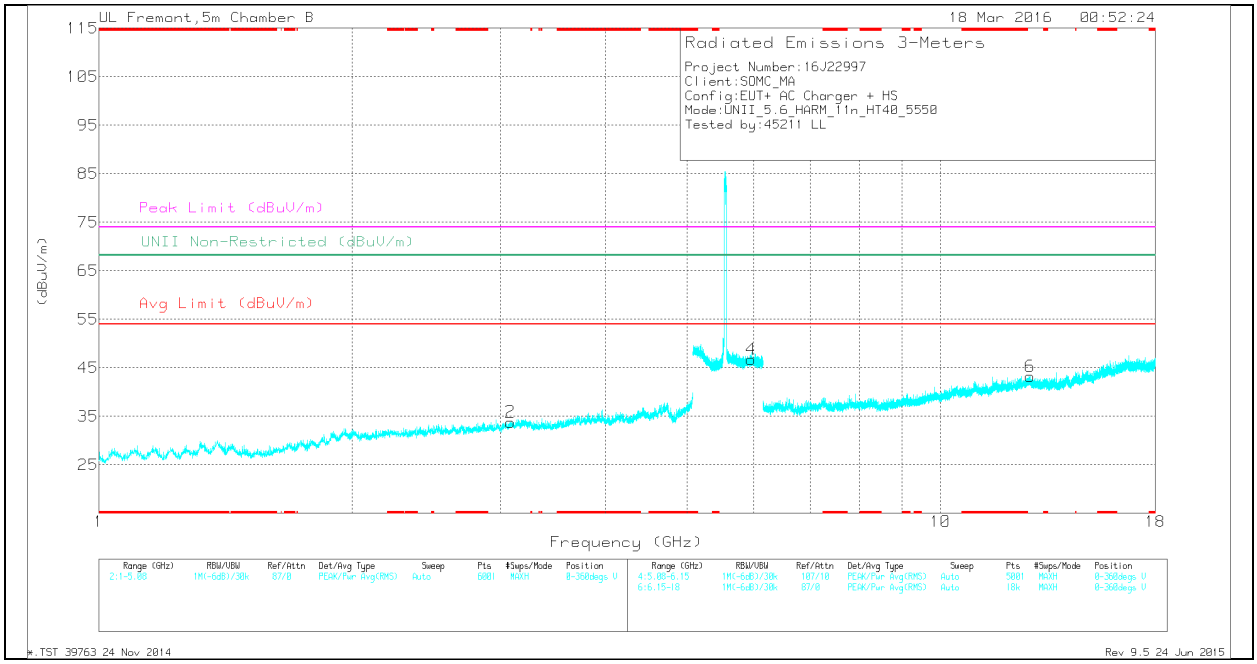
MID CHANNEL VERTICAL



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

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MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.908	35.57	Pk	31	-34.1	0	32.47	-	-	-	-	68.2	-35.73	0-360	200	H
2	3.083	34.42	Pk	33.1	-33.7	0	33.82	-	-	-	-	68.2	-34.38	0-360	101	V
3	5.178	34.24	Pk	34.3	-19.3	0	49.24	-	-	-	-	68.2	-18.96	0-360	101	H
4	5.956	32.87	Pk	35.4	-21.5	0	46.77	-	-	-	-	68.2	-21.43	0-360	199	V
5	9.796	30.17	Pk	36.8	-26.4	0	40.57	-	-	-	-	68.2	-27.63	0-360	101	H
6	12.789	28.94	Pk	39.3	-25	0	43.24	-	-	-	-	68.2	-24.96	0-360	199	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fl tr/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
1.907	42.93	PK-U	31	-34.1	0	39.83	-	-	-	-	68.2	-28.37	360	200	H
3.084	43.35	PK-U	33.1	-33.7	0	42.75	-	-	-	-	68.2	-25.45	360	102	V
5.179	42.28	PK-U	34.3	-19.6	0	56.98	-	-	-	-	68.2	-11.22	360	102	H
5.961	42.35	PK-U	34.3	-19.6	0	57.05	-	-	-	-	68.2	-11.15	360	102	V
9.795	37.44	PK-U	36.8	-26.4	0	47.84	-	-	-	-	68.2	-20.36	360	102	H
12.788	36.63	PK-U	39.3	-25	0	50.93	-	-	-	-	68.2	-17.27	360	198	V

PK-U - U-NII: Maximum Peak

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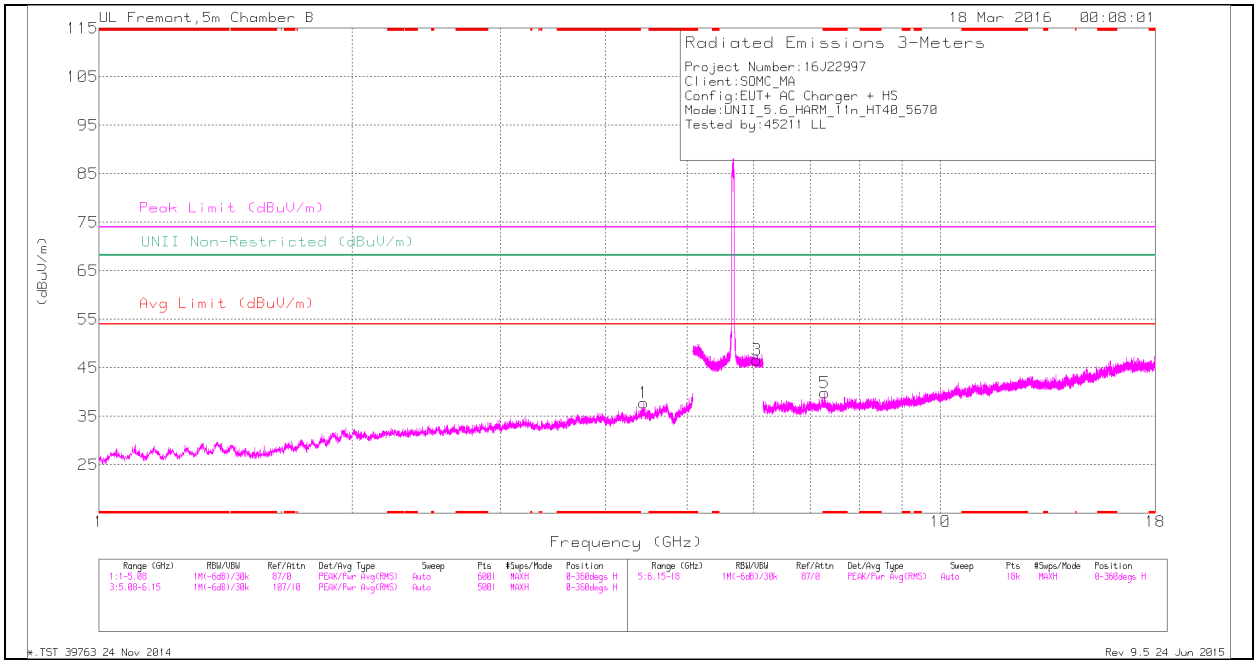
HIGH CHANNEL HORIZONTAL



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

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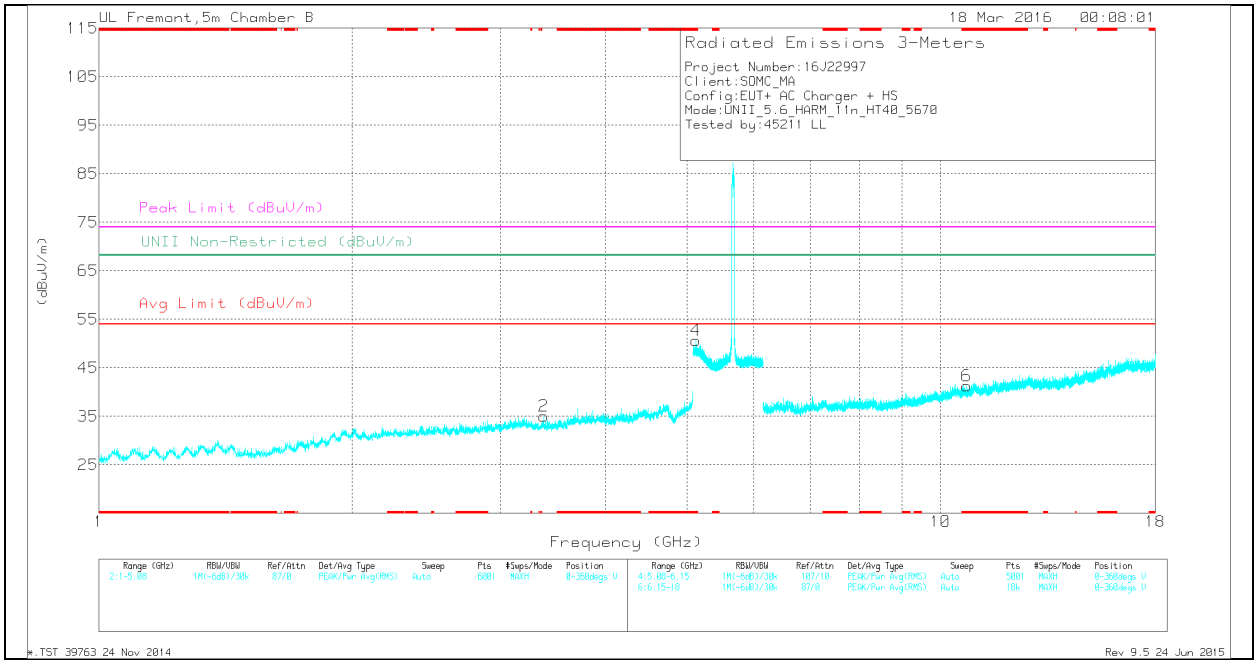
HIGH CHANNEL VERTICAL



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

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HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 5.121	35.82	Pk	34.2	-19.4	0	50.62	-	-	74	-23.38	-	-	0-360	200	V
5	* 7.278	33.19	Pk	35.5	-28.8	0	39.89	-	-	74	-34.11	-	-	0-360	199	H
6	* 10.749	29.69	Pk	37.7	-26.1	0	41.29	-	-	74	-32.71	-	-	0-360	200	V
2	3.375	35.26	Pk	32.8	-33	0	35.06	-	-	-	-	68.2	-33.14	0-360	101	V
1	4.439	34.97	Pk	34	-31.2	0	37.77	-	-	-	-	68.2	-30.43	0-360	101	H
3	6.053	32.2	Pk	35.5	-21.1	0	46.6	-	-	-	-	68.2	-21.6	0-360	200	H

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 5.12	42.24	PK-U	34.2	-19.5	0	56.94	-	-	74	-17.06	-	-	257	200	V
* 5.12	31.13	ADR	34.2	-19.5	.12	45.95	54	-8.05	-	-	-	-	257	200	V
* 7.277	39.82	PK-U	35.5	-28.8	0	46.52	-	-	74	-27.48	-	-	237	200	H
* 7.28	28.76	ADR	35.5	-28.8	.12	35.58	54	-18.42	-	-	-	-	237	200	H
* 10.747	36.79	PK-U	37.7	-26.1	0	48.39	-	-	74	-25.61	-	-	311	200	V
* 10.748	25.77	ADR	37.7	-26.1	.12	37.49	54	-16.51	-	-	-	-	311	200	V
3.377	42.27	PK-U	32.8	-33	0	42.07	-	-	-	-	68.2	-26.13	290	101	V
4.438	42.7	PK-U	34	-31.2	0	45.5	-	-	-	-	68.2	-22.7	330	101	H
6.051	40.54	PK-U	35.5	-21.5	0	54.54	-	-	-	-	68.2	-13.66	345	200	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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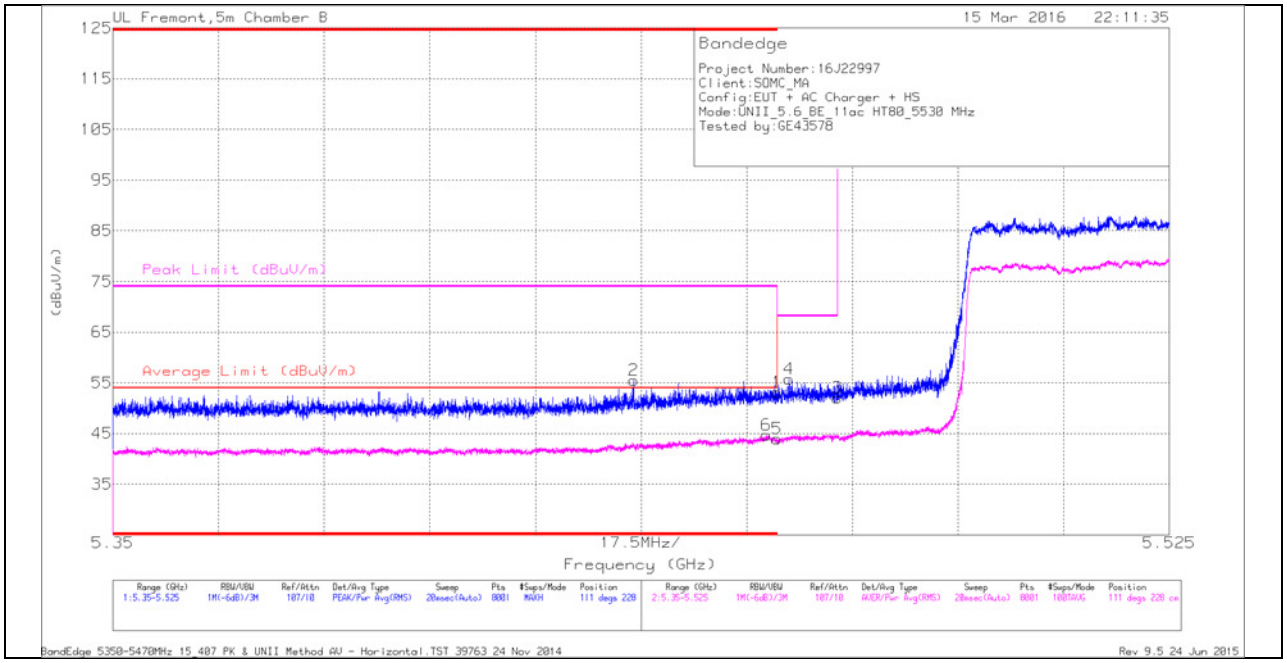
9.3.4. TX ABOVE 1 GHz 802.11ac VHT80 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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	* 5.436	41.32	Pk	34.6	-20.4	0	55.52	-	-	74	-18.48	111	228	H
6	* 5.458	30.32	RMS	34.6	-20.5	.25	44.67	54	-9.33	-	-	111	228	H
1	* 5.46	39.58	Pk	34.6	-21	0	53.18	-	-	74	-20.82	111	228	H
5	* 5.46	30.13	RMS	34.6	-21	.25	43.98	54	-10.02	-	-	111	228	H
4	5.462	41.82	Pk	34.6	-20.7	0	55.72	-	-	68.2	-12.48	111	228	H
3	5.47	38.31	Pk	34.6	-20.9	0	52.01	-	-	68.2	-16.19	111	228	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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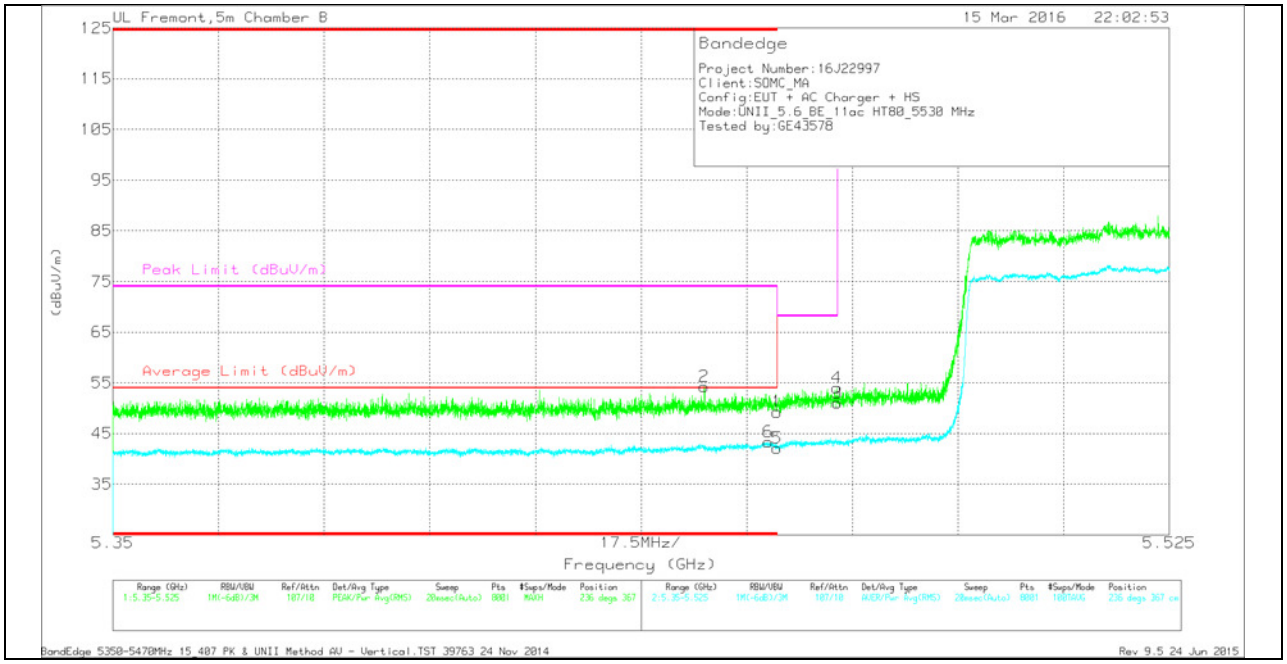
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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	40.32	Pk	34.6	-20.6	0	54.32	-	-	74	-19.68	236	367	V
6	* 5.459	29.07	RMS	34.6	-20.6	.25	43.32	54	-10.68	-	-	236	367	V
1	* 5.46	35.64	Pk	34.6	-21	0	49.24	-	-	74	-24.76	236	367	V
5	* 5.46	28.28	RMS	34.6	-21	.25	42.13	54	-11.87	-	-	236	367	V
3	5.47	37.33	Pk	34.6	-20.9	0	51.03	-	-	68.2	-17.17	236	367	V
4	5.47	40.35	Pk	34.6	-20.9	0	54.05	-	-	68.2	-14.15	236	367	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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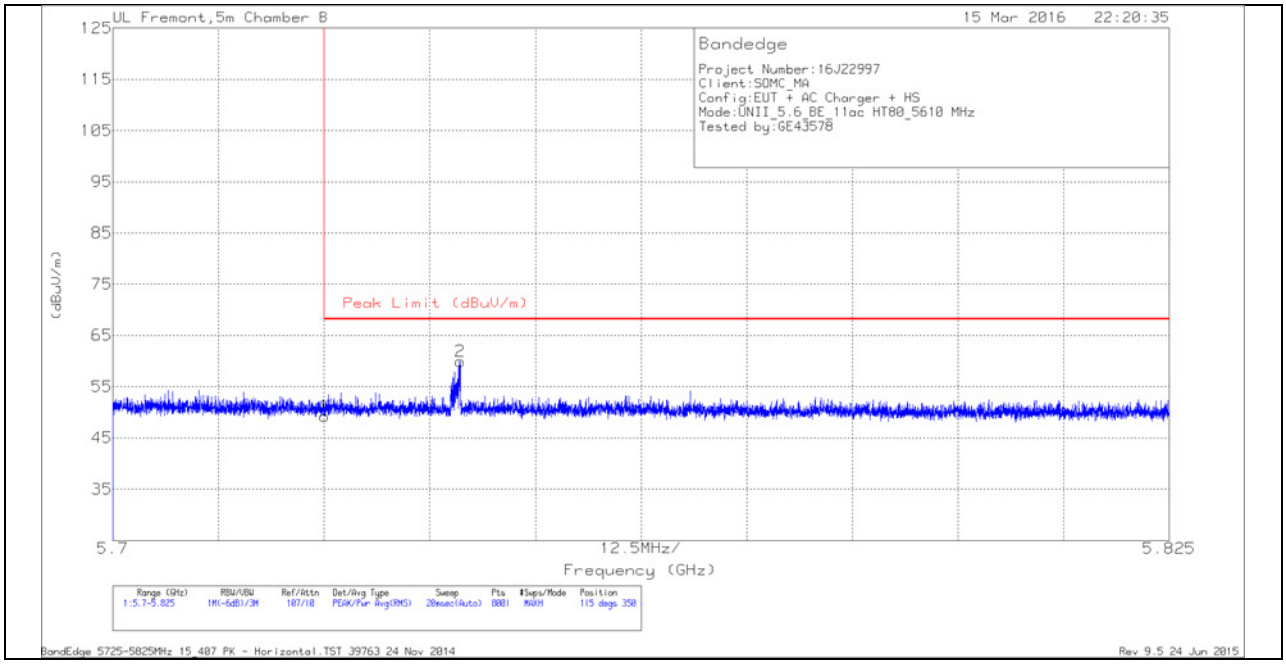
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	36.04	Pk	34.9	-21.7	49.24	68.2	-18.96	115	350	H
2	5.741	46.62	Pk	34.9	-21.6	59.92	68.2	-8.28	115	350	H

Pk - Peak detector

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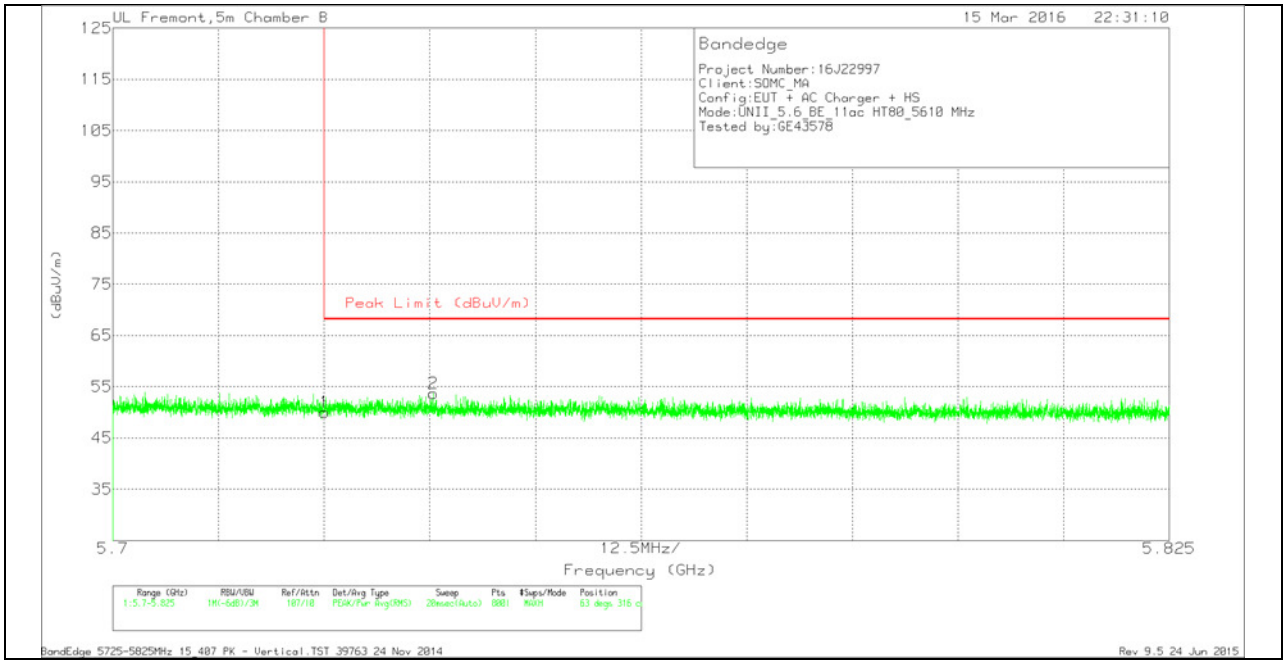
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	36.85	Pk	34.9	-21.7	50.05	68.2	-18.15	63	316	V
2	5.738	40.41	Pk	34.9	-21.6	53.71	68.2	-14.49	63	316	V

Pk - Peak detector

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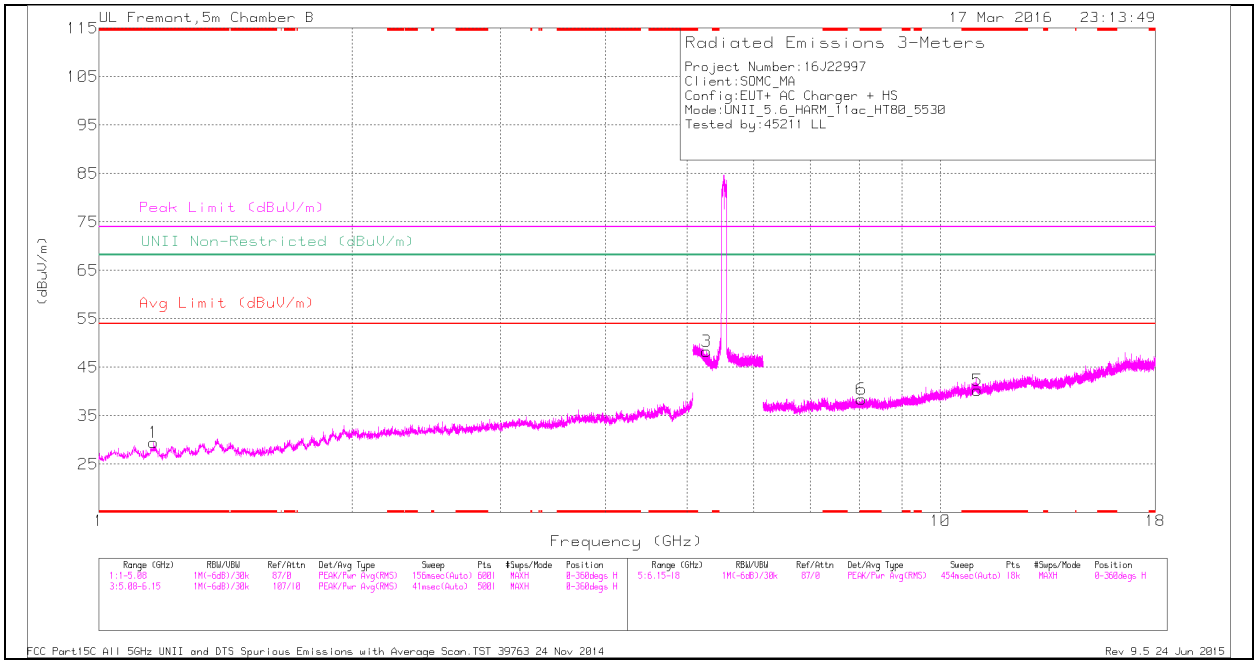
HARMONICS AND SPURIOUS EMISSIONS

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.

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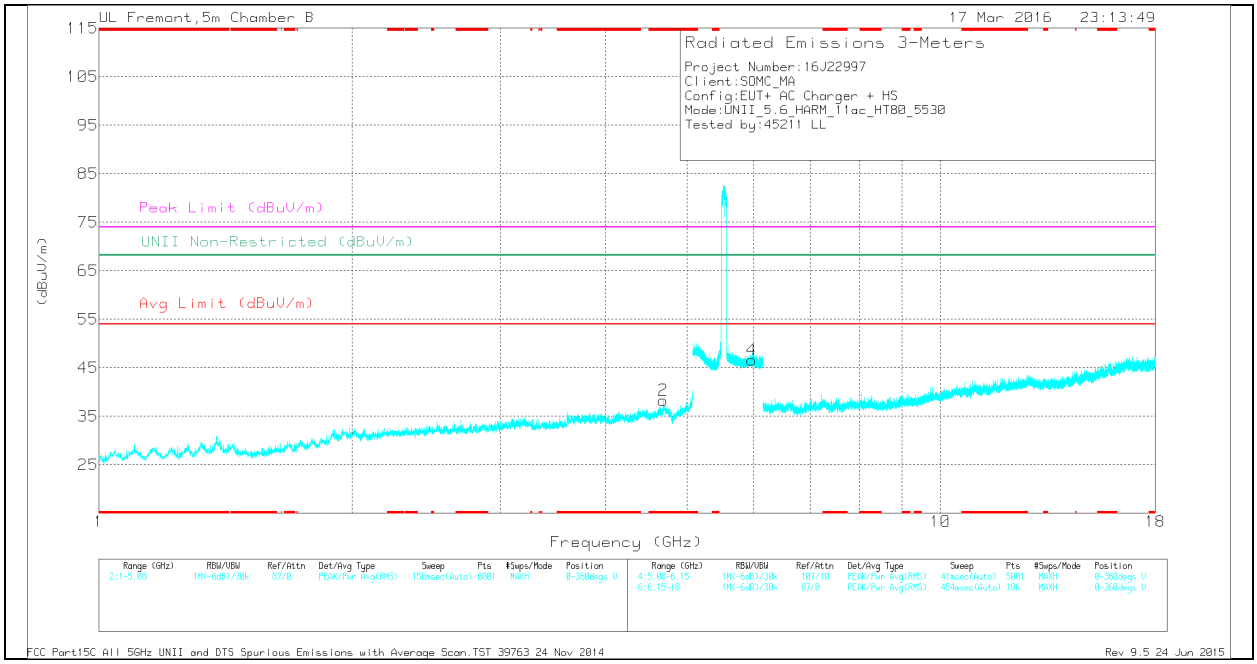
LOW CHANNEL VERTICAL



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

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.162	36.88	Pk	28.2	-35.6	0	29.48	-	-	74	-44.52	-	-	0-360	102	H
2	* 4.683	35.51	Pk	34.2	-31.4	0	38.31	-	-	74	-35.69	-	-	0-360	101	V
5	* 11.061	28.03	Pk	37.9	-25.7	0	40.23	-	-	74	-33.77	-	-	0-360	101	H
6	* 8.055	31.59	Pk	35.7	-28.9	0	38.39	-	-	74	-35.61	-	-	0-360	101	H
3	5.273	33.73	Pk	34.5	-19.9	0	48.33	-	-	-	-	68.2	-19.87	0-360	101	H
4	5.97	32.6	Pk	35.4	-21.4	0	46.6	-	-	-	-	68.2	-21.6	0-360	199	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.163	44.97	PK-U	28.2	-35.6	0	37.57	-	-	74	-36.43	-	-	119	101	H
* 1.161	32.6	ADR	28.2	-35.6	.25	25.45	54	-28.55	-	-	-	-	119	101	H
* 4.685	43.25	PK-U	34.2	-31.5	0	45.95	-	-	74	-28.05	-	-	19	101	V
* 4.687	31.37	ADR	34.2	-31.5	.25	34.32	54	-19.68	-	-	-	-	19	101	V
* 11.062	36.66	PK-U	37.9	-25.7	0	48.86	-	-	74	-25.14	-	-	193	102	H
* 11.061	25.44	ADR	37.9	-25.7	.25	37.89	54	-16.11	-	-	-	-	193	102	H
* 8.057	39.26	PK-U	35.7	-28.9	0	46.06	-	-	74	-27.94	-	-	150	102	H
* 8.054	28.26	ADR	35.7	-28.9	.25	35.31	54	-18.69	-	-	-	-	150	102	H
5.273	40.41	PK-U	34.5	-19.9	0	55.01	-	-	-	-	68.2	-13.19	289	101	H
5.969	41.15	PK-U	35.4	-21.4	0	55.15	-	-	-	-	68.2	-13.05	324	198	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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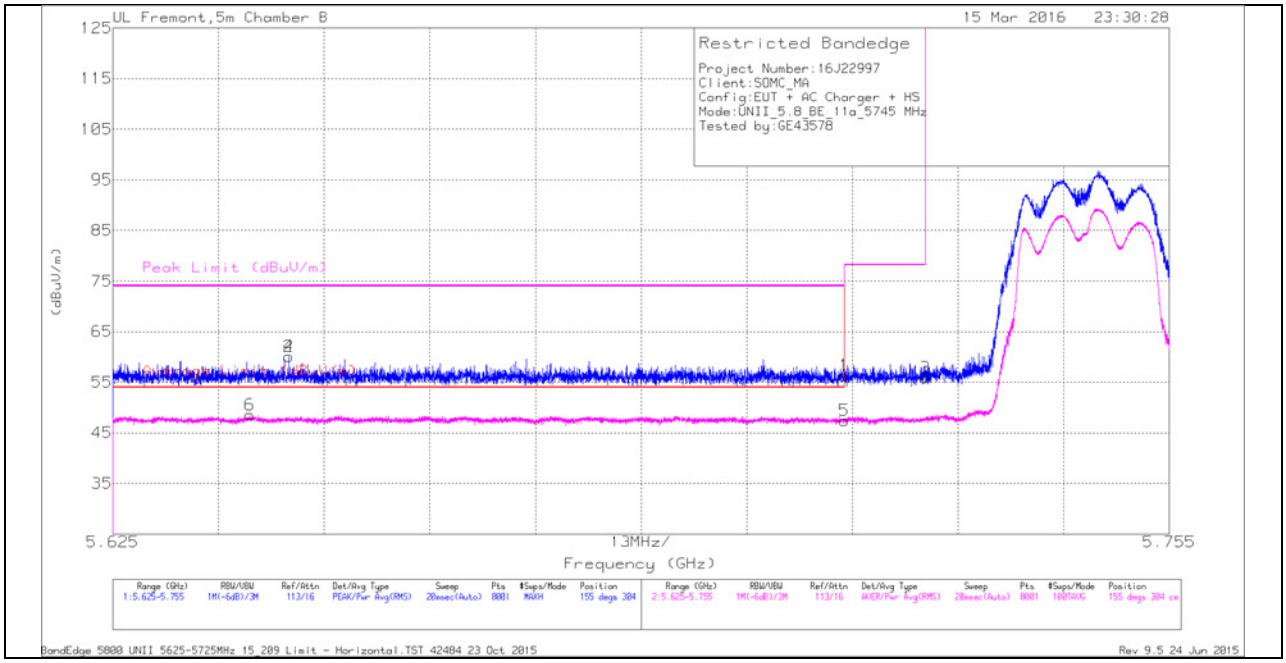
9.4. 5.8 GHz

9.4.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.8 GHz BAND AUTHORIZED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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
6	5.642	35.07	RMS	34.7	-21.2	0	48.57	54	-5.43	-	-	155	304	H
2	5.647	46.85	Pk	34.7	-21.5	0	60.05	-	-	74	-13.95	155	304	H
4	5.647	46.85	Pk	34.7	-21.5	0	60.05	-	-	74	-13.95	155	304	H
1	5.715	43.01	Pk	34.9	-21.6	0	56.31	-	-	74	-17.69	155	304	H
5	5.715	34.08	RMS	34.9	-21.6	0	47.38	54	-6.62	-	-	155	304	H
3	5.725	42.67	Pk	34.9	-21.7	0	55.87	-	-	78.2	-22.33	155	304	H

Pk - Peak detector

RMS - RMS detection

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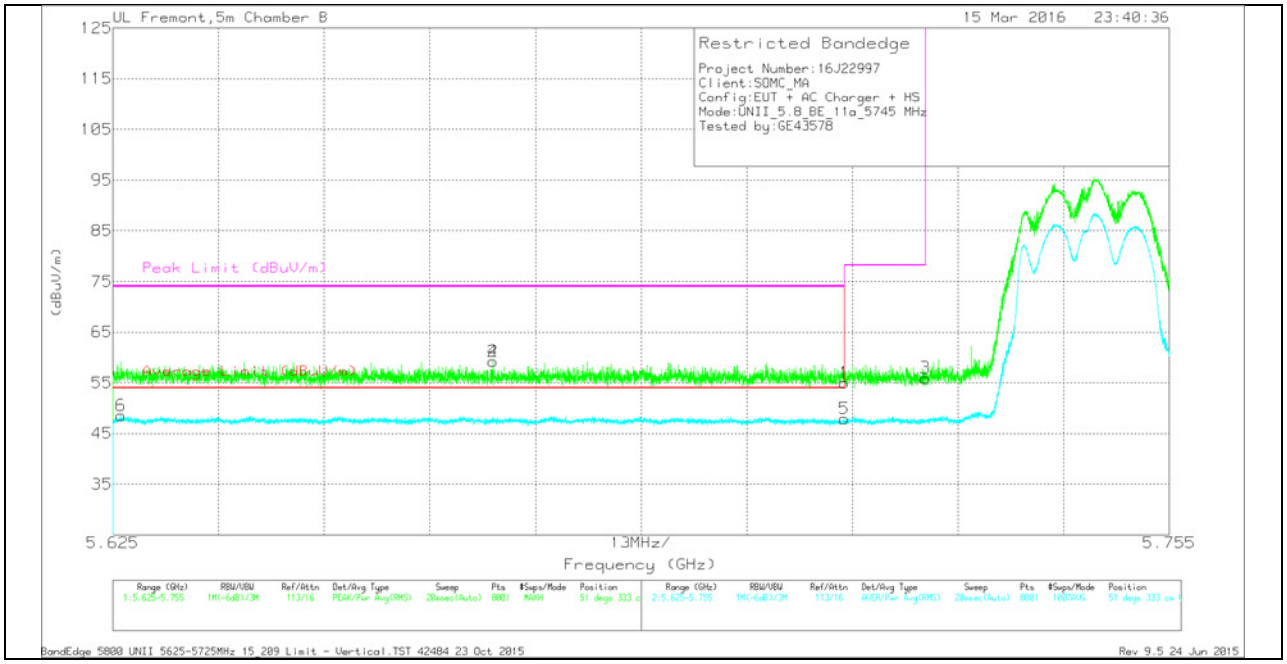
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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
6	5.626	35.07	RMS	34.7	-21.2	0	48.57	54	-5.43	-	-	51	333	V
2	5.672	45.91	Pk	34.8	-21.5	0	59.21	-	-	74	-14.79	51	333	V
4	5.672	45.91	Pk	34.8	-21.5	0	59.21	-	-	74	-14.79	51	333	V
1	5.715	41.7	Pk	34.9	-21.6	0	55	-	-	74	-19	51	333	V
5	5.715	34.65	RMS	34.9	-21.6	0	47.95	54	-6.05	-	-	51	333	V
3	5.725	42.74	Pk	34.9	-21.7	0	55.94	-	-	78.2	-22.26	51	333	V

Pk - Peak detector

RMS - RMS detection

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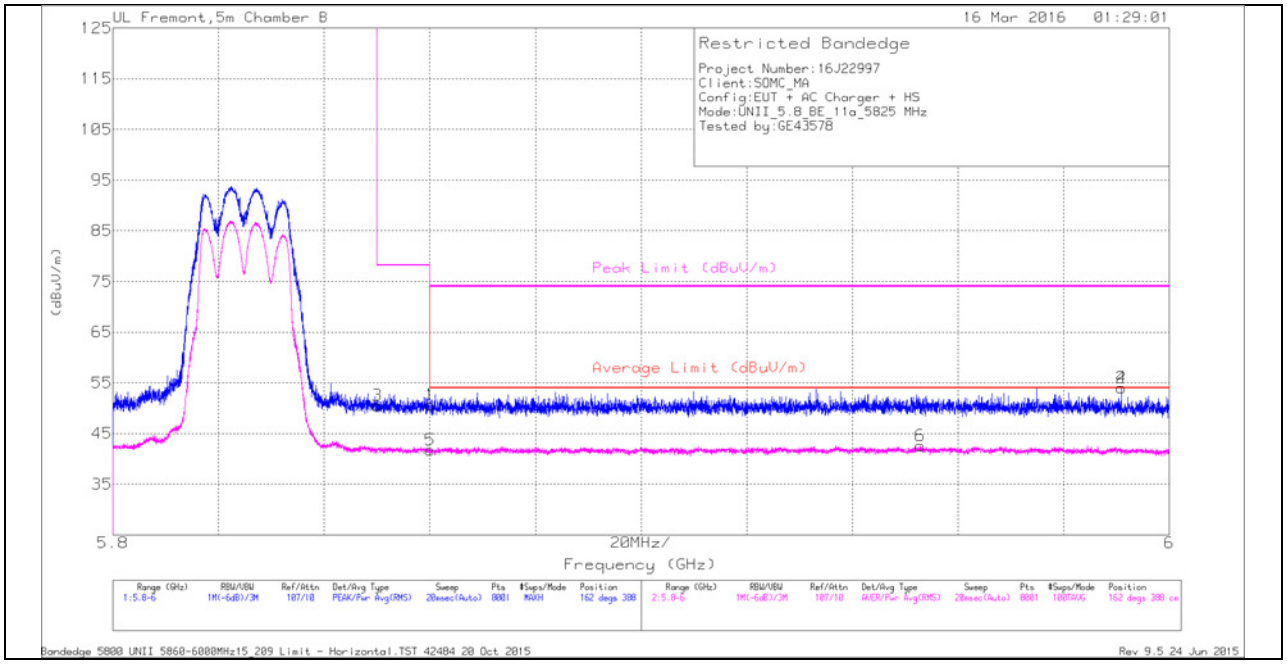
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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
3	5.85	36.99	Pk	35.1	-21.6	0	50.49	-	-	78.2	-27.71	162	388	H
1	5.86	37.02	Pk	35.2	-21.5	0	50.72	-	-	74	-23.28	162	388	H
5	5.86	28.04	RMS	35.2	-21.5	0	41.74	54	-12.26	-	-	162	388	H
6	5.953	28.45	RMS	35.4	-21.2	0	42.65	54	-11.35	-	-	162	388	H
2	5.991	40.05	Pk	35.4	-21.4	0	54.05	-	-	74	-19.95	162	388	H
4	5.991	40.05	Pk	35.4	-21.4	0	54.05	-	-	74	-19.95	162	388	H

Pk - Peak detector

RMS - RMS detection

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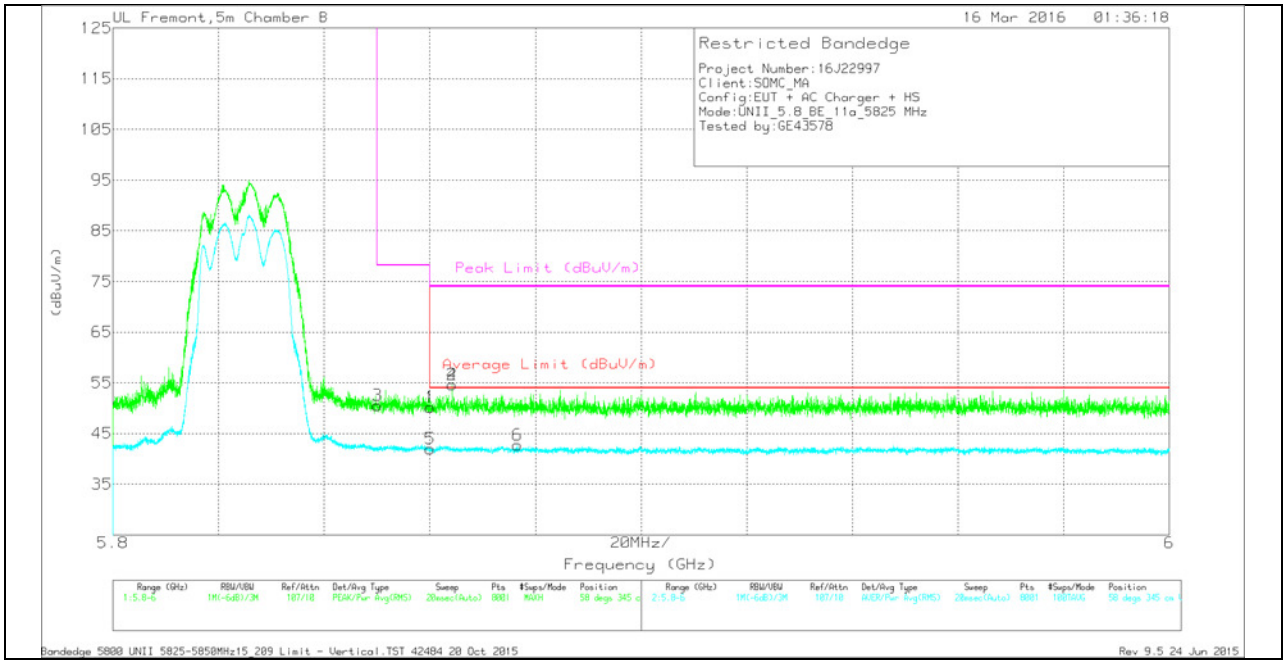
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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
3	5.85	36.99	Pk	35.1	-21.6	0	50.49	-	-	78.2	-27.71	58	345	V
1	5.86	36.47	Pk	35.2	-21.5	0	50.17	-	-	74	-23.83	58	345	V
5	5.86	28.25	RMS	35.2	-21.5	0	41.95	54	-12.05	-	-	58	345	V
2	5.864	40.8	Pk	35.2	-21.4	0	54.6	-	-	74	-19.4	58	345	V
4	5.864	40.8	Pk	35.2	-21.4	0	54.6	-	-	74	-19.4	58	345	V
6	5.877	29	RMS	35.2	-21.5	0	42.7	54	-11.3	-	-	58	345	V

Pk - Peak detector

RMS - RMS detection

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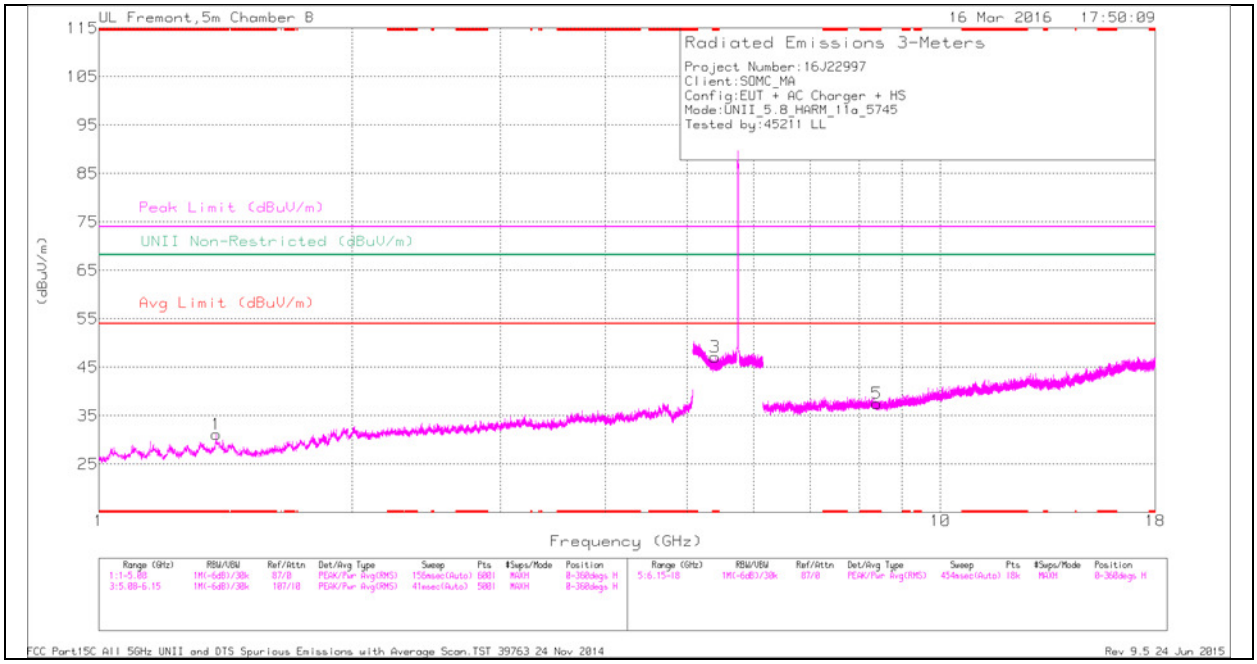
HARMONICS AND SPURIOUS EMISSIONS

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.

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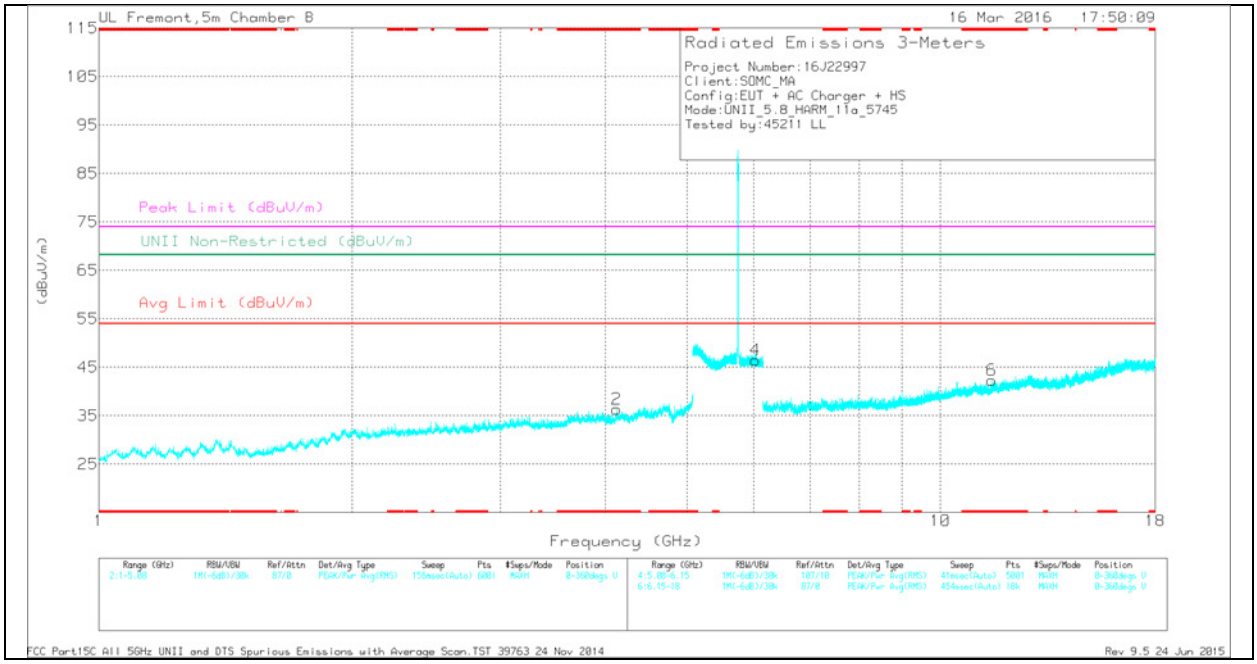
LOW CHANNEL VERTICAL



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

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.379	36.91	Pk	29.2	-35	0	31.11	-	-	74	-42.89	-	-	0-360	102	H
2	* 4.123	35.27	Pk	33.7	-32.6	0	36.37	-	-	74	-37.63	-	-	0-360	101	V
3	* 5.396	33.04	Pk	34.5	-20.4	0	47.14	-	-	74	-26.86	-	-	0-360	199	H
5	* 8.404	30.67	Pk	35.7	-28.8	0	37.57	-	-	74	-36.43	-	-	0-360	101	H
6	* 11.514	30.06	Pk	38.1	-25.8	0	42.36	-	-	74	-31.64	-	-	0-360	199	V
4	6.027	32.13	Pk	35.5	-21.2	0	46.43	-	-	-	-	68.2	-21.77	0-360	199	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fl tr/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
* 1.382	44.5	PK-U	29.2	-35	0	38.7	-	-	74	-35.3	-	-	241	101	H
* 1.381	32.35	ADR	29.2	-35	0	26.55	54	-27.45	-	-	-	-	241	101	H
* 4.126	43.57	PK-U	33.7	-32.5	0	44.77	-	-	74	-29.23	-	-	45	101	V
* 4.124	30.76	ADR	33.7	-32.6	0	31.86	54	-22.14	-	-	-	-	45	101	V
* 5.395	39.64	PK-U	34.5	-20.1	0	54.04	-	-	74	-19.96	-	-	212	198	H
* 5.396	28.33	ADR	34.5	-20.3	0	42.53	54	-11.47	-	-	-	-	212	198	H
* 8.4	39.12	PK-U	35.7	-28.7	0	46.12	-	-	74	-27.88	-	-	91	103	H
* 8.406	27.38	ADR	35.7	-28.8	0	34.28	54	-19.72	-	-	-	-	91	103	H
* 11.513	37.13	PK-U	38.1	-25.8	0	49.43	-	-	74	-24.57	-	-	318	198	V
* 11.515	25.19	ADR	38.1	-25.7	0	37.59	54	-16.41	-	-	-	-	318	198	V
6.028	40.79	PK-U	35.5	-21.5	0	54.79	-	-	-	-	68.2	-13.41	273	198	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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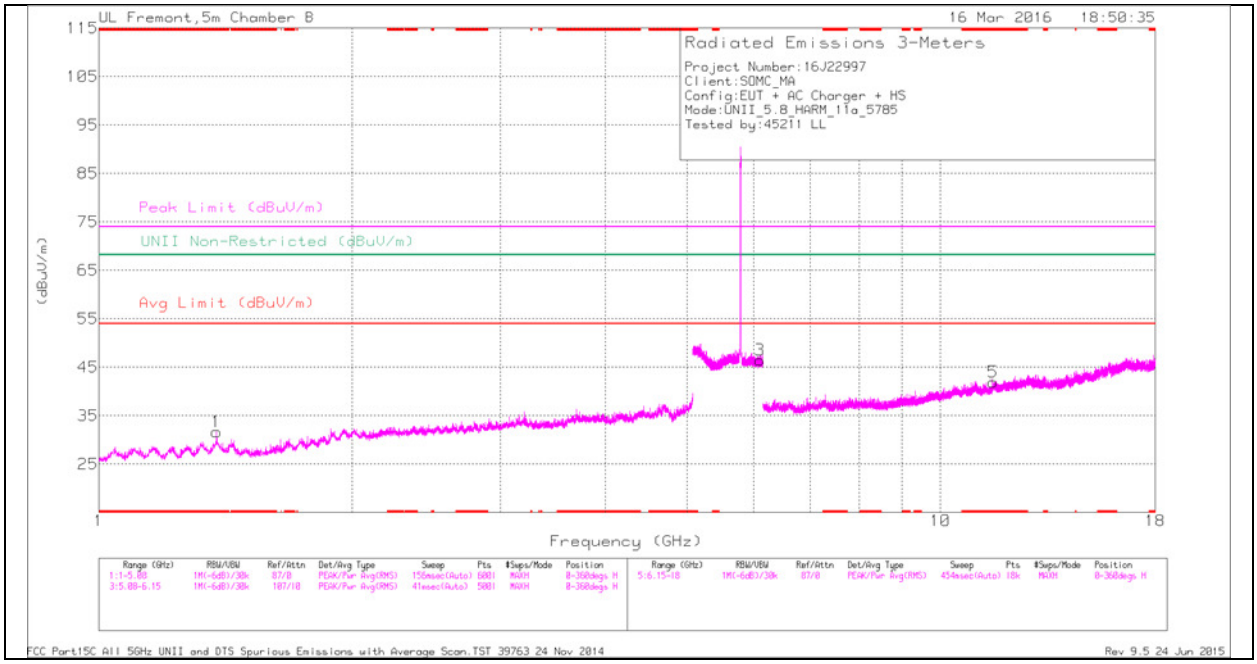
MID CHANNEL HORIZONTAL



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

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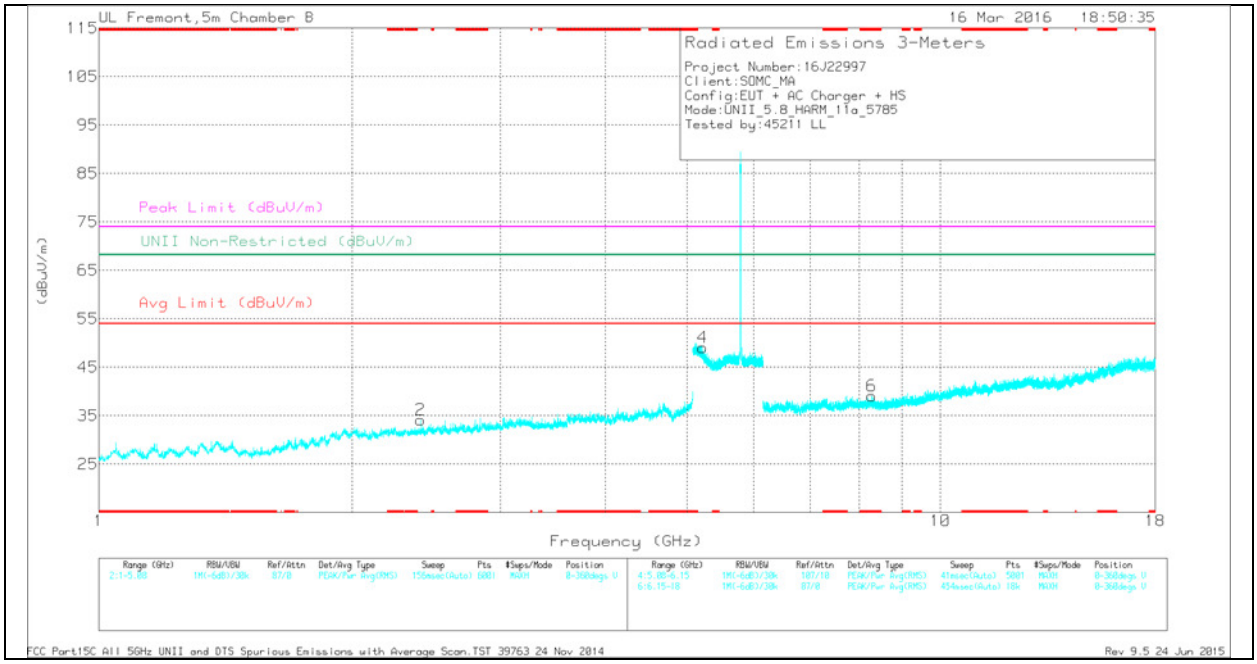
MID CHANNEL VERTICAL



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

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MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.38	37.5	Pk	29.2	-35	0	31.7	-	-	74	-42.3	-	-	0-360	199	H
5	* 11.554	28.95	Pk	38.1	-25.1	0	41.95	-	-	74	-32.05	-	-	0-360	199	H
6	* 8.287	31.88	Pk	35.7	-28.5	0	39.08	-	-	74	-34.92	-	-	0-360	102	V
2	2.41	36.65	Pk	32.2	-34.7	0	34.15	-	-	-	-	68.2	-34.05	0-360	199	V
4	5.217	34.36	Pk	34.4	-19.7	0	49.06	-	-	-	-	68.2	-19.14	0-360	101	V
3	6.099	32.15	Pk	35.5	-21.2	0	46.45	-	-	-	-	68.2	-21.75	0-360	200	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.383	44.07	PK-U	29.2	-35	0	38.27	-	-	74	-35.73	-	-	253	198	H
* 1.382	32.27	ADR	29.2	-35	0	26.47	54	-27.53	-	-	-	-	253	198	H
* 11.556	36.81	PK-U	38.1	-25.1	0	49.81	-	-	74	-24.19	-	-	175	198	H
* 11.555	25.14	ADR	38.1	-25.1	0	38.14	54	-15.86	-	-	-	-	175	198	H
* 8.289	39.53	PK-U	35.7	-28.5	0	46.73	-	-	74	-27.27	-	-	352	103	V
* 8.29	27.67	ADR	35.7	-28.5	0	34.87	54	-19.13	-	-	-	-	352	103	V
2.414	43.49	PK-U	32.2	-34.7	0	40.99	-	-	-	-	68.2	-27.21	26	198	V
5.216	42.11	PK-U	34.4	-19.7	0	56.81	-	-	-	-	68.2	-11.39	352	102	V
6.098	40.81	PK-U	35.5	-21.3	0	55.01	-	-	-	-	68.2	-13.19	352	198	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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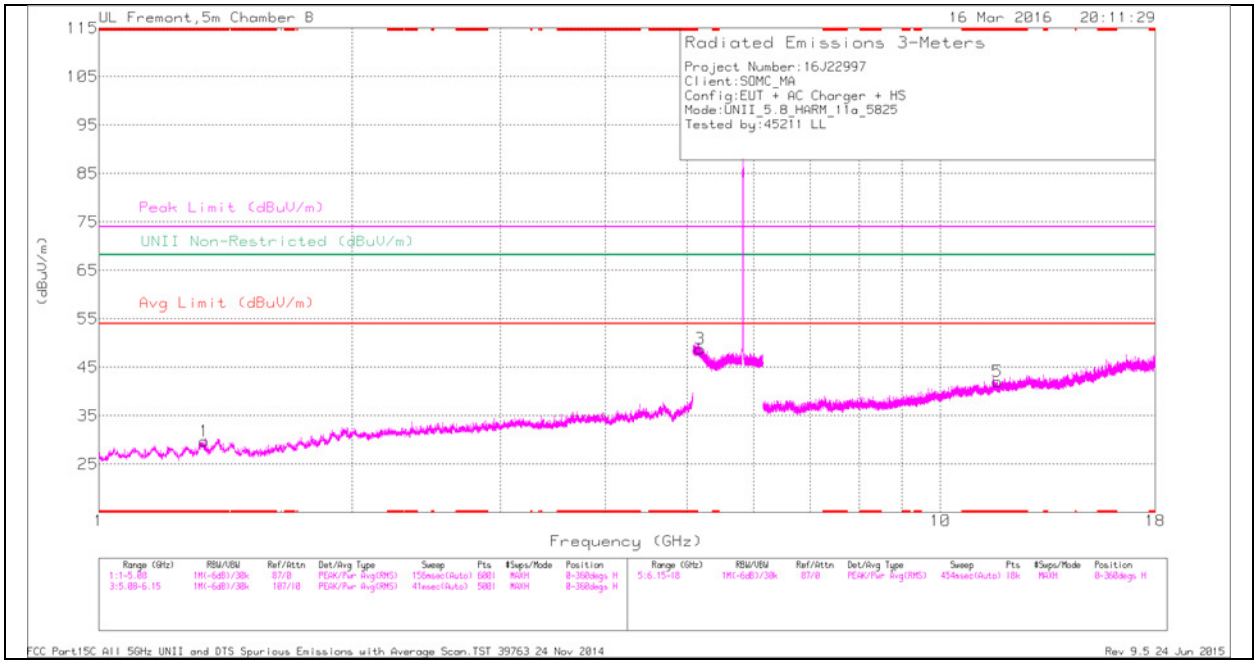
HIGH CHANNEL HORIZONTAL



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

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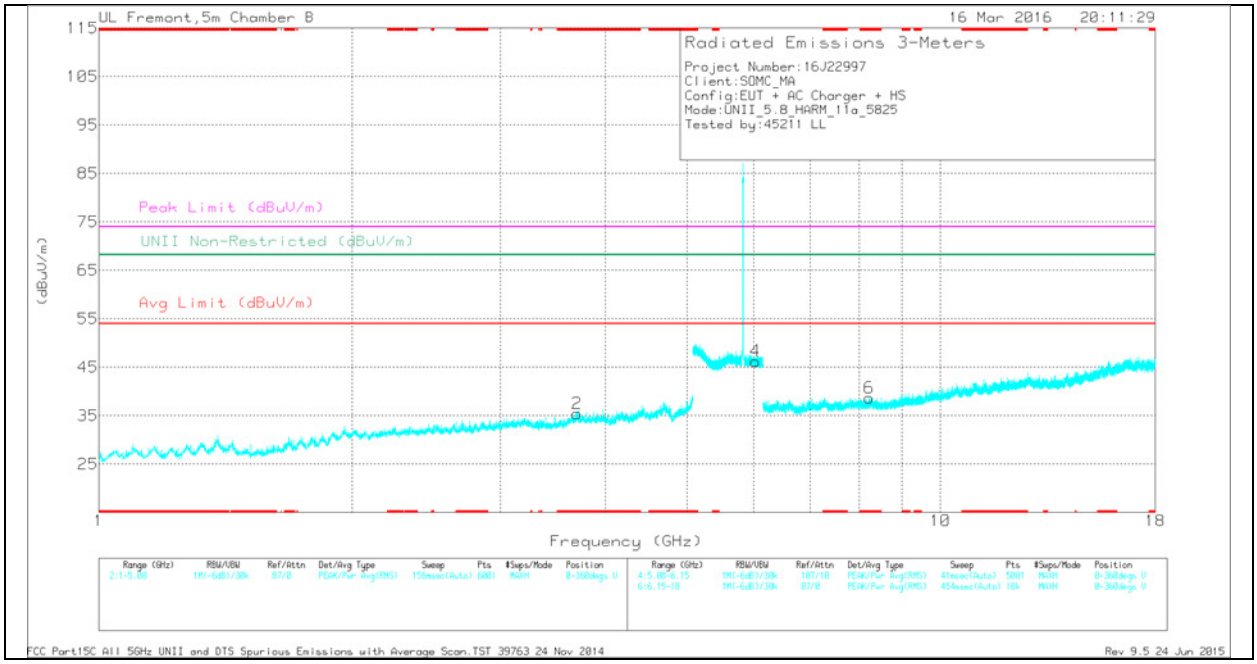
HIGH CHANNEL VERTICAL



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

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HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.334	35.88	Pk	29.1	-35.3	0	29.68	-	-	74	-44.32	-	-	0-360	102	H
2	* 3.7	35.07	Pk	33.3	-32.9	0	35.47	-	-	74	-38.53	-	-	0-360	200	V
5	* 11.68	29.22	Pk	38.3	-25.5	0	42.02	-	-	74	-31.98	-	-	0-360	101	H
6	* 8.228	31.93	Pk	35.8	-29.1	0	38.63	-	-	74	-35.37	-	-	0-360	199	V
3	5.182	34.21	Pk	34.3	-19.7	0	48.81	-	-	-	-	68.2	-19.39	0-360	101	H
4	6.028	32.18	Pk	35.5	-21.4	0	46.28	-	-	-	-	68.2	-21.92	0-360	199	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fl tr/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
* 1.337	43.71	PK-U	29.1	-35.3	0	37.51	-	-	74	-36.49	-	-	158	103	H
* 1.331	31.97	ADR	29.1	-35.4	0	25.67	54	-28.33	-	-	-	-	158	103	H
* 3.698	42.45	PK-U	33.3	-32.9	0	42.85	-	-	74	-31.15	-	-	106	200	V
* 3.701	30.93	ADR	33.3	-32.9	0	31.33	54	-22.67	-	-	-	-	106	200	V
* 11.679	36.79	PK-U	38.3	-25.5	0	49.59	-	-	74	-24.41	-	-	353	102	H
* 11.684	25.13	ADR	38.3	-25.6	0	37.83	54	-16.17	-	-	-	-	353	102	H
* 8.228	39.11	PK-U	35.8	-29	0	45.91	-	-	74	-28.09	-	-	233	198	V
* 8.226	27.95	ADR	35.8	-29.1	0	34.65	54	-19.35	-	-	-	-	233	198	V
5.181	41.85	PK-U	34.3	-19.7	0	56.45	-	-	-	-	68.2	-11.75	240	102	H
6.028	41.08	PK-U	35.5	-21.4	0	55.18	-	-	-	-	68.2	-13.02	277	198	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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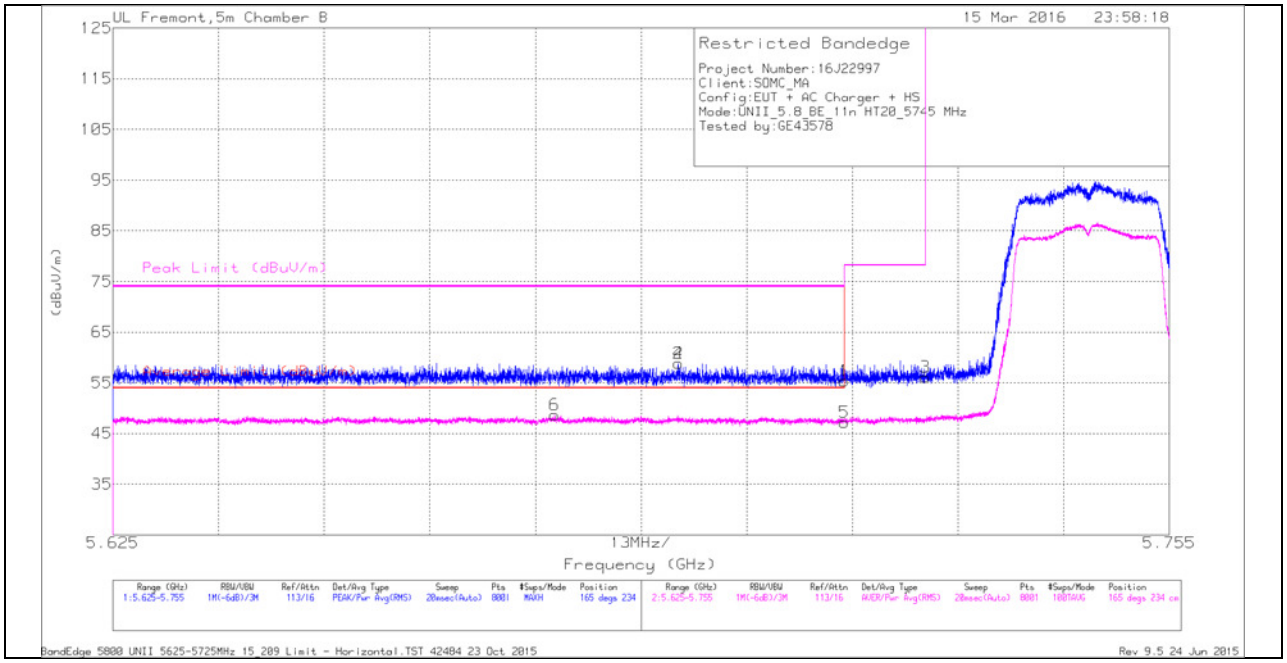
9.4.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.8 GHz BAND AUTHORIZED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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
6	5.679	35.2	RMS	34.8	-21.3	0	48.7	54	-5.3	-	-	165	234	H
2	5.695	45.35	Pk	34.8	-21.3	0	58.85	-	-	74	-15.15	165	234	H
4	5.695	45.35	Pk	34.8	-21.3	0	58.85	-	-	74	-15.15	165	234	H
1	5.715	42.03	Pk	34.9	-21.6	0	55.33	-	-	74	-18.67	165	234	H
5	5.715	33.94	RMS	34.9	-21.6	0	47.24	54	-6.76	-	-	165	234	H
3	5.725	42.91	Pk	34.9	-21.7	0	56.11	-	-	78.2	-22.09	165	234	H

Pk - Peak detector

RMS - RMS detection

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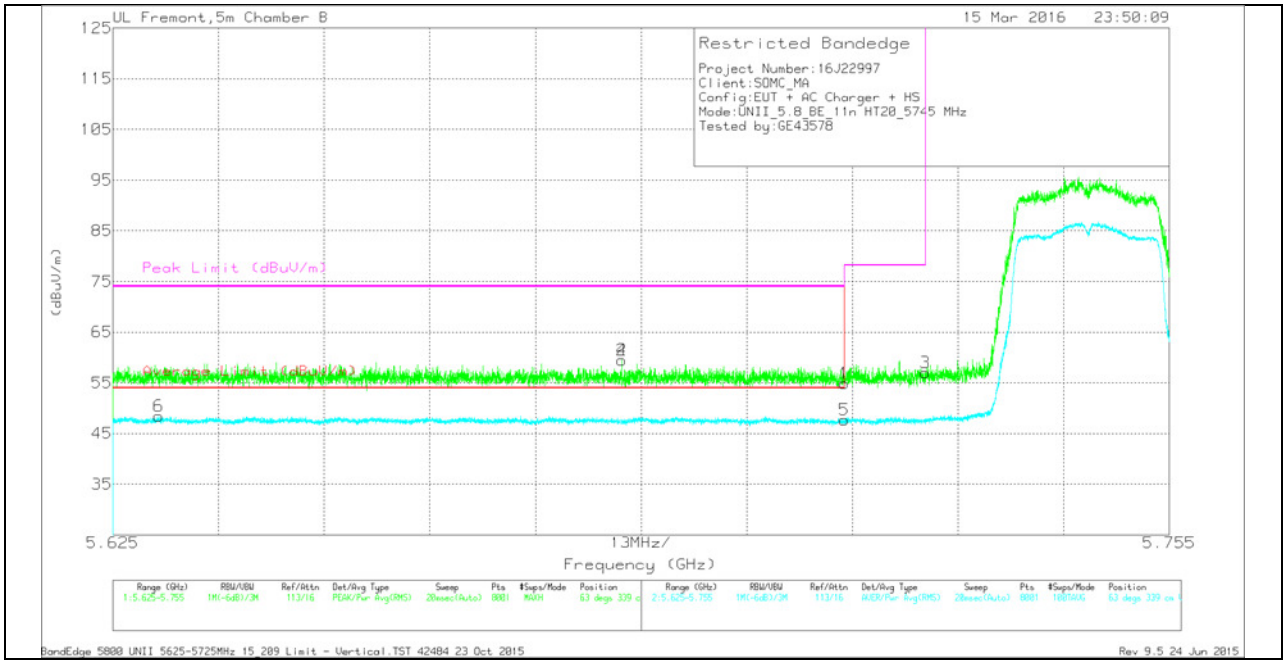
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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
6	5.631	34.99	RMS	34.7	-21.3	0	48.39	54	-5.61	-	-	63	339	V
2	5.688	46.35	Pk	34.8	-21.7	0	59.45	-	-	74	-14.55	63	339	V
4	5.688	46.35	Pk	34.8	-21.7	0	59.45	-	-	74	-14.55	63	339	V
1	5.715	41.6	Pk	34.9	-21.6	0	54.9	-	-	74	-19.1	63	339	V
5	5.715	34.38	RMS	34.9	-21.6	0	47.68	54	-6.32	-	-	63	339	V
3	5.725	43.82	Pk	34.9	-21.7	0	57.02	-	-	78.2	-21.18	63	339	V

Pk - Peak detector

RMS - RMS detection

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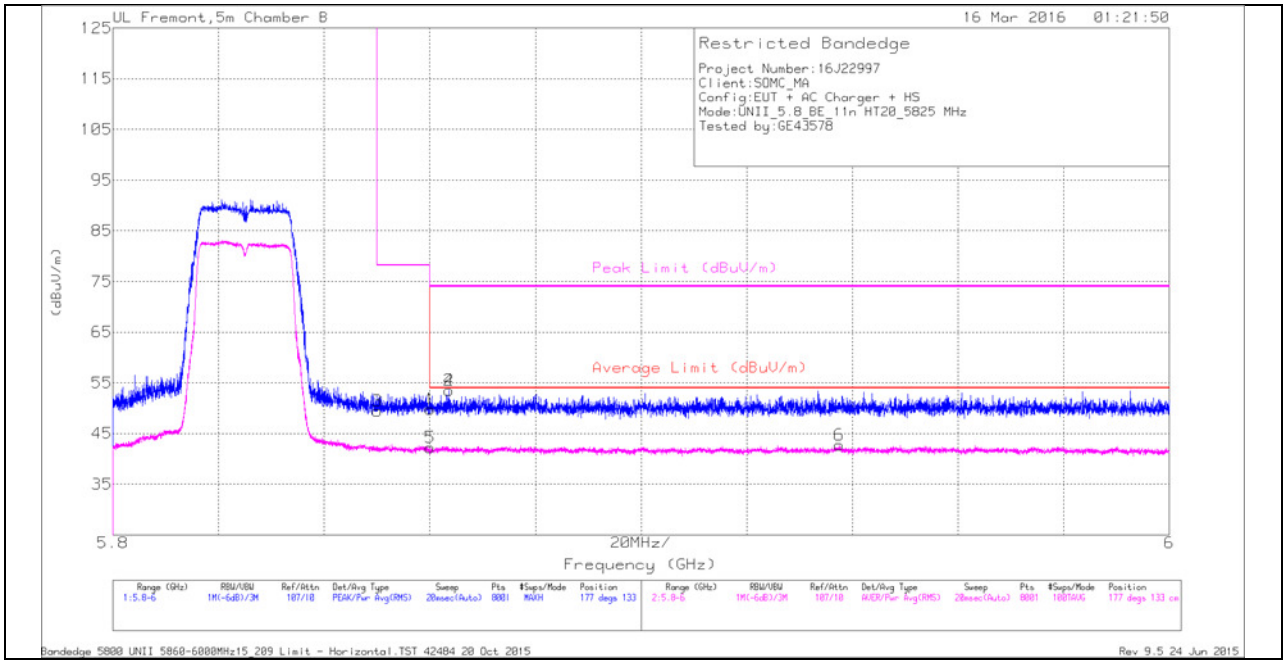
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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
3	5.85	35.93	Pk	35.1	-21.6	0	49.43	-	-	78.2	-28.77	177	133	H
1	5.86	36.06	Pk	35.2	-21.5	0	49.76	-	-	74	-24.24	177	133	H
5	5.86	28.53	RMS	35.2	-21.5	0	42.23	54	-11.77	-	-	177	133	H
2	5.864	39.61	Pk	35.2	-21.3	0	53.51	-	-	74	-20.49	177	133	H
4	5.864	39.61	Pk	35.2	-21.3	0	53.51	-	-	74	-20.49	177	133	H
6	5.937	28.49	RMS	35.4	-21.2	0	42.69	54	-11.31	-	-	177	133	H

Pk - Peak detector

RMS - RMS detection

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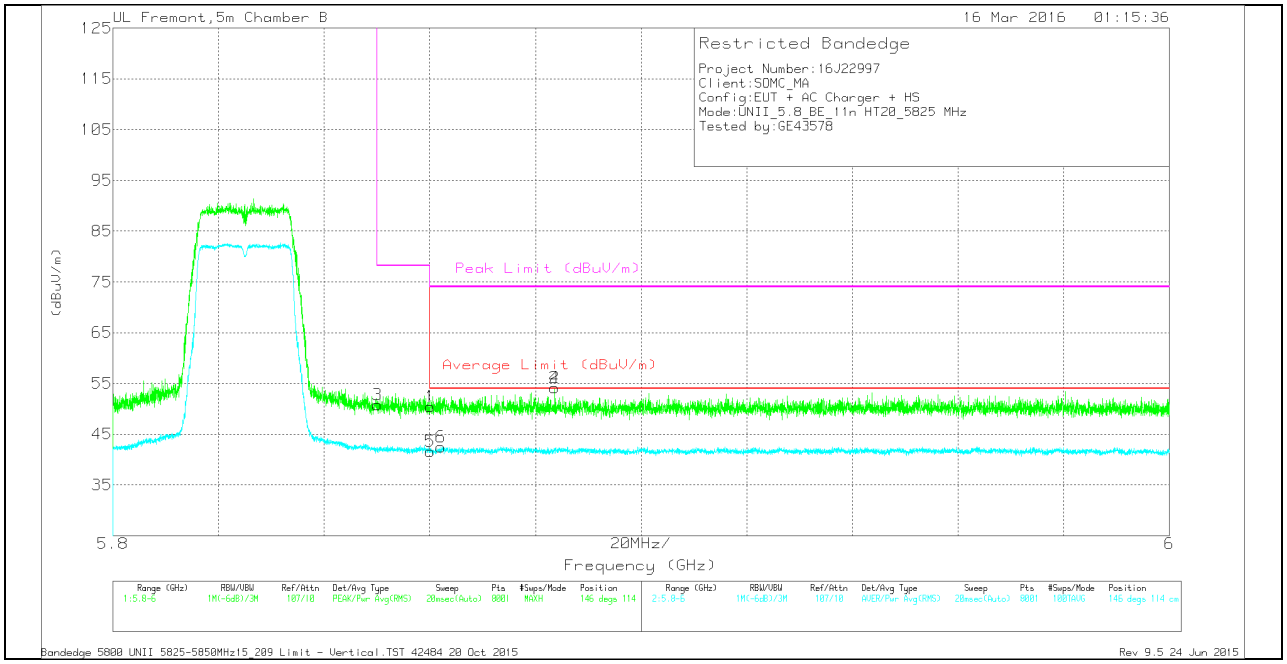
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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
3	5.85	37.32	Pk	35.1	-21.6	0	50.82	-	-	78.2	-27.38	146	114	V
1	5.86	36.75	Pk	35.2	-21.5	0	50.45	-	-	74	-23.55	146	114	V
5	5.86	27.86	RMS	35.2	-21.5	0	41.56	54	-12.44	-	-	146	114	V
6	5.862	28.71	RMS	35.2	-21.4	0	42.51	54	-11.49	-	-	146	114	V
2	5.884	40.21	Pk	35.3	-21.4	0	54.11	-	-	74	-19.89	146	114	V
4	5.884	40.21	Pk	35.3	-21.4	0	54.11	-	-	74	-19.89	146	114	V

Pk - Peak detector

RMS - RMS detection

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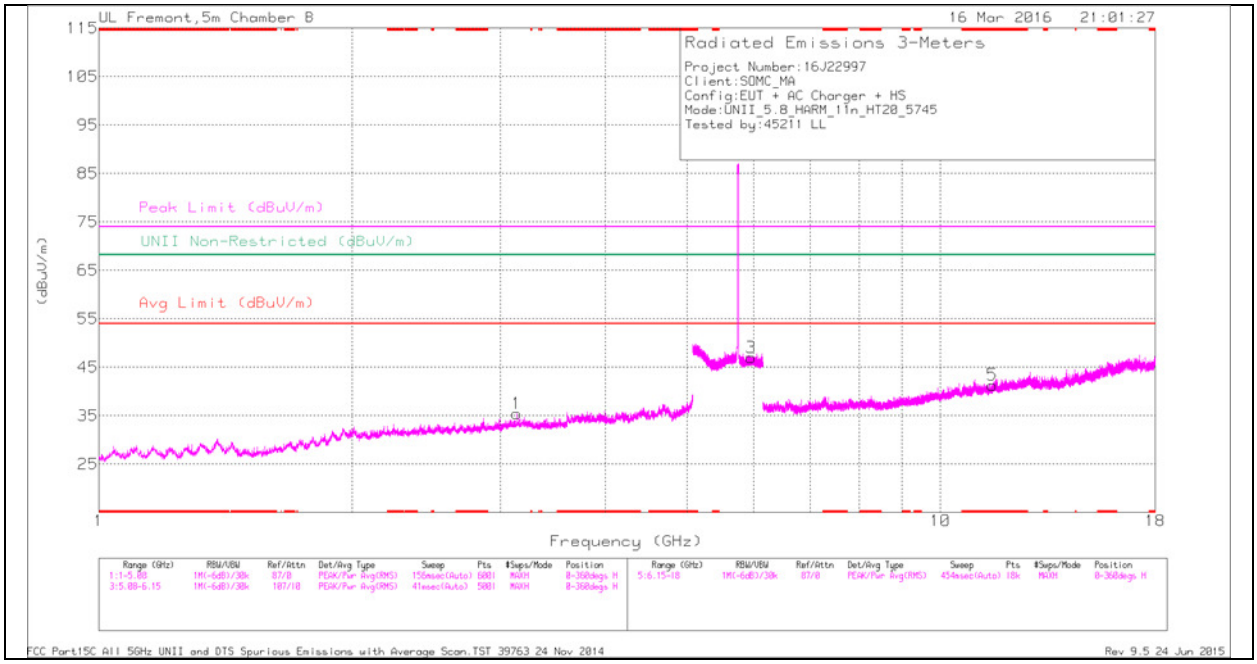
HARMONICS AND SPURIOUS EMISSIONS

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.

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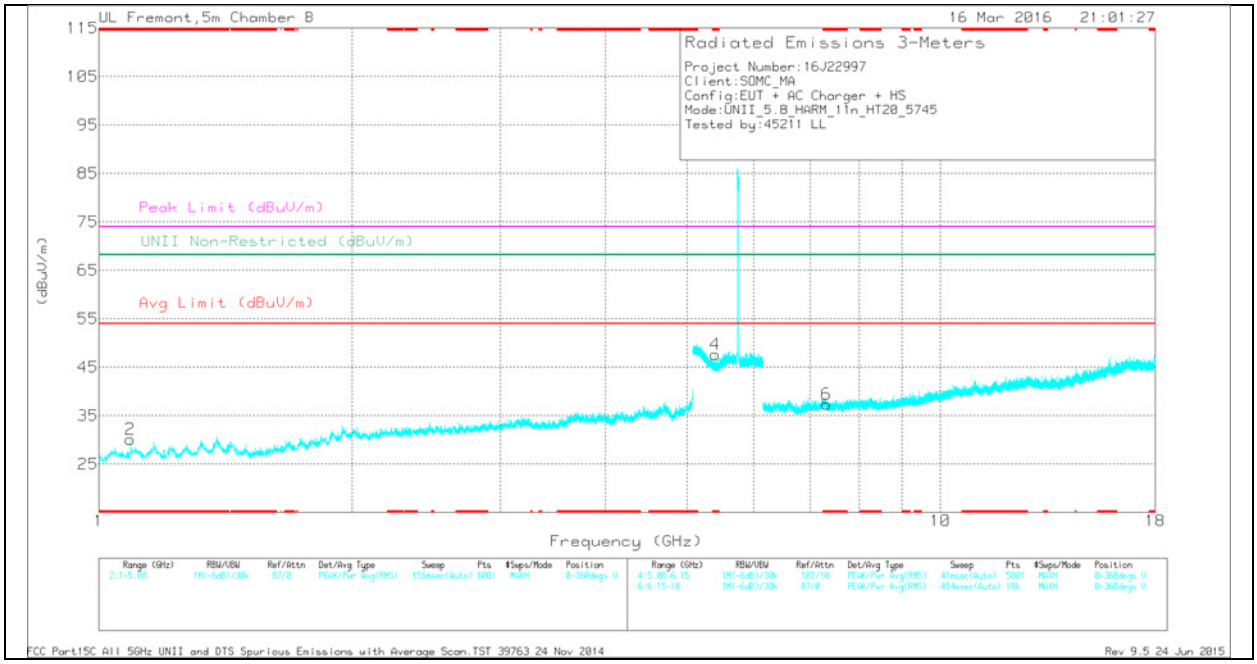
LOW CHANNEL VERTICAL



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

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.09	37.96	Pk	27.9	-35.7	0	30.16	-	-	74	-43.84	-	-	0-360	200	V
4	* 5.405	33.58	Pk	34.5	-20.4	0	47.68	-	-	74	-26.32	-	-	0-360	101	V
5	* 11.518	28.95	Pk	38.1	-25.7	0	41.35	-	-	74	-32.65	-	-	0-360	101	H
6	* 7.32	31.07	Pk	35.6	-29.3	0	37.37	-	-	74	-36.63	-	-	0-360	200	V
1	3.137	35.89	Pk	33.2	-33.7	0	35.39	-	-	-	-	68.2	-32.81	0-360	199	H
3	5.954	33.04	Pk	35.4	-21.4	0	47.04	-	-	-	-	68.2	-21.16	0-360	101	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fl tr/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
* 1.092	44.27	PK-U	27.9	-35.7	0	36.47	-	-	74	-37.53	-	-	270	199	V
* 1.093	32.33	ADR	27.9	-35.7	0	24.53	54	-29.47	-	-	-	-	270	199	V
* 5.407	40.13	PK-U	34.5	-20.5	0	54.13	-	-	74	-19.87	-	-	213	100	V
* 5.408	28.5	ADR	34.5	-20.8	0	42.2	54	-11.8	-	-	-	-	213	100	V
* 11.515	37.37	PK-U	38.1	-25.7	0	49.77	-	-	74	-24.23	-	-	168	100	H
* 11.518	25.09	ADR	38.1	-25.7	0	37.49	54	-16.51	-	-	-	-	168	100	H
* 7.324	39.39	PK-U	35.6	-29.4	0	45.59	-	-	74	-28.41	-	-	43	200	V
* 7.324	28.17	ADR	35.6	-29.4	0	34.37	54	-19.63	-	-	-	-	43	200	V
3.135	43.65	PK-U	33.2	-33.7	0	43.15	-	-	-	-	68.2	-25.05	284	199	H
5.951	41.12	PK-U	35.4	-21.6	0	54.92	-	-	-	-	68.2	-13.28	110	102	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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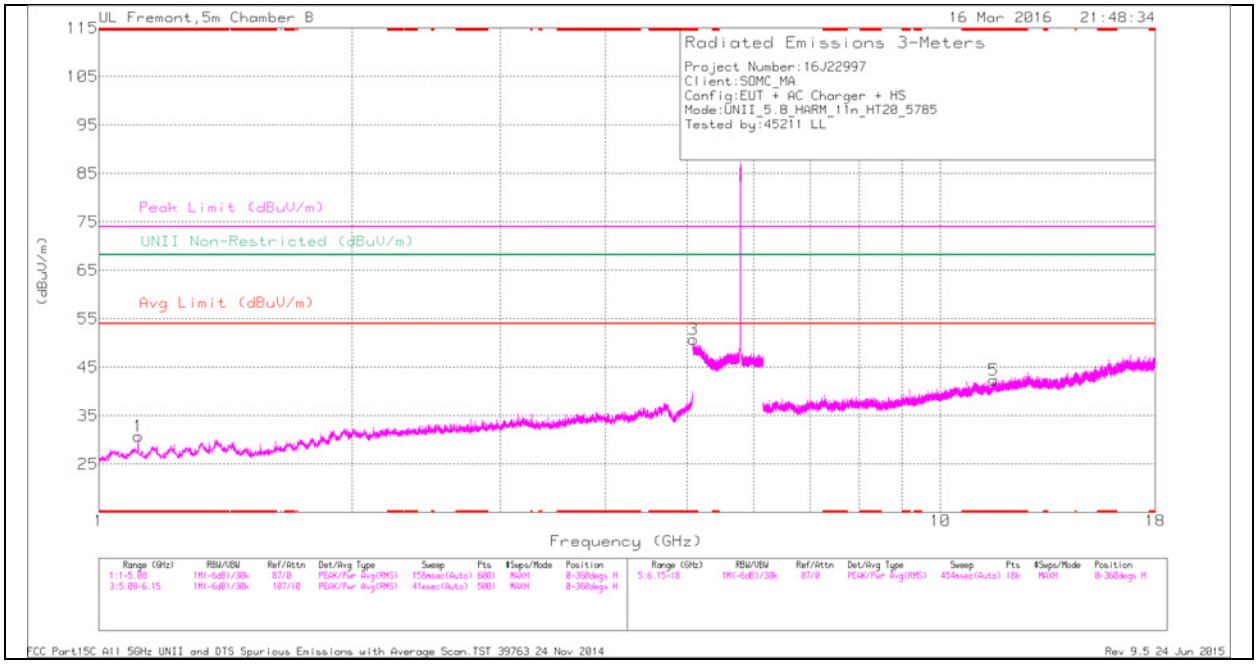
MID CHANNEL HORIZONTAL



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

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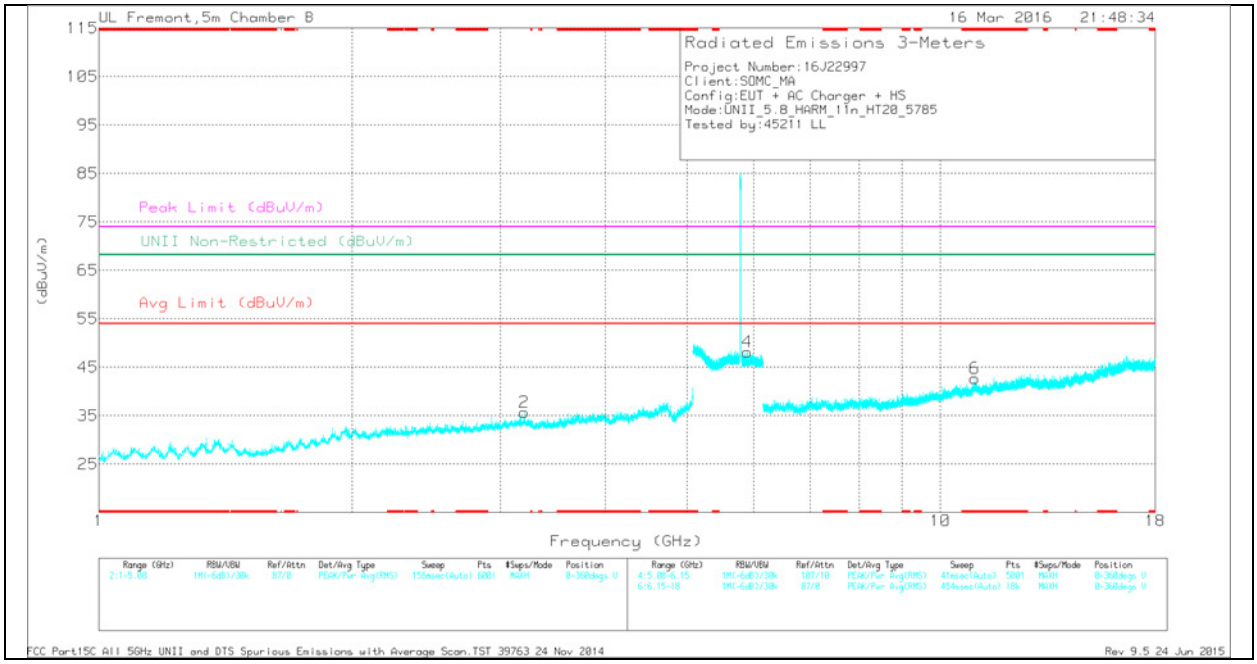
MID CHANNEL VERTICAL



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

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MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.114	38.23	Pk	28	-35.5	0	30.73	-	-	74	-43.27	-	-	0-360	199	H
3	* 5.088	36.06	Pk	34.1	-19.4	0	50.76	-	-	74	-23.24	-	-	0-360	199	H
5	* 11.577	28.97	Pk	38.2	-24.8	0	42.37	-	-	74	-31.63	-	-	0-360	200	H
6	* 10.983	29.84	Pk	37.9	-25	0	42.74	-	-	74	-31.26	-	-	0-360	200	V
2	3.2	35.32	Pk	33.2	-32.8	0	35.72	-	-	-	-	68.2	-32.48	0-360	101	V
4	5.897	34.43	Pk	35.3	-21.6	0	48.13	-	-	-	-	68.2	-20.07	0-360	199	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fl tr/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
* 1.112	44.29	PK-U	28	-35.5	0	36.79	-	-	74	-37.21	-	-	202	199	H
* 1.111	32	ADR	28	-35.5	0	24.5	54	-29.5	-	-	-	-	202	199	H
* 5.087	42.13	PK-U	34.1	-19.7	0	56.53	-	-	74	-17.47	-	-	147	198	H
* 5.09	30.72	ADR	34.1	-19.5	0	45.32	54	-8.68	-	-	-	-	147	198	H
* 11.575	37.18	PK-U	38.2	-24.8	0	50.58	-	-	74	-23.42	-	-	142	198	H
* 11.575	24.84	ADR	38.2	-24.8	0	38.24	54	-15.76	-	-	-	-	142	198	H
* 10.981	37.1	PK-U	37.9	-25.1	0	49.9	-	-	74	-24.1	-	-	296	198	V
* 10.982	25.23	ADR	37.9	-25.1	0	38.03	54	-15.97	-	-	-	-	296	198	V
3.2	41.88	PK-U	33.2	-32.8	0	42.28	-	-	-	-	68.2	-25.92	44	102	V
5.896	41.43	PK-U	35.3	-21.5	0	55.23	-	-	-	-	68.2	-12.97	108	198	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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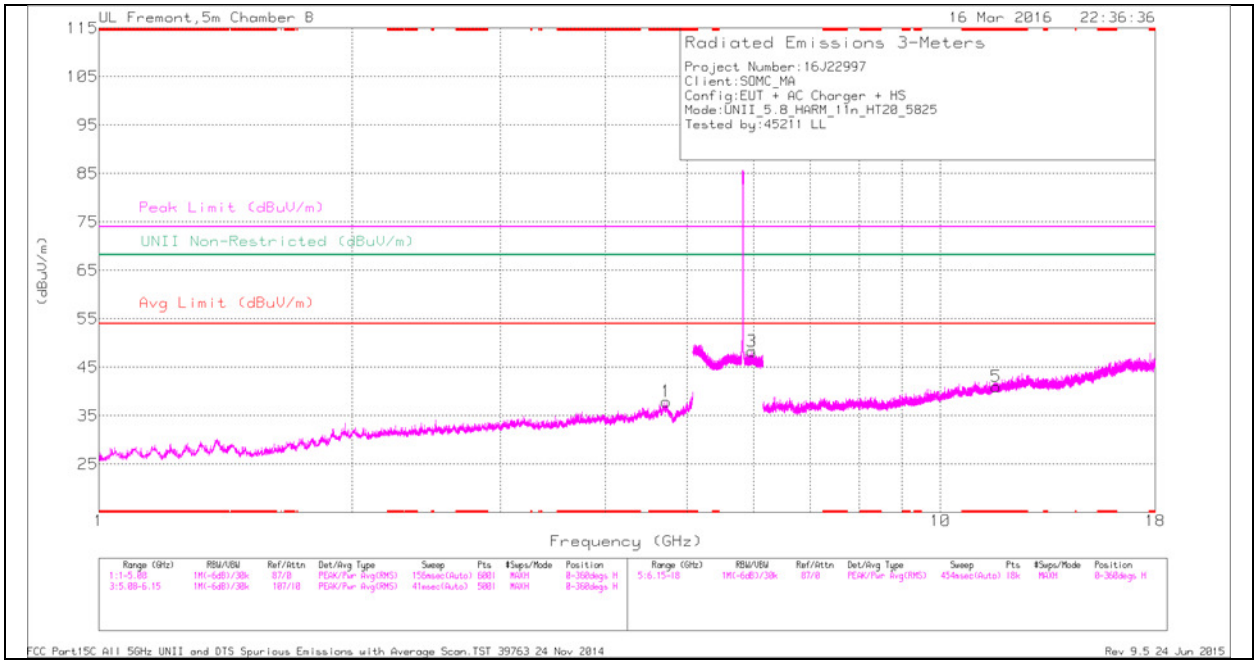
HIGH CHANNEL HORIZONTAL



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

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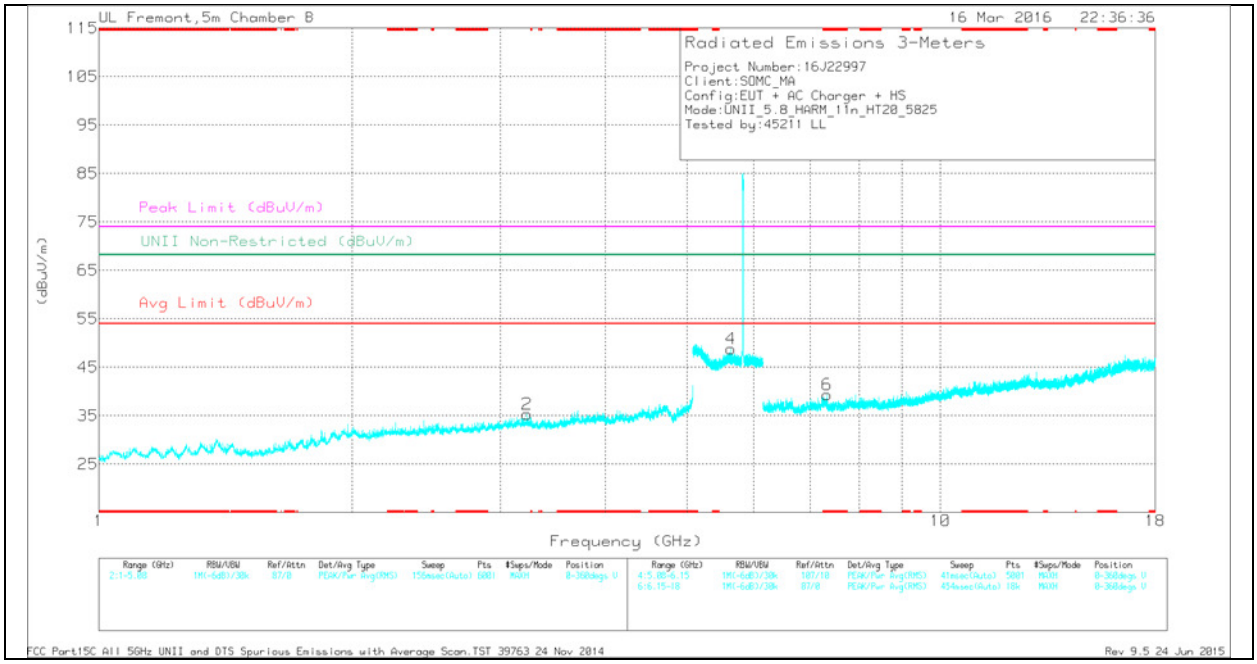
HIGH CHANNEL VERTICAL



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

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HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.722	35.47	Pk	34.1	-31.6	0	37.97	-	-	74	-36.03	-	-	0-360	101	H
5	* 11.65	27.94	Pk	38.2	-25.1	0	41.04	-	-	74	-32.96	-	-	0-360	101	H
6	* 7.333	33.46	Pk	35.6	-29.7	0	39.36	-	-	74	-34.64	-	-	0-360	101	V
2	3.227	35.07	Pk	33	-32.8	0	35.27	-	-	-	-	68.2	-32.93	0-360	101	V
4	5.642	35.47	Pk	34.7	-21.3	0	48.87	-	-	-	-	68.2	-19.33	0-360	200	V
3	5.972	34.46	Pk	35.4	-21.6	0	48.26	-	-	-	-	68.2	-19.94	0-360	101	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fl tr/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
* 4.721	42.59	PK-U	34.1	-31.6	0	45.09	-	-	74	-28.91	-	-	176	101	H
* 4.726	31.17	ADR	34.1	-31.5	0	33.77	54	-20.23	-	-	-	-	176	101	H
* 11.651	36.84	PK-U	38.2	-25.2	0	49.84	-	-	74	-24.16	-	-	226	102	H
* 11.654	24.94	ADR	38.2	-25.3	0	37.84	54	-16.16	-	-	-	-	226	102	H
* 7.335	40.61	PK-U	35.6	-29.8	0	46.41	-	-	74	-27.59	-	-	102	102	V
* 7.337	28.44	ADR	35.6	-29.8	0	34.24	54	-19.76	-	-	-	-	102	102	V
3.231	41.9	PK-U	33	-32.9	0	42	-	-	-	-	68.2	-26.2	19	101	V
5.64	41.99	PK-U	34.7	-21.6	0	55.09	-	-	-	-	68.2	-13.11	21	200	V
5.968	41.12	PK-U	35.4	-21.3	0	55.22	-	-	-	-	68.2	-12.98	360	101	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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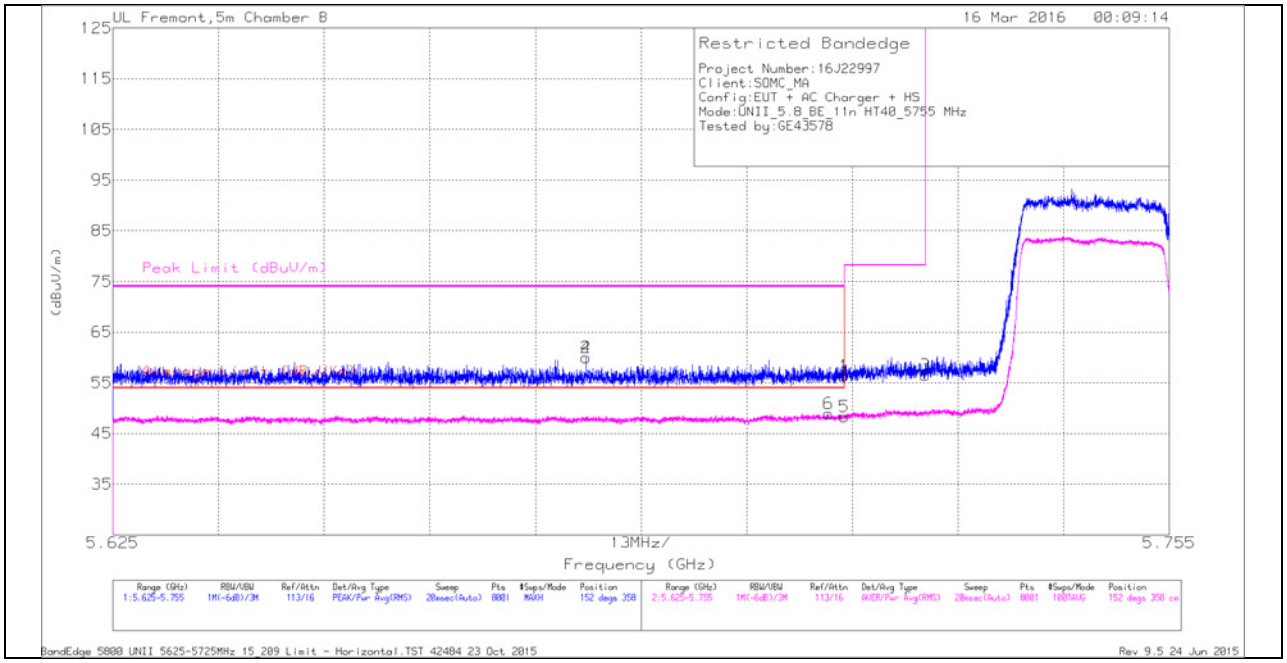
9.4.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.8 GHz BAND AUTHORIZED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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	5.683	46.61	Pk	34.8	-21.4	0	60.01	-	-	74	-13.99	152	358	H
4	5.683	46.61	Pk	34.8	-21.4	0	60.01	-	-	74	-13.99	152	358	H
6	5.713	35.7	RMS	34.8	-21.7	.12	48.92	54	-5.08	-	-	152	358	H
1	5.715	43.03	Pk	34.9	-21.6	0	56.33	-	-	74	-17.67	152	358	H
5	5.715	34.91	RMS	34.9	-21.6	.12	48.33	54	-5.67	-	-	152	358	H
3	5.725	43.3	Pk	34.9	-21.7	0	56.5	-	-	78.2	-21.7	152	358	H

Pk - Peak detector

RMS - RMS detection

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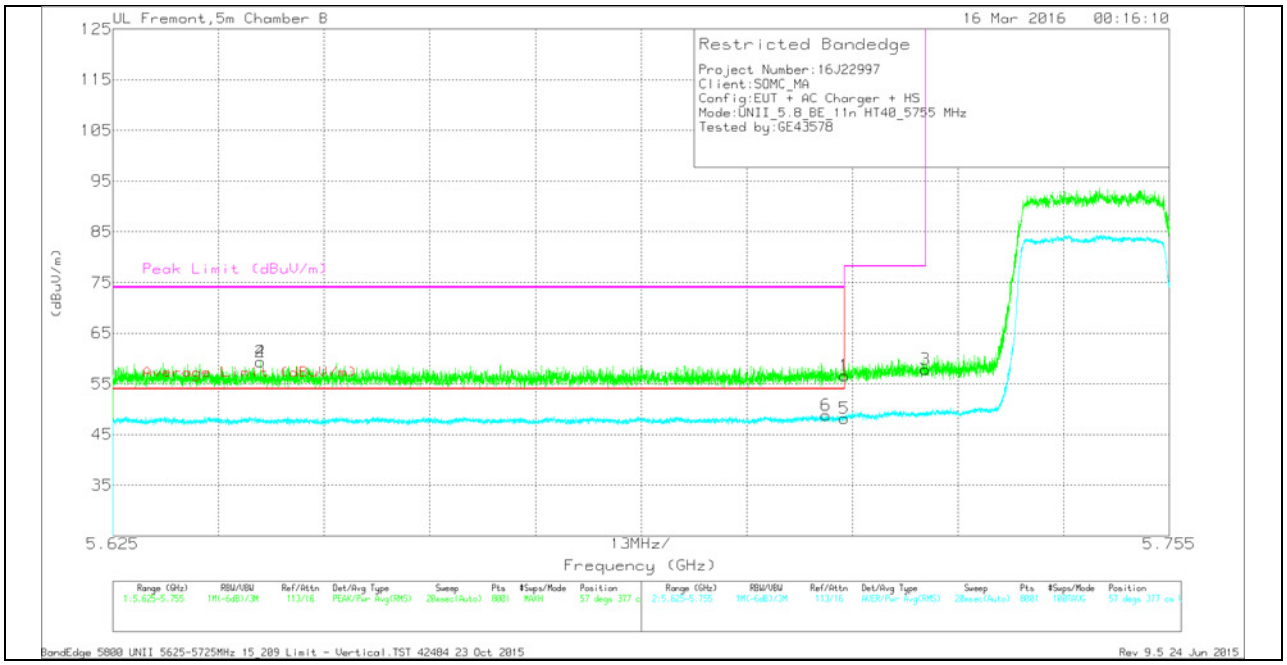
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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	5.643	46.03	Pk	34.7	-21.4	0	59.33	-	-	74	-14.67	57	377	V
4	5.643	46.03	Pk	34.7	-21.4	0	59.33	-	-	74	-14.67	57	377	V
6	5.713	35.57	RMS	34.8	-21.7	.12	48.79	54	-5.21	-	-	57	377	V
1	5.715	43.28	Pk	34.9	-21.6	0	56.58	-	-	74	-17.42	57	377	V
5	5.715	34.76	RMS	34.9	-21.6	.12	48.18	54	-5.82	-	-	57	377	V
3	5.725	44.67	Pk	34.9	-21.7	0	57.87	-	-	78.2	-20.33	57	377	V

Pk - Peak detector

RMS - RMS detection

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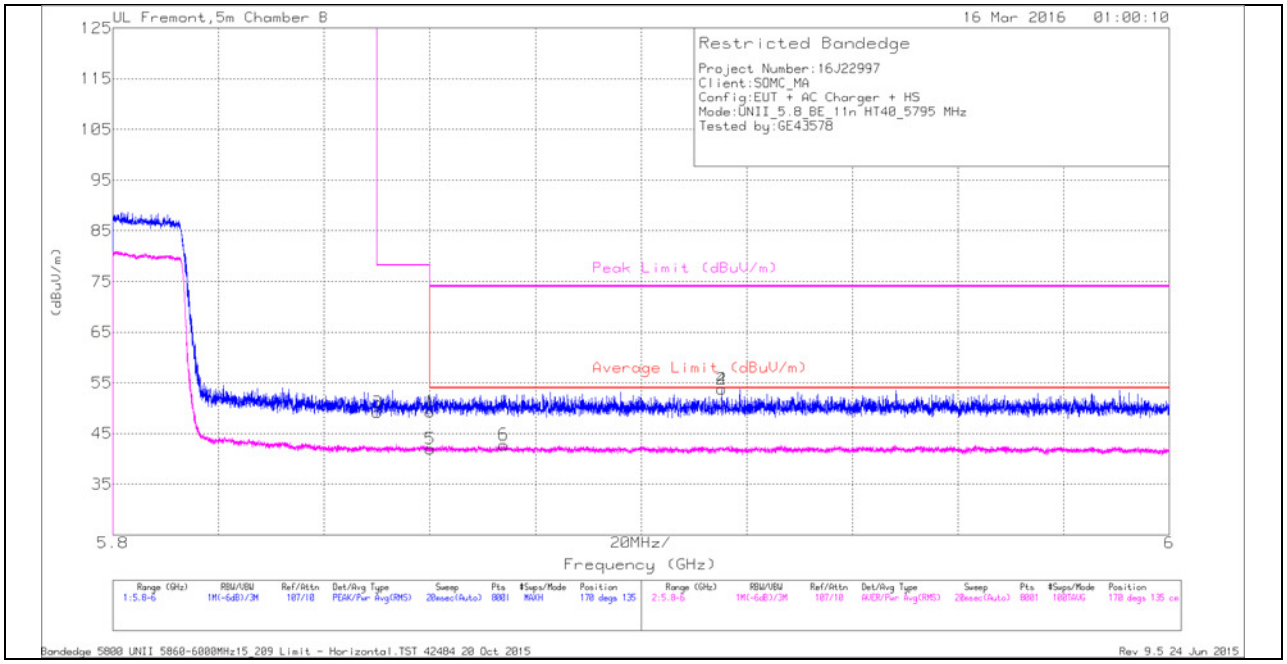
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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
3	5.85	35.73	Pk	35.1	-21.6	0	49.23	-	-	78.2	-28.97	170	135	H
1	5.86	35.59	Pk	35.2	-21.5	0	49.29	-	-	74	-24.71	170	135	H
5	5.86	28.13	RMS	35.2	-21.5	.12	41.95	54	-12.05	-	-	170	135	H
6	5.874	28.66	RMS	35.2	-21.2	.12	42.78	54	-11.22	-	-	170	135	H
2	5.915	39.81	Pk	35.3	-21.3	0	53.81	-	-	74	-20.19	170	135	H
4	5.915	39.81	Pk	35.3	-21.3	0	53.81	-	-	74	-20.19	170	135	H

Pk - Peak detector

RMS - RMS detection

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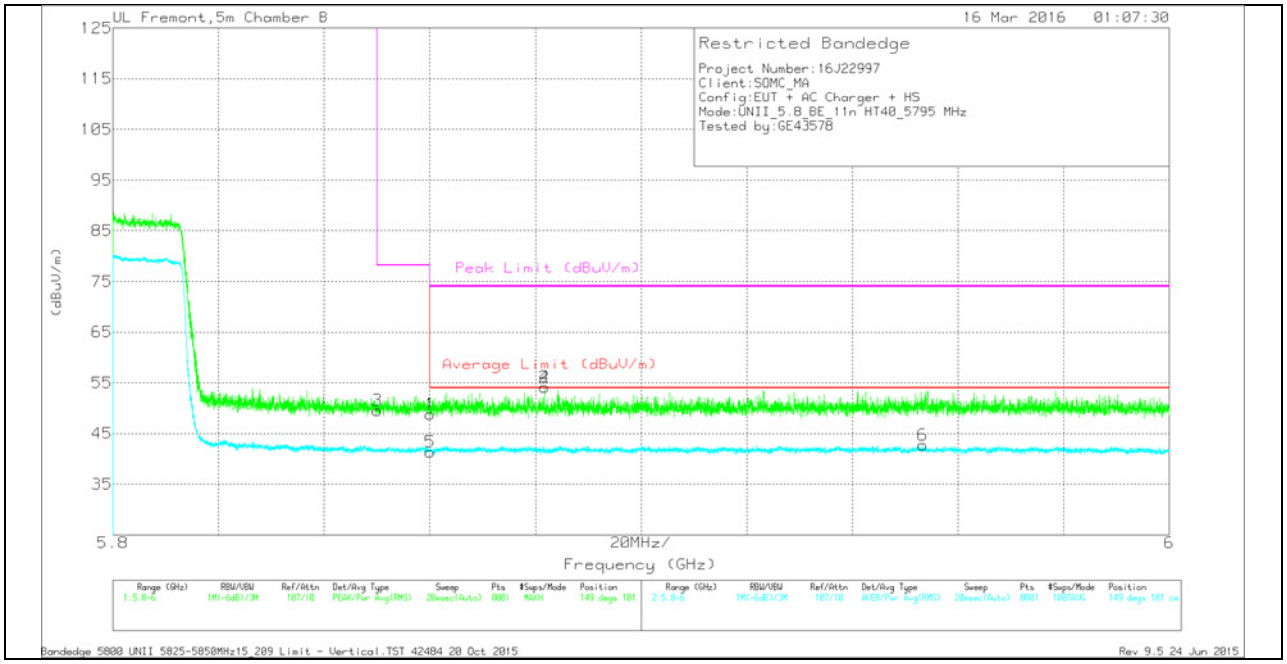
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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
3	5.85	36	Pk	35.1	-21.6	0	49.5	-	-	78.2	-28.7	149	101	V
1	5.86	35.07	Pk	35.2	-21.5	0	48.77	-	-	74	-25.23	149	101	V
5	5.86	27.5	RMS	35.2	-21.5	.12	41.32	54	-12.68	-	-	149	101	V
2	5.882	40.44	Pk	35.3	-21.6	0	54.14	-	-	74	-19.86	149	101	V
4	5.882	40.44	Pk	35.3	-21.6	0	54.14	-	-	74	-19.86	149	101	V
6	5.953	28.49	RMS	35.4	-21.3	.12	42.71	54	-11.29	-	-	149	101	V

Pk - Peak detector

RMS - RMS detection

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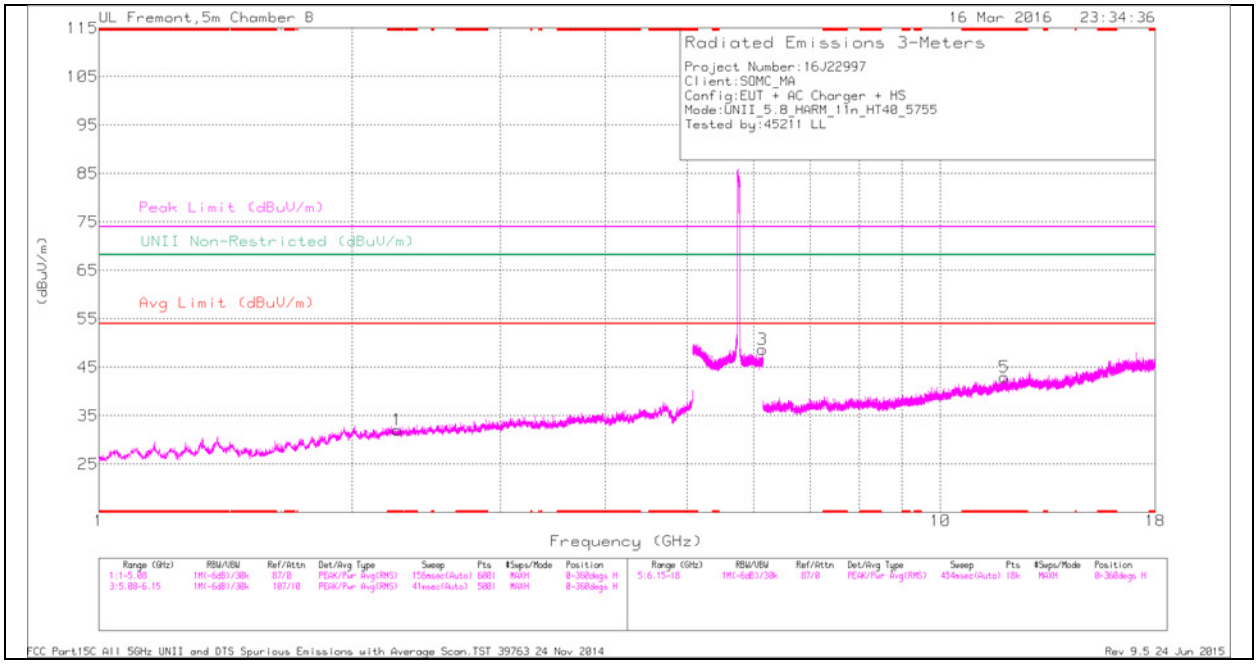
HARMONICS AND SPURIOUS EMISSIONS

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.

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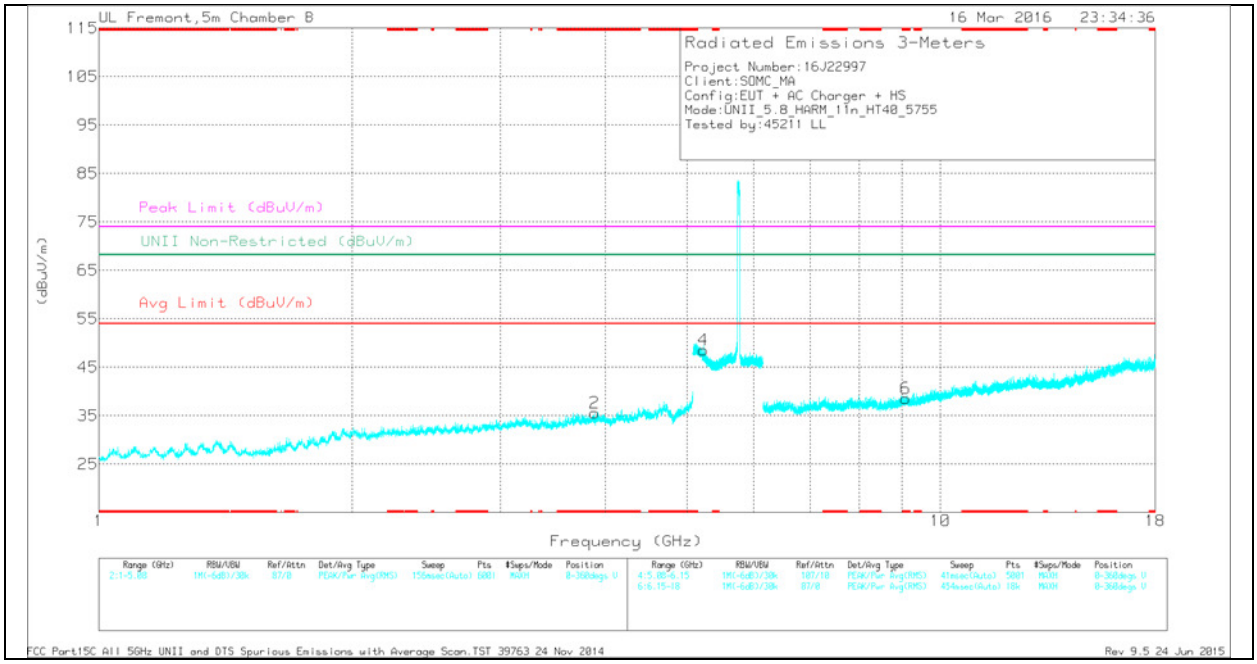
LOW CHANNEL VERTICAL



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

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.264	34.27	Pk	31.8	-34	0	32.07	-	-	74	-41.93	-	-	0-360	102	H
2	* 3.879	35	Pk	33.4	-32.8	0	35.6	-	-	74	-38.4	-	-	0-360	200	V
5	* 11.92	29.72	Pk	38.6	-25.3	0	43.02	-	-	74	-30.98	-	-	0-360	101	H
6	* 9.093	30.43	Pk	36.1	-28	0	38.53	-	-	74	-35.47	-	-	0-360	200	V
4	5.227	33.8	Pk	34.4	-19.7	0	48.5	-	-	-	-	68.2	-19.7	0-360	199	V
3	6.145	34.36	Pk	35.5	-21.2	0	48.66	-	-	-	-	68.2	-19.54	0-360	101	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fl tr/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
* 2.266	42.38	PK-U	31.8	-34	0	40.18	-	-	74	-33.82	-	-	73	101	H
* 2.263	31.14	ADR	31.8	-34	.12	29.06	54	-24.94	-	-	-	-	73	101	H
* 3.88	42.88	PK-U	33.4	-32.8	0	43.48	-	-	74	-30.52	-	-	111	200	V
* 3.878	31.44	ADR	33.4	-32.8	.12	32.16	54	-21.84	-	-	-	-	111	200	V
* 11.918	36.45	PK-U	38.6	-25.3	0	49.75	-	-	74	-24.25	-	-	86	103	H
* 11.922	25.52	ADR	38.6	-25.3	.12	38.94	54	-15.06	-	-	-	-	86	103	H
* 9.092	38.64	PK-U	36.1	-28	0	46.74	-	-	74	-27.26	-	-	103	200	V
* 9.092	27.59	ADR	36.1	-28	.12	35.81	54	-18.19	-	-	-	-	103	200	V
5.229	41.47	PK-U	34.4	-20.1	0	55.77	-	-	-	-	68.2	-12.43	273	198	V
6.144	40.74	PK-U	35.5	-20.9	0	55.34	-	-	-	-	68.2	-12.86	151	102	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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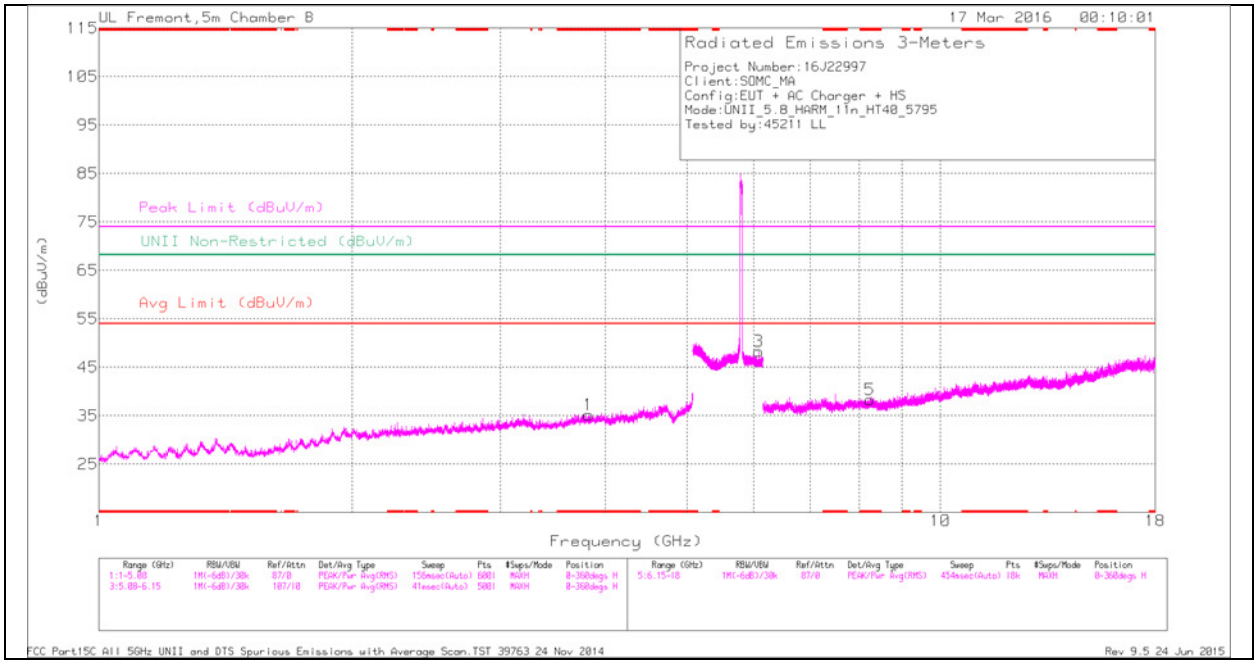
HIGH CHANNEL HORIZONTAL



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

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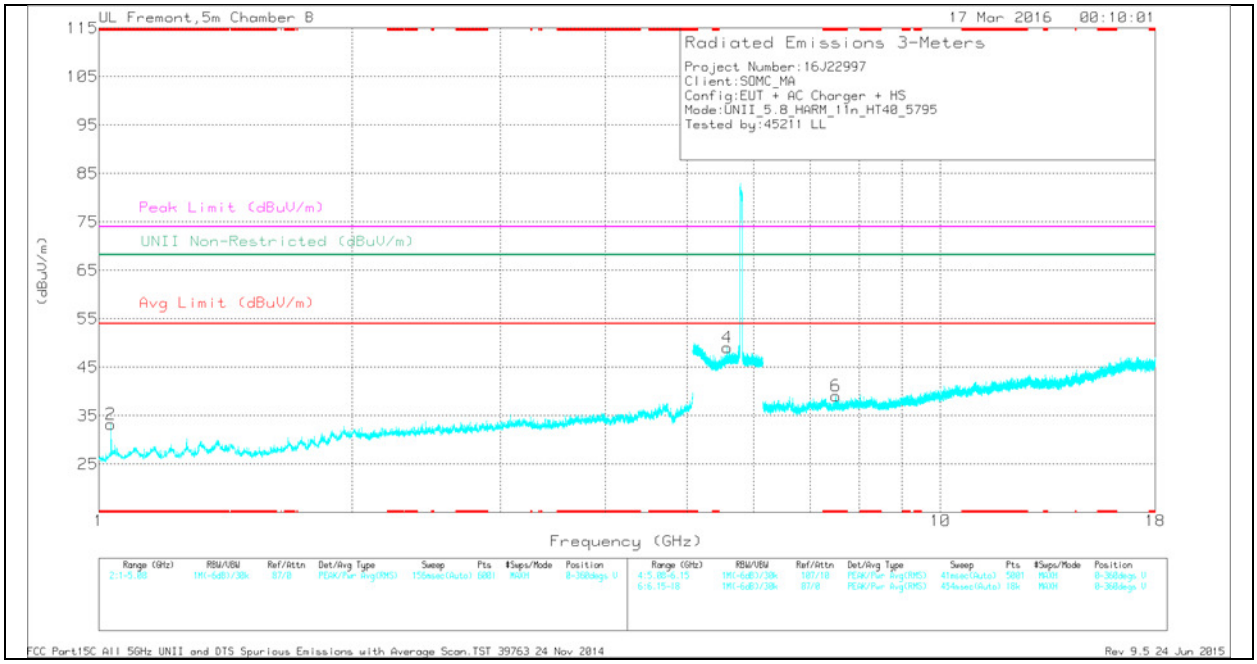
HIGH CHANNEL VERTICAL



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

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HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.819	34.83	Pk	33.4	-33	0	35.23	-	-	74	-38.77	-	-	0-360	199	H
2	* 1.033	41.53	Pk	27.8	-36.1	0	33.23	-	-	74	-40.77	-	-	0-360	199	V
5	* 8.248	31.59	Pk	35.7	-29	0	38.29	-	-	74	-35.71	-	-	0-360	101	H
6	* 7.517	32.68	Pk	35.6	-29.2	0	39.08	-	-	74	-34.92	-	-	0-360	200	V
4	5.583	35.87	Pk	34.6	-21.4	0	49.07	-	-	-	-	68.2	-19.13	0-360	101	V
3	6.08	33.99	Pk	35.5	-21.2	0	48.29	-	-	-	-	68.2	-19.91	0-360	199	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fl tr/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
* 3.821	43.19	PK-U	33.4	-33	0	43.59	-	-	74	-30.41	-	-	348	198	H
* 3.821	31.46	ADR	33.4	-33	.12	31.98	54	-22.02	-	-	-	-	348	198	H
* 1.035	44.51	PK-U	27.8	-36.1	0	36.21	-	-	74	-37.79	-	-	319	198	V
* 1.035	33.12	ADR	27.8	-36.1	.12	24.94	54	-29.06	-	-	-	-	319	198	V
* 8.25	39.92	PK-U	35.7	-29	0	46.62	-	-	74	-27.38	-	-	255	102	H
* 8.246	28.63	ADR	35.7	-29	.12	35.45	54	-18.55	-	-	-	-	255	102	H
* 7.518	39.76	PK-U	35.6	-29.2	0	46.16	-	-	74	-27.84	-	-	313	199	V
* 7.517	28.72	ADR	35.6	-29.2	.12	35.24	54	-18.76	-	-	-	-	313	199	V
5.584	42.83	PK-U	34.6	-21.2	0	56.23	-	-	-	-	68.2	-11.97	238	102	V
6.08	40.62	PK-U	35.5	-21	0	55.12	-	-	-	-	68.2	-13.08	279	198	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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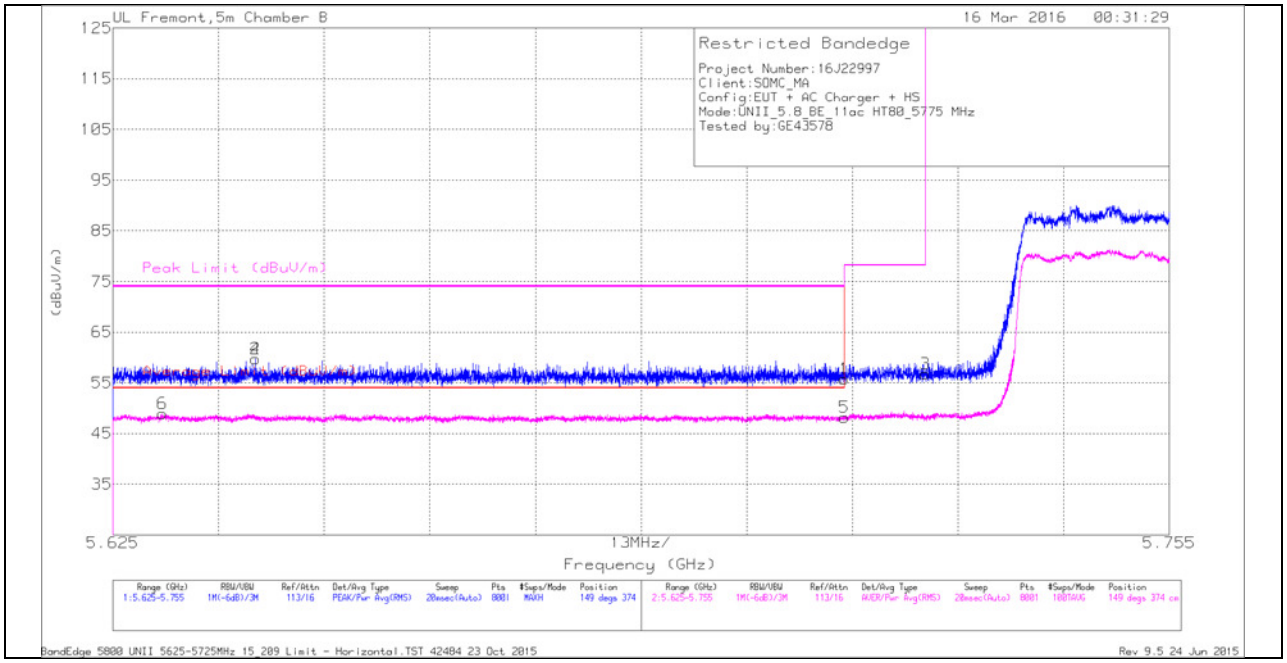
9.4.4. TX ABOVE 1 GHz 802.11ac VHT80 MODE IN THE 5.8 GHz BAND AUTHORIZED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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
6	5.631	35.23	RMS	34.7	-21.2	.25	48.98	54	-5.02	-	-	149	374	H
2	5.643	46.35	Pk	34.7	-21.3	0	59.75	-	-	74	-14.25	149	374	H
4	5.643	46.35	Pk	34.7	-21.3	0	59.75	-	-	74	-14.25	149	374	H
1	5.715	42.42	Pk	34.9	-21.6	0	55.72	-	-	74	-18.28	149	374	H
5	5.715	34.6	RMS	34.9	-21.6	.25	48.15	54	-5.85	-	-	149	374	H
3	5.725	43.54	Pk	34.9	-21.7	0	56.74	-	-	78.2	-21.46	149	374	H

Pk - Peak detector

RMS - RMS detection

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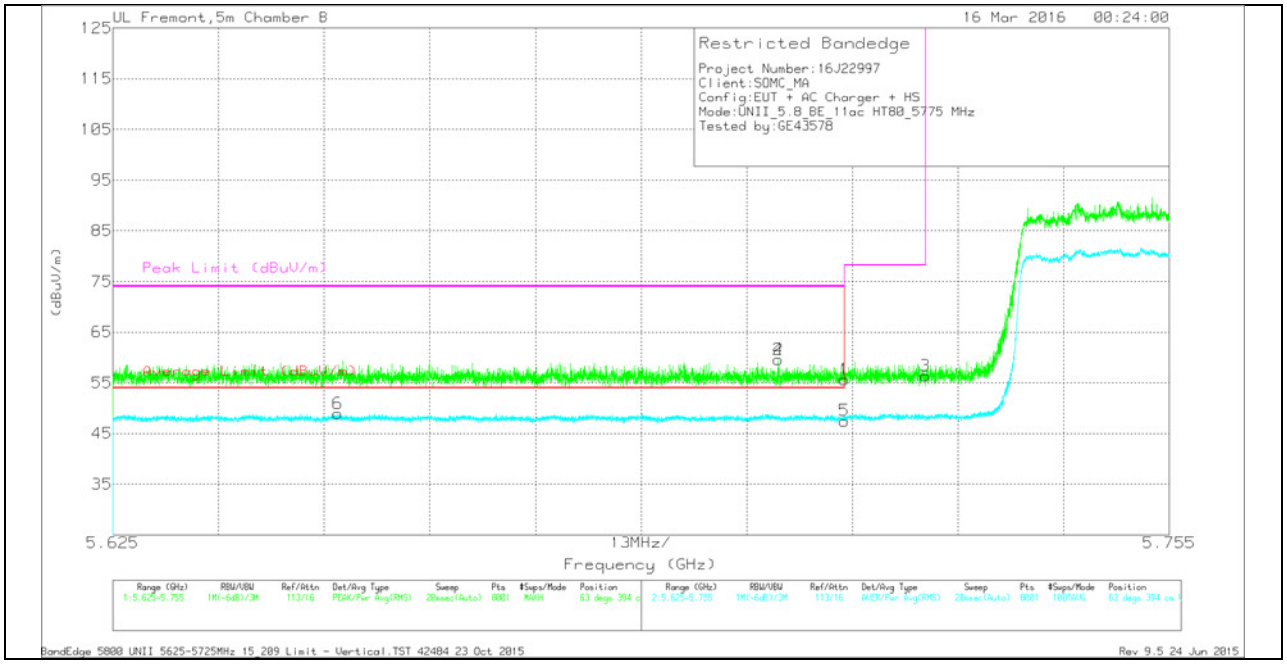
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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
6	5.653	35.23	RMS	34.7	-21.2	.25	48.98	54	-5.02	-	-	63	394	V
2	5.707	46.39	Pk	34.8	-21.6	0	59.59	-	-	74	-14.41	63	394	V
4	5.707	46.39	Pk	34.8	-21.6	0	59.59	-	-	74	-14.41	63	394	V
1	5.715	42.37	Pk	34.9	-21.6	0	55.67	-	-	74	-18.33	63	394	V
5	5.715	33.95	RMS	34.9	-21.6	.25	47.5	54	-6.5	-	-	63	394	V
3	5.725	43.22	Pk	34.9	-21.7	0	56.42	-	-	78.2	-21.78	63	394	V

Pk - Peak detector

RMS - RMS detection

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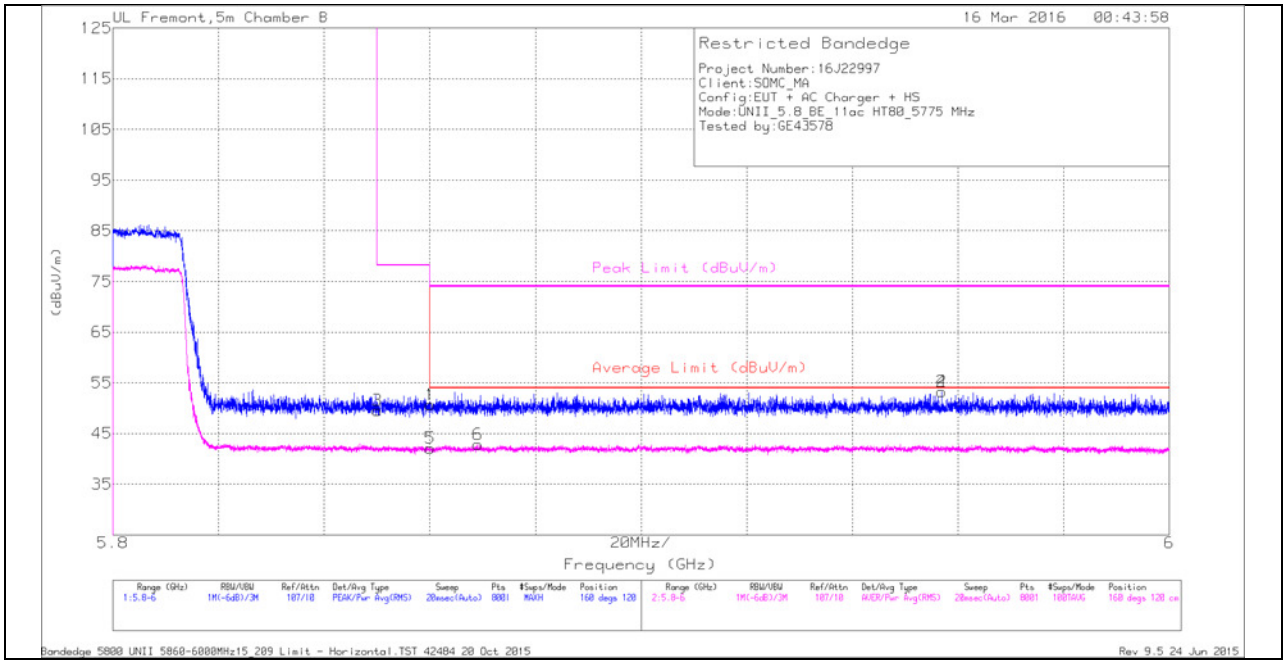
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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
3	5.85	36.06	Pk	35.1	-21.6	0	49.56	-	-	78.2	-28.64	160	120	H
1	5.86	37	Pk	35.2	-21.5	0	50.7	-	-	74	-23.3	160	120	H
5	5.86	28.1	RMS	35.2	-21.5	.25	42.05	54	-11.95	-	-	160	120	H
6	5.869	28.71	RMS	35.2	-21.3	.25	42.86	54	-11.14	-	-	160	120	H
2	5.957	39.31	Pk	35.4	-21.4	0	53.31	-	-	74	-20.69	160	120	H
4	5.957	39.31	Pk	35.4	-21.4	0	53.31	-	-	74	-20.69	160	120	H

Pk - Peak detector

RMS - RMS detection

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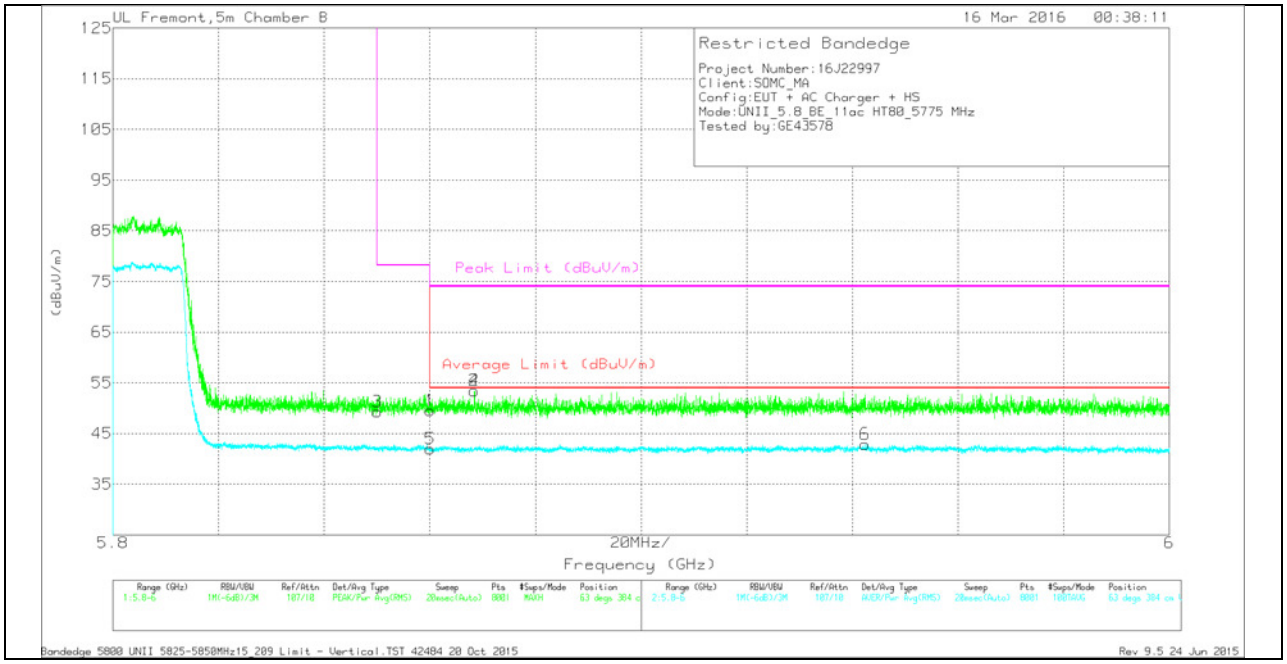
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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
3	5.85	35.75	Pk	35.1	-21.6	0	49.25	-	-	78.2	-28.95	63	384	V
1	5.86	35.85	Pk	35.2	-21.5	0	49.55	-	-	74	-24.45	63	384	V
5	5.86	27.98	RMS	35.2	-21.5	.25	41.93	54	-12.07	-	-	63	384	V
2	5.868	39.66	Pk	35.2	-21.4	0	53.46	-	-	74	-20.54	63	384	V
4	5.868	39.66	Pk	35.2	-21.4	0	53.46	-	-	74	-20.54	63	384	V
6	5.942	28.55	RMS	35.4	-21.3	.25	42.9	54	-11.1	-	-	63	384	V

Pk - Peak detector

RMS - RMS detection

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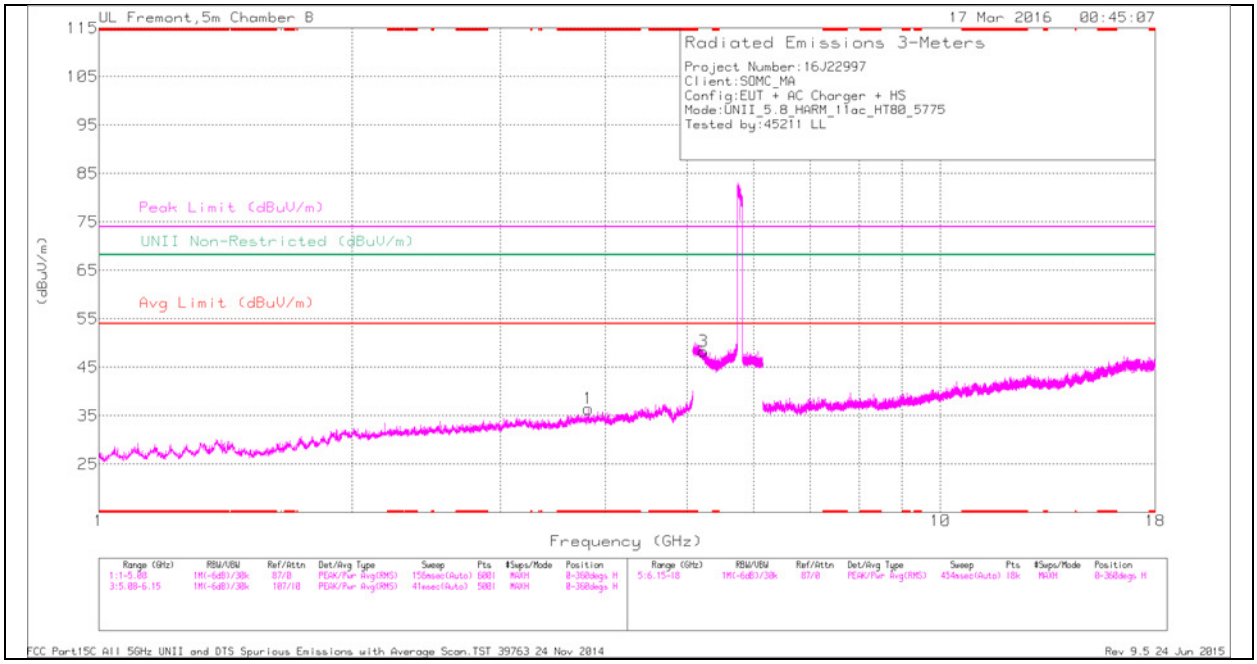
HARMONICS AND SPURIOUS EMISSIONS

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.

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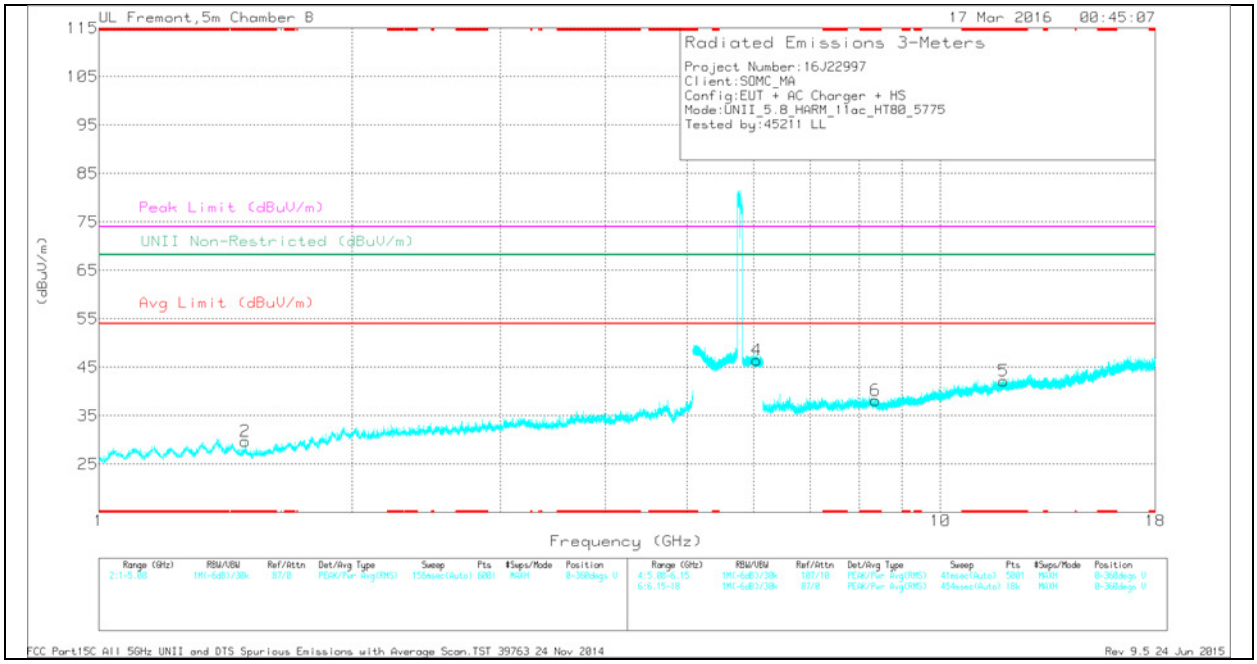
LOW CHANNEL VERTICAL



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

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.818	36.02	Pk	33.4	-33	0	36.42	-	-	74	-37.58	-	-	0-360	101	H
2	* 1.492	37.18	Pk	28.1	-35.6	0	29.68	-	-	74	-44.32	-	-	0-360	101	V
5	* 11.889	29.12	Pk	38.5	-25.4	0	42.22	-	-	74	-31.78	-	-	0-360	101	V
6	* 8.371	31.48	Pk	35.7	-29	0	38.18	-	-	74	-35.82	-	-	0-360	199	V
3	5.226	33.6	Pk	34.4	-19.7	0	48.3	-	-	-	-	68.2	-19.9	0-360	101	H
4	6.05	32.37	Pk	35.5	-21.4	0	46.47	-	-	-	-	68.2	-21.73	0-360	199	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.82	42.45	PK-U	33.4	-33	0	42.85	-	-	74	-31.15	-	-	309	101	H
* 3.819	31.61	ADR	33.4	-33	.25	32.26	54	-21.74	-	-	-	-	309	101	H
* 1.491	44.53	PK-U	28.1	-35.6	0	37.03	-	-	74	-36.97	-	-	233	101	V
* 1.492	32.57	ADR	28.1	-35.6	.25	25.32	54	-28.68	-	-	-	-	233	101	V
* 11.889	36.55	PK-U	38.5	-25.4	0	49.65	-	-	74	-24.35	-	-	124	102	V
* 11.887	25.65	ADR	38.5	-25.4	.25	39	54	-15	-	-	-	-	124	102	V
* 8.369	40.23	PK-U	35.7	-29	0	46.93	-	-	74	-27.07	-	-	61	198	V
* 8.371	28.63	ADR	35.7	-29	.25	35.58	54	-18.42	-	-	-	-	61	198	V
5.226	41.26	PK-U	34.4	-19.6	0	56.06	-	-	-	-	68.2	-12.14	28	101	H
6.05	40.48	PK-U	35.5	-21.4	0	54.58	-	-	-	-	68.2	-13.62	83	198	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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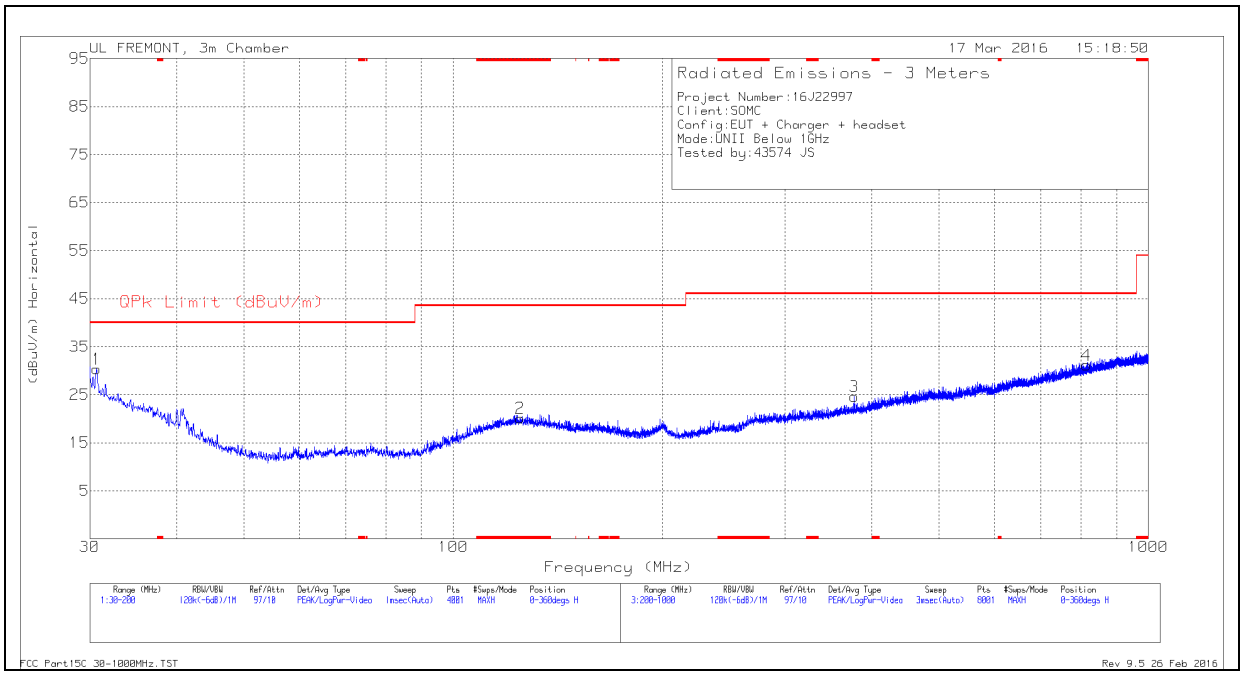
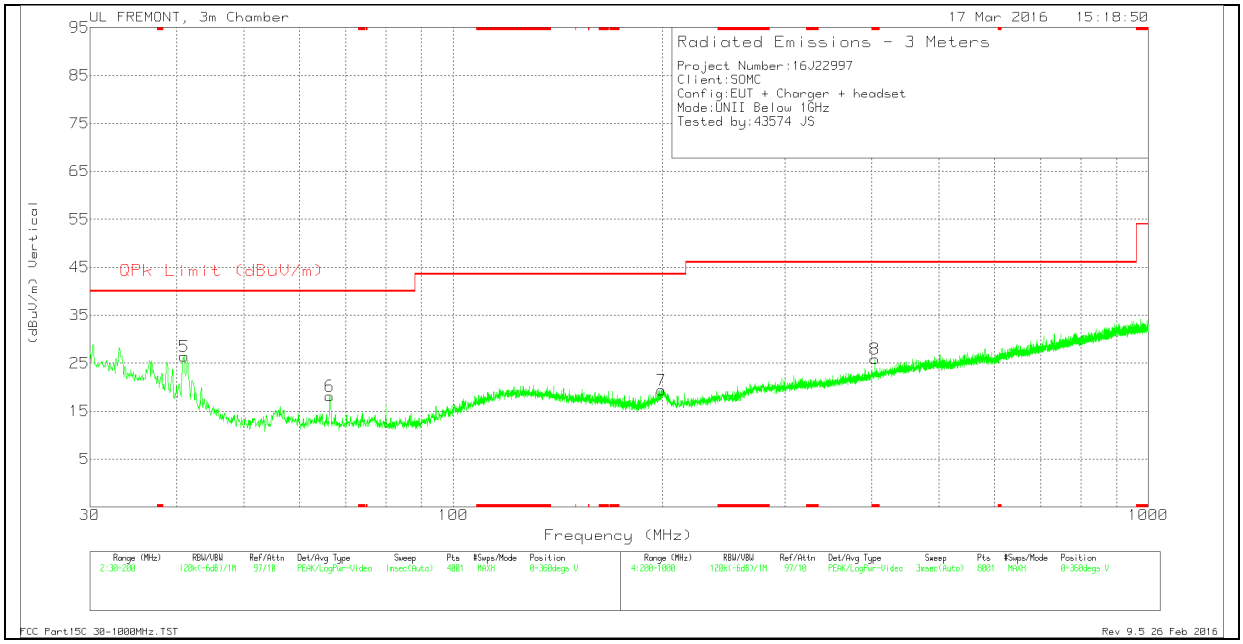
10. WORST-CASE BELOW 1 GHz (in the 5.3 GHz Band)

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



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



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Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T122 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 124.8175	28.12	Pk	18	-26	20.12	43.52	-23.4	0-360	400	H
8	* 404.1	30.99	Pk	19.7	-24.8	25.89	46.02	-20.13	0-360	300	V
1	30.68	32.75	Pk	24.8	-27.2	30.35	40	-9.65	0-360	200	H
5	41.0075	36.42	Pk	17	-27	26.42	40	-13.58	0-360	100	V
6	66.4225	33.03	Pk	11.8	-26.7	18.13	40	-21.87	0-360	100	V
7	199.32	28.23	Pk	16.4	-25.2	19.43	43.52	-24.09	0-360	100	V
3	377.7	30.32	Pk	18.9	-24.6	24.62	46.02	-21.4	0-360	300	H
4	814.6	29.05	Pk	25.4	-23.3	31.15	46.02	-14.87	0-360	400	H

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

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11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

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

ANSI C63.10-2013, Section 6.2.

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10-2013

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

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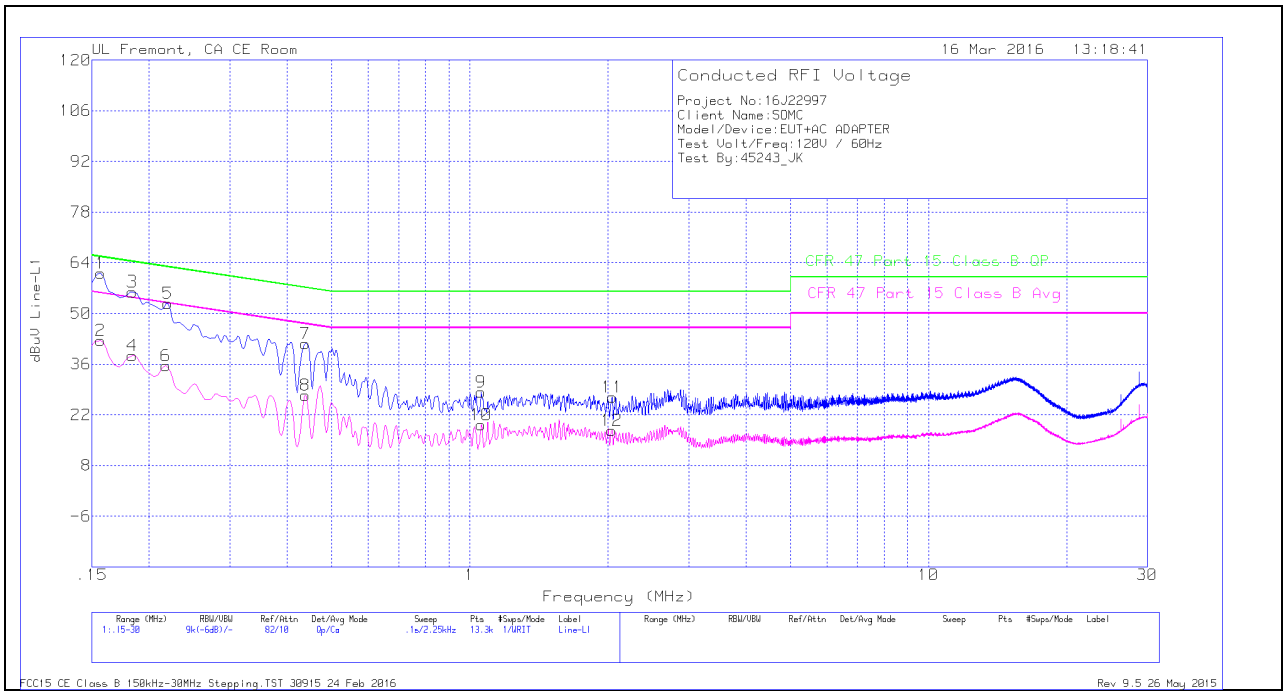
6 WORST EMISSIONS

LINE 1 PLOT



LINE 1 RESULTS

Trace Markers

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR) Margin (dB)
1	.15675	49.8	Qp	1.3	0	10.1	61.2	65.63	-4.43	-	-
2	.15675	31.1	Ca	1.3	0	10.1	42.5	-	-	55.63	-13.13
3	.18375	44.79	Qp	1.1	0	10.1	55.99	64.31	-8.32	-	-
4	.18375	27.21	Ca	1.1	0	10.1	38.41	-	-	54.31	-15.9
5	.21975	41.86	Qp	.8	0	10.1	52.76	62.83	-10.07	-	-
6	.2175	24.62	Ca	.8	0	10.1	35.52	-	-	52.91	-17.39
7	.438	31.23	Qp	.4	0	10.1	41.73	57.1	-15.37	-	-
8	.438	16.94	Ca	.4	0	10.1	27.44	-	-	47.1	-19.66
9	1.059	17.89	Qp	.3	0	10.1	28.29	56	-27.71	-	-
10	1.059	8.88	Ca	.3	0	10.1	19.28	-	-	46	-26.72
11	2.04225	16.54	Qp	.2	.1	10.1	26.94	56	-29.06	-	-
12	2.04	7.3	Ca	.2	.1	10.1	17.7	-	-	46	-28.3

Pk - Peak detector

Av - Average detection

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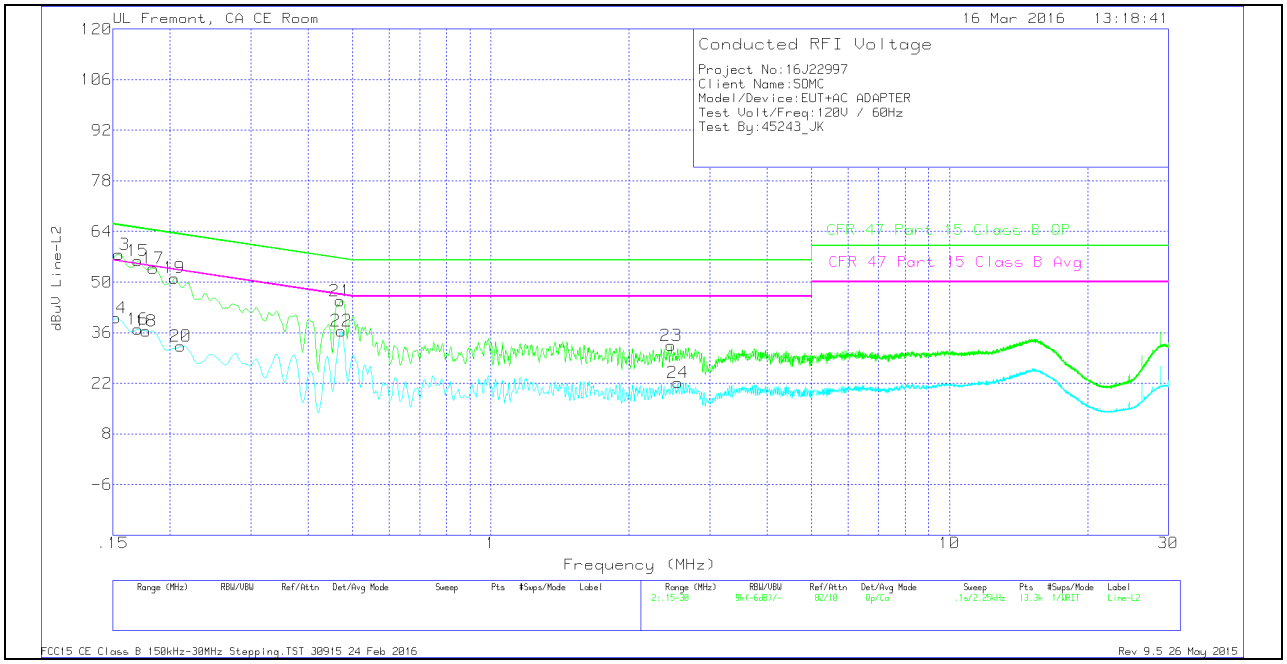
LINE 2 PLOT



LINE 2 RESULTS

Trace Markers

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR) Margin (dB)
13	.1545	46.08	Qp	1.4	0	10.1	57.58	65.75	-8.17	-	-
14	.15225	28.47	Ca	1.5	0	10.1	40.07	-	-	55.88	-15.81
15	.17025	44.59	Qp	1.2	0	10.1	55.89	64.95	-9.06	-	-
16	.17025	25.68	Ca	1.2	0	10.1	36.98	-	-	54.95	-17.97
17	.18375	42.6	Qp	1.1	0	10.1	53.8	64.31	-10.51	-	-
18	.177	25.09	Ca	1.2	0	10.1	36.39	-	-	54.63	-18.24
19	.204	40.03	Qp	1	0	10.1	51.13	63.45	-12.32	-	-
20	.21075	21.22	Ca	.9	0	10.1	32.22	-	-	53.18	-20.96
21	.4695	34.32	Qp	.4	0	10.1	44.82	56.52	-11.7	-	-
22	.47175	26.02	Ca	.4	0	10.1	36.52	-	-	46.48	-9.96
23	2.47425	21.97	Qp	.2	.1	10.1	32.37	56	-23.63	-	-
24	2.5575	11.72	Ca	.2	.1	10.1	22.12	-	-	46	-23.88

Qp - Quasi-Peak detector

Ca - CISPR average detection

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12. DYNAMIC FREQUENCY SELECTION

12.1. OVERVIEW

12.1.1. LIMITS

INDUSTRY CANADA

IC RSS-247 is closely harmonized with FCC Part 15 DFS rules. The deviations are as follows:

RSS-247 Issue 1

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”.

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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.		

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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.

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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

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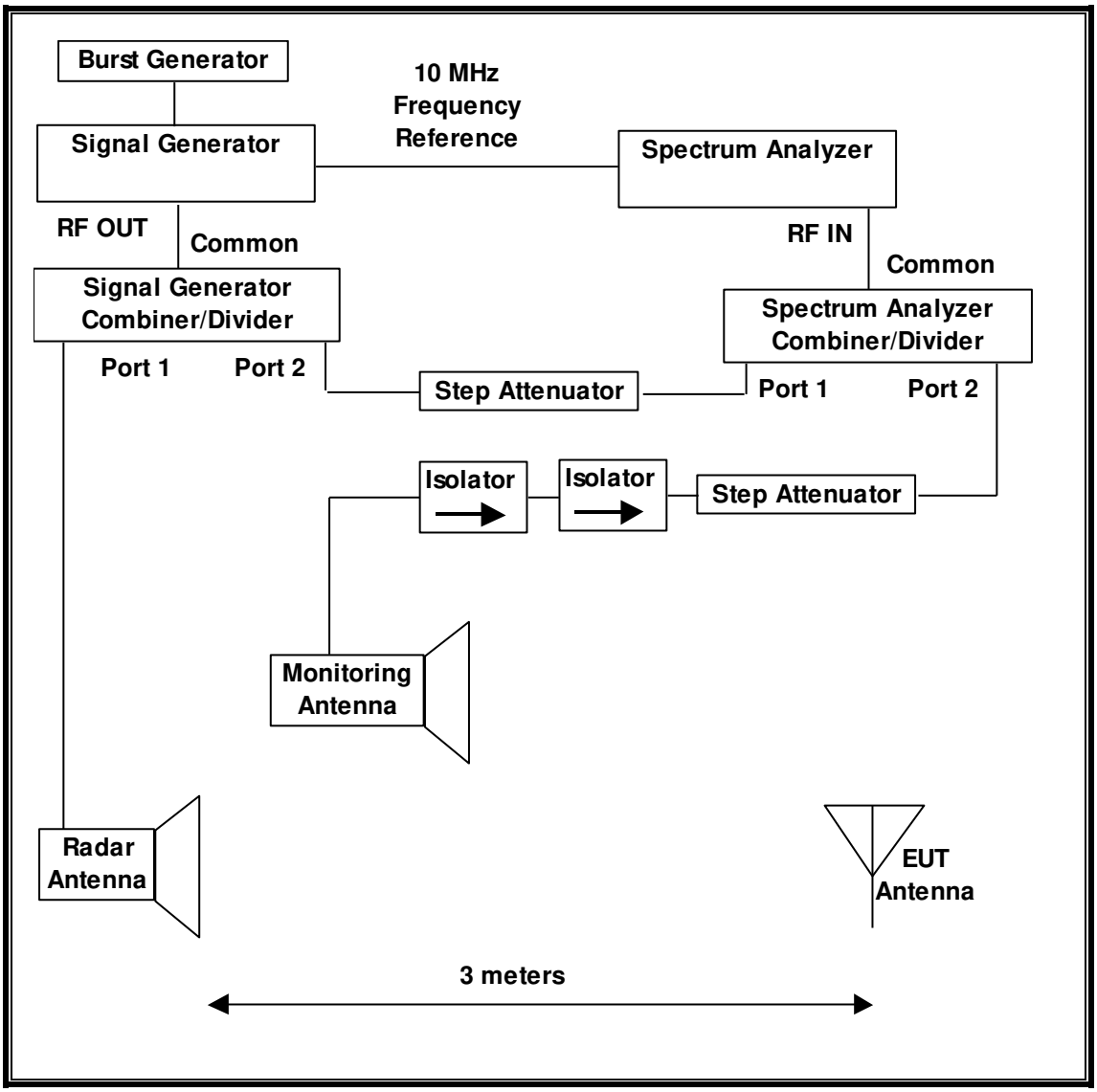
12.1.2. TEST AND MEASUREMENT SYSTEM

RADIATED METHOD SYSTEM BLOCK DIAGRAM



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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.

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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**	**Serial Number**	**Cal Due**
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight	N9030A	US51350187	06/01/16
Signal Generator, MXG X-Series RF Vector	Agilent	N5172B	MY51350337	03/11/17

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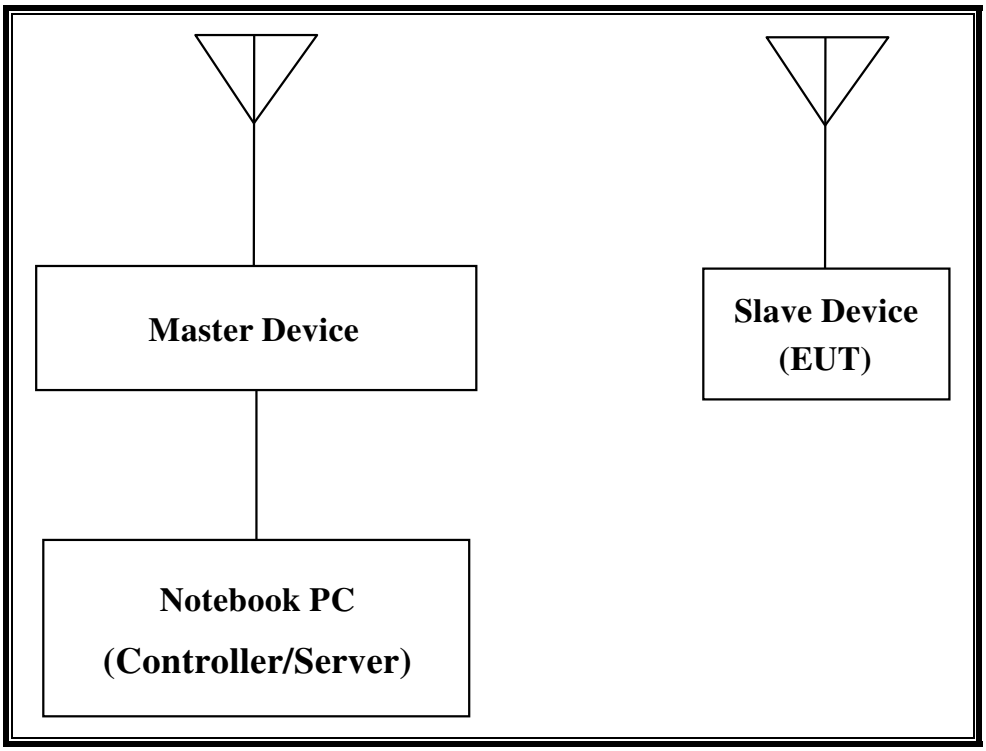
12.1.3. SETUP OF EUT

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/Server)	Lenovo	Type 4236-B92	PB-HEX04 12/05	DoC
AC Adapter (Controller/Server PC)	Lenovo	42T4418	11S42T4418Z1Z GWG08R90M	DoC

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12.1.4. DESCRIPTION OF EUT

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

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

The EUT is a Slave Device without Radar Detection.

The highest power level within these bands is 9.41dBm EIRP in the 5250-5350 MHz band and 10.41dBm EIRP in the 5470-5725 MHz band.

The only antenna assembly utilized with the EUT has a minimum gain of -4.9 dBi in the 5250-5350 MHz band and -5.3 dBi in the 5470-5725 MHz band.

Two 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 EUT is Android 6.0.1 kernel version 3.18.20-perf-g3442001-01778-g02ab9f3 (buil number 35.0.B.2.87).

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

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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.

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12.2. RESULTS FOR 20 MHz BANDWIDTH

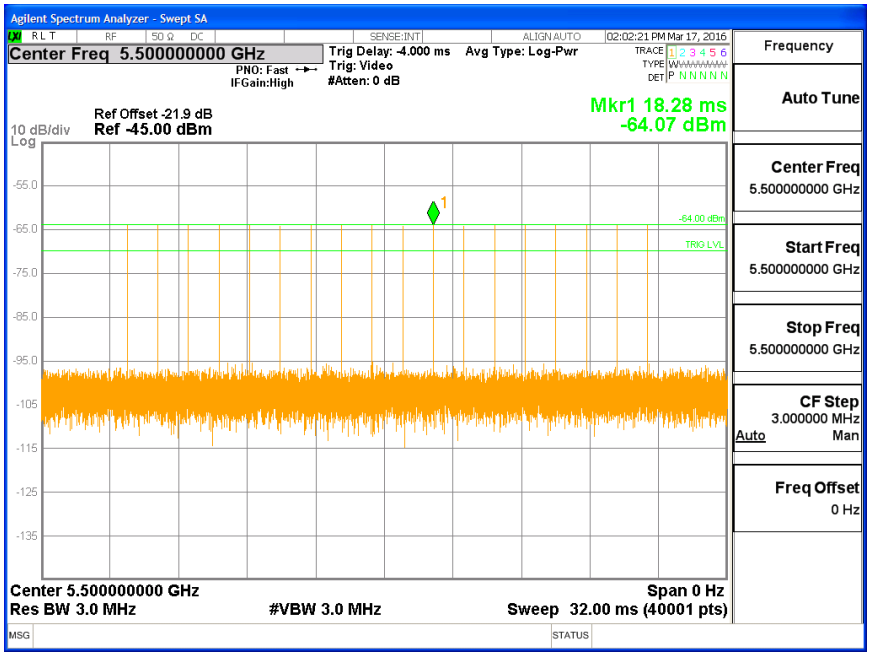
12.2.1. TEST CHANNEL

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

12.2.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM

SHORT PULSE RADAR TYPE 0 AT MASTER



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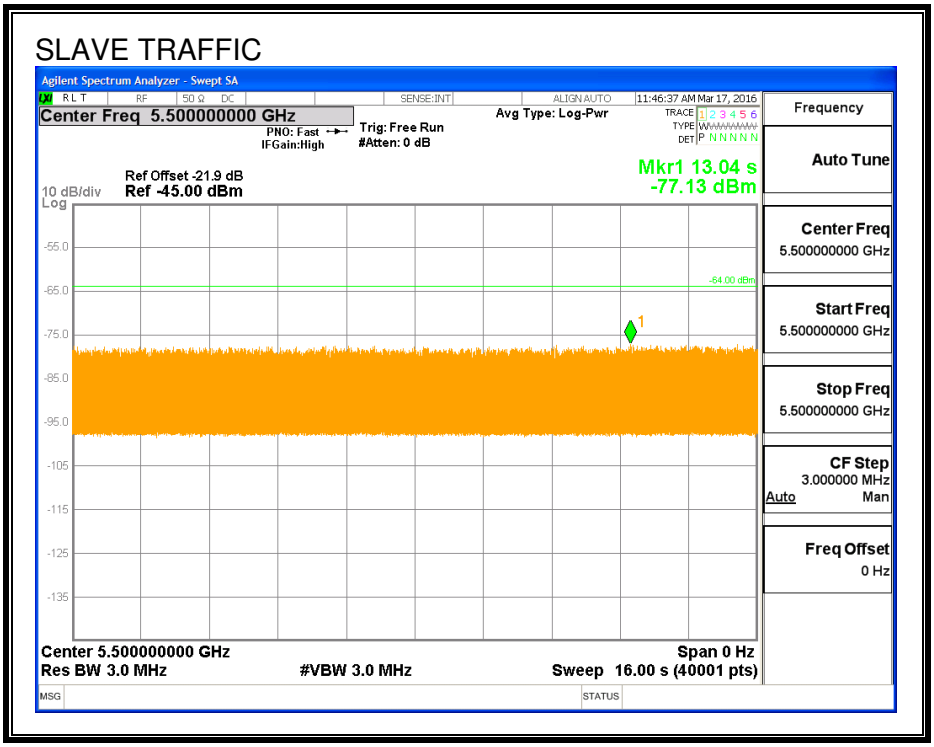
TRAFFIC



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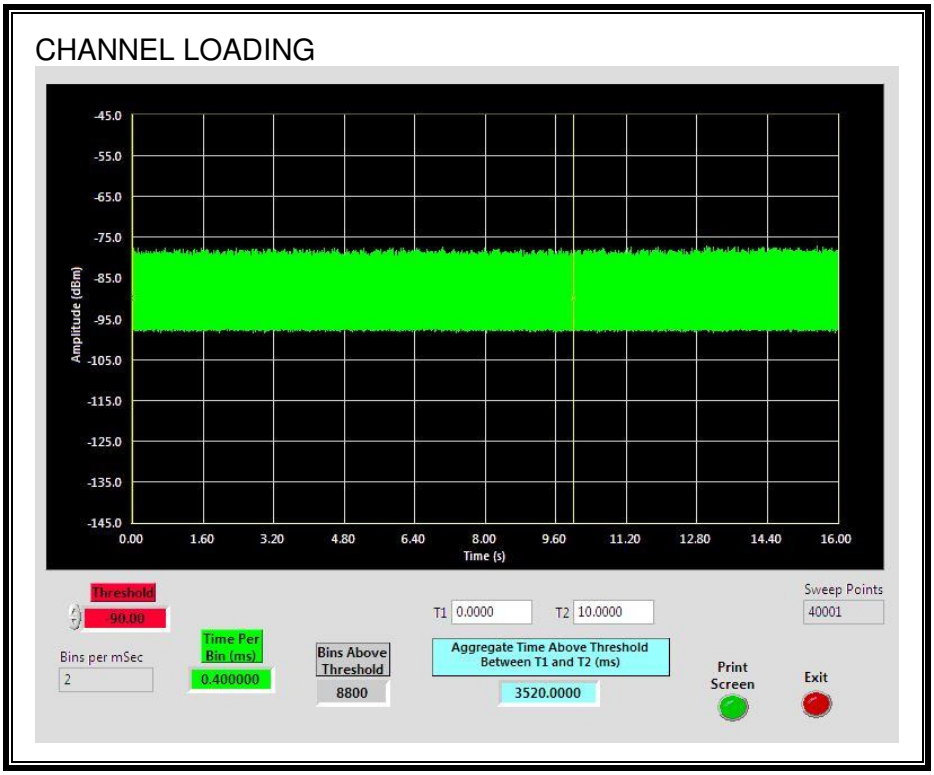
CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 35.2%

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12.2.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

12.2.4. MOVE AND CLOSING TIME

REPORTING NOTES

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

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

The aggregate channel closing transmission time is calculated as follows:

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

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

RESULTS

Channel Move Time (sec)	Limit (sec)
0.0528	10

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

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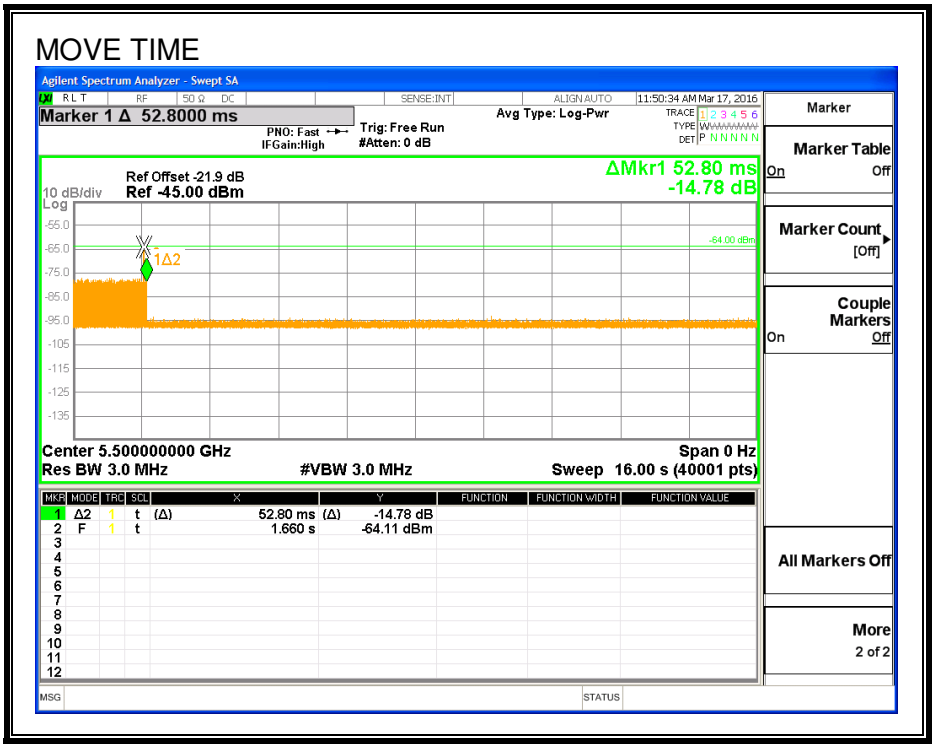
MOVE TIME



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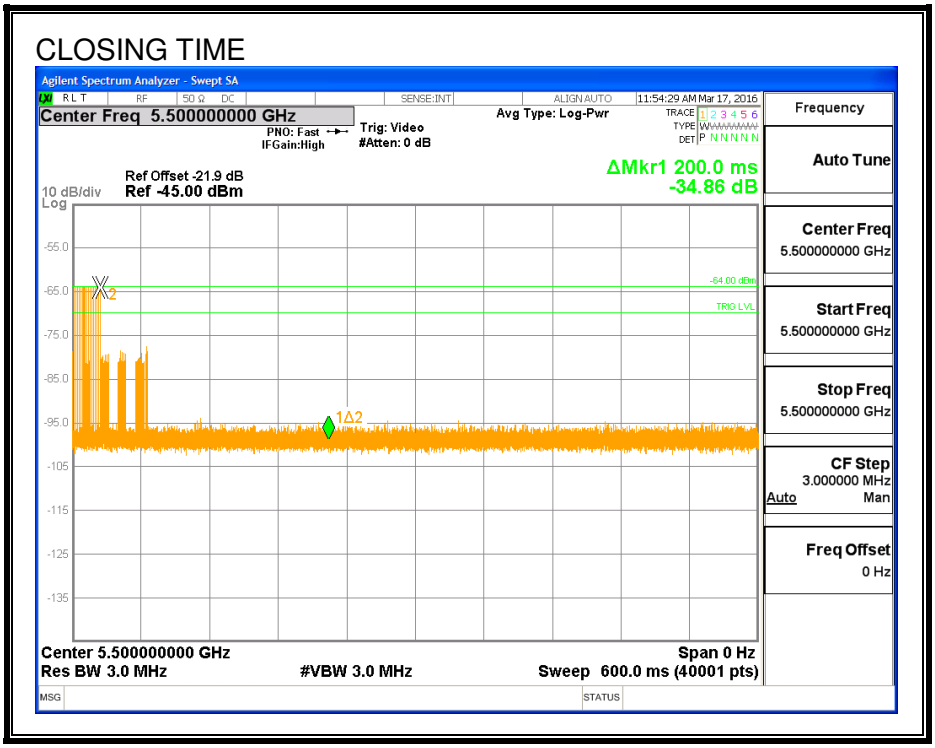
CHANNEL CLOSING TIME



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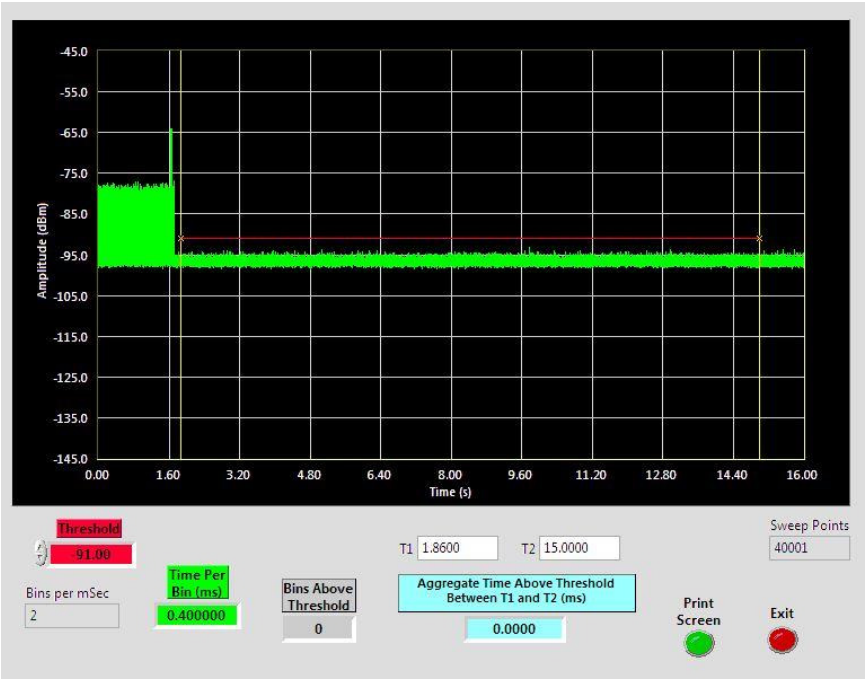
AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



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12.3. **RESULTS FOR 40 MHz BANDWIDTH**

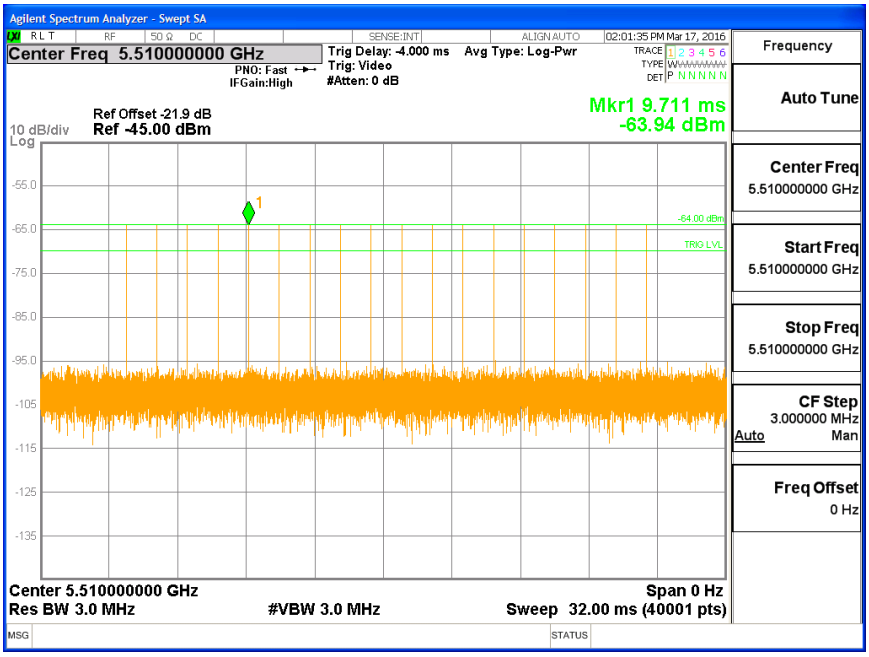
12.3.1. TEST CHANNEL

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

12.3.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM

SHORT PULSE RADAR TYPE 0 AT MASTER



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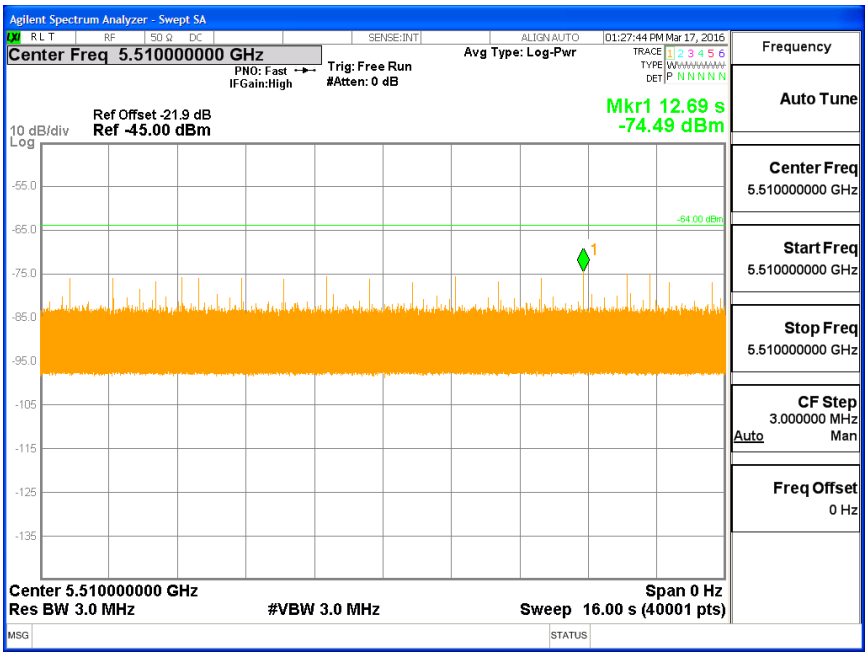
TRAFFIC

SLAVE TRAFFIC



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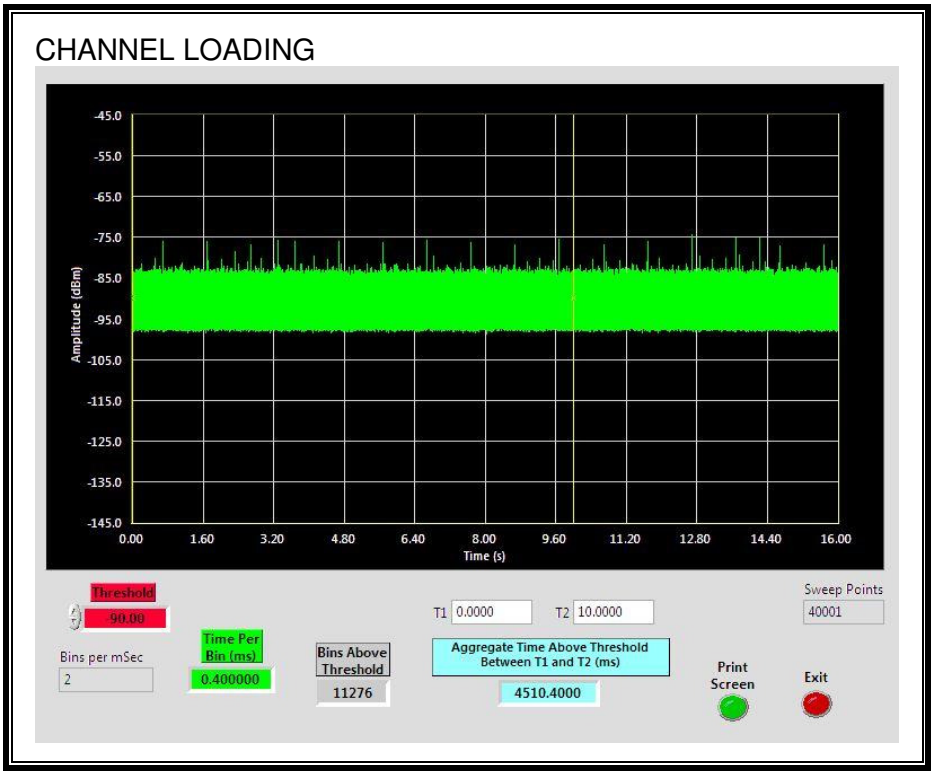
CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 45.1%

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12.3.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

12.3.4. MOVE AND CLOSING TIME

REPORTING NOTES

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

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

The aggregate channel closing transmission time is calculated as follows:

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

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

RESULTS

Channel Move Time (sec)	Limit (sec)
0.0584	10

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

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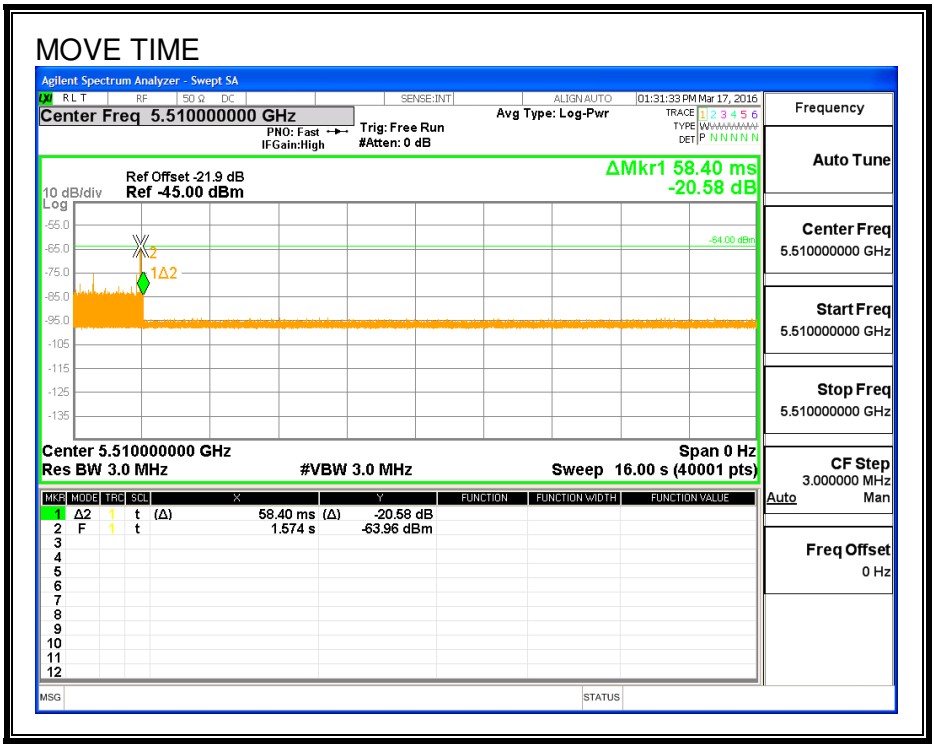
MOVE TIME



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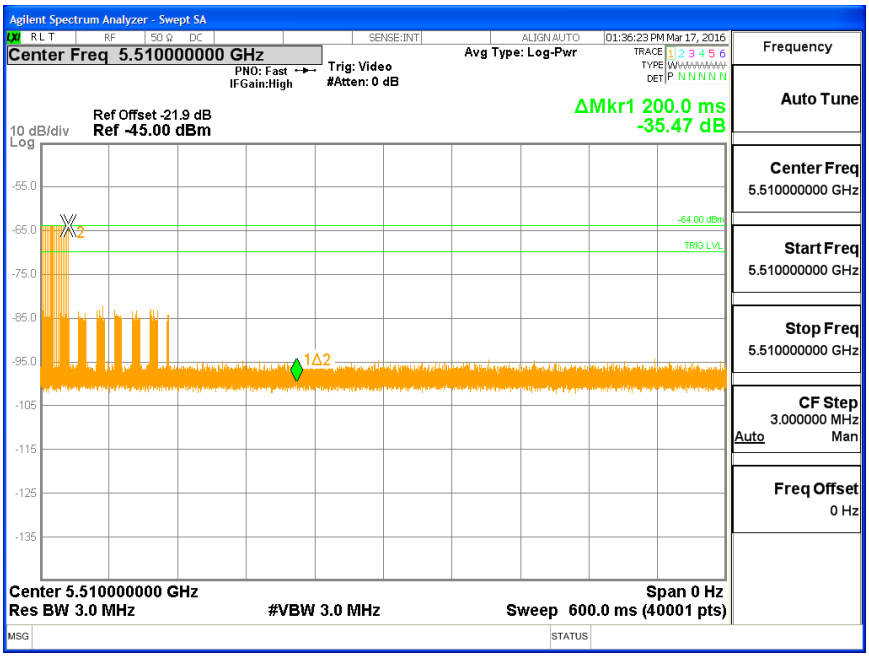
CHANNEL CLOSING TIME

CLOSING TIME



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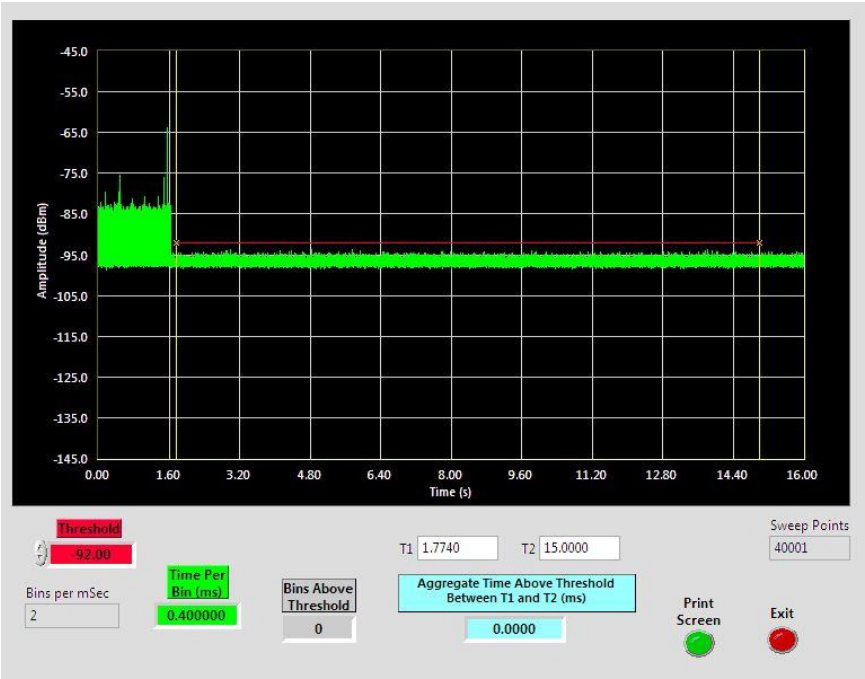
AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



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12.4. RESULTS FOR 80 MHz BANDWIDTH

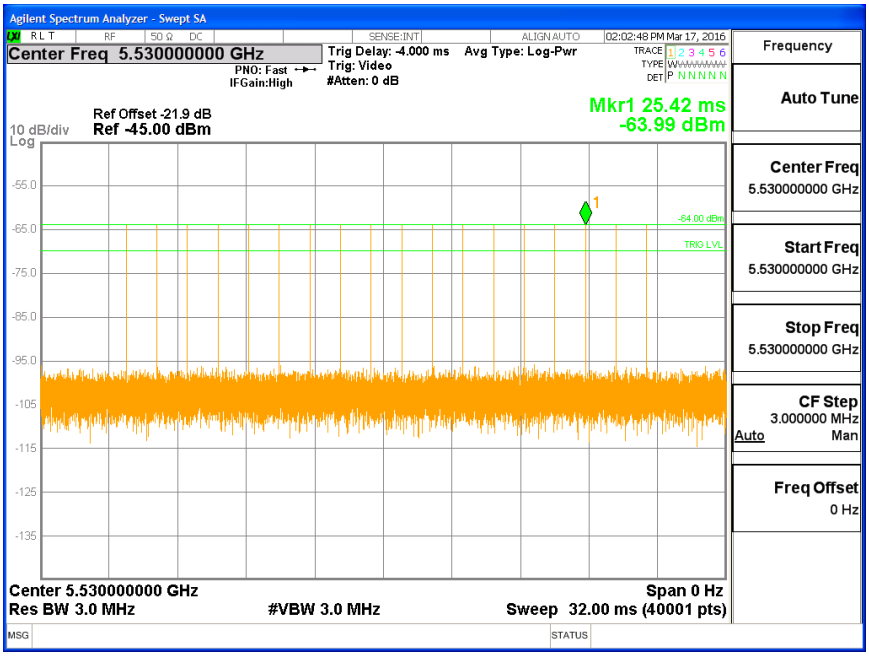
12.4.1. TEST CHANNEL

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

12.4.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM

SHORT PULSE RADAR TYPE 0 AT MASTER



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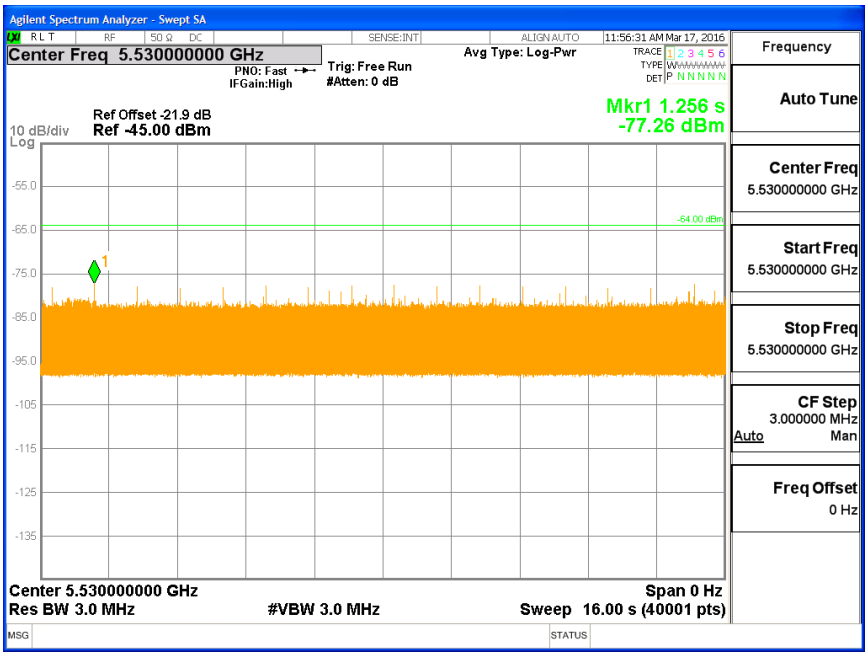
TRAFFIC

SLAVE TRAFFIC



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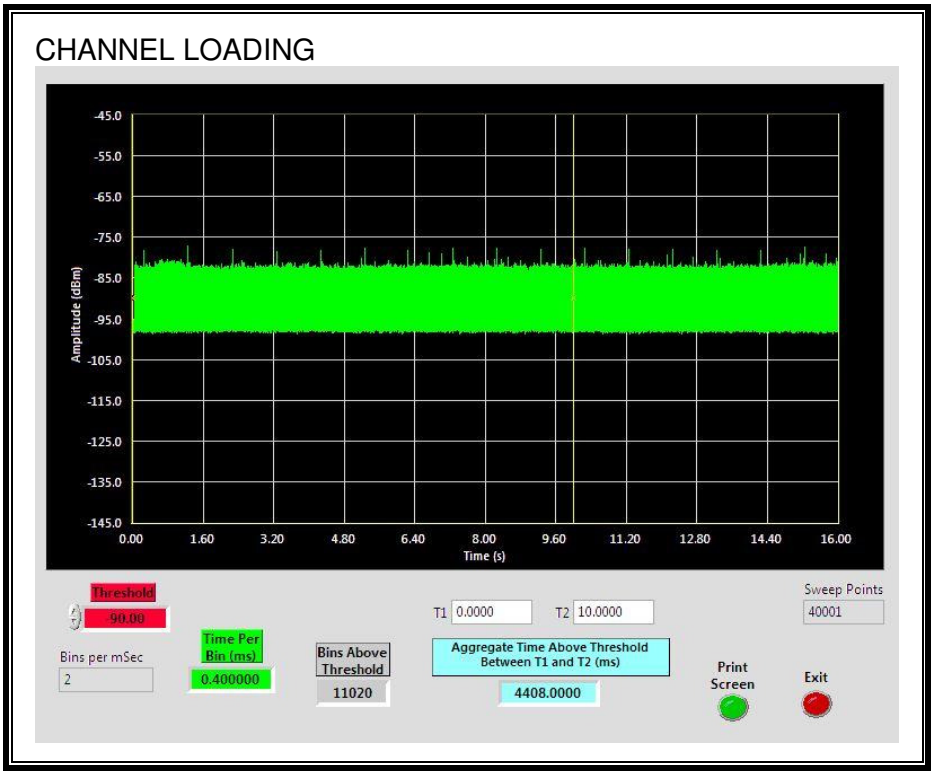
CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 44.08%

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12.4.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

12.4.4. MOVE AND CLOSING TIME

REPORTING NOTES

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

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

The aggregate channel closing transmission time is calculated as follows:

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

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

RESULTS

Channel Move Time (sec)	Limit (sec)
0.0756	10

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

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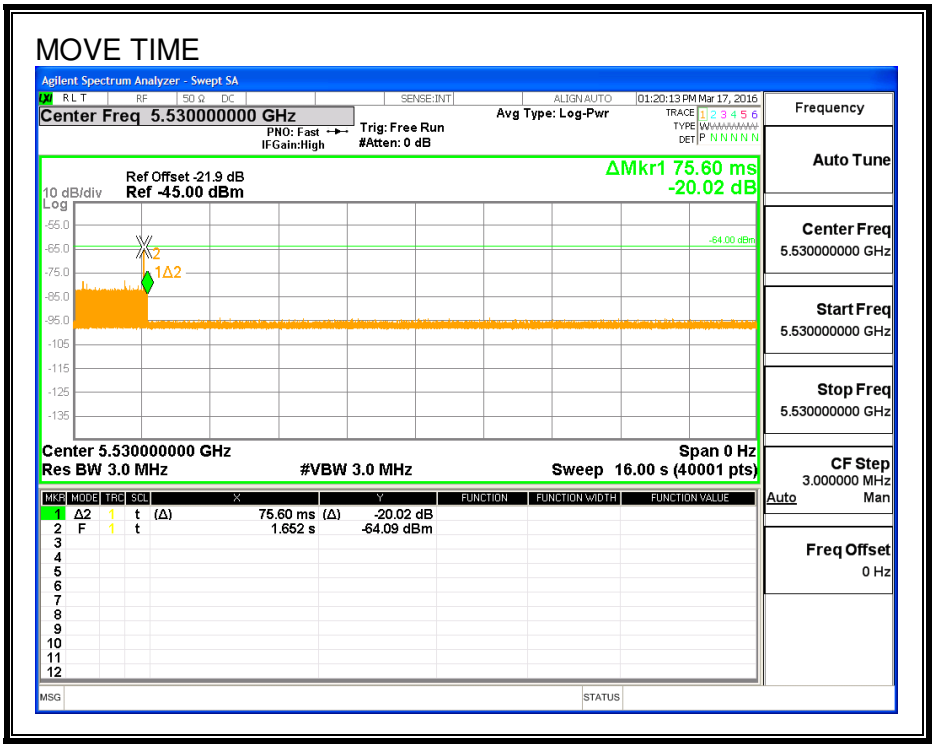
MOVE TIME



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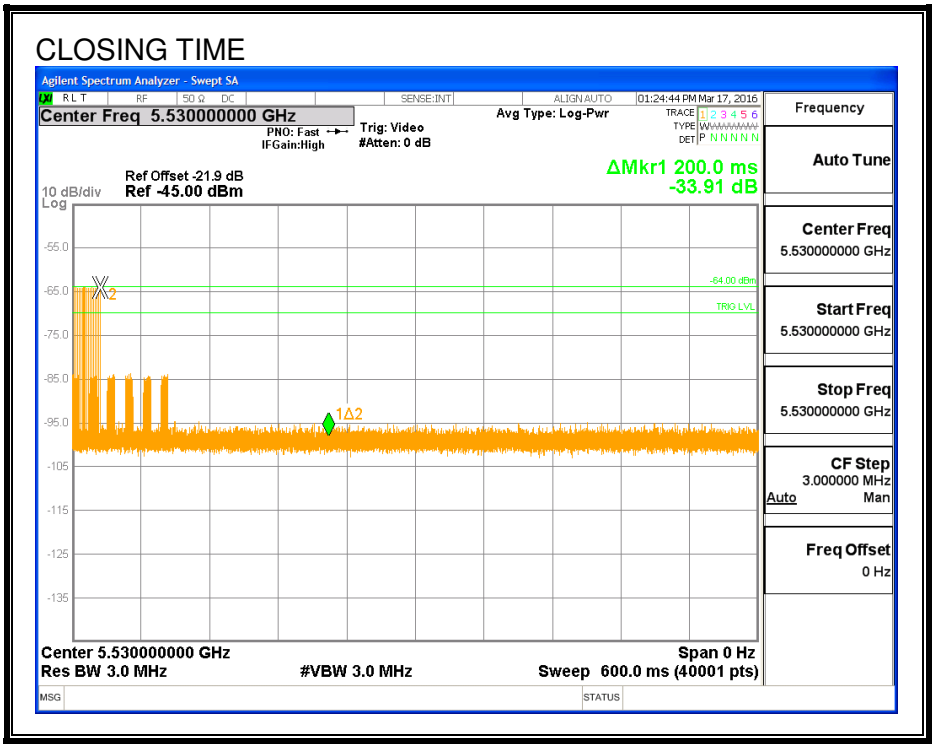
CHANNEL CLOSING TIME



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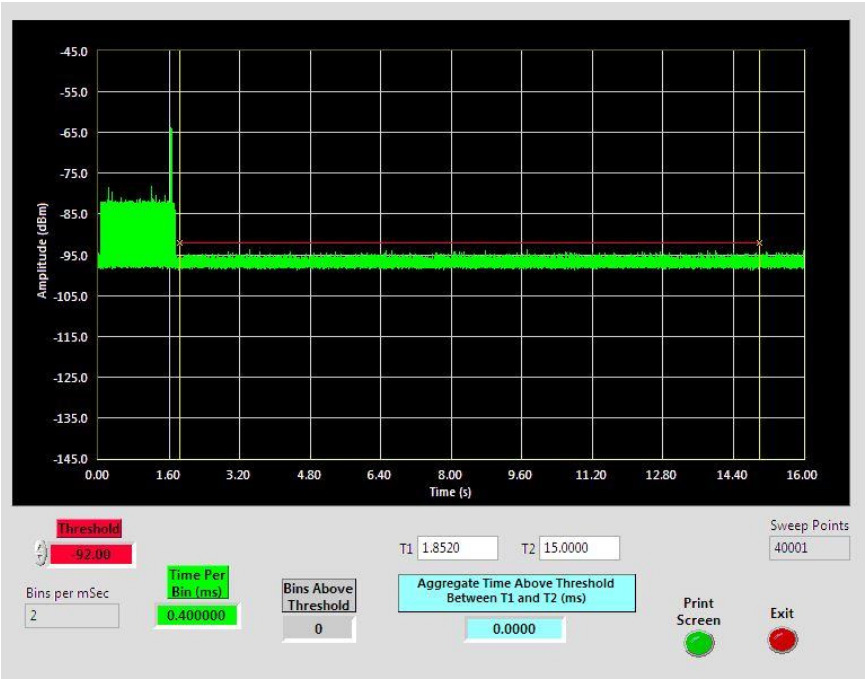
AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



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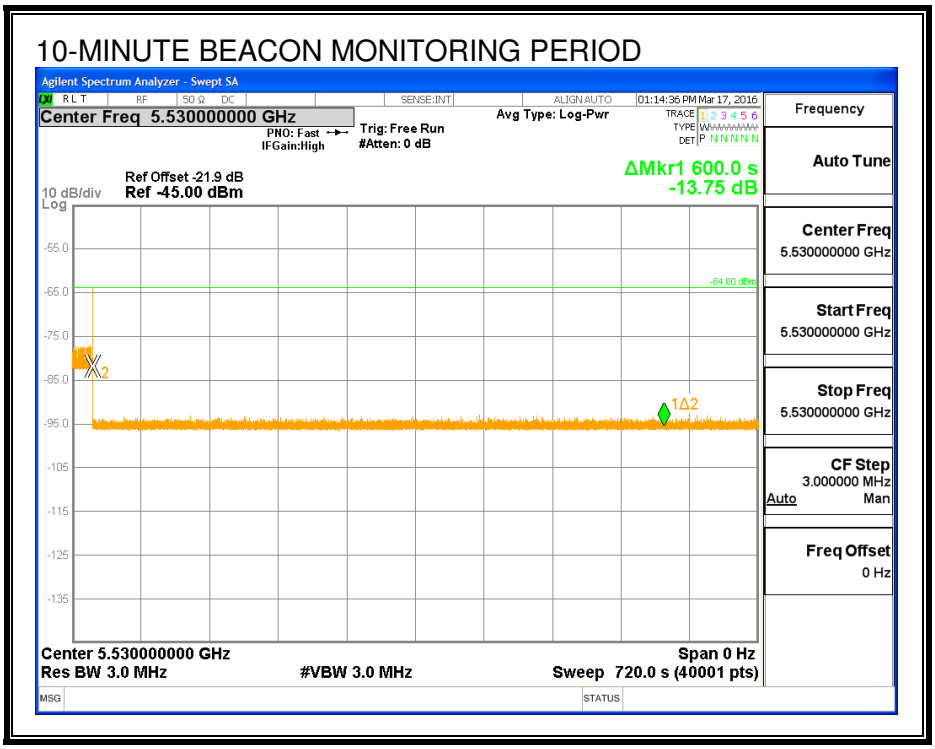
12.4.5. 10-MINUTE BEACON MONITORING PERIOD

RESULTS

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



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