MID CHANNEL DATA

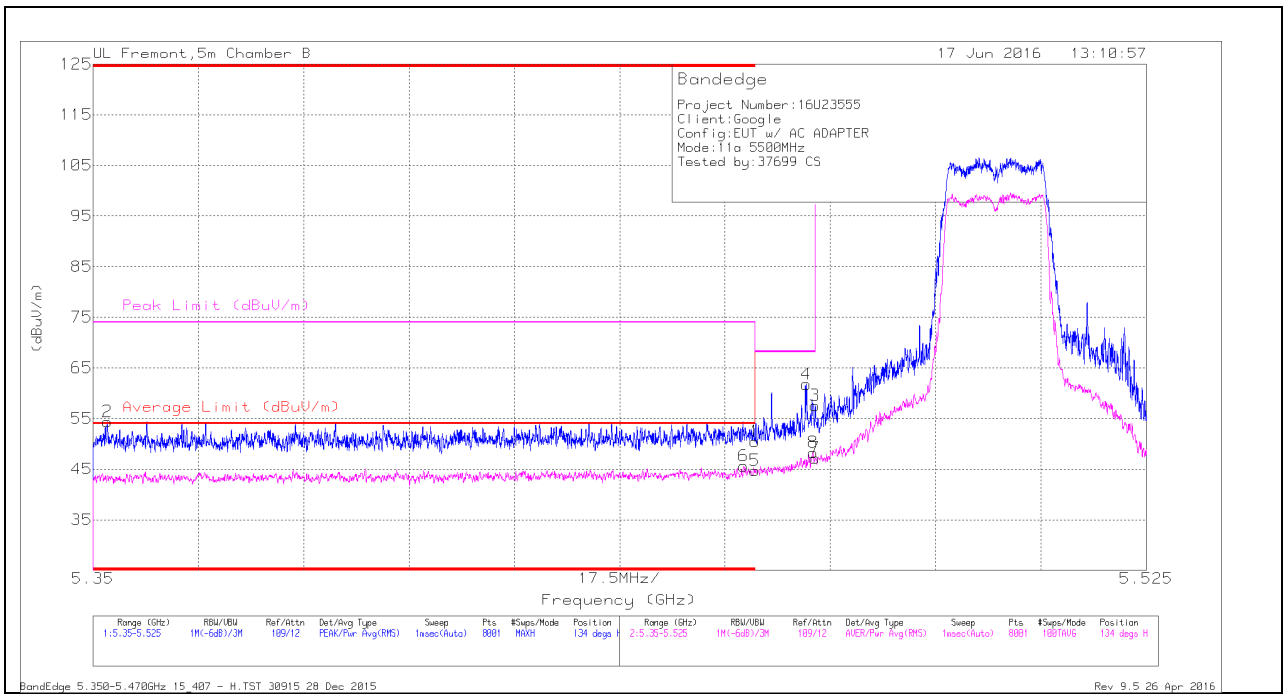
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.999	42.23	PK-U	33.3	-31.8	0	43.73	-	-	74	-30.27	-	-	271	270	H
	* 3.999	32.29	ADR	33.3	-31.8	.09	33.88	54	-20.12	-	-	-	-	271	270	H
2	* 4.602	45.49	PK-U	34.1	-31.9	0	47.69	-	-	74	-26.31	-	-	226	143	H
	* 4.594	35.27	ADR	34.1	-32.2	.09	37.26	54	-16.74	-	-	-	-	226	143	H
3	* 4.595	40.07	PK-U	34.1	-32.1	0	42.07	-	-	74	-31.93	-	-	241	199	V
	* 4.593	31.13	ADR	34.1	-32.2	.09	33.12	54	-20.88	-	-	-	-	241	199	V
4	* 5.359	49.29	PK-U	34.5	-20.3	0	63.49	-	-	74	-10.51	-	-	259	277	H
	* 5.355	36.8	ADR	34.5	-20.5	.09	50.89	54	-3.11	-	-	-	-	259	277	H
6	* 15.859	35.71	PK-U	40.6	-22.3	0	54.01	-	-	74	-19.99	-	-	7	103	V
	* 15.86	24.06	ADR	40.6	-22.4	.09	42.35	54	-11.65	-	-	-	-	7	103	V
5	7.053	42.34	PK-U	35.5	-30.2	0	47.64	-	-	-	-	68.2	-20.56	248	103	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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

RESTRICTED BANDEDGE (LOW CHANNEL)

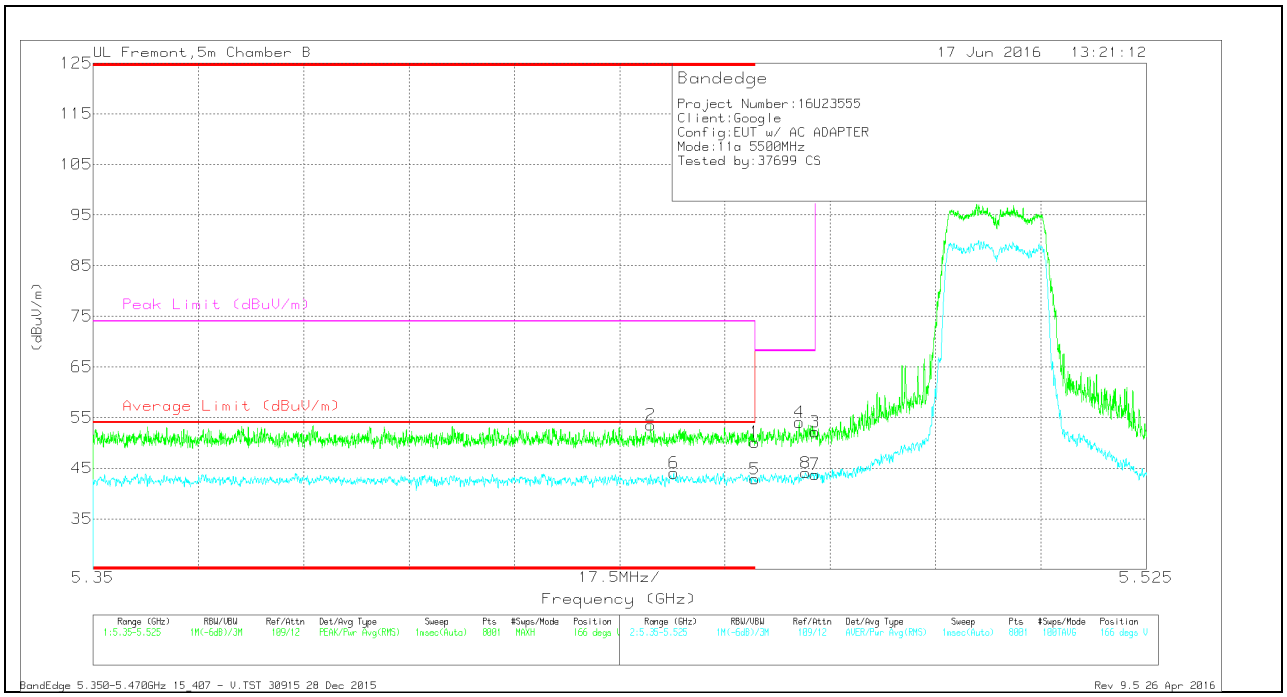
HORIZONTAL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (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	37	Pk	34.5	-21	50.5	-	-	74	-23.5	134	110	H
2	* 5.352	40.08	Pk	34.5	-20.2	54.38	-	-	74	-19.62	134	110	H
5	* 5.46	31.22	RMS	34.5	-21	44.72	54	-9.28	-	-	134	110	H
6	* 5.458	31.63	RMS	34.5	-20.5	45.63	54	-8.37	-	-	134	110	H
4	5.469	47.97	Pk	34.5	-20.7	61.77	-	-	68.2	-6.43	134	110	H
3	5.47	43.97	Pk	34.5	-20.9	57.57	-	-	68.2	-10.63	134	110	H
7	5.47	33.57	RMS	34.5	-20.9	47.17	-	-	-	-	134	110	H
8	5.47	34.6	RMS	34.5	-20.8	48.3	-	-	-	-	134	110	H

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

VERTICAL RESULTS

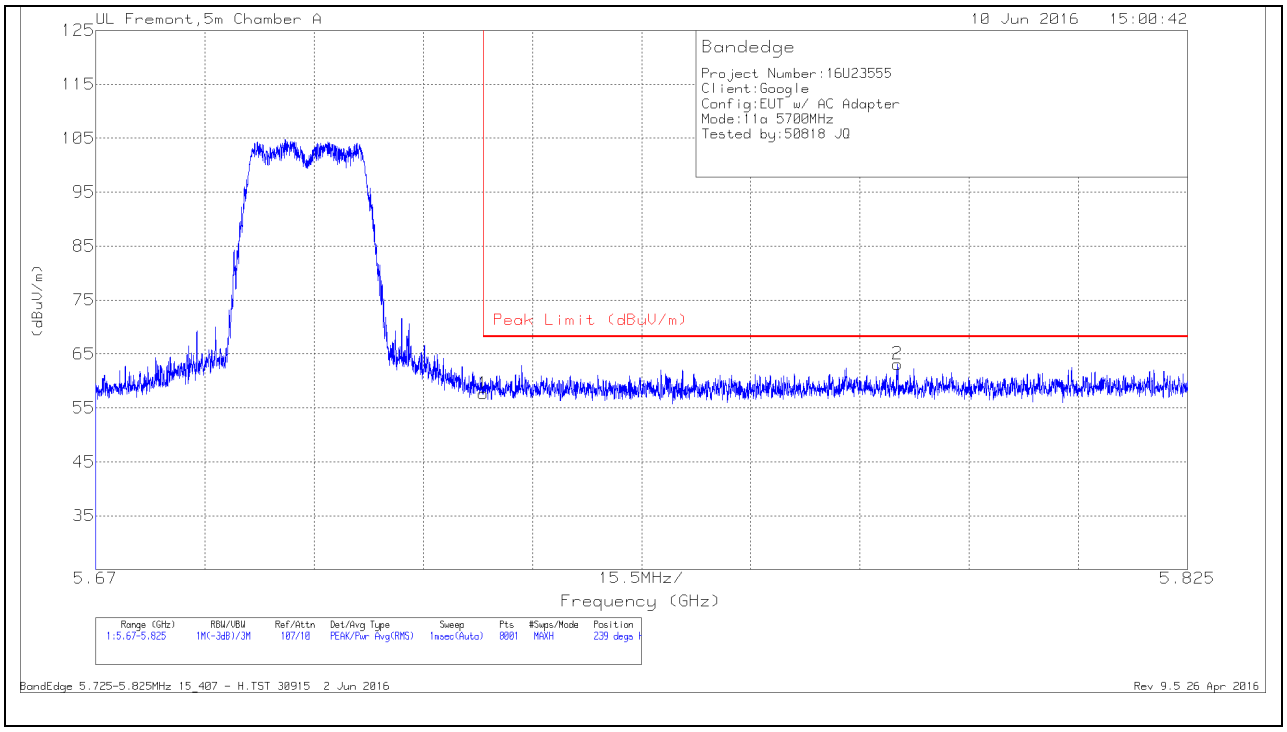


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.443	39.64	Pk	34.5	-20.6	53.54	-	-	74	-20.46	166	132	V
6	* 5.446	30.16	RMS	34.5	-20.6	44.06	54	-9.94	-	-	166	132	V
1	* 5.46	36.63	Pk	34.5	-21	50.13	-	-	74	-23.87	166	132	V
5	* 5.46	29.35	RMS	34.5	-21	42.85	54	-11.15	-	-	166	132	V
4	5.467	40.37	Pk	34.5	-20.8	54.07	-	-	68.2	-14.13	166	132	V
8	5.468	30.3	RMS	34.5	-20.7	44.1	-	-	-	-	166	132	V
3	5.47	38.57	Pk	34.5	-20.9	52.17	-	-	68.2	-16.03	166	132	V
7	5.47	30.18	RMS	34.5	-20.9	43.78	-	-	-	-	166	132	V

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

AUTHORIZED BANDEDGE (HIGH CHANNEL)

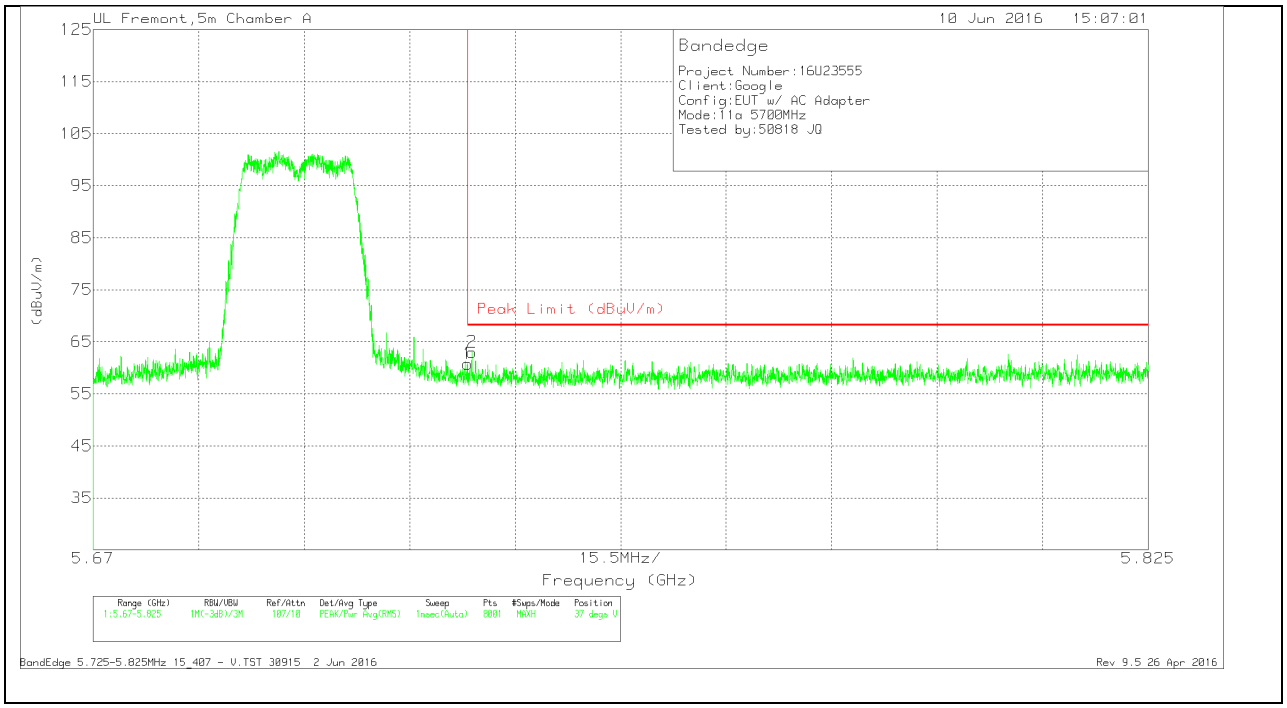
HORIZONTAL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (db/m)	Amp/Cbl/Fltr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	35.57	Pk	34.9	-12.8	57.67	68.2	-10.53	239	276	H
2	5.784	40.95	Pk	34.9	-12.7	63.15	68.2	-5.05	239	276	H

Pk - Peak detector

VERTICAL RESULTS

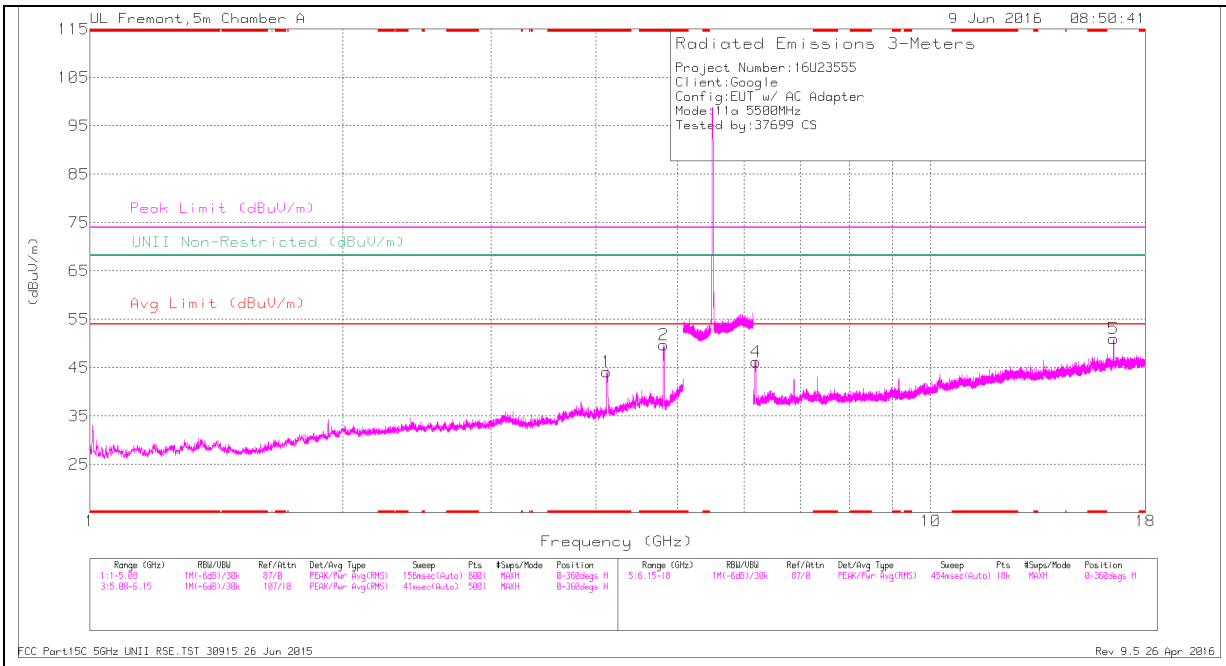


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (db/m)	Amp/Cbl/Fltr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	38.66	Pk	34.9	-12.8	60.76	68.2	-7.44	37	256	V
2	5.726	40.91	Pk	34.9	-12.8	63.01	68.2	-5.19	37	256	V

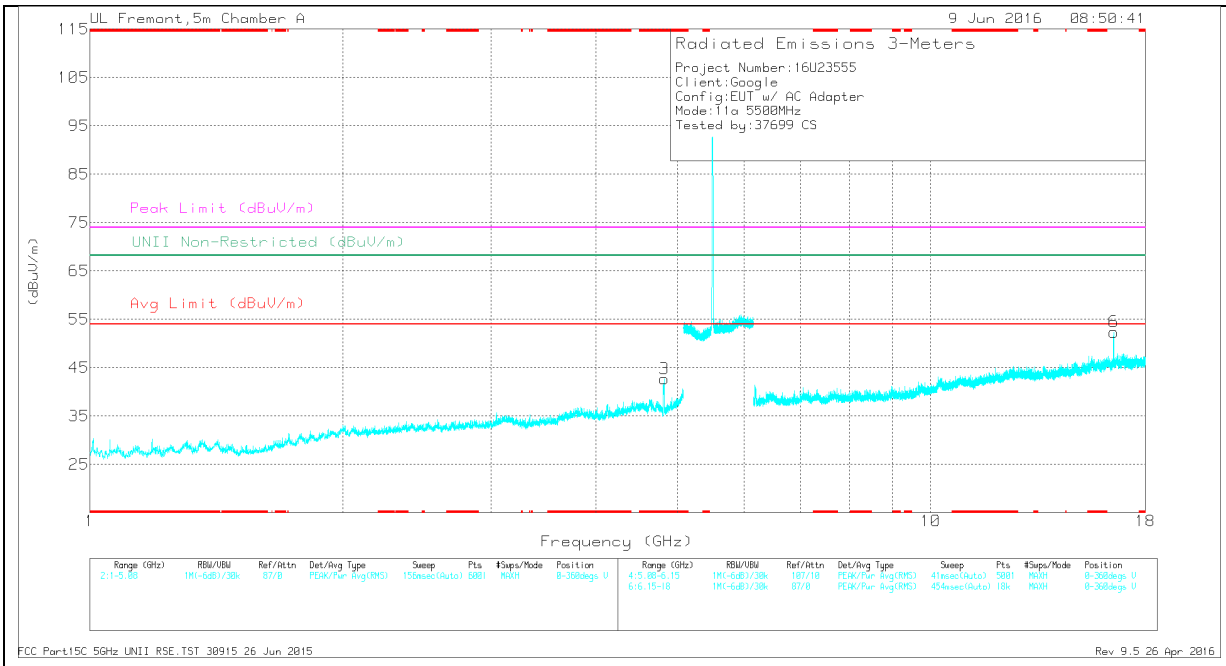
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



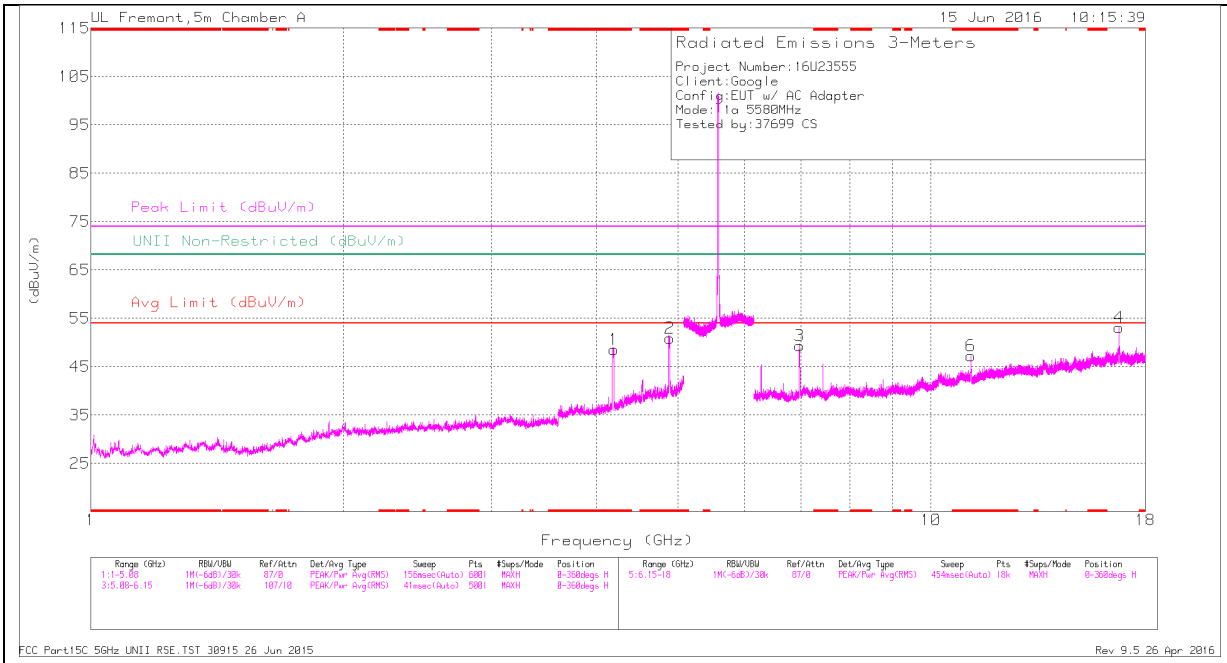
VERTICAL

LOW CHANNEL DATA

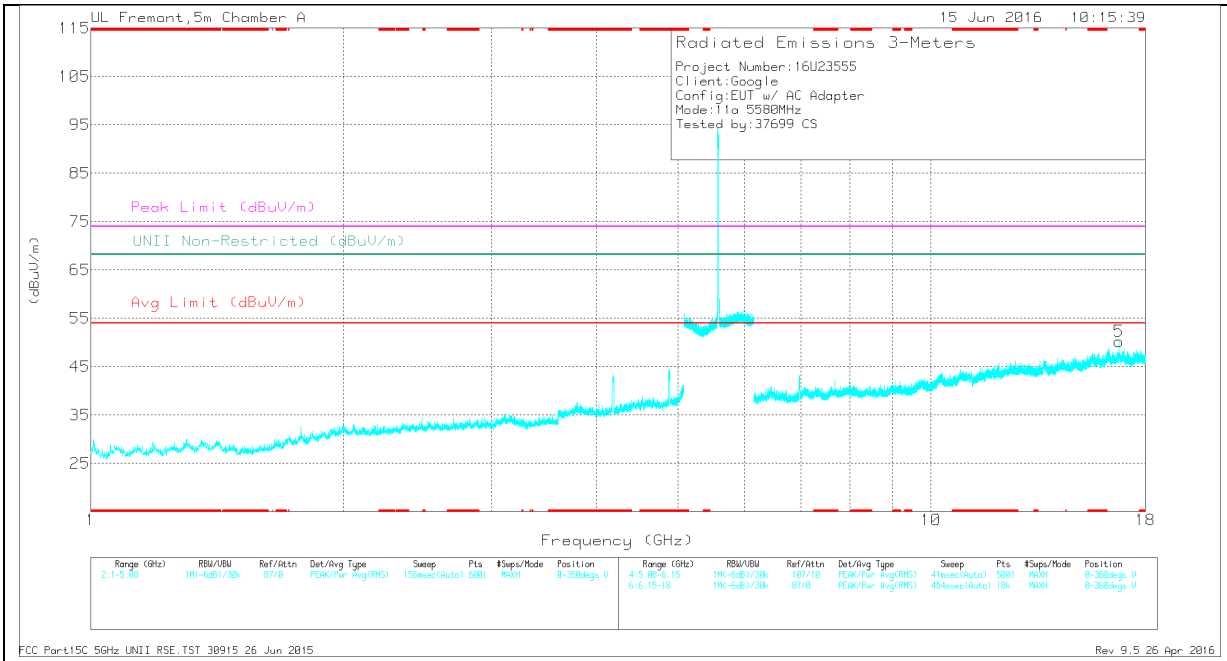
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (db/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.132	46.64	PK-U	33.6	-30.4	49.84	-	-	74	-24.16	-	-	268	339	H
	* 4.127	37.95	ADR	33.6	-30.4	41.15	54	-12.85	-	-	-	-	268	339	H
2	* 4.815	52.72	PK-U	34.3	-28.6	58.42	-	-	74	-15.58	-	-	228	374	H
	* 4.82	44.48	ADR	34.3	-28.6	50.18	54	-3.82	-	-	-	-	228	374	H
3	* 4.819	47.7	PK-U	34.3	-28.6	53.4	-	-	74	-20.6	-	-	27	265	V
	* 4.82	39.83	ADR	34.3	-28.6	45.53	54	-8.47	-	-	-	-	27	265	V
4	6.195	44.61	PK-U	35.5	-26.4	53.71	-	-	-	-	68.2	-14.49	216	104	H
5	16.494	36.64	PK-U	41.2	-20.8	57.04	-	-	-	-	68.2	-11.16	236	252	H
6	16.502	35.87	PK-U	41.2	-21.1	55.97	-	-	-	-	68.2	-12.23	172	118	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

MID CHANNEL RESULTS



HORIZTONAL



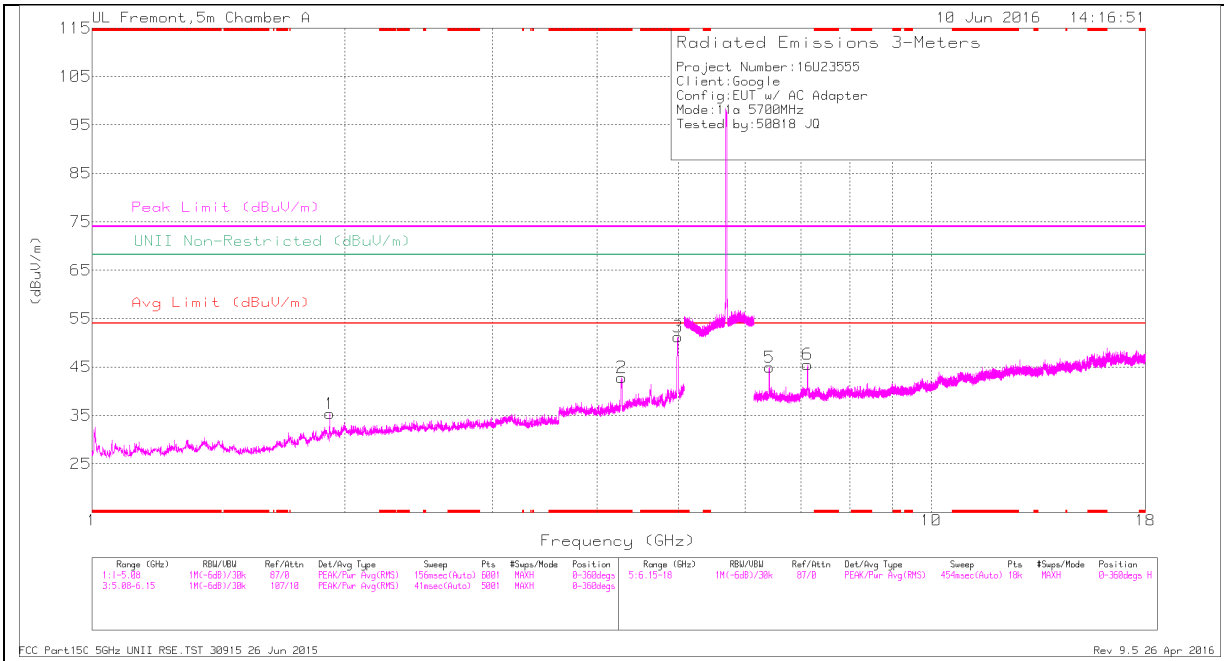
VERTICAL

MID CHANNEL DATA

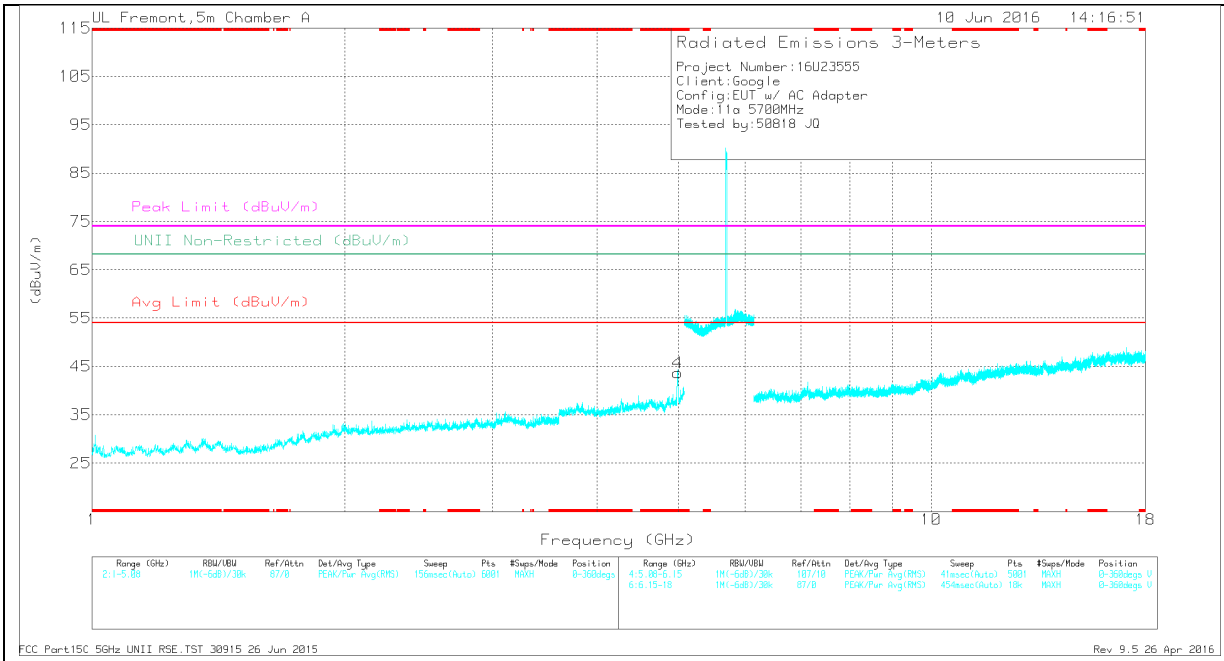
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (db/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.182	51.32	PK-U	33.6	-29.9	55.02	-	-	74	-18.98	-	-	227	101	H
	* 4.188	43.23	ADR	33.6	-29.8	47.03	54	-6.97	-	-	-	-	227	101	H
2	* 4.879	51.82	PK-U	34.3	-28.4	57.72	-	-	74	-16.28	-	-	244	105	H
	* 4.875	44.18	ADR	34.3	-28.5	49.98	54	-4.02	-	-	-	-	244	105	H
6	* 11.161	33.23	PK-U	37.9	-21.2	49.93	-	-	74	-24.07	-	-	274	118	H
	* 11.16	23.34	ADR	37.9	-21.2	40.04	54	-13.96	-	-	-	-	274	118	H
3	6.977	45.43	PK-U	35.7	-25.5	55.63	-	-	-	-	68.2	-12.57	174	131	H
4	16.739	38.11	PK-U	41.6	-21.4	58.31	-	-	-	-	68.2	-9.89	251	104	H
5	16.744	35.94	PK-U	41.6	-21.4	56.14	-	-	-	-	68.2	-12.06	8	104	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL RESULTS



HORIZTONAL



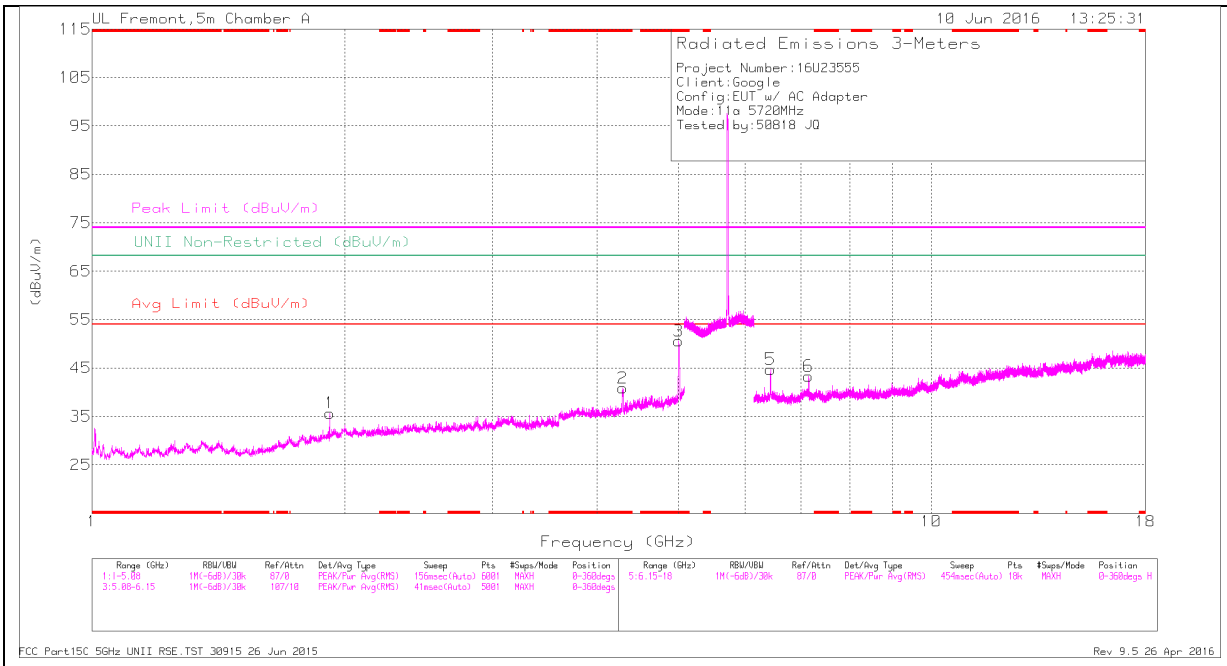
VERTICAL

HIGH CHANNEL DATA

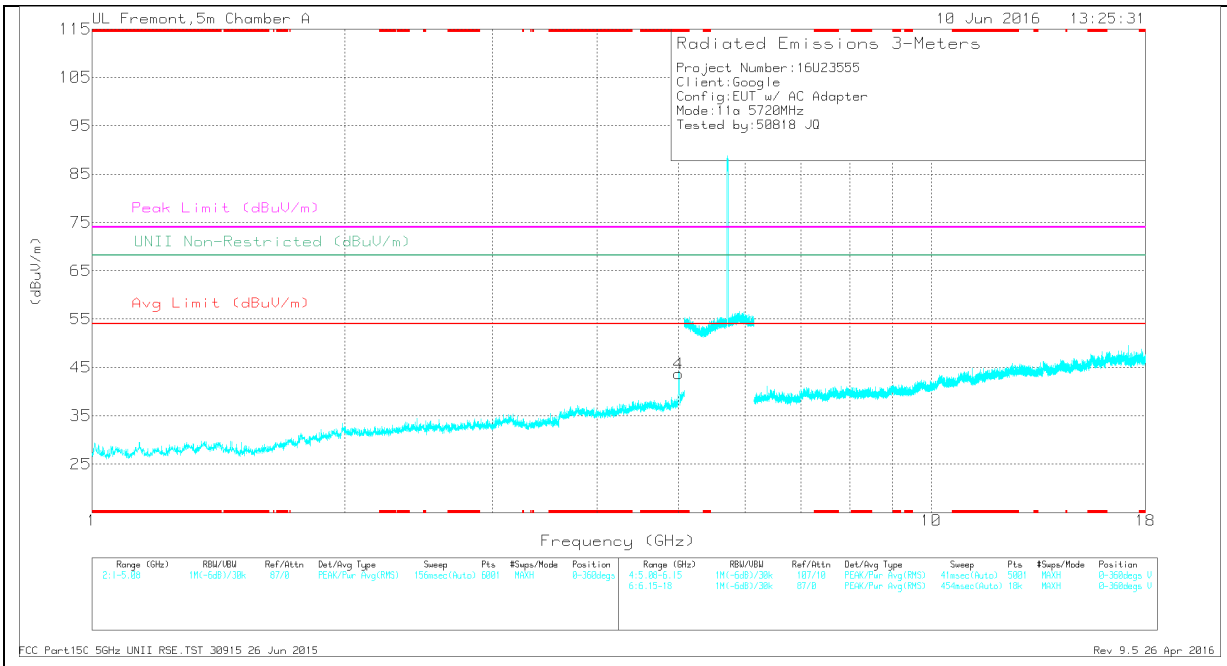
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (db/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.277	45.87	PK-U	33.7	-29.1	50.47	-	-	74	-23.53	-	-	245	143	H
	* 4.277	37.31	ADR	33.7	-29.1	41.91	54	-12.09	-	-	-	-	245	143	H
3	* 4.985	50.97	PK-U	34.3	-27.7	57.57	-	-	74	-16.43	-	-	272	115	H
	* 4.995	43.14	ADR	34.3	-27.6	49.84	54	-4.16	-	-	-	-	272	115	H
4	* 4.984	45.87	PK-U	34.3	-27.7	52.47	-	-	74	-21.53	-	-	43	283	V
	* 4.98	38.44	ADR	34.3	-27.8	44.94	54	-9.06	-	-	-	-	43	283	V
1	1.92	44.32	PK-U	31.2	-33.8	41.72	-	-	-	-	68.2	-26.48	122	282	H
5	6.406	42.29	PK-U	35.6	-26.1	51.79	-	-	-	-	68.2	-16.41	202	107	H
6	7.118	39.57	PK-U	35.7	-24	51.27	-	-	-	-	68.2	-16.93	231	302	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

STRADDLE CHANNEL RESULTS



HORIZTONAL



VERTICAL

STRADDLE CHANNEL DATA

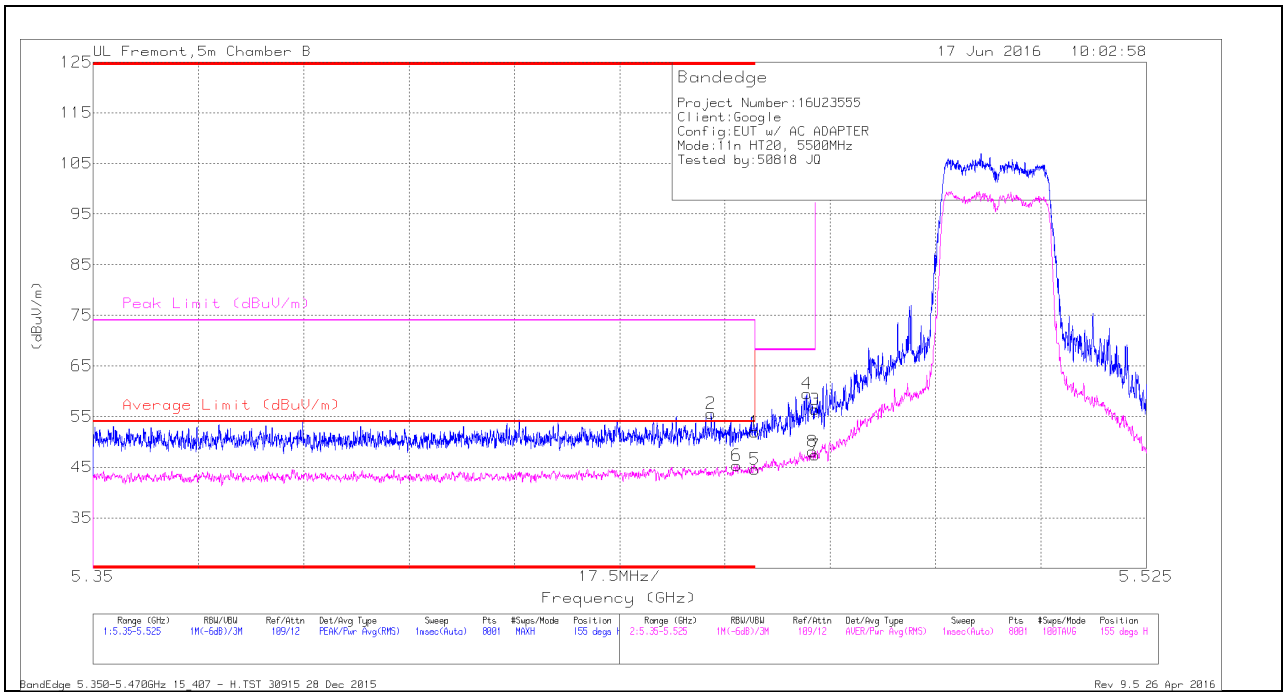
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (db/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 5.012	50.51	PK-U	34.3	-27.9	56.91	-	-	74	-17.09	-	-	195	101	H
	* 5.007	42.56	ADR	34.3	-27.8	49.06	54	-4.94	-	-	-	-	195	101	H
2	* 4.283	43.78	PK-U	33.7	-29.1	48.38	-	-	74	-25.62	-	-	248	140	H
	* 4.283	35.45	ADR	33.7	-29.1	40.05	54	-13.95	-	-	-	-	248	140	H
4	* 5.001	45.27	PK-U	34.3	-27.7	51.87	-	-	74	-22.13	-	-	148	394	V
	* 4.997	36.79	ADR	34.3	-27.7	43.39	54	-10.61	-	-	-	-	148	394	V
1	1.92	43.77	PK-U	31.2	-33.8	41.17	-	-	-	-	68.2	-27.03	121	288	H
5	6.442	41.82	PK-U	35.6	-25	52.42	-	-	-	-	68.2	-15.78	203	101	H
6	7.149	38.93	PK-U	35.7	-24.7	49.93	-	-	-	-	68.2	-18.27	353	104	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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

RESTRICTED BANDEDGE (LOW CHANNEL)

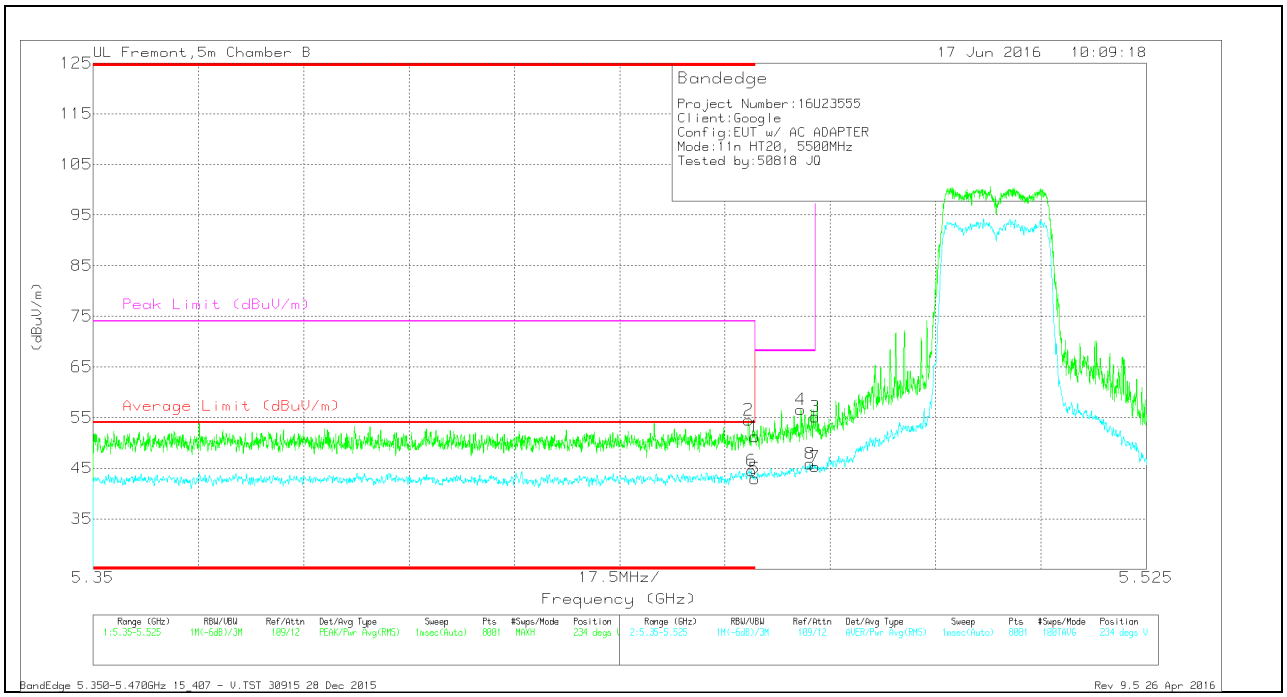
HORIZONTAL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (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	38.5	Pk	34.5	-21	52	-	-	74	-22	155	302	H
2	* 5.453	41.7	Pk	34.5	-20.6	55.6	-	-	74	-18.4	155	302	H
5	* 5.46	31.1	RMS	34.5	-21	44.6	54	-9.4	-	-	155	302	H
6	* 5.457	31.65	RMS	34.5	-20.8	45.35	54	-8.65	-	-	155	302	H
4	5.469	45.73	Pk	34.5	-20.7	59.53	-	-	68.2	-8.67	155	302	H
3	5.47	42.83	Pk	34.5	-20.9	56.43	-	-	68.2	-11.77	155	302	H
7	5.47	33.76	RMS	34.5	-20.9	47.36	-	-	-	-	155	302	H
8	5.47	34.39	RMS	34.5	-20.8	48.09	-	-	-	-	155	302	H

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

VERTICAL RESULTS

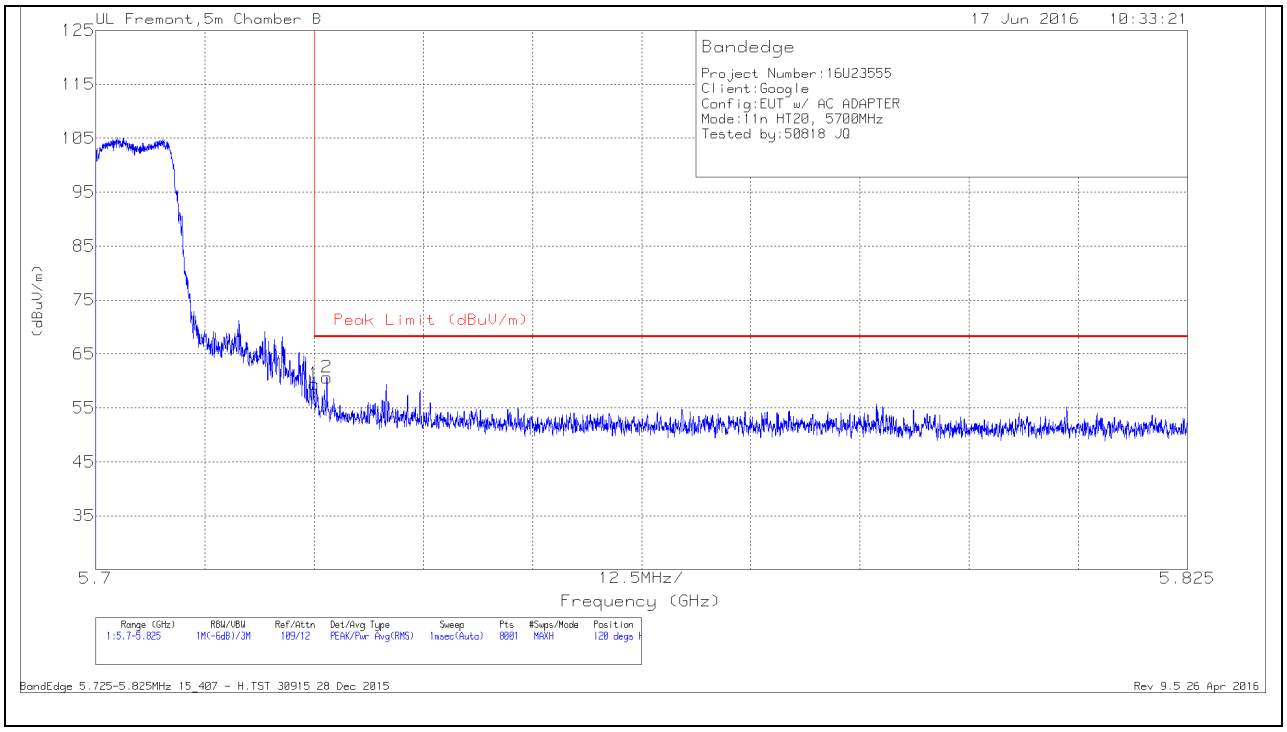


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.459	40.71	Pk	34.5	-20.7	54.51	-	-	74	-19.49	234	357	V
6	* 5.459	30.83	RMS	34.5	-20.8	44.53	54	-9.47	-	-	234	357	V
1	* 5.46	37.75	Pk	34.5	-21	51.25	-	-	74	-22.75	234	357	V
5	* 5.46	29.44	RMS	34.5	-21	42.94	54	-11.06	-	-	234	357	V
4	5.468	42.89	Pk	34.5	-20.8	56.59	-	-	68.2	-11.61	234	357	V
8	5.469	32.09	RMS	34.5	-20.7	45.89	-	-	-	-	234	357	V
3	5.47	41.57	Pk	34.5	-20.9	55.17	-	-	68.2	-13.03	234	357	V
7	5.47	31.73	RMS	34.5	-20.9	45.33	-	-	-	-	234	357	V

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

AUTHORIZED BANDEDGE (HIGH CHANNEL)

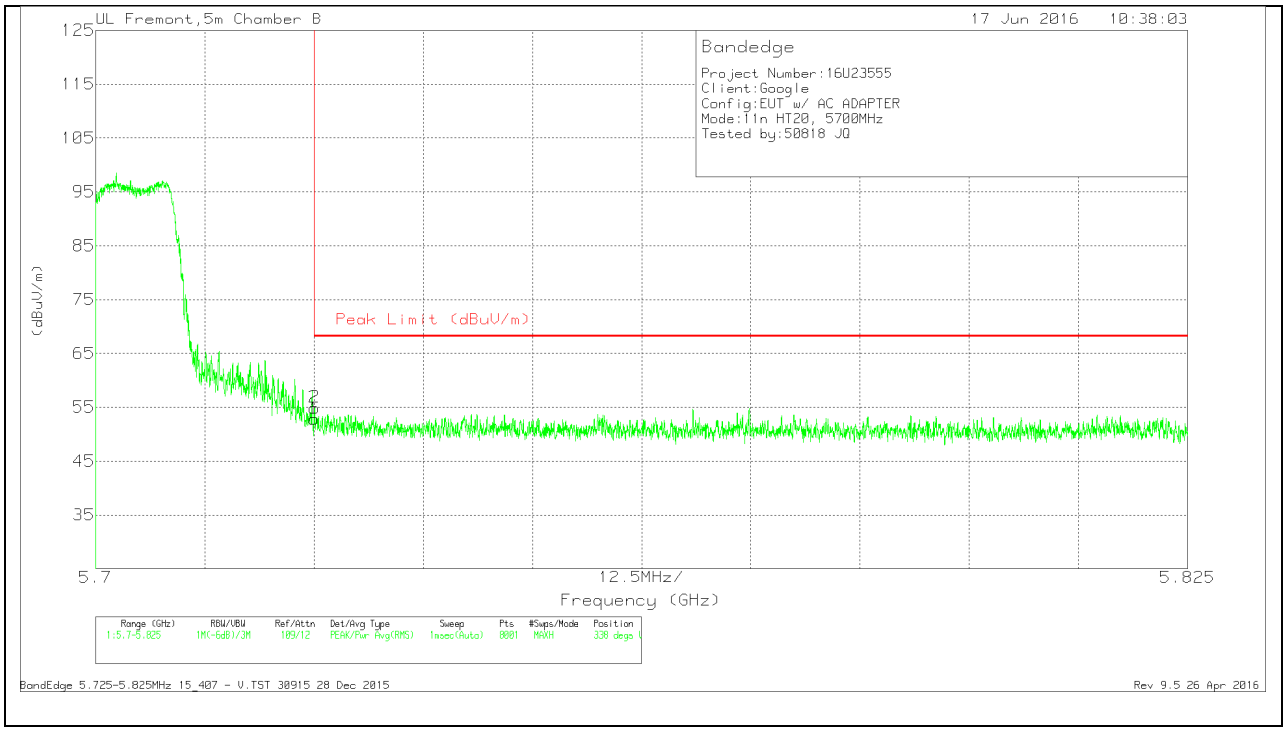
HORIZONTAL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	46.22	Pk	34.9	-21.7	59.42	68.2	-8.78	120	106	H
2	5.726	47.23	Pk	34.9	-21.5	60.63	68.2	-7.57	120	106	H

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

VERTICAL RESULTS

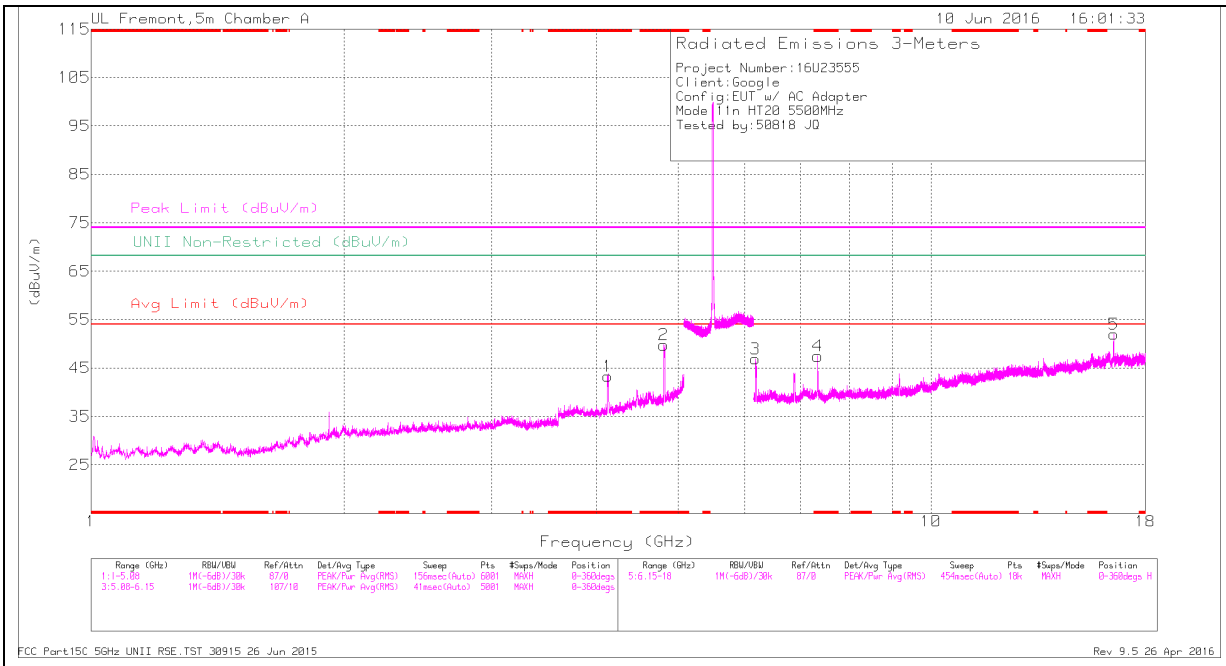


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	39.6	Pk	34.9	-21.7	52.8	68.2	-15.4	338	104	V
2	5.725	41.74	Pk	34.9	-21.7	54.94	68.2	-13.26	338	104	V

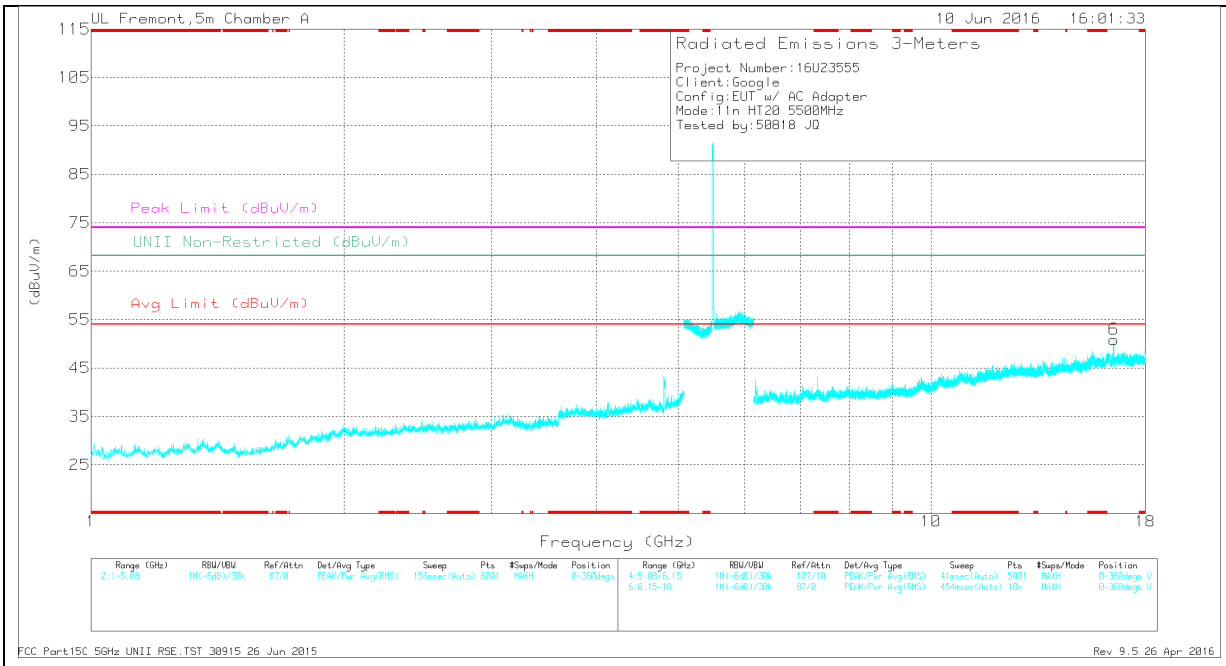
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



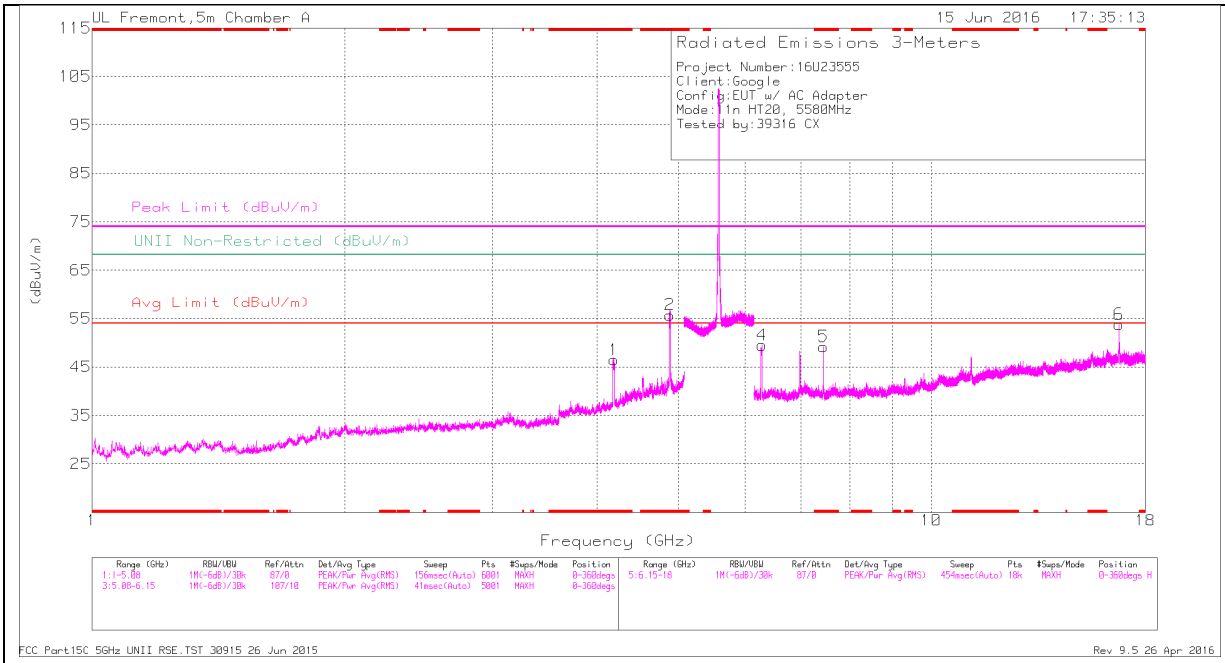
VERTICAL

LOW CHANNEL DATA

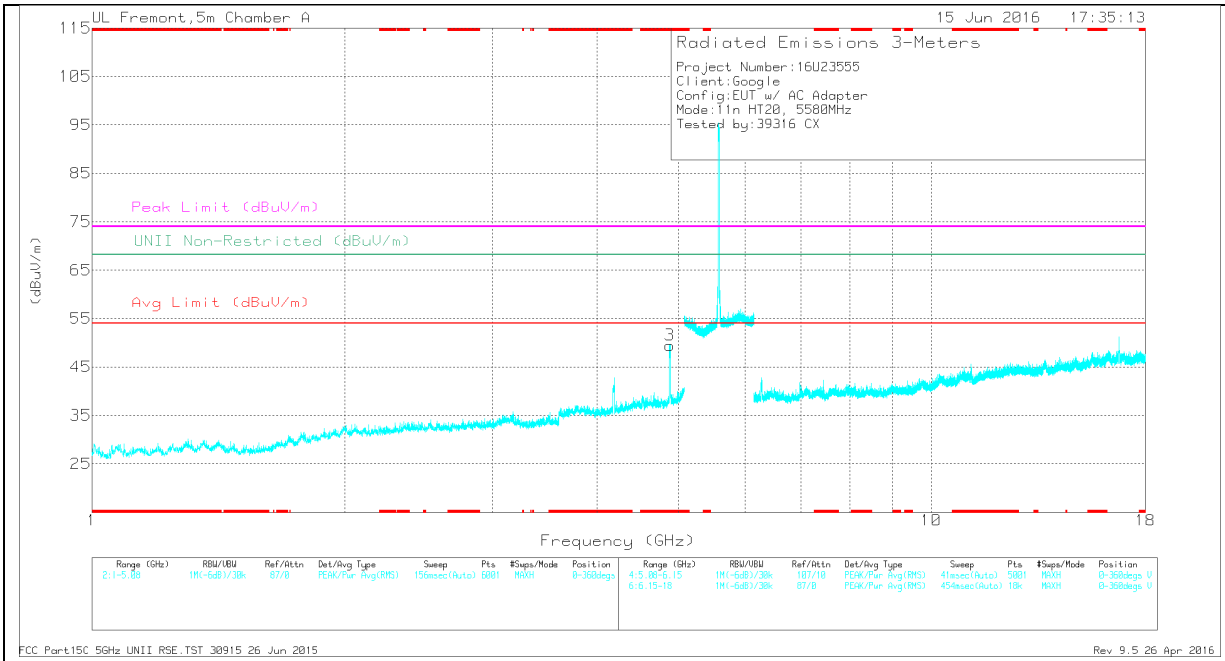
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (db/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.133	47.88	PK-U	33.6	-30.4	51.08	-	-	74	-22.92	-	-	244	152	H
	* 4.133	39.48	ADR	33.6	-30.4	42.68	54	-11.32	-	-	-	-	244	152	H
2	* 4.805	51.8	PK-U	34.3	-28.7	57.4	-	-	74	-16.6	-	-	273	101	H
	* 4.821	43.72	ADR	34.3	-28.6	49.42	54	-4.58	-	-	-	-	273	101	H
4	* 7.333	40.71	PK-U	35.7	-23.9	52.51	-	-	74	-21.49	-	-	231	293	H
	* 7.333	34.18	ADR	35.7	-23.9	45.98	54	-8.02	-	-	-	-	231	293	H
3	6.18	43.84	PK-U	35.5	-26.5	52.84	-	-	-	-	68.2	-15.36	227	279	H
5	16.501	37.82	PK-U	41.2	-21	58.02	-	-	-	-	68.2	-10.18	336	102	H
6	16.508	38.03	PK-U	41.2	-21.2	58.03	-	-	-	-	68.2	-10.17	181	101	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

MID CHANNEL RESULTS



HORIZTONAL



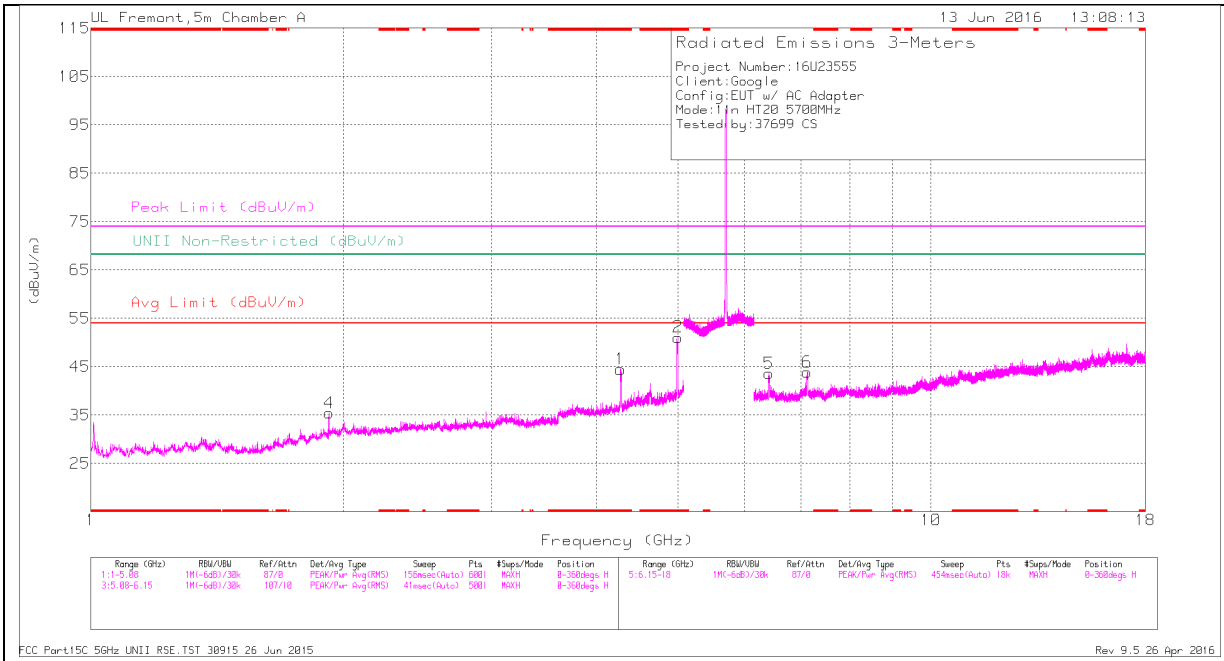
VERTICAL

MID CHANNEL DATA

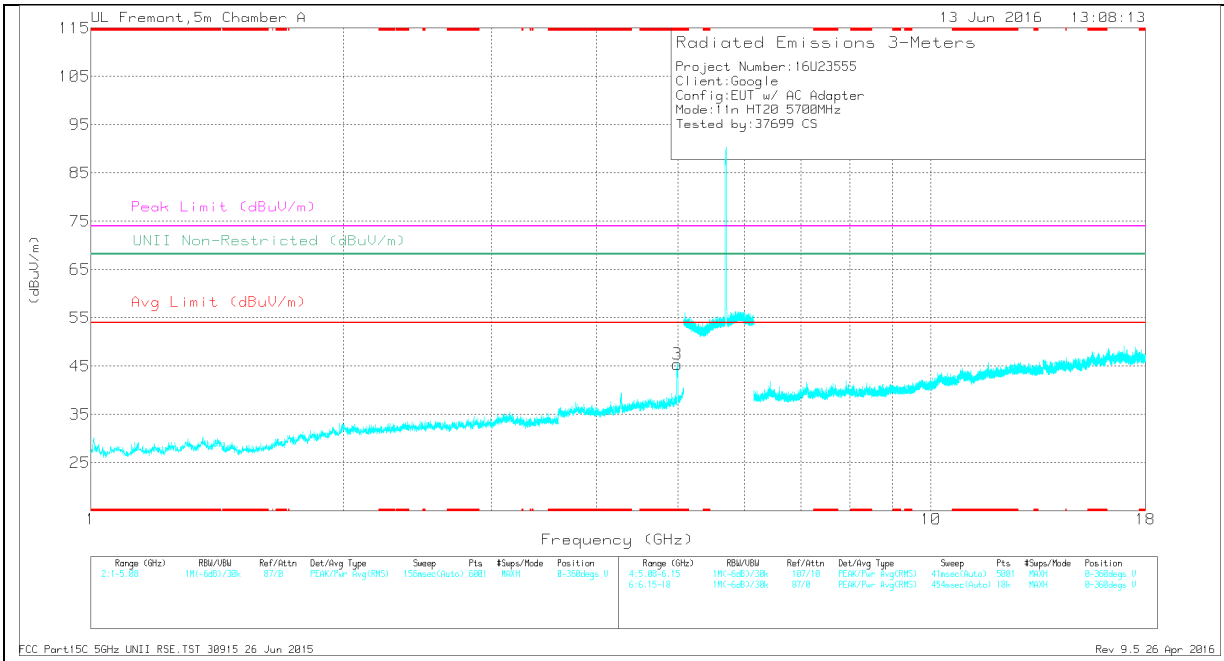
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (db/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.875	52.54	PK-U	34.3	-28.5	58.34	-	-	74	-15.66	-	-	245	109	H
	* 4.875	44.66	ADR	34.3	-28.5	50.46	54	-3.54	-	-	-	-	245	109	H
1	* 4.182	46.1	PK-U	33.6	-29.9	49.8	-	-	74	-24.2	-	-	252	117	H
	* 4.192	38.24	ADR	33.6	-29.8	42.04	54	-11.96	-	-	-	-	252	117	H
3	* 4.875	48.09	PK-U	34.3	-28.5	53.89	-	-	74	-20.11	-	-	217	101	V
	* 4.875	40.25	ADR	34.3	-28.5	46.05	54	-7.95	-	-	-	-	217	101	V
5	* 7.44	42.13	PK-U	35.8	-24.7	53.23	-	-	74	-20.77	-	-	174	108	H
	* 7.44	34.85	ADR	35.8	-24.7	45.95	54	-8.05	-	-	-	-	174	108	H
4	6.27	45.47	PK-U	35.5	-26.5	54.47	-	-	-	-	68.2	-13.73	174	117	H
6	16.742	38.65	PK-U	41.6	-21.4	58.85	-	-	-	-	68.2	-9.35	258	110	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL RESULTS



HORIZTONAL



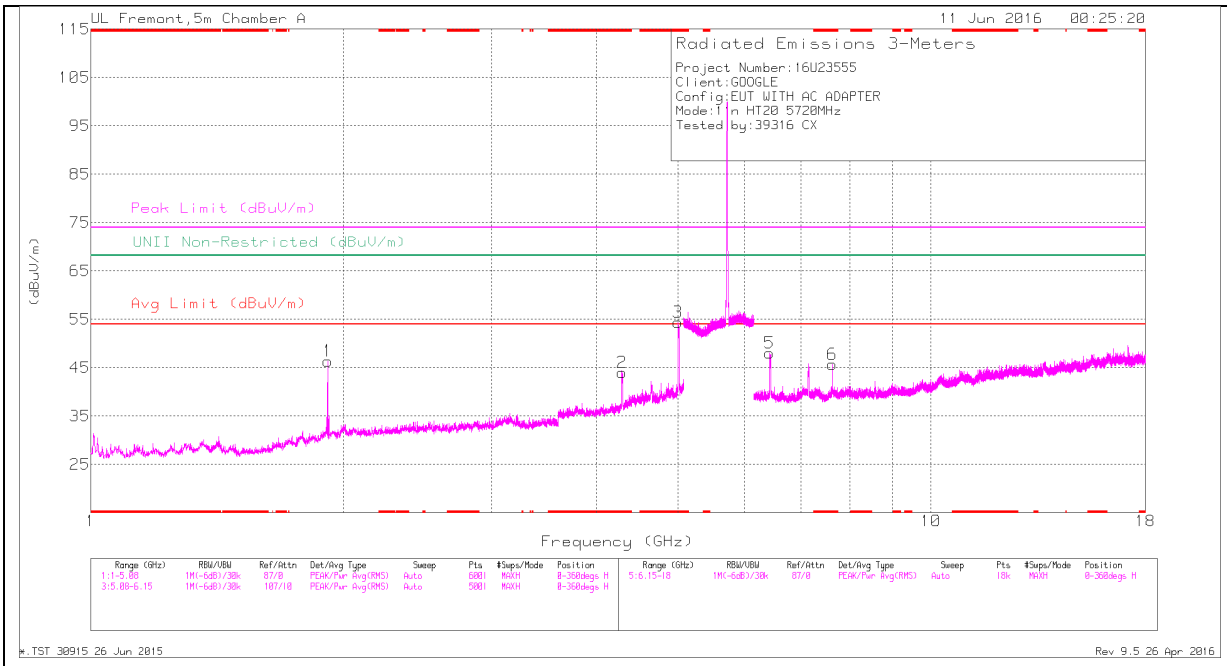
VERTICAL

HIGH CHANNEL DATA

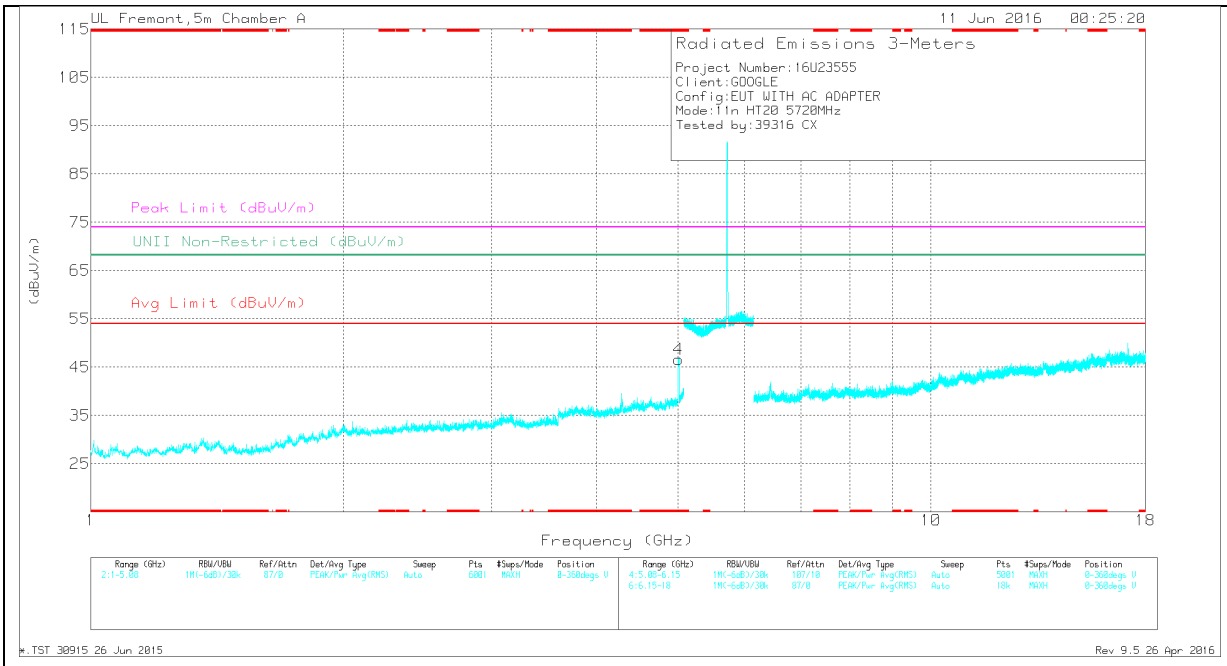
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (db/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.283	46.83	PK-U	33.7	-29.1	51.43	-	-	74	-22.57	-	-	250	109	H
	* 4.277	38.57	ADR	33.7	-29.1	43.17	54	-10.83	-	-	-	-	250	109	H
2	* 4.995	51.72	PK-U	34.3	-27.6	58.42	-	-	74	-15.58	-	-	112	107	H
	* 4.979	43.93	ADR	34.3	-27.9	50.33	54	-3.67	-	-	-	-	112	107	H
3	* 4.996	44.83	PK-U	34.3	-27.6	51.53	-	-	74	-22.47	-	-	169	102	V
	* 4.995	36.56	ADR	34.3	-27.6	43.26	54	-10.74	-	-	-	-	169	102	V
4	1.92	44.02	PK-U	31.2	-33.8	41.42	-	-	-	-	68.2	-26.78	168	103	H
5	6.417	41.5	PK-U	35.6	-25.9	51.2	-	-	-	-	68.2	-17	165	101	H
6	7.117	38.49	PK-U	35.7	-24	50.19	-	-	-	-	68.2	-18.01	351	146	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

STRADDLE CHANNEL RESULTS



HORIZTONAL



VERTICAL

STRADDLE CHANNEL DATA

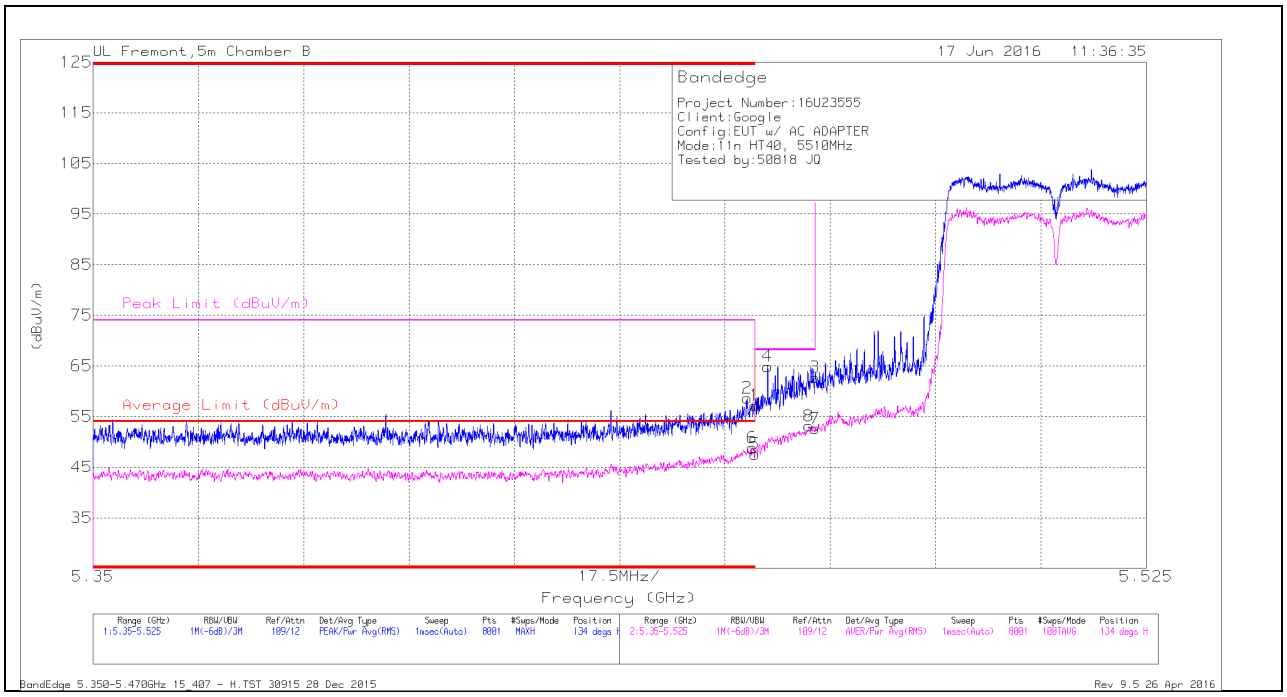
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (db/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.297	47.13	PK-U	33.7	-29.2	51.63	-	-	74	-22.37	-	-	236	400	H
	* 4.297	38.76	ADR	33.7	-29.2	43.26	54	-10.74	-	-	-	-	236	400	H
3	* 5.002	51.68	PK-U	34.3	-27.7	58.28	-	-	74	-15.72	-	-	185	116	H
	* 4.998	43.71	ADR	34.3	-27.7	50.31	54	-3.69	-	-	-	-	185	116	H
4	* 5.013	47.57	PK-U	34.3	-27.9	53.97	-	-	74	-20.03	-	-	43	279	V
	* 4.997	39.59	ADR	34.3	-27.7	46.19	54	-7.81	-	-	-	-	43	279	V
6	* 7.627	36.51	PK-U	35.9	-23.6	48.81	-	-	74	-25.19	-	-	200	110	H
	* 7.627	28.31	ADR	35.9	-23.6	40.61	54	-13.39	-	-	-	-	200	110	H
1	1.92	42.03	PK-U	31.2	-33.8	39.43	-	-	-	-	68.2	-28.77	168	287	H
5	6.43	42.35	PK-U	35.6	-25.4	52.55	-	-	-	-	68.2	-15.65	198	112	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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

RESTRICTED BANDEDGE (LOW CHANNEL)

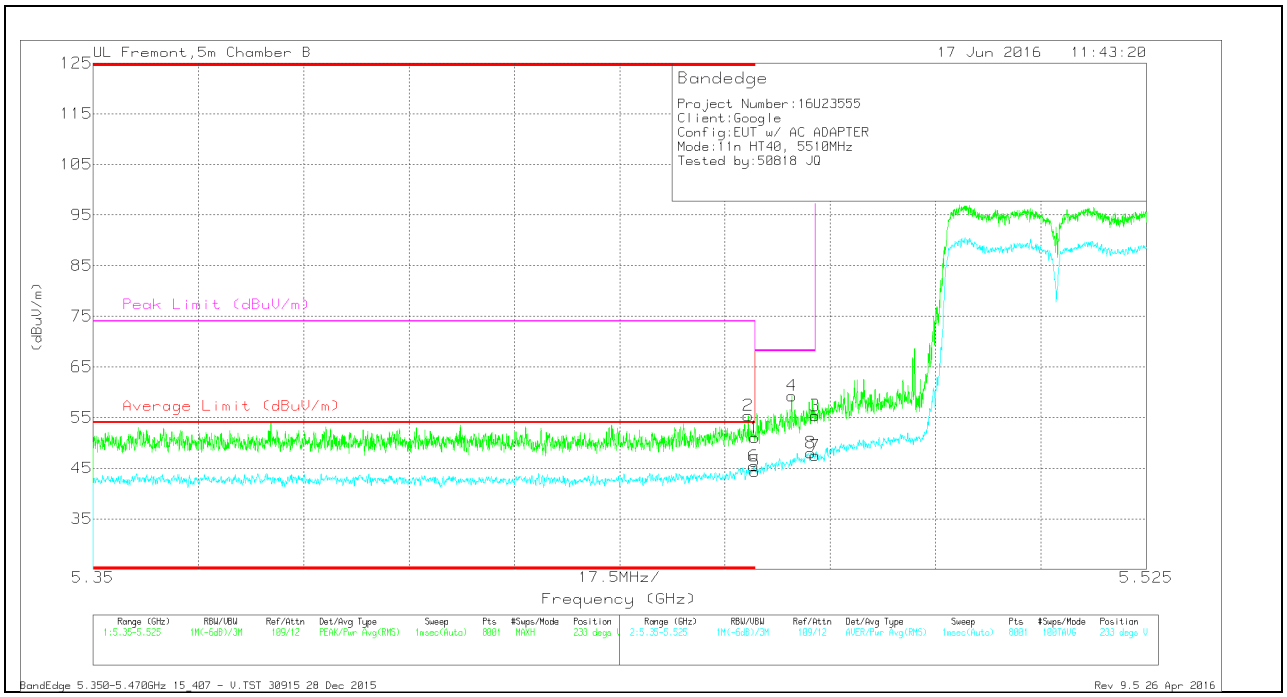
HORIZONTAL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (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	43.71	Pk	34.5	-21	57.21	-	-	74	-16.79	134	354	H
2	* 5.459	44.78	Pk	34.5	-20.6	58.68	-	-	74	-15.32	134	354	H
5	* 5.46	34.09	RMS	34.5	-21	47.59	54	-6.41	-	-	134	354	H
6	* 5.46	35.22	RMS	34.5	-20.9	48.82	54	-5.18	-	-	134	354	H
4	5.462	51.03	Pk	34.5	-20.6	64.93	-	-	68.2	-3.27	134	354	H
8	5.469	39.34	RMS	34.5	-20.7	53.14	-	-	-	-	134	354	H
3	5.47	49.12	Pk	34.5	-20.9	62.72	-	-	68.2	-5.48	134	354	H
7	5.47	39.03	RMS	34.5	-20.9	52.63	-	-	-	-	134	354	H

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

VERTICAL RESULTS

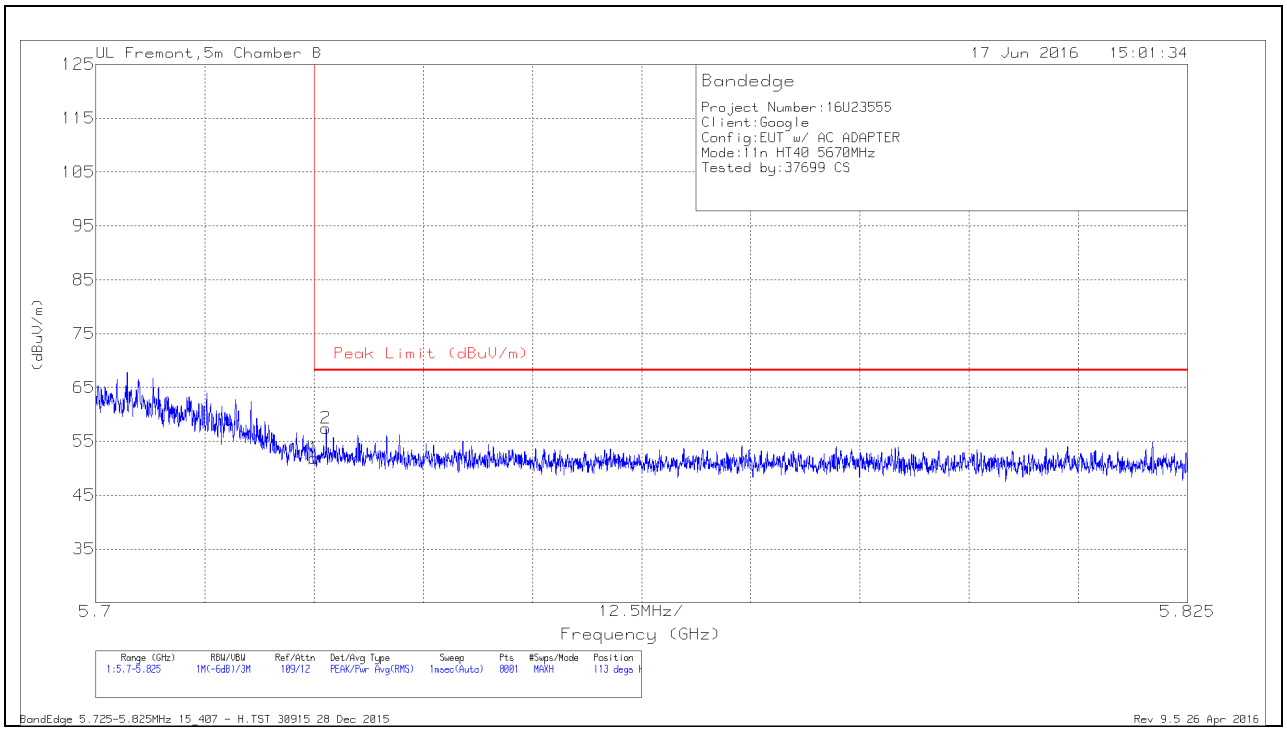


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.459	41.59	Pk	34.5	-20.7	55.39	-	-	74	-18.61	233	357	V
1	* 5.46	37.58	Pk	34.5	-21	51.08	-	-	74	-22.92	233	357	V
5	* 5.46	30.88	RMS	34.5	-21	44.38	54	-9.62	-	-	233	357	V
6	* 5.46	31.82	RMS	34.5	-20.9	45.42	54	-8.58	-	-	233	357	V
4	5.466	45.71	Pk	34.5	-20.9	59.31	-	-	68.2	-8.89	233	357	V
8	5.469	34.24	RMS	34.5	-20.7	48.04	-	-	-	-	233	357	V
3	5.47	41.76	Pk	34.5	-20.9	55.36	-	-	68.2	-12.84	233	357	V
7	5.47	33.9	RMS	34.5	-20.9	47.5	-	-	-	-	233	357	V

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

AUTHORIZED BANDEDGE (HIGH CHANNEL)

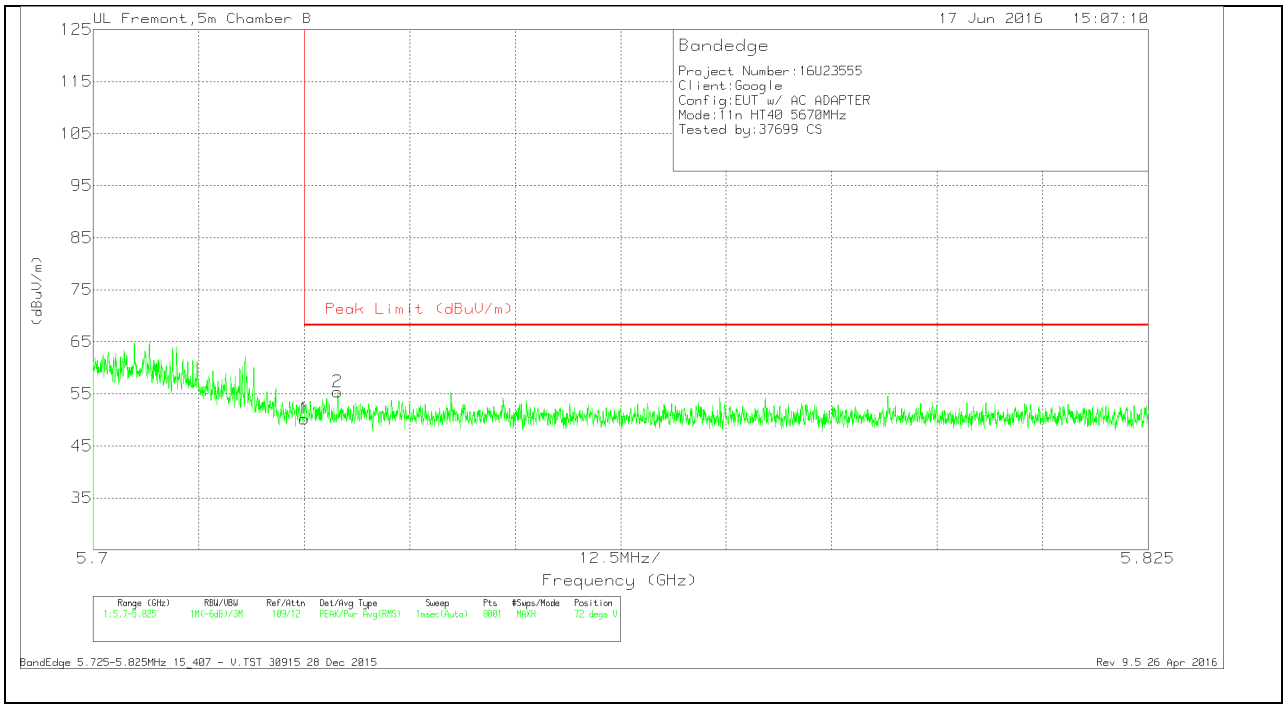
HORIZONTAL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	38.66	Pk	34.9	-21.7	51.86	68.2	-16.34	113	102	H
2	5.726	44	Pk	34.9	-21.5	57.4	68.2	-10.8	113	102	H

Pk - Peak detector

VERTICAL RESULTS

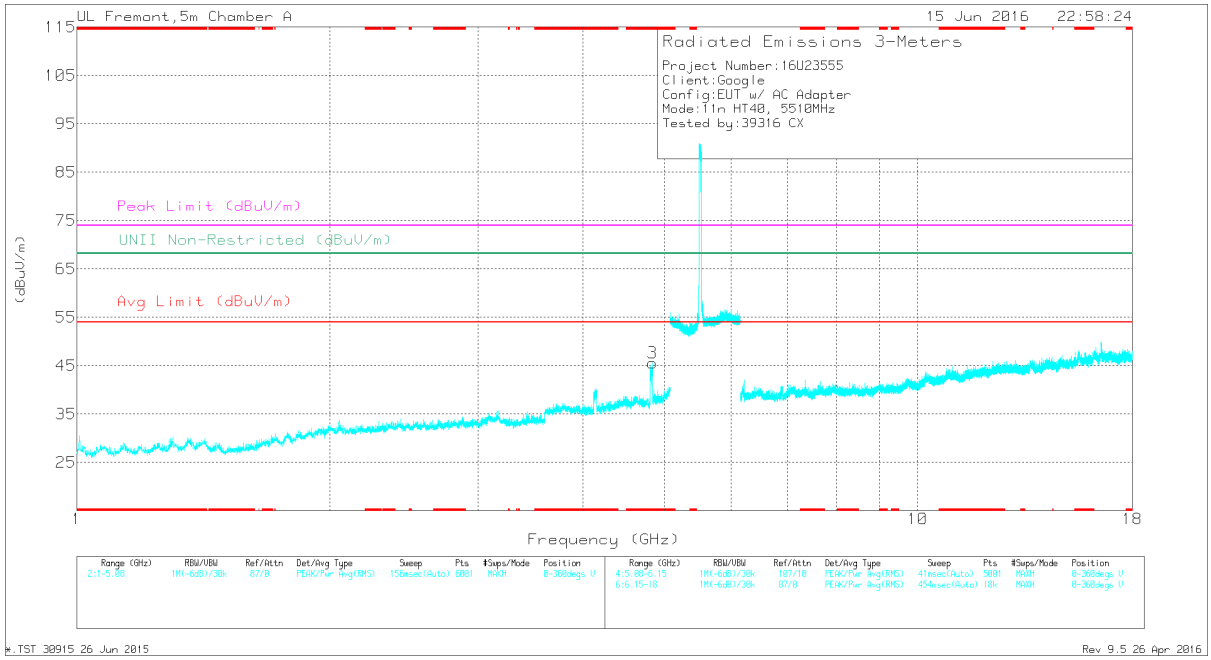


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	37.02	Pk	34.9	-21.7	50.22	68.2	-17.98	72	345	V
2	5.729	42.31	Pk	34.9	-21.8	55.41	68.2	-12.79	72	345	V

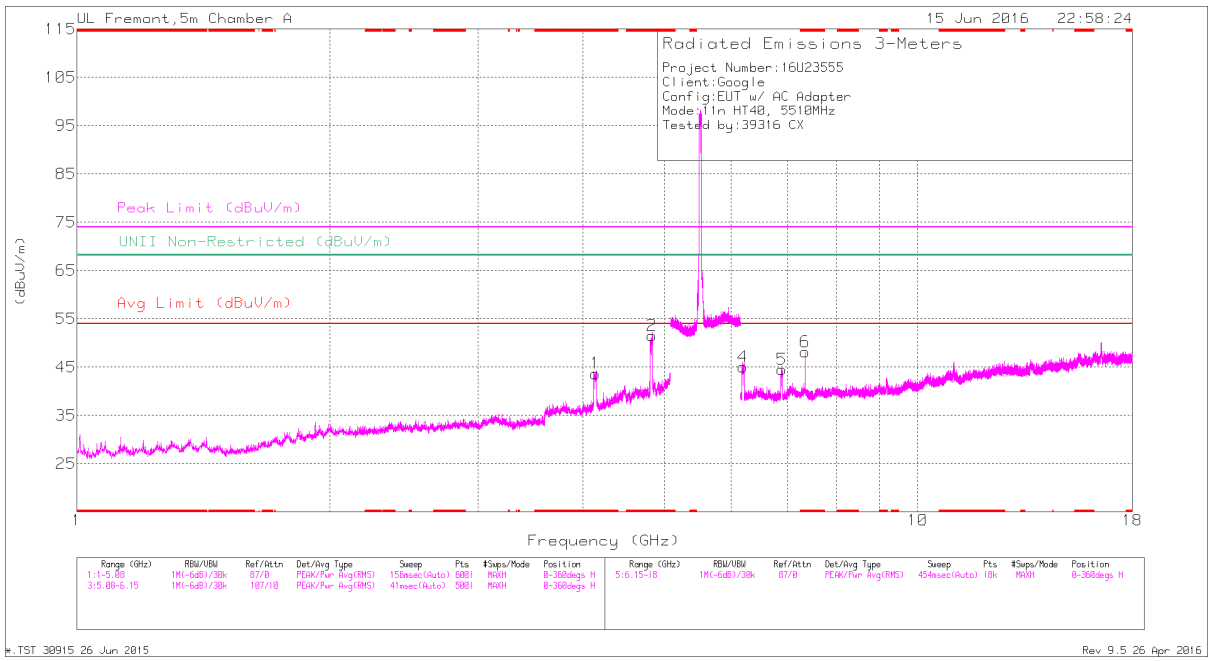
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



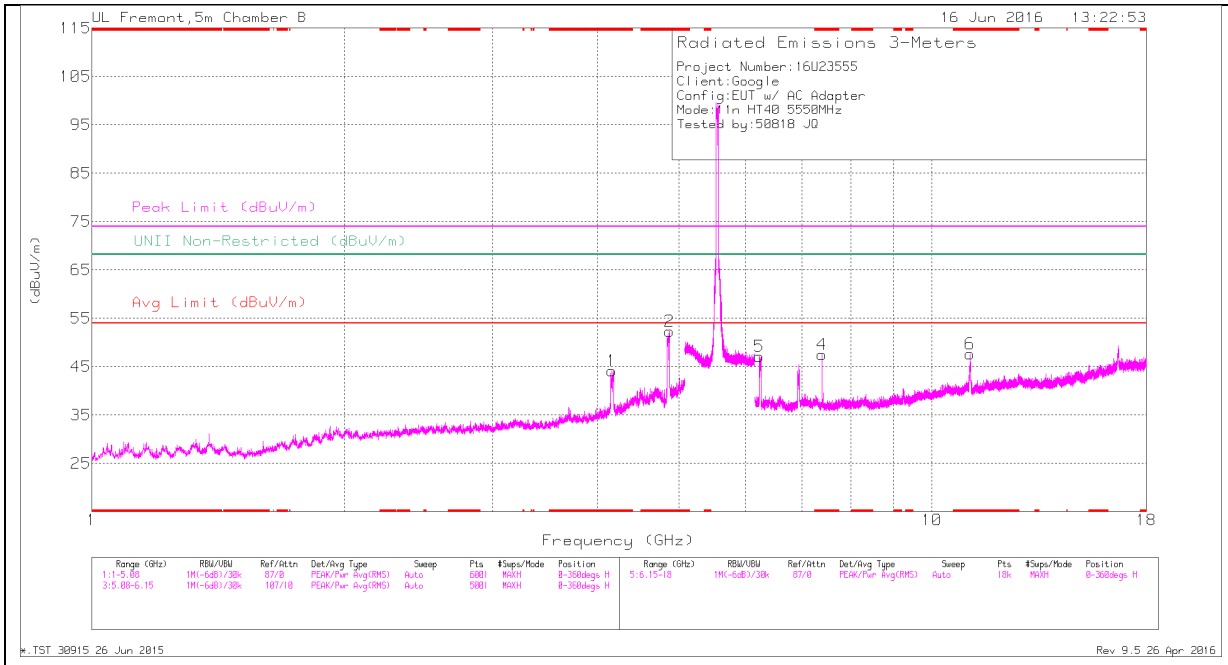
VERTICAL

LOW CHANNEL DATA

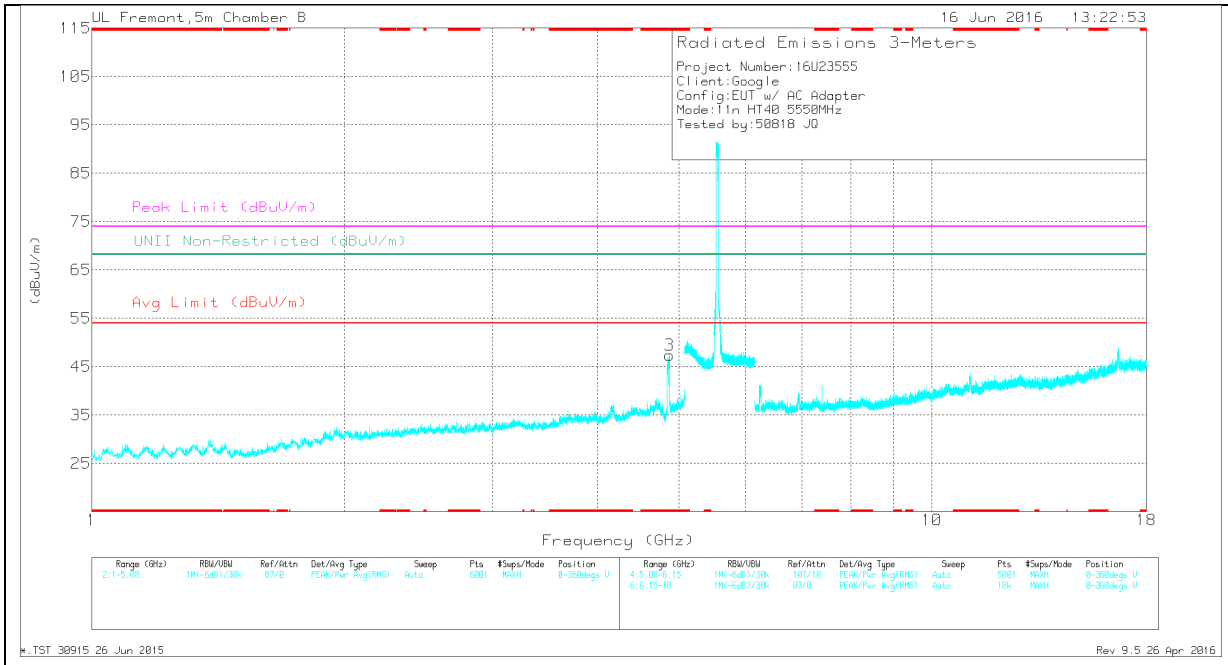
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (db/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.117	48.48	PK-U	33.7	-30.5	51.68	-	-	74	-22.32	-	-	229	175	H
	* 4.116	39.84	ADR	33.7	-30.5	43.04	54	-10.96	-	-	-	-	229	175	H
2	* 4.833	52.4	PK-U	34.3	-28.7	58	-	-	74	-16	-	-	245	110	H
	* 4.837	44.7	ADR	34.3	-28.7	50.3	54	-3.7	-	-	-	-	245	110	H
3	* 4.836	49.05	PK-U	34.3	-28.7	54.65	-	-	74	-19.35	-	-	42	280	V
	* 4.837	41.16	ADR	34.3	-28.7	46.76	54	-7.24	-	-	-	-	42	280	V
6	* 7.347	41.58	PK-U	35.7	-23.7	53.58	-	-	74	-20.42	-	-	173	115	H
	* 7.347	36.72	ADR	35.7	-23.7	48.72	54	-5.28	-	-	-	-	173	115	H
4	6.215	42.69	PK-U	35.5	-26.4	51.79	-	-	-	-	68.2	-16.41	348	101	H
5	6.896	41.29	PK-U	35.6	-25.3	51.59	-	-	-	-	68.2	-16.61	348	102	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

MID CHANNEL RESULTS



HORIZTONAL



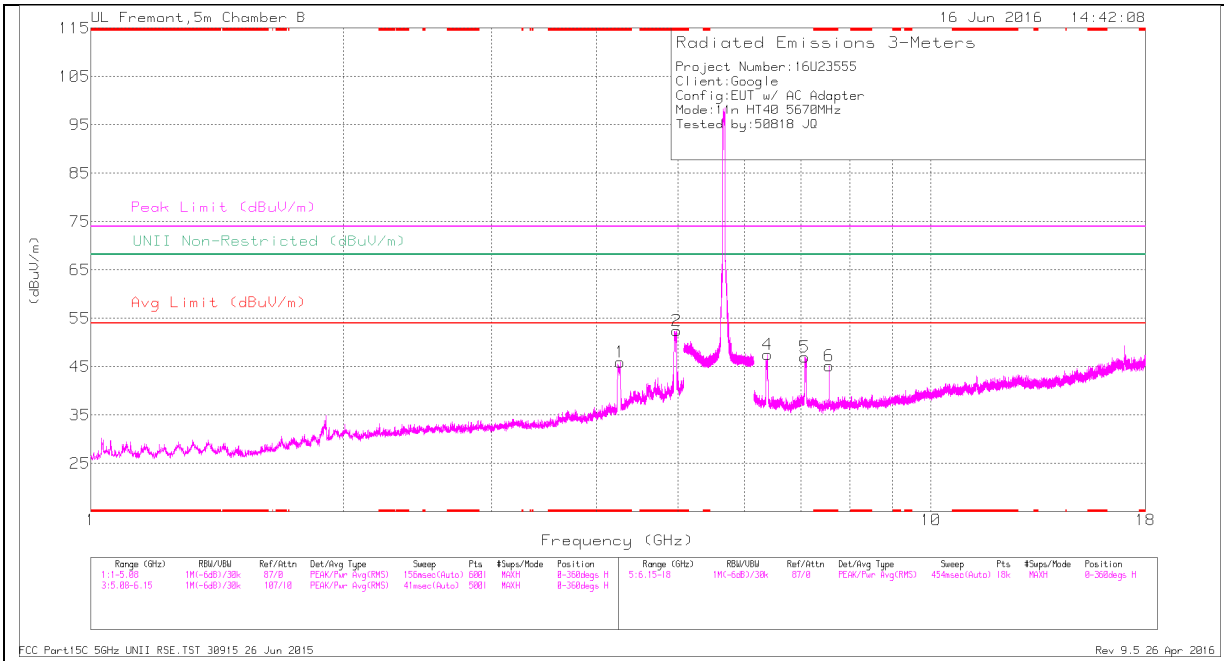
VERTICAL

MID CHANNEL DATA

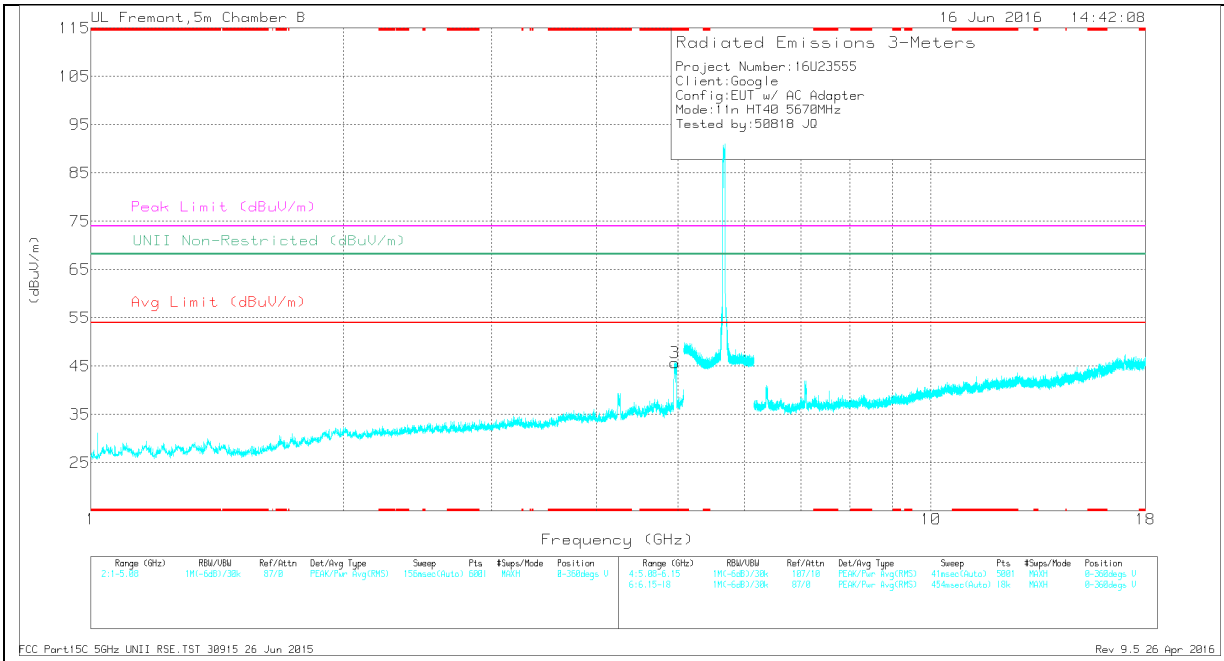
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.178	48.8	PK-U	33.7	-31.9	50.6	-	-	74	-23.4	-	-	233	103	H
	* 4.179	40.52	ADR	33.7	-31.9	42.32	54	-11.68	-	-	-	-	233	103	H
2	* 4.84	56.84	PK-U	33.8	-32.4	58.24	-	-	74	-15.76	-	-	276	107	H
	* 4.84	49.29	ADR	33.8	-32.4	50.69	54	-3.31	-	-	-	-	276	107	H
3	* 4.864	54.04	PK-U	33.8	-31.9	55.94	-	-	74	-18.06	-	-	211	322	V
	* 4.87	46.49	ADR	33.8	-31.7	48.59	54	-5.41	-	-	-	-	211	322	V
4	* 7.4	46.68	PK-U	35.6	-30.6	51.68	-	-	74	-22.32	-	-	237	106	H
	* 7.4	42.28	ADR	35.6	-30.6	47.28	54	-6.72	-	-	-	-	237	106	H
6	* 11.096	42.68	PK-U	37.9	-26.1	54.48	-	-	74	-19.52	-	-	55	116	H
	* 11.098	30.9	ADR	37.9	-26.1	42.7	54	-11.3	-	-	-	-	55	116	H
5	6.229	49	PK-U	35.4	-31.7	52.7	-	-	-	-	68.2	-15.5	209	125	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL RESULTS



HORIZTONAL



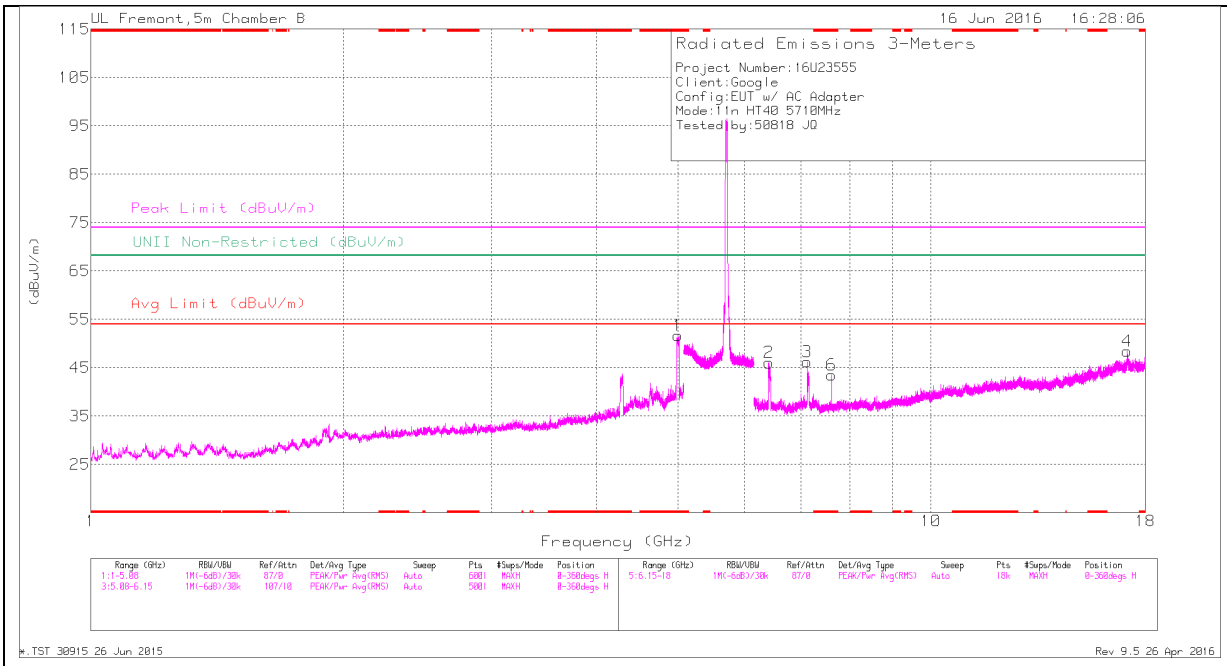
VERTICAL

HIGH CHANNEL DATA

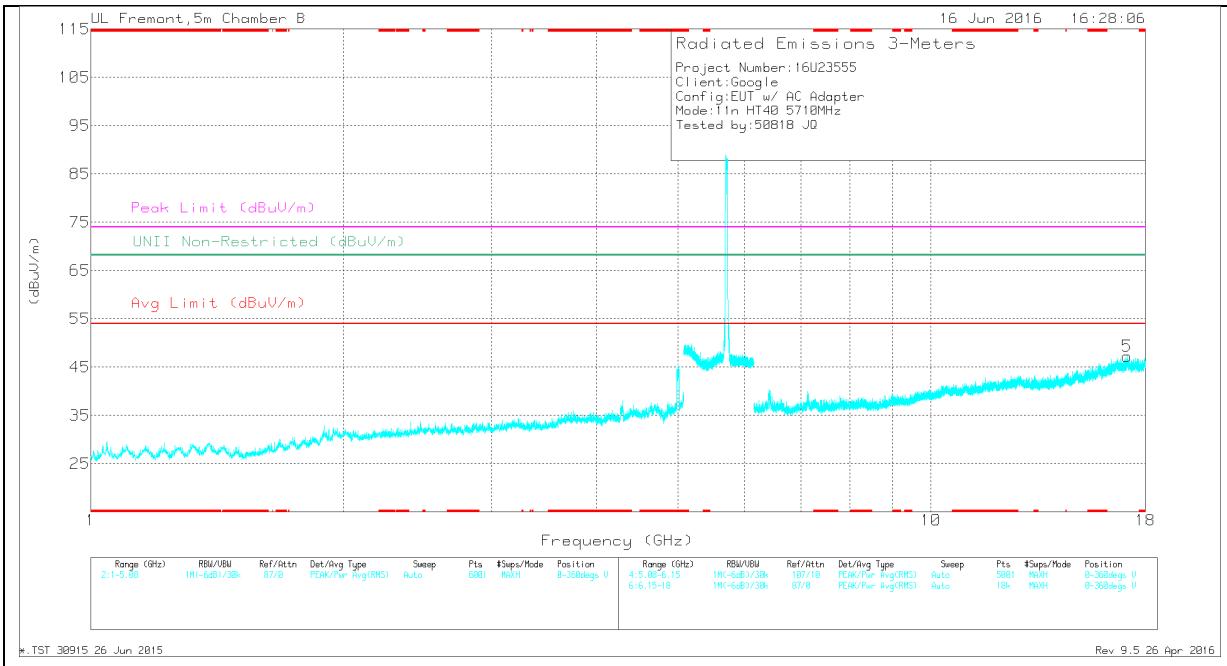
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.954	55.87	PK-U	34	-31.4	58.47	-	-	74	-15.53	-	-	313	197	H
	* 4.947	48.62	ADR	33.9	-31.7	50.82	54	-3.18	-	-	-	-	313	197	H
1	* 4.269	51.3	PK-U	33.7	-33	52	-	-	74	-22	-	-	220	165	H
	* 4.268	43.59	ADR	33.7	-33	44.29	54	-9.71	-	-	-	-	220	165	H
3	* 4.949	51.65	PK-U	34	-31.6	54.05	-	-	74	-19.95	-	-	211	379	V
	* 4.946	44.06	ADR	33.9	-31.7	46.26	54	-7.74	-	-	-	-	211	379	V
6	* 7.56	43.15	PK-U	35.7	-29.2	49.65	-	-	74	-24.35	-	-	196	115	H
	* 7.56	37.59	ADR	35.7	-29.2	44.09	54	-9.91	-	-	-	-	196	115	H
4	6.395	47.6	PK-U	35.6	-30.2	53	-	-	-	-	68.2	-15.2	206	119	H
5	7.103	47.81	PK-U	35.5	-30.7	52.61	-	-	-	-	68.2	-15.59	240	314	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

STRADDLE CHANNEL RESULTS



HORIZTONAL



VERTICAL

STRADDLE CHANNEL DATA

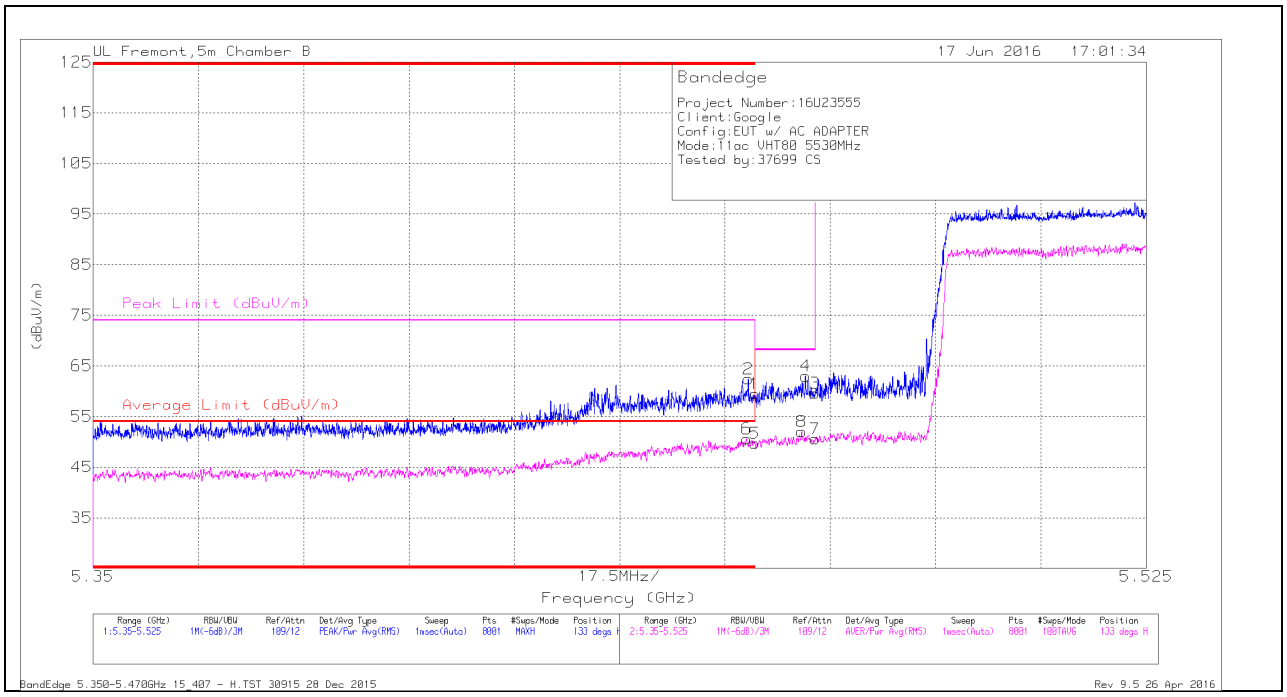
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.983	55.07	PK-U	34	-30.5	58.57	-	-	74	-15.43	-	-	316	266	H
	* 4.981	46.64	ADR	34	-30.6	50.04	54	-3.96	-	-	-	-	316	266	H
6	* 7.613	43.26	PK-U	35.7	-30	48.96	-	-	74	-25.04	-	-	198	110	H
	* 7.613	37.32	ADR	35.7	-30	43.02	54	-10.98	-	-	-	-	198	110	H
2	6.44	46.72	PK-U	35.6	-30.8	51.52	-	-	-	-	68.2	-16.68	195	124	H
3	7.121	46.23	PK-U	35.6	-30.8	51.03	-	-	-	-	68.2	-17.17	355	102	H
4	17.122	35.26	PK-U	41.5	-23.4	53.36	-	-	-	-	68.2	-14.84	142	102	H
5	17.15	34.88	PK-U	41.4	-22.9	53.38	-	-	-	-	68.2	-14.82	10	128	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

5.1.12. TX ABOVE 1 GHz 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

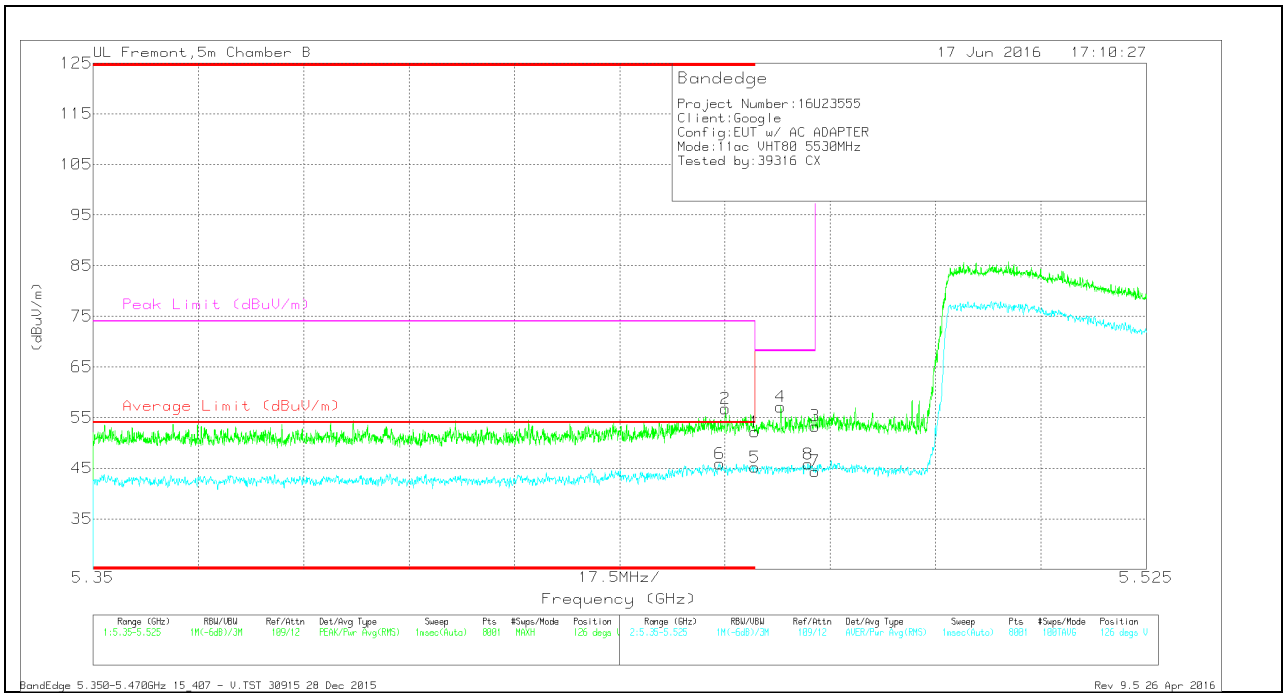
HORIZONTAL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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	46	Pk	34.5	-21	0	59.5	-	-	74	-14.5	133	108	H
2	* 5.459	48.62	Pk	34.5	-20.7	0	62.42	-	-	74	-11.58	133	108	H
5	* 5.46	36.11	RMS	34.5	-21	.09	49.7	54	-4.3	-	-	133	108	H
6	* 5.459	36.62	RMS	34.5	-20.6	.09	50.61	54	-3.39	-	-	133	108	H
4	5.468	49.19	Pk	34.5	-20.7	0	62.99	-	-	68.2	-5.21	133	108	H
8	5.468	38.23	RMS	34.5	-20.8	.09	52.02	-	-	-	-	133	108	H
3	5.47	46.01	Pk	34.5	-20.9	0	59.61	-	-	68.2	-8.59	133	108	H
7	5.47	36.88	RMS	34.5	-20.9	.09	50.57	-	-	-	-	133	108	H

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

VERTICAL RESULTS

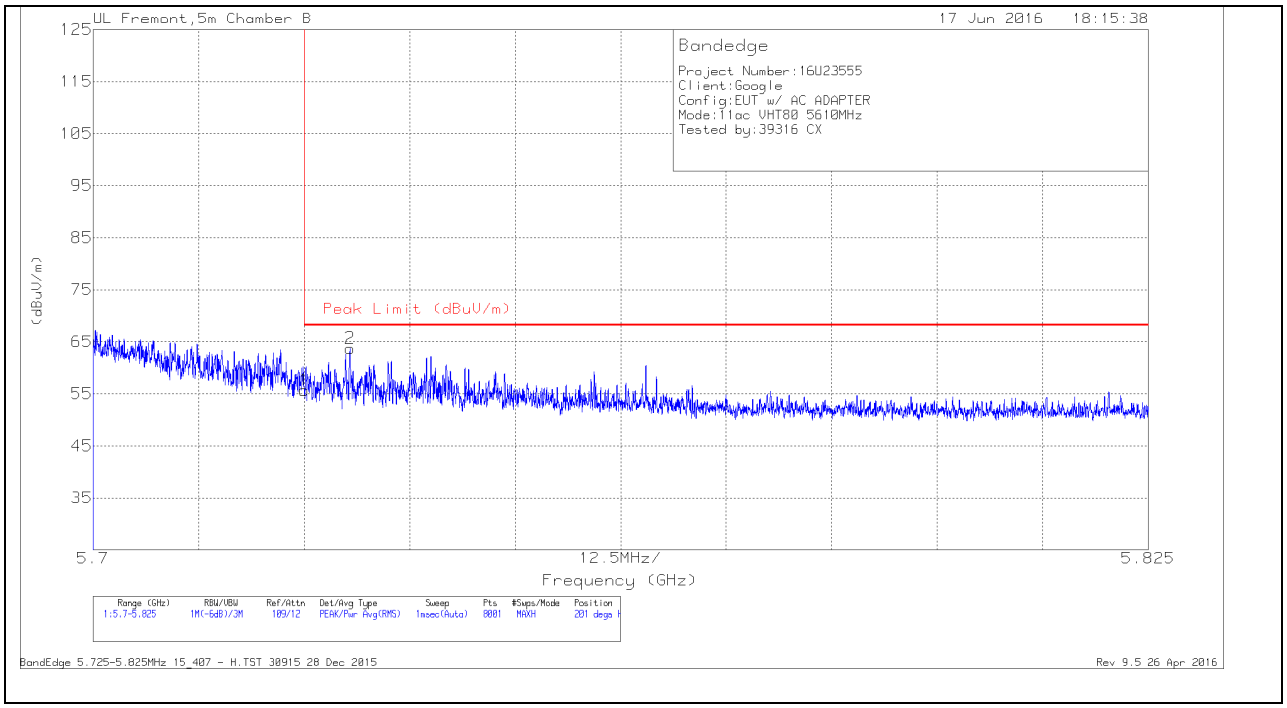


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	38.64	Pk	34.5	-21	52.14	-	-	74	-21.86	126	402	V
2	* 5.455	43.16	Pk	34.5	-20.9	56.76	-	-	74	-17.24	126	402	V
5	* 5.46	31.69	RMS	34.5	-21	45.19	54	-8.81	-	-	126	402	V
6	* 5.454	32.19	RMS	34.5	-20.8	45.89	54	-8.11	-	-	126	402	V
4	5.464	43.42	Pk	34.5	-20.8	57.12	-	-	68.2	-11.08	126	402	V
8	5.469	32.01	RMS	34.5	-20.7	45.81	-	-	-	-	126	402	V
3	5.47	39.72	Pk	34.5	-20.9	53.32	-	-	68.2	-14.88	126	402	V
7	5.47	30.8	RMS	34.5	-20.9	44.4	-	-	-	-	126	402	V

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

AUTHORIZED BANDEDGE (HIGH CHANNEL)

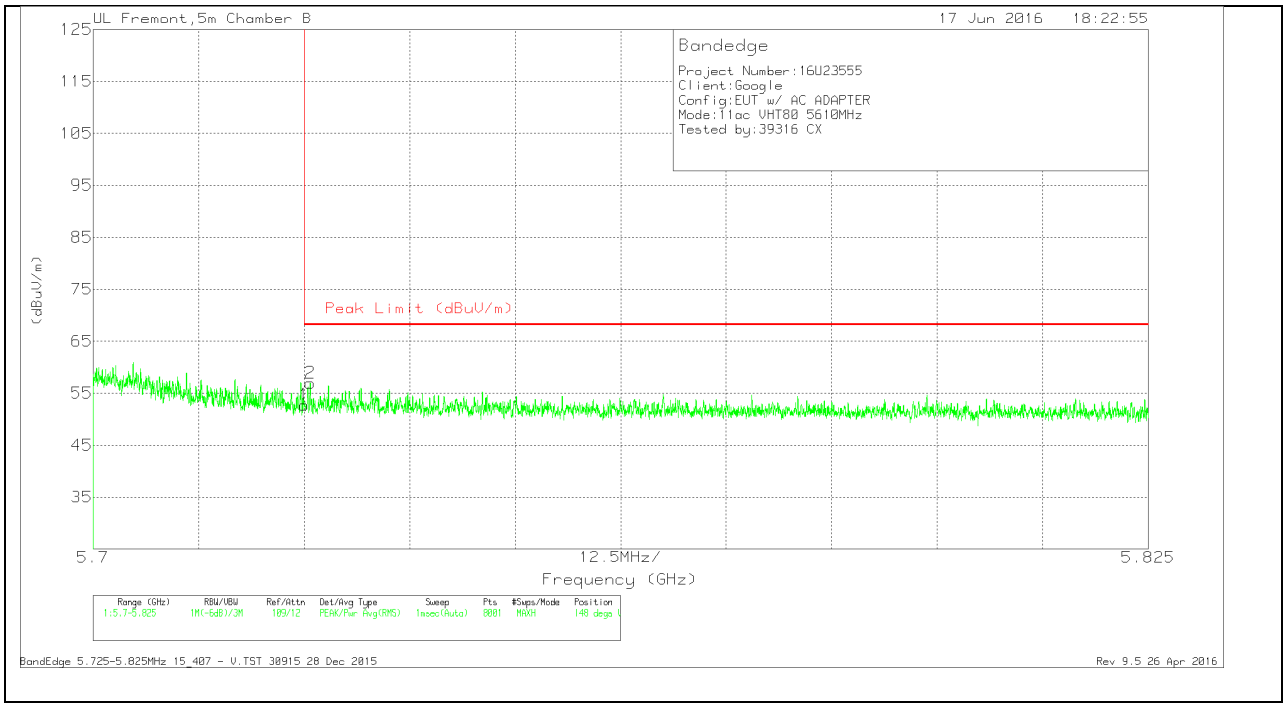
HORIZONTAL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	42.49	Pk	34.9	-21.7	55.69	68.2	-12.51	201	151	H
2	5.73	50.42	Pk	34.9	-21.6	63.72	68.2	-4.48	201	151	H

Pk - Peak detector

VERTICAL RESULTS

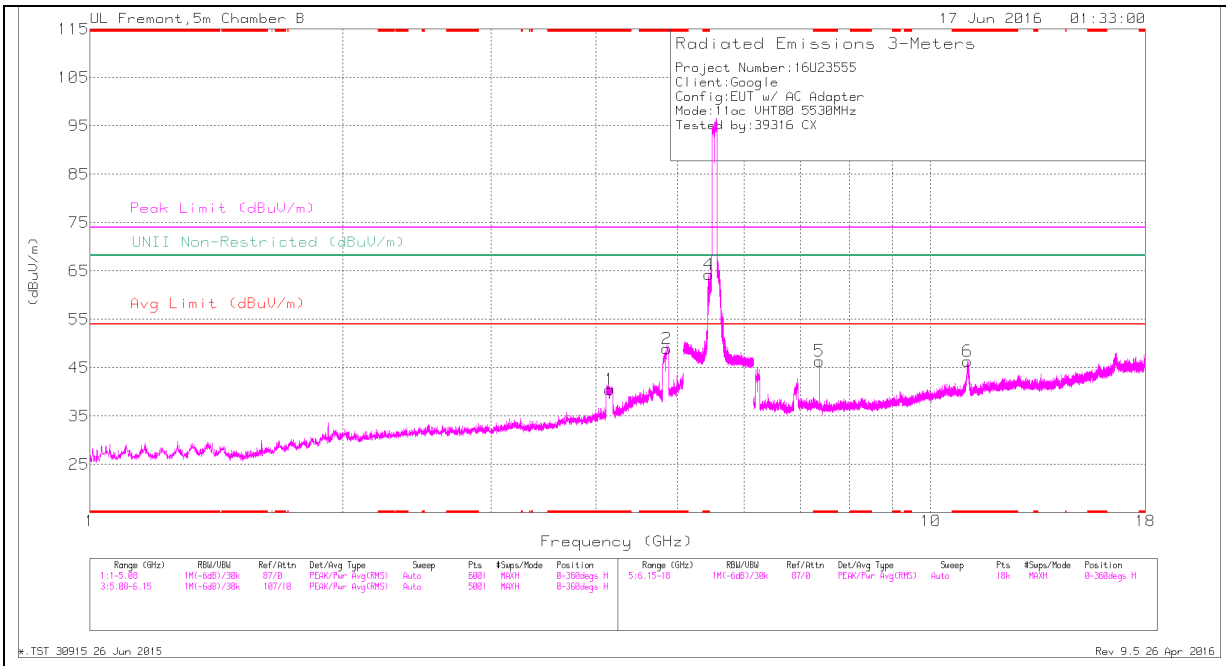


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	39.57	Pk	34.9	-21.7	52.77	68.2	-15.43	148	150	V
2	5.726	43.67	Pk	34.9	-21.6	56.97	68.2	-11.23	148	150	V

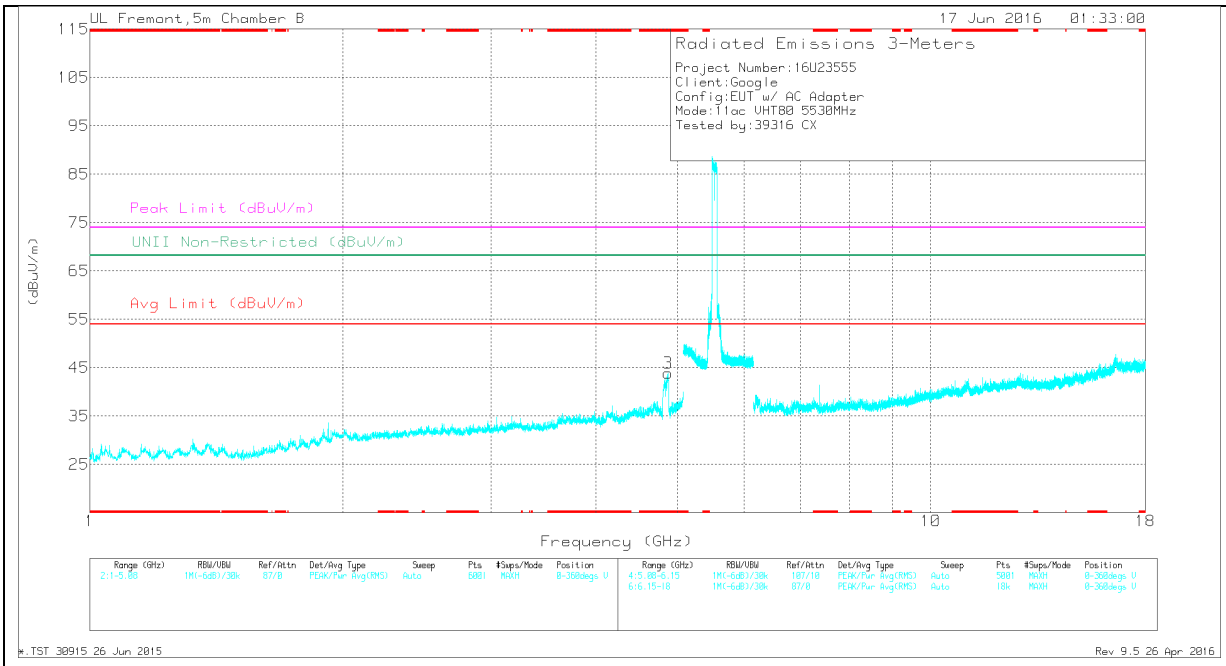
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



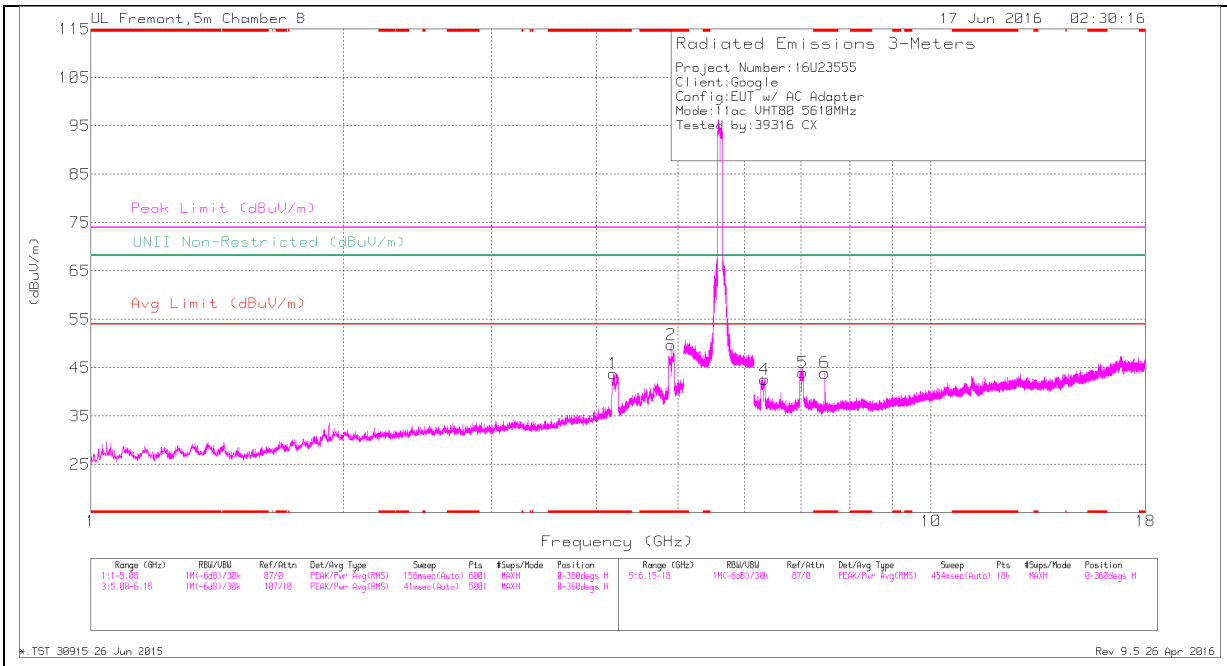
VERTICAL

LOW CHANNEL DATA

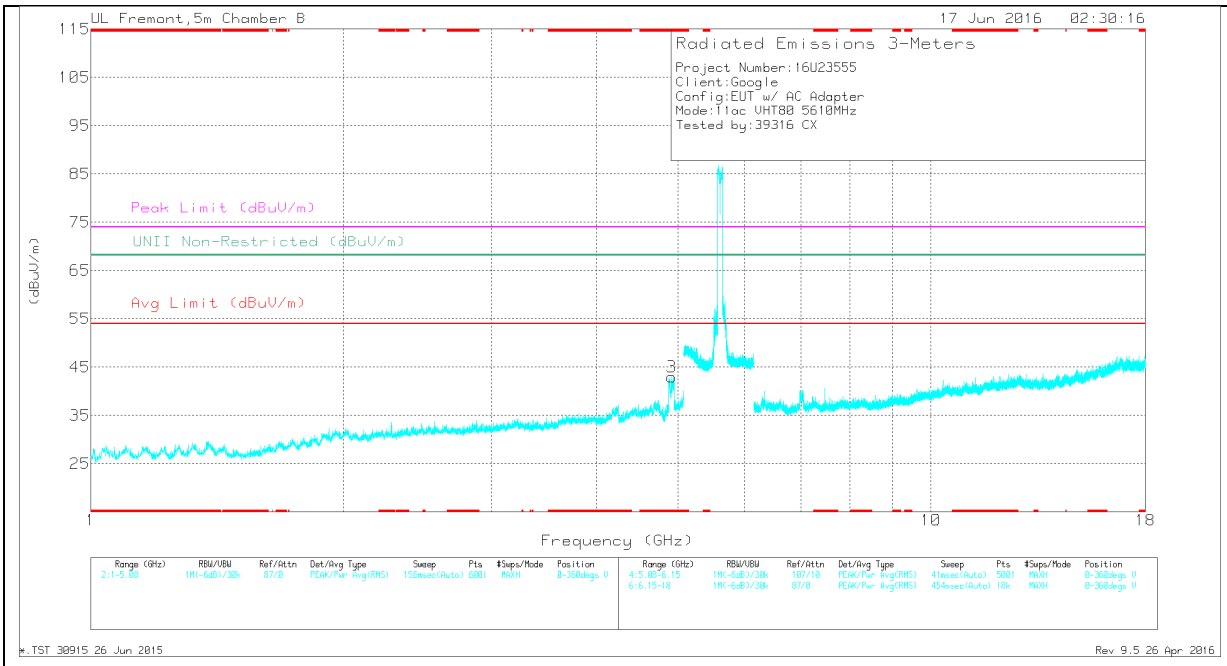
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.127	43.75	PK-U	33.7	-32.5	0	44.95	-	-	74	-29.05	-	-	276	150	H
	* 4.116	33.91	ADR	33.7	-32.8	.09	34.9	54	-19.1	-	-	-	-	276	150	H
2	* 4.814	49.27	PK-U	33.8	-32.3	0	50.77	-	-	74	-23.23	-	-	238	101	H
	* 4.815	40.2	ADR	33.8	-32.3	.09	41.79	54	-12.21	-	-	-	-	238	101	H
3	* 4.832	44.67	PK-U	33.8	-32.4	0	46.07	-	-	74	-27.93	-	-	183	102	V
	* 4.826	35.26	ADR	33.8	-32.4	.09	36.75	54	-17.25	-	-	-	-	183	102	V
4	* 5.459	47.29	PK-U	34.5	-20.7	0	61.09	-	-	74	-12.91	-	-	260	101	H
	* 5.457	36.06	ADR	34.5	-20.7	.09	49.95	54	-4.05	-	-	-	-	260	101	H
5	* 7.373	40.26	PK-U	35.6	-30.4	0	45.46	-	-	74	-28.54	-	-	237	368	H
	* 7.373	31.87	ADR	35.6	-30.4	.09	37.16	54	-16.84	-	-	-	-	237	368	H
6	* 11.063	36.73	PK-U	37.9	-25.8	0	48.83	-	-	74	-25.17	-	-	358	101	H
	* 11.062	25.12	ADR	37.9	-25.7	.09	37.41	54	-16.59	-	-	-	-	358	101	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL RESULTS



HORIZTONAL



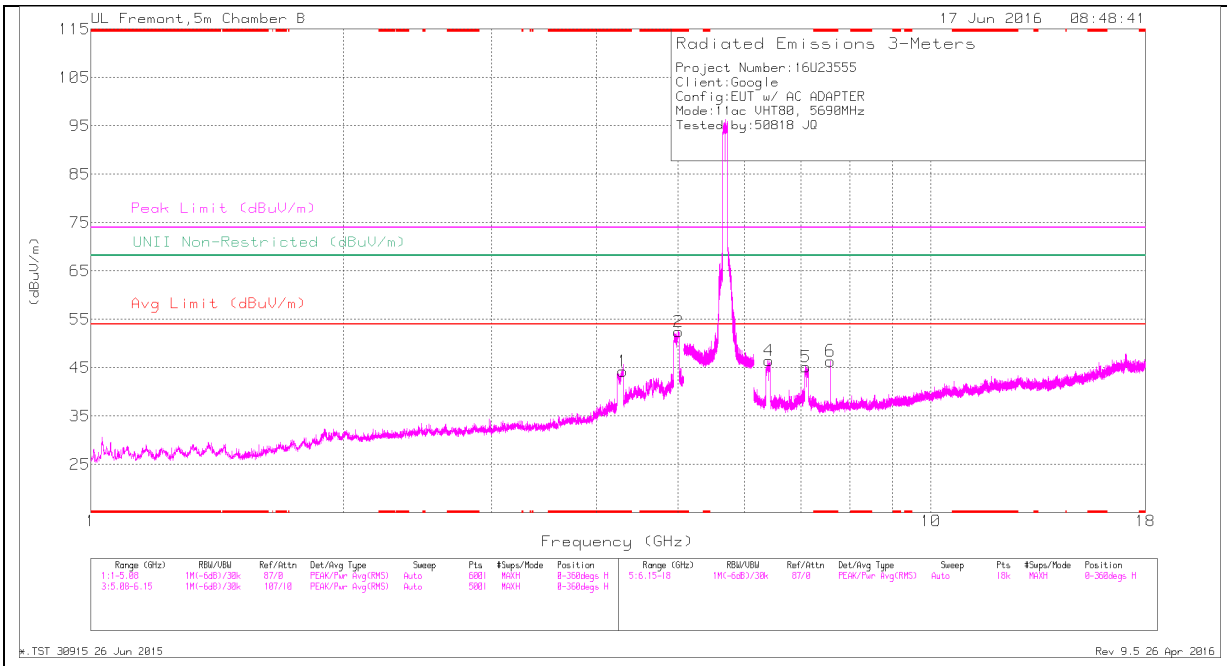
VERTICAL

HIGH CHANNEL DATA

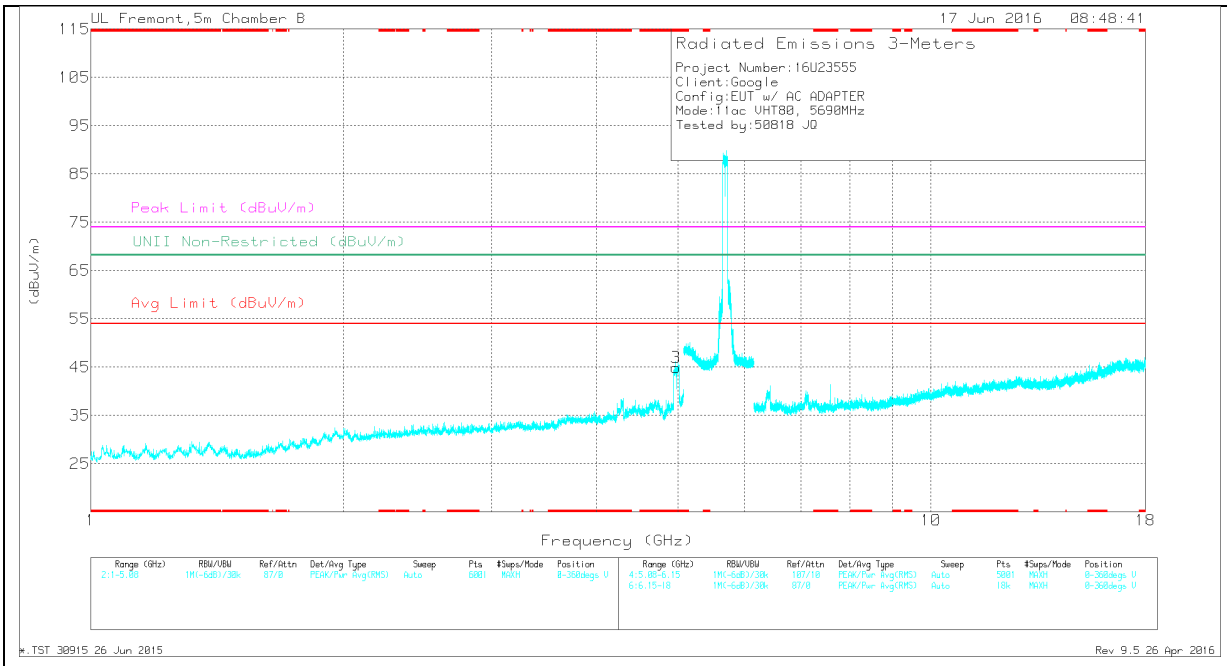
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.945	52.38	PK-U	33.9	-31.7	0	54.58	-	-	74	-19.42	-	-	277	101	H
	* 4.938	43.76	ADR	33.9	-31.8	.09	45.95	54	-8.05	-	-	-	-	277	101	H
2	* 4.229	48.72	PK-U	33.7	-32.5	0	49.92	-	-	74	-24.08	-	-	240	323	H
	* 4.241	40.41	ADR	33.7	-32.7	.09	41.5	54	-12.5	-	-	-	-	240	323	H
3	* 4.932	49.34	PK-U	33.9	-31.8	0	51.44	-	-	74	-22.56	-	-	212	312	V
	* 4.929	40.87	ADR	33.9	-31.8	.09	43.06	54	-10.94	-	-	-	-	212	312	V
6	* 7.48	42.82	PK-U	35.6	-29.7	0	48.72	-	-	74	-25.28	-	-	249	105	H
	* 7.48	37.16	ADR	35.6	-29.7	.09	43.15	54	-10.85	-	-	-	-	249	105	H
4	6.304	44.46	PK-U	35.5	-31.4	0	48.56	-	-	-	-	68.2	-19.64	193	123	H
5	7.044	45.11	PK-U	35.5	-30.1	0	50.51	-	-	-	-	68.2	-17.69	247	115	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

STRADDLE CHANNEL RESULTS



HORIZTONAL



VERTICAL

STRADDLE CHANNEL DATA

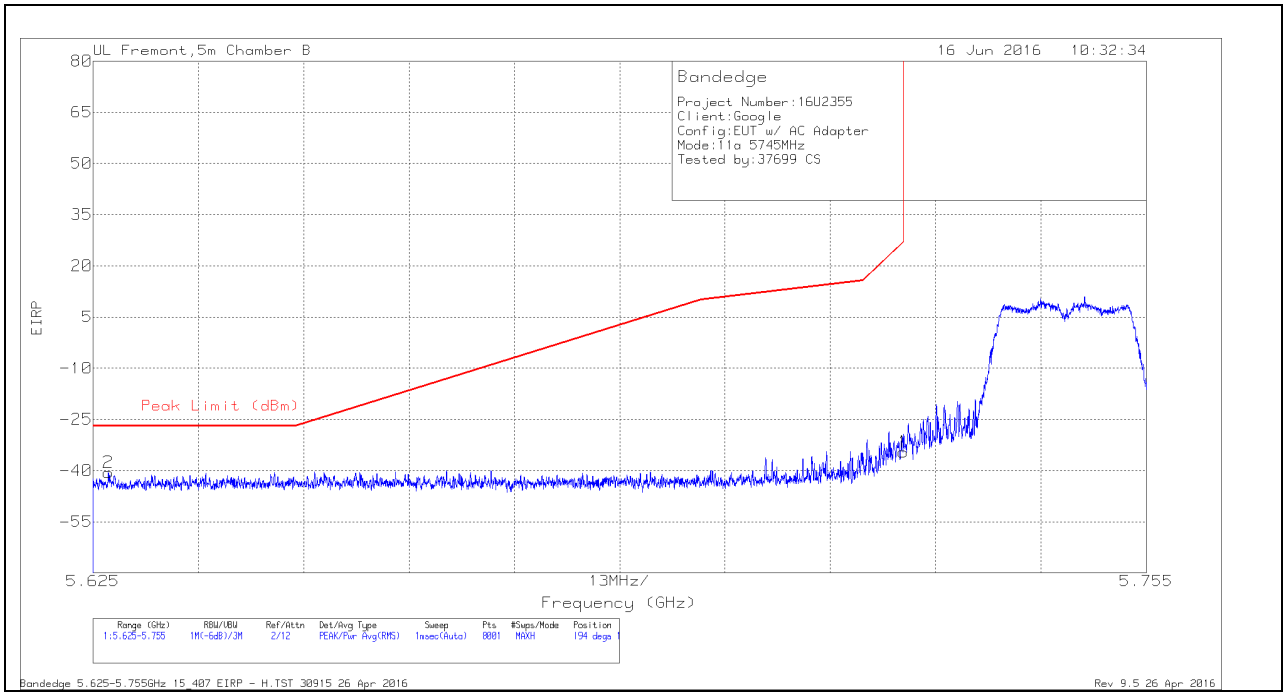
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.284	51.58	PK-U	33.7	-33	52.28	-	-	74	-21.72	-	-	146	343	H
	* 4.29	42.88	ADR	33.7	-33	43.58	54	-10.42	-	-	-	-	146	343	H
2	* 4.952	55.99	PK-U	34	-31.5	58.49	-	-	74	-15.51	-	-	131	101	H
	* 4.963	47.85	ADR	34	-31.2	50.65	54	-3.35	-	-	-	-	131	101	H
3	* 5.004	48.62	PK-U	34.1	-30.2	52.52	-	-	74	-21.48	-	-	268	248	V
	* 5.004	40.91	ADR	34.1	-30.2	44.81	54	-9.19	-	-	-	-	268	248	V
6	* 7.587	42.71	PK-U	35.7	-29.4	49.01	-	-	74	-24.99	-	-	15	104	H
	* 7.587	37.83	ADR	35.7	-29.4	44.13	54	-9.87	-	-	-	-	15	104	H
4	6.435	47.02	PK-U	35.6	-30.7	51.92	-	-	-	-	68.2	-16.28	110	103	H
5	7.121	46.27	PK-U	35.6	-30.8	51.07	-	-	-	-	68.2	-17.13	108	107	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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

RESTRICTED BANDEDGE (LOW CHANNEL)

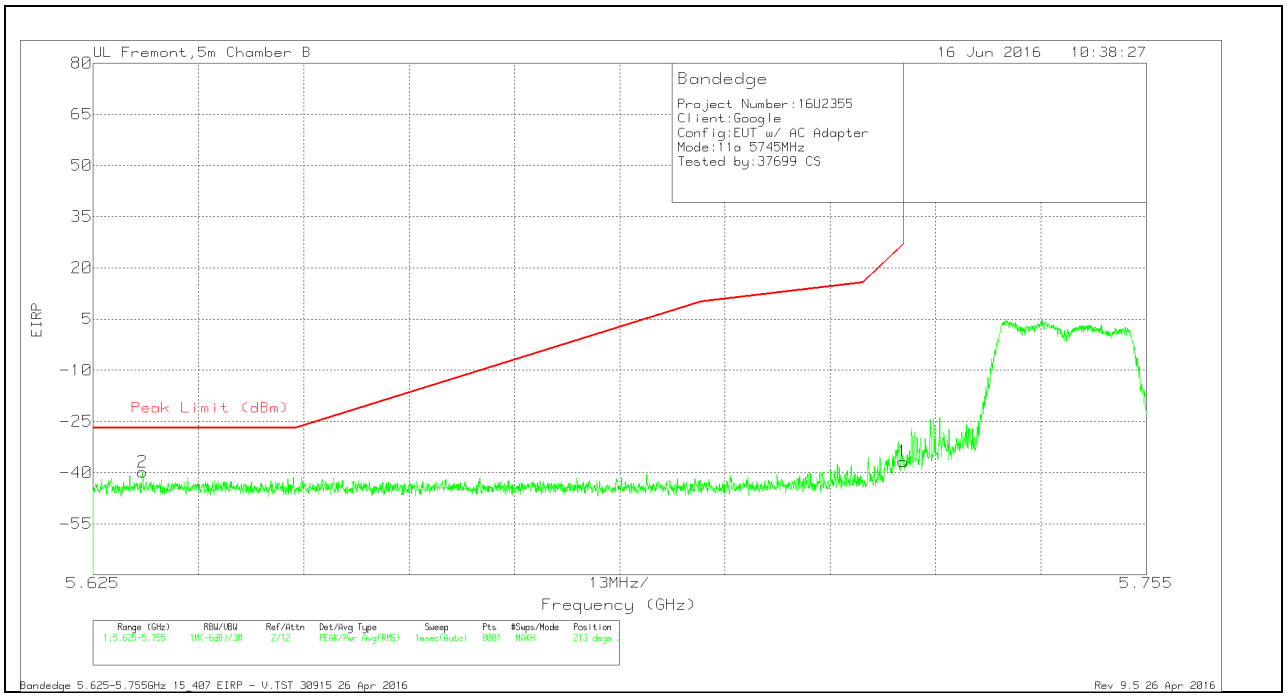
HORIZONTAL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	5.627	-65.72	Pk	34.6	-21.2	11.8	-40.52	-27	-13.52	194	126	H
1	5.725	-59.54	Pk	34.9	-21.7	11.8	-34.54	26.97	-61.51	194	126	H

Pk - Peak detector

VERTICAL RESULTS

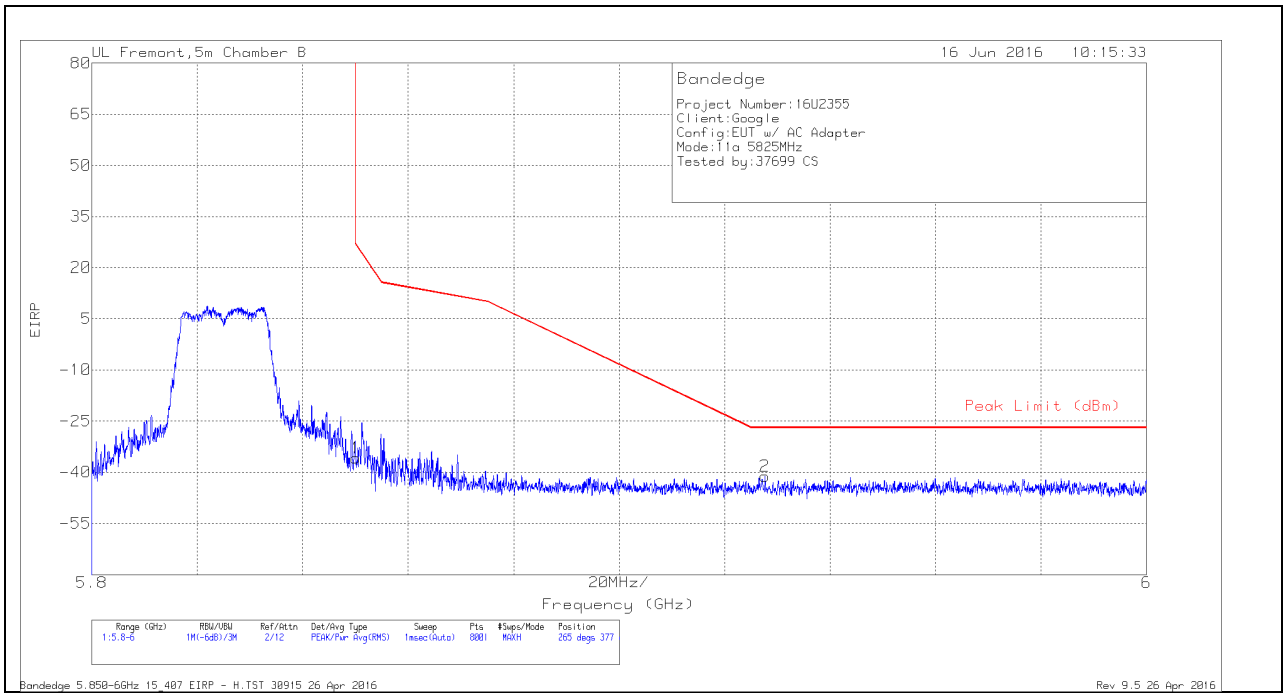


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.631	-64.99	Pk	34.6	-21.2	11.8	-39.79	-27	-12.79	213	343	V
1	5.725	-61.7	Pk	34.9	-21.7	11.8	-36.7	26.97	-63.67	213	343	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

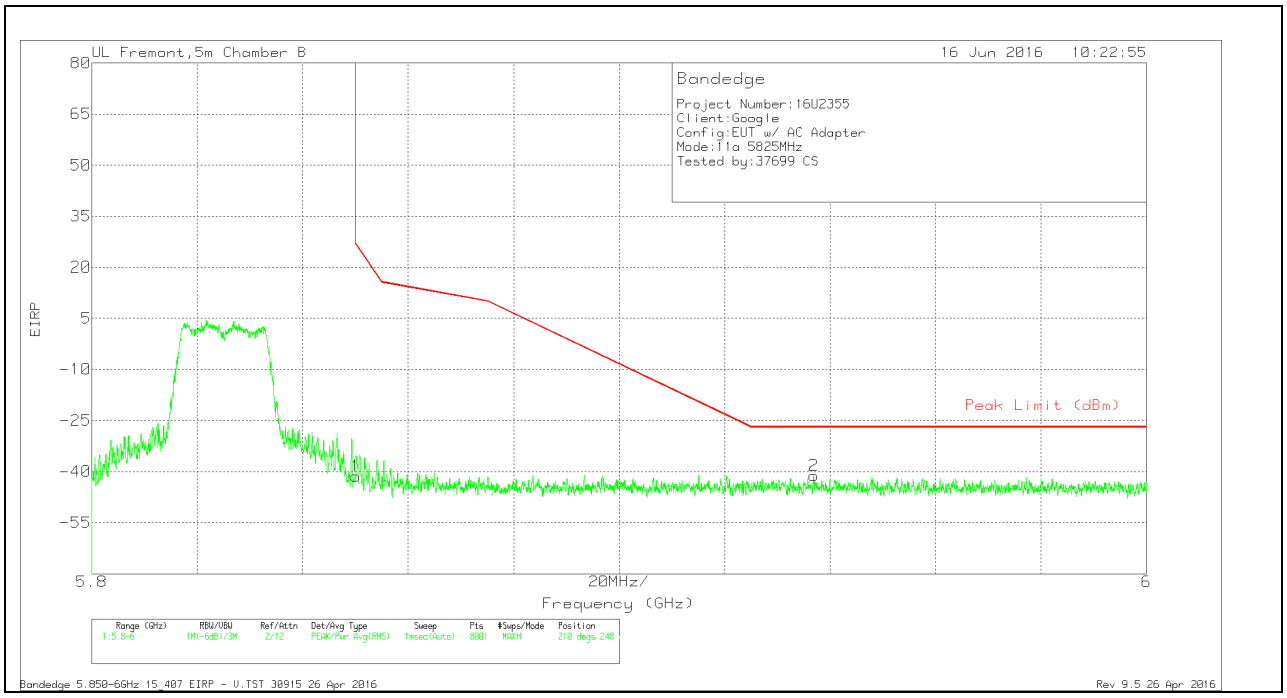
HORIZONTAL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	-61.28	Pk	35.2	-21.6	11.8	-35.88	26.94	-62.82	265	377	H
2	5.928	-66.91	Pk	35.3	-21.4	11.8	-41.21	-27	-14.21	265	377	H

Pk - Peak detector

VERTICAL RESULTS

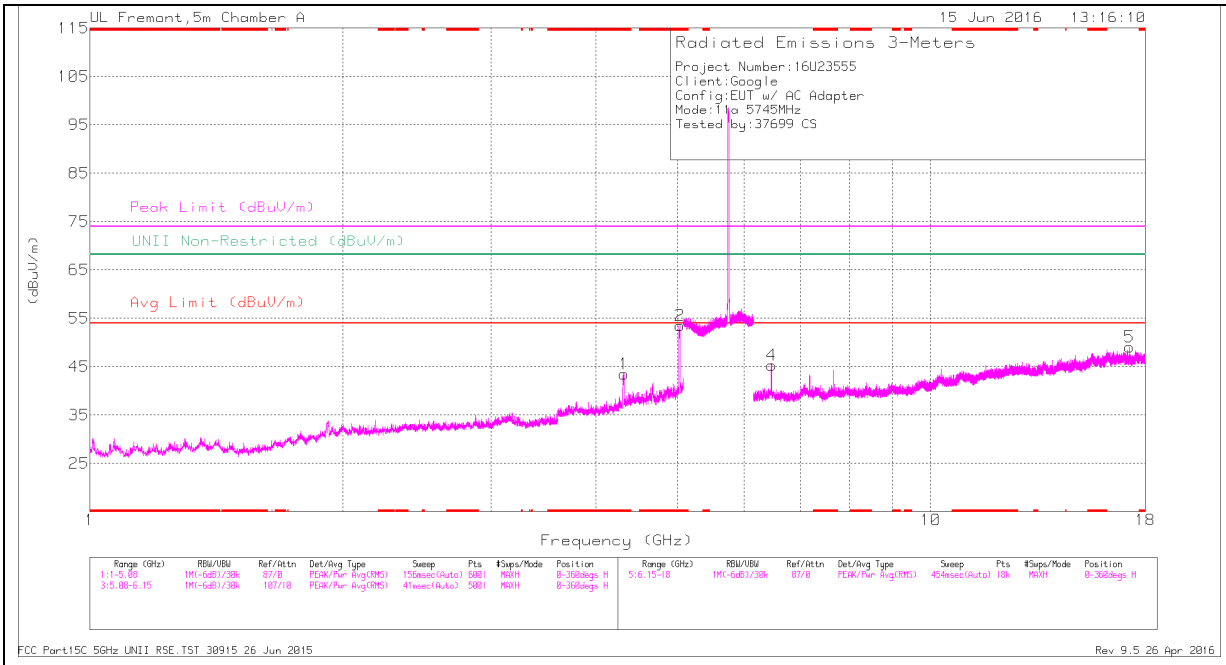


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-66.72	Pk	35.2	-21.6	11.8	-41.32	26.94	-68.26	210	248	V
2	5.937	-67.05	Pk	35.3	-21.2	11.8	-41.15	-27	-14.15	210	248	V

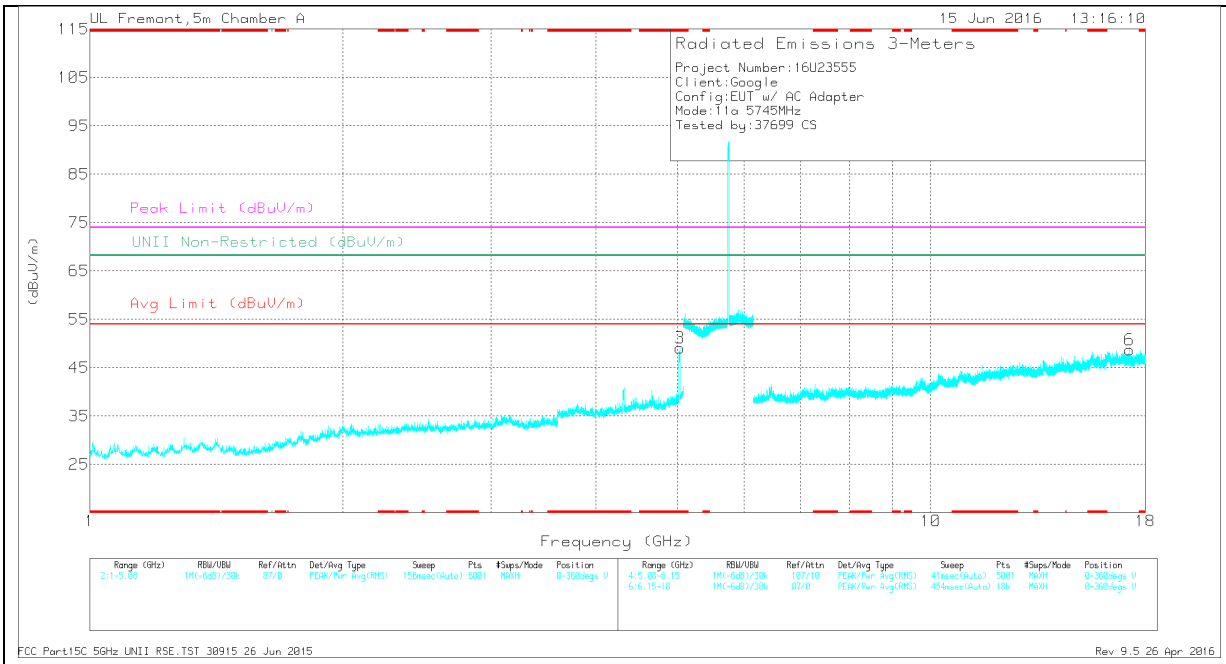
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



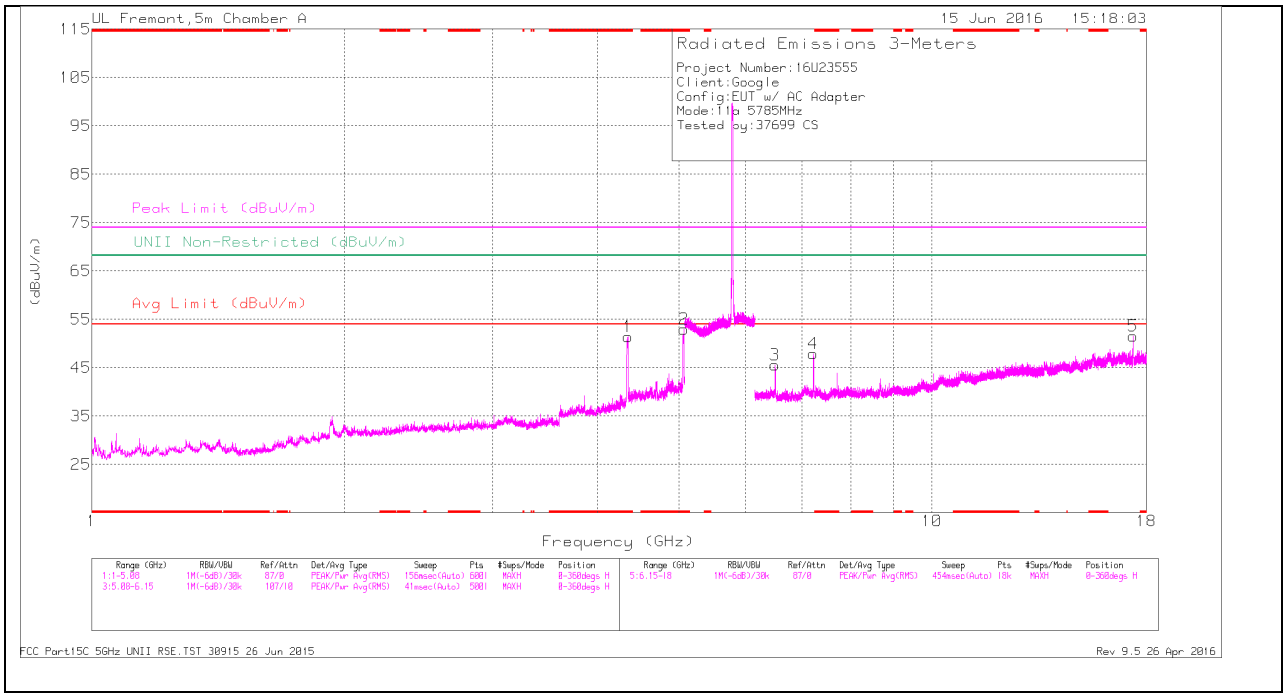
VERTICAL

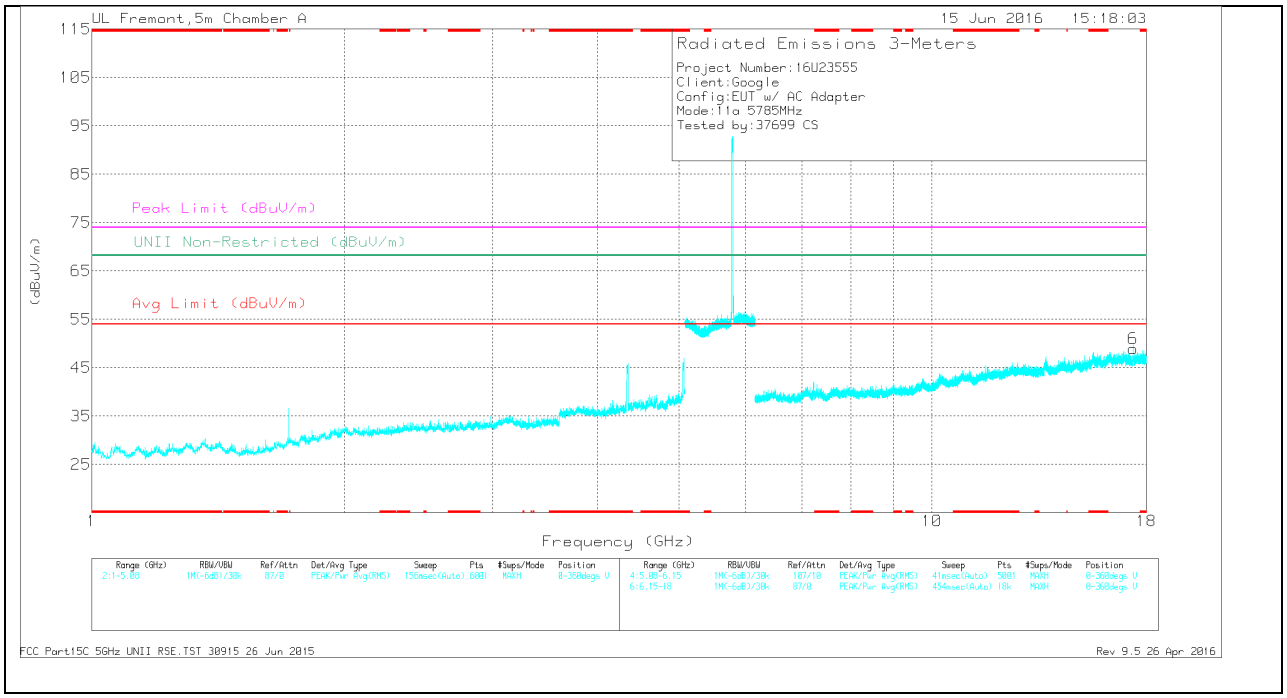
LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (db/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.024	51.99	PK-U	34.3	-27.7	58.59	-	-	74	-15.41	-	-	242	113	H
	* 5.02	43.86	ADR	34.3	-27.8	50.36	54	-3.64	-	-	-	-	242	113	H
1	* 4.31	47.7	PK-U	33.7	-29.4	52	-	-	74	-22	-	-	246	278	H
	* 4.317	39.31	ADR	33.8	-29.5	43.61	54	-10.39	-	-	-	-	246	278	H
3	* 5.024	49.01	PK-U	34.3	-27.7	55.61	-	-	74	-18.39	-	-	210	117	V
	* 5.035	40.03	ADR	34.3	-27.1	47.23	54	-6.77	-	-	-	-	210	117	V
4	6.456	41.56	PK-U	35.6	-24.9	52.26	-	-	-	-	68.2	-15.94	229	123	H
5	17.235	36.13	PK-U	41	-21.3	55.83	-	-	-	-	68.2	-12.37	268	101	H
6	17.236	36.41	PK-U	41	-21.3	56.11	-	-	-	-	68.2	-12.09	16	113	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

MID CHANNEL RESULTS



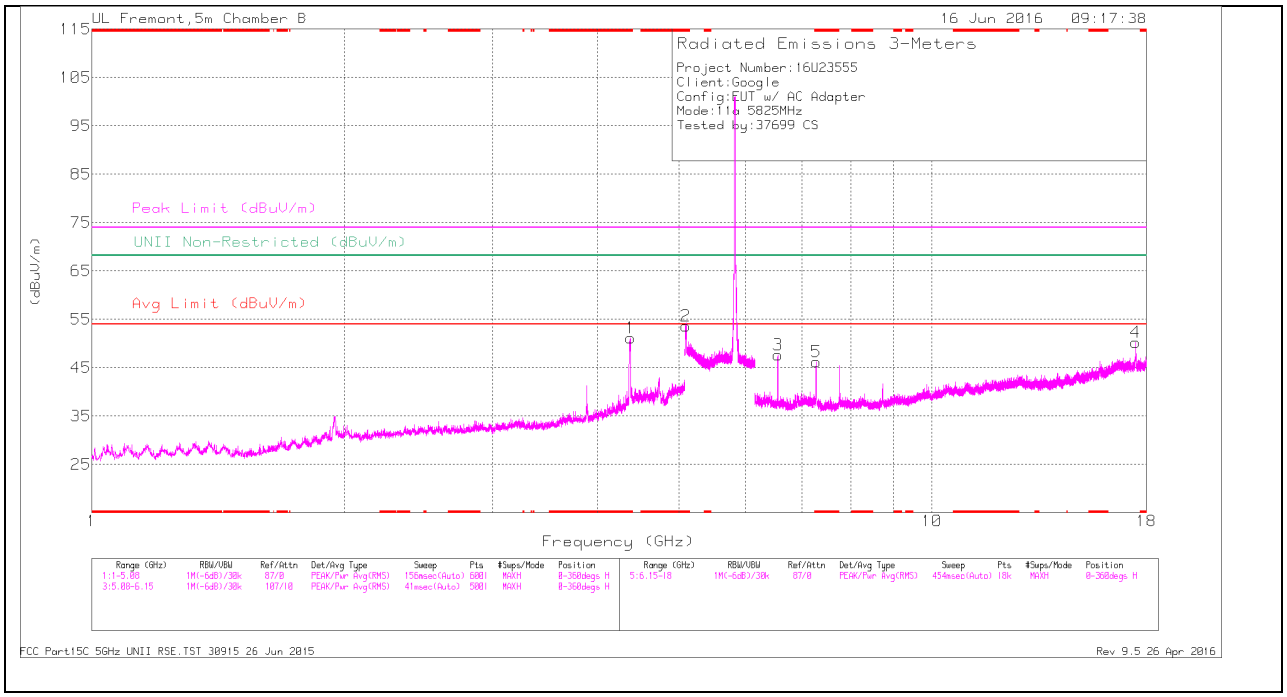


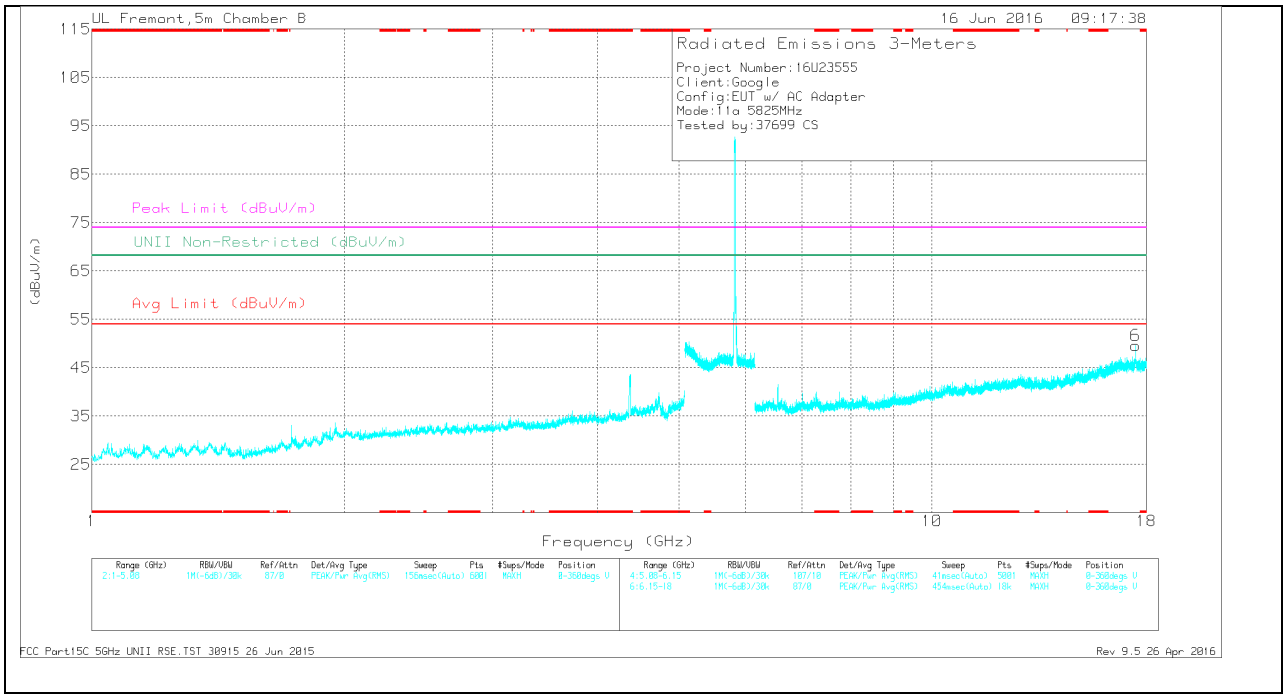
MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (db/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.341	54.45	PK-U	33.9	-30.2	58.15	-	-	74	-15.85	-	-	247	276	H
	* 4.346	46.61	ADR	33.9	-30.2	50.31	54	-3.69	-	-	-	-	247	276	H
2	* 5.069	49.47	PK-U	34.3	-25.8	57.97	-	-	74	-16.03	-	-	244	108	H
	* 5.07	41.45	ADR	34.3	-25.8	49.95	54	-4.05	-	-	-	-	244	108	H
3	6.516	41.78	PK-U	35.6	-25.1	52.28	-	-	-	-	68.2	-15.92	174	129	H
4	7.228	43.8	PK-U	35.7	-25.2	54.3	-	-	-	-	68.2	-13.9	174	116	H
6	17.355	35.33	PK-U	40.9	-21.3	54.93	-	-	-	-	68.2	-13.27	217	102	V
5	17.365	39.08	PK-U	40.9	-21.3	58.68	-	-	-	-	68.2	-9.52	264	101	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL RESULTS





HIGH CHANNEL DATA

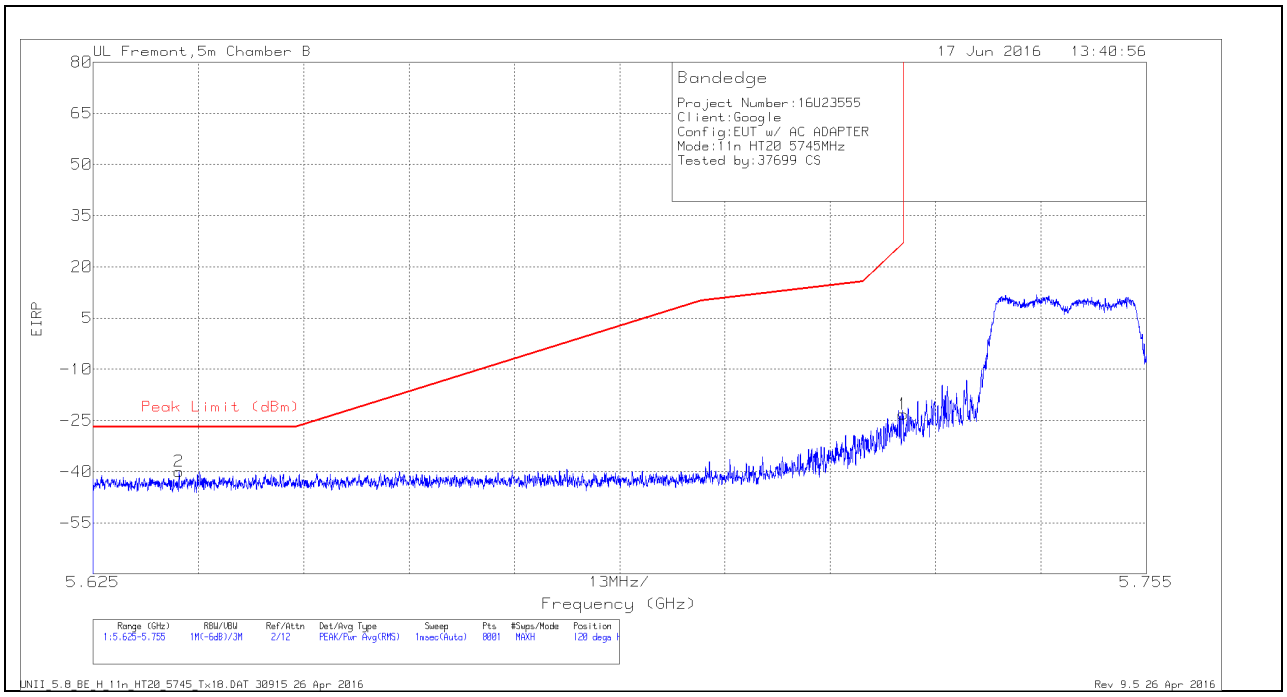
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.372	54.49	PK-U	34	-32	56.49	-	-	74	-17.51	-	-	227	216	H
	* 4.377	47.07	ADR	34	-31.9	49.17	54	-4.83	-	-	-	-	227	216	H
2	* 5.09	44.83	PK-U	34.1	-19.4	59.53	-	-	74	-14.47	-	-	315	246	H
	* 5.09	35.8	ADR	34.1	-19.4	50.5	54	-3.5	-	-	-	-	315	246	H
5	* 7.289	43.95	PK-U	35.6	-28.8	50.75	-	-	74	-23.25	-	-	238	115	H
	* 7.289	35.88	ADR	35.6	-28.8	42.68	54	-11.32	-	-	-	-	238	115	H
3	6.55	49.17	PK-U	35.5	-31.4	53.27	-	-	-	-	68.2	-14.93	196	130	H
4	17.468	37.3	PK-U	41.3	-23	55.6	-	-	-	-	68.2	-12.6	258	119	H
6	17.468	36.08	PK-U	41.3	-23	54.38	-	-	-	-	68.2	-13.82	216	102	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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

RESTRICTED BANDEDGE (LOW CHANNEL)

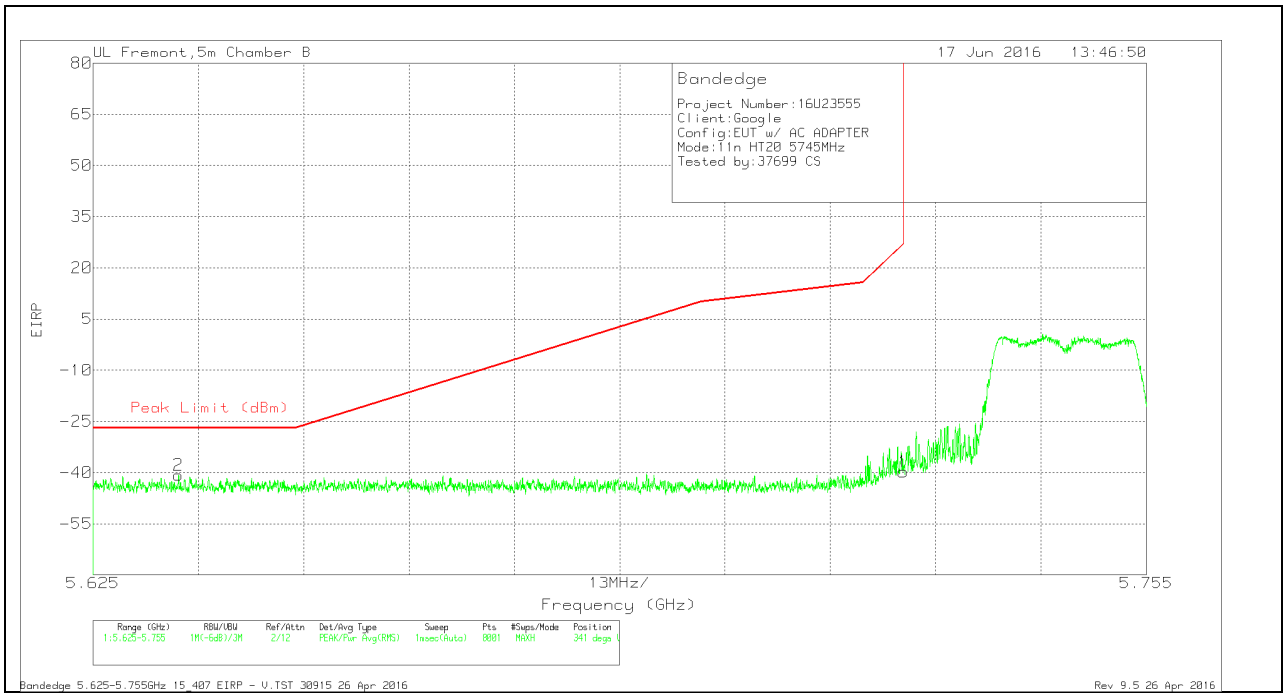
HORIZONTAL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	5.636	-64.75	Pk	34.6	-21.6	11.8	-39.95	-27	-12.95	120	118	H
1	5.725	-48.16	Pk	34.9	-21.7	11.8	-23.16	26.97	-50.13	120	118	H

Pk - Peak detector

VERTICAL RESULTS

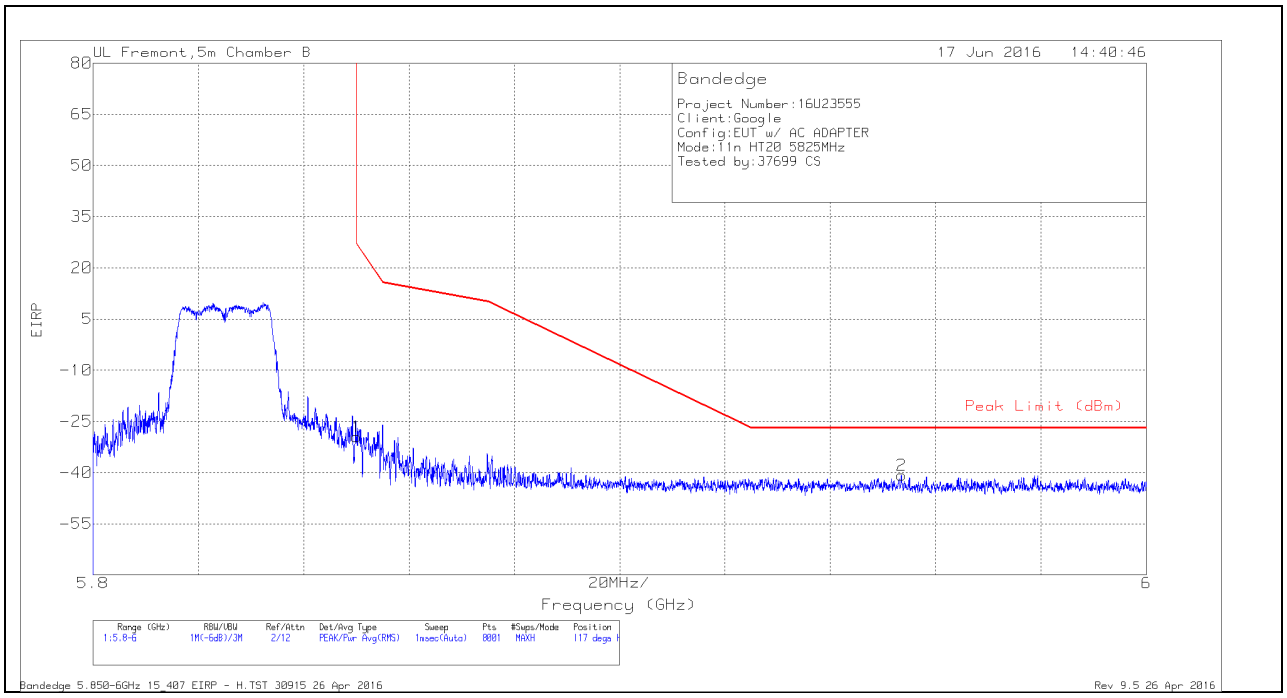


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.636	-65.54	Pk	34.6	-21.6	11.8	-40.74	-27	-13.74	341	128	V
1	5.725	-64.74	Pk	34.9	-21.7	11.8	-39.74	26.97	-66.71	341	128	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

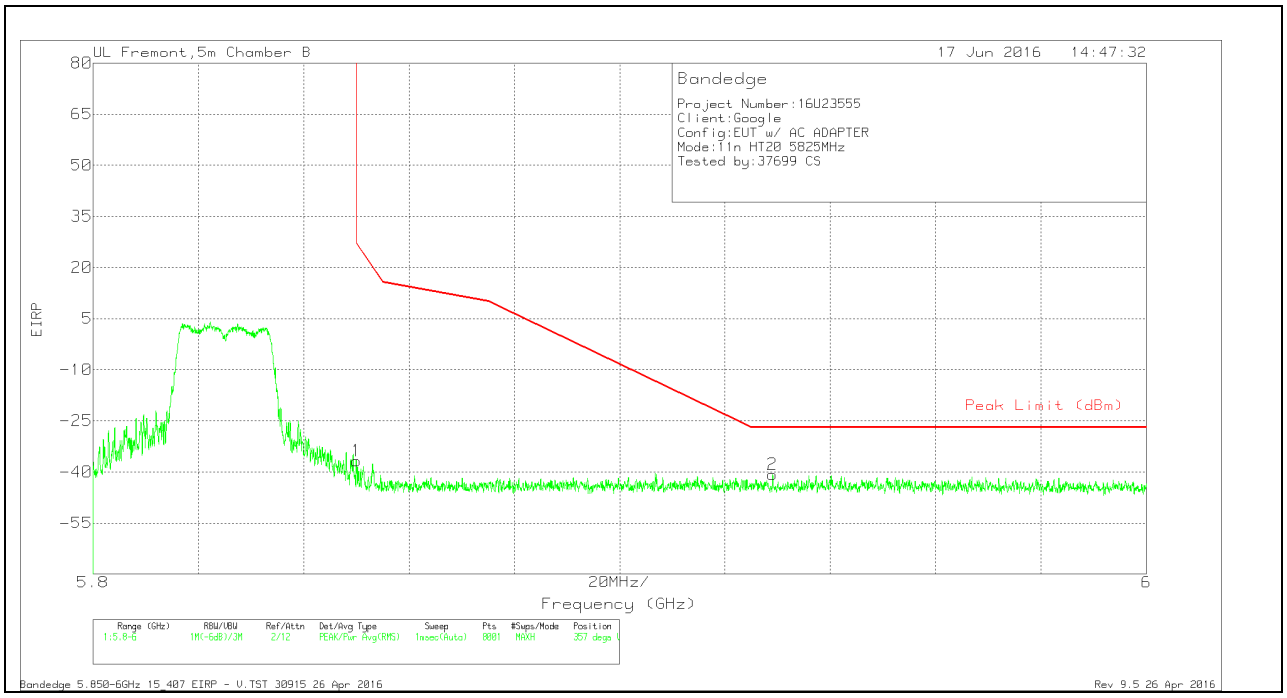
HORIZONTAL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	-54.98	Pk	35.2	-21.6	11.8	-29.58	26.94	-56.52	117	103	H
2	5.954	-66.46	Pk	35.2	-21.3	11.8	-40.76	-27	-13.76	117	103	H

Pk - Peak detector

VERTICAL RESULTS

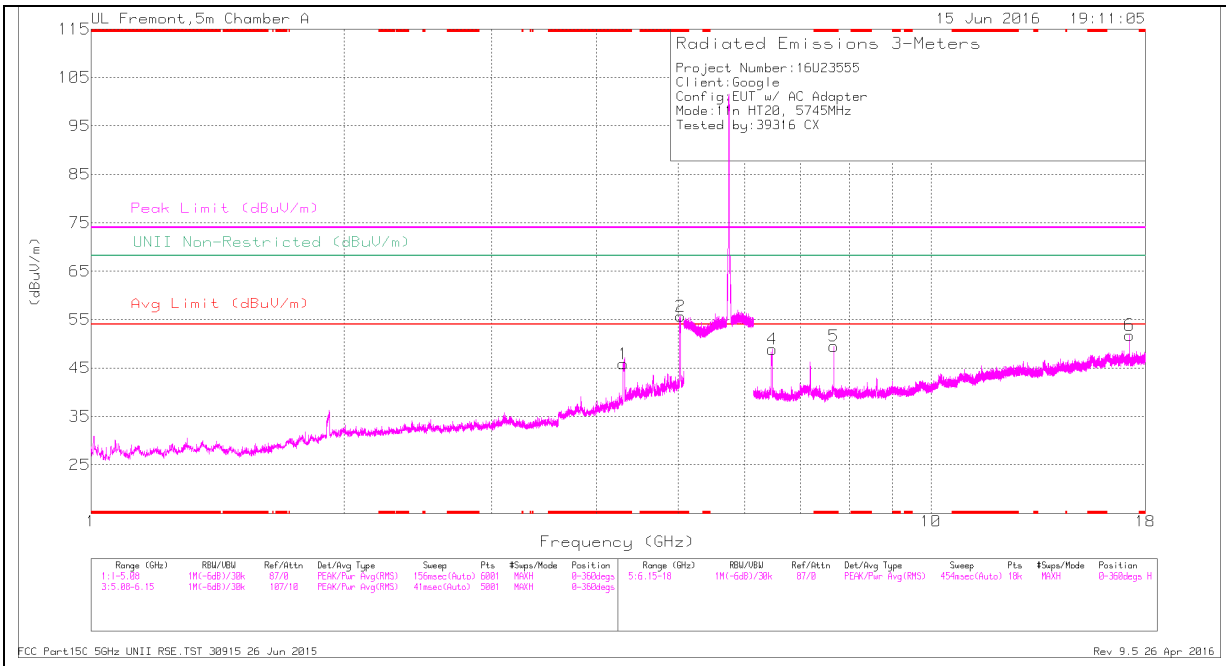


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-62.13	Pk	35.2	-21.6	11.8	-36.73	26.94	-63.67	357	395	V
2	5.929	-66.31	Pk	35.3	-21.5	11.8	-40.71	-27	-13.71	357	395	V

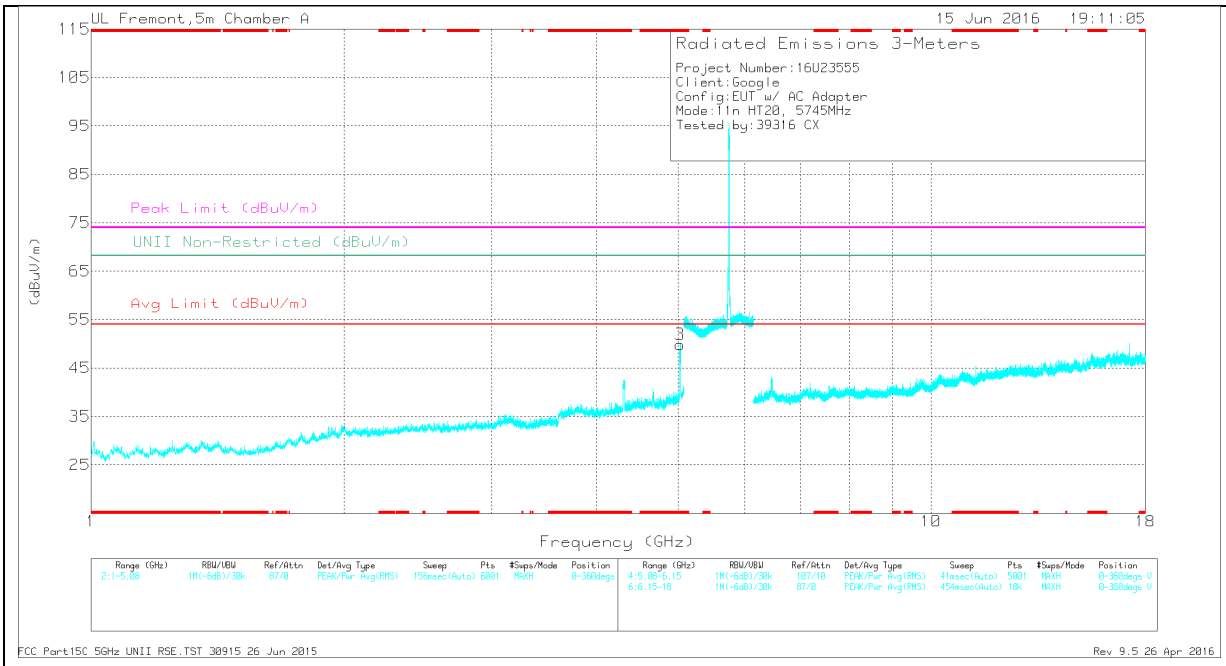
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



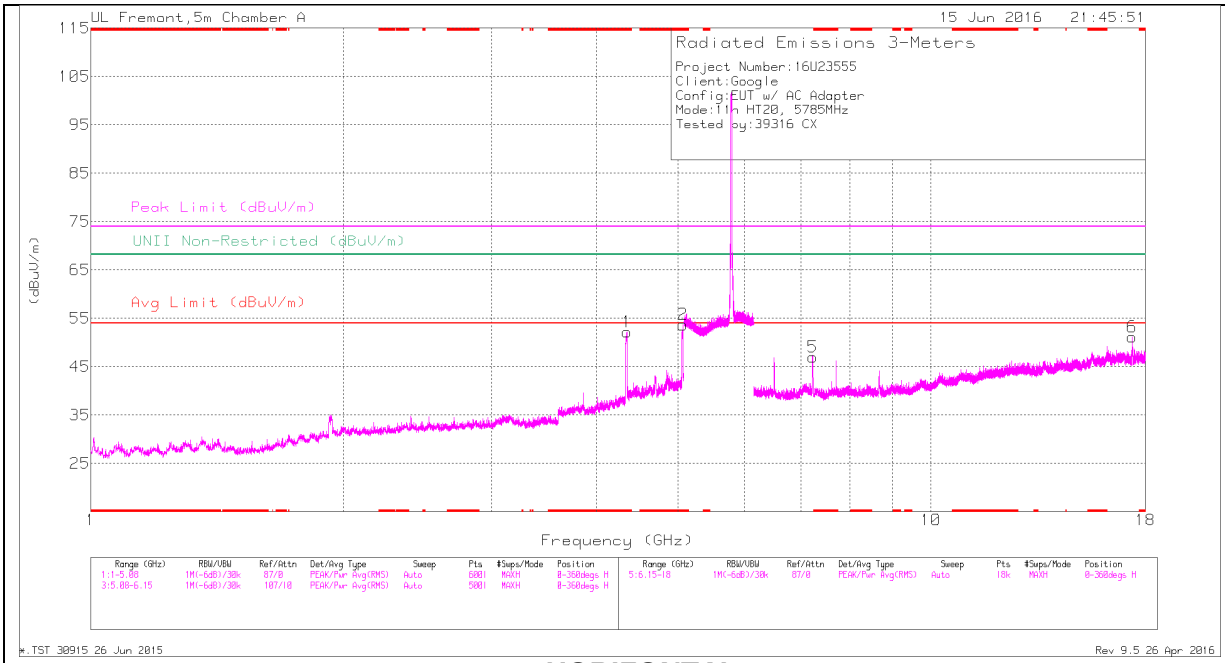
VERTICAL

LOW CHANNEL DATA

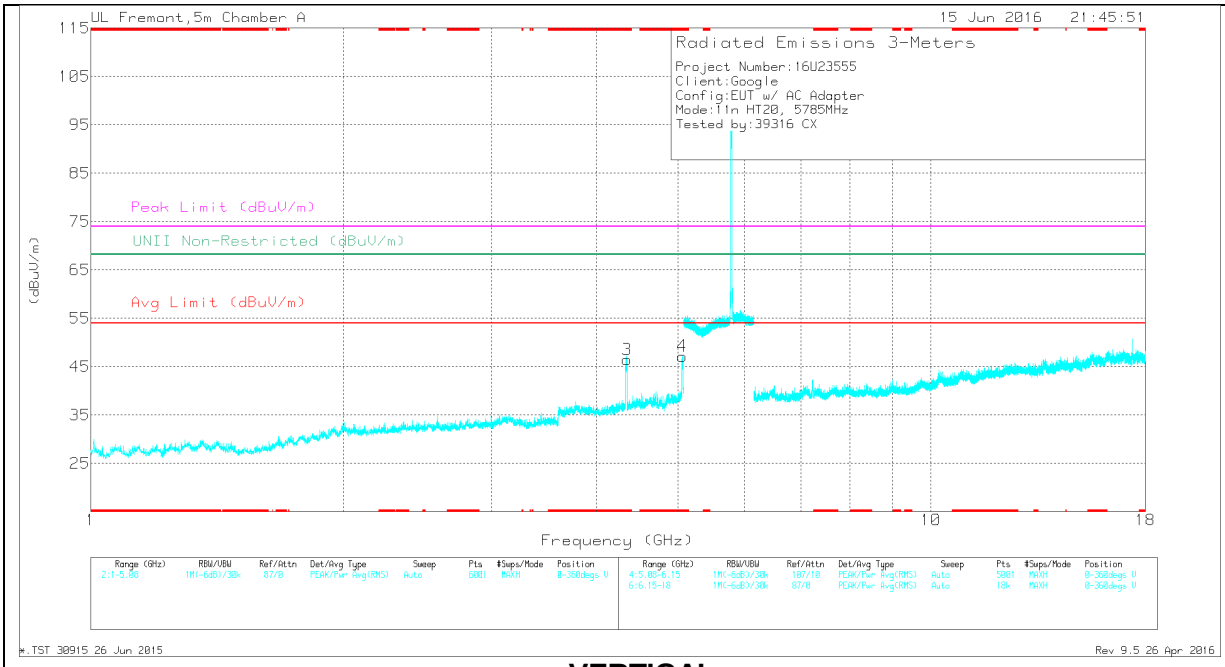
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (db/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.019	51.41	PK-U	34.3	-27.8	57.91	-	-	74	-16.09	-	-	247	103	H
	* 5.019	44.11	ADR	34.3	-27.8	50.61	54	-3.39	-	-	-	-	247	103	H
1	* 4.317	46.02	PK-U	33.8	-29.5	50.32	-	-	74	-23.68	-	-	249	322	H
	* 4.316	37.64	ADR	33.8	-29.5	41.94	54	-12.06	-	-	-	-	249	322	H
3	* 5.019	47.1	PK-U	34.3	-27.8	53.6	-	-	74	-20.4	-	-	215	292	V
	* 5.019	39.22	ADR	34.3	-27.8	45.72	54	-8.28	-	-	-	-	215	292	V
5	* 7.66	38.47	PK-U	35.9	-23.9	50.47	-	-	74	-23.53	-	-	178	103	H
	* 7.66	30.36	ADR	35.9	-23.9	42.36	54	-11.64	-	-	-	-	178	103	H
4	6.471	41.35	PK-U	35.6	-25.1	51.85	-	-	-	-	68.2	-16.35	177	110	H
6	17.235	36.11	PK-U	41	-21.3	55.81	-	-	-	-	68.2	-12.39	260	102	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

MID CHANNEL RESULTS



HORIZONTAL



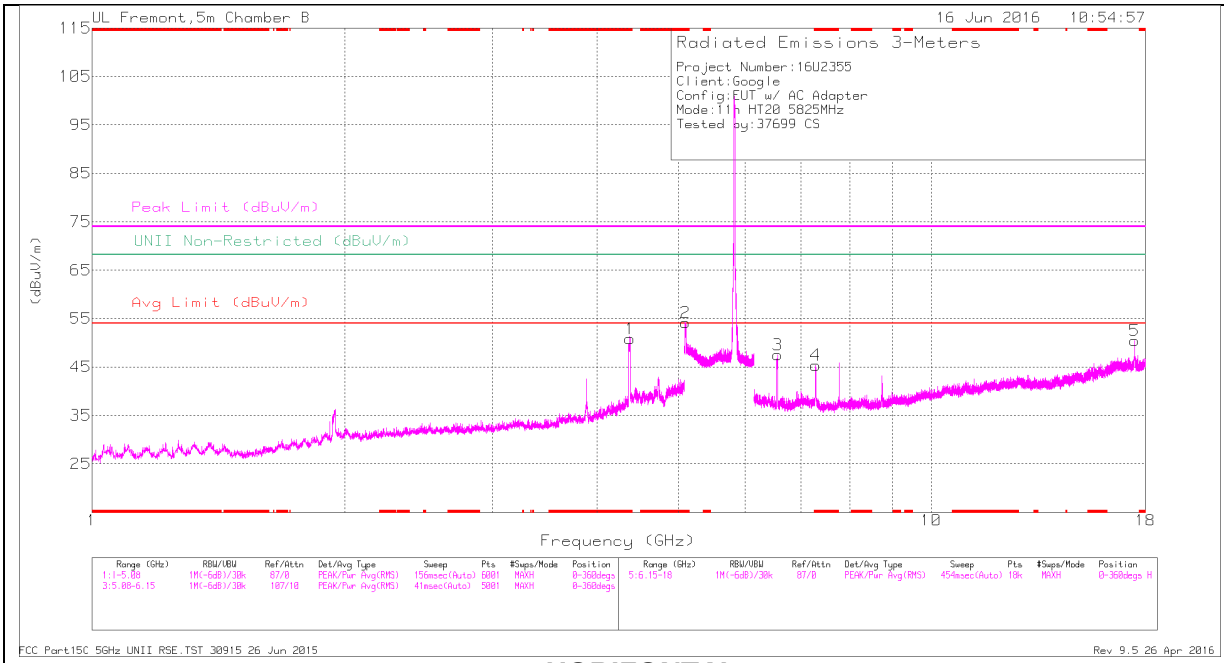
VERTICAL

MID CHANNEL DATA

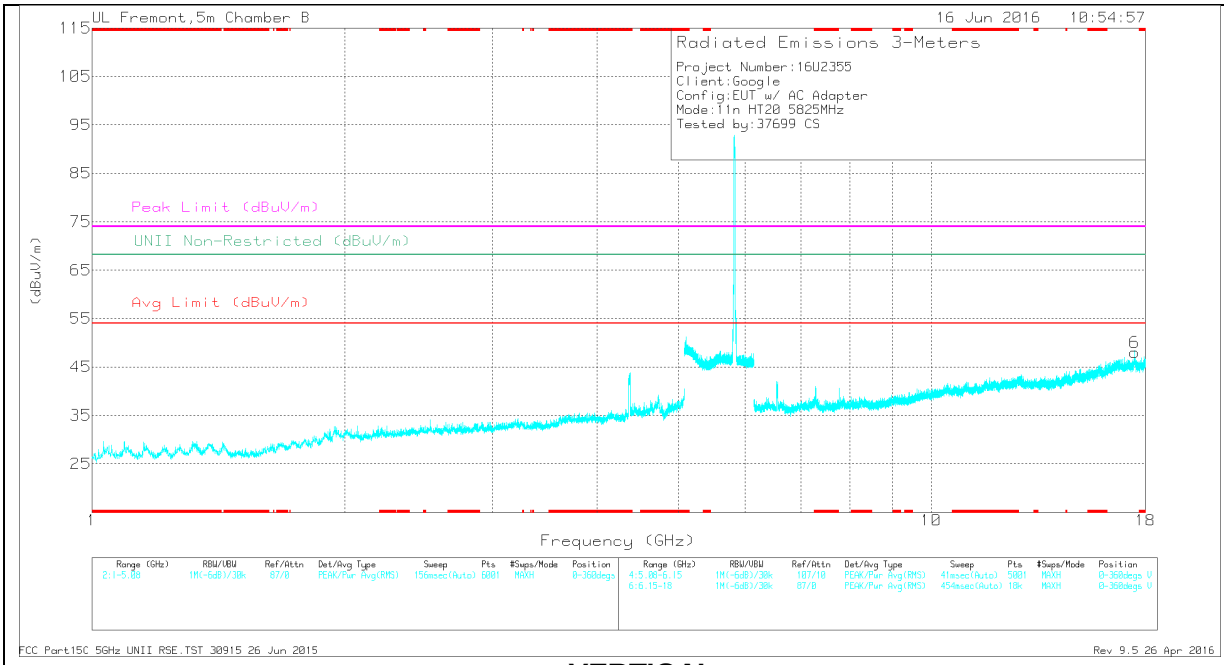
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (db/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.063	51.95	PK-U	34.3	-25.8	60.45	-	-	74	-13.55	-	-	246	119	H
	* 5.07	43.82	ADR	34.3	-25.8	52.32	54	-1.68	-	-	-	-	246	119	H
2	* 5.07	50.87	PK-U	34.3	-25.8	59.37	-	-	74	-14.63	-	-	246	119	H
	* 5.054	43.25	ADR	34.3	-26.1	51.45	54	-2.55	-	-	-	-	246	119	H
2	* 5.055	49.42	PK-U	34.3	-26.1	57.62	-	-	74	-16.38	-	-	247	105	H
	* 5.054	41.87	ADR	34.3	-26.1	50.07	54	-3.93	-	-	-	-	247	105	H
1	* 4.346	53.5	PK-U	33.9	-30.2	57.2	-	-	74	-16.8	-	-	249	107	H
	* 4.346	46.13	ADR	33.9	-30.2	49.83	54	-4.17	-	-	-	-	249	107	H
3	* 4.336	47.75	PK-U	33.9	-30.1	51.55	-	-	74	-22.45	-	-	185	101	V
	* 4.341	39.8	ADR	33.9	-30.1	43.6	54	-10.4	-	-	-	-	185	101	V
4	* 5.069	44.97	PK-U	34.3	-25.8	53.47	-	-	74	-20.53	-	-	217	102	V
	* 5.069	36.52	ADR	34.3	-25.8	45.02	54	-8.98	-	-	-	-	217	102	V
5	7.223	40.94	PK-U	35.7	-25.2	51.44	-	-	-	-	68.2	-16.76	245	265	H
6	17.351	38.12	PK-U	40.9	-21.2	57.82	-	-	-	-	68.2	-10.38	256	107	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

HIGH CHANNEL DATA

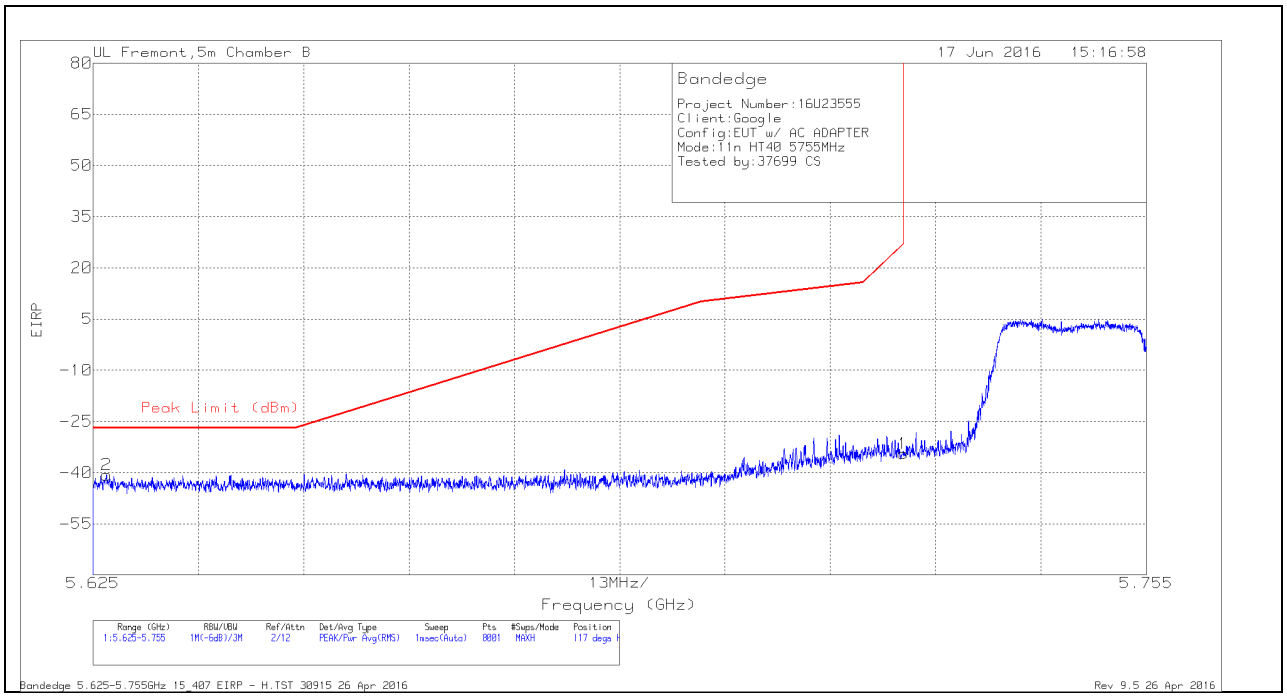
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.371	56.43	PK-U	33.9	-32	58.33	-	-	74	-15.67	-	-	231	102	H
	* 4.377	48.42	ADR	34	-31.9	50.52	54	-3.48	-	-	-	-	231	102	H
2	* 5.1	44.73	PK-U	34.1	-19.2	59.63	-	-	74	-14.37	-	-	315	274	H
	* 5.099	35.84	ADR	34.1	-19.1	50.84	54	-3.16	-	-	-	-	315	274	H
4	* 7.279	44.5	PK-U	35.6	-28.8	51.3	-	-	74	-22.7	-	-	248	295	H
	* 7.278	36.32	ADR	35.6	-28.8	43.12	54	-10.88	-	-	-	-	248	295	H
3	6.545	48.87	PK-U	35.5	-31.5	52.87	-	-	-	-	68.2	-15.33	197	102	H
6	17.467	38.45	PK-U	41.3	-23	56.75	-	-	-	-	68.2	-11.45	263	102	H
5	17.476	37	PK-U	41.3	-22.9	55.4	-	-	-	-	68.2	-12.8	227	102	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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

RESTRICTED BANDEDGE (LOW CHANNEL)

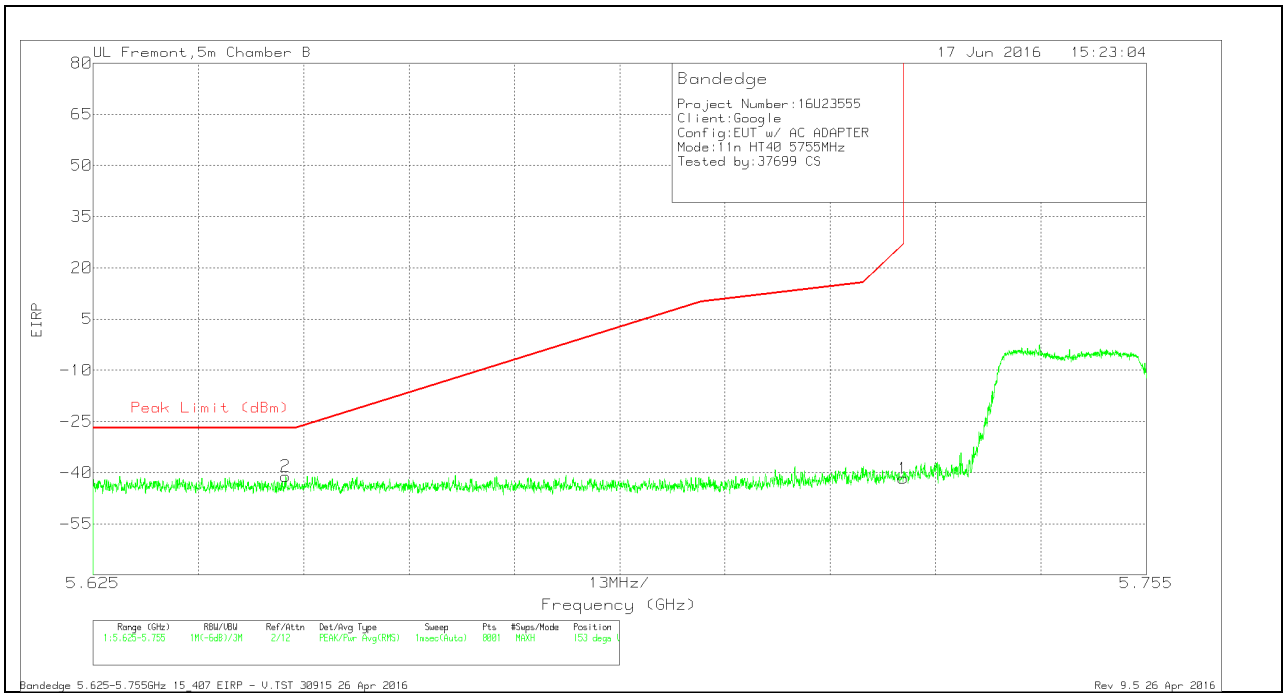
HORIZONTAL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	5.627	-65.95	Pk	34.6	-21.1	11.8	-40.65	-27	-13.65	117	119	H
1	5.725	-59.44	Pk	34.9	-21.7	11.8	-34.44	26.97	-61.41	117	119	H

Pk - Peak detector

VERTICAL RESULTS

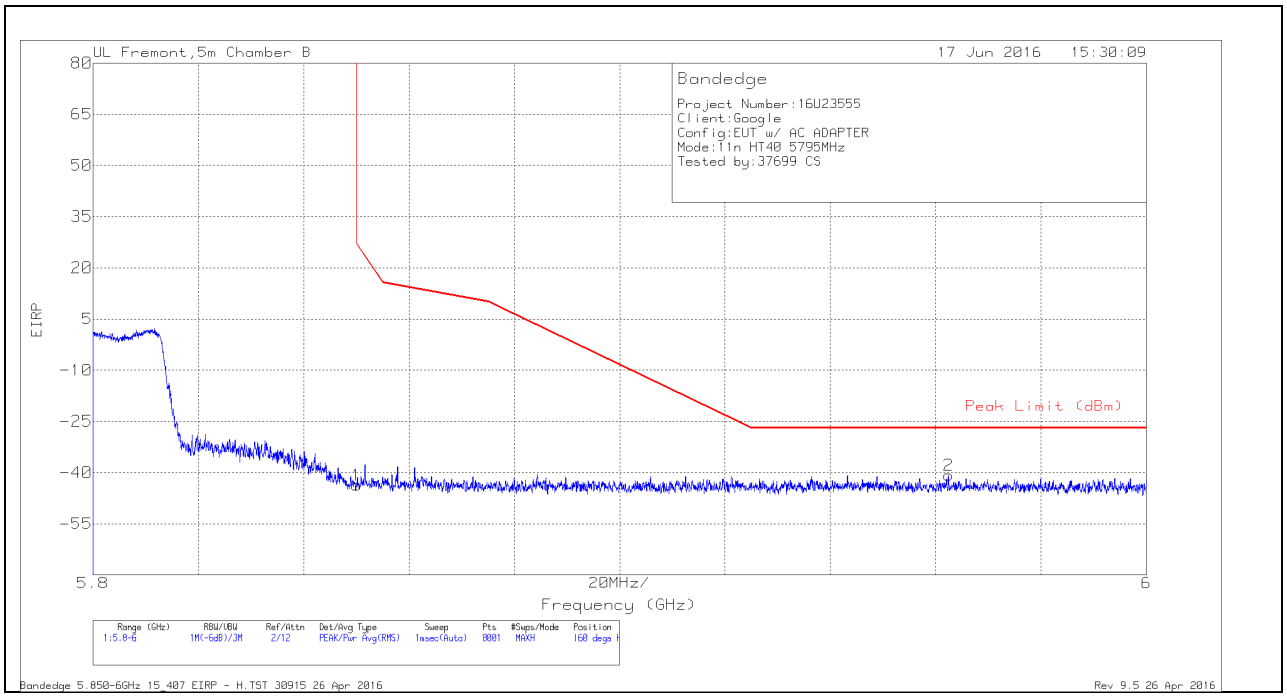


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.649	-66.07	Pk	34.7	-21.5	11.8	-41.07	-27	-14.07	153	159	V
1	5.725	-66.7	Pk	34.9	-21.7	11.8	-41.7	26.97	-68.67	153	159	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

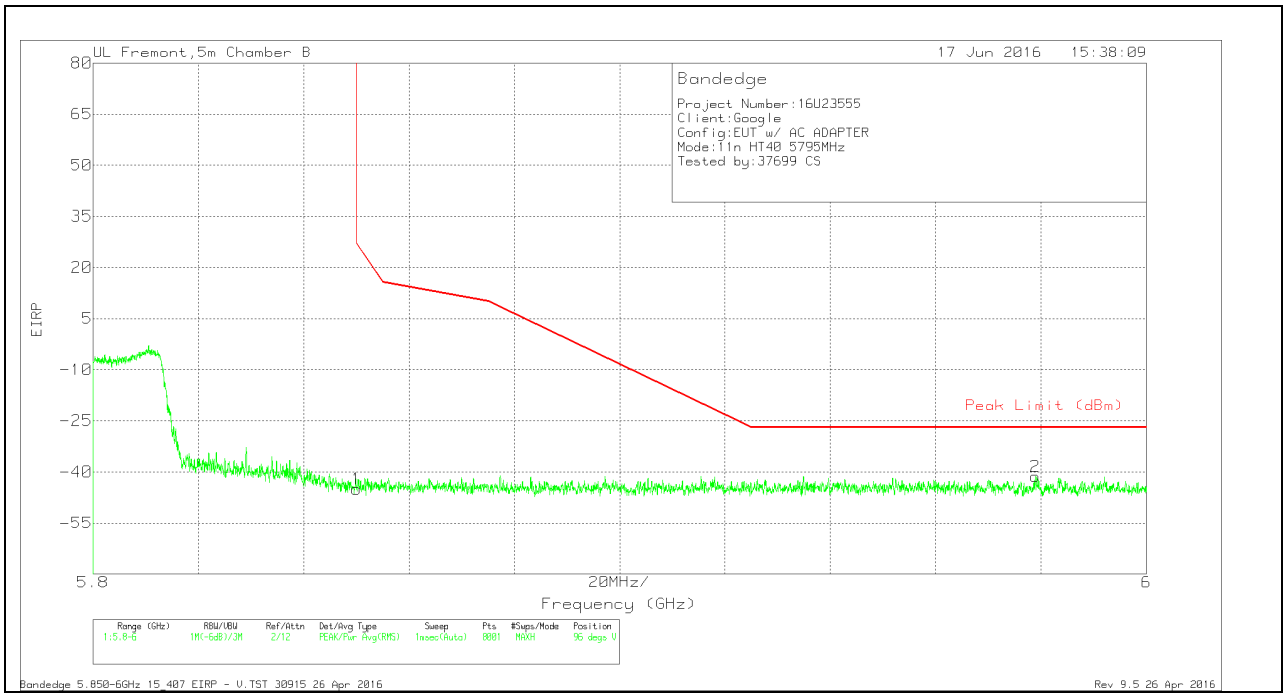
HORIZONTAL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	-69.06	Pk	35.2	-21.6	11.8	-43.66	26.94	-70.6	160	295	H
2	5.962	-66.37	Pk	35.2	-21.4	11.8	-40.77	-27	-13.77	160	295	H

Pk - Peak detector

VERTICAL RESULTS

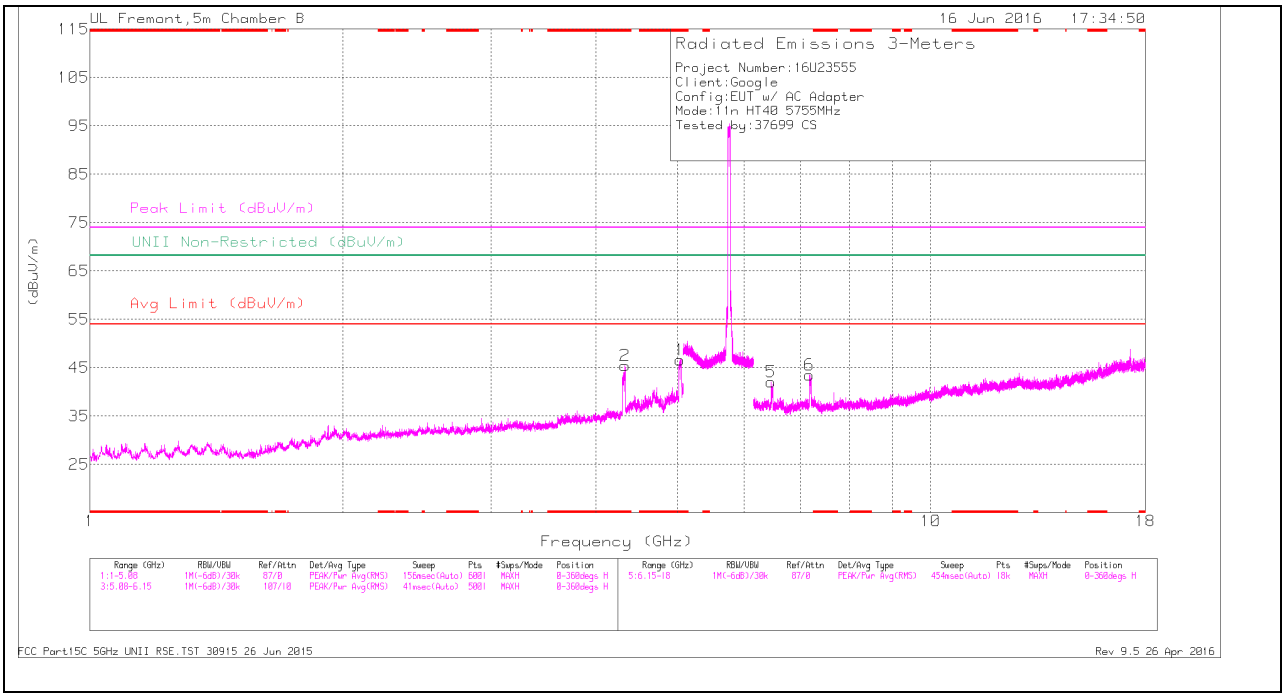


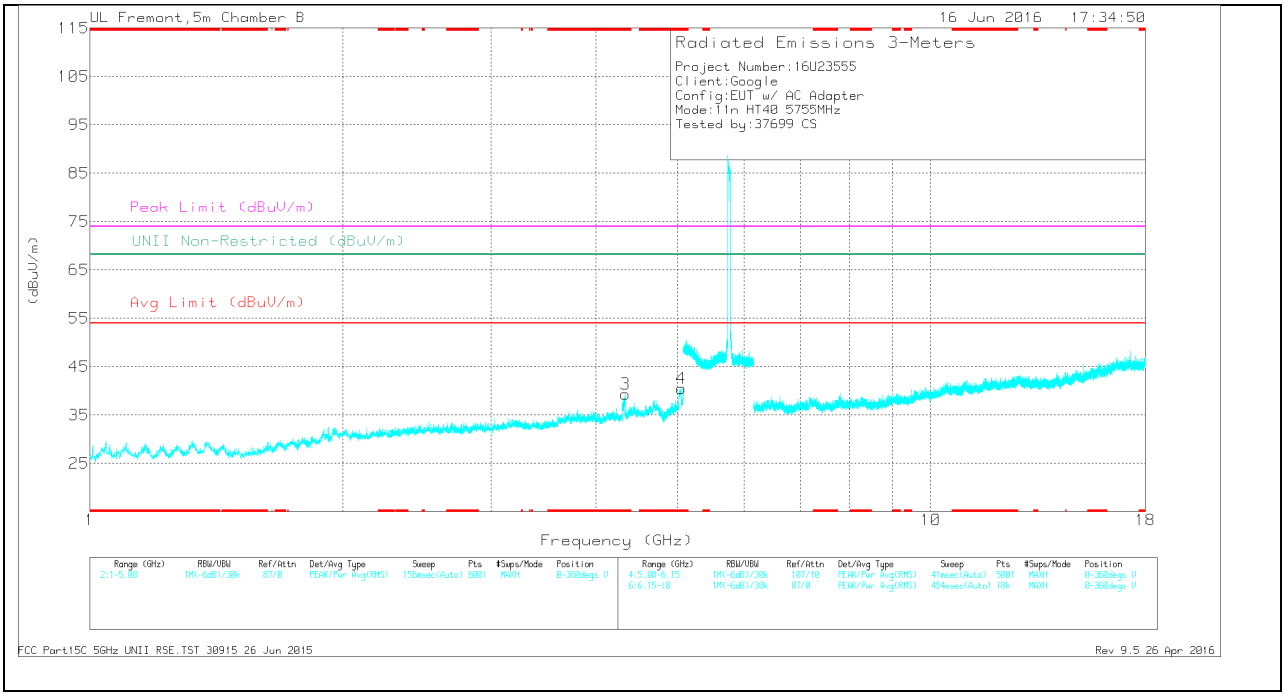
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-70.4	Pk	35.2	-21.6	11.8	-45	26.94	-71.94	96	380	V
2	5.979	-67.15	Pk	35.2	-21.2	11.8	-41.35	-27	-14.35	96	380	V

Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



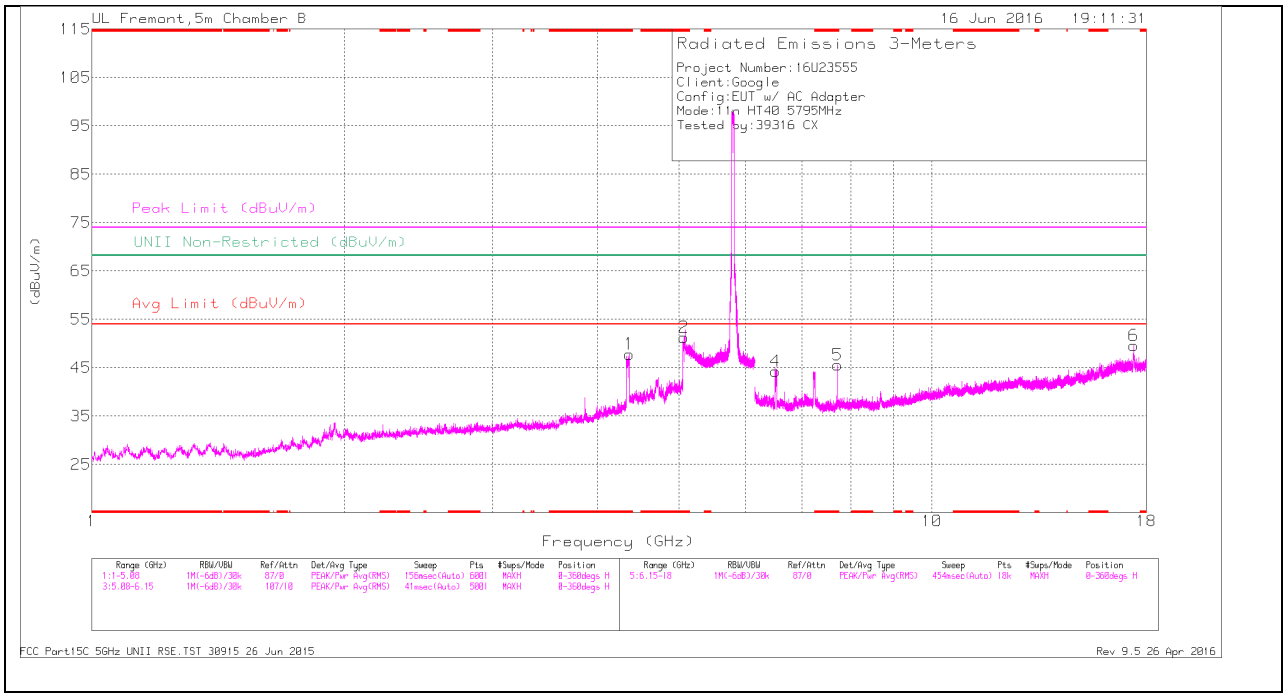


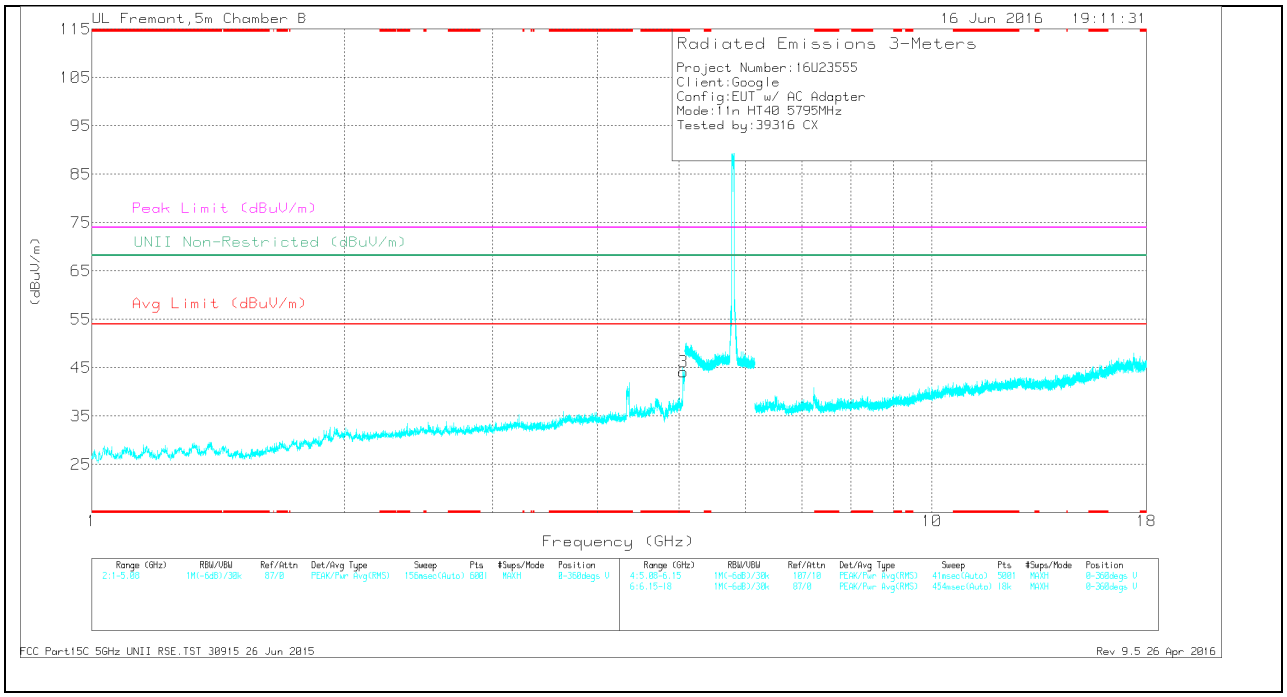
LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.051	53.29	PK-U	34.1	-29.9	57.49	-	-	74	-16.51	-	-	270	113	H
	* 5.051	46.08	ADR	34.1	-29.9	50.28	54	-3.72	-	-	-	-	270	113	H
2	* 4.331	47.23	PK-U	33.8	-32.6	48.43	-	-	74	-25.57	-	-	219	122	H
	* 4.331	38.85	ADR	33.8	-32.6	40.05	54	-13.95	-	-	-	-	219	122	H
3	* 4.303	44.48	PK-U	33.7	-32.9	45.28	-	-	74	-28.72	-	-	237	272	V
	* 4.332	34.58	ADR	33.8	-32.6	35.78	54	-18.22	-	-	-	-	237	272	V
4	* 5.043	49.77	PK-U	34.1	-29.8	54.07	-	-	74	-19.93	-	-	212	359	V
	* 5.042	42.26	ADR	34.1	-29.8	46.56	54	-7.44	-	-	-	-	212	359	V
5	6.48	46.48	PK-U	35.6	-31	51.08	-	-	-	-	68.2	-17.12	195	101	H
6	7.177	41.41	PK-U	35.6	-30.3	46.71	-	-	-	-	68.2	-21.49	352	102	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL RESULTS





HIGH CHANNEL DATA

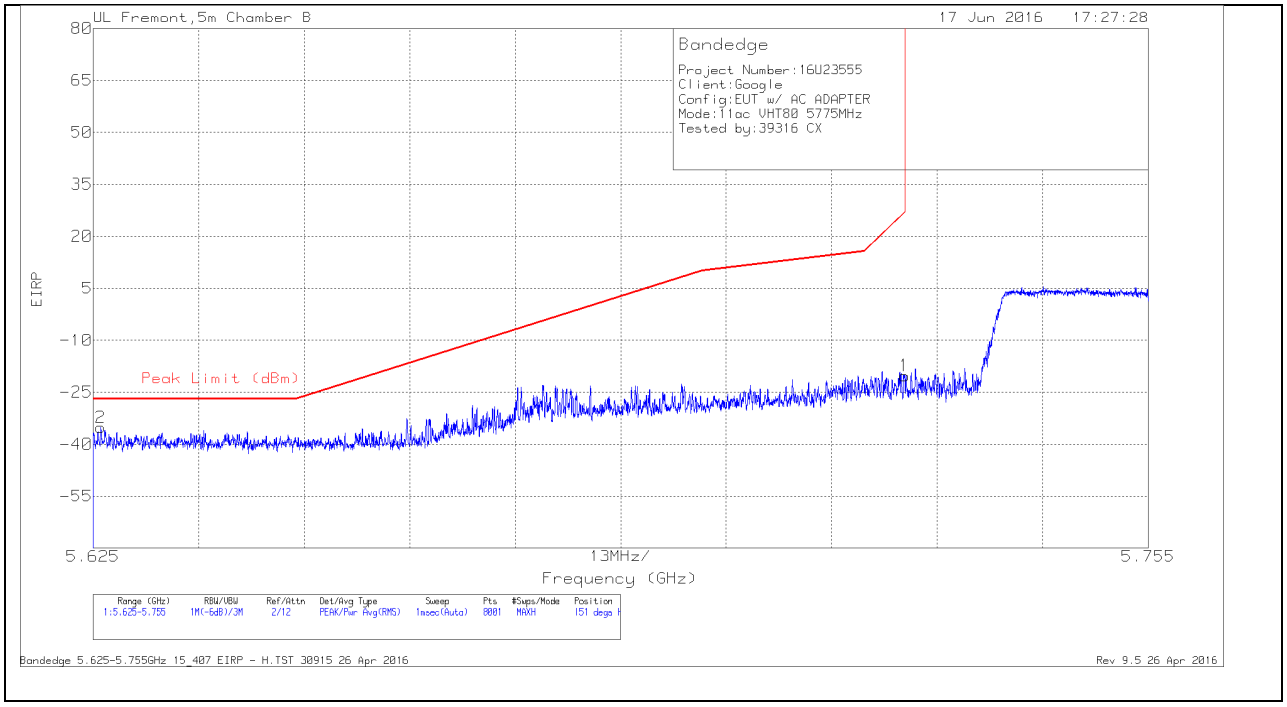
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.057	53.54	PK-U	34.1	-30	57.64	-	-	74	-16.36	-	-	271	115	H
	* 5.054	44.84	ADR	34.1	-29.9	49.04	54	-4.96	-	-	-	-	271	115	H
1	* 4.342	53.62	PK-U	33.8	-32.6	54.82	-	-	74	-19.18	-	-	219	111	H
	* 4.331	45.62	ADR	33.8	-32.6	46.82	54	-7.18	-	-	-	-	219	111	H
5	* 7.727	44.73	PK-U	35.8	-29.6	50.93	-	-	74	-23.07	-	-	198	118	H
	* 7.727	39.02	ADR	35.8	-29.6	45.22	54	-8.78	-	-	-	-	198	118	H
4	6.505	47.21	PK-U	35.6	-31.5	51.31	-	-	-	-	68.2	-16.89	199	101	H
6	17.38	38.12	PK-U	41.3	-22.7	56.72	-	-	-	-	68.2	-11.48	263	103	H
3	* 5.056	46.23	Pk-U	34.1	-29.9	50.43	-	-	74	-23.57	-	-	269	104	V
	* 5.056	36.54	ADR	34.1	-29.9	40.74	54	-13.26	-	-	-	-	269	104	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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

RESTRICTED BANDEDGE (MID CHANNEL)

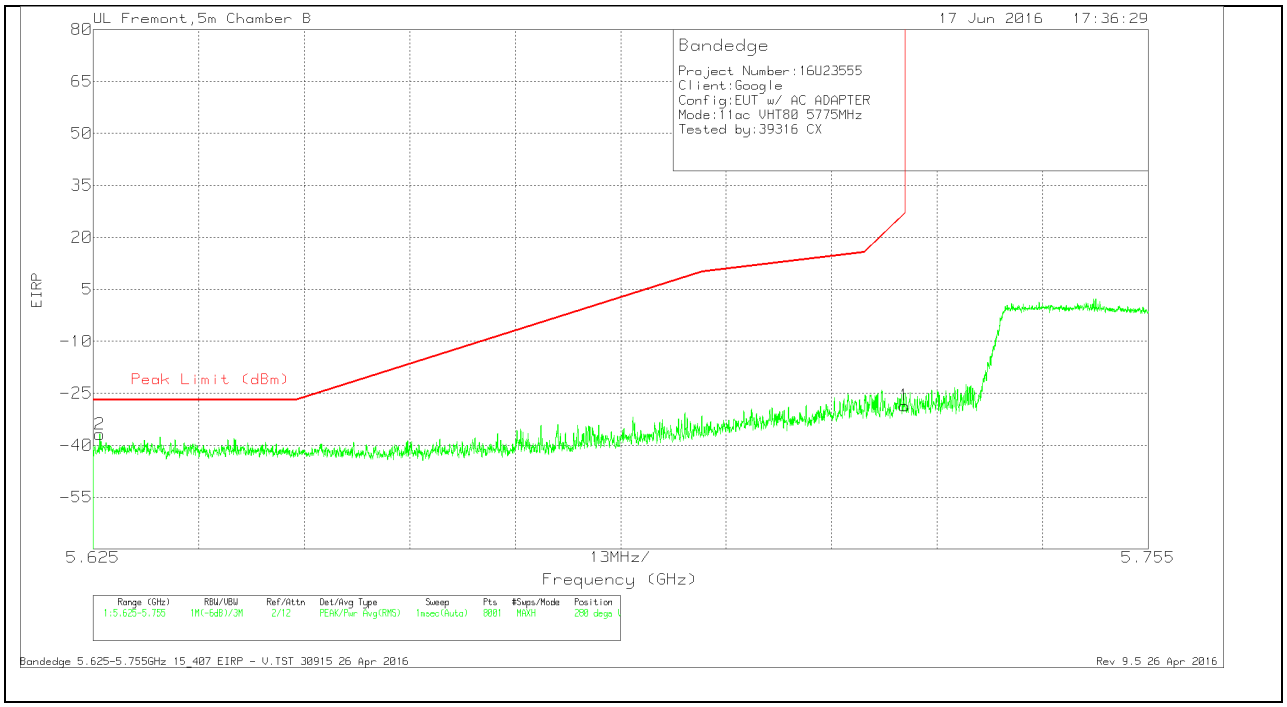
HORIZONTAL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	5.626	-60.35	Pk	34.6	-21.2	11.8	-35.15	-27	-8.15	151	336	H
1	5.725	-45.22	Pk	34.9	-21.7	11.8	-20.22	26.97	-47.19	151	336	H

Pk - Peak detector

VERTICAL RESULTS

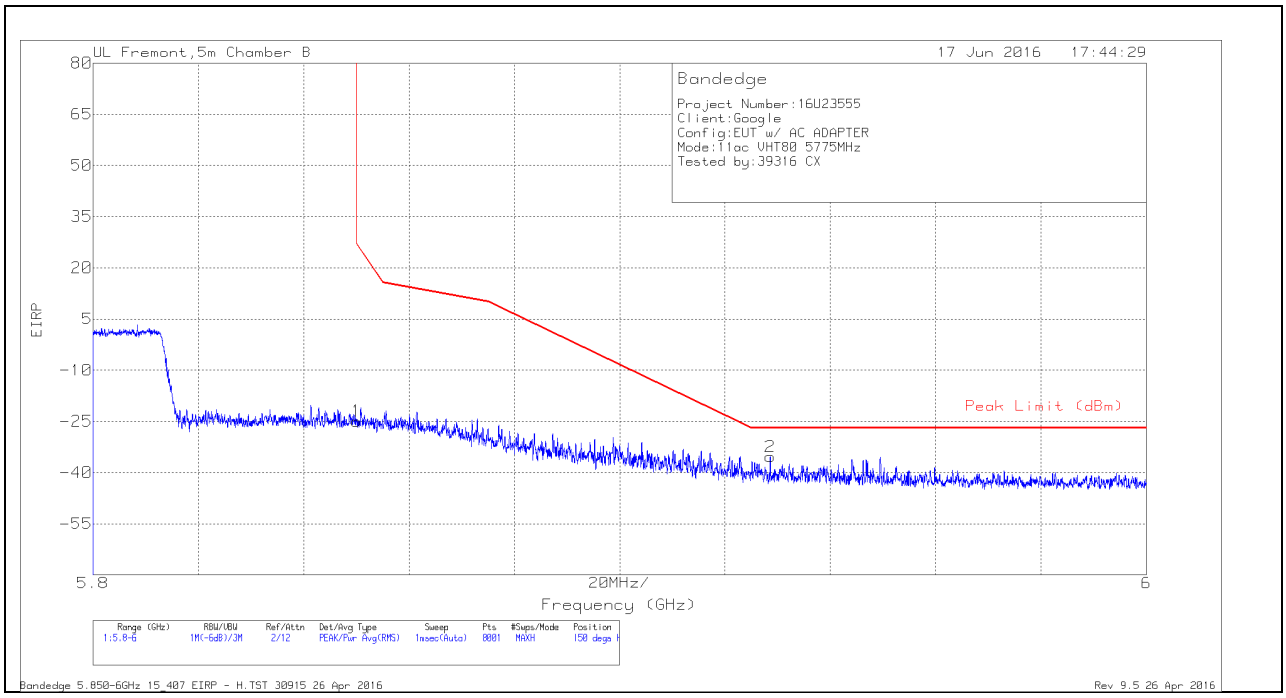


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.626	-61.94	Pk	34.6	-21.3	11.8	-36.84	-27	-9.84	280	282	V
1	5.725	-53.53	Pk	34.9	-21.7	11.8	-28.53	26.97	-55.5	280	282	V

Pk - Peak detector

AUTHORIZED BANDEDGE (MID CHANNEL)

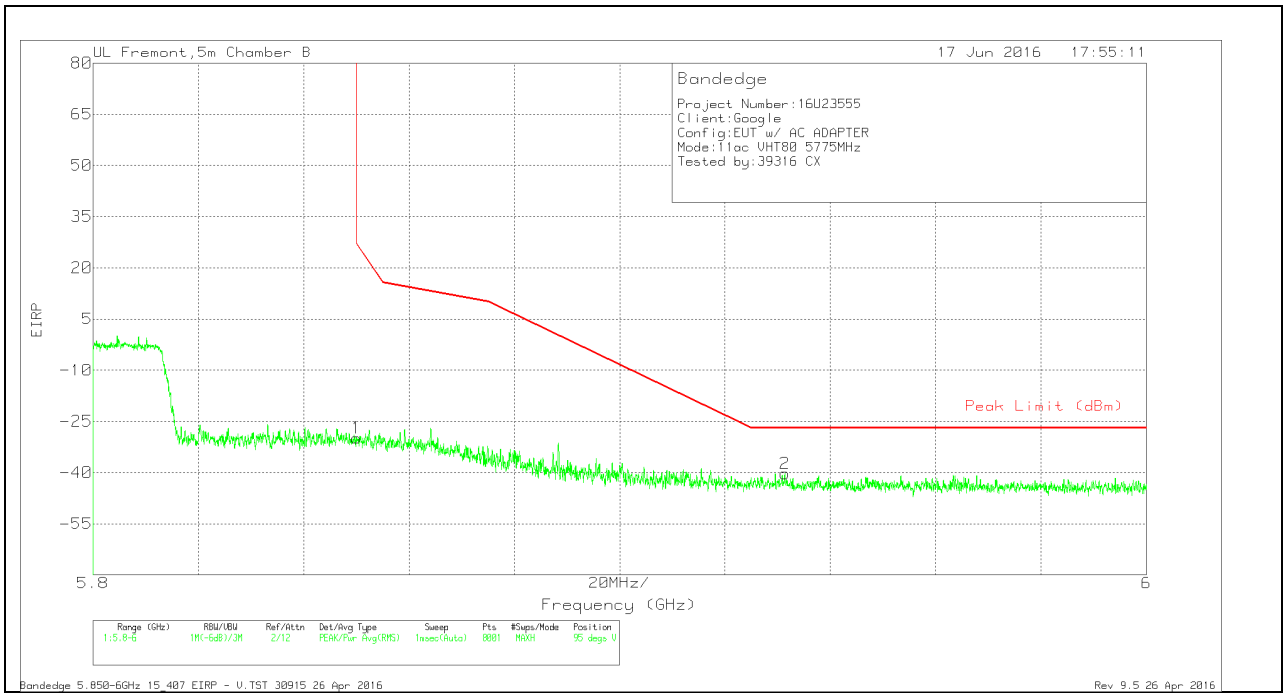
HORIZONTAL RESULTS



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	-50.36	Pk	35.2	-21.6	11.8	-24.96	26.94	-51.9	150	324	H
2	5.929	-60.87	Pk	35.3	-21.6	11.8	-35.37	-27	-8.37	150	324	H

Pk - Peak detector

VERTICAL RESULTS

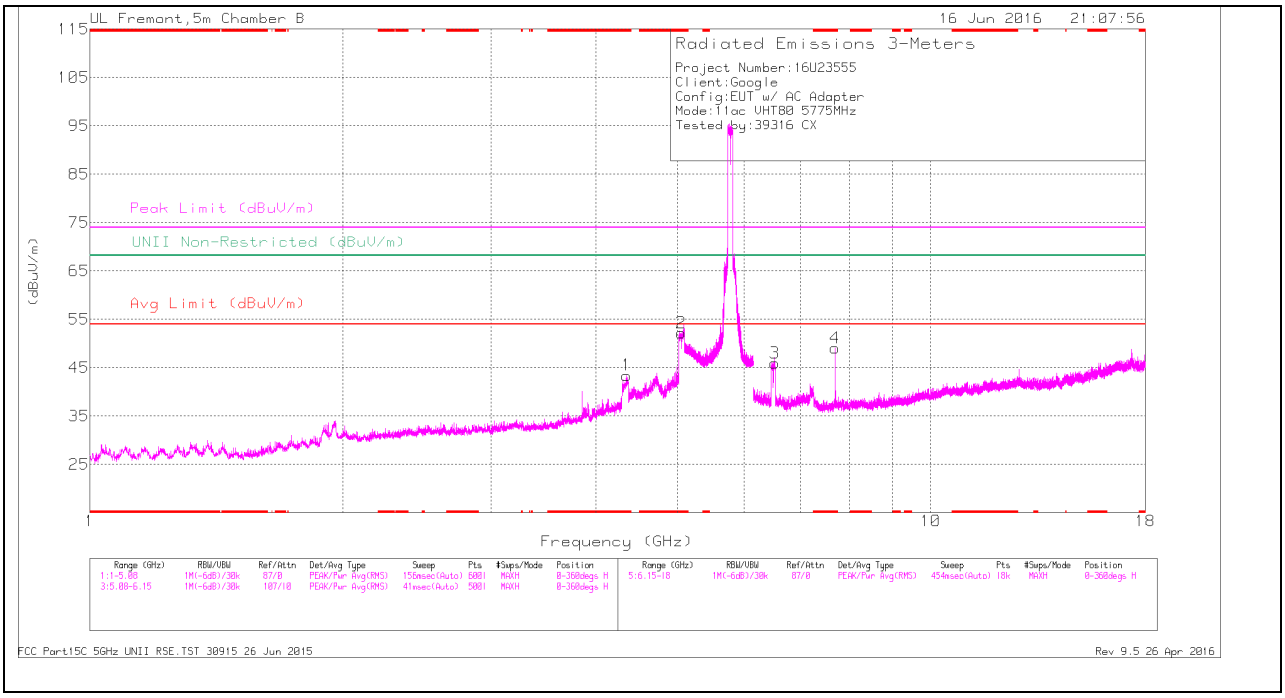


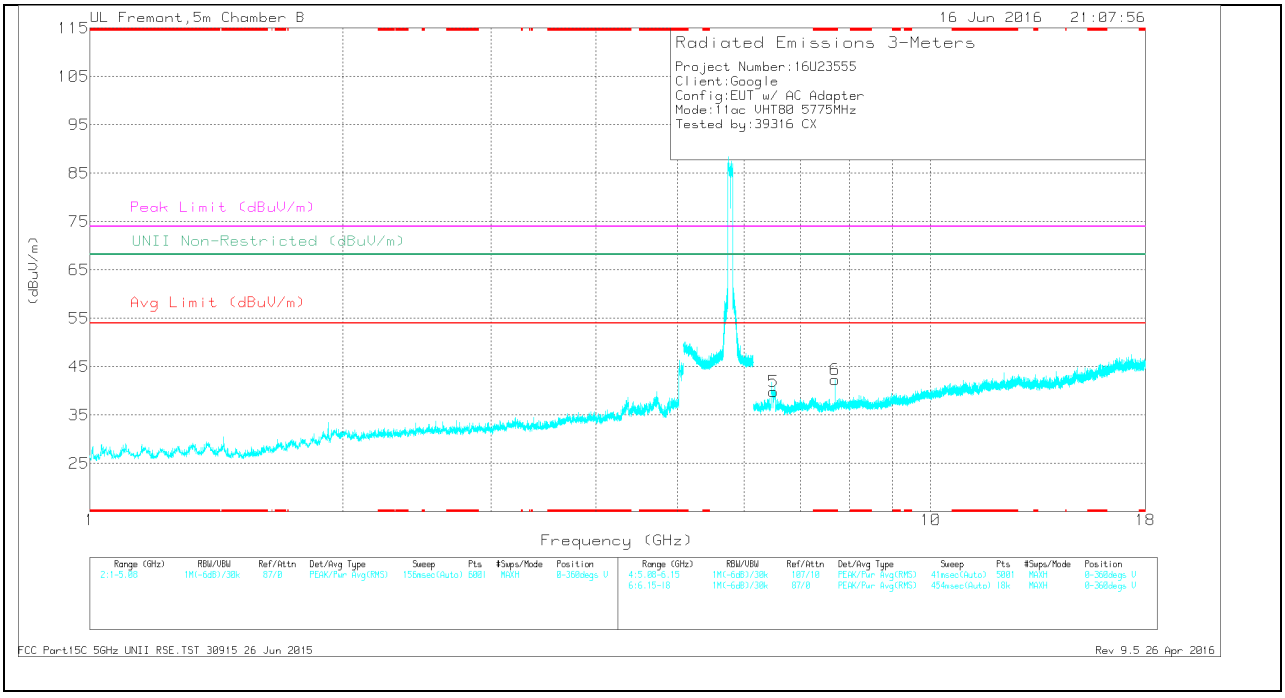
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-55.25	Pk	35.2	-21.6	11.8	-29.85	26.94	-56.79	95	257	V
2	5.931	-65.98	Pk	35.3	-21.4	11.8	-40.28	-27	-13.28	95	257	V

Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL RESULTS





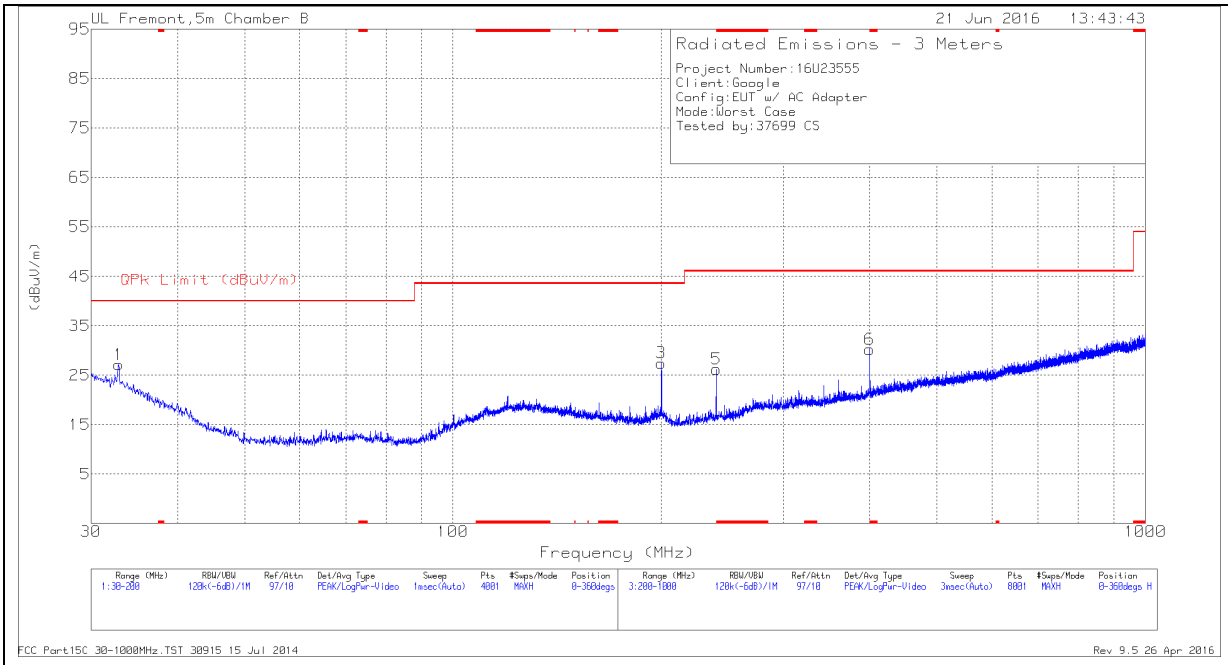
MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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	* 5.027	55.6	PK-U	34.1	-30	0	59.7	-	-	74	-14.3	-	-	272	102	H
	* 5.035	46.53	ADR	34.1	-29.9	.09	50.82	54	-3.18	-	-	-	-	272	102	H
2	* 4.346	49.63	PK-U	33.8	-32.5	0	50.93	-	-	74	-23.07	-	-	218	117	H
	* 4.349	40.06	ADR	33.9	-32.4	.09	41.65	54	-12.35	-	-	-	-	218	117	H
4	* 7.7	46.75	PK-U	35.7	-29.8	0	52.65	-	-	74	-21.35	-	-	195	104	H
	* 7.7	42.69	ADR	35.7	-29.8	.09	48.68	54	-5.32	-	-	-	-	195	104	H
6	* 7.7	43.19	PK-U	35.7	-29.8	0	49.09	-	-	74	-24.91	-	-	83	383	V
	* 7.7	37.92	ADR	35.7	-29.8	.09	43.91	54	-10.09	-	-	-	-	83	383	V
5	6.524	48.5	PK-U	35.6	-31.5	0	52.6	-	-	-	-	68.2	-15.6	196	102	H
3	6.526	42.54	PK-U	35.6	-31.5	0	46.64	-	-	-	-	68.2	-21.56	101	392	V

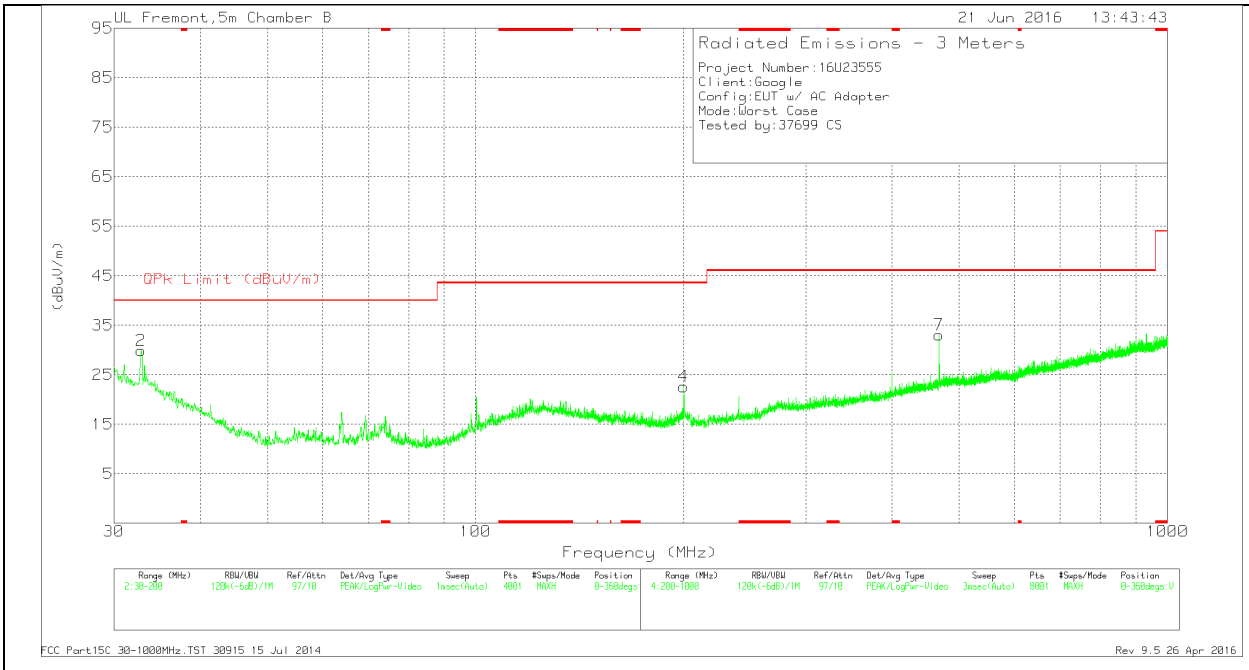
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

5.2. WORST-CASE BELOW 1 GHz

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



HORIZONTAL



VERTICAL

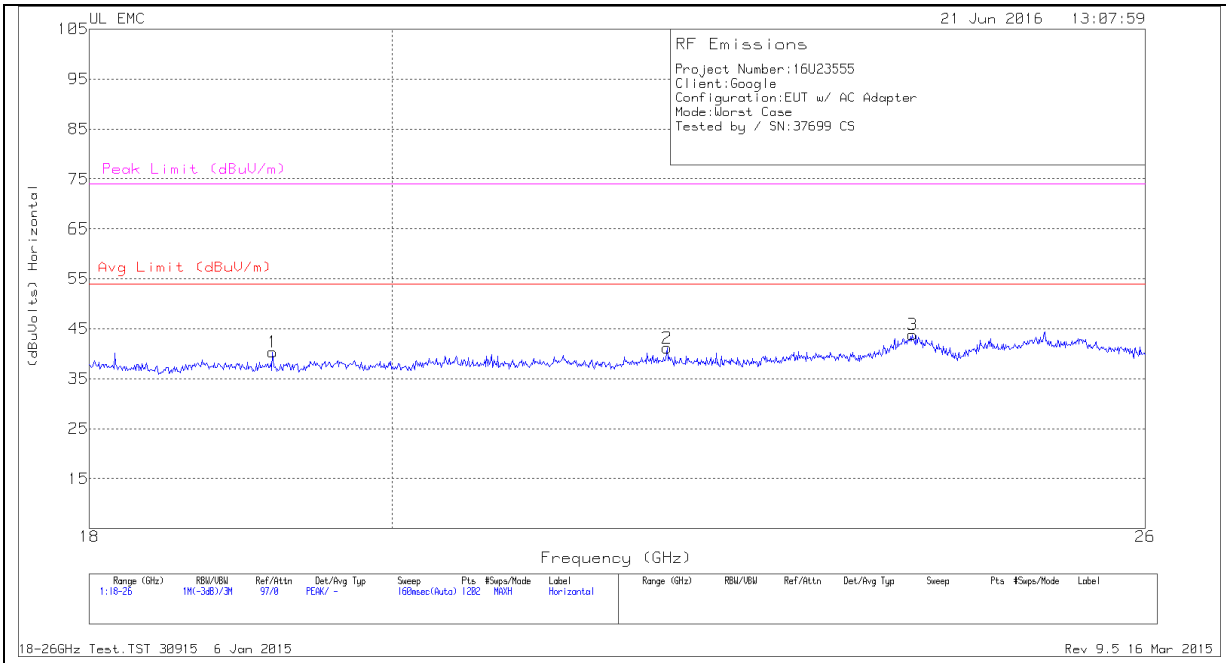
Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 400	37.02	Pk	19.5	-26.3	30.22	46.02	-15.8	0-360	100	H
2	32.8475	35.48	Pk	23.2	-28.8	29.88	40	-10.12	0-360	100	V
1	32.89	32.75	Pk	23.2	-28.8	27.15	40	-12.85	0-360	200	H
3	200	38.06	Pk	16.5	-27.1	27.46	43.52	-16.06	0-360	100	H
4	200	33.21	Pk	16.5	-27.1	22.61	43.52	-20.91	0-360	200	V
5	240	37.42	Pk	15.5	-26.7	26.22	46.02	-19.8	0-360	100	H
7	467.8	38.15	Pk	21.2	-26.3	33.05	46.02	-12.97	0-360	300	V

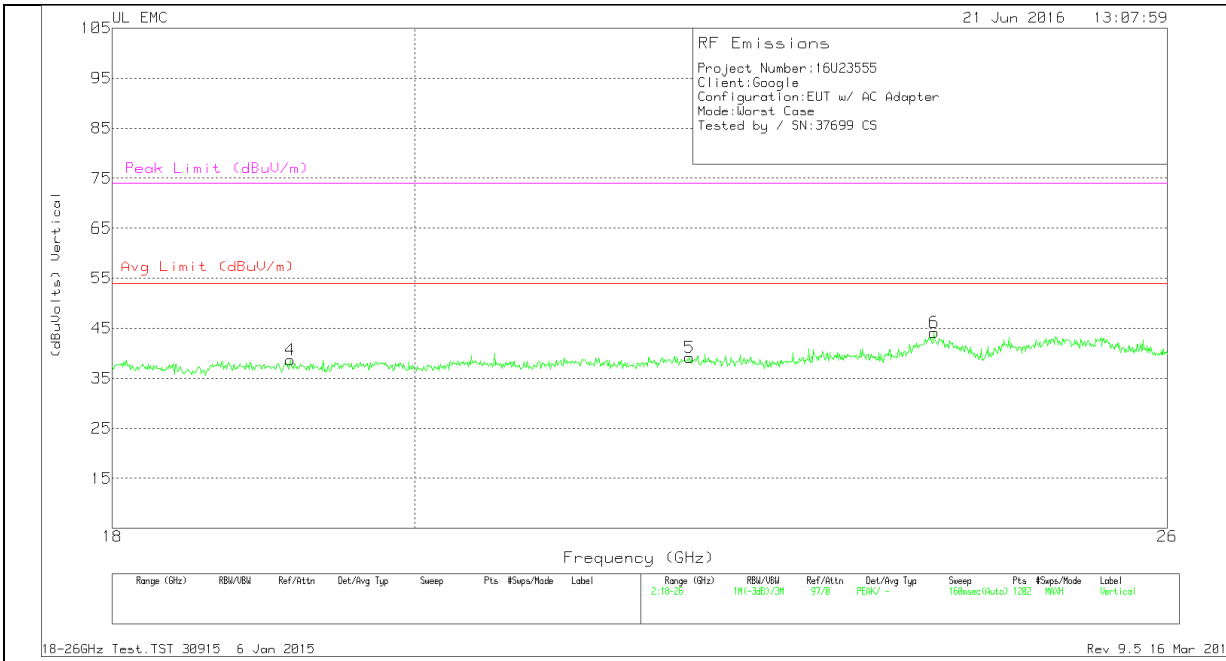
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

5.3. WORST-CASE 18 GHz – 26 GHz

SPURIOUS EMISSIONS 18-26 GHz (WORST-CASE CONFIGURATION)



HORIZONTAL



VERTICAL

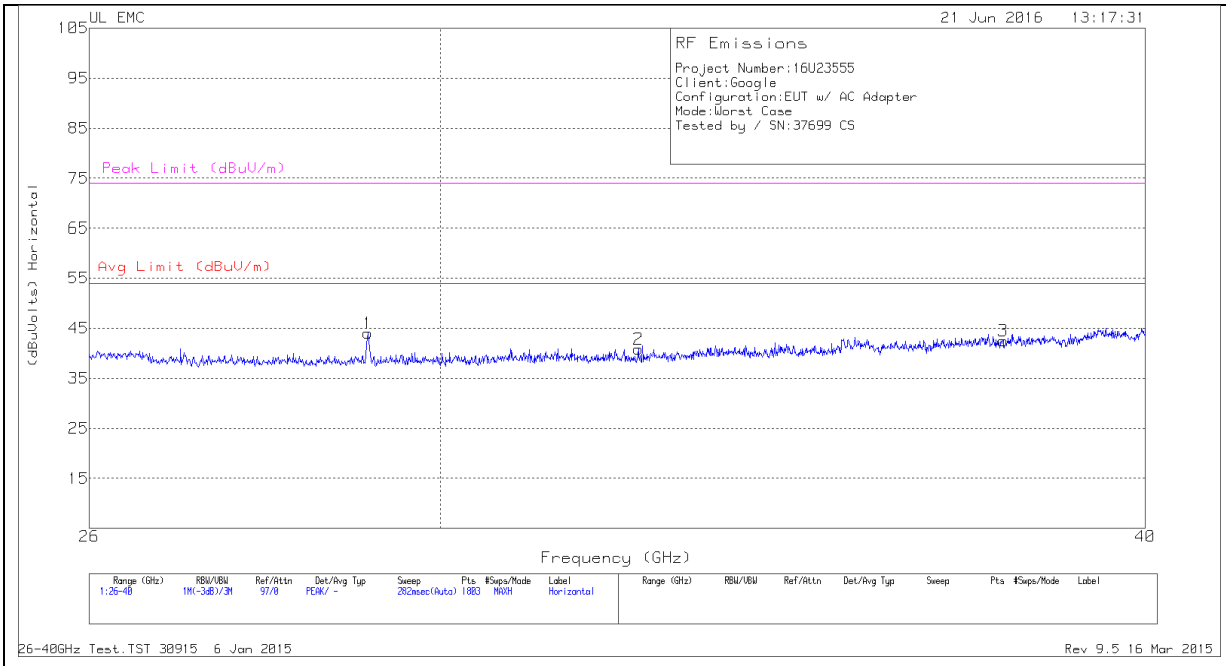
Data

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T449 (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	19.186	41.83	Pk	32.7	-24.7	-9.5	40.333	54	-13.667	74	-33.667
2	22.01	42.37	Pk	33.5	-25.2	-9.5	41.167	54	-12.833	74	-32.833
3	23.975	43.53	Pk	34	-24.2	-9.5	43.833	54	-10.167	74	-30.167
4	19.152	40.27	Pk	32.7	-24.8	-9.5	38.667	54	-15.333	74	-35.333
5	22.01	40.37	Pk	33.5	-25.2	-9.5	39.167	54	-14.833	74	-34.833
6	23.968	43.87	Pk	34	-24.2	-9.5	44.167	54	-9.833	74	-29.833

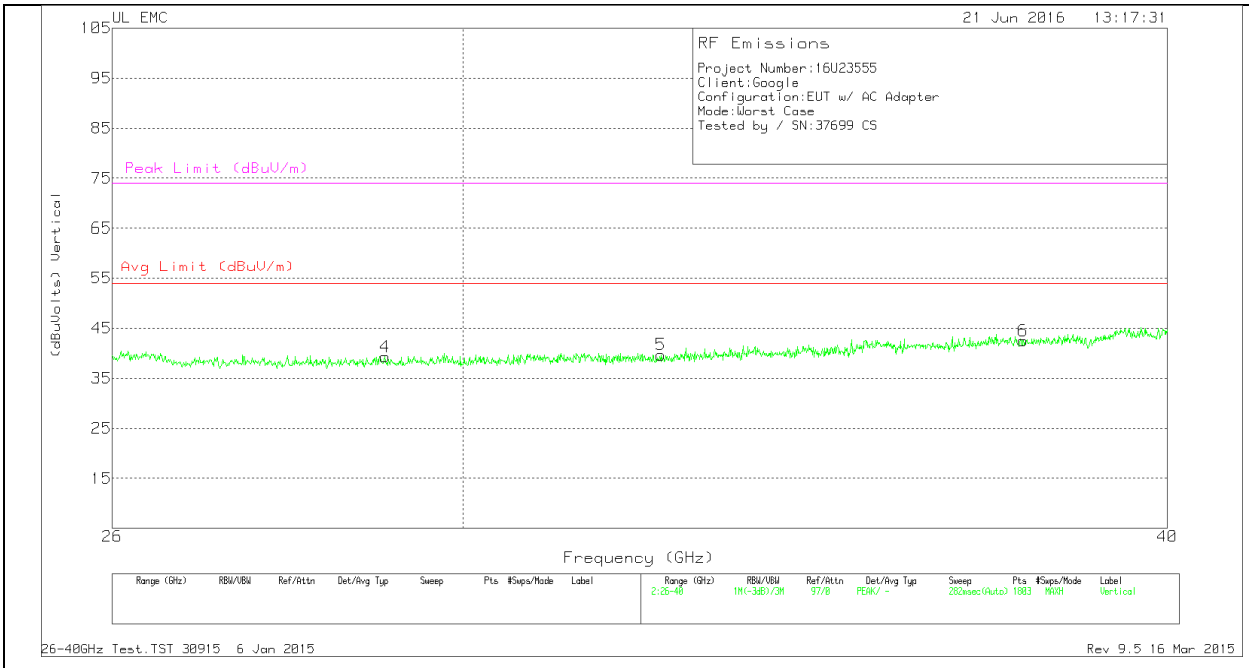
Pk - Peak detector

5.4. WORST-CASE 26 GHz – 40 GHz

SPURIOUS EMISSIONS 26-40 GHz (WORST-CASE CONFIGURATION)



HORIZONTAL



VERTICAL

Data

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T90 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	29.131	50.2	Pk	35.9	-32.6	-9.5	44	54	-10	74	-30
2	32.526	47.33	Pk	36.2	-33.2	-9.5	40.83	54	-13.17	74	-33.17
3	37.743	49.1	Pk	37	-34.1	-9.5	42.5	54	-11.5	74	-31.5
4	29.061	45.53	Pk	35.9	-32.6	-9.5	39.33	54	-14.67	74	-34.67
5	32.526	46.17	Pk	36.2	-33.2	-9.5	39.67	54	-14.33	74	-34.33
6	37.712	49	Pk	37	-34	-9.5	42.5	54	-11.5	74	-31.5

Pk - Peak detector

6. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

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

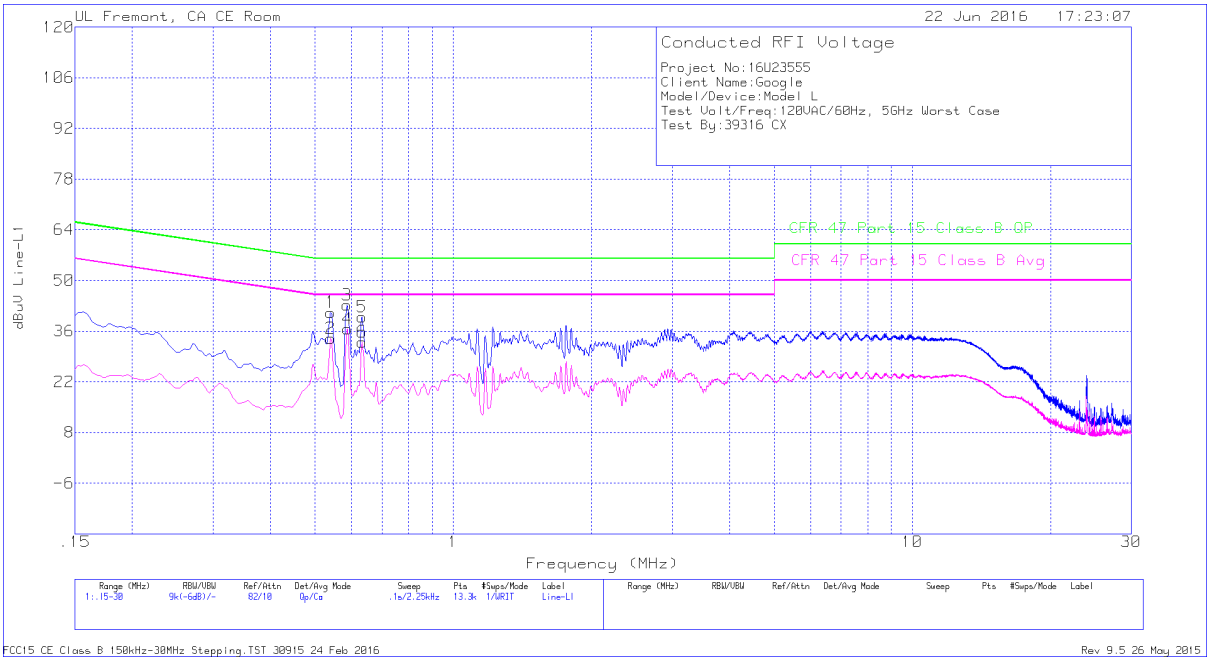
The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

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

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

RESULTS

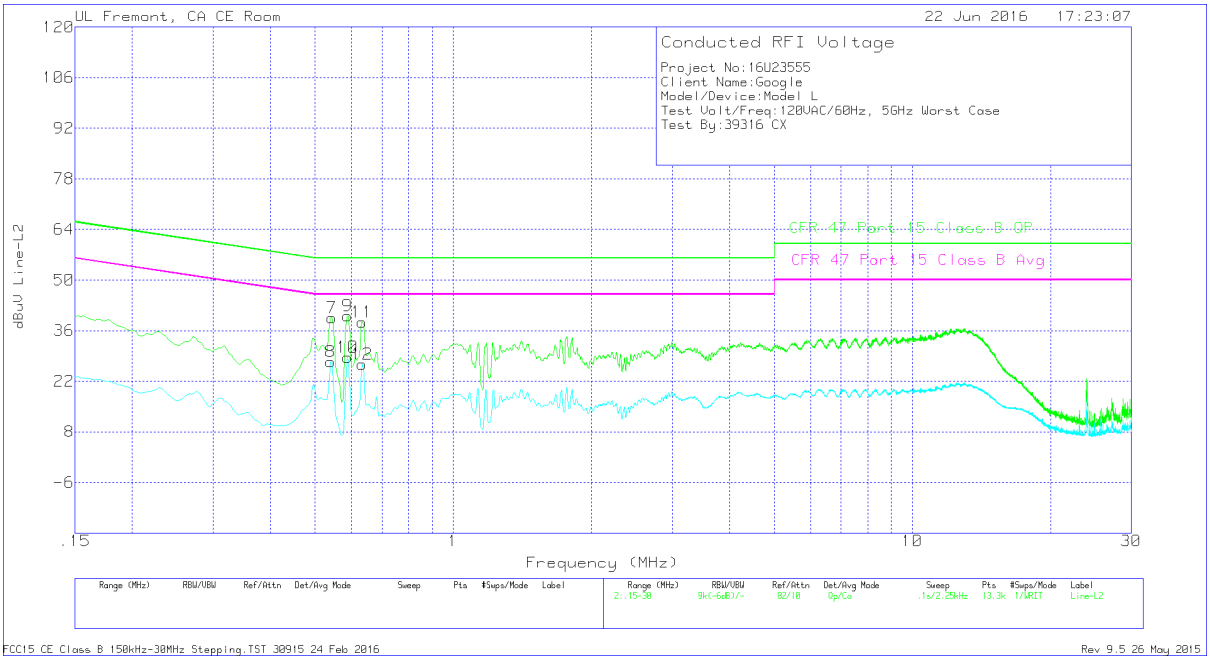
LINE 1 RESULTS



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN 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	.5415	31.12	Qp	0	0	10.1	41.22	56	-14.78	-	-
2	.5415	23.88	Ca	0	0	10.1	33.98	-	-	46	-12.02
3	.5865	33.12	Qp	0	0	10.1	43.22	56	-12.78	-	-
4	.58875	26.44	Ca	0	0	10.1	36.54	-	-	46	-9.46
5	.63375	29.77	Qp	0	0	10.1	39.87	56	-16.13	-	-
6	.63375	22.95	Ca	0	0	10.1	33.05	-	-	46	-12.95

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN 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)
7	.54375	29.53	Qp	0	0	10.1	39.63	56	-16.37	-	-
8	.5415	17.33	Ca	0	0	10.1	27.43	-	-	46	-18.57
9	.58875	29.96	Qp	0	0	10.1	40.06	56	-15.94	-	-
10	.58875	18.58	Ca	0	0	10.1	28.68	-	-	46	-17.32
11	.63375	28.31	Qp	0	0	10.1	38.41	56	-17.59	-	-
12	.63375	16.6	Ca	0	0	10.1	26.7	-	-	46	-19.3

Qp - Quasi-Peak detector
Ca - CISPR average detection

7. DYNAMIC FREQUENCY SELECTION

7.1. OVERVIEW

7.1.1. 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”.

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

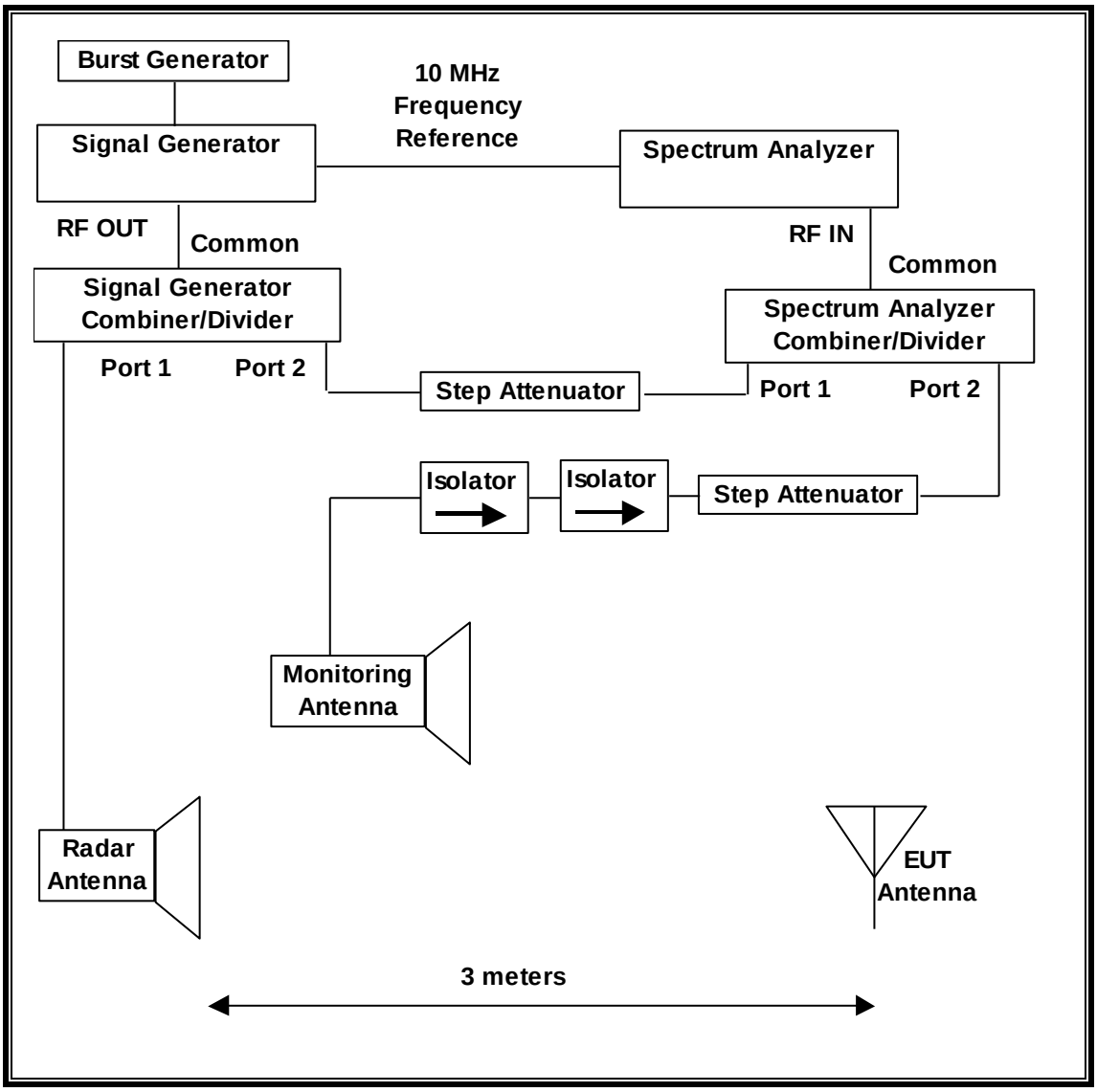
Radar Waveform Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

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

7.1.2. 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**	**Serial Number**	**Cal Due**
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight	N9030A	US51350187	06/13/17
Signal Generator, MXG X-Series RF Vector	Agilent	N5182B	MY51350337	03/11/17

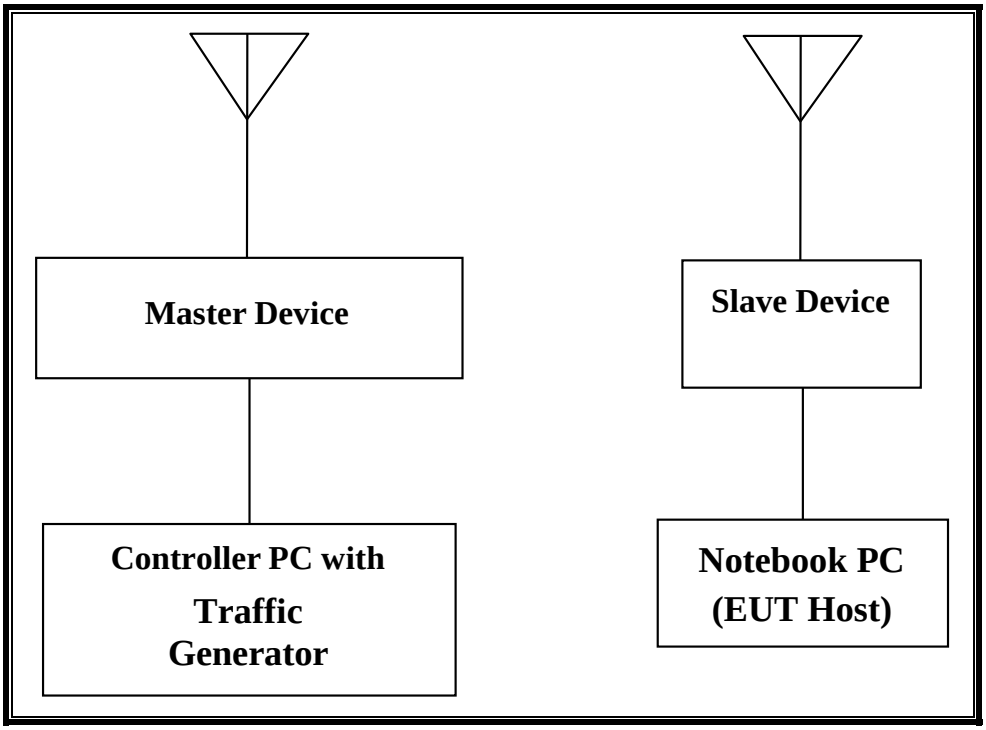
7.1.3. TEST AND MEASUREMENT SOFTWARE

The following test and measurement software was utilized for the tests documented in this report:

TEST SOFTWARE LIST		
Name	**Version**	**Test / Function**
Aggregate Time-PXA	2.0.0.6	Channel Loading and Aggregate Closing Time
PXA Read	3.0.0.7	Signal Generator Screen Capture
SGXProject.exe	2	Radar Waveform Generation and Download

7.1.4. 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**
AC Adapter (EUT)	Salcomp	GL0402	No Serial Number	DoC
Notebook PC (EUT Host)	HP	11-d001dx	5CD51634JG	DoC
AC Adapter (Host PC)	Light On Technology	HSTNN-LA40	WDUUV0B3U8HK1Y	DoC
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	11S42T4418Z1ZGWG 08R90M	DoC

7.1.5. DESCRIPTION OF EUT

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

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

The EUT is a Slave Device without Radar Detection.

The highest power level within these bands is 18.9 dBm EIRP in the 5250-5350 MHz band and 19.2 dBm EIRP in the 5470-5725 MHz band.

The only antenna assembly utilized with the EUT has a gain of 3.7 dBi.

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

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

The EUT uses one transmitter/receiver which connected to an PCB antenna to perform radiated tests.

WLAN traffic that meets or exceeds the minimum required loading was generated by transferring a data stream from the Master Device to the Slave Device 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.

The firmware installed in the EUT during testing was 16.80.205.82

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.

7.2. RESULTS FOR 20 MHz BANDWIDTH

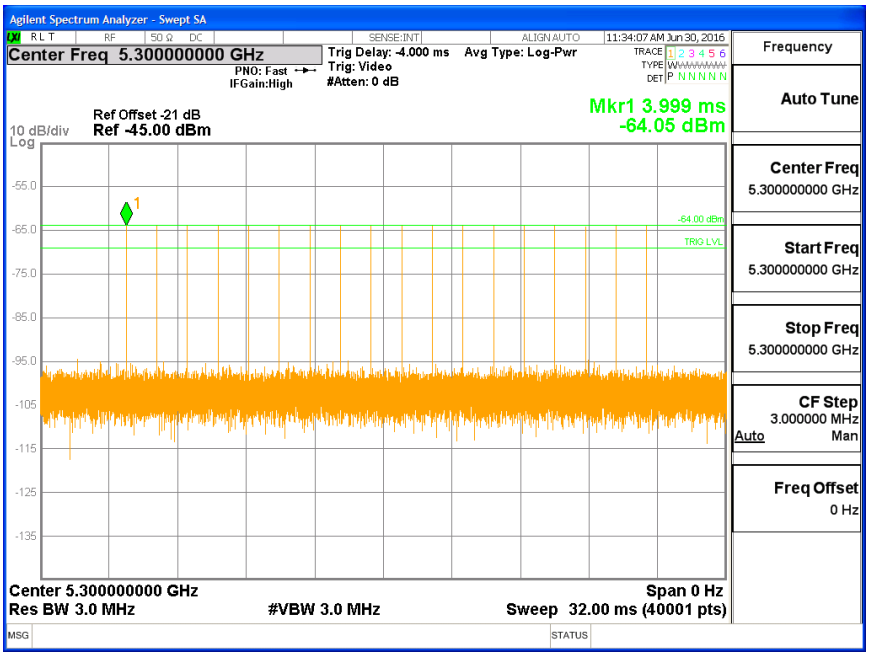
7.2.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5300 MHz.

7.2.2. RADAR WAVEFORM AND TRAFFIC

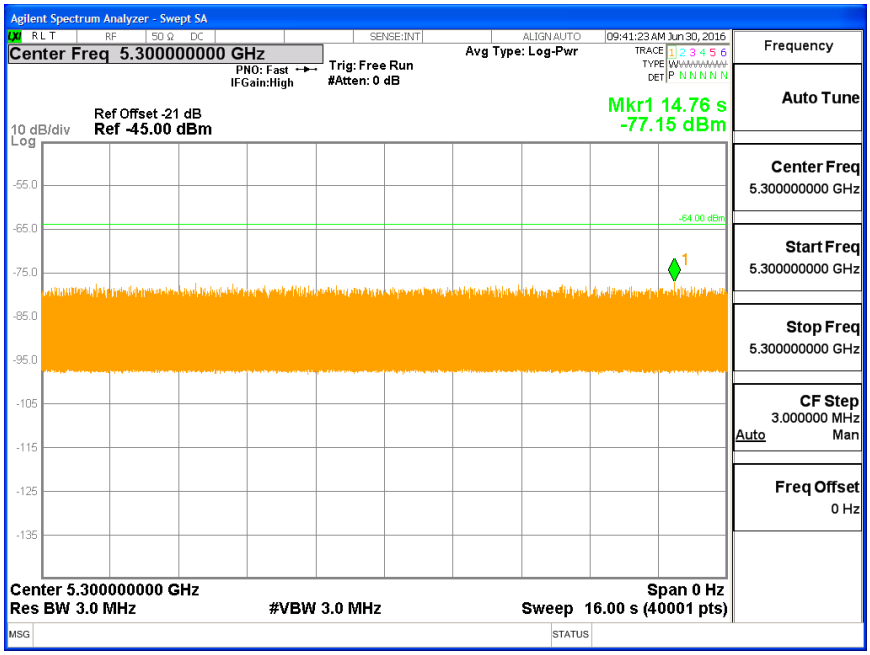
RADAR WAVEFORM

SHORT PULSE RADAR TYPE 0 AT MASTER

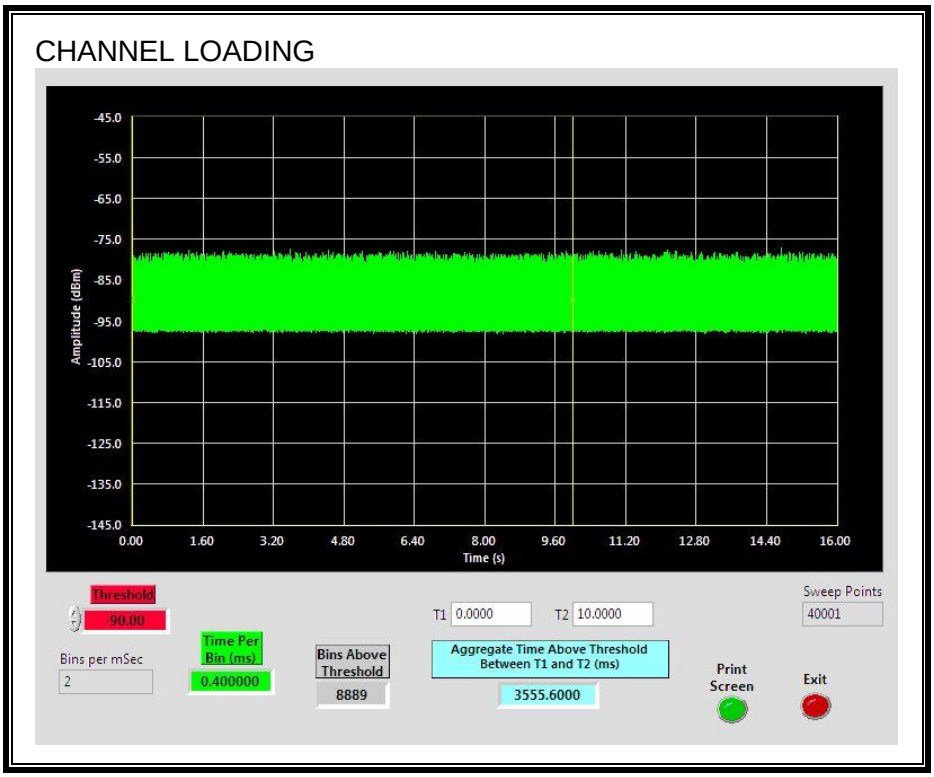


TRAFFIC

SLAVE TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 35.55%

7.2.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

7.2.4. 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).

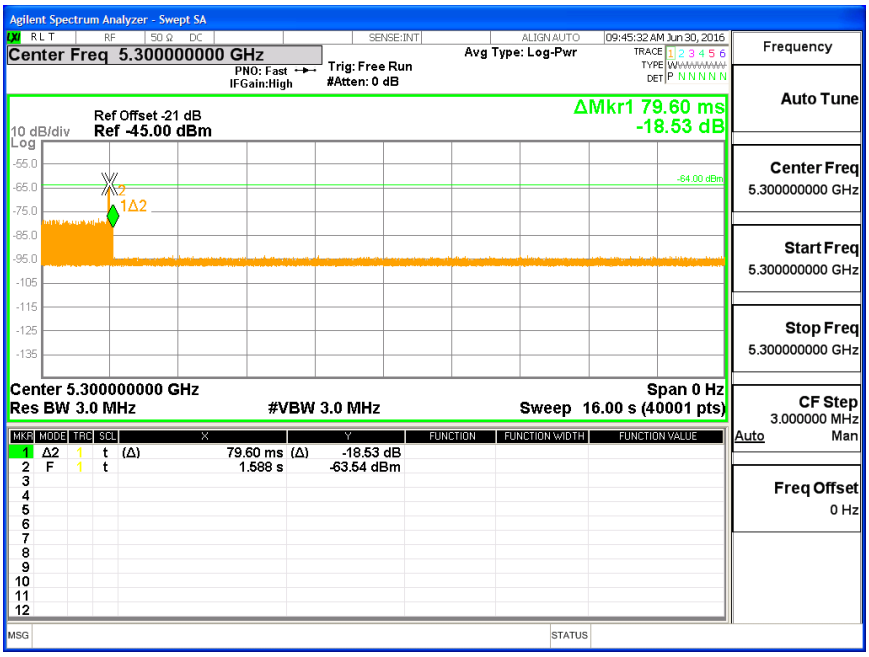
RESULTS

Channel Move Time (sec)	Limit (sec)
0.0824	10

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

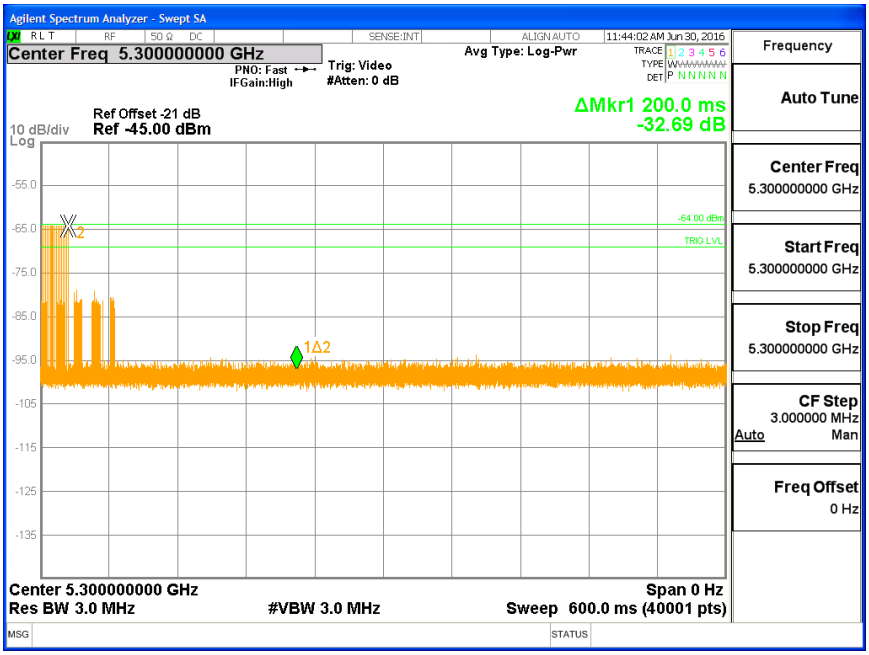
MOVE TIME

MOVE TIME



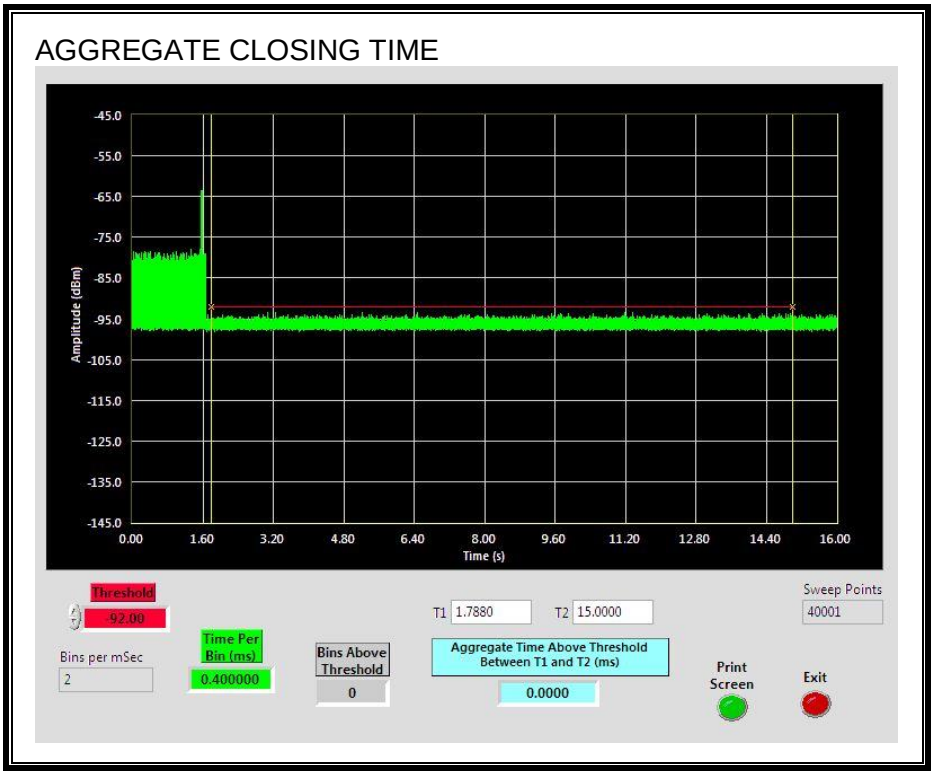
CHANNEL CLOSING TIME

CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.



7.3. RESULTS FOR 40 MHz BANDWIDTH

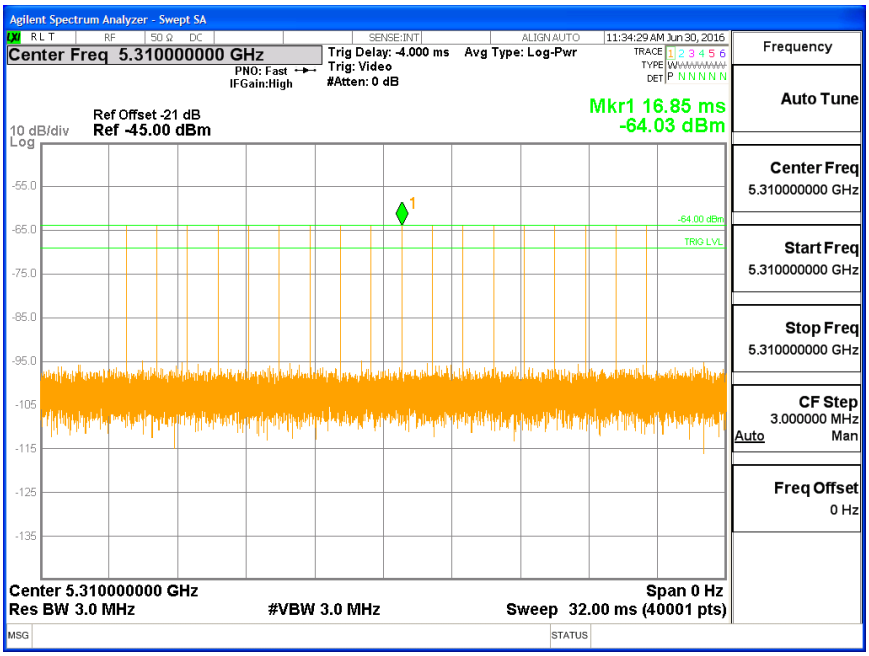
7.3.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5310 MHz.

7.3.2. RADAR WAVEFORM AND TRAFFIC

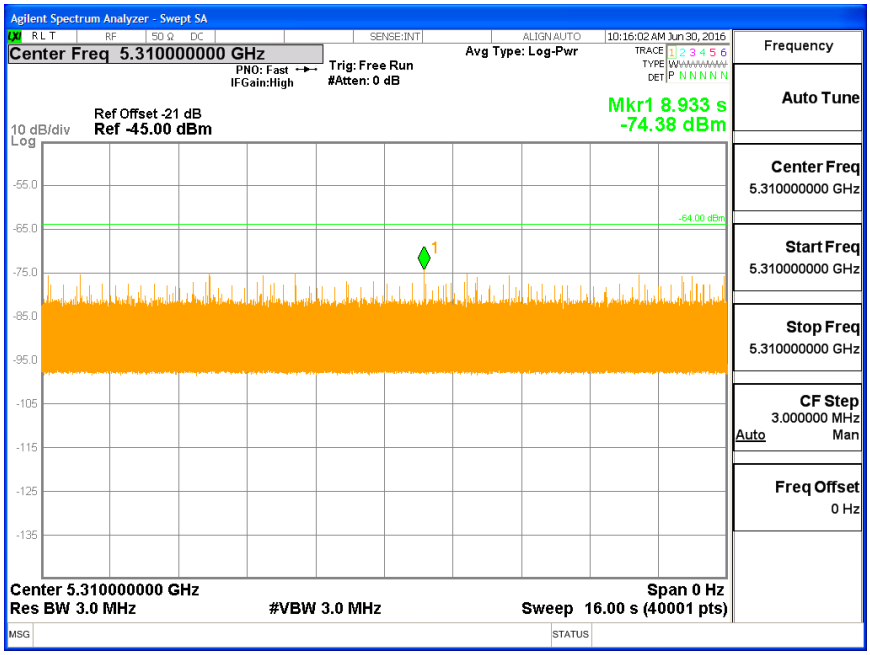
RADAR WAVEFORM

SHORT PULSE RADAR TYPE 0 AT MASTER

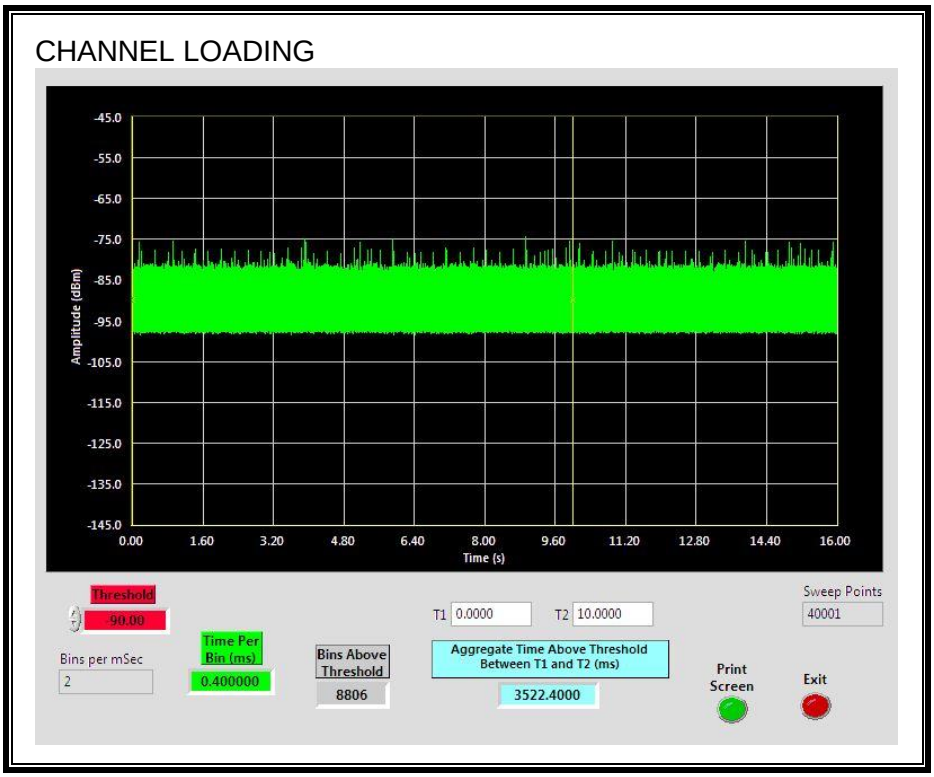


TRAFFIC

SLAVE TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 35.22%

7.3.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

7.3.4. 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).

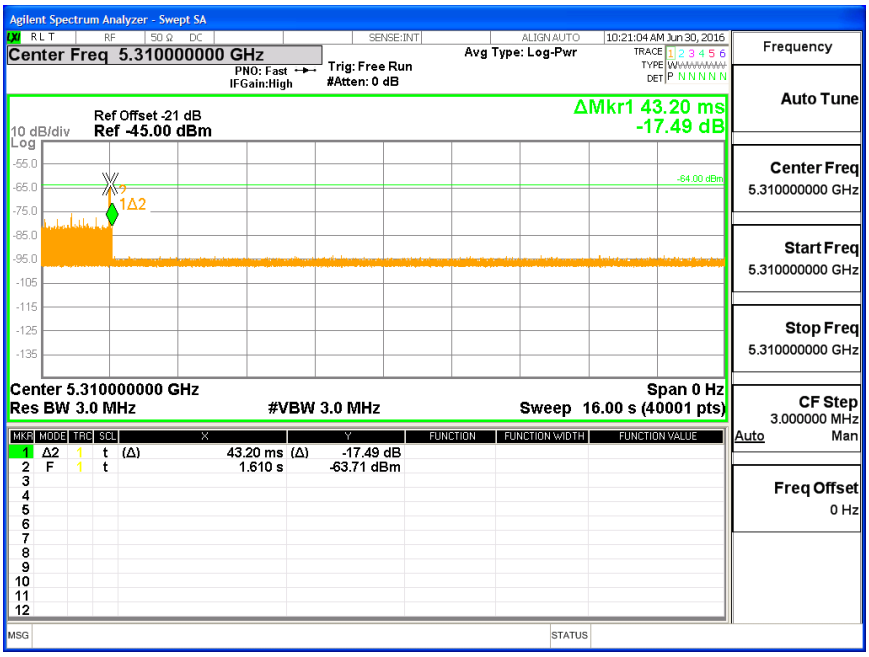
RESULTS

Channel Move Time (sec)	Limit (sec)
0.0432	10

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

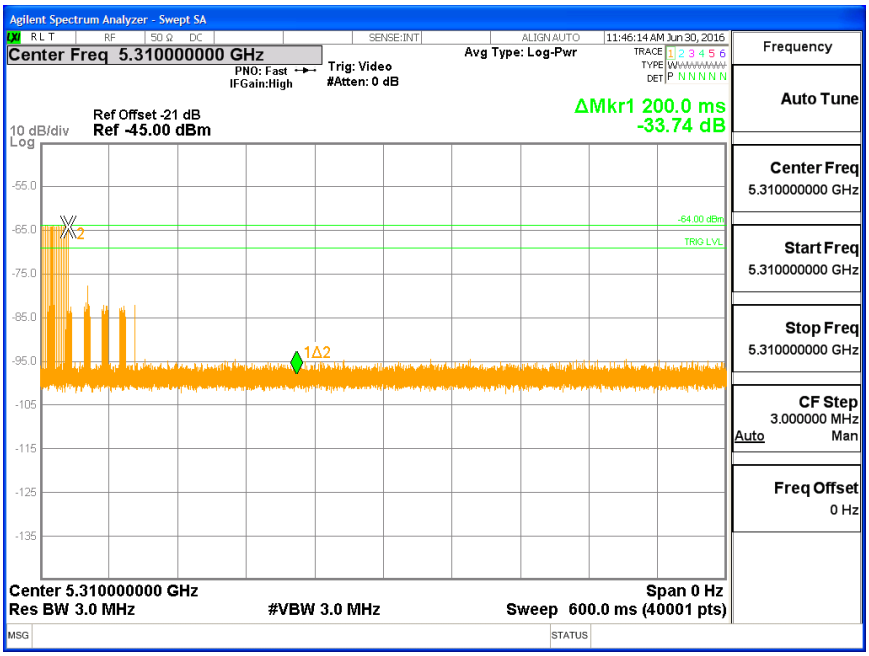
MOVE TIME

MOVE TIME



CHANNEL CLOSING TIME

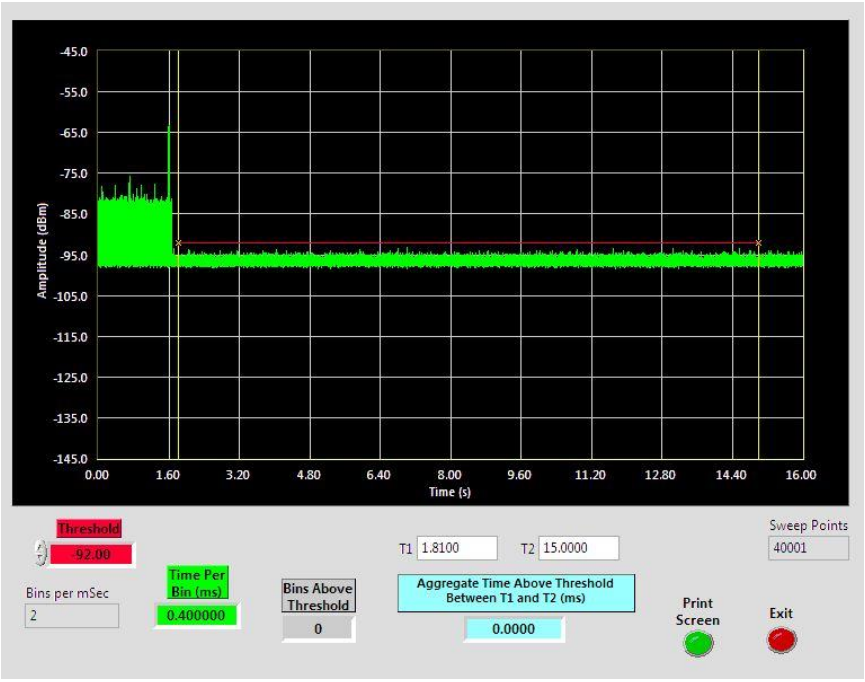
CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



7.4. RESULTS FOR 80 MHz BANDWIDTH

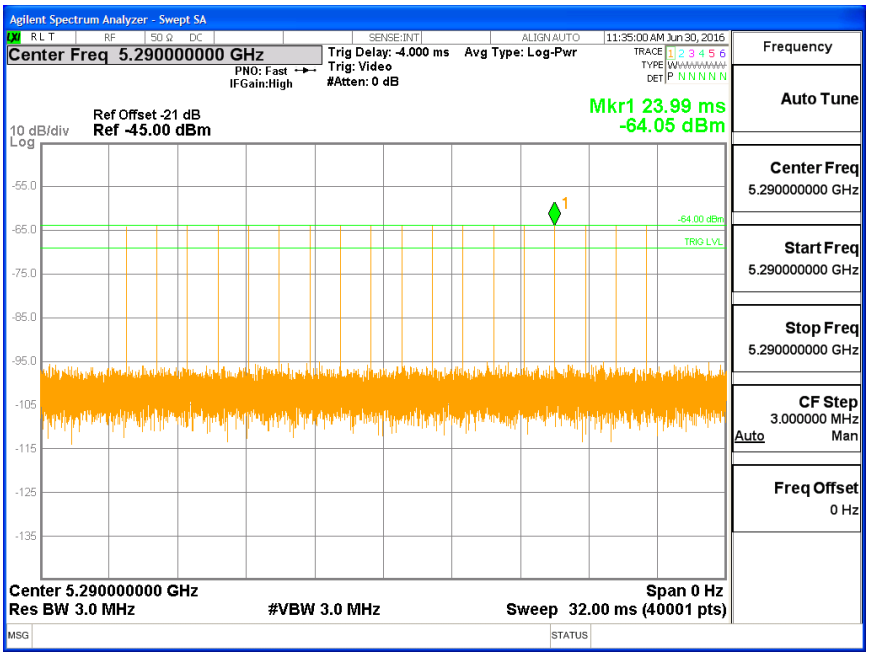
7.4.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5290 MHz.

7.4.2. RADAR WAVEFORM AND TRAFFIC

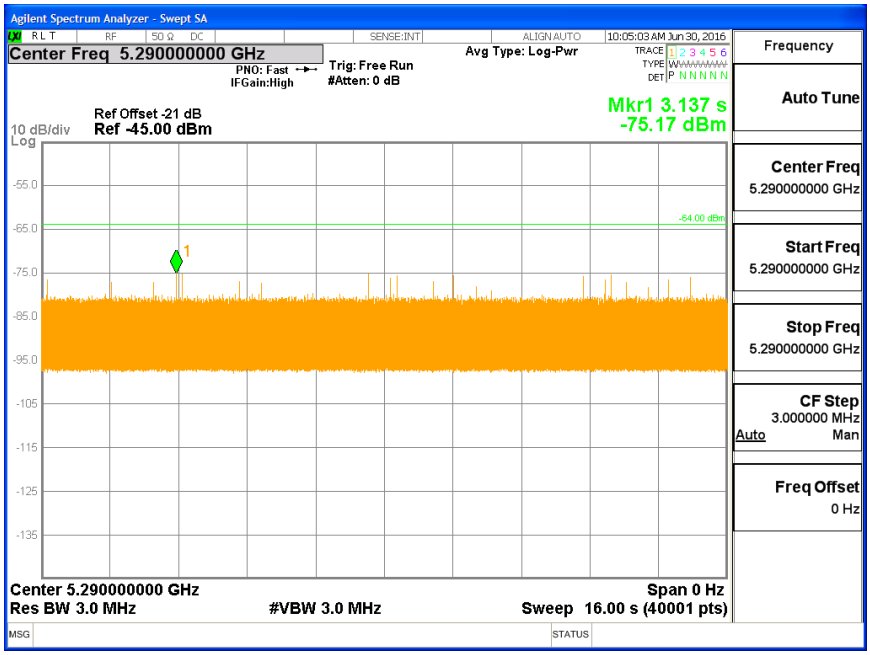
RADAR WAVEFORM

SHORT PULSE RADAR TYPE 0 AT MASTER

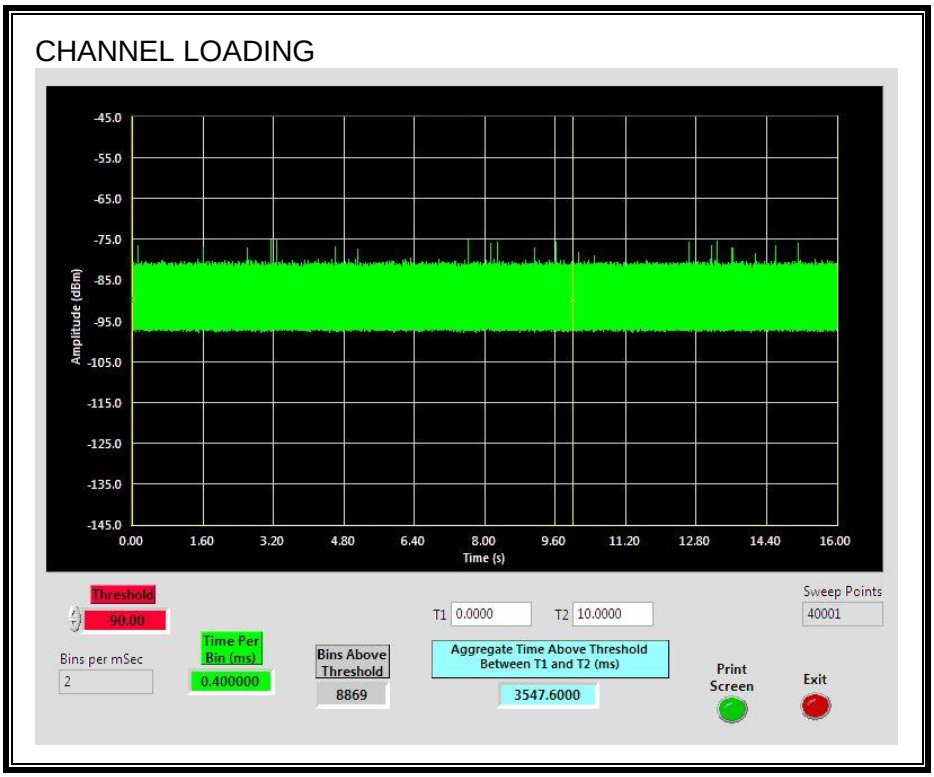


TRAFFIC

SLAVE TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 35.47%

7.4.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

7.4.4. 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).

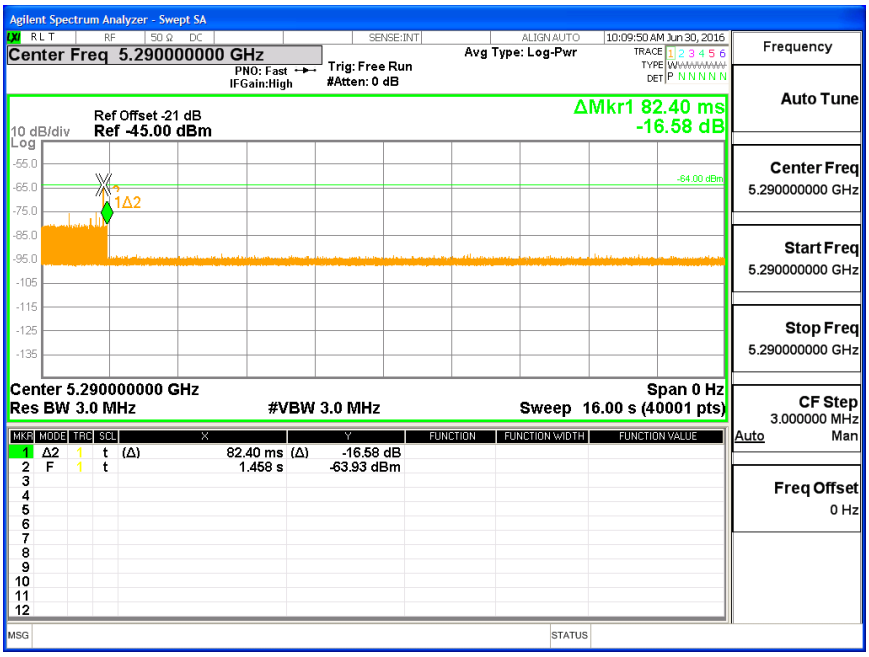
RESULTS

Channel Move Time (sec)	Limit (sec)
0.0824	10

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

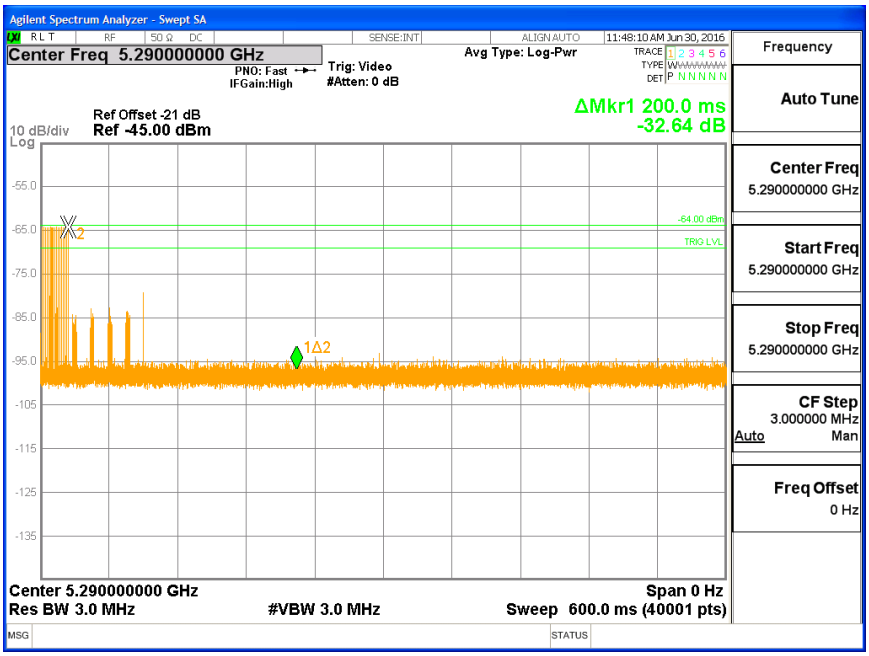
MOVE TIME

MOVE TIME



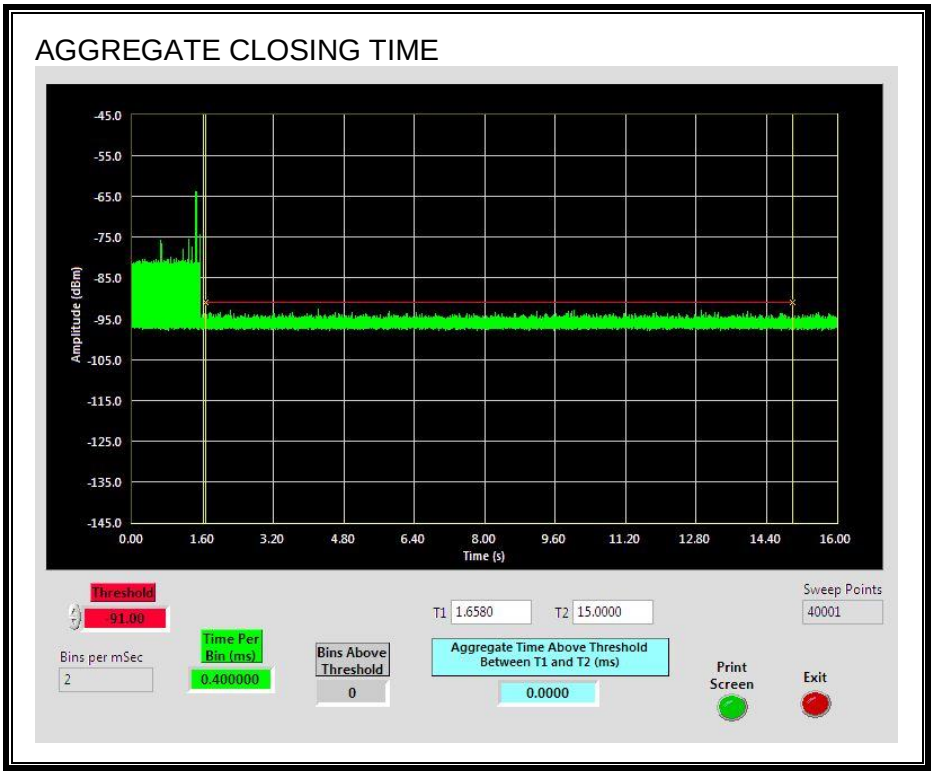
CHANNEL CLOSING TIME

CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.



7.4.5. 10-MINUTE BEACON MONITORING PERIOD

RESULTS

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

10-MINUTE BEACON MONITORING PERIOD