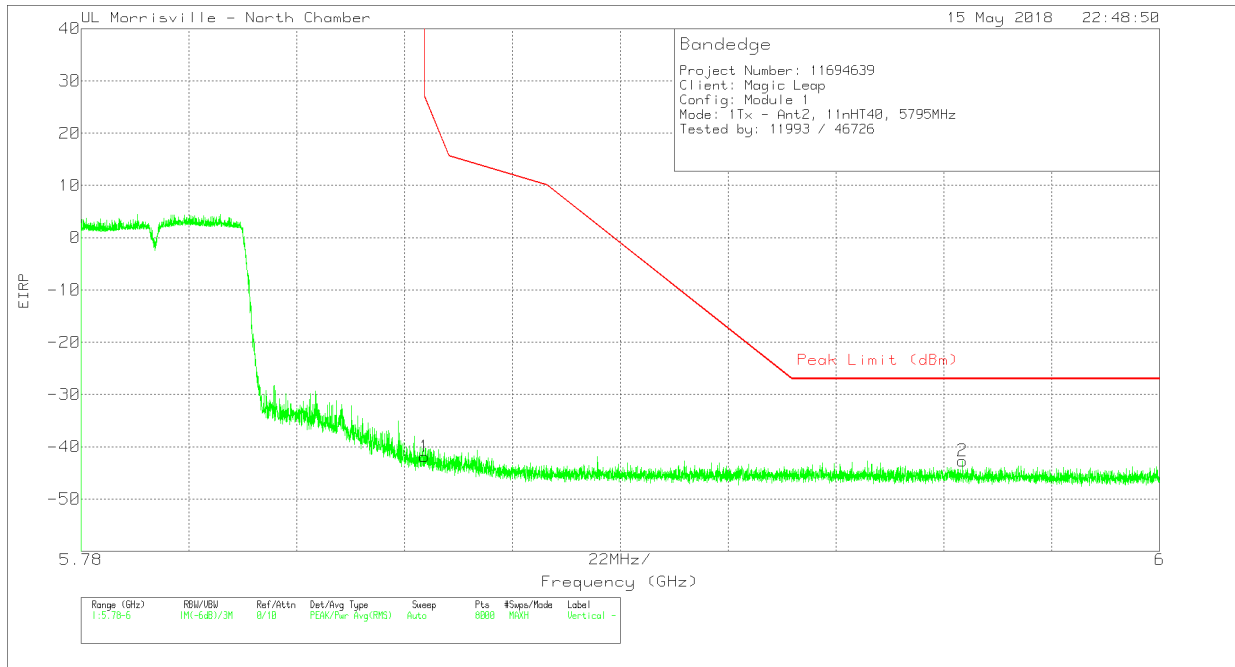


**AUTHORIZED BANDEDGE (HIGH CHANNEL) VERTICAL**

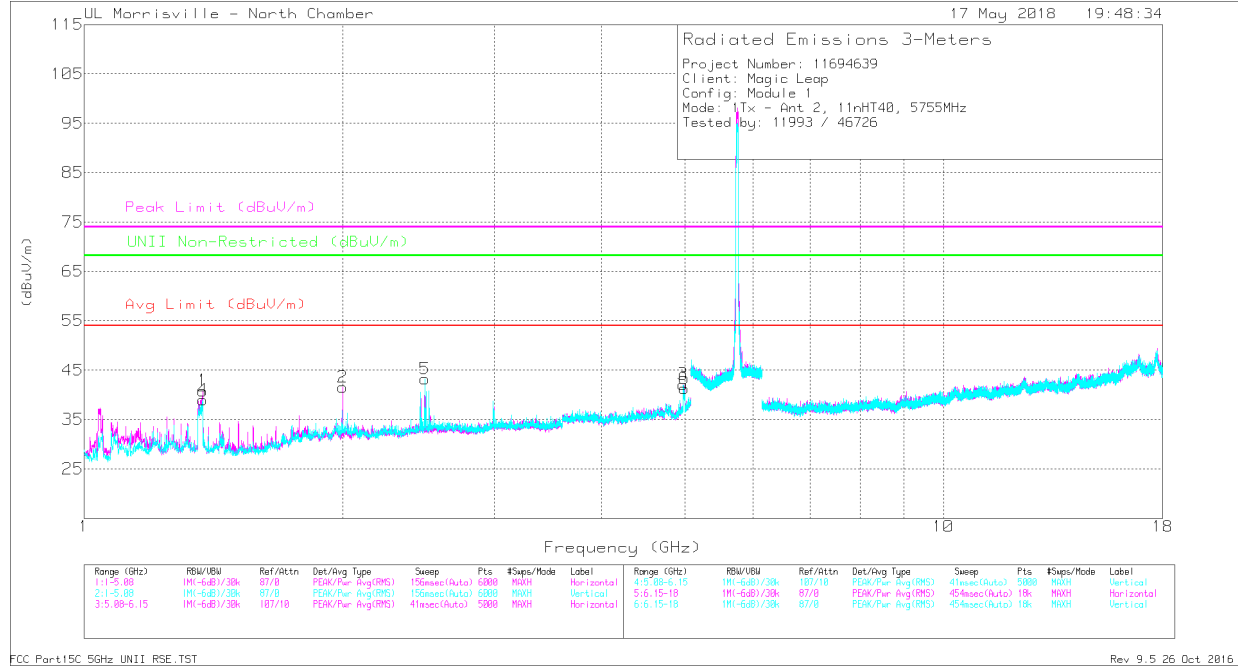


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-66.01	Pk	34.8	-22.5	11.8	0	-41.91	26.95	-68.86	158	192	V
2	5.96	-67.37	Pk	34.9	-22	11.8	0	-42.67	-27	-15.67	158	192	V

Pk - Peak detector

**HARMONICS AND SPURIOUS EMISSIONS – MODULE 1**

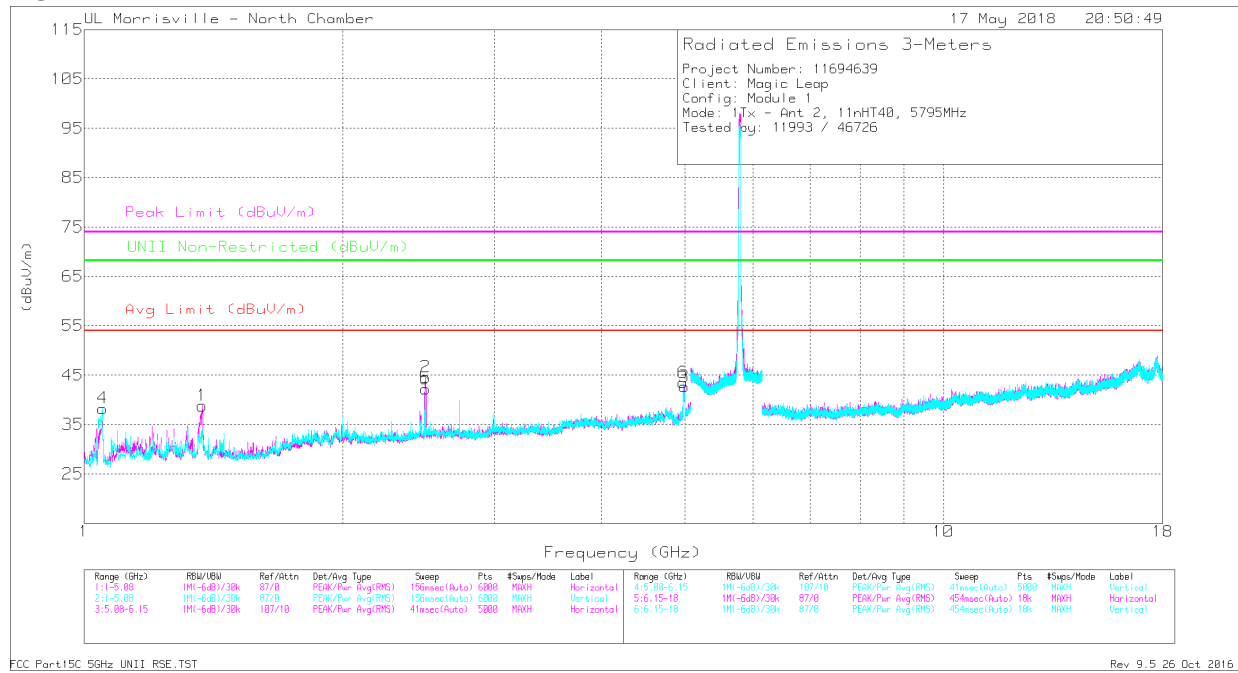
**LOW CHANNEL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.374	53.3	PK-U	29.3	-36.2	0	46.4	-	-	74	-27.6	-	-	13	368	H
	* 1.374	33.31	ADR	29.3	-36.2	.09	26.5	54	-27.5	-	-	-	-	13	368	H
3	* 4.977	47.3	PK-U	34.1	-31.2	0	50.2	-	-	74	-23.8	-	-	294	115	H
	* 4.979	31.41	ADR	34.1	-31.3	.09	34.3	54	-19.7	-	-	-	-	294	115	H
4	* 1.374	54.99	PK-U	29.3	-36.2	0	48.09	-	-	74	-25.91	-	-	245	275	V
	* 1.374	34.7	ADR	29.3	-36.2	.09	27.89	54	-26.11	-	-	-	-	245	275	V
5	* 2.492	58.44	PK-U	32.3	-34.4	0	56.34	-	-	74	-17.66	-	-	305	103	V
	* 2.49	32.54	ADR	32.3	-34.4	.09	30.53	54	-23.47	-	-	-	-	305	103	V
6	* 4.998	44.18	PK-U	34.1	-31.2	0	47.08	-	-	74	-26.92	-	-	298	136	V
	* 4.998	30.43	ADR	34.1	-31.2	.09	33.42	54	-20.58	-	-	-	-	298	136	V
2	1.999	50.44	PK-U	31.1	-34.9	0	46.64	-	-	-	-	68.2	-21.56	15	176	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**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/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	* 1.374	55.65	PK-U	29.3	-36.2	0	48.75	-	-	74	-25.25	-	-	62	179	H
	* 1.374	33.96	ADR	29.3	-36.2	.09	27.15	54	-26.85	-	-	-	-	62	179	H
2	* 2.496	57.77	PK-U	32.3	-34.4	0	55.67	-	-	74	-18.33	-	-	118	115	H
	* 2.496	32.13	ADR	32.3	-34.4	.09	30.12	54	-23.88	-	-	-	-	118	115	H
3	* 4.997	47.56	PK-U	34.1	-31.2	0	50.46	-	-	74	-23.54	-	-	3	222	H
	* 4.996	32.16	ADR	34.1	-31.2	.09	35.15	54	-18.85	-	-	-	-	3	222	H
4	* 1.051	56.49	PK-U	27.1	-37.2	0	46.39	-	-	74	-27.61	-	-	1	205	V
	* 1.051	34.71	ADR	27.1	-37.2	.09	24.7	54	-29.3	-	-	-	-	1	205	V
5	* 2.498	55.19	PK-U	32.3	-34.4	0	53.09	-	-	74	-20.91	-	-	172	302	V
	* 2.497	31.62	ADR	32.3	-34.4	.09	29.61	54	-24.39	-	-	-	-	172	302	V
6	* 4.978	46.72	PK-U	34.1	-31.3	0	49.52	-	-	74	-24.48	-	-	5	141	V
	* 4.979	31.89	ADR	34.1	-31.3	.09	34.78	54	-19.22	-	-	-	-	5	141	V

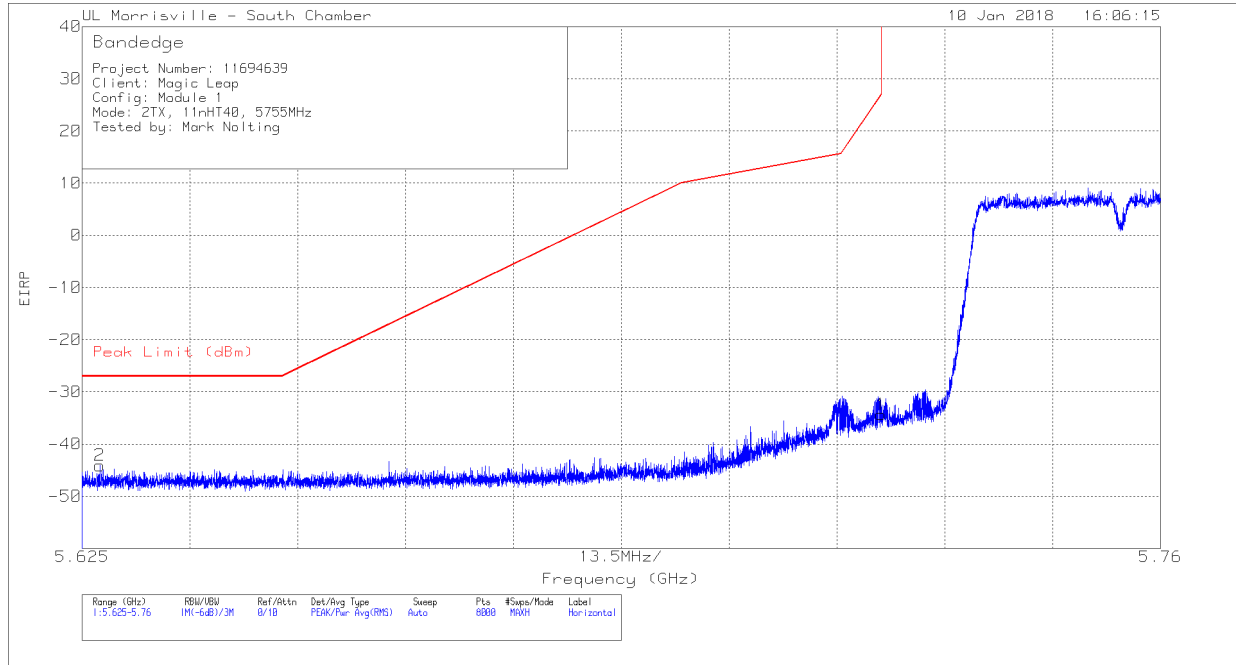
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

**10.2.27. TX ABOVE 1 GHz 802.11n HT40 MODE, 5.8 GHz BAND – MODULE 1, MIMO  
 SDM**

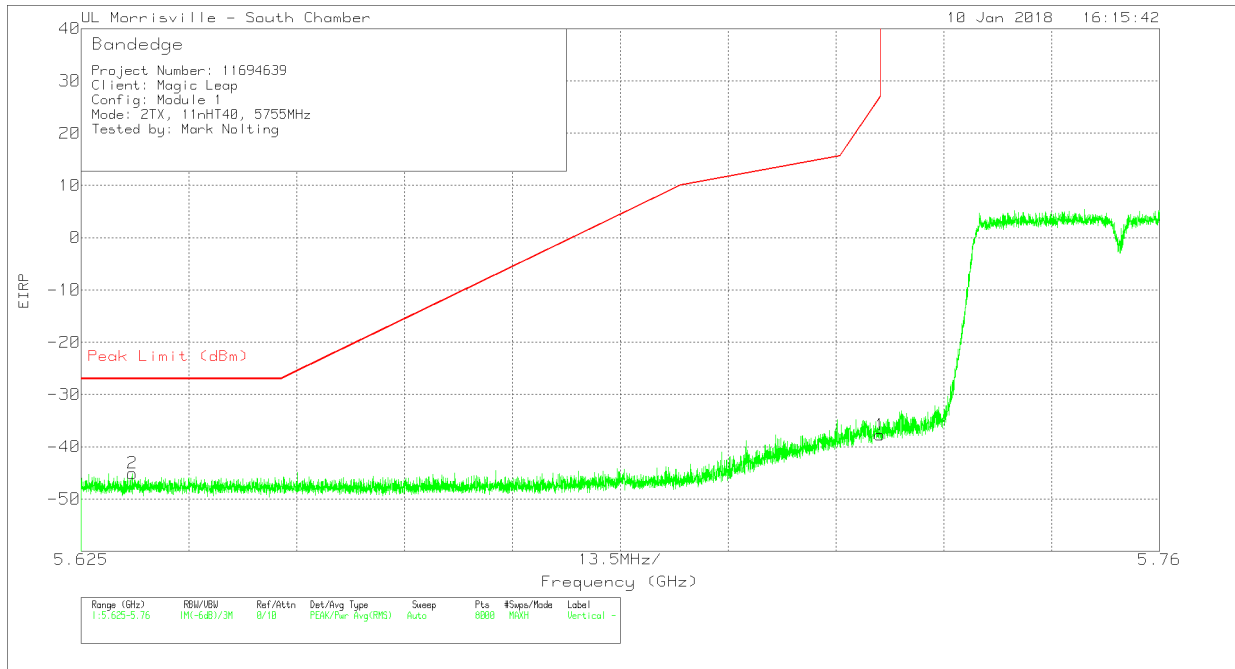
**RESTRICTED BANDEDGE (LOW CHANNEL) HORIZONTAL**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.627	-67.01	Pk	34.6	-23.5	11.8	-44.11	-27	-17.11	253	183	H
1	5.725	-57.26	Pk	34.6	-23.5	11.8	-34.36	26.99	-61.35	253	183	H

Pk - Peak detector

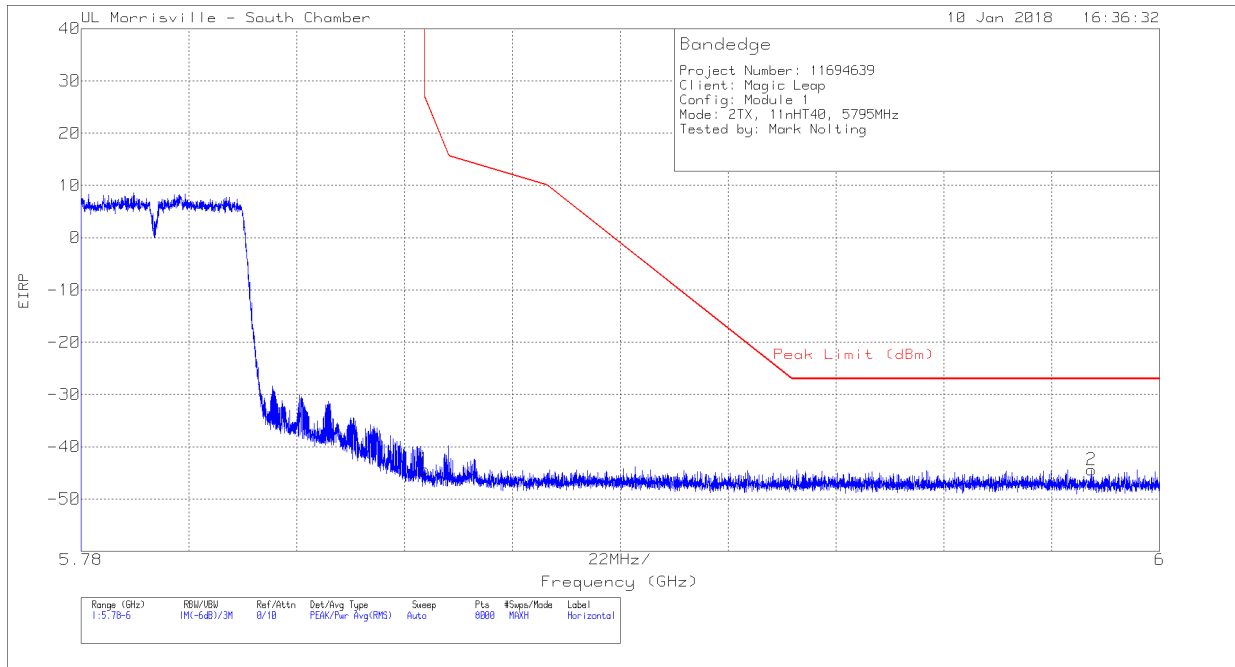
**RESTRICTED BANDEDGE (LOW CHANNEL) VERTICAL**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.631	-67.99	Pk	34.6	-23.5	11.8	-45.09	-27	-18.09	242	269	V
1	5.725	-60.61	Pk	34.6	-23.5	11.8	-37.71	26.99	-64.7	242	269	V

Pk - Peak detector

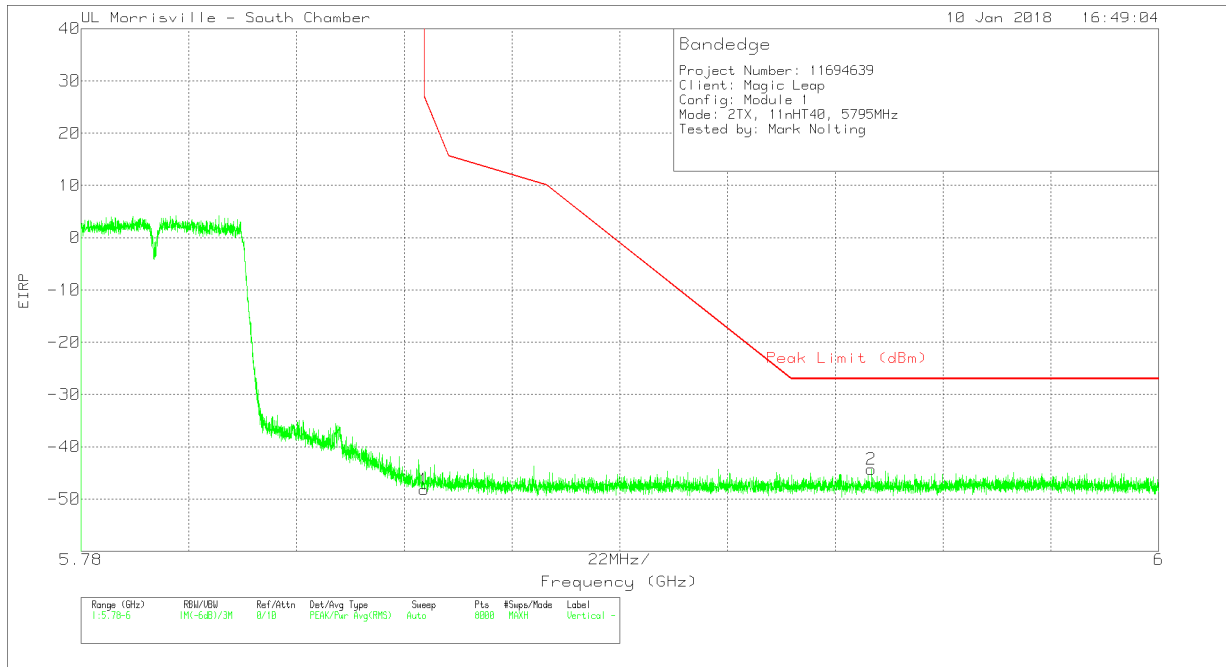
**AUTHORIZED BANDEDGE (HIGH CHANNEL) HORIZONTAL**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.65	Pk	34.8	-23.2	11.8	-44.25	26.95	-71.2	253	200	H
2	5.986	-68.47	Pk	35.1	-22.8	11.8	-44.37	-27	-17.37	253	200	H

Pk - Peak detector

**AUTHORIZED BANDEDGE (HIGH CHANNEL) VERTICAL**

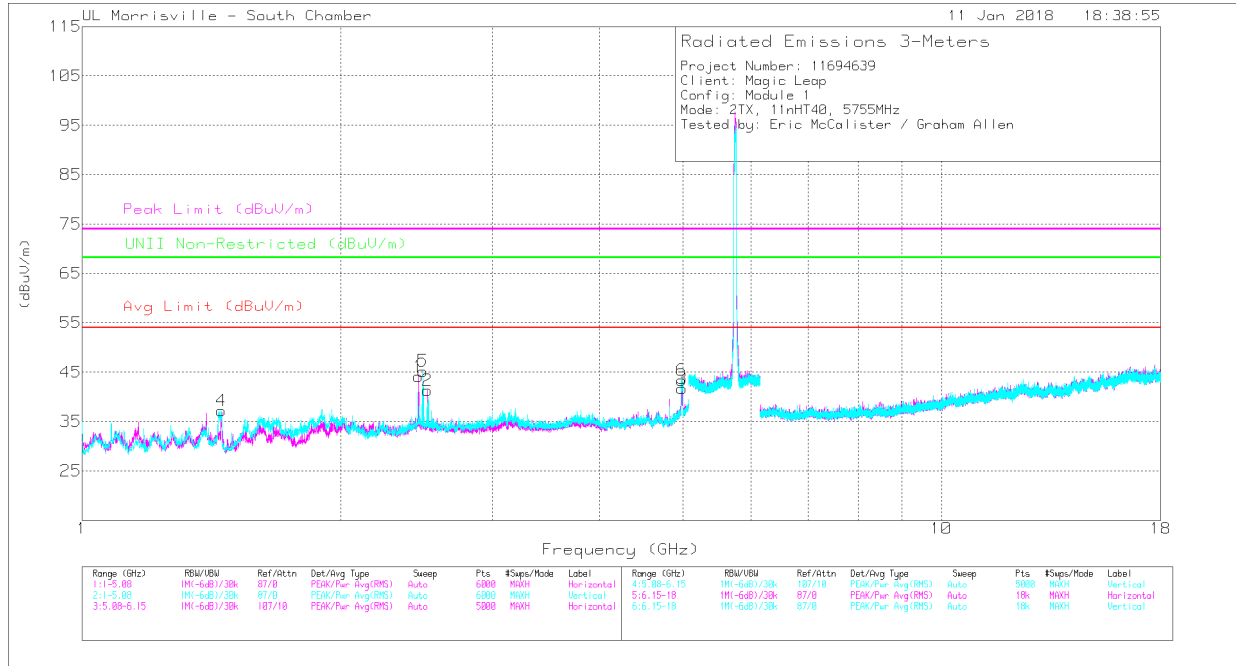


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-71.58	Pk	34.8	-23.2	11.8	-48.18	26.95	-75.13	235	211	V
2	5.941	-68.22	Pk	34.9	-22.8	11.8	-44.32	-27	-17.32	235	211	V

Pk - Peak detector

**HARMONICS AND SPURIOUS EMISSIONS**

**LOW CHANNEL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 4.993	46.21	PK-U	34	-30.2	0	50.01	-	-	74	-23.99	-	-	270	166	H
	* 4.992	31.19	ADR	34	-30.2	.09	35.08	54	-18.92	-	-	-	-	270	166	H
4	* 1.455	53.84	PK-U	28.6	-35	0	47.44	-	-	74	-26.56	-	-	207	132	V
	* 1.455	32.36	ADR	28.6	-35	.09	26.05	54	-27.95	-	-	-	-	207	132	V
5	* 2.489	59.57	PK-U	32.4	-34.1	0	57.87	-	-	74	-16.13	-	-	151	272	V
	* 2.49	34.16	ADR	32.4	-34	.09	32.65	54	-21.35	-	-	-	-	151	272	V
6	* 4.989	48.91	PK-U	34	-30.2	0	52.71	-	-	74	-21.29	-	-	124	115	V
	* 4.988	33.25	ADR	34	-30.2	.09	37.14	54	-16.86	-	-	-	-	124	115	V
1	2.466	54.13	PK-U	32.4	-34	0	52.53	-	-	-	-	68.2	-15.67	187	174	H
2	2.52	53.72	PK-U	32.3	-33.9	0	52.12	-	-	-	-	68.2	-16.08	196	153	H

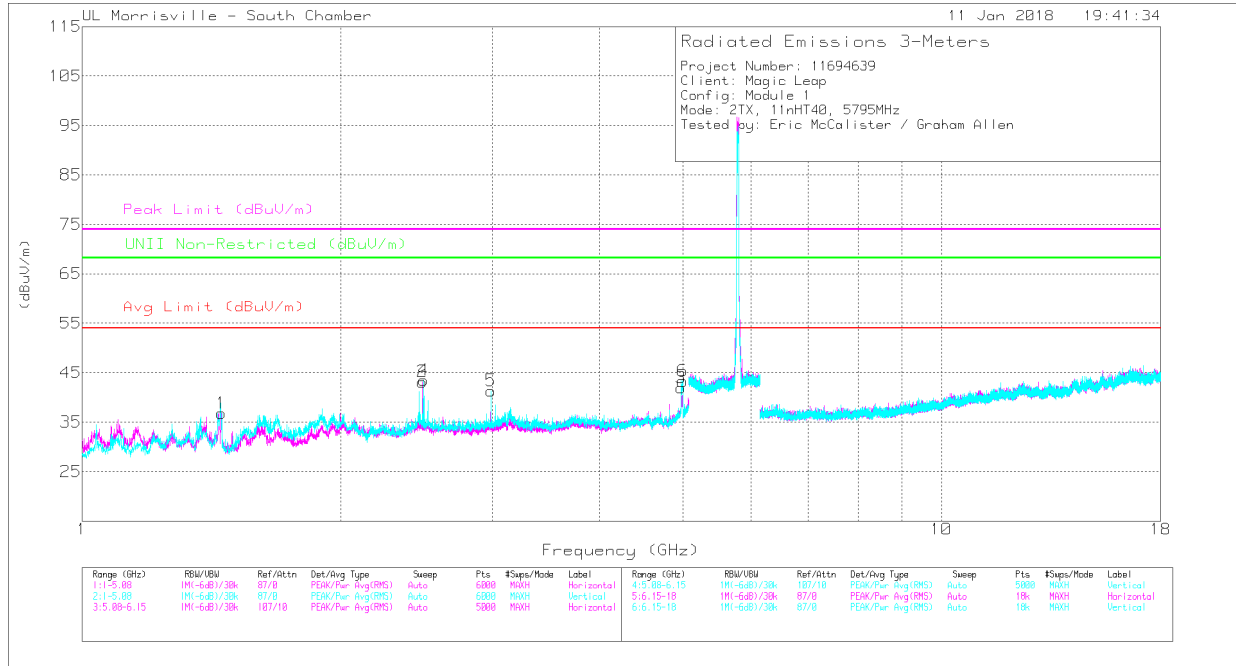
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



**HIGH CHANNEL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Fitr/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	* 1.452	54.51	PK-U	28.7	-35	0	48.21	-	-	74	-25.79	-	-	152	325	H
	* 1.452	32.53	ADR	28.7	-35	.09	26.32	54	-27.68	-	-	-	-	152	325	H
2	* 2.489	56.58	PK-U	32.4	-34.1	0	54.88	-	-	74	-19.12	-	-	259	153	H
	* 2.491	31.95	ADR	32.4	-34	.09	30.44	54	-23.56	-	-	-	-	259	153	H
3	* 4.981	44.21	PK-U	34	-30	0	48.21	-	-	74	-25.79	-	-	256	239	H
	* 4.98	30.21	ADR	34	-30	.09	34.3	54	-19.7	-	-	-	-	256	239	H
4	* 2.491	61.99	PK-U	32.4	-34	0	60.39	-	-	74	-13.61	-	-	209	217	V
	* 2.492	34.93	ADR	32.4	-34	.09	33.42	54	-20.58	-	-	-	-	209	217	V
6	* 4.998	49.35	PK-U	34	-30.2	0	53.15	-	-	74	-20.85	-	-	133	115	V
	* 4.997	33.35	ADR	34	-30.2	.09	37.24	54	-16.76	-	-	-	-	133	115	V
5	2.994	52.5	PK-U	32.9	-33.6	0	51.8	-	-	-	-	68.2	-16.4	127	154	V

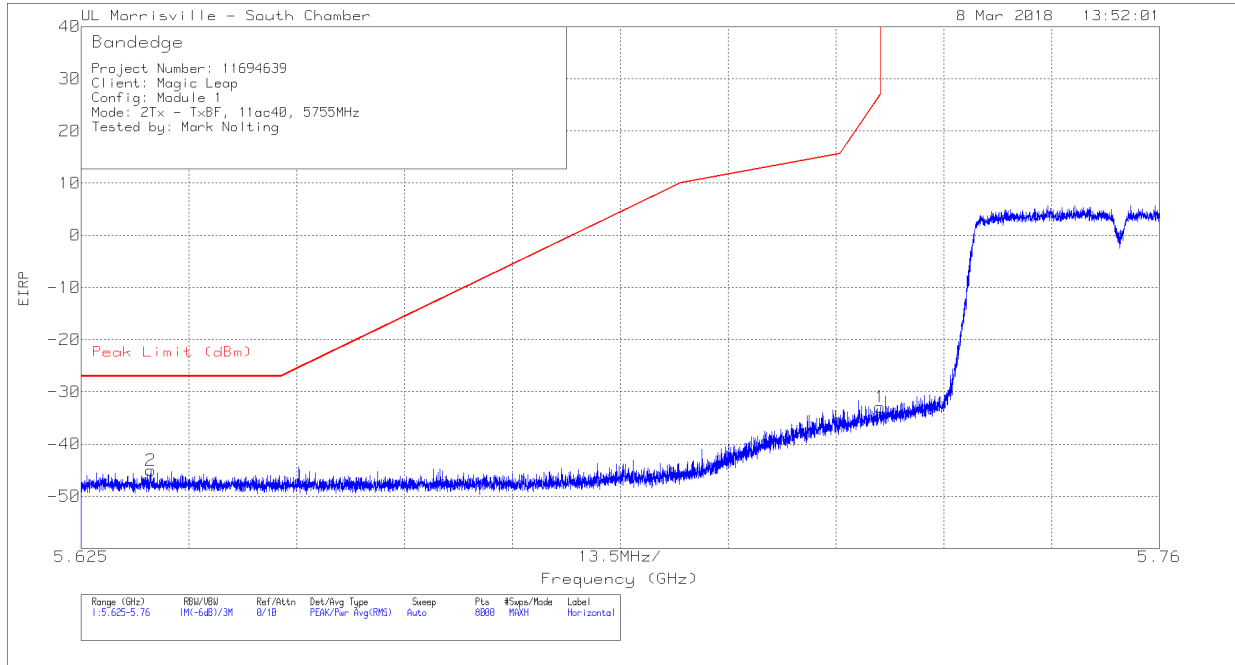
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

**10.2.28. TX ABOVE 1 GHz 802.11ac VHT40 MODE, 5.8 GHz BAND – MODULE 1, MIMO TxBF**

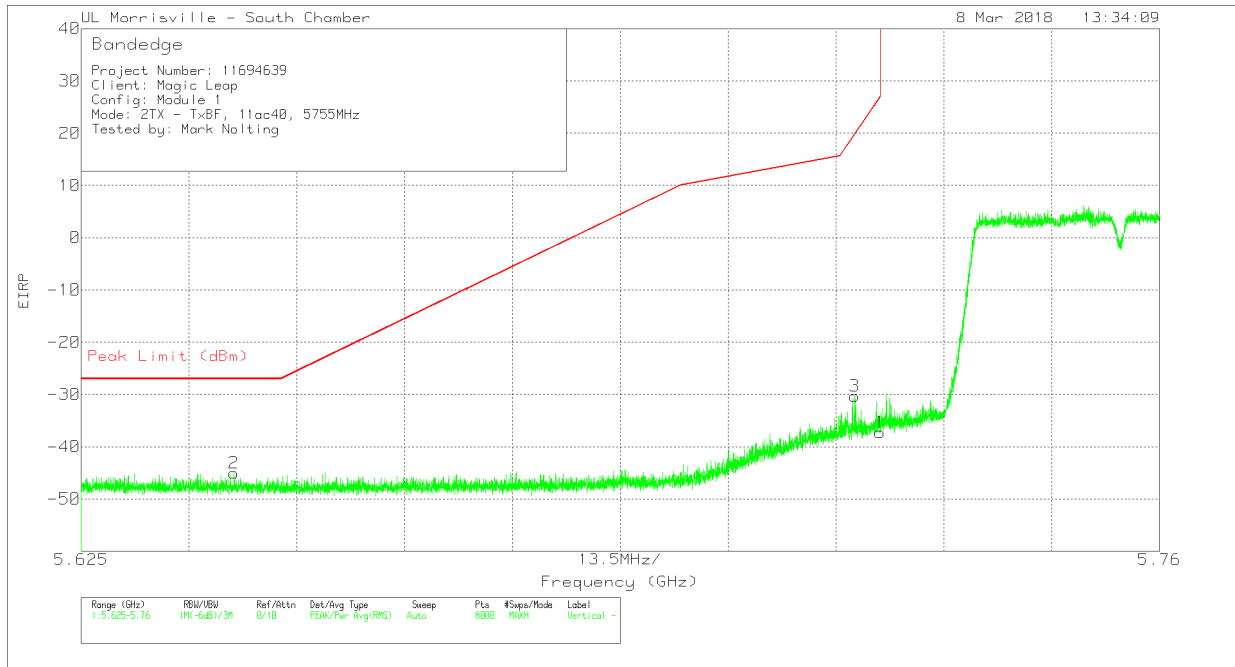
**RESTRICTED BANDEDGE (LOW CHANNEL) HORIZONTAL**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.634	-67.91	Pk	34.6	-23.5	11.8	-45.01	-27	-18.01	153	193	H
1	5.725	-55.82	Pk	34.6	-23.5	11.8	-32.92	26.99	-59.91	153	193	H

Pk - Peak detector

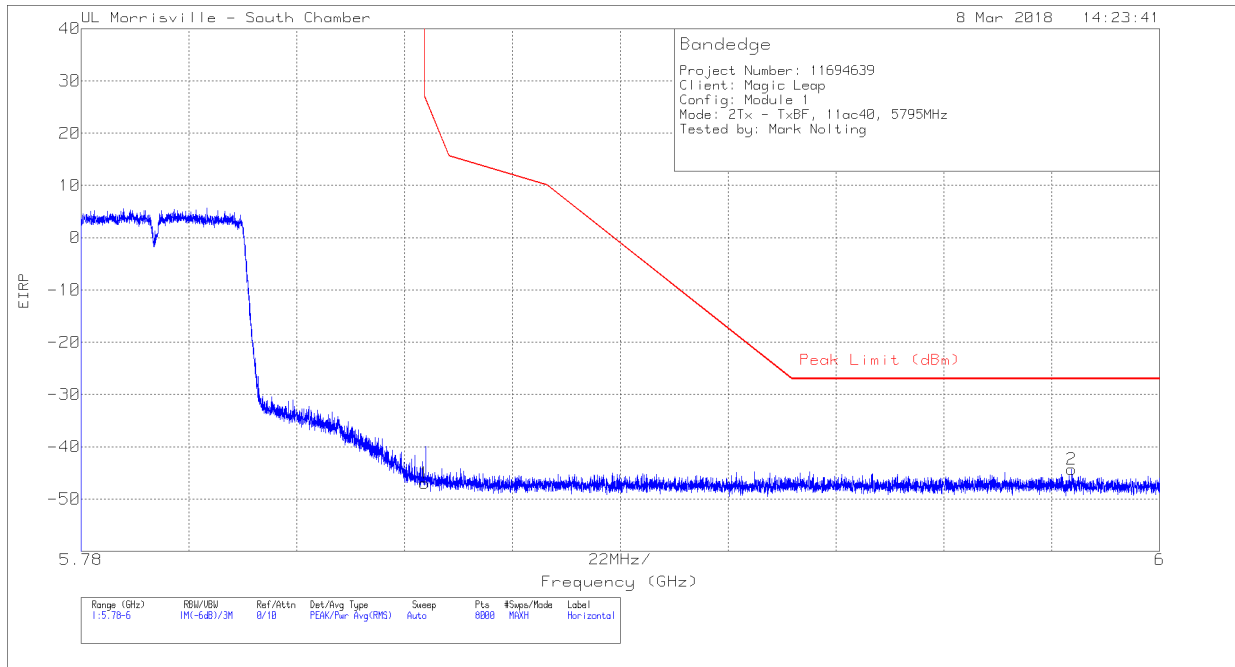
**RESTRICTED BANDEDGE (LOW CHANNEL) VERTICAL**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.644	-67.84	Pk	34.6	-23.6	11.8	-45.04	-27	-18.04	260	109	V
3	5.722	-53.31	Pk	34.6	-23.4	11.8	-30.31	19.68	-49.99	260	109	V
1	5.725	-60.14	Pk	34.6	-23.5	11.8	-37.24	26.99	-64.23	260	109	V

Pk - Peak detector

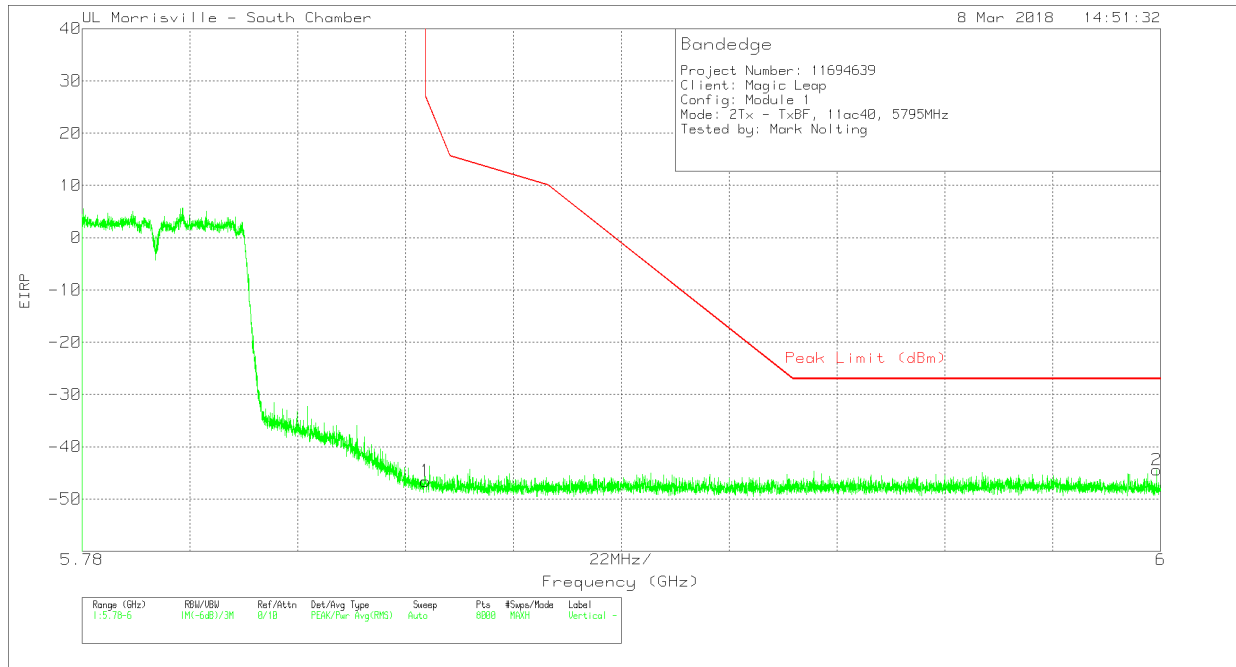
**AUTHORIZED BANDEDGE (HIGH CHANNEL) HORIZONTAL**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-70.35	Pk	34.8	-23.2	11.8	-46.95	26.95	-73.9	159	101	H
2	5.982	-68.5	Pk	35.1	-22.7	11.8	-44.3	-27	-17.3	159	101	H

Pk - Peak detector

**AUTHORIZED BANDEDGE (HIGH CHANNEL) VERTICAL**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-69.97	Pk	34.8	-23.2	11.8	-46.57	26.95	-73.52	266	115	V
2	5.999	-68.4	Pk	35.1	-22.9	11.8	-44.4	-27	-17.4	266	115	V

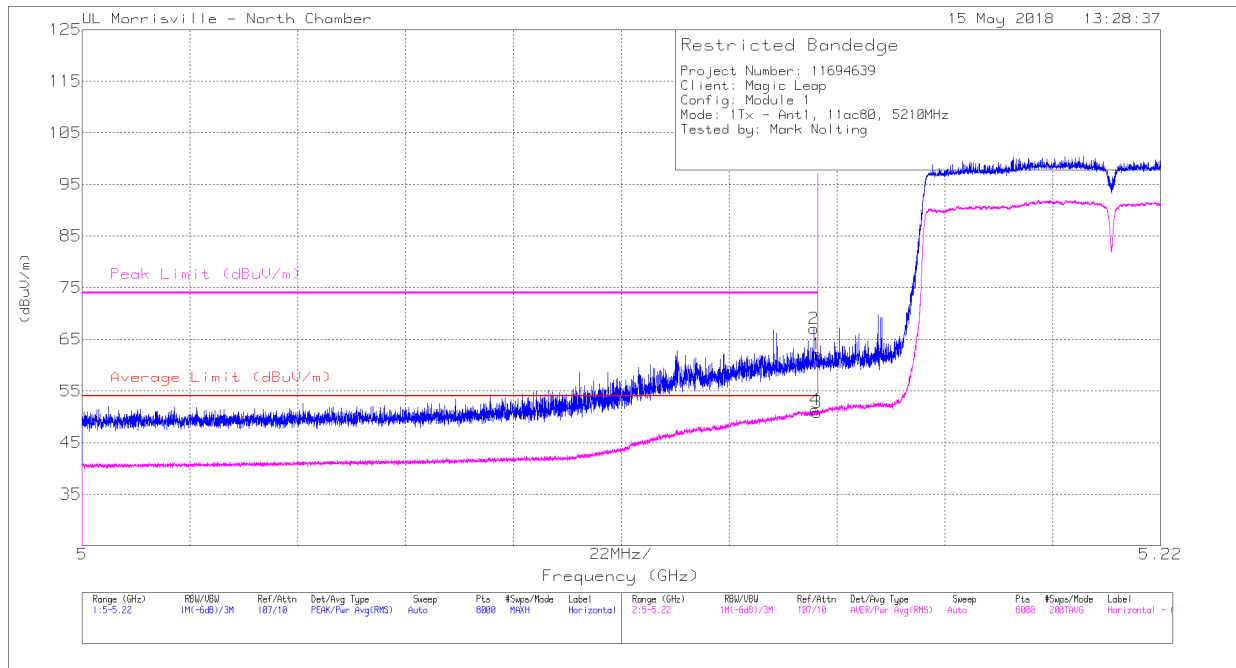
Pk - Peak detector

Note - Transmit beamforming only supported by 802.11n and 802.11ac modes. The router was investigated at different  $\theta$ s around the EUT. It was determined that there was <3dB delta in position. The router was then placed behind the receiving antenna. Transmit beamforming spot check scans were taken and this showed little to no variation from 802.11n/ac MIMO SDM spurious scans. Therefore, 802.11n/ac MIMO SDM spurious data is used to represent 802.11nHT20/nHT40 and 802.11ac VHT80 transmit beamforming. For transmit beamforming testing 802.11ac VHT20 and VHT40 were tested to cover 802.11n HT20 and HT40.

**10.2.29. TX ABOVE 1 GHz 802.11ac VHT80 MODE, 5.2 GHz BAND – MODULE 1, SISO ANT0**

**RESTRICTED BANDEDGE (LOW CHANNEL) HORIZONTAL**

Note – The plots in this section show ANT 1 but should be considered ANT0.



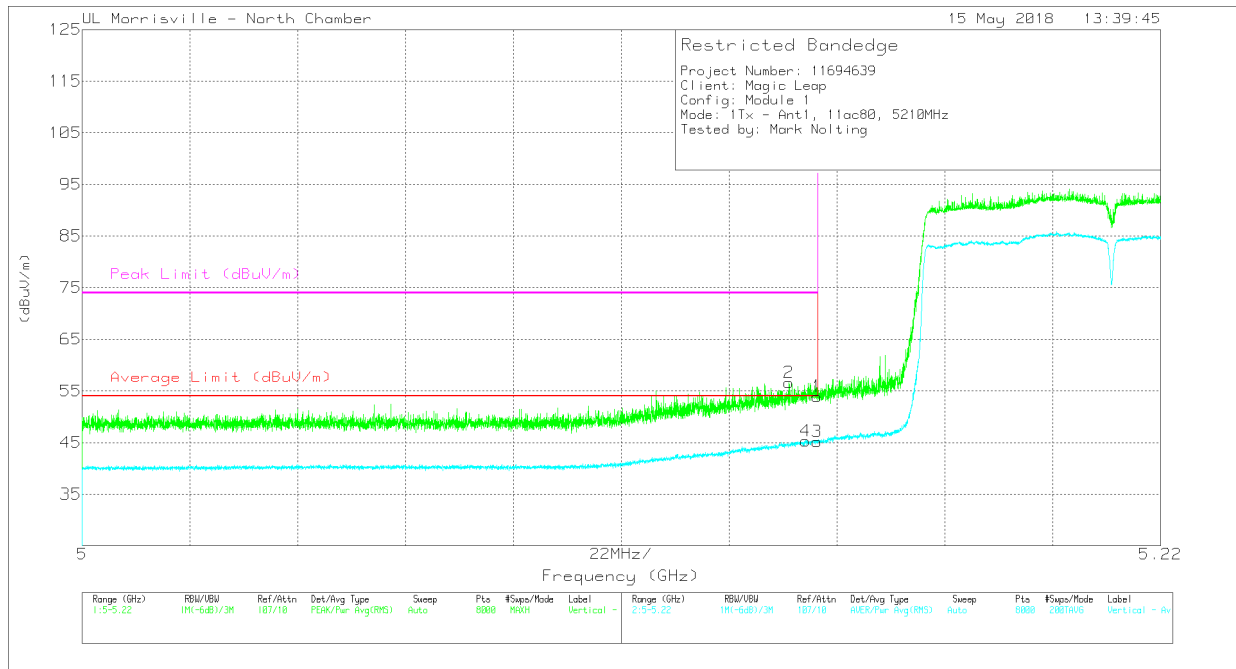
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.149	55.62	Pk	34.2	-22.8	0	67.02	-	-	74	-6.98	82	183	H
4	* 5.149	39.72	RMS	34.2	-22.8	.2	51.32	54	-2.68	-	-	82	183	H
1	* 5.15	50.63	Pk	34.2	-22.7	0	62.13	-	-	74	-11.87	82	183	H
3	* 5.15	39.17	RMS	34.2	-22.7	.2	50.87	54	-3.13	-	-	82	183	H

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

**RESTRICTED BANDEDGE (LOW CHANNEL) VERTICAL**



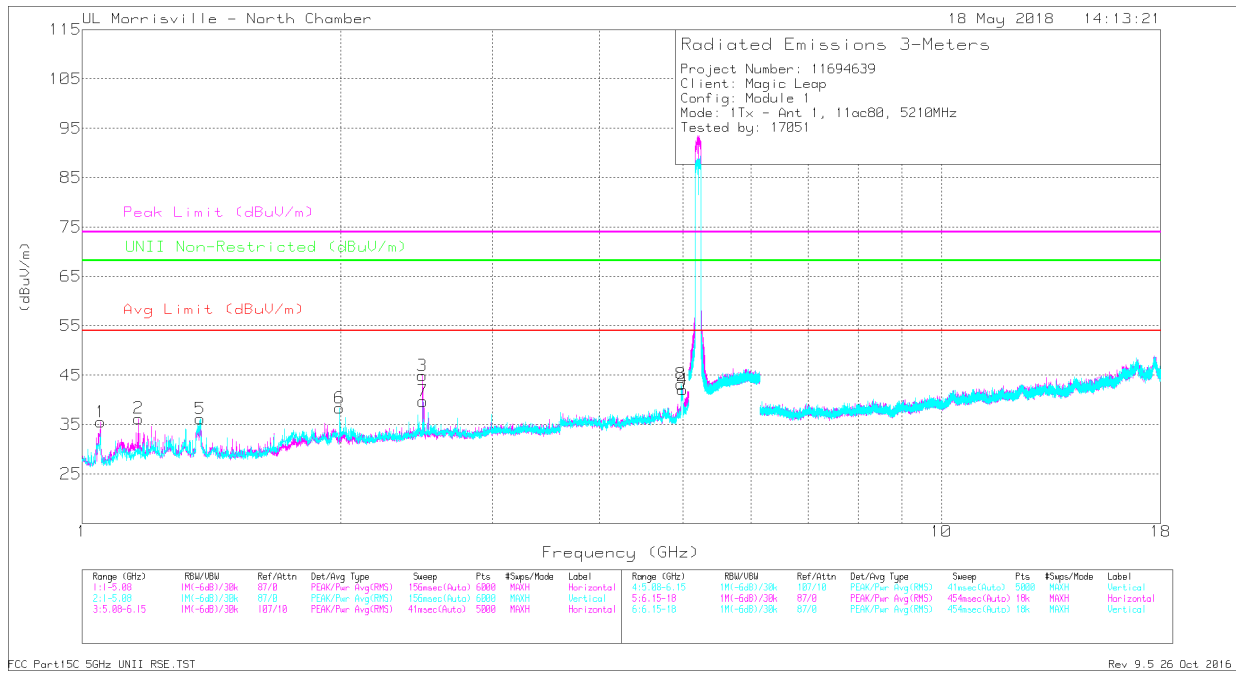
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.144	45.2	Pk	34.2	-22.8	0	56.6	-	-	74	-17.4	199	150	V
4	* 5.148	33.93	RMS	34.2	-22.8	.2	45.53	54	-8.47	-	-	199	150	V
1	* 5.15	42.44	Pk	34.2	-22.7	0	53.94	-	-	74	-20.06	199	150	V
3	* 5.15	33.65	RMS	34.2	-22.7	.2	45.35	54	-8.65	-	-	199	150	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

**HARMONICS AND SPURIOUS EMISSIONS**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/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	* 1.051	52.78	PK-U	27.1	-37.2	0	42.68	-	-	74	-31.32	-	-	182	217	H
	* 1.044	36.87	ADR	27.1	-37.3	.2	26.87	54	-27.13	-	-	-	-	182	217	H
2	* 1.167	49.83	PK-U	27.9	-37.2	0	40.53	-	-	74	-33.47	-	-	38	214	H
	* 1.167	40.79	ADR	27.9	-37.2	.2	31.69	54	-22.31	-	-	-	-	38	214	H
3	* 2.5	56.84	PK-U	32.3	-34.4	0	54.74	-	-	74	-19.26	-	-	112	100	H
	* 2.498	32.34	ADR	32.3	-34.4	.2	30.44	54	-23.56	-	-	-	-	112	100	H
4	* 4.993	48.39	PK-U	34.1	-31.2	0	51.29	-	-	74	-22.71	-	-	12	106	H
	* 4.982	33.03	ADR	34.1	-31.3	.2	36.03	54	-17.97	-	-	-	-	12	106	H
5	* 1.374	53.28	PK-U	29.3	-36.2	0	46.38	-	-	74	-27.62	-	-	298	307	V
	* 1.364	34.67	ADR	29.3	-36.3	.2	27.87	54	-26.13	-	-	-	-	298	307	V
7	* 2.496	58.19	PK-U	32.3	-34.4	0	56.09	-	-	74	-17.91	-	-	121	192	V
	* 2.489	32.38	ADR	32.3	-34.4	.2	30.48	54	-23.52	-	-	-	-	121	192	V
8	* 4.981	49.03	PK-U	34.1	-31.3	0	51.83	-	-	74	-22.17	-	-	4	100	V
	* 4.978	33.64	ADR	34.1	-31.2	.2	36.74	54	-17.26	-	-	-	-	4	100	V
6	1.999	55.49	PK-U	31.1	-34.9	0	51.69	-	-	-	-	68.2	-16.51	108	117	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

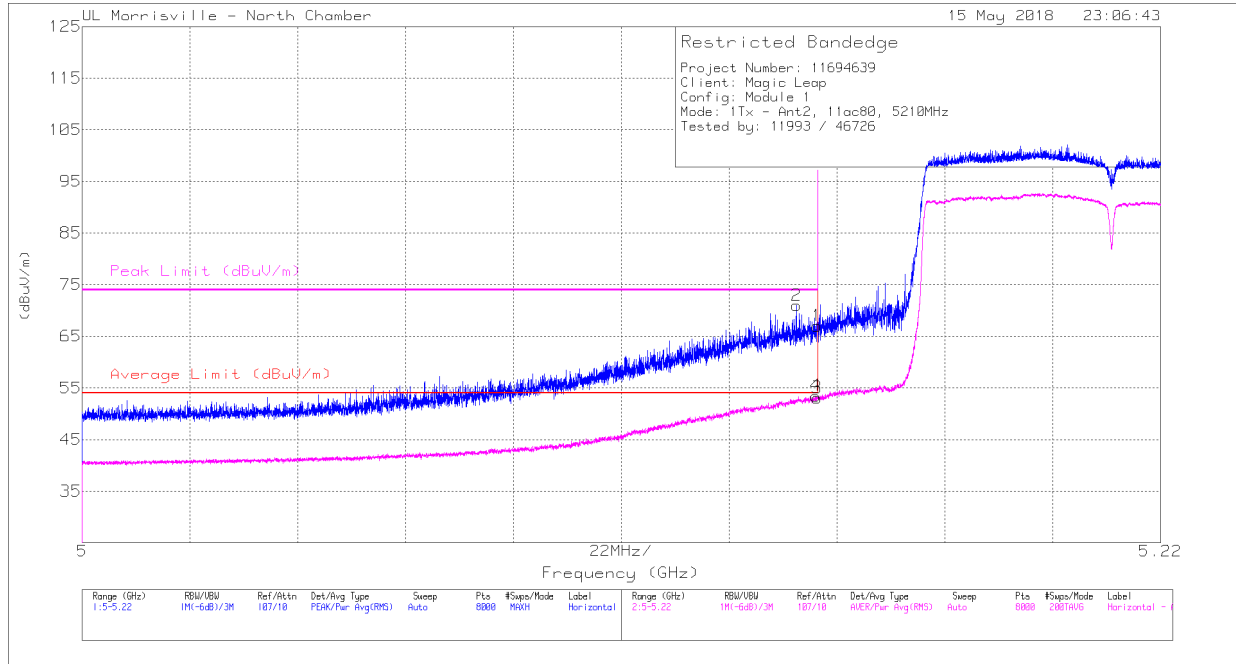
ADR - U-NII AD primary method, RMS average



**10.2.30. TX ABOVE 1 GHz 802.11ac VHT80 MODE, 5.2 GHz BAND – MODULE 1, SISO ANT1**

**RESTRICTED BANDEDGE (LOW CHANNEL) HORIZONTAL**

Note – The plots in this section show ANT 2 but should be considered ANT1.



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/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	*** 5.15	55.51	Pk	34.2	-22.7	0	67.01	-	-	74	-6.99	184	332	H
2	** 5.146	59.56	Pk	34.2	-22.8	0	70.96	-	-	74	-3.04	184	332	H
3	*** 5.15	41.4	RMS	34.2	-22.7	.2	53.1	54	-9	-	-	184	332	H
4	*** 5.15	41.88	RMS	34.2	-22.8	.2	53.48	54	-52	-	-	184	332	H

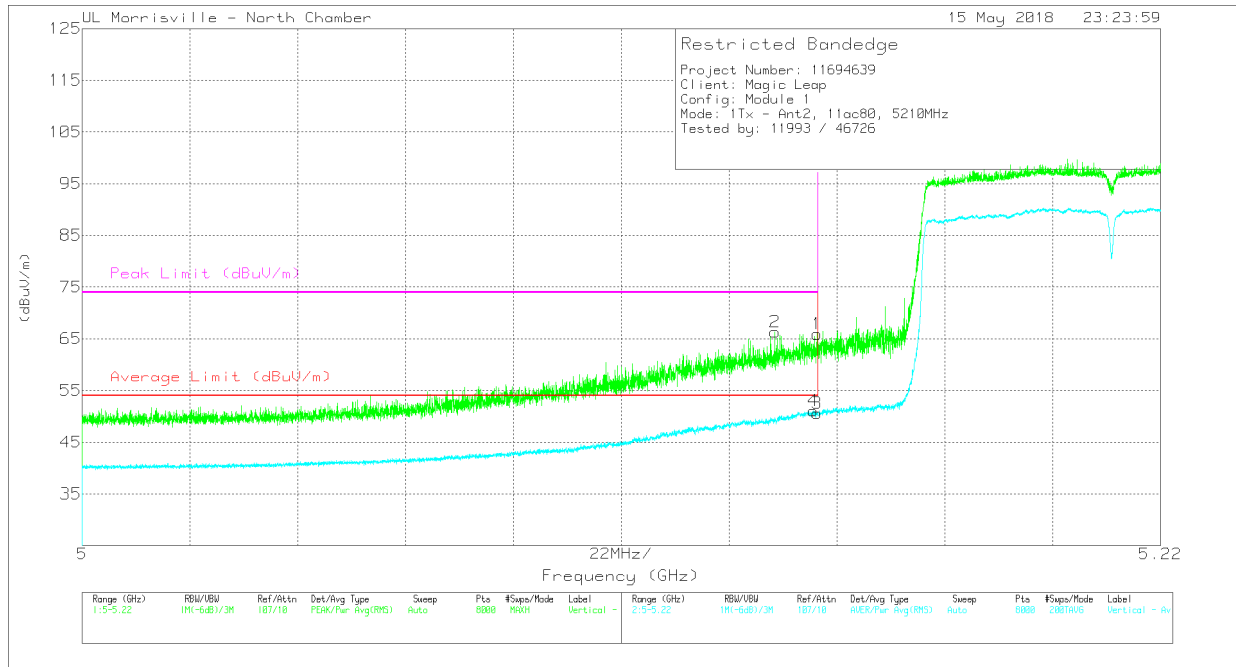
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

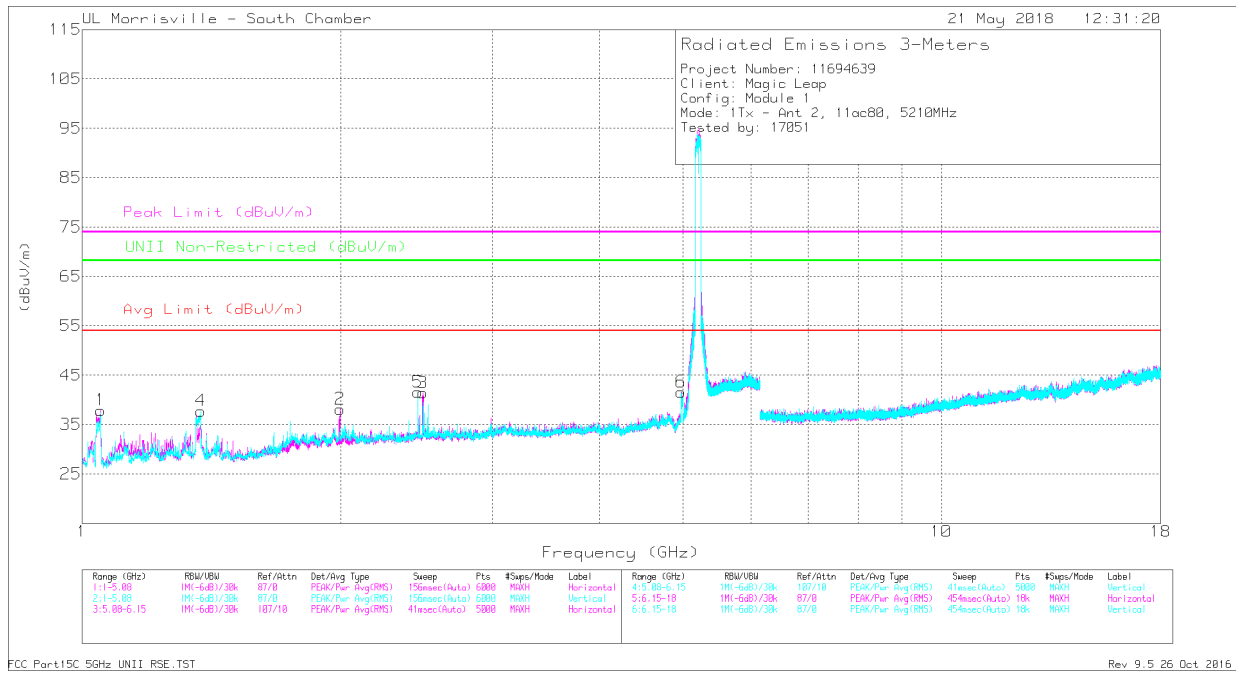
**RESTRICTED BANDEDGE (LOW CHANNEL) VERTICAL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/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	*** 5.15	54.41	Pk	34.2	-22.7	0	65.91	-	-	74	-8.09	149	309	V
2	*** 5.141	54.95	Pk	34.2	-22.8	0	66.35	-	-	74	-7.65	149	309	V
3	*** 5.15	38.91	RMS	34.2	-22.7	.2	50.61	54	-3.39	-	-	149	309	V
4	*** 5.149	39.45	RMS	34.2	-22.8	.2	51.05	54	-2.95	-	-	149	309	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 \*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band  
 Pk - Peak detector  
 RMS - RMS detection

**HARMONICS AND SPURIOUS EMISSIONS**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Fitr/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	* 1.038	54.57	PK-U	27	-35.2	0	46.37	-	-	74	-27.63	-	-	157	112	H
	* 1.044	33.77	ADR	26.9	-35.2	.2	25.67	54	-28.33	-	-	-	-	157	112	H
3	* 2.497	57.35	PK-U	32.3	-34	0	55.65	-	-	74	-18.35	-	-	183	112	H
	* 2.497	32.02	ADR	32.3	-34	.2	30.52	54	-23.48	-	-	-	-	183	112	H
4	* 1.377	44.05	PK-U	29.2	-34.7	0	38.55	-	-	74	-35.45	-	-	354	119	V
	* 1.376	33.88	ADR	29.2	-34.8	.2	28.48	54	-25.52	-	-	-	-	354	119	V
6	* 4.993	46.9	PK-U	34	-30.1	0	50.8	-	-	74	-23.2	-	-	68	101	V
	* 4.994	31.71	ADR	34	-30.1	.2	35.81	54	-18.19	-	-	-	-	68	101	V
2	1.999	50.72	PK-U	31	-34.2	0	47.52	-	-	-	-	68.2	-20.68	170	101	H
5	2.466	51.88	PK-U	32.4	-34.1	0	50.18	-	-	-	-	68.2	-18.02	197	194	V

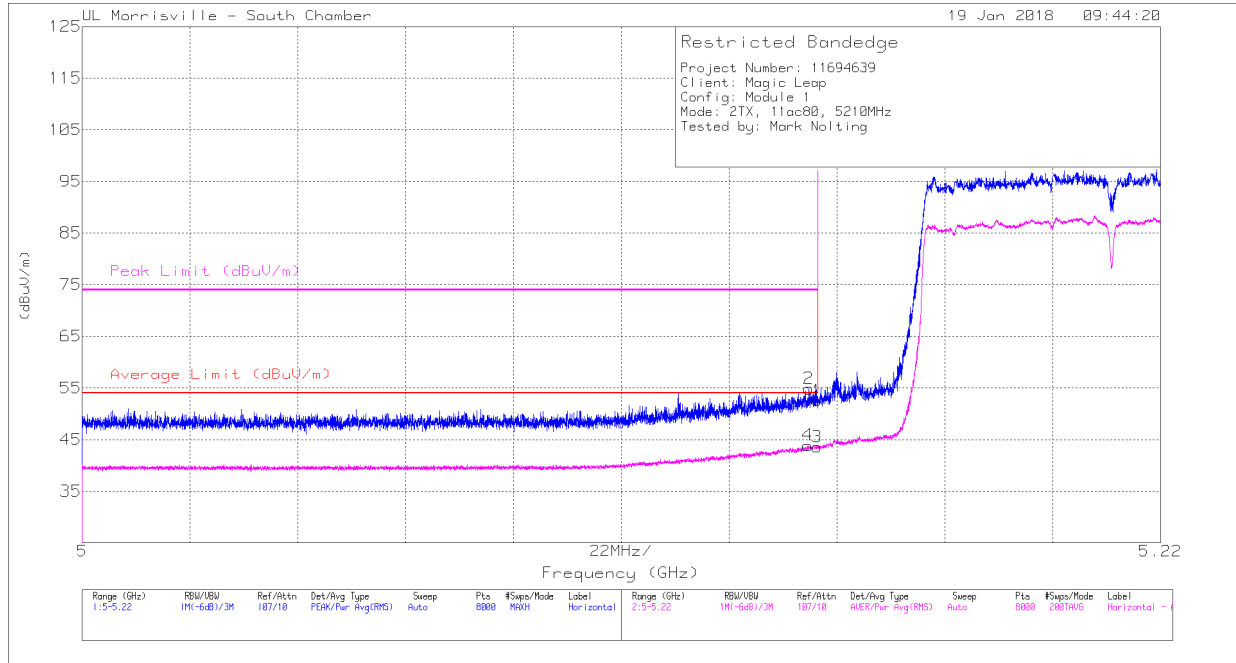
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

**10.2.31. TX ABOVE 1 GHz 802.11ac VHT80 MODE, 5.2 GHz BAND – MODULE 1, MIMO SDM**

**RESTRICTED BANDEDGE (LOW CHANNEL) HORIZONTAL – MODULE 1**



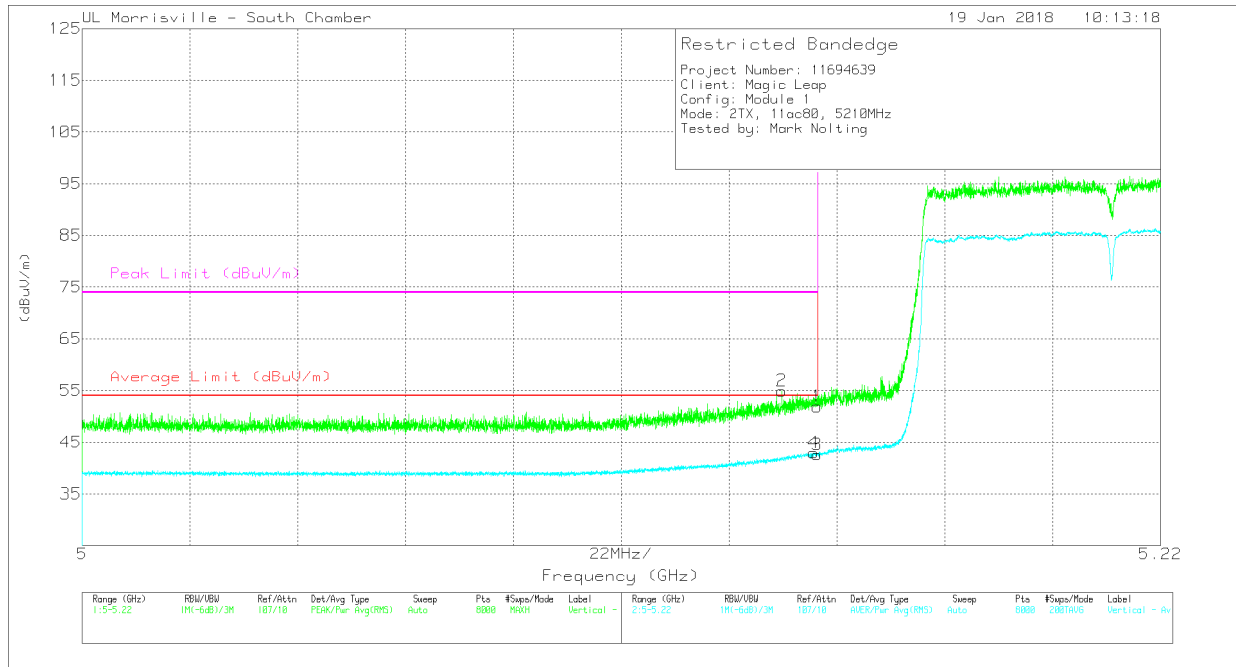
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.148	43.44	Pk	34.1	-22.7	0	54.84	-	-	74	-19.16	160	136	H
4	* 5.148	32.29	RMS	34.1	-22.7	.2	43.89	54	-10.11	-	-	160	136	H
1	* 5.15	41.16	Pk	34.1	-22.7	0	52.56	-	-	74	-21.44	160	136	H
3	* 5.15	31.99	RMS	34.1	-22.7	.2	43.59	54	-10.41	-	-	160	136	H

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

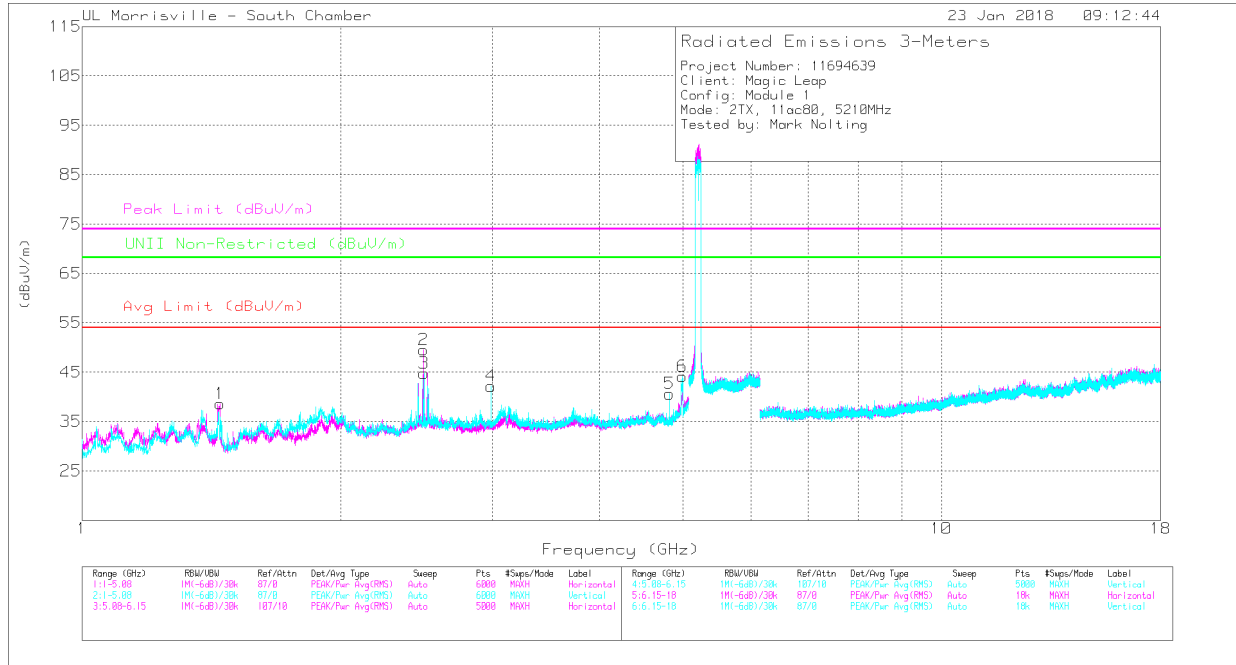
**RESTRICTED BANDEDGE (LOW CHANNEL) VERTICAL – MODULE 1**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/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	* 5.143	43.54	Pk	34.1	-22.7	0	54.94	-	-	74	-19.06	227	266	V
4	* 5.149	31.57	RMS	34.1	-22.7	.2	43.17	54	-10.83	-	-	227	266	V
1	* 5.15	40.49	Pk	34.1	-22.7	0	51.89	-	-	74	-22.11	227	266	V
3	* 5.15	31.16	RMS	34.1	-22.7	.2	42.76	54	-11.24	-	-	227	266	V

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

**HARMONICS AND SPURIOUS EMISSIONS – MODULE 1**

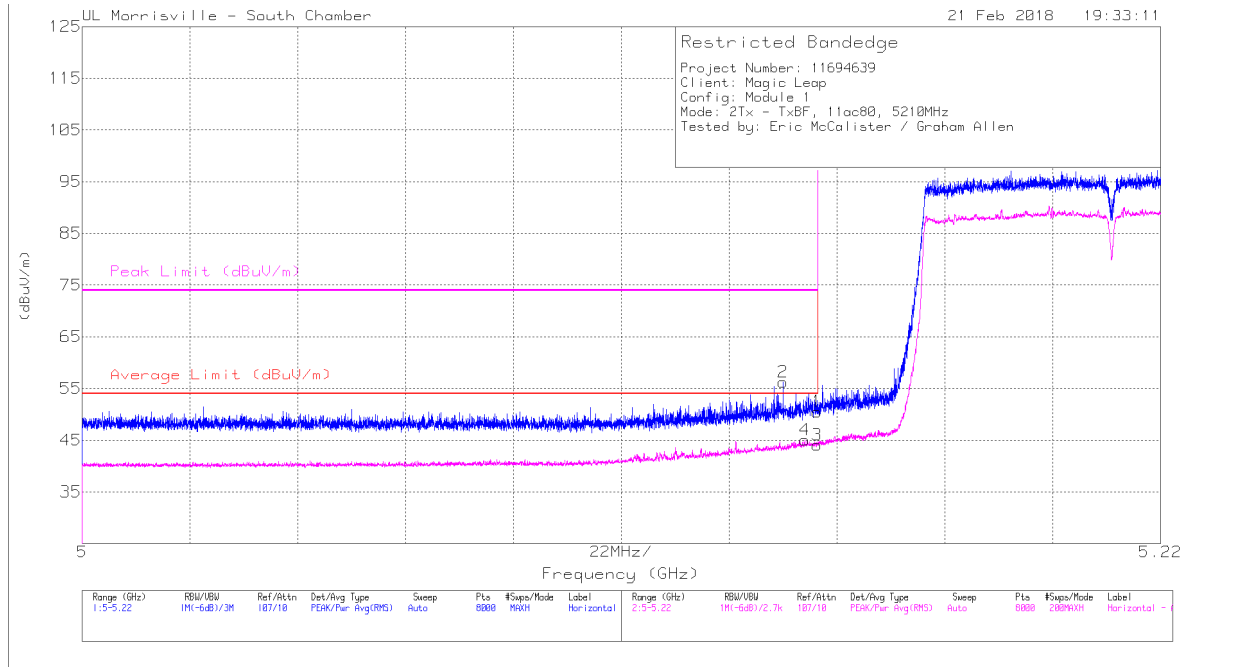


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.455	56.41	PK-U	28.6	-35	0	50.01	-	-	74	-23.99	-	-	155	140	H
	* 1.44	32.96	ADR	28.7	-34.9	.2	26.96	54	-27.04	-	-	-	-	155	140	H
2	* 2.489	62.21	PK-U	32.4	-34.1	0	60.51	-	-	74	-13.49	-	-	197	101	H
	* 2.489	36.13	ADR	32.4	-34.1	.2	34.63	54	-19.37	-	-	-	-	197	101	H
3	* 2.496	62.91	PK-U	32.3	-34	0	61.21	-	-	74	-12.79	-	-	209	132	V
	* 2.498	36.89	ADR	32.3	-34	.2	35.39	54	-18.61	-	-	-	-	209	132	V
5	* 4.824	44.09	PK-U	34	-30.9	0	47.19	-	-	74	-26.81	-	-	221	243	V
	* 4.824	38.15	ADR	34	-30.9	.2	41.45	54	-12.55	-	-	-	-	221	243	V
6	* 4.996	48.99	PK-U	34	-30.2	0	52.79	-	-	74	-21.21	-	-	140	101	V
	* 4.996	33.39	ADR	34	-30.2	.2	37.39	54	-16.61	-	-	-	-	140	101	V
4	3	54.04	PK-U	32.9	-33.6	0	53.34	-	-	-	-	68.2	-14.86	179	160	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

**10.2.32. TX ABOVE 1 GHz 802.11ac VHT80 MODE, 5.2 GHz BAND – MODULE 1, MIMO TxBF**

**RESTRICTED BANDEDGE (LOW CHANNEL) HORIZONTAL**



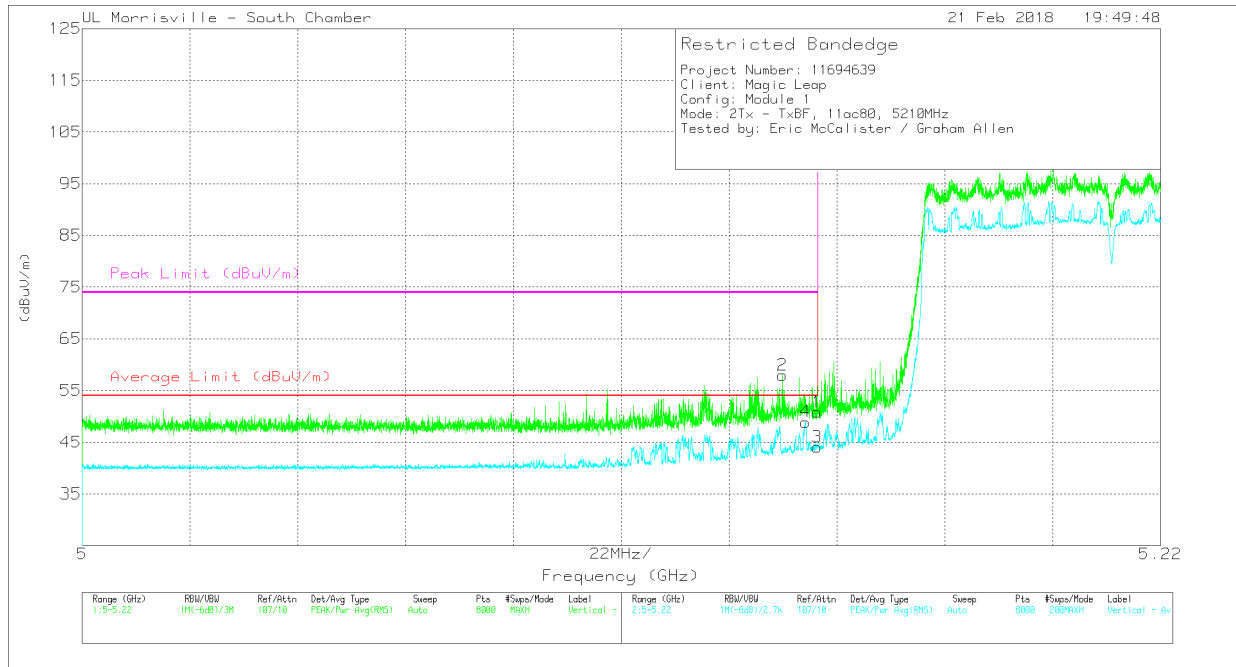
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	39.12	Pk	34.1	-22.7	50.52	-	-	74	-23.48	165	152	H
2	* 5.143	44.81	Pk	34.1	-22.7	56.21	-	-	74	-17.79	165	152	H
3	* 5.15	32.65	V1TR	34.1	-22.7	44.05	54	-9.95	-	-	165	152	H
4	* 5.147	33.66	V1TR	34.1	-22.7	45.06	54	-8.94	-	-	165	152	H

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

V1TR - U-NII: VB=1/Ton, RMS Average where: Ton is packet duration

**RESTRICTED BANDEDGE (LOW CHANNEL) VERTICAL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/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	* 5.15	39.43	Pk	34.1	-22.7	50.83	-	-	74	-23.17	159	103	V
2	* 5.143	46.56	Pk	34.1	-22.7	57.96	-	-	74	-16.04	159	103	V
3	* 5.15	32.65	V1TR	34.1	-22.7	44.05	54	-9.95	-	-	159	102	V
4	* 5.148	37.53	V1TR	34.1	-22.7	48.93	54	-5.07	-	-	159	102	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

V1TR - U-NII: VB=1/Ton, RMS Average where: Ton is packet duration

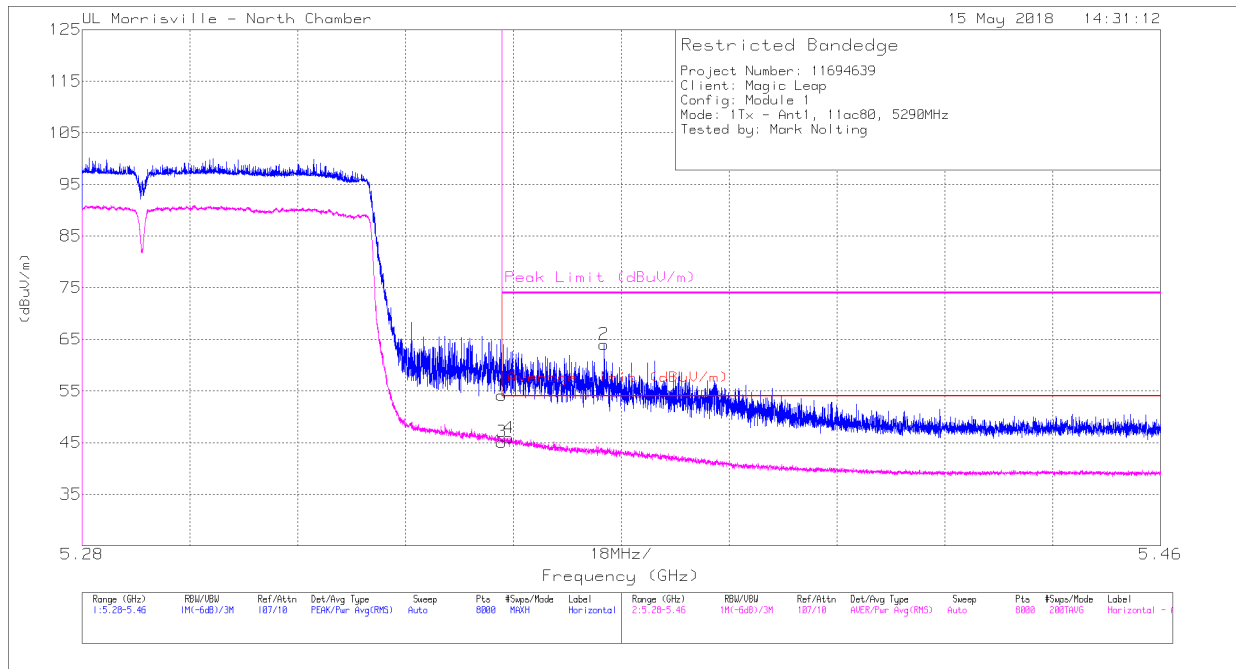
Note - Transmit beamforming only supported by 802.11n and 802.11ac modes. The router was investigated at different  $\theta$ s around the EUT. It was determined that there was <3dB delta in position. The router was then placed behind the receiving antenna. Transmit beamforming spot check scans were taken and this showed little to no variation from 802.11n/ac MIMO SDM spurious scans. Therefore, 802.11n/ac MIMO SDM spurious data is used to represent 802.11nHT20/nHT40 and 802.11ac VHT80 transmit beamforming. For transmit beamforming testing 802.11ac VHT20 and VHT40 were tested to cover 802.11n HT20 and HT40.



**10.2.33. TX ABOVE 1 GHz 802.11ac VHT80 MODE, 5.3 GHz BAND – MODULE 1, SISO ANT0**

**AUTHORIZED BANDEGE (HIGH CHANNEL) HORIZONTAL**

Note – The plots in this section show ANT 1 but should be considered ANT0.



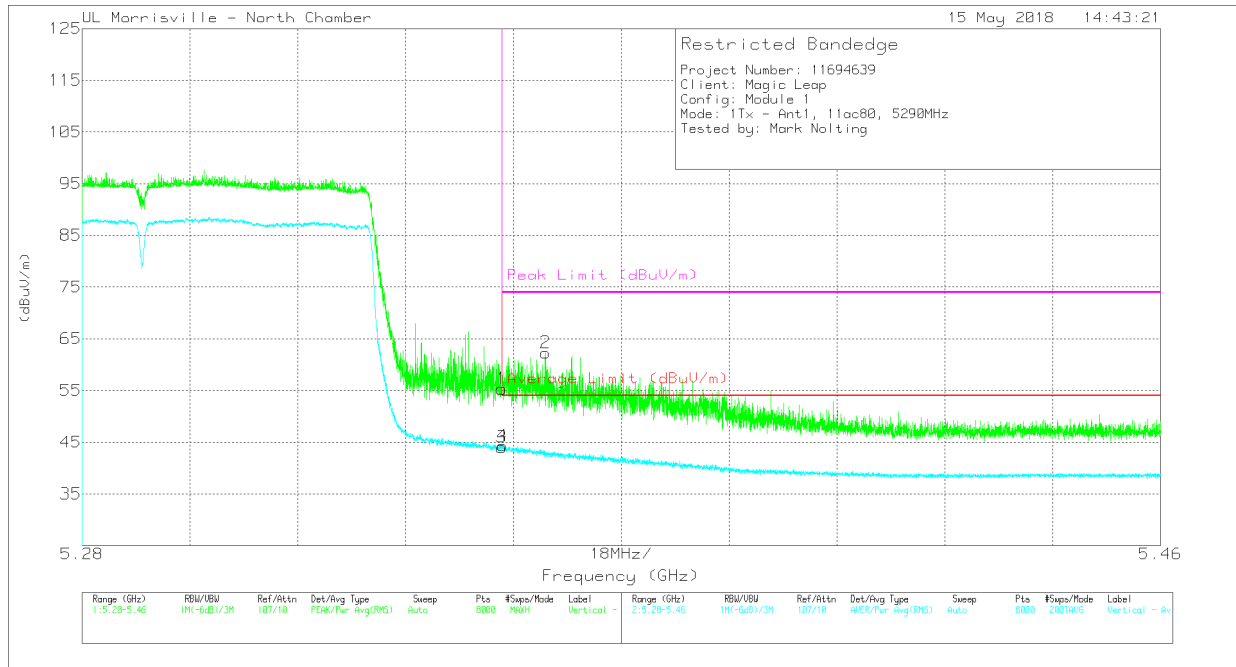
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	42.92	Pk	34.4	-23.2	0	54.12	-	-	74	-19.88	80	160	H
3	* 5.35	33.72	RMS	34.4	-23.2	.2	45.12	54	-8.88	-	-	80	160	H
4	* 5.351	34.54	RMS	34.4	-23.2	.2	45.94	54	-8.06	-	-	80	160	H
2	* 5.367	52.84	Pk	34.4	-23.2	0	64.04	-	-	74	-9.96	80	160	H

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

**AUTHORIZED BANDEGE (HIGH CHANNEL) VERTICAL**



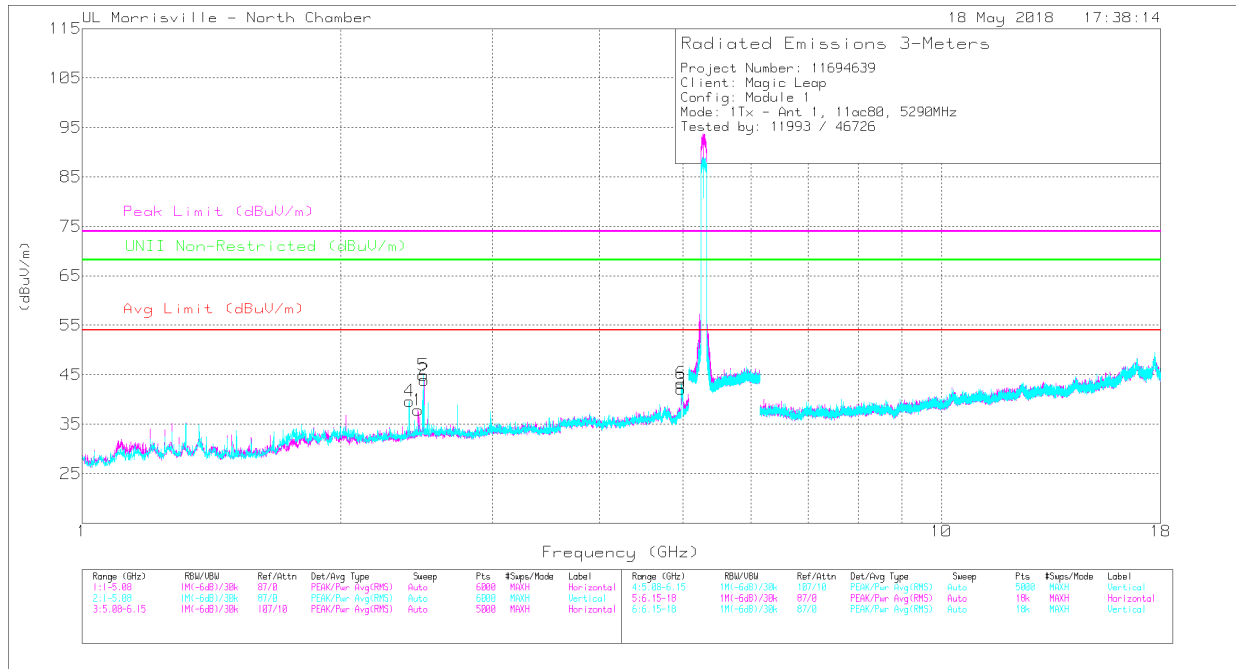
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	44.13	Pk	34.4	-23.2	0	55.33	-	-	74	-18.67	317	271	V
3	* 5.35	32.62	RMS	34.4	-23.2	.2	44.02	54	-9.98	-	-	317	271	V
4	* 5.35	32.89	RMS	34.4	-23.2	.2	44.29	54	-9.71	-	-	317	271	V
2	* 5.357	51.11	Pk	34.4	-23.2	0	62.31	-	-	74	-11.69	317	271	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

**HARMONICS AND SPURIOUS EMISSIONS**



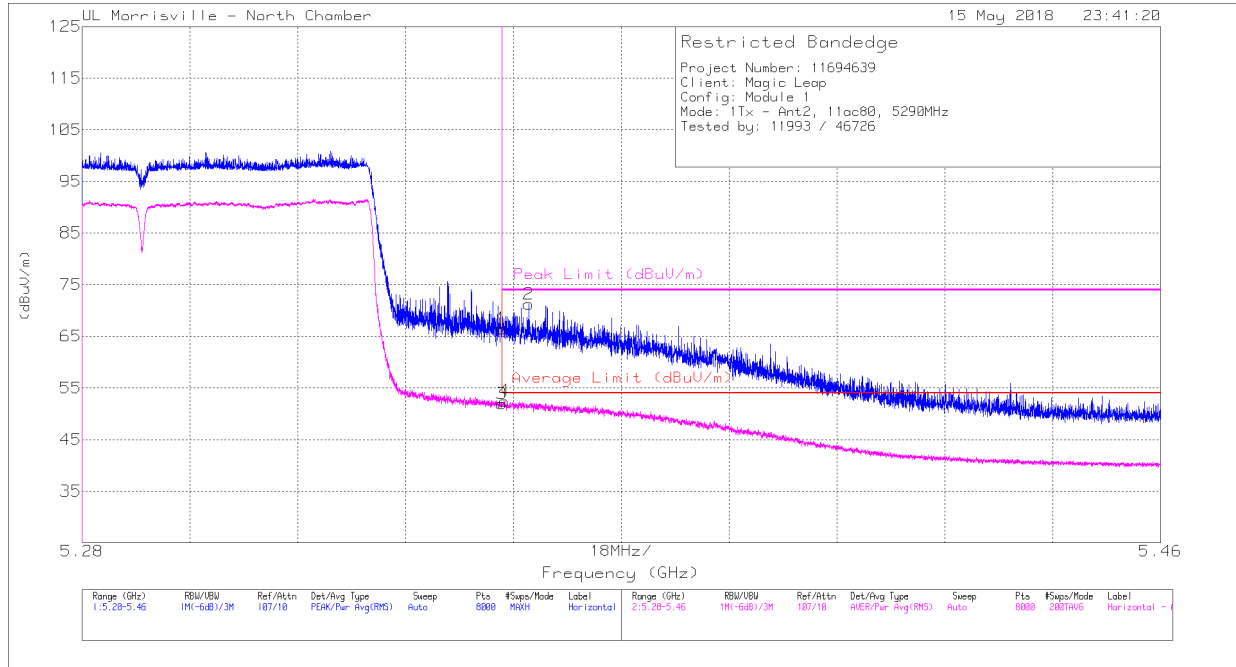
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* ** 2.499	55.09	PK-U	32.3	-34.4	0	52.99	-	-	74	-21.01	-	-	230	379	H
	* ** 2.497	31.87	ADR	32.3	-34.4	.2	29.97	54	-24.03	-	-	-	-	230	379	H
3	* ** 4.977	46.37	PK-U	34.1	-31.2	0	49.27	-	-	74	-24.73	-	-	295	257	H
	* ** 4.978	31.87	ADR	34.1	-31.2	.2	34.97	54	-19.03	-	-	-	-	295	257	H
1	2.46	50.41	PK-U	32.3	-34.4	0	48.31	-	-	-	-	68.2	-19.89	295	136	H
5	* ** 2.492	57.65	PK-U	32.3	-34.4	0	55.55	-	-	74	-18.45	-	-	119	136	V
	* ** 2.494	32.36	ADR	32.3	-34.4	.2	30.46	54	-23.54	-	-	-	-	119	136	V
6	* ** 4.978	49.26	PK-U	34.1	-31.2	0	52.16	-	-	74	-21.84	-	-	7	105	V
	* ** 4.979	33.29	ADR	34.1	-31.3	.2	36.29	54	-17.71	-	-	-	-	7	105	V
4	2.4	43.83	PK-U	32	-34.4	0	41.43	-	-	-	-	68.2	-26.77	318	170	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 \*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band  
 PK-U - U-NII: Maximum Peak  
 ADR - U-NII AD primary method, RMS average

**10.2.34. TX ABOVE 1 GHz 802.11ac VHT80 MODE, 5.3 GHz BAND – MODULE 1, SISO ANT1**

**AUTHORIZED BANDEDGE (HIGH CHANNEL) HORIZONTAL**

Note – The plots in this section show ANT 2 but should be considered ANT1.



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.35	55.31	Pk	34.4	-23.2	0	66.51	-	-	74	-7.49	211	307	H
2	** 5.355	60.05	Pk	34.4	-23.2	0	71.25	-	-	74	-2.75	211	307	H
3	*** 5.35	40.53	RMS	34.4	-23.2	.2	51.93	54	-2.07	-	-	211	307	H
4	*** 5.351	41.07	RMS	34.4	-23.2	.2	52.47	54	-1.53	-	-	211	307	H

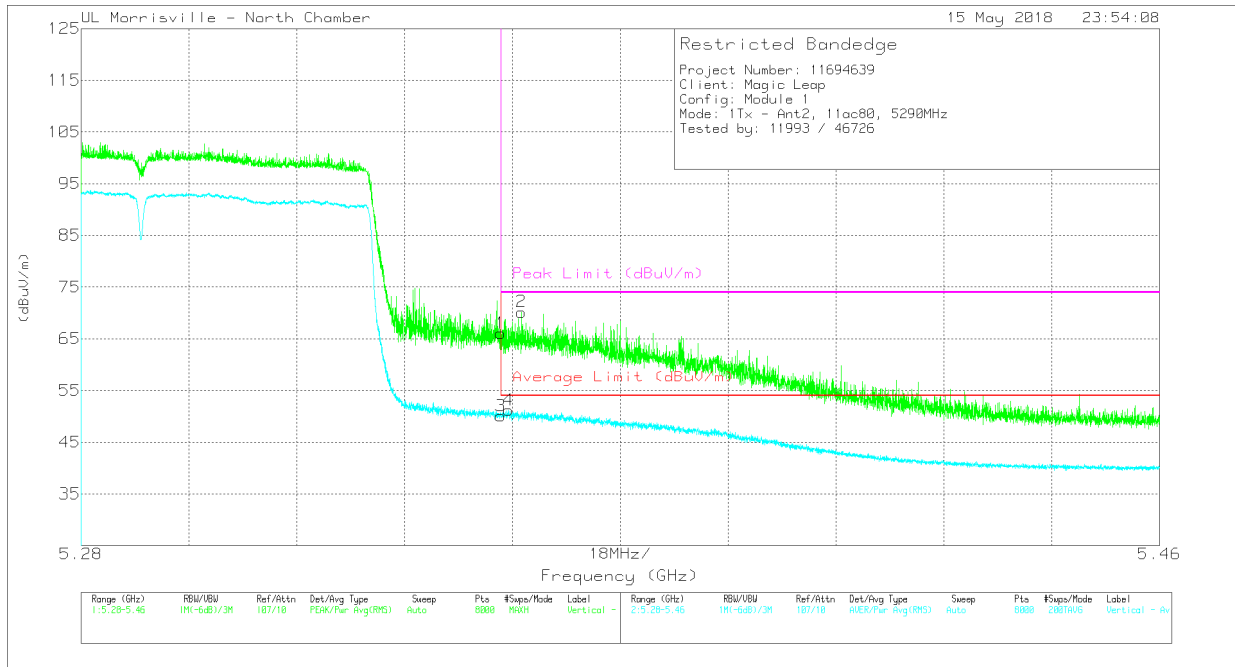
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

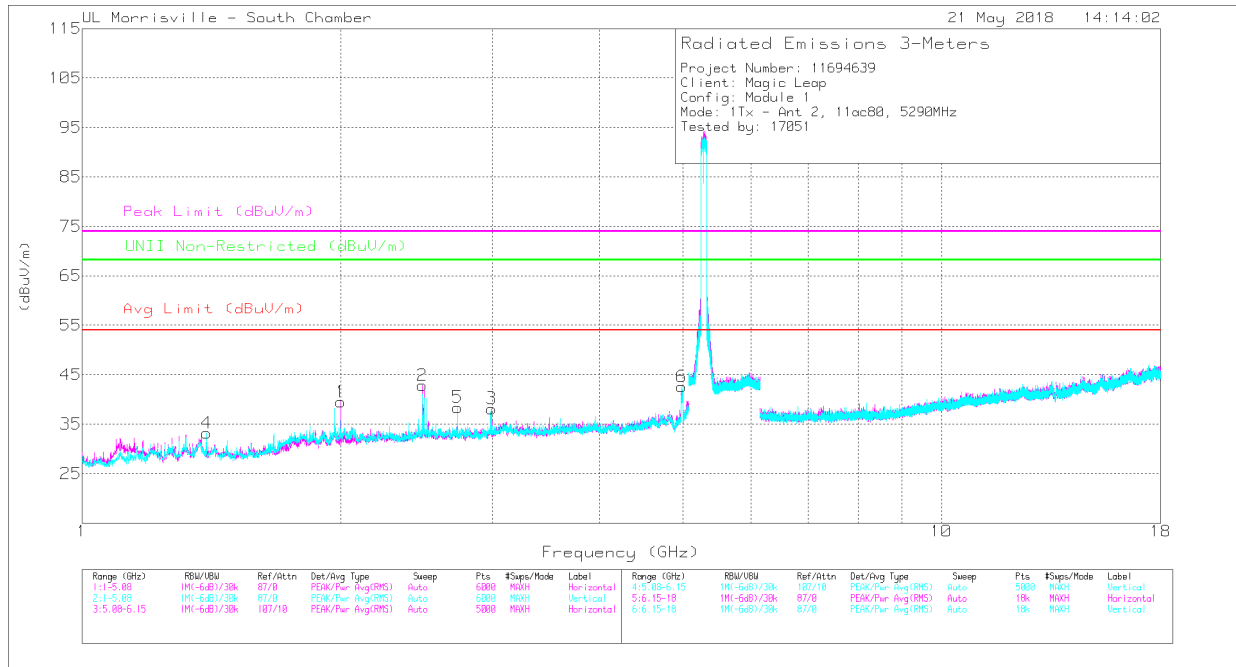
**AUTHORIZED BANDEGE (HIGH CHANNEL) VERTICAL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.35	54.84	Pk	34.4	-23.2	0	66.04	-	-	74	-7.96	158	257	V
2	*** 5.354	58.99	Pk	34.4	-23.2	0	70.19	-	-	74	-3.81	158	257	V
3	** 5.35	38.69	RMS	34.4	-23.2	.2	50.09	54	-3.91	-	-	158	257	V
4	*** 5.351	39.78	RMS	34.4	-23.2	.2	51.18	54	-2.82	-	-	158	257	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 \*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band  
 Pk - Peak detector  
 RMS - RMS detection

**HARMONICS AND SPURIOUS EMISSIONS**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.497	57.88	PK-U	32.3	-34	0	56.18	-	-	74	-17.82	-	-	187	113	H
	* 2.499	31.61	ADR	32.3	-34	.2	30.11	54	-23.89	-	-	-	-	187	113	H
4	* 1.395	45.41	PK-U	28.8	-34.8	0	39.41	-	-	74	-34.59	-	-	82	132	V
	* 1.395	37.62	ADR	28.8	-34.8	.2	31.82	54	-22.18	-	-	-	-	82	132	V
5	* 2.736	46.93	PK-U	32.3	-33.8	0	45.43	-	-	74	-28.57	-	-	48	245	V
	* 2.736	33.59	ADR	32.3	-33.8	.2	32.29	54	-21.71	-	-	-	-	48	245	V
6	* 4.999	48.18	PK-U	34	-30.1	0	52.08	-	-	74	-21.92	-	-	69	101	V
	* 4.994	32.08	ADR	34	-30.1	.2	36.18	54	-17.82	-	-	-	-	69	101	V
1	1.994	51.63	PK-U	31	-34.2	0	48.43	-	-	-	-	68.2	-19.77	182	100	H
3	2.99	48.11	PK-U	32.8	-33.7	0	47.21	-	-	-	-	68.2	-20.99	69	101	H

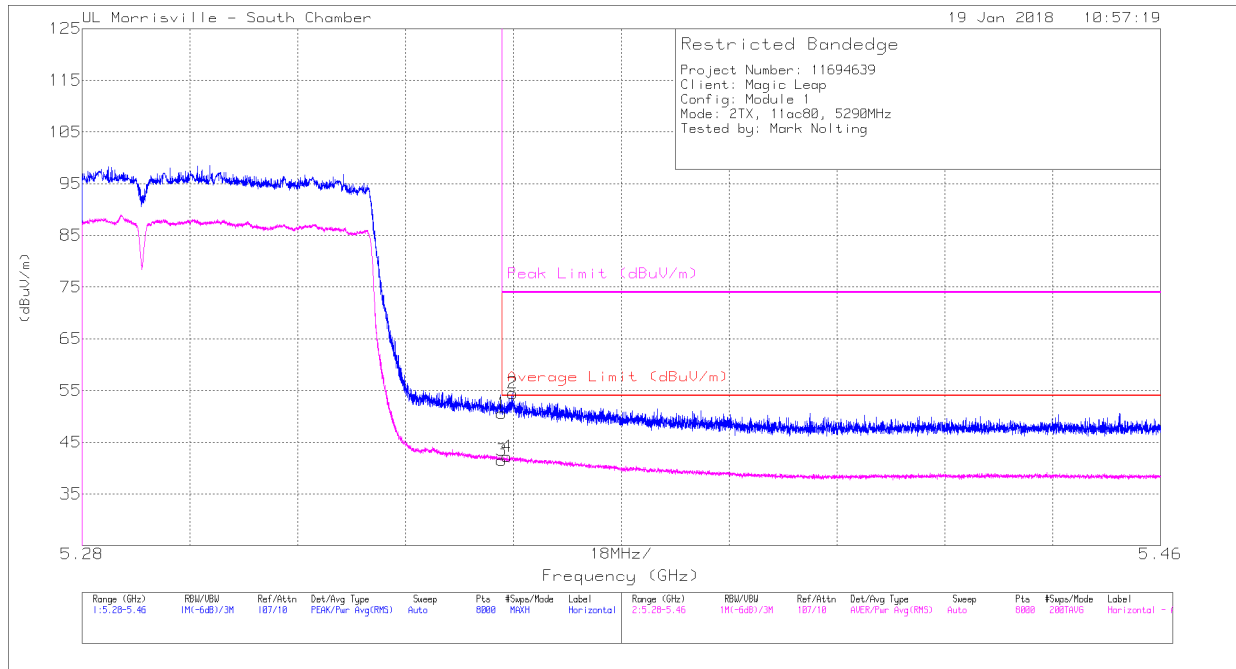
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

**10.2.35. TX ABOVE 1 GHz 802.11ac VHT80 MODE, 5.3 GHz BAND – MODULE 1, MIMO SDM**

**AUTHORIZED BANDEDGE (HIGH CHANNEL) HORIZONTAL – MODULE 1**



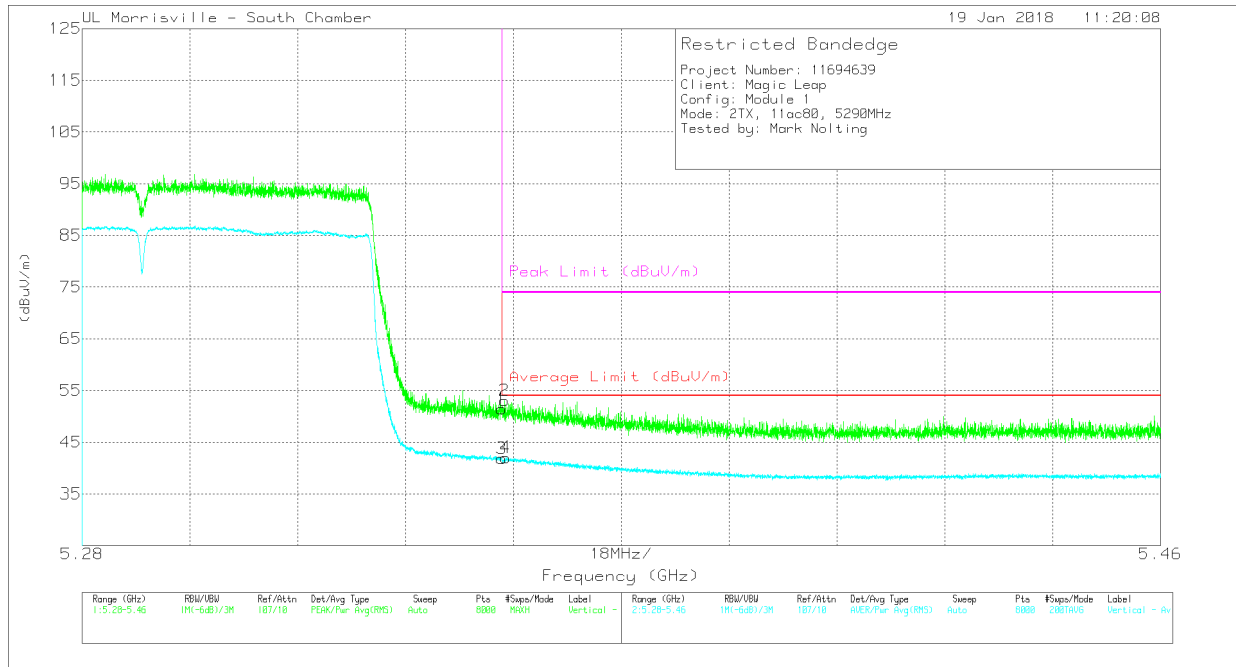
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	39.31	Pk	34.4	-23.1	0	50.61	-	-	74	-23.39	160	155	H
3	* 5.35	30.01	RMS	34.4	-23.1	.19	41.5	54	-12.5	-	-	160	155	H
4	* 5.351	30.74	RMS	34.4	-23.1	.19	42.23	54	-11.77	-	-	160	155	H
2	* 5.352	43.17	Pk	34.4	-23.1	0	54.47	-	-	74	-19.53	160	155	H

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

**AUTHORIZED BANDEDGE (HIGH CHANNEL) VERTICAL – MODULE 1**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	40.17	Pk	34.4	-23.1	0	51.47	-	-	74	-22.53	228	259	V
3	* 5.35	30.38	RMS	34.4	-23.1	.19	41.87	54	-12.13	-	-	228	259	V
2	* 5.351	41.77	Pk	34.4	-23.1	0	53.07	-	-	74	-20.93	228	259	V
4	* 5.351	30.53	RMS	34.4	-23.1	.19	42.02	54	-11.98	-	-	228	259	V

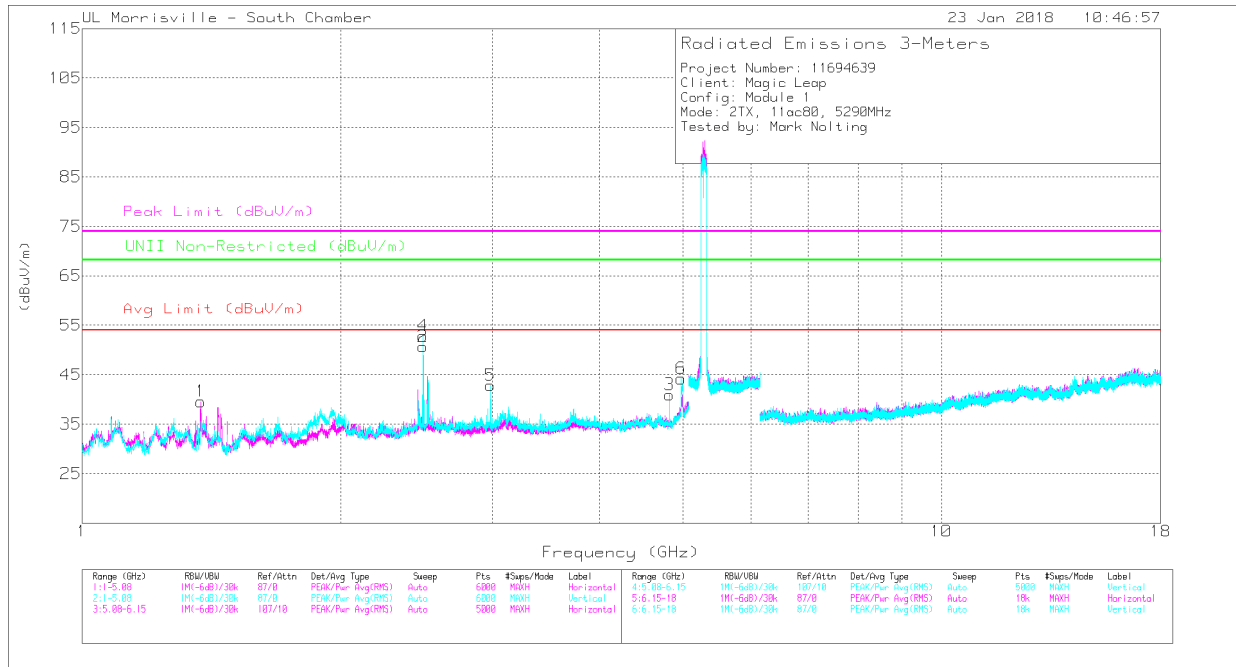
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



**HARMONICS AND SPURIOUS EMISSIONS**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.374	53.5	PK-U	28.9	-34.7	0	47.7	-	-	74	-26.3	-	-	158	158	H
	* 1.368	33.43	ADR	28.9	-34.7	.19	27.82	54	-26.18	-	-	-	-	158	158	H
2	* 2.492	63.69	PK-U	32.4	-34	0	62.09	-	-	74	-11.91	-	-	194	108	H
	* 2.491	37.2	ADR	32.4	-34	.19	35.79	54	-18.21	-	-	-	-	194	108	H
3	* 4.824	43.53	PK-U	34	-30.9	0	46.63	-	-	74	-27.37	-	-	127	101	H
	* 4.824	36.36	ADR	34	-30.9	.19	39.65	54	-14.35	-	-	-	-	127	101	H
4	* 2.496	63.08	PK-U	32.4	-34	0	61.48	-	-	74	-12.52	-	-	95	102	V
	* 2.499	36.55	ADR	32.3	-34	.19	35.04	54	-18.96	-	-	-	-	95	102	V
6	* 4.99	48.67	PK-U	34	-30.2	0	52.47	-	-	74	-21.53	-	-	142	103	V
	* 4.997	33.09	ADR	34	-30.2	.19	37.08	54	-16.92	-	-	-	-	142	103	V
5	2.996	53.27	PK-U	32.9	-33.6	0	52.57	-	-	-	-	68.2	-15.63	102	114	V

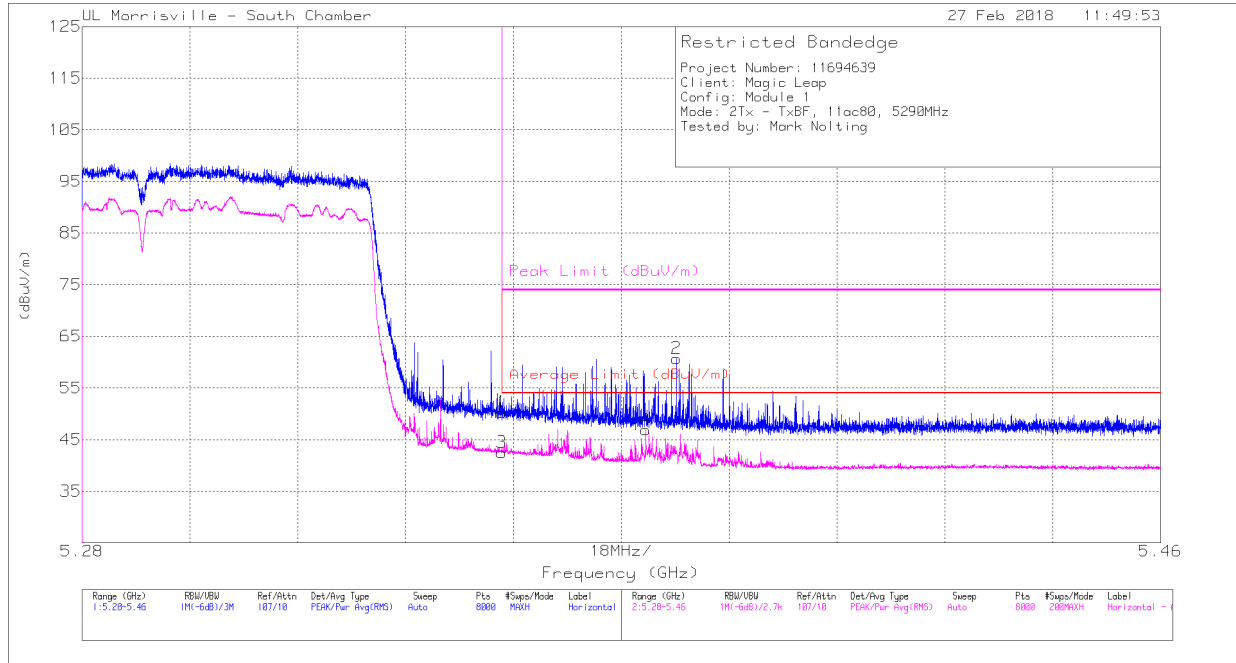
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

**10.2.36. TX ABOVE 1 GHz 802.11ac VHT80 MODE, 5.3 GHz BAND – MODULE 1, MIMO TxBF**

**AUTHORIZED BANDEDGE (HIGH CHANNEL) HORIZONTAL**



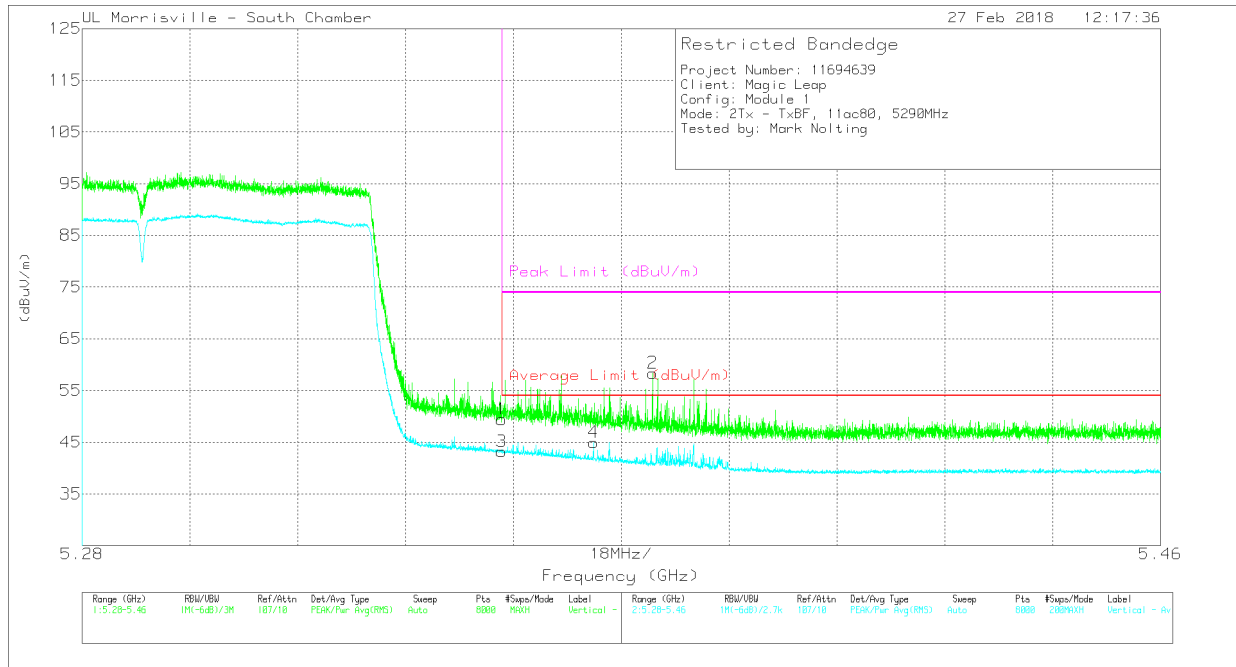
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	38.96	Pk	34.4	-23.1	50.26	-	-	74	-23.74	158	201	H
3	* 5.35	31.21	V1TR	34.4	-23.1	42.51	54	-11.49	-	-	158	201	H
4	* 5.374	35.68	V1TR	34.4	-23.2	46.88	54	-7.12	-	-	158	201	H
2	* 5.379	49.52	Pk	34.4	-23.2	60.72	-	-	74	-13.28	158	201	H

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

V1TR - U-NII: VB=1/Ton, RMS Average where: Ton is packet duration

**AUTHORIZED BANDEDGE (HIGH CHANNEL) VERTICAL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/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	* 5.35	38.13	Pk	34.4	-23.1	49.43	-	-	74	-24.57	328	113	V
3	* 5.35	31.93	V1TR	34.4	-23.1	43.23	54	-10.77	-	-	328	113	V
4	* 5.365	33.77	V1TR	34.4	-23.2	44.97	54	-9.03	-	-	328	113	V
2	* 5.375	47.18	Pk	34.4	-23.2	58.38	-	-	74	-15.62	328	113	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

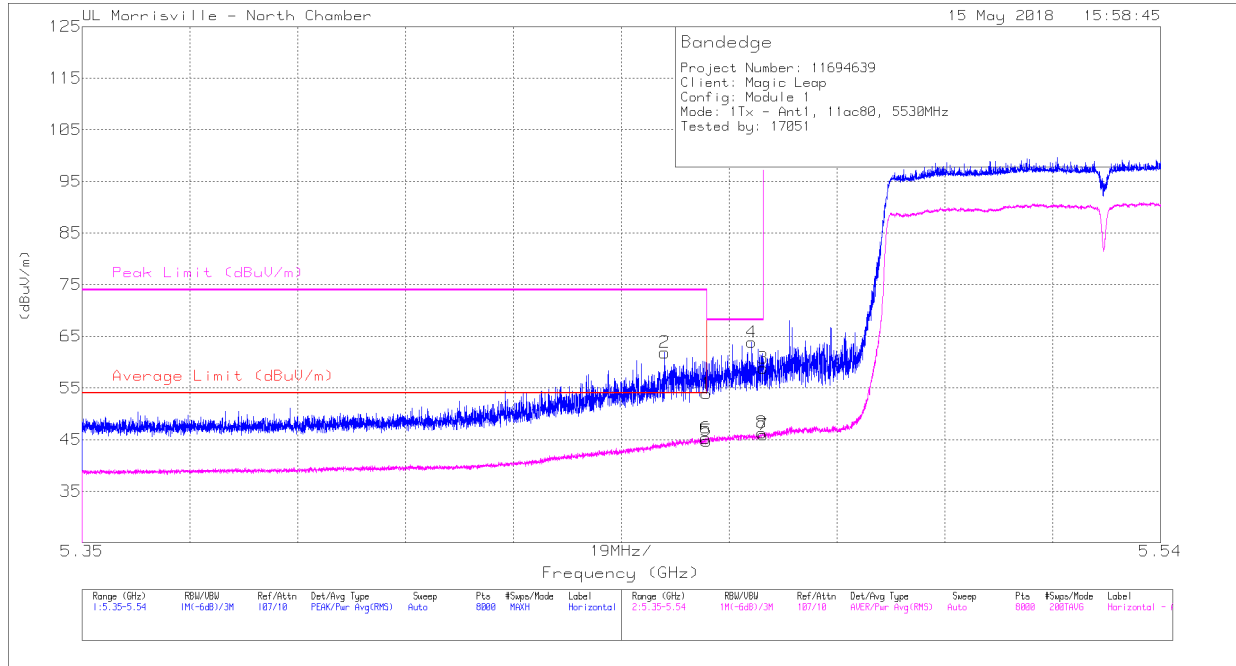
V1TR - U-NII: VB=1/Ton, RMS Average where: Ton is packet duration

Note - Transmit beamforming only supported by 802.11n and 802.11ac modes. The router was investigated at different  $\theta$ s around the EUT. It was determined that there was <3dB delta in position. The router was then placed behind the receiving antenna. Transmit beamforming spot check scans were taken and this showed little to no variation from 802.11n/ac MIMO SDM spurious scans. Therefore, 802.11n/ac MIMO SDM spurious data is used to represent 802.11nHT20/nHT40 and 802.11ac VHT80 transmit beamforming. For transmit beamforming testing 802.11ac VHT20 and VHT40 were tested to cover 802.11n HT20 and HT40.

**10.2.37. TX ABOVE 1 GHz 802.11ac VHT80 MODE, 5.6 GHz BAND – MODULE 1, SISO ANT0**

**RESTRICTED BANDEDGE (LOW CHANNEL) HORIZONTAL**

Note – The plots in this section show ANT 1 but should be considered ANT0.



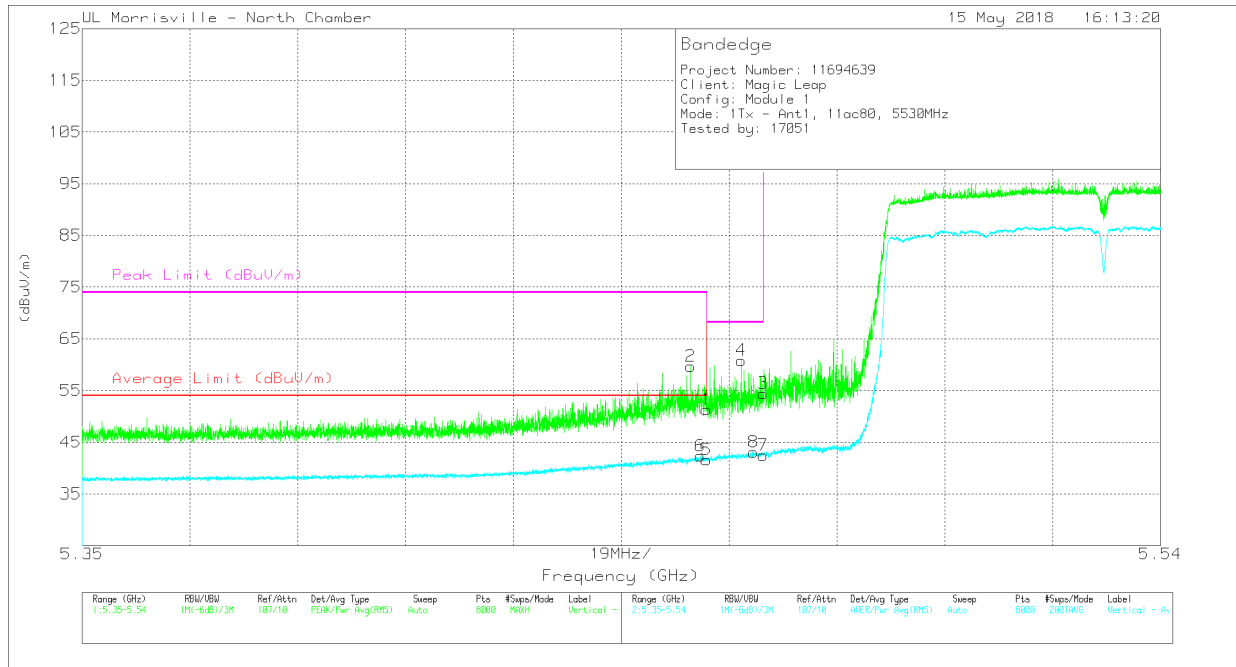
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.453	50.65	Pk	34.3	-23.1	0	61.85	-	-	74	-12.15	85	162	H
1	* 5.46	42.71	Pk	34.3	-23.1	0	53.91	-	-	74	-20.09	85	162	H
5	* 5.46	33.36	RMS	34.3	-23.1	.2	44.76	54	-9.24	-	-	85	162	H
6	* 5.46	33.86	RMS	34.3	-23.1	.2	45.26	54	-8.74	-	-	85	162	H
4	5.468	52.69	Pk	34.3	-23.1	0	63.89	-	-	68.2	-4.31	85	162	H
3	5.47	47.52	Pk	34.3	-23	0	58.82	-	-	68.2	-9.38	85	162	H
7	5.47	34.44	RMS	34.3	-23	.2	45.94	-	-	-	-	85	162	H
8	5.47	34.83	RMS	34.3	-23	.2	46.33	-	-	-	-	85	162	H

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

**RESTRICTED BANDEDGE (LOW CHANNEL) VERTICAL**



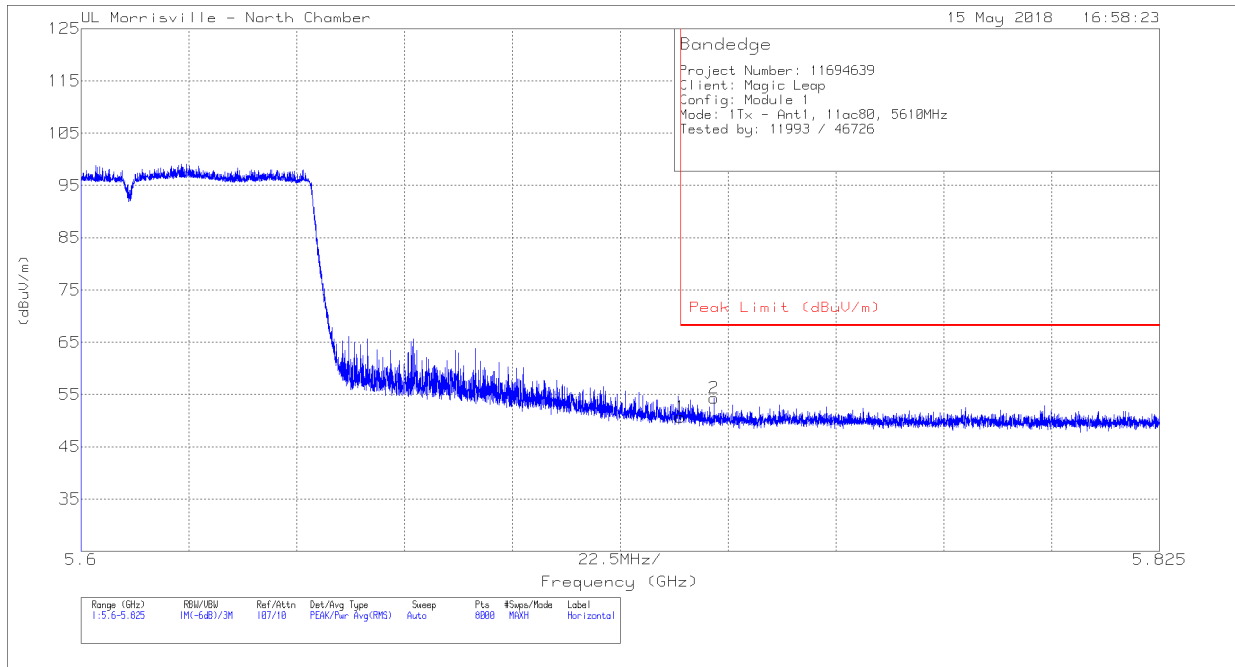
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.457	48.5	Pk	34.3	-23.1	0	59.7	-	-	74	-14.3	191	162	V
6	* 5.459	30.92	RMS	34.3	-23.1	.2	42.32	54	-11.68	-	-	191	162	V
1	* 5.46	40.1	Pk	34.3	-23.1	0	51.3	-	-	74	-22.7	191	162	V
5	* 5.46	30.24	RMS	34.3	-23.1	.2	41.64	54	-12.36	-	-	191	162	V
4	5.466	49.63	Pk	34.3	-23.1	0	60.83	-	-	68.2	-7.37	191	162	V
8	5.468	31.72	RMS	34.3	-23.1	.2	43.12	-	-	-	-	191	162	V
3	5.47	43.15	Pk	34.3	-23	0	54.45	-	-	68.2	-13.75	191	162	V
7	5.47	30.99	RMS	34.3	-23	.2	42.49	-	-	-	-	191	162	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

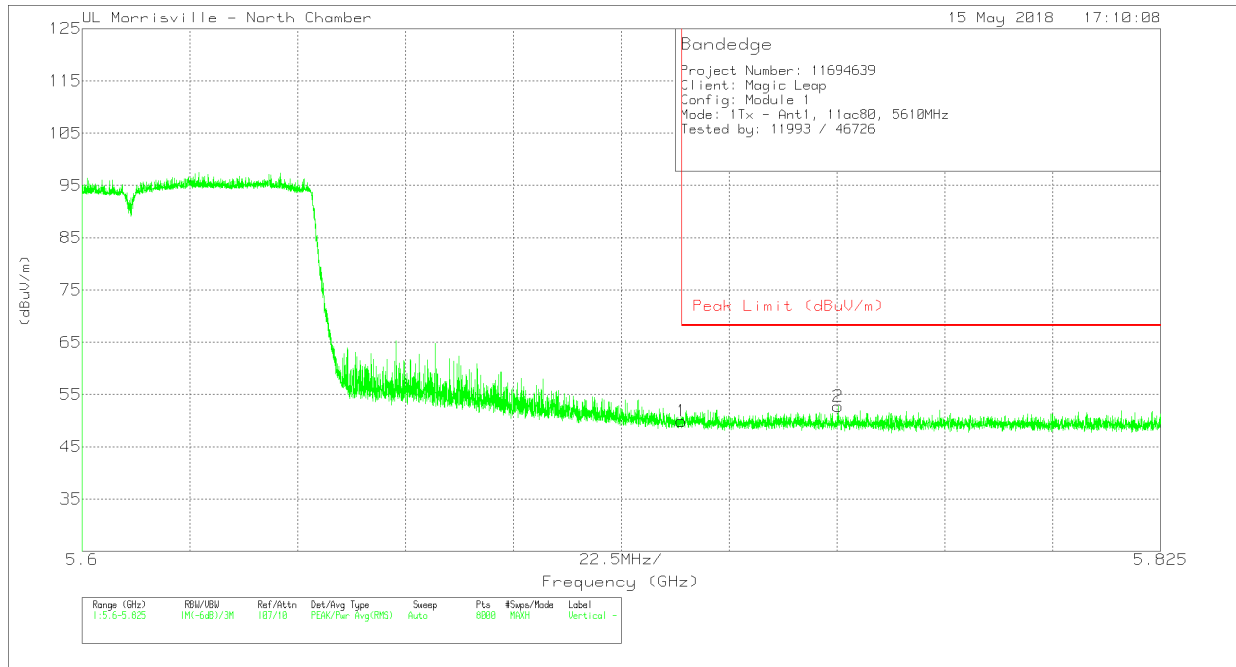
**AUTHORIZED BANDEDGE (HIGH CHANNEL) HORIZONTAL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	38.98	Pk	34.7	-23	50.68	68.2	-17.52	91	178	H
2	5.732	42.6	Pk	34.7	-23	54.3	68.2	-13.9	91	178	H

Pk - Peak detector

**AUTHORIZED BANDEDGE (HIGH CHANNEL) VERTICAL**

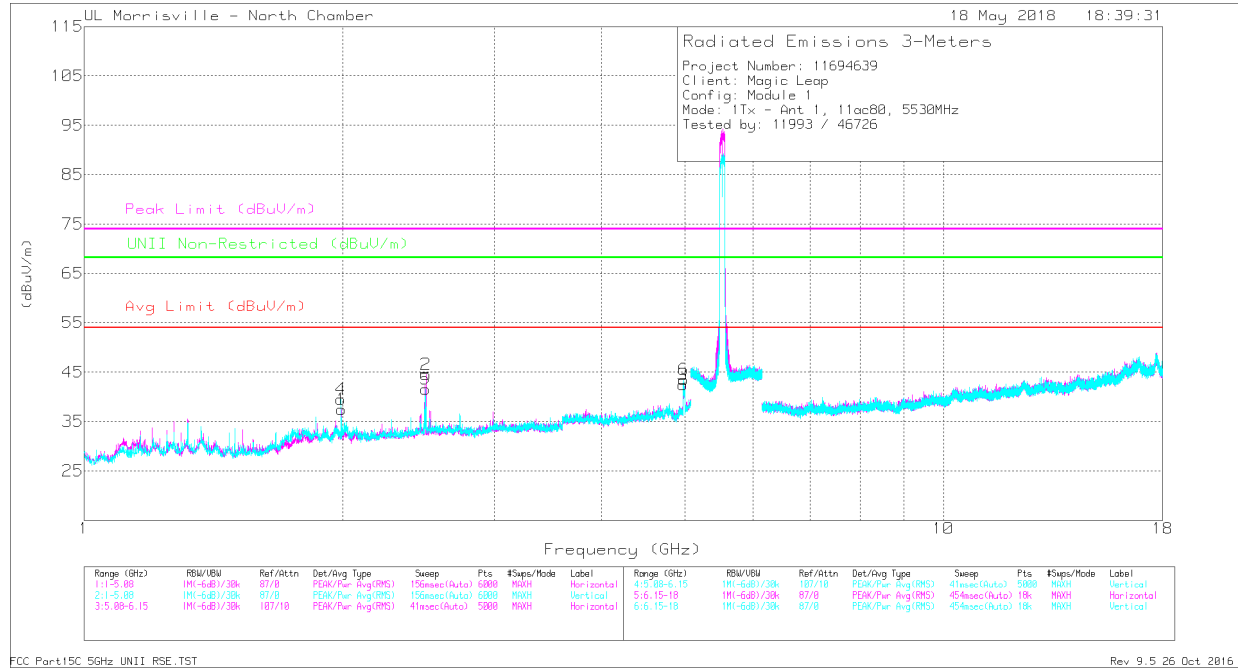


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	38.19	Pk	34.7	-23	0	49.89	68.2	-18.31	262	320	V
2	5.758	40.94	Pk	34.7	-22.9	0	52.74	68.2	-15.46	262	320	V

Pk - Peak detector

**HARMONICS AND SPURIOUS EMISSIONS**

**LOW CHANNEL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.497	55.12	PK-U	32.3	-34.4	0	53.02	-	-	74	-20.98	-	-	298	103	H
	* 2.49	32.13	ADR	32.3	-34.4	.2	30.23	54	-23.77	-	-	-	-	298	103	H
3	* 4.978	47.42	PK-U	34.1	-31.3	0	50.22	-	-	74	-23.78	-	-	8	117	H
	* 4.978	32.42	ADR	34.1	-31.2	.2	35.52	54	-18.48	-	-	-	-	8	117	H
1	1.992	49.91	PK-U	31.2	-34.9	0	46.21	-	-	-	-	68.2	-21.99	269	133	H
5	* 2.49	56.91	PK-U	32.3	-34.4	0	54.81	-	-	74	-19.19	-	-	24	170	V
	* 2.5	31.98	ADR	32.3	-34.4	.2	30.08	54	-23.92	-	-	-	-	24	170	V
6	* 4.988	49.06	PK-U	34.1	-31.3	0	51.86	-	-	74	-22.14	-	-	360	102	V
	* 4.984	32.99	ADR	34.1	-31.3	.2	35.99	54	-18.01	-	-	-	-	360	102	V
4	1.991	50.09	PK-U	31.2	-34.9	0	46.39	-	-	-	-	68.2	-21.81	281	116	V

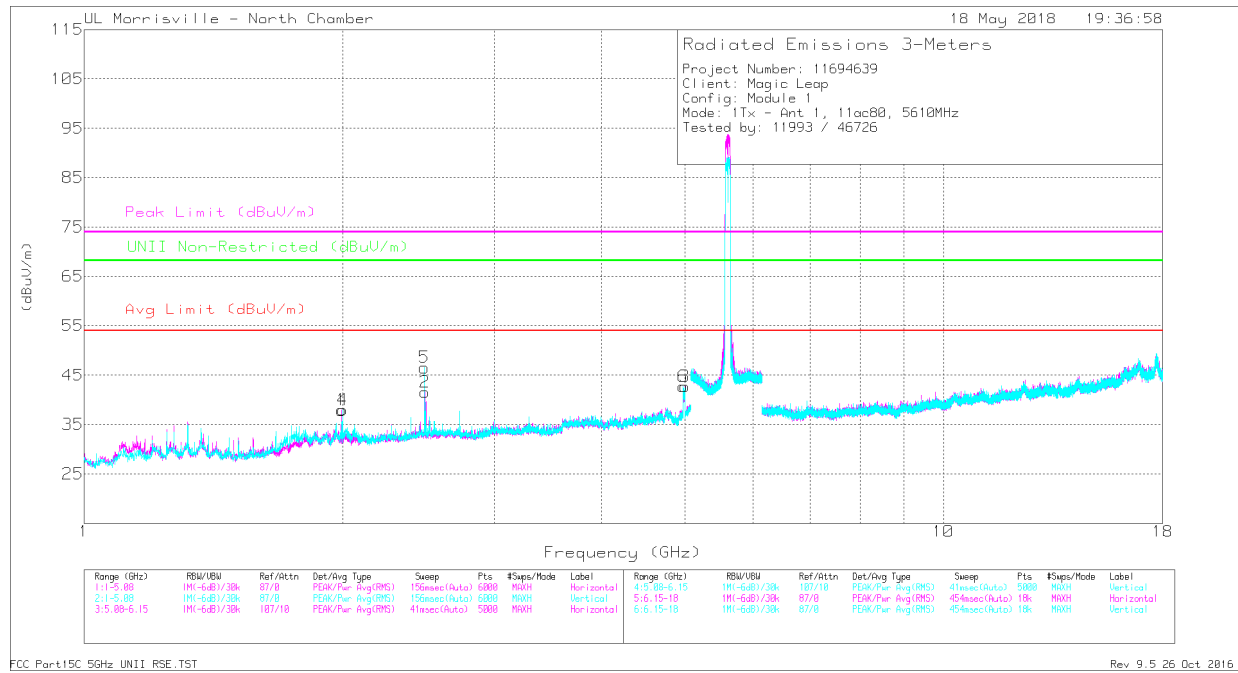
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



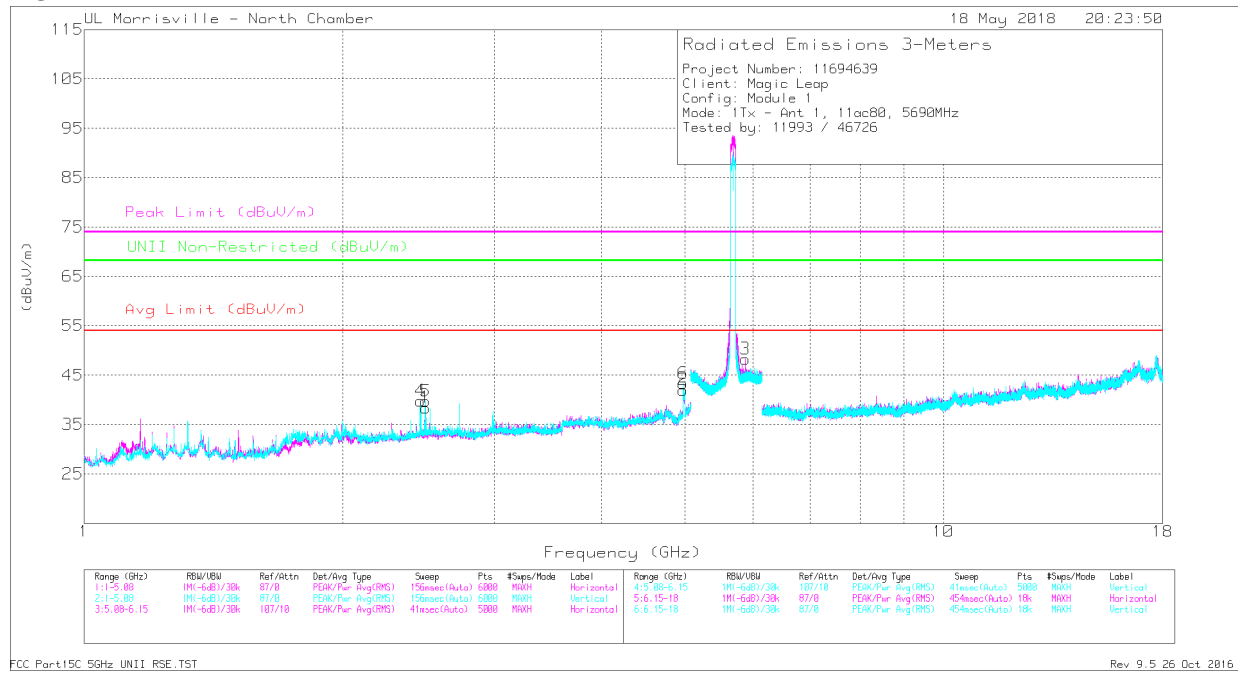
**MID CHANNEL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/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	* 2.489	53.89	PK-U	32.3	-34.4	0	51.79	-	-	74	-22.21	-	-	247	228	H
	* 2.489	31.49	ADR	32.3	-34.4	.2	29.59	54	-24.41	-	-	-	-	247	228	H
3	* 5	46.72	PK-U	34.1	-31.2	0	49.62	-	-	74	-24.38	-	-	70	223	H
	* 5	32	ADR	34.1	-31.2	.2	35.1	54	-18.9	-	-	-	-	70	223	H
1	1.997	52.12	PK-U	31.1	-34.9	0	48.32	-	-	-	-	68.2	-19.88	108	156	H
5	* 2.49	54	PK-U	32.3	-34.4	0	51.9	-	-	74	-22.1	-	-	38	229	V
	* 2.49	31.39	ADR	32.3	-34.4	.2	29.49	54	-24.51	-	-	-	-	38	229	V
6	* 4.977	48.78	PK-U	34.1	-31.2	0	51.68	-	-	74	-22.32	-	-	4	117	V
	* 4.978	32.98	ADR	34.1	-31.2	.2	36.08	54	-17.92	-	-	-	-	4	117	V
4	2	56.34	PK-U	31.1	-34.9	0	52.54	-	-	-	-	68.2	-15.66	115	159	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**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/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	* 2.493	55.92	PK-U	32.3	-34.4	0	53.82	-	-	74	-20.18	-	-	112	199	H
	* 2.495	31.28	ADR	32.3	-34.4	.2	29.38	54	-24.62	-	-	-	-	112	199	H
2	* 4.976	46.91	PK-U	34.1	-31.2	0	49.81	-	-	74	-24.19	-	-	12	138	H
	* 4.977	32.27	ADR	34.1	-31.2	.2	35.37	54	-18.63	-	-	-	-	12	138	H
3	5.877	39.29	PK-U	34.9	-22.4	0	51.79	-	-	-	-	68.2	-16.41	338	163	H
5	* 2.496	58.9	PK-U	32.3	-34.4	0	56.8	-	-	74	-17.2	-	-	29	121	V
	* 2.496	32.6	ADR	32.3	-34.4	.2	30.7	54	-23.3	-	-	-	-	29	121	V
6	* 4.978	49.14	PK-U	34.1	-31.2	0	52.04	-	-	74	-21.96	-	-	2	102	V
	* 4.978	33.58	ADR	34.1	-31.2	.2	36.68	54	-17.32	-	-	-	-	2	102	V
4	2.46	51.45	PK-U	32.3	-34.4	0	49.35	-	-	-	-	68.2	-18.85	117	182	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

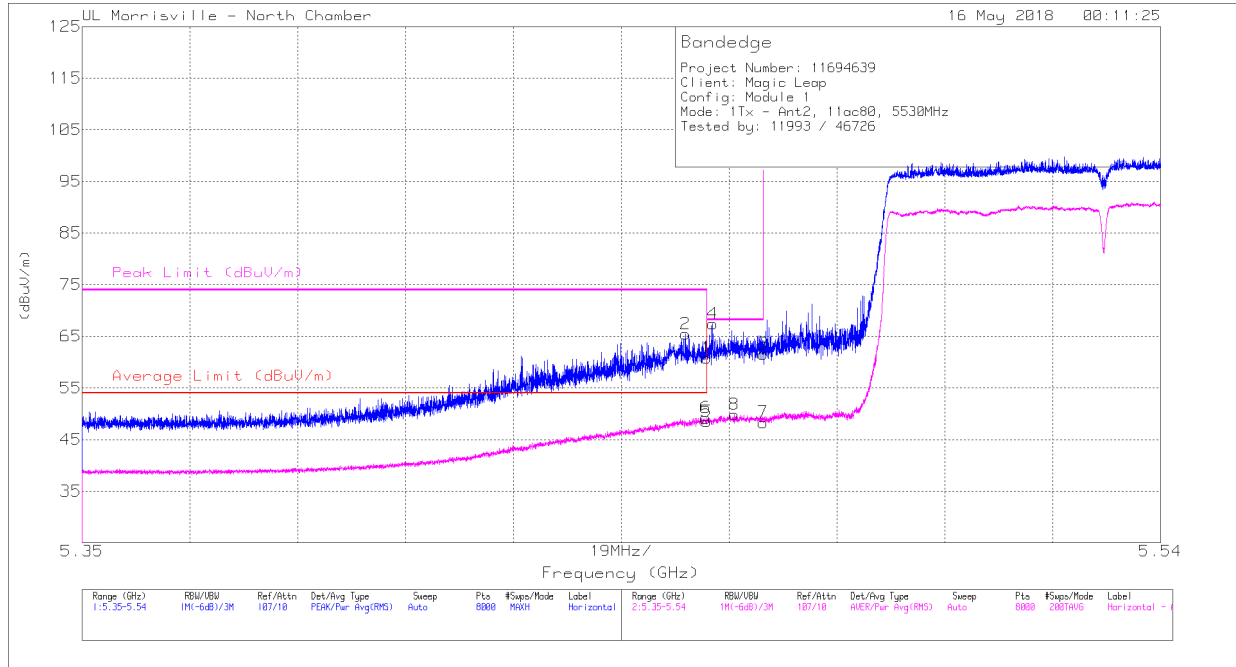
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

**10.2.38. TX ABOVE 1 GHz 802.11ac VHT80 MODE, 5.6 GHz BAND – MODULE 1, SISO ANT1**

**RESTRICTED BANDEDGE (LOW CHANNEL) HORIZONTAL**

Note – The plots in this section show ANT 2 but should be considered ANT1.



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/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	49.62	Pk	34.3	-23.1	0	60.82	-	-	74	-13.18	211	348	H
2	*** 5.456	54.28	Pk	34.3	-23.1	0	65.48	-	-	74	-8.52	211	348	H
5	*** 5.46	37.12	RMS	34.3	-23.1	.2	48.52	54	-5.48	-	-	211	348	H
6	*** 5.46	37.79	RMS	34.3	-23.1	.2	49.19	54	-4.81	-	-	211	348	H
4	5.461	56.24	Pk	34.3	-23.1	0	67.44	-	-	68.2	-.76	211	348	H
8	5.465	38.41	RMS	34.3	-23.1	.2	49.81	-	-	-	-	211	348	H
3	5.47	50.28	Pk	34.3	-23	0	61.58	-	-	68.2	-6.62	211	348	H
7	5.47	36.8	RMS	34.3	-23	.2	48.3	-	-	-	-	211	348	H

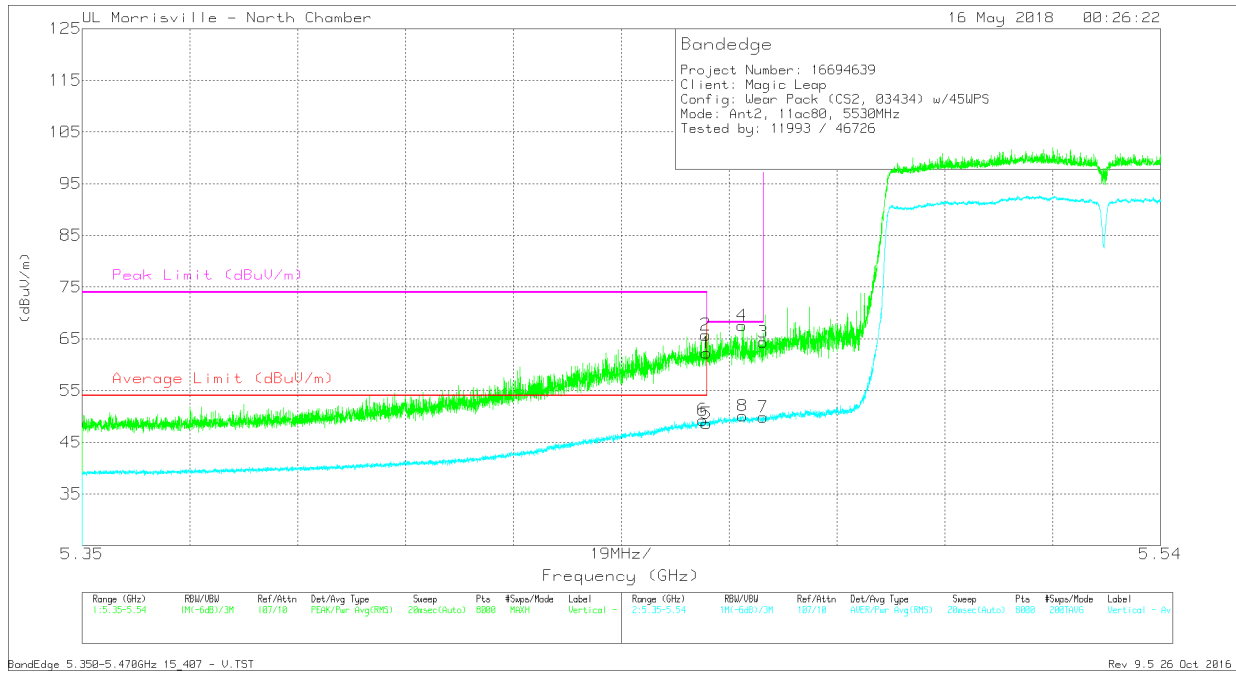
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

**RESTRICTED BANDEDGE (LOW CHANNEL) VERTICAL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/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	51.08	Pk	34.3	-23.1	0	62.28	-	-	74	-11.72	157	240	V
2	*** 5.46	54.55	Pk	34.3	-23.1	0	65.75	-	-	74	-8.25	157	240	V
5	*** 5.46	37.25	RMS	34.3	-23.1	.2	48.65	54	-5.35	-	-	157	240	V
6	*** 5.459	37.88	RMS	34.3	-23.1	.2	49.28	54	-4.72	-	-	157	240	V
4	5.466	56.35	Pk	34.3	-23.1	0	67.55	-	-	68.2	-65	157	240	V
8	5.466	38.68	RMS	34.3	-23.1	.2	50.08	-	-	-	-	157	240	V
3	5.47	53.04	Pk	34.3	-23	0	64.34	-	-	68.2	-3.86	157	240	V
7	5.47	38.34	RMS	34.3	-23	.2	49.84	-	-	-	-	157	240	V

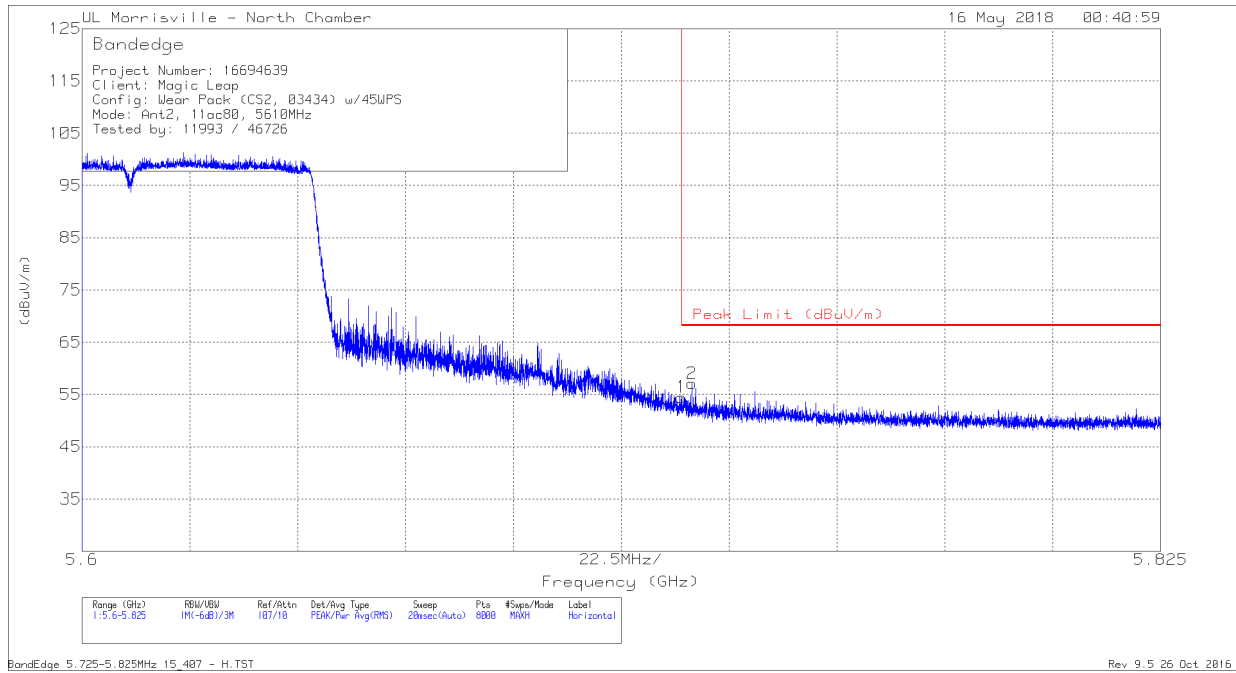
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

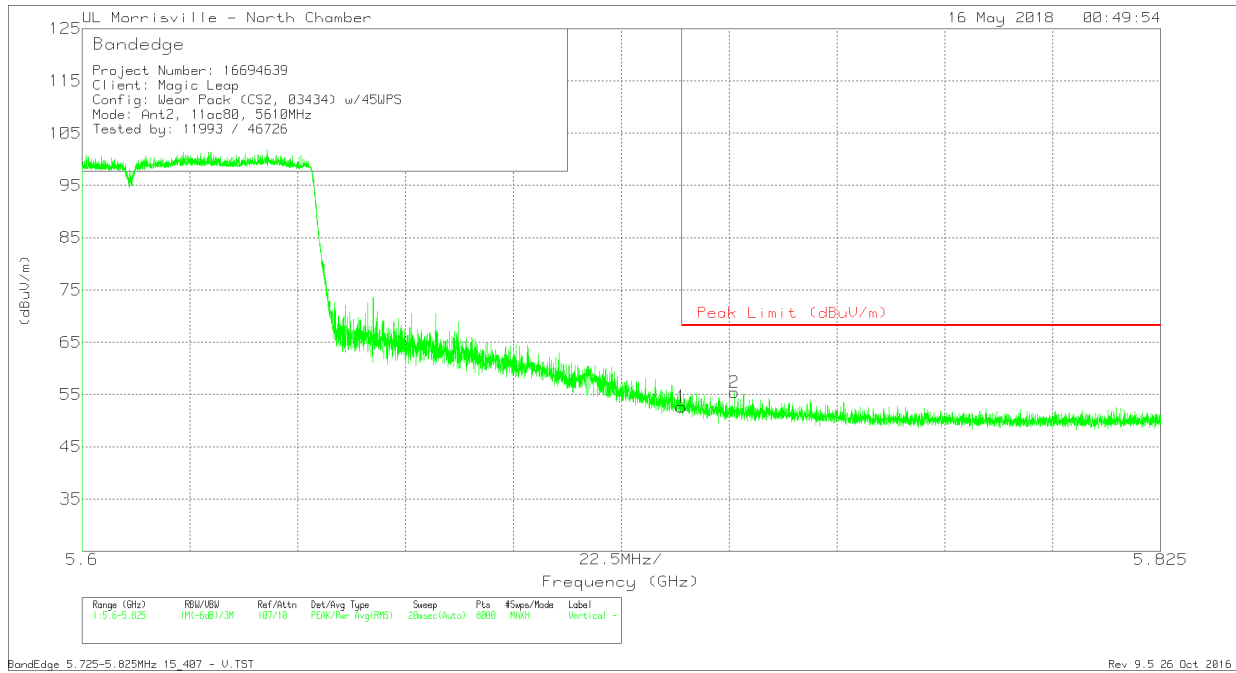
**AUTHORIZED BANDEDGE (HIGH CHANNEL) HORIZONTAL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	42.77	Pk	34.7	-23	0	54.47	68.2	-13.73	310	256	H
2	5.727	45.41	Pk	34.7	-23	0	57.11	68.2	-11.09	310	256	H

Pk - Peak detector

**AUTHORIZED BANDEDGE (HIGH CHANNEL) VERTICAL**

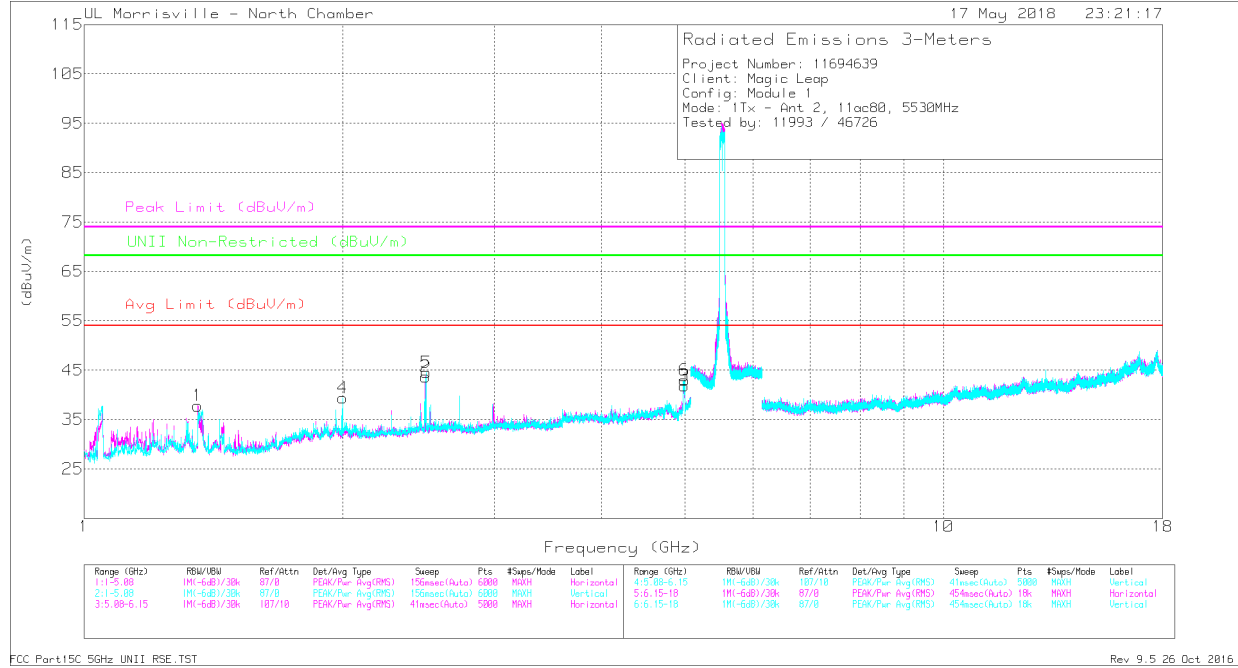


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	40.94	Pk	34.7	-23	0	52.64	68.2	-15.56	164	254	V
2	5.736	43.71	Pk	34.7	-23	0	55.41	68.2	-12.79	164	254	V

Pk - Peak detector

**HARMONICS AND SPURIOUS EMISSIONS**

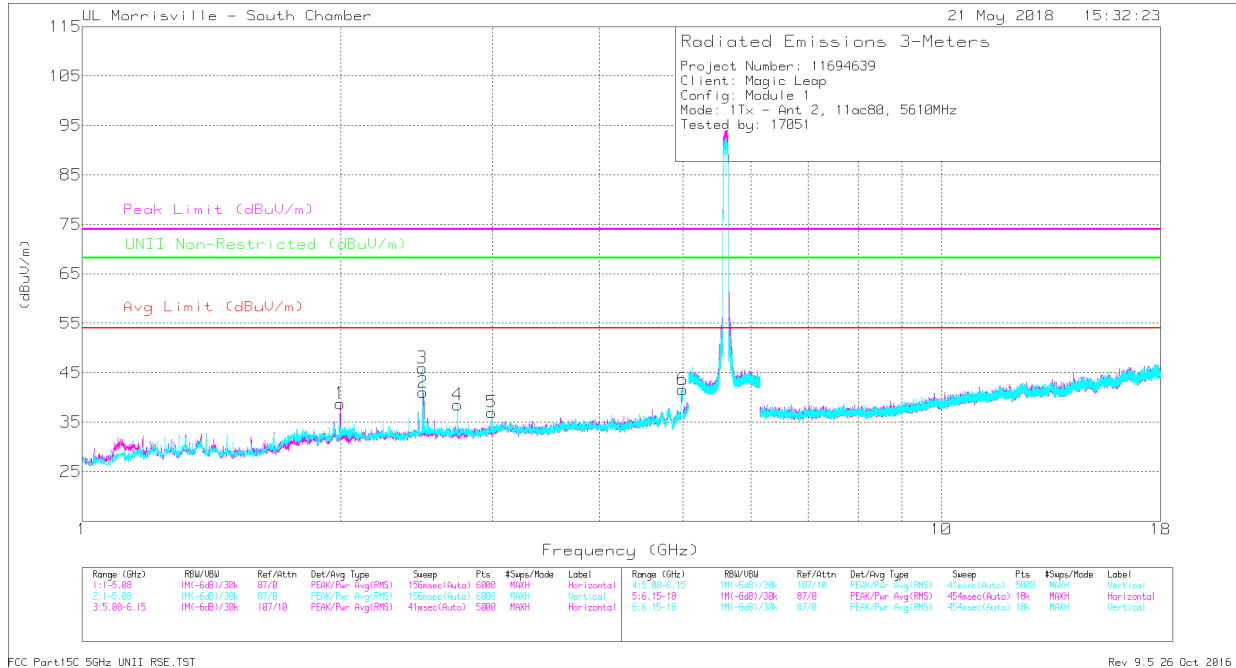
**LOW CHANNEL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.357	51.57	PK-U	29.3	-36.3	0	44.57	-	-	74	-29.43	-	-	85	156	H
	* 1.359	32.68	ADR	29.3	-36.3	.2	25.88	54	-28.12	-	-	-	-	85	156	H
2	* 2.5	57.79	PK-U	32.3	-34.4	0	55.69	-	-	74	-18.31	-	-	113	153	H
	* 2.496	31.95	ADR	32.3	-34.4	.2	30.05	54	-23.95	-	-	-	-	113	153	H
3	* 4.995	47.47	PK-U	34.1	-31.2	0	50.37	-	-	74	-23.63	-	-	15	109	H
	* 4.993	32.48	ADR	34.1	-31.2	.2	35.58	54	-18.42	-	-	-	-	15	109	H
5	* 2.5	58.53	PK-U	32.3	-34.4	0	56.43	-	-	74	-17.57	-	-	29	143	V
	* 2.497	32.19	ADR	32.3	-34.4	.2	30.29	54	-23.71	-	-	-	-	29	143	V
6	* 4.997	48.37	PK-U	34.1	-31.2	0	51.27	-	-	74	-22.73	-	-	360	113	V
	* 4.997	32.56	ADR	34.1	-31.2	.2	35.66	54	-18.34	-	-	-	-	360	113	V
4	1.999	52.79	PK-U	31.1	-34.9	0	48.99	-	-	-	-	68.2	-19.21	265	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

**MID CHANNEL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Fitr/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	* 2.497	57.9	PK-U	32.3	-34	0	56.2	-	-	74	-17.8	-	-	187	113	H
	* 2.499	31.88	ADR	32.3	-34	.2	30.38	54	-23.62	-	-	-	-	187	113	H
3	* 2.5	58.41	PK-U	32.3	-34	0	56.71	-	-	74	-17.29	-	-	194	174	V
	* 2.499	32.36	ADR	32.3	-34	.2	30.86	54	-23.14	-	-	-	-	194	174	V
4	* 2.736	47.91	PK-U	32.3	-33.8	0	46.41	-	-	74	-27.59	-	-	47	244	V
	* 2.736	33.73	ADR	32.3	-33.8	.2	32.43	54	-21.57	-	-	-	-	47	244	V
6	* 4.986	47.03	PK-U	34	-30	0	51.03	-	-	74	-22.97	-	-	70	100	V
	* 4.995	31.44	ADR	34	-30.1	.2	35.54	54	-18.46	-	-	-	-	70	100	V
1	1.992	51.29	PK-U	31	-34.2	0	48.09	-	-	-	-	68.2	-20.11	182	100	H
5	2.991	50.72	PK-U	32.8	-33.7	0	49.82	-	-	-	-	68.2	-18.38	6	100	V

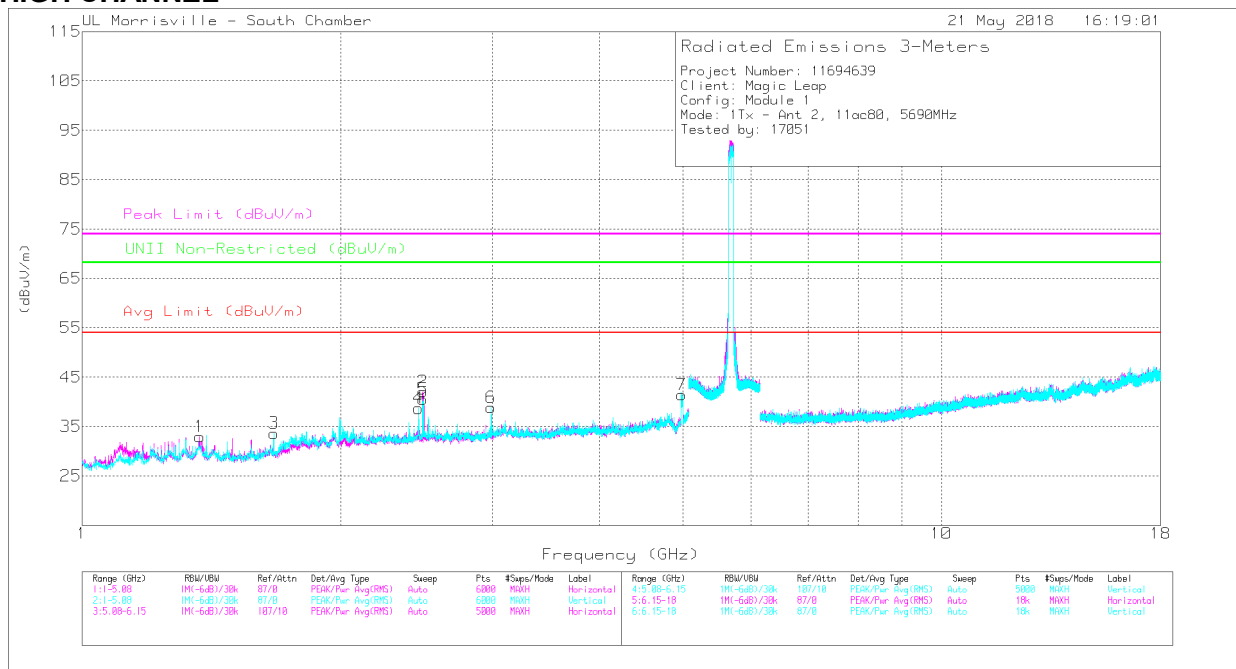
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



**HIGH CHANNEL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.368	44.87	PK-U	29.4	-34.7	0	39.57	-	-	74	-34.43	-	-	86	100	H
	* 1.368	33.5	ADR	29.4	-34.7	.2	28.4	54	-25.6	-	-	-	-	86	100	H
2	* 2.498	57	PK-U	32.3	-34	0	55.3	-	-	74	-18.7	-	-	185	112	H
	* 2.493	34.27	ADR	32.4	-33.9	.2	32.97	54	-21.03	-	-	-	-	185	112	H
3	* 1.671	45.72	PK-U	28.6	-34.4	0	39.92	-	-	74	-34.08	-	-	338	102	V
	* 1.671	37.04	ADR	28.6	-34.4	.2	31.44	54	-22.56	-	-	-	-	338	102	V
5	* 2.491	57.68	PK-U	32.4	-33.9	0	56.18	-	-	74	-17.82	-	-	194	176	V
	* 2.49	32.27	ADR	32.4	-33.9	.2	30.97	54	-23.03	-	-	-	-	194	176	V
7	* 4.984	48.39	PK-U	34	-30	0	52.39	-	-	74	-21.61	-	-	70	101	V
	* 4.989	31.59	ADR	34	-30	.2	35.79	54	-18.21	-	-	-	-	70	101	V
4	2.469	51.46	PK-U	32.4	-34.1	0	49.76	-	-	-	-	68.2	-18.44	199	193	V
6	2.993	50.83	PK-U	32.8	-33.7	0	49.93	-	-	-	-	68.2	-18.27	8	101	V

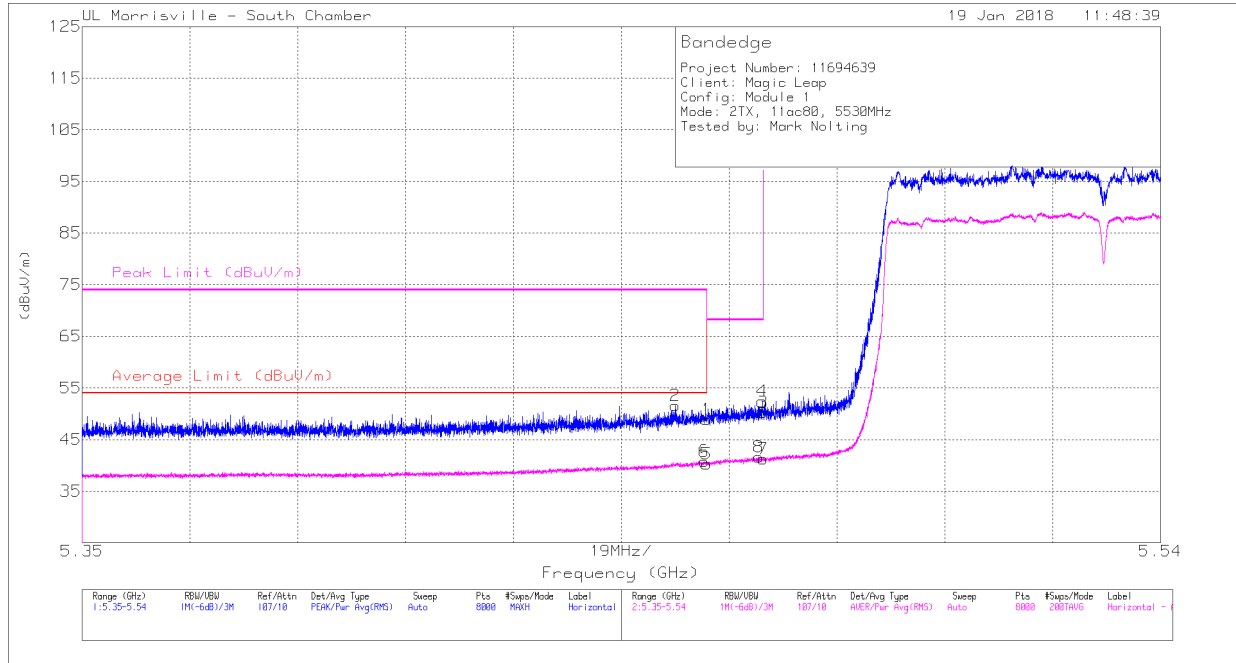
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

**10.2.39. TX ABOVE 1 GHz 802.11ac VHT80 MODE, 5.6 GHz BAND – MODULE 1, MIMO SDM**

**RESTRICTED BANDEDGE (LOW CHANNEL) HORIZONTAL – MODULE 1**



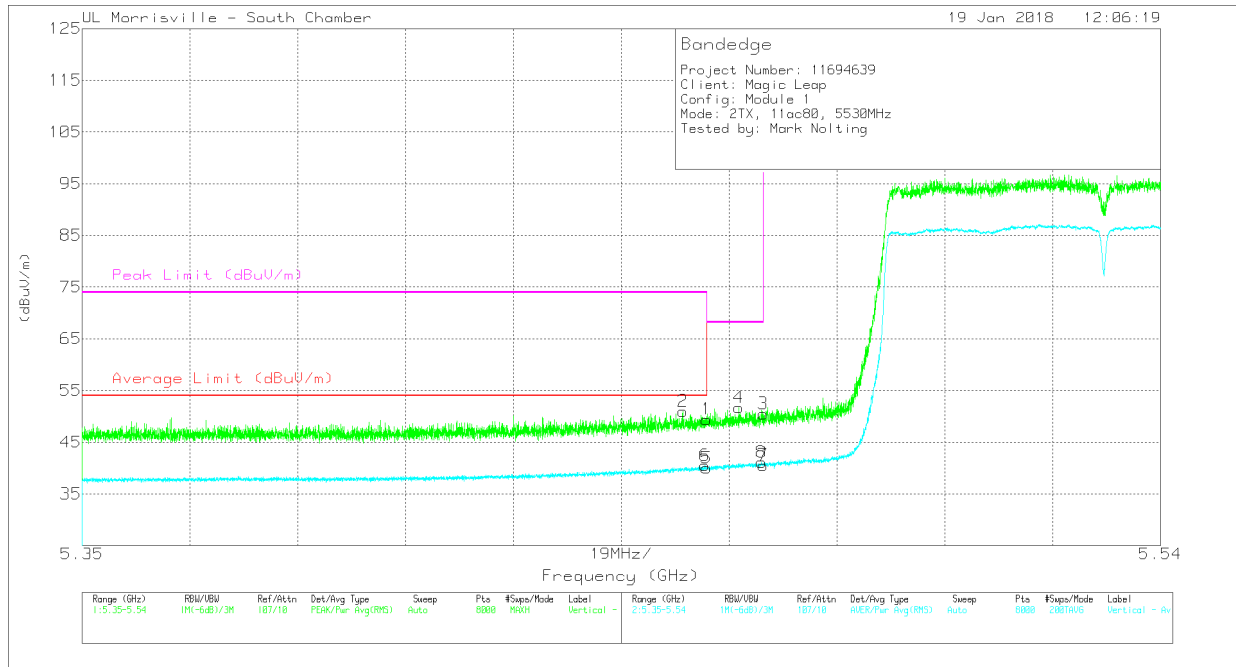
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.455	40.67	Pk	34.5	-23.6	0	51.57	-	-	74	-22.43	160	161	H
1	* 5.46	37.99	Pk	34.5	-23.6	0	48.89	-	-	74	-25.11	160	161	H
5	* 5.46	29.16	RMS	34.5	-23.6	.19	40.25	54	-13.75	-	-	160	161	H
6	* 5.46	29.69	RMS	34.5	-23.6	.19	40.78	54	-13.22	-	-	160	161	H
8	5.469	30.49	RMS	34.5	-23.6	.19	41.58	-	-	-	-	160	161	H
3	5.47	39.29	Pk	34.5	-23.6	0	50.19	-	-	68.2	-18.01	160	161	H
4	5.47	41.48	Pk	34.5	-23.6	0	52.38	-	-	68.2	-15.82	160	161	H
7	5.47	30.12	RMS	34.5	-23.6	.19	41.21	-	-	-	-	160	161	H

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

**RESTRICTED BANDEDGE (LOW CHANNEL) VERTICAL – MODULE 1**



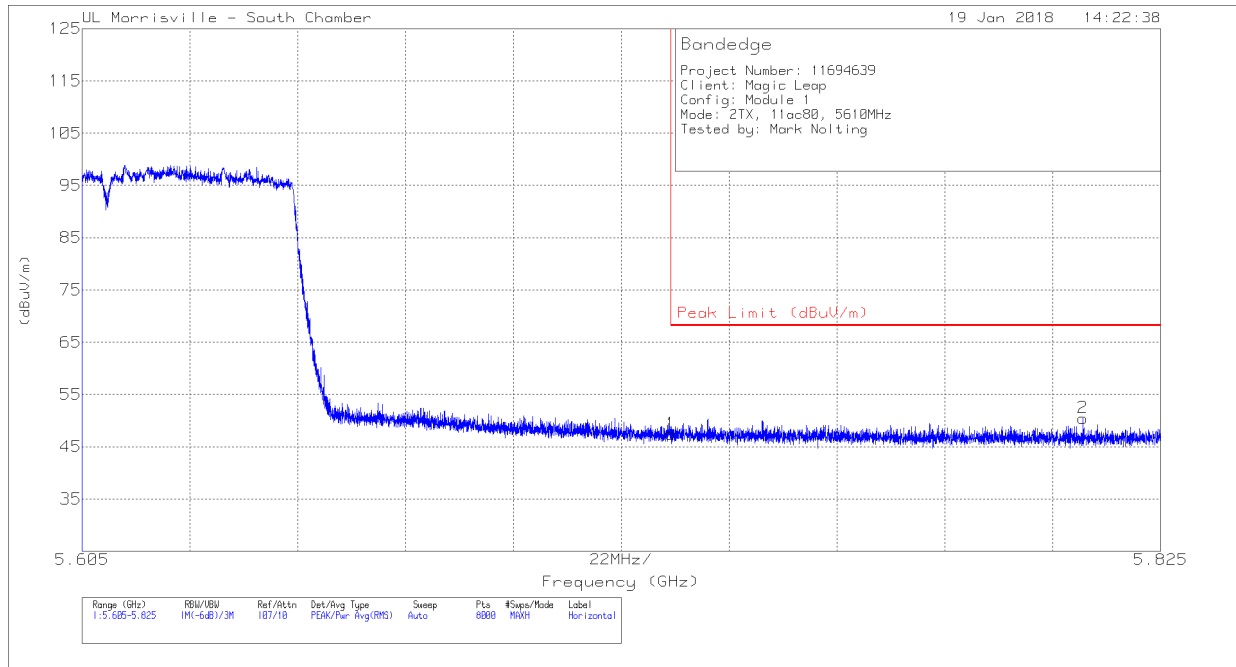
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.456	40.09	Pk	34.5	-23.6	0	50.99	-	-	74	-23.01	229	216	V
1	* 5.46	38.52	Pk	34.5	-23.6	0	49.42	-	-	74	-24.58	229	216	V
5	* 5.46	28.9	RMS	34.5	-23.6	.19	39.99	54	-14.01	-	-	229	216	V
6	* 5.46	29.38	RMS	34.5	-23.6	.19	40.47	54	-13.53	-	-	229	216	V
4	5.466	40.77	Pk	34.5	-23.6	0	51.67	-	-	68.2	-16.53	229	216	V
3	5.47	39.6	Pk	34.5	-23.6	0	50.5	-	-	68.2	-17.7	229	216	V
7	5.47	29.46	RMS	34.5	-23.6	.19	40.55	-	-	-	-	229	216	V
8	5.47	30.02	RMS	34.5	-23.6	.19	41.11	-	-	-	-	229	216	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

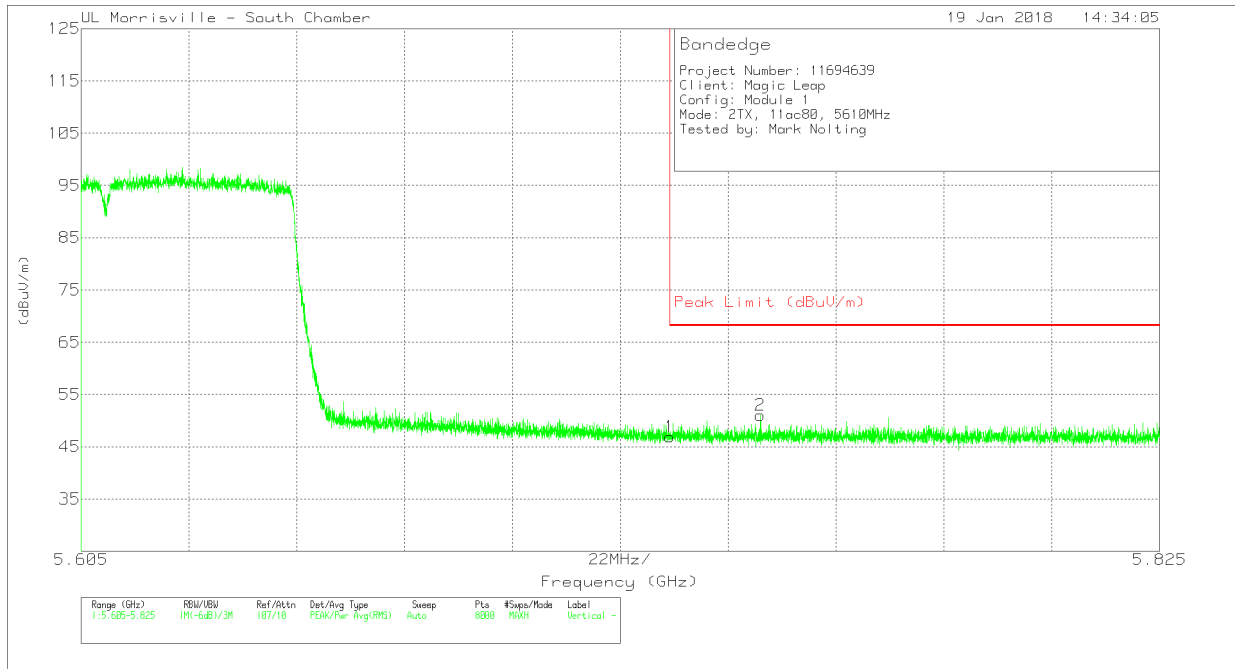
**AUTHORIZED BANDEDGE (HIGH CHANNEL) HORIZONTAL – MODULE 1**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	36.36	Pk	34.6	-23.5	47.46	68.2	-20.74	160	130	H
2	5.809	39.08	Pk	34.7	-23.3	50.48	68.2	-17.72	160	130	H

Pk - Peak detector

**AUTHORIZED BANDEDGE (HIGH CHANNEL) VERTICAL – MODULE 1**

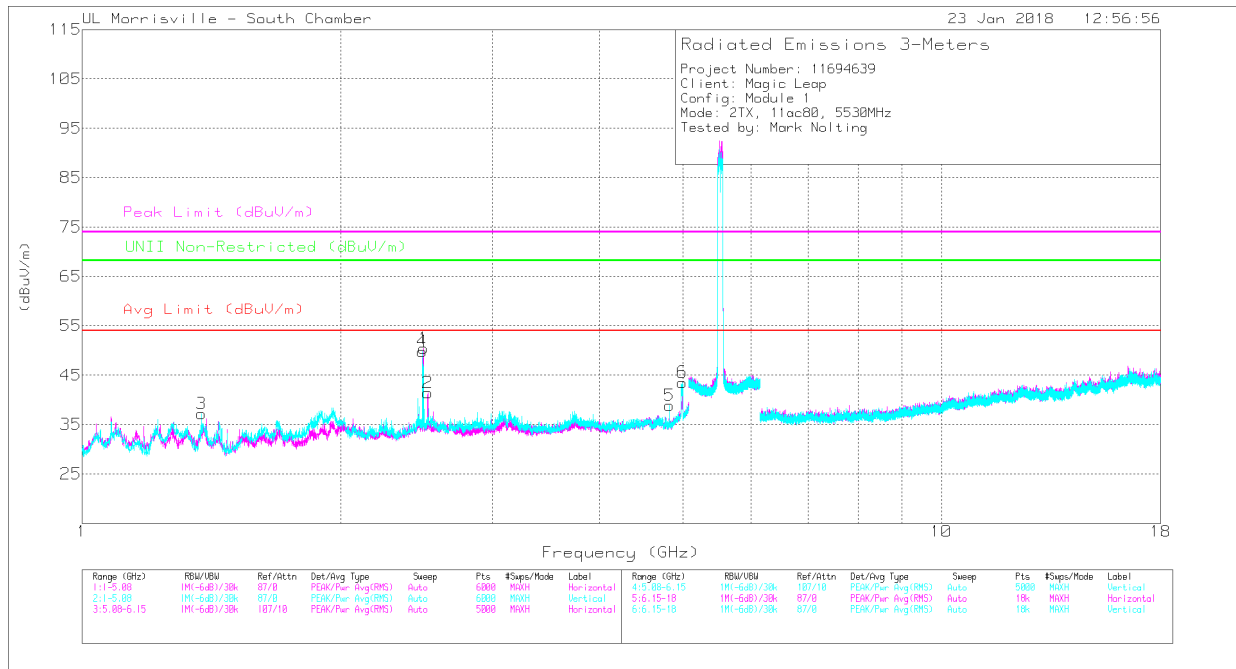


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	35.82	Pk	34.6	-23.5	46.92	68.2	-21.28	229	228	V
2	5.743	39.83	Pk	34.6	-23.4	51.03	68.2	-17.17	229	228	V

Pk - Peak detector

**HARMONICS AND SPURIOUS EMISSIONS**

**Low Channel**



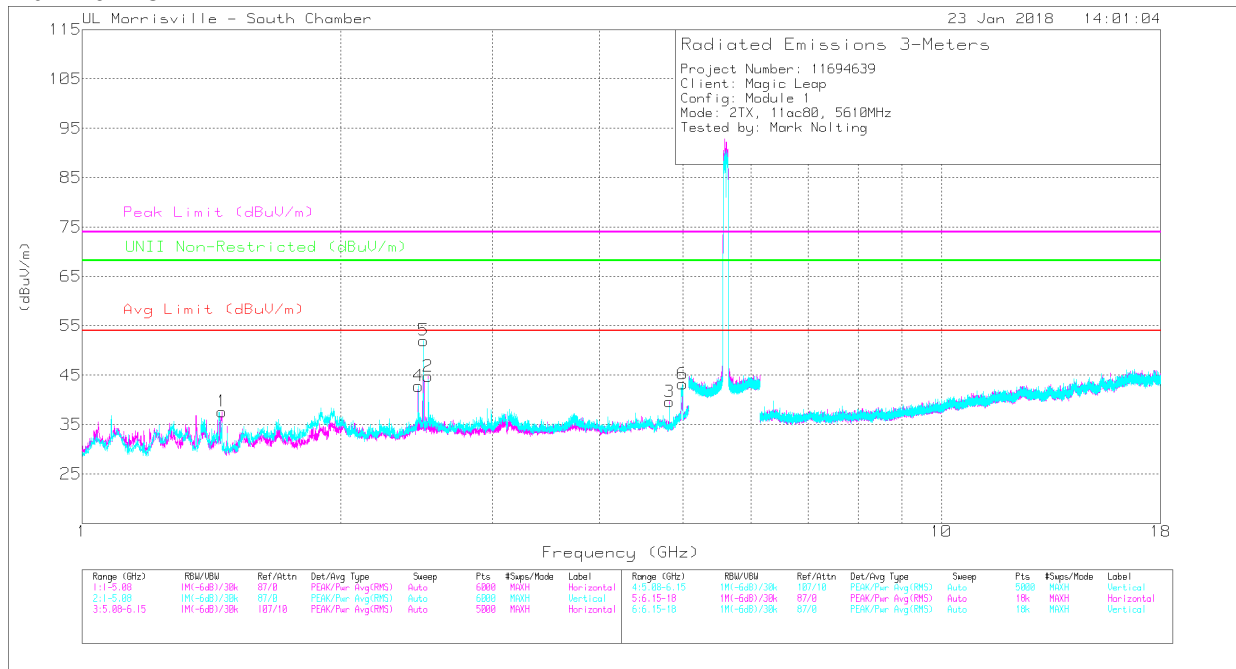
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.489	62.95	PK-U	32.4	-34.1	0	61.25	-	-	74	-12.75	-	-	196	108	H
	* 2.49	37.66	ADR	32.4	-34	.19	36.25	54	-17.75	-	-	-	-	196	108	H
3	* 1.376	50.91	PK-U	28.9	-34.7	0	45.11	-	-	74	-28.89	-	-	180	161	V
	* 1.376	40.82	ADR	28.9	-34.7	.19	35.21	54	-18.79	-	-	-	-	180	161	V
4	* 2.494	63.85	PK-U	32.4	-34	0	62.25	-	-	74	-11.75	-	-	97	101	V
	* 2.496	36.44	ADR	32.4	-34	.19	35.03	54	-18.97	-	-	-	-	97	101	V
5	* 4.824	43.92	PK-U	34	-30.9	0	47.02	-	-	74	-26.98	-	-	223	243	V
	* 4.824	36.34	ADR	34	-30.9	.19	39.63	54	-14.37	-	-	-	-	223	243	V
6	* 5	48.02	PK-U	34	-30.2	0	51.82	-	-	74	-22.18	-	-	138	101	V
	* 4.998	32.67	ADR	34	-30.2	.19	36.66	54	-17.34	-	-	-	-	138	101	V
2	2.531	58.16	PK-U	32.2	-34	0	56.36	-	-	-	-	68.2	-11.84	192	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

**Mid Channel**



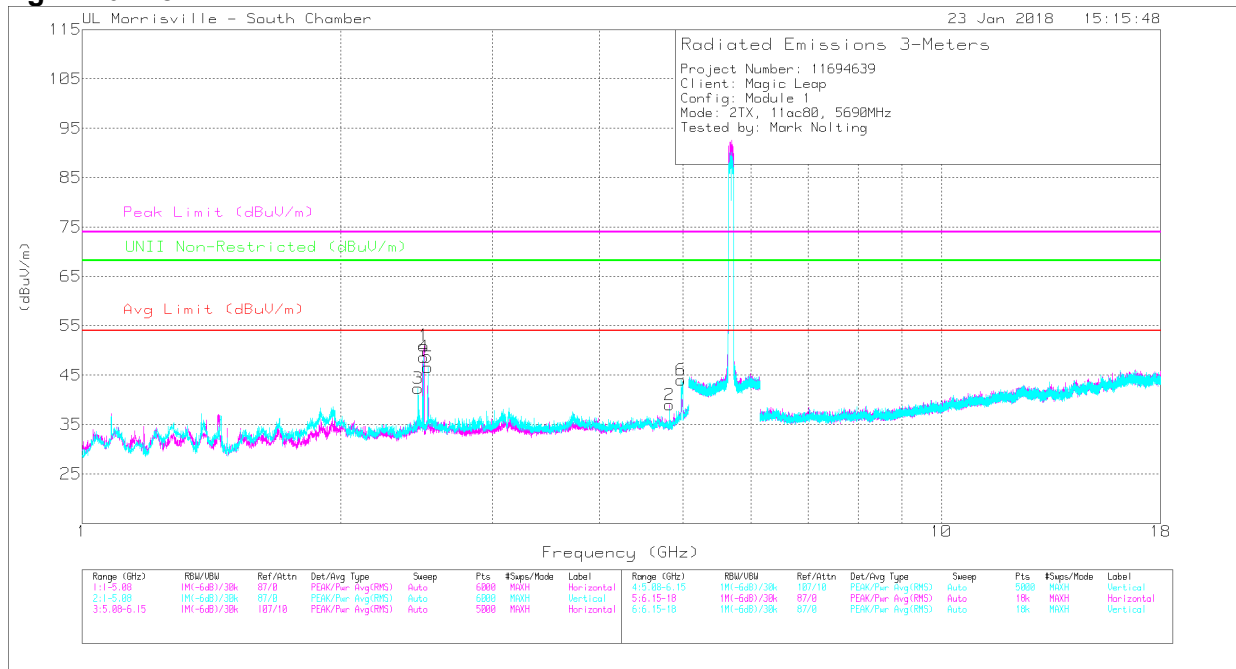
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.437	56.8	PK-U	28.7	-34.9	0	50.6	-	-	74	-23.4	-	-	155	179	H
	* 1.44	33.35	ADR	28.7	-34.9	.19	27.34	54	-26.66	-	-	-	-	155	179	H
3	* 4.824	42.39	PK-U	34	-30.9	0	45.49	-	-	74	-28.51	-	-	127	101	H
	* 4.824	34.7	ADR	34	-30.9	.19	37.99	54	-16.01	-	-	-	-	127	101	H
5	* 2.492	63.63	PK-U	32.4	-34	0	62.03	-	-	74	-11.97	-	-	98	101	V
	* 2.49	35.91	ADR	32.4	-34	.19	34.5	54	-19.5	-	-	-	-	98	101	V
6	* 5	48.14	PK-U	34	-30.2	0	51.94	-	-	74	-22.06	-	-	138	101	V
	* 5	33.06	ADR	34	-30.2	.19	37.05	54	-16.95	-	-	-	-	138	101	V
4	2.467	57.29	PK-U	32.4	-34	0	55.69	-	-	-	-	68.2	-12.51	101	101	V
2	2.523	58.24	PK-U	32.3	-34	0	56.54	-	-	-	-	68.2	-11.66	191	106	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**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (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	* 2.499	63.15	PK-U	32.3	-34	0	61.45	-	-	74	-12.55	-	-	196	111	H
	* 2.49	37.08	ADR	32.4	-34	.19	35.67	54	-18.33	-	-	-	-	196	111	H
2	* 4.824	41.97	PK-U	34	-30.9	0	45.07	-	-	74	-28.93	-	-	125	101	H
	* 4.824	33.94	ADR	34	-30.9	.19	37.23	54	-16.77	-	-	-	-	125	101	H
4	* 2.492	63.75	PK-U	32.4	-34	0	62.15	-	-	74	-11.85	-	-	94	101	V
	* 2.49	36.8	ADR	32.4	-34	.19	35.39	54	-18.61	-	-	-	-	94	101	V
6	* 4.999	48.33	PK-U	34	-30.2	0	52.13	-	-	74	-21.87	-	-	140	101	V
	* 4.999	32.86	ADR	34	-30.2	.19	36.85	54	-17.15	-	-	-	-	140	101	V
3	2.459	57.33	PK-U	32.4	-34.1	0	55.63	-	-	-	-	68.2	-12.57	96	102	V
5	2.526	58.47	PK-U	32.3	-34	0	56.77	-	-	-	-	68.2	-11.43	98	101	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

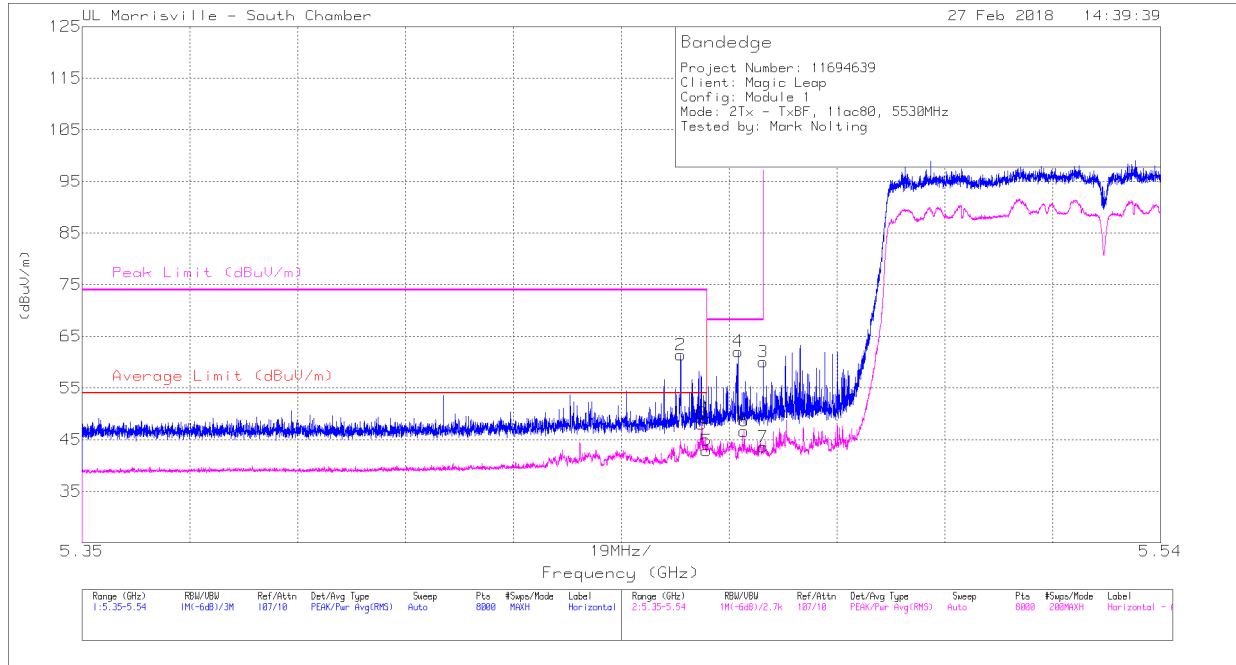
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



**10.2.40. TX ABOVE 1 GHz 802.11ac VHT80 MODE, 5.6 GHz BAND – MODULE 1, MIMO TxBF**

**RESTRICTED BANDEDGE (LOW CHANNEL) HORIZONTAL**



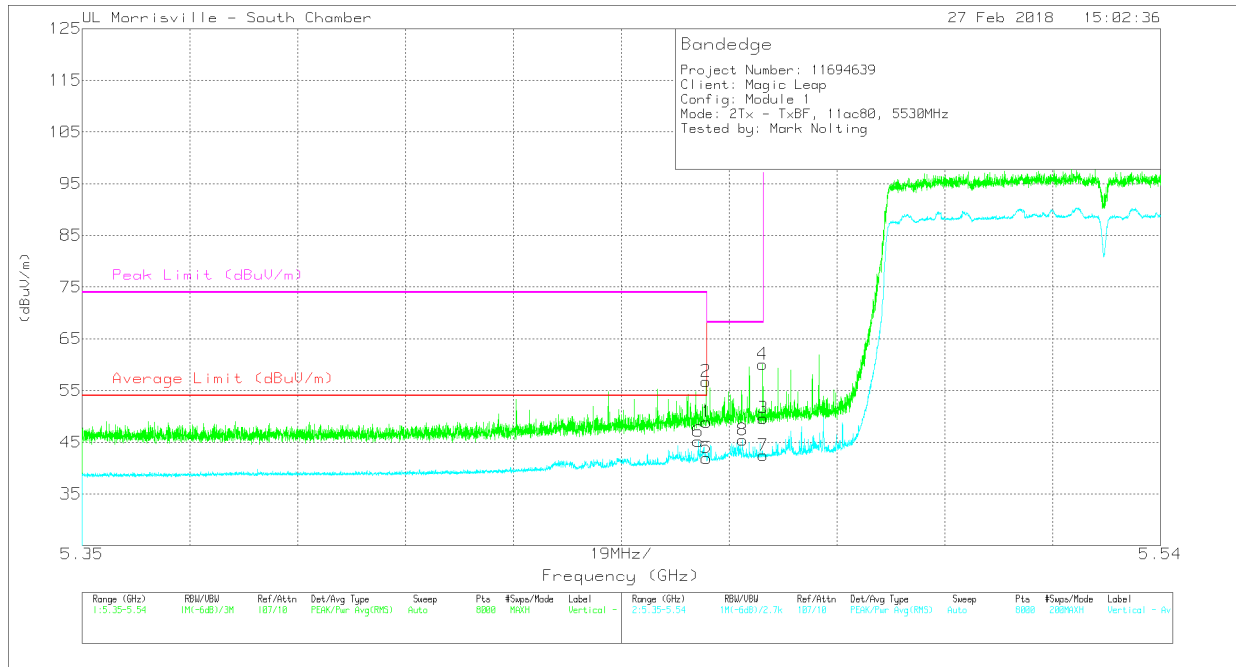
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.455	50.47	Pk	34.5	-23.6	61.37	-	-	74	-12.63	155	203	H
6	* 5.459	37.18	V1TR	34.5	-23.6	48.08	54	-5.92	-	-	155	203	H
1	* 5.46	38.18	Pk	34.5	-23.6	49.08	-	-	74	-24.92	155	203	H
5	* 5.46	31.93	V1TR	34.5	-23.6	42.83	54	-11.17	-	-	155	203	H
4	5.466	51.17	Pk	34.5	-23.6	62.07	-	-	68.2	-6.13	155	203	H
8	5.467	35.71	V1TR	34.5	-23.6	46.61	-	-	-	-	155	203	H
3	5.47	49.15	Pk	34.5	-23.6	60.05	-	-	68.2	-8.15	155	203	H
7	5.47	32.71	V1TR	34.5	-23.6	43.61	-	-	-	-	155	203	H

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

V1TR - U-NII: VB=1/Ton, RMS Average where: Ton is packet duration

**RESTRICTED BANDEDGE (LOW CHANNEL) VERTICAL**



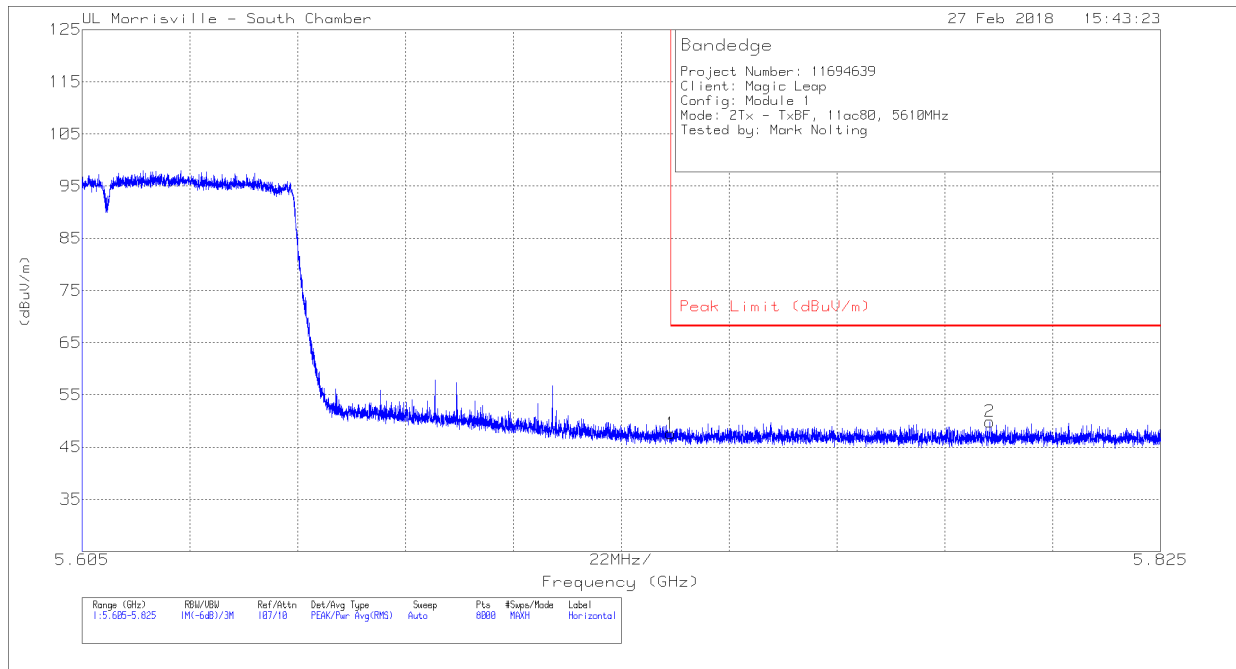
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 5.459	34.28	V1TR	34.5	-23.6	45.18	54	-8.82	-	-	325	101	V
1	* 5.46	38.03	Pk	34.5	-23.6	48.93	-	-	74	-25.07	325	101	V
2	* 5.46	45.87	Pk	34.5	-23.6	56.77	-	-	74	-17.23	325	101	V
5	* 5.46	31.03	V1TR	34.5	-23.6	41.93	54	-12.07	-	-	325	101	V
8	5.466	34.56	V1TR	34.5	-23.6	45.46	-	-	-	-	325	101	V
3	5.47	38.77	Pk	34.5	-23.6	49.67	-	-	68.2	-18.53	325	101	V
4	5.47	49.2	Pk	34.5	-23.6	60.1	-	-	68.2	-8.1	325	101	V
7	5.47	31.6	V1TR	34.5	-23.6	42.5	-	-	-	-	325	101	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

V1TR - U-NII: VB=1/Ton, RMS Average where: Ton is packet duration

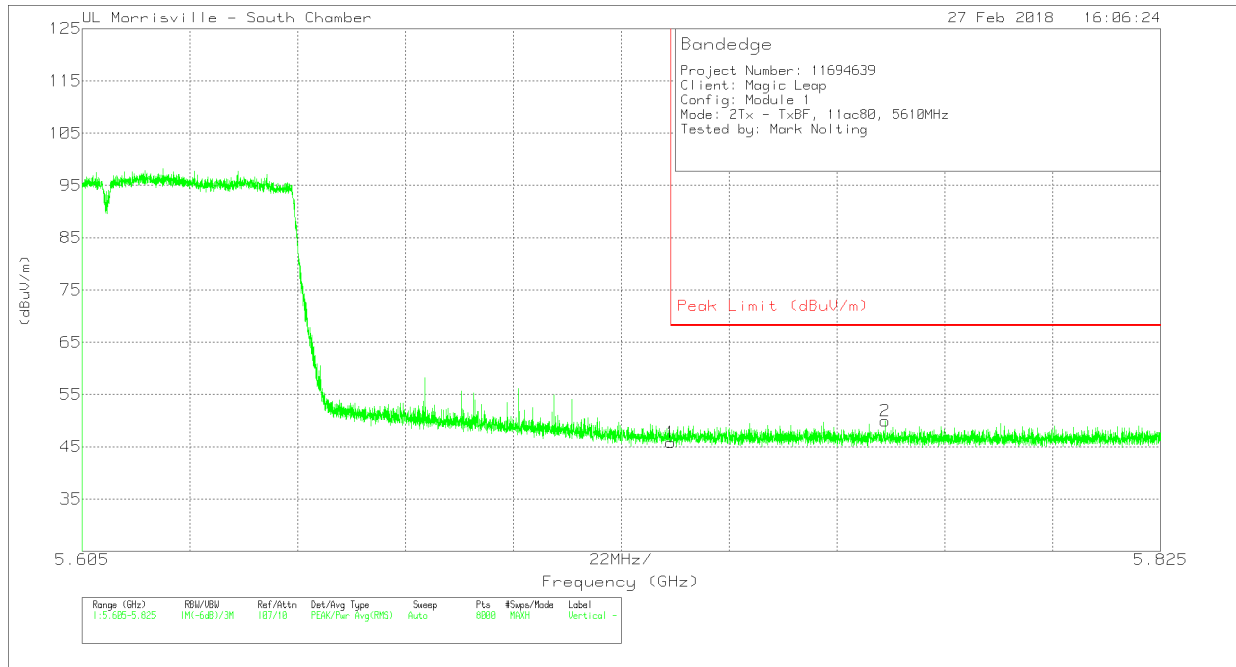
**AUTHORIZED BANDEDGE (HIGH CHANNEL) HORIZONTAL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	36.55	Pk	34.6	-23.5	47.65	68.2	-20.55	158	188	H
2	5.79	38.48	Pk	34.7	-23.3	49.88	68.2	-18.32	158	188	H

Pk - Peak detector

**AUTHORIZED BANDEDGE (HIGH CHANNEL) VERTICAL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	34.69	Pk	34.6	-23.5	45.79	68.2	-22.41	326	101	V
2	5.769	38.52	Pk	34.7	-23.3	49.92	68.2	-18.28	326	101	V

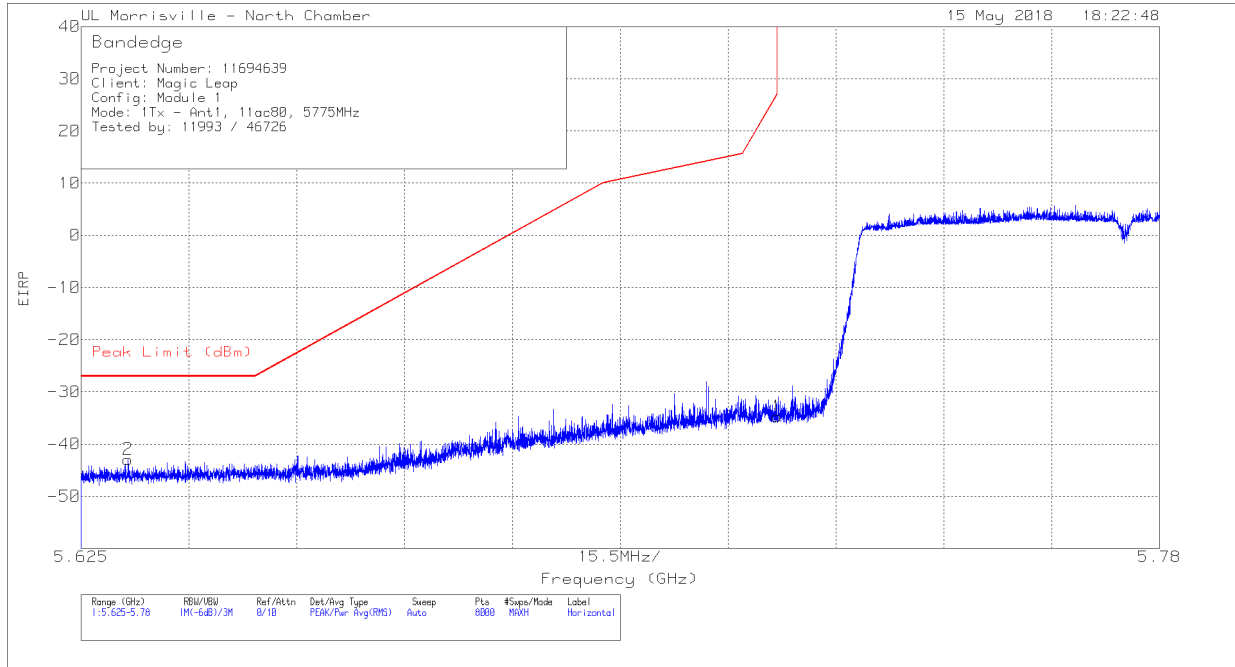
Pk - Peak detector

Note - Transmit beamforming only supported by 802.11n and 802.11ac modes. The router was investigated at different  $\theta$ s around the EUT. It was determined that there was <3dB delta in position. The router was then placed behind the receiving antenna. Transmit beamforming spot check scans were taken and this showed little to no variation from 802.11n/ac MIMO SDM spurious scans. Therefore, 802.11n/ac MIMO SDM spurious data is used to represent 802.11nHT20/nHT40 and 802.11ac VHT80 transmit beamforming. For transmit beamforming testing 802.11ac VHT20 and VHT40 were tested to cover 802.11n HT20 and HT40.

**10.2.41. TX ABOVE 1 GHz 802.11ac VHT80 MODE, 5.8 GHz BAND – MODULE 1, SISO ANT0**

**RESTRICTED BANDEDGE (LOW CHANNEL) HORIZONTAL**

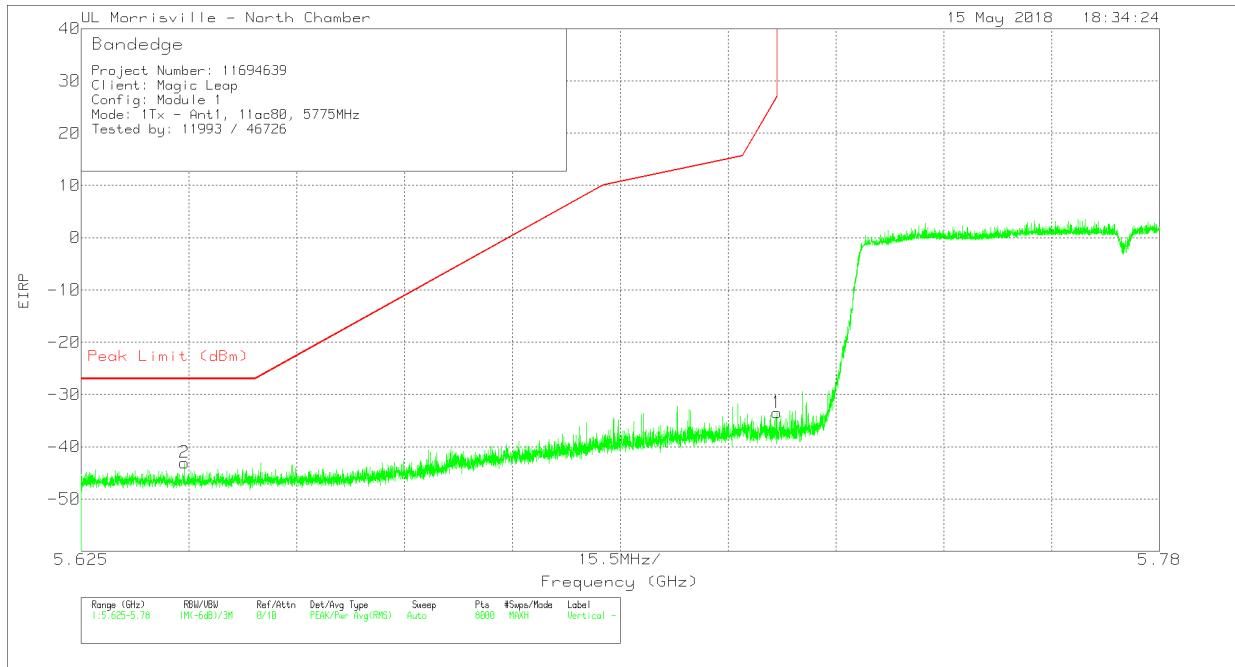
Note – The plots in this section show ANT 1 but should be considered ANT0.



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.632	-66.12	Pk	34.5	-23.1	11.8	0	-42.92	-27	-15.92	267	270	H
1	5.725	-58.21	Pk	34.7	-23	11.8	0	-34.71	26.97	-61.68	267	270	H

Pk - Peak detector

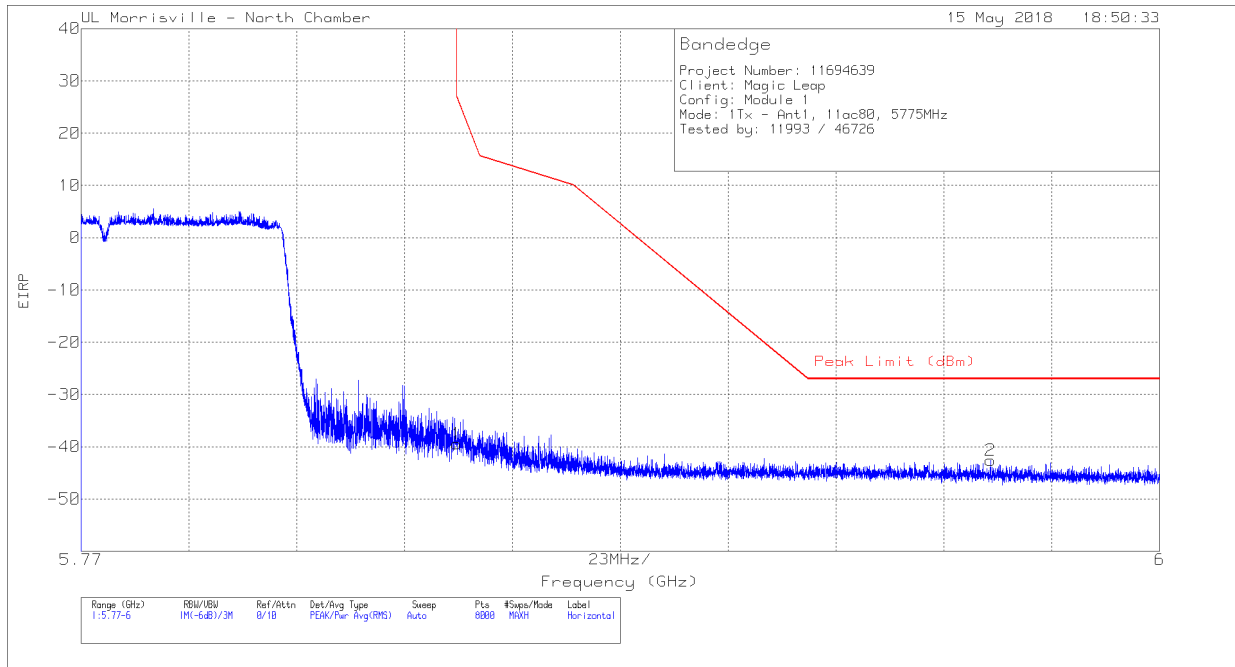
**RESTRICTED BANDEDGE (LOW CHANNEL) VERTICAL**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.64	-66.23	Pk	34.5	-23.1	11.8	-43.03	-27	-16.03	270	302	V
1	5.725	-56.93	Pk	34.7	-23	11.8	-33.43	26.97	-60.4	270	302	V

Pk - Peak detector

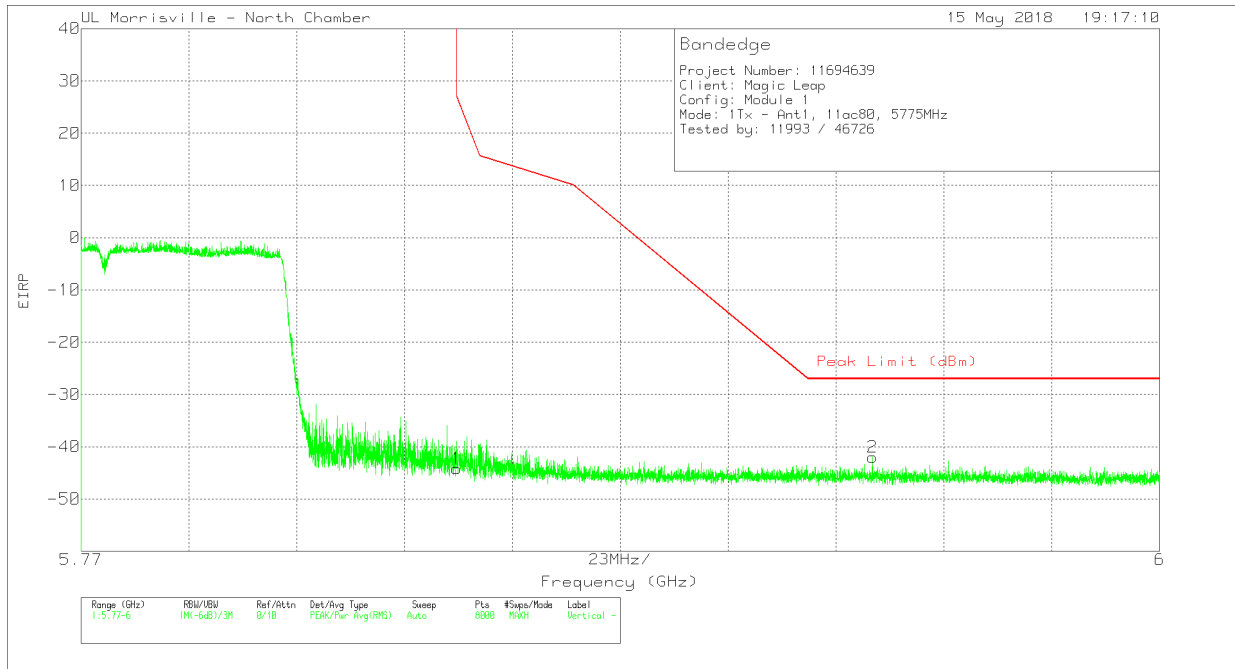
**AUTHORIZED BANDEDGE (HIGH CHANNEL) HORIZONTAL**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-63.53	Pk	34.8	-22.5	11.8	0	-39.43	26.95	-66.38	267	323	H
2	5.964	-67.32	Pk	34.9	-22	11.8	0	-42.62	-27	-15.62	267	323	H

Pk - Peak detector

**AUTHORIZED BANDEDGE (HIGH CHANNEL) VERTICAL**

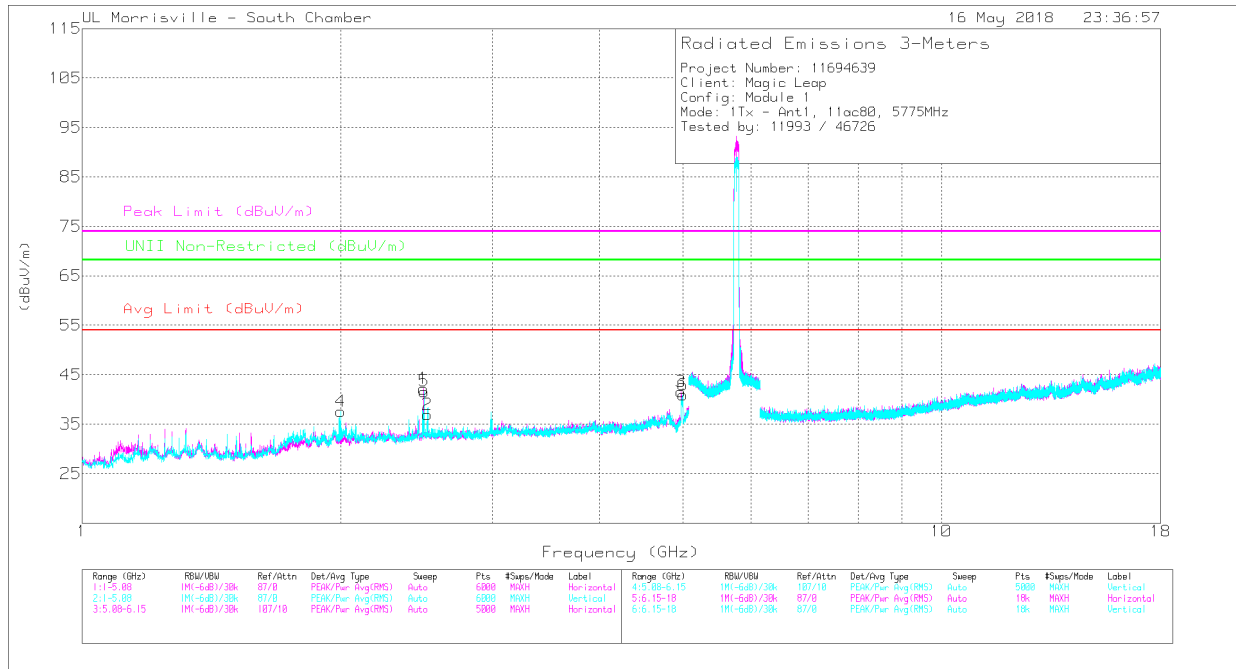


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-68.31	Pk	34.8	-22.5	11.8	0	-44.21	26.95	-71.16	247	232	V
2	5.939	-66.62	Pk	34.9	-22.1	11.8	0	-42.02	-27	-15.02	247	232	V

Pk - Peak detector



**HARMONICS AND SPURIOUS EMISSIONS**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.498	55.53	PK-U	32.3	-34	0	53.83	-	-	74	-20.17	-	-	184	167	H
	* ** 2.499	30.96	ADR	32.3	-34	.2	29.46	54	-24.54	-	-	-	-	184	167	H
3	* ** 4.977	43.55	PK-U	34	-29.8	0	47.75	-	-	74	-26.25	-	-	74	128	H
	* ** 4.979	29.44	ADR	34	-29.8	.2	33.84	54	-20.16	-	-	-	-	74	128	H
2	2.524	49.71	PK-U	32.4	-34	0	48.11	-	-	-	-	68.2	-20.09	187	134	H
5	* ** 2.498	55.87	PK-U	32.3	-34	0	54.17	-	-	74	-19.83	-	-	183	111	V
	* ** 2.497	31.1	ADR	32.3	-34	.2	29.6	54	-24.4	-	-	-	-	183	111	V
6	* ** 4.998	46.93	PK-U	34	-30.1	0	50.83	-	-	74	-23.17	-	-	62	101	V
	* ** 4.996	30.91	ADR	34	-30.1	.2	35.01	54	-18.99	-	-	-	-	62	101	V
4	1.998	50.93	PK-U	31	-34.2	0	47.73	-	-	-	-	68.2	-20.47	329	314	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

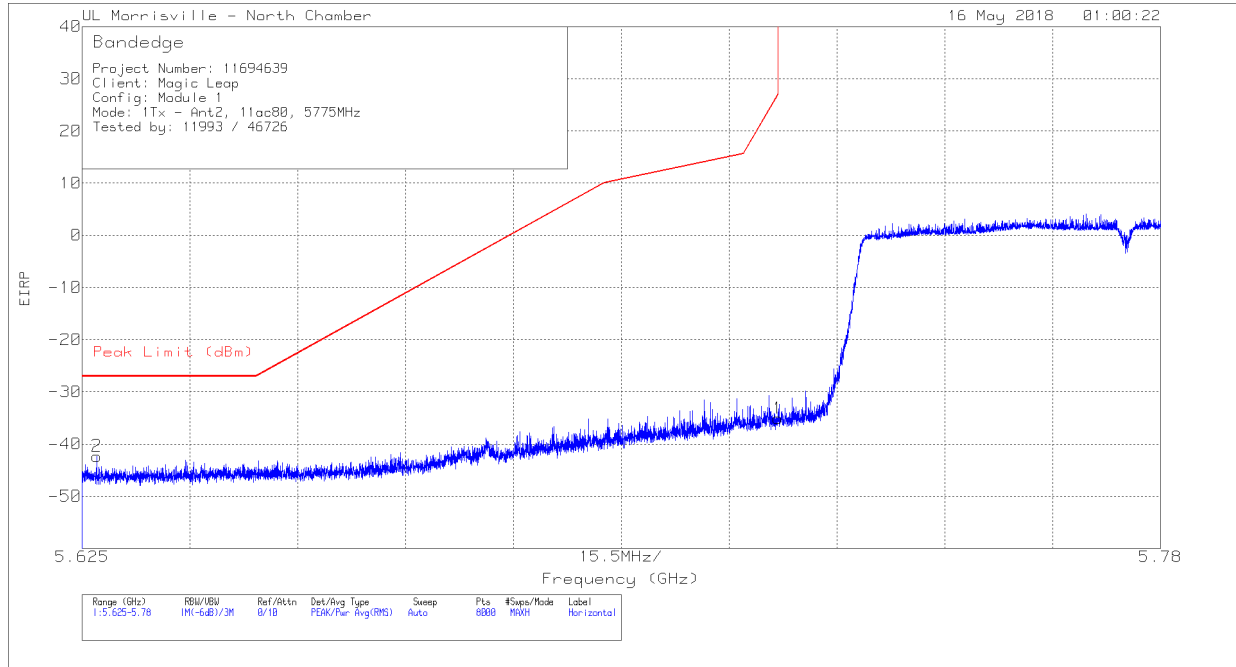
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

**10.2.42. TX ABOVE 1 GHz 802.11ac VHT80 MODE, 5.8 GHz BAND – MODULE 1, SISO ANT1**

**RESTRICTED BANDEDGE (LOW CHANNEL) HORIZONTAL**

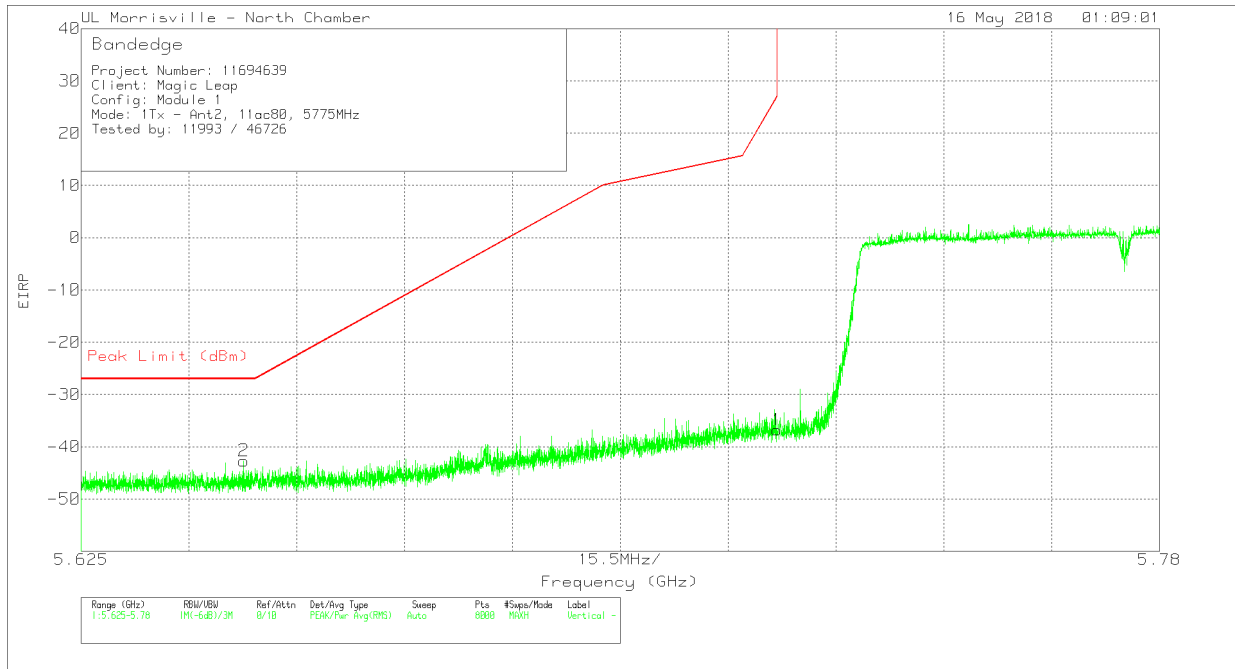
Note – The plots in this section show ANT 2 but should be considered ANT1.



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.627	-65.42	Pk	34.5	-23.2	11.8	0	-42.32	-27	-15.32	356	205	H
1	5.725	-58.58	Pk	34.7	-23	11.8	0	-35.08	26.97	-62.05	356	205	H

Pk - Peak detector

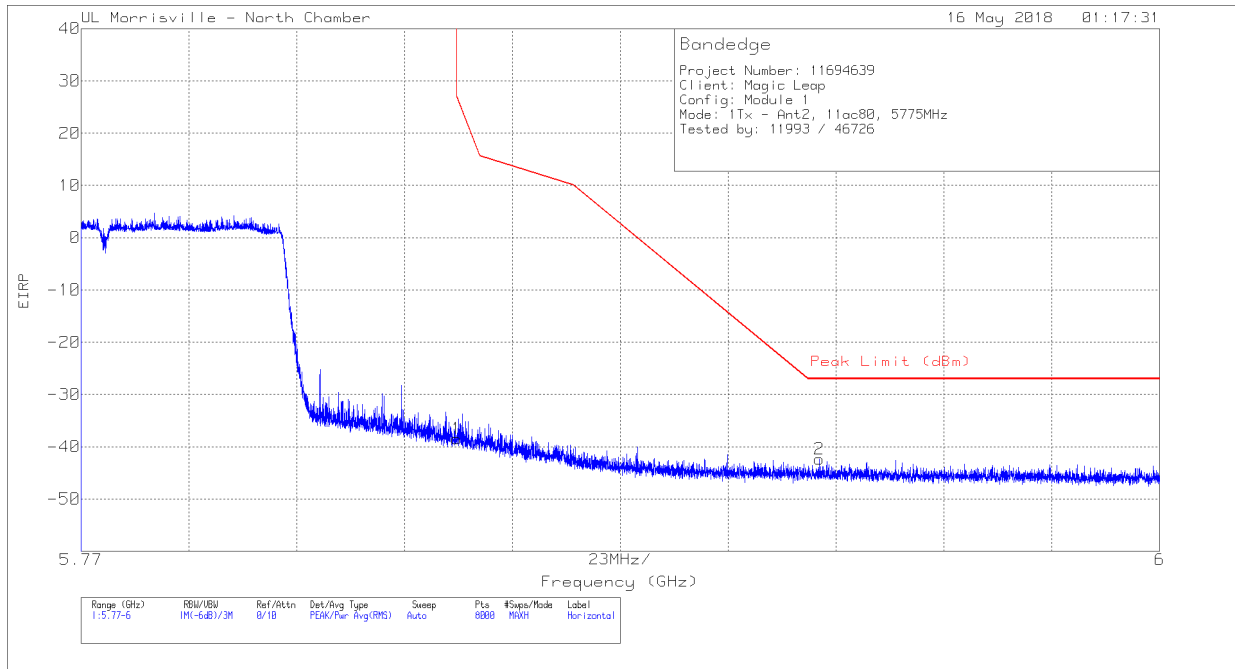
**RESTRICTED BANDEDGE (LOW CHANNEL) VERTICAL**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.648	-65.88	Pk	34.5	-23.1	11.8	0	-42.68	-27	-15.68	157	238	V
1	5.725	-60.26	Pk	34.7	-23	11.8	0	-36.76	26.97	-63.73	157	238	V

Pk - Peak detector

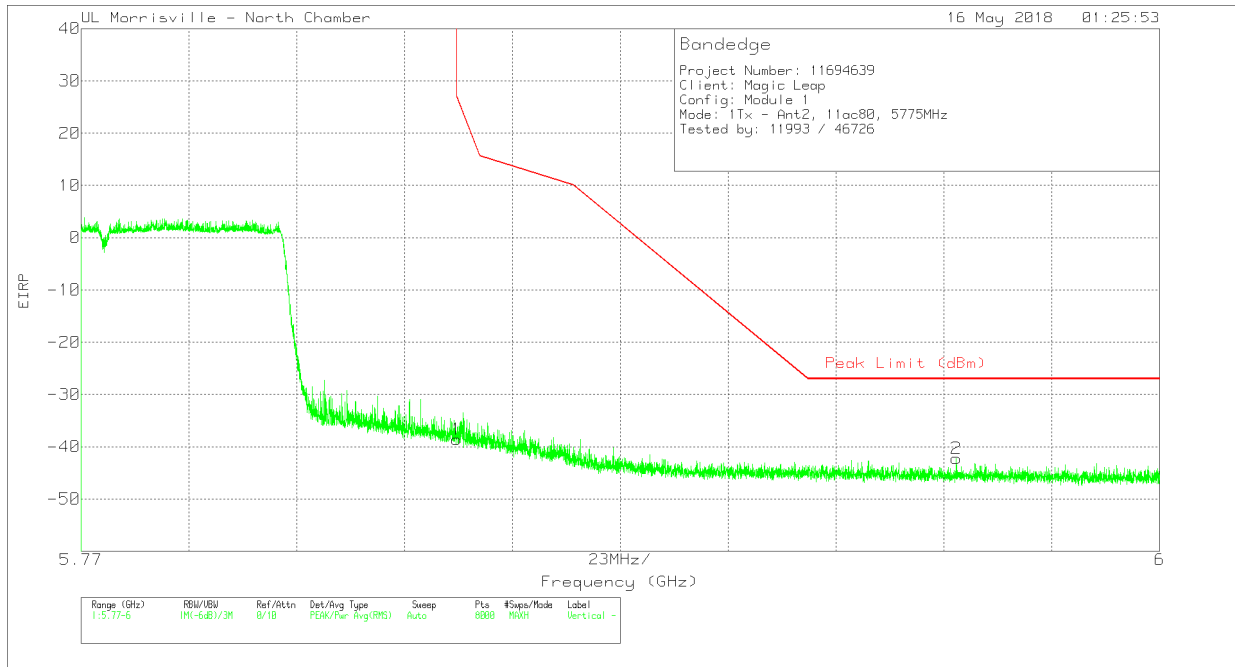
**AUTHORIZED BANDEDGE (HIGH CHANNEL) HORIZONTAL**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-62.59	Pk	34.8	-22.5	11.8	0	-38.49	26.95	-65.44	182	212	H
2	5.927	-66.95	Pk	34.9	-22.1	11.8	0	-42.35	-27	-15.35	182	212	H

Pk - Peak detector

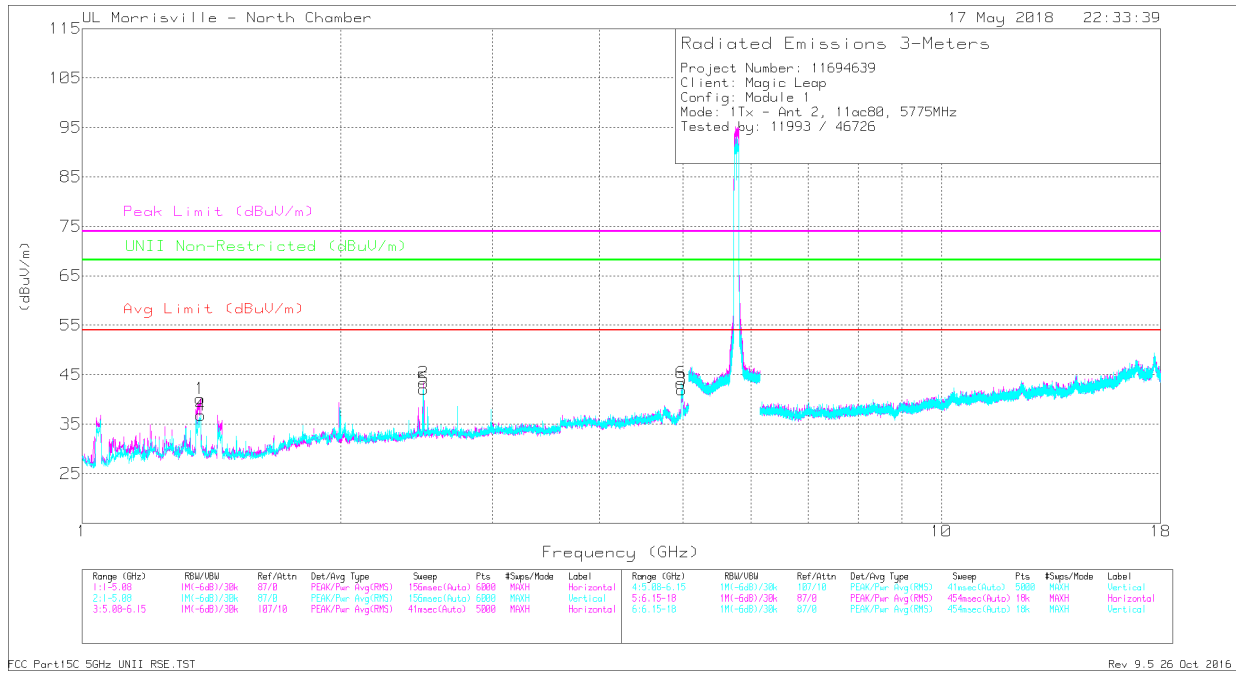
**AUTHORIZED BANDEDGE (HIGH CHANNEL) VERTICAL**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-62.72	Pk	34.8	-22.5	11.8	0	-38.62	26.95	-65.57	128	242	V
2	5.957	-66.96	Pk	34.9	-22	11.8	0	-42.26	-27	-15.26	128	242	V

Pk - Peak detector

**HARMONICS AND SPURIOUS EMISSIONS**

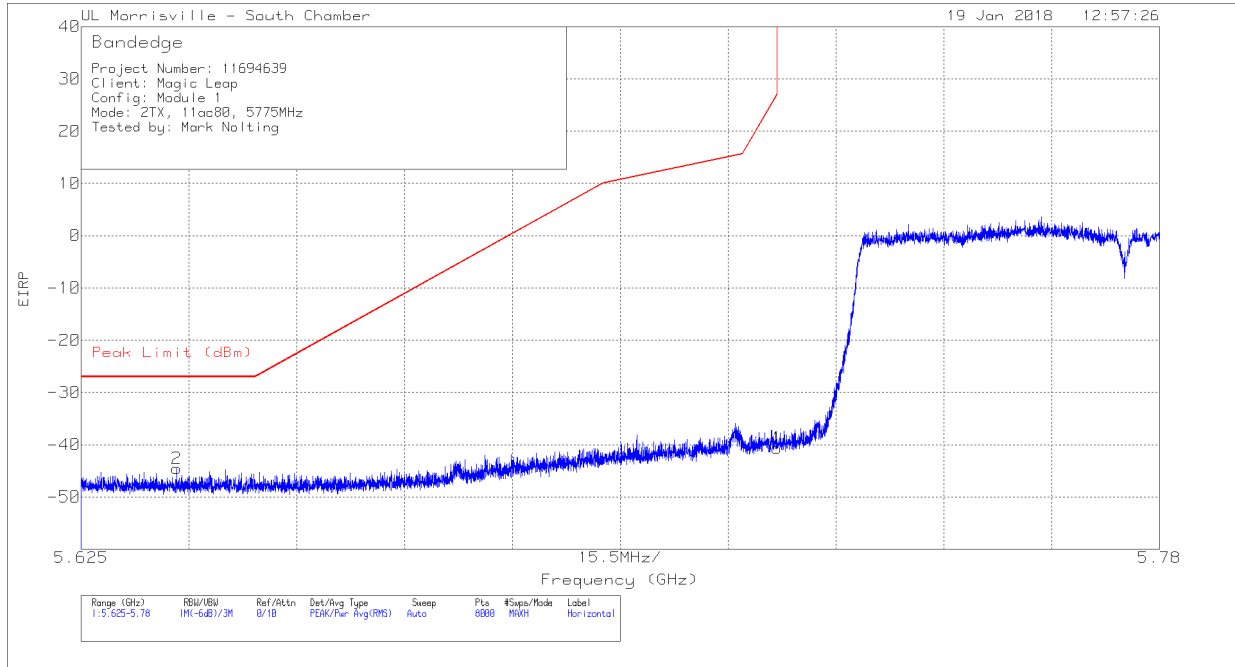


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.374	55.42	PK-U	29.3	-36.2	0	48.52	-	-	74	-25.48	-	-	60	136	H
	* 1.37	34.45	ADR	29.4	-36.3	.2	27.75	54	-26.25	-	-	-	-	60	136	H
2	* 2.495	54.94	PK-U	32.3	-34.4	0	52.84	-	-	74	-21.16	-	-	296	155	H
	* 2.497	31.35	ADR	32.3	-34.4	.2	29.45	54	-24.55	-	-	-	-	296	155	H
3	* 4.984	48.74	PK-U	34.1	-31.3	0	51.54	-	-	74	-22.46	-	-	18	141	H
	* 4.984	32.75	ADR	34.1	-31.3	.2	35.75	54	-18.25	-	-	-	-	18	141	H
4	* 1.374	52.54	PK-U	29.3	-36.2	0	45.64	-	-	74	-28.36	-	-	243	203	V
	* 1.376	33.77	ADR	29.2	-36.2	.2	26.97	54	-27.03	-	-	-	-	243	203	V
5	* 2.497	56.79	PK-U	32.3	-34.4	0	54.69	-	-	74	-19.31	-	-	17	106	V
	* 2.496	31.54	ADR	32.3	-34.4	.2	29.64	54	-24.36	-	-	-	-	17	106	V
6	* 4.978	50	PK-U	34.1	-31.2	0	52.9	-	-	74	-21.1	-	-	3	106	V
	* 4.978	33.07	ADR	34.1	-31.2	.2	36.17	54	-17.83	-	-	-	-	3	106	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

**10.2.43. TX ABOVE 1 GHz 802.11ac VHT80 MODE, 5.8 GHz BAND – MODULE 1, MIMO SDM**

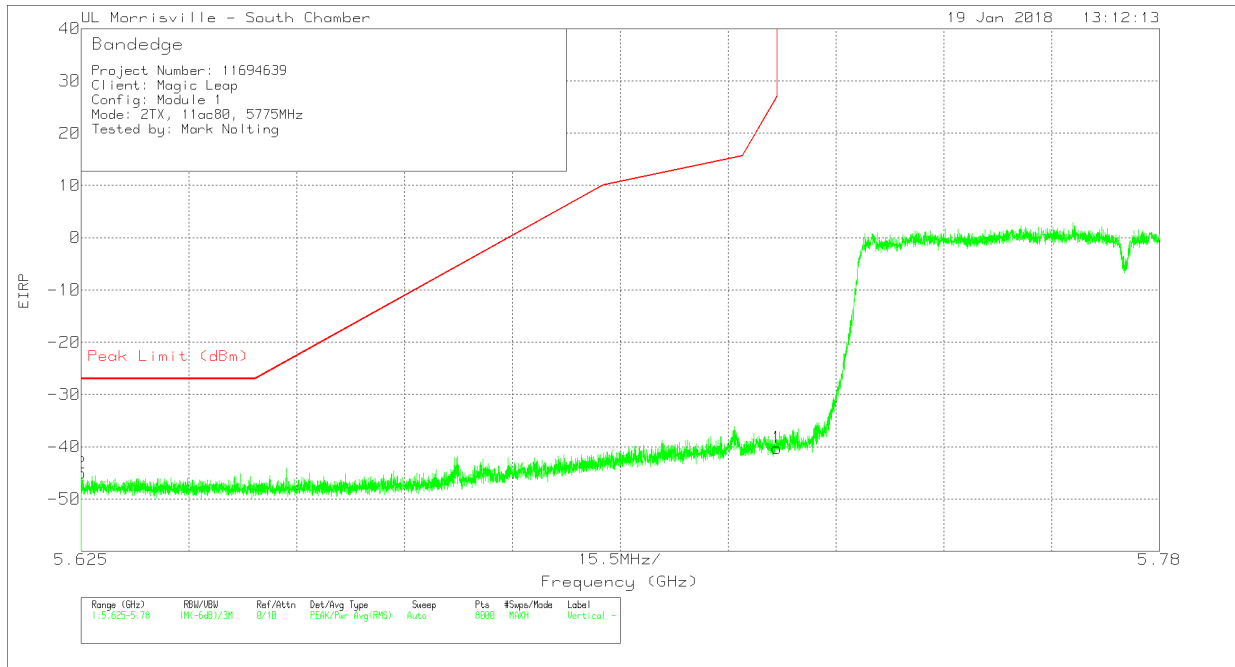
**RESTRICTED BANDEDGE (LOW CHANNEL) HORIZONTAL – MODULE 1**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.639	-67.36	Pk	34.6	-23.6	11.8	-44.56	-27	-17.56	15	116	H
1	5.725	-63.55	Pk	34.6	-23.5	11.8	-40.65	26.97	-67.62	15	116	H

Pk - Peak detector

**RESTRICTED BANDEDGE (LOW CHANNEL) VERTICAL – MODULE 1**

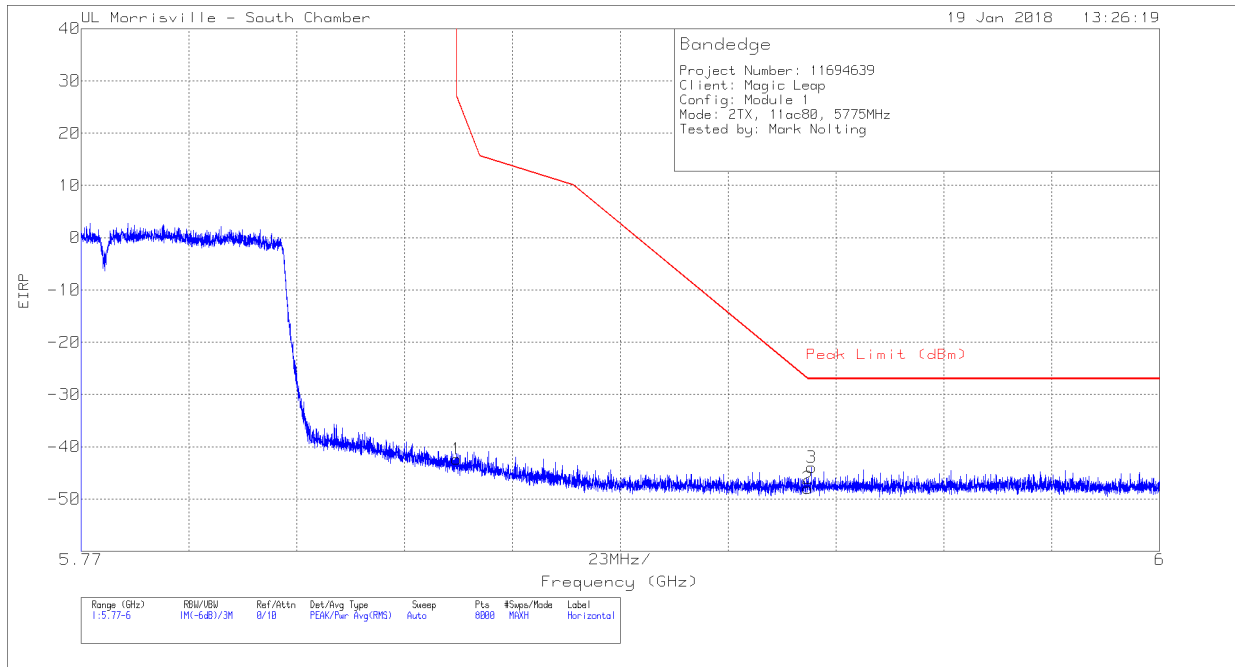


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.625	-67.96	Pk	34.6	-23.5	11.8	-45.06	-27	-18.06	228	220	V
1	5.725	-63.13	Pk	34.6	-23.5	11.8	-40.23	26.97	-67.2	228	220	V

Pk - Peak detector



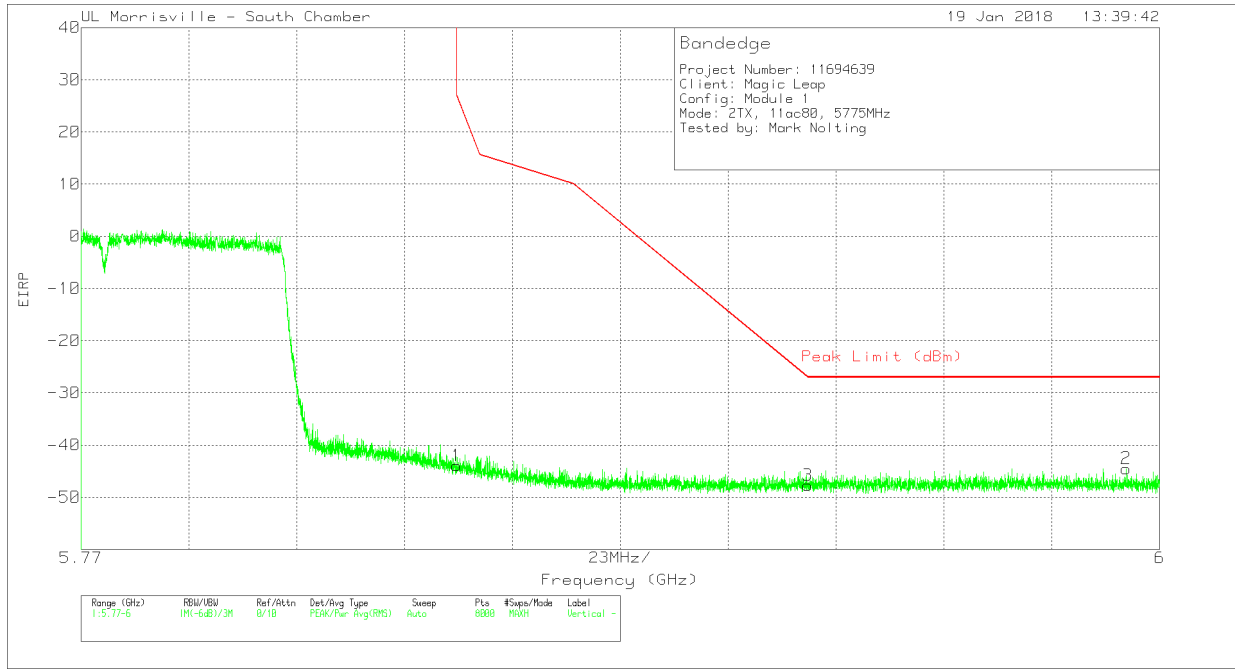
**AUTHORIZED BANDEDGE (HIGH CHANNEL) HORIZONTAL – MODULE 1**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-65.8	Pk	34.8	-23.2	11.8	-42.4	26.95	-69.35	63	110	H
2	5.925	-71.72	Pk	34.9	-22.9	11.8	-47.92	-26.95	-20.97	63	110	H
3	5.926	-67.88	Pk	34.9	-22.8	11.8	-43.98	-27	-16.98	63	110	H

Pk - Peak detector

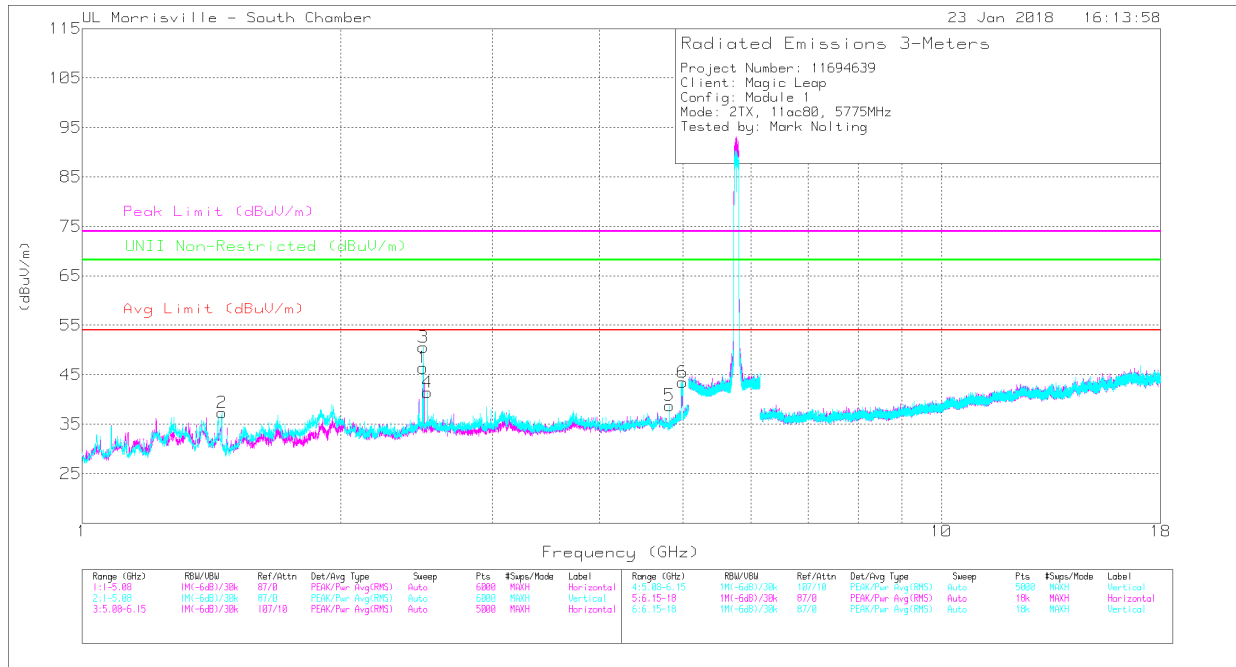
**AUTHORIZED BANDEDGE (HIGH CHANNEL) VERTICAL – MODULE 1**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.37	Pk	34.8	-23.2	11.8	-43.97	26.95	-70.92	225	195	V
3	5.925	-71.49	Pk	34.9	-22.9	11.8	-47.69	-26.95	-20.74	225	195	V
2	5.993	-68.5	Pk	35.1	-22.9	11.8	-44.5	-27	-17.5	225	195	V

Pk - Peak detector

**HARMONICS AND SPURIOUS EMISSIONS**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.496	62.87	PK-U	32.4	-34	0	61.27	-	-	74	-12.73	-	-	194	110	H
	* ** 2.489	36.65	ADR	32.4	-34.1	.19	35.14	54	-18.86	-	-	-	-	194	110	H
2	* ** 1.437	53.68	PK-U	28.7	-34.9	0	47.48	-	-	74	-26.52	-	-	193	116	V
	* ** 1.438	33.66	ADR	28.7	-34.9	.19	27.65	54	-26.35	-	-	-	-	193	116	V
3	* ** 2.491	63.28	PK-U	32.4	-34	0	61.68	-	-	74	-12.32	-	-	98	101	V
	* ** 2.496	35.7	ADR	32.4	-34	.19	34.29	54	-19.71	-	-	-	-	98	101	V
5	* ** 4.824	43.08	PK-U	34	-30.9	0	46.18	-	-	74	-27.82	-	-	225	283	V
	* ** 4.824	35.87	ADR	34	-30.9	.19	39.16	54	-14.84	-	-	-	-	225	283	V
6	* ** 4.988	48.2	PK-U	34	-30.2	0	52	-	-	74	-22	-	-	138	102	V
	* ** 4.999	32.61	ADR	34	-30.2	.19	36.6	54	-17.4	-	-	-	-	138	102	V
4	2.531	59.71	PK-U	32.2	-34	0	57.91	-	-	-	-	68.2	-10.29	98	101	V

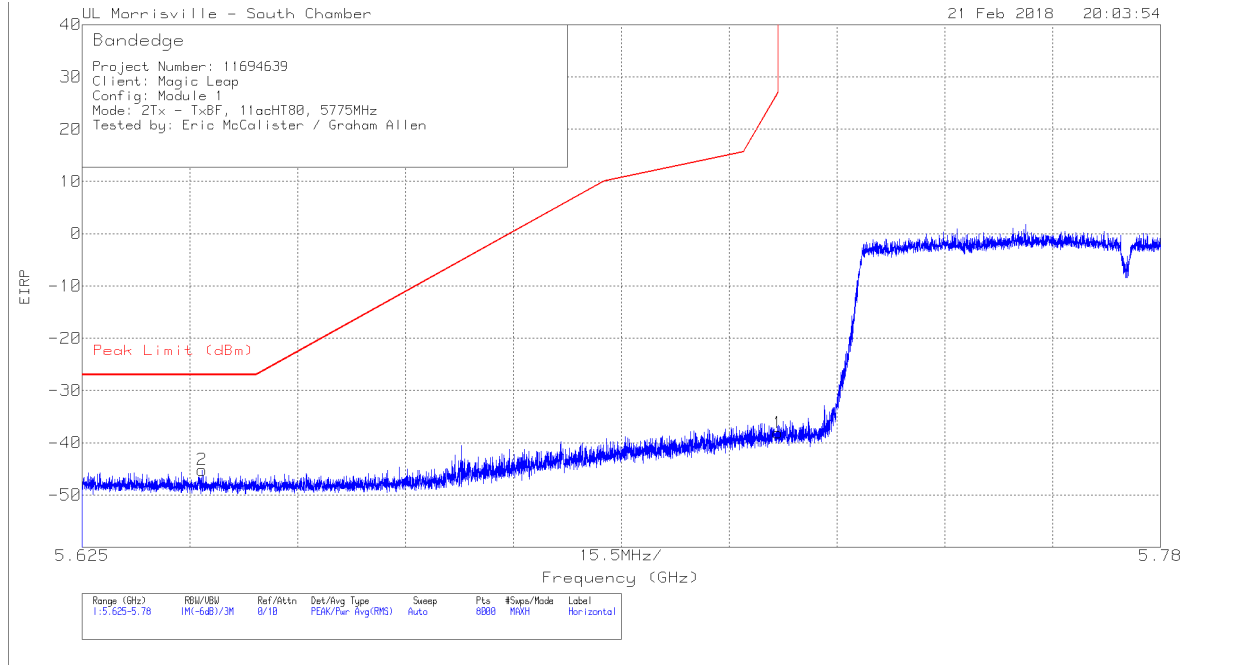
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

**10.2.44. TX ABOVE 1 GHz 802.11ac VHT80 MODE, 5.8 GHz BAND – MODULE 1, MIMO TxBF**

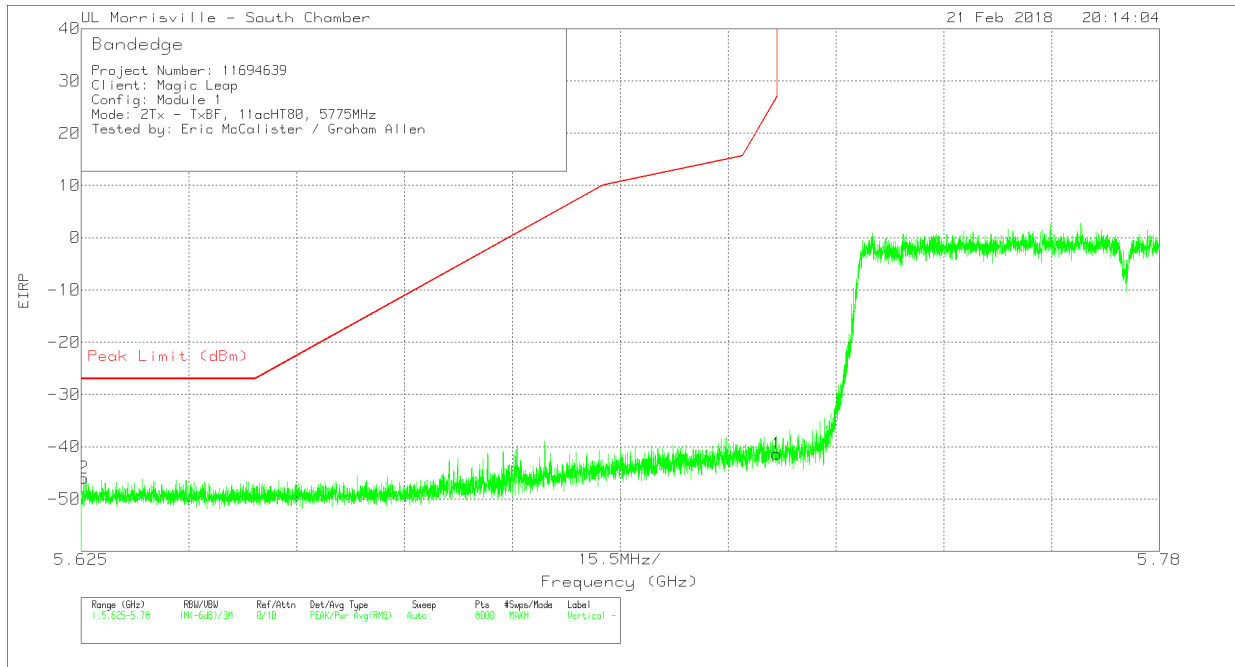
**RESTRICTED BANDEDGE (LOW CHANNEL) HORIZONTAL**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.642	-68.01	Pk	34.6	-23.6	11.8	-45.21	-27	-18.21	154	132	H
1	5.725	-61	Pk	34.6	-23.5	11.8	-38.1	26.97	-65.07	154	132	H

Pk - Peak detector

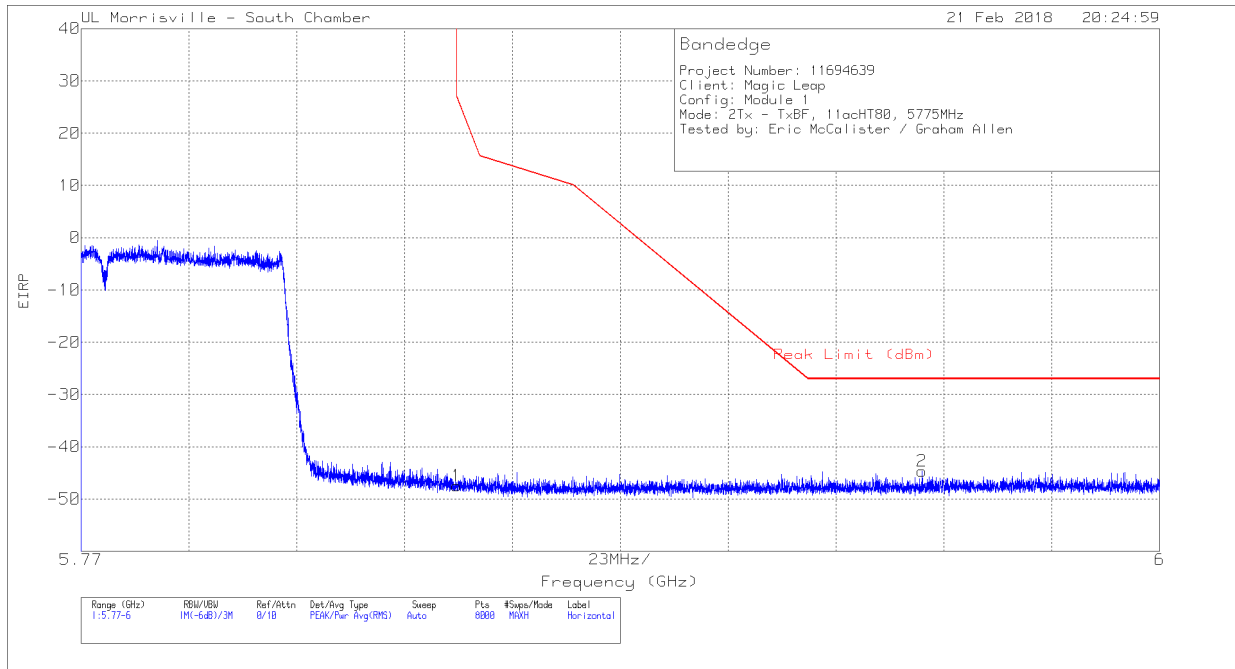
**RESTRICTED BANDEDGE (LOW CHANNEL) VERTICAL**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.625	-68.87	Pk	34.6	-23.5	11.8	-45.97	-27	-18.97	202	186	V
1	5.725	-64.3	Pk	34.6	-23.5	11.8	-41.4	26.97	-68.37	202	186	V

Pk - Peak detector

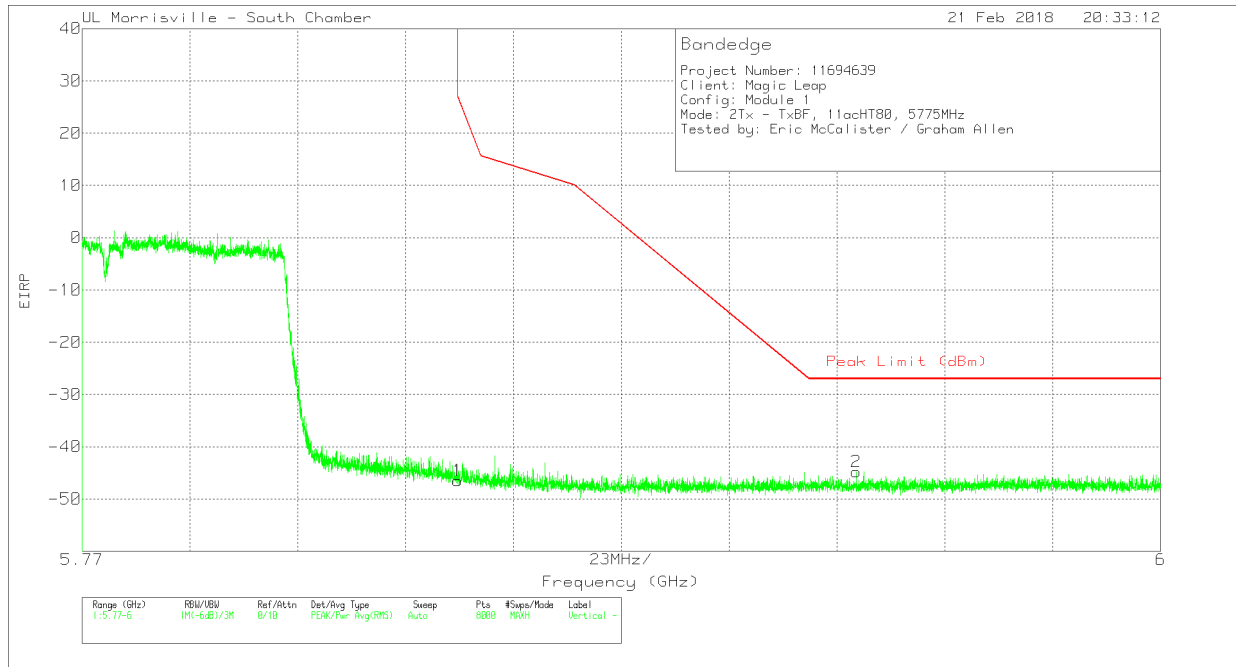
**AUTHORIZED BANDEDGE (HIGH CHANNEL) HORIZONTAL**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-70.84	Pk	34.8	-23.2	11.8	-47.44	26.95	-74.39	302	131	H
2	5.949	-68.46	Pk	34.9	-22.9	11.8	-44.66	-27	-17.66	302	131	H

Pk - Peak detector

**AUTHORIZED BANDEDGE (HIGH CHANNEL) VERTICAL**



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0069 AF (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	-69.91	Pk	34.8	-23.2	11.8	-46.51	26.95	-73.46	194	122	V
2	5.935	-68.68	Pk	34.9	-22.8	11.8	-44.78	-27	-17.78	194	122	V

Pk - Peak detector

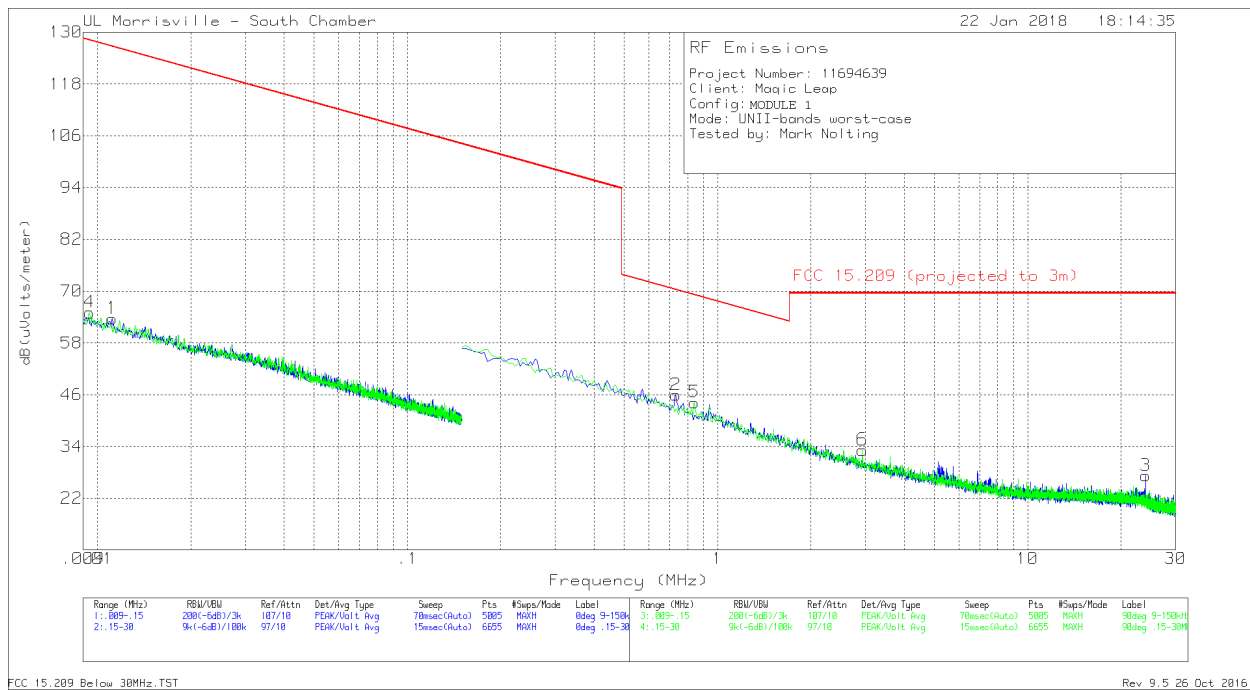
Note - Transmit beamforming only supported by 802.11n and 802.11ac modes. The router was investigated at different  $\theta$ s around the EUT. It was determined that there was <3dB delta in position. The router was then placed behind the receiving antenna. Transmit beamforming spot check scans were taken and this showed little to no variation from 802.11n/ac MIMO SDM spurious scans. Therefore, 802.11n/ac MIMO SDM spurious data is used to represent 802.11nHT20/nHT40 and 802.11ac VHT80 transmit beamforming. For transmit beamforming testing 802.11ac VHT20 and VHT40 were tested to cover 802.11n HT20 and HT40.

### 10.3. RADIATED Tx WORST-CASE

#### SPURIOUS EMISSIONS 9 TO 30 MHz (WORST-CASE CONFIGURATION) – MODULE 1

**Note:** All measurements were made at a test distance of 3 m. The limits in the plots and tabular data are the FCC/IC limits extrapolated from the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz – 30 MHz) to the measurement distance to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance with the requirement that the level of any spurious emissions be below the level of the intentionally transmitted signal. The extrapolation factor for the limits were 40\*Log (specification distance / test distance).

Although these tests were performed at a test site other than an open area test site, adequate comparison measurements were confirmed against an open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

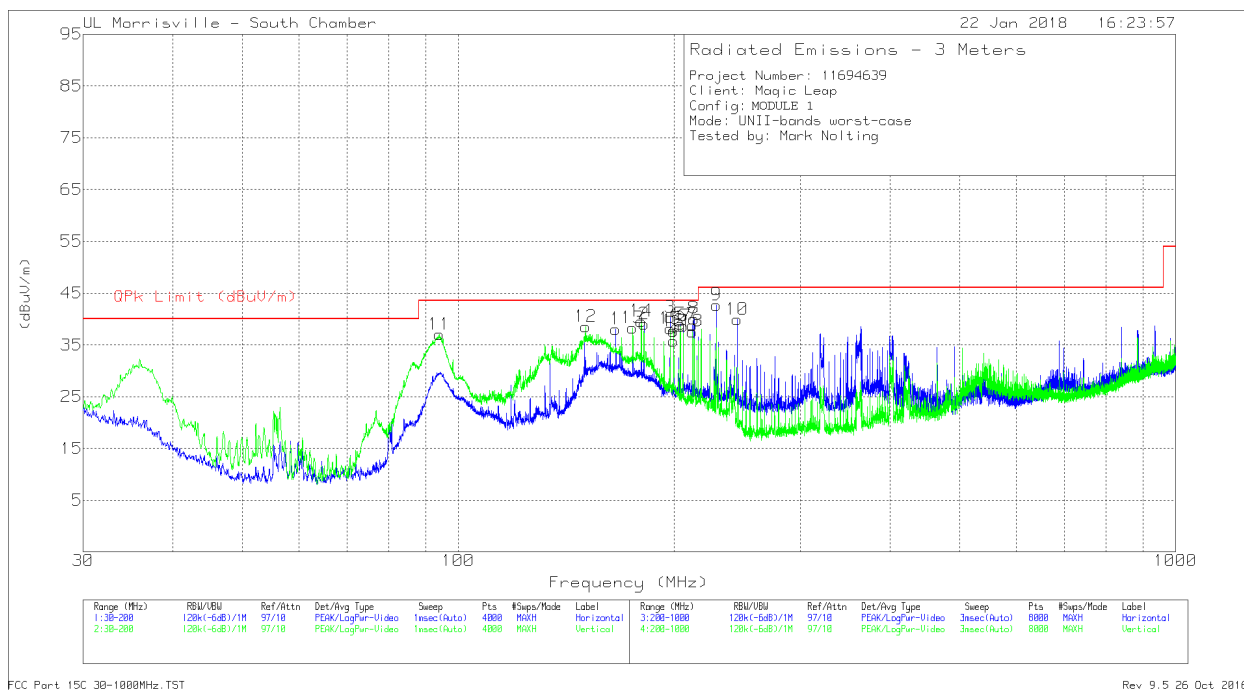


Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF (dB/m)	Cbl (dB)	Corrected Reading dB(uV/meter)	QP FCC 15.209 (projected to 3m)	QP Margin (dB)	AV FCC 15.209 (projected to 3m)	AV Margin (dB)	PK FCC 15.209 (projected to 3m)	PK Margin (dB)	Azimuth (Degs)
4	.00942	44.93	Pk	20	.1	65.03	-	-	128.12	-63.09	148.12	-83.09	0-360
1	.01116	44.75	Pk	18.8	.1	63.65	-	-	126.65	-63	146.65	-83	0-360
2	.73318	35.47	Pk	10.4	.1	45.97	70.3	-24.33	-	-	-	-	0-360
5	.84084	33.71	Pk	10.4	.1	44.21	69.11	-24.9	-	-	-	-	0-360
6	2.93132	22.3	Pk	10.6	.3	33.2	69.54	-36.34	-	-	-	-	0-360
3	23.99758	16.8	Pk	9.6	.8	27.2	69.54	-42.34	-	-	-	-	0-360

Pk - Peak detector



**SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION) – MODULE 1**



FCC Part 15C 30-1000MHz.TST

Rev. 9.5 26 Oct 2016

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0074 AF (dB/m)	Cbl/Amp (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	165.792	46.46	Qp	16.6	-30.4	32.66	43.52	-10.86	280	161	H
2	181.5848	49.52	Qp	15.7	-30.3	34.92	43.52	-8.6	320	132	H
3	197.3738	49.87	Qp	17.2	-30.3	36.77	43.52	-6.75	290	168	H
4	199.6614	48.5	Pk	17.5	-30.2	35.8	43.52	-7.72	0-360	100	H
5	204.0009	52.8	Qp	16	-30.2	38.6	43.52	-4.92	68	113	H
6	205.8245	53.31	Qp	15.5	-30.1	38.71	43.52	-4.81	246	158	H
7	211.9716	54.57	Qp	15.3	-30.2	39.67	43.52	-3.85	231	154	H
8	213.1603	52.43	Qp	15.3	-30.2	37.53	43.52	-5.99	251	153	H
9	228.9509	54.17	Qp	15.8	-30	39.97	46.02	-6.05	326	137	H
10	244.7412	50.47	Qp	16.3	-29.9	36.87	46.02	-9.15	301	120	H
11	94.0641	55.55	Pk	12.5	-31	37.05	43.52	-6.47	0-360	101	V
12	150.5238	47.9	Qp	16.9	-30.6	34.2	43.52	-9.32	216	102	V
13	175.1058	51.08	Qp	15.9	-30.4	36.58	43.52	-6.94	18	102	V
14	180.0019	52.37	Qp	15.7	-30.3	37.77	43.52	-5.75	20	101	V
15	197.3696	49.27	Qp	17.2	-30.3	36.17	43.52	-7.35	16	101	V
16	199.6857	50.07	Qp	17.5	-30.2	37.37	43.52	-6.15	8	100	V
17	204.0021	52.51	Qp	16	-30.2	38.31	43.52	-5.21	353	103	V
18	211.9734	52.69	Qp	15.3	-30.2	37.79	43.52	-5.73	324	100	V

Pk - Peak detector

Qp - Quasi-Peak detector

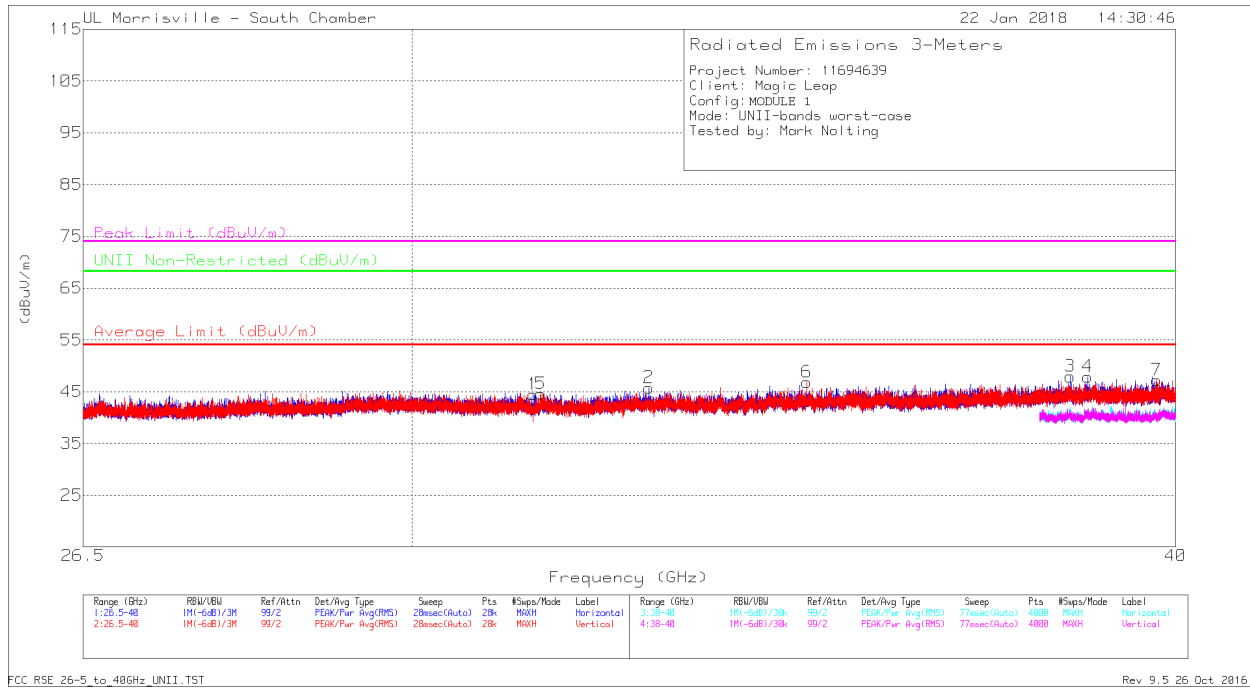
**SPURIOUS EMISSIONS 18 TO 26 GHz (WORST-CASE CONFIGURATION) – MODULE 1**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0076 AF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 18.22	47.77	Pk	32.3	-40.5	39.57	54	-14.43	74	-34.43	-	-	0-360	199	H
2	* 22.712	46.87	Pk	33.7	-39.1	41.47	54	-12.53	74	-32.53	-	-	0-360	100	H
4	* 20.608	47.11	Pk	33.2	-39.5	40.81	54	-13.19	74	-33.19	-	-	0-360	151	V
5	* 22.181	46.97	Pk	33.6	-39.3	41.27	54	-12.73	74	-32.73	-	-	0-360	201	V
6	* 23.621	47.03	Pk	33.9	-38.6	42.33	54	-11.67	74	-31.67	-	-	0-360	300	V
3	25.867	45.5	Pk	34.4	-37.3	42.6	-	-	-	-	68.2	-25.6	0-360	100	H

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

**SPURIOUS EMISSIONS 26 TO 40 GHz (WORST-CASE CONFIGURATION) – MODULE 1**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0077 AF (dB/m)	Amp/Cbl (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 31.395	42.38	Pk	36.8	-34.7	0	44.48	54	-9.52	74	-29.52	-	-	0-360	199	H
5	* 31.487	42.06	Pk	36.8	-34.3	0	44.56	54	-9.44	74	-29.44	-	-	0-360	201	V
4	* 38.689	44.65	PK-U	38.6	-35.6	0	47.65	-	-	74	-26.35	-	-	244	139	H
	* 38.691	33.35	ADR	38.6	-35.6	.2	36.55	54	-17.45	-	-	-	-	244	139	H
7	* 39.715	43.4	Pk	38.6	-34.8	0	47.2	54	-6.8	74	-26.8	-	-	0-360	300	V
2	32.794	43.76	Pk	37.1	-35.1	0	45.76	-	-	-	-	68.2	-22.44	0-360	199	H
6	34.811	45.55	Pk	37.3	-36	0	46.85	-	-	-	-	68.2	-21.35	0-360	201	V
3	38.444	45.32	Pk	38.4	-35.8	0	47.92	-	-	-	-	68.2	-20.28	0-360	199	H

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

## 11. 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 <sup>*</sup>	56 to 46 <sup>*</sup>
0.5-5	56	46
5-30	60	50

<sup>\*</sup> Decreases with the logarithm of the frequency.

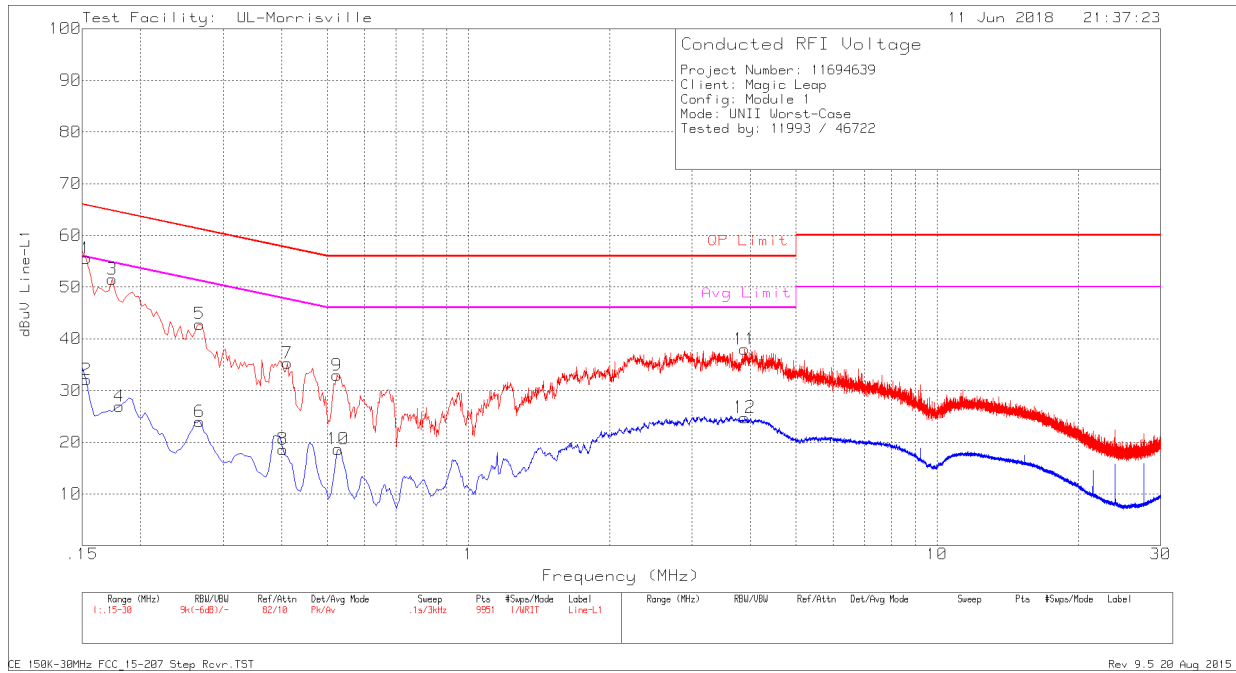
### TEST PROCEDURE

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 lines.

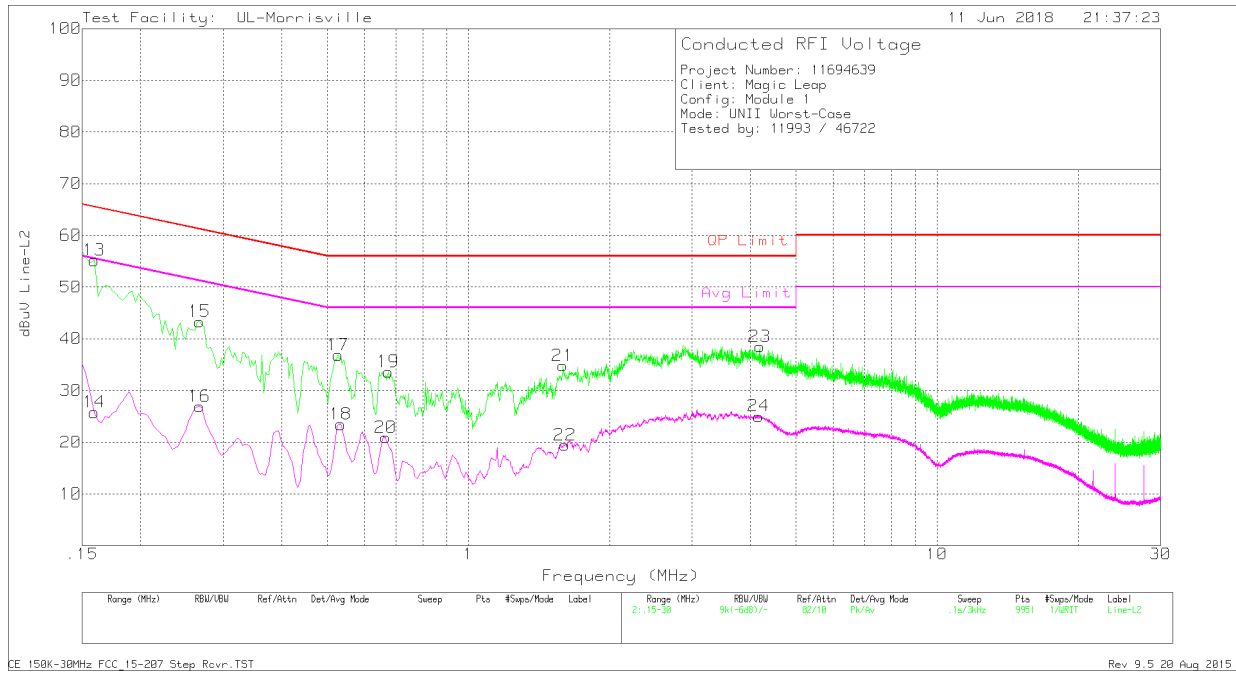
**LINE 1 RESULTS – MODULE 1**



Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit	Margin (dB)	Avg Limit	Margin (dB)
1	.153	45.37	Pk	.2	10	55.57	65.84	-10.27	-	-
2	.153	21.92	Av	.2	10	32.12	-	-	55.84	-23.72
3	.174	41.35	Pk	.2	10	51.55	64.77	-13.22	-	-
4	.18	16.73	Av	.2	10	26.93	-	-	54.49	-27.56
5	.267	32.86	Pk	.1	9.9	42.86	61.21	-18.35	-	-
6	.267	14.01	Av	.1	9.9	24.01	-	-	51.21	-27.2
7	.411	25.17	Pk	.1	10	35.27	57.63	-22.36	-	-
8	.402	8.64	Av	.1	9.9	18.64	-	-	47.81	-29.17
9	.525	23.07	Pk	0	9.9	32.97	56	-23.03	-	-
10	.528	8.75	Av	0	9.9	18.65	-	-	46	-27.35
11	3.888	28.01	Pk	0	10	38.01	56	-17.99	-	-
12	3.885	14.77	Av	0	10	24.77	-	-	46	-21.23

Pk - Peak detector  
 Av - Average detection

**LINE 2 RESULTS – MODULE 1**



Range 2: Line-L2 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit	Margin (dB)	Avg Limit	Margin (dB)
13	.159	44.96	Pk	.2	10	55.16	65.52	-10.36	-	-
14	.159	15.58	Av	.2	10	25.78	-	-	55.52	-29.74
15	.267	33.32	Pk	.1	9.9	43.32	61.21	-17.89	-	-
16	.267	16.96	Av	.1	9.9	26.96	-	-	51.21	-24.25
17	.528	26.95	Pk	0	9.9	36.85	56	-19.15	-	-
18	.534	13.55	Av	0	9.9	23.45	-	-	46	-22.55
19	.675	23.72	Pk	0	9.9	33.62	56	-22.38	-	-
20	.666	10.99	Av	0	9.9	20.89	-	-	46	-25.11
21	1.593	24.82	Pk	0	10	34.82	56	-21.18	-	-
22	1.608	9.47	Av	0	10	19.47	-	-	46	-26.53
23	4.185	28.5	Pk	0	10	38.5	56	-17.5	-	-
24	4.161	15.04	Av	0	10	25.04	-	-	46	-20.96

Pk - Peak detector  
 Av - Average detection

## 12. SETUP PHOTOS

Refer to UL document R11694639-EP6 for setup photos.

**END OF REPORT**