

## Appendix A

### Power and Power Spectral Density Results

#### U-NII-1 5150-5250 MHz



## 4 dBi Omni antenna

### Conducted Power for U-NII-1

Band Width	Mode	Frequency	Data Rate	TP	Port 1	Limit	Margin
MHz	ac	MHz			dBm	dBm	dB
10	ac	5160	vt0	9	9.4	30	-20.6
10	ac	5200	vt0	19	18.4	30	-11.6
10	ac	5245	vt0	19	18.8	30	-11.2
20	ac	5165	vt0	7	5.8	30	-24.2
20	ac	5200	vt0	19	18.2	30	-11.8
20	ac	5240	vt0	20	19.2	30	-10.8
30	ac	5170	vt0	5	3.6	30	-26.4
30	ac	5200	vt0	20	18.9	30	-11.1
30	ac	5235	vt0	25	21.5	30	-8.6
40	ac	5175	vf0	5	3.4	30	-26.6
40	ac	5200	vf0	20	19.1	30	-10.9
40	ac	5230	vfo	20	19.0	30	-11.0
50	ac	5180	vf0	6	4.6	30	-25.4
50	ac	5200	vf0	20	19.3	30	-10.7
50	ac	5225	vfo	20	19.2	30	-10.8
60	ac	5185	vf0	6	5.0	30	-25.0
60	ac	5200	vf0	20	19.1	30	-10.9
60	ac	5220	vfo	20	19.0	30	-11.0
80	ac	5190	ve	8	5.9	30	-24.1
80	ac	5200	ve	11	10.3	30	-19.7
80	ac	5215	ve	14	13.5	30	-16.5



**Conducted Power Spectral Density for U-NII-1**

Band Width	Mode	Frequency	Data Rate	TP	Port 1	Limit	Margin
MHz	ac	MHz			dBm	dBm	dB
10	ac	5160	vt0	9	-0.9	17	-17.9
10	ac	5200	vt0	19	10.5	17	-6.5
10	ac	5245	vt0	19	10.6	17	-6.4
20	ac	5165	vt0	7	-5.5	17	-22.5
20	ac	5200	vt0	19	7.2	17	-9.8
20	ac	5240	vt0	20	7.7	17	-9.3
30	ac	5170	vt0	5	-9.4	17	-26.4
30	ac	5200	vt0	20	6.0	17	-11.0
30	ac	5235	vt0	25	8.5	17	-8.5
40	ac	5175	vf0	5	-11.1	17	-28.1
40	ac	5200	vf0	20	4.7	17	-12.3
40	ac	5230	vfo	20	4.7	17	-12.3
50	ac	5180	vf0	6	-10.6	17	-27.6
50	ac	5200	vf0	20	4.0	17	-13.0
50	ac	5225	vfo	20	3.9	17	-13.1
60	ac	5185	vf0	6	-11.3	17	-28.3
60	ac	5200	vf0	20	3.1	17	-13.9
60	ac	5220	vfo	20	2.8	17	-14.2
80	ac	5190	ve	8	-11.8	17	-28.8
80	ac	5200	ve	11	-7.0	17	-24.0
80	ac	5215	ve	14	-4.1	17	-21.1



## 13 dBi Omni antenna

### Power

Band Width	Mode	Frequency	Data Rate	Port 1	Limit	Margin
MHz	ac	MHz		dBm	dBm	dB
10	ac	5160	vt0	2.37	23	-20.6
10	ac	5200	vt0	11.38	23	-11.6
10	ac	5245	vt0	11.76	23	-11.2
20	ac	5165	vt0	-1.19	23	-24.2
20	ac	5200	vt0	11.19	23	-11.8
20	ac	5240	vt0	12.23	23	-10.8
30	ac	5170	vt0	-3.42	23	-26.4
30	ac	5200	vt0	11.91	23	-11.1
30	ac	5235	vt0	14.45	23	-8.6
40	ac	5175	vf0	-3.64	23	-26.6
40	ac	5200	vf0	12.13	23	-10.9
40	ac	5230	vfo	12.03	23	-11.0
50	ac	5180	vf0	-2.36	23	-25.4
50	ac	5200	vf0	12.26	23	-10.7
50	ac	5225	vfo	12.18	23	-10.8
60	ac	5185	vf0	-2.04	23	-25.0
60	ac	5200	vf0	12.11	23	-10.9
60	ac	5220	vfo	12.03	23	-11.0
80	ac	5190	ve	-1.06	23	-24.1
80	ac	5200	ve	3.34	23	-19.7
80	ac	5215	ve	6.52	23	-16.5



Power Spectral Density

Band Width	Mode	Frequency	Data Rate	Port 1	Limit	Margin
MHz	ac	MHz		dBm	dBm	dB
10	ac	5160	vt0	-7.89	10	-17.9
10	ac	5200	vt0	3.5	10	-6.5
10	ac	5245	vt0	3.63	10	-6.4
20	ac	5165	vt0	-12.46	10	-22.5
20	ac	5200	vt0	0.23	10	-9.8
20	ac	5240	vt0	0.66	10	-9.3
30	ac	5170	vt0	-16.41	10	-26.4
30	ac	5200	vt0	-1.02	10	-11.0
30	ac	5235	vt0	1.54	10	-8.5
40	ac	5175	vf0	-18.08	10	-28.1
40	ac	5200	vf0	-2.3	10	-12.3
40	ac	5230	vfo	-2.33	10	-12.3
50	ac	5180	vf0	-17.58	10	-27.6
50	ac	5200	vf0	-3	10	-13.0
50	ac	5225	vfo	-3.1	10	-13.1
60	ac	5185	vf0	-18.33	10	-28.3
60	ac	5200	vf0	-3.89	10	-13.9
60	ac	5220	vfo	-4.19	10	-14.2
80	ac	5190	ve	-18.76	10	-28.8
80	ac	5200	ve	-14	10	-24.0
80	ac	5215	ve	-11.1	10	-21.1



## 22 dBi Sector antenna

Power

Band Width	Mode	Frequency	Data Rate	Port 1	Limit	Margin
MHz	ac	MHz		dBm	dBm	dB
10	ac	5160	vt0	-6.63	14	-20.6
10	ac	5200	vt0	2.38	14	-11.6
10	ac	5245	vt0	2.76	14	-11.2
20	ac	5165	vt0	-10.19	14	-24.2
20	ac	5200	vt0	2.19	14	-11.8
20	ac	5240	vt0	3.23	14	-10.8
30	ac	5170	vt0	-12.42	14	-26.4
30	ac	5200	vt0	2.91	14	-11.1
30	ac	5235	vt0	5.45	14	-8.6
40	ac	5175	vf0	-12.64	14	-26.6
40	ac	5200	vf0	3.13	14	-10.9
40	ac	5230	vfo	3.03	14	-11.0
50	ac	5180	vf0	-11.36	14	-25.4
50	ac	5200	vf0	3.26	14	-10.7
50	ac	5225	vfo	3.18	14	-10.8
60	ac	5185	vf0	-11.04	14	-25.0
60	ac	5200	vf0	3.11	14	-10.9
60	ac	5220	vfo	3.03	14	-11.0
80	ac	5190	ve	-10.06	14	-24.1
80	ac	5200	ve	-5.66	14	-19.7
80	ac	5215	ve	-2.48	14	-16.5



Power Spectral Density

Band Width	Mode	Frequency	Data Rate	Port 1	Limit	Margin
MHz	ac	MHz		dBm	dBm	dB
10	ac	5160	vt0	-16.89	1	-17.9
10	ac	5200	vt0	-5.5	1	-6.5
10	ac	5245	vt0	-5.37	1	-6.4
20	ac	5165	vt0	-21.46	1	-22.5
20	ac	5200	vt0	-8.77	1	-9.8
20	ac	5240	vt0	-8.34	1	-9.3
30	ac	5170	vt0	-25.41	1	-26.4
30	ac	5200	vt0	-10.02	1	-11.0
30	ac	5235	vt0	-7.46	1	-8.5
40	ac	5175	vf0	-27.08	1	-28.1
40	ac	5200	vf0	-11.3	1	-12.3
40	ac	5230	vfo	-11.33	1	-12.3
50	ac	5180	vf0	-26.58	1	-27.6
50	ac	5200	vf0	-12	1	-13.0
50	ac	5225	vfo	-12.1	1	-13.1
60	ac	5185	vf0	-27.33	1	-28.3
60	ac	5200	vf0	-12.89	1	-13.9
60	ac	5220	vfo	-13.19	1	-14.2
80	ac	5190	ve	-27.76	1	-28.8
80	ac	5200	ve	-23	1	-24.0
80	ac	5215	ve	-20.1	1	-21.1

## 34 dBi Dish antenna

### Power

Band Width	Mode	Frequency	Data Rate	Port 1	Limit	Margin
MHz	ac	MHz		dBm	dBm	dB
10	ac	5160	vt0	-20.63	19	-39.6
10	ac	5200	vt0	-11.62	19	-30.6
10	ac	5245	vt0	-11.24	19	-30.2
20	ac	5165	vt0	-24.19	19	-43.2
20	ac	5200	vt0	-11.81	19	-30.8
20	ac	5240	vt0	-10.77	19	-29.8
30	ac	5170	vt0	-26.42	19	-45.4
30	ac	5200	vt0	-11.09	19	-30.1
30	ac	5235	vt0	-8.55	19	-27.6
40	ac	5175	vf0	-26.64	19	-45.6
40	ac	5200	vf0	-10.87	19	-29.9
40	ac	5230	vfo	-10.97	19	-30.0
50	ac	5180	vf0	-25.36	19	-44.4
50	ac	5200	vf0	-10.74	19	-29.7
50	ac	5225	vfo	-10.82	19	-29.8
60	ac	5185	vf0	-25.04	19	-44.0
60	ac	5200	vf0	-10.89	19	-29.9
60	ac	5220	vfo	-10.97	19	-30.0
80	ac	5190	ve	-24.06	19	-43.1
80	ac	5200	ve	-19.66	19	-38.7
80	ac	5215	ve	-16.48	19	-35.5



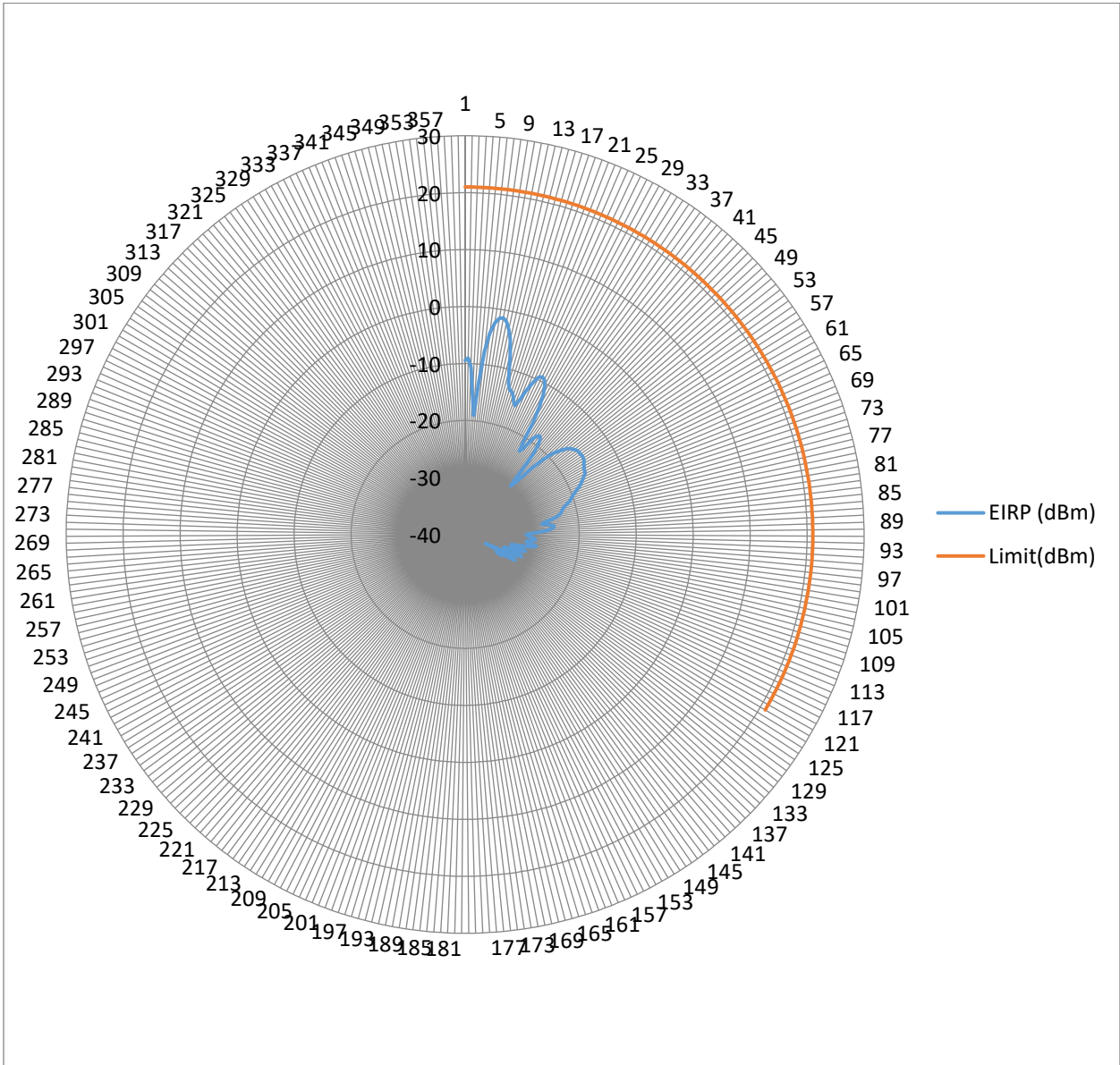
## Power Spectral Density

Band Width	Mode	Frequency	Data Rate	Port 1	Limit	Margin
MHz	ac	MHz		dBm	dBm	dB
10	ac	5160	vt0	-30.89	6	-36.9
10	ac	5200	vt0	-19.5	6	-25.5
10	ac	5245	vt0	-19.37	6	-25.4
20	ac	5165	vt0	-35.46	6	-41.5
20	ac	5200	vt0	-22.77	6	-28.8
20	ac	5240	vt0	-22.34	6	-28.3
30	ac	5170	vt0	-39.41	6	-45.4
30	ac	5200	vt0	-24.02	6	-30.0
30	ac	5235	vt0	-21.46	6	-27.5
40	ac	5175	vf0	-41.08	6	-47.1
40	ac	5200	vf0	-25.3	6	-31.3
40	ac	5230	vfo	-25.33	6	-31.3
50	ac	5180	vf0	-40.58	6	-46.6
50	ac	5200	vf0	-26	6	-32.0
50	ac	5225	vfo	-26.1	6	-32.1
60	ac	5185	vf0	-41.33	6	-47.3
60	ac	5200	vf0	-26.89	6	-32.9
60	ac	5220	vfo	-27.19	6	-33.2
80	ac	5190	ve	-41.76	6	-47.8
80	ac	5200	ve	-37	6	-43.0
80	ac	5215	ve	-34.1	6	-40.1

## Elevation Angel > 30 degrees results

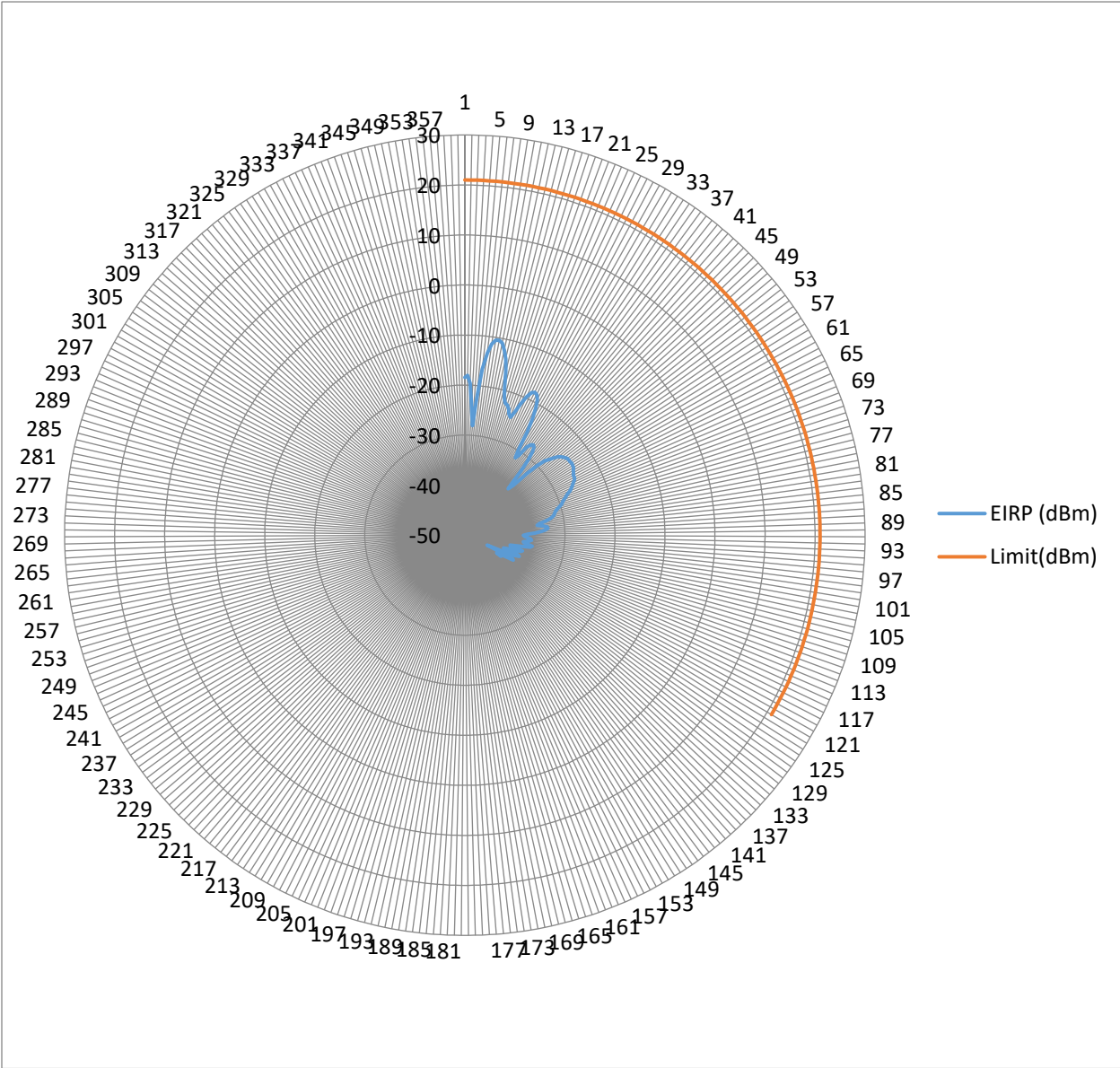
Note: All the data represented is from 30 degrees above bore sight to 150 degrees and is shifted back by 30 degrees on the plots.

AMO - 5G13 Antenna





AM-5AC22 Antenna





### RD-5G34 Antenna

