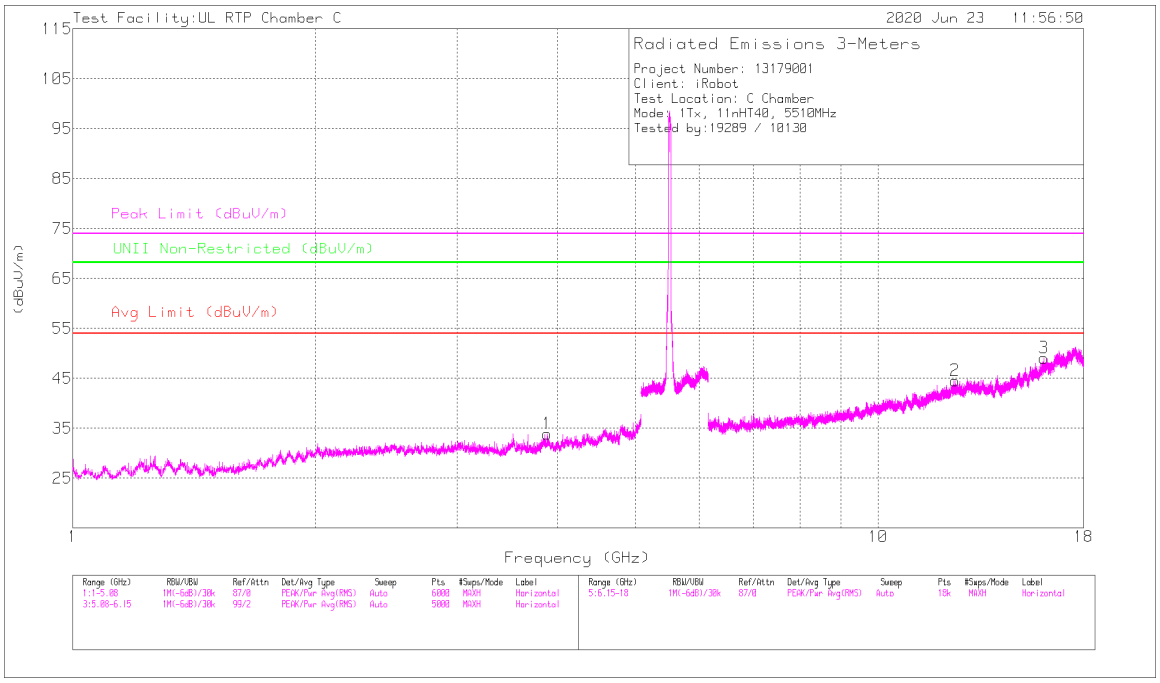
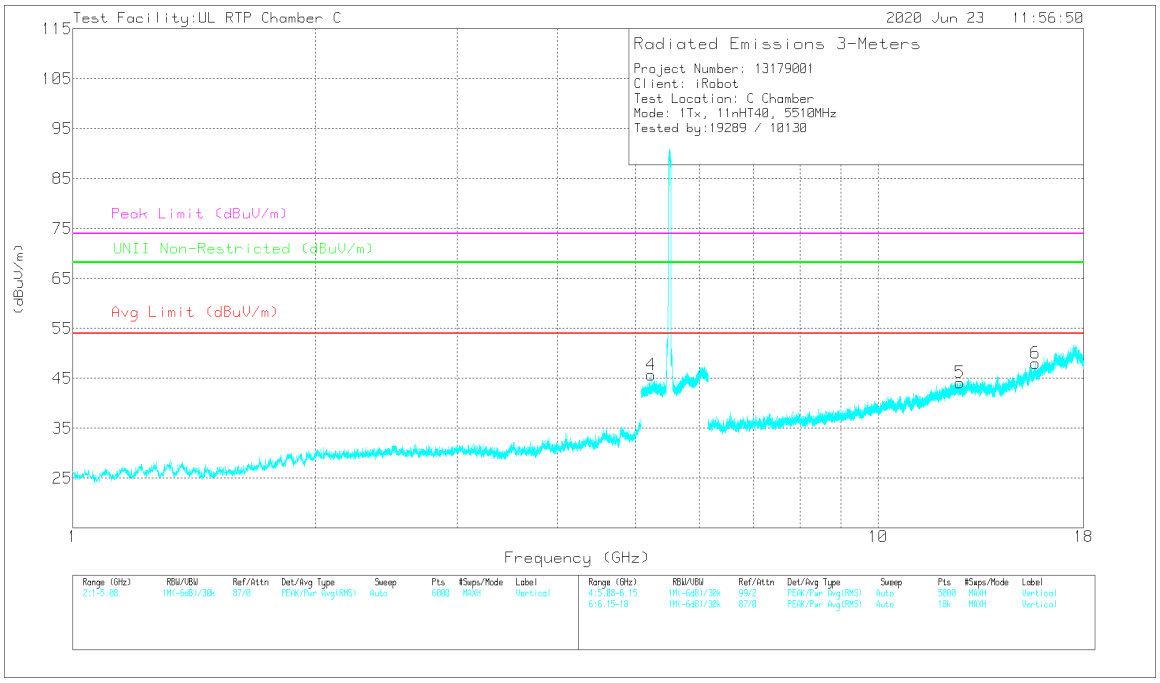
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

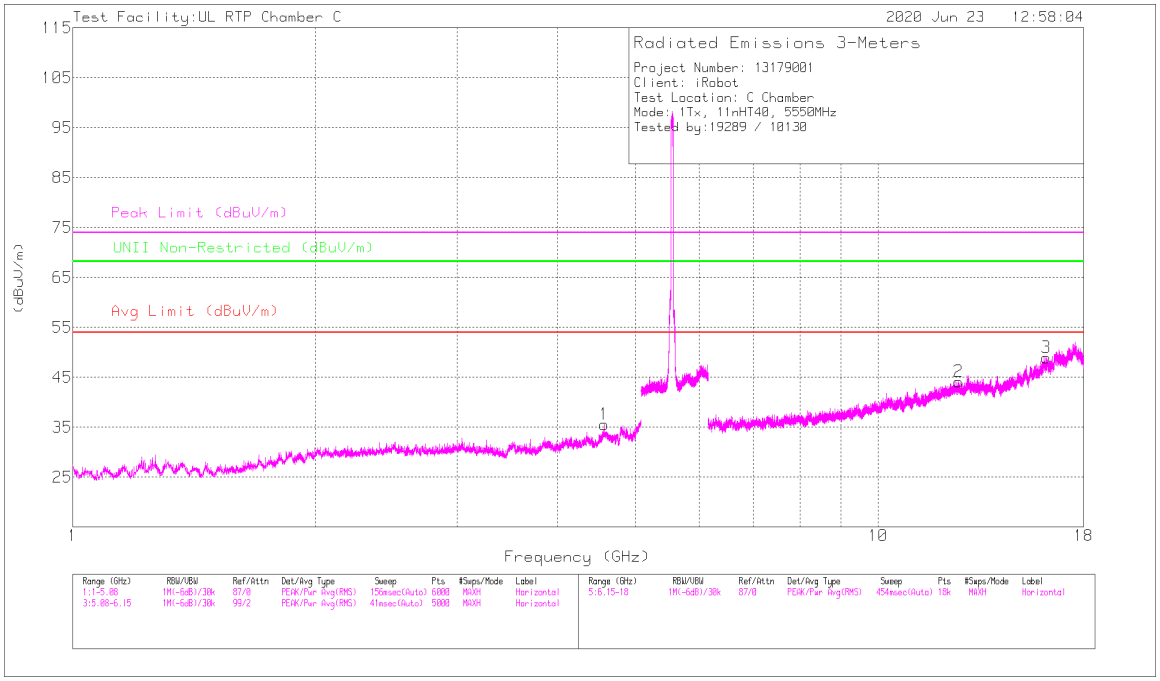
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.88459	57.43	PK-U	33.5	-49.7	0	41.23	-	-	74	-32.77	-	-	318	396	H
	* ** 3.8848	44.2	ADV	33.5	-49.7	.47	28.47	54	-25.53	-	-	-	-	318	396	H
4	** 5.2296	32.37	PK-U	34.3	-15.7	0	50.97	-	-	-	-	68.2	-17.23	239	216	V
	** 5.2299	18.94	ADV	34.3	-15.7	.47	38.01	-	-	-	-	-	-	239	216	V
2	* ** 12.47021	52.17	PK-U	39	-41	0	50.17	-	-	74	-23.83	-	-	9	168	H
	* ** 12.46986	39.25	ADV	39	-41	.47	37.72	54	-16.28	-	-	-	-	9	168	H
3	* ** 16.07494	50.82	PK-U	41.3	-36.4	0	55.72	-	-	74	-18.28	-	-	280	126	H
	* ** 16.07541	37.66	ADV	41.3	-36.4	.47	43.03	54	-10.97	-	-	-	-	280	126	H
5	* ** 12.63647	51.69	PK-U	39.2	-40.1	0	50.79	-	-	74	-23.21	-	-	232	319	V
	* ** 12.63609	38.55	ADV	39.2	-40.1	.47	38.12	54	-15.88	-	-	-	-	232	319	V
6	* ** 15.68801	50.87	PK-U	40.7	-36.4	0	55.17	-	-	74	-18.83	-	-	114	143	V
	* ** 15.68816	37.07	ADV	40.7	-36.5	.47	41.74	54	-12.26	-	-	-	-	114	143	V

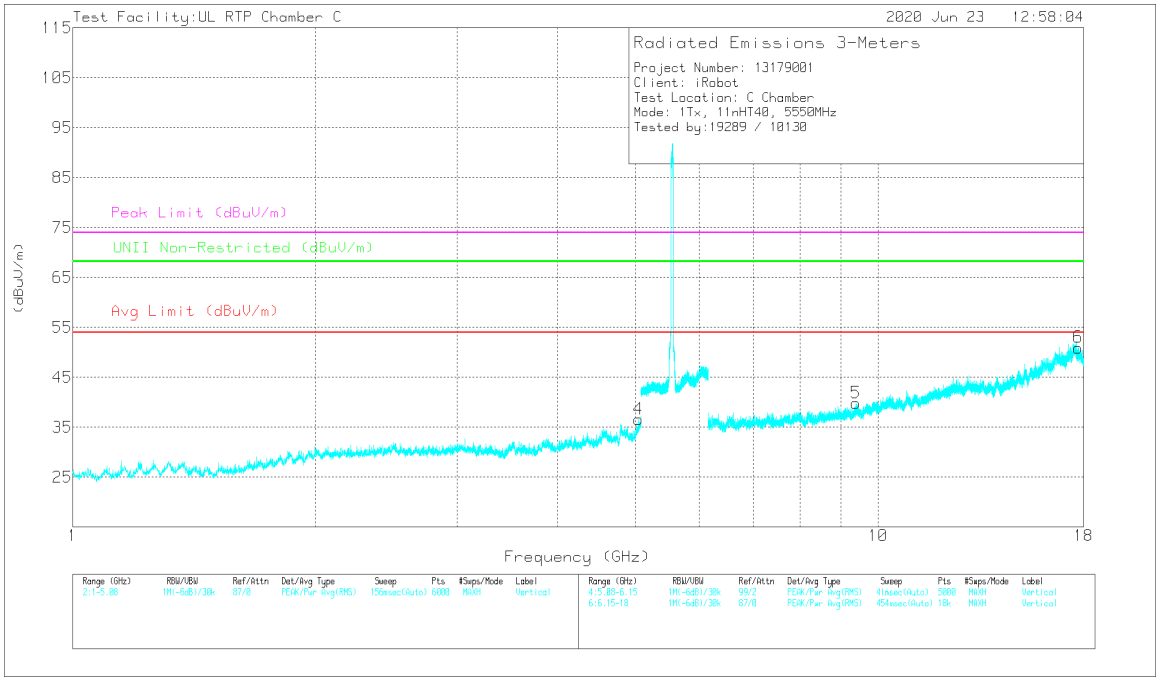
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

MID CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA
TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

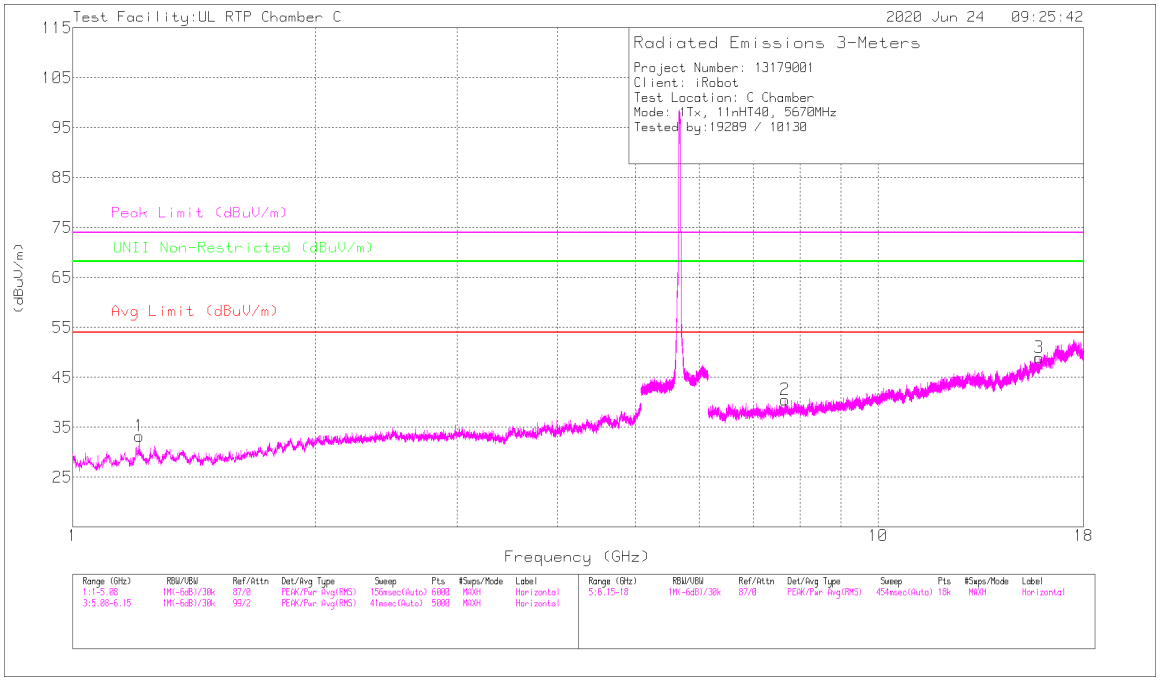
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.57053	56.91	PK-U	34.1	-49.4	0	41.61	-	-	74	-32.39	-	-	172	102	H
	* ** 4.57097	43.1	ADV	34.1	-49.4	.47	28.27	54	-25.73	-	-	-	-	172	102	H
4	* ** 5.03891	55.39	PK-U	34.1	-47.8	0	41.69	-	-	74	-32.31	-	-	237	102	V
	* ** 5.03963	42.62	ADV	34.1	-47.8	.47	29.39	54	-24.61	-	-	-	-	237	102	V
2	* ** 12.58831	51.83	PK-U	39.2	-40.3	0	50.73	-	-	74	-23.27	-	-	162	166	H
	* ** 12.58835	38.49	ADV	39.2	-40.3	.47	37.86	54	-16.14	-	-	-	-	162	166	H
3	* ** 16.18111	51.26	PK-U	41.3	-37.5	0	55.06	-	-	74	-18.94	-	-	50	316	H
	* ** 16.18059	38.51	ADV	41.3	-37.5	.47	42.78	54	-11.22	-	-	-	-	50	316	H
5	* ** 9.3907	54.02	PK-U	36.4	-44.6	0	45.82	-	-	74	-28.18	-	-	45	176	V
	* ** 9.39001	40.58	ADV	36.4	-44.5	.47	32.95	54	-21.05	-	-	-	-	45	176	V
6	* ** 17.73115	49.28	PK-U	41.6	-33.6	0	57.28	-	-	74	-16.72	-	-	354	236	V
	* ** 17.73049	36.31	ADV	41.6	-33.6	.47	44.78	54	-9.22	-	-	-	-	354	236	V

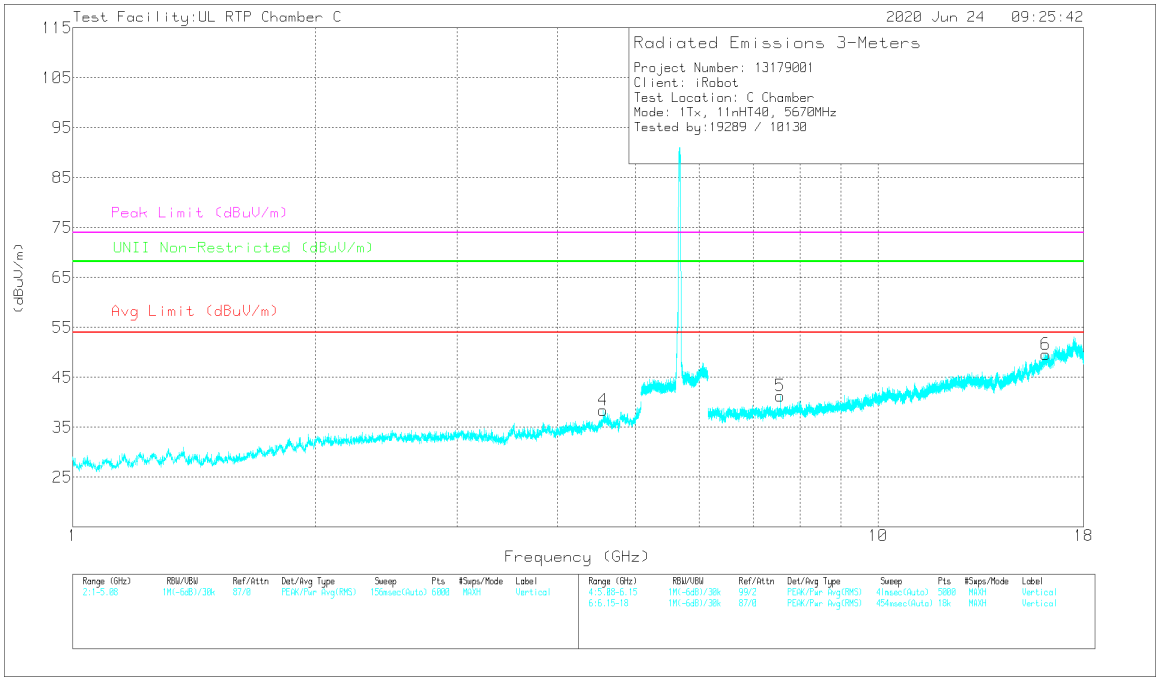
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA
TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

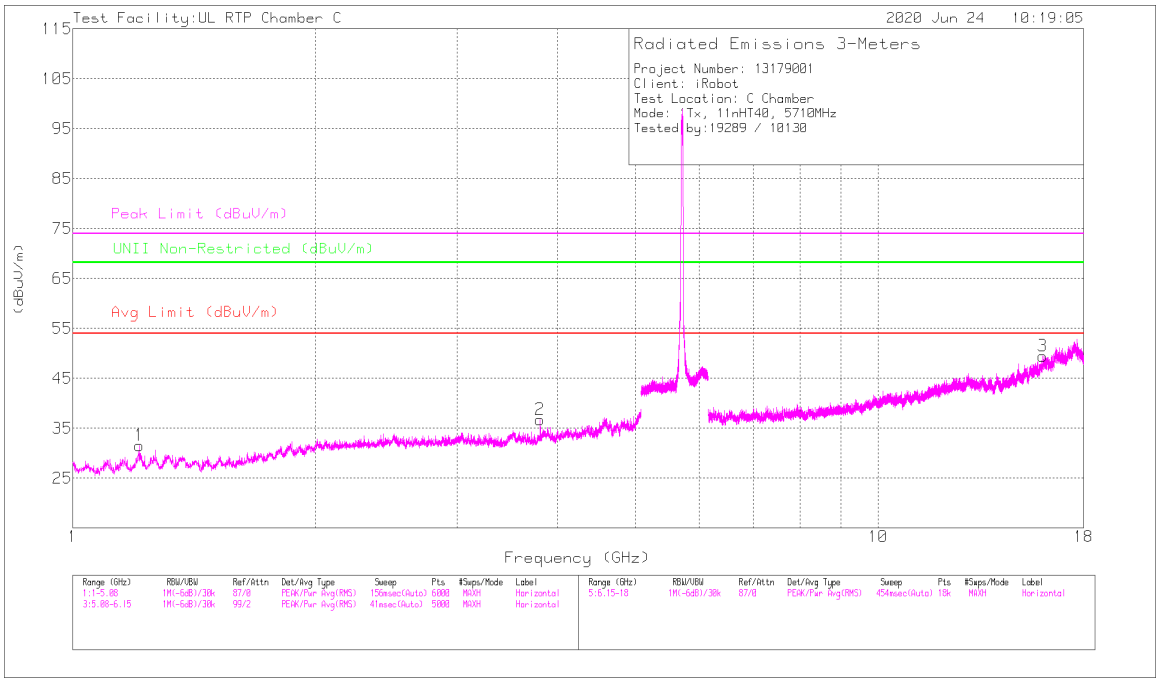
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.20949	66.22	PK-U	28.2	-55.3	0	39.12	-	-	74	-34.88	-	-	189	107	H
	* ** 1.20959	54.94	ADV	28.2	-55.3	.47	28.31	54	-25.69	-	-	-	-	189	107	H
4	* ** 4.55699	58.83	PK-U	34.1	-49.3	0	43.63	-	-	74	-30.37	-	-	130	369	V
	* ** 4.55709	45.69	ADV	34.1	-49.3	.47	30.96	54	-23.04	-	-	-	-	130	369	V
2	* ** 7.67098	55.62	PK-U	35.9	-45.6	0	45.92	-	-	74	-28.08	-	-	0	268	H
	* ** 7.6712	42.44	ADV	35.9	-45.6	.47	33.21	54	-20.79	-	-	-	-	0	268	H
3	* ** 15.84542	52.11	PK-U	40.9	-37.5	0	55.51	-	-	74	-18.49	-	-	35	396	H
	* ** 15.846	38.86	ADV	40.9	-37.5	.47	42.73	54	-11.27	-	-	-	-	35	396	H
5	* ** 7.56004	58.57	PK-U	35.8	-47.1	0	47.27	-	-	74	-26.73	-	-	1	272	V
	* ** 7.55997	48.83	ADV	35.8	-47.1	.47	38	54	-16	-	-	-	-	1	272	V
6	* ** 16.16469	51.88	PK-U	41.3	-38.2	0	54.98	-	-	74	-19.02	-	-	222	110	V
	* ** 16.16537	39.06	ADV	41.3	-38.2	.47	42.63	54	-11.37	-	-	-	-	222	110	V

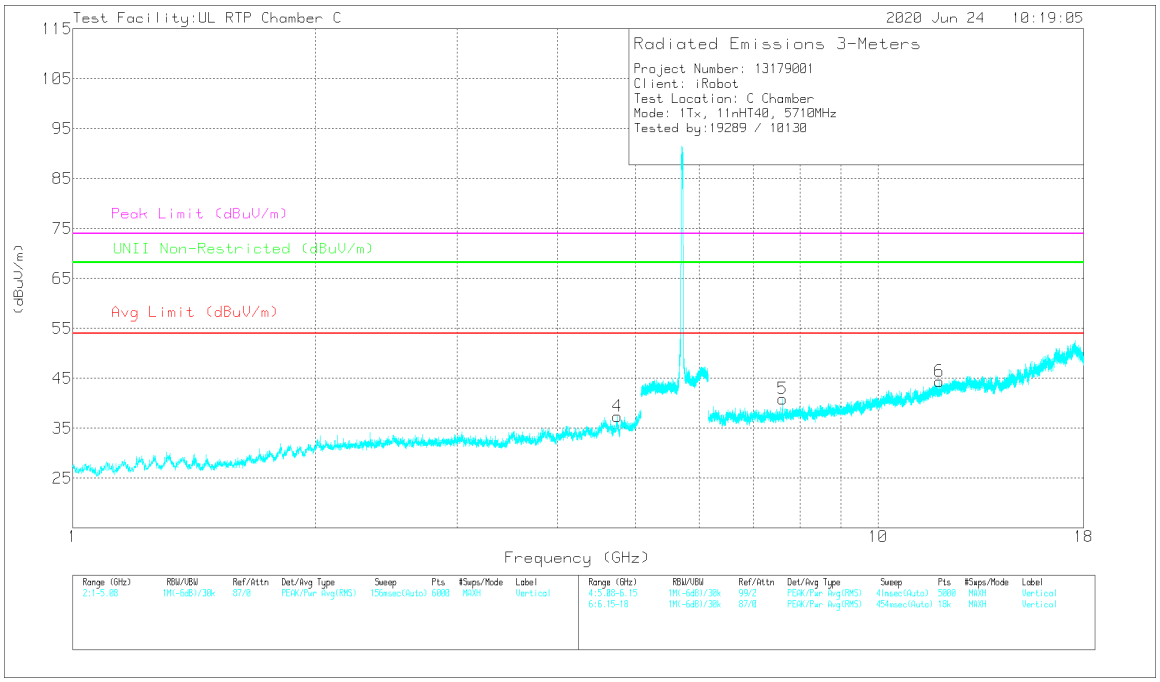
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

CHANNEL 142 RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA
TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.20936	65.73	PK-U	28.2	-55.3	0	38.63	-	-	74	-35.37	-	-	185	103	H
	* ** 1.20955	55.61	ADV	28.2	-55.3	.47	28.98	54	-25.02	-	-	-	-	185	103	H
2	* ** 3.80667	58.87	PK-U	33.6	-49.6	0	42.87	-	-	74	-31.13	-	-	153	140	H
	* ** 3.80663	49.9	ADV	33.6	-49.6	.47	34.37	54	-19.63	-	-	-	-	153	140	H
4	* ** 4.74444	58.08	PK-U	34.1	-48.7	0	43.48	-	-	74	-30.52	-	-	355	124	V
	* ** 4.74442	44.44	ADV	34.1	-48.7	.47	30.31	54	-23.69	-	-	-	-	355	124	V
3	* ** 16.00587	51.49	PK-U	41.1	-37.2	0	55.39	-	-	74	-18.61	-	-	351	190	H
	* ** 16.00627	38.37	ADV	41.1	-37.2	.47	42.74	54	-11.26	-	-	-	-	351	190	H
5	* ** 7.61304	57.06	PK-U	35.8	-46.5	0	46.36	-	-	74	-27.64	-	-	225	224	V
	* ** 7.61329	46.99	ADV	35.8	-46.5	.47	36.76	54	-17.24	-	-	-	-	225	224	V
6	* ** 11.91844	53.87	PK-U	38.7	-42	0	50.57	-	-	74	-23.43	-	-	135	216	V
	* ** 11.91776	40.2	ADV	38.7	-42	.47	37.37	54	-16.63	-	-	-	-	135	216	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

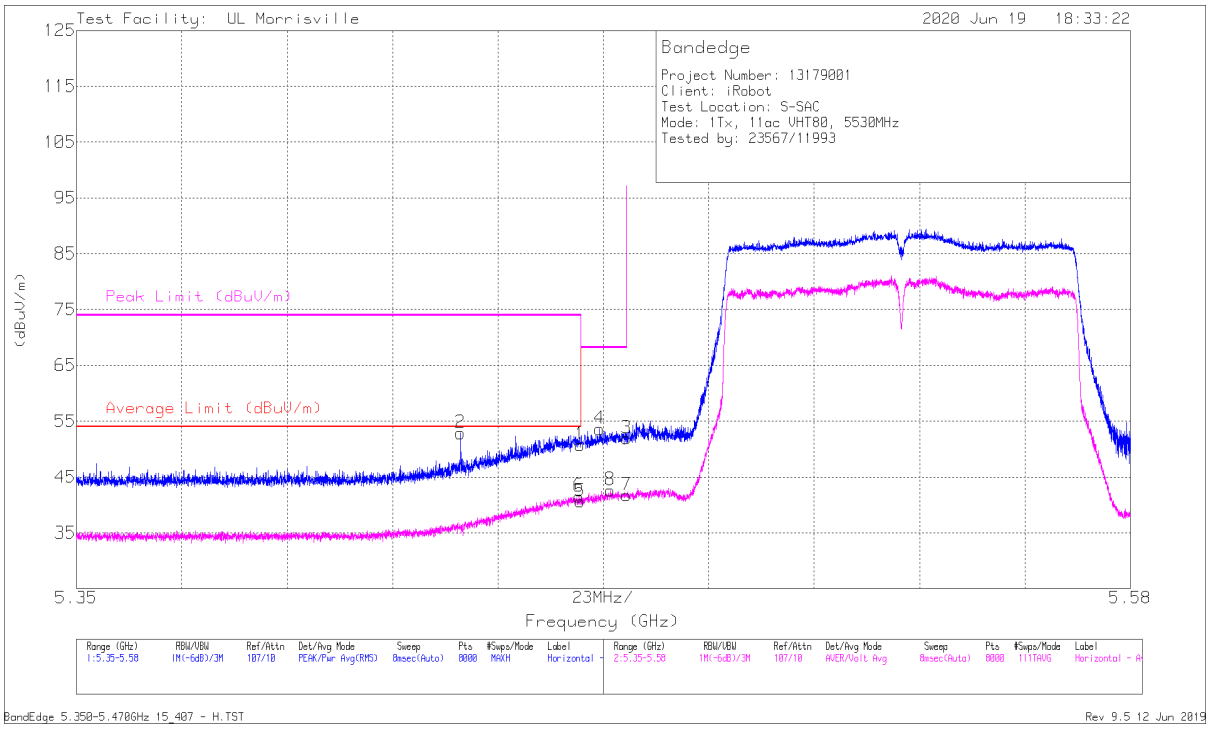
UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

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

1TX External Antenna MODE

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT

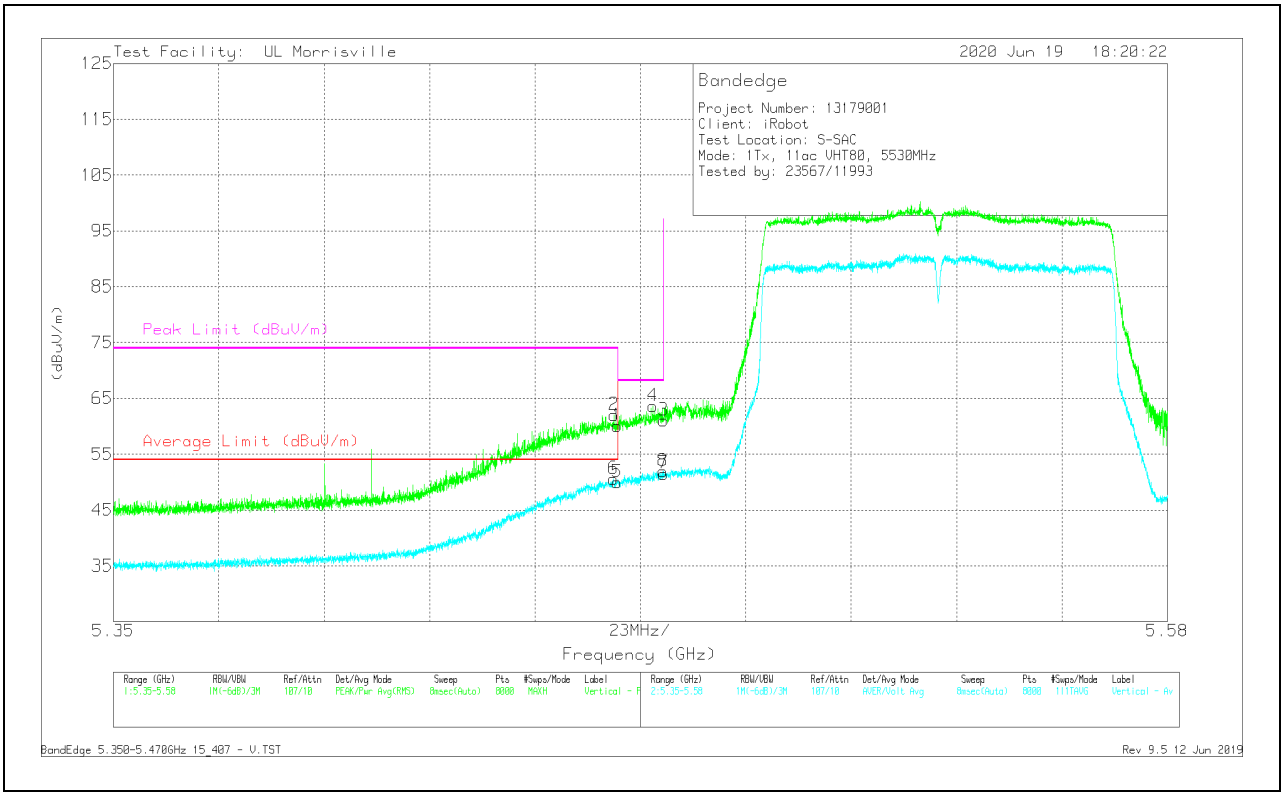


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0078 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.45998	39.47	Pk	34.4	-23.1	0	50.77	-	-	74	-23.23	121	130	H
2	* ** 5.43382	41.88	Pk	34.4	-23.4	0	52.88	-	-	74	-21.12	121	130	H
5	* ** 5.45998	28.4	ADV	34.4	-23.1	.91	40.61	54	-13.39	-	-	121	130	H
6	* ** 5.45967	29.29	ADV	34.4	-23.1	.91	41.50	54	-12.50	-	-	121	130	H
4	5.46418	42.41	Pk	34.4	-23.2	0	53.61	-	-	68.2	-14.59	121	130	H
8	5.46651	30.5	ADV	34.4	-23.2	.91	42.61	-	-	-	-	121	130	H
3	5.46999	40.71	Pk	34.4	-23.2	0	51.91	-	-	68.2	-16.29	121	130	H
7	5.46999	29.57	ADV	34.4	-23.2	.91	41.68	-	-	-	-	121	130	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



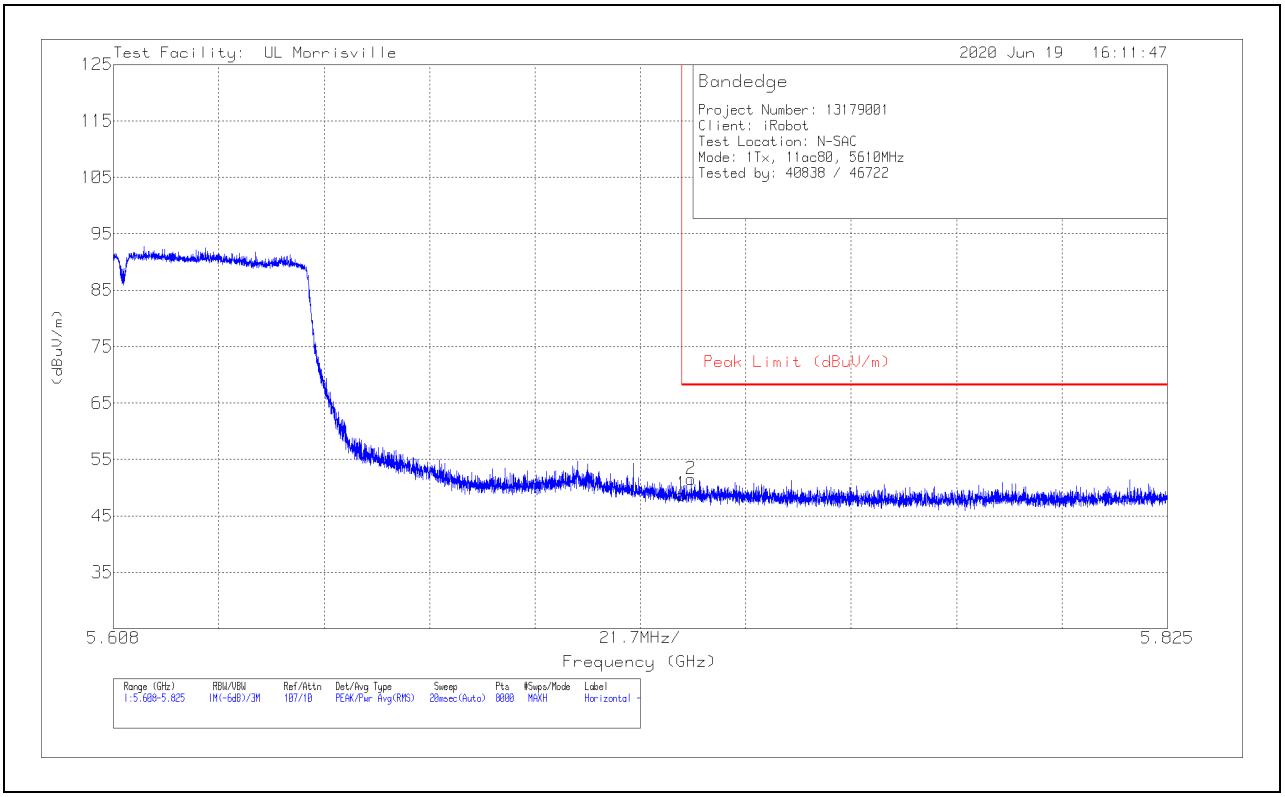
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0078 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.45998	48.76	Pk	34.4	-23.1	0	60.06	-	-	74	-13.94	118	105	V
2	* ** 5.45924	50.73	Pk	34.4	-23.1	0	62.03	-	-	74	-11.97	118	105	V
5	* ** 5.45998	37.72	ADV	34.4	-23.1	.91	49.93	54	-4.07	-	-	118	105	V
6	* ** 5.45909	38.31	ADV	34.4	-23.1	.91	50.52	54	-3.48	-	-	118	105	V
4	5.46775	52.42	Pk	34.4	-23.2	0	63.62	-	-	68.2	-4.58	118	105	V
8	5.4699	39.78	ADV	34.4	-23.2	.91	51.89	-	-	-	-	118	105	V
3	5.46999	49.83	Pk	34.4	-23.2	0	61.03	-	-	68.2	-7.17	118	105	V
7	5.46999	39.37	ADV	34.4	-23.2	.91	51.48	-	-	-	-	118	105	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT

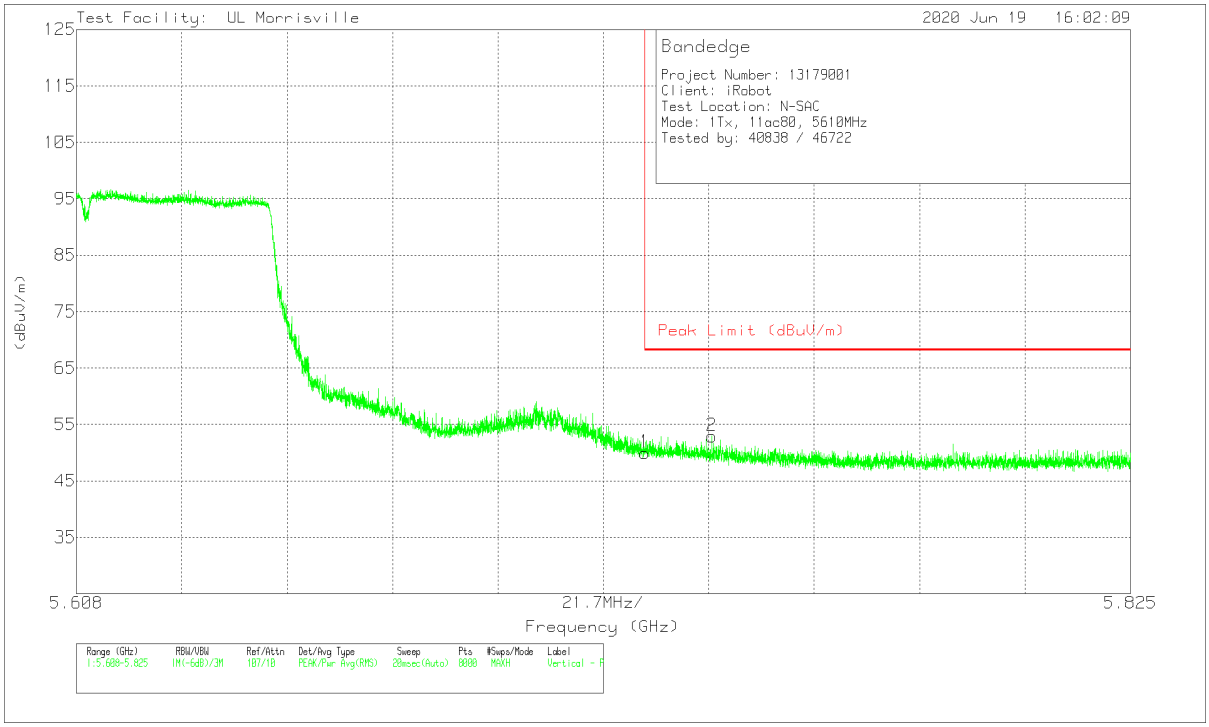


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	35.96	Pk	34.6	-21.8	48.76	68.2	-19.44	41	350	H
2	5.72698	38.7	Pk	34.6	-21.8	51.5	68.2	-16.7	41	350	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



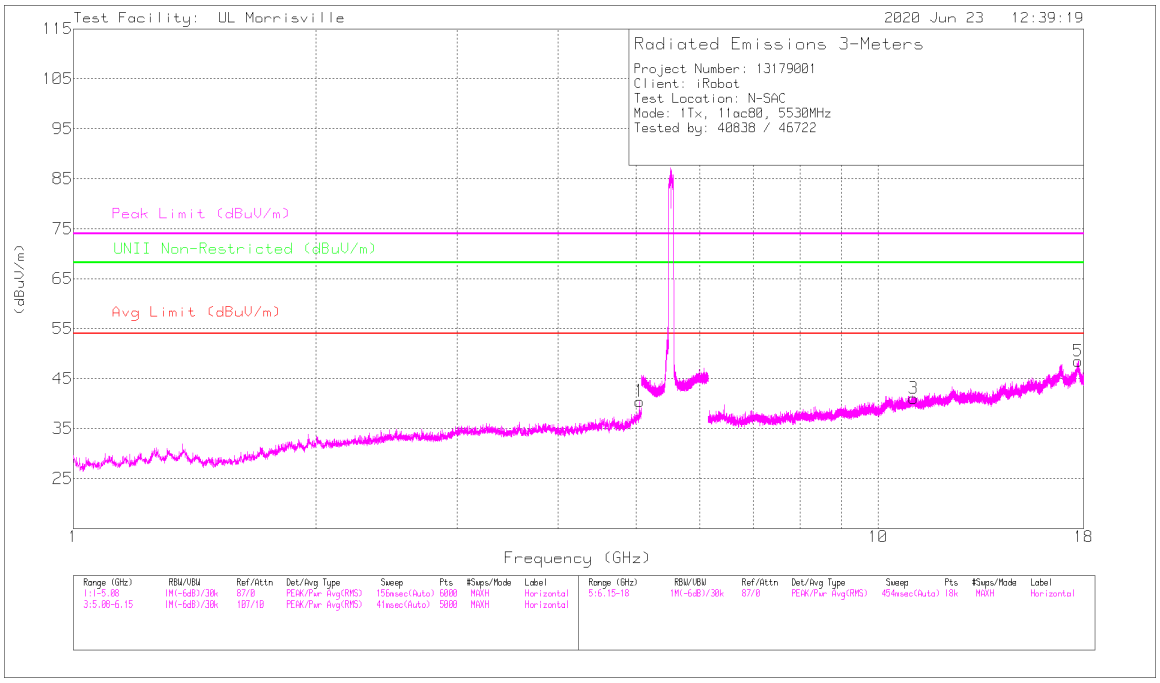
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	37.2	Pk	34.6	-21.8	0	50	68.2	-18.2	314	115	V
2	5.73884	40.03	Pk	34.7	-21.8	0	52.93	68.2	-15.27	314	115	V

Pk - Peak detector

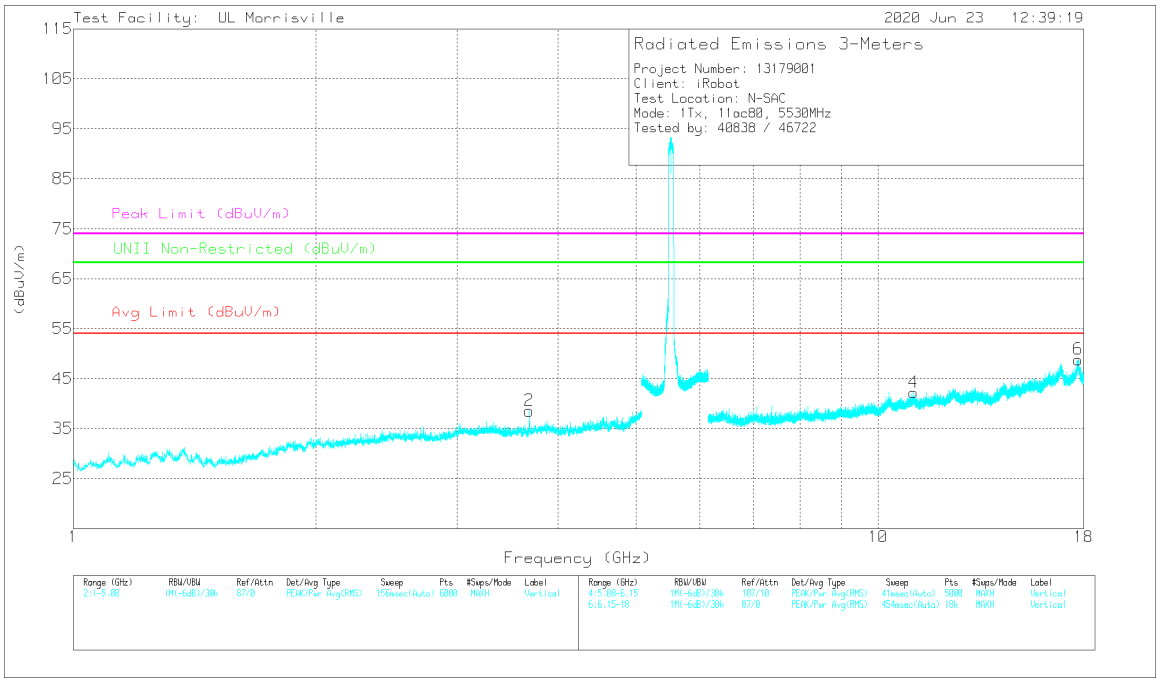
UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

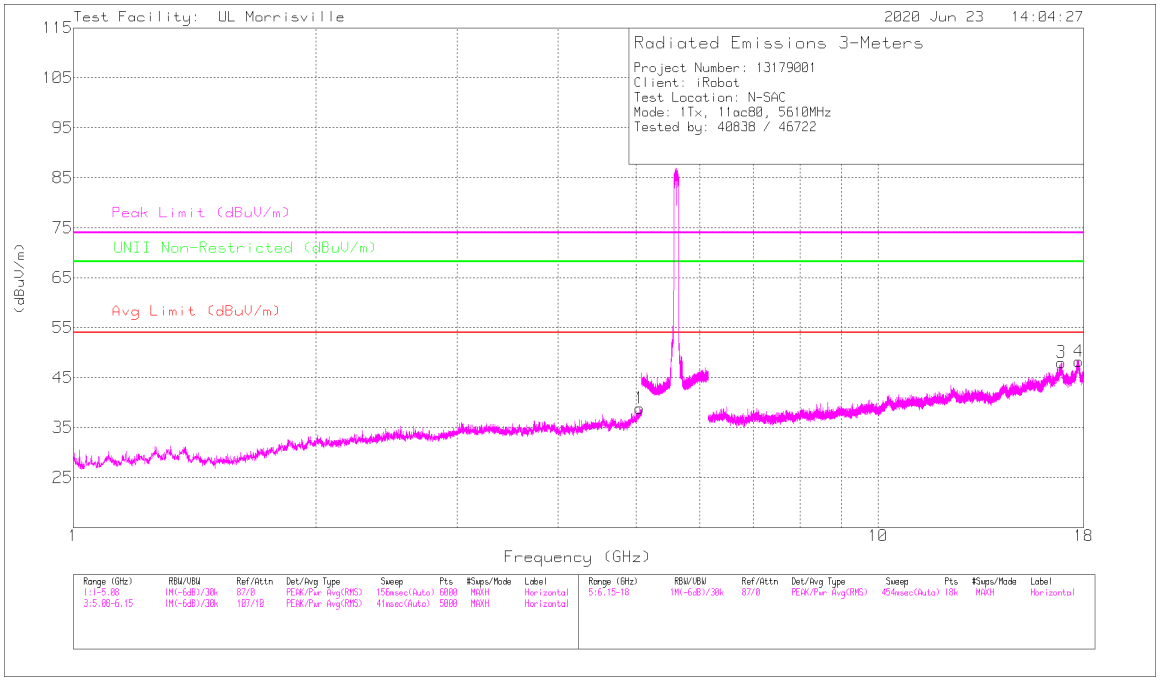
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.05243	42.12	PK-U	34.2	-30.5	0	45.82	-	-	74	-28.18	-	-	316	267	H
	* ** 5.05476	28.35	ADV	34.1	-30.5	.91	32.86	54	-21.14	-	-	-	-	316	267	H
2	* ** 3.68665	42.56	PK-U	33.1	-31.9	0	43.76	-	-	74	-30.24	-	-	49	253	V
	* ** 3.68666	34.13	ADV	33.1	-31.9	.91	36.24	54	-17.76	-	-	-	-	49	253	V
3	* ** 11.06037	34.78	PK-U	37.9	-25.2	0	47.48	-	-	74	-26.52	-	-	246	307	H
	* ** 11.05994	22.16	ADV	37.9	-25.2	.91	35.77	54	-18.23	-	-	-	-	246	307	H
5	* ** 17.72274	33.69	PK-U	41.7	-19.8	0	55.59	-	-	74	-18.41	-	-	291	134	H
	* ** 17.72449	20.65	ADV	41.7	-19.8	.91	43.46	54	-10.54	-	-	-	-	291	134	H
4	* ** 11.05802	35.81	PK-U	37.9	-25.2	0	48.51	-	-	74	-25.49	-	-	310	233	V
	* ** 11.06003	24.17	ADV	37.9	-25.2	.91	37.78	54	-16.22	-	-	-	-	310	233	V
6	* ** 17.73556	33.05	PK-U	41.7	-19.7	0	55.05	-	-	74	-18.95	-	-	66	342	V
	* ** 17.73388	19.92	ADV	41.7	-19.6	.91	42.93	54	-11.07	-	-	-	-	66	342	V

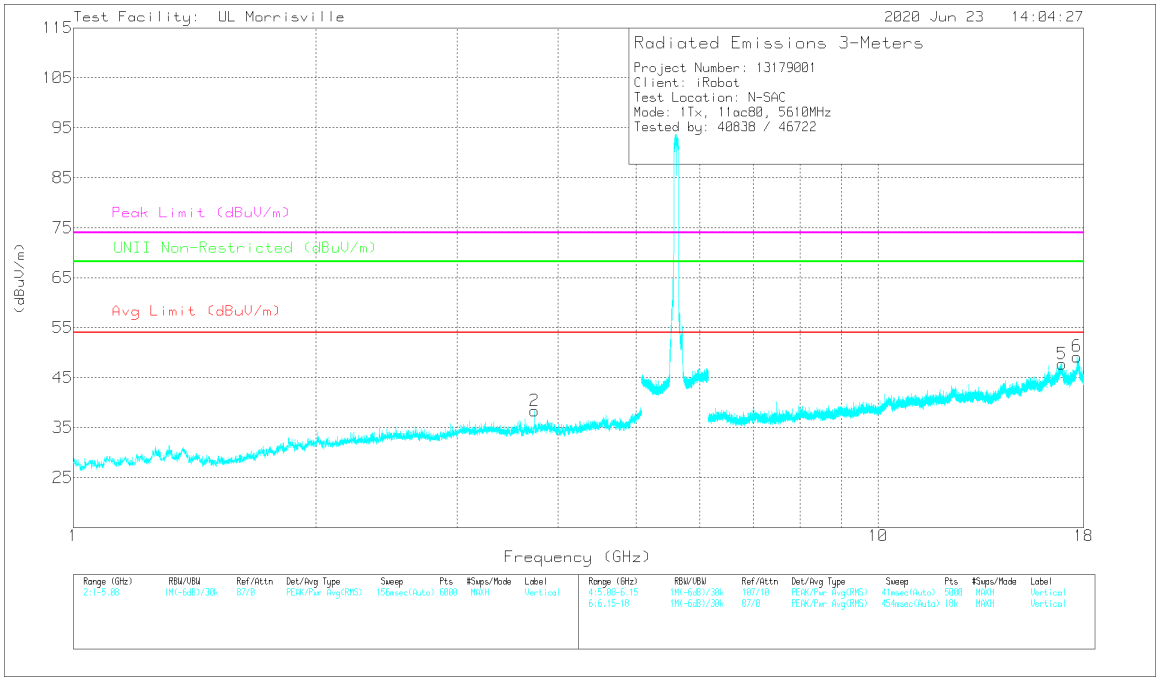
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA
TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

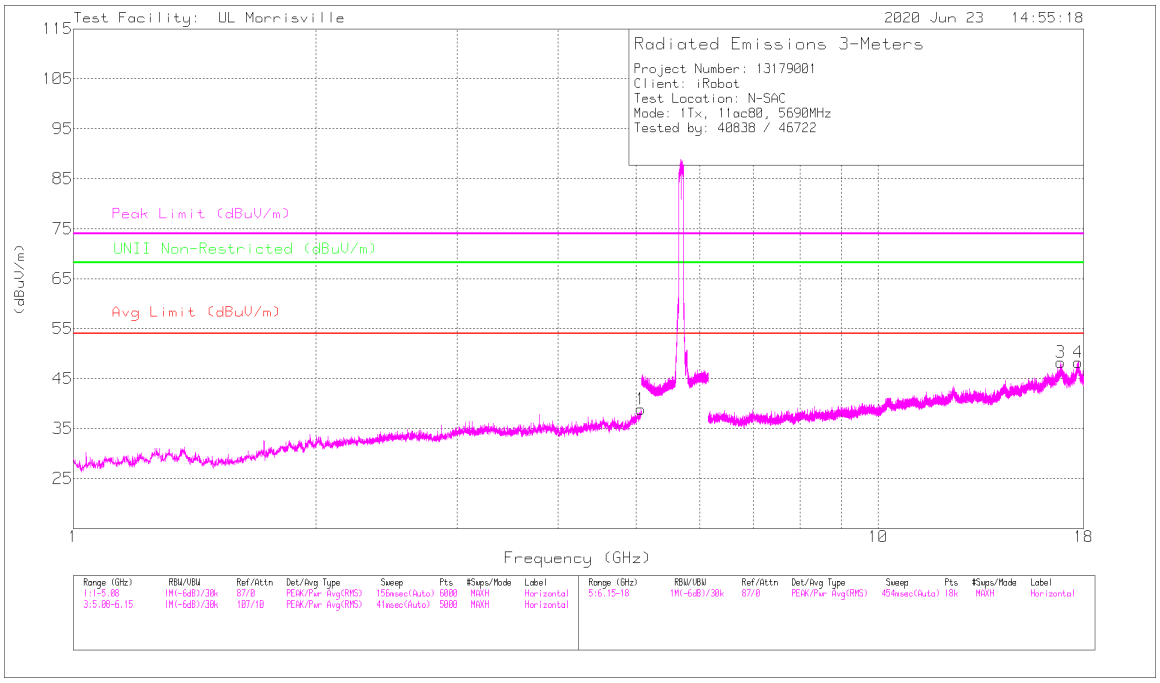
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.05551	41.32	PK-U	34.1	-30.4	0	45.02	-	-	74	-28.98	-	-	83	197	H
	* ** 5.05539	28.31	ADV	34.1	-30.4	.91	32.92	54	-21.08	-	-	-	-	83	197	H
2	* ** 3.73994	43.21	PK-U	33.3	-32.5	0	44.01	-	-	74	-29.99	-	-	68	199	V
	* ** 3.73995	34.61	ADV	33.3	-32.5	.91	36.32	54	-17.68	-	-	-	-	68	199	V
4	* ** 17.7438	33.63	PK-U	41.7	-19.8	0	55.53	-	-	74	-18.47	-	-	13	102	H
	* ** 17.74309	20.71	ADV	41.7	-19.8	.91	43.52	54	-10.48	-	-	-	-	13	102	H
3	16.90002	34.59	PK-U	41.5	-22.4	0	53.69	-	-	-	-	68.2	-14.51	225	161	H
5	16.91263	35.63	PK-U	41.5	-22.7	0	54.43	-	-	-	-	68.2	-13.77	61	260	V
6	17.67346	34.24	PK-U	41.7	-21.3	0	54.64	-	-	-	-	68.2	-13.56	213	176	V

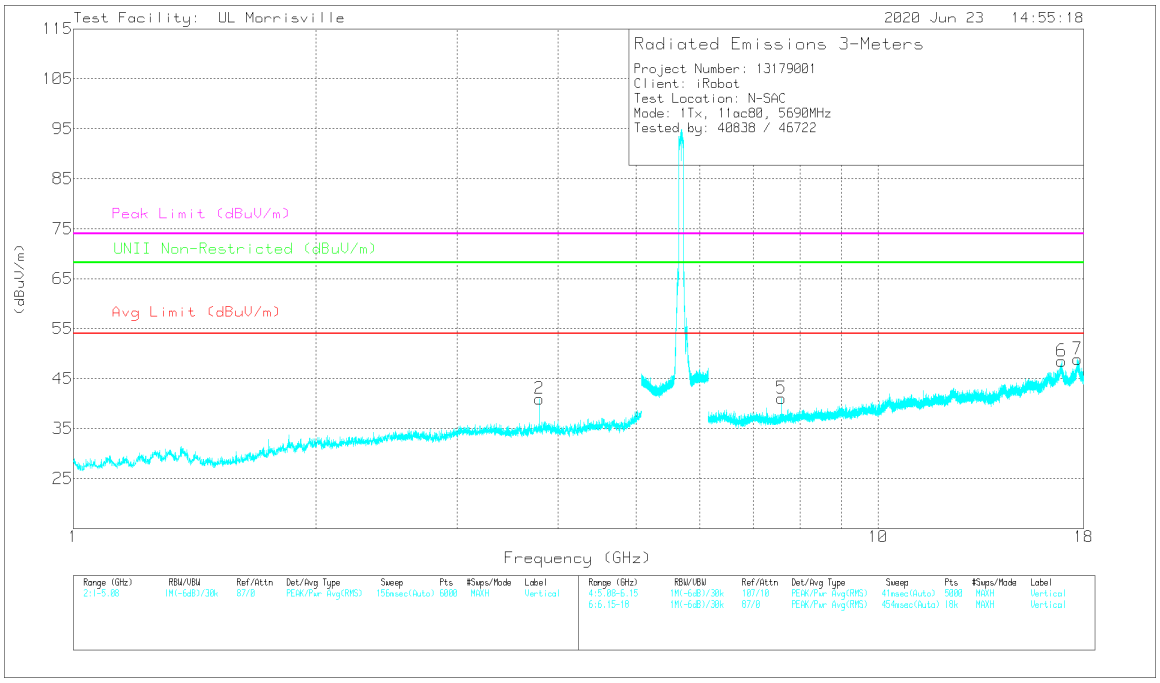
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

CHANNEL 138 RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA
TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.06856	40.06	PK-U	34.2	-29.8	0	44.46	-	-	74	-29.54	-	-	169	200	H
	* ** 5.06796	27.7	ADV	34.2	-29.9	.91	32.91	54	-21.09	-	-	-	-	169	200	H
2	* ** 3.79316	44.76	PK-U	33.5	-32.4	0	45.86	-	-	74	-28.14	-	-	60	233	V
	* ** 3.79334	38.57	ADV	33.5	-32.4	.91	40.58	54	-13.42	-	-	-	-	60	233	V
4	* ** 17.73353	34	PK-U	41.7	-19.6	0	56.1	-	-	74	-17.9	-	-	300	214	H
	* ** 17.73185	20.75	ADV	41.7	-19.7	.91	43.66	54	-10.34	-	-	-	-	300	214	H
5	* ** 7.58651	39.46	PK-U	35.8	-28.6	0	46.66	-	-	74	-27.34	-	-	190	143	V
	* ** 7.58659	31.27	ADV	35.8	-28.6	.91	39.38	54	-14.62	-	-	-	-	190	143	V
3	16.85995	35.4	PK-U	41.6	-22.6	0	54.4	-	-	-	-	68.2	-13.8	242	377	H
6	16.90821	35.89	PK-U	41.6	-22.5	0	54.99	-	-	-	-	68.2	-13.21	80	198	V
7	17.68521	33.52	PK-U	41.7	-20.9	0	54.32	-	-	-	-	68.2	-13.88	193	362	V

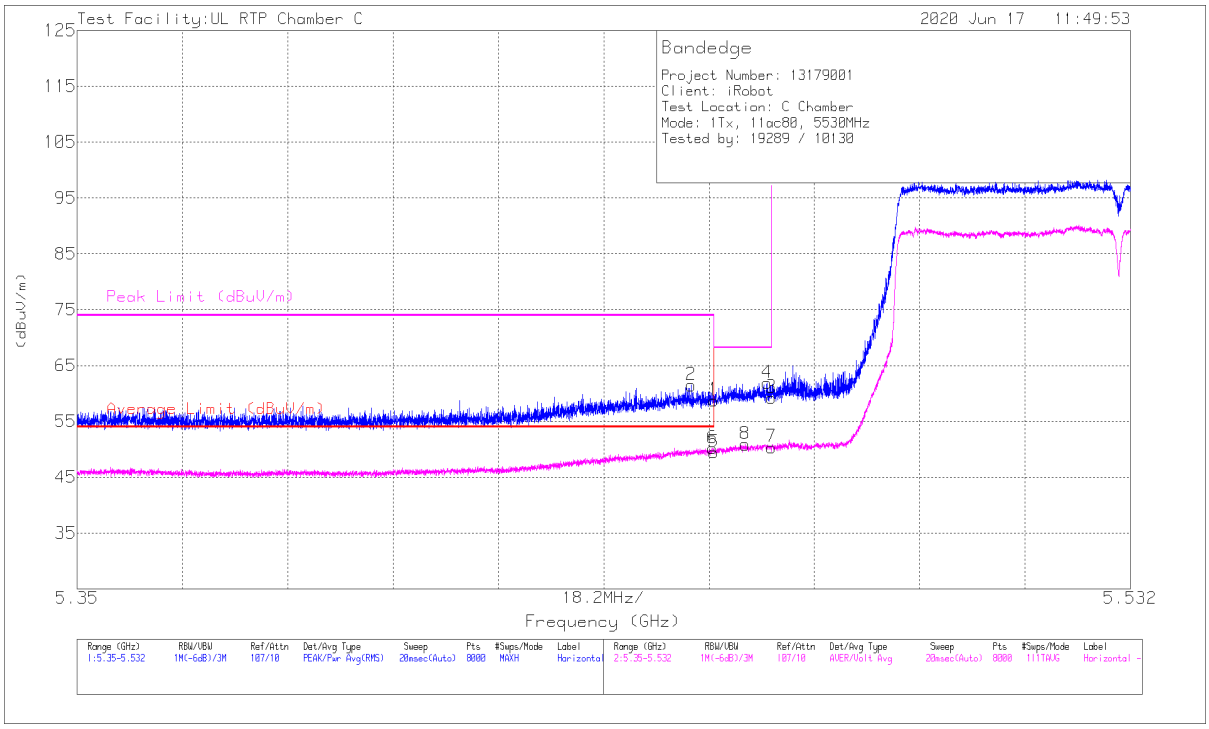
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

1TX PCB Antenna MODE

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT

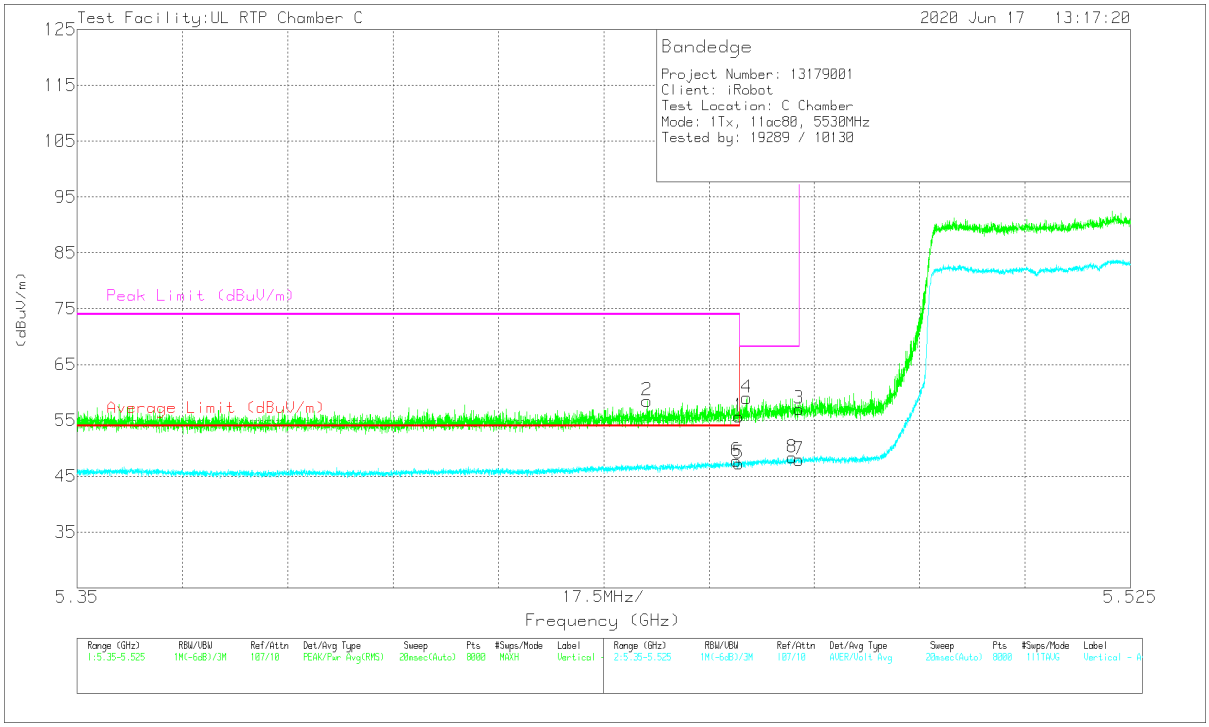


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.45999	39.75	Pk	34.6	-15.6	0	58.75	-	-	74	-15.25	358	166	H
2	* ** 5.4561	42.48	Pk	34.6	-15.6	0	61.48	-	-	74	-12.52	358	166	H
5	* ** 5.45999	29.55	ADV	34.6	-15.6	.91	49.46	54	-4.54	-	-	358	166	H
6	* ** 5.45976	30.27	ADV	34.6	-15.6	.91	50.18	54	-3.82	-	-	358	166	H
8	5.46543	30.77	ADV	34.6	-15.4	.91	50.88	-	-	-	-	358	166	H
4	5.46923	42.66	Pk	34.6	-15.4	0	61.86	-	-	68.2	-6.34	358	166	H
3	5.47	40.03	Pk	34.6	-15.4	0	59.23	-	-	68.2	-8.97	358	166	H
7	5.47	30.26	ADV	34.6	-15.4	.91	50.37	-	-	-	-	358	166	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



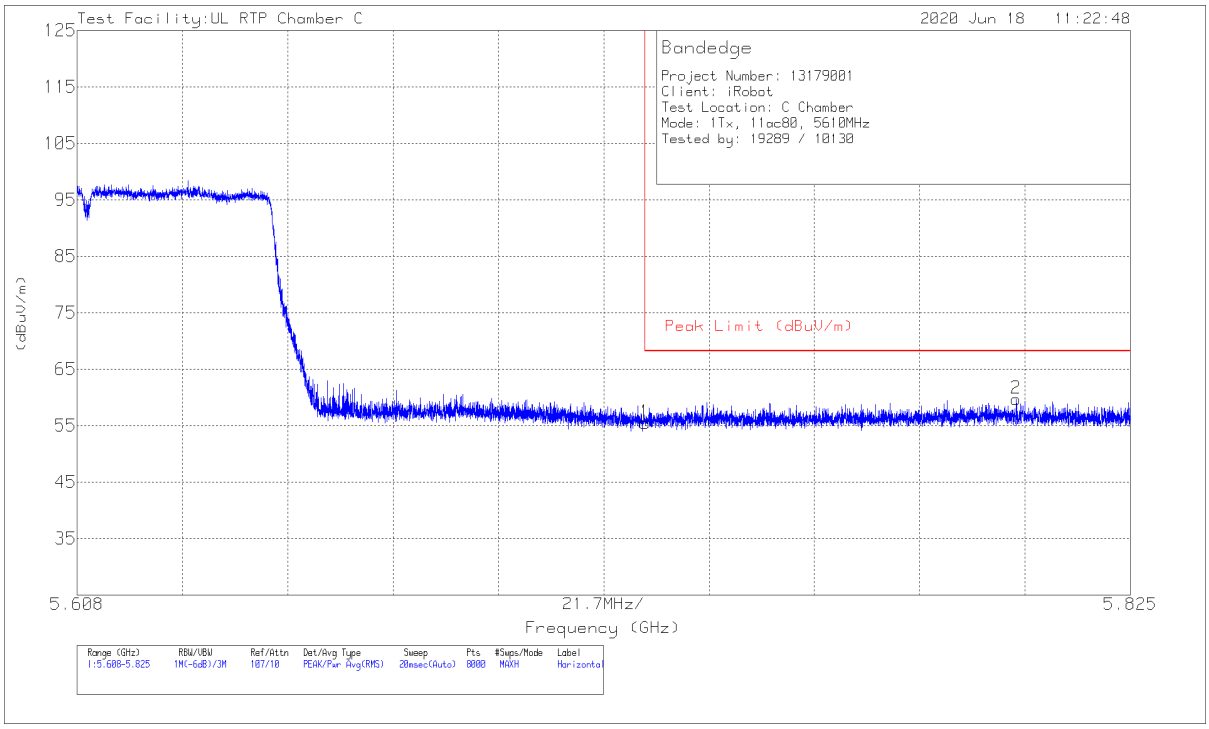
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.45998	36.7	Pk	34.6	-15.6	0	55.7	-	-	74	-18.3	117	304	V
2	* ** 5.44469	39.44	Pk	34.6	-15.5	0	58.54	-	-	74	-15.46	117	304	V
5	* ** 5.45998	27.39	ADV	34.6	-15.6	.91	47.3	54	-6.7	-	-	117	304	V
6	* ** 5.45954	27.87	ADV	34.6	-15.6	.91	47.78	54	-6.22	-	-	117	304	V
4	5.46125	39.94	Pk	34.6	-15.5	0	59.04	-	-	68.2	-9.16	117	304	V
8	5.4688	28.26	ADV	34.6	-15.4	.91	48.37	-	-	-	-	117	304	V
3	5.46998	37.88	Pk	34.6	-15.4	0	57.08	-	-	68.2	-11.12	117	304	V
7	5.46998	27.84	ADV	34.6	-15.4	.91	47.95	-	-	-	-	117	304	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT

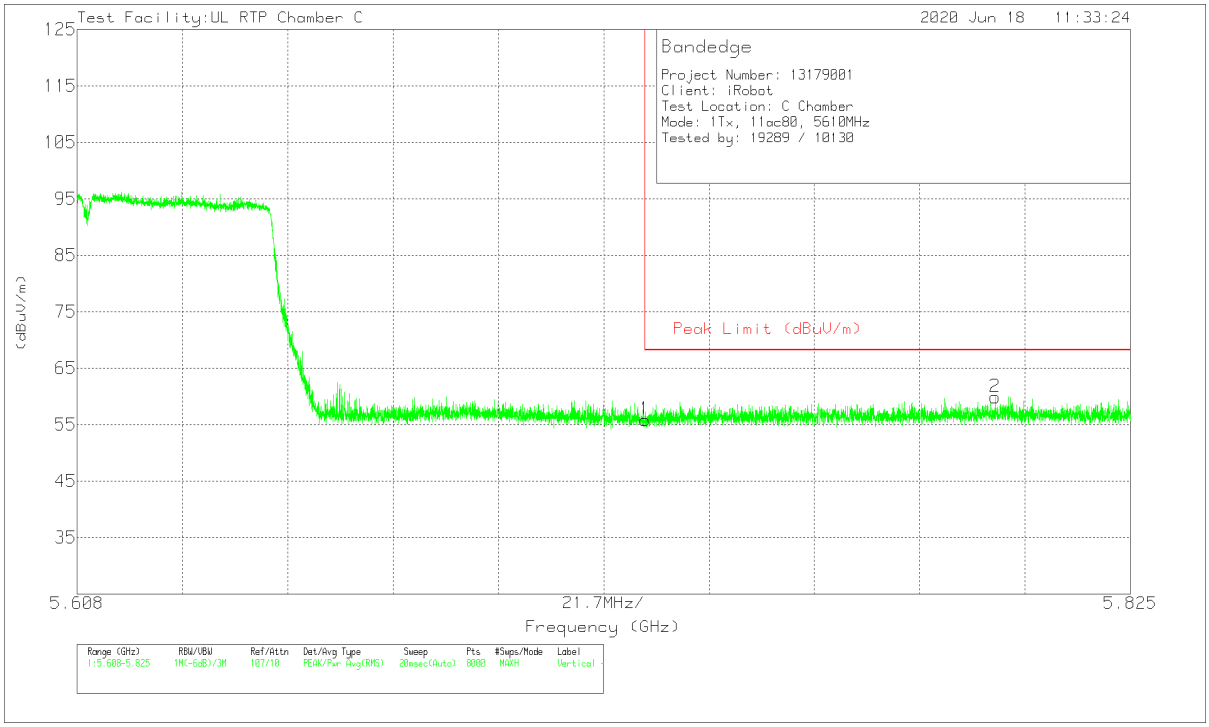


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	35.68	Pk	34.6	-14.8	55.48	68.2	-12.72	142	315	H
2	5.80148	39.24	Pk	34.8	-14.3	59.74	68.2	-8.46	142	315	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



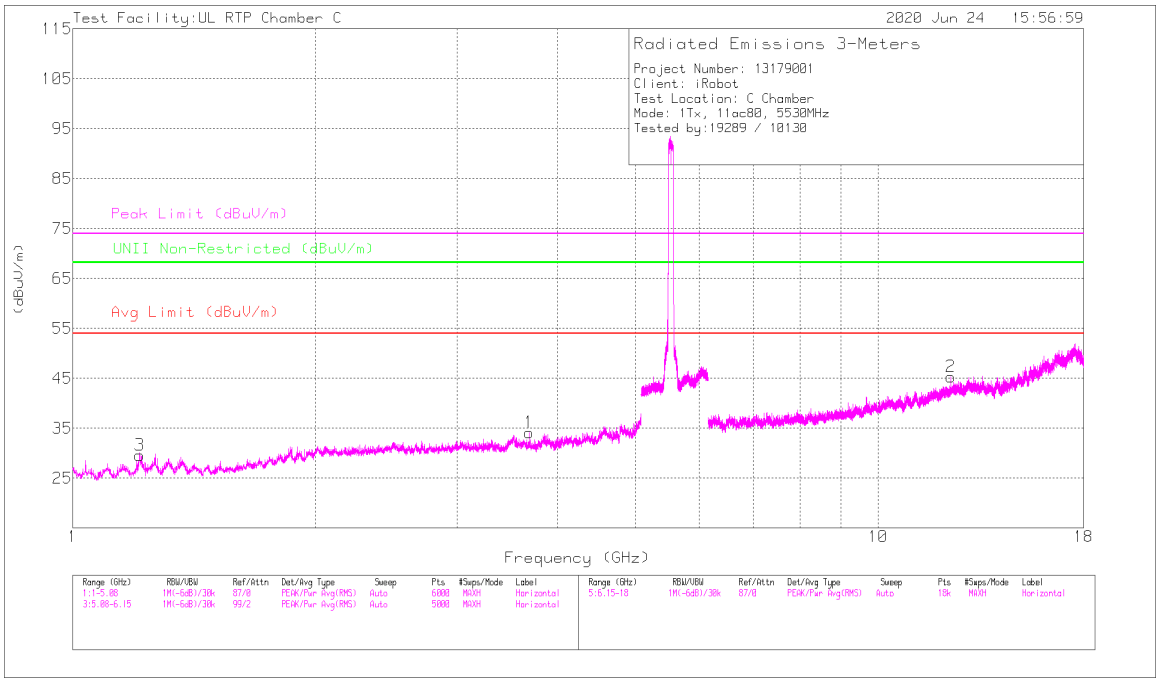
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	36.08	Pk	34.6	-14.8	55.88	68.2	-12.32	241	336	V
2	5.79714	39.29	Pk	34.8	-14.2	59.89	68.2	-8.31	241	336	V

Pk - Peak detector

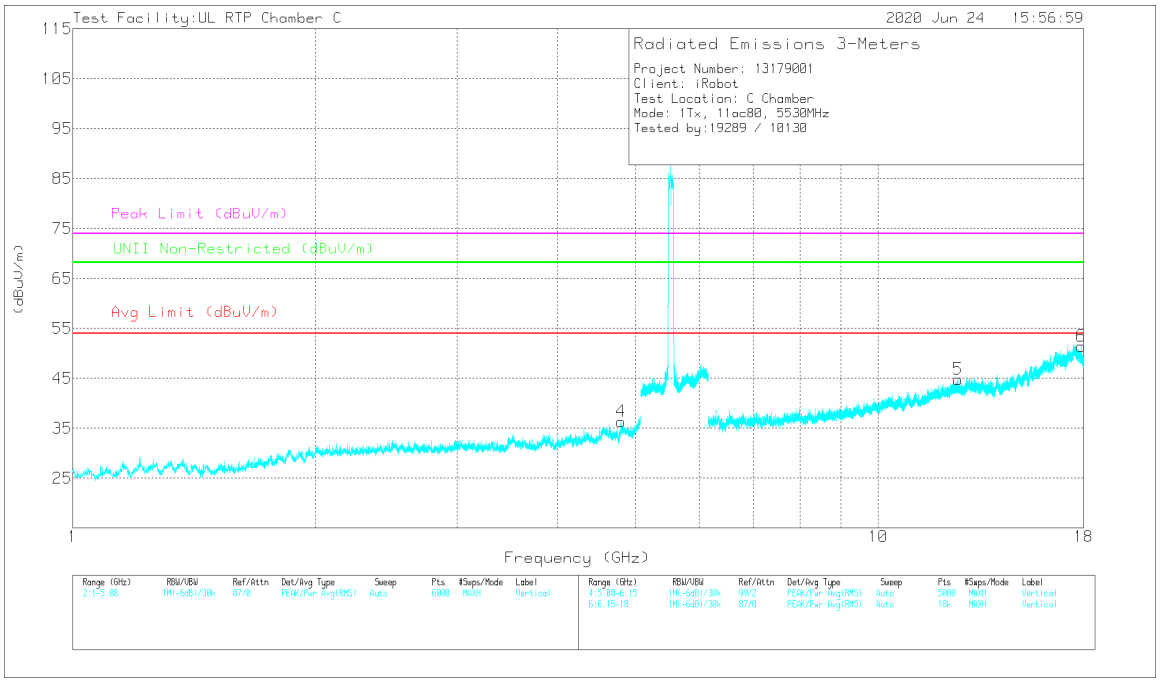
UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

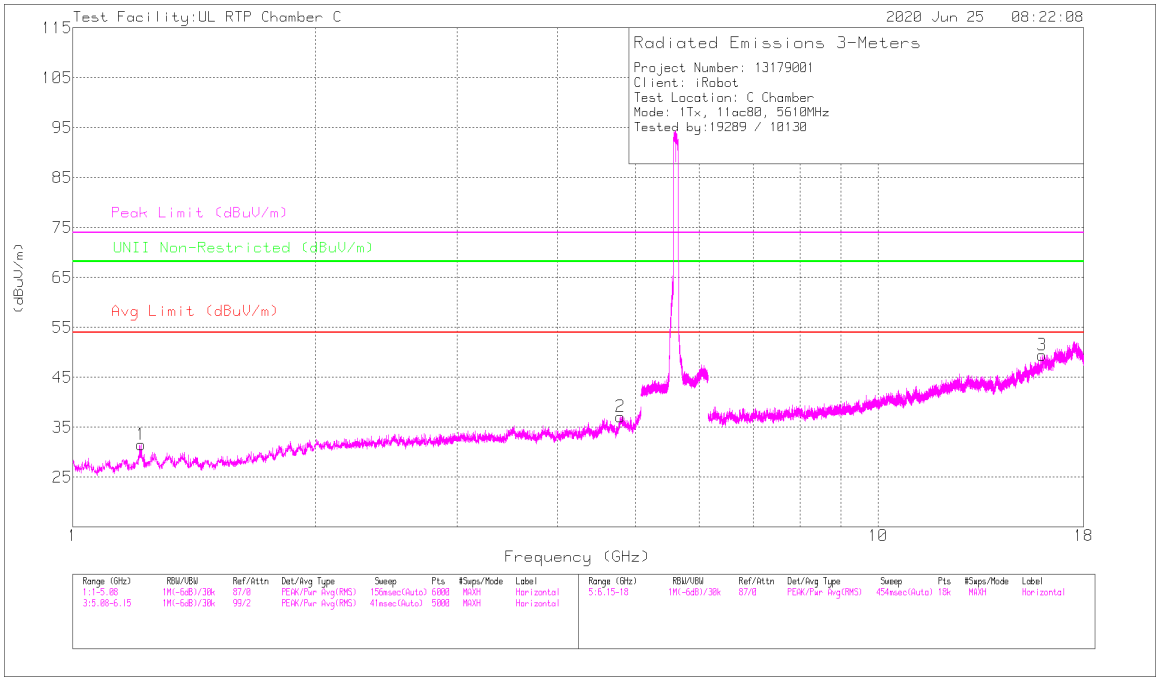
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.68644	57.58	PK-U	33.2	-50	0	40.78	-	-	74	-33.22	-	-	151	102	H
	* ** 3.6867	47.17	ADV	33.2	-50	.91	31.28	54	-22.72	-	-	-	-	151	102	H
3	* ** 1.20953	64.77	PK-U	28.2	-55.3	0	37.67	-	-	74	-36.33	-	-	180	102	H
	* ** 1.20959	54.22	ADV	28.2	-55.3	.91	28.03	54	-25.97	-	-	-	-	180	102	H
4	* ** 4.79678	56.04	PK-U	34.1	-48.5	0	41.64	-	-	74	-32.36	-	-	355	102	V
	* ** 4.79868	43.06	ADV	34.1	-48.7	.91	29.37	54	-24.63	-	-	-	-	355	102	V
2	* ** 12.30691	52.39	PK-U	38.9	-41.1	0	50.19	-	-	74	-23.81	-	-	131	112	H
	* ** 12.30618	39.17	ADV	38.9	-41.1	.91	37.88	54	-16.12	-	-	-	-	131	112	H
5	* ** 12.56485	52.66	PK-U	39.2	-40.8	0	51.06	-	-	74	-22.94	-	-	258	116	V
	* ** 12.56411	38.91	ADV	39.2	-40.8	.91	38.22	54	-15.78	-	-	-	-	258	116	V
6	* ** 17.87053	49.52	PK-U	41.4	-33.7	0	57.22	-	-	74	-16.78	-	-	223	329	V
	* ** 17.87067	36.53	ADV	41.4	-33.7	.91	45.14	54	-8.86	-	-	-	-	223	329	V

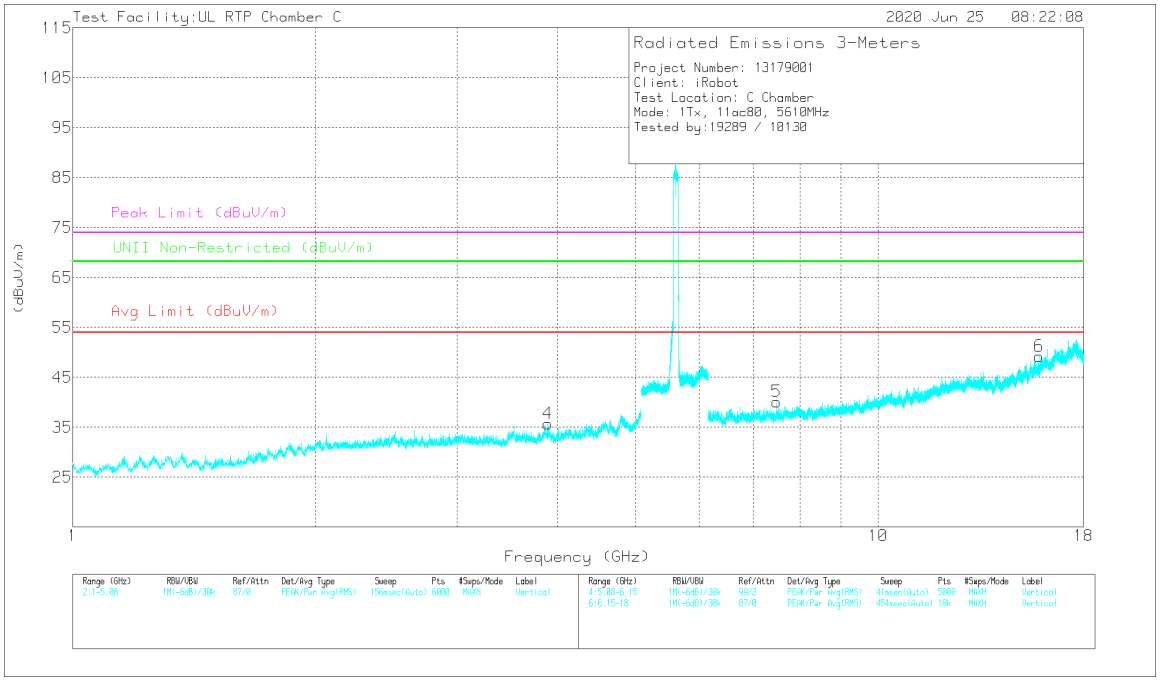
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA
TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

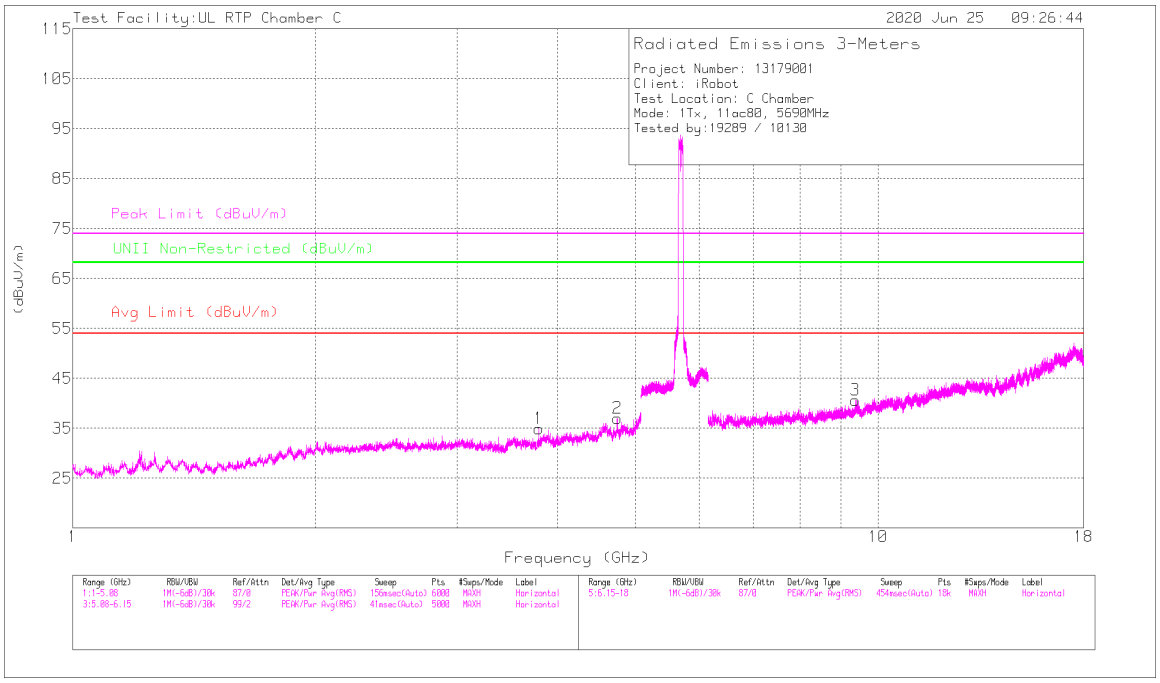
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.2158	64.41	PK-U	28.3	-55.2	0	37.51	-	-	74	-36.49	-	-	172	102	H
	* ** 1.216	53.06	ADV	28.3	-55.3	.91	26.97	54	-27.03	-	-	-	-	172	102	H
2	* ** 4.79135	56.47	PK-U	34.1	-48.4	0	42.17	-	-	74	-31.83	-	-	339	102	H
	* ** 4.79359	43.96	ADV	34.1	-48.5	.91	30.47	54	-23.53	-	-	-	-	339	102	H
4	* ** 3.89142	57.05	PK-U	33.5	-50	0	40.55	-	-	74	-33.45	-	-	5	154	V
	* ** 3.89158	44.39	ADV	33.5	-50	.91	28.8	54	-25.2	-	-	-	-	5	154	V
3	* ** 15.98629	50.41	PK-U	41.1	-37.4	0	54.11	-	-	74	-19.89	-	-	309	338	H
	* ** 15.98458	38.19	ADV	41.1	-37.6	.91	42.6	54	-11.4	-	-	-	-	309	338	H
5	* ** 7.47932	57.03	PK-U	35.8	-46.5	0	46.33	-	-	74	-27.67	-	-	308	395	V
	* ** 7.47996	46.85	ADV	35.8	-46.5	.91	37.06	54	-16.94	-	-	-	-	308	395	V
6	* ** 15.8493	50.83	PK-U	40.9	-37.6	0	54.13	-	-	74	-19.87	-	-	39	199	V
	* ** 15.85191	38.1	ADV	40.9	-37.5	.91	42.41	54	-11.59	-	-	-	-	39	199	V

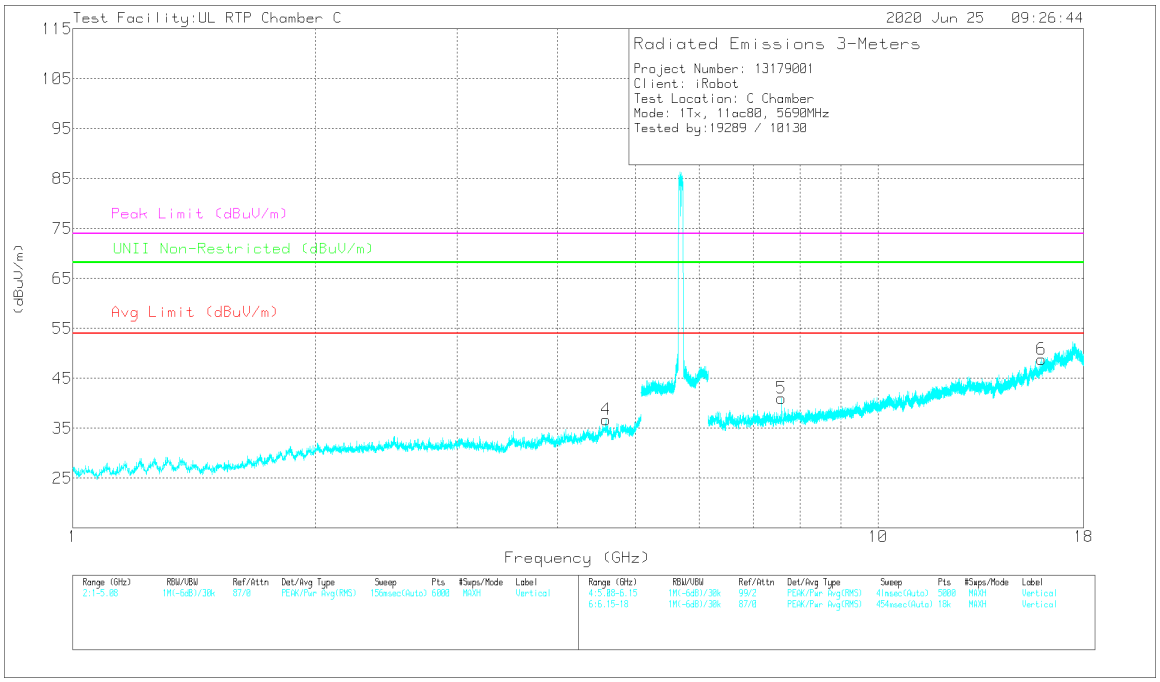
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

CHANNEL 138 RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.79324	57.29	PK-U	33.6	-50	0	40.89	-	-	74	-33.11	-	-	156	102	H
	* ** 3.79336	48.55	ADV	33.6	-50	.91	33.06	54	-20.94	-	-	-	-	156	102	H
2	* ** 4.746	55.71	PK-U	34.1	-48.7	0	41.11	-	-	74	-32.89	-	-	154	102	H
	* ** 4.74439	43.4	ADV	34.1	-48.7	.91	29.71	54	-24.29	-	-	-	-	154	102	H
4	* ** 4.59689	57.67	PK-U	34.2	-49.7	0	42.17	-	-	74	-31.83	-	-	358	102	V
	* ** 4.59529	44.57	ADV	34.2	-49.7	.91	29.98	54	-24.02	-	-	-	-	358	102	V
3	* ** 9.37123	53.99	PK-U	36.4	-44.4	0	45.99	-	-	74	-28.01	-	-	343	396	H
	* ** 9.3715	41.66	ADV	36.4	-44.4	.91	34.57	54	-19.43	-	-	-	-	343	396	H
5	* ** 7.58682	57.28	PK-U	35.8	-47	0	46.08	-	-	74	-27.92	-	-	355	260	V
	* ** 7.58664	47.86	ADV	35.8	-47	.91	37.57	54	-16.43	-	-	-	-	355	260	V
6	* ** 15.96836	50.55	PK-U	41.1	-38.2	0	53.45	-	-	74	-20.55	-	-	162	155	V
	* ** 15.96518	38.24	ADV	41.1	-38	.91	42.25	54	-11.75	-	-	-	-	162	155	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

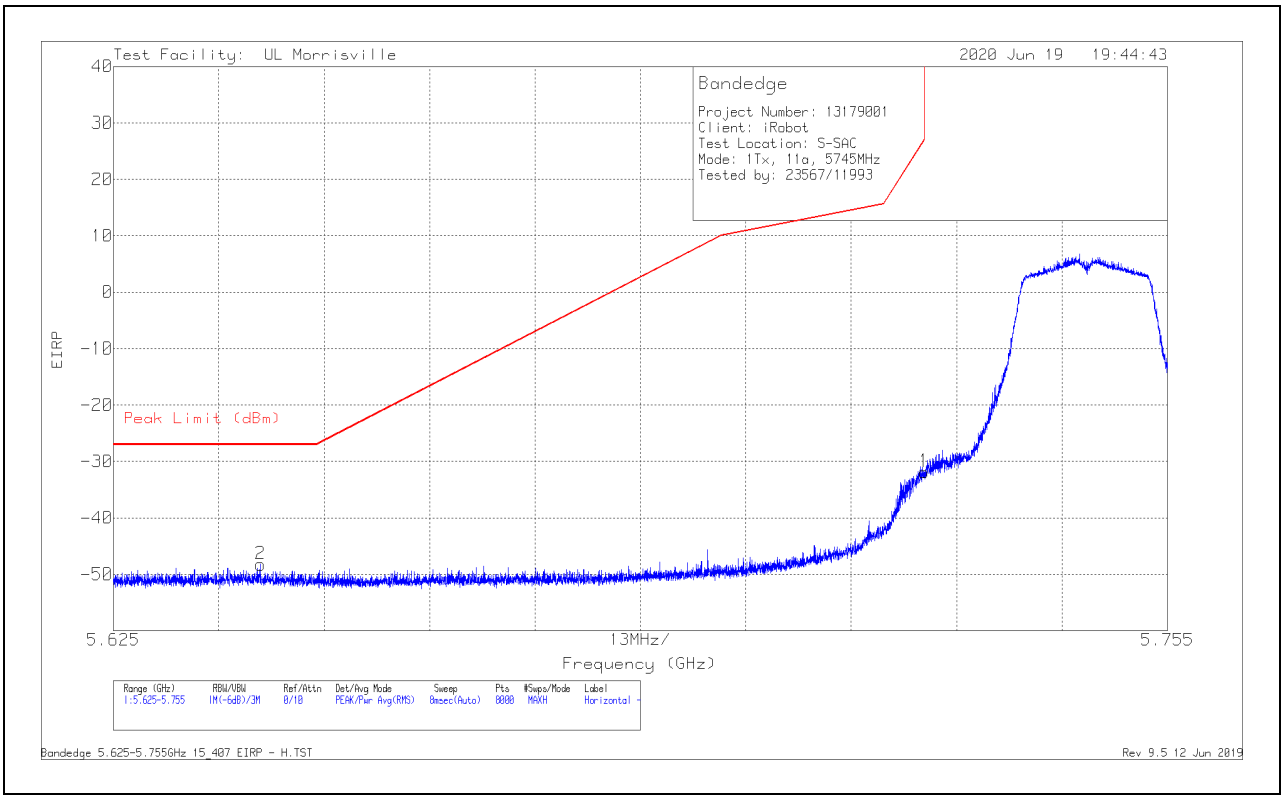
UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

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

1TX External Antenna MODE

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT

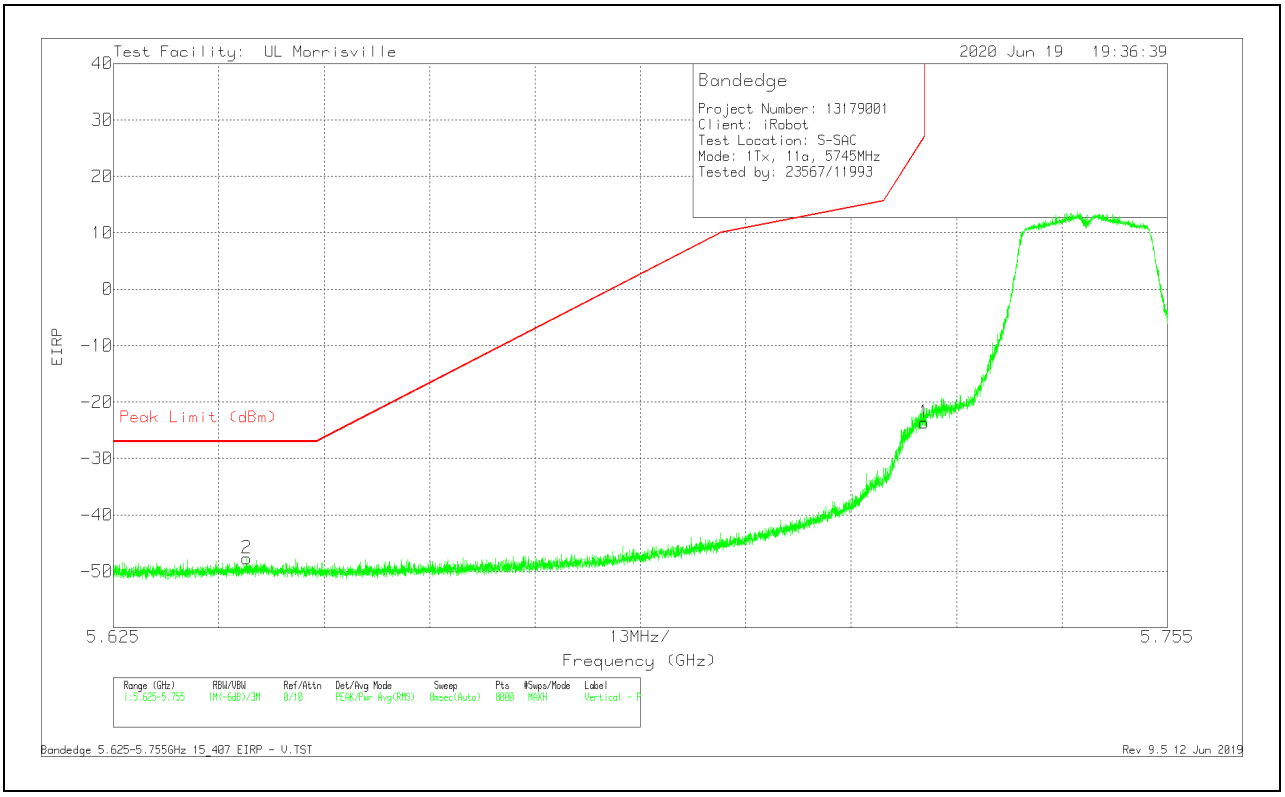


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0078 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.64314	-71.74	Pk	34.7	-23	11.8	-48.24	-27	-21.24	122	351	H
1	5.725	-55.35	Pk	34.8	-23.1	11.8	-31.85	27	-58.85	122	351	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



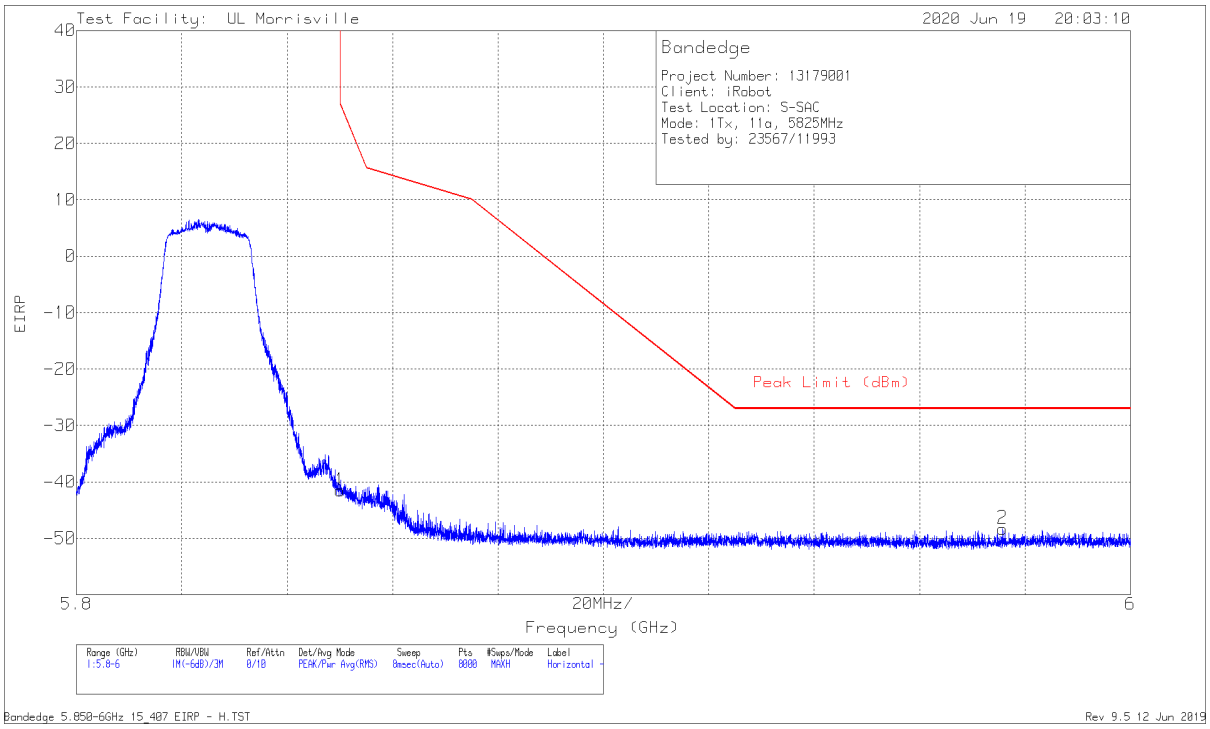
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0078 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.64145	-71.2	Pk	34.7	-23	11.8	-47.7	-27	-20.7	111	115	V
1	5.725	-47.16	Pk	34.8	-23.1	11.8	-23.66	27	-50.66	111	115	V

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT

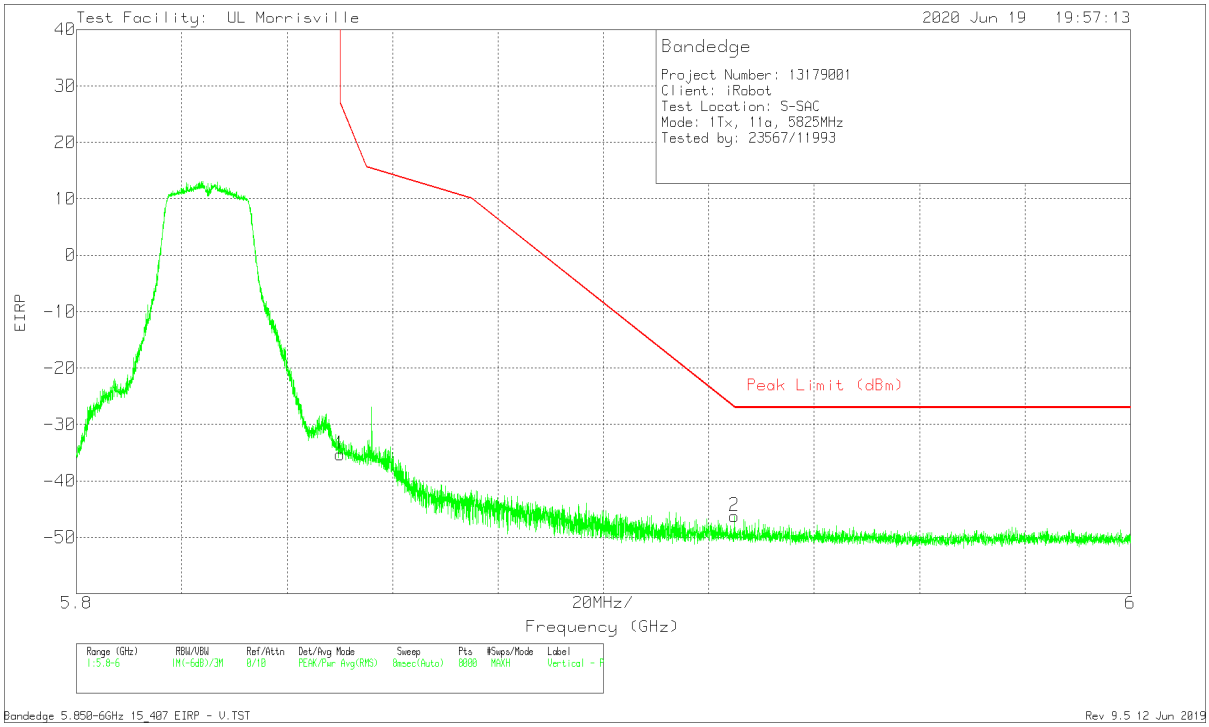


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0078 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85001	-65.29	Pk	34.9	-22.9	11.8	-41.49	26.99	-68.48	123	133	H
2	5.97572	-72.38	Pk	35	-22.7	11.8	-48.28	-27	-21.28	123	133	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



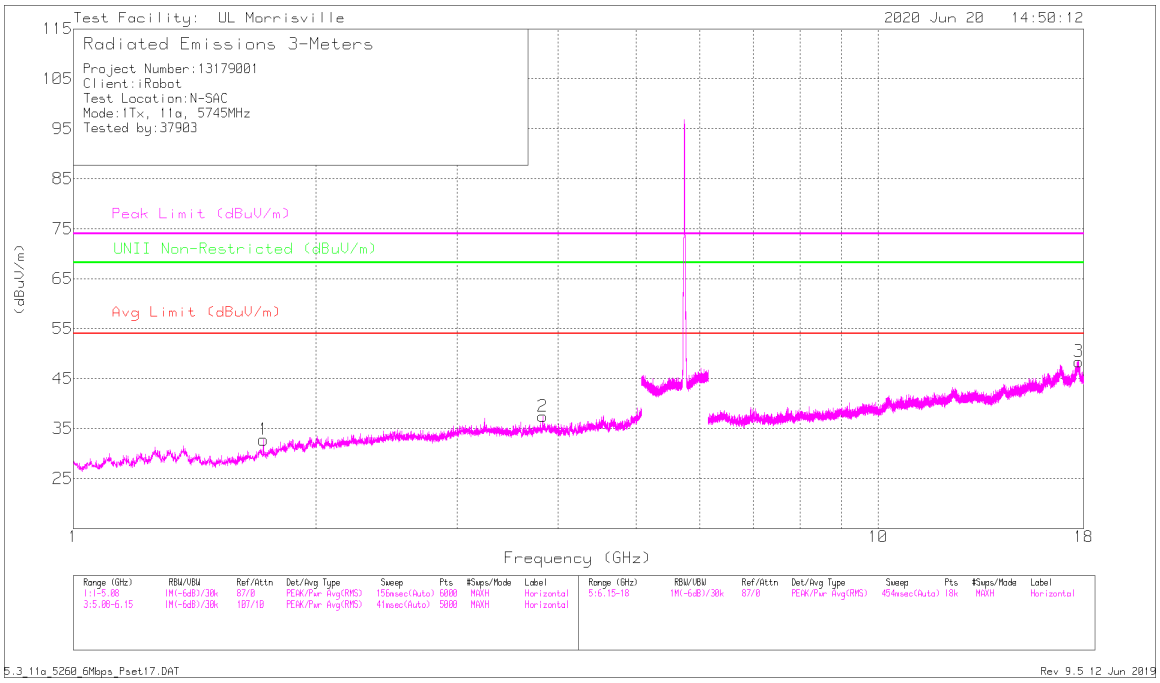
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0078 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85001	-59.05	Pk	34.9	-22.9	11.8	-35.25	26.99	-62.24	114	120	V
2	5.92484	-70.51	Pk	35	-22.5	11.8	-46.21	-26.88	-19.33	114	120	V

Pk - Peak detector

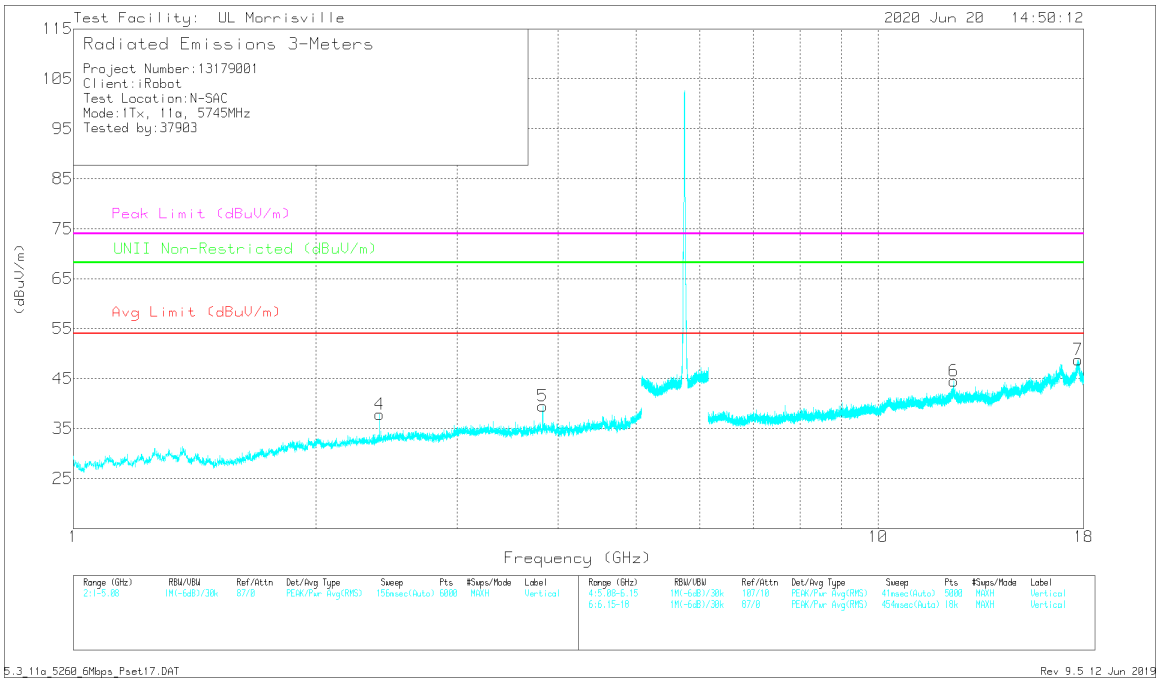
UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

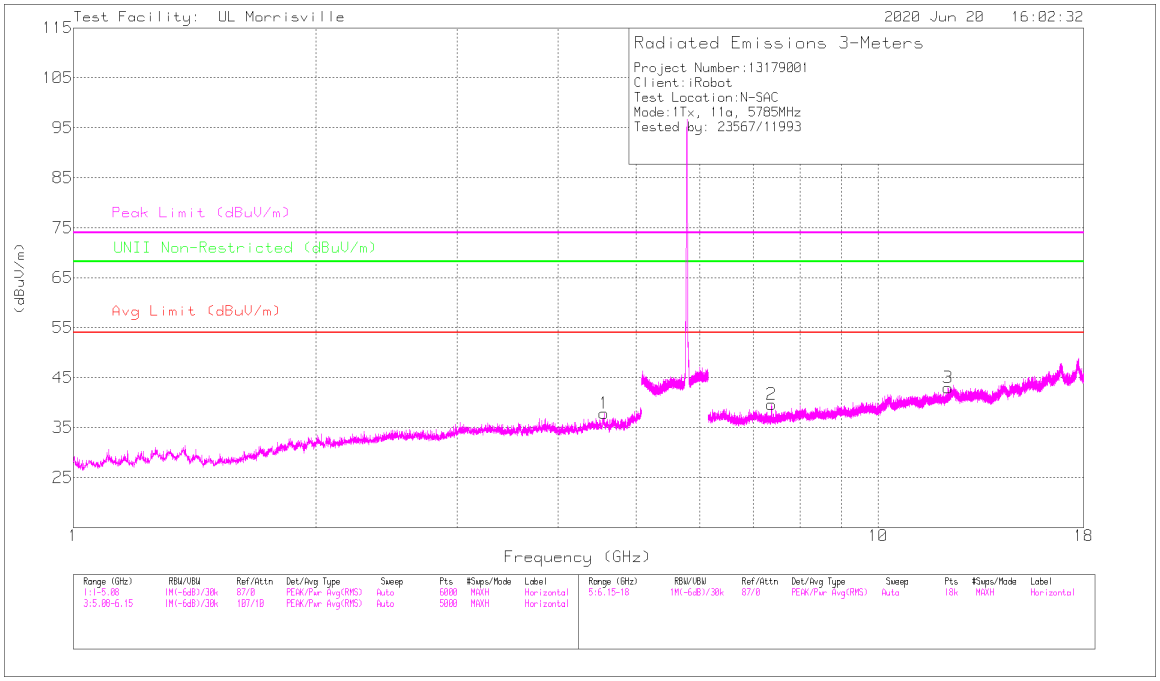
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.71927	43.91	PK-U	29.5	-34.9	0	38.51	-	-	74	-35.49	-	-	70	117	H
	* ** 1.71896	29.99	ADV	29.5	-34.9	.23	24.82	54	-29.18	-	-	-	-	70	117	H
2	* ** 3.8299	42.83	PK-U	33.6	-32.1	0	44.33	-	-	74	-29.67	-	-	352	102	H
	* ** 3.82999	33.27	ADV	33.6	-32.1	.23	35.00	54	-19.00	-	-	-	-	352	102	H
5	* ** 3.83006	42.92	PK-U	33.6	-32.1	0	44.42	-	-	74	-29.58	-	-	78	198	V
	* ** 3.83002	34.02	ADV	33.6	-32.1	.23	35.75	54	-18.25	-	-	-	-	78	198	V
3	* ** 17.74368	33.87	PK-U	41.7	-19.8	0	55.77	-	-	74	-18.23	-	-	36	148	H
	* ** 17.74433	20.64	ADV	41.7	-19.8	.23	42.77	54	-11.23	-	-	-	-	36	148	H
6	* ** 12.41538	35.48	PK-U	38.9	-24.3	0	50.08	-	-	74	-23.92	-	-	6	377	V
	* ** 12.41641	22.04	ADV	38.9	-24.3	.23	36.87	54	-17.13	-	-	-	-	6	377	V
7	* ** 17.73065	33.66	PK-U	41.6	-19.7	0	55.56	-	-	74	-18.44	-	-	340	393	V
	* ** 17.73081	20.7	ADV	41.6	-19.7	.23	42.83	54	-11.17	-	-	-	-	340	393	V
4	2.4043	45.5	PK-U	31.9	-33.6	0	43.8	-	-	-	-	68.2	-24.4	293	168	V

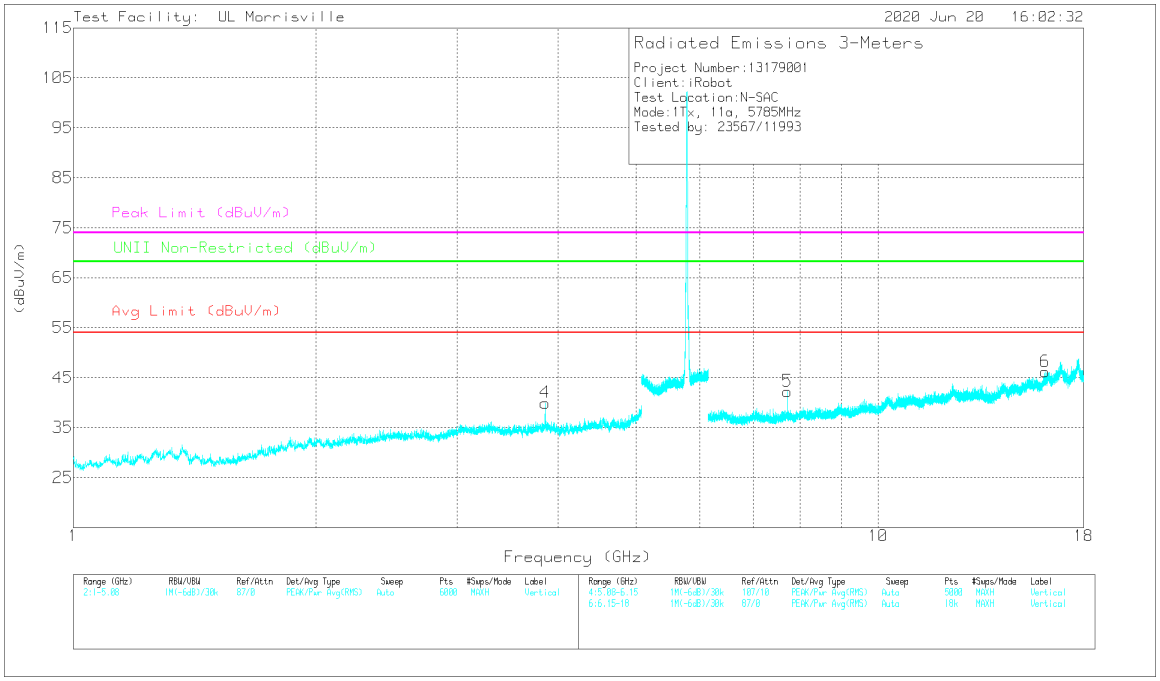
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

MID CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA
TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

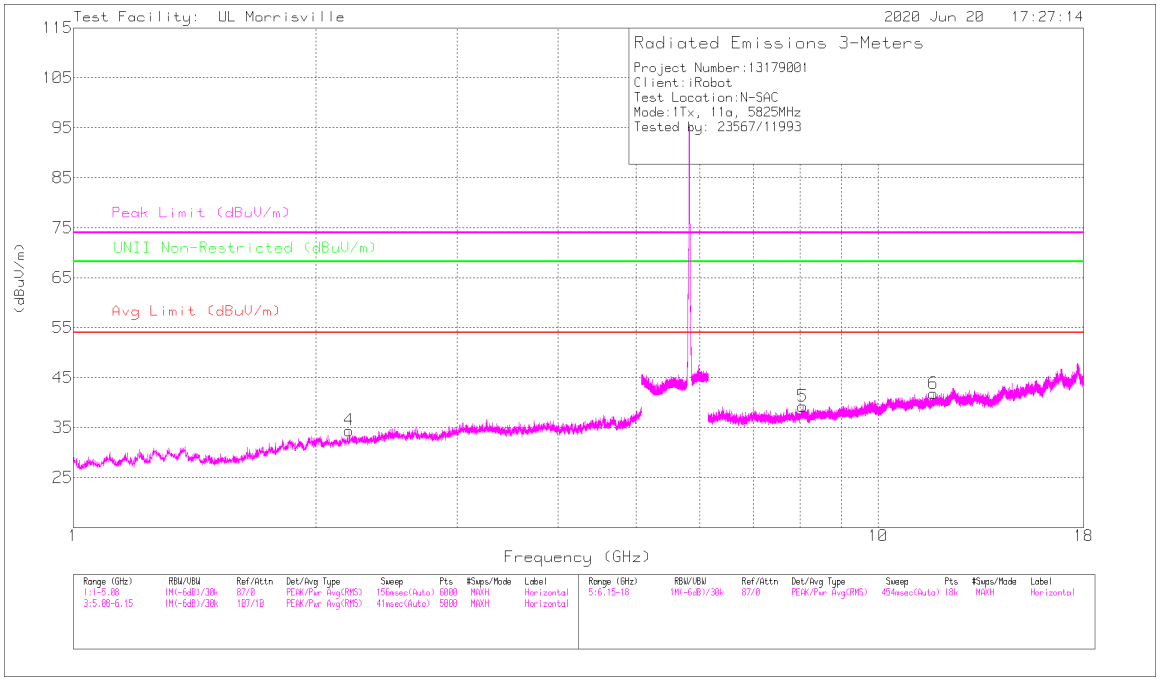
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.56463	41.55	PK-U	34.1	-32.1	0	43.55	-	-	74	-30.45	-	-	173	330	H
	* ** 4.56331	28.42	ADV	34.1	-32.1	.23	30.65	54	-23.35	-	-	-	-	173	330	H
4	* ** 3.85677	44.35	PK-U	33.6	-31.9	0	46.05	-	-	74	-27.95	-	-	36	104	V
	* ** 3.85665	36.62	ADV	33.6	-31.9	.23	38.55	54	-15.45	-	-	-	-	36	104	V
2	* ** 7.37023	37.71	PK-U	35.6	-28.9	0	44.41	-	-	74	-29.59	-	-	172	313	H
	* ** 7.37118	24.41	ADV	35.6	-28.9	.23	31.34	54	-22.66	-	-	-	-	172	313	H
3	* ** 12.21678	35.91	PK-U	38.9	-25.8	0	49.01	-	-	74	-24.99	-	-	112	165	H
	* ** 12.2158	22.73	ADV	38.9	-25.8	.23	36.06	54	-17.94	-	-	-	-	112	165	H
5	* ** 7.71357	39.78	PK-U	35.9	-28.4	0	47.28	-	-	74	-26.72	-	-	195	106	V
	* ** 7.71333	31.33	ADV	35.9	-28.4	.23	39.08	54	-14.94	-	-	-	-	195	106	V
6	* ** 16.1302	36.66	PK-U	40.7	-25.1	0	52.26	-	-	74	-21.74	-	-	35	102	V
	* ** 16.13139	23.66	ADV	40.7	-25.1	.23	39.49	54	-14.51	-	-	-	-	35	102	V

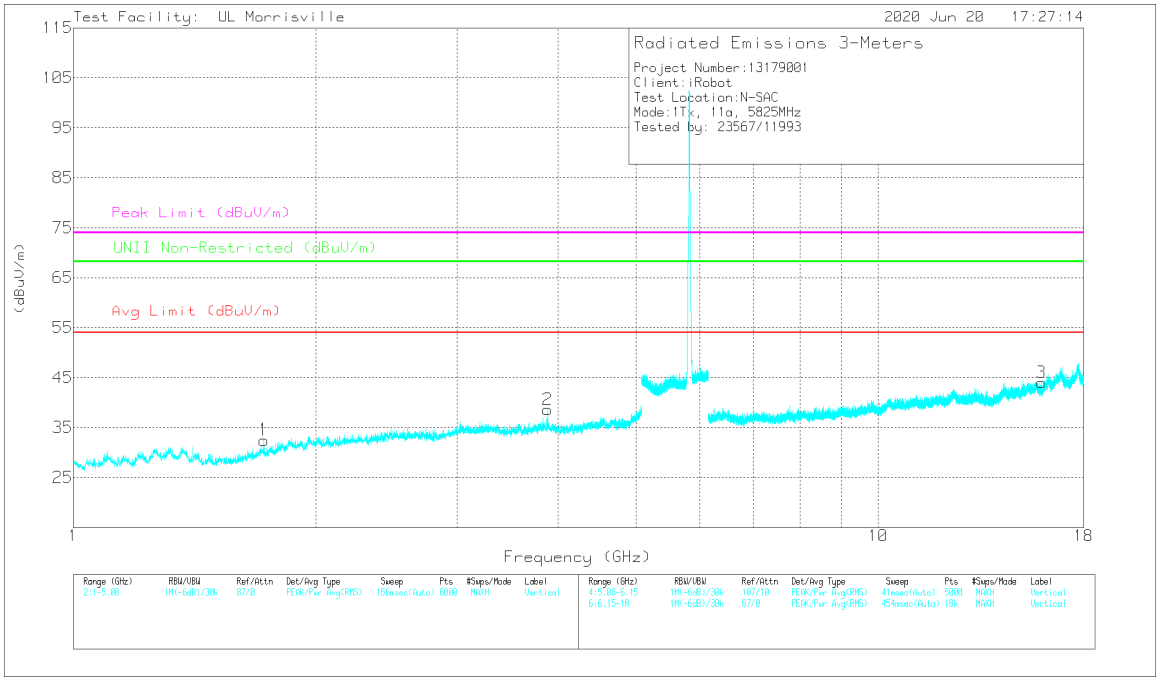
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA
TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* ** 2.2575	43.01	PK-U	31.7	-34.1	0	40.61	-	-	74	-33.39	-	-	296	219	H
	* ** 2.2133	29.5	ADV	31.7	-34.2	.23	27.23	54	-26.77	-	-	-	-	296	219	H
1	** 1.72578	42.69	PK-U	29.4	-34.9	0	37.19	-	-	74	-36.81	68.2	-31.01	114	119	V
	** 1.72444	29.75	ADV	29.5	-34.9	.23	24.58	54	-29.42	-	-	-	-	114	119	V
2	* ** 3.88318	43.44	PK-U	33.6	-32.1	0	44.94	-	-	74	-29.06	-	-	51	140	V
	* ** 3.88328	34.15	ADV	33.6	-32.1	.23	35.88	54	-18.12	-	-	-	-	51	140	V
5	* ** 8.06121	36.37	PK-U	35.9	-27.1	0	45.17	-	-	74	-28.83	-	-	226	125	H
	* ** 8.06173	23.29	ADV	35.9	-27.2	.23	32.22	54	-21.78	-	-	-	-	226	125	H
6	* ** 11.71306	34.72	PK-U	38.4	-25.3	0	47.82	-	-	74	-26.18	-	-	53	303	H
	* ** 11.71395	21.85	ADV	38.4	-25.3	.23	35.18	54	-18.82	-	-	-	-	53	303	H
3	* ** 15.9512	37.18	PK-U	40.3	-26.3	0	51.18	-	-	74	-22.82	-	-	118	226	V
	* ** 15.95225	24.05	ADV	40.3	-26.3	.23	38.28	54	-15.72	-	-	-	-	118	226	V

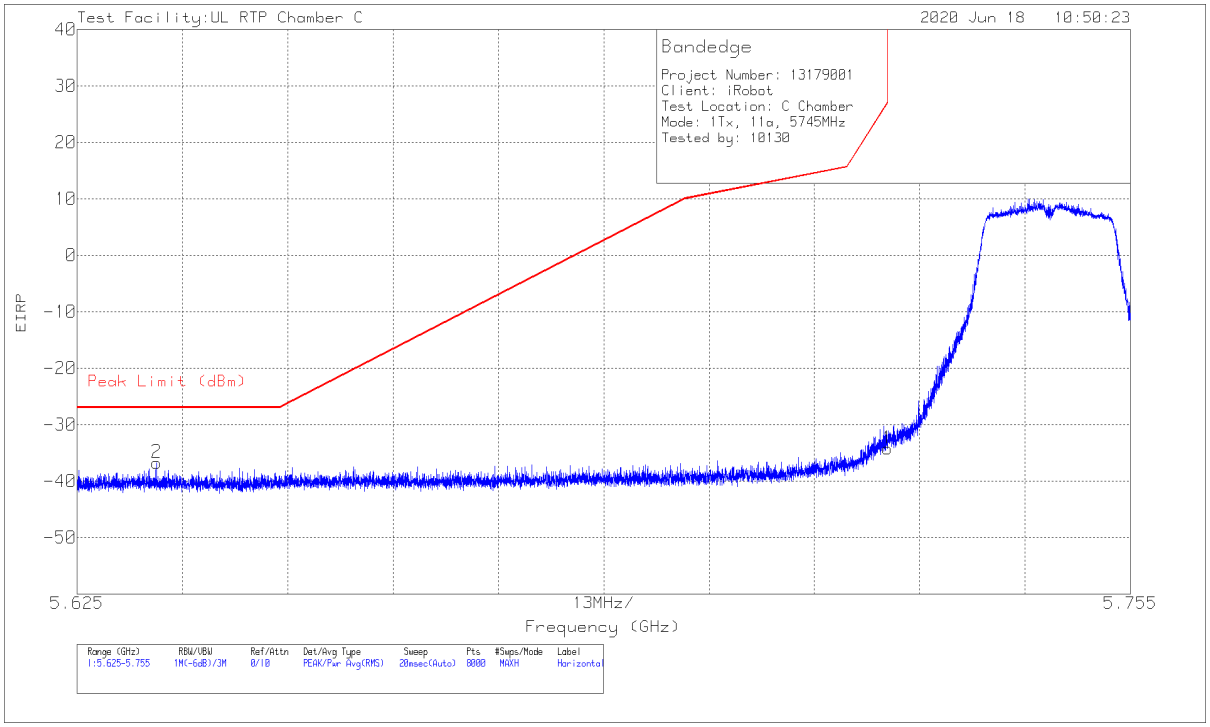
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

1TX PCB Antenna MODE

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT

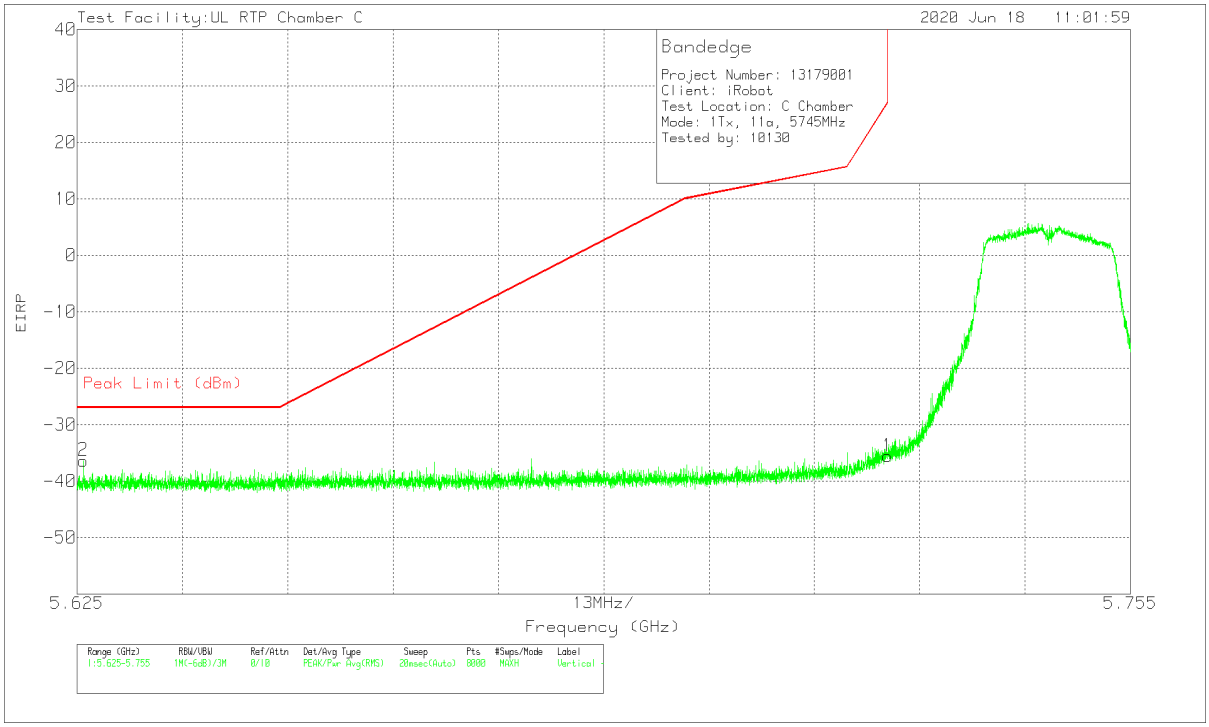


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.63482	-68.34	Pk	34.6	-14.8	11.8	-36.74	-27	-9.74	52	102	H
1	5.725	-65.84	Pk	34.6	-14.8	11.8	-34.24	27	-61.24	52	102	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



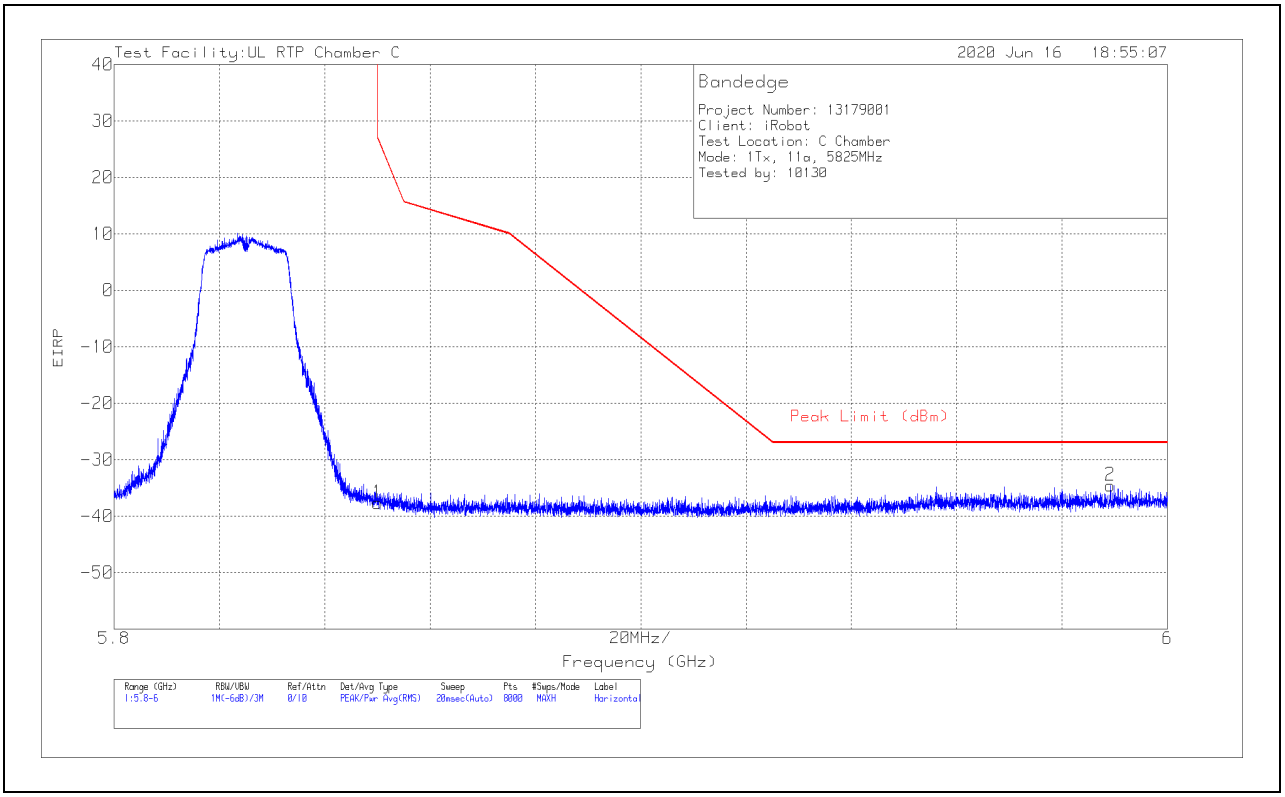
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.62576	-67.78	Pk	34.6	-15	11.8	-36.38	-27	-9.38	200	330	V
1	5.725	-67.16	Pk	34.6	-14.8	11.8	-35.56	27	-62.56	200	330	V

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT

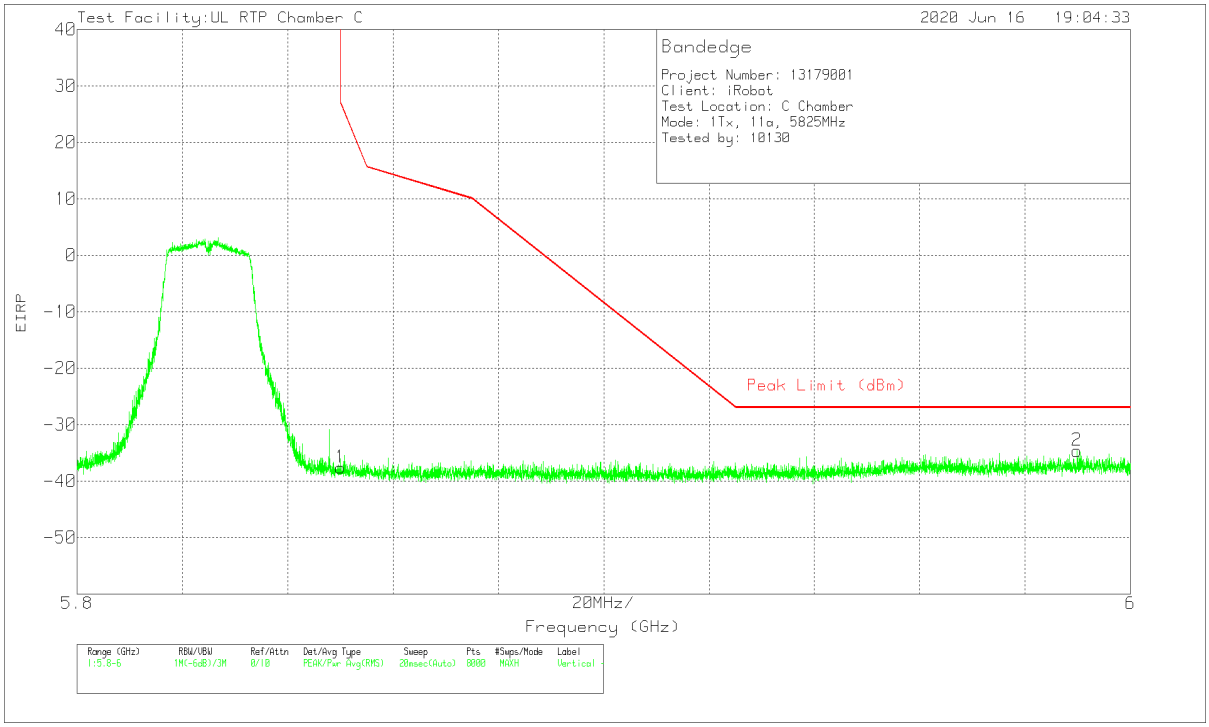


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85001	-70.28	Pk	34.9	-14.3	11.8	.23	-37.65	26.99	-64.64	332	280	H
2	5.98912	-67.49	Pk	35.1	-14.2	11.8	.23	-34.56	-27	-7.56	332	280	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



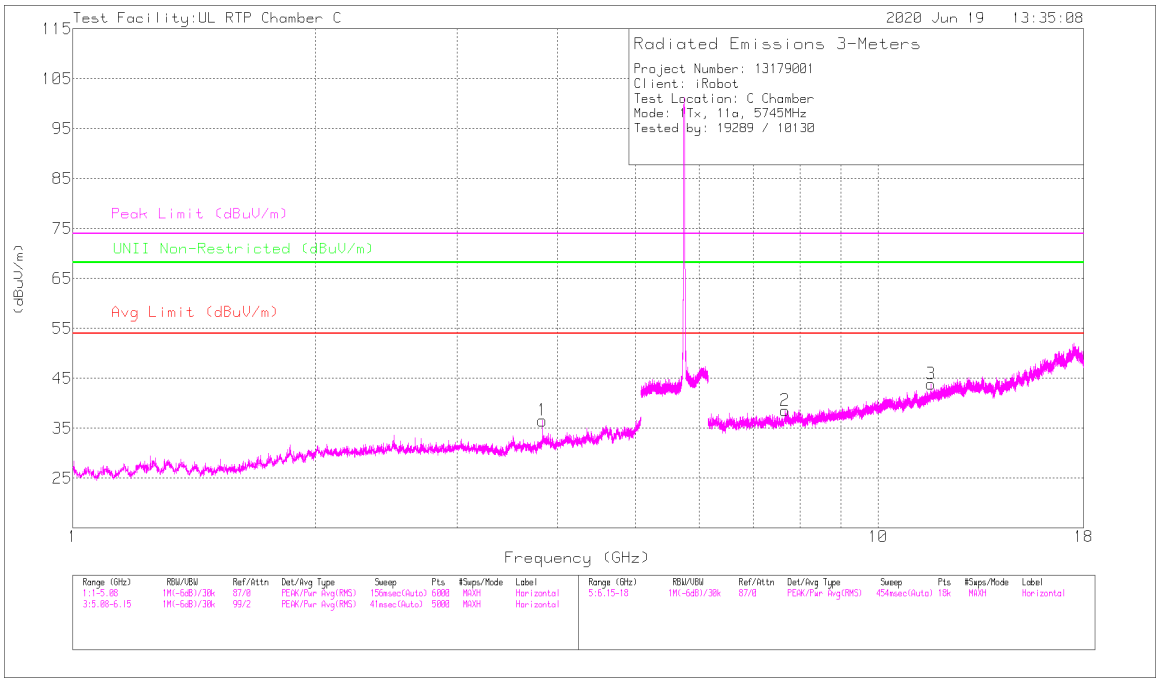
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85001	-70.24	Pk	34.9	-14.3	11.8	.23	-37.61	26.99	-64.6	96	262	V
2	5.9899	-67.56	Pk	35.1	-14.2	11.8	.23	-34.63	-27	-7.63	96	262	V

Pk - Peak detector

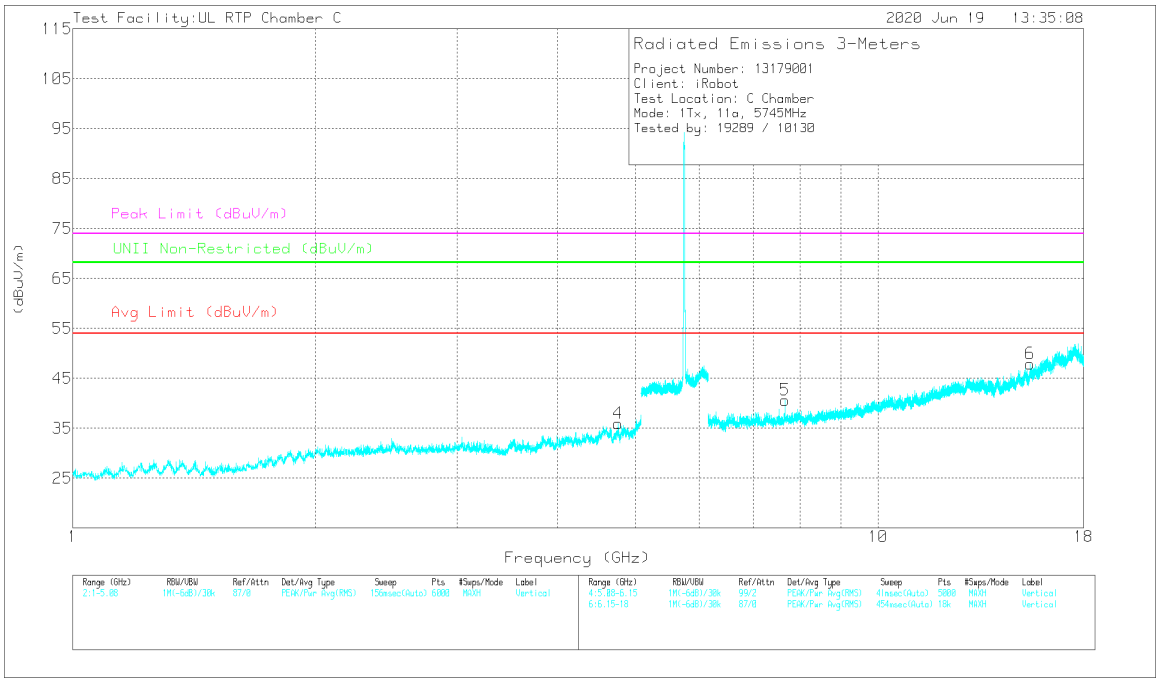
UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

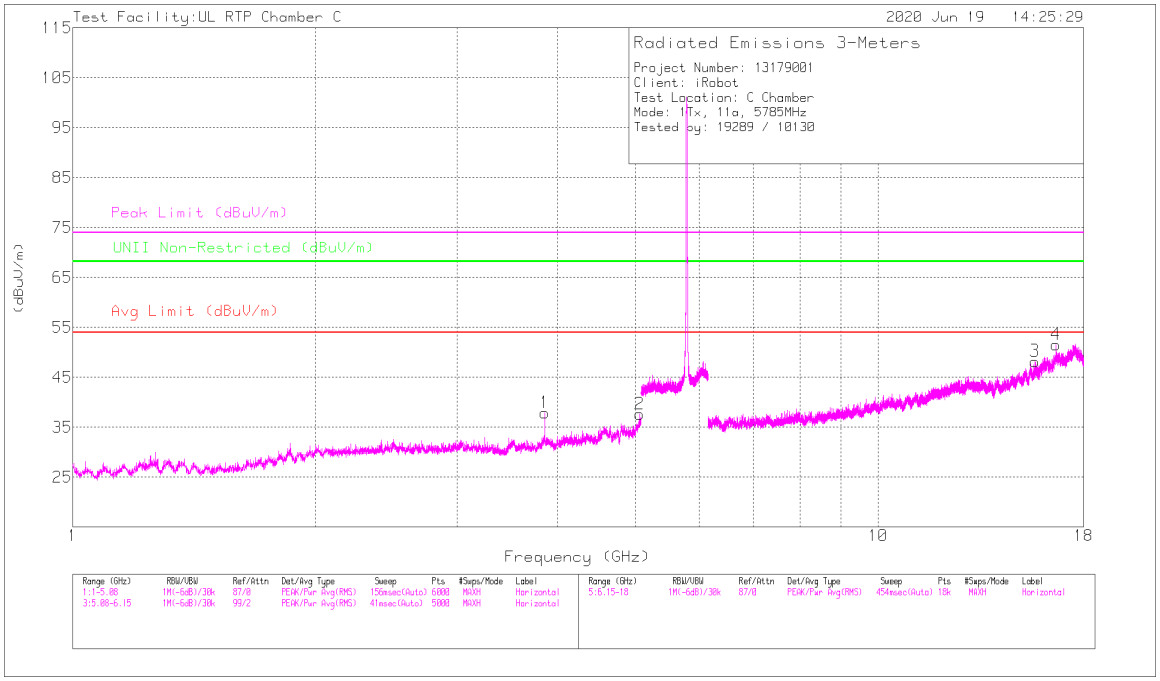
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.83009	57.49	PK-U	33.5	-49	0	41.99	-	-	74	-32.01	-	-	149	102	H
	* ** 3.82998	48.67	ADV	33.5	-49	.23	33.4	54	-20.6	-	-	-	-	149	102	H
4	* ** 4.75826	55.51	PK-U	34.1	-48.4	0	41.21	-	-	74	-32.79	-	-	86	102	V
	* ** 4.7571	42.68	ADV	34.1	-48.4	.23	28.61	54	-25.39	-	-	-	-	86	102	V
2	* ** 7.65974	56.08	PK-U	35.8	-45.7	0	46.18	-	-	74	-27.82	-	-	347	102	H
	* ** 7.65999	45.52	ADV	35.8	-45.7	.23	35.85	54	-18.15	-	-	-	-	347	102	H
3	* ** 11.64411	52.44	PK-U	38.5	-42.2	0	48.74	-	-	74	-25.26	-	-	268	226	H
	* ** 11.64373	39.73	ADV	38.5	-42.2	.23	36.26	54	-17.74	-	-	-	-	268	226	H
5	* ** 7.66003	56.85	PK-U	35.9	-45.7	0	47.05	-	-	74	-26.95	-	-	233	310	V
	* ** 7.65995	47.13	ADV	35.8	-45.7	.23	37.46	54	-16.54	-	-	-	-	233	310	V
6	* ** 15.44878	50.36	PK-U	40.3	-36.7	0	53.96	-	-	74	-20.04	-	-	237	297	V
	* ** 15.44717	37.3	ADV	40.3	-36.6	.23	41.23	54	-12.77	-	-	-	-	237	297	V

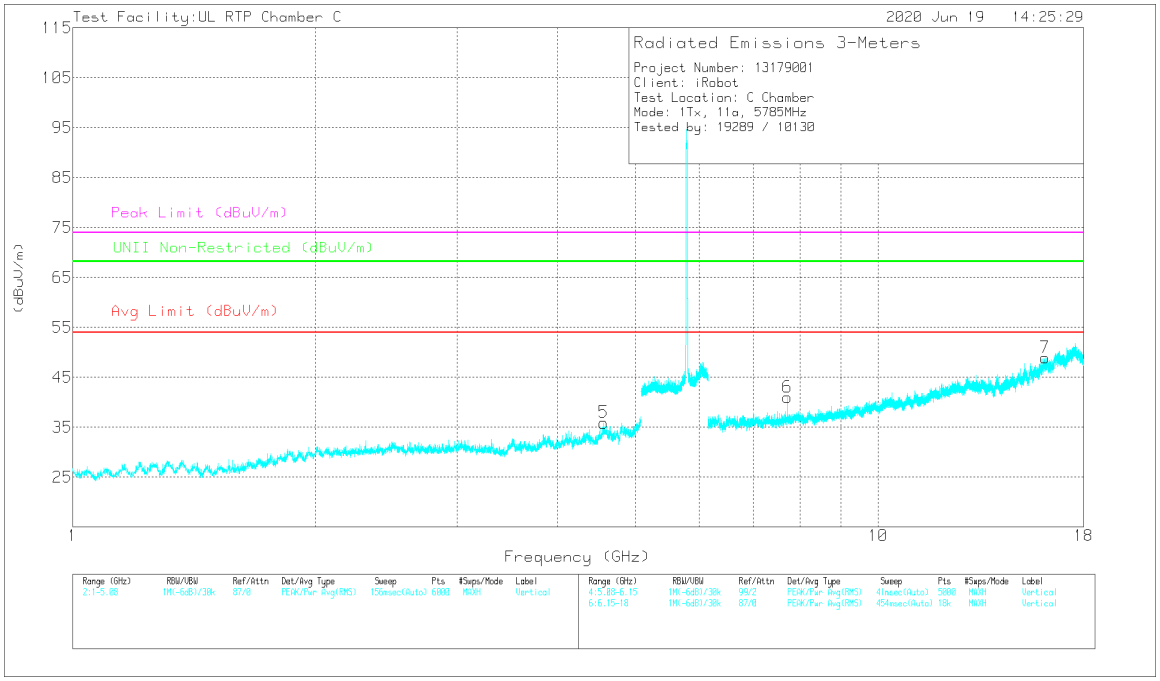
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

MID CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA
TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

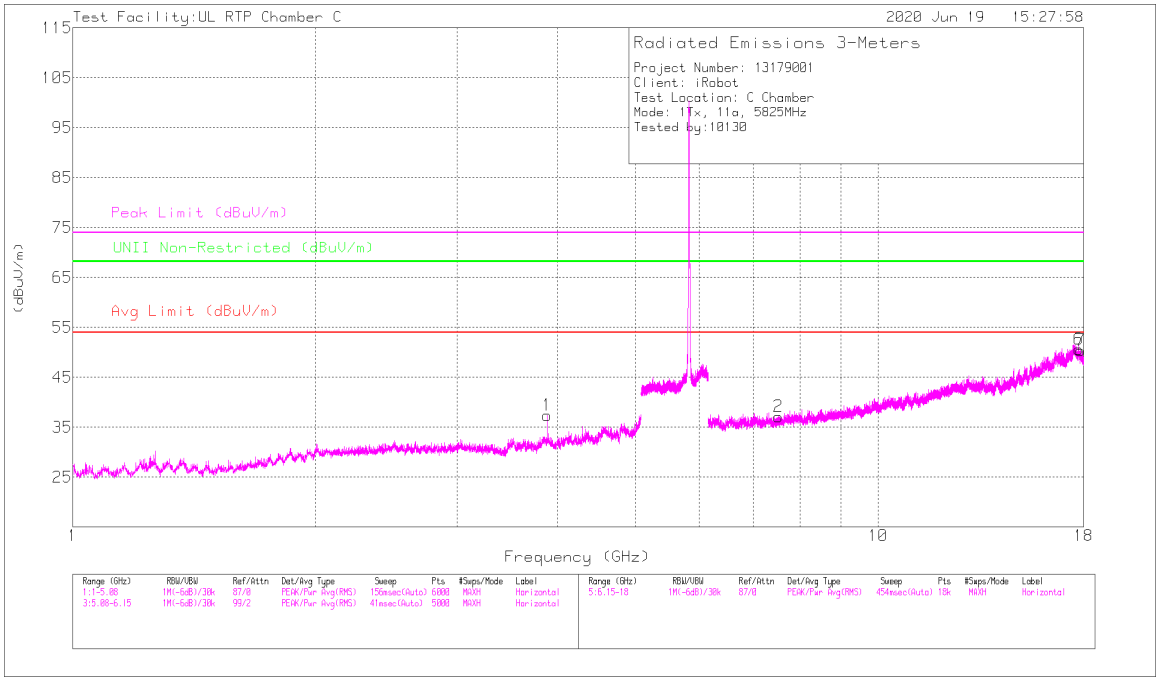
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.85653	58.72	PK-U	33.5	-49.2	0	43.02	-	-	74	-30.98	-	-	156	102	H
	* ** 3.85661	50.71	ADV	33.5	-49.2	.23	35.24	54	-18.76	-	-	-	-	156	102	H
2	* ** 5.05882	55.7	PK-U	34.1	-46.9	0	42.9	-	-	74	-31.1	-	-	66	102	H
	* ** 5.05908	42.72	ADV	34.1	-46.9	.23	30.15	54	-23.85	-	-	-	-	66	102	H
5	* ** 4.56061	56.09	PK-U	34.1	-49.2	0	40.99	-	-	74	-33.01	-	-	94	102	V
	* ** 4.56024	43.35	ADV	34.1	-49.2	.23	28.48	54	-25.52	-	-	-	-	94	102	V
3	* ** 15.65961	49.93	PK-U	40.7	-36.7	0	53.93	-	-	74	-20.07	-	-	239	105	H
	* ** 15.65939	36.78	ADV	40.7	-36.7	.23	41.01	54	-12.99	-	-	-	-	239	105	H
6	* ** 7.71313	57.07	PK-U	35.9	-46.5	0	46.47	-	-	74	-27.53	-	-	333	102	V
	* ** 7.71331	48.11	ADV	35.9	-46.5	.23	37.74	54	-16.26	-	-	-	-	333	102	V
7	* ** 16.12337	51.46	PK-U	41.3	-37.3	0	55.46	-	-	74	-18.54	-	-	0	105	V
	* ** 16.12294	38.27	ADV	41.3	-37.3	.23	42.5	54	-11.5	-	-	-	-	0	105	V
4	16.62362	51.24	PK-U	42.2	-36.4	0	57.04	-	-	-	-	68.2	-11.16	6	190	H

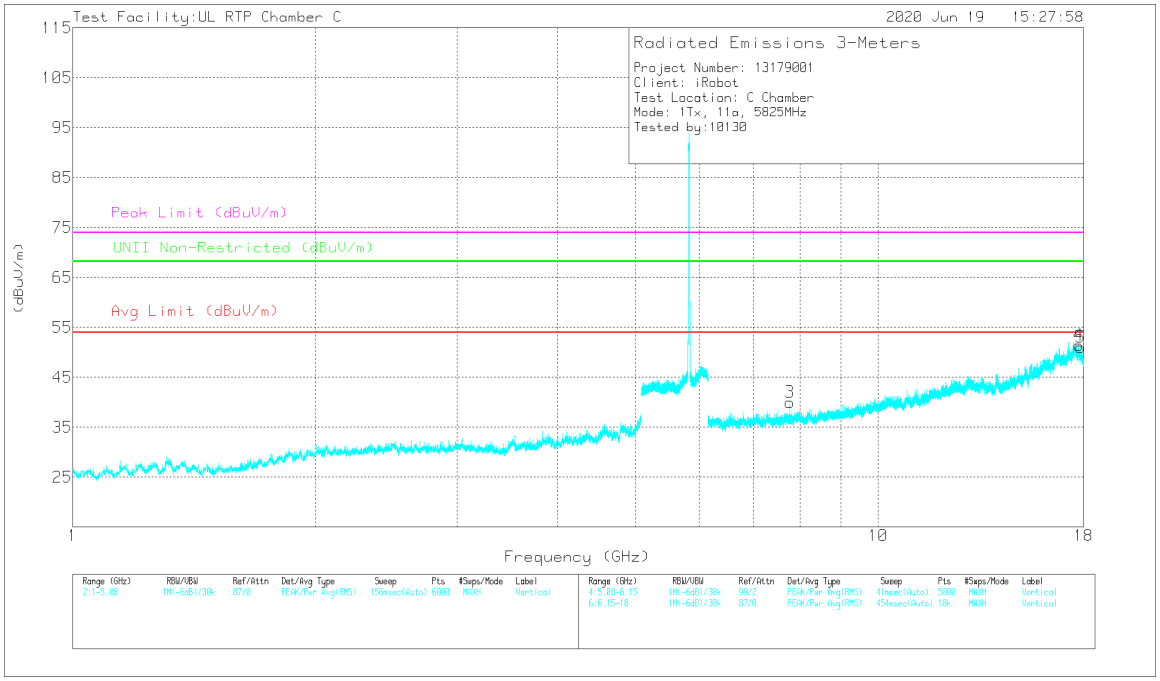
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA
TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.88354	59	PK-U	33.5	-49.7	0	42.8	-	-	74	-31.2	-	-	119	102	H
	* ** 3.88331	51.13	ADV	33.5	-49.7	.23	35.16	54	-18.84	-	-	-	-	119	102	H
2	* ** 7.51512	54.42	PK-U	35.8	-46.8	0	43.42	-	-	74	-30.58	-	-	169	103	H
	* ** 7.518	41.7	ADV	35.8	-47	.23	30.73	54	-23.27	-	-	-	-	169	103	H
6	* ** 17.75124	49.63	PK-U	41.6	-33.5	0	57.73	-	-	74	-16.27	-	-	16	296	H
	* ** 17.75222	36.67	ADV	41.6	-33.4	.23	45.1	54	-8.9	-	-	-	-	16	296	H
7	* ** 17.85326	49.26	PK-U	41.4	-34.1	0	56.56	-	-	74	-17.44	-	-	192	128	H
	* ** 17.8533	36.59	ADV	41.4	-34.1	.23	44.12	54	-9.88	-	-	-	-	192	128	H
4	* ** 17.75113	49.03	PK-U	41.6	-33.6	0	57.03	-	-	74	-16.97	-	-	117	154	V
	* ** 17.75192	36.73	ADV	41.6	-33.4	.23	45.16	54	-8.84	-	-	-	-	117	154	V
5	* ** 17.84624	49.12	PK-U	41.4	-34.1	0	56.42	-	-	74	-17.58	-	-	286	264	V
	* ** 17.84527	36.93	ADV	41.4	-34.1	.23	44.46	54	-9.54	-	-	-	-	286	264	V
3	7.76681	57.75	PK-U	35.9	-46.7	0	46.95	-	-	-	-	68.2	-21.25	146	276	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

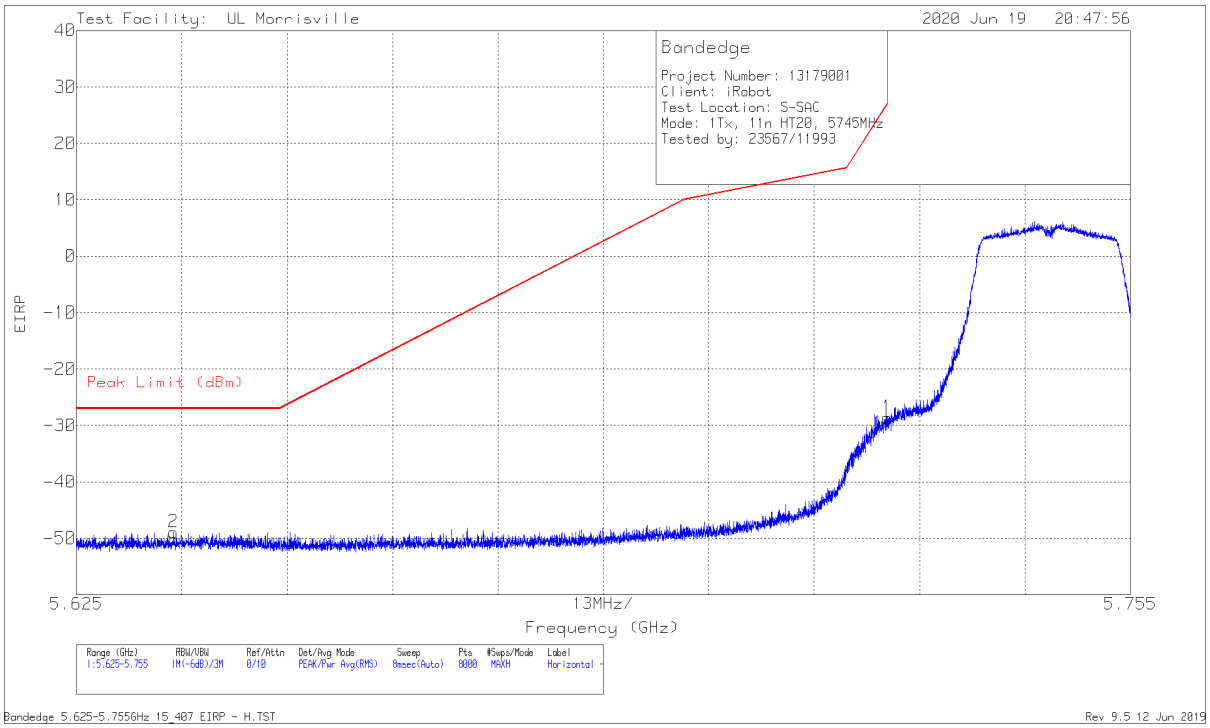
UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

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

1TX External Antenna MODE

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT

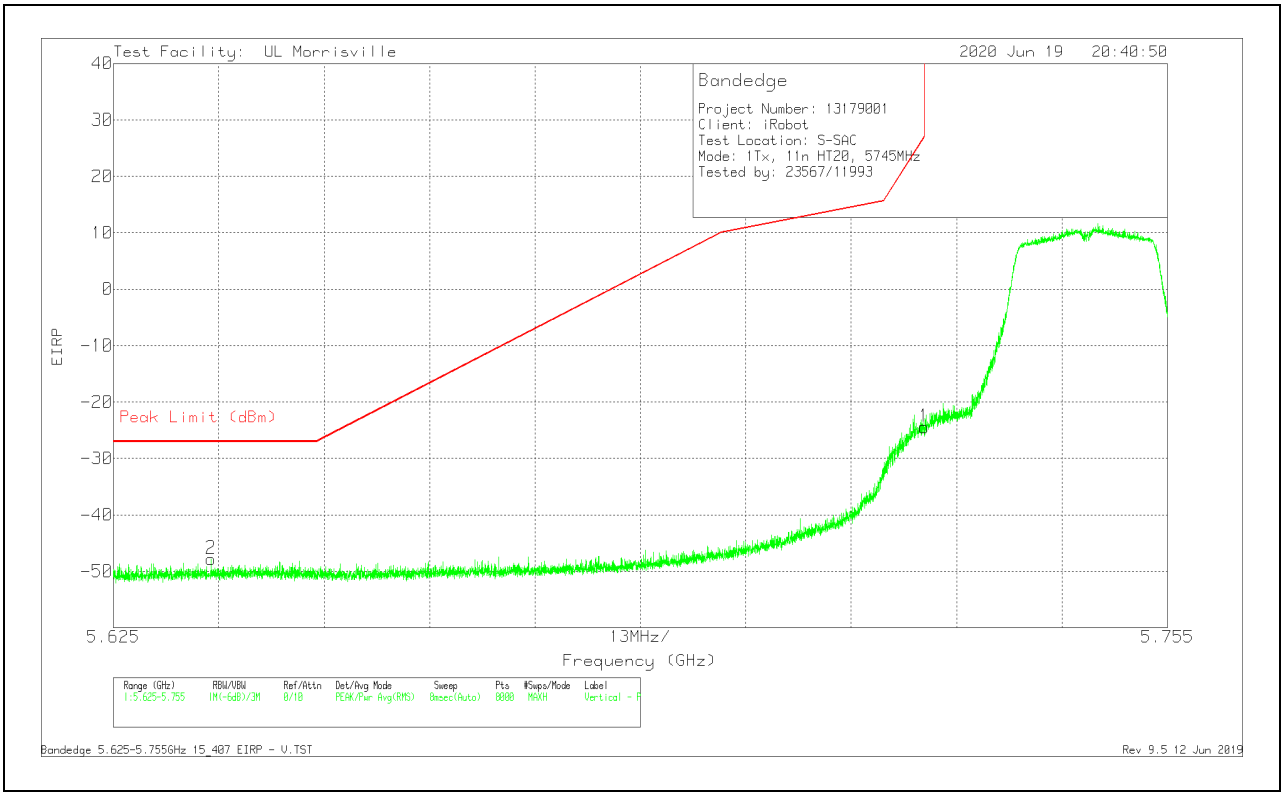


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0078 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.63699	-72.31	Pk	34.7	-23.1	11.8	-48.91	-27	-21.91	121	106	H
1	5.725	-52.1	Pk	34.8	-23.1	11.8	-28.6	27	-55.6	121	106	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



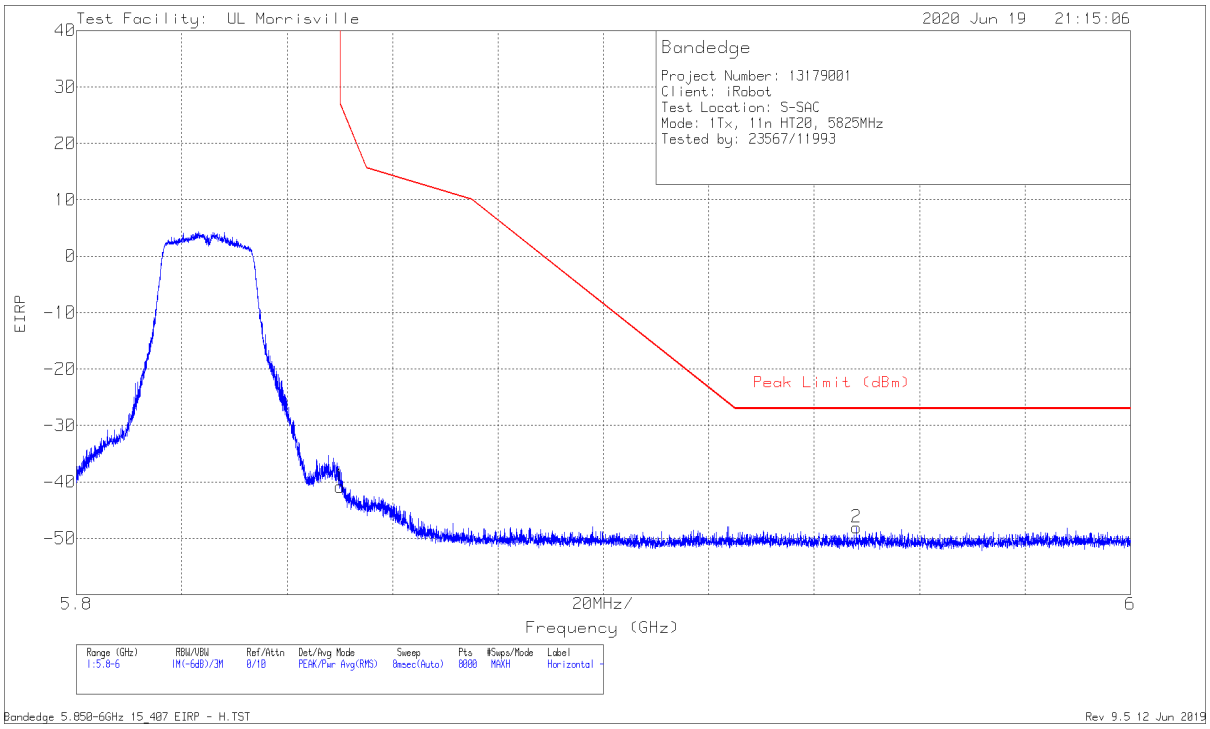
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0078 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.63706	-71.19	Pk	34.7	-23.1	11.8	-47.79	-27	-20.79	162	109	V
1	5.725	-47.92	Pk	34.8	-23.1	11.8	-24.42	27	-51.42	162	109	V

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT

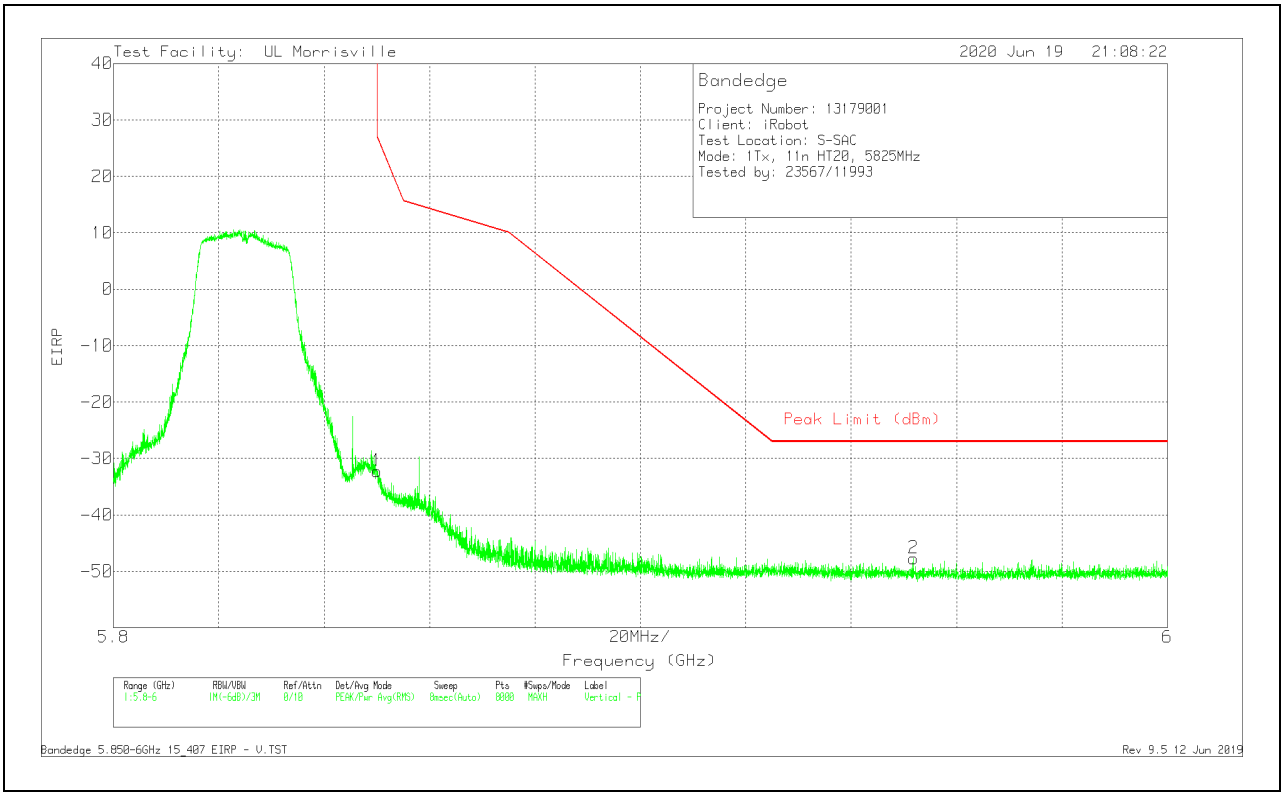


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0078 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85001	-64.63	Pk	34.9	-22.9	11.8	-40.83	26.99	-67.82	127	167	H
2	5.94804	-72.18	Pk	35	-22.7	11.8	-48.08	-27	-21.08	127	167	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



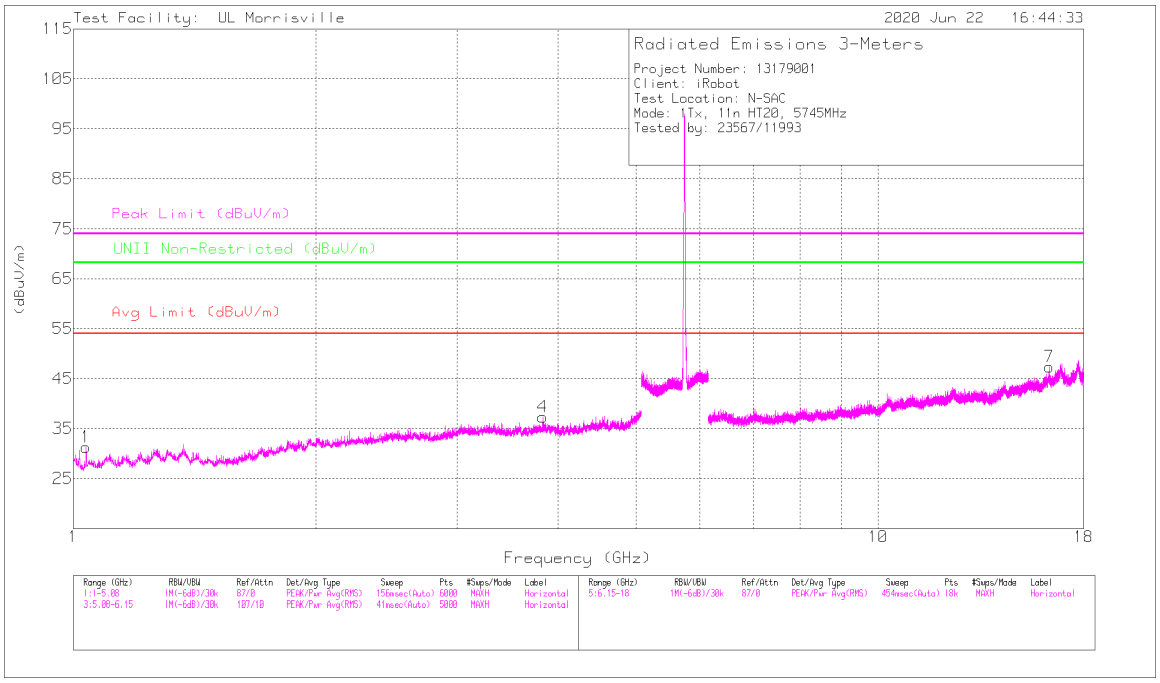
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0078 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85001	-56.1	Pk	34.9	-22.9	11.8	-32.3	26.99	-59.29	92	132	V
2	5.95182	-71.83	Pk	35	-22.7	11.8	-47.73	-27	-20.73	92	132	V

Pk - Peak detector

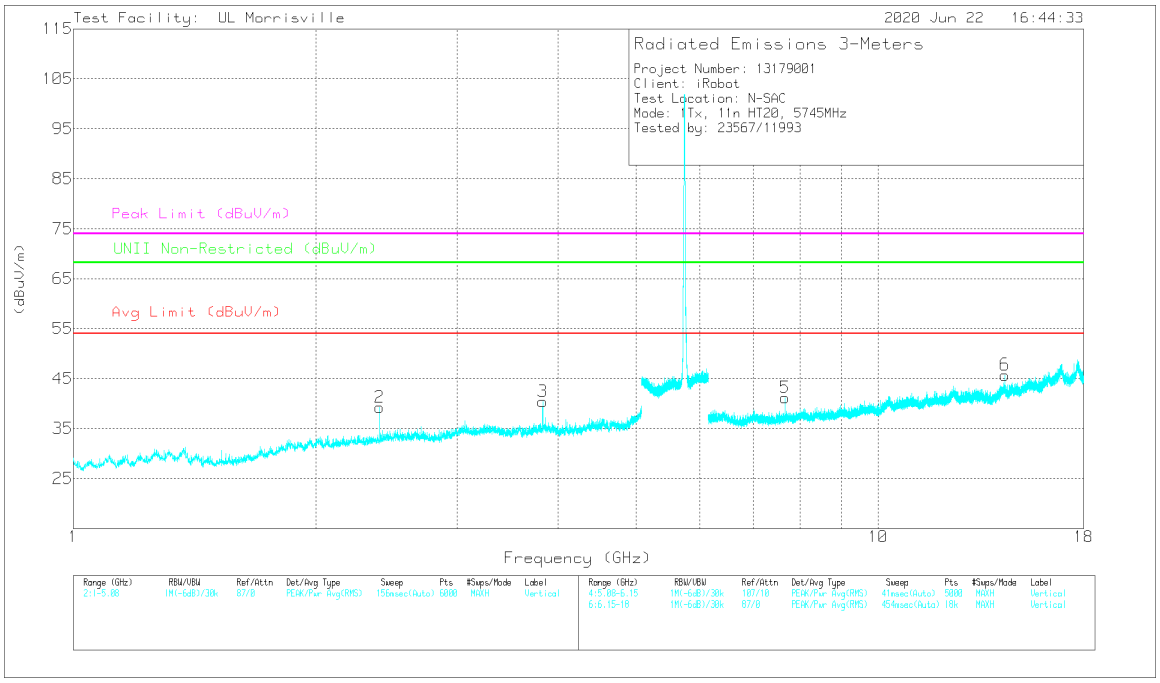
UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

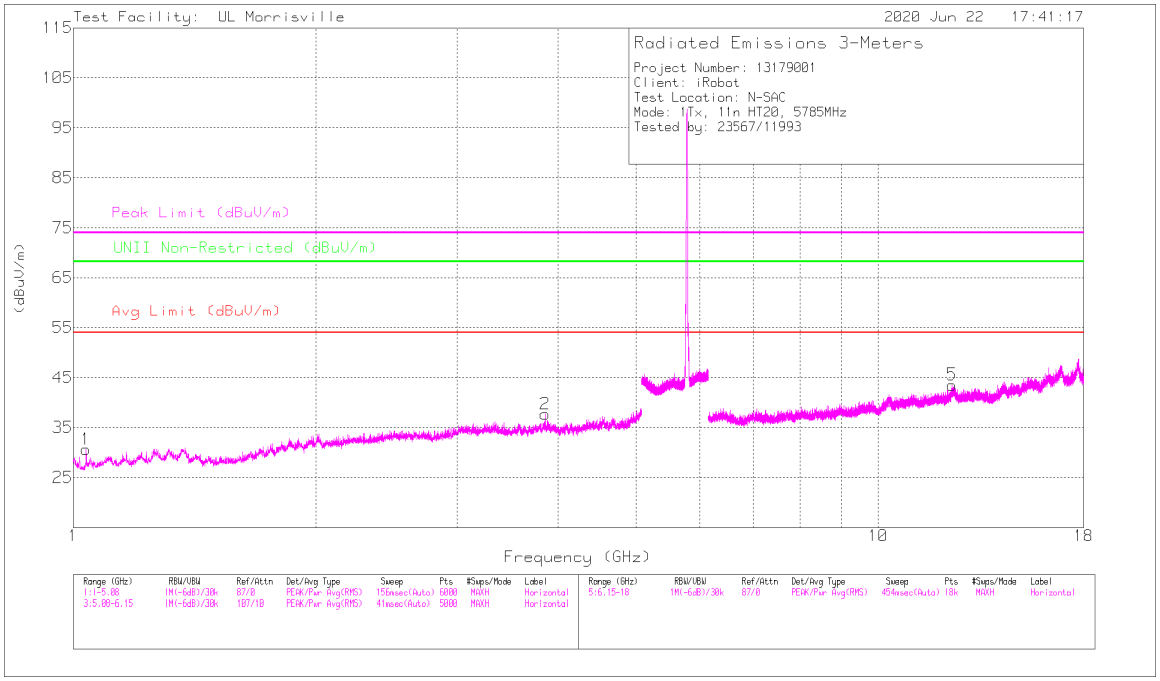
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.03695	45.93	PK-U	27.4	-36.6	0	36.73	-	-	74	-37.27	-	-	324	292	H
	* ** 1.03683	35.83	ADV	27.4	-36.6	.24	26.87	54	-27.13	-	-	-	-	324	292	H
4	* ** 3.82985	42.64	PK-U	33.6	-32.1	0	44.14	-	-	74	-29.86	-	-	24	395	H
	* ** 3.82994	33.39	ADV	33.6	-32.1	.24	35.13	54	-18.87	-	-	-	-	24	395	H
3	* ** 3.82994	43.84	PK-U	33.6	-32.1	0	45.34	-	-	74	-28.66	-	-	16	100	V
	* ** 3.82997	36.39	ADV	33.6	-32.1	.24	38.13	54	-15.87	-	-	-	-	16	100	V
5	* ** 7.65985	40.38	PK-U	35.8	-28.5	0	47.68	-	-	74	-26.32	-	-	194	135	V
	* ** 7.66002	30.79	ADV	35.8	-28.5	.24	38.33	54	-15.67	-	-	-	-	194	135	V
2	2.4021	43.51	PK-U	31.9	-33.6	0	41.81	-	-	-	-	68.2	-26.39	96	326	V
6	14.37058	36.68	PK-U	39.2	-25.2	0	50.68	-	-	-	-	68.2	-17.52	0	210	V
7	16.31018	35.5	PK-U	40.9	-23.8	0	52.6	-	-	-	-	68.2	-15.6	272	359	H

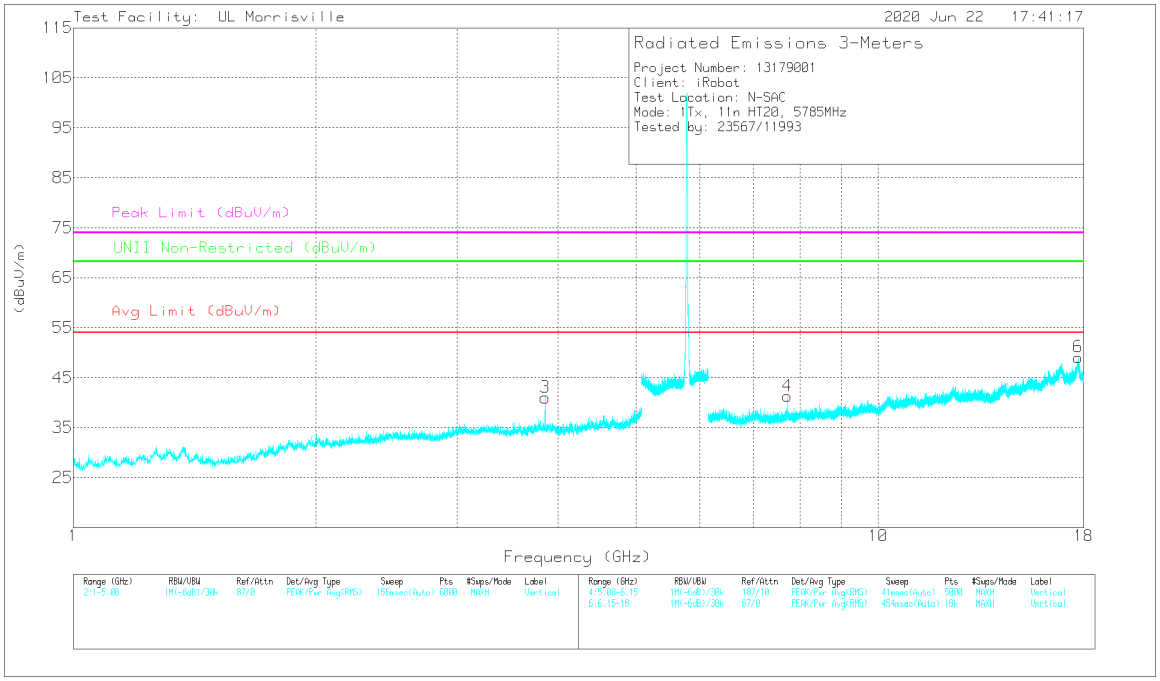
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

MID CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA
TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

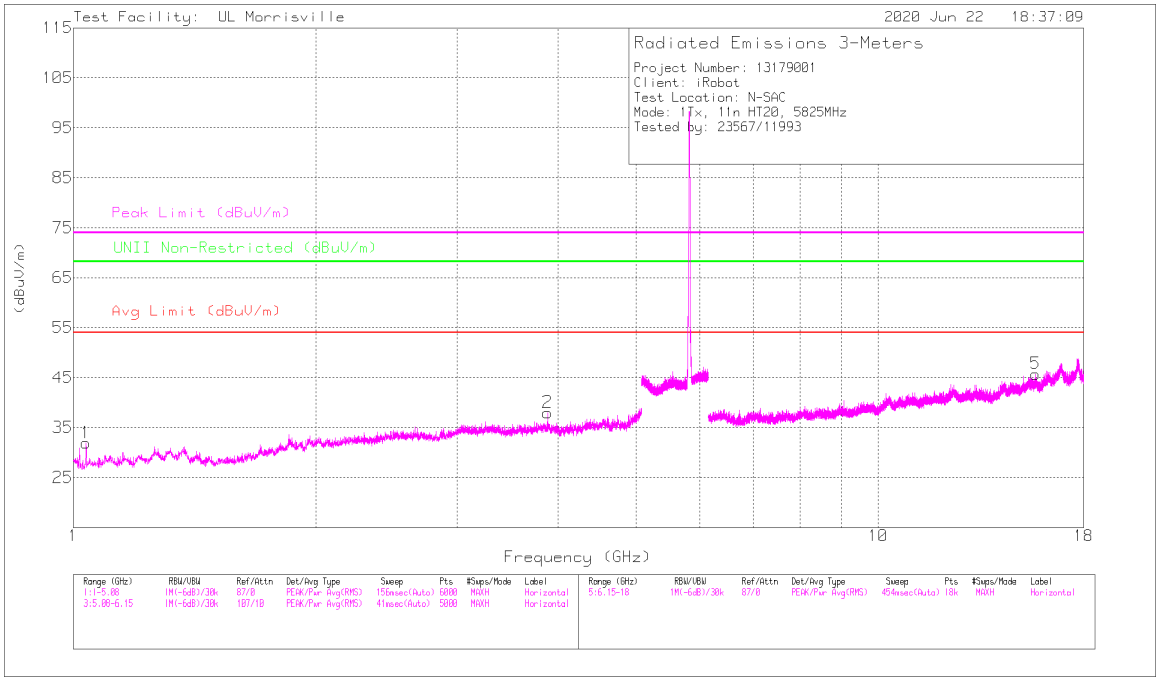
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.03866	44.86	PK-U	27.3	-36.6	0	35.56	-	-	74	-38.44	-	-	322	324	H
	* ** 1.03687	33.47	ADV	27.4	-36.6	.24	24.51	54	-29.49	-	-	-	-	322	324	H
2	* ** 3.85675	42.56	PK-U	33.6	-31.9	0	44.26	-	-	74	-29.74	-	-	96	121	H
	* ** 3.85665	31.32	ADV	33.6	-31.9	.24	33.26	54	-20.74	-	-	-	-	96	121	H
3	* ** 3.8567	44.46	PK-U	33.6	-31.9	0	46.16	-	-	74	-27.84	-	-	30	114	V
	* ** 3.85667	37.93	ADV	33.6	-31.9	.24	39.87	54	-14.13	-	-	-	-	30	114	V
5	* ** 12.36086	35.46	PK-U	38.9	-24.9	0	49.46	-	-	74	-24.54	-	-	32	314	H
	* ** 12.36154	22.5	ADV	38.9	-24.9	.24	36.74	54	-17.26	-	-	-	-	32	314	H
4	* ** 7.71309	39.98	PK-U	35.9	-28.4	0	47.48	-	-	74	-26.52	-	-	177	107	V
	* ** 7.71332	31.32	ADV	35.9	-28.4	.24	39.06	54	-14.94	-	-	-	-	177	107	V
6	* ** 17.73486	33.94	PK-U	41.7	-19.6	0	56.04	-	-	74	-17.96	-	-	300	250	V
	* ** 17.734	20.4	ADV	41.7	-19.6	.24	42.74	54	-11.26	-	-	-	-	300	250	V

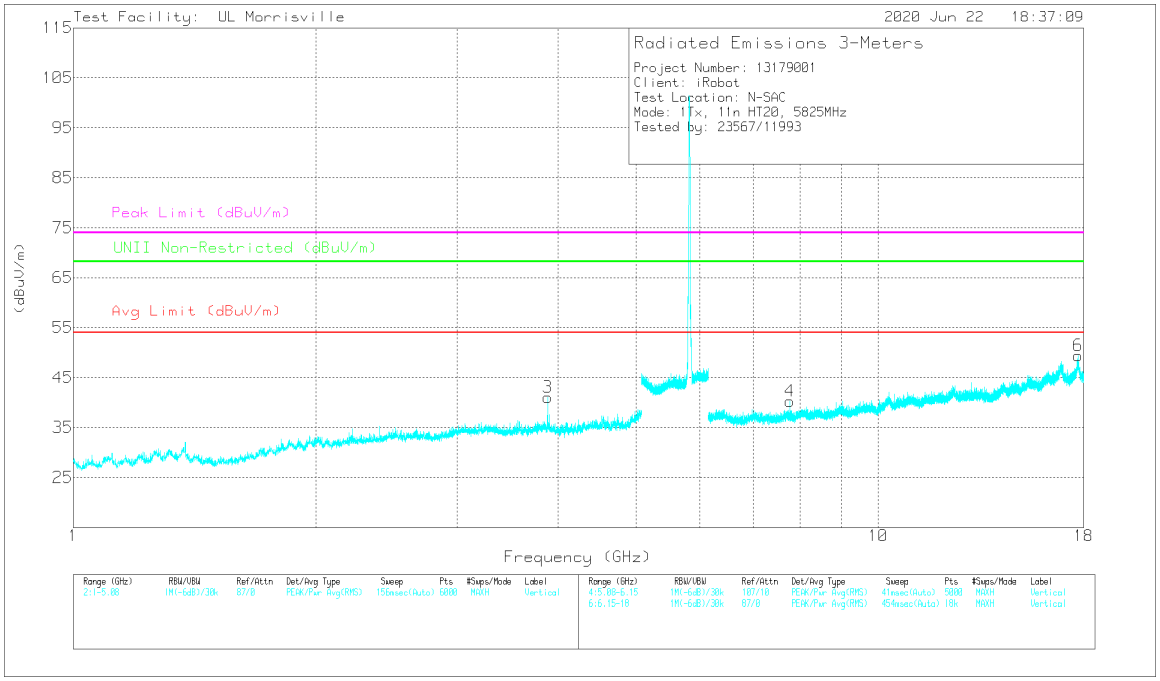
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA
TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.0366	45.68	PK-U	27.4	-36.6	0	36.48	-	-	74	-37.52	-	-	331	166	H
	* ** 1.03672	34.78	ADV	27.4	-36.6	.24	25.82	54	-28.18	-	-	-	-	331	166	H
2	* ** 3.88351	42.93	PK-U	33.6	-32.1	0	44.43	-	-	74	-29.57	-	-	101	149	H
	* ** 3.88336	32.34	ADV	33.6	-32.1	.24	34.08	54	-19.92	-	-	-	-	101	149	H
3	* ** 3.88324	44.6	PK-U	33.6	-32.1	0	46.1	-	-	74	-27.9	-	-	29	113	V
	* ** 3.88336	37.85	ADV	33.6	-32.1	.24	39.59	54	-14.41	-	-	-	-	29	113	V
5	* ** 15.68878	36.17	PK-U	40.2	-25.4	0	50.97	-	-	74	-23.03	-	-	89	349	H
	* ** 15.69024	23.28	ADV	40.2	-25.4	.24	38.32	54	-15.68	-	-	-	-	89	349	H
6	* ** 17.7344	34.05	PK-U	41.7	-19.6	0	56.15	-	-	74	-17.85	-	-	1	143	V
	* ** 17.73414	20.83	ADV	41.7	-19.6	.24	43.17	54	-10.83	-	-	-	-	1	143	V
4	7.76667	39.39	PK-U	35.9	-28.1	0	47.19	-	-	-	-	68.2	-21.01	175	110	V

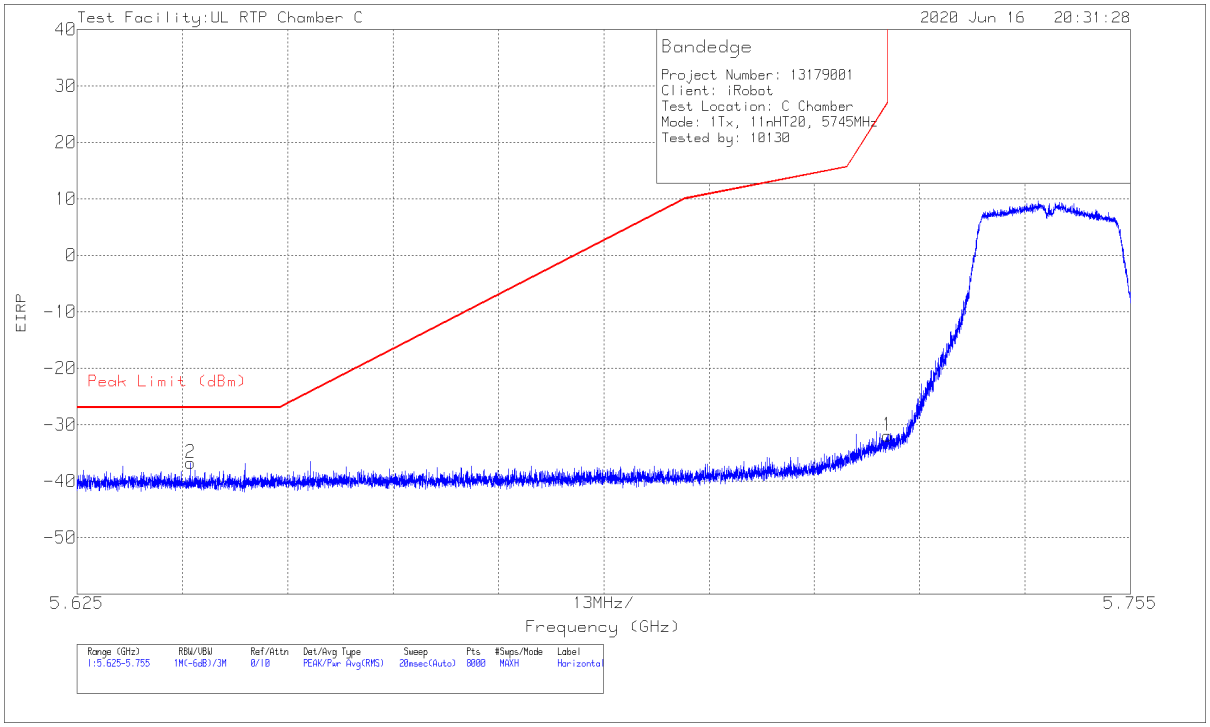
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

1TX PCB Antenna MODE

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT

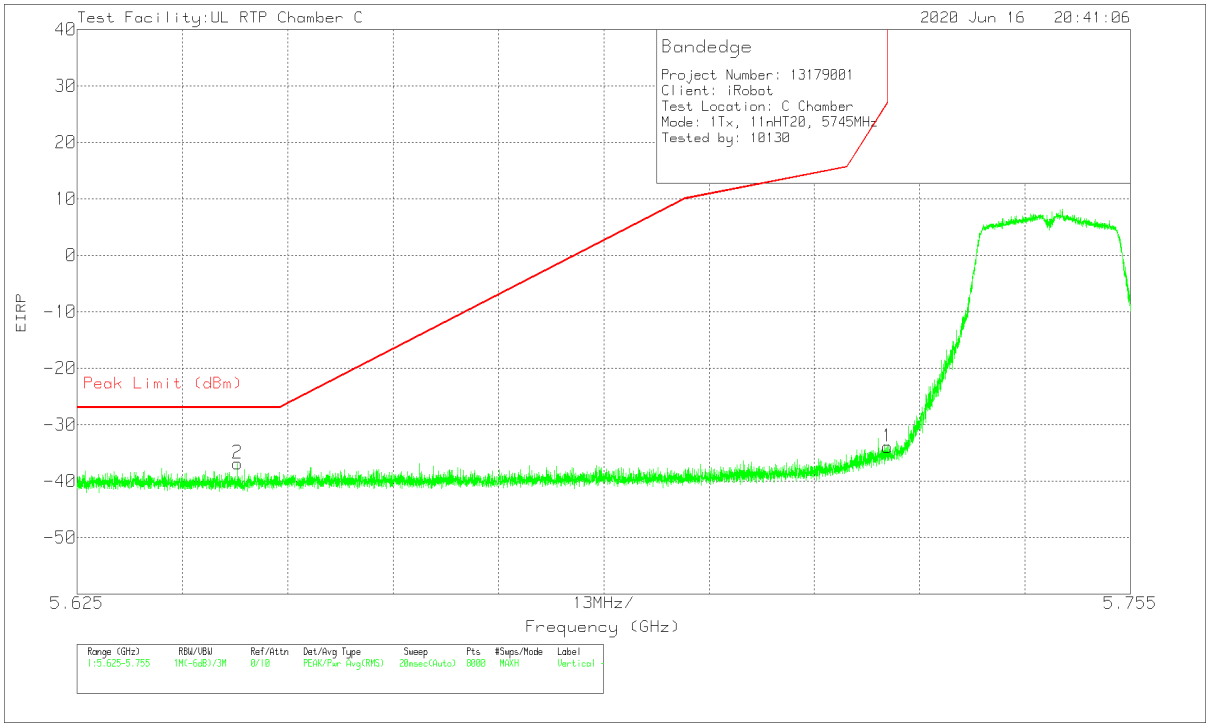


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.63901	-68.5	Pk	34.6	-14.9	11.8	.24	-36.76	-27	-9.76	48	295	H
1	5.725	-63.74	Pk	34.6	-14.8	11.8	.24	-31.9	27	-58.9	48	295	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



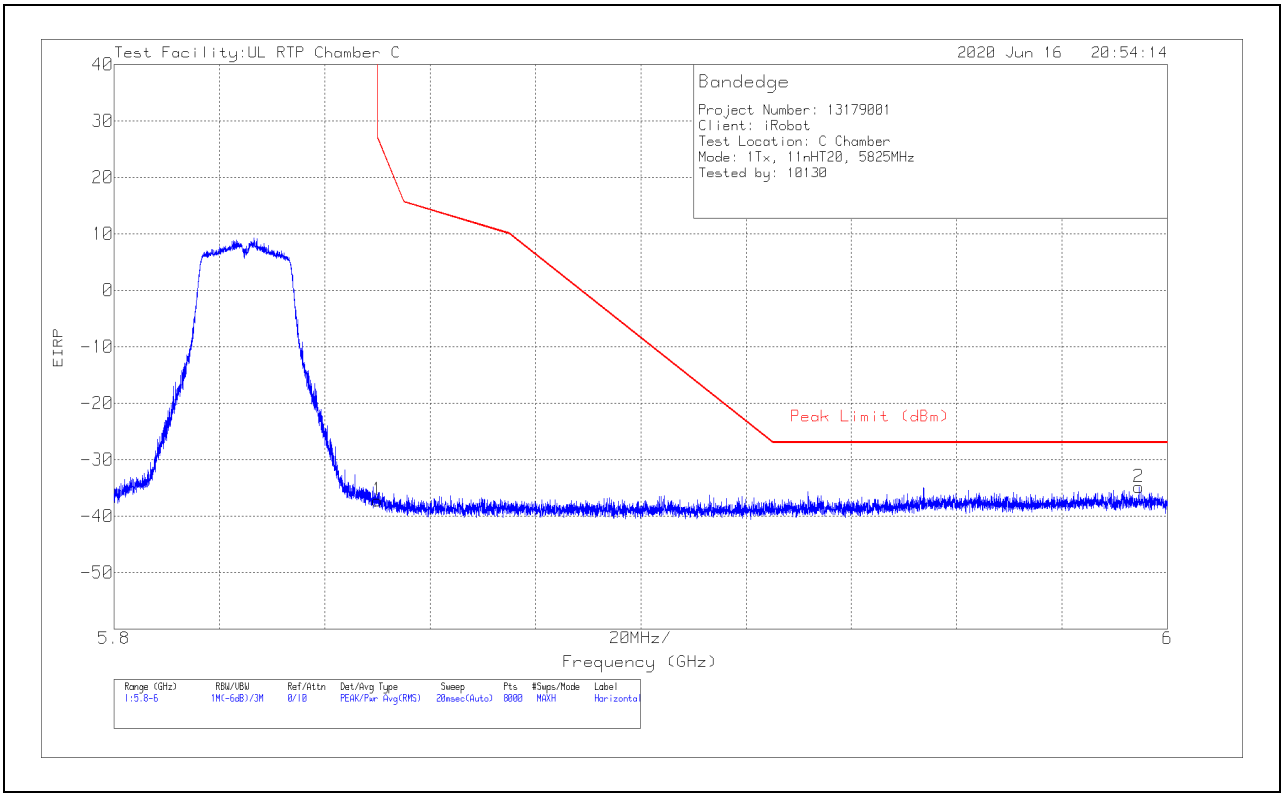
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.64483	-68.49	Pk	34.6	-15	11.8	.24	-36.85	-27	-9.85	142	303	V
1	5.725	-65.75	Pk	34.6	-14.8	11.8	.24	-33.91	27	-60.91	142	303	V

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT

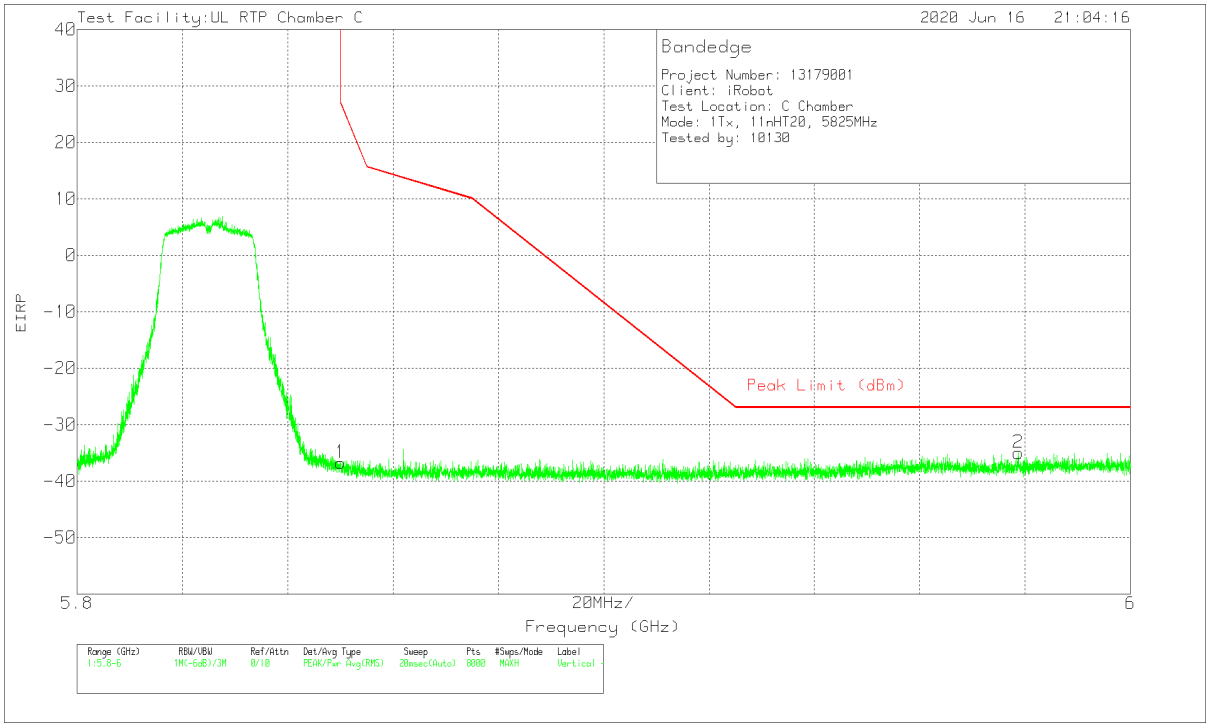


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85001	-69.85	Pk	34.9	-14.3	11.8	.24	-37.21	26.99	-64.2	345	107	H
2	5.99457	-67.9	Pk	35.2	-14.2	11.8	.24	-34.86	-27	-7.86	345	107	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



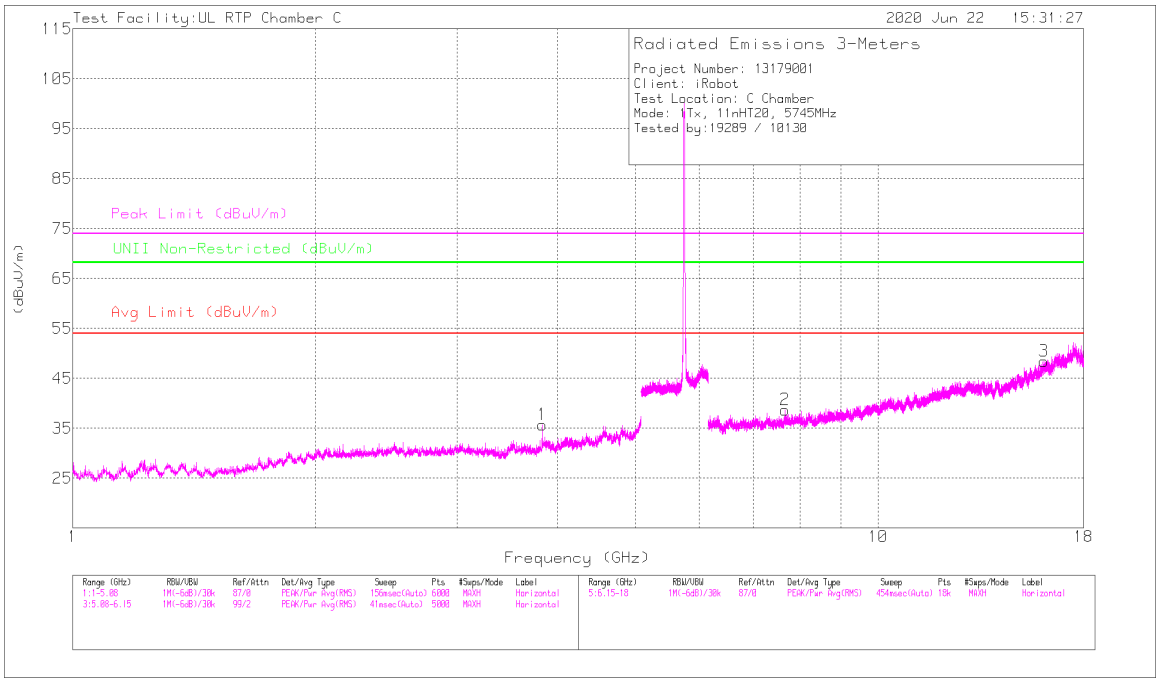
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85001	-69.4	Pk	34.9	-14.3	11.8	.24	-36.76	26.99	-63.75	149	328	V
2	5.97872	-67.93	Pk	35.1	-14.2	11.8	.24	-34.99	-27	-7.99	149	328	V

Pk - Peak detector

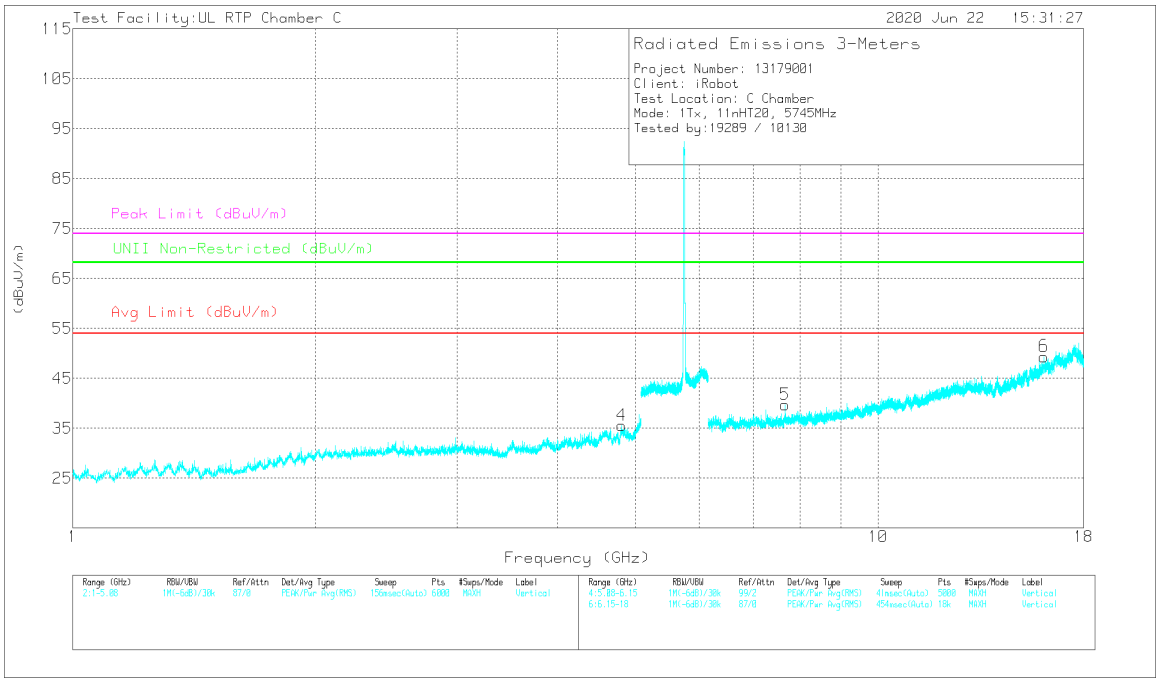
UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

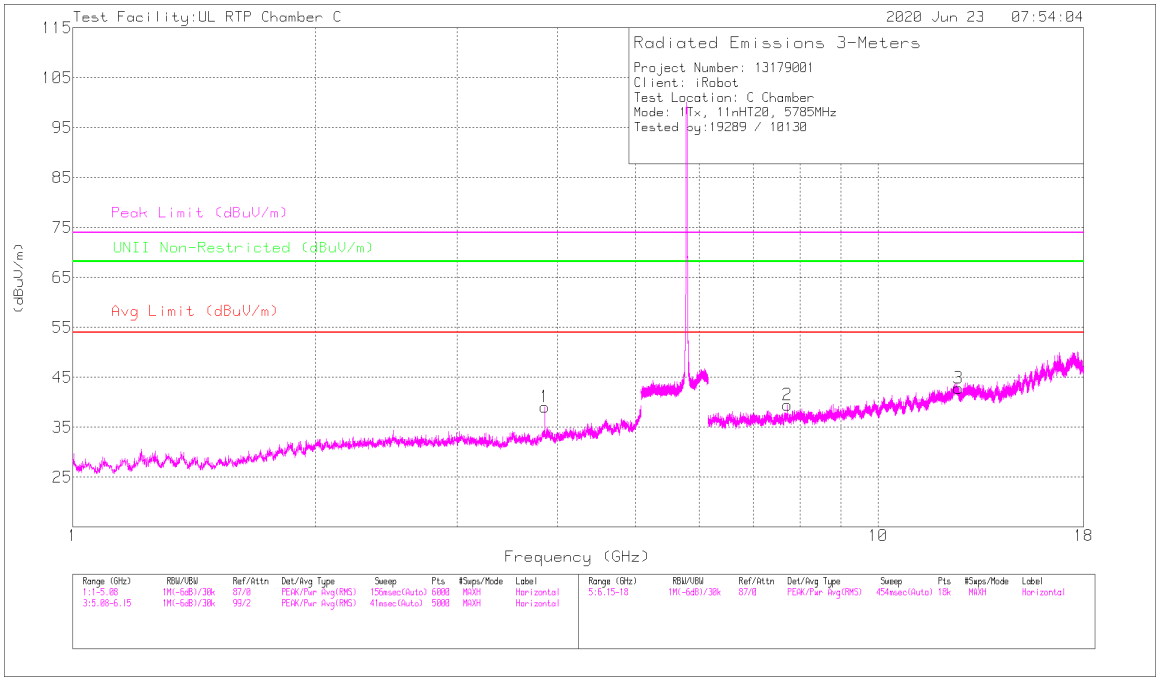
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.83003	56.93	PK-U	33.5	-49	0	41.43	-	-	74	-32.57	-	-	147	102	H
	* ** 3.82999	48.13	ADV	33.5	-49	.24	32.87	54	-21.13	-	-	-	-	147	102	H
4	* ** 4.80559	54.8	PK-U	34.1	-48.8	0	40.1	-	-	74	-33.9	-	-	237	102	V
	* ** 4.80543	41.99	ADV	34.1	-48.8	.24	27.53	54	-26.47	-	-	-	-	237	102	V
2	* ** 7.65993	55.72	PK-U	35.8	-45.7	0	45.82	-	-	74	-28.18	-	-	341	113	H
	* ** 7.66001	44.87	ADV	35.9	-45.7	.24	35.31	54	-18.69	-	-	-	-	341	113	H
3	* ** 16.07388	51.27	PK-U	41.3	-36.3	0	56.27	-	-	74	-17.73	-	-	129	308	H
	* ** 16.07446	37.86	ADV	41.3	-36.3	.24	43.1	54	-10.9	-	-	-	-	129	308	H
5	* ** 7.66005	56.07	PK-U	35.9	-45.7	0	46.27	-	-	74	-27.73	-	-	240	270	V
	* ** 7.66001	45.99	ADV	35.9	-45.7	.24	36.43	54	-17.57	-	-	-	-	240	270	V
6	* ** 16.07443	50.96	PK-U	41.3	-36.3	0	55.96	-	-	74	-18.04	-	-	215	107	V
	* ** 16.0745	37.82	ADV	41.3	-36.4	.24	42.96	54	-11.04	-	-	-	-	215	107	V

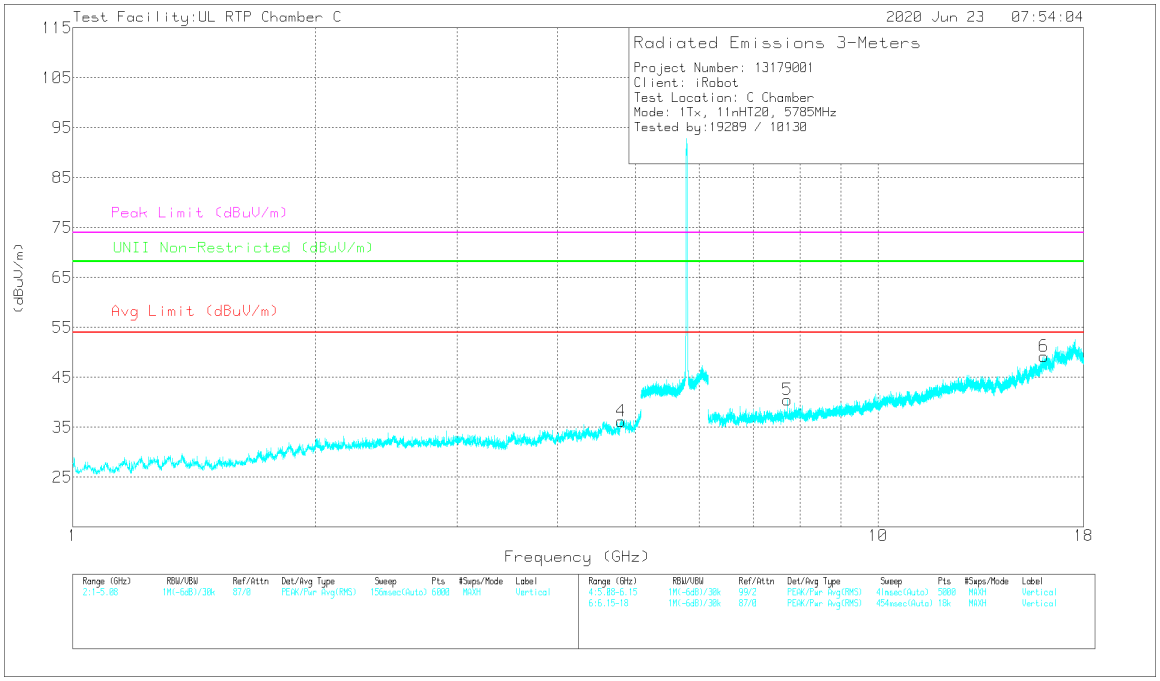
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

MID CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA
TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

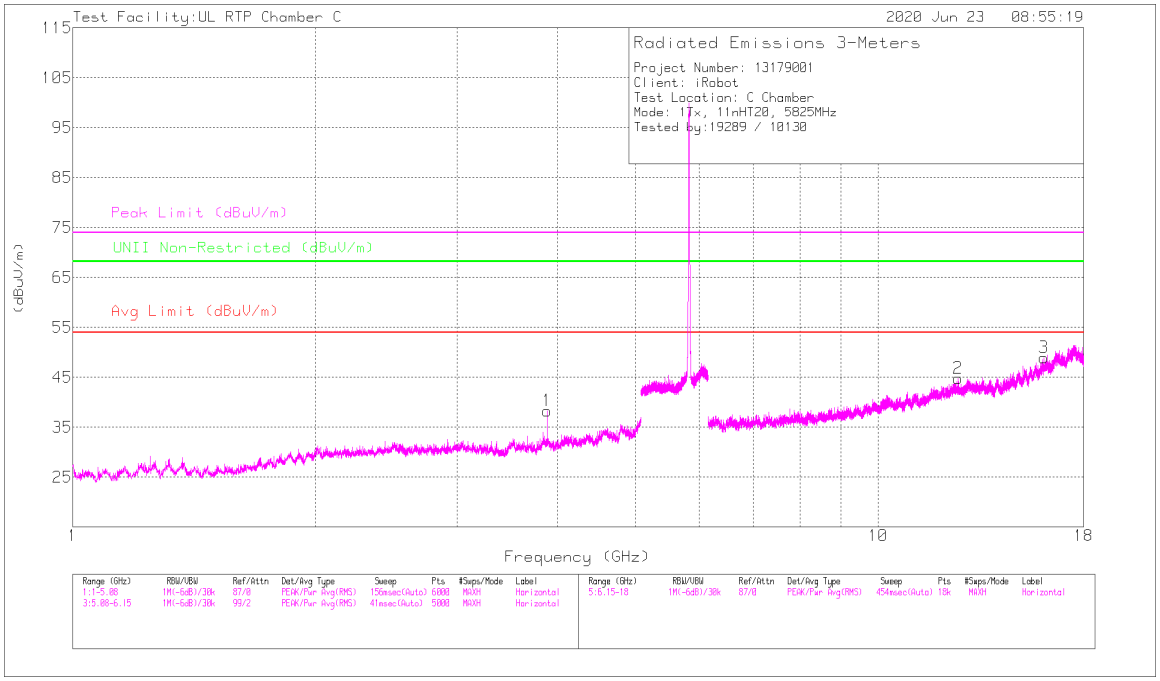
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.85668	58.8	PK-U	33.5	-49.3	0	43	-	-	74	-31	-	-	159	102	H
	* ** 3.85668	51.02	ADV	33.5	-49.3	.24	35.46	54	-18.54	-	-	-	-	159	102	H
4	* ** 4.79721	54.88	PK-U	34.1	-48.6	0	40.38	-	-	74	-33.62	-	-	44	102	V
	* ** 4.79756	42.15	ADV	34.1	-48.6	.24	27.89	54	-26.11	-	-	-	-	44	102	V
2	* ** 7.71306	57.12	PK-U	35.9	-46.5	0	46.52	-	-	74	-27.48	-	-	348	102	H
	* ** 7.71333	46.64	ADV	35.9	-46.5	.24	36.28	54	-17.72	-	-	-	-	348	102	H
3	* ** 12.58109	52.01	PK-U	39.2	-40.4	0	50.81	-	-	74	-23.19	-	-	4	279	H
	* ** 12.58064	38.95	ADV	39.2	-40.4	.24	37.99	54	-16.01	-	-	-	-	4	279	H
5	* ** 7.71356	57.4	PK-U	35.9	-46.5	0	46.8	-	-	74	-27.2	-	-	157	398	V
	* ** 7.7133	47.11	ADV	35.9	-46.5	.24	36.75	54	-17.25	-	-	-	-	157	398	V
6	* ** 16.06985	50.88	PK-U	41.3	-36.3	0	55.88	-	-	74	-18.12	-	-	60	392	V
	* ** 16.07005	38.18	ADV	41.3	-36.3	.24	43.42	54	-10.58	-	-	-	-	60	392	V

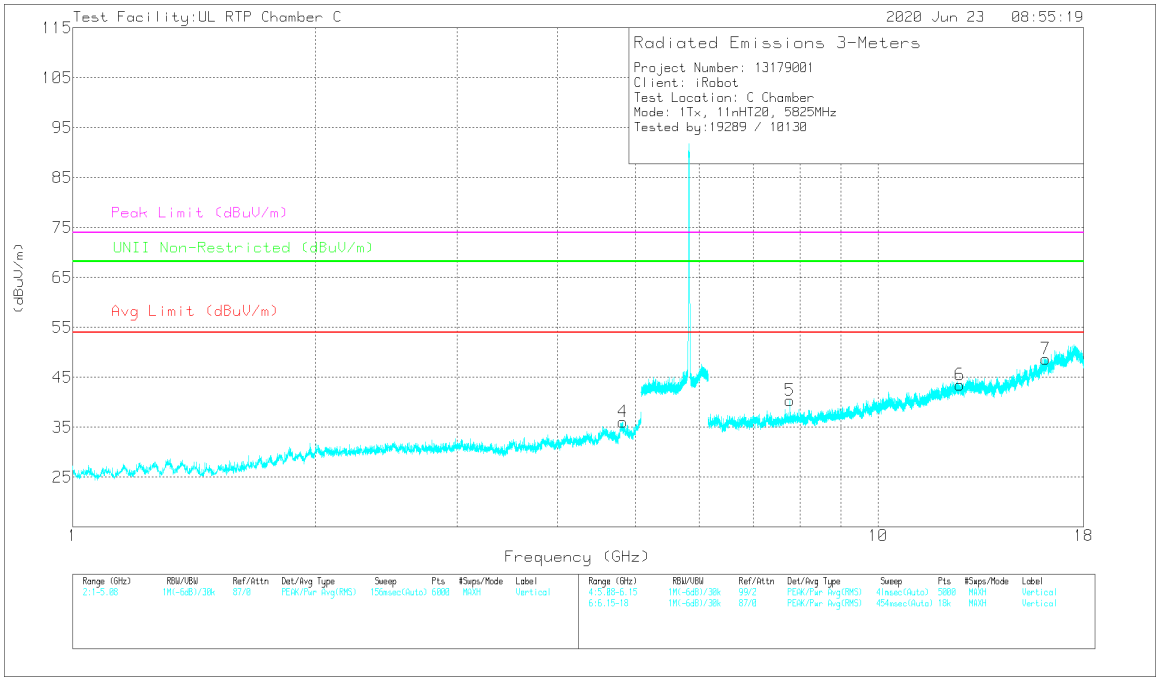
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA
TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.88326	59.61	PK-U	33.5	-49.7	0	43.41	-	-	74	-30.59	-	-	156	102	H
	* ** 3.88334	51.44	ADV	33.5	-49.7	.24	35.48	54	-18.52	-	-	-	-	156	102	H
4	* ** 4.81797	54.72	PK-U	34.1	-49.2	0	39.62	-	-	74	-34.38	-	-	26	102	V
	* ** 4.81792	41.65	ADV	34.1	-49.2	.24	26.79	54	-27.21	-	-	-	-	26	102	V
2	* ** 12.57462	52.3	PK-U	39.2	-40.5	0	51	-	-	74	-23	-	-	80	165	H
	* ** 12.57458	38.86	ADV	39.2	-40.5	.24	37.8	54	-16.2	-	-	-	-	80	165	H
3	* ** 16.07379	50.91	PK-U	41.3	-36.3	0	55.91	-	-	74	-18.09	-	-	122	220	H
	* ** 16.07325	37.93	ADV	41.3	-36.3	.24	43.17	54	-10.83	-	-	-	-	122	220	H
6	* ** 12.64303	51.35	PK-U	39.2	-40.4	0	50.15	-	-	74	-23.85	-	-	122	102	V
	* ** 12.64312	38.07	ADV	39.2	-40.4	.24	37.11	54	-16.89	-	-	-	-	122	102	V
7	* ** 16.15413	51.21	PK-U	41.3	-37.9	0	54.61	-	-	74	-19.39	-	-	130	211	V
	* ** 16.15354	38.22	ADV	41.3	-37.9	.24	41.86	54	-12.14	-	-	-	-	130	211	V
5	7.76648	56.77	PK-U	35.9	-46.8	0	45.87	-	-	-	-	68.2	-22.33	152	107	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

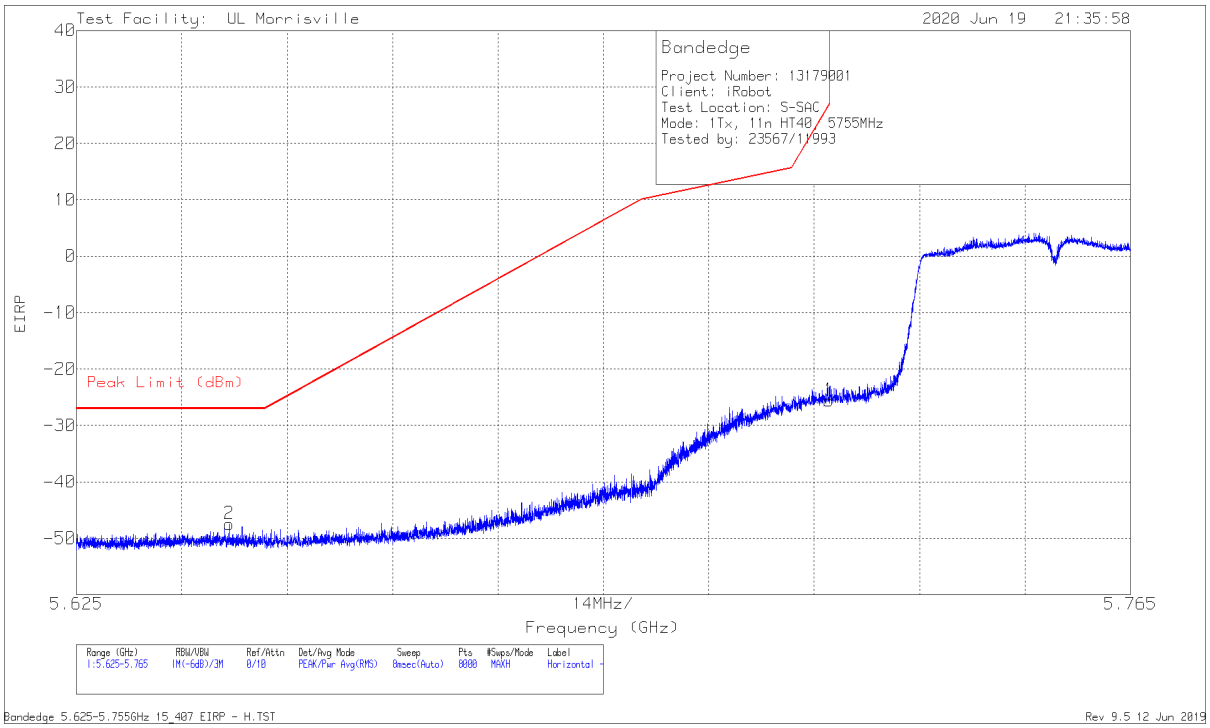
UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

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

1TX External Antenna MODE

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT

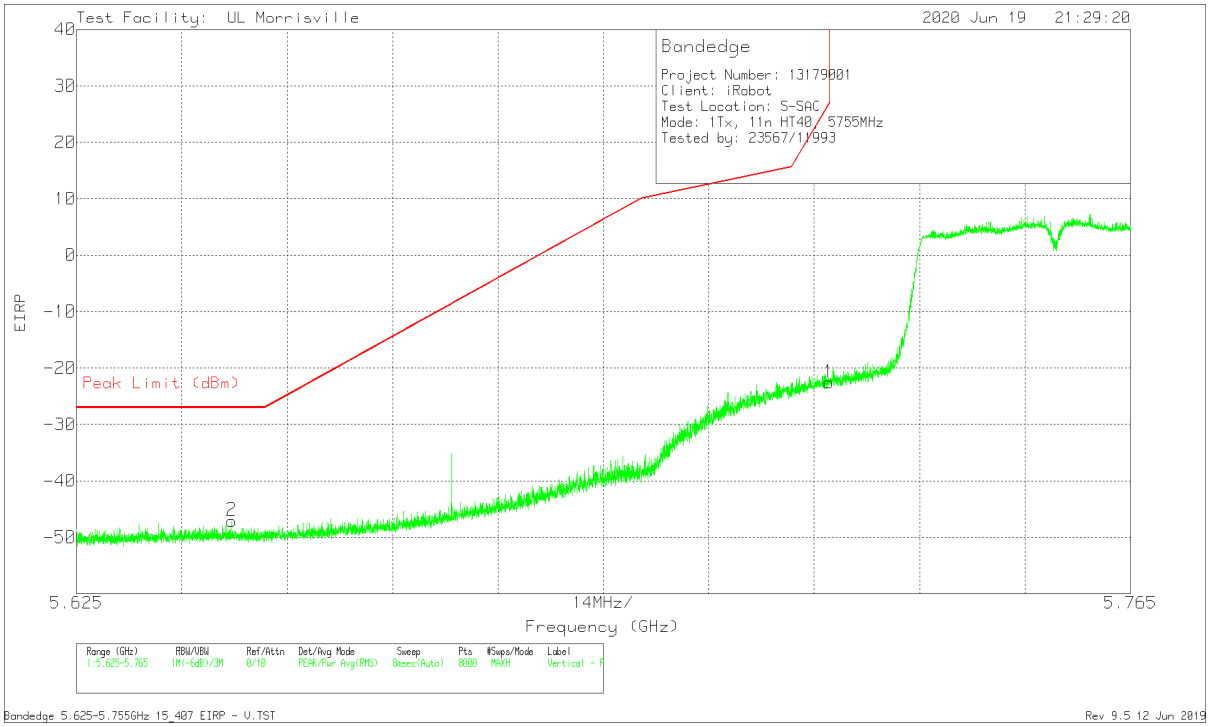


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0078 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.64527	-70.94	Pk	34.7	-23	11.8	-47.44	-27	-20.44	125	146	H
1	5.72499	-49.11	Pk	34.8	-23.1	11.8	-25.61	26.97	-52.58	125	146	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



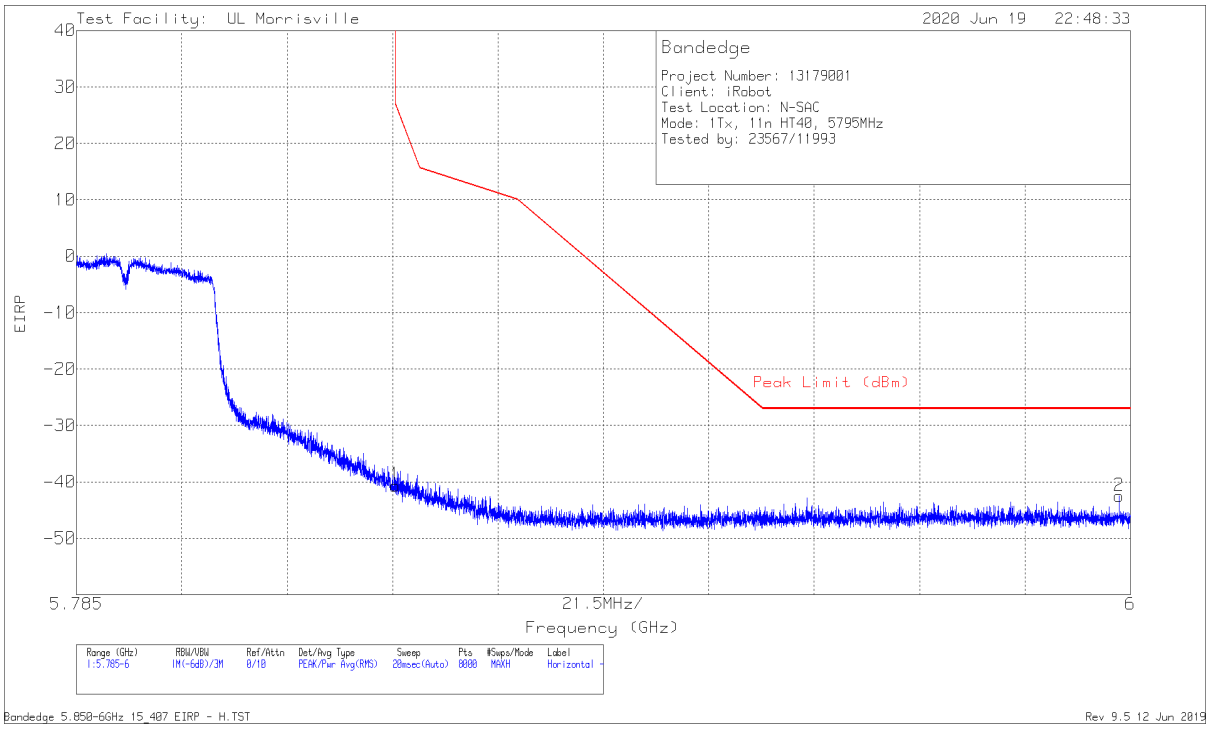
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0078 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.64564	-70.45	Pk	34.7	-23.1	11.8	-47.05	-27	-20.05	170	105	V
1	5.72499	-46.02	Pk	34.8	-23.1	11.8	-22.52	26.97	-49.49	170	105	V

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT

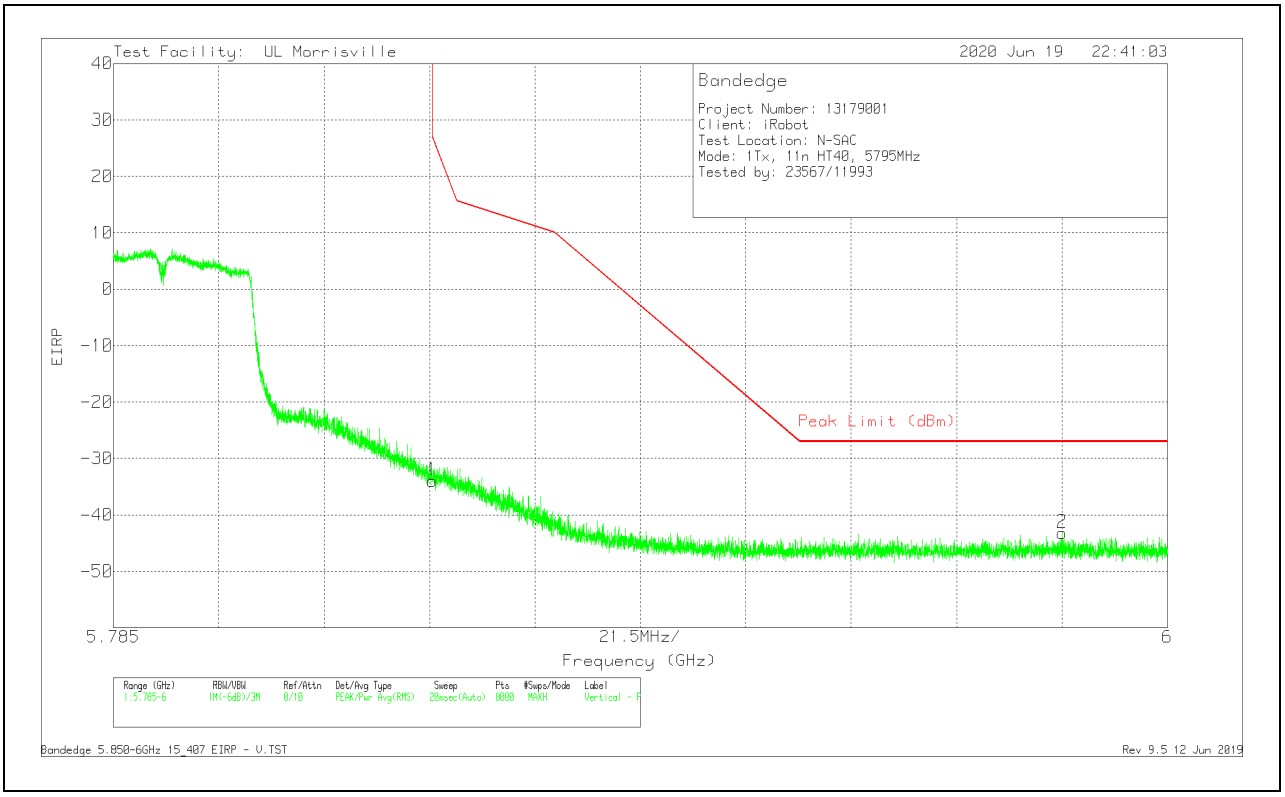


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85002	-65.8	Pk	34.8	-21.4	11.8	-40.6	26.96	-67.56	211	128	H
2	5.99769	-68.52	Pk	35	-20.8	11.8	-42.52	-27	-15.52	211	128	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



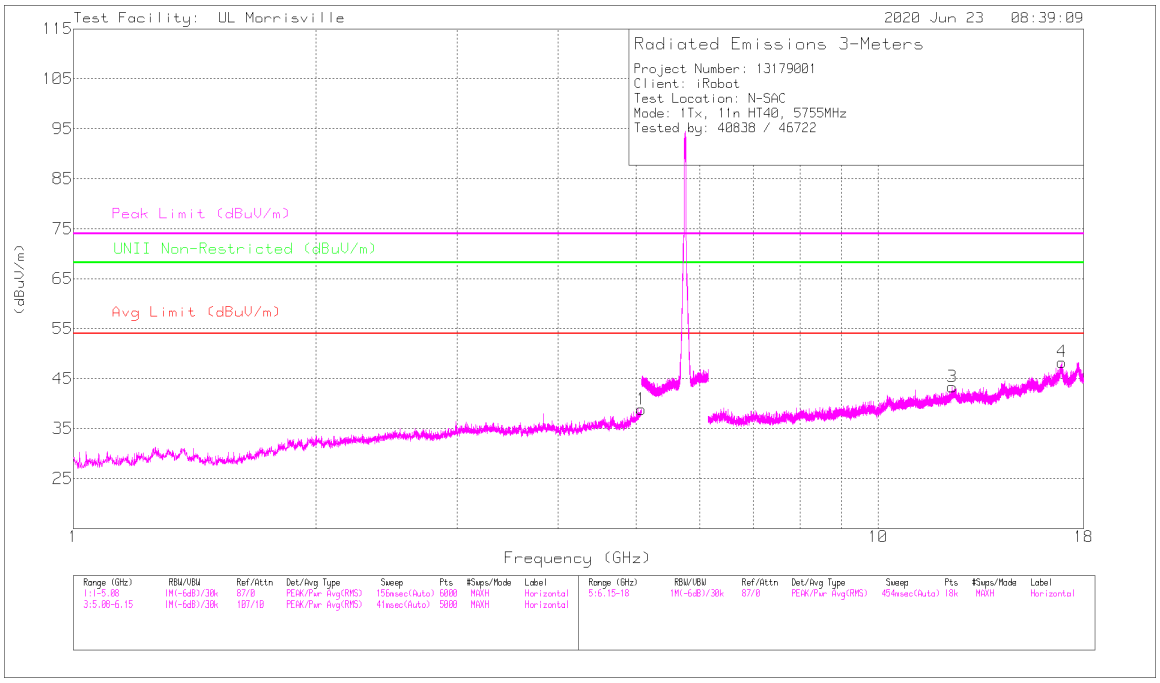
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85002	-59.11	Pk	34.8	-21.4	11.8	-33.91	26.96	-60.87	114	112	V
2	5.97852	-69.26	Pk	35.1	-20.8	11.8	-43.16	-27	-16.16	114	112	V

Pk - Peak detector

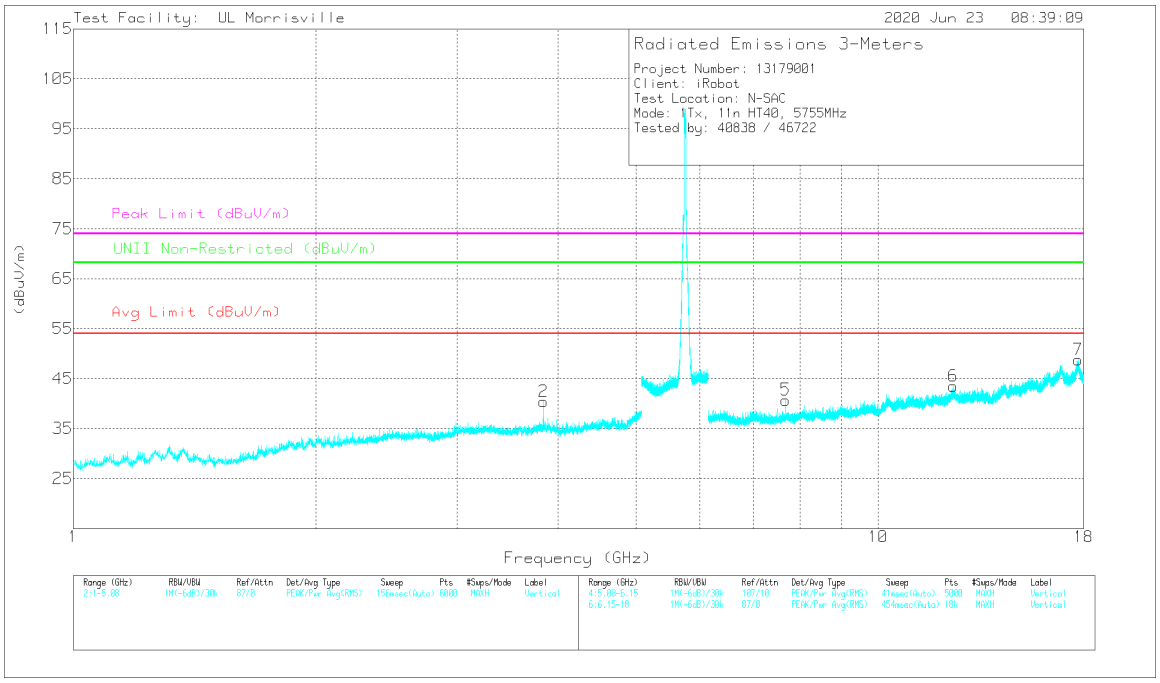
UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

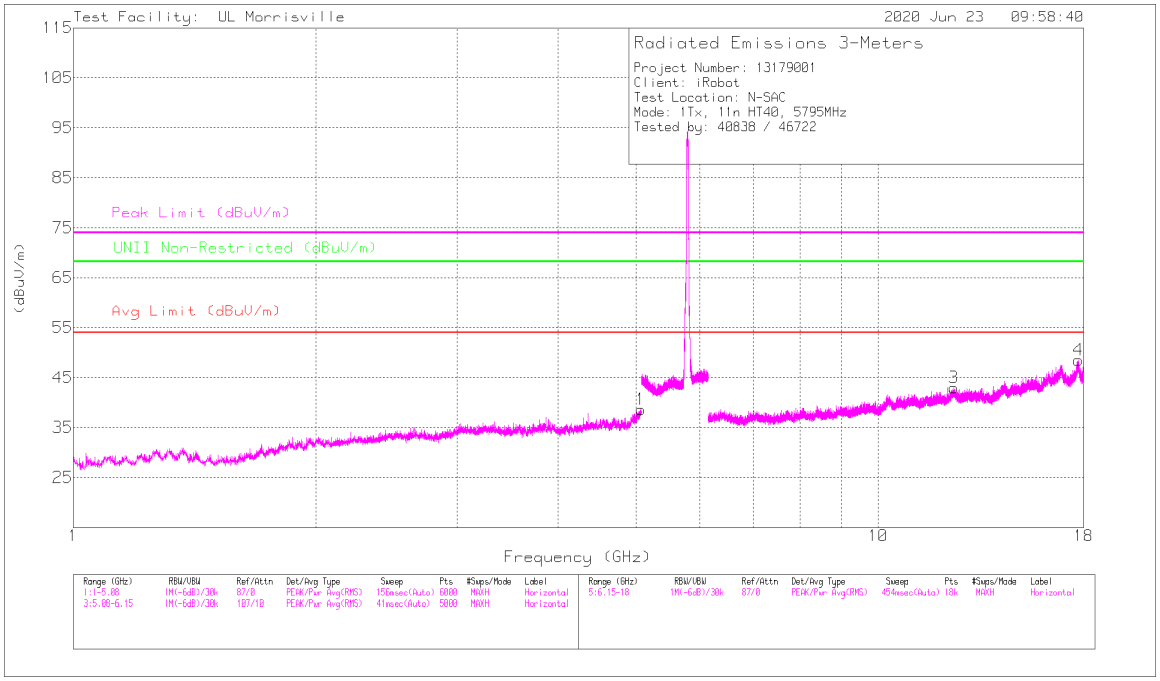
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.07732	40.35	PK-U	34.2	-29.3	0	45.25	-	-	74	-28.75	-	-	214	330	H
	* ** 5.07556	27.39	ADV	34.2	-29.4	.47	32.66	54	-21.34	-	-	-	-	214	330	H
2	* ** 3.83642	43.99	PK-U	33.6	-32.1	0	45.49	-	-	74	-28.51	-	-	39	237	V
	* ** 3.83666	36.32	ADV	33.6	-32.1	.47	38.29	54	-15.71	-	-	-	-	39	237	V
3	* ** 12.36358	34.51	PK-U	38.9	-24.9	0	48.51	-	-	74	-25.49	-	-	146	216	H
	* ** 12.3618	22.42	ADV	38.9	-24.9	.47	36.89	54	-17.11	-	-	-	-	146	216	H
5	* ** 7.67366	38.48	PK-U	35.8	-28.4	0	45.88	-	-	74	-28.12	-	-	179	117	V
	* ** 7.67331	29.65	ADV	35.8	-28.4	.47	37.52	54	-16.48	-	-	-	-	179	117	V
6	* ** 12.38942	34.97	PK-U	38.9	-24.5	0	49.37	-	-	74	-24.63	-	-	76	249	V
	* ** 12.38992	22.3	ADV	38.9	-24.5	.47	37.17	54	-16.83	-	-	-	-	76	249	V
7	* ** 17.72556	33.2	PK-U	41.7	-19.8	0	55.1	-	-	74	-18.9	-	-	219	247	V
	* ** 17.72567	20.87	ADV	41.7	-19.8	.47	43.24	54	-10.76	-	-	-	-	219	247	V
4	16.91145	35.98	PK-U	41.5	-22.6	0	54.88	-	-	-	-	68.2	-13.32	67	102	H

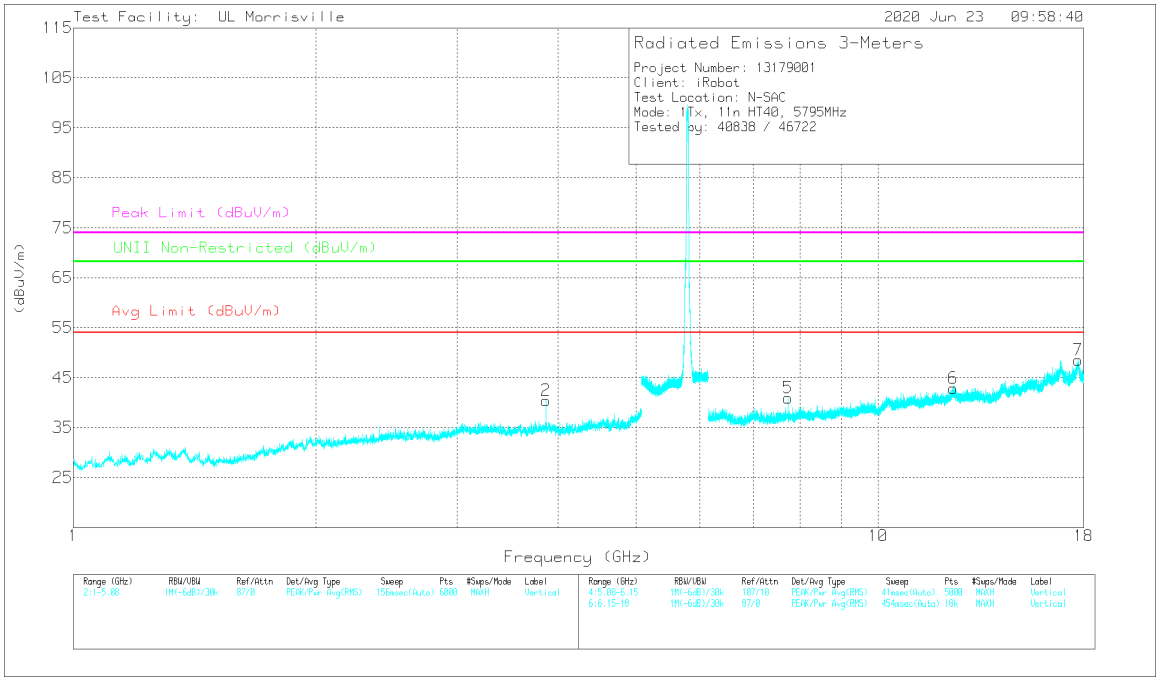
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA
TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.06816	40.2	PK-U	34.2	-29.9	0	44.5	-	-	74	-29.5	-	-	99	197	H
	* ** 5.06722	27.69	ADV	34.2	-29.9	.47	32.46	54	-21.54	-	-	-	-	99	197	H
2	* ** 3.86364	42.62	PK-U	33.6	-31.9	0	44.32	-	-	74	-29.68	-	-	66	196	V
	* ** 3.86329	34.8	ADV	33.6	-31.9	.47	36.97	54	-17.03	-	-	-	-	66	196	V
3	* ** 12.40994	34.73	PK-U	39	-24.3	0	49.43	-	-	74	-24.57	-	-	313	183	H
	* ** 12.41156	22.03	ADV	39	-24.3	.47	37.20	54	-16.80	-	-	-	-	313	183	H
4	* ** 17.73855	33.3	PK-U	41.7	-19.7	0	55.3	-	-	74	-18.7	-	-	9	102	H
	* ** 17.73953	20.86	ADV	41.7	-19.7	.47	43.33	54	-10.67	-	-	-	-	9	102	H
5	* ** 7.72656	39.53	PK-U	35.8	-28.3	0	47.03	-	-	74	-26.97	-	-	177	111	V
	* ** 7.7266	31.24	ADV	35.8	-28.3	.47	39.21	54	-14.79	-	-	-	-	177	111	V
6	* ** 12.39736	34.76	PK-U	38.9	-24.4	0	49.26	-	-	74	-24.74	-	-	99	262	V
	* ** 12.39673	22.15	ADV	38.9	-24.4	.47	37.12	54	-16.88	-	-	-	-	99	262	V
7	* ** 17.73252	33.11	PK-U	41.7	-19.7	0	55.11	-	-	74	-18.89	-	-	188	108	V
	* ** 17.73056	20.45	ADV	41.6	-19.7	.47	42.82	54	-11.18	-	-	-	-	188	108	V

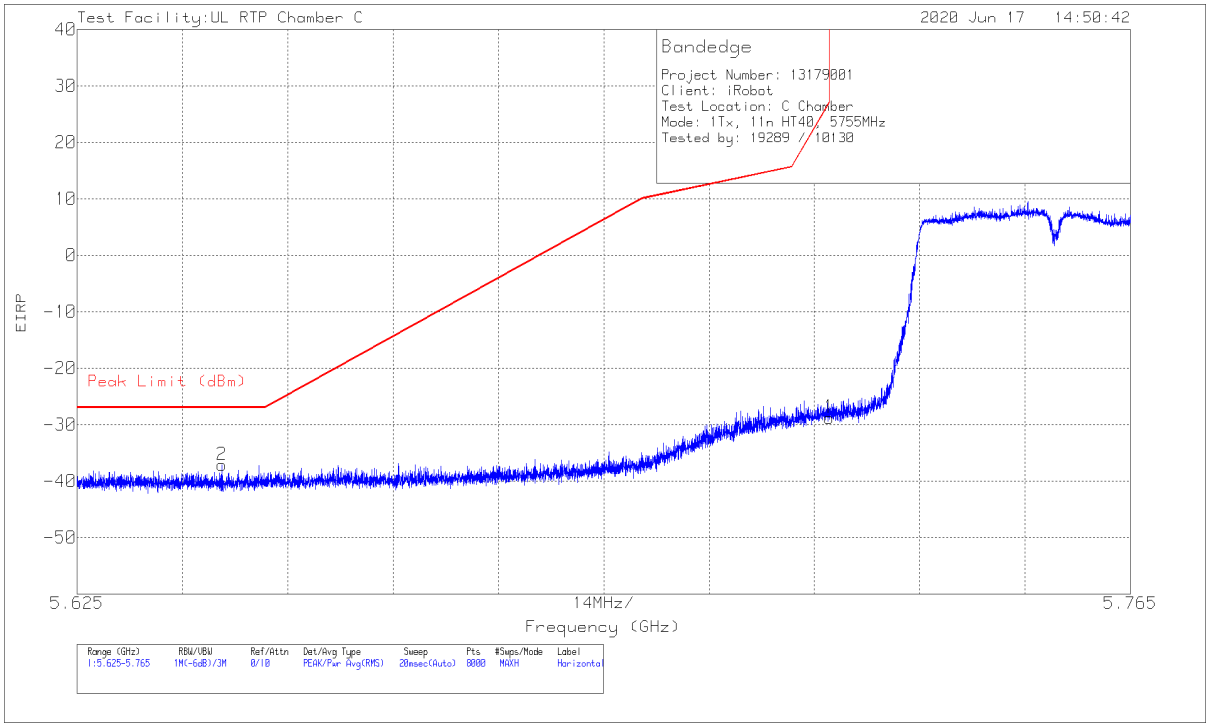
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

1TX PCB Antenna MODE

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT

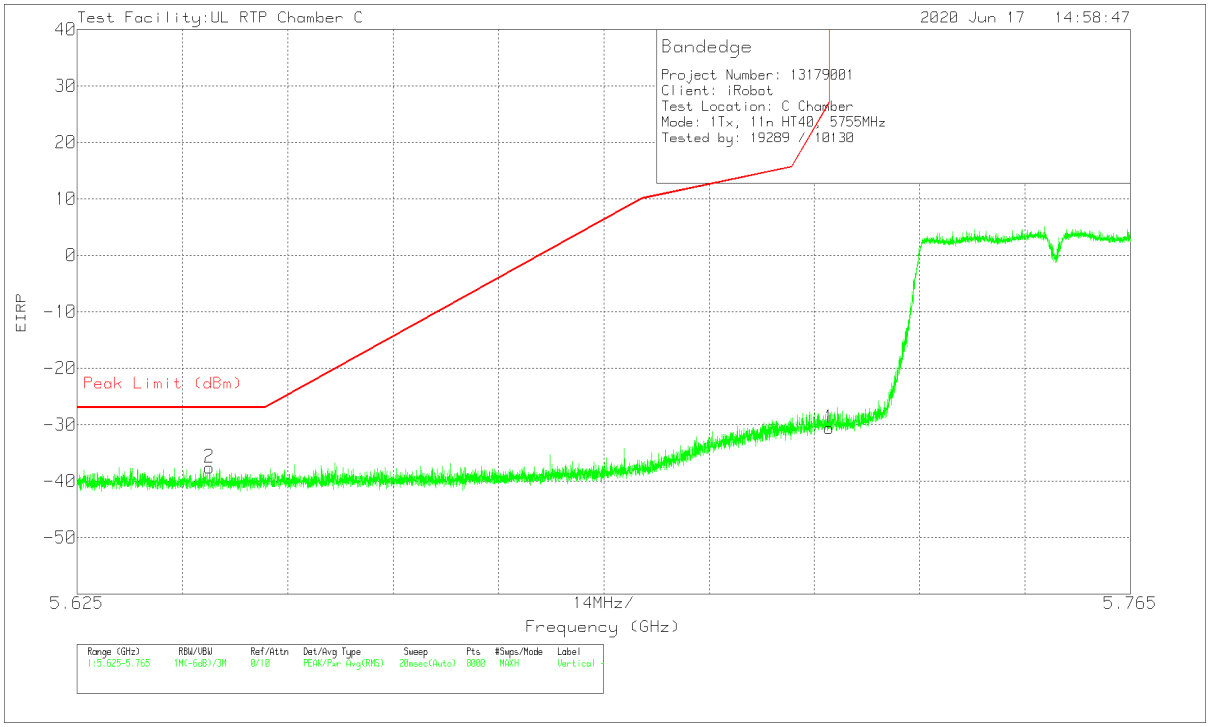


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.64427	-68.53	Pk	34.6	-15	11.8	-37.13	-27	-10.13	333	99	H
1	5.72499	-60.37	Pk	34.6	-14.8	11.8	-28.77	26.97	-55.74	333	99	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



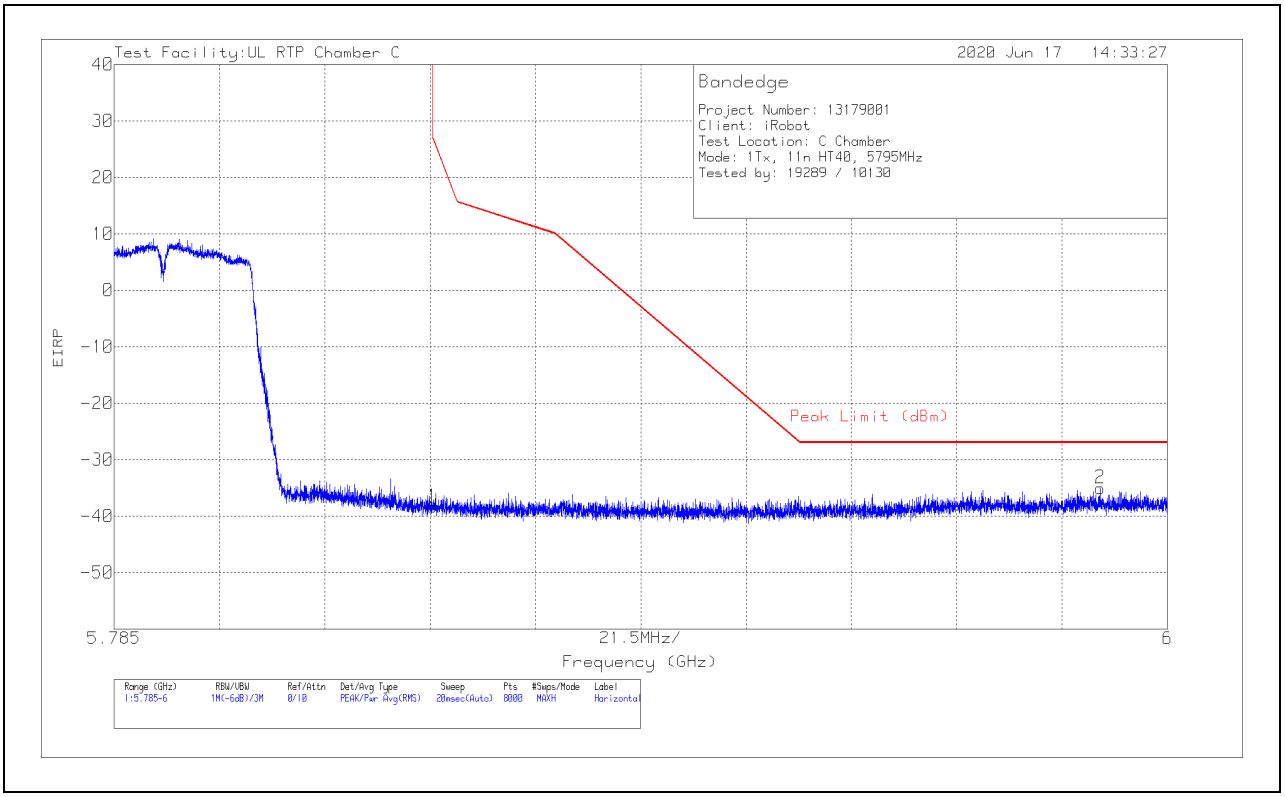
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.64256	-68.96	Pk	34.6	-15	11.8	-37.56	-27	-10.56	154	314	V
1	5.72499	-62.16	Pk	34.6	-14.8	11.8	-30.56	26.97	-57.53	154	314	V

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT

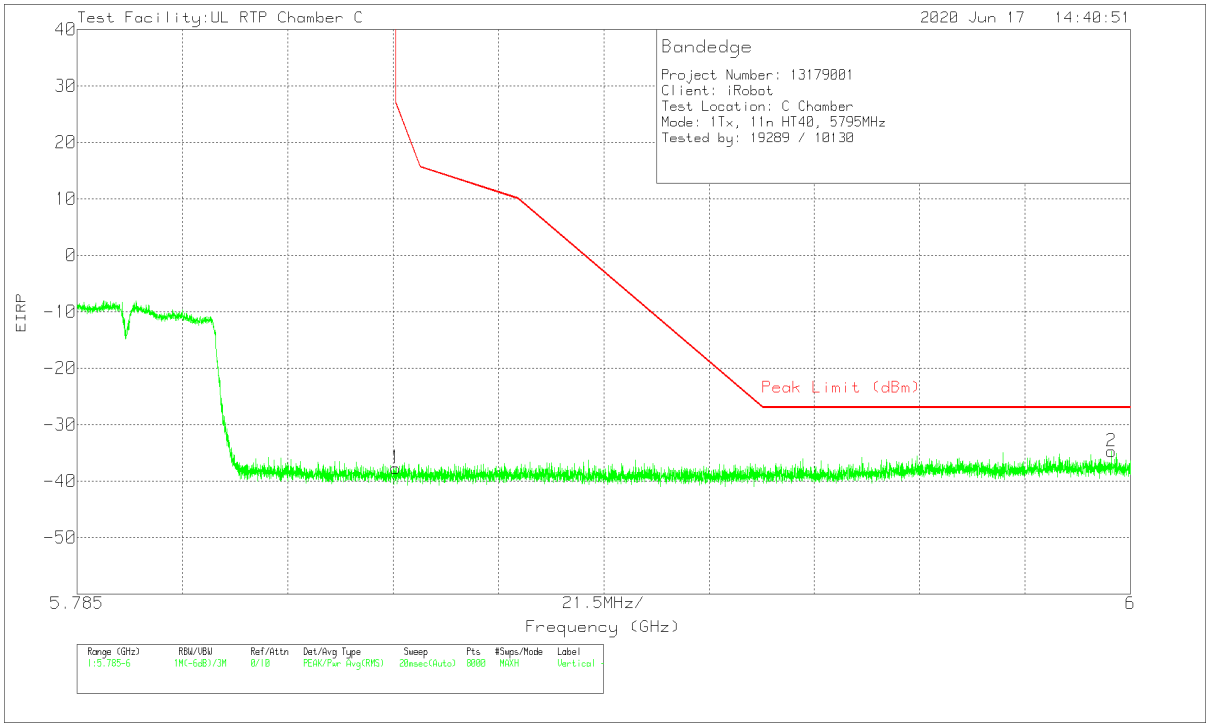


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85002	-70.73	Pk	34.9	-14.3	11.8	-38.33	26.96	-65.29	44	134	H
2	5.98629	-67.93	Pk	35.1	-14	11.8	-35.03	-27	-8.03	44	134	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



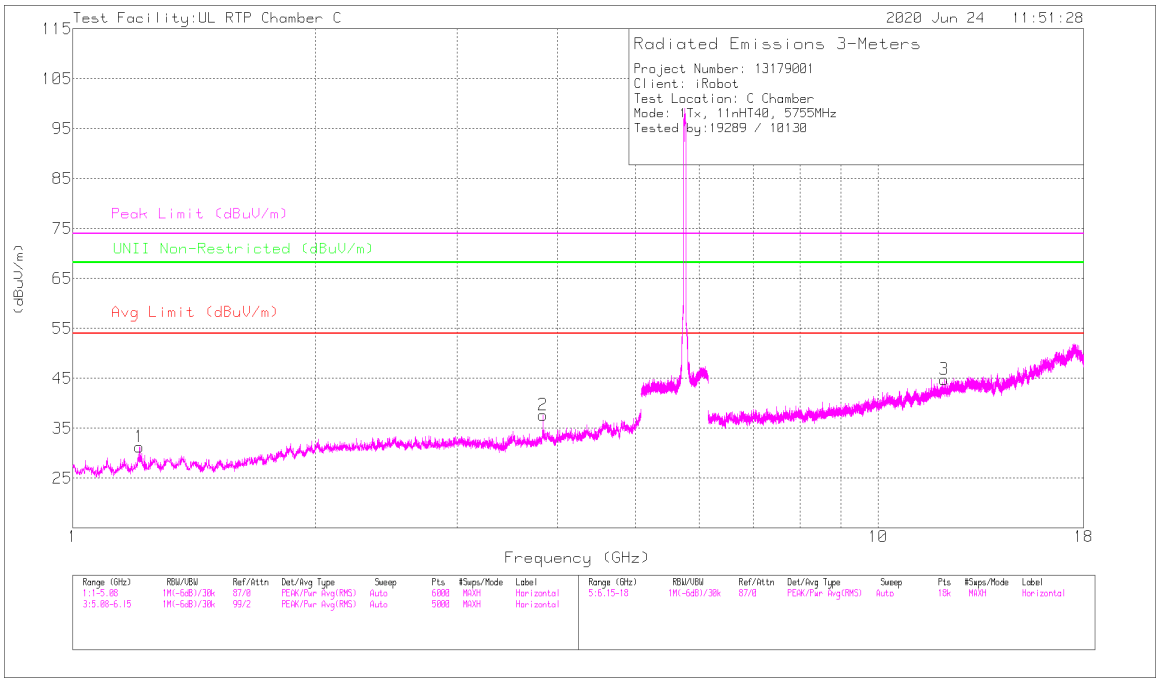
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85002	-70.12	Pk	34.9	-14.3	11.8	-37.72	26.96	-64.68	337	262	V
2	5.9961	-67.54	Pk	35.2	-14.2	11.8	-34.74	-27	-7.74	337	262	V

Pk - Peak detector

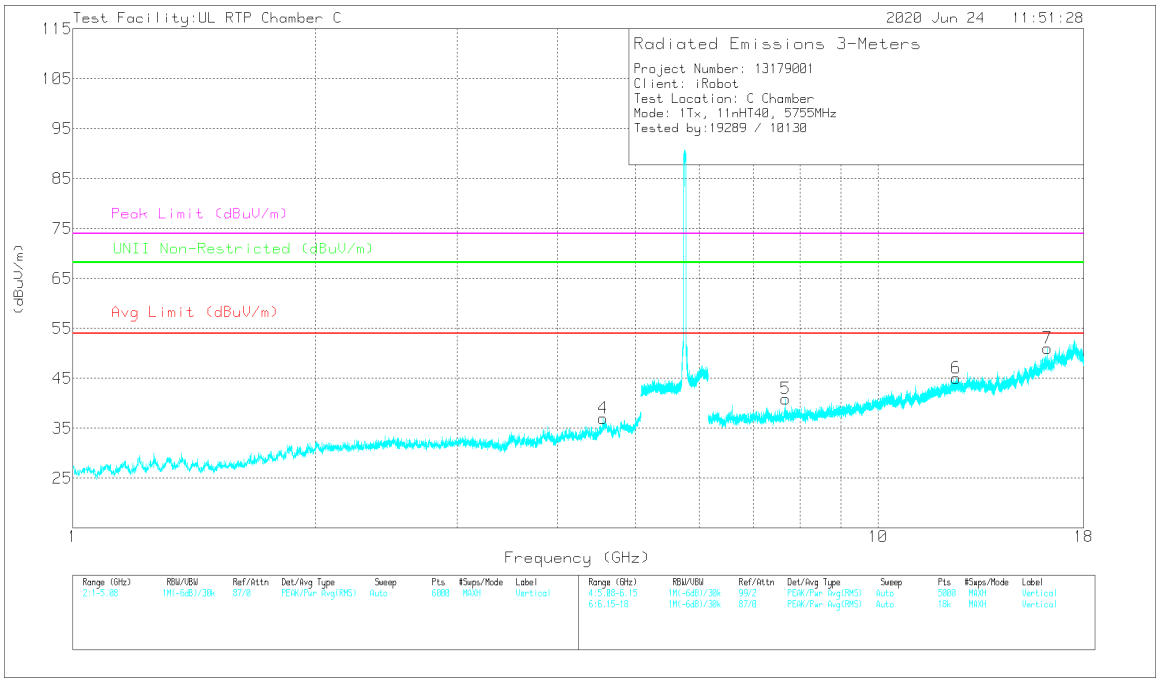
UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

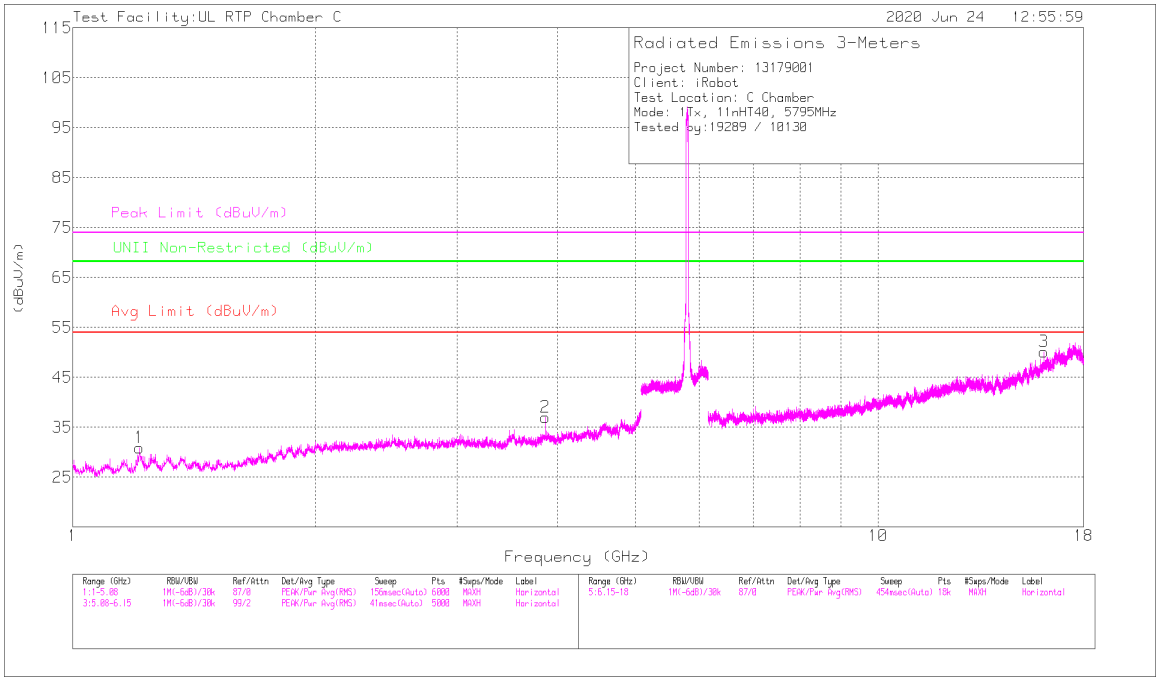
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.20965	65.63	PK-U	28.2	-55.3	0	38.53	-	-	74	-35.47	-	-	179	104	H
	* ** 1.20958	55.62	ADV	28.2	-55.3	.47	28.99	54	-25.01	-	-	-	-	179	104	H
2	* ** 3.8367	59.56	PK-U	33.5	-49.2	0	43.86	-	-	74	-30.14	-	-	148	103	H
	* ** 3.83662	50.89	ADV	33.5	-49.2	.47	35.66	54	-18.34	-	-	-	-	148	103	H
4	* ** 4.55785	57.64	PK-U	34.1	-49.3	0	42.44	-	-	74	-31.56	-	-	244	213	V
	* ** 4.5576	44.91	ADV	34.1	-49.3	.47	30.18	54	-23.82	-	-	-	-	244	213	V
3	* ** 12.08482	52.34	PK-U	38.8	-41.1	0	50.04	-	-	74	-23.96	-	-	308	105	H
	* ** 12.0845	39.45	ADV	38.8	-41.1	.47	37.62	54	-16.38	-	-	-	-	308	105	H
5	* ** 7.67334	56.83	PK-U	35.9	-45.6	0	47.13	-	-	74	-26.87	-	-	341	104	V
	* ** 7.67335	48.07	ADV	35.9	-45.6	.47	38.84	54	-15.16	-	-	-	-	341	104	V
6	* ** 12.50485	53.02	PK-U	39.1	-41.2	0	50.92	-	-	74	-23.08	-	-	211	298	V
	* ** 12.50346	39.97	ADV	39.1	-41.1	.47	38.44	54	-15.56	-	-	-	-	211	298	V
7	16.23144	50.91	PK-U	41.3	-35.7	0	56.51	-	-	-	-	68.2	-11.69	205	283	V

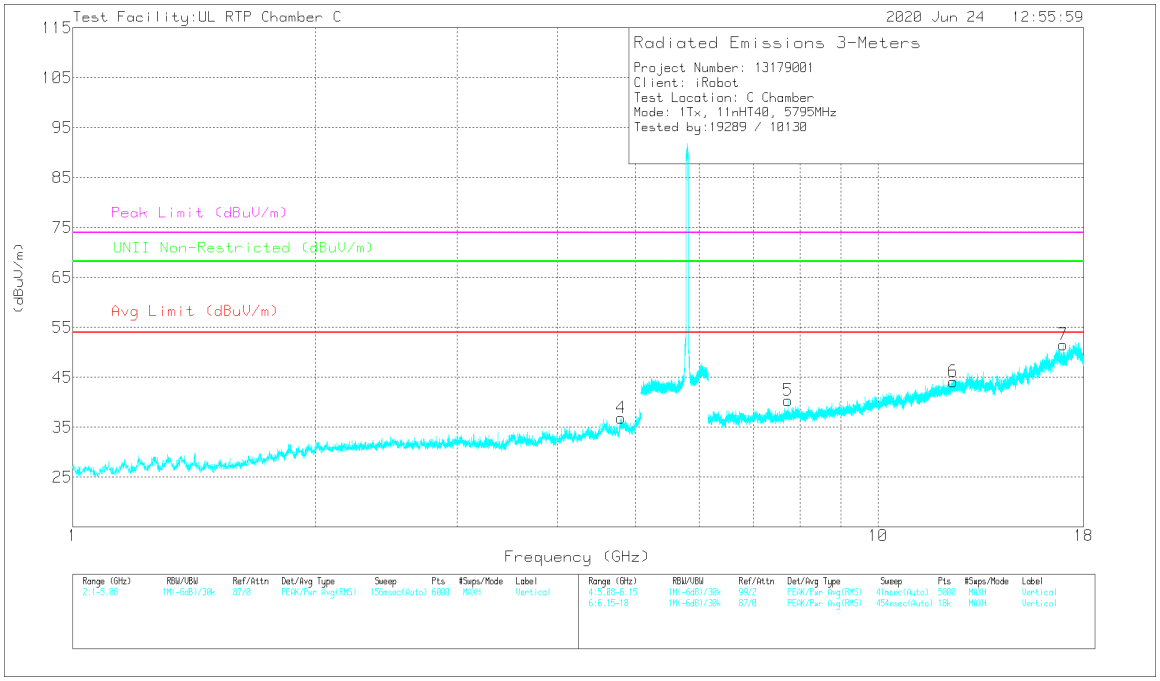
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.20933	65.39	PK-U	28.2	-55.3	0	38.29	-	-	74	-35.71	-	-	175	109	H
	* ** 1.20961	55.21	ADV	28.2	-55.3	.47	28.58	54	-25.42	-	-	-	-	175	109	H
2	* ** 3.86342	59.49	PK-U	33.5	-49.6	0	43.39	-	-	74	-30.61	-	-	152	120	H
	* ** 3.86335	51.33	ADV	33.5	-49.6	.47	35.7	54	-18.3	-	-	-	-	152	120	H
4	* ** 4.79606	57.36	PK-U	34.1	-48.5	0	42.96	-	-	74	-31.04	-	-	50	102	V
	* ** 4.79597	43.82	ADV	34.1	-48.5	.47	29.89	54	-24.11	-	-	-	-	50	102	V
3	* ** 16.0747	51.13	PK-U	41.3	-36.4	0	56.03	-	-	74	-17.97	-	-	103	139	H
	* ** 16.07537	38.04	ADV	41.3	-36.4	.47	43.41	54	-10.59	-	-	-	-	103	139	H
5	* ** 7.7268	58.23	PK-U	35.9	-46.6	0	47.53	-	-	74	-26.47	-	-	327	102	V
	* ** 7.72667	49.57	ADV	35.9	-46.7	.47	39.24	54	-14.76	-	-	-	-	327	102	V
6	* ** 12.40749	52.08	PK-U	39	-40.2	0	50.88	-	-	74	-23.12	-	-	193	102	V
	* ** 12.40793	38.88	ADV	39	-40.2	.47	38.15	54	-15.85	-	-	-	-	193	102	V
7	16.96655	52	PK-U	42.2	-36.9	0	57.3	-	-	-	-	68.2	-10.9	144	258	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

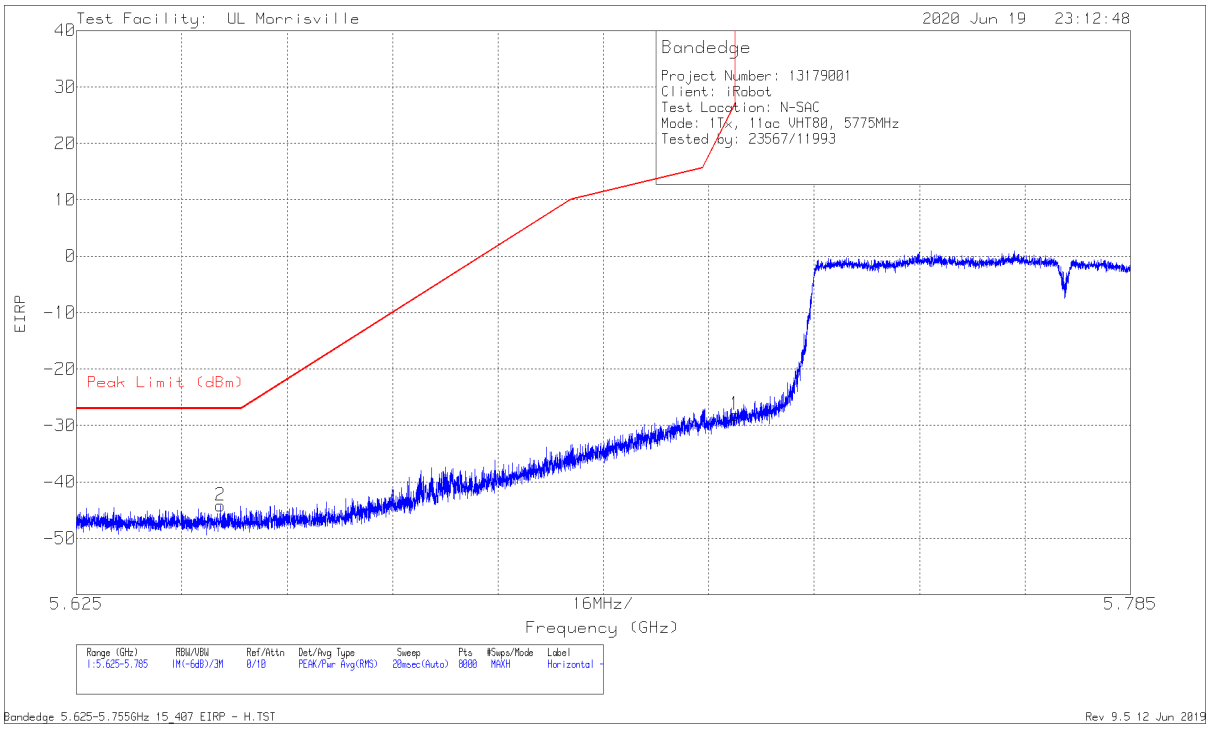
UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

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

1TX External Antenna MODE

BANDEDGE (CHANNEL 155 LOW EDGE)

HORIZONTAL RESULT

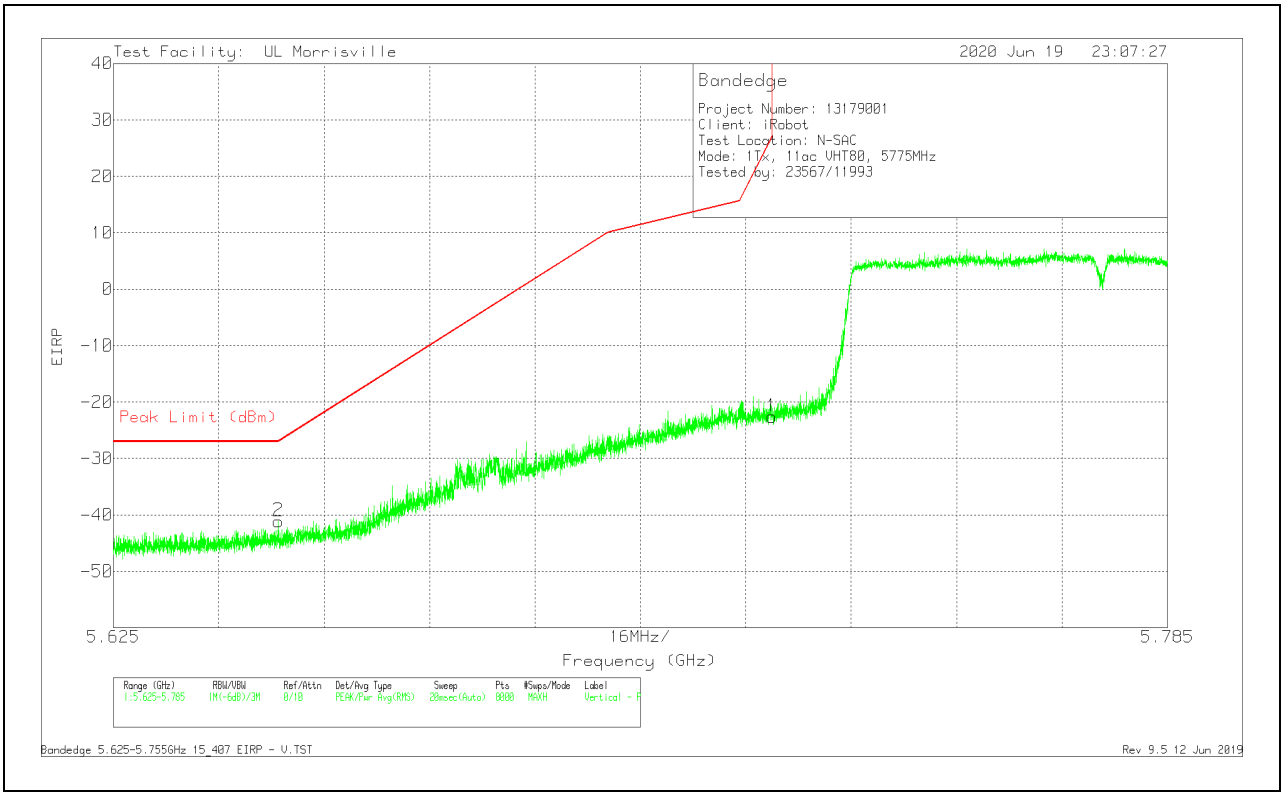


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.64682	-68.68	Pk	34.6	-21.9	11.8	-44.18	-27	-17.18	50	368	H
1	5.725	-52.69	Pk	34.6	-21.8	11.8	-28.09	26.99	-55.08	50	368	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



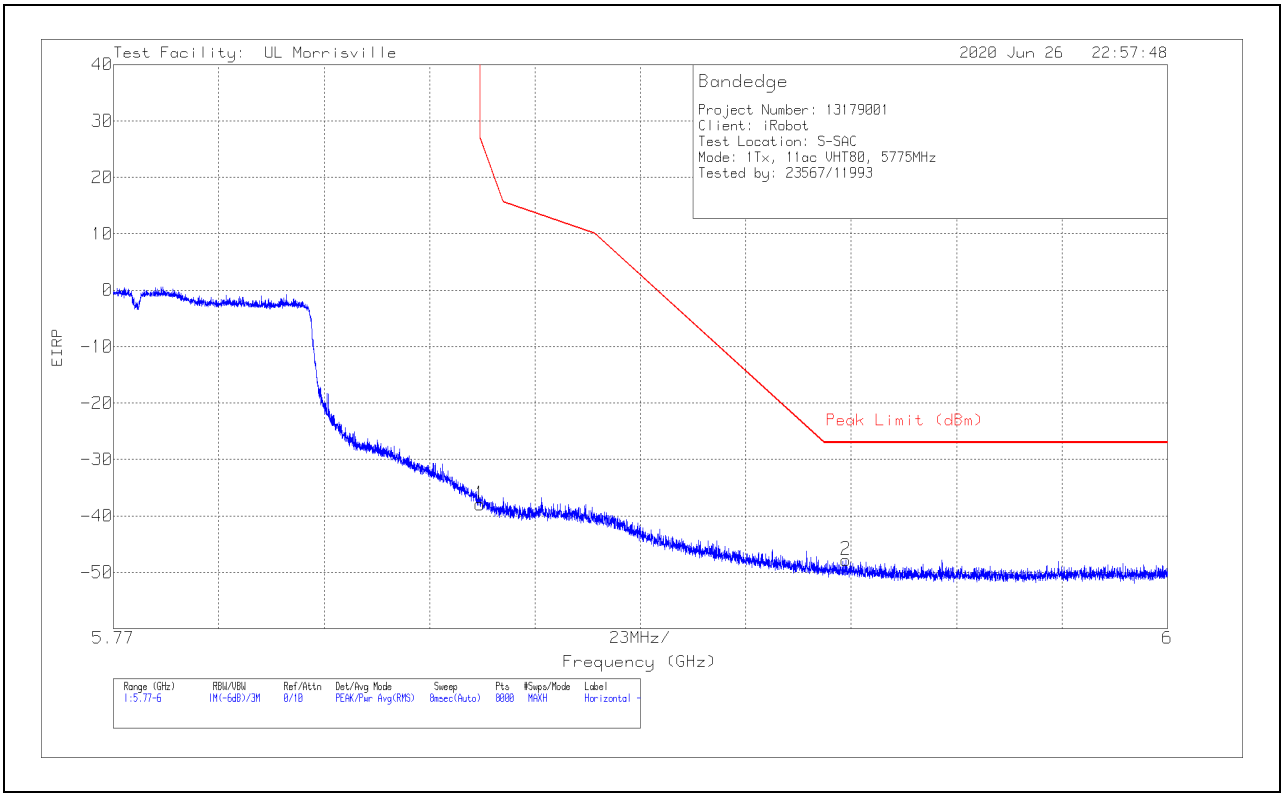
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.65004	-65.6	Pk	34.6	-21.9	11.8	-41.1	-26.97	-14.13	38	103	V
1	5.725	-47.19	Pk	34.6	-21.8	11.8	-22.59	26.99	-49.58	38	103	V

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

BANDEDGE (CHANNEL 155 HIGH EDGE)

HORIZONTAL RESULT

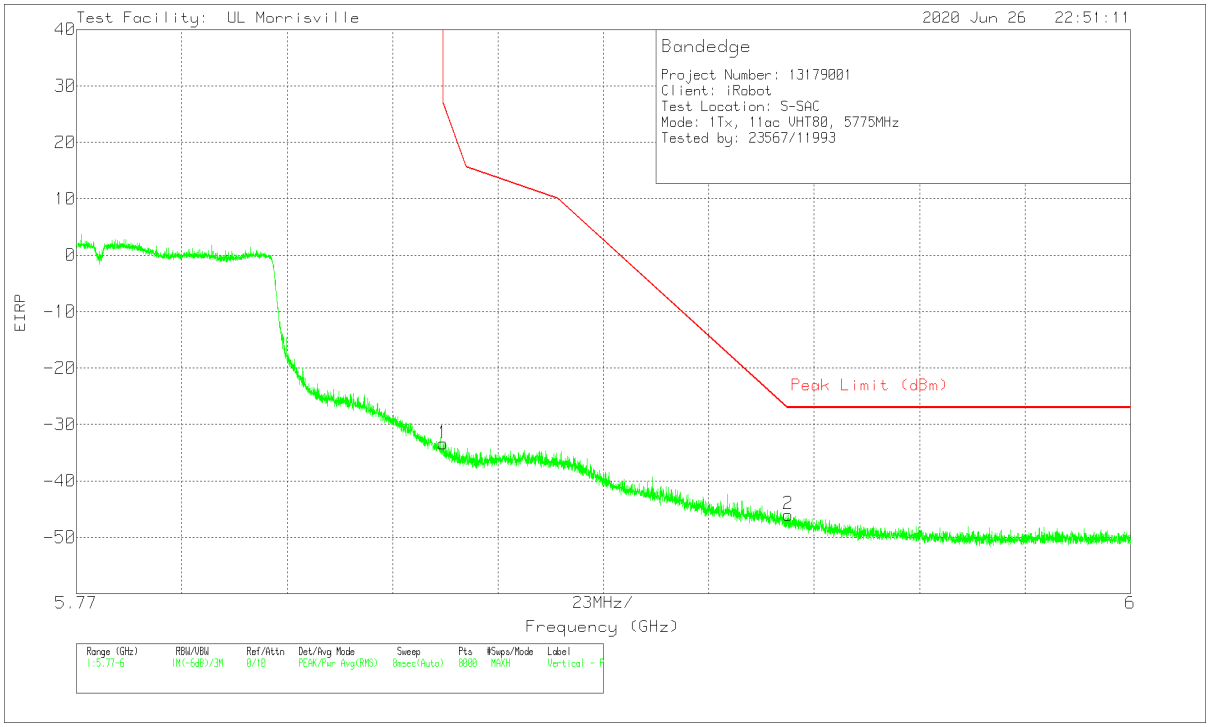


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0078 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85002	-61.71	Pk	34.9	-22.9	11.8	-37.91	26.95	-64.86	98	119	H
2	5.92984	-72.19	Pk	35	-22.4	11.8	-47.79	-27	-20.79	98	119	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



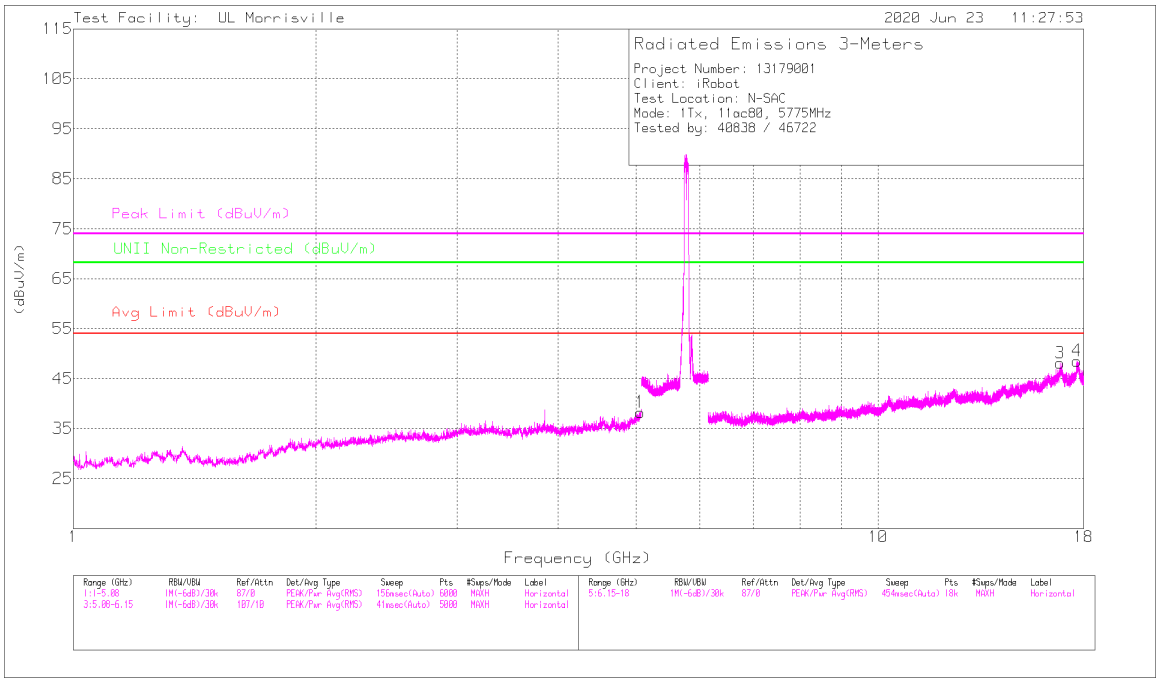
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0078 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85002	-57.2	Pk	34.9	-22.9	11.8	-33.4	26.95	-60.35	194	104	V
2	5.92533	-70.25	Pk	35	-22.5	11.8	-45.95	-27	-18.95	194	104	V

Pk - Peak detector

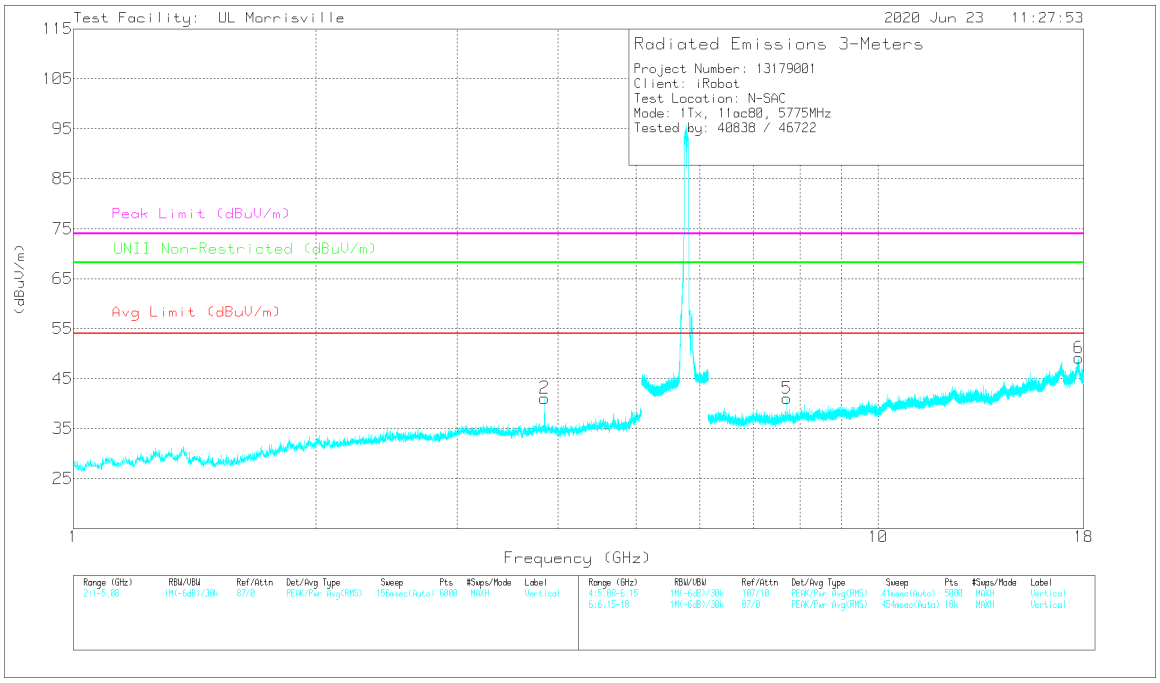
UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.06444	40.23	PK-U	34.2	-30.1	0	44.33	-	-	74	-29.67	-	-	23	250	H
	* ** 5.06447	27.93	ADV	34.2	-30.1	.91	32.94	54	-21.06	-	-	-	-	23	250	H
2	* ** 3.84998	43.47	PK-U	33.5	-32	0	44.97	-	-	74	-29.03	-	-	56	253	V
	* ** 3.84997	36.66	ADV	33.5	-32	.91	39.07	54	-14.93	-	-	-	-	56	253	V
5	* ** 7.69988	39.06	PK-U	35.8	-28.5	0	46.36	-	-	74	-27.64	-	-	185	125	V
	* ** 7.70002	30.35	ADV	35.8	-28.4	.91	38.66	54	-15.34	-	-	-	-	185	125	V
6	* ** 17.74286	32.82	PK-U	41.7	-19.8	0	54.72	-	-	74	-19.28	-	-	333	102	V
	* ** 17.74321	20.69	ADV	41.7	-19.8	.91	43.50	54	-10.50	-	-	-	-	333	102	V
3	16.83659	34.65	PK-U	41.6	-22.4	0	53.85	-	-	-	-	68.2	-14.35	3	239	H
4	17.65707	34.95	PK-U	41.7	-22.1	0	54.55	-	-	-	-	68.2	-13.65	210	147	H

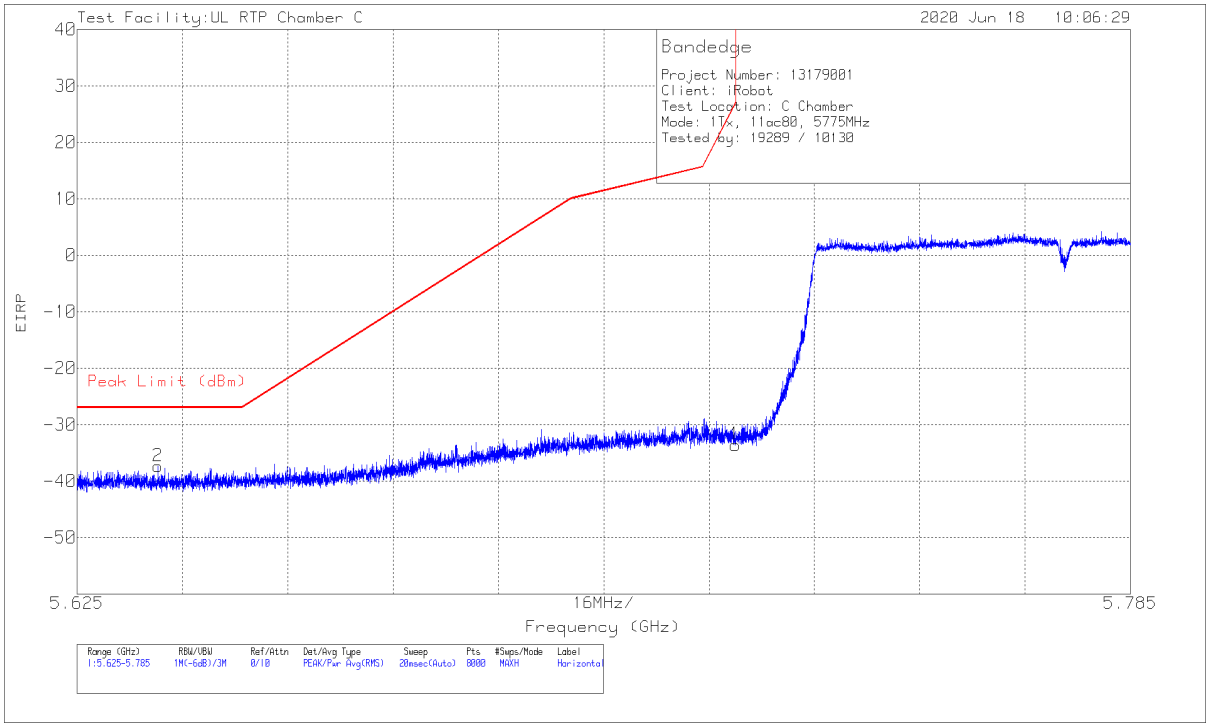
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

1TX PCB Antenna MODE

BANDEDGE (CHANNEL 155 LOW EDGE)

HORIZONTAL RESULT

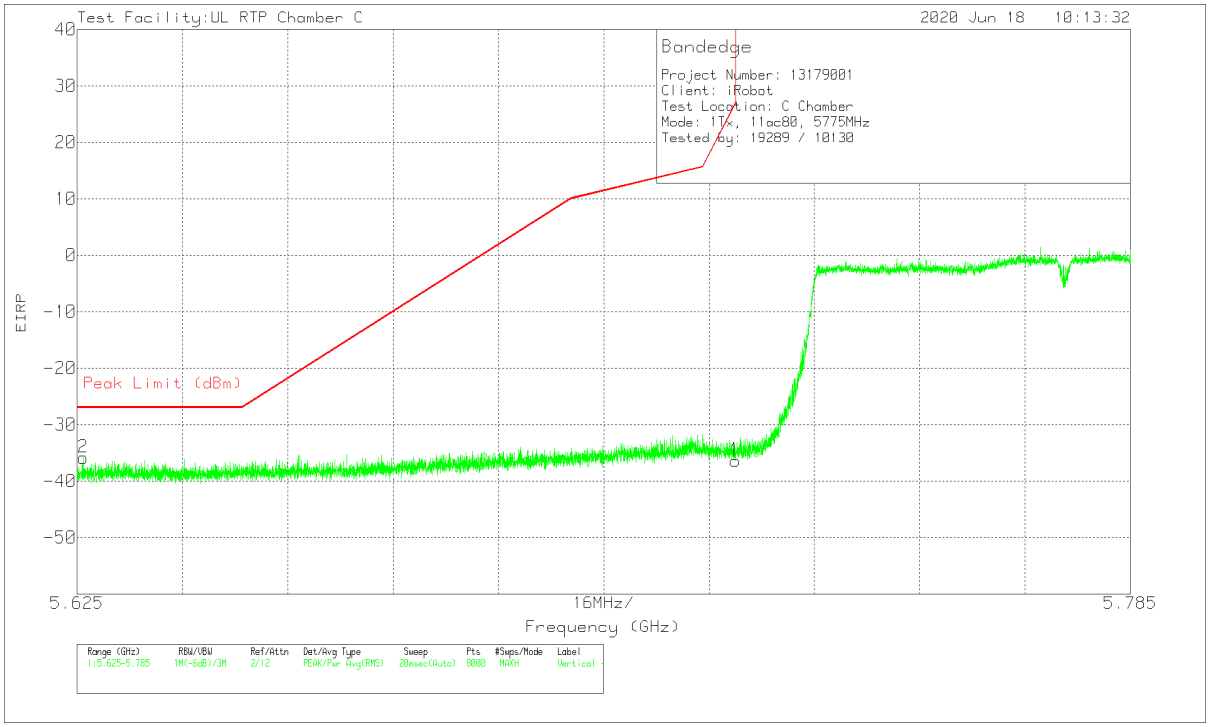


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.63726	-68.89	Pk	34.6	-14.9	11.8	-37.39	-27	-10.39	60	102	H
1	5.725	-65.18	Pk	34.6	-14.8	11.8	-33.58	26.99	-60.57	60	102	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



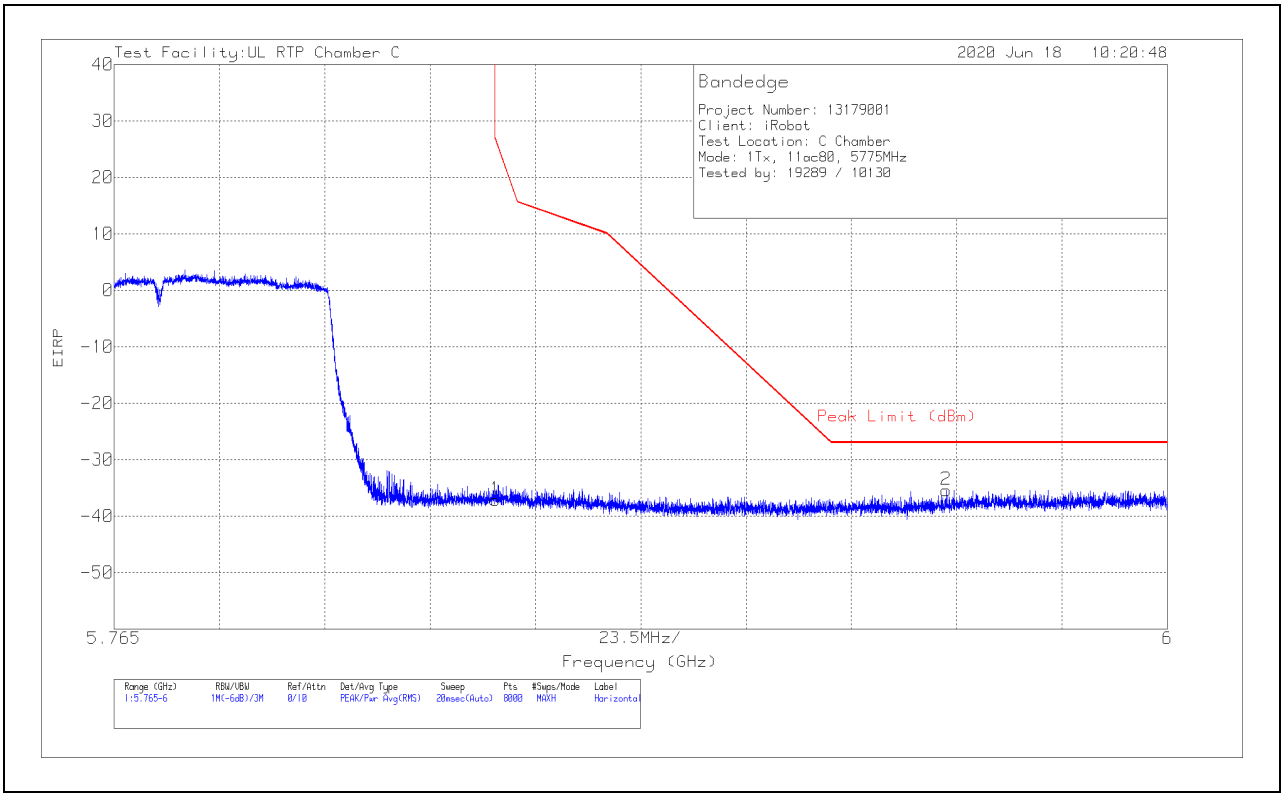
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.62592	-67.24	Pk	34.6	-15	11.8	-35.84	-27	-8.84	248	341	V
1	5.725	-67.98	Pk	34.6	-14.8	11.8	-36.38	26.99	-63.37	248	341	V

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

BANDEDGE (CHANNEL 155 HIGH EDGE)

HORIZONTAL RESULT

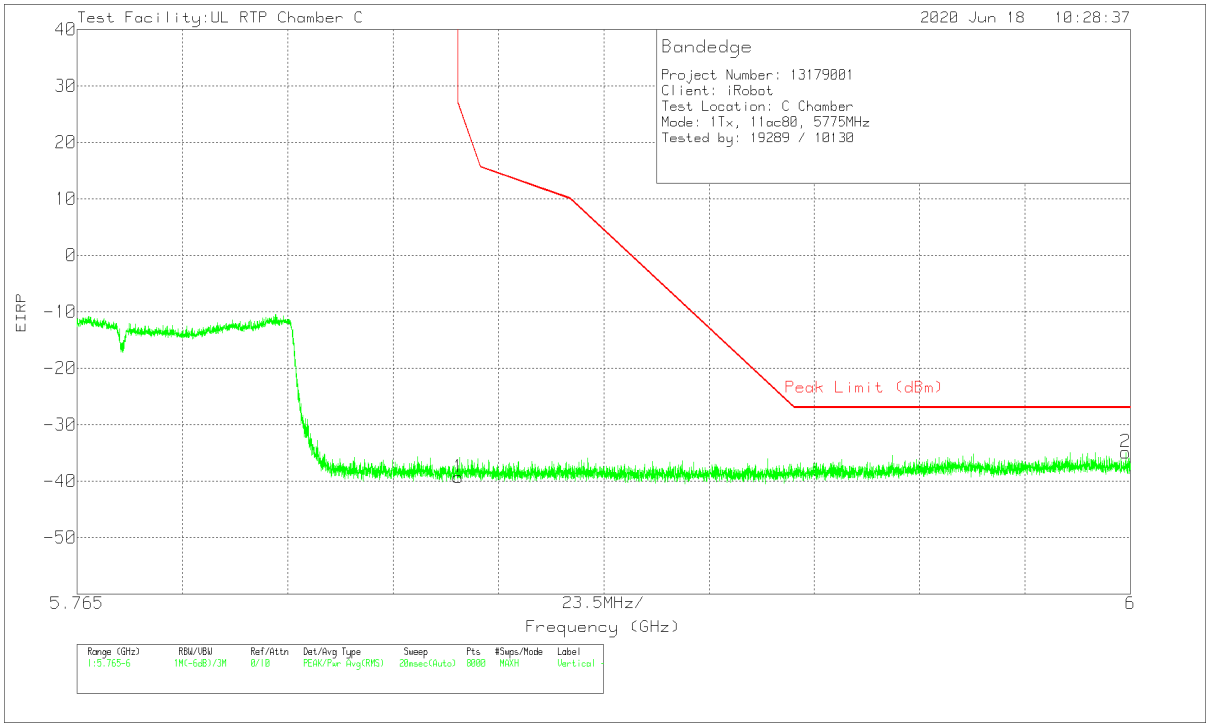


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85002	-69.49	Pk	34.9	-14.3	11.8	-37.09	26.95	-64.04	58	134	H
2	5.95065	-68.18	Pk	35.1	-14.1	11.8	-35.38	-27	-8.38	58	134	H

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

VERTICAL RESULT



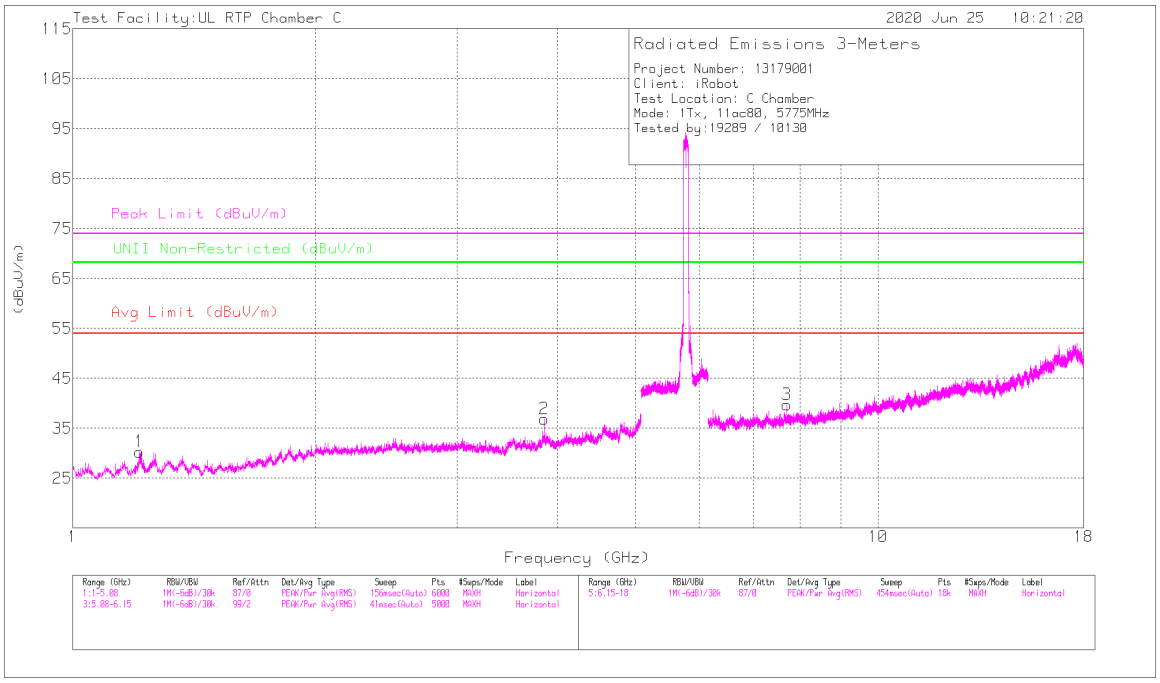
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85002	-71.71	Pk	34.9	-14.3	11.8	-39.31	26.95	-66.26	357	221	V
2	5.99895	-67.49	Pk	35.2	-14.4	11.8	-34.89	-27	-7.89	357	221	V

Pk - Peak detector

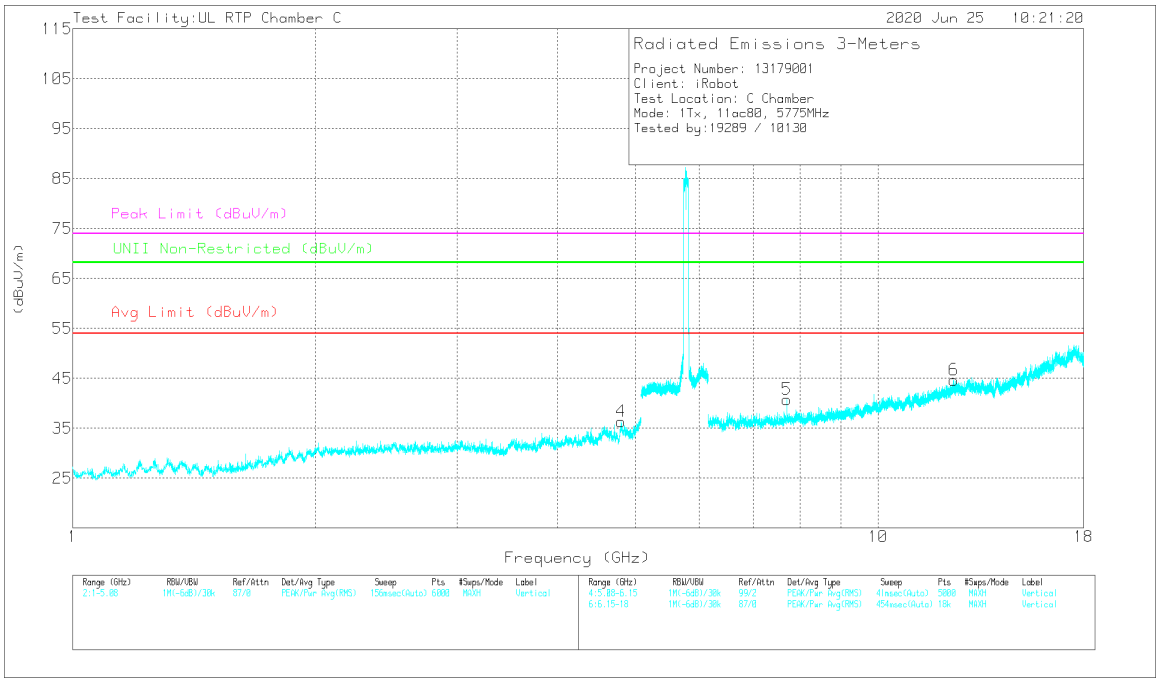
UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400

This report shall not be reproduced except in full, without the written approval of UL LLC.

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.20952	64.01	PK-U	28.2	-55.3	0	36.91	-	-	74	-37.09	-	-	166	102	H
	* ** 1.20963	53.71	ADV	28.2	-55.3	.91	27.52	54	-26.48	-	-	-	-	166	102	H
2	* ** 3.84996	58.58	PK-U	33.5	-49.4	0	42.68	-	-	74	-31.32	-	-	158	102	H
	* ** 3.84999	51.18	ADV	33.5	-49.4	.91	36.19	54	-17.81	-	-	-	-	158	102	H
4	* ** 4.79989	55.65	PK-U	34.1	-48.8	0	40.95	-	-	74	-33.05	-	-	286	102	V
	* ** 4.79983	43.18	ADV	34.1	-48.8	.91	29.39	54	-24.61	-	-	-	-	286	102	V
3	* ** 7.70011	55.33	PK-U	35.9	-46.2	0	45.03	-	-	74	-28.97	-	-	351	102	H
	* ** 7.69996	45.8	ADV	35.9	-46.2	.91	36.41	54	-17.59	-	-	-	-	351	102	H
5	* ** 7.69994	56.91	PK-U	35.9	-46.2	0	46.61	-	-	74	-27.39	-	-	322	103	V
	* ** 7.69997	48.17	ADV	35.9	-46.2	.91	38.78	54	-15.22	-	-	-	-	322	103	V
6	* ** 12.42591	51.36	PK-U	39	-40.4	0	49.96	-	-	74	-24.04	-	-	151	262	V
	* ** 12.42498	39.07	ADV	39	-40.3	.91	38.68	54	-15.32	-	-	-	-	151	262	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK-U - Maximum Peak
ADV - Linear Voltage Average

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

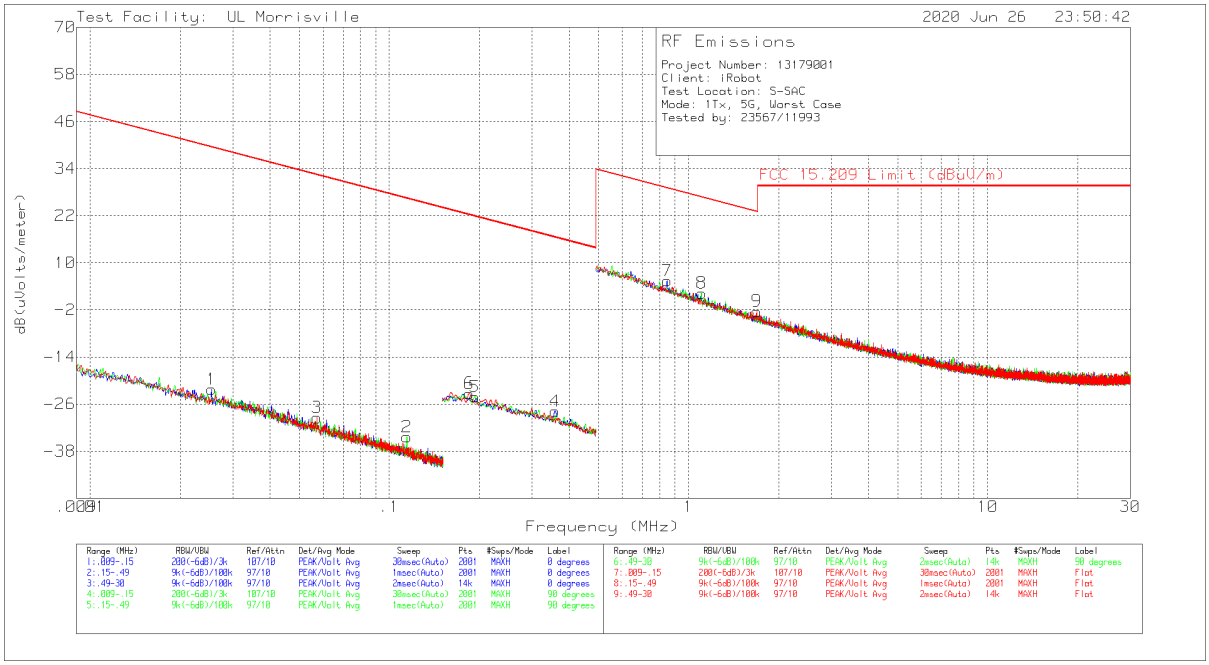
10.2. WORST CASE BELOW 30MHZ

Note for below 30 MHz scans: All measurements were made at a test distance of 3 m. The measured data was extrapolated from the test distance (3m) to the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz – 30 MHz) 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 (test distance / specification distance).

The below 30 MHz limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω. For example, the measurement frequency 25.47 kHz resulted in a level of -22.26 dBuV/m, which is equivalent to -22.26-51.5 = -73.77 dBuA/m, which has the same margin, -61.74 dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.

SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION) – External Antenna



ANTENNA- THREE ORIENTATIONS

Below 30MHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 AF (dB/m)	Cbl (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.209 QP/Avg Limit (dBuV/m)	FCC 15.209 Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.02547	44.14	Pk	13.5	.1	-80	-22.26	39.48	59.48	-61.74	0-360
3	.05735	39.02	Pk	11.4	.1	-80	-29.48	32.43	52.43	-61.91	0-360
2	.11451	34.46	Pk	11.1	.1	-80	-34.34	26.43	46.43	-60.77	0-360
6	.18494	45.6	Pk	11	.1	-80	-23.3	22.26	42.26	-45.56	0-360
5	.19301	44.76	Pk	11	.1	-80	-24.14	21.89	41.89	-46.03	0-360
4	.35834	41.1	Pk	11	.1	-80	-27.8	16.52	46.52	-44.32	0-360
7	.84836	34.26	Pk	11	.1	-40	5.36	29.03	-	-23.67	0-360
8	1.10554	30.98	Pk	11.1	.2	-40	2.28	26.73	-	-24.45	0-360
9	1.69156	26.35	Pk	11.1	.2	-40	-2.35	23.04	-	-25.39	0-360

Pk - Peak detector

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400
This report shall not be reproduced except in full, without the written approval of UL LLC.