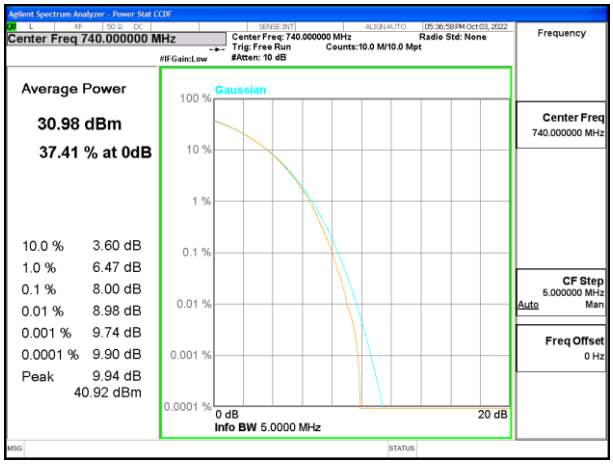
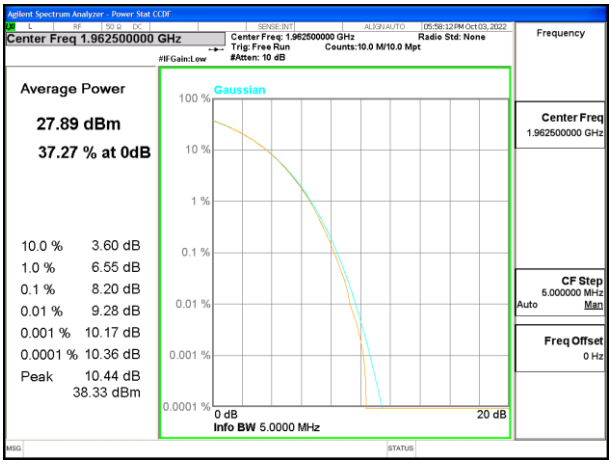
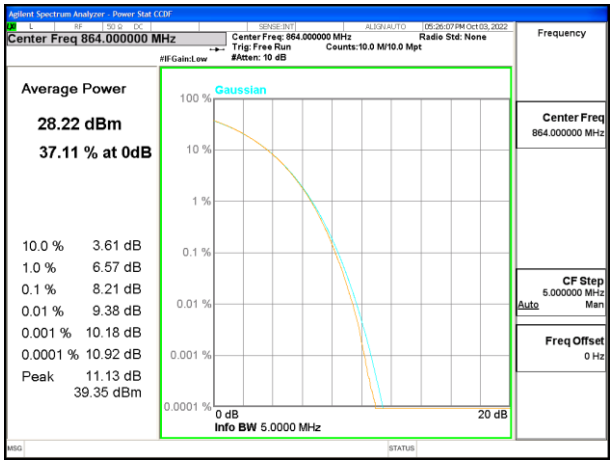


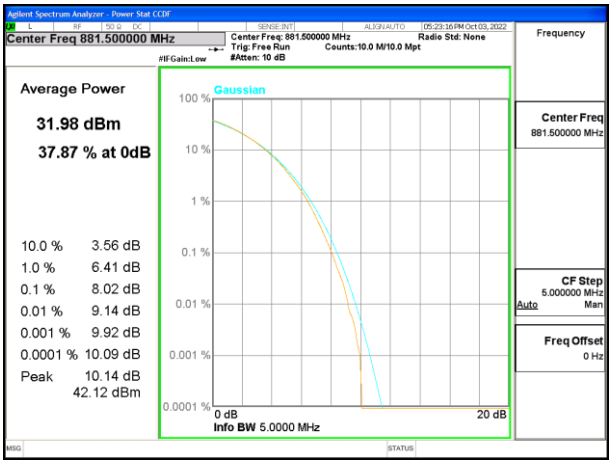
LTE B17 5MHz QPSK Middle Channel



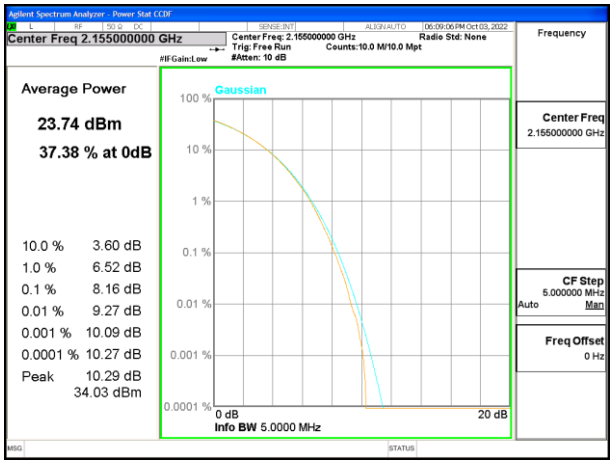
LTE B25 5MHz QPSK Middle Channel



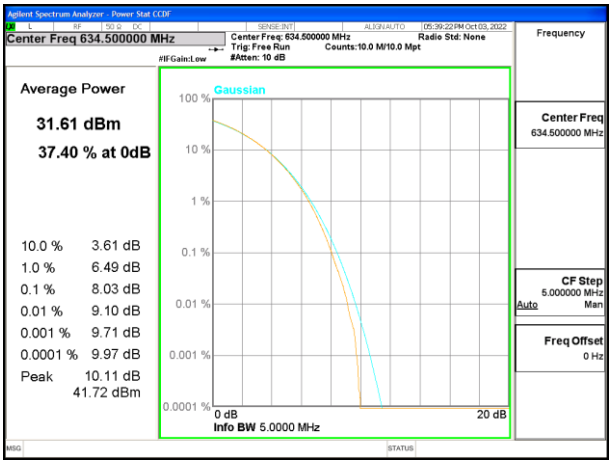
LTE B26 5MHz QPSK Middle Channel (FCC Part 90S)



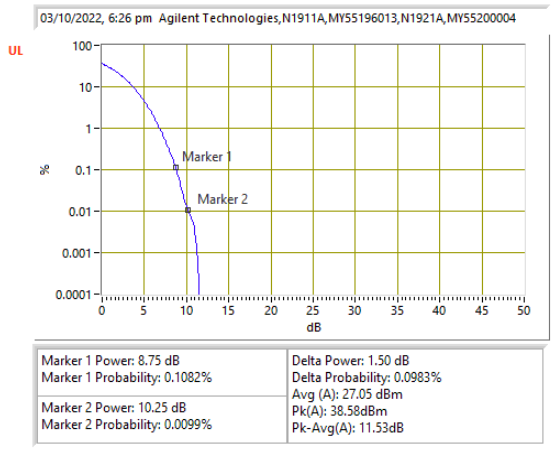
LTE B26 5MHz QPSK Middle Channel (FCC Part 22)



LTE B66 5MHz QPSK Middle Channel



LTE B71 5MHz QPSK Middle Channel



5G NR n71 20MHz QPSK Middle Channel

10. RADIATED TEST RESULTS

10.1. FIELD STRENGTH OF SPURIOUS RADIATION, ABOVE 1GHz

RULE PART(S)

FCC: §2.1051, 2.1053, 22.917, 24.238, 27.53, 27.53, 27.53, 90.543, 90.691

LIMIT

FCC: §22.917 (a), 24.238 (a), 27.53 (h), 27.53 (g), 27.53 (c) (f), 90.543 (e)(f), 90.691 (a),

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r01

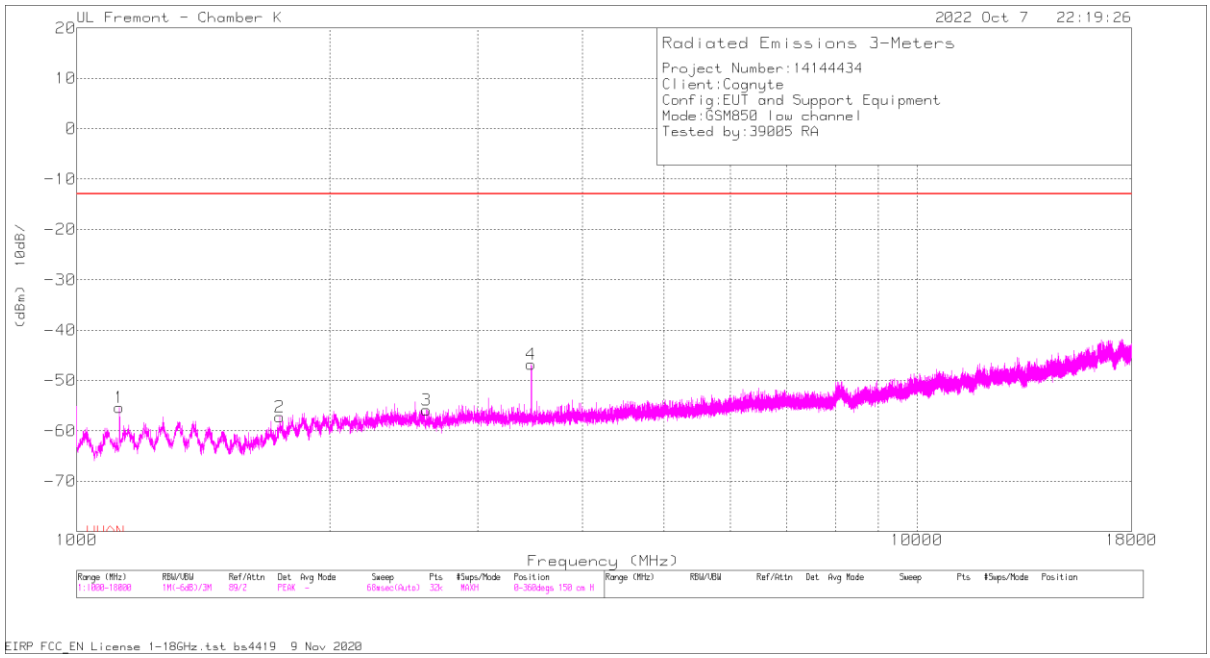
All tests above 1GHz were done with a Resolution Bandwidth of 1MHz, and a Video Bandwidth of 3MHz

RESULTS

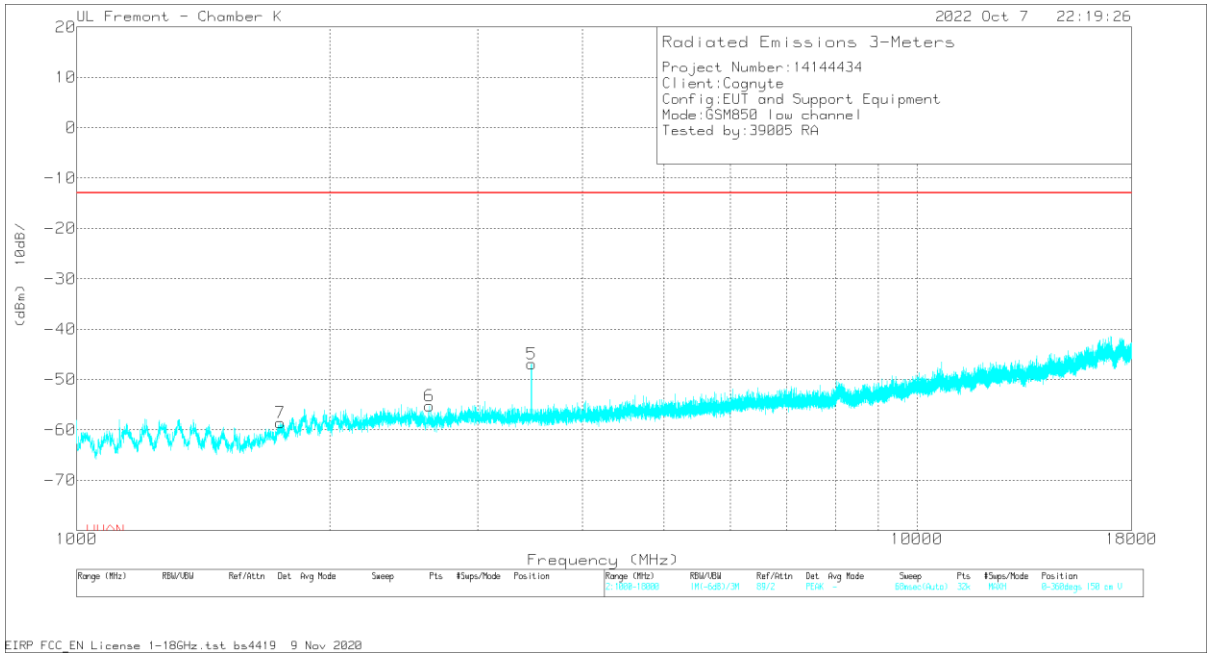
10.1.1. GSM 850

GSM 850

LOW CHANNEL RESULTS



HORIZONTAL



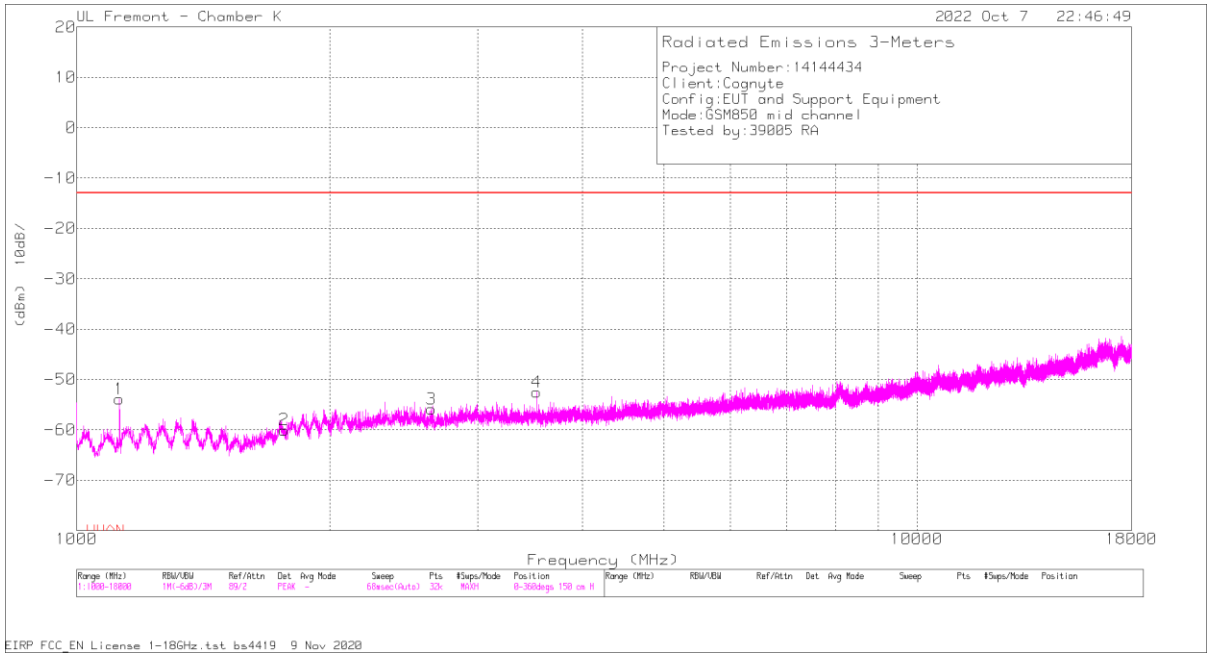
VERTICAL

Trace Markers

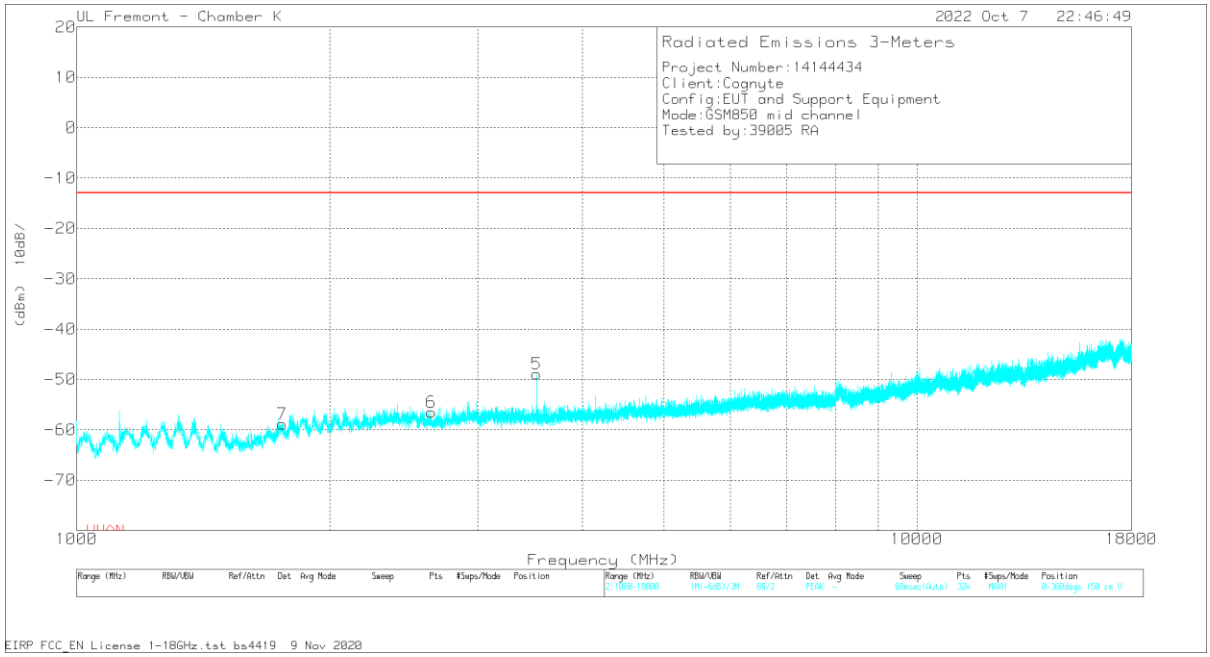
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1124.844	58.76	Pk	28.1	-47	-95.2	-55.34	-13	-42.4	0-360	150	H
2	1744.813	54.72	Pk	29.5	-46.3	-95.2	-57.28	-13	-44.28	0-360	150	H
3	2607.563	51.29	Pk	32	-44	-95.2	-55.91	-13	-42.91	0-360	150	H
4	3476.156	57.86	Pk	32.9	-42.4	-95.2	-46.84	-13	-33.84	0-360	150	H
5	3476.688	57.79	Pk	32.9	-42.4	-95.2	-46.91	-13	-33.91	0-360	150	V
6	2628.281	51.76	Pk	32.1	-43.9	-95.2	-55.24	-13	-42.24	0-360	150	V
7	1746.406	53.49	Pk	29.5	-46.4	-95.2	-58.61	-13	-45.61	0-360	150	V

Pk - Peak detector

MID CHANNEL RESULTS



HORIZONTAL



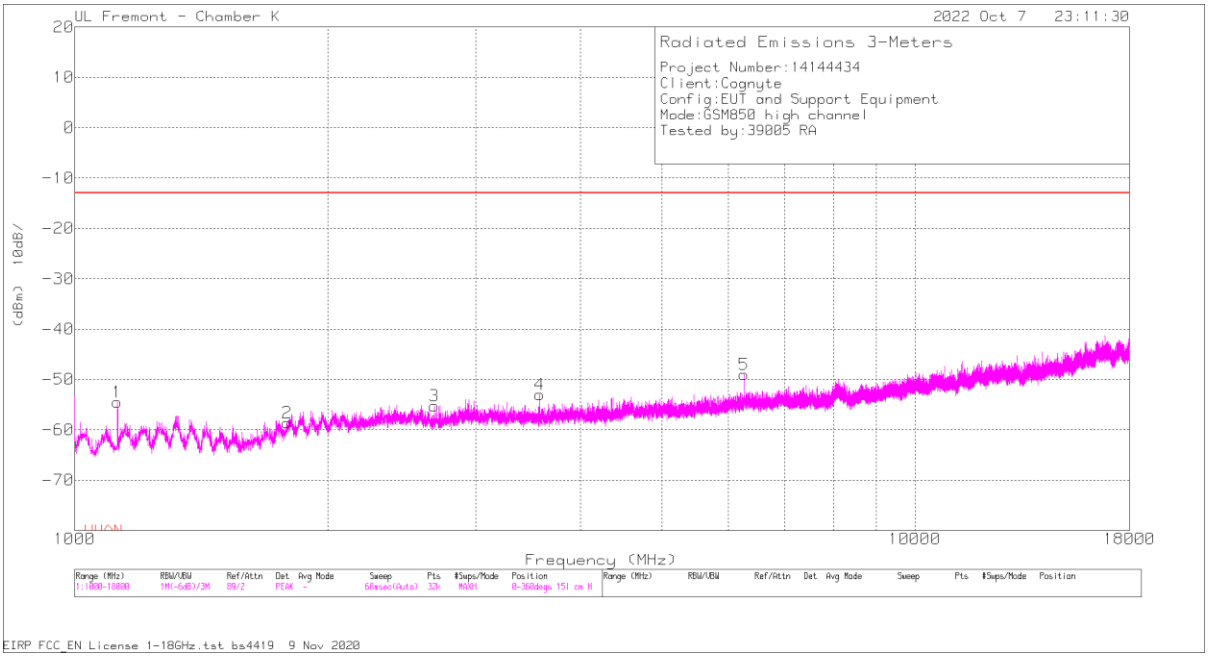
VERTICAL

Trace Markers

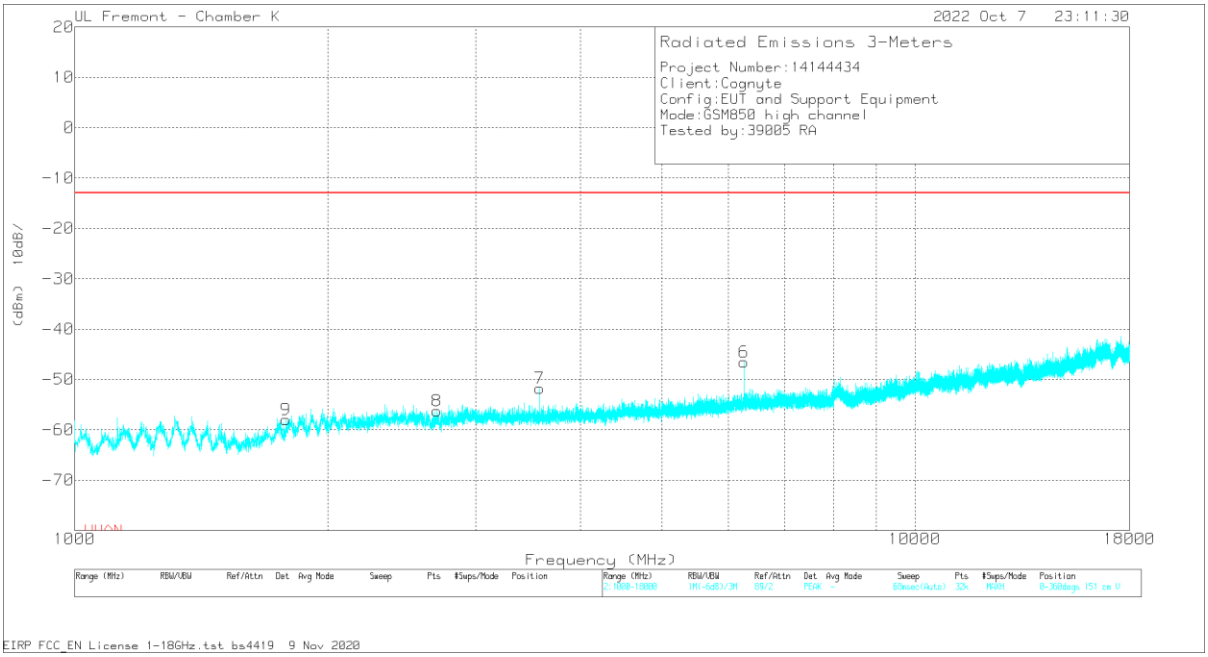
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1124.844	60.21	Pk	28.1	-47	-95.2	-53.89	-13	-40.89	0-360	150	H
2	1764.469	51.67	Pk	29.8	-46.3	-95.2	-60.03	-13	-47.03	0-360	150	H
3	2644.75	51.07	Pk	32.1	-43.8	-95.2	-55.83	-13	-42.83	0-360	150	H
4	3526.625	52.51	Pk	32.9	-42.7	-95.2	-52.49	-13	-39.49	0-360	150	H
5	3525.563	56.01	Pk	32.9	-42.6	-95.2	-48.89	-13	-35.89	0-360	150	V
6	2644.75	50.44	Pk	32.1	-43.8	-95.2	-56.46	-13	-43.46	0-360	150	V
7	1758.094	52.84	Pk	29.7	-46.2	-95.2	-58.86	-13	-45.86	0-360	150	V

Pk - Peak detector

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

Trace Markers

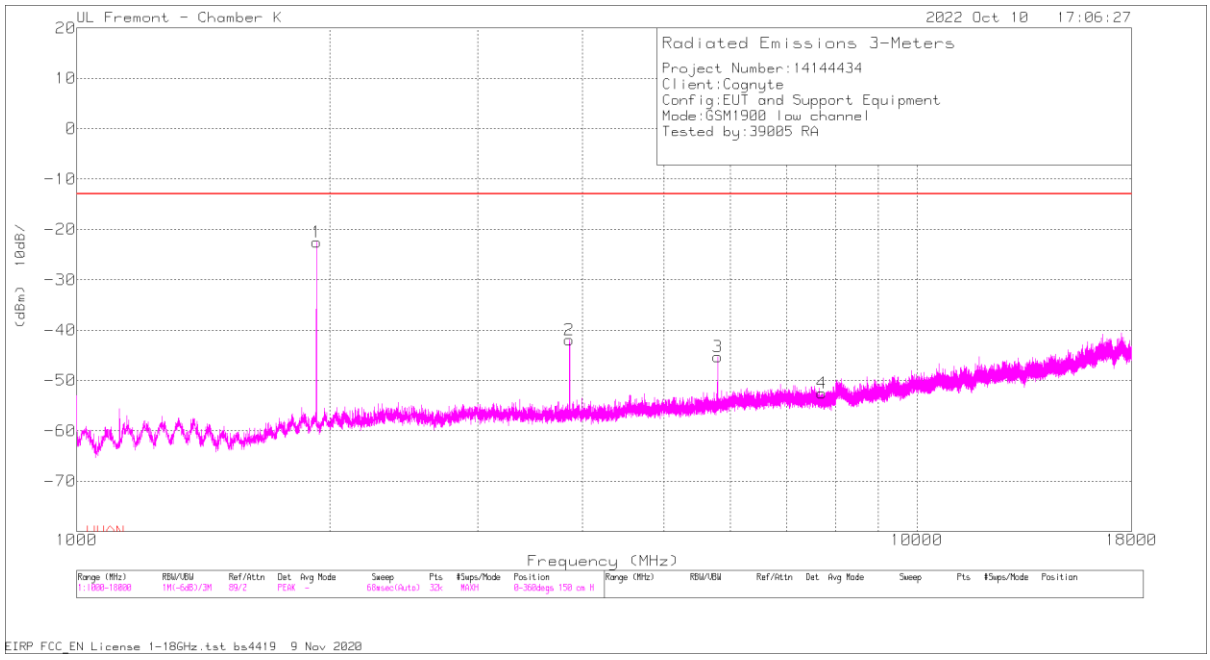
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1124.844	59.63	Pk	28.1	-47	-95.2	-54.47	-13	-41.47	0-360	151	H
2	1788.906	52.44	Pk	30.2	-46.1	-95.2	-58.66	-13	-45.66	0-360	151	H
3	2680.875	51.87	Pk	32.1	-44	-95.2	-55.23	-13	-42.23	0-360	151	H
4	3574.969	51.47	Pk	33	-42.3	-95.2	-53.03	-13	-40.03	0-360	151	H
5	6256.719	50.2	Pk	35.6	-39.6	-95.2	-49	-13	-36	0-360	151	H
6	6256.188	52.62	Pk	35.6	-39.6	-95.2	-46.58	-13	-33.58	0-360	151	V
7	3574.969	52.77	Pk	33	-42.3	-95.2	-51.73	-13	-38.73	0-360	151	V
8	2699.469	50.8	Pk	32.1	-43.9	-95.2	-56.2	-13	-43.2	0-360	151	V
9	1784.125	53.46	Pk	30.1	-46.3	-95.2	-57.94	-13	-44.94	0-360	151	V

Pk - Peak detector

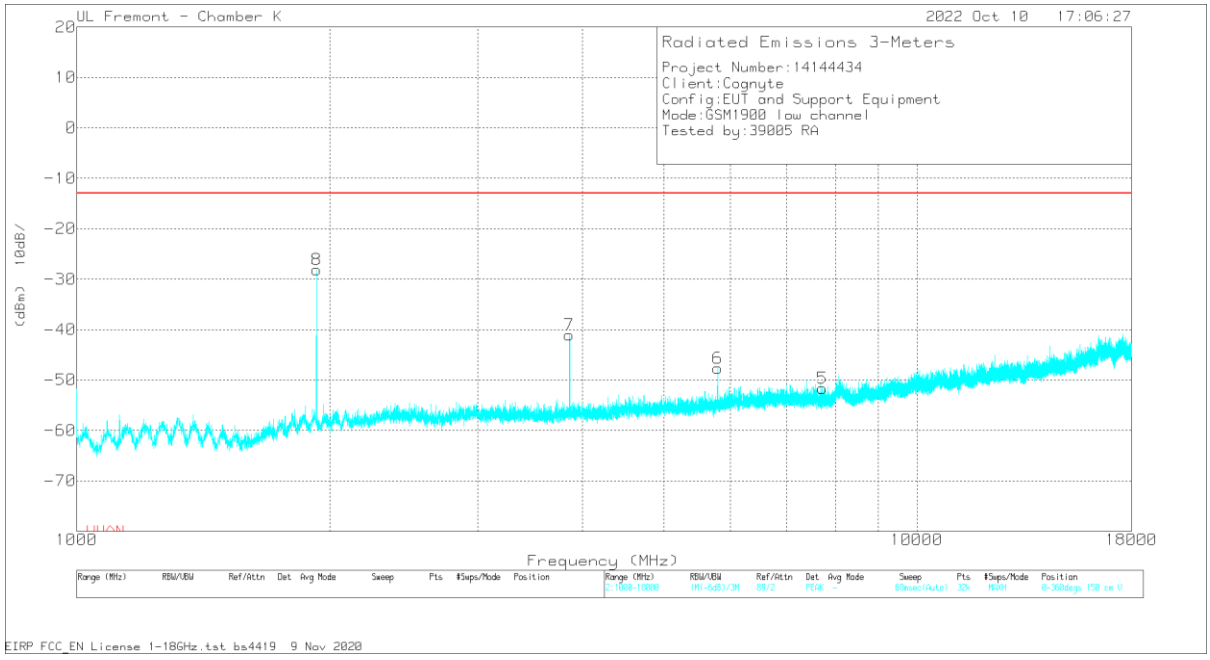
10.1.2. GSM 1900

GSM 1900

LOW CHANNEL RESULTS



HORIZONTAL



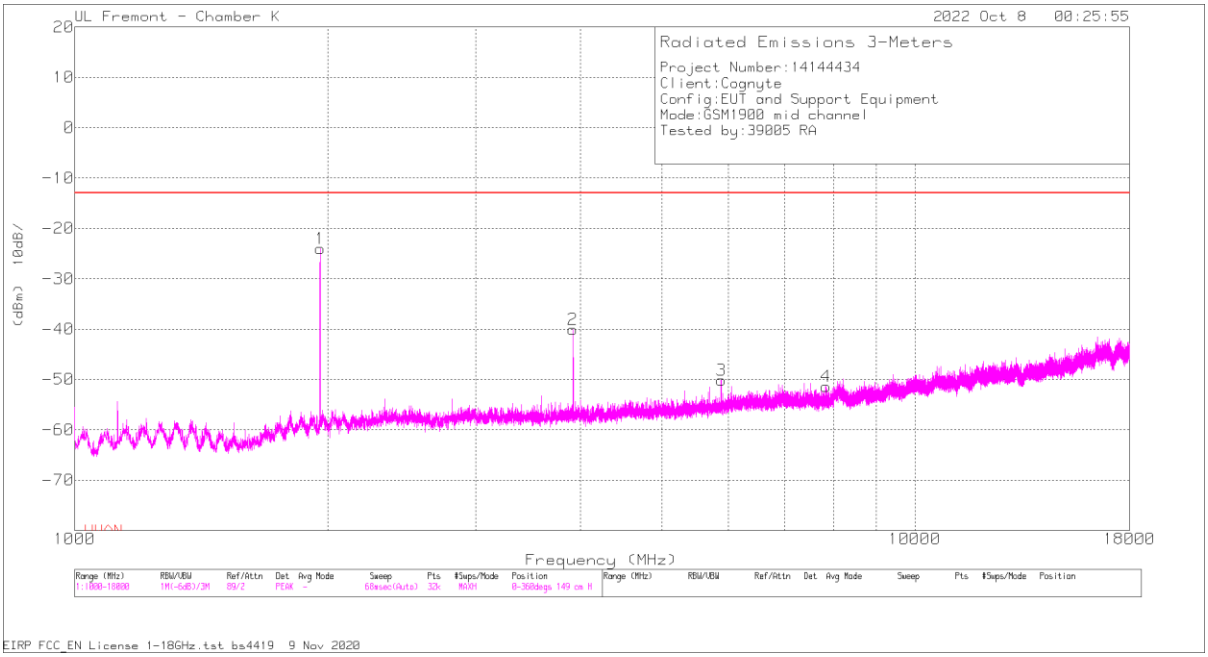
VERTICAL

Trace Markers

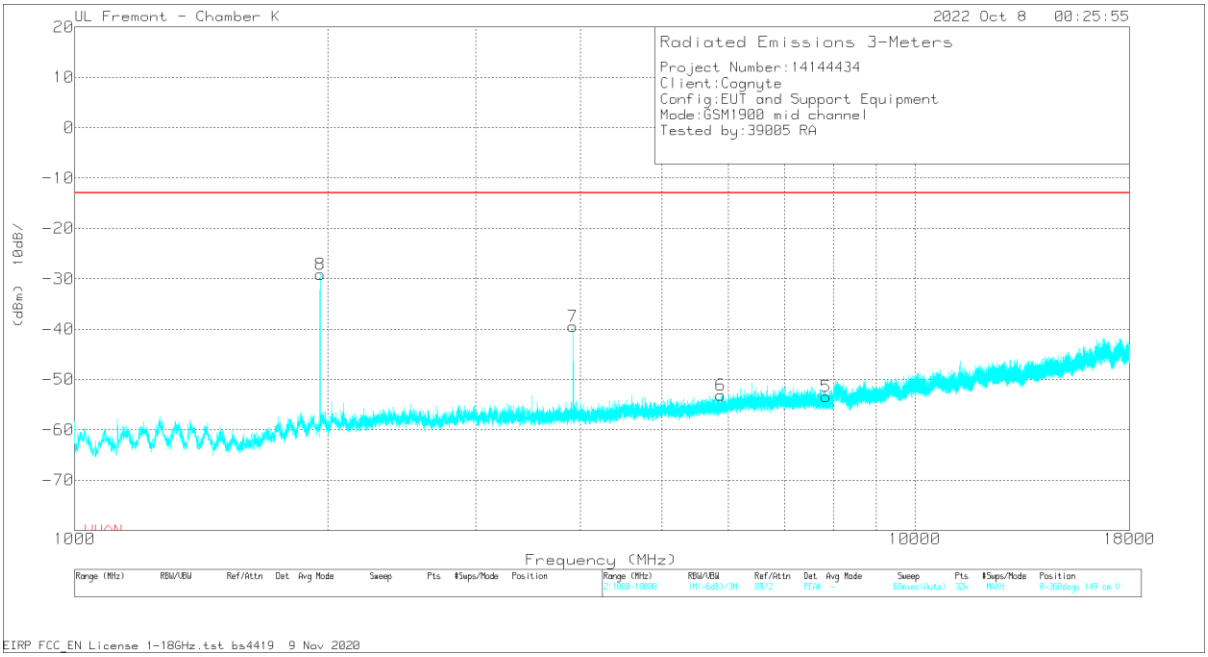
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*1930.219	87.4	Pk	31.2	-45.9	-95.2	-22.5	-13	-9.5	0-360	150	H
2	3860.25	62.1	Pk	33.5	-42.3	-95.2	-41.9	-13	-28.9	0-360	150	H
3	5790.281	55.23	Pk	34.8	-40.1	-95.2	-45.27	-13	-32.27	0-360	150	H
4	7712.344	45.04	Pk	35.8	-38.2	-95.2	-52.56	-13	-39.56	0-360	150	H
5	7715.531	45.86	Pk	35.8	-38.1	-95.2	-51.64	-13	-38.64	0-360	150	V
6	5790.281	52.86	Pk	34.8	-40.1	-95.2	-47.64	-13	-34.64	0-360	150	V
7	3860.25	63	Pk	33.5	-42.3	-95.2	-41	-13	-28	0-360	150	V
8	*1929.688	81.92	Pk	31.2	-46	-95.2	-28.08	-13	-15.08	0-360	150	V

* - indicates fundamental frequencies
Pk - Peak detector

MID CHANNEL RESULTS



HORIZONTAL



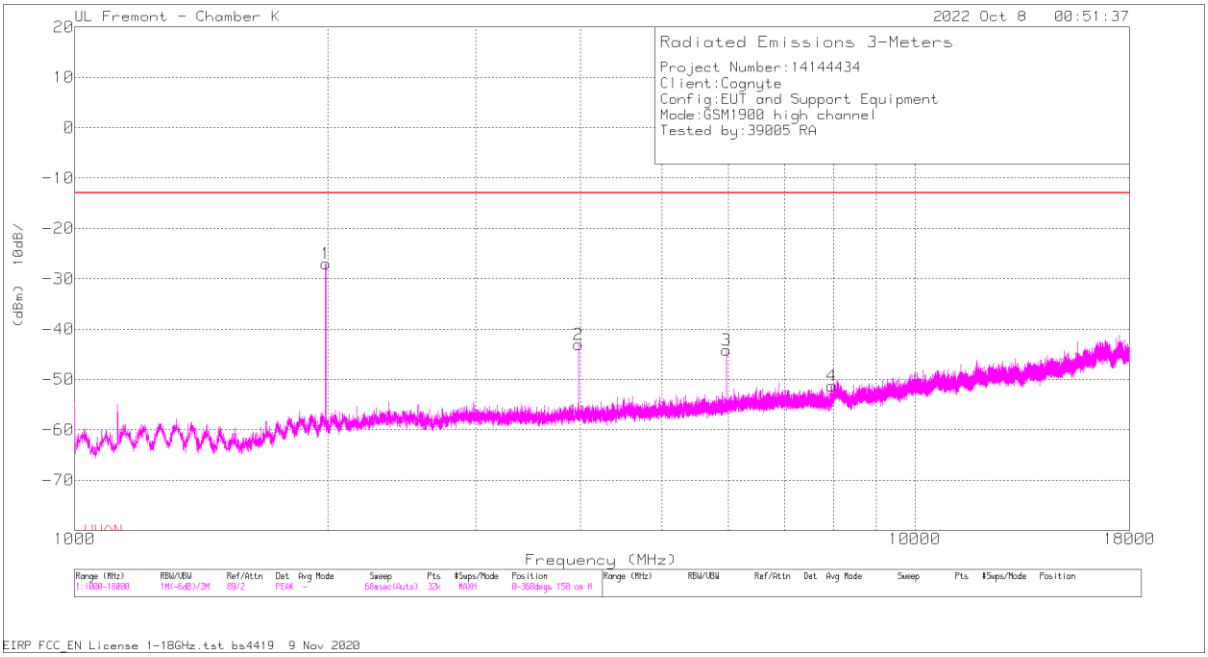
VERTICAL

Trace Markers

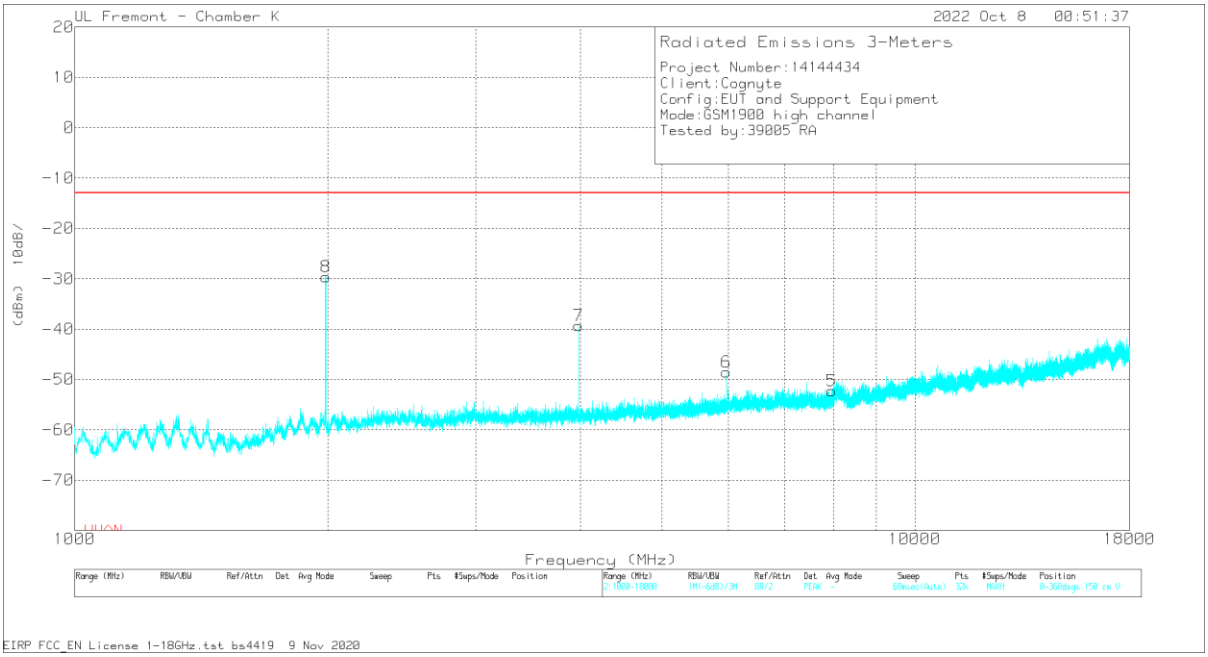
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*1959.969	85.76	Pk	31.3	-45.9	-95.2	-24.04	-13	-11.04	0-360	149	H
2	3919.75	64.08	Pk	33.4	-42.4	-95.2	-40.12	-13	-27.12	0-360	149	H
3	5880.063	50.01	Pk	35	-39.9	-95.2	-50.09	-13	-37.09	0-360	149	H
4	7840.375	46.28	Pk	35.7	-38.2	-95.2	-51.42	-13	-38.42	0-360	149	H
5	7839.313	44.37	Pk	35.7	-38.2	-95.2	-53.33	-13	-40.33	0-360	149	V
6	5879.531	46.94	Pk	35	-39.9	-95.2	-53.16	-13	-40.16	0-360	149	V
7	3919.75	64.75	Pk	33.4	-42.4	-95.2	-39.45	-13	-26.45	0-360	149	V
8	*1959.438	80.77	Pk	31.3	-46	-95.2	-29.13	-13	-16.13	0-360	149	V

* - indicates fundamental frequencies
Pk - Peak detector

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

Trace Markers

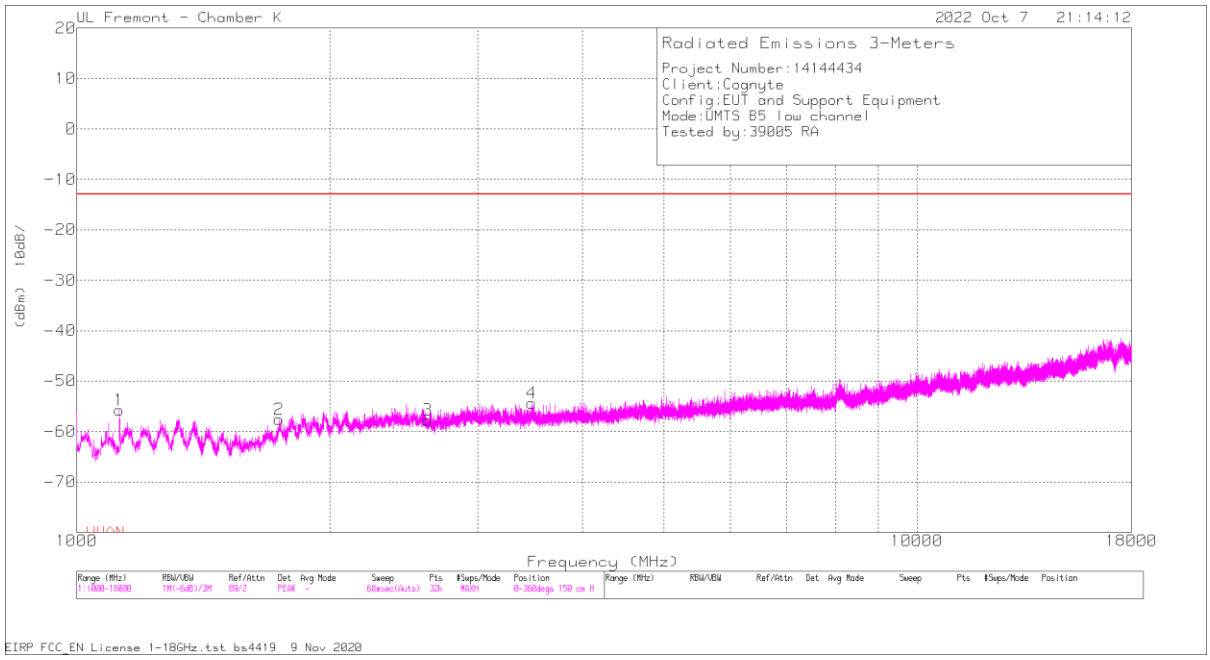
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*1989.719	82.64	Pk	31.4	-45.9	-95.2	-27.06	-13	-14.06	0-360	150	H
2	3979.25	61	Pk	33.4	-42.3	-95.2	-43.1	-13	-30.1	0-360	150	H
3	5969.313	55.69	Pk	35.2	-39.8	-95.2	-44.11	-13	-31.11	0-360	150	H
4	7959.906	45.86	Pk	35.8	-37.7	-95.2	-51.24	-13	-38.24	0-360	150	H
5	7958.844	44.86	Pk	35.8	-37.7	-95.2	-52.24	-13	-39.24	0-360	150	V
6	5969.313	51.33	Pk	35.2	-39.8	-95.2	-48.47	-13	-35.47	0-360	150	V
7	3979.25	64.76	Pk	33.4	-42.3	-95.2	-39.34	-13	-26.34	0-360	150	V
8	*1989.719	80.13	Pk	31.4	-45.9	-95.2	-29.57	-13	-16.57	0-360	150	V

* - indicates fundamental frequencies
Pk - Peak detector

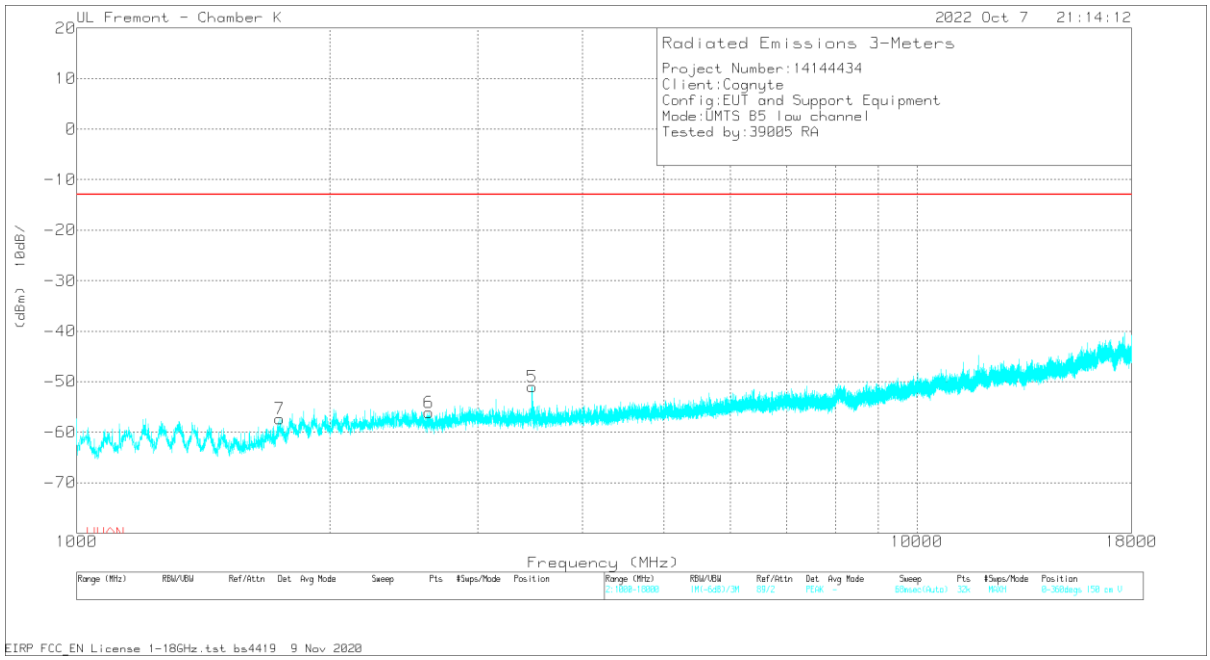
10.1.3. UMTS BAND 5

UMTS B5

LOW CHANNEL RESULTS



HORIZONTAL



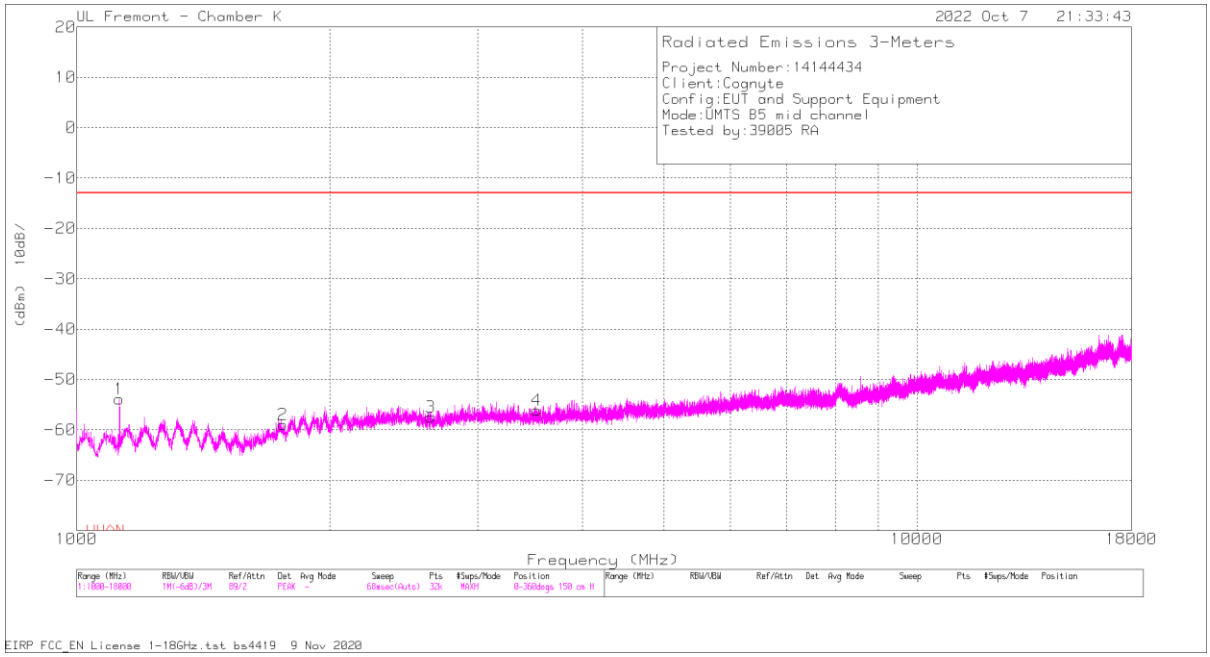
VERTICAL

Trace Markers

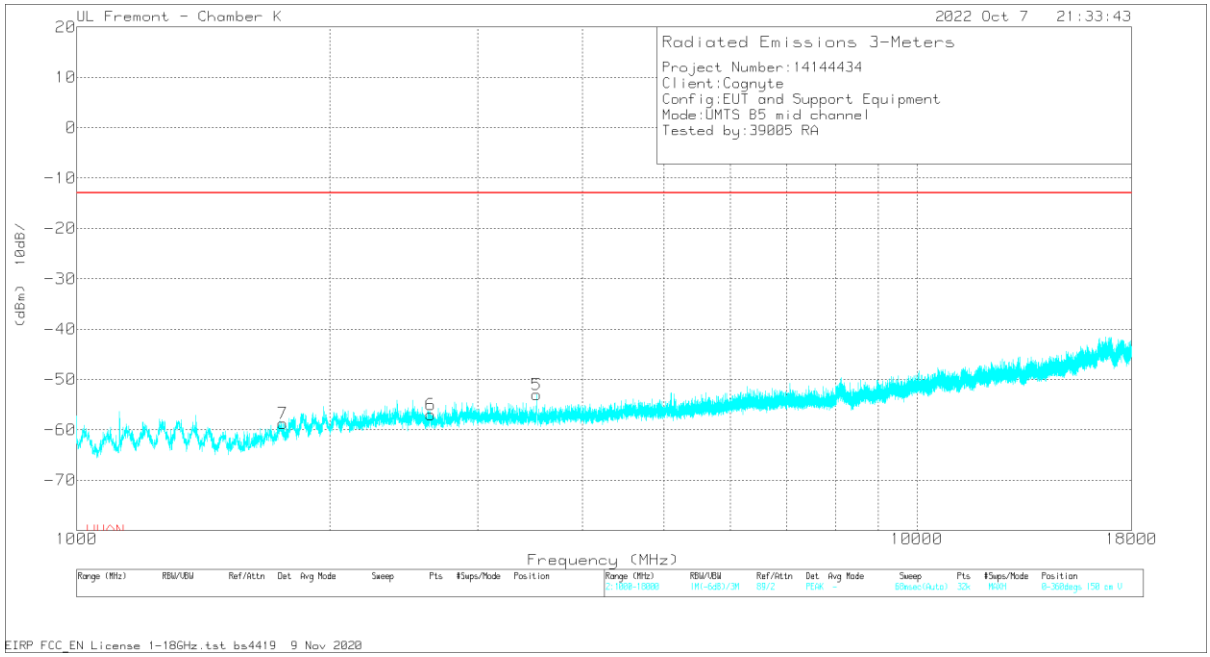
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1124.844	58.36	Pk	28.1	-47	-95.2	-55.74	-13	-42.74	0-360	150	H
2	1741.625	54.43	Pk	29.4	-46.2	-95.2	-57.57	-13	-44.57	0-360	150	H
3	2618.188	49.4	Pk	32.1	-44	-95.2	-57.7	-13	-44.7	0-360	150	H
4	3481.469	50.55	Pk	32.9	-42.6	-95.2	-54.35	-13	-41.35	0-360	150	H
5	3485.188	53.64	Pk	33	-42.4	-95.2	-50.96	-13	-37.96	0-360	150	V
6	2625.094	50.99	Pk	32.1	-44	-95.2	-56.11	-13	-43.11	0-360	150	V
7	1745.875	54.72	Pk	29.5	-46.4	-95.2	-57.38	-13	-44.38	0-360	150	V

Pk - Peak detector

MID CHANNEL RESULTS



HORIZONTAL



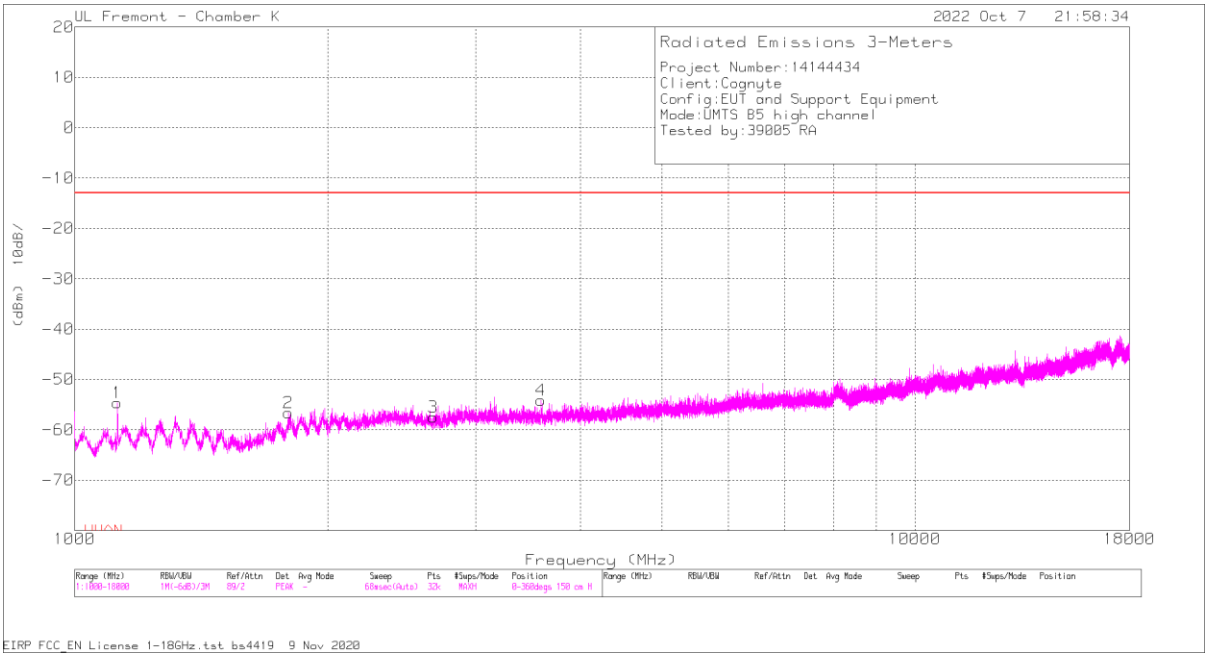
VERTICAL

Trace Markers

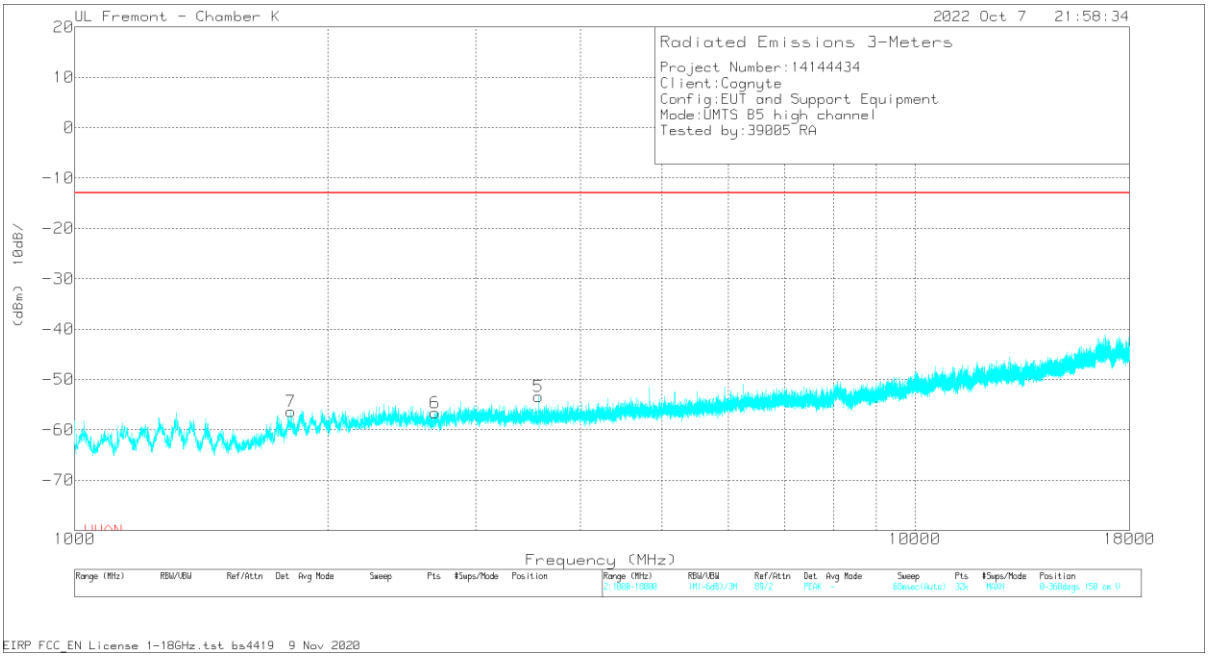
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1124.844	60.22	Pk	28.1	-47	-95.2	-53.88	-13	-40.88	0-360	150	H
2	1759.688	52.91	Pk	29.7	-46.4	-95.2	-58.99	-13	-45.99	0-360	150	H
3	2639.438	49.54	Pk	32.1	-43.9	-95.2	-57.46	-13	-44.46	0-360	150	H
4	3526.094	48.89	Pk	32.9	-42.7	-95.2	-56.11	-13	-43.11	0-360	150	H
5	3526.094	51.95	Pk	32.9	-42.7	-95.2	-53.05	-13	-40.05	0-360	150	V
6	2637.844	49.97	Pk	32.1	-43.8	-95.2	-56.93	-13	-43.93	0-360	150	V
7	1758.625	53.09	Pk	29.7	-46.3	-95.2	-58.71	-13	-45.71	0-360	150	V

Pk - Peak detector

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

Trace Markers

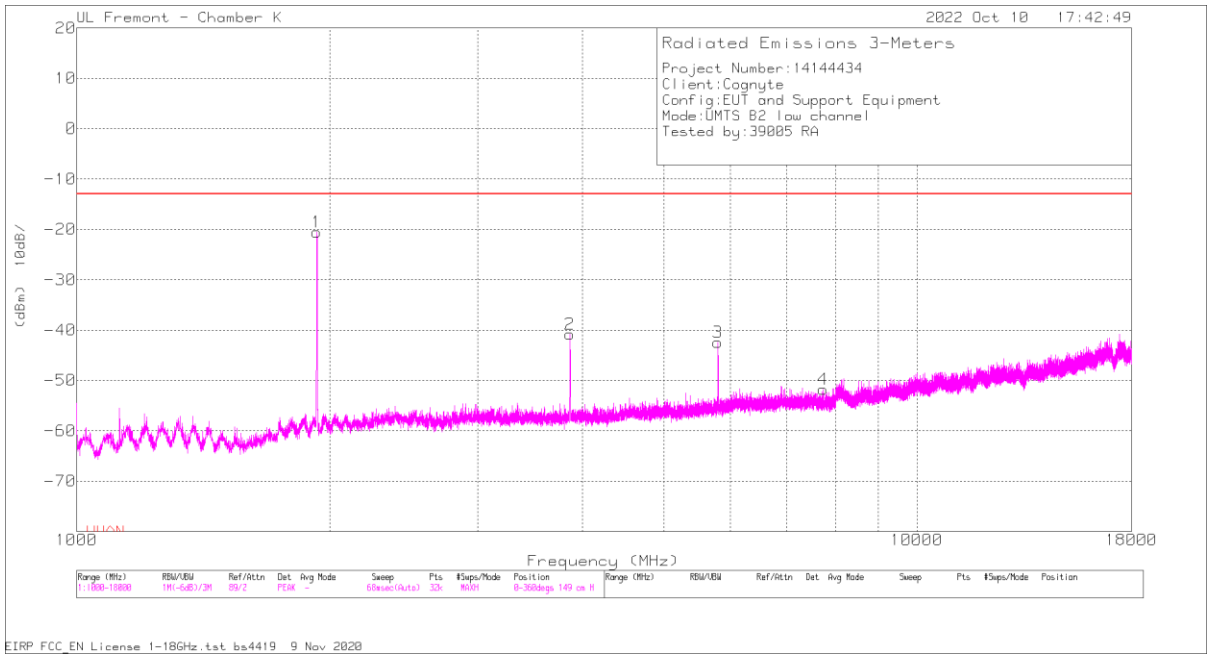
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1124.844	59.44	Pk	28.1	-47	-95.2	-54.66	-13	-41.66	0-360	150	H
2	1795.813	54.23	Pk	30.3	-46	-95.2	-56.67	-13	-43.67	0-360	150	H
3	2672.375	49.67	Pk	32.1	-44.1	-95.2	-57.53	-13	-44.53	0-360	150	H
4	3588.781	50.5	Pk	33	-42.4	-95.2	-54.1	-13	-41.1	0-360	150	H
5	3565.938	51.37	Pk	33	-42.5	-95.2	-53.33	-13	-40.33	0-360	150	V
6	2683	50.3	Pk	32.1	-43.8	-95.2	-56.6	-13	-43.6	0-360	150	V
7	1810.156	54.33	Pk	30.5	-46	-95.2	-56.37	-13	-43.37	0-360	150	V

Pk - Peak detector

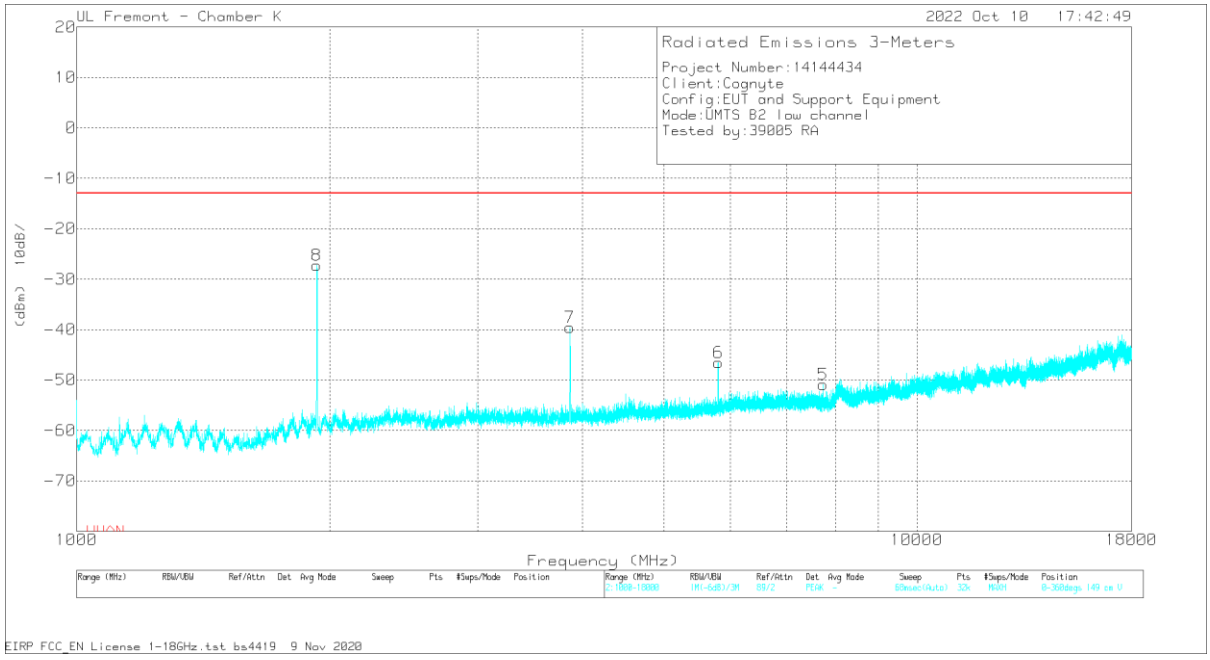
10.1.4. UMTS BAND 2

UMTS B2

LOW CHANNEL RESULTS



HORIZONTAL



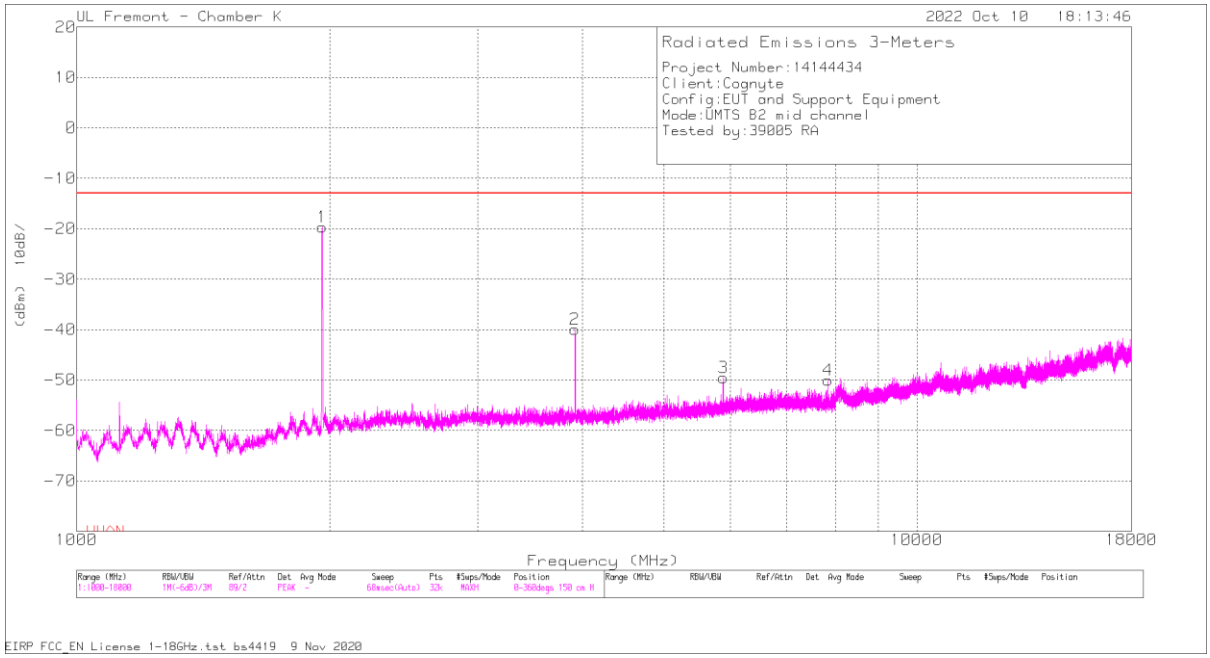
VERTICAL

Trace Markers

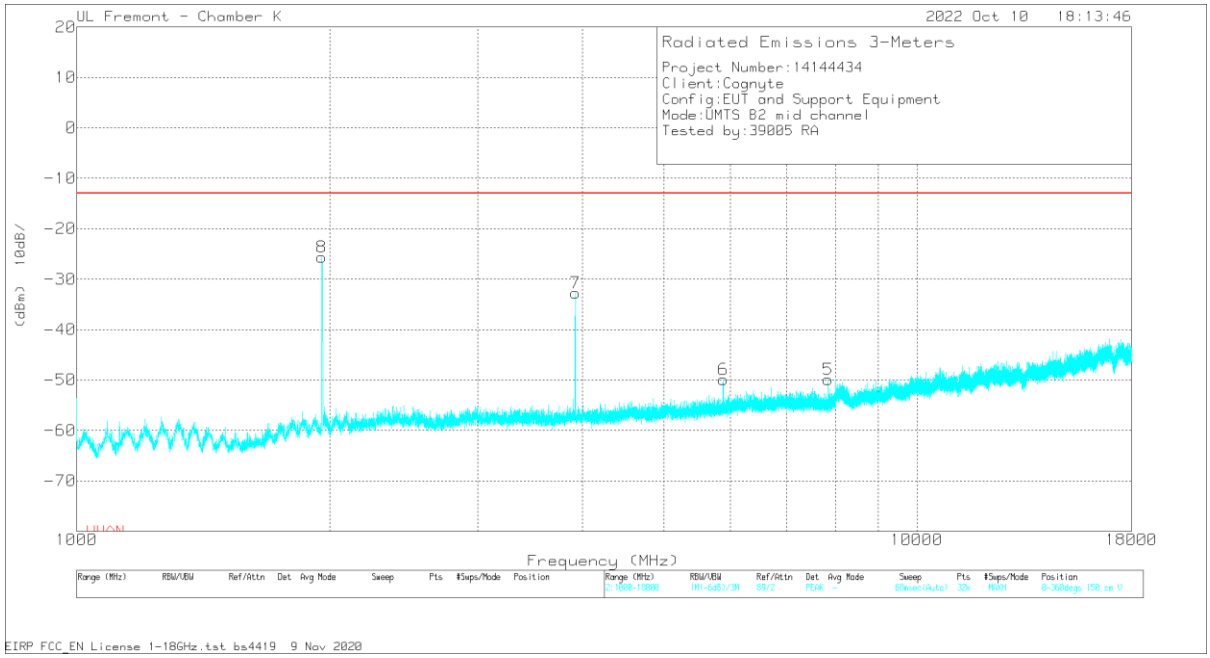
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*1931.281	89.3	Pk	31.2	-45.8	-95.2	-20.5	-13	-7.5	0-360	149	H
2	3862.375	62.93	Pk	33.5	-42.1	-95.2	-40.87	-13	-27.87	0-360	149	H
3	5798.25	57.95	Pk	34.8	-40	-95.2	-42.45	-13	-29.45	0-360	149	H
4	7736.25	45.74	Pk	35.8	-38.1	-95.2	-51.76	-13	-38.76	0-360	149	H
5	7729.344	46.66	Pk	35.8	-38.1	-95.2	-50.84	-13	-37.84	0-360	149	V
6	5799.844	53.92	Pk	34.8	-40	-95.2	-46.48	-13	-33.48	0-360	149	V
7	3865.563	64.32	Pk	33.5	-42.2	-95.2	-39.58	-13	-26.58	0-360	149	V
8	*1931.281	82.6	Pk	31.2	-45.8	-95.2	-27.2	-13	-14.2	0-360	149	V

* - indicates fundamental frequencies
Pk - Peak detector

MID CHANNEL RESULTS



HORIZONTAL



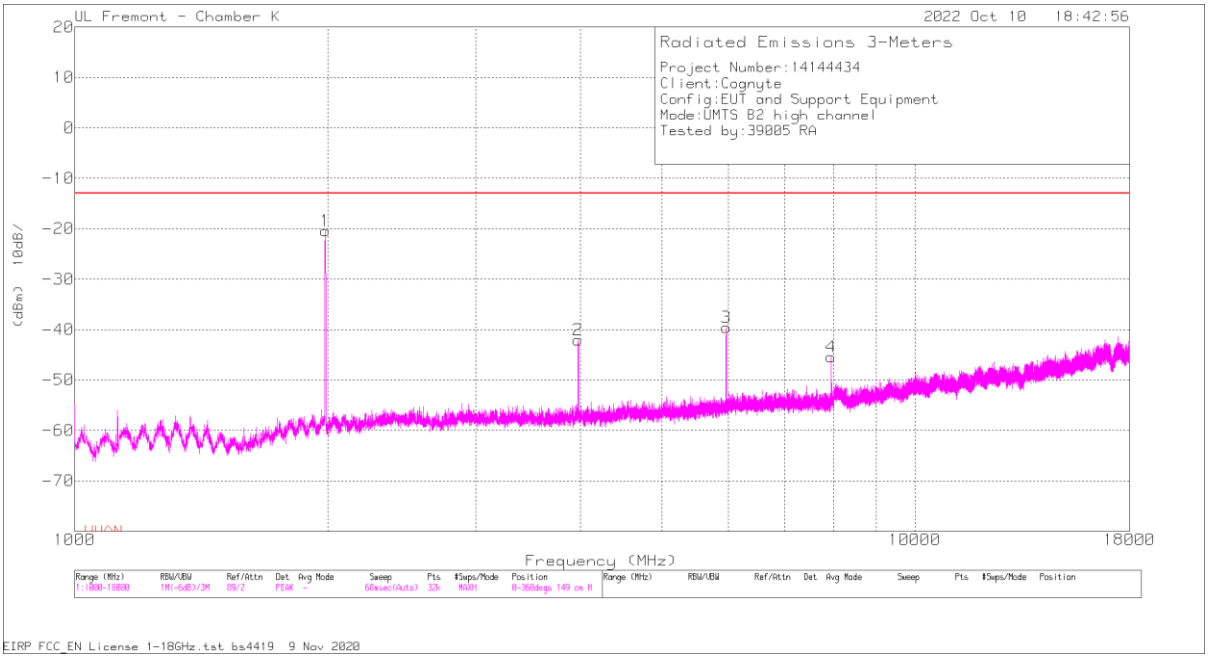
VERTICAL

Trace Markers

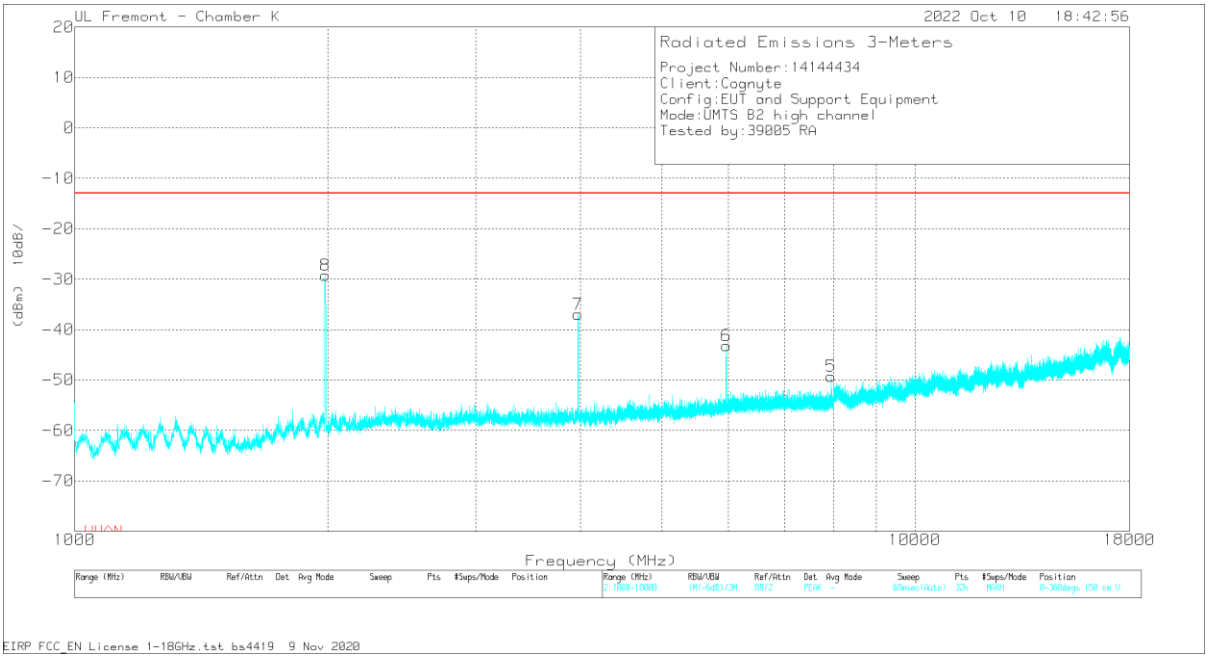
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*1959.969	90.17	Pk	31.3	-45.9	-95.2	-19.63	-13	-6.63	0-360	150	H
2	3919.75	64.26	Pk	33.4	-42.4	-95.2	-39.94	-13	-26.94	0-360	150	H
3	5880.063	50.57	Pk	35	-39.9	-95.2	-49.53	-13	-36.53	0-360	150	H
4	7840.109	47.7	Pk	35.7	-38.2	-95.2	-50	-13	-37	0-360	150	H
5	7839.844	47.76	Pk	35.7	-38.2	-95.2	-49.94	-13	-36.94	0-360	150	V
6	5880.063	50.19	Pk	35	-39.9	-95.2	-49.91	-13	-36.91	0-360	150	V
7	3921.875	71.35	Pk	33.4	-42.3	-95.2	-32.75	-13	-19.75	0-360	150	V
8	*1958.375	84.33	Pk	31.3	-46	-95.2	-25.57	-13	-12.57	0-360	150	V

* - indicates fundamental frequencies
Pk - Peak detector

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

Trace Markers

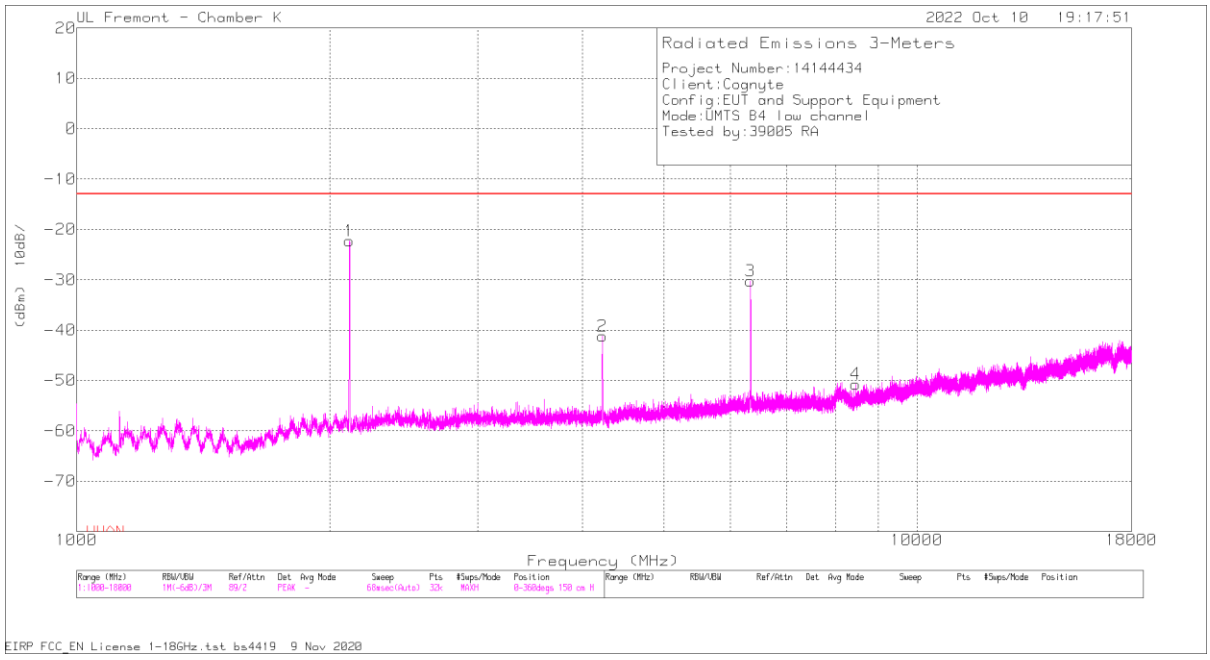
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*1987.594	89.44	Pk	31.4	-46	-95.2	-20.36	-13	-7.36	0-360	149	H
2	3974.469	62.09	Pk	33.4	-42.3	-95.2	-42.01	-13	-29.01	0-360	149	H
3	5961.875	60.18	Pk	35.2	-39.7	-95.2	-39.52	-13	-26.52	0-360	149	H
4	7950.344	51.73	Pk	35.8	-37.8	-95.2	-45.47	-13	-32.47	0-360	149	H
5	7950.344	47.94	Pk	35.8	-37.8	-95.2	-49.26	-13	-36.26	0-360	150	V
6	5962.406	56.51	Pk	35.2	-39.7	-95.2	-43.19	-13	-30.19	0-360	150	V
7	3973.406	67.09	Pk	33.4	-42.3	-95.2	-37.01	-13	-24.01	0-360	150	V
8	*1988.656	80.6	Pk	31.4	-46	-95.2	-29.2	-13	-16.2	0-360	150	V

* - indicates fundamental frequencies
Pk - Peak detector

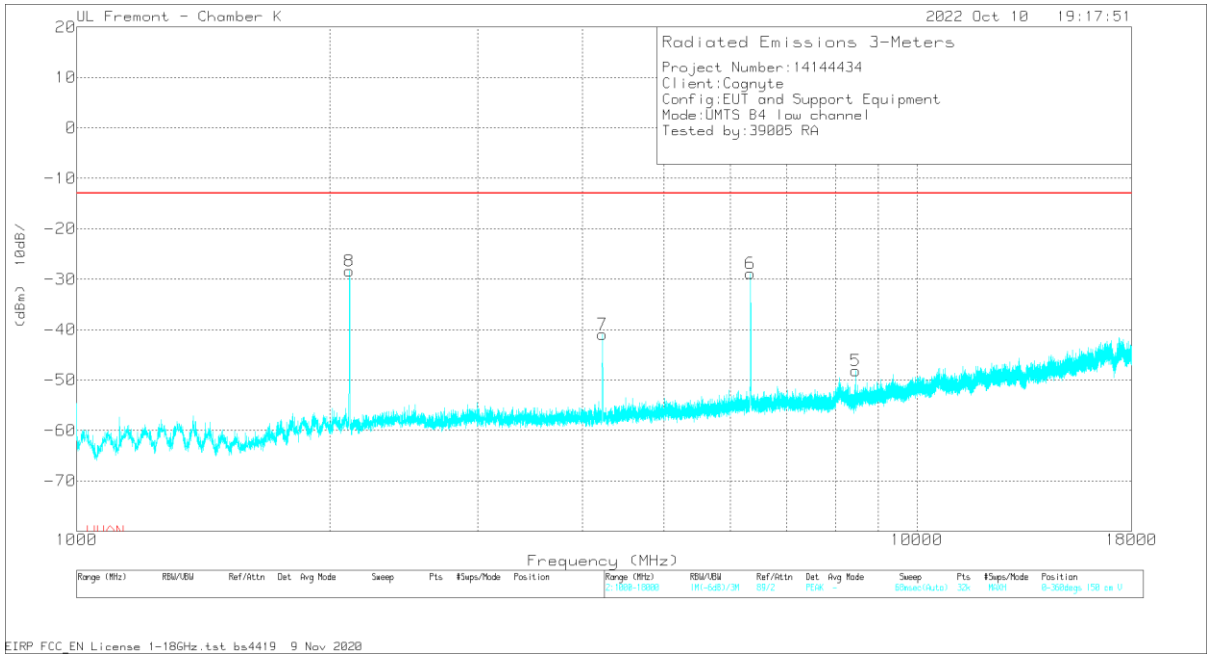
10.1.5. UMTS BAND 4

UMTS B4

LOW CHANNEL RESULTS



HORIZONTAL



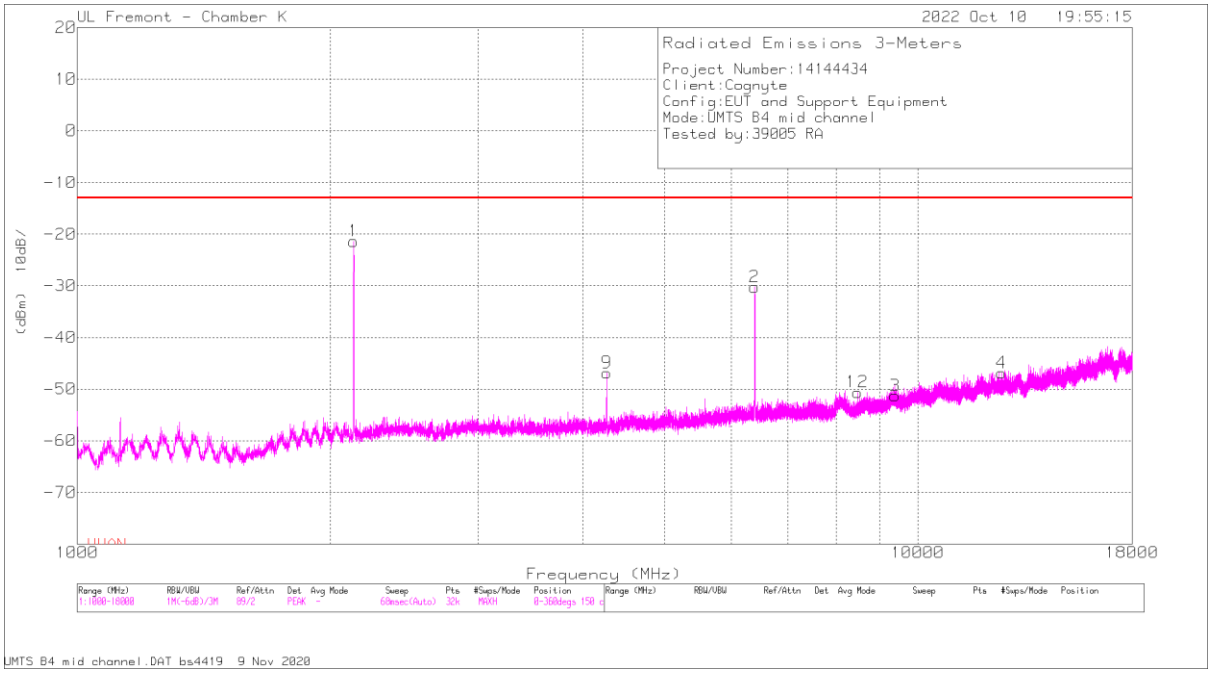
VERTICAL

Trace Markers

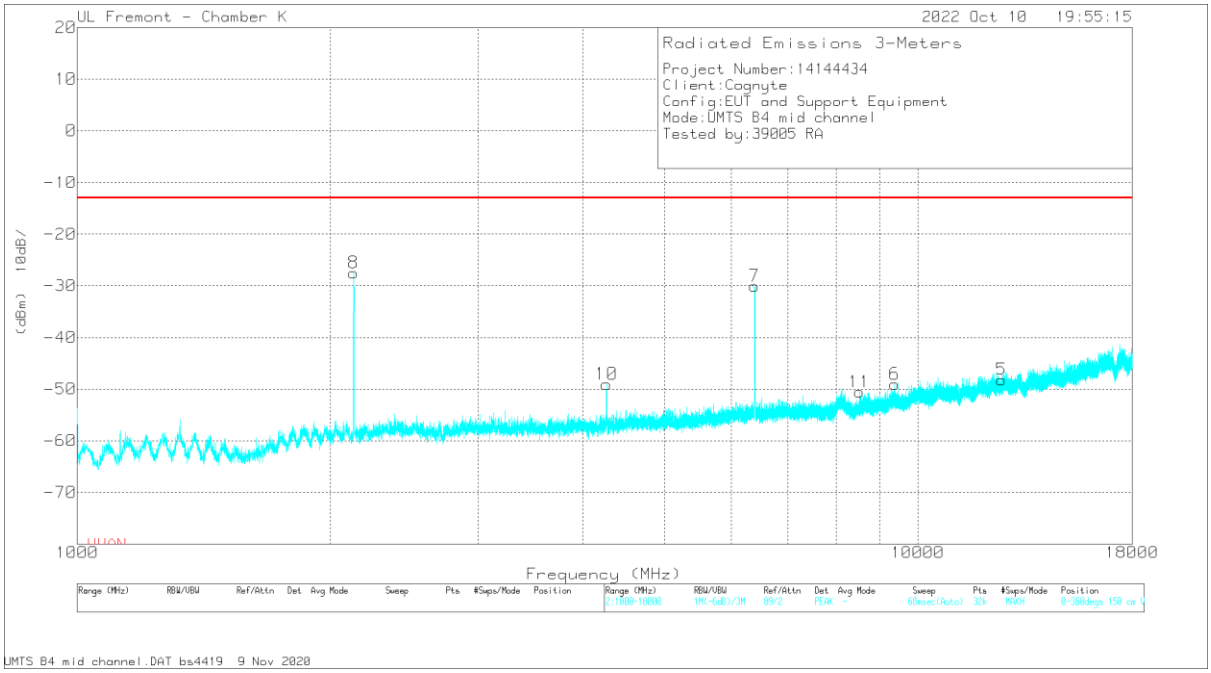
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*2112.438	86.67	Pk	31.7	-45.5	-95.2	-22.33	-13	-9.33	0-360	150	H
2	4222.563	62.53	Pk	33.7	-42.2	-95.2	-41.17	-13	-28.17	0-360	150	H
3	6334.281	68.45	Pk	35.7	-39.2	-95.2	-30.25	-13	-17.25	0-360	150	H
4	8449.719	46.6	Pk	35.7	-37.8	-95.2	-50.7	-13	-37.7	0-360	150	H
5	8449.719	49.14	Pk	35.7	-37.8	-95.2	-48.16	-13	-35.16	0-360	150	V
6	6339.594	69.71	Pk	35.7	-39.1	-95.2	-28.89	-13	-15.89	0-360	150	V
7	4224.688	62.78	Pk	33.7	-42.2	-95.2	-40.92	-13	-27.92	0-360	150	V
8	*2112.438	80.65	Pk	31.7	-45.5	-95.2	-28.35	-13	-15.35	0-360	150	V

* - indicates fundamental frequencies
Pk - Peak detector

MID CHANNEL RESULTS



HORIZONTAL



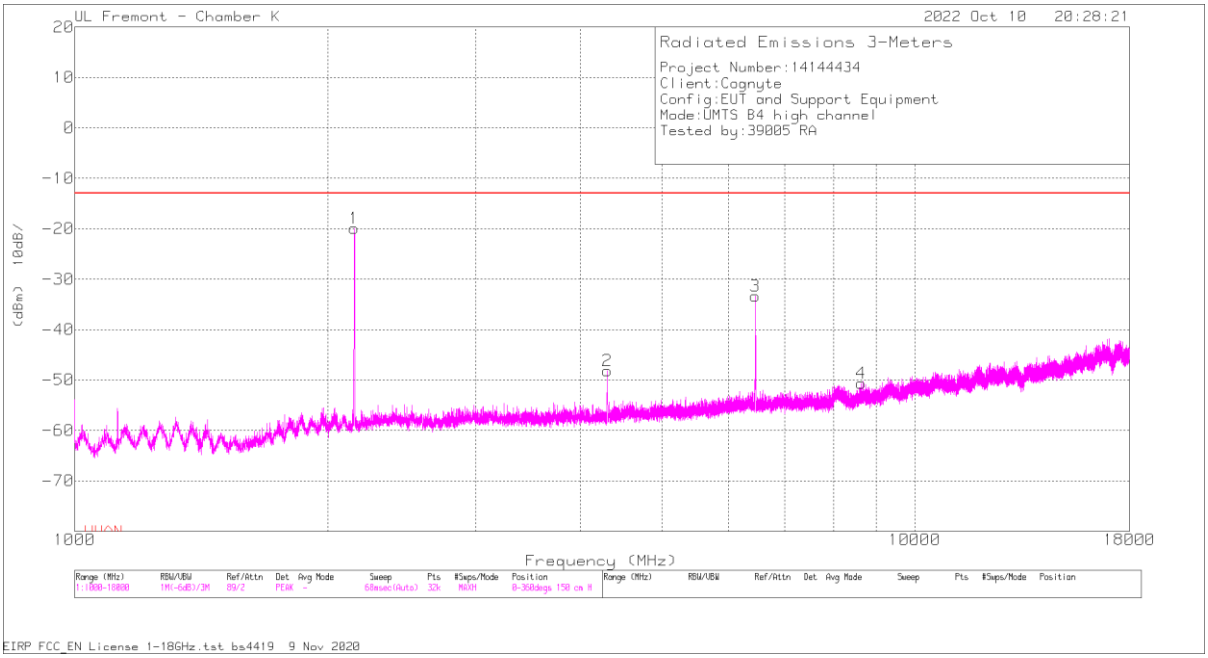
VERTICAL

Trace Markers

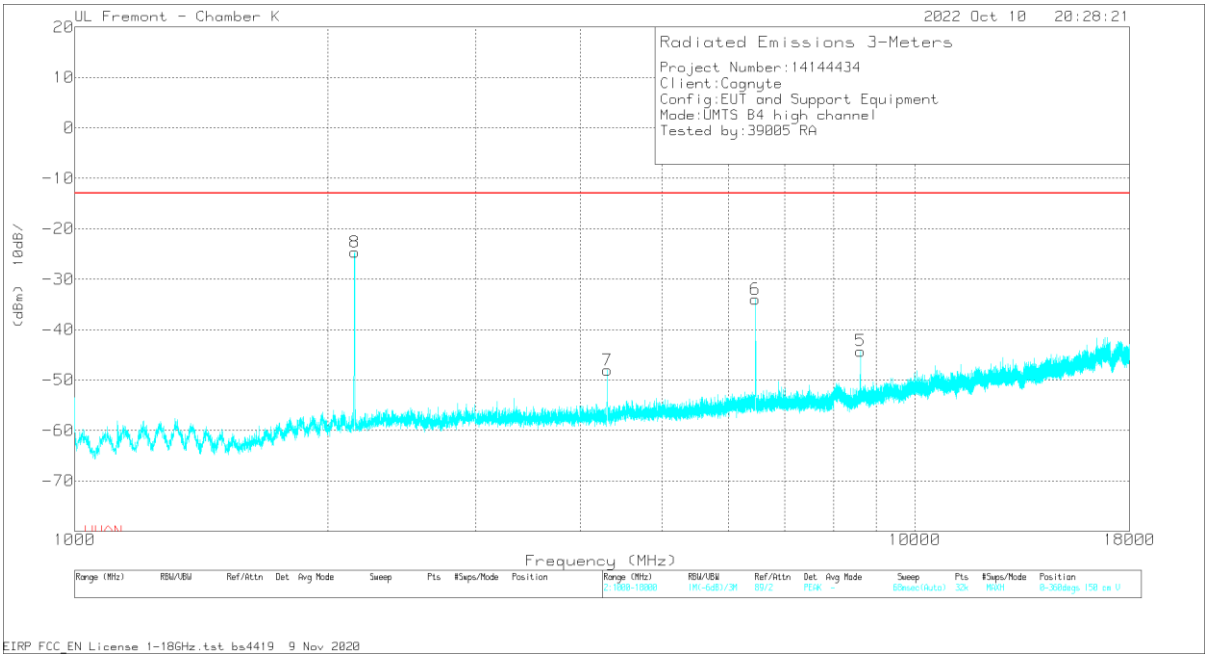
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*2132.625	87.94	Pk	31.5	-45.6	-95.2	-21.36	-13	-8.36	0-360	150	H
2	6398.563	68.45	Pk	35.7	-39.2	-95.2	-30.25	-13	-17.25	0-360	150	H
3	9396.938	44.43	Pk	36.6	-37.1	-95.2	-51.27	-13	-38.27	0-360	150	H
4	12587.094	44.13	Pk	39.1	-34.9	-95.2	-46.87	-13	-33.87	0-360	150	H
9	4266.656	56.75	Pk	33.6	-42	-95.2	-46.85	-13	-33.85	0-360	150	H
12	8476.281	46.79	Pk	35.7	-37.9	-95.2	-50.61	-13	-37.61	0-360	150	H
5	12573.813	42.73	Pk	39.1	-34.8	-95.2	-48.17	-13	-35.17	0-360	150	V
6	9393.75	46.65	Pk	36.6	-37.1	-95.2	-49.05	-13	-36.05	0-360	150	V
7	6397.5	68.67	Pk	35.7	-39.2	-95.2	-30.03	-13	-17.03	0-360	150	V
8	*2133.156	81.81	Pk	31.5	-45.6	-95.2	-27.49	-13	-14.49	0-360	150	V
10	4264	54.45	Pk	33.6	-41.9	-95.2	-49.05	-13	-36.05	0-360	150	V
11	8529.938	46.36	Pk	35.8	-37.5	-95.2	-50.54	-13	-37.54	0-360	150	V

* - indicates fundamental frequencies
Pk - Peak detector

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*2151.219	89.1	Pk	31.6	-45.4	-95.2	-19.9	-13	-6.9	0-360	150	H
2	4304.375	55.29	Pk	33.7	-41.9	-95.2	-48.11	-13	-35.11	0-360	150	H
3	6454.344	65.42	Pk	35.7	-39.3	-95.2	-33.38	-13	-20.38	0-360	150	H
4	8632.469	46.03	Pk	35.9	-37.4	-95.2	-50.67	-13	-37.67	0-360	150	H
5	8610.156	52.57	Pk	35.9	-37.5	-95.2	-44.23	-13	-31.23	0-360	150	V
6	6459.656	64.89	Pk	35.7	-39.4	-95.2	-34.01	-13	-21.01	0-360	150	V
7	4304.906	55.47	Pk	33.7	-42	-95.2	-48.03	-13	-35.03	0-360	150	V
8	*2153.344	84.6	Pk	31.6	-45.6	-95.2	-24.6	-13	-11.6	0-360	150	V

* - indicates fundamental frequencies
Pk - Peak detector

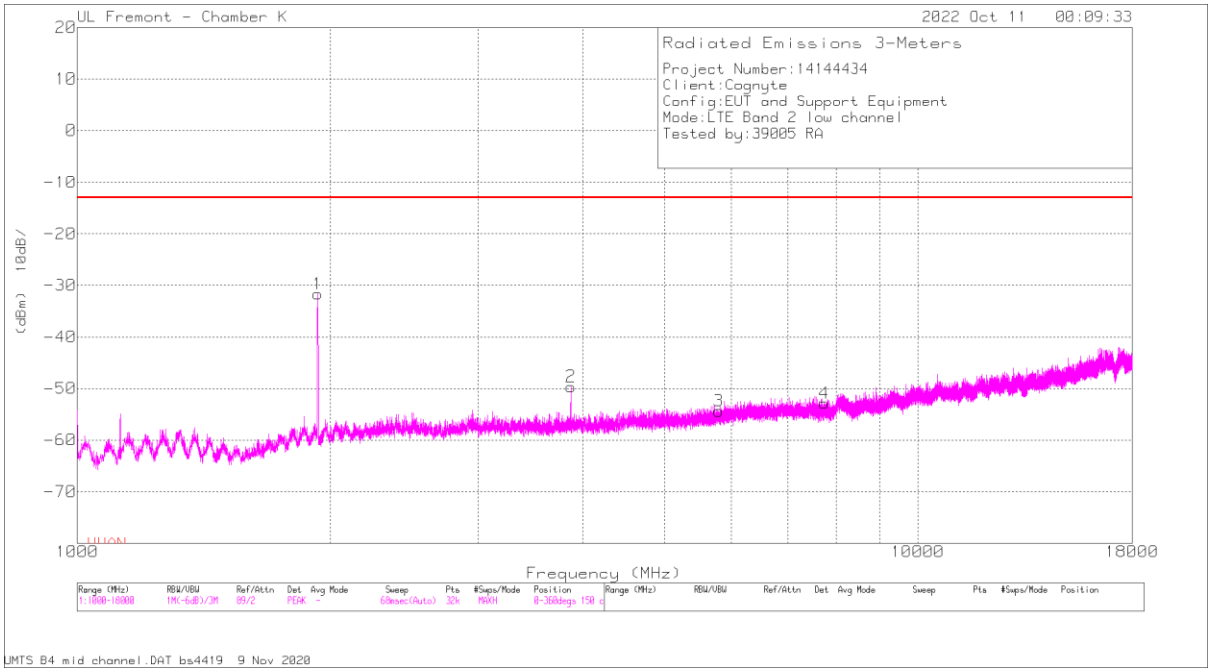
10.1.6. LTE BAND 2

LIMITS

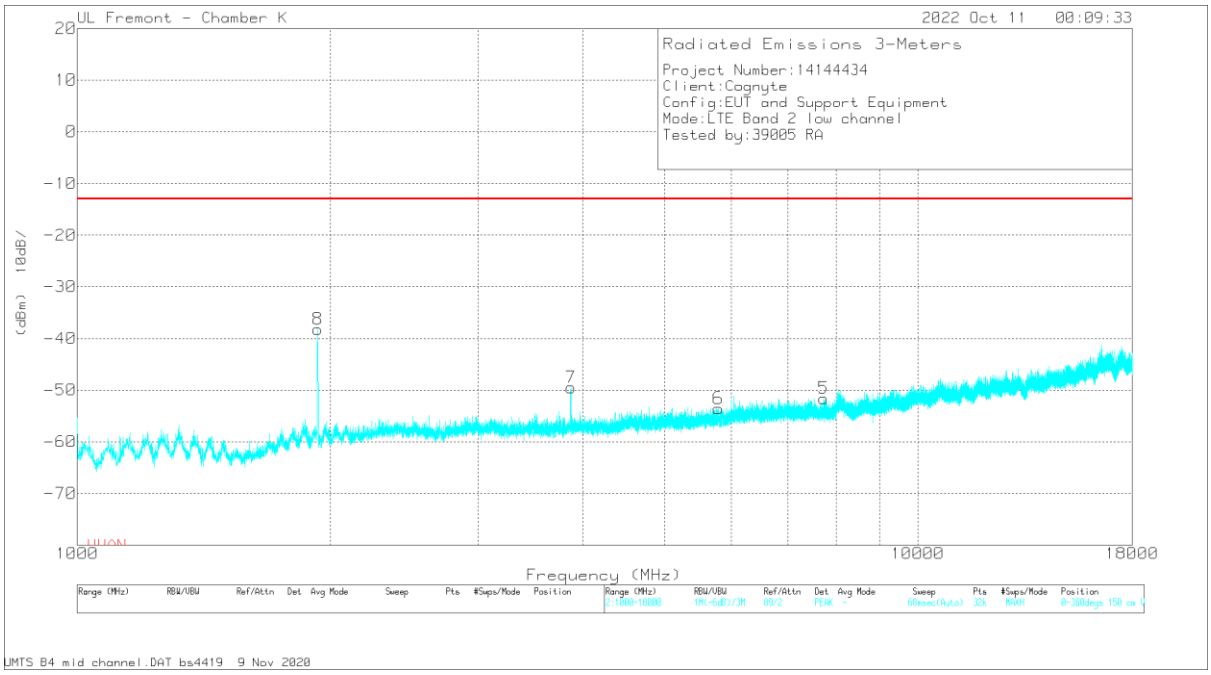
FCC: §24.238(a)
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

QPSK LTE BAND 2 (5.0MHZ BANDWIDTH)

LOW CHANNEL RESULTS



HORIZONTAL



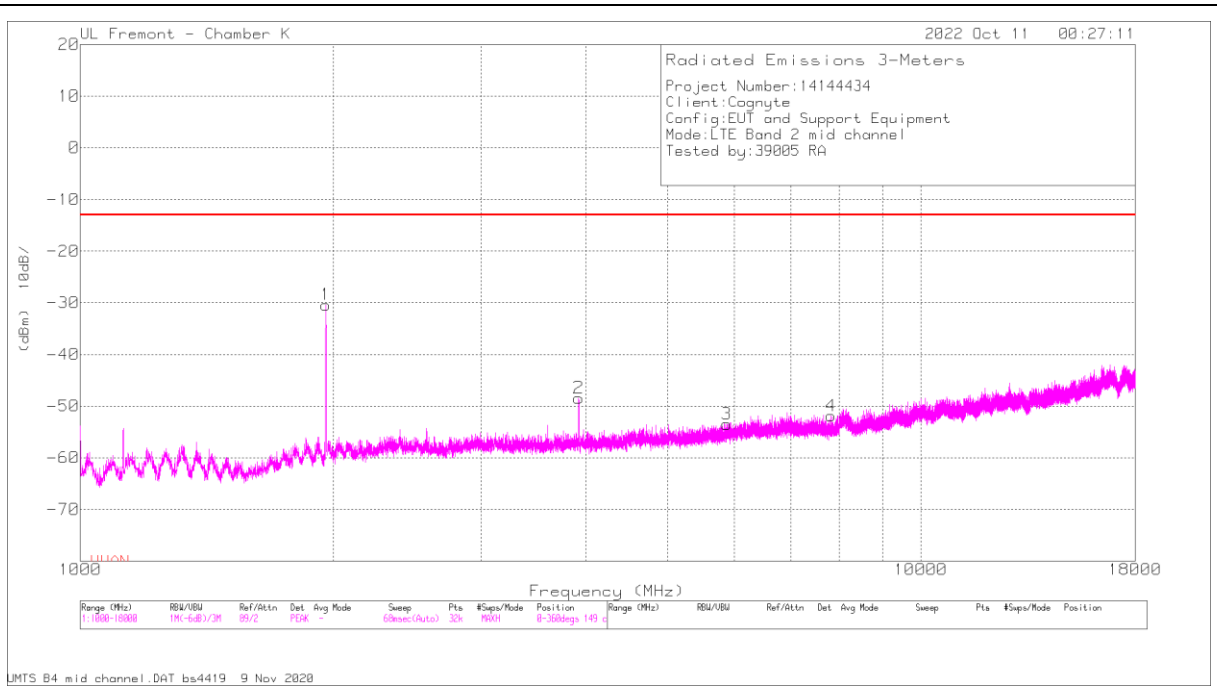
VERTICAL

Trace Markers

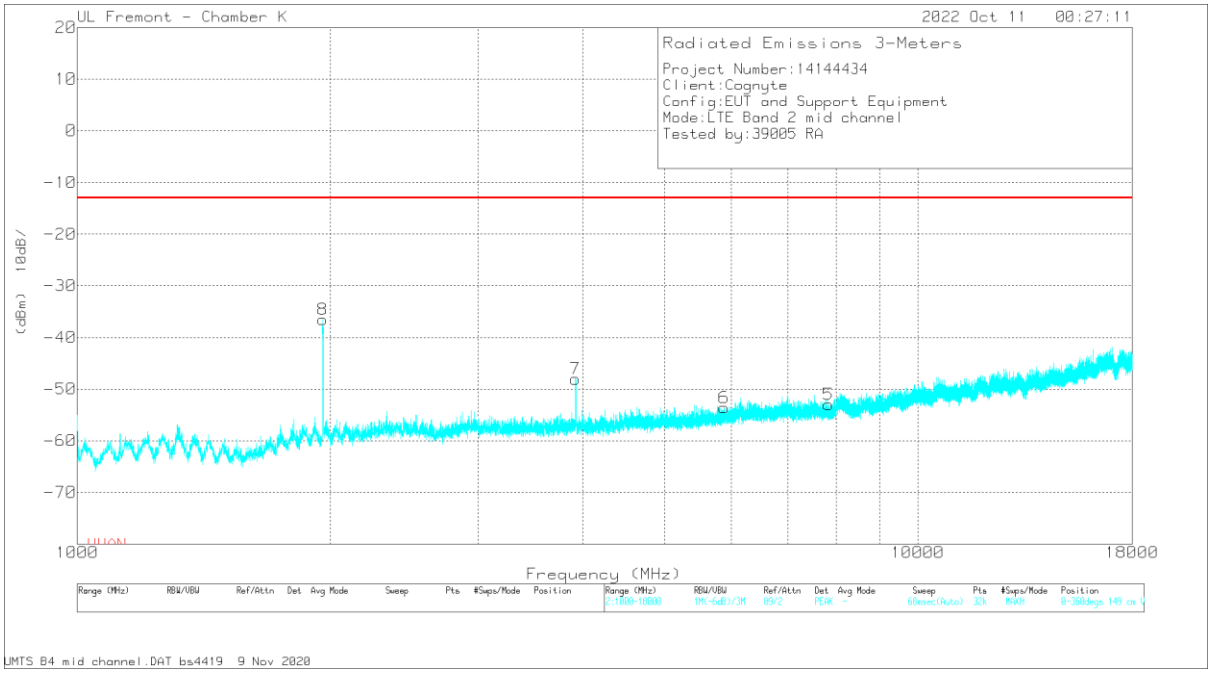
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*1933.406	78.21	Pk	31.2	-45.9	-95.2	-31.69	-13	-18.69	0-360	150	H
2	3866.625	54.36	Pk	33.5	-42.3	-95.2	-49.64	-13	-36.64	0-360	150	H
3	5794	46.05	Pk	34.8	-40	-95.2	-54.35	-13	-41.35	0-360	150	H
4	7737.313	44.63	Pk	35.8	-38.1	-95.2	-52.87	-13	-39.87	0-360	150	H
5	7728.281	45.91	Pk	35.8	-38.1	-95.2	-51.59	-13	-38.59	0-360	150	V
6	5791.344	46.83	Pk	34.8	-40	-95.2	-53.57	-13	-40.57	0-360	150	V
7	3866.625	54.5	Pk	33.5	-42.3	-95.2	-49.5	-13	-36.5	0-360	150	V
8	*1932.344	71.59	Pk	31.2	-45.8	-95.2	-38.21	-13	-25.21	0-360	150	V

* - indicates fundamental frequencies
Pk - Peak detector

MID CHANNEL RESULTS



HORIZONTAL



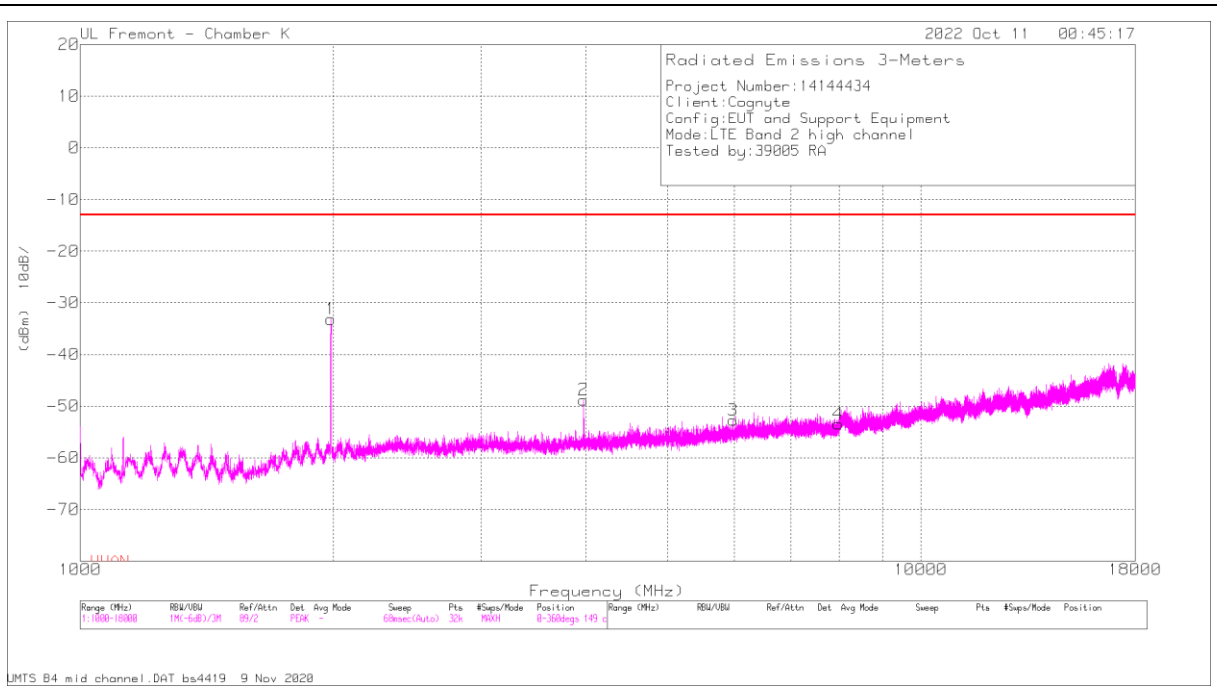
VERTICAL

Trace Markers

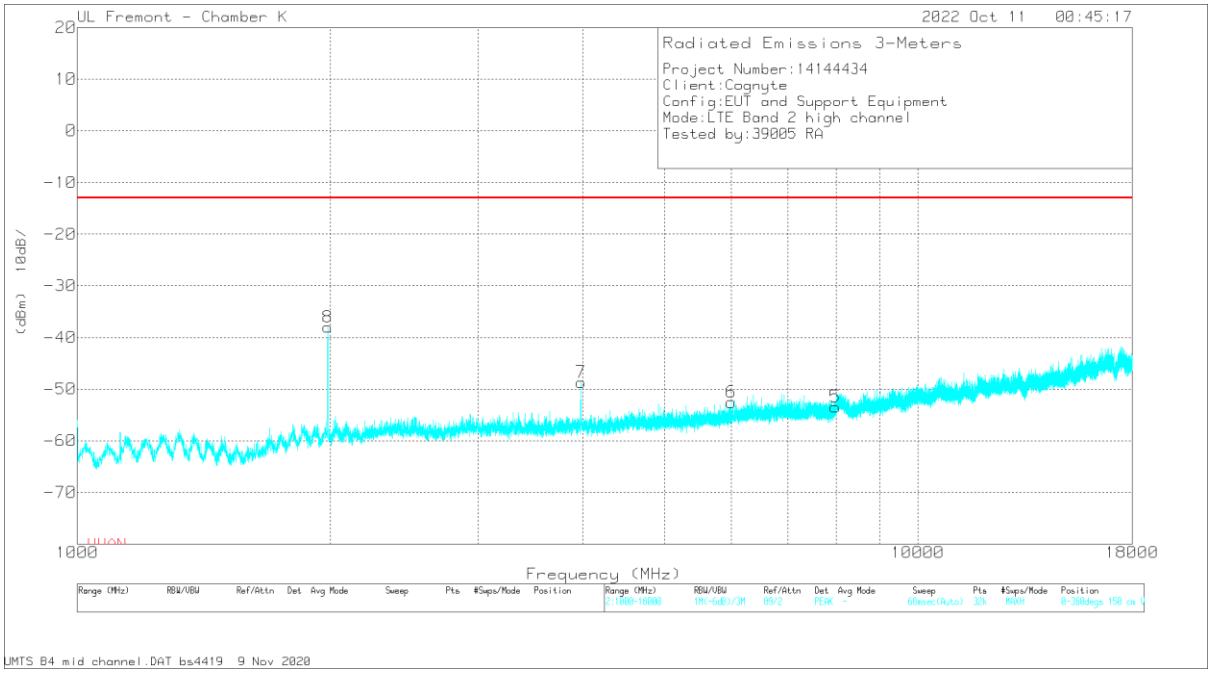
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*1960.5	79.32	Pk	31.3	-45.8	-95.2	-30.38	-13	-17.38	0-360	149	H
2	3918.156	55.66	Pk	33.4	-42.3	-95.2	-48.44	-13	-35.44	0-360	149	H
3	5878.469	46.6	Pk	35	-39.9	-95.2	-53.5	-13	-40.5	0-360	149	H
4	7826.563	45.89	Pk	35.7	-38.3	-95.2	-51.91	-13	-38.91	0-360	149	H
5	7830.281	44.7	Pk	35.7	-38.2	-95.2	-53	-13	-40	0-360	149	V
6	5883.781	46.5	Pk	35.1	-40	-95.2	-53.6	-13	-40.6	0-360	149	V
7	3917.625	55.97	Pk	33.4	-42.2	-95.2	-48.03	-13	-35.03	0-360	149	V
8	*1959.969	73.24	Pk	31.3	-45.9	-95.2	-36.56	-13	-23.56	0-360	149	V

* - indicates fundamental frequencies
Pk - Peak detector

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*1986.531	76.53	Pk	31.4	-45.9	-95.2	-33.17	-13	-20.17	0-360	149	H
2	3971.281	55.3	Pk	33.4	-42.3	-95.2	-48.8	-13	-35.8	0-360	149	H
3	5983.656	46.94	Pk	35.3	-39.8	-95.2	-52.76	-13	-39.76	0-360	149	H
4	7978.5	43.56	Pk	35.8	-37.6	-95.2	-53.44	-13	-40.44	0-360	149	H
5	7979.031	43.56	Pk	35.8	-37.6	-95.2	-53.44	-13	-40.44	0-360	150	V
6	6002.781	47.16	Pk	35.3	-39.8	-95.2	-52.54	-13	-39.54	0-360	150	V
7	3975.531	55.3	Pk	33.4	-42.2	-95.2	-48.7	-13	-35.7	0-360	150	V
8	*1987.594	71.78	Pk	31.4	-46	-95.2	-38.02	-13	-25.02	0-360	150	V

* - indicates fundamental frequencies
Pk - Peak detector

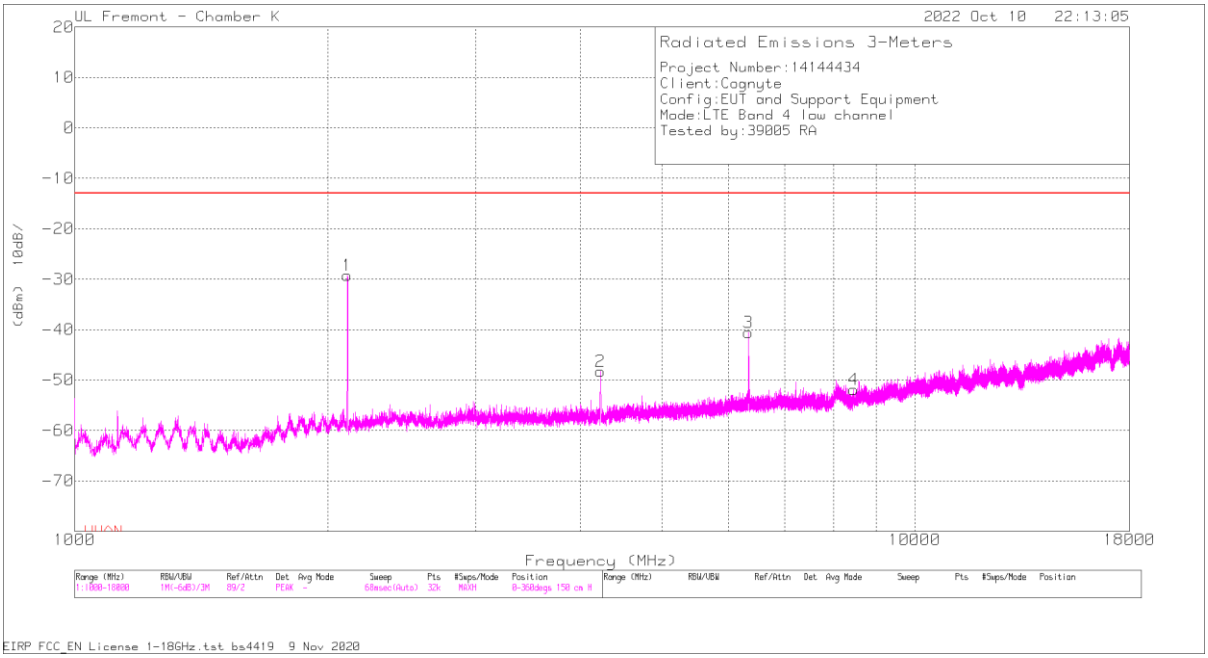
10.1.7. LTE BAND 4

LIMITS

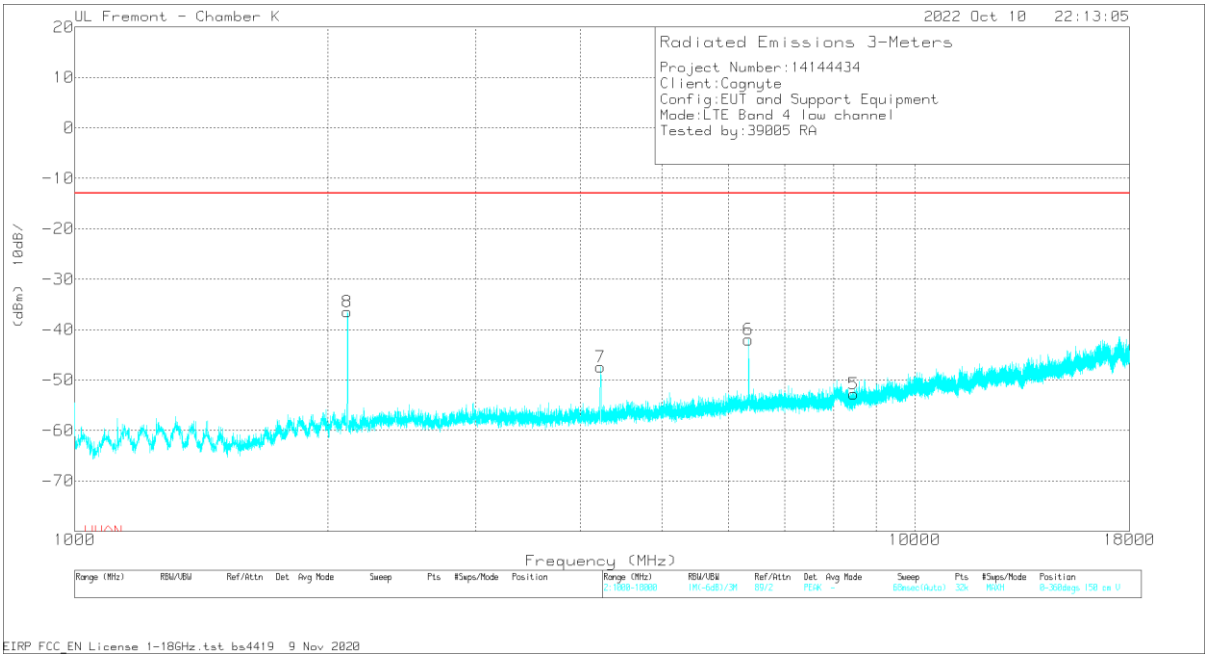
FCC: §27.53 (h)
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

QPSK LTE BAND 4 (5.0MHZ BANDWIDTH)

LOW CHANNEL RESULTS



HORIZONTAL



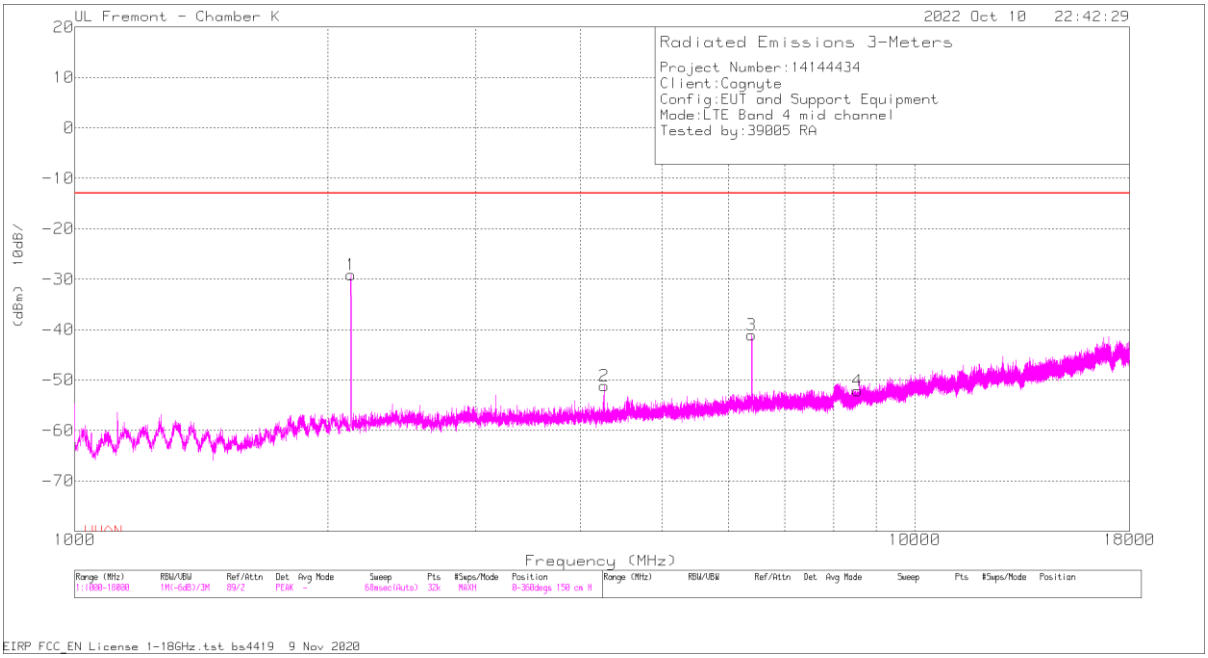
VERTICAL

Trace Markers

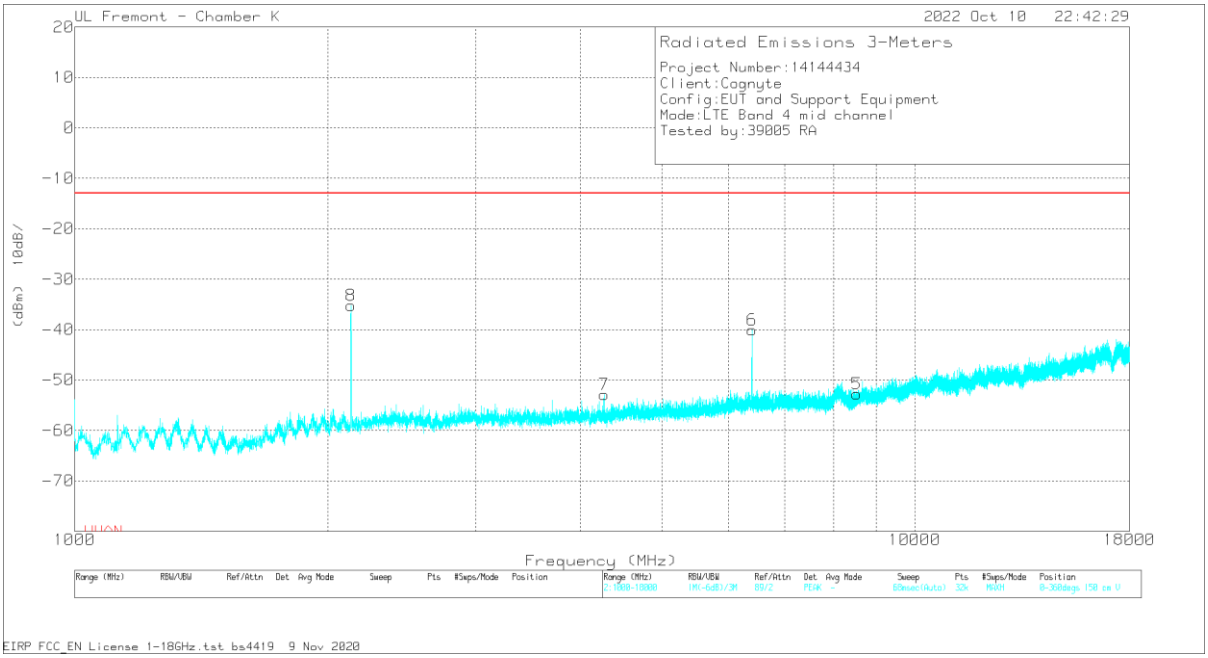
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*2111.906	79.71	Pk	31.7	-45.5	-95.2	-29.29	-13	-16.29	0-360	150	H
2	4225.219	55.29	Pk	33.7	-42.1	-95.2	-48.31	-13	-35.31	0-360	150	H
3	6339.063	58.06	Pk	35.7	-39.1	-95.2	-40.54	-13	-27.54	0-360	150	H
4	8457.156	45.47	Pk	35.7	-37.8	-95.2	-51.83	-13	-38.83	0-360	150	H
5	8453.969	44.58	Pk	35.7	-37.8	-95.2	-52.72	-13	-39.72	0-360	150	V
6	6336.406	56.61	Pk	35.7	-39.1	-95.2	-41.99	-13	-28.99	0-360	150	V
7	4225.75	56.11	Pk	33.7	-42	-95.2	-47.39	-13	-34.39	0-360	150	V
8	*2112.438	72.52	Pk	31.7	-45.5	-95.2	-36.48	-13	-23.48	0-360	150	V

* - indicates fundamental frequencies
Pk - Peak detector

MID CHANNEL RESULTS



HORIZONTAL



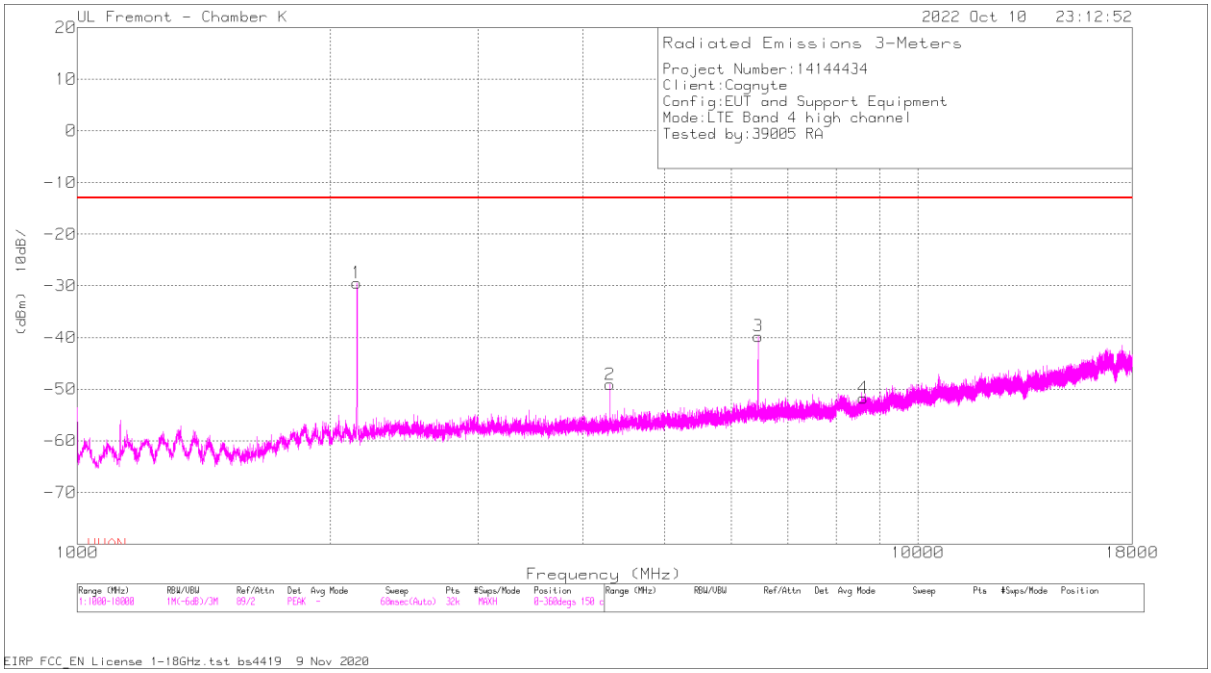
VERTICAL

Trace Markers

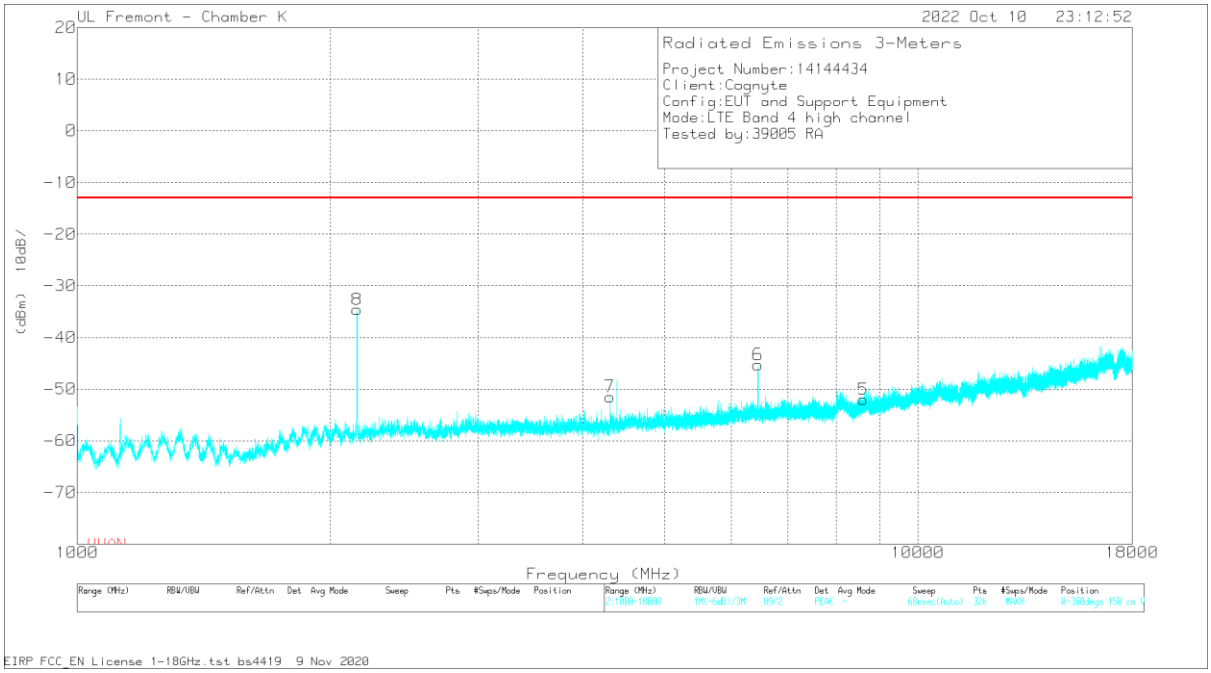
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*2132.625	80.17	Pk	31.5	-45.6	-95.2	-29.13	-13	-16.13	0-360	150	H
2	4265.594	52.45	Pk	33.6	-42	-95.2	-51.15	-13	-38.15	0-360	150	H
3	6394.844	57.7	Pk	35.7	-39.3	-95.2	-41.1	-13	-28.1	0-360	150	H
4	8535.781	44.86	Pk	35.8	-37.6	-95.2	-52.14	-13	-39.14	0-360	150	H
5	8532.594	44.21	Pk	35.8	-37.6	-95.2	-52.79	-13	-39.79	0-360	150	V
6	6401.219	58.69	Pk	35.7	-39.2	-95.2	-40.01	-13	-27.01	0-360	150	V
7	4265.063	50.74	Pk	33.6	-42	-95.2	-52.86	-13	-39.86	0-360	150	V
8	*2132.094	74.06	Pk	31.5	-45.6	-95.2	-35.24	-13	-22.24	0-360	150	V

* - indicates fundamental frequencies
Pk - Peak detector

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*2150.688	79.56	Pk	31.6	-45.4	-95.2	-29.44	-13	-16.44	0-360	150	H
2	4306.5	54.4	Pk	33.7	-42	-95.2	-49.1	-13	-36.1	0-360	150	H
3	6458.594	59.14	Pk	35.7	-39.4	-95.2	-39.76	-13	-26.76	0-360	150	H
4	8613.875	45.06	Pk	35.9	-37.5	-95.2	-51.74	-13	-38.74	0-360	150	H
5	8613.344	44.78	Pk	35.9	-37.5	-95.2	-52.02	-13	-39.02	0-360	150	V
6	6456.469	53.61	Pk	35.7	-39.4	-95.2	-45.29	-13	-32.29	0-360	150	V
7	4306.5	52.01	Pk	33.7	-42	-95.2	-51.49	-13	-38.49	0-360	150	V
8	*2152.813	74.49	Pk	31.6	-45.5	-95.2	-34.61	-13	-21.61	0-360	150	V

* - indicates fundamental frequencies
Pk - Peak detector

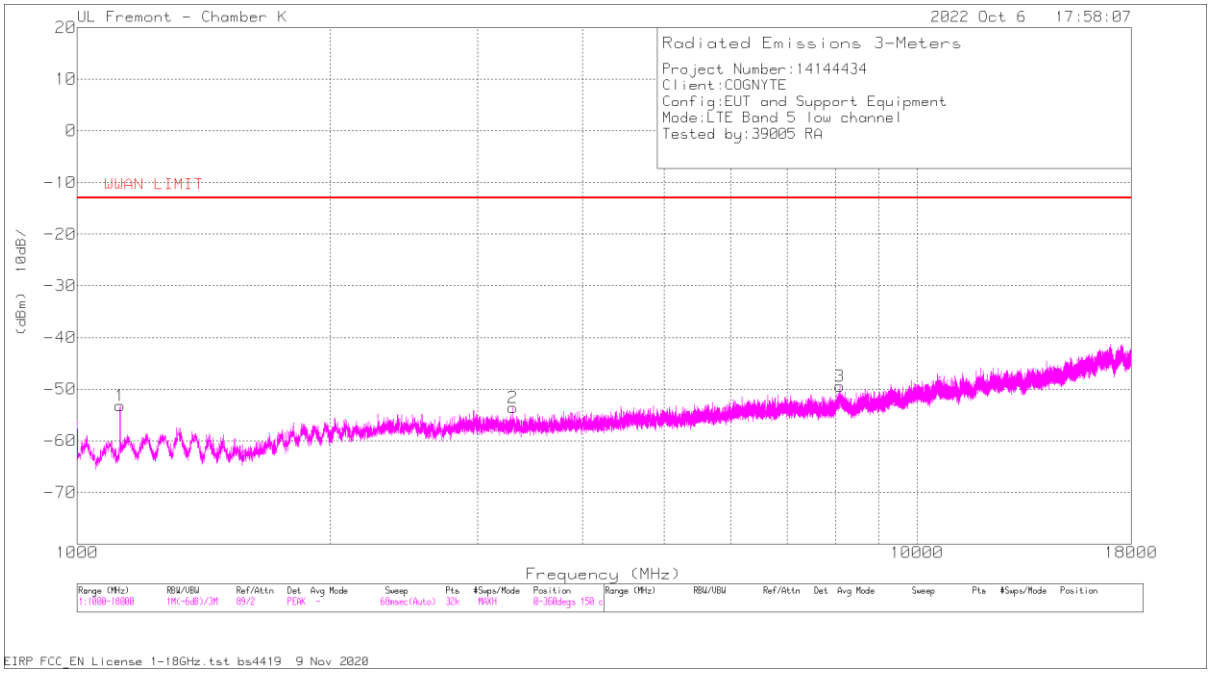
10.1.8. LTE BAND 5

LIMITS

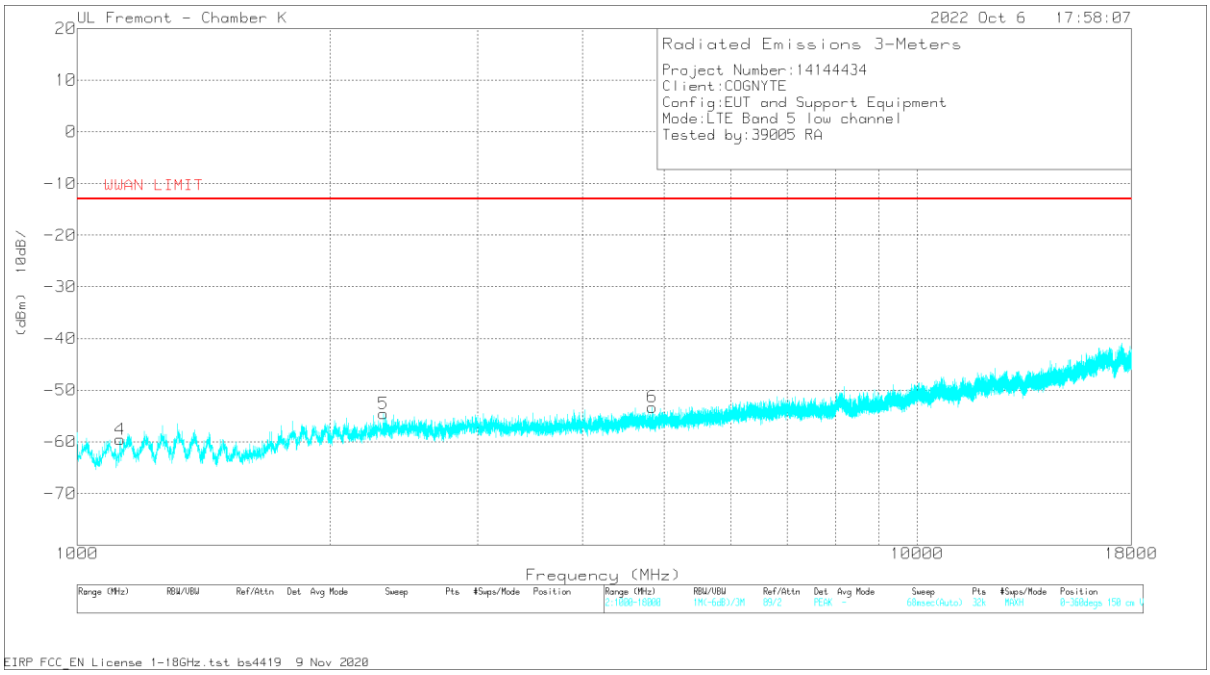
FCC: §22.917(a)
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

QPSK LTE BAND 5 (5.0MHZ BANDWIDTH)

LOW CHANNEL RESULTS



HORIZONTAL



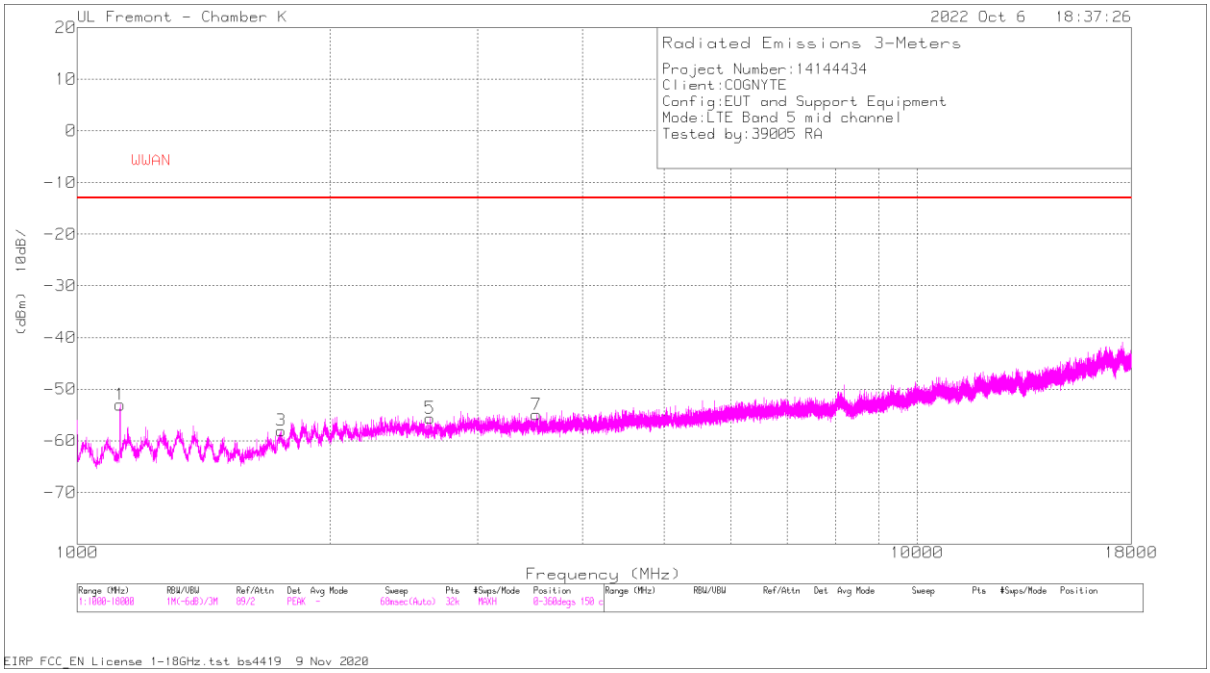
VERTICAL

Trace Markers

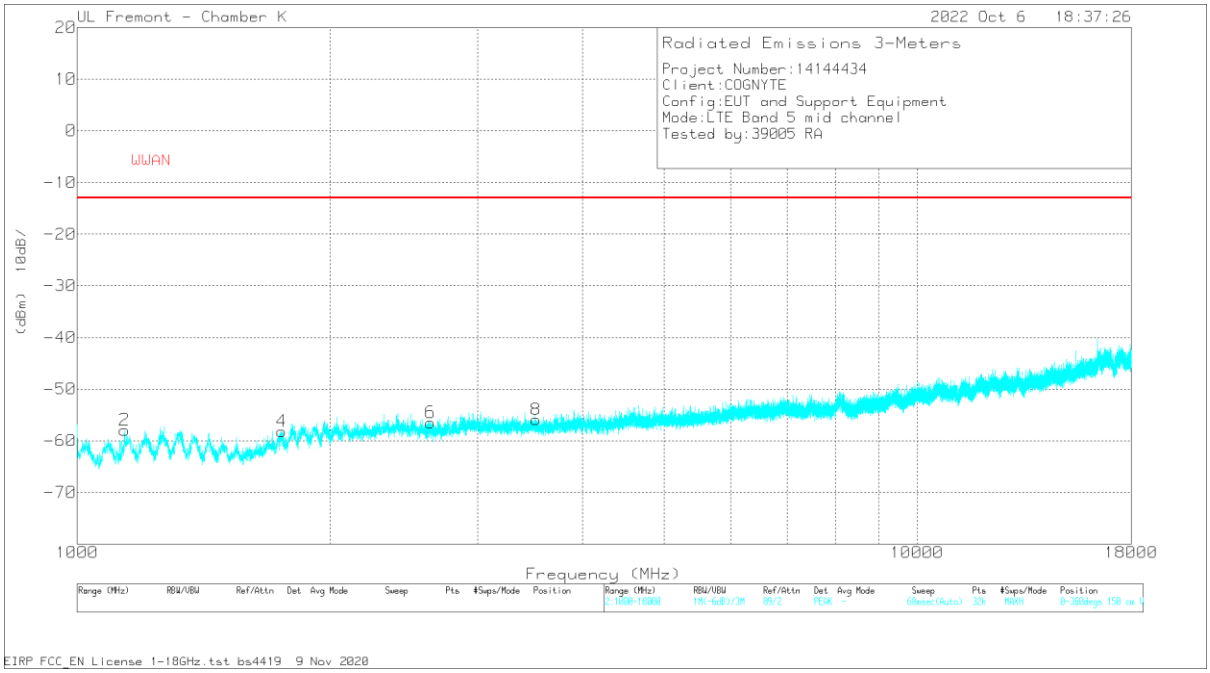
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN LIMIT	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1124.844	60.87	Pk	28.1	-47	-95.2	-53.23	-13	-40.23	0-360	150	H
2	3301.906	51.2	Pk	32.9	-42.5	-95.2	-53.6	-13	-40.6	0-360	150	H
3	8091.656	47.63	Pk	35.8	-37.7	-95.2	-49.47	-13	-36.47	0-360	150	H
4	1124.844	54.52	Pk	28.1	-47	-95.2	-59.58	-13	-46.58	0-360	150	V
5	2314.844	53.64	Pk	32.2	-45.2	-95.2	-54.56	-13	-41.56	0-360	150	V
6	4839.875	48.91	Pk	34.2	-41.2	-95.2	-53.29	-13	-40.29	0-360	150	V

Pk - Peak detector

MID CHANNEL RESULTS



HORIZONTAL



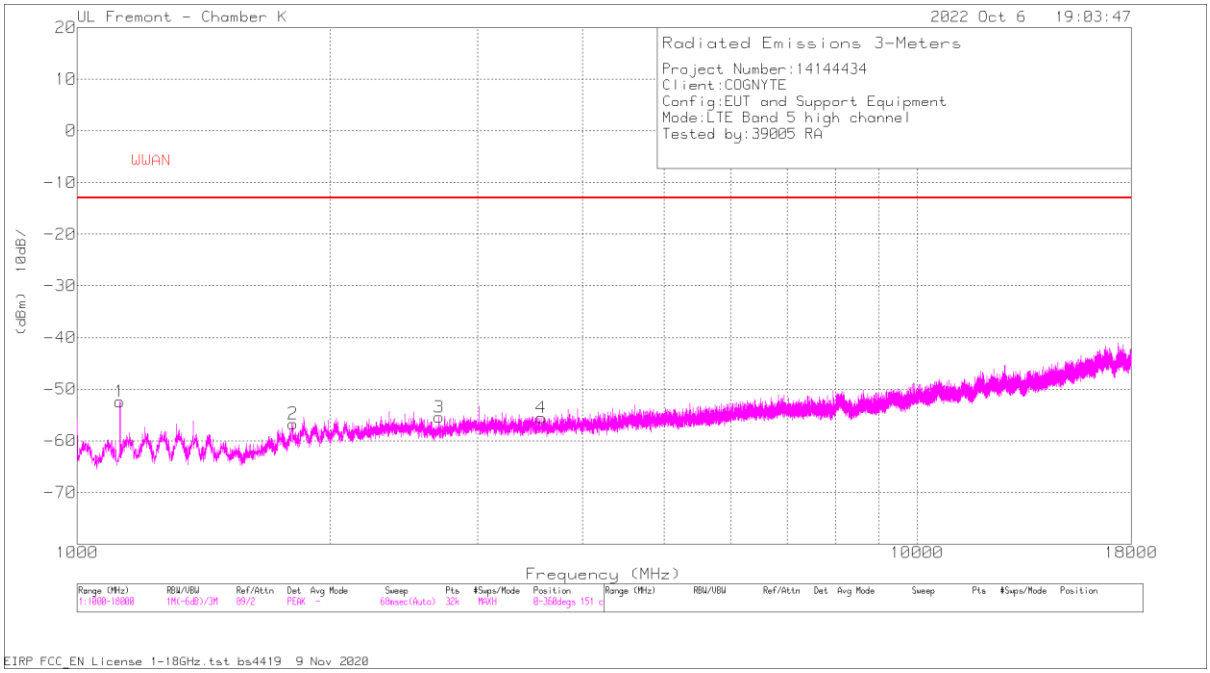
VERTICAL

Trace Markers

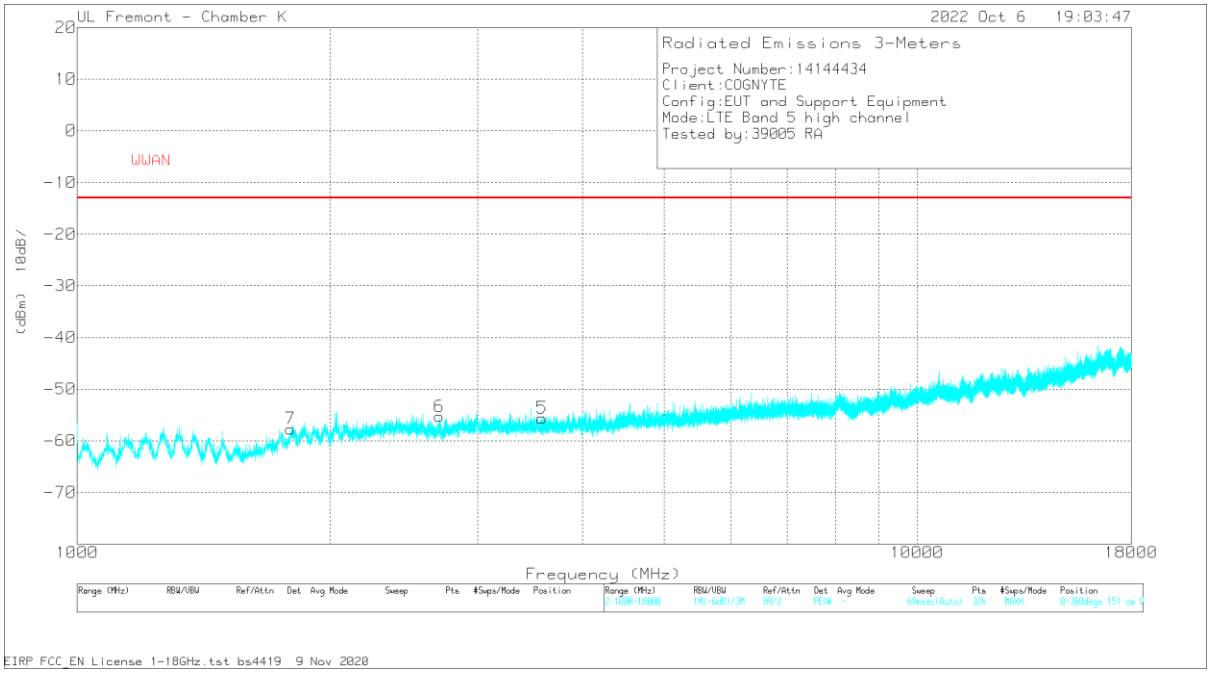
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1124.844	61.08	Pk	28.1	-47	-95.2	-53.02	-13	-40.02	0-360	150	H
3	1750.125	53.87	Pk	29.5	-46.2	-95.2	-58.03	-13	-45.03	0-360	150	H
5	2630.406	51.37	Pk	32.1	-43.9	-95.2	-55.63	-13	-42.63	0-360	150	H
7	3522.375	49.76	Pk	32.9	-42.4	-95.2	-54.94	-13	-41.94	0-360	150	H
2	1138.656	55.96	Pk	28.3	-47	-95.2	-57.94	-13	-44.94	0-360	150	V
4	1751.719	53.71	Pk	29.6	-46.3	-95.2	-58.19	-13	-45.19	0-360	150	V
6	2634.125	50.63	Pk	32.1	-44	-95.2	-56.47	-13	-43.47	0-360	150	V
8	3520.25	48.98	Pk	32.9	-42.6	-95.2	-55.92	-13	-42.92	0-360	150	V

Pk - Peak detector

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1124.313	61.68	Pk	28.1	-47	-95.2	-52.42	-13	-39.42	0-360	151	H
2	1807.5	54.27	Pk	30.5	-46.3	-95.2	-56.73	-13	-43.73	0-360	151	H
3	2696.813	51.56	Pk	32.1	-43.9	-95.2	-55.44	-13	-42.44	0-360	151	H
4	3570.188	49.16	Pk	33	-42.5	-95.2	-55.54	-13	-42.54	0-360	151	H
5	3577.094	49.09	Pk	33	-42.5	-95.2	-55.61	-13	-42.61	0-360	151	V
6	2698.938	51.69	Pk	32.1	-43.9	-95.2	-55.31	-13	-42.31	0-360	151	V
7	1795.813	53.23	Pk	30.3	-46	-95.2	-57.67	-13	-44.67	0-360	151	V

Pk - Peak detector

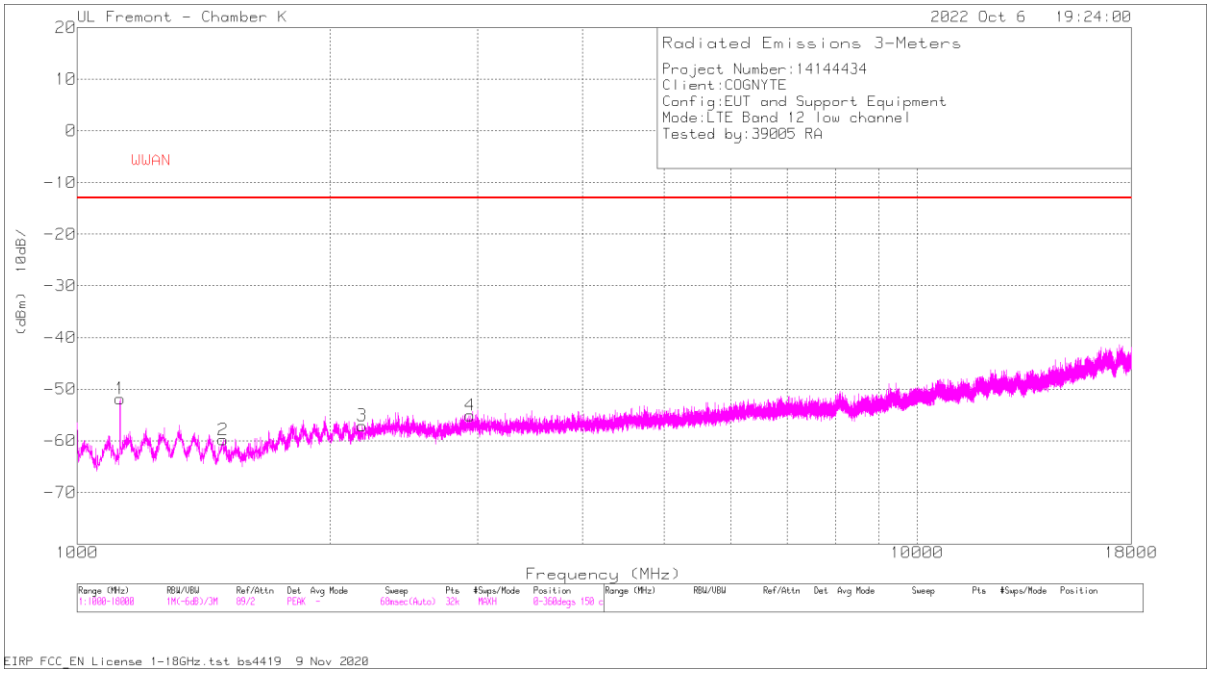
10.1.9. LTE BAND 12

LIMITS

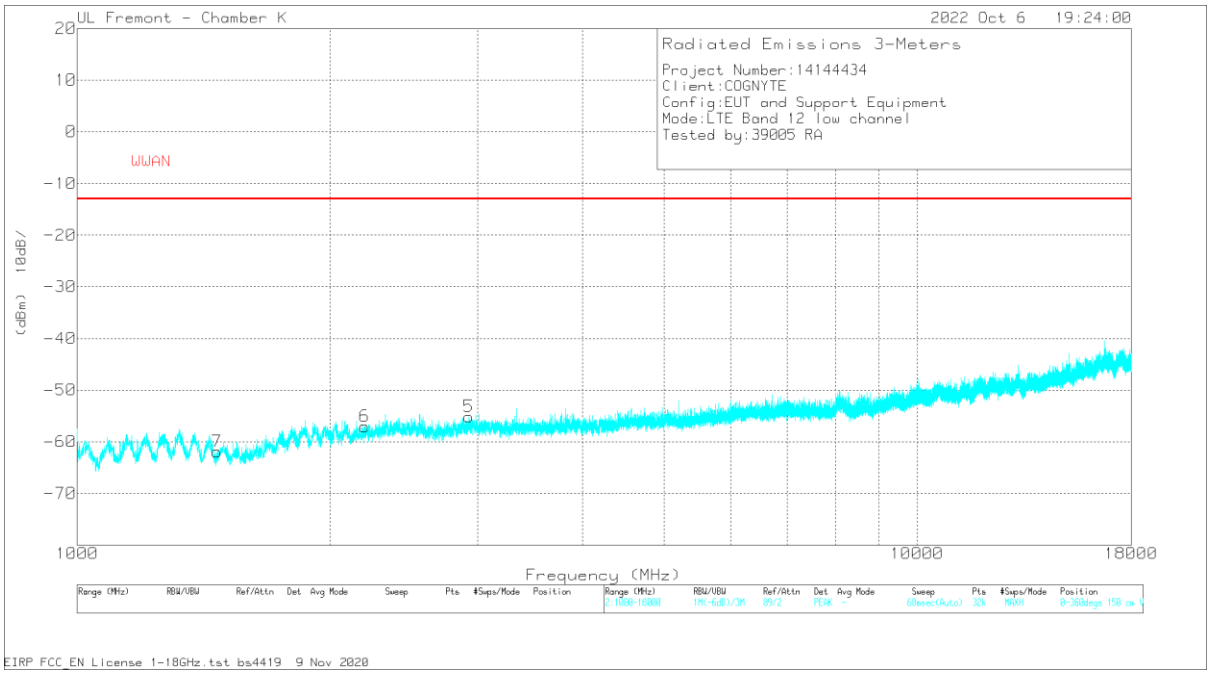
FCC: §27.53 (g)
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

QPSK LTE BAND 12 (5.0MHZ BANDWIDTH)

LOW CHANNEL RESULTS



HORIZONTAL



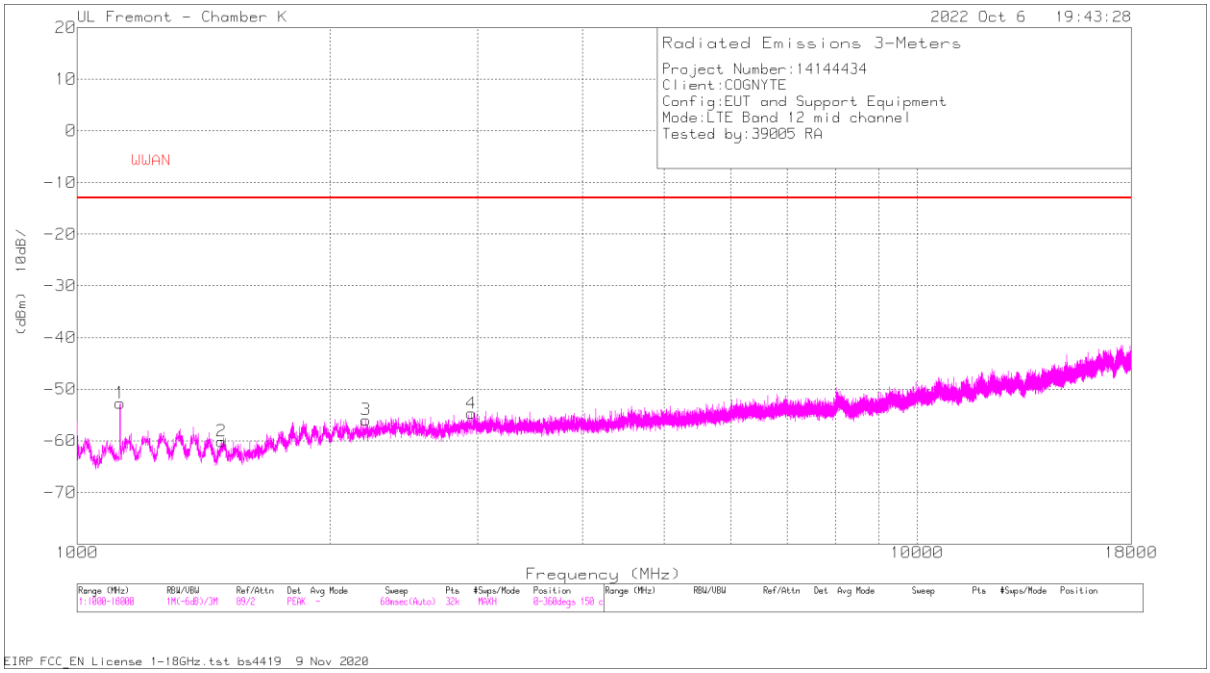
VERTICAL

Trace Markers

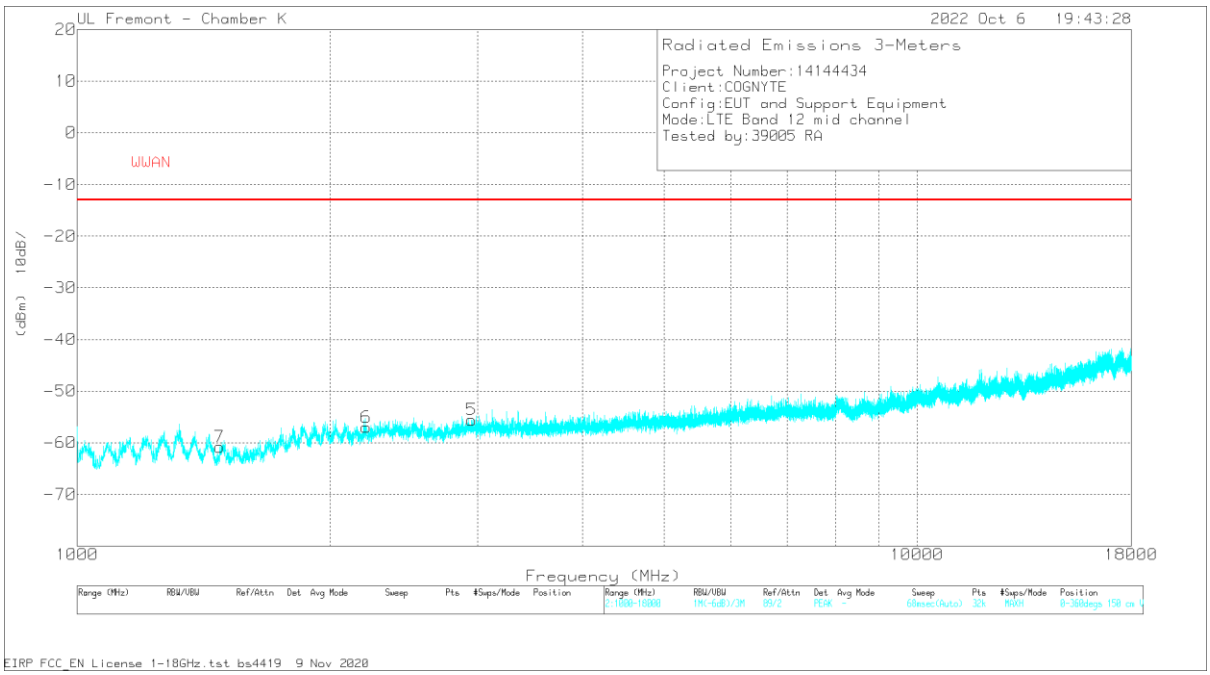
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1124.844	62.23	Pk	28.1	-47	-95.2	-51.87	-13	-38.87	0-360	150	H
2	1491.938	53.89	Pk	27.7	-46.2	-95.2	-59.81	-13	-46.81	0-360	150	H
3	2184.688	52.33	Pk	31.6	-45.8	-95.2	-57.07	-13	-44.07	0-360	150	H
4	2938.531	50.4	Pk	32.9	-43.2	-95.2	-55.1	-13	-42.1	0-360	150	H
5	2925.25	50.35	Pk	32.9	-43.2	-95.2	-55.15	-13	-42.15	0-360	150	V
6	2199.031	52.25	Pk	31.6	-45.7	-95.2	-57.05	-13	-44.05	0-360	150	V
7	1467.5	51.78	Pk	27.9	-46.4	-95.2	-61.92	-13	-48.92	0-360	150	V

Pk - Peak detector

MID CHANNEL RESULTS



HORIZONTAL



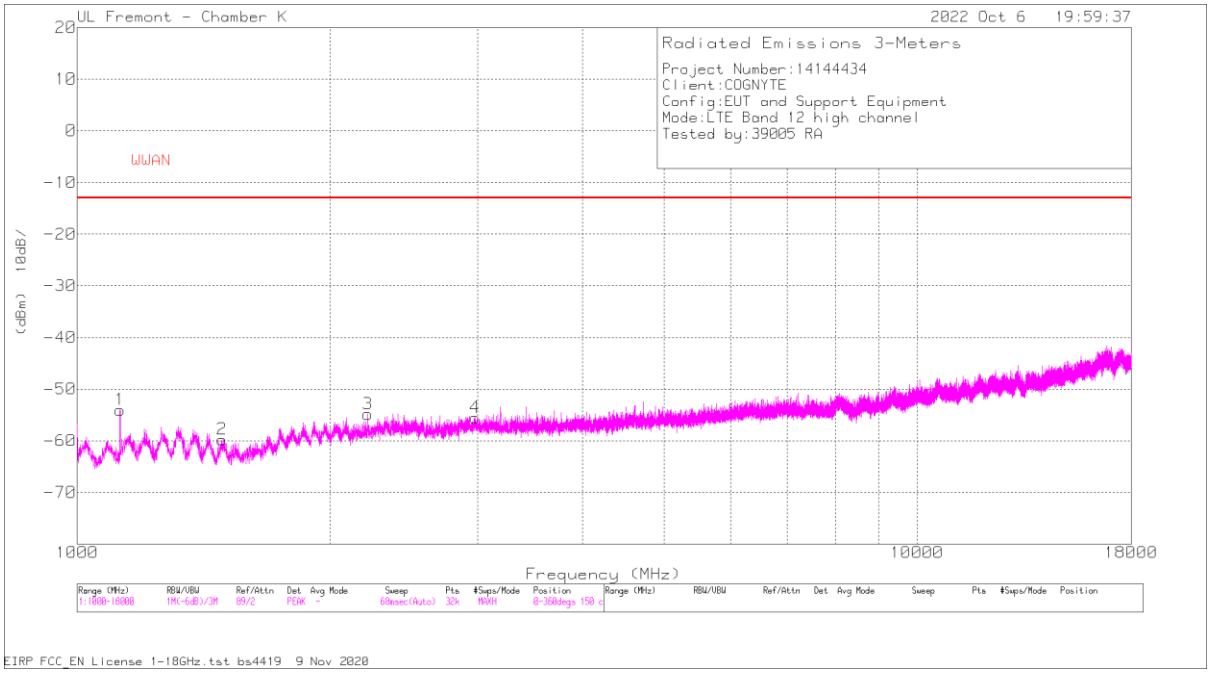
VERTICAL

Trace Markers

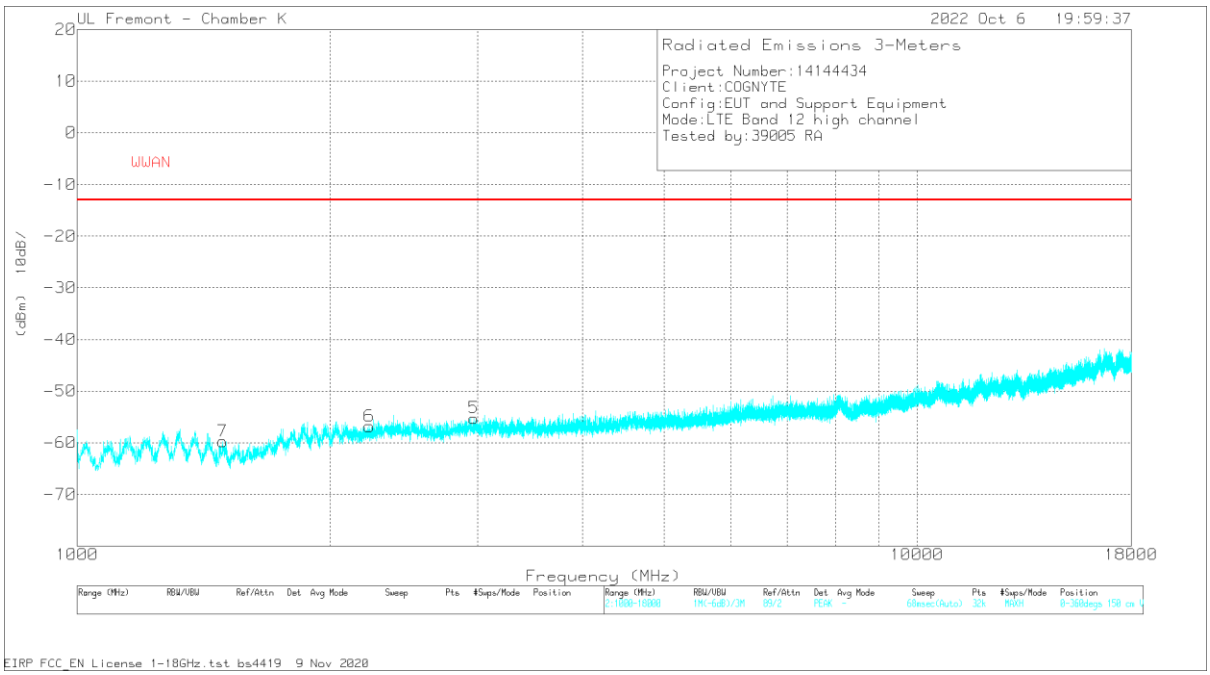
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1124.844	61.38	Pk	28.1	-47	-95.2	-52.72	-13	-39.72	0-360	150	H
2	1485.031	53.6	Pk	27.8	-46.3	-95.2	-60.1	-13	-47.1	0-360	150	H
3	2205.938	53.24	Pk	31.6	-45.6	-95.2	-55.96	-13	-42.96	0-360	150	H
4	2948.625	50.7	Pk	32.9	-43.1	-95.2	-54.7	-13	-41.7	0-360	150	H
5	2949.156	49.81	Pk	32.9	-43.1	-95.2	-55.59	-13	-42.59	0-360	150	V
6	2209.125	52.2	Pk	31.6	-45.6	-95.2	-57	-13	-44	0-360	150	V
7	1477.594	52.89	Pk	27.8	-46.3	-95.2	-60.81	-13	-47.81	0-360	150	V

Pk - Peak detector

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1124.844	60.09	Pk	28.1	-47	-95.2	-54.01	-13	-41.01	0-360	150	H
2	1488.219	53.96	Pk	27.8	-46.3	-95.2	-59.74	-13	-46.74	0-360	150	H
3	2219.219	54.26	Pk	31.6	-45.5	-95.2	-54.84	-13	-41.84	0-360	150	H
4	2979.438	49.69	Pk	33.1	-43.1	-95.2	-55.51	-13	-42.51	0-360	150	H
5	2966.688	50.27	Pk	33	-43.3	-95.2	-55.23	-13	-42.23	0-360	150	V
6	2227.719	52.4	Pk	31.6	-45.6	-95.2	-56.8	-13	-43.8	0-360	150	V
7	1490.344	54.07	Pk	27.7	-46.3	-95.2	-59.73	-13	-46.73	0-360	150	V

Pk - Peak detector

10.1.10. LTE BAND 13

LIMITS

FCC: §27.53 (c)

(1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;

(3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations;

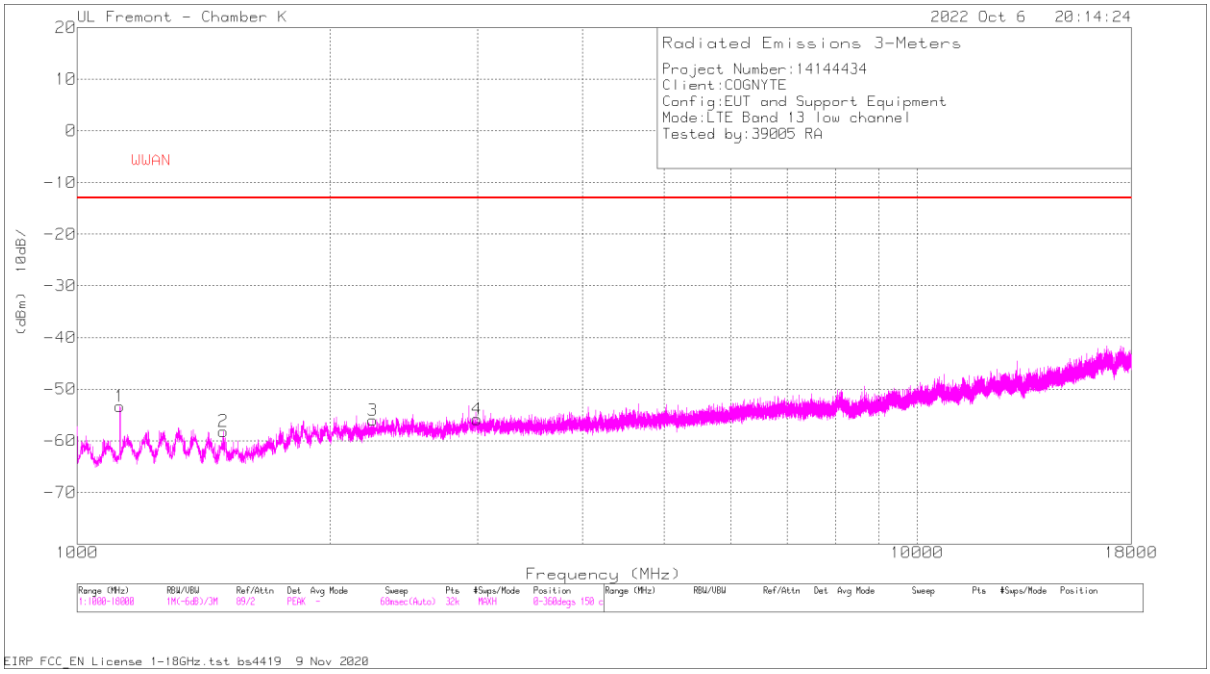
(5) Compliance with the provisions of paragraphs (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

(6) Compliance with the provisions of paragraphs (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

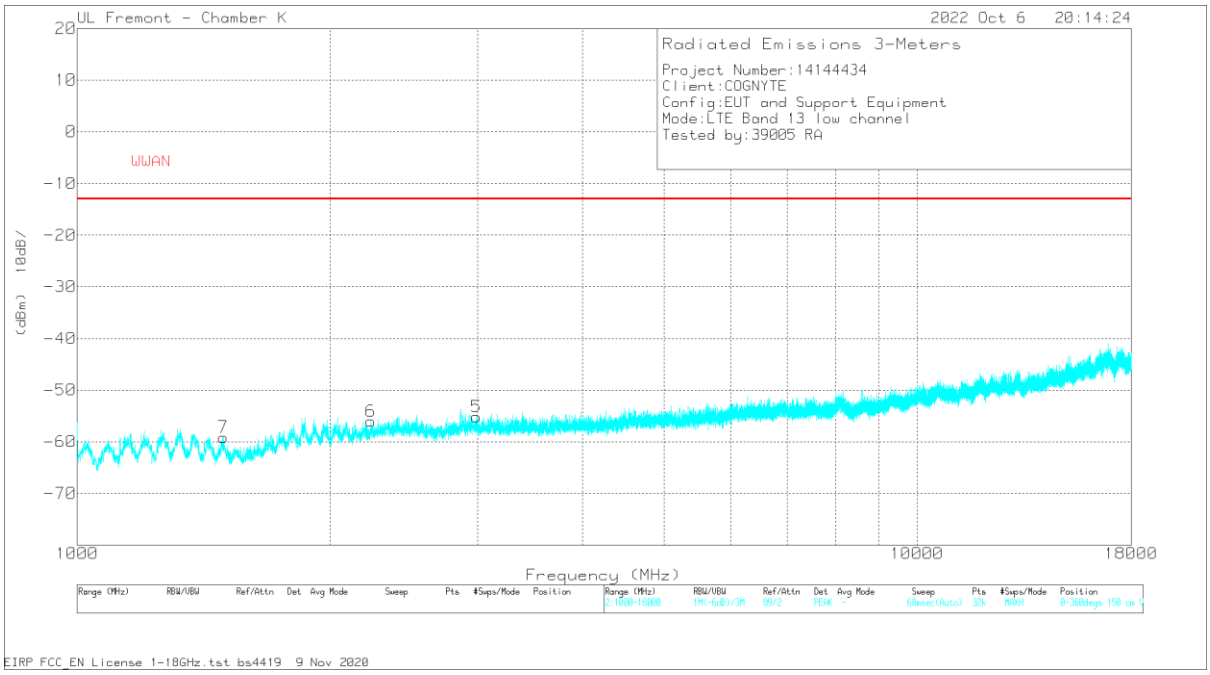
(f) or operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals. (-70 dBW/MHz = -40dBm/MHz

QPSK LTE BAND 13 (5.0MHZ BANDWIDTH)

LOW CHANNEL RESULTS



HORIZONTAL



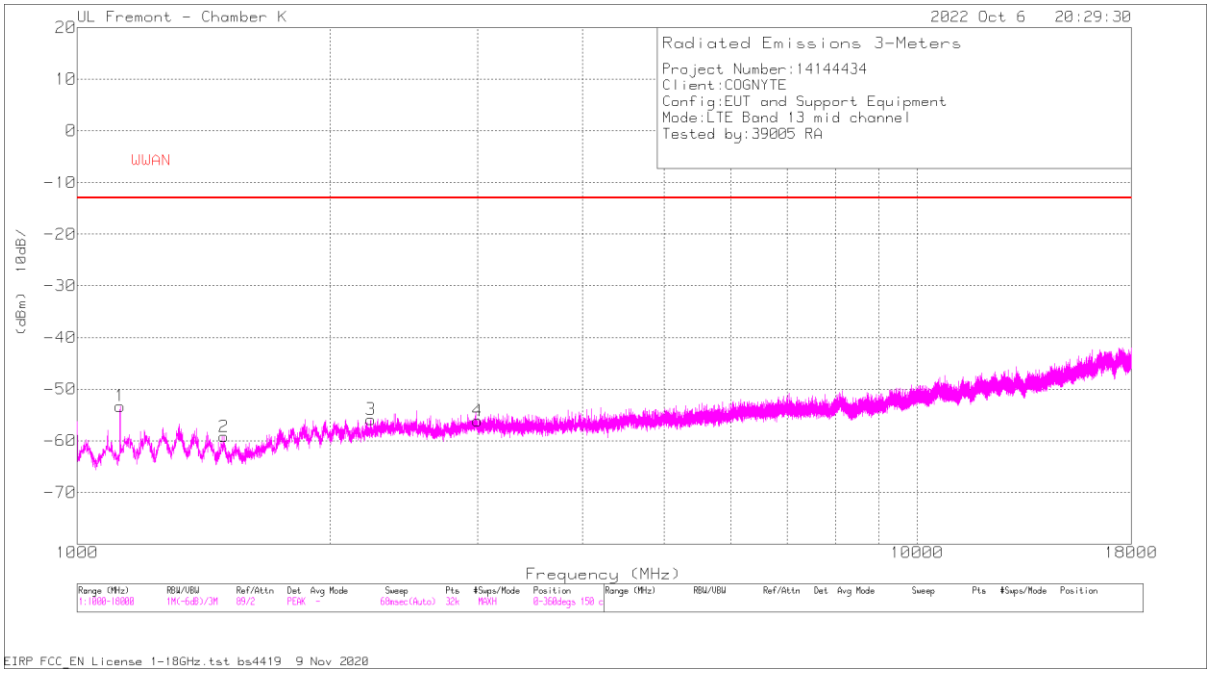
VERTICAL

Trace Markers

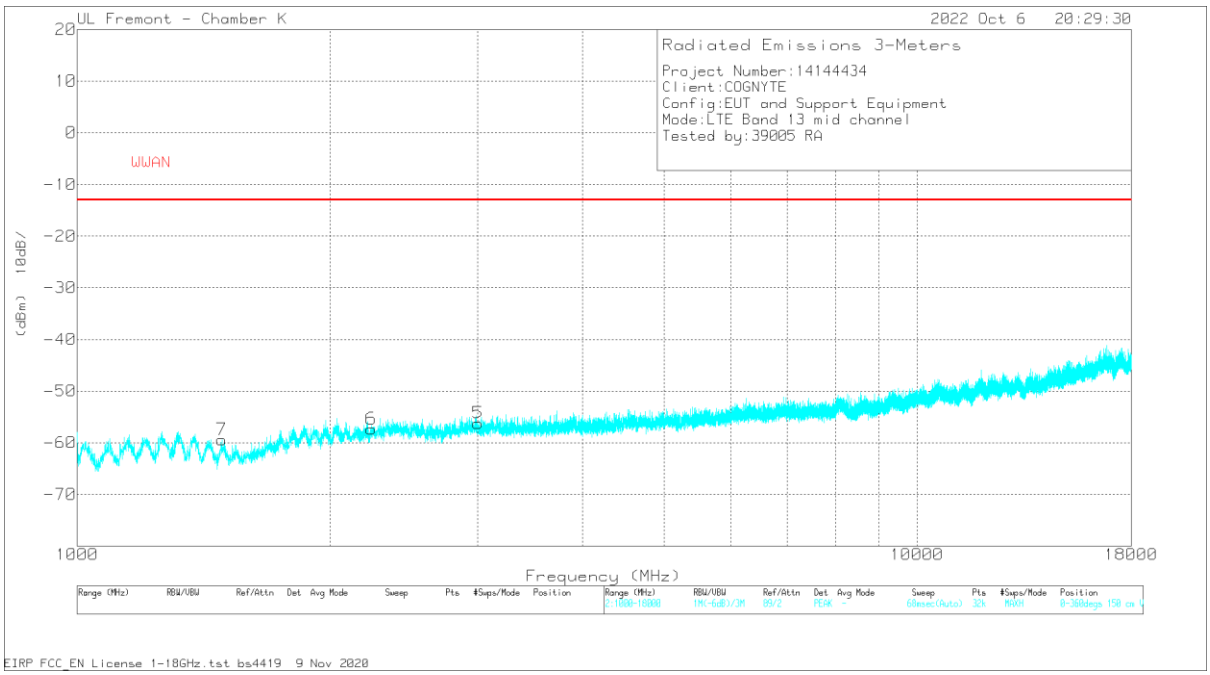
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1124.313	60.75	Pk	28.1	-47	-95.2	-53.35	-13	-40.35	0-360	150	H
2	1492.469	55.53	Pk	27.7	-46.2	-95.2	-58.17	-13	-45.17	0-360	150	H
3	2250.031	52.98	Pk	31.6	-45.4	-95.2	-56.02	-13	-43.02	0-360	150	H
4	2992.719	49.19	Pk	33.1	-42.9	-95.2	-55.81	-13	-42.81	0-360	150	H
5	2988.469	50.12	Pk	33.1	-43.2	-95.2	-55.18	-13	-42.18	0-360	150	V
6	2238.875	53.16	Pk	31.6	-45.6	-95.2	-56.04	-13	-43.04	0-360	150	V
7	1493	54.52	Pk	27.7	-46.2	-95.2	-59.18	-13	-46.18	0-360	150	V

Pk - Peak detector

MID CHANNEL RESULTS



HORIZONTAL



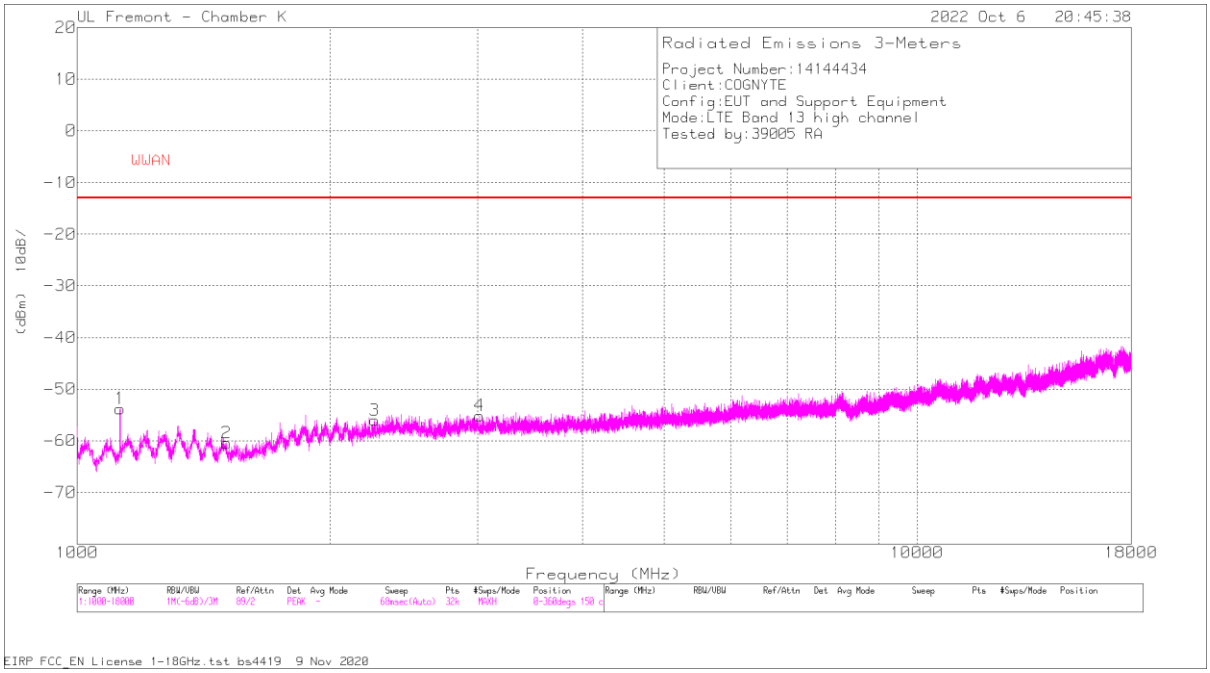
VERTICAL

Trace Markers

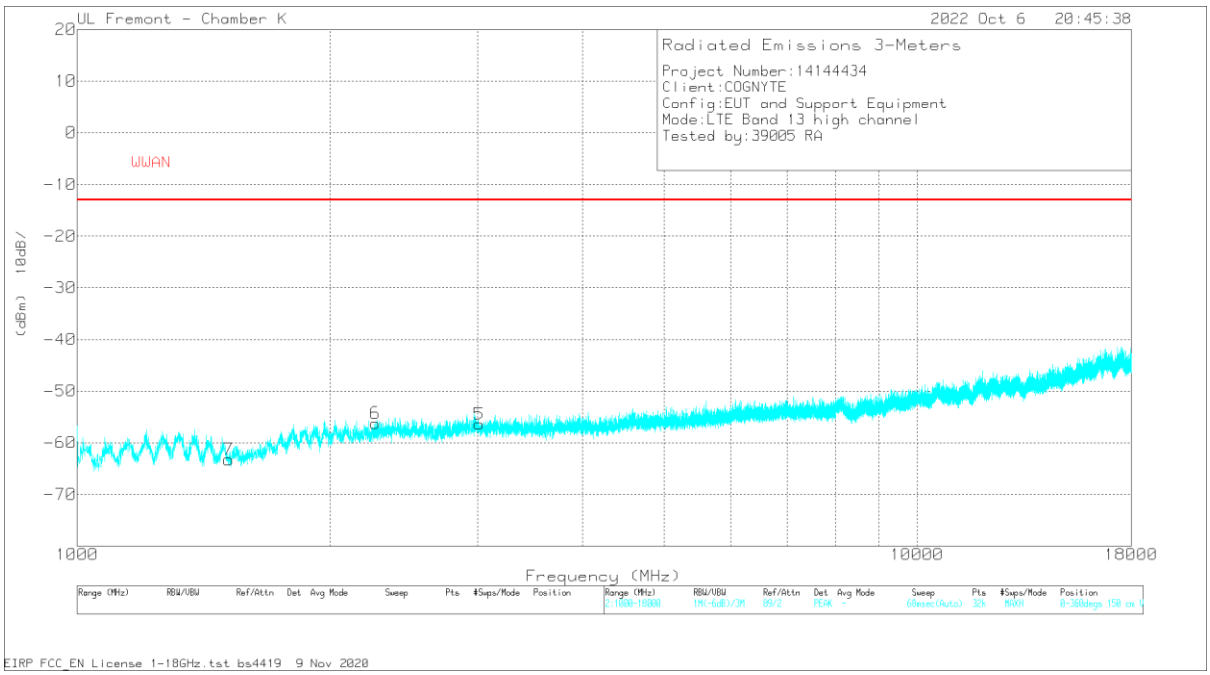
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1124.844	60.81	Pk	28.1	-47	-95.2	-53.29	-13	-40.29	0-360	150	H
2	1495.656	54.59	Pk	27.7	-46.3	-95.2	-59.21	-13	-46.21	0-360	150	H
3	2237.281	53.32	Pk	31.6	-45.6	-95.2	-55.88	-13	-42.88	0-360	150	H
4	2999.625	48.85	Pk	33.1	-42.9	-95.2	-56.15	-13	-43.15	0-360	150	H
5	3000.688	48.79	Pk	33.1	-42.9	-95.2	-56.21	-13	-43.21	0-360	150	V
6	2239.938	51.78	Pk	31.6	-45.5	-95.2	-57.32	-13	-44.32	0-360	150	V
7	1486.625	54.28	Pk	27.8	-46.3	-95.2	-59.42	-13	-46.42	0-360	150	V

Pk - Peak detector

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	WWAN	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1124.844	60.29	Pk	28.1	-47	-95.2	-53.81	-13	-40.81	0-360	150	H
2	1506.281	53.45	Pk	27.6	-46.3	-95.2	-60.45	-13	-47.45	0-360	150	H
3	2262.25	52.85	Pk	31.7	-45.4	-95.2	-56.05	-13	-43.05	0-360	150	H
4	3015.563	49.98	Pk	33	-42.9	-95.2	-55.12	-13	-42.12	0-360	150	H
5	3010.781	48.91	Pk	33	-43.1	-95.2	-56.39	-13	-43.39	0-360	150	V
6	2265.969	52.55	Pk	31.7	-45.3	-95.2	-56.25	-13	-43.25	0-360	150	V
7	1514.781	50.75	Pk	27.5	-46.3	-95.2	-63.25	-13	-50.25	0-360	150	V

Pk - Peak detector

**NOTE for test engineer to check test data: if emissions in 1559-1610 MHz bandwidth is less than 700Hz BW, then the limit is -50dBm/MHz. If more than 700Hz BW, then shall be limited to −40 dBm/MHz.

*** Emissions in the GPS band were wideband emissions therefore the -40dBm/MHz limit was used.**