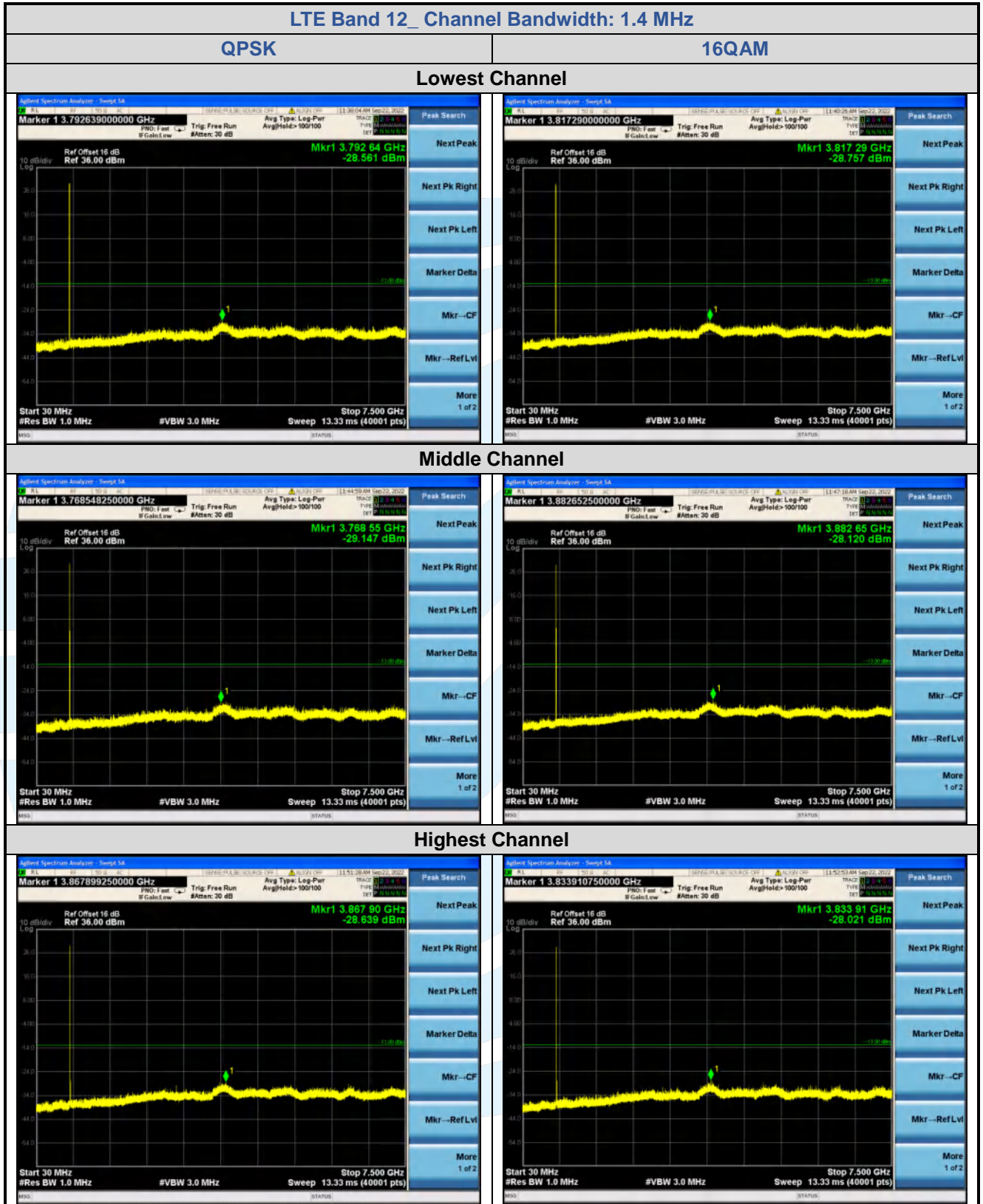
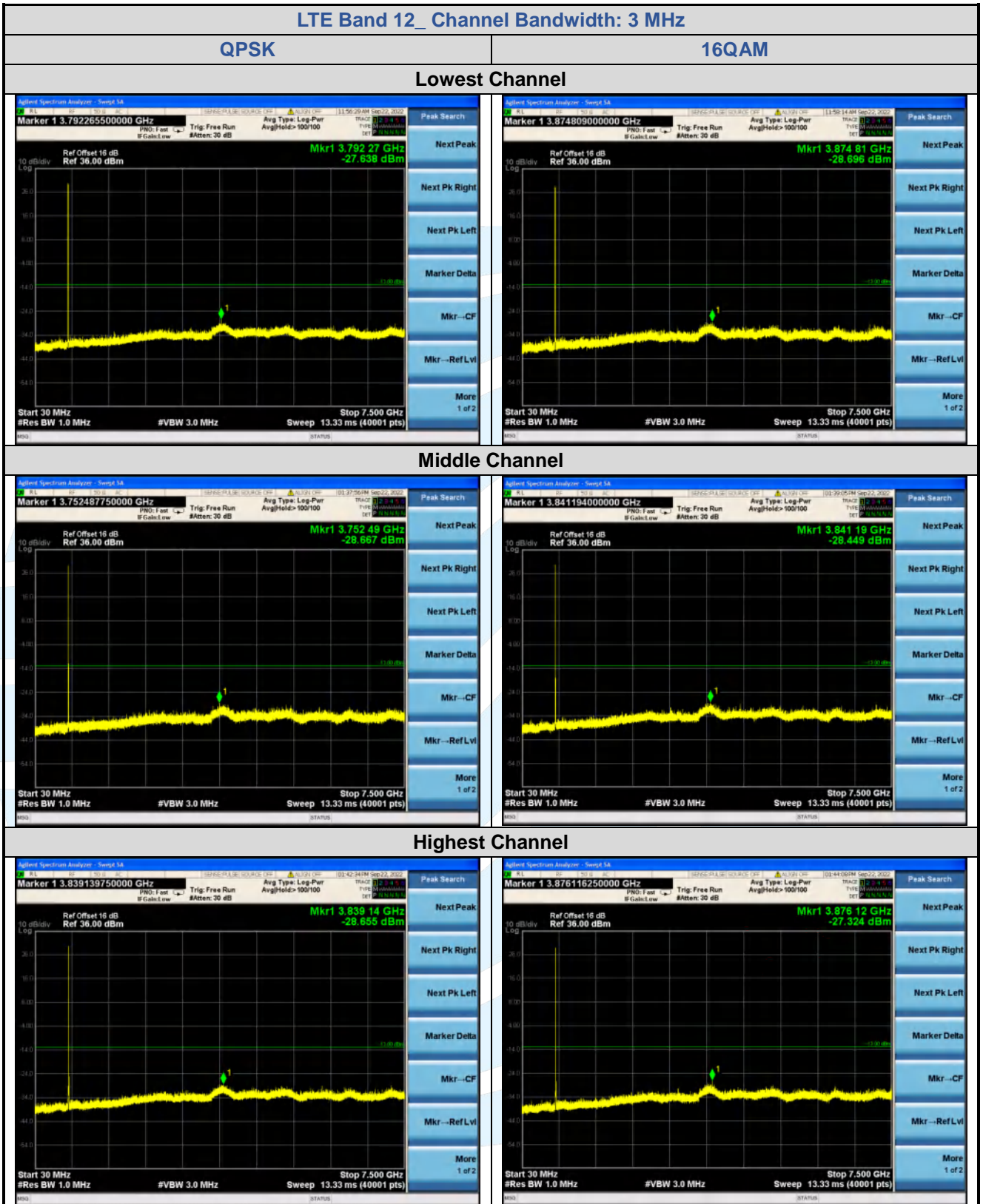
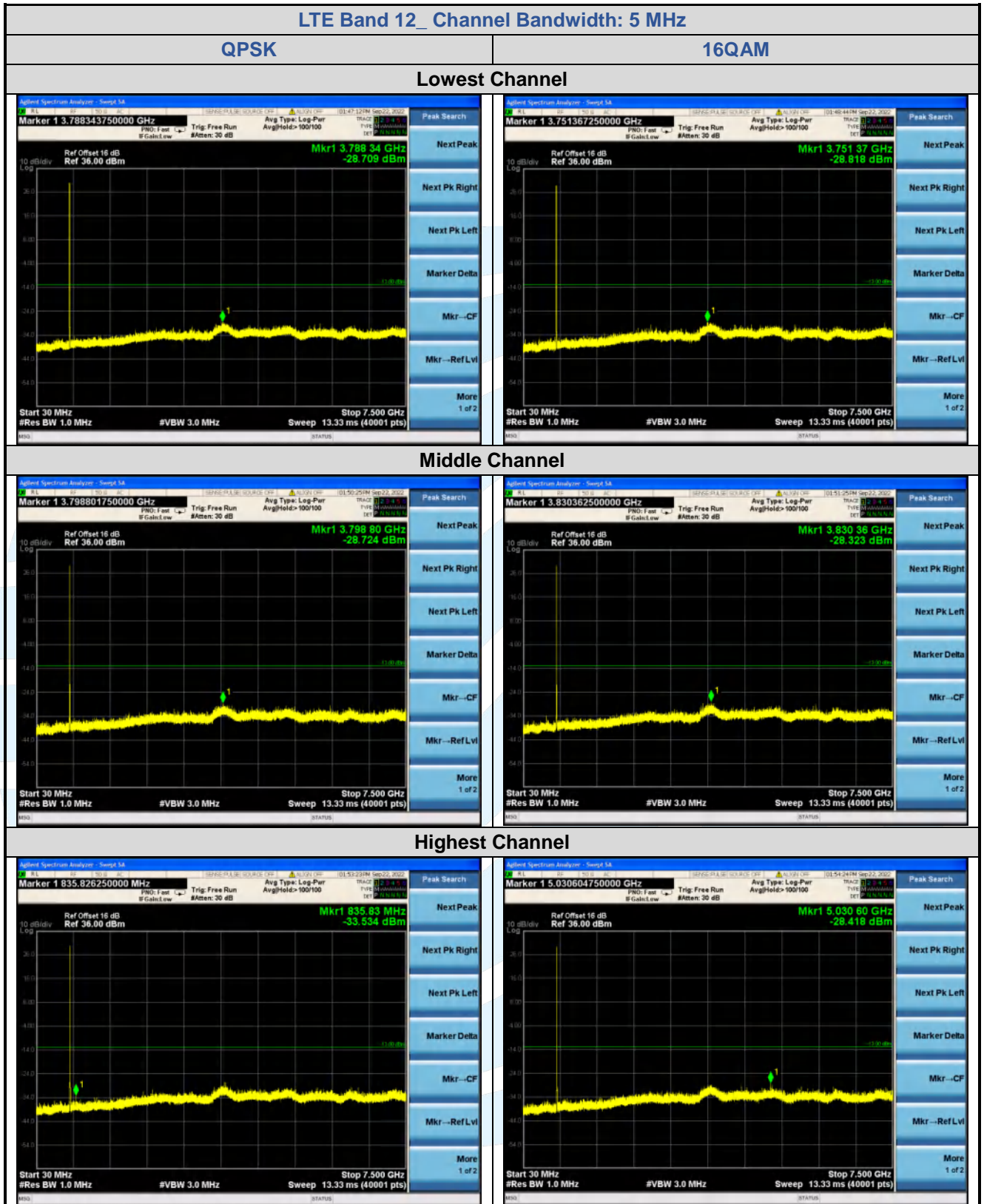
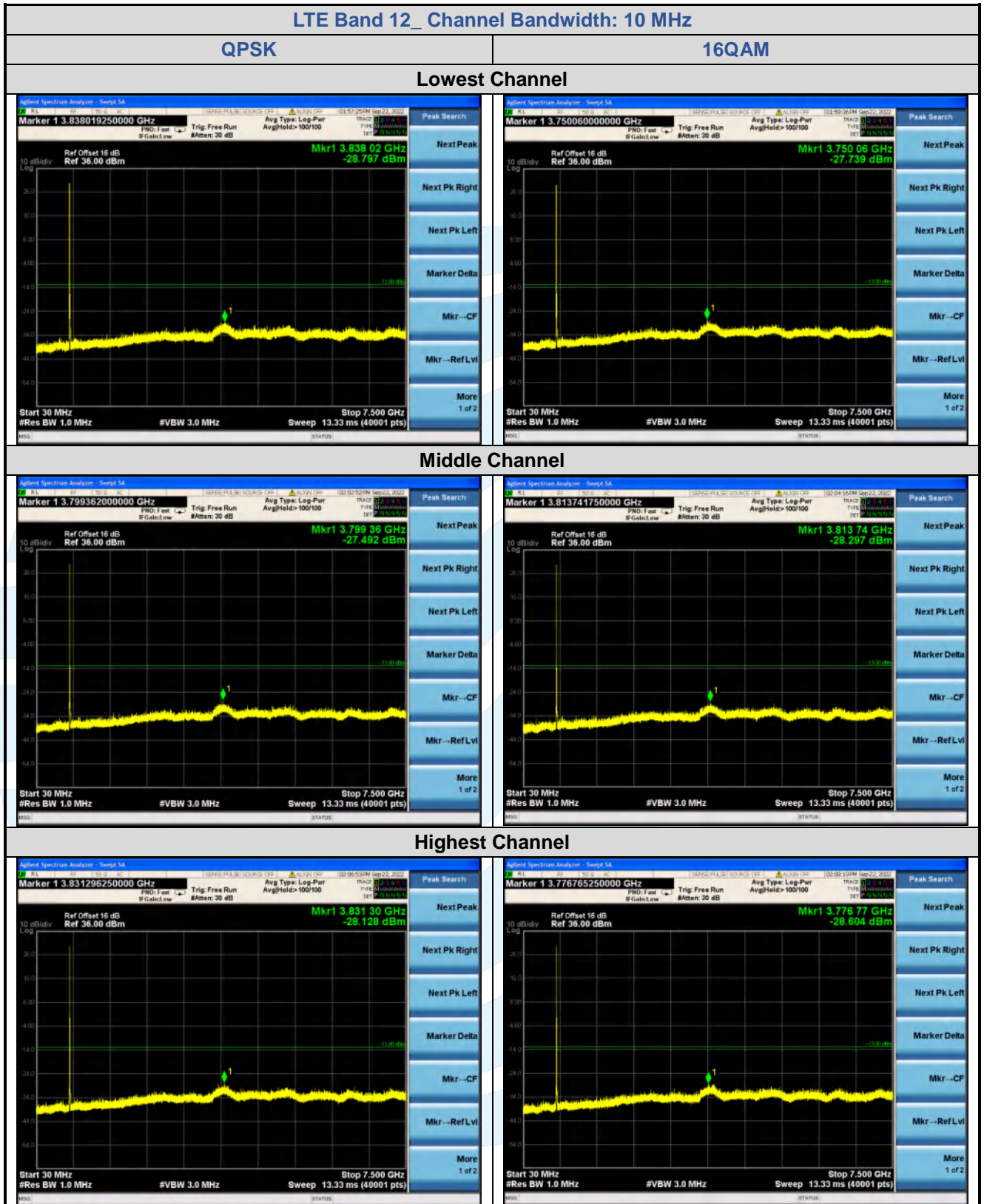


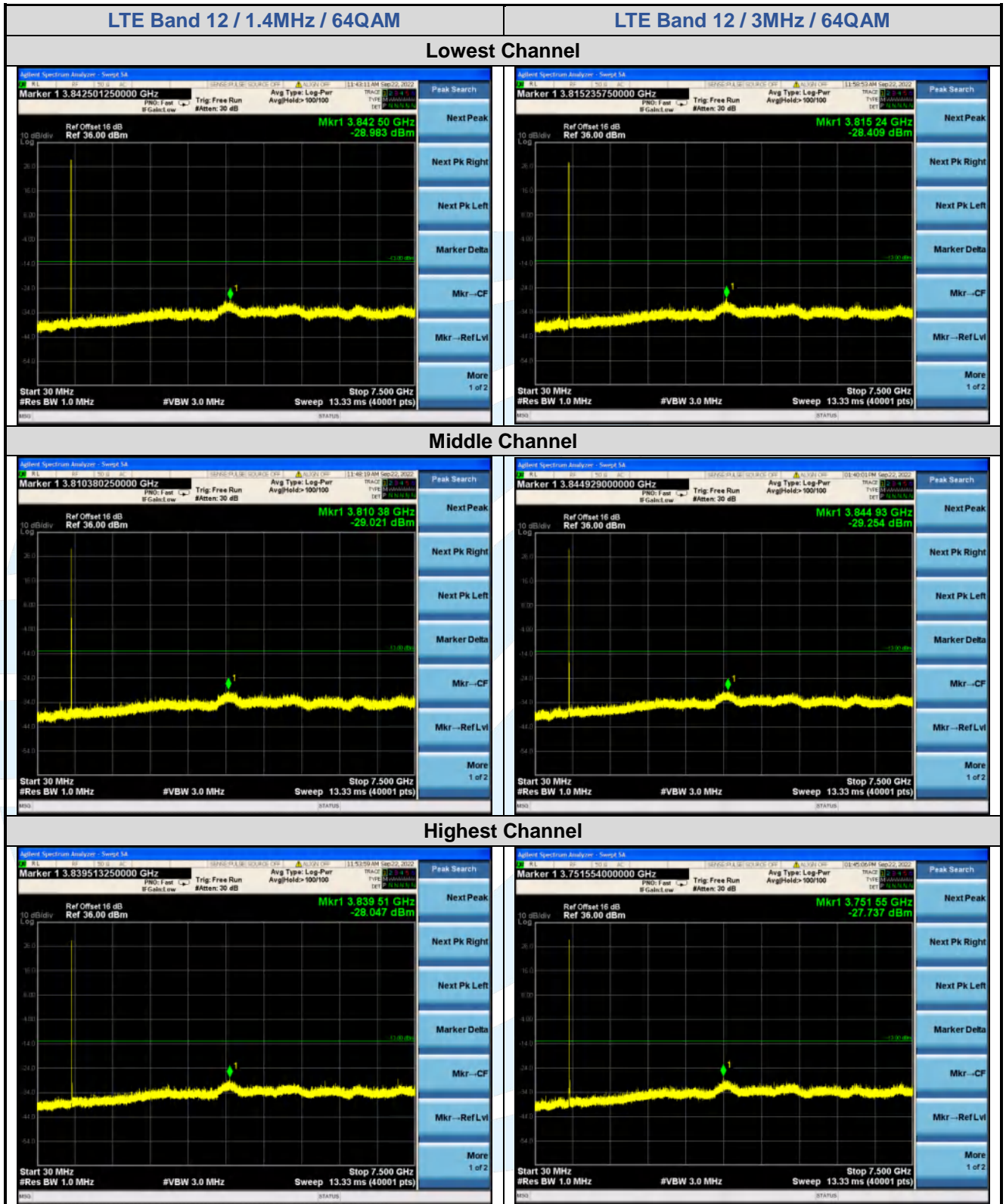
5.7.4 LTE Band 12

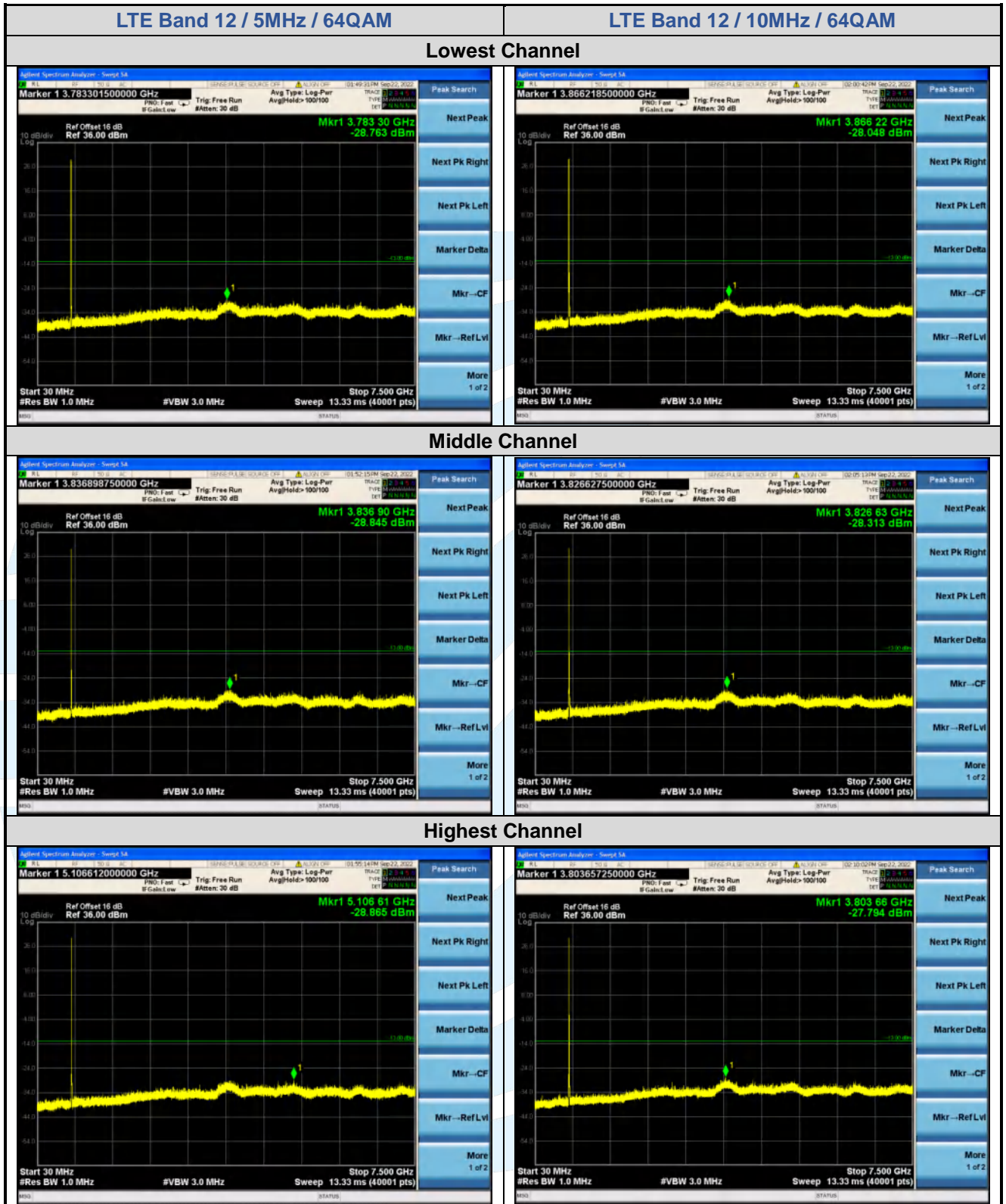




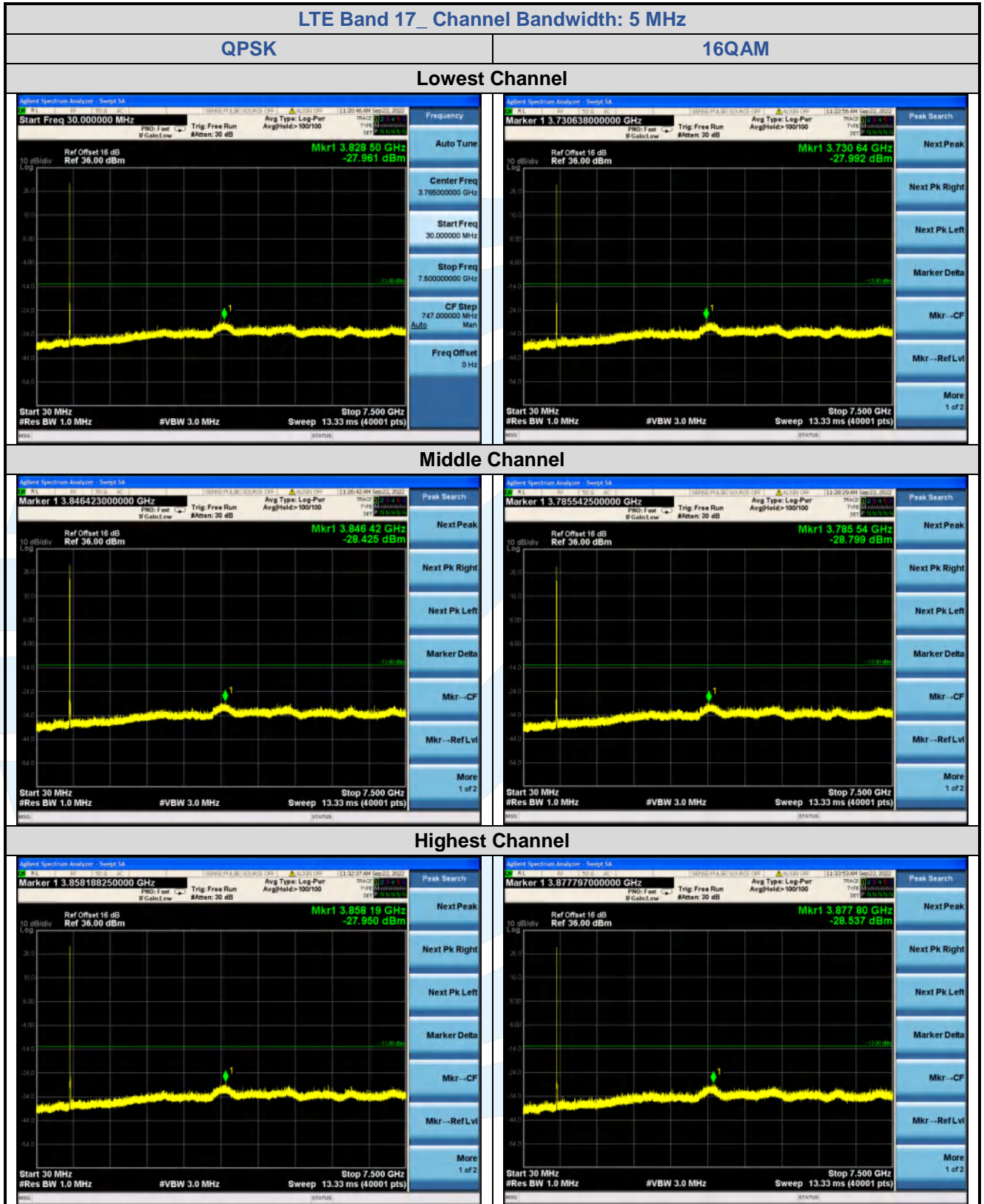


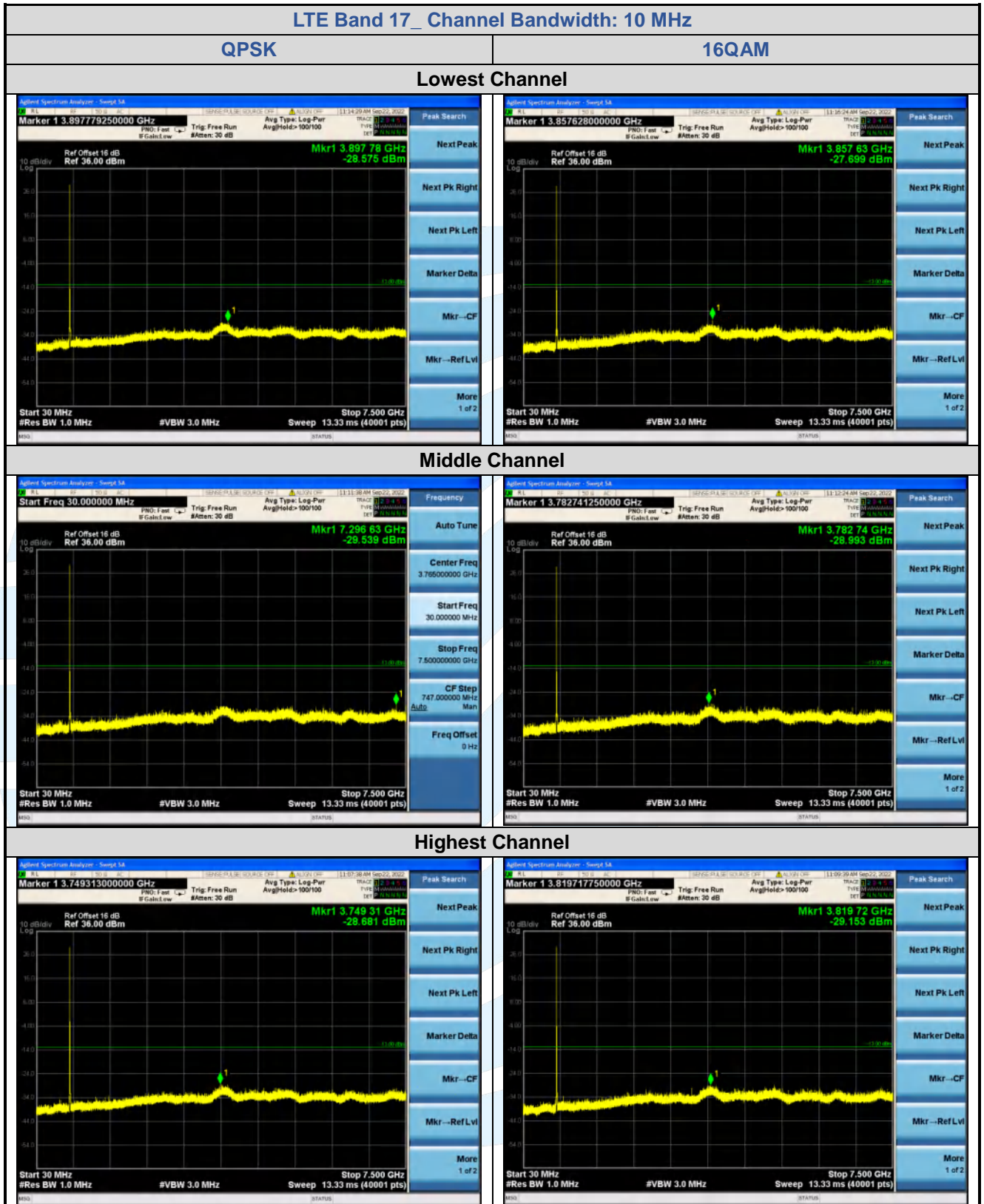


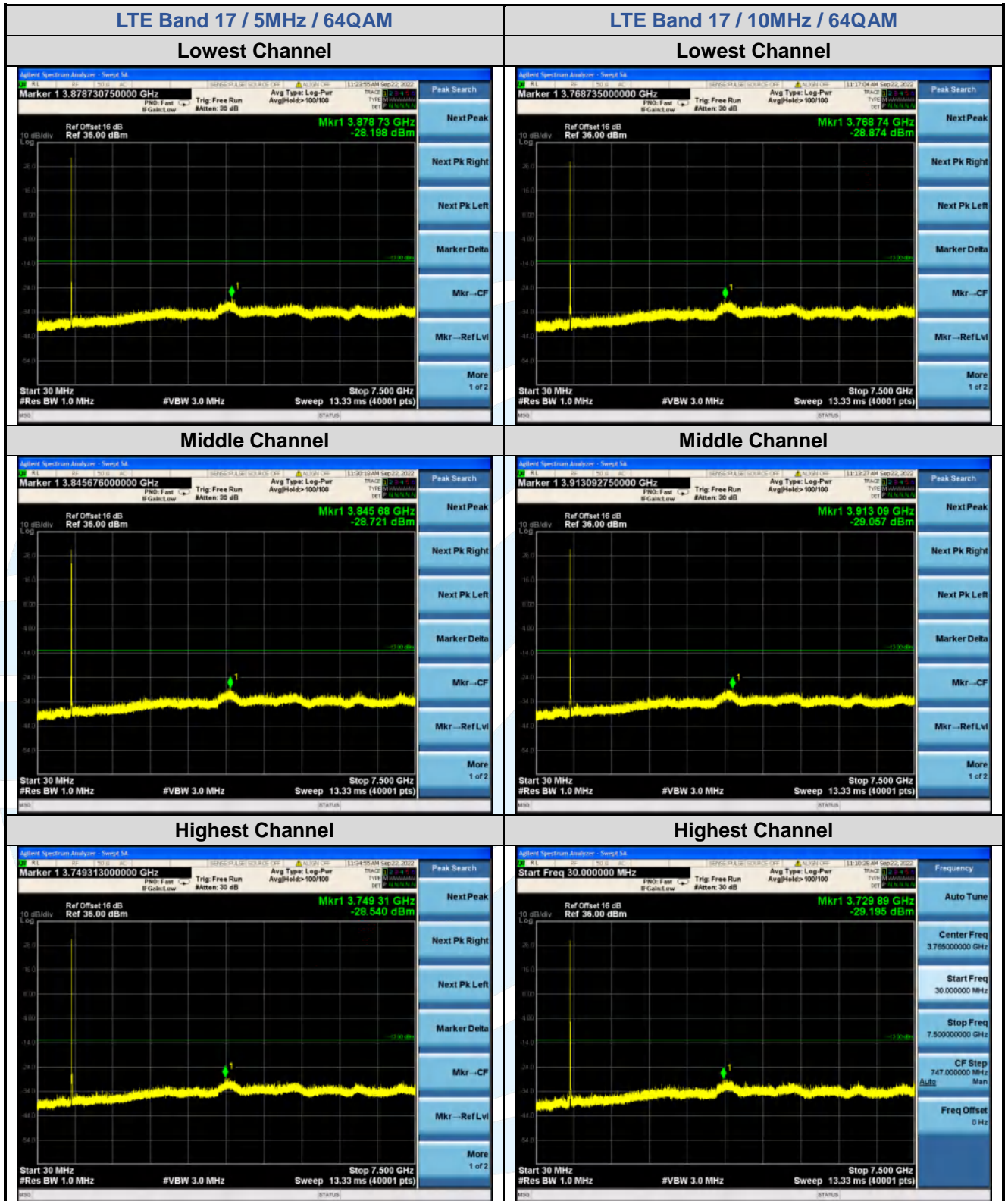




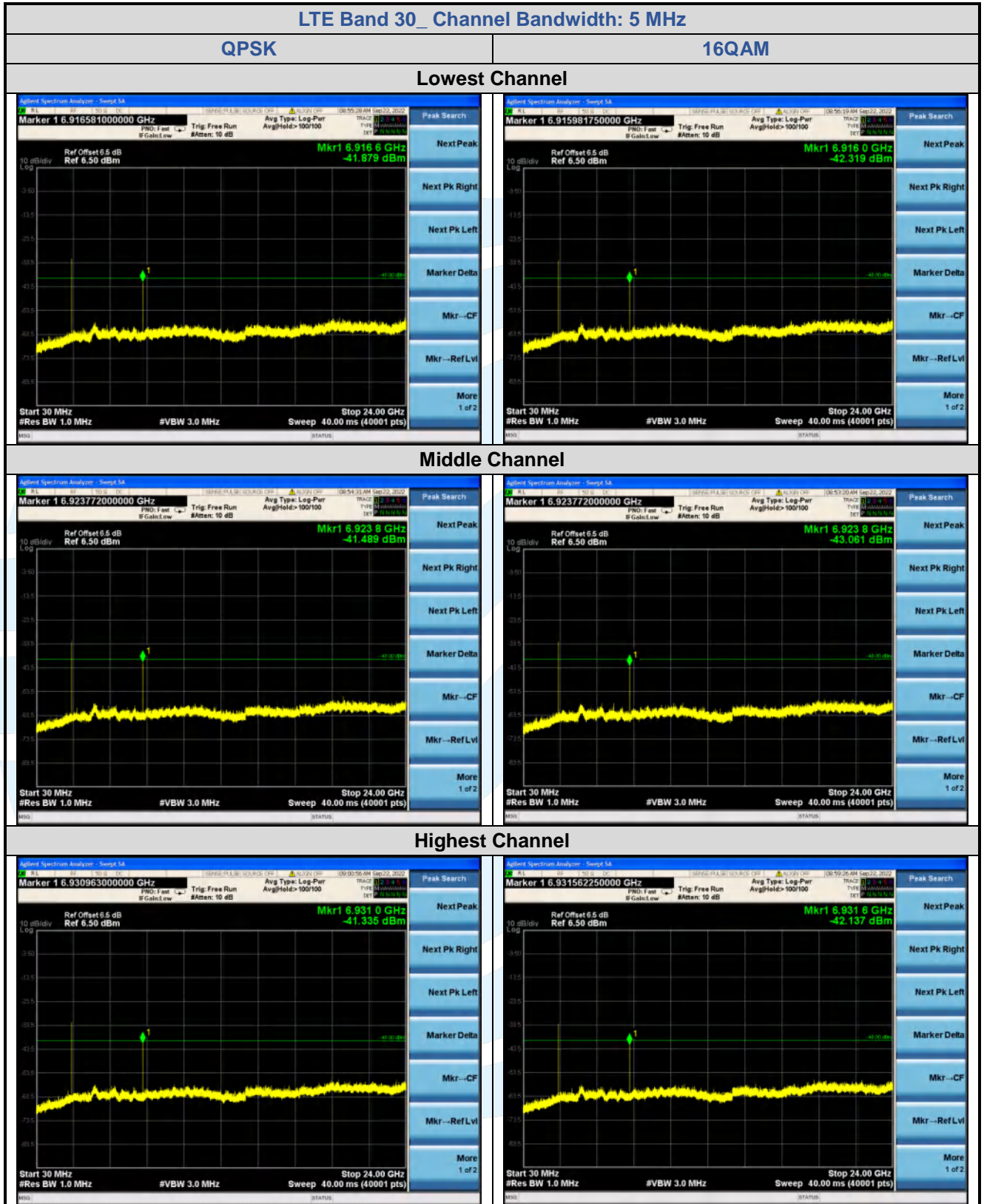
5.7.5 LTE Band 17

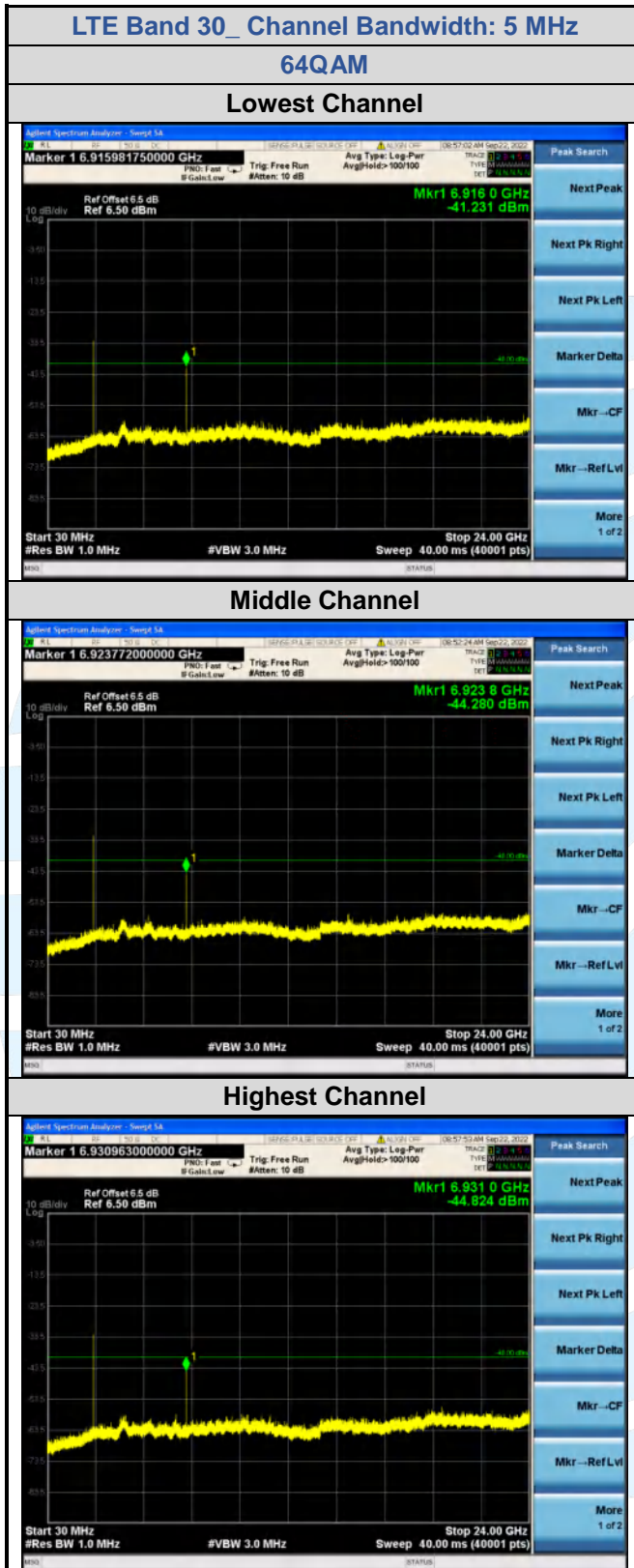


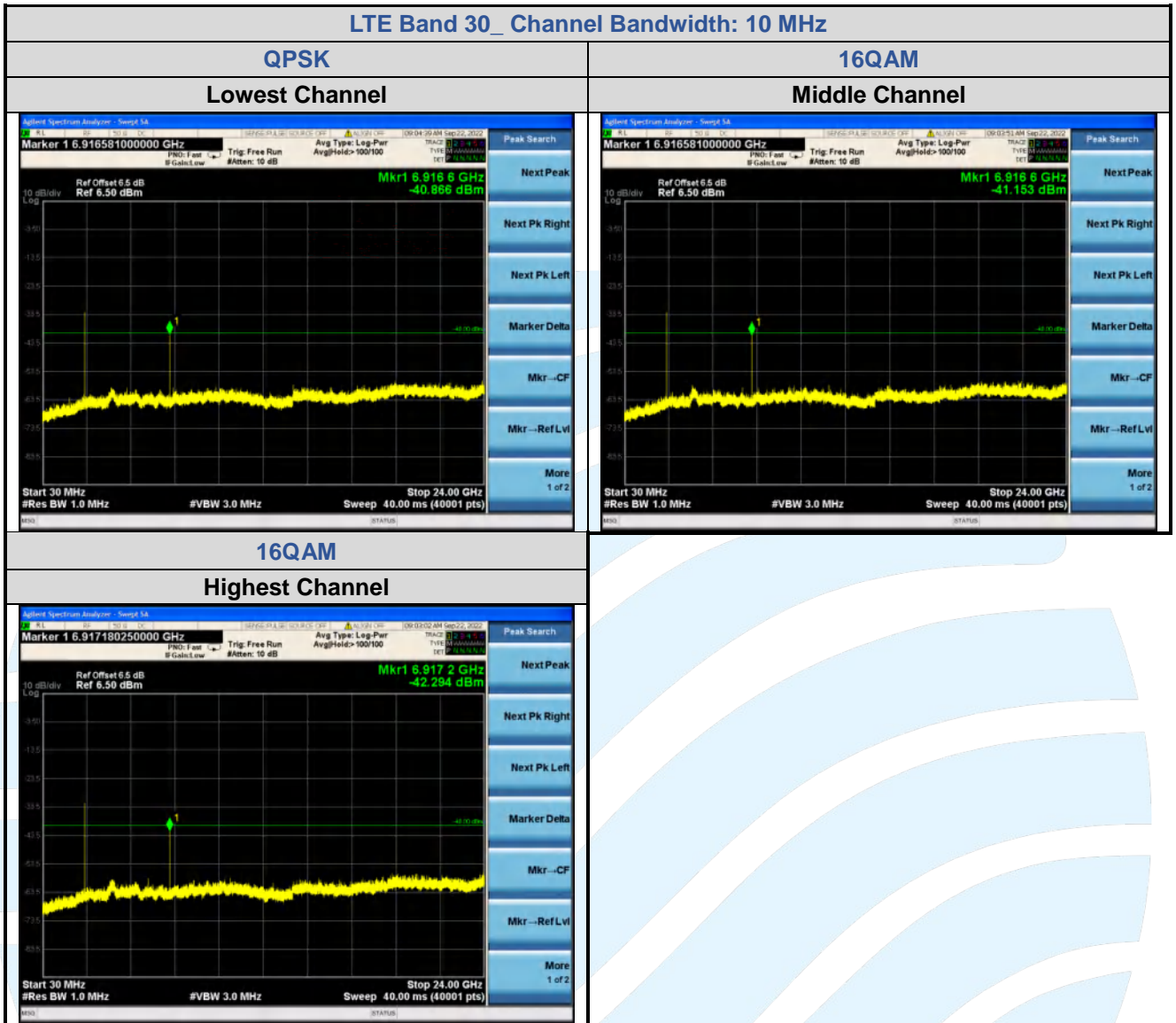




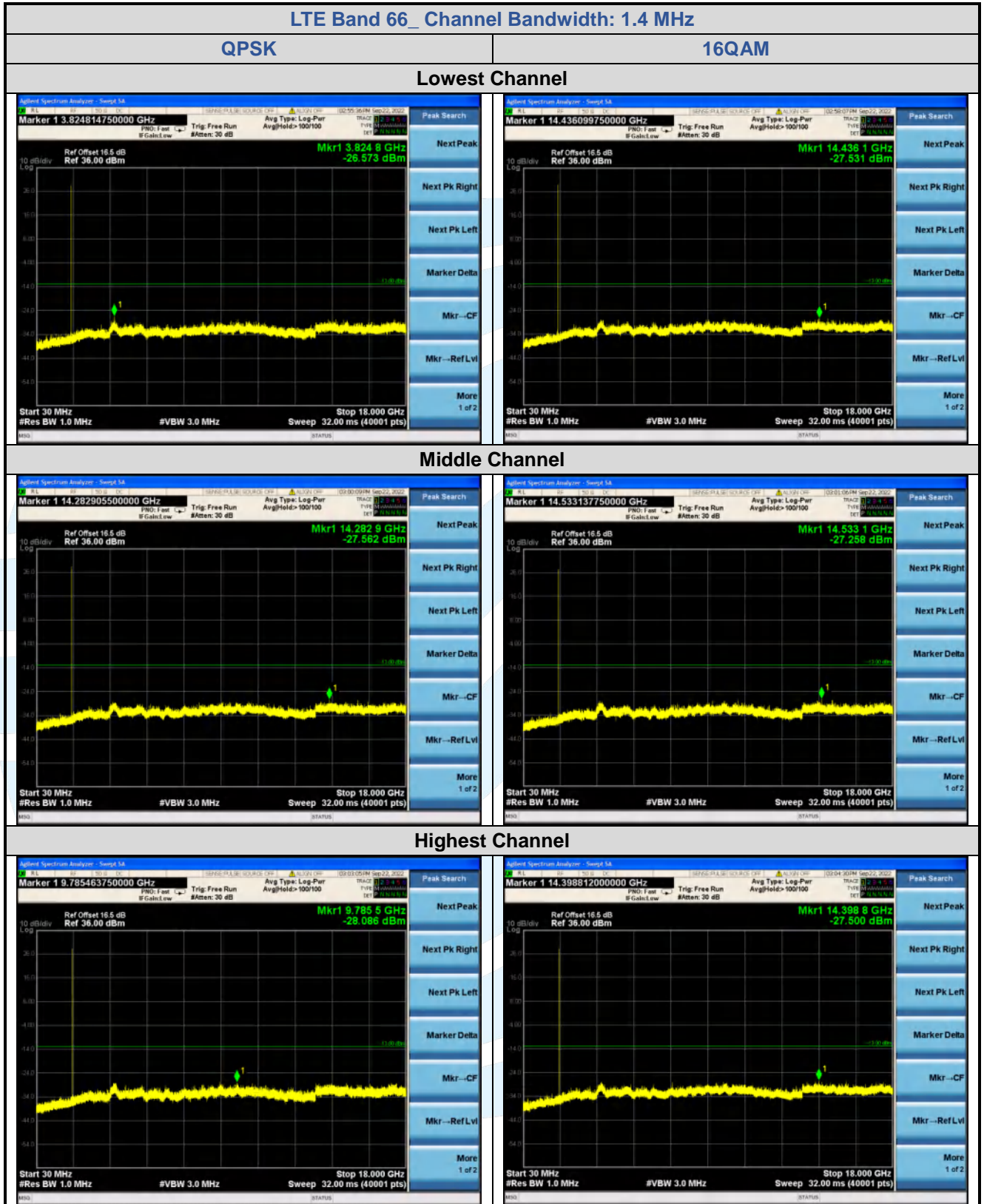
5.7.6 LTE Band 30

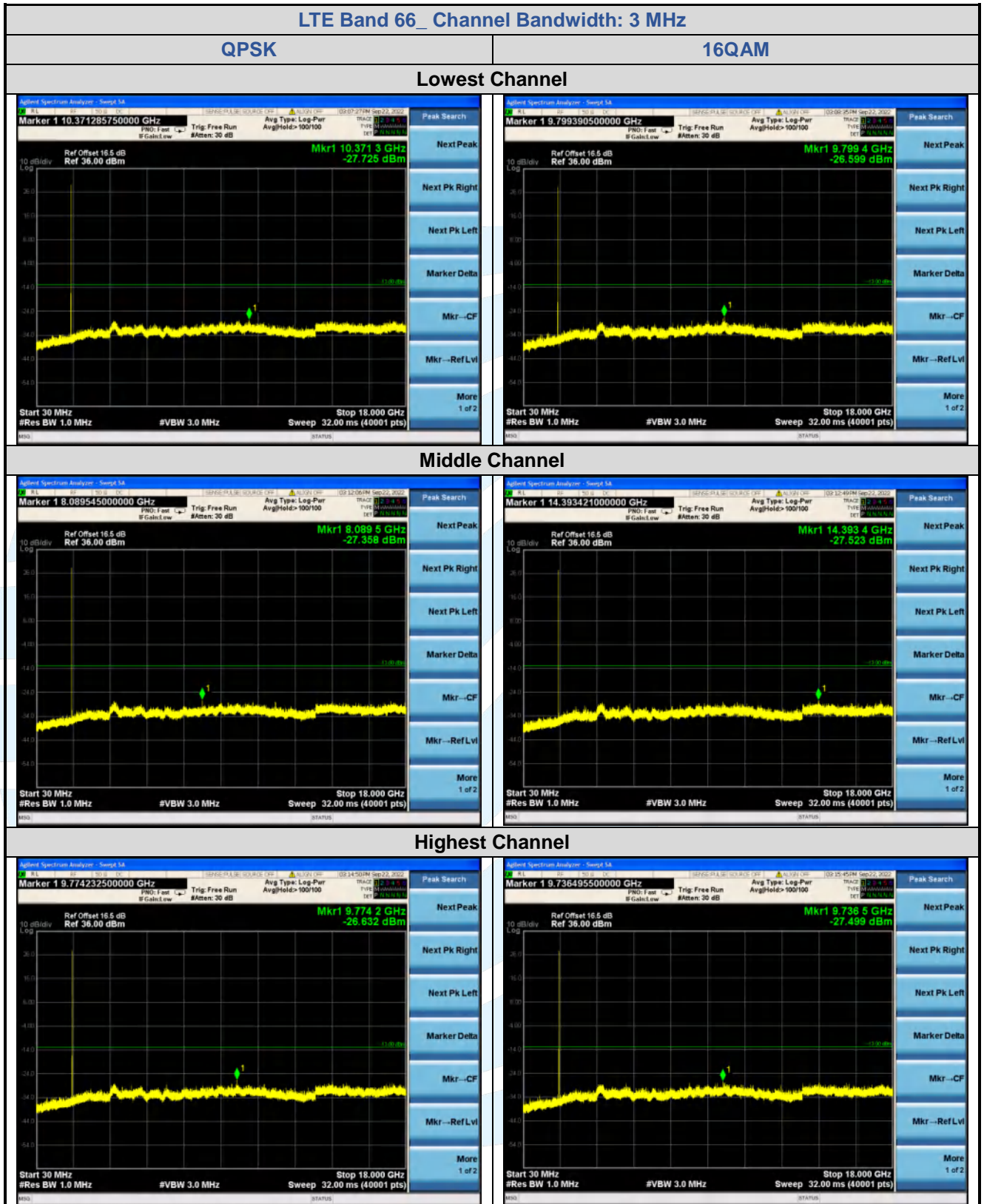


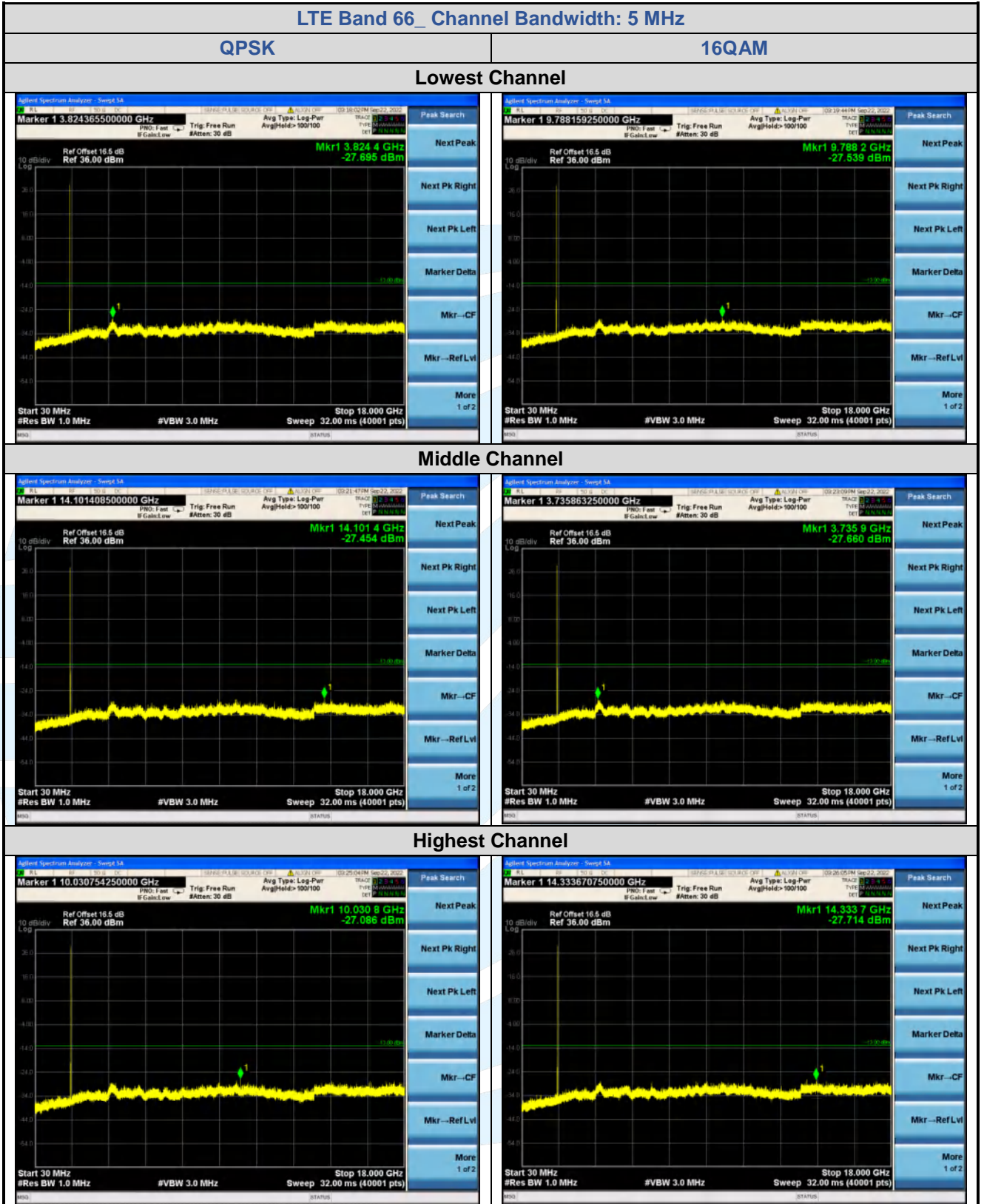


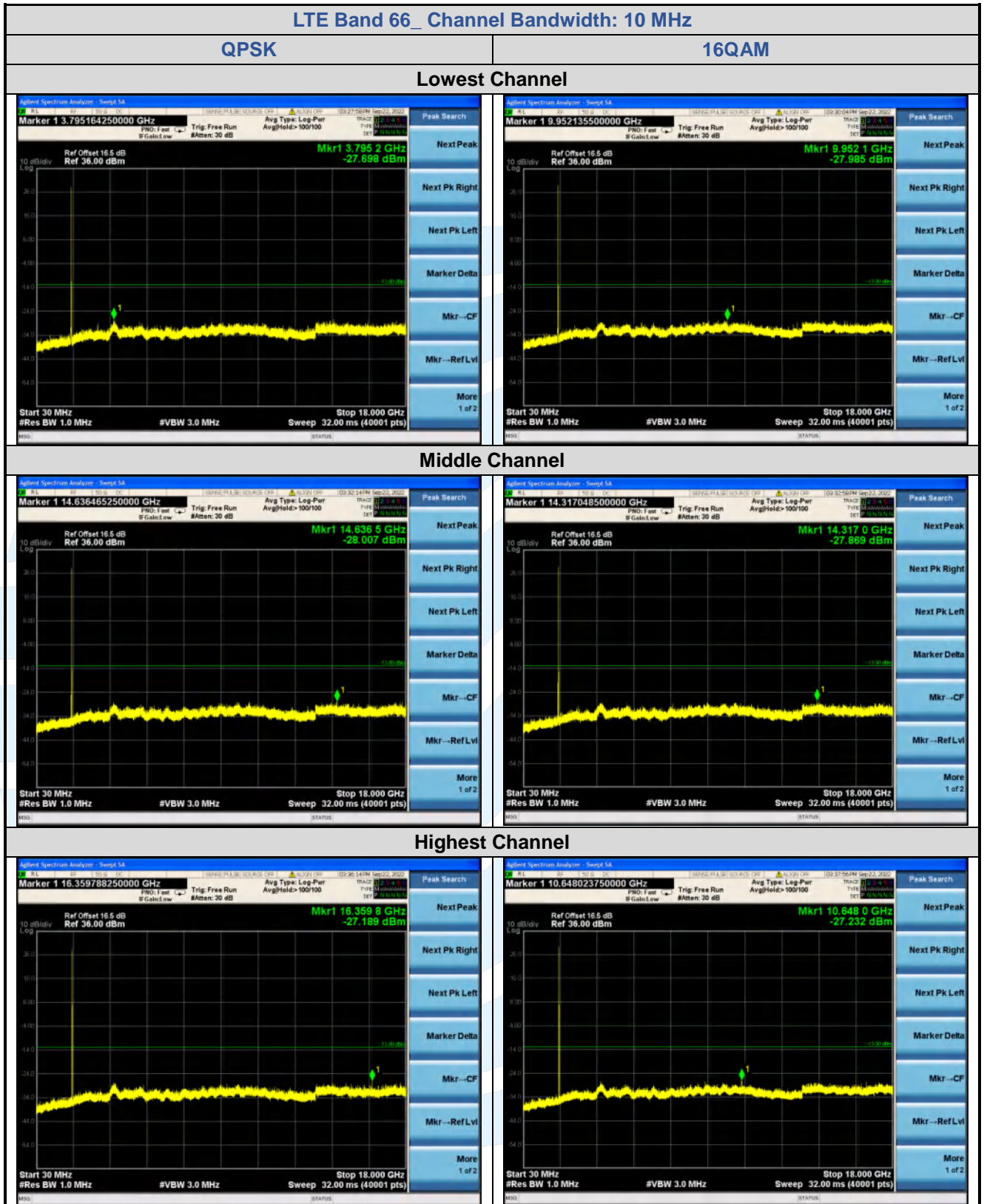


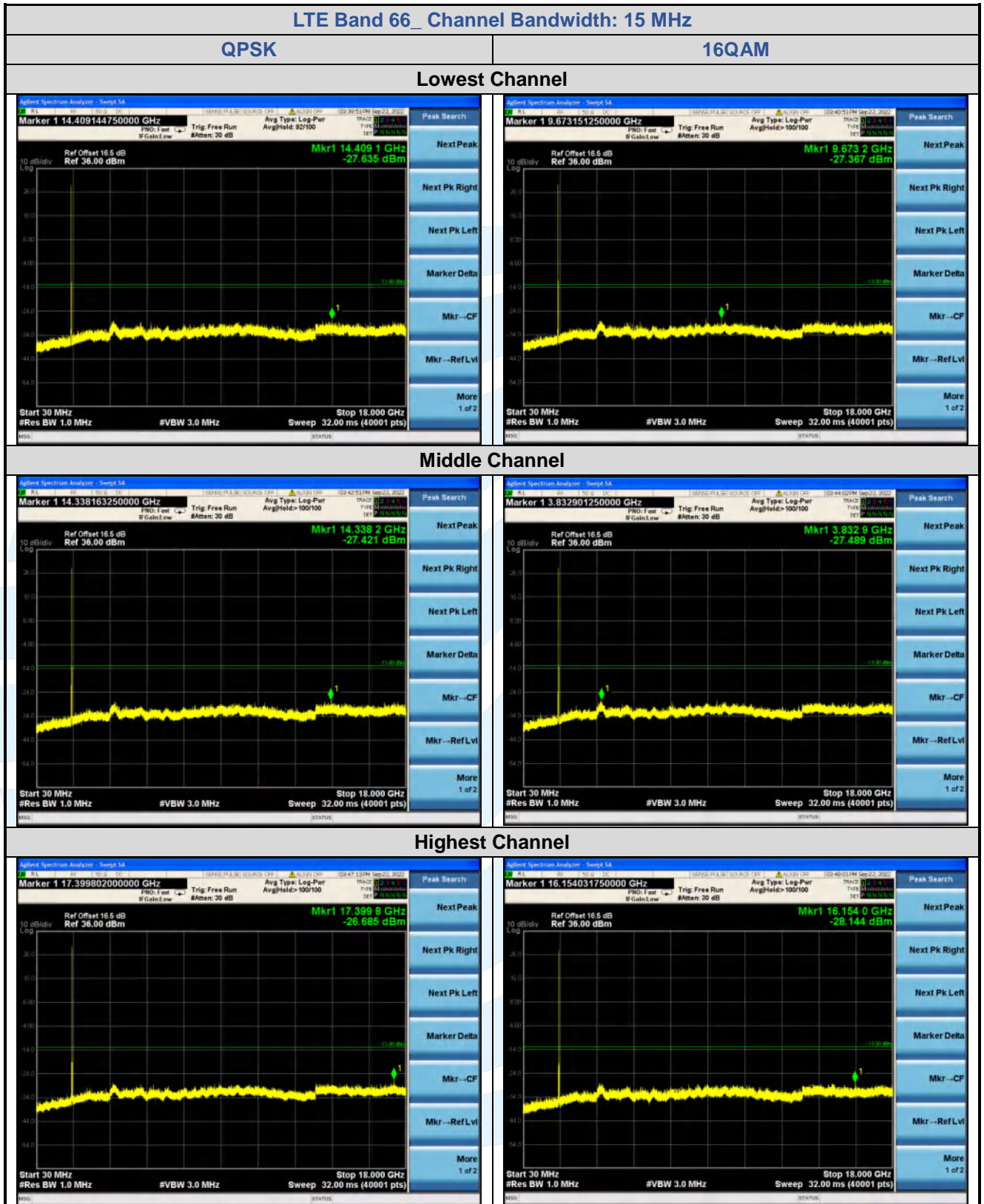
5.7.7 LTE Band 66

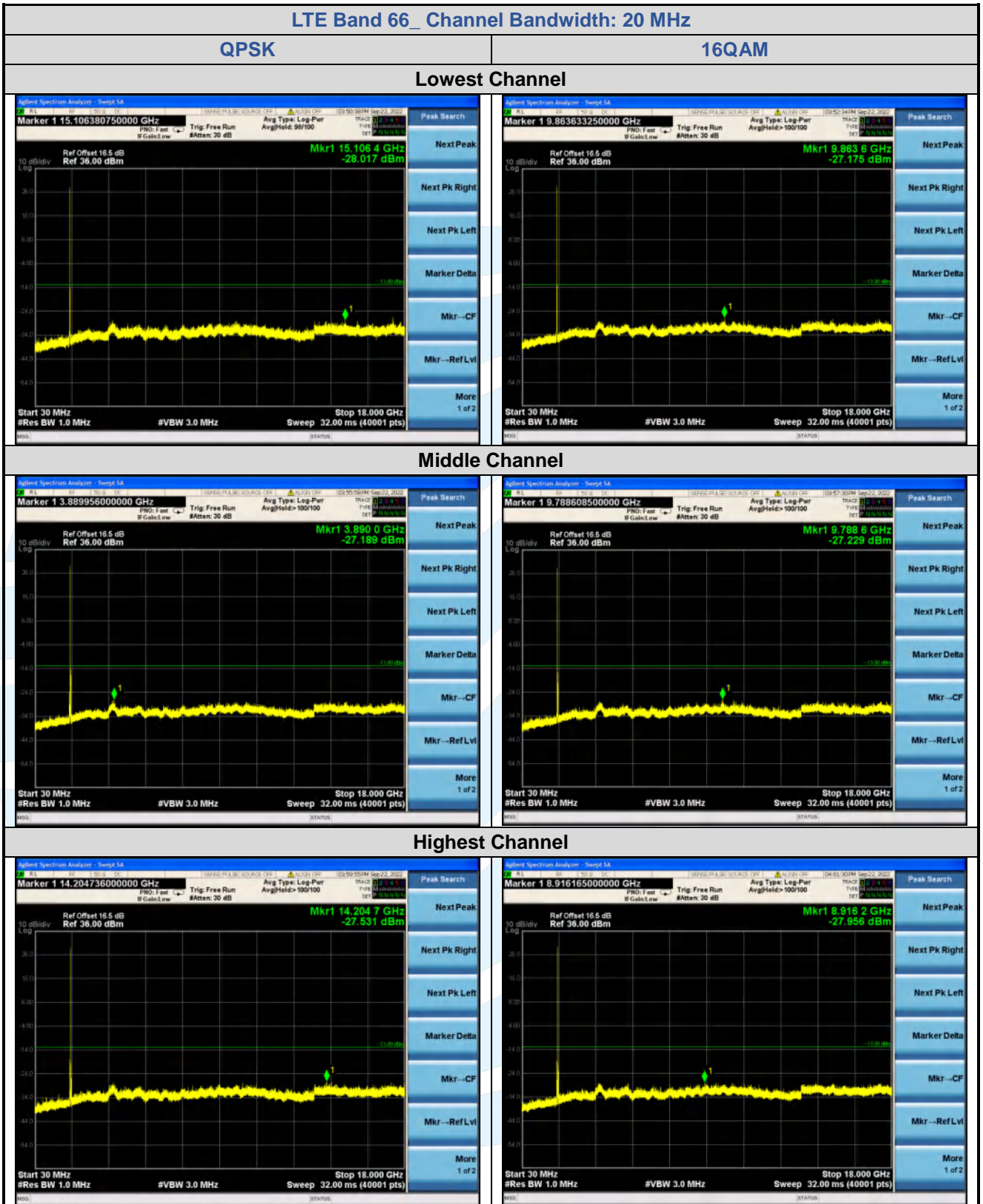


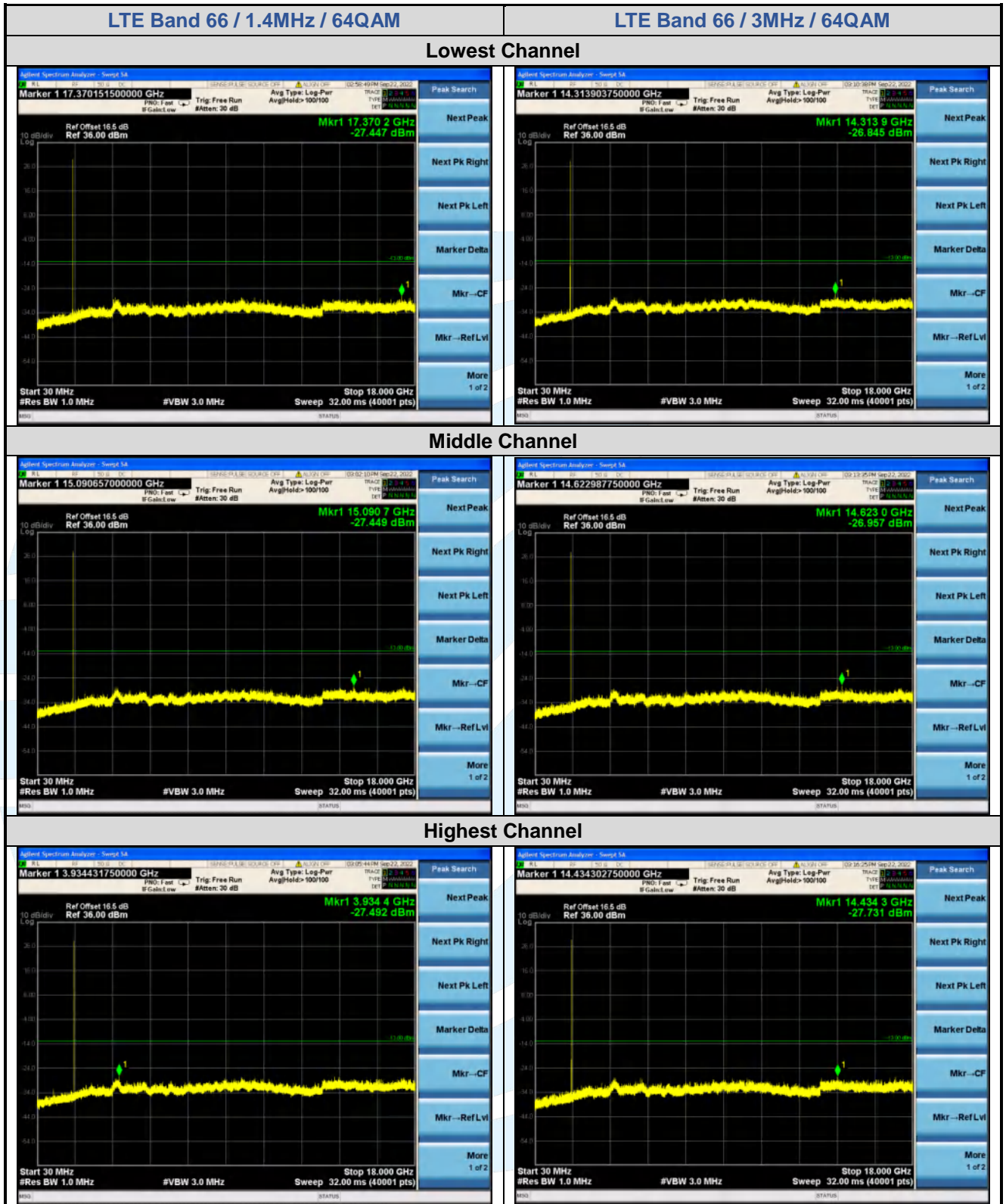


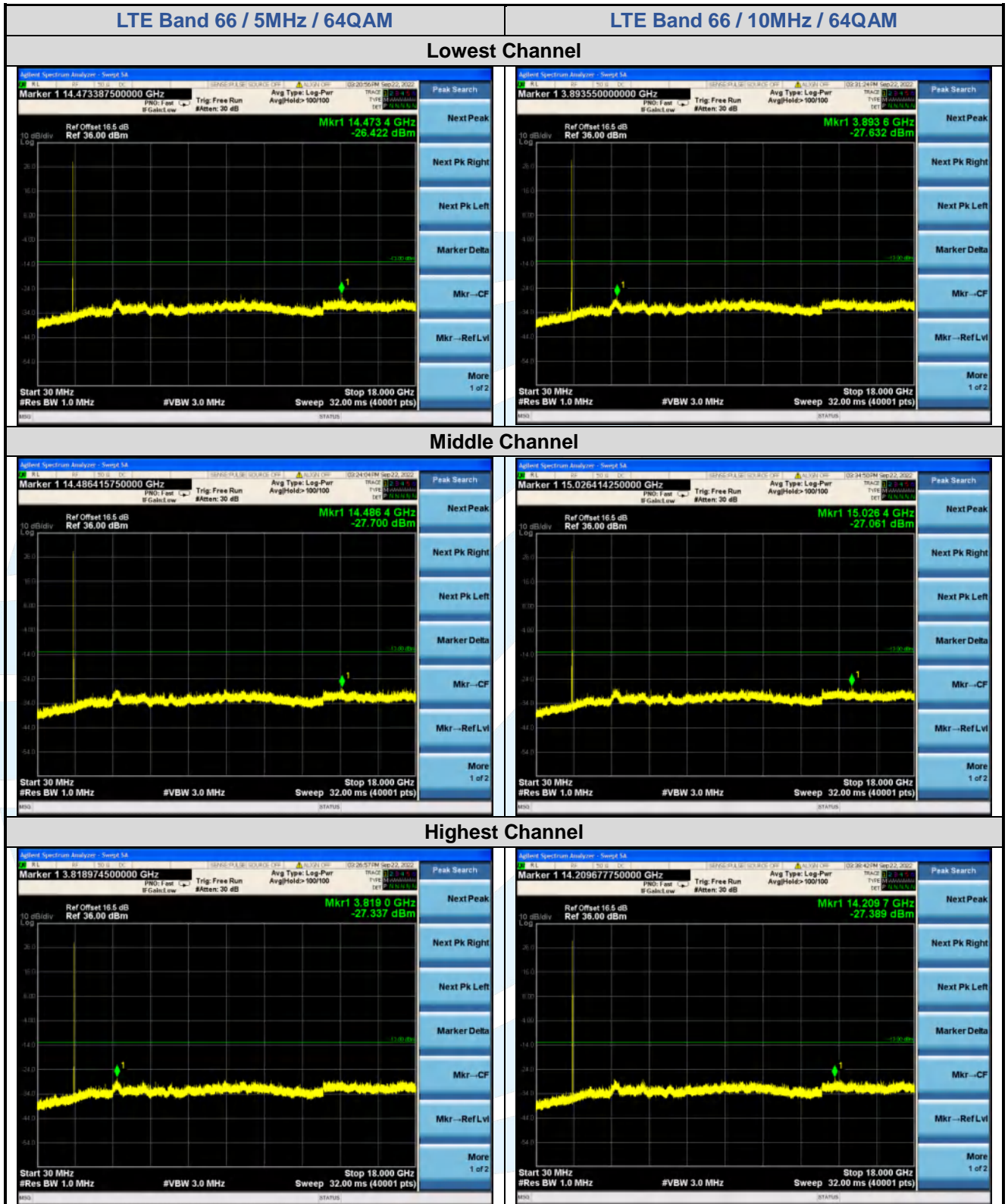


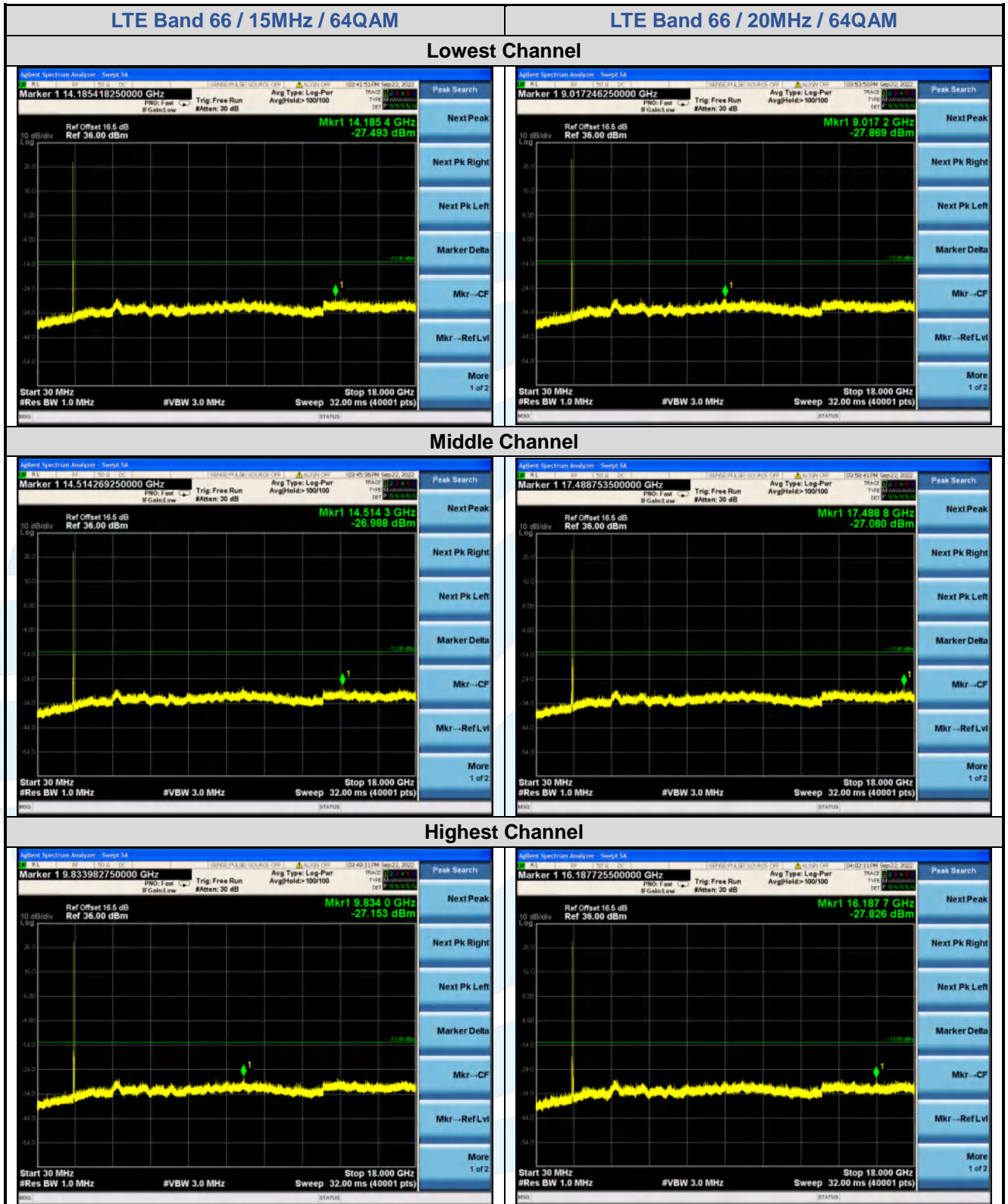












5.8 FIELD STRENGTH OF SPURIOUS RADIATION

Test Requirement: LTE Band 2: FCC 47 CFR Part 24.238(a)
 LTE Band 4 & LTE Band 66: FCC 47 CFR Part 27.53(h)
 LTE Band 5: FCC 47 CFR Part 22.917(a)
 LTE Band 12 & Band 17: FCC 47 CFR Part 27.53(g)
 LTE Band 30: FCC 47 CFR Part 27.53(a)(4)

Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009 MHz-30 MHz	Peak	10 kHz	30 KHz	Peak
30 MHz-1 GHz	Quasi-peak	100 kHz	300 KHz	Peak
Above 1 GHz	Peak	1 MHz	3 MHz	Peak

Limits:

FCC 47 CFR Part 24.238(a), 27.53(h)(1), 22.917(a), 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. The emission limit equal to -13 dBm.

FCC 47 CFR Part 27.53(a)(4): For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:

- (i) By a factor of not less than: $43 + 10 \log(P)$ dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than $55 + 10 \log(P)$ dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than $61 + 10 \log(P)$ dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than $67 + 10 \log(P)$ dB on all frequencies between 2328 and 2337 MHz;
- (ii) By a factor of not less than $43 + 10 \log(P)$ dB on all frequencies between 2300 and 2305 MHz, $55 + 10 \log(P)$ dB on all frequencies between 2296 and 2300 MHz, $61 + 10 \log(P)$ dB on all frequencies between 2292 and 2296 MHz, $67 + 10 \log(P)$ dB on all frequencies between 2288 and 2292 MHz, and $70 + 10 \log(P)$ dB below 2288 MHz;
- (iii) By a factor of not less than $43 + 10 \log(P)$ dB on all frequencies between 2360 and 2365 MHz, and not less than $70 + 10 \log(P)$ dB above 2365 MHz.

Test Setup: Refer to section 4.2.1 for details.

Test Procedures: KDB 971168 D01v03r01 Section 7

Equipment Used: Refer to section 3 for details.

Test Result: Pass

The measurement data as follows:

5.8.1 LTE Band 2

LTE Band 2_ 20 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	33.570	-74.30	4.68	-69.62	-13.00	-56.62	Horizontal
2	392.738	-70.77	4.89	-65.88	-13.00	-52.88	Horizontal
3	958.714	-68.51	14.29	-54.22	-13.00	-41.22	Horizontal
4	3720.000	-45.26	7.65	-37.61	-13.00	-24.61	Horizontal
5	5580.000	-58.04	11.70	-46.34	-13.00	-33.34	Horizontal
6	30.639	-73.00	5.09	-67.91	-13.00	-54.91	Vertical
7	193.137	-70.43	-0.77	-71.20	-13.00	-58.20	Vertical
8	952.000	-68.55	14.25	-54.30	-13.00	-41.30	Vertical
9	3720.000	-50.34	7.65	-42.69	-13.00	-29.69	Vertical
10	5580.000	-55.59	11.70	-43.89	-13.00	-30.89	Vertical
Middle Channel							
1	35.263	-74.64	5.02	-69.62	-13.00	-56.62	Horizontal
2	350.972	-73.56	4.51	-69.05	-13.00	-56.05	Horizontal
3	945.334	-70.89	14.20	-56.69	-13.00	-43.69	Horizontal
4	3760.000	-44.00	7.79	-36.21	-13.00	-23.21	Horizontal
5	5640.000	-57.56	11.56	-46.00	-13.00	-33.00	Horizontal
6	31.959	-75.26	4.86	-70.40	-13.00	-57.40	Vertical
7	227.016	-75.56	-0.98	-76.54	-13.00	-63.54	Vertical
8	972.283	-73.31	14.39	-58.92	-13.00	-45.92	Vertical
9	3760.000	-46.89	7.79	-39.10	-13.00	-26.10	Vertical
10	5640.000	-54.93	11.56	-43.37	-13.00	-30.37	Vertical
Highest Channel							
1	30.639	-77.53	5.09	-72.44	-13.00	-59.44	Horizontal
2	384.545	-75.14	4.78	-70.36	-13.00	-57.36	Horizontal
3	958.714	-72.25	14.29	-57.96	-13.00	-44.96	Horizontal
4	3800.000	-38.92	7.93	-30.99	-13.00	-17.99	Horizontal
5	5700.000	-54.68	11.43	-43.25	-13.00	-30.25	Horizontal
6	35.016	-74.72	5.31	-69.41	-13.00	-56.41	Vertical
7	334.126	-70.59	3.90	-66.69	-13.00	-53.69	Vertical
8	972.283	-68.76	14.39	-54.37	-13.00	-41.37	Vertical
9	3800.000	-50.06	7.93	-42.13	-13.00	-29.13	Vertical
10	5700.000	-52.88	11.43	-41.45	-13.00	-28.45	Vertical

5.8.2 LTE Band 4

LTE Band 4_ 20 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	34.770	-76.89	5.16	-71.73	-13.00	-58.73	Horizontal
2	403.934	-73.27	5.21	-68.06	-13.00	-55.06	Horizontal
3	992.997	-72.90	14.78	-58.12	-13.00	-45.12	Horizontal
4	3440.000	-46.32	6.53	-39.79	-13.00	-26.79	Horizontal
5	5160.000	-49.65	10.10	-39.55	-13.00	-26.55	Horizontal
6	35.016	-74.12	5.31	-68.81	-13.00	-55.81	Vertical
7	350.972	-71.83	4.51	-67.32	-13.00	-54.32	Vertical
8	972.283	-70.26	14.39	-55.87	-13.00	-42.87	Vertical
9	3440.000	-45.59	6.53	-39.06	-13.00	-26.06	Vertical
10	5160.000	-50.27	10.10	-40.17	-13.00	-27.17	Vertical
Middle Channel							
1	35.016	-74.25	5.31	-68.94	-13.00	-55.94	Horizontal
2	495.238	-71.97	6.67	-65.30	-13.00	-52.30	Horizontal
3	925.613	-69.30	14.06	-55.24	-13.00	-42.24	Horizontal
4	5197.500	-53.69	10.25	-43.44	-13.00	-30.44	Horizontal
5	6930.000	-56.55	12.77	-43.78	-13.00	-30.78	Horizontal
6	34.527	-76.71	4.99	-71.72	-13.00	-58.72	Vertical
7	318.088	-74.65	3.63	-71.02	-13.00	-58.02	Vertical
8	925.613	-72.35	14.06	-58.29	-13.00	-45.29	Vertical
9	5197.500	-55.76	10.25	-45.51	-13.00	-32.51	Vertical
10	6930.000	-55.69	12.77	-42.92	-13.00	-29.92	Vertical
Highest Channel							
1	30.425	-71.60	5.13	-66.47	-13.00	-53.47	Horizontal
2	201.454	-68.61	-1.13	-69.74	-13.00	-56.74	Horizontal
3	979.139	-67.03	14.44	-52.59	-13.00	-39.59	Horizontal
4	5235.000	-54.13	10.44	-43.69	-13.00	-30.69	Horizontal
5	6980.000	-48.52	12.81	-35.71	-13.00	-22.71	Horizontal
6	30.855	-74.86	5.05	-69.81	-13.00	-56.81	Vertical
7	371.268	-71.12	4.12	-67.00	-13.00	-54.00	Vertical
8	965.474	-70.49	14.34	-56.15	-13.00	-43.15	Vertical
9	5235.000	-53.56	10.44	-43.12	-13.00	-30.12	Vertical
10	6980.000	-47.71	12.81	-34.90	-13.00	-21.90	Vertical

5.8.3 LTE Band 5

LTE Band 5_ 10 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	34.527	-91.38	33.80	-57.58	-13.00	-44.58	Horizontal
2	236.793	-89.32	28.09	-61.23	-13.00	-48.23	Horizontal
3	965.474	-86.01	43.05	-42.96	-13.00	-29.96	Horizontal
4	1658.000	-57.79	0.27	-57.52	-13.00	-44.52	Horizontal
5	2487.000	-64.35	3.64	-60.71	-13.00	-47.71	Horizontal
6	35.016	-90.80	34.12	-56.68	-13.00	-43.68	Vertical
7	243.543	-89.83	28.83	-61.00	-13.00	-48.00	Vertical
8	932.141	-87.08	42.91	-44.17	-13.00	-31.17	Vertical
9	1658.000	-51.55	0.27	-51.28	-13.00	-38.28	Vertical
10	2487.000	-66.61	3.64	-62.97	-13.00	-49.97	Vertical
Middle Channel							
1	34.285	-91.83	33.62	-58.21	-13.00	-45.21	Horizontal
2	294.426	-90.39	31.01	-59.38	-13.00	-46.38	Horizontal
3	938.714	-87.58	42.94	-44.64	-13.00	-31.64	Horizontal
4	1673.000	-58.86	0.36	-58.50	-13.00	-45.50	Horizontal
5	2509.500	-67.68	3.71	-63.97	-13.00	-50.97	Horizontal
6	35.511	-92.33	33.54	-58.79	-13.00	-45.79	Vertical
7	478.139	-88.43	35.31	-53.12	-13.00	-40.12	Vertical
8	958.714	-87.34	43.02	-44.32	-13.00	-31.32	Vertical
9	1673.000	-56.69	0.36	-56.33	-13.00	-43.33	Vertical
10	2509.500	-65.97	3.71	-62.26	-13.00	-49.26	Vertical
Highest Channel							
1	35.762	-92.47	33.25	-59.22	-13.00	-46.22	Horizontal
2	679.435	-87.88	39.83	-48.05	-13.00	-35.05	Horizontal
3	887.398	-86.28	42.64	-43.64	-13.00	-30.64	Horizontal
4	1688.000	-51.57	0.46	-51.11	-13.00	-38.11	Horizontal
5	2532.000	-67.39	3.76	-63.63	-13.00	-50.63	Horizontal
6	35.016	-92.69	34.12	-58.57	-13.00	-45.57	Vertical
7	660.602	-86.81	39.56	-47.25	-13.00	-34.25	Vertical
8	965.474	-87.67	43.05	-44.62	-13.00	-31.62	Vertical
9	1688.000	-54.25	0.46	-53.79	-13.00	-40.79	Vertical
10	2532.000	-67.64	3.76	-63.88	-13.00	-50.88	Vertical

5.8.4 LTE Band 12

LTE Band 12_ 10 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	34.045	-92.47	33.45	-59.02	-13.00	-46.02	Horizontal
2	646.822	-88.67	39.37	-49.30	-13.00	-36.30	Horizontal
3	938.714	-88.26	42.94	-45.32	-13.00	-32.32	Horizontal
4	1408.000	-68.12	-0.88	-69.00	-13.00	-56.00	Horizontal
5	2112.000	-69.13	2.42	-66.71	-13.00	-53.71	Horizontal
6	30.855	-92.56	33.86	-58.70	-13.00	-45.70	Vertical
7	542.610	-89.58	37.09	-52.49	-13.00	-39.49	Vertical
8	925.613	-87.54	42.88	-44.66	-13.00	-31.66	Vertical
9	1408.000	-67.41	-0.88	-68.29	-13.00	-55.29	Vertical
10	2112.000	-69.69	2.42	-67.27	-13.00	-54.27	Vertical
Middle Channel							
1	33.101	-90.94	33.57	-57.37	-13.00	-44.37	Horizontal
2	684.226	-89.15	40.01	-49.14	-13.00	-36.14	Horizontal
3	952.000	-87.87	42.99	-44.88	-13.00	-31.88	Horizontal
4	1415.000	-66.56	-0.85	-67.41	-13.00	-54.41	Horizontal
5	2122.500	-69.16	2.45	-66.71	-13.00	-53.71	Horizontal
6	35.016	-92.20	34.12	-58.08	-13.00	-45.08	Vertical
7	590.351	-89.99	37.95	-52.04	-13.00	-39.04	Vertical
8	979.139	-87.17	43.11	-44.06	-13.00	-31.06	Vertical
9	1415.000	-64.72	-0.85	-65.57	-13.00	-52.57	Vertical
10	2122.500	-68.79	2.45	-66.34	-13.00	-53.34	Vertical
Highest Channel							
1	33.101	-92.04	33.57	-58.47	-13.00	-45.47	Horizontal
2	642.292	-88.84	39.29	-49.55	-13.00	-36.55	Horizontal
3	932.141	-88.10	42.91	-45.19	-13.00	-32.19	Horizontal
4	1422.000	-64.66	-0.83	-65.49	-13.00	-52.49	Horizontal
5	2133.000	-67.89	2.46	-65.43	-13.00	-52.43	Horizontal
6	35.762	-90.92	33.25	-57.67	-13.00	-44.67	Vertical
7	598.707	-89.22	38.21	-51.01	-13.00	-38.01	Vertical
8	938.714	-86.74	42.94	-43.80	-13.00	-30.80	Vertical
9	1422.000	-66.72	-0.83	-67.55	-13.00	-54.55	Vertical
10	2133.000	-67.39	2.46	-64.93	-13.00	-51.93	Vertical

5.8.5 LTE Band 17

LTE Band 17_ 5 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	31.513	-91.50	33.75	-57.75	-13.00	-44.75	Horizontal
2	520.208	-87.87	36.39	-51.48	-13.00	-38.48	Horizontal
3	965.474	-87.74	43.05	-44.69	-13.00	-31.69	Horizontal
4	1418.000	-66.52	-0.84	-67.36	-13.00	-54.36	Horizontal
5	2127.000	-68.78	2.45	-66.33	-13.00	-53.33	Horizontal
6	35.511	-91.96	33.54	-58.42	-13.00	-45.42	Vertical
7	516.565	-88.62	36.45	-52.17	-13.00	-39.17	Vertical
8	979.139	-88.09	43.11	-44.98	-13.00	-31.98	Vertical
9	1418.000	-65.64	-0.84	-66.48	-13.00	-53.48	Vertical
10	2127.000	-70.18	2.45	-67.73	-13.00	-54.73	Vertical
Middle Channel							
1	33.101	-92.27	33.57	-58.70	-13.00	-45.70	Horizontal
2	607.181	-90.32	38.37	-51.95	-13.00	-38.95	Horizontal
3	986.044	-86.98	43.28	-43.70	-13.00	-30.70	Horizontal
4	1420.000	-67.01	-0.83	-67.84	-13.00	-54.84	Horizontal
5	2130.000	-68.86	2.45	-66.41	-13.00	-53.41	Horizontal
6	31.073	-92.60	33.83	-58.77	-13.00	-45.77	Vertical
7	607.181	-88.59	38.37	-50.22	-13.00	-37.22	Vertical
8	952.000	-87.74	42.99	-44.75	-13.00	-31.75	Vertical
9	1420.000	-65.82	-0.83	-66.65	-13.00	-53.65	Vertical
10	2130.000	-68.34	2.45	-65.89	-13.00	-52.89	Vertical
Highest Channel							
1	31.959	-91.58	33.67	-57.91	-13.00	-44.91	Horizontal
2	684.226	-88.34	40.01	-48.33	-13.00	-35.33	Horizontal
3	945.334	-87.07	42.96	-44.11	-13.00	-31.11	Horizontal
4	1422.000	-66.87	-0.83	-67.70	-13.00	-54.70	Horizontal
5	2133.000	-69.41	2.46	-66.95	-13.00	-53.95	Horizontal
6	35.263	-91.11	33.83	-57.28	-13.00	-44.28	Vertical
7	660.602	-88.78	39.56	-49.22	-13.00	-36.22	Vertical
8	986.044	-87.81	43.28	-44.53	-13.00	-31.53	Vertical
9	1422.000	-66.09	-0.83	-66.92	-13.00	-53.92	Vertical
10	2133.000	-68.25	2.46	-65.79	-13.00	-52.79	Vertical

5.8.6 LTE Band 30

LTE Band 30_ 5 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	31.292	-76.18	4.97	-71.21	-40.00	-31.21	Horizontal
2	409.651	-71.25	5.21	-66.04	-40.00	-26.04	Horizontal
3	965.474	-71.35	14.34	-57.01	-40.00	-17.01	Horizontal
4	4615.000	-53.95	9.27	-44.68	-40.00	-4.68	Horizontal
5	6922.500	-59.85	12.78	-47.07	-40.00	-7.07	Horizontal
6	32.411	-75.81	4.82	-70.99	-40.00	-30.99	Vertical
7	185.163	-74.38	-0.80	-75.18	-40.00	-35.18	Vertical
8	979.139	-71.62	14.44	-57.18	-40.00	-17.18	Vertical
9	4615.000	-55.06	9.27	-45.79	-40.00	-5.79	Vertical
10	6922.500	-60.63	12.78	-47.85	-40.00	-7.85	Vertical
Middle Channel							
1	30.425	-74.97	5.13	-69.84	-40.00	-29.84	Horizontal
2	243.543	-71.86	0.71	-71.15	-40.00	-31.15	Horizontal
3	952.000	-69.77	14.25	-55.52	-40.00	-15.52	Horizontal
4	4620.000	-53.81	9.28	-44.53	-40.00	-4.53	Horizontal
5	6930.000	-60.36	12.77	-47.59	-40.00	-7.59	Horizontal
6	34.770	-76.40	5.16	-71.24	-40.00	-31.24	Vertical
7	334.126	-73.01	3.90	-69.11	-40.00	-29.11	Vertical
8	986.044	-72.03	14.63	-57.40	-40.00	-17.40	Vertical
9	4620.000	-54.51	9.28	-45.23	-40.00	-5.23	Vertical
10	6930.000	-57.32	12.77	-44.55	-40.00	-4.55	Vertical
Highest Channel							
1	32.184	-73.63	4.84	-68.79	-40.00	-28.79	Horizontal
2	363.523	-71.20	4.57	-66.63	-40.00	-26.63	Horizontal
3	979.139	-69.65	14.44	-55.21	-40.00	-15.21	Horizontal
4	4625.000	-55.49	9.27	-46.22	-40.00	-6.22	Horizontal
5	6937.500	-58.99	12.78	-46.21	-40.00	-6.21	Horizontal
6	34.285	-77.81	4.81	-73.00	-40.00	-33.00	Vertical
7	176.275	-74.44	-0.74	-75.18	-40.00	-35.18	Vertical
8	986.044	-73.32	14.63	-58.69	-40.00	-18.69	Vertical
9	4625.000	-54.95	9.27	-45.68	-40.00	-5.68	Vertical
10	6937.500	-56.45	12.78	-43.67	-40.00	-3.67	Vertical

LTE Band 30_ 10 MHz_ QPSK							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
Middle Channel							
1	33.807	-76.03	4.64	-71.39	-40.00	-31.39	Horizontal
2	371.268	-73.16	4.12	-69.04	-40.00	-29.04	Horizontal
3	958.714	-72.94	14.29	-58.65	-40.00	-18.65	Horizontal
4	4620.000	-52.96	9.28	-43.68	-40.00	-3.68	Horizontal
5	6930.000	-56.00	12.77	-43.23	-40.00	-3.23	Horizontal
6	31.513	-76.13	4.94	-71.19	-40.00	-31.19	Vertical
7	366.087	-73.52	4.48	-69.04	-40.00	-29.04	Vertical
8	986.044	-71.53	14.63	-56.90	-40.00	-16.90	Vertical
9	4620.000	-54.91	9.28	-45.63	-40.00	-5.63	Vertical
10	6930.000	-56.96	12.77	-44.19	-40.00	-4.19	Vertical

5.8.7 LTE Band 66

LTE Band 66_ 20 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	34.770	-73.17	5.16	-68.01	-13.00	-55.01	Horizontal
2	329.462	-70.50	3.84	-66.66	-13.00	-53.66	Horizontal
3	958.714	-68.93	14.29	-54.64	-13.00	-41.64	Horizontal
4	3440.000	-50.01	6.53	-43.48	-13.00	-30.48	Horizontal
5	6880.000	-56.69	12.73	-43.96	-13.00	-30.96	Horizontal
6	30.855	-71.40	5.05	-66.35	-13.00	-53.35	Vertical
7	278.331	-69.00	2.13	-66.87	-13.00	-53.87	Vertical
8	992.997	-65.81	14.78	-51.03	-13.00	-38.03	Vertical
9	3440.000	-52.67	6.53	-46.14	-13.00	-33.14	Vertical
10	6880.000	-54.51	12.73	-41.78	-13.00	-28.78	Vertical
Middle Channel							
1	35.511	-75.32	4.73	-70.59	-13.00	-57.59	Horizontal
2	353.447	-72.62	4.65	-67.97	-13.00	-54.97	Horizontal
3	965.474	-70.05	14.34	-55.71	-13.00	-42.71	Horizontal
4	5235.000	-59.27	10.44	-48.83	-13.00	-35.83	Horizontal
5	6980.000	-55.67	12.81	-42.86	-13.00	-29.86	Horizontal
6	31.292	-72.97	4.97	-68.00	-13.00	-55.00	Vertical
7	311.452	-70.96	3.57	-67.39	-13.00	-54.39	Vertical
8	986.044	-68.83	14.63	-54.20	-13.00	-41.20	Vertical
9	5235.000	-54.85	10.44	-44.41	-13.00	-31.41	Vertical
10	6980.000	-51.41	12.81	-38.60	-13.00	-25.60	Vertical
Highest Channel							
1	34.527	-74.06	4.99	-69.07	-13.00	-56.07	Horizontal
2	403.934	-71.78	5.21	-66.57	-13.00	-53.57	Horizontal
3	972.283	-70.04	14.39	-55.65	-13.00	-42.65	Horizontal
4	5310.000	-58.83	10.85	-47.98	-13.00	-34.98	Horizontal
5	7080.000	-52.95	12.96	-39.99	-13.00	-26.99	Horizontal
6	35.016	-75.25	5.31	-69.94	-13.00	-56.94	Vertical
7	353.447	-73.07	4.65	-68.42	-13.00	-55.42	Vertical
8	932.141	-71.05	14.11	-56.94	-13.00	-43.94	Vertical
9	5310.000	-55.22	10.85	-44.37	-13.00	-31.37	Vertical
10	7080.000	-52.04	12.96	-39.08	-13.00	-26.08	Vertical

Remark:

1. Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain, the value was added to Original Receiver Reading by the software automatically.
2. Result = Reading + Correct Factor.
3. Margin = Result – Limit

5.9 FREQUENCY STABILITY

Test Requirement: FCC 47 CFR Part 2.1055 &
 FCC 47 CFR Part 22.355 &
 FCC 47 CFR Part 24.235 &
 FCC 47 CFR Part 27.54

Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01

Limits:
FCC 47 CFR Part 22.355, FCC 47 CFR Par 90.213
 The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

FCC 47 CFR Part 24.235, FCC 47 CFR Part 27.54
 The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test Setup: Refer to section 4.2.2 for details.

Test Procedures:

- 1) Use CMW 500 with Frequency Error measurement capability.
 - a) Temp. = -30° to $+50^{\circ}$ Ca
 - b) Voltage =low voltage, 3.5 Vdc, Normal, 3.8 Vdc and High voltage, 4.35 Vdc.

2) Frequency Stability vs Temperature:

The EUT is place inside a temperature chamber. The temperature is set to 20° C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until $+50^{\circ}$ C is reached.

3) Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

Equipment Used: Refer to section 3 for details.

Test Result: Pass

Modulation	Channel/ Frequency	Voltage	Temperature	Deviation	Deviation	Limit	Pass/ Fail	
	(MHz)	(Vdc)	($^{\circ}$ C)	(Hz)	(ppm)	(ppm)		
LTE Band 2 / 20MHz / Full RB								
QPSK	18900 / 1880.0	VL	TN	-5.43	-0.0029	Note 1	Pass	
		VN		-6.64	-0.0035		Pass	
		VH		-6.13	-0.0033		Pass	
				50	-4.88		-0.0026	Pass
				40	-4.32		-0.0023	Pass
				30	-4.77		-0.0025	Pass
				20	-5.03		-0.0027	Pass
			VN	10	-5.67		-0.0030	Pass
				0	-6.19		-0.0033	Pass
				-10	-6.34		-0.0034	Pass
				-20	-7.22		-0.0038	Pass
				-30	-8.01		-0.0043	Pass

Modulation	Channel/ Frequency	Voltage	Temperature	Deviation	Deviation	Limit	Pass/ Fail
	(MHz)	(Vdc)	(°C)	(Hz)	(ppm)	(ppm)	
LTE Band 4 / 20MHz / Full RB							
QPSK	20175 / 1732.5	VL	TN	-5.44	-0.0031	Note 1	Pass
		VN		-4.89	-0.0028		Pass
		VH		-6.11	-0.0035		Pass
		VN	50	-5.88	-0.0034		Pass
			40	-5.56	-0.0032		Pass
			30	-5.45	-0.0031		Pass
			20	-4.89	-0.0028		Pass
			10	-4.78	-0.0028		Pass
			0	-5.23	-0.0030		Pass
			-10	-6.14	-0.0035		Pass
			-20	-7.09	-0.0041		Pass
			-30	-5.83	-0.0034		Pass

Modulation	Channel/ Frequency	Voltage	Temperature	Deviation	Deviation	Limit	Pass/ Fail
	(MHz)	(Vdc)	(°C)	(Hz)	(ppm)	(ppm)	
LTE Band 5 / 10MHz / Full RB							
QPSK	20525 / 836.5	VL	TN	-5.34	-0.0064	± 2.5	Pass
		VN		-5.67	-0.0068	± 2.5	Pass
		VH		-5.91	-0.0071	± 2.5	Pass
		VN	50	-6.23	-0.0074	± 2.5	Pass
			40	-6.63	-0.0079	± 2.5	Pass
			30	-4.89	-0.0058	± 2.5	Pass
			20	-5.01	-0.0060	± 2.5	Pass
			10	-6.04	-0.0072	± 2.5	Pass
			0	-5.55	-0.0066	± 2.5	Pass
			-10	-5.78	-0.0069	± 2.5	Pass
			-20	-5.81	-0.0069	± 2.5	Pass
			-30	-5.86	-0.0070	± 2.5	Pass

Modulation	Channel/ Frequency	Voltage	Temperature	Deviation	Deviation	Limit	Pass/ Fail	
	(MHz)	(Vdc)	(°C)	(Hz)	(ppm)	(ppm)		
LTE Band 12 / 10MHz / Full RB								
QPSK	23095 / 707.5	VL	TN	-4.67	-0.0066	Note 1	Pass	
		VN		-5.01	-0.0071		Pass	
		VH		-5.43	-0.0077		Pass	
		VN	50	50	-5.55		-0.0078	Pass
			40	40	-4.97		-0.0070	Pass
			30	30	-4.89		-0.0069	Pass
			20	20	-4.46		-0.0063	Pass
			10	10	-4.65		-0.0066	Pass
			0	0	-5.34		-0.0075	Pass
			-10	-10	-5.56		-0.0079	Pass
			-20	-20	-5.55		-0.0078	Pass
			-30	-30	-5.22		-0.0074	Pass

Modulation	Channel/ Frequency	Voltage	Temperature	Deviation	Deviation	Limit	Pass/ Fail	
	(MHz)	(Vdc)	(°C)	(Hz)	(ppm)	(ppm)		
LTE Band 17 / 10MHz / Full RB								
QPSK	23790 / 710	VL	TN	-5.67	-0.0080	Note 1	Pass	
		VN		-5.89	-0.0083		Pass	
		VH		-6.01	-0.0085		Pass	
		VN	50	50	-4.89		-0.0069	Pass
			40	40	-4.76		-0.0067	Pass
			30	30	-4.44		-0.0063	Pass
			20	20	-4.63		-0.0065	Pass
			10	10	-4.52		-0.0064	Pass
			0	0	-4.89		-0.0069	Pass
			-10	-10	-3.45		-0.0049	Pass
			-20	-20	-4.43		-0.0062	Pass
			-30	-30	-4.78		-0.0067	Pass

Modulation	Channel/ Frequency	Voltage	Temperature	Deviation	Deviation	Limit	Pass/ Fail
	(MHz)	(Vdc)	(°C)	(Hz)	(ppm)	(ppm)	
LTE Band 30 / 10MHz / Full RB							
QPSK	27710 /2310	VL	TN	-3.05	-0.0013	Note 1	Pass
		VN		-4.23	-0.0018		Pass
		VH		-5.35	-0.0023		Pass
		VN	50	-4.88	-0.0021		Pass
			40	-4.56	-0.0020		Pass
			30	-4.96	-0.0021		Pass
			20	-4.34	-0.0019		Pass
			10	-5.43	-0.0024		Pass
			0	-5.23	-0.0023		Pass
			-10	-5.66	-0.0025		Pass
			-20	-6.09	-0.0026		Pass
			-30	-6.45	-0.0028		Pass

Modulation	Channel/ Frequency	Voltage	Temperature	Deviation	Deviation	Limit	Pass/ Fail
	(MHz)	(Vdc)	(°C)	(Hz)	(ppm)	(ppm)	
LTE Band 66/ 20MHz / Full RB							
QPSK	132322 / 1745	VL	TN	-3.89	-0.0022	Note 1	Pass
		VN		-4.14	-0.0024		Pass
		VH		-4.91	-0.0028		Pass
		VN	50	-5.33	-0.0031		Pass
			40	-5.79	-0.0033		Pass
			30	-6.04	-0.0035		Pass
			20	-5.55	-0.0032		Pass
			10	-6.51	-0.0037		Pass
			0	-4.23	-0.0024		Pass
			-10	-3.96	-0.0023		Pass
			-20	-6.04	-0.0035		Pass
			-30	-3.87	-0.0022		Pass

APPENDIX 1 PHOTOS OF TEST SETUP

See test photos attached in Appendix 1 for the actual connections between Product and support equipment.

APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS

Refer to Appendix 2 for EUT external and internal photos.

*** End of Report ***

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