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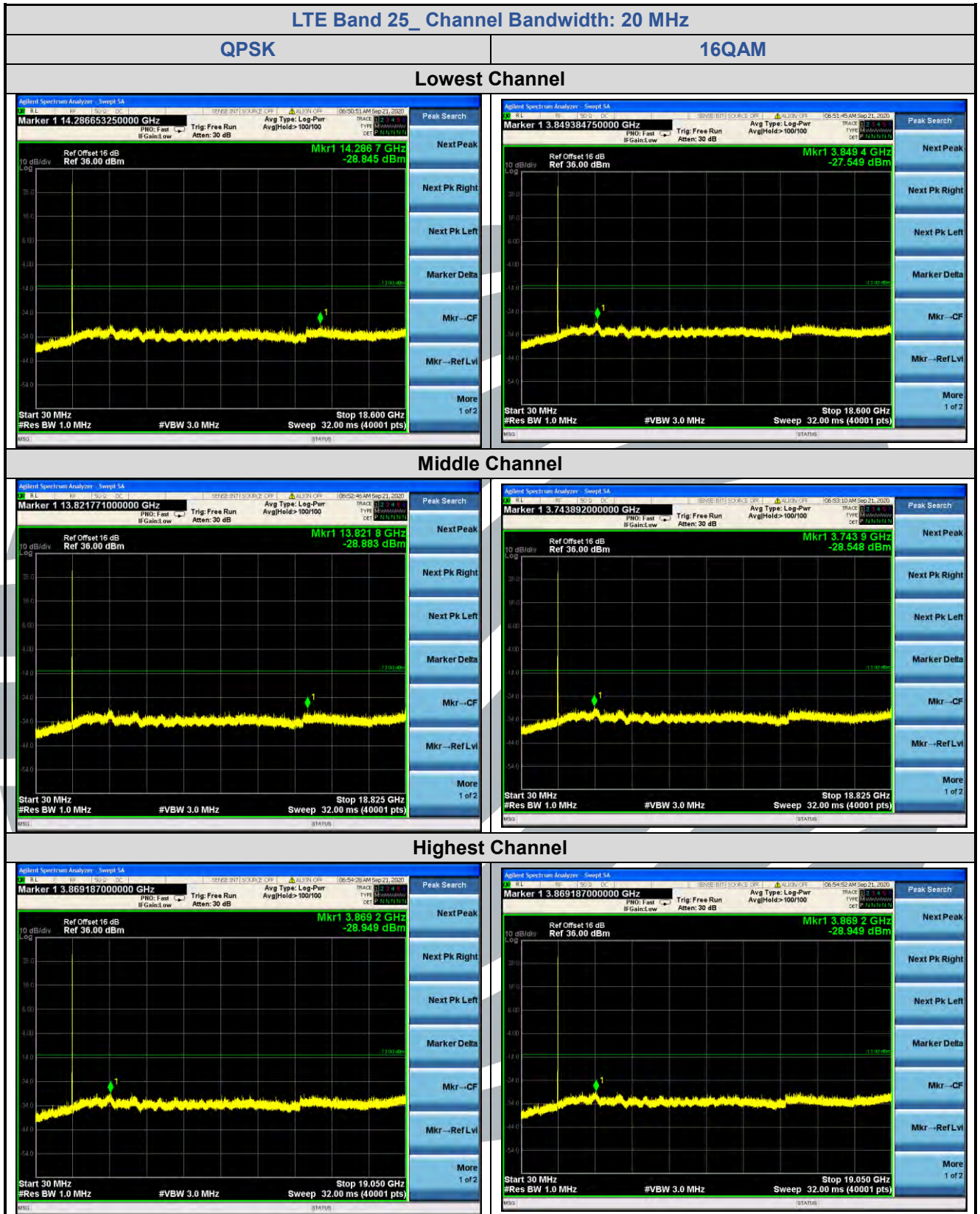
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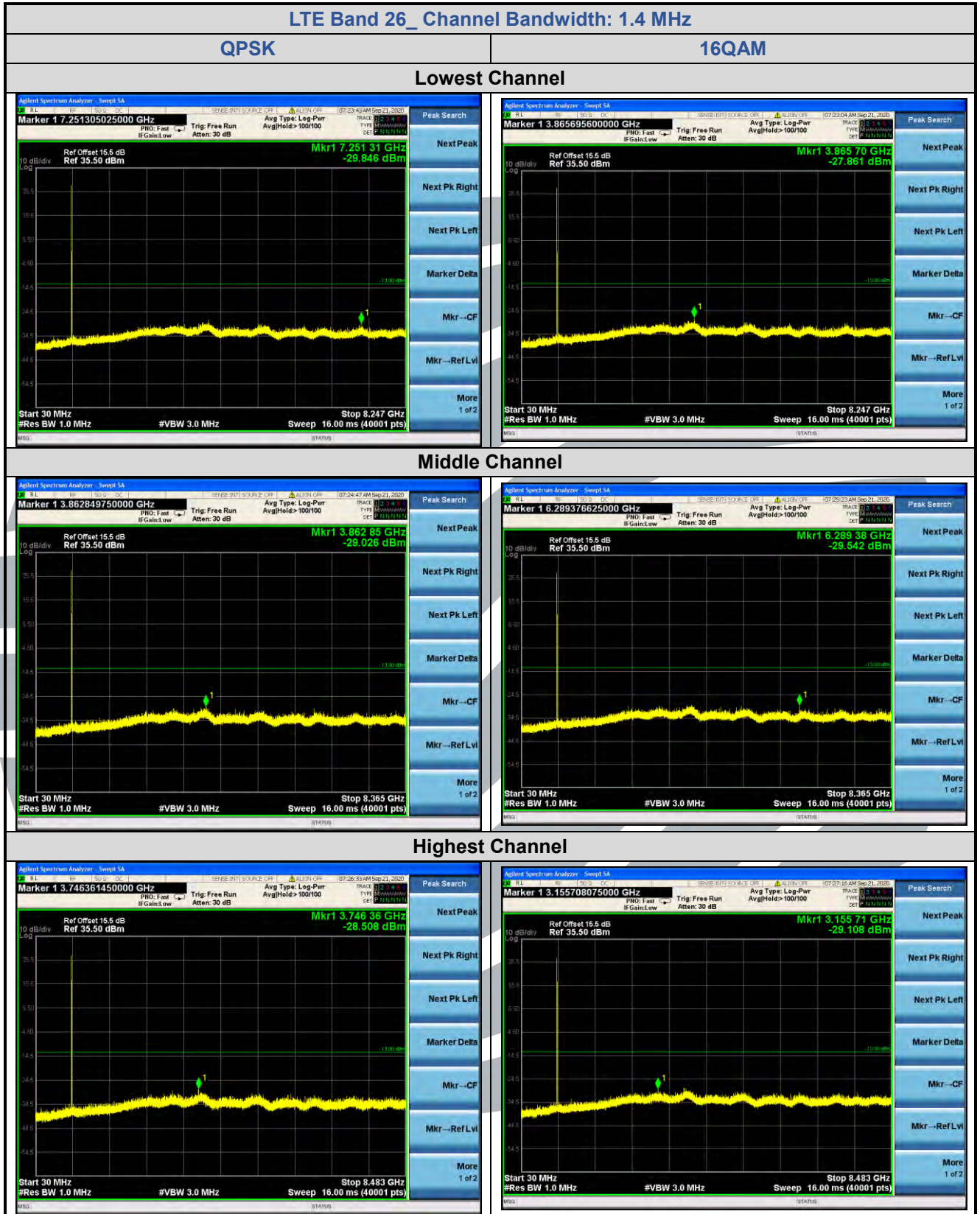
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5.7.7 LTE Band 26



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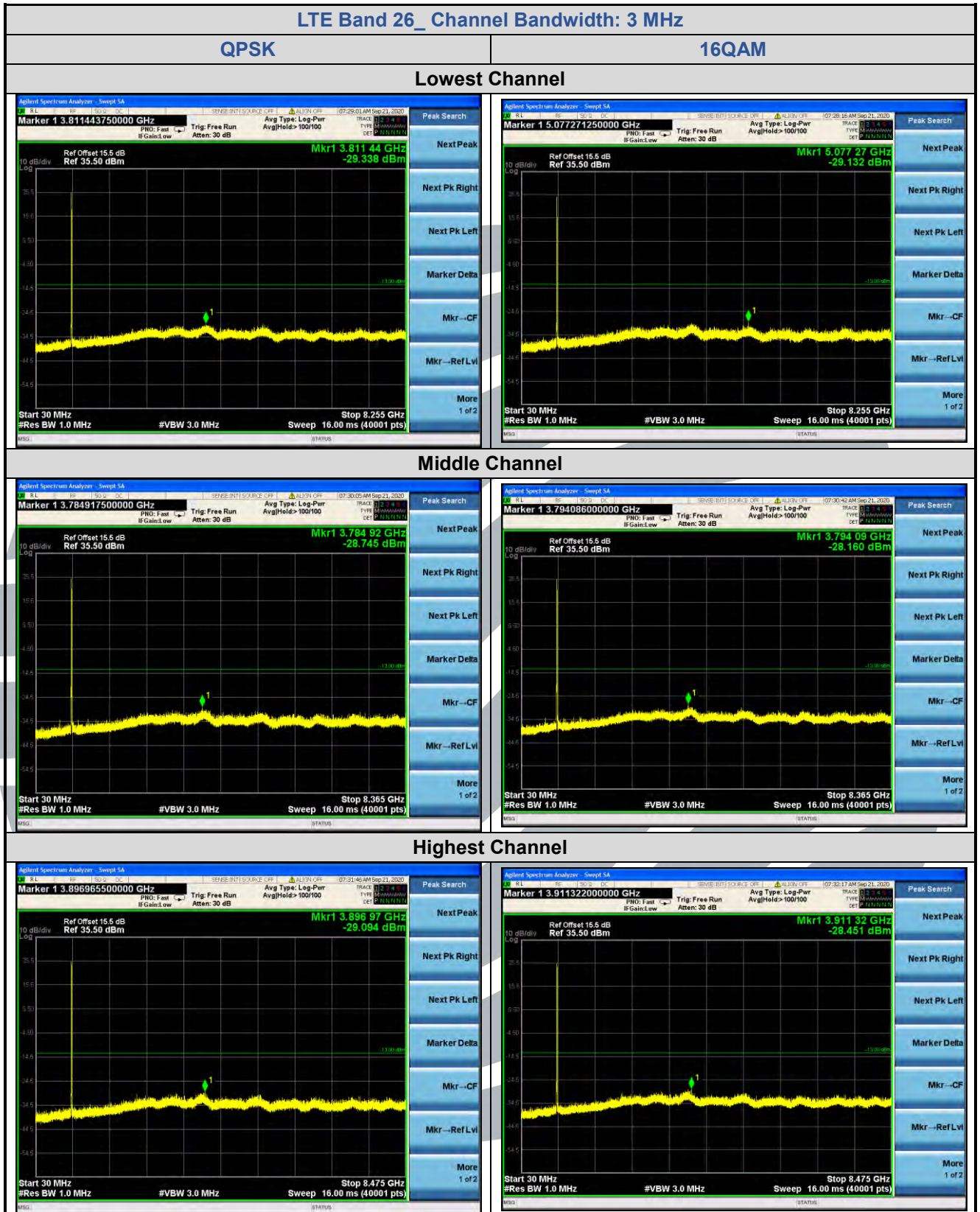
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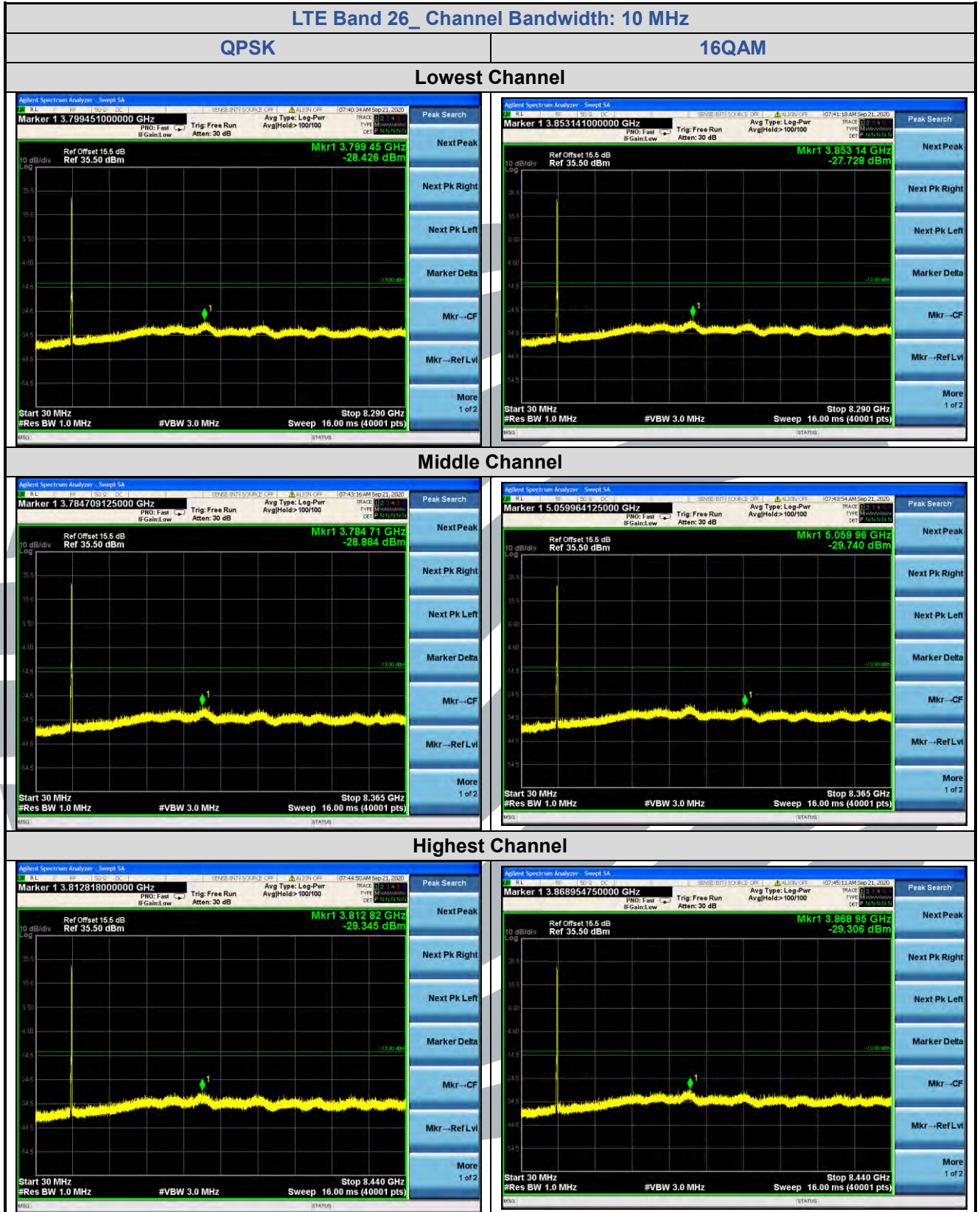
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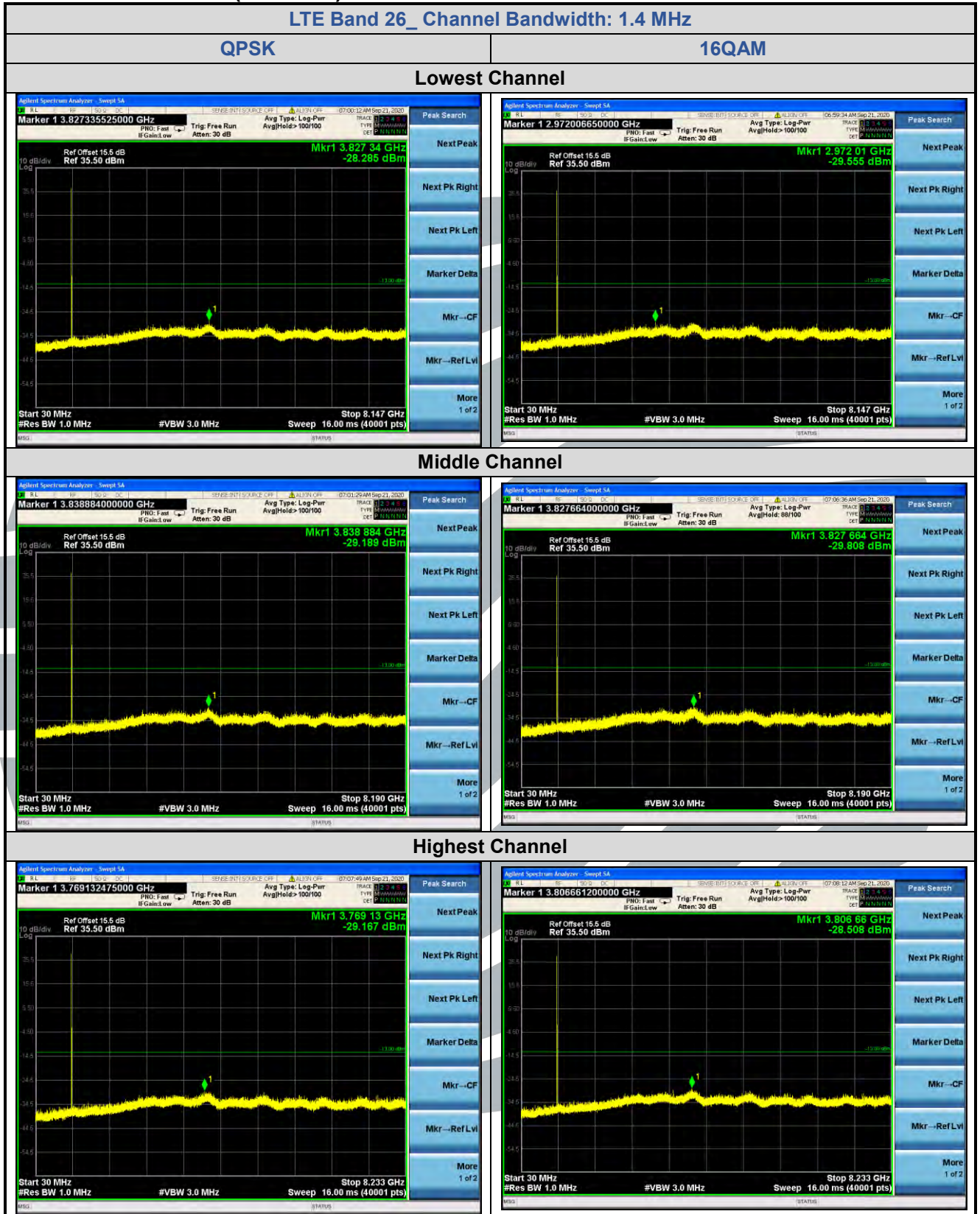
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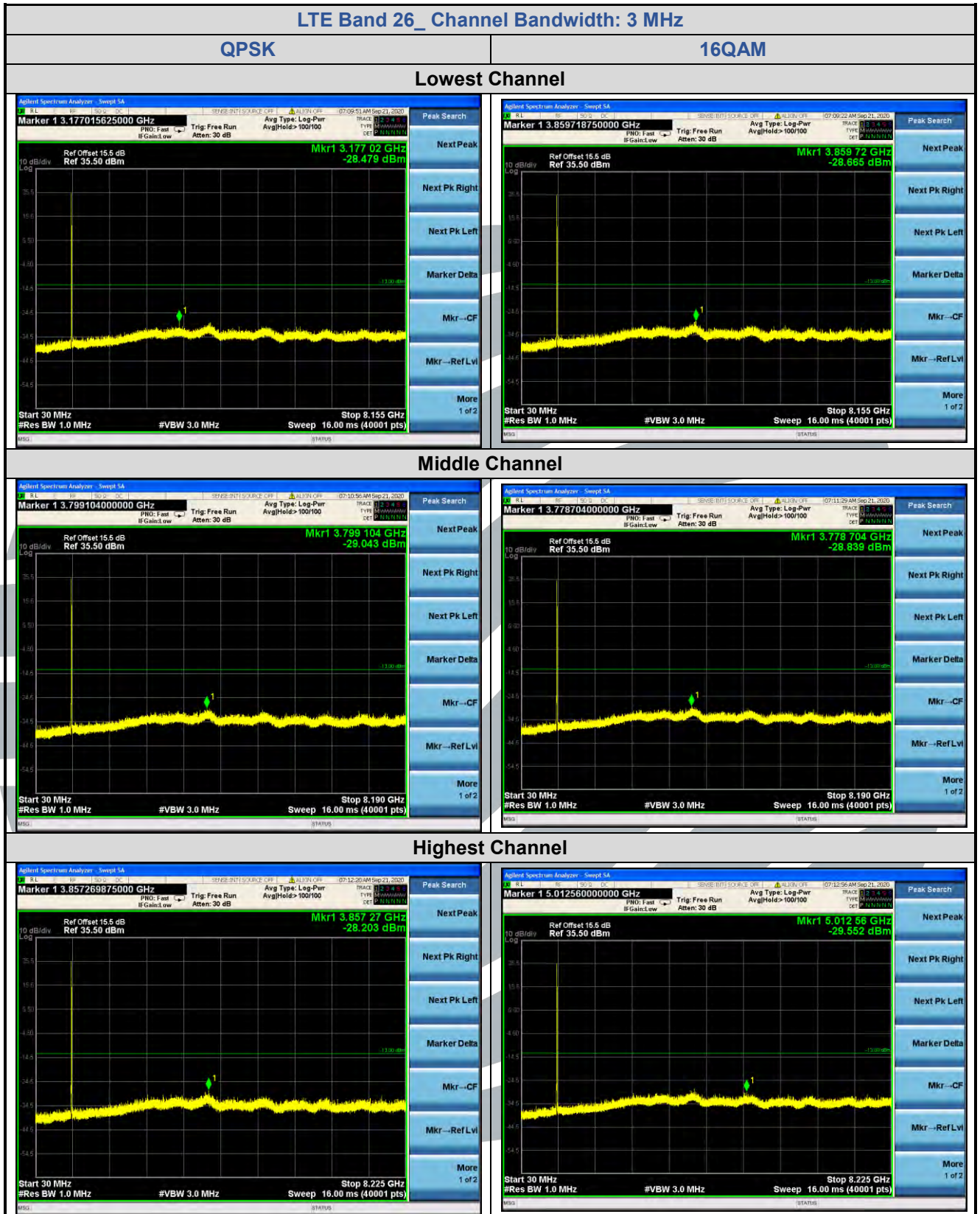




5.7.8 LTE Band 26 (Part 90S)







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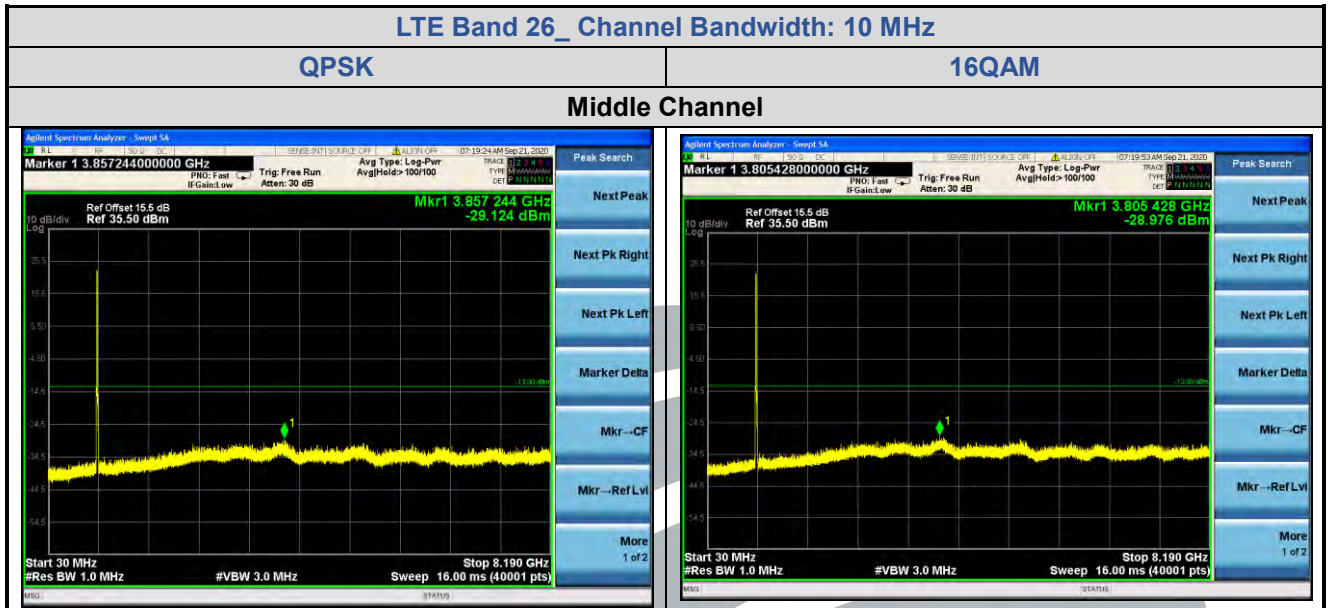
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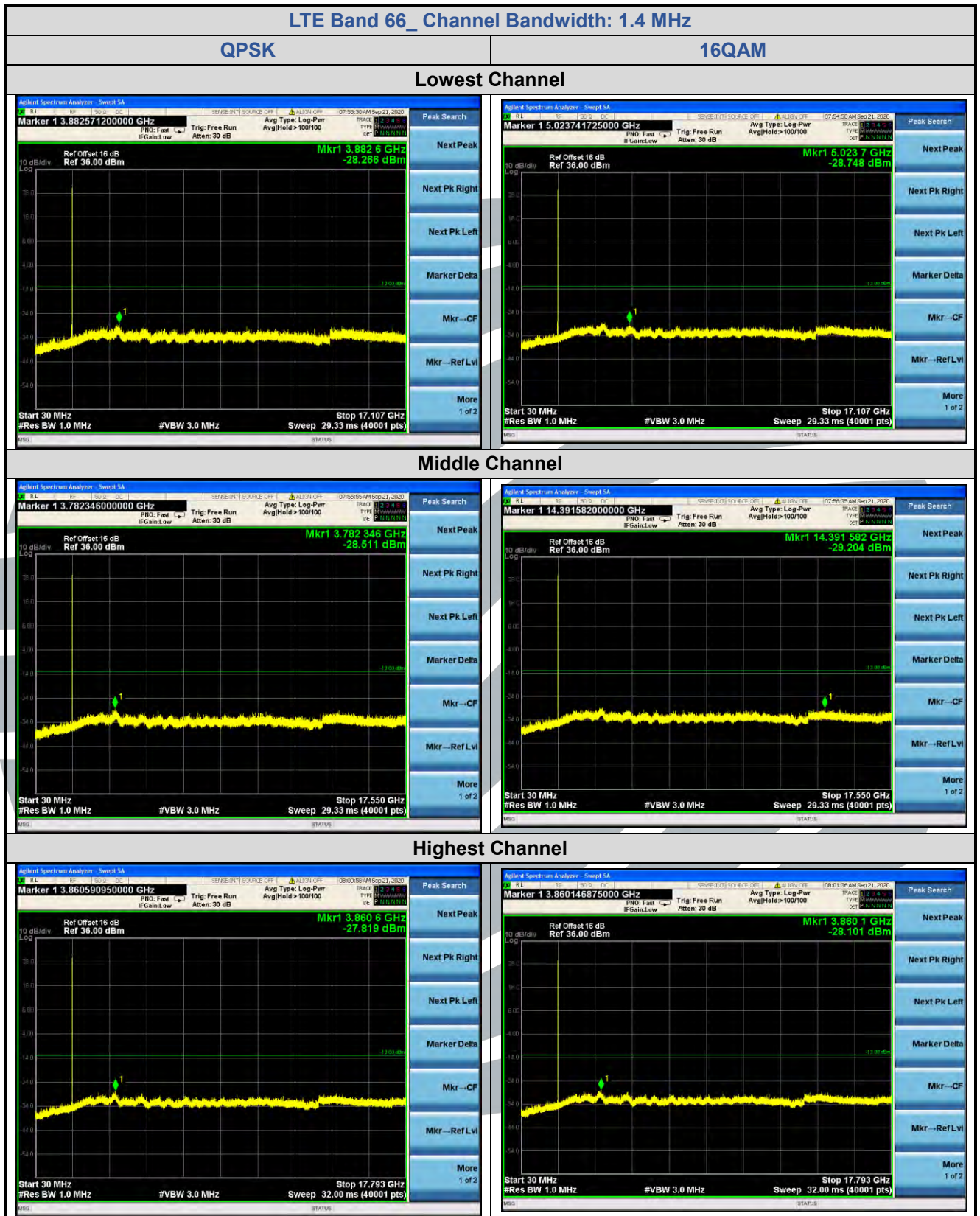
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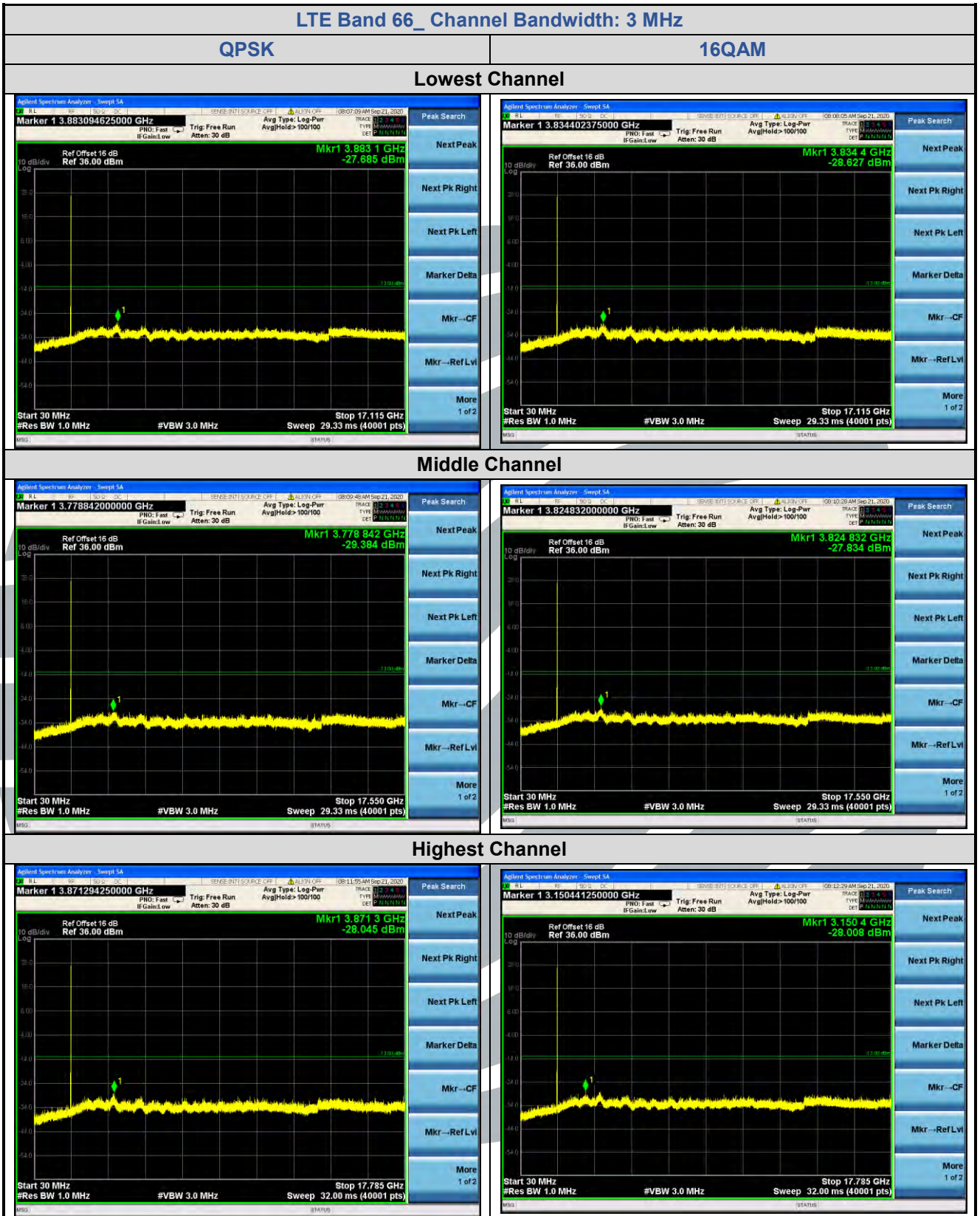
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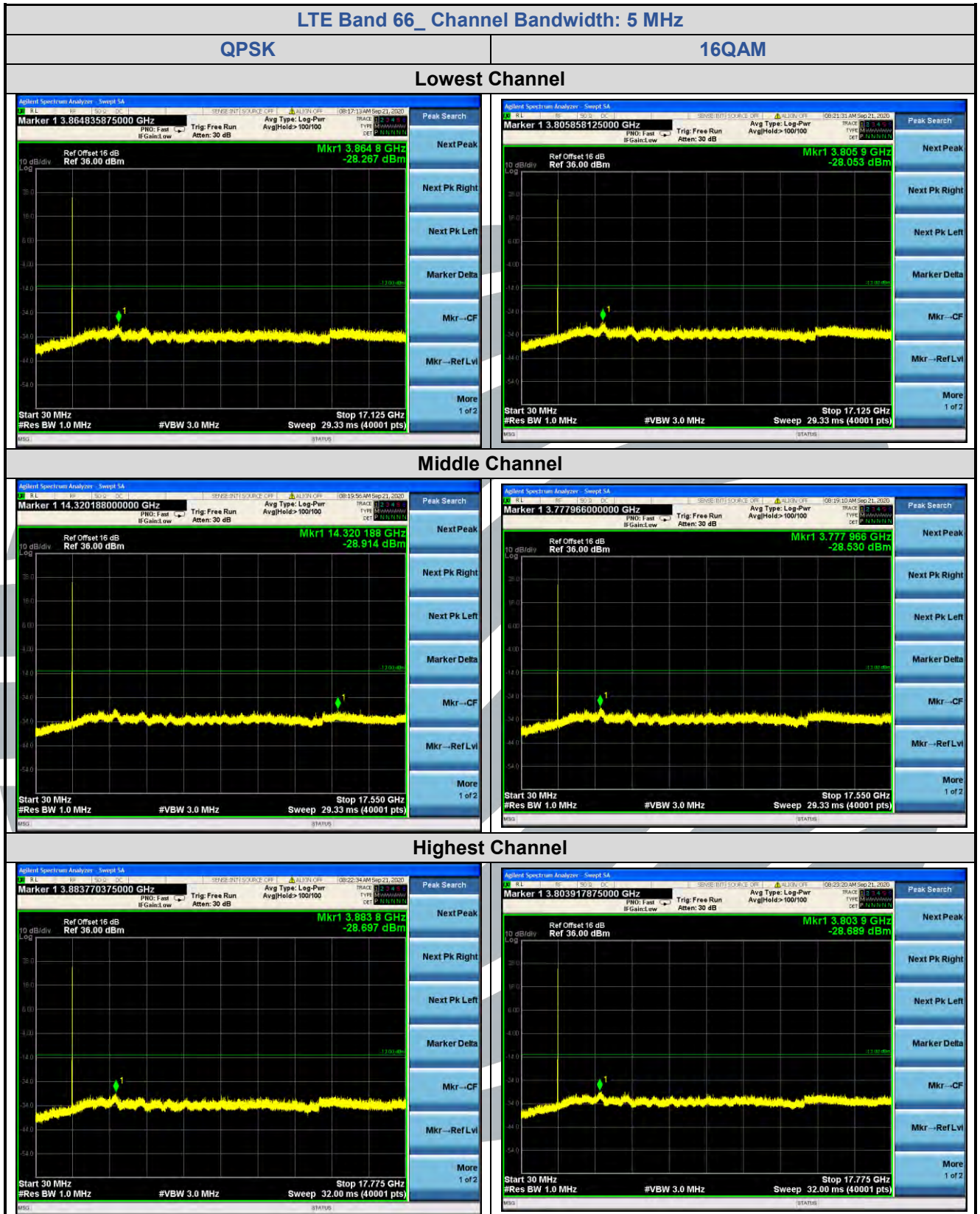
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5.7.9 LTE Band 66







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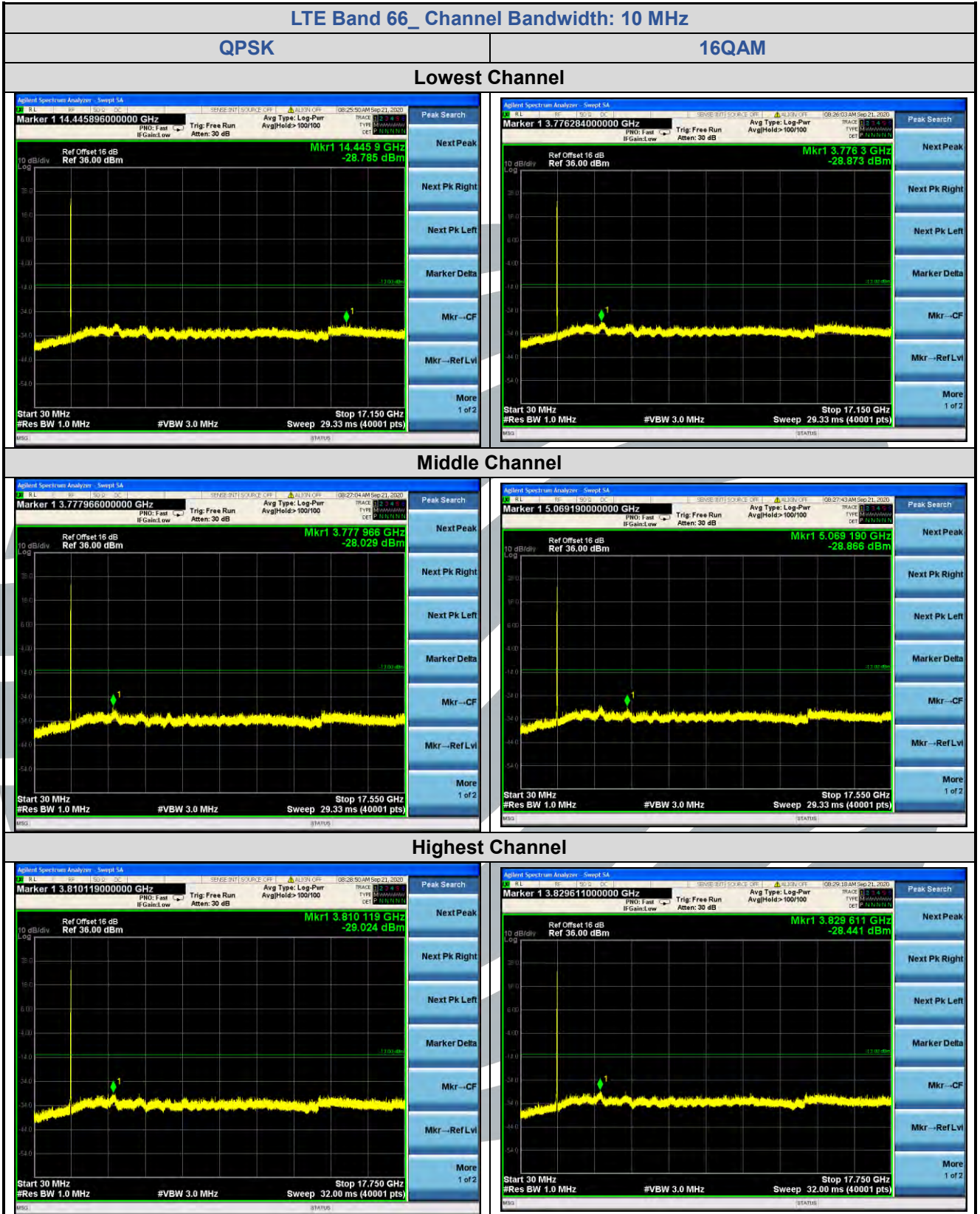
Tel: +86-755-28230888

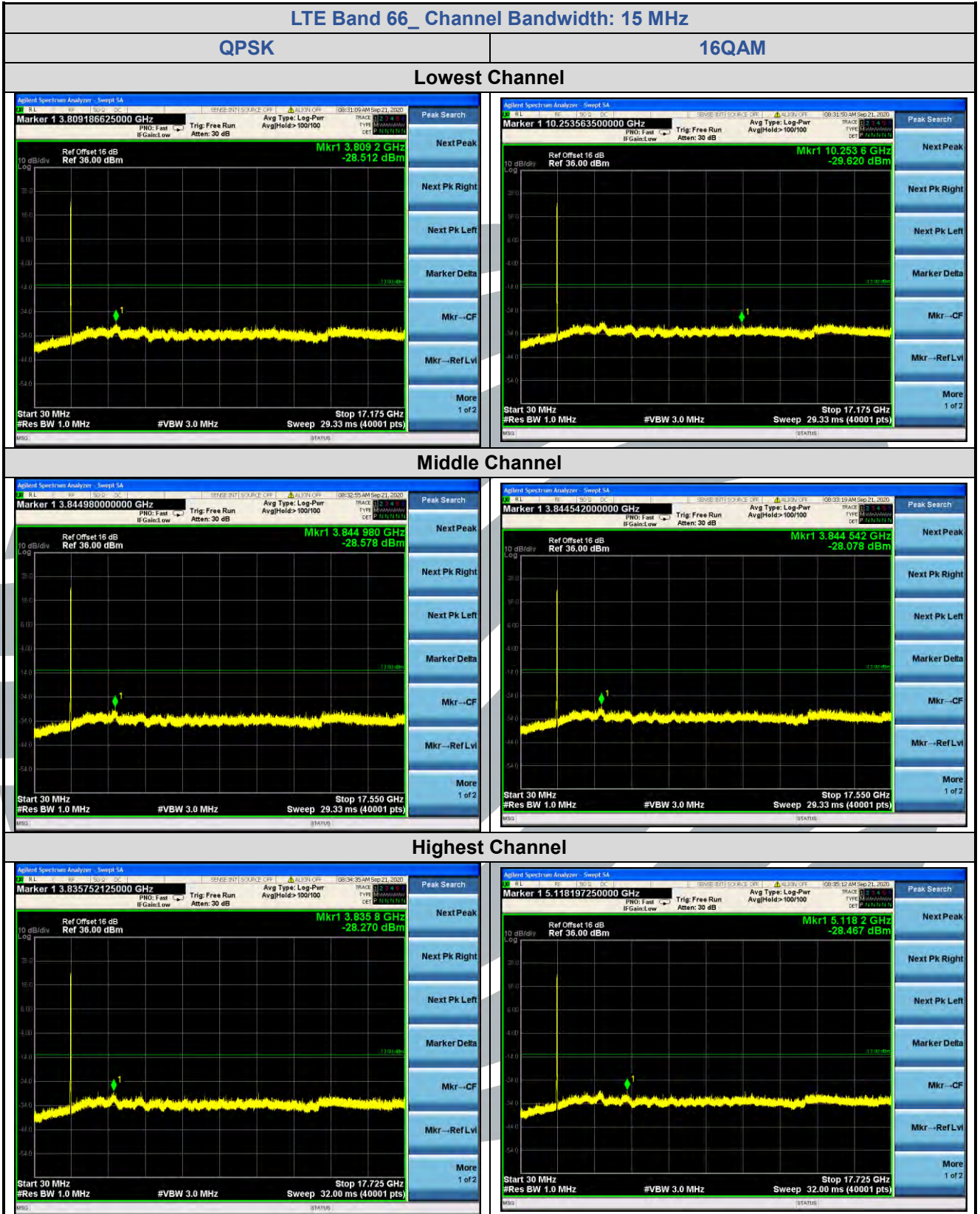
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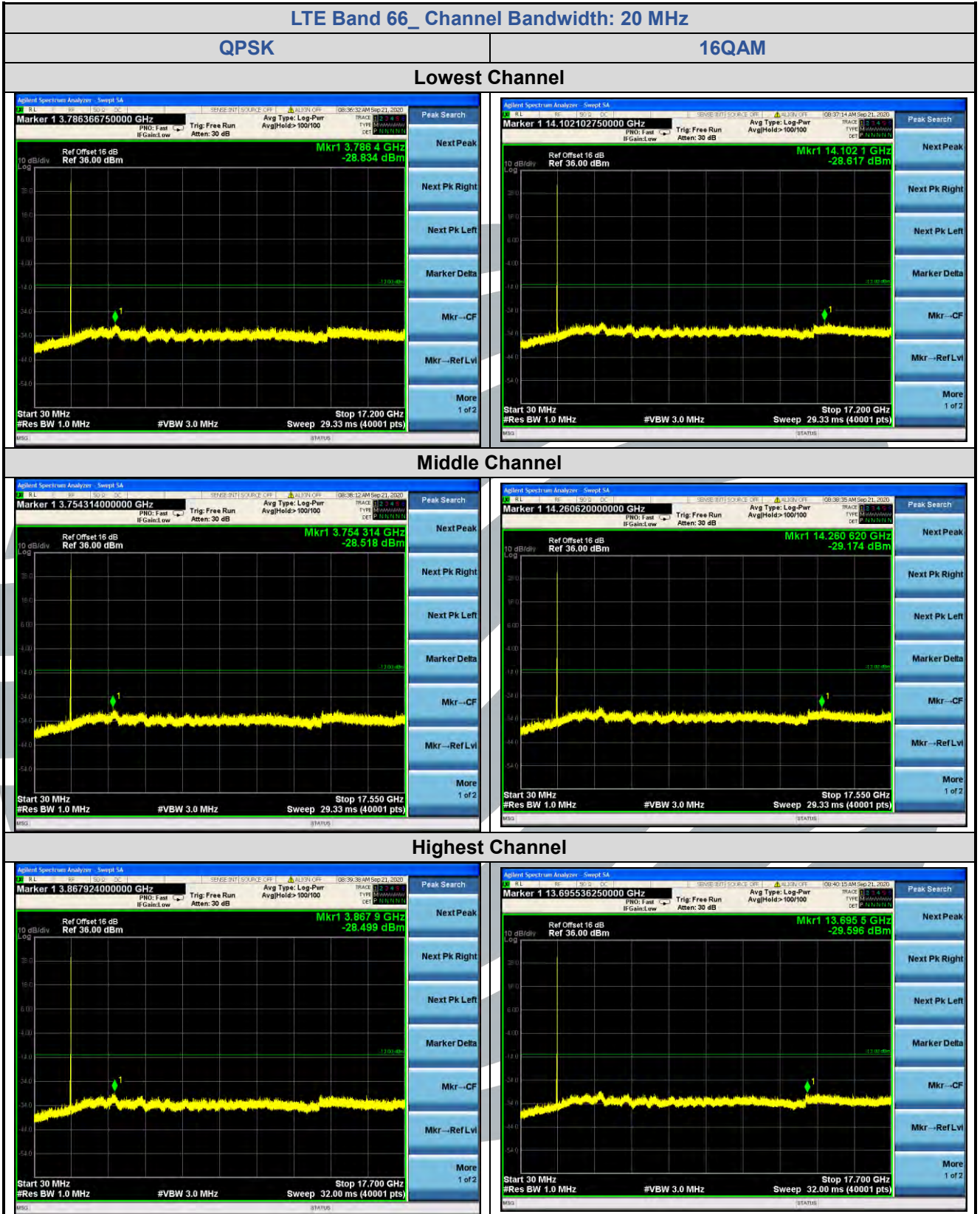
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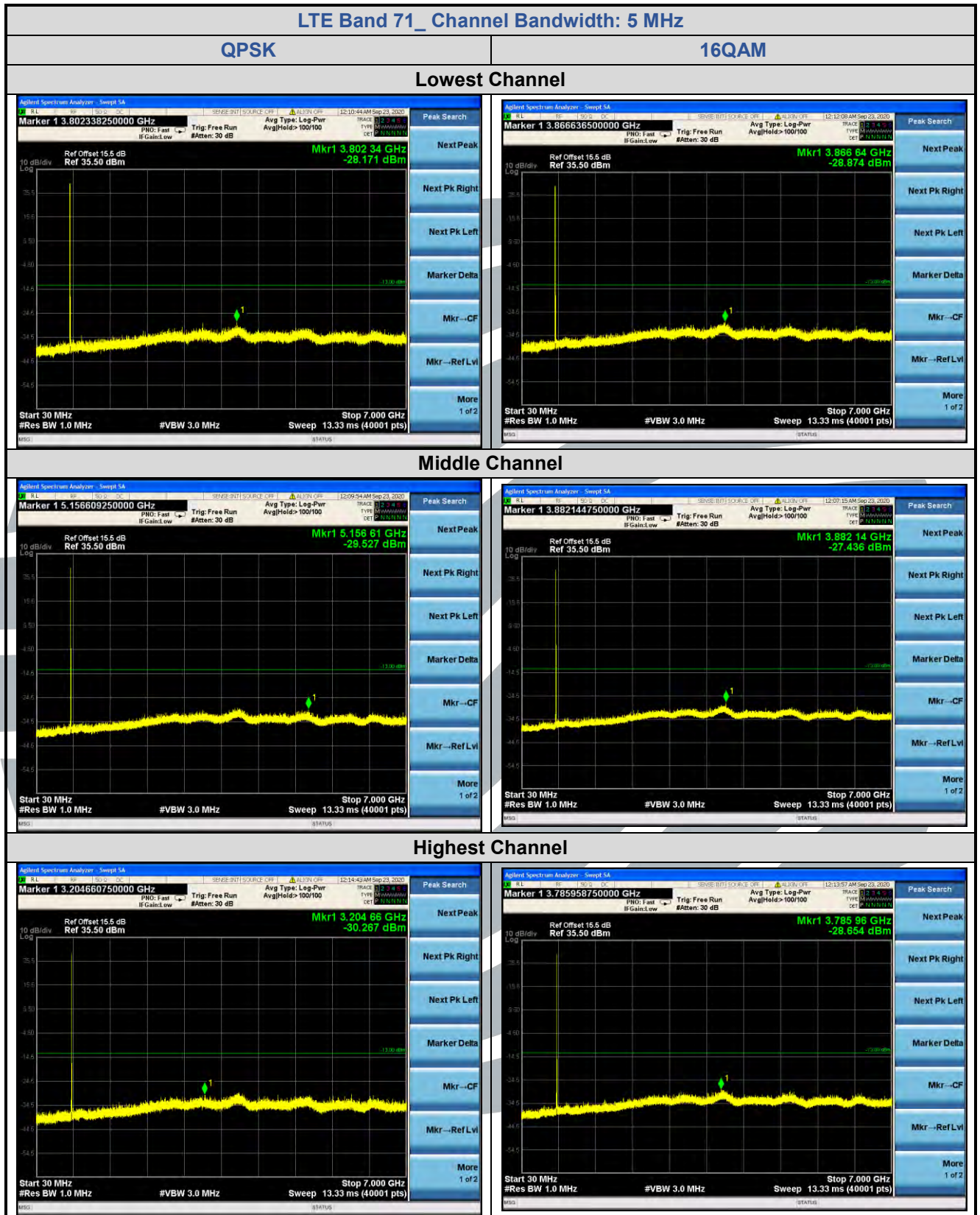
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## 5.7.10 LTE Band 71



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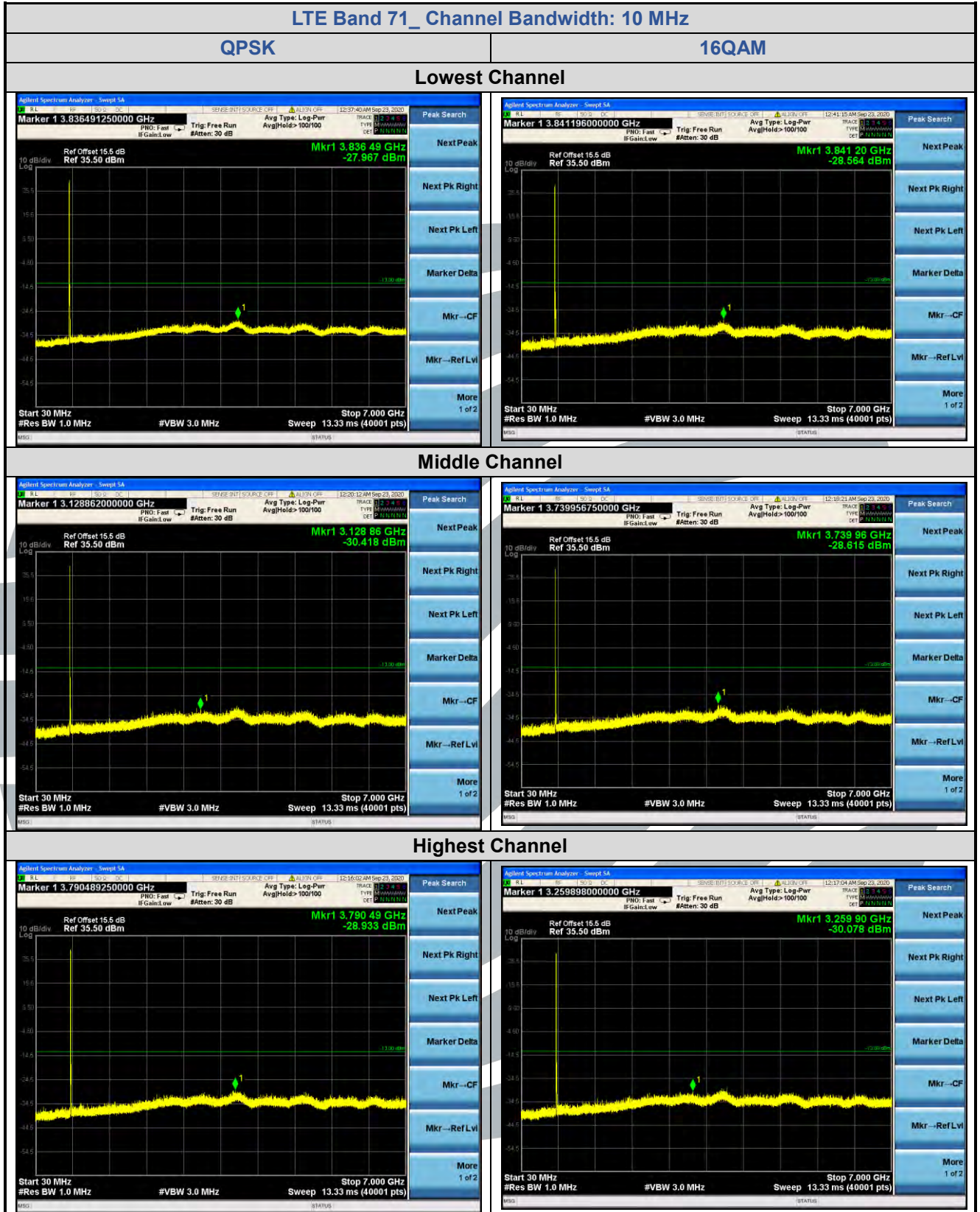
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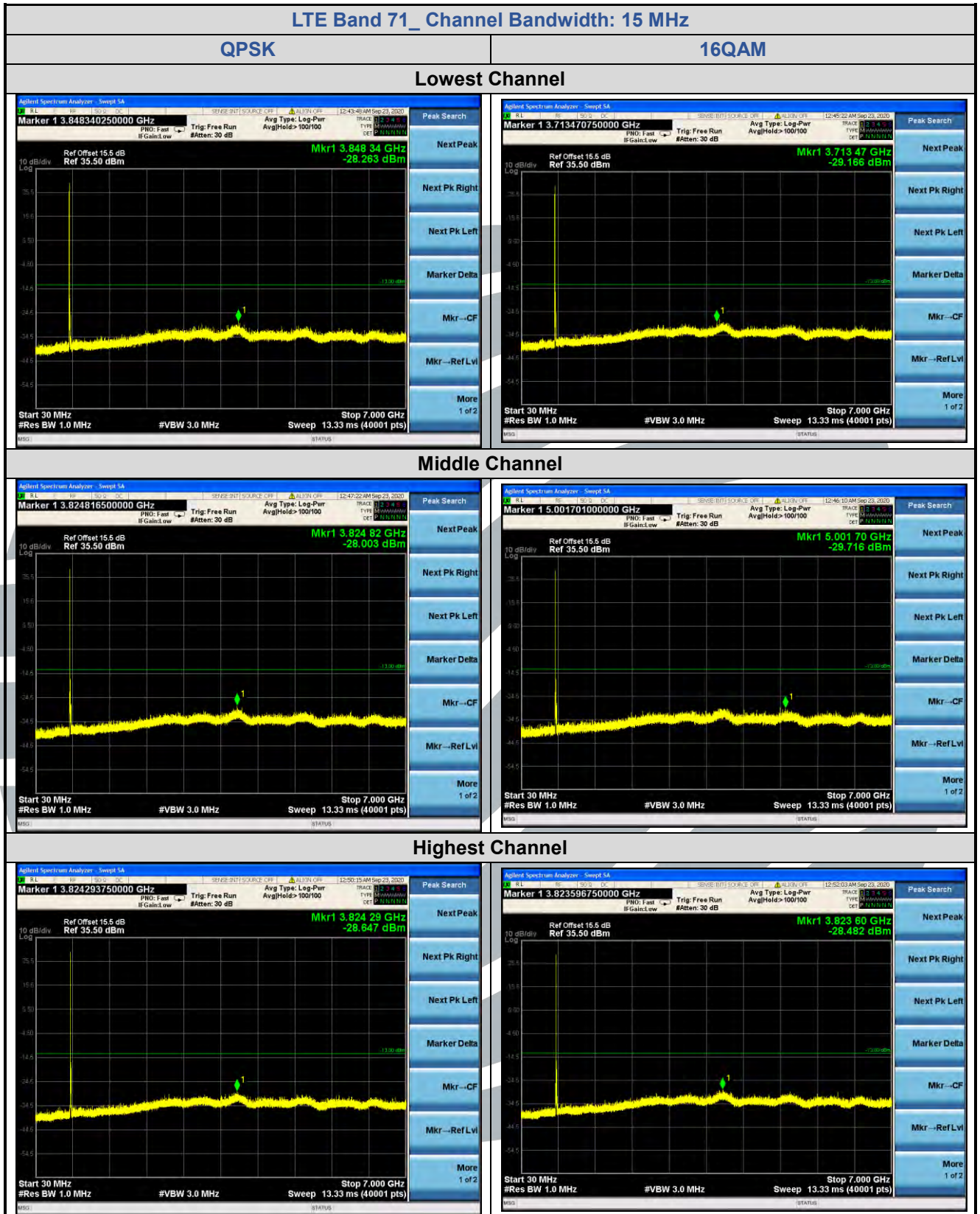
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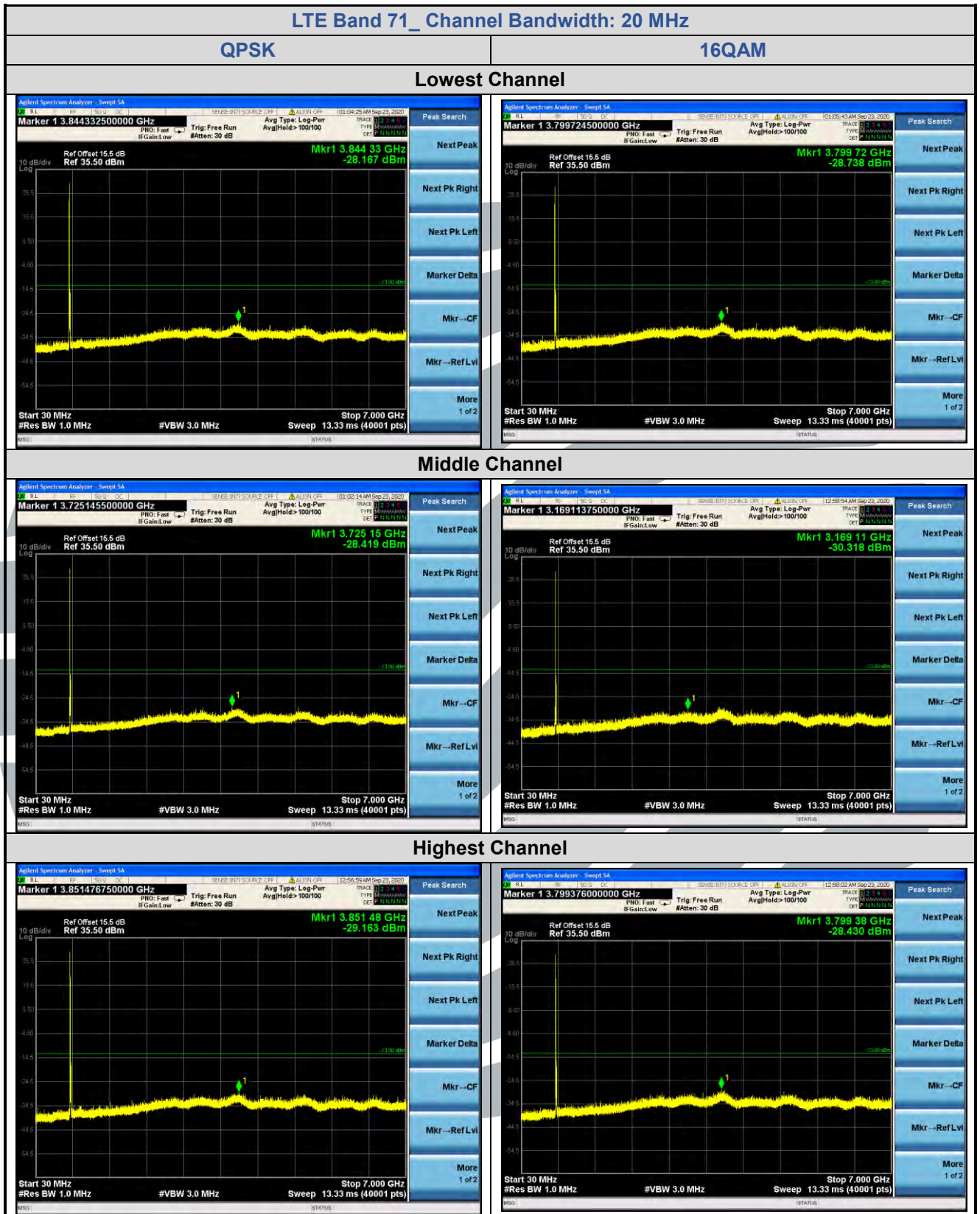
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### 5.8 FIELD STRENGTH OF SPURIOUS RADIATION

**Test Requirement:** **LTE Band 2 & LTE Band 25:** FCC 47 CFR Part 24.238(a), RSS-133 Issue 6, Section 6.5  
**LTE Band 4 & LTE Band 66:** FCC 47 CFR Part 27.53(h), RSS-139 Issue 3, Section 6.6  
**LTE Band 5 & LTE Band 26:** FCC 47 CFR Part 22.917(a), RSS-132 Issue 3, Section 5.5  
**LTE Band 12 & Band 71:** FCC 47 CFR Part 27.53(g), RSS-130 Issue 2, Section 4.7  
**LTE Band 13:** FCC 47 CFR Part 27.53, RSS-130 Issue 2, Section 4.7  
**LTE Band 26:** FCC 47 CFR Part 90.691

**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), 27.53(c)(2), 90.691:**

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:**

(c) 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.

(f) 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).

**RSS-132 Issue 3, Section 5.5, RSS-133 Issue 6, Section 6.6, RSS-139 Issue 3, Section 6.5, RSS-130 Issue 2, Section 4.7:**

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.

**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_Below 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	47.703	-73.22	1.07	-72.15	-13.00	-59.15	Horizontal
2	101.893	-75.23	2.33	-72.90	-13.00	-59.90	Horizontal
3	972.283	-81.59	21.84	-59.75	-13.00	-46.75	Horizontal
4	31.073	-80.38	9.59	-70.79	-13.00	-57.79	Vertical
5	163.162	-80.24	4.65	-75.59	-13.00	-62.59	Vertical
6	952.000	-80.78	21.91	-58.87	-13.00	-45.87	Vertical
<b>Middle Channel</b>							
1	53.756	-72.16	0.11	-72.05	-13.00	-59.05	Horizontal
2	102.612	-77.02	2.34	-74.68	-13.00	-61.68	Horizontal
3	952.000	-81.22	21.74	-59.48	-13.00	-46.48	Horizontal
4	32.184	-81.81	8.85	-72.96	-13.00	-59.96	Vertical
5	292.364	-80.93	9.69	-71.24	-13.00	-58.24	Vertical
6	958.714	-81.79	21.83	-59.96	-13.00	-46.96	Vertical
<b>Highest Channel</b>							
1	53.756	-71.10	0.11	-70.99	-13.00	-57.99	Horizontal
2	264.971	-80.45	9.16	-71.29	-13.00	-58.29	Horizontal
3	952.000	-81.91	21.74	-60.17	-13.00	-47.17	Horizontal
4	31.073	-80.89	9.59	-71.30	-13.00	-58.30	Vertical
5	296.502	-80.33	9.87	-70.46	-13.00	-57.46	Vertical
6	708.694	-79.25	18.79	-60.46	-13.00	-47.46	Vertical

LTE Band 2_20 MHz_QPSK_Above 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	3720.000	-60.08	6.82	-53.26	-13.00	-40.26	Horizontal
2	5580.000	-61.51	10.86	-50.65	-13.00	-37.65	Horizontal
3	3720.000	-60.49	6.81	-53.68	-13.00	-40.68	Vertical
4	5580.000	-62.31	11.34	-50.97	-13.00	-37.97	Vertical
<b>Middle Channel</b>							
1	3760.000	-59.41	6.93	-52.48	-13.00	-39.48	Horizontal
2	5640.000	-62.19	10.84	-51.35	-13.00	-38.35	Horizontal
3	3760.000	-60.19	6.93	-53.26	-13.00	-40.26	Vertical
4	5640.000	-62.15	11.32	-50.83	-13.00	-37.83	Vertical
<b>Highest Channel</b>							
1	3800.000	-60.81	7.03	-53.78	-13.00	-40.78	Horizontal
2	5700.000	-61.97	10.83	-51.14	-13.00	-38.14	Horizontal
3	3800.000	-60.03	7.05	-52.98	-13.00	-39.98	Vertical
4	5700.000	-61.63	11.29	-50.34	-13.00	-37.34	Vertical

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**5.8.2 LTE Band 4**

LTE Band 4_ 20 MHz_ QPSK_ Below 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	47.703	-71.10	1.07	-70.03	-13.00	-57.03	Horizontal
2	103.335	-76.09	2.34	-73.75	-13.00	-60.75	Horizontal
3	945.334	-80.60	21.62	-58.98	-13.00	-45.98	Horizontal
4	47.703	-76.34	1.82	-74.52	-13.00	-61.52	Vertical
5	127.586	-79.38	3.98	-75.40	-13.00	-62.40	Vertical
6	986.044	-81.54	21.96	-59.58	-13.00	-46.58	Vertical
<b>Middle Channel</b>							
1	50.108	-72.18	0.26	-71.92	-13.00	-58.92	Horizontal
2	158.640	-79.41	4.60	-74.81	-13.00	-61.81	Horizontal
3	798.620	-80.81	19.53	-61.28	-13.00	-48.28	Horizontal
4	35.511	-78.30	6.65	-71.65	-13.00	-58.65	Vertical
5	403.934	-81.34	12.82	-68.52	-13.00	-55.52	Vertical
6	972.283	-80.94	21.68	-59.26	-13.00	-46.26	Vertical
<b>Highest Channel</b>							
1	47.703	-72.60	1.07	-71.53	-13.00	-58.53	Horizontal
2	162.020	-79.38	4.73	-74.65	-13.00	-61.65	Horizontal
3	749.676	-79.94	18.43	-61.51	-13.00	-48.51	Horizontal
4	35.511	-77.47	6.65	-70.82	-13.00	-57.82	Vertical
5	294.426	-80.25	9.78	-70.47	-13.00	-57.47	Vertical
6	815.635	-80.15	19.62	-60.53	-13.00	-47.53	Vertical

LTE Band 4_ 20 MHz_ QPSK _ Above 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	3440.000	-59.65	5.94	-53.71	-13.00	-40.71	Horizontal
2	5160.000	-61.76	9.17	-52.59	-13.00	-39.59	Horizontal
3	3440.000	-60.27	5.75	-54.52	-13.00	-41.52	Vertical
4	5160.000	-61.95	9.53	-52.42	-13.00	-39.42	Vertical
<b>Middle Channel</b>							
1	3465.000	-59.99	6.02	-53.97	-13.00	-40.97	Horizontal
2	5197.500	-61.13	9.31	-51.82	-13.00	-38.82	Horizontal
3	3465.000	-60.64	5.87	-54.77	-13.00	-41.77	Vertical
4	5197.500	-60.64	9.69	-50.95	-13.00	-37.95	Vertical
<b>Highest Channel</b>							
1	3490.000	-60.76	6.11	-54.65	-13.00	-41.65	Horizontal
2	5235.000	-61.31	9.50	-51.81	-13.00	-38.81	Horizontal
3	3490.000	-60.22	5.99	-54.23	-13.00	-41.23	Vertical
4	5235.000	-61.52	9.89	-51.63	-13.00	-38.63	Vertical

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**5.8.3 LTE Band 5**

LTE Band 5_ 10 MHz_ QPSK_ Below 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	101.180	-82.29	25.21	-57.08	-13.00	-44.08	Horizontal
2	542.610	-83.22	39.17	-44.05	-13.00	-31.05	Horizontal
3	945.334	-82.52	44.75	-37.77	-13.00	-24.77	Horizontal
4	101.180	-86.29	25.87	-60.42	-13.00	-47.42	Vertical
5	611.462	-87.20	40.25	-46.95	-13.00	-33.95	Vertical
6	965.474	-85.27	44.82	-40.45	-13.00	-27.45	Vertical
<b>Middle Channel</b>							
1	33.101	-89.68	30.98	-58.70	-13.00	-45.70	Horizontal
2	255.823	-87.49	31.26	-56.23	-13.00	-43.23	Horizontal
3	992.997	-86.38	45.21	-41.17	-13.00	-28.17	Horizontal
4	132.149	-88.39	26.78	-61.61	-13.00	-48.61	Vertical
5	611.462	-87.70	40.25	-47.45	-13.00	-34.45	Vertical
6	945.334	-87.10	44.95	-42.15	-13.00	-29.15	Vertical
<b>Highest Channel</b>							
1	31.959	-89.31	31.67	-57.64	-13.00	-44.64	Horizontal
2	550.290	-87.28	39.11	-48.17	-13.00	-35.17	Horizontal
3	992.997	-86.47	45.21	-41.26	-13.00	-28.26	Horizontal
4	101.180	-85.46	25.87	-59.59	-13.00	-46.59	Vertical
5	723.793	-87.78	42.49	-45.29	-13.00	-32.29	Vertical
6	945.334	-86.05	44.95	-41.10	-13.00	-28.10	Vertical

LTE Band 5_ 10 MHz_ QPSK_ Above 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	1658.000	-60.29	0.11	-60.18	-13.00	-47.18	Horizontal
2	2487.000	-61.08	2.76	-58.32	-13.00	-45.32	Horizontal
3	1658.000	-59.79	-0.66	-60.45	-13.00	-47.45	Vertical
4	2487.000	-61.47	2.36	-59.11	-13.00	-46.11	Vertical
<b>Middle Channel</b>							
1	1673.000	-60.16	0.19	-59.97	-13.00	-46.97	Horizontal
2	2509.500	-61.40	2.82	-58.58	-13.00	-45.58	Horizontal
3	1673.000	-59.52	-0.57	-60.09	-13.00	-47.09	Vertical
4	2509.500	-61.19	2.41	-58.78	-13.00	-45.78	Vertical
<b>Highest Channel</b>							
1	1688.000	-60.27	0.28	-59.99	-13.00	-46.99	Horizontal
2	2532.000	-60.83	2.89	-57.94	-13.00	-44.94	Horizontal
3	1688.000	-58.87	-0.47	-59.34	-13.00	-46.34	Vertical
4	2532.000	-59.65	2.47	-57.18	-13.00	-44.18	Vertical

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**5.8.4 LTE Band 12**

LTE Band 12_ 10 MHz_ QPSK_ Below 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	97.002	-84.05	25.12	-58.93	-13.00	-45.93	Horizontal
2	280.294	-84.07	31.80	-52.27	-13.00	-39.27	Horizontal
3	906.304	-82.37	43.98	-38.39	-13.00	-25.39	Horizontal
4	97.002	-83.26	25.51	-57.75	-13.00	-44.75	Vertical
5	546.437	-84.06	39.09	-44.97	-13.00	-31.97	Vertical
6	952.000	-83.23	45.02	-38.21	-13.00	-25.21	Vertical
<b>Middle Channel</b>							
1	115.632	-84.03	25.69	-58.34	-13.00	-45.34	Horizontal
2	565.978	-84.50	39.11	-45.39	-13.00	-32.39	Horizontal
3	925.613	-83.11	44.32	-38.79	-13.00	-25.79	Horizontal
4	97.002	-83.27	25.51	-57.76	-13.00	-44.76	Vertical
5	165.472	-82.74	27.36	-55.38	-13.00	-42.38	Vertical
6	972.283	-82.07	44.73	-37.34	-13.00	-24.34	Vertical
<b>Highest Channel</b>							
1	204.305	-85.57	28.61	-56.96	-13.00	-43.96	Horizontal
2	611.462	-85.57	40.20	-45.37	-13.00	-32.37	Horizontal
3	958.714	-83.53	44.86	-38.67	-13.00	-25.67	Horizontal
4	36.014	-87.43	29.41	-58.02	-13.00	-45.02	Vertical
5	233.488	-86.38	30.09	-56.29	-13.00	-43.29	Vertical
6	958.714	-84.69	44.92	-39.77	-13.00	-26.77	Vertical

LTE Band 12_ 10 MHz_ QPSK_ Above 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	1408.000	-57.25	-0.43	-57.68	-13.00	-44.68	Horizontal
2	2112.000	-60.50	2.00	-58.50	-13.00	-45.50	Horizontal
3	1408.000	-56.58	-1.20	-57.78	-13.00	-44.78	Vertical
4	2112.000	-59.40	1.52	-57.88	-13.00	-44.88	Vertical
<b>Middle Channel</b>							
1	1415.000	-57.94	-0.44	-58.38	-13.00	-45.38	Horizontal
2	2122.500	-60.55	2.00	-58.55	-13.00	-45.55	Horizontal
3	1415.000	-58.90	-1.22	-60.12	-13.00	-47.12	Vertical
4	2122.500	-60.43	1.53	-58.90	-13.00	-45.90	Vertical
<b>Highest Channel</b>							
1	1422.000	-58.72	-0.45	-59.17	-13.00	-46.17	Horizontal
2	2133.000	-61.08	2.01	-59.07	-13.00	-46.07	Horizontal
3	1422.000	-58.63	-1.24	-59.87	-13.00	-46.87	Vertical
4	2133.000	-61.81	1.53	-60.28	-13.00	-47.28	Vertical

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**5.8.5 LTE Band 13**

LTE Band 13_5 MHz_QPSK_Below 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	152.090	-88.56	26.85	-61.71	-13.00	-48.71	Horizontal
2	718.725	-87.00	42.08	-44.92	-13.00	-31.92	Horizontal
3	938.714	-85.84	44.60	-41.24	-13.00	-28.24	Horizontal
4	118.096	-88.54	26.65	-61.89	-13.00	-48.89	Vertical
5	734.037	-87.33	42.41	-44.92	-13.00	-31.92	Vertical
6	952.000	-86.91	45.02	-41.89	-13.00	-28.89	Vertical
<b>Middle Channel</b>							
1	132.149	-88.69	26.51	-62.18	-13.00	-49.18	Horizontal
2	527.571	-87.02	39.29	-47.73	-13.00	-34.73	Horizontal
3	979.139	-86.68	44.97	-41.71	-13.00	-28.71	Horizontal
4	106.281	-87.88	26.15	-61.73	-13.00	-48.73	Vertical
5	464.887	-86.86	36.65	-50.21	-13.00	-37.21	Vertical
6	945.334	-86.91	44.95	-41.96	-13.00	-28.96	Vertical
<b>Highest Channel</b>							
1	35.016	-88.56	29.84	-58.72	-13.00	-45.72	Horizontal
2	527.571	-87.54	39.29	-48.25	-13.00	-35.25	Horizontal
3	938.714	-86.59	44.60	-41.99	-13.00	-28.99	Horizontal
4	97.002	-86.99	25.51	-61.48	-13.00	-48.48	Vertical
5	512.948	-87.40	38.44	-48.96	-13.00	-35.96	Vertical
6	958.714	-86.48	44.92	-41.56	-13.00	-28.56	Vertical

LTE Band 13_5 MHz_QPSK_Above 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	1559.000	-59.10	-0.43	-59.53	-13.00	-46.53	Horizontal
2	2338.500	-59.97	2.39	-57.58	-13.00	-44.58	Horizontal
3	1559.000	-57.93	-1.28	-59.21	-13.00	-46.21	Vertical
4	2338.500	-60.76	1.96	-58.80	-13.00	-45.80	Vertical
<b>Middle Channel</b>							
1	1564.000	-58.25	-0.41	-58.66	-13.00	-45.66	Horizontal
2	2346.000	-60.14	2.41	-57.73	-13.00	-44.73	Horizontal
3	1564.000	-56.67	-1.26	-57.93	-13.00	-44.93	Vertical
4	2346.000	-59.73	1.98	-57.75	-13.00	-44.75	Vertical
<b>Highest Channel</b>							
1	1569.000	-57.65	-0.39	-58.04	-13.00	-45.04	Horizontal
2	2353.500	-59.44	2.43	-57.01	-13.00	-44.01	Horizontal
3	1569.000	-58.56	-1.24	-59.80	-13.00	-46.80	Vertical
4	2353.500	-58.91	2.01	-56.90	-13.00	-43.90	Vertical

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**5.8.6 LTE Band 25**

LTE Band 25_ 20 MHz_ QPSK_ Below 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	47.703	-72.01	1.07	-70.94	-13.00	-57.94	Horizontal
2	250.486	-80.14	8.76	-71.38	-13.00	-58.38	Horizontal
3	881.184	-78.99	19.89	-59.10	-13.00	-46.10	Horizontal
4	31.959	-80.37	8.99	-71.38	-13.00	-58.38	Vertical
5	175.040	-80.79	4.84	-75.95	-13.00	-62.95	Vertical
6	938.714	-80.83	21.66	-59.17	-13.00	-46.17	Vertical
<b>Middle Channel</b>							
1	54.135	-71.36	0.09	-71.27	-13.00	-58.27	Horizontal
2	102.612	-76.30	2.34	-73.96	-13.00	-60.96	Horizontal
3	938.714	-80.44	21.46	-58.98	-13.00	-45.98	Horizontal
4	35.511	-78.28	6.65	-71.63	-13.00	-58.63	Vertical
5	276.382	-79.98	8.99	-70.99	-13.00	-57.99	Vertical
6	992.997	-80.49	22.15	-58.34	-13.00	-45.34	Vertical
<b>Highest Channel</b>							
1	48.378	-72.38	0.84	-71.54	-13.00	-58.54	Horizontal
2	97.002	-75.48	2.22	-73.26	-13.00	-60.26	Horizontal
3	932.141	-81.93	21.30	-60.63	-13.00	-47.63	Horizontal
4	30.855	-80.69	9.73	-70.96	-13.00	-57.96	Vertical
5	401.105	-80.05	12.85	-67.20	-13.00	-54.20	Vertical
6	912.695	-80.47	21.13	-59.34	-13.00	-46.34	Vertical

LTE Band 25_ 20 MHz_ QPSK_ Above 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	3720.000	-59.36	6.82	-52.54	-13.00	-39.54	Horizontal
2	5580.000	-60.52	10.86	-49.66	-13.00	-36.66	Horizontal
3	3720.000	-59.22	6.81	-52.41	-13.00	-39.41	Vertical
4	5580.000	-59.93	11.34	-48.59	-13.00	-35.59	Vertical
<b>Middle Channel</b>							
1	3765.000	-59.80	6.95	-52.85	-13.00	-39.85	Horizontal
2	5647.500	-60.10	10.85	-49.25	-13.00	-36.25	Horizontal
3	3765.000	-60.75	6.95	-53.80	-13.00	-40.80	Vertical
4	5647.500	-59.98	11.32	-48.66	-13.00	-35.66	Vertical
<b>Highest Channel</b>							
1	3810.000	-58.31	7.06	-51.25	-13.00	-38.25	Horizontal
2	5715.000	-60.01	10.82	-49.19	-13.00	-36.19	Horizontal
3	3810.000	-58.61	7.08	-51.53	-13.00	-38.53	Vertical
4	5715.000	-59.75	11.28	-48.47	-13.00	-35.47	Vertical

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**5.8.7 LTE Band 26**

LTE Band 26_ 15 MHz_ QPSK_ Below 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	72.211	-86.69	29.08	-57.61	-13.00	-44.61	Horizontal
2	527.571	-88.01	45.18	-42.83	-13.00	-29.83	Horizontal
3	945.334	-86.32	50.66	-35.66	-13.00	-22.66	Horizontal
4	72.211	-86.69	29.66	-57.03	-13.00	-44.03	Vertical
5	546.437	-87.28	44.98	-42.30	-13.00	-29.30	Vertical
6	952.000	-86.22	50.93	-35.29	-13.00	-22.29	Vertical
<b>Middle Channel</b>							
1	135.916	-86.86	32.29	-54.57	-13.00	-41.57	Horizontal
2	607.181	-86.75	45.94	-40.81	-13.00	-27.81	Horizontal
3	986.044	-87.29	51.00	-36.29	-13.00	-23.29	Horizontal
4	106.281	-87.78	32.06	-55.72	-13.00	-42.72	Vertical
5	562.014	-87.23	45.10	-42.13	-13.00	-29.13	Vertical
6	938.714	-86.09	50.71	-35.38	-13.00	-22.38	Vertical
<b>Highest Channel</b>							
1	91.700	-88.54	30.88	-57.66	-13.00	-44.66	Horizontal
2	713.692	-87.70	47.96	-39.74	-13.00	-26.74	Horizontal
3	972.283	-87.11	50.81	-36.30	-13.00	-23.30	Horizontal
4	64.080	-87.67	29.00	-58.67	-13.00	-45.67	Vertical
5	535.038	-87.38	44.88	-42.50	-13.00	-29.50	Vertical
6	972.283	-85.84	50.65	-35.19	-13.00	-22.19	Vertical

LTE Band 26_ 15 MHz_ QPSK_ Above 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	1663.000	-61.46	0.13	-61.33	-13.00	-48.33	Horizontal
2	2494.500	-62.52	2.77	-59.75	-13.00	-46.75	Horizontal
3	1663.000	-63.13	-0.64	-63.77	-13.00	-50.77	Vertical
4	2494.500	-64.17	2.37	-61.80	-13.00	-48.80	Vertical
<b>Middle Channel</b>							
1	1673.000	-61.81	0.19	-61.62	-13.00	-48.62	Horizontal
2	2509.500	-62.47	2.82	-59.65	-13.00	-46.65	Horizontal
3	1673.000	-61.87	-0.57	-62.44	-13.00	-49.44	Vertical
4	2509.500	-61.78	2.41	-59.37	-13.00	-46.37	Vertical
<b>Highest Channel</b>							
1	1683.000	-62.56	0.26	-62.30	-13.00	-49.30	Horizontal
2	2524.500	-62.23	2.86	-59.37	-13.00	-46.37	Horizontal
3	1683.000	-62.81	-0.49	-63.30	-13.00	-50.30	Vertical
4	2524.500	-62.53	2.44	-60.09	-13.00	-47.09	Vertical

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**5.8.8 LTE Band 26 (Part 90S)**

LTE Band 26_1.4 MHz_QPSK_Below 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	97.002	-78.53	25.12	-53.41	-13.00	-40.41	Horizontal
2	523.876	-78.84	39.26	-39.58	-13.00	-26.58	Horizontal
3	965.474	-77.84	44.87	-32.97	-13.00	-19.97	Horizontal
4	124.925	-79.63	26.75	-52.88	-13.00	-39.88	Vertical
5	590.351	-79.17	39.67	-39.50	-13.00	-26.50	Vertical
6	986.044	-78.15	44.97	-33.18	-13.00	-20.18	Vertical
<b>Middle Channel</b>							
1	97.002	-79.61	25.12	-54.49	-13.00	-41.49	Horizontal
2	327.155	-80.08	33.15	-46.93	-13.00	-33.93	Horizontal
3	925.613	-78.10	44.32	-33.78	-13.00	-20.78	Horizontal
4	97.002	-79.28	25.51	-53.77	-13.00	-40.77	Vertical
5	373.886	-79.41	34.91	-44.50	-13.00	-31.50	Vertical
6	958.714	-79.19	44.92	-34.27	-13.00	-21.27	Vertical
<b>Highest Channel</b>							
1	97.002	-78.56	25.12	-53.44	-13.00	-40.44	Horizontal
2	527.571	-77.80	39.29	-38.51	-13.00	-25.51	Horizontal
3	919.132	-76.46	44.21	-32.25	-13.00	-19.25	Horizontal
4	97.002	-78.73	25.51	-53.22	-13.00	-40.22	Vertical
5	298.593	-78.13	32.16	-45.97	-13.00	-32.97	Vertical
6	945.334	-77.06	44.95	-32.11	-13.00	-19.11	Vertical

LTE Band 26_1.4 MHz_QPSK_Above 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	1629.400	-62.73	-0.07	-62.80	-13.00	-49.80	Horizontal
2	2444.100	-62.69	2.65	-60.04	-13.00	-47.04	Horizontal
3	1629.400	-62.29	-0.87	-63.16	-13.00	-50.16	Vertical
4	2444.100	-62.55	2.24	-60.31	-13.00	-47.31	Vertical
<b>Middle Channel</b>							
1	1638.000	-62.00	-0.02	-62.02	-13.00	-49.02	Horizontal
2	2457.000	-61.29	2.69	-58.60	-13.00	-45.60	Horizontal
3	1638.000	-61.44	-0.81	-62.25	-13.00	-49.25	Vertical
4	2457.000	-61.23	2.28	-58.95	-13.00	-45.95	Vertical
<b>Highest Channel</b>							
1	1643.000	-61.15	0.00	-61.15	-13.00	-48.15	Horizontal
2	2464.500	-62.12	2.70	-59.42	-13.00	-46.42	Horizontal
3	1643.000	-61.88	-0.78	-62.66	-13.00	-49.66	Vertical
4	2464.500	-62.54	2.29	-60.25	-13.00	-47.25	Vertical

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**5.8.9 LTE Band 66**

LTE Band 66_ 20 MHz_ QPSK_ Below 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	50.461	-71.94	0.25	-71.69	-13.00	-58.69	Horizontal
2	127.586	-73.97	3.66	-70.31	-13.00	-57.31	Horizontal
3	255.823	-78.64	8.91	-69.73	-13.00	-56.73	Horizontal
4	53.379	-71.47	0.75	-70.72	-13.00	-57.72	Vertical
5	139.791	-69.84	4.00	-65.84	-13.00	-52.84	Vertical
6	958.714	-81.76	21.83	-59.93	-13.00	-46.93	Vertical
<b>Middle Channel</b>							
1	54.135	-72.44	0.09	-72.35	-13.00	-59.35	Horizontal
2	130.305	-75.48	3.80	-71.68	-13.00	-58.68	Horizontal
3	254.031	-78.91	8.85	-70.06	-13.00	-57.06	Horizontal
4	47.703	-72.44	1.82	-70.62	-13.00	-57.62	Vertical
5	128.486	-70.83	3.99	-66.84	-13.00	-53.84	Vertical
6	938.714	-79.95	21.66	-58.29	-13.00	-45.29	Vertical
<b>Highest Channel</b>							
1	97.002	-73.66	2.22	-71.44	-13.00	-58.44	Horizontal
2	132.149	-74.49	3.73	-70.76	-13.00	-57.76	Horizontal
3	523.876	-79.67	15.66	-64.01	-13.00	-51.01	Horizontal
4	69.230	-70.30	0.55	-69.75	-13.00	-56.75	Vertical
5	127.586	-70.58	3.98	-66.60	-13.00	-53.60	Vertical
6	972.283	-81.21	21.68	-59.53	-13.00	-46.53	Vertical

LTE Band 66_ 20 MHz_ QPSK_ Above 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	3440.000	-58.16	5.94	-52.22	-13.00	-39.22	Horizontal
2	5160.000	-60.23	9.17	-51.06	-13.00	-38.06	Horizontal
3	3440.000	-61.00	5.75	-55.25	-13.00	-42.25	Vertical
4	5160.000	-59.41	9.53	-49.88	-13.00	-36.88	Vertical
<b>Middle Channel</b>							
1	3490.000	-58.74	6.11	-52.63	-13.00	-39.63	Horizontal
2	5235.000	-60.50	9.50	-51.00	-13.00	-38.00	Horizontal
3	3490.000	-59.27	5.99	-53.28	-13.00	-40.28	Vertical
4	5235.000	-60.58	9.89	-50.69	-13.00	-37.69	Vertical
<b>Highest Channel</b>							
1	3540.000	-61.03	6.27	-54.76	-13.00	-41.76	Horizontal
2	5310.000	-60.48	9.89	-50.59	-13.00	-37.59	Horizontal
3	3540.000	-59.55	6.19	-53.36	-13.00	-40.36	Vertical
4	5310.000	-60.12	10.31	-49.81	-13.00	-36.81	Vertical

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**5.8.10 LTE Band 71**

LTE Band 71_ 20 MHz_ QPSK_ Below 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	34.045	-88.90	36.31	-52.59	-13.00	-39.59	Horizontal
2	373.886	-88.09	39.93	-48.16	-13.00	-35.16	Horizontal
3	965.474	-86.44	50.78	-35.66	-13.00	-22.66	Horizontal
4	97.002	-86.43	31.42	-55.01	-13.00	-42.01	Vertical
5	586.217	-87.92	45.46	-42.46	-13.00	-29.46	Vertical
6	958.714	-86.67	50.83	-35.84	-13.00	-22.84	Vertical
<b>Middle Channel</b>							
1	31.735	-90.30	37.70	-52.60	-13.00	-39.60	Horizontal
2	535.038	-88.02	45.12	-42.90	-13.00	-29.90	Horizontal
3	952.000	-86.60	50.76	-35.84	-13.00	-22.84	Horizontal
4	30.639	-90.15	38.92	-51.23	-13.00	-38.23	Vertical
5	353.447	-88.22	39.74	-48.48	-13.00	-35.48	Vertical
6	958.714	-85.94	50.83	-35.11	-13.00	-22.11	Vertical
<b>Highest Channel</b>							
1	33.570	-90.41	36.60	-53.81	-13.00	-40.81	Horizontal
2	546.437	-87.72	45.03	-42.69	-13.00	-29.69	Horizontal
3	965.474	-86.59	50.78	-35.81	-13.00	-22.81	Horizontal
4	32.640	-89.82	37.58	-52.24	-13.00	-39.24	Vertical
5	261.273	-87.44	36.90	-50.54	-13.00	-37.54	Vertical
6	986.044	-86.60	50.89	-35.71	-13.00	-22.71	Vertical

LTE Band 71_ 20 MHz_ QPSK_ Above 1G							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
<b>Lowest Channel</b>							
1	1346.000	-58.84	-0.24	-59.08	-13.00	-46.08	Horizontal
2	2019.000	-61.75	1.90	-59.85	-13.00	-46.85	Horizontal
3	1346.000	-58.00	-0.93	-58.93	-13.00	-45.93	Vertical
4	2019.000	-60.62	1.40	-59.22	-13.00	-46.22	Vertical
<b>Middle Channel</b>							
1	1366.000	-60.02	-0.30	-60.32	-13.00	-47.32	Horizontal
2	2049.000	-60.89	1.93	-58.96	-13.00	-45.96	Horizontal
3	1366.000	-60.06	-1.01	-61.07	-13.00	-48.07	Vertical
4	2049.000	-62.66	1.44	-61.22	-13.00	-48.22	Vertical
<b>Highest Channel</b>							
1	1376.000	-58.43	-0.32	-58.75	-13.00	-45.75	Horizontal
2	2064.000	-61.03	1.94	-59.09	-13.00	-46.09	Horizontal
3	1376.000	-58.47	-1.05	-59.52	-13.00	-46.52	Vertical
4	2064.000	-60.30	1.45	-58.85	-13.00	-45.85	Vertical

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## 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,  
 RSS-133 Issue 6, Section 6.3 & RSS-139 Issue 3, Section 6.4  
 RSS-132 Issue 3, Section 5.3 & RSS-130 Issue 2, Section 4.5

**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  $\pm 2.5$  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.

**RSS-132 Issue 3, Section 5.3:**

The carrier frequency shall not depart from the reference frequency in excess of  $\pm 2.5$  ppm for mobile stations and  $\pm 1.5$  ppm for base stations

**RSS-133 Issue 6, Section 6.3:**

The carrier frequency shall not depart from the reference frequency, in excess of  $\pm 2.5$  ppm for mobile stations and  $\pm 1.0$  ppm for base stations.

**RSS-139 Issue 3, Section 6.4, RSS-130 Issue 2, Section 4.5:**

The frequency stability shall be sufficient to ensure that the occupied bandwidth stays within the operating frequency block when tested to the temperature and supply voltage variations specified in RSS-Gen.

**Test Setup:** Refer to section 4.2.2 for details.

**Test Procedures:**

- 1) Use CMW 500 or CMU 200 with Frequency Error measurement capability.
  - a) Temp. =  $-30^{\circ}$  to  $+50^{\circ}\text{C}$
  - b) Voltage =low voltage, 3.2 Vdc, Normal, 3.8Vdc and High voltage, 4.5 Vdc.

2) Frequency Stability vs Temperature:

The EUT is place inside a temperature chamber. The temperature is set to  $20^{\circ}\text{C}$  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  $+50^{\circ}\text{C}$  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

5.9.1 LTE Band 2

Modulation	Channel/ Frequency (MHz)	Voltage	Temperature	Deviation	Deviation	Limit	Pass/ Fail
		(Vdc)	(°C)	(Hz)	(ppm)	(ppm)	
<b>LTE Band 2 / 20MHz / Full RB</b>							
QPSK	18900 / 1880.0	VL	TN	-12	-0.0064	N/A	Pass
		VN		-10	-0.0053		Pass
		VH		-8	-0.0043		Pass
		VN	50	-13	-0.0069		Pass
			40	-16	-0.0085		Pass
			30	-6	-0.0032		Pass
			20	-8	-0.0043		Pass
			10	-12	-0.0064		Pass
			0	-14	-0.0074		Pass
			-10	-15	-0.0080		Pass
			-20	-10	-0.0053		Pass
			-30	-11	-0.0059		Pass

**5.9.2 LTE Band 4**

Modulation	Channel/ Frequency (MHz)	Voltage	Temperature	Deviation	Deviation	Limit	Pass/ Fail
		(Vdc)	(°C)	(Hz)	(ppm)	(ppm)	
<b>LTE Band 4 / 20MHz / Full RB</b>							
QPSK	20175 / 1732.5	VL	TN	-13	-0.0075	N/A	Pass
		VN		-13	-0.0075		Pass
		VH		-11	-0.0063		Pass
		VN	50	-16	-0.0092		Pass
			40	-19	-0.0110		Pass
			30	-9	-0.0052		Pass
			20	-11	-0.0063		Pass
			10	-15	-0.0087		Pass
			0	-17	-0.0098		Pass
			-10	-18	-0.0104		Pass
			-20	-13	-0.0075		Pass
			-30	-14	-0.0081		Pass

**5.9.3 LTE Band 5**

Modulation	Channel/ Frequency (MHz)	Voltage	Temperature	Deviation	Deviation	Limit	Result
		(Vdc)	(°C)	(Hz)	(ppm)	(ppm)	
<b>LTE Band 5 / 10MHz / Full RB</b>							
QPSK	20525 / 836.5	VL	TN	-9	-0.0108	± 2.5	Pass
		VN		-11	-0.0132	± 2.5	Pass
		VH		-9	-0.0108	± 2.5	Pass
		VN	50	-14	-0.0167	± 2.5	Pass
			40	-17	-0.0203	± 2.5	Pass
			30	-7	-0.0084	± 2.5	Pass
			20	-9	-0.0108	± 2.5	Pass
			10	-13	-0.0155	± 2.5	Pass
			0	-15	-0.0179	± 2.5	Pass
			-10	-16	-0.0191	± 2.5	Pass
			-20	-11	-0.0132	± 2.5	Pass
			-30	-12	-0.0143	± 2.5	Pass

### 5.9.4 LTE Band 12

Modulation	Channel/ Frequency (MHz)	Voltage	Temperature	Deviation	Deviation	Limit	Result
		(Vdc)	(°C)	(Hz)	(ppm)	(ppm)	
<b>LTE Band 12 / 10MHz / Full RB</b>							
QPSK	23095 / 707.5	VL	TN	-7	-0.0099	N/A	Pass
		VN		-13	-0.0184		Pass
		VH		-12	-0.0170		Pass
		VN	50	-9	-0.0127		Pass
			40	-12	-0.0170		Pass
			30	-13	-0.0184		Pass
			20	-10	-0.0141		Pass
			10	-12	-0.0170		Pass
			0	-17	-0.0240		Pass
			-10	-16	-0.0226		Pass
			-20	-13	-0.0184		Pass
			-30	-17	-0.0240		Pass

### 5.9.5 LTE Band 13

Modulation	Channel/ Frequency (MHz)	Voltage	Temperature	Deviation	Deviation	Limit	Result
		(Vdc)	(°C)	(Hz)	(ppm)	(ppm)	
<b>LTE Band 13 / 10MHz / Full RB</b>							
QPSK	23230 / 782	VL	TN	-5	-0.0064	N/A	Pass
		VN		-4	-0.0051		Pass
		VH		-8	-0.0102		Pass
		VN	50	-12	-0.0153		Pass
			40	-9	-0.0115		Pass
			30	-11	-0.0141		Pass
			20	-10	-0.0128		Pass
			10	-6	-0.0077		Pass
			0	-8	-0.0102		Pass
			-10	-13	-0.0166		Pass
			-20	-12	-0.0153		Pass
			-30	-10	-0.0128		Pass

**5.9.6 LTE Band 25**

Modulation	Channel/ Frequency (MHz)	Voltage	Temperature	Deviation	Deviation	Limit	Result
		(Vdc)	(°C)	(Hz)	(ppm)	(ppm)	
<b>LTE Band 25 / 20MHz / Full RB</b>							
QPSK	26340 / 1880.0	VL	TN	-14	-0.0074	N/A	Pass
		VN		-13	-0.0069		Pass
		VH		-11	-0.0059		Pass
		VN	50	-16	-0.0085		Pass
			40	-19	-0.0101		Pass
			30	-9	-0.0048		Pass
			20	-11	-0.0059		Pass
			10	-15	-0.0080		Pass
			0	-17	-0.0090		Pass
			-10	-18	-0.0096		Pass
			-20	-13	-0.0069		Pass
			-30	-14	-0.0074		Pass

**5.9.7 LTE Band 26**

Modulation	Channel/ Frequency (MHz)	Voltage	Temperature	Deviation	Deviation	Limit	Result
		(Vdc)	(°C)	(Hz)	(ppm)	(ppm)	
<b>LTE Band 26 / 15MHz / Full RB</b>							
QPSK	26915 / 836.5	VL	TN	-9	-0.0108	± 2.5	Pass
		VN		-11	-0.0132	± 2.5	Pass
		VH		-12	-0.0143	± 2.5	Pass
		VN	50	-8	-0.0096	± 2.5	Pass
			40	-13	-0.0155	± 2.5	Pass
			30	-13	-0.0155	± 2.5	Pass
			20	-19	-0.0227	± 2.5	Pass
			10	-13	-0.0155	± 2.5	Pass
			0	-8	-0.0096	± 2.5	Pass
			-10	-11	-0.0132	± 2.5	Pass
			-20	-15	-0.0179	± 2.5	Pass
			-30	-14	-0.0167	± 2.5	Pass

**5.9.8 LTE Band 26 (Part 90S)**

Modulation	Channel/ Frequency (MHz)	Voltage	Temperature	Deviation	Deviation	Limit	Result
		(Vdc)	(°C)	(Hz)	(ppm)	(ppm)	
<b>LTE Band 26 / 10MHz / Full RB</b>							
QPSK	26740 / 819	VL	TN	-4	-0.0049	± 2.5	Pass
		VN		-4	-0.0049	± 2.5	Pass
		VH		-6	-0.0073	± 2.5	Pass
		VN	50	-12	-0.0147	± 2.5	Pass
			40	-17	-0.0208	± 2.5	Pass
			30	-10	-0.0122	± 2.5	Pass
			20	-11	-0.0134	± 2.5	Pass
			10	-12	-0.0147	± 2.5	Pass
			0	-16	-0.0195	± 2.5	Pass
			-10	-11	-0.0134	± 2.5	Pass
			-20	-16	-0.0195	± 2.5	Pass
			-30	-18	-0.0220	± 2.5	Pass

**5.9.9 LTE Band 66**

Modulation	Channel/ Frequency (MHz)	Voltage	Temperature	Deviation	Deviation	Limit	Result
		(Vdc)	(°C)	(Hz)	(ppm)	(ppm)	
<b>LTE Band 66 / 20MHz / Full RB</b>							
QPSK	132322 / 1745	VL	TN	-14	-0.0080	N/A	Pass
		VN		-7	-0.0040		Pass
		VH		-8	-0.0046		Pass
		VN	50	-11	-0.0063		Pass
			40	-13	-0.0074		Pass
			30	-9	-0.0052		Pass
			20	-4	-0.0023		Pass
			10	-7	-0.0040		Pass
			0	-8	-0.0046		Pass
			-10	-12	-0.0069		Pass
			-20	-14	-0.0080		Pass
			-30	-7	-0.0040		Pass

**5.9.10 LTE Band 71**

Modulation	Channel/ Frequency (MHz)	Voltage	Temperature	Deviation	Deviation	Limit	Result
		(Vdc)	(°C)	(Hz)	(ppm)	(ppm)	
<b>LTE Band 71 / 20MHz / Full RB</b>							
QPSK	133322 / 683	VL	TN	-13	-0.0190	N/A	Pass
		VN		-11	-0.0161		Pass
		VH		-9	-0.0132		Pass
		VN	50	-14	-0.0205		Pass
			40	-17	-0.0249		Pass
			30	-7	-0.0102		Pass
			20	-9	-0.0132		Pass
			10	-13	-0.0190		Pass
			0	-15	-0.0220		Pass
			-10	-16	-0.0234		Pass
			-20	-11	-0.0161		Pass
			-30	-12	-0.0176		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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