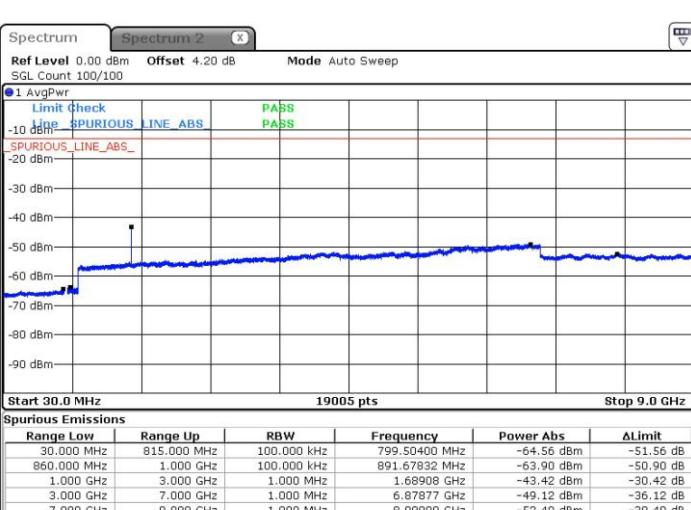




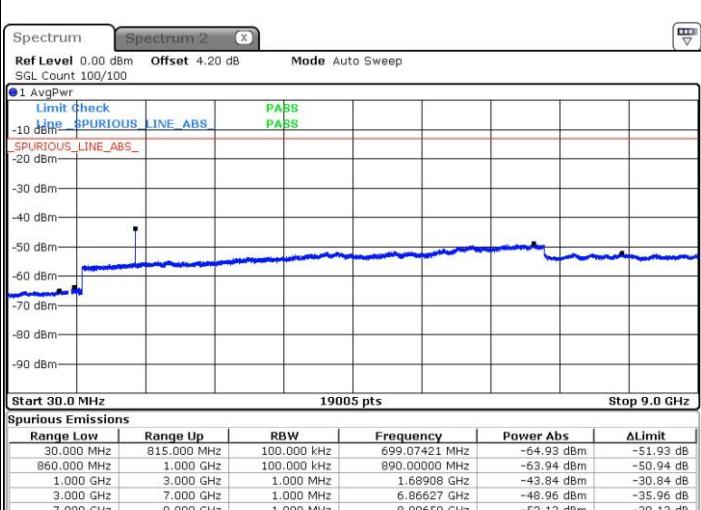
LTE Band 5 / 5MHz

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 28.FEB.2016 16:06:31

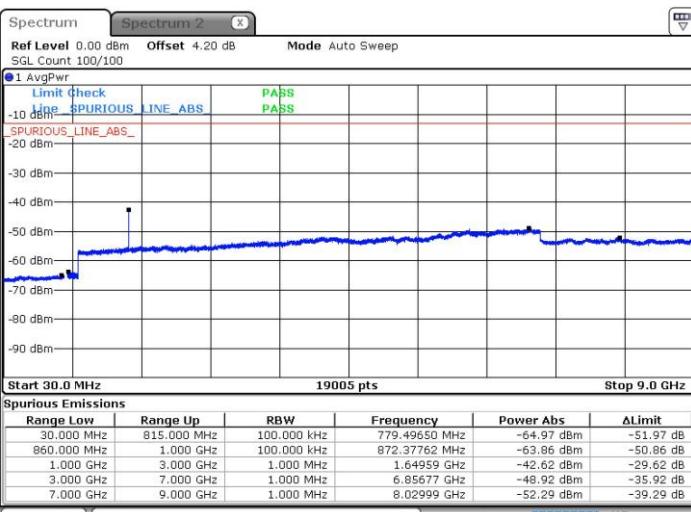


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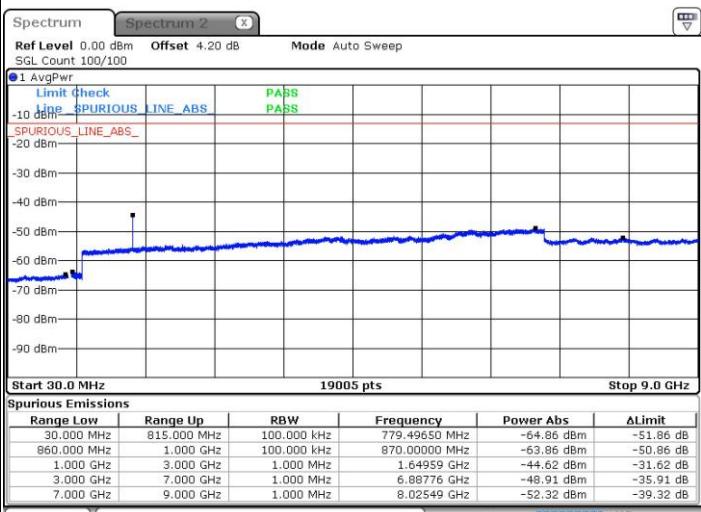
LTE Band 5 / 10MHz

Lowest Channel / QPSK

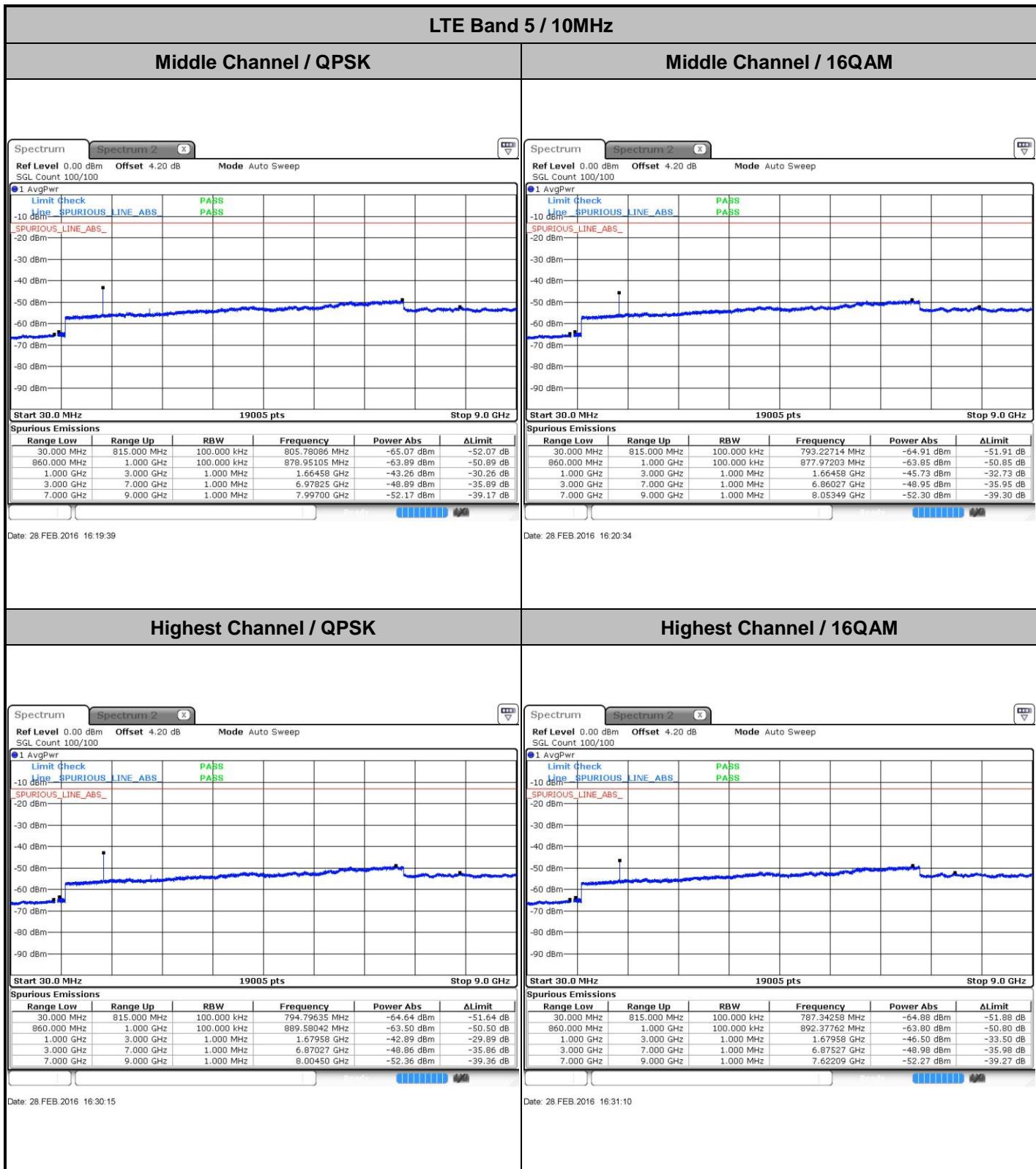
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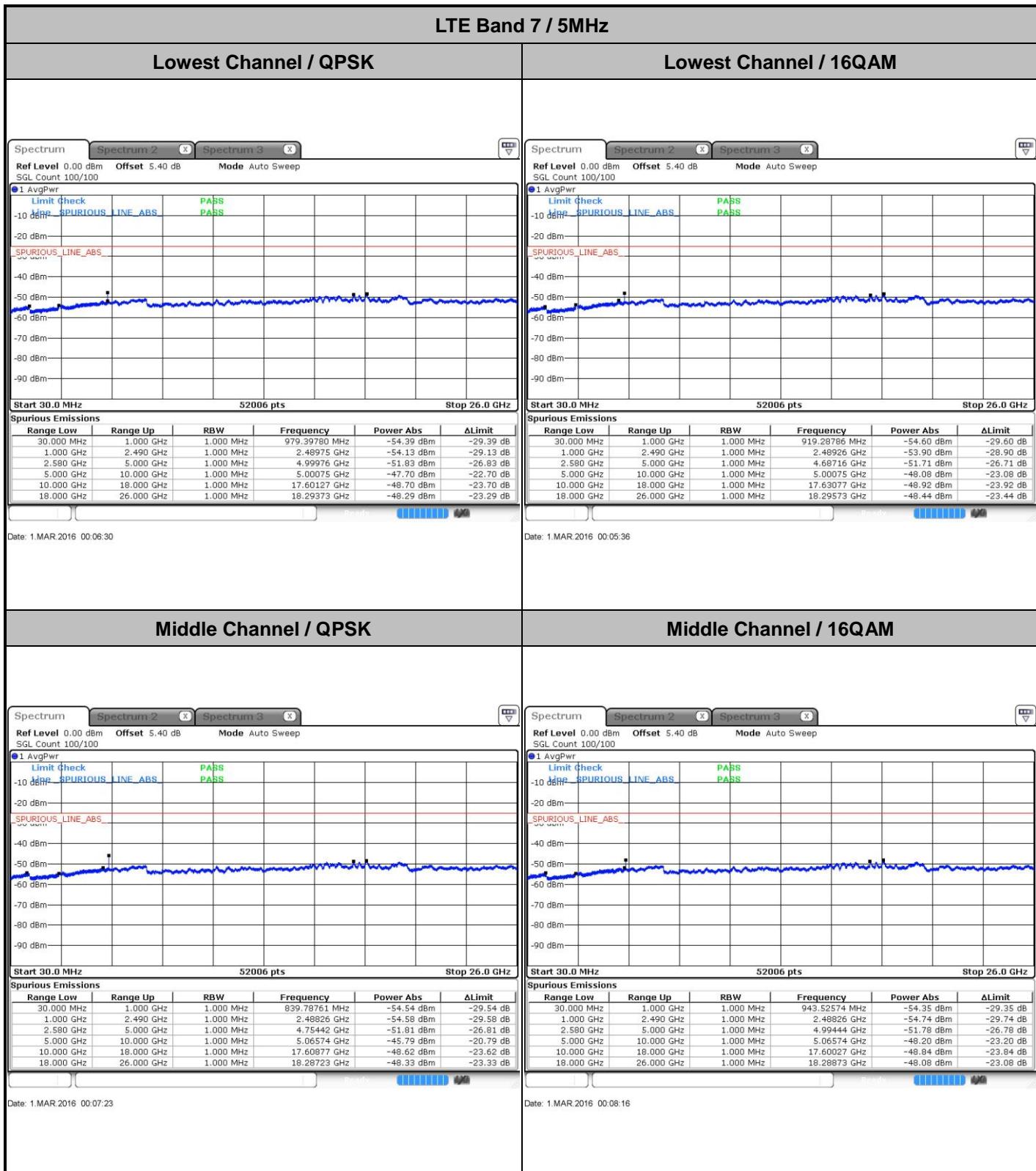


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Date: 28.FEB.2016 16:18:02



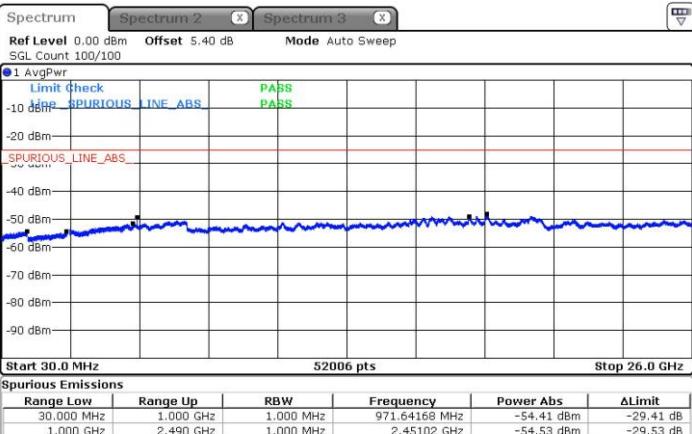
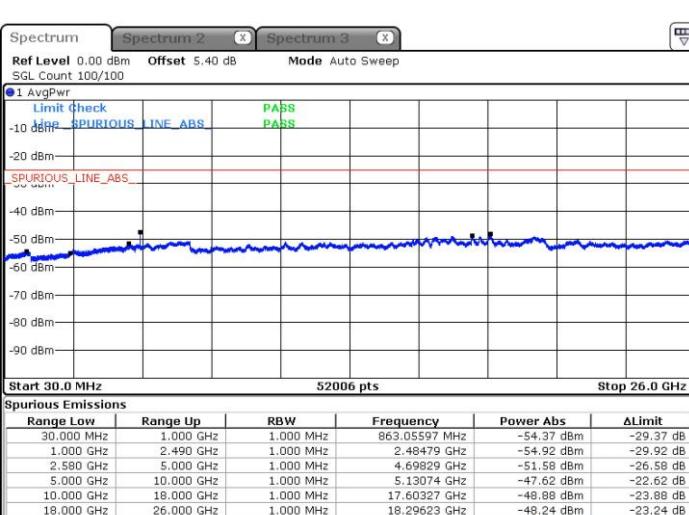




LTE Band 7 / 5MHz

Highest Channel / QPSK

Highest Channel / 16QAM

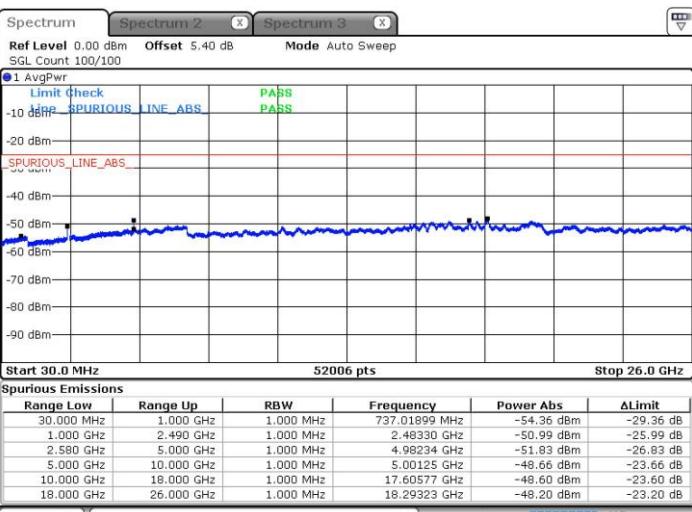
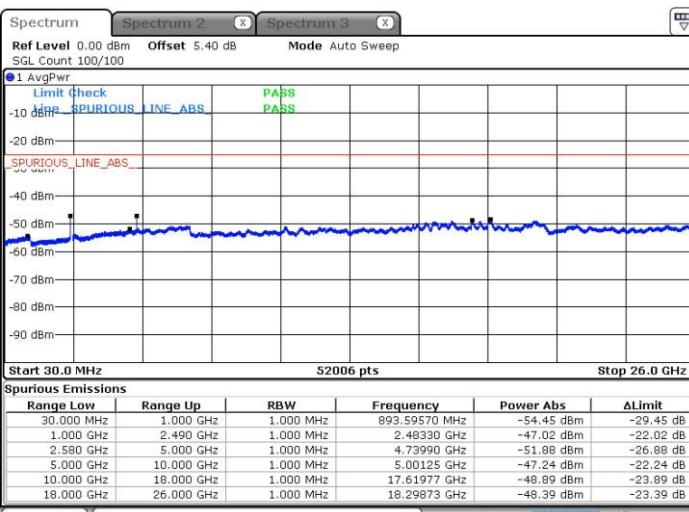


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LTE Band 7 / 10MHz

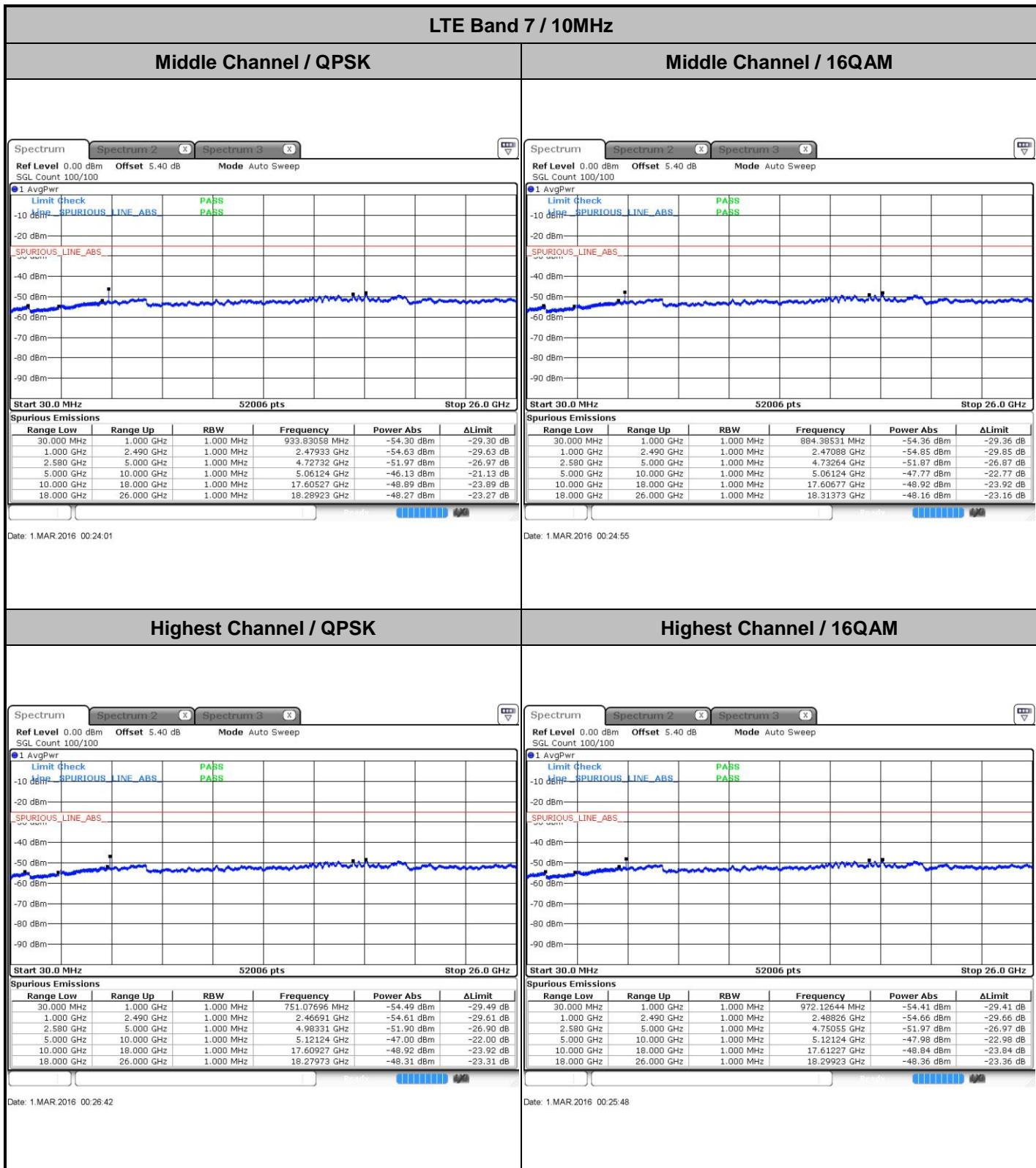
Lowest Channel / QPSK

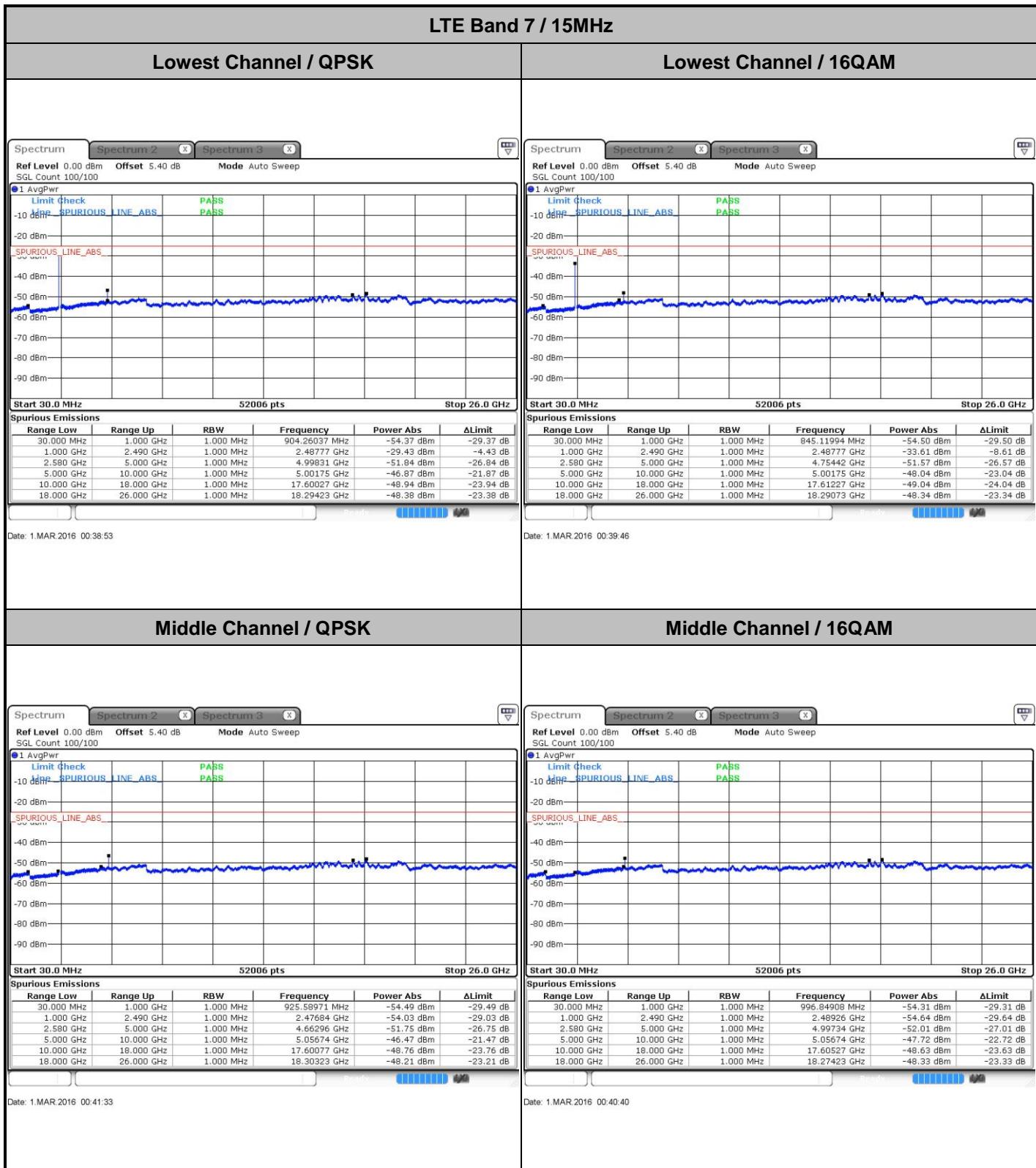
Lowest Channel / 16QAM

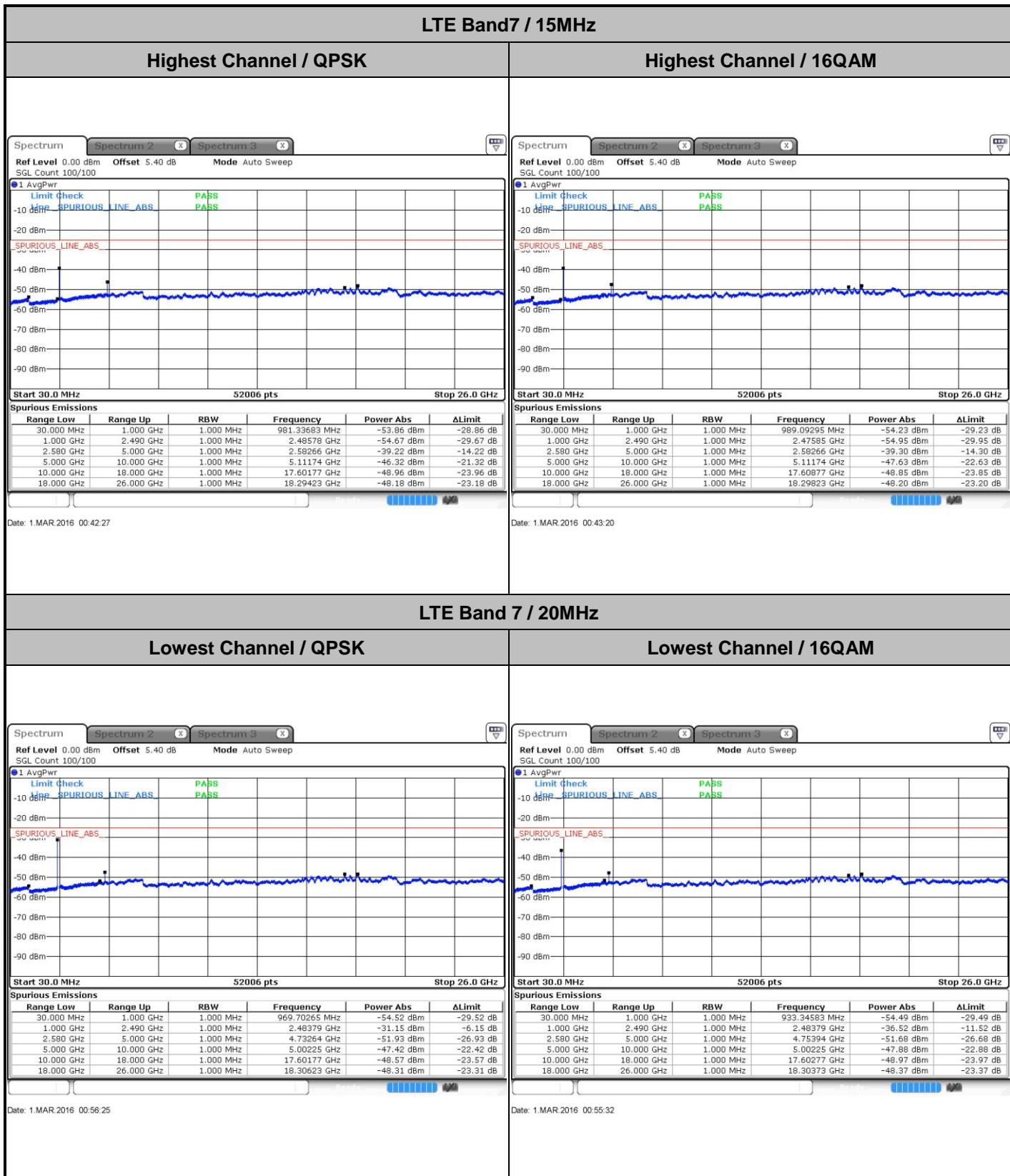


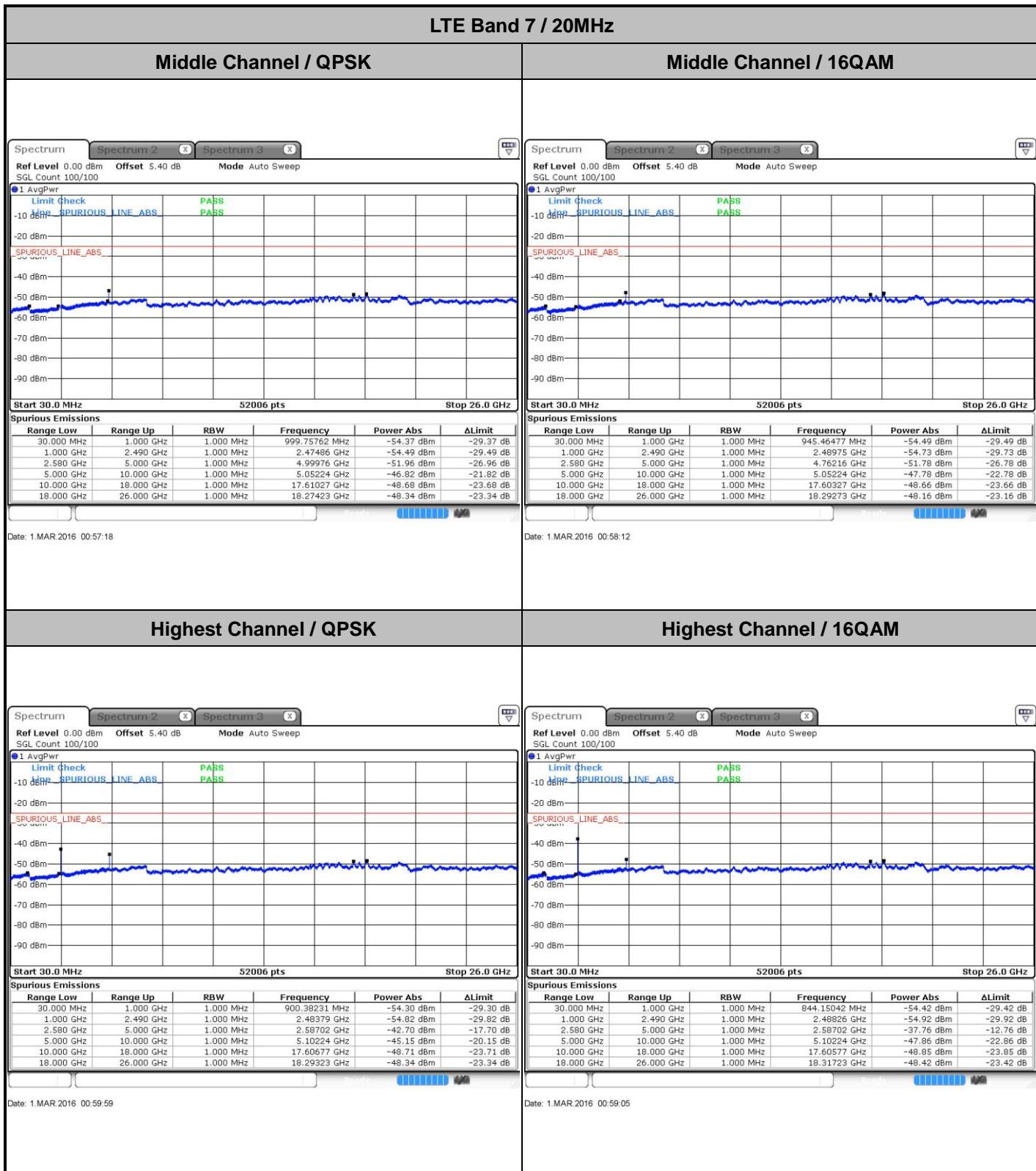
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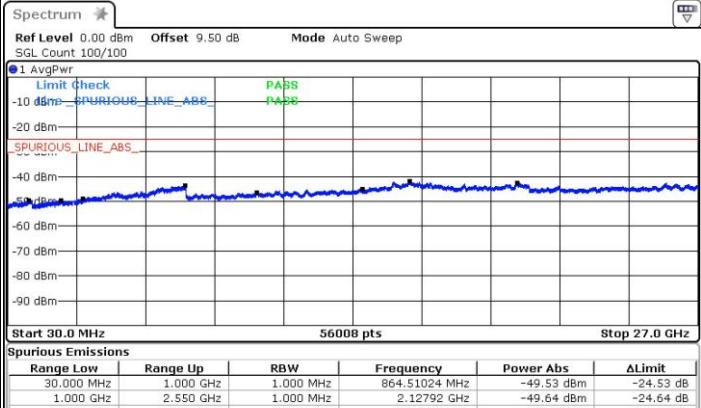
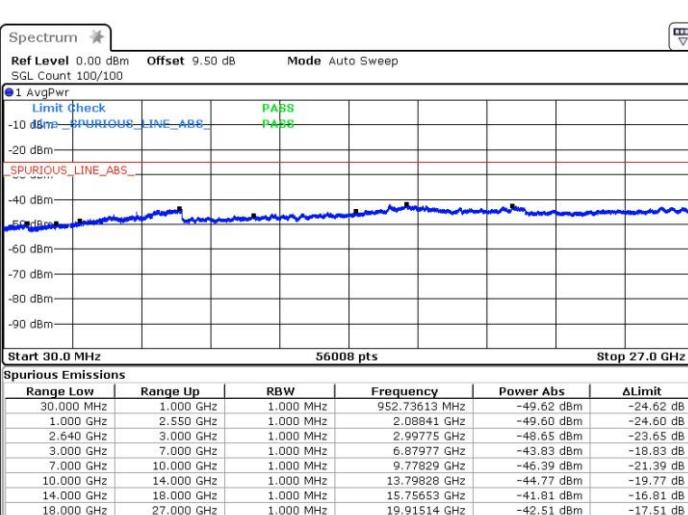




LTE Band 38 / 5MHz

Highest Channel / QPSK

Highest Channel / 16QAM



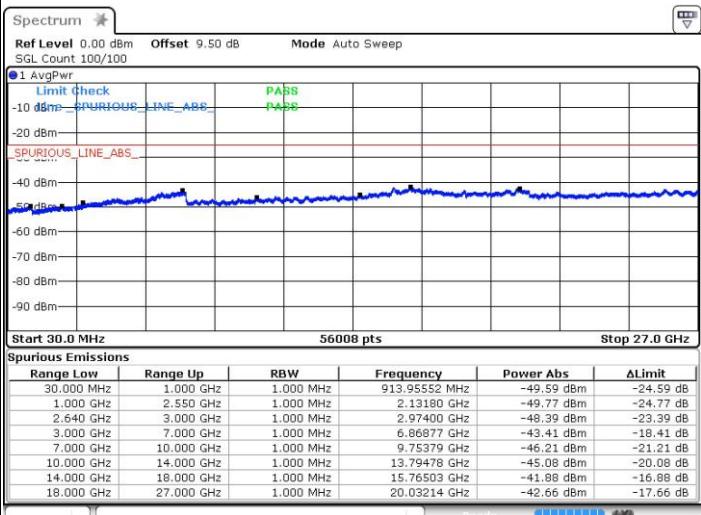
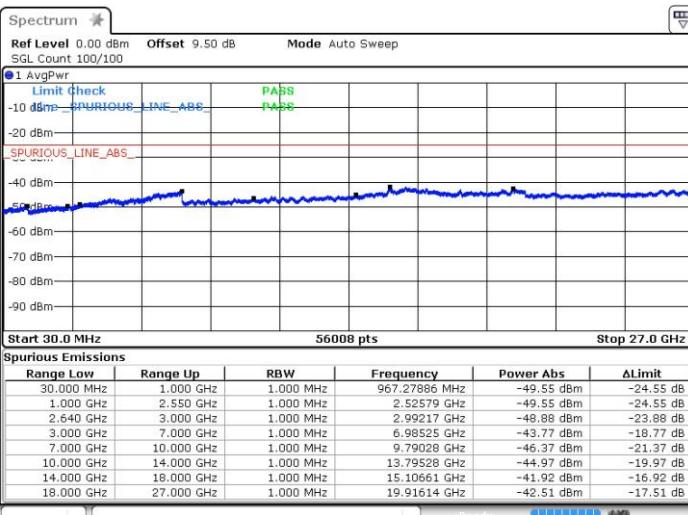
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Date: 8.MAR.2016 15:34:58

LTE Band 38 / 10MHz

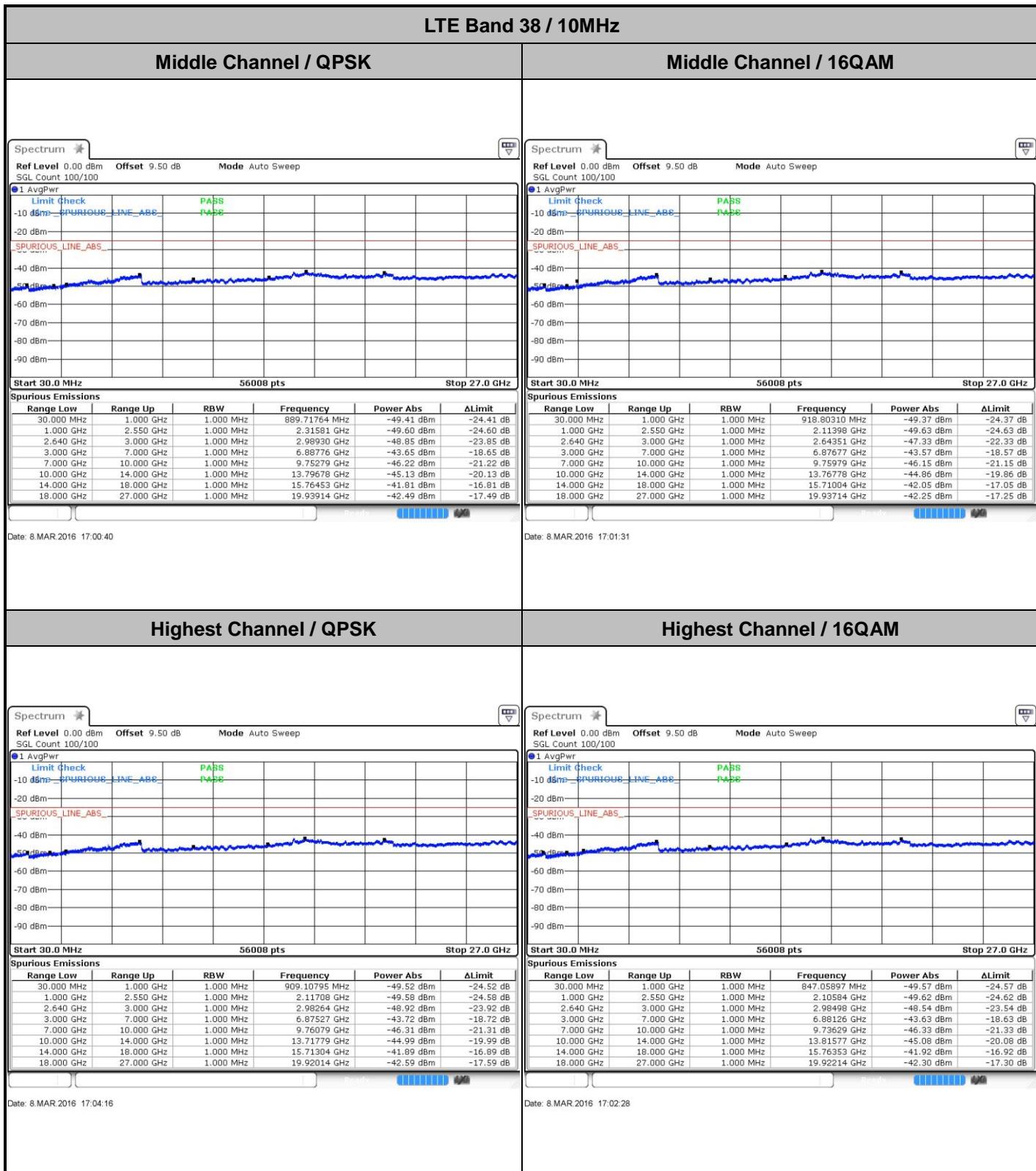
Lowest Channel / QPSK

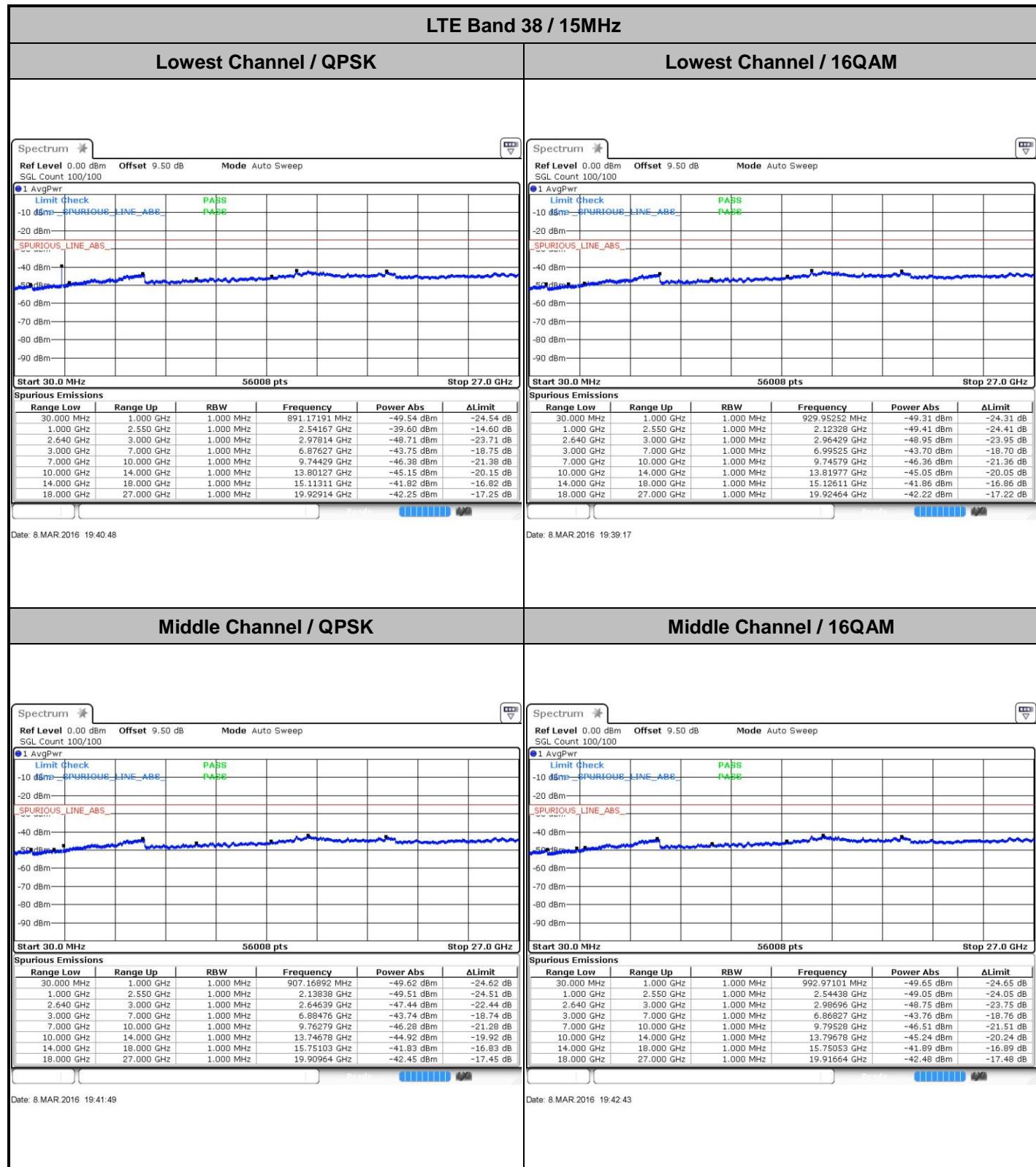
Lowest Channel / 16QAM



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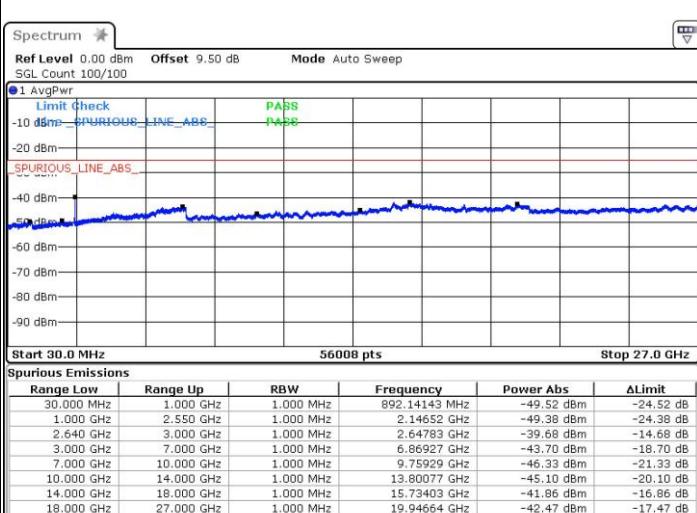
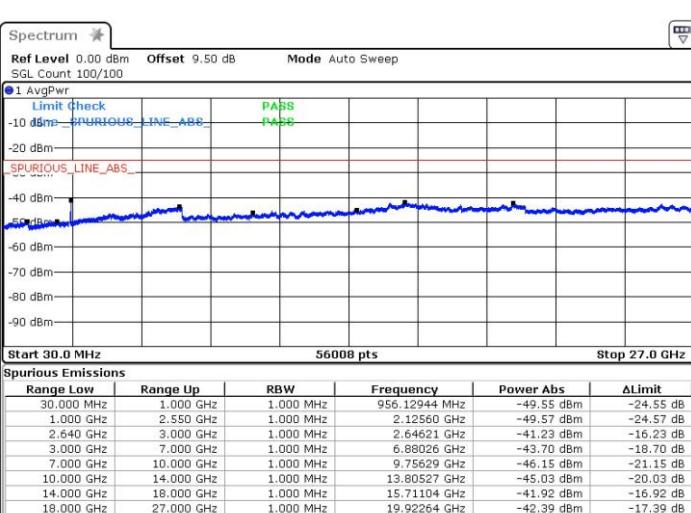




LTE Band 38 / 15MHz

Highest Channel / QPSK

Highest Channel / 16QAM

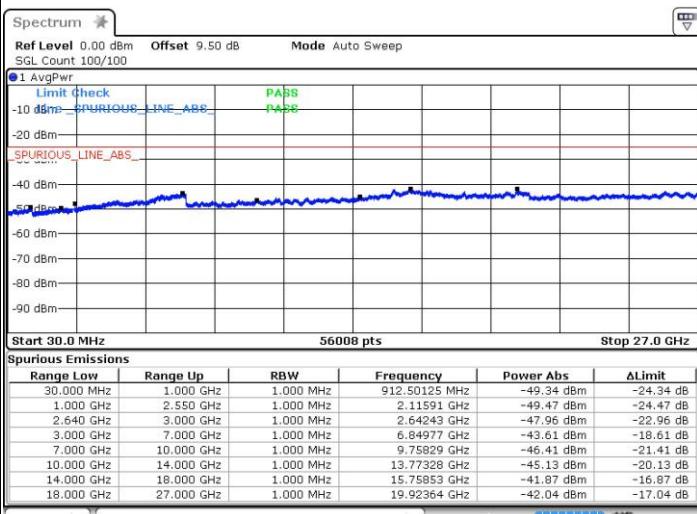
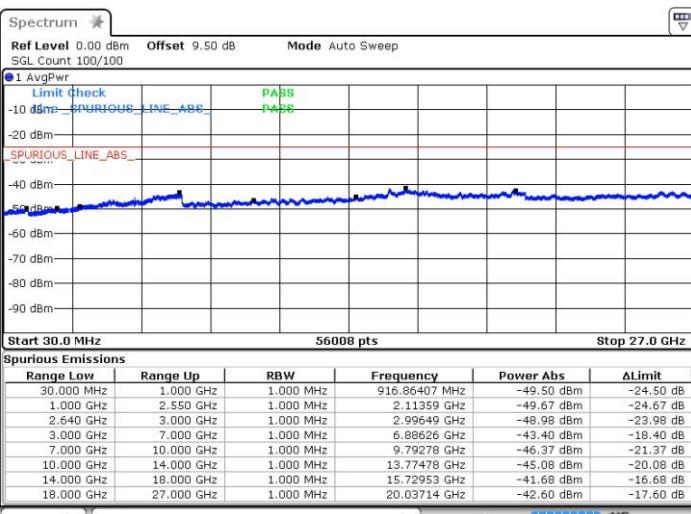


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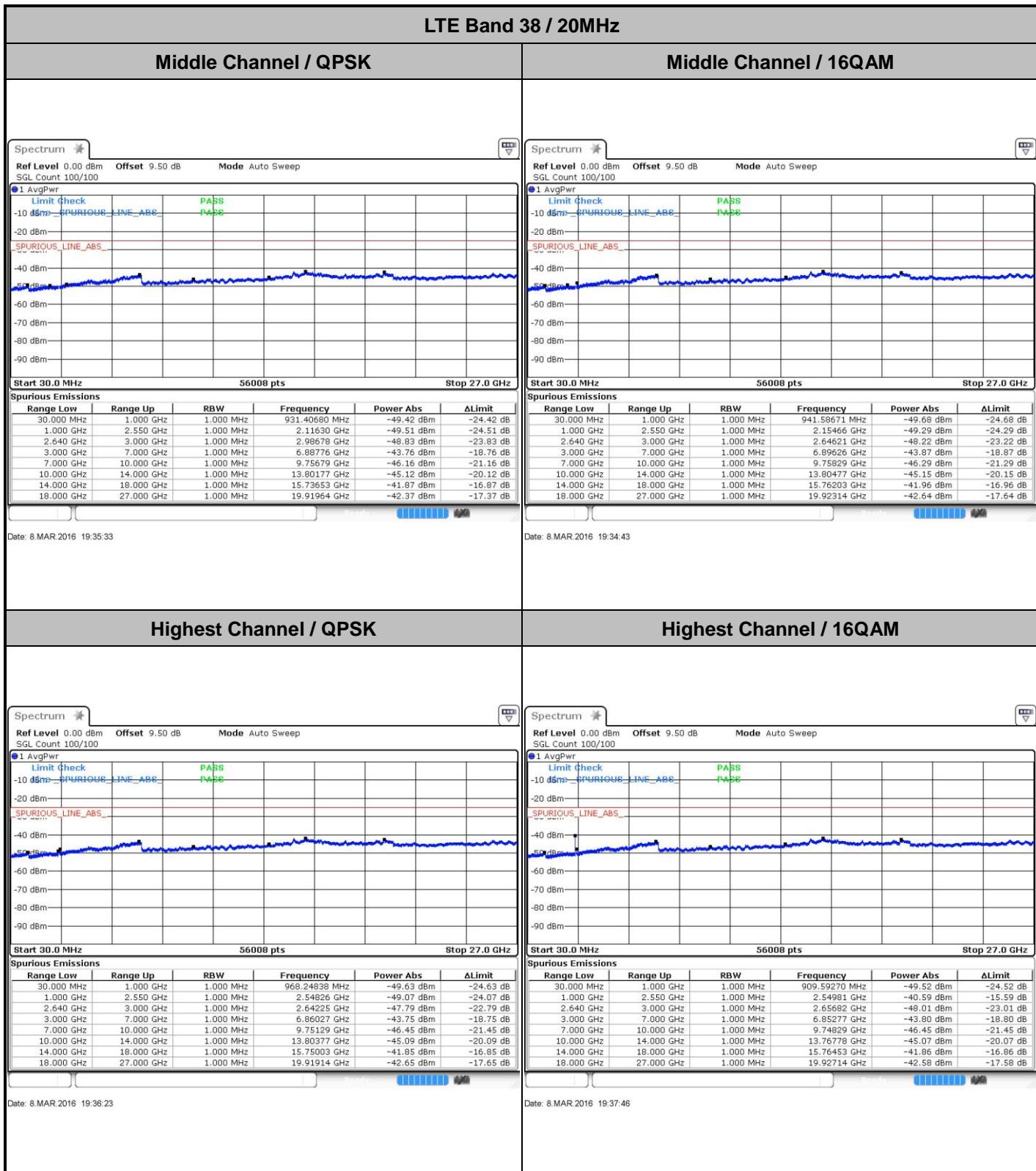
LTE Band 38 / 20MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



Date: 8.MAR.2016 19:33:52





Frequency Stability

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0192	PASS
40	Normal Voltage	0.0135	
30	Normal Voltage	0.0018	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0044	
0	Normal Voltage	0.0146	
-10	Normal Voltage	0.0036	
-20	Normal Voltage	0.0001	
-30	Normal Voltage	0.0054	
20	Maximum Voltage	0.0059	
20	Normal Voltage	0.0111	
20	Battery End Point	0.0031	

Note: Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage =4.4 V



Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0043	PASS
40	Normal Voltage	0.0036	
30	Normal Voltage	0.0103	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0028	
0	Normal Voltage	0.0110	
-10	Normal Voltage	0.0008	
-20	Normal Voltage	0.0016	
-30	Normal Voltage	0.0067	
20	Maximum Voltage	0.0028	
20	Normal Voltage	0.0039	
20	Battery End Point	0.0059	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage =4.4V
2. Note: The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



Test Conditions		LTE Band 38 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0019	PASS
40	Normal Voltage	0.0092	
30	Normal Voltage	0.0039	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0131	
0	Normal Voltage	0.0050	
-10	Normal Voltage	0.0096	
-20	Normal Voltage	0.0077	
-30	Normal Voltage	0.0023	
20	Maximum Voltage	0.0035	
20	Normal Voltage	0.0085	
20	Battery End Point	0.0104	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage =4.4 V
2. Note: The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



Appendix B. Test Results of Radiated Test

ERP/EIRP

LTE Band 5 / 1.4MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	17.48	0.0560	15.08	0.0322
Middle		3	3	18.23	0.0665	15.22	0.0333
Highest		3	3	18.72	0.0745	15.46	0.0352
Lowest	16QAM	1	3	16.78	0.0476	14.13	0.0259
Middle		1	3	17.47	0.0558	14.75	0.0299
Highest		1	3	18.08	0.0643	14.55	0.0285
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 3MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	14	17.73	0.0593	15.02	0.0318
Middle		1	8	18.56	0.0718	15.44	0.0350
Highest		1	8	18.55	0.0716	15.33	0.0341
Lowest	16QAM	1	0	16.62	0.0459	14.48	0.0281
Middle		1	8	17.51	0.0564	14.75	0.0299
Highest		1	0	17.42	0.0552	14.06	0.0255
Limit	ERP < 7W			Result		PASS	



LTE Band 5 / 5MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	12	17.67	0.0585	14.85	0.0305
Middle		1	12	18.31	0.0678	15.54	0.0358
Highest		1	12	18.78	0.0755	15.40	0.0347
Lowest	16QAM	1	12	16.82	0.0481	13.78	0.0239
Middle		1	12	17.62	0.0578	14.21	0.0264
Highest		1	0	17.70	0.0589	14.64	0.0291
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 10MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	25	18.11	0.0647	15.23	0.0333
Middle		1	25	18.48	0.0705	15.33	0.0341
Highest		1	25	18.80	0.0759	15.45	0.0351
Lowest	16QAM	1	25	17.11	0.0514	14.48	0.0281
Middle		1	25	17.39	0.0548	14.47	0.0280
Highest		1	25	17.92	0.0619	14.43	0.0277
Limit	ERP < 7W			Result		PASS	



LTE Band 7 / 5MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	12	23.35	0.2163	22.44	0.1754
Middle		1	12	23.13	0.2056	20.48	0.1117
Highest		1	12	23.31	0.2143	20.90	0.1230
Lowest	16QAM	1	12	21.88	0.1542	20.86	0.1219
Middle		1	24	21.67	0.1469	19.54	0.0899
Highest		1	0	22.13	0.1633	19.86	0.0968
Limit	EIRP < 2W			Result		PASS	

LTE Band 7 / 10MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	23.20	0.2089	21.85	0.1531
Middle		1	25	23.38	0.2178	20.98	0.1253
Highest		1	25	23.56	0.2270	20.74	0.1186
Lowest	16QAM	1	25	22.52	0.1786	20.78	0.1197
Middle		1	0	22.00	0.1585	19.68	0.0929
Highest		1	25	22.23	0.1671	19.61	0.0914
Limit	EIRP < 2W			Result		PASS	



LTE Band 7 / 15MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	23.35	0.2163	21.71	0.1483
Middle		1	37	23.10	0.2042	20.43	0.1104
Highest		1	37	23.23	0.2104	21.31	0.1352
Lowest	16QAM	1	0	22.48	0.1770	20.89	0.1227
Middle		1	74	21.82	0.1521	19.18	0.0828
Highest		1	0	22.40	0.1738	19.51	0.0893
Limit	EIRP < 2W			Result		PASS	

LTE Band 7 / 20MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	49	23.16	0.2070	21.41	0.1384
Middle		1	49	23.32	0.2148	20.65	0.1161
Highest		1	49	22.98	0.1986	20.87	0.1222
Lowest	16QAM	1	49	22.69	0.1858	20.82	0.1208
Middle		1	49	22.55	0.1799	19.92	0.0982
Highest		1	99	22.33	0.1710	20.24	0.1057
Limit	EIRP < 2W			Result		PASS	



LTE Band 38 / 5MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	12	23.15	0.2065	21.20	0.1318
Middle		1	12	23.02	0.2004	21.18	0.1312
Highest		1	12	22.27	0.1687	20.17	0.1040
Lowest	16QAM	1	12	21.51	0.1416	19.61	0.0914
Middle		1	12	21.04	0.1271	19.43	0.0877
Highest		1	12	20.55	0.1135	18.49	0.0706
Limit	EIRP < 2W			Result		PASS	

LTE Band 38 / 10MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	25	22.95	0.1972	20.86	0.1219
Middle		1	25	22.38	0.1730	20.47	0.1114
Highest		1	49	22.05	0.1603	19.76	0.0946
Lowest	16QAM	1	25	21.44	0.1393	19.12	0.0817
Middle		1	25	21.19	0.1315	19.42	0.0875
Highest		1	25	20.91	0.1233	19.05	0.0804
Limit	EIRP < 2W			Result		PASS	



LTE Band 38 / 15MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	37	23.08	0.2032	20.79	0.1199
Middle		1	37	23.17	0.2075	21.33	0.1358
Highest		1	0	22.33	0.1710	20.41	0.1099
Lowest	16QAM	1	37	21.37	0.1371	19.46	0.0883
Middle		1	37	21.64	0.1459	19.73	0.0940
Highest		1	0	21.03	0.1268	19.19	0.0830
Limit	EIRP < 2W			Result		PASS	

LTE Band 38 / 20MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	49	23.42	0.2198	21.19	0.1315
Middle		1	49	22.72	0.1871	20.70	0.1175
Highest		1	49	22.33	0.1710	20.14	0.1033
Lowest	16QAM	1	0	21.67	0.1469	19.70	0.0933
Middle		1	49	21.15	0.1303	19.24	0.0839
Highest		1	49	20.94	0.1242	18.66	0.0735
Limit	EIRP < 2W			Result		PASS	



Radiated Spurious Emission

LTE Band 5 / 1.4MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1672	-55.49	-13	-42.49	-57.67	-57.38	1.86	5.90	H
	2508	-35.96	-13	-22.96	-50.45	-38.30	2.31	6.80	H
	3345	-54.12	-13	-41.12	-66.75	-56.52	2.85	7.40	H
	1672	-58.03	-13	-45.03	-56.89	-59.92	1.86	5.90	V
	2508	-35.15	-13	-22.15	-51.04	-37.49	2.31	6.80	V
	3345	-52.66	-13	-39.66	-66.64	-55.06	2.85	7.40	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 5 / 3MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1670	-55.86	-13	-42.86	-58.04	-57.75	1.86	5.90	H
	2506	-32.84	-13	-19.84	-47.91	-35.18	2.31	6.80	H
	3339	-53.33	-13	-40.33	-65.96	-55.73	2.85	7.40	H
	1670	-59.10	-13	-46.10	-57.96	-60.99	1.86	5.90	V
	2506	-31.67	-13	-18.67	-48.25	-34.01	2.31	6.80	V
	3339	-53.02	-13	-40.02	-67.00	-55.42	2.85	7.40	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 5 / 5MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1668	-55.80	-13	-42.80	-57.98	-57.69	1.86	5.90	H
	2504	-32.89	-13	-19.89	-47.95	-35.23	2.31	6.80	H
	3336	-54.21	-13	-41.21	-66.84	-56.61	2.85	7.40	H
	1668	-58.93	-13	-45.93	-57.79	-60.82	1.86	5.90	V
	2504	-31.83	-13	-18.83	-48.33	-34.17	2.31	6.80	V
	3336	-53.50	-13	-40.50	-67.48	-55.90	2.85	7.40	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 5 / 10MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1664	-55.44	-13	-42.44	-57.62	-57.33	1.86	5.90	H
	2496	-23.95	-13	-10.95	-40.05	-26.29	2.31	6.80	H
	3327	-53.33	-13	-40.33	-65.96	-55.73	2.85	7.40	H
	1664	-57.20	-13	-44.20	-56.06	-59.09	1.86	5.90	V
	2496	-25.27	-13	-12.27	-42.84	-27.61	2.31	6.80	V
	3327	-50.86	-13	-37.86	-64.84	-53.26	2.85	7.40	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 7 / 5MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5066	-48.48	-25	-23.48	-62.46	-54.26	3.49	9.27	H
	7598.52	-47.83	-25	-22.83	-64.37	-55.62	4.28	12.07	H
	10132	-44.39	-25	-19.39	-65.78	-51.69	5.1	12.40	H
	5066	-50.15	-25	-25.15	-64.31	-57.45	5.1	12.40	V
	7598	-45.81	-25	-20.81	-62.83	-53.09	5.66	12.94	V
	10132	-45.93	-25	-20.93	-67.03	-53.25	5.99	13.31	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 7 / 10MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5063	-46.24	-25	-21.24	-60.22	-52.02	3.49	9.27	H
	7589	-44.52	-25	-19.52	-61.06	-52.31	4.28	12.07	H
	10124	-45.02	-25	-20.02	-66.41	-52.32	5.1	12.40	H
	5060	-49.06	-25	-24.06	-63.22	-56.36	5.1	12.40	V
	7591.77	-46.50	-25	-21.50	-63.52	-53.78	5.66	12.94	V
	10124	-44.46	-25	-19.46	-65.56	-51.78	5.99	13.31	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 7 / 15MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5057	-49.18	-25	-24.18	-63.16	-54.96	3.49	9.27	H
	7585.02	-46.97	-25	-21.97	-63.51	-54.76	4.28	12.07	H
	10112	-44.37	-25	-19.37	-65.76	-51.67	5.1	12.40	H
	5057	-48.81	-25	-23.81	-62.97	-56.11	5.1	12.40	V
	7585.02	-46.70	-25	-21.70	-63.72	-53.98	5.66	12.94	V
	10112	-45.96	-25	-20.96	-67.06	-53.28	5.99	13.31	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 7 / 20MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5051	-48.90	-25	-23.90	-62.88	-54.68	3.49	9.27	H
	7578.27	-47.12	-25	-22.12	-63.66	-54.91	4.28	12.07	H
	10104	-45.86	-25	-20.86	-67.25	-53.16	5.1	12.40	H
	5051	-48.45	-25	-23.45	-62.61	-55.75	5.1	12.40	V
	7578.27	-44.63	-25	-19.63	-61.65	-51.91	5.66	12.94	V
	10104	-45.41	-25	-20.41	-66.51	-52.73	5.99	13.31	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 38 / 5MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5186	-50.27	-25	-25.27	-64.25	-56.05	3.49	9.27	H
	7778	-47.94	-25	-22.94	-64.48	-55.73	4.28	12.07	H
	10372	-45.64	-25	-20.64	-67.03	-52.94	5.1	12.40	H
	5186	-50.09	-25	-25.09	-64.25	-55.87	3.49	9.27	V
	7778	-46.62	-25	-21.62	-63.64	-54.41	4.28	12.07	V
	10372	-46.94	-25	-21.94	-68.04	-54.24	5.1	12.40	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 38 / 10MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5180	-47.67	-25	-22.67	-61.65	-53.45	3.49	9.27	H
	7771	-44.80	-25	-19.80	-61.34	-52.59	4.28	12.07	H
	10360	-46.03	-25	-21.03	-67.42	-53.33	5.1	12.40	H
	5181	-49.15	-25	-24.15	-63.31	-54.93	3.49	9.27	V
	7772	-45.98	-25	-20.98	-63	-53.77	4.28	12.07	V
	10360	-45.10	-25	-20.10	-66.2	-52.40	5.1	12.40	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 38 / 15MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5177	-47.59	-25	-22.59	-61.57	-53.37	3.49	9.27	H
	7765	-46.57	-25	-21.57	-63.11	-54.36	4.28	12.07	H
	10352	-46.52	-25	-21.52	-67.91	-53.82	5.1	12.40	H
	5177	-49.27	-25	-24.27	-63.43	-55.05	3.49	9.27	V
	7765	-45.88	-25	-20.88	-62.9	-53.67	4.28	12.07	V
	10352	-47.45	-25	-22.45	-68.55	-54.75	5.1	12.40	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 38 / 20MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5171	-49.76	-25	-24.76	-63.74	-55.54	3.49	9.27	H
	7758	-45.94	-25	-20.94	-62.48	-53.73	4.28	12.07	H
	10344	-46.70	-25	-21.70	-68.09	-54.00	5.1	12.40	H
	5171	-49.47	-25	-24.47	-63.63	-55.25	3.49	9.27	V
	7758	-46.33	-25	-21.33	-63.35	-54.12	4.28	12.07	V
	10344	-46.38	-25	-21.38	-67.48	-53.68	5.1	12.40	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.