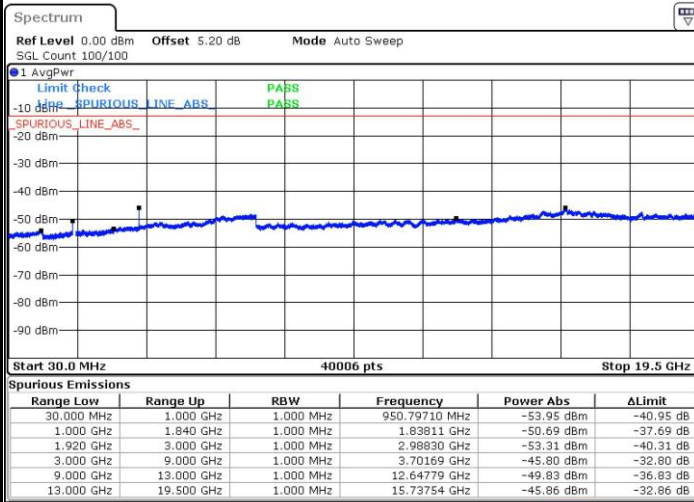




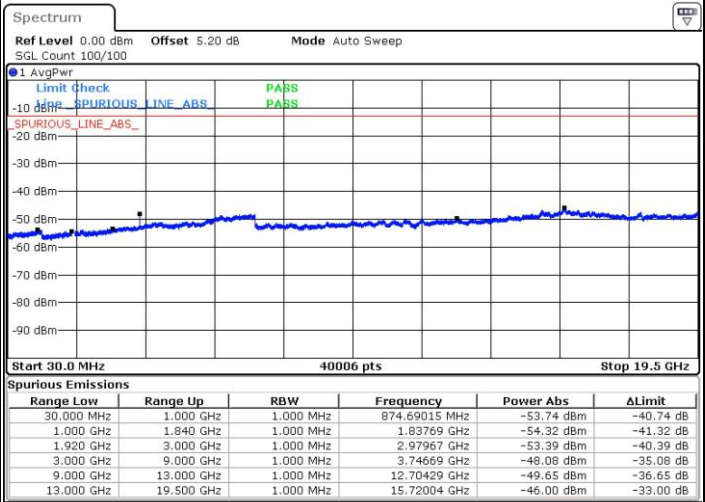
LTE Band 2 / 15MHz

Lowest Channel / 64QAM



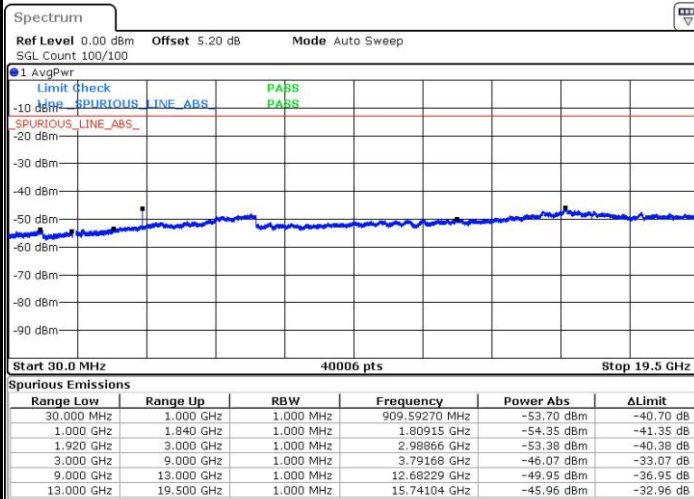
Date: 7.MAR.2019 10:30:42

Middle Channel / 64QAM



Date: 7.MAR.2019 10:32:52

Highest Channel / 64QAM

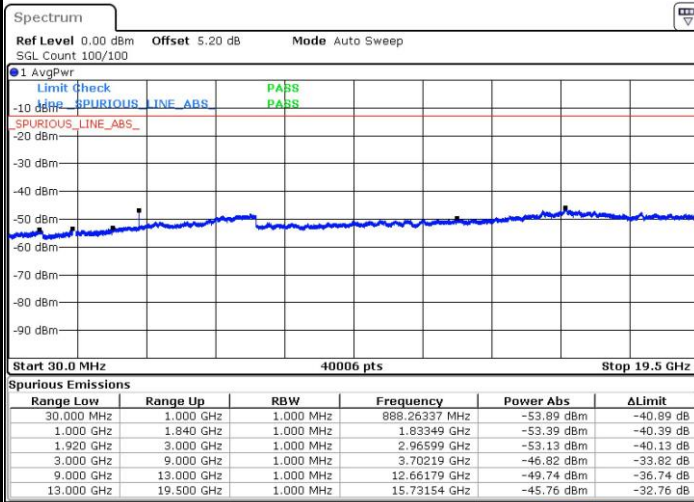


Date: 7.MAR.2019 10:35:06



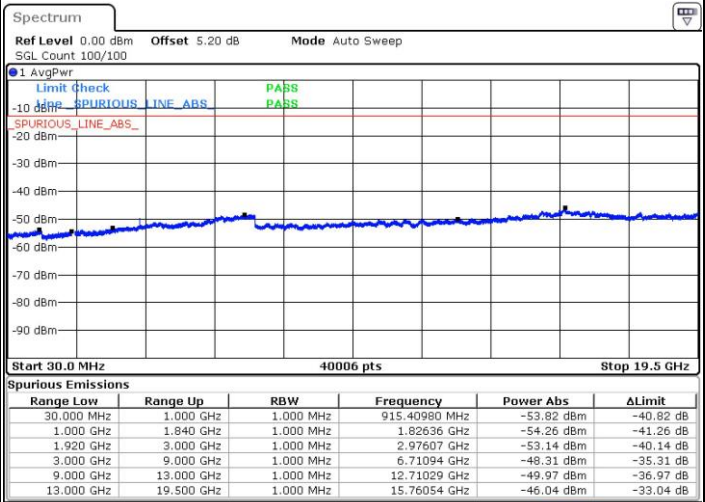
LTE Band 2 / 20MHz

Lowest Channel / 64QAM



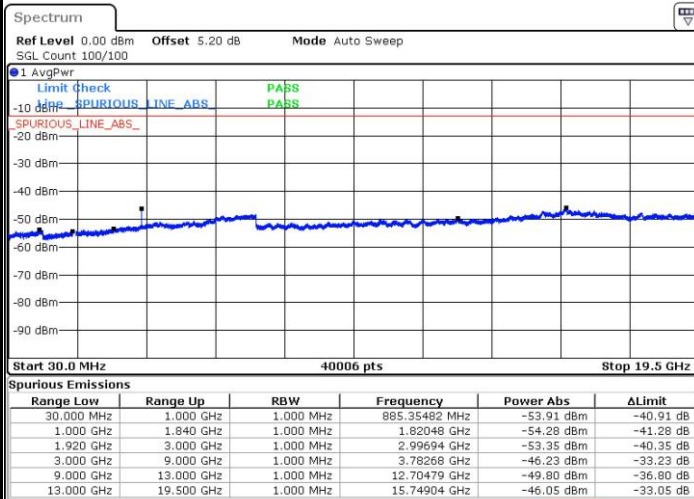
Date: 7.MAR.2019 10:37:21

Middle Channel / 64QAM



Date: 7.MAR.2019 10:39:24

Highest Channel / 64QAM

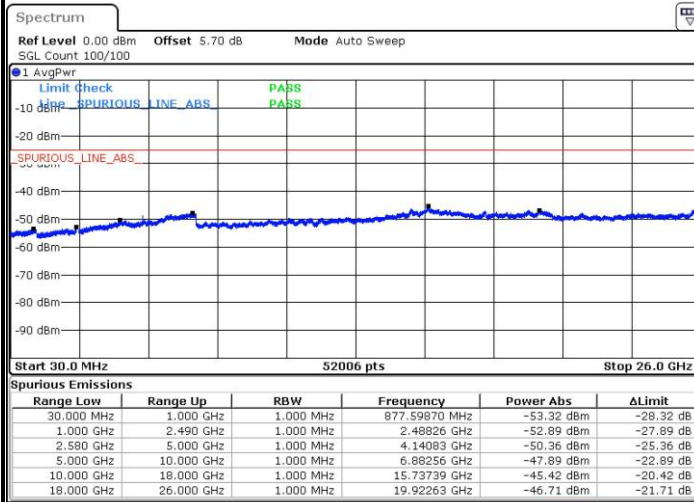


Date: 7.MAR.2019 10:41:35



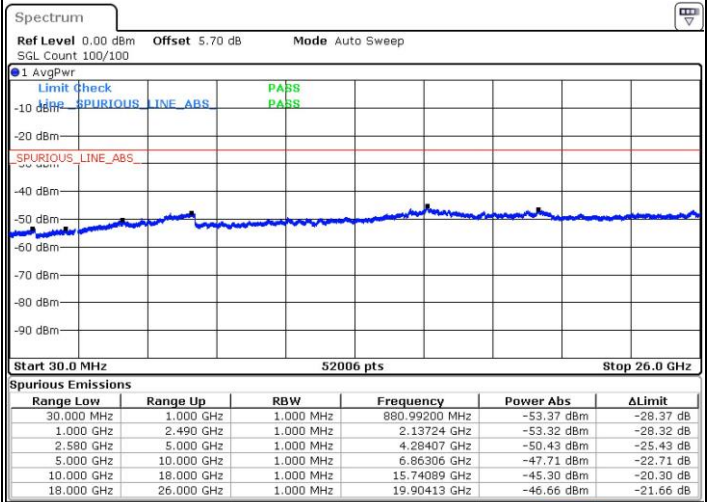
LTE Band 7 / 5MHz

Lowest Channel / QPSK



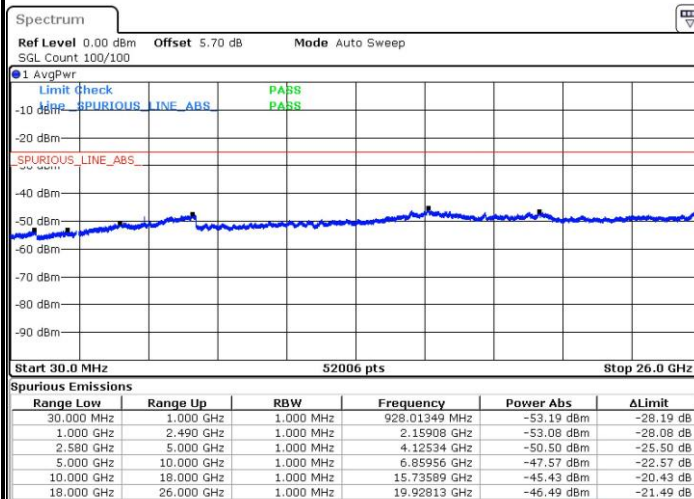
Date: 7.MAR.2019 11:13:22

Lowest Channel / 16QAM



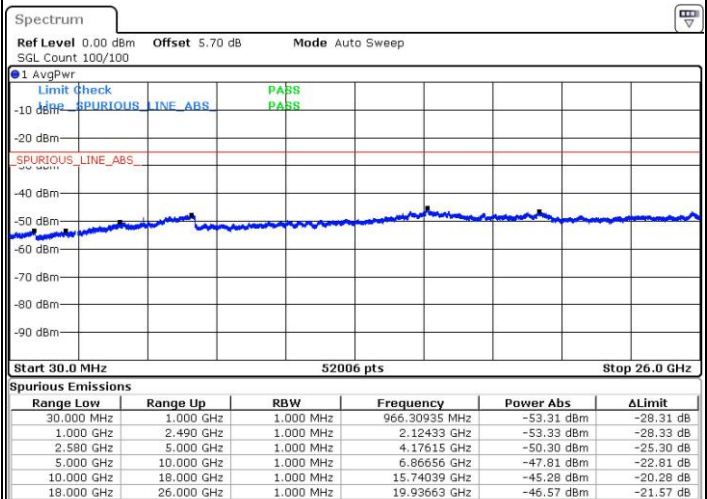
Date: 7.MAR.2019 11:15:40

Middle Channel / QPSK



Date: 7.MAR.2019 11:17:29

Middle Channel / 16QAM

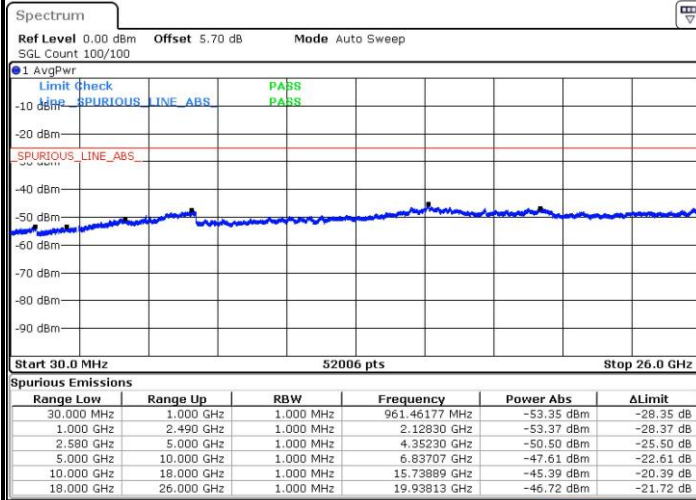


Date: 7.MAR.2019 11:18:17



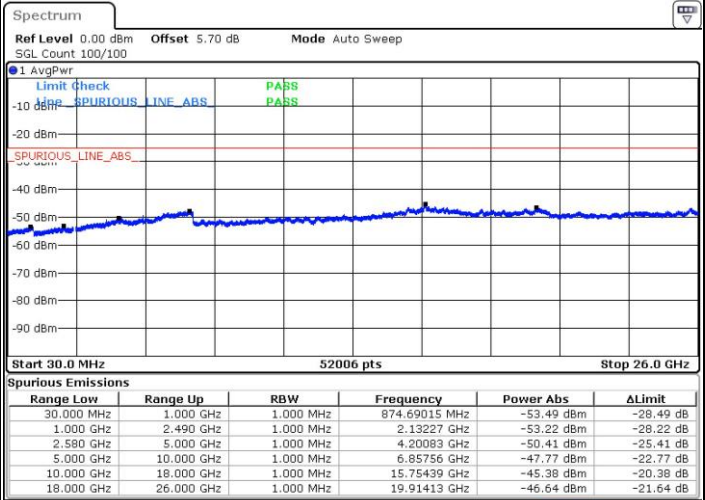
LTE Band 7 / 5MHz

Highest Channel / QPSK



Date: 7.MAR.2019 11:20:14

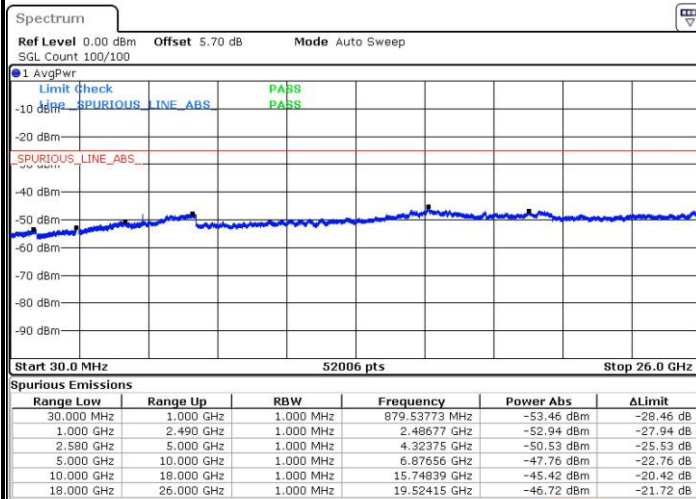
Highest Channel / 16QAM



Date: 7.MAR.2019 11:21:03

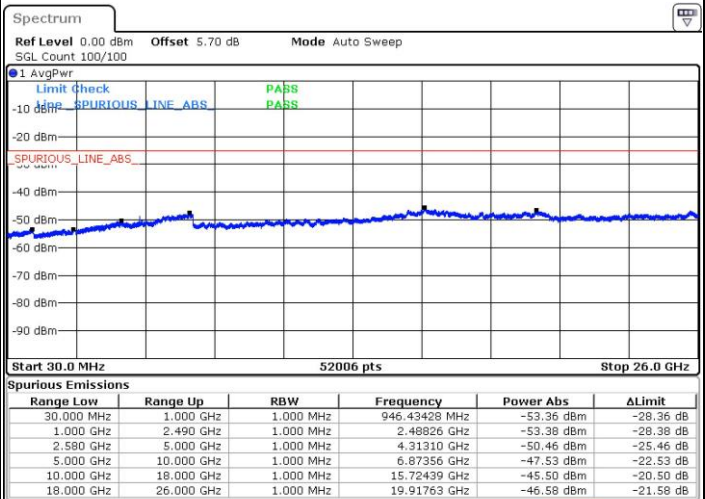
LTE Band 7 / 10MHz

Lowest Channel / QPSK



Date: 7.MAR.2019 11:22:49

Lowest Channel / 16QAM

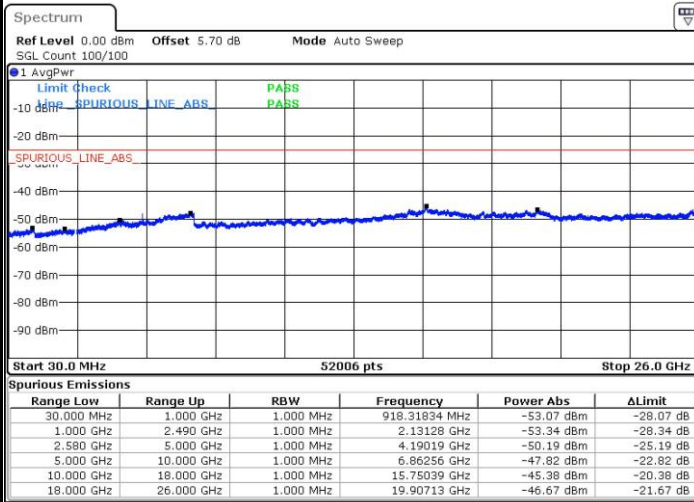


Date: 7.MAR.2019 11:23:36



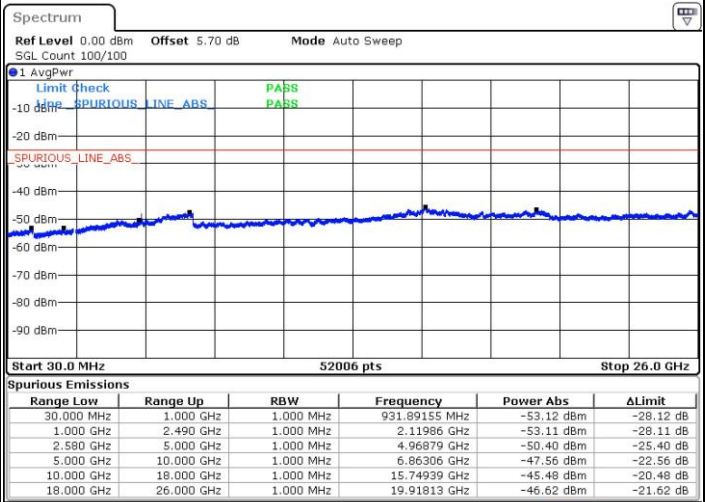
LTE Band 7 / 10MHz

Middle Channel / QPSK



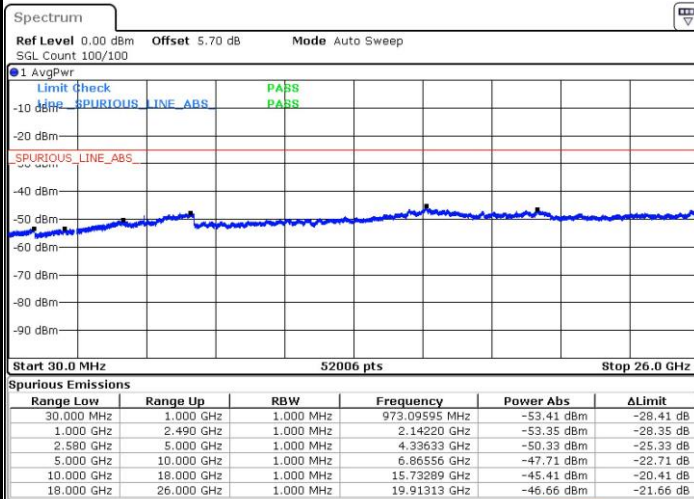
Date: 7.MAR.2019 11:25:20

Middle Channel / 16QAM



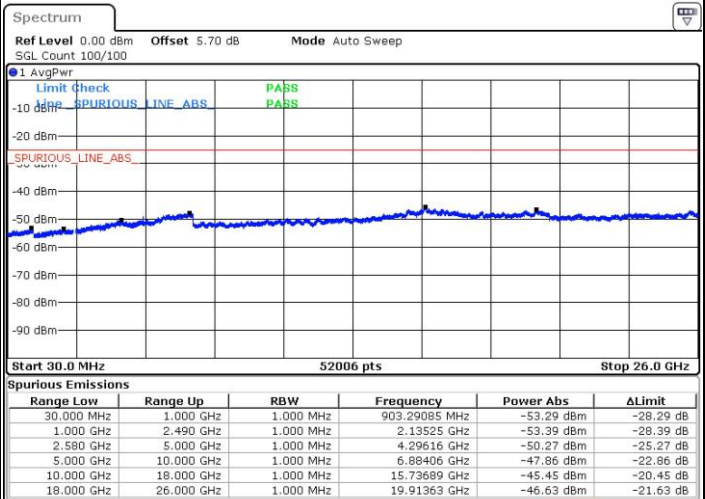
Date: 7.MAR.2019 11:26:10

Highest Channel / QPSK



Date: 7.MAR.2019 11:28:01

Highest Channel / 16QAM

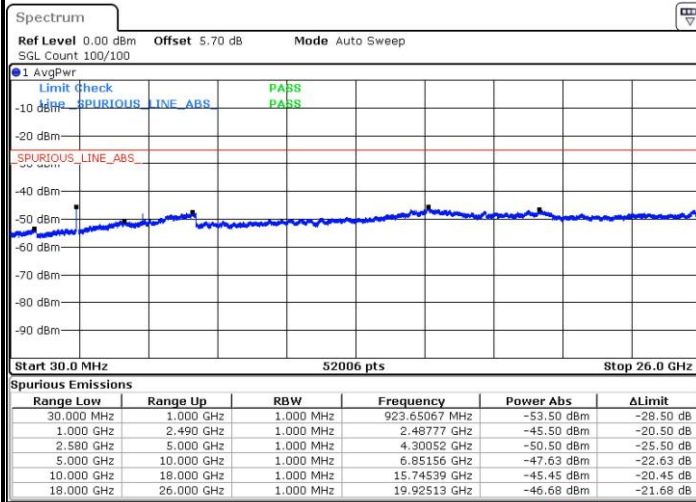


Date: 7.MAR.2019 11:28:58



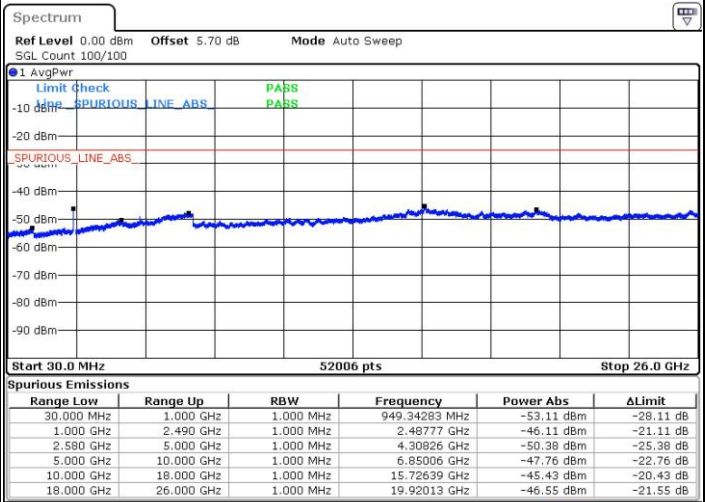
LTE Band 7 / 15MHz

Lowest Channel / QPSK



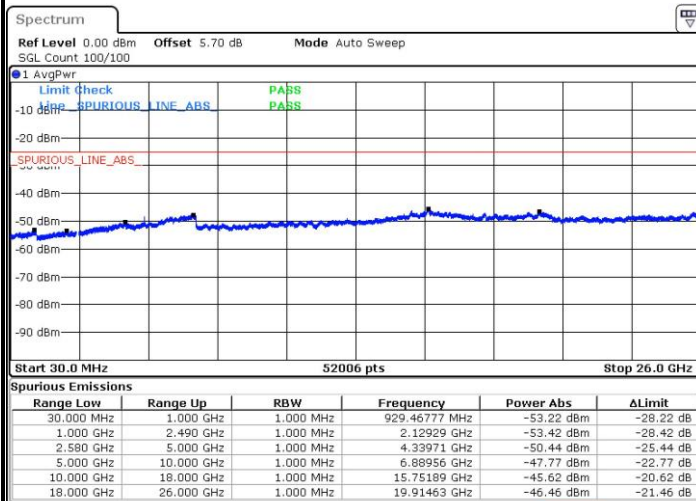
Date: 7.MAR.2019 11:30:52

Lowest Channel / 16QAM



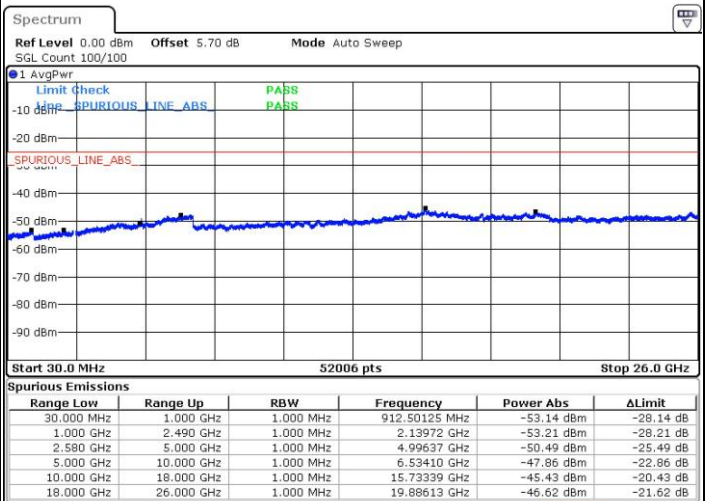
Date: 7.MAR.2019 11:31:38

Middle Channel / QPSK



Date: 7.MAR.2019 11:33:20

Middle Channel / 16QAM

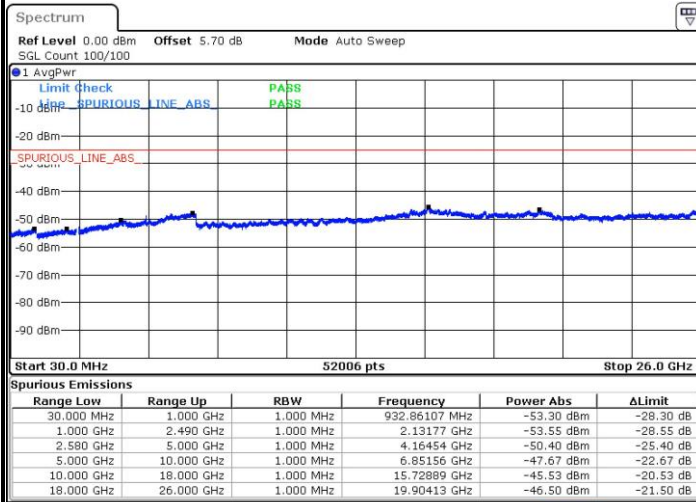


Date: 7.MAR.2019 11:34:11



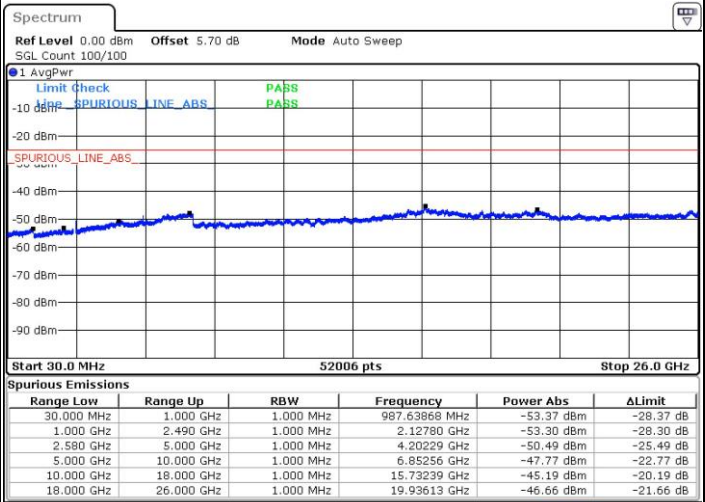
LTE Band7 / 15MHz

Highest Channel / QPSK



Date: 7.MAR.2019 11:35:57

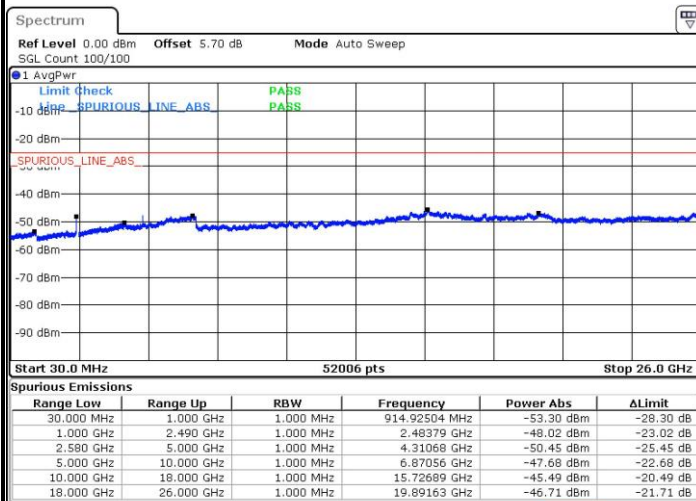
Highest Channel / 16QAM



Date: 7.MAR.2019 11:36:45

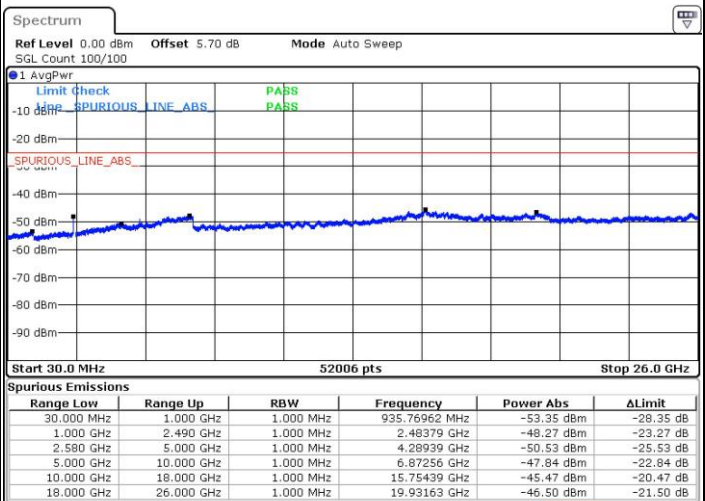
LTE Band 7 / 20MHz

Lowest Channel / QPSK



Date: 7.MAR.2019 11:38:37

Lowest Channel / 16QAM

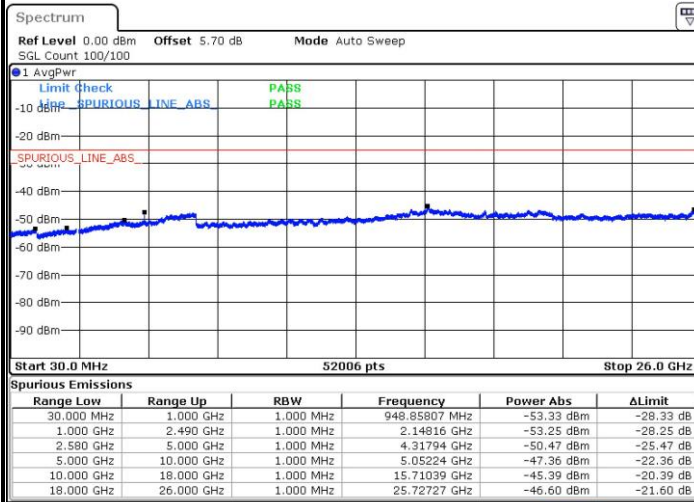


Date: 7.MAR.2019 11:39:25



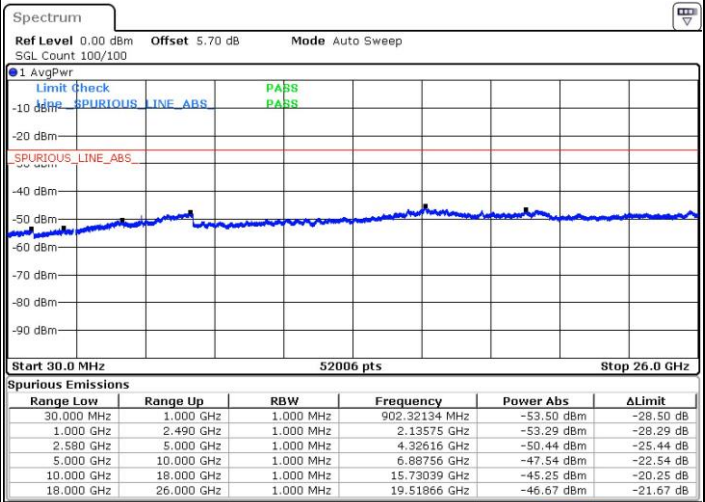
LTE Band 7 / 20MHz

Middle Channel / QPSK



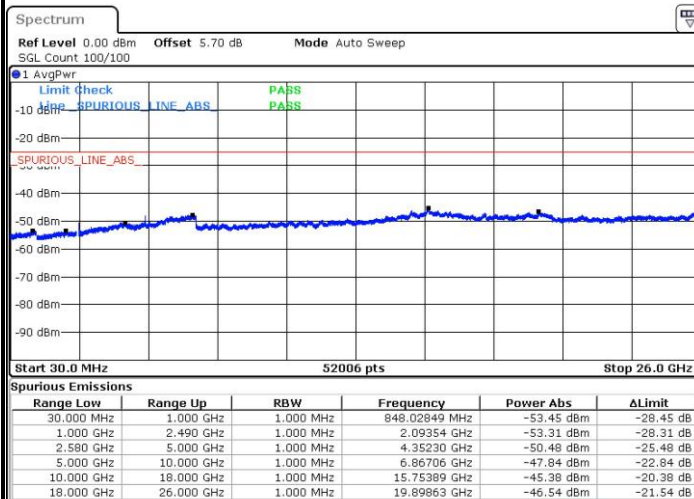
Date: 7.MAR.2019 11:41:01

Middle Channel / 16QAM



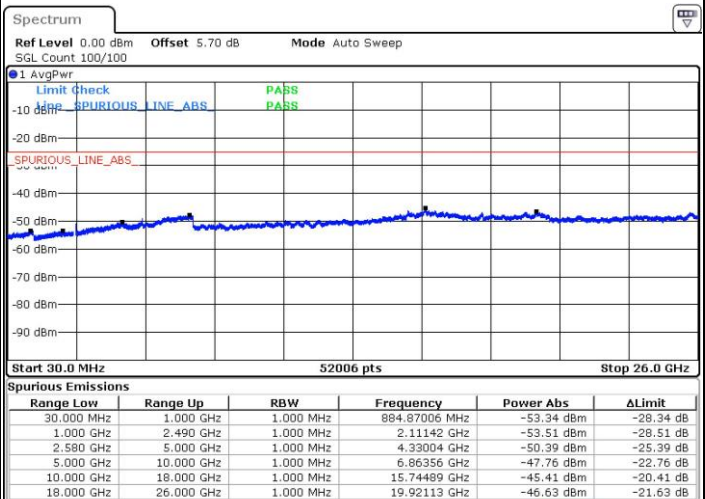
Date: 7.MAR.2019 11:41:50

Highest Channel / QPSK



Date: 7.MAR.2019 11:43:26

Highest Channel / 16QAM

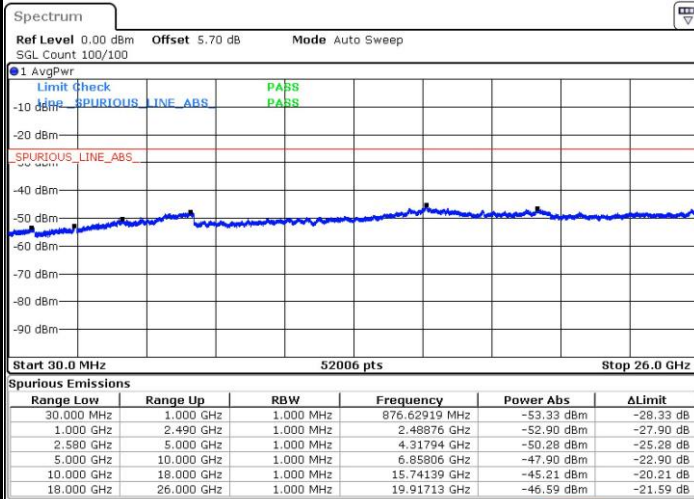


Date: 7.MAR.2019 11:44:23



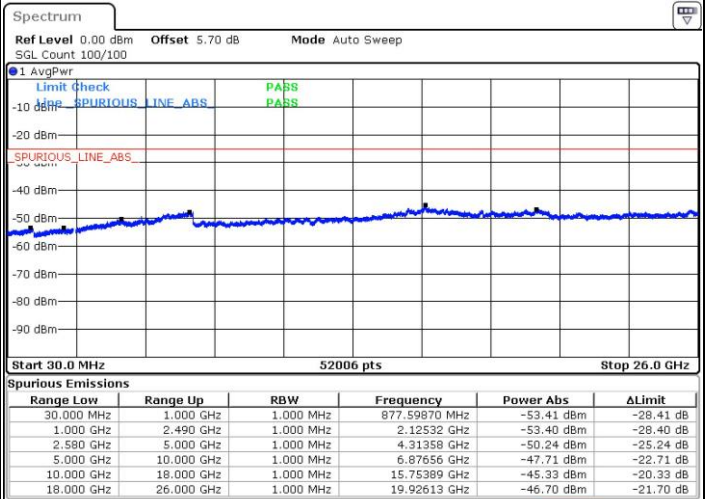
LTE Band 7 / 5MHz

Lowest Channel / 64QAM



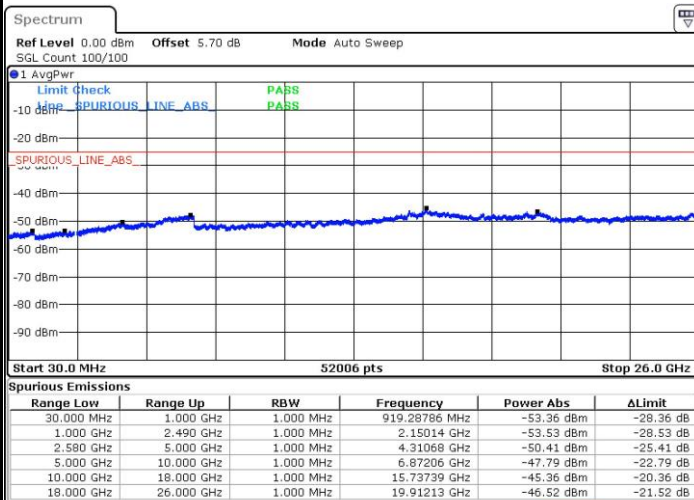
Date: 7.MAR.2019 11:16:33

Middle Channel / 64QAM



Date: 7.MAR.2019 11:19:09

Highest Channel / 64QAM

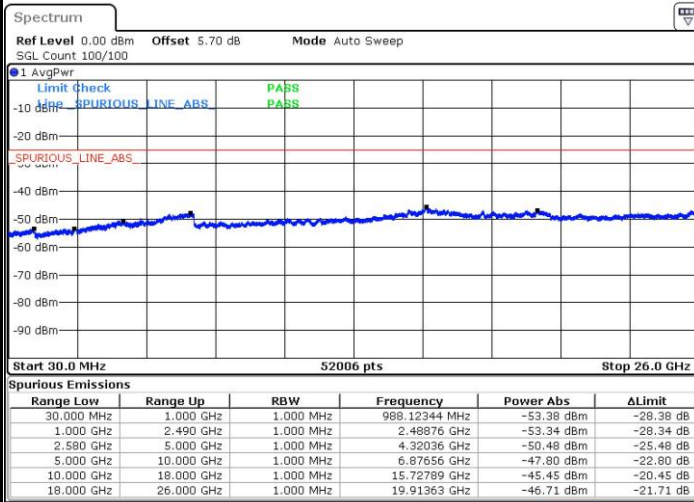


Date: 7.MAR.2019 11:21:52



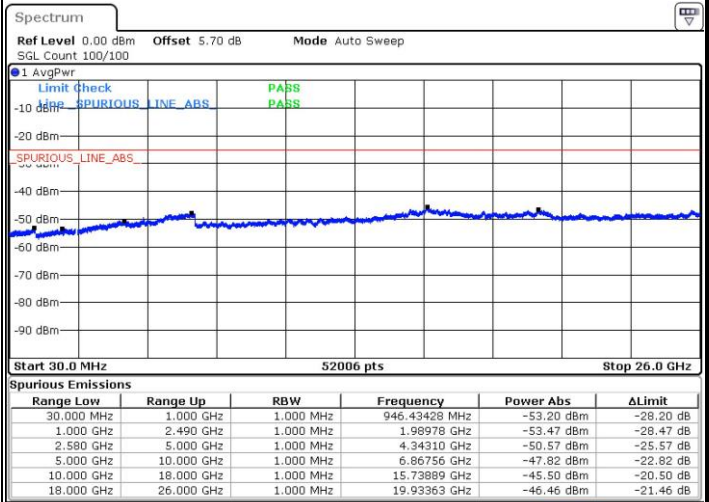
LTE Band 7 / 10MHz

Lowest Channel / 64QAM



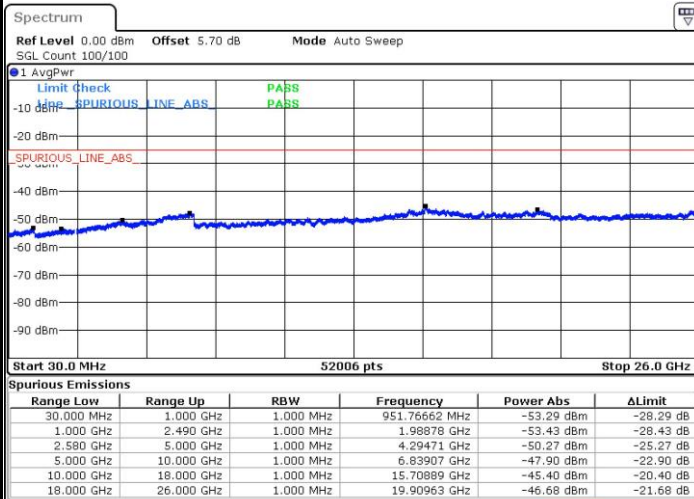
Date: 7.MAR.2019 11:24:28

Middle Channel / 64QAM



Date: 7.MAR.2019 11:26:58

Highest Channel / 64QAM

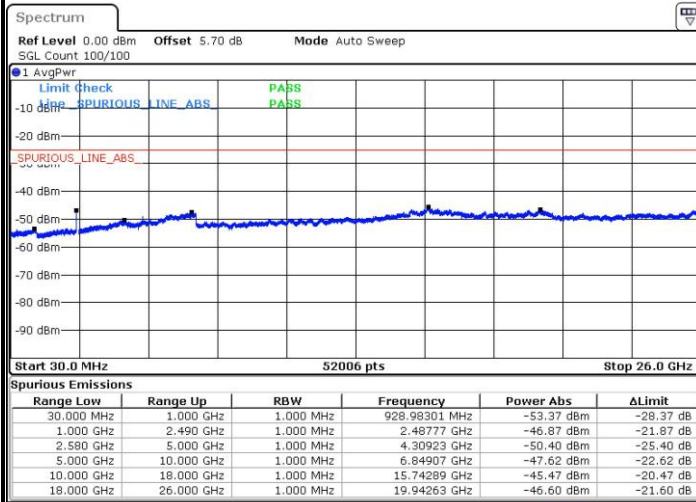


Date: 7.MAR.2019 11:29:46



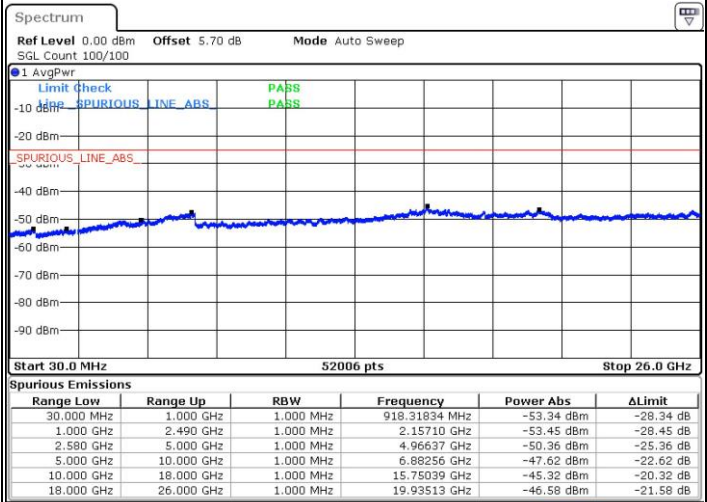
LTE Band 7 / 15MHz

Lowest Channel / 64QAM



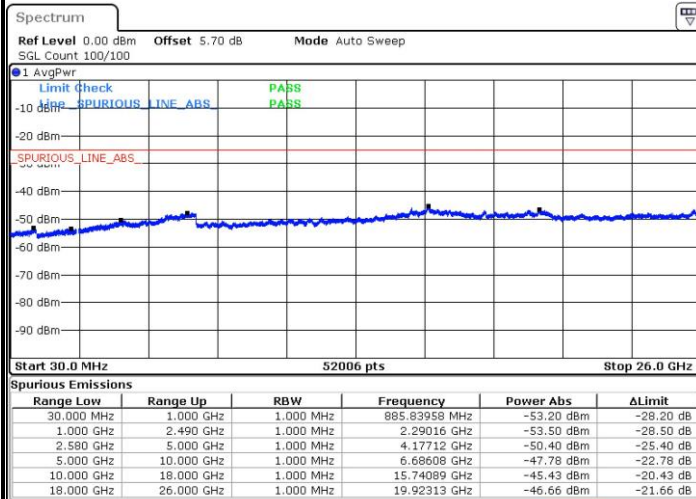
Date: 7.MAR.2019 11:32:24

Middle Channel / 64QAM



Date: 7.MAR.2019 11:35:03

Highest Channel / 64QAM

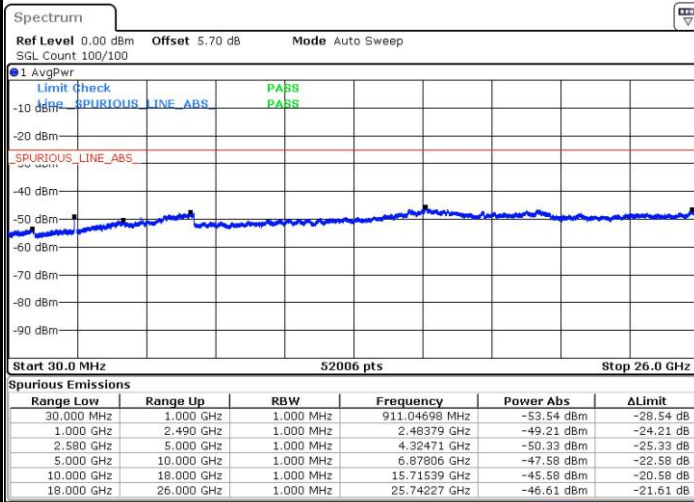


Date: 7.MAR.2019 11:37:33



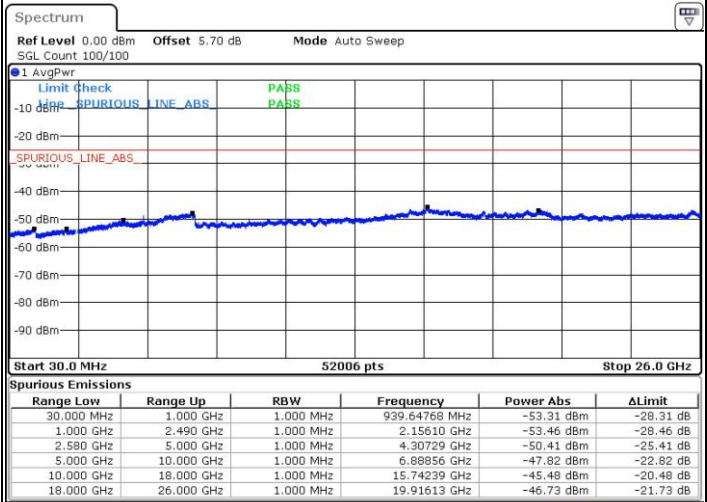
LTE Band 7 / 20MHz

Lowest Channel / 64QAM



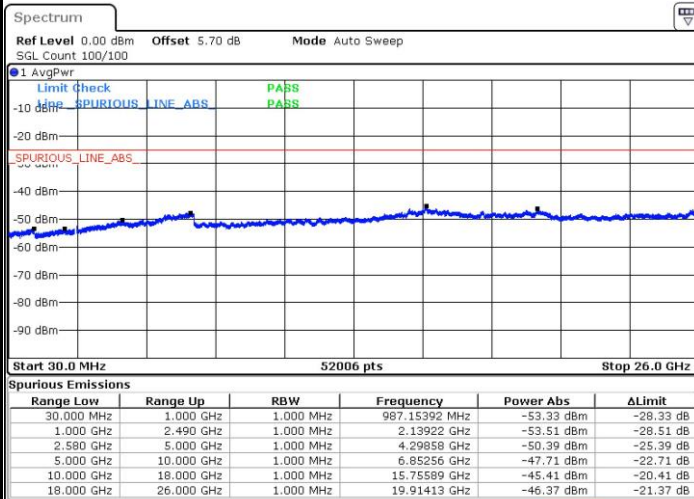
Date: 7.MAR.2019 11:40:13

Middle Channel / 64QAM



Date: 7.MAR.2019 11:42:37

Highest Channel / 64QAM

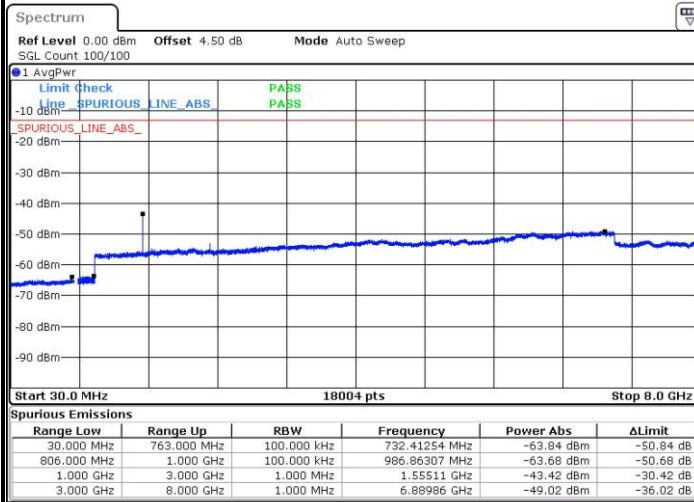


Date: 7.MAR.2019 11:45:21



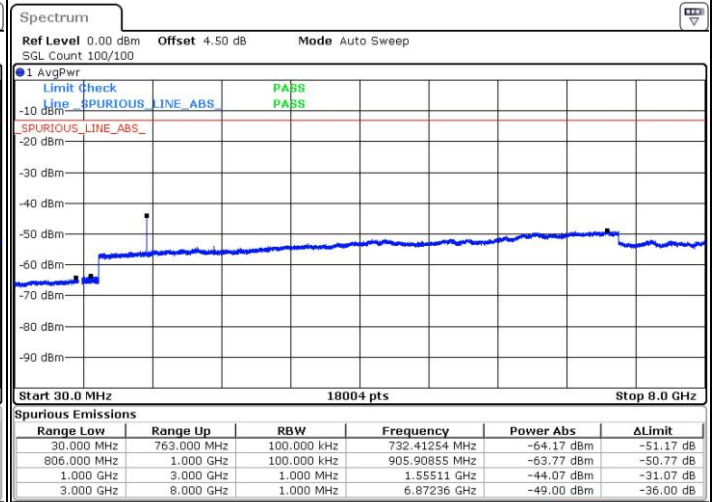
LTE Band 13 / 5MHz

Lowest Channel / QPSK



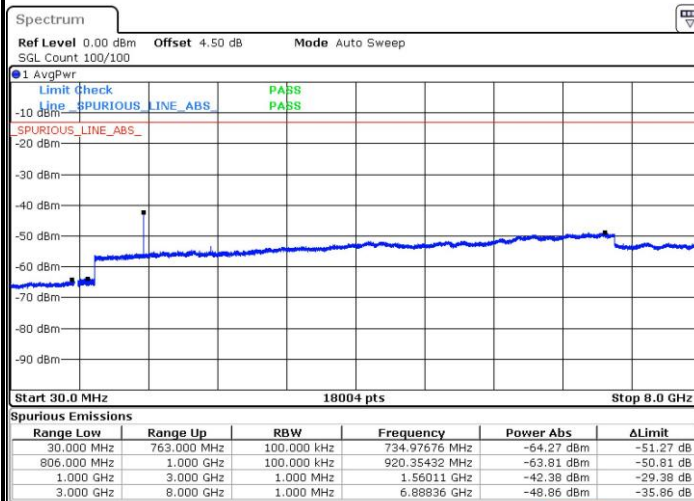
Date: 7.MAR.2019 13:55:31

Lowest Channel / 16QAM



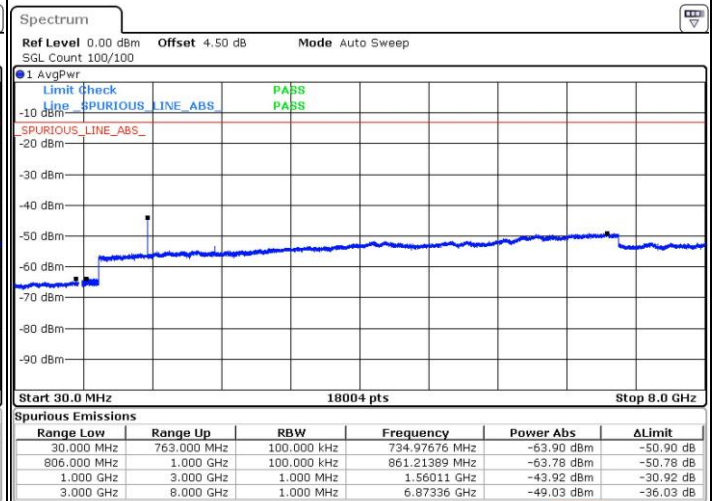
Date: 7.MAR.2019 13:57:11

Middle Channel / QPSK



Date: 7.MAR.2019 13:58:04

Middle Channel / 16QAM

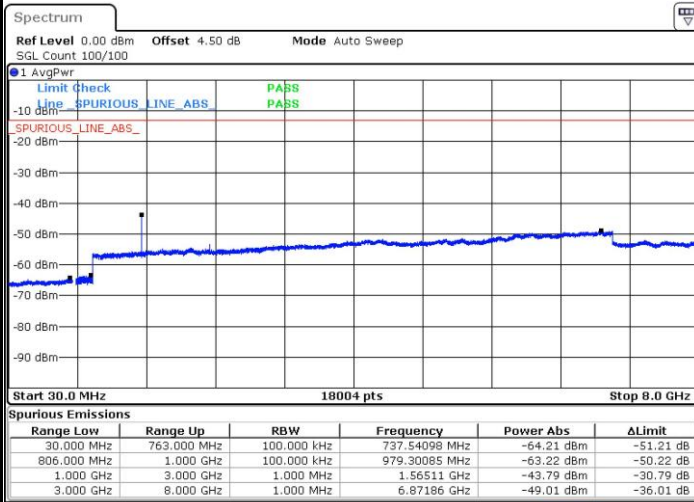


Date: 7.MAR.2019 13:58:28



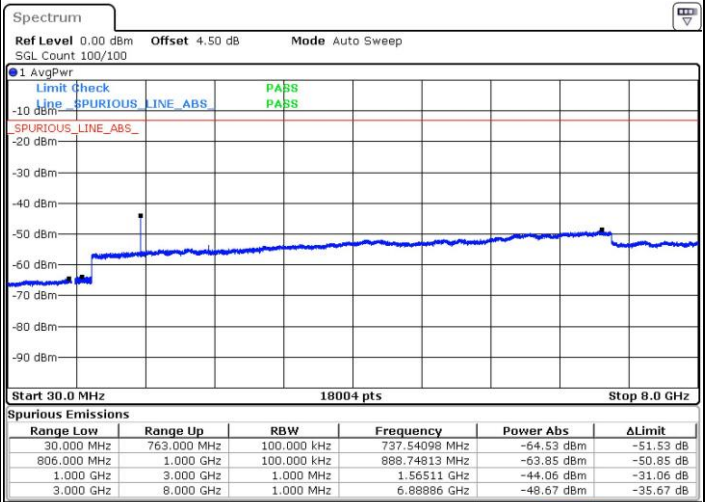
LTE Band 13 / 5MHz

Highest Channel / QPSK



Date: 7.MAR.2019 13:59:26

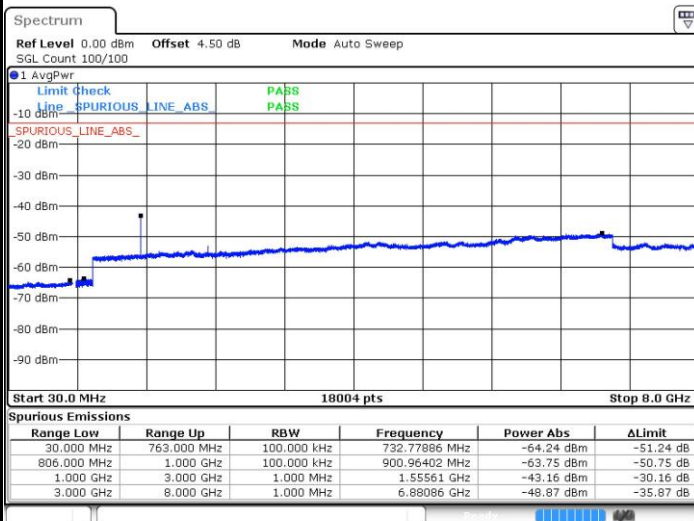
Highest Channel / 16QAM



Date: 7.MAR.2019 13:59:50

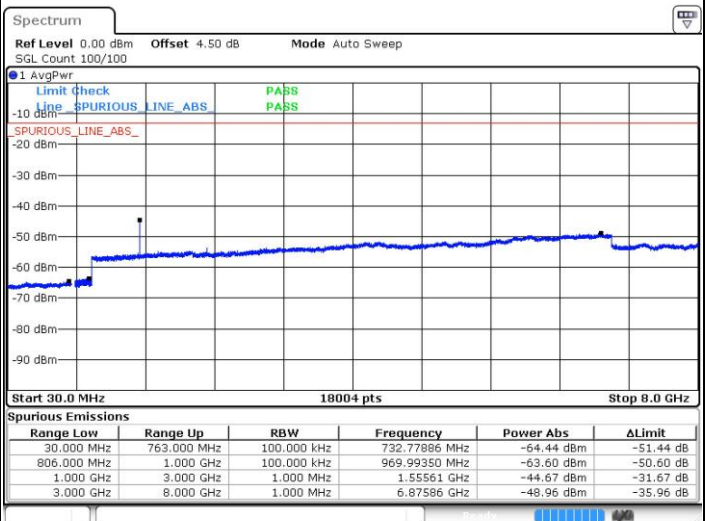
LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 7.MAR.2019 14:01:03

Middle Channel / 16QAM

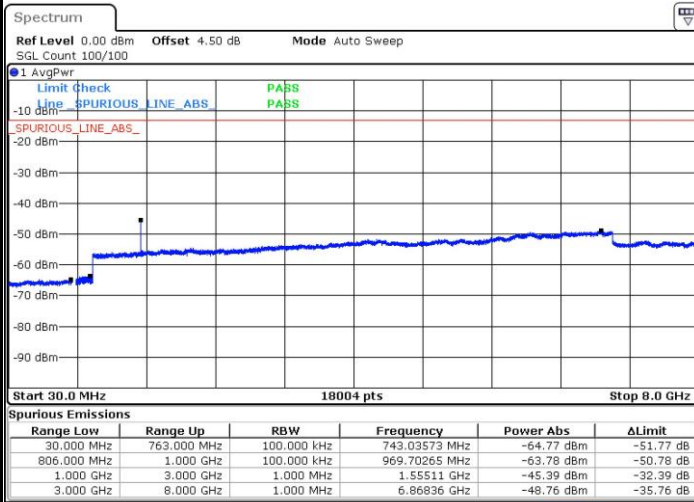


Date: 7.MAR.2019 14:01:32



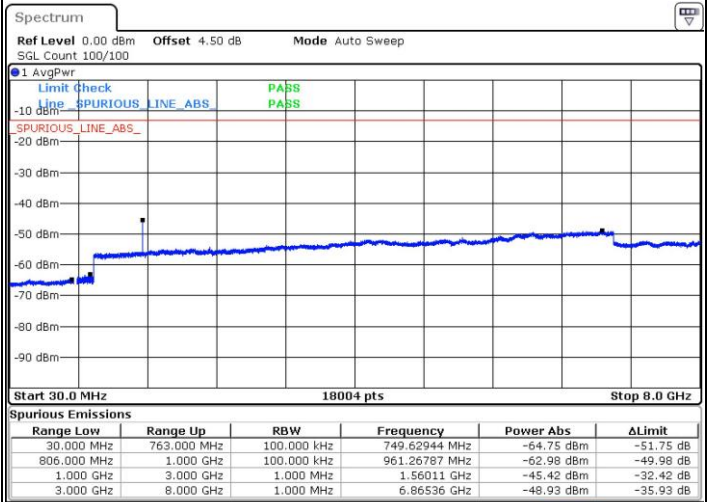
LTE Band 13 / 5MHz

Lowest Channel / 64QAM



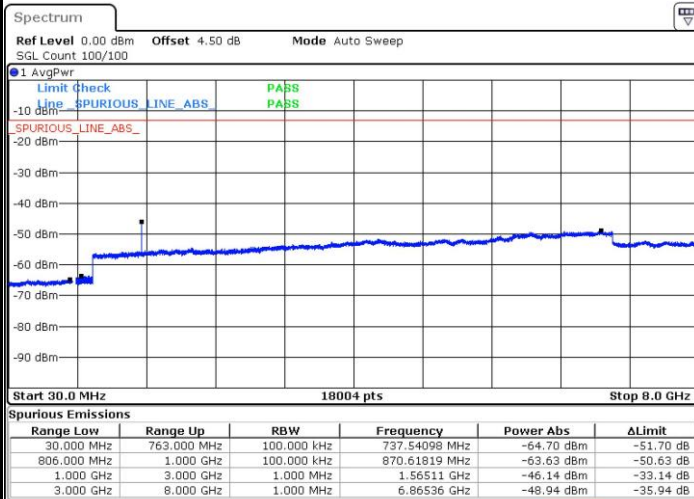
Date: 7.MAR.2019 13:57:36

Middle Channel / 64QAM



Date: 7.MAR.2019 13:58:54

Highest Channel / 64QAM

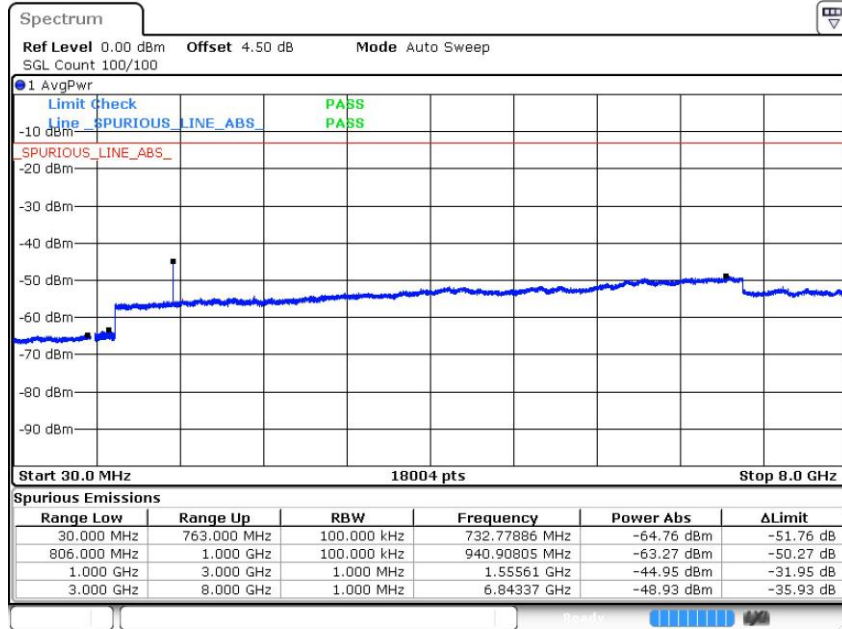


Date: 7.MAR.2019 14:00:15



LTE Band 13 / 10MHz

Middle Channel / 64QAM



Date: 7.MAR.2019 14:01:56

Frequency Stability

Test Conditions		LTE Band 2 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0004	PASS
40	Normal Voltage	0.0028	
30	Normal Voltage	0.0007	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0009	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0026	
-30	Normal Voltage	0.0026	
20	Maximum Voltage	0.0002	
20	Normal Voltage	0.0007	
20	Battery End Point	0.0013	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.1 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0023	PASS
40	Normal Voltage	0.0028	
30	Normal Voltage	0.0008	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0019	
0	Normal Voltage	0.0032	
-10	Normal Voltage	0.0002	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0020	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0024	
20	Battery End Point	0.0027	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.1 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Test Conditions		LTE Band 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0014	PASS
40	Normal Voltage	0.0004	
30	Normal Voltage	0.0047	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0054	
0	Normal Voltage	0.0063	
-10	Normal Voltage	0.0010	
-20	Normal Voltage	0.0058	
-30	Normal Voltage	0.0066	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0009	
20	Battery End Point	0.0046	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.1 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

LTE Band 2 / 20MHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3702	-60.09	-13	-47.09	-64.96	3.55	8.42	H
	5553	-55.26	-13	-42.26	-61.60	4.34	10.68	H
	7404	-52.12	-13	-39.12	-58.92	5.14	11.94	H
	3702	-59.84	-13	-46.84	-64.71	3.55	8.42	V
	5553	-53.49	-13	-40.49	-59.83	4.34	10.68	V
	7404	-52.06	-13	-39.06	-58.86	5.14	11.94	V
Middle	3742	-60.08	-13	-47.08	-64.95	3.55	8.42	H
	5613	-46.11	-13	-33.11	-52.45	4.34	10.68	H
	7484	-51.91	-13	-38.91	-58.71	5.14	11.94	H
	3741	-60.07	-13	-47.07	-64.94	3.55	8.42	V
	5613	-47.51	-13	-34.51	-53.85	4.34	10.68	V
	7484	-51.79	-13	-38.79	-58.59	5.14	11.94	V
Highest	3783	-59.69	-13	-46.69	-64.56	3.55	8.42	H
	5673	-54.28	-13	-41.28	-60.62	4.34	10.68	H
	7560	-52.11	-13	-39.11	-58.91	5.14	11.94	H
	3782	-60.17	-13	-47.17	-65.04	3.55	8.42	V
	5673	-53.98	-13	-40.98	-60.32	4.34	10.68	V
	7560	-51.55	-13	-38.55	-58.35	5.14	11.94	V

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



LTE Band 7 / 20MHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5000	-43.64	-25	-18.64	-53.85	3.03	13.24	H
	7504	-60.49	-25	-35.49	-69.94	3.56	13.01	H
	10000	-58.30	-25	-33.30	-67.82	3.92	13.44	H
	5000	-44.13	-25	-19.13	-54.34	3.03	13.24	V
	7503.27	-60.23	-25	-35.23	-69.68	3.56	13.01	V
	10000	-58.54	-25	-33.54	-68.06	3.92	13.44	V
Middle	5052	-38.35	-25	-13.35	-48.56	3.03	13.24	H
	7580	-60.36	-25	-35.36	-69.81	3.56	13.01	H
	10100	-57.59	-25	-32.59	-67.11	3.92	13.44	H
	5052	-40.28	-25	-15.28	-50.49	3.03	13.24	V
	7580	-60.00	-25	-35.00	-69.45	3.56	13.01	V
	10100	-58.42	-25	-33.42	-67.94	3.92	13.44	V
Highest	5100	-37.59	-25	-12.59	-47.80	3.03	13.24	H
	7652	-61.13	-25	-36.13	-70.58	3.56	13.01	H
	10200	-57.44	-25	-32.44	-66.96	3.92	13.44	H
	5100	-40.41	-25	-15.41	-50.62	3.03	13.24	V
	7652	-60.55	-25	-35.55	-70.00	3.56	13.01	V
	10200	-58.31	-25	-33.31	-67.83	3.92	13.44	V

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



LTE Band 12 / 10MHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1400	-67.20	-13	-54.20	-69.53	1.21	5.68	H
	2098	-63.80	-13	-50.80	-65.91	1.54	5.80	H
	2798.36	-61.93	-13	-48.93	-65.93	1.73	7.88	H
	1400	-66.32	-13	-53.32	-68.65	1.21	5.68	V
	2098.77	-63.76	-13	-50.76	-65.87	1.54	5.80	V
	2798	-60.76	-13	-47.76	-64.76	1.73	7.88	V
Middle	1406	-66.55	-13	-53.55	-68.88	1.21	5.68	H
	2110	-63.76	-13	-50.76	-65.87	1.54	5.80	H
	2812	-61.24	-13	-48.24	-65.24	1.73	7.88	H
	1406	-65.44	-13	-52.44	-67.77	1.21	5.68	V
	2110	-63.16	-13	-50.16	-65.27	1.54	5.80	V
	2812	-60.29	-13	-47.29	-64.29	1.73	7.88	V
Highest	1414	-66.58	-13	-53.58	-68.91	1.21	5.68	H
	2120	-64.04	-13	-51.04	-66.15	1.54	5.80	H
	2826.36	-61.03	-13	-48.03	-65.03	1.73	7.88	H
	1414	-66.39	-13	-53.39	-68.72	1.21	5.68	V
	2119.77	-63.86	-13	-50.86	-65.97	1.54	5.80	V
	2826	-60.54	-13	-47.54	-64.54	1.73	7.88	V

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



LTE Band 13 / 5MHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1554	-67.47	-13	-54.47	-69.18	2.23	6.09	H
	2332.02	-67.15	-13	-54.15	-67.68	2.83	5.51	H
	3108	-63.91	-13	-50.91	-65.85	3.21	7.30	H
	1554.68	-67.89	-13	-54.89	-69.60	2.23	6.09	V
	2332	-66.66	-13	-53.66	-67.19	2.83	5.51	V
	3108	-64.32	-13	-51.32	-66.26	3.21	7.30	V
Middle	1560	-68.98	-42.15	-26.83	-70.69	2.23	6.09	H
	2339.52	-66.70	-13	-53.70	-67.23	2.83	5.51	H
	3120	-65.26	-13	-52.26	-67.20	3.21	7.30	H
	1559.68	-68.81	-42.15	-26.66	-70.52	2.23	6.09	V
	2340	-66.19	-13	-53.19	-66.72	2.83	5.51	V
	3120	-64.04	-13	-51.04	-65.98	3.21	7.30	V
Highest	1564.68	-68.29	-42.15	-26.14	-70.00	2.23	6.09	H
	2348	-66.49	-13	-53.49	-67.02	2.83	5.51	H
	3132	-64.67	-13	-51.67	-66.61	3.21	7.30	H
	1564	-68.75	-42.15	-26.60	-70.46	2.23	6.09	V
	2347.02	-66.37	-13	-53.37	-66.90	2.83	5.51	V
	3132	-64.71	-13	-51.71	-66.65	3.21	7.30	V

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

LTE Band 13 / 10MHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1556	-65.38	-13	-52.38	-67.09	2.23	6.09	H
	2332.77	-64.95	-13	-51.95	-65.48	2.83	5.51	H
	3108	-64.05	-13	-51.05	-65.99	3.21	7.30	H
	1555.18	-68.01	-13	-55.01	-69.72	2.23	6.09	V
	2332	-66.81	-13	-53.81	-67.34	2.83	5.51	V
	3108	-64.02	-13	-51.02	-65.96	3.21	7.30	V

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



LTE Band 26 / 15MHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1650	-69.01	-13	-56.01	-70.22	2.32	5.68	H
	2474	-65.65	-13	-52.65	-66.28	3.02	5.80	H
	3300	-65.76	-13	-52.76	-68.22	3.27	7.88	H
	1650	-69.12	-13	-56.12	-70.33	2.32	5.68	V
	2474	-66.19	-13	-53.19	-66.82	3.02	5.80	V
	3300	-65.94	-13	-52.94	-68.40	3.27	7.88	V
Middle	1659	-69.27	-13	-56.27	-70.48	2.32	5.68	H
	2490	-65.62	-13	-52.62	-66.25	3.02	5.80	H
	3318	-65.82	-13	-52.82	-68.28	3.27	7.88	H
	1660	-69.37	-13	-56.37	-70.58	2.32	5.68	V
	2489	-66.17	-13	-53.17	-66.80	3.02	5.80	V
	3318	-66.70	-13	-53.70	-69.16	3.27	7.88	V
Highest	1670	-69.24	-13	-56.24	-70.45	2.32	5.68	H
	2504	-66.47	-13	-53.47	-67.10	3.02	5.80	H
	3339	-65.30	-13	-52.30	-67.76	3.27	7.88	H
	1669	-69.42	-13	-56.42	-70.63	2.32	5.68	V
	2504	-66.87	-13	-53.87	-67.50	3.02	5.80	V
	3339	-65.60	-13	-52.60	-68.06	3.27	7.88	V

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



LTE Band 66 / 20MHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3423	-54.70	-13	-41.70	-61.02	1.81	8.13	H
	5133	-56.11	-13	-43.11	-64.09	2.222	10.20	H
	6840	-53.51	-13	-40.51	-62.33	2.54	11.36	H
	3422.18	-57.97	-13	-44.97	-64.29	1.81	8.13	V
	5133	-56.16	-13	-43.16	-64.14	2.222	10.20	V
	6840	-54.58	-13	-41.58	-63.40	2.54	11.36	V
Middle	3471	-54.59	-13	-41.59	-60.91	1.81	8.13	H
	5208	-54.72	-13	-41.72	-62.70	2.222	10.20	H
	6948	-53.00	-13	-40.00	-61.82	2.54	11.36	H
	3471	-56.65	-13	-43.65	-62.97	1.81	8.13	V
	5208	-52.68	-13	-39.68	-60.66	2.222	10.20	V
	6948	-53.95	-13	-40.95	-62.77	2.54	11.36	V
Highest	3522	-57.39	-13	-44.39	-63.71	1.81	8.13	H
	5283	-56.10	-13	-43.10	-64.08	2.222	10.20	H
	7044	-52.24	-13	-39.24	-61.06	2.54	11.36	H
	3522	-57.80	-13	-44.80	-64.12	1.81	8.13	V
	5283.27	-56.50	-13	-43.50	-64.48	2.222	10.20	V
	7044	-53.22	-13	-40.22	-62.04	2.54	11.36	V

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



Appendix D. Reference Report

Please refer to Sporton report number FG922110B which is issued separately.