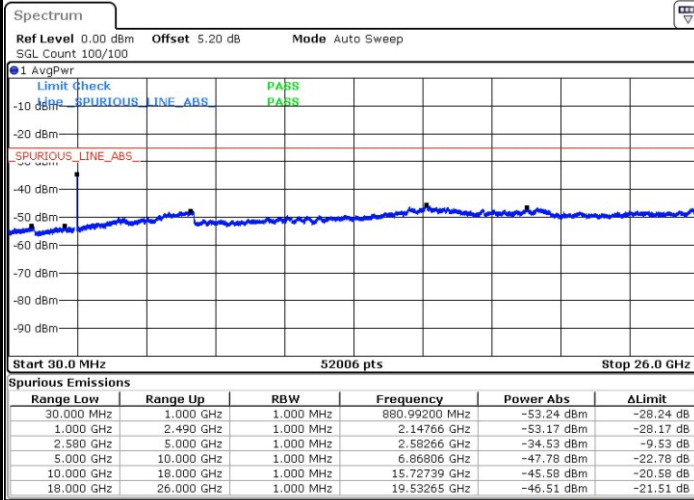




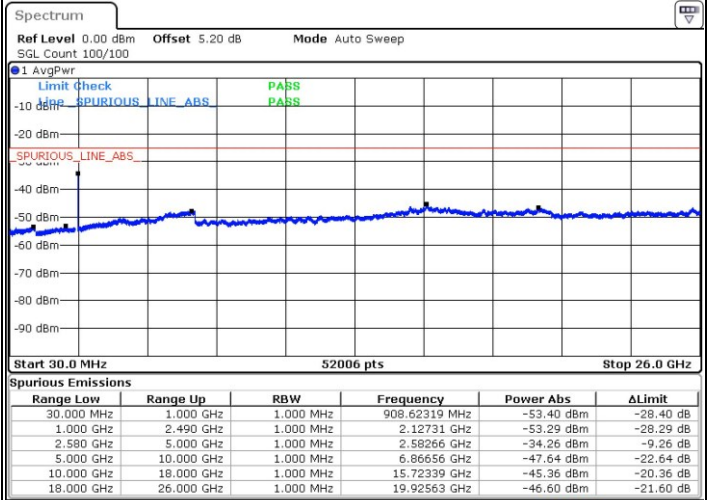
LTE Band7 / 15MHz

Highest Channel / QPSK



Date: 15 MAR 2019 14:42:47

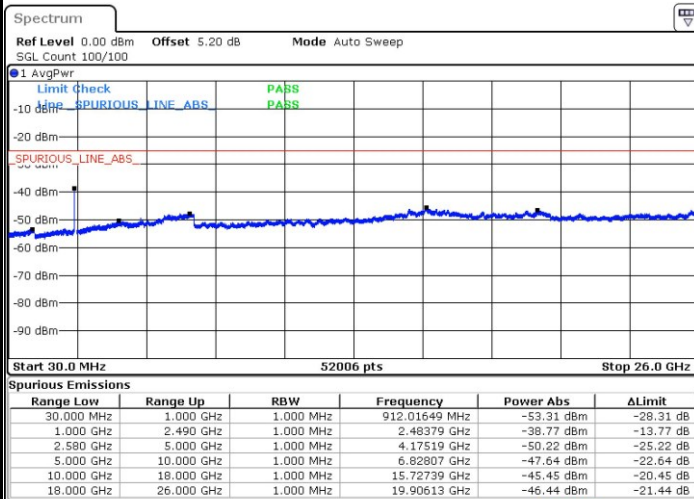
Highest Channel / 16QAM



Date: 15 MAR 2019 14:43:36

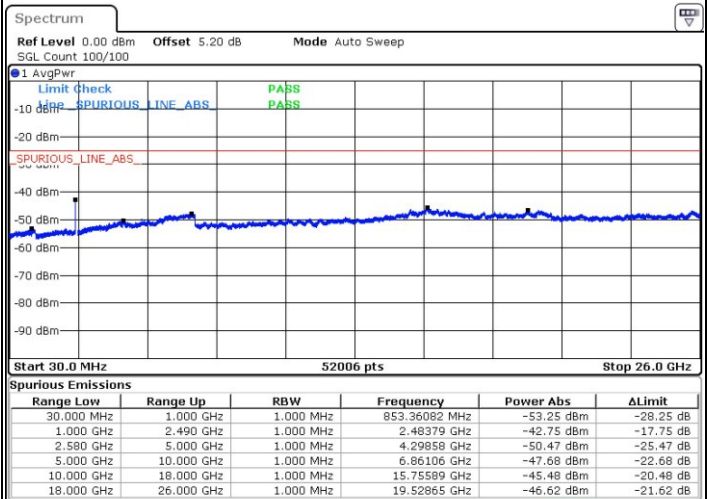
LTE Band 7 / 20MHz

Lowest Channel / QPSK



Date: 15 MAR 2019 15:11:48

Lowest Channel / 16QAM

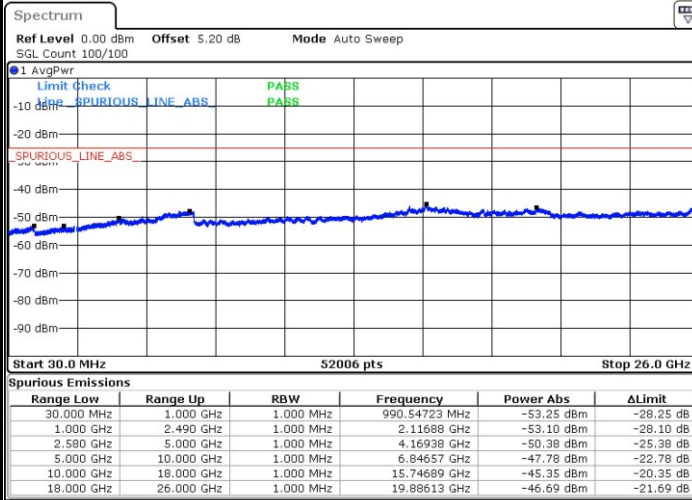


Date: 15 MAR 2019 15:30:21



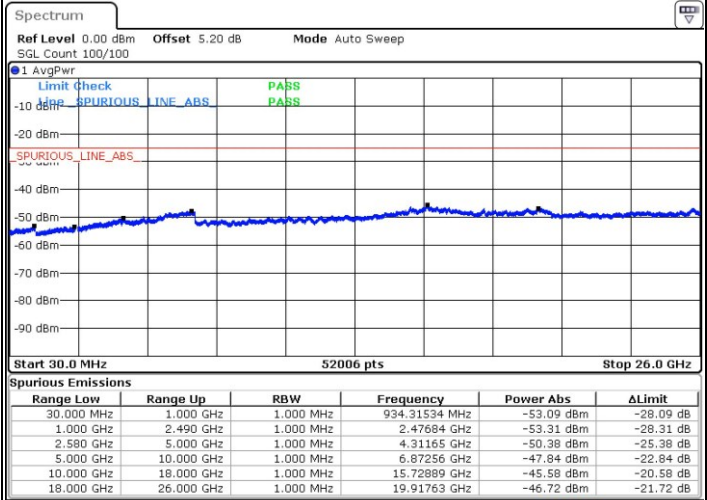
LTE Band 7 / 20MHz

Middle Channel / QPSK



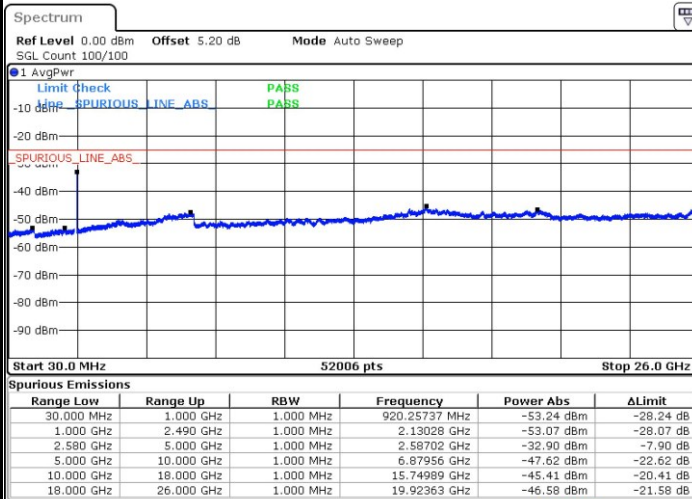
Date: 15 MAR 2019 15:32:16

Middle Channel / 16QAM



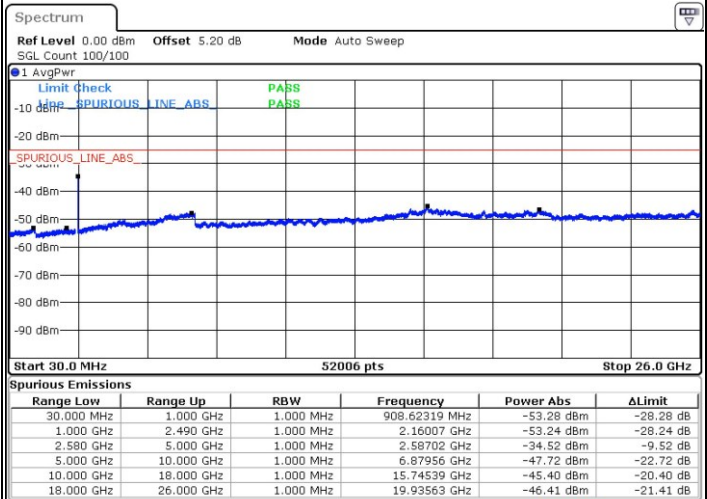
Date: 15 MAR 2019 15:33:10

Highest Channel / QPSK



Date: 15 MAR 2019 15:35:06

Highest Channel / 16QAM

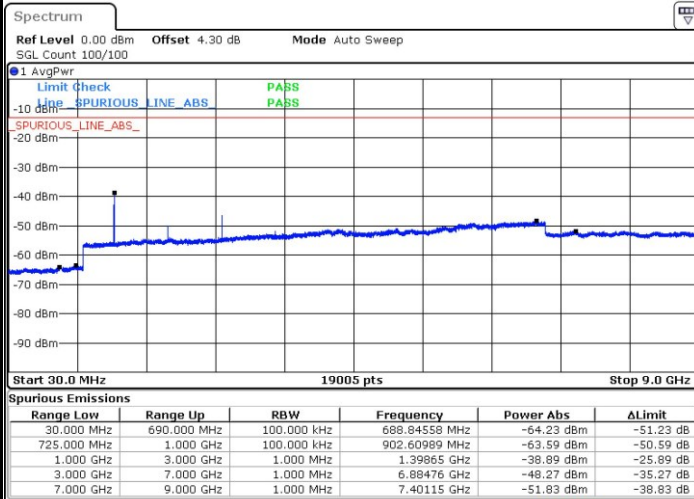


Date: 15 MAR 2019 15:35:59



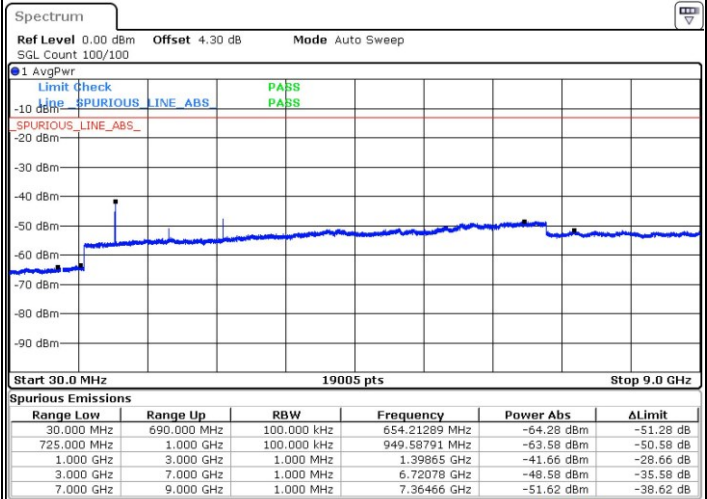
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



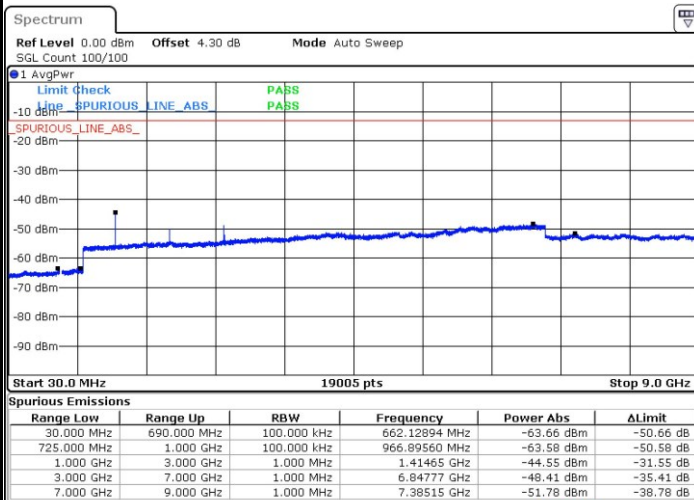
Date: 15 MAR 2019 16:25:23

Lowest Channel / 16QAM



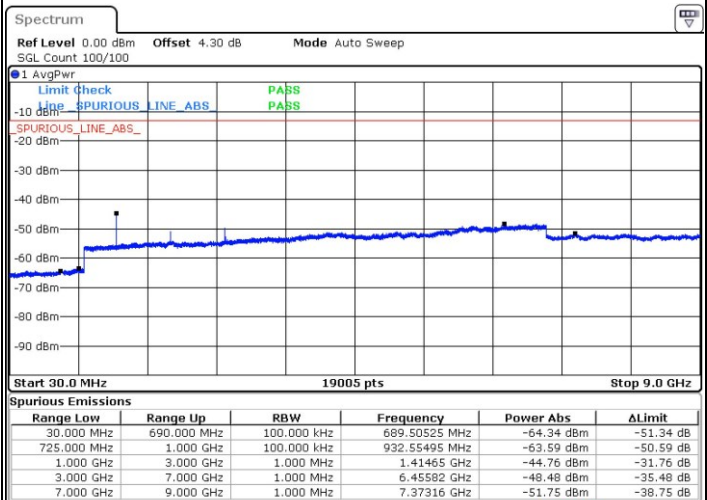
Date: 15 MAR 2019 16:25:52

Middle Channel / QPSK



Date: 15 MAR 2019 16:26:52

Middle Channel / 16QAM

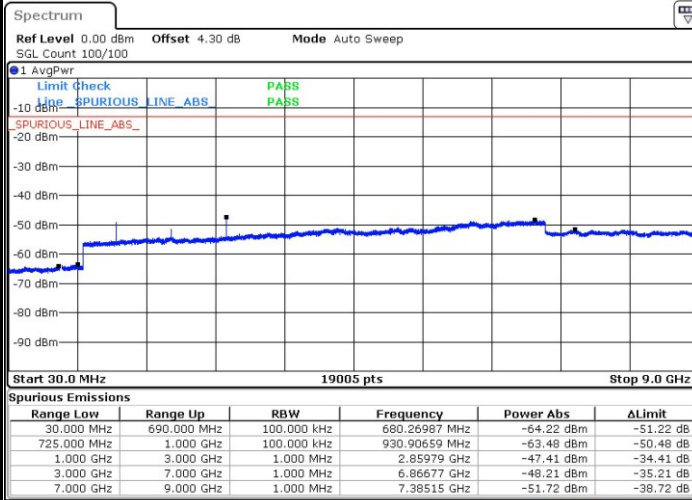


Date: 15 MAR 2019 16:27:21



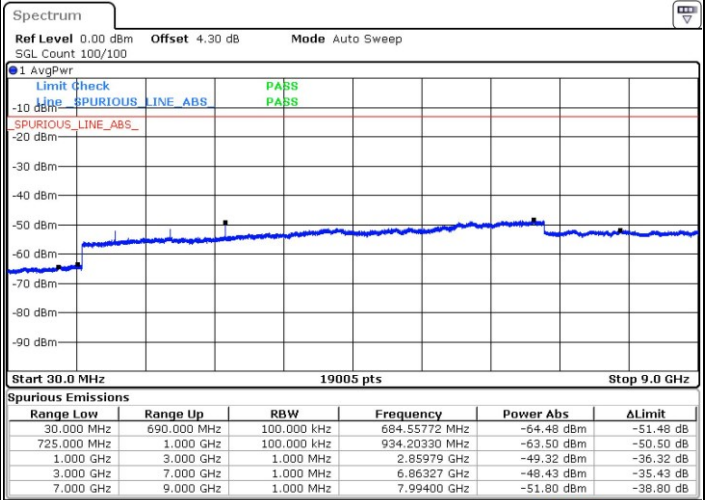
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 15 MAR 2019 16:28:20

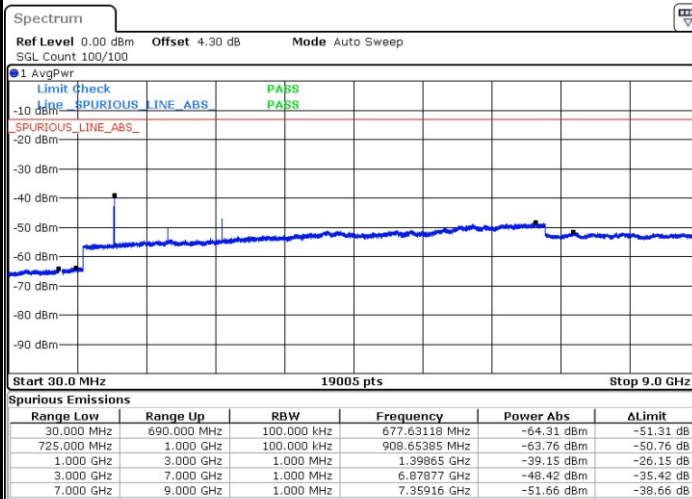
Highest Channel / 16QAM



Date: 15 MAR 2019 16:29:04

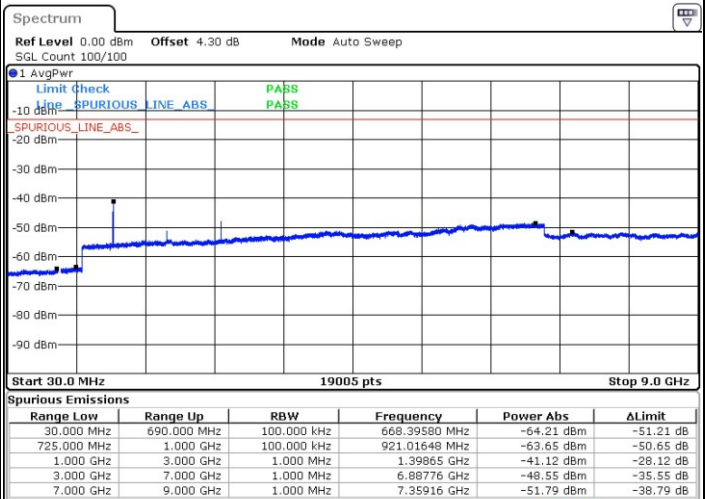
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 15 MAR 2019 16:53:34

Lowest Channel / 16QAM

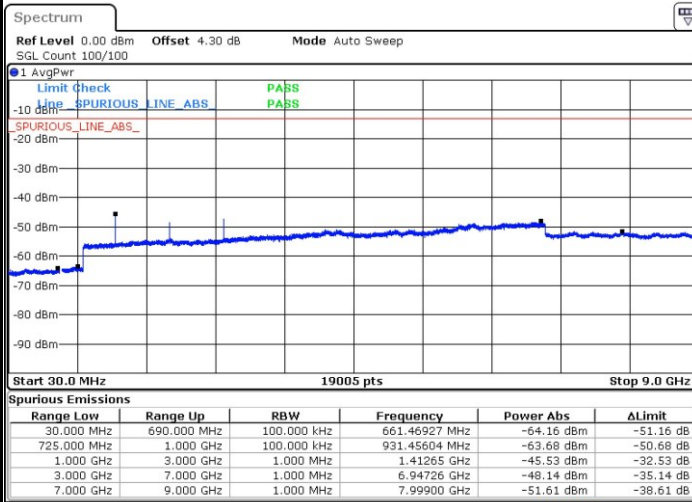


Date: 15 MAR 2019 16:55:07



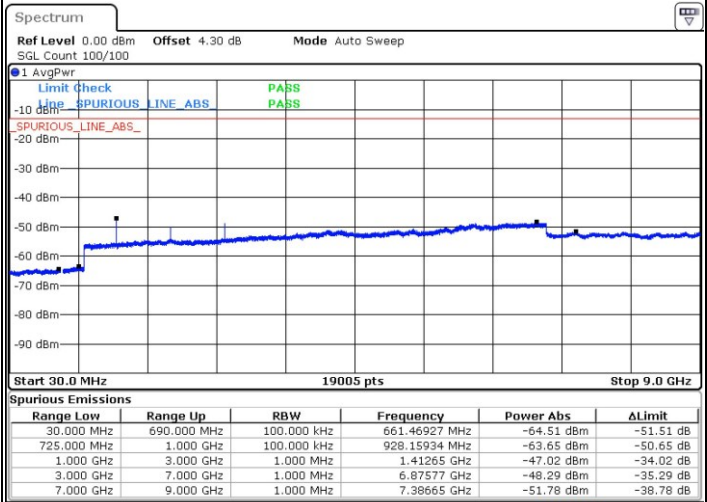
LTE Band 12 / 3MHz

Middle Channel / QPSK



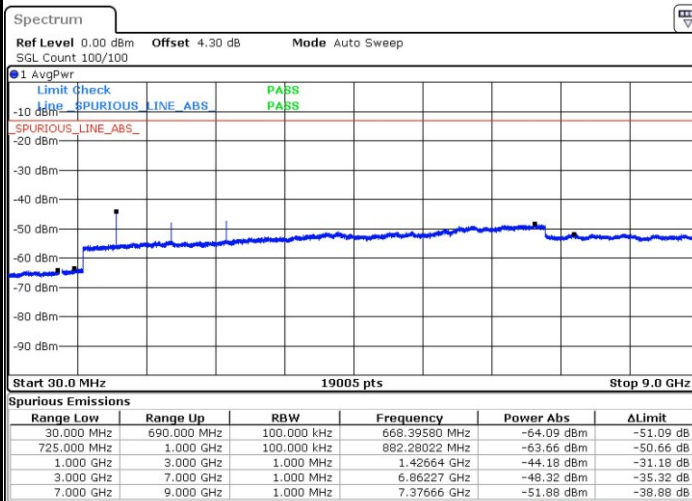
Date: 15 MAR 2019 16:56:19

Middle Channel / 16QAM



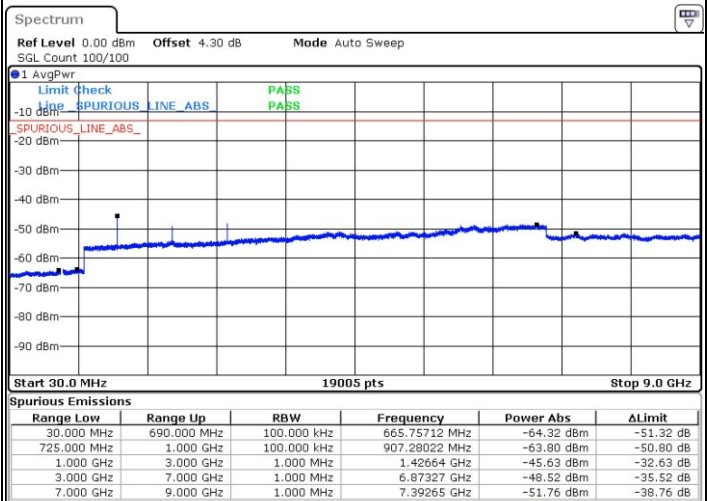
Date: 15 MAR 2019 16:56:54

Highest Channel / QPSK



Date: 15 MAR 2019 16:59:23

Highest Channel / 16QAM

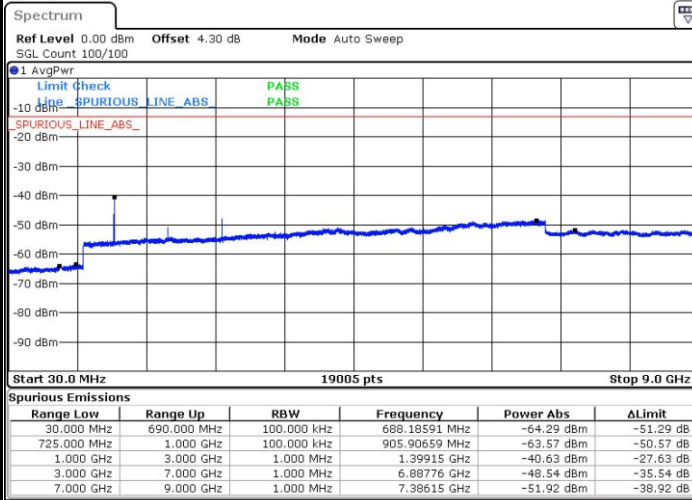


Date: 15 MAR 2019 16:59:51



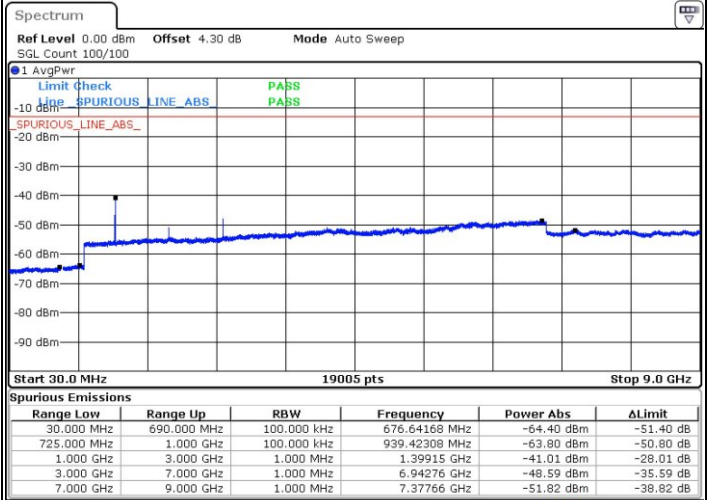
LTE Band 12 / 5MHz

Lowest Channel / QPSK



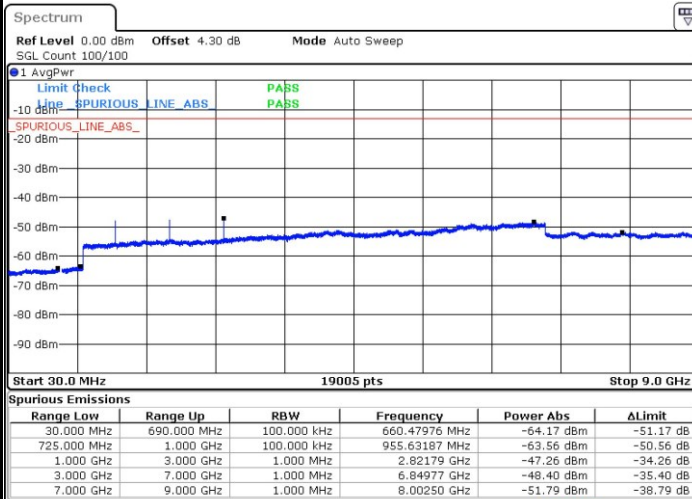
Date: 15 MAR 2019 17:16:08

Lowest Channel / 16QAM



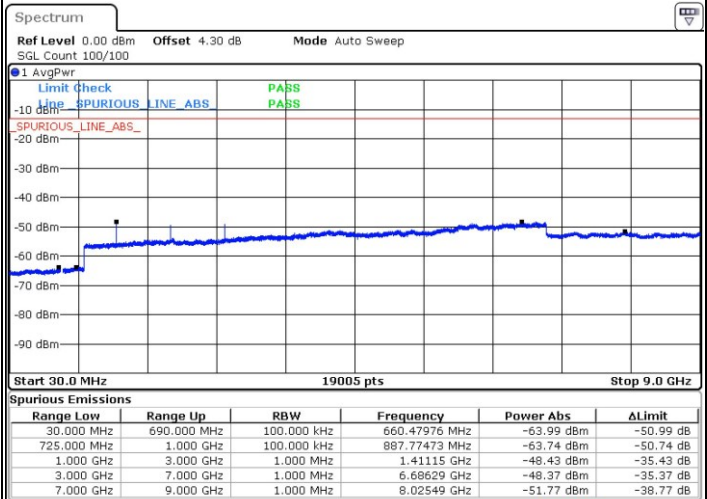
Date: 15 MAR 2019 17:17:47

Middle Channel / QPSK



Date: 15 MAR 2019 17:18:45

Middle Channel / 16QAM

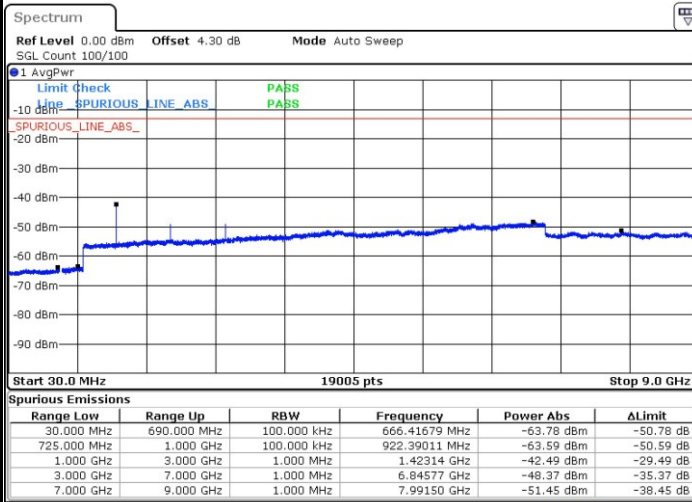


Date: 15 MAR 2019 17:19:13



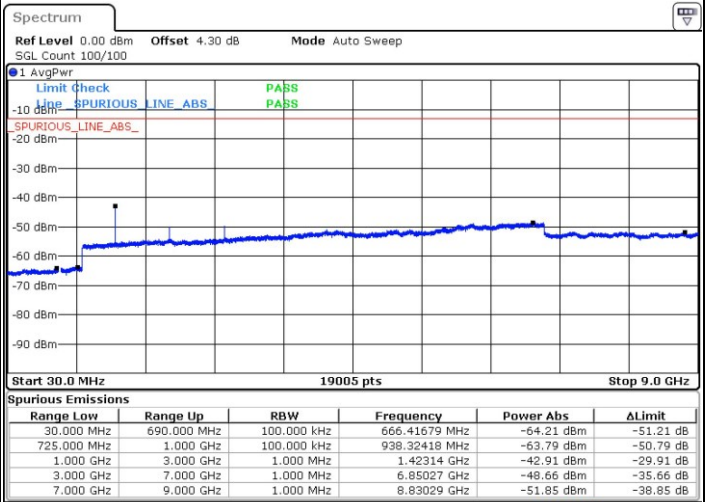
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 15 MAR 2019 17:20:24

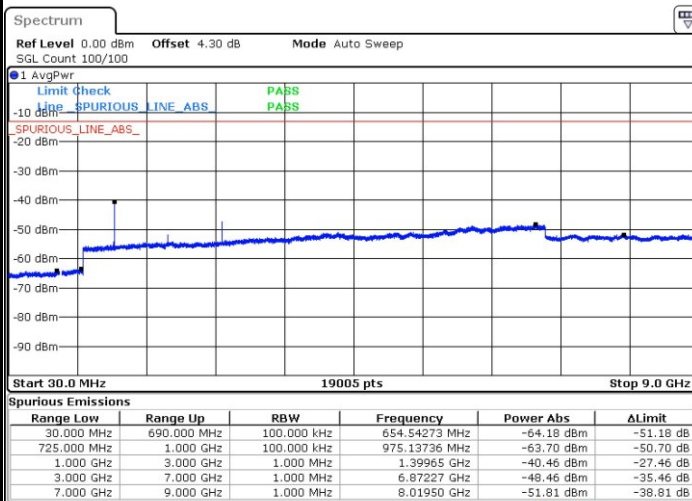
Highest Channel / 16QAM



Date: 15 MAR 2019 17:20:53

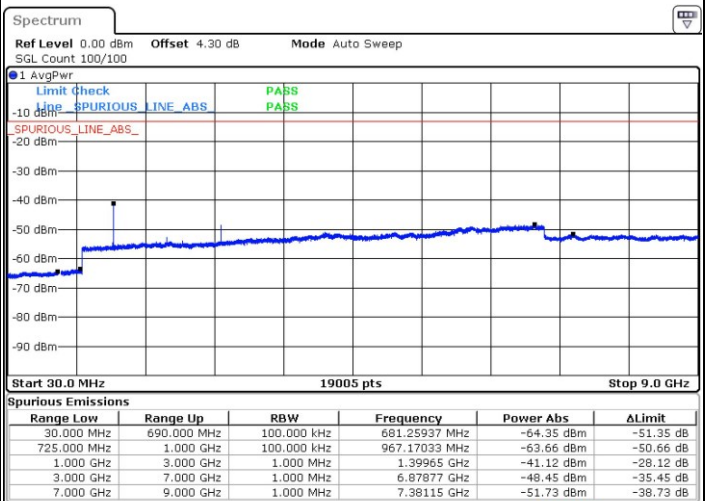
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 15 MAR 2019 17:35:47

Lowest Channel / 16QAM

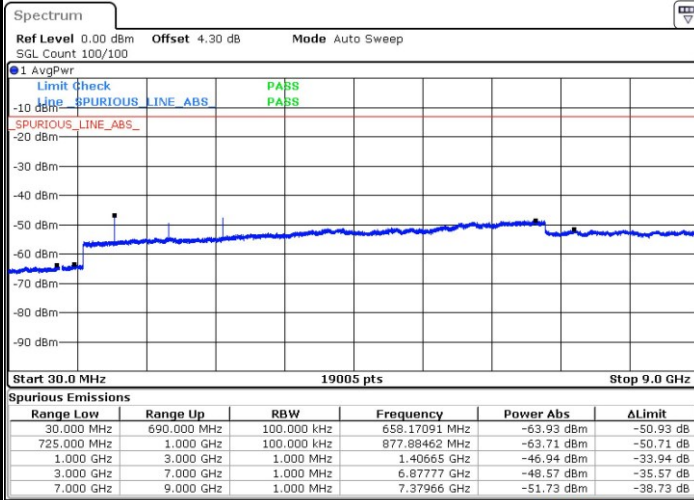


Date: 15 MAR 2019 17:37:39



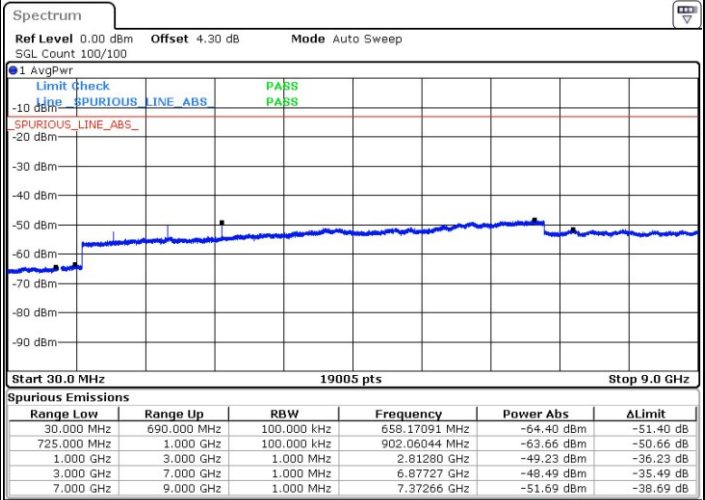
LTE Band 12 / 10MHz

Middle Channel / QPSK



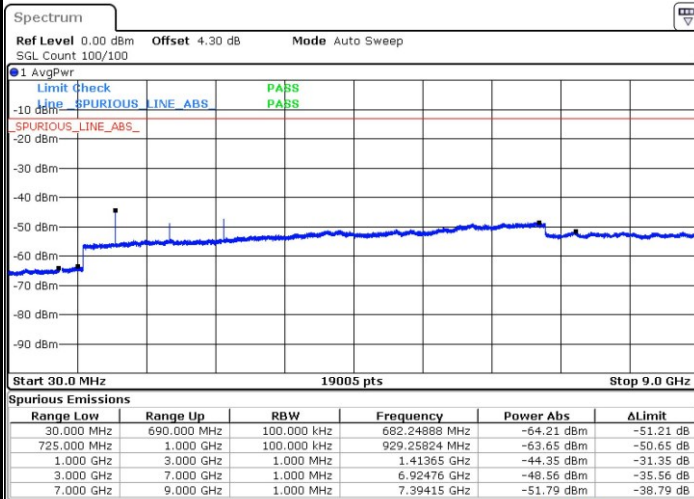
Date: 15 MAR 2019 17:38:43

Middle Channel / 16QAM



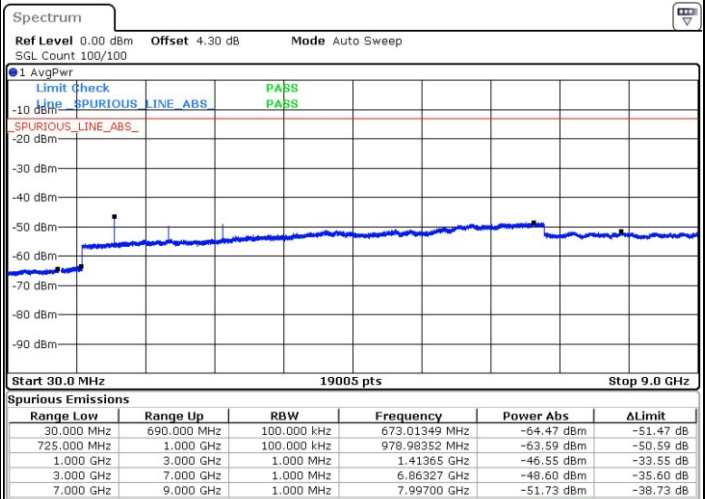
Date: 15 MAR 2019 17:39:13

Highest Channel / QPSK



Date: 15 MAR 2019 17:40:16

Highest Channel / 16QAM

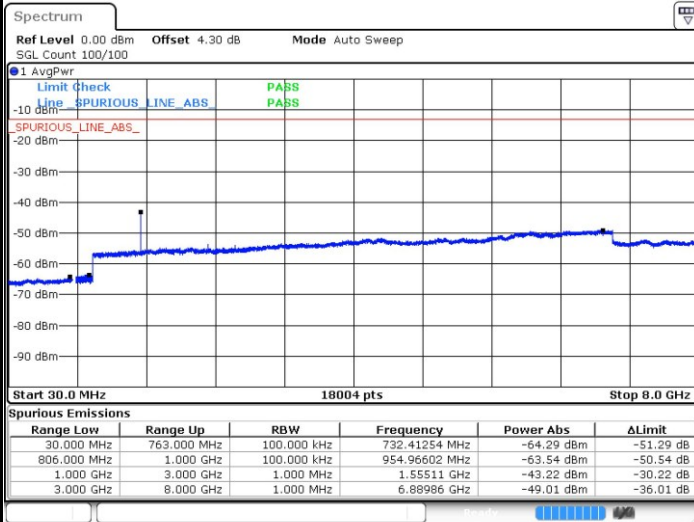


Date: 15 MAR 2019 17:40:43



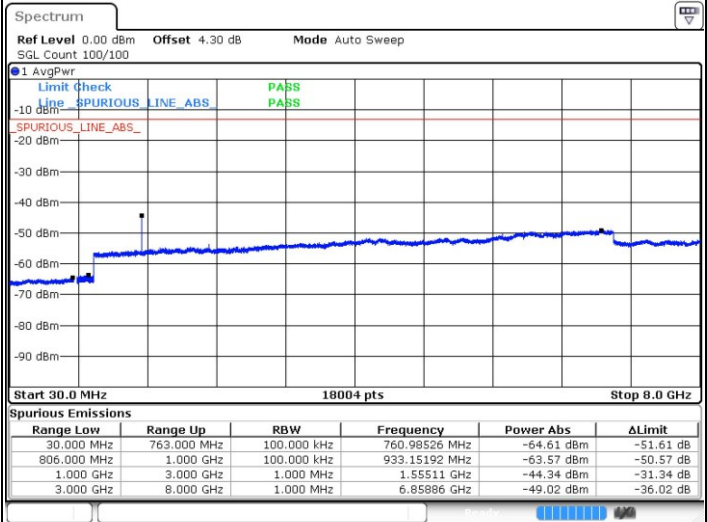
LTE Band 13 / 5MHz

Lowest Channel / QPSK



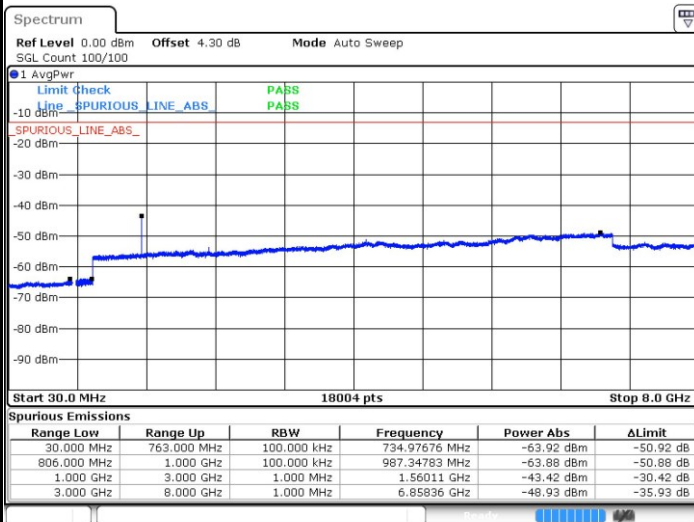
Date: 12 MAR 2019 19:56:21

Lowest Channel / 16QAM



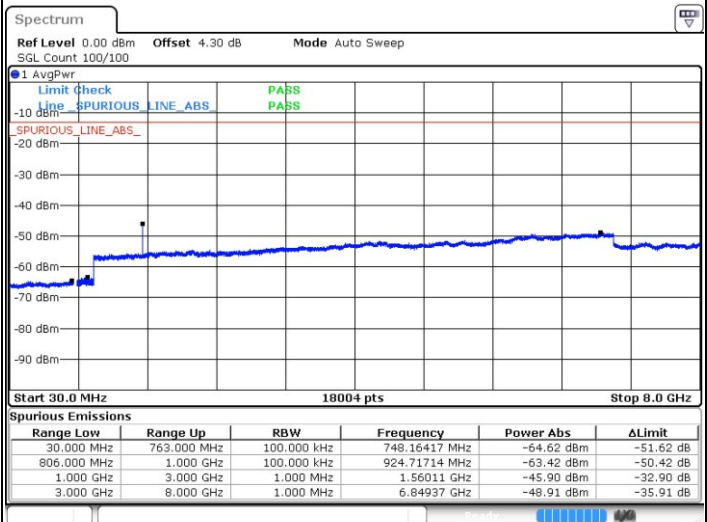
Date: 12 MAR 2019 19:57:14

Middle Channel / QPSK



Date: 12 MAR 2019 20:00:05

Middle Channel / 16QAM

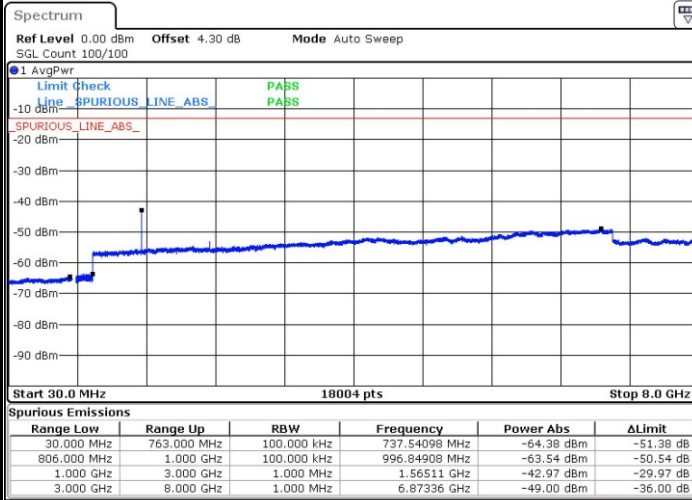


Date: 12 MAR 2019 20:00:41



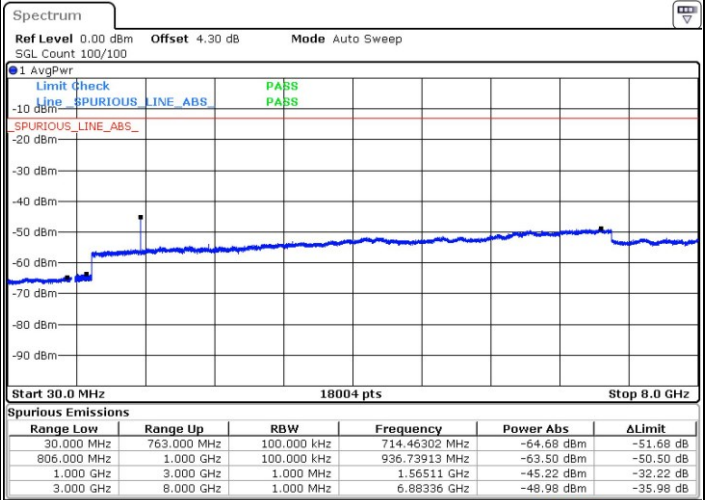
LTE Band 13 / 5MHz

Highest Channel / QPSK



Date: 12 MAR 2019 20:02:48

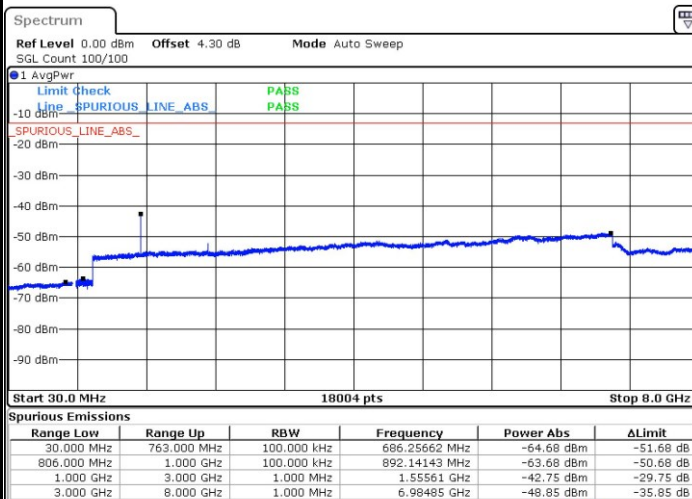
Highest Channel / 16QAM



Date: 12 MAR 2019 20:04:19

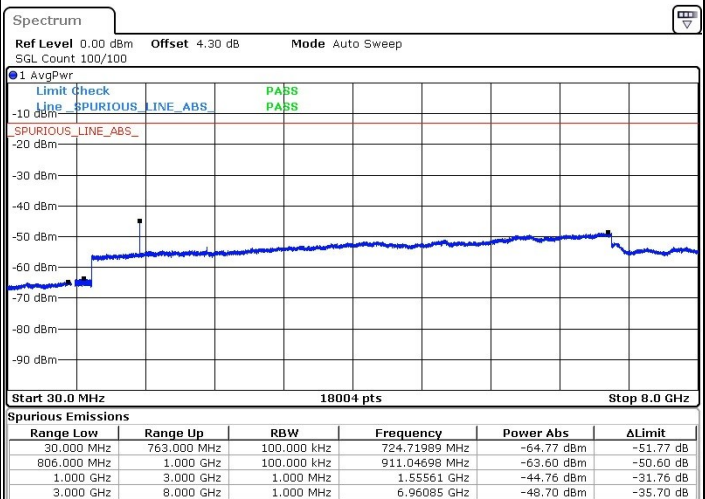
LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 13 MAR 2019 15:55:13

Middle Channel / 16QAM



Date: 13 MAR 2019 16:02:06

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	0.0006	PASS
40	Normal Voltage	0.0028	
30	Normal Voltage	0.0009	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0018	
0	Normal Voltage	0.0011	
-10	Normal Voltage	0.0018	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0029	
20	Maximum Voltage	0.0004	
20	Normal Voltage	0.0006	
20	Battery End Point	0.0017	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.3 V. ; Maximum Voltage =4.3 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0023	PASS
40	Normal Voltage	0.0015	
30	Normal Voltage	0.0028	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0009	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0016	
-20	Normal Voltage	0.0022	
-30	Normal Voltage	0.0018	
20	Maximum Voltage	0.0027	
20	Normal Voltage	0.0033	
20	Battery End Point	0.0004	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.3 V. ; Maximum Voltage =4.3 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0017	PASS
40	Normal Voltage	0.0061	
30	Normal Voltage	0.0080	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0010	
0	Normal Voltage	0.0072	
-10	Normal Voltage	0.0014	
-20	Normal Voltage	0.0057	
-30	Normal Voltage	0.0085	
20	Maximum Voltage	0.0054	
20	Normal Voltage	0.0071	
20	Battery End Point	0.0002	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.3 V. ; Maximum Voltage =4.3 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) =3.3 V. ; Maximum Voltage =4.3 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0011	PASS
40	Normal Voltage	0.0024	
30	Normal Voltage	0.0090	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0102	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0023	
-20	Normal Voltage	0.0076	
-30	Normal Voltage	0.0068	
20	Maximum Voltage	0.0011	
20	Normal Voltage	0.0007	
20	Battery End Point	0.0106	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.3 V. ; Maximum Voltage =4.3 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) =3.3 V. ; Maximum Voltage =4.3 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	-60.76	-13	-47.76	-65.63	3.55	8.42	H
	5553	-56.44	-13	-43.44	-62.78	4.34	10.68	H
	7404	-52.72	-13	-39.72	-59.52	5.14	11.94	H
	3702	-58.47	-13	-45.47	-63.34	3.55	8.42	V
	5553	-54.60	-13	-41.60	-60.94	4.34	10.68	V
	7404	-52.35	-13	-39.35	-59.15	5.14	11.94	V
Middle	3741	-60.56	-13	-47.56	-65.43	3.55	8.42	H
	5613	-56.51	-13	-43.51	-62.85	4.34	10.68	H
	7488	-52.29	-13	-39.29	-59.09	5.14	11.94	H
	3741	-57.92	-13	-44.92	-62.79	3.55	8.42	V
	5613	-53.53	-13	-40.53	-59.87	4.34	10.68	V
	7488	-51.83	-13	-38.83	-58.63	5.14	11.94	V
Highest	3783	-60.45	-13	-47.45	-65.32	3.55	8.42	H
	5673	-56.64	-13	-43.64	-62.98	4.34	10.68	H
	7560	-52.51	-13	-39.51	-59.31	5.14	11.94	H
	3783	-59.24	-13	-46.24	-64.11	3.55	8.42	V
	5673	-53.41	-13	-40.41	-59.75	4.34	10.68	V
	7560	-51.93	-13	-38.93	-58.73	5.14	11.94	V

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



LTE Band 4 / 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	3420	-54.20	-13	-41.20	-64.94	2.604	13.34	H
	5133.27	-58.89	-13	-45.89	-69.40	3.011	13.52	H
	6846	-55.07	-13	-42.07	-65.27	3.271	13.47	H
	3420	-56.42	-13	-43.42	-67.16	2.604	13.34	V
	5130	-56.01	-13	-43.01	-66.52	3.011	13.52	V
	6846	-55.19	-13	-42.19	-65.39	3.271	13.47	V
Middle	3444	-48.76	-13	-35.76	-59.50	2.604	13.34	H
	5172	-56.88	-13	-43.88	-67.39	3.011	13.52	H
	6894	-55.18	-13	-42.18	-65.38	3.271	13.47	H
	3444	-54.36	-13	-41.36	-65.10	2.604	13.34	V
	5172	-53.73	-13	-40.73	-64.24	3.011	13.52	V
	6894.36	-54.71	-13	-41.71	-64.91	3.271	13.47	V
Highest	3474	-51.05	-13	-38.05	-61.79	2.604	13.34	H
	5208	-58.88	-13	-45.88	-69.39	3.011	13.52	H
	6942	-54.54	-13	-41.54	-64.74	3.271	13.47	H
	3474	-57.58	-13	-44.58	-68.32	2.604	13.34	V
	5208	-54.10	-13	-41.10	-64.61	3.011	13.52	V
	6944.36	-54.16	-13	-41.16	-64.36	3.271	13.47	V

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



LTE Band 5 / 10MHz / 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	1650	-66.26	-13	-53.26	-67.47	2.32	5.68	H
	2473.77	-66.87	-13	-53.87	-67.50	3.02	5.80	H
	3300	-67.16	-13	-54.16	-69.62	3.27	7.88	H
	1650	-62.07	-13	-49.07	-63.28	2.32	5.68	V
	2473.77	-66.43	-13	-53.43	-67.06	3.02	5.80	V
	3300	-66.48	-13	-53.48	-68.94	3.27	7.88	V
Middle	1664	-67.80	-13	-54.80	-69.01	2.32	5.68	H
	2496.27	-66.01	-13	-53.01	-66.64	3.02	5.80	H
	3330	-65.34	-13	-52.34	-67.80	3.27	7.88	H
	1664.18	-68.41	-13	-55.41	-69.62	2.32	5.68	V
	2496	-66.55	-13	-53.55	-67.18	3.02	5.80	V
	3330	-66.22	-13	-53.22	-68.68	3.27	7.88	V
Highest	1680	-69.63	-13	-56.63	-70.84	2.32	5.68	H
	2518.77	-67.60	-13	-54.60	-68.23	3.02	5.80	H
	3360	-66.26	-13	-53.26	-68.72	3.27	7.88	H
	1679.18	-68.93	-13	-55.93	-70.14	2.32	5.68	V
	2518	-66.75	-13	-53.75	-67.38	3.02	5.80	V
	3360	-66.07	-13	-53.07	-68.53	3.27	7.88	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	5004	-65.45	-25	-40.45	-75.66	3.03	13.24	H
	7503.27	-60.34	-25	-35.34	-69.79	3.56	13.01	H
	10000	-58.09	-25	-33.09	-67.61	3.92	13.44	H
	5000	-62.58	-25	-37.58	-72.79	3.03	13.24	V
	7504	-53.62	-25	-28.62	-63.07	3.56	13.01	V
	10000	-57.63	-25	-32.63	-67.15	3.92	13.44	V
Middle	5052	-63.86	-25	-38.86	-74.07	3.03	13.24	H
	7580	-60.68	-25	-35.68	-70.13	3.56	13.01	H
	10100	-58.26	-25	-33.26	-67.78	3.92	13.44	H
	5052	-60.92	-25	-35.92	-71.13	3.03	13.24	V
	7576	-54.11	-25	-29.11	-63.56	3.56	13.01	V
	10100	-56.18	-25	-31.18	-65.70	3.92	13.44	V
Highest	5100	-62.42	-25	-37.42	-72.63	3.03	13.24	H
	7653.27	-60.84	-25	-35.84	-70.29	3.56	13.01	H
	10200	-58.73	-25	-33.73	-68.25	3.92	13.44	H
	5100	-56.65	-25	-31.65	-66.86	3.03	13.24	V
	7652	-55.89	-25	-30.89	-65.34	3.56	13.01	V
	10200	-53.53	-25	-28.53	-63.05	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)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1400	-52.96	-13	-39.96	-58.98	1.40	9.57	H
	2098	-57.90	-13	-44.90	-65.31	1.87	11.44	H
	2798	-50.77	-13	-37.77	-59.66	2.31	13.35	H
	1400	-49.67	-13	-36.67	-55.69	1.40	9.57	V
	2098	-52.03	-13	-39.03	-59.44	1.87	11.44	V
	2798	-47.12	-13	-34.12	-56.01	2.31	13.35	V
Middle	1406	-52.19	-13	-39.19	-58.21	1.40	9.57	H
	2110	-57.58	-13	-44.58	-64.99	1.87	11.44	H
	2812	-49.79	-13	-36.79	-58.68	2.31	13.35	H
	1406	-47.49	-13	-34.49	-53.51	1.40	9.57	V
	2110	-52.45	-13	-39.45	-59.86	1.87	11.44	V
	2812	-45.96	-13	-32.96	-54.85	2.31	13.35	V
Highest	1414	-54.35	-13	-41.35	-60.37	1.40	9.57	H
	2120	-59.88	-13	-46.88	-67.29	1.87	11.44	H
	2826	-55.51	-13	-42.51	-64.40	2.31	13.35	H
	1412	-50.29	-13	-37.29	-56.31	1.40	9.57	V
	2120	-55.34	-13	-42.34	-62.75	1.87	11.44	V
	2826	-51.13	-13	-38.13	-60.02	2.31	13.35	V

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



LTE Band 13 / 5MHz / 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	1554	-63.21	-40	-23.21	-64.92	2.23	6.09	H
	2332	-62.13	-13	-49.13	-62.66	2.83	5.51	H
	3108	-61.92	-13	-48.92	-63.86	3.21	7.30	H
	1554	-63.36	-40	-23.36	-65.07	2.23	6.09	V
	2332	-60.28	-13	-47.28	-60.81	2.83	5.51	V
	3108	-61.93	-13	-48.93	-63.87	3.21	7.30	V
Middle	1560	-62.26	-40	-22.26	-63.97	2.23	6.09	H
	2340	-63.27	-13	-50.27	-63.80	2.83	5.51	H
	3120	-62.70	-13	-49.70	-64.64	3.21	7.30	H
	1560	-59.66	-40	-19.66	-61.37	2.23	6.09	V
	2434	-60.77	-13	-47.77	-61.30	2.83	5.51	V
	3120	-62.91	-13	-49.91	-64.85	3.21	7.30	V
Highest	1564	-57.21	-40	-17.21	-58.92	2.23	6.09	H
	2348	-64.57	-13	-51.57	-65.10	2.83	5.51	H
	3132	-62.43	-13	-49.43	-64.37	3.21	7.30	H
	1564	-55.48	-40	-15.48	-57.19	2.23	6.09	V
	2348	-64.20	-13	-51.20	-64.73	2.83	5.51	V
	3132	-62.48	-13	-49.48	-64.42	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)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1556	-64.00	-40	-24.00	-65.71	2.23	6.09	H
	2332	-61.96	-13	-48.96	-62.49	2.83	5.51	H
	3108	-62.05	-13	-49.05	-63.99	3.21	7.30	H
	1556	-64.15	-40	-24.15	-65.86	2.23	6.09	V
	2332	-59.97	-13	-46.97	-60.50	2.83	5.51	V
	3108	-62.30	-13	-49.30	-64.24	3.21	7.30	V