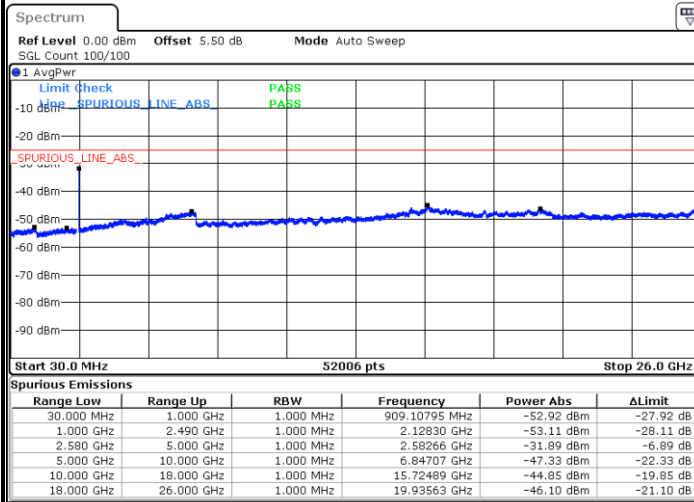




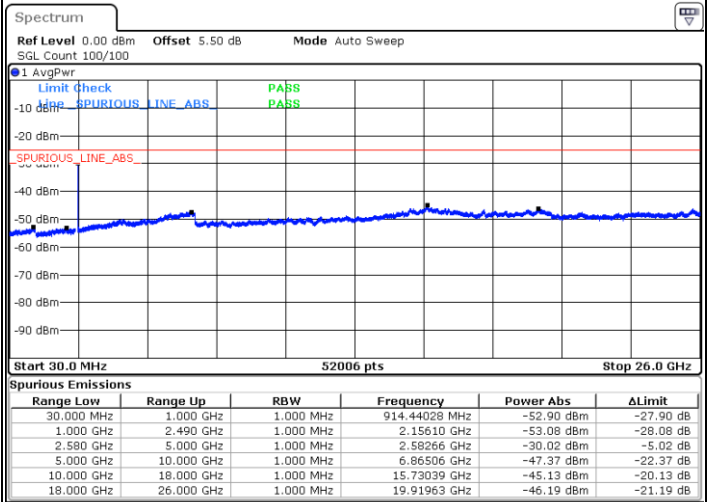
LTE Band7 / 15MHz

Highest Channel / QPSK



Date: 14 JUL 2019 15:24:04

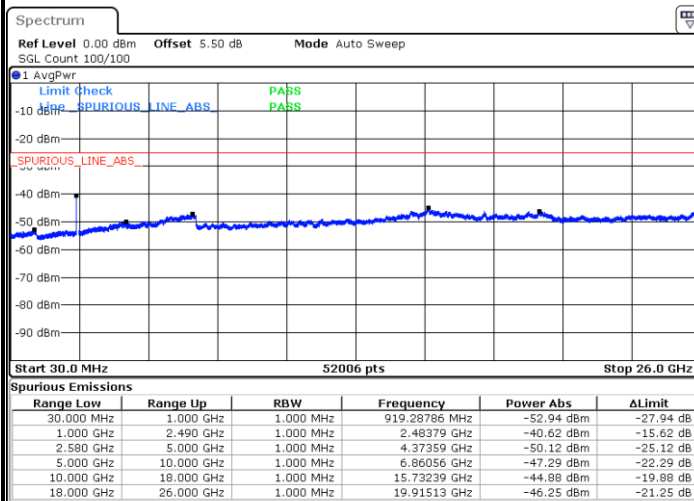
Highest Channel / 16QAM



Date: 14 JUL 2019 15:24:58

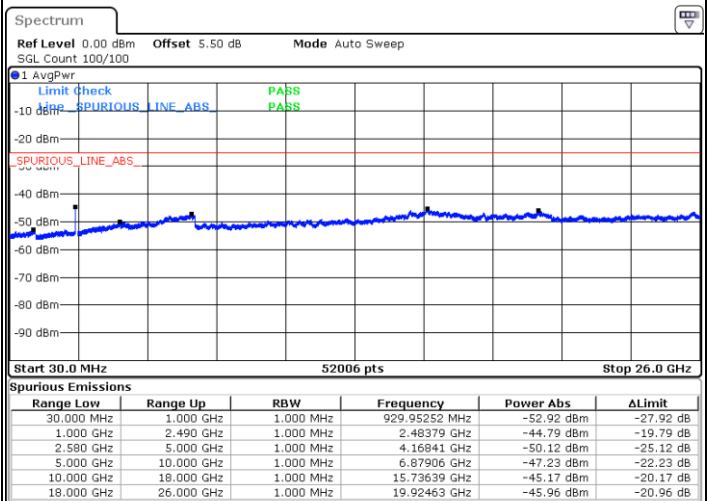
LTE Band 7 / 20MHz

Lowest Channel / QPSK



Date: 14 JUL 2019 15:36:57

Lowest Channel / 16QAM

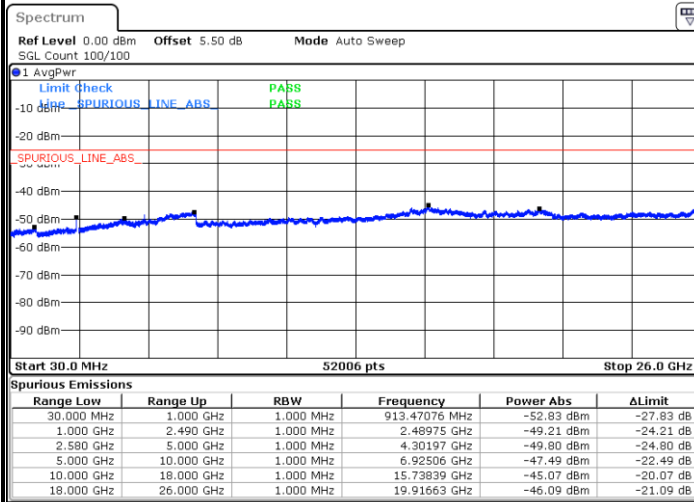


Date: 14 JUL 2019 15:37:51



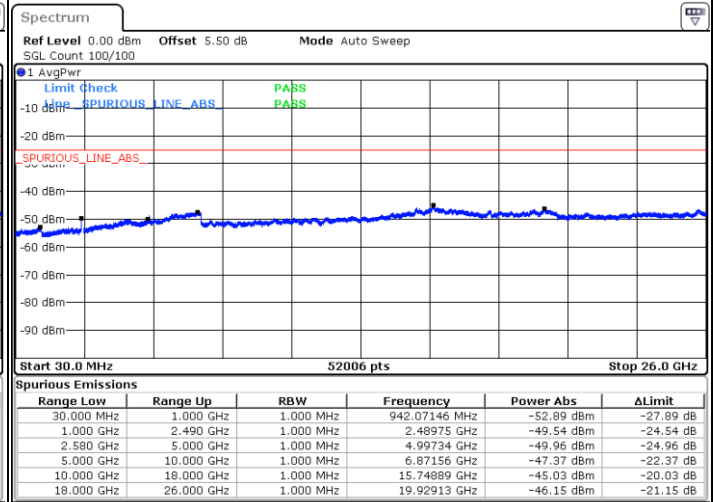
LTE Band 7 / 20MHz

Middle Channel / QPSK



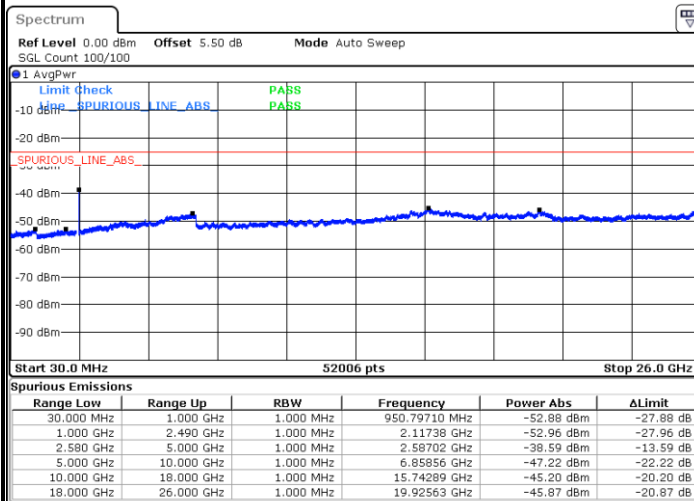
Date: 14 JUL 2019 15:39:38

Middle Channel / 16QAM



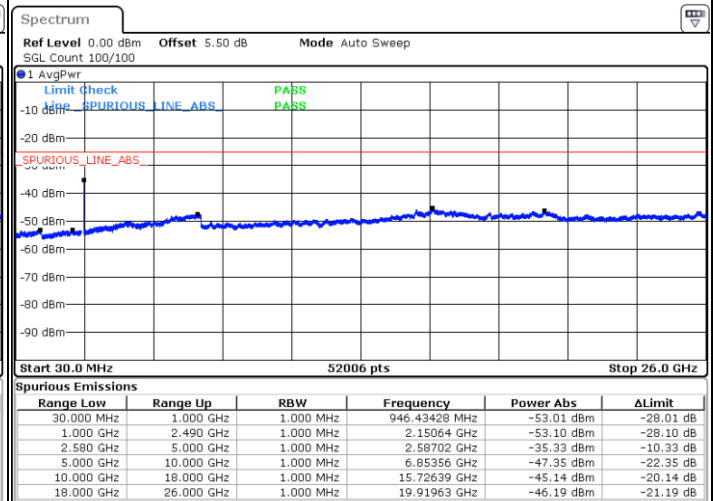
Date: 14 JUL 2019 15:38:44

Highest Channel / QPSK



Date: 14 JUL 2019 15:40:32

Highest Channel / 16QAM

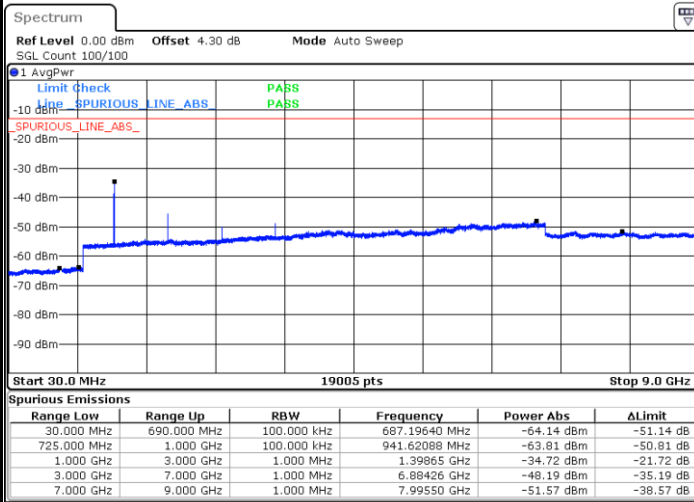


Date: 14 JUL 2019 15:41:26



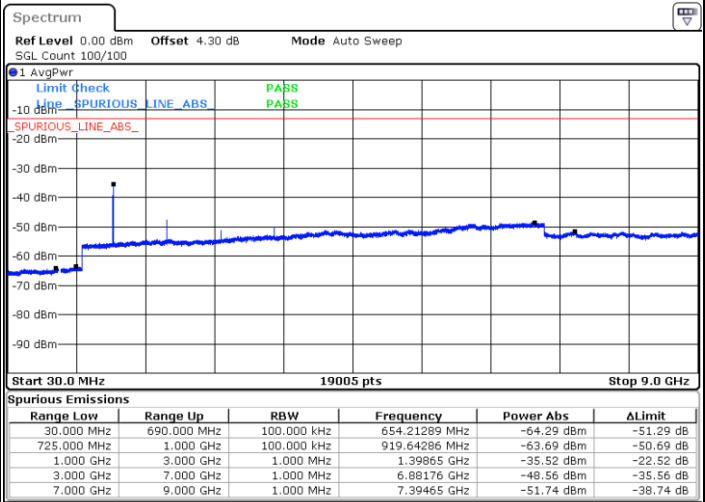
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



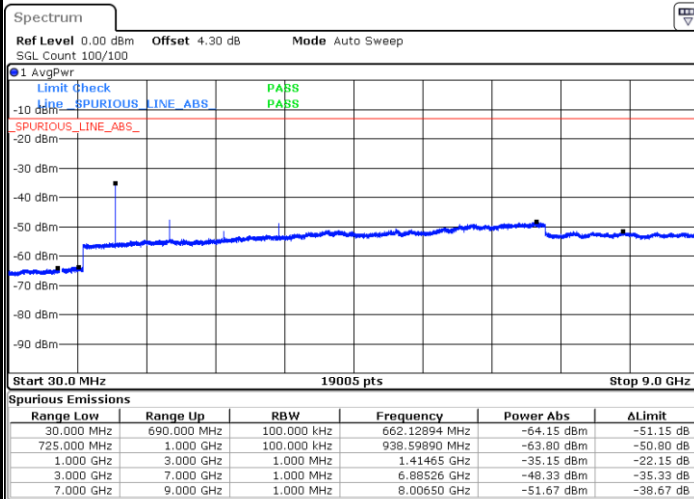
Date: 14 JUL 2019 16:00:47

Lowest Channel / 16QAM



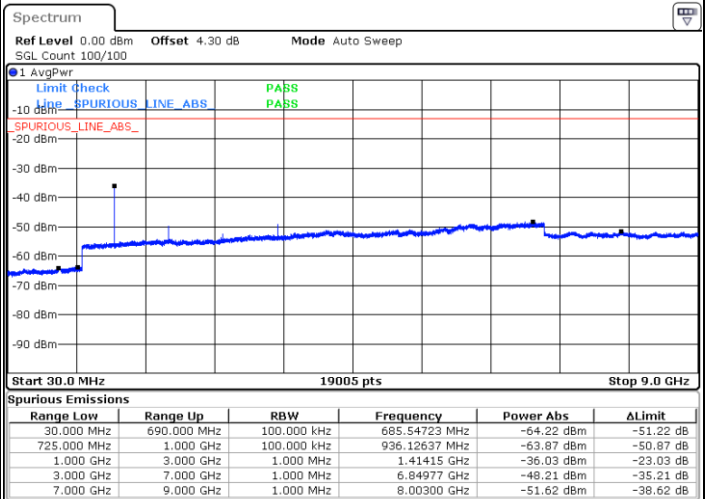
Date: 14 JUL 2019 16:01:41

Middle Channel / QPSK



Date: 14 JUL 2019 16:03:30

Middle Channel / 16QAM

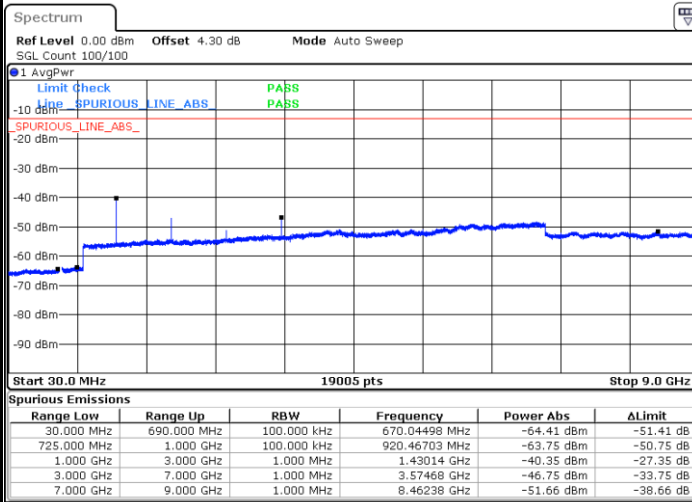


Date: 14 JUL 2019 16:02:35



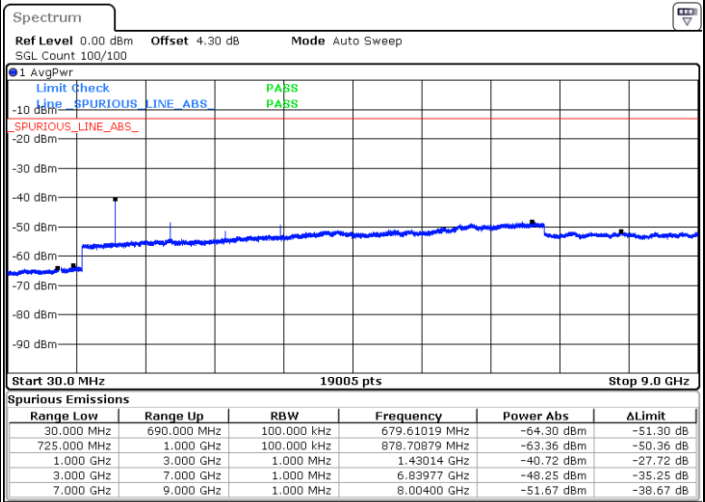
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 14 JUL 2019 16:04:24

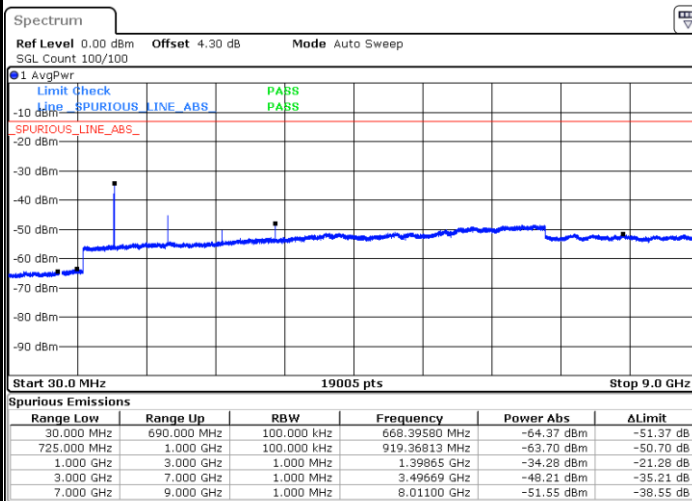
Highest Channel / 16QAM



Date: 14 JUL 2019 16:05:18

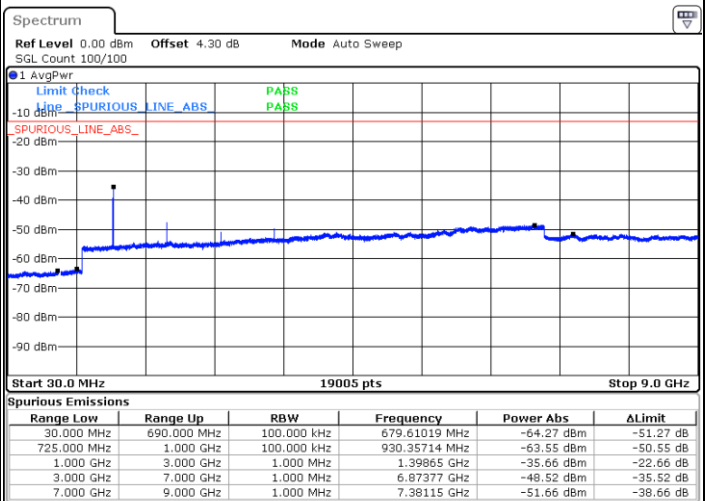
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 14 JUL 2019 16:17:12

Lowest Channel / 16QAM

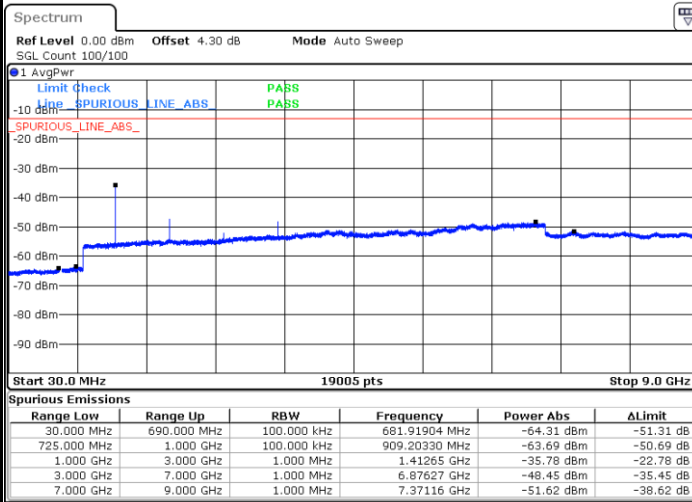


Date: 14 JUL 2019 16:18:06



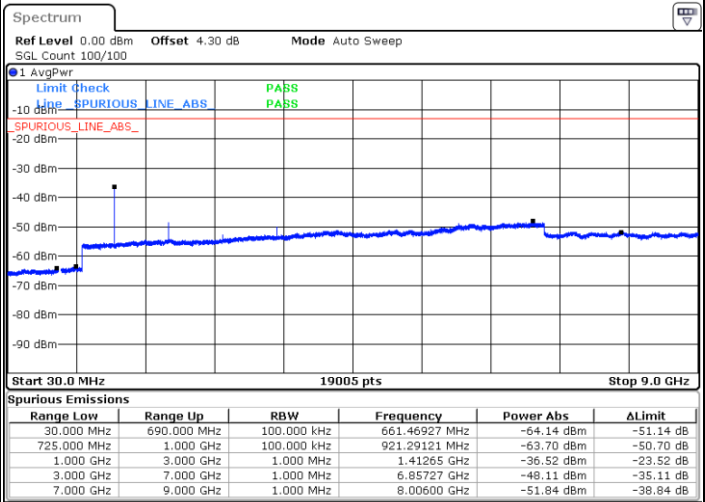
LTE Band 12 / 3MHz

Middle Channel / QPSK



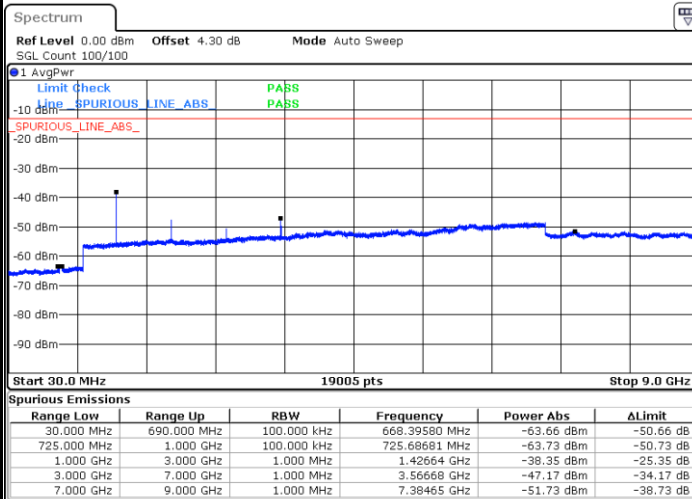
Date: 14 JUL 2019 16:19:54

Middle Channel / 16QAM



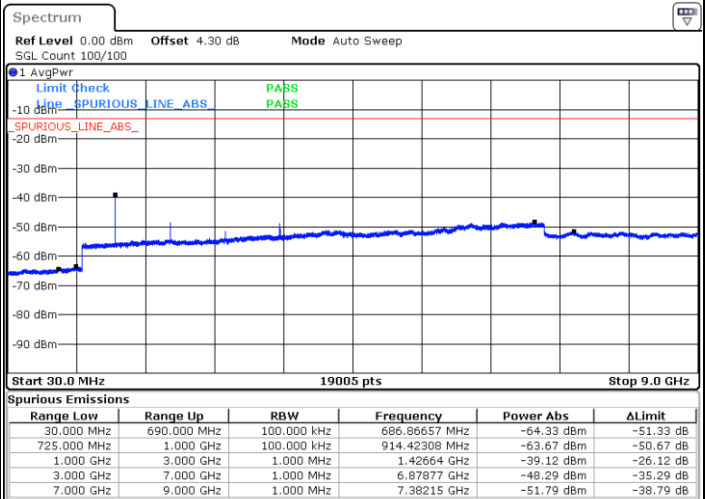
Date: 14 JUL 2019 16:19:00

Highest Channel / QPSK



Date: 14 JUL 2019 16:20:49

Highest Channel / 16QAM

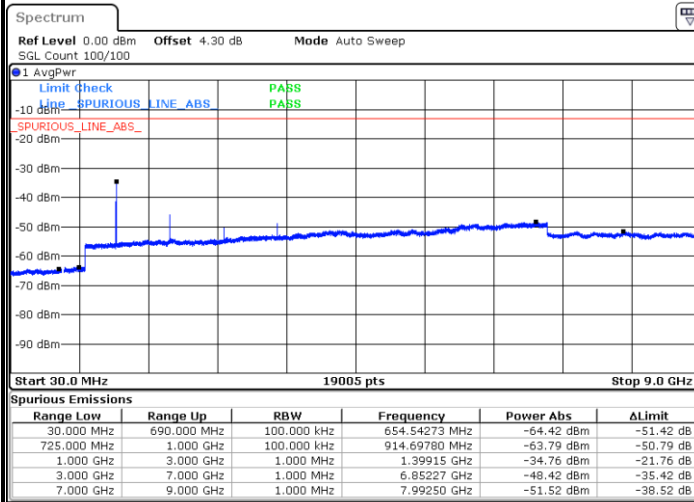


Date: 14 JUL 2019 16:21:43



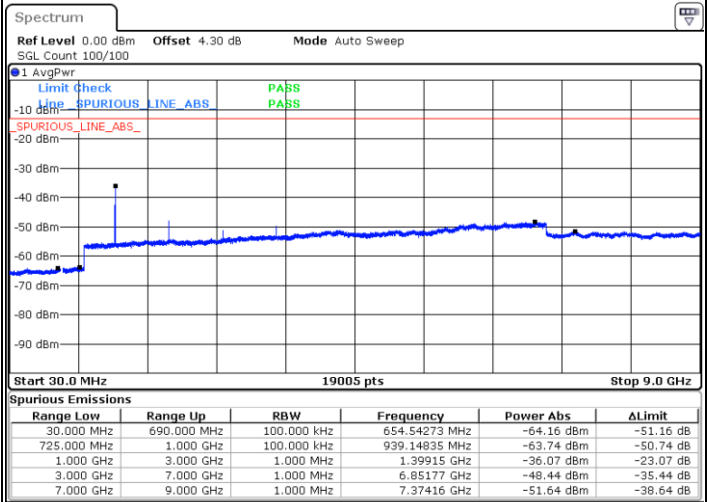
LTE Band 12 / 5MHz

Lowest Channel / QPSK



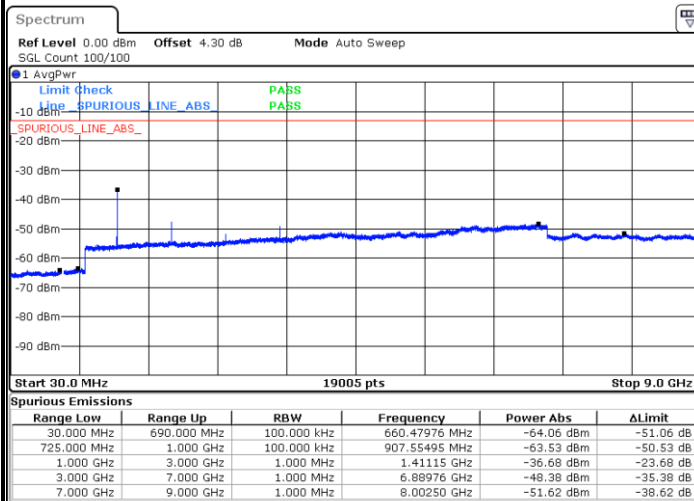
Date: 14 JUL 2019 16:33:36

Lowest Channel / 16QAM



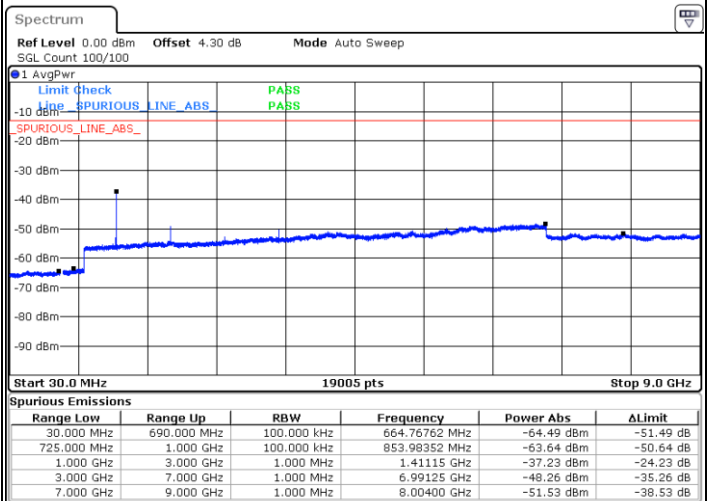
Date: 14 JUL 2019 16:34:31

Middle Channel / QPSK



Date: 14 JUL 2019 16:36:19

Middle Channel / 16QAM

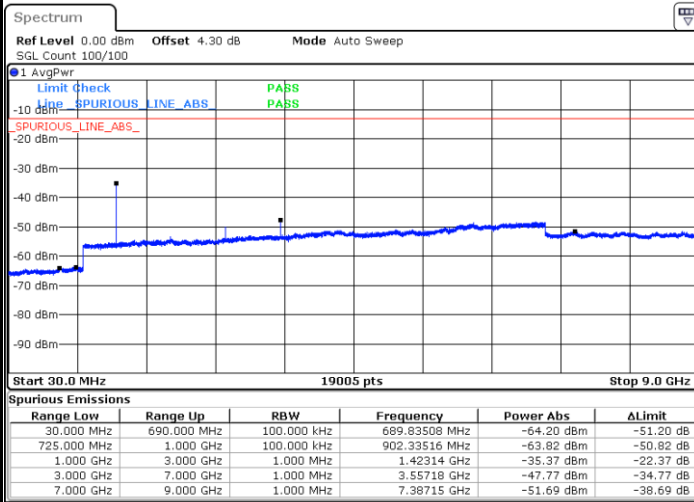


Date: 14 JUL 2019 16:35:25



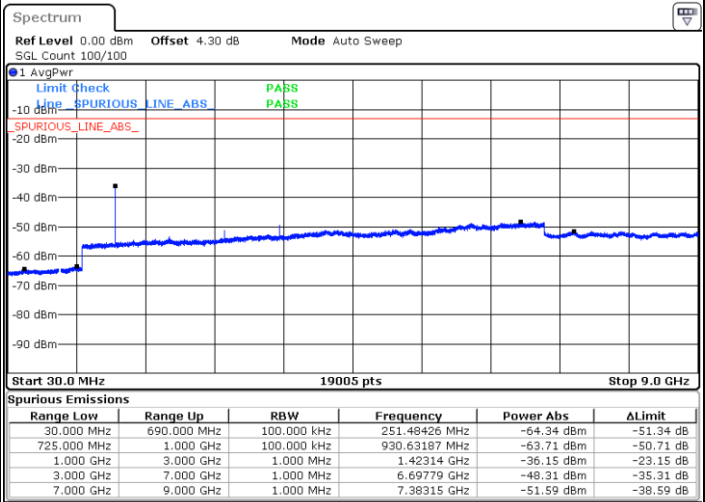
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 14 JUL 2019 16:37:13

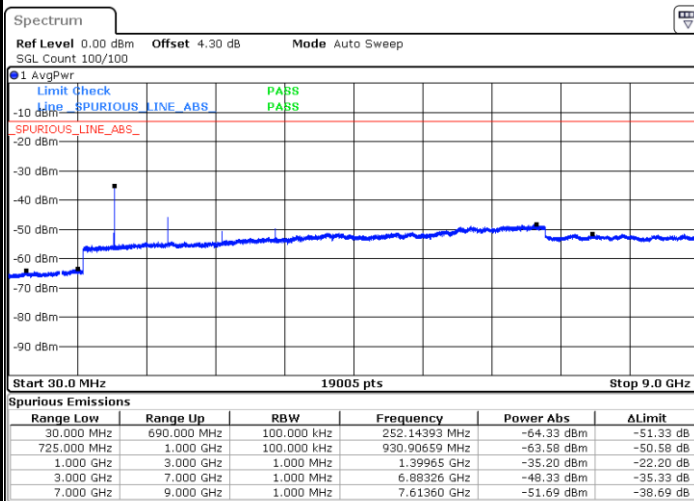
Highest Channel / 16QAM



Date: 14 JUL 2019 16:38:08

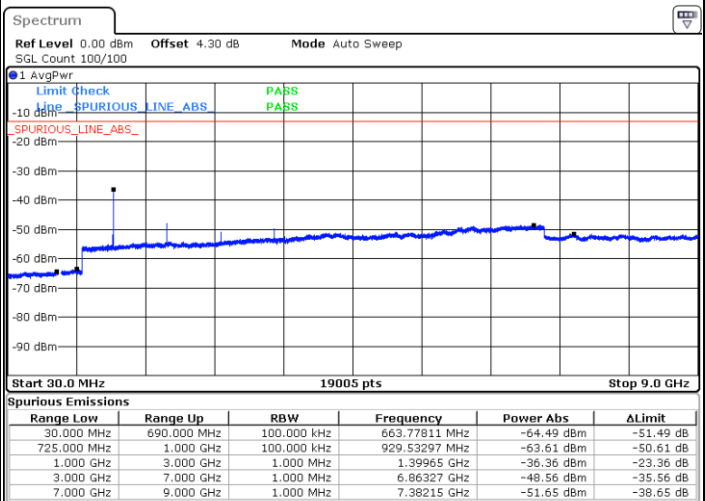
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 14 JUL 2019 16:50:01

Lowest Channel / 16QAM

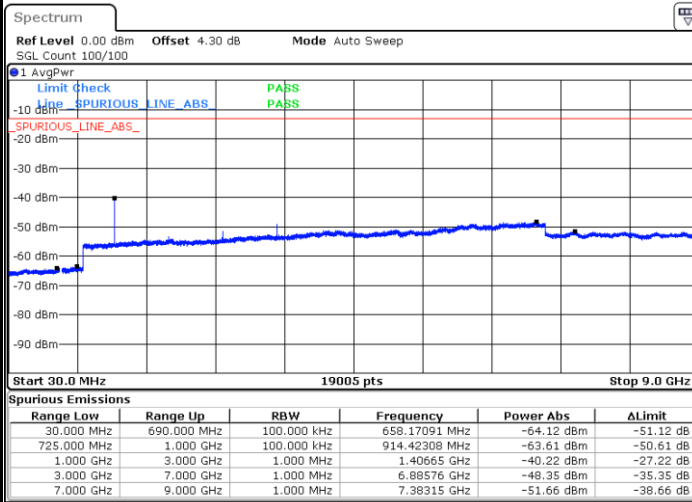


Date: 14 JUL 2019 16:50:55



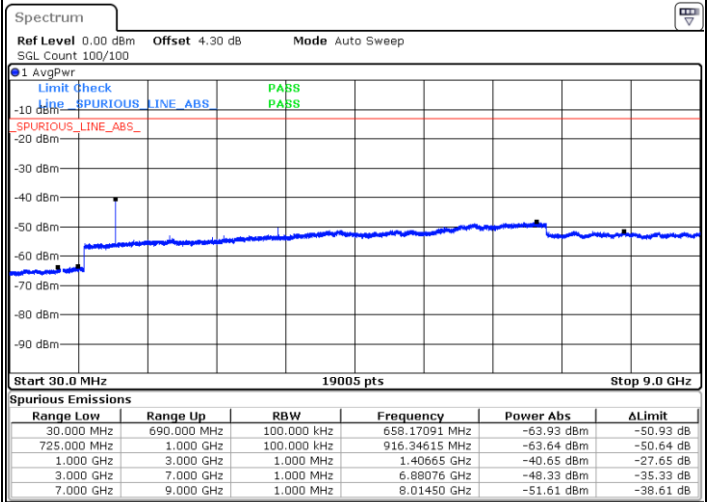
LTE Band 12 / 10MHz

Middle Channel / QPSK



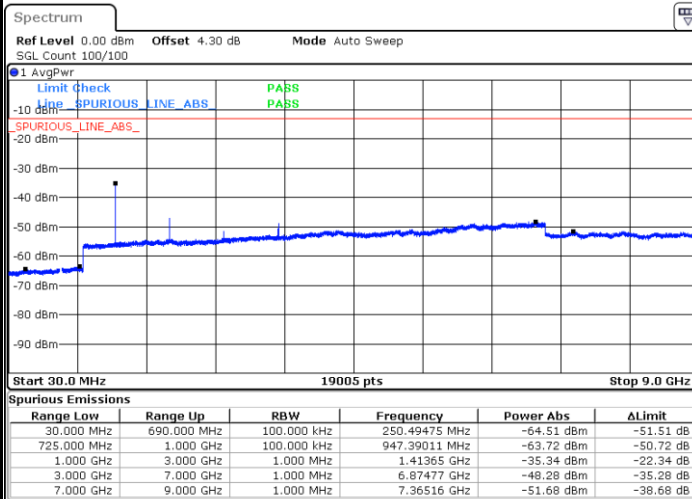
Date: 14 JUL 2019 16:52:44

Middle Channel / 16QAM



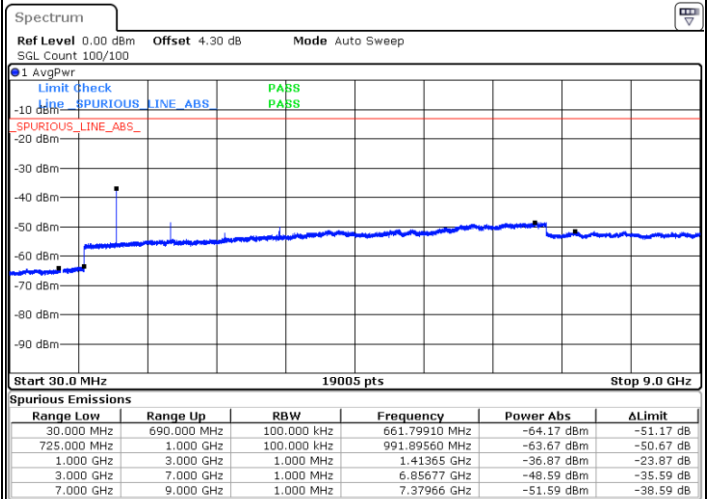
Date: 14 JUL 2019 16:51:50

Highest Channel / QPSK



Date: 14 JUL 2019 16:53:38

Highest Channel / 16QAM

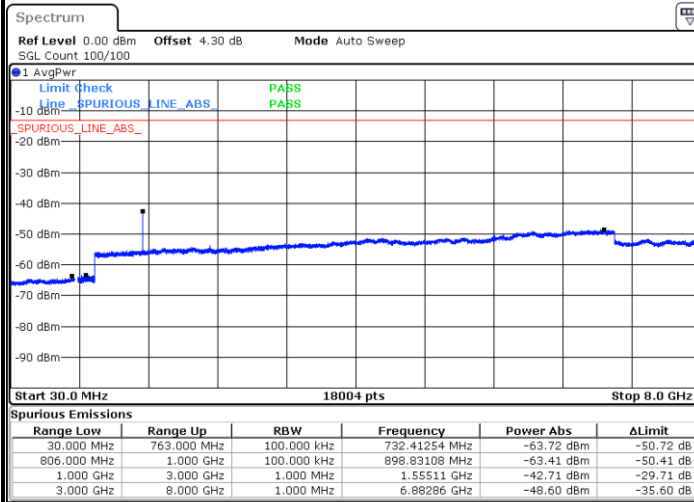


Date: 14 JUL 2019 16:54:33



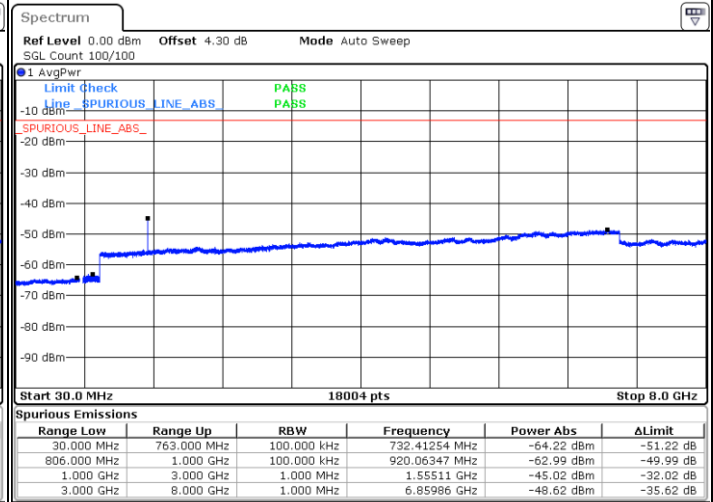
LTE Band 13 / 5MHz

Lowest Channel / QPSK



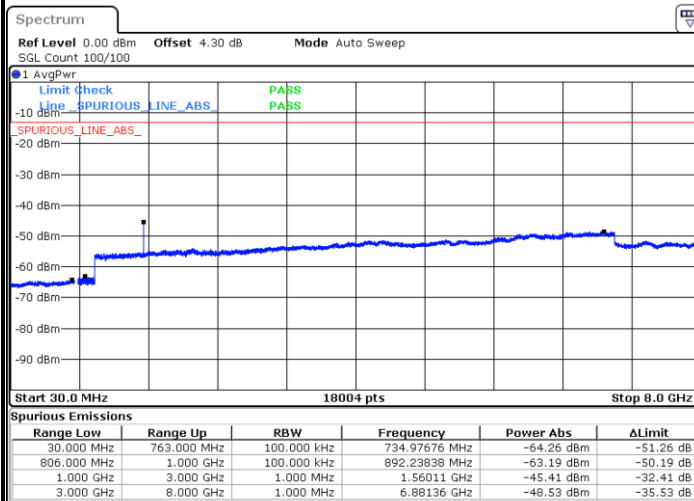
Date: 14 JUL 2019 17:30:47

Lowest Channel / 16QAM



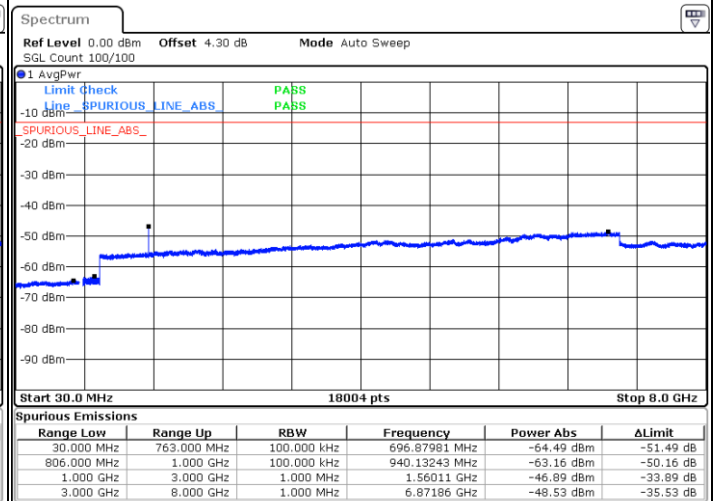
Date: 14 JUL 2019 17:29:53

Middle Channel / QPSK



Date: 14 JUL 2019 17:32:21

Middle Channel / 16QAM

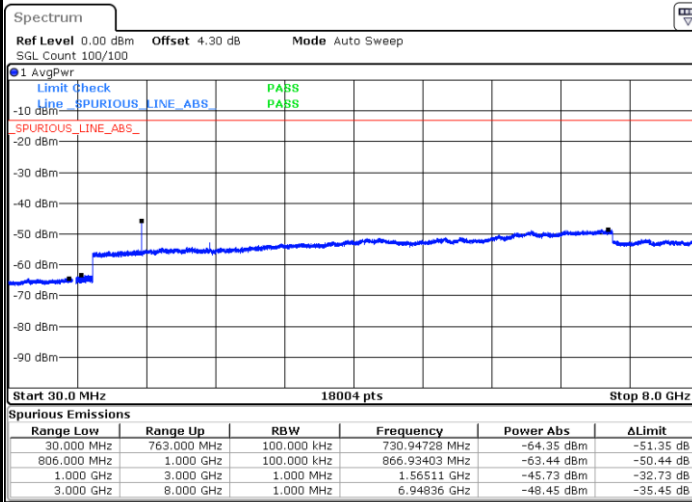


Date: 14 JUL 2019 17:33:15



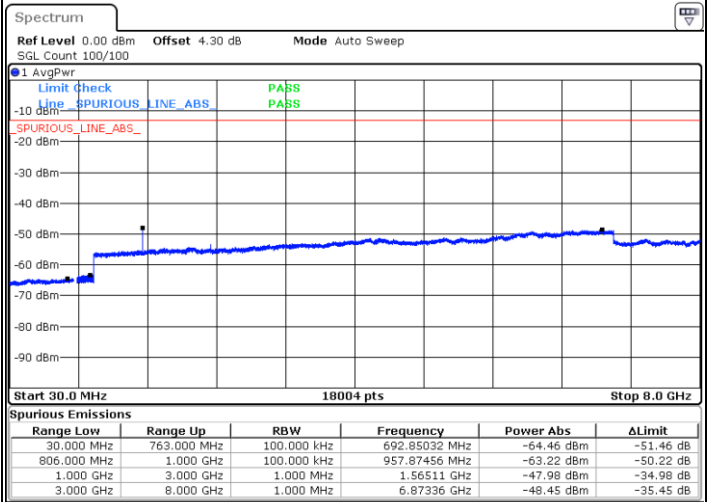
LTE Band 13 / 5MHz

Highest Channel / QPSK



Date: 14 JUL 2019 17:42:14

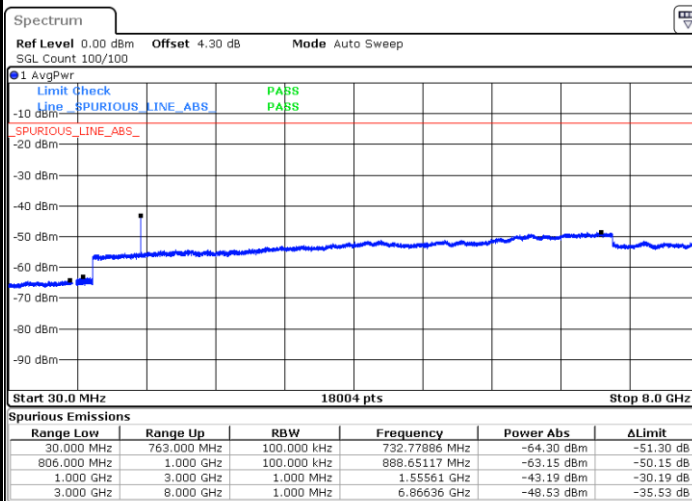
Highest Channel / 16QAM



Date: 14 JUL 2019 17:41:20

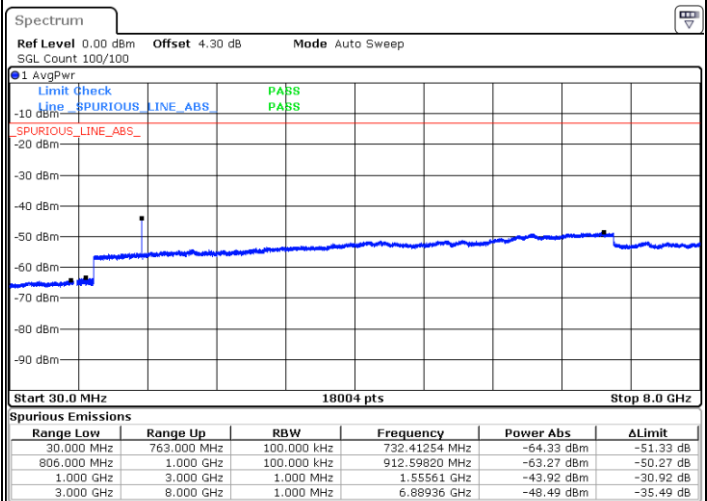
LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 14 JUL 2019 17:43:08

Middle Channel / 16QAM



Date: 14 JUL 2019 17:44:02

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	0.0026	PASS
40	Normal Voltage	0.0016	
30	Normal Voltage	0.0004	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0015	
0	Normal Voltage	0.0020	
-10	Normal Voltage	0.0001	
-20	Normal Voltage	0.0013	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0014	
20	Normal Voltage	0.0011	
20	Battery End Point	0.0001	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.2 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	0.0018	PASS
40	Normal Voltage	0.0012	
30	Normal Voltage	0.0019	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0010	
0	Normal Voltage	0.0020	
-10	Normal Voltage	0.0003	
-20	Normal Voltage	0.0012	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0016	
20	Normal Voltage	0.0001	
20	Battery End Point	0.0009	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.2 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	0.0001	PASS
40	Normal Voltage	0.0014	
30	Normal Voltage	0.0046	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0058	
0	Normal Voltage	0.0059	
-10	Normal Voltage	0.0052	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0013	
20	Maximum Voltage	0.0053	
20	Normal Voltage	0.0059	
20	Battery End Point	0.0014	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.2 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	0.0001	PASS
40	Normal Voltage	0.0016	
30	Normal Voltage	0.0043	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0058	
0	Normal Voltage	0.0059	
-10	Normal Voltage	0.0052	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0016	
20	Maximum Voltage	0.0053	
20	Normal Voltage	0.0059	
20	Battery End Point	0.0014	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.2 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	0.0001	PASS
40	Normal Voltage	0.0017	
30	Normal Voltage	0.0046	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0058	
0	Normal Voltage	0.0054	
-10	Normal Voltage	0.0052	
-20	Normal Voltage	0.0027	
-30	Normal Voltage	0.0016	
20	Maximum Voltage	0.0053	
20	Normal Voltage	0.0059	
20	Battery End Point	0.0014	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.2 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	0.0001	PASS
40	Normal Voltage	0.0012	
30	Normal Voltage	0.0043	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0058	
0	Normal Voltage	0.0051	
-10	Normal Voltage	0.0052	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0023	
20	Maximum Voltage	0.0053	
20	Normal Voltage	0.0059	
20	Battery End Point	0.0014	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.2 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	-55.06	-13	-42.06	-61.32	1.843	8.10	H
	5553.27	-53.32	-13	-40.32	-61.63	2.19	10.50	H
	7404	-51.87	-13	-38.87	-60.79	2.58	11.50	H
	3702	-49.62	-13	-36.62	-55.88	1.84	8.10	V
	5553	-51.16	-13	-38.16	-59.47	2.19	10.50	V
	7404	-50.10	-13	-37.10	-59.02	2.58	11.50	V
Middle	3741	-56.12	-13	-43.12	-62.38	1.843	8.10	H
	5613.27	-52.56	-13	-39.56	-60.87	2.19	10.50	H
	7482	-52.31	-13	-39.31	-61.23	2.58	11.50	H
	3741	-53.26	-13	-40.26	-59.52	1.84	8.10	V
	5613	-51.29	-13	-38.29	-59.60	2.19	10.50	V
	7482	-50.58	-13	-37.58	-59.50	2.58	11.50	V
Highest	3783	-56.09	-13	-43.09	-62.35	1.843	8.10	H
	5673.27	-51.61	-13	-38.61	-59.92	2.19	10.50	H
	7566	-51.91	-13	-38.91	-60.83	2.58	11.50	H
	3783	-53.33	-13	-40.33	-59.59	1.84	8.10	V
	5673.27	-50.12	-13	-37.12	-58.43	2.19	10.50	V
	7566	-47.50	-13	-34.50	-56.42	2.58	11.50	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	3423	-53.20	-13	-40.20	-59.89	1.75	8.44	H
	5133.27	-52.81	-13	-39.81	-61.23	1.94	10.36	H
	6846	-50.97	-13	-37.97	-60.21	2.47	11.71	H
	3423	-50.50	-13	-37.50	-57.19	1.75	8.44	V
	5133	-49.86	-13	-36.86	-58.28	1.94	10.36	V
	6846	-50.50	-13	-37.50	-59.74	2.47	11.71	V
Middle	3447	-56.39	-13	-43.39	-63.08	1.75	8.44	H
	5170.77	-53.65	-13	-40.65	-62.07	1.94	10.36	H
	6894	-52.13	-13	-39.13	-61.37	2.47	11.71	H
	3447	-55.34	-13	-42.34	-62.03	1.75	8.44	V
	5172	-53.04	-13	-40.04	-61.46	1.94	10.36	V
	6894	-51.88	-13	-38.88	-61.12	2.47	11.71	V
Highest	3471	-54.49	-13	-41.49	-61.18	1.75	8.44	H
	5208.27	-53.38	-13	-40.38	-61.80	1.94	10.36	H
	6942	-51.02	-13	-38.02	-60.26	2.47	11.71	H
	3471	-52.00	-13	-39.00	-58.69	1.75	8.44	V
	5208	-51.28	-13	-38.28	-59.70	1.94	10.36	V
	6942	-49.85	-13	-36.85	-59.09	2.47	11.71	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	-59.81	-13	-46.81	-63.05	1.11	6.50	H
	2474	-60.70	-13	-47.70	-63.32	1.43	6.20	H
	3300	-59.71	-13	-46.71	-64.15	1.71	8.30	H
	1650	-62.16	-13	-49.16	-65.40	1.11	6.50	V
	2474	-58.45	-13	-45.45	-61.07	1.43	6.20	V
	3300	-59.89	-13	-46.89	-64.33	1.71	8.30	V
Middle	1664	-60.79	-13	-47.79	-64.03	1.11	6.50	H
	2496	-59.79	-13	-46.79	-62.41	1.43	6.20	H
	3330	-59.81	-13	-46.81	-64.25	1.71	8.30	H
	1664	-62.51	-13	-49.51	-65.75	1.11	6.50	V
	2496	-56.91	-13	-43.91	-59.53	1.43	6.20	V
	3330	-59.42	-13	-46.42	-63.86	1.71	8.30	V
Highest	1680	-58.30	-13	-45.30	-61.54	1.11	6.50	H
	2518	-60.25	-13	-47.25	-62.87	1.43	6.20	H
	3360	-59.66	-13	-46.66	-64.10	1.71	8.30	H
	1680	-59.53	-13	-46.53	-62.77	1.11	6.50	V
	2518	-59.41	-13	-46.41	-62.03	1.43	6.20	V
	3360	-58.92	-13	-45.92	-63.36	1.71	8.30	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	-58.80	-25	-33.80	-67.29	1.83	10.32	H
	7503.27	-56.89	-25	-31.89	-65.90	2.60	11.61	H
	10005	-59.92	-25	-34.92	-70.68	2.67	13.43	H
	5000	-55.49	-25	-30.49	-63.98	1.83	10.32	V
	7505	-51.94	-25	-26.94	-60.95	2.60	11.61	V
	10005	-57.57	-25	-32.57	-68.33	2.67	13.43	V
Middle	5050	-58.93	-25	-33.93	-67.42	1.83	10.32	H
	7580	-57.57	-25	-32.57	-66.58	2.60	11.61	H
	10104	-58.29	-25	-33.29	-69.05	2.67	13.43	H
	5050	-55.47	-25	-30.47	-63.96	1.83	10.32	V
	7580	-52.85	-25	-27.85	-61.86	2.60	11.61	V
	10104	-54.61	-25	-29.61	-65.37	2.67	13.43	V
Highest	5102.18	-56.61	-25	-31.61	-65.10	1.83	10.32	H
	7655.00	-57.22	-25	-32.22	-66.23	2.60	11.61	H
	10203.00	-58.36	-25	-33.36	-69.12	2.67	13.43	H
	5100.00	-53.33	-25	-28.33	-61.82	1.83	10.32	V
	7653.27	-49.97	-25	-24.97	-58.98	2.60	11.61	V
	10203.00	-55.26	-25	-30.26	-66.02	2.67	13.43	V



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	-45.82	-13	-32.82	-49.06	1.11	6.50	H
	2098	-53.84	-13	-40.84	-56.46	1.43	6.20	H
	2798	-54.98	-13	-41.98	-59.42	1.71	8.30	H
	3500	-49.90	-13	-36.90	-54.62	1.93	8.80	H
	1400	-50.07	-13	-37.07	-53.31	1.11	6.50	V
	2098	-54.14	-13	-41.14	-56.76	1.43	6.20	V
	2798	-59.18	-13	-46.18	-63.62	1.71	8.30	V
	3500	-55.73	-13	-42.73	-60.45	1.93	8.80	V
Middle	1406	-42.66	-13	-29.66	-45.90	1.11	6.50	H
	2110	-55.00	-13	-42.00	-57.62	1.43	6.20	H
	2812	-55.50	-13	-42.50	-59.94	1.71	8.30	H
	3515	-51.13	-13	-38.13	-55.85	1.93	8.80	H
	1406	-53.47	-13	-40.47	-56.71	1.11	6.50	V
	2110	-56.58	-13	-43.58	-59.20	1.43	6.20	V
	2812	-58.77	-13	-45.77	-63.21	1.71	8.30	V
	3515	-57.86	-13	-44.86	-62.58	1.93	8.80	V
Highest	1414	-50.37	-13	-37.37	-53.61	1.11	6.50	H
	2120	-56.77	-13	-43.77	-59.39	1.43	6.20	H
	2826	-59.18	-13	-46.18	-63.62	1.71	8.30	H
	3535	-52.73	-13	-39.73	-57.45	1.93	8.80	H
	1414	-55.48	-13	-42.48	-58.72	1.11	6.50	V
	2120	-59.64	-13	-46.64	-62.26	1.43	6.20	V
	2826	-59.53	-13	-46.53	-63.97	1.71	8.30	V
	3535	-58.84	-13	-45.84	-63.56	1.93	8.80	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	-58.43	-13	-45.43	-61.06	1.09	5.87	H
	2332.02	-60.98	-13	-47.98	-63.38	1.37	5.92	H
	3108	-59.73	-13	-46.73	-63.62	1.64	7.68	H
	1554	-55.46	-13	-42.46	-58.09	1.09	5.87	V
	2332.02	-58.79	-13	-45.79	-61.19	1.37	5.92	V
	3108	-59.61	-13	-46.61	-63.50	1.64	7.68	V
Middle	1560	-55.36	-42.15	-13.21	-57.99	1.09	5.87	H
	2339.52	-58.84	-13	-45.84	-61.24	1.37	5.92	H
	3120	-60.29	-13	-47.29	-64.18	1.64	7.68	H
	1559.68	-55.71	-42.15	-13.56	-58.34	1.09	5.87	V
	2340	-57.73	-13	-44.73	-60.13	1.37	5.92	V
	3120	-59.91	-13	-46.91	-63.80	1.64	7.68	V
Highest	1564	-57.45	-42.15	-15.30	-60.08	1.09	5.87	H
	2347.02	-61.10	-13	-48.10	-63.50	1.37	5.92	H
	3132	-60.15	-13	-47.15	-64.04	1.64	7.68	H
	1564	-55.81	-42.15	-13.66	-58.44	1.09	5.87	V
	2347.02	-58.19	-13	-45.19	-60.59	1.37	5.92	V
	3132	-59.84	-13	-46.84	-63.73	1.64	7.68	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	-58.30	-13	-45.30	-60.93	1.09	5.87	H
	2332.77	-60.80	-13	-47.80	-63.20	1.37	5.92	H
	3108	-59.85	-13	-46.85	-63.74	1.64	7.68	H
	1555.18	-54.42	-13	-41.42	-57.05	1.09	5.87	V
	2332	-58.72	-13	-45.72	-61.12	1.37	5.92	V
	3108	-59.38	-13	-46.38	-63.27	1.64	7.68	V

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