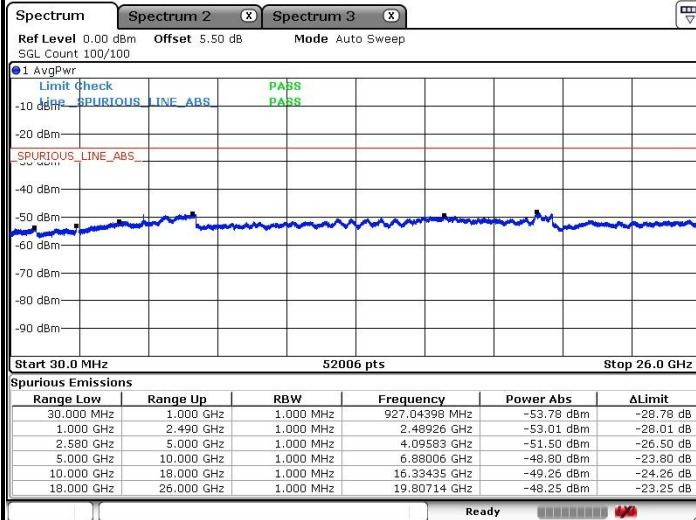




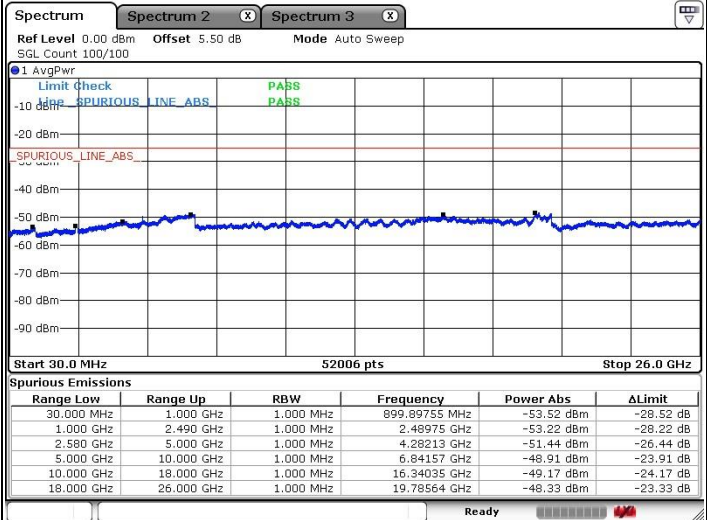
LTE Band 7 / 15MHz+20MHz

Lowest Channel / QPSK



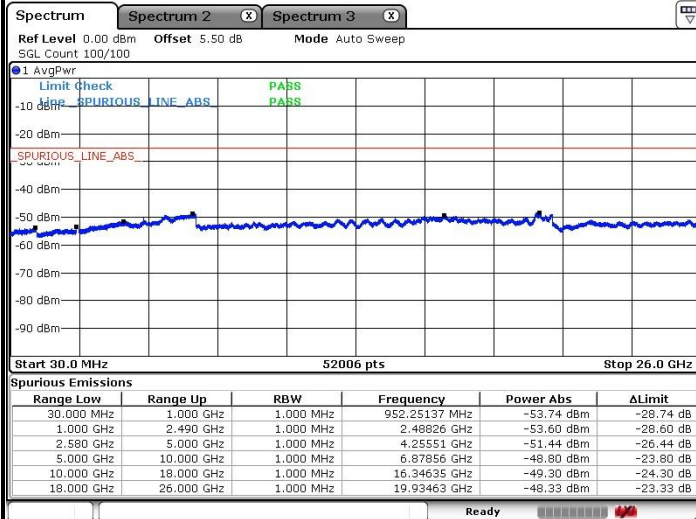
Date: 3 JAN 2019 18:19:52

Lowest Channel / 16QAM



Date: 3 JAN 2019 18:18:38

Lowest Channel / 64QAM

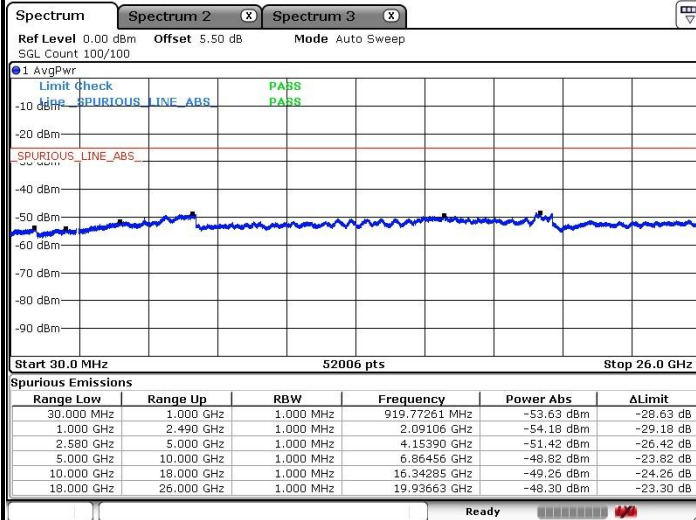


Date: 3 JAN 2019 18:17:44



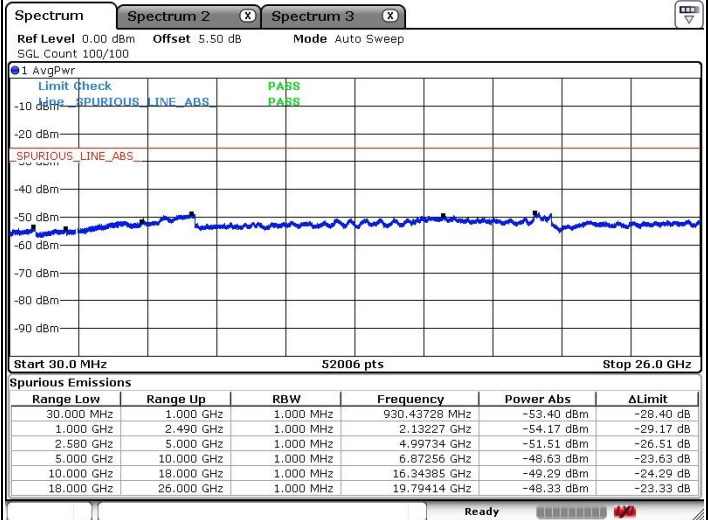
LTE Band 7 / 15MHz+20MHz

Middle Channel / QPSK



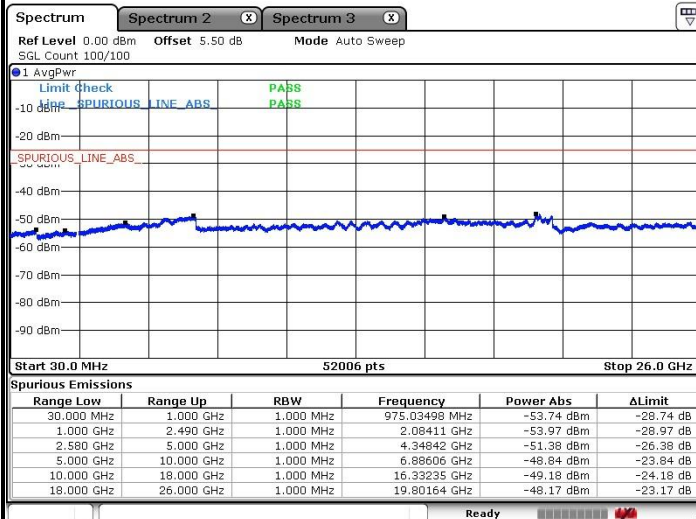
Date: 3 JAN 2019 18:21:04

Middle Channel / 16QAM



Date: 3 JAN 2019 18:21:55

Middle Channel / 64QAM

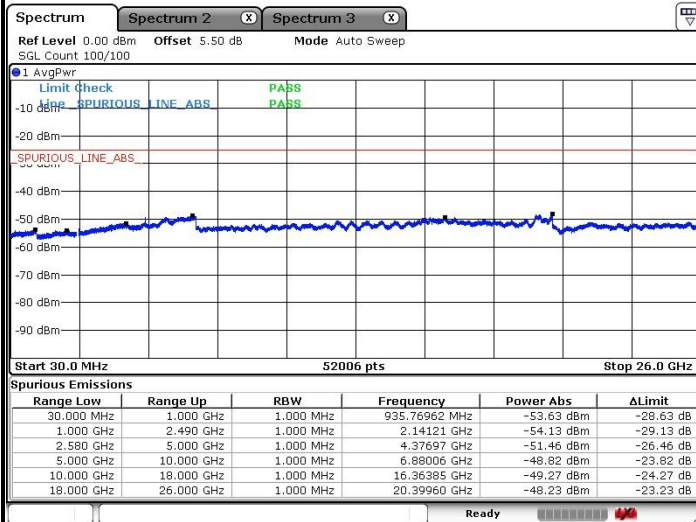


Date: 3 JAN 2019 18:22:43



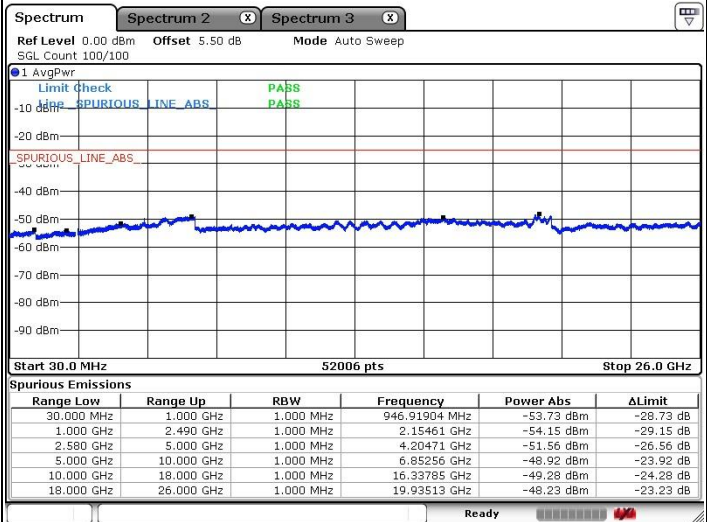
LTE Band 7 / 15MHz+20MHz

Highest Channel / QPSK



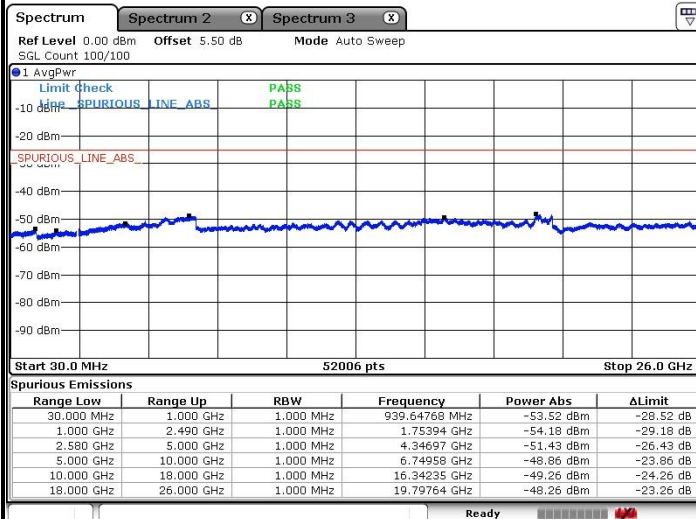
Date: 3 JAN 2019 18:30:41

Highest Channel / 16QAM



Date: 3 JAN 2019 18:29:53

Highest Channel / 64QAM

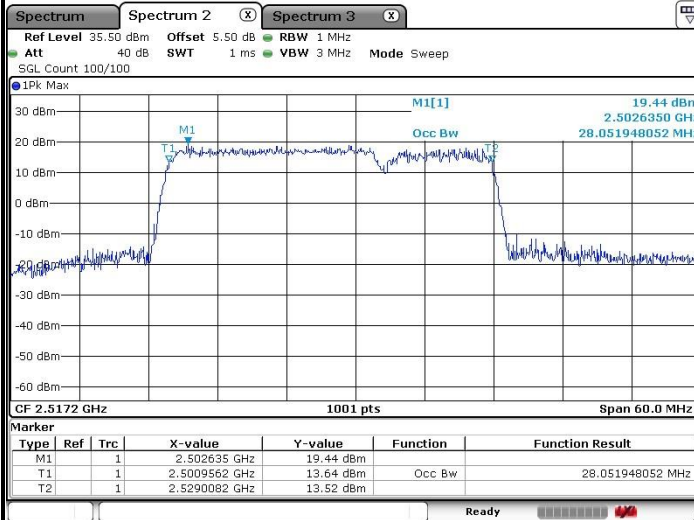


Date: 3 JAN 2019 18:29:01



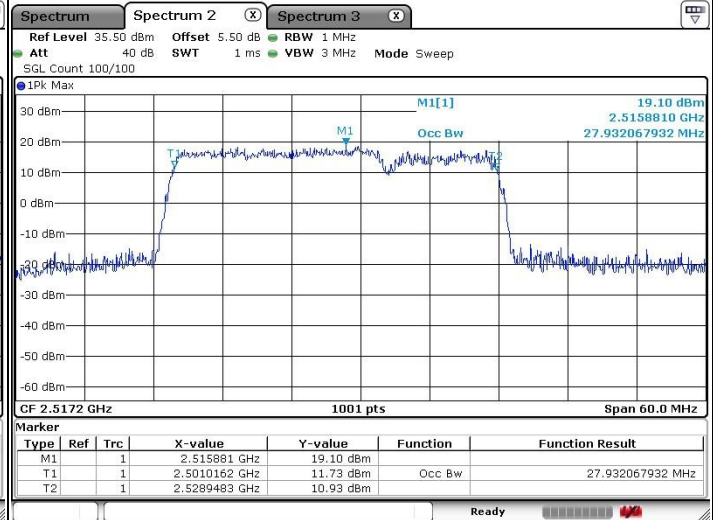
LTE Band 7 / 20MHz+10MHz

Lowest Channel / QPSK



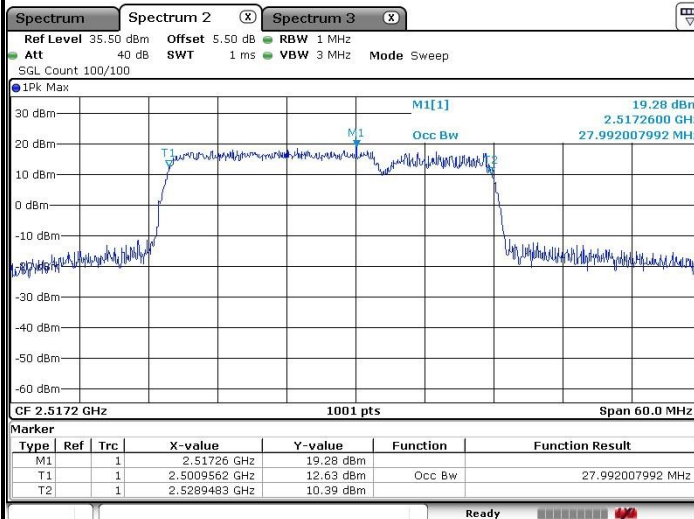
Date: 3.JAN.2019 16:38:41

Lowest Channel / 16QAM



Date: 3.JAN.2019 16:40:47

Lowest Channel / 64QAM

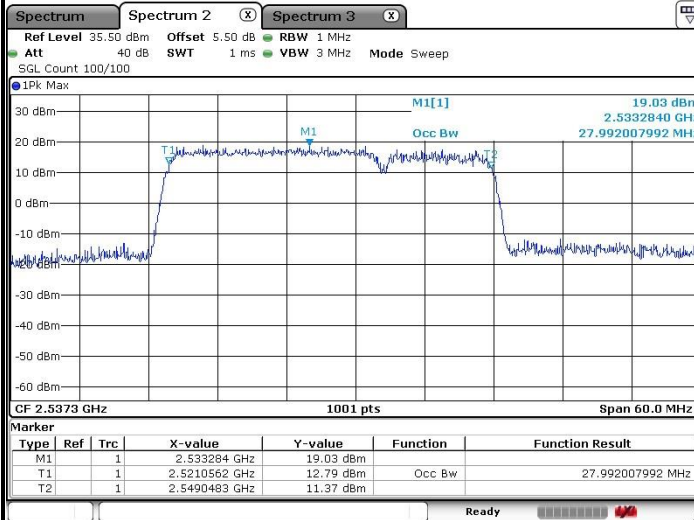


Date: 3.JAN.2019 16:41:13



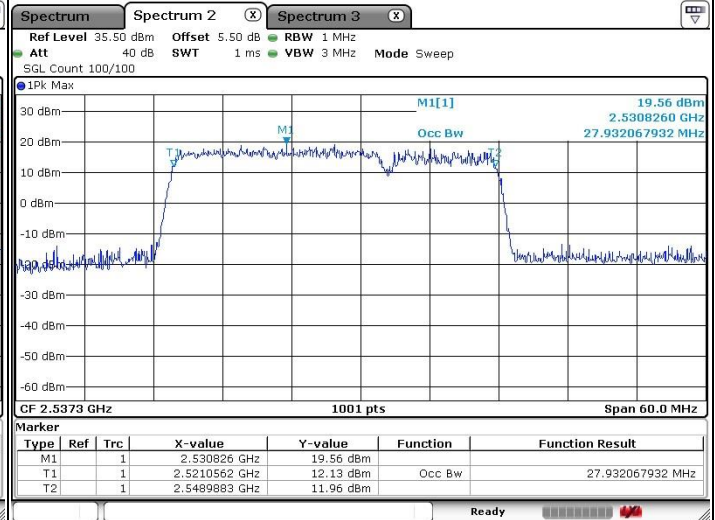
LTE Band 7 / 20MHz+10MHz

Middle Channel / QPSK



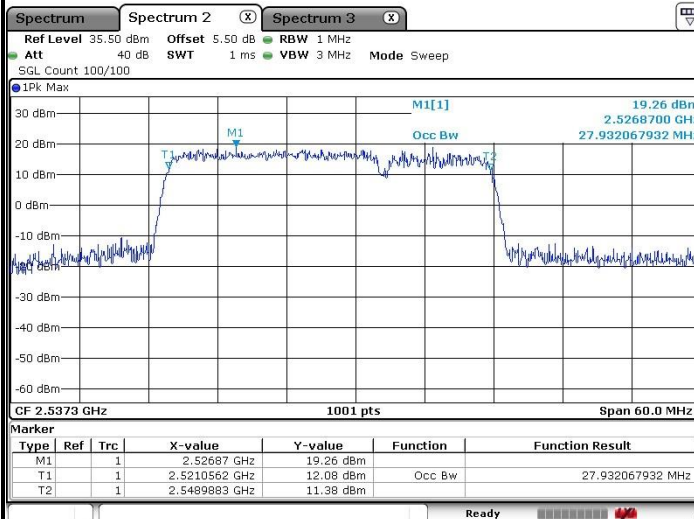
Date: 3. JAN. 2019 16:50:21

Middle Channel / 16QAM



Date: 3. JAN. 2019 16:49:44

Middle Channel / 64QAM

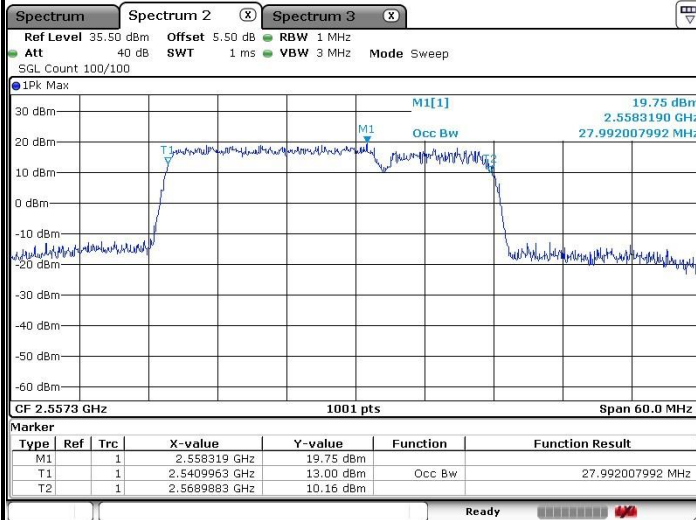


Date: 3. JAN. 2019 16:48:46



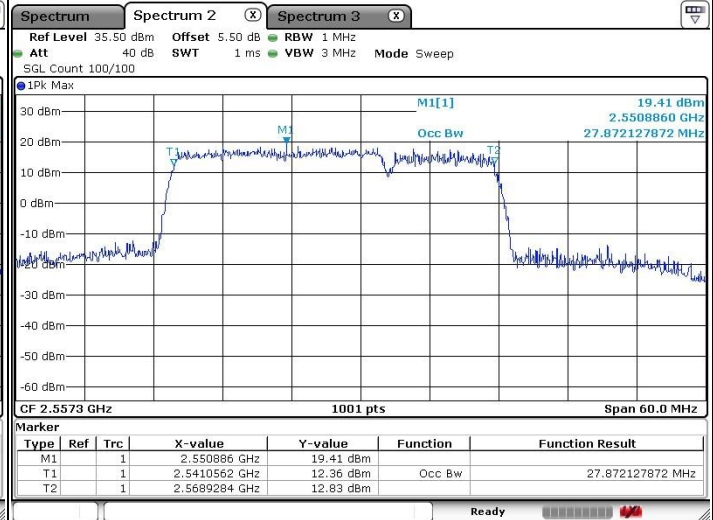
LTE Band 7 / 20MHz+10MHz

Highest Channel / QPSK



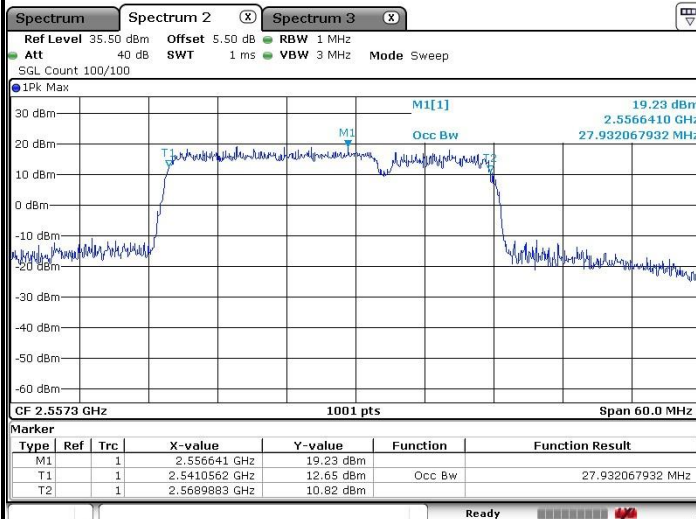
Date: 3. JAN. 2019 16:58:47

Highest Channel / 16QAM



Date: 3. JAN. 2019 16:59:53

Highest Channel / 64QAM

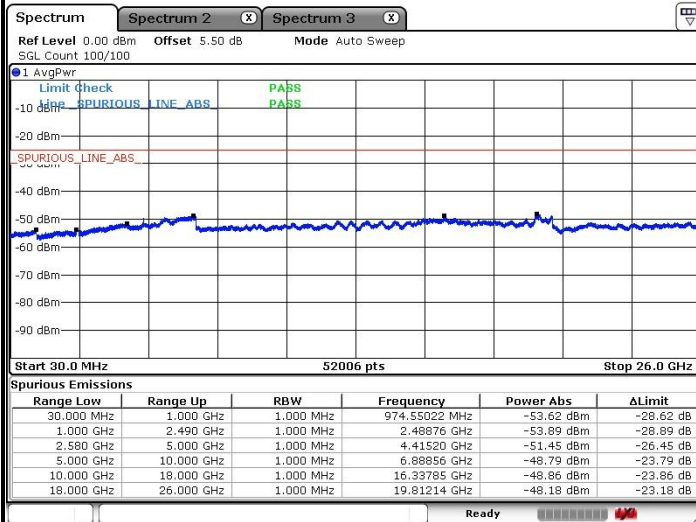


Date: 3. JAN. 2019 17:00:16



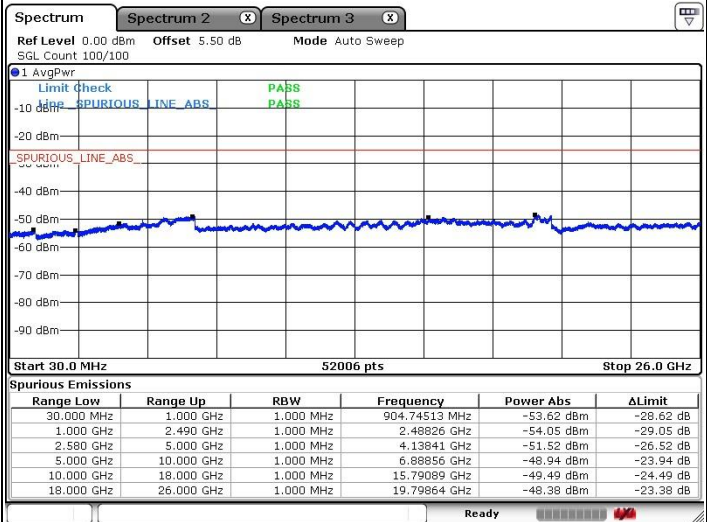
LTE Band 7 / 20MHz+15MHz

Lowest Channel / QPSK



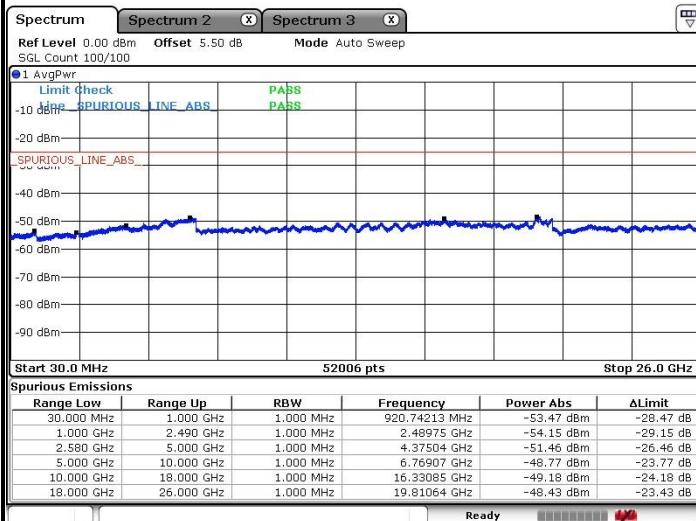
Date: 3 JAN 2019 18:36:36

Lowest Channel / 16QAM



Date: 3 JAN 2019 18:35:48

Lowest Channel / 64QAM

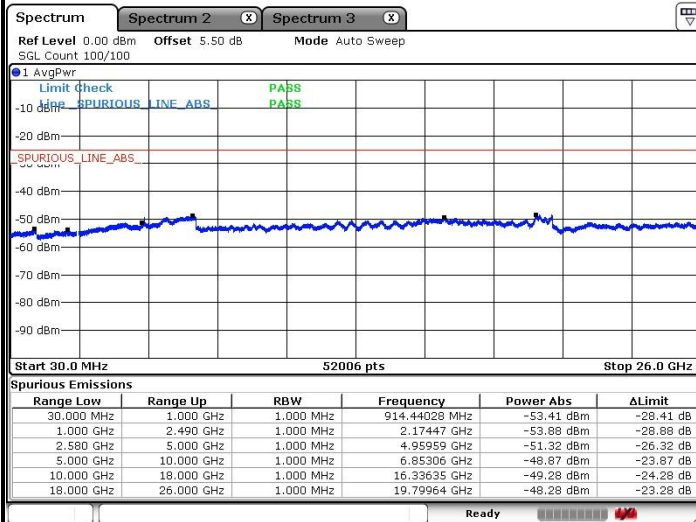


Date: 3 JAN 2019 18:34:56



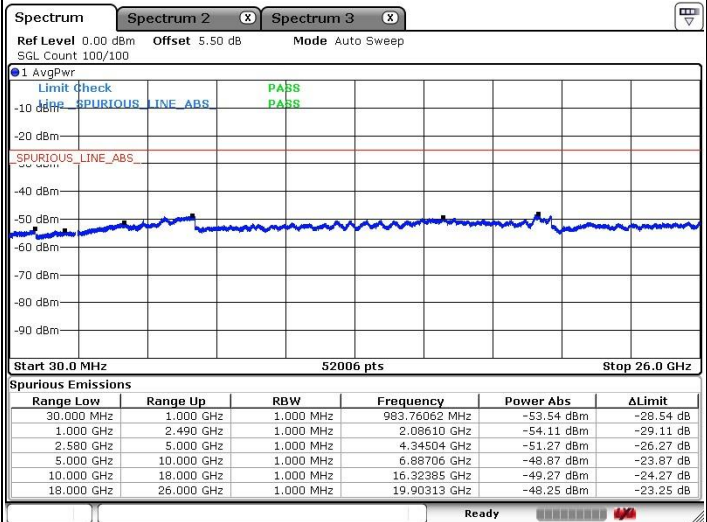
LTE Band 7 / 20MHz+15MHz

Middle Channel / QPSK



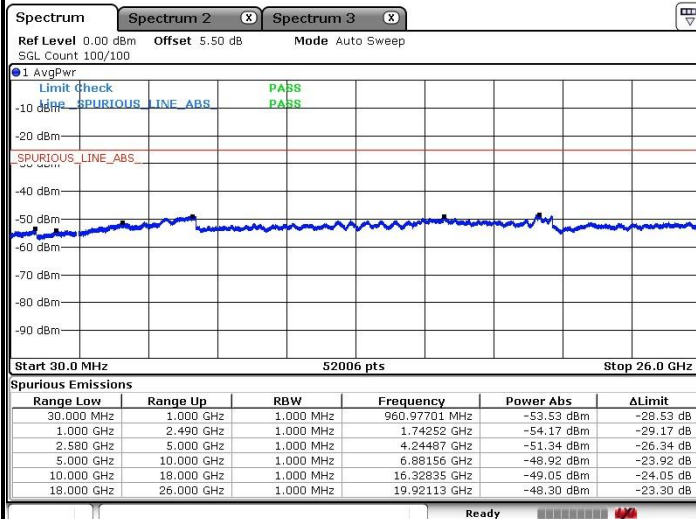
Date: 3 JAN 2019 18:37:44

Middle Channel / 16QAM



Date: 3 JAN 2019 18:38:35

Middle Channel / 64QAM

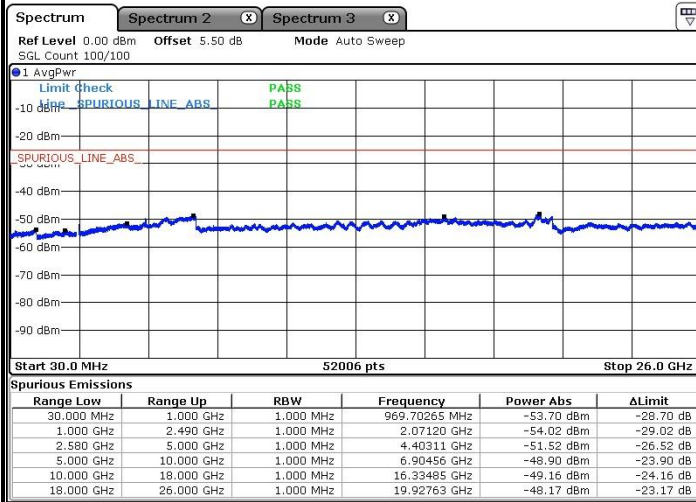


Date: 3 JAN 2019 18:39:25



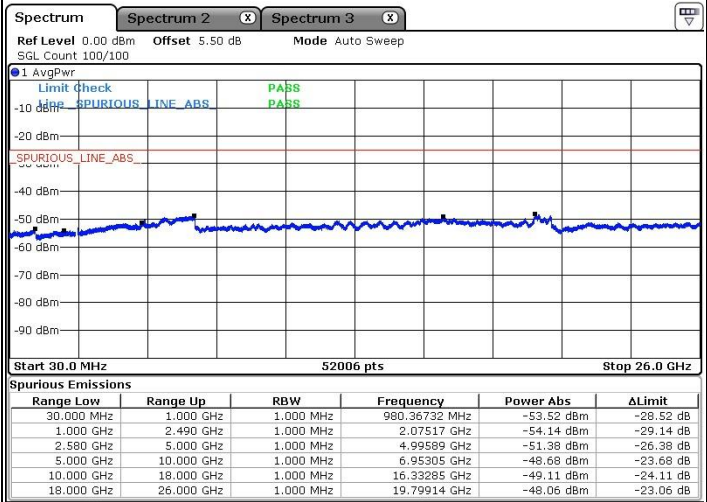
LTE Band 7 / 20MHz+15MHz

Highest Channel / QPSK



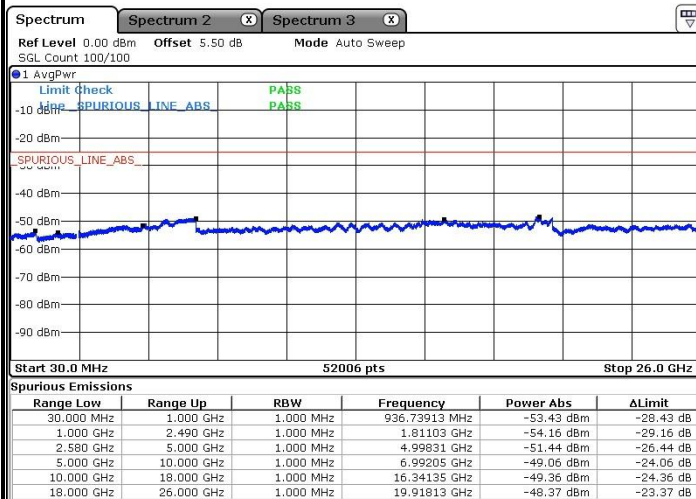
Date: 3 JAN 2019 18:46:59

Highest Channel / 16QAM



Date: 3 JAN 2019 18:46:09

Highest Channel / 64QAM

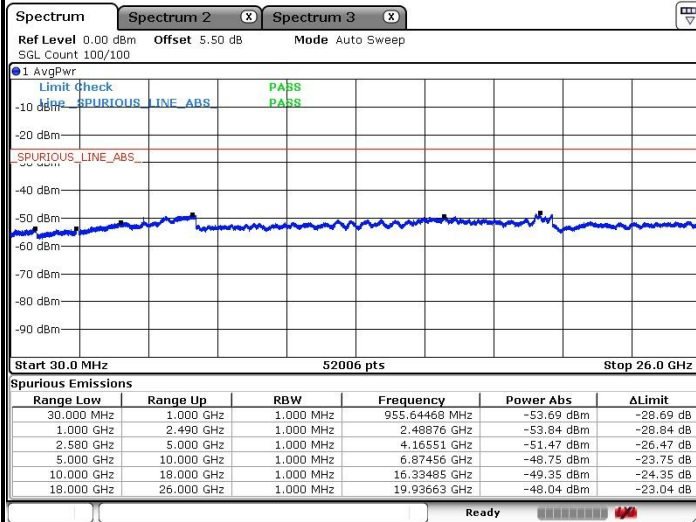


Date: 3 JAN 2019 18:45:16



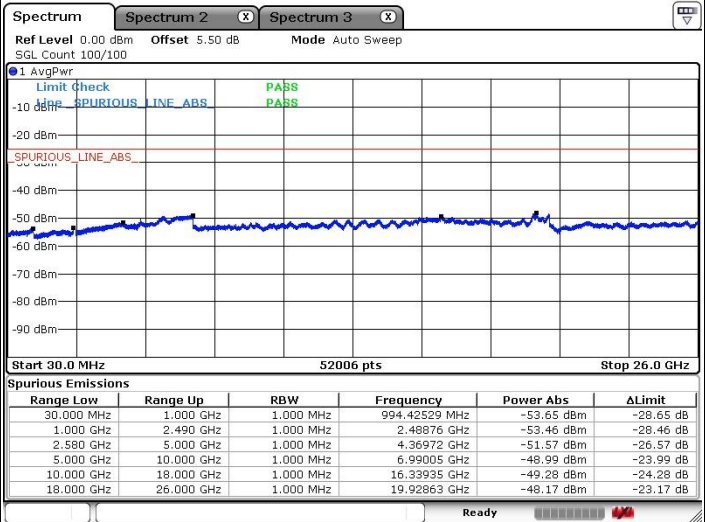
LTE Band 7 / 20MHz+20MHz

Lowest Channel / QPSK



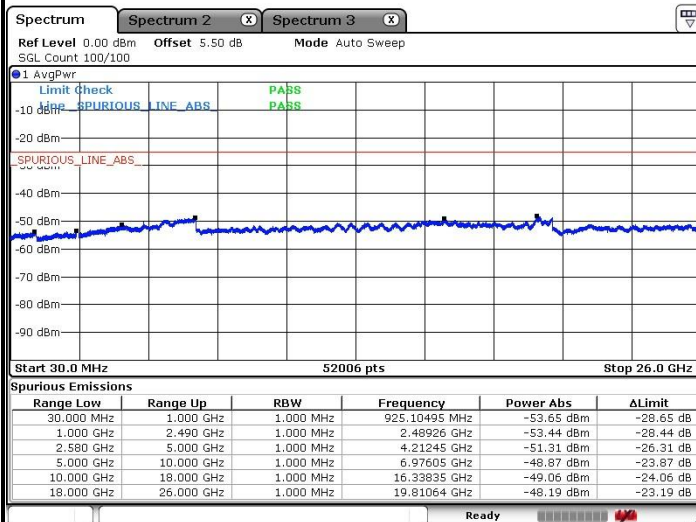
Date: 3 JAN 2019 18:52:44

Lowest Channel / 16QAM



Date: 3 JAN 2019 18:51:55

Lowest Channel / 64QAM

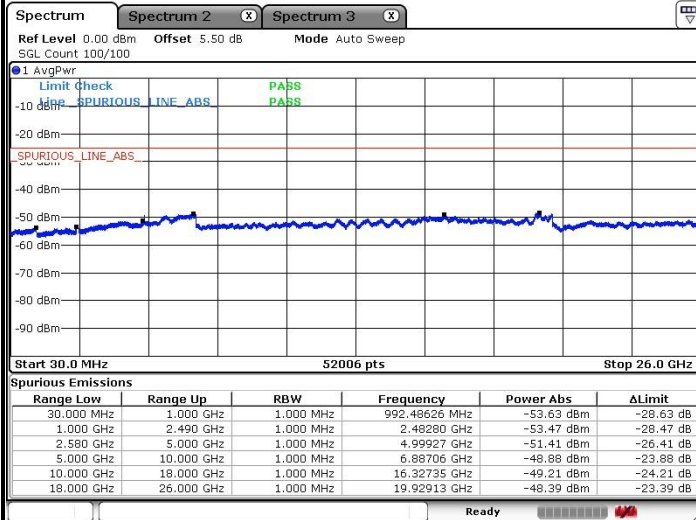


Date: 3 JAN 2019 18:51:05



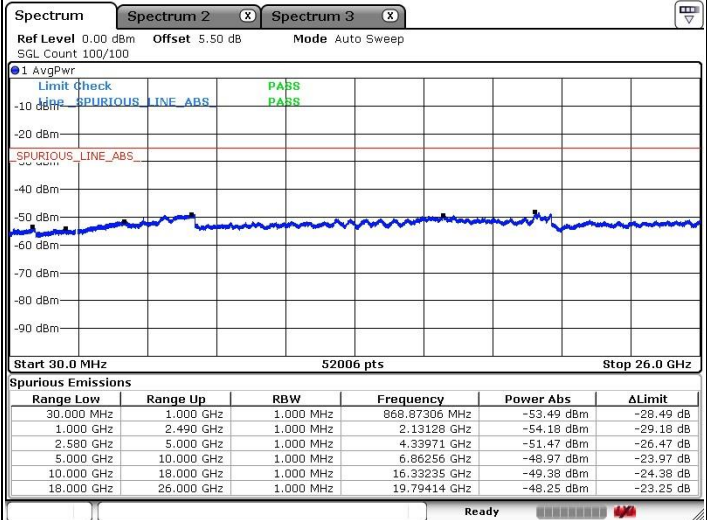
LTE Band 7 / 20MHz+20MHz

Middle Channel / QPSK



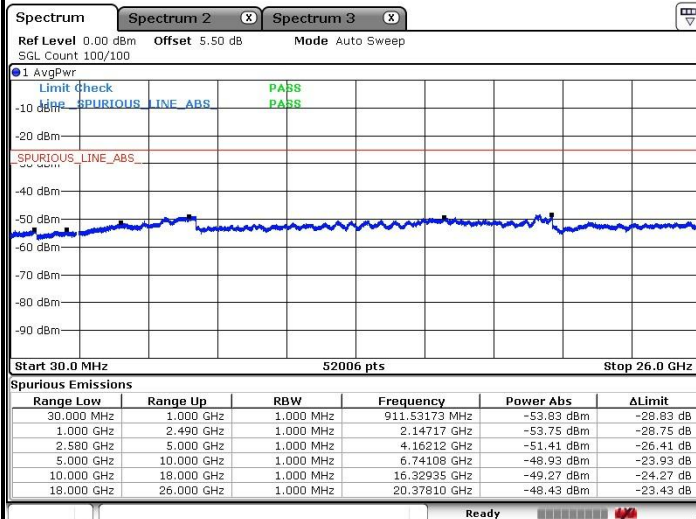
Date: 3 JAN 2019 18:53:57

Middle Channel / 16QAM



Date: 3 JAN 2019 18:54:49

Middle Channel / 64QAM

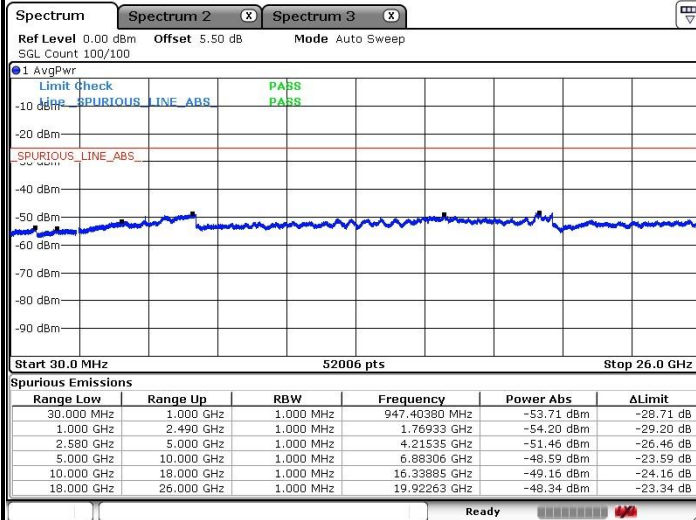


Date: 3 JAN 2019 18:55:38



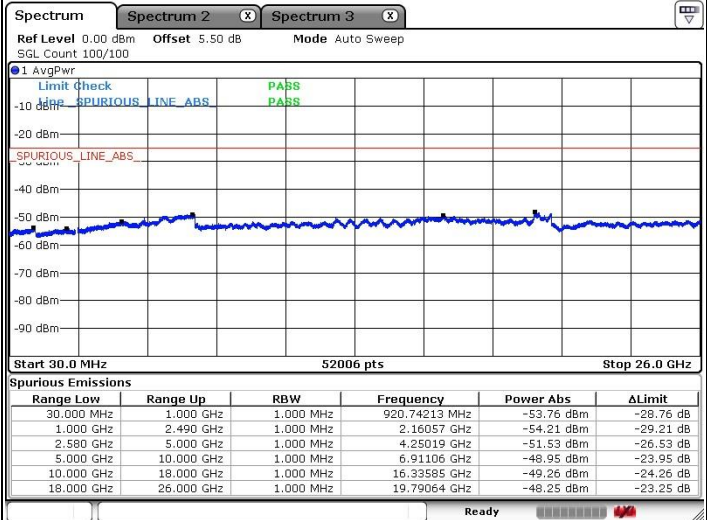
LTE Band 7 / 20MHz+20MHz

Highest Channel / QPSK



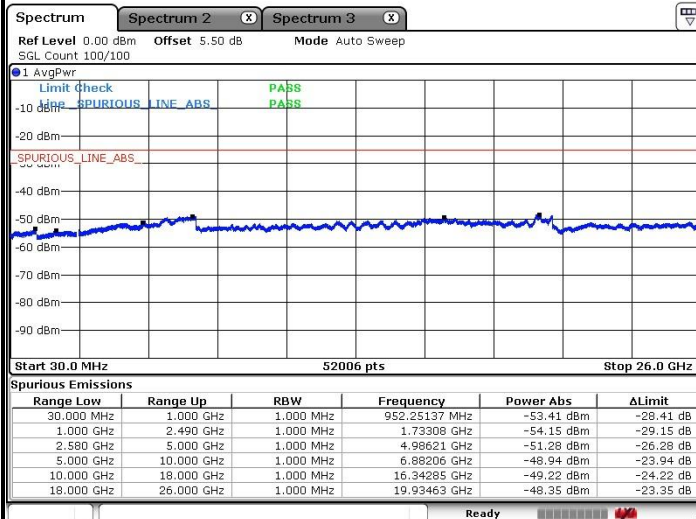
Date: 3.JAN.2019 19:04:54

Highest Channel / 16QAM



Date: 3.JAN.2019 19:04:05

Highest Channel / 64QAM



Date: 3.JAN.2019 19:03:13

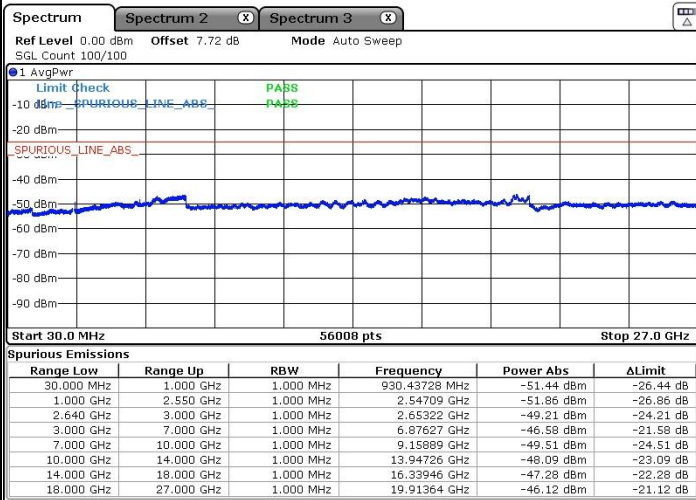


LTE Band 38 / 15MHz+15MHz

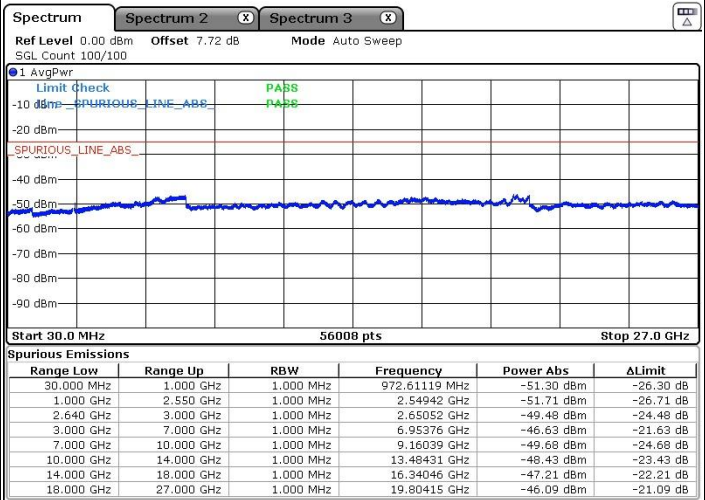
QPSK

Lowest Channel

Middle Channel

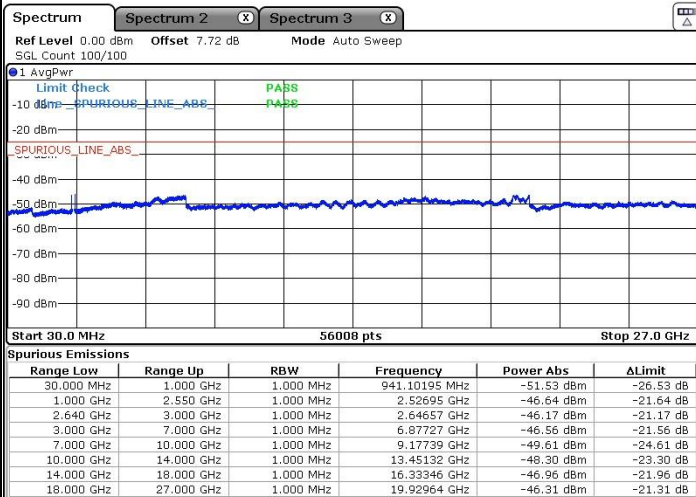


Date: 28 DEC.2018 18:23:28



Date: 28 DEC.2018 18:24:58

Highest Channel



Date: 28 DEC.2018 18:34:02

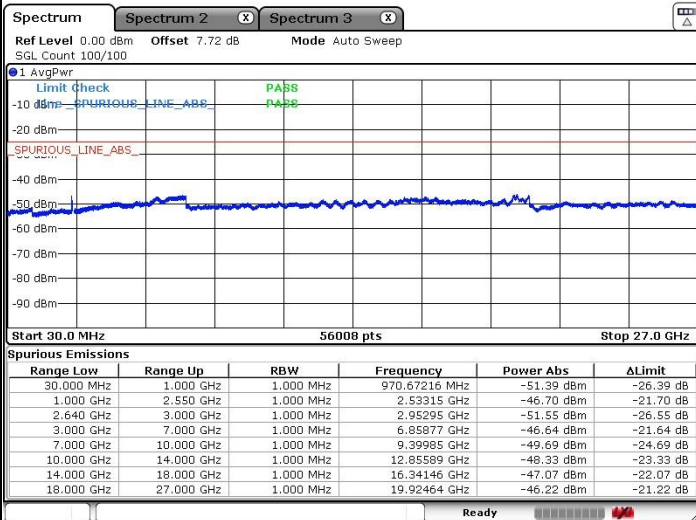


LTE Band 38 / 15MHz+15MHz

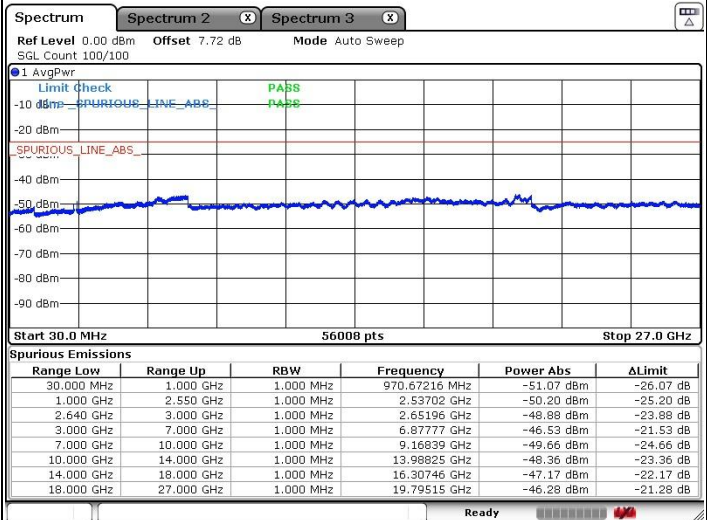
16QAM

Lowest Channel

Middle Channel

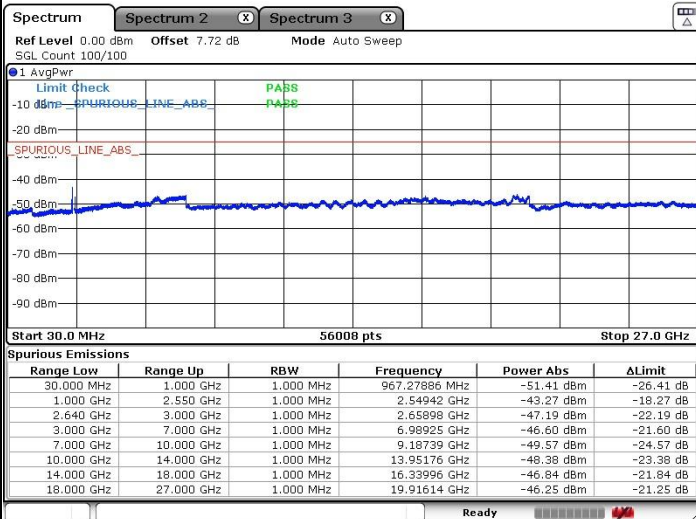


Date: 28 DEC.2018 18:22:36



Date: 28 DEC.2018 18:25:49

Highest Channel



Date: 28 DEC.2018 18:33:07

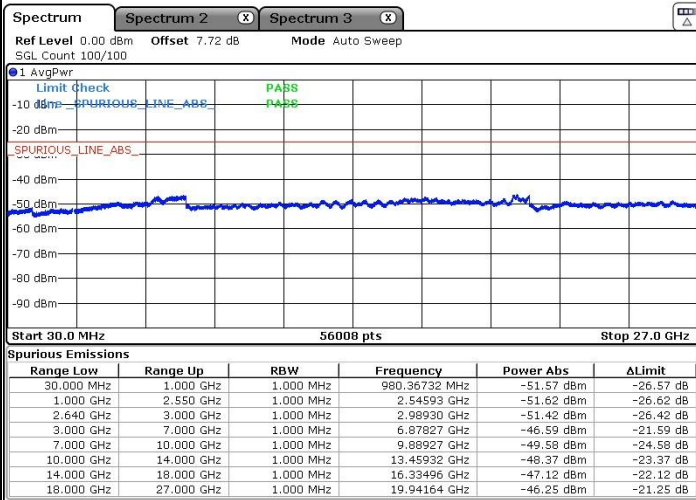


LTE Band 38 / 15MHz+15MHz

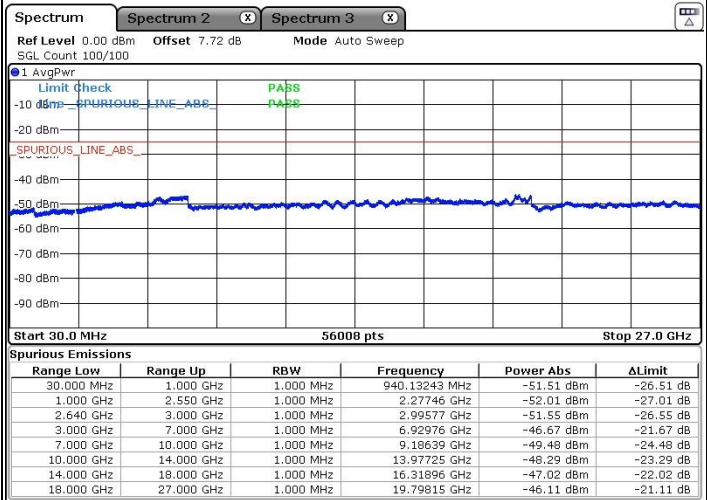
64QAM

Lowest Channel

Middle Channel

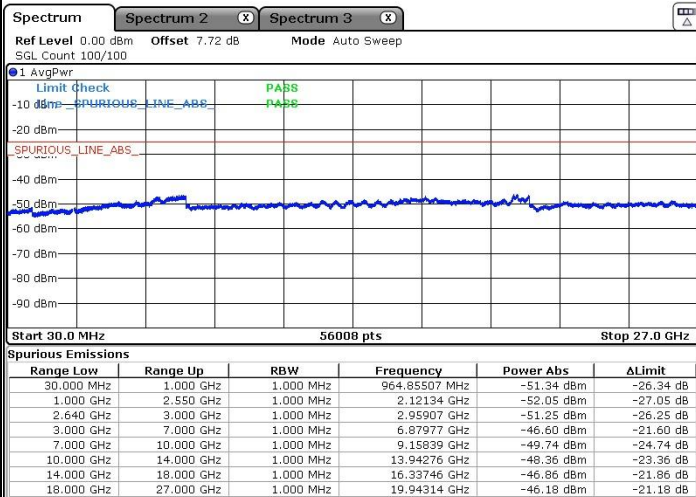


Date: 28 DEC.2018 18:21:37



Date: 28 DEC.2018 18:26:40

Highest Channel



Date: 28 DEC.2018 18:32:12

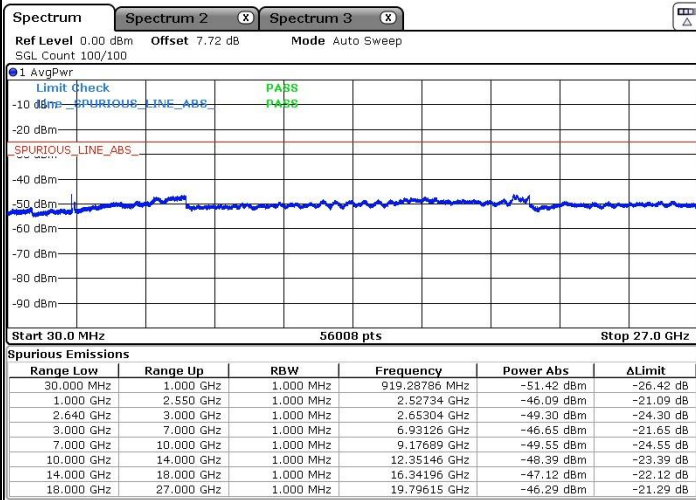


LTE Band 38 / 20MHz+20MHz

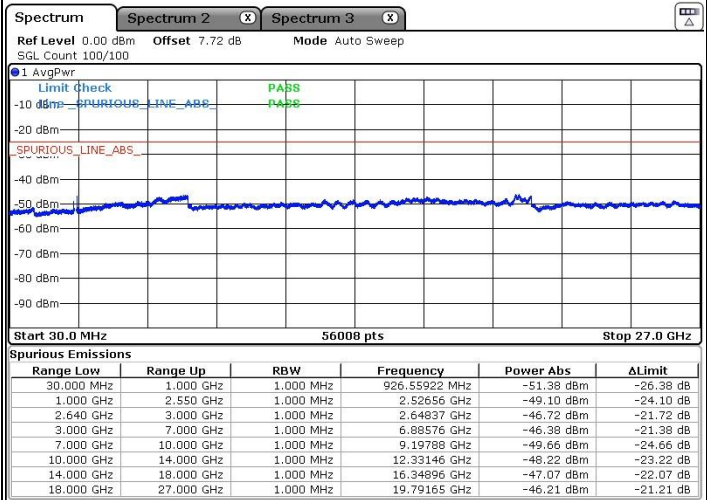
QPSK

Lowest Channel

Middle Channel

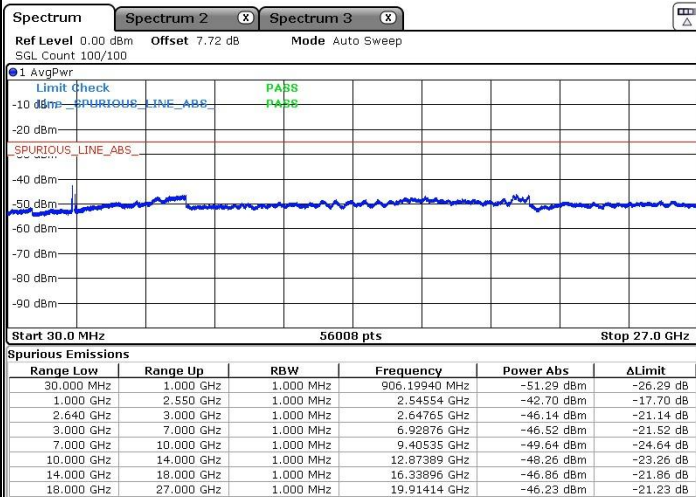


Date: 28 DEC.2018 17:19:17



Date: 28 DEC.2018 17:33:15

Highest Channel



Date: 28 DEC.2018 18:09:51

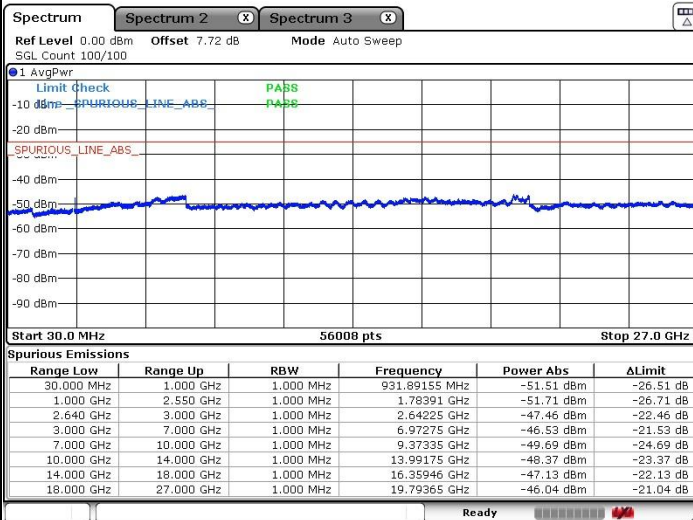


LTE Band 38 / 20MHz+20MHz

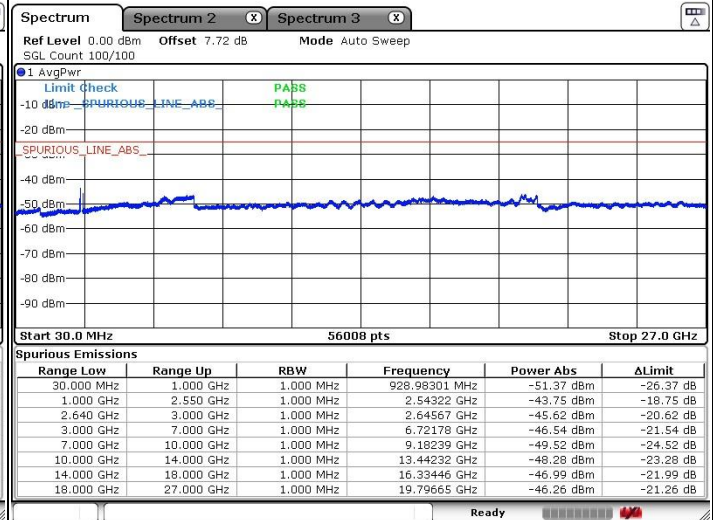
16QAM

Lowest Channel

Middle Channel

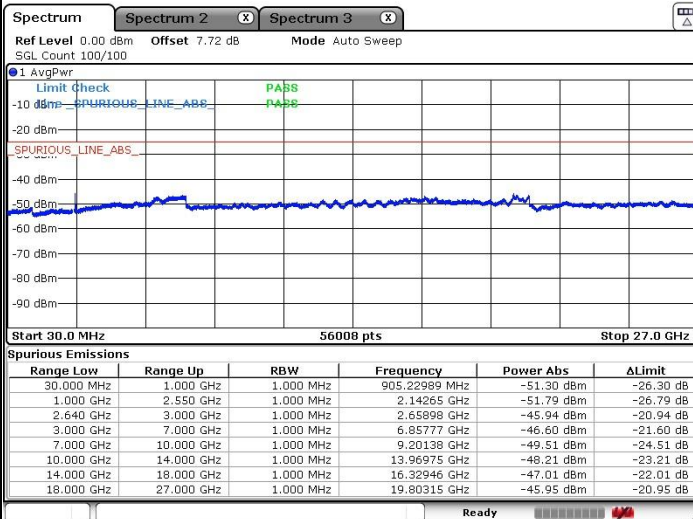


Date: 28 DEC.2018 17:20:25



Date: 28 DEC.2018 17:32:06

Highest Channel



Date: 28 DEC.2018 18:11:00

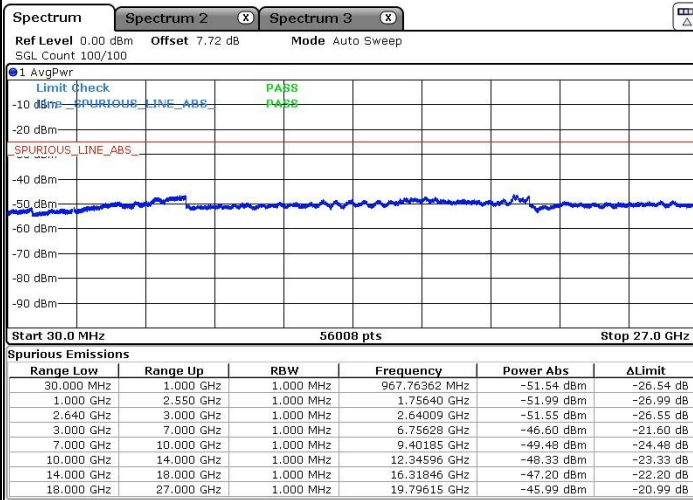


LTE Band 38 / 20MHz+20MHz

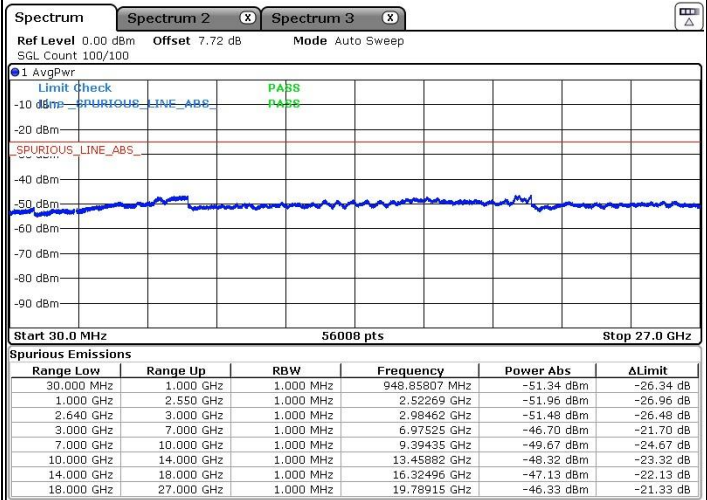
64QAM

Lowest Channel

Middle Channel

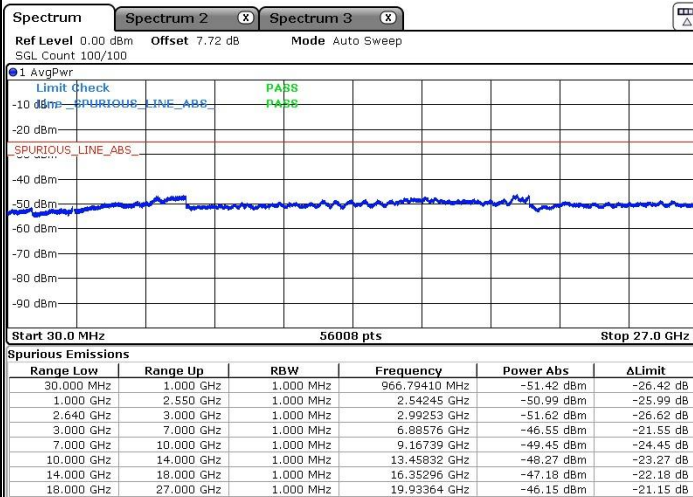


Date: 28 DEC.2018 17:21:14



Date: 28 DEC.2018 17:31:13

Highest Channel



Date: 28 DEC.2018 18:11:51

**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	0.0026	
30	Normal Voltage	0.0007	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0017	
0	Normal Voltage	0.0009	
-10	Normal Voltage	0.0016	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0029	
20	Maximum Voltage	0.0002	
20	Normal Voltage	0.0007	
20	Battery End Point	0.0013	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.7 V. ; Maximum Voltage =4.4 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	0.0021	PASS
40	Normal Voltage	0.0016	
30	Normal Voltage	0.0024	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0008	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0016	
-20	Normal Voltage	0.0019	
-30	Normal Voltage	0.0018	
20	Maximum Voltage	0.0023	
20	Normal Voltage	0.0031	
20	Battery End Point	0.0004	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.7 V. ; Maximum Voltage =4.4 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: Normal Voltage =3.85V. ; Battery End Point (BEP) =3.7V. ; Maximum Voltage =4.4V.



Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0027	PASS
40	Normal Voltage	0.0004	
30	Normal Voltage	0.0022	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0018	
-10	Normal Voltage	0.0000	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0021	
20	Normal Voltage	0.0018	
20	Battery End Point	0.0002	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.7 V. ; Maximum Voltage =4.4 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	0.0003	PASS
40	Normal Voltage	0.0081	
30	Normal Voltage	0.0006	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0076	
0	Normal Voltage	0.0066	
-10	Normal Voltage	0.0017	
-20	Normal Voltage	0.0090	
-30	Normal Voltage	0.0004	
20	Maximum Voltage	0.0014	
20	Normal Voltage	0.0082	
20	Battery End Point	0.0006	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.7 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Test Conditions		LTE Band 38 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0004	PASS
40	Normal Voltage	0.0001	
30	Normal Voltage	0.0024	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0022	
-10	Normal Voltage	0.0025	
-20	Normal Voltage	0.0002	
-30	Normal Voltage	0.0020	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0025	
20	Battery End Point	0.0003	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.7 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Note:

1. Antenna 1 is Bottom Antenna, Antenna 2 is Top Antenna. The Top Antenna and Bottom Antenna can't transmit simultaneously.
2. Pre-scan was performed with Ant1 and Ant2, only the worst cases are reported.

LTE Band 2 / 20MHz / QPSK for Ant 1								
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	3741	-58.59	-13	-45.59	-70.85	2.641	14.90	H
	5613	-54.97	-13	-41.97	-66.83	2.94	14.80	H
	7488	-52.04	-13	-39.04	-61.81	3.39	13.16	H
	3741	-58.69	-13	-45.69	-70.95	2.64	14.90	V
	5613	-54.12	-13	-41.12	-65.98	2.94	14.80	V
	7488	-51.58	-13	-38.58	-61.35	3.39	13.16	V

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

LTE Band 4 / 20MHz / QPSK for Ant 1								
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	3447	-62.10	-13	-49.10	-72.84	2.604	13.34	H
	5172	-51.26	-13	-38.26	-61.77	3.011	13.52	H
	6900	-54.46	-13	-41.46	-64.66	3.271	13.47	H
	3447	-62.09	-13	-49.09	-72.83	2.604	13.34	V
	5172	-55.24	-13	-42.24	-65.75	3.011	13.52	V
	6900	-53.99	-13	-40.99	-64.19	3.271	13.47	V

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

LTE Band 5 / 10MHz / QPSK for Ant 2								
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	1664	-58.19	-13	-45.19	-67.31	1.58	10.70	H
	2496	-61.72	-13	-48.72	-72.12	2.102	12.50	H
	3330	-62.06	-13	-49.06	-73.10	2.856	13.90	H
	1664	-61.44	-13	-48.44	-70.56	1.58	10.70	V
	2496.27	-61.30	-13	-48.30	-71.70	2.10	12.50	V
	3330	-62.17	-13	-49.17	-73.21	2.86	13.90	V

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



LTE Band 7 / 20MHz / QPSK for Ant 1								
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	5052	-54.30	-25	-29.30	-64.51	3.03	13.24	H
	7580	-56.14	-25	-31.14	-65.59	3.56	13.01	H
	10100	-55.69	-25	-30.69	-65.21	3.92	13.44	H
	5052	-55.41	-25	-30.41	-65.62	3.03	13.24	V
	7576	-45.95	-25	-20.95	-55.40	3.56	13.01	V
	10100	-56.62	-25	-31.62	-66.14	3.92	13.44	V

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

LTE Band 12 / 10MHz / QPSK for Ant 1								
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	1406	-64.28	-13	-51.28	-72.45	1.40	9.57	H
	2108	-64.08	-13	-51.08	-73.64	1.87	11.44	H
	2812	-60.94	-13	-47.94	-71.98	2.31	13.35	H
	1406	-63.67	-13	-50.67	-71.84	1.40	9.57	V
	2108	-63.24	-13	-50.24	-72.80	1.87	11.44	V
	2812	-61.15	-13	-48.15	-72.19	2.31	13.35	V

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

LTE Band 38 / 20MHz / QPSK for Ant 1								
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	5172	-66.57	-25	-41.57	-76.78	3.03	13.24	H
	7756	-57.47	-25	-32.47	-66.92	3.56	13.01	H
	10340	-58.83	-25	-33.83	-68.35	3.92	13.44	H
	5172	-66.67	-25	-41.67	-76.88	3.03	13.24	V
	7760	-47.00	-25	-22.00	-56.45	3.56	13.01	V
	10340	-59.11	-25	-34.11	-68.63	3.92	13.44	V

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

**For CA**

LTE Band 7 CA / 15M+20M / QPSK for Ant 2								
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	5064	-53.16	-25	-28.16	-63.37	3.03	13.24	H
	7596	-44.84	-25	-19.84	-54.29	3.56	13.01	H
	10125	-57.05	-25	-32.05	-66.57	3.92	13.44	H
	5064	-51.09	-25	-26.09	-61.30	3.03	13.24	V
	7596	-48.86	-25	-23.86	-58.31	3.56	13.01	V
	10125	-58.57	-25	-33.57	-68.09	3.92	13.44	V

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

LTE Band 38 CA / 20M+20M / QPSK for Ant 2								
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	5188	-52.96	-25	-27.96	-63.17	3.03	13.24	H
	7784	-57.44	-25	-32.44	-66.89	3.56	13.01	H
	10377	-58.38	-25	-33.38	-67.90	3.92	13.44	H
	5188	-55.80	-25	-30.80	-66.01	3.03	13.24	V
	7784	-57.11	-25	-32.11	-66.56	3.56	13.01	V
	10377	-57.62	-25	-32.62	-67.14	3.92	13.44	V

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