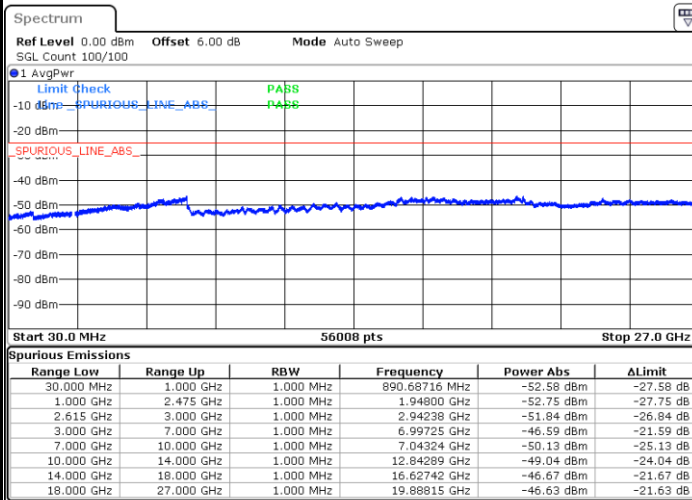




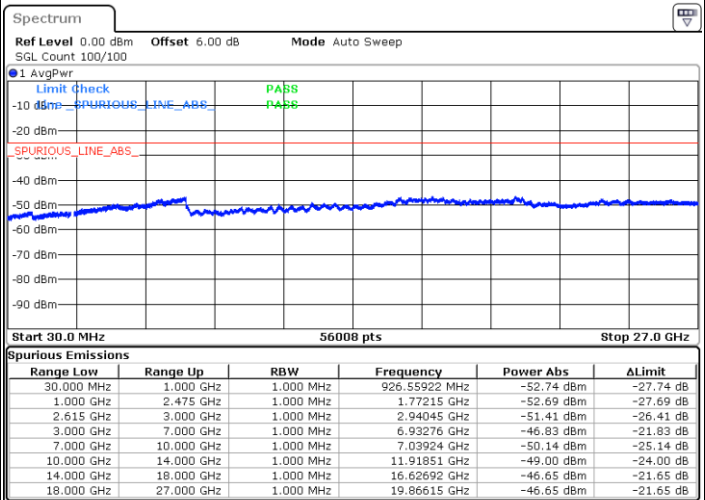
LTE Band 7 / 15MHz+10MHz

Highest Channel / QPSK



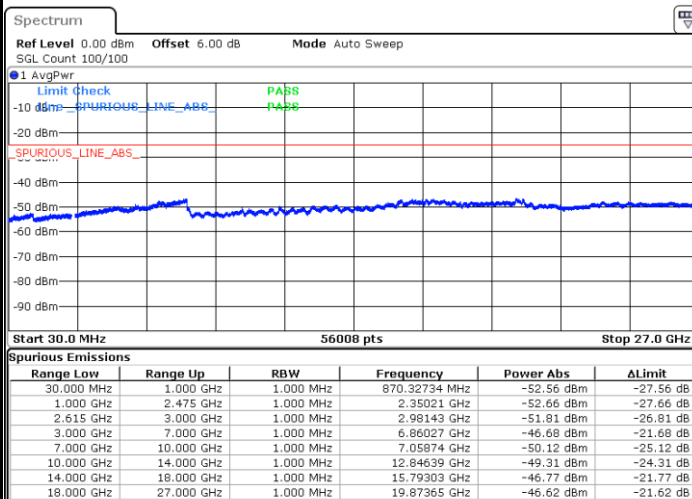
Date: 24 SEP 2019 18:01:27

Highest Channel / 16QAM



Date: 24 SEP 2019 17:58:33

Highest Channel / 64QAM

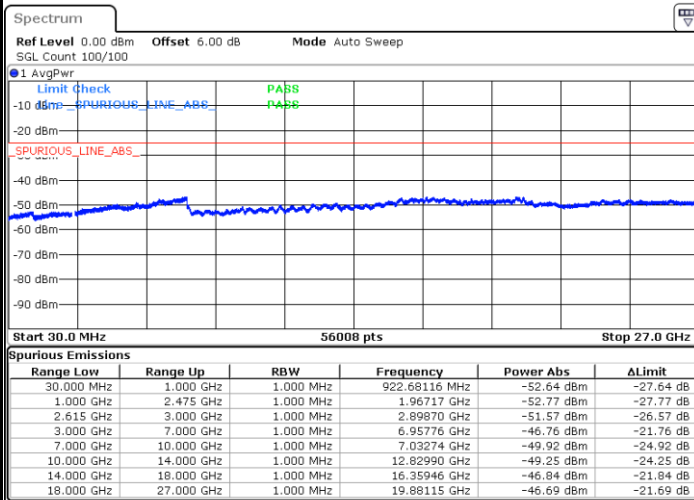


Date: 24 SEP 2019 17:59:48



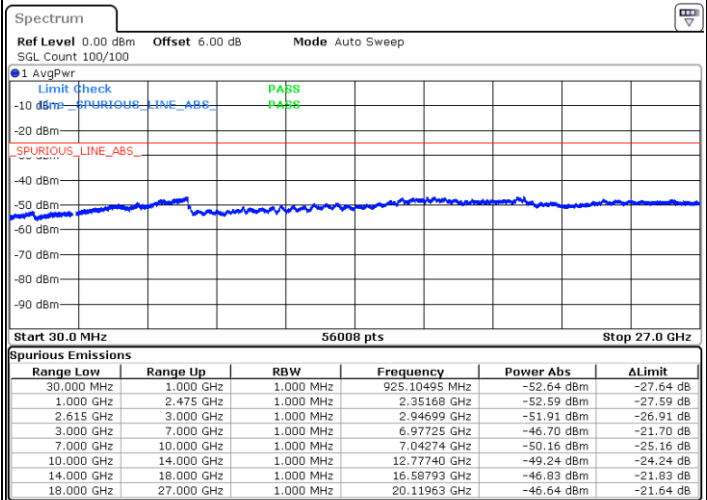
LTE Band 7 / 15MHz+15MHz

Lowest Channel / QPSK



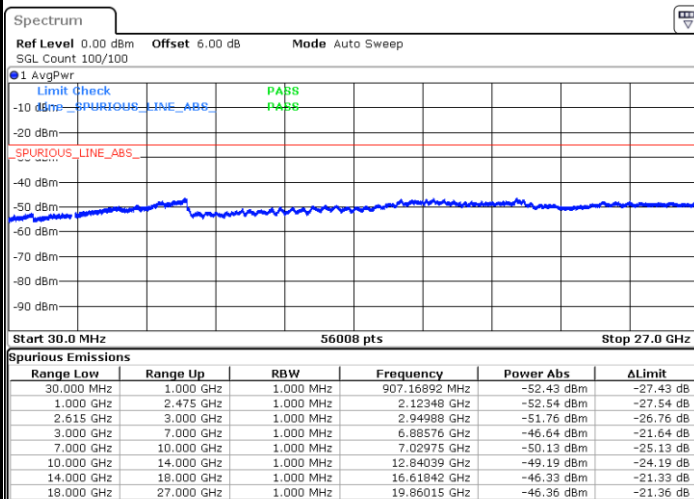
Date: 24 SEP 2019 17:21:29

Lowest Channel / 16QAM



Date: 24 SEP 2019 17:22:49

Lowest Channel / 64QAM

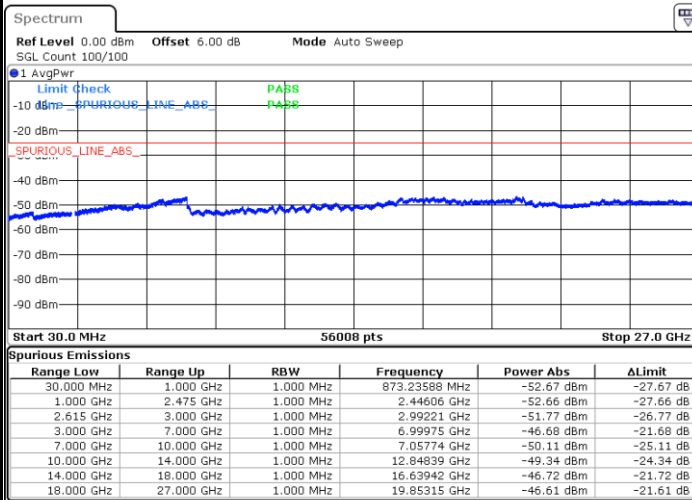


Date: 24 SEP 2019 17:24:26



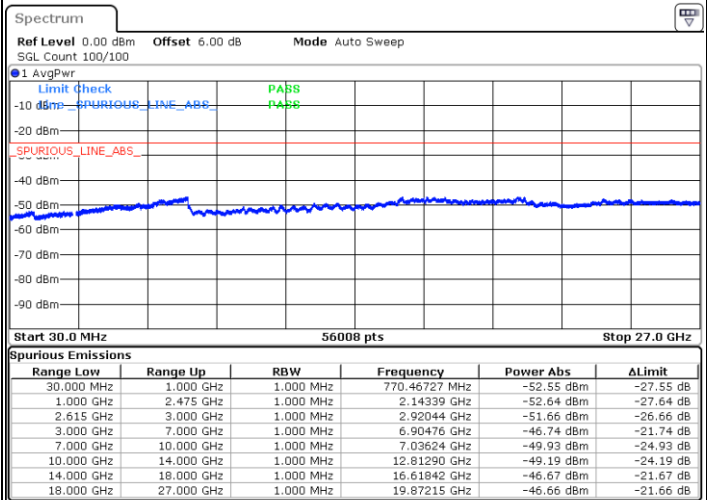
LTE Band 7 / 15MHz+15MHz

Middle Channel / QPSK



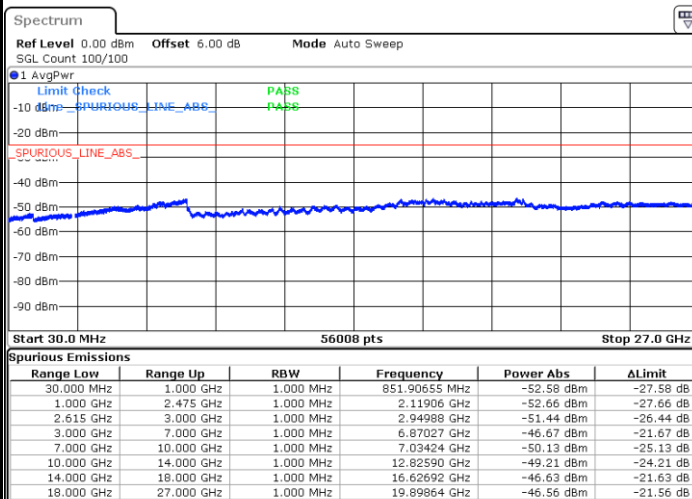
Date: 24 SEP 2019 16:49:55

Middle Channel / 16QAM



Date: 24 SEP 2019 16:50:58

Middle Channel / 64QAM

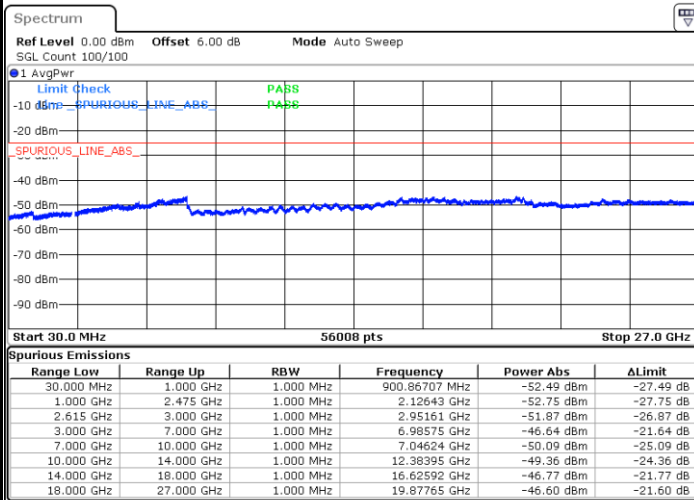


Date: 24 SEP 2019 17:06:04



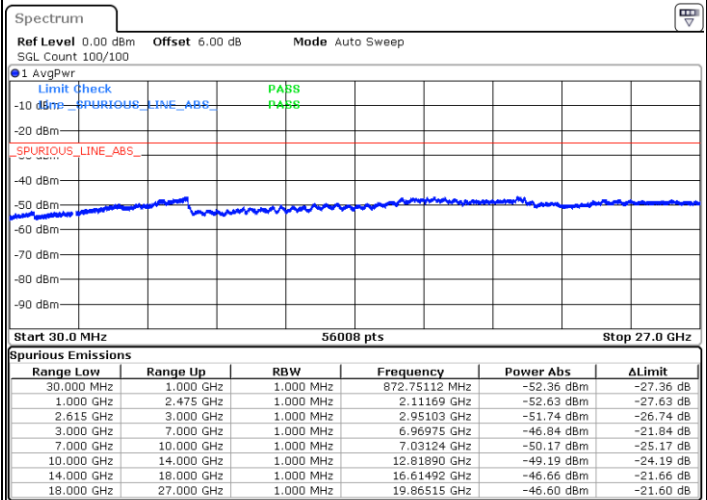
LTE Band 7 / 15MHz+15MHz

Highest Channel / QPSK



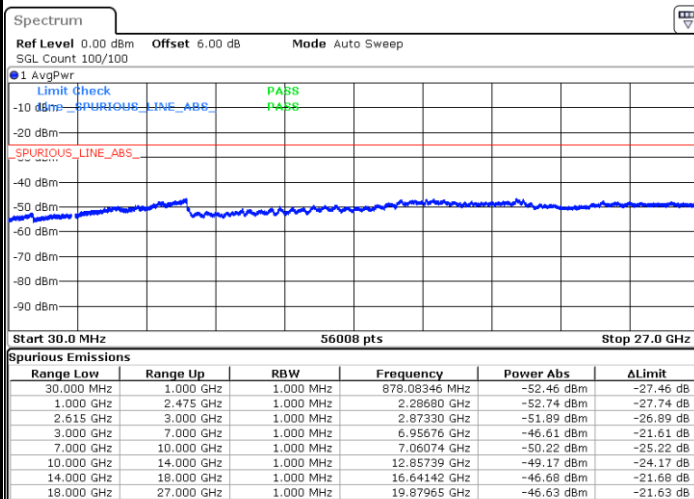
Date: 24 SEP 2019 17:28:50

Highest Channel / 16QAM



Date: 24 SEP 2019 17:27:41

Highest Channel / 64QAM

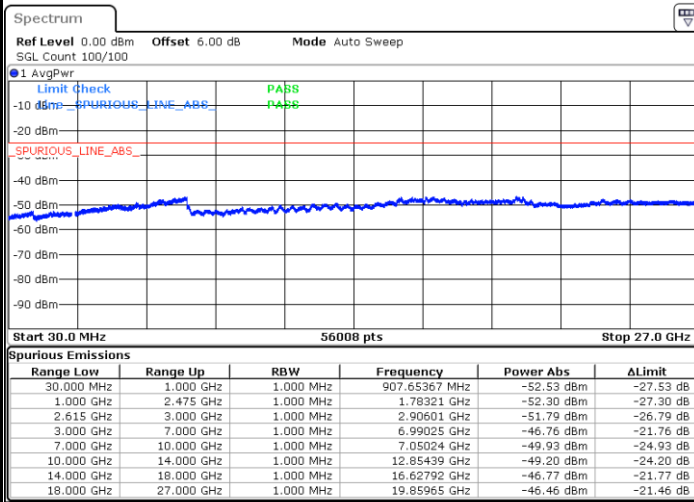


Date: 24 SEP 2019 17:26:19



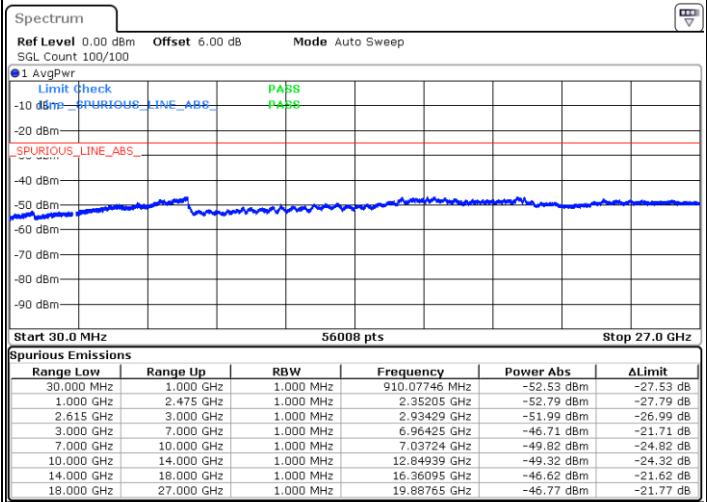
LTE Band 7 / 15MHz+20MHz

Lowest Channel / QPSK



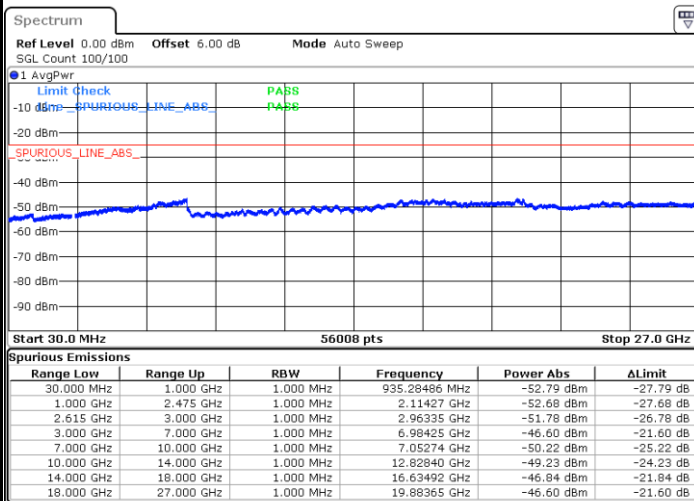
Date: 24 SEP 2019 16:32:12

Lowest Channel / 16QAM



Date: 24 SEP 2019 16:30:45

Lowest Channel / 64QAM

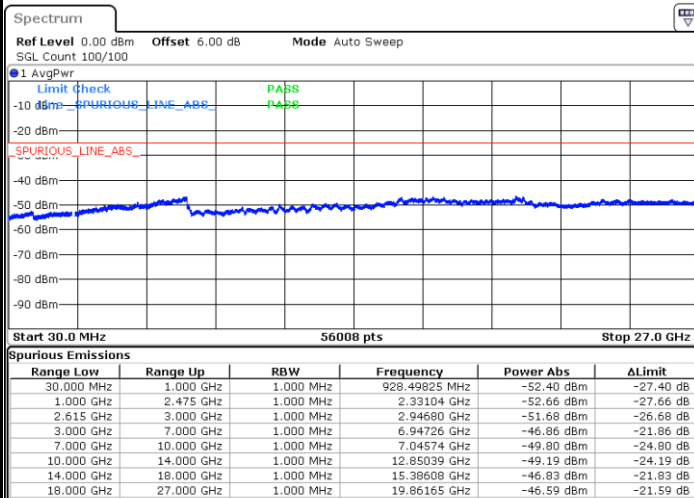


Date: 24 SEP 2019 16:28:32



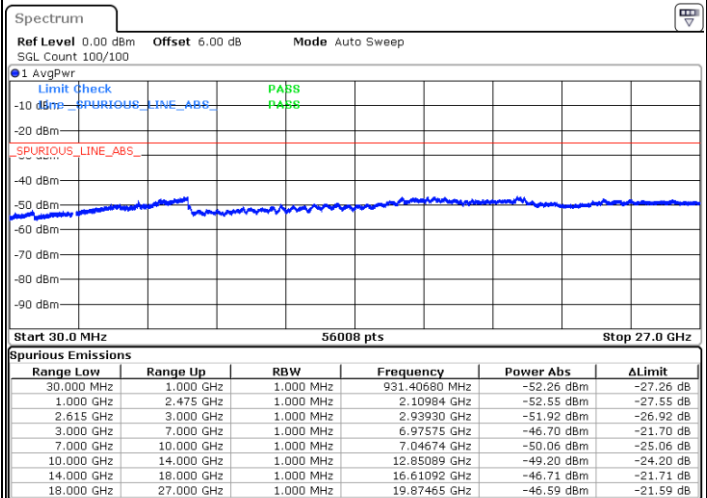
LTE Band 7 / 15MHz+20MHz

Middle Channel / QPSK



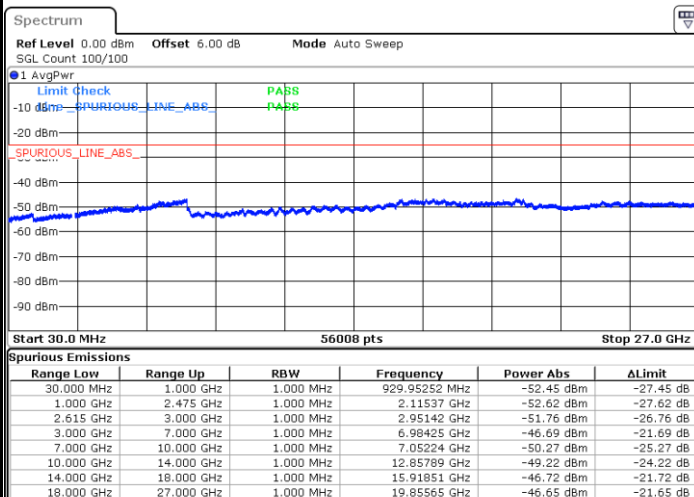
Date: 24 SEP 2019 16:33:36

Middle Channel / 16QAM



Date: 24 SEP 2019 16:34:37

Middle Channel / 64QAM

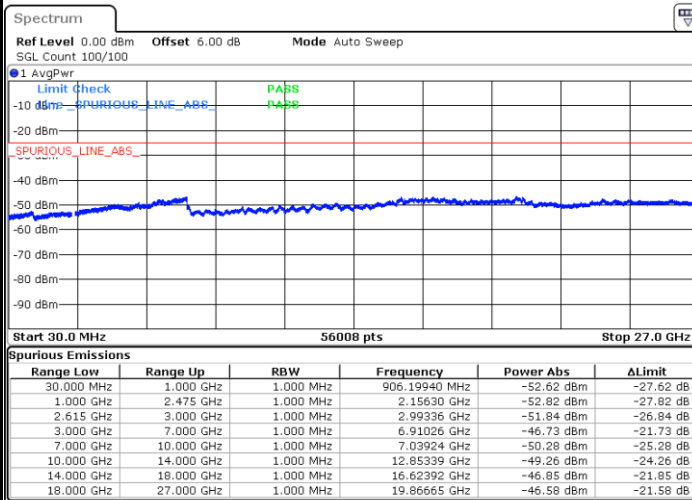


Date: 24 SEP 2019 16:35:38



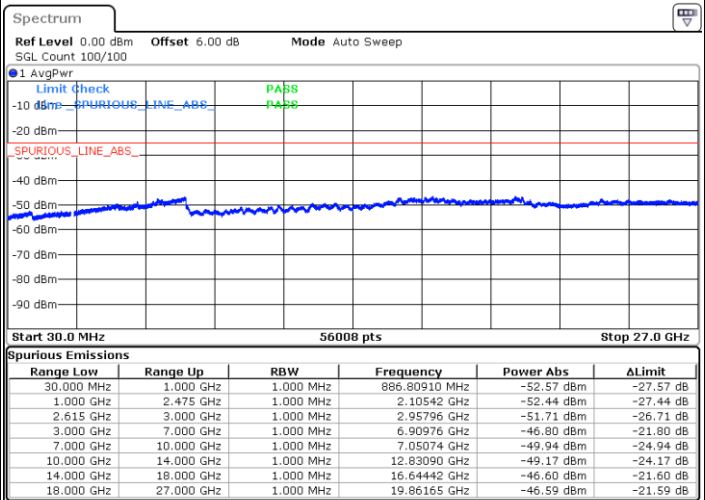
LTE Band 7 / 15MHz+20MHz

Highest Channel / QPSK



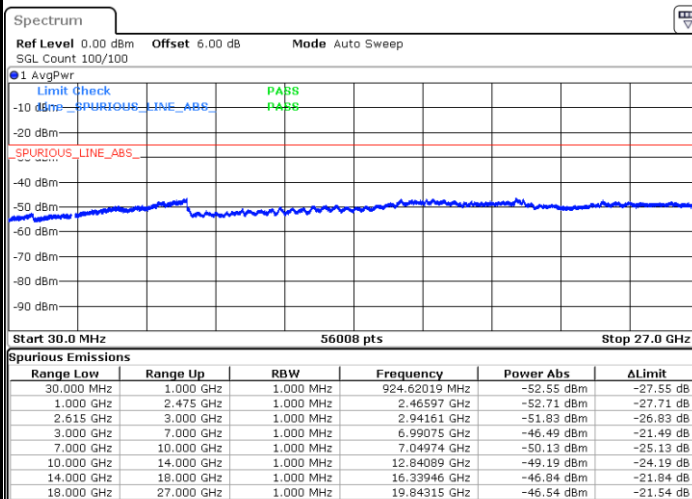
Date: 24 SEP 2019 16:44:03

Highest Channel / 16QAM



Date: 24 SEP 2019 16:45:33

Highest Channel / 64QAM

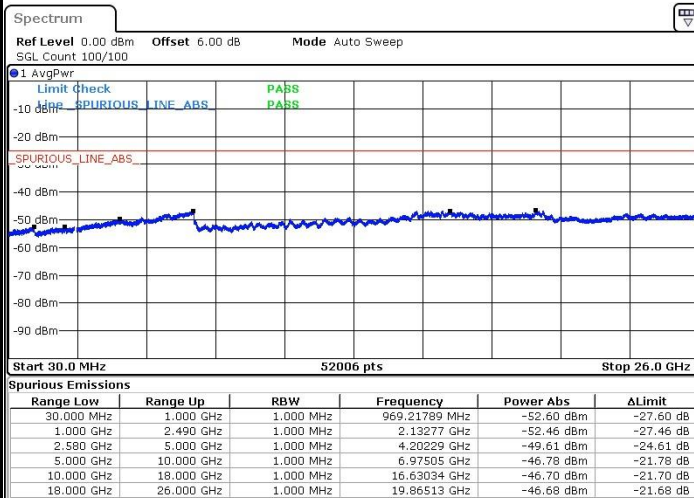


Date: 24 SEP 2019 16:46:43



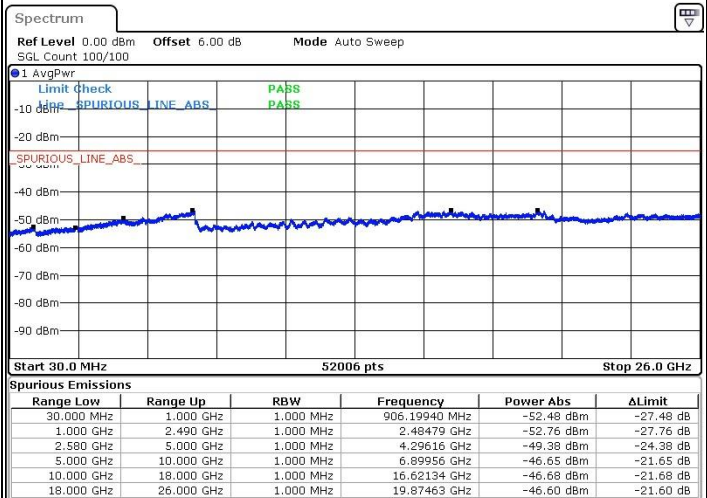
LTE Band 7 / 20MHz+10MHz

Lowest Channel / QPSK



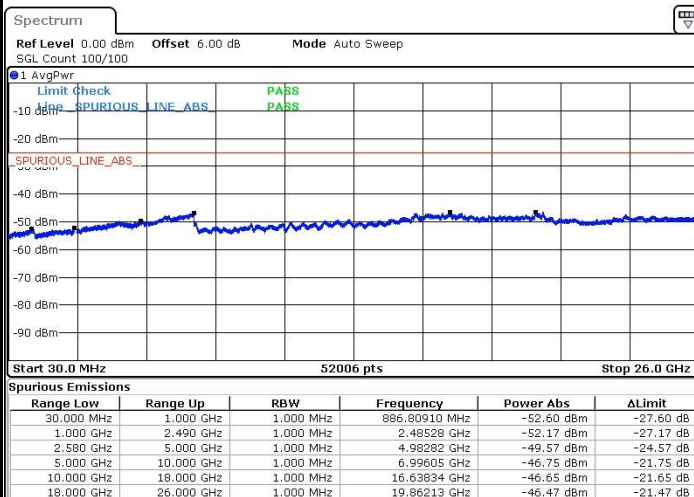
Date: 24 SEP 2019 21:55:19

Lowest Channel / 16QAM



Date: 24 SEP 2019 21:54:20

Lowest Channel / 64QAM

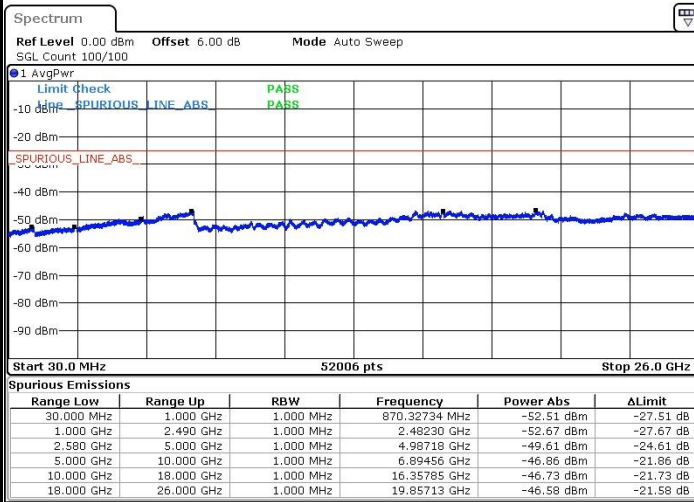


Date: 24 SEP 2019 21:53:24



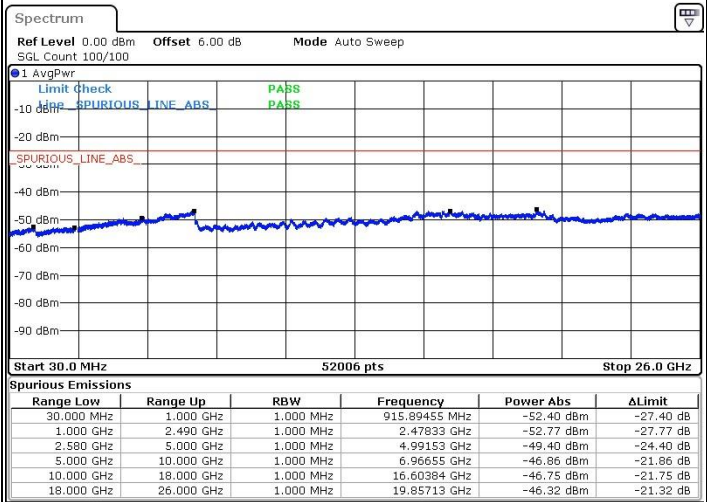
LTE Band 7 / 20MHz+10MHz

Middle Channel / QPSK



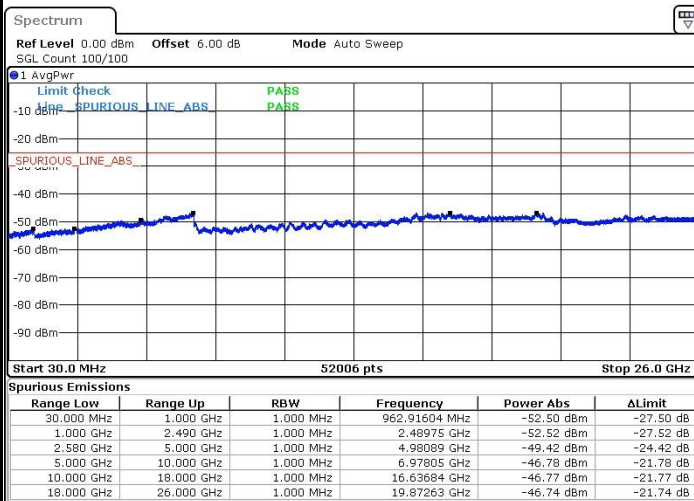
Date: 24 SEP 2019 21:56:48

Middle Channel / 16QAM



Date: 24 SEP 2019 21:57:48

Middle Channel / 64QAM

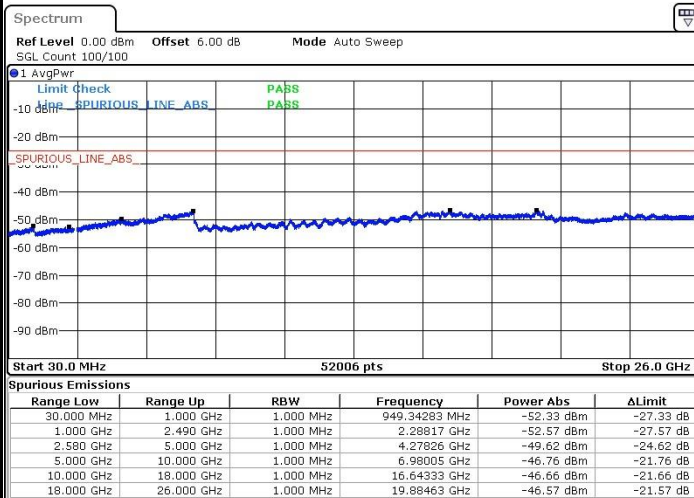


Date: 24 SEP 2019 21:58:50



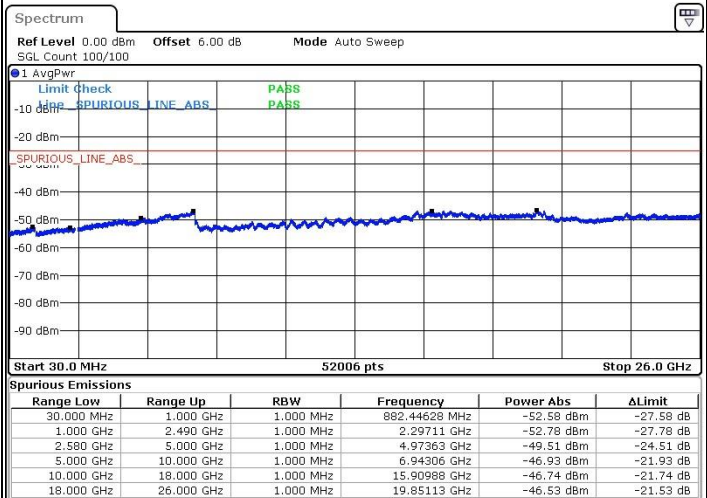
LTE Band 7 / 20MHz+10MHz

Highest Channel / QPSK



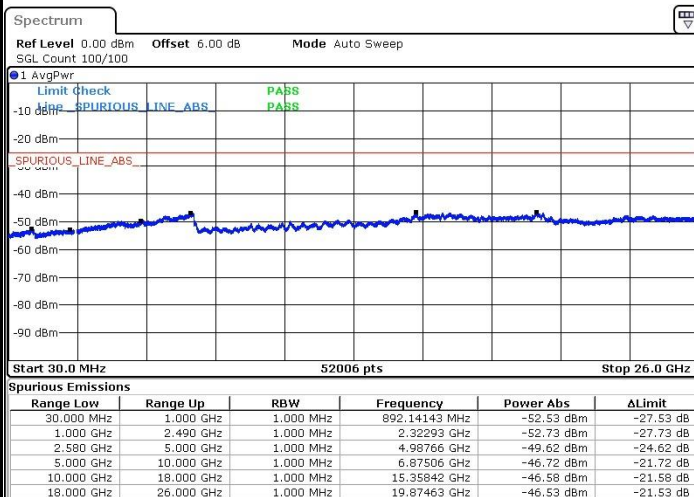
Date: 24 SEP. 2019 22:02:14

Highest Channel /16QAM



Date: 24 SEP. 2019 22:01:10

Highest Channel / 64QAM

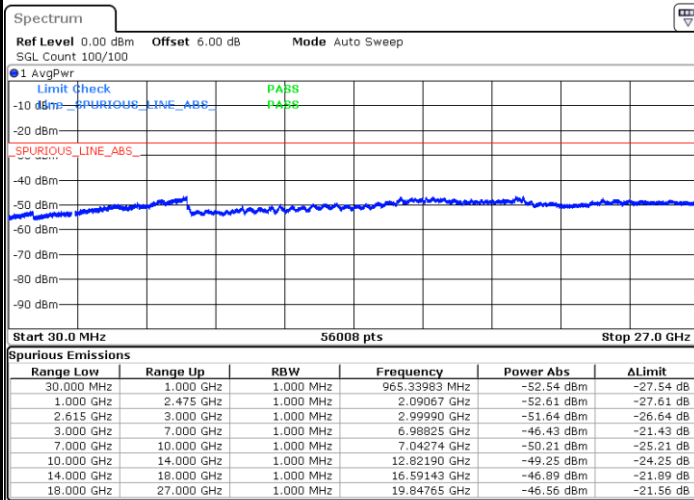


Date: 24 SEP. 2019 22:00:13



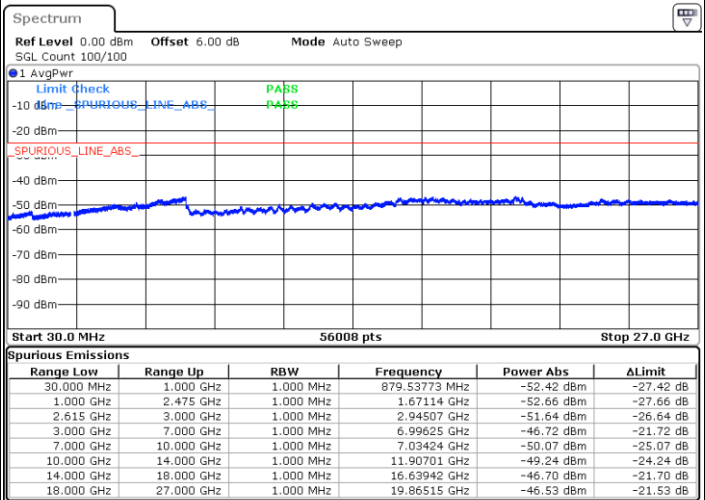
LTE Band 7 / 20MHz+15MHz

Lowest Channel / QPSK



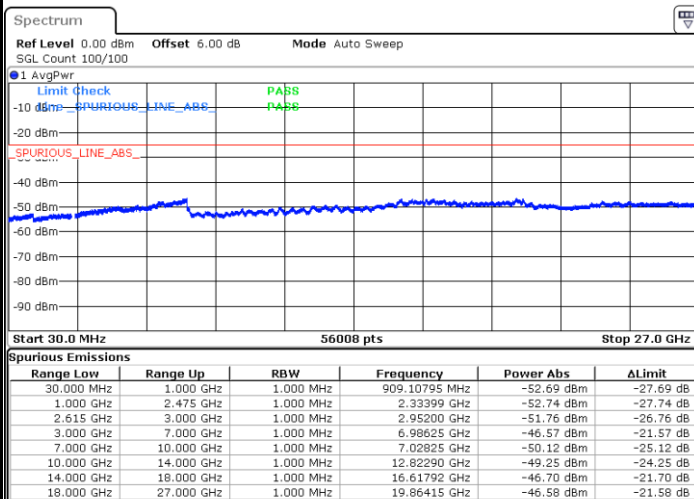
Date: 24 SEP 2019 18:11:22

Lowest Channel / 16QAM



Date: 24 SEP 2019 18:13:01

Lowest Channel / 64QAM

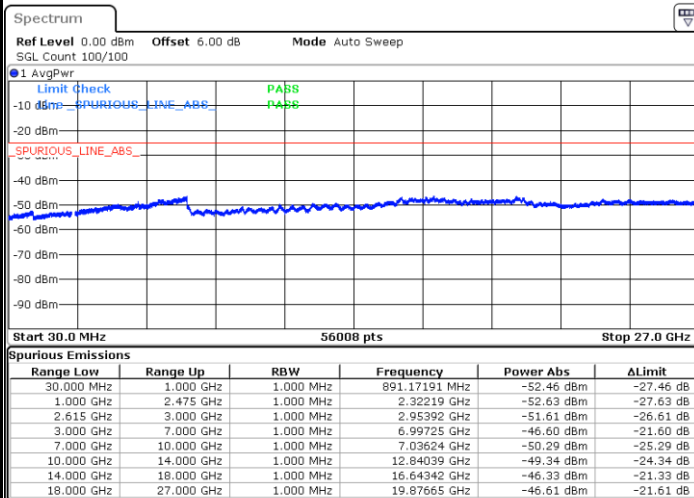


Date: 24 SEP 2019 18:14:19



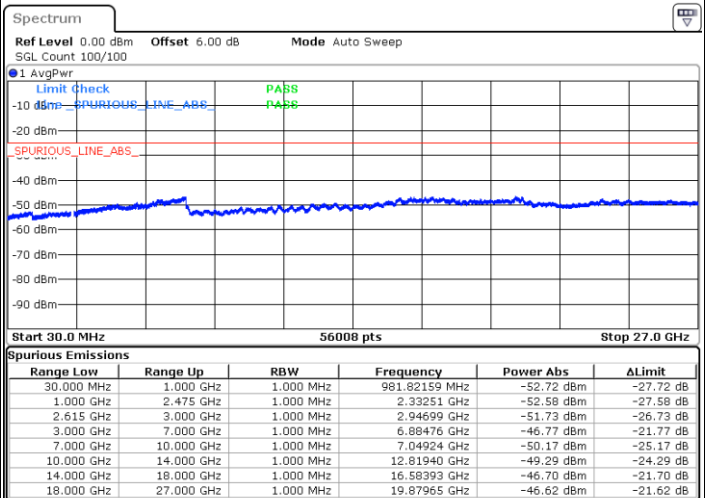
LTE Band 7 / 20MHz+15MHz

MiddleChannel / QPSK



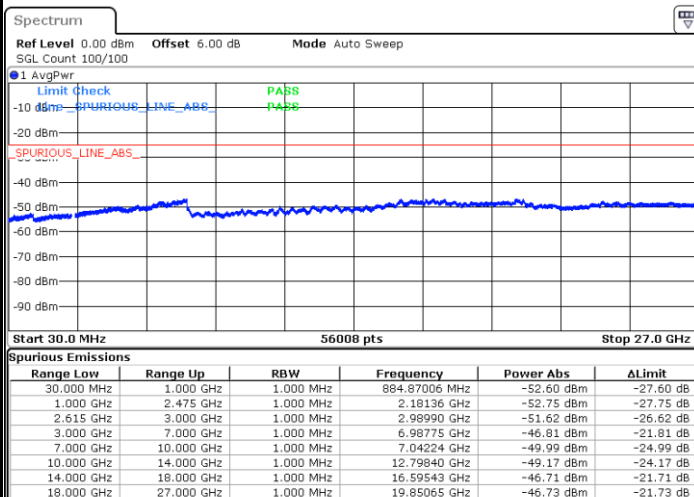
Date: 24 SEP 2019 18:10:00

Middle Channel / 16QAM



Date: 24 SEP 2019 18:09:03

Middle Channel /64QAM

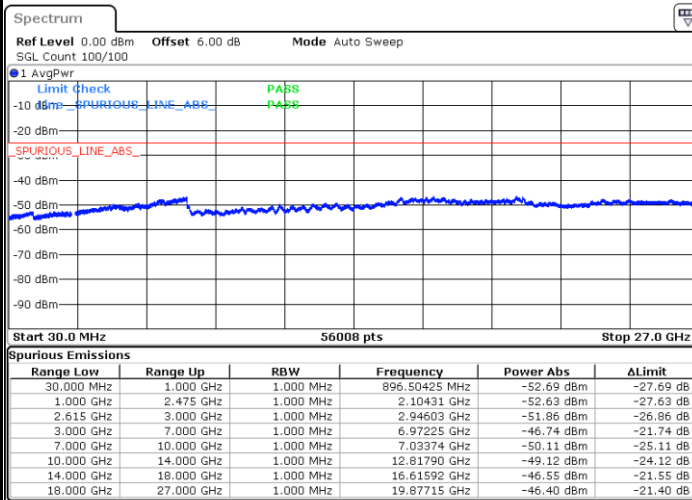


Date: 24 SEP 2019 18:08:08



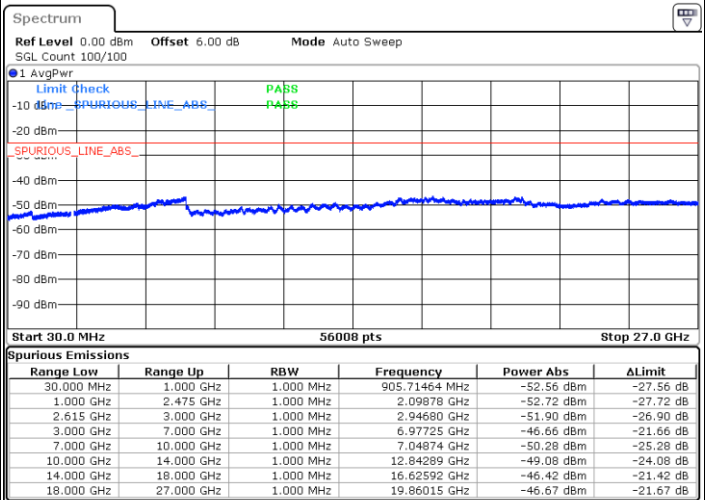
LTE Band 7 / 20MHz+15MHz

Highest Channel / QPSK



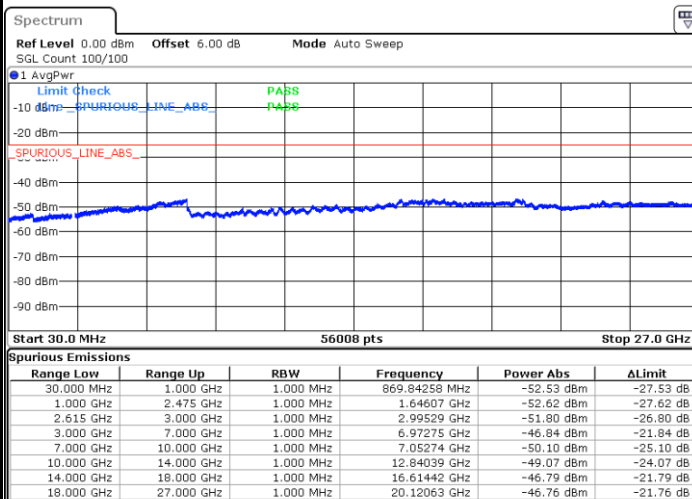
Date: 24 SEP 2019 18:32:53

Highest Channel / 16QAM



Date: 24 SEP 2019 18:31:49

Highest Channel / 64QAM

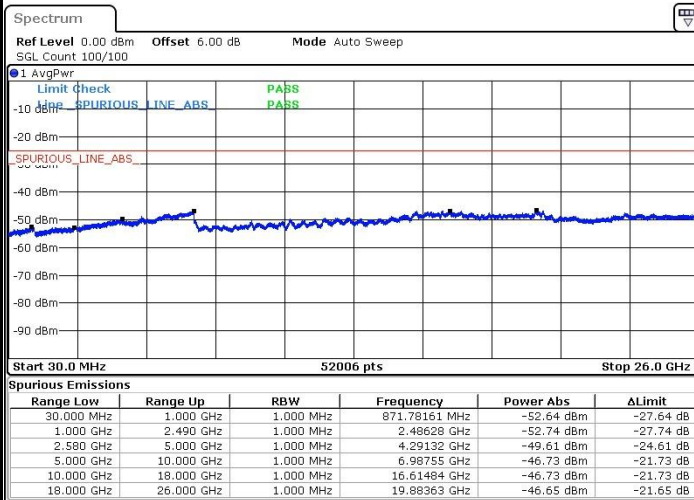


Date: 24 SEP 2019 18:30:36



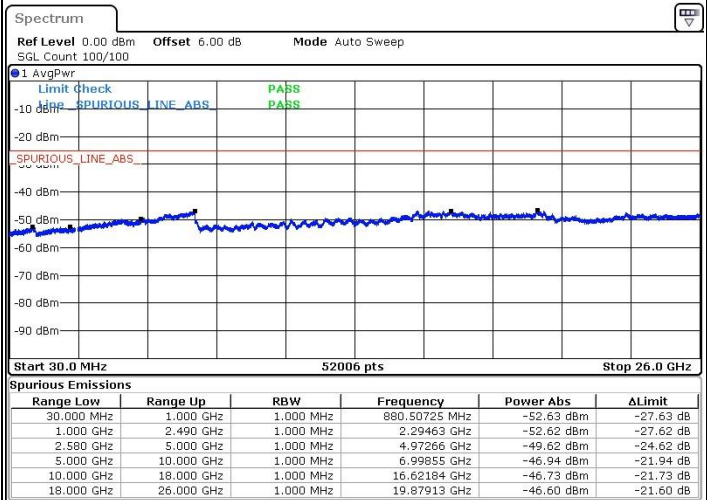
LTE Band 7 / 20MHz+20MHz

Lowest Channel /QPSK



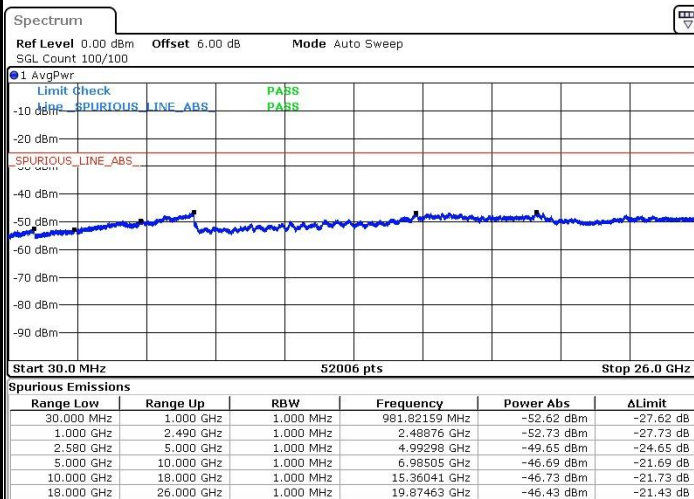
Date: 24 SEP 2019 22:24:41

Lowest Channel /16QAM



Date: 24 SEP 2019 22:25:41

Lowest Channel /64QAM

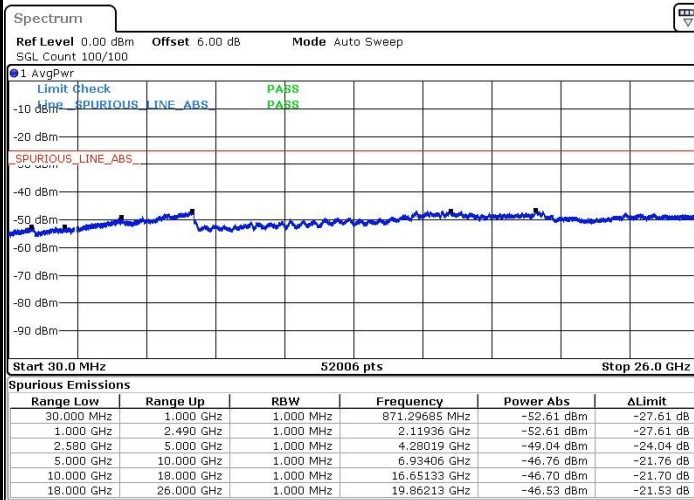


Date: 24 SEP 2019 22:26:45



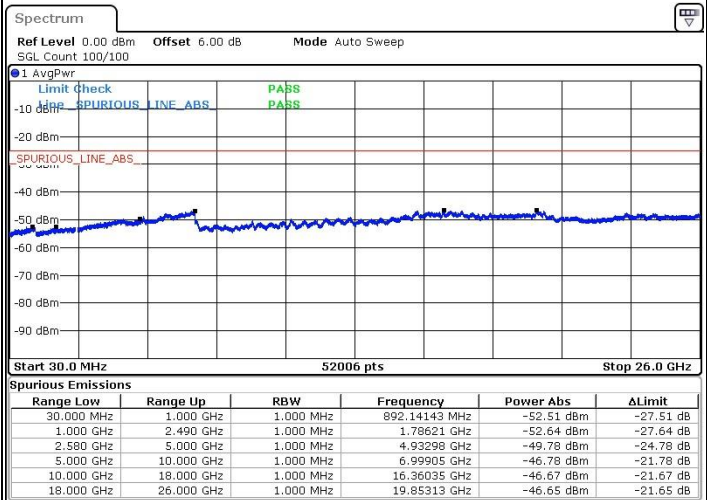
LTE Band 7 / 20MHz+20MHz

Middle Channel / QPSK



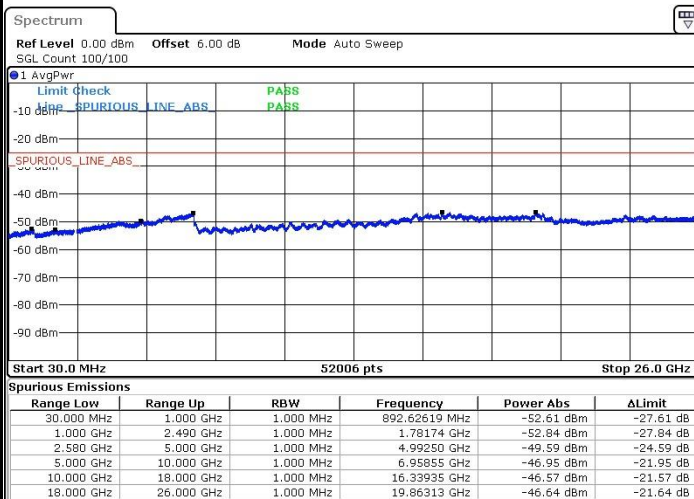
Date: 24 SEP 2019 22:31:08

Middle Channel / 16QAM



Date: 24 SEP 2019 22:30:07

Middle Channel / 64QAM

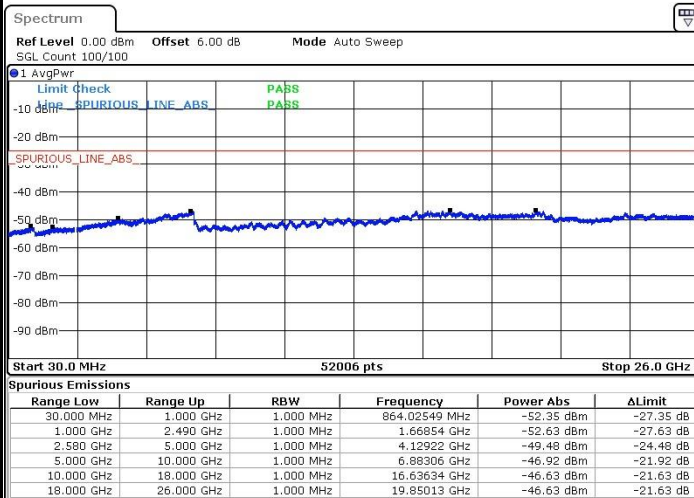


Date: 24 SEP 2019 22:29:10



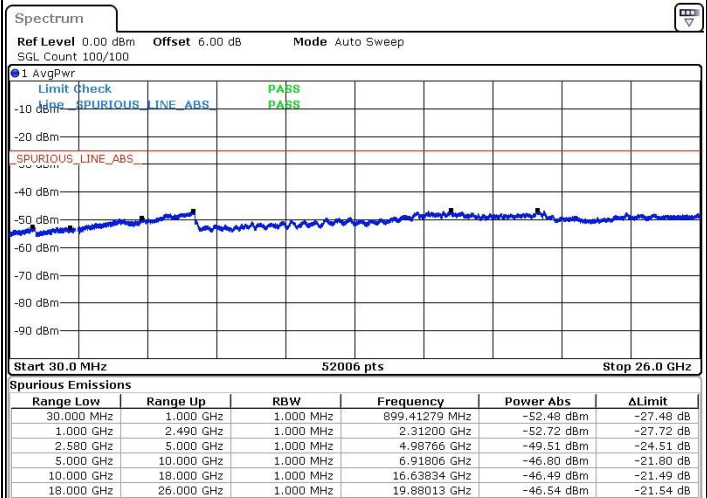
LTE Band 7 / 20MHz+20MHz

Highest Channel / QPSK



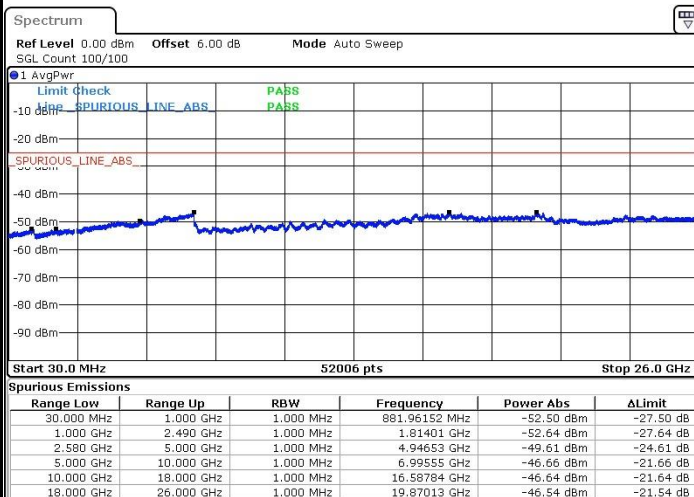
Date: 24 SEP 2019 22:45:35

Highest Channel / 16QAM



Date: 24 SEP 2019 22:44:40

Highest Channel / 64QAM



Date: 24 SEP 2019 22:43:45

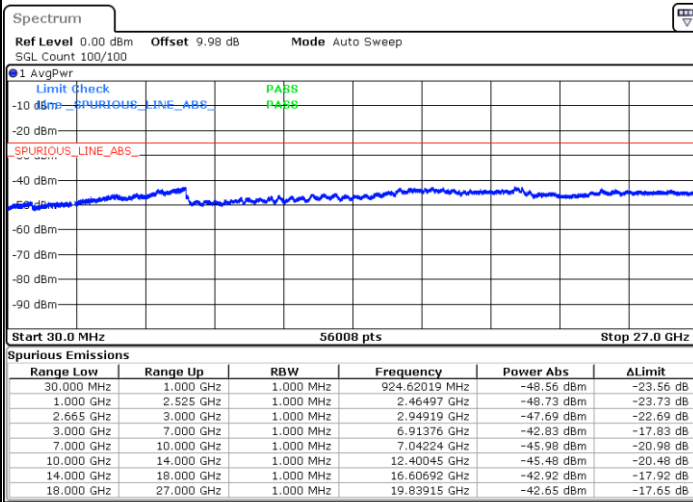


LTE Band 38 / 15MHz+15MHz

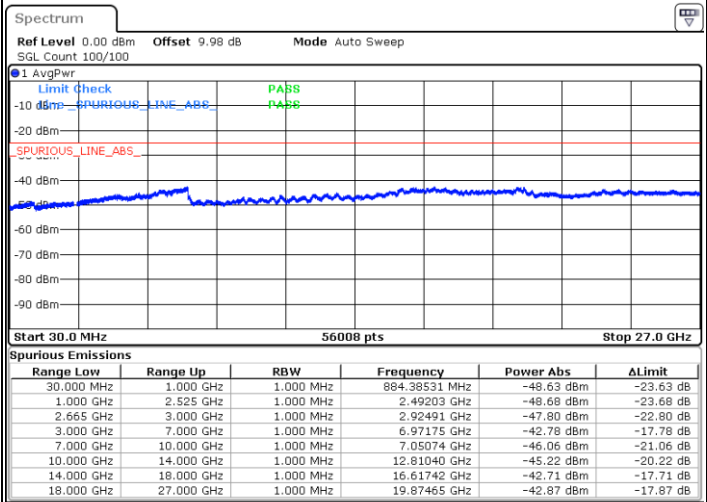
QPSK

Lowest Channel

Middle Channel

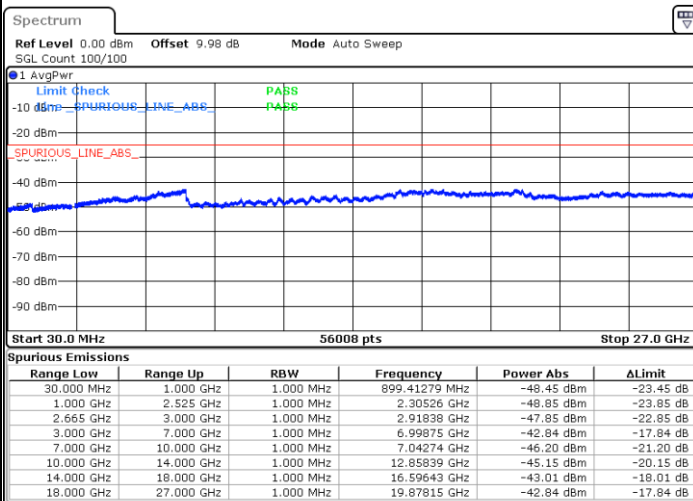


Date: 24 SEP 2019 10:37:26



Date: 24 SEP 2019 10:56:09

Highest Channel



Date: 24 SEP 2019 10:52:59

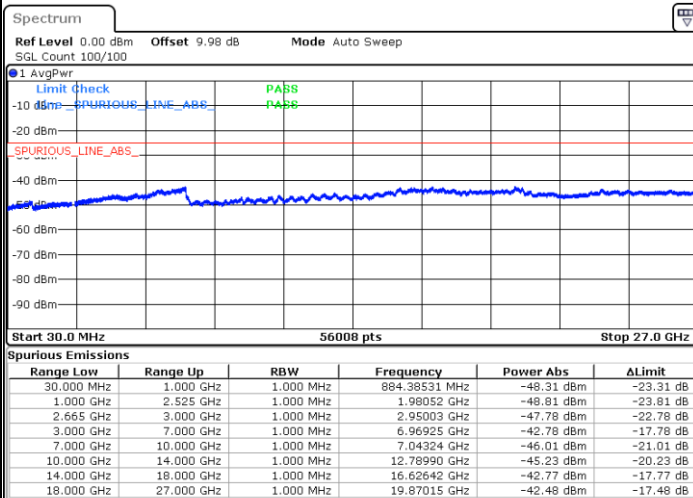


LTE Band 38 / 15MHz+15MHz

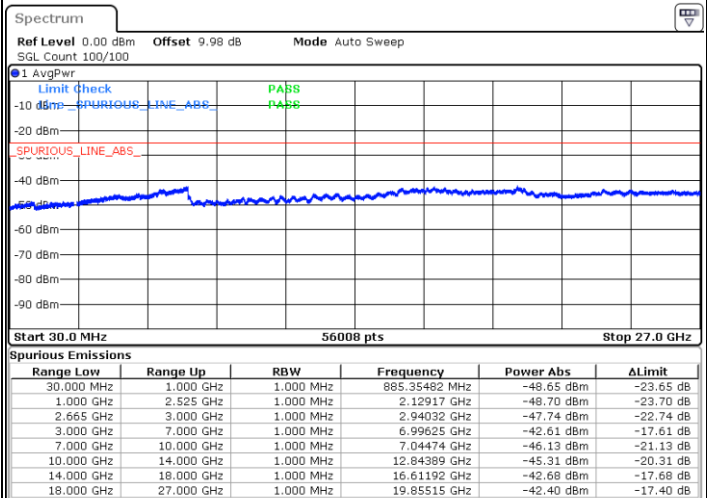
16QAM

Lowest Channel

Middle Channel

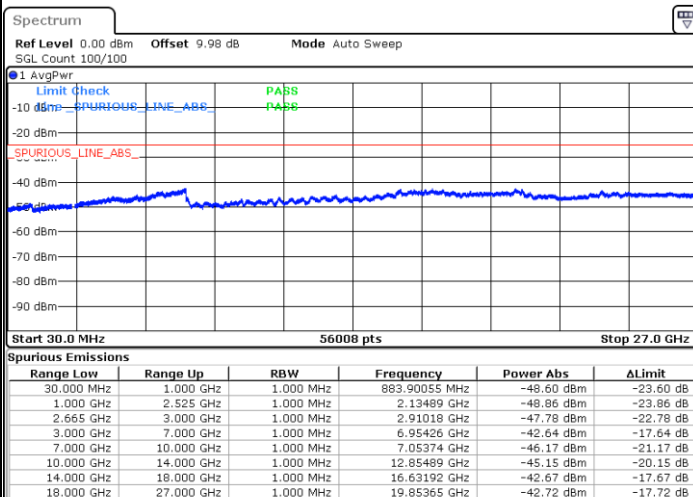


Date: 24 SEP 2019 10:38:53



Date: 24 SEP 2019 10:57:17

Highest Channel



Date: 24 SEP 2019 10:50:33

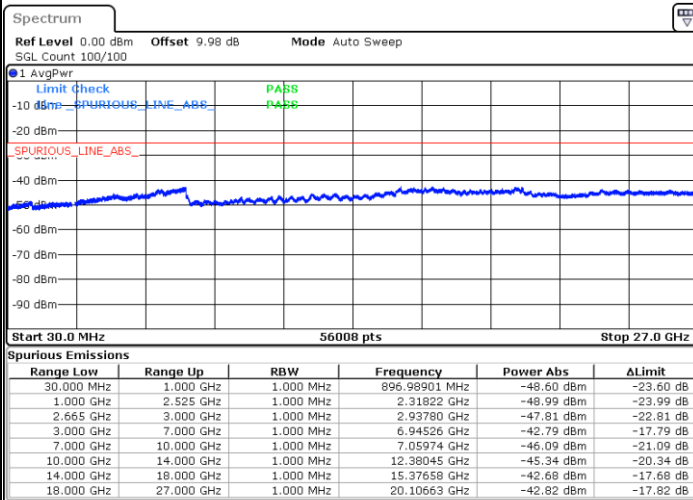


LTE Band 38 / 15MHz+15MHz

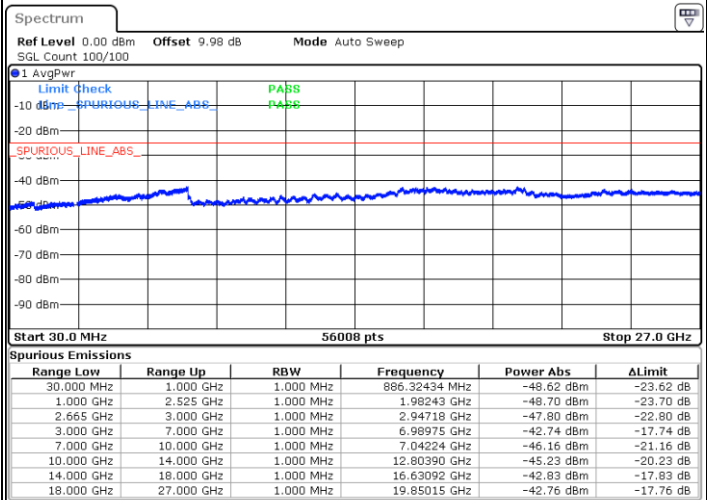
64QAM

Lowest Channel

Middle Channel

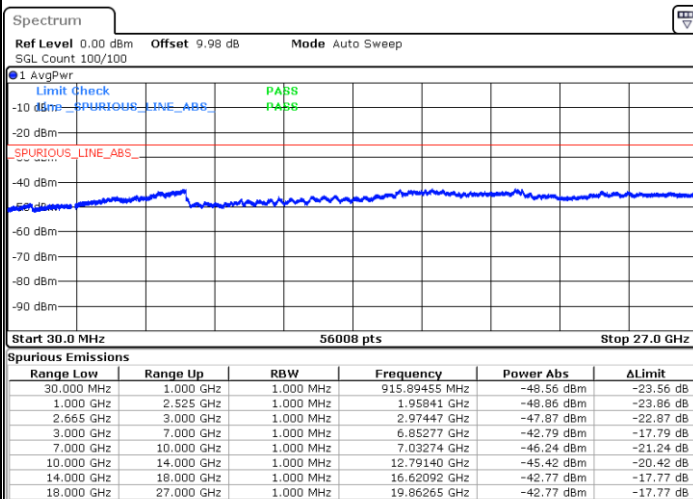


Date: 24 SEP 2019 10:40:01



Date: 24 SEP 2019 10:58:26

Highest Channel



Date: 24 SEP 2019 10:51:50

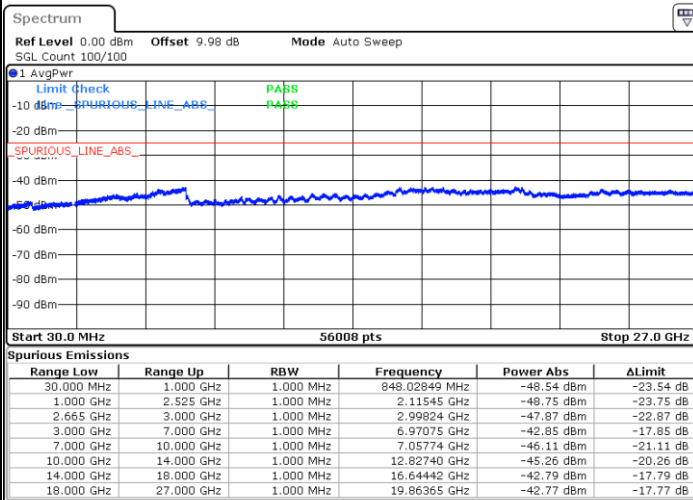


LTE Band 38 / 20MHz+20MHz

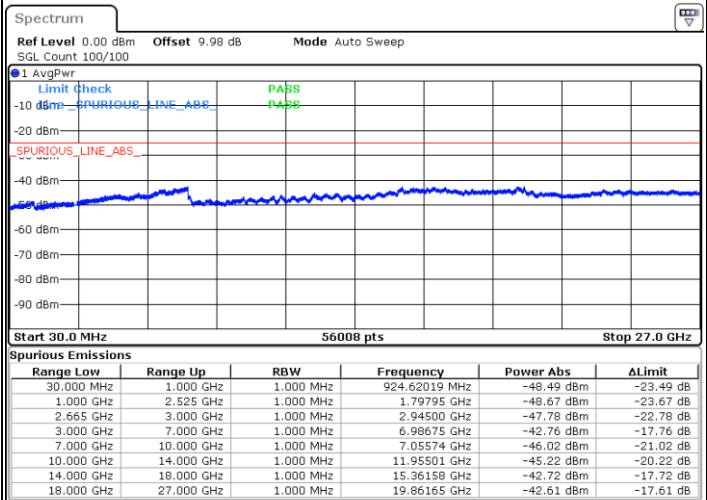
QPSK

Lowest Channel

Middle Channel

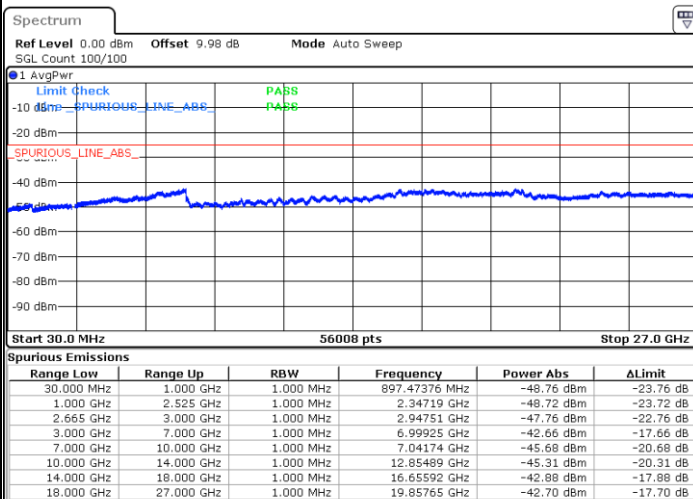


Date: 23 SEP 2019 18:13:30



Date: 23 SEP 2019 18:19:21

Highest Channel



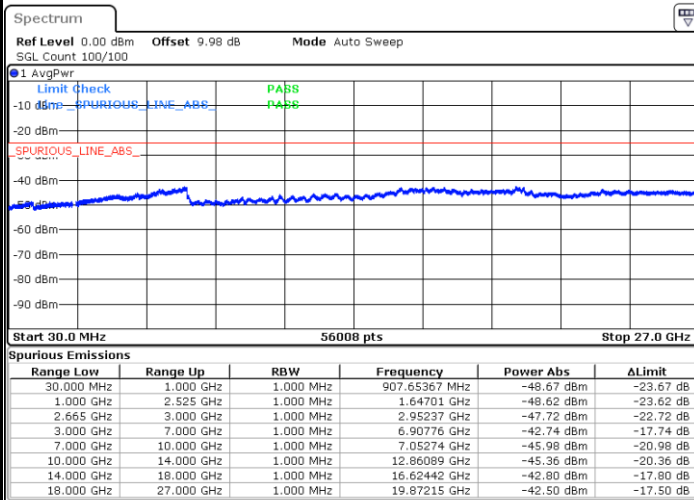
Date: 23 SEP 2019 18:05:52



LTE Band 38 / 20MHz+20MHz

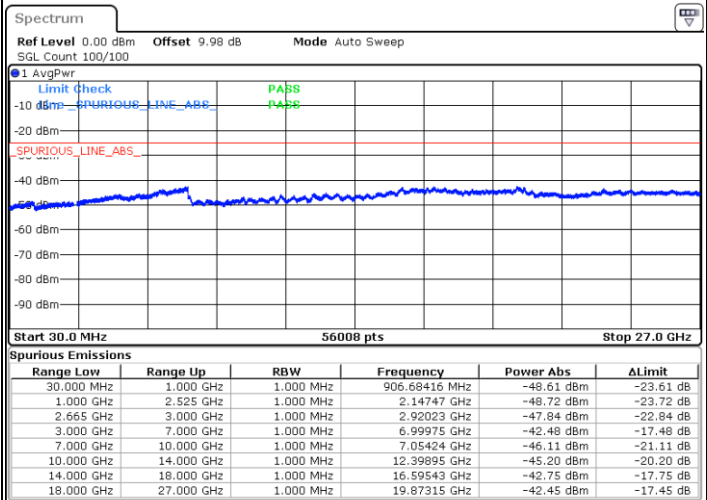
16QAM

Lowest Channel



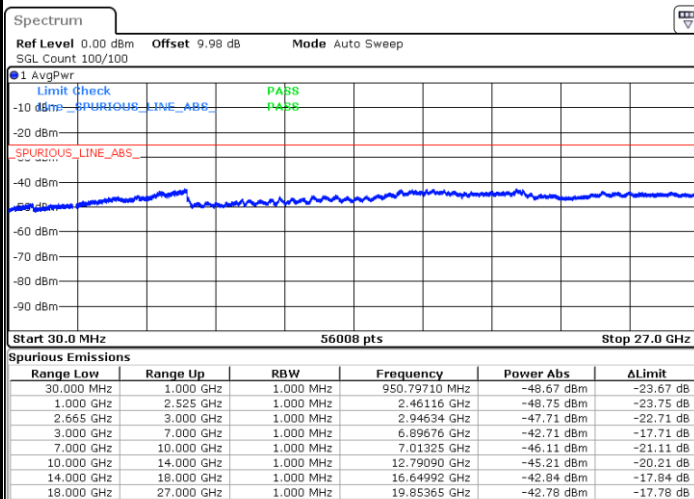
Date: 23 SEP 2019 18:14:36

Middle Channel



Date: 23 SEP 2019 18:18:13

Highest Channel



Date: 23 SEP 2019 18:04:40

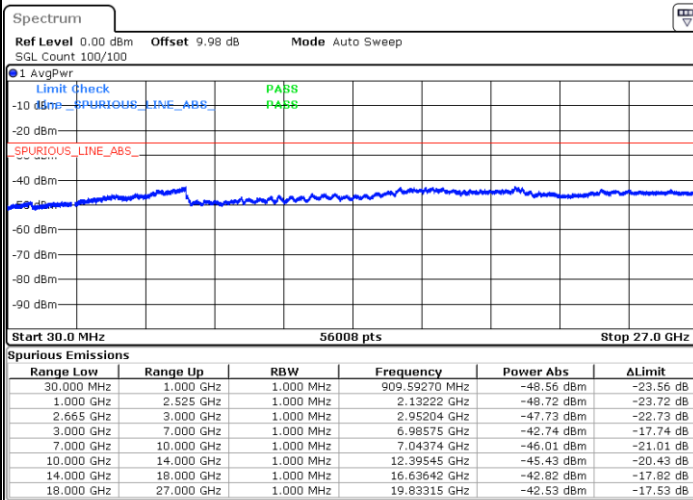


LTE Band 38 / 20MHz+20MHz

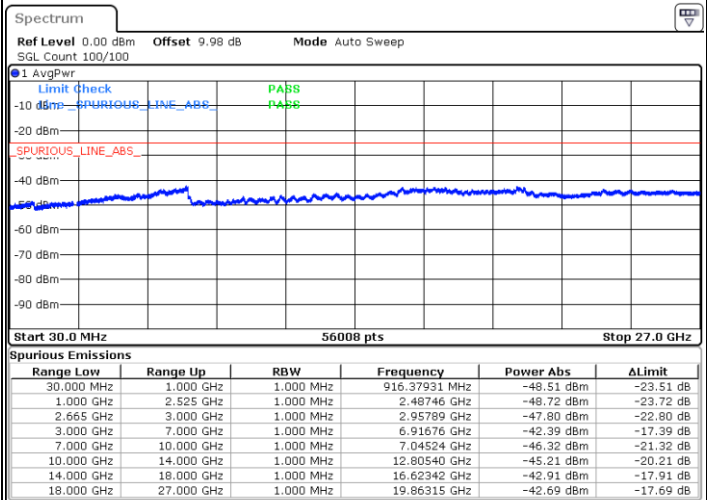
64QAM

Lowest Channel

Middle Channel

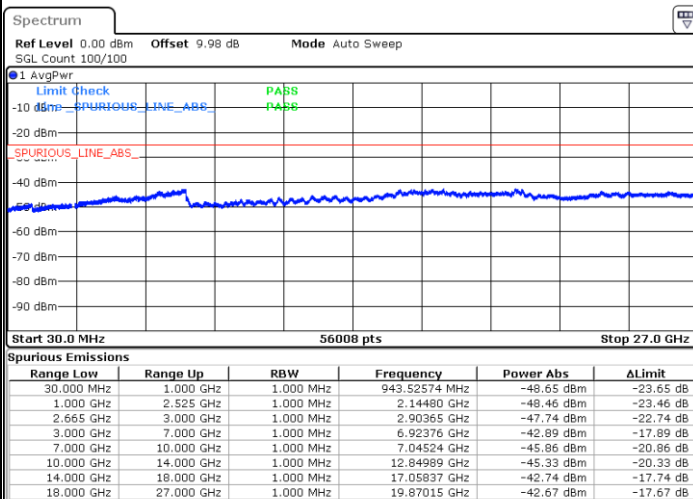


Date: 23 SEP 2019 18:16:00



Date: 23 SEP 2019 18:17:15

Highest Channel



Date: 23 SEP 2019 18:03:07

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	0.0001	PASS
40	Normal Voltage	0.0016	
30	Normal Voltage	0.0051	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0056	
0	Normal Voltage	0.0056	
-10	Normal Voltage	0.0049	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0051	
20	Normal Voltage	0.0060	
20	Battery End Point	0.0012	

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	0.0001	PASS
40	Normal Voltage	0.0014	
30	Normal Voltage	0.0052	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0056	
0	Normal Voltage	0.0056	
-10	Normal Voltage	0.0049	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0051	
20	Normal Voltage	0.0060	
20	Battery End Point	0.0012	

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 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	0.0053	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0051	
0	Normal Voltage	0.0052	
-10	Normal Voltage	0.0049	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0051	
20	Normal Voltage	0.0066	
20	Battery End Point	0.0012	

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 26 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0001	PASS
40	Normal Voltage	0.0015	
30	Normal Voltage	0.0053	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0053	
0	Normal Voltage	0.0052	
-10	Normal Voltage	0.0049	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0012	
20	Maximum Voltage	0.0051	
20	Normal Voltage	0.0063	
20	Battery End Point	0.0012	

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	0.0008	PASS
40	Normal Voltage	0.0003	
30	Normal Voltage	0.0009	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0005	
0	Normal Voltage	0.0010	
-10	Normal Voltage	0.0013	
-20	Normal Voltage	0.0000	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0003	
20	Normal Voltage	0.0007	
20	Battery End Point	0.0001	

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.

**For CA**

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20+20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.03	PASS
40	Normal Voltage	0.02	
30	Normal Voltage	-0.01	
20(Ref.)	Normal Voltage	0.02	
10	Normal Voltage	0.01	
0	Normal Voltage	-0.01	
-10	Normal Voltage	0.02	
-20	Normal Voltage	-0.01	
-30	Normal Voltage	-0.01	
20	Maximum Voltage	0.02	
20	Normal Voltage	0.03	
20	Battery End Point	-0.01	

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 41 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20+20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.02	PASS
40	Normal Voltage	0.03	
30	Normal Voltage	-0.02	
20(Ref.)	Normal Voltage	0.03	
10	Normal Voltage	-0.02	
0	Normal Voltage	-0.01	
-10	Normal Voltage	0.02	
-20	Normal Voltage	0.01	
-30	Normal Voltage	-0.02	
20	Maximum Voltage	0.01	
20	Normal Voltage	0.02	
20	Battery End Point	-0.02	

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

Pre-scanned in three orthogonal panels, X, Y, Z for WWAN Bottom / Top Antenna. The worse cases (Bottom Antenna) were recorded in this report

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)
Middle	3741	-56.77	-13	-43.77	-69.03	2.641	14.90	H
	5613	-55.33	-13	-42.33	-67.19	2.94	14.80	H
	7488	-49.80	-13	-36.80	-59.57	3.39	13.16	H
	3741	-57.38	-13	-44.38	-69.64	2.64	14.90	V
	5613	-51.74	-13	-38.74	-63.60	2.94	14.80	V
	7488	-49.74	-13	-36.74	-59.51	3.39	13.16	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)
Middle	3447	-61.78	-13	-48.78	-72.52	2.604	13.34	H
	5172	-56.35	-13	-43.35	-66.86	3.011	13.52	H
	6900	-52.75	-13	-39.75	-62.95	3.271	13.47	H
	3447	-61.17	-13	-48.17	-71.91	2.604	13.34	V
	5172	-56.51	-13	-43.51	-67.02	3.011	13.52	V
	6900	-52.49	-13	-39.49	-62.69	3.271	13.47	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)
Middle	5052	-52.07	-25	-27.07	-62.28	3.03	13.24	H
	7580	-53.03	-25	-28.03	-62.48	3.56	13.01	H
	10100	-49.44	-25	-24.44	-58.96	3.92	13.44	H
	12630	-49.74	-25	-24.74	-59.66	4.44	14.36	H
	15160	-50.97	-25	-25.97	-61.34	4.77	15.14	H
	5052	-51.41	-25	-26.41	-61.62	3.03	13.24	V
	7580	-53.02	-25	-28.02	-62.47	3.56	13.01	V
	10100	-54.86	-25	-29.86	-64.38	3.92	13.44	V
	12630	-56.24	-25	-31.24	-66.16	4.44	14.36	V
	15160	-51.76	-25	-26.76	-62.13	4.77	15.14	V

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

LTE Band 26 / 15MHz / 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	1660	-67.75	-13	-54.75	-74.72	1.58	10.70	H
	2490	-41.18	-13	-28.18	-49.43	2.102	12.50	H
	3318	-64.61	-13	-51.61	-73.50	2.856	13.90	H
	1660	-67.15	-13	-54.15	-74.12	1.58	10.70	V
	2490	-38.57	-13	-25.57	-46.82	2.10	12.50	V
	3318	-64.65	-13	-51.65	-73.54	2.86	13.90	V

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

LTE Band 38 / 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)
Middle	5172	-62.09	-25	-37.09	-72.30	3.03	13.24	H
	7760	-57.09	-25	-32.09	-66.54	3.56	13.01	H
	10340	-56.41	-25	-31.41	-65.93	3.92	13.44	H
	5172	-66.07	-25	-41.07	-76.28	3.03	13.24	V
	7760	-59.05	-25	-34.05	-68.50	3.56	13.01	V
	10340	-56.76	-25	-31.76	-66.28	3.92	13.44	V

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

**For CA**

LTE Band 7 / 20MHz +20 MHz / 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	5032	-62.07	-25	-37.07	-72.28	3.03	13.24	H
	7548	-45.87	-25	-20.87	-55.32	3.56	13.01	H
	10060	-55.83	-25	-30.83	-65.35	3.92	13.44	H
	5032	-64.22	-25	-39.22	-74.43	3.03	13.24	V
	7548	-57.84	-25	-32.84	-67.29	3.56	13.01	V
	10060	-57.76	-25	-32.76	-67.28	3.92	13.44	V

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

LTE Band 38 / 20MHz +20 MHz / 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	5152	-63.92	-25	-38.92	-74.13	3.03	13.24	H
	7728	-45.60	-25	-20.60	-55.05	3.56	13.01	H
	10300	-56.02	-25	-31.02	-65.54	3.92	13.44	H
	5152.38	-65.53	-25	-40.53	-75.74	3.03	13.24	V
	7728	-53.91	-25	-28.91	-63.36	3.56	13.01	V
	10300	-56.92	-25	-31.92	-66.44	3.92	13.44	V

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