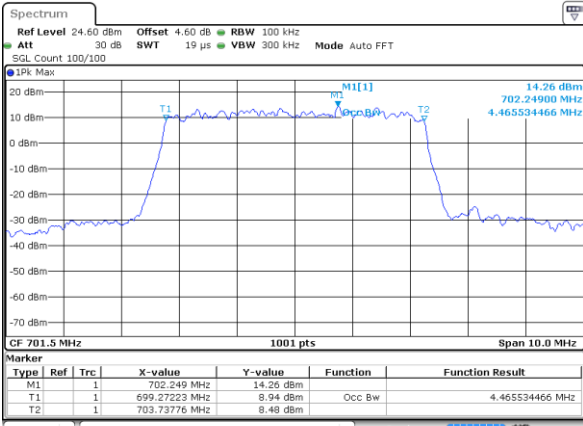




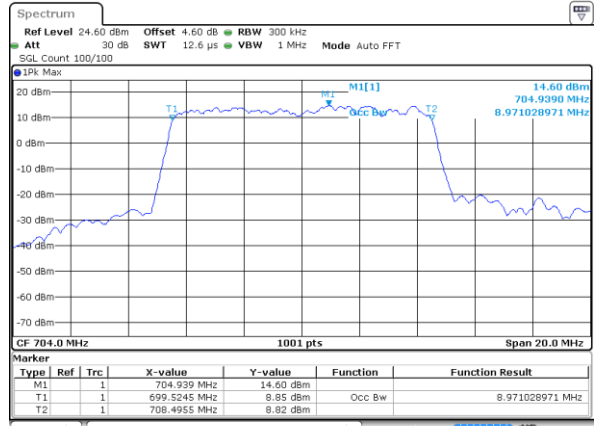
LTE Band 12

Lowest Channel / 5MHz / 64QAM



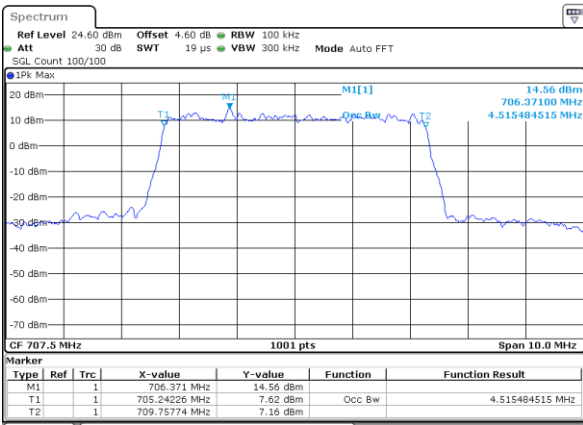
Date: 14 NOV 2019 00:06:41

Lowest Channel / 10MHz / 64QAM



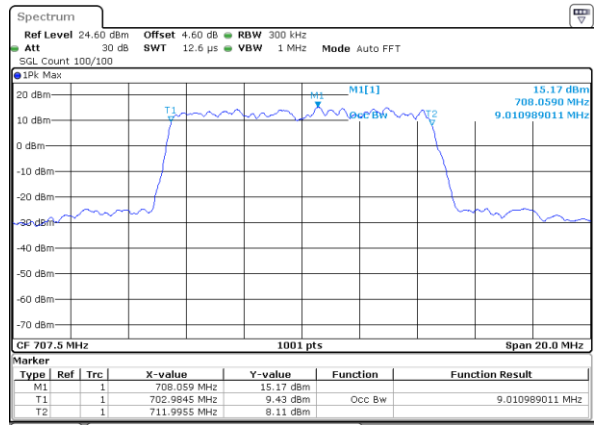
Date: 14 NOV 2019 00:17:37

Middle Channel / 5MHz / 64QAM



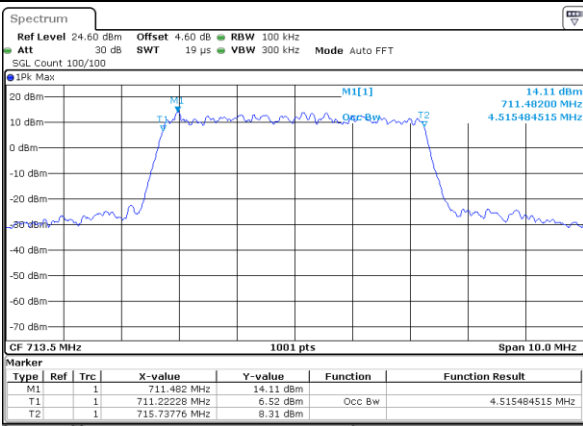
Date: 14 NOV 2019 00:07:01

Middle Channel / 10MHz / 64QAM



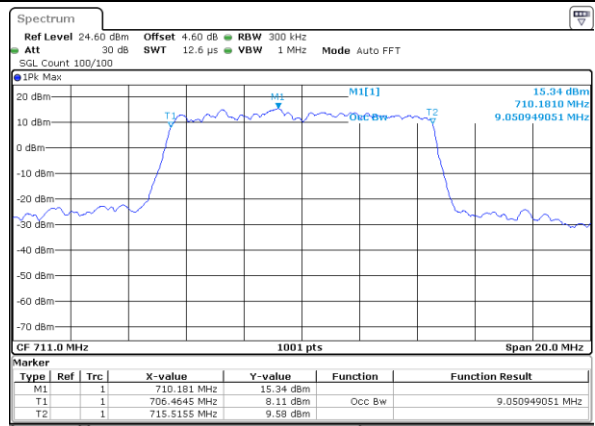
Date: 14 NOV 2019 00:17:57

Highest Channel / 5MHz / 64QAM



Date: 14 NOV 2019 00:07:21

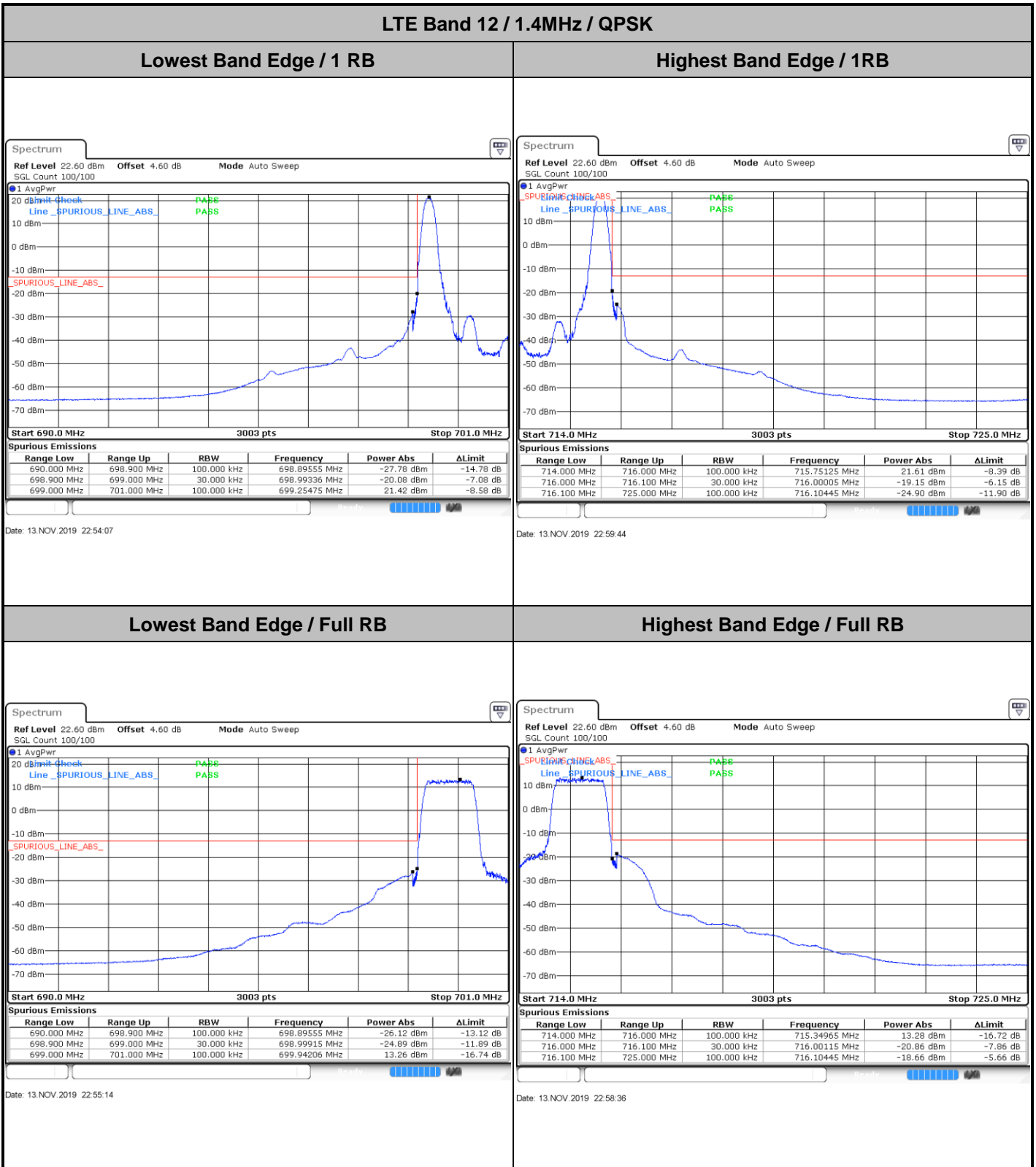
Highest Channel / 10MHz / 64QAM



Date: 14 NOV 2019 00:18:17



# Conducted Band Edge





LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



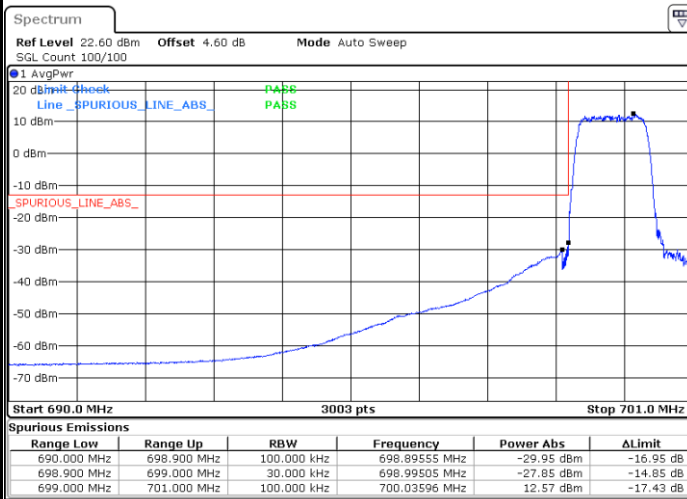
Date: 13.NOV.2019 22:53:00

Highest Band Edge / 1 RB



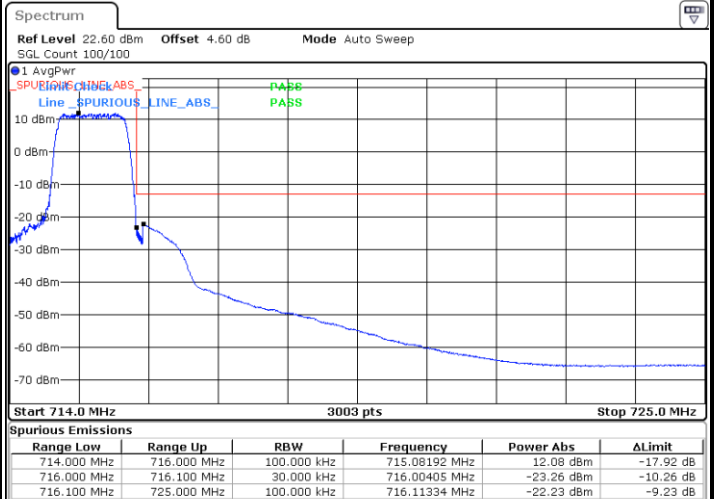
Date: 13.NOV.2019 23:00:51

Lowest Band Edge / Full RB



Date: 13.NOV.2019 22:56:22

Highest Band Edge / Full RB

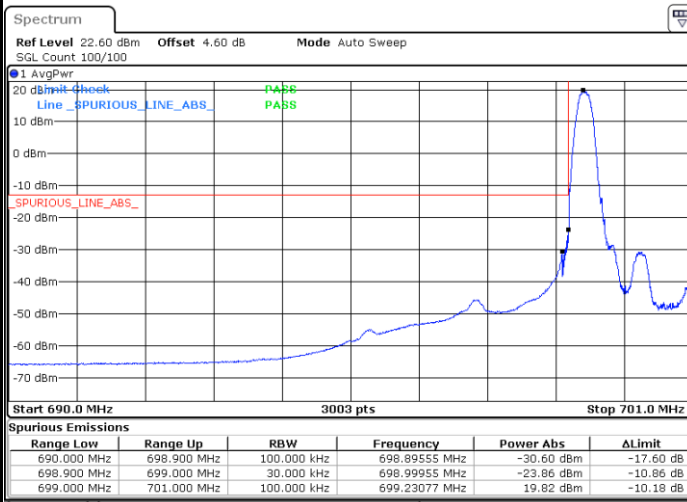


Date: 13.NOV.2019 22:57:29



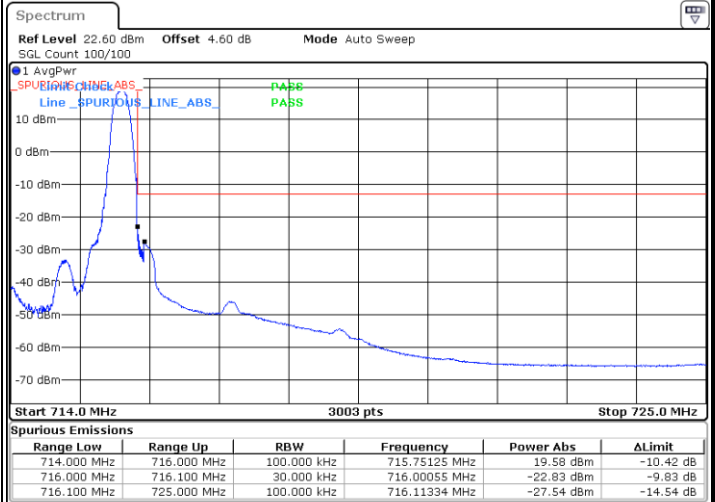
LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



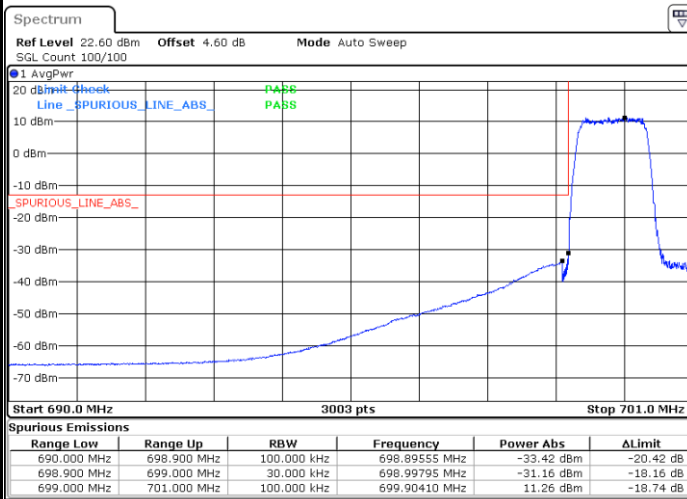
Date: 13.NOV.2019 23:54:29

Highest Band Edge / 1 RB



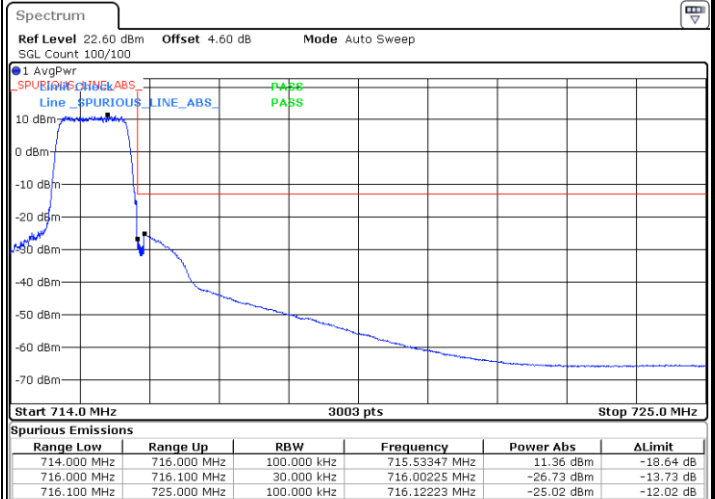
Date: 13.NOV.2019 23:52:15

Lowest Band Edge / Full RB



Date: 13.NOV.2019 23:55:37

Highest Band Edge / Full RB

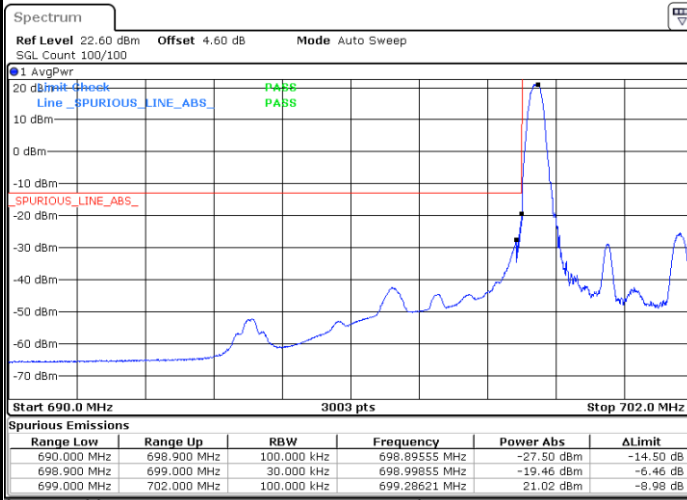


Date: 13.NOV.2019 23:53:22



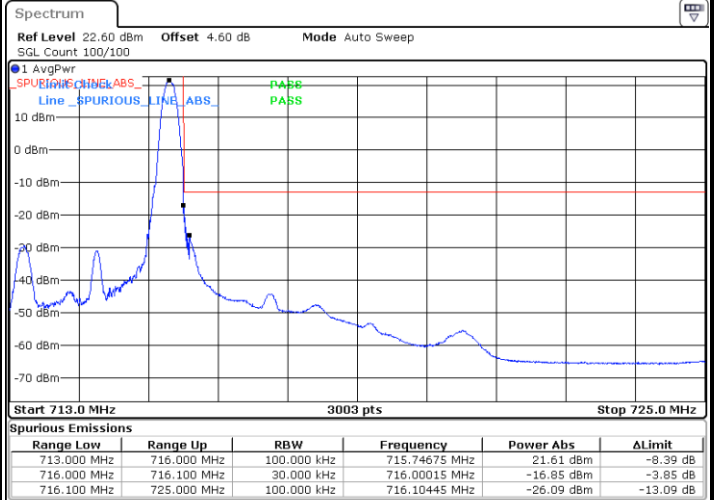
LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



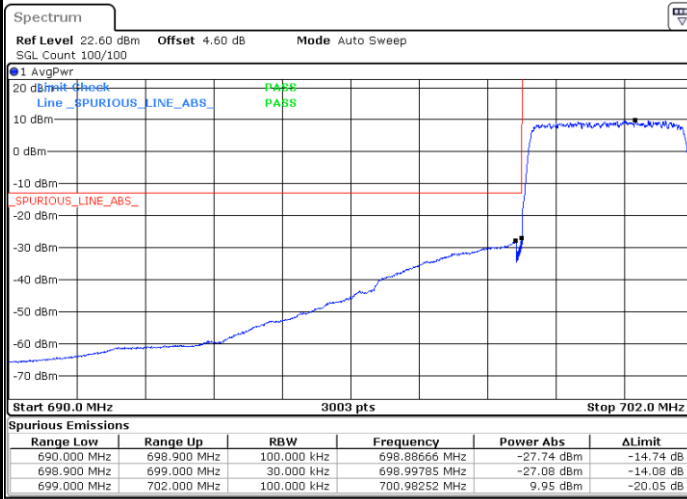
Date: 13.NOV.2019 23:10:32

Highest Band Edge / 1 RB



Date: 13.NOV.2019 23:16:09

Lowest Band Edge / Full RB



Date: 13.NOV.2019 23:11:39

Highest Band Edge / Full RB

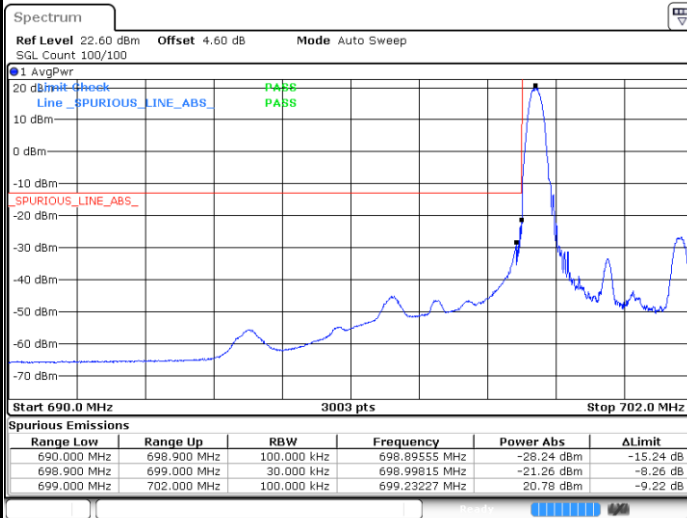


Date: 13.NOV.2019 23:15:01



LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



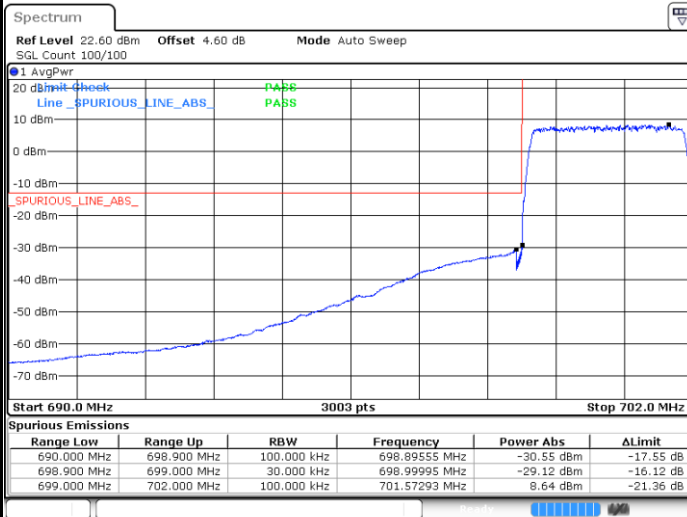
Date: 13.NOV.2019 23:09:24

Highest Band Edge / 1 RB



Date: 13.NOV.2019 23:17:16

Lowest Band Edge / Full RB



Date: 13.NOV.2019 23:12:47

Highest Band Edge / Full RB

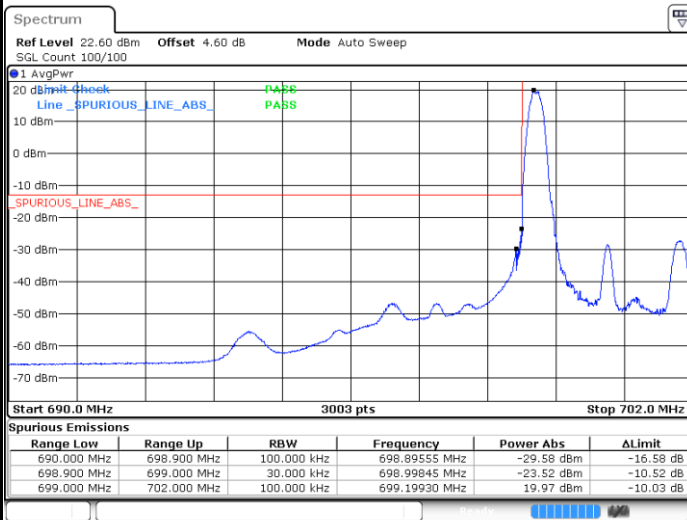


Date: 13.NOV.2019 23:13:54



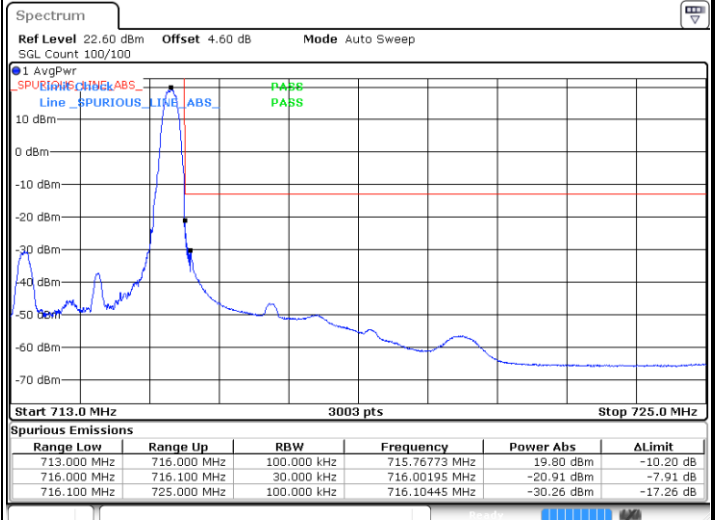
LTE Band 12 / 3MHz / 64QAM

Lowest Band Edge / 1 RB



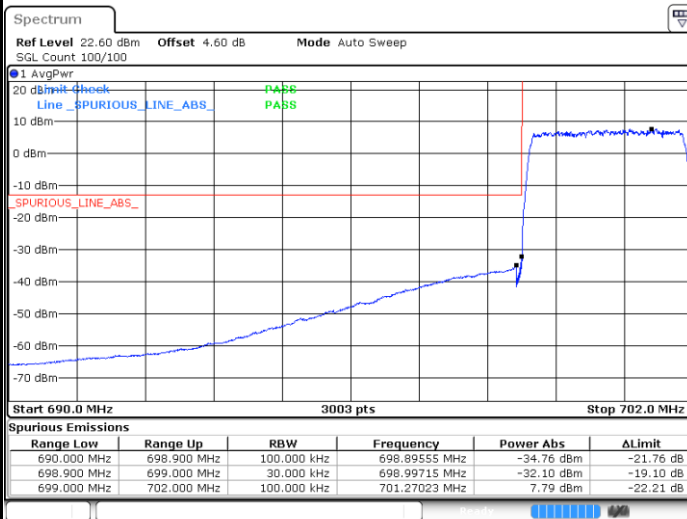
Date: 14.NOV.2019 00:03:10

Highest Band Edge / 1 RB



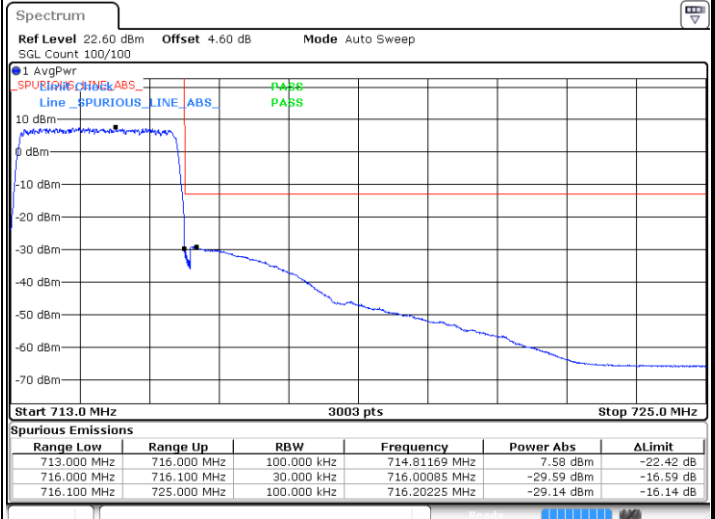
Date: 14.NOV.2019 00:06:32

Lowest Band Edge / Full RB



Date: 14.NOV.2019 00:04:17

Highest Band Edge / Full RB

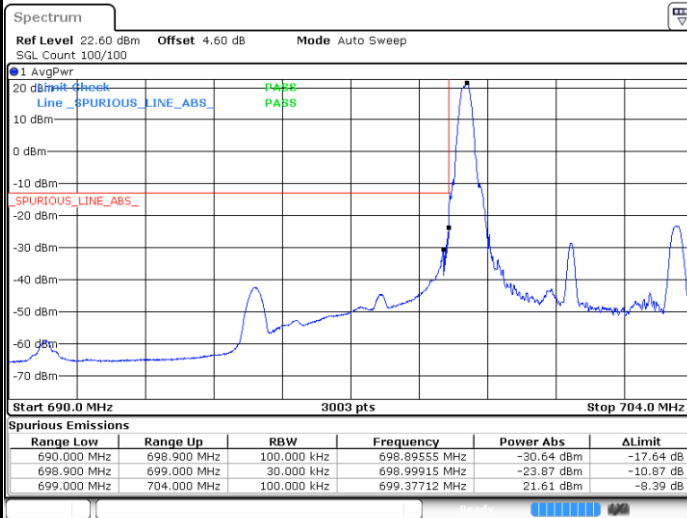


Date: 14.NOV.2019 00:05:24



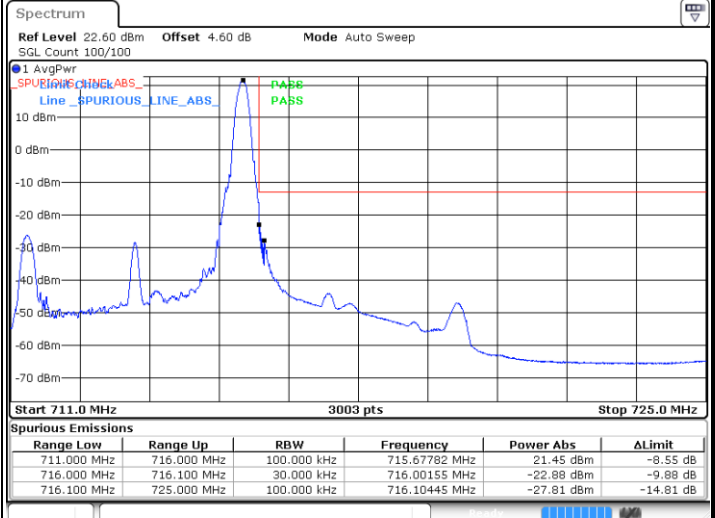
LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1 RB



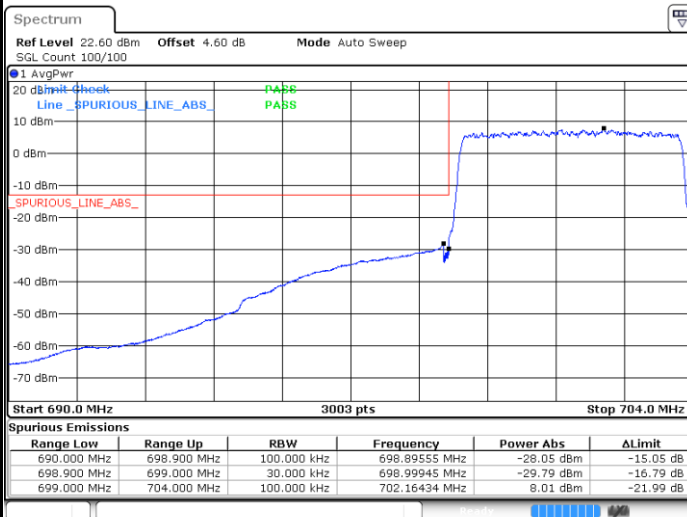
Date: 13.NOV.2019 23:26:57

Highest Band Edge / 1 RB



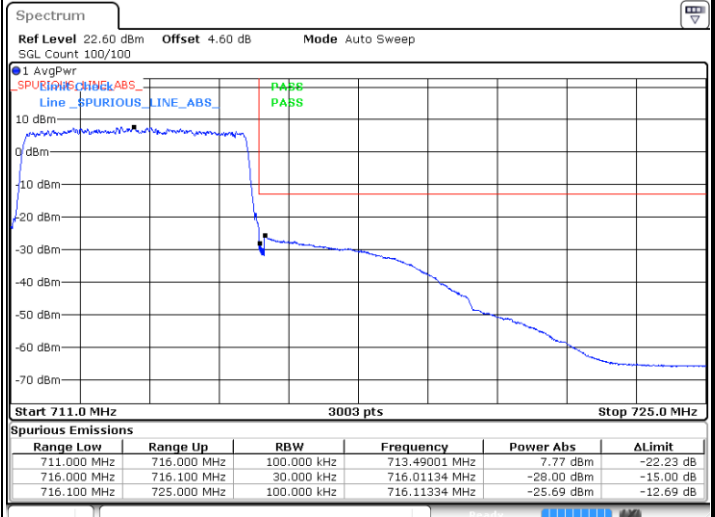
Date: 13.NOV.2019 23:32:34

Lowest Band Edge / Full RB



Date: 13.NOV.2019 23:28:05

Highest Band Edge / Full RB



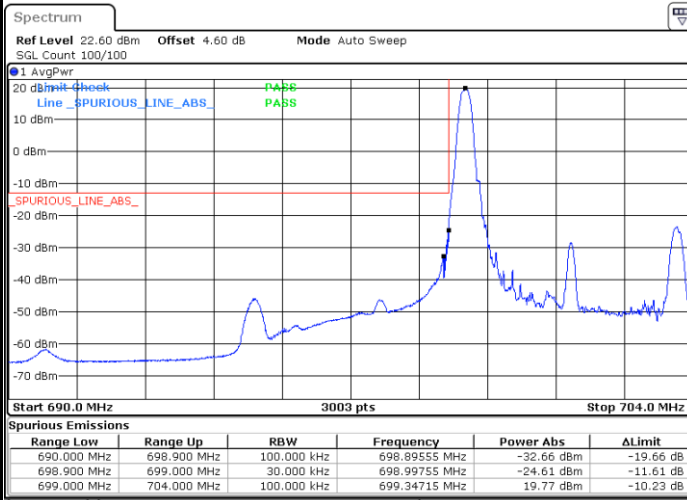
Date: 13.NOV.2019 23:31:27





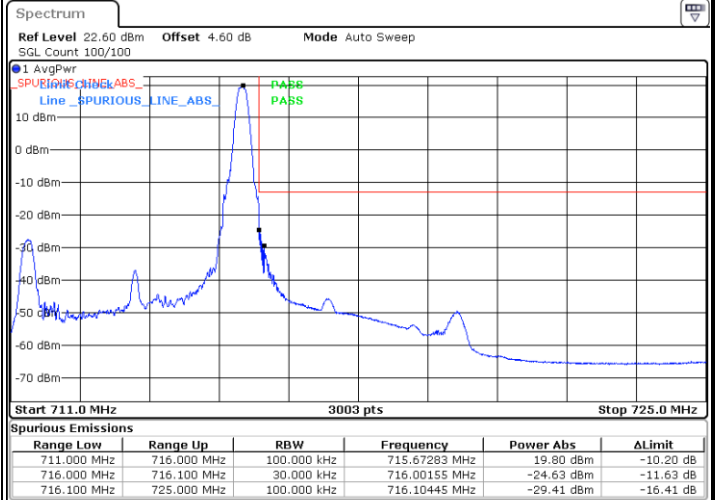
LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1RB



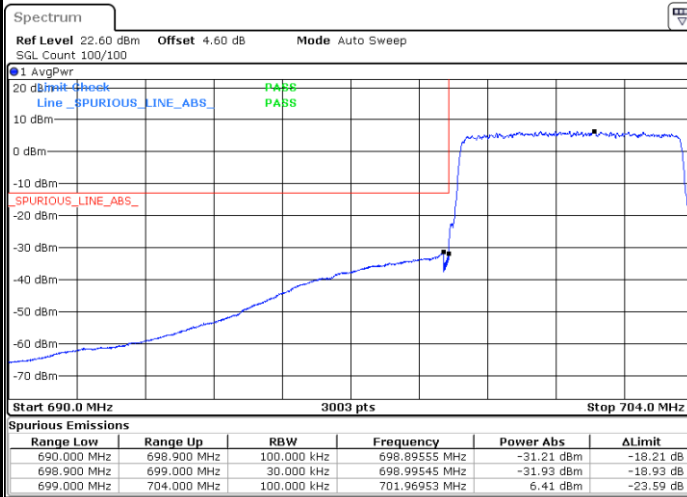
Date: 13.NOV.2019 23:25:50

Highest Band Edge / 1 RB



Date: 13.NOV.2019 23:33:41

Lowest Band Edge / Full RB



Date: 13.NOV.2019 23:29:12

Highest Band Edge / Full RB

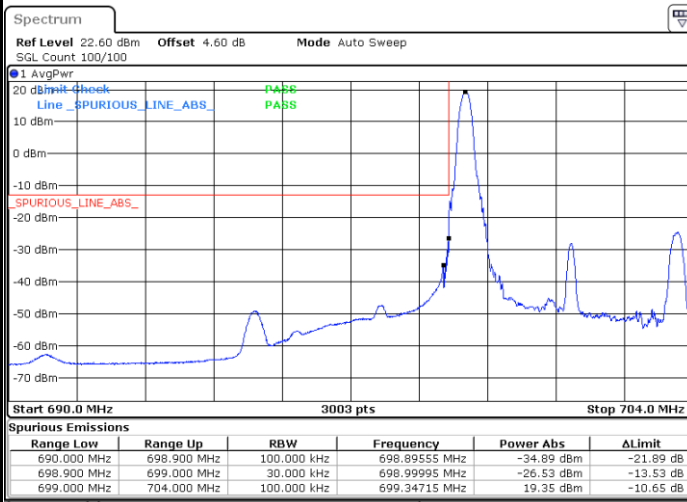


Date: 13.NOV.2019 23:30:19



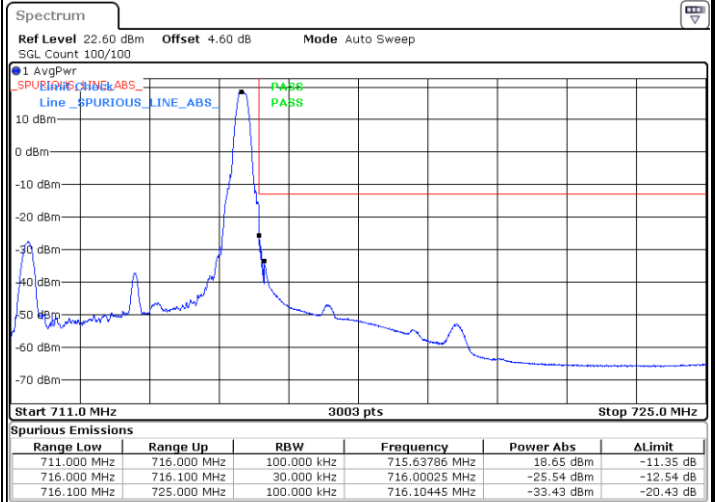
LTE Band 12 / 5MHz / 64QAM

Lowest Band Edge / 1RB



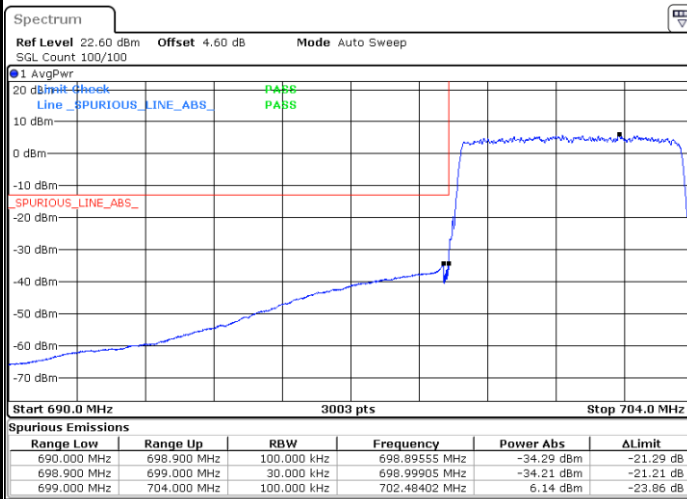
Date: 14.NOV.2019 00:10:54

Highest Band Edge / 1 RB



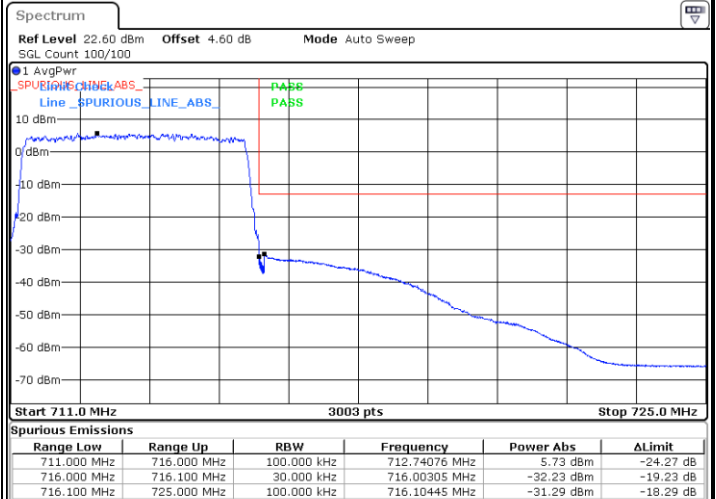
Date: 14.NOV.2019 00:09:47

Lowest Band Edge / Full RB



Date: 14.NOV.2019 00:12:01

Highest Band Edge / Full RB

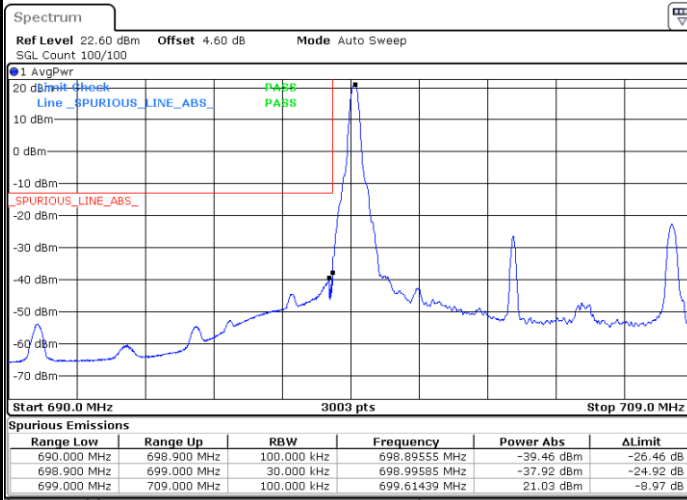


Date: 14.NOV.2019 00:08:39



LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / 1 RB



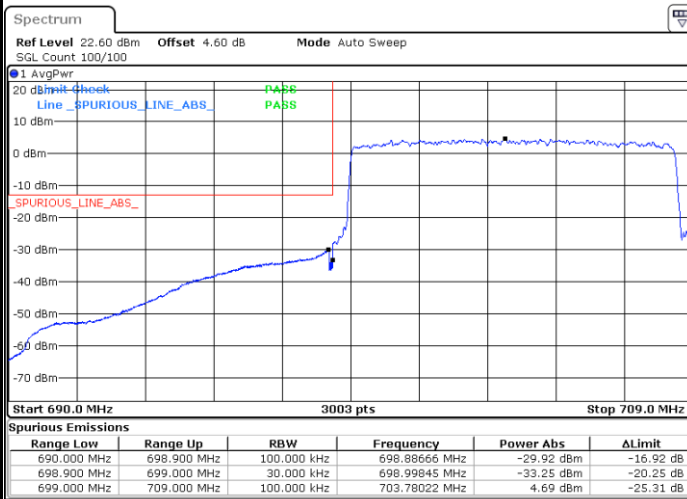
Date: 13.NOV.2019 23:43:23

Highest Band Edge / 1 RB



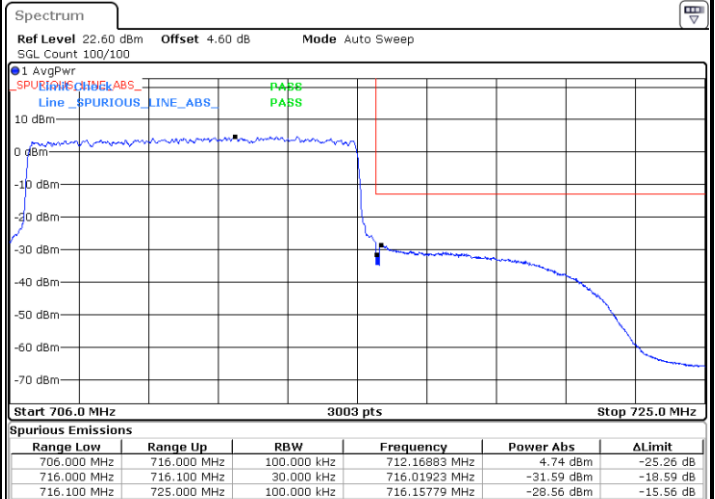
Date: 13.NOV.2019 23:49:00

Lowest Band Edge / Full RB



Date: 13.NOV.2019 23:44:30

Highest Band Edge / Full RB

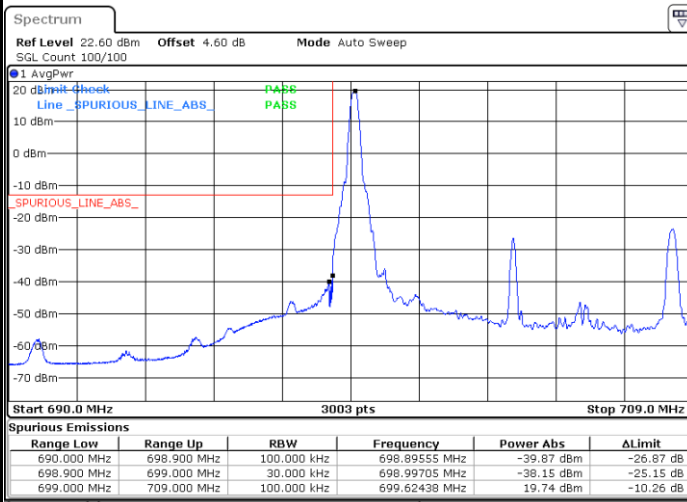


Date: 13.NOV.2019 23:47:52



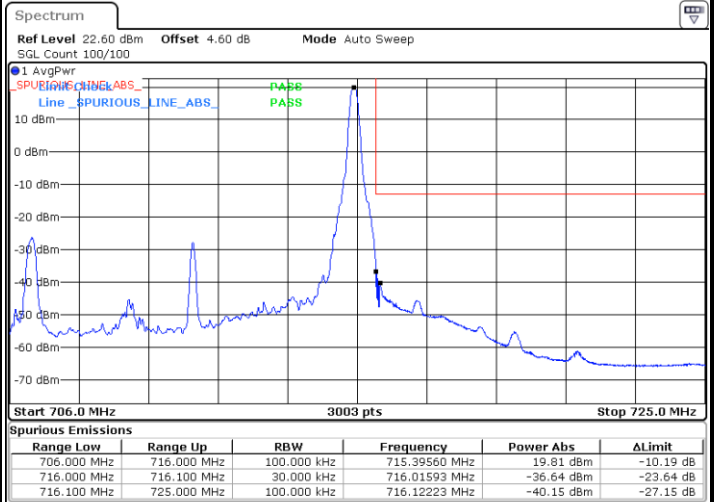
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



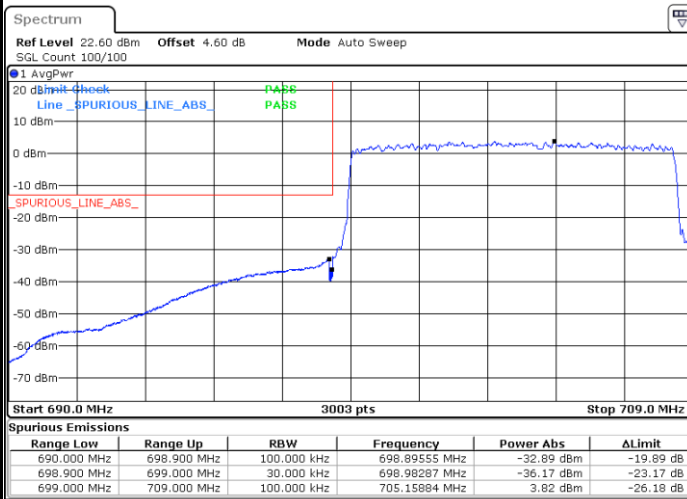
Date: 13.NOV.2019 23:42:15

Highest Band Edge / 1 RB



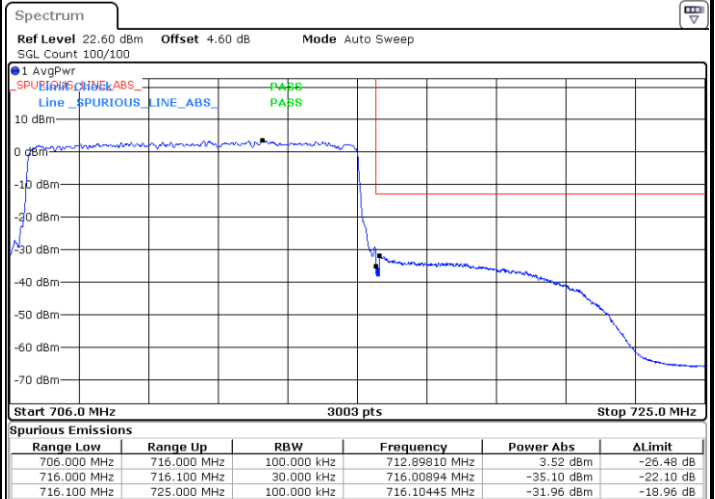
Date: 13.NOV.2019 23:50:07

Lowest Band Edge / Full RB



Date: 13.NOV.2019 23:45:37

Highest Band Edge / Full RB

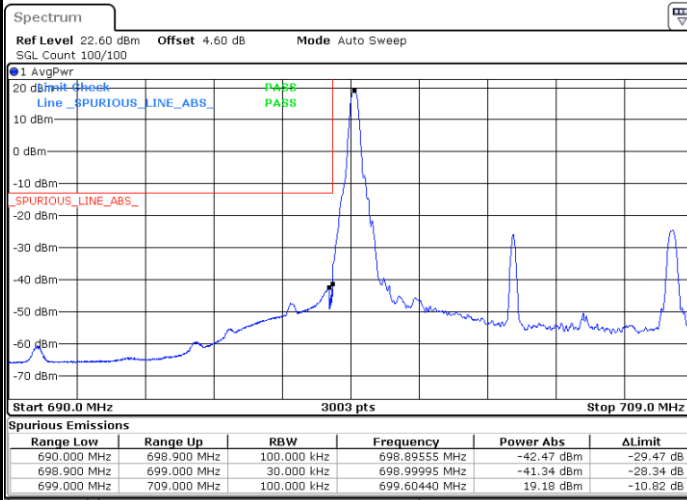


Date: 13.NOV.2019 23:46:45



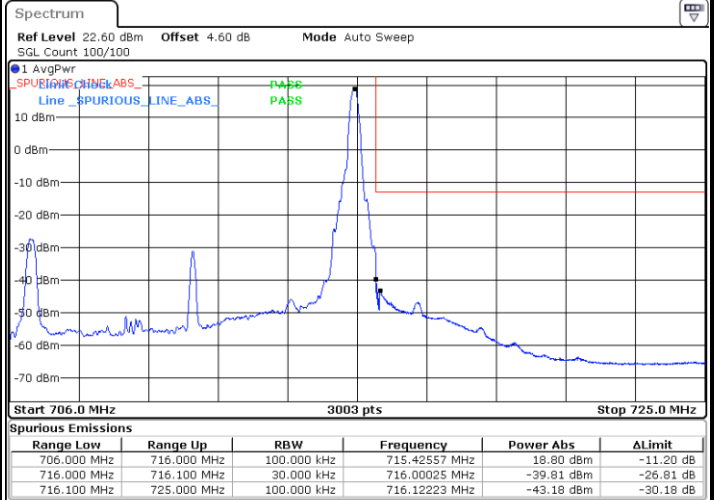
LTE Band 12 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



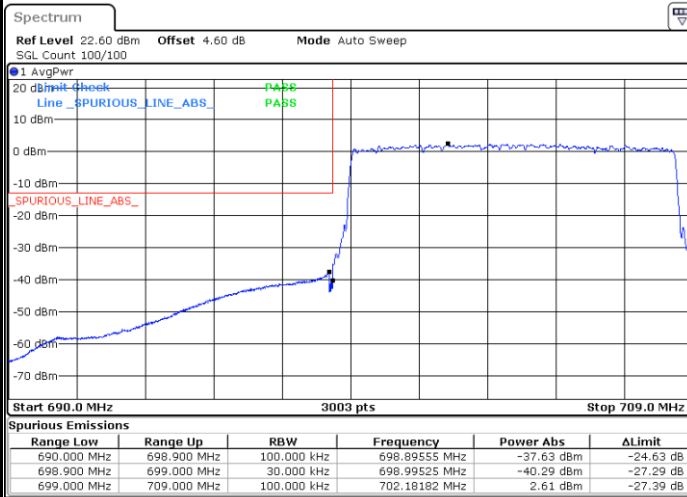
Date: 14.NOV.2019 00:21:49

Highest Band Edge / 1 RB



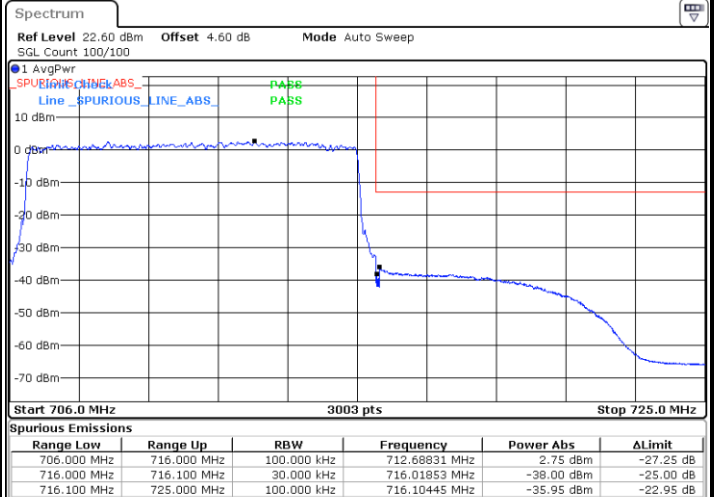
Date: 14.NOV.2019 00:20:42

Lowest Band Edge / Full RB



Date: 14.NOV.2019 00:22:57

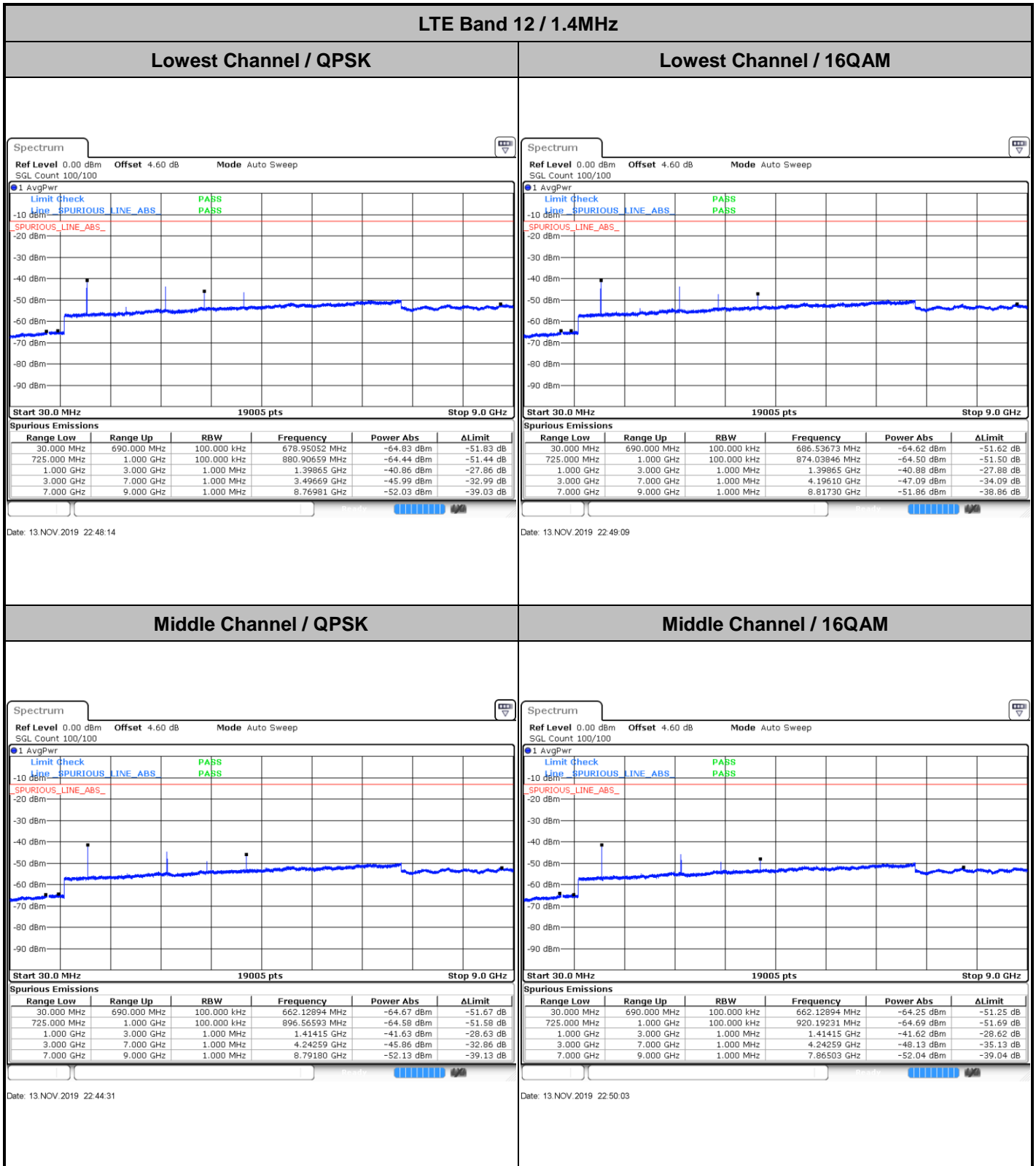
Highest Band Edge / Full RB



Date: 14.NOV.2019 00:19:35



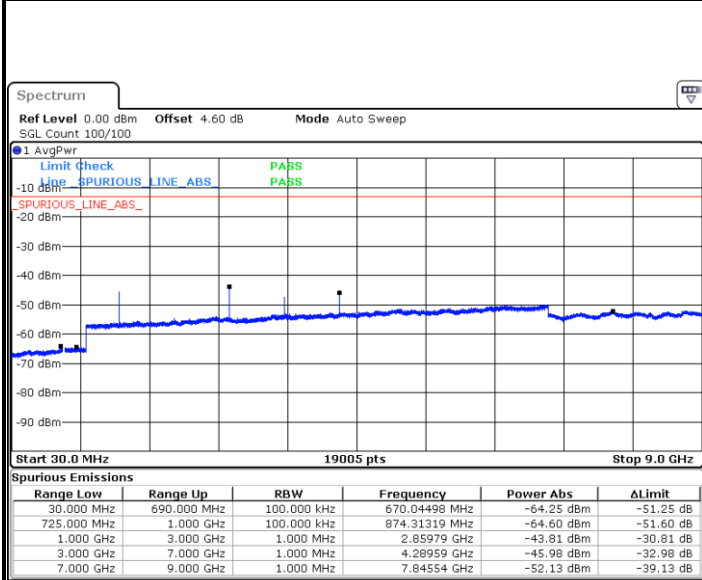
# Conducted Spurious Emission





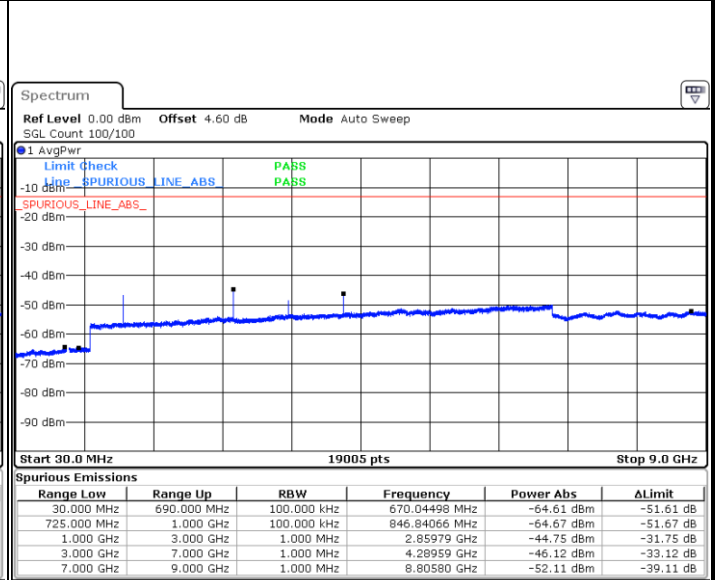
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 13.NOV.2019 22:50:57

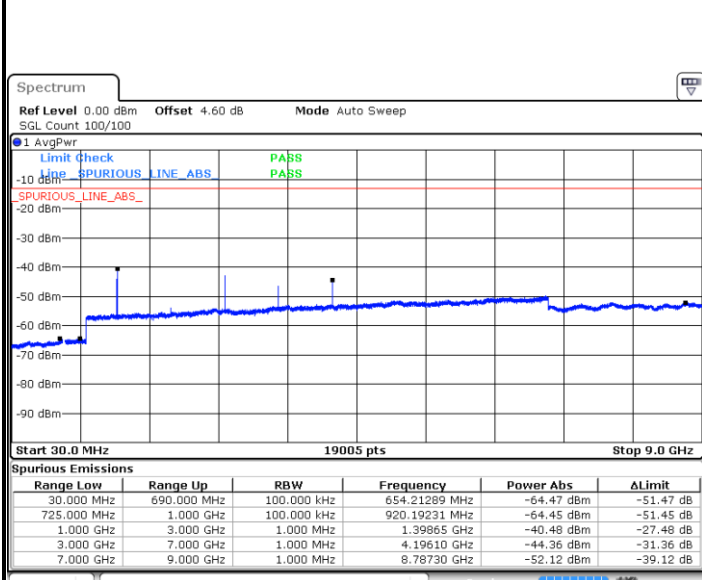
Highest Channel / 16QAM



Date: 13.NOV.2019 22:51:51

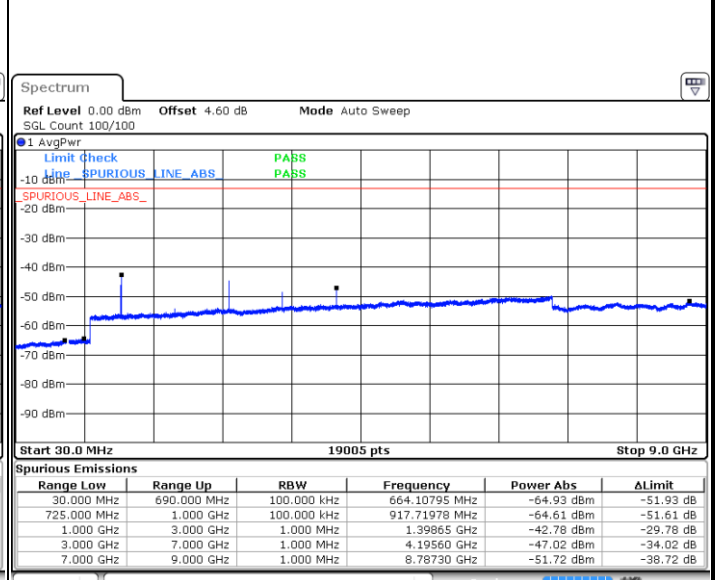
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 13.NOV.2019 23:03:45

Lowest Channel / 16QAM



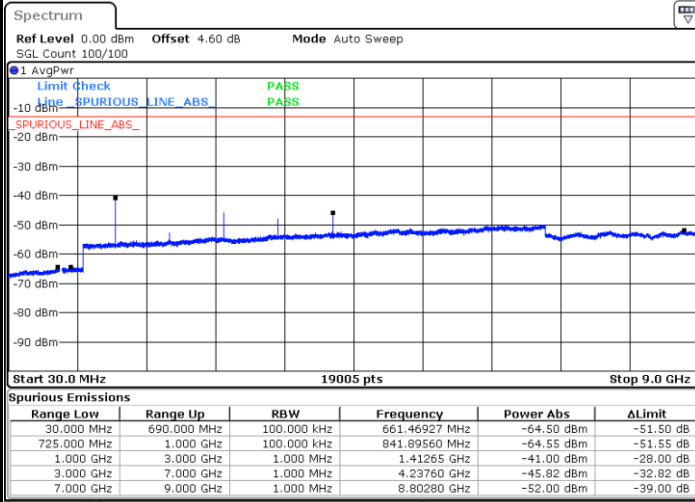
Date: 13.NOV.2019 23:04:39



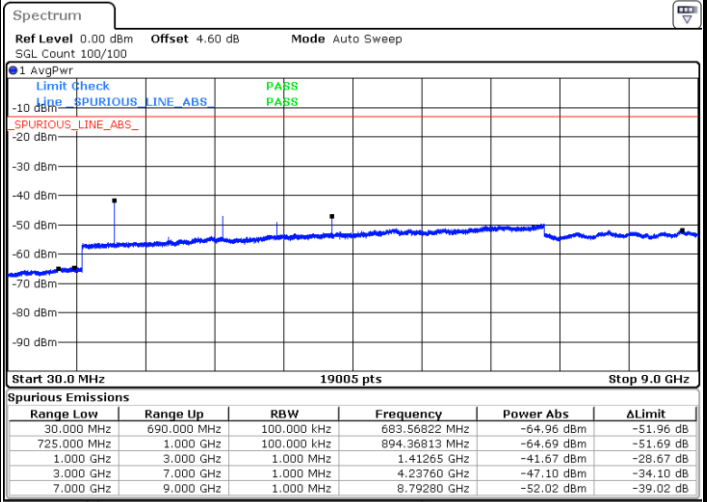
LTE Band 12 / 3MHz

Middle Channel / QPSK

Middle Channel / 16QAM



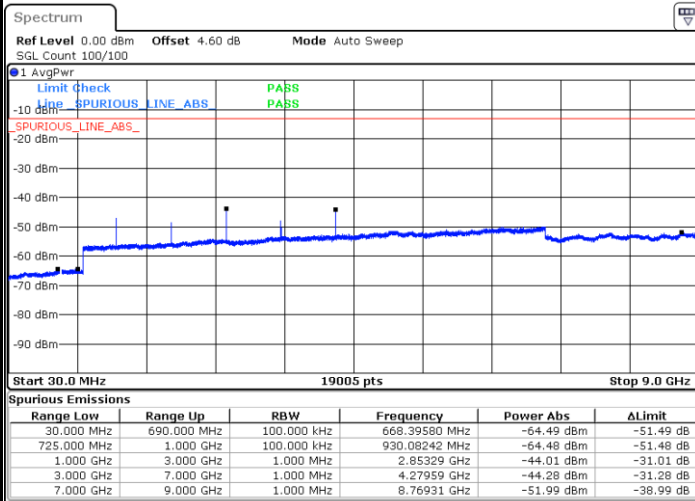
Date: 13.NOV.2019 23:06:28



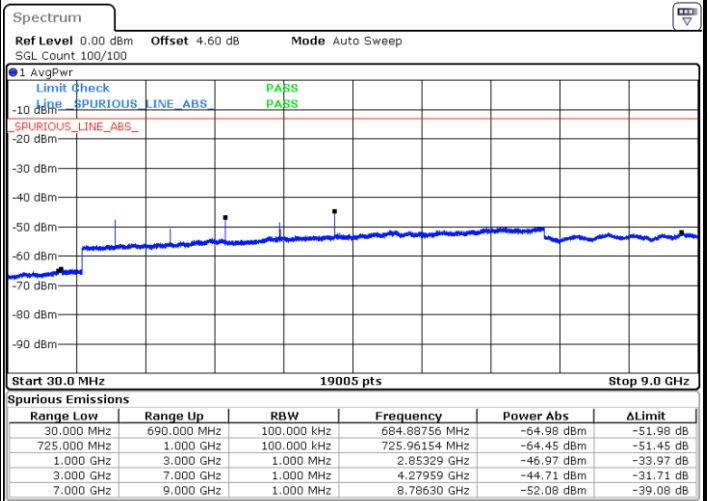
Date: 13.NOV.2019 23:05:33

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 13.NOV.2019 23:07:22



Date: 13.NOV.2019 23:08:16

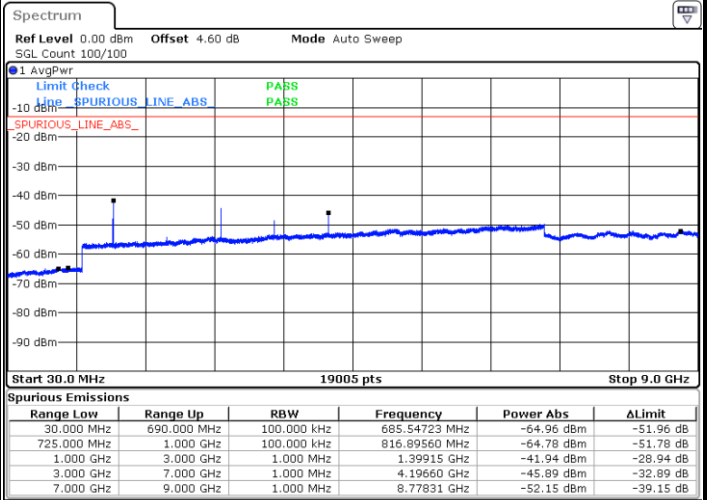
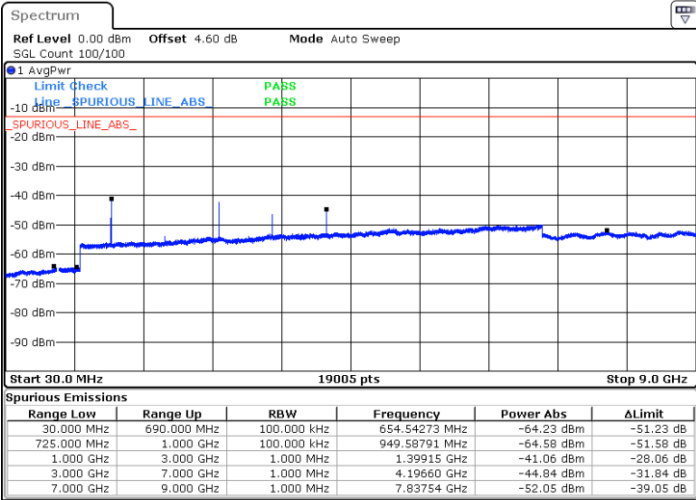




LTE Band 12 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

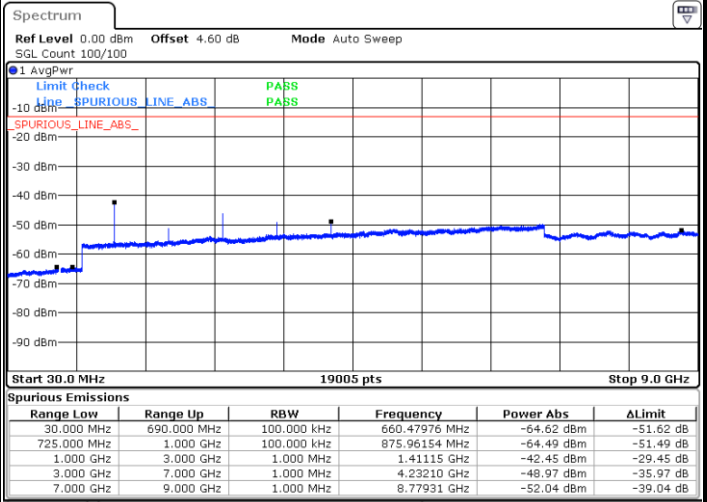
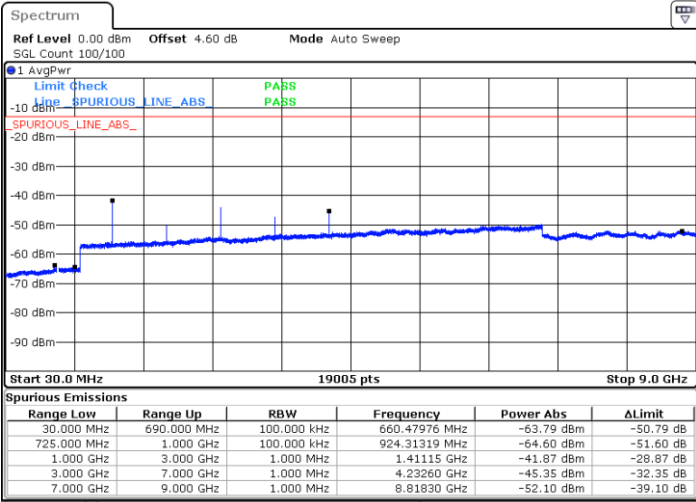


Date: 13.NOV.2019 23:20:10

Date: 13.NOV.2019 23:21:05

Middle Channel / QPSK

Middle Channel / 16QAM



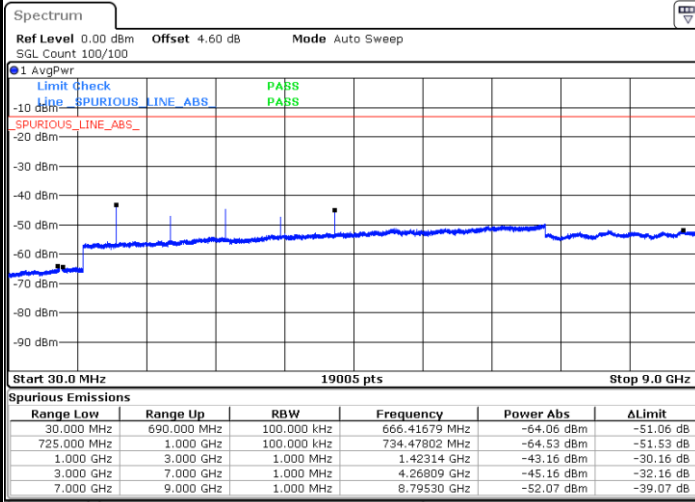
Date: 13.NOV.2019 23:22:53

Date: 13.NOV.2019 23:21:59



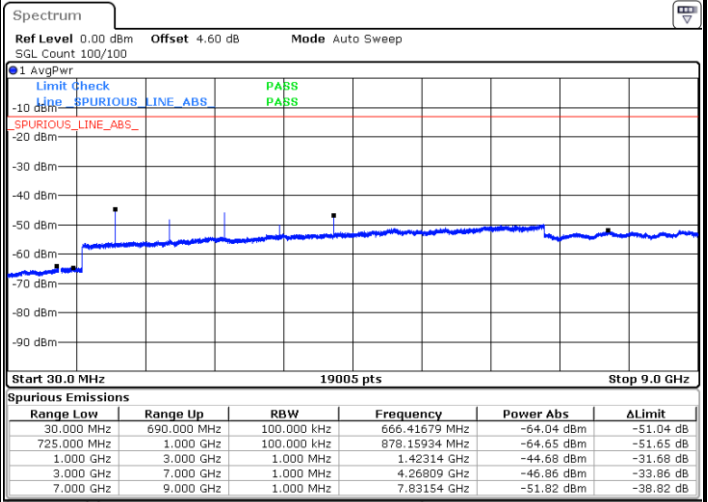
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 13.NOV.2019 23:23:47

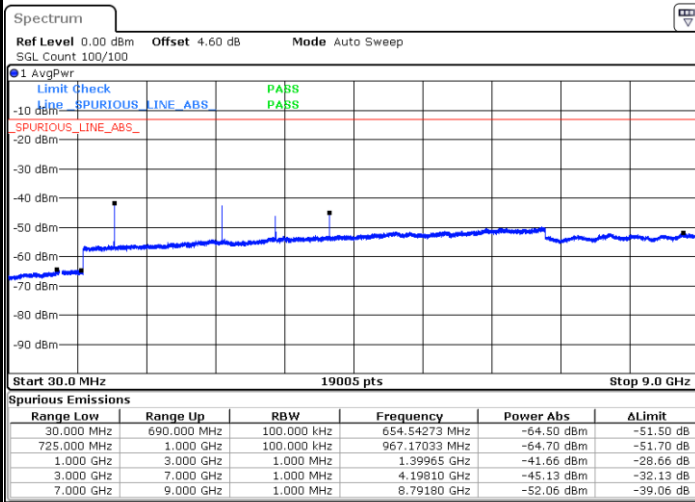
Highest Channel / 16QAM



Date: 13.NOV.2019 23:24:41

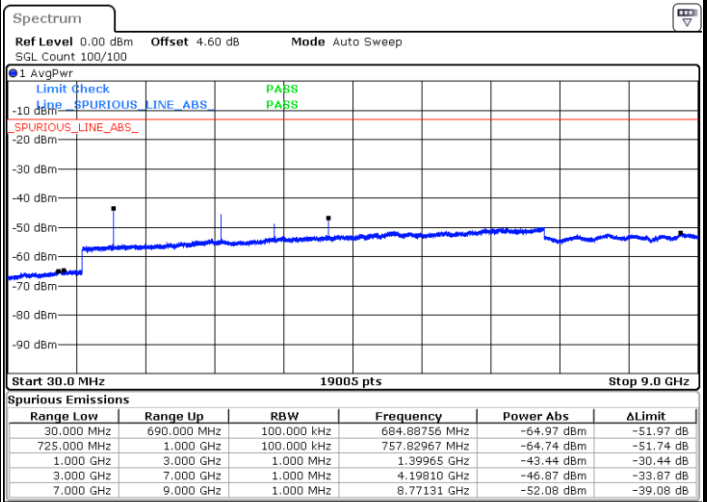
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 13.NOV.2019 23:36:36

Lowest Channel / 16QAM



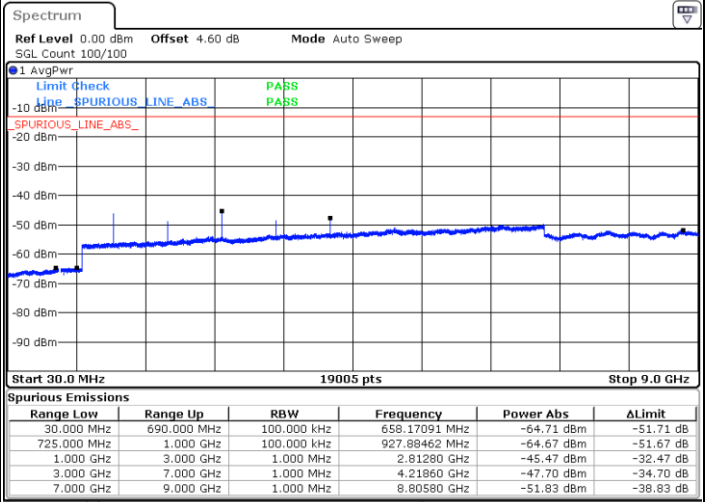
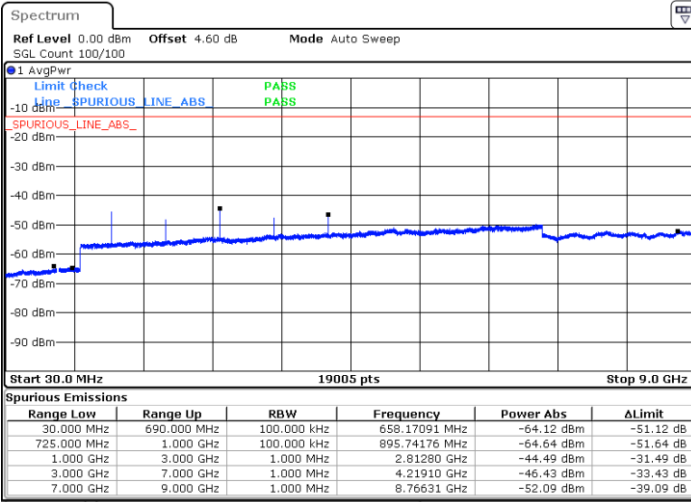
Date: 13.NOV.2019 23:37:30



LTE Band 12 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

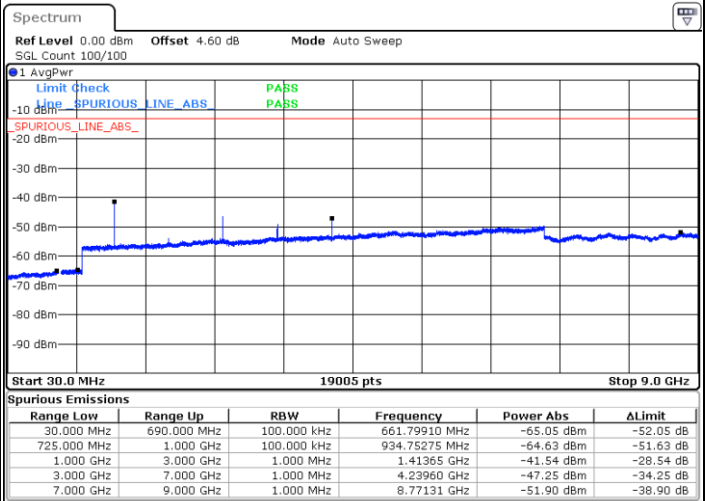
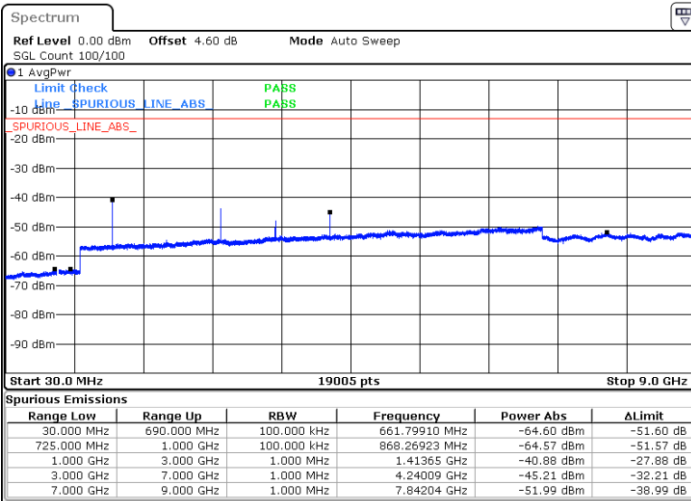


Date: 13.NOV.2019 23:39:18

Date: 13.NOV.2019 23:38:24

Highest Channel / QPSK

Highest Channel / 16QAM

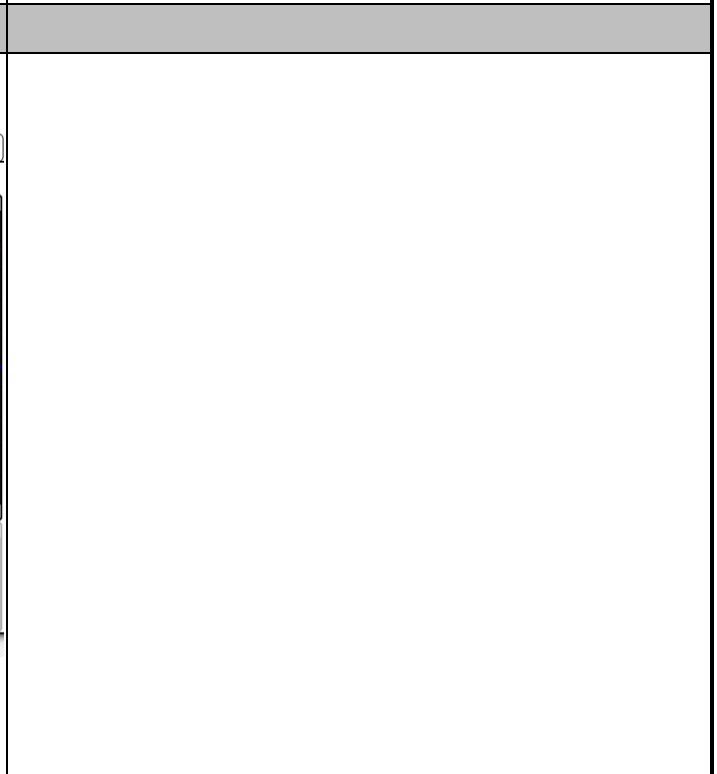
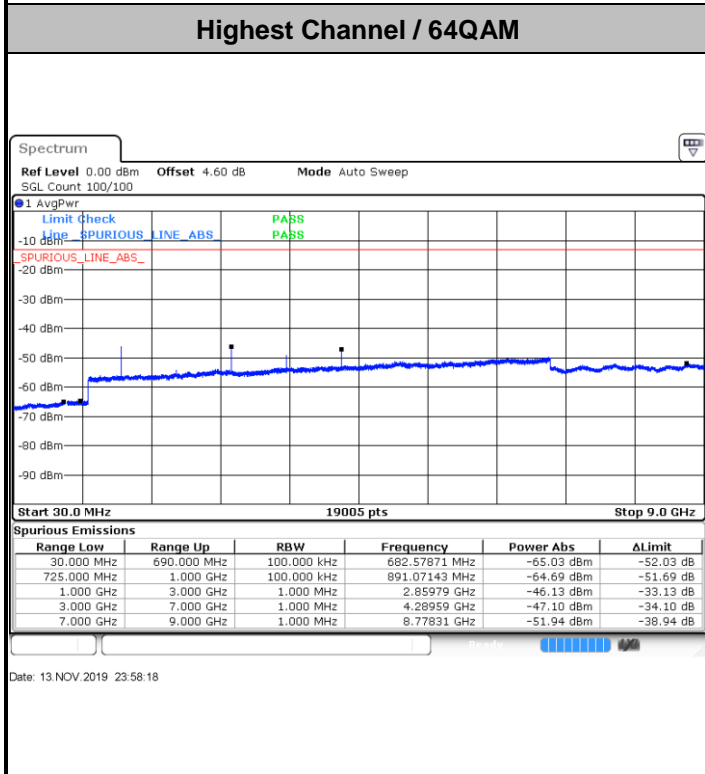
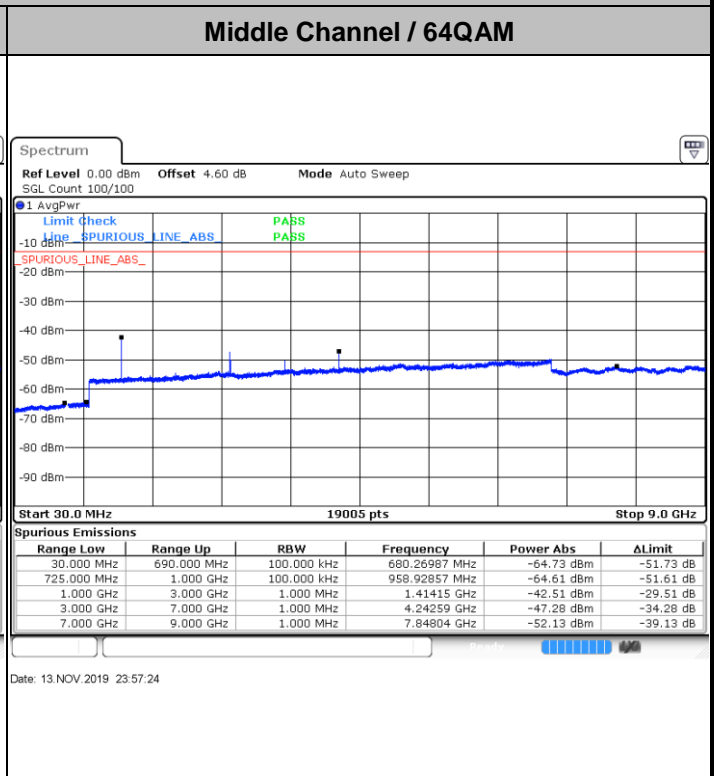
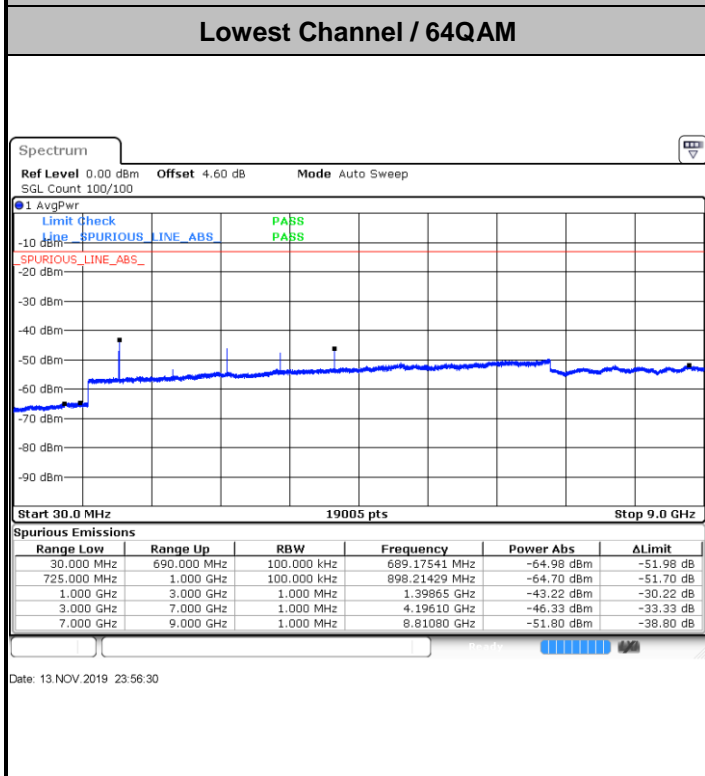


Date: 13.NOV.2019 23:40:13

Date: 13.NOV.2019 23:41:07



**LTE Band 12 / 1.4MHz**

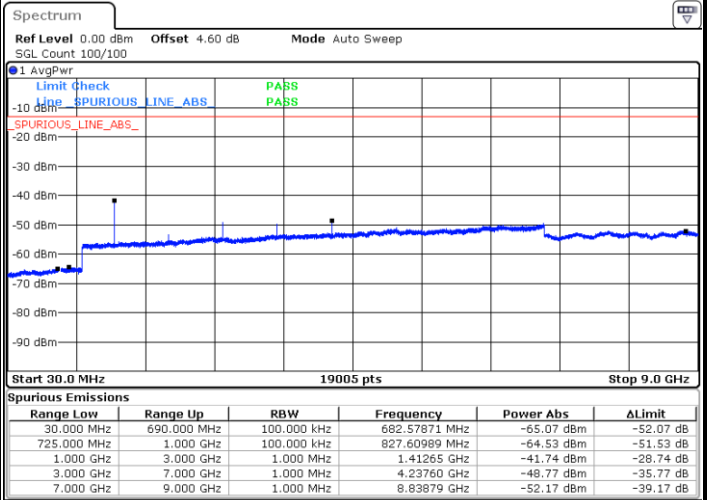
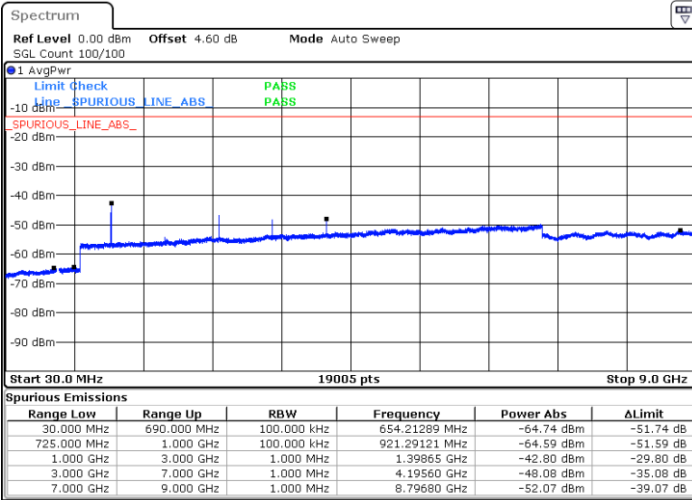




LTE Band 12 / 3MHz

Lowest Channel / 64QAM

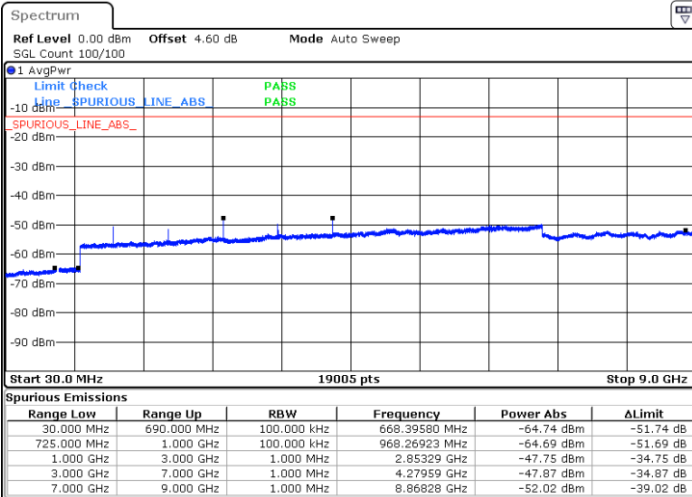
Middle Channel / 64QAM



Date: 13.NOV.2019 23:59:13

Date: 14.NOV.2019 00:00:07

Highest Channel / 64QAM



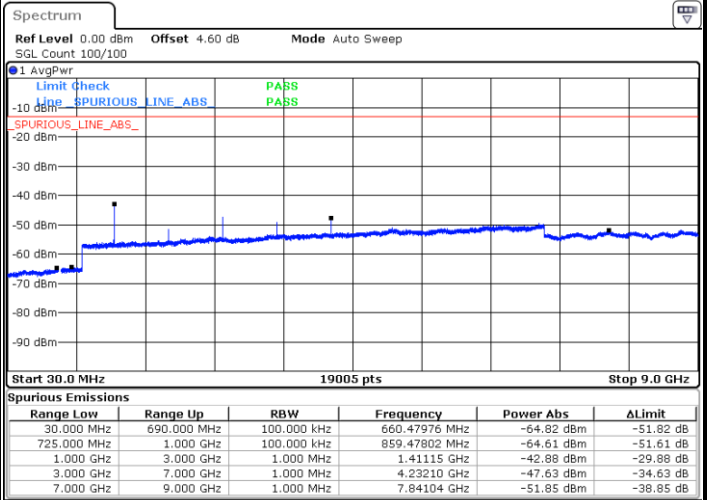
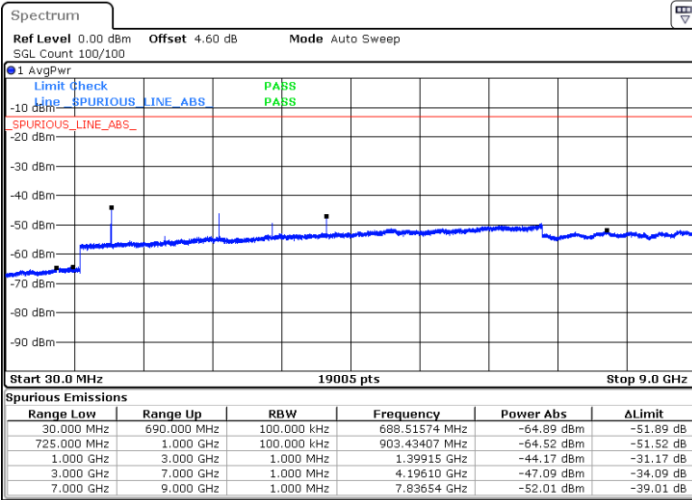
Date: 14.NOV.2019 00:01:01



LTE Band 12 / 5MHz

Lowest Channel / 64QAM

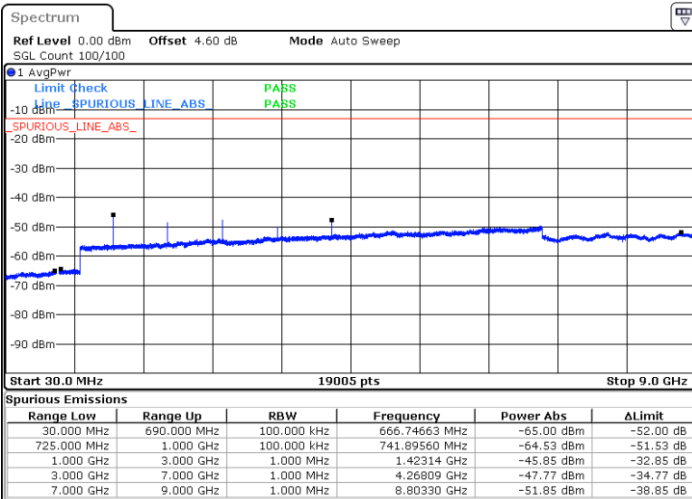
Middle Channel / 64QAM



Date: 14.NOV.2019 00:12:55

Date: 14.NOV.2019 00:13:49

Highest Channel / 64QAM



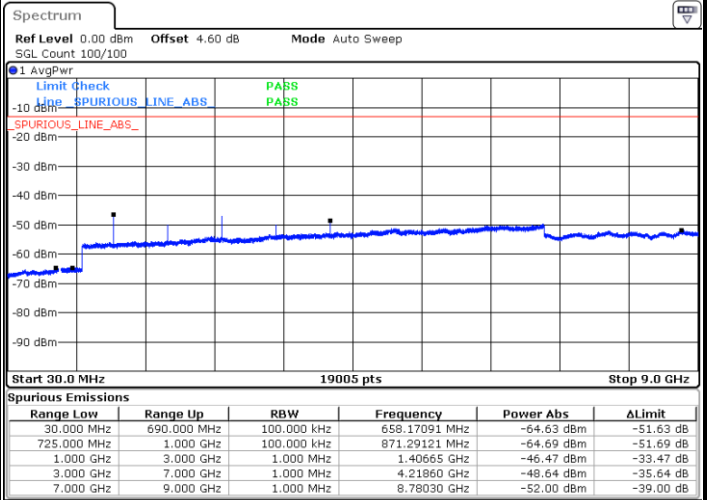
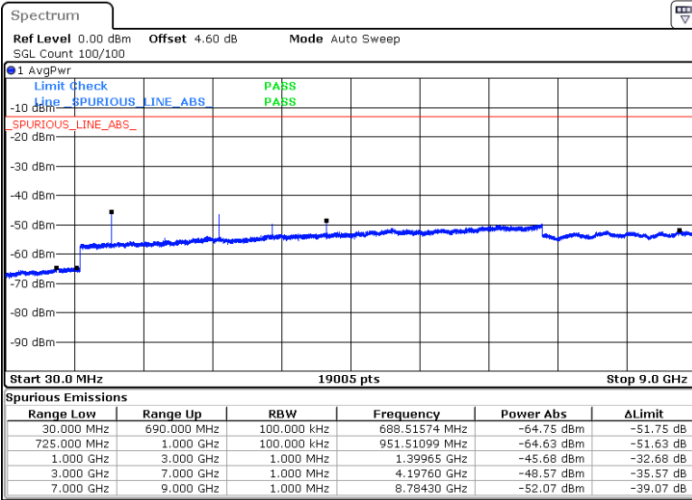
Date: 14.NOV.2019 00:14:43



LTE Band 12 / 10MHz

Lowest Channel / 64QAM

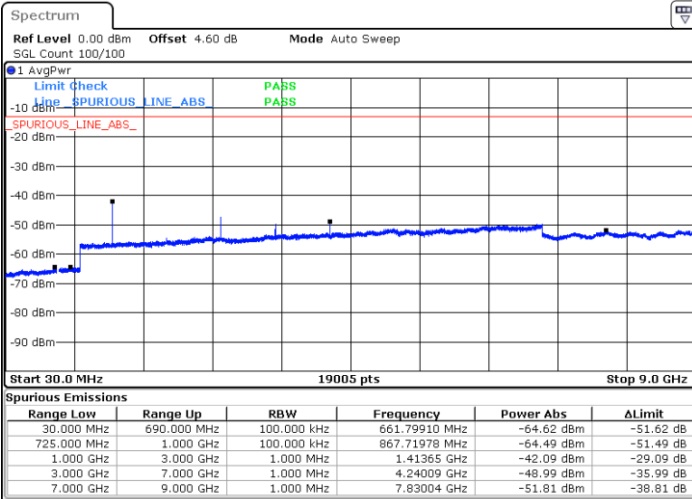
Middle Channel / 64QAM



Date: 14.NOV.2019 00:15:37

Date: 14.NOV.2019 00:16:32

Highest Channel / 64QAM



Date: 14.NOV.2019 00:17:26



Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0015	PASS
40	Normal Voltage	0.0034	
30	Normal Voltage	0.0040	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0102	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0053	
-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) =3.6 V.; Maximum Voltage =4.2 V.
2. 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)
Middle	3741	-30.67	-13	-17.67	-42.93	2.64	14.90	H
	5613	-28.19	-13	-15.19	-40.05	2.94	14.80	H
	7488	-44.82	-13	-31.82	-54.59	3.39	13.16	H
	9358	-39.91	-13	-26.91	-50.39	4.00	14.48	H
	11224	-38.67	-13	-25.67	-48.18	4.23	13.74	H
	13095	-38.96	-13	-25.96	-48.80	4.49	14.32	H
	14964	-35.99	-13	-22.99	-46.24	4.94	15.19	H
	16836	-37.97	-13	-24.97	-47.86	5.01	14.90	H
	3741	-27.36	-13	-14.36	-39.62	2.64	14.90	V
	5613	-29.22	-13	-16.22	-41.08	2.94	14.80	V
	7488	-45.36	-13	-32.36	-55.13	3.39	13.16	V
	9358	-45.68	-13	-32.68	-56.16	4.00	14.48	V
	11226	-44.34	-13	-31.34	-53.85	4.23	13.74	V
	13095	-42.72	-13	-29.72	-52.56	4.49	14.32	V
	14964	-37.95	-13	-24.95	-48.20	4.94	15.19	V
	16839.81	-41.15	-13	-28.15	-51.04	5.01	14.90	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	-33.78	-13	-20.78	-44.52	2.604	13.34	H
	5172	-40.03	-13	-27.03	-50.54	3.011	13.52	H
	6900	-36.68	-13	-23.68	-46.88	3.271	13.47	H
	8616	-39.32	-13	-26.32	-46.29	5.527	12.5	H
	10341	-44.83	-13	-31.83	-51.69	6.038	12.9	H
	12060	-43.17	-13	-30.17	-50.37	6.726	13.93	H
	13788.72	-39.72	-13	-26.72	-47.16	6.963	14.4	H
	15516	-35.03	-13	-22.03	-41.66	7.57	14.2	H
	3447	-37.96	-13	-24.96	-48.70	2.604	13.34	V
	5172	-44.81	-13	-31.81	-55.32	3.011	13.52	V
	6900	-42.63	-13	-29.63	-52.83	3.271	13.47	V
	8616	-44.11	-13	-31.11	-51.08	5.527	12.50	V
	10341.54	-46.12	-13	-33.12	-52.98	6.038	12.90	V
	12060	-43.08	-13	-30.08	-50.28	6.726	13.93	V
	13788	-39.45	-13	-26.45	-46.89	6.963	14.40	V
15516	-40.60	-13	-27.60	-47.23	7.57	14.20	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)
Middle	1664	-32.14	-13	-19.14	-39.11	1.58	10.70	H
	2496	-39.56	-13	-26.56	-47.81	2.102	12.50	H
	3330	-46.25	-13	-33.25	-55.14	2.856	13.90	H
	4158	-58.56	-13	-45.56	-67.02	2.689	13.30	H
	4992	-55.30	-13	-42.30	-63.06	3.093	13.00	H
	5826	-55.48	-13	-42.48	-64.25	3.178	14.10	H
	1664	-28.68	-13	-15.68	-35.65	1.58	10.70	V
	2496	-33.15	-13	-20.15	-41.40	2.10	12.50	V
	3330	-42.75	-13	-29.75	-51.64	2.86	13.90	V
	4158	-56.77	-13	-43.77	-65.23	2.69	13.30	V
	4992	-57.66	-13	-44.66	-65.42	3.09	13.00	V
	5824.63	-57.46	-13	-44.46	-66.23	3.18	14.10	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	-45.48	-25	-20.48	-55.58	3.54	13.64	H
	7580	-32.95	-25	-7.95	-42.38	4.10	13.52	H
	10100	-42.10	-25	-17.10	-51.98	4.51	14.39	H
	12630	-51.34	-25	-26.34	-61.15	4.56	14.37	H
	15160	-52.32	-25	-27.32	-59.72	5.17	12.58	H
	5052	-47.86	-25	-22.86	-57.96	3.54	13.64	V
	7576	-39.11	-25	-14.11	-48.54	4.10	13.52	V
	10100	-47.67	-25	-22.67	-57.55	4.51	14.39	V
	12630	-51.43	-25	-26.43	-61.24	4.56	14.37	V
15160	-49.80	-25	-24.80	-57.20	5.17	12.58	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)
Middle	1406	-54.49	-13	-41.49	-61.46	1.58	10.70	H
	2110	-48.80	-13	-35.80	-57.05	2.102	12.50	H
	2812	-49.32	-13	-36.32	-58.21	2.856	13.90	H
	3516	-55.68	-13	-42.68	-64.14	2.689	13.30	H
	4218	-54.12	-13	-41.12	-61.88	3.093	13.00	H
	4920	-56.65	-13	-43.65	-65.42	3.178	14.10	H
	1406	-57.77	-13	-44.77	-64.74	1.58	10.70	V
	2110	-53.16	-13	-40.16	-61.41	2.10	12.50	V
	2812	-46.73	-13	-33.73	-55.62	2.86	13.90	V
	3516	-54.21	-13	-41.21	-62.67	2.69	13.30	V
	4218	-49.52	-13	-36.52	-57.28	3.09	13.00	V
	4921.63	-58.86	-13	-45.86	-67.63	3.18	14.10	V

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