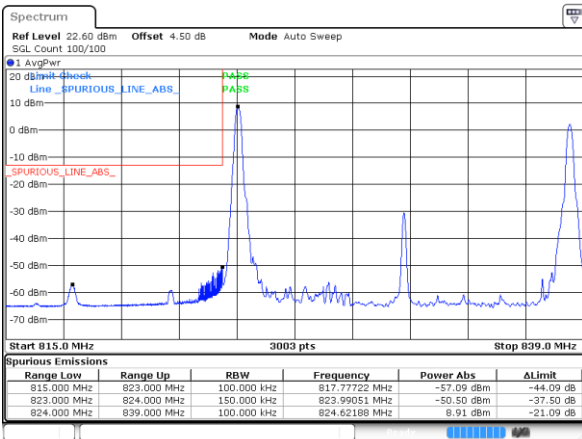




LTE Band 5 / 5MHz+10MHz

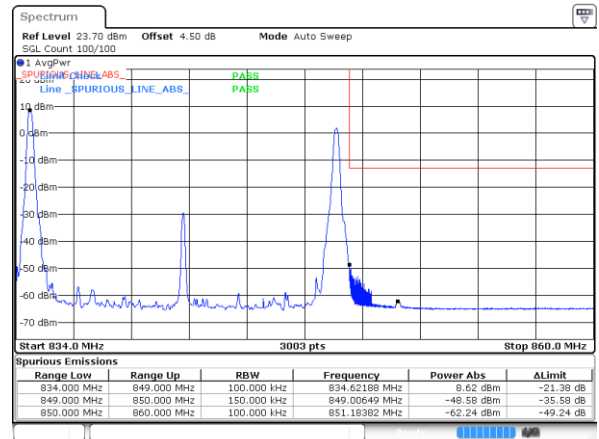
64QAM

Lowest Band Edge / 1RB0 and 1RB49



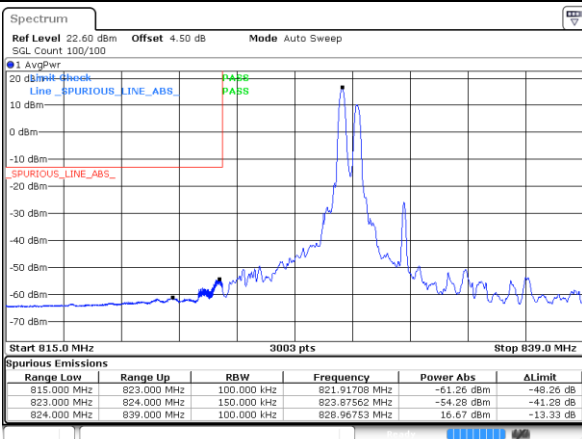
Date: 29 NOV 2019 10:18:36

Highest Band Edge / 1RB0 and 1RB49



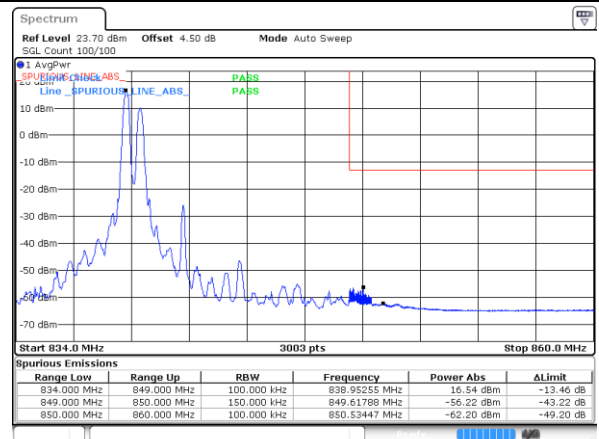
Date: 29 NOV 2019 10:47:13

Lowest Band Edge / 1RB24 and 1RB0



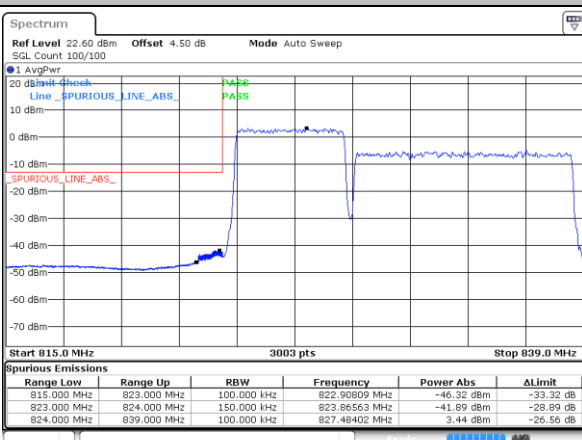
Date: 29 NOV 2019 10:15:07

Highest Band Edge / 1RB24 and 1RB0



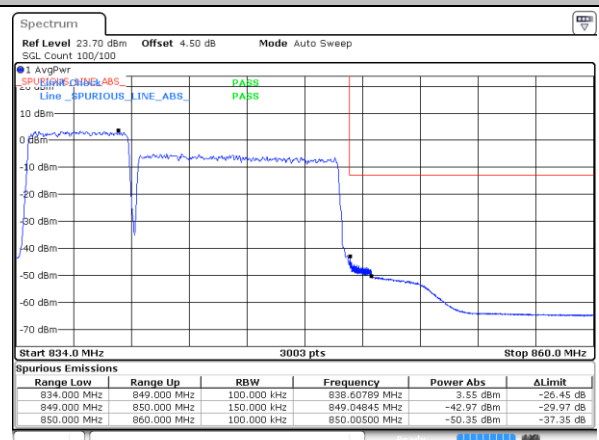
Date: 29 NOV 2019 10:40:21

Lowest Band Edge / Full RB



Date: 29 NOV 2019 10:32:04

Highest Band Edge / Full RB



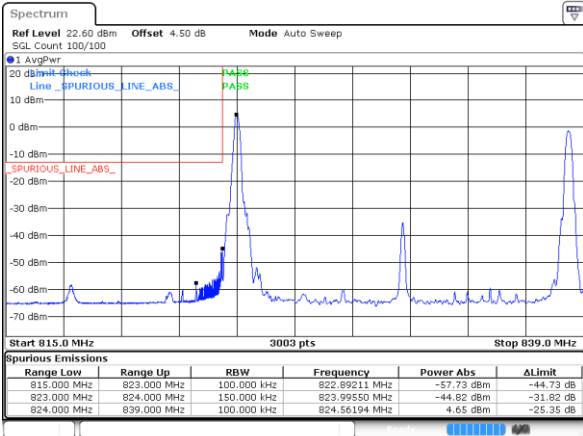
Date: 29 NOV 2019 10:48:35



LTE Band 5 / 10MHz+5MHz

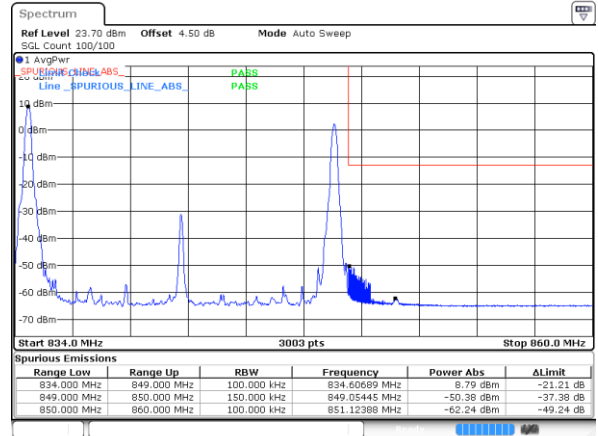
64QAM

Lowest Band Edge / 1RB0 and 1RB24



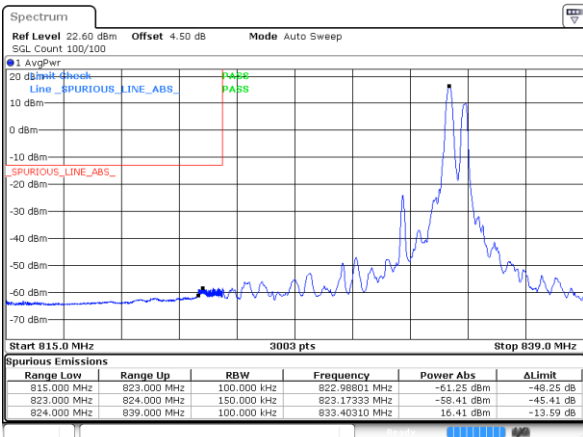
Date: 29 NOV 2019 12:19:16

Highest Band Edge / 1RB0 and 1RB24



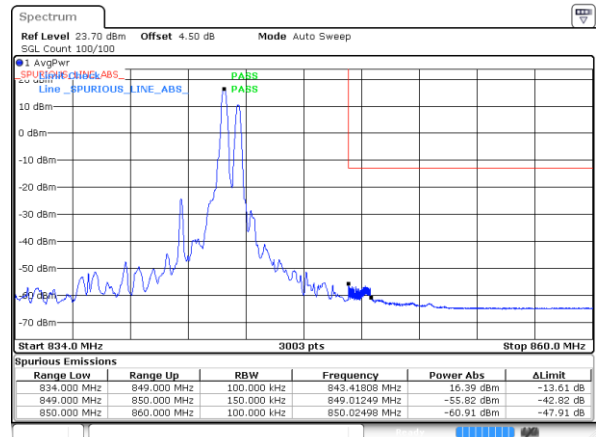
Date: 29 NOV 2019 12:20:53

Lowest Band Edge / 1RB49 and 1RB0



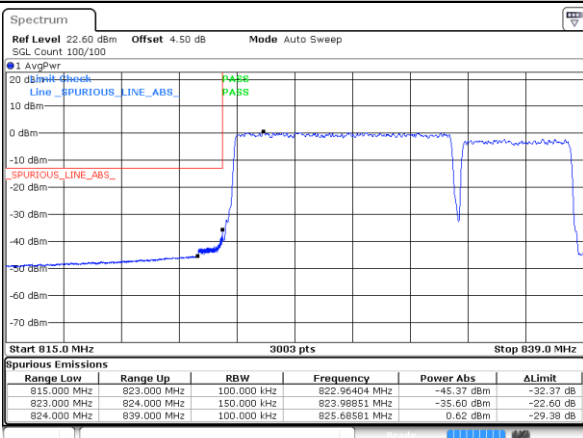
Date: 29 NOV 2019 12:04:29

Highest Band Edge / 1RB49 and 1RB0



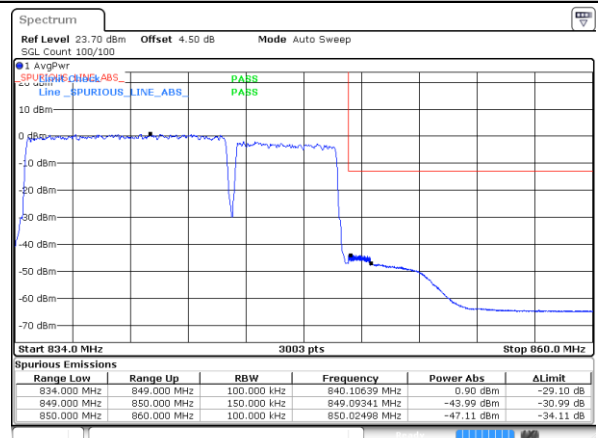
Date: 29 NOV 2019 14:58:09

Lowest Band Edge / Full RB



Date: 29 NOV 2019 10:57:06

Highest Band Edge / Full RB



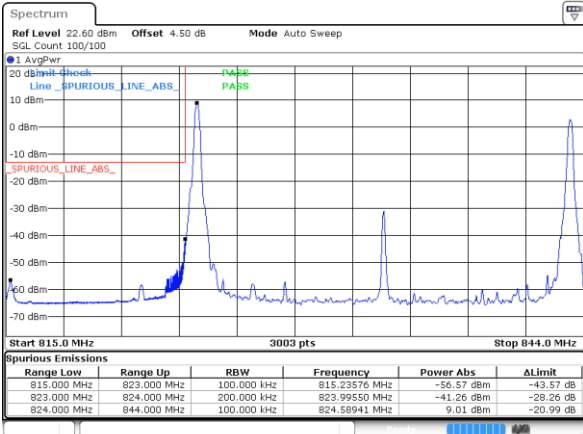
Date: 29 NOV 2019 14:59:23



LTE Band 5 / 10MHz+10MHz

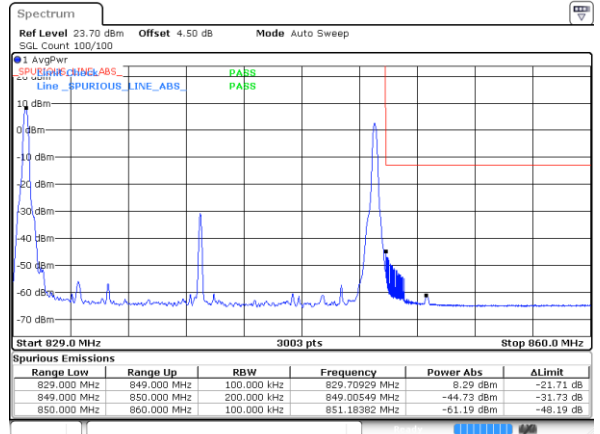
64QAM

Lowest Band Edge / 1RB0 and 1RB49



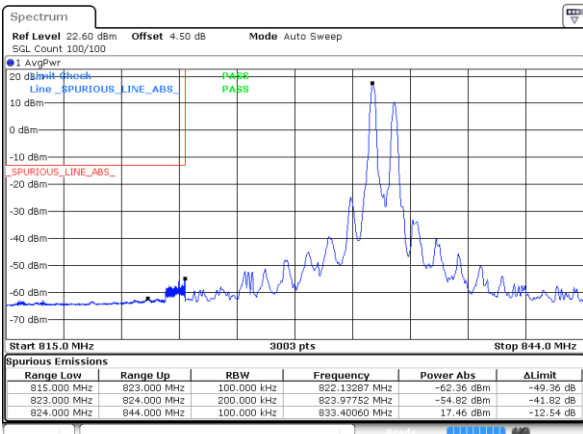
Date: 29 NOV 2019 16:00:59

Highest Band Edge / 1RB0 and 1RB49



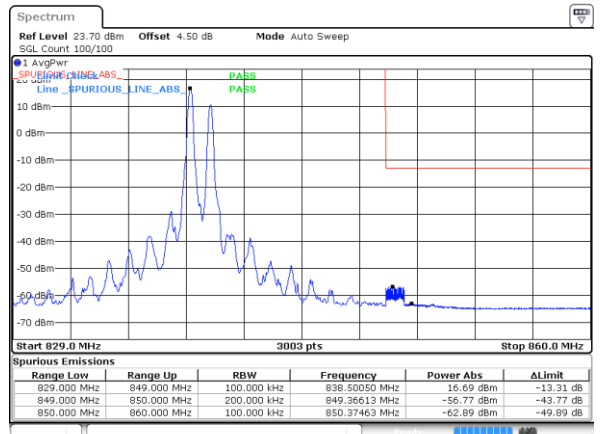
Date: 29 NOV 2019 15:57:54

Lowest Band Edge / 1RB49 and 1RB0



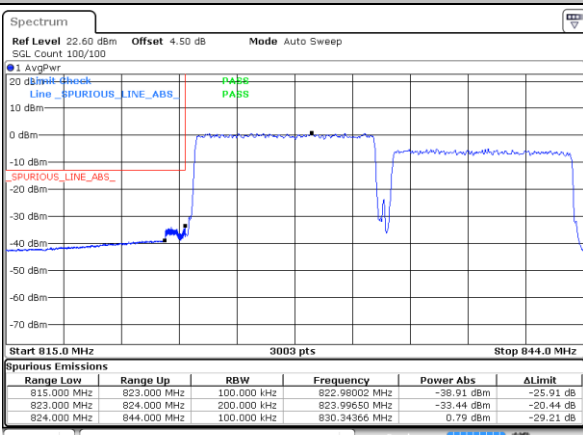
Date: 29 NOV 2019 16:32:34

Highest Band Edge / 1RB49 and 1RB0



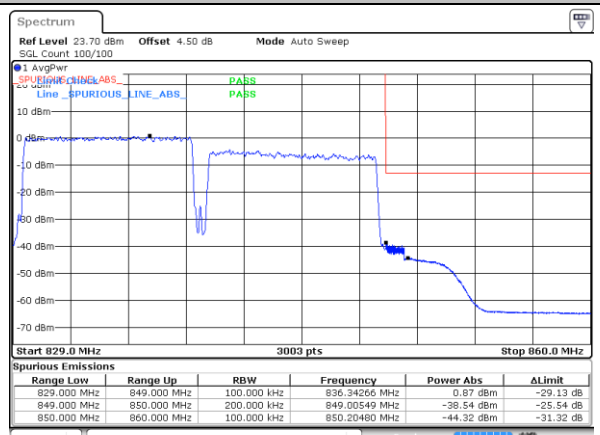
Date: 29 NOV 2019 15:49:10

Lowest Band Edge / Full RB



Date: 29 NOV 2019 16:33:29

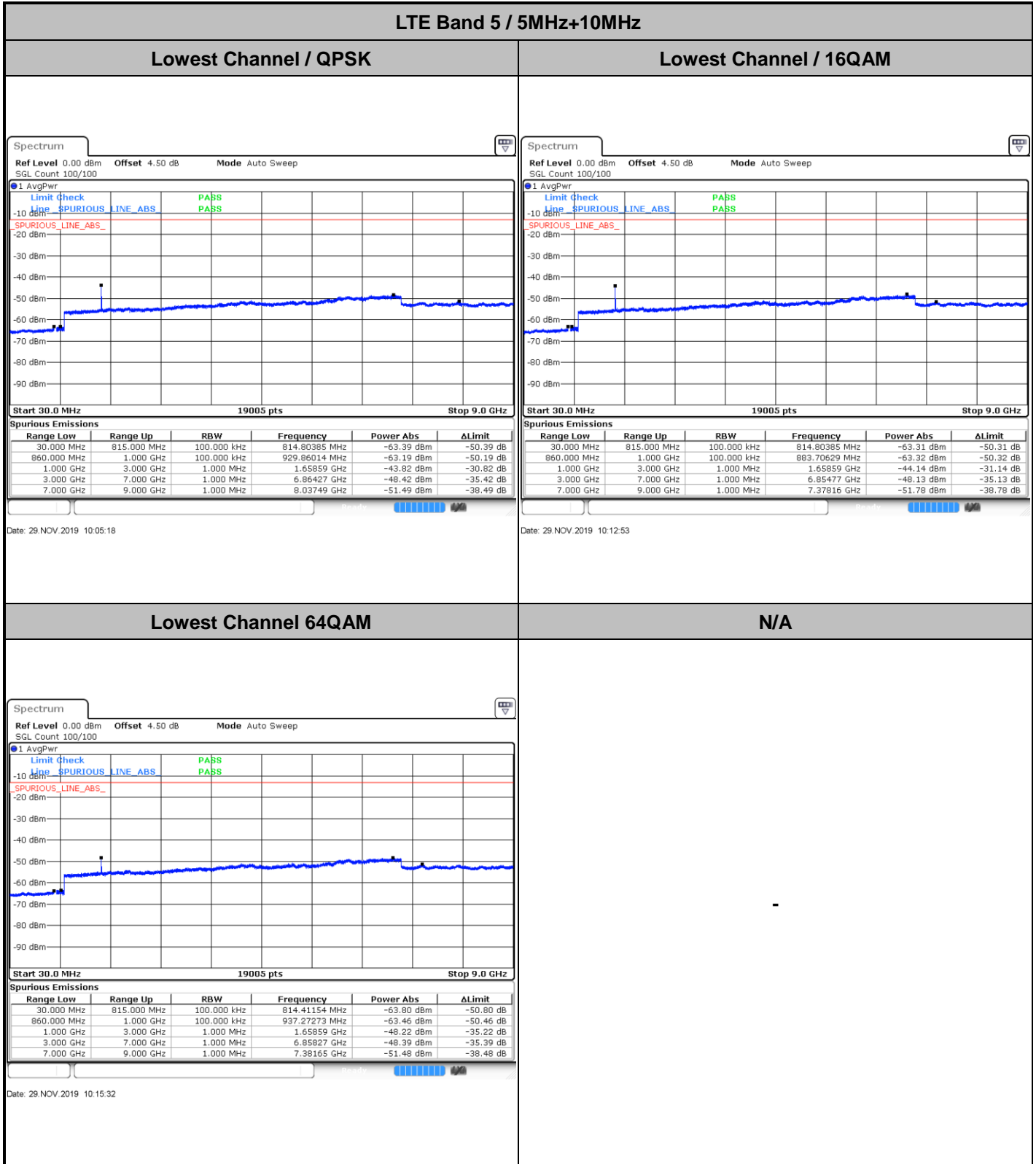
Highest Band Edge / Full RB



Date: 29 NOV 2019 15:48:19

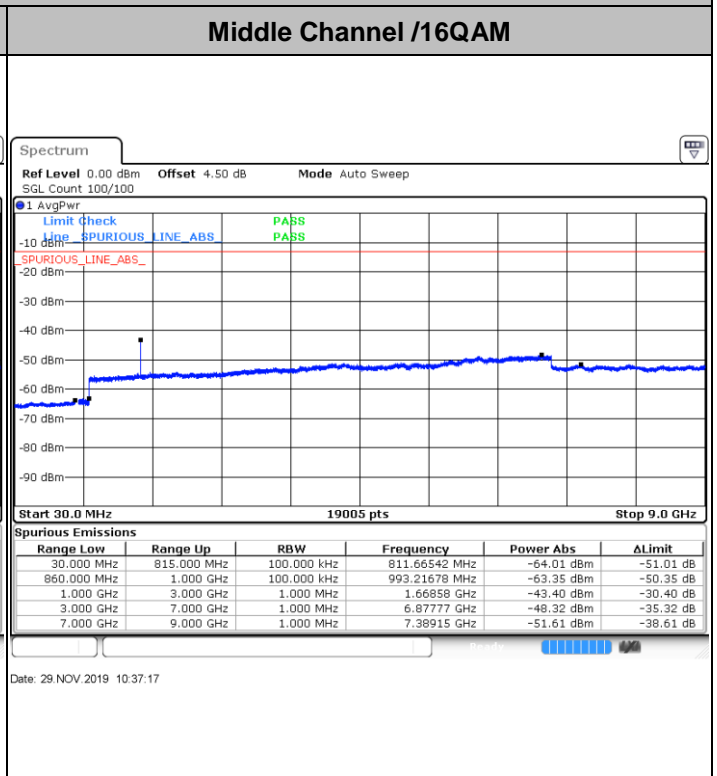
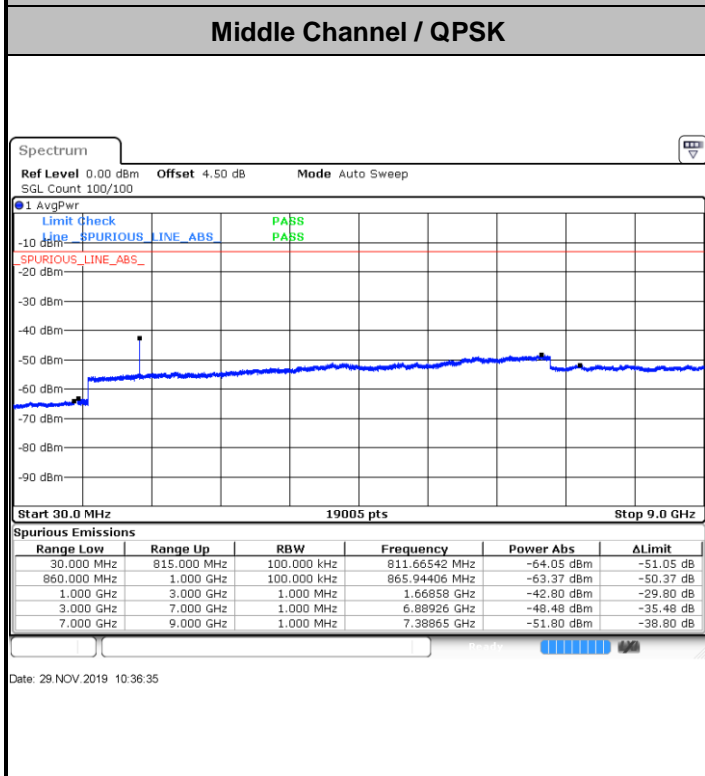


# Conducted Spurious Emission



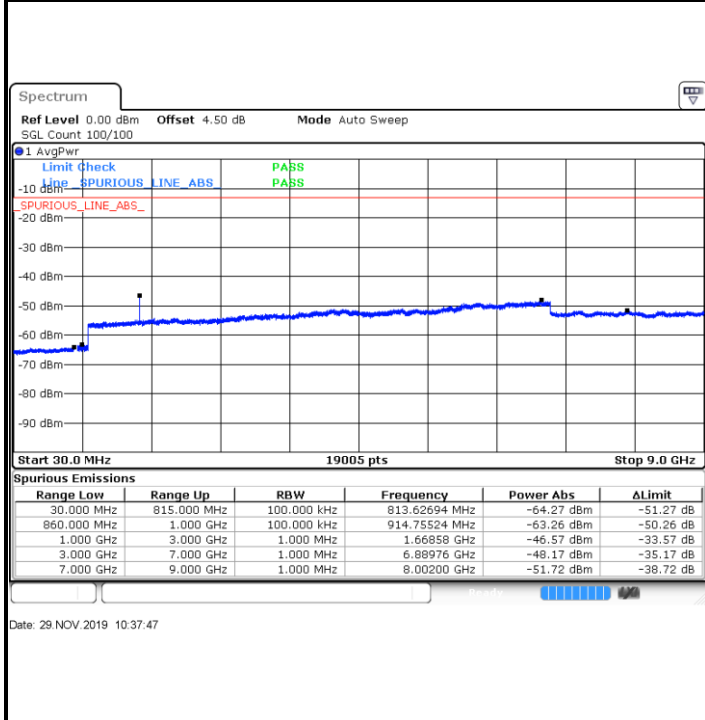


**LTE Band 5 / 5MHz+10MHz**



**Middle Channel / 64QAM**

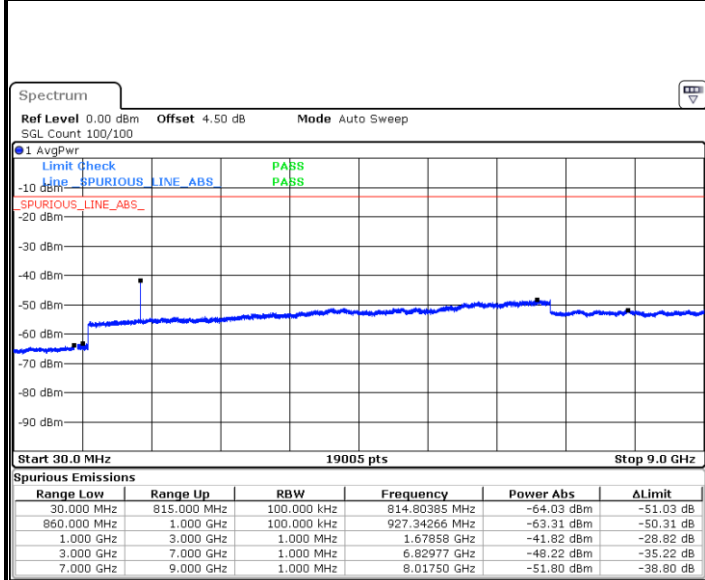
**N/A**





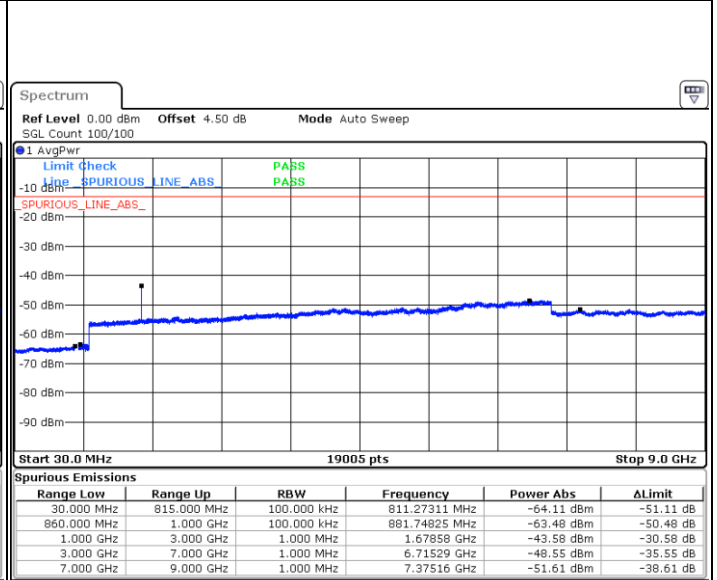
**LTE Band 5 / 5MHz+10MHz**

**Highest Channel / QPSK**



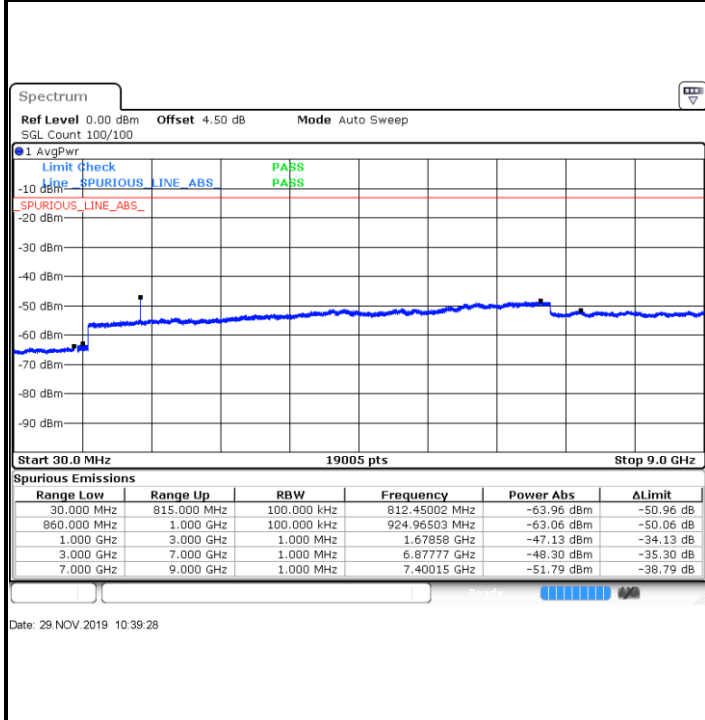
Date: 29 NOV 2019 10:44:42

**Highest Channel / 16QAM**



Date: 29 NOV 2019 10:41:21

**Highest Channel / 64QAM**



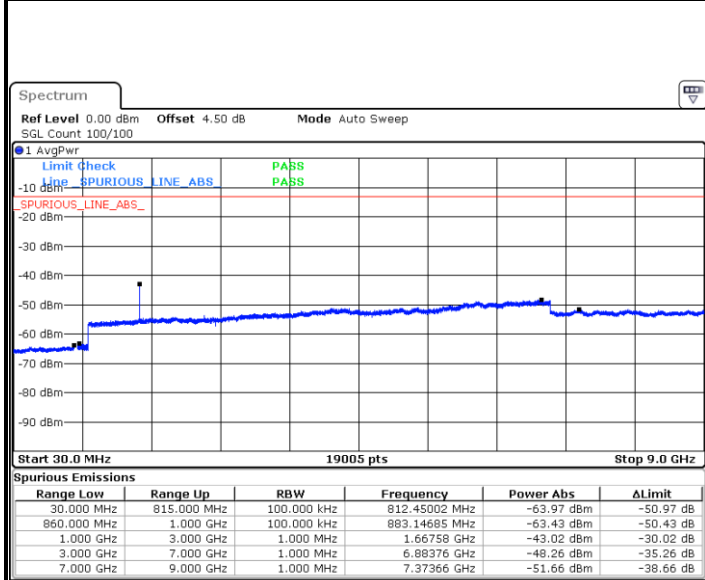
Date: 29 NOV 2019 10:39:28

**N/A**



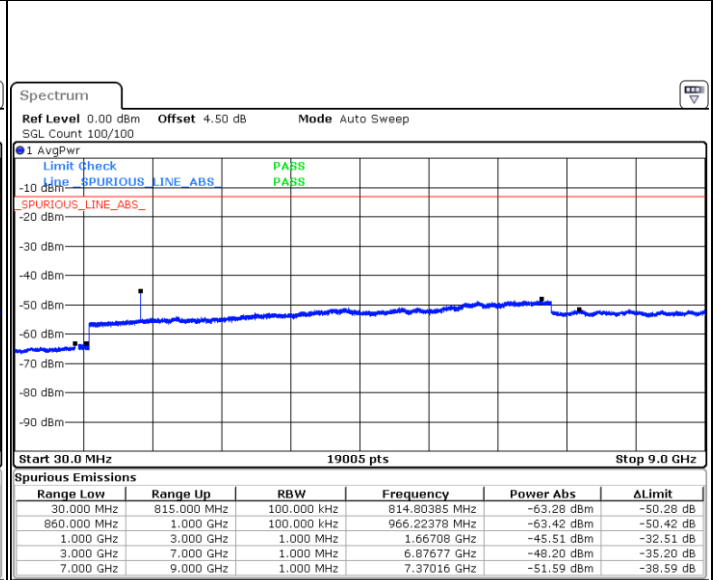
**LTE Band 5 / 10MHz+5MHz**

**Lowest Channel / QPSK**



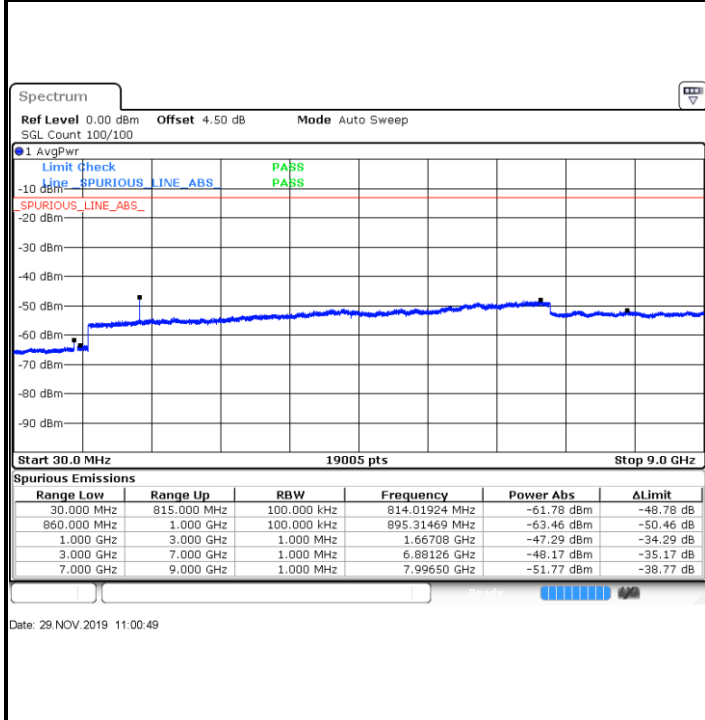
Date: 29 NOV 2019 12:13:13

**Lowest Channel / 16QAM**



Date: 29 NOV 2019 12:11:39

**Lowest Channel / 64QAM**



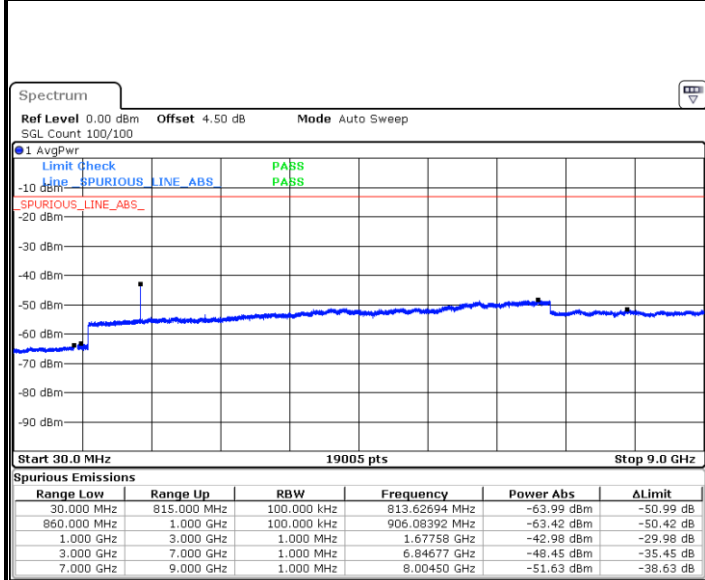
Date: 29 NOV 2019 11:00:49

**N/A**



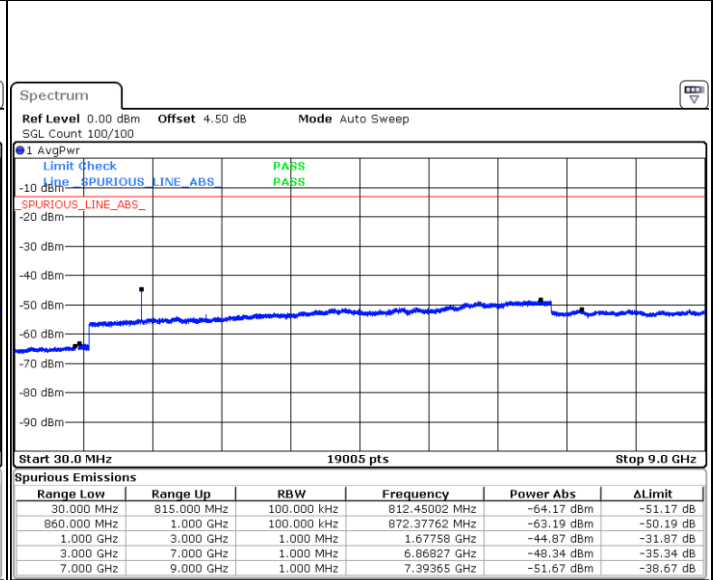
**LTE Band 5 / 10MHz+5MHz**

**MiddleChannel / QPSK**



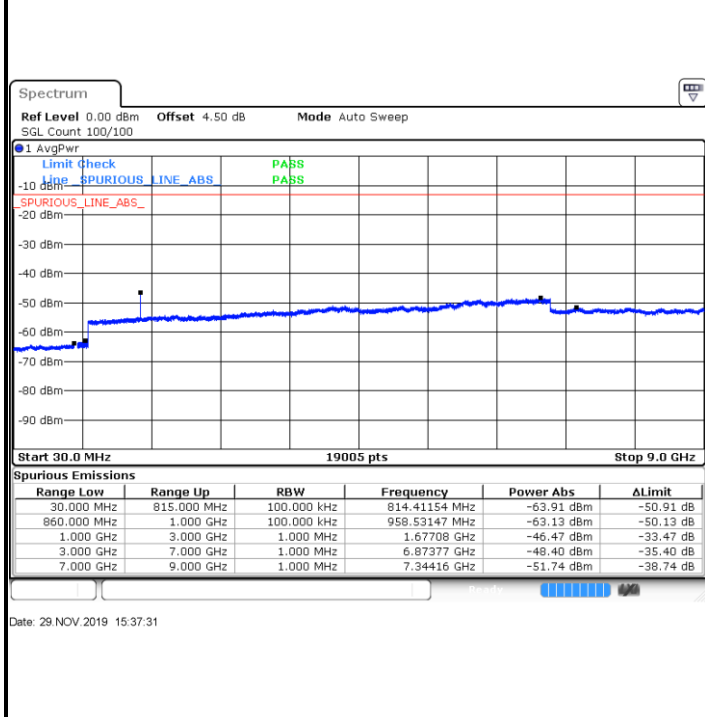
Date: 29 NOV 2019 15:38:36

**Middle Channel / 16QAM**



Date: 29 NOV 2019 15:38:02

**Middle Channel / 64QAM**



Date: 29 NOV 2019 15:37:31

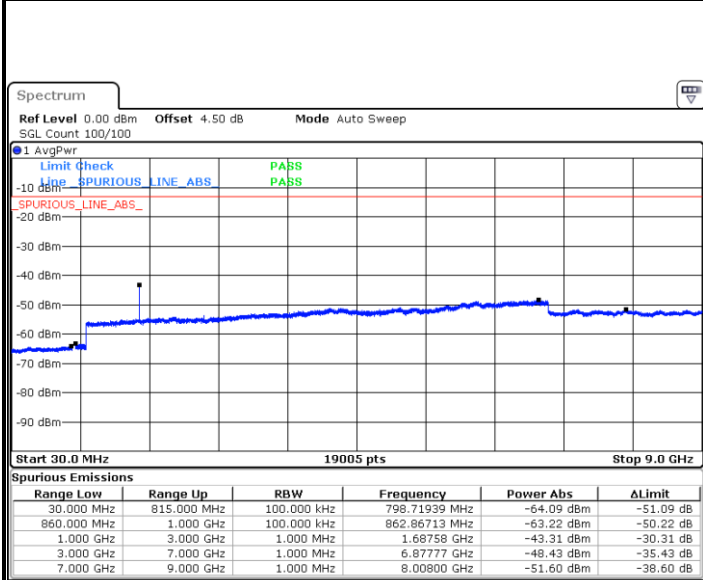
**N/A**





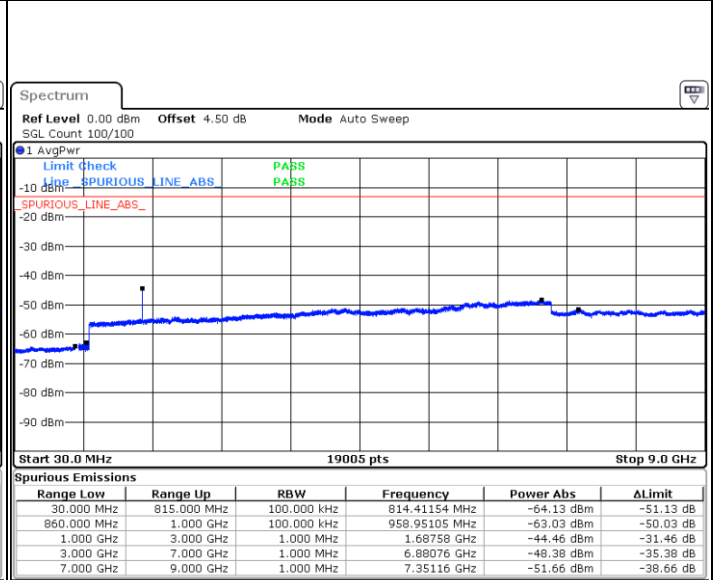
**LTE Band 5 / 10MHz+5MHz**

**Highest Channel / QPSK**



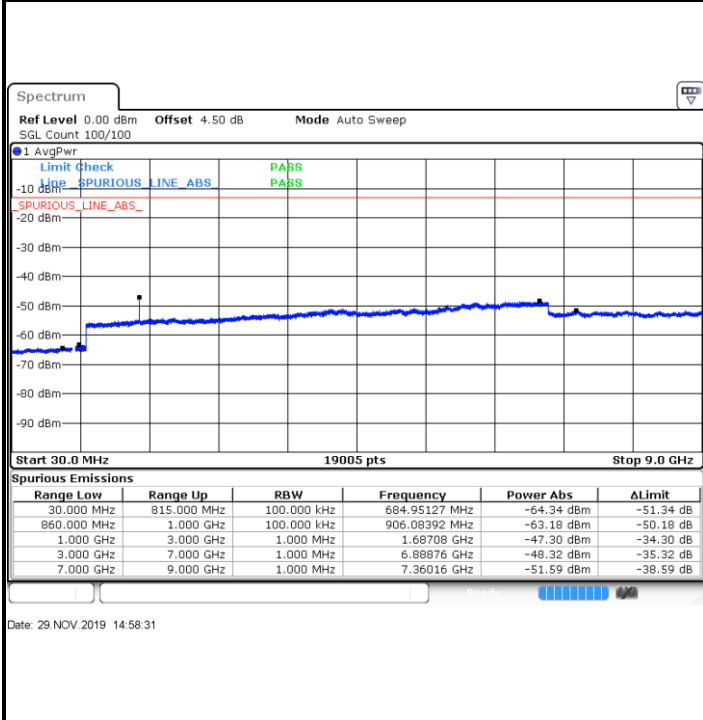
Date: 29 NOV 2019 14:56:19

**Highest Channel / 16QAM**



Date: 29 NOV 2019 14:57:23

**Highest Channel / 64QAM**



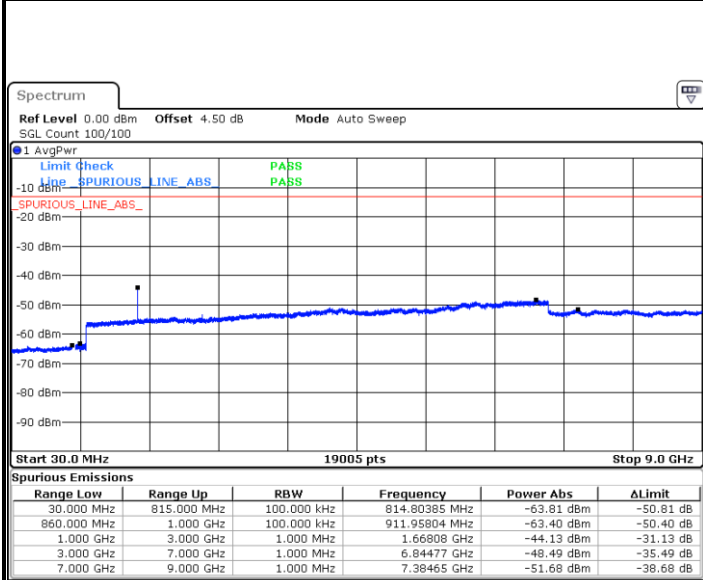
Date: 29 NOV 2019 14:58:31

**N/A**



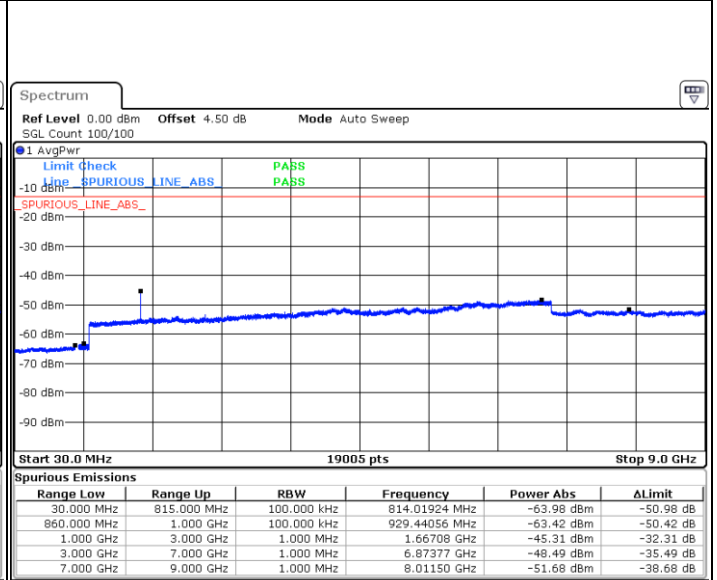
**LTE Band 5 / 10MHz+10MHz**

**Lowest Channel / QPSK**



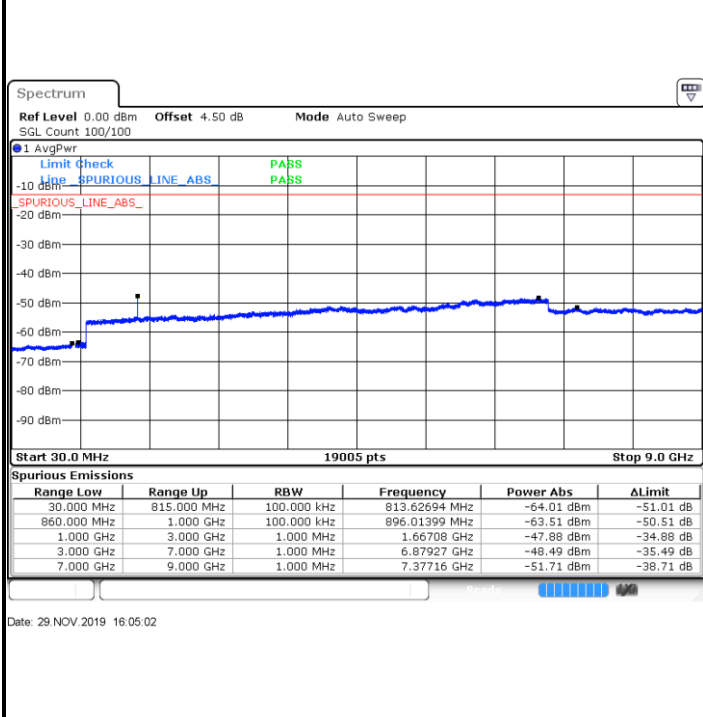
Date: 29 NOV 2019 16:03:25

**Lowest Channel / 16QAM**



Date: 29 NOV 2019 16:04:00

**Lowest Channel / 64QAM**



Date: 29 NOV 2019 16:05:02

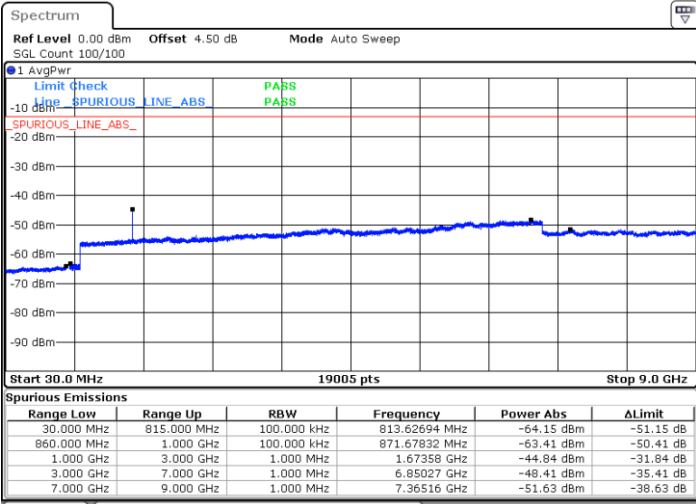
**N/A**



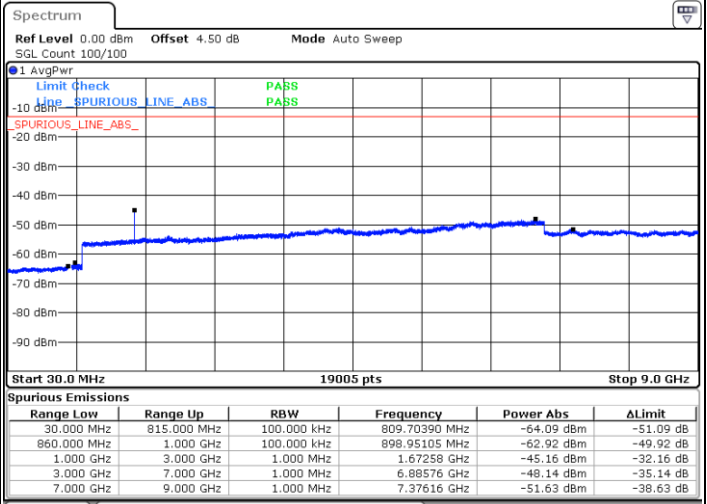
LTE Band 5 / 10MHz+10MHz

Middle Channel / QPSK

Middle Channel / 16QAM



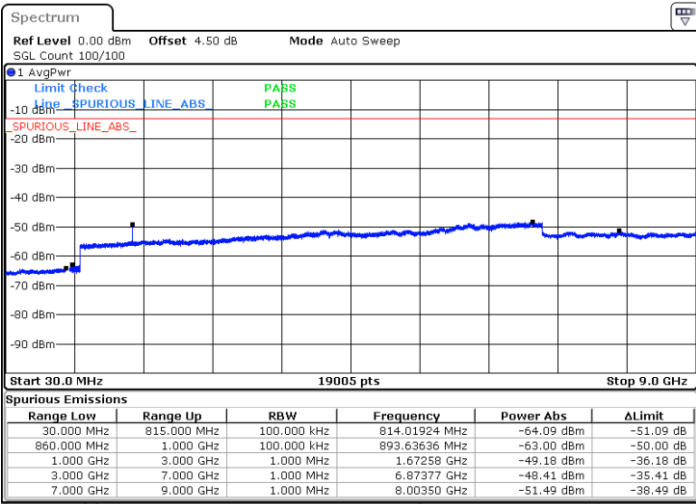
Date: 29 NOV 2019 15:40:33



Date: 29 NOV 2019 15:41:07

Middle Channel / 64QAM

N/A



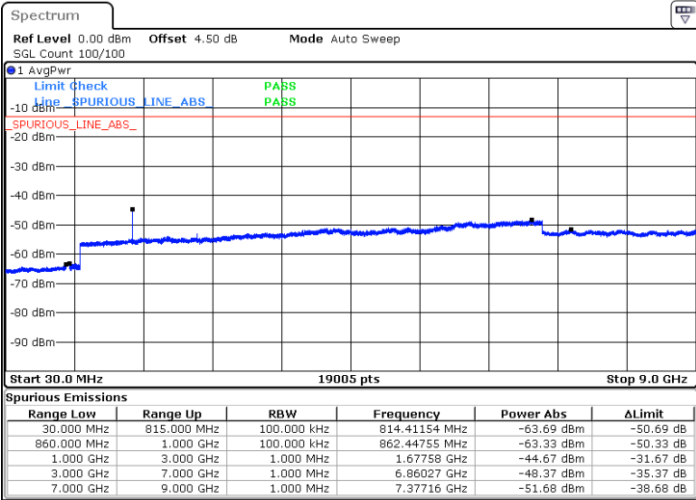
Date: 29 NOV 2019 15:41:39



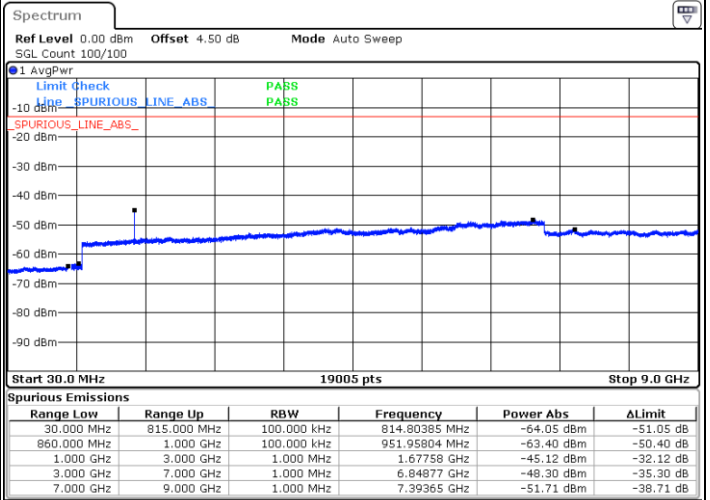
LTE Band 5 / 10MHz+10MHz

Highest Channel / QPSK

Highest Channel / 16QAM



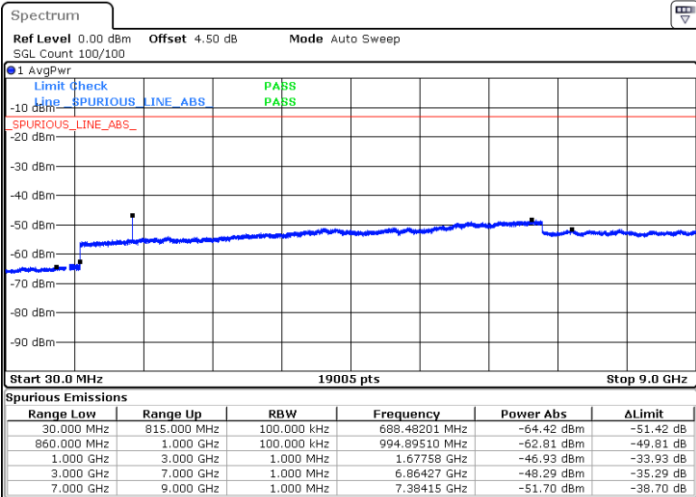
Date: 29 NOV 2019 15:53:58



Date: 29 NOV 2019 15:52:02

Highest Channel / 64QAM

N/A



Date: 29 NOV 2019 15:50:03



### Frequency Stability

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10+10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.01	PASS
40	Normal Voltage	-0.02	
30	Normal Voltage	0.02	
20(Ref.)	Normal Voltage	0.01	
10	Normal Voltage	0.02	
0	Normal Voltage	0.02	
-10	Normal Voltage	0.02	
-20	Normal Voltage	0.01	
-30	Normal Voltage	0.01	
20	Maximum Voltage	-0.03	
20	Normal Voltage	-0.02	
20	Battery End Point	0.01	

**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 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

LTE Band 12 / 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)
Lowest	1398	-58.72	-13	-45.72	-65.69	1.58	10.70	H
	2098	-60.37	-13	-47.37	-68.62	2.102	12.50	H
	2798	-62.36	-13	-49.36	-71.25	2.856	13.90	H
	1400	-60.99	-13	-47.99	-67.96	1.58	10.70	V
	2098	-60.35	-13	-47.35	-68.60	2.10	12.50	V
	2798	-62.61	-13	-49.61	-71.50	2.86	13.90	V
Middle	1406	-61.70	-13	-48.70	-68.67	1.58	10.70	H
	2110	-59.79	-13	-46.79	-68.04	2.102	12.50	H
	2812	-61.94	-13	-48.94	-70.83	2.856	13.90	H
	1406	-63.21	-13	-50.21	-70.18	1.58	10.70	V
	2108	-59.42	-13	-46.42	-67.67	2.10	12.50	V
	2812	-62.69	-13	-49.69	-71.58	2.86	13.90	V
Highest	1413.18	-67.44	-13	-54.44	-74.41	1.58	10.70	H
	2120	-63.08	-13	-50.08	-71.33	2.102	12.50	H
	2826	-62.70	-13	-49.70	-71.59	2.856	13.90	H
	1412	-61.64	-13	-48.64	-68.61	1.58	10.70	V
	2120	-58.88	-13	-45.88	-67.13	2.10	12.50	V
	2826	-61.73	-13	-48.73	-70.62	2.86	13.90	V

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



LTE Band 13 / 5MHz / 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)
Lowest	1554	-59.22	-13	-46.22	-61.85	1.09	5.87	H
	2332	-55.85	-13	-42.85	-58.25	1.37	5.92	H
	3108	-63.45	-13	-50.45	-67.34	1.64	7.68	H
	1554	-62.52	-13	-49.52	-65.15	1.09	5.87	V
	2332	-58.94	-13	-45.94	-61.34	1.37	5.92	V
	3108	-63.46	-13	-50.46	-67.35	1.64	7.68	V
Middle	1560	-57.90	-42.15	-15.75	-60.53	1.09	5.87	H
	2340	-57.16	-13	-44.16	-59.56	1.37	5.92	H
	3120	-62.98	-13	-49.98	-66.87	1.64	7.68	H
	1560	-59.90	-42.15	-17.75	-62.53	1.09	5.87	V
	2340	-60.43	-13	-47.43	-62.83	1.37	5.92	V
	3120	-63.16	-13	-50.16	-67.05	1.64	7.68	V
Highest	1564	-59.46	-42.15	-17.31	-62.09	1.09	5.87	H
	2348	-57.33	-13	-44.33	-59.73	1.37	5.92	H
	3132	-63.46	-13	-50.46	-67.35	1.64	7.68	H
	1564	-61.22	-42.15	-19.07	-63.85	1.09	5.87	V
	2346	-58.98	-13	-45.98	-61.38	1.37	5.92	V
	3132	-63.30	-13	-50.30	-67.19	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	-59.09	-13	-46.09	-61.72	1.09	5.87	H
	2334	-54.34	-13	-41.34	-56.74	1.37	5.92	H
	3108	-63.44	-13	-50.44	-67.33	1.64	7.68	H
	1554	-62.21	-13	-49.21	-64.84	1.09	5.87	V
	2334	-58.10	-13	-45.10	-60.50	1.37	5.92	V
	3108	-63.40	-13	-50.40	-67.29	1.64	7.68	V

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



LTE Band 25 / 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	3702.18	-57.40	-13	-44.40	-69.66	2.641	14.90	H
	5553	-47.90	-13	-34.90	-59.76	2.94	14.80	H
	7404	-50.40	-13	-37.40	-60.17	3.39	13.16	H
	3702.18	-57.41	-13	-44.41	-69.67	2.64	14.90	V
	5553	-48.77	-13	-35.77	-60.63	2.94	14.80	V
	7404	-50.05	-13	-37.05	-59.82	3.39	13.16	V
Middle	3741	-55.23	-13	-42.23	-67.49	2.641	14.90	H
	5613	-41.82	-13	-28.82	-53.68	2.94	14.80	H
	7488	-50.32	-13	-37.32	-60.09	3.39	13.16	H
	3741	-55.26	-13	-42.26	-67.52	2.64	14.90	V
	5613	-42.64	-13	-29.64	-54.50	2.94	14.80	V
	7488	-49.71	-13	-36.71	-59.48	3.39	13.16	V
Highest	3792.18	-57.28	-13	-44.28	-69.54	2.641	14.90	H
	5688	-45.73	-13	-32.73	-57.59	2.94	14.80	H
	7584	-50.37	-13	-37.37	-60.14	3.39	13.16	H
	3792.18	-57.20	-13	-44.20	-69.46	2.64	14.90	V
	5688	-48.41	-13	-35.41	-60.27	2.94	14.80	V
	7584	-49.69	-13	-36.69	-59.46	3.39	13.16	V

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





LTE Band 26 / 15MHz / 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)
Lowest	1650	-62.03	-13	-49.03	-69.00	1.58	10.70	H
	2474	-52.79	-13	-39.79	-61.04	2.102	12.50	H
	3300	-64.03	-13	-51.03	-72.92	2.856	13.90	H
	1650	-61.58	-13	-48.58	-68.55	1.58	10.70	V
	2474	-52.41	-13	-39.41	-60.66	2.10	12.50	V
	3300	-63.97	-13	-50.97	-72.86	2.86	13.90	V
Middle	1660	-62.40	-13	-49.40	-69.37	1.58	10.70	H
	2490	-54.70	-13	-41.70	-62.95	2.102	12.50	H
	3318	-64.70	-13	-51.70	-73.59	2.856	13.90	H
	1660	-62.24	-13	-49.24	-69.21	1.58	10.70	V
	2490	-54.60	-13	-41.60	-62.85	2.10	12.50	V
	3318	-64.66	-13	-51.66	-73.55	2.86	13.90	V
Highest	1670	-62.17	-13	-49.17	-69.14	1.58	10.70	H
	2504	-57.27	-13	-44.27	-65.52	2.102	12.50	H
	3342	-64.70	-13	-51.70	-73.59	2.856	13.90	H
	1670	-62.54	-13	-49.54	-69.51	1.58	10.70	V
	2504	-56.75	-13	-43.75	-65.00	2.10	12.50	V
	3342	-64.60	-13	-51.60	-73.49	2.86	13.90	V

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



For CA:

LTE Band 5B_CA / 10MHz+10 MHz / 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)
Lowest	1650.00	-65.18	-13	-52.18	-68.42	1.11	6.50	H
	2473.77	-52.53	-13	-39.53	-55.15	1.43	6.20	H
	3300.00	-60.23	-13	-47.23	-64.67	1.71	8.30	H
	1649.18	-64.98	-13	-51.98	-68.22	1.11	6.50	V
	2474.00	-53.92	-13	-40.92	-56.54	1.43	6.20	V
	3300.00	-60.39	-13	-47.39	-64.83	1.71	8.30	V
Middle	1654.00	-65.04	-13	-52.04	-68.28	1.11	6.50	H
	2481.57	-52.67	-13	-39.67	-55.29	1.43	6.20	H
	3306.00	-60.24	-13	-47.24	-64.68	1.71	8.30	H
	1654.38	-64.45	-13	-51.45	-67.69	1.11	6.50	V
	2482.00	-53.88	-13	-40.88	-56.50	1.43	6.20	V
	3306.00	-60.13	-13	-47.13	-64.57	1.71	8.30	V
Highest	1659.38	-64.83	-13	-51.83	-68.07	1.11	6.50	H
	2488.00	-53.49	-13	-40.49	-56.11	1.43	6.20	H
	3318.00	-59.97	-13	-46.97	-64.41	1.71	8.30	H
	1660.00	-64.95	-13	-51.95	-68.19	1.11	6.50	V
	2490.00	-53.28	-13	-40.28	-55.90	1.43	6.20	V
	3318.00	-59.81	-13	-46.81	-64.25	1.71	8.30	V

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