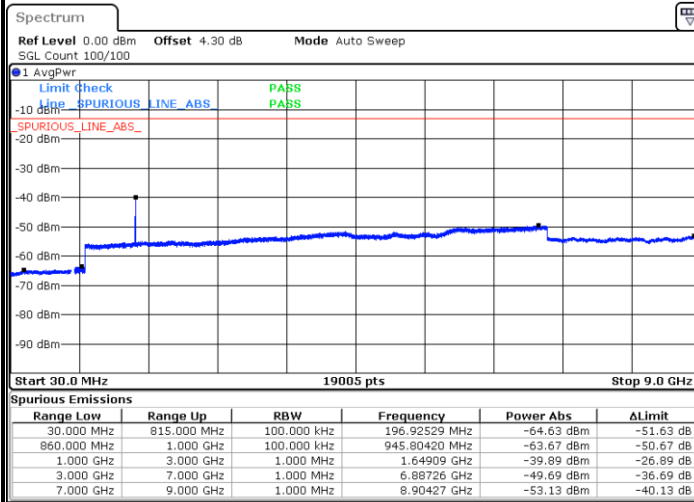




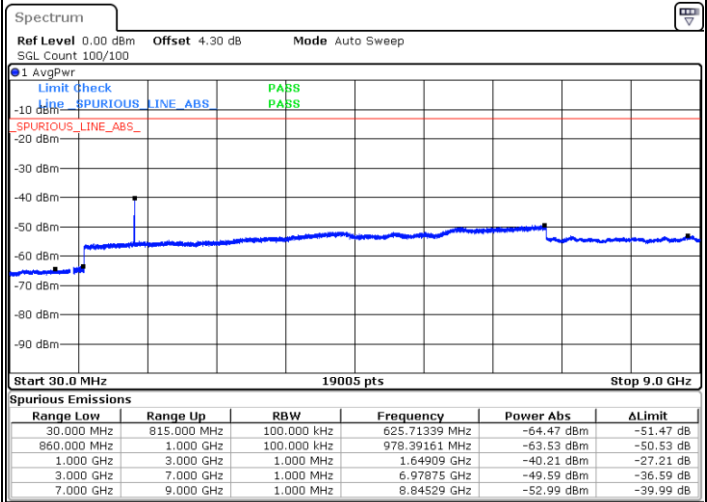
LTE Band 5 / 5MHz

Lowest Channel / QPSK



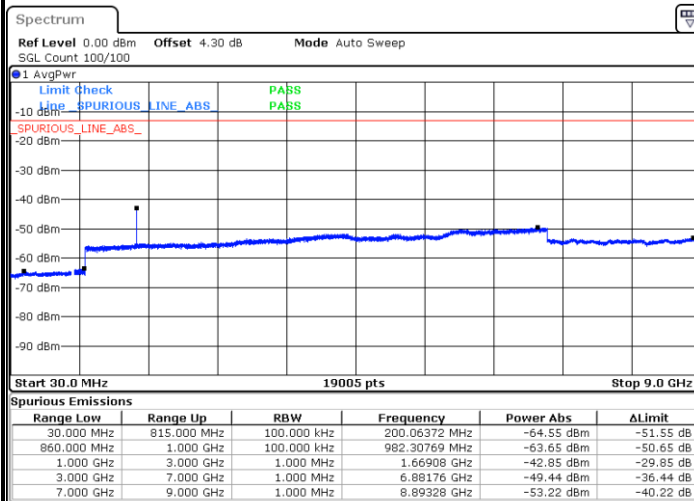
Date: 7 JUN 2019 20:29:31

Lowest Channel / 16QAM



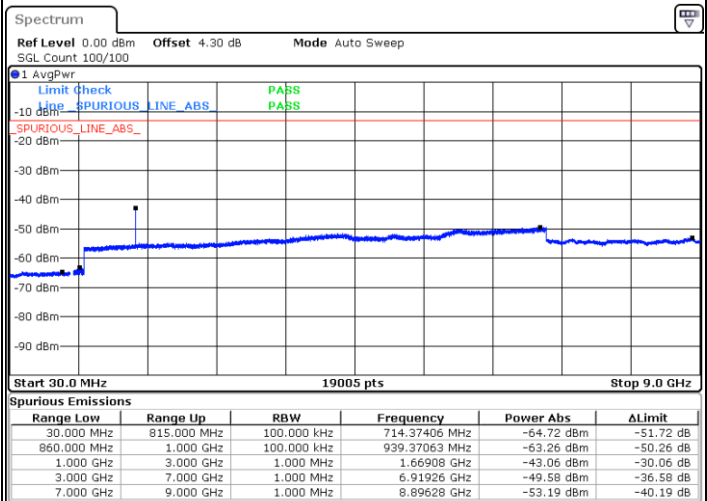
Date: 7 JUN 2019 19:28:59

Middle Channel / QPSK



Date: 7 JUN 2019 19:30:32

Middle Channel / 16QAM

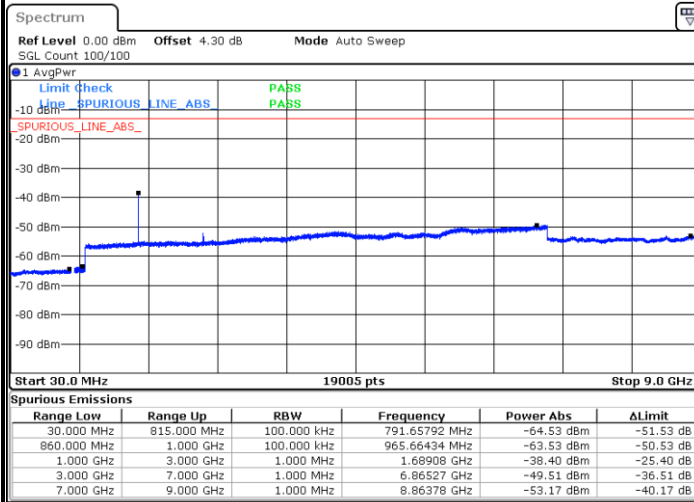


Date: 7 JUN 2019 19:31:26



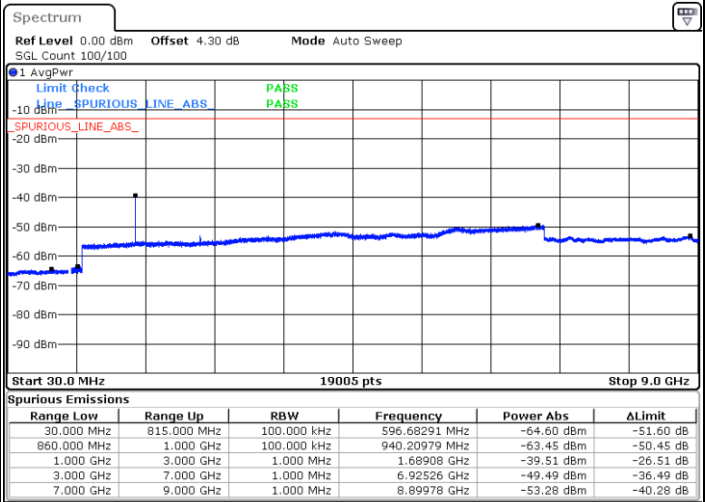
LTE Band 5 / 5MHz

Highest Channel / QPSK



Date: 7 JUN 2019 19:39:34

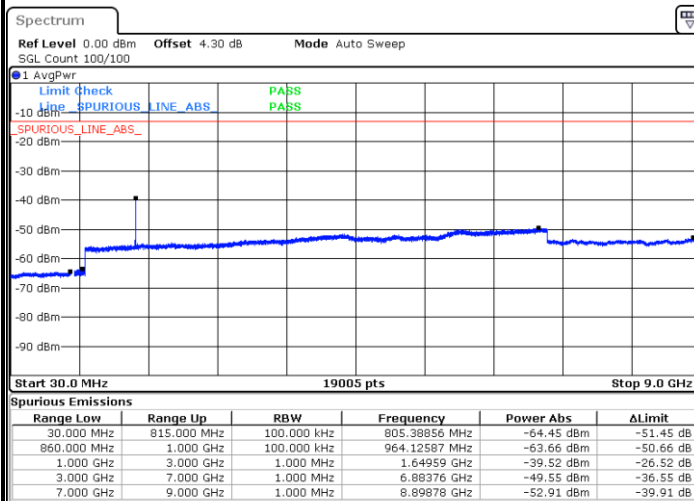
Highest Channel / 16QAM



Date: 7 JUN 2019 19:40:27

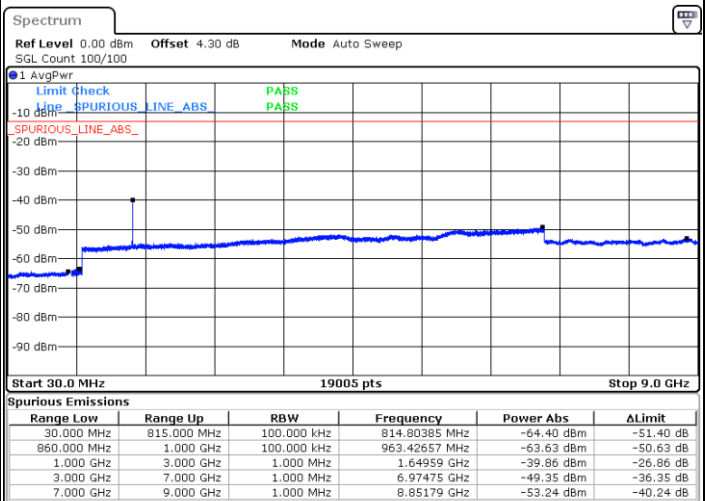
LTE Band 5 / 10MHz

Lowest Channel / QPSK



Date: 7 JUN 2019 19:48:35

Lowest Channel / 16QAM

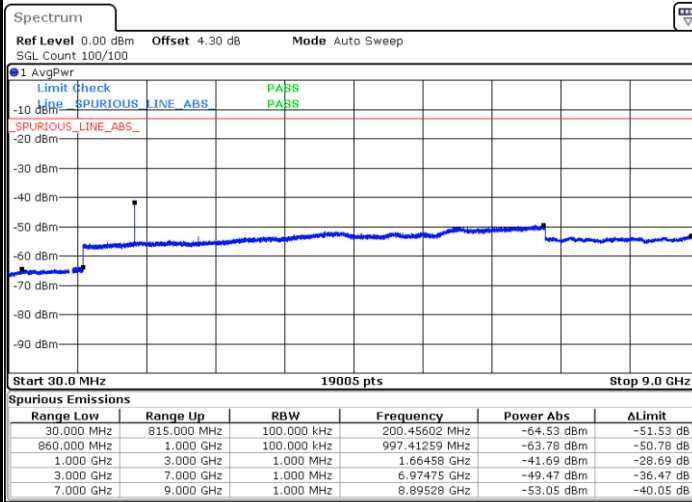


Date: 7 JUN 2019 19:49:29



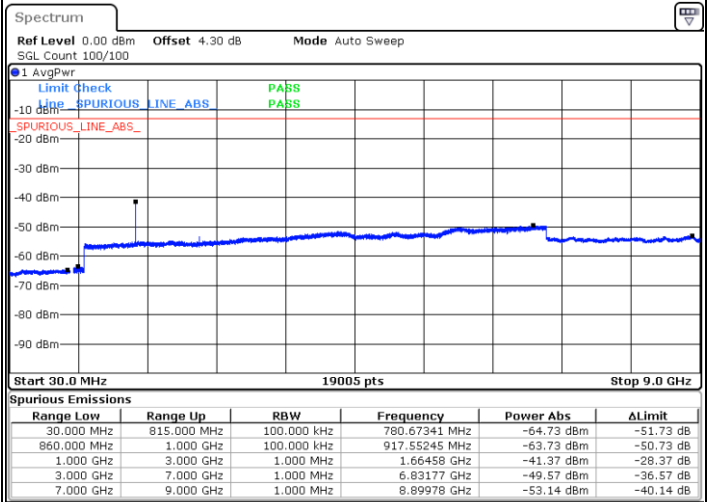
LTE Band 5 / 10MHz

Middle Channel / QPSK



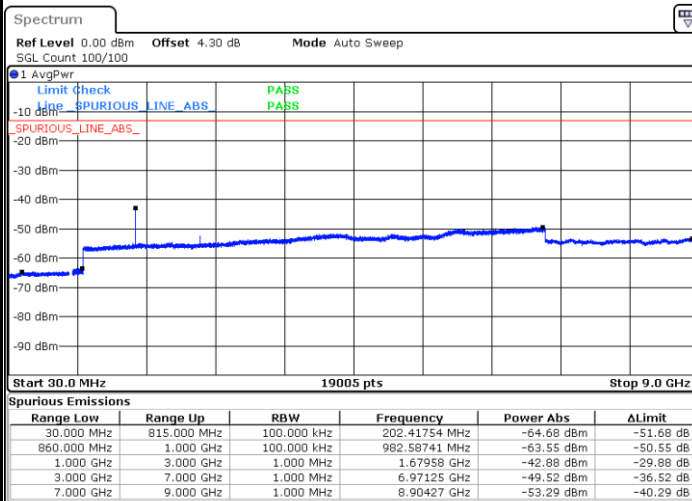
Date: 7 JUN 2019 19:51:02

Middle Channel / 16QAM



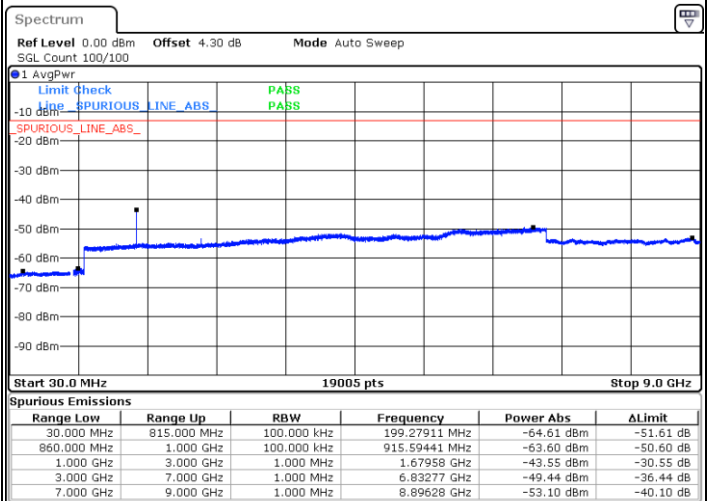
Date: 7 JUN 2019 19:51:55

Highest Channel / QPSK



Date: 7 JUN 2019 20:00:03

Highest Channel / 16QAM

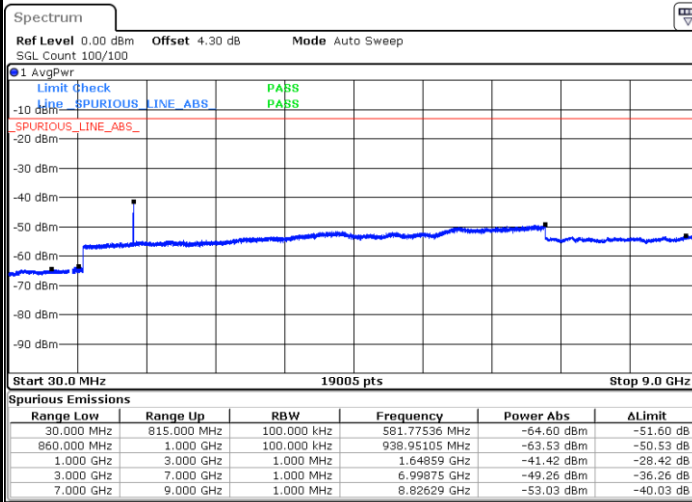


Date: 7 JUN 2019 20:00:57



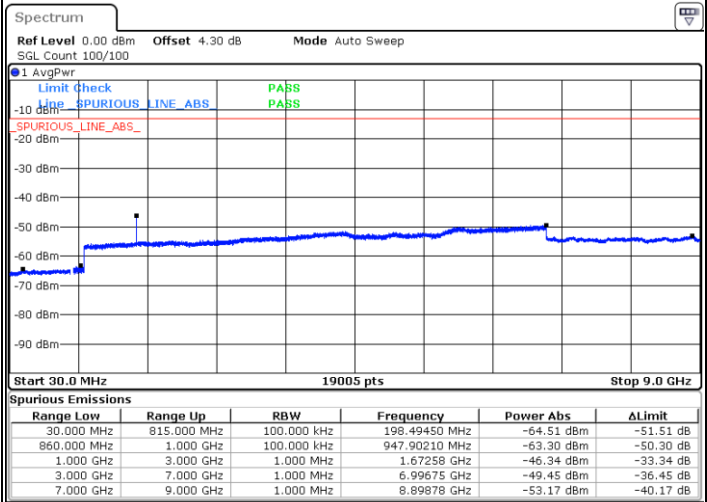
LTE Band 5 / 1.4MHz

Lowest Channel / 64QAM



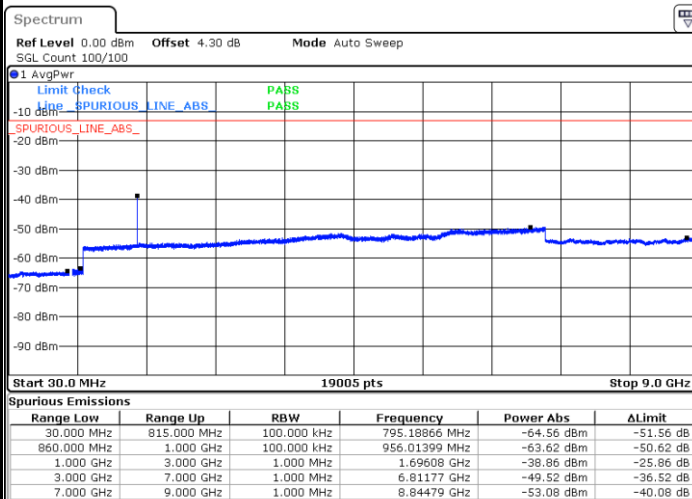
Date: 7 JUN 2019 20:52:59

Middle Channel / 64QAM



Date: 7 JUN 2019 20:53:52

Highest Channel / 64QAM

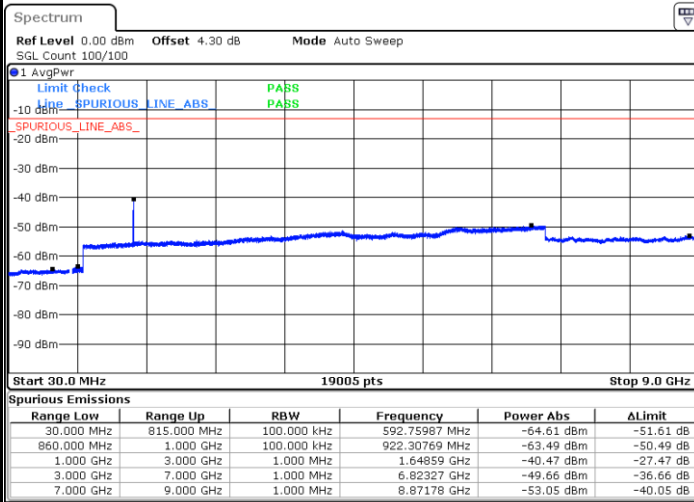


Date: 7 JUN 2019 20:58:43



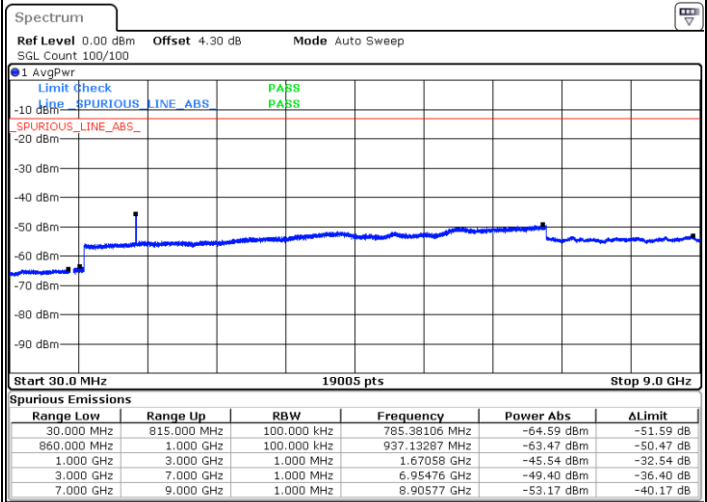
LTE Band 5 / 3MHz

Lowest Channel / 64QAM



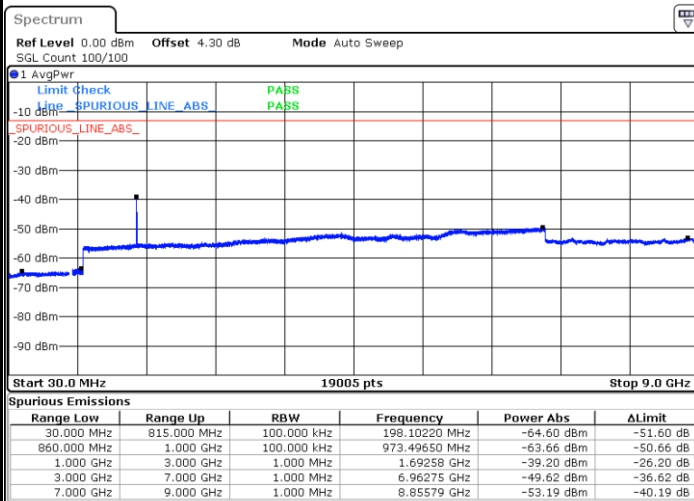
Date: 7 JUN 2019 21:03:13

Middle Channel / 64QAM



Date: 7 JUN 2019 21:04:07

Highest Channel / 64QAM

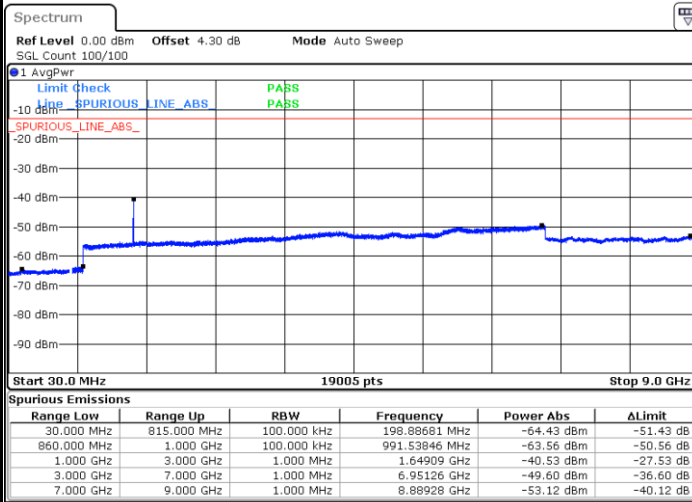


Date: 7 JUN 2019 21:08:57



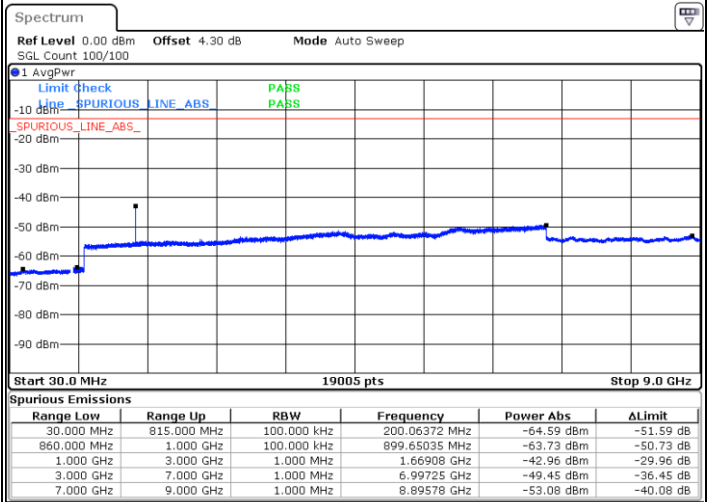
LTE Band 5 / 5MHz

Lowest Channel / 64QAM



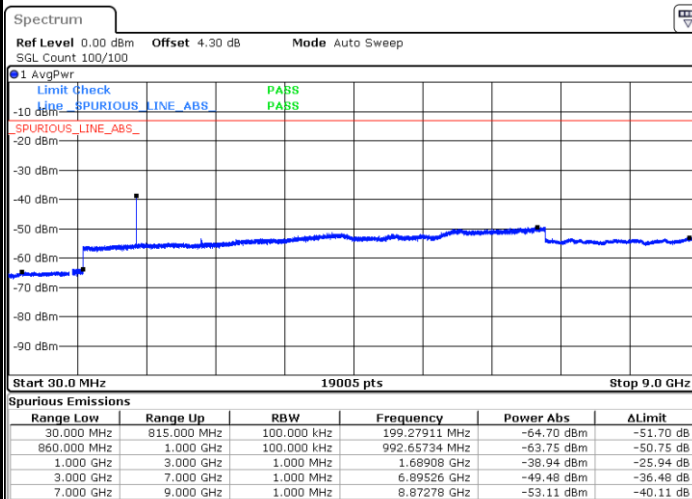
Date: 7 JUN 2019 21:13:28

Middle Channel / 64QAM



Date: 7 JUN 2019 21:14:21

Highest Channel / 64QAM

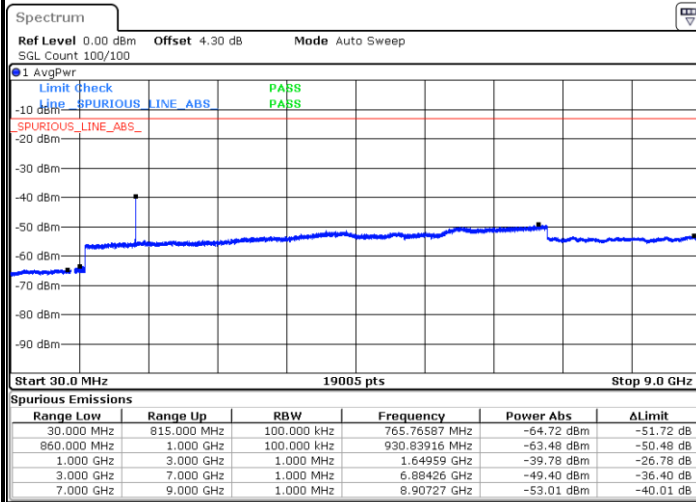


Date: 7 JUN 2019 21:19:12



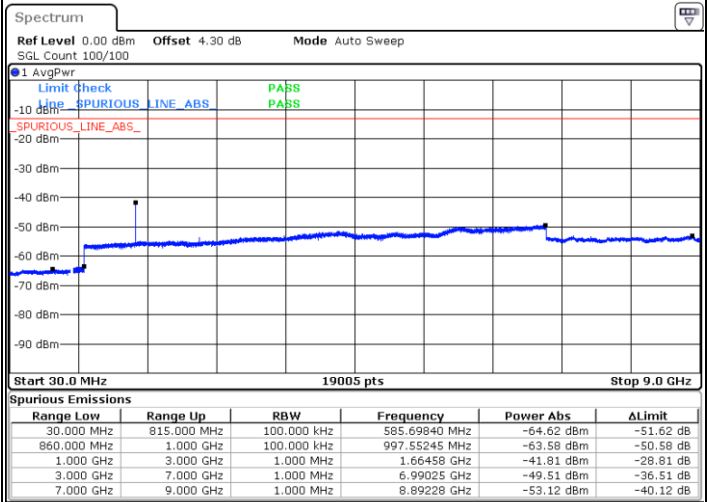
LTE Band 5 / 10MHz

Lowest Channel / 64QAM



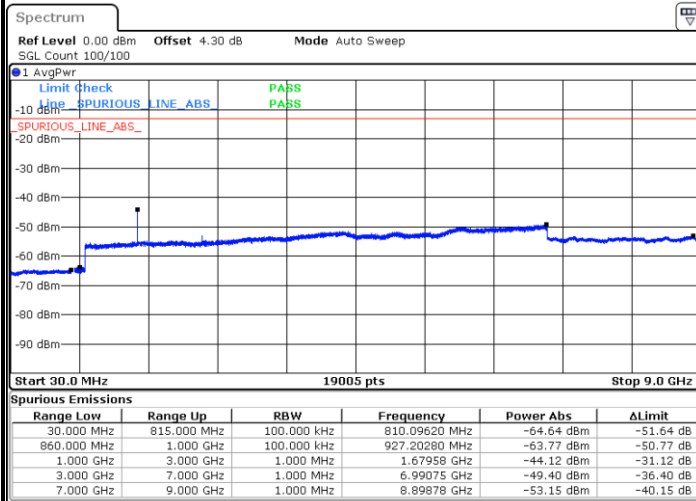
Date: 7 JUN 2019 21:23:43

Middle Channel / 64QAM



Date: 7 JUN 2019 21:24:36

Highest Channel / 64QAM

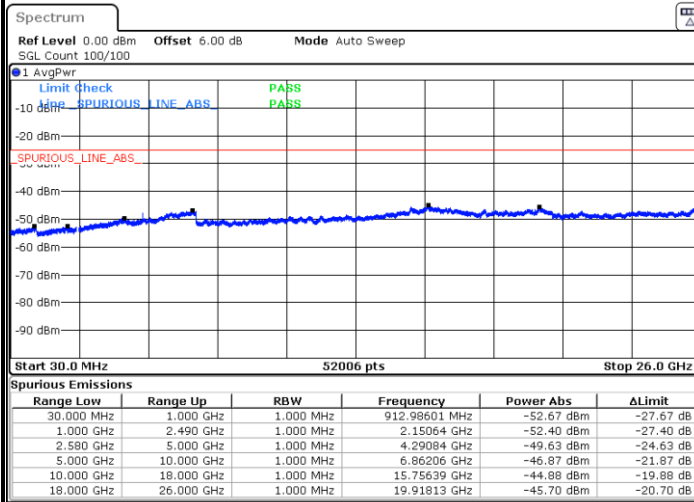


Date: 7 JUN 2019 21:29:27



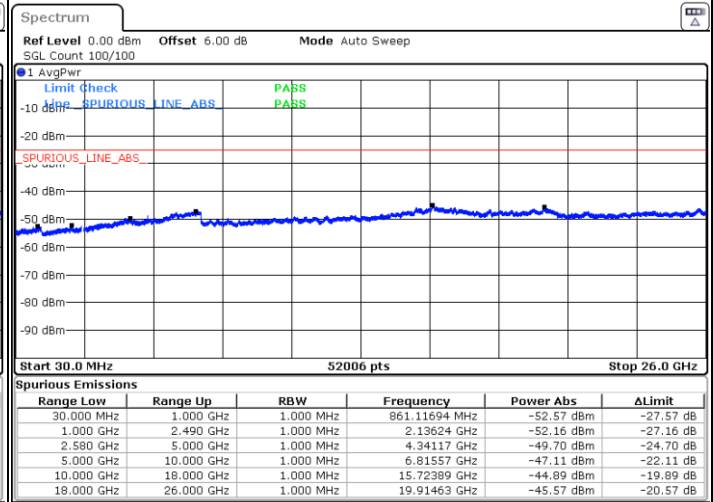
LTE Band 7 / 5MHz

Lowest Channel / QPSK



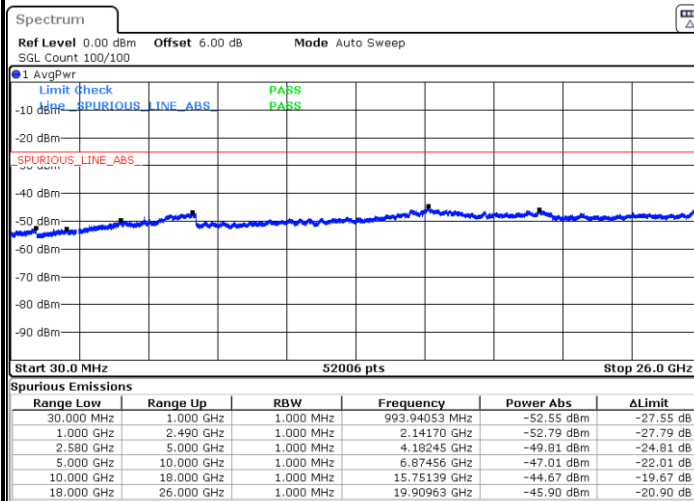
Date: 20 JUN 2019 19:41:54

Lowest Channel / 16QAM



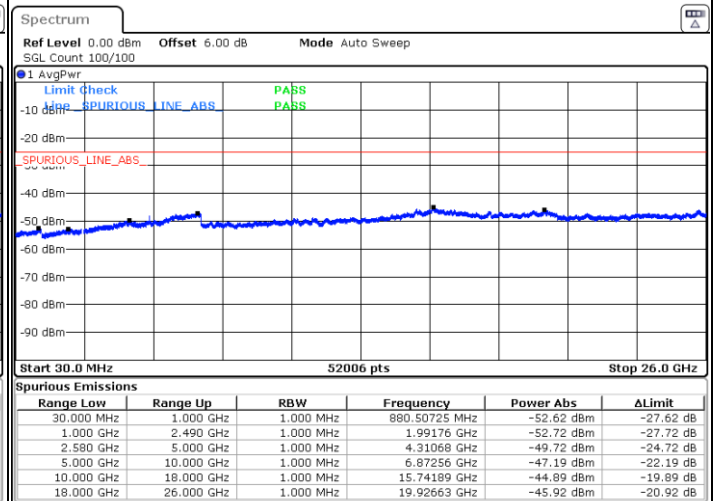
Date: 20 JUN 2019 19:42:48

Middle Channel / QPSK



Date: 20 JUN 2019 19:44:36

Middle Channel / 16QAM

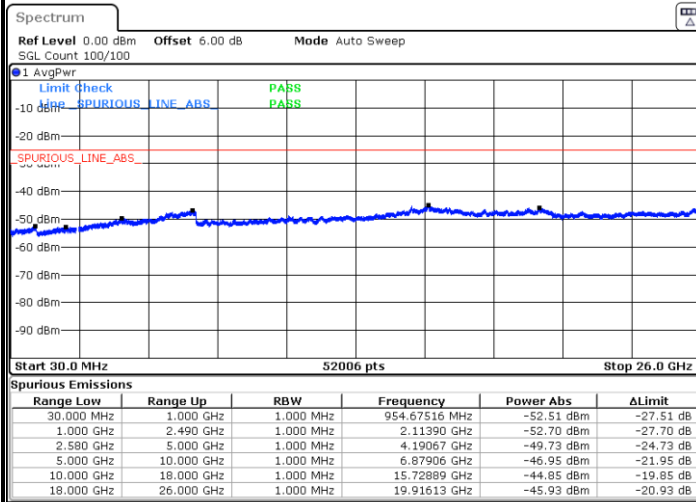


Date: 20 JUN 2019 19:43:42



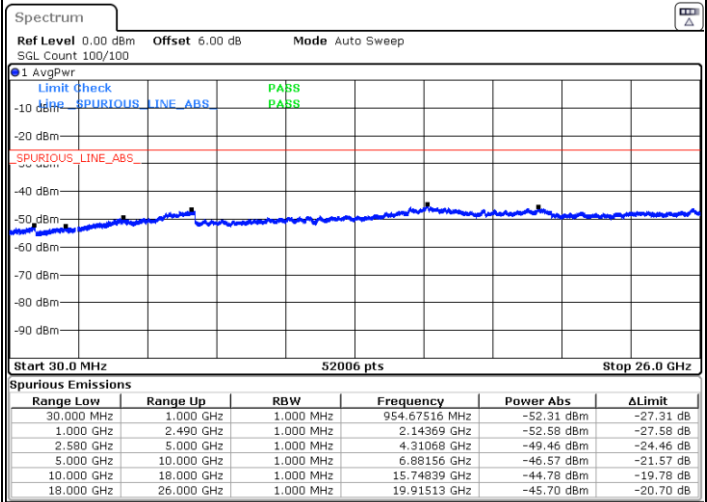
LTE Band 7 / 5MHz

Highest Channel / QPSK



Date: 20 JUN 2019 19:45:30

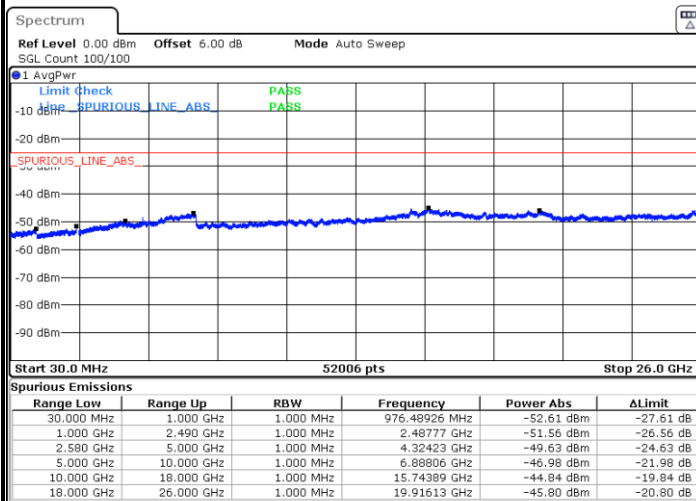
Highest Channel / 16QAM



Date: 20 JUN 2019 19:46:24

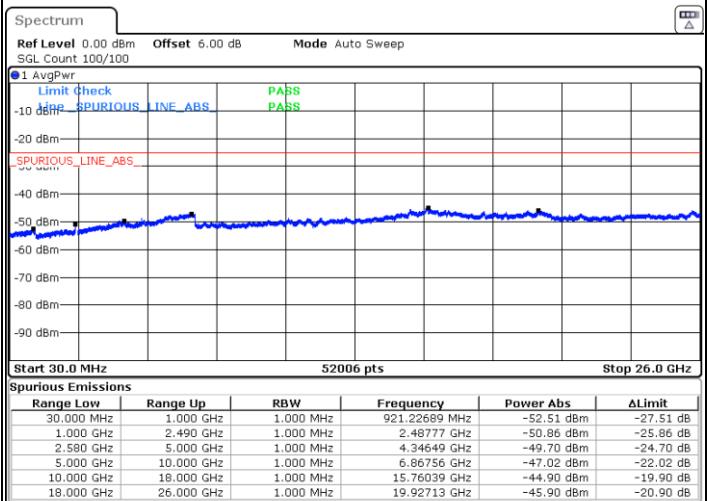
LTE Band 7 / 10MHz

Lowest Channel / QPSK



Date: 20 JUN 2019 19:58:24

Lowest Channel / 16QAM

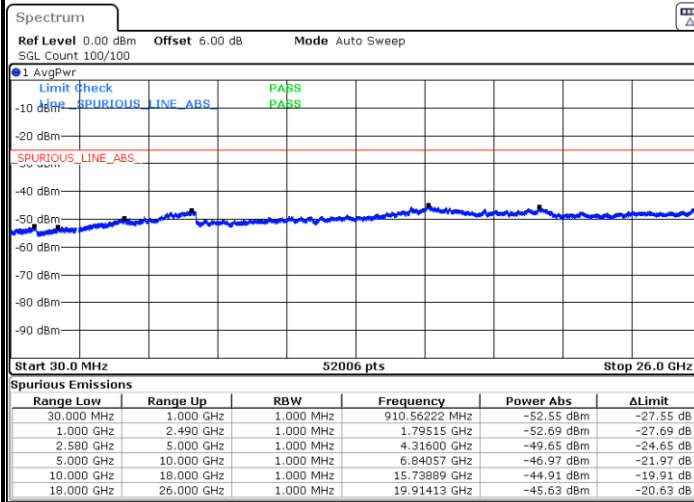


Date: 20 JUN 2019 19:59:18



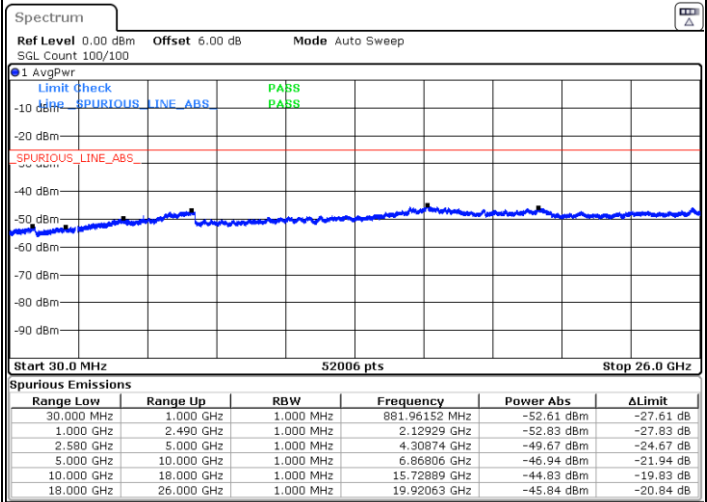
LTE Band 7 / 10MHz

Middle Channel / QPSK



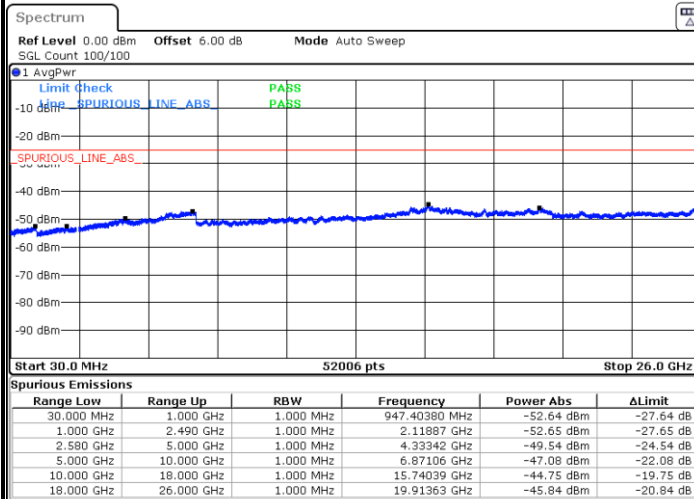
Date: 20 JUN 2019 20:01:06

Middle Channel / 16QAM



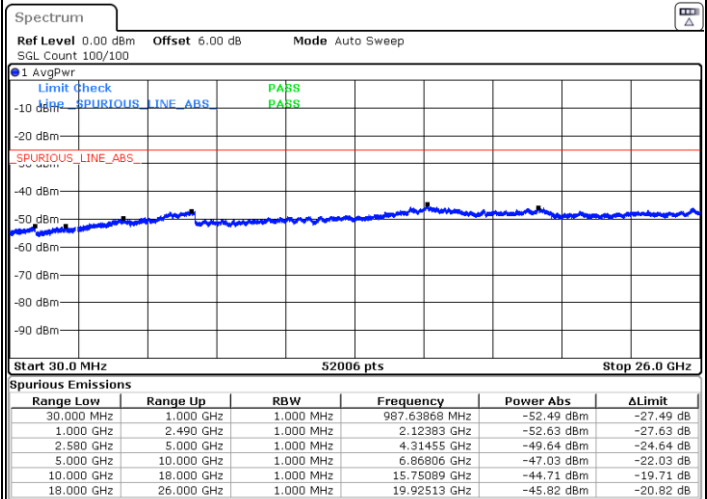
Date: 20 JUN 2019 20:00:12

Highest Channel / QPSK



Date: 20 JUN 2019 20:02:00

Highest Channel / 16QAM

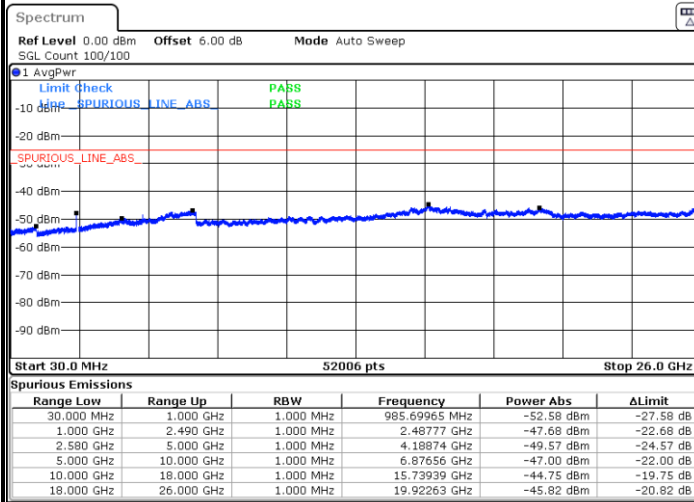


Date: 20 JUN 2019 20:02:54



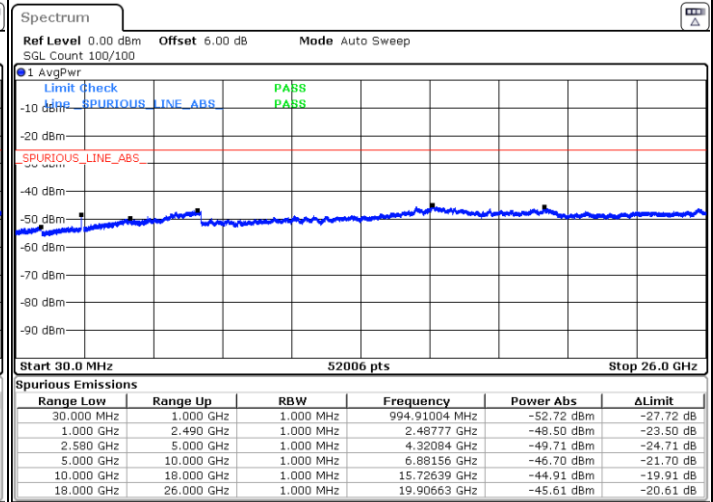
LTE Band 7 / 15MHz

Lowest Channel / QPSK



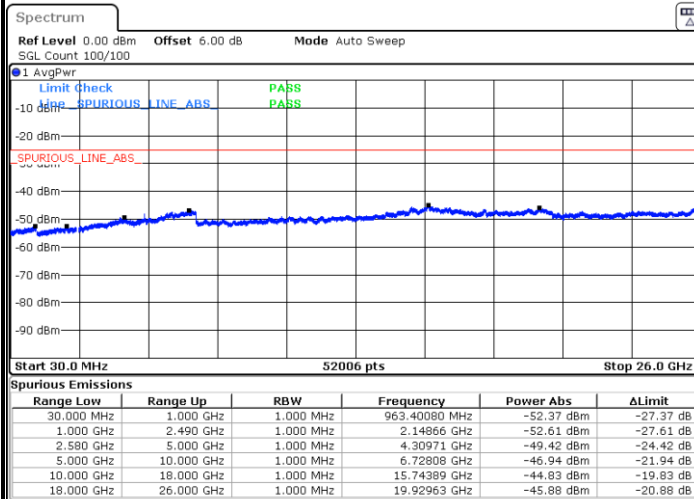
Date: 20 JUN 2019 20:14:55

Lowest Channel / 16QAM



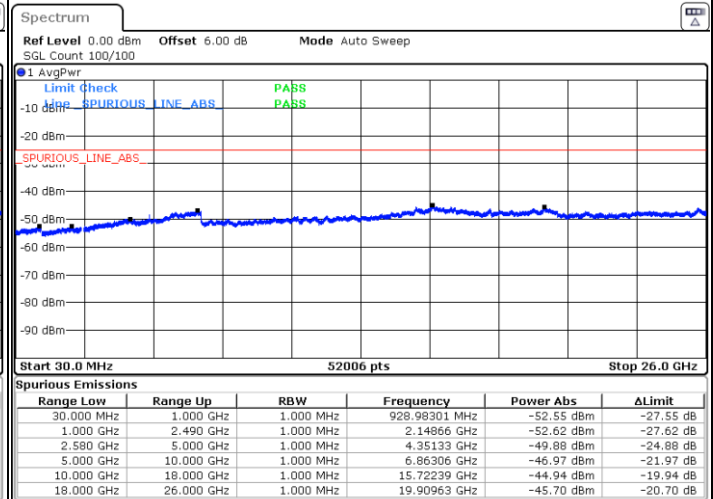
Date: 20 JUN 2019 20:15:49

Middle Channel / QPSK



Date: 20 JUN 2019 20:17:37

Middle Channel / 16QAM

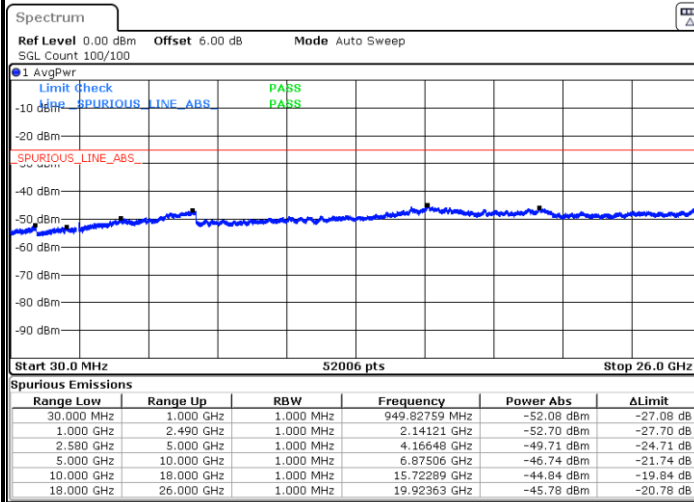


Date: 20 JUN 2019 20:16:43



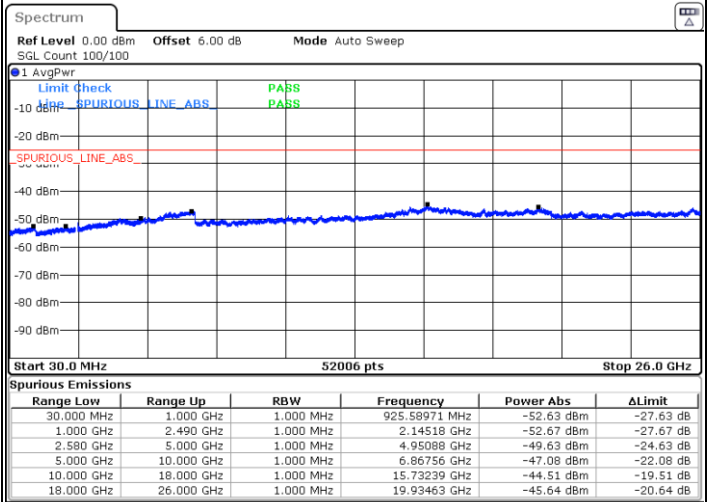
LTE Band7 / 15MHz

Highest Channel / QPSK



Date: 20 JUN 2019 20:18:31

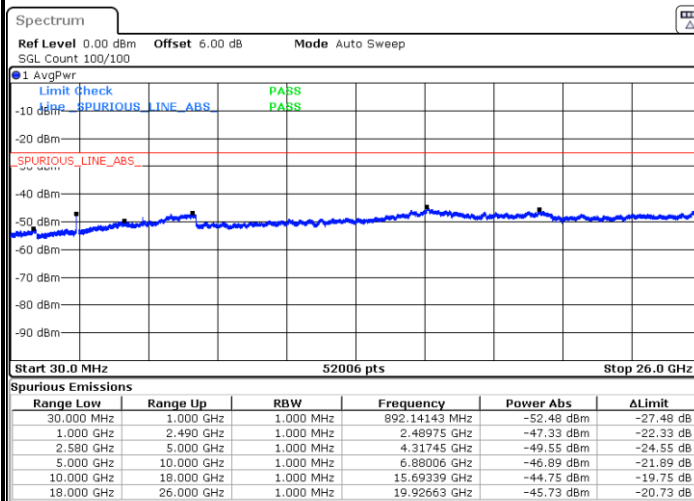
Highest Channel / 16QAM



Date: 20 JUN 2019 20:19:26

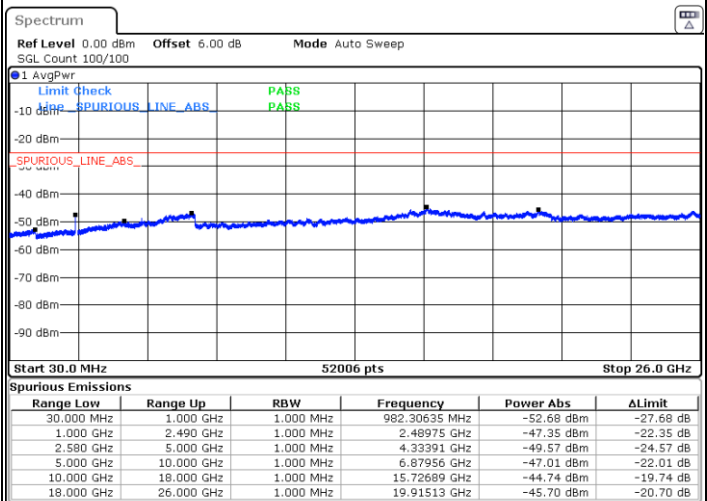
LTE Band 7 / 20MHz

Lowest Channel / QPSK



Date: 20 JUN 2019 20:31:27

Lowest Channel / 16QAM

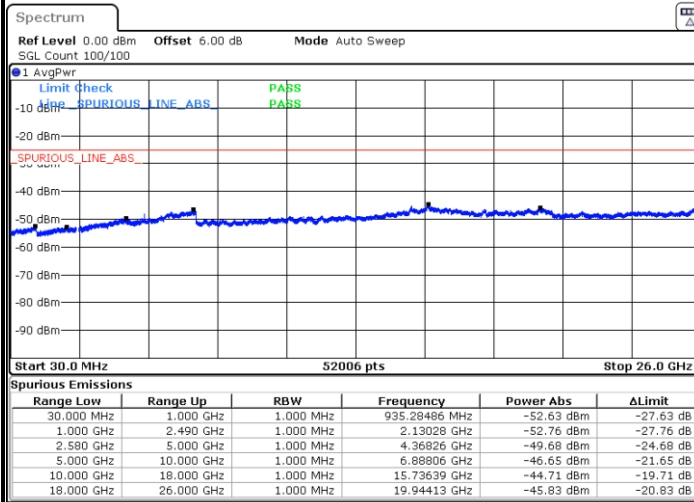


Date: 20 JUN 2019 20:32:21



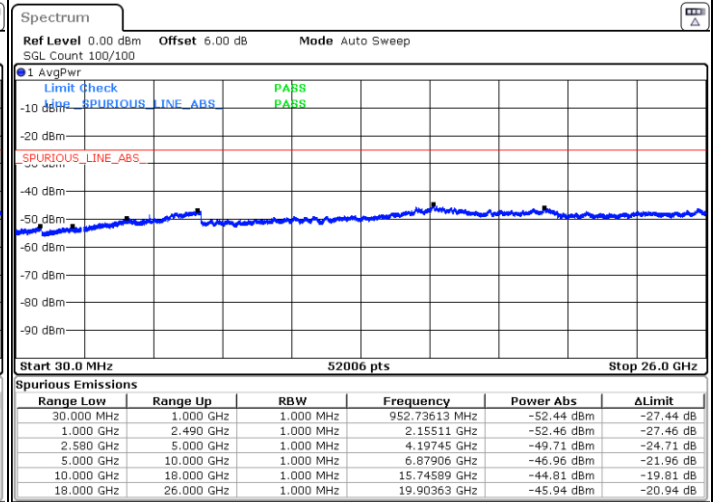
LTE Band 7 / 20MHz

Middle Channel / QPSK



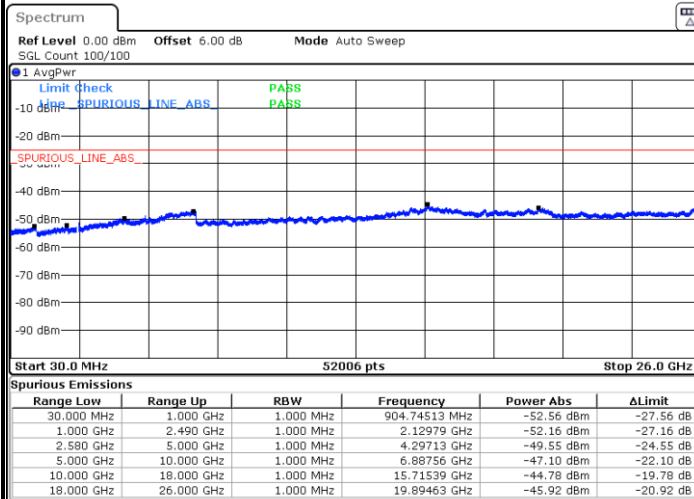
Date: 20 JUN 2019 20:34:09

Middle Channel / 16QAM



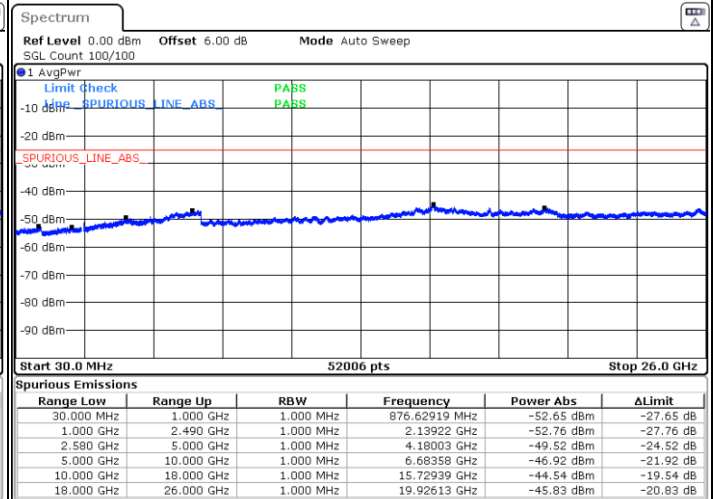
Date: 20 JUN 2019 20:33:15

Highest Channel / QPSK



Date: 20 JUN 2019 20:35:03

Highest Channel / 16QAM

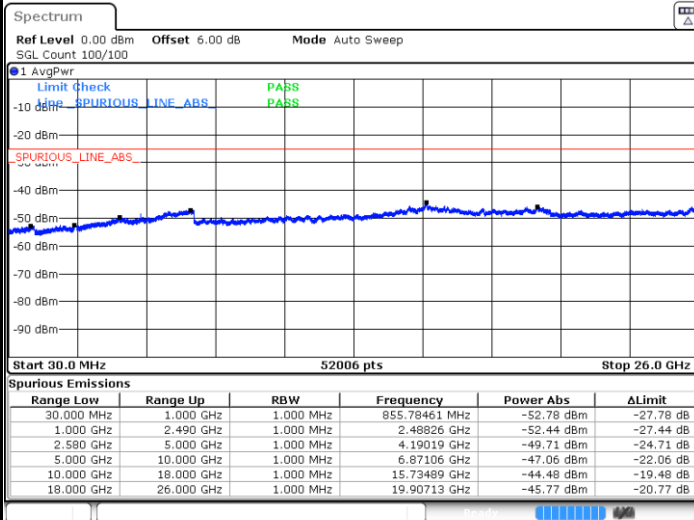


Date: 20 JUN 2019 20:35:57



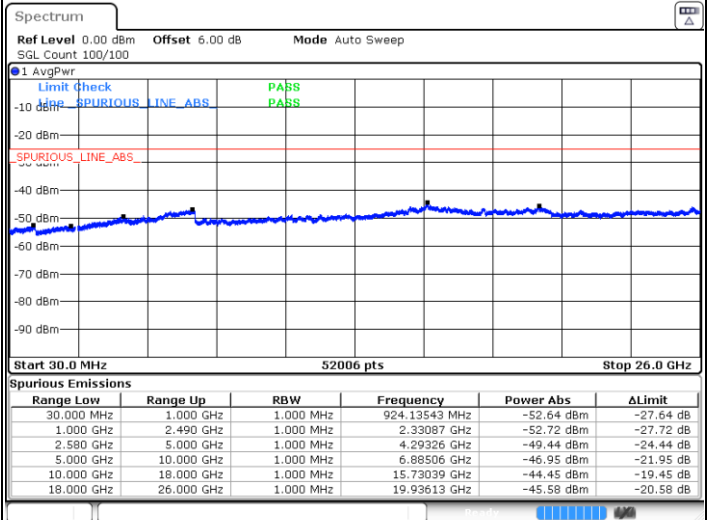
LTE Band 7 / 5MHz

Lowest Channel / 64QAM



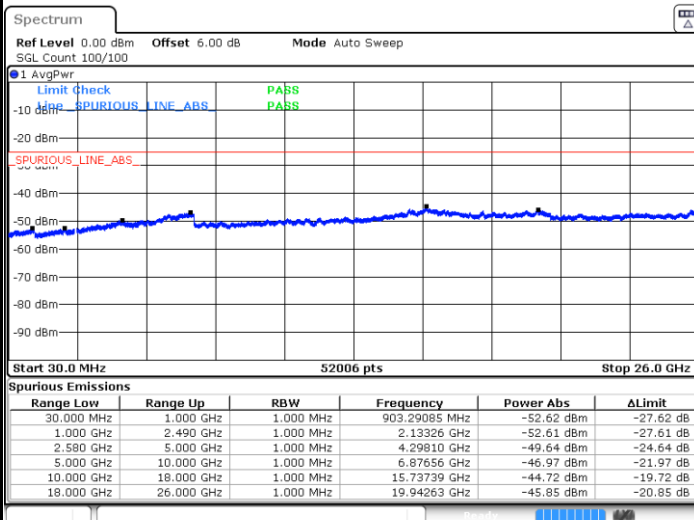
Date: 20 JUN 2019 20:37:52

Middle Channel / 64QAM



Date: 20 JUN 2019 20:38:46

Highest Channel / 64QAM

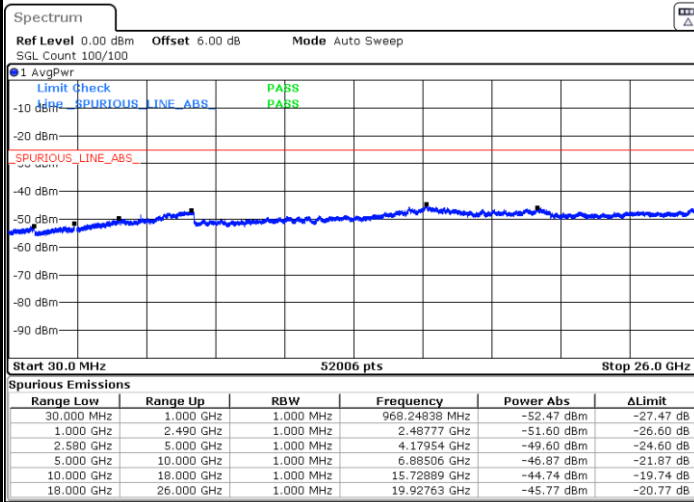


Date: 20 JUN 2019 20:39:40



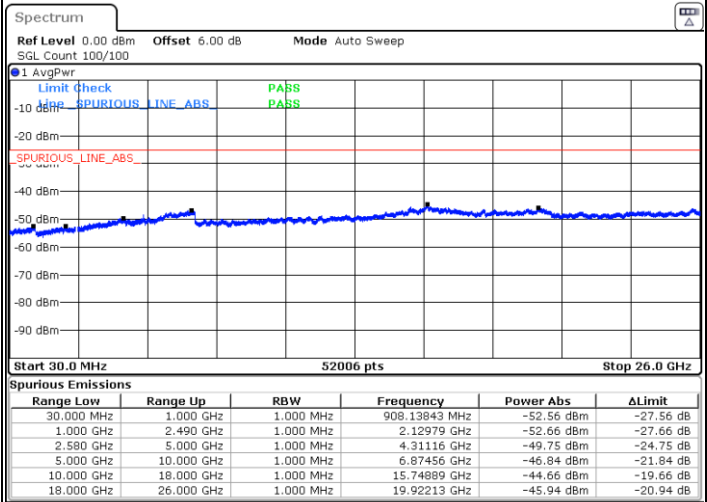
LTE Band 7 / 10MHz

Lowest Channel / 64QAM



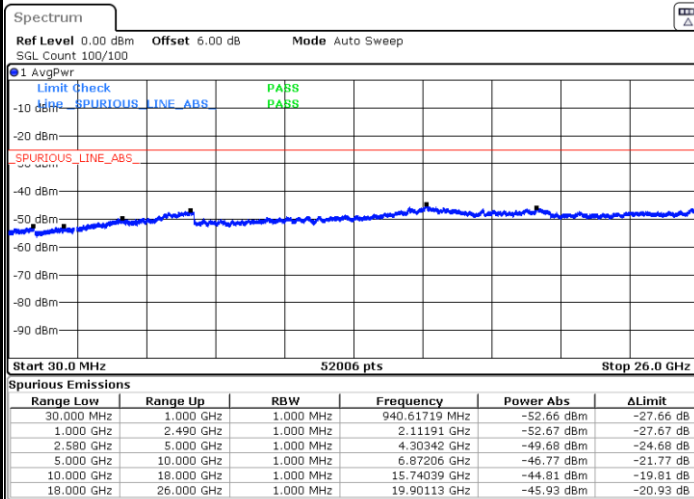
Date: 20 JUN 2019 20:46:07

Middle Channel / 64QAM



Date: 20 JUN 2019 20:47:02

Highest Channel / 64QAM

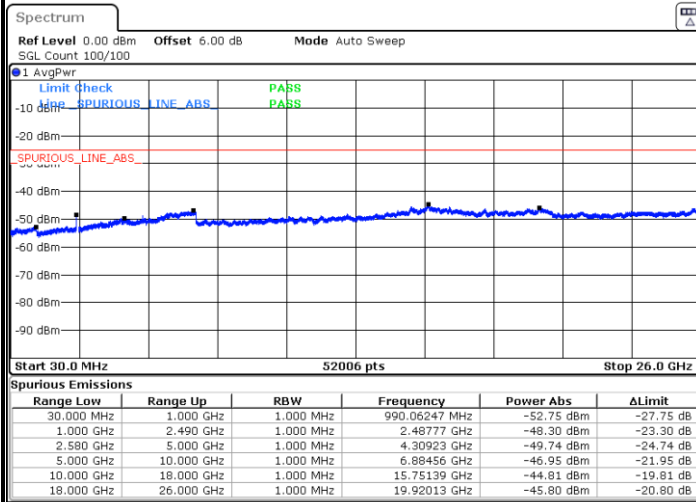


Date: 20 JUN 2019 20:47:56



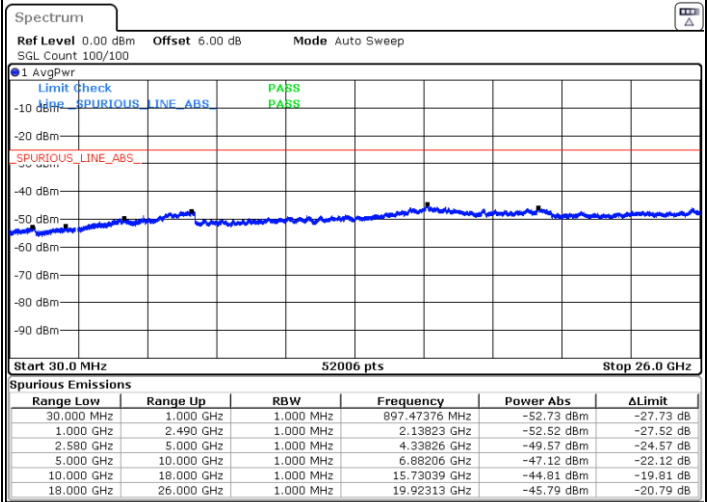
LTE Band 7 / 15MHz

Lowest Channel / 64QAM



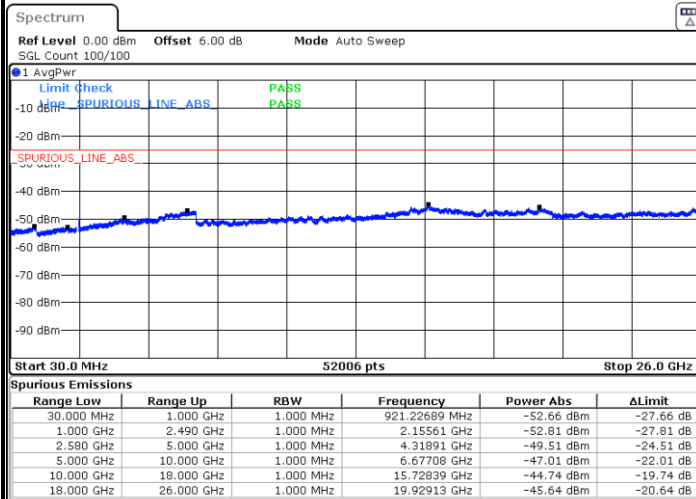
Date: 20 JUN 2019 20:58:56

Middle Channel / 64QAM



Date: 20 JUN 2019 20:59:50

Highest Channel / 64QAM

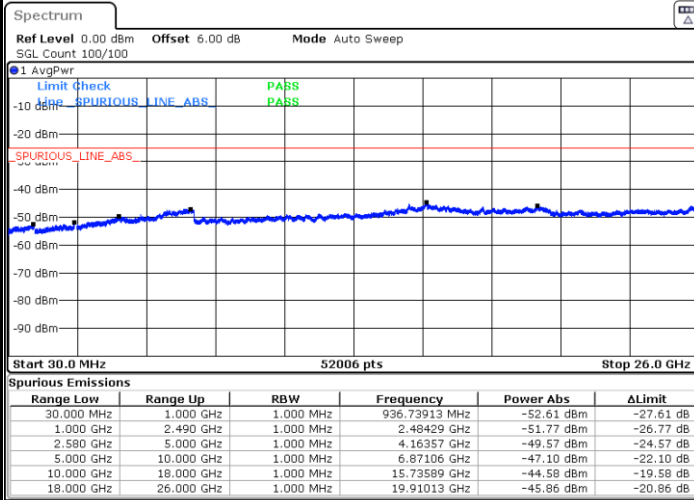


Date: 20 JUN 2019 21:00:44



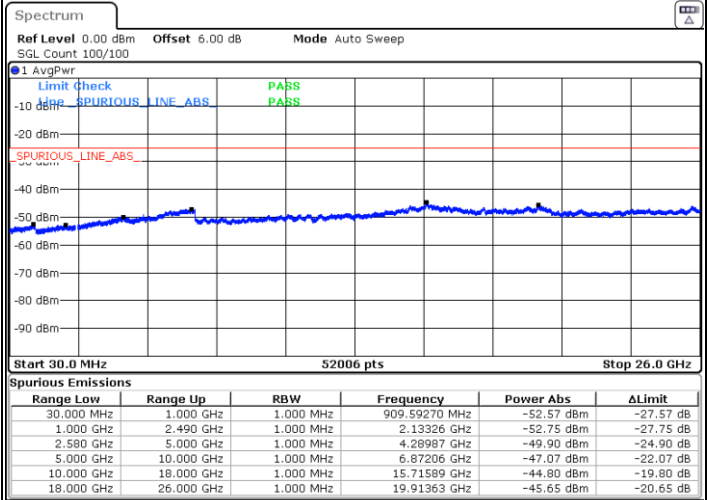
LTE Band 7 / 20MHz

Lowest Channel / 64QAM



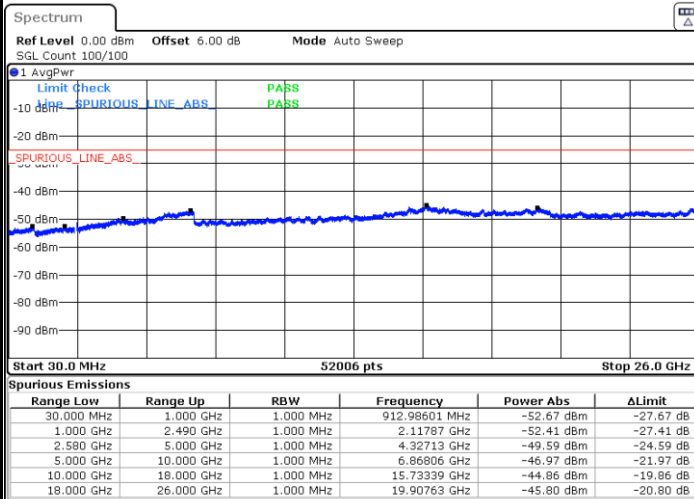
Date: 20 JUN 2019 21:07:12

Middle Channel / 64QAM



Date: 20 JUN 2019 21:08:06

Highest Channel / 64QAM

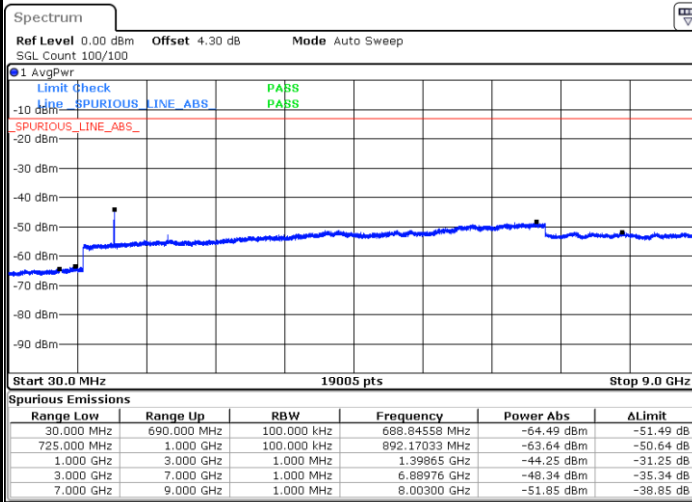


Date: 20 JUN 2019 21:09:00



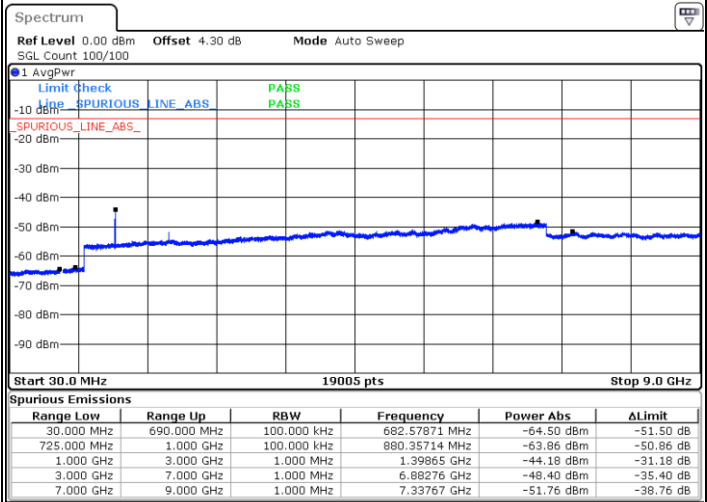
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



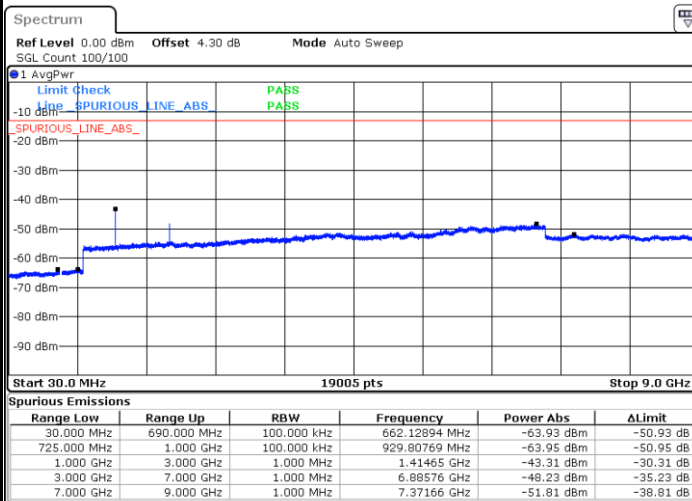
Date: 8 JUN 2019 04:54:59

Lowest Channel / 16QAM



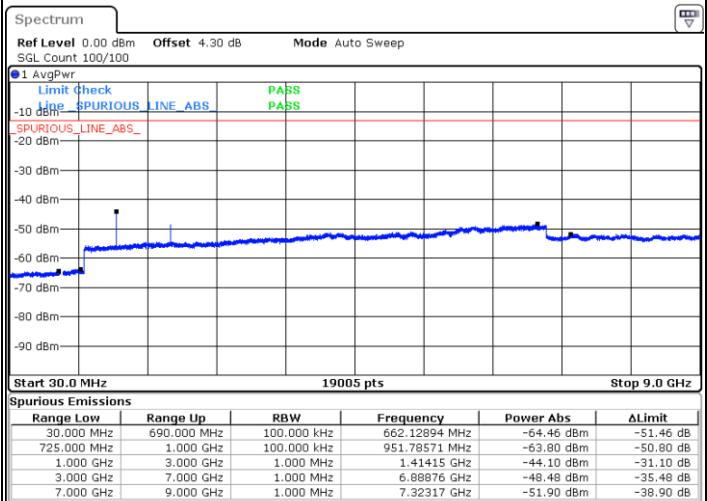
Date: 8 JUN 2019 04:55:54

Middle Channel / QPSK



Date: 8 JUN 2019 04:57:42

Middle Channel / 16QAM

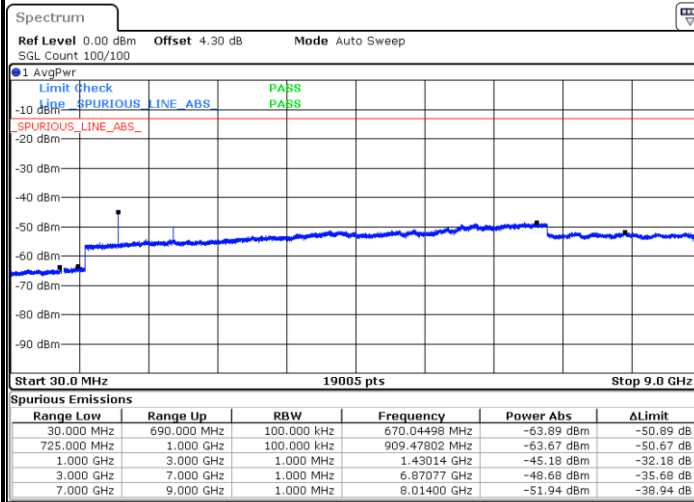


Date: 8 JUN 2019 04:56:48



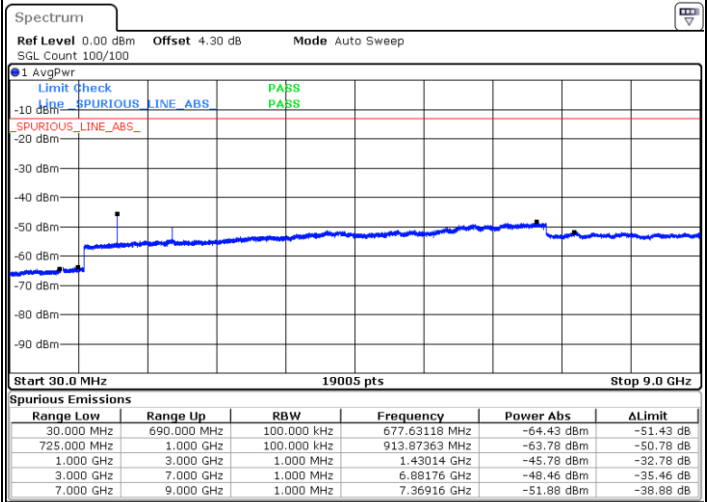
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 8 JUN 2019 04:58:37

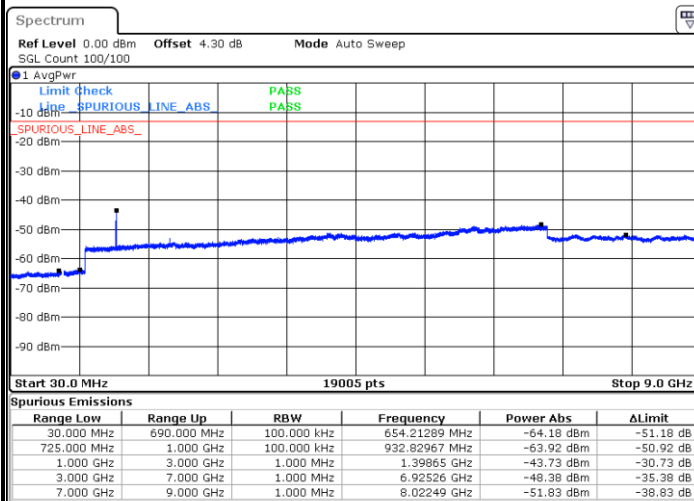
Highest Channel / 16QAM



Date: 8 JUN 2019 04:59:31

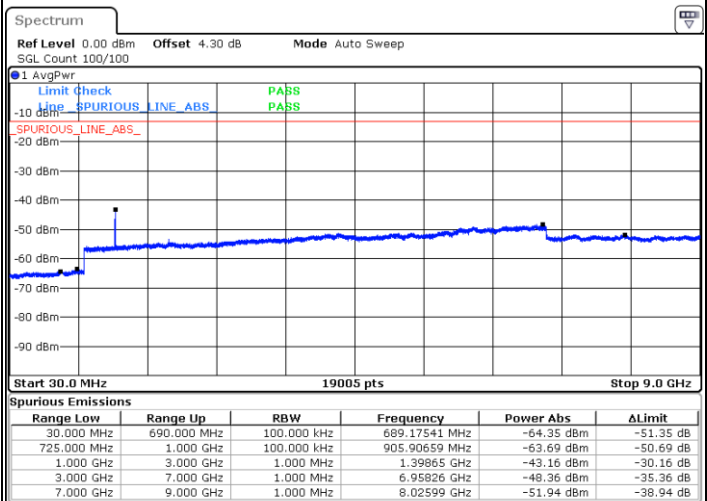
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 8 JUN 2019 05:11:23

Lowest Channel / 16QAM

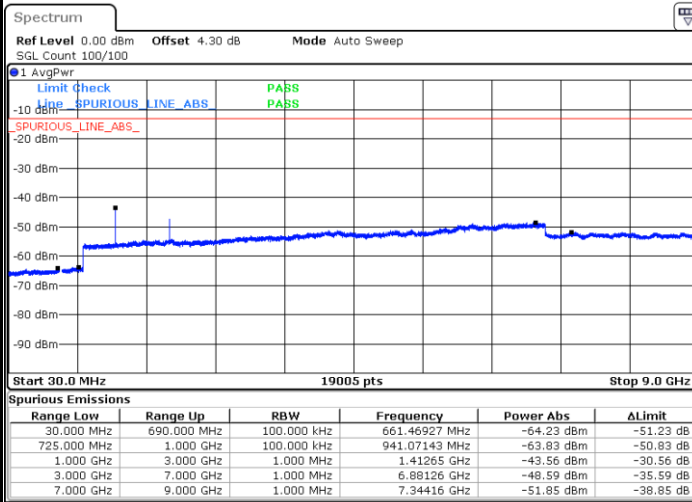


Date: 8 JUN 2019 05:12:18



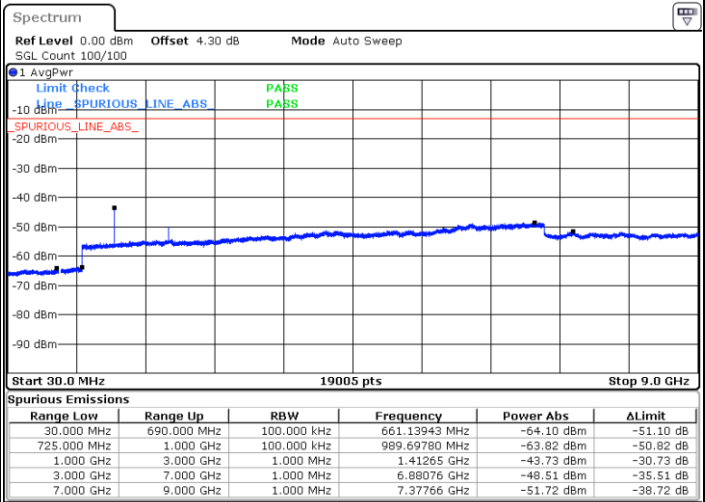
LTE Band 12 / 3MHz

Middle Channel / QPSK



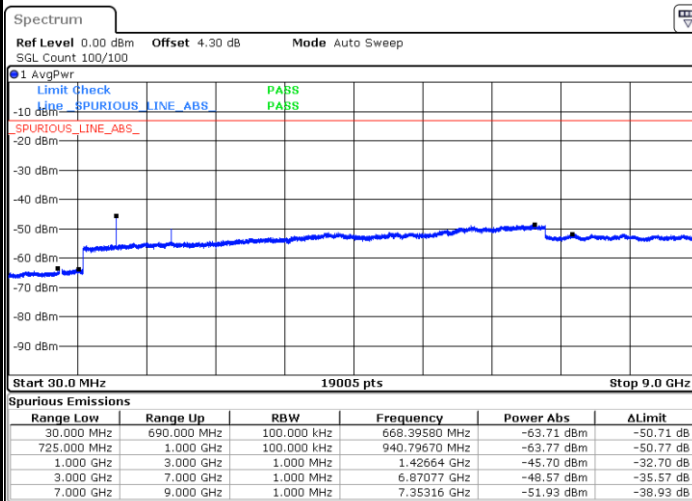
Date: 8 JUN 2019 05:14:07

Middle Channel / 16QAM



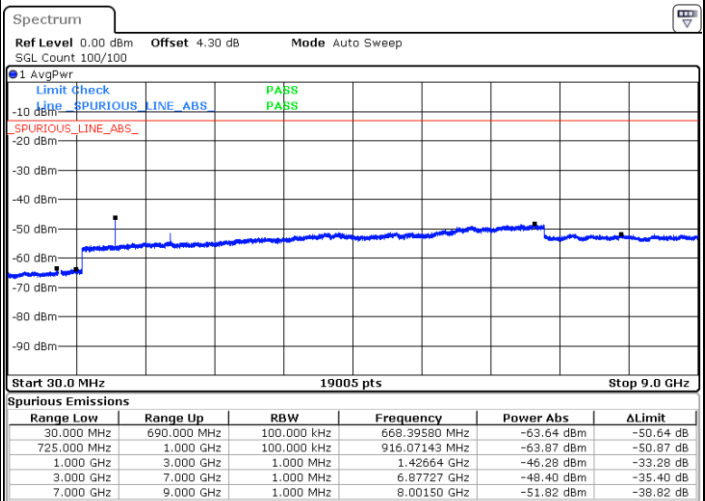
Date: 8 JUN 2019 05:13:12

Highest Channel / QPSK



Date: 8 JUN 2019 05:15:01

Highest Channel / 16QAM

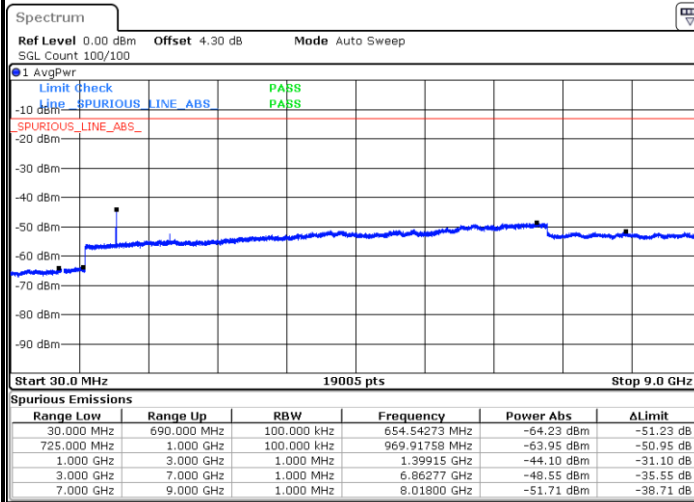


Date: 8 JUN 2019 05:15:55



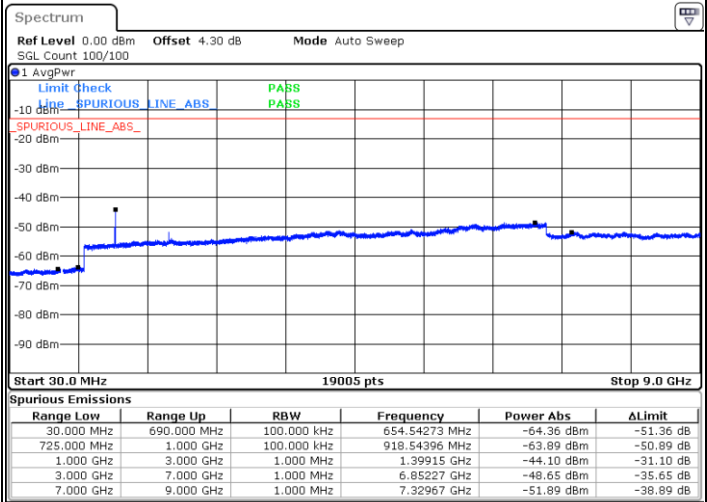
LTE Band 12 / 5MHz

Lowest Channel / QPSK



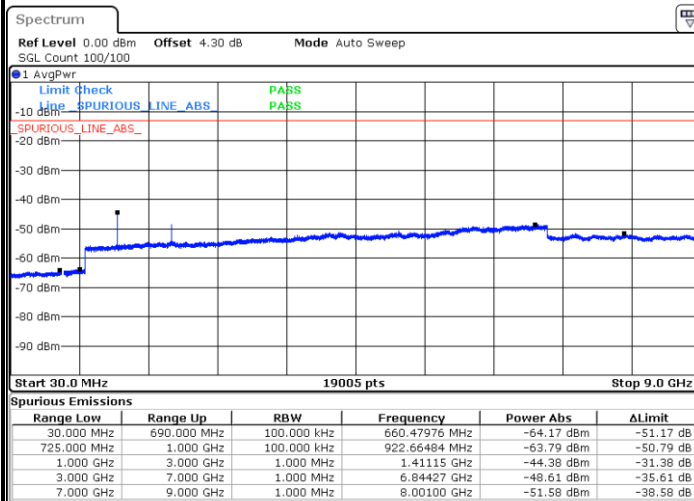
Date: 8 JUN 2019 05:27:48

Lowest Channel / 16QAM



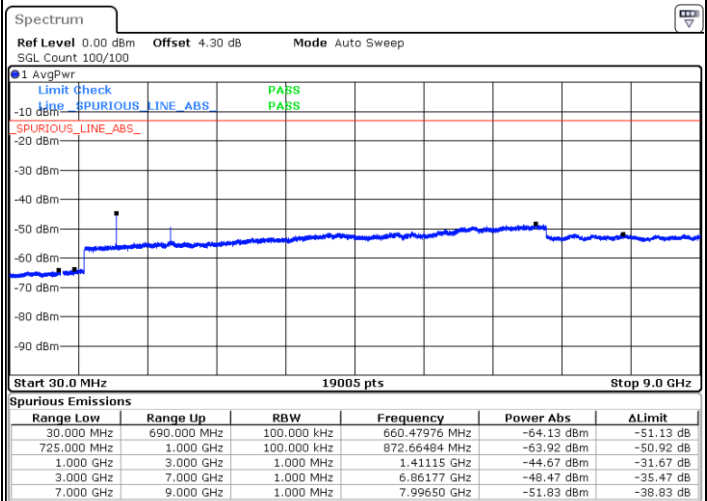
Date: 8 JUN 2019 05:28:42

Middle Channel / QPSK



Date: 8 JUN 2019 05:30:31

Middle Channel / 16QAM

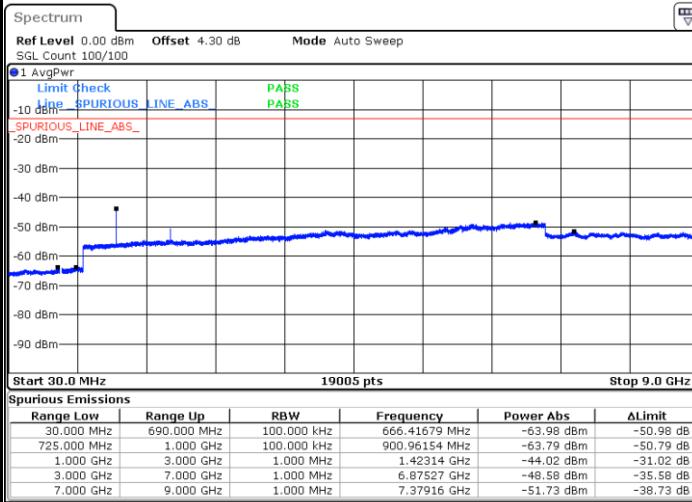


Date: 8 JUN 2019 05:29:37



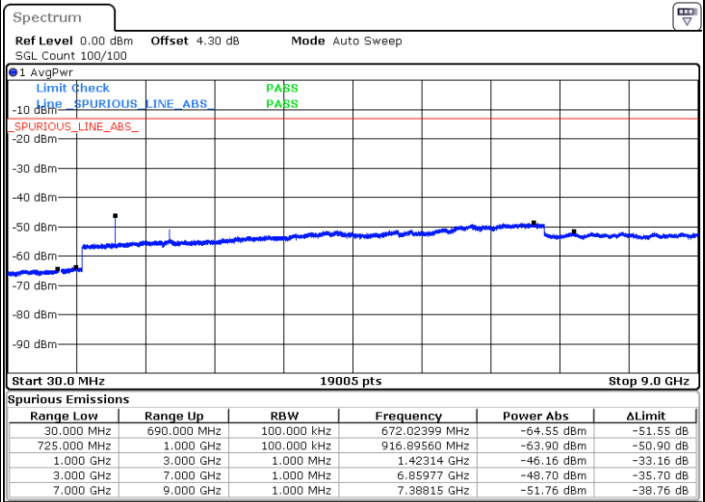
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 8 JUN 2019 05:31:25

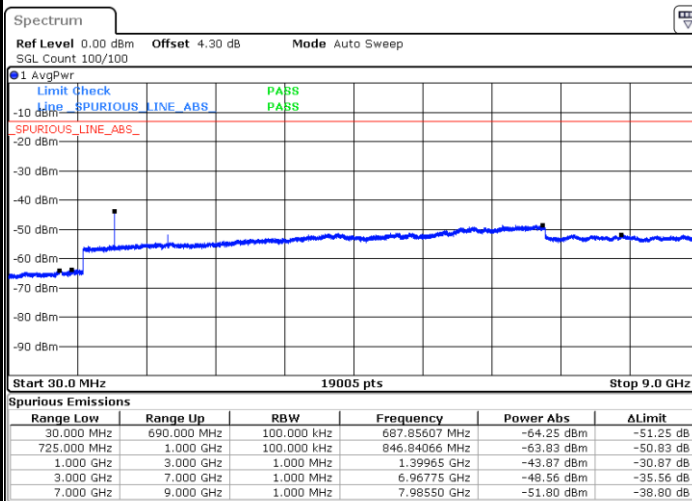
Highest Channel / 16QAM



Date: 8 JUN 2019 05:32:20

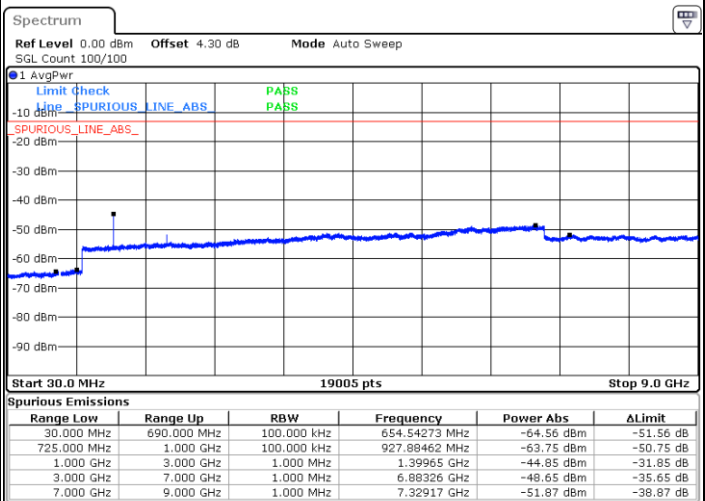
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 8 JUN 2019 05:44:12

Lowest Channel / 16QAM

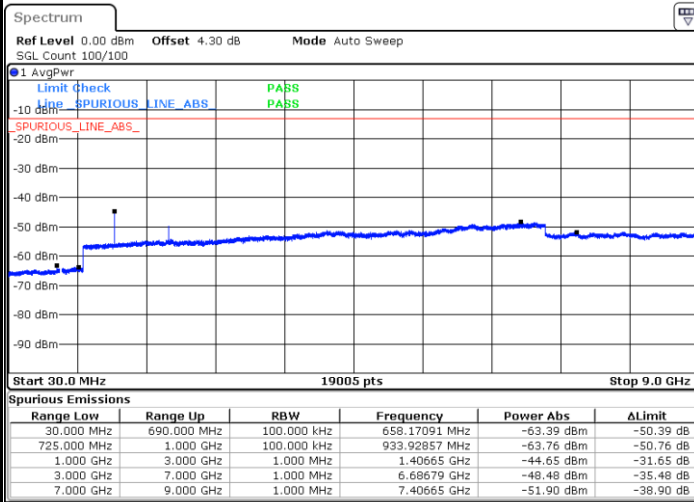


Date: 8 JUN 2019 05:45:07



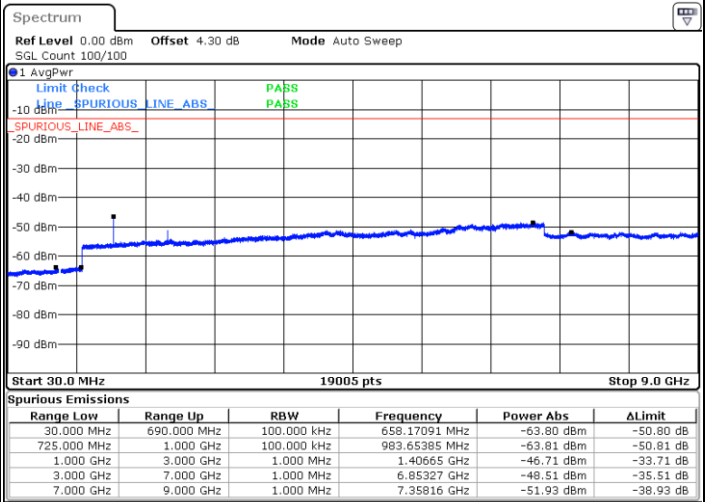
LTE Band 12 / 10MHz

Middle Channel / QPSK



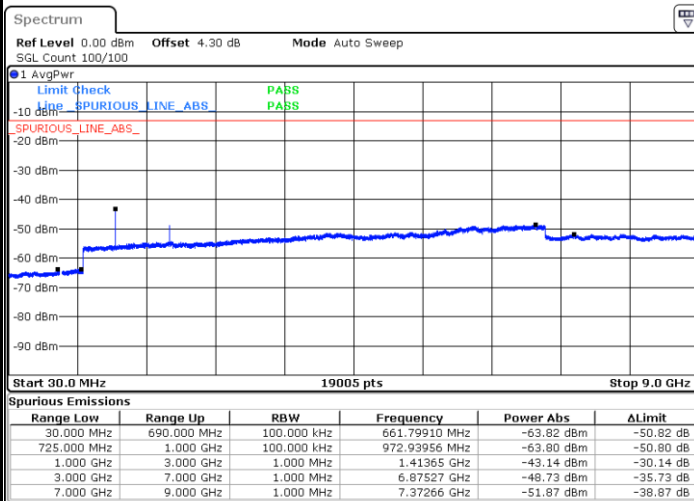
Date: 8 JUN 2019 05:46:56

Middle Channel / 16QAM



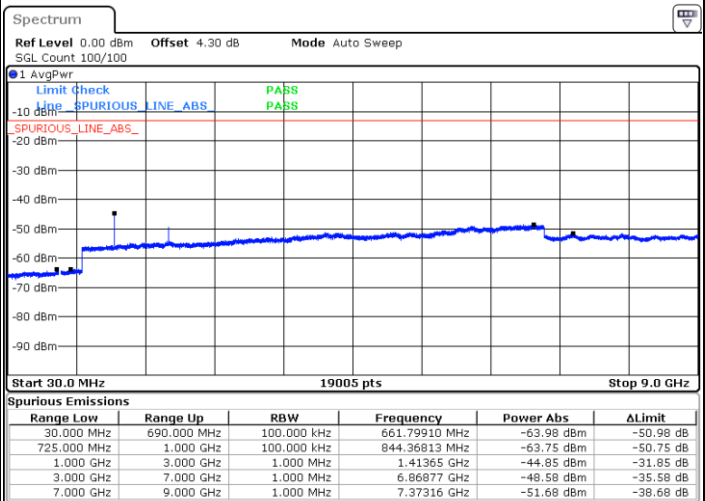
Date: 8 JUN 2019 05:46:01

Highest Channel / QPSK



Date: 8 JUN 2019 05:47:50

Highest Channel / 16QAM

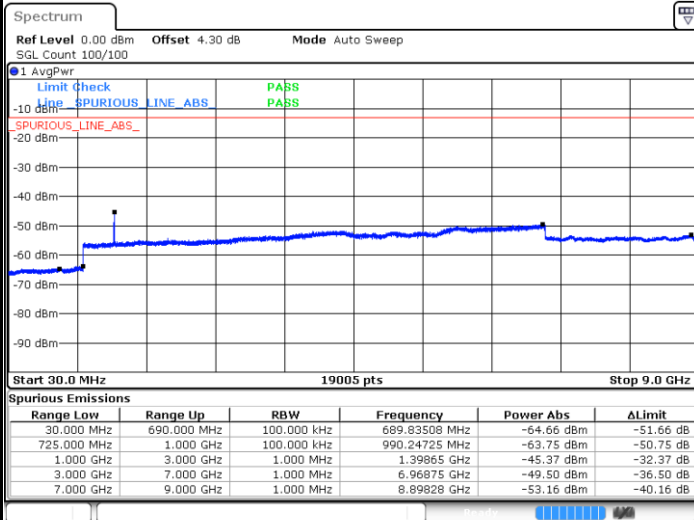


Date: 8 JUN 2019 05:48:44



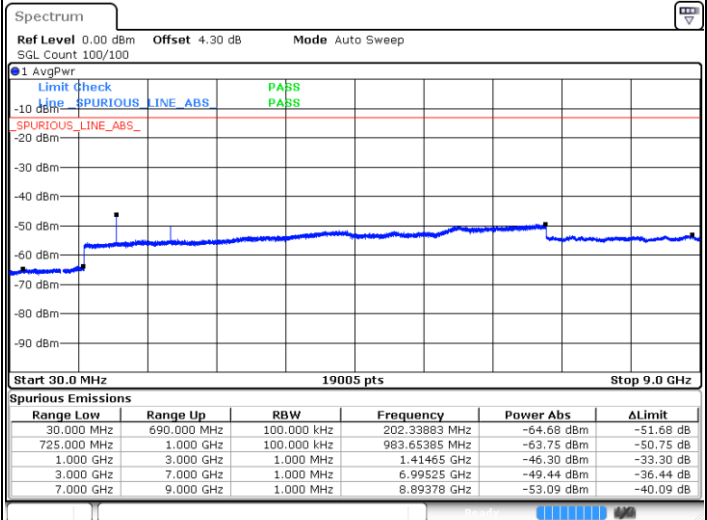
LTE Band 12 / 1.4MHz

Lowest Channel / 64QAM



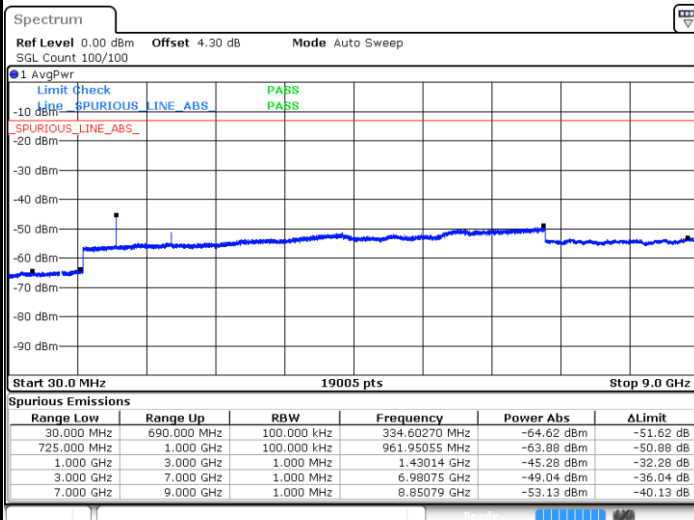
Date: 9 JUN 2019 11:02:08

Middle Channel / 64QAM



Date: 9 JUN 2019 11:03:02

Highest Channel / 64QAM

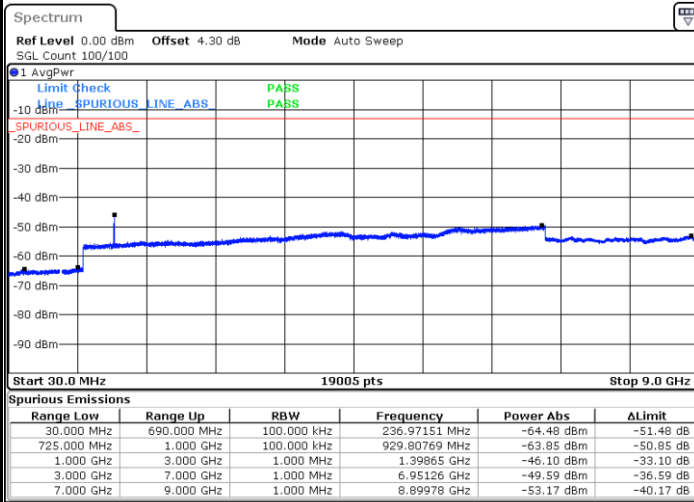


Date: 9 JUN 2019 11:03:55



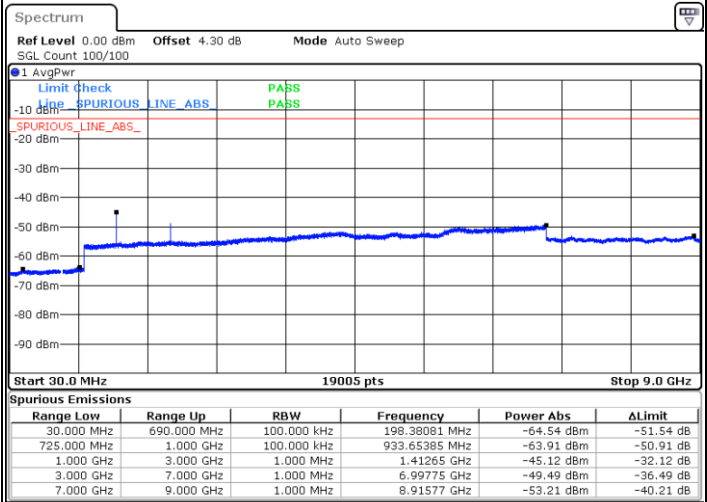
LTE Band 12 / 3MHz

Lowest Channel / 64QAM



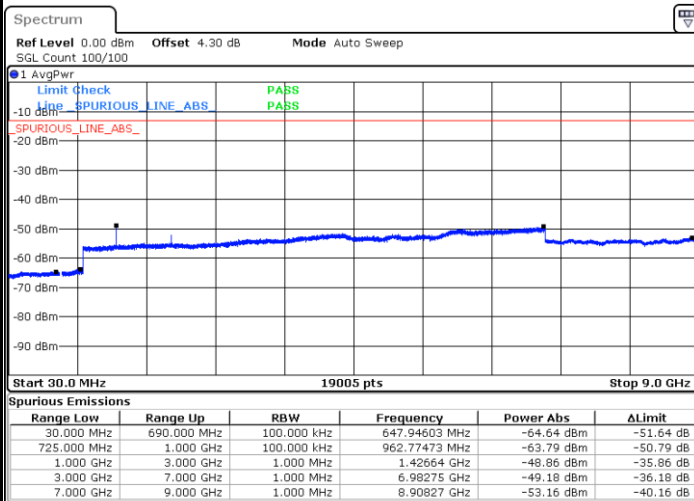
Date: 9 JUN 2019 11:04:49

Middle Channel / 64QAM



Date: 9 JUN 2019 11:05:43

Highest Channel / 64QAM

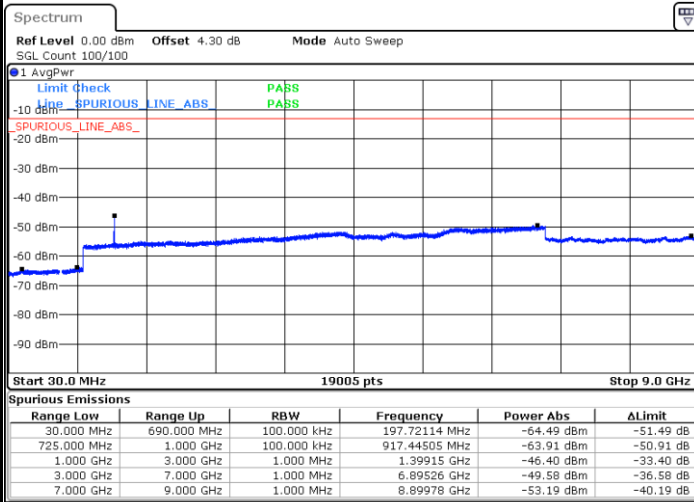


Date: 9 JUN 2019 11:06:37



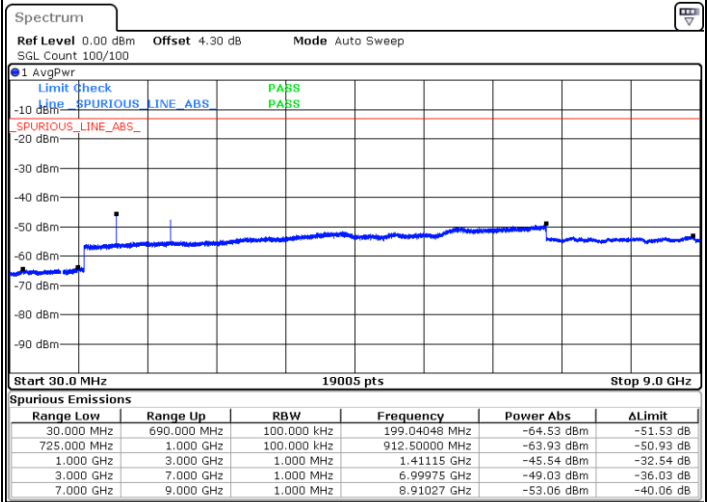
LTE Band 12 / 5MHz

Lowest Channel / 64QAM



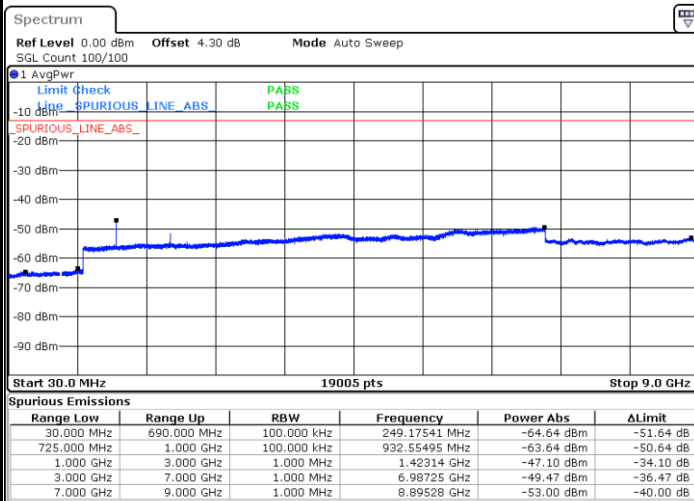
Date: 9 JUN 2019 11:18:41

Middle Channel / 64QAM



Date: 9 JUN 2019 11:19:35

Highest Channel / 64QAM

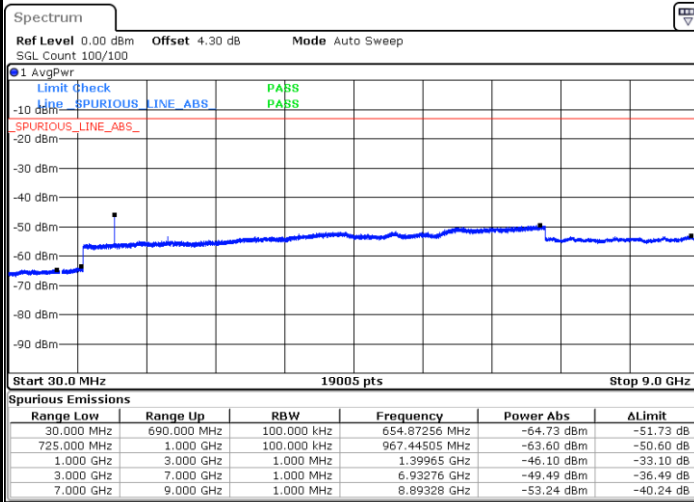


Date: 9 JUN 2019 11:20:29



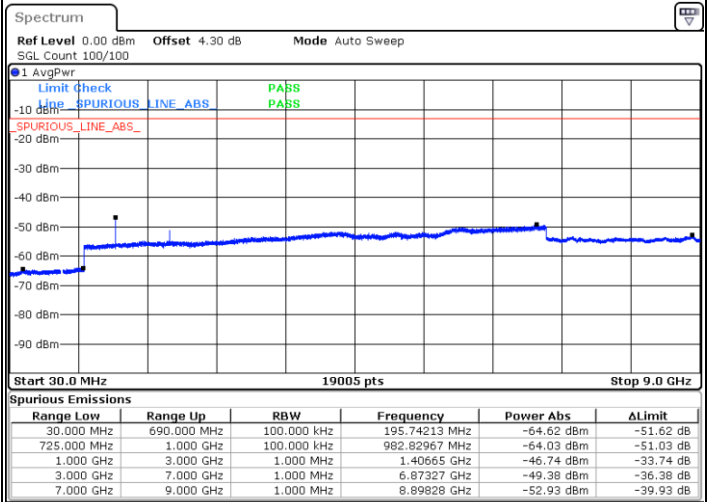
LTE Band 12 / 10MHz

Lowest Channel / 64QAM



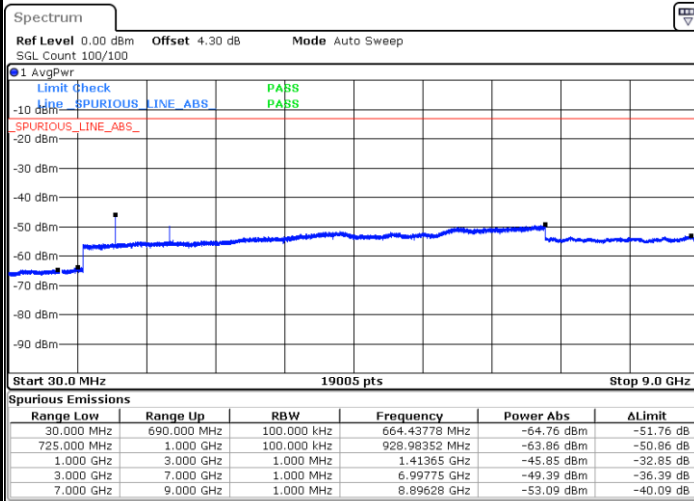
Date: 9 JUN 2019 11:21:23

Middle Channel / 64QAM



Date: 9 JUN 2019 11:22:16

Highest Channel / 64QAM



Date: 9 JUN 2019 11:23:10

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	0.0014	PASS
40	Normal Voltage	0.0035	
30	Normal Voltage	0.0009	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0018	
0	Normal Voltage	0.0009	
-10	Normal Voltage	0.0016	
-20	Normal Voltage	0.0034	
-30	Normal Voltage	0.0018	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

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.

Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0215	PASS
40	Normal Voltage	0.0019	
30	Normal Voltage	0.0033	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0018	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0019	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0018	
20	Maximum Voltage	0.0023	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0004	

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.



Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0006	PASS
40	Normal Voltage	0.0005	
30	Normal Voltage	0.0078	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0065	
0	Normal Voltage	0.0016	
-10	Normal Voltage	0.0085	
-20	Normal Voltage	0.0012	
-30	Normal Voltage	0.0020	
20	Maximum Voltage	0.0062	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0023	

Note: Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.



Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0022	PASS
40	Normal Voltage	0.0027	
30	Normal Voltage	0.0018	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0018	
0	Normal Voltage	0.0031	
-10	Normal Voltage	0.0002	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0019	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0026	

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.



Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0014	PASS
40	Normal Voltage	0.0092	
30	Normal Voltage	0.0004	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0013	
0	Normal Voltage	0.0072	
-10	Normal Voltage	0.0010	
-20	Normal Voltage	0.0083	
-30	Normal Voltage	0.0001	
20	Maximum Voltage	0.0082	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0110	

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 2 / 20MHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3702	-38.45	-13	-25.45	-50.71	2.641	14.90	H
	5553	-57.19	-13	-44.19	-69.05	2.94	14.80	H
	7404	-51.72	-13	-38.72	-61.49	3.39	13.16	H
	3702	-44.31	-13	-31.31	-56.57	2.64	14.90	V
	5553	-57.14	-13	-44.14	-69.00	2.94	14.80	V
	7404	-51.22	-13	-38.22	-60.99	3.39	13.16	V
Middle	3741	-37.31	-13	-24.31	-49.57	2.641	14.90	H
	5613	-56.50	-13	-43.50	-68.36	2.94	14.80	H
	7488	-52.29	-13	-39.29	-62.06	3.39	13.16	H
	3741	-43.21	-13	-30.21	-55.47	2.64	14.90	V
	5613	-56.76	-13	-43.76	-68.62	2.94	14.80	V
	7488	-50.96	-13	-37.96	-60.73	3.39	13.16	V
Highest	3783	-38.02	-13	-25.02	-50.28	2.641	14.90	H
	5673	-54.90	-13	-41.90	-66.76	2.94	14.80	H
	7560	-51.53	-13	-38.53	-61.30	3.39	13.16	H
	3783	-43.38	-13	-30.38	-55.64	2.64	14.90	V
	5673	-56.15	-13	-43.15	-68.01	2.94	14.80	V
	7560	-51.07	-13	-38.07	-60.84	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)
Lowest	3423	-60.52	-13	-47.52	-71.26	2.604	13.34	H
	5133	-51.60	-13	-38.60	-62.11	3.011	13.52	H
	6840	-55.28	-13	-42.28	-65.48	3.271	13.47	H
	3423	-60.28	-13	-47.28	-71.02	2.604	13.34	V
	5133	-49.65	-13	-36.65	-60.16	3.011	13.52	V
	6840	-54.90	-13	-41.90	-65.10	3.271	13.47	V
Middle	3447	-60.95	-13	-47.95	-71.69	2.604	13.34	H
	5172	-50.35	-13	-37.35	-60.86	3.011	13.52	H
	6900	-55.09	-13	-42.09	-65.29	3.271	13.47	H
	3447	-60.47	-13	-47.47	-71.21	2.604	13.34	V
	5172	-48.49	-13	-35.49	-59.00	3.011	13.52	V
	6900	-54.64	-13	-41.64	-64.84	3.271	13.47	V
Highest	3471	-61.67	-13	-48.67	-72.41	2.604	13.34	H
	5208	-49.84	-13	-36.84	-60.35	3.011	13.52	H
	6948	-53.80	-13	-40.80	-64.00	3.271	13.47	H
	3471	-62.19	-13	-49.19	-72.93	2.604	13.34	V
	5208	-49.19	-13	-36.19	-59.70	3.011	13.52	V
	6948	-53.92	-13	-40.92	-64.12	3.271	13.47	V

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



LTE Band 5 / 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	1650	-52.88	-13	-39.88	-59.85	1.58	10.70	H
	2474	-58.64	-13	-45.64	-66.89	2.102	12.50	H
	3300	-64.65	-13	-51.65	-73.54	2.856	13.90	H
	1650	-57.16	-13	-44.16	-64.13	1.58	10.70	V
	2474	-60.35	-13	-47.35	-68.60	2.10	12.50	V
	3300	-64.37	-13	-51.37	-73.26	2.86	13.90	V
Middle	1664	-57.69	-13	-44.69	-64.66	1.58	10.70	H
	2496	-46.29	-13	-33.29	-54.54	2.102	12.50	H
	3330	-64.65	-13	-51.65	-73.54	2.856	13.90	H
	1664	-66.02	-13	-53.02	-72.99	1.58	10.70	V
	2496	-51.49	-13	-38.49	-59.74	2.10	12.50	V
	3330	-64.05	-13	-51.05	-72.94	2.86	13.90	V
Highest	1680	-52.97	-13	-39.97	-59.94	1.58	10.70	H
	2518	-59.10	-13	-46.10	-67.35	2.102	12.50	H
	3360	-64.80	-13	-51.80	-73.69	2.856	13.90	H
	1680	-57.59	-13	-44.59	-64.56	1.58	10.70	V
	2518	-62.28	-13	-49.28	-70.53	2.10	12.50	V
	3360	-64.66	-13	-51.66	-73.55	2.86	13.90	V

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