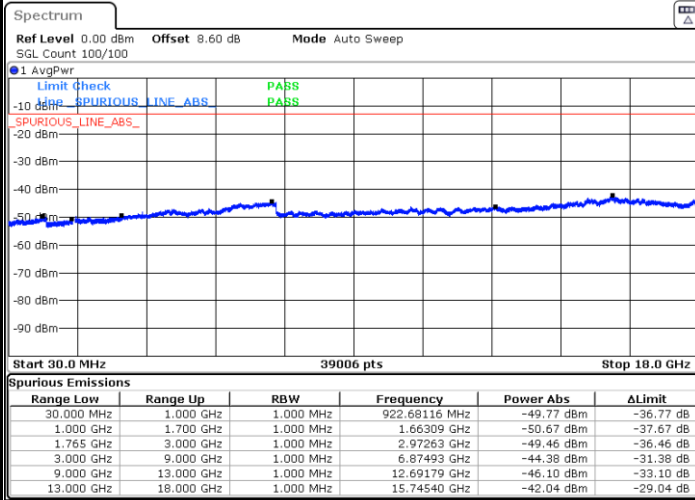




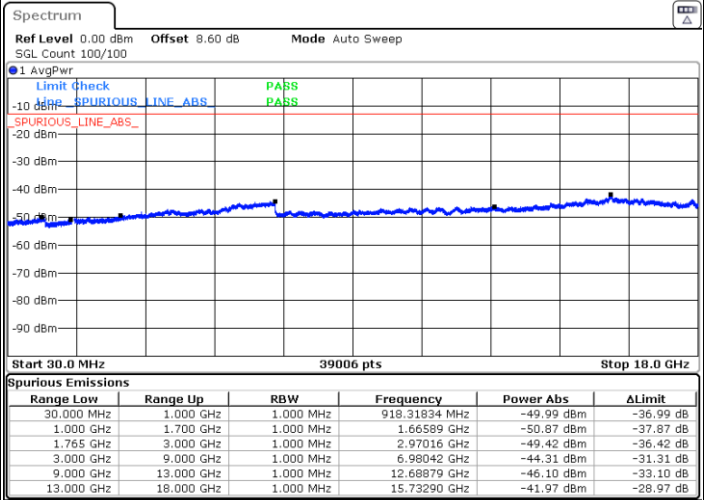
LTE Band 4 / 1.4MHz

Highest Channel / QPSK



Date: 3 JUL 2019 10:20:37

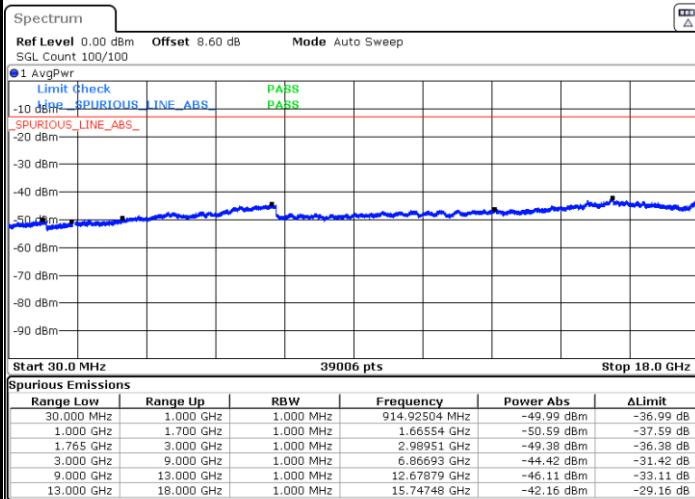
Highest Channel / 16QAM



Date: 3 JUL 2019 10:21:31

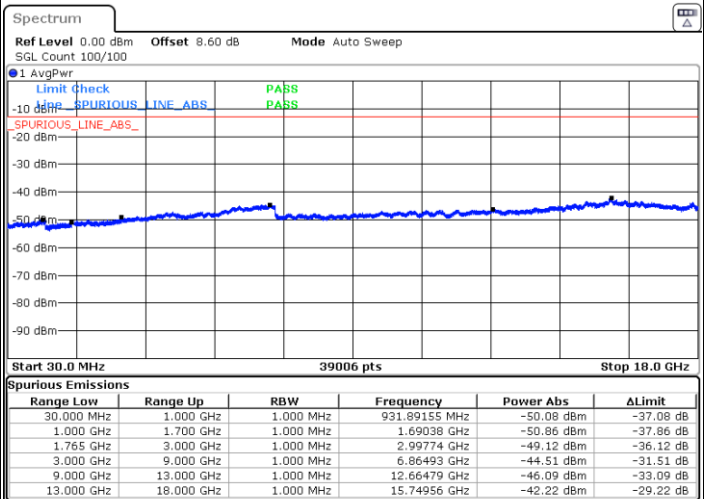
LTE Band 4 / 3MHz

Lowest Channel / QPSK



Date: 3 JUL 2019 10:27:35

Lowest Channel / 16QAM



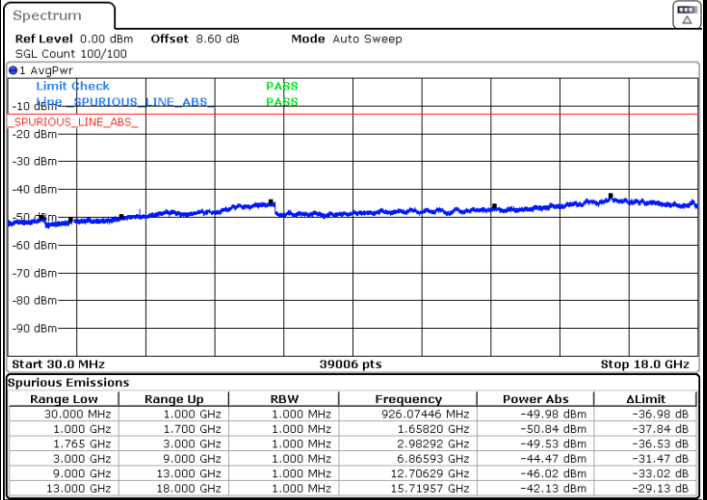
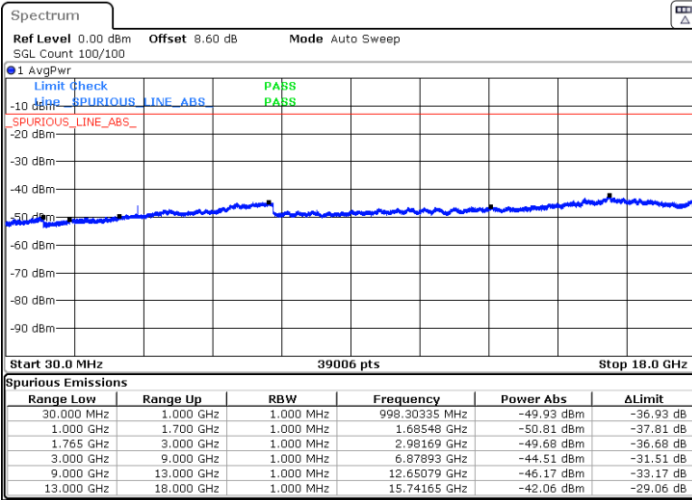
Date: 3 JUL 2019 10:28:30



LTE Band 4 / 3MHz

Middle Channel / QPSK

Middle Channel / 16QAM

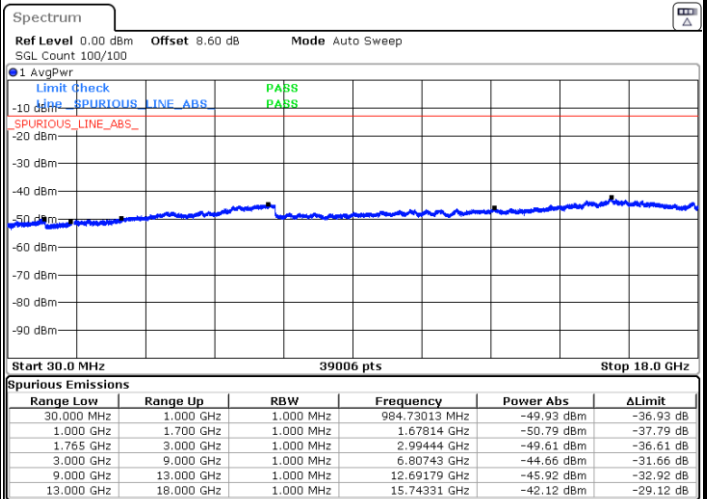
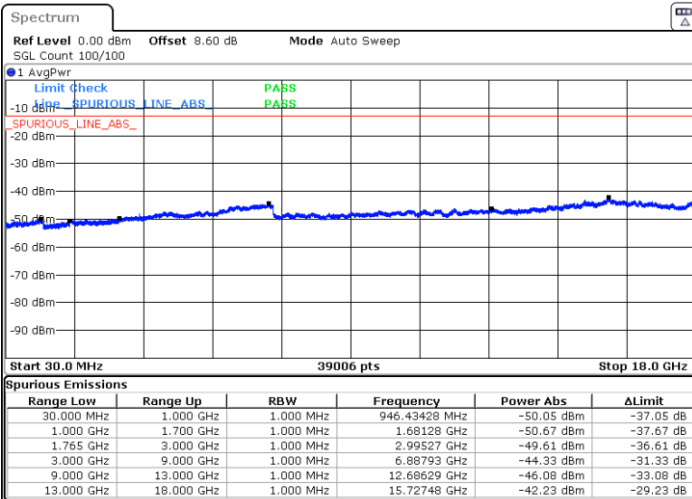


Date: 3 JUL 2019 10:30:04

Date: 3 JUL 2019 10:30:59

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 3 JUL 2019 10:37:03

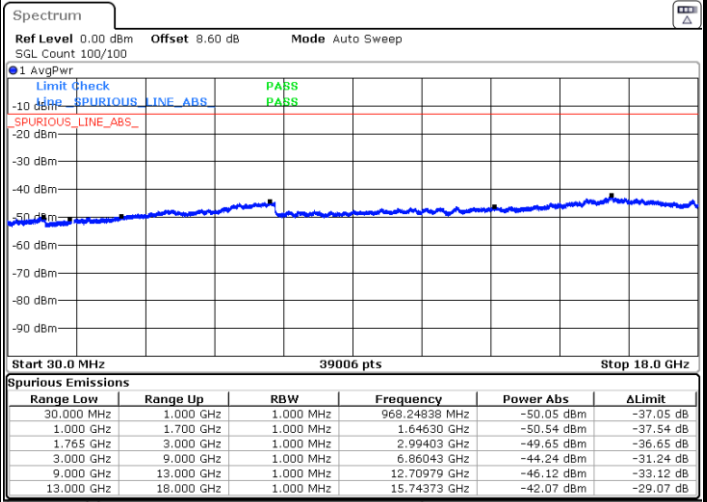
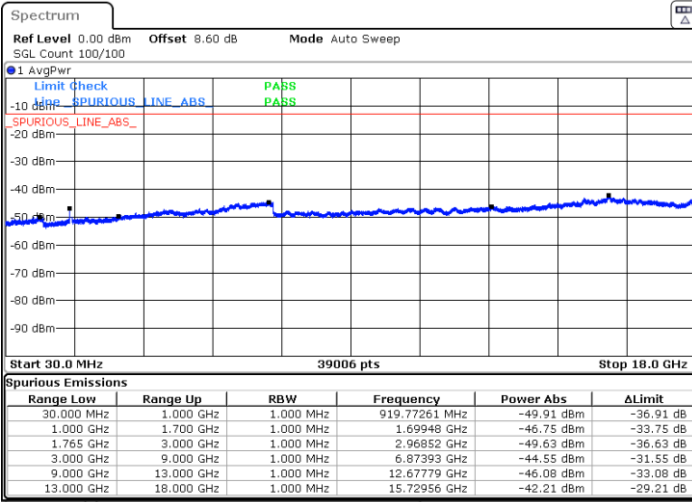
Date: 3 JUL 2019 10:37:57



LTE Band 4 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

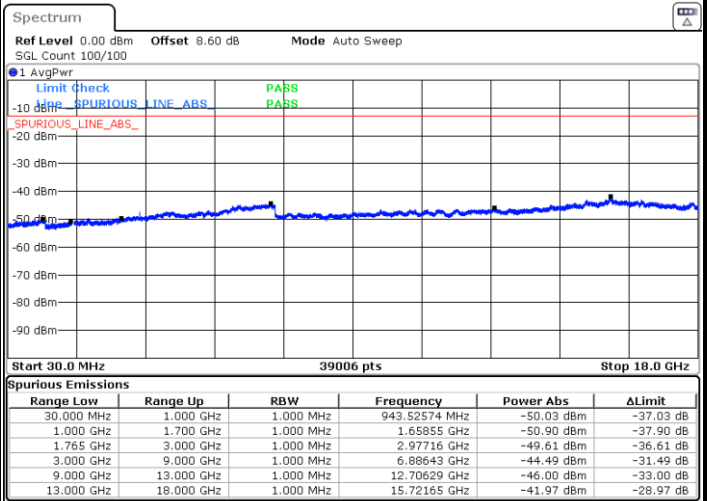
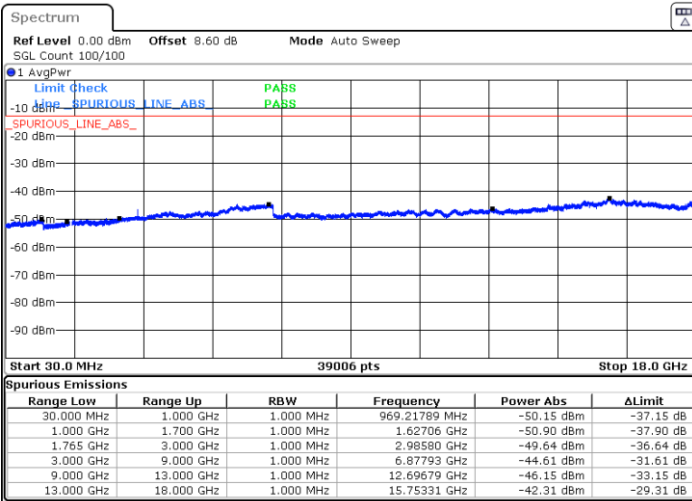


Date: 3 JUL 2019 10:44:01

Date: 3 JUL 2019 10:44:56

Middle Channel / QPSK

Middle Channel / 16QAM



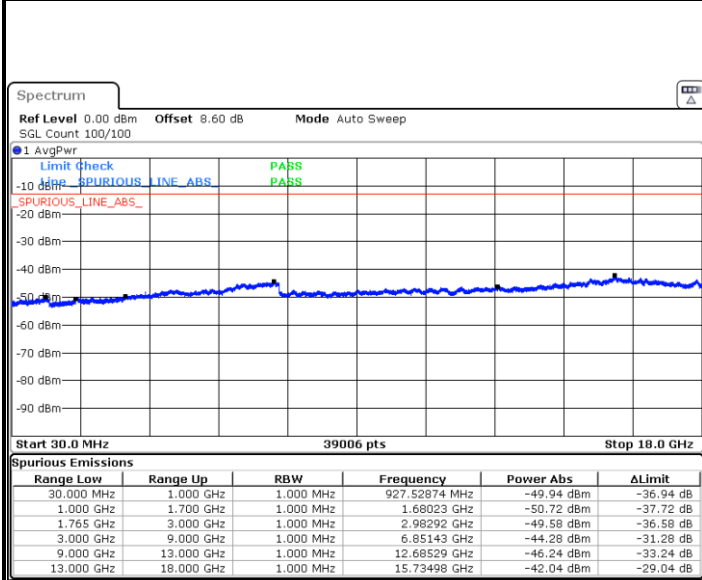
Date: 3 JUL 2019 10:46:30

Date: 3 JUL 2019 10:47:25



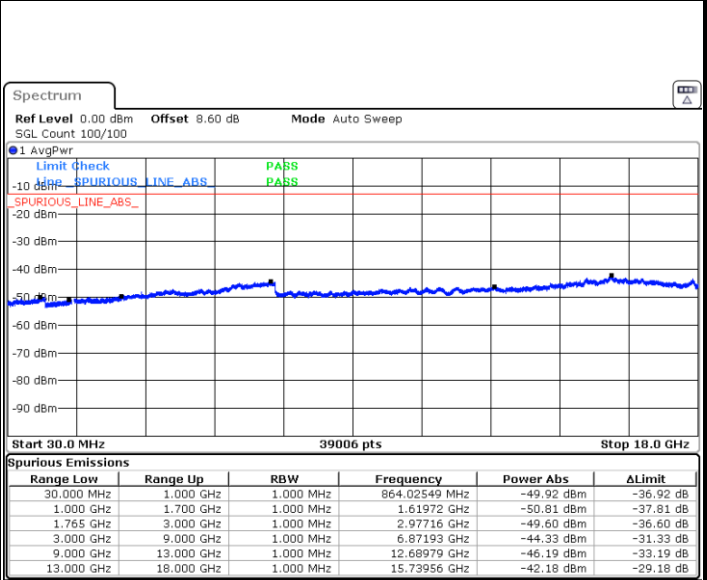
LTE Band 4 / 5MHz

Highest Channel / QPSK



Date: 3 JUL 2019 10:53:29

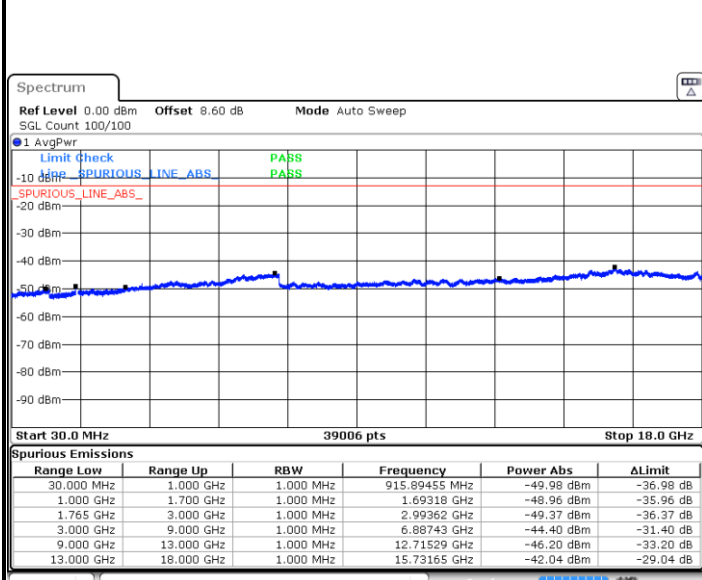
Highest Channel / 16QAM



Date: 3 JUL 2019 10:54:23

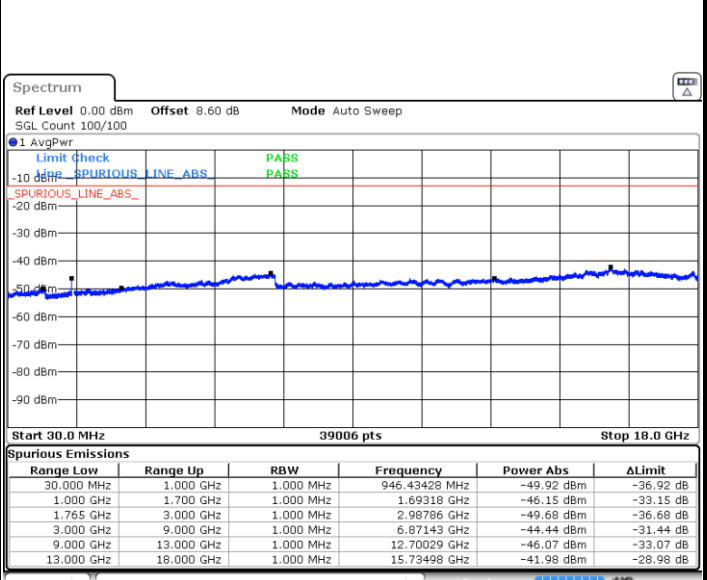
LTE Band 4 / 10MHz

Lowest Channel / QPSK



Date: 3 JUL 2019 11:00:27

Lowest Channel / 16QAM



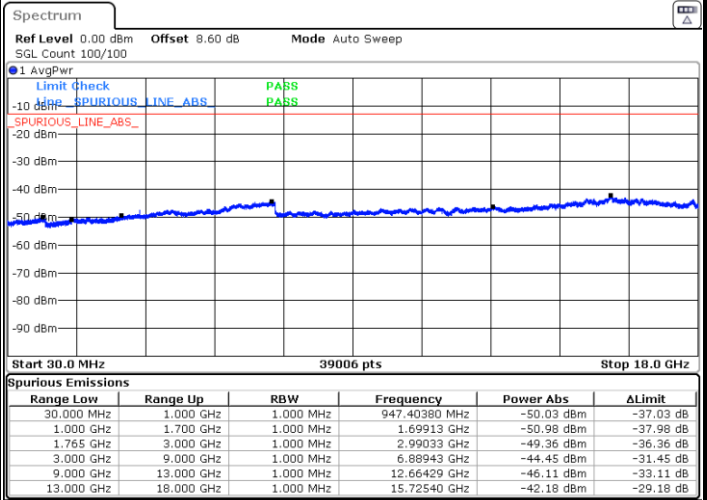
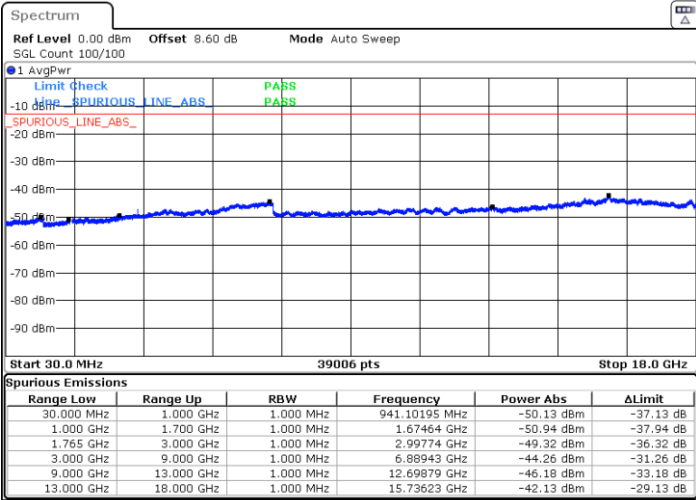
Date: 3 JUL 2019 11:01:22



LTE Band 4 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

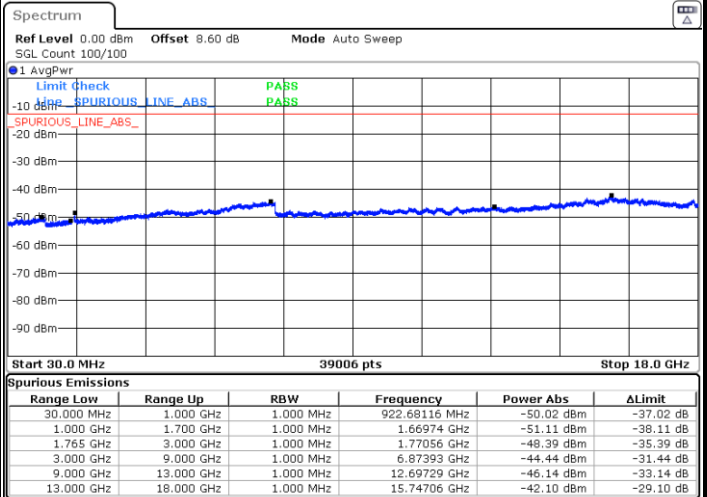
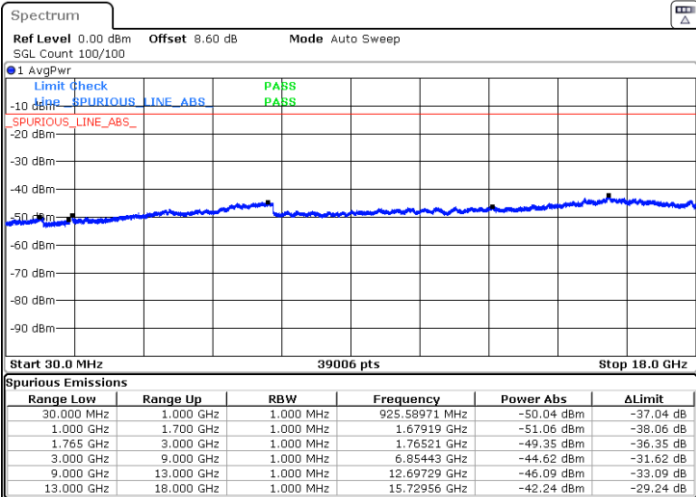


Date: 3 JUL 2019 11:02:56

Date: 3 JUL 2019 11:03:51

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 3 JUL 2019 11:09:55

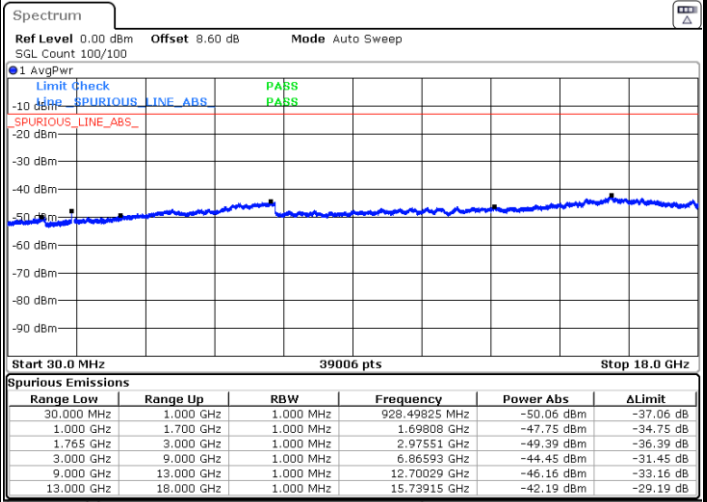
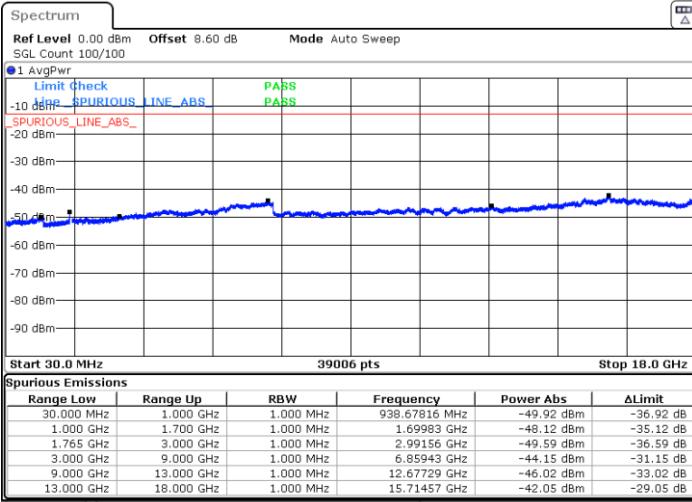
Date: 3 JUL 2019 11:10:49



LTE Band 4 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

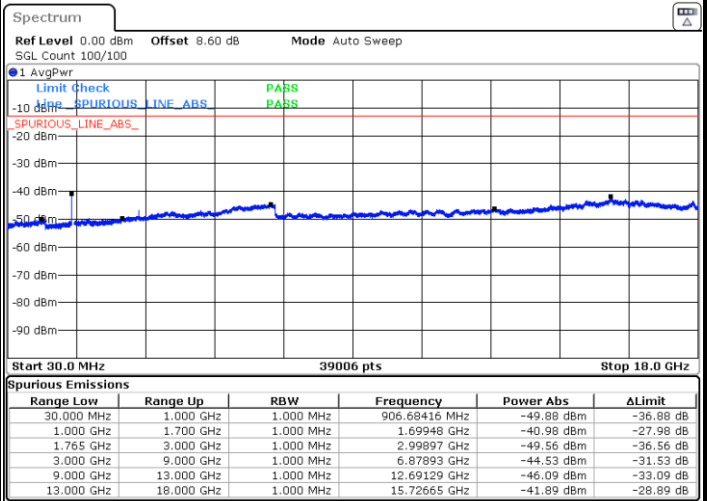
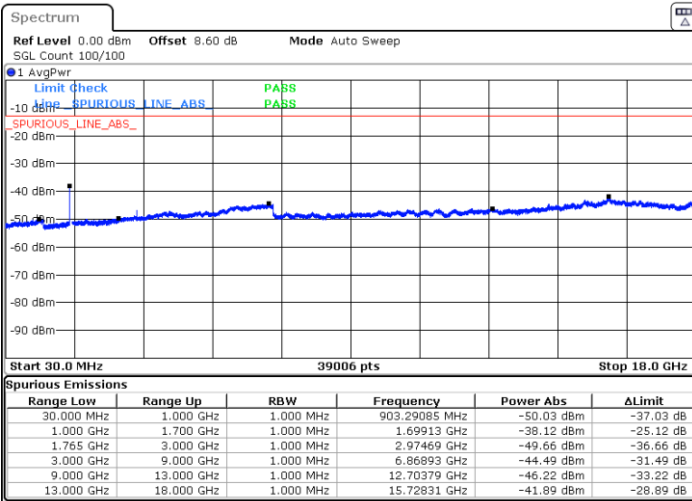


Date: 3 JUL 2019 11:16:53

Date: 3 JUL 2019 11:17:48

Middle Channel / QPSK

Middle Channel / 16QAM



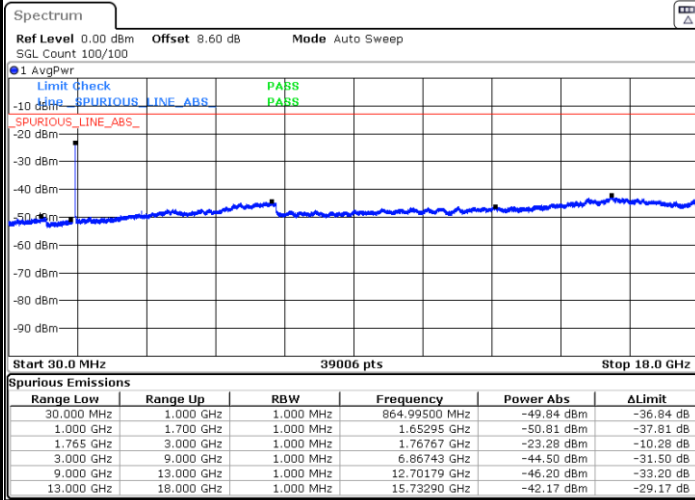
Date: 3 JUL 2019 11:19:22

Date: 3 JUL 2019 11:20:17



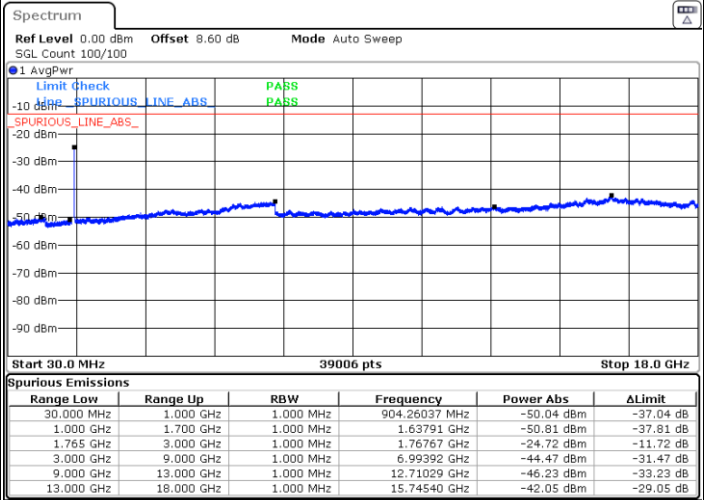
LTE Band 4 / 15MHz

Highest Channel / QPSK



Date: 3 JUL 2019 11:26:21

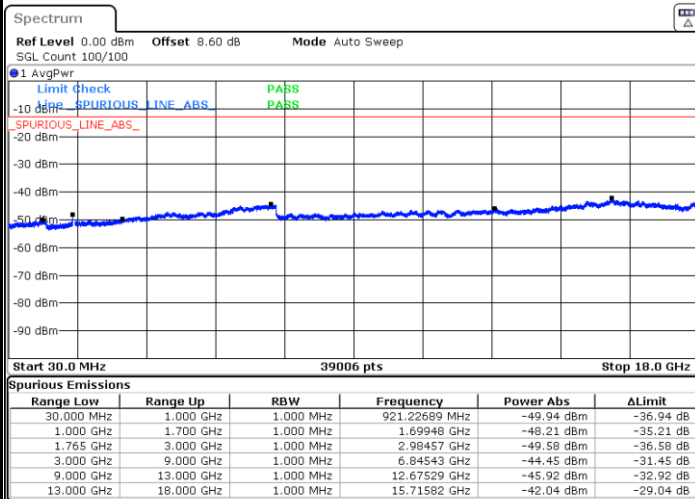
Highest Channel / 16QAM



Date: 3 JUL 2019 11:27:15

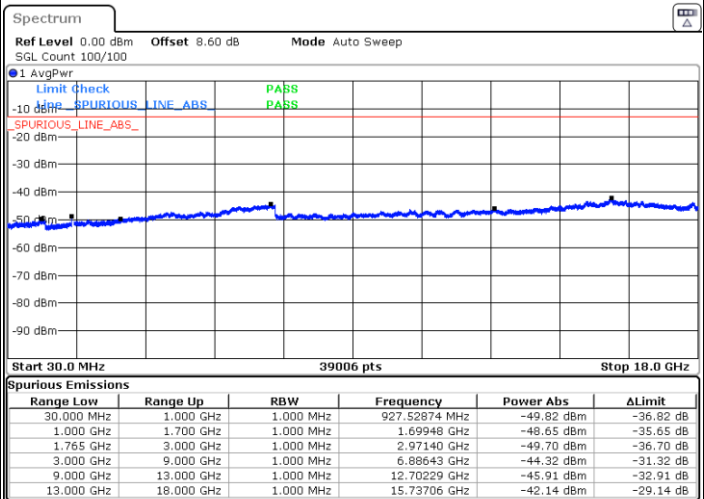
LTE Band 4 / 20MHz

Lowest Channel / QPSK



Date: 3 JUL 2019 11:33:20

Lowest Channel / 16QAM



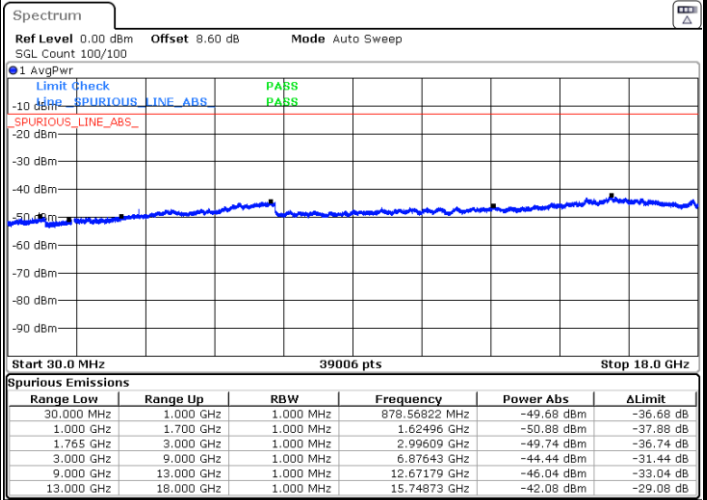
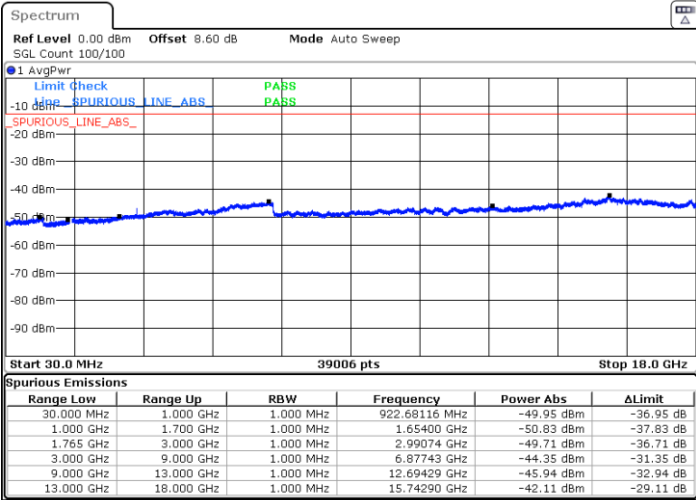
Date: 3 JUL 2019 11:34:14



LTE Band 4 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

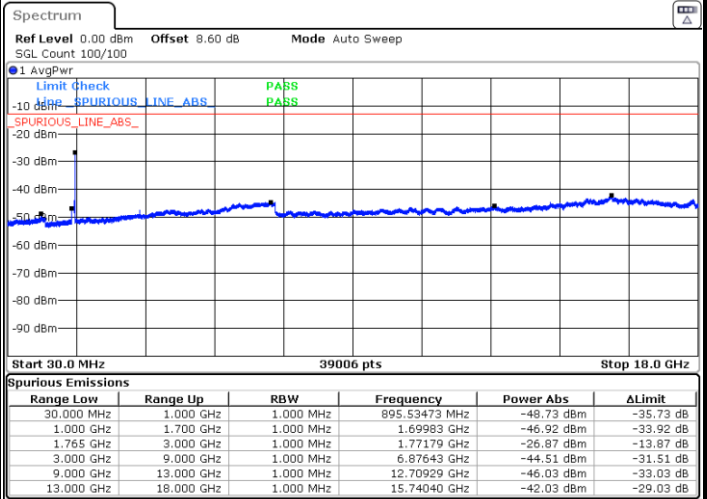
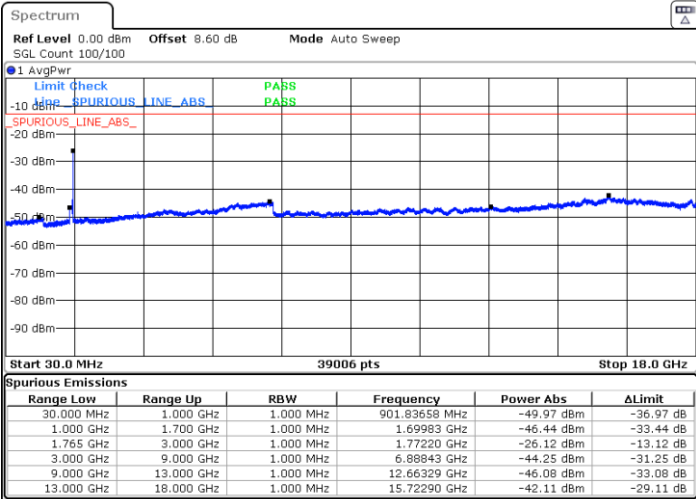


Date: 3 JUL 2019 11:35:48

Date: 3 JUL 2019 11:36:43

Highest Channel / QPSK

Highest Channel / 16QAM



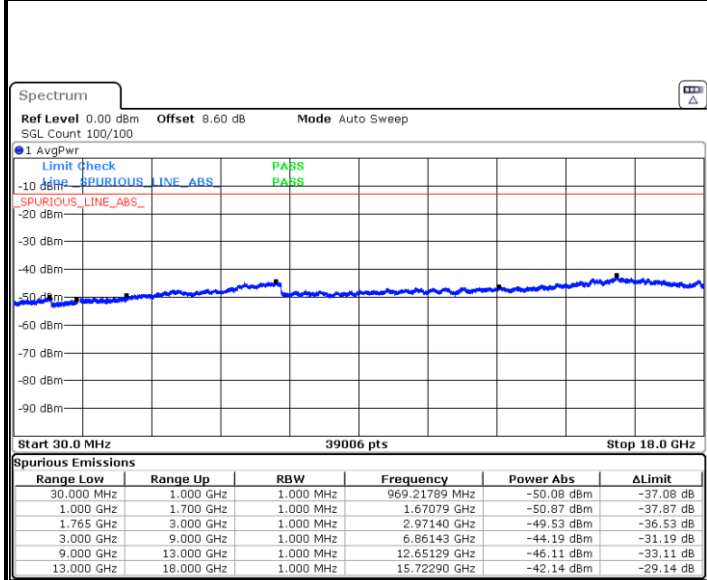
Date: 3 JUL 2019 11:42:47

Date: 3 JUL 2019 11:43:42



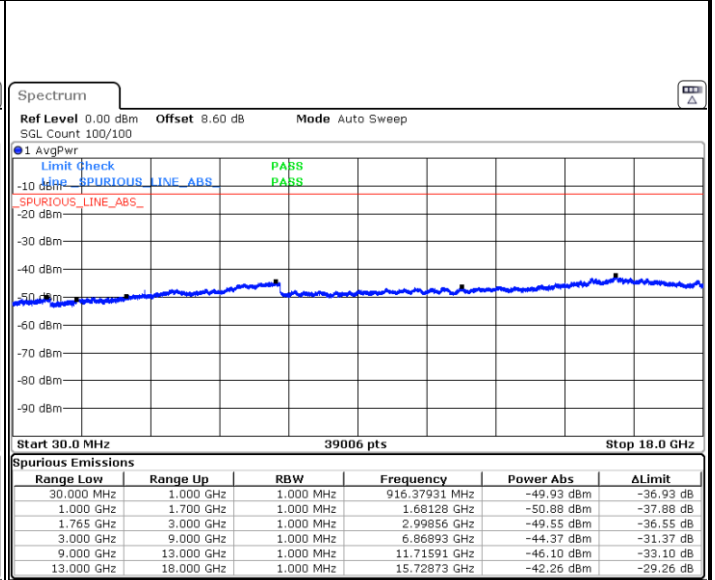
LTE Band 4 / 1.4MHz

Lowest Channel / 64QAM



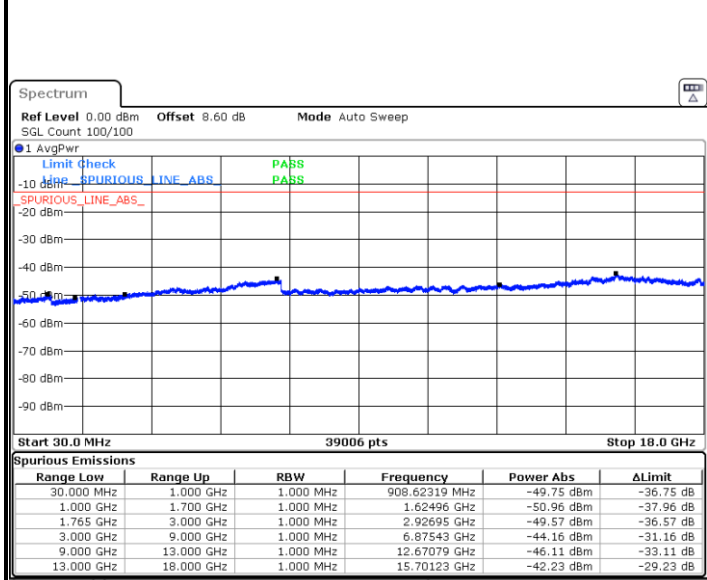
Date: 3 JUL 2019 11:49:33

Middle Channel / 64QAM



Date: 3 JUL 2019 11:50:48

Highest Channel / 64QAM



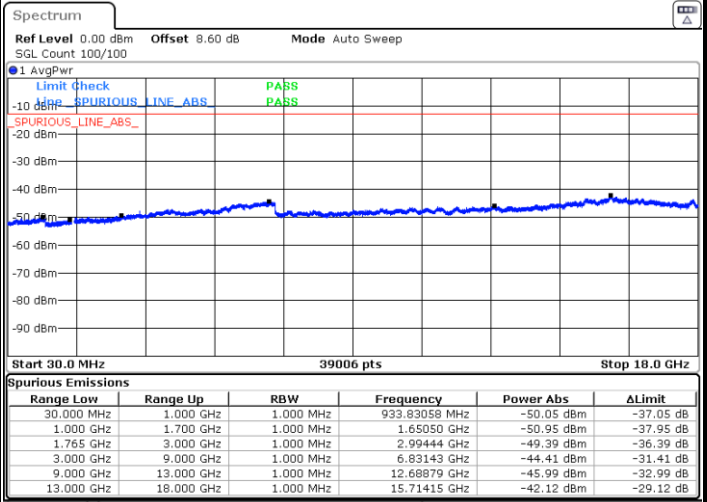
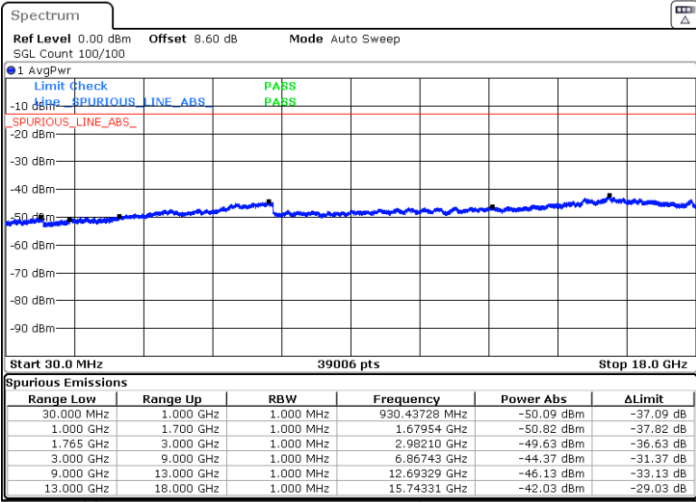
Date: 3 JUL 2019 11:54:17



LTE Band 4 / 3MHz

Lowest Channel / 64QAM

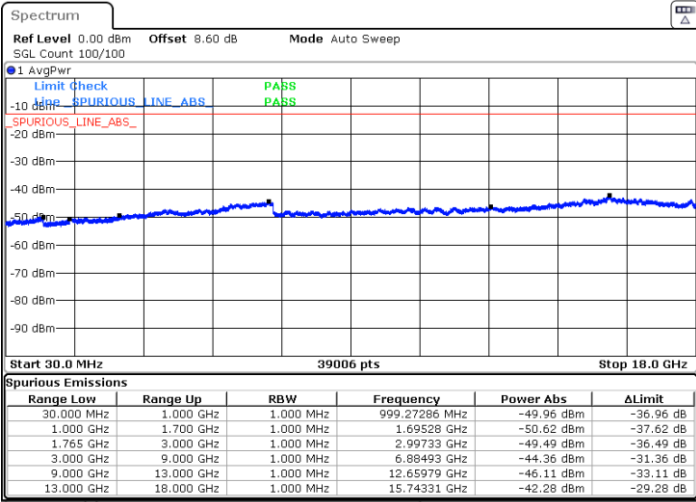
Middle Channel / 64QAM



Date: 3 JUL 2019 11:57:46

Date: 3 JUL 2019 11:59:01

Highest Channel / 64QAM



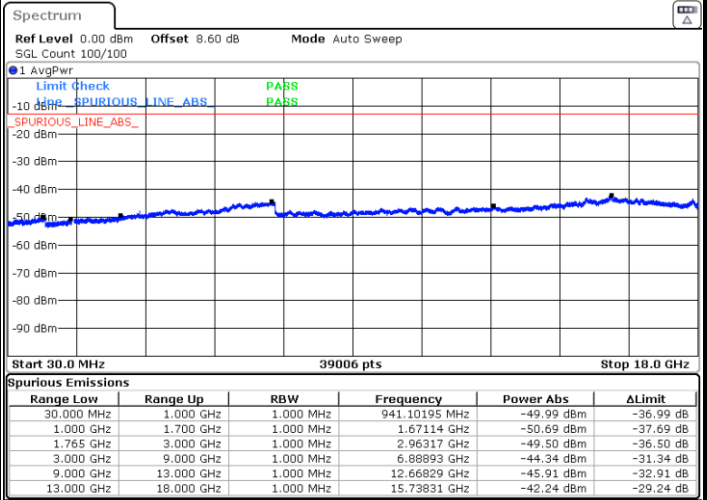
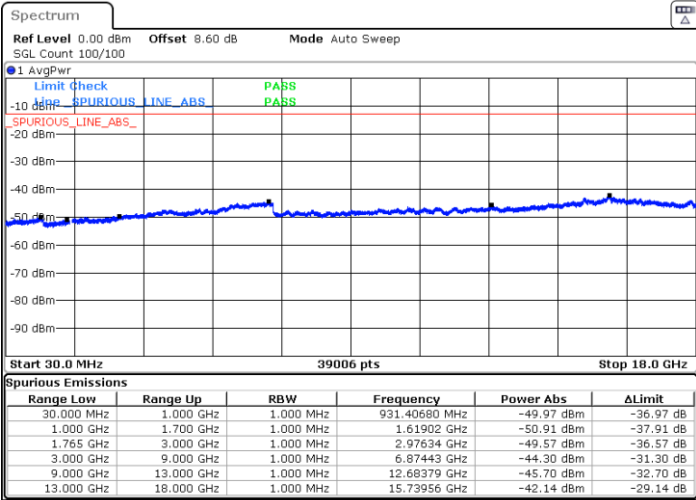
Date: 3 JUL 2019 12:02:30



LTE Band 4 / 5MHz

Lowest Channel / 64QAM

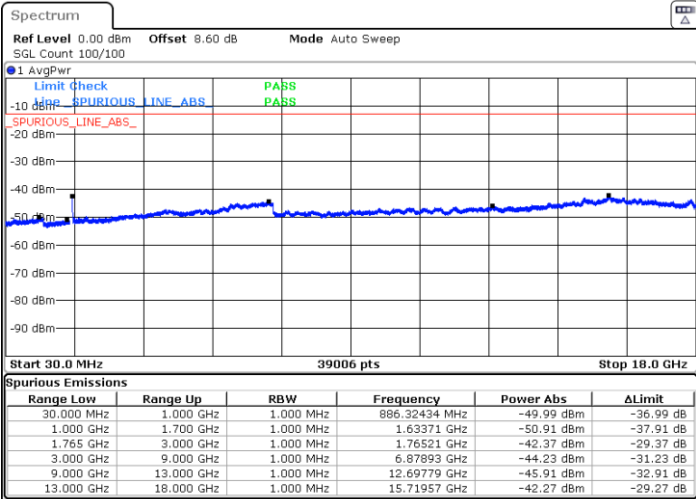
Middle Channel / 64QAM



Date: 3 JUL 2019 12:05:59

Date: 3 JUL 2019 12:07:14

Highest Channel / 64QAM

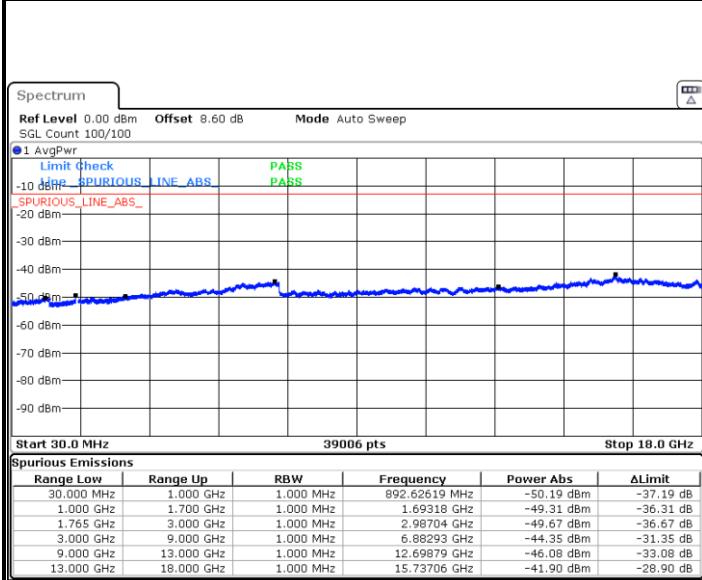


Date: 3 JUL 2019 12:10:43



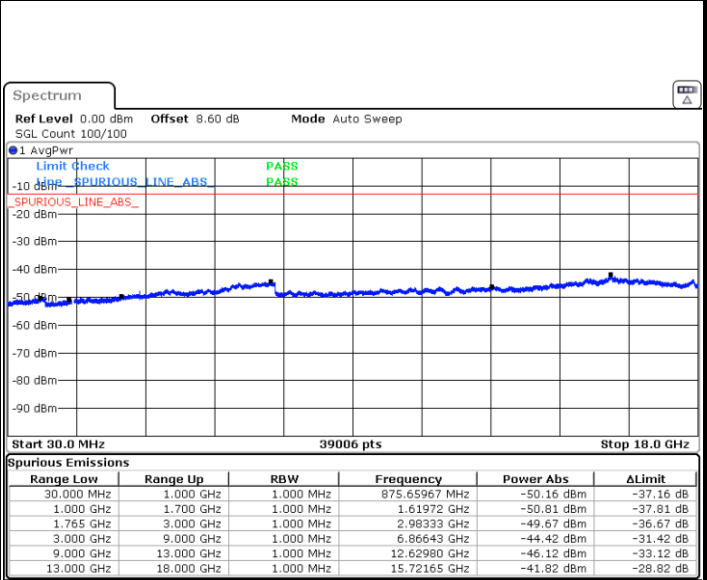
LTE Band 4 / 10MHz

Lowest Channel / 64QAM



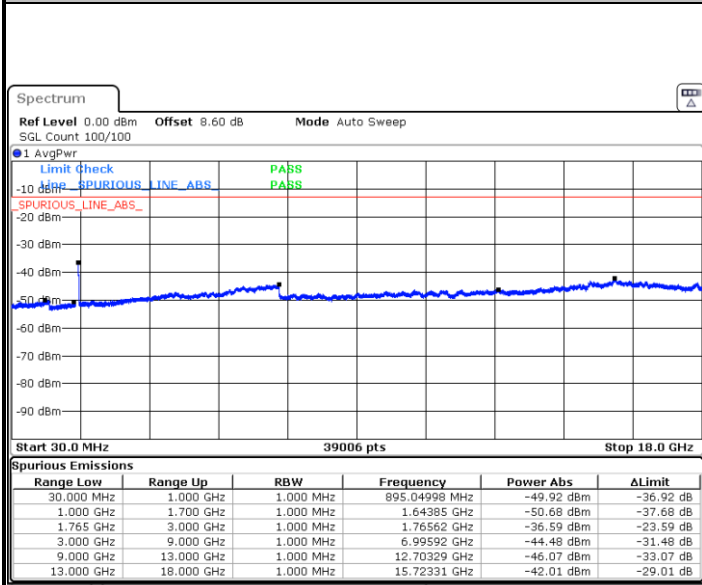
Date: 3 JUL 2019 12:14:12

Middle Channel / 64QAM



Date: 3 JUL 2019 12:15:27

Highest Channel / 64QAM

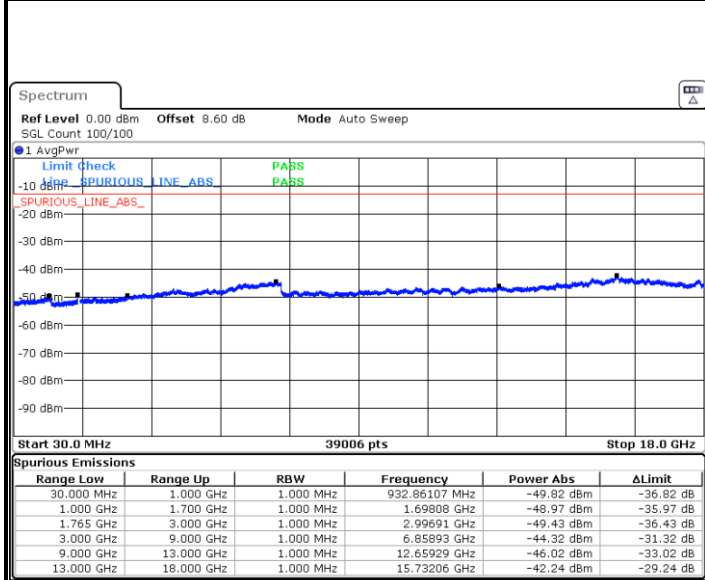


Date: 3 JUL 2019 12:18:56



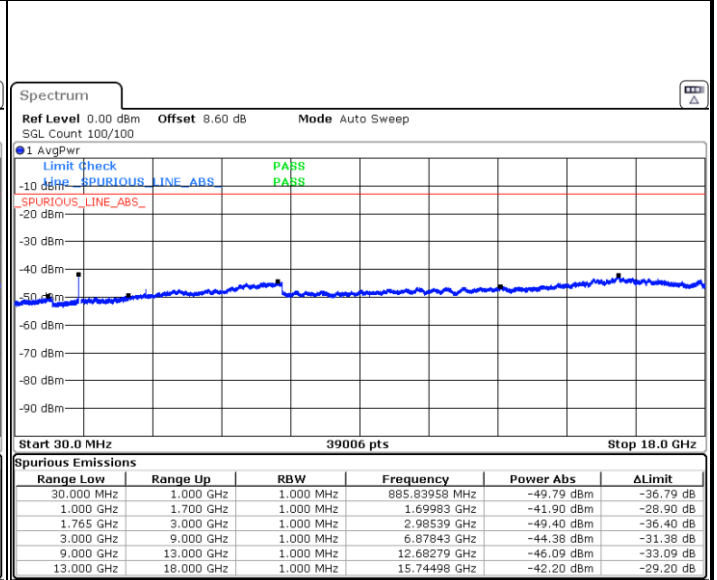
LTE Band 4 / 15MHz

Lowest Channel / 64QAM



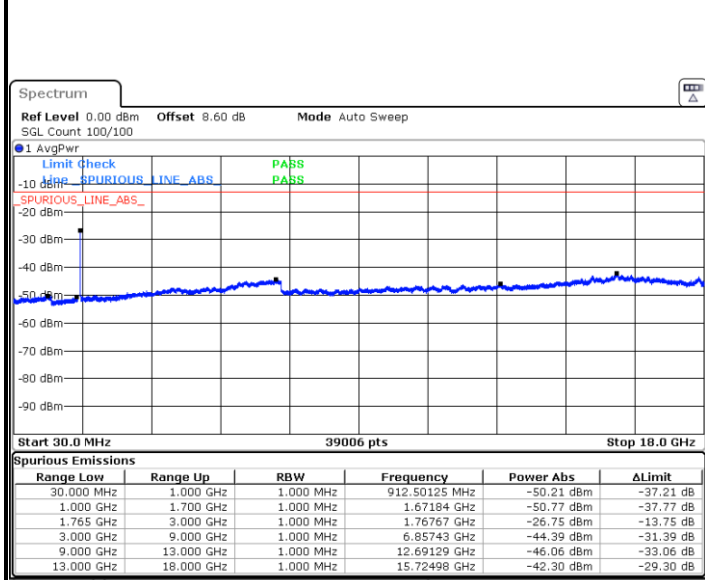
Date: 3 JUL 2019 12:22:26

Middle Channel / 64QAM



Date: 3 JUL 2019 12:23:40

Highest Channel / 64QAM



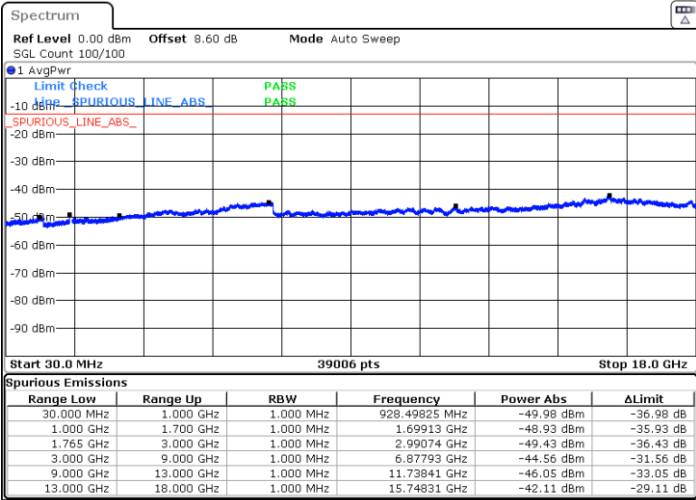
Date: 3 JUL 2019 12:27:09



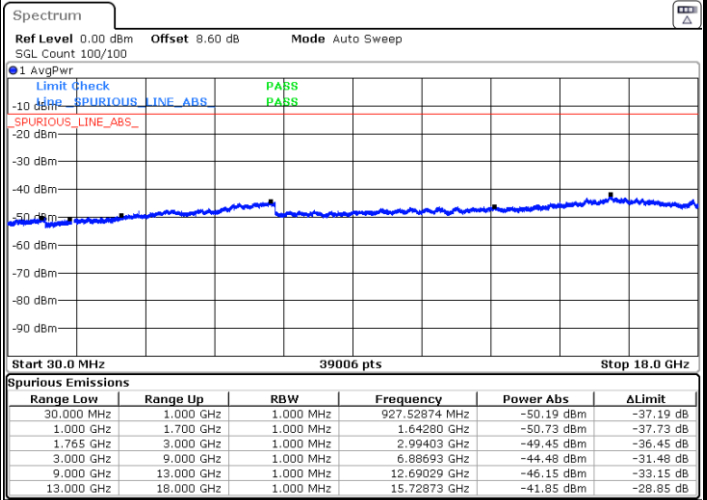
LTE Band 4 / 20MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

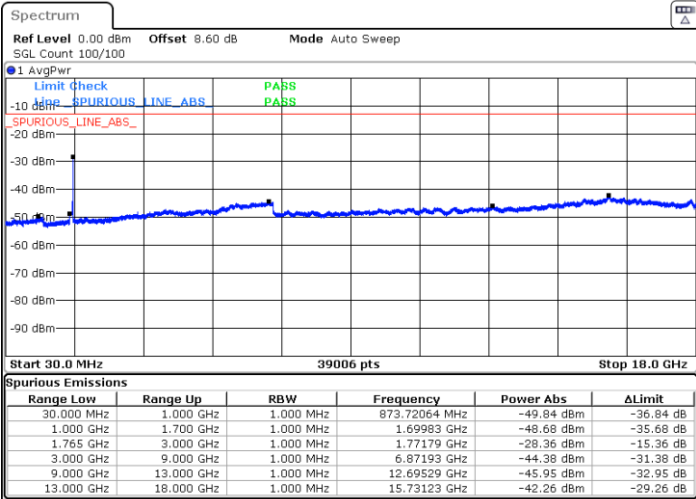


Date: 3 JUL 2019 12:30:38



Date: 3 JUL 2019 12:31:53

Highest Channel / 64QAM



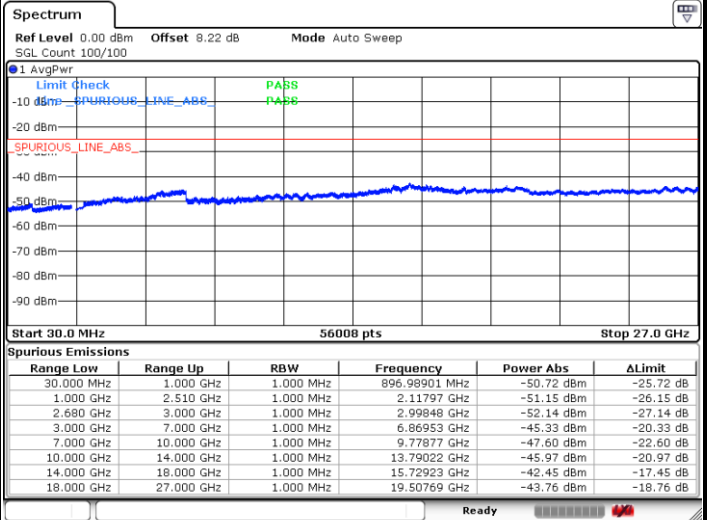
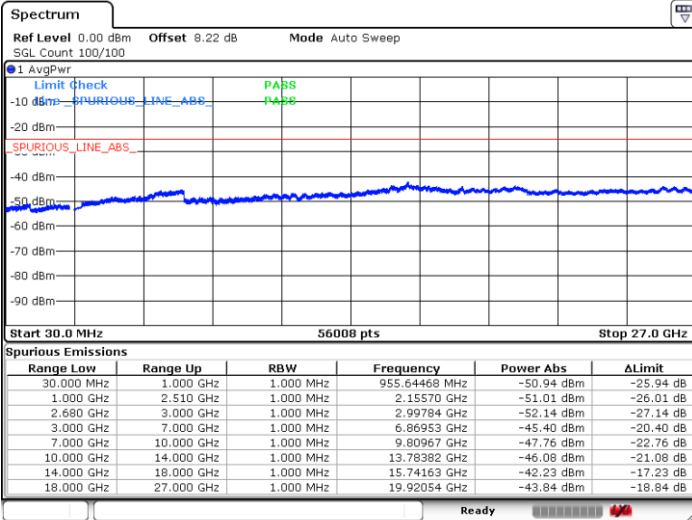
Date: 3 JUL 2019 12:35:22



LTE Band 41 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

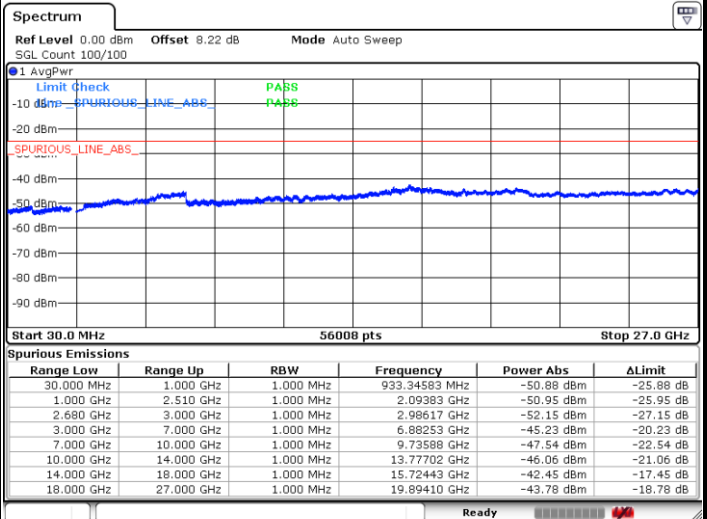
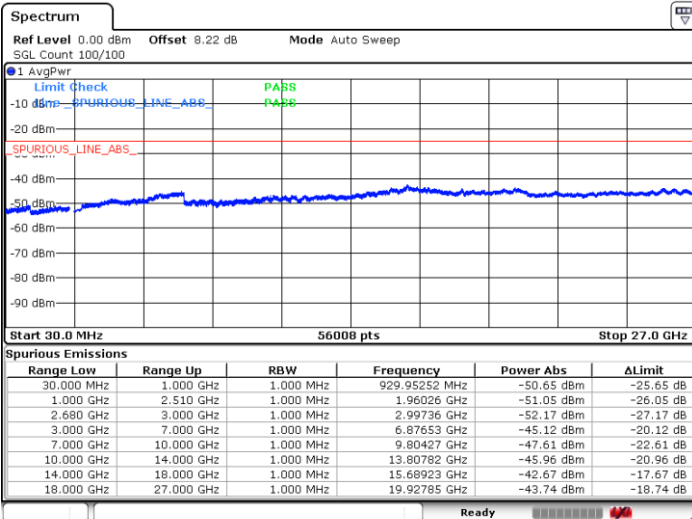


Date: 4 JUL 2019 13:55:24

Date: 4 JUL 2019 13:59:00

Middle Channel / QPSK

Middle Channel / 16QAM



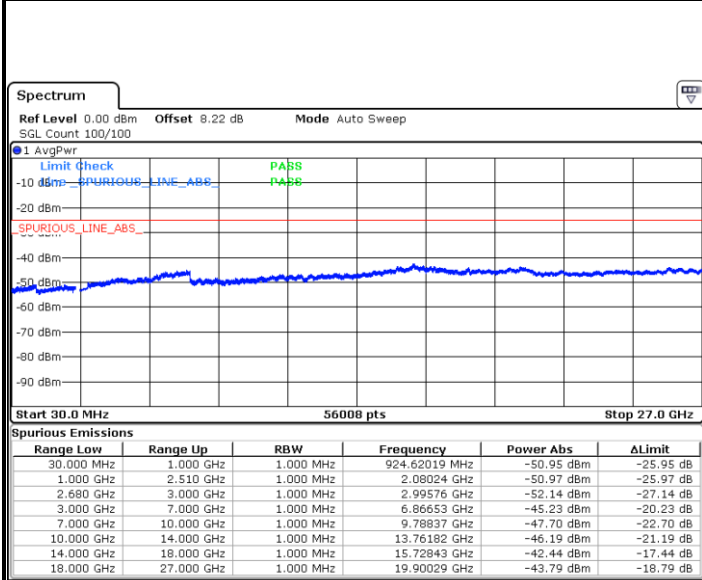
Date: 4 JUL 2019 14:03:56

Date: 4 JUL 2019 14:02:58



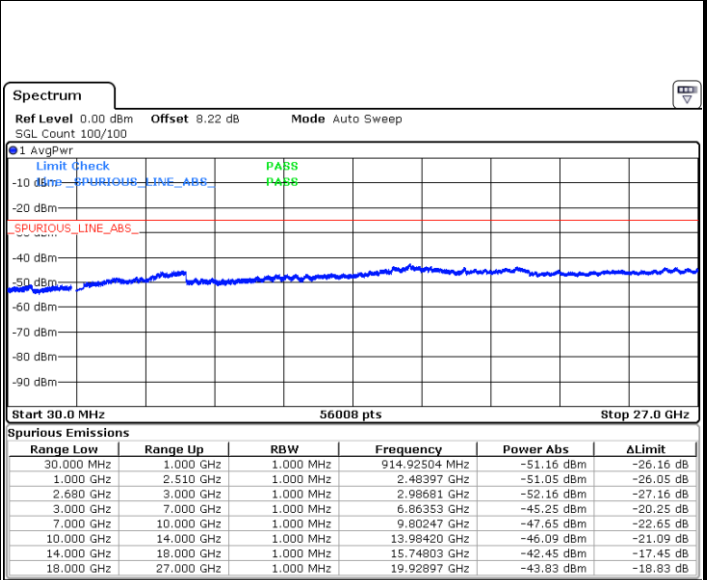
LTE Band 41 / 5MHz

Highest Channel / QPSK



Date: 4 JUL 2019 14:05:01

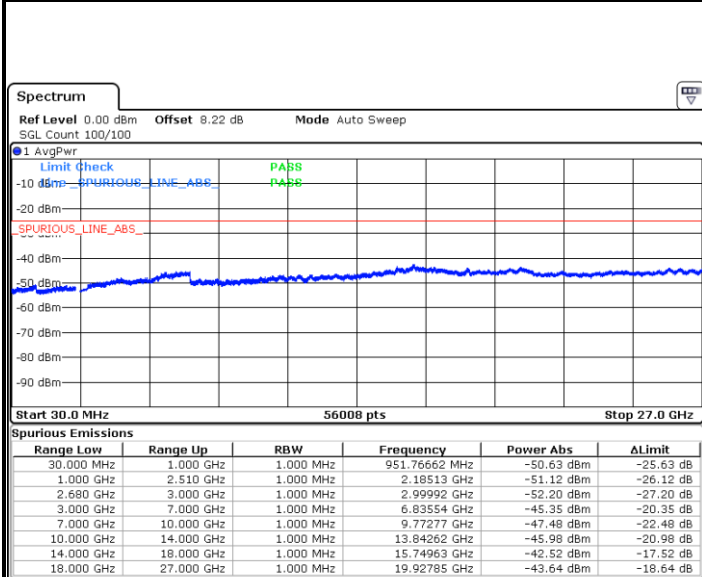
Highest Channel / 16QAM



Date: 4 JUL 2019 14:06:01

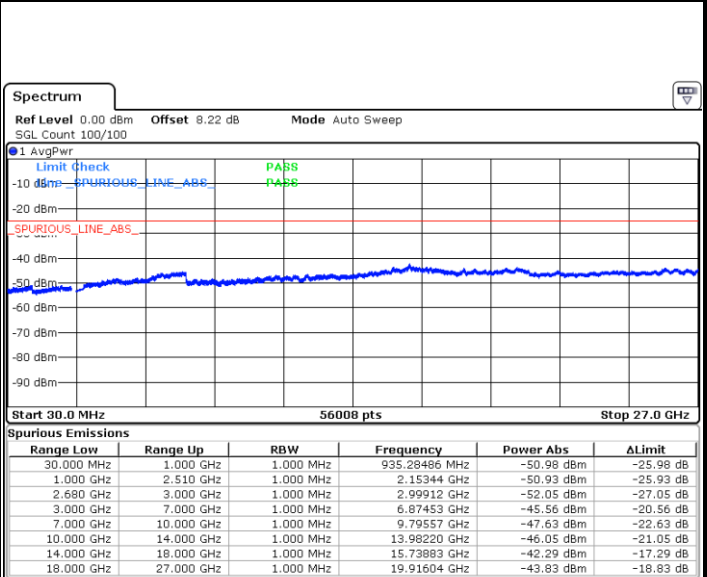
LTE Band 41 / 10MHz

Lowest Channel / QPSK



Date: 4 JUL 2019 14:35:49

Lowest Channel / 16QAM



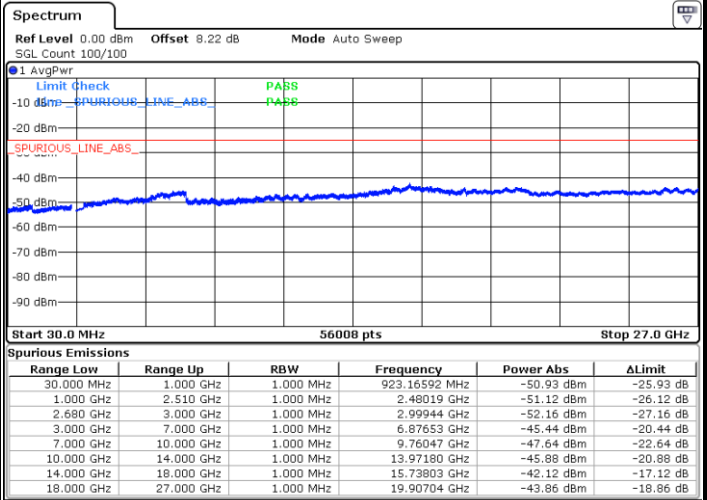
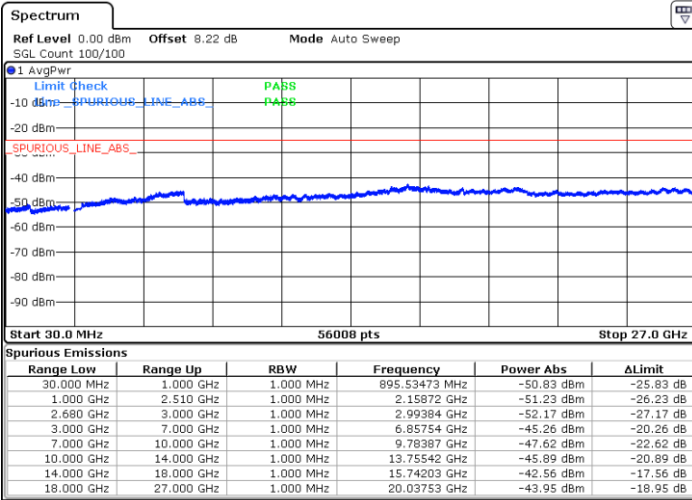
Date: 4 JUL 2019 14:34:47



LTE Band 41 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

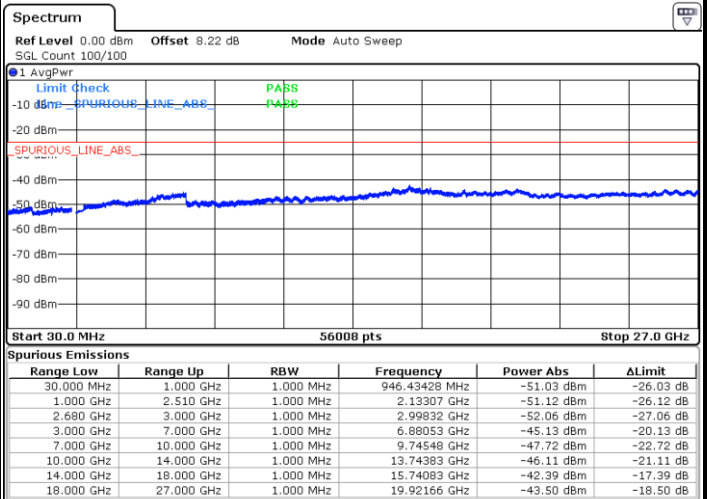
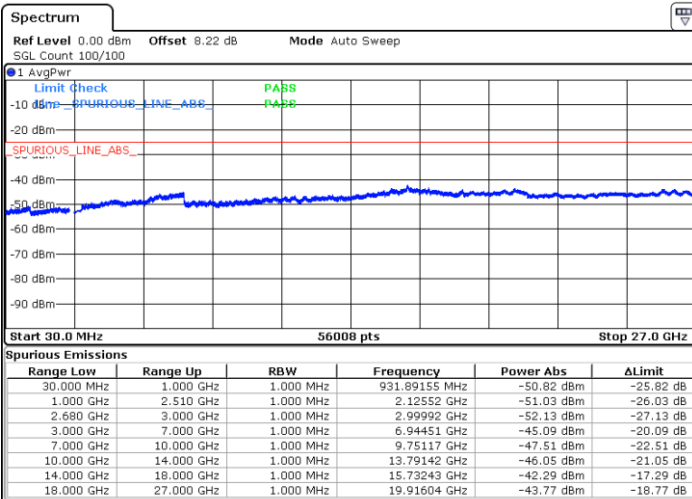


Date: 4 JUL 2019 14:36:53

Date: 4 JUL 2019 14:38:05

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 4 JUL 2019 14:42:36

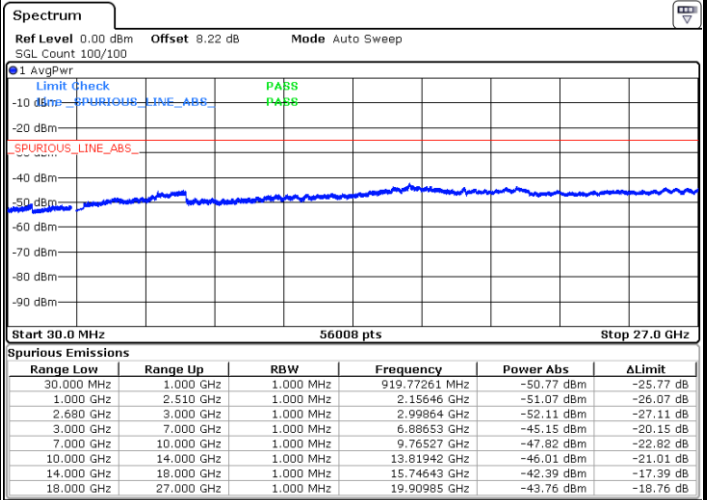
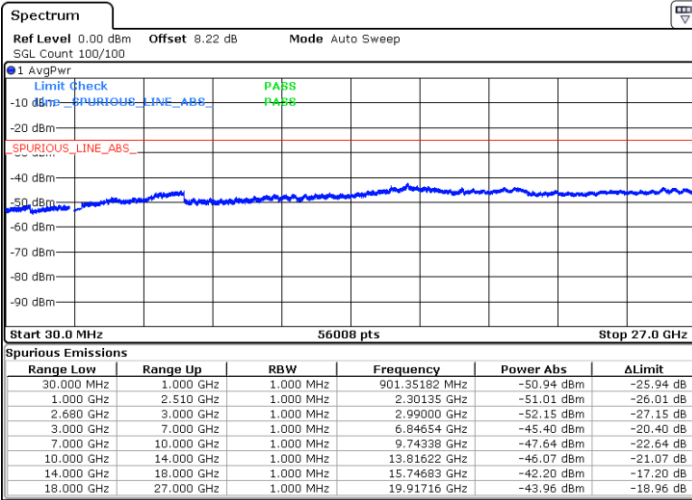
Date: 4 JUL 2019 14:41:17



LTE Band 41 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

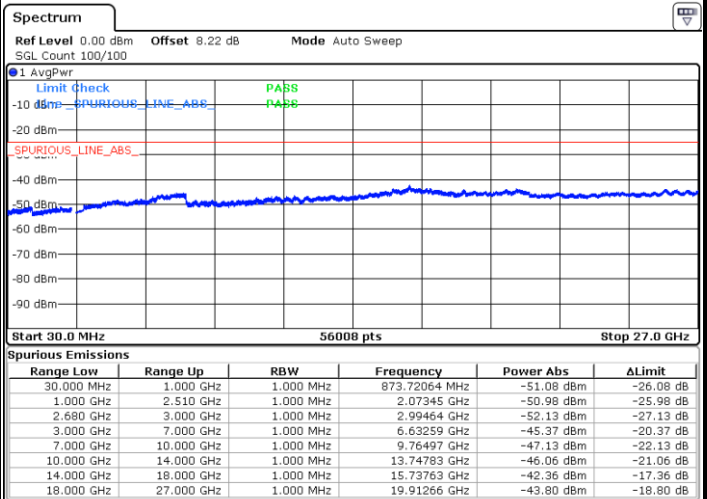
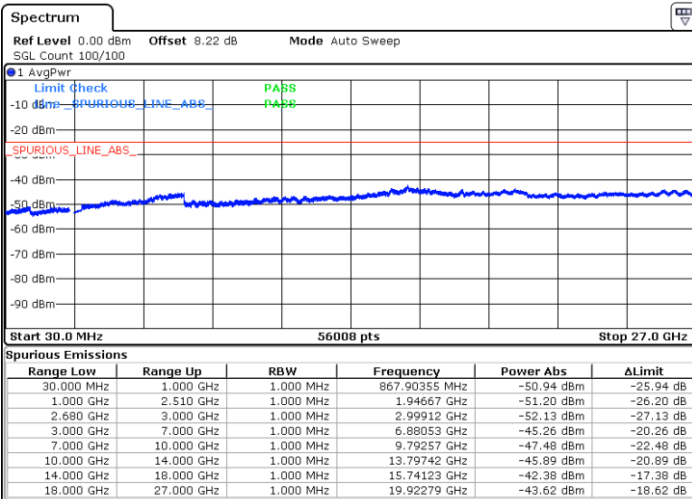


Date: 4 JUL 2019 14:23:01

Date: 4 JUL 2019 14:24:14

Middle Channel / QPSK

Middle Channel / 16QAM



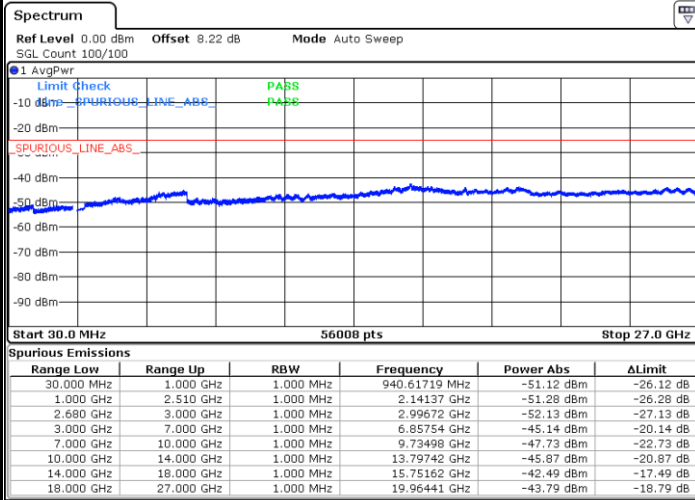
Date: 4 JUL 2019 14:28:25

Date: 4 JUL 2019 14:27:24



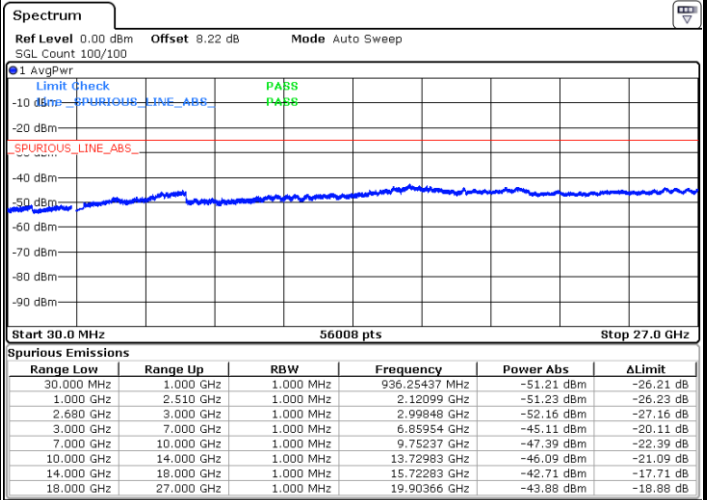
LTE Band 41 / 15MHz

Highest Channel / QPSK



Date: 4 JUL 2019 14:29:44

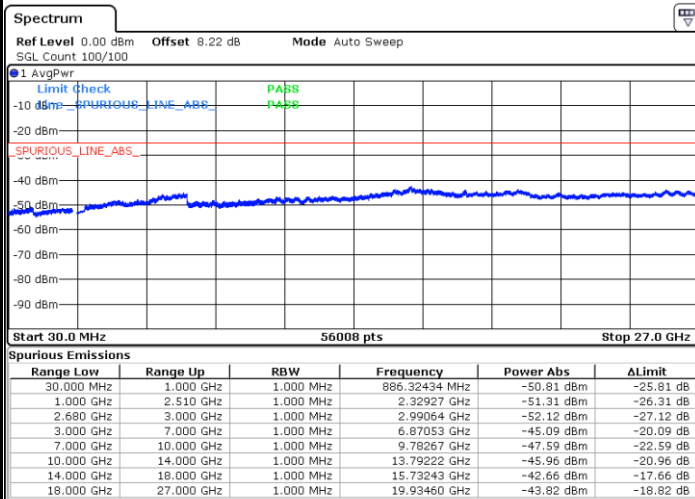
Highest Channel / 16QAM



Date: 4 JUL 2019 14:30:57

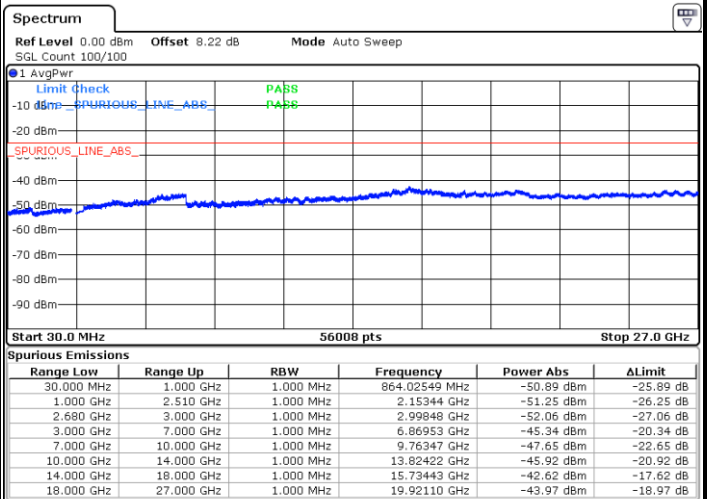
LTE Band 41 / 20MHz

Lowest Channel / QPSK



Date: 4 JUL 2019 14:11:55

Lowest Channel / 16QAM



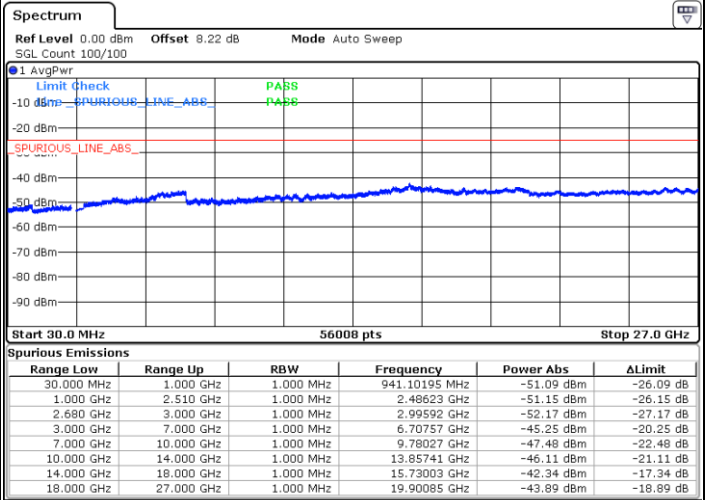
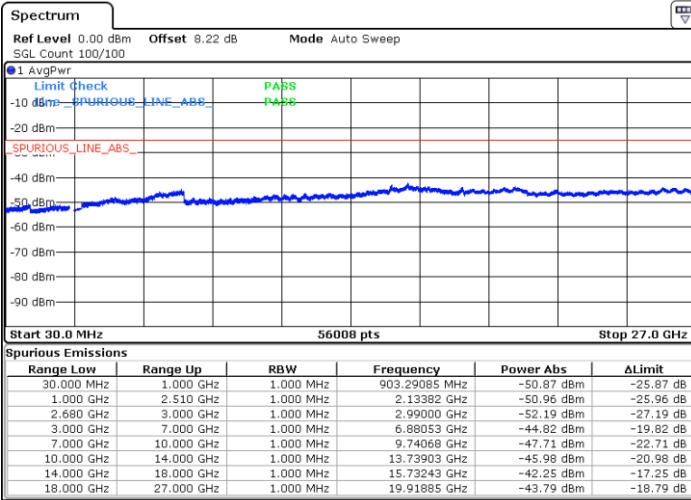
Date: 4 JUL 2019 14:10:54



LTE Band 41 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

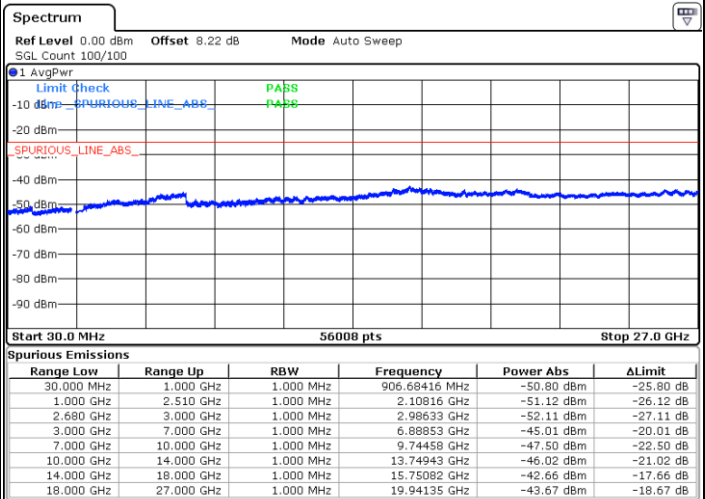
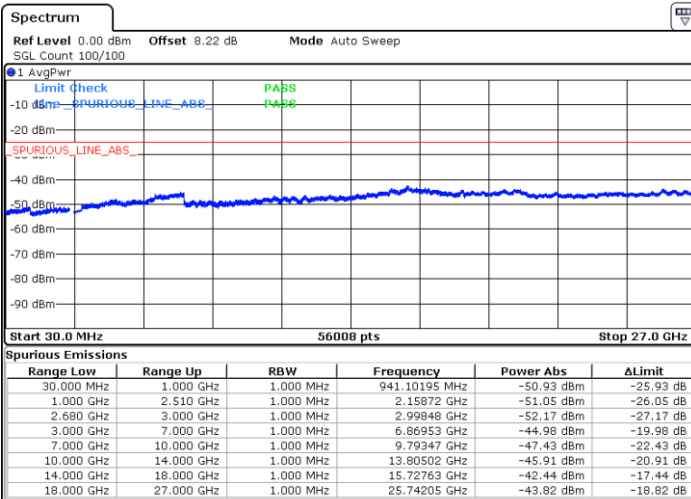


Date: 4 JUL 2019 14:13:28

Date: 4 JUL 2019 14:17:11

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 4 JUL 2019 14:21:09

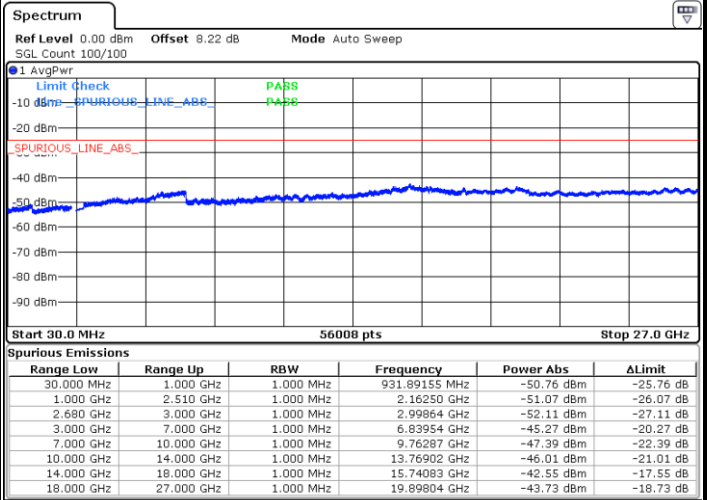
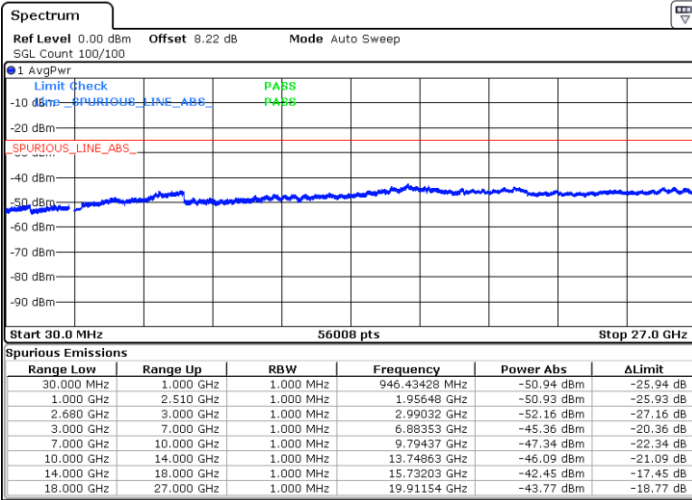
Date: 4 JUL 2019 14:20:13



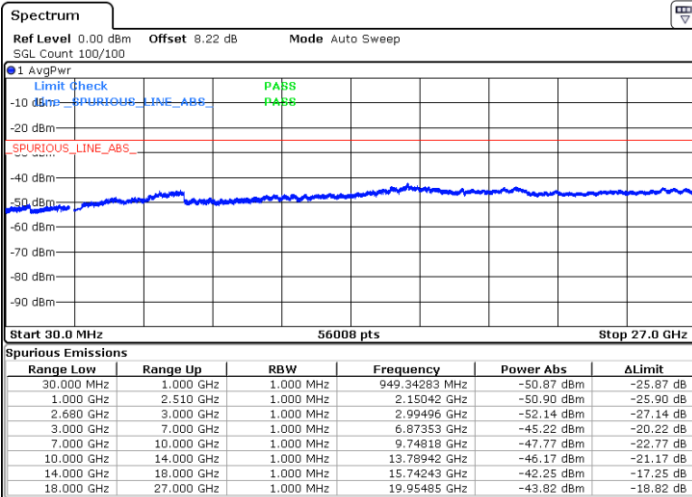
LTE Band 41 / 5MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM



Highest Channel / 64QAM

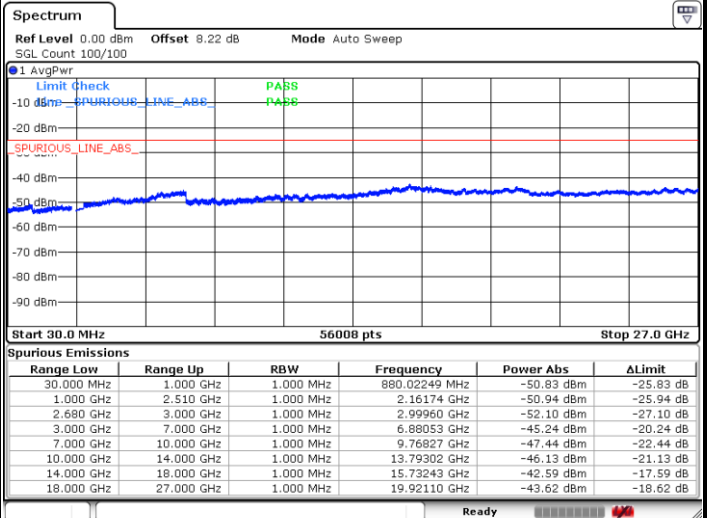
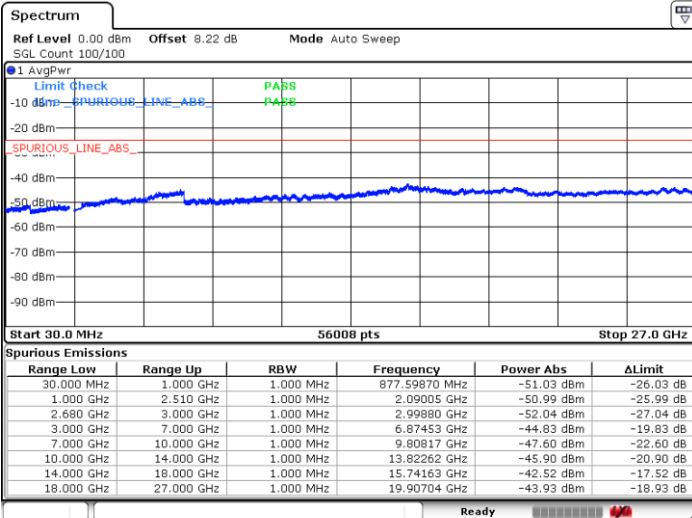




LTE Band 41 / 10MHz

Lowest Channel / 64QAM

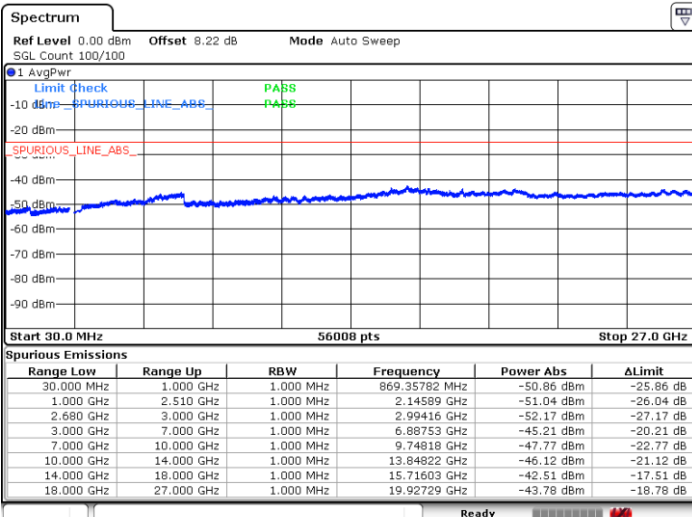
Middle Channel / 64QAM



Date: 4 JUL 2019 14:33:31

Date: 4 JUL 2019 14:39:08

Highest Channel / 64QAM



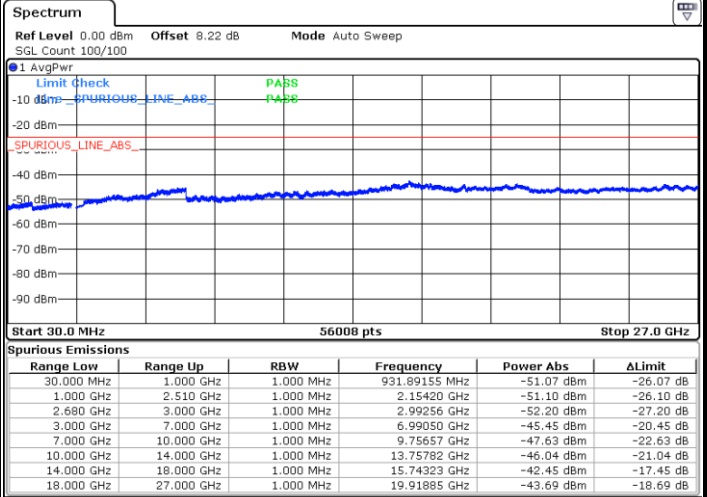
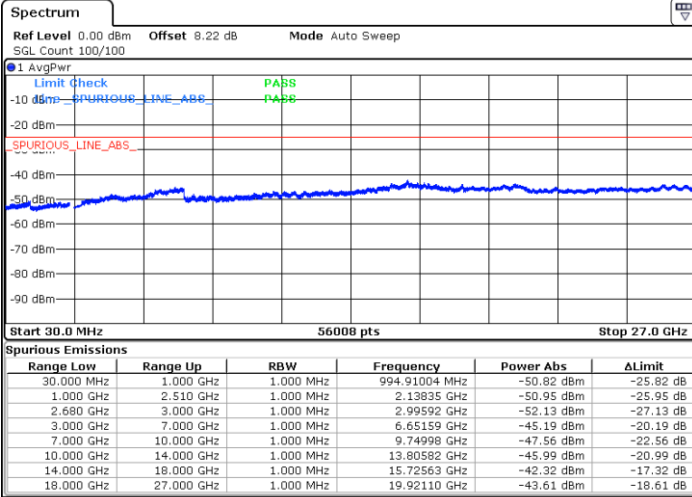
Date: 4 JUL 2019 14:40:19



LTE Band 41 / 15MHz

Lowest Channel / 64QAM

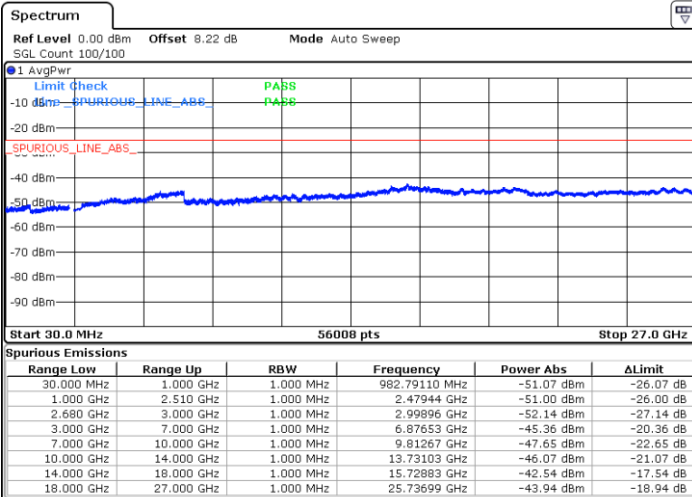
Middle Channel / 64QAM



Date: 4 JUL 2019 14:25:17

Date: 4 JUL 2019 14:26:19

Highest Channel / 64QAM



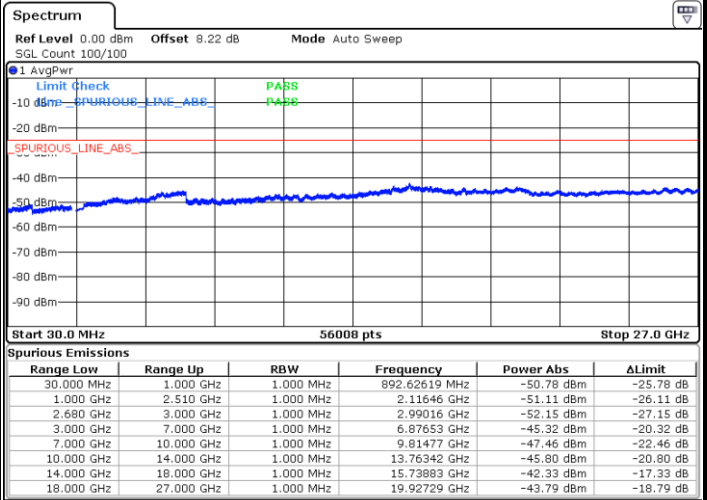
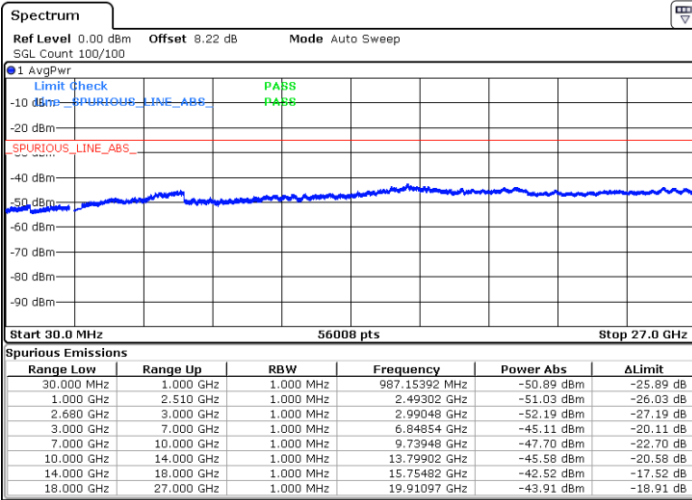
Date: 4 JUL 2019 14:32:01



LTE Band 41 / 20MHz

Lowest Channel / 64QAM

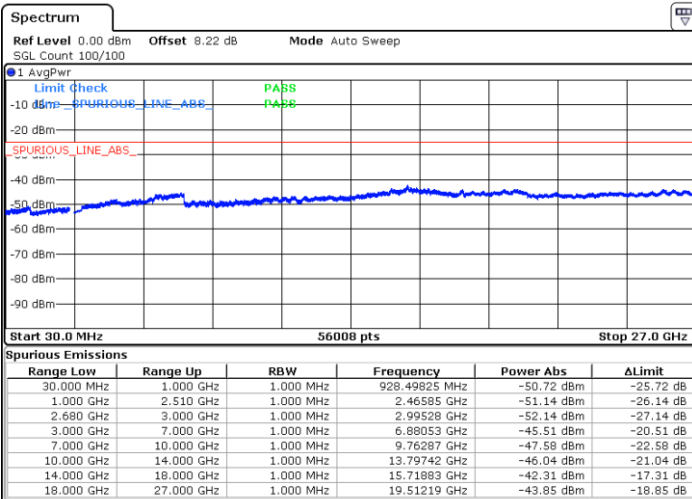
Middle Channel / 64QAM



Date: 4 JUL 2019 14:09:30

Date: 4 JUL 2019 14:18:11

Highest Channel / 64QAM



Date: 4 JUL 2019 14:19:15



Frequency Stability

Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0021	PASS
40	Normal Voltage	0.0022	
30	Normal Voltage	0.0024	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0014	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0016	
-20	Normal Voltage	0.0026	
-30	Normal Voltage	0.0016	
20	Maximum Voltage	0.0024	
20	Normal Voltage	0.0031	
20	Battery End Point	0.0004	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.2 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 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0003	PASS
40	Normal Voltage	0.0022	
30	Normal Voltage	0.0020	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0010	
0	Normal Voltage	0.0013	
-10	Normal Voltage	0.0009	
-20	Normal Voltage	0.0005	
-30	Normal Voltage	0.0013	
20	Maximum Voltage	0.0018	
20	Normal Voltage	0.0008	
20	Battery End Point	0.0007	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.2 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 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	3447.18	-63.83	-13	-50.83	-74.57	2.604	13.34	H
	5172	-60.48	-13	-47.48	-70.99	3.011	13.52	H
	6900	-55.86	-13	-42.86	-66.06	3.271	13.47	H
	3447.18	-62.58	-13	-49.58	-73.32	2.604	13.34	V
	5172	-59.18	-13	-46.18	-69.69	3.011	13.52	V
	6900	-55.51	-13	-42.51	-65.71	3.271	13.47	V

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

LTE Band 41 / 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	5168	-64.39	-25	-39.39	-74.60	3.03	13.24	H
	7752	-53.66	-25	-28.66	-63.11	3.56	13.01	H
	10340	-53.06	-25	-28.06	-62.58	3.92	13.44	H
	5168	-64.24	-25	-39.24	-74.45	3.03	13.24	V
	7752	-48.46	-25	-23.46	-57.91	3.56	13.01	V
	10340	-46.87	-25	-21.87	-56.39	3.92	13.44	V

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



Appendix D. Reference Report

Please refer to Sporton report number FG960403B which is issued separately.