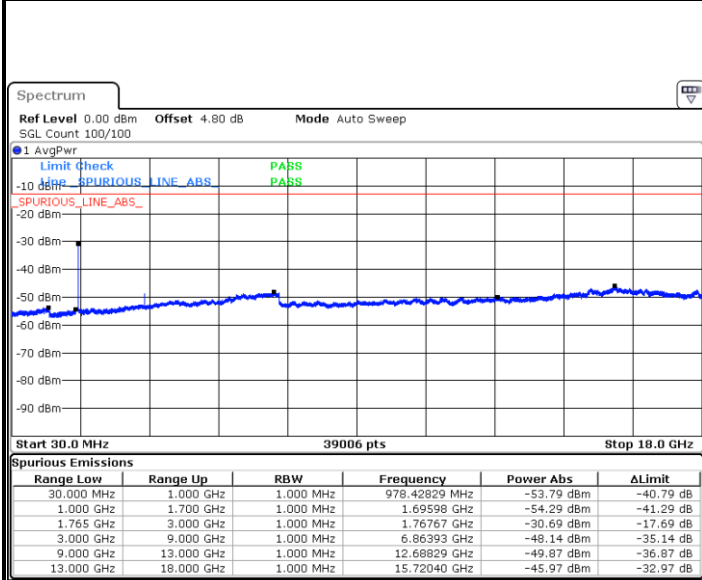




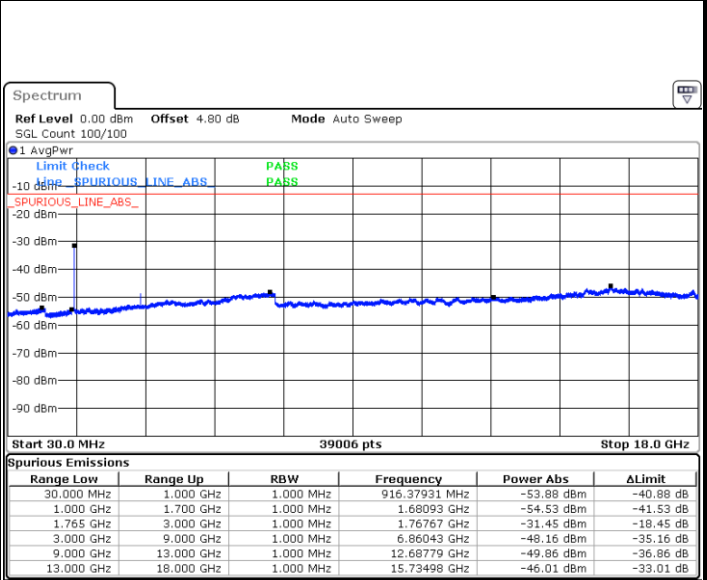
LTE Band 4 / 15MHz

Highest Channel / QPSK



Date: 11.OCT.2018 17:27:26

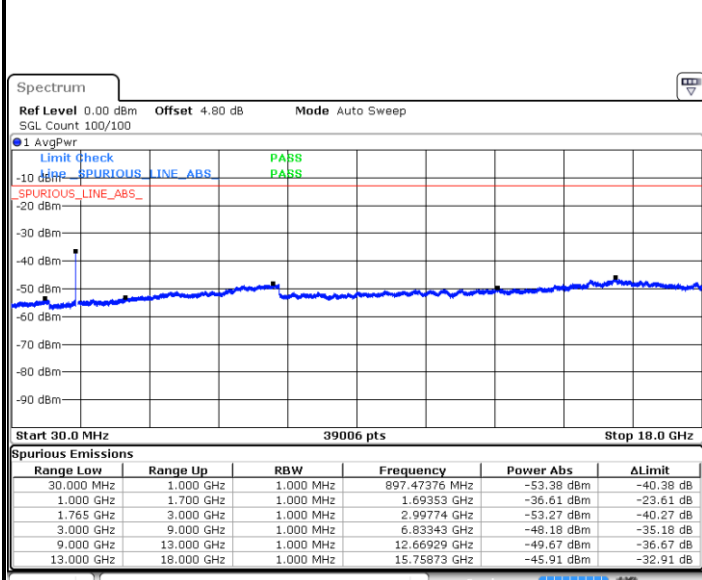
Highest Channel / 16QAM



Date: 11.OCT.2018 17:28:20

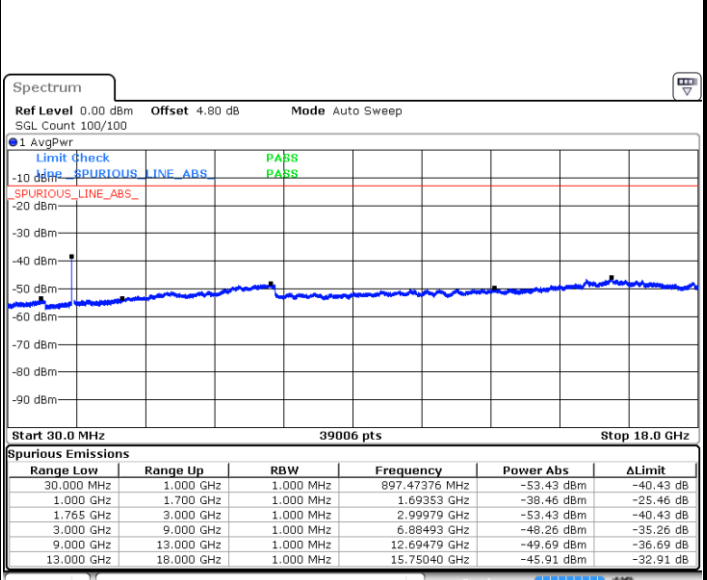
LTE Band 4 / 20MHz

Lowest Channel / QPSK



Date: 11.OCT.2018 17:34:24

Lowest Channel / 16QAM

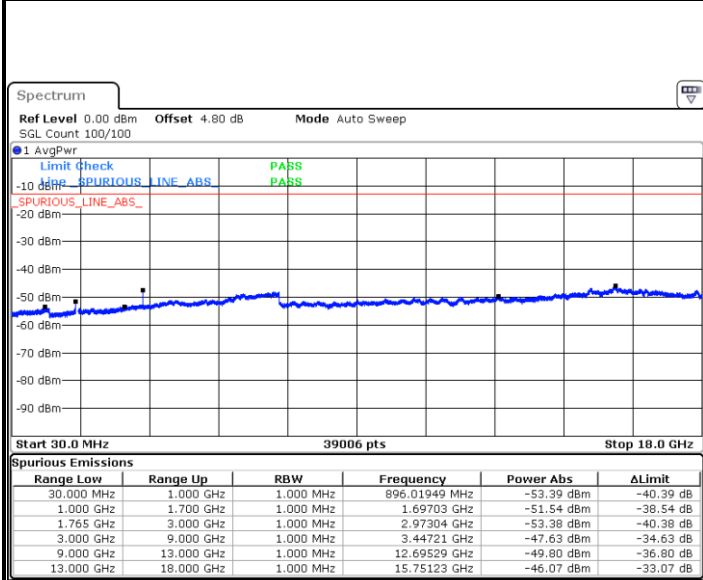


Date: 11.OCT.2018 17:35:19



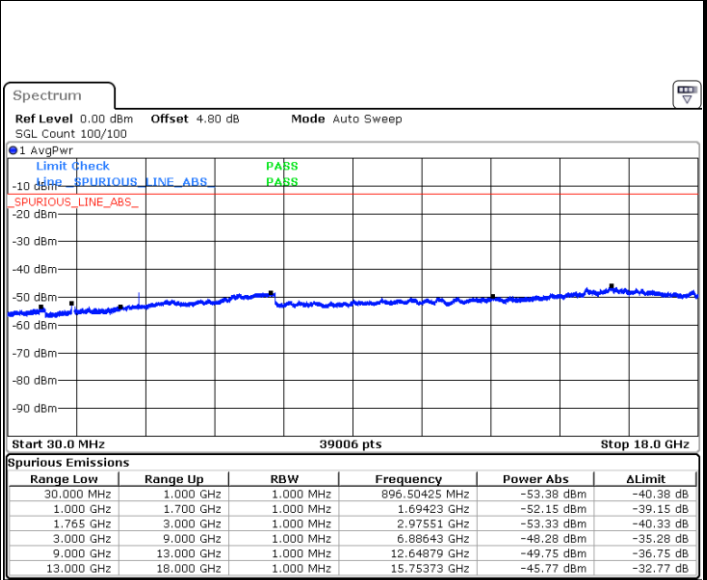
LTE Band 4 / 20MHz

Middle Channel / QPSK



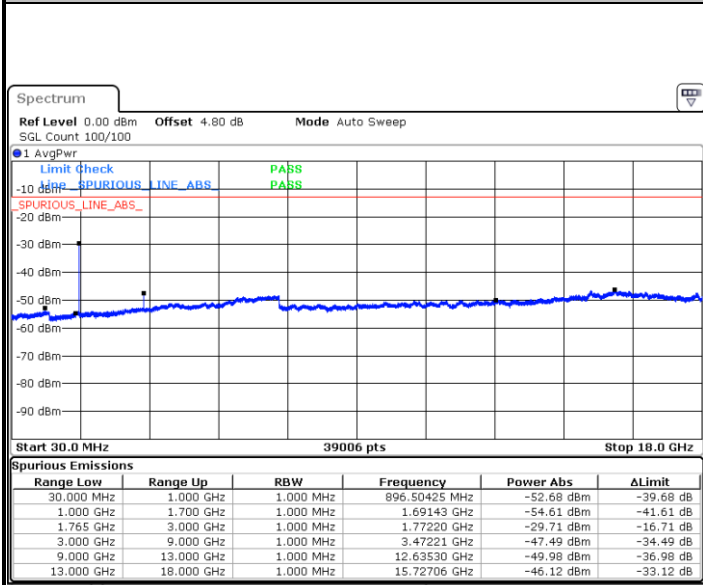
Date: 11.OCT.2018 17:36:54

Middle Channel / 16QAM



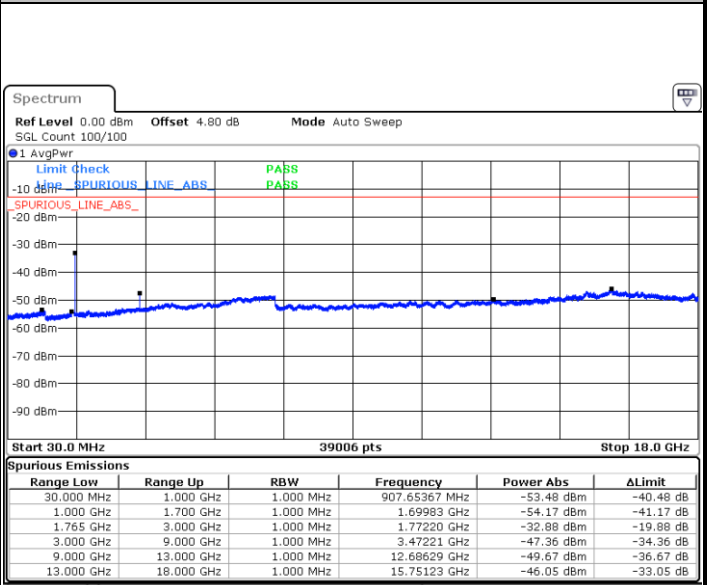
Date: 12.OCT.2018 09:26:53

Highest Channel / QPSK



Date: 11.OCT.2018 17:43:53

Highest Channel / 16QAM



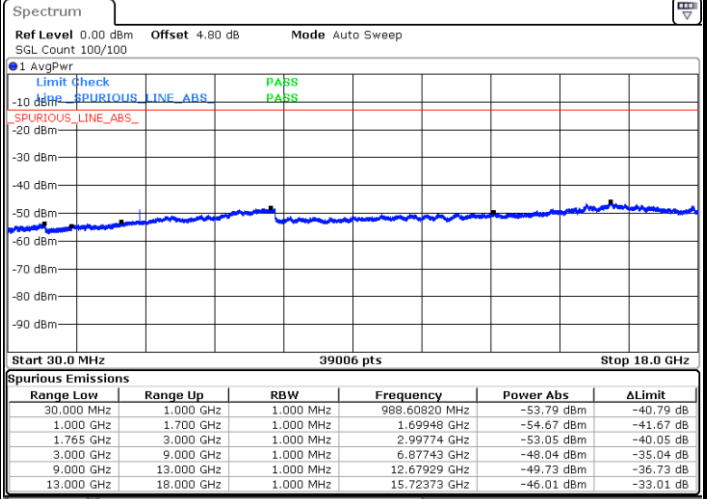
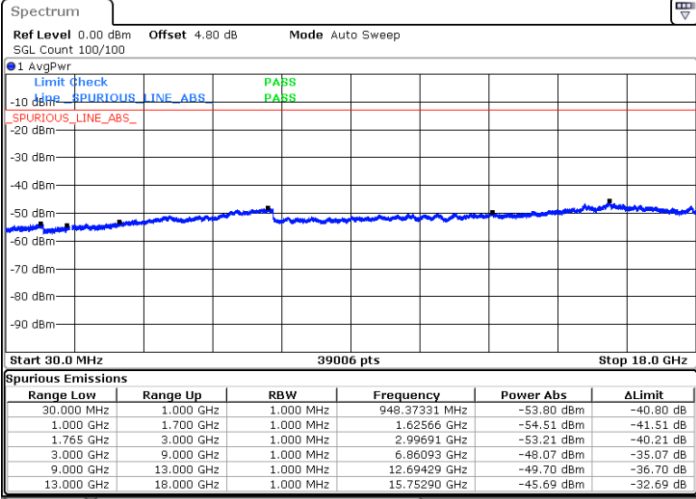
Date: 12.OCT.2018 09:27:49



LTE Band 4 / 1.4MHz

Lowest Channel / 64QAM

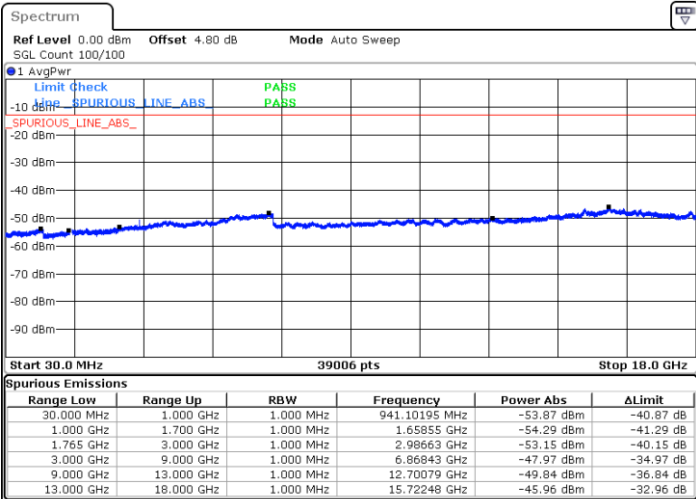
Middle Channel / 64QAM



Date: 12.OCT.2018 09:00:19

Date: 12.OCT.2018 09:01:14

Highest Channel / 64QAM



Date: 12.OCT.2018 09:02:08

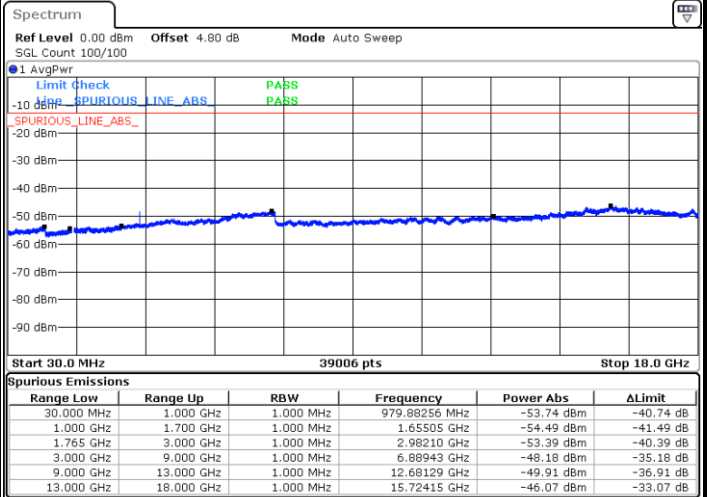
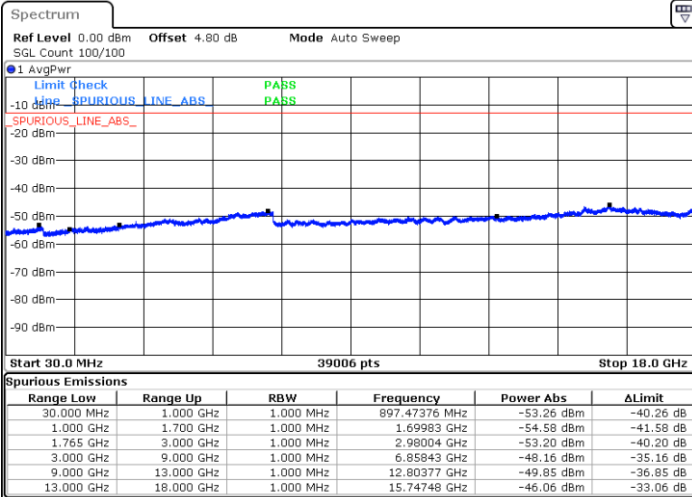




LTE Band 4 / 5MHz

Lowest Channel / 64QAM

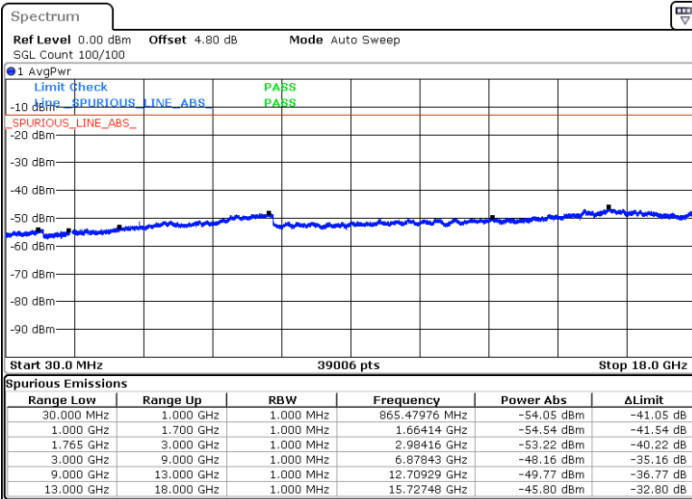
Middle Channel / 64QAM



Date: 12.OCT.2018 09:05:47

Date: 12.OCT.2018 09:06:41

Highest Channel / 64QAM



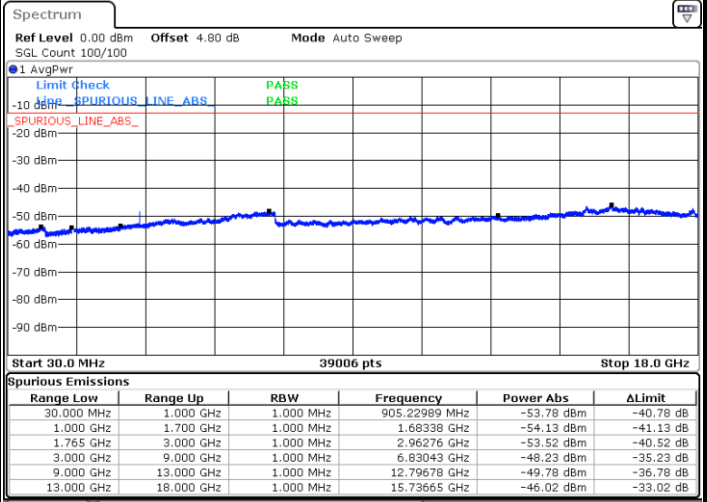
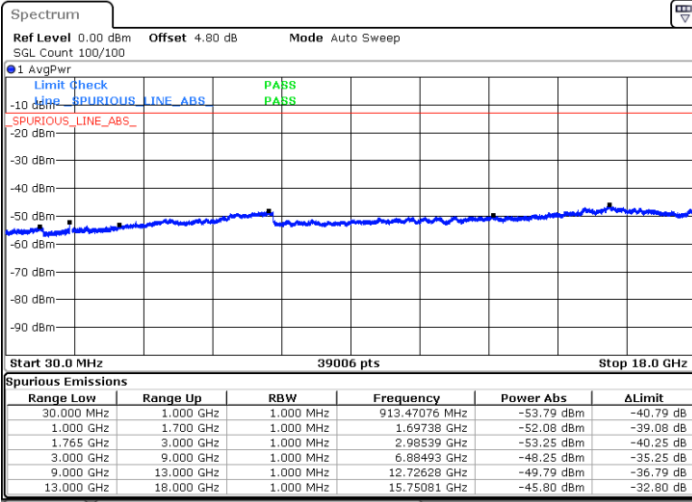
Date: 12.OCT.2018 09:07:36



LTE Band 4 / 10MHz

Lowest Channel / 64QAM

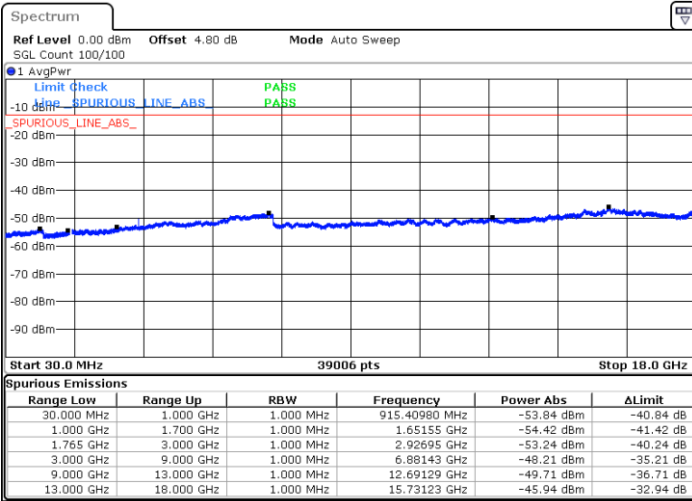
Middle Channel / 64QAM



Date: 12.OCT.2018 09:08:31

Date: 12.OCT.2018 09:09:25

Highest Channel / 64QAM



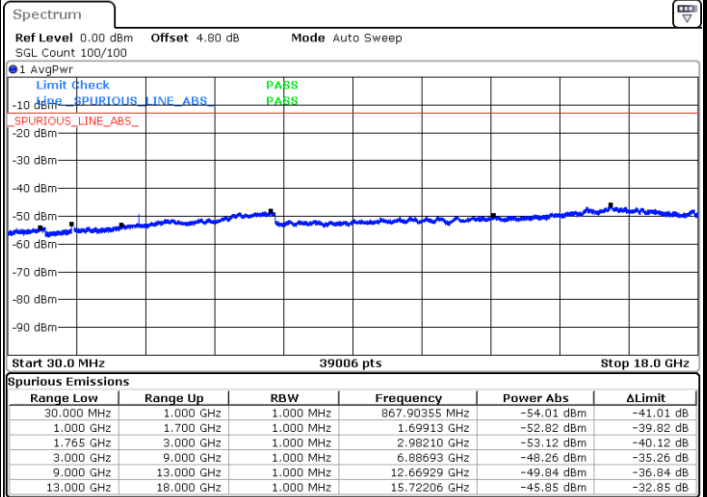
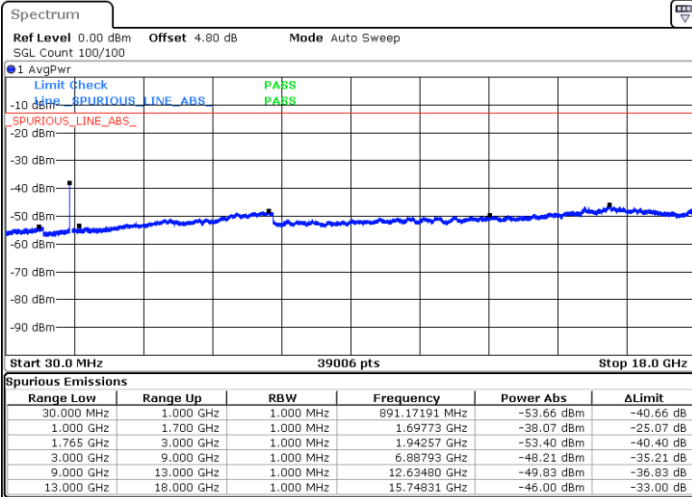
Date: 12.OCT.2018 09:10:20



LTE Band 4 / 15MHz

Lowest Channel / 64QAM

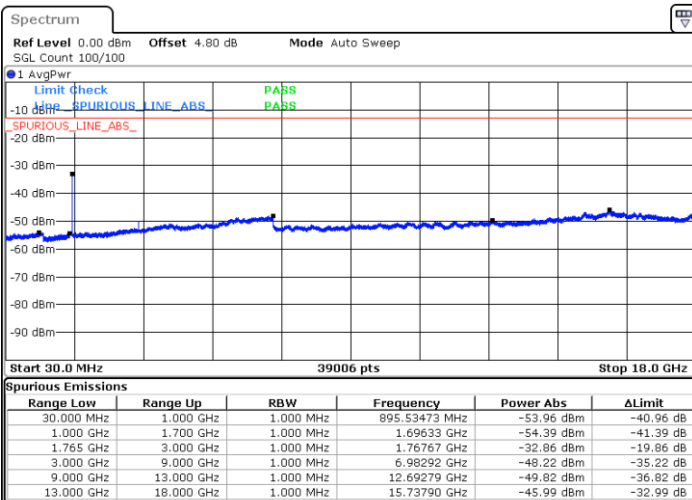
Middle Channel / 64QAM



Date: 12.OCT.2018 09:11:14

Date: 12.OCT.2018 09:12:09

Highest Channel / 64QAM

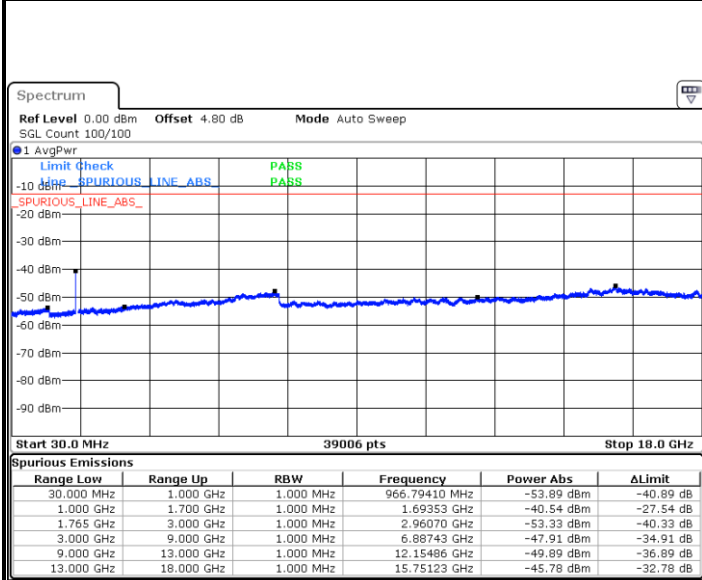


Date: 12.OCT.2018 09:13:04



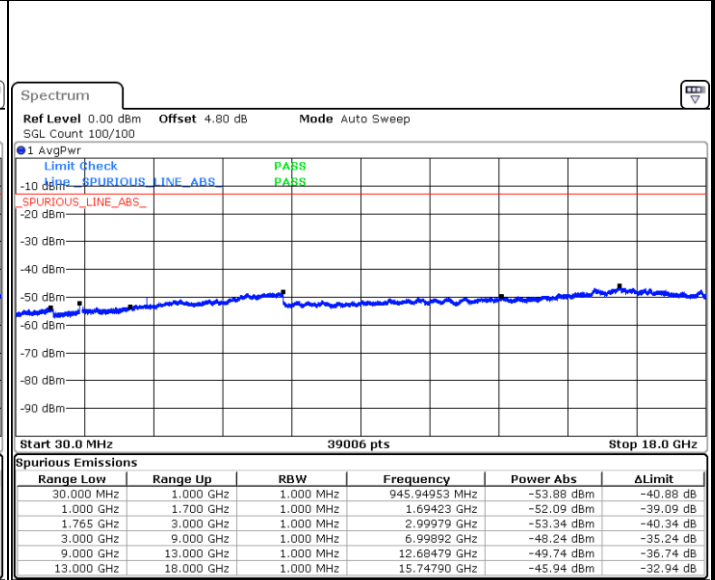
**LTE Band 4 / 20MHz**

**Lowest Channel / 64QAM**



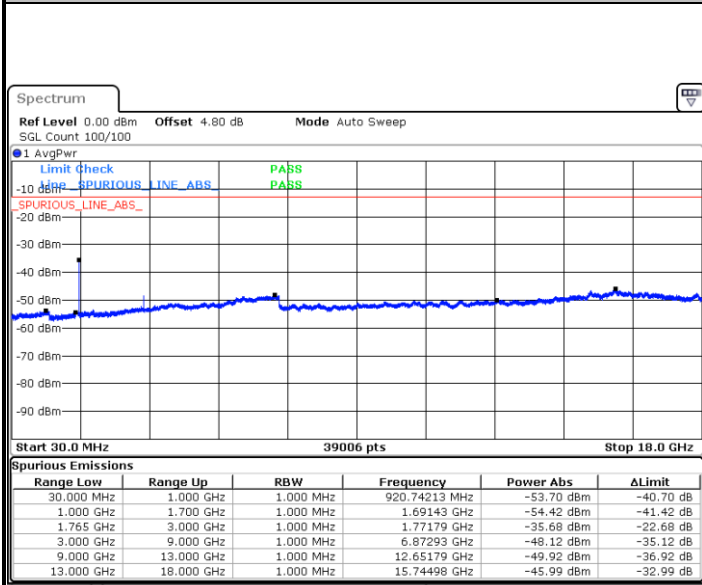
Date: 12.OCT.2018 09:29:23

**Middle Channel / 64QAM**



Date: 12.OCT.2018 09:14:53

**Highest Channel / 64QAM**



Date: 12.OCT.2018 09:15:47

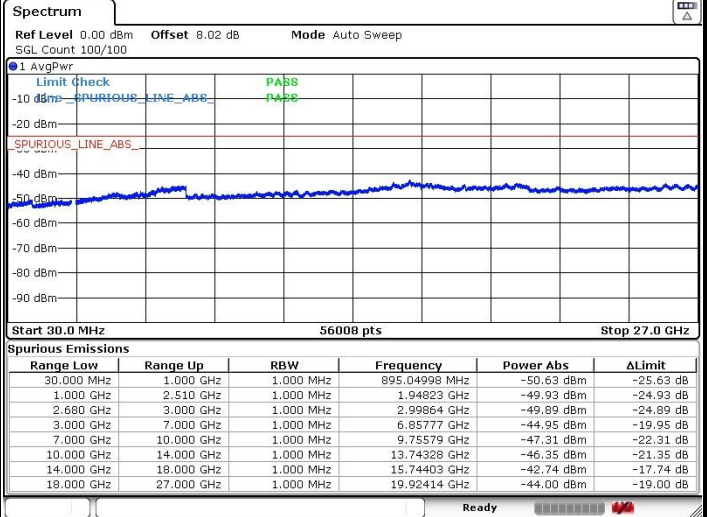
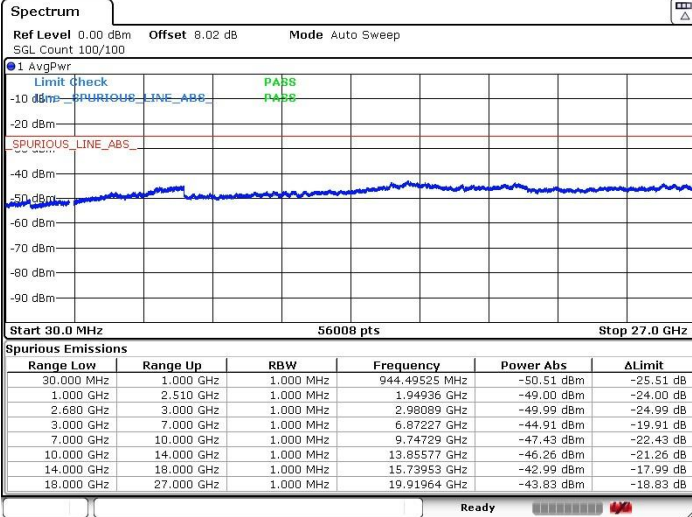




LTE Band 41 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

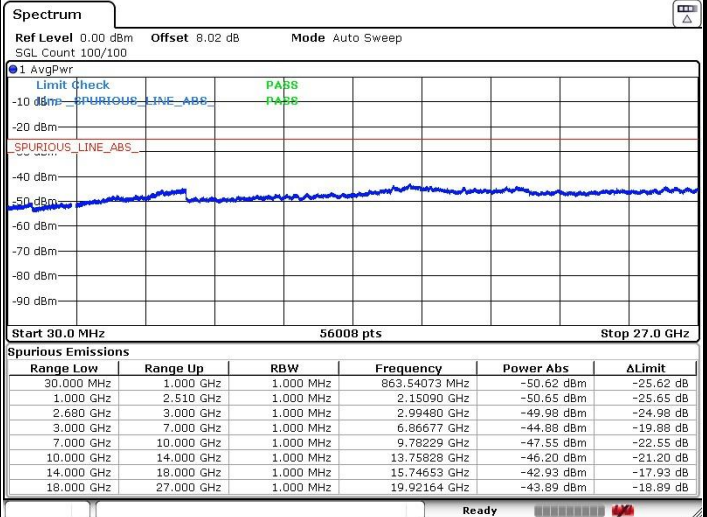
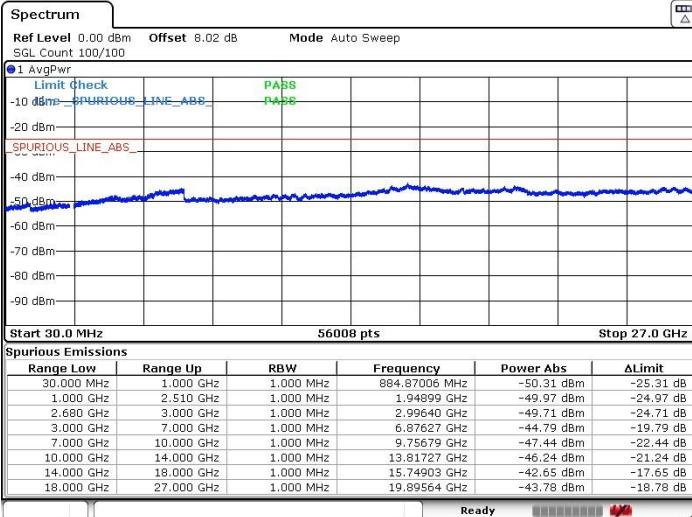


Date: 25.OCT.2018 10:46:16

Date: 25.OCT.2018 10:45:28

Middle Channel / QPSK

Middle Channel / 16QAM



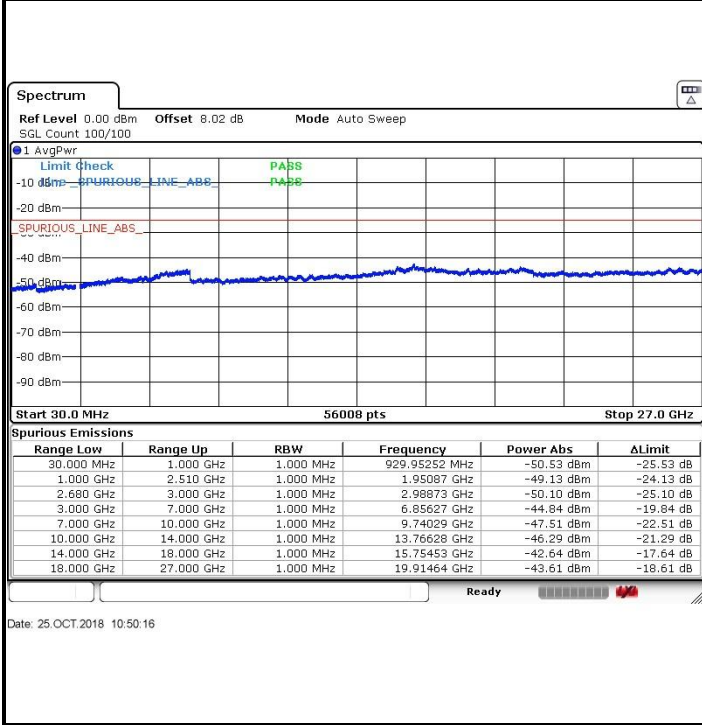
Date: 25.OCT.2018 10:49:23

Date: 25.OCT.2018 10:48:37

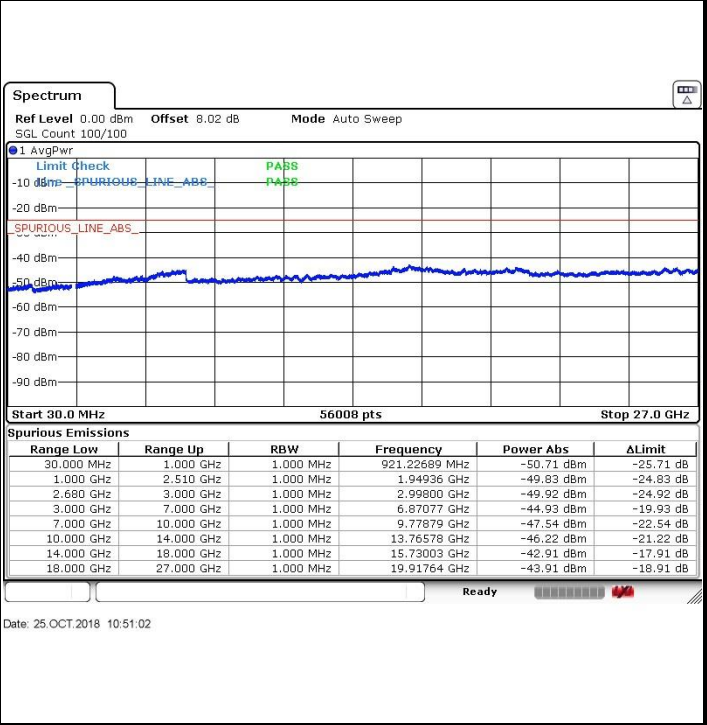


LTE Band 41 / 5MHz

Highest Channel / QPSK

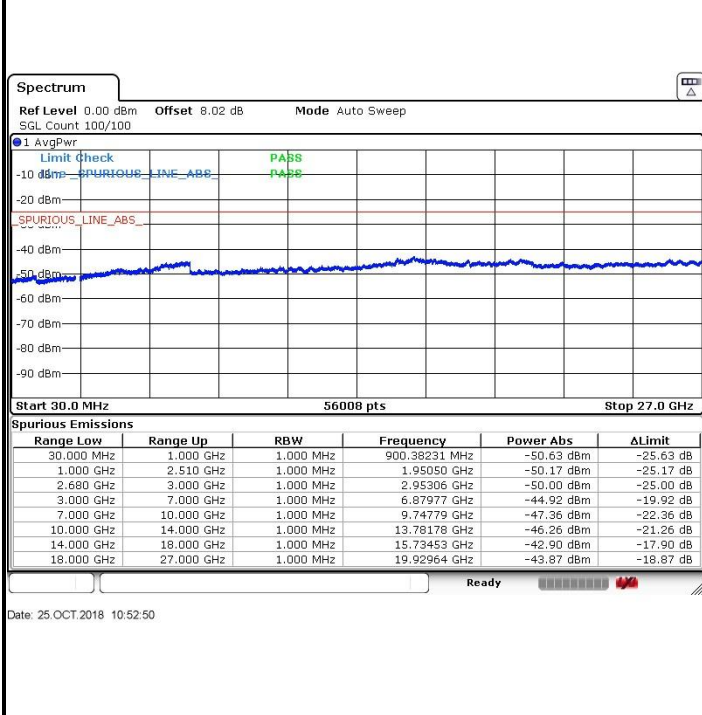


Highest Channel / 16QAM



LTE Band 41 / 10MHz

Lowest Channel / QPSK



Lowest Channel / 16QAM

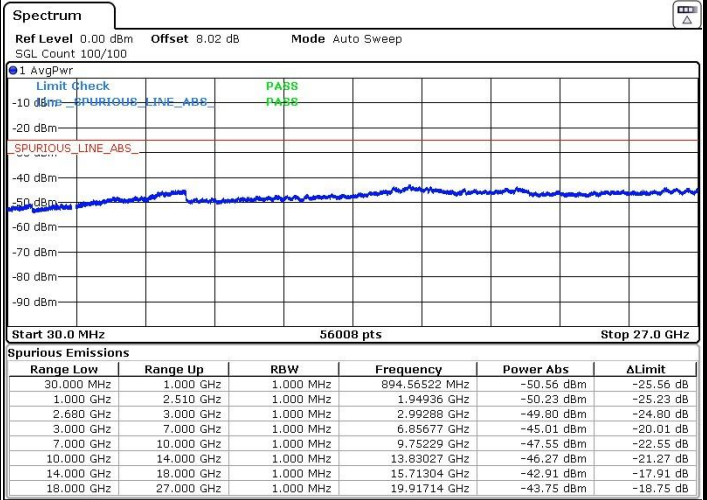
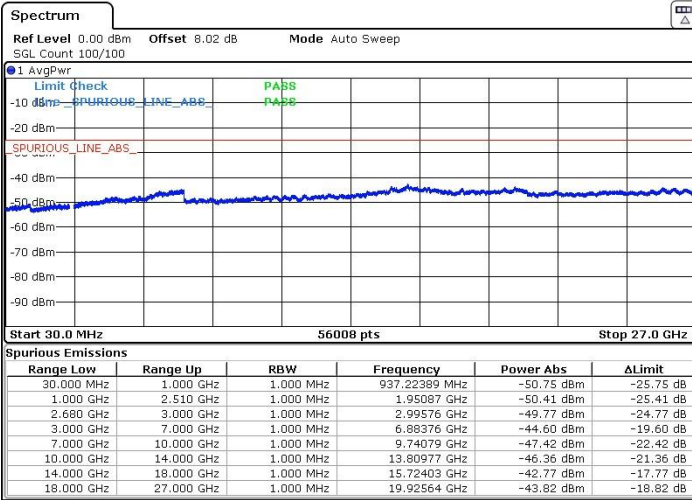




LTE Band 41 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

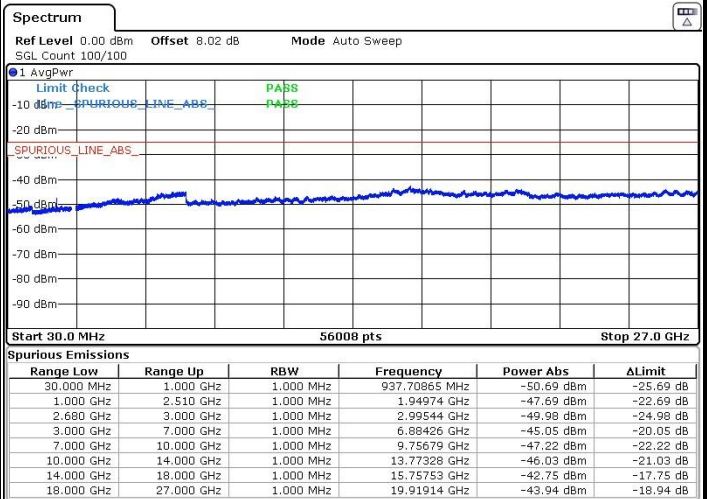
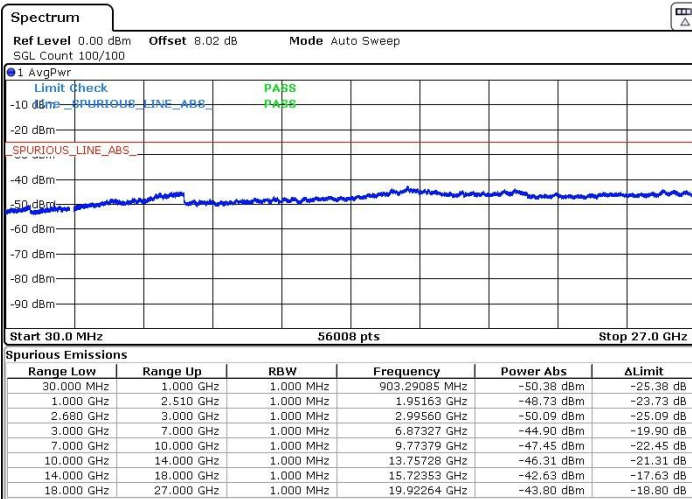


Date: 25.OCT.2018 10:56:54

Date: 25.OCT.2018 10:56:07

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 25.OCT.2018 10:57:41

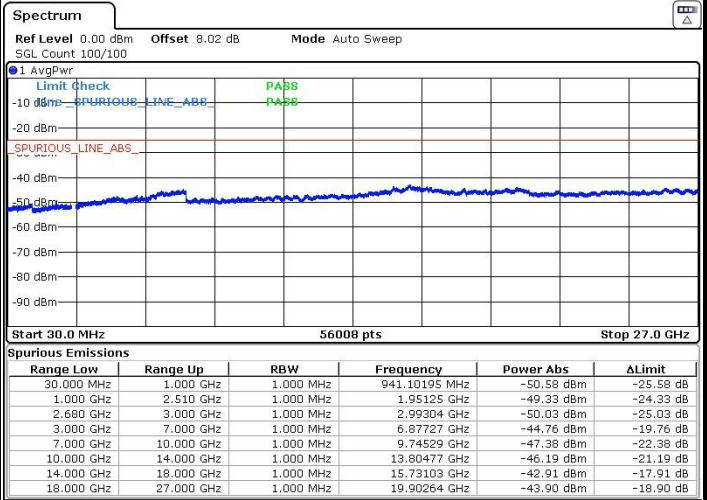
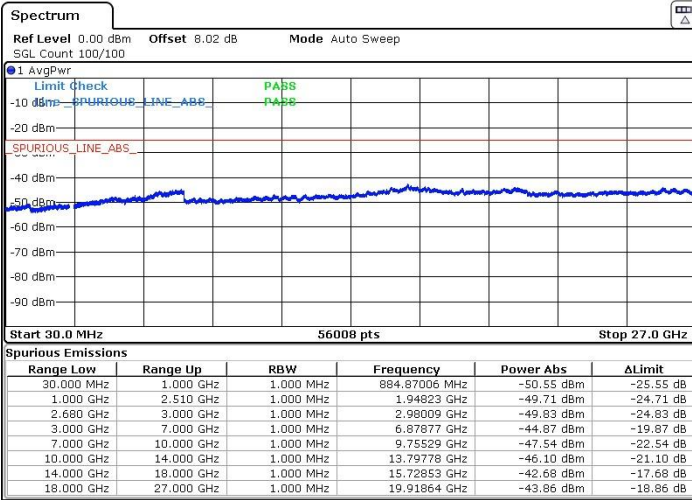
Date: 25.OCT.2018 10:58:31



LTE Band 41 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

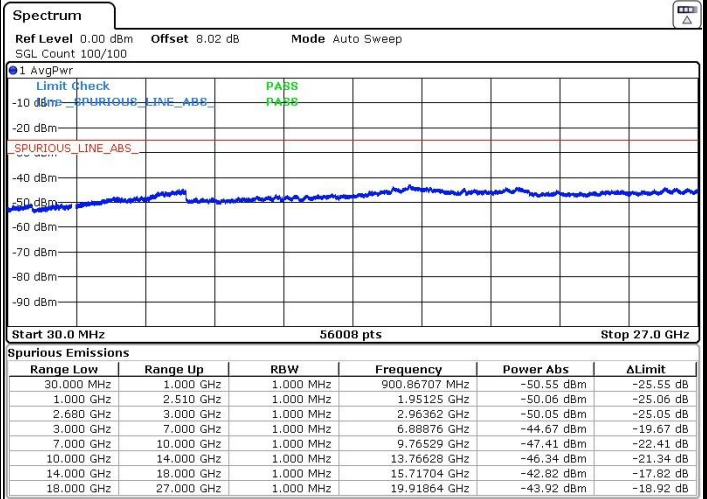
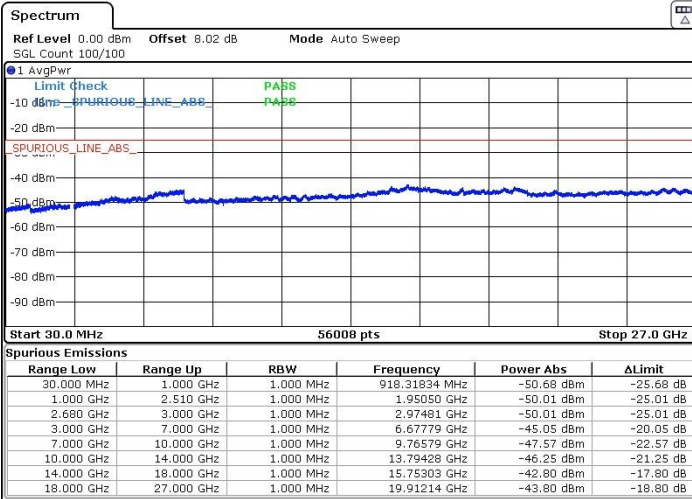


Date: 25.OCT.2018 11:00:23

Date: 25.OCT.2018 11:01:12

Middle Channel / QPSK

Middle Channel / 16QAM

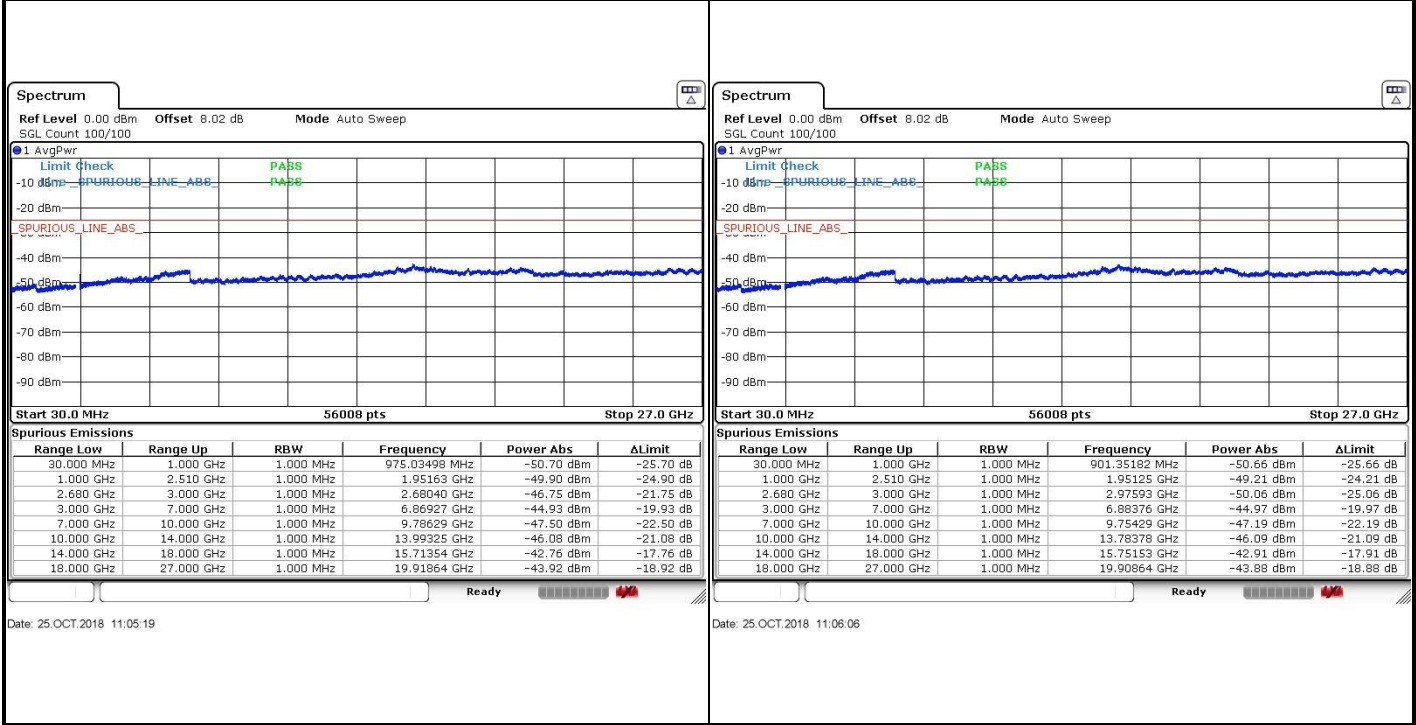


Date: 25.OCT.2018 11:04:29

Date: 25.OCT.2018 11:03:40

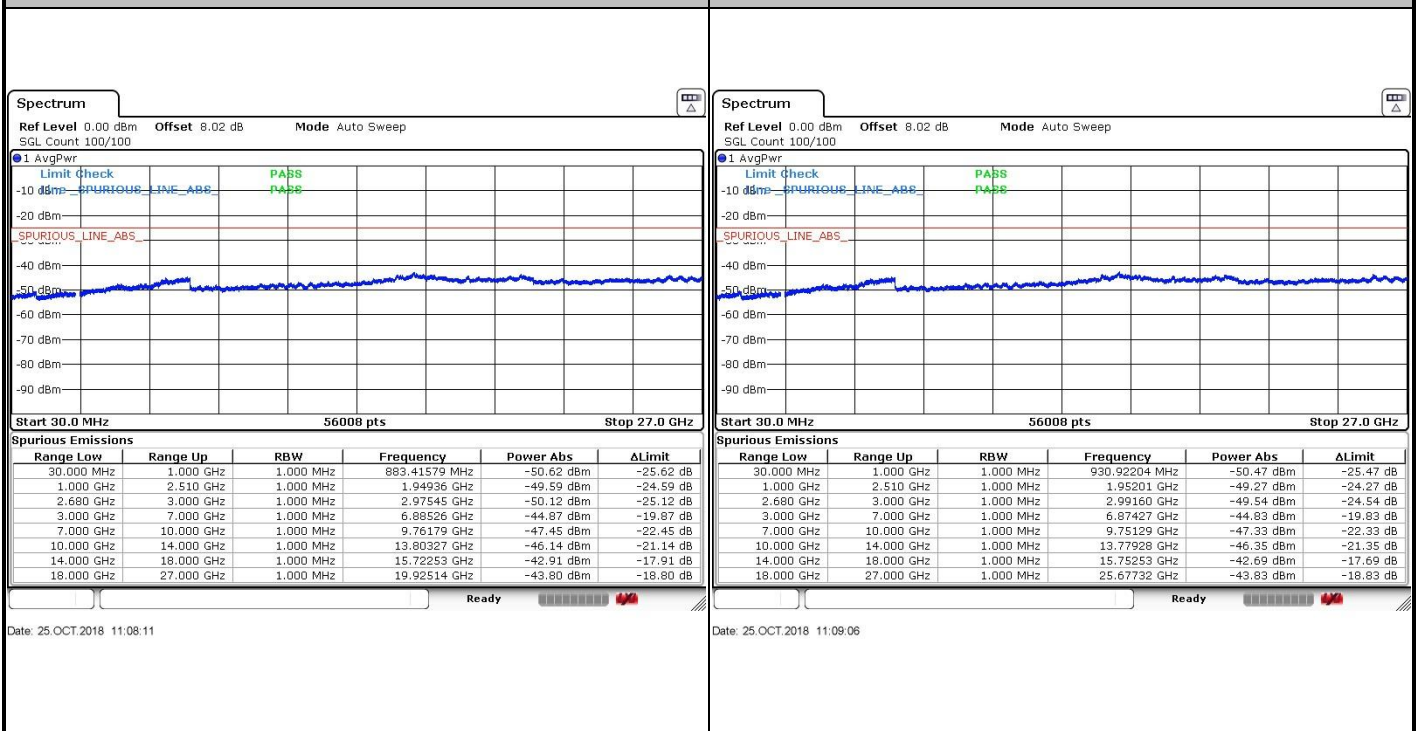


<b>Highest Channel / QPSK</b>	<b>Highest Channel / 16QAM</b>
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**LTE Band 41 / 20MHz**

<b>Lowest Channel / QPSK</b>	<b>Lowest Channel / 16QAM</b>
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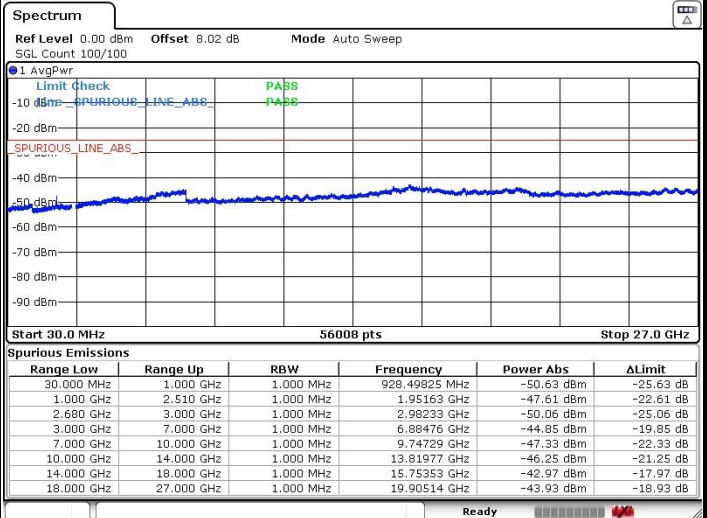
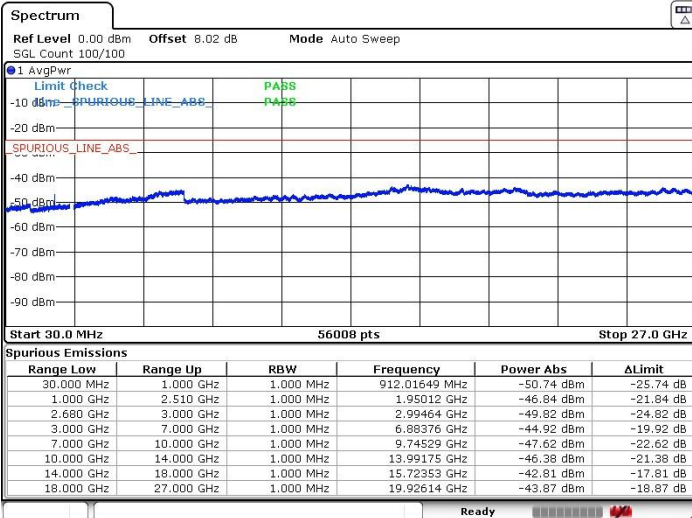




LTE Band 41 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

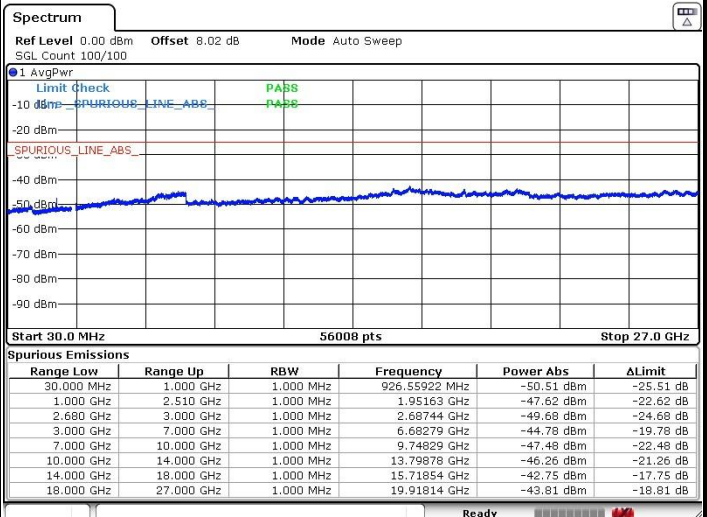
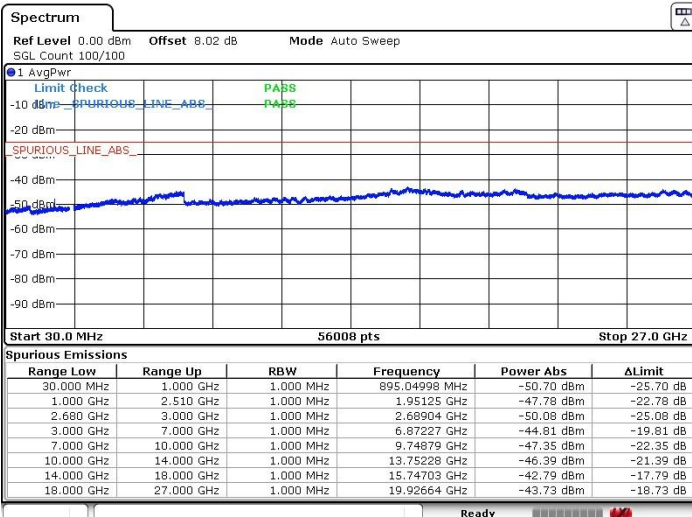


Date: 25.OCT.2018 11:11:14

Date: 25.OCT.2018 11:12:15

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 25.OCT.2018 11:13:52

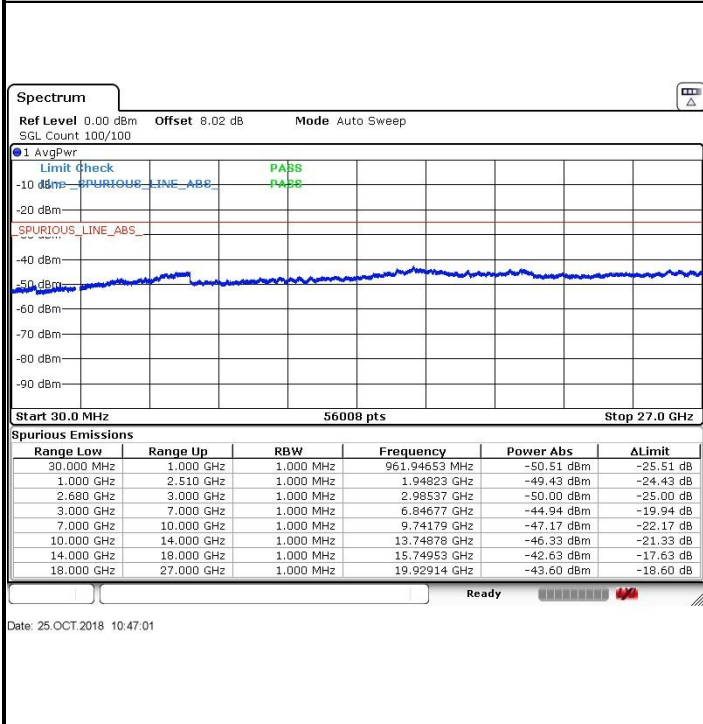
Date: 25.OCT.2018 11:14:42



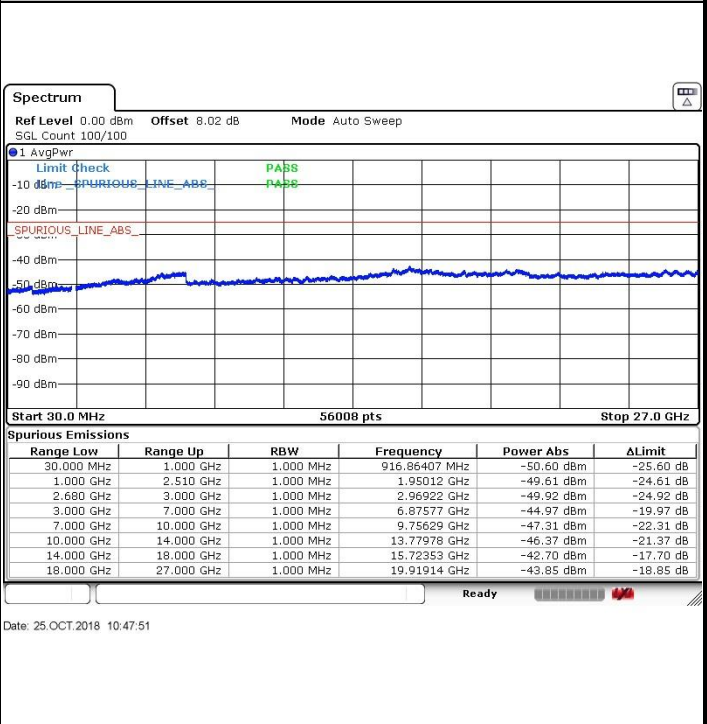


LTE Band 41 / 5MHz

Lowest Channel / 64QAM

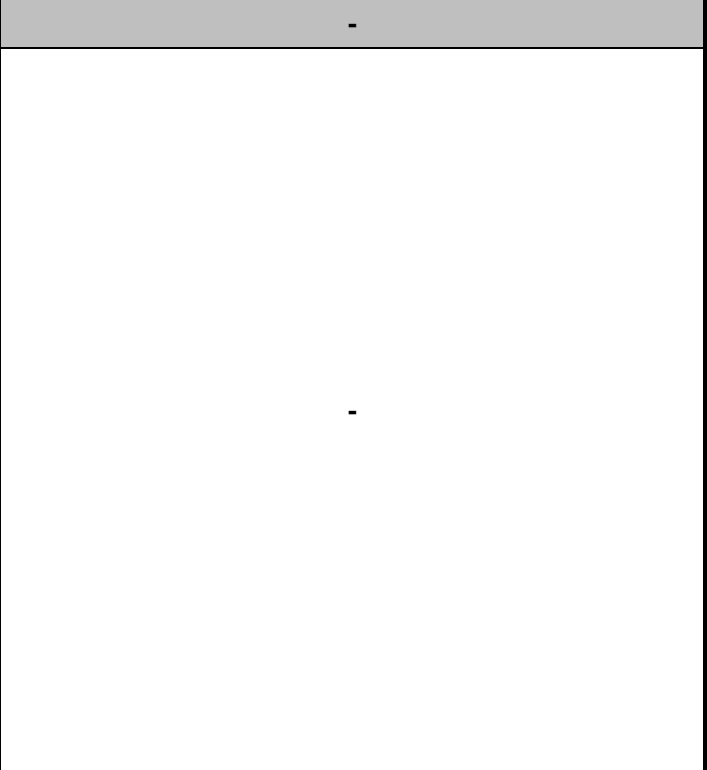
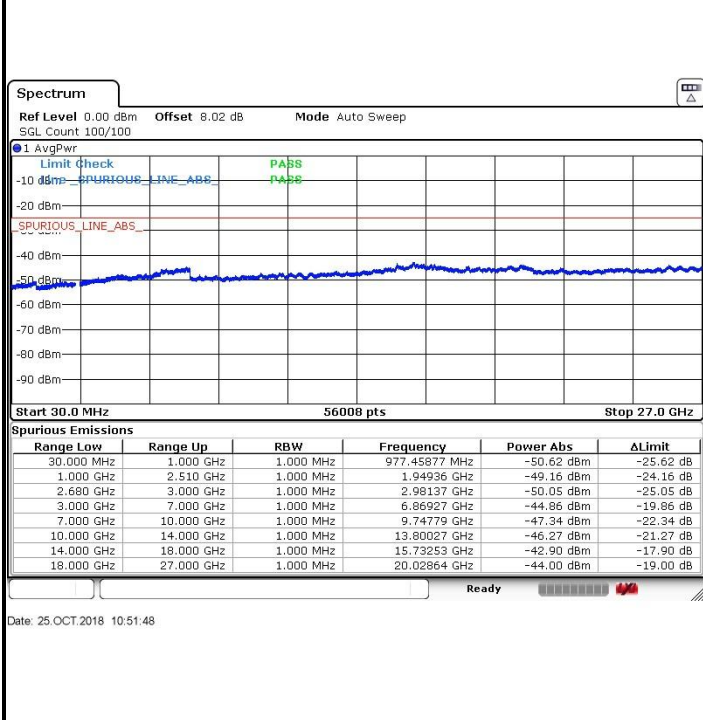


Middle Channel / 64QAM



LTE Band 41 / 5MHz

Highest Channel / 64QAM

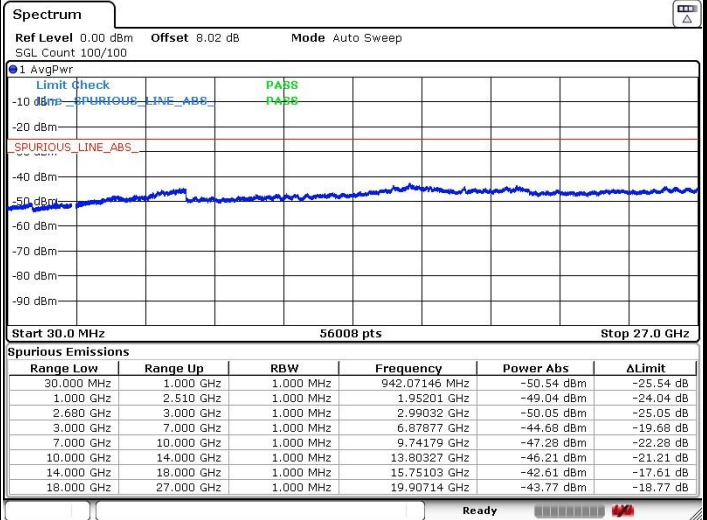
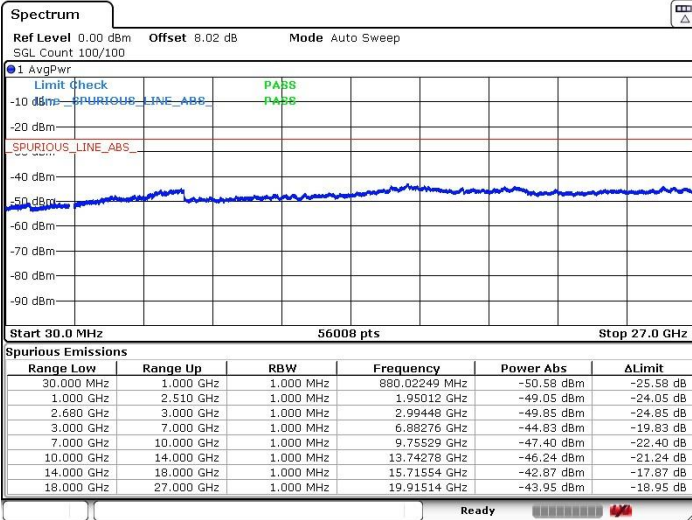




LTE Band 41 / 10MHz

Lowest Channel / 64QAM

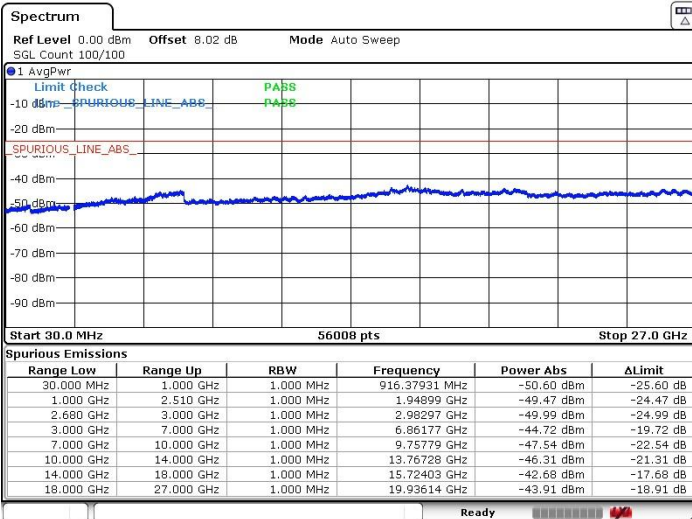
Middle Channel / 64QAM



Date: 25.OCT.2018 10:54:28

Date: 25.OCT.2018 10:55:19

Highest Channel / 64QAM



Date: 25.OCT.2018 10:59:18

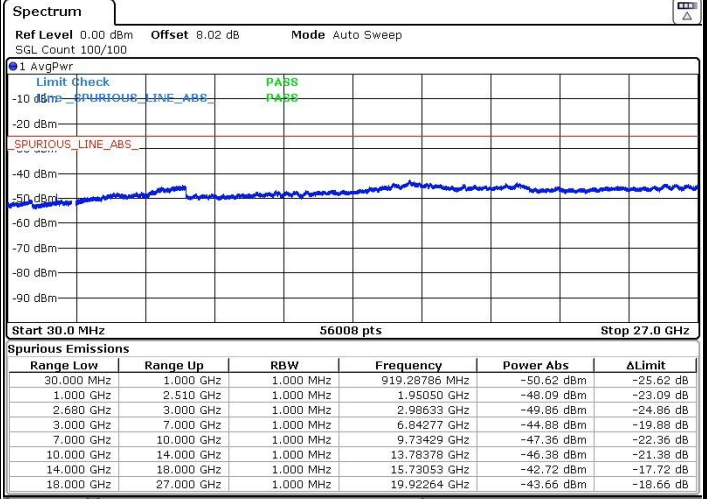
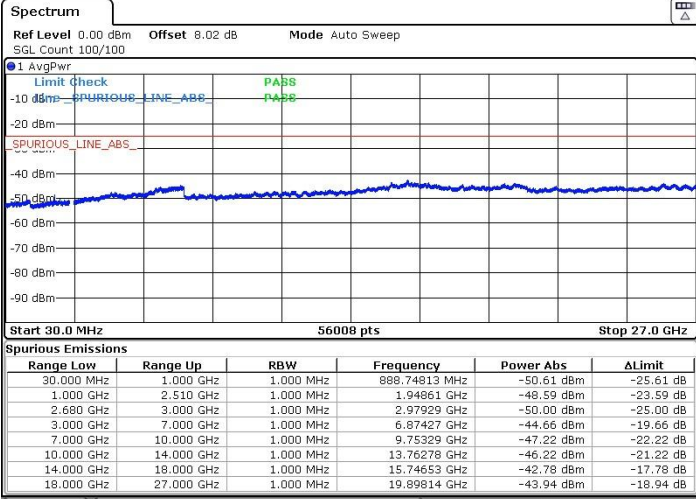




LTE Band 41 / 15MHz

Lowest Channel / 64QAM

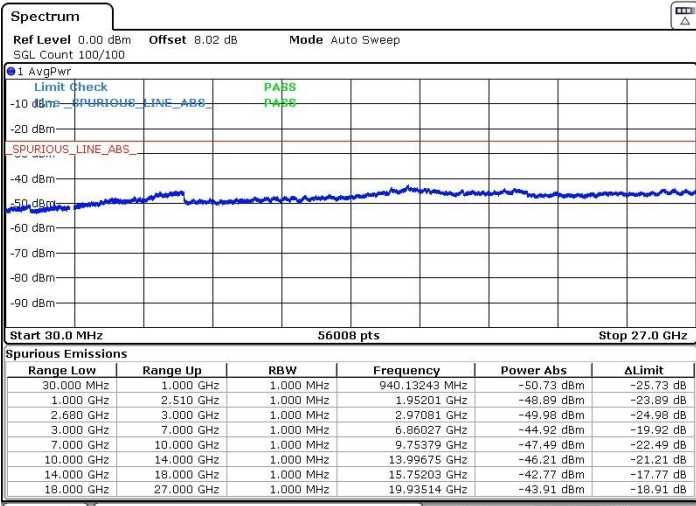
Middle Channel / 64QAM



Date: 25.OCT.2018 11:01:59

Date: 25.OCT.2018 11:02:51

Highest Channel / 64QAM



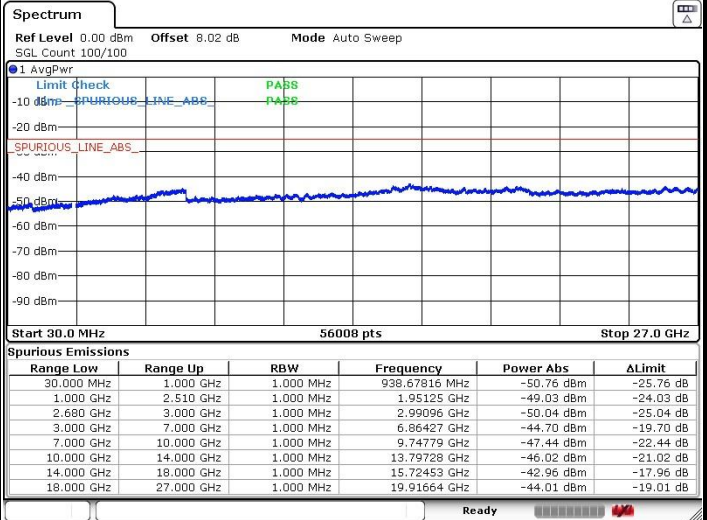
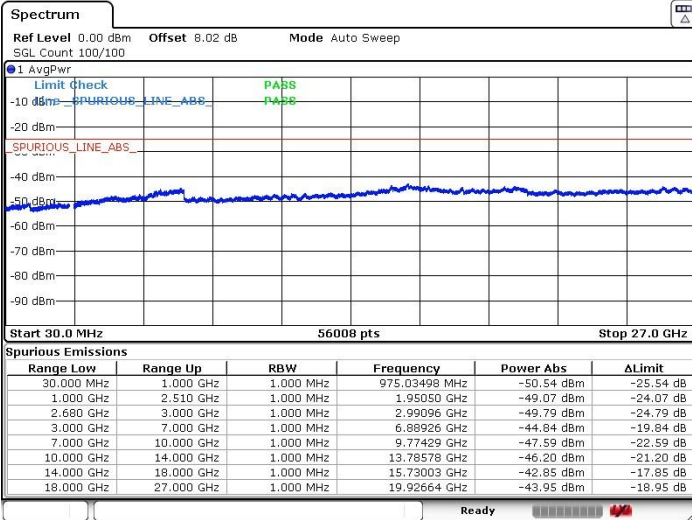
Date: 25.OCT.2018 11:07:01



LTE Band 41 / 20MHz

Lowest Channel / 64QAM

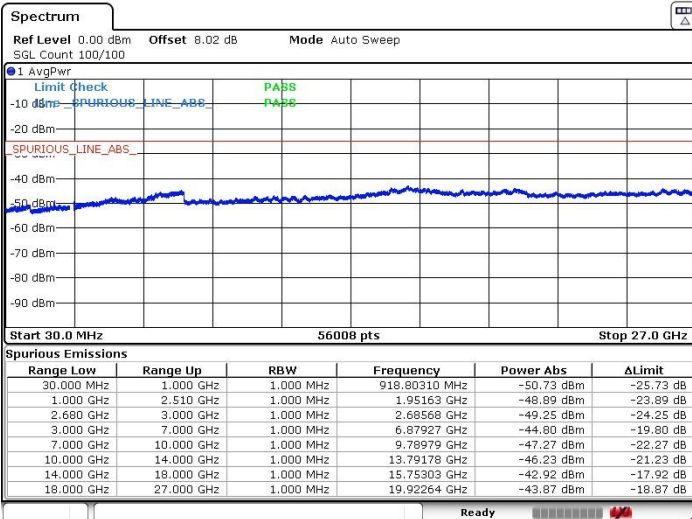
Middle Channel / 64QAM



Date: 25.OCT.2018 11:09:55

Date: 25.OCT.2018 11:13:02

Highest Channel / 64QAM



Date: 25.OCT.2018 11:15:41



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	0.0007	PASS
40	Normal Voltage	0.0002	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0003	
0	Normal Voltage	0.0016	
-10	Normal Voltage	0.0001	
-20	Normal Voltage	0.0016	
-30	Normal Voltage	0.0021	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0004	
20	Battery End Point	0.0018	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.1 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	0.0008	PASS
40	Normal Voltage	0.0032	
30	Normal Voltage	0.0010	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0022	
0	Normal Voltage	0.0005	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0006	
-30	Normal Voltage	0.0004	
20	Maximum Voltage	0.0002	
20	Normal Voltage	0.0026	
20	Battery End Point	0.0011	

**Note:**

- 3. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.1 V.
- 4. Note: The frequency fundamental emissions stay within the authorized frequency block.



### Appendix B. Test Results of Radiated Test

#### Radiated Spurious Emission

LTE Band 4 / 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	3456	-60.19	-13	-47.19	-64.91	3.41	8.13	H
	5184	-47.59	-13	-34.59	-53.60	4.195	10.20	H
	6912	-47.09	-13	-34.09	-53.54	4.91	11.36	H
	8640	-38.72	-13	-25.72	-45.69	5.53	12.50	H
	3456	-59.53	-13	-46.53	-64.25	3.413	8.13	V
	5184	-51.47	-13	-38.47	-57.48	4.195	10.20	V
	6912	-51.61	-13	-38.61	-58.06	4.911	11.36	V
	8640	-39.90	-13	-26.90	-46.87	5.527	12.50	V

LTE Band 41 / 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	5176	-47.85	-25	-22.85	-53.86	4.20	10.21	H
	7764	-42.78	-25	-17.78	-49.64	5.12	11.98	H
	10350	-34.15	-25	-9.15	-41.19	5.86	12.90	H
	12942	-48.23	-25	-23.23	-55.11	6.91	13.78	H
	15534	-53.88	-25	-28.88	-60.54	7.55	14.21	H
	5176	-55.12	-25	-30.12	-61.13	4.20	10.21	V
	7764	-49.72	-25	-24.72	-56.58	5.12	11.98	V
	10350	-39.28	-25	-14.28	-46.32	5.86	12.90	V
	12942	-52.18	-25	-27.18	-59.06	6.91	13.78	V
	15534	-56.52	-25	-31.52	-63.18	7.55	14.21	V



## **Appendix D. Reference Report**

Please refer to Sporton report number FG890604-02B which is issued separately.