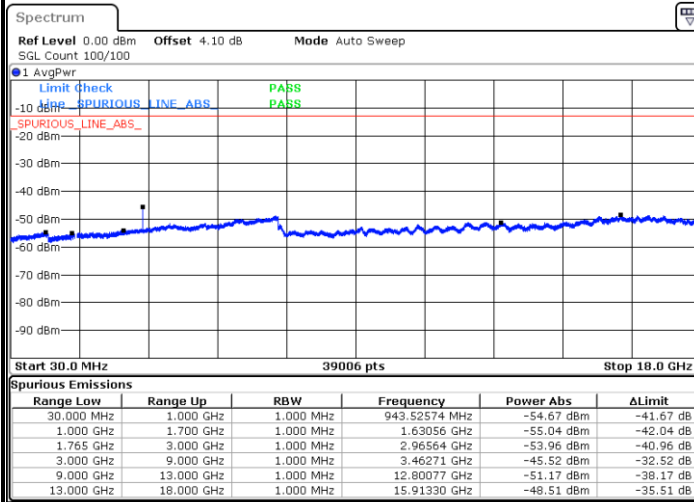




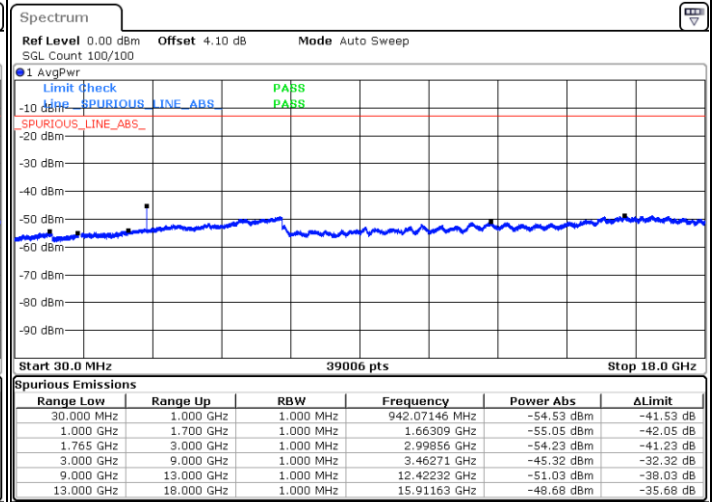
LTE Band 4 / 3MHz

Middle Channel / QPSK



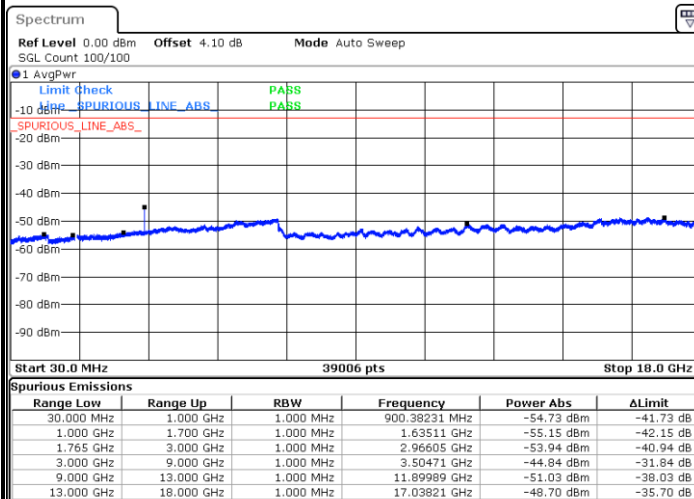
Date: 2 MAY 2019 13:19:36

Middle Channel / 16QAM



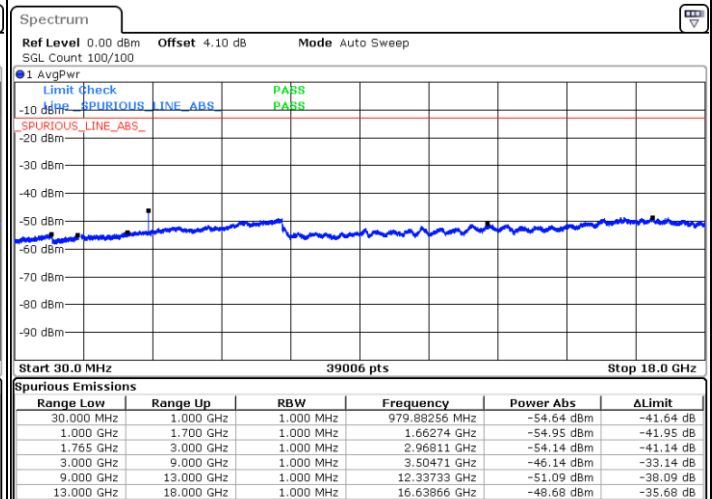
Date: 2 MAY 2019 13:20:30

Highest Channel / QPSK



Date: 2 MAY 2019 13:26:31

Highest Channel / 16QAM

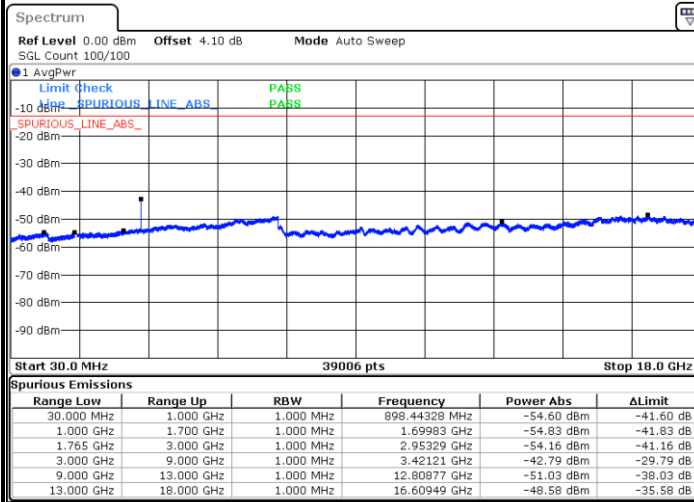


Date: 2 MAY 2019 13:27:25



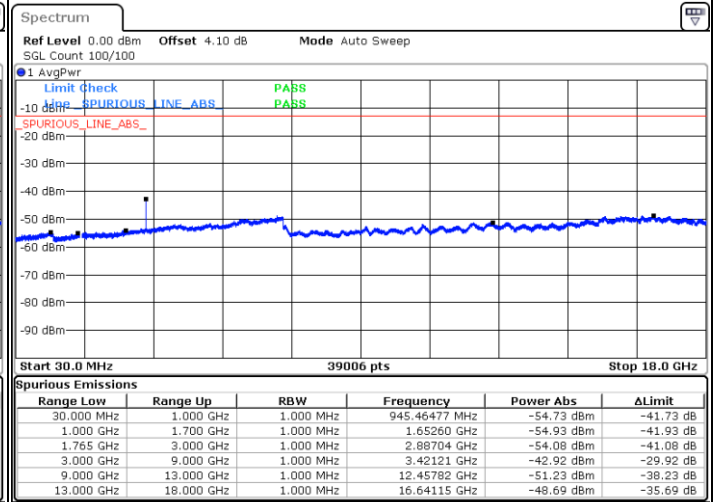
LTE Band 4 / 5MHz

Lowest Channel / QPSK



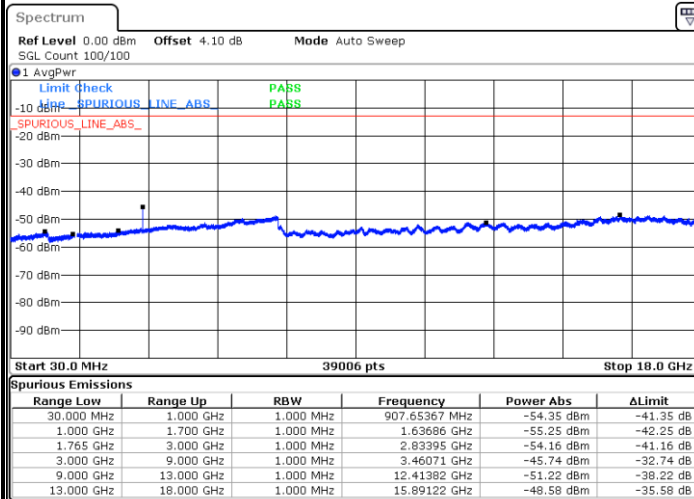
Date: 2 MAY 2019 13:33:27

Lowest Channel / 16QAM



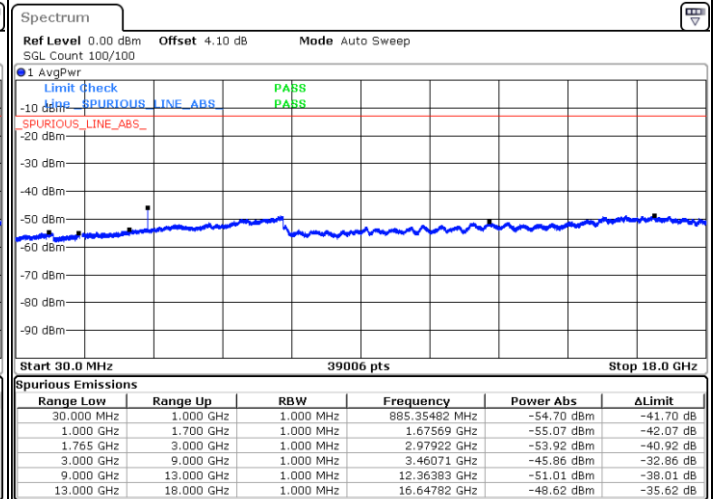
Date: 2 MAY 2019 13:34:20

Middle Channel / QPSK



Date: 2 MAY 2019 13:35:54

Middle Channel / 16QAM

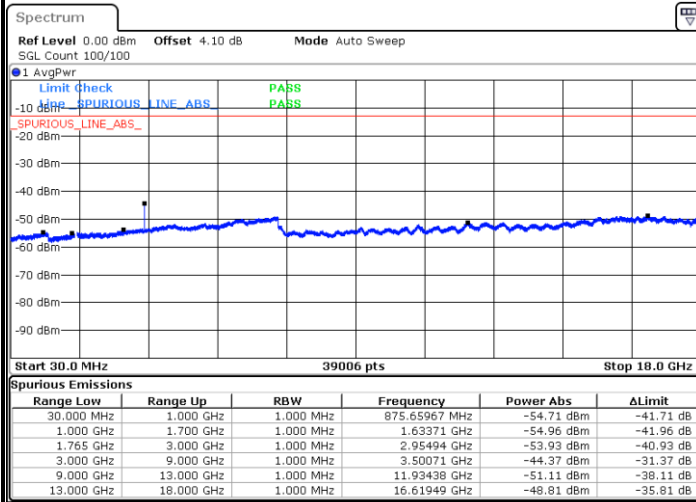


Date: 2 MAY 2019 13:36:48



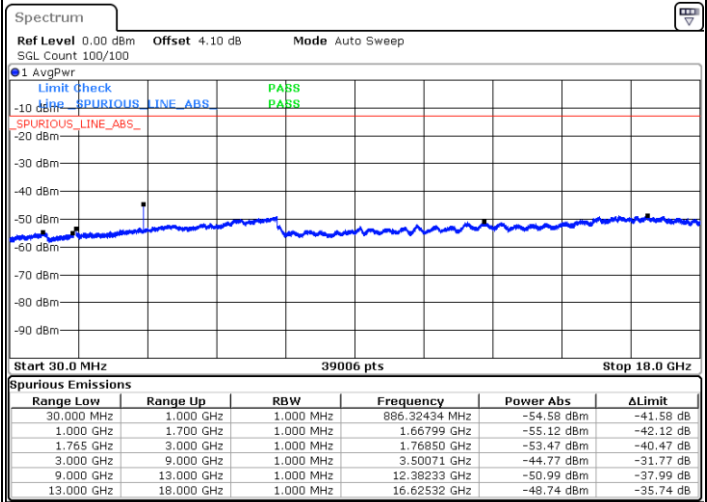
LTE Band 4 / 5MHz

Highest Channel / QPSK



Date: 2 MAY 2019 13:42:50

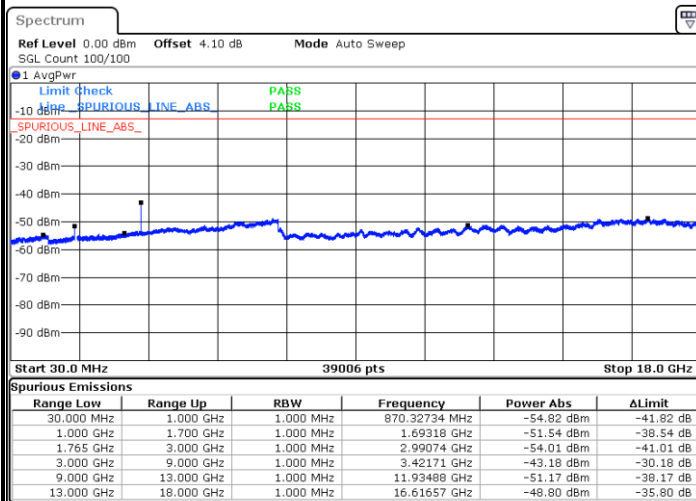
Highest Channel / 16QAM



Date: 2 MAY 2019 13:43:44

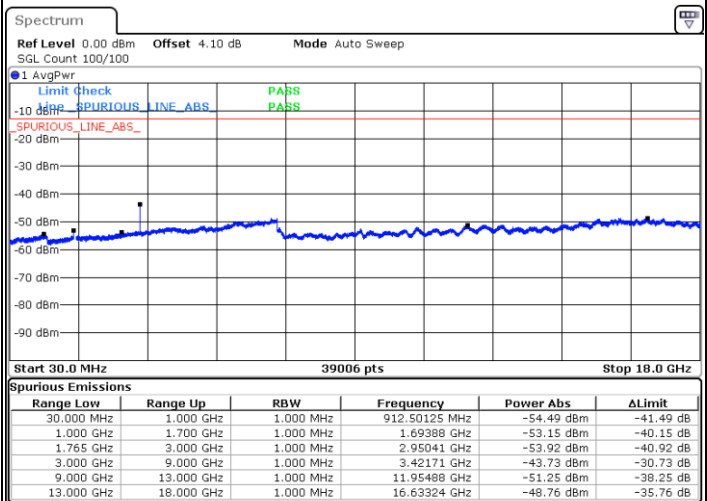
LTE Band 4 / 10MHz

Lowest Channel / QPSK



Date: 2 MAY 2019 13:49:45

Lowest Channel / 16QAM

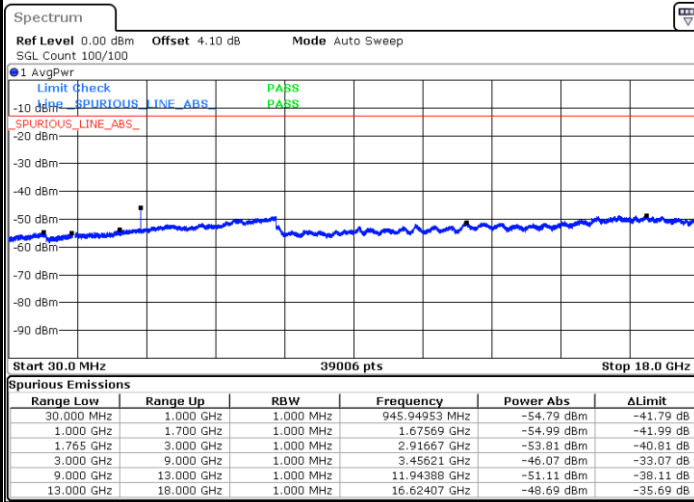


Date: 2 MAY 2019 13:50:39



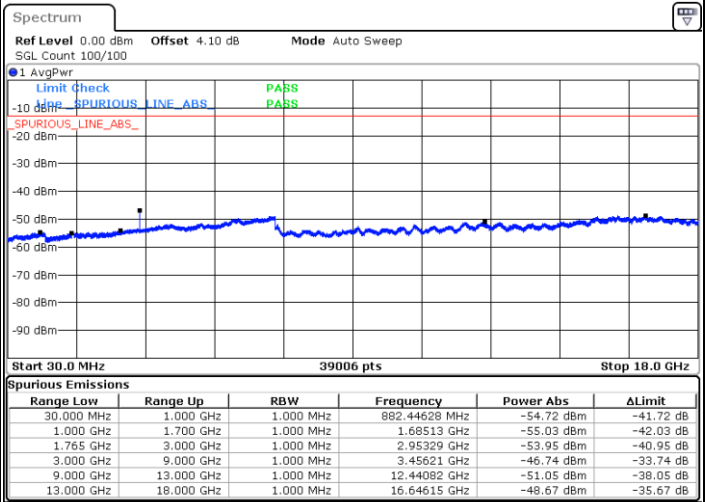
LTE Band 4 / 10MHz

Middle Channel / QPSK



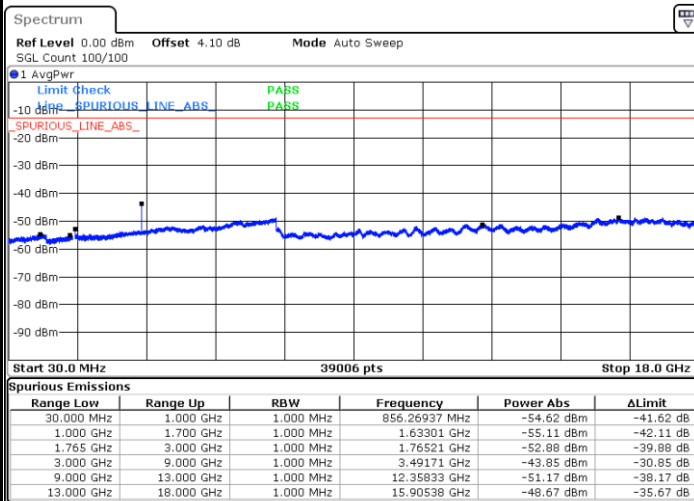
Date: 2 MAY 2019 13:52:13

Middle Channel / 16QAM



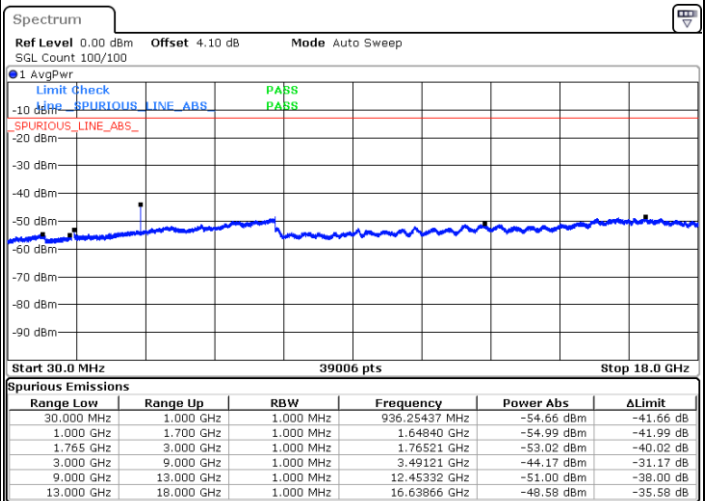
Date: 2 MAY 2019 13:53:06

Highest Channel / QPSK



Date: 2 MAY 2019 13:59:08

Highest Channel / 16QAM

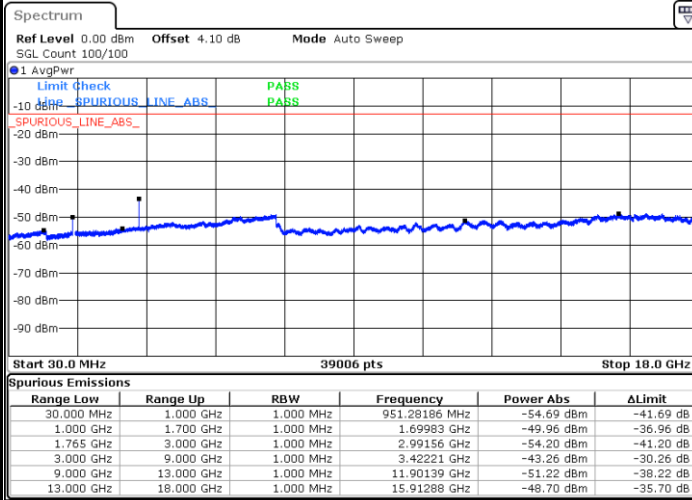


Date: 2 MAY 2019 14:00:02



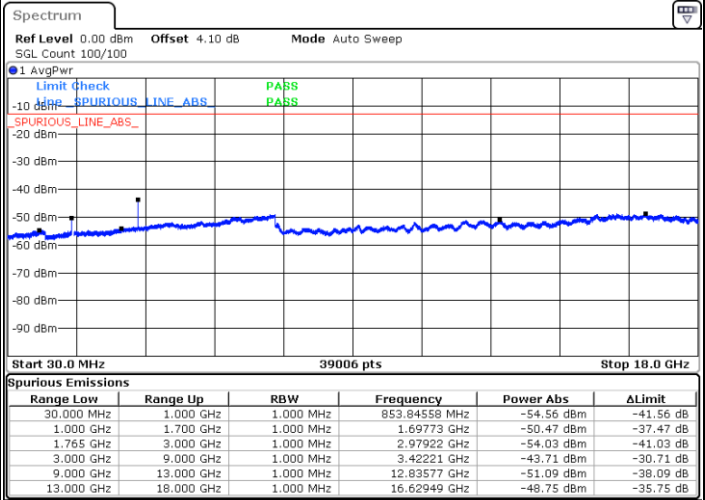
LTE Band 4 / 15MHz

Lowest Channel / QPSK



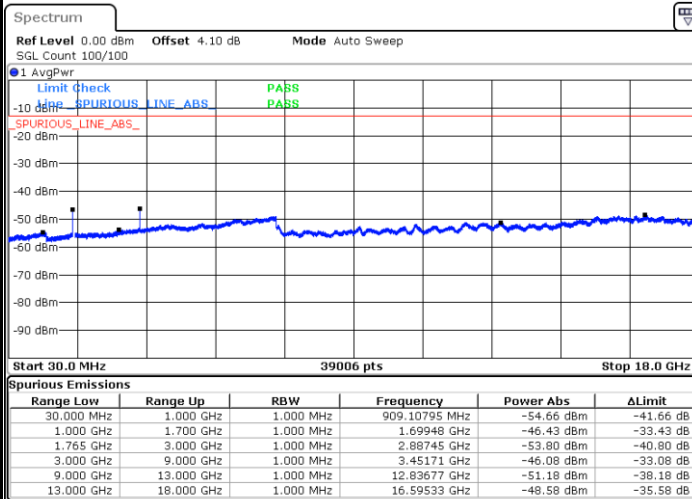
Date: 2 MAY 2019 14:06:04

Lowest Channel / 16QAM



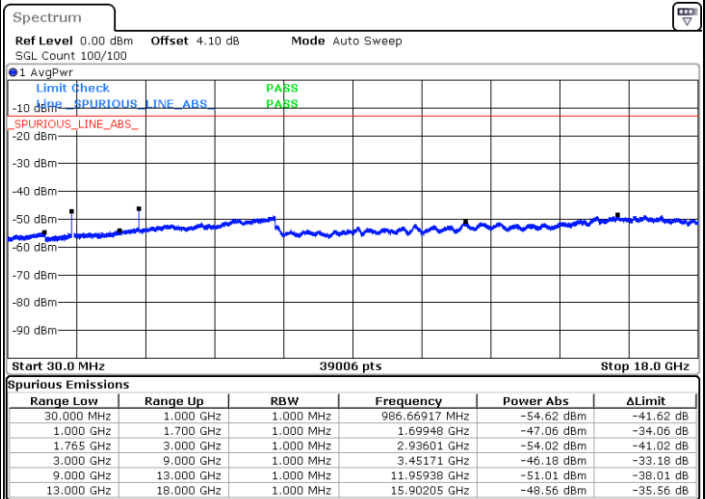
Date: 2 MAY 2019 14:06:58

Middle Channel / QPSK



Date: 2 MAY 2019 14:08:31

Middle Channel / 16QAM

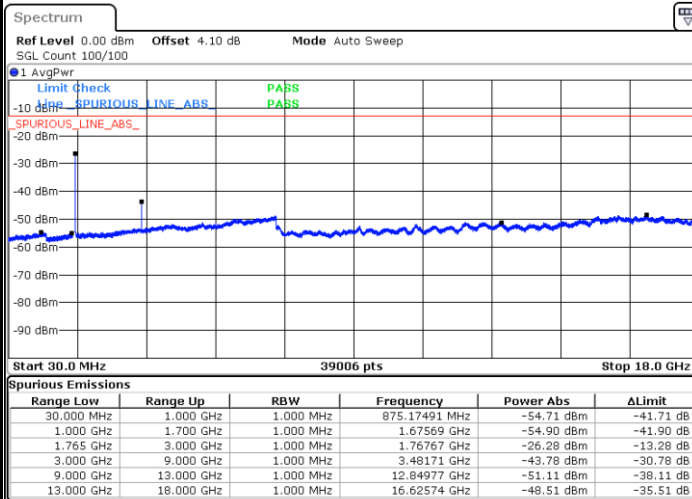


Date: 2 MAY 2019 14:09:25



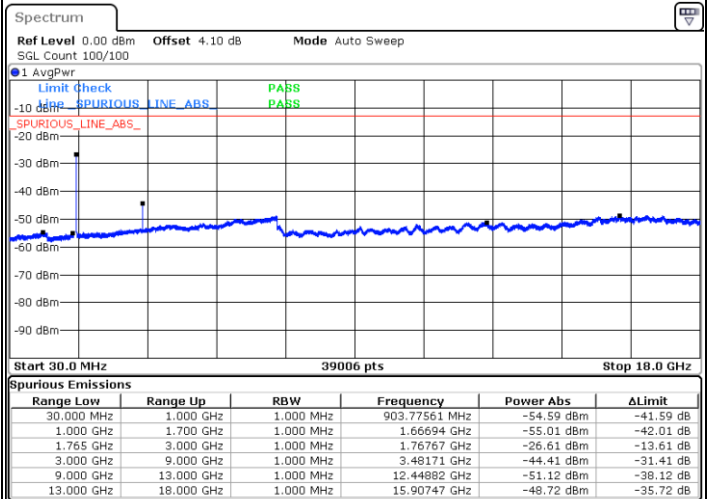
LTE Band 4 / 15MHz

Highest Channel / QPSK



Date: 2 MAY 2019 14:15:27

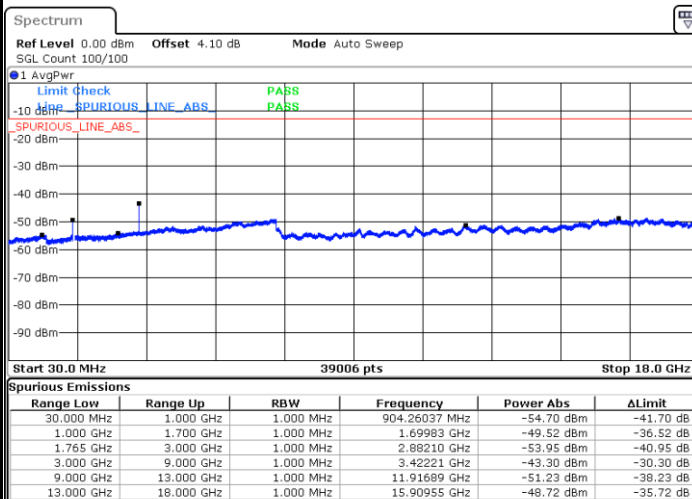
Highest Channel / 16QAM



Date: 2 MAY 2019 14:16:21

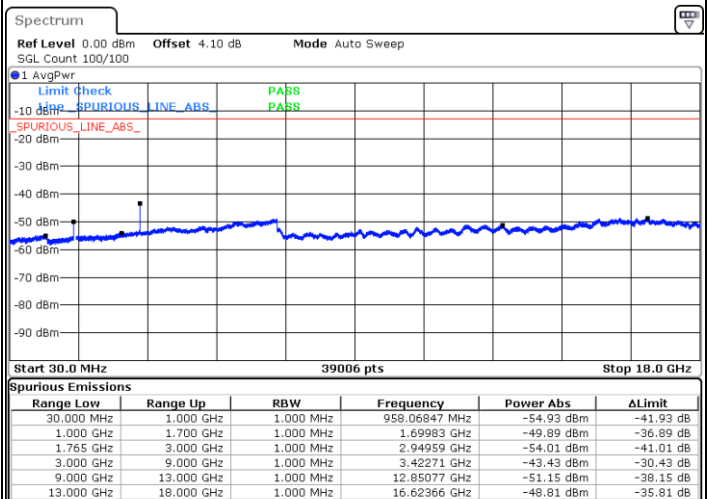
LTE Band 4 / 20MHz

Lowest Channel / QPSK



Date: 2 MAY 2019 14:22:22

Lowest Channel / 16QAM

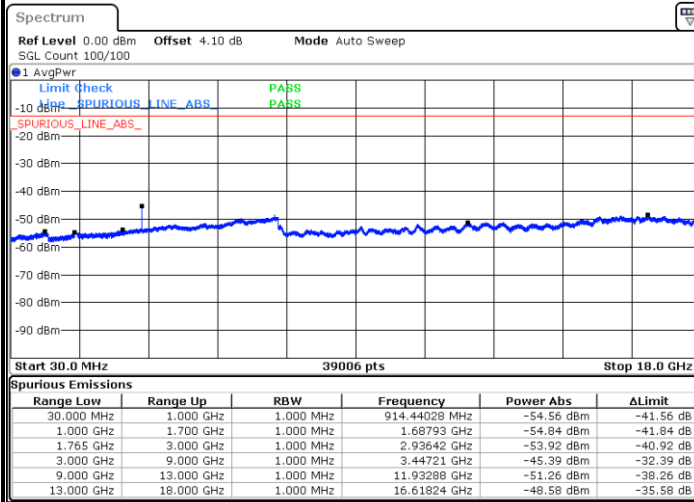


Date: 2 MAY 2019 14:23:16



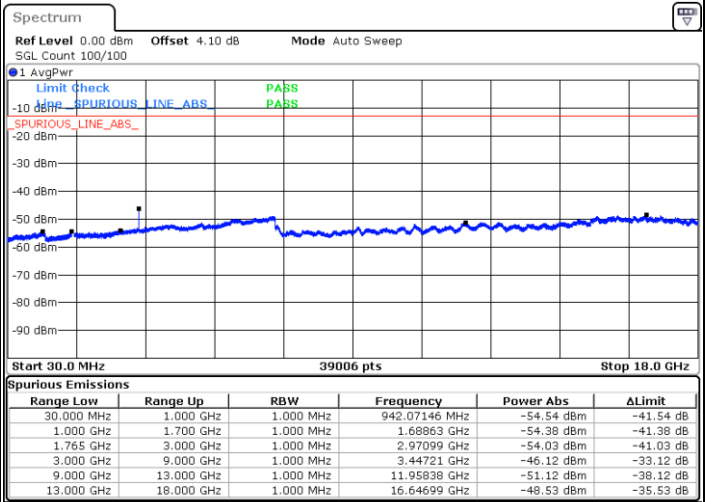
LTE Band 4 / 20MHz

Middle Channel / QPSK



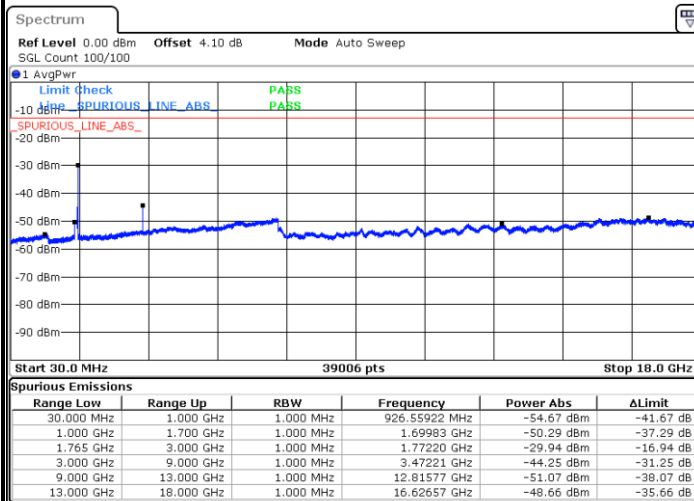
Date: 2 MAY 2019 14:24:50

Middle Channel / 16QAM



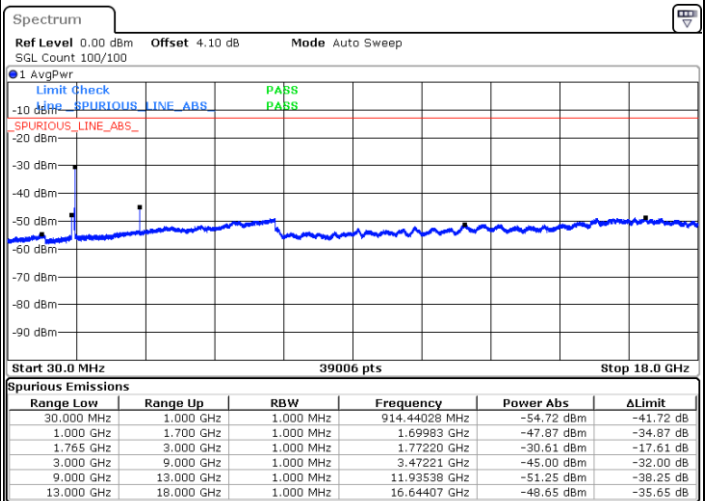
Date: 2 MAY 2019 14:25:44

Highest Channel / QPSK



Date: 2 MAY 2019 14:31:45

Highest Channel / 16QAM

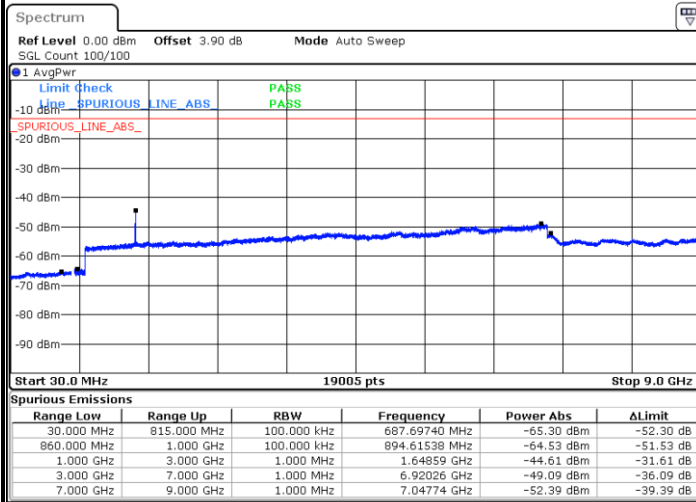


Date: 2 MAY 2019 14:32:39



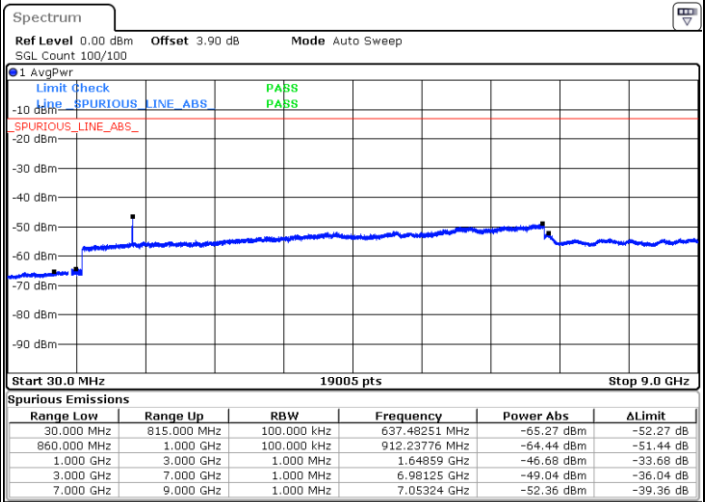
LTE Band 5 / 1.4MHz

Lowest Channel / QPSK



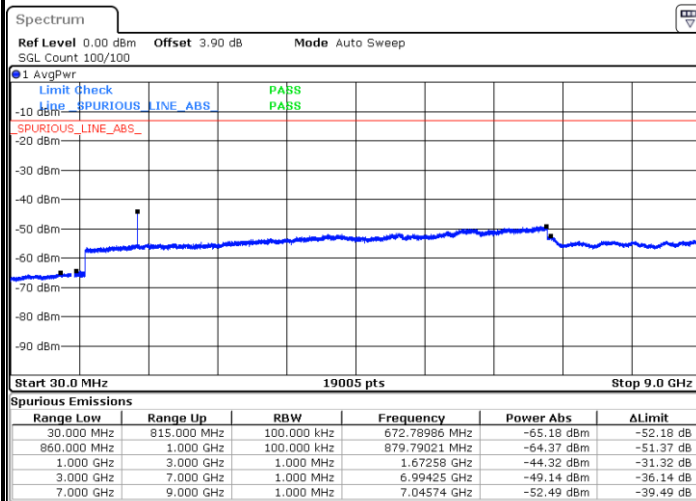
Date: 2 MAY 2019 16:05:39

Lowest Channel / 16QAM



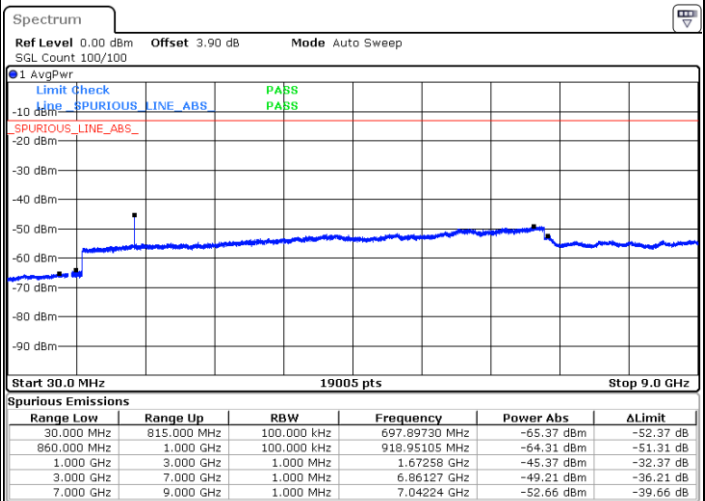
Date: 2 MAY 2019 16:08:32

Middle Channel / QPSK



Date: 2 MAY 2019 16:10:06

Middle Channel / 16QAM

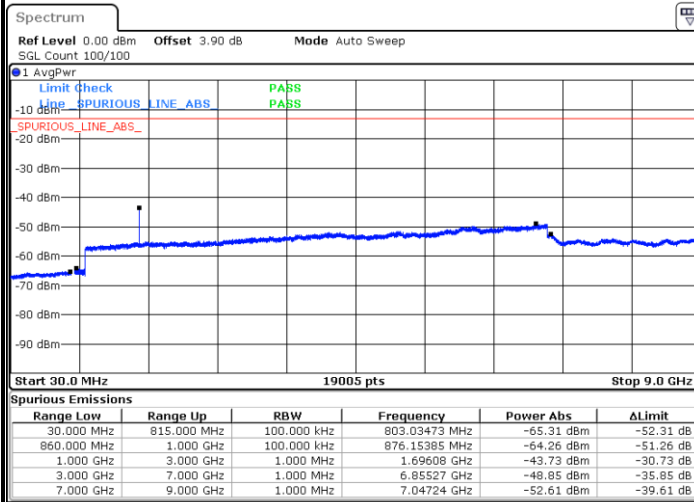


Date: 2 MAY 2019 16:11:00



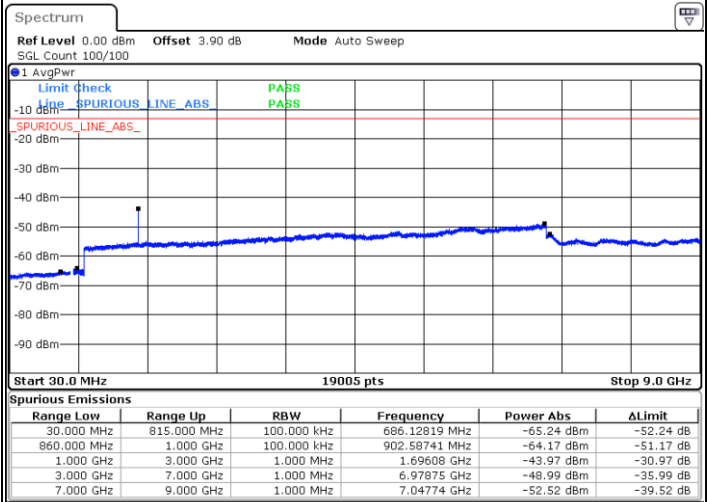
LTE Band 5 / 1.4MHz

Highest Channel / QPSK



Date: 2 MAY 2019 16:19:01

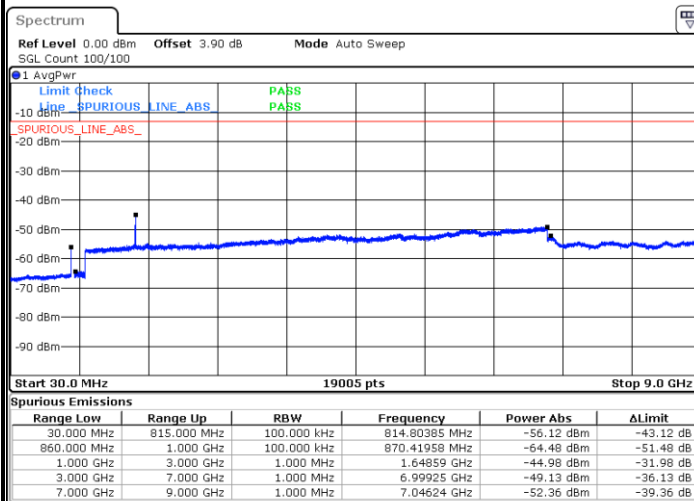
Highest Channel / 16QAM



Date: 2 MAY 2019 16:19:55

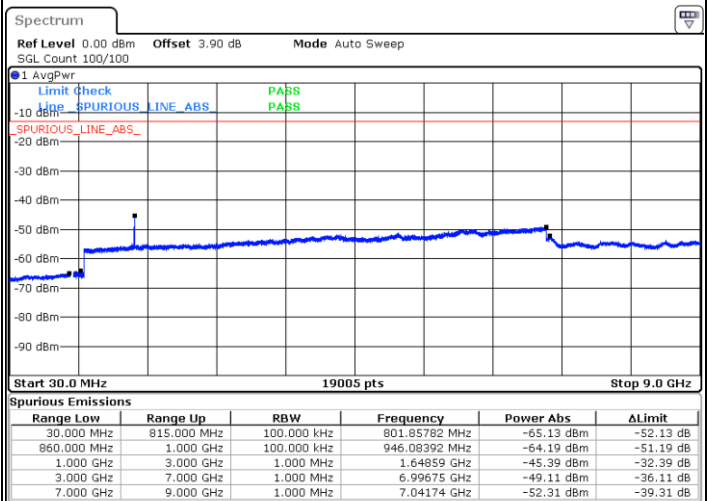
LTE Band 5 / 3MHz

Lowest Channel / QPSK



Date: 2 MAY 2019 17:50:55

Lowest Channel / 16QAM

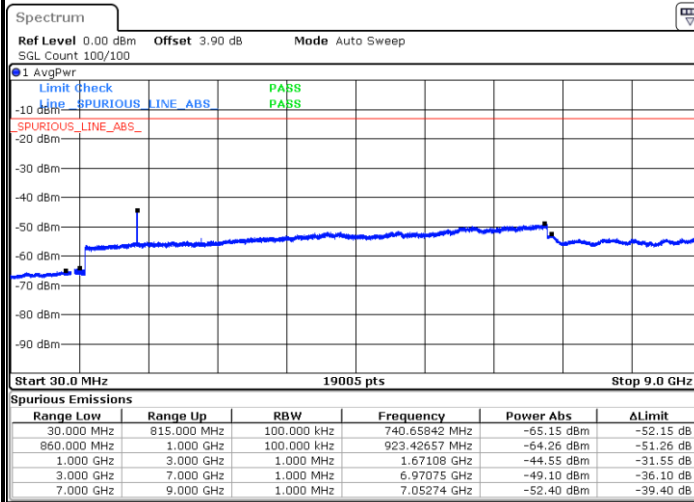


Date: 2 MAY 2019 17:51:49



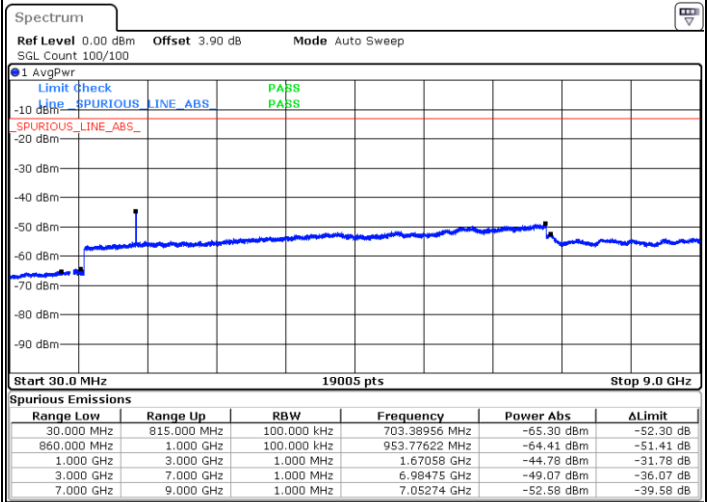
LTE Band 5 / 3MHz

Middle Channel / QPSK



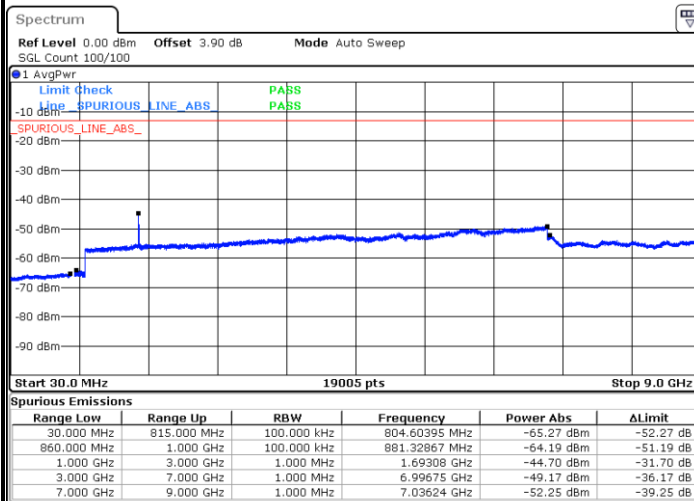
Date: 2 MAY 2019 17:53:22

Middle Channel / 16QAM



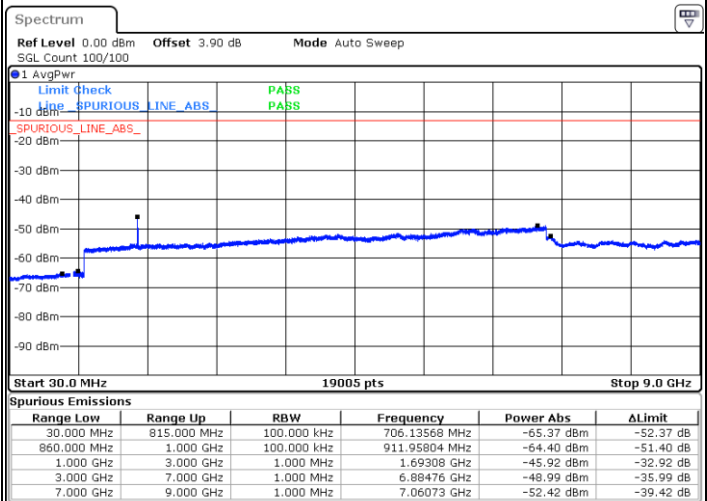
Date: 2 MAY 2019 17:54:16

Highest Channel / QPSK



Date: 2 MAY 2019 18:02:17

Highest Channel / 16QAM

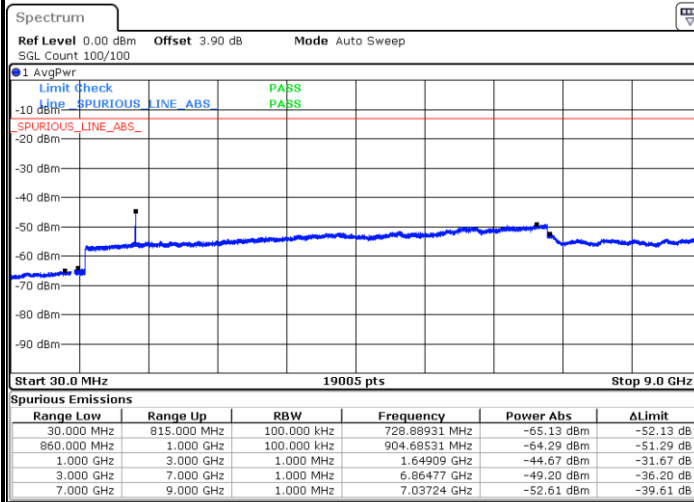


Date: 2 MAY 2019 18:03:11



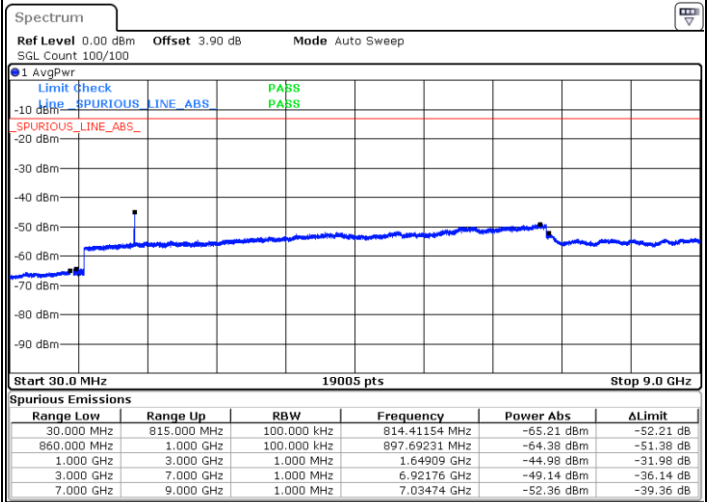
LTE Band 5 / 5MHz

Lowest Channel / QPSK



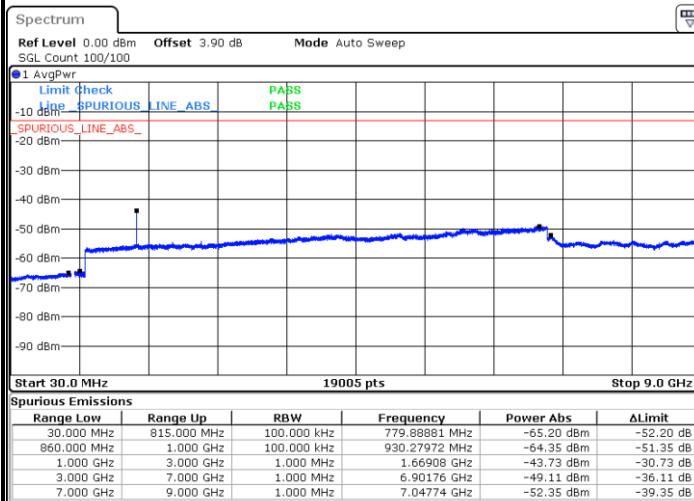
Date: 2 MAY 2019 17:35:52

Lowest Channel / 16QAM



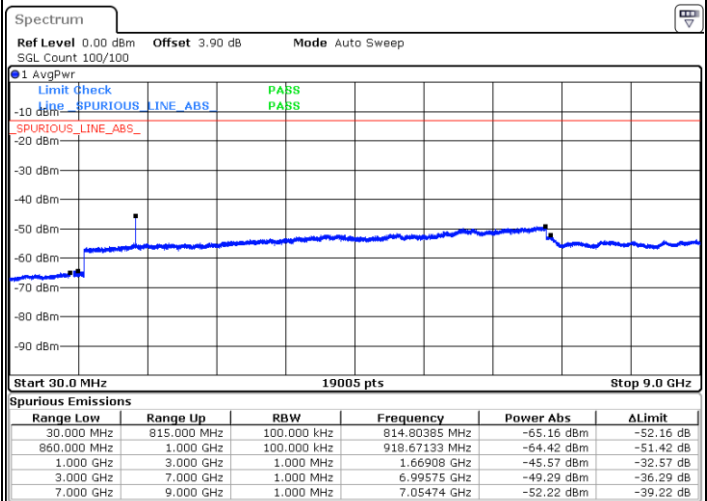
Date: 2 MAY 2019 16:21:28

Middle Channel / QPSK



Date: 2 MAY 2019 16:23:01

Middle Channel / 16QAM

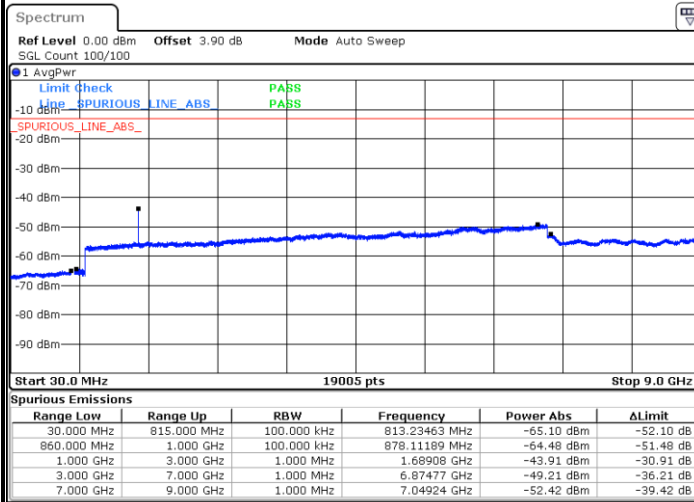


Date: 2 MAY 2019 16:23:55



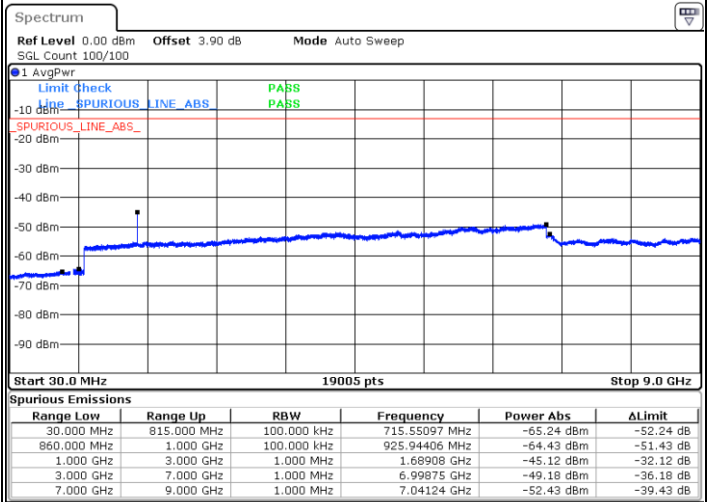
LTE Band 5 / 5MHz

Highest Channel / QPSK



Date: 2 MAY 2019 16:31:57

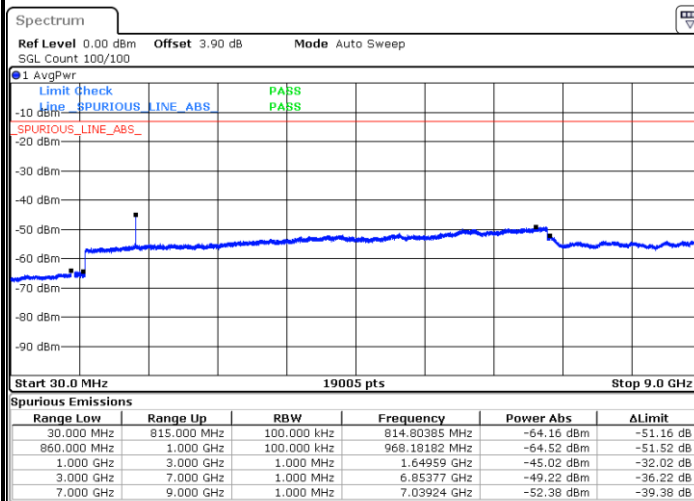
Highest Channel / 16QAM



Date: 2 MAY 2019 16:32:50

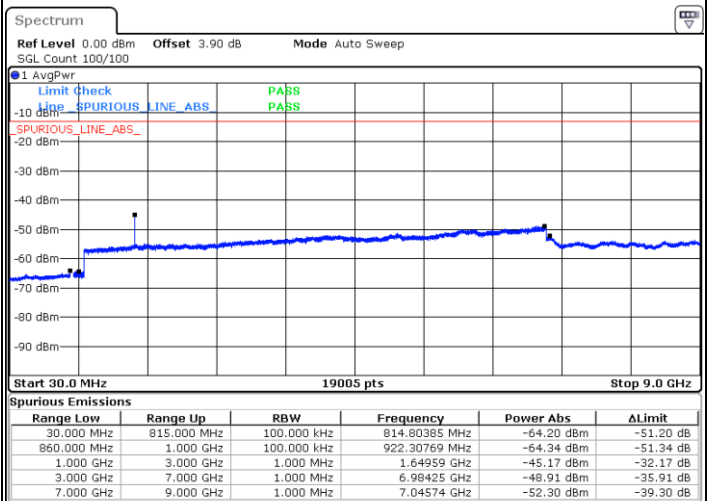
LTE Band 5 / 10MHz

Lowest Channel / QPSK



Date: 2 MAY 2019 16:40:52

Lowest Channel / 16QAM

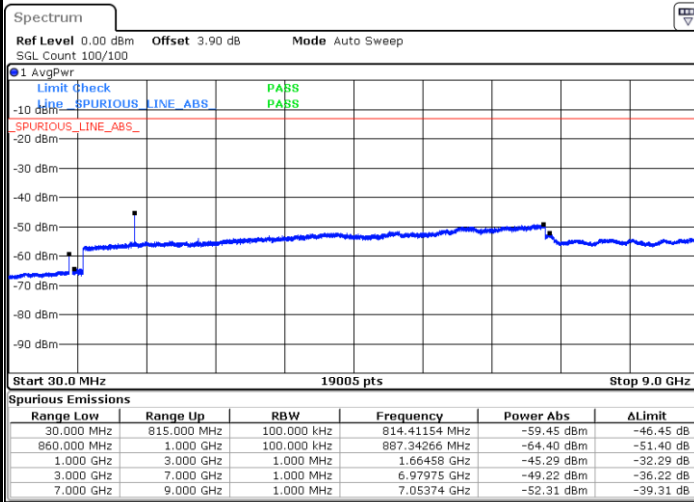


Date: 2 MAY 2019 16:41:45



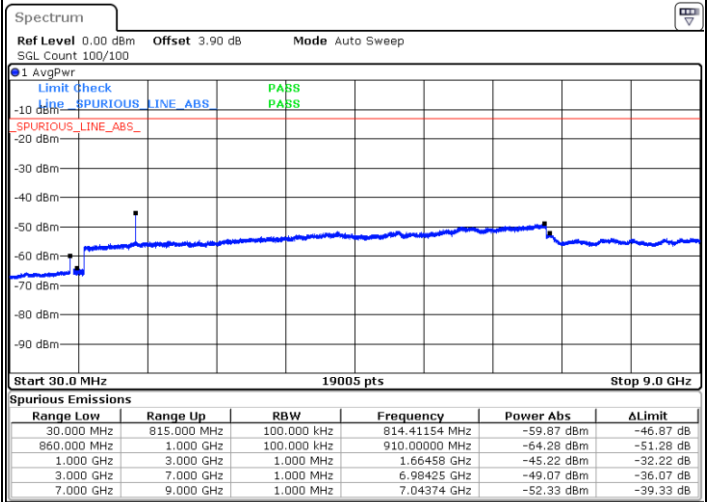
LTE Band 5 / 10MHz

Middle Channel / QPSK



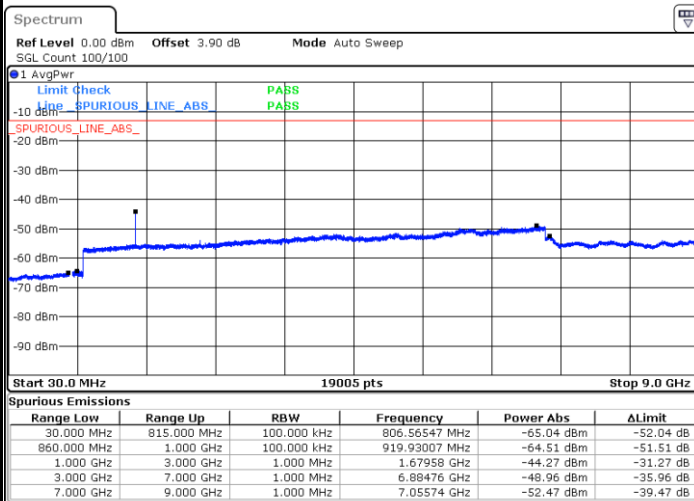
Date: 2 MAY 2019 16:43:19

Middle Channel / 16QAM



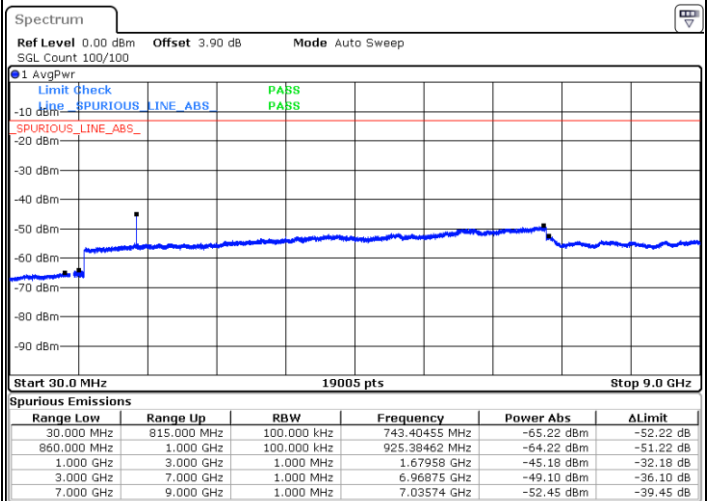
Date: 2 MAY 2019 16:44:12

Highest Channel / QPSK



Date: 2 MAY 2019 16:52:14

Highest Channel / 16QAM

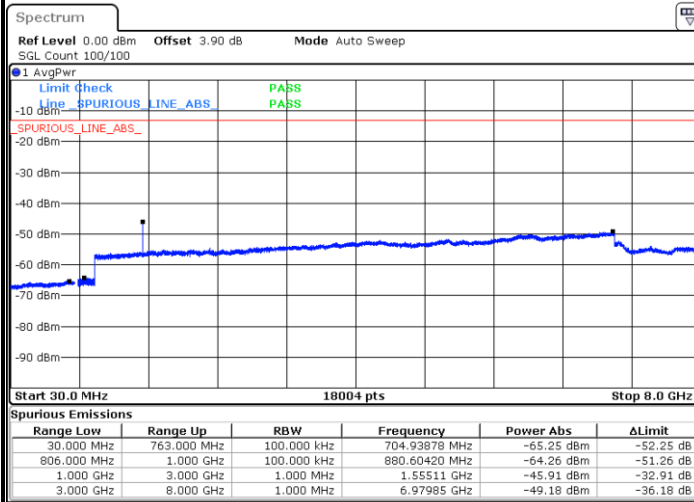


Date: 2 MAY 2019 17:41:53



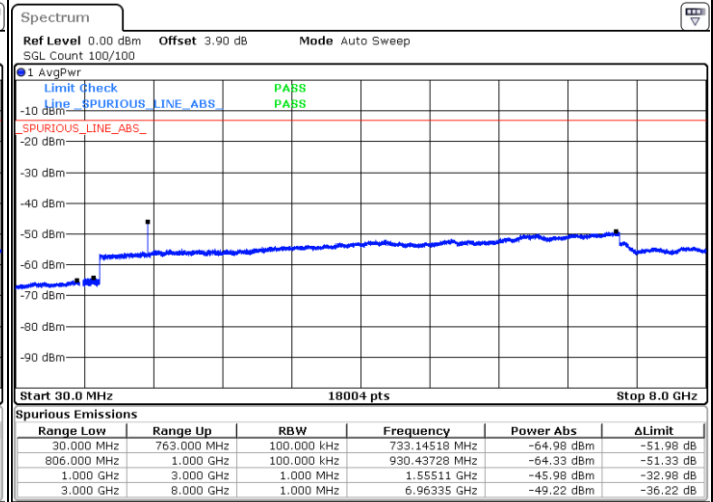
LTE Band 13 / 5MHz

Lowest Channel / QPSK



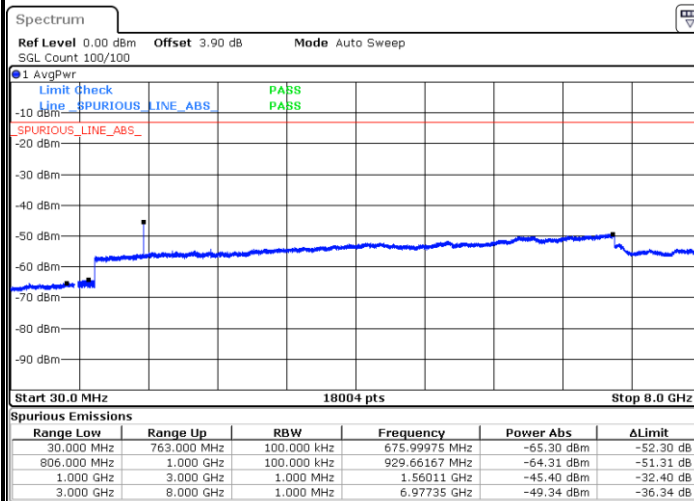
Date: 2 MAY 2019 18:16:35

Lowest Channel / 16QAM



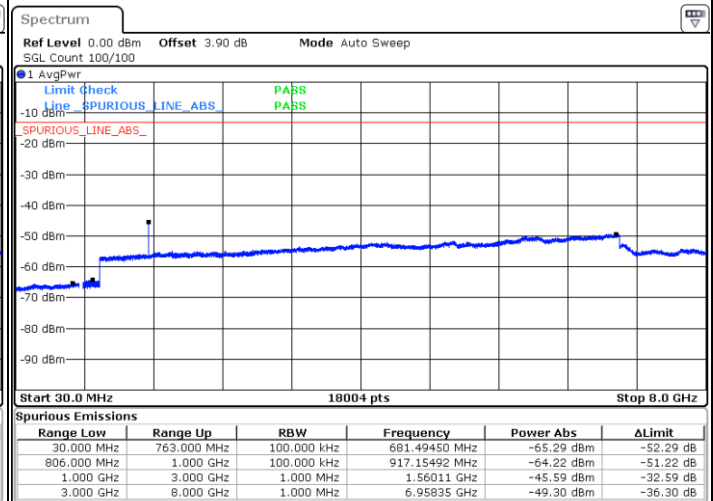
Date: 2 MAY 2019 18:15:42

Middle Channel / QPSK



Date: 2 MAY 2019 19:21:27

Middle Channel / 16QAM

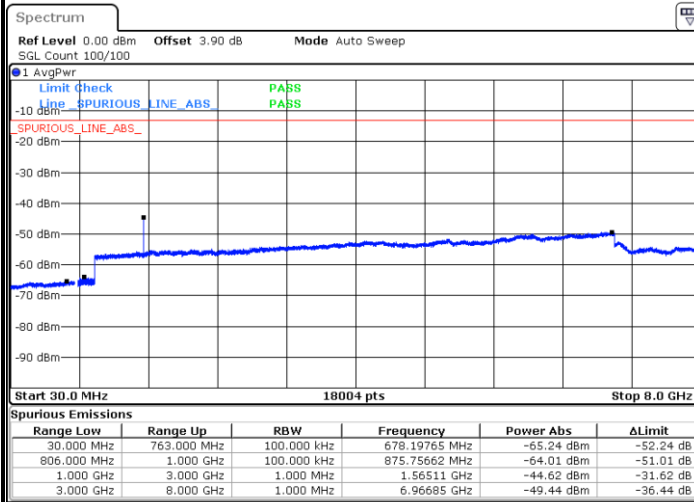


Date: 2 MAY 2019 18:19:02



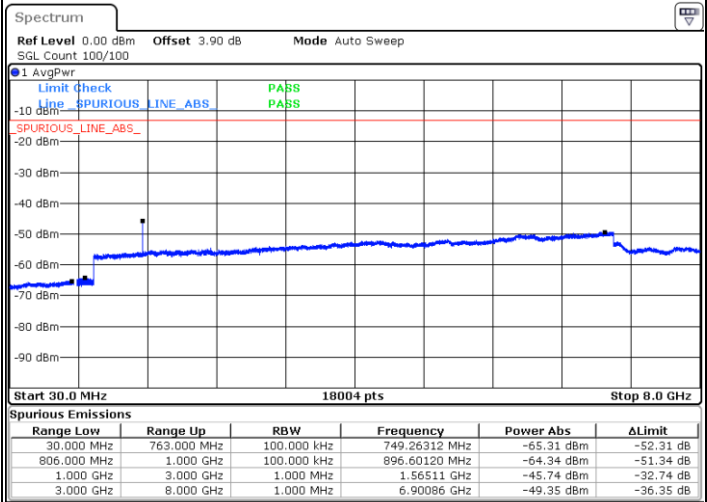
LTE Band 13 / 5MHz

Highest Channel / QPSK



Date: 2 MAY 2019 18:45:48

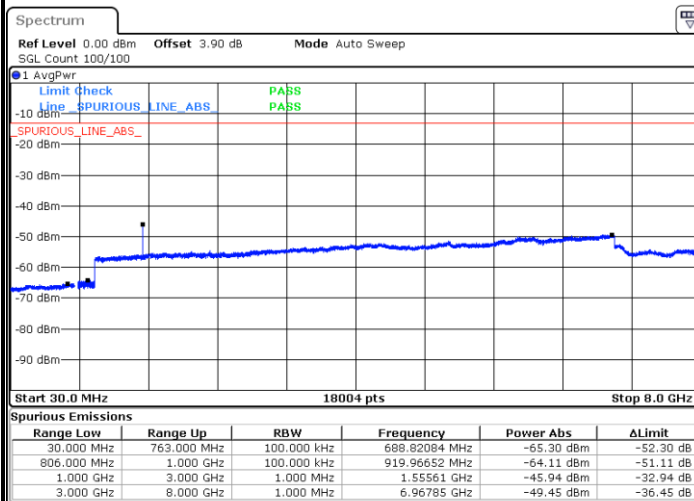
Highest Channel / 16QAM



Date: 2 MAY 2019 18:44:54

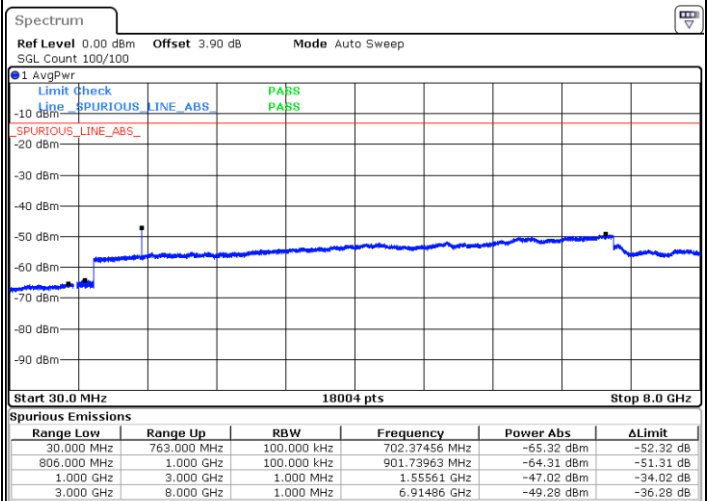
LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 2 MAY 2019 18:46:41

Middle Channel / 16QAM



Date: 2 MAY 2019 18:47:34

**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	0.0004	PASS
40	Normal Voltage	0.0033	
30	Normal Voltage	0.0007	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0009	
-10	Normal Voltage	0.0022	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0041	
20	Maximum Voltage	0.0002	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.5 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	0.0026	PASS
40	Normal Voltage	0.0016	
30	Normal Voltage	0.0038	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0008	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0016	
-20	Normal Voltage	0.0020	
-30	Normal Voltage	0.0018	
20	Maximum Voltage	0.0025	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0004	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.5 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	0.0001	PASS
40	Normal Voltage	0.0018	
30	Normal Voltage	0.0044	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0056	
0	Normal Voltage	0.0059	
-10	Normal Voltage	0.0042	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0067	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

Note: Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.4 V.



Test Conditions		LTE Band 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0014	PASS
40	Normal Voltage	0.0004	
30	Normal Voltage	0.0033	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0054	
0	Normal Voltage	0.0052	
-10	Normal Voltage	0.0010	
-20	Normal Voltage	0.0058	
-30	Normal Voltage	0.0061	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0046	

Note: Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.4 V.



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

LTE Band 2 / 20MHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3741	-46.40	-13	-33.40	-52.66	1.843	8.10	H
	5613	-44.61	-13	-31.61	-52.92	2.19	10.50	H
	7482	-52.07	-13	-39.07	-60.99	2.58	11.50	H
	3741	-50.85	-13	-37.85	-57.11	1.84	8.10	V
	5613	-53.21	-13	-40.21	-61.52	2.19	10.50	V
	7482	-52.21	-13	-39.21	-61.13	2.58	11.50	V

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

LTE Band 4 / 20MHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3447	-47.26	-13	-34.26	-53.95	1.75	8.44	H
	5172	-44.12	-13	-31.12	-52.54	1.94	10.36	H
	6900	-51.84	-13	-38.84	-61.08	2.47	11.71	H
	3447	-54.06	-13	-41.06	-60.75	1.75	8.44	V
	5169	-47.38	-13	-34.38	-55.80	1.94	10.36	V
	6900	-51.57	-13	-38.57	-60.81	2.47	11.71	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)
Middle	1664	-60.19	-13	-47.19	-63.43	1.11	6.50	H
	2496	-51.71	-13	-38.71	-54.33	1.43	6.20	H
	3330	-59.19	-13	-46.19	-63.63	1.71	8.30	H
	1664	-60.41	-13	-47.41	-63.65	1.11	6.50	V
	2496	-54.71	-13	-41.71	-57.33	1.43	6.20	V
	3330	-58.94	-13	-45.94	-63.38	1.71	8.30	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)
Middle	1560	-60.66	-42.15	-18.51	-63.29	1.09	5.87	H
	2340	-48.80	-13	-35.80	-51.20	1.37	5.92	H
	3120	-59.56	-13	-46.56	-63.45	1.64	7.68	H
	1560	-62.20	-42.15	-20.05	-64.83	1.09	5.87	V
	2340	-46.33	-13	-33.33	-48.73	1.37	5.92	V
	3120	-59.16	-13	-46.16	-63.05	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	-61.91	-13	-48.91	-64.54	1.09	5.87	H
	2332	-56.04	-13	-43.04	-58.44	1.37	5.92	H
	3108	-59.98	-13	-46.98	-63.87	1.64	7.68	H
	1556	-64.20	-13	-51.20	-66.83	1.09	5.87	V
	2332	-51.13	-13	-38.13	-53.53	1.37	5.92	V
	3108	-59.60	-13	-46.60	-63.49	1.64	7.68	V

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