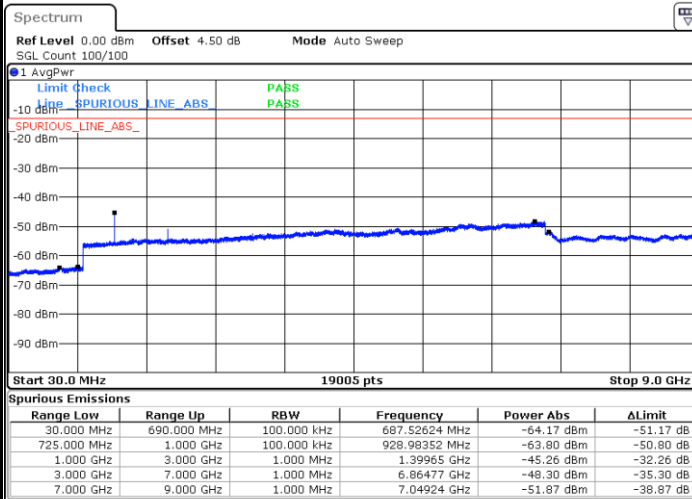




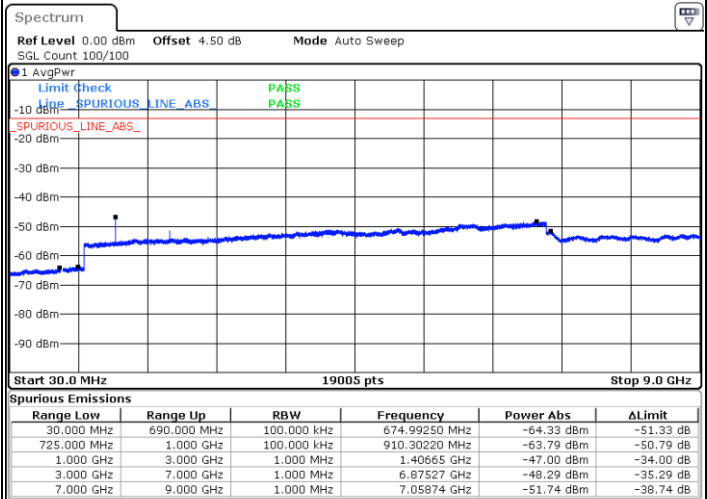
LTE Band 12 / 10MHz

Lowest Channel / 64QAM



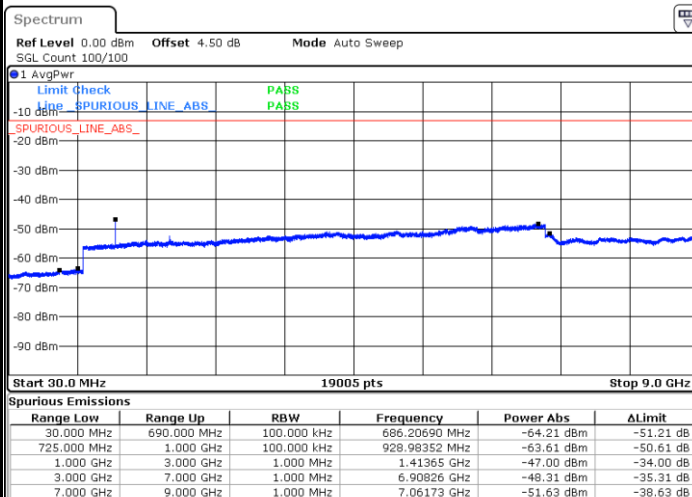
Date: 13 JAN 2018 17:07:28

Middle Channel / 64QAM



Date: 13 JAN 2018 17:08:22

Highest Channel / 64QAM

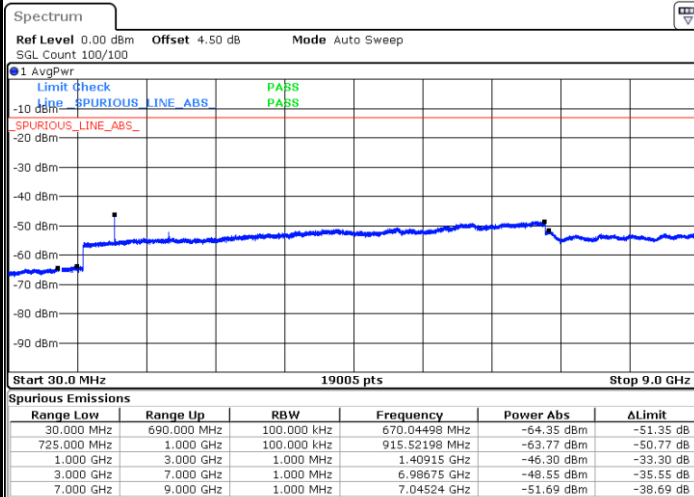


Date: 13 JAN 2018 17:09:16



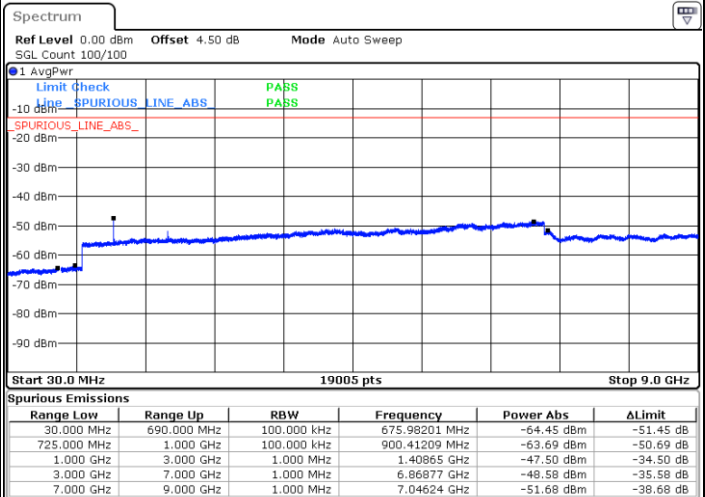
LTE Band 17 / 5MHz

Lowest Channel / QPSK



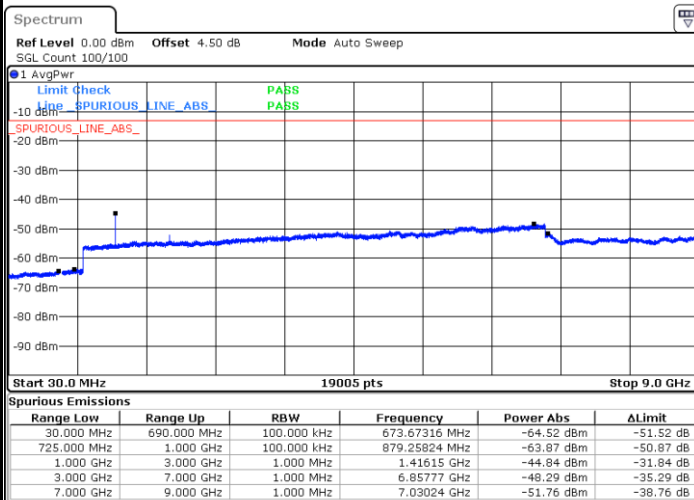
Date: 13 JAN 2018 14:21:37

Lowest Channel / 16QAM



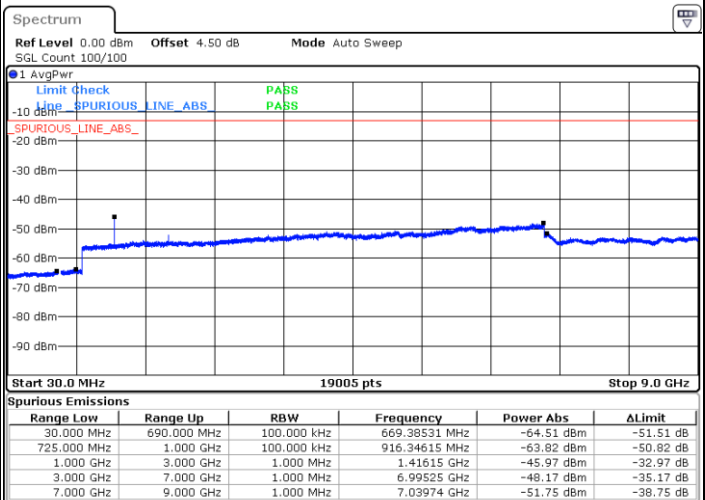
Date: 13 JAN 2018 14:22:31

Middle Channel / QPSK



Date: 13 JAN 2018 14:24:05

Middle Channel / 16QAM

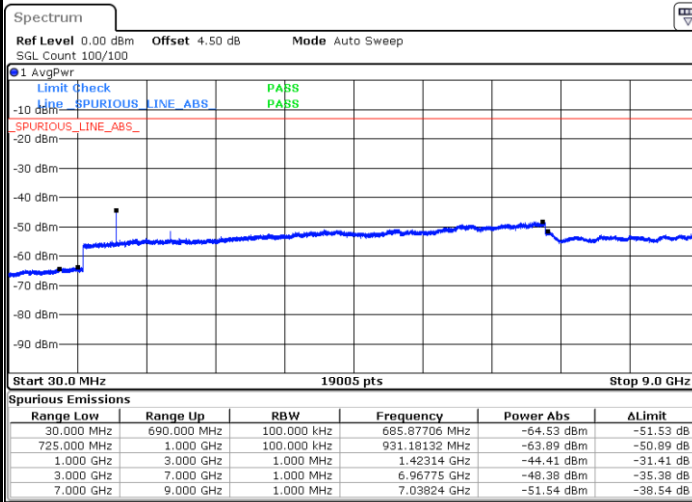


Date: 13 JAN 2018 14:25:00



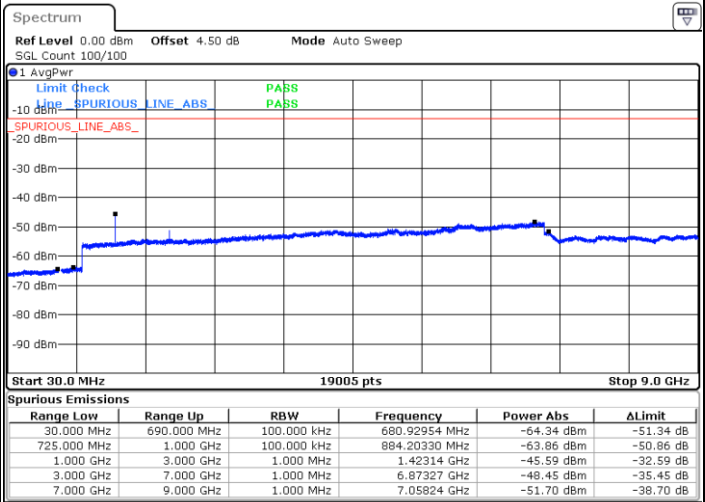
LTE Band 17 / 5MHz

Highest Channel / QPSK



Date: 13 JAN 2018 14:31:04

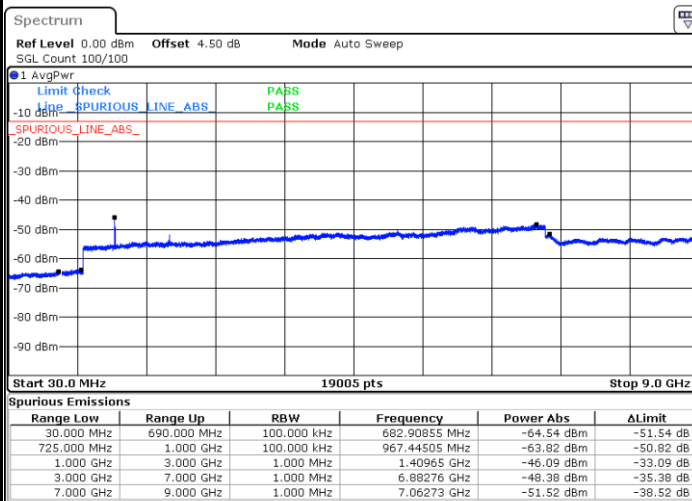
Highest Channel / 16QAM



Date: 13 JAN 2018 14:31:58

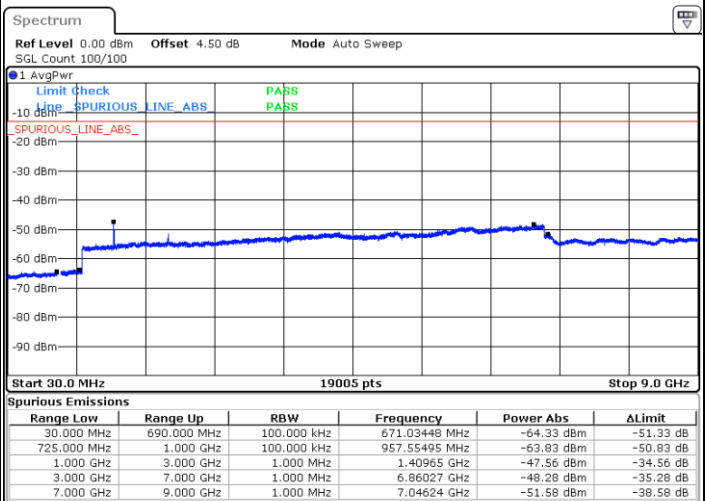
LTE Band 17 / 10MHz

Lowest Channel / QPSK



Date: 13 JAN 2018 14:38:02

Lowest Channel / 16QAM

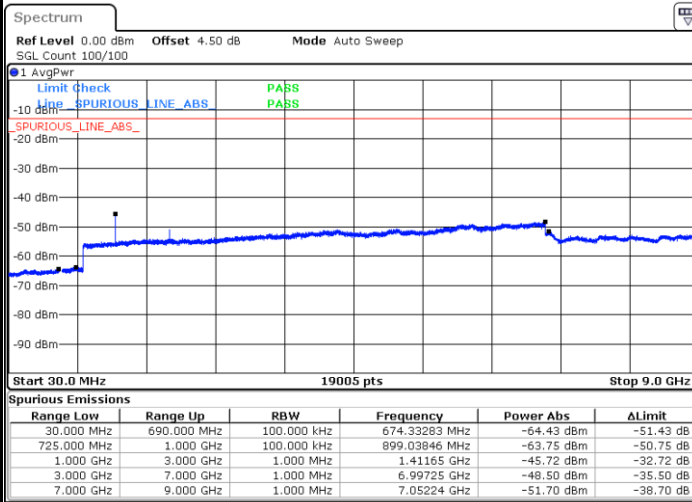


Date: 13 JAN 2018 14:38:57



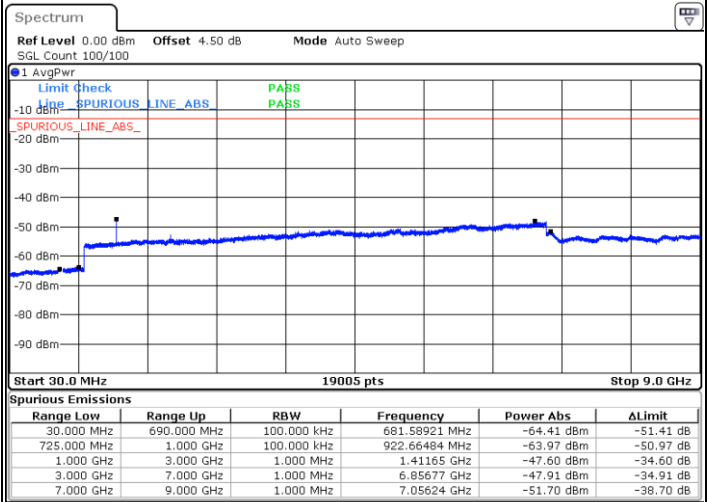
LTE Band 17 / 10MHz

Middle Channel / QPSK



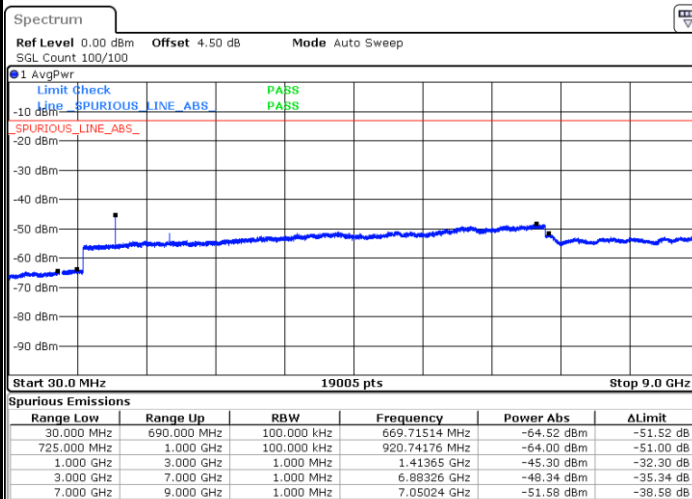
Date: 13 JAN 2018 14:40:31

Middle Channel / 16QAM



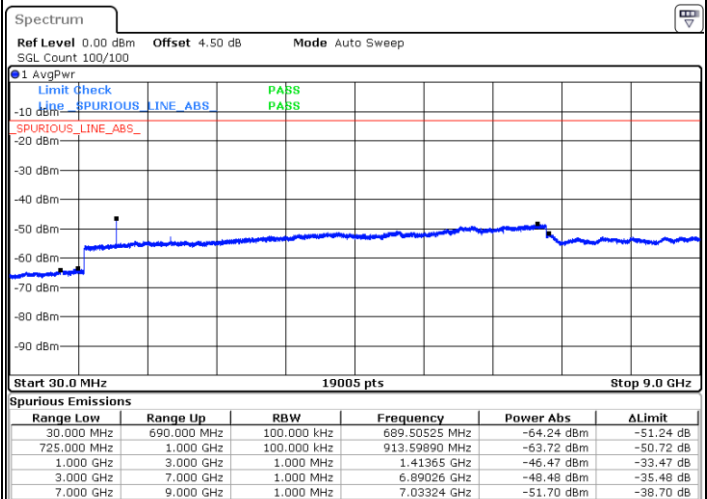
Date: 13 JAN 2018 14:41:25

Highest Channel / QPSK



Date: 13 JAN 2018 14:47:29

Highest Channel / 16QAM

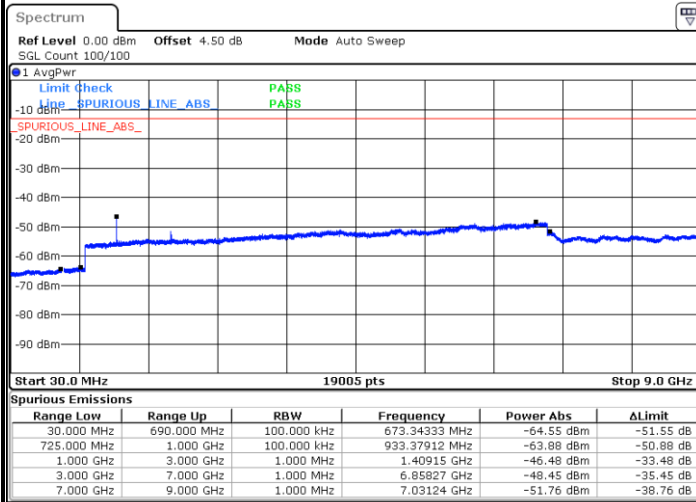


Date: 13 JAN 2018 14:48:24



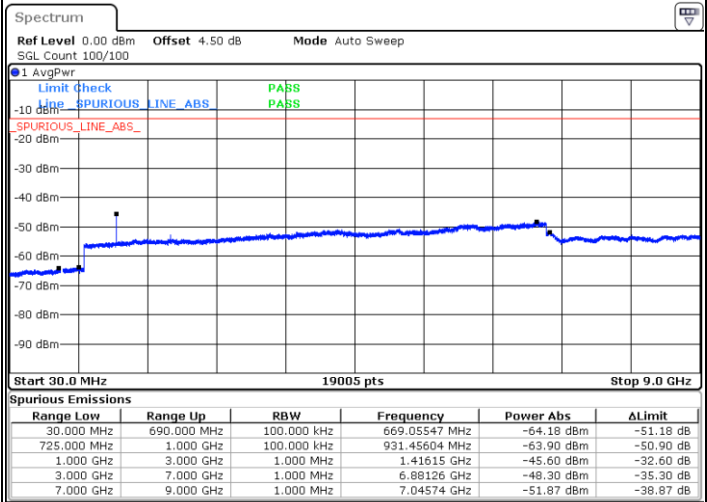
LTE Band 17 / 5MHz

Lowest Channel / 64QAM



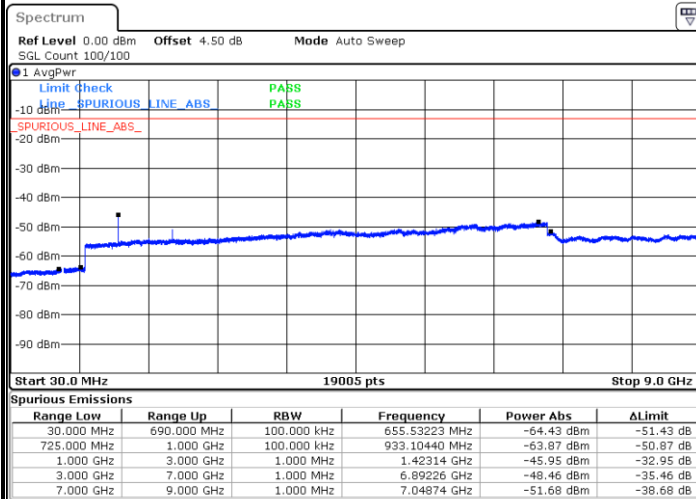
Date: 13 JAN 2018 15:06:30

Middle Channel / 64QAM



Date: 13 JAN 2018 15:07:24

Highest Channel / 64QAM

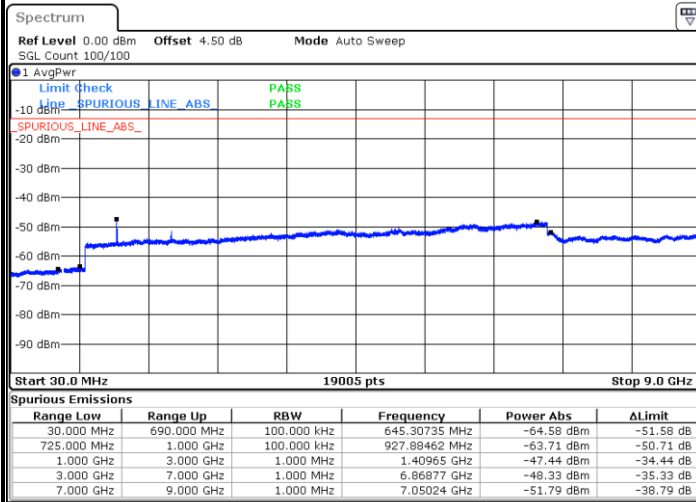


Date: 13 JAN 2018 15:08:18



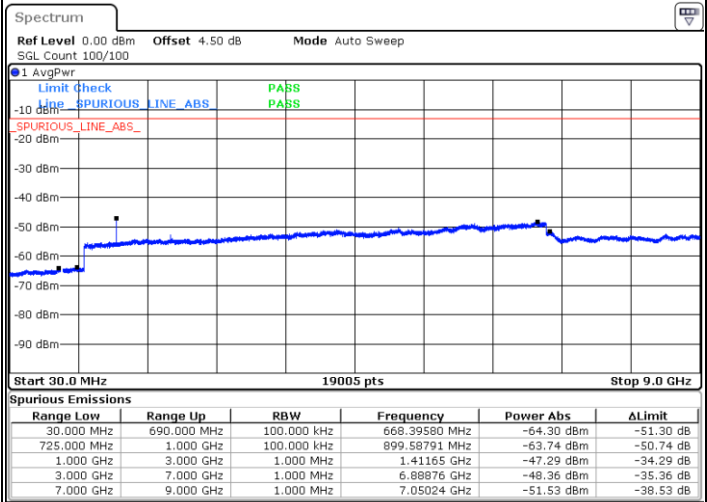
LTE Band 17 / 10MHz

Lowest Channel / 64QAM



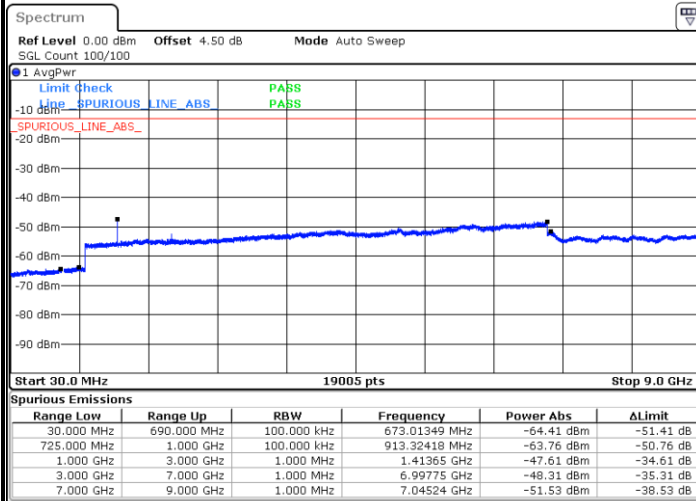
Date: 13 JAN 2018 15:09:13

Middle Channel / 64QAM



Date: 13 JAN 2018 15:10:07

Highest Channel / 64QAM



Date: 13 JAN 2018 15:11:02

**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	0.0023	PASS
40	Normal Voltage	0.0018	
30	Normal Voltage	0.0011	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0013	
-10	Normal Voltage	0.0018	
-20	Normal Voltage	0.0011	
-30	Normal Voltage	0.0000	
20	Maximum Voltage	0.0008	
20	Normal Voltage	0.0012	
20	Battery End Point	0.0002	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 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	0.0030	
30	Normal Voltage	0.0013	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0036	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0014	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0006	
20	Maximum Voltage	0.0002	
20	Normal Voltage	0.0003	
20	Battery End Point	0.0025	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 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	0.0045	PASS
40	Normal Voltage	0.0008	
30	Normal Voltage	0.0011	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0061	
-10	Normal Voltage	0.0063	
-20	Normal Voltage	0.0019	
-30	Normal Voltage	0.0016	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0002	
20	Battery End Point	0.0060	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 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	0.0048	PASS
40	Normal Voltage	0.0073	
30	Normal Voltage	0.0023	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0028	
0	Normal Voltage	0.0008	
-10	Normal Voltage	0.0051	
-20	Normal Voltage	0.0010	
-30	Normal Voltage	0.0006	
20	Maximum Voltage	0.0065	
20	Normal Voltage	0.0007	
20	Battery End Point	0.0055	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Test Conditions		LTE Band 17 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0082	PASS
40	Normal Voltage	0.0108	
30	Normal Voltage	0.0121	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0015	
0	Normal Voltage	0.0076	
-10	Normal Voltage	0.0087	
-20	Normal Voltage	0.0014	
-30	Normal Voltage	0.0017	
20	Maximum Voltage	0.0031	
20	Normal Voltage	0.0070	
20	Battery End Point	0.0018	

Note:

1. Normal Voltage =3.8V. ; Battery End Point (BEP) =3.4 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 / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3741	-59.92	-13	-46.92	-67.30	-65.09	1.83	7.00	H
	5613	-55.59	-13	-42.59	-67.76	-63.21	2.18	9.80	H
	7485	-52.86	-13	-39.86	-70.09	-62.53	2.53	12.20	H
	3741	-58.30	-13	-45.30	-67.15	-63.47	1.83	7.00	V
	5613	-54.15	-13	-41.15	-68.32	-61.77	2.18	9.80	V
	7485	-48.85	-13	-35.85	-69.95	-58.52	2.53	12.20	V

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

LTE Band 4 / 10MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3456	-54.23	-13	-41.23	-62.51	-59.37	1.81	6.95	H
	5184	-53.11	-13	-40.11	-67.67	-60.18	2.23	9.30	H
	6912	-51.39	-13	-38.39	-70.74	-59.67	2.60	10.88	H
	3456	-57.60	-13	-44.60	-63.4	-62.74	1.81	6.95	V
	5184	-54.66	-13	-41.66	-68.96	-61.73	2.23	9.30	V
	6912	-51.51	-13	-38.51	-70.05	-59.79	2.6	10.88	V

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



LTE Band 5 / 10MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1664	-47.70	-13	-34.70	-50.04	-49.61	1.14	5.20	H
	2496	-57.97	-13	-44.97	-62.27	-60.60	1.12	5.90	H
	3327	-61.75	-13	-48.75	-65.87	-64.96	1.34	6.70	H
	1664	-50.61	-13	-37.61	-51.18	-52.52	1.14	5.20	V
	2496	-60.20	-13	-47.20	-63.27	-62.83	1.12	5.90	V
	3327	-61.13	-13	-48.13	-66.27	-64.34	1.34	6.70	V

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



Tips: Antenna #2 and Antenna #3 support LTE Band 7, the two antenna could switch Main Antenna and Diversity Antenna for each other.

< Antenna #2>

LTE Band 7 / 15MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5056	-64.99	-25	-39.99	-48.52	-71.71	2.40	9.12	H
	7584	-52.76	-25	-27.76	-45.10	-62.38	2.87	12.50	H
	10116	-51.48	-25	-26.48	-45.72	-60.40	3.18	12.10	H
	12642	-58.72	-25	-33.72	-57.27	-67.76	3.79	12.83	H
	15165	-33.85	-25	-8.85	-37.80	-42.28	4.34	12.77	H
	5056	-69.81	-25	-44.81	-49.83	-76.52	2.40	9.12	V
	7584	-55.90	-25	-30.90	-45.9	-65.52	2.87	12.50	V
	10116	-54.48	-25	-29.48	-49.16	-63.40	3.18	12.10	V
	12642	-61.64	-25	-36.64	-58.77	-70.68	3.79	12.83	V
	15165	-34.27	-25	-9.27	-39.53	-42.70	4.34	12.77	V

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

< Antenna #3>

LTE Band 7 / 15MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5056.68	-69.45	-25	-44.45	-52.98	-76.17	2.40	9.12	H
	7584	-53.75	-25	-28.75	-46.09	-63.37	2.87	12.50	H
	10116	-53.81	-25	-28.81	-48.05	-62.73	3.18	12.10	H
	12641.7	-60.01	-25	-35.01	-58.56	-69.05	3.79	12.83	H
	15165	-38.62	-25	-13.62	-41.30	-47.05	4.34	12.77	H
	5056	-70.76	-25	-45.76	-50.78	-77.47	2.40	9.12	V
	7584	-60.47	-25	-35.47	-50.47	-70.09	2.87	12.50	V
	10116	-54.78	-25	-29.78	-49.46	-63.70	3.18	12.10	V
	12645	-63.62	-25	-38.62	-60.75	-72.66	3.79	12.83	V
	15165	-43.02	-25	-18.02	-44.58	-51.45	4.34	12.77	V

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



LTE Band 12 / 10MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1406	-44.64	-13	-31.64	-48.11	-46.01	1.167	4.69	H
	2110	-52.94	-13	-39.94	-60.19	-55.54	1.446	6.20	H
	2812	-56.51	-13	-43.51	-64.44	-60.06	1.694	7.40	H
	1406	-45.68	-13	-32.68	-47.27	-47.05	1.167	4.69	V
	2110	-60.42	-13	-47.42	-61.4	-63.01	1.446	6.20	V
	2812	-60.29	-13	-47.29	-63.94	-63.84	1.694	7.40	V

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

LTE Band 17 / 10MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1412	-42.15	-13	-29.15	-45.77	-43.52	1.167	4.69	H
	2116	-55.12	-13	-42.12	-62.48	-57.72	1.446	6.20	H
	2822	-55.41	-13	-42.41	-63.78	-58.96	1.694	7.40	H
	1412	-48.68	-13	-35.68	-49.52	-50.05	1.167	4.69	V
	2116	-62.16	-13	-49.16	-63.14	-64.75	1.446	6.20	V
	2822	-59.64	-13	-46.64	-63.29	-63.19	1.694	7.40	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 FG7D2507B which is issued separately.