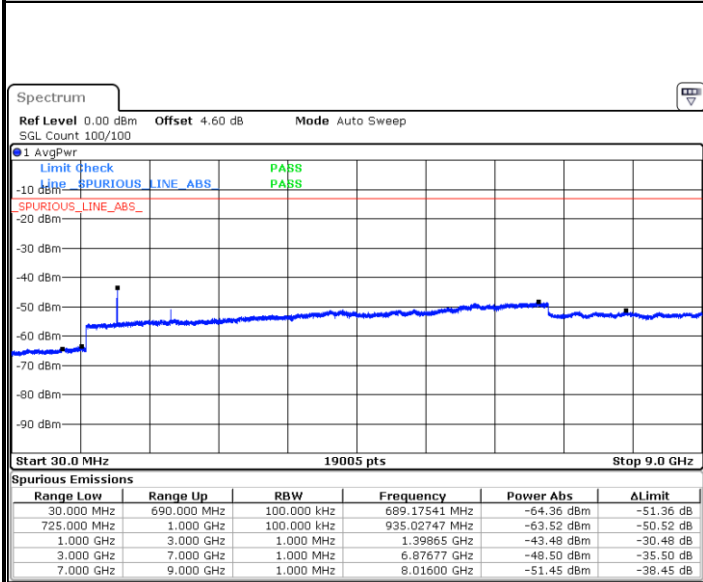




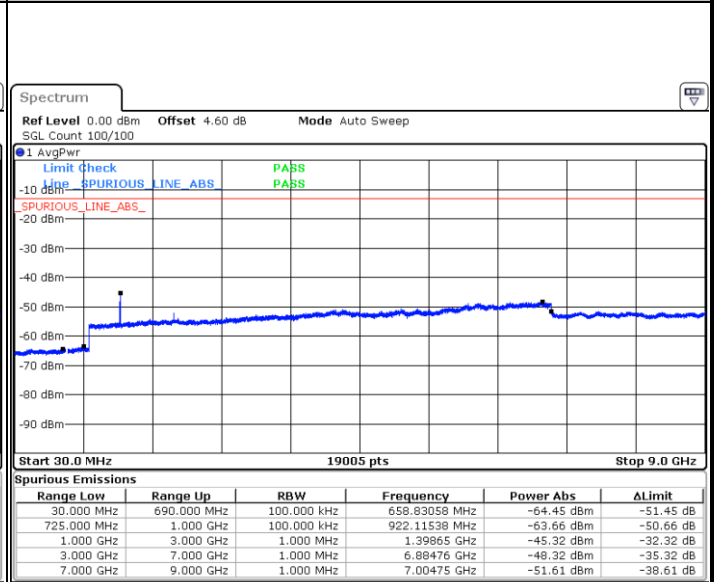
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



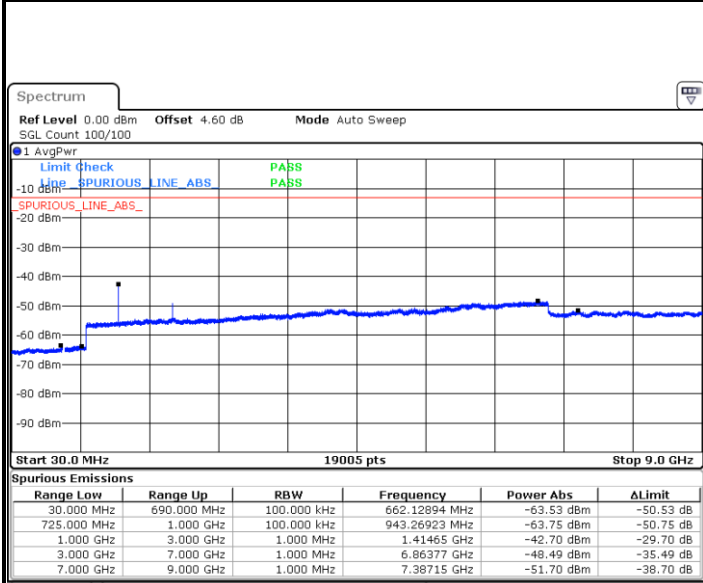
Date: 14 JUN 2017 17:23:25

Lowest Channel / 16QAM



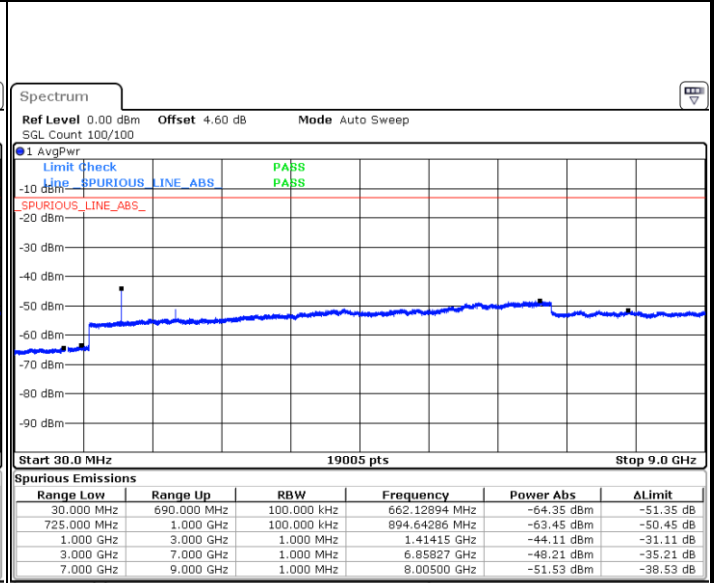
Date: 14 JUN 2017 17:24:20

Middle Channel / QPSK



Date: 14 JUN 2017 17:26:10

Middle Channel / 16QAM



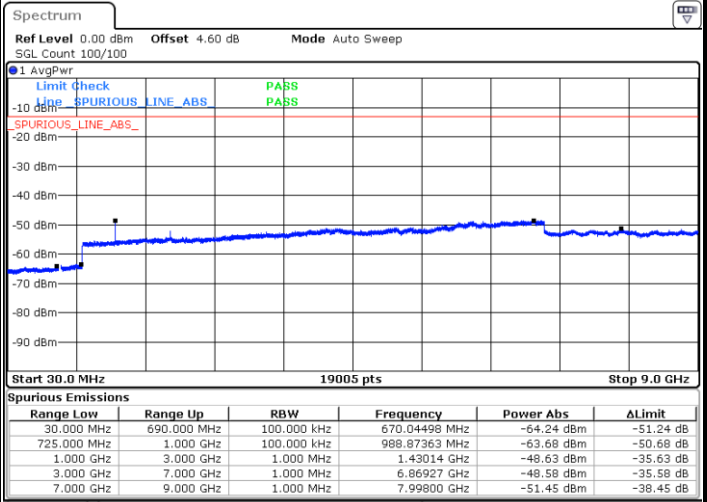
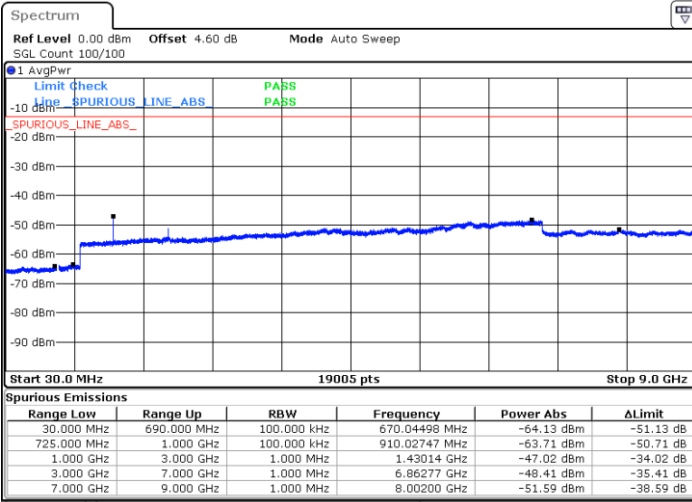
Date: 14 JUN 2017 17:25:15



LTE Band 12 / 1.4MHz

Highest Channel / QPSK

Highest Channel / 16QAM



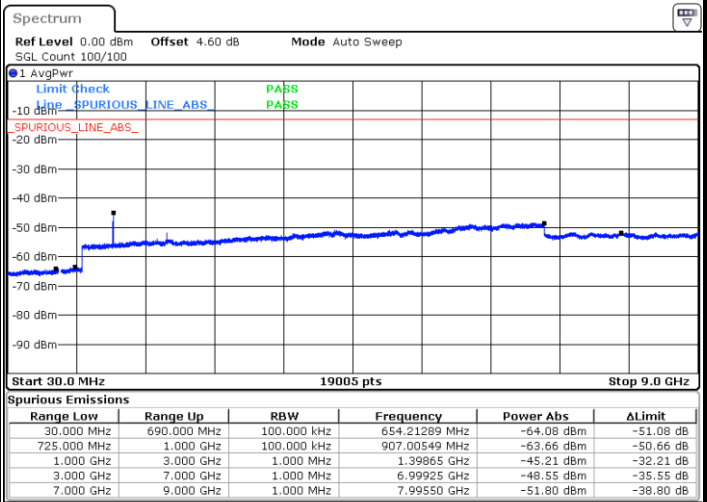
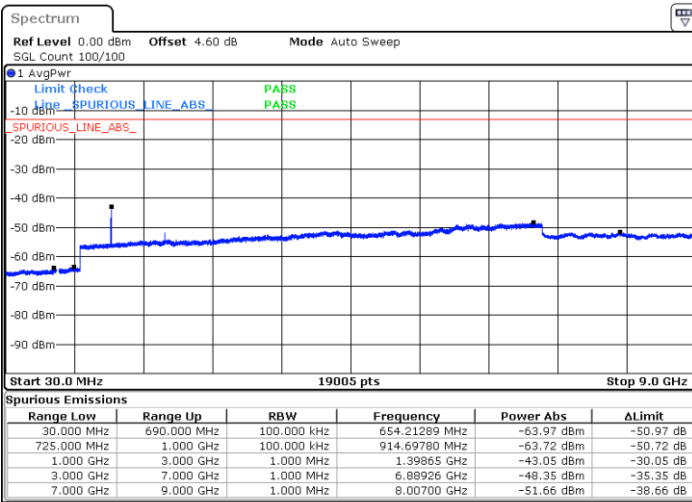
Date: 14 JUN 2017 17:27:05

Date: 14 JUN 2017 17:28:00

LTE Band 12 / 3MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



Date: 14 JUN 2017 17:40:06

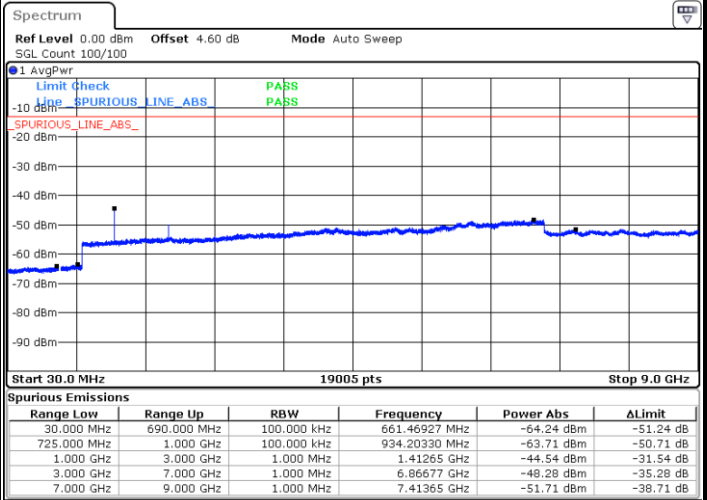
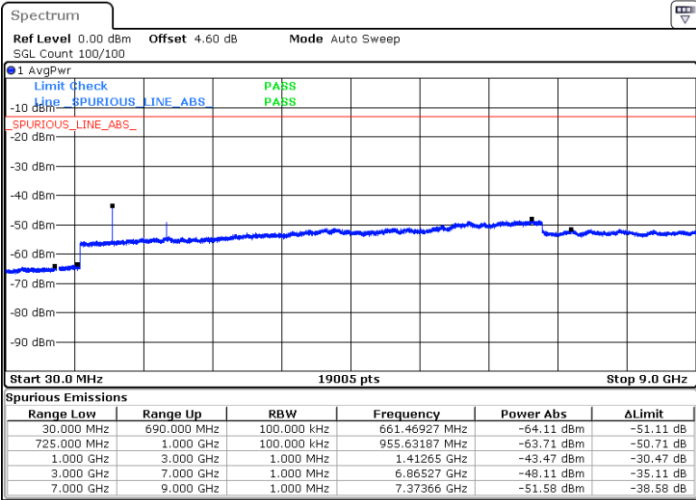
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LTE Band 12 / 3MHz

Middle Channel / QPSK

Middle Channel / 16QAM

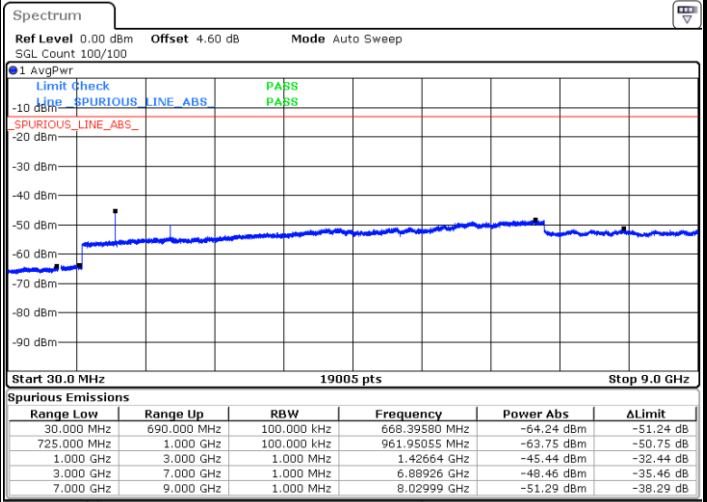
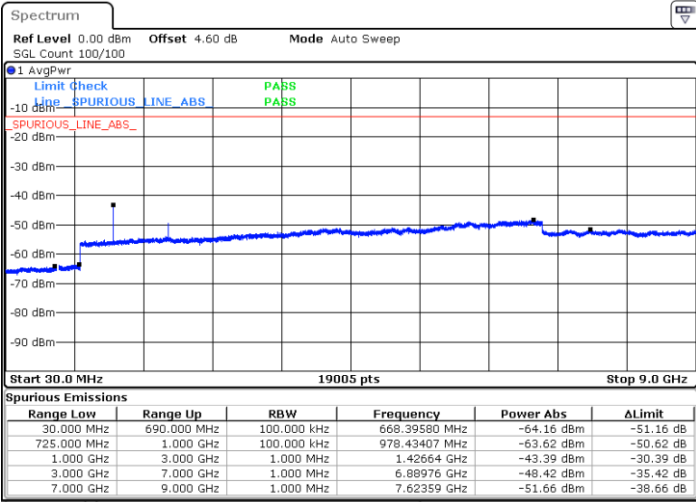


Date: 14 JUN 2017 17:42:51

Date: 14 JUN 2017 17:41:56

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 14 JUN 2017 17:43:47

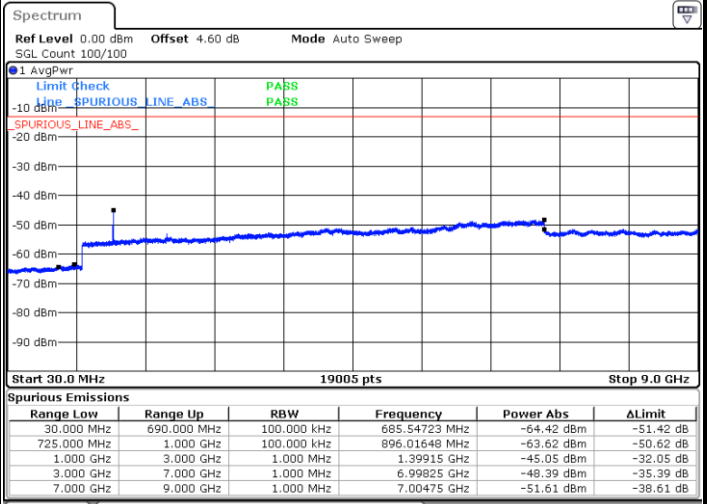
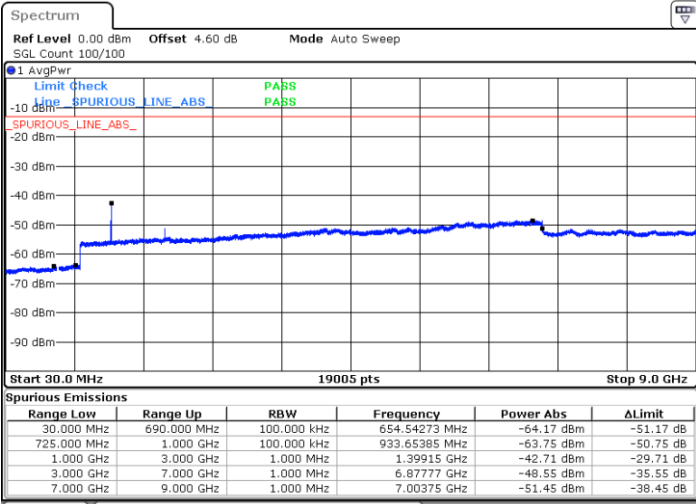
Date: 14 JUN 2017 17:44:42



LTE Band 12 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

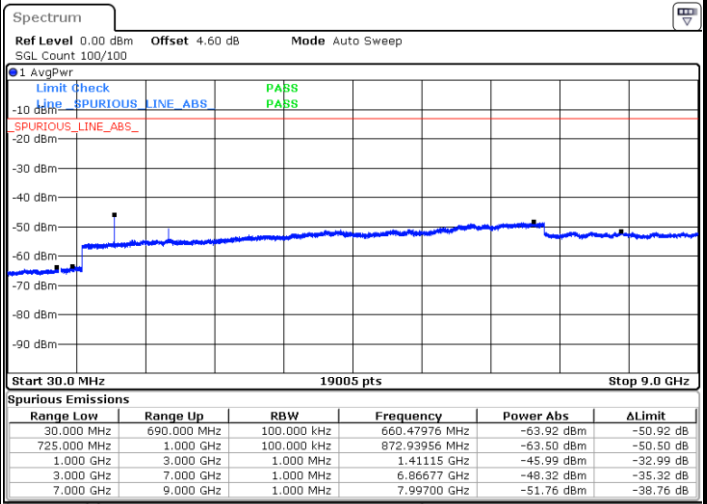
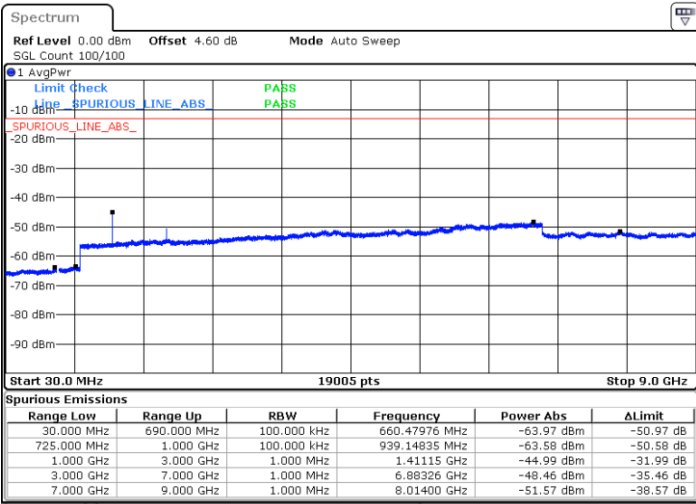


Date: 14 JUN 2017 17:56:50

Date: 14 JUN 2017 17:57:45

Middle Channel / QPSK

Middle Channel / 16QAM



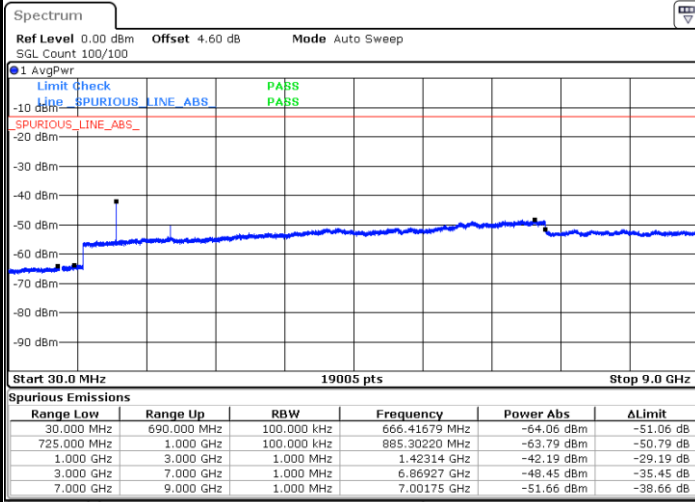
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Date: 14 JUN 2017 17:58:41



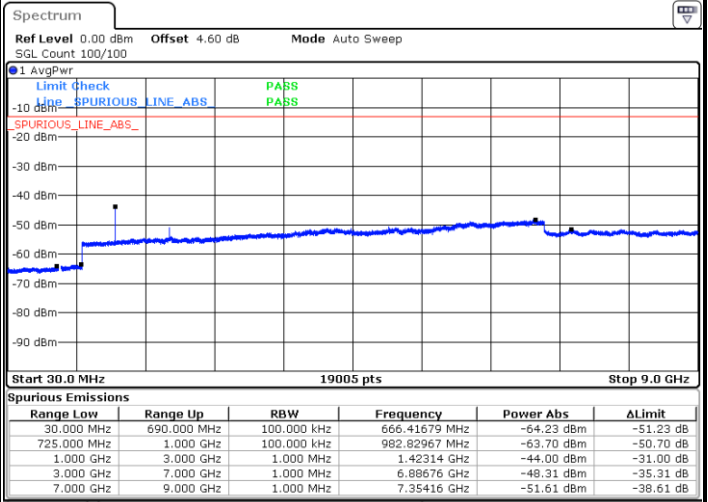
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 14 JUN 2017 18:00:31

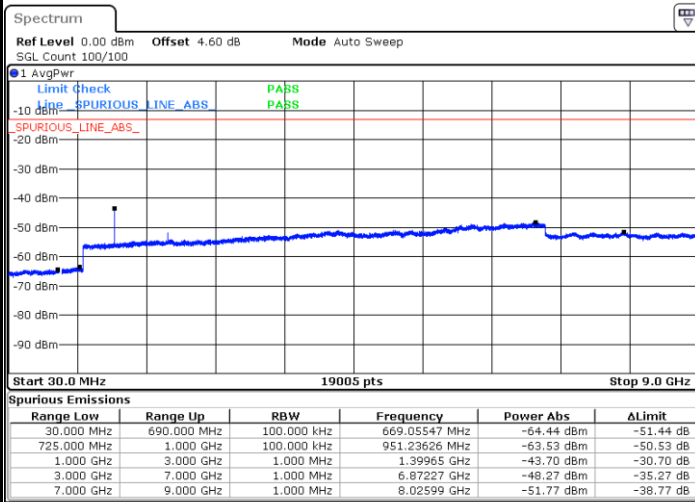
Highest Channel / 16QAM



Date: 14 JUN 2017 18:01:26

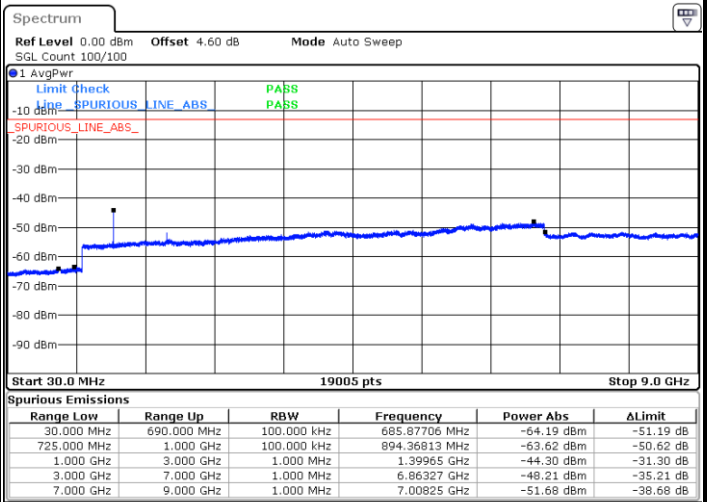
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 14 JUN 2017 18:13:32

Lowest Channel / 16QAM

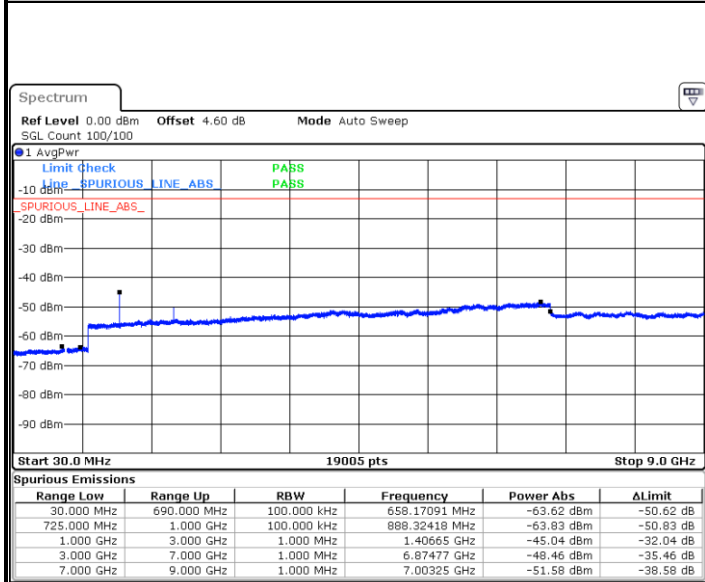


Date: 14 JUN 2017 18:14:27



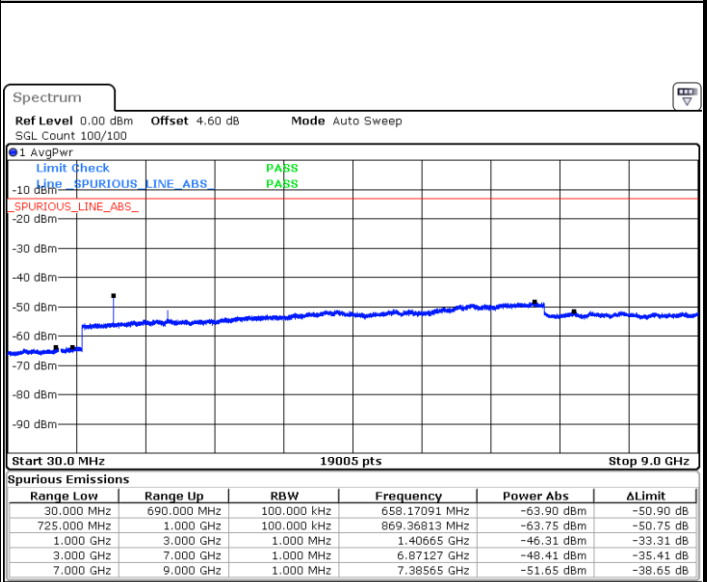
LTE Band 12 / 10MHz

Middle Channel / QPSK



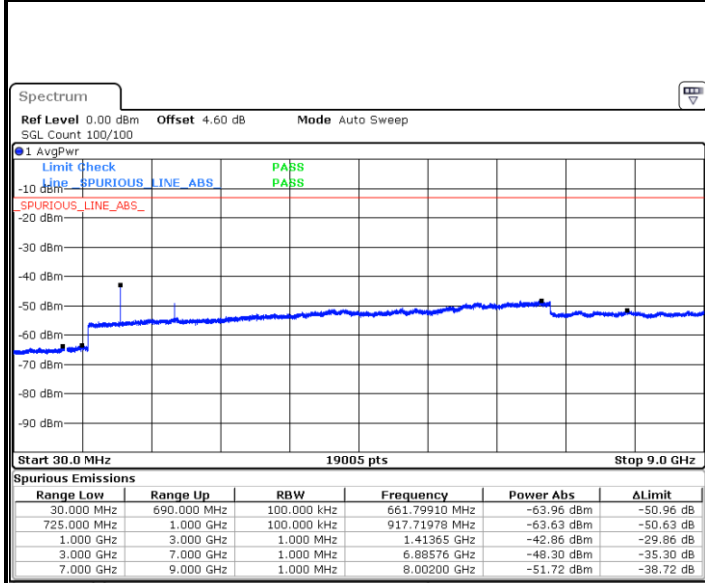
Date: 14 JUN 2017 18:16:17

Middle Channel / 16QAM



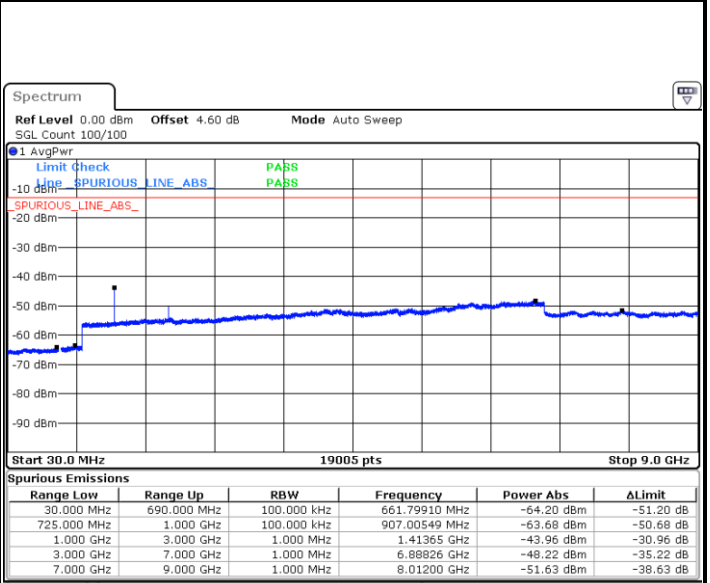
Date: 14 JUN 2017 18:15:22

Highest Channel / QPSK



Date: 14 JUN 2017 18:17:12

Highest Channel / 16QAM



Date: 14 JUN 2017 18:18:07



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	0.0001	PASS
40	Normal Voltage	0.0003	
30	Normal Voltage	0.0005	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0018	
-10	Normal Voltage	0.0003	
-20	Normal Voltage	0.0003	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0004	
20	Battery End Point	0.0017	

Note:

1. Normal Voltage = 3.8 V. ; Battery End Point (BEP) = 3.4 V. ; Maximum Voltage = 4.35 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	0.0005	PASS
40	Normal Voltage	0.0002	
30	Normal Voltage	0.0020	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0023	
0	Normal Voltage	0.0025	
-10	Normal Voltage	0.0004	
-20	Normal Voltage	0.0006	
-30	Normal Voltage	0.0027	
20	Maximum Voltage	0.0001	
20	Normal Voltage	0.0003	
20	Battery End Point	0.0017	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.35 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	0.0041	PASS
40	Normal Voltage	0.0004	
30	Normal Voltage	0.0006	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0030	
0	Normal Voltage	0.0005	
-10	Normal Voltage	0.0002	
-20	Normal Voltage	0.0031	
-30	Normal Voltage	0.0023	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0012	
20	Battery End Point	0.0047	

Note: Normal Voltage = 3.8 V. ; Battery End Point (BEP) = 3.4 V. ; Maximum Voltage = 4.35 V.



Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0059	PASS
40	Normal Voltage	0.0007	
30	Normal Voltage	0.0055	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0007	
0	Normal Voltage	0.0017	
-10	Normal Voltage	0.0024	
-20	Normal Voltage	0.0083	
-30	Normal Voltage	0.0062	
20	Maximum Voltage	0.0049	
20	Normal Voltage	0.0078	
20	Battery End Point	0.0010	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.35 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 / 1.4MHz / 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	3759	-60.31	-13	-47.31	-74.55	-62.02	5.08	6.80	H
	5637	-60.09	-13	-47.09	-76.89	-61.76	8.03	9.70	H
	7518	-55.57	-13	-42.57	-76.87	-57.95	9.43	11.81	H
	3759	-62.65	-13	-49.65	-75.08	-64.36	5.08	6.80	V
	5637	-60.28	-13	-47.28	-77.37	-61.95	8.03	9.70	V
	7518	-56.05	-13	-43.05	-77.19	-58.43	9.43	11.81	V

LTE Band 2 / 3MHz / 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	3756	-60.78	-13	-47.78	-75.02	-62.49	5.08	6.80	H
	5637	-59.33	-13	-46.33	-76.13	-61.00	8.03	9.70	H
	7515	-55.57	-13	-42.57	-76.87	-57.95	9.43	11.81	H
	3756	-61.93	-13	-48.93	-74.36	-63.64	5.08	6.80	V
	5637	-60.38	-13	-47.38	-77.47	-62.05	8.03	9.70	V
	7515	-55.97	-13	-42.97	-77.11	-58.35	9.43	11.81	V

LTE Band 2 / 5MHz / 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	3756	-61.11	-13	-48.11	-75.35	-62.82	5.08	6.80	H
	5634	-60.28	-13	-47.28	-77.08	-61.95	8.03	9.70	H
	7512	-54.72	-13	-41.72	-76.02	-57.10	9.43	11.81	H
	3756	-61.68	-13	-48.68	-74.11	-63.39	5.08	6.80	V
	5634	-59.62	-13	-46.62	-76.71	-61.29	8.03	9.70	V
	7512	-56.28	-13	-43.28	-77.42	-58.66	9.43	11.81	V



LTE Band 2 / 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	3750	-58.88	-13	-45.88	-73.12	-60.59	5.08	6.80	H
	5628	-59.53	-13	-46.53	-76.33	-61.20	8.03	9.70	H
	7503	-55.32	-13	-42.32	-76.62	-57.70	9.43	11.81	H
	3750	-61.59	-13	-48.59	-74.02	-63.30	5.08	6.80	V
	5628	-60.35	-13	-47.35	-77.44	-62.02	8.03	9.70	V
	7503	-56.05	-13	-43.05	-77.19	-58.43	9.43	11.81	V

LTE Band 2 / 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	3747	-60.64	-13	-47.64	-74.88	-62.35	5.08	6.80	H
	5619	-58.96	-13	-45.96	-75.76	-60.63	8.03	9.70	H
	7494	-55.23	-13	-42.23	-76.53	-57.61	9.43	11.81	H
	3747	-62.97	-13	-49.97	-75.4	-64.68	5.08	6.80	V
	5619	-59.31	-13	-46.31	-76.4	-60.98	8.03	9.70	V
	7494	-55.32	-13	-42.32	-76.46	-57.70	9.43	11.81	V

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	-60.78	-13	-47.78	-75.02	-62.49	5.08	6.80	H
	5613	-60.06	-13	-47.06	-76.86	-61.73	8.03	9.70	H
	7485	-55.69	-13	-42.69	-76.99	-58.07	9.43	11.81	H
	3741	-63.21	-13	-50.21	-75.64	-64.92	5.08	6.80	V
	5613	-60.55	-13	-47.55	-77.64	-62.22	8.03	9.70	V
	7485	-56.25	-13	-43.25	-77.39	-58.63	9.43	11.81	V



LTE Band 4 / 1.4MHz / 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	3465	-62.31	-13	-49.31	-71.21	-66.28	4.87	8.84	H
	5196	-65.14	-13	-52.14	-76.07	-66.58	7.70	9.14	H
	6927	-57.93	-13	-44.93	-76.40	-59.61	8.98	10.66	H
	3465	-63.71	-13	-50.71	-75.33	-67.68	4.87	8.84	V
	5196	-62.18	-13	-49.18	-76.23	-63.62	7.70	9.14	V
	6927	-59.58	-13	-46.58	-77.6	-61.26	8.98	10.66	V

LTE Band 4 / 3MHz / 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	3462	-63.57	-13	-50.57	-72.47	-67.54	4.87	8.84	H
	5193	-64.56	-13	-51.56	-75.49	-66.00	7.70	9.14	H
	6924	-58.16	-13	-45.16	-76.63	-59.84	8.98	10.66	H
	3462	-63.79	-13	-50.79	-75.41	-67.76	4.87	8.84	V
	5193	-62.13	-13	-49.13	-76.18	-63.57	7.70	9.14	V
	6924	-58.16	-13	-45.16	-76.18	-59.84	8.98	10.66	V

LTE Band 4 / 5MHz / QPSK									
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	3462	-62.49	-13	-49.49	-71.39	-66.46	4.87	8.84	H
	5190	-65.04	-13	-52.04	-75.97	-66.48	7.70	9.14	H
	6921	-58.32	-13	-45.32	-76.79	-60.00	8.98	10.66	H
	3462	-64.21	-13	-51.21	-75.83	-68.18	4.87	8.84	V
	5190	-61.41	-13	-48.41	-75.46	-62.85	7.70	9.14	V
	6921	-57.96	-13	-44.96	-75.98	-59.64	8.98	10.66	V



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	-59.56	-13	-46.56	-68.46	-63.53	4.87	8.84	H
	5184	-64.12	-13	-51.12	-75.05	-65.56	7.70	9.14	H
	6912	-58.90	-13	-45.90	-77.37	-60.58	8.98	10.66	H
	3456	-62.53	-13	-49.53	-74.15	-66.50	4.87	8.84	V
	5184	-62.18	-13	-49.18	-76.23	-63.62	7.70	9.14	V
	6912	-58.45	-13	-45.45	-76.47	-60.13	8.98	10.66	V

LTE Band 4 / 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	3453	-63.05	-13	-50.05	-71.95	-67.02	4.87	8.84	H
	5178	-64.64	-13	-51.64	-75.57	-66.08	7.70	9.14	H
	6903	-58.06	-13	-45.06	-76.53	-59.74	8.98	10.66	H
	3453	-63.91	-13	-50.91	-75.53	-67.88	4.87	8.84	V
	5178	-61.61	-13	-48.61	-75.66	-63.05	7.70	9.14	V
	6903	-58.90	-13	-45.90	-76.92	-60.58	8.98	10.66	V

LTE Band 4 / 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	3447	-59.39	-13	-46.39	-68.29	-63.36	4.87	8.84	H
	5172	-65.24	-13	-52.24	-76.17	-66.68	7.70	9.14	H
	6894	-58.12	-13	-45.12	-76.59	-59.80	8.98	10.66	H
	3447	-63.29	-13	-50.29	-74.91	-67.26	4.87	8.84	V
	5172	-61.97	-13	-48.97	-76.02	-63.41	7.70	9.14	V
	6894	-58.10	-13	-45.10	-76.12	-59.78	8.98	10.66	V



LTE Band 5 / 1.4MHz / 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	1672	-66.87	-13	-53.87	-69.47	-69.19	1.33	5.80	H
	2508	-61.83	-13	-48.83	-71.18	-65.00	1.58	6.90	H
	3342	-67.57	-13	-54.57	-76.78	-71.07	1.85	7.50	H
	1672	-67.84	-13	-54.84	-69.71	-70.16	1.33	5.80	V
	2508	-63.52	-13	-50.52	-71.49	-66.69	1.58	6.90	V
	3342	-67.05	-13	-54.05	-76.07	-70.55	1.85	7.50	V

LTE Band 5 / 3MHz / 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	1670	-66.82	-13	-53.82	-69.42	-69.14	1.33	5.80	H
	2506	-61.42	-13	-48.42	-70.77	-64.59	1.58	6.90	H
	3342	-67.96	-13	-54.96	-77.17	-71.46	1.85	7.50	H
	1670	-67.99	-13	-54.99	-69.86	-70.31	1.33	5.80	V
	2506	-63.88	-13	-50.88	-71.85	-67.05	1.58	6.90	V
	3342	-67.75	-13	-54.75	-76.77	-71.25	1.85	7.50	V

LTE Band 5 / 5MHz / 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	1668	-67.26	-13	-54.26	-69.86	-69.58	1.33	5.80	H
	2503	-61.90	-13	-48.90	-71.25	-65.07	1.58	6.90	H
	3336	-68.02	-13	-55.02	-77.23	-71.52	1.85	7.50	H
	1668	-67.62	-13	-54.62	-69.49	-69.94	1.33	5.80	V
	2503	-63.82	-13	-50.82	-71.79	-66.99	1.58	6.90	V
	3336	-68.39	-13	-55.39	-77.41	-71.89	1.85	7.50	V



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	-66.96	-13	-53.96	-69.56	-69.28	1.33	5.80	H
	2496	-61.48	-13	-48.48	-70.83	-64.65	1.58	6.90	H
	3330	-67.39	-13	-54.39	-76.60	-70.89	1.85	7.50	H
	1664	-67.72	-13	-54.72	-69.59	-70.04	1.33	5.80	V
	2496	-63.06	-13	-50.06	-71.03	-66.23	1.58	6.90	V
	3330	-68.20	-13	-55.20	-77.22	-71.70	1.85	7.50	V

LTE Band 12 / 1.4MHz / 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	1414	-68.03	-13	-55.03	-68.98	-69.26	1.17	4.55	H
	2120	-65.70	-13	-52.70	-70.29	-67.45	1.45	5.35	H
	2828	-68.71	-13	-55.71	-72.68	-70.98	1.68	6.10	H
	1414	-68.02	-13	-55.02	-69.09	-69.25	1.17	4.55	V
	2120	-65.90	-13	-52.90	-70.48	-67.65	1.45	5.35	V
	2828	-66.46	-13	-53.46	-71.14	-68.72	1.68	6.10	V

LTE Band 12 / 3MHz / 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	-67.62	-13	-54.62	-68.57	-68.85	1.17	4.55	H
	2118	-64.76	-13	-51.76	-69.35	-66.51	1.45	5.35	H
	2824	-69.40	-13	-56.40	-73.37	-71.67	1.68	6.10	H
	1412	-66.99	-13	-53.99	-68.06	-68.22	1.17	4.55	V
	2118	-66.56	-13	-53.56	-71.14	-68.31	1.45	5.35	V
	2824	-68.33	-13	-55.33	-73.01	-70.59	1.68	6.10	V

LTE Band 12 / 5MHz / 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	1410	-68.19	-13	-55.19	-69.14	-69.42	1.17	4.55	H
	2116	-64.77	-13	-51.77	-69.36	-66.52	1.45	5.35	H
	2822	-69.30	-13	-56.30	-73.27	-71.57	1.68	6.10	H
	1410	-67.50	-13	-54.50	-68.57	-68.73	1.17	4.55	V
	2116	-68.19	-13	-55.19	-72.77	-69.94	1.45	5.35	V
	2822	-68.42	-13	-55.42	-73.10	-70.68	1.68	6.10	V



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	-67.16	-13	-54.16	-68.11	-68.39	1.17	4.55	H
	2108	-64.90	-13	-51.90	-69.49	-66.65	1.45	5.35	H
	2812	-69.37	-13	-56.37	-73.34	-71.64	1.68	6.10	H
	1406	-69.02	-13	-56.02	-70.09	-70.25	1.17	4.55	V
	2110	-67.53	-13	-54.53	-72.11	-69.28	1.45	5.35	V
	2812	-68.71	-13	-55.71	-73.39	-70.97	1.68	6.10	V

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