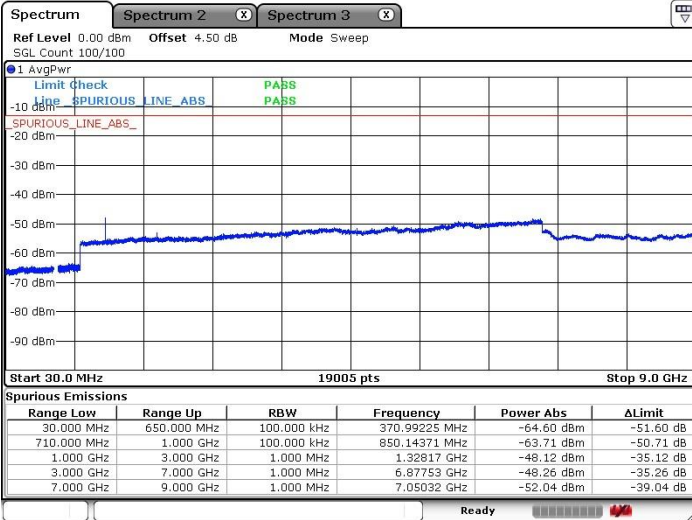




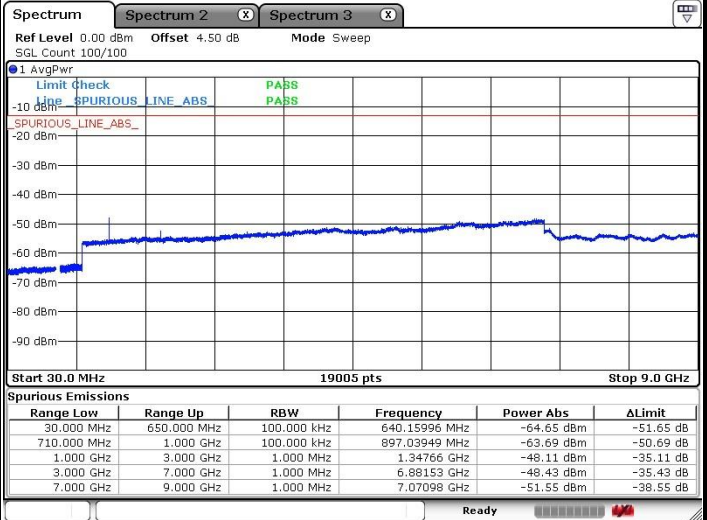
LTE Band 71 / 15MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

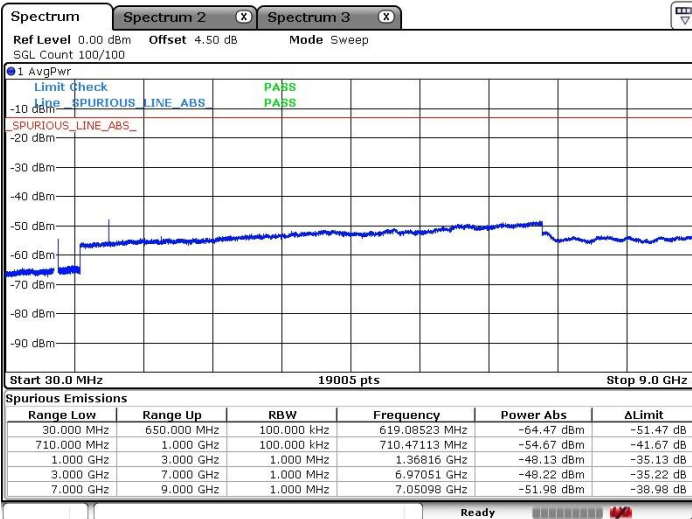


Date: 15.MAR.2019 21:38:03



Date: 15.MAR.2019 21:41:45

Highest Channel / 64QAM

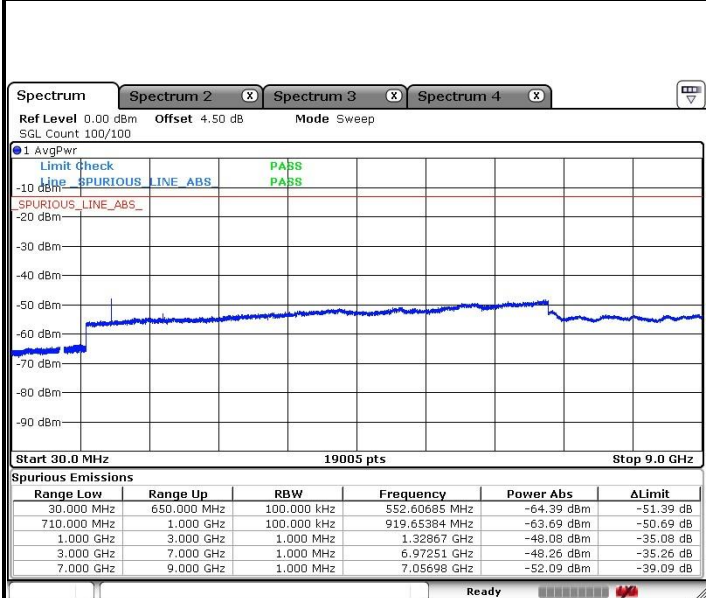


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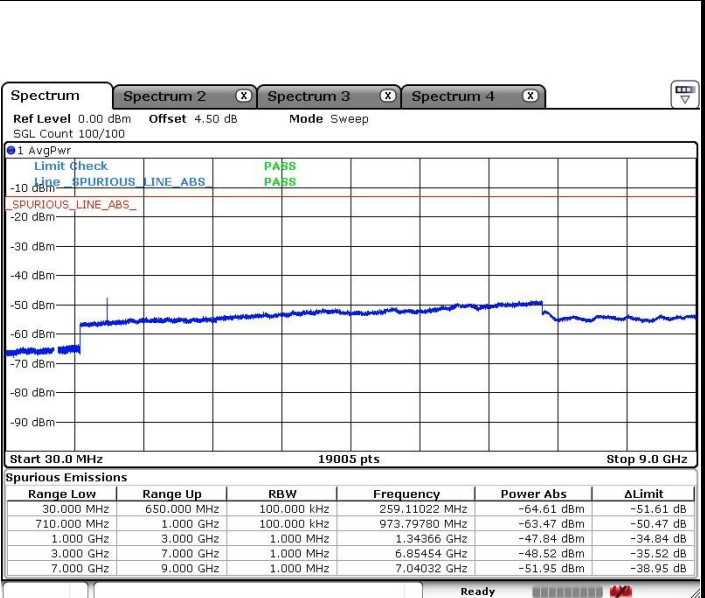
LTE Band 71 / 20MHz

Lowest Channel / 64QAM



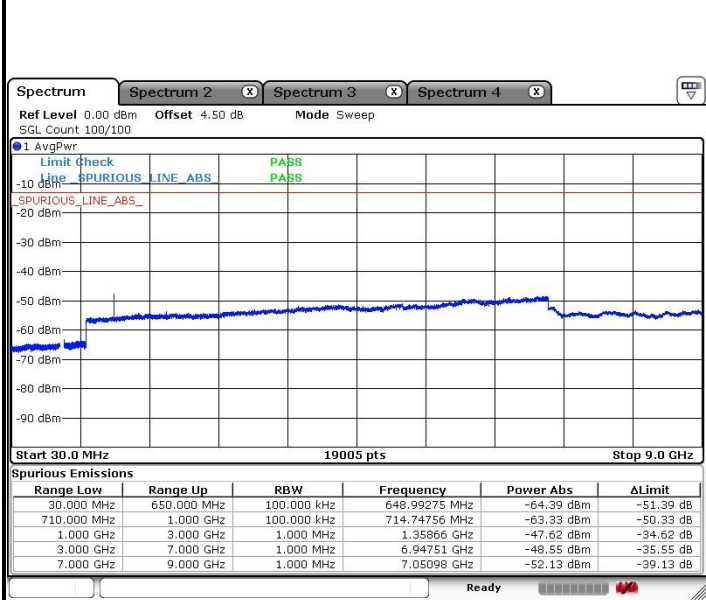
Date: 15.MAR.2019 21:49:26

Middle Channel / 64QAM



Date: 15.MAR.2019 21:54:55

Highest Channel / 64QAM



Date: 15.MAR.2019 21:59:10



Frequency Stability

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0026	PASS
40	Normal Voltage	0.0005	
30	Normal Voltage	0.0022	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0018	
-10	Normal Voltage	0.0000	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0023	
20	Normal Voltage	0.0000	
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 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0003	PASS
40	Normal Voltage	0.0080	
30	Normal Voltage	0.0052	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0091	
-10	Normal Voltage	0.0006	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0065	
20	Maximum Voltage	0.0081	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0064	

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 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0013	PASS
40	Normal Voltage	0.0004	
30	Normal Voltage	0.0045	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0054	
0	Normal Voltage	0.0060	
-10	Normal Voltage	0.0010	
-20	Normal Voltage	0.0058	
-30	Normal Voltage	0.0063	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0046	

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 25 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0018	PASS
40	Normal Voltage	0.0027	
30	Normal Voltage	0.0015	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0021	
0	Normal Voltage	0.0014	
-10	Normal Voltage	0.0005	
-20	Normal Voltage	0.0014	
-30	Normal Voltage	0.0022	
20	Maximum Voltage	0.0002	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0016	

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 26 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0085	PASS
40	Normal Voltage	0.0062	
30	Normal Voltage	0.0017	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0087	
0	Normal Voltage	0.0065	
-10	Normal Voltage	0.0026	
-20	Normal Voltage	0.0006	
-30	Normal Voltage	0.0071	
20	Maximum Voltage	0.0021	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0079	

Note: Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.4 V.



Test Conditions		LTE Band 41 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0010	PASS
40	Normal Voltage	0.0019	
30	Normal Voltage	0.0017	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0017	
0	Normal Voltage	0.0007	
-10	Normal Voltage	0.0013	
-20	Normal Voltage	0.0010	
-30	Normal Voltage	0.0009	
20	Maximum Voltage	0.0009	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0013	

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 66 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0012	PASS
40	Normal Voltage	0.0029	
30	Normal Voltage	0.0003	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0033	
0	Normal Voltage	0.0005	
-10	Normal Voltage	0.0002	
-20	Normal Voltage	0.0018	
-30	Normal Voltage	0.0005	
20	Maximum Voltage	0.0030	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0007	

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 71 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0050	PASS
40	Normal Voltage	0.0032	
30	Normal Voltage	0.0009	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0035	
0	Normal Voltage	0.0025	
-10	Normal Voltage	0.0004	
-20	Normal Voltage	0.0046	
-30	Normal Voltage	0.0019	
20	Maximum Voltage	0.0041	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0004	

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 7 / 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	5050	-60.19	-25	-35.19	-66.20	4.20	10.21	H
	7580	-50.99	-25	-25.99	-57.85	5.12	11.98	H
	10107	-58.30	-25	-33.30	-65.34	5.86	12.90	H
	5050	-58.44	-25	-33.44	-64.45	4.20	10.21	V
	7580	-51.98	-25	-26.98	-58.84	5.12	11.98	V
	10107	-59.40	-25	-34.40	-66.44	5.86	12.90	V

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

LTE Band 12 / 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	1406	-67.18	-13	-54.18	-68.39	2.32	5.68	H
	2110	-58.55	-13	-45.55	-59.18	3.02	5.80	H
	2812	-66.21	-13	-53.21	-68.67	3.27	7.88	H
	1406	-67.41	-13	-54.41	-68.62	2.32	5.68	V
	2110	-57.87	-13	-44.87	-58.50	3.02	5.80	V
	2812	-66.15	-13	-53.15	-68.61	3.27	7.88	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	-68.36	-40	-28.36	-72.22	2.23	6.09	H
	2340	-51.36	-13	-38.36	-51.89	2.83	5.51	H
	3120	-65.88	-13	-52.88	-67.82	3.21	7.30	H
	1560	-66.88	-40	-26.88	-70.74	2.23	6.09	V
	2340	-49.14	-13	-36.14	-49.67	2.83	5.51	V
	3120	-66.05	-13	-53.05	-67.99	3.21	7.30	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	-68.28	-13	-55.28	-69.99	2.23	6.09	H
	2332	-44.42	-13	-31.42	-44.95	2.83	5.51	H
	3108	-65.63	-13	-52.63	-67.57	3.21	7.30	H
	1556	-67.51	-13	-54.51	-69.22	2.23	6.09	V
	2332	-45.65	-13	-32.65	-46.18	2.83	5.51	V
	3108	-65.44	-13	-52.44	-67.38	3.21	7.30	V

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

LTE Band 25 / 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	3747	-57.03	-13	-44.03	-61.90	3.55	8.42	H
	5622	-51.25	-13	-38.25	-57.59	4.34	10.68	H
	7494	-52.48	-13	-39.48	-59.28	5.14	11.94	H
	3747	-58.95	-13	-45.95	-63.82	3.55	8.42	V
	5622	-48.61	-13	-35.61	-54.95	4.34	10.68	V
	7494	-51.78	-13	-38.78	-58.58	5.14	11.94	V

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



LTE Band 26 / 15MHz / 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	1660	-68.43	-13	-55.43	-69.64	2.32	5.68	H
	2490	-65.50	-13	-52.50	-66.13	3.02	5.80	H
	3318	-66.35	-13	-53.35	-68.81	3.27	7.88	H
	1660	-68.75	-13	-55.75	-69.96	2.32	5.68	V
	2490	-65.90	-13	-52.90	-66.53	3.02	5.80	V
	3318	-66.52	-13	-53.52	-68.98	3.27	7.88	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	5170	-57.67	-25	-32.67	-63.68	4.20	10.21	H
	7750	-45.08	-25	-20.08	-51.94	5.12	11.98	H
	10332	-58.14	-25	-33.14	-65.18	5.86	12.90	H
	5170	-54.63	-25	-29.63	-60.64	4.20	10.21	V
	7750	-41.18	-25	-16.18	-48.04	5.12	11.98	V
	10332	-58.97	-25	-33.97	-66.01	5.86	12.90	V

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



LTE Band 66 / 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	3471	-62.11	-13	-49.11	-66.83	3.41	8.13	H
	5208	-55.02	-13	-42.02	-61.03	4.195	10.20	H
	6945	-53.73	-13	-40.73	-60.18	4.91	11.36	H
	3471	-62.10	-13	-49.10	-66.82	3.413	8.13	V
	5208	-56.79	-13	-43.79	-62.80	4.195	10.20	V
	6945	-54.56	-13	-41.56	-61.01	4.911	11.36	V

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

LTE Band 71 / 20MHz / 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	1348	-66.79	-13	-53.79	-67.72	2.06	5.14	H
	2022	-65.99	-13	-52.99	-66.21	2.57	4.94	H
	2696	-64.25	-13	-51.25	-65.33	3.04	6.27	H
	1348	-66.57	-13	-53.57	-67.50	2.06	5.14	V
	2022	-66.36	-13	-53.36	-66.58	2.57	4.94	V
	2696	-64.40	-13	-51.40	-65.48	3.04	6.27	V

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