



Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0042	PASS
40	Normal Voltage	0.0035	
30	Normal Voltage	0.0005	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0026	
0	Normal Voltage	0.0040	
-10	Normal Voltage	0.0011	
-20	Normal Voltage	0.0041	
-30	Normal Voltage	0.0006	
20	Maximum Voltage	0.0037	
20	Normal Voltage	0.0006	
20	Battery End Point	0.0026	

Note:

1. Normal Voltage =3.3 V. ; Battery End Point (BEP) =3 V. ; Maximum Voltage =3.6 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	0.0041	PASS
40	Normal Voltage	0.0035	
30	Normal Voltage	0.0005	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0026	
0	Normal Voltage	0.0040	
-10	Normal Voltage	0.0011	
-20	Normal Voltage	0.0043	
-30	Normal Voltage	0.0006	
20	Maximum Voltage	0.0036	
20	Normal Voltage	0.0006	
20	Battery End Point	0.0026	

Note:

1. Normal Voltage =3.3V. ; Battery End Point (BEP) =3V. ; Maximum Voltage =3.6V.
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	0.0044	PASS
40	Normal Voltage	0.0033	
30	Normal Voltage	0.0005	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0026	
0	Normal Voltage	0.0040	
-10	Normal Voltage	0.0011	
-20	Normal Voltage	0.0044	
-30	Normal Voltage	0.0005	
20	Maximum Voltage	0.0037	
20	Normal Voltage	0.0006	
20	Battery End Point	0.0026	

Note:

1. Normal Voltage =3.3V. ; Battery End Point (BEP) =3V. ; Maximum Voltage =3.6V
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	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0041	PASS
40	Normal Voltage	0.0035	
30	Normal Voltage	0.0005	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0026	
0	Normal Voltage	0.0040	
-10	Normal Voltage	0.0011	
-20	Normal Voltage	0.0044	
-30	Normal Voltage	0.0006	
20	Maximum Voltage	0.0037	
20	Normal Voltage	0.0006	
20	Battery End Point	0.0025	

Note:

1. Normal Voltage =3.3V. ; Battery End Point (BEP) =3V. ; Maximum Voltage =3.6V.
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	0.0042	PASS
40	Normal Voltage	0.0035	
30	Normal Voltage	0.0005	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0026	
0	Normal Voltage	0.0042	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0044	
-30	Normal Voltage	0.0006	
20	Maximum Voltage	0.0037	
20	Normal Voltage	0.0006	
20	Battery End Point	0.0026	

Note:

1. Normal Voltage =3.3V. ; Battery End Point (BEP) =3V. ; Maximum Voltage =3.6V.
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	0.0018	PASS
40	Normal Voltage	0.0029	
30	Normal Voltage	0.0007	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0035	
0	Normal Voltage	0.0015	
-10	Normal Voltage	0.0022	
-20	Normal Voltage	0.0010	
-30	Normal Voltage	0.0009	
20	Maximum Voltage	0.0039	
20	Normal Voltage	0.0016	
20	Battery End Point	0.0027	

Note:

1. Normal Voltage =3.3 V. ; Battery End Point (BEP) =3 V. ; Maximum Voltage =3.6 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 12 / 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)
Lowest	1400	-58.68	-13	-45.68	-59.89	2.319	5.68	H
	2098	-66.57	-13	-53.57	-67.20	3.02	5.80	H
	2798	-64.46	-13	-51.46	-66.92	3.27	7.88	H
	1400	-65.51	-13	-52.51	-66.72	2.32	5.68	V
	2098	-66.73	-13	-53.73	-67.36	3.02	5.80	V
	2798	-65.33	-13	-52.33	-67.79	3.27	7.88	V
Middle	1406	-57.25	-13	-44.25	-58.46	2.319	5.68	H
	2108	-65.97	-13	-52.97	-66.60	3.02	5.80	H
	2812	-63.93	-13	-50.93	-66.39	3.27	7.88	H
	1406	-66.39	-13	-53.39	-67.60	2.32	5.68	V
	2108	-66.91	-13	-53.91	-67.54	3.02	5.80	V
	2812	-65.26	-13	-52.26	-67.72	3.27	7.88	V
Highest	1414	-58.38	-13	-45.38	-59.59	2.319	5.68	H
	2120	-67.27	-13	-54.27	-67.90	3.02	5.80	H
	2826	-62.78	-13	-49.78	-65.24	3.27	7.88	H
	1412	-67.90	-13	-54.90	-69.11	2.32	5.68	V
	2119	-67.59	-13	-54.59	-68.22	3.02	5.80	V
	2826	-65.01	-13	-52.01	-67.47	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)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1554	-65.03	-13	-52.03	-66.74	2.23	6.09	H
	2331	-66.55	-13	-53.55	-67.08	2.83	5.51	H
	3108	-64.51	-13	-51.51	-66.45	3.21	7.30	H
	1554	-63.26	-13	-50.26	-64.97	2.23	6.09	V
	2331	-66.57	-13	-53.57	-67.10	2.83	5.51	V
	3108	-63.56	-13	-50.56	-65.50	3.21	7.30	V
Middle	1560	-68.35	-40	-28.35	-72.21	2.23	6.09	H
	2340	-66.69	-13	-53.69	-67.22	2.83	5.51	H
	3120	-65.15	-13	-52.15	-67.09	3.21	7.30	H
	1560	-67.11	-40	-27.11	-70.97	2.23	6.09	V
	2340	-66.76	-13	-53.76	-67.29	2.83	5.51	V
	3120	-64.74	-13	-51.74	-66.68	3.21	7.30	V
Highest	1564	-68.51	-40	-28.51	-72.37	2.23	6.09	H
	2346	-66.53	-13	-53.53	-67.06	2.83	5.51	H
	3132	-65.51	-13	-52.51	-67.45	3.21	7.30	H
	1564	-67.82	-40	-27.82	-71.68	2.23	6.09	V
	2346	-66.61	-13	-53.61	-67.14	2.83	5.51	V
	3132	-63.82	-13	-50.82	-65.76	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)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1556	-64.99	-13	-51.99	-66.70	2.23	6.09	H
	2332	-66.49	-13	-53.49	-67.02	2.83	5.51	H
	3108	-65.17	-13	-52.17	-67.11	3.21	7.30	H
	1554	-62.47	-13	-49.47	-64.18	2.23	6.09	V
	2332	-66.53	-13	-53.53	-67.06	2.83	5.51	V
	3108	-63.03	-13	-50.03	-64.97	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)
Lowest	3702	-60.53	-13	-47.53	-65.40	3.55	8.42	H
	5553	-57.14	-13	-44.14	-63.48	4.34	10.68	H
	7404	-52.47	-13	-39.47	-59.27	5.14	11.94	H
	3702	-59.11	-13	-46.11	-63.98	3.55	8.42	V
	5553	-55.65	-13	-42.65	-61.99	4.34	10.68	V
	7404	-52.01	-13	-39.01	-58.81	5.14	11.94	V
Middle	3747	-60.47	-13	-47.47	-65.34	3.55	8.42	H
	5619	-56.46	-13	-43.46	-62.80	4.34	10.68	H
	7494	-52.13	-13	-39.13	-58.93	5.14	11.94	H
	3747	-58.28	-13	-45.28	-63.15	3.55	8.42	V
	5622	-53.22	-13	-40.22	-59.56	4.34	10.68	V
	7494	-51.98	-13	-38.98	-58.78	5.14	11.94	V
Highest	3792	-59.16	-13	-46.16	-64.03	3.55	8.42	H
	5688	-55.90	-13	-42.90	-62.24	4.34	10.68	H
	7584	-52.00	-13	-39.00	-58.80	5.14	11.94	H
	3792	-54.62	-13	-41.62	-59.49	3.55	8.42	V
	5688	-55.04	-13	-42.04	-61.38	4.34	10.68	V
	7584	-51.53	-13	-38.53	-58.33	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)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1650	-67.41	-13	-54.41	-68.62	2.32	5.68	H
	2474	-65.52	-13	-52.52	-66.15	3.02	5.80	H
	3300	-63.35	-13	-50.35	-65.81	3.27	7.88	H
	1650	-65.70	-13	-52.70	-66.91	2.32	5.68	V
	2474	-65.85	-13	-52.85	-66.48	3.02	5.80	V
	3300	-53.26	-13	-40.26	-55.72	3.27	7.88	V
Middle	1660	-69.18	-13	-56.18	-70.39	2.32	5.68	H
	2488	-65.13	-13	-52.13	-65.76	3.02	5.80	H
	3318	-61.09	-13	-48.09	-63.55	3.27	7.88	H
	1660	-66.85	-13	-53.85	-68.06	2.32	5.68	V
	2488	-66.44	-13	-53.44	-67.07	3.02	5.80	V
	3318	-51.71	-13	-38.71	-54.17	3.27	7.88	V
Highest	1668	-68.60	-13	-55.60	-69.81	2.32	5.68	H
	2504	-66.14	-13	-53.14	-66.77	3.02	5.80	H
	3339	-64.54	-13	-51.54	-67.00	3.27	7.88	H
	1670	-67.28	-13	-54.28	-68.49	2.32	5.68	V
	2504	-66.55	-13	-53.55	-67.18	3.02	5.80	V
	3342	-59.23	-13	-46.23	-61.69	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)
Lowest	5000	-40.58	-25	-15.58	-46.59	4.20	10.21	H
	7504	-50.57	-25	-25.57	-57.43	5.12	11.98	H
	10000	-59.22	-25	-34.22	-66.26	5.86	12.90	H
	5000	-36.29	-25	-11.29	-42.30	4.20	10.21	V
	7504	-45.10	-25	-20.10	-51.96	5.12	11.98	V
	10000	-58.26	-25	-33.26	-65.30	5.86	12.90	V
Middle	5168	-39.75	-25	-14.75	-45.76	4.20	10.21	H
	7751	-49.45	-25	-24.45	-56.31	5.12	11.98	H
	10336	-53.07	-25	-28.07	-60.11	5.86	12.90	H
	5168	-34.54	-25	-9.54	-40.55	4.20	10.21	V
	7751	-40.53	-25	-15.53	-47.39	5.12	11.98	V
	10340	-46.75	-25	-21.75	-53.79	5.86	12.90	V
Highest	5340	-39.21	-25	-14.21	-45.22	4.20	10.21	H
	8013	-46.02	-25	-21.02	-52.88	5.12	11.98	H
	10684	-45.45	-25	-20.45	-52.49	5.86	12.90	H
	5340	-32.43	-25	-7.43	-38.44	4.20	10.21	V
	8013	-36.78	-25	-11.78	-43.64	5.12	11.98	V
	10684	-37.95	-25	-12.95	-44.99	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)
Lowest	3423	-32.69	-13	-19.69	-39.38	1.75	8.44	H
	5133	-53.83	-13	-40.83	-62.25	1.94	10.36	H
	6840	-49.58	-13	-36.58	-58.82	2.47	11.71	H
	3423	-43.52	-13	-30.52	-50.21	1.75	8.44	V
	5133	-53.28	-13	-40.28	-61.70	1.94	10.36	V
	6840	-47.02	-13	-34.02	-56.26	2.47	11.71	V
Middle	3471	-27.41	-13	-14.41	-34.10	1.75	8.44	H
	5208	-50.35	-13	-37.35	-58.77	1.94	10.36	H
	6942	-43.76	-13	-30.76	-53.00	2.47	11.71	H
	3471	-41.32	-13	-28.32	-48.01	1.75	8.44	V
	5208	-52.18	-13	-39.18	-60.60	1.94	10.36	V
	6942	-43.30	-13	-30.30	-52.54	2.47	11.71	V
Highest	3522	-33.92	-13	-20.92	-40.61	1.75	8.44	H
	5283	-54.13	-13	-41.13	-62.55	1.94	10.36	H
	7044	-50.28	-13	-37.28	-59.52	2.47	11.71	H
	3522	-47.56	-13	-34.56	-54.25	1.75	8.44	V
	5283	-53.91	-13	-40.91	-62.33	1.94	10.36	V
	7044	-49.68	-13	-36.68	-58.92	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)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648.32	-69.97	-13	-56.97	-76.94	1.58	10.70	H
	2472	-66.34	-13	-53.34	-74.59	2.102	12.50	H
	3297	-63.75	-13	-50.75	-72.64	2.856	13.90	H
	1648	-66.77	-13	-53.77	-75.54	3.18	14.10	V
	2472.48	-66.04	-13	-53.04	-73.28	3.31	12.70	V
	3297	-58.11	-13	-45.11	-65.70	3.41	13.15	V
Middle	1672	-67.07	-13	-54.07	-74.04	1.58	10.70	H
	2507.88	-66.29	-13	-53.29	-74.54	2.102	12.50	H
	3345	-59.93	-13	-46.93	-68.82	2.856	13.90	H
	4179.8	-63.98	-13	-50.98	-72.44	2.689	13.30	H
	5015.76	-62.46	-13	-49.46	-70.22	3.093	13.00	H
	5853	-61.85	-13	-48.85	-70.62	3.178	14.10	H
	6687	-57.39	-13	-44.39	-64.63	3.306	12.70	H
	7524	-55.45	-13	-42.45	-63.04	3.406	13.15	H
	1672	-65.77	-13	-52.77	-72.74	1.58	10.70	V
	2508	-66.16	-13	-53.16	-74.41	2.10	12.50	V
	3345	-53.77	-13	-40.77	-62.66	2.86	13.90	V
	4179	-63.45	-13	-50.45	-71.91	2.69	13.30	V
	5015.76	-61.73	-13	-48.73	-69.49	3.09	13.00	V
	5851.72	-60.15	-13	-47.15	-68.92	3.18	14.10	V
	6687	-55.58	-13	-42.58	-62.82	3.31	12.70	V
	7524	-51.58	-13	-38.58	-59.17	3.41	13.15	V
Highest	1696	-65.55	-13	-52.55	-72.52	1.58	10.70	H
	2544	-62.59	-13	-49.59	-70.84	2.102	12.50	H
	3390	-63.06	-13	-50.06	-71.95	2.856	13.90	H
	1696	-60.77	-13	-47.77	-69.54	3.18	14.10	V
	2544	-62.08	-13	-49.08	-69.32	3.31	12.70	V
	3390	-55.33	-13	-42.33	-62.92	3.41	13.15	V

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