















































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	0.0027	
30	Normal Voltage	0.0007	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0009	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0025	
-30	Normal Voltage	0.0028	
20	Maximum Voltage	0.0002	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0013	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.7 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	0.0021	PASS
40	Normal Voltage	0.0016	
30	Normal Voltage	0.0023	
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	0.0033	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0004	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.7 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	0.0017	PASS
40	Normal Voltage	0.0062	
30	Normal Voltage	0.0080	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0010	
0	Normal Voltage	0.0073	
-10	Normal Voltage	0.0014	
-20	Normal Voltage	0.0057	
-30	Normal Voltage	0.0081	
20	Maximum Voltage	0.0054	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0002	

Note: Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.7 V. ; Maximum Voltage =4.4 V.



Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0025	PASS
40	Normal Voltage	0.0029	
30	Normal Voltage	0.0008	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0018	
0	Normal Voltage	0.0034	
-10	Normal Voltage	0.0002	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0021	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0027	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.7 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Test Conditions		LTE Band 38 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0008	PASS
40	Normal Voltage	0.0009	
30	Normal Voltage	0.0024	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0028	
0	Normal Voltage	0.0018	
-10	Normal Voltage	0.0003	
-20	Normal Voltage	0.0005	
-30	Normal Voltage	0.0003	
20	Maximum Voltage	0.0026	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0024	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.7 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								
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	-62.97	-13	-49.97	-67.84	3.55	8.42	H
	5613	-57.66	-13	-44.66	-64.00	4.34	10.68	H
	7485	-53.86	-13	-40.86	-60.66	5.14	11.94	H
	3741	-62.44	-13	-49.44	-67.31	3.55	8.42	V
	5613	-54.62	-13	-41.62	-60.96	4.34	10.68	V
	7485	-54.34	-13	-41.34	-61.14	5.14	11.94	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	-64.66	-13	-51.66	-69.38	3.41	8.13	H
	5172	-49.49	-13	-36.49	-55.50	4.195	10.20	H
	6894	-55.72	-13	-42.72	-62.17	4.91	11.36	H
	3447	-64.63	-13	-51.63	-69.35	3.413	8.13	V
	5172	-55.22	-13	-42.22	-61.23	4.195	10.20	V
	6894	-56.40	-13	-43.40	-62.85	4.911	11.36	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	-68.87	-13	-55.87	-70.08	2.32	5.68	H
	2496	-66.63	-13	-53.63	-67.26	3.02	5.80	H
	3330	-64.75	-13	-51.75	-67.21	3.27	7.88	H
	1664	-68.63	-13	-55.63	-69.84	2.32	5.68	V
	2496	-66.16	-13	-53.16	-66.79	3.02	5.80	V
	3330	-65.34	-13	-52.34	-67.80	3.27	7.88	V

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

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	-51.77	-25	-26.77	-57.78	4.20	10.21	H
	7580	-45.33	-25	-20.33	-52.19	5.12	11.98	H
	10104	-52.75	-25	-27.75	-59.79	5.86	12.90	H
	5050	-56.72	-25	-31.72	-62.73	4.20	10.21	V
	7580	-44.02	-25	-19.02	-50.88	5.12	11.98	V
	10104	-57.30	-25	-32.30	-64.34	5.86	12.90	V

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

LTE Band 38 / 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	-51.22	-25	-26.22	-57.23	4.20	10.21	H
	7760	-55.22	-25	-30.22	-62.08	5.12	11.98	H
	10344	-54.84	-25	-29.84	-61.88	5.86	12.90	H
	5170	-58.31	-25	-33.31	-64.32	4.20	10.21	V
	7760	-56.12	-25	-31.12	-62.98	5.12	11.98	V
	10344	-58.12	-25	-33.12	-65.16	5.86	12.90	V

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



For CA:

LTE Band 7C_CA / 10M+20M / 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	5060	-52.35	-25	-27.35	-58.36	4.20	10.21	H
	7590	-53.80	-25	-28.80	-60.66	5.12	11.98	H
	10125	-54.48	-25	-29.48	-61.52	5.86	12.90	H
	5060	-54.50	-25	-29.50	-60.51	4.20	10.21	V
	7590	-55.36	-25	-30.36	-62.22	5.12	11.98	V
	10125	-57.56	-25	-32.56	-64.60	5.86	12.90	V

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

LTE Band 38C_CA / 20M+20M / 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	5150	-53.59	-25	-28.59	-59.60	4.20	10.21	H
	7730	-46.31	-25	-21.31	-53.17	5.12	11.98	H
	10305	-53.42	-25	-28.42	-60.46	5.86	12.90	H
	5150	-54.34	-25	-29.34	-60.35	4.20	10.21	V
	7730	-44.60	-25	-19.60	-51.46	5.12	11.98	V
	10305	-58.90	-25	-33.90	-65.94	5.86	12.90	V

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