





Frequency Stability

Test Conditions		LTE Band 71 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0003	PASS
40	Normal Voltage	0.0013	
30	Normal Voltage	0.0016	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0010	
0	Normal Voltage	0.0001	
-10	Normal Voltage	0.0009	
-20	Normal Voltage	0.0012	
-30	Normal Voltage	0.0003	
20	Maximum Voltage	0.0007	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0026	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 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

Top Antenna:

LTE Band 12 / 10MHz / QPSK									
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	-62.31	-13	-49.31	-70.27	-65.56	4.00	9.40	H
	2109	-63.67	-13	-50.67	-73.33	-67.24	4.88	10.60	H
	2812	-62.10	-13	-49.10	-73.96	-67.03	5.52	12.60	H
	1406	-62.54	-13	-49.54	-70.58	-65.79	4.00	9.40	V
	2109	-63.63	-13	-50.63	-73.66	-67.20	4.88	10.60	V
	2812	-61.83	-13	-48.83	-73.93	-66.76	5.52	12.60	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)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1559.5	-63.63	-42.15	-21.48	-70.41	-66.88	4.00	9.40	H
	2339.25	-55.20	-13	-42.20	-65.99	-58.77	4.88	10.60	H
	3119	-62.65	-13	-49.65	-75.54	-67.58	5.52	12.60	H
	1559.5	-65.71	-42.15	-23.56	-72.70	-68.96	4.00	9.40	V
	2339.25	-60.22	-13	-47.22	-71.40	-63.79	4.88	10.60	V
	3119	-62.09	-13	-49.09	-75.49	-67.02	5.52	12.60	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)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1555	-66.23	-13	-53.23	-72.91	-69.48	4.00	9.40	H
	2332.5	-55.60	-13	-42.60	-66.30	-59.17	4.88	10.60	H
	3110	-62.82	-13	-49.82	-75.46	-67.75	5.52	12.60	H
	1555	-66.03	-13	-53.03	-72.92	-69.28	4.00	9.40	V
	2332.5	-58.93	-13	-45.93	-70.02	-62.50	4.88	10.60	V
	3110	-62.42	-13	-49.42	-75.57	-67.35	5.52	12.60	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)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3747	-55.15	-13	-42.15	-77.49	-61.90	5.85	12.60	H
	5620.5	-54.97	-13	-41.97	-79.17	-60.77	7.30	13.10	H
	7494	-53.44	-13	-40.44	-79.84	-56.59	8.35	11.50	H
	3747	-51.86	-13	-38.86	-77.36	-58.61	5.85	12.60	V
	5620.5	-54.40	-13	-41.40	-79.1	-60.20	7.30	13.10	V
	7494	-53.29	-13	-40.29	-79.68	-56.44	8.35	11.50	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)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1659.5	-66.17	-13	-53.17	-72.29	-69.42	4.00	9.40	H
	2489.25	-65.15	-13	-52.15	-75.36	-68.72	4.88	10.60	H
	3319	-64.14	-13	-51.14	-76.18	-69.07	5.52	12.60	H
	1659.5	-66.13	-13	-53.13	-72.06	-69.38	4.00	9.40	V
	2489.25	-64.75	-13	-51.75	-75.31	-68.32	4.88	10.60	V
	3319	-63.66	-13	-50.66	-76.12	-68.59	5.52	12.60	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)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3472	-54.62	-13	-41.62	-67.23	-61.47	5.65	12.50	H
	5208	-61.16	-13	-48.16	-78.30	-66.83	7.13	12.80	H
	6944	-58.07	-13	-45.07	-78.67	-61.47	8.40	11.80	H
	3472	-50.75	-13	-37.75	-63.91	-57.60	5.65	12.50	V
	5208	-61.05	-13	-48.05	-78.14	-66.72	7.13	12.80	V
	6944	-57.87	-13	-44.87	-78.52	-61.27	8.40	11.80	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)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1343	-64.87	-13	-51.87	-71.76	-68.12	4.00	9.40	H
	2014.5	-66.32	-13	-53.32	-74.31	-69.89	4.88	10.60	H
	2686	-63.49	-13	-50.49	-74.41	-68.42	5.52	12.60	H
	1343	-65.13	-13	-52.13	-71.97	-68.38	4.00	9.40	V
	2014.5	-65.88	-13	-52.88	-74.29	-69.45	4.88	10.60	V
	2686	-63.24	-13	-50.24	-74.46	-68.17	5.52	12.60	V

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

Bottom Antenna:

LTE Band 12 / 10MHz / QPSK									
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	-62.80	-13	-49.80	-70.76	-66.05	4.00	9.40	H
	2109	-64.54	-13	-51.54	-74.20	-68.11	4.88	10.60	H
	2812	-62.84	-13	-49.84	-74.70	-67.77	5.52	12.60	H
	1406	-63.00	-13	-50.00	-71.04	-66.25	4.00	9.40	V
	2109	-64.56	-13	-51.56	-74.59	-68.13	4.88	10.60	V
	2812	-62.82	-13	-49.82	-74.92	-67.75	5.52	12.60	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)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3747	-54.90	-13	-41.90	-77.24	-61.65	5.85	12.60	H
	5620.5	-54.44	-13	-41.44	-78.64	-60.24	7.30	13.10	H
	7494	-53.51	-13	-40.51	-79.91	-56.66	8.35	11.50	H
	3747	-51.03	-13	-38.03	-76.53	-57.78	5.85	12.60	V
	5620.5	-54.52	-13	-41.52	-79.22	-60.32	7.30	13.10	V
	7494	-53.60	-13	-40.60	-79.99	-56.75	8.35	11.50	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)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1659.5	-66.22	-13	-53.22	-72.34	-69.47	4.00	9.40	H
	2489.25	-64.99	-13	-51.99	-75.20	-68.56	4.88	10.60	H
	3319	-63.88	-13	-50.88	-75.92	-68.81	5.52	12.60	H
	1659.5	-66.37	-13	-53.37	-72.30	-69.62	4.00	9.40	V
	2489.25	-64.54	-13	-51.54	-75.10	-68.11	4.88	10.60	V
	3319	-63.37	-13	-50.37	-75.83	-68.30	5.52	12.60	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)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1343	-64.81	-13	-51.81	-71.70	-68.06	4.00	9.40	H
	2014.5	-66.16	-13	-53.16	-74.15	-69.73	4.88	10.60	H
	2686	-63.49	-13	-50.49	-74.41	-68.42	5.52	12.60	H
	1343	-65.04	-13	-52.04	-71.88	-68.29	4.00	9.40	V
	2014.5	-65.84	-13	-52.84	-74.25	-69.41	4.88	10.60	V
	2686	-63.02	-13	-50.02	-74.24	-67.95	5.52	12.60	V

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