

Appendix B: Test Results of Radiated Spurious Emissions

Worst Mode 30MHz ~ 1000MHz

LTE Band 4											
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor	Pre-Amplifier	Correction Factor (dB/m)
High	Horizontal										
	101	-67.1	-13	-54.1	236	360	38.66	15.48	0.78	26.76	-105.76
	263	-73.62	-13	-60.62	300	260	27.63	18.85	1.24	26.08	-101.25
	398	-69.83	-13	-56.83	189	360	28.34	22.23	1.55	26.69	-98.17
	555	-67.02	-13	-54.02	200	314	28.28	25.59	1.86	27.49	-95.3
	710	-64.07	-13	-51.07	300	272	29.01	27.58	2.08	27.48	-93.08
	924	-60.81	-13	-47.81	200	43	29.18	29.99	2.38	27.1	-89.99
	Vertical										
	108	-63.77	-13	-50.77	113	360	41.41	16.01	0.8	26.73	-105.18
	222	-70.37	-13	-57.37	100	54	32.97	16.98	1.14	26.2	-103.34
	401	-69.79	-13	-56.79	100	102	28.4	22.23	1.55	26.71	-98.19
	551	-66.56	-13	-53.56	100	275	28.92	25.41	1.85	27.48	-95.48
	730	-62.85	-13	-49.85	300	183	30.24	27.51	2.11	27.45	-93.09
	904	-61.71	-13	-48.71	200	25	28.83	29.5	2.36	27.14	-90.54

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre\ Amp(dB) + 20\log(D) - 104.8$
3. $Margin\ value = EIRP - Limit$
4. The other EIRP levels were very low against the limit.

LTE Band 13											
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor	Pre-Amplifier	Correction Factor (dB/m)
Mid	Horizontal										
	99	-73.08	-13	-60.08	165	360	35.23	15.1	0.77	26.77	-106.16
	244	-76.81	-13	-63.81	200	360	27.15	18.4	1.19	26.14	-101.81
	384	-71.52	-13	-58.52	100	48	29	21.96	1.51	26.58	-98.37
	555	-69.17	-13	-56.17	100	223	28.28	25.59	1.86	27.49	-95.3
	710	-65.73	-13	-52.73	100	174	29.5	27.58	2.08	27.48	-93.08
	845	-63.07	-13	-50.07	200	352	30.24	29.08	2.28	27.26	-91.16
	Vertical										
	108	-67.29	-13	-54.29	100	332	40.04	16.01	0.8	26.73	-105.18
	222	-73	-13	-60	256	360	32.49	16.98	1.14	26.2	-103.34
	360	-72.16	-13	-59.16	100	11	28.78	21.42	1.46	26.41	-98.79
	493	-70.29	-13	-57.29	300	116	28.87	23.85	1.74	27.34	-97.01
	630	-68.26	-13	-55.26	100	88	28.12	26.6	1.98	27.55	-94.23
	845	-63.85	-13	-50.85	100	76	29.46	29.08	2.28	27.26	-91.16

Remarks:

1. $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m) - 2.15$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre\ Amp(dB) + 20\log(D) - 104.8$
3. $Margin\ value = ERP - Limit$
4. The other ERP levels were very low against the limit.

1GHz ~ 18GHz

LTE Band 4											
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor	Pre-Amplifier	Correction Factor (dB/m)
Low	Horizontal										
	3422	-51.75	-13	-38.75	400	179	54.39	33	7.27	51.15	-106.14
	5133	-49.22	-13	-36.22	328	360	53.59	35.07	8.97	51.59	-102.81
	6844	-55.58	-13	-42.58	300	342	45.49	36.1	10.43	52.34	-101.07
	Vertical										
	3422	-56.21	-13	-43.21	400	195	49.93	33	7.27	51.15	-106.14
	5133	-51.04	-13	-38.04	200	46	51.77	35.07	8.97	51.59	-102.81
	6844	-55.41	-13	-42.41	400	59	45.66	36.1	10.43	52.34	-101.07
Mid	Horizontal										
	3447	-54.36	-13	-41.36	100	275	51.76	33	7.29	51.15	-106.12
	5170	-40.7	-13	-27.7	200	247	62.02	35.14	9	51.6	-102.72
	6894	-56.16	-13	-43.16	200	360	45.06	35.92	10.47	52.35	-101.22
	Vertical										
	3447	-57.36	-13	-44.36	100	297	48.76	33	7.29	51.15	-106.12
	5170	-43.54	-13	-30.54	299	360	59.18	35.14	9	51.6	-102.72
	6894	-55.54	-13	-42.54	200	294	45.68	35.92	10.47	52.35	-101.22
High	Horizontal										
	3472	-53.57	-13	-40.57	100	68	52.52	33	7.32	51.15	-106.09
	5208	-37.47	-13	-24.47	100	84	65.21	35.15	9.04	51.61	-102.68
	6944	-54.71	-13	-41.71	100	158	46.24	36.16	10.51	52.36	-100.95
	Vertical										
	3472	-55.91	-13	-42.91	300	234	50.18	33	7.32	51.15	-106.09
	5208	-37.13	-13	-24.13	100	24	65.55	35.15	9.04	51.61	-102.68
	6944	-54.89	-13	-41.89	200	317	46.06	36.16	10.51	52.36	-100.95

Remarks:

- EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre Amp(dB) + 20log(D) – 104.8
- Margin value = EIRP – Limit
- The other EIRP levels were very low against the limit.

1GHz ~ 9GHz

LTE Band 12											
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor	Pre-Amplifier	Correction Factor (dB/m)
Low	Horizontal										
	1407	-62.71	-13	-49.71	300	284	52.48	28.57	4.54	50.89	-113.04
	2111	-37.75	-13	-24.75	400	237	73.14	31.92	5.66	51.06	-108.74
	3519	-49.62	-13	-36.62	100	78	58.49	33.08	7.37	51.15	-105.96
	Vertical										
	1407	-59.24	-13	-46.24	200	346	55.95	28.57	4.54	50.89	-113.04
	2111	-30.51	-13	-17.51	400	356	80.38	31.92	5.66	51.06	-108.74
	3519	-49.95	-13	-36.95	100	346	58.16	33.08	7.37	51.15	-105.96
Mid	Horizontal										
	1414	-59.41	-13	-46.41	100	360	55.8	28.54	4.55	50.89	-113.06
	2122	-56.43	-13	-43.43	200	341	54.42	31.94	5.68	51.06	-108.7
	2829	-59.76	-13	-46.76	200	191	49.49	32.7	6.59	51.13	-107.1
	Vertical										
	1414	-56.4	-13	-43.4	100	360	58.81	28.54	4.55	50.89	-113.06
	2122	-40.43	-13	-27.43	200	341	70.42	31.94	5.68	51.06	-108.7
	2829	-59.97	-13	-46.97	200	191	49.28	32.7	6.59	51.13	-107.1
High	Horizontal										
	1421	-58.65	-13	-45.65	100	256	56.57	28.52	4.56	50.89	-113.07
	2132	-56.1	-13	-43.1	166	360	54.73	31.96	5.69	51.07	-108.68
	3554	-59.66	-13	-46.66	100	56	48.28	33.21	7.41	51.15	-105.79
	Vertical										
	1421	-51.47	-13	-38.47	300	118	63.75	28.52	4.56	50.89	-113.07
	2132	-40.11	-13	-27.11	200	360	70.72	31.96	5.69	51.07	-108.68
	3554	-50.56	-13	-37.56	200	360	57.38	33.21	7.41	51.15	-105.79

Remarks:

- ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m) – 2.15
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre Amp(dB) + 20log(D) – 104.8
- Margin value = ERP – Limit
- The other ERP levels were very low against the limit.

1GHz ~ 9GHz

LTE Band 13											
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor	Pre-Amplifier	Correction Factor (dB/m)
Low	Horizontal										
	1563	-53.45	-40	-13.45	300	239	61.93	28.15	4.79	50.91	-113.23
	2344	-49.99	-13	-36.99	300	107	59.98	32.56	5.97	51.09	-107.82
	3126	-58.93	-13	-45.93	100	360	49.47	33.2	6.95	51.14	-106.25
	3908	-53.14	-13	-40.14	400	233	53.69	33.97	7.79	51.18	-104.68
	Vertical										
	1563	-45.92	-40	-5.92	186	360	69.46	28.15	4.79	50.91	-113.23
	2344	-51.74	-13	-38.74	400	360	58.23	32.56	5.97	51.09	-107.82
	3126	-57.84	-13	-44.84	300	360	50.56	33.2	6.95	51.14	-106.25
	3908	-48.25	-13	-35.25	100	168	58.58	33.97	7.79	51.18	-104.68
Mid	Horizontal										
	1564	-56.53	-40	-16.53	300	239	58.85	28.15	4.79	50.91	-113.23
	2346	-52.84	-13	-39.84	400	163	57.13	32.56	5.97	51.09	-107.82
	3128	-61.06	-13	-48.06	200	198	47.34	33.2	6.95	51.14	-106.25
	3910	-54.75	-13	-41.75	400	90	52.09	33.96	7.79	51.18	-104.69
	Vertical										
	1564	-50.88	-40	-10.88	100	305	64.5	28.15	4.79	50.91	-113.23
	2346	-41.82	-13	-28.82	200	355	68.15	32.56	5.97	51.09	-107.82
	3128	-57.13	-13	-44.13	400	360	51.27	33.2	6.95	51.14	-106.25
	3910	-52.39	-13	-39.39	300	172	54.45	33.96	7.79	51.18	-104.69

LTE Band 13											
High	Horizontal										
	1573	-57.13	-40	-17.13	300	32	58.19	28.19	4.81	50.91	-113.17
	2359	-53.91	-13	-40.91	200	360	56.03	32.58	5.98	51.09	-107.79
	3146	-59.38	-13	-46.38	300	205	49	33.2	6.97	51.14	-106.23
	3933	-58.02	-13	-45.02	400	50	48.88	33.87	7.82	51.18	-104.75
	Vertical										
	1573	-49.98	-40	-9.98	247	360	65.34	28.19	4.81	50.91	-113.17
	2359	-56.36	-13	-43.36	100	360	53.58	32.58	5.98	51.09	-107.79
	3146	-56.8	-13	-43.8	200	225	51.58	33.2	6.97	51.14	-106.23
	3933	-52.94	-13	-39.94	200	197	53.96	33.87	7.82	51.18	-104.75

Remarks:

1. $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m) - 2.15$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre\ Amp(dB) + 20\log(D) - 104.8$
3. $Margin\ value = ERP - Limit$
4. The other ERP levels were very low against the limit.

1GHz ~ 18GHz

LTE Band 66											
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor	Pre-Amplifier	Correction Factor (dB/m)
Low	Horizontal										
	3422	-50.85	-13	-37.85	400	137	55.29	33	7.27	51.15	-106.14
	5133	-43.88	-13	-30.88	300	225	58.93	35.07	8.97	51.59	-102.81
	6845	-54.78	-13	-41.78	400	54	46.29	36.1	10.43	52.34	-101.07
	Vertical										
	3422	-53.31	-13	-40.31	200	114	52.83	33	7.27	51.15	-106.14
	5133	-37.53	-13	-24.53	300	42	65.28	35.07	8.97	51.59	-102.81
	6845	-55.77	-13	-42.77	300	167	45.3	36.1	10.43	52.34	-101.07
Mid	Horizontal										
	3472	-53.2	-13	-40.2	300	241	52.89	33	7.32	51.15	-106.09
	5208	-48.23	-13	-35.23	400	300	54.45	35.15	9.04	51.61	-102.68
	6944	-55.43	-13	-42.43	400	360	45.52	36.16	10.51	52.36	-100.95
	Vertical										
	3472	-55.34	-13	-42.34	300	223	50.75	33	7.32	51.15	-106.09
	5208	-51.51	-13	-38.51	100	339	51.17	35.15	9.04	51.61	-102.68
	6944	-55.79	-13	-42.79	400	38	45.16	36.16	10.51	52.36	-100.95
High	Horizontal										
	3522	-51.23	-13	-38.23	300	358	54.72	33.09	7.37	51.15	-105.95
	5283	-40.81	-13	-27.81	300	360	61.75	35.23	9.1	51.63	-102.56
	7045	-54.78	-13	-41.78	300	219	46.35	35.93	10.58	52.38	-101.13
	Vertical										
	3522	-53.02	-13	-40.02	400	107	52.93	33.09	7.37	51.15	-105.95
	5283	-45.19	-13	-32.19	267	360	57.37	35.23	9.1	51.63	-102.56
	7045	-55.36	-13	-42.36	200	334	45.77	35.93	10.58	52.38	-101.13

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre\ Amp(dB) + 20\log(D) - 104.8$
3. $Margin\ value = EIRP - Limit$
4. The other EIRP levels were very low against the limit.