

Appendix B.1

LTE-NB1 Band 2



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Effective (Isotropic) Radiated Power Output Data

Test Result

Test Band	Test Mode	Sub-carrier Spacing (kHz)	Test channel	Number of T	Conducted Power (dBm)	EIRP (dBm)	limit (dBm)	Verdict
NB1 Band 2	BPSK	3.75	18601	1T0	23.5	26.6	33	PASS
NB1 Band 2	BPSK	3.75	18601	1T47	23.47	26.57	33	PASS
NB1 Band 2	BPSK	3.75	18900	1T0	23.4	26.5	33	PASS
NB1 Band 2	BPSK	3.75	18900	1T47	23.41	26.51	33	PASS
NB1 Band 2	BPSK	3.75	19199	1T0	23.32	26.42	33	PASS
NB1 Band 2	BPSK	3.75	19199	1T47	23.35	26.45	33	PASS
NB1 Band 2	QPSK	3.75	18601	1T0	23.31	26.41	33	PASS
NB1 Band 2	QPSK	3.75	18601	1T47	23.2	26.3	33	PASS
NB1 Band 2	QPSK	3.75	18900	1T0	23.03	26.13	33	PASS
NB1 Band 2	QPSK	3.75	18900	1T47	23.37	26.47	33	PASS
NB1 Band 2	QPSK	3.75	19199	1T0	23.21	26.31	33	PASS
NB1 Band 2	QPSK	3.75	19199	1T47	23.35	26.45	33	PASS



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Test Band	Test Mode	Sub-carrier Spacing (kHz)	Test channel	Number of T	Conducted Power (dBm)	EIRP (dBm)	limit (dBm)	Verdict
NB1 Band 2	BPSK	15	18601	1T0	23.38	26.48	33	PASS
NB1 Band 2	BPSK	15	18601	1T11	23.31	26.41	33	PASS
NB1 Band 2	BPSK	15	18900	1T0	23.41	26.51	33	PASS
NB1 Band 2	BPSK	15	18900	1T11	23.45	26.55	33	PASS
NB1 Band 2	BPSK	15	19199	1T0	23.47	26.57	33	PASS
NB1 Band 2	BPSK	15	19199	1T11	23.31	26.41	33	PASS
NB1 Band 2	QPSK	15	18601	1T0	23.33	26.43	33	PASS
NB1 Band 2	QPSK	15	18601	1T11	23.41	26.51	33	PASS
NB1 Band 2	QPSK	15	18601	12T0	21.52	24.62	33	PASS
NB1 Band 2	QPSK	15	18900	1T0	23.38	26.48	33	PASS
NB1 Band 2	QPSK	15	18900	1T11	23.44	26.54	33	PASS
NB1 Band 2	QPSK	15	18900	12T0	21.51	24.61	33	PASS
NB1 Band 2	QPSK	15	19199	1T0	23.39	26.49	33	PASS
NB1 Band 2	QPSK	15	19199	1T11	23.47	26.57	33	PASS
NB1 Band 2	QPSK	15	19199	12T0	21.41	24.51	33	PASS



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Field Strength of Spurious Radiation

Test Band = NB-IOT Band 2_ TM1

Test Channel = Low Channel

Final Data List										
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3705	67.05	-45.69	30.30	-43.60	-13.00	30.60	142	86	Horizontal
2	5557.5	47.50	-43.87	33.30	-58.34	-13.00	45.34	265	38	Horizontal
3	6933	42.05	-42.48	35.97	-59.72	-13.00	46.72	284	199	Horizontal
4	9533.25	39.22	-38.13	37.76	-56.41	-13.00	43.41	142	0	Horizontal
5	11244	35.85	-35.14	38.40	-56.15	-13.00	43.15	263	55	Horizontal
6	13557	36.10	-34.29	39.99	-53.46	-13.00	40.46	285	101	Horizontal

Final Data List										
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3705	65.46	-45.69	30.30	-45.19	-13.00	32.19	142	291	Vertical
2	5557.5	47.42	-43.87	33.30	-58.42	-13.00	45.42	265	258	Vertical
3	7410	42.42	-41.94	36.49	-58.29	-13.00	45.29	284	96	Vertical
4	7848	41.18	-40.64	36.95	-57.77	-13.00	44.77	142	227	Vertical
5	9537	39.53	-38.13	37.76	-56.10	-13.00	43.10	263	145	Vertical
6	13565.25	36.67	-34.38	40.00	-52.98	-13.00	39.98	254	3	Vertical



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Test Band = NB-IOT Band 2_ TM1

Test Channel = Mid Channel

Final Data List										
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3759.75	71.36	-45.54	30.48	-38.96	-13.00	25.96	102	266	Horizontal
2	5640	46.85	-43.81	33.58	-58.65	-13.00	45.65	265	84	Horizontal
3	7519.5	42.43	-41.53	36.62	-57.74	-13.00	44.74	284	328	Horizontal
4	9429	39.41	-38.16	37.73	-56.28	-13.00	43.28	142	9	Horizontal
5	13055.25	36.17	-34.67	39.64	-54.12	-13.00	41.12	263	116	Horizontal
6	15210.75	34.09	-32.63	39.70	-54.10	-13.00	41.10	228	3	Horizontal

Final Data List										
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3759.75	70.33	-45.54	30.48	-39.99	-13.00	26.99	201	144	Vertical
2	5640	50.66	-43.81	33.58	-54.84	-13.00	41.84	142	322	Vertical
3	7519.5	47.50	-41.53	36.62	-52.67	-13.00	39.67	265	337	Vertical
4	9441.75	39.26	-38.16	37.73	-56.42	-13.00	43.42	284	31	Vertical
5	13566.75	36.57	-34.40	40.00	-53.09	-13.00	40.09	142	360	Vertical
6	15178.5	34.50	-32.88	39.76	-53.88	-13.00	40.88	263	63	Vertical



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Test Band = NB-IOT Band 2_ TM1

Test Channel = High Channel

Final Data List										
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3810	65.84	-45.44	30.65	-44.20	-13.00	31.20	254	52	Horizontal
2	6006	41.62	-43.33	34.81	-62.15	-13.00	49.15	142	0	Horizontal
3	7619.25	43.79	-41.27	36.72	-56.02	-13.00	43.02	263	327	Horizontal
4	9582	39.14	-38.11	37.77	-56.45	-13.00	43.45	225	117	Horizontal
5	14353.5	35.47	-34.64	40.23	-54.20	-13.00	41.20	185	279	Horizontal
6	17855.25	32.94	-30.95	40.95	-52.32	-13.00	39.32	224	344	Horizontal

Final Data List										
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3810	64.87	-45.44	30.65	-45.17	-13.00	32.17	201	112	Vertical
2	5715	49.83	-43.70	33.83	-55.30	-13.00	42.30	142	304	Vertical
3	7620	47.82	-41.27	36.72	-51.99	-13.00	38.99	265	335	Vertical
4	9576	39.48	-38.11	37.77	-56.12	-13.00	43.12	284	143	Vertical
5	11832.75	35.71	-35.22	38.40	-56.37	-13.00	43.37	254	209	Vertical
6	13944.75	35.61	-34.66	40.26	-54.05	-13.00	41.05	112	209	Vertical

Remark:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & AMP. The basic equation with a sample calculation is as follows:

AF = Antenna Factor(dB/m)

Factor = Cable Factor(dB) - Preamplifier (dB)

Level = Reading Level + AF + Factor -95.26

Margin = Limit – Level

---End of Attachment---

