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Appendix B.2

LTE-NB1 Band 4



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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 4	BPSK	3.75	19951	1T0	23.46	26.56	30	PASS
NB1 Band 4	BPSK	3.75	19951	1T47	23.28	26.38	30	PASS
NB1 Band 4	BPSK	3.75	20175	1T0	23.45	26.55	30	PASS
NB1 Band 4	BPSK	3.75	20175	1T47	23.51	26.61	30	PASS
NB1 Band 4	BPSK	3.75	20399	1T0	23.47	26.57	30	PASS
NB1 Band 4	BPSK	3.75	20399	1T47	23.55	26.65	30	PASS
NB1 Band 4	QPSK	3.75	19951	1T0	23.27	26.37	30	PASS
NB1 Band 4	QPSK	3.75	19951	1T47	23.21	26.31	30	PASS
NB1 Band 4	QPSK	3.75	20175	1T0	23.33	26.43	30	PASS
NB1 Band 4	QPSK	3.75	20175	1T47	23.51	26.61	30	PASS
NB1 Band 4	QPSK	3.75	20399	1T0	23.29	26.39	30	PASS
NB1 Band 4	QPSK	3.75	20399	1T47	23.45	26.55	30	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 4	BPSK	15	19951	1T0	23.39	26.49	30	PASS
NB1 Band 4	BPSK	15	19951	1T11	23.61	26.71	30	PASS
NB1 Band 4	BPSK	15	20175	1T0	23.33	26.43	30	PASS
NB1 Band 4	BPSK	15	20175	1T11	23.35	26.45	30	PASS
NB1 Band 4	BPSK	15	20399	1T0	23.37	26.47	30	PASS
NB1 Band 4	BPSK	15	20399	1T11	23.46	26.56	30	PASS
NB1 Band 4	QPSK	15	19951	1T0	23.61	26.71	30	PASS
NB1 Band 4	QPSK	15	19951	1T11	23.31	26.41	30	PASS
NB1 Band 4	QPSK	15	19951	12T0	21.57	24.67	30	PASS
NB1 Band 4	QPSK	15	20175	1T0	23.34	26.44	30	PASS
NB1 Band 4	QPSK	15	20175	1T11	23.57	26.67	30	PASS
NB1 Band 4	QPSK	15	20175	12T0	21.51	24.61	30	PASS
NB1 Band 4	QPSK	15	20399	1T0	23.45	26.55	30	PASS
NB1 Band 4	QPSK	15	20399	1T11	23.51	26.61	30	PASS
NB1 Band 4	QPSK	15	20399	12T0	21.35	24.45	30	PASS



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Field Strength of Spurious Radiation

Test Band = NB-IOT Band 4_ 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	3424.5	77.27	-45.87	29.58	-34.28	-13.00	21.28	201	279	Horizontal
2	5137.5	49.60	-44.24	33.17	-56.73	-13.00	43.73	142	312	Horizontal
3	6843	41.57	-42.50	35.94	-60.26	-13.00	47.26	265	9	Horizontal
4	9534.75	39.29	-38.13	37.76	-56.34	-13.00	43.34	284	181	Horizontal
5	13581	36.70	-34.56	40.01	-53.11	-13.00	40.11	255	0	Horizontal
6	16995.75	33.72	-31.27	38.90	-53.91	-13.00	40.91	142	37	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	3424.5	74.54	-45.87	29.58	-37.01	-13.00	24.01	201	331	Vertical
2	5137.5	51.97	-44.24	33.17	-54.36	-13.00	41.36	174	345	Vertical
3	6849.75	43.81	-42.50	35.94	-58.01	-13.00	45.01	142	345	Vertical
4	7895.25	40.83	-40.66	37.00	-58.09	-13.00	45.09	263	360	Vertical
5	12149.25	36.12	-35.22	38.58	-55.78	-13.00	42.78	225	266	Vertical
6	17958.75	32.81	-31.28	41.20	-52.53	-13.00	39.53	226	138	Vertical



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Test Band = NB-IOT Band 4_ 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	3465	77.34	-45.77	29.59	-34.10	-13.00	21.10	201	265	Horizontal
2	5197.5	51.43	-44.15	33.16	-54.82	-13.00	41.82	142	297	Horizontal
3	6930	44.29	-42.48	35.97	-57.48	-13.00	44.48	265	39	Horizontal
4	8019	40.50	-40.39	37.11	-58.04	-13.00	45.04	284	248	Horizontal
5	10281	37.28	-36.78	38.04	-56.72	-13.00	43.72	142	71	Horizontal
6	13579.5	36.48	-34.54	40.01	-53.31	-13.00	40.31	266	0	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	3465	74.65	-45.77	29.59	-36.79	-13.00	23.79	102	112	Vertical
2	5197.5	54.61	-44.15	33.16	-51.64	-13.00	38.64	265	3	Vertical
3	6929.25	44.07	-42.48	35.97	-57.70	-13.00	44.70	284	349	Vertical
4	8877.75	39.36	-39.08	37.54	-57.44	-13.00	44.44	142	47	Vertical
5	11174.25	35.37	-35.07	38.40	-56.56	-13.00	43.56	263	307	Vertical
6	15183.75	34.35	-32.79	39.75	-53.94	-13.00	40.94	228	359	Vertical



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Test Band = NB-IOT Band 4_ 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	3504.75	78.12	-45.67	29.62	-33.19	-13.00	20.19	175	279	Horizontal
2	5257.5	52.58	-44.07	33.15	-53.60	-13.00	40.60	235	296	Horizontal
3	7009.5	45.28	-42.58	36.01	-56.55	-13.00	43.55	162	71	Horizontal
4	9545.25	39.22	-38.13	37.76	-56.40	-13.00	43.40	172	279	Horizontal
5	11335.5	35.90	-35.42	38.40	-56.38	-13.00	43.38	166	357	Horizontal
6	13578	36.41	-34.52	40.00	-53.37	-13.00	40.37	264	11	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	3504.75	76.10	-45.67	29.62	-35.21	-13.00	22.21	195	111	Vertical
2	5257.5	54.70	-44.07	33.15	-51.48	-13.00	38.48	204	15	Vertical
3	7009.5	47.17	-42.58	36.01	-54.66	-13.00	41.66	186	360	Vertical
4	9598.5	39.01	-38.10	37.78	-56.57	-13.00	43.57	235	254	Vertical
5	11152.5	35.35	-35.16	38.40	-56.67	-13.00	43.67	162	288	Vertical
6	13557	35.99	-34.29	39.99	-53.57	-13.00	40.57	211	356	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---



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