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Appendix B.5

LTE-NB1 Band 13



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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)	ERP (dBm)	limit (dBm)	Verdict
NB1 Band 13	BPSK	3.75	23181	1T0	23.51	23.86	34.77	PASS
NB1 Band 13	BPSK	3.75	23181	1T47	23.32	23.67	34.77	PASS
NB1 Band 13	BPSK	3.75	23230	1T0	23.39	23.74	34.77	PASS
NB1 Band 13	BPSK	3.75	23230	1T47	23.46	23.81	34.77	PASS
NB1 Band 13	BPSK	3.75	23279	1T0	23.33	23.68	34.77	PASS
NB1 Band 13	BPSK	3.75	23279	1T47	23.32	23.67	34.77	PASS
NB1 Band 13	QPSK	3.75	23181	1T0	23.46	23.81	34.77	PASS
NB1 Band 13	QPSK	3.75	23181	1T47	23.37	23.72	34.77	PASS
NB1 Band 13	QPSK	3.75	23230	1T0	23.27	23.62	34.77	PASS
NB1 Band 13	QPSK	3.75	23230	1T47	23.29	23.64	34.77	PASS
NB1 Band 13	QPSK	3.75	23279	1T0	23.31	23.66	34.77	PASS
NB1 Band 13	QPSK	3.75	23279	1T47	23.42	23.77	34.77	PASS



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Test Band	Test Mode	Sub-carrier Spacing (kHz)	Test channel	Number of T	Conducted Power (dBm)	ERP (dBm)	limit (dBm)	Verdict
NB1 Band 13	BPSK	15	23181	1T0	23.39	23.74	34.77	PASS
NB1 Band 13	BPSK	15	23181	1T11	23.42	23.77	34.77	PASS
NB1 Band 13	BPSK	15	23230	1T0	23.31	23.66	34.77	PASS
NB1 Band 13	BPSK	15	23230	1T11	23.42	23.77	34.77	PASS
NB1 Band 13	BPSK	15	23279	1T0	23.31	23.66	34.77	PASS
NB1 Band 13	BPSK	15	23279	1T11	23.29	23.64	34.77	PASS
NB1 Band 13	QPSK	15	23181	1T0	23.21	23.56	34.77	PASS
NB1 Band 13	QPSK	15	23181	1T11	23.42	23.77	34.77	PASS
NB1 Band 13	QPSK	15	23181	12T0	21.42	21.77	34.77	PASS
NB1 Band 13	QPSK	15	23230	1T0	23.53	23.88	34.77	PASS
NB1 Band 13	QPSK	15	23230	1T11	23.48	23.83	34.77	PASS
NB1 Band 13	QPSK	15	23230	12T0	21.57	21.92	34.77	PASS
NB1 Band 13	QPSK	15	23279	1T0	23.3	23.65	34.77	PASS
NB1 Band 13	QPSK	15	23279	1T11	23.46	23.81	34.77	PASS
NB1 Band 13	QPSK	15	23279	12T0	21.51	21.86	34.77	PASS



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Field Strength of Spurious Radiation

Test Band = NB-IOT Band 13_ 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	1559	70.47	-48.51	24.70	-48.60	-40.00	8.60	152	14	Horizontal
2	2338.5	77.38	-47.61	27.04	-38.45	-13.00	25.45	265	101	Horizontal
3	3109.36	42.87	-46.51	29.52	-69.38	-13.00	56.38	254	260	Horizontal
4	3886.7	42.36	-45.54	30.92	-67.53	-13.00	54.53	142	158	Horizontal
5	4664.04	41.92	-44.58	32.46	-65.46	-13.00	52.46	263	44	Horizontal
6	5441.38	41.36	-43.83	33.11	-64.62	-13.00	51.62	228	44	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	1559	65.67	-48.51	24.70	-53.40	-40.00	13.40	202	31	Vertical
2	2338	68.48	-47.61	27.04	-47.35	-13.00	34.35	265	61	Vertical
3	3109.36	42.92	-46.51	29.52	-69.33	-13.00	56.33	254	0	Vertical
4	3886.7	42.78	-45.54	30.92	-67.11	-13.00	54.11	142	147	Vertical
5	4664.04	41.92	-44.58	32.46	-65.46	-13.00	52.46	263	318	Vertical
6	5441.38	42.05	-43.83	33.11	-63.93	-13.00	50.93	228	290	Vertical



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Test Band = NB-IOT Band 13_ 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	1564	69.25	-48.51	24.69	-49.83	-40.00	9.83	142	58	Horizontal
2	2346	76.49	-47.61	27.06	-39.32	-13.00	26.32	265	87	Horizontal
3	3818	43.59	-45.61	30.68	-66.60	-13.00	53.60	284	58	Horizontal
4	5176	42.51	-44.09	33.16	-63.67	-13.00	50.67	142	360	Horizontal
5	6256.5	45.50	-43.01	35.31	-57.46	-13.00	44.46	263	60	Horizontal
6	7753	41.04	-41.11	36.85	-58.47	-13.00	45.47	228	44	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	1564	65.48	-48.51	24.69	-53.60	-40.00	13.60	225	100	Vertical
2	2346	70.20	-47.61	27.06	-45.61	-13.00	32.61	265	131	Vertical
3	3128	45.23	-46.46	29.53	-66.97	-13.00	53.97	284	99	Vertical
4	4692.5	43.49	-44.56	32.52	-63.80	-13.00	50.80	122	59	Vertical
5	6256.5	48.14	-43.01	35.31	-54.82	-13.00	41.82	263	303	Vertical
6	7783	40.24	-40.83	36.88	-58.97	-13.00	45.97	228	273	Vertical



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Test Band = NB-IOT Band 13_ 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	1569	69.35	-48.51	24.68	-49.74	-40.00	9.74	102	17	Horizontal
2	2353	75.59	-47.61	27.08	-40.20	-13.00	27.20	265	88	Horizontal
3	2989.5	44.21	-46.51	29.46	-68.11	-13.00	55.11	284	248	Horizontal
4	5038.5	42.72	-44.85	33.19	-64.20	-13.00	51.20	142	290	Horizontal
5	6276.5	44.28	-42.98	35.35	-58.60	-13.00	45.60	263	352	Horizontal
6	7756.5	40.65	-41.07	36.86	-58.83	-13.00	45.83	335	343	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	1569	65.62	-48.51	24.68	-53.47	-40.00	13.47	142	70	Vertical
2	2353.5	69.84	-47.61	27.08	-45.95	-13.00	32.95	265	9	Vertical
3	2941	43.83	-46.67	29.25	-68.85	-13.00	55.85	284	28	Vertical
4	4592	43.38	-44.65	32.30	-64.22	-13.00	51.22	100	357	Vertical
5	6275.5	46.70	-42.98	35.35	-56.19	-13.00	43.19	226	304	Vertical
6	6958	42.16	-42.64	35.98	-59.75	-13.00	46.75	400	1	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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