NR Band n25

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
5 MHz	π/2 BPSK	1852.5	-3.20	1 / 12	24.06	20.86	0.122	33.01	-12.15
		1882.5	-3.20	1 / 12	24.03	20.83	0.121	33.01	-12.18
		1912.5	-3.20	1 / 12	23.99	20.79	0.120	33.01	-12.22
	QPSK	1852.5	-3.20	1 / 1	24.09	20.89	0.123	33.01	-12.12
		1882.5	-3.20	1 / 23	24.16	**20.96**	0.125	33.01	-12.05
		1912.5	-3.20	1 / 12	24.00	20.80	0.120	33.01	-12.21
	16-QAM	1882.5	-3.20	1 / 12	23.32	20.12	0.103	33.01	-12.89
	64-QAM	1882.5	-3.20	1 / 23	21.57	18.37	0.069	33.01	-14.64
	256-QAM	1852.5	-3.20	1 / 1	19.62	16.42	0.044	33.01	-16.59
10 MHz	π/2 BPSK	1855.0	-3.20	1 / 25	23.99	20.79	0.120	33.01	-12.22
		1882.5	-3.20	1 / 25	24.07	20.87	0.122	33.01	-12.14
		1910.0	-3.20	1 / 1	23.98	20.78	0.120	33.01	-12.23
	QPSK	1855.0	-3.20	1 / 1	23.98	20.78	0.120	33.01	-12.23
		1882.5	-3.20	1 / 25	24.10	**20.90**	0.123	33.01	-12.11
		1910.0	-3.20	1 / 1	24.05	20.85	0.122	33.01	-12.16
	16-QAM	1910.0	-3.20	1 / 1	23.38	20.18	0.104	33.01	-12.83
	64-QAM	1882.5	-3.20	1 / 1	21.74	18.54	0.071	33.01	-14.47
	256-QAM	1882.5	-3.20	1 / 1	19.59	16.39	0.044	33.01	-16.62
15 MHz	π/2 BPSK	1857.5	-3.20	1 / 36	24.20	21.00	0.126	33.01	-12.01
		1882.5	-3.20	1 / 1	24.17	20.97	0.125	33.01	-12.04
		1907.5	-3.20	1 / 1	24.14	20.94	0.124	33.01	-12.07
	QPSK	1857.5	-3.20	1 / 1	24.20	**21.00**	0.126	33.01	-12.01
		1882.5	-3.20	1 / 1	24.16	20.96	0.125	33.01	-12.05
		1907.5	-3.20	1 / 36	24.13	20.93	0.124	33.01	-12.08
	16-QAM	1882.5	-3.20	1 / 1	23.32	20.12	0.103	33.01	-12.89
	64-QAM	1857.5	-3.20	1 / 77	21.82	18.62	0.073	33.01	-14.39
	256-QAM	1907.5	-3.20	1 / 1	19.77	16.57	0.045	33.01	-16.44
20 MHz	π/2 BPSK	1860.0	-3.20	1 / 50	24.17	20.97	0.125	33.01	-12.04
		1882.5	-3.20	1 / 50	24.14	20.94	0.124	33.01	-12.07
		1905.0	-3.20	1 / 50	24.20	**21.00**	0.126	33.01	-12.01
	QPSK	1860.0	-3.20	1 / 1	24.19	20.99	0.126	33.01	-12.02
		1882.5	-3.20	1 / 1	24.16	20.96	0.125	33.01	-12.05
		1905.0	-3.20	1 / 50	24.09	20.89	0.123	33.01	-12.12
	16-QAM	1905.0	-3.20	1 / 1	23.23	20.03	0.101	33.01	-12.98
	64-QAM	1882.5	-3.20	1 / 50	21.80	18.60	0.072	33.01	-14.41
	256-QAM	1882.5	-3.20	1 / 104	19.70	16.50	0.045	33.01	-16.51
25 MHz	π/2 BPSK	1862.5	-3.20	1 / 1	24.17	20.97	0.125	33.01	-12.04
		1882.5	-3.20	1 / 1	24.18	20.98	0.125	33.01	-12.03
		1902.5	-3.20	1 / 1	24.18	20.98	0.125	33.01	-12.03
	QPSK	1862.5	-3.20	1 / 131	24.20	**21.00**	0.126	33.01	-12.01
		1882.5	-3.20	1 / 131	24.20	21.00	0.126	33.01	-12.01
		1902.5	-3.20	1 / 64	24.14	20.94	0.124	33.01	-12.07
	16-QAM	1862.5	-3.20	1 / 64	23.59	20.39	0.109	33.01	-12.62
	64-QAM	1862.5	-3.20	1 / 64	21.79	18.59	0.072	33.01	-14.42
	256-QAM	1862.5	-3.20	1 / 64	19.71	16.51	0.045	33.01	-16.50
30 MHz	π/2 BPSK	1865.0	-3.20	1 / 1	24.08	20.88	0.122	33.01	-12.13
		1882.5	-3.20	1 / 1	24.19	20.99	0.126	33.01	-12.02
		1900.0	-3.20	1 / 80	24.16	20.96	0.125	33.01	-12.05
	QPSK	1865.0	-3.20	1 / 80	24.18	20.98	0.125	33.01	-12.03
		1882.5	-3.20	1 / 80	24.20	**21.00**	0.126	33.01	-12.01
		1900.0	-3.20	1 / 1	24.14	20.94	0.124	33.01	-12.07
	16-QAM	1900.0	-3.20	1 / 158	23.43	20.23	0.105	33.01	-12.78
	64-QAM	1882.5	-3.20	1 / 158	21.76	18.56	0.072	33.01	-14.45
	256-QAM	1865.0	-3.20	1 / 158	19.73	16.53	0.045	33.01	-16.48
35 MHz	π/2 BPSK	1867.5	-3.20	1 / 1	24.20	**21.00**	0.126	33.01	-12.01
		1882.5	-3.20	1 / 90	24.09	20.89	0.123	33.01	-12.12
		1897.5	-3.20	1 / 1	24.12	20.92	0.124	33.01	-12.09
	QPSK	1867.5	-3.20	1 / 90	24.15	20.95	0.125	33.01	-12.06
		1882.5	-3.20	1 / 90	24.08	20.88	0.122	33.01	-12.13
		1897.5	-3.20	1 / 90	24.16	20.96	0.125	33.01	-12.05
	16-QAM	1882.5	-3.20	1 / 90	23.26	20.06	0.101	33.01	-12.95
	64-QAM	1897.5	-3.20	1 / 90	21.79	18.59	0.072	33.01	-14.42
	256-QAM	1897.5	-3.20	1 / 1	19.76	16.56	0.045	33.01	-16.45
40 MHz	π/2 BPSK	1870.0	-3.20	1 / 214	24.18	20.98	0.125	33.01	-12.03
		1882.5	-3.20	1 / 214	24.15	20.95	0.124	33.01	-12.06
		1895.0	-3.20	1 / 1	24.20	**21.00**	0.126	33.01	-12.01
	QPSK	1870.0	-3.20	1 / 108	24.18	20.98	0.125	33.01	-12.03
		1882.5	-3.20	1 / 108	24.20	21.00	0.126	33.01	-12.01
		1895.0	-3.20	1 / 108	24.18	20.98	0.125	33.01	-12.03
	16-QAM	1870.0	-3.20	1 / 1	23.40	20.20	0.105	33.01	-12.81
	64-QAM	1882.5	-3.20	1 / 108	21.93	18.73	0.075	33.01	-14.28
	256-QAM	1882.5	-3.20	1 / 214	19.86	16.66	0.046	33.01	-16.35

Table 7-9. Antenna 2b EIRP Data (NR Band n25)

NR Band n2

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
5 MHz	π/2 BPSK	1852.5	-3.20	1 / 1	24.10	20.90	0.123	33.01	-12.11
		1880.0	-3.20	1 / 12	24.17	20.97	0.125	33.01	-12.04
		1907.5	-3.20	1 / 1	24.09	20.89	0.123	33.01	-12.12
	QPSK	1852.5	-3.20	1 / 1	24.18	20.98	0.125	33.01	-12.03
		1880.0	-3.20	1 / 1	24.20	**21.00**	0.126	33.01	-12.01
		1907.5	-3.20	1 / 1	24.15	20.95	0.125	33.01	-12.06
	16-QAM	1880.0	-3.20	1 / 1	23.31	20.11	0.103	33.01	-12.90
	64-QAM	1880.0	-3.20	1 / 12	21.91	18.71	0.074	33.01	-14.30
	256-QAM	1880.0	-3.20	1 / 12	19.66	16.46	0.044	33.01	-16.55
10 MHz	π/2 BPSK	1855.0	-3.20	1 / 1	24.12	20.92	0.124	33.01	-12.09
		1880.0	-3.20	1 / 1	24.19	20.99	0.126	33.01	-12.02
		1905.0	-3.20	1 / 1	24.09	20.89	0.123	33.01	-12.12
	QPSK	1855.0	-3.20	1 / 1	24.17	20.97	0.125	33.01	-12.04
		1880.0	-3.20	1 / 1	24.20	**21.00**	0.126	33.01	-12.01
		1905.0	-3.20	1 / 1	24.16	20.96	0.125	33.01	-12.05
	16-QAM	1855.0	-3.20	1 / 25	23.39	20.19	0.104	33.01	-12.82
	64-QAM	1880.0	-3.20	1 / 25	21.79	18.59	0.072	33.01	-14.42
	256-QAM	1880.0	-3.20	1 / 50	19.75	16.55	0.045	33.01	-16.46
15 MHz	π/2 BPSK	1857.5	-3.20	1 / 36	24.20	**21.00**	0.126	33.01	-12.01
		1880.0	-3.20	1 / 36	24.17	20.97	0.125	33.01	-12.04
		1902.5	-3.20	1 / 77	24.20	21.00	0.126	33.01	-12.01
	QPSK	1857.5	-3.20	1 / 1	24.17	20.97	0.125	33.01	-12.04
		1880.0	-3.20	1 / 1	24.16	20.96	0.125	33.01	-12.05
		1902.5	-3.20	1 / 77	24.17	20.97	0.125	33.01	-12.04
	16-QAM	1902.5	-3.20	1 / 77	23.59	20.39	0.109	33.01	-12.62
	64-QAM	1902.5	-3.20	1 / 77	21.81	18.61	0.073	33.01	-14.40
	256-QAM	1880.0	-3.20	1 / 37	19.72	16.52	0.045	33.01	-16.49
20 MHz	π/2 BPSK	1860.0	-3.20	1 / 1	24.14	20.94	0.124	33.01	-12.07
		1880.0	-3.20	1 / 1	24.14	20.94	0.124	33.01	-12.07
		1900.0	-3.20	1 / 1	24.08	20.88	0.122	33.01	-12.13
	QPSK	1860.0	-3.20	1 / 50	24.20	**21.00**	0.126	33.01	-12.01
		1880.0	-3.20	1 / 1	24.14	20.94	0.124	33.01	-12.07
		1900.0	-3.20	1 / 104	24.20	21.00	0.126	33.01	-12.01
	16-QAM	1900.0	-3.20	1 / 104	23.28	20.08	0.102	33.01	-12.94
	64-QAM	1860.0	-3.20	1 / 1	21.86	18.66	0.073	33.01	-14.35
	256-QAM	1860.0	-3.20	1 / 1	19.75	16.55	0.045	33.01	-16.46

Table 7-10. Antenna 2b EIRP Data (NR Band n2)

WCDMA PCS

Frequency [MHz]	Mode	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1852.40	WCDMA1900	24.12	-3.20	20.92	0.124	33.01	-12.09
1880.00	WCDMA1900	24.20	-3.20	**21.00**	**0.126**	33.01	-12.01
1907.60	WCDMA1900	24.15	-3.20	20.95	0.124	33.01	-12.06

Table 7-11. Antenna 2b EIRP Data (WCDMA PCS)

7.6.3 Antenna 3a – EIRP

LTE Band 25

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1.4 MHz	QPSK	1850.7	-2.80	1 / 0	24.50	21.70	0.148	33.01	-11.31
		1882.5	-2.80	1 / 0	24.70	**21.90**	0.155	33.01	-11.11
		1914.3	-2.80	1 / 3	24.67	21.87	0.154	33.01	-11.14
	16-QAM	1882.5	-2.80	1 / 0	23.69	20.89	0.123	33.01	-12.12
	64-QAM	1850.7	-2.80	1 / 3	22.71	19.91	0.098	33.01	-13.10
	256-QAM	1882.5	-2.80	1 / 3	19.76	16.96	0.050	33.01	-16.05
3 MHz	QPSK	1851.5	-2.80	1 / 0	24.70	**21.90**	0.155	33.01	-11.11
		1882.5	-2.80	1 / 14	24.60	21.80	0.151	33.01	-11.21
		1913.5	-2.80	1 / 14	24.59	21.79	0.151	33.01	-11.22
	16-QAM	1913.5	-2.80	1 / 14	23.72	20.92	0.124	33.01	-12.09
	64-QAM	1851.5	-2.80	1 / 0	22.72	19.92	0.098	33.01	-13.09
	256-QAM	1913.5	-2.80	1 / 14	19.73	16.93	0.049	33.01	-16.08
5 MHz	QPSK	1852.5	-2.80	1 / 0	24.52	21.72	0.149	33.01	-11.29
		1882.5	-2.80	1 / 0	24.70	**21.90**	0.155	33.01	-11.11
		1912.5	-2.80	1 / 12	24.69	21.89	0.155	33.01	-11.12
	16-QAM	1882.5	-2.80	1 / 12	23.61	20.81	0.121	33.01	-12.20
	64-QAM	1912.5	-2.80	1 / 0	22.52	19.72	0.094	33.01	-13.29
	256-QAM	1882.5	-2.80	1 / 12	19.68	16.88	0.049	33.01	-16.13
10 MHz	QPSK	1855.0	-2.80	1 / 0	24.60	21.80	0.151	33.01	-11.21
		1882.5	-2.80	1 / 49	24.44	21.64	0.146	33.01	-11.37
		1910.0	-2.80	1 / 0	24.70	**21.90**	0.155	33.01	-11.11
	16-QAM	1882.5	-2.80	1 / 25	23.68	20.88	0.122	33.01	-12.13
	64-QAM	1910.0	-2.80	1 / 49	22.64	19.84	0.096	33.01	-13.17
	256-QAM	1910.0	-2.80	1 / 49	19.84	17.04	0.051	33.01	-15.97
15 MHz	QPSK	1857.5	-2.80	1 / 0	24.46	21.66	0.147	33.01	-11.35
		1882.5	-2.80	1 / 0	24.70	**21.90**	0.155	33.01	-11.11
		1907.5	-2.80	1 / 74	24.65	21.85	0.153	33.01	-11.16
	16-QAM	1857.5	-2.80	1 / 0	23.72	20.92	0.124	33.01	-12.09
	64-QAM	1882.5	-2.80	1 / 37	22.68	19.88	0.097	33.01	-13.13
	256-QAM	1907.5	-2.80	1 / 74	19.84	17.04	0.051	33.01	-15.97
20 MHz	QPSK	1860.0	-2.80	1 / 99	24.70	**21.90**	0.155	33.01	-11.11
		1882.5	-2.80	1 / 0	24.59	21.79	0.151	33.01	-11.22
		1905.0	-2.80	1 / 0	24.45	21.65	0.146	33.01	-11.36
	16-QAM	1882.5	-2.80	1 / 0	23.70	20.90	0.123	33.01	-12.11
	64-QAM	1905.0	-2.80	1 / 50	22.59	19.79	0.095	33.01	-13.22
	256-QAM	1882.5	-2.80	1 / 50	19.80	17.00	0.050	33.01	-16.01

Table 7-12. Antenna 3a EIRP Data (LTE Band 25)

LTE Band 2

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1.4 MHz	QPSK	1850.7	-2.80	1 / 0	24.70	**21.90**	0.155	33.01	-11.11
		1880.0	-2.80	1 / 0	24.58	21.78	0.151	33.01	-11.23
		1909.3	-2.80	1 / 0	24.51	21.71	0.148	33.01	-11.30
	16-QAM	1850.7	-2.80	1 / 0	24.10	21.30	0.135	33.01	-11.71
	64-QAM	1850.7	-2.80	1 / 0	23.35	20.55	0.114	33.01	-12.46
	256-QAM	1850.7	-2.80	1 / 3	20.27	17.47	0.056	33.01	-15.54
3 MHz	QPSK	1851.5	-2.80	1 / 0	24.68	**21.88**	0.154	33.01	-11.13
		1880.0	-2.80	1 / 0	24.60	21.80	0.151	33.01	-11.21
		1908.5	-2.80	1 / 0	24.58	21.78	0.151	33.01	-11.23
	16-QAM	1851.5	-2.80	1 / 0	24.25	21.45	0.140	33.01	-11.56
	64-QAM	1851.5	-2.80	1 / 7	23.28	20.48	0.112	33.01	-12.53
	256-QAM	1880.0	-2.80	1 / 7	20.11	17.31	0.054	33.01	-15.70
5 MHz	QPSK	1852.5	-2.80	1 / 0	24.68	**21.88**	0.154	33.01	-11.13
		1880.0	-2.80	1 / 0	24.63	21.83	0.152	33.01	-11.18
		1907.5	-2.80	1 / 0	24.60	21.80	0.151	33.01	-11.21
	16-QAM	1852.5	-2.80	1 / 0	24.19	21.39	0.138	33.01	-11.62
	64-QAM	1852.5	-2.80	1 / 0	23.41	20.61	0.115	33.01	-12.40
	256-QAM	1852.5	-2.80	1 / 0	20.31	17.51	0.056	33.01	-15.50
10 MHz	QPSK	1855.0	-2.80	1 / 0	24.68	**21.88**	0.154	33.01	-11.13
		1880.0	-2.80	1 / 0	24.59	21.79	0.151	33.01	-11.22
		1905.0	-2.80	1 / 0	24.55	21.75	0.150	33.01	-11.26
	16-QAM	1880.0	-2.80	1 / 0	24.18	21.38	0.137	33.01	-11.63
	64-QAM	1855.0	-2.80	1 / 25	23.25	20.45	0.111	33.01	-12.56
	256-QAM	1855.0	-2.80	1 / 0	20.22	17.42	0.055	33.01	-15.59
15 MHz	QPSK	1857.5	-2.80	1 / 0	24.41	21.61	0.145	33.01	-11.40
		1880.0	-2.80	1 / 0	24.45	**21.65**	0.146	33.01	-11.36
		1902.5	-2.80	1 / 0	24.45	**21.65**	0.146	33.01	-11.36
	16-QAM	1902.5	-2.80	1 / 0	24.04	21.24	0.133	33.01	-11.77
	64-QAM	1857.5	-2.80	1 / 0	23.31	20.51	0.112	33.01	-12.50
	256-QAM	1857.5	-2.80	1 / 37	20.09	17.29	0.054	33.01	-15.72
20 MHz	QPSK	1860.0	-2.80	1 / 50	24.60	21.80	0.151	33.01	-11.21
		1880.0	-2.80	1 / 0	24.43	21.63	0.146	33.01	-11.38
		1900.0	-2.80	1 / 0	24.66	**21.86**	0.153	33.01	-11.15
	16-QAM	1880.0	-2.80	1 / 0	24.47	21.67	0.147	33.01	-11.34
	64-QAM	1880.0	-2.80	1 / 0	23.83	21.03	0.127	33.01	-11.98
	256-QAM	1880.0	-2.80	1 / 50	20.05	17.25	0.053	33.01	-15.76

Table 7-13. Antenna 3a EIRP Data (LTE Band 2)

NR Band n25

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
5 MHz	π/2 BPSK	1852.5	-2.80	1 / 23	24.53	21.73	0.149	33.01	-11.28
		1882.5	-2.80	1 / 12	24.52	21.72	0.149	33.01	-11.29
		1912.5	-2.80	1 / 23	24.59	21.79	0.151	33.01	-11.22
	QPSK	1852.5	-2.80	1 / 1	24.49	21.69	0.148	33.01	-11.32
		1882.5	-2.80	1 / 12	24.42	21.62	0.145	33.01	-11.39
		1912.5	-2.80	1 / 23	24.70	**21.90**	0.155	33.01	-11.11
	16-QAM	1912.5	-2.80	1 / 12	23.49	20.69	0.117	33.01	-12.32
	64-QAM	1912.5	-2.80	1 / 1	22.66	19.86	0.097	33.01	-13.15
	256-QAM	1852.5	-2.80	1 / 12	19.81	17.01	0.050	33.01	-16.00
10 MHz	π/2 BPSK	1855.0	-2.80	1 / 1	24.51	21.71	0.148	33.01	-11.30
		1882.5	-2.80	1 / 25	24.70	**21.90**	0.155	33.01	-11.11
		1910.0	-2.80	1 / 1	24.68	21.88	0.154	33.01	-11.13
	QPSK	1855.0	-2.80	1 / 1	24.46	21.66	0.147	33.01	-11.35
		1882.5	-2.80	1 / 50	24.66	21.86	0.153	33.01	-11.15
		1910.0	-2.80	1 / 1	24.61	21.81	0.152	33.01	-11.20
	16-QAM	1910.0	-2.80	1 / 25	23.62	20.82	0.121	33.01	-12.19
	64-QAM	1910.0	-2.80	1 / 1	22.61	19.81	0.096	33.01	-13.20
	256-QAM	1910.0	-2.80	1 / 48	19.82	17.02	0.050	33.01	-15.99
15 MHz	π/2 BPSK	1857.5	-2.80	1 / 1	24.68	21.88	0.154	33.01	-11.13
		1882.5	-2.80	1 / 1	24.57	21.77	0.150	33.01	-11.24
		1907.5	-2.80	1 / 36	24.50	21.70	0.148	33.01	-11.31
	QPSK	1857.5	-2.80	1 / 36	24.66	21.86	0.153	33.01	-11.15
		1882.5	-2.80	1 / 1	24.64	21.84	0.153	33.01	-11.17
		1907.5	-2.80	1 / 1	24.70	**21.90**	0.155	33.01	-11.11
	16-QAM	1907.5	-2.80	1 / 36	23.57	20.77	0.119	33.01	-12.24
	64-QAM	1907.5	-2.80	1 / 77	22.75	19.95	0.099	33.01	-13.06
	256-QAM	1907.5	-2.80	1 / 36	19.68	16.88	0.049	33.01	-16.13
20 MHz	π/2 BPSK	1860.0	-2.80	1 / 104	24.70	**21.90**	0.155	33.01	-11.11
		1882.5	-2.80	1 / 50	24.48	21.68	0.147	33.01	-11.33
		1905.0	-2.80	1 / 1	24.46	21.66	0.147	33.01	-11.35
	QPSK	1860.0	-2.80	1 / 104	24.55	21.75	0.150	33.01	-11.26
		1882.5	-2.80	1 / 1	24.57	21.77	0.150	33.01	-11.24
		1905.0	-2.80	1 / 50	24.61	21.81	0.152	33.01	-11.20
	16-QAM	1860.0	-2.80	1 / 104	23.63	20.83	0.121	33.01	-12.18
	64-QAM	1905.0	-2.80	1 / 104	22.51	19.71	0.094	33.01	-13.30
	256-QAM	1905.0	-2.80	1 / 50	19.78	16.98	0.050	33.01	-16.03
25 MHz	π/2 BPSK	1862.5	-2.80	1 / 1	24.57	21.77	0.150	33.01	-11.24
		1882.5	-2.80	1 / 1	24.61	21.81	0.152	33.01	-11.20
		1902.5	-2.80	1 / 131	24.56	21.76	0.150	33.01	-11.25
	QPSK	1862.5	-2.80	1 / 64	24.56	21.76	0.150	33.01	-11.25
		1882.5	-2.80	1 / 1	24.58	21.78	0.151	33.01	-11.23
		1902.5	-2.80	1 / 1	24.70	**21.90**	0.155	33.01	-11.11
	16-QAM	1882.5	-2.80	1 / 1	23.69	20.89	0.123	33.01	-12.12
	64-QAM	1882.5	-2.80	1 / 1	22.62	19.82	0.096	33.01	-13.19
	256-QAM	1902.5	-2.80	1 / 0	19.72	16.92	0.049	33.01	-16.09
30 MHz	π/2 BPSK	1865.0	-2.80	1 / 158	24.55	21.75	0.150	33.01	-11.26
		1882.5	-2.80	1 / 1	24.57	21.77	0.150	33.01	-11.24
		1900.0	-2.80	1 / 1	24.58	21.78	0.151	33.01	-11.23
	QPSK	1865.0	-2.80	1 / 158	24.70	**21.90**	0.155	33.01	-11.11
		1882.5	-2.80	1 / 80	24.51	21.71	0.148	33.01	-11.30
		1900.0	-2.80	1 / 1	24.66	21.86	0.153	33.01	-11.15
	16-QAM	1882.5	-2.80	1 / 1	23.68	20.88	0.122	33.01	-12.13
	64-QAM	1882.5	-2.80	1 / 1	22.64	19.84	0.096	33.01	-13.17
	256-QAM	1882.5	-2.80	1 / 80	19.76	16.96	0.050	33.01	-16.05
35 MHz	π/2 BPSK	1867.5	-2.80	1 / 186	24.54	21.74	0.149	33.01	-11.27
		1882.5	-2.80	1 / 90	24.66	21.86	0.153	33.01	-11.15
		1897.5	-2.80	1 / 186	24.49	21.69	0.148	33.01	-11.32
	QPSK	1867.5	-2.80	1 / 186	24.48	21.68	0.147	33.01	-11.33
		1882.5	-2.80	1 / 1	24.51	21.71	0.148	33.01	-11.30
		1897.5	-2.80	1 / 1	24.70	**21.90**	0.155	33.01	-11.11
	16-QAM	1897.5	-2.80	1 / 90	23.46	20.66	0.116	33.01	-12.35
	64-QAM	1897.5	-2.80	1 / 186	22.37	19.57	0.091	33.01	-13.44
	256-QAM	1897.5	-2.80	1 / 186	19.76	16.96	0.050	33.01	-16.05
40 MHz	π/2 BPSK	1870.0	-2.80	1 / 108	24.50	21.70	0.148	33.01	-11.31
		1882.5	-2.80	1 / 1	24.70	**21.90**	0.155	33.01	-11.11
		1895.0	-2.80	1 / 214	24.67	21.87	0.154	33.01	-11.14
	QPSK	1870.0	-2.80	1 / 214	24.62	21.82	0.152	33.01	-11.19
		1882.5	-2.80	1 / 108	24.58	21.78	0.151	33.01	-11.23
		1895.0	-2.80	1 / 1	24.58	21.78	0.151	33.01	-11.23
	16-QAM	1870.0	-2.80	1 / 1	23.74	20.94	0.124	33.01	-12.07
	64-QAM	1882.5	-2.80	1 / 214	22.74	19.94	0.099	33.01	-13.07
	256-QAM	1895.0	-2.80	1 / 1	19.63	16.83	0.048	33.01	-16.18

Table 7-14. Antenna 3a EIRP Data (NR Band n25)

NR Band n2

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
5 MHz	π/2 BPSK	1852.5	-2.80	1 / 12	24.59	21.79	0.151	33.01	-11.22
		1880.0	-2.80	1 / 12	24.56	21.76	0.150	33.01	-11.25
		1907.5	-2.80	1 / 23	24.69	21.89	0.155	33.01	-11.12
	QPSK	1852.5	-2.80	1 / 1	24.69	21.89	0.154	33.01	-11.12
		1880.0	-2.80	1 / 23	24.68	21.88	0.154	33.01	-11.13
		1907.5	-2.80	1 / 12	24.70	**21.90**	0.155	33.01	-11.11
	16-QAM	1907.5	-2.80	1 / 1	23.90	21.10	0.129	33.01	-11.91
	64-QAM	1907.5	-2.80	1 / 1	22.32	19.52	0.090	33.01	-13.49
	256-QAM	1907.5	-2.80	1 / 1	20.19	17.39	0.055	33.01	-15.62
10 MHz	π/2 BPSK	1855.0	-2.80	1 / 1	24.63	21.83	0.152	33.01	-11.18
		1880.0	-2.80	1 / 50	24.58	21.78	0.151	33.01	-11.23
		1905.0	-2.80	1 / 25	24.69	21.89	0.155	33.01	-11.12
	QPSK	1855.0	-2.80	1 / 25	24.60	21.80	0.151	33.01	-11.21
		1880.0	-2.80	1 / 1	24.65	21.85	0.153	33.01	-11.16
		1905.0	-2.80	1 / 25	24.70	**21.90**	0.155	33.01	-11.11
	16-QAM	1855.0	-2.80	1 / 1	23.75	20.95	0.125	33.01	-12.06
	64-QAM	1905.0	-2.80	1 / 1	22.33	19.53	0.090	33.01	-13.48
	256-QAM	1905.0	-2.80	1 / 50	20.22	17.42	0.055	33.01	-15.59
15 MHz	π/2 BPSK	1857.5	-2.80	1 / 1	24.55	21.75	0.150	33.01	-11.26
		1880.0	-2.80	1 / 1	24.70	21.90	0.155	33.01	-11.11
		1902.5	-2.80	1 / 1	24.70	**21.90**	0.155	33.01	-11.11
	QPSK	1857.5	-2.80	1 / 77	24.69	21.89	0.155	33.01	-11.12
		1880.0	-2.80	1 / 36	24.69	21.89	0.154	33.01	-11.13
		1902.5	-2.80	1 / 1	24.66	21.86	0.153	33.01	-11.15
	16-QAM	1902.5	-2.80	1 / 36	23.76	20.96	0.125	33.01	-12.05
	64-QAM	1857.5	-2.80	1 / 77	22.33	19.53	0.090	33.01	-13.48
	256-QAM	1902.5	-2.80	1 / 1	20.18	17.38	0.055	33.01	-15.63
20 MHz	π/2 BPSK	1860.0	-2.80	1 / 104	24.69	21.89	0.154	33.01	-11.12
		1880.0	-2.80	1 / 50	24.68	21.88	0.154	33.01	-11.13
		1900.0	-2.80	1 / 50	24.67	21.87	0.154	33.01	-11.14
	QPSK	1860.0	-2.80	1 / 1	24.70	21.90	0.155	33.01	-11.11
		1880.0	-2.80	1 / 1	24.69	21.89	0.155	33.01	-11.12
		1900.0	-2.80	1 / 50	24.70	**21.90**	0.155	33.01	-11.11
	16-QAM	1900.0	-2.80	1 / 104	23.80	21.00	0.126	33.01	-12.01
	64-QAM	1900.0	-2.80	1 / 50	22.46	19.66	0.092	33.01	-13.35
	256-QAM	1900.0	-2.80	1 / 104	22.23	19.43	0.088	33.01	-13.58

Table 7-15. Antenna 3a EIRP Data (NR Band n2)

WCDMA PCS

Frequency [MHz]	Mode	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1852.40	WCDMA1900	24.63	-2.80	21.83	0.152	33.01	-11.18
1880.00	WCDMA1900	24.60	-2.80	21.80	0.151	33.01	-11.21
1907.60	WCDMA1900	24.70	-2.80	**21.90**	**0.155**	33.01	-11.11

Table 7-16. Antenna 3a EIRP Data (WCDMA PCS)

7.6.4 Antenna 1b – EIRP

LTE Band 25

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1.4 MHz	QPSK	1850.7	-1.00	1 / 5	23.61	**22.61**	0.182	33.01	-10.40
		1882.5	-1.00	1 / 5	23.59	22.59	0.182	33.01	-10.42
		1914.3	-1.00	1 / 5	23.43	22.43	0.175	33.01	-10.58
	16-QAM	1914.3	-1.00	1 / 5	22.63	21.63	0.146	33.01	-11.38
	64-QAM	1882.5	-1.00	1 / 5	21.70	20.70	0.117	33.01	-12.31
	256-QAM	1882.5	-1.00	1 / 3	18.75	17.75	0.060	33.01	-15.26
3 MHz	QPSK	1851.5	-1.00	1 / 7	23.70	**22.70**	0.186	33.01	-10.31
		1882.5	-1.00	1 / 7	23.52	22.52	0.179	33.01	-10.49
		1913.5	-1.00	1 / 0	23.70	**22.70**	0.186	33.01	-10.31
	16-QAM	1851.5	-1.00	1 / 7	22.76	21.76	0.150	33.01	-11.25
	64-QAM	1851.5	-1.00	1 / 7	21.73	20.73	0.118	33.01	-12.28
	256-QAM	1851.5	-1.00	1 / 0	18.76	17.76	0.060	33.01	-15.25
5 MHz	QPSK	1852.5	-1.00	1 / 0	23.64	22.64	0.184	33.01	-10.37
		1882.5	-1.00	1 / 0	23.70	**22.70**	0.186	33.01	-10.31
		1912.5	-1.00	1 / 12	23.62	22.62	0.183	33.01	-10.39
	16-QAM	1882.5	-1.00	1 / 12	22.46	21.46	0.140	33.01	-11.55
	64-QAM	1882.5	-1.00	1 / 12	21.69	20.69	0.117	33.01	-12.32
	256-QAM	1882.5	-1.00	1 / 24	18.63	17.63	0.058	33.01	-15.38
10 MHz	QPSK	1855.0	-1.00	1 / 25	23.61	22.61	0.182	33.01	-10.40
		1882.5	-1.00	1 / 49	23.66	**22.66**	0.185	33.01	-10.35
		1910.0	-1.00	1 / 25	23.48	22.48	0.177	33.01	-10.53
	16-QAM	1882.5	-1.00	1 / 25	22.68	21.68	0.147	33.01	-11.33
	64-QAM	1882.5	-1.00	1 / 25	21.55	20.55	0.114	33.01	-12.46
	256-QAM	1882.5	-1.00	1 / 0	18.60	17.60	0.058	33.01	-15.41
15 MHz	QPSK	1857.5	-1.00	1 / 37	23.69	**22.69**	0.186	33.01	-10.32
		1882.5	-1.00	1 / 74	23.64	22.64	0.184	33.01	-10.37
		1907.5	-1.00	1 / 37	23.69	**22.69**	0.186	33.01	-10.32
	16-QAM	1857.5	-1.00	1 / 74	22.67	21.67	0.147	33.01	-11.34
	64-QAM	1857.5	-1.00	1 / 74	21.64	20.64	0.116	33.01	-12.37
	256-QAM	1857.5	-1.00	1 / 0	18.78	17.78	0.060	33.01	-15.23
20 MHz	QPSK	1860.0	-1.00	1 / 0	23.61	22.61	0.182	33.01	-10.40
		1882.5	-1.00	1 / 0	23.69	**22.69**	0.186	33.01	-10.32
		1905.0	-1.00	1 / 50	23.67	22.67	0.185	33.01	-10.34
	16-QAM	1882.5	-1.00	1 / 0	22.52	21.52	0.142	33.01	-11.49
	64-QAM	1905.0	-1.00	1 / 0	21.70	20.70	0.117	33.01	-12.31
	256-QAM	1882.5	-1.00	1 / 50	18.79	17.79	0.060	33.01	-15.22

Table 7-17. Antenna 1b EIRP Data (LTE Band 25)

LTE Band 2

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1.4 MHz	QPSK	1850.7	-1.00	1 / 0	23.46	22.46	0.176	33.01	-10.55
		1880.0	-1.00	1 / 5	23.70	**22.70**	0.186	33.01	-10.31
		1909.3	-1.00	1 / 0	23.59	22.59	0.182	33.01	-10.42
	16-QAM	1909.3	-1.00	1 / 0	22.66	21.66	0.147	33.01	-11.35
	64-QAM	1880.0	-1.00	1 / 3	21.66	20.66	0.116	33.01	-12.35
	256-QAM	1909.3	-1.00	1 / 3	18.60	17.60	0.058	33.01	-15.41
3 MHz	QPSK	1851.5	-1.00	1 / 7	23.45	22.45	0.176	33.01	-10.56
		1880.0	-1.00	1 / 14	23.58	22.58	0.181	33.01	-10.43
		1908.5	-1.00	1 / 14	23.70	**22.70**	0.186	33.01	-10.31
	16-QAM	1851.5	-1.00	1 / 0	22.48	21.48	0.141	33.01	-11.53
	64-QAM	1851.5	-1.00	1 / 0	21.66	20.66	0.116	33.01	-12.35
	256-QAM	1851.5	-1.00	1 / 0	18.63	17.63	0.058	33.01	-15.38
5 MHz	QPSK	1852.5	-1.00	1 / 12	23.65	22.65	0.184	33.01	-10.36
		1880.0	-1.00	1 / 24	23.70	**22.70**	0.186	33.01	-10.31
		1907.5	-1.00	1 / 0	23.64	22.64	0.184	33.01	-10.37
	16-QAM	1880.0	-1.00	1 / 0	22.71	21.71	0.148	33.01	-11.30
	64-QAM	1852.5	-1.00	1 / 24	21.67	20.67	0.117	33.01	-12.34
	256-QAM	1880.0	-1.00	1 / 0	18.77	17.77	0.060	33.01	-15.24
10 MHz	QPSK	1855.0	-1.00	1 / 49	23.58	22.58	0.181	33.01	-10.43
		1880.0	-1.00	1 / 0	23.53	22.53	0.179	33.01	-10.48
		1905.0	-1.00	1 / 0	23.60	**22.60**	0.182	33.01	-10.41
	16-QAM	1855.0	-1.00	1 / 0	22.39	21.39	0.138	33.01	-11.62
	64-QAM	1855.0	-1.00	1 / 49	21.70	20.70	0.117	33.01	-12.31
	256-QAM	1855.0	-1.00	1 / 25	18.59	17.59	0.057	33.01	-15.42
15 MHz	QPSK	1857.5	-1.00	1 / 0	23.51	22.51	0.178	33.01	-10.50
		1880.0	-1.00	1 / 0	23.70	**22.70**	0.186	33.01	-10.31
		1902.5	-1.00	1 / 74	23.58	22.58	0.181	33.01	-10.43
	16-QAM	1857.5	-1.00	1 / 74	22.68	21.68	0.147	33.01	-11.33
	64-QAM	1857.5	-1.00	1 / 0	21.69	20.69	0.117	33.01	-12.32
	256-QAM	1857.5	-1.00	1 / 74	18.75	17.75	0.060	33.01	-15.26
20 MHz	QPSK	1860.0	-1.00	1 / 99	23.44	22.44	0.175	33.01	-10.57
		1880.0	-1.00	1 / 99	23.70	**22.70**	0.186	33.01	-10.31
		1900.0	-1.00	1 / 0	23.58	22.58	0.181	33.01	-10.43
	16-QAM	1860.0	-1.00	1 / 0	22.68	21.68	0.147	33.01	-11.33
	64-QAM	1900.0	-1.00	1 / 50	21.39	20.39	0.109	33.01	-12.62
	256-QAM	1860.0	-1.00	1 / 99	18.56	17.56	0.057	33.01	-15.45

Table 7-18. Antenna 1b EIRP Data (LTE Band 2)

NR Band n25

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
5 MHz	π/2 BPSK	1852.5	-1.00	1 / 23	23.52	22.52	0.179	33.01	-10.49
		1882.5	-1.00	1 / 23	23.52	22.52	0.178	33.01	-10.49
		1912.5	-1.00	1 / 12	23.55	22.55	0.180	33.01	-10.46
	QPSK	1852.5	-1.00	1 / 1	23.58	22.58	0.181	33.01	-10.43
		1882.5	-1.00	1 / 23	23.61	22.61	0.182	33.01	-10.40
		1912.5	-1.00	1 / 12	23.63	**22.63**	0.183	33.01	-10.38
	16-QAM	1912.5	-1.00	1 / 12	22.86	21.86	0.153	33.01	-11.15
	64-QAM	1912.5	-1.00	1 / 23	21.24	20.24	0.106	33.01	-12.77
	256-QAM	1912.5	-1.00	1 / 12	19.16	18.16	0.065	33.01	-14.85
10 MHz	π/2 BPSK	1855.0	-1.00	1 / 25	23.50	22.50	0.178	33.01	-10.51
		1882.5	-1.00	1 / 25	23.49	22.49	0.178	33.01	-10.52
		1910.0	-1.00	1 / 25	23.61	22.61	0.182	33.01	-10.40
	QPSK	1855.0	-1.00	1 / 1	23.53	22.53	0.179	33.01	-10.48
		1882.5	-1.00	1 / 25	23.56	22.56	0.180	33.01	-10.45
		1910.0	-1.00	1 / 25	23.65	**22.65**	0.184	33.01	-10.36
	16-QAM	1855.0	-1.00	1 / 25	22.79	21.79	0.151	33.01	-11.22
	64-QAM	1910.0	-1.00	1 / 1	21.40	20.40	0.110	33.01	-12.61
	256-QAM	1910.0	-1.00	1 / 50	19.02	18.02	0.063	33.01	-14.99
15 MHz	π/2 BPSK	1857.5	-1.00	1 / 1	23.69	22.69	0.186	33.01	-10.32
		1882.5	-1.00	1 / 77	23.65	22.65	0.184	33.01	-10.36
		1907.5	-1.00	1 / 1	23.69	22.69	0.186	33.01	-10.32
	QPSK	1857.5	-1.00	1 / 1	23.70	22.70	0.186	33.01	-10.31
		1882.5	-1.00	1 / 77	23.65	22.65	0.184	33.01	-10.36
		1907.5	-1.00	1 / 77	23.70	**22.70**	0.186	33.01	-10.31
	16-QAM	1907.5	-1.00	1 / 1	22.90	21.90	0.155	33.01	-11.11
	64-QAM	1907.5	-1.00	1 / 1	21.35	20.35	0.108	33.01	-12.66
	256-QAM	1907.5	-1.00	1 / 1	19.37	18.37	0.069	33.01	-14.64
20 MHz	π/2 BPSK	1860.0	-1.00	1 / 1	23.67	22.67	0.185	33.01	-10.34
		1882.5	-1.00	1 / 50	23.64	22.64	0.184	33.01	-10.37
		1905.0	-1.00	1 / 104	23.70	22.70	0.186	33.01	-10.31
	QPSK	1860.0	-1.00	1 / 104	23.65	22.65	0.184	33.01	-10.37
		1882.5	-1.00	1 / 50	23.65	22.65	0.184	33.01	-10.36
		1905.0	-1.00	1 / 104	23.70	**22.70**	0.186	33.01	-10.31
	16-QAM	1905.0	-1.00	1 / 50	22.81	21.81	0.152	33.01	-11.20
	64-QAM	1882.5	-1.00	1 / 50	21.39	20.39	0.109	33.01	-12.62
	256-QAM	1860.0	-1.00	1 / 1	19.23	18.23	0.066	33.01	-14.78
25 MHz	π/2 BPSK	1862.5	-1.00	1 / 64	23.68	22.68	0.186	33.01	-10.33
		1882.5	-1.00	1 / 64	23.65	22.65	0.184	33.01	-10.36
		1902.5	-1.00	1 / 131	23.70	**22.70**	0.186	33.01	-10.31
	QPSK	1862.5	-1.00	1 / 131	23.63	22.63	0.183	33.01	-10.38
		1882.5	-1.00	1 / 64	23.70	22.70	0.186	33.01	-10.31
		1902.5	-1.00	1 / 64	23.66	22.66	0.184	33.01	-10.35
	16-QAM	1902.5	-1.00	1 / 64	22.80	21.80	0.151	33.01	-11.21
	64-QAM	1882.5	-1.00	1 / 64	21.22	20.22	0.105	33.01	-12.79
	256-QAM	1862.5	-1.00	1 / 1	19.38	18.38	0.069	33.01	-14.63
30 MHz	π/2 BPSK	1865.0	-1.00	1 / 80	23.70	**22.70**	0.186	33.01	-10.31
		1882.5	-1.00	1 / 1	23.69	22.69	0.186	33.01	-10.32
		1900.0	-1.00	1 / 158	23.61	22.61	0.182	33.01	-10.40
	QPSK	1865.0	-1.00	1 / 158	23.66	22.66	0.185	33.01	-10.35
		1882.5	-1.00	1 / 80	23.67	22.67	0.185	33.01	-10.34
		1900.0	-1.00	1 / 158	23.53	22.53	0.179	33.01	-10.48
	16-QAM	1865.0	-1.00	1 / 158	22.87	21.87	0.154	33.01	-11.14
	64-QAM	1900.0	-1.00	1 / 158	21.29	20.29	0.107	33.01	-12.72
	256-QAM	1865.0	-1.00	1 / 1	19.27	18.27	0.067	33.01	-14.74
30 MHz	π/2 BPSK	1865.0	-1.00	1 / 90	23.70	**22.70**	0.186	33.01	-10.31
		1882.5	-1.00	1 / 90	23.62	22.62	0.183	33.01	-10.39
		1900.0	-1.00	1 / 90	23.65	22.65	0.184	33.01	-10.36
	QPSK	1865.0	-1.00	1 / 90	23.67	22.67	0.185	33.01	-10.34
		1882.5	-1.00	1 / 1	23.66	22.66	0.185	33.01	-10.35
		1900.0	-1.00	1 / 90	23.58	22.58	0.181	33.01	-10.43
	16-QAM	1865.0	-1.00	1 / 1	22.87	21.87	0.154	33.01	-11.14
	64-QAM	1900.0	-1.00	1 / 186	21.56	20.56	0.114	33.01	-12.45
	256-QAM	1865.0	-1.00	1 / 186	19.38	18.38	0.069	33.01	-14.63
35 MHz	π/2 BPSK	1867.5	-1.00	1 / 108	23.33	22.33	0.171	33.01	-10.68
		1882.5	-1.00	1 / 108	23.25	22.25	0.168	33.01	-10.76
		1897.5	-1.00	1 / 108	23.27	22.27	0.169	33.01	-10.74
	QPSK	1867.5	-1.00	1 / 108	23.17	22.17	0.165	33.01	-10.84
		1882.5	-1.00	1 / 1	23.16	22.16	0.164	33.01	-10.85
		1897.5	-1.00	1 / 108	23.20	22.20	0.166	33.01	-10.81
	16-QAM	1867.5	-1.00	1 / 1	22.37	21.37	0.137	33.01	-11.64
	64-QAM	1897.5	-1.00	1 / 214	21.06	20.06	0.101	33.01	-12.95
	256-QAM	1867.5	-1.00	1 / 214	18.88	17.88	0.061	33.01	-15.13
40 MHz	π/2 BPSK	1870.0	-1.00	1 / 214	23.62	22.62	0.183	33.01	-10.39
		1882.5	-1.00	1 / 214	23.63	22.63	0.183	33.01	-10.38
		1895.0	-1.00	1 / 108	23.70	22.70	0.186	33.01	-10.31
	QPSK	1870.0	-1.00	1 / 108	23.68	22.68	0.185	33.01	-10.33
		1882.5	-1.00	1 / 108	23.68	22.68	0.185	33.01	-10.33
		1895.0	-1.00	1 / 214	23.70	**22.70**	0.186	33.01	-10.31
	16-QAM	1895.0	-1.00	1 / 108	22.88	21.88	0.154	33.01	-11.13
	64-QAM	1870.0	-1.00	1 / 214	21.43	20.43	0.110	33.01	-12.58
	256-QAM	1870.0	-1.00	1 / 1	19.38	18.38	0.069	33.01	-14.63

Table 7-19. Antenna 1b EIRP Data (NR Band n25)

NR Band n2

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
5 MHz	π/2 BPSK	1852.5	-1.00	1 / 1	23.57	22.57	0.181	33.01	-10.44
		1880.0	-1.00	1 / 12	23.60	22.60	0.182	33.01	-10.41
		1907.5	-1.00	1 / 1	23.70	**22.70**	0.186	33.01	-10.31
	QPSK	1852.5	-1.00	1 / 1	23.52	22.52	0.179	33.01	-10.49
		1880.0	-1.00	1 / 1	23.60	22.60	0.182	33.01	-10.41
		1907.5	-1.00	1 / 12	23.69	22.69	0.186	33.01	-10.32
	16-QAM	1907.5	-1.00	1 / 1	22.96	21.96	0.157	33.01	-11.06
	64-QAM	1907.5	-1.00	1 / 23	21.28	20.28	0.107	33.01	-12.73
	256-QAM	1907.5	-1.00	1 / 1	19.10	18.10	0.065	33.01	-14.91
10 MHz	π/2 BPSK	1855.0	-1.00	1 / 1	23.43	22.43	0.175	33.01	-10.58
		1880.0	-1.00	1 / 25	23.49	22.49	0.177	33.01	-10.52
		1905.0	-1.00	1 / 25	23.67	22.67	0.185	33.01	-10.34
	QPSK	1855.0	-1.00	1 / 1	23.51	22.51	0.178	33.01	-10.50
		1880.0	-1.00	1 / 1	23.56	22.56	0.180	33.01	-10.45
		1905.0	-1.00	1 / 1	23.70	**22.70**	0.186	33.01	-10.31
	16-QAM	1905.0	-1.00	1 / 1	22.65	21.65	0.146	33.01	-11.36
	64-QAM	1905.0	-1.00	1 / 25	21.38	20.38	0.109	33.01	-12.63
	256-QAM	1905.0	-1.00	1 / 25	19.09	18.09	0.064	33.01	-14.92
15 MHz	π/2 BPSK	1857.5	-1.00	1 / 1	23.66	22.66	0.184	33.01	-10.35
		1880.0	-1.00	1 / 77	23.65	22.65	0.184	33.01	-10.36
		1902.5	-1.00	1 / 36	23.69	22.69	0.186	33.01	-10.32
	QPSK	1857.5	-1.00	1 / 36	23.66	22.66	0.184	33.01	-10.35
		1880.0	-1.00	1 / 77	23.64	22.64	0.183	33.01	-10.37
		1902.5	-1.00	1 / 1	23.70	**22.70**	0.186	33.01	-10.31
	16-QAM	1902.5	-1.00	1 / 1	22.84	21.84	0.153	33.01	-11.17
	64-QAM	1902.5	-1.00	1 / 36	21.50	20.50	0.112	33.01	-12.51
	256-QAM	1857.5	-1.00	1 / 36	19.19	18.19	0.066	33.01	-14.82
20 MHz	π/2 BPSK	1860.0	-1.00	1 / 1	23.64	22.64	0.184	33.01	-10.37
		1880.0	-1.00	1 / 104	23.69	22.69	0.186	33.01	-10.32
		1900.0	-1.00	1 / 50	23.69	22.69	0.186	33.01	-10.32
	QPSK	1860.0	-1.00	1 / 1	23.64	22.64	0.183	33.01	-10.37
		1880.0	-1.00	1 / 104	23.64	22.64	0.184	33.01	-10.37
		1900.0	-1.00	1 / 50	23.70	**22.70**	0.186	33.01	-10.31
	16-QAM	1900.0	-1.00	1 / 1	22.87	21.87	0.154	33.01	-11.14
	64-QAM	1900.0	-1.00	1 / 104	21.38	20.38	0.109	33.01	-12.63
	256-QAM	1900.0	-1.00	1 / 1	19.33	18.33	0.068	33.01	-14.68

Table 7-20. Antenna 1b EIRP Data (NR Band n2)

WCDMA PCS

Frequency [MHz]	Mode	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1852.40	WCDMA1900	23.49	-1.00	22.49	0.177	33.01	-10.52
1880.00	WCDMA1900	23.56	-1.00	22.56	0.180	33.01	-10.45
1907.60	WCDMA1900	23.70	-1.00	**22.70**	**0.186**	33.01	-10.31

Table 7-21. Antenna 1b EIRP Data (WCDMA PCS)

7.7 Radiated Spurious Emissions

§2.1053, 24.238(a)

Test Overview

Radiated spurious emissions measurements are performed using the field strength conversion method described in KDB 971168 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using horizontally and vertically polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as peak measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.8

Test Settings

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW ≥ 3 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points ≥ 2 x span / RBW
5. Detector = RMS
6. Trace mode = Average (Max Hold for pulsed emissions)
7. The trace was allowed to stabilize

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

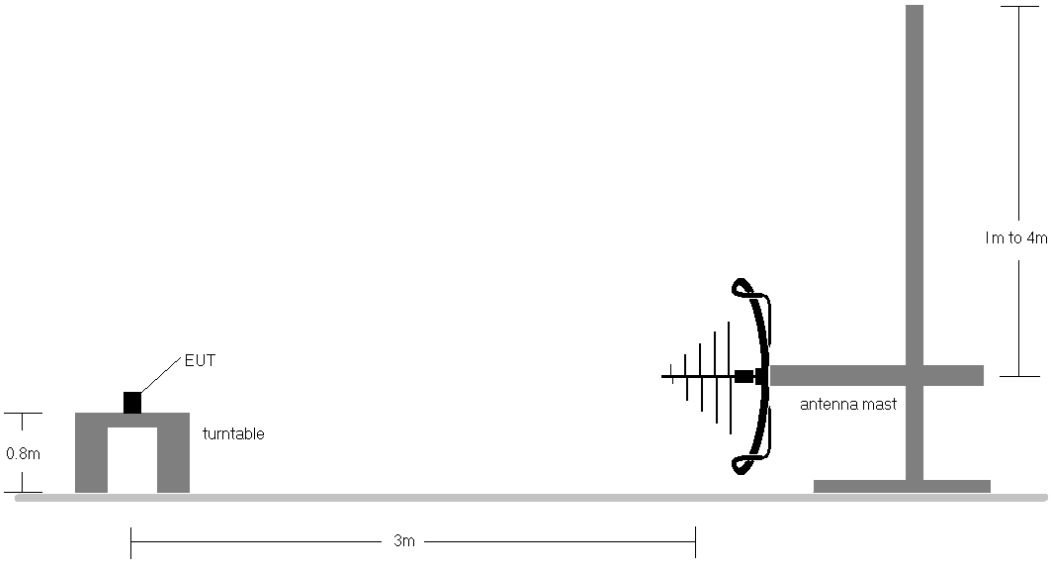


Figure 7-6. Test Instrument & Measurement Setup < 1GHz

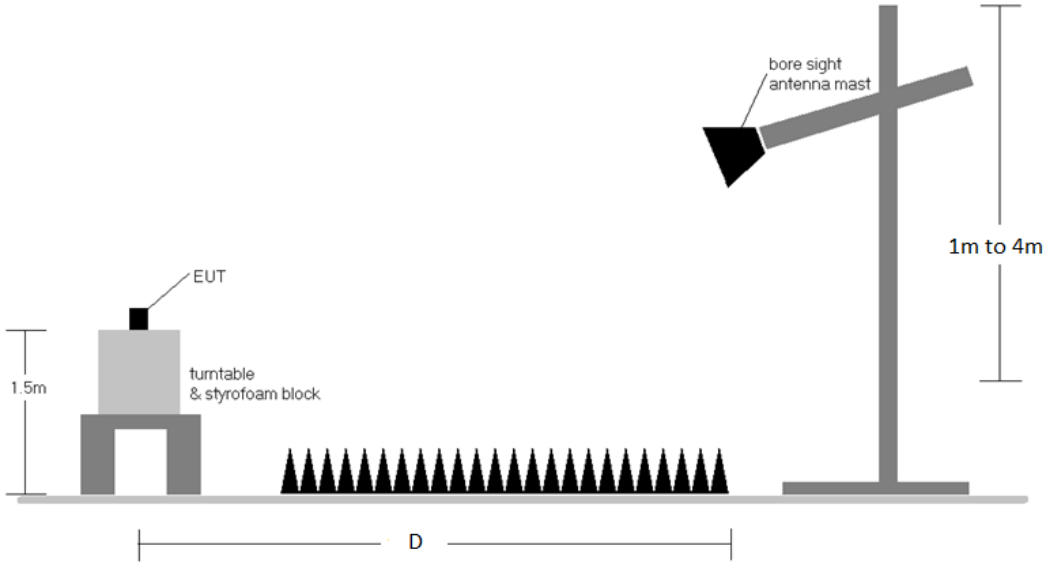


Figure 7-7. Test Instrument & Measurement Setup >1 GHz

Test Notes

1. Field strengths are calculated using the Measurement quantity conversions in KDB 971168 Section 5.8.4.
    a. E(dBµV/m) = Measured amplitude level (dBm) + 107 + Cable Loss (dB) + Antenna Factor (dB/m)
    b. EIRP (dBm) = E(dBµV/m) + 20logD – 104.8; where D is the measurement distance in meters.

2. This device employs UMTS technology with WCDMA (AMR/RMC) and HSDPA capabilities. The EUT was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to “1”.

3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.

4. This unit was tested with its standard battery.

5. The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.

6. D is the measurement test distance and emissions 1-18GHz were measured at a 3 meters test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.

7. No significant emissions were found for below 1GHz and Above 18GHz measurement.

8. The "-" shown in the following RSE tables are used to denote a noise floor measurement.

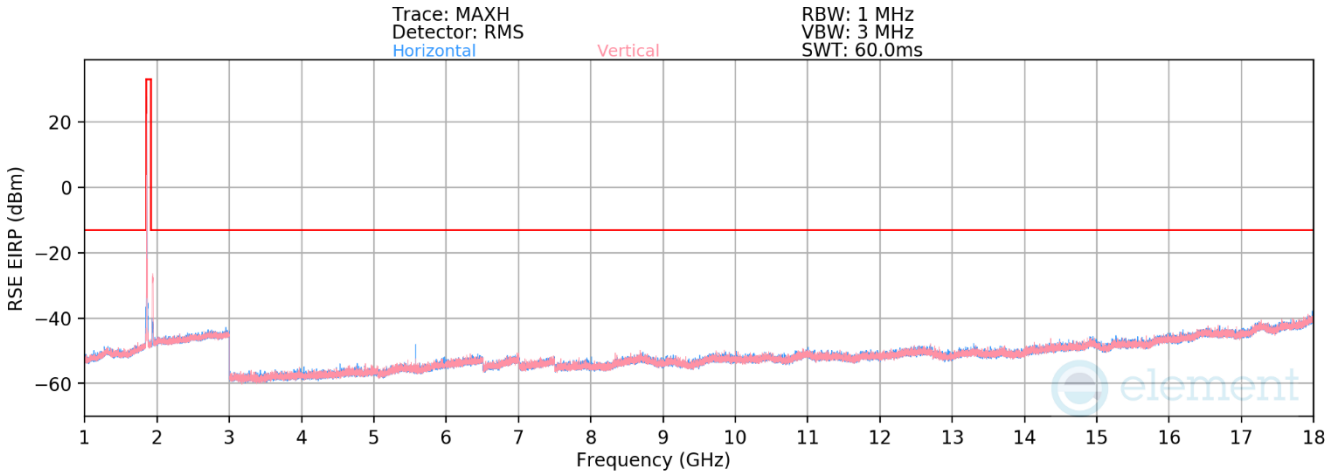
9. For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

10. Spurious emission in EN-DC Operating mode with Sub 6GHz NR carrier as well as an LTE carrier (anchor) has been checked and was found to not to be the worst case.

11. NR band n25 overlaps the entire frequency range of NR band 2. Therefore, the radiated emissions data of NR band n25 provided in this report covers NR band n2.

7.7.1 Antenna 4 – Radiated Spurious Emission Measurement

LTE Band 25/2



Plot 7-302. Radiated Spurious Plot (LTE Band 25/2)

Bandwidth (MHz):	20
Frequency (MHz):	1860.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3720.0	H	-	-	-78.60	3.81	32.21	-63.05	-13.00	-50.05
5580.0	H	116	164	-73.65	5.87	39.22	-56.04	-13.00	-43.04
7440.0	V	-	-	-79.66	8.24	35.58	-59.68	-13.00	-46.68
9300.0	V	-	-	-80.55	9.22	35.67	-59.59	-13.00	-46.59
11160.0	H	-	-	-80.59	11.42	37.84	-57.42	-13.00	-44.42

Table 7-22. Antenna 4 Radiated Spurious Data (LTE Band 25/2 – Low Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1882.5
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3765.0	V	-	-	-76.61	0.44	30.83	-64.43	-13.00	-51.43
5647.5	H	-	-	-77.59	3.28	32.69	-62.57	-13.00	-49.57
7530.0	V	-	-	-77.88	4.25	33.37	-61.89	-13.00	-48.89

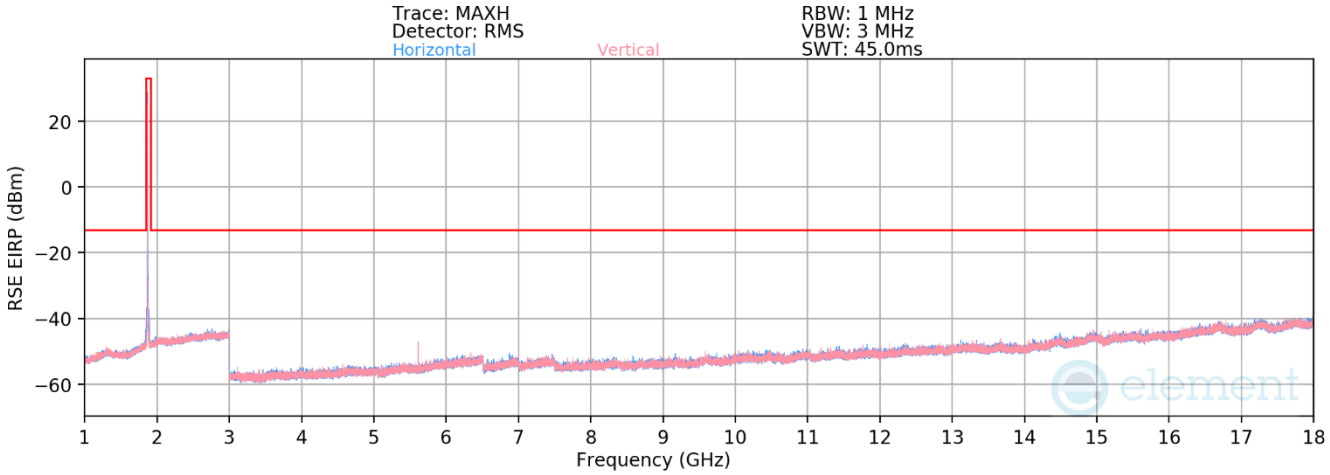
Table 7-23. Antenna 4 Radiated Spurious Data (LTE Band 25/2 – Mid Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1905.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3810.00	V	-	-	-78.23	3.25	32.02	-63.24	-13.00	-50.24
5715.00	H	-	-	-79.20	6.21	34.01	-61.25	-13.00	-48.25
7620.00	V	-	-	-80.85	8.51	34.66	-60.59	-13.00	-47.59

Table 7-24. Antenna 4 Radiated Spurious Data (LTE Band 25/2 – High Channel)

NR Band n25/2



Plot 7-303. Radiated Spurious Plot (NR Band n25/2)

Bandwidth (MHz):	40
Frequency (MHz):	1870.0
RB / Offset:	1 / 108

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3740.0	H	-	-	-78.73	3.52	31.79	-63.47	-13.00	-50.47
5610.0	H	116	164	-73.33	5.95	39.62	-55.64	-13.00	-42.64
7480.0	H	-	-	-80.06	8.50	35.44	-59.82	-13.00	-46.82
9350.0	H	-	-	-80.80	9.20	35.40	-59.86	-13.00	-46.86
11220.0	H	-	-	-80.82	11.76	37.94	-57.32	-13.00	-44.32

Table 7-25. Antenna 4 Radiated Spurious Data (NR Band n25/2 – Low Channel)

Bandwidth (MHz):	40
Frequency (MHz):	1882.5
RB / Offset:	1 / 108

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3765.0	H	-	-	-78.57	3.40	31.83	-63.43	-13.00	-50.43
5647.5	H	116	164	-74.36	6.08	38.72	-56.54	-13.00	-43.54
7530.0	H	-	-	-80.49	8.62	35.13	-60.13	-13.00	-47.13
9412.5	H	-	-	-80.42	9.18	35.76	-59.50	-13.00	-46.50
11295.0	H	-	-	-81.24	12.02	37.78	-57.48	-13.00	-44.48

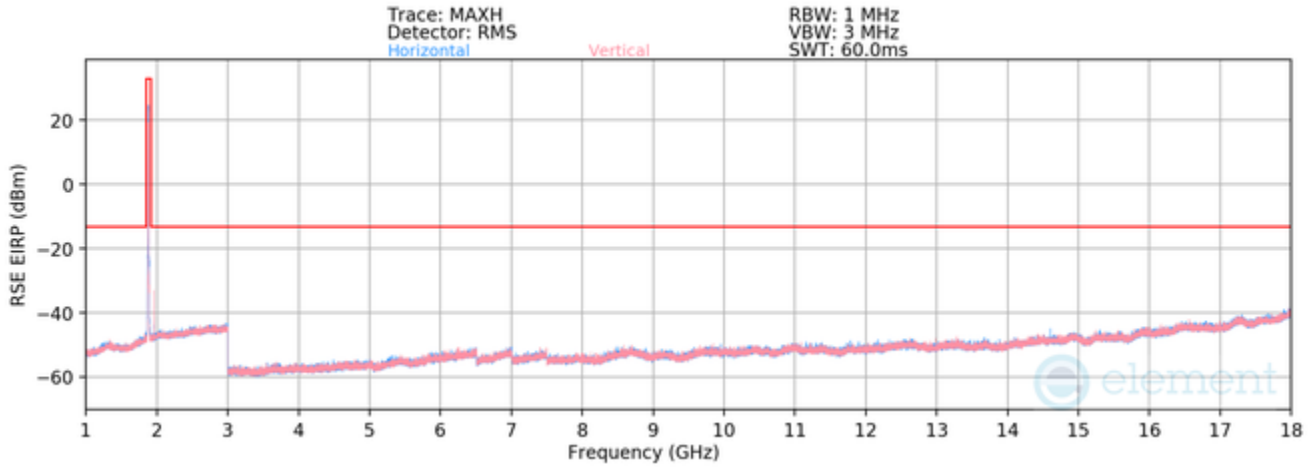
Table 7-26. Antenna 4 Radiated Spurious Data (NR Band n25/2 – Mid Channel)

Bandwidth (MHz):	40
Frequency (MHz):	1895.0
RB / Offset:	1 / 108

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3790.0	H	-	-	-78.67	3.52	31.85	-63.41	-13.00	-50.41
5685.0	H	-	-	-79.21	5.95	33.74	-61.52	-13.00	-48.52
7580.0	H	-	-	-80.53	8.50	34.97	-60.29	-13.00	-47.29

Table 7-27. Antenna 4 Radiated Spurious Data (NR Band n25/2 – High Channel)

WCDMA PCS



Plot 7-304. Radiated Spurious Plot (WCDMA PCS)

Mode:	WCDMA RMC
Channel:	9262
Frequency (MHz):	1852.4

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3704.8	H	-	-	-78.47	3.59	32.12	-63.14	-13.00	-50.14
5557.2	H	-	-	-79.14	6.00	33.86	-61.40	-13.00	-48.40
7409.6	H	-	-	-79.31	8.55	36.24	-59.02	-13.00	-46.02

Table 7-28. Antenna 4 Radiated Spurious Data (WCDMA PCS – Low Channel)

Mode:	WCDMA RMC
Channel:	9400
Frequency (MHz):	1880

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3760.0	H	-	-	-78.70	3.44	31.74	-63.52	-13.00	-50.52
5640.0	H	-	-	-79.42	6.07	33.65	-61.61	-13.00	-48.61
7520.0	H	-	-	-80.56	8.58	35.02	-60.23	-13.00	-47.23

Table 7-29. Antenna 4 Radiated Spurious Data (WCDMA PCS – Mid Channel)

Mode:	WCDMA RMC
Channel:	9538
Frequency (MHz):	1907.6

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3815.2	H	-	-	-78.20	3.19	31.99	-63.27	-13.00	-50.27
5722.8	H	-	-	-78.99	6.50	34.51	-60.74	-13.00	-47.74
7630.4	H	-	-	-80.92	8.72	34.80	-60.46	-13.00	-47.46

Table 7-30. Antenna 4 Radiated Spurious Data (WCDMA PCS – High Channel)

7.7.2 Antenna 2b – Radiated Spurious Emission Measurement

LTE Band 25/2

Bandwidth (MHz):	20
Frequency (MHz):	1860.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3720.0	H	-	-	-76.37	0.37	31.00	-64.26	-13.00	-51.26
5580.0	H	-	-	-77.88	3.55	32.67	-62.59	-13.00	-49.59
7440.0	H	-	-	-78.02	4.50	33.48	-61.78	-13.00	-48.78

Table 7-31. Antenna 2b Radiated Spurious Data (LTE Band 25/2 – Low Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1882.5
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3765.0	H	-	-	-76.41	0.35	30.94	-64.32	-13.00	-51.32
5647.5	H	-	-	-77.77	3.47	32.70	-62.56	-13.00	-49.56
7530.0	H	-	-	-78.09	4.46	33.37	-61.89	-13.00	-48.89

Table 7-32. Antenna 2b Radiated Spurious Data (LTE Band 25/2 – Mid Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1905.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3810.00	H	-	-	-76.44	0.44	31.00	-64.26	-13.00	-51.26
5715.00	H	-	-	-77.68	3.28	32.60	-62.66	-13.00	-49.66
7620.00	H	-	-	-78.05	4.25	33.20	-62.06	-13.00	-49.06

Table 7-33. Antenna 2b Radiated Spurious Data (LTE Band 25/2 – High Channel)

NR Band n25/2

Bandwidth (MHz):	40
Frequency (MHz):	1870.0
RB / Offset:	1 / 108

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3740.0	H	-	-	-78.62	3.54	31.93	-63.33	-13.00	-50.33
5610.0	H	-	-	-79.30	5.95	33.65	-61.61	-13.00	-48.61
7480.0	H	-	-	-79.64	8.52	35.88	-59.38	-13.00	-46.38

Table 7-34. Antenna 2b Radiated Spurious Data (NR Band n25/2 – Low Channel)

Bandwidth (MHz):	40
Frequency (MHz):	1882.5
RB / Offset:	1 / 108

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3765.0	H	-	-	-78.57	3.40	31.83	-63.43	-13.00	-50.43
5647.5	H	-	-	-79.53	6.08	33.55	-61.71	-13.00	-48.71
7530.0	H	-	-	-80.48	8.62	35.14	-60.12	-13.00	-47.12

Table 7-35. Antenna 2b Radiated Spurious Data (NR Band n25/2 – Mid Channel)

Bandwidth (MHz):	40
Frequency (MHz):	1895.0
RB / Offset:	1 / 108

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3790.0	H	-	-	-78.09	3.21	32.12	-63.14	-13.00	-50.14
5685.0	H	-	-	-79.95	6.52	33.57	-61.69	-13.00	-48.69
7580.0	H	-	-	-81.04	8.75	34.71	-60.55	-13.00	-47.55

Table 7-36. Antenna 2b Radiated Spurious Data (NR Band n25/2 – High Channel)

WCDMA PCS

Mode:	WCDMA RMC
Channel:	9262
Frequency (MHz):	1852.4

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3704.8	H	-	-	-78.35	3.59	32.24	-63.02	-13.00	-50.02
5557.2	H	-	-	-79.26	6.00	33.73	-61.52	-13.00	-48.52
7409.6	H	-	-	-79.73	8.55	35.82	-59.44	-13.00	-46.44

Table 7-37. Antenna 2b Radiated Spurious Data (WCDMA PCS – Low Channel)

Mode:	WCDMA RMC
Channel:	9400
Frequency (MHz):	1880

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3760.0	H	-	-	-78.68	3.44	31.76	-63.50	-13.00	-50.50
5640.0	H	-	-	-79.28	6.07	33.79	-61.47	-13.00	-48.47
7520.0	H	-	-	-80.25	8.58	35.33	-59.92	-13.00	-46.92

Table 7-38. Antenna 2b Radiated Spurious Data (WCDMA PCS – Mid Channel)

Mode:	WCDMA RMC
Channel:	9538
Frequency (MHz):	1907.6

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3815.2	H	-	-	-78.14	3.19	32.05	-63.21	-13.00	-50.21
5722.8	H	-	-	-79.57	6.50	33.93	-61.33	-13.00	-48.33
7630.4	H	-	-	-80.72	8.72	35.00	-60.26	-13.00	-47.26

Table 7-39. Antenna 2b Radiated Spurious Data (WCDMA PCS – High Channel)

7.7.3 Antenna 3a – Radiated Spurious Emission Measurement

LTE Band 25/2

Bandwidth (MHz):	20
Frequency (MHz):	1860.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3720.0	H	-	-	-76.64	0.37	30.73	-64.53	-13.00	-51.53
5580.0	H	-	-	-77.92	3.55	32.63	-62.63	-13.00	-49.63
7440.0	H	-	-	-77.95	4.50	33.55	-61.71	-13.00	-48.71

Table 7-40. Antenna 3a Radiated Spurious Data (LTE Band 25/2 – Low Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1882.5
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3765.0	H	-	-	-76.32	0.35	31.03	-64.23	-13.00	-51.23
5647.5	H	-	-	-77.81	3.47	32.66	-62.60	-13.00	-49.60
7530.0	H	-	-	-78.18	4.46	33.28	-61.98	-13.00	-48.98

Table 7-41. Antenna 3a Radiated Spurious Data (LTE Band 25/2 – Mid Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1905.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3810.00	H	-	-	-76.46	0.44	30.98	-64.28	-13.00	-51.28
5715.00	H	-	-	-77.68	3.28	32.60	-62.66	-13.00	-49.66
7620.00	H	-	-	-77.94	4.25	33.31	-61.95	-13.00	-48.95

Table 7-42. Antenna 3a Radiated Spurious Data (LTE Band 25/2 – High Channel)

NR Band n25/2

Bandwidth (MHz):	40
Frequency (MHz):	1870.0
RB / Offset:	1 / 108

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3740.0	H	-	-	-78.54	3.54	32.00	-63.26	-13.00	-50.26
5610.0	H	-	-	-79.38	5.95	33.57	-61.69	-13.00	-48.69
7480.0	H	-	-	-80.03	8.52	35.49	-59.77	-13.00	-46.77

Table 7-43. Antenna 3a Radiated Spurious Data (NR Band n25/2 – Low Channel)

Bandwidth (MHz):	40
Frequency (MHz):	1882.5
RB / Offset:	1 / 108

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3765.0	H	-	-	-78.58	3.40	31.82	-63.44	-13.00	-50.44
5647.5	H	-	-	-79.35	6.08	33.73	-61.53	-13.00	-48.53
7530.0	H	-	-	-80.62	8.62	35.00	-60.26	-13.00	-47.26

Table 7-44. Antenna 3a Radiated Spurious Data (NR Band n25/2 – Mid Channel)

Bandwidth (MHz):	40
Frequency (MHz):	1895.0
RB / Offset:	1 / 108

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3790.0	H	-	-	-78.11	3.21	32.10	-63.16	-13.00	-50.16
5685.0	H	-	-	-79.96	6.52	33.56	-61.70	-13.00	-48.70
7580.0	H	-	-	-81.00	8.75	34.75	-60.51	-13.00	-47.51

Table 7-45. Antenna 3a Radiated Spurious Data (NR Band n25/2 – High Channel)

WCDMA PCS

Mode:	WCDMA RMC
Channel:	9262
Frequency (MHz):	1852.4

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3704.8	H	-	-	-78.64	3.59	31.95	-63.31	-13.00	-50.31
5557.2	H	-	-	-79.15	6.00	33.85	-61.41	-13.00	-48.41
7409.6	H	-	-	-79.71	8.55	35.84	-59.42	-13.00	-46.42

Table 7-46. Antenna 3a Radiated Spurious Data (WCDMA PCS – Low Channel)

Mode:	WCDMA RMC
Channel:	9400
Frequency (MHz):	1880

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3760.0	H	-	-	-78.91	3.44	31.53	-63.73	-13.00	-50.73
5640.0	H	-	-	-79.28	6.07	33.79	-61.47	-13.00	-48.47
7520.0	H	-	-	-80.35	8.58	35.23	-60.03	-13.00	-47.03

Table 7-47. Antenna 3a Radiated Spurious Data (WCDMA PCS – Mid Channel)

Mode:	WCDMA RMC
Channel:	9538
Frequency (MHz):	1907.6

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3815.2	H	-	-	-78.37	3.19	31.82	-63.44	-13.00	-50.44
5722.8	H	-	-	-79.30	6.50	34.21	-61.05	-13.00	-48.05
7630.4	H	-	-	-80.80	8.72	34.91	-60.34	-13.00	-47.34

Table 7-48. Antenna 3a Radiated Spurious Data (WCDMA PCS – High Channel)

7.7.4 Antenna 1b – Radiated Spurious Emission Measurement

LTE Band 25/2

Bandwidth (MHz):	20
Frequency (MHz):	1860.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3720.0	H	-	-	-78.61	3.81	32.21	-63.05	-13.00	-50.05
5580.0	H	-	-	-79.08	5.91	33.84	-61.42	-13.00	-48.42
7440.0	H	-	-	-79.73	8.24	35.51	-59.75	-13.00	-46.75

Table 7-49. Antenna 1b Radiated Spurious Data (LTE Band 25/2 – Low Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1882.5
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3765.0	H	-	-	-78.84	3.65	31.82	-63.44	-13.00	-50.44
5647.5	H	-	-	-79.14	5.90	33.77	-61.49	-13.00	-48.49
7530.0	H	-	-	-80.19	8.29	35.09	-60.17	-13.00	-47.17

Table 7-50. Antenna 1b Radiated Spurious Data (LTE Band 25/2 – Mid Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1905.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3810.00	H	-	-	-76.56	0.44	30.88	-64.38	-13.00	-51.38
5715.00	H	-	-	-77.65	3.28	32.63	-62.63	-13.00	-49.63
7620.00	H	-	-	-77.82	4.25	33.43	-61.83	-13.00	-48.83

Table 7-51. Antenna 1b Radiated Spurious Data (LTE Band 25/2 – High Channel)

NR Band n25/2

Bandwidth (MHz):	40
Frequency (MHz):	1870.0
RB / Offset:	1 / 108

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3740.0	H	-	-	-78.71	3.54	31.83	-63.43	-13.00	-50.43
5610.0	H	-	-	-79.53	5.95	33.42	-61.84	-13.00	-48.84
7480.0	H	-	-	-80.00	8.52	35.52	-59.74	-13.00	-46.74

Table 7-52. Antenna 1b Radiated Spurious Data (NR Band n25/2 – Low Channel)

Bandwidth (MHz):	40
Frequency (MHz):	1882.5
RB / Offset:	1 / 108

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3765.0	H	-	-	-78.60	3.40	31.80	-63.46	-13.00	-50.46
5647.5	H	-	-	-79.52	6.08	33.56	-61.70	-13.00	-48.70
7530.0	H	-	-	-80.48	8.62	35.14	-60.12	-13.00	-47.12

Table 7-53. Antenna 1b Radiated Spurious Data (NR Band n25/2 – Mid Channel)

Bandwidth (MHz):	40
Frequency (MHz):	1895.0
RB / Offset:	1 / 108

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3790.0	H	-	-	-78.33	3.21	31.88	-63.38	-13.00	-50.38
5685.0	H	-	-	-80.03	6.52	33.49	-61.77	-13.00	-48.77
7580.0	H	-	-	-80.95	8.75	34.80	-60.46	-13.00	-47.46

Table 7-54. Antenna 1b Radiated Spurious Data (NR Band n25/2 – High Channel)

WCDMA PCS

Mode:	WCDMA RMC
Channel:	9262
Frequency (MHz):	1852.4

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3704.8	H	-	-	-78.52	3.59	32.07	-63.19	-13.00	-50.19
5557.2	H	-	-	-79.02	6.00	33.98	-61.28	-13.00	-48.28
7409.6	H	-	-	-79.56	8.55	35.99	-59.27	-13.00	-46.27

Table 7-55. Antenna 1b Radiated Spurious Data (WCDMA PCS – Low Channel)

Mode:	WCDMA RMC
Channel:	9400
Frequency (MHz):	1880

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3760.0	H	-	-	-78.56	3.44	31.88	-63.38	-13.00	-50.38
5640.0	H	-	-	-79.20	6.07	33.87	-61.39	-13.00	-48.39
7520.0	H	-	-	-80.24	8.58	35.34	-59.91	-13.00	-46.91

Table 7-56. Antenna 1b Radiated Spurious Data (WCDMA PCS – Mid Channel)

Mode:	WCDMA RMC
Channel:	9538
Frequency (MHz):	1907.6

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3815.2	H	-	-	-78.26	3.19	31.93	-63.33	-13.00	-50.33
5722.8	H	-	-	-79.34	6.50	34.16	-61.09	-13.00	-48.09
7630.4	H	-	-	-80.67	8.72	35.05	-60.21	-13.00	-47.21

Table 7-57. Antenna 1b Radiated Spurious Data (WCDMA PCS – High Channel)

7.8 Frequency Stability / Temperature Variation

§2.1055, §24.235

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015 and TIA-603-E-2016. The frequency stability of the transmitter is measured by:

a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.

b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

For Part 24 the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test Procedure Used

ANSI C63.26-2015

TIA-603-E-2016

Test Settings

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a "standby" condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

Test Setup

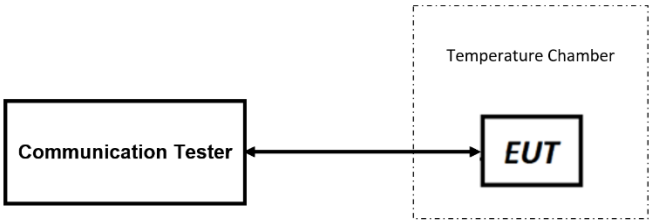


Figure 7-8. Test Instrument & Measurement Setup

Test Notes

1. All ports were tested and only the worst case data were reported.

Frequency Stability / Temperature Variation

LTE B25/2	
Operating Band Lower Boundary (GHz)	1.850
Ref. Voltage (VDC):	3.80

Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	1.85001262	-0.00001262
		- 20	1.85057161	-0.00057161
		- 10	1.85088055	-0.00088055
		0	1.85028065	-0.00028065
		+ 10	1.85055135	-0.00055135
		+ 20 (Ref)	1.85085602	-0.00085602
		+ 30	1.85039412	-0.00039412
		+ 40	1.85003135	-0.00003135
		+ 50	1.85067604	-0.00067604
Battery Endpoint	3.40	+ 20	1.85051621	-0.00051621

Table 7-58. LTE Band 25/2 Lower Boundary Frequency Stability Data

LTE B25/2	
Operating Band Upper Boundary (GHz)	1.915
Ref. Voltage (VDC):	3.80

Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	1.91421258	-0.00078742
		- 20	1.91460834	-0.00039166
		- 10	1.91477870	-0.00022130
		0	1.91497810	-0.00002190
		+ 10	1.91486307	-0.00013693
		+ 20 (Ref)	1.91423191	-0.00076809
		+ 30	1.91458995	-0.00041005
		+ 40	1.91433813	-0.00066187
		+ 50	1.91433928	-0.00066072
Battery Endpoint	3.40	+ 20	1.91473962	-0.00026038

Table 7-59. LTE Band 25/2 Upper Boundary Frequency Stability Data

NR Band n25/2

NR Band n25/2				
	Operating Band Lower Boundary (GHz)		1.850	
	Ref. Voltage (VDC):		3.80	
Voltage (%)	**Power (VDC)**	**Temp (°C)**	**Measured Freq. (GHz)**	**Freq. Delta from Operating Range (GHz)**
100 %	3.80	- 30	1.85072357	-0.00072357
		- 20	1.85070946	-0.00070946
		- 10	1.85071921	-0.00071921
		0	1.85072822	-0.00072822
		+ 10	1.85070112	-0.00070112
		+ 20 (Ref)	1.85070669	-0.00070669
		+ 30	1.85071119	-0.00071118
		+ 40	1.85070453	-0.00070453
		+ 50	1.85072586	-0.00072586
Battery Endpoint	3.40	+ 20	1.85071352	-0.00071352

Table 7-60. NR Band n25/2 Lower Boundary Frequency Stability Data

NR Band n25/2				
	Operating Band Upper Boundary (GHz)		1.915	
	Ref. Voltage (VDC):		3.80	
Voltage (%)	**Power (VDC)**	**Temp (°C)**	**Measured Freq. (GHz)**	**Freq. Delta from Operating Range (GHz)**
100 %	3.80	- 30	1.91426056	-0.00073944
		- 20	1.91425043	-0.00074957
		- 10	1.91424369	-0.00075631
		0	1.91424726	-0.00075274
		+ 10	1.91423630	-0.00076370
		+ 20 (Ref)	1.91423119	-0.00076881
		+ 30	1.91422080	-0.00077920
		+ 40	1.91422402	-0.00077598
		+ 50	1.91421980	-0.00078020
Battery Endpoint	3.40	+ 20	1.91423092	-0.00076908

Table 7-61. NR Band n25/2 Upper Boundary Frequency Stability Data

WCDMA PCS

WCDMA PCS	
Operating Band Lower Boundary (GHz)	1.850
Ref. Voltage (VDC):	3.80

Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	1.85079538	-0.00079538
		- 20	1.85096026	-0.00096026
		- 10	1.85017255	-0.00017255
		0	1.85057373	-0.00057373
		+ 10	1.85034057	-0.00034057
		+ 20 (Ref)	1.85049426	-0.00049426
		+ 30	1.85057927	-0.00057927
		+ 40	1.85002796	-0.00002796
		+ 50	1.85006053	-0.00006053
Battery Endpoint	3.40	+ 20	1.85098144	-0.00098144

Table 7-62. WCDMA PCS Lower Boundary Frequency Stability Data

WCDMA PCS	
Operating Band Upper Boundary (GHz)	1.910
Ref. Voltage (VDC):	3.80

Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	1.90971348	-0.00028652
		- 20	1.90917920	-0.00082080
		- 10	1.90942084	-0.00057916
		0	1.90928578	-0.00071422
		+ 10	1.90936149	-0.00063851
		+ 20 (Ref)	1.90932966	-0.00067034
		+ 30	1.90928920	-0.00071080
		+ 40	1.90946243	-0.00053757
		+ 50	1.90945511	-0.00054489
Battery Endpoint	3.40	+ 20	1.90965338	-0.00034662

Table 7-63. WCDMA PCS Upper Boundary Frequency Stability Data

8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the Apple **Tablet Device FCC ID: BCGA2903** complies with all the requirements of Part 24 of the FCC rules.