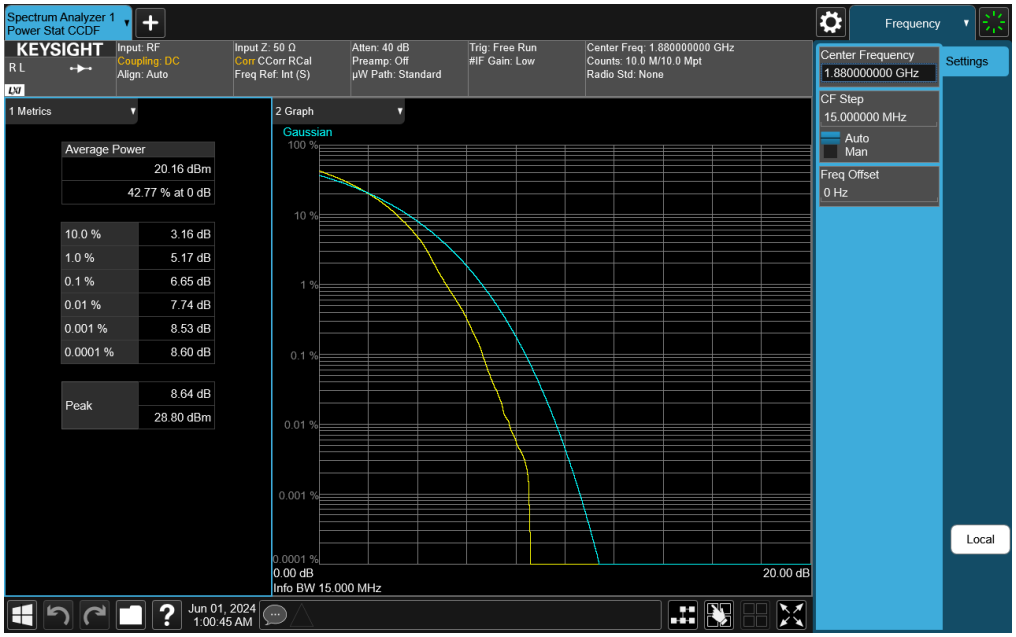
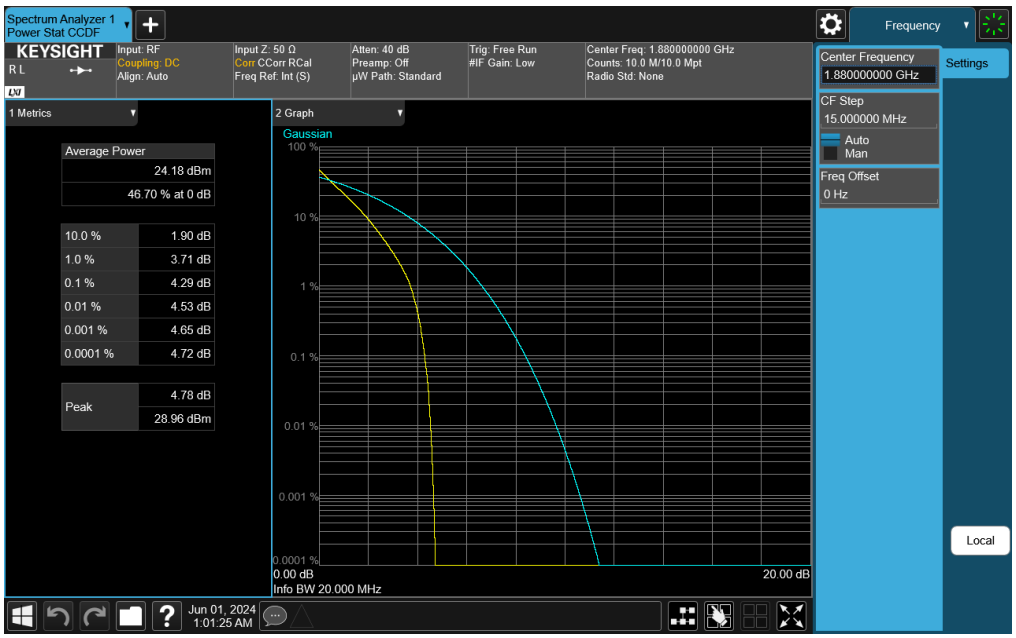
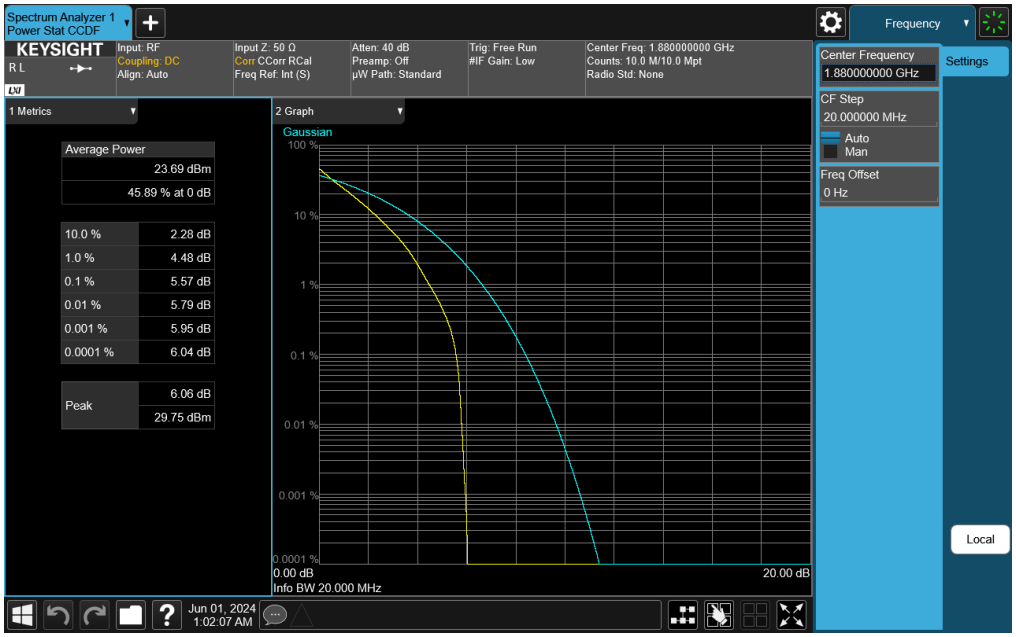


Plot 7-295. PAR Plot (NR Band n2 - 15MHz DFT-s-OFDM 256-QAM - Full RB)

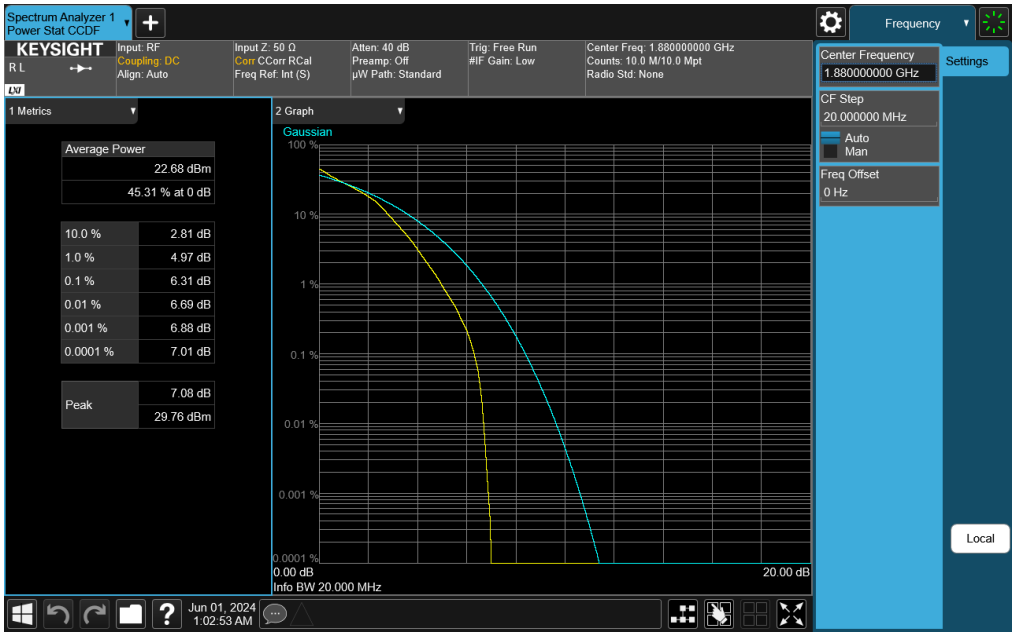


Plot 7-296. PAR Plot (NR Band n2 - 20MHz DFT-s-OFDM π/2 BPSK - Full RB)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

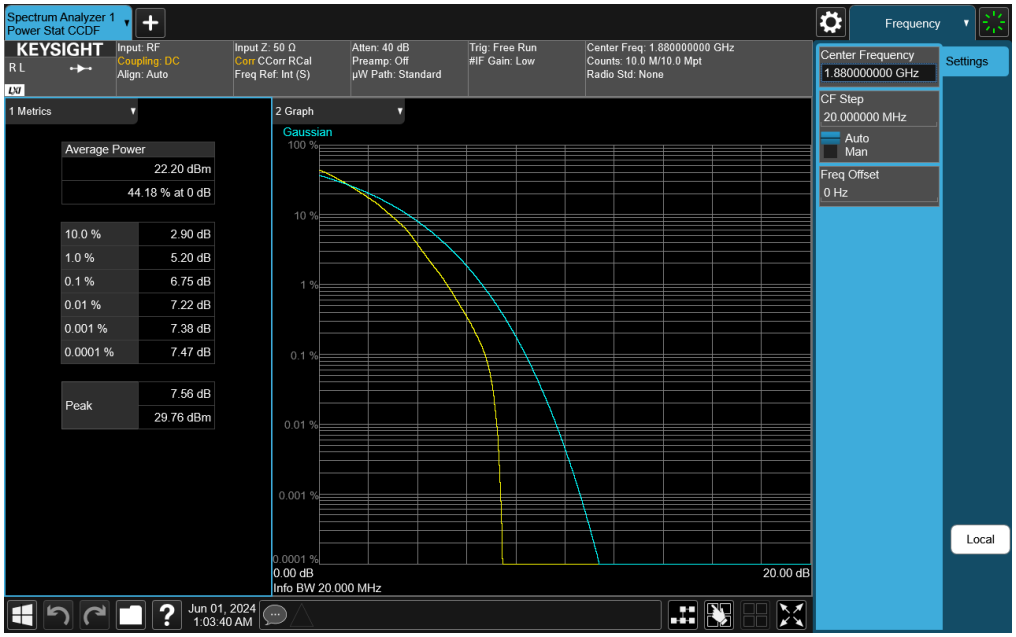


Plot 7-297. PAR Plot (NR Band n2 - 20MHz DFT-s-OFDM QPSK - Full RB)

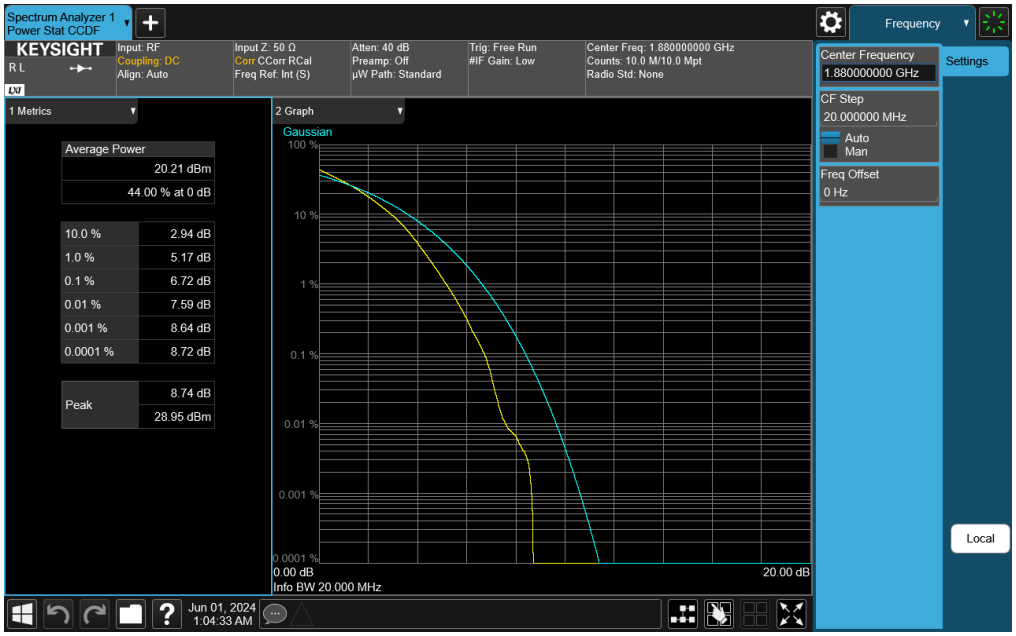


Plot 7-298. PAR Plot (NR Band n2 - 20MHz DFT-s-OFDM 16-QAM - Full RB)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.



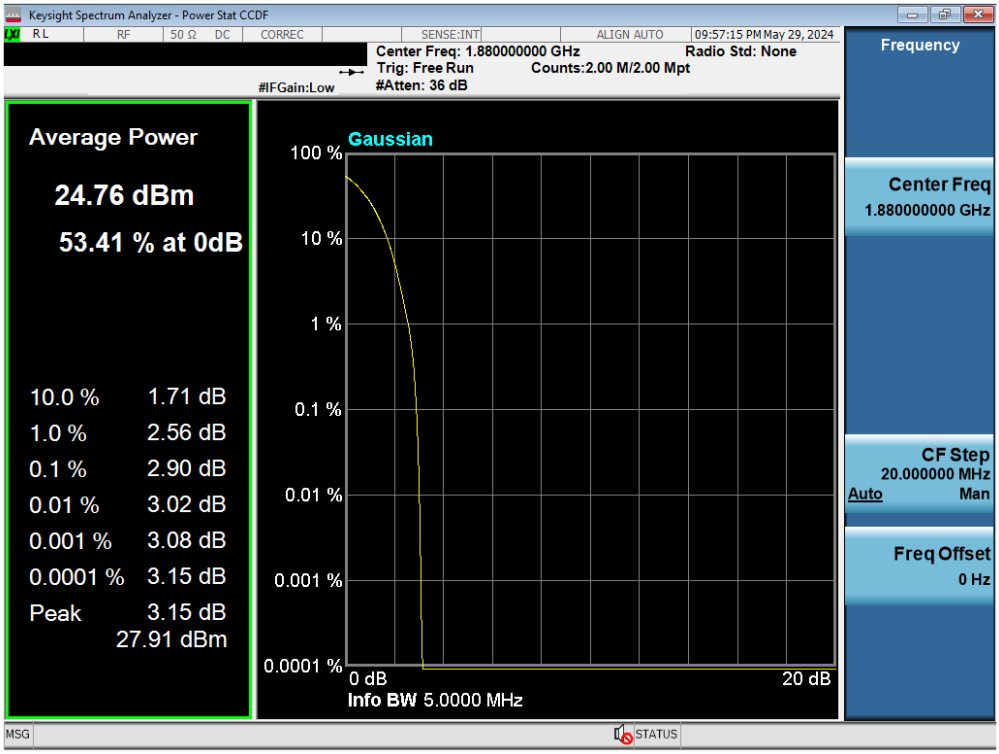
Plot 7-299. PAR Plot (NR Band n2 - 20MHz DFT-s-OFDM 64-QAM - Full RB)



Plot 7-300. PAR Plot (NR Band n2 - 20MHz DFT-s-OFDM 256-QAM - Full RB)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

WCDMA PCS



Plot 7-301. PAR Plot (WCDMA, Ch. 9400)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

7.6 Radiated Power (EIRP)

§24.232(c)

Test Overview

Equivalent Isotropic Radiated Power (EIRP) measurements are calculated by adding highest antenna gain to maximum measured conducted output power. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.2.1
ANSI C63.26-2015 – Section 5.2.5.5

Test Settings

The relevant equation for determining the EIRP from the conducted RF output power measured is:

EIRP = PMeas – LC + GT

Where:

EIRP = Equivalent Isotropic Radiated Power (expressed in the same units as PMeas, typically dBW or dBm)

PMeas = measured transmitter output power or PSD, in dBW or dBm

LC = signal attenuation in the connecting cable between the transmitter and antenna in dB

GT = gain of the transmitting antenna, in dBi (EIRP)

Test Setup

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

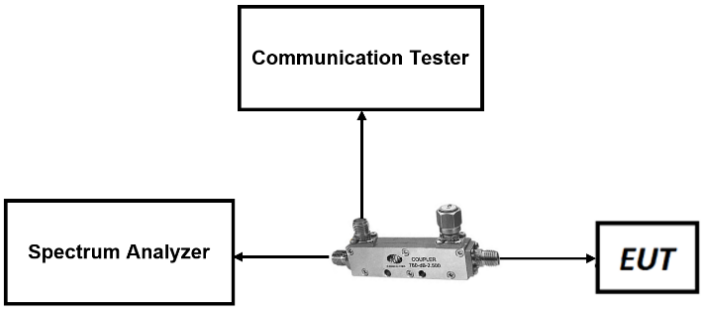


Figure 7-9. LTE Test Instrument & Measurement Setup

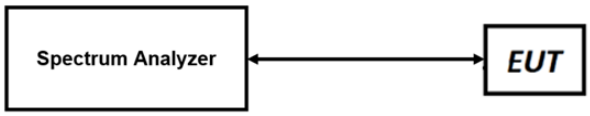


Figure 7-10. FR1 Test Instrument & Measurement Setup

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

Test Notes

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

2. This unit was tested with its standard battery.

3. The Level (dBm) readings in the table were taken with a correction table loaded into the base station simulator. The correction table was used to account for the signal attenuation in the connecting cable between the transmitter and antenna.

4. The Ant. Gains (GT) are listed in dBi.

5. 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”.

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

7.6.1 Antenna 3b – 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	0.70	1 / 0	24.95	25.65	0.367	33.01	-7.36
		1882.5	0.70	1 / 0	25.14	25.84	0.384	33.01	-7.17
		1914.3	0.70	1 / 5	25.17	**25.87**	0.386	33.01	-7.14
	16-QAM	1882.5	0.70	1 / 0	24.29	24.99	0.316	33.01	-8.02
	64-QAM	1914.3	0.70	1 / 0	23.25	23.95	0.248	33.01	-9.06
	256-QAM	1882.5	0.70	1 / 5	20.28	20.98	0.125	33.01	-12.03
3 MHz	QPSK	1851.5	0.70	1 / 0	24.73	25.43	0.349	33.01	-7.58
		1882.5	0.70	1 / 0	25.06	**25.76**	0.377	33.01	-7.25
		1913.5	0.70	1 / 0	24.98	25.68	0.370	33.01	-7.33
	16-QAM	1882.5	0.70	1 / 0	24.42	25.12	0.325	33.01	-7.89
	64-QAM	1882.5	0.70	1 / 0	23.37	24.07	0.255	33.01	-8.94
	256-QAM	1913.5	0.70	1 / 0	20.30	21.00	0.126	33.01	-12.01
5 MHz	QPSK	1852.5	0.70	1 / 0	25.01	25.71	0.372	33.01	-7.30
		1882.5	0.70	1 / 0	25.20	**25.90**	0.389	33.01	-7.11
		1912.5	0.70	1 / 0	24.97	25.67	0.369	33.01	-7.34
	16-QAM	1912.5	0.70	1 / 0	24.56	25.26	0.336	33.01	-7.75
	64-QAM	1912.5	0.70	1 / 24	23.41	24.11	0.258	33.01	-8.90
	256-QAM	1912.5	0.70	1 / 0	20.20	20.90	0.123	33.01	-12.11
10 MHz	QPSK	1855.0	0.70	1 / 0	24.73	25.43	0.349	33.01	-7.58
		1882.5	0.70	1 / 49	25.12	**25.82**	0.382	33.01	-7.19
		1910.0	0.70	1 / 49	25.03	25.73	0.374	33.01	-7.28
	16-QAM	1910.0	0.70	1 / 49	24.48	25.18	0.330	33.01	-7.83
	64-QAM	1882.5	0.70	1 / 0	23.38	24.08	0.256	33.01	-8.93
	256-QAM	1910.0	0.70	1 / 0	20.37	21.07	0.128	33.01	-11.94
15 MHz	QPSK	1857.5	0.70	1 / 0	24.83	25.53	0.357	33.01	-7.48
		1882.5	0.70	1 / 0	24.96	**25.66**	0.368	33.01	-7.35
		1907.5	0.70	1 / 0	24.87	25.57	0.361	33.01	-7.44
	16-QAM	1907.5	0.70	1 / 0	24.45	25.15	0.327	33.01	-7.86
	64-QAM	1907.5	0.70	1 / 0	23.16	23.86	0.243	33.01	-9.15
	256-QAM	1907.5	0.70	1 / 0	20.19	20.89	0.123	33.01	-12.12
20 MHz	QPSK	1860.0	0.70	1 / 0	24.84	25.54	0.358	33.01	-7.47
		1882.5	0.70	1 / 0	24.96	**25.66**	0.368	33.01	-7.35
		1905.0	0.70	1 / 0	24.92	25.62	0.365	33.01	-7.39
	16-QAM	1882.5	0.70	1 / 0	24.38	25.08	0.322	33.01	-7.93
	64-QAM	1905.0	0.70	1 / 0	23.08	23.78	0.239	33.01	-9.23
	256-QAM	1905.0	0.70	1 / 99	20.16	20.86	0.122	33.01	-12.15

Table 7-2. Antenna 3b EIRP Data (LTE Band 25)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	0.70	1 / 5	25.20	**25.90**	0.389	33.01	-7.11
		1880.0	0.70	1 / 5	25.17	25.87	0.386	33.01	-7.14
		1909.3	0.70	1 / 0	25.20	**25.90**	0.389	33.01	-7.11
	16-QAM	1850.7	0.70	1 / 5	24.54	25.24	0.334	33.01	-7.77
	64-QAM	1909.3	0.70	1 / 0	23.40	24.10	0.257	33.01	-8.91
	256-QAM	1850.7	0.70	1 / 5	20.30	21.00	0.126	33.01	-12.01
3 MHz	QPSK	1851.5	0.70	1 / 0	25.09	25.79	0.379	33.01	-7.22
		1880.0	0.70	1 / 0	25.20	**25.90**	0.389	33.01	-7.11
		1908.5	0.70	1 / 0	25.14	25.84	0.384	33.01	-7.17
	16-QAM	1908.5	0.70	1 / 0	24.61	25.31	0.340	33.01	-7.70
	64-QAM	1908.5	0.70	1 / 0	23.52	24.22	0.264	33.01	-8.79
	256-QAM	1908.5	0.70	1 / 0	20.49	21.19	0.132	33.01	-11.82
5 MHz	QPSK	1852.5	0.70	1 / 0	25.19	25.89	0.388	33.01	-7.12
		1880.0	0.70	1 / 0	25.20	**25.90**	0.389	33.01	-7.11
		1907.5	0.70	1 / 0	25.11	25.81	0.381	33.01	-7.20
	16-QAM	1907.5	0.70	1 / 0	24.53	25.23	0.333	33.01	-7.78
	64-QAM	1907.5	0.70	1 / 0	23.62	24.32	0.270	33.01	-8.69
	256-QAM	1907.5	0.70	1 / 0	20.45	21.15	0.130	33.01	-11.86
10 MHz	QPSK	1855.0	0.70	1 / 25	25.12	25.82	0.382	33.01	-7.19
		1880.0	0.70	1 / 0	25.17	25.87	0.386	33.01	-7.14
		1905.0	0.70	1 / 25	25.20	**25.90**	0.389	33.01	-7.11
	16-QAM	1905.0	0.70	1 / 49	24.71	25.41	0.348	33.01	-7.60
	64-QAM	1855.0	0.70	1 / 25	23.41	24.11	0.258	33.01	-8.90
	256-QAM	1880.0	0.70	1 / 0	20.43	21.13	0.130	33.01	-11.88
15 MHz	QPSK	1857.5	0.70	1 / 0	25.09	**25.79**	0.379	33.01	-7.22
		1880.0	0.70	1 / 0	25.08	25.78	0.378	33.01	-7.23
		1902.5	0.70	1 / 0	24.93	25.63	0.366	33.01	-7.38
	16-QAM	1902.5	0.70	1 / 0	24.45	25.15	0.327	33.01	-7.86
	64-QAM	1857.5	0.70	1 / 0	23.42	24.12	0.258	33.01	-8.89
	256-QAM	1880.0	0.70	1 / 0	20.26	20.96	0.125	33.01	-12.05
20 MHz	QPSK	1860.0	0.70	1 / 0	25.05	25.75	0.376	33.01	-7.26
		1880.0	0.70	1 / 0	24.75	25.45	0.351	33.01	-7.56
		1900.0	0.70	1 / 0	25.17	**25.87**	0.386	33.01	-7.14
	16-QAM	1900.0	0.70	1 / 0	24.69	25.39	0.346	33.01	-7.62
	64-QAM	1900.0	0.70	1 / 0	23.49	24.19	0.262	33.01	-8.82
	256-QAM	1900.0	0.70	1 / 0	20.29	20.99	0.126	33.01	-12.02

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

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	0.70	1 / 12	25.08	25.78	0.378	33.01	-7.23
		1882.5	0.70	1 / 1	25.11	25.81	0.381	33.01	-7.20
		1912.5	0.70	1 / 23	25.12	25.82	0.382	33.01	-7.19
	QPSK	1852.5	0.70	1 / 12	25.20	**25.90**	0.389	33.01	-7.11
		1882.5	0.70	1 / 1	25.06	25.76	0.377	33.01	-7.25
		1912.5	0.70	1 / 1	25.12	25.82	0.382	33.01	-7.19
	16-QAM	1882.5	0.70	1 / 23	24.14	24.84	0.305	33.01	-8.17
	64-QAM	1852.5	0.70	1 / 12	23.19	23.89	0.245	33.01	-9.12
	256-QAM	1882.5	0.70	1 / 12	20.26	20.96	0.125	33.01	-12.05
10 MHz	π/2 BPSK	1855.0	0.70	1 / 1	25.18	25.88	0.387	33.01	-7.13
		1882.5	0.70	1 / 1	24.94	25.64	0.366	33.01	-7.37
		1910.0	0.70	1 / 50	25.20	**25.90**	0.389	33.01	-7.11
	QPSK	1855.0	0.70	1 / 1	24.83	25.53	0.357	33.01	-7.48
		1882.5	0.70	1 / 50	25.07	25.77	0.378	33.01	-7.24
		1910.0	0.70	1 / 50	25.15	25.85	0.385	33.01	-7.16
	16-QAM	1855.0	0.70	1 / 25	24.14	24.84	0.305	33.01	-8.17
	64-QAM	1855.0	0.70	1 / 1	23.21	23.91	0.246	33.01	-9.10
	256-QAM	1882.5	0.70	1 / 50	20.27	20.97	0.125	33.01	-12.04
15 MHz	π/2 BPSK	1857.5	0.70	1 / 77	25.14	25.84	0.384	33.01	-7.17
		1882.5	0.70	1 / 1	25.16	25.86	0.385	33.01	-7.15
		1907.5	0.70	1 / 1	24.89	25.59	0.362	33.01	-7.42
	QPSK	1857.5	0.70	1 / 1	24.93	25.63	0.366	33.01	-7.38
		1882.5	0.70	1 / 77	25.20	**25.90**	0.389	33.01	-7.11
		1907.5	0.70	1 / 77	25.08	25.78	0.378	33.01	-7.23
	16-QAM	1907.5	0.70	1 / 77	24.14	24.84	0.305	33.01	-8.17
	64-QAM	1857.5	0.70	1 / 77	23.16	23.86	0.243	33.01	-9.15
	256-QAM	1857.5	0.70	1 / 1	20.29	20.99	0.126	33.01	-12.02
20 MHz	π/2 BPSK	1860.0	0.70	1 / 1	25.17	25.87	0.386	33.01	-7.14
		1882.5	0.70	1 / 50	25.07	25.77	0.378	33.01	-7.24
		1905.0	0.70	1 / 50	25.18	25.88	0.387	33.01	-7.13
	QPSK	1860.0	0.70	1 / 1	25.20	**25.90**	0.389	33.01	-7.11
		1882.5	0.70	1 / 104	25.09	25.79	0.379	33.01	-7.22
		1905.0	0.70	1 / 1	25.15	25.85	0.385	33.01	-7.16
	16-QAM	1882.5	0.70	1 / 50	24.22	24.92	0.310	33.01	-8.09
	64-QAM	1882.5	0.70	1 / 50	23.18	23.88	0.244	33.01	-9.13
	256-QAM	1882.5	0.70	1 / 50	20.29	20.99	0.126	33.01	-12.02
25 MHz	π/2 BPSK	1862.5	0.70	1 / 64	25.20	**25.90**	0.389	33.01	-7.11
		1882.5	0.70	1 / 131	24.95	25.65	0.367	33.01	-7.36
		1902.5	0.70	1 / 131	25.13	25.83	0.383	33.01	-7.18
	QPSK	1862.5	0.70	1 / 131	25.16	25.86	0.385	33.01	-7.15
		1882.5	0.70	1 / 1	24.96	25.66	0.368	33.01	-7.35
		1902.5	0.70	1 / 1	25.18	25.88	0.387	33.01	-7.13
	16-QAM	1882.5	0.70	1 / 64	24.19	24.89	0.308	33.01	-8.12
	64-QAM	1902.5	0.70	1 / 1	23.15	23.85	0.243	33.01	-9.16
	256-QAM	1882.5	0.70	1 / 1	20.30	21.00	0.126	33.01	-12.01
30 MHz	π/2 BPSK	1865.0	0.70	1 / 158	25.12	25.82	0.382	33.01	-7.19
		1882.5	0.70	1 / 1	25.16	25.86	0.385	33.01	-7.15
		1900.0	0.70	1 / 1	25.17	25.87	0.386	33.01	-7.14
	QPSK	1865.0	0.70	1 / 158	25.00	25.70	0.372	33.01	-7.31
		1882.5	0.70	1 / 158	25.20	**25.90**	0.389	33.01	-7.11
		1900.0	0.70	1 / 158	25.07	25.77	0.378	33.01	-7.24
	16-QAM	1900.0	0.70	1 / 158	24.16	24.86	0.306	33.01	-8.15
	64-QAM	1882.5	0.70	1 / 80	23.06	23.76	0.238	33.01	-9.25
	256-QAM	1900.0	0.70	1 / 158	20.29	20.99	0.126	33.01	-12.02
35 MHz	π/2 BPSK	1867.5	0.70	1 / 1	24.91	25.61	0.364	33.01	-7.40
		1882.5	0.70	1 / 186	25.18	25.88	0.387	33.01	-7.13
		1897.5	0.70	1 / 1	25.20	**25.90**	0.389	33.01	-7.11
	QPSK	1867.5	0.70	1 / 186	25.13	25.83	0.383	33.01	-7.18
		1882.5	0.70	1 / 1	25.13	25.83	0.383	33.01	-7.18
		1897.5	0.70	1 / 186	25.12	25.82	0.382	33.01	-7.19
	16-QAM	1867.5	0.70	1 / 90	24.18	24.88	0.308	33.01	-8.13
	64-QAM	1867.5	0.70	1 / 90	23.20	23.90	0.245	33.01	-9.11
	256-QAM	1882.5	0.70	1 / 90	20.23	20.93	0.124	33.01	-12.08
40 MHz	π/2 BPSK	1870.0	0.70	1 / 108	25.06	25.76	0.377	33.01	-7.25
		1882.5	0.70	1 / 1	25.14	25.84	0.384	33.01	-7.17
		1895.0	0.70	1 / 108	25.20	**25.90**	0.389	33.01	-7.11
	QPSK	1870.0	0.70	1 / 108	24.87	25.57	0.361	33.01	-7.44
		1882.5	0.70	1 / 1	24.96	25.66	0.368	33.01	-7.35
		1895.0	0.70	1 / 214	25.14	25.84	0.384	33.01	-7.17
	16-QAM	1895.0	0.70	1 / 214	24.21	24.91	0.310	33.01	-8.10
	64-QAM	1870.0	0.70	1 / 1	23.20	23.90	0.245	33.01	-9.11
	256-QAM	1870.0	0.70	1 / 108	20.32	21.02	0.126	33.01	-11.99

Table 7-4. Antenna 3b EIRP Data (NR Band n25)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	0.70	1 / 1	25.08	25.78	0.378	33.01	-7.23
		1880.0	0.70	1 / 23	24.93	25.63	0.366	33.01	-7.38
		1907.5	0.70	1 / 1	25.18	25.88	0.387	33.01	-7.13
	QPSK	1852.5	0.70	1 / 1	25.20	**25.90**	0.389	33.01	-7.11
		1880.0	0.70	1 / 23	24.89	25.59	0.362	33.01	-7.42
		1907.5	0.70	1 / 12	24.88	25.58	0.361	33.01	-7.43
	16-QAM	1852.5	0.70	1 / 12	24.14	24.84	0.305	33.01	-8.17
	64-QAM	1852.5	0.70	1 / 23	23.18	23.88	0.244	33.01	-9.13
	256-QAM	1907.5	0.70	1 / 1	20.28	20.98	0.125	33.01	-12.03
10 MHz	π/2 BPSK	1855.0	0.70	1 / 25	25.04	25.74	0.375	33.01	-7.27
		1880.0	0.70	1 / 25	24.88	25.58	0.361	33.01	-7.43
		1905.0	0.70	1 / 1	25.20	**25.90**	0.389	33.01	-7.11
	QPSK	1855.0	0.70	1 / 25	24.98	25.68	0.370	33.01	-7.33
		1880.0	0.70	1 / 1	25.14	25.84	0.384	33.01	-7.17
		1905.0	0.70	1 / 50	25.20	**25.90**	0.389	33.01	-7.11
	16-QAM	1880.0	0.70	1 / 1	24.03	24.73	0.297	33.01	-8.28
	64-QAM	1905.0	0.70	1 / 1	23.20	23.90	0.245	33.01	-9.11
	256-QAM	1855.0	0.70	1 / 50	20.29	20.99	0.126	33.01	-12.02
15 MHz	π/2 BPSK	1857.5	0.70	1 / 36	24.95	25.65	0.367	33.01	-7.36
		1880.0	0.70	1 / 1	25.18	25.88	0.387	33.01	-7.13
		1902.5	0.70	1 / 77	25.00	25.70	0.372	33.01	-7.31
	QPSK	1857.5	0.70	1 / 1	25.18	25.88	0.387	33.01	-7.13
		1880.0	0.70	1 / 1	25.19	25.89	0.388	33.01	-7.12
		1902.5	0.70	1 / 77	25.20	**25.90**	0.389	33.01	-7.11
	16-QAM	1902.5	0.70	1 / 1	24.18	24.88	0.308	33.01	-8.13
	64-QAM	1857.5	0.70	1 / 36	23.20	23.90	0.245	33.01	-9.11
	256-QAM	1902.5	0.70	1 / 36	20.30	21.00	0.126	33.01	-12.01
20 MHz	π/2 BPSK	1860.0	0.70	1 / 104	25.20	**25.90**	0.389	33.01	-7.11
		1880.0	0.70	1 / 50	25.18	25.88	0.387	33.01	-7.13
		1900.0	0.70	1 / 1	25.12	25.82	0.382	33.01	-7.19
	QPSK	1860.0	0.70	1 / 50	24.95	25.65	0.367	33.01	-7.36
		1880.0	0.70	1 / 104	25.02	25.72	0.373	33.01	-7.29
		1900.0	0.70	1 / 50	25.20	**25.90**	0.389	33.01	-7.11
	16-QAM	1880.0	0.70	1 / 104	24.16	24.86	0.306	33.01	-8.15
	64-QAM	1880.0	0.70	1 / 1	23.11	23.81	0.240	33.01	-9.20
	256-QAM	1900.0	0.70	1 / 104	20.24	20.94	0.124	33.01	-12.07

Table 7-5. Antenna 3b EIRP Data (NR Band n2)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

WCDMA PCS

Frequency [MHz]	Mode	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1852.40	WCDMA1900	25.12	0.70	**25.82**	**0.382**	33.01	-7.19
1880.00	WCDMA1900	24.96	0.70	25.66	0.368	33.01	-7.35
1907.60	WCDMA1900	25.09	0.70	25.79	0.379	33.01	-7.22

Table 7-6. Antenna 3b EIRP Data (WCDMA PCS)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

7.6.2 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	0.20	1 / 0	23.54	23.74	0.237	33.01	-9.27
		1882.5	0.20	1 / 0	23.59	**23.79**	0.239	33.01	-9.22
		1914.3	0.20	1 / 0	23.54	23.74	0.237	33.01	-9.27
	16-QAM	1914.3	0.20	1 / 0	22.79	22.99	0.199	33.01	-10.02
	64-QAM	1850.7	0.20	1 / 0	21.64	21.84	0.153	33.01	-11.17
	256-QAM	1850.7	0.20	1 / 0	18.62	18.82	0.076	33.01	-14.19
3 MHz	QPSK	1851.5	0.20	1 / 0	23.29	23.49	0.223	33.01	-9.52
		1882.5	0.20	1 / 0	23.49	23.69	0.234	33.01	-9.32
		1913.5	0.20	1 / 0	23.58	**23.78**	0.239	33.01	-9.23
	16-QAM	1882.5	0.20	1 / 0	22.87	23.07	0.203	33.01	-9.94
	64-QAM	1882.5	0.20	1 / 0	21.72	21.92	0.156	33.01	-11.09
	256-QAM	1913.5	0.20	1 / 0	18.74	18.94	0.078	33.01	-14.07
5 MHz	QPSK	1852.5	0.20	1 / 0	23.51	23.71	0.235	33.01	-9.30
		1882.5	0.20	1 / 0	23.70	**23.90**	0.245	33.01	-9.11
		1912.5	0.20	1 / 0	23.39	23.59	0.229	33.01	-9.42
	16-QAM	1882.5	0.20	1 / 0	22.87	23.07	0.203	33.01	-9.94
		1912.5	0.20	1 / 0	22.87	23.07	0.203	33.01	-9.94
	64-QAM	1912.5	0.20	1 / 12	21.71	21.91	0.155	33.01	-11.10
	256-QAM	1882.5	0.20	1 / 0	18.71	18.91	0.078	33.01	-14.10
10 MHz	QPSK	1855.0	0.20	1 / 0	23.35	23.55	0.226	33.01	-9.46
		1882.5	0.20	1 / 25	23.53	**23.73**	0.236	33.01	-9.28
		1910.0	0.20	1 / 49	23.45	23.65	0.232	33.01	-9.36
	16-QAM	1910.0	0.20	1 / 0	22.94	23.14	0.206	33.01	-9.87
	64-QAM	1882.5	0.20	1 / 0	21.76	21.96	0.157	33.01	-11.05
	256-QAM	1882.5	0.20	1 / 0	18.75	18.95	0.079	33.01	-14.06
15 MHz	QPSK	1857.5	0.20	1 / 0	23.27	23.47	0.222	33.01	-9.54
		1882.5	0.20	1 / 0	23.36	**23.56**	0.227	33.01	-9.45
		1907.5	0.20	1 / 0	23.22	23.42	0.220	33.01	-9.59
	16-QAM	1907.5	0.20	1 / 74	22.62	22.82	0.191	33.01	-10.19
	64-QAM	1907.5	0.20	1 / 0	21.52	21.72	0.149	33.01	-11.29
	256-QAM	1882.5	0.20	1 / 0	18.55	18.75	0.075	33.01	-14.26
20 MHz	QPSK	1860.0	0.20	1 / 0	23.25	23.45	0.221	33.01	-9.56
		1882.5	0.20	1 / 0	23.23	23.43	0.220	33.01	-9.58
		1905.0	0.20	1 / 0	23.39	**23.59**	0.229	33.01	-9.42
	16-QAM	1882.5	0.20	1 / 0	22.93	23.13	0.206	33.01	-9.88
	64-QAM	1882.5	0.20	1 / 0	21.62	21.82	0.152	33.01	-11.19
	256-QAM	1860.0	0.20	1 / 99	18.55	18.75	0.075	33.01	-14.26

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

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	0.20	1 / 0	23.50	23.70	0.234	33.01	-9.31
		1880.0	0.20	1 / 0	23.58	23.78	0.239	33.01	-9.23
		1909.3	0.20	1 / 0	23.70	**23.90**	0.245	33.01	-9.11
	16-QAM	1909.3	0.20	1 / 3	22.74	22.94	0.197	33.01	-10.07
	64-QAM	1909.3	0.20	1 / 0	21.69	21.89	0.155	33.01	-11.12
	256-QAM	1850.7	0.20	1 / 3	18.86	19.06	0.081	33.01	-13.95
3 MHz	QPSK	1851.5	0.20	1 / 7	23.65	23.85	0.243	33.01	-9.16
		1880.0	0.20	1 / 0	23.66	23.86	0.243	33.01	-9.15
		1908.5	0.20	1 / 14	23.68	**23.88**	0.244	33.01	-9.13
	16-QAM	1851.5	0.20	1 / 0	22.67	22.87	0.194	33.01	-10.14
	64-QAM	1880.0	0.20	1 / 7	21.70	21.90	0.155	33.01	-11.11
	256-QAM	1880.0	0.20	1 / 7	18.76	18.96	0.079	33.01	-14.05
5 MHz	QPSK	1852.5	0.20	1 / 0	23.70	**23.90**	0.245	33.01	-9.11
		1880.0	0.20	1 / 12	23.70	**23.90**	0.245	33.01	-9.11
		1907.5	0.20	1 / 0	23.39	23.59	0.229	33.01	-9.42
	16-QAM	1907.5	0.20	1 / 12	22.70	22.90	0.195	33.01	-10.11
	64-QAM	1907.5	0.20	1 / 24	21.65	21.85	0.153	33.01	-11.16
	256-QAM	1880.0	0.20	1 / 12	18.80	19.00	0.079	33.01	-14.01
10 MHz	QPSK	1855.0	0.20	1 / 0	23.62	23.82	0.241	33.01	-9.19
		1880.0	0.20	1 / 25	23.59	23.79	0.239	33.01	-9.22
		1905.0	0.20	1 / 25	23.65	**23.85**	0.243	33.01	-9.16
	16-QAM	1880.0	0.20	1 / 0	22.70	22.90	0.195	33.01	-10.11
	64-QAM	1855.0	0.20	1 / 0	21.61	21.81	0.152	33.01	-11.20
	256-QAM	1880.0	0.20	1 / 0	18.74	18.94	0.078	33.01	-14.07
15 MHz	QPSK	1857.5	0.20	1 / 0	23.69	**23.89**	0.245	33.01	-9.12
		1880.0	0.20	1 / 74	23.68	23.88	0.244	33.01	-9.13
		1902.5	0.20	1 / 37	23.68	23.88	0.244	33.01	-9.13
	16-QAM	1902.5	0.20	1 / 0	22.73	22.93	0.196	33.01	-10.08
	64-QAM	1902.5	0.20	1 / 37	21.68	21.88	0.154	33.01	-11.13
	256-QAM	1880.0	0.20	1 / 0	18.80	19.00	0.079	33.01	-14.01
20 MHz	QPSK	1860.0	0.20	1 / 0	23.68	23.88	0.244	33.01	-9.13
		1880.0	0.20	1 / 50	23.70	**23.90**	0.245	33.01	-9.11
		1900.0	0.20	1 / 50	23.51	23.71	0.235	33.01	-9.30
	16-QAM	1880.0	0.20	1 / 99	22.56	22.76	0.189	33.01	-10.25
	64-QAM	1880.0	0.20	1 / 50	21.64	21.84	0.153	33.01	-11.17
	256-QAM	1860.0	0.20	1 / 99	18.81	19.01	0.080	33.01	-14.00

Table 7-8. Antenna 1b EIRP Data (LTE Band 2)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	0.20	1 / 1	23.70	**23.90**	0.245	33.01	-9.11
		1882.5	0.20	1 / 1	23.67	23.87	0.244	33.01	-9.14
		1912.5	0.20	1 / 12	23.48	23.68	0.233	33.01	-9.33
	QPSK	1852.5	0.20	1 / 23	23.70	**23.90**	0.245	33.01	-9.11
		1882.5	0.20	1 / 12	23.70	**23.90**	0.245	33.01	-9.11
		1912.5	0.20	1 / 12	23.70	**23.90**	0.245	33.01	-9.11
	16-QAM	1882.5	0.20	1 / 1	22.67	22.87	0.194	33.01	-10.14
	64-QAM	1912.5	0.20	1 / 1	21.72	21.92	0.156	33.01	-11.09
	256-QAM	1912.5	0.20	1 / 23	18.81	19.01	0.080	33.01	-14.00
10 MHz	π/2 BPSK	1855.0	0.20	1 / 25	23.68	23.88	0.244	33.01	-9.13
		1882.5	0.20	1 / 1	23.67	23.87	0.244	33.01	-9.14
		1910.0	0.20	1 / 1	23.66	23.86	0.243	33.01	-9.15
	QPSK	1855.0	0.20	1 / 1	23.70	**23.90**	0.245	33.01	-9.11
		1882.5	0.20	1 / 1	23.60	23.80	0.240	33.01	-9.21
		1910.0	0.20	1 / 25	23.42	23.62	0.230	33.01	-9.39
	16-QAM	1882.5	0.20	1 / 1	22.67	22.87	0.194	33.01	-10.14
	64-QAM	1855.0	0.20	1 / 1	21.68	21.88	0.154	33.01	-11.13
	256-QAM	1910.0	0.20	1 / 25	18.78	18.98	0.079	33.01	-14.03
15 MHz	π/2 BPSK	1857.5	0.20	1 / 1	23.56	23.76	0.238	33.01	-9.25
		1882.5	0.20	1 / 36	23.60	23.80	0.240	33.01	-9.21
		1907.5	0.20	1 / 77	23.52	23.72	0.236	33.01	-9.29
	QPSK	1857.5	0.20	1 / 77	23.69	23.89	0.245	33.01	-9.12
		1882.5	0.20	1 / 36	23.70	**23.90**	0.245	33.01	-9.11
		1907.5	0.20	1 / 77	23.66	23.86	0.243	33.01	-9.15
	16-QAM	1882.5	0.20	1 / 36	22.67	22.87	0.194	33.01	-10.14
	64-QAM	1882.5	0.20	1 / 1	21.65	21.85	0.153	33.01	-11.16
	256-QAM	1882.5	0.20	1 / 1	18.79	18.99	0.079	33.01	-14.02
20 MHz	π/2 BPSK	1860.0	0.20	1 / 50	23.58	23.78	0.239	33.01	-9.23
		1882.5	0.20	1 / 1	23.40	23.60	0.229	33.01	-9.41
		1905.0	0.20	1 / 104	23.70	**23.90**	0.245	33.01	-9.11
	QPSK	1860.0	0.20	1 / 1	23.66	23.86	0.243	33.01	-9.15
		1882.5	0.20	1 / 50	23.60	23.80	0.240	33.01	-9.21
		1905.0	0.20	1 / 104	23.56	23.76	0.238	33.01	-9.25
	16-QAM	1860.0	0.20	1 / 50	22.74	22.94	0.197	33.01	-10.07
	64-QAM	1860.0	0.20	1 / 50	21.74	21.94	0.156	33.01	-11.07
	256-QAM	1860.0	0.20	1 / 1	18.83	19.03	0.080	33.01	-13.98
25 MHz	π/2 BPSK	1862.5	0.20	1 / 131	23.50	23.70	0.234	33.01	-9.31
		1882.5	0.20	1 / 64	23.68	23.88	0.244	33.01	-9.13
		1902.5	0.20	1 / 1	23.51	23.71	0.235	33.01	-9.30
	QPSK	1862.5	0.20	1 / 1	23.70	**23.90**	0.245	33.01	-9.11
		1882.5	0.20	1 / 64	23.46	23.66	0.232	33.01	-9.35
		1902.5	0.20	1 / 131	23.47	23.67	0.233	33.01	-9.34
	16-QAM	1882.5	0.20	1 / 131	22.69	22.89	0.195	33.01	-10.12
	64-QAM	1882.5	0.20	1 / 1	21.62	21.82	0.152	33.01	-11.19
	256-QAM	1862.5	0.20	1 / 131	18.77	18.97	0.079	33.01	-14.04
30 MHz	π/2 BPSK	1865.0	0.20	1 / 158	23.57	23.77	0.238	33.01	-9.24
		1882.5	0.20	1 / 158	23.55	23.75	0.237	33.01	-9.26
		1900.0	0.20	1 / 158	23.68	23.88	0.244	33.01	-9.13
	QPSK	1865.0	0.20	1 / 80	23.70	**23.90**	0.245	33.01	-9.11
		1882.5	0.20	1 / 1	23.70	**23.90**	0.245	33.01	-9.11
		1900.0	0.20	1 / 80	23.46	23.66	0.232	33.01	-9.35
	16-QAM	1900.0	0.20	1 / 158	22.73	22.93	0.196	33.01	-10.08
	64-QAM	1865.0	0.20	1 / 80	21.70	21.90	0.155	33.01	-11.11
	256-QAM	1900.0	0.20	1 / 1	18.80	19.00	0.079	33.01	-14.01
35 MHz	π/2 BPSK	1867.5	0.20	1 / 1	23.45	23.65	0.232	33.01	-9.36
		1882.5	0.20	1 / 186	23.69	23.89	0.245	33.01	-9.12
		1897.5	0.20	1 / 90	23.68	23.88	0.244	33.01	-9.13
	QPSK	1867.5	0.20	1 / 90	23.70	**23.90**	0.245	33.01	-9.11
		1882.5	0.20	1 / 1	23.46	23.66	0.232	33.01	-9.35
		1897.5	0.20	1 / 186	23.60	23.80	0.240	33.01	-9.21
	16-QAM	1882.5	0.20	1 / 186	22.68	22.88	0.194	33.01	-10.13
	64-QAM	1867.5	0.20	1 / 90	21.69	21.89	0.155	33.01	-11.12
	256-QAM	1897.5	0.20	1 / 186	18.63	18.83	0.076	33.01	-14.18
40 MHz	π/2 BPSK	1870.0	0.20	1 / 108	23.68	23.88	0.244	33.01	-9.13
		1882.5	0.20	1 / 214	23.69	23.89	0.245	33.01	-9.12
		1895.0	0.20	1 / 1	23.53	23.73	0.236	33.01	-9.28
	QPSK	1870.0	0.20	1 / 1	23.69	23.89	0.245	33.01	-9.12
		1882.5	0.20	1 / 108	23.69	23.89	0.245	33.01	-9.12
		1895.0	0.20	1 / 214	23.70	**23.90**	0.245	33.01	-9.11
	16-QAM	1895.0	0.20	1 / 1	22.80	23.00	0.200	33.01	-10.01
	64-QAM	1895.0	0.20	1 / 1	21.77	21.97	0.157	33.01	-11.04
	256-QAM	1882.5	0.20	1 / 108	18.90	19.10	0.081	33.01	-13.91

Table 7-9. Antenna 1b EIRP Data (NR Band n25)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	0.20	1 / 23	23.62	23.82	0.241	33.01	-9.19
		1880.0	0.20	1 / 12	23.64	23.84	0.242	33.01	-9.17
		1907.5	0.20	1 / 23	23.64	23.84	0.242	33.01	-9.17
	QPSK	1852.5	0.20	1 / 23	23.59	23.79	0.239	33.01	-9.22
		1880.0	0.20	1 / 1	23.70	**23.90**	0.245	33.01	-9.11
		1907.5	0.20	1 / 1	23.67	23.87	0.244	33.01	-9.14
	16-QAM	1880.0	0.20	1 / 1	22.66	22.86	0.193	33.01	-10.15
	64-QAM	1852.5	0.20	1 / 23	21.56	21.76	0.150	33.01	-11.25
	256-QAM	1880.0	0.20	1 / 1	18.68	18.88	0.077	33.01	-14.13
10 MHz	π/2 BPSK	1855.0	0.20	1 / 25	23.67	23.87	0.244	33.01	-9.14
		1880.0	0.20	1 / 1	23.51	23.71	0.235	33.01	-9.30
		1905.0	0.20	1 / 50	23.57	23.77	0.238	33.01	-9.24
	QPSK	1855.0	0.20	1 / 50	23.70	**23.90**	0.245	33.01	-9.11
		1880.0	0.20	1 / 1	23.66	23.86	0.243	33.01	-9.15
		1905.0	0.20	1 / 50	23.70	**23.90**	0.245	33.01	-9.11
	16-QAM	1880.0	0.20	1 / 25	22.63	22.83	0.192	33.01	-10.18
	64-QAM	1880.0	0.20	1 / 1	21.61	21.81	0.152	33.01	-11.20
	256-QAM	1880.0	0.20	1 / 25	18.83	19.03	0.080	33.01	-13.98
15 MHz	π/2 BPSK	1857.5	0.20	1 / 77	23.66	23.86	0.243	33.01	-9.15
		1880.0	0.20	1 / 36	23.55	23.75	0.237	33.01	-9.26
		1902.5	0.20	1 / 36	23.47	23.67	0.233	33.01	-9.34
	QPSK	1857.5	0.20	1 / 1	23.70	**23.90**	0.245	33.01	-9.11
		1880.0	0.20	1 / 36	23.66	23.86	0.243	33.01	-9.15
		1902.5	0.20	1 / 36	23.66	23.86	0.243	33.01	-9.15
	16-QAM	1902.5	0.20	1 / 77	22.69	22.89	0.195	33.01	-10.12
	64-QAM	1857.5	0.20	1 / 77	21.64	21.84	0.153	33.01	-11.17
	256-QAM	1857.5	0.20	1 / 1	18.79	18.99	0.079	33.01	-14.02
20 MHz	π/2 BPSK	1860.0	0.20	1 / 104	23.62	23.82	0.241	33.01	-9.19
		1880.0	0.20	1 / 1	23.70	**23.90**	0.245	33.01	-9.11
		1900.0	0.20	1 / 104	23.61	23.81	0.240	33.01	-9.20
	QPSK	1860.0	0.20	1 / 50	23.50	23.70	0.234	33.01	-9.31
		1880.0	0.20	1 / 1	23.39	23.59	0.229	33.01	-9.42
		1900.0	0.20	1 / 50	23.50	23.70	0.234	33.01	-9.31
	16-QAM	1880.0	0.20	1 / 1	22.73	22.93	0.196	33.01	-10.08
	64-QAM	1900.0	0.20	1 / 104	21.67	21.87	0.154	33.01	-11.14
	256-QAM	1880.0	0.20	1 / 1	18.61	18.81	0.076	33.01	-14.20

Table 7-10. Antenna 1b EIRP Data (NR Band n2)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

WCDMA PCS

Frequency [MHz]	Mode	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1852.40	WCDMA1900	23.53	0.20	23.73	0.236	33.01	-9.28
1880.00	WCDMA1900	23.46	0.20	23.66	0.232	33.01	-9.35
1907.60	WCDMA1900	23.62	0.20	**23.82**	**0.241**	33.01	-9.19

Table 7-11. Antenna 1b EIRP Data (WCDMA PCS)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

7.6.3 Antenna 4 – 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	-1.60	1 / 0	23.96	22.36	0.172	33.01	-10.65
		1882.5	-1.60	1 / 0	24.01	**22.41**	0.174	33.01	-10.60
		1914.3	-1.60	1 / 5	23.96	22.36	0.172	33.01	-10.65
	16-QAM	1914.3	-1.60	1 / 3	23.32	21.72	0.149	33.01	-11.29
	64-QAM	1914.3	-1.60	1 / 5	22.34	20.74	0.119	33.01	-12.27
	256-QAM	1914.3	-1.60	1 / 0	19.17	17.57	0.057	33.01	-15.44
3 MHz	QPSK	1851.5	-1.60	1 / 0	23.89	22.29	0.169	33.01	-10.72
		1882.5	-1.60	1 / 0	23.93	22.33	0.171	33.01	-10.68
		1913.5	-1.60	1 / 0	24.13	**22.53**	0.179	33.01	-10.48
	16-QAM	1913.5	-1.60	1 / 0	23.45	21.85	0.153	33.01	-11.16
	64-QAM	1913.5	-1.60	1 / 7	22.19	20.59	0.115	33.01	-12.42
	256-QAM	1913.5	-1.60	1 / 0	19.26	17.66	0.058	33.01	-15.35
5 MHz	QPSK	1852.5	-1.60	1 / 0	24.20	**22.60**	0.182	33.01	-10.41
		1882.5	-1.60	1 / 0	24.10	22.50	0.178	33.01	-10.51
		1912.5	-1.60	1 / 0	24.09	22.49	0.177	33.01	-10.52
	16-QAM	1882.5	-1.60	1 / 24	23.42	21.82	0.152	33.01	-11.19
	64-QAM	1912.5	-1.60	1 / 0	22.25	20.65	0.116	33.01	-12.36
	256-QAM	1912.5	-1.60	1 / 0	19.26	17.66	0.058	33.01	-15.35
10 MHz	QPSK	1855.0	-1.60	1 / 0	23.80	22.20	0.166	33.01	-10.81
		1882.5	-1.60	1 / 49	24.20	**22.60**	0.182	33.01	-10.41
		1910.0	-1.60	1 / 49	24.15	22.55	0.180	33.01	-10.46
	16-QAM	1910.0	-1.60	1 / 49	23.56	21.96	0.157	33.01	-11.05
	64-QAM	1910.0	-1.60	1 / 0	22.30	20.70	0.117	33.01	-12.31
	256-QAM	1910.0	-1.60	1 / 0	19.41	17.81	0.060	33.01	-15.20
15 MHz	QPSK	1857.5	-1.60	1 / 0	23.87	22.27	0.169	33.01	-10.74
		1882.5	-1.60	1 / 0	23.94	22.34	0.171	33.01	-10.67
		1907.5	-1.60	1 / 0	24.04	**22.44**	0.175	33.01	-10.57
	16-QAM	1907.5	-1.60	1 / 0	23.39	21.79	0.151	33.01	-11.22
	64-QAM	1882.5	-1.60	1 / 0	22.11	20.51	0.112	33.01	-12.50
	256-QAM	1907.5	-1.60	1 / 74	19.22	17.62	0.058	33.01	-15.39
20 MHz	QPSK	1860.0	-1.60	1 / 0	23.90	22.30	0.170	33.01	-10.71
		1882.5	-1.60	1 / 0	23.94	**22.34**	0.171	33.01	-10.67
		1905.0	-1.60	1 / 0	23.86	22.26	0.168	33.01	-10.75
	16-QAM	1905.0	-1.60	1 / 0	23.60	22.00	0.158	33.01	-11.01
	64-QAM	1882.5	-1.60	1 / 0	22.21	20.61	0.115	33.01	-12.40
	256-QAM	1905.0	-1.60	1 / 99	19.30	17.70	0.059	33.01	-15.31

Table 7-12. Antenna 4 EIRP Data (LTE Band 25)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	-1.60	1 / 0	24.09	22.49	0.177	33.01	-10.52
		1880.0	-1.60	1 / 0	24.18	**22.58**	0.181	33.01	-10.43
		1909.3	-1.60	1 / 0	24.05	22.45	0.176	33.01	-10.56
	16-QAM	1880.0	-1.60	1 / 0	23.31	21.71	0.148	33.01	-11.30
	64-QAM	1880.0	-1.60	1 / 3	22.47	20.87	0.122	33.01	-12.14
	256-QAM	1880.0	-1.60	1 / 3	19.34	17.74	0.059	33.01	-15.27
3 MHz	QPSK	1851.5	-1.60	1 / 0	24.10	22.50	0.178	33.01	-10.51
		1880.0	-1.60	1 / 0	24.17	**22.57**	0.181	33.01	-10.44
		1908.5	-1.60	1 / 0	24.12	22.52	0.179	33.01	-10.49
	16-QAM	1880.0	-1.60	1 / 0	23.39	21.79	0.151	33.01	-11.22
	64-QAM	1880.0	-1.60	1 / 0	22.49	20.89	0.123	33.01	-12.12
	256-QAM	1880.0	-1.60	1 / 0	19.40	17.80	0.060	33.01	-15.21
5 MHz	QPSK	1852.5	-1.60	1 / 0	24.04	22.44	0.175	33.01	-10.57
		1880.0	-1.60	1 / 0	24.20	**22.60**	0.182	33.01	-10.41
		1907.5	-1.60	1 / 0	24.18	22.58	0.181	33.01	-10.43
	16-QAM	1880.0	-1.60	1 / 0	23.31	21.71	0.148	33.01	-11.30
	64-QAM	1880.0	-1.60	1 / 0	22.41	20.81	0.121	33.01	-12.20
	256-QAM	1880.0	-1.60	1 / 0	19.44	17.84	0.061	33.01	-15.17
10 MHz	QPSK	1855.0	-1.60	1 / 49	24.20	**22.60**	0.182	33.01	-10.41
		1880.0	-1.60	1 / 0	24.19	22.59	0.182	33.01	-10.42
		1905.0	-1.60	1 / 25	24.12	22.52	0.179	33.01	-10.49
	16-QAM	1880.0	-1.60	1 / 49	23.38	21.78	0.151	33.01	-11.23
	64-QAM	1880.0	-1.60	1 / 0	22.49	20.89	0.123	33.01	-12.12
	256-QAM	1880.0	-1.60	1 / 0	19.41	17.81	0.060	33.01	-15.20
15 MHz	QPSK	1857.5	-1.60	1 / 74	23.94	22.34	0.171	33.01	-10.67
		1880.0	-1.60	1 / 0	24.04	**22.44**	0.175	33.01	-10.57
		1902.5	-1.60	1 / 37	23.91	22.31	0.170	33.01	-10.70
	16-QAM	1880.0	-1.60	1 / 0	23.28	21.68	0.147	33.01	-11.33
	64-QAM	1880.0	-1.60	1 / 74	22.29	20.69	0.117	33.01	-12.32
	256-QAM	1880.0	-1.60	1 / 74	19.37	17.77	0.060	33.01	-15.24
20 MHz	QPSK	1860.0	-1.60	1 / 99	24.05	**22.45**	0.176	33.01	-10.56
		1880.0	-1.60	1 / 50	23.98	22.38	0.173	33.01	-10.63
		1900.0	-1.60	1 / 0	23.92	22.32	0.171	33.01	-10.69
	16-QAM	1860.0	-1.60	1 / 0	23.26	21.66	0.147	33.01	-11.35
	64-QAM	1880.0	-1.60	1 / 0	22.26	20.66	0.116	33.01	-12.35
	256-QAM	1860.0	-1.60	1 / 99	19.31	17.71	0.059	33.01	-15.30

Table 7-13. Antenna 4 EIRP Data (LTE Band 2)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	-1.60	1 / 12	24.15	22.55	0.180	33.01	-10.46
		1882.5	-1.60	1 / 23	24.02	22.42	0.175	33.01	-10.59
		1912.5	-1.60	1 / 23	24.04	22.44	0.175	33.01	-10.57
	QPSK	1852.5	-1.60	1 / 1	24.12	22.52	0.179	33.01	-10.49
		1882.5	-1.60	1 / 1	24.02	22.42	0.175	33.01	-10.59
		1912.5	-1.60	1 / 1	24.20	**22.60**	0.182	33.01	-10.41
	16-QAM	1852.5	-1.60	1 / 12	23.21	21.61	0.145	33.01	-11.40
	64-QAM	1912.5	-1.60	1 / 1	22.05	20.45	0.111	33.01	-12.56
	256-QAM	1882.5	-1.60	1 / 12	19.11	17.51	0.056	33.01	-15.50
10 MHz	π/2 BPSK	1855.0	-1.60	1 / 50	24.11	22.51	0.178	33.01	-10.50
		1882.5	-1.60	1 / 1	24.15	22.55	0.180	33.01	-10.46
		1910.0	-1.60	1 / 1	24.20	**22.60**	0.182	33.01	-10.41
	QPSK	1855.0	-1.60	1 / 25	23.87	22.27	0.169	33.01	-10.74
		1882.5	-1.60	1 / 25	24.20	**22.60**	0.182	33.01	-10.41
		1910.0	-1.60	1 / 50	24.13	22.53	0.179	33.01	-10.48
	16-QAM	1882.5	-1.60	1 / 50	23.16	21.56	0.143	33.01	-11.45
	64-QAM	1882.5	-1.60	1 / 25	22.19	20.59	0.115	33.01	-12.42
	256-QAM	1882.5	-1.60	1 / 1	19.29	17.69	0.059	33.01	-15.32
15 MHz	π/2 BPSK	1857.5	-1.60	1 / 1	24.14	22.54	0.179	33.01	-10.47
		1882.5	-1.60	1 / 36	23.96	22.36	0.172	33.01	-10.65
		1907.5	-1.60	1 / 36	23.90	22.30	0.170	33.01	-10.71
	QPSK	1857.5	-1.60	1 / 77	24.20	**22.60**	0.182	33.01	-10.41
		1882.5	-1.60	1 / 36	23.94	22.34	0.171	33.01	-10.67
		1907.5	-1.60	1 / 1	23.97	22.37	0.173	33.01	-10.64
	16-QAM	1907.5	-1.60	1 / 36	23.20	21.60	0.145	33.01	-11.41
	64-QAM	1882.5	-1.60	1 / 36	22.17	20.57	0.114	33.01	-12.44
	256-QAM	1857.5	-1.60	1 / 77	19.27	17.67	0.058	33.01	-15.34
20 MHz	π/2 BPSK	1860.0	-1.60	1 / 50	24.20	**22.60**	0.182	33.01	-10.41
		1882.5	-1.60	1 / 50	24.05	22.45	0.176	33.01	-10.56
		1905.0	-1.60	1 / 1	24.07	22.47	0.177	33.01	-10.54
	QPSK	1860.0	-1.60	1 / 50	23.97	22.37	0.173	33.01	-10.64
		1882.5	-1.60	1 / 50	24.12	22.52	0.179	33.01	-10.49
		1905.0	-1.60	1 / 1	24.16	22.56	0.180	33.01	-10.45
	16-QAM	1905.0	-1.60	1 / 50	23.12	21.52	0.142	33.01	-11.49
	64-QAM	1882.5	-1.60	1 / 104	22.11	20.51	0.112	33.01	-12.50
	256-QAM	1860.0	-1.60	1 / 50	19.27	17.67	0.058	33.01	-15.34
25 MHz	π/2 BPSK	1862.5	-1.60	1 / 1	24.03	22.43	0.175	33.01	-10.58
		1882.5	-1.60	1 / 64	24.20	**22.60**	0.182	33.01	-10.41
		1902.5	-1.60	1 / 1	23.86	22.26	0.168	33.01	-10.75
	QPSK	1862.5	-1.60	1 / 64	24.12	22.52	0.179	33.01	-10.49
		1882.5	-1.60	1 / 1	23.84	22.24	0.167	33.01	-10.77
		1902.5	-1.60	1 / 64	24.17	22.57	0.181	33.01	-10.44
	16-QAM	1902.5	-1.60	1 / 1	23.22	21.62	0.145	33.01	-11.39
	64-QAM	1862.5	-1.60	1 / 1	22.26	20.66	0.116	33.01	-12.35
	256-QAM	1882.5	-1.60	1 / 64	19.27	17.67	0.058	33.01	-15.34
30 MHz	π/2 BPSK	1865.0	-1.60	1 / 158	23.82	22.22	0.167	33.01	-10.79
		1882.5	-1.60	1 / 158	23.99	22.39	0.173	33.01	-10.62
		1900.0	-1.60	1 / 1	24.16	22.56	0.180	33.01	-10.45
	QPSK	1865.0	-1.60	1 / 158	24.20	**22.60**	0.182	33.01	-10.41
		1882.5	-1.60	1 / 80	23.93	22.33	0.171	33.01	-10.68
		1900.0	-1.60	1 / 1	24.15	22.55	0.180	33.01	-10.46
	16-QAM	1882.5	-1.60	1 / 158	23.18	21.58	0.144	33.01	-11.43
	64-QAM	1865.0	-1.60	1 / 80	22.11	20.51	0.112	33.01	-12.50
	256-QAM	1865.0	-1.60	1 / 158	19.31	17.71	0.059	33.01	-15.30
35 MHz	π/2 BPSK	1867.5	-1.60	1 / 1	24.01	22.41	0.174	33.01	-10.60
		1882.5	-1.60	1 / 90	24.10	22.50	0.178	33.01	-10.51
		1897.5	-1.60	1 / 90	24.20	**22.60**	0.182	33.01	-10.41
	QPSK	1867.5	-1.60	1 / 90	24.14	22.54	0.179	33.01	-10.47
		1882.5	-1.60	1 / 186	24.08	22.48	0.177	33.01	-10.53
		1897.5	-1.60	1 / 1	24.06	22.46	0.176	33.01	-10.55
	16-QAM	1897.5	-1.60	1 / 1	23.20	21.60	0.145	33.01	-11.41
	64-QAM	1897.5	-1.60	1 / 1	22.14	20.54	0.113	33.01	-12.47
	256-QAM	1882.5	-1.60	1 / 1	19.25	17.65	0.058	33.01	-15.36
40 MHz	π/2 BPSK	1870.0	-1.60	1 / 108	24.19	22.59	0.182	33.01	-10.42
		1882.5	-1.60	1 / 1	24.15	22.55	0.180	33.01	-10.46
		1895.0	-1.60	1 / 214	24.12	22.52	0.179	33.01	-10.49
	QPSK	1870.0	-1.60	1 / 108	24.05	22.45	0.176	33.01	-10.56
		1882.5	-1.60	1 / 108	24.20	**22.60**	0.182	33.01	-10.41
		1895.0	-1.60	1 / 1	24.08	22.48	0.177	33.01	-10.53
	16-QAM	1870.0	-1.60	1 / 214	23.16	21.56	0.143	33.01	-11.45
	64-QAM	1895.0	-1.60	1 / 108	22.12	20.52	0.113	33.01	-12.49
	256-QAM	1870.0	-1.60	1 / 108	19.23	17.63	0.058	33.01	-15.38

Table 7-14. Antenna 4 EIRP Data (NR Band n25)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	-1.60	1 / 1	24.14	22.54	0.179	33.01	-10.47
		1880.0	-1.60	1 / 23	23.91	22.31	0.170	33.01	-10.70
		1907.5	-1.60	1 / 1	24.00	22.40	0.174	33.01	-10.61
	QPSK	1852.5	-1.60	1 / 23	24.20	**22.60**	0.182	33.01	-10.41
		1880.0	-1.60	1 / 1	24.11	22.51	0.178	33.01	-10.50
		1907.5	-1.60	1 / 1	23.89	22.29	0.169	33.01	-10.72
	16-QAM	1852.5	-1.60	1 / 1	23.17	21.57	0.144	33.01	-11.44
	64-QAM	1907.5	-1.60	1 / 12	22.11	20.51	0.112	33.01	-12.50
	256-QAM	1880.0	-1.60	1 / 23	19.29	17.69	0.059	33.01	-15.32
10 MHz	π/2 BPSK	1855.0	-1.60	1 / 1	24.20	**22.60**	0.182	33.01	-10.41
		1880.0	-1.60	1 / 1	24.05	22.45	0.176	33.01	-10.56
		1905.0	-1.60	1 / 1	24.18	22.58	0.181	33.01	-10.43
	QPSK	1855.0	-1.60	1 / 50	24.11	22.51	0.178	33.01	-10.50
		1880.0	-1.60	1 / 25	24.16	22.56	0.180	33.01	-10.45
		1905.0	-1.60	1 / 25	24.18	22.58	0.181	33.01	-10.43
	16-QAM	1880.0	-1.60	1 / 50	23.18	21.58	0.144	33.01	-11.43
	64-QAM	1855.0	-1.60	1 / 25	22.06	20.46	0.111	33.01	-12.55
	256-QAM	1905.0	-1.60	1 / 50	19.30	17.70	0.059	33.01	-15.31
15 MHz	π/2 BPSK	1857.5	-1.60	1 / 36	23.99	22.39	0.173	33.01	-10.62
		1880.0	-1.60	1 / 1	23.99	22.39	0.173	33.01	-10.62
		1902.5	-1.60	1 / 77	23.89	22.29	0.169	33.01	-10.72
	QPSK	1857.5	-1.60	1 / 36	24.20	**22.60**	0.182	33.01	-10.41
		1880.0	-1.60	1 / 36	24.13	22.53	0.179	33.01	-10.48
		1902.5	-1.60	1 / 1	24.14	22.54	0.179	33.01	-10.47
	16-QAM	1857.5	-1.60	1 / 77	23.18	21.58	0.144	33.01	-11.43
	64-QAM	1857.5	-1.60	1 / 36	22.13	20.53	0.113	33.01	-12.48
	256-QAM	1857.5	-1.60	1 / 1	19.30	17.70	0.059	33.01	-15.31
20 MHz	π/2 BPSK	1860.0	-1.60	1 / 50	24.20	**22.60**	0.182	33.01	-10.41
		1880.0	-1.60	1 / 1	24.17	22.57	0.181	33.01	-10.44
		1900.0	-1.60	1 / 104	24.12	22.52	0.179	33.01	-10.49
	QPSK	1860.0	-1.60	1 / 104	24.14	22.54	0.179	33.01	-10.47
		1880.0	-1.60	1 / 50	24.14	22.54	0.179	33.01	-10.47
		1900.0	-1.60	1 / 104	24.16	22.56	0.180	33.01	-10.45
	16-QAM	1860.0	-1.60	1 / 50	23.25	21.65	0.146	33.01	-11.36
	64-QAM	1880.0	-1.60	1 / 104	22.29	20.69	0.117	33.01	-12.32
	256-QAM	1880.0	-1.60	1 / 50	19.36	17.76	0.060	33.01	-15.25

Table 7-15. Antenna 4 EIRP Data (NR Band n2)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

WCDMA PCS

Frequency [MHz]	Mode	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1852.40	WCDMA1900	23.96	-1.60	22.36	0.172	33.01	-10.65
1880.00	WCDMA1900	23.85	-1.60	22.25	0.168	33.01	-10.76
1907.60	WCDMA1900	24.01	-1.60	**22.41**	**0.174**	33.01	-10.60

Table 7-16. Antenna 4 EIRP Data (WCDMA PCS)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

7.6.4 Antenna 2 – 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 / 3	23.09	**22.09**	0.162	33.01	-10.92
		1882.5	-1.00	1 / 0	23.06	22.06	0.161	33.01	-10.95
		1914.3	-1.00	1 / 0	22.94	21.94	0.156	33.01	-11.07
	16-QAM	1914.3	-1.00	1 / 0	22.36	21.36	0.137	33.01	-11.65
	64-QAM	1914.3	-1.00	1 / 0	21.30	20.30	0.107	33.01	-12.71
	256-QAM	1882.5	-1.00	1 / 3	18.13	17.13	0.052	33.01	-15.88
3 MHz	QPSK	1851.5	-1.00	1 / 0	22.92	21.92	0.156	33.01	-11.09
		1882.5	-1.00	1 / 0	22.97	21.97	0.157	33.01	-11.04
		1913.5	-1.00	1 / 0	23.10	**22.10**	0.162	33.01	-10.91
	16-QAM	1913.5	-1.00	1 / 7	22.41	21.41	0.138	33.01	-11.60
	64-QAM	1882.5	-1.00	1 / 0	21.26	20.26	0.106	33.01	-12.75
	256-QAM	1913.5	-1.00	1 / 0	18.30	17.30	0.054	33.01	-15.71
5 MHz	QPSK	1852.5	-1.00	1 / 0	23.20	**22.20**	0.166	33.01	-10.81
		1882.5	-1.00	1 / 0	23.17	22.17	0.165	33.01	-10.84
		1912.5	-1.00	1 / 0	23.04	22.04	0.160	33.01	-10.97
	16-QAM	1912.5	-1.00	1 / 0	22.52	21.52	0.142	33.01	-11.49
	64-QAM	1912.5	-1.00	1 / 12	21.16	20.16	0.104	33.01	-12.85
	256-QAM	1912.5	-1.00	1 / 0	18.22	17.22	0.053	33.01	-15.79
10 MHz	QPSK	1855.0	-1.00	1 / 0	22.80	21.80	0.151	33.01	-11.21
		1882.5	-1.00	1 / 25	23.00	22.00	0.158	33.01	-11.01
		1910.0	-1.00	1 / 49	23.05	**22.05**	0.160	33.01	-10.96
	16-QAM	1910.0	-1.00	1 / 49	22.52	21.52	0.142	33.01	-11.49
	64-QAM	1855.0	-1.00	1 / 0	21.31	20.31	0.107	33.01	-12.70
	256-QAM	1910.0	-1.00	1 / 0	18.33	17.33	0.054	33.01	-15.68
15 MHz	QPSK	1857.5	-1.00	1 / 0	22.85	21.85	0.153	33.01	-11.16
		1882.5	-1.00	1 / 0	22.86	**21.86**	0.153	33.01	-11.15
		1907.5	-1.00	1 / 0	22.79	21.79	0.151	33.01	-11.22
	16-QAM	1907.5	-1.00	1 / 0	22.35	21.35	0.136	33.01	-11.66
	64-QAM	1907.5	-1.00	1 / 74	21.07	20.07	0.102	33.01	-12.94
	256-QAM	1907.5	-1.00	1 / 0	18.17	17.17	0.052	33.01	-15.84
20 MHz	QPSK	1860.0	-1.00	1 / 0	22.81	21.81	0.152	33.01	-11.20
		1882.5	-1.00	1 / 0	22.86	21.86	0.153	33.01	-11.15
		1905.0	-1.00	1 / 0	22.99	**21.99**	0.158	33.01	-11.02
	16-QAM	1905.0	-1.00	1 / 0	22.55	21.55	0.143	33.01	-11.46
	64-QAM	1882.5	-1.00	1 / 0	21.15	20.15	0.104	33.01	-12.86
	256-QAM	1882.5	-1.00	1 / 0	18.13	17.13	0.052	33.01	-15.88

Table 7-17. Antenna 2 EIRP Data (LTE Band 25)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	23.12	**22.12**	0.163	33.01	-10.89
		1880.0	-1.00	1 / 5	23.06	22.06	0.161	33.01	-10.95
		1909.3	-1.00	1 / 3	23.02	22.02	0.159	33.01	-10.99
	16-QAM	1909.3	-1.00	1 / 0	22.24	21.24	0.133	33.01	-11.77
	64-QAM	1880.0	-1.00	1 / 3	21.31	20.31	0.107	33.01	-12.70
	256-QAM	1850.7	-1.00	1 / 5	18.34	17.34	0.054	33.01	-15.67
3 MHz	QPSK	1851.5	-1.00	1 / 0	23.16	**22.16**	0.164	33.01	-10.85
		1880.0	-1.00	1 / 0	23.15	22.15	0.164	33.01	-10.86
		1908.5	-1.00	1 / 0	23.07	22.07	0.161	33.01	-10.94
	16-QAM	1880.0	-1.00	1 / 0	22.31	21.31	0.135	33.01	-11.70
	64-QAM	1851.5	-1.00	1 / 14	21.43	20.43	0.110	33.01	-12.58
	256-QAM	1880.0	-1.00	1 / 0	18.41	17.41	0.055	33.01	-15.60
5 MHz	QPSK	1852.5	-1.00	1 / 0	23.20	**22.20**	0.166	33.01	-10.81
		1880.0	-1.00	1 / 0	23.14	22.14	0.164	33.01	-10.87
		1907.5	-1.00	1 / 0	23.08	22.08	0.161	33.01	-10.93
	16-QAM	1852.5	-1.00	1 / 0	22.31	21.31	0.135	33.01	-11.70
	64-QAM	1907.5	-1.00	1 / 0	21.32	20.32	0.108	33.01	-12.69
	256-QAM	1880.0	-1.00	1 / 0	18.42	17.42	0.055	33.01	-15.59
10 MHz	QPSK	1855.0	-1.00	1 / 0	23.16	**22.16**	0.164	33.01	-10.85
		1880.0	-1.00	1 / 0	23.13	22.13	0.163	33.01	-10.88
		1905.0	-1.00	1 / 25	23.10	22.10	0.162	33.01	-10.91
	16-QAM	1880.0	-1.00	1 / 25	22.37	21.37	0.137	33.01	-11.64
	64-QAM	1905.0	-1.00	1 / 0	21.49	20.49	0.112	33.01	-12.52
	256-QAM	1880.0	-1.00	1 / 49	18.40	17.40	0.055	33.01	-15.61
15 MHz	QPSK	1857.5	-1.00	1 / 74	22.95	**21.95**	0.157	33.01	-11.06
		1880.0	-1.00	1 / 0	22.91	21.91	0.155	33.01	-11.10
		1902.5	-1.00	1 / 74	22.85	21.85	0.153	33.01	-11.16
	16-QAM	1857.5	-1.00	1 / 0	22.20	21.20	0.132	33.01	-11.81
	64-QAM	1880.0	-1.00	1 / 0	21.22	20.22	0.105	33.01	-12.79
	256-QAM	1880.0	-1.00	1 / 74	18.21	17.21	0.053	33.01	-15.80
20 MHz	QPSK	1860.0	-1.00	1 / 0	22.92	**21.92**	0.156	33.01	-11.09
		1880.0	-1.00	1 / 0	22.89	21.89	0.155	33.01	-11.12
		1900.0	-1.00	1 / 50	22.91	21.91	0.155	33.01	-11.10
	16-QAM	1860.0	-1.00	1 / 0	22.42	21.42	0.139	33.01	-11.59
	64-QAM	1860.0	-1.00	1 / 99	21.16	20.16	0.104	33.01	-12.85
	256-QAM	1860.0	-1.00	1 / 99	18.20	17.20	0.052	33.01	-15.81

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

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	23.20	**22.20**	0.166	33.01	-10.81
		1882.5	-1.00	1 / 12	23.20	**22.20**	0.166	33.01	-10.81
		1912.5	-1.00	1 / 12	23.08	22.08	0.161	33.01	-10.93
	QPSK	1852.5	-1.00	1 / 12	23.18	22.18	0.165	33.01	-10.83
		1882.5	-1.00	1 / 1	23.04	22.04	0.160	33.01	-10.97
		1912.5	-1.00	1 / 12	23.00	22.00	0.158	33.01	-11.01
	16-QAM	1852.5	-1.00	1 / 1	22.25	21.25	0.133	33.01	-11.76
	64-QAM	1882.5	-1.00	1 / 12	21.26	20.26	0.106	33.01	-12.75
	256-QAM	1852.5	-1.00	1 / 23	18.42	17.42	0.055	33.01	-15.59
10 MHz	π/2 BPSK	1855.0	-1.00	1 / 25	23.17	22.17	0.165	33.01	-10.84
		1882.5	-1.00	1 / 1	23.01	22.01	0.159	33.01	-11.00
		1910.0	-1.00	1 / 50	23.16	22.16	0.164	33.01	-10.85
	QPSK	1855.0	-1.00	1 / 25	23.18	22.18	0.165	33.01	-10.83
		1882.5	-1.00	1 / 1	23.20	**22.20**	0.166	33.01	-10.81
		1910.0	-1.00	1 / 50	22.87	21.87	0.154	33.01	-11.14
	16-QAM	1855.0	-1.00	1 / 50	22.20	21.20	0.132	33.01	-11.81
	64-QAM	1882.5	-1.00	1 / 1	21.19	20.19	0.104	33.01	-12.82
	256-QAM	1855.0	-1.00	1 / 50	18.32	17.32	0.054	33.01	-15.69
15 MHz	π/2 BPSK	1857.5	-1.00	1 / 36	23.12	22.12	0.163	33.01	-10.89
		1882.5	-1.00	1 / 36	23.04	22.04	0.160	33.01	-10.97
		1907.5	-1.00	1 / 1	23.20	**22.20**	0.166	33.01	-10.81
	QPSK	1857.5	-1.00	1 / 77	23.09	22.09	0.162	33.01	-10.92
		1882.5	-1.00	1 / 77	23.12	22.12	0.163	33.01	-10.89
		1907.5	-1.00	1 / 36	23.16	22.16	0.164	33.01	-10.85
	16-QAM	1882.5	-1.00	1 / 77	22.17	21.17	0.131	33.01	-11.84
	64-QAM	1882.5	-1.00	1 / 77	21.14	20.14	0.103	33.01	-12.87
	256-QAM	1857.5	-1.00	1 / 77	18.23	17.23	0.053	33.01	-15.78
20 MHz	π/2 BPSK	1860.0	-1.00	1 / 50	23.15	22.15	0.164	33.01	-10.86
		1882.5	-1.00	1 / 50	23.09	22.09	0.162	33.01	-10.92
		1905.0	-1.00	1 / 50	23.20	**22.20**	0.166	33.01	-10.81
	QPSK	1860.0	-1.00	1 / 1	23.12	22.12	0.163	33.01	-10.89
		1882.5	-1.00	1 / 1	23.10	22.10	0.162	33.01	-10.91
		1905.0	-1.00	1 / 1	22.99	21.99	0.158	33.01	-11.02
	16-QAM	1882.5	-1.00	1 / 104	22.20	21.20	0.132	33.01	-11.81
	64-QAM	1882.5	-1.00	1 / 1	21.19	20.19	0.104	33.01	-12.82
	256-QAM	1860.0	-1.00	1 / 50	18.28	17.28	0.053	33.01	-15.73
25 MHz	π/2 BPSK	1862.5	-1.00	1 / 64	23.19	22.19	0.166	33.01	-10.82
		1882.5	-1.00	1 / 1	23.02	22.02	0.159	33.01	-10.99
		1902.5	-1.00	1 / 1	23.20	**22.20**	0.166	33.01	-10.81
	QPSK	1862.5	-1.00	1 / 64	22.89	21.89	0.155	33.01	-11.12
		1882.5	-1.00	1 / 64	22.98	21.98	0.158	33.01	-11.03
		1902.5	-1.00	1 / 64	23.04	22.04	0.160	33.01	-10.97
	16-QAM	1902.5	-1.00	1 / 64	22.30	21.30	0.135	33.01	-11.71
	64-QAM	1862.5	-1.00	1 / 1	21.29	20.29	0.107	33.01	-12.72
	256-QAM	1862.5	-1.00	1 / 131	18.40	17.40	0.055	33.01	-15.61
30 MHz	π/2 BPSK	1865.0	-1.00	1 / 80	22.94	21.94	0.156	33.01	-11.07
		1882.5	-1.00	1 / 1	23.18	22.18	0.165	33.01	-10.83
		1900.0	-1.00	1 / 158	22.83	21.83	0.152	33.01	-11.18
	QPSK	1865.0	-1.00	1 / 1	23.06	22.06	0.161	33.01	-10.95
		1882.5	-1.00	1 / 158	23.20	**22.20**	0.166	33.01	-10.81
		1900.0	-1.00	1 / 1	23.15	22.15	0.164	33.01	-10.86
	16-QAM	1865.0	-1.00	1 / 158	22.19	21.19	0.132	33.01	-11.82
	64-QAM	1882.5	-1.00	1 / 158	21.15	20.15	0.104	33.01	-12.86
	256-QAM	1882.5	-1.00	1 / 80	18.23	17.23	0.053	33.01	-15.78
35 MHz	π/2 BPSK	1867.5	-1.00	1 / 90	23.15	22.15	0.164	33.01	-10.86
		1882.5	-1.00	1 / 186	23.15	22.15	0.164	33.01	-10.86
		1897.5	-1.00	1 / 1	23.13	22.13	0.163	33.01	-10.88
	QPSK	1867.5	-1.00	1 / 1	23.18	22.18	0.165	33.01	-10.83
		1882.5	-1.00	1 / 90	23.07	22.07	0.161	33.01	-10.94
		1897.5	-1.00	1 / 186	23.20	**22.20**	0.166	33.01	-10.81
	16-QAM	1897.5	-1.00	1 / 186	22.19	21.19	0.132	33.01	-11.82
	64-QAM	1882.5	-1.00	1 / 90	21.20	20.20	0.105	33.01	-12.81
	256-QAM	1867.5	-1.00	1 / 90	18.29	17.29	0.054	33.01	-15.72
40 MHz	π/2 BPSK	1870.0	-1.00	1 / 214	23.07	22.07	0.161	33.01	-10.94
		1882.5	-1.00	1 / 108	23.05	22.05	0.160	33.01	-10.96
		1895.0	-1.00	1 / 214	23.17	22.17	0.165	33.01	-10.84
	QPSK	1870.0	-1.00	1 / 1	23.09	22.09	0.162	33.01	-10.92
		1882.5	-1.00	1 / 1	23.13	22.13	0.163	33.01	-10.88
		1895.0	-1.00	1 / 108	23.20	**22.20**	0.166	33.01	-10.81
	16-QAM	1882.5	-1.00	1 / 108	22.25	21.25	0.133	33.01	-11.76
	64-QAM	1870.0	-1.00	1 / 108	21.24	20.24	0.106	33.01	-12.77
	256-QAM	1895.0	-1.00	1 / 108	18.41	17.41	0.055	33.01	-15.60

Table 7-19. Antenna 2 EIRP Data (NR Band n25)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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 / 23	23.04	22.04	0.160	33.01	-10.97
		1880.0	-1.00	1 / 1	23.20	**22.20**	0.166	33.01	-10.81
		1907.5	-1.00	1 / 12	23.07	22.07	0.161	33.01	-10.94
	QPSK	1852.5	-1.00	1 / 1	23.00	22.00	0.158	33.01	-11.01
		1880.0	-1.00	1 / 1	23.19	22.19	0.166	33.01	-10.82
		1907.5	-1.00	1 / 1	23.20	**22.20**	0.166	33.01	-10.81
	16-QAM	1907.5	-1.00	1 / 12	22.06	21.06	0.128	33.01	-11.95
	64-QAM	1880.0	-1.00	1 / 12	21.10	20.10	0.102	33.01	-12.91
	256-QAM	1907.5	-1.00	1 / 23	18.28	17.28	0.053	33.01	-15.73
10 MHz	π/2 BPSK	1855.0	-1.00	1 / 1	23.06	22.06	0.161	33.01	-10.95
		1880.0	-1.00	1 / 50	23.16	22.16	0.164	33.01	-10.85
		1905.0	-1.00	1 / 50	23.20	**22.20**	0.166	33.01	-10.81
	QPSK	1855.0	-1.00	1 / 1	22.97	21.97	0.157	33.01	-11.04
		1880.0	-1.00	1 / 1	23.17	22.17	0.165	33.01	-10.84
		1905.0	-1.00	1 / 50	23.20	**22.20**	0.166	33.01	-10.81
	16-QAM	1855.0	-1.00	1 / 50	22.14	21.14	0.130	33.01	-11.87
	64-QAM	1880.0	-1.00	1 / 50	21.22	20.22	0.105	33.01	-12.79
	256-QAM	1905.0	-1.00	1 / 50	18.27	17.27	0.053	33.01	-15.74
15 MHz	π/2 BPSK	1857.5	-1.00	1 / 1	23.08	22.08	0.161	33.01	-10.93
		1880.0	-1.00	1 / 1	23.19	22.19	0.166	33.01	-10.82
		1902.5	-1.00	1 / 77	23.19	22.19	0.166	33.01	-10.82
	QPSK	1857.5	-1.00	1 / 1	23.20	**22.20**	0.166	33.01	-10.81
		1880.0	-1.00	1 / 36	23.13	22.13	0.163	33.01	-10.88
		1902.5	-1.00	1 / 77	22.94	21.94	0.156	33.01	-11.07
	16-QAM	1880.0	-1.00	1 / 1	22.21	21.21	0.132	33.01	-11.80
	64-QAM	1902.5	-1.00	1 / 36	21.22	20.22	0.105	33.01	-12.79
	256-QAM	1880.0	-1.00	1 / 36	18.30	17.30	0.054	33.01	-15.71
20 MHz	π/2 BPSK	1860.0	-1.00	1 / 1	23.20	**22.20**	0.166	33.01	-10.81
		1880.0	-1.00	1 / 1	22.99	21.99	0.158	33.01	-11.02
		1900.0	-1.00	1 / 50	23.03	22.03	0.160	33.01	-10.98
	QPSK	1860.0	-1.00	1 / 104	23.11	22.11	0.163	33.01	-10.90
		1880.0	-1.00	1 / 1	23.08	22.08	0.161	33.01	-10.93
		1900.0	-1.00	1 / 1	23.06	22.06	0.161	33.01	-10.95
	16-QAM	1880.0	-1.00	1 / 1	22.15	21.15	0.130	33.01	-11.86
	64-QAM	1880.0	-1.00	1 / 50	21.00	20.00	0.100	33.01	-13.01
	256-QAM	1860.0	-1.00	1 / 50	18.27	17.27	0.053	33.01	-15.74

Table 7-20. Antenna 2 EIRP Data (NR Band n2)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

WCDMA PCS

Frequency [MHz]	Mode	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1852.40	WCDMA1900	22.98	-1.00	21.98	0.158	33.01	-11.03
1880.00	WCDMA1900	22.84	-1.00	21.84	0.153	33.01	-11.17
1907.60	WCDMA1900	23.05	-1.00	**22.05**	**0.160**	33.01	-10.96

Table 7-21. Antenna 2 EIRP Data (WCDMA PCS)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

Test Setup

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

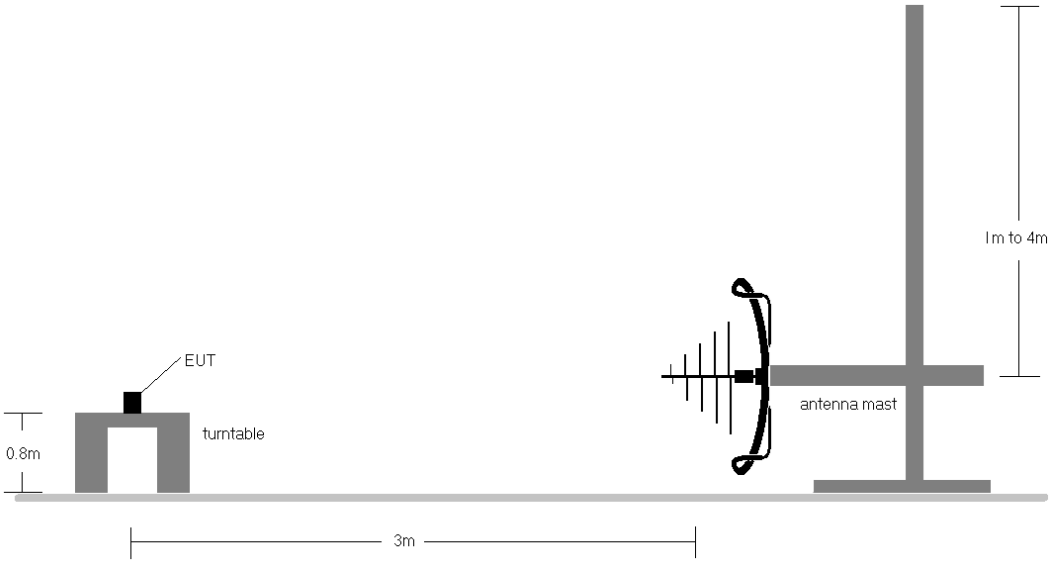


Figure 7-11. Test Instrument & Measurement Setup < 1GHz

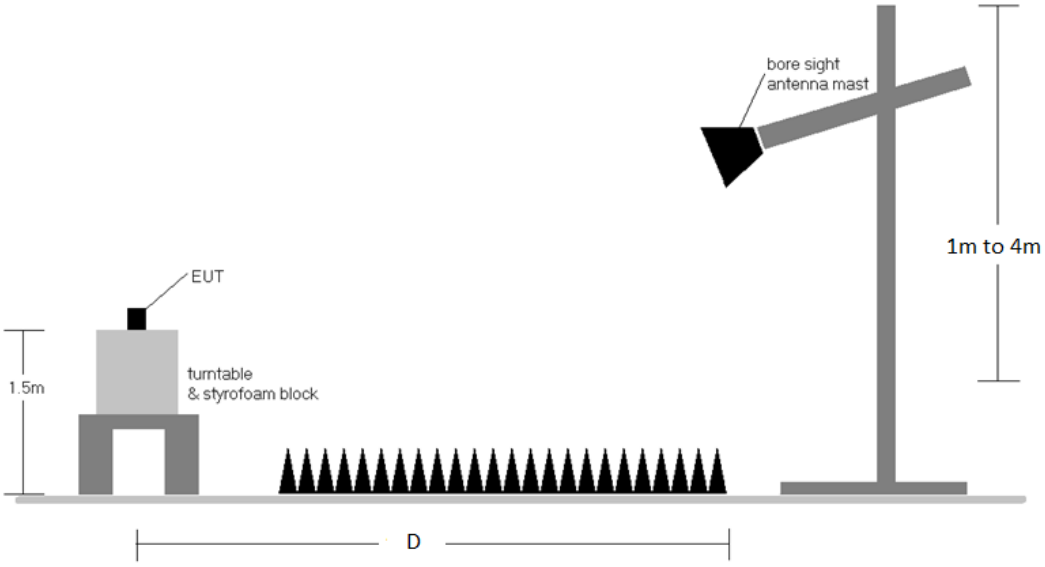


Figure 7-12. Test Instrument & Measurement Setup >1 GHz

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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.

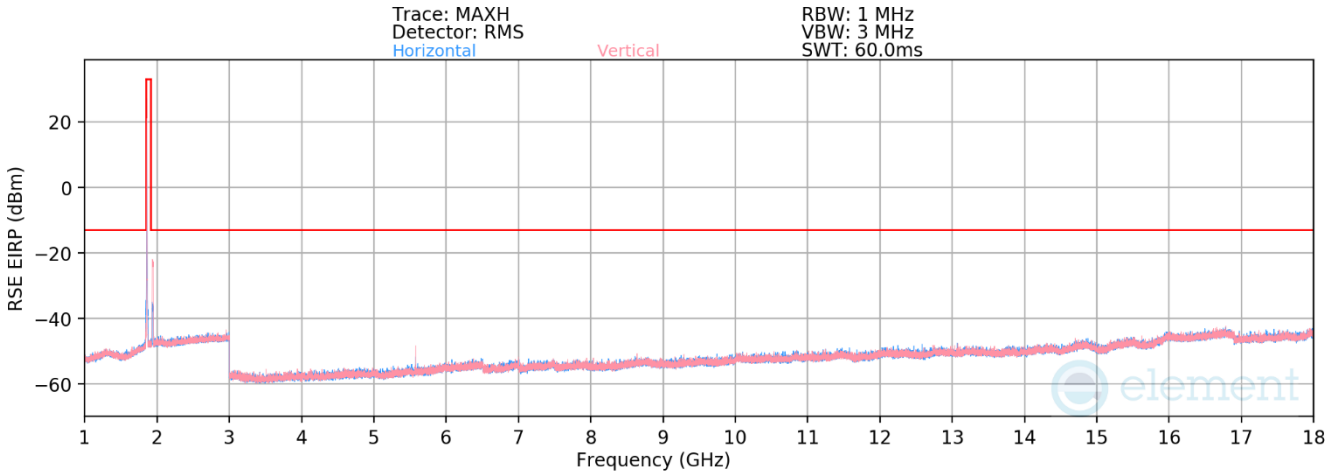
10. Spurious emission in EN-DC Operating mode with Sub 6GHz NR carrier as well as an LTE carrier (anchor) has been checked and was found to not to be the worst case.

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.

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

7.7.1 Antenna 3b – Radiated Spurious Emission Measurement

LTE Band 25/2



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

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	-	-	-76.06	0.86	31.80	-63.46	-13.00	-50.46
5580.0	V	316	164	-66.91	4.05	44.14	-51.12	-13.00	-38.12
7440.0	H	-	-	-77.39	5.35	34.96	-60.30	-13.00	-47.30
9300.0	H	-	-	-76.98	6.19	36.21	-59.05	-13.00	-46.05
11160.0	H	-	-	-78.18	8.60	37.42	-57.84	-13.00	-44.84

Table 7-22. Antenna 3b 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	-	-	-75.94	0.84	31.90	-63.36	-13.00	-50.36
5647.5	V	331	166	-68.65	4.07	42.42	-52.84	-13.00	-39.84
7530.0	H	-	-	-77.55	5.40	34.85	-60.41	-13.00	-47.41
9412.5	H	-	-	-77.39	6.54	36.15	-59.11	-13.00	-46.11
11295.0	H	-	-	-78.63	9.06	37.44	-57.82	-13.00	-44.82

Table 7-23. Antenna 3b Radiated Spurious Data (LTE Band 25/2 – Mid Channel)

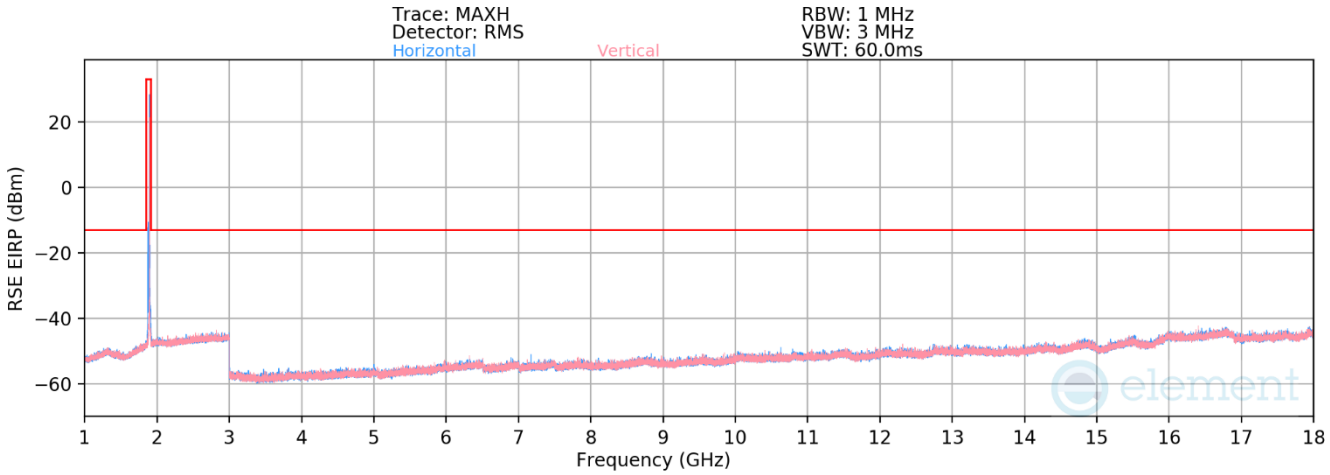
Bandwidth (MHz):	20
Frequency (MHz):	1905.0
RB / Offset:	1 / 50

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	-	-	-75.98	0.94	31.96	-63.30	-13.00	-50.30
5715.00	V	322	168	-69.22	4.04	41.82	-53.43	-13.00	-40.43
7620.00	H	-	-	-78.14	5.84	34.70	-60.56	-13.00	-47.56
9525.00	H	-	-	-77.72	6.77	36.05	-59.21	-13.00	-46.21
11430.00	H	-	-	-78.78	9.71	37.93	-57.33	-13.00	-44.33

Table 7-24. Antenna 3b Radiated Spurious Data (LTE Band 25/2 – High Channel)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

NR Band n25/2



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

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	-	-	-75.87	0.72	31.85	-63.41	-13.00	-50.41
5610.0	H	-	-	-77.89	4.20	33.31	-61.95	-13.00	-48.95
7480.0	H	-	-	-77.55	5.62	35.06	-60.19	-13.00	-47.19

Table 7-25. Antenna 3b 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	-	-	-76.09	1.01	31.91	-63.34	-13.00	-50.34
5647.5	H	-	-	-77.60	4.11	33.51	-61.75	-13.00	-48.75
7530.0	H	-	-	-77.58	5.61	35.03	-60.23	-13.00	-47.23

Table 7-26. Antenna 3b Radiated Spurious Data (NR Band n25/2 – Mid Channel)

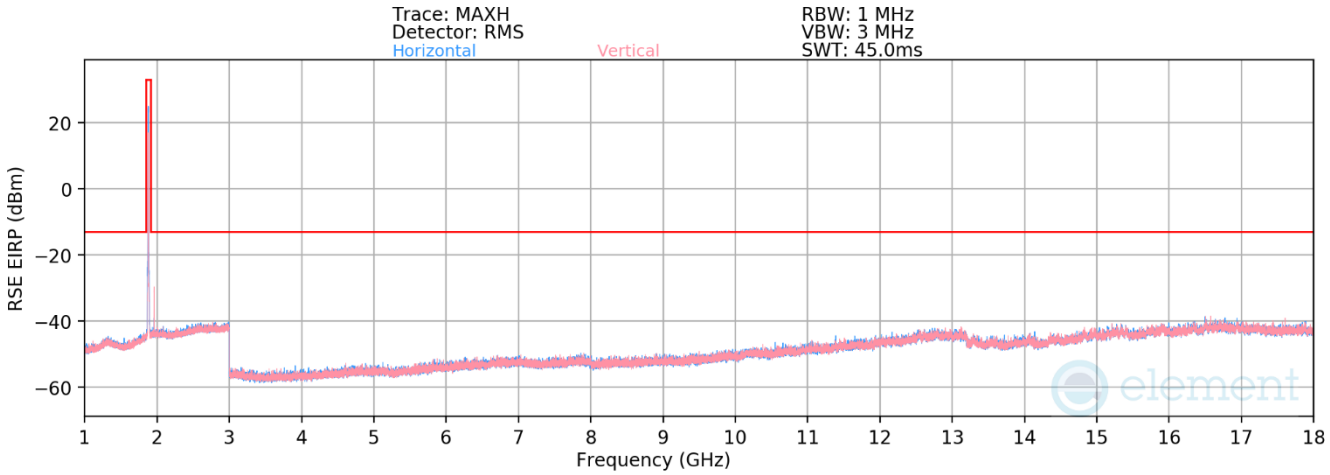
Bandwidth (MHz):	40
Frequency (MHz):	1895.0
RB / Offset:	1 / 108

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	V	-	-	-76.01	1.06	32.04	-63.22	-13.00	-50.22
5685.0	V	322	174	-72.50	3.92	38.42	-56.84	-13.00	-43.84
7580.0	H	-	-	-77.71	5.55	34.84	-60.42	-13.00	-47.42
9475.0	H	-	-	-77.27	6.68	36.40	-58.85	-13.00	-45.85
11370.0	H	-	-	-78.45	9.40	37.95	-57.31	-13.00	-44.31

Table 7-27. Antenna 3b Radiated Spurious Data (NR Band n25/2 – High Channel)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

WCDMA PCS



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

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	-	-	-79.18	5.03	32.85	-62.41	-13.00	-49.41
5557.2	H	-	-	-80.86	8.48	34.62	-60.64	-13.00	-47.64
7409.6	H	-	-	-81.77	10.97	36.20	-59.06	-13.00	-46.06

Table 7-28. Antenna 3b 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	-	-	-79.32	4.92	32.60	-62.65	-13.00	-49.65
5640.0	H	-	-	-81.07	8.64	34.57	-60.69	-13.00	-47.69
7520.0	H	-	-	-81.59	10.87	36.28	-58.98	-13.00	-45.98

Table 7-29. Antenna 3b 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	-	-	-79.16	5.00	32.84	-62.41	-13.00	-49.41
5722.8	H	-	-	-80.67	8.73	35.06	-60.19	-13.00	-47.19
7630.4	H	-	-	-81.47	10.87	36.40	-58.86	-13.00	-45.86

Table 7-30. Antenna 3b Radiated Spurious Data (WCDMA PCS – High Channel)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

7.7.2 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	-	-	-76.13	0.80	31.67	-63.59	-13.00	-50.59
5580.0	V	-	-	-77.87	4.11	33.24	-62.02	-13.00	-49.02
7440.0	H	-	-	-77.70	5.47	34.77	-60.49	-13.00	-47.49

Table 7-31. 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	-	-	-75.82	0.72	31.90	-63.35	-13.00	-50.35
5647.5	V	-	-	-77.60	4.07	33.47	-61.79	-13.00	-48.79
7530.0	V	-	-	-77.69	5.61	34.92	-60.34	-13.00	-47.34

Table 7-32. 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	-	-	-76.10	0.94	31.84	-63.42	-13.00	-50.42
5715.00	H	-	-	-77.82	4.04	33.22	-62.04	-13.00	-49.04
7620.00	V	-	-	-78.08	5.84	34.76	-60.50	-13.00	-47.50

Table 7-33. Antenna 1b Radiated Spurious Data (LTE Band 25/2 – High Channel)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	-	-	-75.96	0.87	31.91	-63.35	-13.00	-50.35
5610.0	H	-	-	-77.91	4.20	33.29	-61.96	-13.00	-48.96
7480.0	H	-	-	-77.49	5.55	35.06	-60.19	-13.00	-47.19

Table 7-34. 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	-	-	-75.91	0.84	31.92	-63.33	-13.00	-50.33
5647.5	H	-	-	-77.76	4.07	33.31	-61.95	-13.00	-48.95
7530.0	H	-	-	-77.61	5.40	34.78	-60.47	-13.00	-47.47

Table 7-35. 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	-	-	-76.00	1.13	32.14	-63.12	-13.00	-50.12
5685.0	H	-	-	-77.31	3.83	33.52	-61.73	-13.00	-48.73
7580.0	H	-	-	-78.10	5.80	34.70	-60.56	-13.00	-47.56

Table 7-36. Antenna 1b Radiated Spurious Data (NR Band n25/2 – High Channel)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	-	-	-79.54	5.03	32.49	-62.77	-13.00	-49.77
5557.2	H	-	-	-81.20	8.48	34.28	-60.98	-13.00	-47.98
7409.6	H	-	-	-81.87	10.97	36.10	-59.16	-13.00	-46.16

Table 7-37. 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	-	-	-79.57	4.92	32.35	-62.90	-13.00	-49.90
5640.0	H	-	-	-81.41	8.64	34.23	-61.03	-13.00	-48.03
7520.0	H	-	-	-81.71	10.87	36.16	-59.10	-13.00	-46.10

Table 7-38. 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	-	-	-79.60	5.00	32.40	-62.85	-13.00	-49.85
5722.8	H	-	-	-81.16	8.73	34.57	-60.68	-13.00	-47.68
7630.4	H	-	-	-81.36	10.87	36.51	-58.75	-13.00	-45.75

Table 7-39. Antenna 1b Radiated Spurious Data (WCDMA PCS – High Channel)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

7.7.3 Antenna 4 – 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	-	-	-75.86	0.64	31.78	-63.48	-13.00	-50.48
5580.0	H	-	-	-77.72	4.02	33.30	-61.96	-13.00	-48.96
7440.0	H	-	-	-77.43	5.37	34.94	-60.31	-13.00	-47.31

Table 7-40. 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	H	-	-	-75.95	0.84	31.89	-63.36	-13.00	-50.36
5647.5	H	-	-	-77.80	4.11	33.31	-61.95	-13.00	-48.95
7530.0	H	-	-	-77.56	5.61	35.06	-60.20	-13.00	-47.20

Table 7-41. 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	H	-	-	-75.84	0.94	32.10	-63.16	-13.00	-50.16
5715.00	H	-	-	-77.44	4.04	33.60	-61.65	-13.00	-48.65
7620.00	H	-	-	-77.66	5.75	35.09	-60.17	-13.00	-47.17

Table 7-42. Antenna 4 Radiated Spurious Data (LTE Band 25/2 – High Channel)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	-	-	-75.90	0.80	31.90	-63.36	-13.00	-50.36
5610.0	H	-	-	-77.94	4.11	33.17	-62.08	-13.00	-49.08
7480.0	H	-	-	-77.42	5.55	35.14	-60.12	-13.00	-47.12

Table 7-43. 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	-	-	-75.90	0.84	31.94	-63.32	-13.00	-50.32
5647.5	H	-	-	-77.93	4.20	33.27	-61.99	-13.00	-48.99
7530.0	H	-	-	-78.01	5.61	34.60	-60.65	-13.00	-47.65

Table 7-44. 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	-	-	-76.05	1.13	32.08	-63.17	-13.00	-50.17
5685.0	H	-	-	-77.47	3.85	33.38	-61.87	-13.00	-48.87
7580.0	H	-	-	-77.98	5.80	34.82	-60.43	-13.00	-47.43

Table 7-45. Antenna 4 Radiated Spurious Data (NR Band n25/2 – High Channel)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	-	-	-79.47	5.03	32.56	-62.70	-13.00	-49.70
5557.2	H	-	-	-81.20	8.48	34.28	-60.98	-13.00	-47.98
7409.6	H	-	-	-81.64	10.97	36.33	-58.93	-13.00	-45.93

Table 7-46. 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	-	-	-79.65	4.92	32.27	-62.98	-13.00	-49.98
5640.0	H	-	-	-81.37	8.64	34.27	-60.99	-13.00	-47.99
7520.0	H	-	-	-81.64	10.87	36.23	-59.03	-13.00	-46.03

Table 7-47. 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	-	-	-79.60	5.00	32.40	-62.85	-13.00	-49.85
5722.8	H	-	-	-81.11	8.73	34.62	-60.63	-13.00	-47.63
7630.4	H	-	-	-81.55	10.87	36.32	-58.94	-13.00	-45.94

Table 7-48. Antenna 4 Radiated Spurious Data (WCDMA PCS – High Channel)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

7.7.4 Antenna 2 – 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	-	-	-75.62	0.80	32.18	-63.08	-13.00	-50.08
5580.0	H	-	-	-77.73	4.05	33.31	-61.94	-13.00	-48.94
7440.0	H	-	-	-77.58	5.37	34.79	-60.47	-13.00	-47.47

Table 7-49. Antenna 2 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	-	-	-75.46	0.72	32.27	-62.99	-13.00	-49.99
5647.5	H	-	-	-77.77	4.11	33.35	-61.91	-13.00	-48.91
7530.0	H	-	-	-77.57	5.54	34.97	-60.29	-13.00	-47.29

Table 7-50. Antenna 2 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	259	32	-73.23	1.06	34.82	-60.44	-13.00	-47.44
5715.00	H	-	-	-77.34	3.83	33.49	-61.77	-13.00	-48.77
7620.00	H	-	-	-77.92	5.84	34.91	-60.35	-13.00	-47.35
9525.00	H	-	-	-77.58	6.77	36.19	-59.07	-13.00	-46.07

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

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	-	-	-75.90	0.86	31.97	-63.29	-13.00	-50.29
5610.0	H	-	-	-77.78	4.11	33.33	-61.92	-13.00	-48.92
7480.0	H	-	-	-77.52	5.61	35.09	-60.17	-13.00	-47.17

Table 7-52. Antenna 2 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	-	-	-75.76	0.72	31.96	-63.29	-13.00	-50.29
5647.5	H	-	-	-77.85	4.11	33.26	-62.00	-13.00	-49.00
7530.0	H	-	-	-77.67	5.61	34.94	-60.32	-13.00	-47.32

Table 7-53. Antenna 2 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	-	-	-75.77	1.01	32.24	-63.02	-13.00	-50.02
5685.0	H	-	-	-77.36	3.76	33.40	-61.86	-13.00	-48.86
7580.0	H	-	-	-78.16	5.80	34.64	-60.62	-13.00	-47.62

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

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	-	-	-79.56	5.03	32.47	-62.79	-13.00	-49.79
5557.2	H	-	-	-81.03	8.48	34.45	-60.81	-13.00	-47.81
7409.6	H	-	-	-81.86	10.97	36.11	-59.15	-13.00	-46.15

Table 7-55. Antenna 2 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	-	-	-79.53	4.92	32.39	-62.86	-13.00	-49.86
5640.0	H	-	-	-81.44	8.64	34.20	-61.06	-13.00	-48.06
7520.0	H	-	-	-81.67	10.87	36.20	-59.06	-13.00	-46.06

Table 7-56. Antenna 2 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	-	-	-79.52	5.00	32.48	-62.77	-13.00	-49.77
5722.8	H	-	-	-80.95	8.73	34.78	-60.47	-13.00	-47.47
7630.4	H	-	-	-81.41	10.87	36.46	-58.80	-13.00	-45.80

Table 7-57. Antenna 2 Radiated Spurious Data (WCDMA PCS – High Channel)

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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.

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

Test Setup

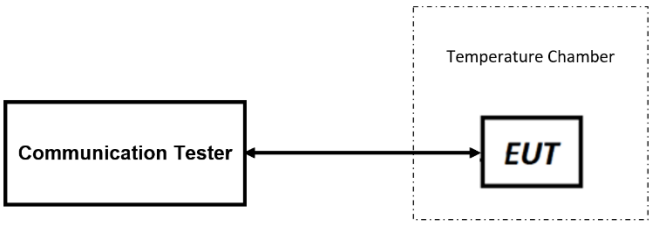


Figure 7-13. LTE Test Instrument & Measurement Setup

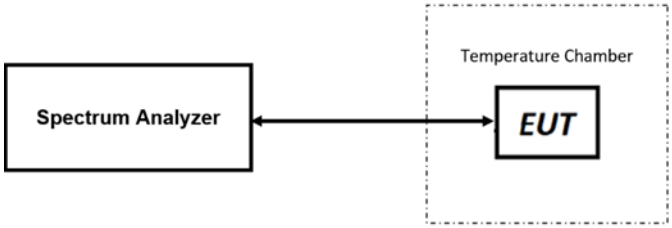


Figure 7-14. FR1 Test Instrument & Measurement Setup

Test Notes

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

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	1.85001745	-0.00001745
		- 20	1.85069139	-0.00069139
		- 10	1.85020327	-0.00020327
		0	1.85049697	-0.00049697
		+ 10	1.85064116	-0.00064116
		+ 20 (Ref)	1.85028133	-0.00028133
		+ 30	1.85059208	-0.00059208
		+ 40	1.85020510	-0.00020510
		+ 50	1.85022703	-0.00022703
Battery Endpoint	3.40	+ 20	1.85015779	-0.00015779

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	1.91413487	-0.00086513
		- 20	1.91411191	-0.00088809
		- 10	1.91424567	-0.00075433
		0	1.91452016	-0.00047984
		+ 10	1.91416225	-0.00083775
		+ 20 (Ref)	1.91467861	-0.00032139
		+ 30	1.91433426	-0.00066574
		+ 40	1.91412738	-0.00087262
		+ 50	1.91493879	-0.00006121
Battery Endpoint	3.40	+ 20	1.91421474	-0.00078526

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

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	1.85053692	-0.00053692
		- 20	1.85040737	-0.00040737
		- 10	1.85029222	-0.00029222
		0	1.85074491	-0.00074491
		+ 10	1.85006622	-0.00006622
		+ 20 (Ref)	1.85083386	-0.00083386
		+ 30	1.85058281	-0.00058281
		+ 40	1.85010844	-0.00010844
		+ 50	1.85096977	-0.00096977
Battery Endpoint	3.40	+ 20	1.85084480	-0.00084480

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	1.91497310	-0.00002690
		- 20	1.91404584	-0.00095416
		- 10	1.91432989	-0.00067011
		0	1.91483675	-0.00016325
		+ 10	1.91402408	-0.00097592
		+ 20 (Ref)	1.91498936	-0.00001064
		+ 30	1.91484454	-0.00015546
		+ 40	1.91408925	-0.00091075
		+ 50	1.91403456	-0.00096544
Battery Endpoint	3.40	+ 20	1.91424796	-0.00075204

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

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	1.85084948	-0.00084948
		- 20	1.85057084	-0.00057084
		- 10	1.85091086	-0.00091086
		0	1.85061441	-0.00061441
		+ 10	1.85006066	-0.00006066
		+ 20 (Ref)	1.85078694	-0.00078694
		+ 30	1.85087346	-0.00087346
		+ 40	1.85049439	-0.00049439
		+ 50	1.85090407	-0.00090407
Battery Endpoint	3.40	+ 20	1.85043505	-0.00043505

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	1.90977603	-0.00022397
		- 20	1.90938390	-0.00061610
		- 10	1.90990123	-0.00009877
		0	1.90938542	-0.00061458
		+ 10	1.90906014	-0.00093986
		+ 20 (Ref)	1.90970778	-0.00029222
		+ 30	1.90997081	-0.00002919
		+ 40	1.90990452	-0.00009548
		+ 50	1.90939948	-0.00060052
Battery Endpoint	3.40	+ 20	1.90918360	-0.00081640

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

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the Apple **Tablet Device FCC ID: BCGA2995** complies with all the requirements of Part 24 of the FCC rules.

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.