

10.2.13. LTE BAND 71 AND 5G NR n71

LIMITS

FCC: §27.53 (g)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

QPSK LTE BAND 71 (20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/24/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE 71 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz										
1.346178	36.40	Pk	29.1	1.1	-95.2	-29.57	-58.17	-13	-45.17	H
1.346178	38.18	Pk	29.1	1.1	-95.2	-29.57	-56.39	-13	-43.39	V
2.020356	35.93	Pk	31.6	.5	-95.2	-28.37	-55.54	-13	-42.54	H
2.020845	36.06	Pk	31.6	.5	-95.2	-28.32	-55.36	-13	-42.36	V
2.692578	34.47	Pk	32.5	.5	-95.2	-27.25	-54.98	-13	-41.98	H
2.692578	36.41	Pk	32.5	.5	-95.2	-27.25	-53.04	-13	-40.04	V
Mid Channel, 680.5MHz										
1.360844	37.57	Pk	29.2	1	-95.2	-29.49	-56.92	-13	-43.92	V
1.362800	37.44	Pk	29.2	1	-95.2	-29.41	-56.97	-13	-43.97	H
2.041378	35.8	Pk	31.4	.5	-95.2	-28.12	-55.62	-13	-42.62	H
2.042356	37.17	Pk	31.4	.5	-95.2	-28.11	-54.24	-13	-41.24	V
2.721911	34.48	Pk	32.6	.5	-95.2	-27.14	-54.76	-13	-41.76	H
2.722400	34.05	Pk	32.5	.5	-95.2	-27.11	-55.26	-13	-42.26	V
High Channel, 688MHz										
1.376000	35.88	Pk	29.1	1	-95.2	-29.39	-58.61	-13	-45.61	V
1.376489	34.86	Pk	29.1	1	-95.2	-29.39	-59.63	-13	-46.63	H
2.063867	35.11	Pk	31.7	.5	-95.2	-28.3	-56.19	-13	-43.19	H
2.063867	34.82	Pk	31.7	.5	-95.2	-28.3	-56.48	-13	-43.48	V
2.751734	34.85	Pk	32.3	.5	-95.2	-26.88	-54.43	-13	-41.43	H
2.752223	34.7	Pk	32.3	.5	-95.2	-26.85	-54.55	-13	-41.55	V

BPSK 5G NR n71 (20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	4/7/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	N71 BPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz										
1.340800	37.27	Pk	29.1	1.1	-95.2	-29.54	-57.27	-13	-44.27	V
1.342756	38.19	Pk	29.1	1.1	-95.2	-29.54	-56.35	-13	-43.35	H
2.040889	36.34	Pk	31.4	.6	-95.2	-28.10	-54.96	-13	-41.96	V
2.046267	36.97	Pk	31.5	.5	-95.2	-28.01	-54.24	-13	-41.24	H
2.686711	37.27	Pk	32.4	.6	-95.2	-27.19	-52.12	-13	-39.12	H
2.688667	35.88	Pk	32.5	.6	-95.2	-27.21	-53.43	-13	-40.43	V
Mid Channel, 680.5MHz										
1.344222	37.83	Pk	29.1	1.1	-95.2	-29.49	-56.66	-13	-43.66	H
1.345689	37.94	Pk	29.1	1.1	-95.2	-29.55	-56.61	-13	-43.61	V
2.034045	36.93	Pk	31.4	.5	-95.2	-28.24	-54.61	-13	-41.61	H
2.035511	37.53	Pk	31.4	.5	-95.2	-28.18	-53.95	-13	-40.95	V
2.729245	35.86	Pk	32.4	.5	-95.2	-27.06	-53.5	-13	-40.5	V
2.749778	36.28	Pk	32.3	.5	-95.2	-26.99	-53.11	-13	-40.11	H
High Channel, 688MHz										
1.337867	39.61	Pk	29.2	1.1	-95.2	-29.52	-54.81	-13	-41.81	V
1.359378	37.72	Pk	29.2	1	-95.2	-29.49	-56.77	-13	-43.77	H
2.061422	36.53	Pk	31.6	.5	-95.2	-28.21	-54.78	-13	-41.78	H
2.070222	36.15	Pk	31.7	.5	-95.2	-28.26	-55.11	-13	-42.11	V
2.725334	36.63	Pk	32.5	.5	-95.2	-27.07	-52.64	-13	-39.64	H
2.729245	35.35	Pk	32.4	.5	-95.2	-27.06	-54.01	-13	-41.01	V

10.3. FIELD STRENGTH OF SPURIOUS RADIATION, ANT3

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests above 1GHz were done with a Resolution Bandwidth of 1MHz, and a Video Bandwidth of 3MHz.

RESULTS

10.3.1. LTE BAND 7 AND 5G NR n7

LIMITS

FCC: §27.53 (m)

At least $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

QPSK LTE BAND 7 (20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/27/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	LTE 7 BPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2510MHz										
4.995938	35.95	Pk	34.2	.8	-95.2	-23.76	-48.01	-25	-23.01	V
5.008594	34.95	Pk	34.2	.8	-95.2	-23.62	-48.87	-25	-23.87	H
7.527188	33.30	Pk	35.5	.3	-95.2	-19.43	-45.53	-25	-20.53	H
7.552031	33.62	Pk	35.6	.3	-95.2	-19.53	-45.21	-25	-20.21	V
10.024688	31.81	Pk	36.9	.6	-95.2	-16.94	-42.83	-25	-17.83	V
10.069219	32.45	Pk	37.0	.7	-95.2	-17.11	-42.16	-25	-17.16	H
Mid Channel, 2535MHz										
5.081250	35.82	Pk	34.3	.8	-95.2	-23.16	-47.44	-25	-22.44	H
5.083125	36.14	Pk	34.3	.8	-95.2	-23.16	-47.12	-25	-22.12	V
7.618594	33.40	Pk	35.5	.4	-95.2	-19.23	-45.13	-25	-20.13	V
7.633594	33.04	Pk	35.6	.4	-95.2	-19.08	-45.24	-25	-20.24	H
10.126406	32.40	Pk	36.9	.7	-95.2	-16.99	-42.19	-25	-17.19	V
10.131094	32.82	Pk	36.9	.7	-95.2	-17.01	-41.79	-25	-16.79	H
High Channel, 2560MHz										
5.119688	35.4	Pk	34.3	.8	-95.2	-23.27	-47.97	-25	-22.97	H
5.120625	35.18	Pk	34.4	.8	-95.2	-23.25	-48.07	-25	-23.07	V
7.678125	32.33	Pk	35.6	.4	-95.2	-18.9	-45.77	-25	-20.77	V
7.683281	33.47	Pk	35.6	.5	-95.2	-18.93	-44.56	-25	-19.56	H
10.321875	33.21	Pk	37.1	.6	-95.2	-16.32	-40.61	-25	-15.61	H
10.357500	32.06	Pk	37.2	.8	-95.2	-16.31	-41.45	-25	-16.45	V

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/29/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	n7 BPSK 40MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2525MHz										
5.037656	35.61	Pk	34.2	.6	-95.2	-23.37	-48.16	-25	-23.16	H
5.060156	35.50	Pk	34.3	.6	-95.2	-23.31	-48.11	-25	-23.11	V
7.574063	32.83	Pk	35.5	.4	-95.2	-19.39	-45.86	-25	-20.86	H
7.578281	33.40	Pk	35.5	.5	-95.2	-19.38	-45.18	-25	-20.18	V
10.097813	32.15	Pk	37.0	.7	-95.2	-17.10	-42.45	-25	-17.45	H
10.120781	31.48	Pk	37.0	.7	-95.2	-17.00	-43.02	-25	-18.02	V
Mid Channel, 2535MHz										
5.110781	35.47	Pk	34.3	.8	-95.2	-23.27	-47.9	-25	-22.9	V
5.115000	36.92	Pk	34.4	.8	-95.2	-23.18	-46.26	-25	-21.26	H
7.502344	32.53	Pk	35.5	.4	-95.2	-19.48	-46.25	-25	-21.25	V
7.517813	35.27	Pk	35.4	.3	-95.2	-19.54	-43.77	-25	-18.77	H
10.062188	32.99	Pk	36.9	.7	-95.2	-17.10	-41.71	-25	-16.71	V
10.069219	32.93	Pk	37.0	.7	-95.2	-17.11	-41.68	-25	-16.68	H
High Channel, 2545MHz										
5.099531	35.44	Pk	34.4	.8	-95.2	-23.28	-47.84	-25	-22.84	H
5.118281	34.68	Pk	34.4	.8	-95.2	-23.27	-48.59	-25	-23.59	V
7.506094	32.70	Pk	35.5	.3	-95.2	-19.53	-46.23	-25	-21.23	V
7.553906	33.36	Pk	35.6	.3	-95.2	-19.52	-45.46	-25	-20.46	H
10.006406	31.51	Pk	36.9	.6	-95.2	-16.72	-42.91	-25	-17.91	V
10.093594	32.81	Pk	37.0	.6	-95.2	-17.15	-41.94	-25	-16.94	H

10.3.2. LTE BAND 12 AND 5G NR n12

LIMITS

FCC: §27.53 (g)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

QPSK LTE BAND 12 (10.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/24/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	LTE12 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 704MHz										
1.413644	39.44	Pk	28.5	.9	-95.2	-29.29	-55.65	-13	-42.65	H
1.417067	37.70	Pk	28.5	.9	-95.2	-29.22	-57.32	-13	-44.32	V
2.082934	36.93	Pk	31.7	.5	-95.2	-28.14	-54.21	-13	-41.21	V
2.096134	36.67	Pk	31.9	.5	-95.2	-28.11	-54.24	-13	-41.24	H
2.811378	35.75	Pk	32.6	.6	-95.2	-26.61	-52.86	-13	-39.86	H
2.817734	35.10	Pk	32.7	.6	-95.2	-26.59	-53.39	-13	-40.39	V
Mid Channel, 707.5MHz										
1.412178	37.74	Pk	28.5	.9	-95.2	-29.31	-57.37	-13	-44.37	V
1.416089	37.48	Pk	28.5	.9	-95.2	-29.27	-57.59	-13	-44.59	H
2.115689	36.87	Pk	31.9	.5	-95.2	-28.13	-54.06	-13	-41.06	H
2.176800	39.67	Pk	31.7	.5	-95.2	-27.71	-51.04	-13	-38.04	V
2.814311	36.19	Pk	32.6	.6	-95.2	-26.72	-52.53	-13	-39.53	H
2.816756	35.62	Pk	32.6	.6	-95.2	-26.65	-53.03	-13	-40.03	V
High Channel, 711MHz										
1.408267	38.44	Pk	28.6	.9	-95.2	-29.39	-56.65	-13	-43.65	V
1.414133	38.93	Pk	28.4	.9	-95.2	-29.3	-56.27	-13	-43.27	H
2.140134	37.31	Pk	31.7	.5	-95.2	-27.96	-53.65	-13	-40.65	H
2.145022	37.50	Pk	31.7	.5	-95.2	-27.98	-53.48	-13	-40.48	V
2.846578	35.76	Pk	32.6	.6	-95.2	-26.7	-52.94	-13	-39.94	V
2.851467	36.06	Pk	32.6	.6	-95.2	-26.8	-52.74	-13	-39.74	H

BPSK 5G NR n12 (15.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/28/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	N12 BPSK 15MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 706.5MHz										
1.398978	38.85	Pk	28.6	.9	-95.2	-29.43	-56.28	-13	-43.28	H
1.401422	38.14	Pk	28.7	.9	-95.2	-29.44	-56.9	-13	-43.9	V
2.111289	37.17	Pk	31.9	.5	-95.2	-27.99	-53.62	-13	-40.62	V
2.117645	37.04	Pk	31.8	.5	-95.2	-27.99	-53.85	-13	-40.85	H
2.813823	36.3	Pk	32.6	.6	-95.2	-26.7	-52.4	-13	-39.40	V
2.822623	36.47	Pk	32.7	.7	-95.2	-26.75	-52.08	-13	-39.08	H
Mid Channel, 707.5MHz										
1.392622	38.45	Pk	28.8	1	-95.2	-29.42	-56.37	-13	-43.37	V
1.400933	38.49	Pk	28.6	.9	-95.2	-29.45	-56.66	-13	-43.66	H
2.183645	36.87	Pk	31.6	.6	-95.2	-27.71	-53.84	-13	-40.84	V
2.191956	37.19	Pk	31.7	.6	-95.2	-27.72	-53.43	-13	-40.43	H
2.816267	36.52	Pk	32.6	.6	-95.2	-26.69	-52.17	-13	-39.17	V
2.826045	36.28	Pk	32.6	.7	-95.2	-26.62	-52.24	-13	-39.24	H
High Channel, 708.5MHz										
1.452022	38.1	Pk	28.1	.9	-95.2	-29.08	-57.18	-13	-44.18	V
1.452267	38.49	Pk	28.1	.9	-95.2	-29.08	-56.79	-13	-43.79	H
2.011556	36.49	Pk	31.7	.5	-95.2	-28.31	-54.82	-13	-41.82	V
2.017422	38.38	Pk	31.5	.5	-95.2	-28.21	-53.03	-13	-40.03	H
2.810889	35.63	Pk	32.7	.6	-95.2	-26.63	-52.9	-13	-39.9	V
2.825067	35.94	Pk	32.7	.7	-95.2	-26.62	-52.48	-13	-39.48	H

10.3.3. LTE BAND 13

LIMITS

FCC: §27.53

(c) The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

(f) Emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

QPSK LTE BAND 13 (10.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/24/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	LTE13 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 782MHz										
1.563245	37.58	Pk	27.8	.8	-95.2	-28.97	-57.99	-40	-17.99	V
1.568133	37.45	Pk	27.8	.9	-95.2	-29.05	-58.10	-40	-18.10	H
2.356711	36.43	Pk	31.9	.5	-95.2	-27.52	-53.89	-13	-40.89	V
2.362578	36.60	Pk	31.9	.5	-95.2	-27.52	-53.72	-13	-40.72	H
3.124756	36.21	Pk	32.5	.6	-95.2	-26.37	-52.26	-13	-39.26	V
3.132578	36.63	Pk	32.6	.6	-95.2	-26.41	-51.78	-13	-38.78	H

10.3.4. LTE BAND 14 AND 5G NR n14

LIMITS

FCC: §90.543 Emission Limitations. (Band 14)

(e) For operations in the 758-768 MHz and the 788-798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(3) On any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, by at least $43 + 10 \log (P)$ dB.

(f) For operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation

QPSK LTE BAND 14 (10.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/24/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	LTE14 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.572533	38.44	Pk	27.8	.9	-95.2	-28.90	-56.96	-40	-16.96	V
1.581333	38.33	Pk	27.7	.8	-95.2	-29.04	-57.41	-40	-17.41	H
2.357689	37.23	Pk	31.9	.5	-95.2	-27.50	-53.07	-13	-40.07	V
2.368445	37.15	Pk	31.8	.5	-95.2	-27.47	-53.22	-13	-40.22	H
3.177556	36.17	Pk	32.8	.5	-95.2	-26.43	-52.16	-13	-39.16	H
3.184889	35.38	Pk	32.8	.5	-95.2	-26.37	-52.89	-13	-39.89	V

BPSK 5G NR n14 (10.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/28/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	N14 BPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.573511	38.15	Pk	27.8	.9	-95.2	-28.94	-57.29	-40	-17.29	V
1.576445	37.64	Pk	27.8	.8	-95.2	-29.09	-58.05	-40	-18.05	H
2.365267	37.06	Pk	31.9	.5	-95.2	-27.47	-53.21	-13	-40.21	V
2.365511	40.11	Pk	31.9	.5	-95.2	-27.46	-50.15	-13	-37.15	H
3.156534	36.57	Pk	32.7	.5	-95.2	-26.55	-51.98	-13	-38.98	V
3.162400	37.00	Pk	32.8	.5	-95.2	-26.56	-51.46	-13	-38.46	H

10.3.5. LTE BAND 17

LIMITS

FCC: §27.53 (g)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

QPSK LTE BAND 17 (10.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/23/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE17 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 709MHz										
1.418044	35.69	Pk	28.5	.9	-95.2	-29.19	-59.30	-13	-46.30	V
1.418533	35.50	Pk	28.5	.9	-95.2	-29.17	-59.47	-13	-46.47	H
2.127911	34.93	Pk	31.7	.5	-95.2	-28.14	-56.21	-13	-43.21	H
2.127911	35.74	Pk	31.7	.5	-95.2	-28.14	-55.40	-13	-42.40	V
2.836311	33.23	Pk	32.6	.7	-95.2	-26.84	-55.51	-13	-42.51	H
2.836311	33.85	Pk	32.6	.7	-95.2	-26.84	-54.89	-13	-41.89	V
Mid Channel, 710MHz										
1.420000	36.19	Pk	28.5	.9	-95.2	-29.1	-58.71	-13	-45.71	H
1.420000	35.36	Pk	28.5	.9	-95.2	-29.1	-59.54	-13	-46.54	V
2.129867	35.47	Pk	31.7	.5	-95.2	-28.14	-55.67	-13	-42.67	V
2.130356	34.48	Pk	31.7	.5	-95.2	-28.12	-56.64	-13	-43.64	H
2.840711	34.23	Pk	32.6	.7	-95.2	-26.65	-54.32	-13	-41.32	H
2.840711	34.52	Pk	32.6	.7	-95.2	-26.65	-54.03	-13	-41.03	V
High Channel, 711MHz										
1.422445	36.30	Pk	28.5	.9	-95.2	-29.16	-58.66	-13	-45.66	H
1.422445	36.85	Pk	28.5	.9	-95.2	-29.16	-58.11	-13	-45.11	V
2.132800	36.06	Pk	31.7	.5	-95.2	-28.07	-55.01	-13	-42.01	V
2.133289	35.43	Pk	31.7	.5	-95.2	-28.06	-55.63	-13	-42.63	H
2.844134	35.19	Pk	32.6	.7	-95.2	-26.81	-53.52	-13	-40.52	V
2.845111	34.86	Pk	32.5	.7	-95.2	-26.77	-53.91	-13	-40.91	H

10.3.6. LTE BAND 25 AND 5G NR n25

LIMITS

FCC: §24.238(a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

QPSK LTE BAND 25 (20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/27/2023
Test Engineer:	26120
Configuration:	EUT only
Mode	LTE 25 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB) 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.720000	38.80	Pk	33.1	-95.2	-32.24	-55.54	-13	-42.54	H
3.720000	39.55	Pk	33.1	-95.2	-32.24	-54.79	-13	-41.79	V
5.580000	36.51	Pk	34.4	-95.2	-29.88	-54.17	-13	-41.17	H
5.580000	35.03	Pk	34.4	-95.2	-29.88	-55.65	-13	-42.65	V
7.440000	33.60	Pk	35.9	-95.2	-26.36	-52.06	-13	-39.06	H
7.440000	34.33	Pk	35.9	-95.2	-26.36	-51.33	-13	-38.33	V
Mid Channel, 1882.5MHz									
3.765000	39.35	Pk	33.2	-95.2	-32.03	-54.68	-13	-41.68	H
3.765000	39.51	Pk	33.2	-95.2	-32.03	-54.52	-13	-41.52	V
5.621250	40.28	Pk	34.4	-95.2	-30.00	-50.52	-13	-37.52	H
5.621719	43.34	Pk	34.4	-95.2	-30.02	-47.48	-13	-34.48	V
7.529766	33.8	Pk	35.9	-95.2	-26.37	-51.87	-13	-38.87	V
7.530000	34.46	Pk	35.9	-95.2	-26.36	-51.20	-13	-38.20	H
High Channel, 1905MHz									
3.812813	38.43	Pk	33.3	-95.2	-31.95	-55.42	-13	-42.42	H
3.812813	38.99	Pk	33.3	-95.2	-31.95	-54.86	-13	-41.86	V
5.718281	37.12	Pk	34.6	-95.2	-29.10	-52.58	-13	-39.58	H
5.718281	37.04	Pk	34.6	-95.2	-29.10	-52.66	-13	-39.66	V
7.624219	34.03	Pk	35.9	-95.2	-26.62	-51.89	-13	-38.89	H
7.624219	33.32	Pk	35.9	-95.2	-26.62	-52.60	-13	-39.60	V

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/8/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	N25 BPSK 40MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.761500	53.59	Pk	33.4	-95.2	-44.81	-53.02	-13	-40.02	H
3.772500	53.00	Pk	33.5	-95.2	-44.87	-53.57	-13	-40.57	V
5.622500	52.24	Pk	34.7	-95.2	-43.90	-52.16	-13	-39.16	H
5.622500	52.52	Pk	34.7	-95.2	-43.90	-51.88	-13	-38.88	V
7.492500	51.28	Pk	36.1	-95.2	-42.32	-50.14	-13	-37.14	H
7.495500	51.14	Pk	36.1	-95.2	-42.38	-50.34	-13	-37.34	V
Mid Channel, 1882.5MHz									
3.766000	53.08	Pk	33.5	-95.2	-44.85	-53.47	-13	-40.47	V
3.767500	54.80	Pk	33.5	-95.2	-44.99	-51.89	-13	-38.89	H
5.636500	53.31	Pk	34.8	-95.2	-43.81	-50.90	-13	-37.90	H
5.654000	51.54	Pk	34.7	-95.2	-43.84	-52.80	-13	-39.80	V
7.524500	51.66	Pk	35.9	-95.2	-42.22	-49.86	-13	-36.86	H
7.535000	50.77	Pk	35.9	-95.2	-42.20	-50.73	-13	-37.73	V
High Channel, 1895MHz									
3.811500	53.85	Pk	33.8	-95.2	-44.97	-52.52	-13	-39.52	H
3.817000	54.77	Pk	33.8	-95.2	-45.04	-51.67	-13	-38.67	V
5.694500	51.88	Pk	34.8	-95.2	-43.83	-52.35	-13	-39.35	H
5.711000	52.16	Pk	34.7	-95.2	-43.53	-51.87	-13	-38.87	V
7.595500	51.07	Pk	35.9	-95.2	-41.93	-50.16	-13	-37.16	H
7.603000	51.33	Pk	35.9	-95.2	-42.01	-49.98	-13	-36.98	V

10.3.7. LTE BAND 26 AND 5G NR n26 (PART 90S)

LIMITS

FCC: §90.691

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

QPSK LTE BAND 26 (10.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/7/2023
Test Engineer:	32978
Configuration:	EUT only
Mode	LTE 26 QPSK 10MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 819MHz									
1.630450	55.95	Pk	28.9	-95.2	-46.42	-56.77	-13	-43.77	H
1.639000	55.66	Pk	29	-95.2	-46.36	-56.90	-13	-43.90	V
2.451700	56.17	Pk	32.4	-95.2	-46.25	-52.88	-13	-39.88	V
2.454400	55.88	Pk	32.3	-95.2	-46.32	-53.34	-13	-40.34	H
3.269350	54.43	Pk	32.9	-95.2	-44.97	-52.84	-13	-39.84	V
3.277000	55.68	Pk	32.9	-95.2	-44.84	-51.46	-13	-38.46	H

BPSK 5G NR n26 (10.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/17/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	N26 BPSK 10MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	80404 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 819MHz									
1.625950	56.31	Pk	28.8	-95.2	-46.37	-56.46	-13	-43.46	H
1.625950	55.29	Pk	28.8	-95.2	-46.37	-57.48	-13	-44.48	V
2.449000	55.99	Pk	32.4	-95.2	-46.38	-53.19	-13	-40.19	V
2.454400	55.69	Pk	32.3	-95.2	-46.32	-53.53	-13	-40.53	H
3.276100	53.77	Pk	32.9	-95.2	-44.89	-53.42	-13	-40.42	H
3.281050	53.78	Pk	32.9	-95.2	-45.06	-53.58	-13	-40.58	V

10.3.8. LTE BAND 26 AND 5G NR n26 (PART 22)

LIMITS

FCC: §22.917(a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$

QPSK LTE BAND 26 (10.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/24/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	LTE 26 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 831.5MHz										
1.650756	38.29	Pk	28.4	.8	-95.2	-28.98	-56.69	-13	-43.69	H
1.653200	36.82	Pk	28.4	.8	-95.2	-28.89	-58.07	-13	-45.07	V
2.478445	36.21	Pk	32.3	.5	-95.2	-27.54	-53.73	-13	-40.73	V
2.487734	36.29	Pk	32.3	.5	-95.2	-27.58	-53.69	-13	-40.69	H
3.317378	37.34	Pk	32.6	.6	-95.2	-26.23	-50.89	-13	-37.89	H
3.324712	35.45	Pk	32.6	.6	-95.2	-26.25	-52.80	-13	-39.8	V
Mid Channel, 836.5MHz										
1.673245	37.86	Pk	28.6	.7	-95.2	-28.72	-56.76	-13	-43.76	H
1.679111	38.13	Pk	28.6	.7	-95.2	-28.74	-56.51	-13	-43.51	V
2.504845	37.03	Pk	32.2	.7	-95.2	-27.46	-52.73	-13	-39.73	H
2.521467	35.78	Pk	32.2	.8	-95.2	-27.34	-53.76	-13	-40.76	V
3.310045	35.59	Pk	32.7	.7	-95.2	-26.26	-52.47	-13	-39.47	V
3.326178	35.55	Pk	32.6	.6	-95.2	-26.14	-52.59	-13	-39.59	H
High Channel, 841.5MHz										
1.674711	37.41	Pk	28.6	.7	-95.2	-28.63	-57.12	-13	-44.12	H
1.675445	37.28	Pk	28.6	.7	-95.2	-28.63	-57.25	-13	-44.25	V
2.519511	36.48	Pk	32.1	.8	-95.2	-27.34	-53.16	-13	-40.16	V
2.5244	36.82	Pk	32.2	.8	-95.2	-27.4	-52.78	-13	-39.78	H
3.375067	35.37	Pk	32.4	.6	-95.2	-26.19	-53.02	-13	-40.02	H
3.387778	35.86	Pk	32.4	.6	-95.2	-26.06	-52.4	-13	-39.40	V

BPSK 5G NR n26 (20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/5/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	N26 BPSK 20MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 834.0MHz									
1.659700	55.76	Pk	29.0	-95.2	-46.55	-56.99	-13	-43.99	H
1.660600	55.08	Pk	29.0	-95.2	-46.54	-57.66	-13	-44.66	V
2.514700	54.85	Pk	32.3	-95.2	-46.19	-54.24	-13	-41.24	H
2.526400	54.72	Pk	32.2	-95.2	-46.45	-54.73	-13	-41.73	V
3.340000	53.38	Pk	32.9	-95.2	-44.93	-53.85	-13	-40.85	V
3.344500	53.16	Pk	32.8	-95.2	-44.91	-54.15	-13	-41.15	H
Low Channel, 836.5MHz									
1.667350	55.26	Pk	28.9	-95.2	-46.55	-57.59	-13	-44.59	V
1.667800	54.97	Pk	28.9	-95.2	-46.56	-57.89	-13	-44.89	H
2.521000	54.57	Pk	32.2	-95.2	-46.24	-54.67	-13	-41.67	H
2.527300	54.96	Pk	32.2	-95.2	-46.44	-54.48	-13	-41.48	V
3.332800	53.53	Pk	32.9	-95.2	-44.90	-53.67	-13	-40.67	V
3.337750	52.97	Pk	32.9	-95.2	-44.82	-54.15	-13	-41.15	H
Low Channel, 839.0MHz									
1.658350	55.40	Pk	28.9	-95.2	-46.48	-57.38	-13	-44.38	H
1.659250	55.60	Pk	29.0	-95.2	-46.54	-57.14	-13	-44.14	V
2.516500	55.51	Pk	32.2	-95.2	-46.29	-53.78	-13	-40.78	H
2.518750	54.38	Pk	32.2	-95.2	-46.28	-54.9	-13	-41.90	V
3.368350	52.81	Pk	33.0	-95.2	-44.93	-54.32	-13	-41.32	H
3.377800	53.57	Pk	32.9	-95.2	-45.10	-53.83	-13	-40.83	V

10.3.9. LTE BAND 30 AND 5G NR n30

LIMITS

FCC: §27.53 (a)

For mobile and portable stations operating in the 2305-2315 MHz: by a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.

QPSK LTE BAND 30 (10.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/12/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE 30 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.605469	27.97	RMS	34.3	-95.2	-29.32	-62.25	-40	-22.25	V
4.618594	27.76	RMS	34.3	-95.2	-29.11	-62.25	-40	-22.25	H
6.90375	25.38	RMS	35.7	-95.2	-26.54	-60.66	-40	-20.66	V
6.939844	25.40	RMS	35.7	-95.2	-26.43	-60.53	-40	-20.53	H
9.172500	22.89	RMS	36.1	-95.2	-23.9	-60.11	-40	-20.11	V
9.253125	22.77	RMS	36.2	-95.2	-23.67	-59.90	-40	-19.90	H

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/2/2023
Test Engineer:	32934
Configuration:	EUT only
Mode	N30 BPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.592813	27.28	RMS	34.3	-95.2	-29.4	-63.02	-40	-23.02	V
4.6125	27.34	RMS	34.3	-95.2	-29.23	-62.79	-40	-22.79	H
6.916406	24.57	RMS	35.7	-95.2	-26.41	-61.34	-40	-21.34	V
6.932813	24.69	RMS	35.7	-95.2	-26.43	-61.24	-40	-21.24	H
9.211875	22.81	RMS	36.1	-95.2	-23.75	-60.04	-40	-20.04	V
9.251719	22.8	RMS	36.2	-95.2	-23.61	-59.81	-40	-19.81	H

10.3.10. LTE BAND 41 AND 5G NR n41

LIMITS

FCC: §27.53 (m)

At least 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

QPSK LTE BAND 41 (20.0MHZ BANDWIDTH)

Project #:	
Date:	3/27/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	LTE 41 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2506MHz										
5.040000	37.29	Pk	34.3	.6	-95.2	-23.30	-46.31	-25	-21.31	V
5.040938	36.51	Pk	34.3	.6	-95.2	-23.25	-47.04	-25	-22.04	H
7.487813	34.04	Pk	35.5	.3	-95.2	-19.46	-44.82	-25	-19.82	V
7.505625	34.59	Pk	35.5	.3	-95.2	-19.53	-44.34	-25	-19.34	H
10.067344	33.31	Pk	36.9	.7	-95.2	-17.12	-41.41	-25	-16.41	V
10.073438	33.30	Pk	37.0	.7	-95.2	-17.15	-41.35	-25	-16.35	H
Mid Channel, 2593MHz										
5.179688	37.78	Pk	34.5	.7	-95.2	-23.04	-45.26	-25	-20.26	H
5.182969	36.04	Pk	34.5	.7	-95.2	-23.09	-47.05	-25	-22.05	V
7.793906	33.56	Pk	35.5	.4	-95.2	-18.99	-44.73	-25	-19.73	V
7.809844	34.68	Pk	35.6	.4	-95.2	-19.12	-43.64	-25	-18.64	H
10.357969	34.46	Pk	37.2	.8	-95.2	-16.30	-39.04	-25	-14.04	H
10.362188	33.15	Pk	37.2	.8	-95.2	-16.33	-40.38	-25	-15.38	V
High Channel, 2680MHz										
5.372344	35.24	Pk	34.7	.6	-95.2	-23.16	-47.82	-25	-22.82	H
5.391094	35.02	Pk	34.6	.7	-95.2	-23.22	-48.10	-25	-23.10	V
8.036719	34.3	Pk	35.7	.4	-95.2	-18.81	-43.61	-25	-18.61	V
8.075625	34.03	Pk	35.7	.3	-95.2	-18.78	-43.95	-25	-18.95	H
10.701563	33.40	Pk	37.5	.5	-95.2	-16.26	-40.06	-25	-15.06	H
10.705781	33.49	Pk	37.5	.5	-95.2	-16.28	-39.99	-25	-14.99	V

BPSK LTE BAND n41 (100.0MHZ BANDWIDTH)

Project #:	4790592293
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Date:	5/9/2023
Test Engineer:	26120
Configuration:	EUT only
Mode	N41 BPSK 100MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2546MHz										
5.092031	37.39	Pk	34.7	.8	-95.2	-30.7	-53.01	-25	-28.01	H
5.092031	35.45	Pk	34.7	.8	-95.2	-30.7	-54.95	-25	-29.95	V
7.637813	34.88	Pk	35.9	.4	-95.2	-27.01	-51.03	-25	-26.03	H
7.637813	34.07	Pk	35.9	.4	-95.2	-27.01	-51.84	-25	-26.84	V
10.184063	32.83	Pk	37.6	.6	-95.2	-24.91	-49.08	-25	-24.08	H
10.184531	34.83	Pk	37.6	.6	-95.2	-24.85	-47.02	-25	-22.02	V
Mid Channel, 2593MHz										
5.185781	37.62	Pk	34.7	.8	-95.2	-30.61	-52.69	-25	-27.69	H
5.185781	37.65	Pk	34.7	.8	-95.2	-30.61	-52.66	-25	-27.66	V
7.779375	34.87	Pk	35.9	.3	-95.2	-27.04	-51.17	-25	-26.17	H
7.779375	33.97	Pk	35.9	.3	-95.2	-27.04	-52.07	-25	-27.07	V
10.372031	34.75	Pk	37.7	.8	-95.2	-25.02	-46.97	-25	-21.97	V
10.372500	32.86	Pk	37.7	.8	-95.2	-24.98	-48.82	-25	-23.82	H
High Channel, 2640MHz										
5.280000	36.10	Pk	34.7	.3	-95.2	-30.57	-54.67	-25	-29.67	H
5.280000	36.40	Pk	34.7	.3	-95.2	-30.57	-54.37	-25	-29.37	V
7.920000	33.54	Pk	36	.2	-95.2	-26.61	-52.07	-25	-27.07	H
7.920000	33.47	Pk	36	.2	-95.2	-26.61	-52.14	-25	-27.14	V
10.560469	32.92	Pk	37.8	.7	-95.2	-24.74	-48.52	-25	-23.52	H
10.560469	32.25	Pk	37.8	.7	-95.2	-24.74	-49.19	-25	-24.19	V

10.3.11. LTE BAND 66 AND 5G NR n66

LIMITS

FCC: §27.53 (h)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

QPSK LTE BAND 66 (20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/3/2023
Test Engineer:	26120
Configuration:	EUT only
Mode	LTE 66 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.440156	38.75	Pk	32.6	-95.2	-32.97	-56.82	-13	-43.82	H
3.440156	38.96	Pk	32.6	-95.2	-32.97	-56.61	-13	-43.61	V
5.160000	37.41	Pk	34.8	-95.2	-29.57	-52.56	-13	-39.56	H
5.160000	37.00	Pk	34.8	-95.2	-29.57	-52.97	-13	-39.97	V
6.879844	33.19	Pk	35.7	-95.2	-26.45	-52.76	-13	-39.76	H
6.879844	32.6	Pk	35.7	-95.2	-26.45	-53.35	-13	-40.35	V
Mid Channel, 1745MHz									
3.440156	39.86	Pk	32.6	-95.2	-32.97	-55.71	-13	-42.71	H
3.440156	39.71	Pk	32.6	-95.2	-32.97	-55.86	-13	-42.86	V
5.160000	37.46	Pk	34.8	-95.2	-29.57	-52.51	-13	-39.51	H
5.160000	37.2	Pk	34.8	-95.2	-29.57	-52.77	-13	-39.77	V
6.879844	34.07	Pk	35.7	-95.2	-26.45	-51.88	-13	-38.88	H
6.879844	34.45	Pk	35.7	-95.2	-26.45	-51.50	-13	-38.50	V
High Channel, 1770MHz									
3.540000	37.16	Pk	32.7	-95.2	-32.86	-58.2	-13	-45.20	H
3.540000	37.07	Pk	32.7	-95.2	-32.86	-58.29	-13	-45.29	V
5.310000	34.84	Pk	34.7	-95.2	-29.84	-55.5	-13	-42.50	H
5.310000	35.1	Pk	34.7	-95.2	-29.84	-55.24	-13	-42.24	V
7.080469	35.48	Pk	35.7	-95.2	-26.91	-50.93	-13	-37.93	H
7.080469	34.74	Pk	35.7	-95.2	-26.91	-51.67	-13	-38.67	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/10/2023

Test Engineer:	25192
Configuration:	EUT only
Mode	N66 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.472969	38.26	Pk	32.6	-95.2	-33.10	-57.44	-13	-44.44	H
3.472969	39.27	Pk	32.6	-95.2	-33.10	-56.43	-13	-43.43	V
5.173125	36.28	Pk	34.7	-95.2	-29.37	-53.59	-13	-40.59	V
5.199844	36.05	Pk	34.7	-95.2	-29.43	-53.88	-13	-40.88	H
6.903281	32.25	Pk	35.7	-95.2	-26.58	-53.83	-13	-40.83	V
6.926719	34.39	Pk	35.7	-95.2	-26.41	-51.52	-13	-38.52	H
Mid Channel, 1745MHz									
3.461250	37.70	Pk	32.6	-95.2	-33	-57.9	-13	-44.90	V
3.490781	38.79	Pk	32.6	-95.2	-32.96	-56.77	-13	-43.77	H
5.217656	36.42	Pk	34.7	-95.2	-28.95	-53.03	-13	-40.03	V
5.244375	35.73	Pk	34.7	-95.2	-28.82	-53.59	-13	-40.59	H
6.950625	32.72	Pk	35.7	-95.2	-26.45	-53.23	-13	-40.23	V
6.974531	34.7	Pk	35.7	-95.2	-26.76	-51.56	-13	-38.56	H
High Channel, 1760MHz									
3.520781	37.40	Pk	32.7	-95.2	-32.93	-58.03	-13	-45.03	V
3.526875	39.97	Pk	32.7	-95.2	-32.87	-55.40	-13	-42.40	H
5.280938	35.94	Pk	34.7	-95.2	-29.61	-54.17	-13	-41.17	V
5.289844	36.64	Pk	34.7	-95.2	-29.64	-53.5	-13	-40.50	H
7.035000	34.73	Pk	35.7	-95.2	-26.75	-51.52	-13	-38.52	H
7.035000	33.78	Pk	35.7	-95.2	-26.75	-52.47	-13	-39.47	V

10.3.12. 5G NR n70

LIMITS

FCC: §27.53 (h)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

BPSK 5G NR n70 (15.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/10/20233
Test Engineer:	25196
Configuration:	EUT only
Mode	N70 BPSK 15MHz
Chamber #:	01-RDE-25196

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 1702.5MHz									
3.390469	39.23	Pk	32.6	-95.2	-33.14	-56.51	-13	-43.51	V
3.407813	39.02	Pk	32.6	-95.2	-33.09	-56.67	-13	-43.67	H
5.085000	38.83	Pk	34.7	-95.2	-30.66	-52.33	-13	-39.33	V
5.102344	37.66	Pk	34.7	-95.2	-30.41	-53.25	-13	-40.25	H
6.809063	33.25	Pk	35.7	-95.2	-26.99	-53.24	-13	-40.24	H
6.820781	33.97	Pk	35.7	-95.2	-26.99	-52.52	-13	-39.52	V

10.3.13. LTE BAND 71 AND 5G NR n71

LIMITS

FCC: §27.53 (g)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

QPSK LTE BAND 71 (20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/31/2023
Test Engineer:	26120
Configuration:	EUT only
Mode	LTE 71 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF (dB) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz									
3.440156	38.75	Pk	32.6	-95.2	-32.97	-56.82	-13	-43.82	H
3.440156	38.96	Pk	32.6	-95.2	-32.97	-56.61	-13	-43.61	V
5.160000	37.41	Pk	34.8	-95.2	-29.57	-52.56	-13	-39.56	H
5.160000	37.00	Pk	34.8	-95.2	-29.57	-52.97	-13	-39.97	V
6.879844	33.19	Pk	35.7	-95.2	-26.45	-52.76	-13	-39.76	H
6.879844	32.60	Pk	35.7	-95.2	-26.45	-53.35	-13	-40.35	V
Low Channel, 680.5MHz									
3.440156	39.86	Pk	32.6	-95.2	-32.97	-55.71	-13	-42.71	H
3.440156	39.71	Pk	32.6	-95.2	-32.97	-55.86	-13	-42.86	V
5.160000	37.46	Pk	34.8	-95.2	-29.57	-52.51	-13	-39.51	H
5.160000	37.20	Pk	34.8	-95.2	-29.57	-52.77	-13	-39.77	V
6.879844	34.07	Pk	35.7	-95.2	-26.45	-51.88	-13	-38.88	H
6.879844	34.45	Pk	35.7	-95.2	-26.45	-51.5	-13	-38.50	V
Low Channel, 688MHz									
3.540000	37.16	Pk	32.7	-95.2	-32.86	-58.20	-13	-45.20	H
3.540000	37.07	Pk	32.7	-95.2	-32.86	-58.29	-13	-45.29	V
5.310000	34.84	Pk	34.7	-95.2	-29.84	-55.5	-13	-42.50	H
5.310000	35.10	Pk	34.7	-95.2	-29.84	-55.24	-13	-42.24	V
7.080469	35.48	Pk	35.7	-95.2	-26.91	-50.93	-13	-37.93	H
7.080469	34.74	Pk	35.7	-95.2	-26.91	-51.67	-13	-38.67	V

BPSK 5G NR n71 (20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/14/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	N71 BPSK 20MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF (dB) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz									
1.355050	56.34	Pk	28.5	-95.2	-46.16	-56.52	-13	-43.52	H
1.355950	56.54	Pk	28.6	-95.2	-46.16	-56.22	-13	-43.22	V
1.999000	55.16	Pk	31.6	-95.2	-46.32	-54.76	-13	-41.76	V
2.00845	55.11	Pk	31.6	-95.2	-46.34	-54.83	-13	-41.83	H
2.707300	54.2	Pk	32.1	-95.2	-46.62	-55.52	-13	-42.52	H
2.710900	55.42	Pk	32.2	-95.2	-46.51	-54.09	-13	-41.09	V
Low Channel, 680.5MHz									
1.353700	57.21	Pk	28.5	-95.2	-46.12	-55.61	-13	-42.61	V
1.356850	55.55	Pk	28.6	-95.2	-46.15	-57.20	-13	-44.20	H
2.049400	56.01	Pk	32.1	-95.2	-46.73	-53.82	-13	-40.82	H
2.055700	55.73	Pk	32.1	-95.2	-46.67	-54.04	-13	-41.04	V
2.718550	54.81	Pk	32.2	-95.2	-46.51	-54.70	-13	-41.70	V
2.725300	55.41	Pk	32.2	-95.2	-46.58	-54.17	-13	-41.17	H
Low Channel, 688MHz									
1.388350	55.37	Pk	28.4	-95.2	-46.06	-57.49	-13	-44.49	H
1.388350	55.04	Pk	28.4	-95.2	-46.06	-57.82	-13	-44.82	V
2.053450	54.86	Pk	32.1	-95.2	-46.56	-54.80	-13	-41.80	V
2.055250	54.81	Pk	32.1	-95.2	-46.64	-54.93	-13	-41.93	H
2.758150	55.26	Pk	32.5	-95.2	-46.25	-53.69	-13	-40.69	V
2.765800	55.03	Pk	32.4	-95.2	-46.18	-53.95	-13	-40.95	H

10.4. FIELD STRENGTH OF SPURIOUS RADIATION, ANT4

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests above 1GHz were done with a Resolution Bandwidth of 1MHz, and a Video Bandwidth of 3MHz.

RESULTS

10.4.1. LTE BAND 7 AND 5G NR n7

LIMITS

FCC: §27.53 (m)

At least $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

QPSK LTE BAND 7 (20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	03/31/2023
Test Engineer:	26120
Configuration:	EUT only
Mode	LTE7 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2510MHz										
5.020313	36.96	Pk	34.5	.8	-95.2	-30.94	-53.88	-25	-28.88	H
5.020313	37.03	Pk	34.5	.8	-95.2	-30.94	-53.81	-25	-28.81	V
7.530469	33.48	Pk	35.9	.3	-95.2	-27.07	-52.59	-25	-27.59	H
7.530469	33.79	Pk	35.9	.3	-95.2	-27.07	-52.28	-25	-27.28	V
10.040156	31.62	Pk	37.4	.7	-95.2	-25.07	-50.55	-25	-25.55	H
10.040156	31.67	Pk	37.4	.7	-95.2	-25.07	-50.50	-25	-25.50	V
Mid Channel, 2535MHz										
5.069063	36.61	Pk	34.6	.7	-95.2	-30.88	-54.17	-25	-29.17	V
5.070000	36.14	Pk	34.6	.7	-95.2	-30.8	-54.56	-25	-29.56	H
7.606406	34.67	Pk	35.9	.4	-95.2	-27.22	-51.45	-25	-26.45	H
7.606406	34.07	Pk	35.9	.4	-95.2	-27.22	-52.05	-25	-27.05	V
10.140000	31.14	Pk	37.6	.7	-95.2	-25.16	-50.92	-25	-25.92	H
10.140000	32.17	Pk	37.6	.7	-95.2	-25.16	-49.89	-25	-24.89	V
High Channel, 2560MHz										
5.120156	35.73	Pk	34.8	.8	-95.2	-30.81	-54.68	-25	-29.68	H
5.120156	36.83	Pk	34.8	.8	-95.2	-30.81	-53.58	-25	-28.58	V
7.680000	35.91	Pk	35.9	.5	-95.2	-26.93	-49.82	-25	-24.82	V
7.680469	34.62	Pk	35.9	.5	-95.2	-26.91	-51.09	-25	-26.09	H
10.239844	32.68	Pk	37.6	.8	-95.2	-25.06	-49.18	-25	-24.18	V
10.240313	34.13	Pk	37.6	.8	-95.2	-25.05	-47.72	-25	-22.72	H

BPSK 5G NR 7 (40.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/9/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	n7 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2525MHz										
5.024063	36.69	Pk	34.5	.7	-95.2	-30.87	-54.18	-25	-29.18	V
5.032969	36.29	Pk	34.5	.7	-95.2	-31	-54.71	-25	-29.71	H
7.547813	33.31	Pk	35.9	.3	-95.2	-27.21	-52.90	-25	-27.90	V
7.560938	33.86	Pk	36.0	.4	-95.2	-27.24	-52.18	-25	-27.18	H
10.055156	32.54	Pk	37.4	.7	-95.2	-25.05	-49.61	-25	-24.61	V
10.089844	33.53	Pk	37.5	.6	-95.2	-25.15	-48.72	-25	-23.72	H
Mid Channel, 2535MHz										
5.041406	37.29	Pk	34.6	.6	-95.2	-31.06	-53.77	-25	-28.77	V
5.067656	38.83	Pk	34.6	.6	-95.2	-30.86	-52.03	-25	-27.03	H
7.599844	34.65	Pk	35.9	.4	-95.2	-27.15	-51.40	-25	-26.40	H
7.626094	34.39	Pk	35.9	.4	-95.2	-27.08	-51.59	-25	-26.59	V
10.089844	32.59	Pk	37.5	.6	-95.2	-25.15	-49.66	-25	-24.66	V
10.124531	32.68	Pk	37.5	.7	-95.2	-24.88	-49.20	-25	-24.20	H
High Channel, 2545MHz										
5.058750	37.02	Pk	34.6	.6	-95.2	-30.88	-53.86	-25	-28.86	V
5.093438	36.41	Pk	34.7	.8	-95.2	-30.77	-54.06	-25	-29.06	H
7.626094	33.63	Pk	35.9	.4	-95.2	-27.08	-52.35	-25	-27.35	V
7.639219	34.70	Pk	35.9	.4	-95.2	-27.01	-51.21	-25	-26.21	H
10.177031	32.45	Pk	37.6	.6	-95.2	-25.01	-49.56	-25	-24.56	V
10.194375	31.35	Pk	37.6	.7	-95.2	-24.71	-50.26	-25	-25.26	H

10.4.2. LTE BAND 25 AND 5G NR n25

LIMITS

FCC: §24.238(a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

QPSK LTE BAND 25 (20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/31/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE25 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.700781	38.72	Pk	33.1	-95.2	-32.37	-55.75	-13	-42.75	V
3.720000	39.36	Pk	33.1	-95.2	-32.24	-54.98	-13	-41.98	H
5.579063	35.88	Pk	34.4	-95.2	-29.93	-54.85	-13	-41.85	H
5.598281	35.51	Pk	34.4	-95.2	-29.82	-55.11	-13	-42.11	V
7.445156	32.39	Pk	35.9	-95.2	-26.38	-53.29	-13	-40.29	H
7.457813	33.08	Pk	35.9	-95.2	-26.28	-52.50	-13	-39.50	V
Mid Channel, 1882.5MHz									
3.739219	38.12	Pk	33.2	-95.2	-32.14	-56.02	-13	-43.02	V
3.765000	37.99	Pk	33.2	-95.2	-32.03	-56.04	-13	-43.04	H
5.636719	36.01	Pk	34.5	-95.2	-30.12	-54.81	-13	-41.81	V
5.646563	36.71	Pk	34.5	-95.2	-30.06	-54.05	-13	-41.05	H
7.535156	33.32	Pk	35.9	-95.2	-26.3	-52.28	-13	-39.28	H
7.535156	32.95	Pk	35.9	-95.2	-26.3	-52.65	-13	-39.65	V
High Channel, 1905MHz									
3.795469	40.87	Pk	33.3	-95.2	-31.92	-52.95	-13	-39.95	V
3.810938	40.27	Pk	33.3	-95.2	-31.91	-53.54	-13	-40.54	H
5.711719	38.26	Pk	34.6	-95.2	-29.16	-51.50	-13	-38.50	H
5.739375	37.23	Pk	34.6	-95.2	-28.90	-52.27	-13	-39.27	V
7.608281	36.81	Pk	36.0	-95.2	-26.57	-48.96	-13	-35.96	V
7.618125	35.34	Pk	35.9	-95.2	-26.66	-50.62	-13	-37.62	H

BPSK 5G NR 25 (40.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	4/9/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	n25 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1870MHz										
5.024063	36.69	Pk	34.5	.7	-95.2	-30.87	-54.18	-13	-41.18	V
5.032969	36.29	Pk	34.5	.7	-95.2	-31	-54.71	-13	-41.71	H
7.547813	33.31	Pk	35.9	.3	-95.2	-27.21	-52.90	-13	-39.90	V
7.560938	33.86	Pk	36	.4	-95.2	-27.24	-52.18	-13	-39.18	H
10.055156	32.54	Pk	37.4	.7	-95.2	-25.05	-49.61	-13	-36.61	V
10.089844	33.53	Pk	37.5	.6	-95.2	-25.15	-48.72	-13	-35.72	H
Low Channel, 1882.5MHz										
5.041406	37.29	Pk	34.6	.6	-95.2	-31.06	-53.77	-13	-40.77	V
5.067656	38.83	Pk	34.6	.6	-95.2	-30.86	-52.03	-13	-39.03	H
7.599844	34.65	Pk	35.9	.4	-95.2	-27.15	-51.40	-13	-38.40	H
7.626094	34.39	Pk	35.9	.4	-95.2	-27.08	-51.59	-13	-38.59	V
10.089844	32.59	Pk	37.5	.6	-95.2	-25.15	-49.66	-13	-36.66	V
10.124531	32.68	Pk	37.5	.7	-95.2	-24.88	-49.2	-13	-36.20	H
High Channel, 1895MHz										
5.058750	37.02	Pk	34.6	.6	-95.2	-30.88	-53.86	-13	-40.86	V
5.093438	36.41	Pk	34.7	.8	-95.2	-30.77	-54.06	-13	-41.06	H
7.626094	33.63	Pk	35.9	.4	-95.2	-27.08	-52.35	-13	-39.35	V
7.639219	34.70	Pk	35.9	.4	-95.2	-27.01	-51.21	-13	-38.21	H
10.177031	32.45	Pk	37.6	.6	-95.2	-25.01	-49.56	-13	-36.56	V
10.194375	31.35	Pk	37.6	.7	-95.2	-24.71	-50.26	-13	-37.26	H

10.4.3. LTE BAND 30 AND 5G NR n30

LIMITS

FCC: §27.53 (a)

For mobile and portable stations operating in the 2305-2315 MHz: by a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.

QPSK LTE BAND 30 (10.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/12/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE30 QPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.605469	27.97	RMS	34.3	-95.2	-29.32	-62.25	-40	-22.25	V
4.618594	27.76	RMS	34.3	-95.2	-29.11	-62.25	-40	-22.25	H
6.903750	25.38	RMS	35.7	-95.2	-26.54	-60.66	-40	-20.66	V
6.939844	25.40	RMS	35.7	-95.2	-26.43	-60.53	-40	-20.53	H
9.172500	22.89	RMS	36.1	-95.2	-23.9	-60.11	-40	-20.11	V
9.253125	22.77	RMS	36.2	-95.2	-23.67	-59.90	-40	-19.90	H

BPSK 5G NR 30 (10.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/12/2023
Test Engineer:	32934
Configuration:	EUT only
Mode	LTE30 QPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.614844	27.34	RMS	34.3	-95.2	-29.14	-62.70	-40	-22.70	V
4.623750	27.02	RMS	34.3	-95.2	-29.03	-62.91	-40	-22.91	H
6.919688	24.68	RMS	35.7	-95.2	-26.44	-61.26	-40	-21.26	V
6.926250	24.71	RMS	35.7	-95.2	-26.39	-61.18	-40	-21.18	H
9.236250	22.74	RMS	36.1	-95.2	-23.83	-60.19	-40	-20.19	H
9.250313	22.85	RMS	36.2	-95.2	-23.59	-59.74	-40	-19.74	V

10.4.4. LTE BAND 41 AND 5G NR n41

LIMITS

FCC: §27.53 (m)

At least 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

QPSK LTE BAND 41 (20MHZ BANDWIDTH)

Project #:	4790592293
Date:	3/31/2023
Test Engineer:	26120
Configuration:	EUT only
Mode	LTE41 QPSK 20MHz
Chamber #:	

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2506MHz										
5.011406	36.37	Pk	34.5	.8	-95.2	-30.87	-54.40	-25	-29.40	V
5.011875	35.50	Pk	34.5	.8	-95.2	-30.86	-55.26	-25	-30.26	H
7.518281	33.67	Pk	35.9	.3	-95.2	-26.86	-52.19	-25	-27.19	H
7.518281	31.72	Pk	35.9	.3	-95.2	-26.86	-54.14	-25	-29.14	V
10.024219	31.69	Pk	37.4	.6	-95.2	-24.98	-50.49	-25	-25.49	H
10.024219	33.46	Pk	37.4	.6	-95.2	-24.98	-48.72	-25	-23.72	V
Mid Channel, 2593MHz										
5.185781	37.08	Pk	34.7	.8	-95.2	-30.61	-53.23	-25	-28.23	V
5.186250	36.48	Pk	34.7	.8	-95.2	-30.62	-53.84	-25	-28.84	H
7.778906	33.00	Pk	35.9	.3	-95.2	-27.03	-53.03	-25	-28.03	H
7.778906	33.98	Pk	35.9	.3	-95.2	-27.03	-52.05	-25	-27.05	V
10.372031	32.15	Pk	37.7	.8	-95.2	-25.02	-49.57	-25	-24.57	H
10.372031	31.90	Pk	37.7	.8	-95.2	-25.02	-49.82	-25	-24.82	V
High Channel, 2680MHz										
5.362969	37.89	Pk	34.7	.5	-95.2	-30.19	-52.30	-25	-27.30	H
5.362969	35	Pk	34.7	.5	-95.2	-30.19	-55.19	-25	-30.19	V
8.040469	32.74	Pk	36	.4	-95.2	-26.63	-52.69	-25	-27.69	H
8.040469	31.8	Pk	36	.4	-95.2	-26.63	-53.63	-25	-28.63	V
10.720313	31.9	Pk	37.7	.6	-95.2	-23.97	-48.97	-25	-23.97	H
10.720313	31.03	Pk	37.7	.6	-95.2	-23.97	-49.84	-25	-24.84	V

BPSK 5G NR n41 (100.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/9/2023
Test Engineer:	26120
Configuration:	EUT only
Mode	n41 BPSK 100MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2546MHz										
5.092031	36.20	Pk	34.7	.8	-95.2	-30.7	-54.20	-25	-29.20	H
5.092031	36.59	Pk	34.7	.8	-95.2	-30.7	-53.81	-25	-28.81	V
7.638281	32.70	Pk	35.9	.4	-95.2	-27.01	-53.21	-25	-28.21	H
7.638281	32.78	Pk	35.9	.4	-95.2	-27.01	-53.13	-25	-28.13	V
10.184063	32.59	Pk	37.6	.6	-95.2	-24.91	-49.32	-25	-24.32	H
10.184063	32.00	Pk	37.6	.6	-95.2	-24.91	-49.91	-25	-24.91	V
Mid Channel, 2593MHz										
5.186250	36.08	Pk	34.7	.8	-95.2	-30.62	-54.24	-25	-29.24	H
5.186250	36.72	Pk	34.7	.8	-95.2	-30.62	-53.6	-25	-28.60	V
7.778906	33.35	Pk	35.9	.3	-95.2	-27.03	-52.68	-25	-27.68	H
7.778906	34.85	Pk	35.9	.3	-95.2	-27.03	-51.18	-25	-26.18	V
10.37250	33.96	Pk	37.7	.8	-95.2	-24.98	-47.72	-25	-22.72	H
10.37250	33.22	Pk	37.7	.8	-95.2	-24.98	-48.46	-25	-23.46	V
High Channel, 2640MHz										
5.280000	36.50	Pk	34.7	.3	-95.2	-30.57	-54.27	-25	-29.27	H
5.280000	37.32	Pk	34.7	.3	-95.2	-30.57	-53.45	-25	-28.45	V
7.920000	34.96	Pk	36	.2	-95.2	-26.61	-50.65	-25	-25.65	H
7.920000	34.38	Pk	36	.2	-95.2	-26.61	-51.23	-25	-26.23	V
10.560000	32.38	Pk	37.8	.7	-95.2	-24.68	-49.00	-25	-24.00	V
10.560469	32.49	Pk	37.8	.7	-95.2	-24.74	-48.95	-25	-23.95	H

10.4.5. LTE BAND 48 AND 5G NR n48

LIMITS

FCC: §96.41

(e) 3.5 GHz Emissions and Interference Limits—

(2) Additional protection levels. Notwithstanding paragraph (d)(1) of this section, the conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

QPSK LTE BAND 48 (20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/8/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE 48 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3560MHz										
7.127578	19.79	RMS	35.5	.5	-95.2	-19.80	-59.21	-40	-19.21	H
7.135509	20.07	RMS	35.5	.6	-95.2	-19.79	-58.82	-40	-18.82	V
10.692234	18.41	RMS	37.4	.5	-95.2	-16.32	-55.21	-40	-15.21	H
10.722197	18.46	RMS	37.4	.5	-95.2	-16.18	-55.02	-40	-15.02	V
14.712717	17.54	RMS	39.7	.9	-95.2	-14.73	-51.79	-40	-11.79	V
14.750831	17.22	RMS	39.8	.8	-95.2	-14.76	-52.14	-40	-12.14	H
Mid Channel, 3625MHz										
7.207331	20.22	RMS	35.5	.6	-95.2	-19.70	-58.58	-40	-18.58	V
7.248750	19.74	RMS	35.5	.6	-95.2	-19.64	-59.00	-40	-19.00	H
10.853063	18.72	RMS	37.5	.5	-95.2	-15.81	-54.29	-40	-14.29	H
10.853944	18.69	RMS	37.5	.5	-95.2	-15.85	-54.36	-40	-14.36	V
14.515097	18.26	RMS	39.6	.8	-95.2	-15.49	-52.03	-40	-12.03	V
14.535366	18.23	RMS	39.6	.8	-95.2	-15.29	-51.86	-40	-11.86	H
High Channel, 3690MHz										
7.357584	19.26	RMS	35.4	.7	-95.2	-19.36	-59.20	-40	-19.20	H
11.083509	18.06	RMS	37.5	.7	-95.2	-15.65	-54.59	-40	-14.59	H
14.600578	17.66	RMS	39.7	.9	-95.2	-14.41	-51.35	-40	-11.35	H
7.336434	19.57	RMS	35.5	.5	-95.2	-19.44	-59.07	-40	-19.07	V
11.056191	17.88	RMS	37.5	.6	-95.2	-15.58	-54.80	-40	-14.80	V
14.59485	17.76	RMS	39.6	.9	-95.2	-14.48	-51.42	-40	-11.42	V

BPSK 5G NR n48 (40.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/3/2023
Test Engineer:	32934
Configuration:	EUT only
Mode	n48 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3570MHz										
7.102463	25.47	RMS	35.7	.5	-95.2	-27.20	-60.73	-40	-20.73	V
7.146084	24.82	RMS	35.7	.6	-95.2	-27.26	-61.34	-40	-21.34	H
10.669763	22.84	RMS	37.8	.6	-95.2	-24.47	-58.43	-40	-18.43	V
10.718231	22.50	RMS	37.7	.5	-95.2	-24.07	-58.57	-40	-18.57	H
14.208422	20.40	RMS	39.2	.8	-95.2	-20.07	-54.87	-40	-14.87	V
14.279803	20.63	RMS	39.4	.7	-95.2	-20.33	-54.80	-40	-14.80	H
Mid Channel, 3625MHz										
7.216584	24.76	RMS	35.8	.5	-95.2	-27.05	-61.19	-40	-21.19	V
7.245225	24.94	RMS	35.8	.6	-95.2	-26.97	-60.83	-40	-20.83	H
10.882144	22.30	RMS	37.7	.5	-95.2	-24.15	-58.85	-40	-18.85	H
10.890956	22.20	RMS	37.7	.6	-95.2	-23.93	-58.63	-40	-18.63	V
14.438428	19.68	RMS	39.6	.8	-95.2	-20.09	-55.21	-40	-15.21	V
14.491744	19.56	RMS	39.7	.7	-95.2	-19.84	-55.08	-40	-15.08	H
High Channel, 3680MHz										
7.329825	24.90	RMS	35.8	.5	-95.2	-26.83	-60.83	-40	-20.83	V
7.347891	24.87	RMS	35.8	.6	-95.2	-27.19	-61.12	-40	-21.12	H
10.964541	21.94	RMS	37.7	.6	-95.2	-23.67	-58.63	-40	-18.63	V
11.021822	22.05	RMS	37.8	.6	-95.2	-23.67	-58.42	-40	-18.42	H
14.649488	19.43	RMS	39.9	.9	-95.2	-19.82	-54.79	-40	-14.79	V
14.732766	19.80	RMS	40.1	.9	-95.2	-19.68	-54.08	-40	-14.08	H

10.4.6. LTE BAND 66 AND 5G NR n66

LIMITS

FCC: §27.53 (h)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

QPSK LTE BAND 66 (20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/31/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	LTE66 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.434063	35.2	Pk	32.5	-95.2	-25.66	-53.16	-13	-40.16	V
3.445313	35.91	Pk	32.5	-95.2	-25.64	-52.43	-13	-39.43	H
5.158125	35.71	Pk	34.4	-95.2	-22.85	-47.94	-13	-34.94	V
5.182969	35.24	Pk	34.5	-95.2	-23.07	-48.53	-13	-35.53	H
6.871875	34.32	Pk	35.4	-95.2	-20.02	-45.5	-13	-32.5	H
6.873750	33.86	Pk	35.5	-95.2	-20.01	-45.85	-13	-32.85	V
Mid Channel, 1745MHz									
3.489844	35.50	Pk	32.5	-95.2	-24.61	-51.81	-13	-38.81	V
3.494063	34.47	Pk	32.6	-95.2	-24.51	-52.64	-13	-39.64	H
5.227031	35.77	Pk	34.5	-95.2	-22.75	-47.68	-13	-34.68	H
5.232188	35.15	Pk	34.5	-95.2	-22.60	-48.15	-13	-35.15	V
7.067344	33.29	Pk	35.5	-95.2	-18.63	-45.04	-13	-32.04	H
7.074844	33.77	Pk	35.5	-95.2	-18.79	-44.72	-13	-31.72	V
High Channel, 1770MHz									
3.631875	37.17	Pk	32.8	-95.2	-24.24	-49.47	-13	-36.47	H
3.644531	36.22	Pk	32.9	-95.2	-24.46	-50.54	-13	-37.54	V
5.317969	34.14	Pk	34.6	-95.2	-21.78	-48.24	-13	-35.24	V
5.32125	34.21	Pk	34.6	-95.2	-21.81	-48.20	-13	-35.20	H
7.019531	32.95	Pk	35.5	-95.2	-18.73	-45.48	-13	-32.48	V
7.057500	33.68	Pk	35.5	-95.2	-18.69	-44.71	-13	-31.71	H

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/10/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	n66 BPSK 40MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBUV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.461500	54.32	Pk	33.0	-95.2	-44.89	-52.77	-13	-39.77	H
3.468000	54.19	Pk	33.0	-95.2	-44.79	-52.80	-13	-39.80	V
5.156500	52.77	Pk	34.4	-95.2	-45.06	-53.09	-13	-40.09	V
5.172500	52.52	Pk	34.4	-95.2	-45.11	-53.39	-13	-40.39	H
6.909000	51.55	Pk	36.2	-95.2	-42.99	-50.44	-13	-37.44	V
6.920000	52.54	Pk	36.1	-95.2	-43	-49.56	-13	-36.56	H
Mid Channel, 1745MHz									
3.499500	53.37	Pk	34.9	-95.2	-44.79	-51.72	-13	-38.72	V
3.501500	53.21	Pk	35.0	-95.2	-44.93	-51.92	-13	-38.92	H
5.226000	53.40	Pk	34.6	-95.2	-44.94	-52.14	-13	-39.14	V
5.248000	52.70	Pk	34.7	-95.2	-44.89	-52.69	-13	-39.69	H
6.971500	50.94	Pk	36.0	-95.2	-42.95	-51.21	-13	-38.21	H
6.975500	51.83	Pk	35.9	-95.2	-42.91	-50.38	-13	-37.38	V
High Channel, 1760MHz									
3.501000	52.97	Pk	35.0	-95.2	-44.9	-52.13	-13	-39.13	H
3.503000	53.13	Pk	35.0	-95.2	-44.96	-52.03	-13	-39.03	V
5.293500	53.11	Pk	34.6	-95.2	-44.88	-52.37	-13	-39.37	V
5.296500	52.80	Pk	34.6	-95.2	-44.86	-52.66	-13	-39.66	H
7.020500	51.54	Pk	36.0	-95.2	-42.51	-50.17	-13	-37.17	H
7.029000	50.88	Pk	36.0	-95.2	-42.64	-50.96	-13	-37.96	V

10.4.7. 5G NR n70

LIMITS

FCC: §27.53 (h)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

BPSK 5G NR n70 (15.0MHZ BANDWIDTH based on 5G NR n70 maximum frequency range)

Project #:	4790592293
Date:	5/9/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	N70 BPSK 15MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 1702.5MHz									
3.390000	53.43	Pk	32.8	-95.2	-44.80	-53.77	-13	-40.77	V
3.392500	54.25	Pk	32.9	-95.2	-44.82	-52.87	-13	-39.87	H
5.087000	53.03	Pk	34.3	-95.2	-45.33	-53.20	-13	-40.20	V
5.097500	53.80	Pk	34.2	-95.2	-45.15	-52.35	-13	-39.35	H
6.774000	52.25	Pk	35.8	-95.2	-42.84	-49.99	-13	-36.99	V
6.795000	51.58	Pk	35.8	-95.2	-42.75	-50.57	-13	-37.57	H

10.4.8. 5G NR n77 (Part 27 3450-3550MHz)

LIMITS

FCC: §27.53

Emission limits

(n) 3.45 GHz Service. The following emission limits apply to stations transmitting in the 3450-3550 MHz band:

(2) For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	7/14/2023
Test Engineer:	32934
Configuration:	EUT only
Mode	n77 BPSK 100MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz									
6.986000	35.11	Pk	35.7	-95.2	-27.15	-51.54	-13	-38.54	H
7.001500	35.17	Pk	35.7	-95.2	-26.99	-51.32	-13	-38.32	V
10.488500	34.02	Pk	37.8	-95.2	-23.87	-47.25	-13	-34.25	V
10.551500	34.20	Pk	37.8	-95.2	-24.46	-47.66	-13	-34.66	H
13.999000	31.38	Pk	39	-95.2	-20.10	-44.92	-13	-31.92	V
14.062000	29.81	Pk	39.1	-95.2	-19.22	-45.51	-13	-32.51	H

10.4.9. 5G NR n77 (Part 27 3700-3980MHz)

LIMITS

FCC: §27.53

(1) 3.7 GHz Service. The following emission limits apply to stations transmitting in the 3700-3980 MHz band:

(2) For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	7/13/2023
Test Engineer:	32934
Configuration:	EUT only
Mode	n77 BPSK 100MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.484000	34.27	Pk	35.9	-95.2	-26.83	-51.86	-13	-38.86	V
7.525500	35.1	Pk	35.9	-95.2	-26.81	-51.01	-13	-38.01	H
11.210000	31.74	Pk	37.8	-95.2	-22.18	-47.84	-13	-34.84	V
11.223500	32.79	Pk	37.8	-95.2	-22.34	-46.95	-13	-33.95	H
14.977500	30.62	Pk	40.4	-95.2	-19.05	-43.23	-13	-30.23	V
15.006000	31.04	Pk	40.4	-95.2	-19.17	-42.93	-13	-29.93	H
Mid Channel, 3840MHz									
7.694000	35.47	Pk	35.9	-95.2	-26.78	-50.61	-13	-37.61	V
7.718500	35.49	Pk	35.9	-95.2	-26.84	-50.65	-13	-37.65	H
11.484000	32.23	Pk	37.9	-95.2	-22.29	-47.36	-13	-34.36	H
11.519000	31.93	Pk	37.9	-95.2	-21.32	-46.69	-13	-33.69	V
15.568500	31.25	Pk	40.8	-95.2	-18.39	-41.54	-13	-28.54	V
15.636000	31.56	Pk	40.8	-95.2	-18.81	-41.65	-13	-28.65	H
High Channel, 3930MHz									
7.950000	35.51	Pk	36.0	-95.2	-26.38	-50.07	-13	-37.07	V
7.955000	35.74	Pk	36.0	-95.2	-26.27	-49.73	-13	-36.73	H
11.684500	33.05	Pk	38.2	-95.2	-21.50	-45.45	-13	-32.45	V
11.769000	32.21	Pk	38.3	-95.2	-21.10	-45.79	-13	-32.79	H
15.726000	30.01	Pk	40.9	-95.2	-18.50	-42.79	-13	-29.79	H
15.729000	30.55	Pk	40.9	-95.2	-18.47	-42.22	-13	-29.22	V

10.5. FIELD STRENGTH OF SPURIOUS RADIATION, ANT7

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests above 1GHz were done with a Resolution Bandwidth of 1MHz, and a Video Bandwidth of 3MHz.

RESULTS

10.5.1. LTE BAND 48 AND 5G NR n48

LIMITS

FCC: §96.41

(e) 3.5 GHz Emissions and Interference Limits—

(2) Additional protection levels. Notwithstanding paragraph (d)(1) of this section, the conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz

QPSK LTE BAND 48 (20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/8/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE48 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3560MHz										
7.143000	20.18	RMS	35.5	.6	-95.2	-19.85	-58.77	-40	-18.77	H
10.679016	18.32	RMS	37.4	.6	-95.2	-16.32	-55.20	-40	-15.20	H
14.21415	18.09	RMS	39.3	.8	-95.2	-14.84	-51.85	-40	-11.85	H
7.121409	19.74	RMS	35.5	.5	-95.2	-19.88	-59.34	-40	-19.34	V
10.630547	18.05	RMS	37.4	.6	-95.2	-16.15	-55.30	-40	-15.30	V
14.226928	18.16	RMS	39.3	.8	-95.2	-14.81	-51.75	-40	-11.75	V
Mid Channel, 3625MHz										
7.262850	20.16	RMS	35.5	.6	-95.2	-19.74	-58.68	-40	-18.68	V
7.272984	19.98	RMS	35.5	.5	-95.2	-19.57	-58.79	-40	-18.79	H
10.817813	18.43	RMS	37.4	.6	-95.2	-15.90	-54.67	-40	-14.67	V
10.849097	18.70	RMS	37.5	.5	-95.2	-15.79	-54.29	-40	-14.29	H
14.522147	18.22	RMS	39.6	.8	-95.2	-15.42	-52.00	-40	-12.00	H
14.547263	17.94	RMS	39.6	.8	-95.2	-14.97	-51.83	-40	-11.83	V
High Channel, 3690MHz										
7.371684	19.73	RMS	35.4	.7	-95.2	-19.61	-58.98	-40	-18.98	H
7.395919	19.94	RMS	35.4	.6	-95.2	-19.69	-58.95	-40	-18.95	V
11.068969	17.88	RMS	37.5	.6	-95.2	-15.53	-54.75	-40	-14.75	H
11.086153	18.08	RMS	37.5	.7	-95.2	-15.67	-54.59	-40	-14.59	V
14.767575	17.41	RMS	39.8	.8	-95.2	-14.58	-51.77	-40	-11.77	H
14.793131	17.07	RMS	39.7	.9	-95.2	-14.53	-52.06	-40	-12.06	V

BPSK 5G NR n48 (40.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/3/2023
Test Engineer:	32934
Configuration:	EUT only
Mode	n48 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3570MHz										
7.109513	25.22	RMS	35.7	.5	-95.2	-27.20	-60.98	-40	-20.98	V
7.144322	24.86	RMS	35.7	.6	-95.2	-27.17	-61.21	-40	-21.21	H
10.679456	22.61	RMS	37.8	.6	-95.2	-24.51	-58.70	-40	-18.70	V
10.723519	22.45	RMS	37.7	.5	-95.2	-24.01	-58.56	-40	-18.56	H
14.248078	20.28	RMS	39.3	.8	-95.2	-20.30	-55.12	-40	-15.12	V
14.270991	20.45	RMS	39.4	.7	-95.2	-20.37	-55.02	-40	-15.02	H
Mid Channel, 3625MHz										
7.246988	25.04	RMS	35.8	.6	-95.2	-26.83	-60.59	-40	-20.59	V
7.249191	25.09	RMS	35.8	.6	-95.2	-26.89	-60.60	-40	-20.60	H
10.876856	22.37	RMS	37.7	.5	-95.2	-24.17	-58.80	-40	-18.80	V
10.885669	22.27	RMS	37.7	.5	-95.2	-24.04	-58.77	-40	-18.77	H
14.395247	19.93	RMS	39.6	.8	-95.2	-19.83	-54.70	-40	-14.70	V
14.488219	19.61	RMS	39.7	.7	-95.2	-19.73	-54.92	-40	-14.92	H
High Channel, 3680MHz										
7.340841	24.83	RMS	35.8	.6	-95.2	-27.04	-61.01	-40	-21.01	V
7.351416	24.84	RMS	35.8	.6	-95.2	-27.11	-61.07	-40	-21.07	H
10.929291	22.19	RMS	37.7	.7	-95.2	-23.85	-58.46	-40	-18.46	V
11.039888	21.99	RMS	37.8	.6	-95.2	-23.38	-58.19	-40	-18.19	H
14.581191	19.34	RMS	39.8	.9	-95.2	-20.03	-55.19	-40	-15.19	V
14.722631	19.79	RMS	40.0	.9	-95.2	-19.92	-54.43	-40	-14.43	H

10.5.2. 5G NR n77 (Part 27 3450-3550MHz)

LIMITS

FCC: §27.53

Emission limits

(n) 3.45 GHz Service. The following emission limits apply to stations transmitting in the 3450-3550 MHz band:

(2) For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	7/14/2023
Test Engineer:	32934
Configuration:	EUT only
Mode	N77 BPSK 100MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz									
6.981000	35.73	Pk	35.7	-95.2	-27.09	-50.86	-13	-37.86	V
6.995000	35.98	Pk	35.7	-95.2	-27.05	-50.57	-13	-37.57	H
10.427000	34.46	Pk	37.7	-95.2	-23.88	-46.92	-13	-33.92	V
10.488000	33.66	Pk	37.8	-95.2	-23.79	-47.53	-13	-34.53	H
14.028000	30.44	Pk	39	-95.2	-20.02	-45.78	-13	-32.78	H
14.062500	29.93	Pk	39.1	-95.2	-19.26	-45.43	-13	-32.43	V

10.5.3. 5G NR n77 (Part 27 3700-3980MHz)

LIMITS

FCC: §27.53

(1) 3.7 GHz Service. The following emission limits apply to stations transmitting in the 3700-3980 MHz band:

(2) For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/2/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	N77 BPSK 100MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.471252	50.42	Pk	36	-95.2	-42.46	-51.24	-13	-38.24	V
7.483999	50.87	Pk	35.9	-95.2	-42.43	-50.86	-13	-37.86	H
11.252627	49.94	Pk	38	-95.2	-40.72	-47.98	-13	-34.98	H
11.263382	49.56	Pk	37.9	-95.2	-40.57	-48.31	-13	-35.31	V
15.021256	50.96	Pk	40	-95.2	-40.17	-44.41	-13	-31.41	H
15.028027	51.10	Pk	40.1	-95.2	-39.94	-43.94	-13	-30.94	V
Mid Channel, 3840MHz									
7.689539	50.74	Pk	35.8	-95.2	-42.15	-50.81	-13	-37.81	V
7.697107	50.69	Pk	36.0	-95.2	-42.16	-50.67	-13	-37.67	H
11.497602	50.30	Pk	38.2	-95.2	-40.80	-47.50	-13	-34.50	V
11.506764	50.99	Pk	38.0	-95.2	-40.79	-47.00	-13	-34.00	H
15.355059	51.01	Pk	40.3	-95.2	-39.69	-43.58	-13	-30.58	V
15.362229	51.47	Pk	40.3	-95.2	-39.94	-43.37	-13	-30.37	H
High Channel, 3930MHz									
7.866398	51.32	Pk	35.9	-95.2	-41.87	-49.85	-13	-36.85	V
7.878747	50.50	Pk	36.0	-95.2	-41.8	-50.50	-13	-37.50	H
11.784004	51.61	Pk	38.6	-95.2	-40.96	-45.95	-13	-32.95	H
11.789979	50.39	Pk	38.6	-95.2	-41.01	-47.22	-13	-34.22	V
15.654605	51.26	Pk	40.7	-95.2	-39.94	-43.18	-13	-30.18	V
15.704795	51.57	Pk	40.8	-95.2	-40.17	-43.00	-13	-30.00	H

10.6. FIELD STRENGTH OF SPURIOUS RADIATION, ANT8

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests above 1GHz were done with a Resolution Bandwidth of 1MHz, and a Video Bandwidth of 3MHz.

RESULT

10.6.1. LTE BAND 48 AND 5G NR n48

LIMITS

FCC: §96.41

(e) 3.5 GHz Emissions and Interference Limits—

(2) Additional protection levels. Notwithstanding paragraph (d)(1) of this section, the conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

QPSK LTE BAND 48 (20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/8/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE 48 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB/m)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3560MHz										
7.102022	20.20	RMS	35.5	.5	-95.2	-20.07	-59.07	-40	-19.07	V
7.123172	19.67	RMS	35.5	.5	-95.2	-19.86	-59.39	-40	-19.39	H
10.611600	18.06	RMS	37.4	.6	-95.2	-16.07	-55.21	-40	-15.21	V
10.634513	18.13	RMS	37.4	.6	-95.2	-16.18	-55.25	-40	-15.25	H
14.204897	18.15	RMS	39.3	.7	-95.2	-14.79	-51.84	-40	-11.84	V
14.257331	18.21	RMS	39.4	.8	-95.2	-15.00	-51.79	-40	-11.79	H
Mid Channel, 3625MHz										
7.242141	19.56	RMS	35.5	.5	-95.2	-19.58	-59.22	-40	-19.22	H
10.835438	18.52	RMS	37.5	.6	-95.2	-15.79	-54.37	-40	-14.37	H
14.526994	18.25	RMS	39.6	.8	-95.2	-15.43	-51.98	-40	-11.98	H
7.209094	20.16	RMS	35.5	.6	-95.2	-19.69	-58.63	-40	-18.63	V
10.912547	18.50	RMS	37.5	.6	-95.2	-16.00	-54.60	-40	-14.60	V
14.492625	18.35	RMS	39.6	.7	-95.2	-15.63	-52.18	-40	-12.18	V
High Channel, 3690MHz										
7.385784	20.12	RMS	35.4	.7	-95.2	-19.68	-58.66	-40	-18.66	V
7.397681	19.90	RMS	35.5	.6	-95.2	-19.68	-58.88	-40	-18.88	H
10.716909	18.42	RMS	37.5	.5	-95.2	-16.19	-54.97	-40	-14.97	V
10.719113	18.43	RMS	37.5	.5	-95.2	-16.17	-54.94	-40	-14.94	H
14.712938	17.50	RMS	39.7	.9	-95.2	-14.72	-51.82	-40	-11.82	V
14.749509	17.18	RMS	39.8	.8	-95.2	-14.79	-52.21	-40	-12.21	H

BPSK 5G NR n48 (40.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/2/2023
Test Engineer:	32934
Configuration:	EUT only
Mode	N48 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBUV)	Det	Horn Antenna ACF(dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3570MHz										
7.126697	25.04	RMS	35.7	.5	-95.2	-27.18	-61.14	-40	-21.14	V
7.143000	24.81	RMS	35.7	.6	-95.2	-27.18	-61.27	-40	-21.27	H
10.631428	22.86	RMS	37.8	.6	-95.2	-24.68	-58.62	-40	-18.62	V
10.724841	22.42	RMS	37.7	.5	-95.2	-24.01	-58.59	-40	-18.59	H
14.181103	19.92	RMS	39.2	.7	-95.2	-20.48	-55.86	-40	-15.86	V
14.267466	20.39	RMS	39.3	.8	-95.2	-20.19	-54.90	-40	-14.90	H
Mid Channel, 3625MHz										
7.239497	24.89	RMS	35.8	.5	-95.2	-26.94	-60.95	-40	-20.95	V
7.256241	25.07	RMS	35.8	.6	-95.2	-26.87	-60.60	-40	-20.60	H
10.882144	22.25	RMS	37.7	.5	-95.2	-24.15	-58.90	-40	-18.90	H
14.431378	19.74	RMS	39.6	.8	-95.2	-19.96	-55.02	-40	-15.02	V
14.486016	19.53	RMS	39.7	.7	-95.2	-19.52	-54.79	-40	-14.79	H
7.239497	24.89	RMS	35.8	.5	-95.2	-26.94	-60.95	-40	-20.95	V
High Channel, 3680MHz										
7.352297	24.76	RMS	35.8	.7	-95.2	-27.13	-61.07	-40	-21.07	H
7.366397	24.77	RMS	35.8	.7	-95.2	-27.05	-60.98	-40	-20.98	V
10.958813	21.96	RMS	37.7	.6	-95.2	-23.73	-58.67	-40	-18.67	V
11.028431	21.89	RMS	37.8	.6	-95.2	-23.66	-58.57	-40	-18.57	H
14.632303	19.46	RMS	39.9	.9	-95.2	-19.97	-54.91	-40	-14.91	V
14.731884	19.82	RMS	40.0	.9	-95.2	-19.65	-54.13	-40	-14.13	H

10.6.2. 5G NR n77 (Part 27 3450-3550MHz)

LIMITS

FCC: §27.53

Emission limits

(n) 3.45 GHz Service. The following emission limits apply to stations transmitting in the 3450-3550 MHz band:

(2) For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	7/14/2023
Test Engineer:	32934
Configuration:	EUT only
Mode	N77 BPSK 100MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF(dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz									
6.994000	35.54	Pk	35.7	-95.2	-27.04	-51.00	-13	-38.00	V
7.009500	35.70	Pk	35.7	-95.2	-26.92	-50.72	-13	-37.72	H
10.491500	34.94	Pk	37.8	-95.2	-23.91	-46.37	-13	-33.37	V
10.519000	33.81	Pk	37.8	-95.2	-24.19	-47.78	-13	-34.78	H
13.935000	30.58	Pk	38.9	-95.2	-19.48	-45.20	-13	-32.20	V
13.99400	30.85	Pk	39.0	-95.2	-20.07	-45.42	-13	-32.42	H

10.6.3. 5G NR n77 (Part 27 3700-3980MHz)

LIMITS

FCC: §27.53

(1) 3.7 GHz Service. The following emission limits apply to stations transmitting in the 3700-3980 MHz band:

(2) For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/5/2023
Test Engineer:	27927
Configuration:	EUT only
Mode	N77 BPSK 100MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.432701	52.58	Pk	35.8	-95.2	-42.26	-49.08	-13	-36.08	H
7.459800	52.96	Pk	36.1	-95.2	-42.49	-48.63	-13	-35.63	V
10.422585	51.72	Pk	37.7	-95.2	-41.06	-46.84	-13	-33.84	H
10.515178	51.60	Pk	37.7	-95.2	-41.16	-47.06	-13	-34.06	V
14.894711	52.64	Pk	40.0	-95.2	-40.03	-42.59	-13	-29.59	H
14.918125	51.96	Pk	40.0	-95.2	-39.87	-43.11	-13	-30.11	V
Mid Channel, 3840MHz									
7.590394	51.95	Pk	35.8	-95.2	-41.72	-49.17	-13	-36.17	H
7.602563	51.99	Pk	35.9	-95.2	-41.59	-48.90	-13	-35.90	V
10.009.829	52.38	Pk	37.2	-95.2	-41.00	-46.62	-13	-33.62	H
10.011757	52.26	Pk	37.3	-95.2	-40.93	-46.57	-13	-33.57	V
15.662164	52.71	Pk	40.7	-95.2	-40.02	-41.81	-13	-28.81	H
15.695331	52.73	Pk	40.9	-95.2	-40.38	-41.95	-13	-28.95	V
High Channel, 3930MHz									
7.763175	52.62	Pk	36	-95.2	-42.17	-48.75	-13	-35.75	H
7.763244	52.60	Pk	36	-95.2	-42.17	-48.77	-13	-35.77	V
11.688.316	51.76	Pk	38.4	-95.2	-40.66	-45.70	-13	-32.70	V
11.695568	52.89	Pk	38.4	-95.2	-40.77	-44.68	-13	-31.68	H
15.766597	52.04	Pk	40.9	-95.2	-39.33	-41.59	-13	-28.59	H
15.771479	53.41	Pk	40.9	-95.2	-39.18	-40.07	-13	-27.07	V

10.7. FIELD STRENGTH OF SPURIOUS RADIATION, ANT9

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests above 1GHz were done with a Resolution Bandwidth of 1MHz, and a Video Bandwidth of 3MHz.

RESULTS

10.7.1. LTE BAND 48 AND 5G NR n48

LIMITS

FCC: §96.41

(e) 3.5 GHz Emissions and Interference Limits—

(2) Additional protection levels. Notwithstanding paragraph (d)(1) of this section, the conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

QPSK LTE BAND 48 (20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/7/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE 48 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3560MHz										
7.196316	20.10	RMS	35.5	.6	-95.2	-19.72	-58.72	-40	-18.72	V
7.231125	19.60	RMS	35.5	.5	-95.2	-19.64	-59.24	-40	-19.24	H
10.876856	18.55	RMS	37.4	.5	-95.2	-15.87	-54.62	-40	-14.62	V
10.892278	18.54	RMS	37.4	.6	-95.2	-15.89	-54.55	-40	-14.55	H
14.501438	18.35	RMS	39.6	.8	-95.2	-15.60	-52.05	-40	-12.05	H
14.553431	17.81	RMS	39.7	.8	-95.2	-14.86	-51.75	-40	-11.75	V
Mid Channel, 3625MHz										
7.232447	19.59	RMS	35.5	.5	-95.2	-19.61	-59.22	-40	-19.22	V
7.252275	19.89	RMS	35.5	.6	-95.2	-19.68	-58.89	-40	-18.89	H
10.911666	18.56	RMS	37.5	.6	-95.2	-16.00	-54.54	-40	-14.54	H
10.972913	18.32	RMS	37.5	.6	-95.2	-16.14	-54.92	-40	-14.92	V
14.507166	18.31	RMS	39.6	.8	-95.2	-15.56	-52.05	-40	-12.05	H
14.523909	18.27	RMS	39.6	.8	-95.2	-15.46	-51.99	-40	-11.99	V
High Channel, 3690MHz										
7.388428	20.08	RMS	35.4	.7	-95.2	-19.66	-58.68	-40	-18.68	V
7.392394	20.01	RMS	35.4	.6	-95.2	-19.67	-58.86	-40	-18.86	H
11.030194	18.17	RMS	37.4	.6	-95.2	-15.70	-54.73	-40	-14.73	V
11.088797	18.07	RMS	37.5	.7	-95.2	-15.72	-54.65	-40	-14.65	H
14.594850	17.74	RMS	39.6	.9	-95.2	-14.48	-51.44	-40	-11.44	H
14.620847	17.37	RMS	39.7	.9	-95.2	-14.31	-51.54	-40	-11.54	V

BPSK 5G NR n48 (40.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/2/2023
Test Engineer:	23934
Configuration:	EUT only
Mode	N48 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3570MHz										
7.112597	25.22	RMS	35.7	.5	-95.2	-27.22	-61.00	-40	-21.00	V
7.138153	24.96	RMS	35.7	.6	-95.2	-27.16	-61.10	-40	-21.10	H
10.673728	22.71	RMS	37.8	.6	-95.2	-24.53	-58.62	-40	-18.62	V
10.712503	22.47	RMS	37.7	.5	-95.2	-24.04	-58.57	-40	-18.57	H
14.207541	20.38	RMS	39.2	.7	-95.2	-20.08	-55.00	-40	-15.00	V
14.274075	20.54	RMS	39.4	.7	-95.2	-20.12	-54.68	-40	-14.68	H
Mid Channel, 3625MHz										
7.205128	25.06	RMS	35.8	.6	-95.2	-27.03	-60.77	-40	-20.77	V
7.245666	24.95	RMS	35.8	.6	-95.2	-26.93	-60.78	-40	-20.78	H
10.891838	22.20	RMS	37.7	.6	-95.2	-24.01	-58.71	-40	-18.71	H
10.905938	22.06	RMS	37.7	.6	-95.2	-23.86	-58.70	-40	-18.70	V
14.474119	19.51	RMS	39.7	.7	-95.2	-19.46	-54.75	-40	-14.75	V
14.497472	19.54	RMS	39.7	.8	-95.2	-19.90	-55.06	-40	-15.06	H
High Channel, 3680MHz										
7.340400	24.91	RMS	35.8	.6	-95.2	-27.05	-60.94	-40	-20.94	V
7.367719	24.82	RMS	35.8	.7	-95.2	-26.96	-60.84	-40	-20.84	H
10.959694	22.03	RMS	37.7	.6	-95.2	-23.77	-58.64	-40	-18.64	V
11.021381	22.08	RMS	37.8	.6	-95.2	-23.66	-58.38	-40	-18.38	H
14.681653	19.67	RMS	40.0	.9	-95.2	-19.65	-54.28	-40	-14.28	V
14.724834	19.82	RMS	40.0	.9	-95.2	-19.74	-54.22	-40	-14.22	H

10.7.2. 5G NR n77 (Part 27 3450-3550MHz)

LIMITS

FCC: §27.53

Emission limits

(n) 3.45 GHz Service. The following emission limits apply to stations transmitting in the 3450-3550 MHz band:

(2) For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	7/14/2023
Test Engineer:	32934
Configuration:	EUT only
Mode	n77 BPSK 100MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz									
6.991500	35.81	Pk	35.7	-95.2	-27.14	-50.83	-13	-37.83	V
7.006500	36.13	Pk	35.7	-95.2	-27.03	-50.40	-13	-37.40	H
10.506000	33.75	Pk	37.8	-95.2	-23.77	-47.42	-13	-34.42	V
10.550000	34.20	Pk	37.8	-95.2	-24.58	-47.78	-13	-34.78	H
14.060500	29.90	Pk	39.1	-95.2	-19.26	-45.46	-13	-32.46	H
14.111500	30.60	Pk	39.1	-95.2	-19.01	-44.51	-13	-31.51	V

10.7.3. 5G NR n77 (Part 27 3700-3980MHz)

LIMITS

FCC: §27.53

(1) 3.7 GHz Service. The following emission limits apply to stations transmitting in the 3700-3980 MHz band:

(2) For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	7/17/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	n77 BPSK 100MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBUV)	Det	200786 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.455500	35.4	Pk	35.9	-95.2	-26.65	-50.55	-13	-37.55	V
7.469500	36.13	Pk	35.9	-95.2	-26.78	-49.95	-13	-36.95	H
11.204000	33.29	Pk	37.8	-95.2	-22.21	-46.32	-13	-33.32	H
11.228000	33.35	Pk	37.8	-95.2	-22.31	-46.36	-13	-33.36	V
15.017500	30.19	Pk	40.5	-95.2	-18.95	-43.46	-13	-30.46	V
15.027000	31.40	Pk	40.5	-95.2	-19.20	-42.50	-13	-29.50	H
Mid Channel, 3840MHz									
7.576500	35.41	Pk	35.9	-95.2	-26.17	-50.06	-13	-37.06	V
7.626000	35.00	Pk	35.9	-95.2	-25.97	-50.27	-13	-37.27	H
11.513500	32.81	Pk	37.9	-95.2	-21.51	-46.00	-13	-33.00	H
11.583500	32.04	Pk	38	-95.2	-21.66	-46.82	-13	-33.82	V
15.340000	30.02	Pk	40.7	-95.2	-19.31	-43.79	-13	-30.79	V
15.352500	30.39	Pk	40.7	-95.2	-19.44	-43.55	-13	-30.55	H
High Channel, 3930MHz									
7.813500	36.45	Pk	35.9	-95.2	-26.47	-49.32	-13	-36.32	H
7.849000	35.17	Pk	36	-95.2	-26.26	-50.29	-13	-37.29	V
11.700500	32.91	Pk	38.2	-95.2	-21.43	-45.52	-13	-32.52	V
11.734000	32.88	Pk	38.3	-95.2	-21.59	-45.61	-13	-32.61	H
15.668000	30.71	Pk	40.9	-95.2	-18.80	-42.39	-13	-29.39	H
15.723000	29.90	Pk	40.9	-95.2	-18.57	-42.97	-13	-29.97	V

11. SETUP PHOTOS

Please refer to 14523771-EP1V1 Setup Photo Report for setup photos.

END OF REPORT