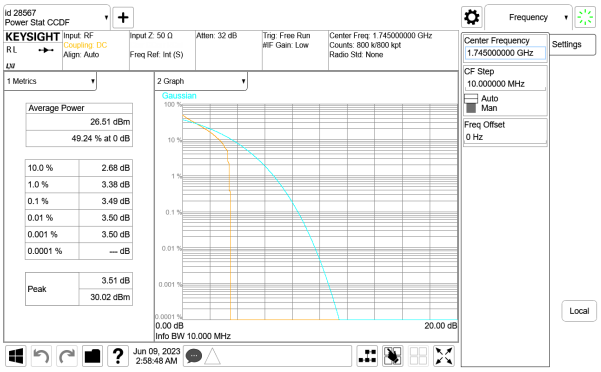
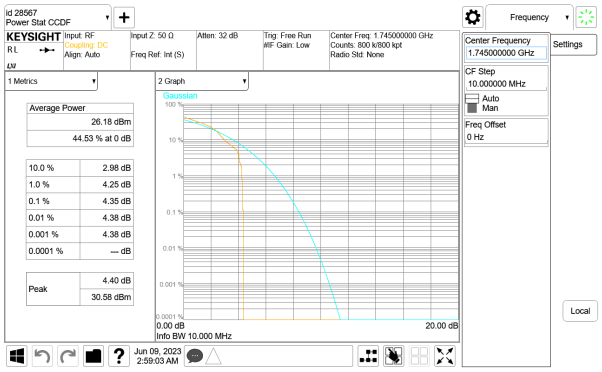
9.5.12. LTE BAND 66 AND 5G NR n66

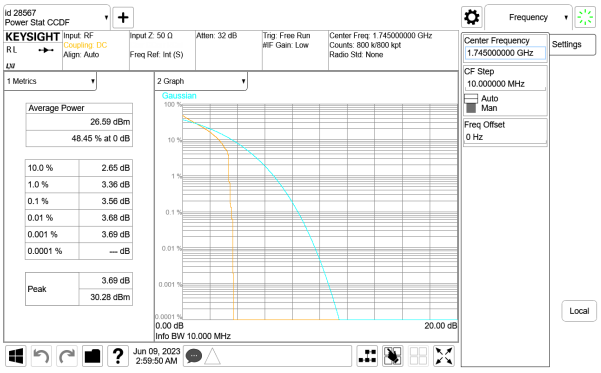
LTE BAND 66



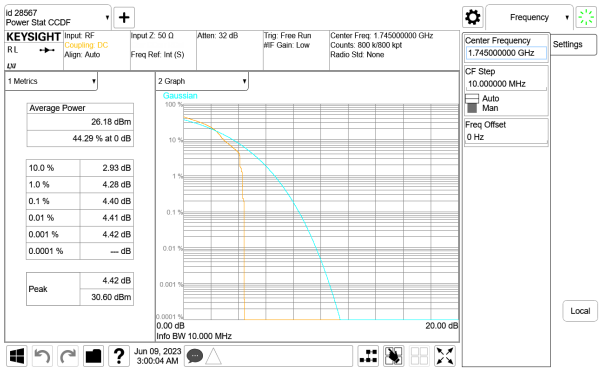
LTE B66 1.4MHz QPSK Middle Channel



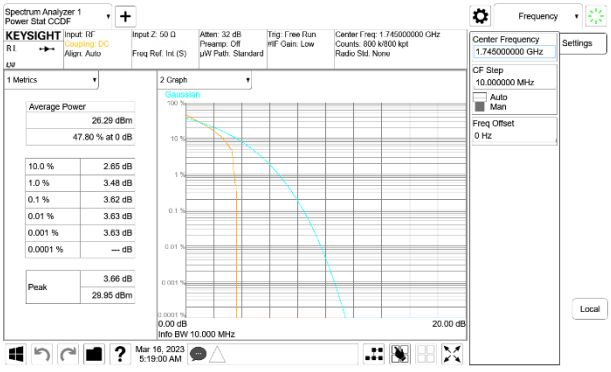
LTE B66 1.4MHz 16QAM Middle Channel



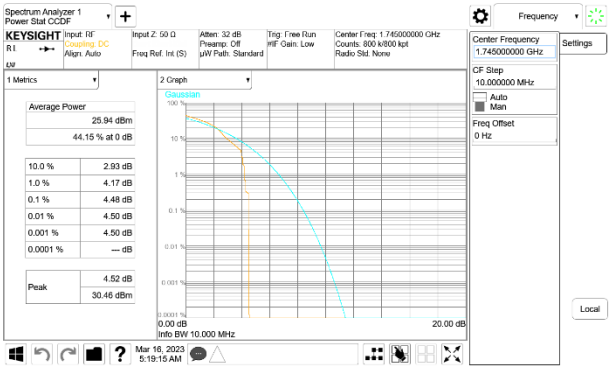
LTE B66 3MHz QPSK Middle Channel



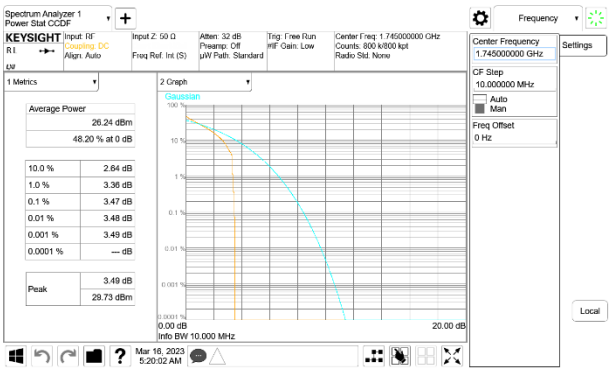
LTE B66 3MHz 16QAM Middle Channel



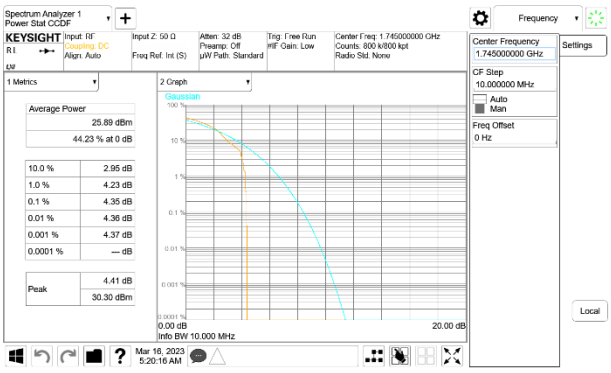
LTE B66 5MHz QPSK Middle Channel, ID:28567



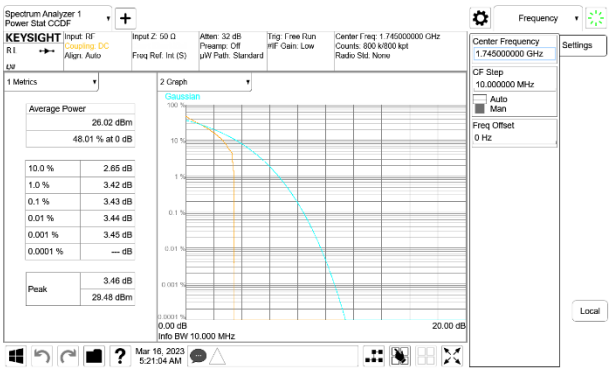
LTE B66 5MHz 16QAM Middle Channel, ID:28567



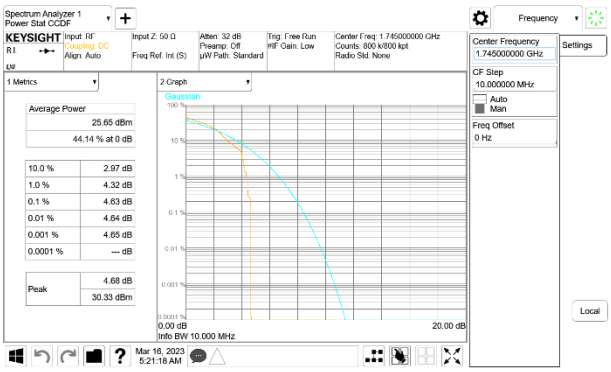
LTE B66 10MHz QPSK Middle Channel, ID:28567



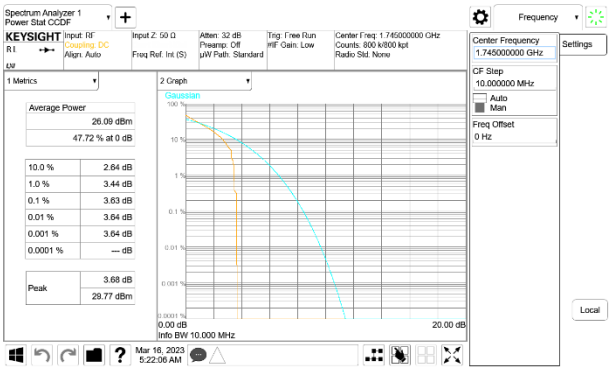
LTE B66 10MHz 16QAM Middle Channel, ID:28567



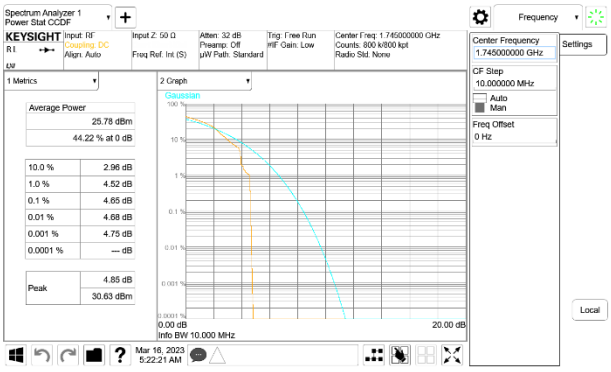
LTE B66 15MHz QPSK Middle Channel, ID:28567



LTE B66 15MHz 16QAM Middle Channel, ID:28567

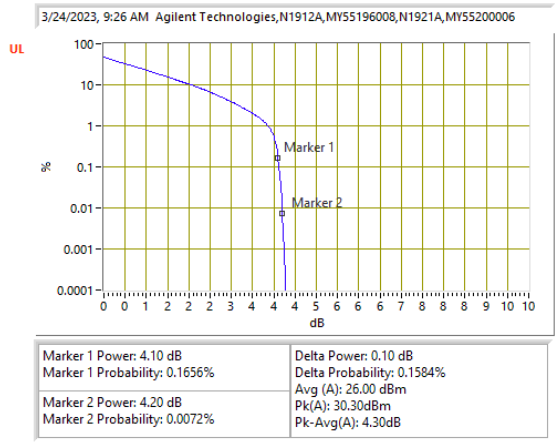


LTE B66 20MHz QPSK Middle Channel, ID:28567

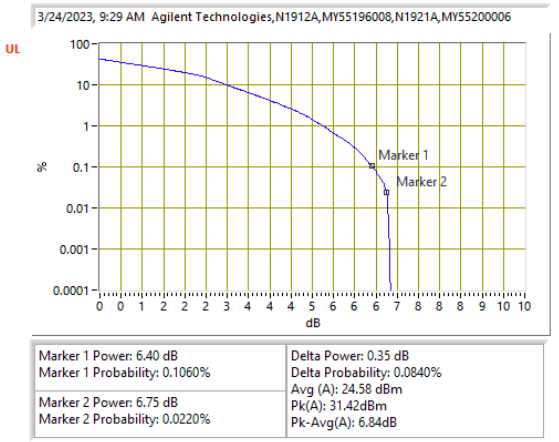


LTE B66 20MHz 16QAM Middle Channel, ID:28567

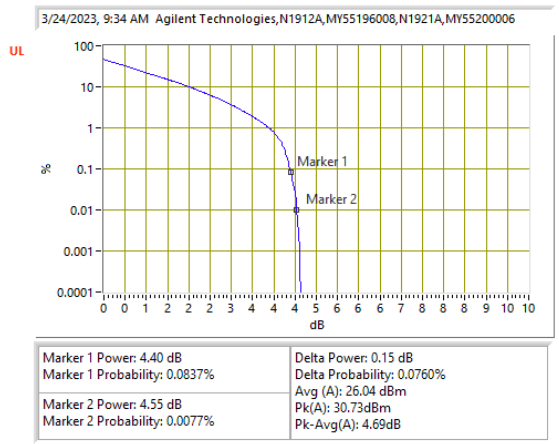
5G NR n66



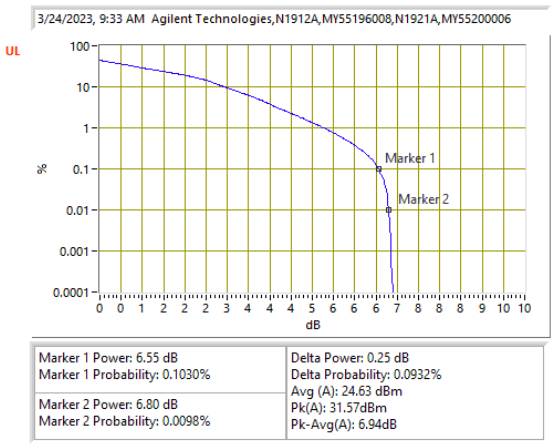
5G NR n66 5MHz BPSK Middle Channel ID:27342



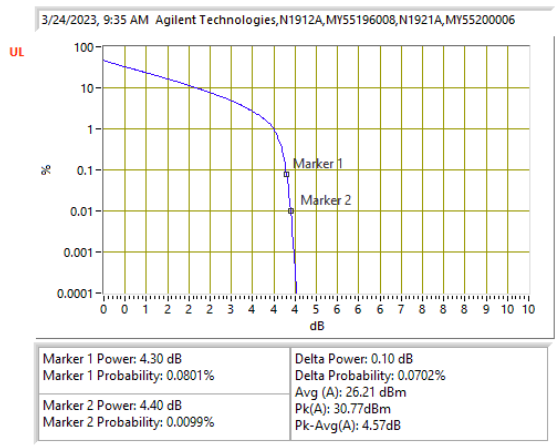
5G NR n66 5MHz 16QAM Middle Channel ID:27342



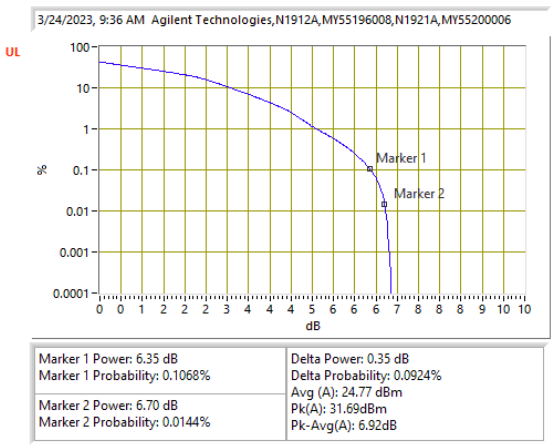
5G NR n66 10MHz BPSK Middle Channel ID:27342



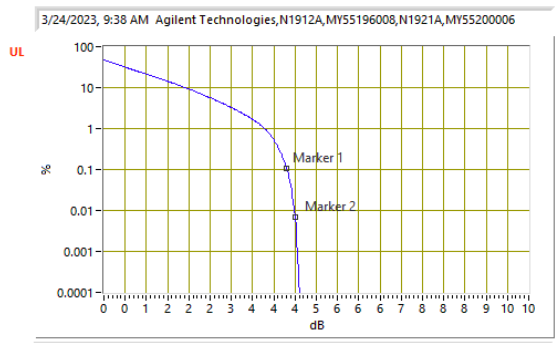
5G NR n66 10MHz 16QAM Middle Channel ID:27342



5G NR n66 15MHz BPSK Middle Channel ID:27342

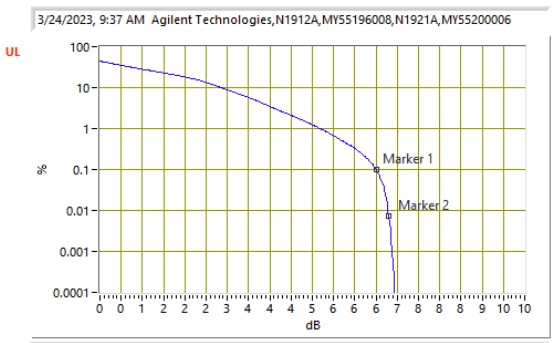


5G NR n66 15MHz 16QAM Middle Channel ID:27342



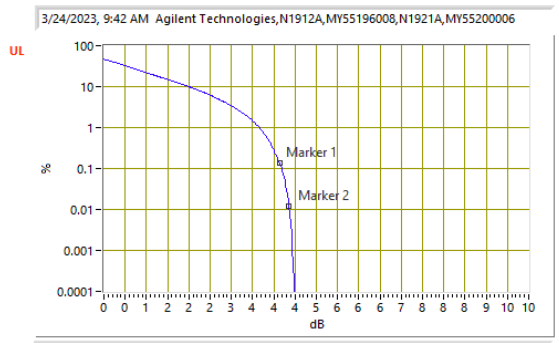
Marker 1 Power: 4.30 dB Marker 1 Probability: 0.1093%	Delta Power: 0.20 dB Delta Probability: 0.1026% Avg (A): 26.19 dBm Pk(A): 30.84dBm Pk-Avg(A): 4.65dB
Marker 2 Power: 4.50 dB Marker 2 Probability: 0.0067%	

5G NR n66 20MHz BPSK Middle Channel ID:27342



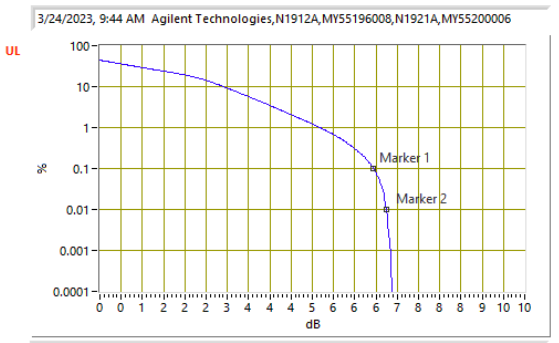
Marker 1 Power: 6.50 dB Marker 1 Probability: 0.1015%	Delta Power: 0.30 dB Delta Probability: 0.0941% Avg (A): 24.71 dBm Pk(A): 31.71dBm Pk-Avg(A): 6.99dB
Marker 2 Power: 6.80 dB Marker 2 Probability: 0.0075%	

5G NR n66 20MHz 16QAM Middle Channel ID:27342



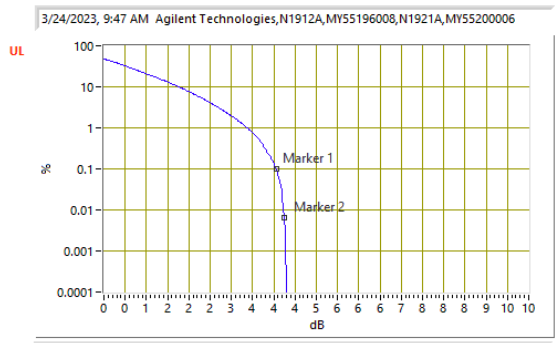
Marker 1 Power: 4.15 dB Marker 1 Probability: 0.1251%	Delta Power: 0.20 dB Delta Probability: 0.1109% Avg (A): 26.43 dBm Pk(A): 30.97dBm Pk-Avg(A): 4.54dB
Marker 2 Power: 4.35 dB Marker 2 Probability: 0.0141%	

5G NR n66 25MHz BPSK Middle Channel ID:27342



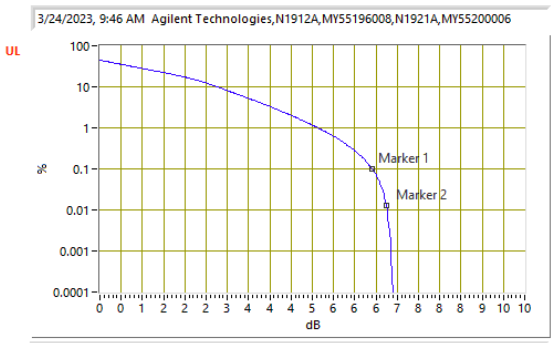
Marker 1 Power: 6.45 dB Marker 1 Probability: 0.0974%	Delta Power: 0.30 dB Delta Probability: 0.0890% Avg (A): 24.85 dBm Pk(A): 31.81dBm Pk-Avg(A): 6.95dB
Marker 2 Power: 6.75 dB Marker 2 Probability: 0.0084%	

5G NR n66 25MHz 16QAM Middle Channel ID:27342



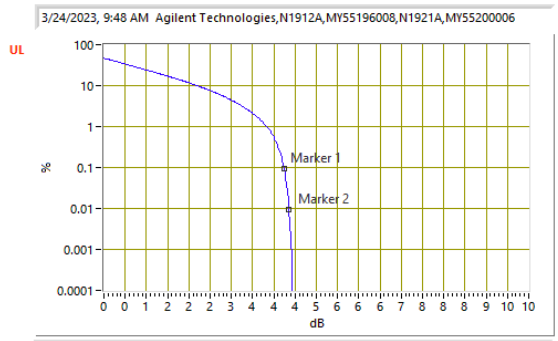
Marker 1 Power: 4.05 dB Marker 1 Probability: 0.1043%	Delta Power: 0.20 dB Delta Probability: 0.0998% Avg (A): 26.37 dBm Pk(A): 30.71dBm Pk-Avg(A): 4.34dB
Marker 2 Power: 4.25 dB Marker 2 Probability: 0.0045%	

5G NR n66 30MHz BPSK Middle Channel ID:27342



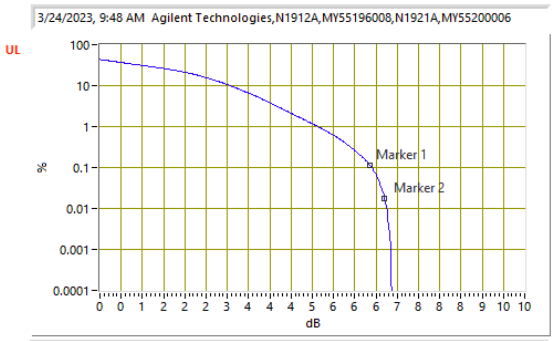
Marker 1 Power: 6.40 dB Marker 1 Probability: 0.1024%	Delta Power: 0.35 dB Delta Probability: 0.0914% Avg (A): 24.86 dBm Pk(A): 31.79dBm Pk-Avg(A): 6.93dB
Marker 2 Power: 6.75 dB Marker 2 Probability: 0.0110%	

5G NR n66 30MHz 16QAM Middle Channel ID:27342



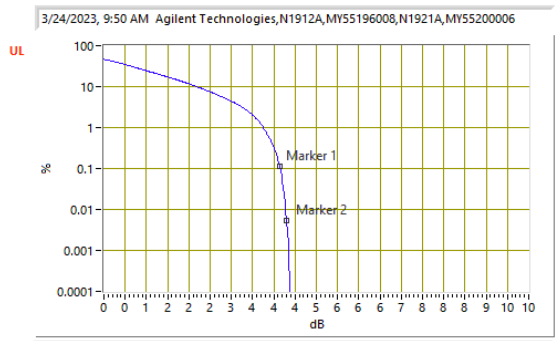
Marker 1 Power: 4.25 dB	Delta Power: 0.10 dB
Marker 1 Probability: 0.0849%	Delta Probability: 0.0721%
	Avg (A): 26.36 dBm
Marker 2 Power: 4.35 dB	Pk(A): 30.87dBm
Marker 2 Probability: 0.0128%	Pk-Avg(A): 4.51dB

5G NR n66 35MHz BPSK Middle Channel ID:27342



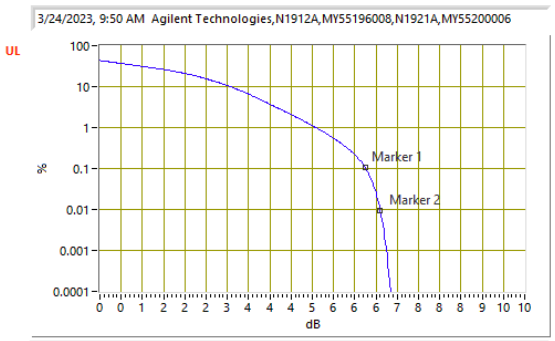
Marker 1 Power: 6.35 dB	Delta Power: 0.35 dB
Marker 1 Probability: 0.1136%	Delta Probability: 0.0960%
	Avg (A): 24.81 dBm
Marker 2 Power: 6.70 dB	Pk(A): 31.71dBm
Marker 2 Probability: 0.0176%	Pk-Avg(A): 6.90dB

5G NR n66 35MHz 16QAM Middle Channel ID:27342



Marker 1 Power: 4.15 dB	Delta Power: 0.15 dB
Marker 1 Probability: 0.0989%	Delta Probability: 0.0934%
	Avg (A): 26.24 dBm
Marker 2 Power: 4.30 dB	Pk(A): 30.67dBm
Marker 2 Probability: 0.0055%	Pk-Avg(A): 4.43dB

5G NR n66 40MHz BPSK Middle Channel ID:27342

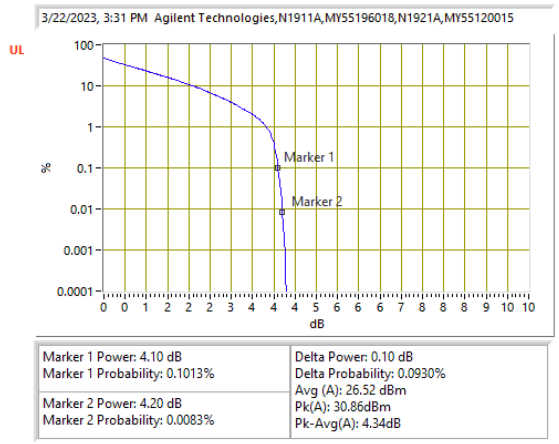


Marker 1 Power: 6.25 dB	Delta Power: 0.35 dB
Marker 1 Probability: 0.1045%	Delta Probability: 0.0953%
	Avg (A): 24.72 dBm
Marker 2 Power: 6.60 dB	Pk(A): 31.63dBm
Marker 2 Probability: 0.0093%	Pk-Avg(A): 6.91dB

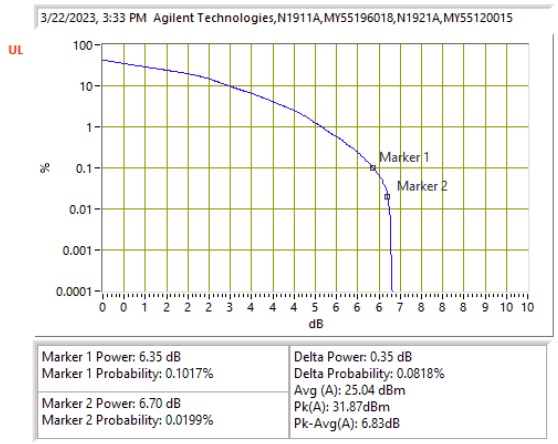
5G NR n66 40MHz 16QAM Middle Channel ID:27342

9.5.13. 5G NR n70

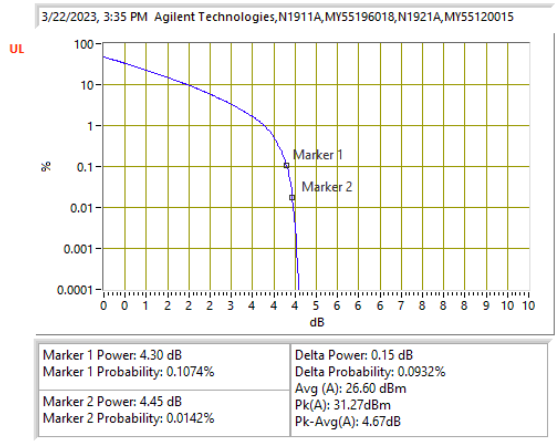
5G NR n70



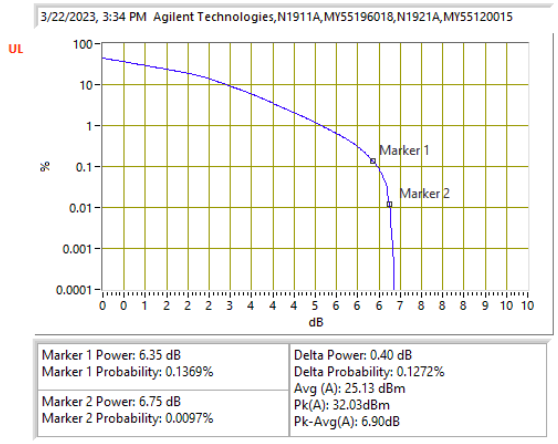
5G NR n70 5MHz BPSK Middle Channel ID:27342



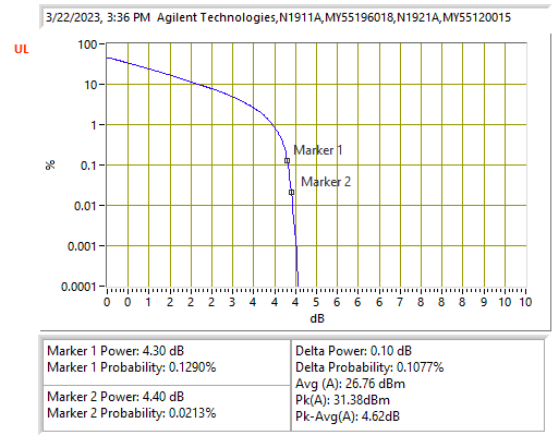
5G NR n70 5MHz 16QAM Middle Channel ID:27342



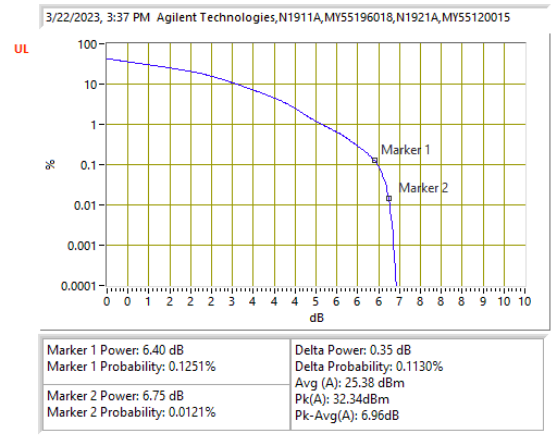
5G NR n70 10MHz BPSK Middle Channel ID:27342



5G NR n70 10MHz 16QAM Middle Channel ID:27342



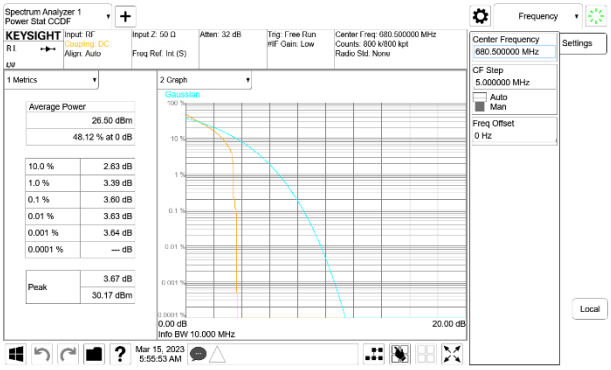
5G NR n70 15MHz BPSK Middle Channel ID:27342



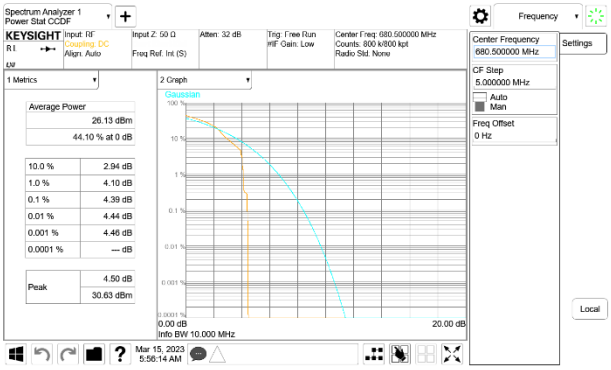
5G NR n70 15MHz 16QAM Middle Channel ID:27342

9.5.14. LTE BAND 71 AND 5G NR n71

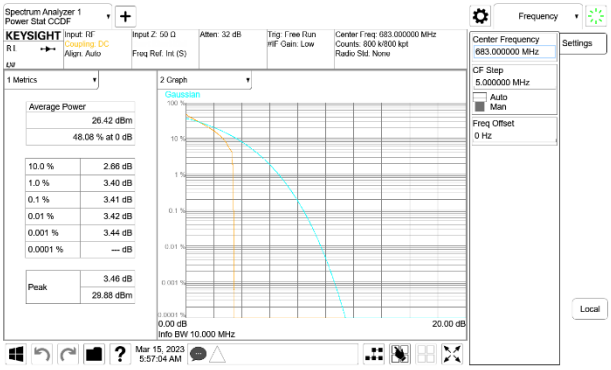
LTE BAND 71



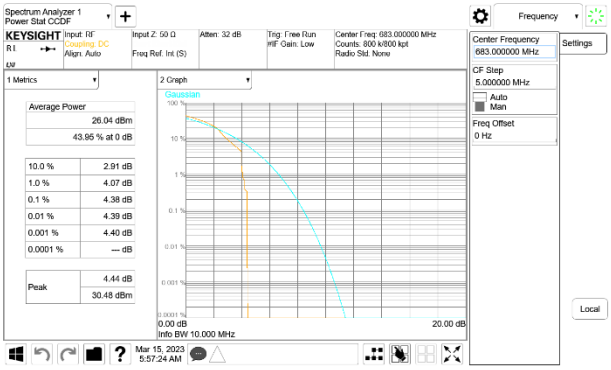
LTE B71 5MHz QPSK Middle Channel, ID:28567



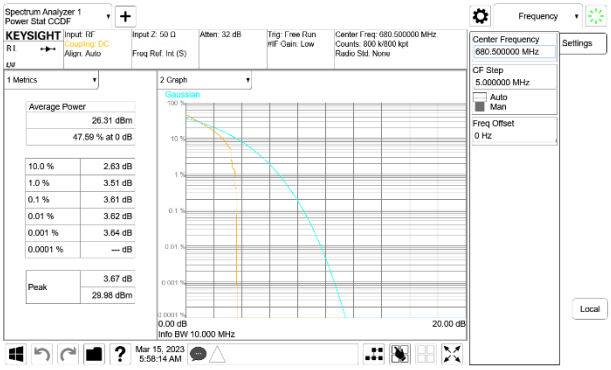
LTE B71 5MHz 16QAM Middle Channel, ID:28567



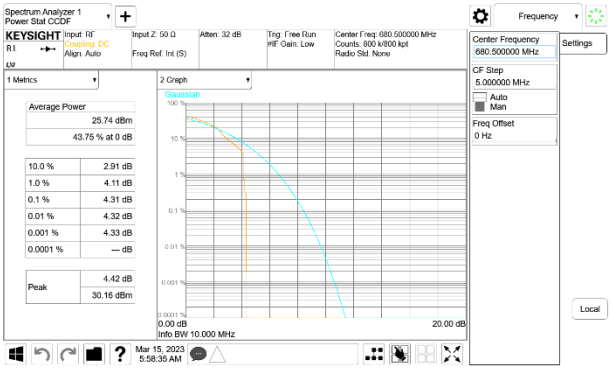
LTE B71 10MHz QPSK Middle Channel, ID:28567



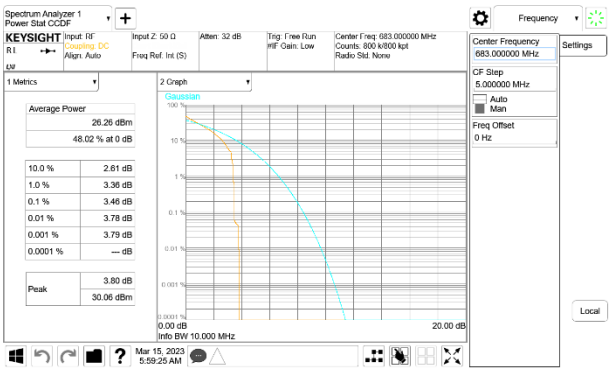
LTE B71 10MHz 16QAM Middle Channel, ID:28567



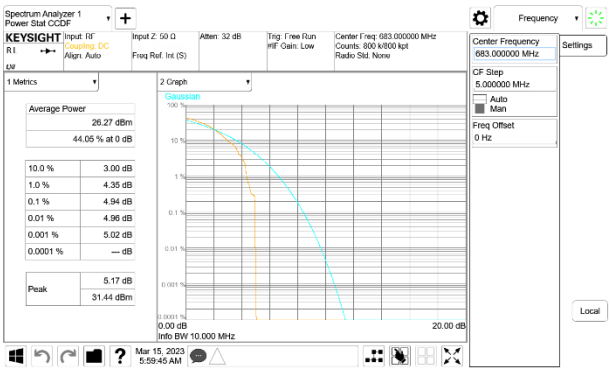
LTE B71 15MHz QPSK Middle Channel, ID:28567



LTE B71 15MHz 16QAM Middle Channel, ID:28567



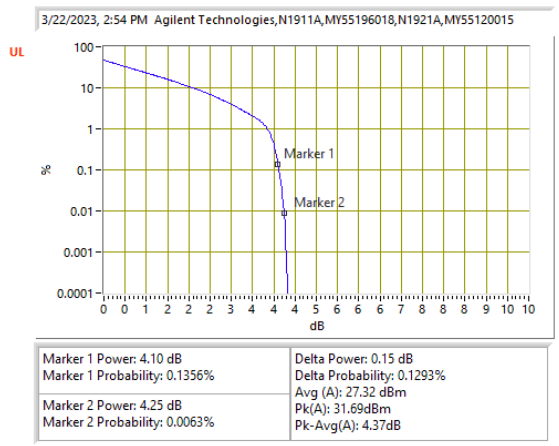
LTE B71 20MHz QPSK Middle Channel, ID:28567



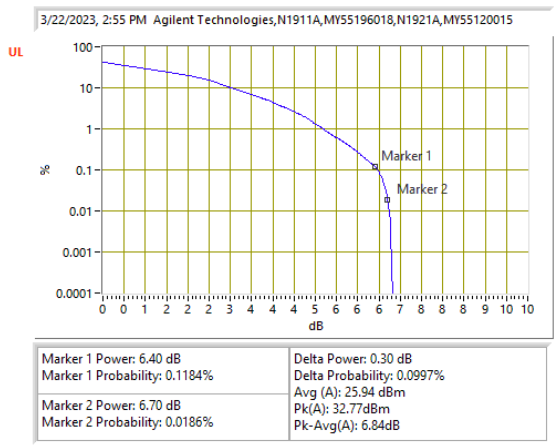
LTE B71 20MHz 16QAM Middle Channel, ID:28567

5G NR n71

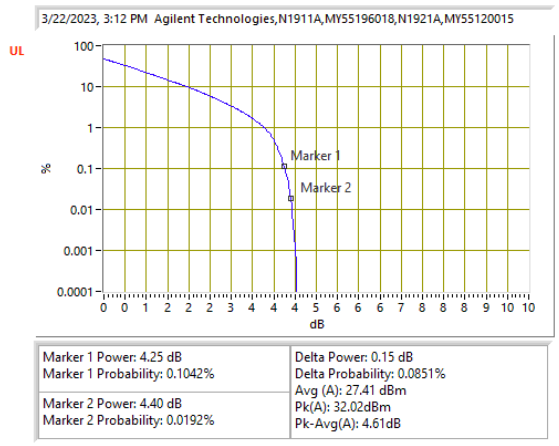
Test Engineer ID:	27342	Test Date:	3/22/2023



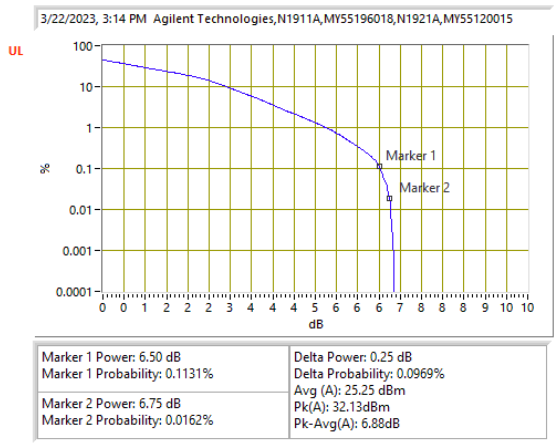
5G NR n71 5MHz BPSK Middle Channel ID:27342



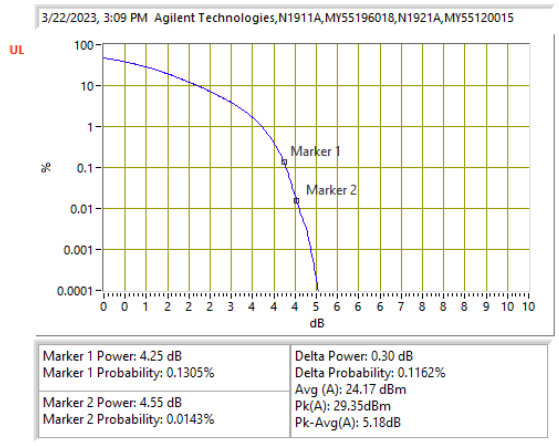
5G NR n71 5MHz 16QAM Middle Channel ID:27342



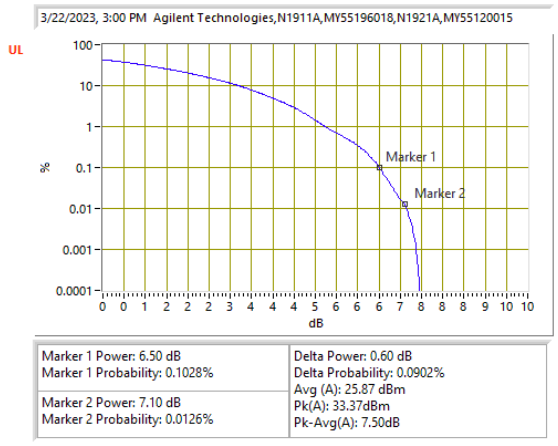
5G NR n71 10MHz BPSK Middle Channel ID:27342



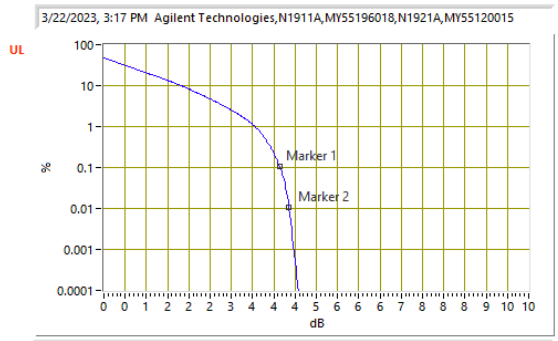
5G NR n71 10MHz 16QAM Middle Channel ID:27342



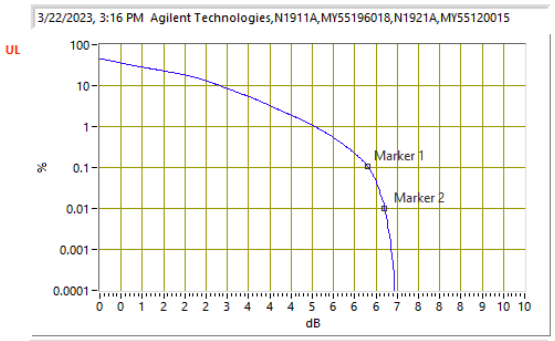
5G NR n71 15MHz BPSK Middle Channel ID:27342



5G NR n71 15MHz 16QAM Middle Channel ID:27342



5G NR n71 20MHz BPSK Middle Channel ID:27342



5G NR n71 20MHz 16QAM Middle Channel ID:27342

9.5.15. 5G NR n77 (Part 27 3450-3550MHz)

Test Engineer ID:	27342	Test Date:	3/232023

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
Band n77	10MHz	3500.0	24	0	BPSK	32.20	27.94	4.26
					16QAM	33.20	26.48	6.72
	15MHz		36	0	BPSK	32.37	28.03	4.34
					16QAM	33.27	26.51	6.76
	20MHz		50	0	BPSK	32.26	28.04	4.22
					16QAM	33.34	26.57	6.77
	30MHz		75	0	BPSK	32.24	27.92	4.32
					16QAM	33.27	26.51	6.76
	40MHz		100	0	BPSK	32.08	27.98	4.10
					16QAM	33.10	26.49	6.61
	50MHz		128	0	BPSK	31.56	27.80	3.76
					16QAM	32.66	26.24	6.42
	60MHz		162	0	BPSK	31.50	27.75	3.75
					16QAM	32.62	26.25	6.37
	70MHz		180	0	BPSK	31.66	27.72	3.94
					16QAM	32.80	26.16	6.64
	80MHz		216	0	BPSK	31.20	27.71	3.49
					16QAM	32.21	26.14	6.07
	90MHz		243	0	BPSK	31.11	27.73	3.38
					16QAM	32.06	26.10	5.96
	100MHz		270	0	BPSK	30.91	27.71	3.20
					16QAM	32.06	26.10	5.96
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9.5.16. 5G NR n77 (Part 27 3700-3980MHz)

Test Engineer ID:	19210	Test Date:	3/222023

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
Band n77	10MHz	3840.0	24	0	BPSK	32.59	28.25	4.34
					16QAM	33.57	26.83	6.74
	15MHz		36	0	BPSK	32.81	28.50	4.31
					16QAM	33.79	26.97	6.82
	20MHz		50	0	BPSK	32.64	28.48	4.16
					16QAM	33.76	26.97	6.79
	30MHz		75	0	BPSK	32.66	28.45	4.21
					16QAM	33.84	27.06	6.78
	40MHz		100	0	BPSK	32.48	28.50	3.98
					16QAM	33.77	27.02	6.75
	50MHz		128	0	BPSK	32.08	28.29	3.79
					16QAM	33.09	26.70	6.39
	60MHz		162	0	BPSK	32.07	28.28	3.79
					16QAM	33.07	26.73	6.34
	70MHz		180	0	BPSK	32.18	28.26	3.92
					16QAM	33.39	26.73	6.66
	80MHz		216	0	BPSK	31.73	28.27	3.46
					16QAM	32.69	26.68	6.01
	90MHz		243	0	BPSK	31.61	28.23	3.38
					16QAM	32.50	26.58	5.92
	100MHz		270	0	BPSK	31.30	28.25	3.05
					16QAM	32.43	26.60	5.83
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

10. RADIATED TEST RESULTS

Radiated measurement using the Field Strength Method

Using the test configuration shown in Figure 6 below, We measure the radiated emissions directly from the EUT and convert the measured field strength or received power to ERP or EIRP, as required, for comparison to the applicable limits. As stated in 5.5.1 of ANSI C63.26-2015, the field strength measurement method using a test site validated to the requirements of ANSI C63.4 is an alternative to the substitution measurement method.

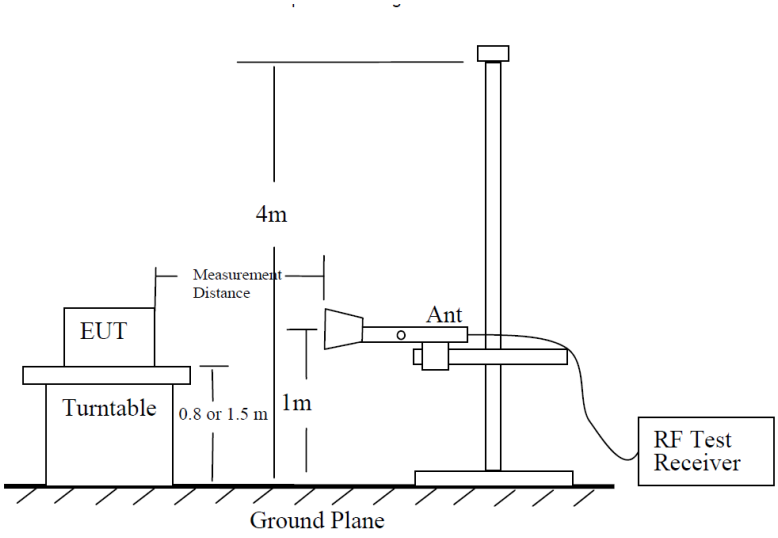


Figure 6 —Test site-up for radiated ERP and/or EIRP measurements

Radiated Power Measurement Calculation According to ANSI C63.26-2015

a) E (dBµV/m) = Measured amplitude level (dBµV) + Cable Loss (dB) + Antenna Factor (dB/m).

b) E (dBµV/m) = Measured amplitude level (dBm) + 107 + Cable Loss (dB) + Antenna Factor (dB/m).

c) E (dBµV/m) = EIRP (dBm) − 20log(D) + 104.8; where D is the measurement distance (in the far field region) in m.

d) EIRP (dBm) = E (dBµV/m) + 20log(D) − 104.8; where D is the measurement distance (in the far field region) in m.

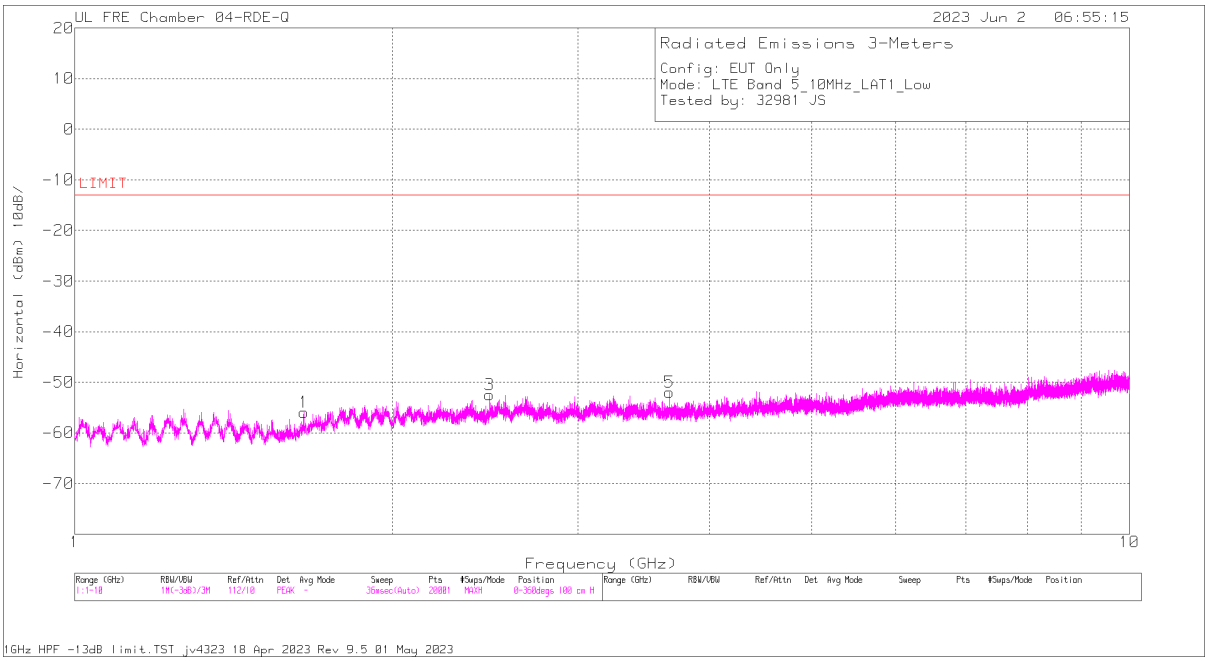
So, from d)

The measuring distance is usually at 3m, then 20*Log(3)=9.5424

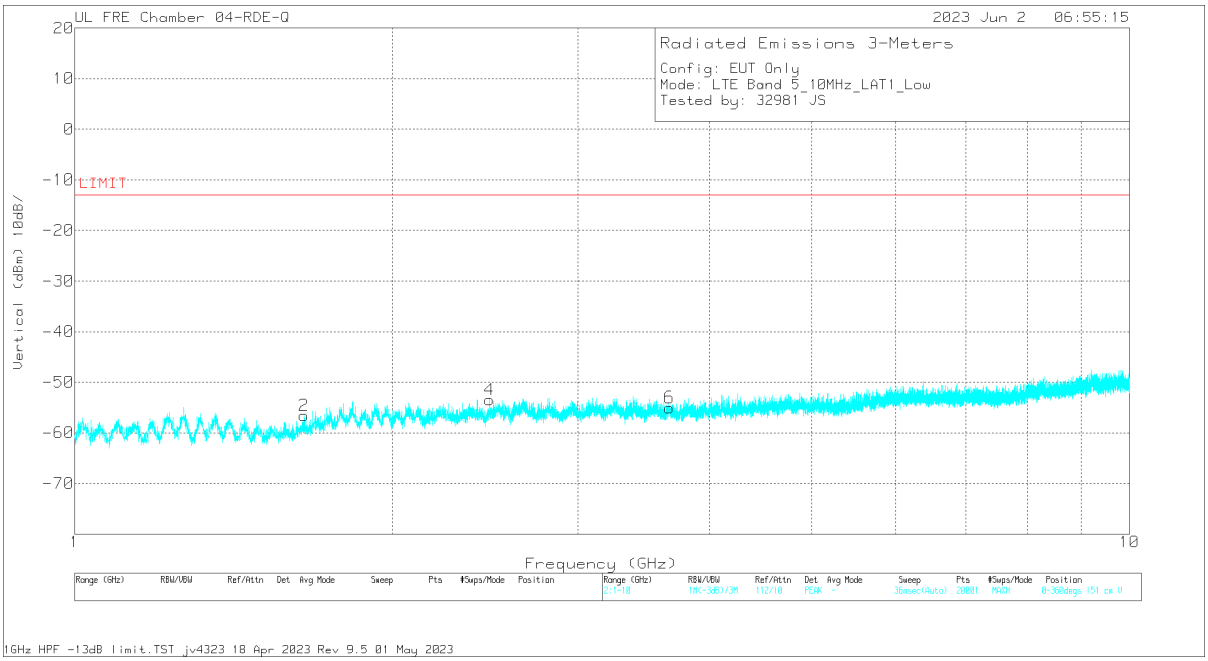
Then, EIRP (dBm) = E (dBµV/m) + 9.5424 − 104.8 = E (dBµV/m) – 95.2576

Note: Confidence check of each chamber is performed daily to see if any degradation from expected/normal reading reference data. Ambient check of each chamber is performed monthly.

Example Plot



Horizontal Polarity



Vertical Polarity

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T962 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	EIRP CF	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
2	1.6489	57.68	Pk	28.7	-47.8	-95.2	-56.62	-13	-43.62	V
1	1.64935	58.36	Pk	28.7	-47.78	-95.2	-55.92	-13	-42.92	H
3	2.4733	58.4	Pk	32.1	-47.77	-95.2	-52.47	-13	-39.47	H
4	2.47375	57.42	Pk	32.1	-47.78	-95.2	-53.46	-13	-40.46	V
5	3.6613	56.88	Pk	32.9	-46.57	-95.2	-51.99	-13	-38.99	H
6	3.66175	53.84	Pk	32.9	-46.56	-95.2	-55.02	-13	-42.02	V

Pk - Peak detector

Radiated Emissions

10.1. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 1

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r02

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

RESULTS

10.1.1. 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 #:	14523758
Date:	2/23/2023
Test Engineer:	27661
Configuration:	EUT Only
Mode	LTE B7 20MHz QPSK
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2510MHz									
5.020000	56.21	Pk	34.4	-95.2	-47.17	-51.76	-25	-26.76	V
5.031500	56.09	Pk	34.4	-95.2	-47.13	-51.84	-25	-26.84	H
7.502000	55.03	Pk	36	-95.2	-45.71	-49.88	-25	-24.88	V
7.526500	55.65	Pk	36	-95.2	-45.57	-49.12	-25	-24.12	H
10.111000	55.63	Pk	37.6	-95.2	-44.42	-46.39	-25	-21.39	H
10.115500	55.5	Pk	37.6	-95.2	-44.48	-46.58	-25	-21.58	V
Mid Channel, 2535MHz									
5.078000	57.14	Pk	34.4	-95.2	-47.15	-50.81	-25	-25.81	V
5.087500	55.77	Pk	34.5	-95.2	-47.21	-52.14	-25	-27.14	H
7.637000	54.46	Pk	36.1	-95.2	-45.30	-49.94	-25	-24.94	V
7.657500	54.93	Pk	36.1	-95.2	-45.36	-49.53	-25	-24.53	H
10.140500	55.69	Pk	37.6	-95.2	-44.54	-46.45	-25	-21.45	V
10.149000	55.28	Pk	37.6	-95.2	-44.54	-46.86	-25	-21.86	H
High Channel, 2560MHz									
5.159000	55.7	Pk	34.5	-95.2	-47.38	-52.38	-25	-27.38	H
5.164000	55.72	Pk	34.5	-95.2	-47.45	-52.43	-25	-27.43	V
7.652500	53.99	Pk	36.1	-95.2	-45.35	-50.46	-25	-25.46	V
7.660000	55.1	Pk	36	-95.2	-45.37	-49.47	-25	-24.47	H
10.206500	55.73	Pk	37.7	-95.2	-44.64	-46.41	-25	-21.41	V
10.228500	56.16	Pk	37.8	-95.2	-44.54	-45.78	-25	-20.78	H

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	14523758
Date:	1/25/2023
Test Engineer:	50822
Configuration:	EUT Only
Mode	FR1 N7 40MHz BPSK
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2520MHz									
3.825000	54.21	Pk	32.8	-95.2	-46.59	-54.78	-25	-29.78	H
3.824000	56.18	Pk	32.8	-95.2	-46.54	-52.76	-25	-27.76	V
6.359500	54.51	Pk	35.6	-95.2	-44.82	-49.91	-25	-24.91	H
6.360000	53.25	Pk	35.6	-95.2	-44.85	-51.20	-25	-26.20	V
8.911000	54.03	Pk	36.2	-95.2	-43.88	-48.85	-25	-23.85	H
8.908500	54.26	Pk	36.2	-95.2	-43.84	-48.58	-25	-23.58	V
Mid Channel, 2535MHz									
5.096500	55.75	Pk	34.3	-95.2	-46.61	-51.76	-25	-26.76	H
5.047000	55.4	Pk	34.3	-95.2	-46.68	-52.18	-25	-27.18	V
7.547500	54.98	Pk	35.5	-95.2	-44.52	-49.24	-25	-24.24	H
7.547500	55.44	Pk	35.5	-95.2	-44.52	-48.78	-25	-23.78	V
9.950000	56.2	Pk	37.1	-95.2	-44.16	-46.06	-25	-21.06	H
10.445000	56.24	Pk	37.5	-95.2	-44.73	-46.19	-25	-21.19	V
High Channel, 2550MHz									
5.009500	55.56	Pk	34.3	-95.2	-46.76	-52.10	-25	-27.10	H
4.727500	55.69	Pk	34.2	-95.2	-46.63	-51.94	-25	-26.94	V
7.051500	55.08	Pk	35.6	-95.2	-45.14	-49.66	-25	-24.66	H
6.797000	54.72	Pk	35.5	-95.2	-44.95	-49.93	-25	-24.93	V
9.811000	55.64	Pk	37	-95.2	-44.28	-46.84	-25	-21.84	H
9.925500	55.77	Pk	37.1	-95.2	-44.13	-46.46	-25	-21.46	V

10.1.2. 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 #:	14523758
Date:	2/23/2023
Test Engineer:	27661
Configuration:	EUT Only
Mode	LTE B12 10MHz QPSK
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, 704MHz									
1.424350	58.24	Pk	28	-95.2	-47.23	-56.19	-13	-43.19	H
1.433800	57.21	Pk	27.9	-95.2	-47.29	-57.38	-13	-44.38	V
2.140300	58.45	Pk	31.6	-95.2	-47.76	-52.91	-13	-39.91	H
2.130400	56.63	Pk	31.5	-95.2	-47.78	-54.85	-13	-41.85	V
2.861200	57.02	Pk	32.7	-95.2	-46.79	-52.27	-13	-39.27	H
2.851300	56.96	Pk	32.6	-95.2	-46.84	-52.48	-13	-39.48	V
Mid Channel, 707.5MHz									
1.422550	57.98	Pk	28	-95.2	-47.22	-56.44	-13	-43.44	H
1.425700	58.15	Pk	27.9	-95.2	-47.24	-56.39	-13	-43.39	V
2.102050	57.26	Pk	31.5	-95.2	-47.97	-54.41	-13	-41.41	H
2.106100	56.75	Pk	31.6	-95.2	-47.94	-54.79	-13	-41.79	V
2.835550	57.23	Pk	32.6	-95.2	-46.80	-52.17	-13	-39.17	H
2.840950	56.61	Pk	32.6	-95.2	-46.86	-52.85	-13	-39.85	V
High Channel, 711MHz									
1.419850	57.39	Pk	28	-95.2	-47.18	-56.99	-13	-43.99	H
1.422100	57.06	Pk	28	-95.2	-47.22	-57.36	-13	-44.36	V
2.130400	56.9	Pk	31.5	-95.2	-47.78	-54.58	-13	-41.58	H
2.120950	56.63	Pk	31.6	-95.2	-47.88	-54.85	-13	-41.85	V
2.878750	57	Pk	32.6	-95.2	-46.75	-52.35	-13	-39.35	H
2.873350	56.71	Pk	32.6	-95.2	-46.58	-52.47	-13	-39.47	V

BPSK 5G NR n12 (15.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/15/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	FR1 N12 15MHz BPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	172654 HPF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 706.5MHz										
1.398978	49.5	Pk	28.2	1	-95.2	-35.15	-51.65	-13	-38.65	H
1.398978	47.73	Pk	28.2	1	-95.2	-35.15	-53.42	-13	-40.42	V
2.098578	48.74	Pk	31.4	.6	-95.2	-34.99	-49.45	-13	-36.45	H
2.099067	42.33	Pk	31.4	.6	-95.2	-34.96	-55.83	-13	-42.83	V
2.826045	40.76	Pk	32.3	.5	-95.2	-34.41	-56.05	-13	-43.05	H
2.826045	40.66	Pk	32.3	.5	-95.2	-34.41	-56.15	-13	-43.15	V
Mid Channel, 707.5MHz										
1.400933	46.98	Pk	28.2	1	-95.2	-35.15	-54.17	-13	-41.17	H
1.400933	47.65	Pk	28.2	1	-95.2	-35.15	-53.50	-13	-40.50	V
2.122534	44.75	Pk	31.5	.5	-95.2	-35.03	-53.48	-13	-40.48	H
2.122534	41.84	Pk	31.5	.5	-95.2	-35.03	-56.39	-13	-43.39	V
2.829956	40.23	Pk	32.3	.5	-95.2	-34.54	-56.71	-13	-43.71	H
2.829956	40.57	Pk	32.3	.5	-95.2	-34.54	-56.37	-13	-43.37	V
High Channel, 708.5MHz										
1.402889	47.91	Pk	28.2	1	-95.2	-35.18	-53.27	-13	-40.27	H
1.402889	45.74	Pk	28.2	1	-95.2	-35.18	-55.44	-13	-42.44	V
2.125467	40.59	Pk	31.5	.5	-95.2	-35.13	-57.74	-13	-44.74	H
2.124978	43.14	Pk	31.5	.5	-95.2	-35.09	-55.15	-13	-42.15	V
2.834356	40.26	Pk	32.3	.5	-95.2	-34.42	-56.56	-13	-43.56	H
2.834356	41.12	Pk	32.3	.5	-95.2	-34.42	-55.70	-13	-42.70	V

10.1.3. 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 #:	14523758
Date:	06/08/2023
Test Engineer:	32981
Configuration:	EUT Only
Mode	LTE B13 10MHz QPSK
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 782MHz									
1.5715	56.51	Pk	27.8	-95.2	-47.44	-58.33	-40	-18.33	H
1.5742	56.71	Pk	27.8	-95.2	-47.43	-58.12	-40	-18.12	V
2.7703	57.04	Pk	32.3	-95.2	-47.4	-53.26	-13	-40.26	H
2.7703	55.54	Pk	32.3	-95.2	-47.4	-54.76	-13	-41.76	V
4.09915	56.18	Pk	33.4	-95.2	-46.58	-52.2	-13	-39.2	H
4.1005	55.32	Pk	33.4	-95.2	-46.56	-53.04	-13	-40.04	V

*** Emissions in the GPS band were wideband emissions therefore the -40dBm/MHz limit was used.**

10.1.4. 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 #:	14523758
Date:	06/19/2023
Test Engineer:	30606
Configuration:	EUT Only
Mode	LTE B14 10MHz QPSK
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.564711	43.31	Pk	27.7	.8	-95.2	-35.18	-58.57	-40	-18.57	H
1.577458	50.59	Pk	27.8	.8	-95.2	-35.23	-51.24	-40	-11.24	V
2.365898	48.8	Pk	32.1	.5	-95.2	-34.96	-48.76	-13	-35.76	V
2.365906	49.32	Pk	32.1	.5	-95.2	-34.96	-48.24	-13	-35.24	H
3.181467	41.64	Pk	32.9	.5	-95.2	-34.09	-54.25	-13	-41.25	H
3.189289	42.19	Pk	32.9	.5	-95.2	-34.1	-53.71	-13	-40.71	V

***Emissions in the GPS band were wideband emissions therefore the -40dBm/MHz limit was used.**

BPSK 5G NR n14 (10.0MHZ BANDWIDTH)

Project #:	14523758
Date:	6/19/2023
Test Engineer:	30606
Configuration:	EUT Only
Mode	FR1 N14 10MHz BPSK
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.577141	42.89	Pk	28.3	.8	-95.2	-29.09	-52.30	-40	-12.30	H
1.57941	40.83	Pk	28.3	.8	-95.2	-29.01	-54.28	-40	-14.28	V
2.227526	39.46	Pk	31.5	.5	-95.2	-27.74	-51.48	-13	-38.48	H
2.236494	39.38	Pk	31.5	.5	-95.2	-27.82	-51.64	-13	-38.64	V
3.160796	37.86	Pk	33	.5	-95.2	-26.45	-50.29	-13	-37.29	V
3.170031	38.29	Pk	33	.5	-95.2	-26.54	-49.95	-13	-36.95	H

*** Emissions in the GPS band were wideband emissions therefore the -40dBm/MHz limit was used.**

10.1.5. 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 #:	14523758
Date:	2/23/2023
Test Engineer:	27661
Configuration:	EUT Only
Mode	LTE B17 10MHz QPSK
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, 709MHz									
1.423450	58.58	Pk	28	-95.2	-47.22	-55.84	-13	-42.84	H
1.427050	56.69	Pk	27.9	-95.2	-47.25	-57.86	-13	-44.86	V
2.139850	56.65	Pk	31.5	-95.2	-47.76	-54.81	-13	-41.81	H
2.144800	57.2	Pk	31.6	-95.2	-47.87	-54.27	-13	-41.27	V
2.849050	57.35	Pk	32.6	-95.2	-46.79	-52.04	-13	-39.04	H
2.874250	56.17	Pk	32.6	-95.2	-46.60	-53.03	-13	-40.03	V
Mid Channel, 710MHz									
1.427950	57.45	Pk	27.9	-95.2	-47.24	-57.09	-13	-44.09	H
1.427050	57.53	Pk	27.9	-95.2	-47.25	-57.02	-13	-44.02	V
2.173600	57.32	Pk	31.7	-95.2	-47.95	-54.13	-13	-41.13	H
2.175850	58.93	Pk	31.7	-95.2	-47.94	-52.51	-13	-39.51	V
2.865700	56.92	Pk	32.7	-95.2	-46.60	-52.18	-13	-39.18	H
2.875150	56.47	Pk	32.6	-95.2	-46.65	-52.78	-13	-39.78	V
High Channel, 711MHz									
1.462600	59.63	Pk	27.6	-95.2	-47.36	-55.33	-13	-42.33	H
1.459900	57.62	Pk	27.6	-95.2	-47.35	-57.33	-13	-44.33	V
2.176300	58.11	Pk	31.7	-95.2	-47.95	-53.34	-13	-40.34	H
2.174500	57.41	Pk	31.7	-95.2	-47.95	-54.04	-13	-41.04	V
2.881450	56.77	Pk	32.6	-95.2	-46.64	-52.47	-13	-39.47	H
2.887750	57.21	Pk	32.6	-95.2	-46.88	-52.27	-13	-39.27	V

10.1.6. 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 #:	14523758
Date:	2/24/2023
Test Engineer:	27661
Configuration:	EUT Only
Mode	LTE B25 20MHz QPSK
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, 1860MHz									
3.729500	54.65	Pk	33.8	-95.2	-46.00	-52.75	-13	-39.75	H
3.749000	55.09	Pk	33.6	-95.2	-45.76	-52.27	-13	-39.27	V
5.575000	54.43	Pk	35.3	-95.2	-46.32	-51.79	-13	-38.79	H
5.580500	54.64	Pk	35.3	-95.2	-46.46	-51.72	-13	-38.72	V
7.418000	54.42	Pk	36	-95.2	-45.94	-50.72	-13	-37.72	H
7.442000	55.36	Pk	36	-95.2	-45.99	-49.83	-13	-36.83	V
Mid Channel, 1882.5MHz									
3.786000	54.76	Pk	33.8	-95.2	-45.59	-52.23	-13	-39.23	H
3.797500	54.01	Pk	33.9	-95.2	-45.58	-52.87	-13	-39.87	V
5.672000	54.64	Pk	35.2	-95.2	-46.24	-51.60	-13	-38.60	H
5.674500	53.98	Pk	35.2	-95.2	-46.2	-52.22	-13	-39.22	V
7.558500	55.74	Pk	36.1	-95.2	-45.37	-48.73	-13	-35.73	H
7.560000	54.69	Pk	36.1	-95.2	-45.38	-49.79	-13	-36.79	V
High Channel, 1905MHz									
3.819000	54.23	Pk	33.8	-95.2	-45.35	-52.52	-13	-39.52	H
3.832000	53.86	Pk	33.8	-95.2	-45.24	-52.78	-13	-39.78	V
5.738500	55.33	Pk	35.2	-95.2	-45.67	-50.34	-13	-37.34	H
5.718500	55.4	Pk	35.2	-95.2	-45.69	-50.29	-13	-37.29	V
7.634000	54.49	Pk	36.1	-95.2	-45.28	-49.89	-13	-36.89	H
7.621000	54.49	Pk	36	-95.2	-45.32	-50.03	-13	-37.03	V

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	14523758
Date:	1/24/2023
Test Engineer:	50822
Configuration:	EUT Only
Mode	FR1 N25 40MHz BPSK
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1870MHz									
2.585200	57.8	Pk	32.4	-95.2	-47.29	-52.29	-13	-39.29	H
2.254400	60.06	Pk	31.4	-95.2	-47.59	-51.33	-13	-38.33	V
3.206500	56.57	Pk	33	-95.2	-46.35	-51.98	-13	-38.98	H
3.401500	55.16	Pk	32.8	-95.2	-46.34	-53.58	-13	-40.58	V
3.850500	56.38	Pk	32.9	-95.2	-46.12	-52.04	-13	-39.04	H
3.847000	55.66	Pk	32.9	-95.2	-46.18	-52.82	-13	-39.82	V
Mid Channel, 1882.5MHz									
3.239000	56.21	Pk	32.9	-95.2	-46.23	-52.32	-13	-39.32	H
3.253000	56.02	Pk	32.9	-95.2	-46.43	-52.71	-13	-39.71	V
3.853000	56.27	Pk	32.9	-95.2	-46.06	-52.09	-13	-39.09	H
3.618000	56.69	Pk	32.9	-95.2	-46.21	-51.82	-13	-38.82	V
5.076000	55.91	Pk	34.3	-95.2	-46.57	-51.56	-13	-38.56	H
5.088000	54.81	Pk	34.3	-95.2	-46.27	-52.36	-13	-39.36	V
High Channel, 1895MHz									
3.516500	56.2	Pk	32.9	-95.2	-46.25	-52.35	-13	-39.35	H
3.222000	56.49	Pk	33	-95.2	-46.33	-52.04	-13	-39.04	V
5.824000	54.69	Pk	35	-95.2	-45.59	-51.10	-13	-38.10	H
4.430500	56.41	Pk	33.9	-95.2	-46.14	-51.03	-13	-38.03	V
7.341500	54.74	Pk	35.5	-95.2	-44.66	-49.62	-13	-36.62	H
7.658000	55	Pk	35.6	-95.2	-44.62	-49.22	-13	-36.22	V

10.1.7. 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 #:	14523758
Date:	3/6/2023
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE B26 90S 10MHz QPSK
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, 819MHz									
1.648000	57.64	Pk	29.3	-95.2	-47.78	-56.04	-13	-43.04	H
1.639450	58.1	Pk	29.3	-95.2	-47.72	-55.52	-13	-42.52	V
2.457100	58.33	Pk	32.5	-95.2	-47.81	-52.18	-13	-39.18	H
2.458000	56.87	Pk	32.5	-95.2	-47.85	-53.68	-13	-40.68	V
3.282400	54.47	Pk	33.1	-95.2	-45.84	-53.47	-13	-40.47	H
3.274300	54.27	Pk	33.1	-95.2	-45.88	-53.71	-13	-40.71	V

BPSK 5G NR n26 (20.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/12/2023
Test Engineer:	32981
Configuration:	EUT Only
Mode	FR1 N26 90S 10MHz BPSK
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	Amp/Cbl (dB)	172654 HPF (dB)	EIRP CF	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 819MHz									
1.629100	60.35	Pk	28.4	-95.2	-47.63	-54.08	-13	-41.08	H
1.628650	62.2	Pk	28.4	-95.2	-47.64	-52.24	-13	-39.24	V
2.454400	55.34	Pk	32	-95.2	-47.50	-55.36	-13	-42.36	H
2.453050	56.28	Pk	31.9	-95.2	-47.50	-54.52	-13	-41.52	V
3.221650	56.1	Pk	33	-95.2	-46.75	-52.85	-13	-39.85	H
3.220750	56.19	Pk	33	-95.2	-46.71	-52.72	-13	-39.72	V

10.1.8. 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) dB.

QPSK LTE BAND 26 (15.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/24/2023
Test Engineer:	27661
Configuration:	EUT Only
Mode	LTE B26 22H 15MHz QPSK
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, 831.5MHz									
1.638550	57.61	Pk	29.3	-95.2	-47.72	-56.01	-13	-43.01	H
1.676338	67.65	Pk	29.4	-95.2	-47.74	-45.89	-13	-32.89	V
2.497600	57.3	Pk	32.6	-95.2	-47.24	-52.54	-13	-39.54	H
2.493550	55.55	Pk	32.5	-95.2	-47.34	-54.49	-13	-41.49	V
3.367450	55.48	Pk	32.9	-95.2	-45.34	-52.16	-13	-39.16	H
3.385900	54.5	Pk	32.8	-95.2	-45.13	-53.03	-13	-40.03	V
Mid Channel, 826.5MHz									
1.639000	56.45	Pk	29.3	-95.2	-47.72	-57.17	-13	-44.17	H
1.686317	66.21	Pk	29.4	-95.2	-47.69	-47.28	-13	-34.28	V
2.513350	55.86	Pk	32.6	-95.2	-47.30	-54.04	-13	-41.04	H
2.516500	55.29	Pk	32.6	-95.2	-47.31	-54.62	-13	-41.62	V
3.343600	56.37	Pk	33	-95.2	-45.36	-51.19	-13	-38.19	H
3.358000	54.86	Pk	32.9	-95.2	-45.34	-52.78	-13	-39.78	V
High Channel, 841.5MHz									
1.681750	57.9	Pk	29.4	-95.2	-47.69	-55.59	-13	-42.59	H
1.682200	59.22	Pk	29.4	-95.2	-47.67	-54.25	-13	-41.25	V
2.508400	55.64	Pk	32.6	-95.2	-47.19	-54.15	-13	-41.15	H
2.539450	55.04	Pk	32.6	-95.2	-47.67	-55.23	-13	-42.23	V
3.368800	54.77	Pk	32.9	-95.2	-45.30	-52.83	-13	-39.83	H
3.389950	54.62	Pk	32.8	-95.2	-45.05	-52.83	-13	-39.83	V

BPSK 5G NR n26 (20.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/04/2023
Test Engineer:	32981
Configuration:	EUT Only
Mode	FR1 N26 22H 20MHz BPSK
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 834MHz									
1.648900	58.43	Pk	28.7	-95.2	-47.8	-55.87	-13	-42.87	H
1.648450	57.86	Pk	28.7	-95.2	-47.8	-56.44	-13	-43.44	V
2.509750	56.07	Pk	32.2	-95.2	-47.61	-54.54	-13	-41.54	H
2.508850	57.1	Pk	32.2	-95.2	-47.67	-53.57	-13	-40.57	V
4.573450	55.65	Pk	34	-95.2	-46.75	-52.30	-13	-39.30	H
4.572100	55.31	Pk	34	-95.2	-46.73	-52.62	-13	-39.62	V
Mid Channel, 836.5MHz									
2.0665	59.4	Pk	31.1	-95.2	-47.76	-52.46	-13	-39.46	H
2.06605	56.6	Pk	31.1	-95.2	-47.74	-55.24	-13	-42.24	V
3.7	55.75	Pk	32.8	-95.2	-46.49	-53.14	-13	-40.14	H
3.6973	55.12	Pk	32.8	-95.2	-46.51	-53.79	-13	-40.79	V
4.69495	55.71	Pk	34.2	-95.2	-46.41	-51.7	-13	-38.7	H
4.69135	54.21	Pk	34.2	-95.2	-46.56	-53.35	-13	-40.35	V
High Channel, 836.5MHz									
1.67905	57.1	Pk	29.2	-95.2	-47.74	-56.64	-13	-43.64	H
1.67905	60.66	Pk	29.2	-95.2	-47.74	-53.08	-13	-40.08	V
2.26585	56.77	Pk	31.4	-95.2	-47.39	-54.42	-13	-41.42	H
2.2582	58.34	Pk	31.4	-95.2	-47.35	-52.81	-13	-39.81	V
2.9575	55.96	Pk	32.2	-95.2	-46.83	-53.87	-13	-40.87	H
2.9584	57.88	Pk	32.2	-95.2	-46.86	-51.98	-13	-38.98	V

10.1.9. 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 #:	14523758
Date:	3/6/2023
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE B30 10MHz QPSK
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									
4.620938	26.61	RMS	34.3	-95.2	-29.01	-63.3	-40	-23.3	H
4.620469	26.23	RMS	34.3	-95.2	-29.06	-63.73	-40	-23.73	V
6.930938	23.85	RMS	35.7	-95.2	-26.57	-62.22	-40	-22.22	H
6.930938	23.87	RMS	35.7	-95.2	-26.57	-62.2	-40	-22.2	V
9.240469	21.35	RMS	36.1	-95.2	-23.74	-61.49	-40	-21.49	H
9.240938	22.04	RMS	36.1	-95.2	-23.71	-60.77	-40	-20.77	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/06/2023
Test Engineer:	25019
Configuration:	EUT Only
Mode	FR1 N30 10MHz BPSK
Chamber #:	04-RDE-P

Frequency (GHz)	Meter Reading (dBuV)	Det	222740 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2310MHz									
4.610763	44.76	RMS	33.8	-95.2	-47.73	-64.37	-40	-24.37	H
4.610763	45.27	RMS	33.8	-95.2	-47.73	-63.86	-40	-23.86	V
6.916262	42.49	RMS	35.5	-95.2	-45.02	-62.23	-40	-22.23	H
6.916262	43.28	RMS	35.5	-95.2	-45.02	-61.44	-40	-21.44	V
9.220289	41.08	RMS	36.2	-95.2	-43.35	-61.27	-40	-21.27	H
9.220289	41.17	RMS	36.2	-95.2	-43.35	-61.18	-40	-21.18	V

10.1.10. 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 #:	14523758
Date:	2/24/2023
Test Engineer:	27661
Configuration:	EUT Only
Mode	LTE B41 FCC 20MHz QPSK
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, 2506MHz									
5.034500	56.2	Pk	34.4	-95.2	-47.18	-51.78	-25	-26.78	H
5.040500	57.84	Pk	34.4	-95.2	-47.03	-49.99	-25	-24.99	V
7.521000	54.28	Pk	36	-95.2	-45.62	-50.54	-25	-25.54	H
7.514500	54.36	Pk	36	-95.2	-45.57	-50.41	-25	-25.41	V
10.143500	56.85	Pk	37.6	-95.2	-44.53	-45.28	-25	-20.28	H
10.151000	55.33	Pk	37.6	-95.2	-44.55	-46.82	-25	-21.82	V
Mid Channel, 2593MHz									
5.191500	55.45	Pk	34.5	-95.2	-47.27	-52.52	-25	-27.52	H
5.188000	55.9	Pk	34.5	-95.2	-47.20	-52.00	-25	-27.00	V
7.778500	53.91	Pk	36.2	-95.2	-45.29	-50.38	-25	-25.38	H
7.748500	53.86	Pk	36.1	-95.2	-45.34	-50.58	-25	-25.58	V
10.352000	55.09	Pk	37.9	-95.2	-44.31	-46.52	-25	-21.52	H
10.358000	54.62	Pk	37.9	-95.2	-44.37	-47.05	-25	-22.05	V
High Channel, 2680MHz									
5.022000	56.5	Pk	34.4	-95.2	-47.14	-51.44	-25	-26.44	H
5.000500	55.41	Pk	34.4	-95.2	-47.18	-52.57	-25	-27.57	V
7.529500	55.2	Pk	36	-95.2	-44.75	-48.75	-25	-23.75	H
7.523500	54.33	Pk	36	-95.2	-44.69	-49.56	-25	-24.56	V
10.067500	55.56	Pk	37.6	-95.2	-43.49	-45.53	-25	-20.53	H
10.071500	54.94	Pk	37.6	-95.2	-43.53	-46.19	-25	-21.19	V

BPSK 5G NR n41 (100.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/03/2023
Test Engineer:	32981
Configuration:	EUT Only
Mode	FR1 N41 FCC 100MHz BPSK
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Amp/Cbl/Fltr (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2546MHz									
3.929500	56.57	Pk	33.2	-95.2	-46.58	-52.01	-25	-27.01	H
3.932000	54.48	Pk	33.2	-95.2	-46.42	-53.94	-25	-28.94	V
5.883500	53.92	Pk	35.1	-95.2	-45.76	-51.94	-25	-26.94	H
5.882500	53.59	Pk	35.1	-95.2	-45.75	-52.26	-25	-27.26	V
9.204500	55.57	Pk	36.4	-95.2	-43.66	-46.89	-25	-21.89	H
9.204000	53.63	Pk	36.4	-95.2	-43.65	-48.82	-25	-23.82	V
Mid Channel, 2593MHz									
4.782000	56.19	Pk	34.2	-95.2	-46.64	-51.45	-25	-26.45	H
4.782500	53.32	Pk	34.2	-95.2	-46.63	-54.31	-25	-29.31	V
9.158000	54.34	Pk	36.4	-95.2	-43.87	-48.33	-25	-23.33	H
9.159000	53.23	Pk	36.4	-95.2	-43.87	-49.44	-25	-24.44	V
12.626000	55.01	Pk	38.9	-95.2	-42.84	-44.13	-25	-19.13	H
12.622000	52.79	Pk	38.9	-95.2	-42.87	-46.38	-25	-21.38	V
High Channel, 2640MHz									
4.070000	55.47	Pk	33.4	-95.2	-46.74	-53.07	-25	-28.07	H
4.069000	54.3	Pk	33.4	-95.2	-46.73	-54.23	-25	-29.23	V
7.436500	55.19	Pk	35.4	-95.2	-44.89	-49.50	-25	-24.50	H
7.439000	52.83	Pk	35.4	-95.2	-44.86	-51.83	-25	-26.83	V
11.737000	54.31	Pk	38.6	-95.2	-43.04	-45.33	-25	-20.33	H
11.733500	54.94	Pk	38.6	-95.2	-43.12	-44.78	-25	-19.78	V

10.1.11. 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 #:	14523758
Date:	3/9/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B66 20MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.442969	39.6	Pk	32.6	-95.2	-32.93	-55.93	-13	-42.93	H
3.442969	39.64	Pk	32.6	-95.2	-32.93	-55.89	-13	-42.89	V
5.160000	36.4	Pk	34.7	-95.2	-29.57	-53.67	-13	-40.67	H
5.160000	36.03	Pk	34.7	-95.2	-29.57	-54.04	-13	-41.04	V
6.879844	33.58	Pk	36	-95.2	-26.45	-52.07	-13	-39.07	H
6.879844	32.63	Pk	36	-95.2	-26.45	-53.02	-13	-40.02	V
Mid Channel, 1745MHz									
3.490313	39.27	Pk	32.5	-95.2	-32.94	-56.37	-13	-43.37	H
3.490313	38.35	Pk	32.5	-95.2	-32.94	-57.29	-13	-44.29	V
5.235000	36.34	Pk	34.7	-95.2	-28.67	-52.83	-13	-39.83	H
5.235000	36.62	Pk	34.7	-95.2	-28.67	-52.55	-13	-39.55	V
6.980156	34.43	Pk	35.7	-95.2	-26.74	-51.81	-13	-38.81	H
6.980156	33.36	Pk	35.7	-95.2	-26.74	-52.88	-13	-39.88	V
High Channel, 1770MHz									
3.540000	38.33	Pk	33.2	-95.2	-32.86	-56.53	-13	-43.53	H
3.540000	39.01	Pk	33.2	-95.2	-32.86	-55.85	-13	-42.85	V
5.310000	37.41	Pk	34.5	-95.2	-29.84	-53.13	-13	-40.13	H
5.310000	35.48	Pk	34.5	-95.2	-29.84	-55.06	-13	-42.06	V
7.080469	34.93	Pk	35.9	-95.2	-26.91	-51.28	-13	-38.28	H
7.080469	35.95	Pk	35.9	-95.2	-26.91	-50.26	-13	-37.26	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/27/2023
Test Engineer:	19226
Configuration:	EUT Only
Mode	FR1 N66 40MHz BPSK
Chamber #:	05-RDE-D

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.026000	56.16	Pk	32.6	-95.2	-46.09	-52.53	-13	-39.53	H
3.028000	54.31	Pk	32.6	-95.2	-46.01	-54.30	-13	-41.30	V
4.716500	55.29	Pk	34.2	-95.2	-46.32	-52.03	-13	-39.03	H
4.715500	54.39	Pk	34.2	-95.2	-46.33	-52.94	-13	-39.94	V
6.300500	53.41	Pk	35.7	-95.2	-44.23	-50.32	-13	-37.32	H
6.295000	54.16	Pk	35.7	-95.2	-44.35	-49.69	-13	-36.69	V
Mid Channel, 1745MHz									
3.217000	56.29	Pk	33	-95.2	-46.29	-52.2	-13	-39.2	H
3.201000	56.65	Pk	33	-95.2	-46.5	-52.05	-13	-39.05	V
5.022500	55.47	Pk	34.3	-95.2	-46.48	-51.91	-13	-38.91	H
3.993000	54.79	Pk	33.3	-95.2	-46.31	-53.42	-13	-40.42	V
7.978000	54.98	Pk	35.7	-95.2	-44.60	-49.12	-13	-36.12	H
5.177000	56.44	Pk	34.2	-95.2	-46.53	-51.09	-13	-38.09	V
High Channel, 1760MHz									
3.188500	56.58	Pk	33	-95.2	-46.67	-52.29	-13	-39.29	H
2.936500	57.97	Pk	32.1	-95.2	-46.88	-52.01	-13	-39.01	V
4.786000	56.44	Pk	34.2	-95.2	-46.51	-51.07	-13	-38.07	H
4.755000	56.59	Pk	34.2	-95.2	-46.52	-50.93	-13	-37.93	V
5.222000	56	Pk	34.1	-95.2	-46.29	-51.39	-13	-38.39	H
5.716000	55.19	Pk	34.8	-95.2	-45.84	-51.05	-13	-38.05	V

10.1.14. 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 #:	14523758
Date:	1/25/2023
Test Engineer:	50822
Configuration:	EUT only
Mode	N70 BPSK 15MHz
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 1702.5MHz									
3.243000	55.95	Pk	32.9	-95.2	-46.39	-52.74	-13	-39.74	H
3.209500	55.95	Pk	33	-95.2	-46.41	-52.66	-13	-39.66	V
4.506500	55.9	Pk	34	-95.2	-46.35	-51.65	-13	-38.65	H
4.716500	56.26	Pk	34.2	-95.2	-46.34	-51.08	-13	-38.08	V
7.110500	54.44	Pk	35.6	-95.2	-44.49	-49.65	-13	-36.65	H
7.058500	55.75	Pk	35.6	-95.2	-44.81	-48.66	-13	-35.66	V

10.1.15. 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 #:	14523758
Date:	3/14/2023
Test Engineer:	25196
Configuration:	EUT Only
Mode	LTE B71 20MHz QPSK
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, 673MHz									
1.345150	56.29	Pk	28.7	-95.2	-47.13	-57.34	-13	-44.34	H
1.342450	55.27	Pk	28.7	-95.2	-47.17	-58.40	-13	-45.40	V
2.017450	56.53	Pk	31.1	-95.2	-48.06	-55.63	-13	-42.63	H
2.009800	55.97	Pk	31.2	-95.2	-47.99	-56.02	-13	-43.02	V
2.668600	57.83	Pk	32.6	-95.2	-47.34	-52.11	-13	-39.11	H
2.664100	57.19	Pk	32.5	-95.2	-47.5	-53.01	-13	-40.01	V
Mid Channel, 683MHz									
1.345600	55.84	Pk	28.6	-95.2	-47.13	-57.89	-13	-44.89	H
1.342900	57.12	Pk	28.7	-95.2	-47.16	-56.54	-13	-43.54	V
2.048500	56.03	Pk	31.4	-95.2	-48.22	-55.99	-13	-42.99	H
2.046250	55.64	Pk	31.3	-95.2	-48.23	-56.49	-13	-43.49	V
2.715400	56.69	Pk	32.6	-95.2	-47.71	-53.62	-13	-40.62	H
2.711350	56.09	Pk	32.6	-95.2	-47.64	-54.15	-13	-41.15	V
High Channel, 688MHz									
1.369000	55.28	Pk	28.4	-95.2	-47.09	-58.61	-13	-45.61	H
1.369000	55.33	Pk	28.4	-95.2	-47.09	-58.56	-13	-45.56	V
2.053900	57.07	Pk	31.4	-95.2	-48.17	-54.90	-13	-41.90	H
2.062000	56.47	Pk	31.5	-95.2	-48.17	-55.40	-13	-42.40	V
2.749150	55.26	Pk	32.5	-95.2	-47.63	-55.07	-13	-42.07	H
2.747350	56.08	Pk	32.5	-95.2	-47.7	-54.32	-13	-41.32	V

BPSK 5G NR n71 (20.0MHZ BANDWIDTH)

Project #:	14523758
Date:	1/31/2023
Test Engineer:	19186
Configuration:	EUT Only
Mode	FR1 N71 20MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 673MHz										
1.333467	51.08	Pk	28.7	1.3	-95.2	-42.10	-56.22	-13	-43.22	H
1.324178	52.1	Pk	28.7	1.3	-95.2	-42.00	-55.10	-13	-42.10	V
2.033067	54.42	Pk	31.3	.6	-95.2	-44.70	-53.58	-13	-40.58	H
2.036489	54.44	Pk	31.4	.6	-95.2	-44.60	-53.36	-13	-40.36	V
2.718489	56.43	Pk	32.1	.5	-95.2	-45.80	-51.97	-13	-38.97	H
2.714089	55.27	Pk	32.1	.6	-95.2	-45.70	-52.93	-13	-39.93	V
Mid Channel, 683MHz										
1.346667	50.99	Pk	28.6	1.3	-95.2	-42.10	-56.41	-13	-43.41	H
1.342756	50.75	Pk	28.7	1.3	-95.2	-42.00	-56.55	-13	-43.55	V
2.028667	54.65	Pk	31.3	.6	-95.2	-44.70	-53.15	-13	-40.15	H
2.021822	53.95	Pk	31.3	.6	-95.2	-44.60	-53.85	-13	-40.85	V
2.716045	55.85	Pk	32.1	.5	-95.2	-45.80	-52.45	-13	-39.45	H
2.715556	55.84	Pk	32.1	.5	-95.2	-45.70	-52.46	-13	-39.46	V
High Channel, 688MHz										
1.375022	52.21	Pk	28.4	1.3	-95.2	-42.10	-55.69	-13	-42.69	H
1.377956	52.13	Pk	28.4	1.3	-95.2	-42.00	-55.67	-13	-42.67	V
2.036168	61	Pk	31.4	.6	-95.2	-44.70	-46.80	-13	-33.80	H
2.036221	53.15	Pk	31.4	.6	-95.2	-44.60	-54.65	-13	-41.65	V
2.749778	54.05	Pk	32.1	.5	-95.2	-45.80	-54.15	-13	-41.15	H
2.735111	54.37	Pk	32.1	.5	-95.2	-45.70	-53.83	-13	-40.83	V

10.2. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 2

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r02

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

RESULTS

10.2.1. LTE BAND 5 AND 5G NR n5

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) dB.

QPSK LTE BAND 5 (10.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/03/2023
Test Engineer:	32981
Configuration:	EUT Only
Mode	LTE B5 10MHz QPSK
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 829MHz									
1.972450	58.92	Pk	30.9	-95.2	-47.42	-52.80	-13	-39.80	H
1.973350	56.96	Pk	30.9	-95.2	-47.48	-54.82	-13	-41.82	V
3.150100	55.13	Pk	32.9	-95.2	-46.20	-53.37	-13	-40.37	H
3.149200	53.74	Pk	32.9	-95.2	-46.21	-54.77	-13	-41.77	V
4.879000	56.79	Pk	34.3	-95.2	-46.58	-50.69	-13	-37.69	H
4.874500	54.4	Pk	34.2	-95.2	-46.53	-53.13	-13	-40.13	V
Mid Channel, 826.5MHz									
1.833850	58.29	Pk	30.9	-95.2	-47.46	-53.47	-13	-40.47	H
1.831600	56.81	Pk	30.9	-95.2	-47.40	-54.89	-13	-41.89	V
3.246400	55.57	Pk	32.9	-95.2	-46.48	-53.21	-13	-40.21	H
3.245950	56.23	Pk	32.9	-95.2	-46.47	-52.54	-13	-39.54	V
5.009050	55.01	Pk	34.3	-95.2	-46.54	-52.43	-13	-39.43	H
5.009050	54.07	Pk	34.3	-95.2	-46.54	-53.37	-13	-40.37	V
High Channel, 844MHz									
2.620000	58.01	Pk	32.5	-95.2	-47.54	-52.23	-13	-39.23	H
2.617750	56.15	Pk	32.5	-95.2	-47.57	-54.12	-13	-41.12	V
3.594250	55.73	Pk	32.9	-95.2	-46.14	-52.71	-13	-39.71	H
3.591100	53.91	Pk	32.9	-95.2	-46.17	-54.56	-13	-41.56	V
5.751100	55.45	Pk	34.9	-95.2	-45.62	-50.47	-13	-37.47	H
5.756950	53.92	Pk	34.9	-95.2	-45.58	-51.96	-13	-38.96	V

BPSK 5G NR n5 (20.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/2/2023
Test Engineer:	28867
Configuration:	EUT Only
Mode	FR1 N5 20MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	Amp/Cbl (dB)	172654 HPF (dB)	EIRP CF	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 834MHz										
1649.373	54.54	Pk	28.5	-43.4	.7	-95.2	-54.86	-13	-41.86	H
2471.762	56.36	Pk	32.2	-45.4	.5	-95.2	-51.54	-13	-38.54	H
3296.644	55.05	Pk	32.9	-45.1	.5	-95.2	-51.85	-13	-38.85	H
1649.499	53.37	Pk	28.5	-43.4	.7	-95.2	-56.03	-13	-43.03	V
2474.086	56.19	Pk	32.2	-45.5	.5	-95.2	-51.81	-13	-38.81	V
3293.955	54.63	Pk	32.9	-45.2	.5	-95.2	-52.37	-13	-39.37	V
Mid Channel, 836.5MHz										
1654.219	53.4	Pk	28.6	-43.7	.7	-95.2	-56.2	-13	-43.2	H
2478.952	56.07	Pk	32.2	-45.4	.5	-95.2	-51.83	-13	-38.83	H
3307.618	55.15	Pk	32.9	-45.2	.5	-95.2	-51.85	-13	-38.85	H
1653.192	54.02	Pk	28.6	-43.7	.7	-95.2	-55.58	-13	-42.58	V
2479.082	55.64	Pk	32.2	-45.4	.5	-95.2	-52.26	-13	-39.26	V
3307.126	54.77	Pk	32.9	-45.2	.5	-95.2	-52.23	-13	-39.23	V
High Channel, 839MHz										
1661.066	53.34	Pk	28.7	-43.7	.7	-95.2	-56.16	-13	-43.16	H
2484.291	54.73	Pk	32.3	-45.3	.5	-95.2	-52.97	-13	-39.97	H
3318.276	55.5	Pk	32.9	-44.9	.5	-95.2	-51.2	-13	-38.2	H
1659.82	53.37	Pk	28.7	-43.7	.7	-95.2	-56.13	-13	-43.13	V
2488.957	56.09	Pk	32.3	-45.5	.5	-95.2	-51.81	-13	-38.81	V
3316.446	55.05	Pk	32.9	-44.9	.5	-95.2	-51.65	-13	-38.65	V

10.2.2. 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 #:	14523758
Date:	3/9/2023
Test Engineer:	28867
Configuration:	EUT Only
Mode	LTE B7 20MHz QPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	BRF 2495-2690MHz T1791 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2510MHz										
4.998750	51.85	Pk	34.2	.8	-95.2	-45	-53.35	-25	-28.35	H
4.998750	51.47	Pk	34.2	.8	-95.2	-45	-53.73	-25	-28.73	V
7.500000	47.92	Pk	35.8	.4	-95.2	-40.5	-51.58	-25	-26.58	H
7.500938	47.9	Pk	35.8	.4	-95.2	-40.4	-51.5	-25	-26.5	V
10.001719	43.44	Pk	37.1	.6	-95.2	-36.4	-50.46	-25	-25.46	H
10.000781	42.18	Pk	37.1	.6	-95.2	-36.2	-51.52	-25	-26.52	V
Mid Channel, 2535MHz										
4.546158	54.73	Pk	33.9	.8	-95.2	-45	-51.27	-25	-26.27	H
4.561963	54.53	Pk	34	.7	-95.2	-45	-51.37	-25	-26.37	V
7.606283	49.5	Pk	35.8	.5	-95.2	-40.5	-49.9	-25	-24.9	H
7.434566	49.98	Pk	35.8	.4	-95.2	-40.4	-49.82	-25	-24.82	V
10.775498	47.61	Pk	37.7	.7	-95.2	-36.4	-45.79	-25	-20.79	H
11.100925	49.57	Pk	37.9	.6	-95.2	-36.2	-44.83	-25	-19.83	V
High Channel, 2560MHz										
4.152841	54.32	Pk	33.4	.2	-95.2	-45	-52.58	-25	-27.58	H
4.683505	54.26	Pk	34	.6	-95.2	-45	-51.94	-25	-26.94	V
7.650938	47.51	Pk	35.8	.4	-95.2	-40.5	-52.09	-25	-27.09	H
7.650938	48.34	Pk	35.8	.4	-95.2	-40.4	-51.26	-25	-26.26	V
10.195781	45.58	Pk	37.3	.7	-95.2	-36.4	-48.22	-25	-23.22	H
10.203281	44.48	Pk	37.3	.8	-95.2	-36.2	-49.42	-25	-24.42	V

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/05/2023
Test Engineer:	32981
Configuration:	EUT Only
Mode	FR1 N7 40MHz BPSK
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2520MHz									
5.137500	56.19	Pk	34.2	-95.2	-46.58	-51.39	-25	-26.39	H
5.136500	54.12	Pk	34.2	-95.2	-46.61	-53.49	-25	-28.49	V
8.662500	54.72	Pk	36	-95.2	-44.07	-48.55	-25	-23.55	H
8.663000	53.31	Pk	36	-95.2	-44.06	-49.95	-25	-24.95	V
10.288000	55.82	Pk	37.4	-95.2	-44.19	-46.17	-25	-21.17	H
10.292000	53.91	Pk	37.4	-95.2	-44.25	-48.14	-25	-23.14	V
Mid Channel, 2535MHz									
3.347	55.96	Pk	32.8	-95.2	-46.17	-52.61	-25	-27.61	H
3.3475	55.31	Pk	32.8	-95.2	-46.17	-53.26	-25	-28.26	V
4.844	54.94	Pk	34.2	-95.2	-46.69	-52.75	-25	-27.75	H
4.84	55.35	Pk	34.2	-95.2	-46.63	-52.28	-25	-27.28	V
7.502	54.35	Pk	35.5	-95.2	-44.87	-50.22	-25	-25.22	H
7.5025	53.51	Pk	35.5	-95.2	-44.88	-51.07	-25	-26.07	V
High Channel, 2550MHz									
4.6565	53.91	Pk	34.1	-95.2	-46.66	-53.85	-25	-28.85	H
4.659	55.78	Pk	34.1	-95.2	-46.64	-51.96	-25	-26.96	V
5.5395	55.22	Pk	34.6	-95.2	-46.14	-51.52	-25	-26.52	H
5.527	56.16	Pk	34.5	-95.2	-46.14	-50.68	-25	-25.68	V
8.291	54.66	Pk	35.9	-95.2	-44.44	-49.08	-25	-24.08	H
8.292	53.44	Pk	35.9	-95.2	-44.45	-50.31	-25	-25.31	V

10.2.3. 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 #:	14523758
Date:	06/13/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B12 10MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	172654 HPF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 704MHz										
1.408267	41.59	Pk	28.2	1	-95.2	-35.24	-59.65	-13	-46.65	H
1.408267	41.21	Pk	28.2	1	-95.2	-35.24	-60.03	-13	-47.03	V
2.112267	40.46	Pk	31.5	.6	-95.2	-34.93	-57.57	-13	-44.57	H
2.112267	41.41	Pk	31.5	.6	-95.2	-34.93	-56.62	-13	-43.62	V
2.816267	40.73	Pk	32.3	.5	-95.2	-34.6	-56.27	-13	-43.27	H
2.816267	42.13	Pk	32.3	.5	-95.2	-34.6	-54.87	-13	-41.87	V
Mid Channel, 707.5MHz										
1.415111	41.02	Pk	28.2	.9	-95.2	-35.21	-60.29	-13	-47.29	H
1.415111	41.46	Pk	28.2	.9	-95.2	-35.21	-59.85	-13	-46.85	V
2.122534	41.54	Pk	31.5	.5	-95.2	-35.03	-56.69	-13	-43.69	H
2.122534	41.34	Pk	31.5	.5	-95.2	-35.03	-56.89	-13	-43.89	V
2.829956	40.66	Pk	32.3	.5	-95.2	-34.54	-56.28	-13	-43.28	H
2.829956	40.78	Pk	32.3	.5	-95.2	-34.54	-56.16	-13	-43.16	V
High Channel, 711MHz										
1.421956	40.79	Pk	28.1	.9	-95.2	-35.16	-60.57	-13	-47.57	H
1.421956	41.92	Pk	28.1	.9	-95.2	-35.16	-59.44	-13	-46.44	V
2.133045	40.74	Pk	31.6	.5	-95.2	-35.13	-57.49	-13	-44.49	H
2.132800	42.13	Pk	31.6	.5	-95.2	-35.16	-56.13	-13	-43.13	V
2.844134	39.87	Pk	32.3	.6	-95.2	-34.56	-56.99	-13	-43.99	H
2.844134	40.57	Pk	32.3	.6	-95.2	-34.56	-56.29	-13	-43.29	V

BPSK 5G NR n12 (15.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/2/2023
Test Engineer:	19186
Configuration:	EUT Only
Mode	FR1 N12 15MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 706.5MHz									
1.398250	59.85	Pk	28.6	-95.2	-47.09	-53.84	-13	-40.84	H
1.398700	67.76	Pk	28.6	-95.2	-47.10	-45.94	-13	-32.94	V
2.528200	57.41	Pk	32.3	-95.2	-47.37	-52.86	-13	-39.86	H
2.525500	55.9	Pk	32.3	-95.2	-47.37	-54.37	-13	-41.37	V
4.097800	56.59	Pk	33.4	-95.2	-46.64	-51.85	-13	-38.85	H
4.101400	54.99	Pk	33.4	-95.2	-46.56	-53.37	-13	-40.37	V
Mid Channel, 707.5MHz									
1.422933	50.78	Pk	27.9	-95.2	-42.3	-57.92	-13	-44.92	H
1.422933	51.97	Pk	27.9	-95.2	-42.3	-56.73	-13	-43.73	V
2.124489	53.68	Pk	31.6	-95.2	-44.9	-54.32	-13	-41.32	H
2.129378	53.39	Pk	31.6	-95.2	-45.1	-54.81	-13	-41.81	V
2.832400	53.6	Pk	32.4	-95.2	-45.5	-54.2	-13	-41.2	H
2.834845	52.97	Pk	32.4	-95.2	-45.4	-54.73	-13	-41.73	V
High Channel, 708.5MHz									
1.422445	50.42	Pk	28	-95.2	-42.3	-58.18	-13	-45.18	H
1.427333	51	Pk	27.9	-95.2	-42.2	-57.60	-13	-44.60	V
2.138220	53.78	Pk	31.6	-95.2	-45	-54.32	-13	-41.32	H
2.124978	53.59	Pk	31.6	-95.2	-44.9	-54.41	-13	-41.41	V
2.843645	54.11	Pk	32.4	-95.2	-45.6	-53.69	-13	-40.69	H
2.846089	54.7	Pk	32.4	-95.2	-45.5	-53.00	-13	-40.00	V

10.2.4. 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 #:	14523758
Date:	06/09/2023
Test Engineer:	32545
Configuration:	EUT Only
Mode	LTE B13 10MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	172654 HPF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 782MHz										
1.564222	41.99	Pk	27.7	0.8	-95.2	-35.17	-59.88	-40	-19.88	H
1.564222	42.34	Pk	27.7	0.8	-95.2	-35.17	-59.53	-40	-19.53	V
2.346445	40.62	Pk	32	0.6	-95.2	-34.98	-56.96	-13	-43.96	H
2.346445	41.54	Pk	32	0.6	-95.2	-34.98	-56.04	-13	-43.04	V
3.128178	40.58	Pk	32.9	0.5	-95.2	-34.24	-55.46	-13	-42.46	H
3.128667	40.74	Pk	32.9	0.5	-95.2	-34.25	-55.31	-13	-42.31	V

*** Emissions in the GPS band were wideband emissions therefore the -40dBm/MHz limit was used.**

10.2.5. 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 #:	14523758
Date:	3/8/2023
Test Engineer:	28867
Configuration:	EUT Only
Mode	LTE B14 10MHz QPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.590133	54.2	Pk	27.7	.8	-95.2	-43.20	-55.70	-40	-15.70	H
1.588667	51.69	Pk	27.7	.8	-95.2	-43.00	-58.01	-40	-18.01	V
2.363067	53.88	Pk	31.9	.5	-95.2	-45.80	-54.72	-13	-41.72	H
2.364534	53.55	Pk	31.9	.5	-95.2	-45.80	-55.05	-13	-42.05	V
3.122312	53.48	Pk	32.9	.5	-95.2	-45.00	-53.32	-13	-40.32	H
3.123289	54.61	Pk	32.9	.5	-95.2	-45.10	-52.29	-13	-39.29	V

*** Emissions in the GPS band were wideband emissions therefore the -40dBm/MHz limit was used.**

BPSK 5G NR n14 (10.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/21/2023
Test Engineer:	19226
Configuration:	EUT Only
Mode	FR1 N14 10MHz BPSK
Chamber #:	04-RDE-D

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.590133	51.74	Pk	27.7	.8	-95.2	-43.20	-58.16	-40	-18.16	H
1.593556	50.6	Pk	27.8	.7	-95.2	-43.10	-59.20	-40	-19.20	V
2.379200	55.56	Pk	32	.6	-95.2	-45.60	-52.64	-13	-39.64	H
2.370889	55.83	Pk	31.9	.6	-95.2	-45.60	-52.47	-13	-39.47	V
3.172178	52.94	Pk	32.9	.5	-95.2	-45.20	-54.06	-13	-41.06	H
3.175600	53.56	Pk	32.9	.5	-95.2	-45.10	-53.34	-13	-40.34	V

*** Emissions in the GPS band were wideband emissions therefore the -40dBm/MHz limit was used.**

10.2.6. 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 #:	14523758
Date:	3/7/2023
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE B17 10MHz QPSK
Chamber #:	05-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, 709MHz									
1.428400	58.86	Pk	27.9	-95.2	-47.24	-55.68	-13	-42.68	H
1.426600	57.07	Pk	27.9	-95.2	-47.25	-57.48	-13	-44.48	V
2.119150	56.99	Pk	31.6	-95.2	-47.94	-54.55	-13	-41.55	H
2.109700	58.15	Pk	31.6	-95.2	-47.98	-53.43	-13	-40.43	V
2.822050	56.85	Pk	32.7	-95.2	-46.85	-52.50	-13	-39.50	H
2.821600	57.02	Pk	32.7	-95.2	-46.83	-52.31	-13	-39.31	V
Mid Channel, 710MHz									
1.434250	58.05	Pk	27.8	-95.2	-47.29	-56.64	-13	-43.64	H
1.431100	57.04	Pk	27.9	-95.2	-47.29	-57.55	-13	-44.55	V
2.120950	57.68	Pk	31.6	-95.2	-47.88	-53.80	-13	-40.80	H
2.114650	57.48	Pk	31.6	-95.2	-47.85	-53.97	-13	-40.97	V
2.849500	56.84	Pk	32.6	-95.2	-46.81	-52.57	-13	-39.57	H
2.864800	56.91	Pk	32.7	-95.2	-46.59	-52.18	-13	-39.18	V
High Channel, 711MHz									
1.430650	58.49	Pk	27.9	-95.2	-47.28	-56.09	-13	-43.09	H
1.422550	58.56	Pk	28	-95.2	-47.22	-55.86	-13	-42.86	V
2.133100	57.68	Pk	31.6	-95.2	-47.79	-53.71	-13	-40.71	H
2.132650	56.68	Pk	31.6	-95.2	-47.78	-54.70	-13	-41.70	V
2.838250	57.59	Pk	32.6	-95.2	-46.69	-51.70	-13	-38.70	H
2.841400	56.24	Pk	32.6	-95.2	-46.87	-53.23	-13	-40.23	V

10.2.7. 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 #:	14523758
Date:	3/7/2023
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE B25 20MHz QPSK
Chamber #:	05-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, 1860MHz									
3.709000	54.93	Pk	33.6	-95.2	-46.05	-52.72	-13	-39.72	H
3.702000	54.45	Pk	33.6	-95.2	-45.98	-53.13	-13	-40.13	V
5.560500	54.63	Pk	35.3	-95.2	-46.23	-51.50	-13	-38.50	H
5.556000	55.58	Pk	35.3	-95.2	-46.13	-50.45	-13	-37.45	V
7.418500	55.48	Pk	36	-95.2	-45.93	-49.65	-13	-36.65	H
7.440000	54.31	Pk	36	-95.2	-45.94	-50.83	-13	-37.83	V
Mid Channel, 1882.5MHz									
3.770000	54.41	Pk	33.7	-95.2	-45.76	-52.85	-13	-39.85	H
3.753500	54.46	Pk	33.6	-95.2	-45.9	-53.04	-13	-40.04	V
5.645000	55.21	Pk	35.2	-95.2	-46.46	-51.25	-13	-38.25	H
5.650500	55.41	Pk	35.2	-95.2	-46.38	-50.97	-13	-37.97	V
7.544500	54.92	Pk	36	-95.2	-45.47	-49.75	-13	-36.75	H
7.550500	54.78	Pk	36.1	-95.2	-45.47	-49.79	-13	-36.79	V
High Channel, 1905MHz									
3.832000	53.77	Pk	33.8	-95.2	-45.24	-52.87	-13	-39.87	H
3.849500	53.44	Pk	33.8	-95.2	-45.32	-53.28	-13	-40.28	V
5.705500	55.48	Pk	35.2	-95.2	-45.85	-50.37	-13	-37.37	H
5.708000	54.62	Pk	35.2	-95.2	-45.84	-51.22	-13	-38.22	V
7.644000	54.03	Pk	36.1	-95.2	-45.24	-50.31	-13	-37.31	H
7.631500	53.54	Pk	36.1	-95.2	-45.27	-50.83	-13	-37.83	V

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/3/2023
Test Engineer:	28867
Configuration:	EUT Only
Mode	FR1 N25 40MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	EIRP CF	Amp/Cbl/Fltr (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.701153	54.37	Pk	33.2	-95.2	-44.50	-52.13	-13	-39.13	H
3.702802	55.22	Pk	33.2	-95.2	-44.40	-51.18	-13	-38.18	V
5.550411	53.42	Pk	34.6	-95.2	-43.50	-50.68	-13	-37.68	H
5.551954	54.14	Pk	34.6	-95.2	-43.50	-49.96	-13	-36.96	V
7.402015	50.65	Pk	35.8	-95.2	-40.30	-49.05	-13	-36.05	H
7.400996	51.62	Pk	35.8	-95.2	-40.40	-48.18	-13	-35.18	V
Mid Channel, 1882.5MHz									
3.725613	55.1	Pk	33.2	-95.2	-44.50	-51.2	-13	-38.2	H
3.724227	55.76	Pk	33.2	-95.2	-44.40	-50.54	-13	-37.54	V
5.587852	54.52	Pk	34.6	-95.2	-43.50	-49.58	-13	-36.58	H
5.586537	54.49	Pk	34.6	-95.2	-43.50	-49.61	-13	-36.61	V
7.449234	50.61	Pk	35.8	-95.2	-40.30	-48.79	-13	-35.79	H
7.452210	51.1	Pk	35.8	-95.2	-40.40	-48.3	-13	-35.3	V
High Channel, 1895MHz									
3.750629	55.32	Pk	33.2	-95.2	-44.50	-50.68	-13	-37.68	H
3.748477	54.99	Pk	33.2	-95.2	-44.40	-51.11	-13	-38.11	V
5.625663	53.77	Pk	34.6	-95.2	-43.50	-50.43	-13	-37.43	H
5.625173	53.69	Pk	34.6	-95.2	-43.50	-50.41	-13	-37.41	V
7.500656	51.45	Pk	35.8	-95.2	-40.30	-47.75	-13	-34.75	H
7.500563	50.56	Pk	35.8	-95.2	-40.40	-48.64	-13	-35.64	V

10.2.8. 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 #:	14523758
Date:	06/04/2023
Test Engineer:	32981
Configuration:	EUT Only
Mode	LTE B26 90S 10MHz QPSK
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 819MHz									
1.631800	56.81	Pk	28.4	-95.2	-47.77	-57.76	-13	-44.76	H
1.629100	58.43	Pk	28.4	-95.2	-47.63	-56.00	-13	-43.00	V
2.382400	57.66	Pk	31.7	-95.2	-47.38	-53.22	-13	-40.22	H
2.383300	56.32	Pk	31.7	-95.2	-47.33	-54.51	-13	-41.51	V
3.274300	54.94	Pk	32.9	-95.2	-46.07	-53.43	-13	-40.43	H
3.275200	56.24	Pk	32.9	-95.2	-46.12	-52.18	-13	-39.18	V

BPSK 5G NR n26 (20.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/2/2023
Test Engineer:	19186
Configuration:	EUT Only
Mode	FR1 N26 90S 10MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 819MHz										
1.629501	59.23	Pk	28.2	.7	-95.2	-43.20	-50.27	-13	-37.27	H
1.628756	52.62	Pk	28.2	.7	-95.2	-43.20	-56.88	-13	-43.88	V
2.451556	55.15	Pk	32.1	.6	-95.2	-45.40	-52.75	-13	-39.75	H
2.438845	55.44	Pk	32.1	.6	-95.2	-45.50	-52.56	-13	-39.56	V
3.281689	53.74	Pk	32.8	.5	-95.2	-45.00	-53.16	-13	-40.16	H
3.274356	53.89	Pk	32.8	.5	-95.2	-45.1	-53.11	-13	-40.11	V

10.2.9. 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) dB.

QPSK LTE BAND 26 (15.0MHZ BANDWIDTH)

Project #:	14523758
Date:	3/8/2023
Test Engineer:	28867
Configuration:	EUT Only
Mode	LTE B26 22H 15MHz
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 831.5MHz										
1.648800	50.14	Pk	28.5	.7	-95.2	-43.4	-59.26	-13	-46.26	H
1.650267	52.01	Pk	28.5	.7	-95.2	-43.4	-57.39	-13	-44.39	V
2.471111	54.94	Pk	32.2	.5	-95.2	-45.4	-52.96	-13	-39.96	H
2.467689	53.94	Pk	32.2	.5	-95.2	-45.5	-54.06	-13	-41.06	V
3.295378	53.22	Pk	32.9	.5	-95.2	-45.1	-53.68	-13	-40.68	H
3.292445	52.85	Pk	32.9	.5	-95.2	-45.2	-54.15	-13	-41.15	V
Mid Channel, 836.5MHz										
1.654178	52.2	Pk	28.6	.7	-95.2	-43.4	-57.4	-13	-44.4	H
1.656622	52.37	Pk	28.6	.7	-95.2	-43.4	-56.93	-13	-43.93	V
2.489200	54.06	Pk	32.3	.5	-95.2	-45.4	-53.84	-13	-40.84	H
2.488223	53.13	Pk	32.3	.5	-95.2	-45.5	-54.77	-13	-41.77	V
6.360223	49.42	Pk	35.4	1	-95.2	-45.1	-51.88	-13	-38.88	H
6.359246	52.82	Pk	35.4	1	-95.2	-45.2	-48.48	-13	-35.48	V
High Channel, 841.5MHz										
1.669333	58.02	Pk	28.9	.7	-95.2	-43.7	-51.28	-13	-38.28	H
1.669822	57.56	Pk	28.9	.7	-95.2	-43.6	-51.64	-13	-38.64	V
2.504356	55.65	Pk	32.3	.5	-95.2	-45.4	-52.15	-13	-39.15	H
2.504845	55.92	Pk	32.3	.5	-95.2	-45.4	-51.88	-13	-38.88	V
3.336934	52.79	Pk	32.8	.5	-95.2	-45.1	-54.01	-13	-41.01	H
3.339378	53.45	Pk	32.8	.5	-95.2	-45.2	-53.45	-13	-40.45	V

BPSK 5G NR n26 (20.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/2/2023
Test Engineer:	19186
Configuration:	EUT Only
Mode	FR1 N26 22H 20MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 834MHz										
1.678220	53.46	Pk	29	.7	-95.2	-43.60	-55.64	-13	-42.64	H
1.671289	52.93	Pk	28.9	.7	-95.2	-43.50	-56.17	-13	-43.17	V
2.498489	53.22	Pk	32.3	.5	-95.2	-45.40	-54.58	-13	-41.58	H
2.489200	54.19	Pk	32.3	.5	-95.2	-45.50	-53.71	-13	-40.71	V
3.341334	53.23	Pk	32.8	.4	-95.2	-45.10	-53.87	-13	-40.87	H
3.345245	53.7	Pk	32.8	.4	-95.2	-44.80	-53.10	-13	-40.10	V
Mid Channel, 836.5MHz										
1.677156	53.12	Pk	29	.7	-95.2	-43.60	-55.98	-13	-42.98	H
1.677645	52.82	Pk	29	.7	-95.2	-43.60	-56.28	-13	-43.28	V
2.501423	54.03	Pk	32.3	.5	-95.2	-45.50	-53.87	-13	-40.87	H
2.503867	54.08	Pk	32.3	.5	-95.2	-45.40	-53.72	-13	-40.72	V
3.340356	53.21	Pk	32.8	.4	-95.2	-45.00	-53.79	-13	-40.79	H
3.334978	54.54	Pk	32.8	.5	-95.2	-45.10	-52.46	-13	-39.46	V
High Channel, 839MHz										
1.659355	63.08	Pk	28.7	.7	-95.2	-43.60	-46.32	-13	-33.32	H
1.659377	66.46	Pk	28.7	.7	-95.2	-43.60	-42.94	-13	-29.94	V
2.525378	54.59	Pk	32.3	.5	-95.2	-45.5	-53.21	-13	-40.21	H
2.528311	53.6	Pk	32.3	.5	-95.2	-45.40	-54.30	-13	-41.30	V
3.353556	52.79	Pk	32.8	.4	-95.2	-45.00	-54.11	-13	-41.11	H
3.362356	53.07	Pk	32.8	.5	-95.2	-45.10	-53.93	-13	-40.93	V

10.2.10. 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 #:	14523758
Date:	06/08/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B30 10MHz QPSK
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									
4.620938	25.92	RMS	34.3	-95.2	-29.01	-63.99	-40	-23.99	H
4.620000	27.04	RMS	34.3	-95.2	-29.12	-62.98	-40	-22.98	V
6.930469	24.23	RMS	35.7	-95.2	-26.50	-61.77	-40	-21.77	H
6.930469	23.63	RMS	35.7	-95.2	-26.50	-62.37	-40	-22.37	V
9.240000	21.68	RMS	36.1	-95.2	-23.77	-61.19	-40	-21.19	H
9.240000	21.58	RMS	36.1	-95.2	-23.77	-61.29	-40	-21.29	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/06/2023
Test Engineer:	25019
Configuration:	EUT Only
Mode	FR1 N30 10MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222740 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.610273	44.51	RMS	33.8	-95.2	-47.74	-64.63	-40	-24.63	H
4.610273	44.55	RMS	33.8	-95.2	-47.74	-64.59	-40	-24.59	V
6.916016	42.27	RMS	35.5	-95.2	-45.03	-62.46	-40	-22.46	H
6.916262	42.24	RMS	35.5	-95.2	-45.02	-62.48	-40	-22.48	V
9.221270	41.23	RMS	36.2	-95.2	-43.35	-61.12	-40	-21.12	H
9.221270	41.09	RMS	36.2	-95.2	-43.35	-61.26	-40	-21.26	V

10.2.11. 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 #:	14523758
Date:	3/9/2023
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE FCC B41 20MHz QPSK
Chamber #:	04-RDE-D

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2506MHz									
3.929500	56.57	Pk	33.2	-95.2	-46.58	-52.01	-25	-27.01	H
3.932000	54.48	Pk	33.2	-95.2	-46.42	-53.94	-25	-28.94	V
5.883500	53.92	Pk	35.1	-95.2	-45.76	-51.94	-25	-26.94	H
5.882500	53.59	Pk	35.1	-95.2	-45.75	-52.26	-25	-27.26	V
9.204500	55.57	Pk	36.4	-95.2	-43.66	-46.89	-25	-21.89	H
9.204000	53.63	Pk	36.4	-95.2	-43.65	-48.82	-25	-23.82	V
Mid Channel, 2593MHz									
4.782000	56.19	Pk	34.2	-95.2	-46.64	-51.45	-25	-26.45	H
4.782500	53.32	Pk	34.2	-95.2	-46.63	-54.31	-25	-29.31	V
9.158000	54.34	Pk	36.4	-95.2	-43.87	-48.33	-25	-23.33	H
9.159000	53.23	Pk	36.4	-95.2	-43.87	-49.44	-25	-24.44	V
12.626000	55.01	Pk	38.9	-95.2	-42.84	-44.13	-25	-19.13	H
12.622000	52.79	Pk	38.9	-95.2	-42.87	-46.38	-25	-21.38	V
High Channel, 2680MHz									
4.070000	55.47	Pk	33.4	-95.2	-46.74	-53.07	-25	-28.07	H
4.069000	54.3	Pk	33.4	-95.2	-46.73	-54.23	-25	-29.23	V
7.436500	55.19	Pk	35.4	-95.2	-44.89	-49.50	-25	-24.50	H
7.439000	52.83	Pk	35.4	-95.2	-44.86	-51.83	-25	-26.83	V
11.737000	54.31	Pk	38.6	-95.2	-43.04	-45.33	-25	-20.33	H
11.733500	54.94	Pk	38.6	-95.2	-43.12	-44.78	-25	-19.78	V

BPSK 5G NR n41 (100.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/05/2023
Test Engineer:	32981
Configuration:	EUT Only
Mode	FR1 N41 FCC 100MHz BPSK
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2546MHz									
5.241000	55.18	Pk	34.1	-95.2	-46.42	-52.34	-25	-27.34	H
5.240500	52.75	Pk	34.1	-95.2	-46.40	-54.75	-25	-29.75	V
9.204500	55.04	Pk	36.4	-95.2	-43.66	-47.42	-25	-22.42	H
9.203000	52.52	Pk	36.4	-95.2	-43.68	-49.96	-25	-24.96	V
11.477000	54.75	Pk	38.3	-95.2	-43.51	-45.66	-25	-20.66	H
11.477500	55.12	Pk	38.3	-95.2	-43.50	-45.28	-25	-20.28	V
Mid Channel, 2593MHz									
5.197500	55	Pk	34.2	-95.2	-46.46	-52.46	-25	-27.46	H
5.193500	53.58	Pk	34.2	-95.2	-46.41	-53.83	-25	-28.83	V
7.632500	54.27	Pk	35.6	-95.2	-44.75	-50.08	-25	-25.08	H
7.632000	58.05	Pk	35.6	-95.2	-44.75	-46.30	-25	-21.30	V
10.167500	56.81	Pk	37.2	-95.2	-44.27	-45.46	-25	-20.46	H
10.166500	54.01	Pk	37.2	-95.2	-44.29	-48.28	-25	-23.28	V
High Channel, 2640MHz									
4.120500	56.49	Pk	33.4	-95.2	-46.55	-51.86	-25	-26.86	H
4.123000	54.05	Pk	33.4	-95.2	-46.67	-54.42	-25	-29.42	V
7.773000	53.76	Pk	35.6	-95.2	-44.48	-50.32	-25	-25.32	H
7.773000	58.74	Pk	35.6	-95.2	-44.48	-45.34	-25	-20.34	V
10.478000	56.25	Pk	37.5	-95.2	-44.59	-46.04	-25	-21.04	H
10.479000	54.73	Pk	37.5	-95.2	-44.58	-47.55	-25	-22.55	V

10.2.12. 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 #:	14523758
Date:	3/8/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B66 20MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.440156	39.55	Pk	32.6	-95.2	-32.97	-56.02	-13	-43.02	H
3.440156	40.28	Pk	32.6	-95.2	-32.97	-55.29	-13	-42.29	V
5.16	37.3	Pk	34.7	-95.2	-29.57	-52.77	-13	-39.77	H
5.16	37.3	Pk	34.7	-95.2	-29.57	-52.77	-13	-39.77	V
6.879844	33.35	Pk	36	-95.2	-26.45	-52.3	-13	-39.3	H
6.879844	33.02	Pk	36	-95.2	-26.45	-52.63	-13	-39.63	V
Mid Channel, 1745MHz									
3.490313	39.37	Pk	32.5	-95.2	-32.94	-56.27	-13	-43.27	H
3.490313	39.62	Pk	32.5	-95.2	-32.94	-56.02	-13	-43.02	V
5.235000	36.34	Pk	34.7	-95.2	-28.67	-52.83	-13	-39.83	H
5.235000	35.39	Pk	34.7	-95.2	-28.67	-53.78	-13	-40.78	V
6.980156	34.04	Pk	35.7	-95.2	-26.74	-52.2	-13	-39.2	H
6.980156	33.72	Pk	35.7	-95.2	-26.74	-52.52	-13	-39.52	V
High Channel, 1770MHz									
3.54	37.73	Pk	33.2	-95.2	-32.86	-57.13	-13	-44.13	H
3.54	38.19	Pk	33.2	-95.2	-32.86	-56.67	-13	-43.67	V
5.31	38.57	Pk	34.5	-95.2	-29.84	-51.97	-13	-38.97	H
5.31	35.87	Pk	34.5	-95.2	-29.84	-54.67	-13	-41.67	V
7.078125	34.06	Pk	35.9	-95.2	-26.92	-52.16	-13	-39.16	V
7.08	34.93	Pk	35.9	-95.2	-26.89	-51.26	-13	-38.26	H

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/12/2023
Test Engineer:	32981
Configuration:	EUT Only
Mode	FR1 N66 40MHz BPSK
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.420684	55.07	Pk	32.7	-95.2	-44.4	-51.83	-13	-38.83	H
3.420203	54.64	Pk	32.7	-95.2	-44.4	-52.26	-13	-39.26	V
5.132112	54.96	Pk	34.5	-95.2	-44.1	-49.84	-13	-36.84	H
5.132389	55.23	Pk	34.5	-95.2	-44.1	-49.57	-13	-36.57	V
6.838828	51.17	Pk	35.6	-95.2	-40.8	-49.23	-13	-36.23	H
6.840608	51.65	Pk	35.6	-95.2	-40.9	-48.85	-13	-35.85	V
Mid Channel, 1745MHz									
3.455500	54.73	Pk	32.9	-95.2	-45.87	-53.44	-13	-40.44	V
3.451500	54.5	Pk	32.9	-95.2	-46.04	-53.84	-13	-40.84	H
5.168000	54.17	Pk	34.2	-95.2	-46.16	-52.99	-13	-39.99	V
5.165500	54.14	Pk	34.2	-95.2	-46.26	-53.12	-13	-40.12	H
6.909000	53.33	Pk	35.5	-95.2	-44.46	-50.83	-13	-37.83	V
6.908500	52.34	Pk	35.5	-95.2	-44.46	-51.82	-13	-38.82	H
High Channel, 1760MHz									
3.481000	55.34	Pk	32.9	-95.2	-46.09	-53.05	-13	-40.05	H
3.478000	54.14	Pk	32.9	-95.2	-46.06	-54.22	-13	-41.22	V
5.221000	55.44	Pk	34.1	-95.2	-46.12	-51.78	-13	-38.78	H
5.223000	53.66	Pk	34.1	-95.2	-46.12	-53.56	-13	-40.56	V
6.946500	54.39	Pk	35.5	-95.2	-44.77	-50.08	-13	-37.08	H
6.947500	52.19	Pk	35.5	-95.2	-44.79	-52.30	-13	-39.30	V

10.2.13. 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 #:	14523758
Date:	2/22/2023
Test Engineer:	27661
Configuration:	EUT Only
Mode	FR1 N70 15MHz BPSK
Chamber #:	05-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, 1702.5MHz									
3.425000	54.09	Pk	33	-95.2	-45.92	-54.03	-13	-41.03	H
3.415000	53.88	Pk	33	-95.2	-45.74	-54.06	-13	-41.06	V
5.082810	50.12	Pk	34.5	-95.2	-47.22	-57.80	-13	-44.80	H
5.087118	56.29	Pk	34.5	-95.2	-47.19	-51.60	-13	-38.60	V
6.839000	54.04	Pk	36.2	-95.2	-45.6	-50.56	-13	-37.56	H
6.852500	54.07	Pk	36.2	-95.2	-45.76	-50.69	-13	-37.69	V

10.2.14. 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 #:	14523758
Date:	3/14/2023
Test Engineer:	25196
Configuration:	EUT Only
Mode	LTE B71 20MHz QPSK
Chamber #:	05-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	172654 HPF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 673MHz										
1.337867	42.84	Pk	28.8	1.3	-95.2	-35.12	-57.38	-13	-44.38	H
1.333467	41.91	Pk	28.9	1.3	-95.2	-35.15	-58.24	-13	-45.24	V
2.031111	42.26	Pk	31.9	.6	-95.2	-34.97	-55.41	-13	-42.41	H
2.022311	41.45	Pk	31.8	.6	-95.2	-34.98	-56.33	-13	-43.33	V
2.692089	41.8	Pk	32.2	.5	-95.2	-34.64	-55.34	-13	-42.34	H
2.691600	41.66	Pk	32.2	.5	-95.2	-34.70	-55.54	-13	-42.54	V
Mid Channel, 683MHz										
1.357422	41.77	Pk	28.6	1.1	-95.2	-35.05	-58.78	-13	-45.78	H
1.378933	43.96	Pk	28.5	1	-95.2	-35.14	-56.88	-13	-43.88	V
2.048711	41.68	Pk	31.9	.6	-95.2	-34.98	-56.00	-13	-43.00	H
2.036000	41.28	Pk	31.9	.6	-95.2	-35.08	-56.50	-13	-43.50	V
2.736578	41.25	Pk	32.3	.5	-95.2	-34.73	-55.88	-13	-42.88	H
2.719956	42.61	Pk	32.2	.5	-95.2	-34.69	-54.58	-13	-41.58	V
High Channel, 688MHz										
1.370133	42.03	Pk	28.6	1	-95.2	-35.11	-58.68	-13	-45.68	H
1.359378	41.81	Pk	28.6	1.1	-95.2	-35.00	-58.69	-13	-45.69	V
2.072178	42.15	Pk	32.1	.6	-95.2	-35.04	-55.39	-13	-42.39	H
2.073156	42.6	Pk	32.1	.6	-95.2	-35.05	-54.95	-13	-41.95	V
2.744400	42.18	Pk	32.3	.6	-95.2	-34.58	-54.70	-13	-41.70	H
2.737556	42.44	Pk	32.3	.5	-95.2	-34.71	-54.67	-13	-41.67	V

BPSK 5G NR n71 (20.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/3/2023
Test Engineer:	19186
Configuration:	EUT Only
Mode	FR1 N71 20MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 673MHz										
1.338844	50.42	Pk	28.7	1.3	-95.2	-42.10	-56.88	-13	-43.88	H
1.334444	51.5	Pk	28.7	1.3	-95.2	-42.00	-55.70	-13	-42.70	V
2.014978	54.05	Pk	31.3	.6	-95.2	-44.50	-53.75	-13	-40.75	H
2.005200	54.62	Pk	31.2	.6	-95.2	-44.60	-53.38	-13	-40.38	V
2.685245	53.87	Pk	32.1	.5	-95.2	-45.80	-54.53	-13	-41.53	H
2.677911	53.78	Pk	32.1	.5	-95.2	-45.80	-54.62	-13	-41.62	V
Mid Channel, 683MHz										
1.367689	48.4	Pk	28.4	1.3	-95.2	-42.10	-59.50	-13	-46.50	H
1.365733	46.94	Pk	28.5	1.3	-95.2	-42.00	-60.76	-13	-47.76	V
2.042356	52.26	Pk	31.4	.6	-95.2	-44.50	-55.54	-13	-42.54	H
2.039422	51.54	Pk	31.4	.6	-95.2	-44.60	-56.46	-13	-43.46	V
2.725823	54.02	Pk	32.1	.5	-95.2	-45.80	-54.38	-13	-41.38	H
2.721911	54.85	Pk	32.1	.5	-95.2	-45.80	-53.55	-13	-40.55	V
High Channel, 688MHz										
1.371600	48.63	Pk	28.4	1.3	-95.2	-42.10	-59.17	-13	-46.17	H
1.371600	47.69	Pk	28.4	1.3	-95.2	-42.00	-60.11	-13	-47.11	V
2.064845	53.57	Pk	31.4	.6	-95.2	-44.50	-54.43	-13	-41.43	H
2.061911	52.28	Pk	31.4	.6	-95.2	-44.60	-55.62	-13	-42.62	V
2.752223	52.99	Pk	32.1	.5	-95.2	-45.80	-55.21	-13	-42.21	H
2.755645	53.57	Pk	32.1	.5	-95.2	-45.80	-54.63	-13	-41.63	V

10.3. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 3

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r02

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

RESULTS

10.3.1. LTE BAND 5 AND 5G NR n5

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) dB.

QPSK LTE BAND 5 (10.0MHZ BANDWIDTH)

Project #:	14523758
Date:	3/9/2023
Test Engineer:	28867
Configuration:	EUT Only
Mode	LTE B5 10MHz QPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 829MHz										
1.905405	53.93	Pk	30.9	.6	-95.2	-44.20	-53.97	-13	-40.97	H
1.902533	53.62	Pk	30.9	.6	-95.2	-43.90	-53.98	-13	-40.98	V
2.470134	54.09	Pk	32.2	.5	-95.2	-45.40	-53.81	-13	-40.81	H
2.470134	54.73	Pk	32.2	.5	-95.2	-45.40	-53.17	-13	-40.17	V
3.298800	52.45	Pk	32.9	.5	-95.2	-45.00	-54.35	-13	-41.35	H
3.297823	52.62	Pk	32.9	.5	-95.2	-45.00	-54.18	-13	-41.18	V
Mid Channel, 836.5MHz										
1.665422	51.81	Pk	28.8	.7	-95.2	-43.40	-57.29	-13	-44.29	H
1.663467	52.36	Pk	28.7	.7	-95.2	-43.40	-56.84	-13	-43.84	V
2.494089	53.05	Pk	32.3	.5	-95.2	-45.50	-54.85	-13	-41.85	H
2.493600	53	Pk	32.3	.5	-95.2	-45.50	-54.90	-13	-41.90	V
3.326667	52.88	Pk	32.9	.5	-95.2	-45.00	-53.92	-13	-40.92	H
3.326667	52.36	Pk	32.9	.5	-95.2	-45.00	-54.44	-13	-41.44	V
High Channel, 844MHz										
1.688889	53.9	Pk	29.2	.7	-95.2	-43.80	-55.20	-13	-42.20	H
1.683511	53.19	Pk	29.1	.7	-95.2	-43.60	-55.81	-13	-42.81	V
2.519511	53.84	Pk	32.3	.5	-95.2	-45.30	-53.86	-13	-40.86	H
2.518045	52.61	Pk	32.3	.5	-95.2	-45.30	-55.09	-13	-42.09	V
3.364800	53.43	Pk	32.8	.5	-95.2	-45.00	-53.47	-13	-40.47	H
3.366267	54.91	Pk	32.8	.5	-95.2	-44.90	-51.89	-13	-38.89	V

BPSK 5G NR n5 (20.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/6/2023
Test Engineer:	28867
Configuration:	EUT Only
Mode	FR1 N5 20MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 834MHz										
1.649808	55.15	Pk	28.5	.7	-95.2	-43.40	-54.25	-13	-41.25	H
1.649277	56.55	Pk	28.5	.7	-95.2	-43.40	-52.85	-13	-39.85	V
2.472295	56.18	Pk	32.2	.5	-95.2	-45.40	-51.72	-13	-38.72	H
2.473442	56.8	Pk	32.2	.5	-95.2	-45.50	-51.20	-13	-38.20	V
3.297948	54.92	Pk	32.9	.5	-95.2	-45.00	-51.88	-13	-38.88	H
3.297918	54.84	Pk	32.9	.5	-95.2	-45.00	-51.96	-13	-38.96	V
Mid Channel, 836.5MHz										
1.652199	52.91	Pk	28.6	.7	-95.2	-43.40	-56.59	-13	-43.59	H
1.654323	53.86	Pk	28.6	.7	-95.2	-43.40	-55.74	-13	-42.74	V
2.479476	55.97	Pk	32.2	.5	-95.2	-45.40	-51.93	-13	-38.93	H
2.478639	55.59	Pk	32.2	.5	-95.2	-45.50	-52.31	-13	-39.31	V
3.306844	55.03	Pk	32.9	.5	-95.2	-45.00	-51.97	-13	-38.97	H
3.308450	54.41	Pk	32.9	.5	-95.2	-45.00	-52.49	-13	-39.49	V
High Channel, 839MHz										
1.659896	54.01	Pk	28.7	.7	-95.2	-43.40	-55.49	-13	-42.49	H
1.659284	58.81	Pk	28.7	.7	-95.2	-43.40	-50.59	-13	-37.59	V
2.488962	55.18	Pk	32.3	.5	-95.2	-45.40	-52.72	-13	-39.72	H
2.485470	54.4	Pk	32.3	.5	-95.2	-45.50	-53.40	-13	-40.40	V
3.318000	54.72	Pk	32.9	.5	-95.2	-45.00	-51.98	-13	-38.98	H
3.315981	55.4	Pk	32.9	.5	-95.2	-45.00	-51.40	-13	-38.40	V

10.3.2. 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 #:	14523758
Date:	3/13/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B7 20MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 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	37.3	Pk	34.1	.8	-95.2	-30.94	-53.94	-25	-28.94	H
5.020313	37.15	Pk	34.1	.8	-95.2	-30.94	-54.09	-25	-29.09	V
7.530469	32.99	Pk	36	.3	-95.2	-27.07	-52.98	-25	-27.98	H
7.530469	33.29	Pk	36	.3	-95.2	-27.07	-52.68	-25	-27.68	V
10.040625	33.26	Pk	37.3	.7	-95.2	-25.07	-49.01	-25	-24.01	H
10.040625	32.75	Pk	37.3	.7	-95.2	-25.07	-49.52	-25	-24.52	V
Mid Channel, 2535MHz										
5.070469	36.57	Pk	34.3	.7	-95.2	-30.84	-54.47	-25	-29.47	H
5.070469	36.79	Pk	34.3	.7	-95.2	-30.84	-54.25	-25	-29.25	V
7.605469	32.75	Pk	35.9	.4	-95.2	-27.23	-53.38	-25	-28.38	H
7.605469	35.06	Pk	35.9	.4	-95.2	-27.23	-51.07	-25	-26.07	V
10.140938	36.69	Pk	37.5	.6	-95.2	-25.02	-45.43	-25	-20.43	H
10.140938	32.36	Pk	37.5	.6	-95.2	-25.02	-49.76	-25	-24.76	V
High Channel, 2560MHz										
5.120156	37.53	Pk	34.6	.8	-95.2	-30.81	-53.08	-25	-28.08	H
5.120156	36.91	Pk	34.6	.8	-95.2	-30.81	-53.70	-25	-28.70	V
7.683750	35.8	Pk	35.9	.5	-95.2	-26.89	-49.89	-25	-24.89	H
7.683281	31.66	Pk	35.9	.5	-95.2	-26.89	-54.03	-25	-29.03	V
10.239844	33.62	Pk	37.6	.8	-95.2	-25.06	-48.24	-25	-23.24	H
10.239844	32.09	Pk	37.6	.8	-95.2	-25.06	-49.77	-25	-24.77	V

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/7/2023
Test Engineer:	28867
Configuration:	EUT Only
Mode	FR1 N7 40MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2520MHz									
5.040500	55.47	Pk	34.4	-95.2	-47.74	-53.07	-25	-28.07	H
5.040500	54.43	Pk	34.4	-95.2	-47.74	-54.11	-25	-29.11	V
7.560500	51.93	Pk	35.8	-95.2	-45.73	-53.20	-25	-28.20	H
7.560500	52.25	Pk	35.8	-95.2	-45.73	-52.88	-25	-27.88	V
10.081000	52.86	Pk	37.5	-95.2	-45.51	-50.35	-25	-25.35	V
10.080500	52.68	Pk	37.5	-95.2	-45.48	-50.50	-25	-25.50	H
Mid Channel, 2535MHz									
5.073000	54.71	Pk	34.5	-95.2	-47.80	-53.79	-25	-28.79	H
5.073000	56.19	Pk	34.5	-95.2	-47.80	-52.31	-25	-27.31	V
7.605500	52.56	Pk	35.7	-95.2	-45.70	-52.64	-25	-27.64	H
7.605500	52.86	Pk	35.7	-95.2	-45.70	-52.34	-25	-27.34	V
10.140500	52.53	Pk	37.5	-95.2	-45.48	-50.65	-25	-25.65	H
10.140500	53.51	Pk	37.5	-95.2	-45.48	-49.67	-25	-24.67	V
High Channel, 2550MHz									
5.099500	54.58	Pk	34.5	-95.2	-47.73	-53.85	-25	-28.85	H
5.101000	57.58	Pk	34.5	-95.2	-47.68	-50.80	-25	-25.80	V
7.650000	52.78	Pk	35.7	-95.2	-45.50	-52.22	-25	-27.22	H
7.650500	52.79	Pk	35.7	-95.2	-45.40	-52.11	-25	-27.11	V
10.200500	52.37	Pk	37.5	-95.2	-45.19	-50.52	-25	-25.52	H
10.200000	52.49	Pk	37.5	-95.2	-45.17	-50.38	-25	-25.38	V

10.3.3. 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 #:	14523758
Date:	3/14/2023
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE B12 10MHz QPSK
Chamber #:	05-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, 704MHz									
1.416700	56.79	Pk	28	-95.2	-47.23	-57.64	-13	-44.64	H
1.416250	56.67	Pk	28	-95.2	-47.23	-57.76	-13	-44.76	V
2.107900	57.64	Pk	31.6	-95.2	-47.98	-53.94	-13	-40.94	H
2.098900	56.68	Pk	31.5	-95.2	-48.00	-55.02	-13	-42.02	V
2.826550	55.73	Pk	32.6	-95.2	-46.84	-53.71	-13	-40.71	H
2.819350	56.2	Pk	32.7	-95.2	-46.86	-53.16	-13	-40.16	V
Mid Channel, 707.5MHz									
1.417150	57.4	Pk	28	-95.2	-47.23	-57.03	-13	-44.03	H
1.410850	57.02	Pk	28	-95.2	-47.16	-57.34	-13	-44.34	V
2.129500	57.07	Pk	31.5	-95.2	-47.81	-54.44	-13	-41.44	H
2.120050	58.52	Pk	31.6	-95.2	-47.91	-52.99	-13	-39.99	V
2.819800	56.59	Pk	32.7	-95.2	-46.83	-52.74	-13	-39.74	H
2.822500	55.96	Pk	32.7	-95.2	-46.87	-53.41	-13	-40.41	V
High Channel, 711MHz									
1.424800	57.21	Pk	27.9	-95.2	-47.22	-57.31	-13	-44.31	H
1.427500	57.16	Pk	27.9	-95.2	-47.25	-57.39	-13	-44.39	V
2.120500	57.44	Pk	31.6	-95.2	-47.90	-54.06	-13	-41.06	H
2.111050	56.86	Pk	31.6	-95.2	-47.91	-54.65	-13	-41.65	V
2.843200	56.5	Pk	32.6	-95.2	-46.89	-52.99	-13	-39.99	H
2.825200	56.47	Pk	32.6	-95.2	-46.90	-53.03	-13	-40.03	V

BPSK 5G NR n12 (15.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/6/2023
Test Engineer:	19186
Configuration:	EUT Only
Mode	FR1 N12 15MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 706.5MHz										
1.420000	51.3	Pk	28	.9	-95.2	-42.10	-57.10	-13	-44.10	H
1.415600	51.08	Pk	28	.9	-95.2	-42.30	-57.52	-13	-44.52	V
2.130356	52.96	Pk	31.6	.5	-95.2	-45.10	-55.24	-13	-42.24	H
2.133778	53.36	Pk	31.6	.5	-95.2	-45.00	-54.74	-13	-41.74	V
2.829467	53.51	Pk	32.4	.5	-95.2	-45.50	-54.29	-13	-41.29	H
2.839734	54.34	Pk	32.4	.6	-95.2	-45.40	-53.26	-13	-40.26	V
Mid Channel, 707.5MHz										
1.427822	52.05	Pk	27.9	.9	-95.2	-42.10	-56.55	-13	-43.55	H
1.430756	51.75	Pk	27.9	.9	-95.2	-42.30	-56.95	-13	-43.95	V
2.133778	53.18	Pk	31.6	.5	-95.2	-45.10	-54.92	-13	-41.92	H
2.128889	53.07	Pk	31.6	.5	-95.2	-45.00	-55.13	-13	-42.13	V
2.832889	55.56	Pk	32.4	.5	-95.2	-45.50	-52.24	-13	-39.24	H
2.828000	53.36	Pk	32.4	.5	-95.2	-45.40	-54.34	-13	-41.34	V
High Channel, 708.5MHz										
1.415111	50.19	Pk	28	.9	-95.2	-42.10	-58.31	-13	-45.31	H
1.420000	50.14	Pk	28	.9	-95.2	-42.30	-58.26	-13	-45.26	V
2.118622	52.6	Pk	31.6	.5	-95.2	-45.10	-55.40	-13	-42.40	H
2.106889	53.3	Pk	31.5	.6	-95.2	-45.00	-54.70	-13	-41.7	V
2.829956	53.62	Pk	32.4	.5	-95.2	-45.50	-54.18	-13	-41.18	H
2.835334	54.1	Pk	32.4	.5	-95.2	-45.40	-53.60	-13	-40.60	V

10.3.4. 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 #:	14523758
Date:	06/08/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B13 10MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	172654 HPF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 782MHz										
1.564711	40.86	Pk	27.7	.8	-95.2	-35.18	-61.02	-40	-21.02	H
1.564711	41.47	Pk	27.7	.8	-95.2	-35.18	-60.41	-40	-20.41	V
2.332931	49.13	Pk	31.9	.6	-95.2	-34.99	-48.56	-13	-35.56	H
2.335035	44.43	Pk	31.9	.6	-95.2	-34.93	-53.20	-13	-40.20	V
3.128178	40.76	Pk	32.9	.5	-95.2	-34.24	-55.28	-13	-42.28	H
3.127689	42.05	Pk	32.9	.5	-95.2	-34.25	-54.00	-13	-41.00	V

* **Emissions in the GPS band were wideband emissions therefore the -40dBm/MHz limit was used.**

10.3.5. 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 #:	14523758
Date:	3/14/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B14 10MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.587689	52.7	Pk	27.7	.8	-95.2	-43.00	-57.00	-40	-17.00	H
1.587689	51.85	Pk	27.7	.8	-95.2	-43.00	-57.85	-40	-17.85	V
2.378222	55.43	Pk	32	.6	-95.2	-45.60	-52.77	-13	-39.77	H
2.365022	55.86	Pk	31.9	.5	-95.2	-45.80	-52.74	-13	-39.74	V
3.171200	53.09	Pk	32.9	.5	-95.2	-45.10	-53.81	-13	-40.81	H
3.176578	52.92	Pk	32.9	.5	-95.2	-45.00	-53.88	-13	-40.88	V

*** Emissions in the GPS band were wideband emissions therefore the -40dBm/MHz limit was used.**

BPSK 5G NR n14 (10.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/6/2023
Test Engineer:	19186
Configuration:	EUT Only
Mode	FR1 N14 10MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	172654 HPF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.577302	50.65	Pk	28.1	.8	-95.2	-35.20	-50.85	-40	-10.85	H
1.577422	48.67	Pk	28.1	.8	-95.2	-35.23	-52.86	-40	-12.86	V
2.373334	40.05	Pk	32.2	.6	-95.2	-34.95	-57.30	-13	-44.30	H
2.373334	40.73	Pk	32.2	.6	-95.2	-34.95	-56.62	-13	-43.62	V
3.172178	39.38	Pk	33.2	.5	-95.2	-34.08	-56.20	-13	-43.20	H
3.172178	40.4	Pk	33.2	.5	-95.2	-34.08	-55.18	-13	-42.18	V

*** Emissions in the GPS band were wideband emissions therefore the -40dBm/MHz limit was used.**

10.3.6. 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 #:	14523758
Date:	06/08/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B17 10MHz QPSK
Chamber #:	05-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	172654 HPF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 709MHz										
1.418533	43.51	Pk	28.1	.9	-95.2	-35.27	-57.96	-13	-44.96	H
1.418533	40.92	Pk	28.1	.9	-95.2	-35.27	-60.55	-13	-47.55	V
2.126934	44.53	Pk	31.6	.5	-95.2	-35.16	-53.73	-13	-40.73	H
2.126934	41.71	Pk	31.6	.5	-95.2	-35.16	-56.55	-13	-43.55	V
2.836311	40.98	Pk	32.3	.5	-95.2	-34.52	-55.94	-13	-42.94	H
2.836311	40.39	Pk	32.3	.5	-95.2	-34.52	-56.53	-13	-43.53	V
Mid Channel, 710MHz										
1.420000	41.78	Pk	28.1	.9	-95.2	-35.21	-59.63	-13	-46.63	H
1.420000	41.7	Pk	28.1	.9	-95.2	-35.21	-59.71	-13	-46.71	V
2.129867	41.44	Pk	31.6	.5	-95.2	-35.09	-56.75	-13	-43.75	H
2.129867	41.41	Pk	31.6	.5	-95.2	-35.09	-56.78	-13	-43.78	V
2.840223	41.41	Pk	32.3	.6	-95.2	-34.47	-55.36	-13	-42.36	H
2.840223	41.05	Pk	32.3	.6	-95.2	-34.47	-55.72	-13	-42.72	V
High Channel, 711MHz										
1.422933	41.25	Pk	28.1	.9	-95.2	-35.20	-60.15	-13	-47.15	H
1.422445	42.17	Pk	28.1	.9	-95.2	-35.18	-59.21	-13	-46.21	V
2.132800	42.01	Pk	31.6	.5	-95.2	-35.16	-56.25	-13	-43.25	H
2.132800	41.49	Pk	31.6	.5	-95.2	-35.16	-56.77	-13	-43.77	V
2.844134	40.35	Pk	32.3	.6	-95.2	-34.56	-56.51	-13	-43.51	H
2.844623	41.19	Pk	32.3	.6	-95.2	-34.54	-55.65	-13	-42.65	V

10.3.7. 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 #:	14523758
Date:	3/9/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B25 20MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.720000	37.5	Pk	32.9	-95.2	-32.24	-57.04	-13	-44.04	H
3.720000	38.5	Pk	32.9	-95.2	-32.24	-56.04	-13	-43.04	V
5.580469	36.88	Pk	34.7	-95.2	-29.89	-53.51	-13	-40.51	H
5.580469	35.86	Pk	34.7	-95.2	-29.89	-54.53	-13	-41.53	V
7.440469	35.15	Pk	36	-95.2	-26.36	-50.41	-13	-37.41	H
7.440469	34.41	Pk	36	-95.2	-26.36	-51.15	-13	-38.15	V
Mid Channel, 1882.5MHz									
3.765469	37.56	Pk	33	-95.2	-32.03	-56.67	-13	-43.67	H
3.765469	38.88	Pk	33	-95.2	-32.03	-55.35	-13	-42.35	V
5.647031	36.59	Pk	34.7	-95.2	-30.06	-53.97	-13	-40.97	H
5.647031	36.76	Pk	34.7	-95.2	-30.06	-53.80	-13	-40.80	V
7.530000	34.47	Pk	36	-95.2	-26.36	-51.09	-13	-38.09	H
7.530000	34.48	Pk	36	-95.2	-26.36	-51.08	-13	-38.08	V
High Channel, 1905MHz									
3.810000	38.6	Pk	33.6	-95.2	-31.92	-54.92	-13	-41.92	H
3.810000	38.54	Pk	33.6	-95.2	-31.92	-54.98	-13	-41.98	V
5.715000	37.55	Pk	34.9	-95.2	-29.04	-51.79	-13	-38.79	H
5.715000	36.21	Pk	34.9	-95.2	-29.04	-53.13	-13	-40.13	V
7.620000	34.22	Pk	35.9	-95.2	-26.65	-51.73	-13	-38.73	H
7.620000	35.92	Pk	35.9	-95.2	-26.65	-50.03	-13	-37.03	V

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/8/2023
Test Engineer:	19186
Configuration:	EUT Only
Mode	FR1 N25 40MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	EIRP CF	Amp/Cbl/Fltr (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.737344	52.77	Pk	33.2	-95.2	-44.30	-53.53	-13	-40.53	H
3.724219	53.53	Pk	33.2	-95.2	-44.30	-52.77	-13	-39.77	V
5.622656	51.55	Pk	34.6	-95.2	-43.40	-52.45	-13	-39.45	H
5.592656	51.83	Pk	34.6	-95.2	-43.30	-52.07	-13	-39.07	V
7.489219	48.01	Pk	35.8	-95.2	-39.80	-51.19	-13	-38.19	H
7.395938	49.21	Pk	35.8	-95.2	-40.40	-50.59	-13	-37.59	V
Mid Channel, 1882.5MHz									
3.758906	52.96	Pk	33.2	-95.2	-44.30	-53.04	-13	-40.04	H
3.740625	55.57	Pk	33.2	-95.2	-44.30	-50.43	-13	-37.43	V
5.651719	52.04	Pk	34.6	-95.2	-43.40	-51.96	-13	-38.96	H
5.632500	51.65	Pk	34.6	-95.2	-43.30	-52.45	-13	-39.45	V
7.532344	48.89	Pk	35.8	-95.2	-39.80	-50.31	-13	-37.31	H
7.516406	47.78	Pk	35.8	-95.2	-40.40	-51.52	-13	-38.52	V
High Channel, 1895MHz									
3.794531	54.19	Pk	33.4	-95.2	-44.30	-51.81	-13	-38.81	H
3.775781	52.59	Pk	33.3	-95.2	-44.30	-53.51	-13	-40.51	V
5.674688	52.19	Pk	34.6	-95.2	-43.40	-51.81	-13	-38.81	H
5.631797	52.01	Pk	34.6	-95.2	-43.30	-52.19	-13	-39.19	V
7.589063	47.88	Pk	35.8	-95.2	-39.80	-51.12	-13	-38.12	H
7.567969	48.98	Pk	35.8	-95.2	-40.40	-50.22	-13	-37.22	V

10.3.8. 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 #:	14523758
Date:	06/08/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B26 90S 10MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	172654 HPF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 819MHz										
1.629245	45.52	Pk	28.1	.7	-95.2	-35.14	-56.02	-13	-43.02	H
1.629000	46.79	Pk	28.1	.7	-95.2	-35.12	-54.73	-13	-41.73	V
2.443734	45.69	Pk	32.2	.6	-95.2	-34.95	-51.66	-13	-38.66	H
2.443734	44.62	Pk	32.2	.6	-95.2	-34.95	-52.73	-13	-39.73	V
3.276312	40.88	Pk	32.7	.5	-95.2	-33.95	-55.07	-13	-42.07	H
3.276312	41.68	Pk	32.7	.5	-95.2	-33.95	-54.27	-13	-41.27	V

BPSK 5G NR n26 (20.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/7/2023
Test Engineer:	19186
Configuration:	EUT Only
Mode	FR1 N26 90S 10MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 819MHz										
1.629250	59.48	Pk	28.2	.7	-95.2	-43.2	-50.02	-13	-37.02	H
1.628756	52.4	Pk	28.2	.7	-95.2	-43.2	-57.10	-13	-44.10	V
2.459867	53.79	Pk	32.2	.5	-95.2	-45.5	-54.21	-13	-41.21	H
2.446178	54.4	Pk	32.1	.6	-95.2	-45.4	-53.50	-13	-40.50	V
3.272400	55.19	Pk	32.8	.5	-95.2	-45.1	-51.81	-13	-38.81	H
3.267512	54.01	Pk	32.8	.4	-95.2	-45.1	-53.09	-13	-40.09	V

10.3.9. 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) dB.

QPSK LTE BAND 26 (15.0MHZ BANDWIDTH)

Project #:	14523758
Date:	3/14/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B26 22H 15MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	172654 HPF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 831.5MHz										
1.649666	51.78	Pk	28.4	.7	-95.2	-35.05	-49.37	-13	-36.37	H
1.649725	51.76	Pk	28.4	.7	-95.2	-35.05	-49.39	-13	-36.39	V
2.494089	41.37	Pk	32.7	.5	-95.2	-34.86	-55.49	-13	-42.49	H
2.494089	40.91	Pk	32.7	.5	-95.2	-34.86	-55.95	-13	-42.95	V
3.326178	40.26	Pk	33.1	.5	-95.2	-33.90	-55.24	-13	-42.24	H
3.325689	39.54	Pk	33.1	.5	-95.2	-33.90	-55.96	-13	-42.96	V
Mid Channel, 836.5MHz										
1.664337	46.6	Pk	28.5	.7	-95.2	-35.17	-54.57	-13	-41.57	H
1.664141	53.86	Pk	28.5	.7	-95.2	-35.19	-47.33	-13	-34.33	V
2.509245	40.75	Pk	32.7	.5	-95.2	-34.90	-56.15	-13	-43.15	H
2.509245	40.55	Pk	32.7	.5	-95.2	-34.90	-56.35	-13	-43.35	V
3.345734	41.19	Pk	33.1	.4	-95.2	-33.84	-54.35	-13	-41.35	H
3.345734	40.05	Pk	33.1	.4	-95.2	-33.84	-55.49	-13	-42.49	V
High Channel, 841.5MHz										
1.669586	45.75	Pk	28.6	.7	-95.2	-35.21	-55.36	-13	-42.36	H
1.669653	55.24	Pk	28.6	.7	-95.2	-35.20	-45.86	-13	-32.86	V
2.524400	40.07	Pk	32.7	.5	-95.2	-34.96	-56.89	-13	-43.89	H
2.524400	40.26	Pk	32.7	.5	-95.2	-34.96	-56.70	-13	-43.70	V
3.336445	40.11	Pk	33.1	.5	-95.2	-33.91	-55.40	-13	-42.40	H
3.336445	39.27	Pk	33.1	.5	-95.2	-33.91	-56.24	-13	-43.24	V

BPSK 5G NR n26 (20.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/6/2023
Test Engineer:	19186
Configuration:	EUT Only
Mode	FR1 N26 22H 20MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 834MHz										
1.666400	52.28	Pk	28.8	.7	-95.2	-43.60	-57.02	-13	-44.02	H
1.667378	51.72	Pk	28.8	.7	-95.2	-43.70	-57.68	-13	-44.68	V
2.510223	54.2	Pk	32.3	.5	-95.2	-45.30	-53.50	-13	-40.50	H
2.513645	54.18	Pk	32.3	.5	-95.2	-45.30	-53.52	-13	-40.52	V
3.340845	54.28	Pk	32.8	.4	-95.2	-45.10	-52.82	-13	-39.82	H
3.337912	53.4	Pk	32.8	.5	-95.2	-44.90	-53.40	-13	-40.40	V
Mid Channel, 836.5MHz										
1.674222	51.5	Pk	28.9	.7	-95.2	-43.60	-57.80	-13	-44.80	H
1.674222	52.28	Pk	28.9	.7	-95.2	-43.70	-57.02	-13	-44.02	V
2.514134	54.44	Pk	32.3	.5	-95.2	-45.30	-53.36	-13	-40.36	H
2.507778	53.82	Pk	32.3	.5	-95.2	-45.30	-53.98	-13	-40.98	V
3.344756	53.51	Pk	32.8	.4	-95.2	-45.10	-53.29	-13	-40.29	H
3.330089	53.67	Pk	32.8	.5	-95.2	-44.90	-53.13	-13	-40.13	V
High Channel, 839MHz										
1.689867	52.81	Pk	29.2	.7	-95.2	-43.60	-56.19	-13	-43.19	H
1.659067	54.47	Pk	28.7	.7	-95.2	-43.70	-54.93	-13	-41.93	V
2.514623	54.72	Pk	32.3	.5	-95.2	-45.30	-53.08	-13	-40.08	H
2.521956	54.91	Pk	32.3	.5	-95.2	-45.30	-52.99	-13	-39.99	V
3.356489	52.79	Pk	32.8	.4	-95.2	-45.10	-54.01	-13	-41.01	H
3.330578	53.38	Pk	32.8	.5	-95.2	-44.90	-53.42	-13	-40.42	V

10.3.10. 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.
in Table 2 and graphically represented in Figure 2, where p is the transmitter output power measured in watts.

QPSK LTE BAND 30 (10.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/08/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B30 10MHz LAT3
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									
4.620000	26.47	RMS	34.3	-95.2	-29.12	-63.55	-40	-23.55	H
4.620000	26.74	RMS	34.3	-95.2	-29.12	-63.28	-40	-23.28	V
6.932344	23.95	RMS	35.7	-95.2	-26.45	-62.00	-40	-22.00	H
6.930469	24.27	RMS	35.7	-95.2	-26.50	-61.73	-40	-21.73	V
9.240469	21.35	RMS	36.1	-95.2	-23.74	-61.49	-40	-21.49	H
9.240000	21.7	RMS	36.1	-95.2	-23.77	-61.17	-40	-21.17	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/13/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	FR1 N30 10MHz BPSK
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									
4.620000	27.09	RMS	34.3	-95.2	-29.12	-62.93	-40	-22.93	H
4.620000	27.04	RMS	34.3	-95.2	-29.12	-62.98	-40	-22.98	V
6.930000	23.89	RMS	35.7	-95.2	-26.42	-62.03	-40	-22.03	H
6.930000	24.47	RMS	35.7	-95.2	-26.42	-61.45	-40	-21.45	V
9.242344	22.05	RMS	36.2	-95.2	-23.71	-60.66	-40	-20.66	H
9.242344	21.12	RMS	36.2	-95.2	-23.71	-61.59	-40	-21.59	V

10.3.11. 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 #:	14523758
Date:	3/13/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE FCC B41 20MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2506MHz										
5.012344	37.93	Pk	34.1	.8	-95.2	-30.84	-53.21	-25	-28.21	H
5.012344	37.63	Pk	34.1	.8	-95.2	-30.84	-53.51	-25	-28.51	V
7.518281	33.71	Pk	36	.3	-95.2	-26.86	-52.05	-25	-27.05	H
7.518281	32.49	Pk	36	.3	-95.2	-26.86	-53.27	-25	-28.27	V
10.024219	31.55	Pk	37.3	.6	-95.2	-24.98	-50.73	-25	-25.73	H
10.024219	32.37	Pk	37.3	.6	-95.2	-24.98	-49.91	-25	-24.91	V
Mid Channel, 2593MHz										
5.18625	37.75	Pk	34.8	.8	-95.2	-30.62	-52.47	-25	-27.47	H
5.186016	37.66	Pk	34.8	.8	-95.2	-30.61	-52.55	-25	-27.55	V
7.778906	33.1	Pk	36	.3	-95.2	-27.03	-52.83	-25	-27.83	H
7.778906	32.87	Pk	36	.3	-95.2	-27.03	-53.06	-25	-28.06	V
10.372031	31.8	Pk	37.4	.8	-95.2	-25.02	-50.22	-25	-25.22	H
10.372031	34.56	Pk	37.4	.8	-95.2	-25.02	-47.46	-25	-22.46	V
High Channel, 2680MHz										
5.359922	37.01	Pk	34.4	.5	-95.2	-30.06	-53.35	-25	-28.35	H
5.359688	36.46	Pk	34.4	.5	-95.2	-30.04	-53.88	-25	-28.88	V
8.040469	34.19	Pk	35.8	.4	-95.2	-26.63	-51.44	-25	-26.44	H
8.040234	34.17	Pk	35.8	.4	-95.2	-26.65	-51.48	-25	-26.48	V
10.719844	31.71	Pk	37.8	.6	-95.2	-23.98	-49.07	-25	-24.07	H
10.719844	31.18	Pk	37.8	.6	-95.2	-23.98	-49.60	-25	-24.60	V

BPSK LTE BAND n41 (100.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/9/2023
Test Engineer:	19186
Configuration:	EUT Only
Mode	FR1 N41 FCC 100MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	BRF 2495-2690MHz T1791 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2546MHz										
5.102813	53.16	Pk	34.4	.7	-95.2	-45.10	-52.04	-25	-27.04	H
5.089688	52.99	Pk	34.4	.7	-95.2	-45.10	-52.21	-25	-27.21	V
7.628906	48.73	Pk	35.8	.4	-95.2	-40.50	-50.77	-25	-25.77	H
7.650938	48.08	Pk	35.8	.4	-95.2	-40.60	-51.52	-25	-26.52	V
10.180313	45.54	Pk	37.3	.6	-95.2	-36.50	-48.26	-25	-23.26	H
10.178438	46.15	Pk	37.3	.6	-95.2	-36.60	-47.75	-25	-22.75	V
Mid Channel, 2593MHz										
5.182031	54.49	Pk	34.7	.8	-95.2	-45.10	-50.11	-25	-25.11	H
5.159531	53.04	Pk	34.6	.8	-95.2	-45.10	-51.66	-25	-26.66	V
7.762031	48.93	Pk	35.8	.3	-95.2	-40.50	-50.57	-25	-25.57	H
7.741406	49.57	Pk	35.8	.3	-95.2	-40.60	-50.03	-25	-25.03	V
10.366875	46.32	Pk	37.4	.8	-95.2	-36.50	-46.78	-25	-21.78	H
10.373438	46.02	Pk	37.4	.8	-95.2	-36.60	-47.08	-25	-22.08	V
High Channel, 2640MHz										
5175401	54.05	Pk	34.7	.8	-95.2	-45.10	-50.65	-25	-25.65	H
5.179281	53.99	Pk	34.7	.8	-95.2	-45.10	-50.61	-25	-25.61	V
7.769866	50.08	Pk	35.8	.4	-95.2	-40.50	-49.22	-25	-24.22	H
7.772225	49.36	Pk	35.8	.4	-95.2	-40.60	-49.94	-25	-24.94	V
10.359961	47.8	Pk	37.4	.7	-95.2	-36.50	-45.50	-25	-20.50	H
10.359984	48.08	Pk	37.4	.7	-95.2	-36.60	-45.22	-25	-20.22	V

10.3.12. 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 #:	14523758
Date:	3/8/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B66 20MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.440625	38.33	Pk	32.6	-95.2	-32.97	-57.24	-13	-44.24	H
3.440625	38.39	Pk	32.6	-95.2	-32.97	-57.18	-13	-44.18	V
5.160000	37.79	Pk	34.7	-95.2	-29.57	-52.28	-13	-39.28	H
5.160000	36.96	Pk	34.7	-95.2	-29.57	-53.11	-13	-40.11	V
6.879844	33.58	Pk	36	-95.2	-26.45	-52.07	-13	-39.07	H
6.879844	33.15	Pk	36	-95.2	-26.45	-52.50	-13	-39.50	V
Mid Channel, 1745MHz									
3.440156	37.64	Pk	32.6	-95.2	-32.97	-57.93	-13	-44.93	H
3.440156	39.41	Pk	32.6	-95.2	-32.97	-56.16	-13	-43.16	V
5.160000	35.9	Pk	34.7	-95.2	-29.57	-54.17	-13	-41.17	H
5.160000	37.54	Pk	34.7	-95.2	-29.57	-52.53	-13	-39.53	V
6.879844	33.63	Pk	36	-95.2	-26.45	-52.02	-13	-39.02	V
6.880313	32.78	Pk	36	-95.2	-26.45	-52.87	-13	-39.87	H
High Channel, 1770MHz									
3.540469	37.62	Pk	33.2	-95.2	-32.88	-57.26	-13	-44.26	H
3.540469	37.65	Pk	33.2	-95.2	-32.88	-57.23	-13	-44.23	V
5.310000	36.66	Pk	34.5	-95.2	-29.84	-53.88	-13	-40.88	H
5.310000	37.15	Pk	34.5	-95.2	-29.84	-53.39	-13	-40.39	V
7.080000	33.48	Pk	35.9	-95.2	-26.89	-52.71	-13	-39.71	H
7.080000	34.48	Pk	35.9	-95.2	-26.89	-51.71	-13	-38.71	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/22/2023
Test Engineer:	25196
Configuration:	EUT Only
Mode	FR1 N66 40MHz BPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.450469	40.49	Pk	32.6	-95.2	-32.97	-55.08	-13	-42.08	H
3.450000	40.48	Pk	32.6	-95.2	-33.01	-55.13	-13	-42.13	V
5.189063	38.2	Pk	34.8	-95.2	-29.33	-51.53	-13	-38.53	H
5.155313	39.17	Pk	34.7	-95.2	-29.79	-51.12	-13	-38.12	V
6.916172	35.26	Pk	35.8	-95.2	-26.39	-50.53	-13	-37.53	H
6.929063	35.63	Pk	35.8	-95.2	-26.37	-50.14	-13	-37.14	V
Mid Channel, 1745MHz									
3.496875	38.79	Pk	32.6	-95.2	-32.99	-56.80	-13	-43.80	H
3.496875	38.82	Pk	32.6	-95.2	-32.99	-56.77	-13	-43.77	V
5.235469	33.95	Pk	34.7	-95.2	-28.69	-55.24	-13	-42.24	H
5.190938	37.83	Pk	34.8	-95.2	-29.31	-51.88	-13	-38.88	V
6.974531	34.33	Pk	35.7	-95.2	-26.76	-51.93	-13	-38.93	H
6.974531	35.7	Pk	35.7	-95.2	-26.76	-50.56	-13	-37.56	V
High Channel, 1760MHz									
3.526875	37.83	Pk	33	-95.2	-32.87	-57.24	-13	-44.24	H
3.509063	38.85	Pk	32.7	-95.2	-33.01	-56.66	-13	-43.66	V
5.222260	45.32	Pk	34.7	-95.2	-28.88	-44.06	-13	-31.06	H
5.222444	50.45	Pk	34.7	-95.2	-28.85	-38.90	-13	-25.90	V
7.046719	34.25	Pk	35.8	-95.2	-26.97	-52.12	-13	-39.12	H
6.999844	34.26	Pk	35.7	-95.2	-26.74	-51.98	-13	-38.98	V

10.3.13. 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 #:	14523758
Date:	2/22/2023
Test Engineer:	27661
Configuration:	EUT Only
Mode	FR1 N70 15MHz BPSK
Chamber #:	05-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, 1702.5MHz									
3.434000	54.46	Pk	33	-95.2	-45.82	-53.56	-13	-40.56	H
3.423500	54.13	Pk	33	-95.2	-45.92	-53.99	-13	-40.99	V
5.104500	55.81	Pk	34.5	-95.2	-47.24	-52.13	-13	-39.13	H
5.123500	55.43	Pk	34.4	-95.2	-47.30	-52.67	-13	-39.67	V
6.824000	54.44	Pk	36.1	-95.2	-45.59	-50.25	-13	-37.25	H
6.831500	54.41	Pk	36.1	-95.2	-45.61	-50.30	-13	-37.30	V

10.3.14. 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 #:	14523758
Date:	3/14/2023
Test Engineer:	25196
Configuration:	EUT Only
Mode	LTE B71 20MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	172654 HPF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 673MHz										
1.332978	41.68	Pk	28.9	1.3	-95.2	-35.19	-58.51	-13	-45.51	H
1.336400	41.9	Pk	28.8	1.3	-95.2	-35.11	-58.31	-13	-45.31	V
2.032089	42.16	Pk	31.9	.6	-95.2	-34.94	-55.48	-13	-42.48	H
2.031111	41.9	Pk	31.9	.6	-95.2	-34.97	-55.77	-13	-42.77	V
2.680356	42.72	Pk	32.2	.5	-95.2	-34.77	-54.55	-13	-41.55	H
2.680356	42.66	Pk	32.2	.5	-95.2	-34.77	-54.61	-13	-41.61	V
Mid Channel, 683MHz										
1.368667	42.51	Pk	28.6	1	-95.2	-35.11	-58.20	-13	-45.20	H
1.378933	43.79	Pk	28.5	1	-95.2	-35.14	-57.05	-13	-44.05	V
2.031845	41.96	Pk	31.9	.6	-95.2	-34.94	-55.68	-13	-42.68	H
2.015956	42.78	Pk	31.7	.6	-95.2	-34.96	-55.08	-13	-42.08	V
2.716534	40.94	Pk	32.2	.5	-95.2	-34.69	-56.25	-13	-43.25	H
2.707245	41.04	Pk	32.2	.6	-95.2	-34.61	-55.97	-13	-42.97	V
High Channel, 688MHz										
1.372089	42.57	Pk	28.6	1	-95.2	-35.15	-58.18	-13	-45.18	H
1.369644	41.69	Pk	28.6	1	-95.2	-35.11	-59.02	-13	-46.02	V
2.079022	42.07	Pk	32.1	.6	-95.2	-34.94	-55.37	-13	-42.37	H
2.078045	42.49	Pk	32.1	.6	-95.2	-35.03	-55.04	-13	-42.04	V
2.745378	42.43	Pk	32.3	.6	-95.2	-34.66	-54.53	-13	-41.53	H
2.743423	42.12	Pk	32.3	.6	-95.2	-34.62	-54.80	-13	-41.80	V

BPSK 5G NR n71 (20.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/7/2023
Test Engineer:	19186
Configuration:	EUT Only
Mode	FR1 N71 20MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 673MHz										
1.343244	49.83	Pk	28.7	1.3	-95.2	-42.00	-57.37	-13	-44.37	H
1.338356	50.02	Pk	28.7	1.3	-95.2	-42.00	-57.18	-13	-44.18	V
2.022311	53.58	Pk	31.3	.6	-95.2	-44.50	-54.22	-13	-41.22	H
2.022800	54.7	Pk	31.3	.6	-95.2	-44.60	-53.20	-13	-40.20	V
2.695511	54.39	Pk	32.1	.6	-95.2	-45.80	-53.91	-13	-40.91	H
2.700400	55.74	Pk	32.1	.6	-95.2	-45.80	-52.56	-13	-39.56	V
Mid Channel, 683MHz										
1.363778	49.05	Pk	28.5	1.1	-95.2	-42.00	-58.55	-13	-45.55	H
1.350578	49.24	Pk	28.6	1.2	-95.2	-42.00	-58.16	-13	-45.16	V
2.042356	53.34	Pk	31.4	.6	-95.2	-44.50	-54.46	-13	-41.46	H
2.043334	55.29	Pk	31.4	.6	-95.2	-44.60	-52.61	-13	-39.61	V
2.727289	54.88	Pk	32.1	.5	-95.2	-45.80	-53.52	-13	-40.52	H
2.709200	55.03	Pk	32.1	.6	-95.2	-45.80	-53.17	-13	-40.17	V
High Channel, 688MHz										
1.383822	51.62	Pk	28.3	1	-95.2	-42.00	-56.18	-13	-43.18	H
1.382844	51.32	Pk	28.3	1	-95.2	-42.00	-56.48	-13	-43.48	V
2.071200	53.2	Pk	31.4	.6	-95.2	-44.50	-54.80	-13	-41.80	H
2.067289	53.21	Pk	31.4	.6	-95.2	-44.60	-54.89	-13	-41.89	V
2.761023	56.06	Pk	32.1	.6	-95.2	-45.80	-52.24	-13	-39.24	H
2.760045	54.99	Pk	32.1	.6	-95.2	-45.80	-53.31	-13	-40.31	V

10.4. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 4

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r02

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 #:	14523758
Date:	3/10/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B7 20MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2510MHz										
5.030156	36.38	Pk	34.1	.7	-95.2	-30.98	-55.00	-25	-30.00	H
5.030156	36.76	Pk	34.1	.7	-95.2	-30.98	-54.62	-25	-29.62	V
7.503750	36.23	Pk	36	.3	-95.2	-26.92	-49.59	-25	-24.59	H
7.504219	39.16	Pk	36	.3	-95.2	-26.94	-46.68	-25	-21.68	V
10.040156	32.27	Pk	37.3	.7	-95.2	-25.07	-50.00	-25	-25.00	H
10.040156	33.05	Pk	37.3	.7	-95.2	-25.07	-49.22	-25	-24.22	V
Mid Channel, 2535MHz										
5.071406	38.58	Pk	34.3	.7	-95.2	-30.86	-52.48	-25	-27.48	H
5.070469	35.69	Pk	34.3	.7	-95.2	-30.84	-55.35	-25	-30.35	V
7.605000	32.7	Pk	35.9	.4	-95.2	-27.24	-53.44	-25	-28.44	H
7.605000	34.04	Pk	35.9	.4	-95.2	-27.24	-52.1	-25	-27.1	V
10.140000	32.22	Pk	37.5	.7	-95.2	-25.16	-49.94	-25	-24.94	H
10.140000	33.96	Pk	37.5	.7	-95.2	-25.16	-48.20	-25	-23.20	V
High Channel, 2560MHz										
5.120156	36.29	Pk	34.6	.8	-95.2	-30.81	-54.32	-25	-29.32	H
5.120156	37.45	Pk	34.6	.8	-95.2	-30.81	-53.16	-25	-28.16	V
7.680000	33.27	Pk	35.9	.5	-95.2	-26.93	-52.46	-25	-27.46	H
7.680000	34.59	Pk	35.9	.5	-95.2	-26.93	-51.14	-25	-26.14	V
10.240313	31.84	Pk	37.6	.8	-95.2	-25.05	-50.01	-25	-25.01	H
10.240313	33.16	Pk	37.6	.8	-95.2	-25.05	-48.69	-25	-23.69	V

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/05/2023
Test Engineer:	32607
Configuration:	EUT Only
Mode	FR1 N7 40MHz BPSK
Chamber #:	05-RDE-D

Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2520MHz									
5.040000	54.61	Pk	34.4	-95.2	-47.71	-53.90	-25	-28.90	H
5.040500	54.46	Pk	34.4	-95.2	-47.74	-54.08	-25	-29.08	V
7.560000	52.6	Pk	35.8	-95.2	-45.73	-52.53	-25	-27.53	H
7.560000	52.52	Pk	35.8	-95.2	-45.73	-52.61	-25	-27.61	V
10.082500	53.94	Pk	37.4	-95.2	-45.43	-49.29	-25	-24.29	H
10.082500	53.34	Pk	37.4	-95.2	-45.43	-49.89	-25	-24.89	V
Mid Channel, 2535MHz									
5.070500	56.04	Pk	34.5	-95.2	-47.91	-52.57	-25	-27.57	H
5.069000	53.99	Pk	34.5	-95.2	-47.87	-54.58	-25	-29.58	V
7.605500	53.03	Pk	35.7	-95.2	-45.70	-52.17	-25	-27.17	H
7.605500	52.48	Pk	35.7	-95.2	-45.70	-52.72	-25	-27.72	V
10.140000	53.46	Pk	37.5	-95.2	-45.45	-49.69	-25	-24.69	H
10.140000	52.67	Pk	37.5	-95.2	-45.45	-50.48	-25	-25.48	V
High Channel, 2550MHz									
5.100500	55.79	Pk	34.5	-95.2	-47.74	-52.65	-25	-27.65	H
5.100000	54.81	Pk	34.5	-95.2	-47.79	-53.68	-25	-28.68	V
7.651000	51.99	Pk	35.7	-95.2	-45.29	-52.80	-25	-27.80	H
7.651000	52.55	Pk	35.7	-95.2	-45.29	-52.24	-25	-27.24	V
10.200000	51.91	Pk	37.5	-95.2	-45.17	-50.96	-25	-25.96	H
10.200000	53.7	Pk	37.5	-95.2	-45.17	-49.17	-25	-24.17	V

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 #:	14523758
Date:	3/9/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B25 20MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.720000	40.03	Pk	32.9	-95.2	-32.24	-54.51	-13	-41.51	H
3.720000	37.95	Pk	32.9	-95.2	-32.24	-56.59	-13	-43.59	V
5.580000	36.7	Pk	34.7	-95.2	-29.88	-53.68	-13	-40.68	H
5.580000	36.86	Pk	34.7	-95.2	-29.88	-53.52	-13	-40.52	V
7.440000	35.87	Pk	36	-95.2	-26.36	-49.69	-13	-36.69	H
7.440000	33.27	Pk	36	-95.2	-26.36	-52.29	-13	-39.29	V
Mid Channel, 1882.5MHz									
3.765000	39.23	Pk	33	-95.2	-32.03	-55.00	-13	-42.00	H
3.765000	37.59	Pk	33	-95.2	-32.03	-56.64	-13	-43.64	V
5.647500	35.7	Pk	34.7	-95.2	-30.06	-54.86	-13	-41.86	H
5.647500	37.34	Pk	34.7	-95.2	-30.06	-53.22	-13	-40.22	V
7.530000	33.68	Pk	36	-95.2	-26.36	-51.88	-13	-38.88	H
7.530000	34.03	Pk	36	-95.2	-26.36	-51.53	-13	-38.53	V
High Channel, 1905MHz									
3.810938	38.59	Pk	33.6	-95.2	-31.91	-54.92	-13	-41.92	H
3.810938	39.02	Pk	33.6	-95.2	-31.91	-54.49	-13	-41.49	V
5.715000	36.97	Pk	34.9	-95.2	-29.04	-52.37	-13	-39.37	H
5.715000	36.4	Pk	34.9	-95.2	-29.04	-52.94	-13	-39.94	V
7.620000	33.46	Pk	35.9	-95.2	-26.65	-52.49	-13	-39.49	H
7.620000	35.74	Pk	35.9	-95.2	-26.65	-50.21	-13	-37.21	V

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/8/2023
Test Engineer:	19186
Configuration:	EUT Only
Mode	FR1 N25 40MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	Amp/Cbl/Fltr (dB)	EIRP CF	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.733594	54.55	Pk	33.2	-44.2	-95.2	-51.65	-13	-38.65	H
3.732656	53.37	Pk	33.2	-44.1	-95.2	-52.73	-13	-39.73	V
5.618906	52	Pk	34.6	-43.6	-95.2	-52.20	-13	-39.20	H
5.596875	52.64	Pk	34.6	-43.6	-95.2	-51.56	-13	-38.56	V
7.833750	49.29	Pk	35.9	-39.6	-95.2	-49.61	-13	-36.61	H
7.809375	48.58	Pk	35.8	-39.8	-95.2	-50.62	-13	-37.62	V
Mid Channel, 1882.5MHz									
3.757031	52.99	Pk	33.2	-44.1	-95.2	-53.11	-13	-40.11	H
3.743906	52.88	Pk	33.2	-44.1	-95.2	-53.22	-13	-40.22	V
5.648906	52.12	Pk	34.6	-43.4	-95.2	-51.88	-13	-38.88	H
5.650781	51.93	Pk	34.6	-43.4	-95.2	-52.07	-13	-39.07	V
7.545000	48.86	Pk	35.8	-39.8	-95.2	-50.34	-13	-37.34	H
7.501406	48.87	Pk	35.8	-39.8	-95.2	-50.33	-13	-37.33	V
High Channel, 1895MHz									
3.789844	52.88	Pk	33.3	-44.2	-95.2	-53.22	-13	-40.22	H
3.766406	52.72	Pk	33.3	-44.2	-95.2	-53.38	-13	-40.38	V
7.593750	48.15	Pk	35.8	-39.6	-95.2	-50.85	-13	-37.85	H
5.655000	51.36	Pk	34.6	-43.5	-95.2	-52.74	-13	-39.74	V
7.593750	48.15	Pk	35.8	-39.6	-95.2	-50.85	-13	-37.85	H
7.546875	49.24	Pk	35.8	-39.8	-95.2	-49.96	-13	-36.96	V

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 (20.0MHZ BANDWIDTH)

Project #:	14523758
Date:	3/14/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B30 10MHz LAT3
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									
4.620000	26.43	RMS	34.3	-95.2	-29.12	-63.59	-40	-23.59	H
4.620000	26.89	RMS	34.3	-95.2	-29.12	-63.13	-40	-23.13	V
6.930000	24.00	RMS	35.7	-95.2	-26.42	-61.92	-40	-21.92	H
6.930000	23.54	RMS	35.7	-95.2	-26.42	-62.38	-40	-22.38	V
9.240000	21.51	RMS	36.1	-95.2	-23.77	-61.36	-40	-21.36	H
9.240000	21.85	RMS	36.1	-95.2	-23.77	-61.02	-40	-21.02	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/05/2023
Test Engineer:	32607
Configuration:	EUT Only
Mode	FR1 N30 10MHz BPSK
Chamber #:	05-RDE-D

Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	Amp/Cbl/Fltr (dB)	EIRP CF	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.620455	45.3	RMS	34.3	-95.2	-47.88	-63.48	-40	-23.48	H
4.618935	45.3	RMS	34.3	-95.2	-47.83	-63.43	-40	-23.43	V
6.930856	43.59	RMS	35.7	-95.2	-46.10	-62.01	-40	-22.01	H
6.930856	43.6	RMS	35.7	-95.2	-46.10	-62.00	-40	-22.00	V
9.240244	43.01	RMS	36.4	-95.2	-44.65	-60.44	-40	-20.44	H
9.239738	42.95	RMS	36.4	-95.2	-44.60	-60.45	-40	-20.45	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 (20.0MHZ BANDWIDTH)

Project #:	14523758
Date:	3/10/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE FCC B41 20MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2506MHz										
5.011875	36.68	Pk	34.1	.8	-95.2	-30.86	-54.48	-25	-29.48	H
5.011875	35.63	Pk	34.1	.8	-95.2	-30.86	-55.53	-25	-30.53	V
7.518281	33.47	Pk	36	.3	-95.2	-26.86	-52.29	-25	-27.29	H
7.518281	32.41	Pk	36	.3	-95.2	-26.86	-53.35	-25	-28.35	V
10.024219	33.06	Pk	37.3	.6	-95.2	-24.98	-49.22	-25	-24.22	H
10.024219	33.11	Pk	37.3	.6	-95.2	-24.98	-49.17	-25	-24.17	V
Mid Channel, 2593MHz										
5.18625	37.29	Pk	34.8	.8	-95.2	-30.62	-52.93	-25	-27.93	H
5.18625	37.68	Pk	34.8	.8	-95.2	-30.62	-52.54	-25	-27.54	V
7.779375	34.11	Pk	36	.3	-95.2	-27.04	-51.83	-25	-26.83	H
7.779375	33.97	Pk	36	.3	-95.2	-27.04	-51.97	-25	-26.97	V
10.372500	33.42	Pk	37.4	.8	-95.2	-24.98	-48.56	-25	-23.56	H
10.372500	32.5	Pk	37.4	.8	-95.2	-24.98	-49.48	-25	-24.48	V
High Channel, 2680MHz										
5.360156	35.88	Pk	34.4	.5	-95.2	-30.09	-54.51	-25	-29.51	H
5.360156	35.18	Pk	34.4	.5	-95.2	-30.09	-55.21	-25	-30.21	V
8.039531	34.13	Pk	35.8	.4	-95.2	-26.62	-51.49	-25	-26.49	H
8.039531	33.79	Pk	35.8	.4	-95.2	-26.62	-51.83	-25	-26.83	V
10.720313	32.26	Pk	37.8	.6	-95.2	-23.97	-48.51	-25	-23.51	V
10.720313	32.26	Pk	37.8	.6	-95.2	-23.97	-48.51	-25	-23.51	V

BPSK LTE BAND n41 (100.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/7/2023
Test Engineer:	19186
Configuration:	EUT Only
Mode	FR1 N41 FCC 100MHz BPSK
Chamber #:	04-RDE-J

Frequency (GHz)	Meter Reading (dBuV)	Det	222741 ACF(dB) - 3mH	BRF 2495-2690MHz T1791 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2546MHz										
5.102344	53.12	Pk	34.4	.7	-95.2	-45.10	-52.08	-25	-27.08	H
5.088750	52.83	Pk	34.4	.6	-95.2	-45.10	-52.47	-25	-27.47	V
7.640156	48.19	Pk	35.8	.4	-95.2	-40.60	-51.41	-25	-26.41	H
7.642969	49.42	Pk	35.8	.4	-95.2	-40.60	-50.18	-25	-25.18	V
10.176094	46.36	Pk	37.3	.5	-95.2	-36.60	-47.64	-25	-22.64	H
10.222031	46.21	Pk	37.3	.8	-95.2	-36.30	-47.19	-25	-22.19	V
Mid Channel, 2593MHz										
5.167500	52.17	Pk	34.7	.8	-95.2	-45.10	-52.33	-25	-27.33	H
5.135156	53.41	Pk	34.5	.8	-95.2	-45.10	-51.39	-25	-26.39	V
7.726406	49.82	Pk	35.8	.4	-95.2	-40.60	-49.58	-25	-24.58	H
7.632656	50.76	Pk	35.8	.4	-95.2	-40.60	-48.74	-25	-23.74	V
10.361719	47.22	Pk	37.4	.8	-95.2	-36.60	-45.88	-25	-20.88	H
10.362188	46.62	Pk	37.4	.8	-95.2	-36.30	-46.48	-25	-21.48	V
High Channel, 2640MHz										
5.295938	52.89	Pk	35	.4	-95.2	-45.10	-51.91	-25	-26.91	H
5.284688	52.54	Pk	35	.3	-95.2	-45.10	-52.36	-25	-27.36	V
7.901719	48.32	Pk	35.9	.6	-95.2	-40.60	-50.38	-25	-25.38	H
7.890940	48.85	Pk	35.9	.6	-95.2	-40.60	-50.05	-25	-25.05	V
10.590000	46.35	Pk	37.5	.8	-95.2	-36.60	-46.75	-25	-21.75	H
10.615313	46.4	Pk	37.5	.6	-95.2	-36.30	-47.70	-25	-22.70	V

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 #:	14523758
Date:	06/08/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B48 FCC 20MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3560MHz										
7.120088	25.15	RMS	35.7	.5	-95.2	-27.23	-61.08	-40	-21.08	H
7.120088	23.91	RMS	35.7	.5	-95.2	-27.23	-62.32	-40	-22.32	V
10.680778	20.71	RMS	37.8	.6	-95.2	-24.49	-60.58	-40	-20.58	H
10.680778	21.4	RMS	37.8	.6	-95.2	-24.49	-59.89	-40	-19.89	V
14.240588	19.38	RMS	39.3	.8	-95.2	-20.27	-55.99	-40	-15.99	H
14.240147	19.89	RMS	39.3	.8	-95.2	-20.30	-55.51	-40	-15.51	V
Mid Channel, 3625MHz										
7.250513	24.42	RMS	35.8	.6	-95.2	-26.83	-61.21	-40	-21.21	H
7.250513	24.14	RMS	35.8	.6	-95.2	-26.83	-61.49	-40	-21.49	V
10.875094	21.29	RMS	37.7	.5	-95.2	-24.08	-59.79	-40	-19.79	H
10.875094	21.06	RMS	37.7	.5	-95.2	-24.08	-60.02	-40	-20.02	V
14.500116	18.61	RMS	39.7	.8	-95.2	-19.99	-56.08	-40	-16.08	H
14.500116	18.48	RMS	39.7	.8	-95.2	-19.99	-56.21	-40	-16.21	V
High Channel, 3690MHz										
7.380056	23.39	RMS	35.8	.7	-95.2	-26.97	-62.28	-40	-22.28	H
7.380056	23.64	RMS	35.8	.7	-95.2	-26.97	-62.03	-40	-22.03	V
11.06985	21.68	RMS	37.8	.6	-95.2	-23.50	-58.62	-40	-18.62	H
11.06985	21.49	RMS	37.8	.6	-95.2	-23.50	-58.81	-40	-18.81	V
14.760084	18.36	RMS	40.1	.8	-95.2	-19.95	-55.89	-40	-15.89	H
14.760084	18.96	RMS	40.1	.8	-95.2	-19.95	-55.29	-40	-15.29	V

BPSK 5G NR n48 (40.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/15/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	FR1 N48FCC 40MHz BPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3570MHz										
7.139916	24.41	RMS	35.7	.6	-95.2	-27.16	-61.65	-40	-21.65	H
7.139034	24.25	RMS	35.7	.6	-95.2	-27.21	-61.86	-40	-21.86	V
10.653459	21.81	RMS	37.8	.6	-95.2	-24.43	-59.42	-40	-19.42	H
10.653459	25.46	RMS	37.8	.6	-95.2	-24.43	-55.77	-40	-15.77	V
14.279803	20.39	RMS	39.4	.7	-95.2	-20.33	-55.04	-40	-15.04	H
14.279803	19.79	RMS	39.4	.7	-95.2	-20.33	-55.64	-40	-15.64	V
Mid Channel, 3625MHz										
7.250072	23.6	RMS	35.8	.6	-95.2	-26.86	-62.06	-40	-22.06	H
7.249631	23.71	RMS	35.8	.6	-95.2	-26.87	-61.96	-40	-21.96	V
10.818694	21.61	RMS	37.7	.6	-95.2	-24.10	-59.39	-40	-19.39	H
10.818253	25.49	RMS	37.7	.6	-95.2	-24.14	-55.55	-40	-15.55	V
14.500116	18.58	RMS	39.7	.8	-95.2	-19.99	-56.11	-40	-16.11	H
14.499234	19.19	RMS	39.7	.8	-95.2	-19.86	-55.37	-40	-15.37	V
High Channel, 3680MHz										
7.359788	23.78	RMS	35.8	.7	-95.2	-27.14	-62.06	-40	-22.06	H
7.358906	23.8	RMS	35.8	.7	-95.2	-27.01	-61.91	-40	-21.91	V
11.040328	20.21	RMS	37.8	.6	-95.2	-23.46	-60.05	-40	-20.05	H
11.040328	20.78	RMS	37.8	.6	-95.2	-23.46	-59.48	-40	-19.48	V
14.719988	18.61	RMS	40	.9	-95.2	-19.98	-55.67	-40	-15.67	H
14.719106	18.58	RMS	40	.9	-95.2	-20.00	-55.72	-40	-15.72	V

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 #:	14523758
Date:	3/8/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B66 20MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.440156	38.13	Pk	32.6	-95.2	-32.97	-57.44	-13	-44.44	H
3.440156	39.88	Pk	32.6	-95.2	-32.97	-55.69	-13	-42.69	V
5.160000	36.33	Pk	34.7	-95.2	-29.57	-53.74	-13	-40.74	H
5.160000	35.95	Pk	34.7	-95.2	-29.57	-54.12	-13	-41.12	V
6.881719	33.31	Pk	36	-95.2	-26.47	-52.36	-13	-39.36	H
6.881719	36.54	Pk	36	-95.2	-26.47	-49.13	-13	-36.13	V
Mid Channel, 1745MHz									
3.490313	38.42	Pk	32.5	-95.2	-32.94	-57.22	-13	-44.22	H
3.490313	39.79	Pk	32.5	-95.2	-32.94	-55.85	-13	-42.85	V
5.235469	36.95	Pk	34.7	-95.2	-28.69	-52.24	-13	-39.24	H
5.235469	35.05	Pk	34.7	-95.2	-28.69	-54.14	-13	-41.14	V
6.980156	34.3	Pk	35.7	-95.2	-26.74	-51.94	-13	-38.94	H
6.980156	32.58	Pk	35.7	-95.2	-26.74	-53.66	-13	-40.66	V
High Channel, 1770MHz									
3.539063	38.26	Pk	33.2	-95.2	-32.87	-56.61	-13	-43.61	H
3.539063	36.93	Pk	33.2	-95.2	-32.87	-57.94	-13	-44.94	V
5.310000	37.25	Pk	34.5	-95.2	-29.84	-53.29	-13	-40.29	H
5.310000	35.69	Pk	34.5	-95.2	-29.84	-54.85	-13	-41.85	V
7.080469	34.63	Pk	35.9	-95.2	-26.91	-51.58	-13	-38.58	H
7.080469	33.36	Pk	35.9	-95.2	-26.91	-52.85	-13	-39.85	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	14523758
Date:	2/22/2023
Test Engineer:	27661
Configuration:	EUT Only
Mode	FR1 N66 40MHz BPSK
Chamber #:	05-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									
3.449500	54.8	Pk	33	-95.2	-45.9	-53.3	-13	-40.3	H
3.460000	53.66	Pk	33	-95.2	-45.73	-54.27	-13	-41.27	V
5.173000	56.17	Pk	34.5	-95.2	-47.4	-51.93	-13	-38.93	H
5.150000	55.62	Pk	34.5	-95.2	-47.43	-52.51	-13	-39.51	V
6.907500	55.28	Pk	36.1	-95.2	-46.03	-49.85	-13	-36.85	H
6.920500	54.34	Pk	36.1	-95.2	-46.11	-50.87	-13	-37.87	V
Mid Channel, 1745MHz									
3.489500	54.71	Pk	33.1	-95.2	-45.92	-53.31	-13	-40.31	H
3.502500	56.27	Pk	33.1	-95.2	-46.1	-51.93	-13	-38.93	V
5.218500	56.67	Pk	34.6	-95.2	-47.08	-51.01	-13	-38.01	H
5.211500	56.36	Pk	34.6	-95.2	-47.09	-51.33	-13	-38.33	V
6.932000	55.12	Pk	36.2	-95.2	-46.15	-50.03	-13	-37.03	H
6.954500	54.34	Pk	36.1	-95.2	-46.13	-50.89	-13	-37.89	V
High Channel, 1760MHz									
3.566000	54.62	Pk	33.5	-95.2	-45.84	-52.92	-13	-39.92	H
3.538000	55.64	Pk	33.2	-95.2	-46.02	-52.38	-13	-39.38	V
5.271500	55.56	Pk	34.7	-95.2	-46.62	-51.56	-13	-38.56	H
5.266500	55.46	Pk	34.7	-95.2	-46.72	-51.76	-13	-38.76	V
7.076000	55.05	Pk	36	-95.2	-45.78	-49.93	-13	-36.93	H
7.063500	55.37	Pk	36	-95.2	-45.73	-49.56	-13	-36.56	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 #:	14523758
Date:	2/22/2023
Test Engineer:	27661
Configuration:	EUT Only
Mode	FR1 N70 15MHz BPSK
Chamber #:	05-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, 1702.5MHz									
3.440000	54.61	Pk	33	-95.2	-45.90	-53.49	-13	-40.49	H
3.444500	53.15	Pk	33	-95.2	-45.78	-54.83	-13	-41.83	V
5.107500	55.55	Pk	34.5	-95.2	-47.31	-52.46	-13	-39.46	H
5.103500	55.27	Pk	34.5	-95.2	-47.24	-52.67	-13	-39.67	V
6.893000	55.19	Pk	36.1	-95.2	-45.85	-49.76	-13	-36.76	H
6.874000	53.78	Pk	36.1	-95.2	-45.84	-51.16	-13	-38.16	V

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 #:	14523758
Date:	06/05/2023
Test Engineer:	32607
Configuration:	EUT Only
Mode	FR1 N77 100MHz BPSK
Chamber #:	05-RDE-D

Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz									
6.999510	44.83	Pk	35.8	-95.2	-45.56	-60.13	-13	-47.13	H
6.998119	45.26	Pk	35.8	-95.2	-45.58	-59.72	-13	-46.72	V
10.502051	45.87	Pk	37.8	-95.2	-44.95	-56.48	-13	-43.48	H
10.500196	45.02	Pk	37.8	-95.2	-45.09	-57.47	-13	-44.47	V
13.999955	43.96	Pk	38.9	-95.2	-43.78	-56.12	-13	-43.12	H
14.000418	43	Pk	38.9	-95.2	-43.83	-57.13	-13	-44.13	V

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

LIMITS

FCC: §27.53
(l) 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 #:	14523758
Date:	02/23/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	FR1 N77 100MHz BPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.500000	32.88	Pk	36	-95.2	-26.94	-53.26	-13	-40.26	H
7.500000	32.65	Pk	36	-95.2	-26.94	-53.49	-13	-40.49	V
11.253000	33.43	Pk	37.8	-95.2	-22.63	-46.60	-13	-33.60	H
11.253000	31.1	Pk	37.8	-95.2	-22.63	-48.93	-13	-35.93	V
15.00050	29.6	Pk	39.8	-95.2	-19.01	-44.81	-13	-31.81	H
15.00050	29.7	Pk	39.8	-95.2	-19.01	-44.71	-13	-31.71	V
Mid Channel, 3840MHz									
7.680500	32.6	Pk	35.9	-95.2	-26.6	-53.30	-13	-40.30	H
7.680500	33.26	Pk	35.9	-95.2	-26.6	-52.64	-13	-39.64	V
11.51975	31.89	Pk	38.2	-95.2	-21.46	-46.57	-13	-33.57	H
11.520000	30.42	Pk	38.2	-95.2	-21.5	-48.08	-13	-35.08	V
15.360000	29.72	Pk	39.9	-95.2	-19.49	-45.07	-13	-32.07	H
15.360000	31.14	Pk	39.9	-95.2	-19.49	-43.65	-13	-30.65	V
High Channel, 3930MHz									
7.860000	31.94	Pk	35.9	-95.2	-26.37	-53.73	-13	-40.73	H
7.860000	33.77	Pk	35.9	-95.2	-26.37	-51.90	-13	-38.90	V
11.7905	29.72	Pk	38.6	-95.2	-21.46	-48.34	-13	-35.34	H
11.7905	31.23	Pk	38.6	-95.2	-21.46	-46.83	-13	-33.83	V
15.720000	30.13	Pk	40.2	-95.2	-18.29	-43.16	-13	-30.16	H
15.720000	29.96	Pk	40.2	-95.2	-18.29	-43.33	-13	-30.33	V

10.5. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 7

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r02

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 #:	14523758
Date:	06/09/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B48 20MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3560MHz										
7.120528	23.83	RMS	35.7	.5	-95.2	-27.18	-62.35	-40	-22.35	H
7.120088	23.71	RMS	35.7	.5	-95.2	-27.23	-62.52	-40	-22.52	V
10.680338	21.83	RMS	37.8	.6	-95.2	-24.48	-59.45	-40	-19.45	H
10.680778	21.56	RMS	37.8	.6	-95.2	-24.49	-59.73	-40	-19.73	V
14.240147	19.39	RMS	39.3	.8	-95.2	-20.30	-56.01	-40	-16.01	H
14.240147	19.6	RMS	39.3	.8	-95.2	-20.30	-55.80	-40	-15.80	V
Mid Channel, 3625MHz										
7.250513	24.07	RMS	35.8	.6	-95.2	-26.83	-61.56	-40	-21.56	H
7.250513	23.96	RMS	35.8	.6	-95.2	-26.83	-61.67	-40	-21.67	V
10.875534	21.23	RMS	37.7	.5	-95.2	-24.05	-59.82	-40	-19.82	H
10.875534	21.06	RMS	37.7	.5	-95.2	-24.05	-59.99	-40	-19.99	V
14.500556	18.07	RMS	39.7	.8	-95.2	-19.94	-56.57	-40	-16.57	H
14.500556	18.33	RMS	39.7	.8	-95.2	-19.94	-56.31	-40	-16.31	V
High Channel, 3690MHz										
7.380938	23.85	RMS	35.8	.7	-95.2	-26.99	-61.84	-40	-21.84	H
7.380938	24.07	RMS	35.8	.7	-95.2	-26.99	-61.62	-40	-21.62	V
11.070291	21.21	RMS	37.8	.6	-95.2	-23.50	-59.09	-40	-19.09	H
11.070291	21.34	RMS	37.8	.6	-95.2	-23.50	-58.96	-40	-18.96	V
14.760525	19.09	RMS	40.1	.8	-95.2	-19.91	-55.12	-40	-15.12	H
14.760966	18.8	RMS	40.1	.8	-95.2	-19.86	-55.36	-40	-15.36	V

BPSK 5G NR n48 (100.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/15/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	n48 40MHz BPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3570MHz										
7.139916	24.01	RMS	35.7	.6	-95.2	-27.16	-62.05	-40	-22.05	H
7.139916	23.69	RMS	35.7	.6	-95.2	-27.16	-62.37	-40	-22.37	V
10.710300	21.25	RMS	37.7	.5	-95.2	-24.01	-59.76	-40	-19.76	H
10.710300	21.98	RMS	37.7	.5	-95.2	-24.01	-59.03	-40	-19.03	V
14.279803	19.3	RMS	39.4	.7	-95.2	-20.33	-56.13	-40	-16.13	H
14.280684	19.27	RMS	39.4	.7	-95.2	-20.15	-55.98	-40	-15.98	V
Mid Channel, 3625MHz										
7.250072	23.86	RMS	35.8	.6	-95.2	-26.86	-61.80	-40	-21.80	H
7.250072	23.98	RMS	35.8	.6	-95.2	-26.86	-61.68	-40	-21.68	V
10.875094	21.15	RMS	37.7	.5	-95.2	-24.08	-59.93	-40	-19.93	H
10.875094	21.58	RMS	37.7	.5	-95.2	-24.08	-59.50	-40	-19.50	V
14.500116	18.85	RMS	39.7	.8	-95.2	-19.99	-55.84	-40	-15.84	H
14.500116	18.56	RMS	39.7	.8	-95.2	-19.99	-56.13	-40	-16.13	V
High Channel, 3680MHz										
7.360228	23.71	RMS	35.8	.7	-95.2	-27.16	-62.15	-40	-22.15	H
7.360228	23.22	RMS	35.8	.7	-95.2	-27.16	-62.64	-40	-22.64	V
11.040769	20.77	RMS	37.8	.6	-95.2	-23.58	-59.61	-40	-19.61	H
11.039888	21.2	RMS	37.8	.6	-95.2	-23.38	-58.98	-40	-18.98	V
14.719988	18.83	RMS	40	.9	-95.2	-19.98	-55.45	-40	-15.45	H
14.719988	19.13	RMS	40	.9	-95.2	-19.98	-55.15	-40	-15.15	V

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 #:	14523758
Date:	
Test Engineer:	26120
Configuration:	EUT Only
Mode	FR1 N77 100MHz BPSK
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz									
6.924135	45.28	Pk	35.5	-95.2	-44.56	-58.98	-13	-45.98	H
6.921802	44.28	Pk	35.5	-95.2	-44.48	-59.90	-13	-46.90	V
10.351805	45.64	Pk	37.4	-95.2	-44.44	-56.60	-13	-43.60	H
10.352738	48.35	Pk	37.4	-95.2	-44.43	-53.88	-13	-40.88	V
13.826140	47.33	Pk	39.3	-95.2	-43.41	-51.98	-13	-38.98	H
13.825674	46.39	Pk	39.3	-95.2	-43.41	-52.92	-13	-39.92	V

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

LIMITS

FCC: §27.53
(l) 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 #:	14523758
Date:	02/21/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	
Chamber #:	05-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
5.691201	46.13	Pk	34.8	-95.2	-45.89	-60.16	-13	-47.16	H
5.692135	45.56	Pk	34.8	-95.2	-45.87	-60.71	-13	-47.71	V
7.195269	45.8	Pk	35.6	-95.2	-44.44	-58.24	-13	-45.24	H
7.192936	44.37	Pk	35.6	-95.2	-44.47	-59.70	-13	-46.70	V
9.567337	46.85	Pk	36.6	-95.2	-43.91	-55.66	-13	-42.66	H
9.570137	45.71	Pk	36.6	-95.2	-43.90	-56.79	-13	-43.79	V
Mid Channel, 3840MHz									
7.680500	33.04	Pk	35.9	-95.2	-26.6	-52.86	-13	-39.86	H
7.680500	34.65	Pk	35.9	-95.2	-26.6	-51.25	-13	-38.25	V
11.519500	32.24	Pk	38.2	-95.2	-21.41	-46.17	-13	-33.17	H
11.519500	30.51	Pk	38.2	-95.2	-21.41	-47.9	-13	-34.9	V
15.359000	33.88	Pk	39.9	-95.2	-19.2	-40.62	-13	-27.62	H
15.359000	31.33	Pk	39.9	-95.2	-19.2	-43.17	-13	-30.17	V
High Channel, 3930MHz									
7.860500	34.08	Pk	35.9	-95.2	-26.42	-51.64	-13	-38.64	H
7.860500	31.56	Pk	35.9	-95.2	-26.42	-54.16	-13	-41.16	V
11.790000	29.46	Pk	38.6	-95.2	-21.42	-48.56	-13	-35.56	H
11.790500	32.85	Pk	38.6	-95.2	-21.46	-45.21	-13	-32.21	V
15.721500	31.43	Pk	40.3	-95.2	-18.41	-41.88	-13	-28.88	H
15.721500	29.61	Pk	40.3	-95.2	-18.41	-43.70	-13	-30.70	V

10.6. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 8

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r02

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

RESULTS

10.6.1. LTE BAND 48 AND 5G NR n48

LIMITS

FCC: §96.41

(b) 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 #:	14523758
Date:	06/09/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B48 20MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3560MHz										
7.120528	24.16	RMS	35.7	.5	-95.2	-27.18	-62.02	-40	-22.02	H
7.120528	24.52	RMS	35.7	.5	-95.2	-27.18	-61.66	-40	-21.66	V
10.680558	21.48	RMS	37.8	.6	-95.2	-24.48	-59.80	-40	-19.80	H
10.680338	21.02	RMS	37.8	.6	-95.2	-24.48	-60.26	-40	-20.26	V
14.240588	19.1	RMS	39.3	.8	-95.2	-20.27	-56.27	-40	-16.27	H
14.240147	19.33	RMS	39.3	.8	-95.2	-20.3	-56.07	-40	-16.07	V
Mid Channel, 3625MHz										
7.250953	23.77	RMS	35.8	.6	-95.2	-26.8	-61.83	-40	-21.83	H
7.250953	23.51	RMS	35.8	.6	-95.2	-26.8	-62.09	-40	-22.09	V
10.848216	23.47	RMS	37.7	.5	-95.2	-24.07	-57.60	-40	-17.60	H
10.848216	27.1	RMS	37.7	.5	-95.2	-24.07	-53.97	-40	-13.97	V
14.500556	18.99	RMS	39.7	.8	-95.2	-19.94	-55.65	-40	-15.65	H
14.500997	18.86	RMS	39.7	.8	-95.2	-19.88	-55.72	-40	-15.72	V
High Channel, 3690MHz										
7.380056	23.7	RMS	35.8	.7	-95.2	-26.97	-61.97	-40	-21.97	H
7.380056	24.03	RMS	35.8	.7	-95.2	-26.97	-61.64	-40	-21.64	V
11.070291	21.04	RMS	37.8	.6	-95.2	-23.5	-59.26	-40	-19.26	H
11.070291	22.37	RMS	37.8	.6	-95.2	-23.5	-57.93	-40	-17.93	V
14.760525	18.9	RMS	40.1	.8	-95.2	-19.91	-55.31	-40	-15.31	H
14.760084	19.06	RMS	40.1	.8	-95.2	-19.95	-55.19	-40	-15.19	V

BPSK 5G NR n48 (40.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/15/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	n48 40MHz BPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3570MHz										
7.139916	24.19	RMS	35.7	.6	-95.2	-27.16	-61.87	-40	-21.87	H
7.139916	23.84	RMS	35.7	.6	-95.2	-27.16	-62.22	-40	-22.22	V
10.653459	24.37	RMS	37.8	.6	-95.2	-24.43	-56.86	-40	-16.86	H
10.653459	25.94	RMS	37.8	.6	-95.2	-24.43	-55.29	-40	-15.29	V
14.280244	19.45	RMS	39.4	.7	-95.2	-20.27	-55.92	-40	-15.92	H
14.279363	19.89	RMS	39.4	.7	-95.2	-20.32	-55.53	-40	-15.53	V
Mid Channel, 3625MHz										
7.250513	24.32	RMS	35.8	.6	-95.2	-26.83	-61.31	-40	-21.31	H
7.249631	23.61	RMS	35.8	.6	-95.2	-26.87	-62.06	-40	-22.06	V
10.875094	22.12	RMS	37.7	.5	-95.2	-24.08	-58.96	-40	-18.96	H
10.875094	21.21	RMS	37.7	.5	-95.2	-24.08	-59.87	-40	-19.87	V
14.500116	18.31	RMS	39.7	.8	-95.2	-19.99	-56.38	-40	-16.38	H
14.499675	19.02	RMS	39.7	.8	-95.2	-19.94	-55.62	-40	-15.62	V
High Channel, 3680MHz										
7.360228	23.42	RMS	35.8	.7	-95.2	-27.16	-62.44	-40	-22.44	H
7.360228	23.58	RMS	35.8	.7	-95.2	-27.16	-62.28	-40	-22.28	V
11.039888	20.48	RMS	37.8	.6	-95.2	-23.38	-59.70	-40	-19.70	H
11.039888	20.51	RMS	37.8	.6	-95.2	-23.38	-59.67	-40	-19.67	V
14.719988	18.81	RMS	40	.9	-95.2	-19.98	-55.47	-40	-15.47	H
14.719988	18.98	RMS	40	.9	-95.2	-19.98	-55.30	-40	-15.30	V

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 #:	14523758
Date:	02/22/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	FR1 N77 100MHz BPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz										
7.000238	26.18	RMS	35.7	.5	-95.2	-27.41	-60.23	-13	-47.23	H
7.000238	26.44	RMS	35.7	.5	-95.2	-27.41	-59.97	-13	-46.97	V
10.500122	25.17	RMS	37.4	.6	-95.2	-24.74	-56.77	-13	-43.77	H
10.500122	24.44	RMS	37.4	.6	-95.2	-24.74	-57.50	-13	-44.50	V
14.000006	21.74	RMS	39.1	.7	-95.2	-20.45	-54.11	-13	-41.11	H
14.000006	20.94	RMS	39.1	.7	-95.2	-20.45	-54.91	-13	-41.91	V

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

LIMITS

FCC: §27.53
(l) 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 #:	14523758
Date:	6/10/2023
Test Engineer:	32981
Configuration:	EUT Only
Mode	FR1 N77 100MHz BPSK
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.673136	44.93	Pk	35.6	-95.2	-44.5	-59.17	-13	-46.17	H
7.674303	44.57	Pk	35.6	-95.2	-44.51	-59.54	-13	-46.54	V
11.523139	47.09	Pk	38.4	-95.2	-43.45	-53.16	-13	-40.16	H
11.522672	45.46	Pk	38.4	-95.2	-43.45	-54.79	-13	-41.79	V
15.161275	46.31	Pk	39.6	-95.2	-42.85	-52.14	-13	-39.14	H
15.157075	46.32	Pk	39.6	-95.2	-42.85	-52.13	-13	-39.13	V
Mid Channel, 3840MHz									
7.603499	52.85	Pk	35.5	-95.2	-44.56	-51.41	-13	-38.41	H
7.602304	53.23	Pk	35.5	-95.2	-44.53	-51.00	-13	-38.00	V
11.421521	55.61	Pk	38.3	-95.2	-44.34	-45.63	-13	-32.63	H
11.419529	54.29	Pk	38.3	-95.2	-44.38	-46.99	-13	-33.99	V
15.196124	53.71	Pk	39.7	-95.2	-42.90	-44.69	-13	-31.69	H
15.196522	54.09	Pk	39.7	-95.2	-42.89	-44.3	-13	-31.3	V
High Channel, 3930MHz									
7.770002	54.1	Pk	35.6	-95.2	-44.57	-50.07	-13	-37.07	H
7.770400	52.01	Pk	35.6	-95.2	-44.56	-52.15	-13	-39.15	V
11.641002	53.66	Pk	38.5	-95.2	-43.77	-46.81	-13	-33.81	H
11.642595	53.43	Pk	38.5	-95.2	-43.76	-47.03	-13	-34.03	V
15.521562	52.9	Pk	40.2	-95.2	-42.79	-44.89	-13	-31.89	H
15.521562	54.59	Pk	40.2	-95.2	-42.79	-43.20	-13	-30.20	V

10.7. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 9

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r02

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 #:	14523758
Date:	06/09/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	LTE B48 20MHz QPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3560MHz										
7.120088	24.07	RMS	35.7	.5	-95.2	-27.23	-62.16	-40	-22.16	H
7.120969	24.16	RMS	35.7	.5	-95.2	-27.13	-61.97	-40	-21.97	V
10.680338	21.97	RMS	37.8	.6	-95.2	-24.48	-59.31	-40	-19.31	H
10.680338	21.8	RMS	37.8	.6	-95.2	-24.48	-59.48	-40	-19.48	V
14.240588	19.67	RMS	39.3	.8	-95.2	-20.27	-55.70	-40	-15.70	H
14.241028	19.85	RMS	39.3	.8	-95.2	-20.25	-55.50	-40	-15.50	V
Mid Channel, 3625MHz										
7.250513	24.45	RMS	35.8	.6	-95.2	-26.83	-61.18	-40	-21.18	H
7.250513	24.43	RMS	35.8	.6	-95.2	-26.83	-61.20	-40	-21.20	V
10.875094	22.28	RMS	37.7	.5	-95.2	-24.08	-58.80	-40	-18.80	H
10.875534	20.99	RMS	37.7	.5	-95.2	-24.05	-60.06	-40	-20.06	V
14.500116	18.73	RMS	39.7	.8	-95.2	-19.99	-55.96	-40	-15.96	H
14.500116	19.35	RMS	39.7	.8	-95.2	-19.99	-55.34	-40	-15.34	V
High Channel, 3690MHz										
7.380497	24.22	RMS	35.8	.7	-95.2	-26.98	-61.46	-40	-21.46	H
7.380938	24.69	RMS	35.8	.7	-95.2	-26.99	-61.00	-40	-21.00	V
11.070291	21.4	RMS	37.8	.6	-95.2	-23.50	-58.90	-40	-18.90	H
11.070291	21.89	RMS	37.8	.6	-95.2	-23.50	-58.41	-40	-18.41	V
14.760084	18.94	RMS	40.1	.8	-95.2	-19.95	-55.31	-40	-15.31	H
14.760525	18.76	RMS	40.1	.8	-95.2	-19.91	-55.45	-40	-15.45	V

BPSK 5G NR n48 (40.0MHZ BANDWIDTH)

Project #:	14523758
Date:	06/14/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	n48 40MHz BPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3570MHz										
7.140356	24.44	RMS	35.7	.6	-95.2	-27.17	-61.63	-40	-21.63	H
7.140356	24.41	RMS	35.7	.6	-95.2	-27.17	-61.66	-40	-21.66	V
10.710741	21.54	RMS	37.7	.5	-95.2	-24.01	-59.47	-40	-19.47	H
10.710300	21.18	RMS	37.7	.5	-95.2	-24.01	-59.83	-40	-19.83	V
14.280244	19.5	RMS	39.4	.7	-95.2	-20.27	-55.87	-40	-15.87	H
14.280244	19.57	RMS	39.4	.7	-95.2	-20.27	-55.80	-40	-15.80	V
Mid Channel, 3625MHz										
7.246988	24.89	RMS	35.8	.6	-95.2	-26.83	-60.74	-40	-20.74	H
7.250513	25.21	RMS	35.8	.6	-95.2	-26.83	-60.42	-40	-20.42	V
10.875094	21.13	RMS	37.7	.5	-95.2	-24.08	-59.95	-40	-19.95	H
10.875094	20.77	RMS	37.7	.5	-95.2	-24.08	-60.31	-40	-20.31	V
14.500116	18.08	RMS	39.7	.8	-95.2	-19.99	-56.61	-40	-16.61	H
14.500116	19.06	RMS	39.7	.8	-95.2	-19.99	-55.63	-40	-15.63	V
High Channel, 3680MHz										
7.380056	24.32	RMS	35.8	.7	-95.2	-26.97	-61.35	-40	-21.35	H
7.380056	24.27	RMS	35.8	.7	-95.2	-26.97	-61.40	-40	-21.40	V
11.040328	20.74	RMS	37.8	.6	-95.2	-23.46	-59.52	-40	-19.52	H
11.041209	20.94	RMS	37.8	.6	-95.2	-23.64	-59.50	-40	-19.50	V
14.720428	20.01	RMS	40	.9	-95.2	-19.98	-54.27	-40	-14.27	H
14.720869	18.83	RMS	40	.9	-95.2	-19.98	-55.45	-40	-15.45	V

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 #:	14523758
Date:	06/05/2023
Test Engineer:	32607
Configuration:	EUT Only
Mode	FR1 N77 100MHz BPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz									
6.995801	44.82	Pk	35.8	-95.2	-45.50	-60.08	-13	-47.08	H
6.993483	45.46	Pk	35.8	-95.2	-45.53	-59.47	-13	-46.47	V
10.500196	45.41	Pk	37.8	-95.2	-45.09	-57.08	-13	-44.08	H
10.500196	45.21	Pk	37.8	-95.2	-45.09	-57.28	-13	-44.28	V
13.999955	43.93	Pk	38.9	-95.2	-43.78	-56.15	-13	-43.15	H
13.999955	43.45	Pk	38.9	-95.2	-43.78	-56.63	-13	-43.63	V

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

LIMITS

FCC: §27.53
(l) 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 #:	14523758
Date:	02/22/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode	FR1 N77 100MHz BPSK
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.502000	34.24	Pk	36	-95.2	-26.82	-51.78	-13	-38.78	H
7.502000	35.25	Pk	36	-95.2	-26.82	-50.77	-13	-37.77	V
11.251000	33.42	Pk	37.9	-95.2	-22.54	-46.42	-13	-33.42	H
11.251000	30.41	Pk	37.9	-95.2	-22.54	-49.43	-13	-36.43	V
15.000000	31.51	Pk	39.8	-95.2	-19.06	-42.95	-13	-29.95	H
15.000000	29.91	Pk	39.8	-95.2	-19.06	-44.55	-13	-31.55	V
Mid Channel, 3840MHz									
7.641724	55.66	Pk	35.7	-95.2	-45.67	-49.51	-13	-36.51	V
7.641830	55.44	Pk	35.7	-95.2	-45.67	-49.73	-13	-36.73	H
11.518955	54.72	Pk	38.3	-95.2	-43.27	-45.45	-13	-32.45	H
11.52104	54.32	Pk	38.3	-95.2	-43.26	-45.84	-13	-32.84	V
15.360534	53.59	Pk	40.2	-95.2	-42.30	-43.71	-13	-30.71	H
15.359231	54	Pk	40.2	-95.2	-42.33	-43.33	-13	-30.33	V
High Channel, 3930MHz									
7.860822	51.54	Pk	35.7	-95.2	-45.69	-53.65	-13	-40.65	H
7.860822	52.89	Pk	35.7	-95.2	-45.69	-52.30	-13	-39.30	V
11.790775	50.17	Pk	38.5	-95.2	-43.50	-50.03	-13	-37.03	H
11.790775	50.64	Pk	38.5	-95.2	-43.50	-49.56	-13	-36.56	V
15.720729	51.51	Pk	40.6	-95.2	-42.68	-45.77	-13	-32.77	H
15.719932	51.45	Pk	40.6	-95.2	-42.78	-45.93	-13	-32.93	V

11. SETUP PHOTOS

Please refer to 14523758-EP1V1 Setup Photo Report for setup photos.

END OF REPORT