5G NR n26 BPSK (20MHz BANDWIDTH)

Band	26	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		824	849		2.5	
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	824.5189	847.3726			
Extreme (50°C)		824.5189	847.3726	3.6	0.004	Yes
Extreme (40°C)		824.5189	847.3726	3.9	0.005	Yes
Extreme (30°C)		824.5189	847.3726	-3.5	-0.004	Yes
Extreme (10°C)		824.5189	847.3726	3.9	0.005	Yes
Extreme (0°C)		824.5189	847.3726	4.6	0.005	Yes
Extreme (-10°C)		824.5189	847.3726	-4.2	-0.005	Yes
Extreme (-20°C)		824.5189	847.3726	3.5	0.004	Yes
Extreme (-30°C)		824.5189	847.3726	-3.8	-0.005	Yes
20°C	15%	824.5189	847.3726	-3.0	-0.004	Yes
	-15%	824.5189	847.3726	4.2	0.005	Yes
	End Point Voltage	824.5189	847.3726	3.7	0.004	Yes

9.4.9. LTE BAND 30 AND 5G NR n30

LIMITS

FCC: §27.54

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

Test Engineer ID:	12482	Test Date:	2024-01-25

LTE BAND 30 QPSK (10MHz BANDWIDTH)

Band	30	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2305	2315			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	2305.5182	2314.4757			
Extreme (50°C)		2305.5182	2314.4757	4.4	0.002	Yes
Extreme (40°C)		2305.5182	2314.4757	-4.3	-0.002	Yes
Extreme (30°C)		2305.5182	2314.4757	-4.6	-0.002	Yes
Extreme (10°C)		2305.5182	2314.4757	5.3	0.002	Yes
Extreme (0°C)		2305.5182	2314.4757	5.2	0.002	Yes
Extreme (-10°C)		2305.5182	2314.4757	4.3	0.002	Yes
Extreme (-20°C)		2305.5182	2314.4757	4.9	0.002	Yes
Extreme (-30°C)		2305.5182	2314.4757	4.7	0.002	Yes
20°C	15%	2305.5182	2314.4757	-5.6	-0.002	Yes
	-15%	2305.5182	2314.4757	-6.4	-0.003	Yes
	End Point Voltage	2305.5182	2314.4757	-7.0	-0.003	Yes

5G NR n30 BPSK (10MHz BANDWIDTH)

Band	30	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2305	2315			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	2305.3410	2314.2871			
Extreme (50°C)		2305.3410	2314.2871	10.0	0.004	Yes
Extreme (40°C)		2305.3410	2314.2871	-6.1	-0.003	Yes
Extreme (30°C)		2305.3410	2314.2871	-7.6	-0.003	Yes
Extreme (10°C)		2305.3410	2314.2871	-10.4	-0.005	Yes
Extreme (0°C)		2305.3410	2314.2871	-8.4	-0.004	Yes
Extreme (-10°C)		2305.3410	2314.2871	-11.7	-0.005	Yes
Extreme (-20°C)		2305.3410	2314.2871	-11.3	-0.005	Yes
Extreme (-30°C)		2305.3410	2314.2871	-8.1	-0.004	Yes
20°C	15%	2305.3410	2314.2871	-10.7	-0.005	Yes
	-15%	2305.3410	2314.2871	-7.9	-0.003	Yes
	End Point Voltage	2305.3410	2314.2871	-9.4	-0.004	Yes

9.4.10. LTE BAND 41 AND 5G NR n41

LIMITS

FCC: §27.54

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

Test Engineer ID:	12482	Test Date:	2024-01-26

LTE BAND 41 QPSK (20MHz BANDWIDTH)

Band	41	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2496	2690		0	
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	2496.9997	2689.2856			
Extreme (50°C)		2496.9997	2689.2856	-11.9	-0.005	Yes
Extreme (40°C)		2496.9997	2689.2856	-11.3	-0.004	Yes
Extreme (30°C)		2496.9997	2689.2856	-10.7	-0.004	Yes
Extreme (10°C)		2496.9997	2689.2856	-12.7	-0.005	Yes
Extreme (0°C)		2496.9997	2689.2856	-10.6	-0.004	Yes
Extreme (-10°C)		2496.9997	2689.2856	-11.3	-0.004	Yes
Extreme (-20°C)		2496.9997	2689.2856	-9.7	-0.004	Yes
Extreme (-30°C)		2496.9997	2689.2856	-11.2	-0.004	Yes
20°C	15%	2496.9997	2689.2856	-12.6	-0.005	Yes
	-15%	2496.9997	2689.2856	-11.4	-0.004	Yes
	End Point Voltage	2496.9997	2689.2856	-9.2	-0.004	Yes

5G NR n41 BPSK (100MHz BANDWIDTH)

Band	41	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2496	2690		0	
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	2497.1562	2687.6917			
Extreme (50°C)		2497.1562	2687.6916	-17.1	-0.007	Yes
Extreme (40°C)		2497.1562	2687.6916	-13.2	-0.005	Yes
Extreme (30°C)		2497.1562	2687.6916	-12.5	-0.005	Yes
Extreme (10°C)		2497.1562	2687.6916	-12.1	-0.005	Yes
Extreme (0°C)		2497.1562	2687.6916	-15.1	-0.006	Yes
Extreme (-10°C)		2497.1562	2687.6916	-16.8	-0.006	Yes
Extreme (-20°C)		2497.1562	2687.6916	-13.9	-0.005	Yes
Extreme (-30°C)		2497.1562	2687.6916	-15.6	-0.006	Yes
20°C	15%	2497.1562	2687.6916	-12.9	-0.005	Yes
	-15%	2497.1562	2687.6916	-17.7	-0.007	Yes
	End Point Voltage	2497.1562	2687.6916	-14.3	-0.006	Yes

9.4.11. LTE BAND 66 AND 5G NR n66

LIMITS

FCC: §27.54

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

Test Engineer ID:	12482	Test Date:	2024-02-21

LTE BAND 66 QPSK (20MHz BANDWIDTH)

Band	66	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1710	1780			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	1711.0638	1778.9336			
Extreme (50°C)		1711.0638	1778.9336	-4.6	-0.003	Yes
Extreme (40°C)		1711.0638	1778.9336	-4.1	-0.002	Yes
Extreme (30°C)		1711.0638	1778.9336	-2.8	-0.002	Yes
Extreme (10°C)		1711.0638	1778.9336	-5.7	-0.003	Yes
Extreme (0°C)		1711.0638	1778.9336	-4.0	-0.002	Yes
Extreme (-10°C)		1711.0638	1778.9336	4.3	0.002	Yes
Extreme (-20°C)		1711.0638	1778.9336	4.3	0.002	Yes
Extreme (-30°C)		1711.0638	1778.9336	4.7	0.003	Yes
20°C	15%	1711.0638	1778.9336	-5.4	-0.003	Yes
	-15%	1711.0638	1778.9336	-5.5	-0.003	Yes
	End Point Voltage	1711.0638	1778.9336	-5.3	-0.003	Yes

5G NR n66 BPSK (40MHz BANDWIDTH)

Band	66	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1710	1780			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	1710.6791	1779.3059			
Extreme (50°C)		1710.6791	1779.3059	-6.5	-0.004	Yes
Extreme (40°C)		1710.6791	1779.3059	-4.5	-0.003	Yes
Extreme (30°C)		1710.6791	1779.3059	-5.1	-0.003	Yes
Extreme (10°C)		1710.6791	1779.3059	-7.1	-0.004	Yes
Extreme (0°C)		1710.6791	1779.3059	-6.6	-0.004	Yes
Extreme (-10°C)		1710.6791	1779.3059	-7.0	-0.004	Yes
Extreme (-20°C)		1710.6791	1779.3059	-5.9	-0.003	Yes
Extreme (-30°C)		1710.6791	1779.3059	-5.0	-0.003	Yes
20°C	15%	1710.6791	1779.3059	-6.9	-0.004	Yes
	-15%	1710.6791	1779.3059	-7.2	-0.004	Yes
	End Point Voltage	1710.6791	1779.3059	-6.7	-0.004	Yes

9.4.12. 5G NR n70

LIMITS

FCC: §27.54

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

Test Engineer ID:	32546	Test Date:	2024-02-21

5G NR n70 BPSK (15MHz BANDWIDTH)

Band	70	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1695	1710			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	1695.4233	1708.8322			
Extreme (50°C)		1695.4233	1708.8322	-9.0	-0.005	Yes
Extreme (40°C)		1695.4233	1708.8322	-7.3	-0.004	Yes
Extreme (30°C)		1695.4233	1708.8322	-6.7	-0.004	Yes
Extreme (10°C)		1695.4233	1708.8322	-4.3	-0.003	Yes
Extreme (0°C)		1695.4233	1708.8322	-6.8	-0.004	Yes
Extreme (-10°C)		1695.4233	1708.8323	9.9	0.006	Yes
Extreme (-20°C)		1695.4233	1708.8322	-9.4	-0.006	Yes
Extreme (-30°C)		1695.4233	1708.8322	-7.2	-0.004	Yes
20°C	15%	1695.4233	1708.8322	4.9	0.003	Yes
	-15%	1695.4233	1708.8322	-6.8	-0.004	Yes
	End Point Voltage	1695.4233	1708.8322	-7.8	-0.005	Yes

9.4.13. LTE BAND 71 AND 5G NR n71

LIMITS

FCC: §27.54

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

Test Engineer ID:	12482	Test Date:	2024-01-25

LTE BAND 71 QPSK (20MHz BANDWIDTH)

Band	71	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		663	698			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	664.0665	696.9383			
Extreme (50°C)		664.0665	696.9383	-3.4	-0.005	Yes
Extreme (40°C)		664.0665	696.9383	-3.1	-0.005	Yes
Extreme (30°C)		664.0665	696.9383	-3.0	-0.004	Yes
Extreme (10°C)		664.0665	696.9383	-3.1	-0.005	Yes
Extreme (0°C)		664.0665	696.9383	3.7	0.005	Yes
Extreme (-10°C)		664.0665	696.9383	-2.3	-0.003	Yes
Extreme (-20°C)		664.0665	696.9383	3.9	0.006	Yes
Extreme (-30°C)		664.0665	696.9383	3.4	0.005	Yes
20°C	15%	664.0665	696.9383	-3.4	-0.005	Yes
	-15%	664.0665	696.9383	-3.5	-0.005	Yes
	End Point Voltage	664.0665	696.9383	-3.8	-0.006	Yes

5G NR n71 BPSK (20MHz BANDWIDTH)

Band	71	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		663	698			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	663.5063	696.4010			
Extreme (50°C)		663.5063	696.4010	-11.7	-0.017	Yes
Extreme (40°C)		663.5063	696.4010	-5.4	-0.008	Yes
Extreme (30°C)		663.5063	696.4010	-5.1	-0.007	Yes
Extreme (10°C)		663.5063	696.4010	-8.4	-0.012	Yes
Extreme (0°C)		663.5063	696.4010	11.8	0.017	Yes
Extreme (-10°C)		663.5063	696.4010	-14.4	-0.021	Yes
Extreme (-20°C)		663.5063	696.4010	-6.4	-0.009	Yes
Extreme (-30°C)		663.5063	696.4010	-6.4	-0.009	Yes
20°C	15%	663.5063	696.4010	-13.1	-0.019	Yes
	-15%	663.5063	696.4010	-13.5	-0.020	Yes
	End Point Voltage	663.5063	696.4010	-7.7	-0.011	Yes

9.4.14. 5G NR n77 (FCC Part 27 3450-3550MHz)

LIMITS

FCC: §27.54

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

Test Engineer ID:	12482	Test Date:	2024-05-10

5G NR n77 BPSK (100MHz BANDWIDTH)

Band	77	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		3450	3550			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	3451.1011	3547.6979			
Extreme (50°C)		3451.1011	3547.6979	-17.0	-0.005	Yes
Extreme (40°C)		3451.1011	3547.6979	-15.0	-0.004	Yes
Extreme (30°C)		3451.1011	3547.6979	11.7	0.003	Yes
Extreme (10°C)		3451.1011	3547.6979	-12.4	-0.004	Yes
Extreme (0°C)		3451.1011	3547.6979	-12.8	-0.004	Yes
Extreme (-10°C)		3451.1011	3547.6979	-16.3	-0.005	Yes
Extreme (-20°C)		3451.1011	3547.6979	-13.6	-0.004	Yes
Extreme (-30°C)		3451.1011	3547.6979	-19.4	-0.006	Yes
20°C	15%	3451.1011	3547.6979	-13.7	-0.004	Yes
	-15%	3451.1011	3547.6979	-14.9	-0.004	Yes
	End Point Voltage	3451.1011	3547.6979	-15.9	-0.005	Yes

9.4.15. 5G NR n77 (FCC Part 27 3700-3980MHz)

LIMITS

FCC: §27.54

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

Test Engineer ID:	12482	Test Date:	1/24/2023

5G NR n77 BPSK (100MHz BANDWIDTH)

Band	77	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		3700	3980			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	3701.0842	3977.7901			
Extreme (50°C)		3701.0842	3977.7901	-16.5	-0.004	Yes
Extreme (40°C)		3701.0842	3977.7901	13.3	0.003	Yes
Extreme (30°C)		3701.0842	3977.7901	-16.3	-0.004	Yes
Extreme (10°C)		3701.0842	3977.7901	-14.7	-0.004	Yes
Extreme (0°C)		3701.0842	3977.7901	-17.3	-0.005	Yes
Extreme (-10°C)		3701.0842	3977.7901	-14.0	-0.004	Yes
Extreme (-20°C)		3701.0842	3977.7901	-13.6	-0.004	Yes
Extreme (-30°C)		3701.0842	3977.7901	12.2	0.003	Yes
20°C	15%	3701.0842	3977.7901	-17.7	-0.005	Yes
	-15%	3701.0842	3977.7901	15.7	0.004	Yes
	End Point Voltage	3701.0842	3977.7901	16.8	0.004	Yes

9.5. PEAK-TO-AVERAGE POWER RATIO

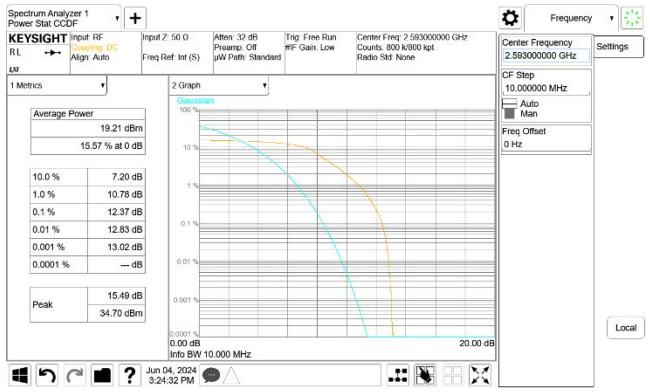
LIMIT

In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

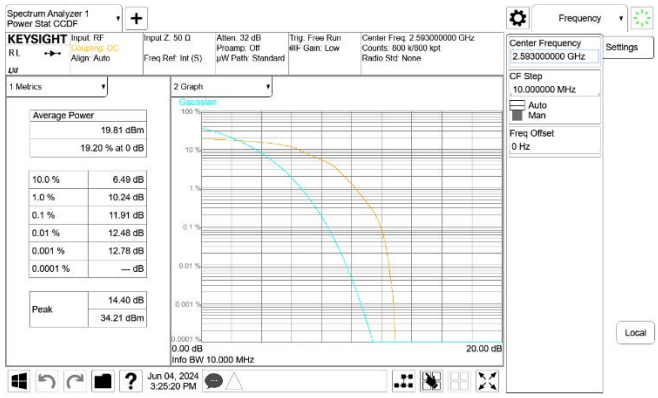
RESULT

Antenna 1 was used to measure as the worst case; full resource block (FRB) for each bandwidth was used to measure as the worst case. The results from all CCDF measurements are passed with 13dB peak-to-average power ratio criteria.

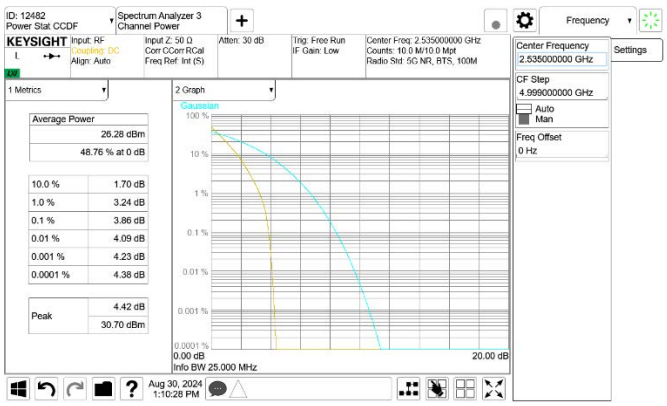
Example Plots: FULL RB



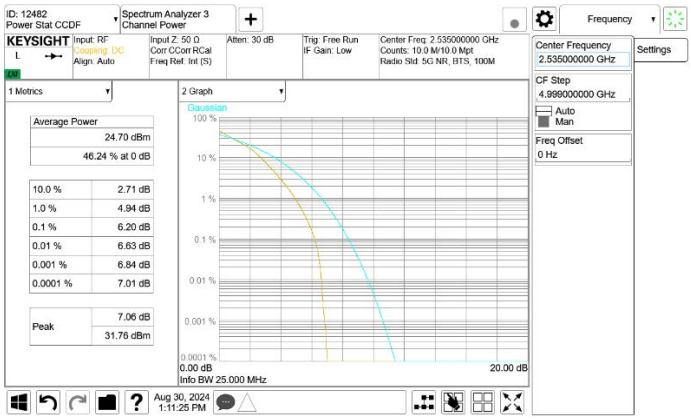
LTE B41 10MHz QPSK Middle Channel



LTE B41 10MHz 16QAM Middle Channel



5G NR n7 30MHz BPSK Middle Channel



5G NR n5 20MHz 16QAM Middle Channel

9.5.1. LTE BAND 7 AND 5G NR n7

Test Engineer ID:	50822	Test Date:	1/10/2024

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
Band 7	5MHz	2535.0	25	0	QPSK	31.01	27.19	3.82
					16QAM	31.26	26.83	4.43
	10MHz		50	0	QPSK	30.52	27.09	3.43
					16QAM	30.91	26.64	4.27
	15MHz		75	0	QPSK	30.75	26.92	3.83
					16QAM	30.89	26.52	4.37
	20MHz		100	0	QPSK	30.59	26.87	3.72
					16QAM	31.74	26.60	5.14
5G NR Band n7	5MHz		25	0	BPSK	30.43	26.33	4.10
					16QAM	31.50	24.68	6.82
	10MHz		50	0	BPSK	30.76	26.26	4.50
					16QAM	31.57	24.71	6.86
	15MHz		75	0	BPSK	31.06	26.74	4.32
					16QAM	31.53	24.77	6.76
	20MHz		100	0	BPSK	30.76	26.40	4.36
					16QAM	31.42	24.67	6.75
	25MHz		128	0	BPSK	30.70	26.61	4.09
					16QAM	31.39	24.80	6.59
	30MHz		160	0	BPSK	30.70	26.28	4.42
					16QAM	31.76	24.70	7.06
	35MHz		180	0	BPSK	30.23	25.73	4.50
					16QAM	31.80	24.22	7.58
	40MHz		216	0	BPSK	30.53	25.68	4.85
					16QAM	30.53	25.68	4.85
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9.5.2. LTE BAND 12 AND 5G NR n12

Test Engineer ID:	25780	Test Date:	2024-01-03

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
Band 12	1.4MHz	705.5	6	0	QPSK	31.26	27.70	3.56
					16QAM	31.68	27.28	4.40
	3MHz		15	0	QPSK	31.54	27.74	3.80
					16QAM	31.81	27.34	4.47
	5MHz		25	0	QPSK	31.44	27.78	3.66
					16QAM	31.88	27.43	4.45
	10MHz		50	0	QPSK	31.61	27.76	3.85
					16QAM	31.97	27.29	4.68
5G NR Band n12	5MHz		25	0	BPSK	30.21	25.98	4.23
					16QAM	31.35	24.55	6.80
	10MHz		50	0	BPSK	30.61	26.11	4.50
					16QAM	31.11	24.35	6.76
	15MHz		75	0	BPSK	30.87	26.22	4.65
					16QAM	30.94	24.11	6.83
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9.5.3. LTE BAND 13

Test Engineer ID:	25780	Test Date:	2024-01-02

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
Band 13	5MHz	782.0	25	0	QPSK	31.43	27.88	3.55
					16QAM	32.00	27.56	4.44
	10MHz		50	0	QPSK	31.51	27.76	3.75
					16QAM	31.80	27.35	4.45
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9.5.4. LTE BAND 14 AND 5G NR n14

Test Engineer ID:	25780	Test Date:	2023-12-21

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
Band 14	5MHz	793.0	25	0	QPSK	31.81	28.20	3.61
					16QAM	31.88	27.79	4.09
	10MHz		50	0	QPSK	31.54	28.10	3.44
					16QAM	32.13	27.68	4.45
5G NR Band n14	5MHz		25	0	BPSK	29.92	25.69	4.23
					16QAM	30.90	24.22	6.68
	10MHz		50	0	BPSK	30.32	25.77	4.55
					16QAM	30.97	24.29	6.68
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9.5.5. LTE BAND 17

Test Engineer ID:	25780	Test Date:	2023-12-21

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
Band 17	5MHz	710.0	25	0	QPSK	31.78	28.16	3.62
					16QAM	32.29	27.87	4.42
	10MHz		50	0	QPSK	31.63	28.08	3.55
					16QAM	32.05	27.67	4.38
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9.5.6. LTE BAND 25 AND 5G NR n25

Test Engineer ID:	50822	Test Date:	2024-01-11

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
Band 25	1.4MHz	1882.5	6	0	QPSK	30.39	26.73	3.66
					16QAM	30.72	26.21	4.51
	3MHz		15	0	QPSK	30.24	26.65	3.59
					16QAM	30.53	26.24	4.29
	5MHz		25	0	QPSK	30.33	26.72	3.61
					16QAM	30.83	26.44	4.39
	10MHz		50	0	QPSK	30.34	26.68	3.66
					16QAM	30.70	26.23	4.47
	15MHz		75	0	QPSK	30.72	26.52	4.20
					16QAM	30.85	26.14	4.71
	20MHz		100	0	QPSK	30.37	26.50	3.87
					16QAM	31.14	26.25	4.89
5G NR Band n25	5MHz		25	0	BPSK	30.30	25.92	4.38
					16QAM	31.26	24.40	6.86
	10MHz		50	0	BPSK	38.50	32.89	5.61
					16QAM	31.44	24.53	6.91
	15MHz		75	0	BPSK	30.77	25.99	4.78
					16QAM	34.51	24.59	9.92
	20MHz		100	0	BPSK	30.91	26.02	4.89
					16QAM	31.67	24.56	7.11
	25MHz		128	0	BPSK	30.72	26.23	4.49
					16QAM	31.63	24.62	7.01
	30MHz		160	0	BPSK	30.81	26.14	4.67
					16QAM	31.76	24.66	7.10
	35MHz		180	0	BPSK	30.19	25.65	4.54
					16QAM	31.72	24.13	7.59
	40MHz		216	0	BPSK	29.21	24.54	4.67
					16QAM	30.66	23.02	7.64
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

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

Test Engineer ID:	25780	Test Date:	2023-12-19

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
Band 26 (FCC Part 90S)	1.4MHz	819.0	6	0	QPSK	32.81	28.37	4.44
					16QAM	33.19	27.86	5.33
	3MHz		15	0	QPSK	31.89	28.34	3.55
					16QAM	32.49	28.04	4.45
	5MHz		25	0	QPSK	32.01	28.38	3.63
					16QAM	32.48	28.07	4.41
	10MHz		50	0	QPSK	32.40	26.59	5.81
					16QAM	32.60	25.58	7.02
5G NR Band n26 (FCC Part 90S)	5MHz		25	0	BPSK	30.29	26.00	4.29
					16QAM	31.35	24.55	6.80
	10MHz		50	0	BPSK	30.85	26.10	4.75
					16QAM	31.44	24.51	6.93
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

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

Test Engineer ID:	50822	Test Date:	2024-01-11

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
Band 26 (FCC Part 22)	1.4MHz	836.5	6	0	QPSK	33.97	29.52	4.45
					16QAM	34.49	29.09	5.40
	3MHz		15	0	QPSK	33.27	29.59	3.68
					16QAM	33.56	29.19	4.37
	5MHz		25	0	QPSK	33.28	29.59	3.69
					16QAM	33.70	29.30	4.40
	10MHz		50	0	QPSK	32.98	29.49	3.49
					16QAM	33.46	29.07	4.39
5G NR Band n26 (FCC Part 22)	5MHz		25	0	BPSK	30.31	25.99	4.32
					16QAM	31.38	24.53	6.85
	10MHz		50	0	BPSK	30.79	26.06	4.73
					16QAM	31.50	24.66	6.84
	15MHz		75	0	BPSK	31.10	26.13	4.97
					16QAM	31.78	24.67	7.11
	20MHz		100	0	BPSK	30.95	26.16	4.79
					16QAM	31.73	24.69	7.04

9.5.9. LTE BAND 30 AND 5G NR N30

Test Engineer ID:	25780	Test Date:	2023-12-14

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
Band 30	5MHz	2310.0	25	0	QPSK	30.76	26.89	3.87
					16QAM	30.89	26.40	4.49
	10MHz		50	0	QPSK	30.44	26.58	3.86
					16QAM	30.96	26.19	4.77
5G NR Band n30	5MHz		25	0	BPSK	30.35	26.09	4.26
					16QAM	31.50	24.58	6.92
	10MHz		50	0	BPSK	30.84	26.14	4.70
					16QAM	31.59	24.60	6.99
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9.5.10. LTE BAND 41 AND 5G NR n41

Test Engineer ID:	25780	Test Date:	2023-12-12

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
Band 41	5MHz	2593.0	25	0	QPSK	29.18	17.55	*4.64
					16QAM	29.40	16.90	*5.51
	10MHz		50	0	QPSK	29.22	17.54	*4.69
					16QAM	29.51	16.89	*5.63
	15MHz		75	0	QPSK	29.19	17.45	*4.75
					16QAM	29.45	16.80	*5.66
	20MHz		100	0	QPSK	29.18	17.43	*4.76
					16QAM	29.44	16.78	*5.67
5G NR Band n41	10MHz		24	0	BPSK	30.79	27.50	3.29
					16QAM	30.61	25.01	5.60
	15MHz		36	0	BPSK	30.55	27.36	3.19
					16QAM	31.31	25.73	5.58
	20MHz		50	0	BPSK	29.76	26.30	3.46
					16QAM	30.48	24.61	5.87
	30MHz		75	0	BPSK	33.18	28.70	4.48
					16QAM	33.82	27.20	6.62
	40MHz		100	0	BPSK	32.38	27.75	4.63
					16QAM	33.90	26.23	7.67
	50MHz		128	0	BPSK	32.49	26.46	6.03
					16QAM	32.74	24.87	7.87
	60MHz		162	0	BPSK	31.33	25.42	5.91
					16QAM	32.23	23.76	8.47
	70MHz		180	0	BPSK	31.34	24.91	6.43
					16QAM	31.58	23.38	8.20
	80MHz		216	0	BPSK	30.64	24.16	6.48
					16QAM	31.78	22.55	9.23
	90MHz		243	0	BPSK	30.65	23.76	6.89
					16QAM	31.27	21.94	9.33
	100MHz		270	0	BPSK	29.04	21.96	7.08
					16QAM	30.23	21.31	8.92
* Duty Cycle Correction Factor (dB)			6.99					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9.5.11. LTE BAND 66 AND 5G NR n66

Test Engineer ID:	50822	Test Date:	2024-01-16

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
Band 66	1.4MHz	1745.0	6	0	QPSK	30.62	26.20	4.42
					16QAM	30.73	25.33	5.40
	3MHz		15	0	QPSK	30.68	26.13	4.55
					16QAM	30.64	25.13	5.51
	5MHz		25	0	QPSK	30.56	26.68	3.88
					16QAM	30.99	26.39	4.60
	10MHz		50	0	QPSK	29.90	26.59	3.31
					16QAM	30.67	26.21	4.46
	15MHz		75	0	QPSK	29.86	26.41	3.45
					16QAM	30.93	26.11	4.82
	20MHz		100	0	QPSK	29.96	26.47	3.49
					16QAM	31.31	26.30	5.01
5G NR Band n66	5MHz		25	0	BPSK	30.36	26.08	4.28
					16QAM	31.40	24.55	6.85
	10MHz		50	0	BPSK	30.68	26.04	4.64
					16QAM	31.61	24.68	6.93
	15MHz		75	0	BPSK	30.74	26.17	4.57
					16QAM	31.57	24.71	6.86
	20MHz		100	0	BPSK	30.78	26.26	4.52
					16QAM	31.64	24.73	6.91
	25MHz		128	0	BPSK	30.58	26.33	4.25
					16QAM	31.43	24.73	6.70
	30MHz		160	0	BPSK	30.93	26.42	4.51
					16QAM	30.93	26.42	4.51
	35MHz		180	0	BPSK	30.46	25.91	4.55
					16QAM	32.07	24.42	7.65
	40MHz		216	0	BPSK	30.86	25.12	5.74
					16QAM	31.46	23.67	7.79
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9.5.12. 5G NR n70

Test Engineer ID:	50822	Test Date:	2024-01-16

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
5G NR Band n70	5MHz	1702.5	25	0	BPSK	30.42	26.12	4.30
					16QAM	31.67	24.67	7.00
	10MHz		50	0	BPSK	30.71	26.11	4.60
					16QAM	31.55	24.64	6.91
	15MHz		75	0	BPSK	30.80	26.18	4.62
					16QAM	31.70	24.65	7.05
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9.5.13. LTE BAND 71 AND 5G NR n71

Test Engineer ID:	25780	Test Date:	2023-12-14

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
Band 71	5MHz	680.5/683	25	0	QPSK	30.84	27.13	3.71
					16QAM	31.42	26.93	4.49
	10MHz		50	0	QPSK	30.56	27.09	3.47
					16QAM	31.27	26.78	4.49
	15MHz		75	0	QPSK	30.47	26.94	3.53
					16QAM	31.23	26.63	4.60
	20MHz		100	0	QPSK	31.02	26.99	4.03
					16QAM	31.56	26.62	4.94
5G NR Band n71	5MHz		24	0	BPSK	30.23	26.03	4.20
					16QAM	31.49	24.59	6.90
	10MHz		36	0	BPSK	30.36	26.07	4.29
					16QAM	31.42	24.54	6.88
	15MHz		50	0	BPSK	30.49	26.16	4.33
					16QAM	31.48	24.69	6.79
	20MHz		75	0	BPSK	30.41	26.19	4.22
					16QAM	31.53	24.69	6.84
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9.5.14. 5G NR n77 (FCC Part 27 3450-3550MHz)

Test Engineer ID:	50822	Test Date:	2024-01-17

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	33.14	28.99	4.15
					16QAM	34.30	27.46	6.84
	15MHz		36	0	BPSK	33.20	29.01	4.19
					16QAM	34.56	27.66	6.90
	20MHz		50	0	BPSK	33.41	29.21	4.20
					16QAM	34.61	27.71	6.90
	30MHz		75	0	BPSK	35.07	30.26	4.81
					16QAM	35.71	28.70	7.01
	40MHz		100	0	BPSK	34.06	27.57	6.49
					16QAM	34.92	26.15	8.77
	50MHz		128	0	BPSK	32.26	26.43	5.83
					16QAM	32.66	24.97	7.69
	60MHz		162	0	BPSK	32.64	26.56	6.08
					16QAM	33.09	24.88	8.21
	70MHz		180	0	BPSK	32.58	26.08	6.50
					16QAM	32.61	24.40	8.21
	80MHz		216	0	BPSK	31.91	25.00	6.91
					16QAM	31.96	23.55	8.41
	90MHz		243	0	BPSK	31.13	24.36	6.77
					16QAM	31.37	22.82	8.55
	100MHz		270	0	BPSK	30.78	24.02	6.76
					16QAM	31.66	22.75	8.91
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9.5.15. 5G NR n77 (FCC Part 27 3700-3980MHz)

Test Engineer ID:	50822	Test Date:	2024-01-18

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	33.30	29.17	4.13
					16QAM	34.41	27.70	6.71
	15MHz		36	0	BPSK	33.35	29.20	4.15
					16QAM	34.70	27.72	6.98
	20MHz		50	0	BPSK	33.44	29.21	4.23
					16QAM	34.66	27.77	6.89
	30MHz		75	0	BPSK	34.53	29.42	5.11
					16QAM	34.53	27.36	7.17
	40MHz		100	0	BPSK	33.08	28.22	4.86
					16QAM	33.97	26.61	7.36
	50MHz		128	0	BPSK	33.26	25.40	7.86
					16QAM	33.28	25.42	7.86
	60MHz		162	0	BPSK	32.65	25.98	6.67
					16QAM	32.53	24.41	8.12
	70MHz		180	0	BPSK	31.73	25.57	6.16
					16QAM	32.36	23.93	8.43
	80MHz		216	0	BPSK	31.45	24.67	6.78
					16QAM	31.84	23.17	8.67
	90MHz		243	0	BPSK	30.65	24.05	6.60
					16QAM	31.51	22.52	8.99
	100MHz		270	0	BPSK	30.55	23.41	7.14
					16QAM	31.51	22.06	9.45
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.

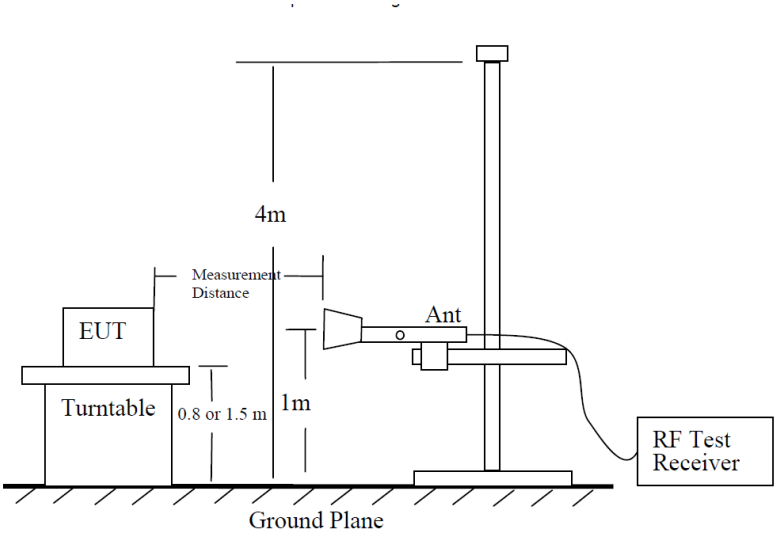


Figure 6—Test site-up for radiated ERP and/or EIRP measurements

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.

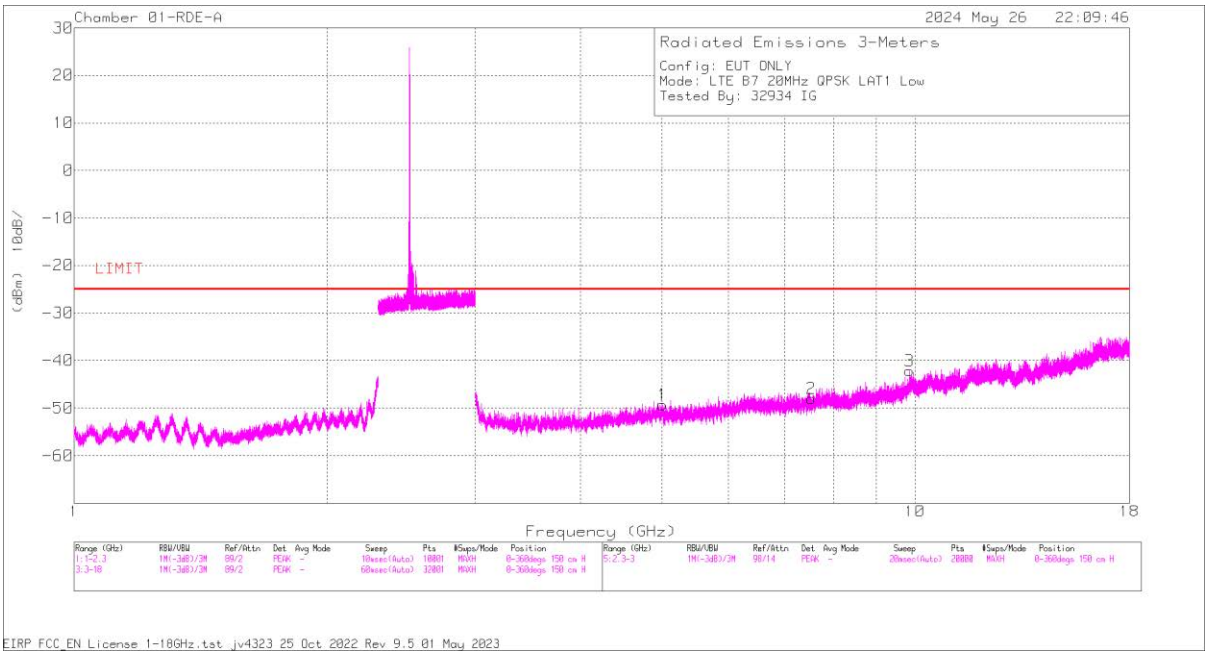
So, from d)

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

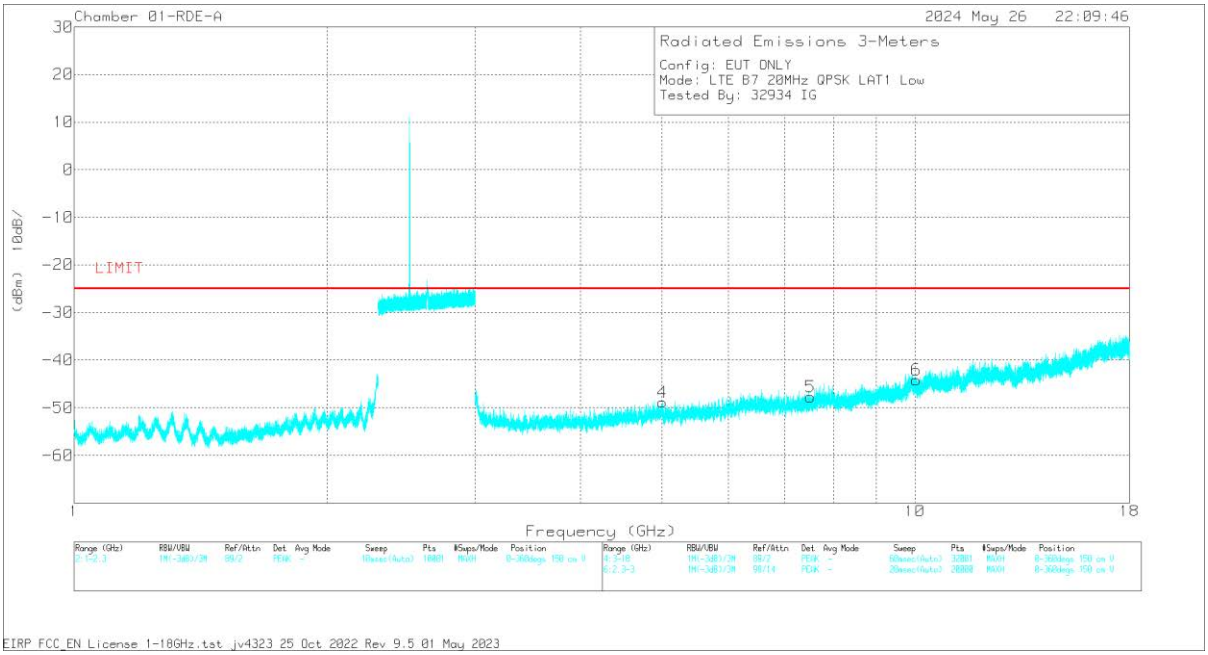
Then, EIRP (dBm) = E (dBμV/m) + 9.5424 − 104.8 = E (dBμV/m) – 95.2576

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

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	BRF 2495-2690MHz T1790 1-18GHz (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
5.008594	33.69	Pk	34.2	.8	-95.2	-22.34	-48.85	-25	-23.85	V
5.012344	33.17	Pk	34.2	.8	-95.2	-22.3	-49.33	-25	-24.33	H
7.516875	29.67	Pk	35.7	.3	-95.2	-18.2	-47.73	-25	-22.73	V
7.531406	29.57	Pk	35.7	.3	-95.2	-18.3	-47.93	-25	-22.93	H
9.855469	30.98	Pk	37.2	.7	-95.2	-15.8	-42.12	-25	-17.12	H
10.04625	28.65	Pk	37.5	.7	-95.2	-15.8	-44.15	-25	-19.15	V

10.1. FIELD STRENGTH OF SPURIOUS RADIATION, ANT1

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests below 1GHz were done with a Resolution Bandwidth of 100kHz, and a Video Bandwidth of 300kHz.

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 #:	14982448
Date:	2024-05-26
Test Engineer:	32934
Configuration:	EUT only
Mode	LTE B7 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	BRF 2495-2690MHz T1790 1-18GHz (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2510MHz										
5.008594	33.69	Pk	34.2	.8	-95.2	-22.34	-48.85	-25	-23.85	V
5.012344	33.17	Pk	34.2	.8	-95.2	-22.3	-49.33	-25	-24.33	H
7.516875	29.67	Pk	35.7	.3	-95.2	-18.2	-47.73	-25	-22.73	V
7.531406	29.57	Pk	35.7	.3	-95.2	-18.3	-47.93	-25	-22.93	H
9.855469	30.98	Pk	37.2	.7	-95.2	-15.8	-42.12	-25	-17.12	H
10.04625	28.65	Pk	37.5	.7	-95.2	-15.8	-44.15	-25	-19.15	V
Mid Channel, 2535MHz										
5.054531	32.73	Pk	34.1	.6	-95.2	-22.0	-49.77	-25	-24.77	V
5.078438	33.23	Pk	34.2	.7	-95.2	-21.8	-48.87	-25	-23.87	H
7.612969	29.50	Pk	35.8	.4	-95.2	-17.9	-47.40	-25	-22.40	H
7.620469	30.01	Pk	35.8	.4	-95.2	-17.8	-46.74	-25	-21.74	V
10.208906	28.24	Pk	37.6	.9	-95.2	-15.6	-44.07	-25	-19.07	V
10.23375	30.62	Pk	37.6	.8	-95.2	-15.5	-41.66	-25	-16.66	H
High Channel, 2560MHz										
5.001094	34.18	Pk	34.2	.8	-95.2	-22.49	-48.51	-25	-23.51	H
5.005781	33.81	Pk	34.2	.8	-95.2	-22.4	-48.79	-25	-23.79	V
7.640156	30.69	Pk	35.8	.4	-95.2	-17.8	-46.11	-25	-21.11	H
7.643906	30.93	Pk	35.8	.4	-95.2	-17.8	-45.87	-25	-20.87	V
10.24125	29.37	Pk	37.6	.8	-95.2	-15.33	-42.76	-25	-17.76	V
10.26375	29.11	Pk	37.7	.7	-95.2	-15.43	-43.12	-25	-18.12	H

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-06-10
Test Engineer:	106018
Configuration:	EUT only
Mode	5G NR n7 BPSK 40MHz
Chamber #:	01-RDE-A

Frequency (MHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	BRF 2495-2690MHz T1790 1-18GHz (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2520MHz										
4.942500	34.30	Pk	34.1	.9	-95.2	-22.50	-48.40	-25	-23.40	H
5.077969	31.98	Pk	34.2	.7	-95.2	-21.80	-50.12	-25	-25.12	V
7.567500	28.86	Pk	35.7	.4	-95.2	-18.25	-48.49	-25	-23.49	V
7.587656	29.93	Pk	35.7	.5	-95.2	-18.10	-47.17	-25	-22.17	H
9.907969	29.47	Pk	37.3	.8	-95.2	-15.50	-43.13	-25	-18.13	H
10.101094	28.37	Pk	37.6	.7	-95.2	-15.90	-44.44	-25	-19.44	V
Mid Channel, 2535MHz										
5.120156	32.98	Pk	34.2	.8	-95.2	-21.92	-49.14	-25	-24.14	H
5.180156	32.83	Pk	34.1	.7	-95.2	-21.90	-49.47	-25	-24.47	V
7.616250	28.90	Pk	35.8	.4	-95.2	-17.88	-47.98	-25	-22.98	H
7.679531	29.59	Pk	35.8	.5	-95.2	-17.75	-47.06	-25	-22.06	V
10.158281	29.97	Pk	37.6	.6	-95.2	-15.60	-42.63	-25	-17.63	V
10.171406	28.69	Pk	37.6	.6	-95.2	-15.56	-43.87	-25	-18.87	H
High Channel, 2550MHz										
5.175938	33.40	Pk	34.1	.7	-95.2	-21.90	-48.90	-25	-23.90	H
5.187188	32.72	Pk	34.1	.8	-95.2	-21.88	-49.46	-25	-24.46	V
7.639219	28.95	Pk	35.8	.4	-95.2	-17.80	-47.85	-25	-22.85	V
7.643906	28.86	Pk	35.8	.4	-95.2	-17.80	-47.94	-25	-22.94	H
10.2825	29.04	Pk	37.7	.7	-95.2	-15.25	-43.01	-25	-18.01	V
10.295625	29.33	Pk	37.7	.6	-95.2	-15.04	-42.61	-25	-17.61	H

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 #:	14982484
Date:	2024-03-26
Test Engineer:	27661
Configuration:	EUT only
Mode	LTE B12 QPSK 10MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	200897 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 704MHz									
1.398700	64.96	Pk	28.2	-95.2	-49.13	-51.17	-13	-38.17	H
2.098450	57.67	Pk	31.4	-95.2	-49.71	-55.84	-13	-42.84	H
2.795950	55.03	Pk	32.2	-95.2	-48.33	-56.3	-13	-43.30	H
1.398700	62.66	Pk	28.2	-95.2	-49.13	-53.47	-13	-40.47	V
2.098450	61.00	Pk	31.4	-95.2	-49.71	-52.51	-13	-39.51	V
2.795950	54.41	Pk	32.2	-95.2	-48.33	-56.92	-13	-43.92	V
Mid Channel, 707.5MHz									
1.405000	57.36	Pk	28.2	-95.2	-49.22	-58.86	-13	-45.86	H
2.809900	54.48	Pk	32.2	-95.2	-48.14	-56.66	-13	-43.66	H
2.107450	57.45	Pk	31.4	-95.2	-49.85	-56.20	-13	-43.20	H
1.405000	57.26	Pk	28.2	-95.2	-49.22	-58.96	-13	-45.96	V
2.809900	54.12	Pk	32.2	-95.2	-48.14	-57.02	-13	-44.02	V
2.107450	57.33	Pk	31.4	-95.2	-49.85	-56.32	-13	-43.32	V
High Channel, 711MHz									
1.412650	62.64	Pk	28.1	-95.2	-49.11	-53.57	-13	-40.57	H
2.823850	54.94	Pk	32.2	-95.2	-48.39	-56.45	-13	-43.45	H
2.118250	57.14	Pk	31.5	-95.2	-49.99	-56.55	-13	-43.55	H
1.412650	63.25	Pk	28.1	-95.2	-49.11	-52.96	-13	-39.96	V
2.823850	54.76	Pk	32.2	-95.2	-48.39	-56.63	-13	-43.63	V
2.118250	58.75	Pk	31.5	-95.2	-49.99	-54.94	-13	-41.94	V

BPSK 5G NR n12 (15.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-12
Test Engineer:	27661
Configuration:	EUT only
Mode	5G NR n12 BPSK 15MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 706.5MHz									
1.398940	72.33	Pk	28.8	-95.2	-49.87	-43.94	-13	-30.94	H
2.116623	58.61	Pk	31.5	-95.2	-49.90	-54.99	-13	-41.99	H
2.829128	57.72	Pk	32.4	-95.2	-48.34	-53.42	-13	-40.42	H
1.398903	71.06	Pk	28.8	-95.2	-49.87	-45.21	-13	-32.21	V
2.122312	58.86	Pk	31.5	-95.2	-49.99	-54.83	-13	-41.83	V
2.826262	57.59	Pk	32.4	-95.2	-48.42	-53.63	-13	-40.63	V
Mid Channel, 707.5MHz									
1.400894	71.74	Pk	28.8	-95.2	-49.87	-44.53	-13	-31.53	H
2.121909	58.84	Pk	31.5	-95.2	-49.99	-54.85	-13	-41.85	H
2.827458	58.34	Pk	32.4	-95.2	-48.40	-52.86	-13	-39.86	H
1.400821	70.82	Pk	28.8	-95.2	-49.87	-45.45	-13	-32.45	V
2.124375	59.37	Pk	31.5	-95.2	-49.99	-54.32	-13	-41.32	V
2.831173	58.20	Pk	32.4	-95.2	-48.33	-52.93	-13	-39.93	V
High Channel, 708.5MHz									
1.403004	71.49	Pk	28.8	-95.2	-49.86	-44.77	-13	-31.77	H
2.125856	59.29	Pk	31.5	-95.2	-49.98	-54.39	-13	-41.39	H
2.835763	58.25	Pk	32.4	-95.2	-48.33	-52.88	-13	-39.88	H
1.402907	70.66	Pk	28.8	-95.2	-49.86	-45.60	-13	-32.60	V
2.123839	59.05	Pk	31.5	-95.2	-49.98	-54.63	-13	-41.63	V
2.833635	57.93	Pk	32.4	-95.2	-48.33	-53.20	-13	-40.20	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 #:	14982484
Date:	2024-05-26
Test Engineer:	32934
Configuration:	EUT only
Mode	LTE13 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	HPF 1.2GHz T1737 1-18GHz (dB) (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 782MHz										
1.555337	45.55	Pk	28.1	.8	-95.2	-28.0	-48.75	-40	-8.75	H
1.573511	40.55	Pk	28.2	.9	-95.2	-27.8	-53.35	-40	-13.35	V
2.330800	37.24	Pk	32.0	.6	-95.2	-26.3	-51.66	-13	-38.66	V
2.342534	37.38	Pk	32.0	.5	-95.2	-26.1	-51.42	-13	-38.42	H
3.132578	35.91	Pk	33.0	.6	-95.2	-25.3	-50.99	-13	-37.99	H
3.133067	36.18	Pk	33.0	.6	-95.2	-25.31	-50.73	-13	-37.73	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 #:	14982484
Date:	2024-05-26
Test Engineer:	32934
Configuration:	EUT only
Mode	LTE14 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	HPF 1.2GHz T1737 1-18GHz (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.577116	44.59	Pk	28.3	.8	-95.2	-27.9	-49.42	-40	-9.42	H
1.577374	41.32	Pk	28.3	.8	-95.2	-27.9	-52.72	-40	-12.72	V
2.359645	37.18	Pk	32.1	.5	-95.2	-26.0	-51.42	-13	-38.42	V
2.366000	39.13	Pk	32.1	.5	-95.2	-25.9	-49.37	-13	-36.37	H
3.171689	37.13	Pk	33.0	.5	-95.2	-25.4	-49.97	-13	-36.97	V
3.177067	35.91	Pk	33.0	.5	-95.2	-25.3	-51.08	-13	-9.42	H

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

BPSK 5G NR n14 (10.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-06-11
Test Engineer:	106018
Configuration:	EUT only
Mode	N14 BPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	HPF 1.2GHz T1737 1-18GHz (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.577068	44.36	Pk	28.3	.8	-95.2	-27.9	-49.65	-40	-9.65	H
1.586711	38.25	Pk	28.3	.8	-95.2	-27.8	-55.68	-40	-15.68	V
2.366000	36.56	Pk	32.1	.5	-95.2	-25.9	-51.94	-13	-38.94	V
2.372845	37.05	Pk	32.1	.5	-95.2	-25.9	-51.45	-13	-38.45	H
3.198578	35.65	Pk	33.0	.6	-95.2	-25.1	-51.01	-13	-38.01	H
3.201023	35.78	Pk	33.0	.6	-95.2	-25.0	-50.82	-13	-37.82	V

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 #:	14982484
Date:	2024-03-26
Test Engineer:	27661
Configuration:	EUT only
Mode	LTE B17 QPSK 10MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 709MHz									
1.408600	63.21	Pk	28.1	-95.2	-49.15	-53.04	-13	-40.04	H
2.816200	56.36	Pk	32.2	-95.2	-48.40	-55.04	-13	-42.04	H
1.408600	60.60	Pk	28.1	-95.2	-49.15	-55.65	-13	-42.65	V
2.816200	54.48	Pk	32.2	-95.2	-48.40	-56.92	-13	-43.92	V
2.111950	57.13	Pk	31.4	-95.2	-49.77	-56.44	-13	-43.44	H
2.111950	58.62	Pk	31.4	-95.2	-49.77	-54.95	-13	-41.95	V
Mid Channel, 710MHz									
1.410850	62.85	Pk	28.1	-95.2	-49.07	-53.32	-13	-40.32	H
2.820250	55.66	Pk	32.2	-95.2	-48.06	-55.40	-13	-42.40	H
1.410850	60.49	Pk	28.1	-95.2	-49.07	-55.68	-13	-42.68	V
2.820250	54.10	Pk	32.2	-95.2	-48.06	-56.96	-13	-43.96	V
2.115100	57.83	Pk	31.4	-95.2	-49.79	-55.76	-13	-42.76	H
2.115100	56.22	Pk	31.4	-95.2	-49.79	-57.37	-13	-44.37	V
High Channel, 711MHz									
1.413100	62.35	Pk	28.1	-95.2	-49.13	-53.88	-13	-40.88	H
2.824300	55.47	Pk	32.2	-95.2	-48.43	-55.96	-13	-42.96	H
1.413100	60.48	Pk	28.1	-95.2	-49.13	-55.75	-13	-42.75	V
2.824300	54.23	Pk	32.2	-95.2	-48.43	-57.20	-13	-44.20	V
2.118250	58.86	Pk	31.5	-95.2	-49.99	-54.83	-13	-41.83	H
2.118250	57.49	Pk	31.5	-95.2	-49.99	-56.2	-13	-43.20	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 #:	14982484
Date:	2024-03-25
Test Engineer:	12501
Configuration:	EUT only
Mode	LTE 25 QPSK 20MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.708750	36.60	Pk	33.0	-95.2	-23.8	-49.40	-13	-36.40	V
3.720938	36.43	Pk	33.0	-95.2	-23.7	-49.47	-13	-36.47	H
5.588438	32.81	Pk	34.5	-95.2	-20.2	-48.09	-13	-35.09	H
5.595469	32.17	Pk	34.5	-95.2	-20.1	-48.58	-13	-35.58	V
7.447031	30.63	Pk	35.6	-95.2	-18.6	-47.57	-13	-34.57	H
7.447969	30.99	Pk	35.6	-95.2	-18.7	-47.31	-13	-34.31	V
Mid Channel, 1882.5MHz									
3.778500	56.18	Pk	33.6	-95.2	-47.9	-53.32	-13	-40.32	H
5.648500	56.52	Pk	34.4	-95.2	-48.3	-52.58	-13	-39.58	H
7.541000	56.40	Pk	36.0	-95.2	-47.8	-50.60	-13	-37.60	H
3.764500	56.57	Pk	33.6	-95.2	-47.7	-52.73	-13	-39.73	V
5.602500	56.20	Pk	34.4	-95.2	-48.6	-53.20	-13	-40.20	V
7.518500	56.46	Pk	36.0	-95.2	-48.1	-50.84	-13	-37.84	V
High Channel, 1905MHz									
3.812000	57.20	Pk	33.6	-95.2	-47.7	-52.10	-13	-39.10	H
5.715000	56.06	Pk	34.5	-95.2	-48.1	-52.74	-13	-39.74	H
7.634500	55.46	Pk	35.9	-95.2	-47.3	-51.14	-13	-38.14	H
3.825500	57.31	Pk	33.7	-95.2	-47.8	-51.94	-13	-38.94	V
5.716500	57.32	Pk	34.5	-95.2	-48.1	-51.48	-13	-38.48	V
7.635000	55.58	Pk	35.9	-95.2	-47.3	-51.02	-13	-38.02	V

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-8
Test Engineer:	25369
Configuration:	EUT only
Mode	N25 BPSK 40MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.751000	55.69	Pk	33.1	-95.2	-46.96	-53.37	-13	-40.37	H
5.625000	54.05	Pk	34.8	-95.2	-46.19	-52.54	-13	-39.54	H
7.487500	53.41	Pk	35.7	-95.2	-45.08	-51.17	-13	-38.17	H
3.747000	55.76	Pk	33.1	-95.2	-46.86	-53.20	-13	-40.20	V
5.639500	53.76	Pk	34.8	-95.2	-46.18	-52.82	-13	-39.82	V
7.493000	52.63	Pk	35.7	-95.2	-45.13	-52.00	-13	-39.00	V
Mid Channel, 1882.5MHz									
3.786500	55.97	Pk	33.2	-95.2	-46.59	-52.62	-13	-39.62	H
5.656000	54.20	Pk	34.8	-95.2	-46.09	-52.29	-13	-39.29	H
7.531500	53.31	Pk	35.7	-95.2	-44.97	-51.16	-13	-38.16	H
3.772000	55.37	Pk	33.1	-95.2	-46.90	-53.63	-13	-40.63	V
5.655500	53.76	Pk	34.8	-95.2	-46.11	-52.75	-13	-39.75	V
7.535000	52.26	Pk	35.7	-95.2	-44.97	-52.21	-13	-39.21	V
High Channel, 1895MHz									
3.770500	54.98	Pk	33.1	-95.2	-46.93	-54.05	-13	-41.05	V
3.774500	55.36	Pk	33.1	-95.2	-46.90	-53.64	-13	-40.64	H
5.627420	63.39	Pk	34.8	-95.2	-46.18	-43.19	-13	-30.19	V
5.627438	61.58	Pk	34.8	-95.2	-46.18	-45.00	-13	-32.00	H
7.560500	52.43	Pk	35.7	-95.2	-44.78	-51.85	-13	-38.85	V
7.585000	52.91	Pk	35.7	-95.2	-44.79	-51.38	-13	-38.38	H

10.1.7. LTE BAND 26 AND 5G NR n26 (FCC 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 #:	149828484
Date:	2024-04-3
Test Engineer:	12491
Configuration:	EUT only
Mode	LTE 26 QPSK 10MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	79834 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 819MHz									
1.628650	71.93	Pk	28.5	-95.2	-49.45	-44.22	-13	-31.22	V
1.629100	75.89	Pk	28.5	-95.2	-49.48	-40.29	-13	-27.29	H
2.443600	62.09	Pk	32.1	-95.2	-49.45	-50.46	-13	-37.46	H
2.443600	60.73	Pk	32.1	-95.2	-49.45	-51.82	-13	-38.82	V
3.256300	53.40	Pk	32.7	-95.2	-46.66	-55.76	-13	-42.76	H
3.256300	53.77	Pk	32.7	-95.2	-46.66	-55.39	-13	-42.39	V

BPSK 5G NR n26 (10.0MHZ BANDWIDTH)

Project #:	1482484
Date:	2024-03-13
Test Engineer:	19226
Configuration:	EUT only
Mode	5G NR n26 BPSK 10MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 819MHz									
1.628667	77.57	Pk	28.1	-95.2	-49.79	-39.32	-13	-26.32	H
1.628808	69.80	Pk	28.1	-95.2	-49.79	-47.09	-13	-34.09	V
2.442980	60.51	Pk	32.2	-95.2	-49.98	-52.47	-13	-39.47	V
2.442986	63.38	Pk	32.2	-95.2	-49.98	-49.60	-13	-36.60	H
3.274542	57.42	Pk	32.9	-95.2	-46.79	-51.67	-13	-38.67	V
3.278207	57.55	Pk	32.9	-95.2	-46.89	-51.64	-13	-38.64	H

10.1.8. LTE BAND 26 AND 5G NR n26 (FCC 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 (10.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-26
Test Engineer:	32894
Configuration:	EUT only
Mode	LTE B26 QPSK 15MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	200897 ACF 3m (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
Low Channel, 831.5MHz									
1.648900	68.24	Pk	28.7	-95.2	-49.61	-47.87	-13	-34.87	H
1.648900	66.69	Pk	28.7	-95.2	-49.61	-49.42	-13	-36.42	V
2.473750	63.06	Pk	32.1	-95.2	-49.14	-49.18	-13	-36.18	H
2.473750	61.11	Pk	32.1	-95.2	-49.14	-51.13	-13	-38.13	V
3.295900	54.32	Pk	32.7	-95.2	-46.62	-54.80	-13	-41.80	H
3.295900	52.72	Pk	32.7	-95.2	-46.62	-56.40	-13	-43.40	V
Mid Channel, 836.5MHz									
1.663750	62.31	Pk	28.9	-95.2	-49.49	-53.48	-13	-40.48	H
2.496250	63.59	Pk	32.2	-95.2	-48.79	-48.20	-13	-35.20	H
3.326050	53.81	Pk	32.6	-95.2	-46.80	-55.59	-13	-42.59	H
1.663750	64.06	Pk	28.9	-95.2	-49.49	-51.73	-13	-38.73	V
2.496250	60.47	Pk	32.2	-95.2	-48.79	-51.32	-13	-38.32	V
3.326050	52.72	Pk	32.6	-95.2	-46.80	-56.68	-13	-43.68	V
High Channel, 841.5MHz									
1.678600	65.56	Pk	29.1	-95.2	-49.49	-50.03	-13	-37.03	H
3.356200	55.54	Pk	32.6	-95.2	-47.03	-54.09	-13	-41.09	H
1.678600	64.26	Pk	29.1	-95.2	-49.49	-51.33	-13	-38.33	V
3.356200	54.71	Pk	32.6	-95.2	-47.03	-54.92	-13	-41.92	V
2.518525	61.92	Pk	32.2	-95.2	-48.59	-49.67	-13	-36.67	H
2.518750	57.05	Pk	32.2	-95.2	-48.58	-54.53	-13	-41.53	V

BPSK 5G NR n26 (20.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-06-5
Test Engineer:	32934
Configuration:	EUT only
Mode	5G NR n25 BPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	HPF 1.2GHz T1737 1-18GHz (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 834MHz										
1.662000	38.75	Pk	29.0	.8	-95.2	-27.8	-54.45	-13	-41.45	V
1.672756	38.90	Pk	29.1	.7	-95.2	-27.6	-54.12	-13	-41.12	H
2.473905	40.16	Pk	32.5	.5	-95.2	-26.1	-48.15	-13	-35.15	V
2.474125	41.83	Pk	32.5	.5	-95.2	-26.1	-46.47	-13	-33.47	H
3.334000	34.55	Pk	32.8	.5	-95.2	-25.0	-52.35	-13	-39.35	V
3.338889	34.44	Pk	32.8	.5	-95.2	-25.1	-52.56	-13	-39.56	H
Mid Channel, 836.5MHz										
1.681556	39.77	Pk	29.2	.7	-95.2	-27.4	-52.97	-13	-39.97	H
1.681556	40.35	Pk	29.2	.7	-95.2	-27.4	-52.39	-13	-39.39	V
2.510223	38.11	Pk	32.5	.7	-95.2	-26.2	-50.09	-13	-37.09	V
2.516578	38.04	Pk	32.5	.7	-95.2	-26.1	-50.10	-13	-37.10	H
3.354045	36.81	Pk	32.8	.6	-95.2	-25.1	-50.09	-13	-37.09	H
3.357467	36.60	Pk	32.8	.6	-95.2	-25.0	-50.15	-13	-37.15	V
Mid Channel, 839.0MHz										
1.668356	39.18	Pk	29.1	.7	-95.2	-27.6	-53.82	-13	-40.82	V
1.680089	38.87	Pk	29.2	.7	-95.2	-27.5	-53.93	-13	-40.93	H
2.526845	36.38	Pk	32.5	.8	-95.2	-25.9	-51.44	-13	-38.44	H
2.536134	37.71	Pk	32.5	.7	-95.2	-25.9	-50.19	-13	-37.19	V
3.357467	35.44	Pk	32.8	.6	-95.2	-25.0	-51.31	-13	-38.31	H
3.365289	34.72	Pk	32.8	.6	-95.2	-25.0	-52.08	-13	-39.08	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 #:	14982484
Date:	2024-05-23
Test Engineer:	32934
Configuration:	EUT only
Mode	LTE B30 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.627500	23.80	RMS	34.0	-95.2	-23.2	-60.60	-40	-20.60	H
4.639219	23.51	RMS	34.0	-95.2	-23.2	-60.89	-40	-20.89	V
6.916875	20.40	RMS	35.6	-95.2	-19.2	-58.39	-40	-18.39	V
6.926719	20.17	RMS	35.7	-95.2	-19.0	-58.33	-40	-18.33	H
9.259219	19.73	RMS	36.1	-95.2	-16.7	-56.05	-40	-16.05	H
9.286768	19.32	RMS	36.2	-95.2	-15.8	-55.46	-40	-15.46	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-05-24
Test Engineer:	32934
Configuration:	EUT only
Mode	5G NR n30 BPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.681406	23.48	RMS	34.0	-95.2	-22.9	-60.62	-40	-20.62	H
6.982031	19.15	RMS	35.7	-95.2	-18.6	-58.95	-40	-18.95	H
9.221719	19.97	RMS	36.1	-95.2	-16.9	-56.03	-40	-16.03	H
6.987188	19.16	RMS	35.7	-95.2	-18.5	-58.84	-40	-18.84	V
9.216094	20.11	RMS	36.1	-95.2	-16.9	-55.89	-40	-15.89	V
4.650000	23.27	RMS	34.0	-95.2	-23.2	-61.13	-40	-21.13	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 #:	14982484
Date:	2024-03-26
Test Engineer:	12501
Configuration:	EUT only
Mode	LTE 41 QPSK 20MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2506MHz									
5.001000	57.31	Pk	34.1	-95.2	-49.5	-53.29	-25	-28.29	H
7.516500	55.99	Pk	36.0	-95.2	-48.0	-51.21	-25	-26.21	H
5.016500	57.10	Pk	34.2	-95.2	-49.5	-53.4	-25	-28.40	V
7.489500	56.16	Pk	35.9	-95.2	-48.1	-51.24	-25	-26.24	V
10.020500	56.74	Pk	37.5	-95.2	-48.1	-49.06	-25	-24.06	H
10.033000	56.74	Pk	37.5	-95.2	-48.2	-49.16	-25	-24.16	V
Mid Channel, 2593MHz									
5.183500	56.20	Pk	34.4	-95.2	-49.30	-53.90	-25	-28.90	H
5.187000	57.24	Pk	34.4	-95.2	-49.40	-52.96	-25	-27.96	V
7.789500	55.71	Pk	36.0	-95.2	-47.45	-50.94	-25	-25.94	V
7.796500	56.62	Pk	36.0	-95.2	-47.50	-50.08	-25	-25.08	H
10.397000	57.43	Pk	37.8	-95.2	-47.80	-47.77	-25	-22.77	V
10.414500	56.93	Pk	37.8	-95.2	-47.65	-48.12	-25	-23.12	H
High Channel, 2680MHz									
5.354500	57.54	Pk	34.4	-95.2	-49.20	-52.46	-25	-27.46	H
8.029500	56.28	Pk	36.1	-95.2	-47.20	-50.02	-25	-25.02	H
10.741500	55.73	Pk	37.9	-95.2	-47.35	-48.92	-25	-23.92	H
10.712000	55.94	Pk	37.9	-95.2	-47.20	-48.56	-25	-23.56	V
5.326000	58.75	Pk	34.4	-95.2	-49.30	-51.35	-25	-26.35	V
8.011000	55.51	Pk	36.1	-95.2	-47.10	-50.69	-25	-25.69	V

BPSK LTE BAND n41 (100.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-13
Test Engineer:	19226
Configuration:	EUT only
Mode	5G NR n41 BPSK 100MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2546MHz									
5.090652	56.05	Pk	34.2	-95.2	-47.27	-52.22	-25	-27.22	H
5.093259	56.12	Pk	34.2	-95.2	-47.31	-52.19	-25	-27.19	V
7.637812	53.96	Pk	35.7	-95.2	-44.86	-50.40	-25	-25.40	V
7.638939	54.73	Pk	35.7	-95.2	-44.90	-49.67	-25	-24.67	H
10.183756	54.11	Pk	37.7	-95.2	-43.87	-47.26	-25	-22.26	H
10.185087	54.35	Pk	37.7	-95.2	-43.86	-47.01	-25	-22.01	V
Mid Channel, 2593MHz									
5.183417	56.07	Pk	34.3	-95.2	-47.01	-51.84	-25	-26.84	H
5.189761	55.70	Pk	34.3	-95.2	-46.94	-52.14	-25	-27.14	V
7.632343	53.98	Pk	35.7	-95.2	-44.95	-50.47	-25	-25.47	V
7.634498	53.60	Pk	35.7	-95.2	-44.95	-50.85	-25	-25.85	H
10.372922	55.32	Pk	37.7	-95.2	-44.53	-46.71	-25	-21.71	H
10.374254	54.60	Pk	37.7	-95.2	-44.51	-47.41	-25	-22.41	V
High Channel, 2640MHz									
5.280549	55.78	Pk	34.4	-95.2	-47.06	-52.08	-25	-27.08	V
5.282157	55.79	Pk	34.4	-95.2	-47.06	-52.07	-25	-27.07	H
7.918977	53.81	Pk	35.8	-95.2	-44.62	-50.21	-25	-25.21	V
7.919835	53.77	Pk	35.8	-95.2	-44.62	-50.25	-25	-25.25	H
10.558746	53.14	Pk	37.6	-95.2	-44.29	-48.75	-25	-23.75	V
10.558990	53.27	Pk	37.6	-95.2	-44.31	-48.64	-25	-23.64	H

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 #:	14982484
Date:	2024-03-25
Test Engineer:	12501
Configuration:	EUT only
Mode	LTE B66 QPSK 20MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1720MHz									
5.144500	57.55	Pk	34.3	-95.2	-49.4	-52.75	-13	-39.75	V
3.433000	55.62	Pk	33.2	-95.2	-47.6	-53.98	-13	-40.98	V
3.440500	56.14	Pk	33.2	-95.2	-47.65	-53.51	-13	-40.51	H
5.153000	57.49	Pk	34.3	-95.2	-49.5	-52.91	-13	-39.91	H
6.885500	55.65	Pk	35.7	-95.2	-47.2	-51.05	-13	-38.05	H
6.895500	55.18	Pk	35.7	-95.2	-46.9	-51.22	-13	-38.22	V
Mid Channel, 1745MHz									
3.482000	55.91	Pk	33.2	-95.2	-47.2	-53.29	-13	-40.29	V
3.487000	55.62	Pk	33.2	-95.2	-47.3	-53.68	-13	-40.68	H
5.238500	56.09	Pk	34.4	-95.2	-49.1	-53.81	-13	-40.81	H
5.241000	56.74	Pk	34.4	-95.2	-49.2	-53.26	-13	-40.26	V
6.960000	56.33	Pk	35.7	-95.2	-46.8	-49.97	-13	-36.97	V
6.983000	56.13	Pk	35.8	-95.2	-46.9	-50.17	-13	-37.17	H
High Channel, 1770MHz									
3.532500	55.61	Pk	33.3	-95.2	-47.05	-53.34	-13	-40.34	H
3.537500	55.32	Pk	33.3	-95.2	-47.05	-53.63	-13	-40.63	V
5.316000	57.00	Pk	34.4	-95.2	-49.10	-52.90	-13	-39.90	H
5.334500	56.33	Pk	34.4	-95.2	-49.05	-53.52	-13	-40.52	V
7.082000	56.17	Pk	35.8	-95.2	-47.80	-51.03	-13	-38.03	H
7.086500	56.07	Pk	35.8	-95.2	-47.80	-51.13	-13	-38.13	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-08
Test Engineer:	2536
Configuration:	EUT only
Mode	5G NR n66 BPSK 40MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112_ACF (dB) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.447000	56.70	Pk	32.9	-95.2	-46.46	-52.06	-13	-39.06	H
3.464500	54.43	Pk	32.9	-95.2	-46.33	-54.20	-13	-41.20	V
5.177500	54.27	Pk	34.3	-95.2	-46.47	-53.10	-13	-40.10	H
5.192500	54.11	Pk	34.3	-95.2	-46.56	-53.35	-13	-40.35	V
6.924000	53.09	Pk	35.7	-95.2	-45.39	-51.8	-13	-38.80	V
6.936500	54.18	Pk	35.7	-95.2	-45.13	-50.45	-13	-37.45	H
Mid Channel, 1745MHz									
3.495000	54.20	Pk	32.9	-95.2	-46.22	-54.32	-13	-41.32	V
3.502500	53.89	Pk	33.0	-95.2	-46.07	-54.38	-13	-41.38	H
5.228000	55.46	Pk	34.4	-95.2	-46.91	-52.25	-13	-39.25	H
5.235500	53.29	Pk	34.4	-95.2	-46.92	-54.43	-13	-41.43	V
6.968000	53.14	Pk	35.7	-95.2	-45.06	-51.42	-13	-38.42	H
6.990000	53.44	Pk	35.7	-95.2	-45.11	-51.17	-13	-38.17	V
High Channel, 1760MHz									
3.512500	53.64	Pk	33.0	-95.2	-45.95	-54.51	-13	-41.51	V
3.516000	54.19	Pk	33.0	-95.2	-46.09	-54.10	-13	-41.10	H
5.277000	54.25	Pk	34.4	-95.2	-46.79	-53.34	-13	-40.34	V
5.295500	54.46	Pk	34.4	-95.2	-46.76	-53.10	-13	-40.10	H
7.023000	53.33	Pk	35.7	-95.2	-45.11	-51.28	-13	-38.28	H
7.031000	53.44	Pk	35.7	-95.2	-45.25	-51.31	-13	-38.31	V

10.1.12. 5G NR n70

LIMITS

FCC: §27.53 (h)

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

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

Project #:	14982484
Date:	2024-03-08
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n70 BPSK 15MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 1702.5MHz									
3.401500	56.39	Pk	32.9	-95.2	-46.89	-52.80	-13	-39.80	V
3.429000	55.52	Pk	32.9	-95.2	-46.70	-53.48	-13	-40.48	H
5.095000	55.49	Pk	34.2	-95.2	-47.00	-52.51	-13	-39.51	H
5.120000	54.05	Pk	34.2	-95.2	-46.58	-53.53	-13	-40.53	V
6.799500	53.47	Pk	35.6	-95.2	-45.71	-51.84	-13	-38.84	V
6.806000	53.56	Pk	35.6	-95.2	-45.75	-51.79	-13	-38.79	H

10.1.13. LTE BAND 71 AND 5G NR n71

LIMITS

FCC: §27.53 (g)

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

QPSK LTE BAND 71 (20.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-04-3
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE B71 QPSK 20MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	200897 ACF 3m (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz									
1.363600	62.62	Pk	28.5	-95.2	-49.36	-53.44	-13	-40.44	H
2.690650	58.65	Pk	32.2	-95.2	-48.97	-53.32	-13	-40.32	H
2.007550	60.13	Pk	31.2	-95.2	-49.62	-53.49	-13	-40.49	H
1.363600	61.04	Pk	28.5	-95.2	-49.36	-55.02	-13	-42.02	V
2.695150	57.30	Pk	32.2	-95.2	-48.70	-54.40	-13	-41.40	V
2.005300	58.95	Pk	31.2	-95.2	-49.56	-54.61	-13	-41.61	V
Low Channel, 680.5MHz									
1.353250	61.37	Pk	28.6	-95.2	-49.33	-54.56	-13	-41.56	H
2.723050	58.37	Pk	32.2	-95.2	-48.41	-53.04	-13	-40.04	H
1.358200	59.17	Pk	28.6	-95.2	-49.33	-56.76	-13	-43.76	V
2.737900	58.08	Pk	32.2	-95.2	-48.06	-52.98	-13	-39.98	V
2.048050	58.56	Pk	31.4	-95.2	-49.48	-54.72	-13	-41.72	H
2.049850	59.46	Pk	31.4	-95.2	-49.36	-53.70	-13	-40.70	V
Low Channel, 688MHz									
1.398967	48.47	Pk	28.2	-95.2	-49.13	-67.66	-13	-54.66	H
2.679400	58.07	Pk	32.2	-95.2	-49.14	-54.07	-13	-41.07	H
1.401850	57.07	Pk	28.2	-95.2	-49.09	-59.02	-13	-46.02	V
2.683900	58.28	Pk	32.2	-95.2	-48.84	-53.56	-13	-40.56	V
2.004400	60.05	Pk	31.2	-95.2	-49.60	-53.55	-13	-40.55	H
2.008000	60.00	Pk	31.2	-95.2	-49.65	-53.65	-13	-40.65	V

BPSK 5G NR n71 (20.0MHZ BANDWIDTH)

Project #:	149822484
Date:	2024-03-13
Test Engineer:	25369
Configuration:	EUT only
Mode	N5G NR n71 BPSK 20MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz									
1.327304	69.09	Pk	29.1	-95.2	-49.66	-46.67	-13	-33.67	V
1.338850	60.41	Pk	29.1	-95.2	-49.73	-55.42	-13	-42.42	H
2.018800	58.74	Pk	31.6	-95.2	-50.00	-54.86	-13	-41.86	V
2.034550	59.52	Pk	31.6	-95.2	-49.99	-54.07	-13	-41.07	H
2.689300	56.84	Pk	32.3	-95.2	-47.97	-54.03	-13	-41.03	V
2.701000	56.34	Pk	32.3	-95.2	-48.14	-54.70	-13	-41.70	H
Mid Channel, 680.5MHz									
1.347291	73.53	Pk	29.0	-95.2	-49.78	-42.45	-13	-29.45	V
1.347391	73.28	Pk	29.0	-95.2	-49.78	-42.70	-13	-29.70	H
2.039950	58.99	Pk	31.6	-95.2	-49.9	-54.51	-13	-41.51	V
2.048050	57.96	Pk	31.7	-95.2	-49.83	-55.37	-13	-42.37	H
2.726200	56.12	Pk	32.3	-95.2	-48.36	-55.14	-13	-42.14	H
2.729350	55.99	Pk	32.3	-95.2	-48.34	-55.25	-13	-42.25	V
High Channel, 688MHz									
1.357381	71.52	Pk	29.0	-95.2	-49.83	-44.51	-13	-31.51	H
1.357435	71.59	Pk	29.0	-95.2	-49.83	-44.44	-13	-31.44	V
2.056150	56.69	Pk	31.7	-95.2	-49.85	-56.66	-13	-43.66	V
2.066500	58.25	Pk	31.7	-95.2	-49.78	-55.03	-13	-42.03	H
2.751850	56.23	Pk	32.4	-95.2	-48.32	-54.89	-13	-41.89	H
2.753650	54.95	Pk	32.4	-95.2	-48.35	-56.20	-13	-43.20	V

10.2. FIELD STRENGTH OF SPURIOUS RADIATION, ANT2

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests below 1GHz were done with a Resolution Bandwidth of 100kHz, and a Video Bandwidth of 300kHz.

RESULTS

10.2.1. 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 #:	14982484
Date:	2028-03-28
Test Engineer:	12501
Configuration:	EUT only
Mode	LTE B7 QPSK 20MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2510MHz									
5.036500	58.52	Pk	34.2	-95.2	-49.4	-51.88	-25	-26.88	H
7.526500	56.96	Pk	36.0	-95.2	-48.1	-50.34	-25	-25.34	H
5.019000	57.07	Pk	34.2	-95.2	-49.4	-53.33	-25	-28.33	V
7.522000	57.35	Pk	36.0	-95.2	-48.1	-49.95	-25	-24.95	V
10.020500	56.71	Pk	37.5	-95.2	-48.1	-49.09	-25	-24.09	V
10.045500	57.25	Pk	37.5	-95.2	-48.2	-48.65	-25	-23.65	H
Mid Channel, 2535MHz									
5.069000	58.06	Pk	34.2	-95.2	-49.6	-52.54	-25	-27.54	H
7.599000	55.79	Pk	36.0	-95.2	-48.4	-51.81	-25	-26.81	H
5.052000	57.70	Pk	34.2	-95.2	-49.4	-52.70	-25	-27.70	V
7.591500	57.05	Pk	35.9	-95.2	-48.3	-50.55	-25	-25.55	V
10.137500	57.20	Pk	37.6	-95.2	-48.7	-49.10	-25	-24.10	V
10.149500	57.93	Pk	37.6	-95.2	-48.7	-48.37	-25	-23.37	H
High Channel, 2560MHz									
5.129000	57.10	Pk	34.3	-95.2	-49.5	-53.30	-25	-28.30	H
7.689000	55.82	Pk	35.9	-95.2	-47.6	-51.08	-25	-26.08	H
7.654000	56.37	Pk	35.9	-95.2	-48.0	-50.93	-25	-25.93	V
5.164500	56.89	Pk	34.3	-95.2	-49.35	-53.36	-25	-28.36	V
10.243000	57.23	Pk	37.7	-95.2	-48.3	-48.57	-25	-23.57	H
10.258500	56.44	Pk	37.7	-95.2	-48.3	-49.36	-25	-24.36	V

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-20
Test Engineer:	19226
Configuration:	EUT only
Mode	5G NR n7 BPSK 40MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2520MHz									
5.041061	56.81	Pk	34.2	-95.2	-47.64	-51.83	-25	-26.83	H
5.041490	56.31	Pk	34.2	-95.2	-47.62	-52.31	-25	-27.31	V
7.501829	70.07	Pk	35.7	-95.2	-45.07	-34.50	-25	-9.50	V
7.501843	64.24	Pk	35.7	-95.2	-45.07	-40.33	-25	-15.33	H
10.078862	53.97	Pk	37.4	-95.2	-44.84	-48.67	-25	-23.67	H
10.080041	54.34	Pk	37.4	-95.2	-44.80	-48.26	-25	-23.26	V
Mid Channel, 2535MHz									
5.068938	55.95	Pk	34.2	-95.2	-47.41	-52.46	-25	-27.46	V
5.070718	55.98	Pk	34.2	-95.2	-47.39	-52.41	-25	-27.41	H
7.546826	67.27	Pk	35.7	-95.2	-44.96	-37.19	-25	-12.19	H
7.546877	70.40	Pk	35.7	-95.2	-44.96	-34.06	-25	-9.06	V
10.139759	53.58	Pk	37.5	-95.2	-44.18	-48.30	-25	-23.30	H
10.140683	53.61	Pk	37.5	-95.2	-44.16	-48.25	-25	-23.25	V
High Channel, 2550MHz									
5.099032	56.52	Pk	34.2	-95.2	-47.34	-51.82	-25	-26.82	H
5.099439	55.81	Pk	34.2	-95.2	-47.34	-52.53	-25	-27.53	V
7.591861	70.39	Pk	35.7	-95.2	-45.08	-34.19	-25	-9.19	V
7.591872	66.54	Pk	35.7	-95.2	-45.08	-38.04	-25	-13.04	H
10.199002	53.02	Pk	37.7	-95.2	-43.74	-48.22	-25	-23.22	V
10.199318	54.02	Pk	37.7	-95.2	-43.76	-47.24	-25	-22.24	H

10.2.2. 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 #:	14982484
Date:	2024-03-20
Test Engineer:	25369
Configuration:	EUT only
Mode	LTE B12 QPSK 10MHz
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 704MHz									
1.402300	59.49	Pk	28.6	-95.2	-47.08	-54.19	-13	-41.19	V
1.402750	57.64	Pk	28.5	-95.2	-47.05	-56.11	-13	-43.11	H
2.117350	56.83	Pk	31.2	-95.2	-47.22	-54.39	-13	-41.39	V
2.123200	57.59	Pk	31.2	-95.2	-47.26	-53.67	-13	-40.67	H
2.817100	57.05	Pk	32.2	-95.2	-47.07	-53.02	-13	-40.02	V
2.830150	56.53	Pk	32.2	-95.2	-46.80	-53.27	-13	-40.27	H
Mid Channel, 707.5MHz									
1.409050	57.35	Pk	28.5	-95.2	-47.00	-56.35	-13	-43.35	H
1.412650	58.22	Pk	28.5	-95.2	-47.08	-55.56	-13	-42.56	V
2.115550	58.10	Pk	31.2	-95.2	-47.31	-53.21	-13	-40.21	H
2.124550	56.68	Pk	31.2	-95.2	-47.18	-54.50	-13	-41.50	V
2.826550	56.26	Pk	32.2	-95.2	-46.98	-53.72	-13	-40.72	V
2.843200	56.43	Pk	32.1	-95.2	-46.75	-53.42	-13	-40.42	H
High Channel, 711MHz									
1.411300	56.65	Pk	28.5	-95.2	-47.06	-57.11	-13	-44.11	H
1.428400	58.72	Pk	28.3	-95.2	-47.16	-55.34	-13	-42.34	V
2.128600	56.46	Pk	31.2	-95.2	-47.12	-54.66	-13	-41.66	H
2.134900	56.12	Pk	31.2	-95.2	-47.12	-55.00	-13	-42.00	V
2.840500	56.04	Pk	32.1	-95.2	-46.79	-53.85	-13	-40.85	V
2.850850	55.87	Pk	32.1	-95.2	-46.75	-53.98	-13	-40.98	H

BPSK 5G NR n12 (15.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-15
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n12 BPSK 15MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 706.5MHz									
1.399170	70.71	Pk	28.8	-95.2	-49.87	-45.56	-13	-32.56	V
1.426150	58.68	Pk	28.6	-95.2	-49.80	-57.72	-13	-44.72	H
2.106100	58.05	Pk	31.6	-95.2	-50.00	-55.55	-13	-42.55	H
2.124100	57.68	Pk	31.5	-95.2	-49.98	-56.00	-13	-43.00	V
2.818450	55.35	Pk	32.4	-95.2	-48.44	-55.89	-13	-42.89	V
2.831500	56.39	Pk	32.4	-95.2	-48.34	-54.75	-13	-41.75	H
Mid Channel, 707.5MHz									
1.401244	70.14	Pk	28.8	-95.2	-49.87	-46.13	-13	-33.13	V
1.401353	69.79	Pk	28.8	-95.2	-49.87	-46.48	-13	-33.48	H
2.110600	57.55	Pk	31.6	-95.2	-49.95	-56.00	-13	-43.00	H
2.135800	58.08	Pk	31.5	-95.2	-50.10	-55.72	-13	-42.72	V
2.821150	57.33	Pk	32.4	-95.2	-48.49	-53.96	-13	-40.96	V
2.824300	57.28	Pk	32.4	-95.2	-48.46	-53.98	-13	-40.98	H
High Channel, 708.5MHz									
1.403208	70.32	Pk	28.8	-95.2	-49.86	-45.94	-13	-32.94	V
1.403250	71.16	Pk	28.8	-95.2	-49.86	-45.10	-13	-32.10	H
2.119150	56.59	Pk	31.5	-95.2	-49.95	-57.06	-13	-44.06	V
2.134000	58.60	Pk	31.5	-95.2	-50.09	-55.19	-13	-42.19	H
2.827450	56.68	Pk	32.4	-95.2	-48.40	-54.52	-13	-41.52	H
2.832850	55.56	Pk	32.4	-95.2	-48.32	-55.56	-13	-42.56	V

10.2.3. 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 #:	14982484
Date:	2024-03-29
Test Engineer:	25369
Configuration:	EUT only
Mode	LTE B13 QPSK 10MHz
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 782MHz									
1.553500	56.16	Pk	27.7	-95.2	-47.51	-58.85	-40	-18.85	H
1.558000	55.97	Pk	27.7	-95.2	-47.46	-58.99	-40	-18.99	V
2.354050	57.75	Pk	31.6	-95.2	-47.88	-53.73	-13	-40.73	H
2.426111	58.14	Pk	31.8	-95.2	-47.21	-52.47	-13	-39.47	V
3.128950	54.80	Pk	32.9	-95.2	-46.54	-54.04	-13	-41.04	H
3.231550	57.37	Pk	33.0	-95.2	-46.77	-51.6	-13	-38.6	V

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

10.2.4. 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 #:	14982484
Date:	2024-03-15
Test Engineer:	25369
Configuration:	EUT only
Mode	LTE B14 QPSK 10MHz
Chamber #:	0R-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	79834 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz									
1.580500	57.49	Pk	27.8	-95.2	-47.42	-57.33	-40	-17.33	V
1.589950	57.33	Pk	27.9	-95.2	-47.37	-57.34	-40	-17.34	H
2.368450	57.51	Pk	31.6	-95.2	-47.61	-53.70	-13	-40.70	H
2.376550	57.42	Pk	31.6	-95.2	-47.46	-53.64	-13	-40.64	V
3.182950	54.05	Pk	33	-95.2	-46.61	-54.76	-13	-41.76	V
3.186100	54.64	Pk	33	-95.2	-46.65	-54.21	-13	-41.21	H

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

BPSK 5G NR n14 (10.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-15
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n14 BPSK 10MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	79834 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz									
1.577163	68.33	Pk	27.9	-95.2	-49.70	-48.67	-40	-8.67	H
1.576900	61.13	Pk	27.9	-95.2	-49.70	-55.87	-40	-15.87	V
2.365300	60.78	Pk	31.8	-95.2	-49.44	-52.06	-13	-39.06	V
2.365706	70.43	Pk	31.8	-95.2	-49.46	-42.43	-13	-29.43	H
3.165850	55.15	Pk	33.0	-95.2	-47.00	-54.05	-13	-41.05	V
3.176200	55.62	Pk	33.0	-95.2	-46.81	-53.39	-13	-40.39	H

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

10.2.5. 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 #:	14982484
Date:	2024-03-29
Test Engineer:	32998
Configuration:	EUT only
Mode	LTE B17 QPSK 10MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	79834 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 709MHz									
1.362250	61.06	Pk	28.5	-95.2	-49.35	-54.99	-13	-41.99	V
1.409500	61.10	Pk	28.1	-95.2	-49.13	-55.13	-13	-42.13	H
2.112400	57.13	Pk	31.4	-95.2	-49.75	-56.42	-13	-43.42	H
2.112400	57.49	Pk	31.4	-95.2	-49.75	-56.06	-13	-43.06	V
2.903500	56.29	Pk	32.4	-95.2	-48.45	-54.96	-13	-41.96	H
2.903500	59.61	Pk	32.4	-95.2	-48.45	-51.64	-13	-38.64	V
Mid Channel, 710MHz									
1.409500	59.93	Pk	28.1	-95.2	-49.13	-56.30	-13	-43.30	V
1.410850	62.33	Pk	28.1	-95.2	-49.07	-53.84	-13	-40.84	H
2.115550	59.87	Pk	31.4	-95.2	-49.82	-53.75	-13	-40.75	H
2.121850	59.54	Pk	31.5	-95.2	-49.83	-53.99	-13	-40.99	V
2.819800	55.33	Pk	32.2	-95.2	-48.07	-55.74	-13	-42.74	H
2.819800	55.33	Pk	32.2	-95.2	-48.07	-55.74	-13	-42.74	H
High Channel, 711MHz									
1.412650	60.91	Pk	28.1	-95.2	-49.11	-55.30	-13	-42.30	H
1.416250	59.37	Pk	28.1	-95.2	-49.16	-56.89	-13	-43.89	V
2.118700	59.87	Pk	31.5	-95.2	-49.98	-53.81	-13	-40.81	H
2.118700	56.68	Pk	31.5	-95.2	-49.98	-57.00	-13	-44.00	V
2.823850	55.37	Pk	32.2	-95.2	-48.39	-56.02	-13	-43.02	H
2.823850	53.98	Pk	32.2	-95.2	-48.39	-57.41	-13	-44.41	V

10.2.6. 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 #:	14982484
Date:	2024-03-26
Test Engineer:	12501
Configuration:	EUT only
Mode	LTE B25 QPSK 20MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.713000	55.77	Pk	33.5	-95.2	-47.3	-53.23	-13	-40.23	H
7.430000	55.67	Pk	35.9	-95.2	-47.8	-51.43	-13	-38.43	H
3.717000	56.09	Pk	33.5	-95.2	-47.3	-52.91	-13	-39.91	V
7.418500	55.47	Pk	35.9	-95.2	-47.9	-51.73	-13	-38.73	V
5.581000	56.32	Pk	34.4	-95.2	-48.7	-53.18	-13	-40.18	H
5.602500	57.26	Pk	34.4	-95.2	-48.6	-52.14	-13	-39.14	V
Mid Channel, 1882.5MHz									
3.774000	56.81	Pk	33.6	-95.2	-47.9	-52.69	-13	-39.69	H
7.520000	56.28	Pk	36.0	-95.2	-48.1	-51.02	-13	-38.02	H
3.777000	57.27	Pk	33.6	-95.2	-47.9	-52.23	-13	-39.23	H
7.520000	56.28	Pk	36.0	-95.2	-48.1	-51.02	-13	-38.02	H
5.635000	56.33	Pk	34.4	-95.2	-48.4	-52.87	-13	-39.87	H
5.659500	56.52	Pk	34.4	-95.2	-48.3	-52.58	-13	-39.58	H
High Channel, 1905MHz									
3.826000	56.88	Pk	33.7	-95.2	-47.7	-52.32	-13	-39.32	H
7.629500	55.49	Pk	35.9	-95.2	-47.4	-51.16	-13	-38.16	H
3.820500	57.76	Pk	33.6	-95.2	-47.8	-51.64	-13	-38.64	V
7.618000	55.85	Pk	35.9	-95.2	-47.2	-50.65	-13	-37.65	V
5.734500	56.91	Pk	34.5	-95.2	-48.1	-51.89	-13	-38.89	H
5.756000	55.93	Pk	34.5	-95.2	-48.2	-52.97	-13	-39.97	V

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-11
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n25 BPSK 40MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.719000	56.52	Pk	33.0	-95.2	-47.09	-52.77	-13	-39.77	H
3.743500	55.44	Pk	33.1	-95.2	-46.77	-53.43	-13	-40.43	V
5.613500	53.94	Pk	34.8	-95.2	-46.23	-52.69	-13	-39.69	V
5.618000	54.17	Pk	34.8	-95.2	-46.18	-52.41	-13	-39.41	H
7.475500	52.49	Pk	35.7	-95.2	-45.09	-52.10	-13	-39.10	V
7.493500	53.03	Pk	35.7	-95.2	-45.15	-51.62	-13	-38.62	H
Mid Channel, 1882.5MHz									
3.740000	55.33	Pk	33.1	-95.2	-46.81	-53.58	-13	-40.58	V
3.776000	54.69	Pk	33.1	-95.2	-46.86	-54.27	-13	-41.27	H
5.663000	54.27	Pk	34.8	-95.2	-46.04	-52.17	-13	-39.17	H
5.668000	53.75	Pk	34.8	-95.2	-46.07	-52.72	-13	-39.72	V
7.514000	53.15	Pk	35.7	-95.2	-44.93	-51.28	-13	-38.28	H
7.515000	52.81	Pk	35.7	-95.2	-44.93	-51.62	-13	-38.62	V
High Channel, 1895MHz									
3.775500	55.06	Pk	33.1	-95.2	-46.88	-53.92	-13	-40.92	H
3.799000	54.02	Pk	33.2	-95.2	-46.46	-54.44	-13	-41.44	V
5.679000	53.63	Pk	34.9	-95.2	-45.99	-52.66	-13	-39.66	H
5.685000	53.45	Pk	34.9	-95.2	-45.98	-52.83	-13	-39.83	V
7.570500	52.81	Pk	35.7	-95.2	-44.72	-51.41	-13	-38.41	V
7.600000	52.83	Pk	35.7	-95.2	-44.68	-51.35	-13	-38.35	H

10.2.7. LTE BAND 26 AND 5G NR n26 (FCC 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 #:	14982484
Date:	2024-03-29
Test Engineer:	25369
Configuration:	EUT only
Mode	LTE B26 QPSK 10MHz
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									
1.629009	63.35	Pk	28.4	-95.2	-47.63	-51.08	-13	-38.08	H
1.648675	56.87	Pk	28.7	-95.2	-47.8	-57.43	-13	-44.43	V
2.443810	62.69	Pk	31.9	-95.2	-47.42	-48.03	-13	-35.03	H
2.444050	56.01	Pk	31.9	-95.2	-47.42	-54.71	-13	-41.71	V
3.261250	54.88	Pk	32.9	-95.2	-46.33	-53.75	-13	-40.75	V
3.290050	54.90	Pk	32.9	-95.2	-46.07	-53.47	-13	-40.47	H

BPSK 5G NR n26 (20.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-15
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n25 BPSK 20MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 819MHz									
1.629381	66.43	Pk	28.1	-95.2	-49.8	-50.47	-13	-37.47	H
1.629100	57.7	Pk	28.1	-95.2	-49.79	-59.19	-13	-46.19	V
2.443593	71.91	Pk	32.2	-95.2	-49.99	-41.08	-13	-28.08	H
2.444.05	59.8	Pk	32.2	-95.2	-49.99	-53.19	-13	-40.19	V
3.284.65	55.48	Pk	32.9	-95.2	-46.73	-53.55	-13	-40.55	V
3.29095	55.37	Pk	32.9	-95.2	-46.73	-53.66	-13	-40.66	H

10.2.8. LTE BAND 26 AND 5G NR n26 (FCC 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 (10.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-29
Test Engineer:	25369
Configuration:	EUT only
Mode	LTE B26 QPSK 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
Low Channel, 831.5MHz									
1.649350	58.48	Pk	28.7	-95.2	-47.78	-55.80	-13	-42.80	H
1.658350	57.28	Pk	28.9	-95.2	-47.79	-56.81	-13	-43.81	V
2.474513	66.10	Pk	32.1	-95.2	-47.80	-44.80	-13	-31.80	H
2.505700	56.14	Pk	32.2	-95.2	-47.75	-54.61	-13	-41.61	V
3.326950	54.78	Pk	32.8	-95.2	-46.28	-53.9	-13	-40.90	H
3.328750	54.46	Pk	32.8	-95.2	-46.24	-54.18	-13	-41.18	V
Mid Channel, 836.5MHz									
1.659512	65.06	Pk	28.9	-95.2	-47.77	-49.01	-13	-36.01	H
1.684450	57.08	Pk	29.3	-95.2	-47.54	-56.36	-13	-43.36	V
2.489615	66.65	Pk	32.2	-95.2	-47.78	-44.13	-13	-31.13	H
2.534950	57.32	Pk	32.3	-95.2	-47.15	-52.73	-13	-39.73	V
3.349450	55.87	Pk	32.8	-95.2	-46.72	-53.25	-13	-40.25	V
3.351700	55.22	Pk	32.8	-95.2	-46.60	-53.78	-13	-40.78	H
High Channel, 841.5MHz									
1.669816	65.00	Pk	29.1	-95.2	-47.73	-48.83	-13	-35.83	H
2.425961	58.29	Pk	31.8	-95.2	-47.21	-52.32	-13	-39.32	V
2.479877	64.36	Pk	32.1	-95.2	-47.80	-46.54	-13	-33.54	V
2.504413	65.71	Pk	32.2	-95.2	-47.75	-45.04	-13	-32.04	H
2.504800	62.95	Pk	32.2	-95.2	-47.76	-47.81	-13	-34.81	H
3.359350	55.74	Pk	32.8	-95.2	-46.61	-53.27	-13	-40.27	H

BPSK 5G NR n26 (20.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-15
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n26 BPSK 15MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	172654 HPF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 834MHz									
1.649338	66.39	Pk	28.2	-95.2	-49.91	-50.52	-13	-37.52	H
1.675900	58.84	Pk	28.5	-95.2	-50.01	-57.87	-13	-44.87	V
2.474155	77.61	Pk	32.2	-95.2	-49.98	-35.37	-13	-22.37	H
2.474202	68.47	Pk	32.2	-95.2	-49.98	-44.51	-13	-31.51	V
3.339550	55.02	Pk	32.8	-95.2	-46.37	-53.75	-13	-40.75	V
3.343150	55.37	Pk	32.8	-95.2	-46.43	-53.46	-13	-40.46	H
Mid Channel, 836.5MHz									
1.654497	65.95	Pk	28.3	-95.2	-49.96	-50.91	-13	-37.91	H
1.667800	58.53	Pk	28.4	-95.2	-49.99	-58.26	-13	-45.26	V
2.481599	78.13	Pk	32.3	-95.2	-50.03	-34.80	-13	-21.80	H
2.481756	68.43	Pk	32.3	-95.2	-50.03	-44.50	-13	-31.50	V
3.330100	55.55	Pk	32.8	-95.2	-46.49	-53.34	-13	-40.34	H
3.341350	55.29	Pk	32.8	-95.2	-46.37	-53.48	-13	-40.48	V
Mid Channel, 839.0MHz									
1.659399	67.79	Pk	28.3	-95.2	-49.93	-49.04	-13	-36.04	H
1.671850	58.49	Pk	28.5	-95.2	-50.01	-58.22	-13	-45.22	V
2.489064	67.03	Pk	32.3	-95.2	-50.00	-45.87	-13	-32.87	V
2.489107	76.04	Pk	32.3	-95.2	-50.00	-36.86	-13	-23.86	H
3.344950	55.11	Pk	32.8	-95.2	-46.47	-53.76	-13	-40.76	H
3.360250	56.02	Pk	32.8	-95.2	-46.44	-52.82	-13	-39.82	V

10.2.9. 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 #:	14982484
Date:	2024-05-23

Test Engineer:	32934
Configuration:	EUT only
Mode	LTE B30 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.604531	23.45	RMS	34.0	-95.2	-23.2	-60.90	-40	-20.90	V
4.619063	23.74	RMS	34.0	-95.2	-23.2	-60.66	-40	-20.66	H
6.934688	20.12	RMS	35.7	-95.2	-19.0	-58.38	-40	-18.38	V
6.936094	20.02	RMS	35.7	-95.2	-19.0	-58.47	-40	-18.47	H
9.238594	19.74	RMS	36.1	-95.2	-16.8	-56.12	-40	-16.12	H
9.331406	18.97	RMS	36.3	-95.2	-15.7	-55.59	-40	-15.59	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-05-24
Test Engineer:	32934
Configuration:	EUT only
Mode	5G NR n30 BPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF(Db/m) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.638281	23.24	RMS	34.0	-95.2	-23.2	-61.16	-40	-21.16	H
7.005000	19.15	RMS	35.6	-95.2	-18.2	-58.65	-40	-18.65	H
9.268125	19.43	RMS	36.1	-95.2	-16.5	-56.17	-40	-16.17	H
4.627969	23.19	RMS	34.0	-95.2	-23.2	-61.21	-40	-21.21	V
6.957656	19.76	RMS	35.7	-95.2	-18.8	-58.54	-40	-18.54	V
9.234375	19.77	RMS	36.1	-95.2	-16.8	-56.13	-40	-16.13	V

10.2.10. 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 #:	14982484
Date:	2024-03-26
Test Engineer:	12501
Configuration:	EUT only
Mode	LTE B41 QPSK 20MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	808480 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2506MHz									
5.016000	56.91	Pk	34.2	-95.2	-49.5	-53.59	-25	-28.59	H
7.503500	56.34	Pk	36.0	-95.2	-48.0	-50.86	-25	-25.86	H
5.036500	57.46	Pk	34.2	-95.2	-49.4	-52.94	-25	-27.94	V
7.493000	56.01	Pk	36.0	-95.2	-48.1	-51.29	-25	-26.29	V
10.022500	57.80	Pk	37.5	-95.2	-48.0	-47.90	-25	-22.90	H
10.047500	57.29	Pk	37.5	-95.2	-48.3	-48.71	-25	-23.71	V
Mid Channel, 2593MHz									
5.186000	57.09	Pk	34.4	-95.2	-49.4	-53.11	-25	-28.11	H
5.195000	56.61	Pk	34.4	-95.2	-49.3	-53.49	-25	-28.49	V
7.817500	56.65	Pk	36.0	-95.2	-47.8	-50.35	-25	-25.35	H
7.844500	55.86	Pk	36.0	-95.2	-48.0	-51.29	-25	-26.29	V
10.343000	58.51	Pk	37.8	-95.2	-48.2	-47.09	-25	-22.09	V
10.391500	57.35	Pk	37.8	-95.2	-47.8	-47.85	-25	-22.85	H
High Channel, 2680MHz									
10.688000	56.39	Pk	37.9	-95.2	-47.3	-48.21	-25	-23.21	H
10.672000	56.00	Pk	37.9	-95.2	-47.3	-48.60	-25	-23.60	V
5.324000	57.30	Pk	34.4	-95.2	-49.3	-52.80	-25	-27.80	H
5.327500	56.42	Pk	34.4	-95.2	-49.3	-53.63	-25	-28.63	V
8.001500	55.87	Pk	36.1	-95.2	-47.1	-50.33	-25	-25.33	V
8.015500	56.17	Pk	36.1	-95.2	-47.1	-50.03	-25	-25.03	H

BPSK LTE BAND n41 (100.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-26
Test Engineer:	19226
Configuration:	EUT only
Mode	5G NR n41 BPSK 100MHz
Chamber #:	04-RDE- R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2546MHz									
5.092447	55.96	Pk	34.2	-95.2	-47.30	-52.34	-25	-27.34	H
5.093857	55.83	Pk	34.2	-95.2	-47.32	-52.49	-25	-27.49	V
7.639448	54.04	Pk	35.7	-95.2	-44.86	-50.32	-25	-25.32	H
7.640006	54.73	Pk	35.7	-95.2	-44.82	-49.59	-25	-24.59	V
10.185405	54.12	Pk	37.7	-95.2	-43.87	-47.25	-25	-22.25	V
10.186066	53.91	Pk	37.7	-95.2	-43.88	-47.47	-25	-22.47	H
Mid Channel, 2593MHz									
5.185054	56.19	Pk	34.3	-95.2	-47.00	-51.71	-25	-26.71	H
5.185059	55.82	Pk	34.3	-95.2	-47.00	-52.08	-25	-27.08	V
5.186323	54.82	Pk	34.3	-95.2	-46.97	-53.05	-25	-28.05	H
7.777790	53.50	Pk	35.8	-95.2	-44.73	-50.63	-25	-25.63	V
10.372586	54.36	Pk	37.7	-95.2	-44.51	-47.65	-25	-22.65	H
10.373227	54.45	Pk	37.7	-95.2	-44.53	-47.58	-25	-22.58	V
High Channel, 2640MHz									
5.279765	55.98	Pk	34.4	-95.2	-47.07	-51.89	-25	-26.89	H
5.281384	55.64	Pk	34.4	-95.2	-47.06	-52.22	-25	-27.22	V
7.919050	53.71	Pk	35.8	-95.2	-44.62	-50.31	-25	-25.31	H
7.920134	54.69	Pk	35.8	-95.2	-44.61	-49.32	-25	-24.32	V
10.559909	52.79	Pk	37.6	-95.2	-44.28	-49.09	-25	-24.09	H
10.562317	53.09	Pk	37.6	-95.2	-44.30	-48.81	-25	-23.81	V

10.2.11. 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 #:	14982484
Date:	2024-03-08
Test Engineer:	12581
Configuration:	EUT only
Mode	LTE 66 QPSK 20MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1720MHz									
5.147000	57.28	Pk	34.3	-95.2	-49.4	-53.02	-13	-40.02	H
3.430000	56.10	Pk	33.2	-95.2	-47.8	-53.70	-13	-40.70	V
3.441000	56.18	Pk	33.2	-95.2	-47.6	-53.42	-13	-40.42	H
5.182000	58.28	Pk	34.4	-95.2	-49.4	-51.92	-13	-38.92	V
6.883500	55.13	Pk	35.7	-95.2	-47.2	-51.57	-13	-38.57	H
6.893500	55.45	Pk	35.7	-95.2	-47.0	-51.05	-13	-38.05	V
Mid Channel, 1745MHz									
3.482500	53.97	Pk	33.2	-95.2	-47.2	-55.23	-13	-42.23	V
3.488500	54.05	Pk	33.2	-95.2	-47.2	-55.15	-13	-42.15	H
5.237500	54.86	Pk	34.4	-95.2	-49.1	-55.04	-13	-42.04	H
5.237500	53.68	Pk	34.4	-95.2	-49.1	-56.22	-13	-43.22	V
6.982000	54.49	Pk	35.8	-95.2	-46.9	-51.81	-13	-38.81	H
6.982000	53.61	Pk	35.8	-95.2	-46.9	-52.69	-13	-39.69	V
High Channel, 1770MHz									
3.543000	54.22	Pk	33.3	-95.2	-47.1	-54.78	-13	-41.78	H
3.543000	53.08	Pk	33.3	-95.2	-47.1	-55.92	-13	-42.92	V
5.310000	54.50	Pk	34.4	-95.2	-49.0	-55.30	-13	-42.30	H
5.319000	55.62	Pk	34.4	-95.2	-49.1	-54.28	-13	-41.28	V
7.078500	54.34	Pk	35.8	-95.2	-47.8	-52.86	-13	-39.86	H
7.091000	56.83	Pk	35.8	-95.2	-47.8	-50.37	-13	-37.37	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-11
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n66 BPSK 40MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112_ACF (dB) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.446000	55.22	Pk	32.9	-95.2	-46.50	-53.58	-13	-40.58	H
3.447000	55.60	Pk	32.9	-95.2	-46.46	-53.16	-13	-40.16	V
5.184500	54.63	Pk	34.3	-95.2	-46.55	-52.82	-13	-39.82	V
5.203000	54.53	Pk	34.3	-95.2	-46.61	-52.98	-13	-39.98	H
6.904000	54.74	Pk	35.6	-95.2	-45.63	-50.49	-13	-37.49	H
6.922500	53.02	Pk	35.7	-95.2	-45.42	-51.90	-13	-38.90	V
Mid Channel, 1745MHz									
3.476000	54.87	Pk	32.9	-95.2	-46.47	-53.90	-13	-40.90	H
3.499500	54.74	Pk	32.9	-95.2	-46.19	-53.75	-13	-40.75	V
5.223000	54.46	Pk	34.4	-95.2	-46.91	-53.25	-13	-40.25	V
5.233000	53.81	Pk	34.4	-95.2	-46.90	-53.89	-13	-40.89	H
6.996000	53.14	Pk	35.7	-95.2	-45.20	-51.56	-13	-38.56	V
6.997000	53.74	Pk	35.7	-95.2	-45.19	-50.95	-13	-37.95	H
High Channel, 1760MHz									
3.511500	54.43	Pk	33	-95.2	-45.90	-53.67	-13	-40.67	H
3.512000	54.05	Pk	33	-95.2	-45.93	-54.08	-13	-41.08	V
5.275000	54.48	Pk	34.4	-95.2	-46.77	-53.09	-13	-40.09	H
5.292000	54.66	Pk	34.4	-95.2	-46.75	-52.89	-13	-39.89	V
7.036000	53.53	Pk	35.7	-95.2	-45.21	-51.18	-13	-38.18	H
7.045000	53.43	Pk	35.7	-95.2	-45.38	-51.45	-13	-38.45	V

10.2.12. 5G NR n70

LIMITS

FCC: §27.53 (h)

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

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

Project #:	14982484
Date:	2024-03-11
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n70 BPSK 15MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 1702.5MHz									
3.400500	55.65	Pk	32.9	-95.2	-46.87	-53.52	-13	-40.52	V
3.432500	55.32	Pk	32.9	-95.2	-46.57	-53.55	-13	-40.55	H
5.109500	54.22	Pk	34.2	-95.2	-46.80	-53.58	-13	-40.58	V
5.122500	54.77	Pk	34.2	-95.2	-46.61	-52.84	-13	-39.84	H
6.817500	54.13	Pk	35.6	-95.2	-45.78	-51.25	-13	-38.25	H
6.821000	53.87	Pk	35.6	-95.2	-45.83	-51.56	-13	-38.56	V

10.2.13. LTE BAND 71 AND 5G NR n71

LIMITS

FCC: §27.53 (g)
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

QPSK LTE BAND 71 (20.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-29
Test Engineer:	32990
Configuration:	EUT only
Mode	LTE B71 QPSK 20MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	200897 ACF 3m (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz									
1.326025	57.12	Pk	28.8	-95.2	-49.61	-58.89	-13	-45.89	H
1.326250	56.69	Pk	28.8	-95.2	-49.61	-59.32	-13	-46.32	V
1.989100	57.79	Pk	31.2	-95.2	-49.76	-55.97	-13	-42.97	H
1.989100	57.06	Pk	31.2	-95.2	-49.76	-56.70	-13	-43.70	V
2.651950	57.30	Pk	32.2	-95.2	-49.32	-55.02	-13	-42.02	H
2.651950	56.31	Pk	32.2	-95.2	-49.32	-56.01	-13	-43.01	V
Mid Channel, 680.5MHz									
1.341100	55.74	Pk	28.7	-95.2	-49.47	-60.23	-13	-47.23	H
1.341100	55.31	Pk	28.7	-95.2	-49.47	-60.66	-13	-47.66	V
2.011600	58.38	Pk	31.3	-95.2	-49.62	-55.14	-13	-42.14	H
2.011600	57.77	Pk	31.3	-95.2	-49.62	-55.75	-13	-42.75	V
2.682100	58.4	Pk	32.2	-95.2	-49.01	-53.61	-13	-40.61	H
2.682100	57.32	Pk	32.2	-95.2	-49.01	-54.69	-13	-41.69	V
High Channel, 683MHz									
1.356400	58.47	Pk	28.6	-95.2	-49.32	-57.45	-13	-44.45	H
1.356400	57.86	Pk	28.6	-95.2	-49.32	-58.06	-13	-45.06	V
2.034100	55.73	Pk	31.4	-95.2	-49.37	-57.44	-13	-44.44	H
2.034100	57.23	Pk	31.4	-95.2	-49.37	-55.94	-13	-42.94	V
2.712250	55.80	Pk	32.2	-95.2	-48.49	-55.69	-13	-42.69	H
2.712250	57.72	Pk	32.2	-95.2	-48.49	-53.77	-13	-40.77	V

BPSK 5G NR n71 (20.0MHZ BANDWIDTH)

Project #:	149822484
Date:	2024-03-13
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n71 BPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz									
1.327418	69.34	Pk	29.1	-95.2	-49.66	-46.42	-13	-33.42	V
1.339300	59.19	Pk	29.1	-95.2	-49.73	-56.64	-13	-43.64	H
2.026000	58.67	Pk	31.6	-95.2	-50.04	-54.97	-13	-41.97	H
2.026000	58.75	Pk	31.6	-95.2	-50.04	-54.89	-13	-41.89	V
2.683450	56.60	Pk	32.3	-95.2	-48.08	-54.38	-13	-41.38	V
2.702350	57.21	Pk	32.3	-95.2	-48.15	-53.84	-13	-40.84	H
Mid Channel, 680.5MHz									
1.371700	57.58	Pk	29.0	-95.2	-49.78	-58.40	-13	-45.40	V
1.380700	59.22	Pk	28.9	-95.2	-49.77	-56.85	-13	-43.85	H
2.040400	59.43	Pk	31.6	-95.2	-49.89	-54.06	-13	-41.06	H
2.048500	58.12	Pk	31.7	-95.2	-49.85	-55.23	-13	-42.23	V
2.730700	55.86	Pk	32.3	-95.2	-48.32	-55.36	-13	-42.36	V
2.740600	56.2	Pk	32.4	-95.2	-48.39	-54.99	-13	-41.99	H
High Channel, 688MHz									
1.382950	58.69	Pk	28.9	-95.2	-49.79	-57.40	-13	-44.40	V
1.384300	58.85	Pk	28.9	-95.2	-49.79	-57.24	-13	-44.24	H
2.056150	57.18	Pk	31.7	-95.2	-49.85	-56.17	-13	-43.17	H
2.061550	56.89	Pk	31.7	-95.2	-49.79	-56.40	-13	-43.40	V
2.754100	55.72	Pk	32.4	-95.2	-48.36	-55.44	-13	-42.44	V
2.755450	55.89	Pk	32.4	-95.2	-48.36	-55.27	-13	-42.27	H

10.3. FIELD STRENGTH OF SPURIOUS RADIATION, ANT3

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests below 1GHz were done with a Resolution Bandwidth of 100kHz, and a Video Bandwidth of 300kHz.

RESULTS

10.3.1. LTE BAND 7 AND 5G NR n7

LIMITS

FCC: §27.53 (m)

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

QPSK LTE BAND 7 (20.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2028-03-27
Test Engineer:	32990
Configuration:	EUT only
Mode	LTE B7 QPSK 20MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2510MHz									
5.000000	53.06	Pk	33.9	-95.2	-47.37	-55.61	-25	-30.61	H
7.502500	52.82	Pk	35.7	-95.2	-45.24	-51.92	-25	-26.92	H
5.000000	54.15	Pk	33.9	-95.2	-47.37	-54.52	-25	-29.52	V
7.502500	54.39	Pk	35.7	-95.2	-45.24	-50.35	-25	-25.35	V
10.000000	54.67	Pk	37.2	-95.2	-45.73	-49.06	-25	-24.06	H
10.000000	53.64	Pk	37.2	-95.2	-45.73	-50.09	-25	-25.09	V
Mid Channel, 2535MHz									
5.050000	53.62	Pk	33.9	-95.2	-47.68	-55.36	-25	-30.36	H
7.575000	51.69	Pk	35.7	-95.2	-45.69	-53.50	-25	-28.50	H
5.050000	54.66	Pk	33.9	-95.2	-47.68	-54.32	-25	-29.32	V
7.575000	52.24	Pk	35.7	-95.2	-45.69	-52.95	-25	-27.95	V
10.100000	53.62	Pk	37.4	-95.2	-45.62	-49.80	-25	-24.80	H
10.100000	53.86	Pk	37.4	-95.2	-45.62	-49.56	-25	-24.56	V
High Channel, 2560MHz									
5.100000	54.82	Pk	34.0	-95.2	-47.85	-54.23	-25	-29.23	H
7.649500	54.31	Pk	35.7	-95.2	-45.73	-50.92	-25	-25.92	H
5.100000	54.17	Pk	34.0	-95.2	-47.85	-54.88	-25	-29.88	V
7.649500	51.89	Pk	35.7	-95.2	-45.73	-53.34	-25	-28.34	V
10.200000	53.89	Pk	37.5	-95.2	-45.44	-49.25	-25	-24.25	H
10.20000	53.45	Pk	37.5	-95.2	-45.44	-49.69	-25	-24.69	V

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-21
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n7 BPSK 40MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2520MHz									
5.028500	55.05	Pk	34.2	-95.2	-47.64	-53.59	-25	-28.59	H
5.039000	54.88	Pk	34.2	-95.2	-47.60	-53.72	-25	-28.72	V
7.547000	52.28	Pk	35.7	-95.2	-44.96	-52.18	-25	-27.18	V
7.578500	52.90	Pk	35.7	-95.2	-45.08	-51.68	-25	-26.68	H
10.089000	53.92	Pk	37.4	-95.2	-44.67	-48.55	-25	-23.55	V
10.096500	54.56	Pk	37.4	-95.2	-44.53	-47.77	-25	-22.77	H
Mid Channel, 2535MHz									
5.070500	54.33	Pk	34.2	-95.2	-47.40	-54.07	-25	-29.07	V
5.085000	54.53	Pk	34.2	-95.2	-47.33	-53.80	-25	-28.80	H
7.606500	52.89	Pk	35.7	-95.2	-44.97	-51.58	-25	-26.58	H
7.610500	52.49	Pk	35.7	-95.2	-44.96	-51.97	-25	-26.97	V
10.151000	53.46	Pk	37.6	-95.2	-43.88	-48.02	-25	-23.02	V
10.165500	54.12	Pk	37.6	-95.2	-43.74	-47.22	-25	-22.22	H
High Channel, 2550MHz									
5.085500	54.88	Pk	34.2	-95.2	-47.32	-53.44	-25	-28.44	H
5.094000	54.91	Pk	34.2	-95.2	-47.32	-53.41	-25	-28.41	V
7.6385000	53.17	Pk	35.7	-95.2	-44.88	-51.21	-25	-26.21	H
7.649000	52.30	Pk	35.7	-95.2	-44.87	-52.07	-25	-27.07	V
10.188500	54.39	Pk	37.7	-95.2	-43.93	-47.04	-25	-22.04	H
10.196500	53.25	Pk	37.7	-95.2	-43.76	-48.01	-25	-23.01	V

10.3.2. 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 #:	14982484
Date:	2024-03-27
Test Engineer:	32990
Configuration:	EUT only
Mode	LTE B25 QPSK 20MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.700000	53.88	Pk	33.0	-95.2	-47.12	-55.44	-13	-42.44	H
7.400000	52.91	Pk	35.6	-95.2	-45.71	-52.40	-13	-39.40	H
3.700000	53.59	Pk	33.0	-95.2	-47.12	-55.73	-13	-42.73	V
7.400000	53.11	Pk	35.6	-95.2	-45.71	-52.20	-13	-39.20	V
5.550000	53.73	Pk	34.4	-95.2	-46.93	-54.00	-13	-41.00	H
5.550000	55.05	Pk	34.4	-95.2	-46.93	-52.68	-13	-39.68	V
Mid Channel, 1882.5MHz									
3.747000	55.27	Pk	33.1	-95.2	-47.22	-54.05	-13	-41.05	H
7.490000	53.04	Pk	35.7	-95.2	-45.91	-52.37	-13	-39.37	H
3.747000	55.40	Pk	33.1	-95.2	-47.22	-53.92	-13	-40.92	V
7.490000	53.83	Pk	35.7	-95.2	-45.91	-51.58	-13	-38.58	V
5.618000	53.81	Pk	34.3	-95.2	-46.83	-53.92	-13	-40.92	H
5.618000	54.09	Pk	34.3	-95.2	-46.83	-53.64	-13	-40.64	V
High Channel, 1905MHz									
3.790000	55.31	Pk	33.2	-95.2	-46.65	-53.34	-13	-40.34	H
7.580500	52.89	Pk	35.7	-95.2	-44.53	-51.14	-13	-38.14	H
3.790000	54.42	Pk	33.2	-95.2	-46.65	-54.23	-13	-41.23	V
7.580500	53.08	Pk	35.7	-95.2	-44.53	-50.95	-13	-37.95	V
5.684500	54.32	Pk	34.4	-95.2	-46.59	-53.07	-13	-40.07	H
5.685000	54.34	Pk	34.4	-95.2	-46.60	-53.06	-13	-40.06	V

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-11
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n25 BPSK 40MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.736500	55.39	Pk	33.1	-95.2	-46.93	-53.64	-13	-40.64	V
3.750000	55.77	Pk	33.1	-95.2	-46.95	-53.28	-13	-40.28	H
5.598500	54.57	Pk	34.7	-95.2	-46.35	-52.28	-13	-39.28	H
5.614000	53.82	Pk	34.8	-95.2	-46.21	-52.79	-13	-39.79	V
7.474500	52.82	Pk	35.7	-95.2	-45.09	-51.77	-13	-38.77	V
7.477500	53.11	Pk	35.7	-95.2	-45.13	-51.52	-13	-38.52	H
Mid Channel, 1882.5MHz									
3.755000	54.66	Pk	33.1	-95.2	-46.92	-54.36	-13	-41.36	V
3.770000	55.07	Pk	33.1	-95.2	-46.91	-53.94	-13	-40.94	H
5.637500	54.08	Pk	34.8	-95.2	-46.23	-52.55	-13	-39.55	H
5.658500	53.97	Pk	34.8	-95.2	-46.07	-52.50	-13	-39.50	V
7.502500	54.01	Pk	35.7	-95.2	-44.93	-50.42	-13	-37.42	H
7.519500	52.86	Pk	35.7	-95.2	-44.99	-51.63	-13	-38.63	V
High Channel, 1895MHz									
3.768500	55.49	Pk	33.1	-95.2	-46.92	-53.53	-13	-40.53	H
3.788500	54.93	Pk	33.2	-95.2	-46.63	-53.70	-13	-40.70	V
5.659000	54.05	Pk	34.8	-95.2	-46.05	-52.40	-13	-39.40	H
5.690500	53.58	Pk	34.9	-95.2	-46.01	-52.73	-13	-39.73	V
7.574500	54.50	Pk	35.7	-95.2	-44.69	-49.69	-13	-36.69	V
7.587000	53.39	Pk	35.7	-95.2	-44.77	-50.88	-13	-37.88	H

10.3.3. LTE BAND 30 AND 5G NR n30

LIMITS

FCC: §27.53 (a)
For mobile and portable stations operating in the 2305-2315 MHz: by a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.

QPSK LTE BAND 30 (10.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-05-23
Test Engineer:	32934
Configuration:	EUT only
Mode	LTE B30 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.609219	23.58	RMS	34	-95.2	-23.2	-60.82	-40	-20.82	V
4.621406	23.78	RMS	34	-95.2	-23.2	-60.66	-40	-20.66	H
6.942188	20.12	RMS	35.7	-95.2	-19.0	-58.38	-40	-18.38	H
6.950625	20.14	RMS	35.7	-95.2	-19.0	-58.36	-40	-18.36	V
9.252656	19.76	RMS	36.1	-95.2	-16.6	-55.94	-40	-15.94	H
9.270000	19.55	RMS	36.2	-95.2	-16.4	-55.85	-40	-15.85	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-05-24
Test Engineer:	32934
Configuration:	EUT only
Mode	5G NR n30 BPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.604063	22.70	RMS	34.0	-95.2	-23.1	-61.61	-40	-21.61	H
4.616719	23.57	RMS	34.0	-95.2	-23.2	-60.83	-40	-20.83	V
6.845625	19.89	RMS	35.6	-95.2	-19.3	-58.97	-40	-18.97	H
6.977109	19.06	RMS	35.7	-95.2	-18.6	-59.04	-40	-19.04	V
9.082969	19.37	RMS	36.0	-95.2	-16.0	-55.83	-40	-15.83	H
9.285938	19.11	RMS	36.2	-95.2	-15.7	-55.60	-40	-15.60	V

10.3.4. 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 #:	14982484
Date:	2024-03-28
Test Engineer:	32990
Configuration:	EUT only
Mode	LTE B41 QPSK 20MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	808480 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2506MHz									
4.992500	53.12	Pk	33.9	-95.2	-47.58	-55.76	-25	-30.76	H
4.992500	56.35	Pk	33.9	-95.2	-47.58	-52.53	-25	-27.53	V
7.488000	51.23	Pk	35.7	-95.2	-45.40	-53.67	-25	-28.67	H
7.488000	53.83	Pk	35.7	-95.2	-45.40	-51.07	-25	-26.07	V
9.984000	53.44	Pk	37.2	-95.2	-45.87	-50.43	-25	-25.43	H
9.984000	54.49	Pk	37.2	-95.2	-45.87	-49.38	-25	-24.38	V
Mid Channel, 2593MHz									
5.166000	55.79	Pk	34.1	-95.2	-47.44	-52.75	-25	-27.75	H
5.166000	54.71	Pk	34.1	-95.2	-47.44	-53.83	-25	-28.83	V
7.749000	51.79	Pk	35.8	-95.2	-44.90	-52.51	-25	-27.51	H
7.749000	51.83	Pk	35.8	-95.2	-44.90	-52.47	-25	-27.47	V
10.333000	52.76	Pk	37.5	-95.2	-45.25	-50.19	-25	-25.19	H
10.333000	53.66	Pk	37.5	-95.2	-45.25	-49.29	-25	-24.29	V
High Channel, 2680MHz									
5.340000	53.79	Pk	34.4	-95.2	-47.41	-54.42	-25	-29.42	H
5.340000	55.63	Pk	34.4	-95.2	-47.41	-52.58	-25	-27.58	V
8.010000	53.61	Pk	35.7	-95.2	-44.77	-50.66	-25	-25.66	H
8.010000	51.70	Pk	35.7	-95.2	-44.77	-52.57	-25	-27.57	V
10.681500	52.03	Pk	37.7	-95.2	-44.85	-50.32	-25	-25.32	H
10.681500	55.07	Pk	37.7	-95.2	-44.85	-47.28	-25	-22.28	V

BPSK LTE BAND n41 (100.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-22
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n41 BPSK 100MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2546MHz									
5.110500	54.46	Pk	34.2	-95.2	-47.28	-53.82	-25	-28.82	V
5.118000	54.46	Pk	34.2	-95.2	-47.08	-53.62	-25	-28.62	H
7.504000	55.73	Pk	35.7	-95.2	-45.07	-48.84	-25	-23.84	V
7.504078	64.84	Pk	35.7	-95.2	-45.07	-39.73	-25	-14.73	H
10.190500	54.15	Pk	37.7	-95.2	-43.91	-47.26	-25	-22.26	H
10.207000	52.79	Pk	37.7	-95.2	-43.81	-48.52	-25	-23.52	V
Mid Channel, 2593MHz									
5.180500	54.30	Pk	34.3	-95.2	-47.00	-53.6	-25	-28.6	H
5.194500	54.75	Pk	34.3	-95.2	-46.94	-53.09	-25	-28.09	V
7.639000	60.45	Pk	35.7	-95.2	-44.90	-43.95	-25	-18.95	H
7.784000	52.60	Pk	35.8	-95.2	-44.72	-51.52	-25	-26.52	V
10.364500	53.44	Pk	37.7	-95.2	-44.50	-48.56	-25	-23.56	H
10.384500	53.80	Pk	37.6	-95.2	-44.45	-48.25	-25	-23.25	V
High Channel, 2640MHz									
5.258000	53.95	Pk	34.4	-95.2	-47.12	-53.97	-25	-28.97	H
5.290500	53.46	Pk	34.4	-95.2	-46.98	-54.32	-25	-29.32	V
7.774300	59.68	Pk	35.8	-95.2	-44.78	-44.50	-25	-19.50	V
7.928000	52.50	Pk	35.8	-95.2	-44.73	-51.63	-25	-26.63	H
10.540500	53.73	Pk	37.6	-95.2	-44.22	-48.09	-25	-23.09	V
10.561000	52.75	Pk	37.6	-95.2	-44.26	-49.11	-25	-24.11	H

10.3.5. 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 #:	14982484
Date:	2024-03-28
Test Engineer:	12581
Configuration:	EUT only
Mode	LTE B66 QPSK 20MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1720MHz									
5.130000	54.63	Pk	34.1	-95.2	-47.68	-54.15	-13	-41.15	H
5.130000	53.35	Pk	34.1	-95.2	-47.68	-55.43	-13	-42.43	V
3.421500	53.98	Pk	32.7	-95.2	-46.85	-55.37	-13	-42.37	H
3.421500	55.18	Pk	32.7	-95.2	-46.85	-54.17	-13	-41.17	V
6.841000	52.22	Pk	35.6	-95.2	-45.07	-52.45	-13	-39.45	H
6.841000	52.75	Pk	35.6	-95.2	-45.07	-51.92	-13	-38.92	V
Mid Channel, 1745MHz									
3.470000	51.76	Pk	32.7	-95.2	-46.76	-57.50	-13	-44.50	H
3.470000	54.07	Pk	32.7	-95.2	-46.76	-55.19	-13	-42.19	V
5.205500	55.81	Pk	34.2	-95.2	-47.46	-52.65	-13	-39.65	H
5.205500	54.67	Pk	34.2	-95.2	-47.46	-53.79	-13	-40.79	V
6.940000	53.74	Pk	35.7	-95.2	-45.95	-51.71	-13	-38.71	V
6.940500	53.81	Pk	35.7	-95.2	-45.97	-51.66	-13	-38.66	H
High Channel, 1770MHz									
3.549500	53.98	Pk	33.3	-95.2	-47.25	-55.17	-13	-42.17	H
3.561500	53.16	Pk	33.3	-95.2	-47.4	-56.14	-13	-43.14	V
5.319000	55.69	Pk	34.4	-95.2	-49.1	-54.21	-13	-41.21	H
5.346500	55.08	Pk	34.4	-95.2	-49.1	-54.82	-13	-41.82	V
7.091000	54.70	Pk	35.8	-95.2	-47.8	-52.5	-13	-39.50	H
7.102750	53.81	Pk	35.8	-95.2	-47.8	-53.39	-13	-40.39	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-11
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n66 BPSK 40MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112_ACF (dB) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.448000	55.65	Pk	32.9	-95.2	-46.45	-53.10	-13	-40.10	V
3.452500	55.23	Pk	32.9	-95.2	-46.41	-53.48	-13	-40.48	H
5.190000	53.98	Pk	34.3	-95.2	-46.54	-53.46	-13	-40.46	V
5.200000	53.88	Pk	34.3	-95.2	-46.65	-53.67	-13	-40.67	H
6.923500	53.07	Pk	35.7	-95.2	-45.41	-51.84	-13	-38.84	V
6.939000	53.66	Pk	35.7	-95.2	-45.13	-50.97	-13	-37.97	H
Mid Channel, 1745MHz									
3.467500	56.43	Pk	32.9	-95.2	-46.41	-52.28	-13	-39.28	H
3.481500	54.80	Pk	32.9	-95.2	-46.46	-53.96	-13	-40.96	V
5.235000	54.56	Pk	34.4	-95.2	-46.92	-53.16	-13	-40.16	H
5.249000	54.40	Pk	34.4	-95.2	-46.78	-53.18	-13	-40.18	V
6.954500	53.69	Pk	35.7	-95.2	-45.07	-50.88	-13	-37.88	H
6.975500	53.13	Pk	35.7	-95.2	-45.01	-51.38	-13	-38.38	V
High Channel, 1760MHz									
3.514500	53.45	Pk	33.0	-95.2	-46.02	-54.77	-13	-41.77	V
3.540000	54.66	Pk	33.1	-95.2	-46.28	-53.72	-13	-40.72	H
5.275500	55.05	Pk	34.4	-95.2	-46.78	-52.53	-13	-39.53	H
5.288000	54.32	Pk	34.4	-95.2	-46.77	-53.25	-13	-40.25	V
7.019000	53.28	Pk	35.7	-95.2	-45.08	-51.30	-13	-38.30	H
7.033500	53.10	Pk	35.7	-95.2	-45.23	-51.63	-13	-38.63	V

10.3.6. 5G NR n70

LIMITS

FCC: §27.53 (h)

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

BPSK 5G NR n70 (15.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-11
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n70 BPSK 15MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 1702.5MHz									
3.408000	55.79	Pk	32.9	-95.2	-46.81	-53.32	-13	-40.32	H
3.428500	55.46	Pk	32.9	-95.2	-46.70	-53.54	-13	-40.54	V
5.115500	54.75	Pk	34.2	-95.2	-46.62	-52.87	-13	-39.87	V
5.121000	54.51	Pk	34.2	-95.2	-46.58	-53.07	-13	-40.07	H
6.802000	53.40	Pk	35.6	-95.2	-45.74	-51.94	-13	-38.94	V
6.816000	53.73	Pk	35.6	-95.2	-45.83	-51.70	-13	-38.7	H

10.4. FIELD STRENGTH OF SPURIOUS RADIATION, ANT4

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests below 1GHz were done with a Resolution Bandwidth of 100kHz, and a Video Bandwidth of 300kHz.

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 #:	14982484
Date:	2024-03-27
Test Engineer:	25369
Configuration:	EUT only
Mode	LTE B7 QPSK 20MHz
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2510MHz									
5.002000	55.36	Pk	34.3	-95.2	-46.65	-52.19	-25	-27.19	H
5.017000	55.05	Pk	34.3	-95.2	-46.61	-52.46	-25	-27.46	V
7.530000	53.71	Pk	35.5	-95.2	-44.46	-50.45	-25	-25.45	V
7.539000	53.32	Pk	35.5	-95.2	-44.30	-50.68	-25	-25.68	H
10.032000	55.27	Pk	37.1	-95.2	-44.23	-47.06	-25	-22.06	V
10.046000	54.18	Pk	37.1	-95.2	-44.26	-48.18	-25	-23.18	H
Mid Channel, 2535MHz									
5.062000	55.10	Pk	34.3	-95.2	-46.63	-52.43	-25	-27.43	V
5.070000	55.44	Pk	34.3	-95.2	-46.53	-51.99	-25	-26.99	H
7.600000	53.43	Pk	35.5	-95.2	-44.6	-50.87	-25	-25.87	V
7.629500	52.86	Pk	35.6	-95.2	-44.77	-51.51	-25	-26.51	H
10.125000	54.70	Pk	37.2	-95.2	-44.14	-47.44	-25	-22.44	H
10.130500	54.87	Pk	37.2	-95.2	-44.27	-47.40	-25	-22.40	V
High Channel, 2560MHz									
5.113500	54.94	Pk	34.2	-95.2	-46.45	-52.51	-25	-27.51	H
5.118000	54.57	Pk	34.2	-95.2	-46.61	-53.04	-25	-28.04	V
7.666500	53.81	Pk	35.6	-95.2	-44.55	-50.34	-25	-25.34	H
7.689500	54.27	Pk	35.6	-95.2	-44.69	-50.02	-25	-25.02	V
10.238500	54.05	Pk	37.3	-95.2	-44.16	-48.01	-25	-23.01	V
10.245000	54.44	Pk	37.3	-95.2	-44.18	-47.64	-25	-22.64	H

BPSK 5G NR 7 (40.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-22
Test Engineer:	25196
Configuration:	EUT only
Mode	5G NR n7 BPSK 40MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2520MHz									
5.000000	54.10	Pk	33.9	-95.2	-47.37	-54.57	-25	-29.57	H
7.500500	52.18	Pk	35.7	-95.2	-45.28	-52.60	-25	-27.60	H
5.000000	54.55	Pk	33.9	-95.2	-47.37	-54.12	-25	-29.12	V
7.500500	52.20	Pk	35.7	-95.2	-45.28	-52.58	-25	-27.58	V
10.000000	52.83	Pk	37.2	-95.2	-45.73	-50.90	-25	-25.90	H
10.000000	53.28	Pk	37.2	-95.2	-45.73	-50.45	-25	-25.45	V
Mid Channel, 2535MHz									
5.030000	55.15	Pk	33.9	-95.2	-47.38	-53.53	-25	-28.53	H
7.545000	54.04	Pk	35.7	-95.2	-45.46	-50.92	-25	-25.92	H
5.030000	53.50	Pk	33.9	-95.2	-47.38	-55.18	-25	-30.18	V
7.545000	52.92	Pk	35.7	-95.2	-45.46	-52.04	-25	-27.04	V
10.060500	53.23	Pk	37.3	-95.2	-45.45	-50.12	-25	-25.12	H
10.060500	53.31	Pk	37.3	-95.2	-45.45	-50.04	-25	-25.04	V
High Channel, 2550MHz									
5.060000	54.77	Pk	33.9	-95.2	-47.83	-54.36	-25	-29.36	H
7.590000	52.86	Pk	35.7	-95.2	-45.93	-52.57	-25	-27.57	H
5.060000	56.20	Pk	33.9	-95.2	-47.83	-52.93	-25	-27.93	V
7.590000	52.43	Pk	35.7	-95.2	-45.93	-53.00	-25	-28.00	V
10.100500	54.79	Pk	37.4	-95.2	-45.59	-48.60	-25	-23.60	H
10.100500	57.46	Pk	37.4	-95.2	-45.59	-45.93	-25	-20.93	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 #:	14982484
Date:	2024-03-27
Test Engineer:	25369
Configuration:	EUT only
Mode	LTE B25 QPSK 20MHz
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.714000	54.10	Pk	32.8	-95.2	-45.72	-54.02	-13	-41.02	H
3.736000	55.33	Pk	32.8	-95.2	-46.04	-53.11	-13	-40.11	V
5.570500	53.46	Pk	34.6	-95.2	-45.92	-53.06	-13	-40.06	V
5.609500	54.20	Pk	34.7	-95.2	-45.87	-52.17	-13	-39.17	H
7.431500	55.21	Pk	35.4	-95.2	-44.53	-49.12	-13	-36.12	H
7.435500	53.88	Pk	35.4	-95.2	-44.47	-50.39	-13	-37.39	V
Mid Channel, 1882.5MHz									
3.758000	54.91	Pk	32.7	-95.2	-46.18	-53.77	-13	-40.77	V
3.781500	55.09	Pk	32.8	-95.2	-46.33	-53.64	-13	-40.64	H
5.621000	56.85	Pk	34.7	-95.2	-45.85	-49.50	-13	-36.50	H
5.620789	61.85	Pk	34.7	-95.2	-45.85	-44.50	-13	-31.50	V
7.518500	53.32	Pk	35.5	-95.2	-44.06	-50.44	-13	-37.44	V
7.537500	53.44	Pk	35.5	-95.2	-43.91	-50.17	-13	-37.17	H
High Channel, 1905MHz									
3.802500	56.16	Pk	32.8	-95.2	-46.42	-52.66	-13	-39.66	V
3.821500	55.30	Pk	32.8	-95.2	-46.22	-53.32	-13	-40.32	H
5.688113	60.38	Pk	34.8	-95.2	-45.83	-45.85	-13	-32.85	H
5.688238	62.18	Pk	34.8	-95.2	-45.82	-44.04	-13	-31.04	V
7.617000	53.35	Pk	35.5	-95.2	-44.3	-50.65	-13	-37.65	V
7.644000	53.81	Pk	35.6	-95.2	-44.15	-49.94	-13	-36.94	H

BPSK 5G NR 25 (40.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-12
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n25 BPSK 40MHz
Chamber #:	0R-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.720000	55.83	Pk	33.0	-95.2	-47.09	-53.46	-13	-40.46	V
3.738000	56.63	Pk	33.1	-95.2	-46.86	-52.33	-13	-39.33	H
5.601500	54.64	Pk	34.7	-95.2	-46.32	-52.18	-13	-39.18	V
5.609000	54.98	Pk	34.8	-95.2	-46.28	-51.70	-13	-38.70	H
7.459000	53.60	Pk	35.7	-95.2	-45.12	-51.02	-13	-38.02	V
7.486500	52.35	Pk	35.7	-95.2	-45.09	-52.24	-13	-39.24	H
Mid Channel, 1882.5MHz									
3.762500	55.14	Pk	33.1	-95.2	-46.93	-53.89	-13	-40.89	H
3.774500	55.09	Pk	33.1	-95.2	-46.90	-53.91	-13	-40.91	V
5.642500	54.25	Pk	34.8	-95.2	-46.17	-52.32	-13	-39.32	V
5.652000	54.68	Pk	34.8	-95.2	-46.15	-51.87	-13	-38.87	H
7.510000	52.56	Pk	35.7	-95.2	-45.05	-51.99	-13	-38.99	H
7.545000	52.69	Pk	35.7	-95.2	-44.86	-51.67	-13	-38.67	V
High Channel, 1895MHz									
3.803000	55.06	Pk	33.2	-95.2	-46.61	-53.55	-13	-40.55	V
3.805500	54.95	Pk	33.2	-95.2	-46.67	-53.72	-13	-40.72	H
5.627336	62.74	Pk	34.8	-95.2	-46.18	-43.84	-13	-30.84	H
5.627473	62.26	Pk	34.8	-95.2	-46.18	-44.32	-13	-31.32	V
7.584000	52.32	Pk	35.7	-95.2	-44.79	-51.97	-13	-38.97	V
7.599500	53.04	Pk	35.7	-95.2	-44.69	-51.15	-13	-38.15	H

10.4.3. LTE BAND 30 AND 5G NR n30

LIMITS

FCC: §27.53 (a)

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

QPSK LTE BAND 30 (10.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-05-23
Test Engineer:	32934
Configuration:	EUT only
Mode	LTE B30 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.631250	23.61	RMS	34.0	-95.2	-23.2	-60.79	-40	-20.79	V
4.632188	23.62	RMS	34.0	-95.2	-23.2	-60.78	-40	-20.78	H
6.932813	20.07	RMS	35.7	-95.2	-19.0	-58.43	-40	-18.43	V
6.936563	20.03	RMS	35.7	-95.2	-18.9	-58.41	-40	-18.41	H
9.247500	19.74	RMS	36.1	-95.2	-16.7	-56.06	-40	-16.06	H
9.257344	19.73	RMS	36.1	-95.2	-16.6	-55.97	-40	-15.97	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-05-23
Test Engineer:	32934
Configuration:	EUT only
Mode	5G NR n30 BPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886ACF(dB) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.631250	23.61	RMS	34.0	-95.2	-23.2	-60.79	-40	-20.79	V
4.632188	23.62	RMS	34.0	-95.2	-23.2	-60.78	-40	-20.78	H
6.932813	20.07	RMS	35.7	-95.2	-19.0	-58.43	-40	-18.43	V
6.936563	20.03	RMS	35.7	-95.2	-18.9	-58.41	-40	-18.41	H
9.247500	19.74	RMS	36.1	-95.2	-16.7	-56.06	-40	-16.06	H
9.257344	19.73	RMS	36.1	-95.2	-16.6	-55.97	-40	-15.97	V

10.4.4. LTE BAND 41 AND 5G NR n41

LIMITS

FCC: §27.53 (m)

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

QPSK LTE BAND 41 (20MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-29
Test Engineer:	12501
Configuration:	EUT only
Mode	LTE B41 QPSK 20MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	808480 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2506MHz									
5.016500	55.59	Pk	34.2	-95.2	-49.5	-54.91	-25	-29.91	H
7.544000	55.04	Pk	36.0	-95.2	-48.1	-52.26	-25	-27.26	H
5.034000	55.74	Pk	34.2	-95.2	-49.5	-54.76	-25	-29.76	V
7.544000	55.50	Pk	36.0	-95.2	-48.1	-51.80	-25	-26.80	V
10.039500	55.44	Pk	37.5	-95.2	-48.1	-50.36	-25	-25.36	H
10.057000	54.64	Pk	37.6	-95.2	-48.2	-51.16	-25	-26.16	V
Mid Channel, 2593MHz									
5.183500	54.79	Pk	34.4	-95.2	-49.3	-55.31	-25	-30.31	V
5.192500	55.39	Pk	34.4	-95.2	-49.2	-54.61	-25	-29.61	H
7.781500	53.41	Pk	36.0	-95.2	-47.4	-53.19	-25	-28.19	H
7.822000	53.94	Pk	36.0	-95.2	-47.8	-53.06	-25	-28.06	V
10.373500	55.91	Pk	37.8	-95.2	-48.0	-49.49	-25	-24.49	V
10.391250	55.77	Pk	37.8	-95.2	-47.8	-49.43	-25	-24.43	H
High Channel, 2680MHz									
5.365000	54.89	Pk	34.4	-95.2	-49.2	-55.11	-25	-30.11	H
8.040500	54.42	Pk	36.1	-95.2	-47.3	-51.98	-25	-26.98	H
10.718500	53.29	Pk	37.9	-95.2	-47.2	-51.21	-25	-26.21	H
5.365000	55.77	Pk	34.4	-95.2	-49.2	-54.23	-25	-29.23	V
8.054000	53.70	Pk	36.1	-95.2	-47.4	-52.80	-25	-27.80	V
10.774000	54.22	Pk	37.9	-95.2	-47.3	-50.38	-25	-25.38	V

BPSK LTE BAND n41 (100.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-06-17
Test Engineer:	32145
Configuration:	EUT only
Mode	5G NR n41 BPSK 100MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF (dB/m)	155051 BRF 2495-2690MHz (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMT	Margin (dB)	Polarity
Low Channel, 2546MHz										
5.084531	39.57	Pk	34.1	.5	-95.2	-30.90	-51.93	-25	-26.93	V
5.092500	40.54	Pk	34.1	.5	-95.2	-30.90	-50.96	-25	-25.96	H
7.674375	35.75	Pk	35.8	.6	-95.2	-26.74	-49.79	-25	-24.79	H
7.688906	36.60	Pk	35.8	.4	-95.2	-26.89	-49.29	-25	-24.29	V
10.160156	35.91	Pk	37.3	.5	-95.2	-25.00	-46.49	-25	-21.49	V
10.197656	34.82	Pk	37.4	.6	-95.2	-24.90	-47.28	-25	-22.28	H
Mid Channel, 2593MHz										
5.145938	38.07	Pk	34.2	.7	-95.2	-30.61	-52.84	-25	-27.84	V
5.162813	39.55	Pk	34.2	.6	-95.2	-30.70	-51.55	-25	-26.55	H
7.736250	36.38	Pk	35.8	.5	-95.2	-26.83	-49.35	-25	-24.35	V
7.758281	35.86	Pk	35.8	.5	-95.2	-26.87	-49.91	-25	-24.91	H
10.402500	34.60	Pk	37.5	.6	-95.2	-25.00	-47.50	-25	-22.50	H
10.439063	33.19	Pk	37.5	.4	-95.2	-24.80	-48.91	-25	-23.91	V
High Channel, 2640MHz										
5.270625	38.41	Pk	34.4	.3	-95.2	-30.4	-52.49	-25	-27.49	H
5.293594	39.37	Pk	34.4	.8	-95.2	-30.6	-51.23	-25	-26.23	V
7.929375	36.25	Pk	35.8	.4	-95.2	-26.5	-49.25	-25	-24.25	H
7.931719	35.90	Pk	35.8	.4	-95.2	-26.5	-49.60	-25	-24.60	V
10.507969	33.48	Pk	37.6	.3	-95.2	-24.4	-48.22	-25	-23.22	V
10.549219	33.78	Pk	37.6	.7	-95.2	-24.62	-47.74	-25	-22.74	H

10.4.5. 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 #:	14982484
Date:	2024-03-29
Test Engineer:	12501
Configuration:	EUT only
Mode	LTE B66 QPSK 20MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.447000	54.48	Pk	33.2	-95.2	-47.6	-55.12	-13	-42.12	H
3.447000	54.35	Pk	33.2	-95.2	-47.6	-55.25	-13	-42.25	V
5.157000	55.68	Pk	34.3	-95.2	-49.3	-54.52	-13	-41.52	V
5.165500	55.43	Pk	34.3	-95.2	-49.4	-54.87	-13	-41.87	H
6.886500	54.05	Pk	35.7	-95.2	-47.2	-52.65	-13	-39.65	H
6.886500	52.92	Pk	35.7	-95.2	-47.2	-53.78	-13	-40.78	V
Mid Channel, 1745MHz									
3.501000	54.57	Pk	33.2	-95.2	-47.2	-54.63	-13	-41.63	V
3.488500	53.65	Pk	33.2	-95.2	-47.2	-55.55	-13	-42.55	H
5.237500	55.03	Pk	34.4	-95.2	-49.1	-54.87	-13	-41.87	H
5.237500	56.29	Pk	34.4	-95.2	-49.1	-53.61	-13	-40.61	V
6.982000	53.44	Pk	35.8	-95.2	-46.9	-52.86	-13	-39.86	H
6.982000	54.38	Pk	35.8	-95.2	-46.9	-51.92	-13	-38.92	V
High Channel, 1770MHz									
3.543000	52.20	Pk	33.3	-95.2	-47.1	-56.80	-13	-43.80	H
3.549500	53.80	Pk	33.3	-95.2	-47.3	-55.35	-13	-42.35	V
5.310000	55.12	Pk	34.4	-95.2	-49.0	-54.68	-13	-41.68	H
5.3100000	56.73	Pk	34.4	-95.2	-49.0	-53.07	-13	-40.07	V
7.078500	55.76	Pk	35.8	-95.2	-47.8	-51.44	-13	-38.44	V
7.091000	54.80	Pk	35.8	-95.2	-47.8	-52.40	-13	-39.40	H

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	14982484
Date:	2024-03-12
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n66 BPSK 40MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112_ACF (dB) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.449500	55.92	Pk	32.9	-95.2	-46.41	-52.79	-13	-39.79	V
3.451500	55.87	Pk	32.9	-95.2	-46.40	-52.83	-13	-39.83	H
5.190500	54.19	Pk	34.3	-95.2	-46.54	-53.25	-13	-40.25	H
5.195500	53.85	Pk	34.3	-95.2	-46.63	-53.68	-13	-40.68	V
6.894500	53.19	Pk	35.6	-95.2	-45.61	-52.02	-13	-39.02	H
6.938000	53.06	Pk	35.7	-95.2	-45.11	-51.55	-13	-38.55	V
Mid Channel, 1745MHz									
3.471500	56.60	Pk	32.9	-95.2	-46.50	-52.20	-13	-39.20	H
3.500000	54.79	Pk	32.9	-95.2	-46.19	-53.70	-13	-40.70	V
5.237500	54.69	Pk	34.4	-95.2	-46.93	-53.04	-13	-40.04	H
5.239000	54.66	Pk	34.4	-95.2	-46.87	-53.01	-13	-40.01	V
6.970000	53.33	Pk	35.7	-95.2	-45.07	-51.24	-13	-38.24	H
6.974500	52.76	Pk	35.7	-95.2	-45.01	-51.75	-13	-38.75	V
High Channel, 1760MHz									
3.507500	53.35	Pk	33	-95.2	-45.82	-54.67	-13	-41.67	V
3.516000	54.67	Pk	33	-95.2	-46.09	-53.62	-13	-40.62	H
5.285500	54.29	Pk	34.4	-95.2	-46.83	-53.34	-13	-40.34	V
5.301000	54.17	Pk	34.4	-95.2	-46.77	-53.40	-13	-40.40	H
7.031500	53.69	Pk	35.7	-95.2	-45.23	-51.04	-13	-38.04	V
7.035000	52.92	Pk	35.7	-95.2	-45.27	-51.85	-13	-38.85	H

10.4.6. 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 #:	14982484
Date:	5/9/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	5G NR n70 BPSK 15MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	41112_ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 1702.5MHz									
3.395000	54.33	Pk	32.9	-95.2	-46.78	-54.75	-13	-41.75	V
3.429500	55.62	Pk	32.9	-95.2	-46.69	-53.37	-13	-40.37	H
5.114500	53.85	Pk	34.2	-95.2	-46.66	-53.81	-13	-40.81	V
5.124000	54.29	Pk	34.2	-95.2	-46.63	-53.34	-13	-40.34	H
6.810000	54.34	Pk	35.6	-95.2	-45.77	-51.03	-13	-38.03	H
6.816000	53.42	Pk	35.6	-95.2	-45.83	-52.01	-13	-39.01	V

10.4.7. 5G NR n77 (FCC 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 #:	14982484
Date:	2024-03-26
Test Engineer:	19226
Configuration:	EUT only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz									
6.998873	54.58	Pk	35.7	-95.2	-45.63	-50.55	-13	-37.55	V
7.000195	55.13	Pk	35.7	-95.2	-45.64	-50.01	-13	-37.01	H
10.50093	53.64	Pk	37.6	-95.2	-44.6	-48.56	-13	-35.56	V
10.500993	53.98	Pk	37.6	-95.2	-44.6	-48.22	-13	-35.22	H
15.000121	53.23	Pk	39.7	-95.2	-42.1	-44.41	-13	-31.41	V
15.000255	52.71	Pk	39.7	-95.2	-42.2	-44.94	-13	-31.94	H

10.4.8. 5G NR n77 (FCC 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 #:	14982484
Date:	2024-03-22
Test Engineer:	32894
Configuration:	EUT only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.400349	53.96	Pk	35.6	-95.2	-45.48	-51.12	-13	-38.12	H
11.100066	52.02	Pk	37.7	-95.2	-44.03	-49.51	-13	-36.51	H
7.400349	52.02	Pk	35.6	-95.2	-45.48	-53.06	-13	-40.06	V
11.100066	51.27	Pk	37.7	-95.2	-44.03	-50.26	-13	-37.26	V
14.800181	52.41	Pk	39.4	-95.2	-42.85	-46.24	-13	-33.24	H
14.800181	51.39	Pk	39.4	-95.2	-42.85	-47.26	-13	-34.26	V
Mid Channel, 3840MHz									
7.579997	52.00	Pk	35.7	-95.2	-45.17	-52.67	-13	-39.67	H
11.370136	51.33	Pk	37.7	-95.2	-43.84	-50.01	-13	-37.01	H
7.579997	52.73	Pk	35.7	-95.2	-45.17	-51.94	-13	-38.94	V
11.370136	51.02	Pk	37.7	-95.2	-43.84	-50.32	-13	-37.32	V
15.160274	50.61	Pk	39.8	-95.2	-40.86	-45.65	-13	-32.65	H
15.160274	52.34	Pk	39.8	-95.2	-40.86	-43.92	-13	-30.92	V
High Channel, 3930MHz									
11.640205	50.86	Pk	38.0	-95.2	-43.35	-49.69	-13	-36.69	H
15.51977	50.10	Pk	40.2	-95.2	-40.26	-45.16	-13	-32.16	H
11.640205	50.17	Pk	38.0	-95.2	-43.35	-50.38	-13	-37.38	V
15.519969	52.14	Pk	40.2	-95.2	-40.25	-43.11	-13	-30.11	V
7.760044	52.11	Pk	35.7	-95.2	-45.79	-53.18	-13	-40.18	H
7.760044	53.00	Pk	35.7	-95.2	-45.79	-52.29	-13	-39.29	V

10.5. FIELD STRENGTH OF SPURIOUS RADIATION, ANT7

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests below 1GHz were done with a Resolution Bandwidth of 100kHz, and a Video Bandwidth of 300kHz.

RESULTS

10.5.1. 5G NR n77 (FCC 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 #:	14982484
Date:	2024-03-14
Test Engineer:	19226
Configuration:	EUT only
Mode	n77 BPSK 100MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz									
6.999842	54.50	Pk	35.7	-95.2	-45.54	-50.54	-13	-37.54	H
7.000282	54.83	Pk	35.7	-95.2	-45.54	-50.21	-13	-37.21	V
10.501037	54.31	Pk	37.6	-95.2	-44.26	-47.55	-13	-34.55	H
10.501086	54.39	Pk	37.6	-95.2	-44.26	-47.47	-13	-34.47	V
14.000110	53.38	Pk	38.9	-95.2	-42.33	-45.25	-13	-32.25	H
14.001657	52.96	Pk	38.9	-95.2	-42.23	-45.57	-13	-32.57	V

10.5.2. 5G NR n77 (FCC 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 #:	14982484
Date:	2024-03-18
Test Engineer:	19226
Configuration:	EUT only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.499636	53.76	Pk	35.7	-95.2	-44.24	-49.98	-13	-36.98	H
7.500939	54.18	Pk	35.7	-95.2	-44.17	-49.49	-13	-36.49	V
11.249676	53.06	Pk	37.9	-95.2	-43.52	-47.76	-13	-34.76	H
11.251901	53.42	Pk	37.9	-95.2	-43.53	-47.41	-13	-34.41	V
14.998771	53.89	Pk	39.7	-95.2	-42.19	-43.8.	-13	-30.80	V
15.001798	53.37	Pk	39.7	-95.2	-42.13	-44.26	-13	-31.26	H
Mid Channel, 3840MHz									
7.679531	53.99	Pk	35.8	-95.2	-44.91	-50.32	-13	-37.32	V
7.680353	53.80	Pk	35.8	-95.2	-44.89	-50.49	-13	-37.49	H
11.519151	52.25	Pk	38.2	-95.2	-43.12	-47.87	-13	-34.87	H
11.520783	51.15	Pk	38.2	-95.2	-43.17	-49.02	-13	-36.02	V
13.788604	53.15	Pk	38.7	-95.2	-42.59	-45.94	-13	-32.94	H
13.791664	52.81	Pk	38.7	-95.2	-42.46	-46.15	-13	-33.15	V
High Channel, 3930MHz									
7.859564	53.71	Pk	35.8	-95.2	-44.93	-50.62	-13	-37.62	V
7.862218	54.12	Pk	35.8	-95.2	-44.81	-50.09	-13	-37.09	H
11.920355	52.28	Pk	38.6	-95.2	-42.56	-46.88	-13	-33.88	H
11.922071	52.05	Pk	38.6	-95.2	-42.48	-47.03	-13	-34.03	V
15.722283	51.93	Pk	40.0	-95.2	-41.41	-44.68	-13	-31.68	H
15.722578	51.76	Pk	40.0	-95.2	-41.43	-44.87	-13	-31.87	V

10.6. FIELD STRENGTH OF SPURIOUS RADIATION, ANT8

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests below 1GHz were done with a Resolution Bandwidth of 100kHz, and a Video Bandwidth of 300kHz.

RESULTS

10.6.1. 5G NR n77 (FCC 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 #:	14982484
Date:	2024-03-20
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz									
6.998802	44.87	Pk	35.7	-95.2	-45.52	-60.15	-13	-47.15	H
7.001135	45.28	Pk	35.7	-95.2	-45.53	-59.75	-13	-46.75	V
10.493.205	45.91	Pk	37.6	-95.2	-44.30	-55.99	-13	-42.99	H
10.508138	45.66	Pk	37.6	-95.2	-44.30	-56.24	-13	-43.24	V
13.989007	45.18	Pk	38.9	-95.2	-42.35	-53.47	-13	-40.47	H
14.010474	45.26	Pk	38.9	-95.2	-42.21	-53.25	-13	-40.25	V

10.6.2. 5G NR n77 (FCC 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 #:	14982484
Date:	2024-03-21
Test Engineer:	19226
Configuration:	EUT only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.499009	53.78	Pk	35.7	-95.2	-44.28	-50.00	-13	-37.00	V
7.50114	53.32	Pk	35.7	-95.2	-44.17	-50.35	-13	-37.35	H
11.250812	52.95	Pk	37.9	-95.2	-43.46	-47.81	-13	-34.81	V
11.251699	52.85	Pk	37.9	-95.2	-43.51	-47.96	-13	-34.96	H
15.000476	53.35	Pk	39.7	-95.2	-42.16	-44.31	-13	-31.31	V
15.002547	53.16	Pk	39.7	-95.2	-42.16	-44.50	-13	-31.50	H
Mid Channel, 3840MHz									
7.678437	53.82	Pk	35.8	-95.2	-44.94	-50.52	-13	-37.52	H
7.678631	53.64	Pk	35.8	-95.2	-44.93	-50.69	-13	-37.69	V
11.520062	51.13	Pk	38.2	-95.2	-43.19	-49.06	-13	-36.06	V
11.521358	52.38	Pk	38.2	-95.2	-43.20	-47.82	-13	-34.82	H
15.361948	51.72	Pk	39.7	-95.2	-42.52	-46.30	-13	-33.30	H
15.362584	51.45	Pk	39.7	-95.2	-42.53	-46.58	-13	-33.58	V
High Channel, 3930MHz									
7.858709	53.61	Pk	35.8	-95.2	-44.93	-50.72	-13	-37.72	V
7.861684	53.49	Pk	35.8	-95.2	-44.83	-50.74	-13	-37.74	H
11.789576	52.94	Pk	38.5	-95.2	-43.46	-47.22	-13	-34.22	H
11.792335	52.95	Pk	38.5	-95.2	-43.35	-47.10	-13	-34.10	V
15.718970	51.67	Pk	40.0	-95.2	-41.39	-44.92	-13	-31.92	V
15.722313	51.76	Pk	40.0	-95.2	-41.42	-44.86	-13	-31.86	H

10.7. FIELD STRENGTH OF SPURIOUS RADIATION, ANT9

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests below 1GHz were done with a Resolution Bandwidth of 100kHz, and a Video Bandwidth of 300kHz.

RESULTS

10.7.1. 5G NR n77 (FCC 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 #:	14982484
Date:	2024-03-25
Test Engineer:	19226
Configuration:	EUT only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz									
6.999177	54.40	Pk	35.7	-95.2	-45.64	-50.74	-13	-37.74	V
6.999334	54.28	Pk	35.7	-95.2	-45.64	-50.86	-13	-37.86	H
10.500437	53.98	Pk	37.6	-95.2	-44.59	-48.21	-13	-35.21	V
10.501221	53.48	Pk	37.6	-95.2	-44.59	-48.71	-13	-35.71	H
13.999646	52.35	Pk	38.9	-95.2	-42.76	-46.71	-13	-33.71	H
14.002107	52.18	Pk	38.9	-95.2	-42.74	-46.86	-13	-33.86	V

10.7.2. 5G NR n77 (FCC 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 #:	14982484
Date:	2024-03-25
Test Engineer:	19226
Configuration:	EUT only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	04-RDE-R

Frequency (GHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.499137	53.37	Pk	35.7	-95.2	-44.27	-50.40	-13	-37.40	H
7.500247	53.40	Pk	35.7	-95.2	-44.20	-50.30	-13	-37.30	V
11.248307	52.46	Pk	37.9	-95.2	-43.44	-48.28	-13	-35.28	V
11.248568	52.96	Pk	37.9	-95.2	-43.45	-47.79	-13	-34.79	H
14.999872	53.16	Pk	39.7	-95.2	-42.15	-44.49	-13	-31.49	V
15.000032	52.91	Pk	39.7	-95.2	-42.14	-44.73	-13	-31.73	H
Mid Channel, 3840MHz									
7.681039	53.96	Pk	35.8	-95.2	-44.86	-50.30	-13	-37.30	H
7.681220	53.35	Pk	35.8	-95.2	-44.86	-50.91	-13	-37.91	V
11.520715	50.74	Pk	38.2	-95.2	-43.18	-49.44	-13	-36.44	V
11.520748	51.51	Pk	38.2	-95.2	-43.18	-48.67	-13	-35.67	H
15.360970	51.41	Pk	39.7	-95.2	-42.53	-46.62	-13	-33.62	V
15.361829	51.88	Pk	39.7	-95.2	-42.52	-46.14	-13	-33.14	H
High Channel, 3930MHz									
7859077	53.70	Pk	35.8	-95.2	-44.94	-50.64	-13	-37.64	V
7862356	53.80	Pk	35.8	-95.2	-44.81	-50.41	-13	-37.41	H
11788625	53.26	Pk	38.5	-95.2	-43.44	-46.88	-13	-33.88	V
11790189	52.36	Pk	38.5	-95.2	-43.45	-47.79	-13	-34.79	H
15720238	51.22	Pk	40.0	-95.2	-41.40	-45.38	-13	-32.38	V
15720491	52.17	Pk	40.0	-95.2	-41.40	-44.43	-13	-31.43	H

11. SETUP PHOTOS

Please refer to 14982484-EP1V1 Setup Photo Report for setup photos.

END OF REPORT