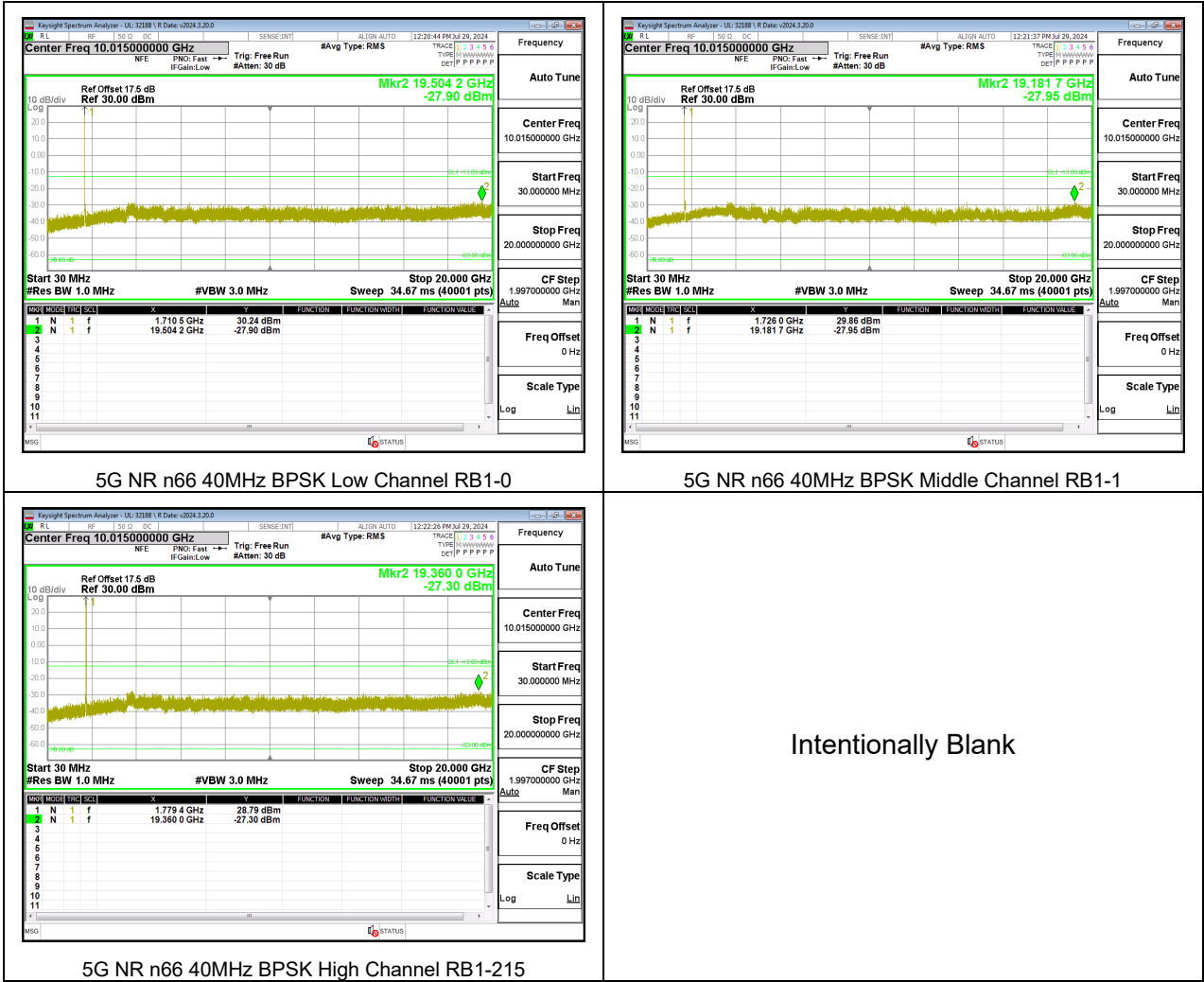


5G NR n66

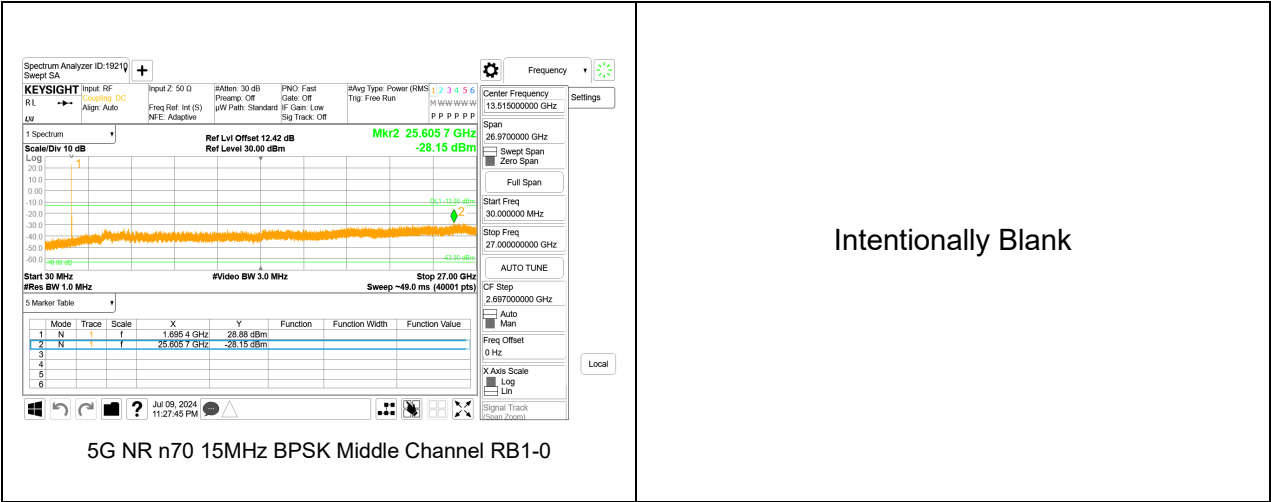


9.3.12. 5G NR n70

LIMITS

FCC: §27.53 (h)
The minimum permissible attenuation level of any spurious emissions is 43 + 10 log (P) dB where transmitting power (P) in Watts.

5G NR n70

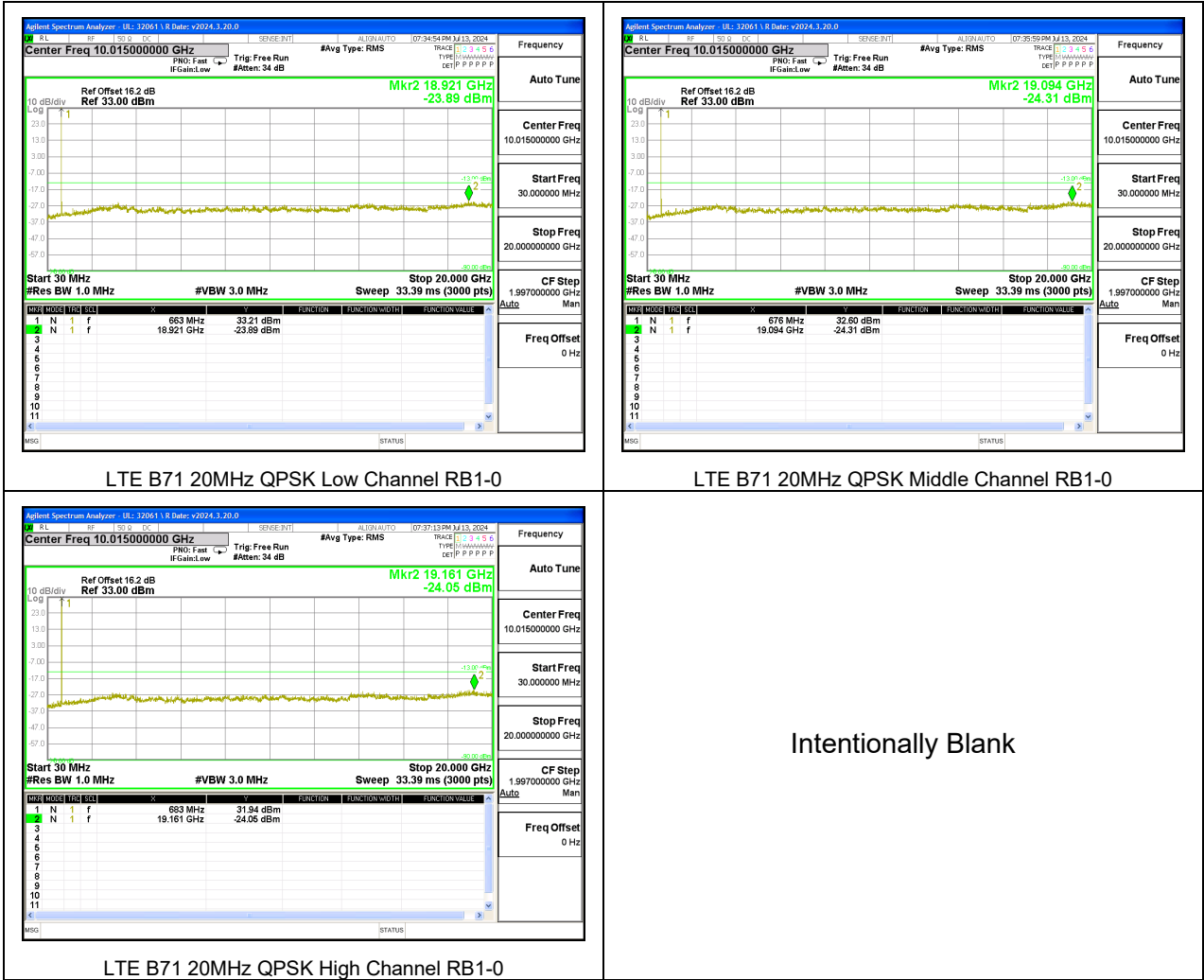


9.3.13. LTE BAND 71 AND 5G NR n71

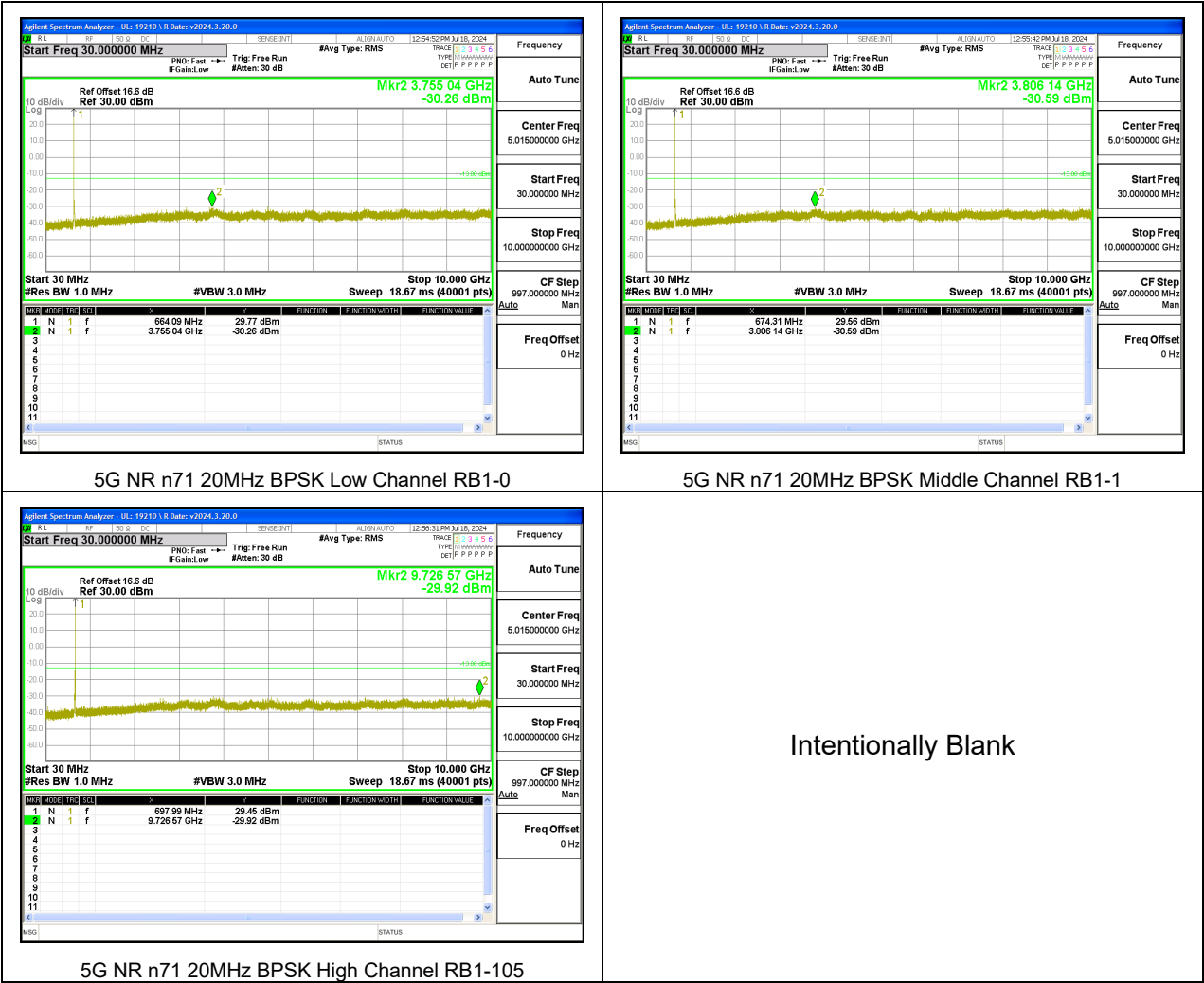
LIMITS

FCC: §27.53 (g)
The minimum permissible attenuation level of any spurious emissions is 43 + 10 log (P) dB where transmitting power (P) in Watts.

LTE BAND 71



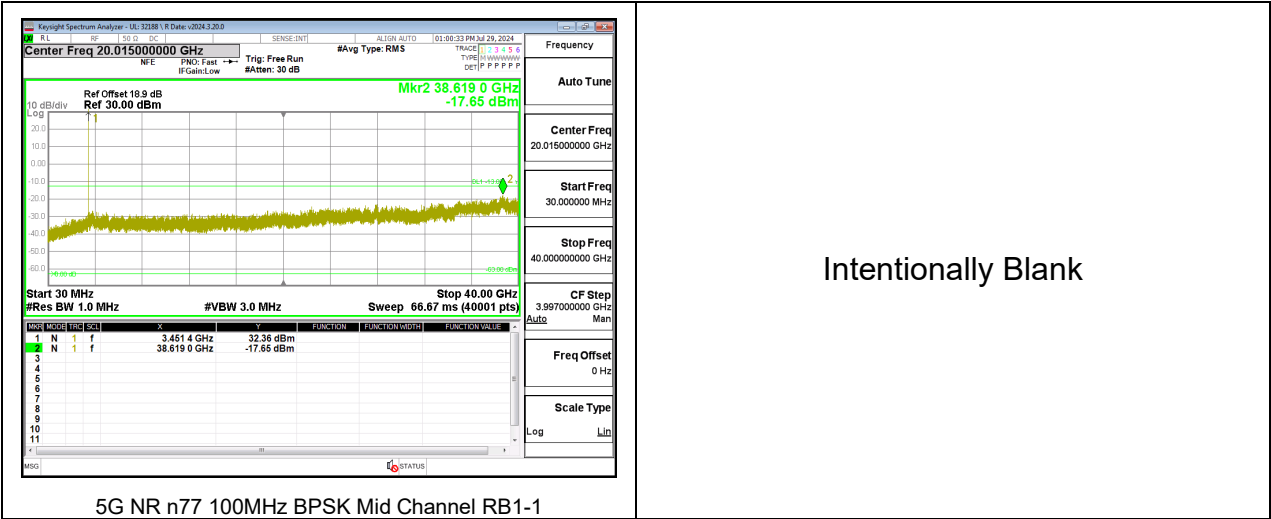
5G NR n71



9.3.14. 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.



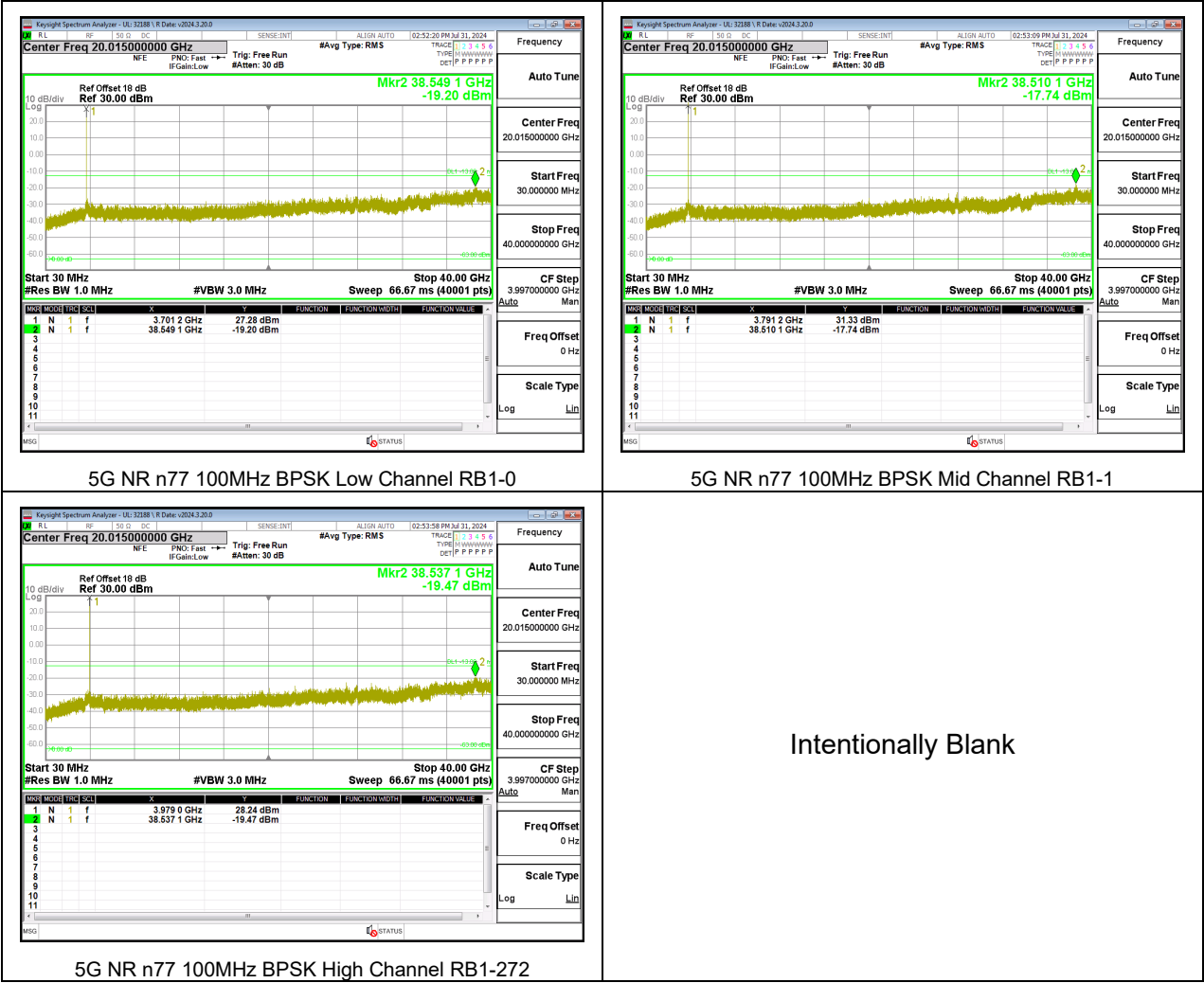
9.3.15. 5G NR n77 (FCC Part 27 3700-3980MHz)

LIMITS

FCC: §27.53

Emission limits

- (1) 3.7 GHz Service. The following emission limits apply to stations transmitting in the 3700-3980 MHz band:
(2) For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.



9.4. FREQUENCY STABILITY

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- Temp. = -30°C to $+50^{\circ}\text{C}$
- Voltage = (85% - 115%)

Low voltage, 3.23VDC, Normal, 3.8VDC and High voltage, 4.37VDC.
End Voltage, 3.2VDC.

Frequency Stability vs Temperature:

The EUT is placed inside a temperature chamber. The temperature is set to 20°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until $+50^{\circ}\text{C}$ is reached.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

RESULTS

See the following pages.

9.4.1. LTE BAND 7 AND 5G NR n7

LIMITS

FCC: §27.54
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

LTE BAND 7 QPSK (20MHz BANDWIDTH)

Test Engineer ID:	25780	Test Date:	8/26/2024
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Band	7	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2500	2570			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	2501.0566	2568.9435			
Extreme (50°C)		2501.0566	2568.9436	13.8	0.005	Yes
Extreme (40°C)		2501.0566	2568.9436	11.8	0.005	Yes
Extreme (30°C)		2501.0566	2568.9436	14.9	0.006	Yes
Extreme (10°C)		2501.0566	2568.9436	11.6	0.005	Yes
Extreme (0°C)		2501.0566	2568.9436	9.3	0.004	Yes
Extreme (-10°C)		2501.0566	2568.9435	-17.8	-0.007	Yes
Extreme (-20°C)		2501.0566	2568.9436	10.8	0.004	Yes
Extreme (-30°C)		2501.0566	2568.9436	10.8	0.004	Yes
20°C	15%	2501.0566	2568.9436	8.0	0.003	Yes
	-15%	2501.0566	2568.9436	8.8	0.003	Yes
	End Point Voltage	2501.0566	2568.9436	9.7	0.004	Yes

5G NR n7 BPSK (40MHz BANDWIDTH)

Test Engineer ID:	27342	Test Date:	8/20/2024
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Band	7	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2500	2570			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	2500.6215	2569.4854			
Extreme (50°C)		2500.6215	2569.4854	0.73	0.000	Yes
Extreme (40°C)		2500.6215	2569.4854	0.84	0.000	Yes
Extreme (30°C)		2500.6215	2569.4854	0.8	0.000	Yes
Extreme (10°C)		2500.6215	2569.4854	-0.35	0.000	Yes
Extreme (0°C)		2500.6215	2569.4854	-1.17	0.000	Yes
Extreme (-10°C)		2500.6215	2569.4854	-1.23	0.000	Yes
Extreme (-20°C)		2500.6215	2569.4854	-1.32	-0.001	Yes
Extreme (-30°C)		2500.6215	2569.4854	-1.08	0.000	Yes
20°C	15%	2500.6215	2569.4854	-1.07	0.000	Yes
	-15%	2500.6215	2569.4854	-1.41	-0.001	Yes
	End Point Voltage	2500.6215	2569.4854	-0.78	0.000	Yes

9.4.2. LTE BAND 12 AND 5G NR n12

LIMITS

FCC: §27.54
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

LTE BAND 12 QPSK (10MHz BANDWIDTH)

Test Engineer ID:	25780	Test Date:	8/26/2024
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Band	12	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		699	716			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	699.5281	715.4740			
Extreme (50°C)		699.5281	715.4740	3.4	0.005	Yes
Extreme (40°C)		699.5281	715.4740	3.9	0.006	Yes
Extreme (30°C)		699.5281	715.4740	-2.7	-0.004	Yes
Extreme (10°C)		699.5281	715.4740	3.3	0.005	Yes
Extreme (0°C)		699.5281	715.4740	3.5	0.005	Yes
Extreme (-10°C)		699.5281	715.4740	-3.2	-0.005	Yes
Extreme (-20°C)		699.5281	715.4740	4.0	0.006	Yes
Extreme (-30°C)		699.5281	715.4740	4.1	0.006	Yes
20°C	15%	699.5281	715.4740	4.0	0.006	Yes
	-15%	699.5281	715.4740	3.6	0.005	Yes
	End Point Voltage	699.5281	715.4740	3.6	0.005	Yes

5G NR n12 BPSK (15MHz BANDWIDTH)

Test Engineer ID:	27342	Test Date:	8/20/2024
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Band	12	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		699	716			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	699.4254	714.8392			
Extreme (50°C)		699.4254	714.8392	1.01	0.001	Yes
Extreme (40°C)		699.4254	714.8392	-0.41	-0.001	Yes
Extreme (30°C)		699.4254	714.8392	0.3	0.000	Yes
Extreme (10°C)		699.4254	714.8392	-1.19	-0.002	Yes
Extreme (0°C)		699.4254	714.8392	-0.19	0.000	Yes
Extreme (-10°C)		699.4254	714.8392	0.55	0.001	Yes
Extreme (-20°C)		699.4254	714.8392	-1.11	-0.002	Yes
Extreme (-30°C)		699.4254	714.8392	-0.2	0.000	Yes
20°C	15%	699.4254	714.8392	0.55	0.001	Yes
	-15%	699.4254	714.8392	0.95	0.001	Yes
	End Point Voltage	699.4254	714.8392	0.77	0.001	Yes

9.4.3. LTE BAND 13

LIMITS

FCC: §27.54
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

LTE BAND 13 QPSK (10MHz BANDWIDTH)

Test Engineer ID:	12482	Test Date:	8/26/2024
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Band	13	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		777	787			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	777.5250	786.4816			
Extreme (50°C)		777.5250	786.4816	-3.2	-0.004	Yes
Extreme (40°C)		777.5250	786.4816	-3.0	-0.004	Yes
Extreme (30°C)		777.5250	786.4816	-3.0	-0.004	Yes
Extreme (10°C)		777.5251	786.4816	4.7	0.006	Yes
Extreme (0°C)		777.5250	786.4816	-3.7	-0.005	Yes
Extreme (-10°C)		777.5250	786.4816	-2.9	-0.004	Yes
Extreme (-20°C)		777.5250	786.4816	-2.9	-0.004	Yes
Extreme (-30°C)		777.5251	786.4816	3.5	0.004	Yes
20°C	15%	777.5250	786.4816	-3.0	-0.004	Yes
	-15%	777.5251	786.4816	3.4	0.004	Yes
	End Point Voltage	777.5251	786.4816	4.3	0.005	Yes

9.4.4. LTE BAND 14 AND 5G NR n14

LIMITS

FCC: §90.539
(e) The frequency stability of mobile, portable and control transmitters operating in the wideband segment must be 1.25 ppm or better when AFC is locked to a base station, and 5 ppm or better when AFC is not locked.

LTE BAND 14 QPSK (10MHz BANDWIDTH)

Test Engineer ID:	12482	Test Date:	8/19/2024
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Band	14	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		788	798			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	788.5123	797.4741			
Extreme (50°C)		788.5260	797.4749	3.5	0.004	Yes
Extreme (40°C)		788.5260	797.4749	-3.4	-0.004	Yes
Extreme (30°C)		788.5260	797.4749	-2.9	-0.004	Yes
Extreme (10°C)		788.5260	797.4749	2.9	0.004	Yes
Extreme (0°C)		788.5260	797.4749	-3.6	-0.005	Yes
Extreme (-10°C)		788.5260	797.4749	4.1	0.005	Yes
Extreme (-20°C)		788.5260	797.4749	-2.8	-0.004	Yes
Extreme (-30°C)		788.5260	797.4749	2.9	0.004	Yes
20°C	15%	788.5123	797.4741	3.5	0.004	Yes
	-15%	788.5123	797.4741	4.7	0.006	Yes
	End Point Voltage	788.5123	797.4741	3.9	0.005	Yes

5G NR n14 BPSK (10MHz BANDWIDTH)

Test Engineer ID:	27342	Test Date:	8/20/2024
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Band	14	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		788	798		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)			
Temperature	Voltage					
Normal (20°C)	Normal	788.3300	797.2952			
Extreme (50°C)		788.3300	797.2952	-1.12	-0.001	Yes
Extreme (40°C)		788.3300	797.2952	1.14	0.001	Yes
Extreme (30°C)		788.3300	797.2952	1.52	0.002	Yes
Extreme (10°C)		788.3300	797.2952	-0.82	-0.001	Yes
Extreme (0°C)		788.3300	797.2952	-0.53	-0.001	Yes
Extreme (-10°C)		788.3300	797.2952	0.44	0.001	Yes
Extreme (-20°C)		788.3300	797.2952	-0.86	-0.001	Yes
Extreme (-30°C)		788.3300	797.2952	1.16	0.001	Yes
20°C	15%	788.3300	797.2952	1.87	0.002	Yes
	-15%	788.3300	797.2952	1.65	0.002	Yes
	End Point Voltage	788.3300	797.2952	1.13	0.001	Yes

9.4.5. LTE BAND 17

LIMITS

FCC: §27.54
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

LTE BAND 17 QPSK (10MHz BANDWIDTH)

Test Engineer ID:	12482	Test Date:	8/19/2024
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Band	17	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		704	716			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	704.5215	713.4713			
Extreme (50°C)		704.5215	713.4713	4.0	0.006	Yes
Extreme (40°C)		704.5215	713.4713	3.2	0.005	Yes
Extreme (30°C)		704.5215	713.4713	3.1	0.004	Yes
Extreme (10°C)		704.5215	713.4713	-3.9	-0.005	Yes
Extreme (0°C)		704.5215	713.4713	-3.2	-0.005	Yes
Extreme (-10°C)		704.5215	713.4713	-3.1	-0.004	Yes
Extreme (-20°C)		704.5215	713.4713	2.9	0.004	Yes
Extreme (-30°C)		704.5215	713.4713	3.3	0.005	Yes
20°C	15%	704.5215	713.4713	4.2	0.006	Yes
	-15%	704.5215	713.4713	3.8	0.005	Yes
	End Point Voltage	704.5215	713.4713	3.4	0.005	Yes

9.4.6. LTE BAND 25 AND 5G NR n25

LIMITS

FCC: §24.235

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

LTE BAND 25 QPSK (20MHz BANDWIDTH)

Test Engineer ID:	12482	Test Date:	8/19/2024
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Band	25	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1850	1915		2.5	Within Authorized Frequency Block (Hz)
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	
Temperature	Voltage					
Normal (20°C)	Normal	1851.0522	1913.9381			
Extreme (50°C)		1851.0522	1913.9381	5.3	0.003	Yes
Extreme (40°C)		1851.0522	1913.9381	4.3	0.002	Yes
Extreme (30°C)		1851.0522	1913.9381	4.1	0.002	Yes
Extreme (10°C)		1851.0522	1913.9381	5.8	0.003	Yes
Extreme (0°C)		1851.0522	1913.9381	4.9	0.003	Yes
Extreme (-10°C)		1851.0522	1913.9381	4.8	0.003	Yes
Extreme (-20°C)		1851.0522	1913.9381	4.9	0.003	Yes
Extreme (-30°C)		1851.0522	1913.9381	-5.1	-0.003	Yes
20°C	15%	1851.0522	1913.9381	4.7	0.002	Yes
	-15%	1851.0522	1913.9381	5.2	0.003	Yes
	End Point Voltage	1851.0522	1913.9381	5.9	0.003	Yes

5G NR n25 BPSK (40MHz BANDWIDTH)

Test Engineer ID:	27342	Test Date:	8/20/2024
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Band	25	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1850	1915		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	1850.5743	1914.5244			
Extreme (50°C)		1850.5743	1914.5244	1.03	0.001	Yes
Extreme (40°C)		1850.5743	1914.5244	1.49	0.001	Yes
Extreme (30°C)		1850.5743	1914.5244	0.82	0.000	Yes
Extreme (10°C)		1850.5743	1914.5244	-0.16	0.000	Yes
Extreme (0°C)		1850.5743	1914.5244	-1.25	-0.001	Yes
Extreme (-10°C)		1850.5743	1914.5244	1.21	0.001	Yes
Extreme (-20°C)		1850.5743	1914.5244	1.15	0.001	Yes
Extreme (-30°C)		1850.5743	1914.5244	1.45	0.001	Yes
20°C	15%	1850.5743	1914.5244	1.43	0.001	Yes
	-15%	1850.5743	1914.5244	1.35	0.001	Yes
	End Point Voltage	1850.5743	1914.5244	1.59	0.001	Yes

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

LIMITS

FCC: §90.213
The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.

LTE QPSK (10MHz BANDWIDTH)

Test Engineer ID:	12482	Test Date:	8/19/2024
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Band	26	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		814	824		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	814.5299	823.4769			
Extreme (50°C)		814.5299	823.4769	3.2	0.004	Yes
Extreme (40°C)		814.5299	823.4769	3.6	0.004	Yes
Extreme (30°C)		814.5299	823.4768	-3.0	-0.004	Yes
Extreme (10°C)		814.5299	823.4768	-3.5	-0.004	Yes
Extreme (0°C)		814.5299	823.4768	-3.7	-0.005	Yes
Extreme (-10°C)		814.5299	823.4769	3.3	0.004	Yes
Extreme (-20°C)		814.5299	823.4769	3.9	0.005	Yes
Extreme (-30°C)		814.5299	823.4769	3.8	0.005	Yes
20°C	15%	814.5299	823.4769	4.0	0.005	Yes
	-15%	814.5299	823.4769	3.4	0.004	Yes
	End Point Voltage	814.5299	823.4769	3.0	0.004	Yes

5G NR n26 BPSK (10MHz BANDWIDTH)

Test Engineer ID:	27342	Test Date:	8/20/2024
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Band	26	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		814	824		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	814.3303	823.2925			
Extreme (50°C)		814.3303	823.2925	0.49	0.001	Yes
Extreme (40°C)		814.3303	823.2925	0.56	0.001	Yes
Extreme (30°C)		814.3303	823.2925	0.78	0.001	Yes
Extreme (10°C)		814.3303	823.2925	-1.4	-0.002	Yes
Extreme (0°C)		814.3303	823.2925	-1.24	-0.002	Yes
Extreme (-10°C)		814.3303	823.2925	0.41	0.001	Yes
Extreme (-20°C)		814.3303	823.2925	-1.45	-0.002	Yes
Extreme (-30°C)		814.3303	823.2925	0.57	0.001	Yes
20°C	15%	814.3303	823.2925	-0.76	-0.001	Yes
	-15%	814.3303	823.2925	-0.32	0.000	Yes
	End Point Voltage	814.3303	823.2925	0.47	0.001	Yes

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

LIMITS

FCC: §22.355

The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

LTE BAND 26 QPSK (10MHz BANDWIDTH)

Test Engineer ID:	12482	Test Date:	8/19/2024
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Band	26	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		824	849		2.5	Within Authorized Frequency Block (Hz)
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	
Temperature	Voltage					
Normal (20°C)	Normal	824.2956	847.7042			
Extreme (50°C)		824.2956	847.7042	3.1	0.004	Yes
Extreme (40°C)		824.2956	847.7042	-3.6	-0.004	Yes
Extreme (30°C)		824.2956	847.7042	-4.1	-0.005	Yes
Extreme (10°C)		824.2956	847.7042	-3.8	-0.005	Yes
Extreme (0°C)		824.2956	847.7042	3.3	0.004	Yes
Extreme (-10°C)		824.2956	847.7042	3.1	0.004	Yes
Extreme (-20°C)		824.2956	847.7042	3.2	0.004	Yes
Extreme (-30°C)		824.2956	847.7042	-3.0	-0.004	Yes
20°C	15%	824.2956	847.7042	4.3	0.005	Yes
	-15%	824.2956	847.7042	-3.4	-0.004	Yes
	End Point Voltage	824.2956	847.7042	3.6	0.004	Yes

5G NR n26 BPSK (20MHz BANDWIDTH)

Test Engineer ID:	27342	Test Date:	8/20/2024
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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	824.5125	847.3875			
Extreme (50°C)		824.5125	847.3875	0.61	0.001	Yes
Extreme (40°C)		824.5125	847.3875	0.34	0.000	Yes
Extreme (30°C)		824.5125	847.3875	0.32	0.000	Yes
Extreme (10°C)		824.5125	847.3875	0.25	0.000	Yes
Extreme (0°C)		824.5125	847.3875	0.29	0.000	Yes
Extreme (-10°C)		824.5125	847.3875	-0.11	0.000	Yes
Extreme (-20°C)		824.5125	847.3875	-1.28	-0.002	Yes
Extreme (-30°C)		824.5125	847.3875	-1.13	-0.001	Yes
20°C	15%	824.5125	847.3875	0.68	0.001	Yes
	-15%	824.5125	847.3875	0.41	0.000	Yes
	End Point Voltage	824.5125	847.3875	0.45	0.001	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.

QPSK (10MHz BANDWIDTH)

Test Engineer ID:	12482	Test Date:	8/19/2024
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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	2305.5232	2689.0067			
Extreme (50°C)		2305.5232	2689.0067	8.8	0.004	Yes
Extreme (40°C)		2305.5232	2689.0067	9.9	0.004	Yes
Extreme (30°C)		2305.5232	2689.0067	7.4	0.003	Yes
Extreme (10°C)		2305.5232	2689.0067	-6.0	-0.003	Yes
Extreme (0°C)		2305.5232	2689.0067	5.4	0.002	Yes
Extreme (-10°C)		2305.5232	2689.0067	8.6	0.004	Yes
Extreme (-20°C)		2305.5232	2689.0067	-6.9	-0.003	Yes
Extreme (-30°C)		2305.5232	2689.0067	8.2	0.004	Yes
20°C	15%	2305.5232	2689.0067	6.8	0.003	Yes
	-15%	2305.5232	2689.0067	-6.5	-0.003	Yes
	End Point Voltage	2305.5232	2689.0067	6.5	0.003	Yes

5G NR n30 BPSK (10MHz BANDWIDTH)

Test Engineer ID:	27342	Test Date:	8/20/2024
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Band	30	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2305	2315		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)			
Temperature	Voltage					
Normal (20°C)	Normal	2305.3381	2314.2949			
Extreme (50°C)		2305.3381	2314.2949	-2.89	-0.001	Yes
Extreme (40°C)		2305.3381	2314.2949	-1.84	-0.001	Yes
Extreme (30°C)		2305.3381	2314.2949	0.7	0.000	Yes
Extreme (10°C)		2305.3381	2314.2949	-3.82	-0.002	Yes
Extreme (0°C)		2305.3381	2314.2949	-1.15	0.000	Yes
Extreme (-10°C)		2305.3381	2314.2949	-1.97	-0.001	Yes
Extreme (-20°C)		2305.3381	2314.2949	-1.99	-0.001	Yes
Extreme (-30°C)		2305.3381	2314.2949	-1.61	-0.001	Yes
20°C	15%	2305.3381	2314.2949	-0.75	0.000	Yes
	-15%	2305.3381	2314.2949	-0.76	0.000	Yes
	End Point Voltage	2305.3381	2314.2949	-1.02	0.000	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.

LTE BAND 41 QPSK (20MHz BANDWIDTH)

Test Engineer ID:	25780	Test Date:	8/19/2024
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Band	41	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2496	2690			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	2496.9762	2689.0067			
Extreme (50°C)		2496.9762	2689.0067	-6.3	-0.002	Yes
Extreme (40°C)		2496.9761	2689.0067	-11.0	-0.004	Yes
Extreme (30°C)		2496.9762	2689.0067	-6.8	-0.003	Yes
Extreme (10°C)		2496.9762	2689.0067	-7.7	-0.003	Yes
Extreme (0°C)		2496.9762	2689.0067	-7.1	-0.003	Yes
Extreme (-10°C)		2496.9762	2689.0067	-6.9	-0.003	Yes
Extreme (-20°C)		2496.9762	2689.0067	-6.1	-0.002	Yes
Extreme (-30°C)		2496.9762	2689.0067	-7.2	-0.003	Yes
20°C	15%	2496.9762	2689.0067	-7.2	-0.003	Yes
	-15%	2496.9762	2689.0067	-7.0	-0.003	Yes
	End Point Voltage	2496.9762	2689.0067	-6.0	-0.002	Yes

5G NR n41 BPSK (100MHz BANDWIDTH)

Test Engineer ID:	27342	Test Date:	8/20/2024
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Condition		2496	2690	Frequency Error Reading (Hz)	0	Within Authorized Frequency Block (Hz)
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	
Temperature	Voltage					
Normal (20°C)	Normal	2497.1461	2687.7200			
Extreme (50°C)		2497.1461	2687.7200	-1.39	-0.001	Yes
Extreme (40°C)		2497.1461	2687.7200	-2.25	-0.001	Yes
Extreme (30°C)		2497.1461	2687.7200	-2.35	-0.001	Yes
Extreme (10°C)		2497.1461	2687.7200	-1.09	0.000	Yes
Extreme (0°C)		2497.1461	2687.7200	-0.95	0.000	Yes
Extreme (-10°C)		2497.1461	2687.7200	-1.48	-0.001	Yes
Extreme (-20°C)		2497.1461	2687.7200	-1.92	-0.001	Yes
Extreme (-30°C)		2497.1461	2687.7200	-2.88	-0.001	Yes
20°C	15%	2497.1461	2687.7200	-2.14	-0.001	Yes
	-15%	2497.1461	2687.7200	-1.99	-0.001	Yes
	End Point Voltage	2497.1461	2687.7200	-5.15	-0.002	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.

LTE BAND 66 QPSK (20MHz BANDWIDTH)

Test Engineer ID:	12482	Test Date:	8/19/2024
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Band	66	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1710	1780		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)			
Temperature	Voltage					
Normal (20°C)	Normal	1711.0612	1778.9335			
Extreme (50°C)		1711.0612	1778.9335	4.0	0.002	Yes
Extreme (40°C)		1711.0612	1778.9335	-4.6	-0.003	Yes
Extreme (30°C)		1711.0612	1778.9335	4.4	0.003	Yes
Extreme (10°C)		1711.0612	1778.9335	4.3	0.002	Yes
Extreme (0°C)		1711.0612	1778.9335	-4.6	-0.003	Yes
Extreme (-10°C)		1711.0612	1778.9335	4.8	0.003	Yes
Extreme (-20°C)		1711.0612	1778.9335	4.3	0.002	Yes
Extreme (-30°C)		1711.0612	1778.9335	4.7	0.003	Yes
20°C	15%	1711.0612	1778.9335	4.2	0.002	Yes
	-15%	1711.0612	1778.9335	-4.0	-0.002	Yes
	End Point Voltage	1711.0612	1778.9335	-5.2	-0.003	Yes

5G NR n66 BPSK (40MHz BANDWIDTH)

Test Engineer ID:	27342	Test Date:	8/20/2024
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Band	66	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1710	1780			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	1710.3095	1779.3817			
Extreme (50°C)		1710.3095	1779.3817	1.01	0.001	Yes
Extreme (40°C)		1710.3095	1779.3817	1.07	0.001	Yes
Extreme (30°C)		1710.3095	1779.3817	1.15	0.001	Yes
Extreme (10°C)		1710.3095	1779.3817	0.82	0.000	Yes
Extreme (0°C)		1710.3095	1779.3817	-1.39	-0.001	Yes
Extreme (-10°C)		1710.3095	1779.3817	-1.56	-0.001	Yes
Extreme (-20°C)		1710.3095	1779.3817	-1.14	-0.001	Yes
Extreme (-30°C)		1710.3095	1779.3817	-1.22	-0.001	Yes
20°C	15%	1710.3095	1779.3817	-1.89	-0.001	Yes
	-15%	1710.3095	1779.3817	-1.93	-0.001	Yes
	End Point Voltage	1710.3095	1779.3817	-2.23	-0.001	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.

5G NR n70 BPSK (15MHz BANDWIDTH)

Test Engineer ID:	28498	Test Date:	8/26/2024
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Band	70	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1695	1710			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	1695.4281	1708.8427			
Extreme (50°C)		1695.4281	1708.8427	1.63	0.001	Yes
Extreme (40°C)		1695.4281	1708.8427	1.4	0.001	Yes
Extreme (30°C)		1695.4281	1708.8427	1.52	0.001	Yes
Extreme (10°C)		1695.4281	1708.8427	1.06	0.001	Yes
Extreme (0°C)		1695.4281	1708.8427	-1.01	-0.001	Yes
Extreme (-10°C)		1695.4281	1708.8427	-0.7	0.000	Yes
Extreme (-20°C)		1695.4281	1708.8427	-1.44	-0.001	Yes
Extreme (-30°C)		1695.4281	1708.8427	-1.46	-0.001	Yes
20°C	15%	1695.4281	1708.8427	-1.73	-0.001	Yes
	-15%	1695.4281	1708.8427	-1.2	-0.001	Yes
	End Point Voltage	1695.4281	1708.8427	-1.62	-0.001	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.

LTE BAND 71 QPSK (20MHz BANDWIDTH)

Test Engineer ID:	12482	Test Date:	8/19/2024
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Band	71	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		663	698			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	664.0707	696.9361			
Extreme (50°C)		664.0707	696.9361	2.7	0.004	Yes
Extreme (40°C)		664.0707	696.9361	2.6	0.004	Yes
Extreme (30°C)		664.0707	696.9361	-2.3	-0.003	Yes
Extreme (10°C)		664.0707	696.9361	-3.4	-0.005	Yes
Extreme (0°C)		664.0707	696.9361	-3.1	-0.005	Yes
Extreme (-10°C)		664.0707	696.9361	3.3	0.005	Yes
Extreme (-20°C)		664.0707	696.9361	-3.2	-0.005	Yes
Extreme (-30°C)		664.0707	696.9361	-3.7	-0.005	Yes
20°C	15%	664.0707	696.9361	4.4	0.006	Yes
	-15%	664.0707	696.9361	4.7	0.007	Yes
	End Point Voltage	664.0707	696.9361	-3.9	-0.006	Yes

5G NR n71 BPSK (20MHz BANDWIDTH)

Test Engineer ID:	27342	Test Date:	8/20/2024
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Band	71	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		663	698			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	663.5221	696.3907			
Extreme (50°C)		663.5221	696.3907	1.82	0.003	Yes
Extreme (40°C)		663.5221	696.3907	1.08	0.002	Yes
Extreme (30°C)		663.5221	696.3907	1.06	0.002	Yes
Extreme (10°C)		663.5221	696.3907	0.52	0.001	Yes
Extreme (0°C)		663.5221	696.3907	0.49	0.001	Yes
Extreme (-10°C)		663.5221	696.3907	0.4	0.001	Yes
Extreme (-20°C)		663.5221	696.3907	1.16	0.002	Yes
Extreme (-30°C)		663.5221	696.3907	1.27	0.002	Yes
20°C	15%	663.5221	696.3907	0.98	0.001	Yes
	-15%	663.5221	696.3907	1.09	0.002	Yes
	End Point Voltage	663.5221	696.3907	1.17	0.002	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.

5G NR n77 BPSK (100MHz BANDWIDTH)

Test Engineer ID:	28498	Test Date:	8/26/2024
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Band	77	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		3450.01	3549.98			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	3451.2598	3547.6780			
Extreme (50°C)		3451.2598	3547.6780	-2.15	-0.001	Yes
Extreme (40°C)		3451.2598	3547.6780	-1.23	0.000	Yes
Extreme (30°C)		3451.2598	3547.6780	1.97	0.001	Yes
Extreme (10°C)		3451.2598	3547.6780	-3.14	-0.001	Yes
Extreme (0°C)		3451.2598	3547.6780	-1.35	0.000	Yes
Extreme (-10°C)		3451.2598	3547.6780	2.05	0.001	Yes
Extreme (-20°C)		3451.2598	3547.6780	-1.63	0.000	Yes
Extreme (-30°C)		3451.2598	3547.6780	2.3	0.001	Yes
20°C	15%	3451.2598	3547.6780	-1.65	0.000	Yes
	-15%	3451.2598	3547.6780	3.72	0.001	Yes
	End Point Voltage	3451.2598	3547.6780	3.69	0.001	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.

5G NR n77 BPSK (100MHz BANDWIDTH)

Test Engineer ID:	28498	Test Date:	8/26/2024
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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	3701.1778	3977.6799			
Extreme (50°C)		3701.1778	3977.6799	-3.32	-0.001	Yes
Extreme (40°C)		3701.1778	3977.6799	-2.73	-0.001	Yes
Extreme (30°C)		3701.1778	3977.6799	-1.92	-0.001	Yes
Extreme (10°C)		3701.1778	3977.6799	-1.07	0.000	Yes
Extreme (0°C)		3701.1778	3977.6799	-2.82	-0.001	Yes
Extreme (-10°C)		3701.1778	3977.6799	0.99	0.000	Yes
Extreme (-20°C)		3701.1778	3977.6799	2.81	0.001	Yes
Extreme (-30°C)		3701.1778	3977.6799	3.44	0.001	Yes
20°C	15%	3701.1778	3977.6799	1.82	0.000	Yes
	-15%	3701.1778	3977.6799	3.21	0.001	Yes
	End Point Voltage	3701.1778	3977.6799	3.32	0.001	Yes

9.5. PEAK-TO-AVERAGE POWER RATIO

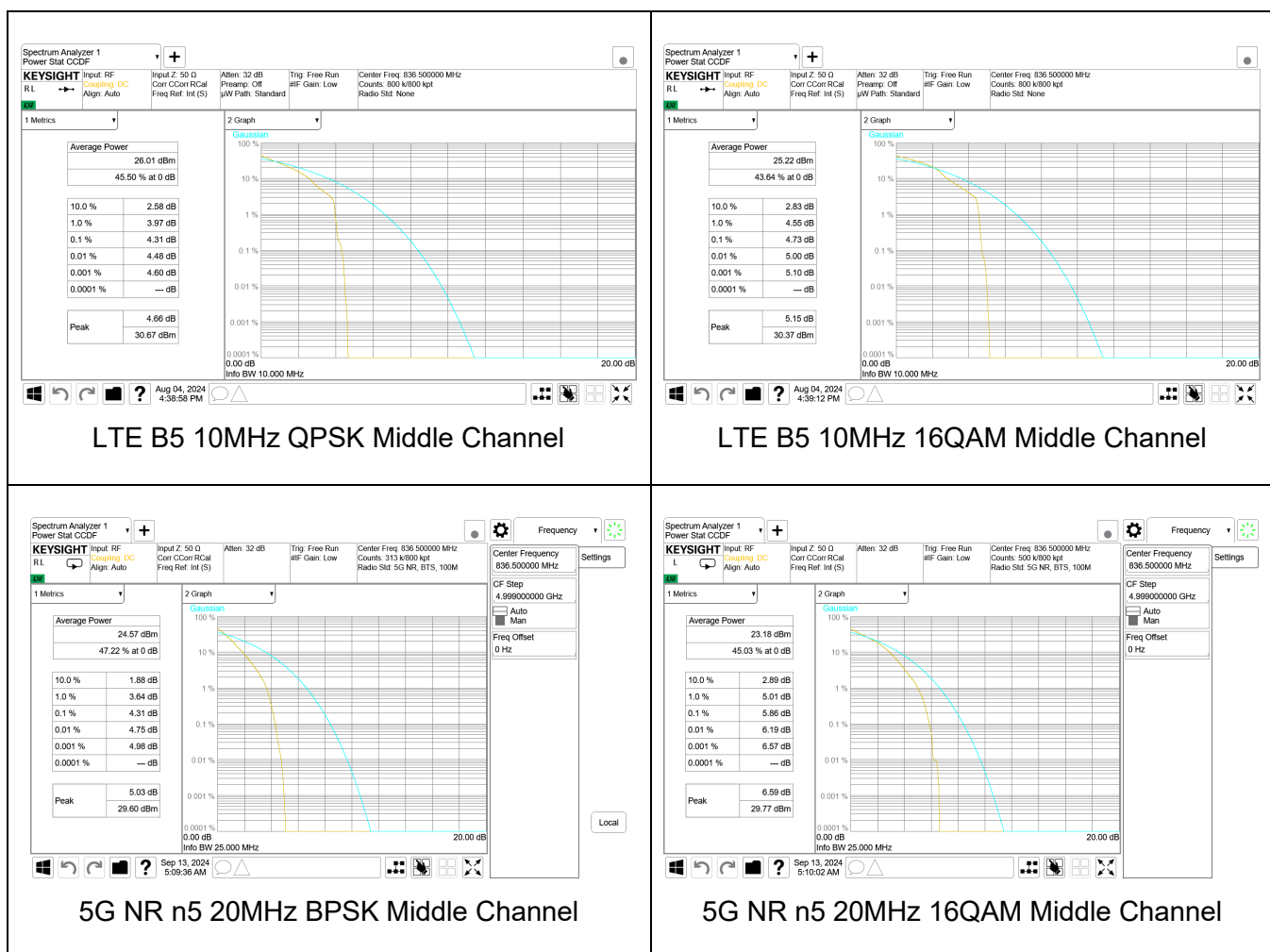
LIMIT

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

The worst-case antenna port for conducted power shown in section 6.5. 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



9.5.1. LTE BAND 7 AND 5G NR n7

Test Engineer ID:	25780	Test Date:	2024-08-04
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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	30.83	26.75	4.08
					16QAM	31.12	26.02	5.10
	10MHz		50	0	QPSK	31.22	26.75	4.47
					16QAM	31.16	26.01	5.15
	15MHz		75	0	QPSK	31.23	26.88	4.35
					16QAM	31.22	26.08	5.14
	20MHz		100	0	QPSK	31.57	26.80	4.77
					16QAM	31.32	26.11	5.21
5G NR Band n7	5MHz		25	0	BPSK	30.58	26.08	4.50
					16QAM	30.65	24.42	6.23
	10MHz		50	0	BPSK	30.57	26.07	4.50
					16QAM	30.98	24.60	6.38
	15MHz		75	0	BPSK	30.97	26.09	4.88
					16QAM	31.14	24.59	6.55
	20MHz		100	0	BPSK	31.04	26.06	4.98
					16QAM	31.33	24.64	6.69
	25MHz		128	0	BPSK	31.17	26.12	5.05
					16QAM	31.48	24.61	6.87
	30MHz		160	0	BPSK	30.39	25.70	4.69
					16QAM	31.17	24.55	6.62
	35MHz		180	0	BPSK	30.29	25.72	4.57
					16QAM	31.36	24.27	7.09
	40MHz		216	0	BPSK	30.86	25.57	5.29
					16QAM	31.89	23.98	7.91
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:	2024-08-04
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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	707.5	6	0	QPSK	30.36	26.00	4.36
					16QAM	30.34	25.19	5.15
	3MHz		15	0	QPSK	30.40	26.01	4.39
					16QAM	30.58	25.15	5.43
	5MHz		25	0	QPSK	30.46	25.92	4.54
					16QAM	30.12	25.17	4.95
	10MHz		50	0	QPSK	30.61	25.93	4.68
					16QAM	30.36	25.07	5.29
5G NR Band n12	5MHz		25	0	BPSK	30.57	25.96	4.61
					16QAM	30.67	24.33	6.34
	10MHz		50	0	BPSK	30.69	25.96	4.73
					16QAM	31.16	24.44	6.72
	15MHz		75	0	BPSK	30.70	25.94	4.76
					16QAM	31.28	24.48	6.80
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:	2024-08-04
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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	31.18	26.39	4.79
				16QAM	30.63	25.59	5.04	
	10MHz	50	0	QPSK	30.82	26.30	4.52	
				16QAM	30.67	25.50	5.17	
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:	2024-08-04
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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	30.71	26.34	4.37
					16QAM	30.79	25.67	5.12
	10MHz		50	0	QPSK	31.14	26.34	4.80
					16QAM	31.27	25.62	5.65
5G NR Band n14	5MHz		25	0	BPSK	30.68	26.01	4.67
					16QAM	30.93	24.53	6.40
	10MHz		50	0	BPSK	30.58	26.13	4.45
					16QAM	31.17	24.66	6.51
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:	2024-08-04
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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	30.08	24.27	5.81
				16QAM	29.76	23.21	6.55	
	10MHz		50	0	QPSK	30.39	24.34	6.05
				16QAM	29.89	23.28	6.61	
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:	25780	Test Date:	2024-08-04
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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	30.57	26.45	4.12
					16QAM	30.67	25.67	5.00
	3MHz		15	0	QPSK	30.90	26.45	4.45
					16QAM	30.98	25.67	5.31
	5MHz		25	0	QPSK	30.97	26.38	4.59
					16QAM	30.45	25.59	4.86
	10MHz		50	0	QPSK	30.85	26.36	4.49
					16QAM	31.01	25.60	5.41
	15MHz		75	0	QPSK	31.22	26.43	4.79
					16QAM	30.61	25.60	5.01
	20MHz		100	0	QPSK	30.81	26.54	4.27
					16QAM	30.55	25.77	4.78
5G NR Band n25	5MHz	25	0	BPSK	30.29	25.45	4.84	
				16QAM	30.70	24.31	6.39	
	10MHz	50	0	BPSK	30.58	25.90	4.68	
				16QAM	31.05	24.34	6.71	
	15MHz	75	0	BPSK	30.61	25.91	4.70	
				16QAM	31.10	24.44	6.66	
	20MHz	100	0	BPSK	30.76	25.89	4.87	
				16QAM	31.16	24.44	6.72	
	25MHz	128	0	BPSK	31.06	25.92	5.14	
				16QAM	31.28	24.48	6.80	
	30MHz	160	0	BPSK	30.59	25.87	4.72	
				16QAM	31.33	24.85	6.48	
	35MHz	180	0	BPSK	30.83	25.95	4.88	
				16QAM	31.57	24.30	7.27	
	40MHz	216	0	BPSK	30.16	25.43	4.73	
				16QAM	32.70	24.53	8.17	
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:	2024-08-04
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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	31.10	26.44	4.66	
					16QAM	30.95	25.73	5.22	
	3MHz		15	0	QPSK	30.97	26.39	4.58	
					16QAM	31.00	25.67	5.33	
	5MHz		25	0	QPSK	30.81	26.30	4.51	
					16QAM	30.92	25.59	5.33	
	10MHz		50	0	QPSK	30.84	24.78	6.06	
					16QAM	30.44	23.73	6.71	
5G NR Band n26 (FCC Part 90S)	5MHz		25	0	BPSK	30.54	25.60	4.94	
					16QAM	30.74	24.21	6.53	
	10MHz		50	0	BPSK	30.72	25.77	4.95	
					16QAM	31.45	24.31	7.14	
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:	25780	Test Date:	2024-03-12
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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	30.54	26.27	4.27
					16QAM	31.00	25.51	5.49
	3MHz		15	0	QPSK	30.69	26.26	4.43
					16QAM	30.92	25.45	5.47
	5MHz		25	0	QPSK	30.99	26.22	4.77
					16QAM	30.54	25.46	5.08
	10MHz		50	0	QPSK	30.69	26.18	4.51
					16QAM	30.90	25.42	5.48
5G NR Band n26 (FCC Part 22)	5MHz		25	0	BPSK	30.61	25.64	4.97
					16QAM	30.60	24.05	6.55
	10MHz	50	0	BPSK	30.78	25.63	5.15	
				16QAM	31.24	24.19	7.05	
	15MHz	75	0	BPSK	30.82	25.63	5.19	
				16QAM	31.29	24.20	7.09	
	20MHz	100	0	BPSK	31.07	25.70	5.37	
				16QAM	31.26	24.22	7.04	
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9.5.9. LTE BAND 30 AND 5G NR N30

Test Engineer ID:	25780	Test Date:	2024-08-04
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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	30.38	24.62	5.76
	10MHz		50	0	16QAM	29.83	23.54	6.29
					QPSK	30.71	24.65	6.06
					16QAM	30.13	23.55	6.58
5G NR Band n30	5MHz		25	0	BPSK	30.13	25.50	4.63
	10MHz		50	0	16QAM	30.46	24.08	6.38
					BPSK	30.42	25.70	4.72
					16QAM	30.91	24.21	6.70
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:	2024-08-04
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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	35.25	22.63	*5.63	
					16QAM	36.64	21.18	*8.47	
	10MHz		50	0	QPSK	35.31	22.54	*5.78	
					16QAM	37.94	21.54	*9.41	
	15MHz		75	0	QPSK	35.43	22.51	*5.93	
					16QAM	36.36	21.79	*7.58	
	20MHz		100	0	QPSK	35.21	23.03	*5.19	
					16QAM	37.42	22.09	*8.34	
5G NR Band n41	10MHz		24	0	BPSK	33.65	29.03	4.62	
					16QAM	34.07	27.64	6.43	
	15MHz		36	0	BPSK	33.66	29.16	4.50	
					16QAM	34.09	27.72	6.37	
	20MHz		50	0	BPSK	33.79	29.21	4.58	
					16QAM	34.18	27.79	6.39	
	30MHz		75	0	BPSK	34.79	29.75	5.04	
					16QAM	35.32	28.62	6.70	
	40MHz		100	0	BPSK	33.61	29.13	4.48	
					16QAM	35.19	27.54	7.65	
	50MHz		128	0	BPSK	33.58	28.01	5.57	
					16QAM	34.09	26.57	7.52	
	60MHz		162	0	BPSK	33.14	26.88	6.26	
					16QAM	33.90	25.38	8.52	
	70MHz		180	0	BPSK	32.64	26.57	6.07	
					16QAM	33.00	25.10	7.90	
	80MHz		216	0	BPSK	31.92	25.29	6.63	
					16QAM	32.65	24.06	8.59	
	90MHz		243	0	BPSK	31.73	24.83	6.90	
					16QAM	32.66	23.63	9.03	
100MHz	270		0	BPSK	31.51	24.46	7.05		
				16QAM	32.58	23.31	9.27		
* 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:	25780	Test Date:	2024-08-04
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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	30.50	25.05	5.45	
	3MHz		15	0	16QAM	30.09	24.09	6.00	
					QPSK	30.87	25.12	5.75	
	5MHz		25	0	16QAM	30.53	24.02	6.51	
					QPSK	30.64	25.07	5.57	
	10MHz		50	0	16QAM	30.55	24.03	6.52	
					QPSK	30.84	25.13	5.71	
	15MHz		75	0	16QAM	30.50	24.03	6.47	
					QPSK	29.98	23.86	6.12	
	20MHz		100	0	16QAM	30.86	22.82	8.04	
					QPSK	29.91	22.70	7.21	
	5G NR Band n66		5MHz	25	0	16QAM	30.21	21.65	8.56
10MHz			50	0	BPSK	30.72	26.10	4.62	
					16QAM	30.99	24.75	6.24	
15MHz			75	0	BPSK	30.94	26.26	4.68	
					16QAM	31.31	24.76	6.55	
20MHz			100	0	BPSK	31.05	26.14	4.91	
					16QAM	31.18	24.63	6.55	
25MHz			128	0	BPSK	31.06	26.18	4.88	
					16QAM	31.37	24.70	6.67	
30MHz			160	0	BPSK	31.11	26.14	4.97	
					16QAM	31.71	24.76	6.95	
35MHz			180	0	BPSK	31.33	26.58	4.75	
	16QAM				31.62	25.19	6.43		
40MHz	216		0	BPSK	31.14	26.18	4.96		
					16QAM	32.11	24.73	7.38	
					BPSK	30.31	25.40	4.91	
					16QAM	32.35	24.03	8.32	
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:	19210	Test Date:	2024-08-05
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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	31.08	26.38	4.70
	10MHz		50	0	16QAM	31.35	24.97	6.38
					BPSK	31.21	26.44	4.77
					16QAM	31.71	24.98	6.73
					BPSK	31.15	26.31	4.84
	15MHz		75	0	16QAM	31.71	24.98	6.73
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:	2024-08-04
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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	31.14	25.44	5.70
				16QAM	30.76	24.40	6.36	
	10MHz		50	0	QPSK	31.38	25.54	5.84
				16QAM	31.03	24.42	6.61	
	15MHz		75	0	QPSK	30.6	24.21	6.39
				16QAM	31.47	23.13	8.34	
	20MHz		100	0	QPSK	30.32	23.11	7.21
				16QAM	30.71	22.04	8.67	
5G NR Band n71	5MHz	680.5/683	24	0	BPSK	30.34	25.71	4.63
				16QAM	30.49	24.33	6.16	
	10MHz		36	0	BPSK	30.55	25.92	4.63
				16QAM	31.15	24.50	6.65	
	15MHz		50	0	BPSK	30.38	25.78	4.60
				16QAM	30.87	24.34	6.53	
	20MHz		75	0	BPSK	30.56	25.88	4.68
				16QAM	30.81	24.34	6.47	
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:	19210	Test Date:	2024-08-05
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Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
5G NR n77 (FCC Part 27 3450- 3550MHz)	10MHz	3500.0	24	0	BPSK	33.68	29.10	4.58
					16QAM	33.94	27.67	6.27
	15MHz		36	0	BPSK	33.63	29.18	4.45
					16QAM	34.21	27.90	6.31
	20MHz		50	0	BPSK	33.72	29.40	4.32
					16QAM	34.08	27.84	6.24
	30MHz		75	0	BPSK	34.23	29.53	4.70
					16QAM	34.49	28.05	6.44
	40MHz		100	0	BPSK	33.14	28.60	4.54
					16QAM	34.48	27.00	7.48
	50MHz		128	0	BPSK	33.07	27.47	5.60
					16QAM	33.55	26.02	7.53
	60MHz	162	0	BPSK	32.45	26.36	6.09	
				16QAM	33.12	24.72	8.40	
	70MHz	180	0	BPSK	31.80	25.84	5.96	
				16QAM	31.90	24.23	7.67	
	80MHz	216	0	BPSK	31.72	25.28	6.44	
				16QAM	31.90	23.57	8.33	
	90MHz	243	0	BPSK	31.43	24.71	6.72	
				16QAM	31.83	23.00	8.83	
	100MHz	270	0	BPSK	31.17	24.21	6.96	
				16QAM	32.34	23.12	9.22	
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:	19210	Test Date:	2024-08-04
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Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
5G NR n77 (FCC Part 27 3700-3980MHz)	10MHz	3840.0	24	0	BPSK	34.16	29.46	4.70
					16QAM	34.54	27.99	6.55
	15MHz		36	0	BPSK	33.64	29.31	4.33
					16QAM	34.10	27.82	6.28
	20MHz		50	0	BPSK	33.54	29.31	4.23
					16QAM	33.89	27.81	6.08
	30MHz		75	0	BPSK	33.71	28.75	4.96
					16QAM	33.64	27.39	6.25
	40MHz		100	0	BPSK	32.89	27.64	5.25
					16QAM	33.76	26.23	7.53
	50MHz		128	0	BPSK	31.67	26.55	5.12
					16QAM	33.03	25.11	7.92
	60MHz		162	0	BPSK	31.54	25.23	6.31
					16QAM	32.18	23.74	8.44
	70MHz		180	0	BPSK	30.48	24.68	5.80
					16QAM	31.47	23.20	8.27
	80MHz		216	0	BPSK	30.24	24.00	6.24
					16QAM	31.21	22.41	8.80
	90MHz		243	0	BPSK	29.90	23.33	6.57
					16QAM	31.52	21.74	9.78
	100MHz		270	0	BPSK	29.94	23.03	6.91
16QAM		30.40			21.40	9.00		
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.

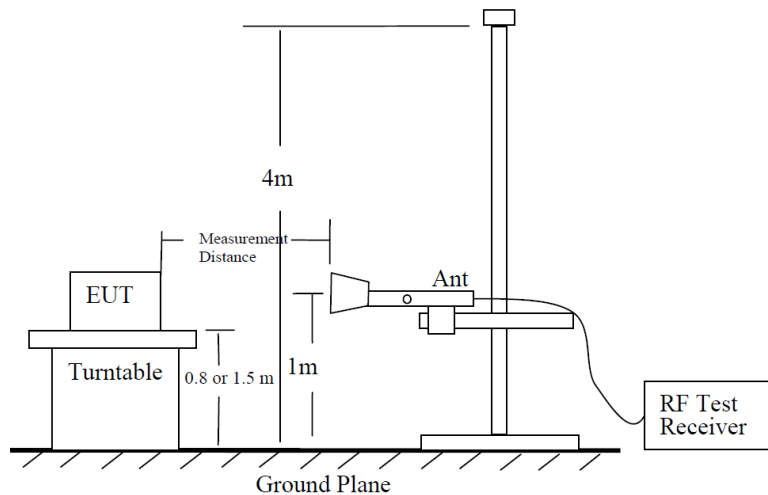


Figure 6 —Test site-up for radiated ERP and/or EIRP measurements

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

- a) $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dB}\mu\text{V)} + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}.$
- b) $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}.$
- c) $E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20\log(D) + 104.8$; where D is the measurement distance (in the far field region) in m.
- d) $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.

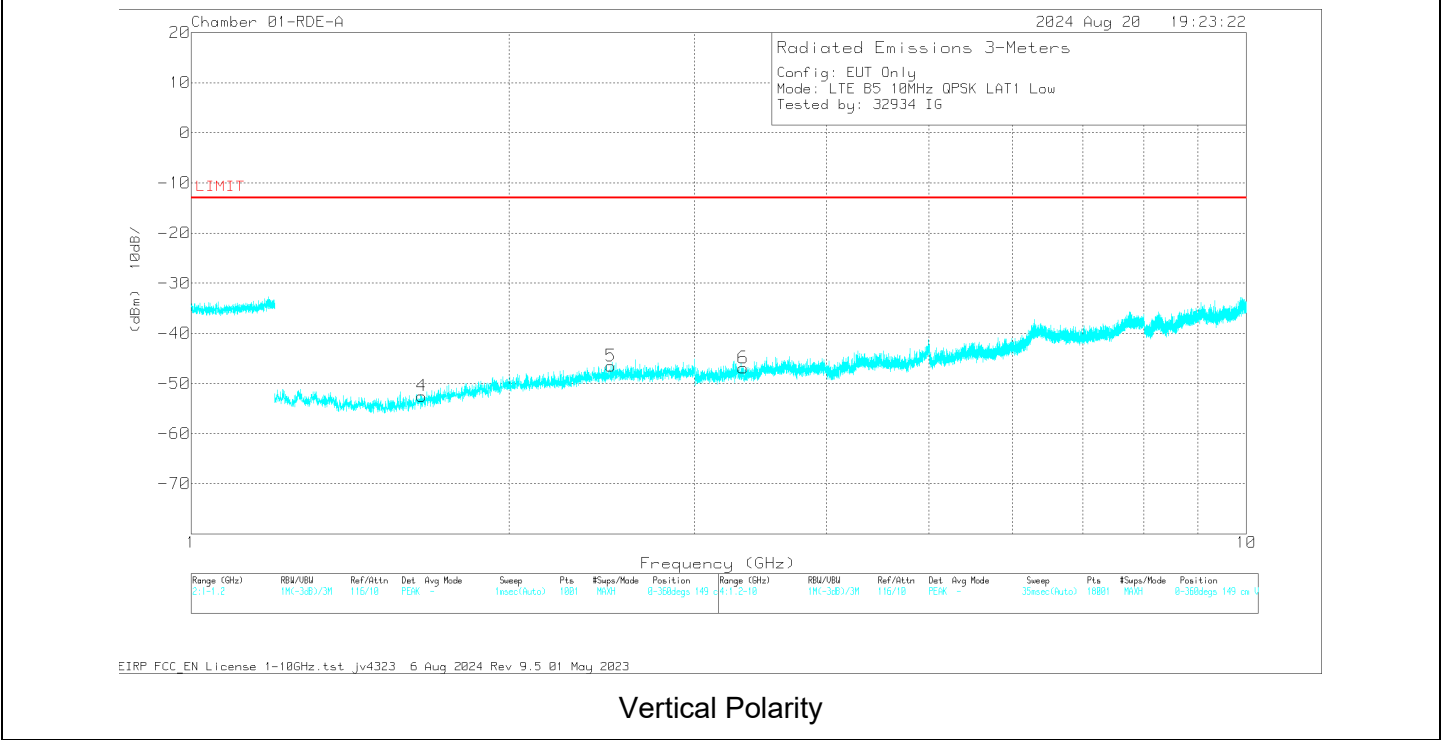
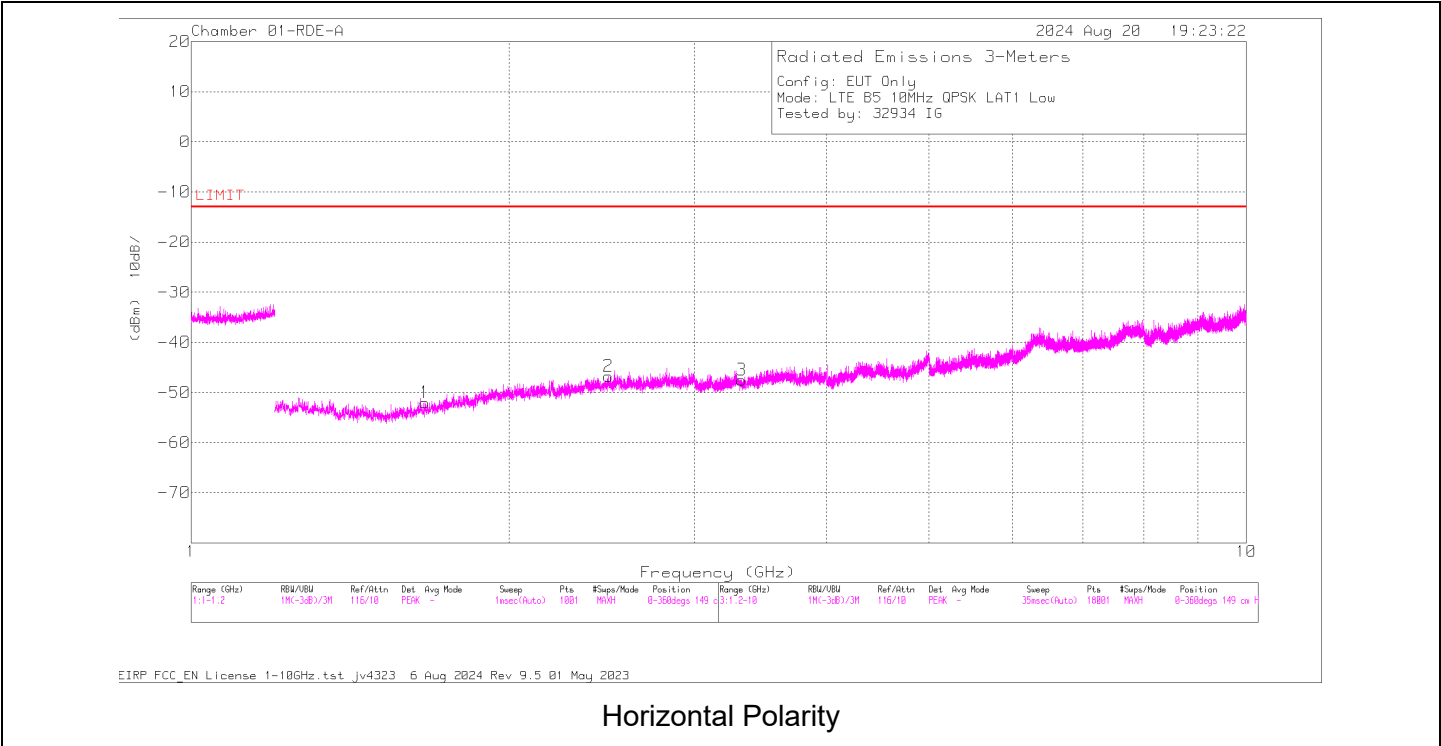
So, from d)

The measuring distance is usually at 3m, then $20 \cdot \log(3) = 9.5424$

Then, $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 9.5424 - 104.8 = E \text{ (dB}\mu\text{V/m)} - 95.2576$

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



Trace Markers

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
1.664933	41.28	Pk	29	0.7	-95.2	-27.80	-52.02	-13	-39.02	H
1.653200	40.63	Pk	28.9	0.8	-95.2	-27.62	-52.49	-13	-39.49	V
2.485778	41.56	Pk	32.5	0.5	-95.2	-26.10	-46.74	-13	-33.74	H
2.498978	41.80	Pk	32.5	0.6	-95.2	-26.20	-46.50	-13	-33.50	V
3.323734	39.29	Pk	32.9	0.6	-95.2	-25.10	-47.51	-13	-34.51	H
3.335956	40.11	Pk	32.8	0.5	-95.2	-25.10	-46.89	-13	-33.89	V

10.1. FIELD STRENGTH OF SPURIOUS RADIATION, ANT1

TEST PROCEDURE

KDB 971168 D01 /D02

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

RESULTS

10.1.1. LTE BAND 7 AND 5G NR n7

LIMITS

FCC: §27.53 (m)

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

QPSK LTE BAND 7 (20.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-08-20
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE B7 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 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										
5.009063	42.16	Pk	34.1	.8	-95.2	-31.01	-49.15	-25	-24.15	H
5.002969	41.41	Pk	34.1	.8	-95.2	-31.00	-49.89	-25	-24.89	V
7.517344	42.47	Pk	35.6	.3	-95.2	-26.97	-43.80	-25	-18.80	H
7.471406	41.85	Pk	35.6	.3	-95.2	-26.60	-44.05	-25	-19.05	V
10.048594	40.69	Pk	37.2	.7	-95.2	-25.16	-41.77	-25	-16.77	H
10.066875	39.96	Pk	37.2	.7	-95.2	-25.20	-42.54	-25	-17.54	V
Mid Channel, 2535MHz										
5.095313	42.47	Pk	34.1	.8	-95.2	-30.80	-48.63	-25	-23.63	H
5.087813	41.52	Pk	34.1	.8	-95.2	-30.84	-49.62	-25	-24.62	V
7.624688	42.74	Pk	35.7	.4	-95.2	-27.07	-43.43	-25	-18.43	H
7.634531	42.24	Pk	35.7	.4	-95.2	-27.09	-43.95	-25	-18.95	V
10.112344	40.86	Pk	37.3	.7	-95.2	-25.20	-41.54	-25	-16.54	H
10.147500	40.71	Pk	37.3	.6	-95.2	-24.65	-41.24	-25	-16.24	V
High Channel, 2560MHz										
5.115000	42.16	Pk	34.1	.8	-95.2	-30.60	-48.74	-25	-23.74	H
5.100000	42.15	Pk	34.1	.8	-95.2	-30.70	-48.85	-25	-23.85	V
7.646719	42.77	Pk	35.7	.4	-95.2	-27.10	-43.43	-25	-18.43	H
7.622344	42.03	Pk	35.7	.4	-95.2	-27.13	-44.20	-25	-19.20	V
10.297031	40.59	Pk	37.4	.6	-95.2	-25.00	-41.61	-25	-16.61	H
10.346250	40.54	Pk	37.5	.7	-95.2	-24.98	-41.44	-25	-16.44	V

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-03-10
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n7 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 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										
5.020313	40.16	Pk	34.1	.8	-95.2	-30.93	-51.07	-25	-26.07	H
5.018906	40.91	Pk	34.1	.8	-95.2	-30.91	-50.30	-25	-25.30	V
7.529531	41.26	Pk	35.6	.3	-95.2	-26.95	-44.99	-25	-19.99	H
7.530469	40.30	Pk	35.6	.3	-95.2	-26.95	-45.95	-25	-20.95	V
10.041094	39.38	Pk	37.2	.7	-95.2	-25.09	-43.01	-25	-18.01	H
10.040156	38.64	Pk	37.2	.7	-95.2	-25.1	-43.76	-25	-18.76	V
Mid Channel, 2535MHz										
5.069531	40.04	Pk	34.1	.7	-95.2	-30.9	-51.26	-25	-26.26	H
5.070938	39.41	Pk	34.1	.7	-95.2	-30.81	-51.80	-25	-26.80	V
7.604531	40.45	Pk	35.7	.4	-95.2	-27.25	-45.90	-25	-20.90	H
7.605000	40.93	Pk	35.7	.4	-95.2	-27.3	-45.47	-25	-20.47	V
10.141875	39.51	Pk	37.3	.6	-95.2	-24.7	-42.49	-25	-17.49	H
10.141406	39.98	Pk	37.3	.6	-95.2	-24.7	-42.02	-25	-17.02	V
High Channel, 2550MHz										
5.119688	41.26	Pk	34.1	.8	-95.2	-30.60	-49.64	-25	-24.64	H
5.118281	41.39	Pk	34.1	.8	-95.2	-30.60	-49.51	-25	-24.51	V
7.680469	40.89	Pk	35.8	.5	-95.2	-26.85	-44.86	-25	-19.86	H
7.679531	41.29	Pk	35.8	.5	-95.2	-26.81	-44.42	-25	-19.42	V
10.239844	40.30	Pk	37.4	.8	-95.2	-25.08	-41.78	-25	-16.78	H
10.240781	39.90	Pk	37.4	.8	-95.2	-25.02	-42.12	-25	-17.12	V

10.1.2. LTE BAND 12 AND 5G NR n12

LIMITS

FCC: §27.53 (g)

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

QPSK LTE BAND 12 (10.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-08-20
Test Engineer:	32934
Configuration:	EUT Only
Mode	LTE B12 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 704MHz										
1.358889	42.95	Pk	28.9	1	-95.2	-28.40	-50.75	-13	-37.75	H
1.351067	42.65	Pk	29	1	-95.2	-28.40	-50.95	-13	-37.95	V
2.112756	41.07	Pk	31.5	.5	-95.2	-26.48	-48.61	-13	-35.61	H
2.143067	42.83	Pk	31.5	.5	-95.2	-26.69	-47.06	-13	-34.06	V
2.813823	41.30	Pk	32.4	.6	-95.2	-25.48	-46.38	-13	-33.38	H
2.810400	40.80	Pk	32.4	.6	-95.2	-25.36	-46.76	-13	-33.76	V
Mid Channel, 707.5MHz										
1.423911	41.72	Pk	28.3	.9	-95.2	-28.10	-52.38	-13	-39.38	H
1.420000	40.36	Pk	28.3	.9	-95.2	-28.00	-53.64	-13	-40.64	V
2.119111	40.76	Pk	31.5	.5	-95.2	-26.41	-48.85	-13	-35.85	H
2.127422	41.07	Pk	31.5	.5	-95.2	-26.64	-48.77	-13	-35.77	V
2.825067	41.13	Pk	32.4	.7	-95.2	-25.50	-46.47	-13	-33.47	H
2.821156	41.07	Pk	32.4	.7	-95.2	-25.58	-46.61	-13	-33.61	V
High Channel, 711MHz										
1.419022	41.68	Pk	28.3	.9	-95.2	-28.10	-52.42	-13	-39.42	H
1.413156	41.03	Pk	28.4	.9	-95.2	-28.12	-52.99	-13	-39.99	V
2.140622	40.71	Pk	31.5	.5	-95.2	-26.50	-48.99	-13	-35.99	H
2.135734	41.12	Pk	31.5	.5	-95.2	-26.70	-48.78	-13	-35.78	V
2.838267	41.57	Pk	32.4	.7	-95.2	-25.47	-46.00	-13	-33.00	H
2.834845	40.92	Pk	32.4	.7	-95.2	-25.50	-46.68	-13	-33.68	V

BPSK 5G NR n12 (15.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-12
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n12 BPSK 15MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 706.5MHz										
1.410222	41.52	Pk	28.4	.9	-95.2	-28.22	-52.60	-13	-39.60	H
1.412178	40.52	Pk	28.4	.9	-95.2	-28.18	-53.56	-13	-40.56	V
2.118622	40.01	Pk	31.5	.5	-95.2	-26.40	-49.59	-13	-36.59	H
2.119600	40.58	Pk	31.5	.5	-95.2	-26.46	-49.08	-13	-36.08	V
2.822623	41.40	Pk	32.4	.7	-95.2	-25.50	-46.20	-13	-33.20	H
2.826045	40.22	Pk	32.4	.7	-95.2	-25.50	-47.38	-13	-34.38	V
Mid Channel, 707.5MHz										
1.415111	40.88	Pk	28.3	.9	-95.2	-28.20	-53.32	-13	-40.32	H
1.415600	40.82	Pk	28.3	.9	-95.2	-28.20	-53.38	-13	-40.38	V
2.120089	41.22	Pk	31.5	.5	-95.2	-26.51	-48.49	-13	-35.49	H
2.122045	39.77	Pk	31.5	.5	-95.2	-26.60	-50.03	-13	-37.03	V
2.826534	41.82	Pk	32.4	.7	-95.2	-25.50	-45.78	-13	-32.78	H
2.829467	40.45	Pk	32.4	.7	-95.2	-25.55	-47.20	-13	-34.20	V
High Channel, 708.5MHz										
1.419511	41.76	Pk	28.3	.9	-95.2	-28.05	-52.29	-13	-39.29	H
1.417556	40.66	Pk	28.3	.9	-95.2	-28.14	-53.48	-13	-40.48	V
2.124000	41.97	Pk	31.5	.5	-95.2	-26.50	-47.73	-13	-34.73	H
2.124978	40.86	Pk	31.5	.5	-95.2	-26.50	-48.84	-13	-35.84	V
2.835823	41.23	Pk	32.4	.7	-95.2	-25.50	-46.37	-13	-33.37	H
2.835334	42.08	Pk	32.4	.7	-95.2	-25.50	-45.52	-13	-32.52	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 #:	15175342
Date:	2024-08-21
Test Engineer:	32934
Configuration:	EUT Only
Mode	LTE B13 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	HPF 1.2GHz T1737 1-18GHz (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 782MHz										
1.579867	40.87	Pk	28.3	.8	-95.2	-27.81	-53.04	-40	-13.04	H
1.581333	41.51	Pk	28.3	.8	-95.2	-27.87	-52.46	-40	-12.46	V
2.337645	42.92	Pk	32	.6	-95.2	-26.20	-45.88	-13	-32.88	H
2.333245	41.04	Pk	32	.6	-95.2	-26.30	-47.86	-13	-34.86	V
3.130623	39.90	Pk	32.9	.6	-95.2	-25.30	-47.10	-13	-34.10	H
3.133556	39.65	Pk	33	.6	-95.2	-25.36	-47.31	-13	-34.31	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 #:	15175342
Date:	2024-08-21
Test Engineer:	32934
Configuration:	EUT Only
Mode	LTE B14 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	HPF 1.2GHz T1737 1-18GHz (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.582311	41.45	Pk	28.3	.8	-95.2	-28.00	-52.65	-40	-12.65	H
1.571067	41.44	Pk	28.2	.9	-95.2	-27.89	-52.55	-40	-12.55	V
2.414400	42.49	Pk	32.3	.5	-95.2	-26.10	-46.01	-13	-33.01	H
2.382622	42.83	Pk	32.2	.5	-95.2	-26.04	-45.71	-13	-32.71	V
3.176578	39.02	Pk	33	.5	-95.2	-25.30	-47.98	-13	-34.98	H
3.174134	39.69	Pk	33	.5	-95.2	-25.20	-47.21	-13	-34.21	V

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

BPSK 5G NR n14 (10.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-12
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR 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/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.585245	42.16	Pk	28.3	.8	-95.2	-27.98	-51.92	-40	-11.92	H
1.588178	39.99	Pk	28.4	.8	-95.2	-27.82	-53.83	-40	-13.83	V
2.378222	48.94	Pk	32.1	.5	-95.2	-26.00	-39.66	-13	-26.66	H
2.378222	46.15	Pk	32.1	.5	-95.2	-26.00	-42.45	-13	-29.45	V
3.172178	39.44	Pk	33.0	.5	-95.2	-25.38	-47.64	-13	-34.64	H
3.174134	38.62	Pk	33.0	.5	-95.2	-25.2	-48.28	-13	-35.28	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 #:	15175342
Date:	2024-08-22
Test Engineer:	32934
Configuration:	EUT Only
Mode	LTE B17 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 709MHz										
1.419511	40.90	Pk	28.3	.9	-95.2	-28.05	-53.15	-13	-40.15	H
1.420489	41.07	Pk	28.3	.9	-95.2	-28.00	-52.93	-13	-39.93	V
2.132311	40.90	Pk	31.5	.5	-95.2	-26.60	-48.90	-13	-35.90	H
2.134756	41.67	Pk	31.5	.5	-95.2	-26.70	-48.23	-13	-35.23	V
2.797200	42.47	Pk	32.3	.5	-95.2	-25.32	-45.25	-13	-32.25	H
2.797200	40.28	Pk	32.3	.5	-95.2	-25.32	-47.44	-13	-34.44	V
Mid Channel, 710MHz										
1.426845	41.97	Pk	28.3	.9	-95.2	-28.02	-52.05	-13	-39.05	H
1.420978	42.02	Pk	28.3	.9	-95.2	-28.00	-51.98	-13	-38.98	V
2.134267	41.70	Pk	31.5	.5	-95.2	-26.70	-48.20	-13	-35.20	H
2.147956	42.28	Pk	31.5	.5	-95.2	-26.40	-47.32	-13	-34.32	V
2.779111	42.71	Pk	32.3	.5	-95.2	-25.40	-45.09	-13	-32.09	H
2.798667	41.08	Pk	32.3	.5	-95.2	-25.40	-46.72	-13	-33.72	V
High Channel, 711MHz										
1.426356	42.10	Pk	28.3	.9	-95.2	-28.06	-51.96	-13	-38.96	H
1.427822	41.68	Pk	28.3	.9	-95.2	-28.00	-52.32	-13	-39.32	V
2.137689	41.65	Pk	31.5	.5	-95.2	-26.63	-48.18	-13	-35.18	H
2.134756	41.62	Pk	31.5	.5	-95.2	-26.70	-48.28	-13	-35.28	V
2.949734	42.61	Pk	32.5	.5	-95.2	-25.43	-45.02	-13	-32.02	H
2.852934	41.04	Pk	32.4	.6	-95.2	-25.31	-46.47	-13	-33.47	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 #:	15175342
Date:	2024-08-27
Test Engineer:	45258
Configuration:	EUT Only
Mode	LTE 25 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.718594	42.90	Pk	33.3	-95.2	-32.24	-51.24	-13	-38.24	H
3.720938	40.90	Pk	33.3	-95.2	-32.20	-53.20	-13	-40.20	V
5.553281	45.39	Pk	34.6	-95.2	-29.33	-44.54	-13	-31.54	H
5.553281	44.13	Pk	34.6	-95.2	-29.33	-45.80	-13	-32.80	V
7.439531	40.74	Pk	35.6	-95.2	-26.25	-45.11	-13	-32.11	H
7.440469	39.89	Pk	35.6	-95.2	-26.25	-45.96	-13	-32.96	V
Mid Channel, 1882.5MHz									
3.765938	42.10	Pk	33.4	-95.2	-32.10	-51.80	-13	-38.80	H
3.765938	40.22	Pk	33.4	-95.2	-32.10	-53.68	-13	-40.68	V
5.647500	39.62	Pk	34.7	-95.2	-29.85	-50.73	-13	-37.73	H
5.646094	40.67	Pk	34.7	-95.2	-29.98	-49.81	-13	-36.81	V
7.529531	40.16	Pk	35.6	-95.2	-26.30	-45.74	-13	-32.74	H
7.529531	41.05	Pk	35.6	-95.2	-26.30	-44.85	-13	-31.85	V
High Channel, 1905MHz									
3.810469	42.14	Pk	33.4	-95.2	-31.85	-51.51	-13	-38.51	H
3.810938	41.20	Pk	33.4	-95.2	-31.89	-52.49	-13	-39.49	V
5.716406	39.78	Pk	34.8	-95.2	-29.04	-49.66	-13	-36.66	H
5.715938	40.05	Pk	34.8	-95.2	-29.01	-49.36	-13	-36.36	V
7.620000	41.84	Pk	35.7	-95.2	-26.40	-44.06	-13	-31.06	H
7.620000	40.98	Pk	35.7	-95.2	-26.40	-44.92	-13	-31.92	V

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	15175342
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Date:	09/12/2024-09-12
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n25 BPSK 40MHz
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
Low Channel, 1870MHz									
3.739219	38.56	Pk	33.1	-95.2	-23.40	-46.94	-13	-33.94	H
3.736406	38.63	Pk	33.1	-95.2	-23.40	-46.87	-13	-33.87	V
5.609531	36.41	Pk	34.5	-95.2	-20.25	-44.54	-13	-31.54	H
5.608594	37.14	Pk	34.5	-95.2	-20.20	-43.76	-13	-30.76	V
7.478906	37.21	Pk	35.6	-95.2	-18.60	-40.99	-13	-27.99	H
7.482188	37.36	Pk	35.6	-95.2	-18.60	-40.84	-13	-27.84	V
Mid Channel, 1882.5MHz									
3.767344	39.16	Pk	33.2	-95.2	-23.70	-46.54	-13	-33.54	H
3.766406	39.58	Pk	33.2	-95.2	-23.70	-46.12	-13	-33.12	V
5.648438	36.35	Pk	34.6	-95.2	-20.24	-44.49	-13	-31.49	H
5.646563	36.54	Pk	34.6	-95.2	-20.20	-44.26	-13	-31.26	V
7.536094	38.58	Pk	35.7	-95.2	-17.80	-38.72	-13	-25.72	H
7.530469	37.14	Pk	35.7	-95.2	-18.00	-40.36	-13	-27.36	V
High Channel, 1895MHz									
3.783750	40.37	Pk	33.2	-95.2	-23.88	-45.51	-13	-32.51	H
3.788906	38.83	Pk	33.2	-95.2	-23.91	-47.08	-13	-34.08	V
5.685938	36.41	Pk	34.6	-95.2	-20.99	-45.18	-13	-32.18	H
5.687344	38.41	Pk	34.6	-95.2	-21.00	-43.19	-13	-30.19	V
7.579688	37.95	Pk	35.7	-95.2	-17.20	-38.75	-13	-25.75	H
7.580625	37.69	Pk	35.7	-95.2	-17.20	-39.01	-13	-26.01	V

10.1.7. LTE BAND 26 (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 #:	15175342
Date:	2024-08-21
Test Engineer:	32934
Configuration:	EUT Only
Mode	LTE B26 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	HPF 1.2GHz T1737 1-18GHz (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 819MHz										
1.636578	40.96	Pk	28.8	.7	-95.2	-27.8	-52.54	-13	-39.54	H
1.637556	40.58	Pk	28.8	.7	-95.2	-27.74	-52.86	-13	-39.86	V
2.464267	41.09	Pk	32.5	.5	-95.2	-26.3	-47.41	-13	-34.41	H
2.455956	40.89	Pk	32.5	.5	-95.2	-26.4	-47.71	-13	-34.71	V
3.275334	39.78	Pk	33.0	.8	-95.2	-24.77	-46.39	-13	-33.39	H
3.275334	40.58	Pk	33.0	.8	-95.2	-24.77	-45.59	-13	-32.59	V

BPSK 5G NR n26 (10.0MHZ BANDWIDTH)

Project #:	15175342
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Date:	2024-02-10
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n26 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, 819MHz										
1.638533	40.45	Pk	28.8	.7	-95.2	-27.7	-52.95	-13	-39.95	H
1.638045	40.54	Pk	28.8	.7	-95.2	-27.7	-52.86	-13	-39.86	V
2.453511	41.76	Pk	32.5	.5	-95.2	-26.25	-46.69	-13	-33.69	H
2.457423	40.36	Pk	32.5	.5	-95.2	-26.3	-48.14	-13	-35.14	V
3.277778	39.38	Pk	33	.8	-95.2	-24.78	-46.8	-13	-33.8	H
3.276800	38.97	Pk	33	.8	-95.2	-24.7	-47.13	-13	-34.13	V

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 #:	15175342
Date:	2024-08-21
Test Engineer:	32934
Configuration:	EUT Only
Mode	LTE B26 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	Amp/Cbl (dB)	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
Low Channel, 829MHz										
1.658578	40.92	Pk	29	.8	-95.2	-27.74	-52.22	-13	-39.22	H
1.647333	41.57	Pk	28.9	.7	-95.2	-27.73	-51.76	-13	-38.76	V
2.482845	42.51	Pk	32.5	.5	-95.2	-26.10	-45.79	-13	-32.79	H
2.490178	41.20	Pk	32.5	.6	-95.2	-26.10	-47.00	-13	-34.00	V
3.321778	41.49	Pk	32.9	.6	-95.2	-25.00	-45.21	-13	-32.21	H
3.311512	39.79	Pk	32.9	.6	-95.2	-25.10	-47.01	-13	-34.01	V
Mid Channel, 836.5MHz										
1.659556	43.01	Pk	29	.8	-95.2	-27.64	-50.03	-13	-37.03	H
1.679600	42.57	Pk	29.2	.7	-95.2	-27.54	-50.27	-13	-37.27	V
2.493111	42.38	Pk	32.5	.6	-95.2	-26.11	-45.83	-13	-32.83	H
2.498489	41.31	Pk	32.5	.6	-95.2	-26.15	-46.94	-13	-33.94	V
3.324712	40.05	Pk	32.9	.6	-95.2	-25.10	-46.75	-13	-33.75	H
3.321289	39.84	Pk	32.9	.6	-95.2	-25.00	-46.86	-13	-33.86	V
High Channel, 844MHz										
1.669333	44.88	Pk	29.1	.7	-95.2	-27.63	-48.15	-13	-35.15	H
1.662000	41.27	Pk	29	.8	-95.2	-27.80	-51.93	-13	-38.93	V
2.525867	41.61	Pk	32.5	.8	-95.2	-26.00	-46.29	-13	-33.29	H
2.524889	41.66	Pk	32.5	.8	-95.2	-26.00	-46.24	-13	-33.24	V
3.378489	40.03	Pk	32.8	.6	-95.2	-24.90	-46.67	-13	-33.67	H
3.377023	39.91	Pk	32.8	.6	-95.2	-25.00	-46.89	-13	-33.89	V

BPSK 5G NR n26 (20.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-16
Test Engineer:	45258
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										
1.665422	40.90	Pk	29	.7	-95.2	-27.76	-52.36	-13	-39.36	H
1.667867	40.28	Pk	29.1	.7	-95.2	-27.60	-52.72	-13	-39.72	V
2.502889	39.97	Pk	32.5	.6	-95.2	-26.20	-48.33	-13	-35.33	H
2.502400	40.40	Pk	32.5	.6	-95.2	-26.20	-47.90	-13	-34.90	V
3.334489	39.76	Pk	32.8	.5	-95.2	-25.00	-47.14	-13	-34.14	H
3.332534	39.65	Pk	32.8	.5	-95.2	-25.05	-47.30	-13	-34.30	V
Mid Channel, 836.5MHz										
1.671778	41.66	Pk	29.1	.7	-95.2	-27.72	-51.46	-13	-38.46	H
1.672756	39.63	Pk	29.1	.7	-95.2	-27.62	-53.39	-13	-40.39	V
2.509245	39.69	Pk	32.5	.7	-95.2	-26.28	-48.59	-13	-35.59	H
2.507778	41.07	Pk	32.5	.7	-95.2	-26.20	-47.13	-13	-34.13	V
3.344756	39.26	Pk	32.8	.5	-95.2	-25.10	-47.74	-13	-34.74	H
3.339867	39.75	Pk	32.8	.5	-95.2	-25.10	-47.25	-13	-34.25	V
Mid Channel, 839.0MHz										
1.678622	40.44	Pk	29.2	.7	-95.2	-27.60	-52.46	-13	-39.46	H
1.678133	40.67	Pk	29.2	.7	-95.2	-27.60	-52.23	-13	-39.23	V
2.516578	40.74	Pk	32.5	.7	-95.2	-26.14	-47.40	-13	-34.40	H
2.515111	40.52	Pk	32.5	.7	-95.2	-26.11	-47.59	-13	-34.59	V
3.356000	40.37	Pk	32.8	.6	-95.2	-25.00	-46.43	-13	-33.43	H
3.356978	38.69	Pk	32.8	.6	-95.2	-24.90	-48.01	-13	-35.01	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 #:	15175342
Date:	2024-02-10
Test Engineer:	45258
Configuration:	EUT Only
Mode	LTE B30 QPSK 10MHz
Chamber #:	01-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
Mid Channel, 2310MHz									
4.620469	25.13	RMS	34	-95.2	-23.2	-59.27	-40	-19.27	H
4.620469	25.29	RMS	34	-95.2	-23.2	-59.11	-40	-19.11	V
6.930469	23.48	RMS	35.7	-95.2	-19.0	-55.02	-40	-15.02	H
6.929531	23.55	RMS	35.7	-95.2	-19.0	-54.95	-40	-14.95	V
9.240469	24.66	RMS	36.1	-95.2	-16.7	-51.14	-40	-11.14	H
9.240469	24.86	RMS	36.1	-95.2	-16.7	-50.94	-40	-10.94	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-16
Test Engineer:	45258
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									
4.619063	25.49	RMS	34	-95.2	-23.20	-58.91	-40	-18.91	H
4.620000	25.44	RMS	34	-95.2	-23.20	-58.96	-40	-18.96	V
6.930000	22.60	RMS	35.7	-95.2	-19.00	-55.90	-40	-15.90	H
6.930000	22.39	RMS	35.7	-95.2	-19.00	-56.11	-40	-16.11	V
9.240000	24.89	RMS	36.1	-95.2	-16.70	-50.91	-40	-10.91	H
9.240469	24.96	RMS	36.1	-95.2	-16.70	-50.84	-40	-10.84	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 #:	15175342
Date:	2024-03-10
Test Engineer:	32934
Configuration:	EUT Only
Mode	LTE B41 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2506MHz									
5.010500	56.11	Pk	34.1	-95.2	-48.60	-53.59	-25	-28.59	V
5.014500	57.24	Pk	34.1	-95.2	-48.50	-52.36	-25	-27.36	H
7.515000	54.68	Pk	35.7	-95.2	-46.92	-51.74	-25	-26.74	V
7.518500	55.33	Pk	35.7	-95.2	-46.82	-50.99	-25	-25.99	H
9.994500	54.90	Pk	37.2	-95.2	-45.28	-48.38	-25	-23.38	V
10.011500	54.06	Pk	37.2	-95.2	-45.19	-49.13	-25	-24.13	H
Mid Channel, 2593MHz									
5.177500	55.73	Pk	34.3	-95.2	-48.03	-53.2	-25	-28.20	V
5.202000	55.72	Pk	34.4	-95.2	-47.92	-53.00	-25	-28.00	H
7.769000	53.06	Pk	35.9	-95.2	-45.47	-51.71	-25	-26.71	H
7.786500	52.96	Pk	35.9	-95.2	-45.61	-51.95	-25	-26.95	V
10.366000	54.27	Pk	37.5	-95.2	-45.96	-49.39	-25	-24.39	H
10.403500	54.04	Pk	37.6	-95.2	-45.76	-49.32	-25	-24.32	V
High Channel, 2680MHz									
5.359500	55.11	Pk	34.6	-95.2	-47.71	-53.20	-25	-28.20	V
5.371000	56.13	Pk	34.6	-95.2	-47.84	-52.31	-25	-27.31	H
8.013500	54.10	Pk	35.9	-95.2	-45.64	-50.84	-25	-25.84	V
8.038500	53.91	Pk	35.9	-95.2	-45.59	-50.98	-25	-25.98	H
10.757000	54.49	Pk	37.7	-95.2	-45.66	-48.67	-25	-23.67	H
10.764500	54.17	Pk	37.7	-95.2	-45.61	-48.94	-25	-23.94	V

BPSK LTE BAND n41 (100.0MHZ BANDWIDTH)

Project #:	15175342
Date:	10/04/2024-
Test Engineer:	32934
Configuration:	EUT Only
Mode	5G NR n41 BPSK 100MHz
Chamber #:	05-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF 3m (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2546MHz									
5.103500	55.44	Pk	34.2	-95.2	-48.21	-53.77	-25	-28.77	V
5.104500	56.44	Pk	34.2	-95.2	-48.19	-52.75	-25	-27.75	H
7.604000	53.79	Pk	35.8	-95.2	-46.54	-52.15	-25	-27.15	V
7.644000	53.81	Pk	35.8	-95.2	-46.27	-51.86	-25	-26.86	H
10.169000	54.92	Pk	37.4	-95.2	-46.12	-49.00	-25	-24.00	H
10.185000	55.43	Pk	37.4	-95.2	-46.01	-48.38	-25	-23.38	V
Mid Channel, 2593MHz									
5.087500	56.36	Pk	34.2	-95.2	-48.22	-52.86	-25	-27.86	V
5.092500	55.71	Pk	34.2	-95.2	-48.23	-53.52	-25	-28.52	H
7.765000	53.96	Pk	35.9	-95.2	-45.57	-50.91	-25	-25.91	H
7.783000	53.64	Pk	35.9	-95.2	-45.67	-51.33	-25	-26.33	V
10.365500	55.14	Pk	37.5	-95.2	-45.95	-48.51	-25	-23.51	H
10.404000	53.95	Pk	37.6	-95.2	-45.84	-49.49	-25	-24.49	V
High Channel, 2640MHz									
5.262500	55.61	Pk	34.5	-95.2	-48.02	-53.11	-25	-28.11	V
5.288500	56.05	Pk	34.6	-95.2	-48.07	-52.62	-25	-27.62	H
7.871500	54.19	Pk	35.9	-95.2	-46.16	-51.27	-25	-26.27	V
7.928000	53.78	Pk	35.9	-95.2	-45.84	-51.36	-25	-26.36	H
10.566000	55.25	Pk	37.6	-95.2	-45.67	-48.02	-25	-23.02	H
10.597000	54.36	Pk	37.7	-95.2	-45.54	-48.68	-25	-23.68	V

10.1.11. LTE BAND 66 AND 5G NR n66

LIMITS

FCC: §27.53 (h)

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

QPSK LTE BAND 66 (20.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-08-21
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE B66 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.455156	42.28	Pk	32.9	-95.2	-33.00	-53.02	-13	-40.02	H
3.444375	40.58	Pk	32.9	-95.2	-33.04	-54.76	-13	-41.76	V
5.144531	39.42	Pk	34.2	-95.2	-29.70	-51.28	-13	-38.28	H
5.186719	45.45	Pk	34.2	-95.2	-29.37	-44.92	-13	-31.92	V
6.849375	40.08	Pk	35.6	-95.2	-26.80	-46.32	-13	-33.32	H
6.870938	40.02	Pk	35.6	-95.2	-26.79	-46.37	-13	-33.37	V
Mid Channel, 1745MHz									
3.473906	41.17	Pk	32.9	-95.2	-33.00	-54.13	-13	-41.13	H
3.440625	42.32	Pk	32.9	-95.2	-33.10	-53.08	-13	-40.08	V
5.255156	39.44	Pk	34.4	-95.2	-28.92	-50.28	-13	-37.28	H
5.262188	46.21	Pk	34.4	-95.2	-29.00	-43.59	-13	-30.59	V
6.959531	39.38	Pk	35.6	-95.2	-26.40	-46.62	-13	-33.62	H
6.996563	39.71	Pk	35.6	-95.2	-26.54	-46.43	-13	-33.43	V
High Channel, 1770MHz									
3.525938	41.16	Pk	33	-95.2	-32.80	-53.84	-13	-40.84	H
3.489375	42.44	Pk	33	-95.2	-32.94	-52.70	-13	-39.70	V
5.336719	48.21	Pk	34.5	-95.2	-30.30	-42.79	-13	-29.79	H
5.336719	51.72	Pk	34.5	-95.2	-30.30	-39.28	-13	-26.28	V
7.068281	42.55	Pk	35.6	-95.2	-26.80	-43.85	-13	-30.85	H
7.099219	42.12	Pk	35.6	-95.2	-26.60	-44.08	-13	-31.08	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-17
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n66 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.463125	42.59	Pk	32.9	-95.2	-33.09	-52.80	-13	-39.80	H
3.488906	42.95	Pk	33	-95.2	-32.90	-52.15	-13	-39.15	V
5.176875	41.58	Pk	34.2	-95.2	-29.68	-49.10	-13	-36.10	H
5.211094	40.90	Pk	34.3	-95.2	-28.80	-48.80	-13	-35.80	V
6.921563	41.94	Pk	35.6	-95.2	-26.34	-44.00	-13	-31.00	H
6.951563	42.03	Pk	35.6	-95.2	-26.54	-44.11	-13	-31.11	V
Mid Channel, 1745MHz									
3.486563	42.99	Pk	33	-95.2	-32.99	-52.20	-13	-39.20	H
3.488906	42.48	Pk	33	-95.2	-32.90	-52.62	-13	-39.62	V
5.236406	41.71	Pk	34.3	-95.2	-28.70	-47.89	-13	-34.89	H
5.232188	42.01	Pk	34.3	-95.2	-28.70	-47.59	-13	-34.59	V
6.980156	40.56	Pk	35.6	-95.2	-26.52	-45.56	-13	-32.56	H
6.979688	39.77	Pk	35.6	-95.2	-26.50	-46.33	-13	-33.33	V
High Channel, 1760MHz									
3.519844	41.49	Pk	33	-95.2	-32.90	-53.61	-13	-40.61	H
3.521719	43.58	Pk	33	-95.2	-32.93	-51.55	-13	-38.55	V
5.279063	41.81	Pk	34.4	-95.2	-29.09	-48.08	-13	-35.08	H
5.280469	40.02	Pk	34.4	-95.2	-29.00	-49.78	-13	-36.78	V
7.039688	41.13	Pk	35.6	-95.2	-26.84	-45.31	-13	-32.31	H
7.039688	40.91	Pk	35.6	-95.2	-26.84	-45.53	-13	-32.53	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 #:	15175342
Date:	2024-09-20
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n70 BPSK 15MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 1702.5MHz									
3.406406	44.19	Pk	32.8	-95.2	-33.06	-51.27	-13	-38.27	H
3.417188	42.40	Pk	32.8	-95.2	-33.00	-53.00	-13	-40.00	V
5.100938	41.77	Pk	34.1	-95.2	-30.41	-49.74	-13	-36.74	H
5.113594	42.42	Pk	34.1	-95.2	-30.20	-48.88	-13	-35.88	V
6.815625	42.29	Pk	35.6	-95.2	-26.94	-44.25	-13	-31.25	H
6.842813	41.60	Pk	35.6	-95.2	-26.80	-44.80	-13	-31.80	V

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 #:	15175342
Date:	2024-08-27
Test Engineer:	45258
Configuration:	EUT Only
Mode	LTE B71 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 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, 673MHz										
1.343244	43.42	Pk	28.7	1.1	-95.2	-35.12	-57.10	-13	-44.10	H
1.328089	48.09	Pk	28.7	1.2	-95.2	-35.09	-52.30	-13	-39.30	V
2.022311	44.97	Pk	31.7	.5	-95.2	-35.00	-53.03	-13	-40.03	H
2.021334	43.92	Pk	31.7	.5	-95.2	-35.07	-54.15	-13	-41.15	V
2.692089	44.27	Pk	32.4	.5	-95.2	-34.72	-52.75	-13	-39.75	H
2.691111	43.44	Pk	32.4	.5	-95.2	-34.70	-53.56	-13	-40.56	V
Mid Channel, 683MHz										
1.343244	50.66	Pk	28.7	1.1	-95.2	-35.12	-49.86	-13	-36.86	H
1.361333	43.30	Pk	28.7	1	-95.2	-35.17	-57.37	-13	-44.37	V
2.042356	43.27	Pk	31.7	.5	-95.2	-35.04	-54.77	-13	-41.77	H
2.041378	43.91	Pk	31.7	.5	-95.2	-35.00	-54.09	-13	-41.09	V
2.721911	43.99	Pk	32.5	.5	-95.2	-34.80	-53.01	-13	-40.01	H
2.723867	43.16	Pk	32.5	.5	-95.2	-34.71	-53.75	-13	-40.75	V
High Channel, 688MHz										
1.377467	43.84	Pk	28.6	1	-95.2	-35.25	-57.01	-13	-44.01	H
1.358400	48.68	Pk	28.7	1	-95.2	-35.14	-51.96	-13	-38.96	V
2.062400	43.53	Pk	31.8	.5	-95.2	-35.00	-54.37	-13	-41.37	H
2.064356	42.66	Pk	31.8	.5	-95.2	-35.10	-55.34	-13	-42.34	V
2.755645	44.37	Pk	32.5	.5	-95.2	-34.66	-52.49	-13	-39.49	H
2.752711	43.81	Pk	32.5	.5	-95.2	-34.70	-53.09	-13	-40.09	V

BPSK 5G NR n71 (20.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-19
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n71 BPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF 226671 ACF 3m (dB/m)	HPF 1.2GHz T1737 1-18GHz (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 673MHz										
1.343244	43.67	Pk	28.7	1.1	-95.2	-35.12	-56.85	-13	-43.85	H
1.347644	43.63	Pk	28.7	1	-95.2	-35.10	-56.97	-13	-43.97	V
2.007156	44.00	Pk	31.7	.5	-95.2	-35.08	-54.08	-13	-41.08	H
2.020356	43.73	Pk	31.7	.5	-95.2	-35.10	-54.37	-13	-41.37	V
2.694045	44.68	Pk	32.4	.5	-95.2	-34.80	-52.42	-13	-39.42	H
2.712134	44.46	Pk	32.5	.5	-95.2	-34.71	-52.45	-13	-39.45	V
Mid Channel, 683MHz										
1.342267	44.01	Pk	28.7	1.1	-95.2	-35.10	-56.49	-13	-43.49	H
1.342756	44.07	Pk	28.7	1.1	-95.2	-35.10	-56.43	-13	-43.43	V
2.021334	44.61	Pk	31.7	.5	-95.2	-35.07	-53.46	-13	-40.46	H
2.040889	44.58	Pk	31.7	.6	-95.2	-35.00	-53.32	-13	-40.32	V
2.718489	44.19	Pk	32.5	.5	-95.2	-34.80	-52.81	-13	-39.81	H
2.734134	44.18	Pk	32.5	.5	-95.2	-34.70	-52.72	-13	-39.72	V
High Channel, 688MHz										
1.378933	43.94	Pk	28.6	1	-95.2	-35.29	-56.95	-13	-43.95	H
1.385289	44.28	Pk	28.5	1	-95.2	-35.20	-56.62	-13	-43.62	V
2.058000	43.80	Pk	31.8	.5	-95.2	-35.10	-54.20	-13	-41.20	H
2.071689	43.94	Pk	31.8	.5	-95.2	-35.07	-54.03	-13	-41.03	V
2.755156	44.59	Pk	32.5	.5	-95.2	-34.62	-52.23	-13	-39.23	H
2.776667	44.14	Pk	32.5	.5	-95.2	-34.63	-52.69	-13	-39.69	V

10.2. FIELD STRENGTH OF SPURIOUS RADIATION, ANT2

TEST PROCEDURE

KDB 971168 D01 /D02

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

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 #:	15175342
Date:	2024-08-26
Test Engineer:	45258
Configuration:	EUT Only
Mode	LTE B7 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 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										
5.019844	40.32	Pk	34.1	.8	-95.2	-30.90	-50.88	-25	-25.88	H
5.018438	40.85	Pk	34.1	.8	-95.2	-30.96	-50.41	-25	-25.41	V
7.530469	39.80	Pk	35.6	.3	-95.2	-26.95	-46.45	-25	-21.45	H
7.530938	41.08	Pk	35.6	.3	-95.2	-26.99	-45.21	-25	-20.21	V
10.041563	40.07	Pk	37.2	.7	-95.2	-25.04	-42.27	-25	-17.27	H
10.041094	38.83	Pk	37.2	.7	-95.2	-25.09	-43.56	-25	-18.56	V
Mid Channel, 2535MHz										
5.070000	40.21	Pk	34.1	.7	-95.2	-30.90	-51.09	-25	-26.09	H
5.070000	38.18	Pk	34.1	.7	-95.2	-30.90	-53.12	-25	-28.12	V
7.604531	40.55	Pk	35.7	.4	-95.2	-27.25	-45.80	-25	-20.80	H
7.603828	40.50	Pk	35.7	.4	-95.2	-27.20	-45.80	-25	-20.80	V
10.140469	39.07	Pk	37.3	.6	-95.2	-24.70	-42.93	-25	-17.93	H
10.140469	40.34	Pk	37.3	.6	-95.2	-24.70	-41.66	-25	-16.66	V
High Channel, 2560MHz										
5.119688	40.25	Pk	34.1	.8	-95.2	-30.60	-50.65	-25	-25.65	H
5.119688	41.13	Pk	34.1	.8	-95.2	-30.60	-49.77	-25	-24.77	V
7.680469	40.91	Pk	35.8	.5	-95.2	-26.85	-44.84	-25	-19.84	H
7.680469	40.28	Pk	35.8	.5	-95.2	-26.85	-45.47	-25	-20.47	V
10.239844	39.21	Pk	37.4	.8	-95.2	-25.08	-42.87	-25	-17.87	H
10.239375	39.88	Pk	37.4	.8	-95.2	-25.04	-42.16	-25	-17.16	V

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-10-04
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n7 BPSK 40MHz
Chamber #:	05-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF 3m (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2520MHz									
5.039500	54.96	Pk	34.1	-95.2	-48.35	-54.49	-25	-29.49	V
5.042000	55.80	Pk	34.1	-95.2	-48.53	-53.83	-25	-28.83	H
7.557500	53.66	Pk	35.7	-95.2	-46.69	-52.53	-25	-27.53	H
7.561000	54.22	Pk	35.7	-95.2	-46.79	-52.07	-25	-27.07	V
10.079000	53.51	Pk	37.3	-95.2	-45.80	-50.19	-25	-25.19	H
10.080000	53.02	Pk	37.3	-95.2	-45.68	-50.56	-25	-25.56	V
Mid Channel, 2535MHz									
5.069500	55.18	Pk	34.2	-95.2	-48.28	-54.10	-25	-29.10	V
5.073000	55.00	Pk	34.2	-95.2	-48.37	-54.37	-25	-29.37	H
7.603500	54.29	Pk	35.8	-95.2	-46.61	-51.72	-25	-26.72	H
7.605500	53.39	Pk	35.8	-95.2	-46.63	-52.64	-25	-27.64	V
10.141500	53.81	Pk	37.3	-95.2	-46.21	-50.30	-25	-25.30	V
10.143000	54.17	Pk	37.3	-95.2	-46.26	-49.99	-25	-24.99	H
High Channel, 2550MHz									
5.099500	55.36	Pk	34.2	-95.2	-48.17	-53.81	-25	-28.81	V
5.102000	55.00	Pk	34.2	-95.2	-47.98	-53.98	-25	-28.98	H
7.651000	54.15	Pk	35.8	-95.2	-46.41	-51.66	-25	-26.66	H
7.651500	53.21	Pk	35.8	-95.2	-46.40	-52.59	-25	-27.59	V
10.198500	55.90	Pk	37.4	-95.2	-46.01	-47.91	-25	-22.91	H
10.200000	54.31	Pk	37.4	-95.2	-46.27	-49.76	-25	-24.76	V

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 #:	15175342
Date:	2024-08-22
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE B12 QPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 704MHz										
1.398489	43.76	Pk	28.5	1	-95.2	-35.15	-57.09	-13	-44.09	H
1.386267	43.80	Pk	28.5	1	-95.2	-35.2	-57.10	-13	-44.10	V
2.124000	44.45	Pk	31.8	.5	-95.2	-35.1	-53.55	-13	-40.55	H
2.126934	44.28	Pk	31.8	.5	-95.2	-35.11	-53.73	-13	-40.73	V
2.873956	45.03	Pk	32.6	.5	-95.2	-34.6	-51.67	-13	-38.67	H
2.874934	44.31	Pk	32.6	.5	-95.2	-34.69	-52.48	-13	-39.48	V
Mid Channel, 707.5MHz										
1.424889	44.18	Pk	28.4	.9	-95.2	-35.2	-56.92	-13	-43.92	H
1.419022	44.71	Pk	28.4	.9	-95.2	-35.3	-56.49	-13	-43.49	V
2.120089	47.95	Pk	31.8	.5	-95.2	-35	-49.95	-13	-36.95	H
2.131334	44.32	Pk	31.7	.5	-95.2	-35.1	-53.78	-13	-40.78	V
2.847067	44.69	Pk	32.6	.6	-95.2	-34.6	-51.91	-13	-38.91	H
2.862711	44.65	Pk	32.6	.5	-95.2	-34.6	-52.05	-13	-39.05	V
High Channel, 711MHz										
1.460089	44.48	Pk	28.3	.9	-95.2	-35.21	-56.73	-13	-43.73	H
1.465467	44.01	Pk	28.3	.9	-95.2	-35.2	-57.19	-13	-44.19	V
2.110311	44.49	Pk	31.8	.5	-95.2	-35.03	-53.44	-13	-40.44	H
2.118134	44.33	Pk	31.8	.5	-95.2	-35.1	-53.67	-13	-40.67	V
2.864667	44.74	Pk	32.6	.5	-95.2	-34.67	-52.03	-13	-39.03	H
2.871511	45.52	Pk	32.6	.5	-95.2	-34.7	-51.28	-13	-38.28	V

BPSK 5G NR n12 (15.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-9-12
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n12 BPSK 15MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 706.5MHz										
1.412667	40.31	Pk	28.4	.9	-95.2	-28.13	-53.72	-13	-40.72	H
1.413156	39.86	Pk	28.4	.9	-95.2	-28.12	-54.16	-13	-41.16	V
2.118622	41.56	Pk	31.5	.5	-95.2	-26.40	-48.04	-13	-35.04	H
2.120089	40.77	Pk	31.5	.5	-95.2	-26.51	-48.94	-13	-35.94	V
2.826045	40.41	Pk	32.4	.7	-95.2	-25.50	-47.19	-13	-34.19	H
2.824089	40.23	Pk	32.4	.7	-95.2	-25.50	-47.37	-13	-34.37	V
Mid Channel, 707.5MHz										
1.418044	40.09	Pk	28.3	.9	-95.2	-28.10	-54.01	-13	-41.01	H
1.417067	40.16	Pk	28.3	.9	-95.2	-28.19	-54.03	-13	-41.03	V
2.122045	40.1	Pk	31.5	.5	-95.2	-26.60	-49.70	-13	-36.70	H
2.122534	40.52	Pk	31.5	.5	-95.2	-26.60	-49.28	-13	-36.28	V
2.829956	40.82	Pk	32.4	.7	-95.2	-25.60	-46.88	-13	-33.88	H
2.830445	39.76	Pk	32.4	.7	-95.2	-25.56	-47.90	-13	-34.90	V
High Channel, 708.5MHz										
1.416089	39.96	Pk	28.3	.9	-95.2	-28.20	-54.24	-13	-41.24	H
1.417556	40.32	Pk	28.3	.9	-95.2	-28.14	-53.82	-13	-40.82	V
2.125956	40.69	Pk	31.5	.5	-95.2	-26.60	-49.11	-13	-36.11	H
2.124978	40.86	Pk	31.5	.5	-95.2	-26.50	-48.84	-13	-35.84	V
2.843156	42.71	Pk	32.4	.7	-95.2	-25.40	-44.79	-13	-31.79	H
2.833867	41.11	Pk	32.4	.7	-95.2	-25.49	-46.48	-13	-33.48	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 #:	15175342
Date:	2024-08-22
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE B13 QPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	HPF 1.2GHz T1737 1-18GHz (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 782MHz										
1.582311	44.38	Pk	28.1	.8	-95.2	-35.23	-57.15	-40	-17.15	H
1.591600	44.28	Pk	28.1	.8	-95.2	-35.24	-57.26	-40	-17.26	V
2.345467	46.85	Pk	32.0	.5	-95.2	-34.95	-50.80	-13	-37.80	H
2.352800	44.35	Pk	32.0	.5	-95.2	-35.08	-53.43	-13	-40.43	V
3.151645	43.73	Pk	33.0	.5	-95.2	-34.40	-52.37	-13	-39.37	H
3.156534	43.89	Pk	33.0	.5	-95.2	-34.20	-52.01	-13	-39.01	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 #:	15175342
Date:	2024-08-23
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE B14 QPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	HPF 1.2GHz T1737 1-18GHz (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.586711	45.57	Pk	28.1	.8	-95.2	-35.20	-55.93	-40	-15.93	H
1.586222	44.83	Pk	28.1	.8	-95.2	-35.20	-56.67	-40	-16.67	V
2.384089	44.74	Pk	32.1	.5	-95.2	-34.91	-52.77	-13	-39.77	H
2.385067	45.19	Pk	32.1	.5	-95.2	-34.99	-52.40	-13	-39.40	V
3.200534	43.88	Pk	32.9	.6	-95.2	-34.00	-51.82	-13	-38.82	H
3.206889	42.98	Pk	32.9	.5	-95.2	-34.00	-52.82	-13	-39.82	V

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

BPSK 5G NR n14 (10.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-12
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR 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/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.586222	39.96	Pk	28.3	.8	-95.2	-27.88	-54.02	-40	-14.02	H
1.584756	42.53	Pk	28.3	.8	-95.2	-28.00	-51.57	-40	-11.57	V
2.378222	48.83	Pk	32.1	.5	-95.2	-26.00	-39.77	-13	-26.77	H
2.378222	44.53	Pk	32.1	.5	-95.2	-26.00	-44.07	-13	-31.07	V
3.171200	39.47	Pk	33	.5	-95.2	-25.40	-47.63	-13	-34.63	H
3.172667	39.28	Pk	33	.5	-95.2	-25.33	-47.75	-13	-34.75	V

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 #:	15175342
Date:	2024-08-23
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE B17 QPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 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, 709MHz										
1.618489	45.17	Pk	28.3	.6	-95.2	-35.20	-56.33	-13	-43.33	H
1.618978	44.76	Pk	28.3	.6	-95.2	-35.20	-56.74	-13	-43.74	V
2.196356	44.20	Pk	31.6	.6	-95.2	-35.06	-53.86	-13	-40.86	H
2.189022	44.37	Pk	31.6	.6	-95.2	-35.10	-53.73	-13	-40.73	V
3.087600	43.43	Pk	33	.6	-95.2	-34.34	-52.51	-13	-39.51	H
3.086134	43.51	Pk	33	.6	-95.2	-34.40	-52.49	-13	-39.49	V
Mid Channel, 710MHz										
1.581822	44.04	Pk	28.1	.8	-95.2	-35.20	-57.46	-13	-44.46	H
1.583778	44.32	Pk	28.1	.8	-95.2	-35.22	-57.20	-13	-44.20	V
2.078534	43.85	Pk	31.8	.5	-95.2	-35.00	-54.05	-13	-41.05	H
2.074134	43.65	Pk	31.8	.5	-95.2	-35.10	-54.35	-13	-41.35	V
2.847067	44.01	Pk	32.6	.6	-95.2	-34.60	-52.59	-13	-39.59	H
2.862711	44.63	Pk	32.6	.5	-95.2	-34.60	-52.07	-13	-39.07	V
High Channel, 711MHz										
1.581822	44.04	Pk	28.1	.8	-95.2	-35.20	-57.46	-13	-44.46	H
1.583778	44.32	Pk	28.1	.8	-95.2	-35.22	-57.20	-13	-44.20	V
2.078534	43.85	Pk	31.8	.5	-95.2	-35.00	-54.05	-13	-41.05	H
2.055067	44.82	Pk	31.8	.5	-95.2	-35.01	-53.09	-13	-40.09	V
2.847067	44.01	Pk	32.6	.6	-95.2	-34.60	-52.59	-13	-39.59	H
2.822623	44.51	Pk	32.5	.7	-95.2	-34.60	-52.09	-13	-39.09	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 #:	15175342
Date:	2024-08-26
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE B25 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.717188	39.31	Pk	33.3	-95.2	-32.30	-54.89	-13	-41.89	H
3.736875	40.29	Pk	33.4	-95.2	-32.19	-53.70	-13	-40.70	V
5.540625	38.86	Pk	34.6	-95.2	-29.18	-50.92	-13	-37.92	H
5.511094	38.75	Pk	34.6	-95.2	-29.31	-51.16	-13	-38.16	V
7.430156	40.07	Pk	35.6	-95.2	-26.20	-45.73	-13	-32.73	H
7.430156	40.65	Pk	35.6	-95.2	-26.20	-45.15	-13	-32.15	V
Mid Channel, 1882.5MHz									
3.777188	40.53	Pk	33.4	-95.2	-31.98	-53.25	-13	-40.25	H
3.760781	40.65	Pk	33.4	-95.2	-32.10	-53.25	-13	-40.25	V
5.581875	38.43	Pk	34.6	-95.2	-29.60	-51.77	-13	-38.77	H
5.564063	38.86	Pk	34.6	-95.2	-29.51	-51.25	-13	-38.25	V
7.582500	39.73	Pk	35.7	-95.2	-26.30	-46.07	-13	-33.07	H
7.622813	40.43	Pk	35.7	-95.2	-26.50	-45.57	-13	-32.57	V
High Channel, 1905MHz									
3.887344	39.41	Pk	33.5	-95.2	-31.77	-54.06	-13	-41.06	H
3.887344	40.63	Pk	33.5	-95.2	-31.77	-52.84	-13	-39.84	V
5.714531	38.15	Pk	34.8	-95.2	-29.15	-51.40	-13	-38.40	H
5.641875	40.41	Pk	34.7	-95.2	-29.98	-50.07	-13	-37.07	V
7.778906	41.55	Pk	35.8	-95.2	-25.50	-43.35	-13	-30.35	H
7.795781	40.47	Pk	35.8	-95.2	-25.60	-44.53	-13	-31.53	V

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-13
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n25 BPSK 40MHz
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
Low Channel, 1870MHz									
3.740625	38.6	Pk	33.1	-95.2	-23.4	-46.90	-13	-33.90	H
3.744375	38.78	Pk	33.1	-95.2	-23.4	-46.72	-13	-33.72	V
5.611875	37.12	Pk	34.5	-95.2	-20.3	-43.88	-13	-30.88	H
5.609531	36.50	Pk	34.5	-95.2	-20.25	-44.45	-13	-31.45	V
7.480781	36.65	Pk	35.6	-95.2	-18.6	-41.55	-13	-28.55	H
7.479375	37.38	Pk	35.6	-95.2	-18.6	-40.82	-13	-27.82	V
Mid Channel, 1882.5MHz									
3.764531	38.43	Pk	33.2	-95.2	-23.75	-47.32	-13	-34.32	H
3.765000	38.20	Pk	33.2	-95.2	-23.7	-47.50	-13	-34.50	V
5.648438	37.32	Pk	34.6	-95.2	-20.24	-43.52	-13	-30.52	H
5.645156	38.54	Pk	34.6	-95.2	-20.2	-42.26	-13	-29.26	V
7.530000	37.25	Pk	35.7	-95.2	-18	-40.25	-13	-27.25	H
7.530469	37.26	Pk	35.7	-95.2	-18	-40.24	-13	-27.24	V
High Channel, 1895MHz									
3.790313	38.75	Pk	33.2	-95.2	-23.93	-47.18	-13	-34.18	H
3.790781	39.14	Pk	33.2	-95.2	-23.98	-46.84	-13	-33.84	V
5.685000	36.99	Pk	34.6	-95.2	-20.90	-44.51	-13	-31.51	H
5.685469	36.45	Pk	34.6	-95.2	-20.95	-45.10	-13	-32.10	V
7.57875	37.76	Pk	35.7	-95.2	-17.20	-38.94	-13	-25.94	H
7.580156	37.39	Pk	35.7	-95.2	-17.20	-39.31	-13	-26.31	V

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 #:	15175342
Date:	2024-08-26
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE B26 QPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 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, 819MHz										
1.632667	42.92	Pk	28.3	.7	-95.2	-35.27	-58.55	-13	-45.55	H
1.628756	43.59	Pk	28.3	.7	-95.2	-35.28	-57.89	-13	-44.89	V
2.461334	43.57	Pk	32.3	.5	-95.2	-34.90	-53.73	-13	-40.73	H
2.454978	42.49	Pk	32.3	.5	-95.2	-35.00	-54.91	-13	-41.91	V
3.299289	42.20	Pk	32.8	.8	-95.2	-34.00	-53.40	-13	-40.40	H
3.294889	41.24	Pk	32.8	.8	-95.2	-34.00	-54.36	-13	-41.36	V

BPSK 5G NR n26 (10.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-13
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n25 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, 819MHz										
1.638533	40.81	Pk	28.8	.7	-95.2	-27.70	-52.59	-13	-39.59	H
1.639511	39.96	Pk	28.8	.7	-95.2	-27.70	-53.44	-13	-40.44	V
2.459867	40.99	Pk	32.5	.5	-95.2	-26.30	-47.51	-13	-34.51	H
2.457911	39.86	Pk	32.5	.5	-95.2	-26.30	-48.64	-13	-35.64	V
3.275334	39.19	Pk	33	.8	-95.2	-24.77	-46.98	-13	-33.98	H
3.274356	39.52	Pk	33	.8	-95.2	-24.80	-46.68	-13	-33.68	V

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 #:	15175342
Date:	2024-08-23
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE B25 QPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 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, 829MHz										
1.662000	44.43	Pk	28.5	.8	-95.2	-35.10	-56.57	-13	-43.57	H
1.657600	46.95	Pk	28.5	.8	-95.2	-35.30	-54.25	-13	-41.25	V
2.439334	45.94	Pk	32.2	.5	-95.2	-34.93	-51.49	-13	-38.49	H
2.427600	44.79	Pk	32.2	.5	-95.2	-35.00	-52.71	-13	-39.71	V
3.328134	44.08	Pk	32.8	.6	-95.2	-33.81	-51.53	-13	-38.53	H
3.334000	43.33	Pk	32.8	.5	-95.2	-33.90	-52.47	-13	-39.47	V
Mid Channel, 836.5MHz										
1.668356	44.04	Pk	28.6	.7	-95.2	-35.20	-57.06	-13	-44.06	H
1.668356	47.49	Pk	28.6	.7	-95.2	-35.20	-53.61	-13	-40.61	V
2.503867	44.48	Pk	32.3	.7	-95.2	-35.00	-52.72	-13	-39.72	H
2.525378	43.98	Pk	32.4	.8	-95.2	-34.94	-52.96	-13	-39.96	V
3.355512	43.69	Pk	32.8	.6	-95.2	-33.90	-52.01	-13	-39.01	H
3.367734	43.52	Pk	32.8	.6	-95.2	-33.70	-51.98	-13	-38.98	V
High Channel, 844MHz										
1.682533	45.97	Pk	28.7	.7	-95.2	-35.25	-55.08	-13	-42.08	H
1.674222	45.88	Pk	28.6	.7	-95.2	-35.30	-55.32	-13	-42.32	V
2.514134	45.98	Pk	32.3	.7	-95.2	-34.90	-51.12	-13	-38.12	H
2.532711	45.01	Pk	32.4	.7	-95.2	-34.90	-51.99	-13	-38.99	V
3.359912	43.35	Pk	32.8	.6	-95.2	-33.71	-52.16	-13	-39.16	H
3.350134	42.81	Pk	32.8	.5	-95.2	-33.80	-52.89	-13	-39.89	V

BPSK 5G NR n26 (20.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-16
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n26 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										
1.677156	40.91	Pk	29.1	.7	-95.2	-27.52	-52.01	-13	-39.01	H
1.676178	41.59	Pk	29.1	.7	-95.2	-27.50	-51.31	-13	-38.31	V
2.513645	40.65	Pk	32.5	.7	-95.2	-26.10	-47.45	-13	-34.45	H
2.514623	40.23	Pk	32.5	.7	-95.2	-26.10	-47.87	-13	-34.87	V
3.352089	40.90	Pk	32.8	.6	-95.2	-25.10	-46.00	-13	-33.00	H
3.353067	39.99	Pk	32.8	.6	-95.2	-25.10	-46.91	-13	-33.91	V
Mid Channel, 836.5MHz										
1.676178	40.68	Pk	29.1	.7	-95.2	-27.50	-52.22	-13	-39.22	H
1.675689	40.66	Pk	29.1	.7	-95.2	-27.50	-52.24	-13	-39.24	V
2.509734	40.33	Pk	32.5	.7	-95.2	-26.23	-47.90	-13	-34.90	H
2.508756	40.97	Pk	32.5	.7	-95.2	-26.28	-47.31	-13	-34.31	V
3.345734	39.11	Pk	32.8	.5	-95.2	-25.10	-47.89	-13	-34.89	H
3.346223	39.19	Pk	32.8	.5	-95.2	-25.10	-47.81	-13	-34.81	V
Mid Channel, 839.0MHz										
1.676178	40.21	Pk	29.1	.7	-95.2	-27.50	-52.69	-13	-39.69	H
1.678133	40.30	Pk	29.2	.7	-95.2	-27.60	-52.60	-13	-39.60	V
2.517067	41.17	Pk	32.5	.7	-95.2	-26.10	-46.93	-13	-33.93	H
2.516578	40.54	Pk	32.5	.7	-95.2	-26.14	-47.60	-13	-34.60	V
3.356978	39.53	Pk	32.8	.6	-95.2	-24.90	-47.17	-13	-34.17	H
3.356000	39.63	Pk	32.8	.6	-95.2	-25.00	-47.17	-13	-34.17	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 #:	15175342
Date:	2024-08-26
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE B30 QPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.704844	26.53	RMS	34.1	-95.2	-28.72	-63.29	-40	-23.29	H
4.692188	27.52	RMS	34.1	-95.2	-28.72	-62.30	-40	-22.30	V
6.910781	24.74	RMS	35.6	-95.2	-26.40	-61.26	-40	-21.26	H
6.892969	24.92	RMS	35.6	-95.2	-26.60	-61.28	-40	-21.28	V
9.779063	23.40	RMS	37.0	-95.2	-23.61	-58.41	-40	-18.41	H
9.788438	23.22	RMS	37.0	-95.2	-23.76	-58.74	-40	-18.74	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-13
Test Engineer:	45258
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									
4.620938	25.37	RMS	34.0	-95.2	-23.20	-59.03	-40	-19.03	H
4.621406	25.33	RMS	34.0	-95.2	-23.24	-59.11	-40	-19.11	V
6.929531	26.43	RMS	35.7	-95.2	-19.00	-52.07	-40	-12.07	H
6.929063	28.33	RMS	35.7	-95.2	-19.00	-50.17	-40	-10.17	V
9.238125	25.72	RMS	36.1	-95.2	-16.71	-50.09	-40	-10.09	H
9.240469	24.67	RMS	36.1	-95.2	-16.70	-51.13	-40	-11.13	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 #:	15175342
Date:	2024-10-04
Test Engineer:	32934
Configuration:	EUT Only
Mode	LTE 41 QPSK 20MHz
Chamber #:	05-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2506MHz									
4.995000	57.08	Pk	34.1	-95.2	-48.43	-52.45	-25	-27.45	V
5.004000	56.90	Pk	34.1	-95.2	-48.53	-52.73	-25	-27.73	H
7.518500	54.56	Pk	35.7	-95.2	-46.82	-51.76	-25	-26.76	H
7.550000	54.58	Pk	35.7	-95.2	-46.76	-51.68	-25	-26.68	V
10.017500	53.95	Pk	37.2	-95.2	-45.27	-49.32	-25	-24.32	H
10.023500	53.35	Pk	37.2	-95.2	-45.12	-49.77	-25	-24.77	V
Mid Channel, 2593MHz									
5.167000	55.82	Pk	34.3	-95.2	-48.12	-53.20	-25	-28.20	V
5.174500	56.34	Pk	34.3	-95.2	-48.28	-52.84	-25	-27.84	H
7.764500	54.76	Pk	35.9	-95.2	-45.56	-50.10	-25	-25.10	V
7.770000	54.11	Pk	35.9	-95.2	-45.45	-50.64	-25	-25.64	H
10.379500	55.28	Pk	37.6	-95.2	-45.9	-48.22	-25	-23.22	H
10.436000	54.67	Pk	37.6	-95.2	-45.83	-48.76	-25	-23.76	V
High Channel, 2680MHz									
5.326500	55.98	Pk	34.6	-95.2	-47.79	-52.41	-25	-27.41	V
5.378000	55.70	Pk	34.6	-95.2	-47.84	-52.74	-25	-27.74	H
8.023500	53.74	Pk	35.9	-95.2	-45.61	-51.17	-25	-26.17	V
8.029500	53.51	Pk	35.9	-95.2	-45.58	-51.37	-25	-26.37	H
10.712500	53.46	Pk	37.7	-95.2	-45.59	-49.63	-25	-24.63	H
10.743000	54.16	Pk	37.7	-95.2	-45.55	-48.89	-25	-23.89	V

BPSK LTE BAND n41 (100.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-10-22
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n41 BPSK 100MHz
Chamber #:	05-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2546MHz									
5.093000	55.17	Pk	34.2	-95.2	-48.19	-54.02	-25	-29.02	H
5.097500	56.17	Pk	34.2	-95.2	-48.23	-53.06	-25	-28.06	V
7.548500	66.48	Pk	35.7	-95.2	-46.82	-39.84	-25	-14.84	H
7.548000	66.67	Pk	35.7	-95.2	-46.88	-39.71	-25	-14.71	V
10.185000	54.68	Pk	37.4	-95.2	-46.01	-49.13	-25	-24.13	H
10.184500	55.73	Pk	37.4	-95.2	-46.10	-48.17	-25	-23.17	V
Mid Channel, 2593MHz									
5.187000	55.04	Pk	34.3	-95.2	-47.96	-53.82	-25	-28.82	H
5.186000	55.07	Pk	34.3	-95.2	-48.04	-53.87	-25	-28.87	V
7.689000	63.36	Pk	35.8	-95.2	-45.90	-41.94	-25	-16.94	H
7.689000	60.68	Pk	35.8	-95.2	-45.90	-44.62	-25	-19.62	V
10.371000	54.23	Pk	37.5	-95.2	-45.89	-49.36	-25	-24.36	H
10.371500	53.88	Pk	37.5	-95.2	-45.86	-49.68	-25	-24.68	V
High Channel, 2640MHz									
5.279000	54.68	Pk	34.5	-95.2	-48.12	-54.14	-25	-29.14	H
5.281000	54.70	Pk	34.5	-95.2	-48.07	-54.07	-25	-29.07	V
7.830000	60.15	Pk	35.9	-95.2	-45.86	-45.01	-25	-20.01	H
7.830500	62.52	Pk	35.9	-95.2	-45.86	-42.64	-25	-17.64	V
10.565000	55.40	Pk	37.6	-95.2	-45.61	-47.81	-25	-22.81	H
10.563500	53.99	Pk	37.6	-95.2	-45.70	-49.31	-25	-24.31	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 #:	15175342
Date:	2024-08-29
Test Engineer:	45258
Configuration:	EUT Only
Mode	LTE 66 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBUV)	Det	226671 ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.439688	42.96	Pk	32.9	-95.2	-33.1	-52.44	-13	-39.44	H
3.441563	42.74	Pk	32.9	-95.2	-33.1	-52.66	-13	-39.66	V
5.159063	41.31	Pk	34.2	-95.2	-29.59	-49.28	-13	-36.28	H
5.159531	40.61	Pk	34.2	-95.2	-29.55	-49.94	-13	-36.94	V
6.881250	40.02	Pk	35.6	-95.2	-26.7	-46.28	-13	-33.28	H
6.881719	40.18	Pk	35.6	-95.2	-26.7	-46.12	-13	-33.12	V
Mid Channel, 1745MHz									
3.490313	42.67	Pk	33.0	-95.2	-33.0	-52.53	-13	-39.53	H
3.496406	42.23	Pk	33.0	-95.2	-32.9	-52.87	-13	-39.87	V
5.129531	40.81	Pk	34.2	-95.2	-30.05	-50.24	-13	-37.24	H
5.140781	40.91	Pk	34.2	-95.2	-29.82	-49.91	-13	-36.91	V
6.977813	41.06	Pk	35.6	-95.2	-26.5	-45.04	-13	-32.04	H
6.986250	40.48	Pk	35.6	-95.2	-26.5	-45.62	-13	-32.62	V
High Channel, 1770MHz									
3.540938	42.40	Pk	33	-95.2	-32.80	-52.60	-13	-39.60	H
3.540469	42.70	Pk	33	-95.2	-32.80	-52.30	-13	-39.30	V
5.310469	40.20	Pk	34.5	-95.2	-29.70	-50.20	-13	-37.20	H
5.310000	39.79	Pk	34.5	-95.2	-29.70	-50.61	-13	-37.61	V
7.079063	40.86	Pk	35.6	-95.2	-26.71	-45.45	-13	-32.45	H
7.078125	41.56	Pk	35.6	-95.2	-26.79	-44.83	-13	-31.83	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-17
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n66 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.450000	43.25	Pk	32.9	-95.2	-32.90	-51.95	-13	-38.95	H
3.467813	44.23	Pk	32.9	-95.2	-33.00	-51.07	-13	-38.07	V
5.184375	42.14	Pk	34.2	-95.2	-29.40	-48.26	-13	-35.26	H
5.191875	42.50	Pk	34.2	-95.2	-29.11	-47.61	-13	-34.61	V
6.92625	40.99	Pk	35.6	-95.2	-26.30	-44.91	-13	-31.91	H
6.990000	41.60	Pk	35.6	-95.2	-26.60	-44.60	-13	-31.60	V
Mid Channel, 1745MHz									
3.493125	42.25	Pk	33	-95.2	-33.00	-52.95	-13	-39.95	H
3.490313	42.08	Pk	33	-95.2	-33.00	-53.12	-13	-40.12	V
5.237578	40.12	Pk	34.3	-95.2	-28.76	-49.54	-13	-36.54	H
5.235469	40.39	Pk	34.3	-95.2	-28.65	-49.16	-13	-36.16	V
6.982031	41.22	Pk	35.6	-95.2	-26.50	-44.88	-13	-31.88	H
6.980156	41.82	Pk	35.6	-95.2	-26.52	-44.30	-13	-31.30	V
High Channel, 1760MHz									
3.251719	42.84	Pk	32.8	-95.2	-33.47	-53.03	-13	-40.03	H
3.249844	43.08	Pk	32.8	-95.2	-33.57	-52.89	-13	-39.89	V
5.280469	40.24	Pk	34.4	-95.2	-29.00	-49.56	-13	-36.56	H
5.280938	40.18	Pk	34.4	-95.2	-29.00	-49.62	-13	-36.62	V
7.040156	41.39	Pk	35.6	-95.2	-26.88	-45.09	-13	-32.09	H
7.038750	41.73	Pk	35.6	-95.2	-26.73	-44.60	-13	-31.60	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 #:	15175342
Date:	09/20/2024-09-20
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n70 BPSK 15MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 1702.5MHz									
3.414844	42.54	Pk	32.8	-95.2	-33.00	-52.86	-13	-39.86	H
3.444844	43.06	Pk	32.9	-95.2	-33.08	-52.32	-13	-39.32	V
5.107500	41.35	Pk	34.1	-95.2	-30.35	-50.10	-13	-37.10	H
5.105156	42.02	Pk	34.1	-95.2	-30.40	-49.48	-13	-36.48	V
6.813281	42.76	Pk	35.6	-95.2	-26.93	-43.77	-13	-30.77	H
6.833906	41.45	Pk	35.6	-95.2	-26.90	-45.05	-13	-32.05	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 #:	15175342
Date:	2024-08-29
Test Engineer:	45258
Configuration:	EUT Only
Mode	LTE B71 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 673MHz										
1.347156	43.17	Pk	28.7	1	-95.2	-35.10	-57.43	-13	-44.43	H
1.346178	42.99	Pk	28.7	1.1	-95.2	-35.10	-57.51	-13	-44.51	V
2.018889	42.64	Pk	31.7	.5	-95.2	-35.02	-55.38	-13	-42.38	H
2.016934	44.89	Pk	31.7	.5	-95.2	-35.09	-53.20	-13	-40.20	V
2.692089	43.86	Pk	32.4	.5	-95.2	-34.72	-53.16	-13	-40.16	H
2.693067	43.65	Pk	32.4	.5	-95.2	-34.89	-53.54	-13	-40.54	V
Mid Channel, 683MHz										
1.362311	43.77	Pk	28.7	1	-95.2	-35.10	-56.83	-13	-43.83	H
1.360844	45.00	Pk	28.7	1	-95.2	-35.20	-55.70	-13	-42.70	V
2.041378	44.23	Pk	31.7	.5	-95.2	-35.00	-53.77	-13	-40.77	H
2.041378	43.75	Pk	31.7	.5	-95.2	-35.00	-54.25	-13	-41.25	V
2.721423	44.06	Pk	32.5	.5	-95.2	-34.80	-52.94	-13	-39.94	H
2.720934	43.07	Pk	32.5	.5	-95.2	-34.79	-53.92	-13	-40.92	V
High Channel, 688MHz										
1.375511	42.86	Pk	28.6	1	-95.2	-35.25	-57.99	-13	-44.99	H
1.376000	42.72	Pk	28.6	1	-95.2	-35.20	-58.08	-13	-45.08	V
2.063378	43.60	Pk	31.8	.5	-95.2	-35.04	-54.34	-13	-41.34	H
2.063378	43.44	Pk	31.8	.5	-95.2	-35.04	-54.50	-13	-41.50	V
2.750756	44.35	Pk	32.5	.5	-95.2	-34.70	-52.55	-13	-39.55	H
2.751734	44.08	Pk	32.5	.5	-95.2	-34.70	-52.82	-13	-39.82	V

BPSK 5G NR n71 (20.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-19
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n71 BPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	HPF 1.2GHz T1737 1-18GHz (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 673MHz										
1.351556	43.75	Pk	28.7	1	-95.2	-35.20	-56.95	-13	-43.95	H
1.355467	44.06	Pk	28.7	1	-95.2	-35.15	-56.59	-13	-43.59	V
2.005200	43.76	Pk	31.7	.5	-95.2	-35.18	-54.42	-13	-41.42	H
2.017911	44.31	Pk	31.7	.5	-95.2	-35.19	-53.88	-13	-40.88	V
2.696000	43.83	Pk	32.4	.5	-95.2	-34.80	-53.27	-13	-40.27	H
2.712134	43.87	Pk	32.5	.5	-95.2	-34.71	-53.04	-13	-40.04	V
Mid Channel, 683MHz										
1.362311	44.45	Pk	28.7	1	-95.2	-35.10	-56.15	-13	-43.15	H
1.368667	43.07	Pk	28.6	1	-95.2	-35.20	-57.73	-13	-44.73	V
2.026222	41.89	Pk	31.7	.5	-95.2	-35.12	-56.23	-13	-43.23	H
2.045778	43.00	Pk	31.7	.5	-95.2	-35.00	-55.00	-13	-42.00	V
2.720934	42.42	Pk	32.5	.5	-95.2	-34.79	-54.57	-13	-41.57	H
2.743423	42.55	Pk	32.5	.5	-95.2	-34.74	-54.39	-13	-41.39	V
High Channel, 688MHz										
1.370133	44.25	Pk	28.6	1	-95.2	-35.11	-56.46	-13	-43.46	H
1.381378	44.09	Pk	28.6	1	-95.2	-35.30	-56.81	-13	-43.81	V
2.052134	44.70	Pk	31.8	.5	-95.2	-34.91	-53.11	-13	-40.11	H
2.062400	44.47	Pk	31.8	.5	-95.2	-35.00	-53.43	-13	-40.43	V
2.753689	44.79	Pk	32.5	.5	-95.2	-34.77	-52.18	-13	-39.18	H
2.767867	44.29	Pk	32.5	.5	-95.2	-34.71	-52.62	-13	-39.62	V

10.3. FIELD STRENGTH OF SPURIOUS RADIATION, ANT3

TEST PROCEDURE

KDB 971168 D01 /D02

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

RESULTS

10.3.1. LTE BAND 7 AND 5G NR n7

LIMITS

FCC: §27.53 (m)

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

QPSK LTE BAND 7 (20.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-10-07
Test Engineer:	32934
Configuration:	EUT Only
Mode	LTE B7 QPSK 20MHz
Chamber #:	05-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2510MHz									
5.027000	56.03	Pk	34.1	-95.2	-48.36	-53.43	-25	-28.43	H
5.024000	56.56	Pk	34.1	-95.2	-48.50	-53.04	-25	-28.04	V
7.526000	54.56	Pk	35.7	-95.2	-46.83	-51.77	-25	-26.77	H
7.547000	54.49	Pk	35.7	-95.2	-46.70	-51.71	-25	-26.71	V
10.049000	53.92	Pk	37.2	-95.2	-45.34	-49.42	-25	-24.42	H
10.031500	53.48	Pk	37.2	-95.2	-45.37	-49.89	-25	-24.89	V
Mid Channel, 2535MHz									
5.068000	54.97	Pk	34.2	-95.2	-48.16	-54.19	-25	-29.19	H
5.070000	54.41	Pk	34.2	-95.2	-48.30	-54.89	-25	-29.89	V
7.607500	54.02	Pk	35.8	-95.2	-46.59	-51.97	-25	-26.97	H
7.606000	55.01	Pk	35.8	-95.2	-46.64	-51.03	-25	-26.03	V
10.140500	54.15	Pk	37.3	-95.2	-46.21	-49.96	-25	-24.96	H
10.142000	54.33	Pk	37.3	-95.2	-46.26	-49.83	-25	-24.83	V
High Channel, 2560MHz									
5.112500	56.24	Pk	34.2	-95.2	-48.28	-53.04	-25	-28.04	H
5.102000	55.87	Pk	34.2	-95.2	-47.98	-53.11	-25	-28.11	V
7.685500	54.16	Pk	35.8	-95.2	-46.03	-51.27	-25	-26.27	H
7.672500	54.07	Pk	35.8	-95.2	-46.26	-51.59	-25	-26.59	V
10.252000	55.27	Pk	37.4	-95.2	-45.82	-48.35	-25	-23.35	H
10.275000	54.87	Pk	37.5	-95.2	-46.02	-48.85	-25	-23.85	V

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-10-04
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n7 BPSK 40MHz
Chamber #:	05-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF 3m (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2520MHz									
5.039000	54.99	Pk	34.1	-95.2	-48.33	-54.44	-25	-29.44	V
5.040000	54.29	Pk	34.1	-95.2	-48.36	-55.17	-25	-30.17	H
7.560000	52.70	Pk	35.7	-95.2	-46.70	-53.50	-25	-28.50	H
7.560000	53.81	Pk	35.7	-95.2	-46.70	-52.39	-25	-27.39	V
10.079000	54.06	Pk	37.3	-95.2	-45.80	-49.64	-25	-24.64	V
10.079500	54.19	Pk	37.3	-95.2	-45.74	-49.45	-25	-24.45	H
Mid Channel, 2535MHz									
5.069500	55.06	Pk	34.2	-95.2	-48.28	-54.22	-25	-29.22	H
5.070000	55.03	Pk	34.2	-95.2	-48.30	-54.27	-25	-29.27	V
7.604000	54.03	Pk	35.8	-95.2	-46.54	-51.91	-25	-26.91	H
7.604500	53.80	Pk	35.8	-95.2	-46.58	-52.18	-25	-27.18	V
10.139500	54.24	Pk	37.3	-95.2	-46.25	-49.91	-25	-24.91	H
10.140000	53.85	Pk	37.3	-95.2	-46.26	-50.31	-25	-25.31	V
High Channel, 2550MHz									
5.099000	55.31	Pk	34.2	-95.2	-48.26	-53.95	-25	-28.95	H
5.100000	54.95	Pk	34.2	-95.2	-48.08	-54.13	-25	-29.13	V
7.648500	54.46	Pk	35.8	-95.2	-46.34	-51.28	-25	-26.28	H
7.649500	52.92	Pk	35.8	-95.2	-46.37	-52.85	-25	-27.85	V
10.019000	55.25	Pk	37.2	-95.2	-45.14	-47.89	-25	-22.89	V
10.022000	53.48	Pk	37.2	-95.2	-45.14	-49.66	-25	-24.66	H

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 #:	15175342
Date:	2024-09-10
Test Engineer:	28567
Configuration:	EUT Only
Mode	LTE B25 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBUV)	Det	226671 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.740625	42.35	Pk	33.4	-95.2	-32.2	-51.65	-13	-38.65	H
3.754219	41.54	Pk	33.4	-95.2	-32.1	-52.36	-13	-39.36	V
5.548594	41.03	Pk	34.6	-95.2	-29.24	-48.81	-13	-35.81	H
5.585156	40.94	Pk	34.6	-95.2	-29.6	-49.26	-13	-36.26	V
7.436250	42.93	Pk	35.6	-95.2	-26.2	-42.87	-13	-29.87	H
7.452656	43.05	Pk	35.6	-95.2	-26.23	-42.78	-13	-29.78	V
Mid Channel, 1882.5MHz									
3.756563	42.41	Pk	33.4	-95.2	-32.14	-51.53	-13	-38.53	H
3.769219	42.38	Pk	33.4	-95.2	-32.16	-51.58	-13	-38.58	V
5.605781	38.23	Pk	34.6	-95.2	-29.82	-52.19	-13	-39.19	H
5.639531	38.81	Pk	34.7	-95.2	-30	-51.69	-13	-38.69	V
7.529531	40.59	Pk	35.6	-95.2	-26.3	-45.31	-13	-32.31	H
7.558594	39.44	Pk	35.7	-95.2	-26.3	-46.36	-13	-33.36	V
High Channel, 1905MHz									
3.813281	40.93	Pk	33.4	-95.2	-31.83	-52.70	-13	-39.70	H
3.832969	40.63	Pk	33.5	-95.2	-31.8	-52.87	-13	-39.87	V
5.709844	38.89	Pk	34.8	-95.2	-29.32	-50.83	-13	-37.83	H
5.718281	38.48	Pk	34.8	-95.2	-29.17	-51.09	-13	-38.09	V
7.616250	41.75	Pk	35.7	-95.2	-26.5	-44.25	-13	-31.25	H
7.668750	40.68	Pk	35.7	-95.2	-26.58	-45.40	-13	-32.40	V

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-19
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n25 BPSK 40MHz
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
Low Channel, 1870MHz									
3.740156	39.93	Pk	33.1	-95.2	-23.4	-45.57	-13	-32.57	H
3.742031	38.18	Pk	33.1	-95.2	-23.5	-47.42	-13	-34.42	V
5.610000	38.03	Pk	34.5	-95.2	-20.3	-42.97	-13	-29.97	H
5.610000	37.88	Pk	34.5	-95.2	-20.3	-43.12	-13	-30.12	V
7.480313	38.62	Pk	35.6	-95.2	-18.6	-39.58	-13	-26.58	H
7.480313	36.70	Pk	35.6	-95.2	-18.6	-41.50	-13	-28.50	V
Mid Channel, 1882.5MHz									
3.765938	38.86	Pk	33.2	-95.2	-23.7	-46.84	-13	-33.84	H
3.764531	38.90	Pk	33.2	-95.2	-23.75	-46.85	-13	-33.85	V
5.647031	38.00	Pk	34.6	-95.2	-20.2	-42.80	-13	-29.80	H
5.647969	36.76	Pk	34.6	-95.2	-20.2	-44.04	-13	-31.04	V
7.528594	38.52	Pk	35.7	-95.2	-18.06	-39.04	-13	-26.04	H
7.530000	37.68	Pk	35.7	-95.2	-18	-39.82	-13	-26.82	V
High Channel, 1895MHz									
3.792188	39.43	Pk	33.2	-95.2	-24	-46.57	-13	-33.57	H
3.792188	39.30	Pk	33.2	-95.2	-24	-46.70	-13	-33.70	V
5.684063	37.77	Pk	34.6	-95.2	-20.9	-43.73	-13	-30.73	H
5.684531	37.51	Pk	34.6	-95.2	-20.9	-43.99	-13	-30.99	V
7.574531	40.00	Pk	35.7	-95.2	-17.3	-36.80	-13	-23.80	H
7.576406	38.37	Pk	35.7	-95.2	-17.24	-38.37	-13	-25.37	V

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 #:	15175342
Date:	2024-08-29
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									
4.620938	23.34	RMS	34	-95.2	-23.20	-61.06	-40	-21.06	H
4.620938	23.35	RMS	34	-95.2	-23.20	-61.05	-40	-21.05	V
6.934219	20.00	RMS	35.7	-95.2	-19.00	-58.50	-40	-18.50	H
6.902344	20.66	RMS	35.6	-95.2	-19.27	-58.21	-40	-18.21	V
9.243750	19.85	RMS	36.1	-95.2	-16.63	-55.88	-40	-15.88	H
9.240938	19.88	RMS	36.1	-95.2	-16.70	-55.92	-40	-15.92	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-17
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									
4.625625	22.67	RMS	34	-95.2	-23.20	-61.73	-40	-21.73	H
4.610625	22.66	RMS	34	-95.2	-23.20	-61.74	-40	-21.74	V
6.937969	19.26	RMS	35.7	-95.2	-19.00	-59.24	-40	-19.24	H
6.956250	19.49	RMS	35.7	-95.2	-18.88	-58.89	-40	-18.89	V
9.243750	19.39	RMS	36.1	-95.2	-16.63	-56.34	-40	-16.34	H
9.232969	19.47	RMS	36.1	-95.2	-16.80	-56.43	-40	-16.43	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 #:	15175342
Date:	2024-10-07
Test Engineer:	32934
Configuration:	EUT Only
Mode	LTE B41 QPSK 20MHz
Chamber #:	05-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2506MHz									
5.012500	56.09	Pk	34.1	-95.2	-48.51	-53.52	-25	-28.52	H
5.006500	58.19	Pk	34.1	-95.2	-48.44	-51.35	-25	-26.35	V
7.522000	55.78	Pk	35.7	-95.2	-46.78	-50.50	-25	-25.50	H
7.516500	54.71	Pk	35.7	-95.2	-46.93	-51.72	-25	-26.72	V
10.019500	55.23	Pk	37.2	-95.2	-45.17	-47.94	-25	-22.94	H
10.041500	53.46	Pk	37.2	-95.2	-45.39	-49.93	-25	-24.93	V
Mid Channel, 2593MHz									
5.195000	55.50	Pk	34.4	-95.2	-48.07	-53.37	-25	-28.37	H
5.205000	55.32	Pk	34.4	-95.2	-48.00	-53.48	-25	-28.48	V
7.780500	53.34	Pk	35.9	-95.2	-45.62	-51.58	-25	-26.58	H
7.767500	53.34	Pk	35.9	-95.2	-45.42	-51.38	-25	-26.38	V
10.365500	54.86	Pk	37.5	-95.2	-45.95	-48.79	-25	-23.79	H
10.374000	53.93	Pk	37.5	-95.2	-45.79	-49.56	-25	-24.56	V
High Channel, 2580MHz									
5.376000	55.63	Pk	34.6	-95.2	-47.83	-52.80	-25	-27.80	H
5.360500	56.18	Pk	34.6	-95.2	-47.73	-52.15	-25	-27.15	V
8.044500	53.12	Pk	35.9	-95.2	-45.57	-51.75	-25	-26.75	H
8.054000	54.46	Pk	35.9	-95.2	-45.55	-50.39	-25	-25.39	V
10.712500	53.42	Pk	37.7	-95.2	-45.59	-49.67	-25	-24.67	H
10.693500	53.44	Pk	37.7	-95.2	-45.59	-49.65	-25	-24.65	V

BPSK LTE BAND n41 (100.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-10-22
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n41 BPSK 100MHz
Chamber #:	05-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2546MHz									
5.092000	55.80	Pk	34.2	-95.2	-48.26	-53.46	-25	-28.46	H
5.090000	55.15	Pk	34.2	-95.2	-48.29	-54.14	-25	-29.14	V
7.636000	54.73	Pk	35.8	-95.2	-46.39	-51.06	-25	-26.06	H
7.638500	54.03	Pk	35.8	-95.2	-46.48	-51.85	-25	-26.85	V
10.184000	54.51	Pk	37.4	-95.2	-46.18	-49.47	-25	-24.47	H
10.183000	55.55	Pk	37.4	-95.2	-46.06	-48.31	-25	-23.31	V
Mid Channel, 2593MHz									
5.186500	55.45	Pk	34.3	-95.2	-48.00	-53.45	-25	-28.45	H
5.187500	55.44	Pk	34.3	-95.2	-47.95	-53.41	-25	-28.41	V
7.778500	53.14	Pk	35.9	-95.2	-45.65	-51.81	-25	-26.81	H
7.777500	53.42	Pk	35.9	-95.2	-45.63	-51.51	-25	-26.51	V
10.370000	55.68	Pk	37.5	-95.2	-45.90	-47.92	-25	-22.92	H
10.371500	53.92	Pk	37.5	-95.2	-45.86	-49.64	-25	-24.64	V
High Channel, 2640MHz									
5.278500	56.12	Pk	34.5	-95.2	-48.17	-52.75	-25	-27.75	H
5.279500	55.75	Pk	34.5	-95.2	-48.14	-53.09	-25	-28.09	V
7.921000	53.16	Pk	35.9	-95.2	-45.81	-51.95	-25	-26.95	H
7.921000	53.66	Pk	35.9	-95.2	-45.81	-51.45	-25	-26.45	V
10.561000	54.78	Pk	37.6	-95.2	-45.61	-48.43	-25	-23.43	H
10.559500	53.81	Pk	37.6	-95.2	-45.59	-49.38	-25	-24.38	V

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 #:	15175342
Date:	2024-09-12
Test Engineer:	28567
Configuration:	EUT Only
Mode	LTE B66 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.459844	43.03	Pk	32.9	-95.2	-32.92	-52.19	-13	-39.19	H
3.498281	42.98	Pk	33	-95.2	-32.93	-52.15	-13	-39.15	V
5.136563	42.31	Pk	34.2	-95.2	-29.94	-48.63	-13	-35.63	H
5.167500	41.85	Pk	34.2	-95.2	-29.55	-48.70	-13	-35.70	V
6.894375	41.91	Pk	35.6	-95.2	-26.64	-44.33	-13	-31.33	H
6.930938	41.52	Pk	35.6	-95.2	-26.40	-44.48	-13	-31.48	V
Mid Channel, 1745MHz									
3.473906	41.17	Pk	32.9	-95.2	-33.00	-54.13	-13	-41.13	H
3.440625	42.32	Pk	32.9	-95.2	-33.10	-53.08	-13	-40.08	V
5.255156	39.44	Pk	34.4	-95.2	-28.92	-50.28	-13	-37.28	H
5.262188	46.21	Pk	34.4	-95.2	-29.00	-43.59	-13	-30.59	V
6.959531	39.38	Pk	35.6	-95.2	-26.40	-46.62	-13	-33.62	H
6.996563	39.71	Pk	35.6	-95.2	-26.54	-46.43	-13	-33.43	V
High Channel, 1770MHz									
3.525938	41.16	Pk	33	-95.2	-32.80	-53.84	-13	-40.84	H
3.489375	42.44	Pk	33	-95.2	-32.94	-52.70	-13	-39.70	V
5.336719	48.21	Pk	34.5	-95.2	-30.30	-42.79	-13	-29.79	H
5.336719	51.72	Pk	34.5	-95.2	-30.30	-39.28	-13	-26.28	V
7.068281	42.55	Pk	35.6	-95.2	-26.80	-43.85	-13	-30.85	H
7.099219	42.12	Pk	35.6	-95.2	-26.60	-44.08	-13	-31.08	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-17
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n66 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.454219	43.93	Pk	32.9	-95.2	-33.00	-51.37	-13	-38.37	H
3.471094	42.29	Pk	32.9	-95.2	-32.99	-53.00	-13	-40.00	V
5.158125	41.46	Pk	34.2	-95.2	-29.51	-49.05	-13	-36.05	H
5.195156	41.65	Pk	34.2	-95.2	-28.98	-48.33	-13	-35.33	V
6.922031	41.72	Pk	35.6	-95.2	-26.30	-44.18	-13	-31.18	H
6.982031	42.41	Pk	35.6	-95.2	-26.50	-43.69	-13	-30.69	V
Mid Channel, 1745MHz									
3.487969	42.38	Pk	33	-95.2	-32.90	-52.72	-13	-39.72	H
3.488906	42.18	Pk	33	-95.2	-32.90	-52.92	-13	-39.92	V
5.234063	40.97	Pk	34.3	-95.2	-28.69	-48.62	-13	-35.62	H
5.234531	40.25	Pk	34.3	-95.2	-28.65	-49.30	-13	-36.30	V
6.979688	41.01	Pk	35.6	-95.2	-26.50	-45.09	-13	-32.09	H
6.981094	41.27	Pk	35.6	-95.2	-26.59	-44.92	-13	-31.92	V
High Channel, 1760MHz									
3.518906	43.10	Pk	33	-95.2	-32.89	-51.99	-13	-38.99	H
3.520313	41.47	Pk	33	-95.2	-32.93	-53.66	-13	-40.66	V
5.280938	40.55	Pk	34.4	-95.2	-29.00	-49.25	-13	-36.25	H
5.280938	39.76	Pk	34.4	-95.2	-29.00	-50.04	-13	-37.04	V
7.042031	41.03	Pk	35.6	-95.2	-26.8	-45.37	-13	-32.37	H
7.041563	40.98	Pk	35.6	-95.2	-26.8	-45.42	-13	-32.42	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 based on 5G NR n70 maximum frequency range)

Project #:	15175342
Date:	2024-09-19
Test Engineer:	31300
Configuration:	EUT Only
Mode	5G NR n70 BPSK 15MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 1702.5MHz									
3.405469	41.74	Pk	32.8	-95.2	-33.10	-53.76	-13	-40.76	H
3.405469	41.28	Pk	32.8	-95.2	-33.10	-54.22	-13	-41.22	V
5.107500	40.69	Pk	34.1	-95.2	-30.35	-50.76	-13	-37.76	H
5.107500	39.88	Pk	34.1	-95.2	-30.35	-51.57	-13	-38.57	V
6.810938	41.58	Pk	35.6	-95.2	-26.91	-44.93	-13	-31.93	H
6.810469	39.60	Pk	35.6	-95.2	-26.95	-46.95	-13	-33.95	V

10.4. FIELD STRENGTH OF SPURIOUS RADIATION, ANT4

TEST PROCEDURE

KDB 971168 D01 /D02

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

RESULTS

10.4.1. LTE BAND 7 AND 5G NR n7

LIMITS

FCC: §27.53 (m)

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

QPSK LTE BAND 7 (20.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-10
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE B7 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 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										
5.193750	42.40	Pk	34.2	.8	-95.2	-30.48	-48.28	-25	-23.28	H
5.167031	41.05	Pk	34.2	.7	-95.2	-30.60	-49.85	-25	-24.85	V
7.676250	42.36	Pk	35.8	.4	-95.2	-26.80	-43.44	-25	-18.44	H
7.661719	42.74	Pk	35.7	.3	-95.2	-26.90	-43.36	-25	-18.36	V
10.005469	40.28	Pk	37.2	.6	-95.2	-24.80	-41.92	-25	-16.92	H
10.057500	40.30	Pk	37.2	.7	-95.2	-25.05	-42.05	-25	-17.05	V
Mid Channel, 2535MHz										
5.094844	41.85	Pk	34.1	.8	-95.2	-30.80	-49.25	-25	-24.25	H
5.102344	41.78	Pk	34.1	.8	-95.2	-30.67	-49.19	-25	-24.19	V
7.593750	42.08	Pk	35.7	.5	-95.2	-27.13	-44.05	-25	-19.05	H
7.620000	42.46	Pk	35.7	.4	-95.2	-27.10	-43.74	-25	-18.74	V
10.137656	40.81	Pk	37.3	.7	-95.2	-24.70	-41.09	-25	-16.09	H
10.185469	40.51	Pk	37.4	.6	-95.2	-24.90	-41.59	-25	-16.59	V
High Channel, 2560MHz										
5.172656	41.83	Pk	34.2	.7	-95.2	-30.43	-48.90	-25	-23.90	H
5.159063	41.73	Pk	34.2	.8	-95.2	-30.79	-49.26	-25	-24.26	V
7.400156	42.28	Pk	35.5	.4	-95.2	-26.90	-43.92	-25	-18.92	H
7.353750	42.62	Pk	35.5	.5	-95.2	-27.03	-43.61	-25	-18.61	V
10.414219	41.24	Pk	37.5	.8	-95.2	-24.82	-40.48	-25	-15.48	H
10.434844	40.16	Pk	37.5	.8	-95.2	-24.63	-41.37	-25	-16.37	V

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-10-07
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n7 BPSK 40MHz
Chamber #:	05-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2520MHz									
5.041500	56.12	Pk	34.1	-95.2	-48.45	-53.43	-25	-28.43	H
5.040000	55.73	Pk	34.1	-95.2	-48.36	-53.73	-25	-28.73	V
7.560000	53.39	Pk	35.7	-95.2	-46.70	-52.81	-25	-27.81	H
7.559500	52.99	Pk	35.7	-95.2	-46.70	-53.21	-25	-28.21	V
10.083000	53.26	Pk	37.3	-95.2	-45.75	-50.39	-25	-25.39	H
10.080000	53.64	Pk	37.3	-95.2	-45.68	-49.94	-25	-24.94	V
Mid Channel, 2535MHz									
5.070000	55.52	Pk	34.2	-95.2	-48.30	-53.78	-25	-28.78	H
5.071500	55.31	Pk	34.2	-95.2	-48.37	-54.06	-25	-29.06	V
7.603500	53.64	Pk	35.8	-95.2	-46.61	-52.37	-25	-27.37	H
7.603000	54.46	Pk	35.8	-95.2	-46.67	-51.61	-25	-26.61	V
10.140000	54.82	Pk	37.3	-95.2	-46.26	-49.34	-25	-24.34	H
10.142000	55.14	Pk	37.3	-95.2	-46.26	-49.02	-25	-24.02	V
High Channel, 2550MHz									
5.102500	56.33	Pk	34.2	-95.2	-48.07	-52.74	-25	-27.74	H
5.101000	55.23	Pk	34.2	-95.2	-48.04	-53.81	-25	-28.81	V
7.651500	53.07	Pk	35.8	-95.2	-46.40	-52.73	-25	-27.73	H
7.649500	53.85	Pk	35.8	-95.2	-46.37	-51.92	-25	-26.92	V
10.197500	56.09	Pk	37.4	-95.2	-45.96	-47.67	-25	-22.67	H
10.200500	54.20	Pk	37.4	-95.2	-46.22	-49.82	-25	-24.82	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 #:	15175342
Date:	2024-09-13
Test Engineer:	32934
Configuration:	EUT Only
Mode	LTE B25 QPSK 20MHz
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
Low Channel, 1860MHz									
3.737344	39.49	Pk	33.1	-95.2	-23.40	-46.01	-13	-33.01	H
3.713438	39.76	Pk	33	-95.2	-23.80	-46.24	-13	-33.24	V
5.568281	38.86	Pk	34.5	-95.2	-20.40	-42.24	-13	-29.24	H
5.561250	37.93	Pk	34.5	-95.2	-20.50	-43.27	-13	-30.27	V
7.447031	37.20	Pk	35.6	-95.2	-18.60	-41.00	-13	-28.00	H
7.431094	38.09	Pk	35.6	-95.2	-18.60	-40.11	-13	-27.11	V
Mid Channel, 1882.5MHz									
3.769219	39.98	Pk	33.2	-95.2	-23.70	-45.72	-13	-32.72	H
3.768281	39.85	Pk	33.2	-95.2	-23.70	-45.85	-13	-32.85	V
5.644219	37.29	Pk	34.6	-95.2	-20.12	-43.43	-13	-30.43	H
5.643281	38.74	Pk	34.6	-95.2	-20.10	-41.96	-13	-28.96	V
7.534688	37.93	Pk	35.7	-95.2	-17.90	-39.47	-13	-26.47	H
7.549688	37.68	Pk	35.7	-95.2	-17.50	-39.32	-13	-26.32	V
High Channel, 1905MHz									
3.804844	39.54	Pk	33.2	-95.2	-23.98	-46.44	-13	-33.44	H
3.822656	39.53	Pk	33.3	-95.2	-24.13	-46.50	-13	-33.50	V
5.719219	37.94	Pk	34.6	-95.2	-21.42	-44.08	-13	-31.08	H
5.709844	39.44	Pk	34.6	-95.2	-21.20	-42.36	-13	-29.36	V
7.618594	39.34	Pk	35.8	-95.2	-16.80	-36.86	-13	-23.86	H
7.636406	38.44	Pk	35.8	-95.2	-16.90	-37.86	-13	-24.86	V

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-14
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n25 BPSK 40MHz
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
Low Channel, 1870MHz									
3.744844	40.26	Pk	33.1	-95.2	-23.40	-45.24	-13	-32.24	H
3.741094	38.60	Pk	33.1	-95.2	-23.41	-46.91	-13	-33.91	V
5.612344	37.88	Pk	34.5	-95.2	-20.30	-43.12	-13	-30.12	H
5.610469	37.27	Pk	34.5	-95.2	-20.30	-43.73	-13	-30.73	V
7.480781	37.39	Pk	35.6	-95.2	-18.60	-40.81	-13	-27.81	H
7.479375	38.09	Pk	35.6	-95.2	-18.60	-40.11	-13	-27.11	V
Mid Channel, 1882.5MHz									
3.766875	40.16	Pk	33.2	-95.2	-23.70	-45.54	-13	-32.54	H
3.766875	38.78	Pk	33.2	-95.2	-23.70	-46.92	-13	-33.92	V
5.644219	38.42	Pk	34.6	-95.2	-20.12	-42.30	-13	-29.30	H
5.645625	37.35	Pk	34.6	-95.2	-20.20	-43.45	-13	-30.45	V
7.536094	39.15	Pk	35.7	-95.2	-17.80	-38.15	-13	-25.15	H
7.534219	38.96	Pk	35.7	-95.2	-17.90	-38.44	-13	-25.44	V
High Channel, 1895MHz									
3.790781	39.34	Pk	33.2	-95.2	-23.98	-46.64	-13	-33.64	H
3.791250	38.73	Pk	33.2	-95.2	-24.00	-47.27	-13	-34.27	V
5.685000	37.28	Pk	34.6	-95.2	-20.90	-44.22	-13	-31.22	H
5.684531	37.54	Pk	34.6	-95.2	-20.90	-43.96	-13	-30.96	V
7.580625	37.92	Pk	35.7	-95.2	-17.20	-38.78	-13	-25.78	H
7.581563	38.36	Pk	35.7	-95.2	-17.20	-38.34	-13	-25.34	V

10.4.3. LTE BAND 30 AND 5G NR n30

LIMITS

FCC: §27.53 (a)

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

QPSK LTE BAND 30 (10.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-13
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									
4.612500	22.93	RMS	34	-95.2	-23.20	-61.47	-40	-21.47	H
4.601250	22.87	RMS	34	-95.2	-23.18	-61.51	-40	-21.51	V
6.946406	19.79	RMS	35.7	-95.2	-19.00	-58.71	-40	-18.71	H
6.921563	19.83	RMS	35.6	-95.2	-19.10	-58.87	-40	-18.87	V
9.251250	19.61	RMS	36.1	-95.2	-16.60	-56.09	-40	-16.09	H
9.255938	19.63	RMS	36.1	-95.2	-16.69	-56.16	-40	-16.16	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-20
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n30 BPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.623750	28.48	RMS	34.1	-95.2	-28.73	-61.35	-40	-21.35	H
4.642031	27.77	RMS	34.1	-95.2	-28.70	-62.03	-40	-22.03	V
6.917344	30.05	RMS	35.6	-95.2	-26.30	-55.85	-40	-15.85	H
6.917344	28.99	RMS	35.6	-95.2	-26.30	-56.91	-40	-16.91	V
9.240000	27.15	RMS	36.3	-95.2	-23.70	-55.45	-40	-15.45	H
9.258281	26.82	RMS	36.3	-95.2	-23.73	-55.81	-40	-15.81	V

10.4.4. LTE BAND 41 AND 5G NR n41

LIMITS

FCC: §27.53 (m)

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

QPSK LTE BAND 41 (20.0MHZ BANDWIDTH)

Project #:	15175342
Date:	09/09/2024
Test Engineer:	32145
Configuration:	EUT Only
Mode	LTE B41 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 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, 2506MHz										
3.960000	41.67	Pk	33.5	.4	-95.2	-32.00	-51.63	-25	-26.63	H
3.938438	41.40	Pk	33.5	.4	-95.2	-32.14	-52.04	-25	-27.04	V
5.153906	42.88	Pk	34.2	.8	-95.2	-30.61	-47.93	-25	-22.93	H
5.150156	41.52	Pk	34.2	.8	-95.2	-30.70	-49.38	-25	-24.38	V
6.499688	40.93	Pk	35.6	.5	-95.2	-27.70	-45.87	-25	-20.87	H
6.519375	40.64	Pk	35.6	.6	-95.2	-27.70	-46.06	-25	-21.06	V
Mid Channel, 2593MHz										
4.356563	42.71	Pk	33.7	.3	-95.2	-31.20	-49.69	-25	-24.69	H
4.336875	41.81	Pk	33.7	.3	-95.2	-31.20	-50.59	-25	-25.59	V
5.675625	41.42	Pk	34.7	.6	-95.2	-30.10	-48.58	-25	-23.58	H
5.659219	42.12	Pk	34.7	.4	-95.2	-30.20	-48.18	-25	-23.18	V
7.238906	41.95	Pk	35.6	.4	-95.2	-26.80	-44.05	-25	-19.05	H
7.237031	41.60	Pk	35.6	.3	-95.2	-26.80	-44.50	-25	-19.50	V
High Channel, 2680MHz										
3.985781	43.06	Pk	33.5	.3	-95.2	-31.98	-50.32	-25	-25.32	H
3.962344	41.84	Pk	33.5	.4	-95.2	-31.93	-51.39	-25	-26.39	V
5.102344	41.14	Pk	34.1	.8	-95.2	-30.67	-49.83	-25	-24.83	H
5.097188	41.25	Pk	34.1	.8	-95.2	-30.70	-49.75	-25	-24.75	V
6.493594	41.05	Pk	35.6	.4	-95.2	-27.76	-45.91	-25	-20.91	H
6.516563	41.75	Pk	35.6	.6	-95.2	-27.60	-44.85	-25	-19.85	V

BPSK LTE BAND n41 (100.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-10-22
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n41 BPSK 100MHz
Chamber #:	05-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2546MHz									
5.090500	56.24	Pk	34.2	-95.2	-48.29	-53.05	-25	-28.05	H
5.091000	54.79	Pk	34.2	-95.2	-48.29	-54.50	-25	-29.50	V
7.636500	53.95	Pk	35.8	-95.2	-46.40	-51.85	-25	-26.85	H
7.637000	53.69	Pk	35.8	-95.2	-46.40	-52.11	-25	-27.11	V
10.185000	54.83	Pk	37.4	-95.2	-46.01	-48.98	-25	-23.98	H
10.183000	54.34	Pk	37.4	-95.2	-46.06	-49.52	-25	-24.52	V
Mid Channel, 2593MHz									
5.187000	55.05	Pk	34.3	-95.2	-47.96	-53.81	-25	-28.81	H
5.186000	55.12	Pk	34.3	-95.2	-48.04	-53.82	-25	-28.82	V
7.771500	54.35	Pk	35.9	-95.2	-45.47	-50.42	-25	-25.42	H
7.776000	53.89	Pk	35.9	-95.2	-45.69	-51.10	-25	-26.10	V
10.374000	54.40	Pk	37.5	-95.2	-45.79	-49.09	-25	-24.09	H
10.371500	54.05	Pk	37.5	-95.2	-45.86	-49.51	-25	-24.51	V
High Channel, 2640MHz									
5.280000	55.75	Pk	34.5	-95.2	-48.16	-53.11	-25	-28.11	H
5.281500	55.15	Pk	34.5	-95.2	-48.08	-53.63	-25	-28.63	V
7.916000	54.01	Pk	35.9	-95.2	-45.91	-51.20	-25	-26.20	H
7.919000	53.95	Pk	35.9	-95.2	-46.04	-51.39	-25	-26.39	V
10.560000	55.01	Pk	37.6	-95.2	-45.52	-48.11	-25	-23.11	H
10.562500	54.87	Pk	37.6	-95.2	-45.69	-48.42	-25	-23.42	V

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 #:	15175342
Date:	2024-09-13
Test Engineer:	28567
Configuration:	EUT Only
Mode	LTE B66 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.442031	42.42	Pk	32.9	-95.2	-33.10	-52.98	-13	-39.98	H
3.458438	42.00	Pk	32.9	-95.2	-32.94	-53.24	-13	-40.24	V
5.141250	41.53	Pk	34.2	-95.2	-29.83	-49.30	-13	-36.30	H
5.167500	41.46	Pk	34.2	-95.2	-29.55	-49.09	-13	-36.09	V
6.885000	40.75	Pk	35.6	-95.2	-26.70	-45.55	-13	-32.55	H
6.919688	41.44	Pk	35.6	-95.2	-26.23	-44.39	-13	-31.39	V
Mid Channel, 1745MHz									
3.479063	43.39	Pk	32.9	-95.2	-33.00	-51.91	-13	-38.91	H
3.502969	43.13	Pk	33	-95.2	-33.00	-52.07	-13	-39.07	V
5.220000	41.99	Pk	34.3	-95.2	-28.80	-47.71	-13	-34.71	H
5.245313	41.13	Pk	34.4	-95.2	-28.80	-48.47	-13	-35.47	V
6.970781	41.98	Pk	35.6	-95.2	-26.48	-44.10	-13	-31.10	H
7.003594	42.06	Pk	35.6	-95.2	-26.50	-44.04	-13	-31.04	V
High Channel, 1770MHz									
3.534375	44.00	Pk	33	-95.2	-32.80	-51.00	-13	-38.00	H
3.561563	42.86	Pk	33	-95.2	-32.70	-52.04	-13	-39.04	V
5.287969	41.34	Pk	34.4	-95.2	-29.30	-48.76	-13	-35.76	H
5.314688	41.94	Pk	34.5	-95.2	-29.87	-48.63	-13	-35.63	V
7.084688	42.55	Pk	35.6	-95.2	-26.70	-43.75	-13	-30.75	H
7.147500	41.61	Pk	35.6	-95.2	-26.30	-44.29	-13	-31.29	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-09-17
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n66 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.460781	42.65	Pk	32.9	-95.2	-32.90	-52.55	-13	-39.55	H
3.466406	43.22	Pk	32.9	-95.2	-32.94	-52.02	-13	-39.02	V
5.159063	41.87	Pk	34.2	-95.2	-29.59	-48.72	-13	-35.72	H
5.187656	41.55	Pk	34.2	-95.2	-29.27	-48.72	-13	-35.72	V
6.906094	41.14	Pk	35.6	-95.2	-26.41	-44.87	-13	-31.87	H
6.981094	42.21	Pk	35.6	-95.2	-26.59	-43.98	-13	-30.98	V
Mid Channel, 1745MHz									
3.492188	43.04	Pk	33	-95.2	-33.00	-52.16	-13	-39.16	H
3.491719	42.37	Pk	33	-95.2	-33.00	-52.83	-13	-39.83	V
5.236406	40.50	Pk	34.3	-95.2	-28.70	-49.10	-13	-36.10	H
5.235938	41.27	Pk	34.3	-95.2	-28.69	-48.32	-13	-35.32	V
5.977031	39.49	Pk	35.3	-95.2	-28.20	-48.61	-13	-35.61	H
5.976094	39.47	Pk	35.3	-95.2	-28.29	-48.72	-13	-35.72	V
High Channel, 1760MHz									
3.522188	42.77	Pk	33	-95.2	-32.90	-52.33	-13	-39.33	H
3.522188	40.99	Pk	33	-95.2	-32.90	-54.11	-13	-41.11	V
5.278125	41.75	Pk	34.4	-95.2	-29.01	-48.06	-13	-35.06	H
5.280000	41.23	Pk	34.4	-95.2	-29.00	-48.57	-13	-35.57	V
7.040625	41.24	Pk	35.6	-95.2	-26.84	-45.20	-13	-32.20	H
7.041094	40.29	Pk	35.6	-95.2	-26.80	-46.11	-13	-33.11	V

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 #:	15175342
Date:	2024-09-19
Test Engineer:	31300
Configuration:	EUT Only
Mode	5G NR n70 BPSK 15MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF 3m (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 1702.5MHz									
3.405469	42.39	Pk	32.8	-95.2	-33.10	-53.11	-13	-40.11	H
3.405469	42.21	Pk	32.8	-95.2	-33.10	-53.29	-13	-40.29	V
5.107969	41.84	Pk	34.1	-95.2	-30.40	-49.66	-13	-36.66	H
5.107969	39.78	Pk	34.1	-95.2	-30.40	-51.72	-13	-38.72	V
6.810000	40.42	Pk	35.6	-95.2	-27.00	-46.18	-13	-33.18	H
6.810000	38.62	Pk	35.6	-95.2	-27.00	-47.98	-13	-34.98	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 #:	15175342
Date:	2024-09-24
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz									
7.010002	47.82	Pk	35.8	-95.2	-47.8	-59.38	-30	-29.38	H
7.031936	47.69	Pk	35.8	-95.2	-47.7	-59.41	-30	-29.41	V
10.415738	48.34	Pk	37.8	-95.2	-47.3	-56.36	-30	-26.36	H
10.500205	48.68	Pk	37.9	-95.2	-47.7	-56.32	-30	-26.32	V
14.000674	48.44	Pk	38.9	-95.2	-47.1	-54.96	-30	-24.96	H
14.052474	48.67	Pk	39.0	-95.2	-47.0	-54.53	-30	-24.53	V

10.4.8. 5G NR n77 (FCC Part 27 3700-3980MHz)

LIMITS

FCC: §27.53

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

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

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-10-09
Test Engineer:	32934
Configuration:	EUT Only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.486469	48.46	Pk	35.9	-95.2	-48.05	-58.89	-13	-45.89	H
11.266472	47.01	Pk	38.0	-95.2	-46.20	-56.39	-13	-43.39	H
7.449136	48.46	Pk	35.9	-95.2	-48.00	-58.84	-13	-45.84	V
11.264605	46.95	Pk	38.0	-95.2	-46.24	-56.49	-13	-43.49	V
15.025008	49.17	Pk	39.8	-95.2	-47.10	-53.33	-13	-40.33	V
15.033875	48.99	Pk	39.8	-95.2	-47.20	-53.61	-13	-40.61	H
Mid Channel, 3840MHz									
7.688069	47.39	Pk	35.9	-95.2	-47.40	-59.31	-13	-46.31	H
11.511005	47.40	Pk	38.2	-95.2	-46.30	-55.90	-13	-42.90	H
15.356808	48.65	Pk	39.9	-95.2	-46.22	-52.87	-13	-39.87	H
7.650269	48.28	Pk	35.9	-95.2	-47.80	-58.82	-13	-45.82	V
11.481605	47.96	Pk	38.2	-95.2	-46.60	-55.64	-13	-42.64	V
15.389941	48.55	Pk	39.9	-95.2	-46.30	-53.05	-13	-40.05	V
High Channel, 3930MHz									
11.787987	55.44	Pk	38.5	-95.2	-46.70	-47.96	-13	-34.96	H
15.735865	57.37	Pk	40.2	-95.2	-46.70	-44.33	-13	-31.33	H
11.759307	55.91	Pk	38.4	-95.2	-46.80	-47.69	-13	-34.69	V
15.707185	56.56	Pk	40.2	-95.2	-46.78	-45.22	-13	-32.22	V
7.818599	55.81	Pk	36.0	-95.2	-48.00	-51.39	-13	-38.39	V
7.844889	55.60	Pk	36.0	-95.2	-47.80	-51.40	-13	-38.40	H

10.5. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 7

TEST PROCEDURE

KDB 971168 D01 /D02

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

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 #:	15175342
Date:	2024-09-24
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz									
6.988069	47.99	Pk	35.8	-95.2	-47.80	-59.21	-30	-29.21	H
7.007669	47.50	Pk	35.8	-95.2	-47.80	-59.70	-30	-29.70	V
10.434871	49.07	Pk	37.9	-95.2	-47.30	-55.53	-30	-25.53	H
10.503471	48.93	Pk	37.9	-95.2	-47.65	-56.02	-30	-26.02	V
13.97594	48.94	Pk	38.9	-95.2	-47.10	-54.46	-30	-24.46	H
14.097741	48.61	Pk	39.0	-95.2	-46.97	-54.56	-30	-24.56	V

10.5.2. 5G NR n77 (FCC Part 27 3700-3980MHz)

LIMITS

FCC: §27.53

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

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

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-10-21
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	05-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.500330	54.40	Pk	35.7	-95.2	-46.86	-51.96	-13	-38.96	H
7.497940	55.51	Pk	35.7	-95.2	-46.80	-50.79	-13	-37.79	V
11.251831	52.83	Pk	37.9	-95.2	-44.79	-49.26	-13	-36.26	H
11.249441	52.93	Pk	37.9	-95.2	-44.84	-49.21	-13	-36.21	V
15.000941	52.63	Pk	39.5	-95.2	-43.76	-46.83	-13	-33.83	H
14.998949	53.36	Pk	39.5	-95.2	-43.64	-45.98	-13	-32.98	V
Mid Channel, 3840MHz									
7.680377	52.92	Pk	35.8	-95.2	-46.04	-52.52	-13	-39.52	H
7.681970	53.64	Pk	35.8	-95.2	-45.99	-51.75	-13	-38.75	V
11.521900	52.23	Pk	38.2	-95.2	-44.59	-49.36	-13	-36.36	H
11.520307	51.94	Pk	38.2	-95.2	-44.51	-49.57	-13	-36.57	V
15.000543	53.01	Pk	39.5	-95.2	-43.82	-46.51	-13	-33.51	H
15.000144	53.83	Pk	39.5	-95.2	-43.89	-45.76	-13	-32.76	V
High Channel, 3930MHz									
7.860822	53.92	Pk	35.9	-95.2	-46.16	-51.54	-13	-38.54	H
7.860423	53.64	Pk	35.9	-95.2	-46.18	-51.84	-13	-38.84	V
11.790775	52.71	Pk	38.5	-95.2	-43.89	-47.88	-13	-34.88	H
11.790377	52.63	Pk	38.5	-95.2	-43.94	-48.01	-13	-35.01	V
15.721525	52.49	Pk	40.5	-95.2	-43.27	-45.48	-13	-32.48	H
15.720330	52.15	Pk	40.5	-95.2	-43.25	-45.80	-13	-32.80	V

10.6. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 8

TEST PROCEDURE

KDB 971168 D01 /D02

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

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 #:	15175342
Date:	2024-09-24
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz									
6.999735	47.88	Pk	35.8	-95.2	-47.8	-59.32	-30	-29.32	H
7.038936	47.68	Pk	35.8	-95.2	-47.7	-59.42	-30	-29.42	V
10.405938	48.57	Pk	37.8	-95.2	-47.3	-56.13	-30	-26.13	H
10.492271	48.34	Pk	37.9	-95.2	-47.6	-56.56	-30	-26.56	V
14.000674	48.88	Pk	38.9	-95.2	-47.1	-54.52	-30	-24.52	H
14.073941	49.70	Pk	39.0	-95.2	-46.9	-53.40	-30	-23.40	V

10.6.2. 5G NR n77 (FCC Part 27 3700-3980MHz)

LIMITS

FCC: §27.53

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

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

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-10-21
Test Engineer:	45258
Configuration:	EUT only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	05-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.499534	54.53	Pk	35.7	-95.2	-46.80	-51.77	-13	-38.77	H
7.499135	55.52	Pk	35.7	-95.2	-46.79	-50.77	-13	-37.77	V
11.250237	53.51	Pk	37.9	-95.2	-44.88	-48.67	-13	-35.67	H
11.249441	52.63	Pk	37.9	-95.2	-44.84	-49.51	-13	-36.51	V
15.000543	53.76	Pk	39.5	-95.2	-43.82	-45.76	-13	-32.76	H
15.000941	53.17	Pk	39.5	-95.2	-43.76	-46.29	-13	-33.29	V
Mid Channel, 3840MHz									
7.682369	53.71	Pk	35.8	-95.2	-45.96	-51.65	-13	-38.65	H
7.680377	52.93	Pk	35.8	-95.2	-46.04	-52.51	-13	-39.51	V
11.519510	52.53	Pk	38.2	-95.2	-44.57	-49.04	-13	-36.04	H
11.517917	53.96	Pk	38.2	-95.2	-44.76	-47.80	-13	-34.80	V
15.363424	53.20	Pk	40.0	-95.2	-43.58	-45.58	-13	-32.58	H
15.361432	52.38	Pk	40.0	-95.2	-43.55	-46.37	-13	-33.37	V
High Channel, 3930MHz									
7.861618	55.80	Pk	35.9	-95.2	-46.13	-49.63	-13	-36.63	H
7.861220	53.17	Pk	35.9	-95.2	-46.14	-52.27	-13	-39.27	V
11.790377	51.97	Pk	38.5	-95.2	-43.94	-48.67	-13	-35.67	H
11.789979	53.05	Pk	38.5	-95.2	-43.99	-47.64	-13	-34.64	V
15.721127	53.17	Pk	40.5	-95.2	-43.26	-44.79	-13	-31.79	H
15.724314	53.21	Pk	40.5	-95.2	-43.42	-44.91	-13	-31.91	V

10.7. FIELD STRENGTH OF SPURIOUS RADIATION, ANT9

TEST PROCEDURE

KDB 971168 D01 /D02

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

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 #:	15175342
Date:	2024-09-24
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz									
7.011869	48.23	Pk	35.8	-95.2	-47.71	-58.88	-30	-28.88	H
7.028202	47.83	Pk	35.8	-95.2	-47.70	-59.27	-30	-29.27	V
10.478738	48.11	Pk	37.9	-95.2	-47.43	-56.62	-30	-26.62	H
10.508138	49.16	Pk	37.9	-95.2	-47.60	-55.74	-30	-25.74	V
14.020274	48.68	Pk	38.9	-95.2	-47.10	-54.72	-30	-24.72	H
14.103807	48.90	Pk	39.1	-95.2	-47.00	-54.20	-30	-24.20	V

10.7.2. 5G NR n77 (FCC Part 27 3700-3980MHz)

LIMITS

FCC: §27.53

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

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

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	15175342
Date:	2024-10-21
Test Engineer:	45258
Configuration:	EUT Only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	05-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.498737	54.23	Pk	35.7	-95.2	-46.79	-52.06	-13	-39.06	H
7.500330	54.10	Pk	35.7	-95.2	-46.86	-52.26	-13	-39.26	V
11.249042	54.43	Pk	37.9	-95.2	-44.79	-47.66	-13	-34.66	H
11.250636	52.45	Pk	37.9	-95.2	-44.82	-49.67	-13	-36.67	V
15.000543	52.82	Pk	39.5	-95.2	-43.82	-46.70	-13	-33.70	H
15.000543	53.11	Pk	39.5	-95.2	-43.82	-46.41	-13	-33.41	V
Mid Channel, 3840MHz									
7.680377	53.12	Pk	35.8	-95.2	-46.04	-52.32	-13	-39.32	H
7.679979	53.91	Pk	35.8	-95.2	-45.98	-51.47	-13	-38.47	V
11.521900	52.43	Pk	38.2	-95.2	-44.59	-49.16	-13	-36.16	H
11.519909	51.82	Pk	38.2	-95.2	-44.50	-49.68	-13	-36.68	V
15.361034	52.68	Pk	40.0	-95.2	-43.52	-46.04	-13	-33.04	H
15.360237	52.79	Pk	40.0	-95.2	-43.74	-46.15	-13	-33.15	V
High Channel, 3930MHz									
7.858033	54.26	Pk	35.9	-95.2	-46.06	-51.10	-13	-38.10	H
7.860423	53.39	Pk	35.9	-95.2	-46.18	-52.09	-13	-39.09	V
11.789580	53.22	Pk	38.5	-95.2	-44.04	-47.52	-13	-34.52	H
11.790377	52.15	Pk	38.5	-95.2	-43.94	-48.49	-13	-35.49	V
15.720729	51.79	Pk	40.5	-95.2	-43.25	-46.16	-13	-33.16	H
15.720729	52.35	Pk	40.5	-95.2	-43.25	-45.60	-13	-32.60	V

11. SETUP PHOTOS

Please refer to 15175342-EP1V1 Setup Photo Report for setup photos.

END OF REPORT