

5G NR n7 BPSK (40MHz BANDWIDTH)

Band	7	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2500	2570		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)			
Temperature	Voltage					
Normal (20°C)	Normal	2500.6042	2569.4113			
Extreme (50°C)		2500.6042	2569.4113	-3.68	-0.001	Yes
Extreme (40°C)		2500.6042	2569.4113	-3.34	-0.001	Yes
Extreme (30°C)		2500.6042	2569.4113	-5.41	-0.002	Yes
Extreme (10°C)		2500.6042	2569.4113	-4.51	-0.002	Yes
Extreme (0°C)		2500.6042	2569.4113	-5.88	-0.002	Yes
Extreme (-10°C)		2500.6042	2569.4113	-3.7	-0.001	Yes
Extreme (-20°C)		2500.6042	2569.4113	-3.99	-0.002	Yes
Extreme (-30°C)		2500.6042	2569.4113	-4.04	-0.002	Yes
20°C	15%	2500.6042	2569.4113	-3.67	-0.001	Yes
	-15%	2500.6042	2569.4113	-3.25	-0.001	Yes
	End Point Voltage	2500.6042	2569.4113	-3.92	-0.002	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.

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LTE BAND 12 QPSK (10MHz BANDWIDTH)

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	699.5291	715.4784			
Extreme (50°C)		699.5231	715.4698	-1.0	-0.001	Yes
Extreme (40°C)		699.5231	715.4698	-0.5	-0.001	Yes
Extreme (30°C)		699.5231	715.4698	0.7	0.001	Yes
Extreme (10°C)		699.5231	715.4698	1.2	0.002	Yes
Extreme (0°C)		699.5231	715.4698	0.5	0.001	Yes
Extreme (-10°C)		699.5231	715.4698	2.0	0.003	Yes
Extreme (-20°C)		699.5231	715.4698	1.2	0.002	Yes
Extreme (-30°C)		699.5231	715.4698	1.7	0.002	Yes
20°C	15%	699.5231	715.4698	0.5	0.001	Yes
	-15%	699.5231	715.4698	3.0	0.004	Yes
	End Point Voltage	699.5231	715.4698	2.1	0.003	Yes

5G NR n12 BPSK (15MHz BANDWIDTH)

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	699.4231	714.8254			
Extreme (50°C)		699.4231	714.8254	1.35	0.002	Yes
Extreme (40°C)		699.4231	714.8254	1.15	0.002	Yes
Extreme (30°C)		699.4231	714.8254	1.33	0.002	Yes
Extreme (10°C)		699.4231	714.8254	1.17	0.002	Yes
Extreme (0°C)		699.4231	714.8254	1.01	0.001	Yes
Extreme (-10°C)		699.4231	714.8254	-1.16	-0.002	Yes
Extreme (-20°C)		699.4231	714.8254	-1.56	-0.002	Yes
Extreme (-30°C)		699.4231	714.8254	-1.34	-0.002	Yes
20°C	15%	699.4231	714.8254	-1.53	-0.002	Yes
	-15%	699.4231	714.8254	-1.37	-0.002	Yes
	End Point Voltage	699.4231	714.8254	-1.27	-0.002	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.

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QPSK (10MHz BANDWIDTH)

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	777.5314	786.4892			
Extreme (50°C)		777.5316	786.4894	2.2	0.003	Yes
Extreme (40°C)		777.5316	786.4894	1.1	0.001	Yes
Extreme (30°C)		777.5316	786.4894	1.8	0.002	Yes
Extreme (10°C)		777.5316	786.4894	1.4	0.002	Yes
Extreme (0°C)		777.5316	786.4894	1.0	0.001	Yes
Extreme (-10°C)		777.5316	786.4894	1.8	0.002	Yes
Extreme (-20°C)		777.5316	786.4894	2.0	0.003	Yes
Extreme (-30°C)		777.5316	786.4894	2.2	0.003	Yes
20°C	15%	777.5316	786.4894	3.7	0.005	Yes
	-15%	777.5316	786.4894	2.8	0.004	Yes
	End Point Voltage	777.5316	786.4894	4.4	0.006	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.

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LTE BAND 14 QPSK (10MHz BANDWIDTH)

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	788.5212	797.4999			
Extreme (50°C)		788.5217	797.5384	2.2	0.003	Yes
Extreme (40°C)		788.5217	797.5384	1.1	0.001	Yes
Extreme (30°C)		788.5217	797.5384	1.3	0.002	Yes
Extreme (10°C)		788.5217	797.5384	1.2	0.002	Yes
Extreme (0°C)		788.5217	797.5384	1.7	0.002	Yes
Extreme (-10°C)		788.5217	797.5384	1.9	0.002	Yes
Extreme (-20°C)		788.5217	797.5384	2.1	0.003	Yes
Extreme (-30°C)		788.5217	797.5384	2.7	0.003	Yes
20°C	15%	788.5217	797.5384	2.7	0.003	Yes
	-15%	788.5217	797.5384	4.0	0.005	Yes
	End Point Voltage	788.5217	797.5384	2.9	0.004	Yes

5G NR n14 BPSK (10MHz BANDWIDTH)

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	788.3402	797.2730			
Extreme (50°C)		788.3402	797.2730	1.85	0.002	Yes
Extreme (40°C)		788.3402	797.2730	1.26	0.002	Yes
Extreme (30°C)		788.3402	797.2730	1.61	0.002	Yes
Extreme (10°C)		788.3402	797.2730	1.09	0.001	Yes
Extreme (0°C)		788.3402	797.2730	1.36	0.002	Yes
Extreme (-10°C)		788.3402	797.2730	1.01	0.001	Yes
Extreme (-20°C)		788.3402	797.2730	1.24	0.002	Yes
Extreme (-30°C)		788.3402	797.2730	1.73	0.002	Yes
20°C	15%	788.3402	797.2730	1.38	0.002	Yes
	-15%	788.3402	797.2730	1.43	0.002	Yes
	End Point Voltage	788.3402	797.2730	1.52	0.002	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.

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LTE BAND 17 QPSK (10MHz BANDWIDTH)

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	704.2543	715.4932			
Extreme (50°C)		704.5180	715.4877	-0.8	-0.001	Yes
Extreme (40°C)		704.5180	715.4877	1.5	0.002	Yes
Extreme (30°C)		704.5180	715.4877	0.5	0.001	Yes
Extreme (10°C)		704.5180	715.4877	0.2	0.000	Yes
Extreme (0°C)		704.5180	715.4877	-2.3	-0.003	Yes
Extreme (-10°C)		704.5180	715.4877	1.0	0.001	Yes
Extreme (-20°C)		704.5180	715.4877	1.3	0.002	Yes
Extreme (-30°C)		704.5180	715.4877	1.1	0.002	Yes
20°C	15%	704.5180	715.4877	1.5	0.002	Yes
	-15%	704.5180	715.4877	0.8	0.001	Yes
	End Point Voltage	704.5180	715.4877	1.3	0.002	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.

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LTE BAND 25 QPSK (20MHz BANDWIDTH)

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	1851.0739	1913.9652			
Extreme (50°C)		1851.0739	1913.9652	2.5	0.001	Yes
Extreme (40°C)		1851.0739	1913.9652	1.6	0.001	Yes
Extreme (30°C)		1851.0739	1913.9652	-1.2	-0.001	Yes
Extreme (10°C)		1851.0739	1913.9652	-1.4	-0.001	Yes
Extreme (0°C)		1851.0739	1913.9652	-2.1	-0.001	Yes
Extreme (-10°C)		1851.0739	1913.9652	-1.0	-0.001	Yes
Extreme (-20°C)		1851.0739	1913.9652	0.7	0.000	Yes
Extreme (-30°C)		1851.0739	1913.9652	0.4	0.000	Yes
20°C	15%	1851.0739	1913.9652	2.7	0.001	Yes
	-15%	1851.0739	1913.9652	3.1	0.002	Yes
	End Point Voltage	1851.0739	1913.9652	2.5	0.001	Yes

5G NR n25 BPSK (40MHz BANDWIDTH)

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	1850.5947	1914.3445			
Extreme (50°C)		1850.5947	1914.3445	-1.33	-0.001	Yes
Extreme (40°C)		1850.5947	1914.3445	-2.05	-0.001	Yes
Extreme (30°C)		1850.5947	1914.3445	-1.44	-0.001	Yes
Extreme (10°C)		1850.5947	1914.3445	1.65	0.001	Yes
Extreme (0°C)		1850.5947	1914.3445	-2.42	-0.001	Yes
Extreme (-10°C)		1850.5947	1914.3445	-2.62	-0.001	Yes
Extreme (-20°C)		1850.5947	1914.3445	-2.29	-0.001	Yes
Extreme (-30°C)		1850.5947	1914.3445	-3.3	-0.002	Yes
20°C	15%	1850.5947	1914.3445	-2.98	-0.002	Yes
	-15%	1850.5947	1914.3445	-3.13	-0.002	Yes
	End Point Voltage	1850.5947	1914.3445	-3.42	-0.002	Yes

9.4.7. LTE BAND 26(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.

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LTE BAND 26 QPSK (10MHz BANDWIDTH)

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	814.5308	823.4920			
Extreme (50°C)		814.5308	823.4920	0.4	0.000	Yes
Extreme (40°C)		814.5308	823.4920	2.5	0.003	Yes
Extreme (30°C)		814.5308	823.4920	1.2	0.001	Yes
Extreme (10°C)		814.5308	823.4920	1.6	0.002	Yes
Extreme (0°C)		814.5308	823.4920	-1.0	-0.001	Yes
Extreme (-10°C)		814.5308	823.4920	1.3	0.002	Yes
Extreme (-20°C)		814.5308	823.4920	0.8	0.001	Yes
Extreme (-30°C)		814.5308	823.4920	1.2	0.001	Yes
20°C	15%	814.5308	823.4920	3.5	0.004	Yes
	-15%	814.5308	823.4920	3.1	0.004	Yes
	End Point Voltage	814.5308	823.4920	2.8	0.003	Yes

5G NR n26 BPSK (10MHz BANDWIDTH)

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	814.3446	823.2817			
Extreme (50°C)		814.3446	823.2817	-2.57	-0.003	Yes
Extreme (40°C)		814.3446	823.2817	-2.55	-0.003	Yes
Extreme (30°C)		814.3446	823.2817	-3.39	-0.004	Yes
Extreme (10°C)		814.3446	823.2817	-2.81	-0.003	Yes
Extreme (0°C)		814.3446	823.2817	-2.37	-0.003	Yes
Extreme (-10°C)		814.3446	823.2817	-2.11	-0.003	Yes
Extreme (-20°C)		814.3446	823.2817	-2.74	-0.003	Yes
Extreme (-30°C)		814.3446	823.2817	-2.81	-0.003	Yes
20°C	15%	814.3446	823.2817	-2.76	-0.003	Yes
	-15%	814.3446	823.2817	-2.59	-0.003	Yes
	End Point Voltage	814.3446	823.2817	-2.42	-0.003	Yes

9.4.8. LTE BAND 26(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.

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LTE BAND 26 QPSK (10MHz BANDWIDTH)

Band	26	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		824	849		2.5	
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	824.5053	848.7793			
Extreme (50°C)		824.5053	848.7793	1.0	0.001	Yes
Extreme (40°C)		824.5053	848.7793	1.2	0.001	Yes
Extreme (30°C)		824.5053	848.7793	0.3	0.000	Yes
Extreme (10°C)		824.5053	848.7793	1.5	0.002	Yes
Extreme (0°C)		824.5053	848.7793	-0.5	-0.001	Yes
Extreme (-10°C)		824.5053	848.7793	1.5	0.002	Yes
Extreme (-20°C)		824.5053	848.7793	1.3	0.002	Yes
Extreme (-30°C)		824.5053	848.7793	1.7	0.002	Yes
20°C	15%	824.5053	848.7793	1.3	0.002	Yes
	-15%	824.5053	848.7793	2.2	0.003	Yes
	End Point Voltage	824.5053	848.7793	3.2	0.004	Yes

5G NR n26 BPSK (20MHz BANDWIDTH)

Band	26	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		824	849		2.5	
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	824.5319	847.3798			
Extreme (50°C)		824.5319	847.3798	1.13	0.001	Yes
Extreme (40°C)		824.5319	847.3798	-1.11	-0.001	Yes
Extreme (30°C)		824.5319	847.3798	1.29	0.002	Yes
Extreme (10°C)		824.5319	847.3798	1.14	0.001	Yes
Extreme (0°C)		824.5319	847.3798	1.02	0.001	Yes
Extreme (-10°C)		824.5319	847.3798	1.65	0.002	Yes
Extreme (-20°C)		824.5319	847.3798	1.83	0.002	Yes
Extreme (-30°C)		824.5319	847.3798	1.06	0.001	Yes
20°C	15%	824.5319	847.3798	1.08	0.001	Yes
	-15%	824.5319	847.3798	1.13	0.001	Yes
	End Point Voltage	824.5319	847.3798	1.32	0.002	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.

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LTE BAND 30 QPSK (10MHz BANDWIDTH)

Band	30	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2305	2315			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	2305.5237	2314.4777			
Extreme (50°C)		2305.5237	2314.4777	-2.0	-0.001	Yes
Extreme (40°C)		2305.5237	2314.4777	-1.5	-0.001	Yes
Extreme (30°C)		2305.5237	2314.4777	-0.4	0.000	Yes
Extreme (10°C)		2305.5237	2314.4777	-1.2	-0.001	Yes
Extreme (0°C)		2305.5237	2314.4777	-1.8	-0.001	Yes
Extreme (-10°C)		2305.5237	2314.4777	0.7	0.000	Yes
Extreme (-20°C)		2305.5237	2314.4777	1.6	0.001	Yes
Extreme (-30°C)		2305.5237	2314.4777	0.6	0.000	Yes
20°C	15%	2305.5237	2314.4777	1.2	0.001	Yes
	-15%	2305.5237	2314.4777	3.4	0.001	Yes
	End Point Voltage	2305.5237	2314.4777	2.6	0.001	Yes

5G NR n30 BPSK (10MHz BANDWIDTH)

Band	30	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2305	2315			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	2305.3167	2314.2679			
Extreme (50°C)		2305.3166	2314.2679	-4.58	-0.002	Yes
Extreme (40°C)		2305.3166	2314.2679	-4.06	-0.002	Yes
Extreme (30°C)		2305.3166	2314.2679	-4.3	-0.002	Yes
Extreme (10°C)		2305.3166	2314.2679	-4.77	-0.002	Yes
Extreme (0°C)		2305.3166	2314.2679	-3.95	-0.002	Yes
Extreme (-10°C)		2305.3166	2314.2679	-3.59	-0.002	Yes
Extreme (-20°C)		2305.3166	2314.2679	-4.08	-0.002	Yes
Extreme (-30°C)		2305.3166	2314.2679	-3.13	-0.001	Yes
20°C	15%	2305.3166	2314.2679	-3.57	-0.002	Yes
	-15%	2305.3166	2314.2679	-4.31	-0.002	Yes
	End Point Voltage	2305.3166	2314.2679	-3.95	-0.002	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.

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LTE BAND 41 QPSK (20MHz BANDWIDTH)

Band	41	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2496	2690		0	
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	2497.0074	2689.4420			
Extreme (50°C)		2497.0074	2689.4420	-2.7	-0.001	Yes
Extreme (40°C)		2497.0074	2689.4420	-2.4	-0.001	Yes
Extreme (30°C)		2497.0074	2689.4420	-2.1	-0.001	Yes
Extreme (10°C)		2497.0074	2689.4420	-2.7	-0.001	Yes
Extreme (0°C)		2497.0074	2689.4420	-3.7	-0.001	Yes
Extreme (-10°C)		2497.0074	2689.4420	-3.2	-0.001	Yes
Extreme (-20°C)		2497.0074	2689.4420	-3.5	-0.001	Yes
Extreme (-30°C)		2497.0074	2689.4420	-3.1	-0.001	Yes
20°C	15%	2497.0074	2689.4420	-3.2	-0.001	Yes
	-15%	2497.0074	2689.4420	-4.1	-0.002	Yes
	End Point Voltage	2497.0074	2689.4420	-3.8	-0.001	Yes

5G NR n41 BPSK (100MHz BANDWIDTH)

Band	41	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2496	2690		0	
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	2497.1621	2687.7552			
Extreme (50°C)		2497.1621	2687.7552	-5.78	-0.002	Yes
Extreme (40°C)		2497.1621	2687.7552	-5.95	-0.002	Yes
Extreme (30°C)		2497.1621	2687.7552	-6.54	-0.003	Yes
Extreme (10°C)		2497.1621	2687.7552	-6.86	-0.003	Yes
Extreme (0°C)		2497.1621	2687.7552	-7.07	-0.003	Yes
Extreme (-10°C)		2497.1621	2687.7552	-6.64	-0.003	Yes
Extreme (-20°C)		2497.1621	2687.7552	-6.44	-0.002	Yes
Extreme (-30°C)		2497.1621	2687.7552	-5.67	-0.002	Yes
20°C	15%	2497.1621	2687.7552	-6.37	-0.002	Yes
	-15%	2497.1621	2687.7552	-7.38	-0.003	Yes
	End Point Voltage	2497.1621	2687.7552	-6.87	-0.003	Yes

9.4.11. LTE BAND 66 AND 5G NR n66

LIMITS

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

Test Engineer ID:	39004	Test Date:	2024-04-10
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LTE BAND 66 QPSK (20MHz BANDWIDTH)

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	1711.0725	1778.9652			
Extreme (50°C)		1711.0725	1778.9652	1.2	0.001	Yes
Extreme (40°C)		1711.0725	1778.9652	-1.2	-0.001	Yes
Extreme (30°C)		1711.0725	1778.9652	2.0	0.001	Yes
Extreme (10°C)		1711.0725	1778.9652	-1.0	-0.001	Yes
Extreme (0°C)		1711.0725	1778.9652	-3.1	-0.002	Yes
Extreme (-10°C)		1711.0725	1778.9652	1.2	0.001	Yes
Extreme (-20°C)		1711.0725	1778.9652	2.2	0.001	Yes
Extreme (-30°C)		1711.0725	1778.9652	3.1	0.002	Yes
20°C	15%	1711.0725	1778.9652	3.0	0.002	Yes
	-15%	1711.0725	1778.9652	2.8	0.002	Yes
	End Point Voltage	1711.0725	1778.9652	4.2	0.002	Yes

5G NR n66 BPSK (40MHz BANDWIDTH)

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	1710.6400	1779.3412			
Extreme (50°C)		1710.6400	1779.3412	-4.4	-0.003	Yes
Extreme (40°C)		1710.6400	1779.3412	-4.91	-0.003	Yes
Extreme (30°C)		1710.6400	1779.3412	-3.84	-0.002	Yes
Extreme (10°C)		1710.6400	1779.3412	-4.42	-0.003	Yes
Extreme (0°C)		1710.6400	1779.3412	-4.06	-0.002	Yes
Extreme (-10°C)		1710.6400	1779.3412	-5.84	-0.003	Yes
Extreme (-20°C)		1710.6400	1779.3412	-4.36	-0.002	Yes
Extreme (-30°C)		1710.6400	1779.3412	-4.05	-0.002	Yes
20°C	15%	1710.6400	1779.3412	-4.85	-0.003	Yes
	-15%	1710.6400	1779.3412	-4.35	-0.002	Yes
	End Point Voltage	1710.6400	1779.3412	-5.39	-0.003	Yes

9.4.12. 5G NR n70

LIMITS

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

Test Engineer ID:	27342	Test Date:	2024-03-15
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5G NR n70 BPSK (15MHz BANDWIDTH)

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	1695.4333	1708.8439			
Extreme (50°C)		1695.4333	1708.8439	-5.63	-0.003	Yes
Extreme (40°C)		1695.4333	1708.8439	-5.59	-0.003	Yes
Extreme (30°C)		1695.4333	1708.8439	-5.87	-0.003	Yes
Extreme (10°C)		1695.4333	1708.8439	-4.46	-0.003	Yes
Extreme (0°C)		1695.4333	1708.8439	-4.79	-0.003	Yes
Extreme (-10°C)		1695.4333	1708.8439	-3.93	-0.002	Yes
Extreme (-20°C)		1695.4333	1708.8439	-3.15	-0.002	Yes
Extreme (-30°C)		1695.4333	1708.8439	-3.92	-0.002	Yes
20°C	15%	1695.4333	1708.8439	-3.98	-0.002	Yes
	-15%	1695.4333	1708.8439	-3.28	-0.002	Yes
	End Point Voltage	1695.4333	1708.8439	-4.31	-0.003	Yes

9.4.13. LTE BAND 71 AND 5G NR n71

LIMITS

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

Test Engineer ID:	39004	Test Date:	2024-04-10
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LTE BAND 71 QPSK (20MHz BANDWIDTH)

Band	71		Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition			663	698		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
			Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)			
Temperature	Voltage	Normal					
Normal (20°C)							
Extreme (50°C)					1.8	0.003	Yes
Extreme (40°C)					0.5	0.001	Yes
Extreme (30°C)					-1.1	-0.002	Yes
Extreme (10°C)					-1.3	-0.002	Yes
Extreme (0°C)					-2.6	-0.004	Yes
Extreme (-10°C)					-1.4	-0.002	Yes
Extreme (-20°C)					-0.8	-0.001	Yes
Extreme (-30°C)					1.3	0.002	Yes
20°C	15%		664.0623	696.9507	-1.7	-0.002	Yes
	-15%		664.0623	696.9507	-2.2	-0.003	Yes
	End Point Voltage		664.0623	696.9507	-1.9	-0.003	Yes

5G NR n71 BPSK (20MHz BANDWIDTH)

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	663.5324	696.3665			
Extreme (50°C)		663.5324	696.3665	0.76	0.001	Yes
Extreme (40°C)		663.5324	696.3665	1.31	0.002	Yes
Extreme (30°C)		663.5324	696.3665	1.05	0.002	Yes
Extreme (10°C)		663.5324	696.3665	-3.85	-0.006	Yes
Extreme (0°C)		663.5324	696.3665	1.23	0.002	Yes
Extreme (-10°C)		663.5324	696.3665	1.13	0.002	Yes
Extreme (-20°C)		663.5324	696.3665	1.28	0.002	Yes
Extreme (-30°C)		663.5324	696.3665	1.55	0.002	Yes
20°C	15%	663.5324	696.3665	1.83	0.003	Yes
	-15%	663.5324	696.3665	1.28	0.002	Yes
	End Point Voltage	663.5324	696.3665	1.16	0.002	Yes

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

LIMITS

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

Test Engineer ID:	27342	Test Date:	2024-03-15
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5G NR n77 BPSK (100MHz BANDWIDTH)

Band	77	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		3450	3550			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	3451.1788	3547.7203			
Extreme (50°C)		3451.1788	3547.7203	-7.31	-0.002	Yes
Extreme (40°C)		3451.1788	3547.7203	-6.96	-0.002	Yes
Extreme (30°C)		3451.1788	3547.7203	-8.13	-0.002	Yes
Extreme (10°C)		3451.1788	3547.7203	-6.61	-0.002	Yes
Extreme (0°C)		3451.1788	3547.7203	-8.97	-0.003	Yes
Extreme (-10°C)		3451.1788	3547.7203	-9.89	-0.003	Yes
Extreme (-20°C)		3451.1788	3547.7203	-9.5	-0.003	Yes
Extreme (-30°C)		3451.1788	3547.7203	-9.51	-0.003	Yes
20°C	15%	3451.1788	3547.7203	-8.65	-0.002	Yes
	-15%	3451.1788	3547.7203	-8.36	-0.002	Yes
	End Point Voltage	3451.1788	3547.7203	-5.98	-0.002	Yes

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

LIMITS

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

Test Engineer ID:	27342	Test Date:	2024-03-15
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5G NR n77 BPSK (100MHz BANDWIDTH)

Band	77	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		3700	3980			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	3701.0882	3977.7834			
Extreme (50°C)		3701.0882	3977.7834	-3.61	-0.001	Yes
Extreme (40°C)		3701.0882	3977.7834	-3.97	-0.001	Yes
Extreme (30°C)		3701.0882	3977.7834	-3.87	-0.001	Yes
Extreme (10°C)		3701.0882	3977.7834	-3.11	-0.001	Yes
Extreme (0°C)		3701.0882	3977.7834	-3.95	-0.001	Yes
Extreme (-10°C)		3701.0882	3977.7834	-4.01	-0.001	Yes
Extreme (-20°C)		3701.0882	3977.7834	-4.34	-0.001	Yes
Extreme (-30°C)		3701.0882	3977.7834	-3.32	-0.001	Yes
20°C	15%	3701.0882	3977.7834	-4.25	-0.001	Yes
	-15%	3701.0882	3977.7834	-4.58	-0.001	Yes
	End Point Voltage	3701.0882	3977.7834	-4.38	-0.001	Yes

9.5.1. LTE BAND 7 AND 5G NR n7

Test Engineer ID:	39004 & 27342	Test Date:	2024-03-30 and 2024-04-02
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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	32.10	27.51	4.59
					16QAM	32.10	26.56	5.54
	10MHz		50	0	QPSK	32.30	27.45	4.85
					16QAM	32.29	26.47	5.82
	15MHz		75	0	QPSK	32.20	27.34	4.86
					16QAM	32.16	26.36	5.80
	20MHz		100	0	QPSK	32.42	27.32	5.10
					16QAM	32.37	26.35	6.02
5G NR Band n7	5MHz		25	0	BPSK	30.36	26.11	4.25
					16QAM	31.34	24.69	6.65
	10MHz		50	0	BPSK	30.74	26.07	4.67
					16QAM	31.47	24.62	6.85
	15MHz		75	0	BPSK	30.88	26.23	4.65
					16QAM	31.63	24.79	6.84
	20MHz		100	0	BPSK	31.03	26.29	4.74
					16QAM	32.37	26.35	6.02
	25MHz	128	0	BPSK	30.58	26.21	4.37	
				16QAM	31.75	24.87	6.88	
	30MHz	160	0	BPSK	31.39	26.32	5.07	
				16QAM	32.09	24.63	7.46	
	35MHz	180	0	BPSK	32.49	27.28	5.21	
				16QAM	34.00	26.26	7.74	
	40MHz	216	0	BPSK	35.06	26.15	8.91	
				16QAM	31.23	26.08	5.15	
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:	39004 & 27342	Test Date:	2024-03-30 and 2024-04-02
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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	705.5	6	0	QPSK	30.81	26.26	4.55	
					16QAM	30.81	25.35	5.46	
	3MHz		15	0	QPSK	30.84	26.25	4.59	
					16QAM	30.87	25.30	5.57	
	5MHz		25	0	QPSK	30.91	26.28	4.63	
					16QAM	30.93	25.30	5.63	
	10MHz		50	0	QPSK	31.17	26.29	4.88	
					16QAM	31.16	25.31	5.85	
5G NR Band n12	5MHz		25	0	BPSK	29.96	25.76	4.20	
					16QAM	31.23	24.44	6.79	
	10MHz		50	0	BPSK	30.28	25.80	4.48	
					16QAM	31.21	24.37	6.84	
	15MHz		75	0	BPSK	30.57	26.07	4.50	
					16QAM	31.13	24.37	6.76	
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:	39004	Test Date:	2024-06-05
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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	
Band 13	5MHz	782.0	25	0	QPSK	31.26	26.56	4.70
				16QAM	31.31	25.58	5.73	
	10MHz	50	0	QPSK	32.40	26.60	5.80	
				16QAM	32.50	25.62	6.88	
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:	39004 & 27342	Test Date:	2024-03-30 and 2024-04-02
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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	30.86	26.27	4.59
					16QAM	30.92	25.30	5.62
	10MHz		50	0	QPSK	31.09	26.29	4.80
					16QAM	31.09	25.31	5.78
5G NR Band n14	5MHz		25	0	BPSK	30.19	25.93	4.26
					16QAM	31.36	24.51	6.85
	10MHz		50	0	BPSK	30.42	25.98	4.44
					16QAM	31.29	24.48	6.81
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:	39004	Test Date:	2024-03-30
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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	31.09	26.28	4.81
					16QAM	31.05	25.30	5.75
	10MHz		50	0	QPSK	31.42	26.30	5.12
					16QAM	31.35	25.30	6.05
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:	39004 & 27342	Test Date:	2024-03-30 and 2024-04-02
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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	31.16	26.71	4.45
					16QAM	31.21	25.81	5.40
	3MHz		15	0	QPSK	31.28	26.75	4.53
					16QAM	31.26	25.78	5.48
	5MHz		25	0	QPSK	31.34	25.79	5.55
					16QAM	31.49	25.08	6.41
	10MHz		50	0	QPSK	31.61	26.77	4.84
					16QAM	31.46	25.80	5.66
	15MHz		75	0	QPSK	31.43	26.64	4.79
					16QAM	31.40	25.68	5.72
20MHz	100		0	QPSK	31.52	26.64	4.88	
				16QAM	31.50	25.68	5.82	
5G NR Band n25	5MHz		25	0	BPSK	30.29	25.98	4.31
					16QAM	31.57	24.70	6.87
	10MHz		50	0	BPSK	30.83	26.11	4.72
					16QAM	31.73	24.77	6.96
	15MHz		75	0	BPSK	30.78	26.24	4.54
					16QAM	31.69	24.86	6.83
	20MHz		100	0	BPSK	30.83	26.21	4.62
					16QAM	31.68	24.81	6.87
	25MHz	128	0	BPSK	30.69	26.33	4.36	
				16QAM	31.68	24.90	6.78	
	30MHz	160	0	BPSK	31.91	27.07	4.84	
				16QAM	33.39	26.11	7.28	
	35MHz	180	0	BPSK	31.18	26.19	4.99	
				16QAM	33.60	25.68	7.92	
40MHz	216	0	BPSK	34.49	25.97	8.52		
			16QAM	29.39	24.71	4.68		
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:	39004 & 27342	Test Date:	2024-03-30 and 2024-04-02
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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	31.65	26.03	5.62	
					16QAM	31.63	25.10	6.53	
	3MHz		15	0	QPSK	30.71	26.04	4.67	
					16QAM	30.69	25.12	5.57	
	5MHz		25	0	QPSK	30.90	25.12	5.78	
					16QAM	30.86	24.75	6.11	
	10MHz		50	0	QPSK	31.48	26.10	5.38	
					16QAM	31.51	25.11	6.40	
5G NR Band n26 (FCC Part 90s)	5MHz		25	0	BPSK	30.10	25.91	4.19	
					16QAM	31.28	24.53	6.75	
	10MHz		50	0	BPSK	30.60	26.01	4.59	
					16QAM	31.52	24.47	7.05	
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:	39004 & 27342	Test Date:	2024-04-19 and 2024-04-02
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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	31.95	26.78	5.17
	3MHz		15	0	16QAM	30.99	26.49	4.50
					QPSK	31.26	26.86	4.40
			16QAM	29.92	26.47	3.45		
				5MHz	25	0	QPSK	31.25
	16QAM		30.12				26.56	3.56
5G NR Band n26 (FCC Part 22)	10MHz		50	0	QPSK	31.15	26.76	4.39
					16QAM	30.01	26.52	3.49
	5MHz		25	0	BPSK	30.19	25.88	4.31
					16QAM	31.31	24.50	6.81
	10MHz		50	0	BPSK	30.60	25.96	4.64
					16QAM	31.43	24.53	6.90
	15MHz	75	0	BPSK	30.80	26.04	4.76	
				16QAM	31.60	24.54	7.06	
20MHz	100	0	BPSK	30.67	26.00	4.67		
			16QAM	31.70	24.65	7.05		
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9.5.9. LTE BAND 30 AND 5G NR n30

Test Engineer ID:	39004 & 27342	Test Date:	2024-03-30 and 2024-04-02
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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	31.17	26.52	4.65	
					16QAM	31.13	25.56	5.57	
	10MHz		50	0	QPSK	31.61	26.56	5.05	
					16QAM	31.57	25.55	6.02	
5G NR Band n30	5MHz		25	0	BPSK	30.26	26.00	4.26	
					16QAM	31.56	24.66	6.90	
	10MHz		50	0	BPSK	30.62	26.02	4.60	
					16QAM	31.63	24.71	6.92	
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:	39004 & 27342	Test Date:	2024-03-30 and 2024-04-02
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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	34.57	22.41	*5.16
					16QAM	37.79	21.32	*9.47
	10MHz		50	0	QPSK	34.22	21.99	*5.23
					16QAM	37.27	21.59	*8.68
	15MHz		75	0	QPSK	37.09	20.91	*9.18
					16QAM	37.07	19.97	*10.1
	20MHz		100	0	QPSK	35.35	20.48	*7.87
					16QAM	34.57	21.06	*6.51
5G NR Band n41	10MHz		24	0	BPSK	32.98	29.57	3.41
					16QAM	33.09	27.74	5.35
	15MHz		36	0	BPSK	32.67	29.53	3.14
					16QAM	33.38	28.00	5.38
	20MHz		50	0	BPSK	32.82	29.68	3.14
					16QAM	33.43	28.08	5.35
	30MHz		75	0	BPSK	34.42	30.24	4.18
					16QAM	34.46	28.18	6.28
	40MHz	100	0	BPSK	33.82	28.71	5.11	
				16QAM	34.33	27.23	7.10	
	50MHz	128	0	BPSK	34.45	28.07	6.38	
				16QAM	34.63	26.54	8.09	
	60MHz	162	0	BPSK	33.53	26.98	6.55	
				16QAM	33.47	25.49	7.98	
	70MHz	180	0	BPSK	33.09	26.39	6.70	
				16QAM	33.98	25.00	8.98	
	80MHz	216	0	BPSK	32.36	25.59	6.77	
				16QAM	32.98	23.93	9.05	
	90MHz	243	0	BPSK	32.06	25.25	6.81	
				16QAM	32.45	23.60	8.85	
	100MHz	270	0	BPSK	31.79	24.61	7.18	
				16QAM	31.34	22.87	8.47	
Duty Cycle Correction Factor (dB) =			7.00					
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:	39004 & 27342	Test Date:	2024-02-08 and 2024-02-08
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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	31.28	26.76	4.52
			16QAM	31.32	25.86	5.46		
	3MHz		15	0	QPSK	31.19	26.68	4.51
			16QAM	31.22	25.68	5.54		
	5MHz		25	0	QPSK	31.30	26.66	4.64
			16QAM	31.27	25.72	5.55		
	10MHz		50	0	QPSK	31.35	25.73	5.62
			16QAM	31.40	24.63	6.77		
	15MHz		75	0	QPSK	31.16	26.53	4.63
			16QAM	31.17	25.57	5.60		
20MHz	100		0	QPSK	31.22	26.56	4.66	
	16QAM		31.26	25.60	5.66			
5G NR Band n66	5MHz		25	0	BPSK	30.38	26.13	4.25
			16QAM	31.67	24.83	6.84		
	10MHz		50	0	BPSK	30.84	26.26	4.58
			16QAM	31.73	24.90	6.83		
	15MHz		75	0	BPSK	30.89	26.38	4.51
			16QAM	31.85	25.05	6.80		
	20MHz		100	0	BPSK	30.85	26.36	4.49
			16QAM	31.85	24.97	6.88		
	25MHz	128	0	BPSK	30.64	26.39	4.25	
		16QAM	31.75	25.00	6.75			
	30MHz	160	0	BPSK	31.66	27.09	4.57	
		16QAM	32.72	25.65	7.07			
	35MHz	180	0	BPSK	31.07	26.52	4.55	
		16QAM	32.81	25.17	7.64			
40MHz	216	0	BPSK	31.07	26.24	4.83		
			16QAM	34.40	26.22	8.18		
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 (FCC)

Test Engineer ID:	27342	Test Date:	2024-04-09
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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	30.13	25.86	4.27
				16QAM	31.83	25.00	6.83	
	10MHz		50	0	BPSK	31.02	26.42	4.60
				16QAM	31.89	25.02	6.87	
	15MHz		75	0	BPSK	30.99	26.47	4.52
				16QAM	31.97	25.00	6.97	
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:	39004 & 27342	Test Date:	2024-04-01 and 2024-04-09
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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	680.3/683	25	0	QPSK	30.87	26.18	4.69
					16QAM	30.95	25.21	5.74
	10MHz		50	0	QPSK	31.00	26.18	4.82
					16QAM	31.06	25.23	5.83
	15MHz		75	0	QPSK	30.96	26.05	4.91
					16QAM	31.14	25.09	6.05
	20MHz		100	0	QPSK	31.26	26.09	5.17
					16QAM	31.52	25.11	6.41
5G NR Band n71	5MHz		24	0	BPSK	30.22	25.94	4.28
					16QAM	31.62	24.72	6.90
	10MHz		36	0	BPSK	30.55	26.07	4.48
					16QAM	31.58	24.72	6.86
	15MHz		50	0	BPSK	30.52	26.04	4.48
					16QAM	31.72	24.89	6.83
	20MHz		75	0	BPSK	30.68	26.20	4.48
					16QAM	31.70	24.89	6.81
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:	27342	Test Date:	2024-04-11
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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 n77	10MHz	3500.0	24	0	BPSK	33.54	29.07	4.47
					16QAM	34.42	27.53	6.89
	15MHz		36	0	BPSK	33.76	29.34	4.42
					16QAM	34.56	27.73	6.83
	20MHz		50	0	BPSK	33.60	29.31	4.29
					16QAM	34.72	27.82	6.90
	30MHz		75	0	BPSK	34.93	30.24	4.69
					16QAM	36.06	28.9	7.16
	40MHz		100	0	BPSK	34.00	29.53	4.47
					16QAM	35.55	27.97	7.58
	50MHz		128	0	BPSK	34.23	28.42	5.81
					16QAM	35.01	26.79	8.22
	60MHz		162	0	BPSK	32.98	26.98	6.00
					16QAM	34.00	25.35	8.65
	70MHz		180	0	BPSK	32.69	26.4	6.29
					16QAM	33.56	24.92	8.64
	80MHz		216	0	BPSK	32.04	25.52	6.52
					16QAM	33.01	24.02	8.99
	90MHz		243	0	BPSK	30.28	23.61	6.67
					16QAM	32.83	23.9	8.93
	100MHz		270	0	BPSK	32.55	25.18	7.37
					16QAM	34.16	24.59	9.57
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:	27342	Test Date:	2024-04-11
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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 n77	10MHz	3840.0	24	0	BPSK	33.64	29.22	4.42
					16QAM	34.62	27.97	6.65
	15MHz		36	0	BPSK	33.83	29.46	4.37
					16QAM	34.77	27.99	6.78
	20MHz		50	0	BPSK	33.76	29.47	4.29
					16QAM	34.81	27.98	6.83
	30MHz		75	0	BPSK	34.32	29.35	4.97
					16QAM	34.80	27.99	6.81
	40MHz		100	0	BPSK	32.92	28.33	4.59
					16QAM	33.71	26.21	7.50
	50MHz		128	0	BPSK	32.52	26.85	5.67
					16QAM	33.19	25.02	8.17
	60MHz		162	0	BPSK	32.34	25.77	6.57
					16QAM	32.16	24.14	8.02
	70MHz		180	0	BPSK	31.00	25.17	5.83
					16QAM	31.58	23.62	7.96
	80MHz		216	0	BPSK	30.91	24.36	6.55
					16QAM	32.06	22.82	9.24
	90MHz		243	0	BPSK	32.24	28.78	3.46
					16QAM	31.99	22.32	9.67
	100MHz		270	0	BPSK	30.98	23.91	7.07
					16QAM	32.53	23.38	9.15
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.

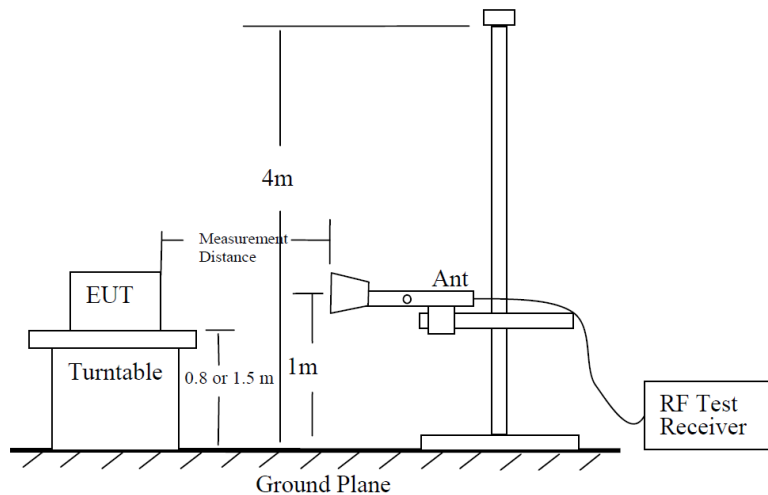


Figure 6 —Test site-up for radiated ERP and/or EIRP measurements

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.

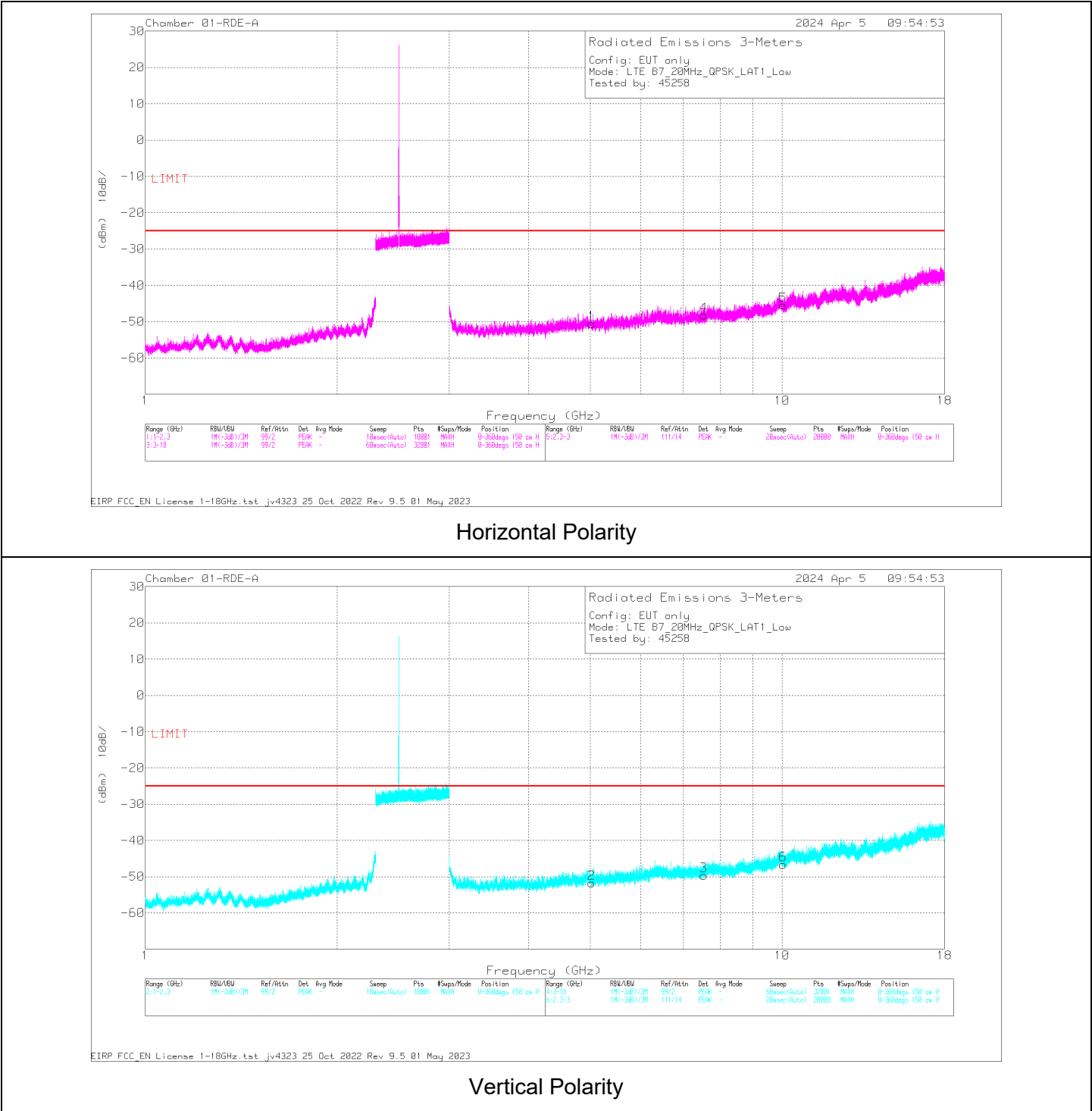
So, from d)

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

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	BRF 2495-2690MHz T1790 1-18GHz (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
1	5.020313	31.69	Pk	34.2	.8	-95.2	-22.1	-50.61	-25	-25.61	H
2	5.020313	30.55	Pk	34.2	.8	-95.2	-22.1	-51.75	-25	-26.75	V
4	7.530469	29.21	Pk	35.7	.3	-95.2	-18.3	-48.29	-25	-23.29	H
3	7.530469	27.89	Pk	35.7	.3	-95.2	-18.3	-49.61	-25	-24.61	V
5	10.040625	27.26	Pk	37.5	.7	-95.2	-15.8	-45.54	-25	-20.54	H
6	10.040625	26.16	Pk	37.5	.7	-95.2	-15.8	-46.64	-25	-21.64	V

Radiated Emissions

10.1. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 1

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

Both QPSK and 16QAM modes are tested, widest QPSK bandwidths results are reported as worst case for LTE bands.

Both BPSK and 16QAM modes are tested, widest BPSK bandwidths results are reported as worst case for 5G NRs

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 #:	14982479
Date:	4/5/2024
Test Engineer:	45258
Configuration:	EUT Only
Mode	LTE B7 QPSK 20MHz
Chamber #:	01-RDE-A4

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	BRF 2495-2690MHz T1790 1-18GHz (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2510MHz										
5.020313	31.69	Pk	34.2	.8	-95.2	-22.10	-50.61	-25	-25.61	H
5.020313	30.55	Pk	34.2	.8	-95.2	-22.10	-51.75	-25	-26.75	V
7.530469	29.21	Pk	35.7	.3	-95.2	-18.30	-48.29	-25	-23.29	H
7.530469	27.89	Pk	35.7	.3	-95.2	-18.30	-49.61	-25	-24.61	V
10.040625	27.26	Pk	37.5	.7	-95.2	-15.80	-45.54	-25	-20.54	H
10.040625	26.16	Pk	37.5	.7	-95.2	-15.80	-46.64	-25	-21.64	V
Mid Channel, 2535MHz										
5.070000	33.27	Pk	34.2	.7	-95.2	-21.90	-48.93	-25	-23.93	H
5.070000	32.12	Pk	34.2	.7	-95.2	-21.90	-50.08	-25	-25.08	V
7.605469	28.48	Pk	35.7	.4	-95.2	-18.10	-48.72	-25	-23.72	H
7.605469	28.18	Pk	35.7	.4	-95.2	-18.10	-49.02	-25	-24.02	V
10.140938	26.34	Pk	37.6	.6	-95.2	-15.80	-46.46	-25	-21.46	H
10.140938	26.89	Pk	37.6	.6	-95.2	-15.80	-45.91	-25	-20.91	V
High Channel, 2560MHz										
5.120156	31.83	Pk	34.2	.8	-95.2	-21.92	-50.29	-25	-25.29	H
5.120156	33.29	Pk	34.2	.8	-95.2	-21.92	-48.83	-25	-23.83	V
7.680000	29.39	Pk	35.8	.5	-95.2	-17.80	-47.31	-25	-22.31	H
7.680000	28.61	Pk	35.8	.5	-95.2	-17.80	-48.09	-25	-23.09	V
10.240313	27.93	Pk	37.6	.8	-95.2	-15.37	-44.24	-25	-19.24	H
10.240313	26.24	Pk	37.6	.8	-95.2	-15.37	-45.93	-25	-20.93	V

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	14982479
Date:	4/23/2024
Test Engineer:	32145
Configuration:	EUT only
Mode	n7 BPSK 40MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	226673 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2520MHz									
5.056500	57.27	Pk	34.0	-95.2	-47.63	-51.56	-25	-26.56	H
5.036000	55.57	Pk	34.0	-95.2	-47.50	-53.13	-25	-28.13	V
7.541000	54.20	Pk	35.9	-95.2	-45.42	-50.52	-25	-25.52	H
7.525000	54.94	Pk	35.8	-95.2	-45.26	-49.72	-25	-24.72	V
10.110500	55.64	Pk	37.3	-95.2	-45.83	-48.09	-25	-23.09	H
10.114500	55.15	Pk	37.3	-95.2	-45.72	-48.47	-25	-23.47	V
Mid Channel, 2535MHz									
5.0845	56.69	Pk	34.1	-95.2	-47.84	-52.25	-25	-27.25	H
5.075	57.01	Pk	34.1	-95.2	-47.7	-51.79	-25	-26.79	V
7.6125	54.48	Pk	35.9	-95.2	-45.9	-50.72	-25	-25.72	H
7.611	54.88	Pk	35.9	-95.2	-45.91	-50.33	-25	-25.33	V
10.172	56.11	Pk	37.3	-95.2	-45.51	-47.3	-25	-22.3	H
10.17	55.03	Pk	37.3	-95.2	-45.55	-48.42	-25	-23.42	V
High Channel, 2550MHz									
5.144500	56.63	Pk	34.2	-95.2	-47.71	-52.08	-25	-27.08	H
5.128500	56.00	Pk	34.2	-95.2	-47.79	-52.79	-25	-27.79	V
7.662000	54.18	Pk	35.9	-95.2	-45.58	-50.70	-25	-25.70	H
7.621000	54.96	Pk	35.9	-95.2	-45.91	-50.25	-25	-25.25	V
10.223500	54.91	Pk	37.4	-95.2	-44.77	-47.66	-25	-22.66	H
10.240000	54.10	Pk	37.4	-95.2	-44.48	-48.18	-25	-23.18	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 #:	14982479
Date:	4/2/2024
Test Engineer:	45258
Configuration:	EUT Only
Mode	LTE B12 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
Low Channel, 704MHz										
1.408267	38.19	Pk	28.4	0.9	-95.2	-28.33	-56.04	-13	-43.04	H
1.408756	39.92	Pk	28.4	0.9	-95.2	-28.38	-54.36	-13	-41.36	V
2.099067	41.19	Pk	31.5	0.5	-95.2	-26.89	-48.9	-13	-35.9	H
2.098578	41.7	Pk	31.5	0.5	-95.2	-26.86	-48.36	-13	-35.36	V
2.815778	36.78	Pk	32.4	0.6	-95.2	-25.5	-50.92	-13	-37.92	H
2.816267	36.45	Pk	32.4	0.6	-95.2	-25.5	-51.25	-13	-38.25	V
Mid Channel, 707.5MHz										
1.416089	38.85	Pk	28.3	0.9	-95.2	-28.2	-55.35	-13	-42.35	H
1.415600	37.45	Pk	28.3	0.9	-95.2	-28.2	-56.75	-13	-43.75	V
2.109089	42.24	Pk	31.5	0.5	-95.2	-26.49	-47.45	-13	-34.45	H
2.109334	41.83	Pk	31.5	0.5	-95.2	-26.47	-47.84	-13	-34.84	V
2.830445	35.31	Pk	32.4	0.7	-95.2	-25.56	-52.35	-13	-39.35	H
2.830445	35.93	Pk	32.4	0.7	-95.2	-25.56	-51.73	-13	-38.73	V
High Channel, 711MHz										
1.421956	38.13	Pk	28.3	0.9	-95.2	-28.1	-55.97	-13	-42.97	H
1.422445	37.24	Pk	28.3	0.9	-95.2	-28.1	-56.86	-13	-43.86	V
2.120089	40.78	Pk	31.5	0.5	-95.2	-26.51	-48.93	-13	-35.93	H
2.119600	40.64	Pk	31.5	0.5	-95.2	-26.46	-49.02	-13	-36.02	V
2.844623	35.58	Pk	32.4	0.7	-95.2	-25.40	-51.92	-13	-38.92	H
2.844623	34.98	Pk	32.4	0.7	-95.2	-25.40	-52.52	-13	-39.52	V

BPSK 5G NR n12 (15.0MHZ BANDWIDTH)

Project #:	14982479
Date:	4/3/2024
Test Engineer:	25369
Configuration:	EUT only
Mode	FR1 n12 15MHz
Chamber #:	04-RDE-S

Frequency (GHz)	Meter Reading (dBuV)	Det	200784 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 706.5MHz									
1.427050	58.21	Pk	28.3	-95.2	-49.16	-57.85	-13	-44.85	H
1.399150	68.76	Pk	28.6	-95.2	-49.35	-47.19	-13	-34.19	V
2.119150	58.58	Pk	31.2	-95.2	-49.92	-55.34	-13	-42.34	H
2.128600	58.87	Pk	31.3	-95.2	-49.97	-55.00	-13	-42.00	V
2.82745	57.33	Pk	32.2	-95.2	-47.94	-53.61	-13	-40.61	H
2.828800	56.86	Pk	32.2	-95.2	-47.91	-54.05	-13	-41.05	V
Mid Channel, 707.5MHz									
1.400950	60.40	Pk	28.6	-95.2	-49.38	-55.58	-13	-42.58	H
1.400950	68.00	Pk	28.6	-95.2	-49.38	-47.98	-13	-34.98	V
2.101150	61.29	Pk	31.2	-95.2	-49.64	-52.35	-13	-39.35	H
2.131300	59.70	Pk	31.3	-95.2	-49.90	-54.10	-13	-41.10	V
2.840050	57.04	Pk	32.2	-95.2	-47.79	-53.75	-13	-40.75	H
2.838250	56.98	Pk	32.2	-95.2	-47.73	-53.75	-13	-40.75	V
High Channel, 708.5MHz									
1.403200	62.63	Pk	28.5	-95.2	-49.35	-53.42	-13	-40.42	H
1.403200	67.28	Pk	28.5	-95.2	-49.35	-48.77	-13	-35.77	V
2.126800	58.93	Pk	31.3	-95.2	-49.95	-54.92	-13	-41.92	H
2.126800	58.94	Pk	31.3	-95.2	-49.95	-54.91	-13	-41.91	V
2.846800	56.57	Pk	32.2	-95.2	-47.59	-54.02	-13	-41.02	H
2.837800	57.11	Pk	32.2	-95.2	-47.72	-53.61	-13	-40.61	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 #:	14982479
Date:	4/2/2024
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE B13 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, 782MHz										
1.564711	38.04	Pk	28.2	.9	-95.2	-27.83	-55.89	-40	-15.89	H
1.564711	37.24	Pk	28.2	.9	-95.2	-27.83	-56.69	-40	-16.69	V
2.345956	36.48	Pk	32.0	.5	-95.2	-26.10	-52.32	-13	-39.32	H
2.346445	36.04	Pk	32.0	.5	-95.2	-26.10	-52.76	-13	-39.76	V
3.218623	34.73	Pk	33.0	.5	-95.2	-24.70	-51.67	-13	-38.67	H
3.218623	34.47	Pk	33.0	.5	-95.2	-24.70	-51.93	-13	-38.93	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 #:	14982479
Date:	4/2/2024
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE14 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)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.585733	37.93	Pk	28.3	.8	-95.2	-27.93	-56.10	-40	-16.10	H
1.585733	37.29	Pk	28.3	.8	-95.2	-27.93	-56.74	-40	-16.74	V
2.379200	36.50	Pk	32.1	.5	-95.2	-25.98	-52.08	-13	-39.08	H
2.379200	35.51	Pk	32.1	.5	-95.2	-25.98	-53.07	-13	-40.07	V
3.172667	35.32	Pk	33.0	.5	-95.2	-25.33	-51.71	-13	-38.71	H
3.172667	34.69	Pk	33.0	.5	-95.2	-25.33	-52.34	-13	-39.34	V

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

BPSK 5G NR n14 (10.0MHZ BANDWIDTH)

Project #:	14982479
Date:	4/3/2024
Test Engineer:	25369
Configuration:	EUT only
Mode	FR1 N14 10MHz
Chamber #:	01-RDE-A

Frequency (MHz)	Meter Reading (dBuV)	Det	200784 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz									
1.586800	35.04	Pk	27.8	-95.2	-27.82	-60.18	-40	-20.18	H
1.586350	34.99	Pk	27.8	-95.2	-27.87	-60.28	-40	-20.28	V
2.379700	33.87	Pk	32.2	-95.2	-25.93	-55.06	-13	-42.06	H
2.379700	34.55	Pk	32.2	-95.2	-25.93	-54.38	-13	-41.38	V
3.172600	31.66	Pk	32.8	-95.2	-25.34	-56.08	-13	-43.08	H
3.172600	30.70	Pk	32.8	-95.2	-25.34	-57.04	-13	-44.04	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 #:	14982479
Date:	4/9/2024
Test Engineer:	45258
Configuration:	EUT Only
Mode	LTE B17 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)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 709MHz										
1.417067	36.87	Pk	28.3	0.9	-95.2	-28.19	-57.32	-13	-44.32	H
1.417556	37.9	Pk	28.3	0.9	-95.2	-28.14	-56.24	-13	-43.24	V
2.113734	50.35	Pk	31.5	0.5	-95.2	-26.57	-39.42	-13	-26.42	H
2.113245	42.83	Pk	31.5	0.5	-95.2	-26.52	-46.89	-13	-33.89	V
2.835823	34.74	Pk	32.4	0.7	-95.2	-25.50	-52.86	-13	-39.86	H
2.836311	33.75	Pk	32.4	0.7	-95.2	-25.50	-53.85	-13	-40.85	V
Mid Channel, 710MHz										
1.420000	37.69	Pk	28.3	0.9	-95.2	-28.00	-56.31	-13	-43.31	H
1.420000	36.04	Pk	28.3	0.9	-95.2	-28.00	-57.96	-13	-44.96	V
2.116667	46.54	Pk	31.5	0.5	-95.2	-26.50	-43.16	-13	-30.16	H
2.116667	41.11	Pk	31.5	0.5	-95.2	-26.50	-48.59	-13	-35.59	V
2.840711	35.26	Pk	32.4	0.7	-95.2	-25.30	-52.14	-13	-39.14	H
2.841200	37.54	Pk	32.4	0.7	-95.2	-25.320	-49.88	-13	-36.88	V
High Channel, 711MHz										
1.422445	37.07	Pk	28.3	0.9	-95.2	-28.10	-57.03	-13	-44.03	H
1.422445	36.42	Pk	28.3	0.9	-95.2	-28.10	-57.68	-13	-44.68	V
2.119600	49.92	Pk	31.5	0.5	-95.2	-26.46	-39.74	-13	-26.74	H
2.119600	44.76	Pk	31.5	0.5	-95.2	-26.46	-44.90	-13	-31.90	V
2.845111	34.81	Pk	32.4	0.7	-95.2	-25.39	-52.68	-13	-39.68	H
2.845111	34.27	Pk	32.4	0.7	-95.2	-25.39	-53.22	-13	-40.22	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 #:	14982479
Date:	4/4/2024
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE B25 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.720000	34.77	Pk	33.0	-95.2	-23.70	-51.13	-13	-38.13	H
3.720000	34.85	Pk	33.0	-95.2	-23.70	-51.05	-13	-38.05	V
5.553281	33.28	Pk	34.5	-95.2	-20.77	-48.19	-13	-35.19	H
5.553281	35.97	Pk	34.5	-95.2	-20.77	-45.50	-13	-32.50	V
7.440000	31.26	Pk	35.6	-95.2	-18.70	-47.04	-13	-34.04	H
7.440000	30.30	Pk	35.6	-95.2	-18.70	-48.00	-13	-35.00	V
Mid Channel, 1882.5MHz									
3.764531	32.70	Pk	33.2	-95.2	-23.75	-53.05	-13	-40.05	H
3.764531	32.98	Pk	33.2	-95.2	-23.75	-52.77	-13	-39.77	V
5.647031	30.42	Pk	34.6	-95.2	-20.2	-50.38	-13	-37.38	H
5.647031	31.85	Pk	34.6	-95.2	-20.2	-48.95	-13	-35.95	V
7.530469	28.29	Pk	35.7	-95.2	-18.0	-49.21	-13	-36.21	H
7.530469	27.72	Pk	35.7	-95.2	-18.0	-49.78	-13	-36.78	V
High Channel, 1905MHz									
3.810469	33.78	Pk	33.3	-95.2	-23.95	-52.07	-13	-39.07	V
3.810938	33.35	Pk	33.3	-95.2	-23.91	-52.46	-13	-39.46	H
5.715938	30.61	Pk	34.6	-95.2	-21.3	-51.29	-13	-38.29	H
5.715938	31.10	Pk	34.6	-95.2	-21.3	-50.80	-13	-37.80	V
7.620469	28.91	Pk	35.8	-95.2	-16.75	-47.24	-13	-34.24	H
7.620469	27.46	Pk	35.8	-95.2	-16.75	-48.69	-13	-35.69	V

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	14982479
Date:	4/24/2024
Test Engineer:	32145
Configuration:	EUT only
Mode	FR1 N25 40MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBUV)	Det	226673 ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.760500	55.6	Pk	33.4	-95.2	-46.97	-53.17	-13	-40.17	H
3.725500	55.76	Pk	33.3	-95.2	-47.02	-53.16	-13	-40.16	V
5.552000	67.29	Pk	34.4	-95.2	-47.01	-40.52	-13	-27.52	H
5.552000	64.42	Pk	34.4	-95.2	-47.01	-43.39	-13	-30.39	V
7.421000	55.19	Pk	35.8	-95.2	-45.63	-49.84	-13	-36.84	H
7.417500	55.15	Pk	35.8	-95.2	-45.7	-49.95	-13	-36.95	V
Mid Channel, 1882.5MHz									
3.778000	56.51	Pk	33.4	-95.2	-46.76	-52.05	-13	-39.05	H
3.783500	56.07	Pk	33.4	-95.2	-46.78	-52.51	-13	-39.51	V
5.590000	67.71	Pk	34.4	-95.2	-47.04	-40.13	-13	-27.13	H
5.589500	60.27	Pk	34.4	-95.2	-47.05	-47.58	-13	-34.58	V
7.502000	55.32	Pk	35.8	-95.2	-45.78	-49.86	-13	-36.86	H
7.519500	54.81	Pk	35.8	-95.2	-45.48	-50.07	-13	-37.07	V
High Channel, 1895MHz									
3.775500	56.41	Pk	33.4	-95.2	-46.92	-52.31	-13	-39.31	H
3.778500	56.07	Pk	33.4	-95.2	-46.73	-52.46	-13	-39.46	V
5.671500	64.56	Pk	34.5	-95.2	-46.72	-42.86	-13	-29.86	H
5.671500	64.92	Pk	34.5	-95.2	-46.72	-42.50	-13	-29.50	V
7.582000	54.71	Pk	35.9	-95.2	-44.49	-49.08	-13	-36.08	H
7.566000	54.62	Pk	35.9	-95.2	-44.74	-49.42	-13	-36.42	V

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

LIMITS

FCC: §90.691
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

QPSK LTE BAND 26 (10.0MHZ BANDWIDTH)

Project #:	14982479
Date:	4/4/2024
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE 26 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)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 819MHz										
1.662978	37.13	Pk	29.0	.8	-95.2	-27.8	-56.07	-13	-43.07	H
1.663467	36.70	Pk	29.0	.8	-95.2	-27.8	-56.50	-13	-43.50	V
2.481378	49.63	Pk	32.5	.5	-95.2	-26.1	-38.67	-13	-25.67	H
2.481378	43.39	Pk	32.5	.5	-95.2	-26.1	-44.91	-13	-31.91	V
3.326667	34.66	Pk	32.8	.6	-95.2	-25.0	-52.14	-13	-39.14	H
3.326667	34.36	Pk	32.8	.6	-95.2	-25.0	-52.44	-13	-39.44	V

BPSK 5G NR n26 (10.0MHZ BANDWIDTH)

Project #:	14982479
Date:	6/29/2024
Test Engineer:	28567
Configuration:	EUT Only
Mode	FR1 N26 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	38.91	Pk	28.8	.7	-95.2	-27.70	-54.49	-13	-41.49	H
1.636578	37.75	Pk	28.8	.7	-95.2	-27.80	-55.75	-13	-42.75	V
2.456934	36.86	Pk	32.5	.5	-95.2	-26.31	-51.65	-13	-38.65	H
2.456934	37.37	Pk	32.5	.5	-95.2	-26.31	-51.14	-13	-38.14	V
3.275823	35.64	Pk	33.0	.8	-95.2	-24.72	-50.48	-13	-37.48	H
3.274356	35.41	Pk	33.0	.8	-95.2	-24.80	-50.79	-13	-37.79	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 #:	14982479
Date:	4/9/2024
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE 26 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)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 829MHz										
1.663467	36.66	Pk	29.0	0.8	-95.2	-27.80	-56.54	-13	-43.54	H
1.663467	38.83	Pk	29.0	0.8	-95.2	-27.80	-54.37	-13	-41.37	V
2.494089	36.50	Pk	32.5	0.6	-95.2	-26.20	-51.80	-13	-38.80	H
2.494089	35.29	Pk	32.5	0.6	-95.2	-26.20	-53.01	-13	-40.01	V
3.326178	35.29	Pk	32.9	0.6	-95.2	-25.00	-51.41	-13	-38.41	H
3.326178	35.77	Pk	32.9	0.6	-95.2	-25.00	-50.93	-13	-37.93	V
Mid Channel, 836.5MHz										
1.672267	37.34	Pk	29.1	0.7	-95.2	-27.67	-55.73	-13	-42.73	H
1.672267	38.14	Pk	29.1	0.7	-95.2	-27.67	-54.93	-13	-41.93	V
2.508267	36.01	Pk	32.5	0.7	-95.2	-26.23	-52.22	-13	-39.22	H
2.508267	35.44	Pk	32.5	0.7	-95.2	-26.23	-52.79	-13	-39.79	V
3.304178	35.34	Pk	33.0	0.7	-95.2	-25.00	-51.16	-13	-38.16	H
3.304178	34.71	Pk	33.0	0.7	-95.2	-25.00	-51.79	-13	-38.79	V
High Channel, 844MHz										
1.683511	37.82	Pk	29.2	0.7	-95.2	-27.55	-55.03	-13	-42.03	H
1.683511	36.94	Pk	29.2	0.7	-95.2	-27.55	-55.91	-13	-42.91	V
2.524400	34.79	Pk	32.5	0.8	-95.2	-26.00	-53.11	-13	-40.11	H
2.524400	36.24	Pk	32.5	0.8	-95.2	-26	-51.66	-13	-38.66	V
3.366267	35.84	Pk	32.8	0.6	-95.2	-25.03	-50.99	-13	-37.99	H
3.366267	35.36	Pk	32.8	0.6	-95.2	-25.03	-51.47	-13	-38.47	V

BPSK 5G NR n26 (20.0MHZ BANDWIDTH)

Project #:	14982479
Date:	5/1/2024
Test Engineer:	32145
Configuration:	EUT only
Mode	5G NR n26 BPSK 20MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	226673 ACF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 834MHz									
1.648900	61.72	Pk	28.4	-95.2	-49.61	-54.69	-13	-41.69	H
1.649350	66.76	Pk	28.4	-95.2	-49.59	-49.63	-13	-36.63	V
2.497600	58.80	Pk	32.3	-95.2	-48.84	-52.94	-13	-39.94	H
2.489050	59.02	Pk	32.3	-95.2	-49.00	-52.88	-13	-39.88	V
3.345850	56.16	Pk	32.8	-95.2	-46.89	-53.13	-13	-40.13	H
3.319750	54.59	Pk	32.8	-95.2	-46.92	-54.73	-13	-41.73	V
Mid Channel, 836.5MHz									
1.693000	59.21	Pk	28.9	-95.2	-49.67	-56.76	-13	-43.76	H
1.654300	64.92	Pk	28.4	-95.2	-49.49	-51.37	-13	-38.37	V
2.493100	58.97	Pk	32.3	-95.2	-48.83	-52.76	-13	-39.76	H
2.490850	58.14	Pk	32.3	-95.2	-48.99	-53.75	-13	-40.75	V
3.316150	54.96	Pk	32.8	-95.2	-46.74	-54.18	-13	-41.18	H
3.307600	54.57	Pk	32.8	-95.2	-46.58	-54.41	-13	-41.41	V
High Channel, 839MHz									
1.686250	58.97	Pk	28.8	-95.2	-49.57	-57.00	-13	-44.00	H
1.659250	65.24	Pk	28.5	-95.2	-49.57	-51.03	-13	-38.03	V
2.525500	58.73	Pk	32.2	-95.2	-48.54	-52.81	-13	-39.81	H
2.524150	58.25	Pk	32.2	-95.2	-48.44	-53.19	-13	-40.19	V
3.338650	56.03	Pk	32.8	-95.2	-47.07	-53.44	-13	-40.44	H
3.335050	55.23	Pk	32.8	-95.2	-46.82	-53.99	-13	-40.99	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 #:	14982479
Date:	4/5/2024
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE 30 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									
4.620469	22.88	RMS	34.0	-95.2	-23.2	-61.52	-40	-21.52	H
4.620469	22.37	RMS	34.0	-95.2	-23.2	-62.03	-40	-22.03	V
6.930469	17.83	RMS	35.7	-95.2	-19.0	-60.67	-40	-20.67	H
6.930469	18.07	RMS	35.7	-95.2	-19.0	-60.43	-40	-20.43	V
9.240469	18.28	RMS	36.1	-95.2	-16.7	-57.52	-40	-17.52	H
9.240469	18.59	RMS	36.1	-95.2	-16.7	-57.21	-40	-17.21	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	14982479
Date:	6/12/2024
Test Engineer:	32145
Configuration:	EUT only
Mode	FR1 N30 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.460156	26.51	RMS	33.9	-95.2	-30.32	-65.11	-40	-25.11	H
4.459688	26.25	RMS	33.9	-95.2	-30.30	-65.35	-40	-25.35	V
6.916406	23.95	RMS	35.6	-95.2	-26.30	-61.95	-40	-21.95	V
6.920156	23.50	RMS	35.6	-95.2	-26.23	-62.33	-40	-22.33	H
9.240000	21.41	RMS	36.3	-95.2	-23.70	-61.19	-40	-21.19	V
9.227344	21.75	RMS	36.3	-95.2	-23.70	-60.85	-40	-20.85	H

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 #:	14982479
Date:	4/8/2024
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE 41 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	BRF 2495-2690MHz T1790 1-18GHz (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2506MHz										
5.012344	32.42	Pk	34.2	.8	-95.2	-22.30	-50.08	-25	-25.08	H
5.012344	32.64	Pk	34.2	.8	-95.2	-22.30	-49.86	-25	-24.86	V
7.518750	29.19	Pk	35.7	.3	-95.2	-18.28	-48.29	-25	-23.29	H
7.518750	28.43	Pk	35.7	.3	-95.2	-18.28	-49.05	-25	-24.05	V
10.024219	27.09	Pk	37.5	.6	-95.2	-15.72	-45.73	-25	-20.73	H
10.024219	26.75	Pk	37.5	.6	-95.2	-15.72	-46.07	-25	-21.07	V
Mid Channel, 2593MHz										
5.186250	31.48	Pk	34.1	.8	-95.2	-21.9	-50.72	-25	-25.72	H
5.186250	32.34	Pk	34.1	.8	-95.2	-21.9	-49.86	-25	-24.86	V
7.778906	29.77	Pk	35.8	.3	-95.2	-17.9	-47.23	-25	-22.23	H
7.778906	29.11	Pk	35.8	.3	-95.2	-17.9	-47.89	-25	-22.89	V
10.372969	29.09	Pk	37.8	.8	-95.2	-15.0	-42.51	-25	-17.51	H
10.372969	26.84	Pk	37.8	.8	-95.2	-15.0	-44.76	-25	-19.76	V
High Channel, 2680MHz										
5.359688	33.11	Pk	34.4	.5	-95.2	-22.0	-49.19	-25	-24.19	H
5.359688	31.14	Pk	34.4	.5	-95.2	-22.0	-51.16	-25	-26.16	V
8.040469	29.6	Pk	35.9	.4	-95.2	-17.6	-46.9	-25	-21.9	H
8.040469	29.28	Pk	35.9	.4	-95.2	-17.6	-47.22	-25	-22.22	V
10.719375	27.00	Pk	37.9	.6	-95.2	-14.9	-44.60	-25	-19.60	H
10.719375	28.30	Pk	37.9	.6	-95.2	-14.9	-43.30	-25	-18.30	V

BPSK 5G NR n41 (100.0MHZ BANDWIDTH)

Project #:	14982479
Date:	7/16/2024
Test Engineer:	45258
Configuration:	EUT only
Mode	FR1 N41 100MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	BRF 2495- 2690MHz T1790 1- 18GHz (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2546MHz										
5.092031	31.61	Pk	34.2	0.8	-95.2	-21.8	-50.39	-25	-25.39	H
5.092031	31.35	Pk	34.2	0.8	-95.2	-21.8	-50.65	-25	-25.65	V
7.638281	28.89	Pk	35.8	0.4	-95.2	-17.8	-47.91	-25	-22.91	H
7.638281	29.26	Pk	35.8	0.4	-95.2	-17.8	-47.54	-25	-22.54	V
10.184063	27.41	Pk	37.6	0.6	-95.2	-15.6	-45.19	-25	-20.19	H
10.184063	27.37	Pk	37.6	0.6	-95.2	-15.6	-45.23	-25	-20.23	V
Mid Channel, 2593MHz										
5.187188	34.28	Pk	34.1	0.8	-95.2	-21.88	-47.9	-25	-22.9	H
5.182969	35.01	Pk	34.1	0.7	-95.2	-21.9	-47.29	-25	-22.29	V
7.769063	31.9	Pk	35.8	0.3	-95.2	-17.71	-44.91	-25	-19.91	H
7.769063	32.65	Pk	35.8	0.3	-95.2	-17.71	-44.16	-25	-19.16	V
10.370625	27.32	Pk	37.8	0.8	-95.2	-15	-44.28	-25	-19.28	H
10.3725	29	Pk	37.8	0.8	-95.2	-15.05	-42.65	-25	-17.65	V
High Channel, 2640MHz										
5.280469	31.15	Pk	34.3	0.3	-95.2	-22.1	-51.55	-25	-26.55	H
5.280469	32.25	Pk	34.3	0.3	-95.2	-22.1	-50.45	-25	-25.45	V
7.92	29.94	Pk	35.9	0.2	-95.2	-17.7	-46.86	-25	-21.86	H
7.92	28.87	Pk	35.9	0.2	-95.2	-17.7	-47.93	-25	-22.93	V
10.560469	26.55	Pk	37.9	0.7	-95.2	-15.15	-45.2	-25	-20.2	H
10.560469	26.3	Pk	37.9	0.7	-95.2	-15.15	-45.45	-25	-20.45	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 #:	14982479
Date:	4/8/2024
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE 66 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)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.440625	33.55	Pk	32.7	-95.2	-24.9	-53.85	-13	-40.85	H
3.440625	34.19	Pk	32.7	-95.2	-24.9	-53.21	-13	-40.21	V
5.133281	38.32	Pk	34.2	-95.2	-21.53	-44.21	-13	-31.21	H
5.133281	37.01	Pk	34.2	-95.2	-21.53	-45.52	-13	-32.52	V
6.880313	30.29	Pk	35.6	-95.2	-19.33	-48.64	-13	-35.64	H
6.880313	29.68	Pk	35.6	-95.2	-19.33	-49.25	-13	-36.25	V
Mid Channel, 1745MHz									
3.490781	34.98	Pk	32.8	-95.2	-24.32	-51.74	-13	-38.74	H
3.490781	34.16	Pk	32.8	-95.2	-24.32	-52.56	-13	-39.56	V
5.235469	31.99	Pk	34.2	-95.2	-21.95	-50.96	-13	-37.96	H
5.235469	31.2	Pk	34.2	-95.2	-21.95	-51.75	-13	-38.75	V
6.981094	29.71	Pk	35.7	-95.2	-18.6	-48.39	-13	-35.39	H
6.981094	29.04	Pk	35.7	-95.2	-18.6	-49.06	-13	-36.06	V
High Channel, 1770MHz									
3.540469	34.59	Pk	32.9	-95.2	-23.9	-51.61	-13	-38.61	H
3.540469	35.35	Pk	32.9	-95.2	-23.9	-50.85	-13	-37.85	V
5.283281	40.97	Pk	34.3	-95.2	-21.63	-41.56	-13	-28.56	V
5.28375	37.07	Pk	34.3	-95.2	-21.68	-45.51	-13	-32.51	H
7.081875	31.02	Pk	35.6	-95.2	-18.5	-47.08	-13	-34.08	H
7.081875	29.6	Pk	35.6	-95.2	-18.5	-48.50	-13	-35.50	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	14982479
Date:	4/24/2024
Test Engineer:	32145
Configuration:	EUT Only
Mode	N66 BPSK 40MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	226673 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1730MHz									
5.132500	65.3	Pk	34.2	-95.2	-47.49	-43.19	-13	-30.19	H
5.132000	63.29	Pk	34.2	-95.2	-47.50	-45.21	-13	-32.21	V
3.479000	55.42	Pk	32.9	-95.2	-46.71	-53.59	-13	-40.59	H
3.484500	55.47	Pk	32.9	-95.2	-46.77	-53.60	-13	-40.60	V
6.933000	54.72	Pk	35.8	-95.2	-45.86	-50.54	-13	-37.54	H
6.939000	53.82	Pk	35.8	-95.2	-45.95	-51.53	-13	-38.53	V
Mid Channel, 1745MHz									
3.492500	54.86	Pk	32.9	-95.2	-46.59	-54.03	-13	-41.03	V
3.498500	55.36	Pk	32.9	-95.2	-46.56	-53.50	-13	-40.50	H
5.177000	70.93	Pk	34.3	-95.2	-47.35	-37.32	-13	-24.32	H
5.178000	67.08	Pk	34.3	-95.2	-47.31	-41.13	-13	-28.13	V
7.003500	54.73	Pk	35.8	-95.2	-45.65	-50.32	-13	-37.32	V
7.004000	54.29	Pk	35.8	-95.2	-45.62	-50.73	-13	-37.73	H
High Channel, 1760MHz									
3.529000	55.02	Pk	32.9	-95.2	-46.79	-54.07	-13	-41.07	H
3.553500	55.40	Pk	32.9	-95.2	-46.69	-53.59	-13	-40.59	V
5.223000	55.87	Pk	34.4	-95.2	-47.46	-52.39	-13	-39.39	V
5.236500	56.44	Pk	34.4	-95.2	-47.71	-52.07	-13	-39.07	H
7.042500	54.37	Pk	35.8	-95.2	-45.07	-50.10	-13	-37.10	H
7.049500	54.00	Pk	35.9	-95.2	-45.03	-50.33	-13	-37.33	V

10.1.12. 5G NR n70 (FCC)

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 #:	14982479
Date:	6/29/2024
Test Engineer:	28567
Configuration:	EUT only
Mode	5G NR n70 BPSK 15MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 1702.5MHz									
3.405469	37.52	Pk	32.8	-95.2	-24.80	-49.68	-13	-36.68	H
3.404531	36.98	Pk	32.8	-95.2	-24.80	-50.22	-13	-37.22	V
5.093438	35.87	Pk	34.2	-95.2	-20.80	-45.93	-13	-32.93	H
5.109375	33.51	Pk	34.2	-95.2	-21.10	-48.59	-13	-35.59	V
6.810938	32.25	Pk	35.6	-95.2	-18.70	-46.05	-13	-33.05	H
6.809531	31.15	Pk	35.6	-95.2	-18.70	-47.15	-13	-34.15	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 #:	14982479
Date:	4/12/2024
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE B71 QPSK 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, 673MHz										
1.346178	38.3	Pk	29	1.1	-95.2	-28.4	-55.2	-13	-42.2	H
1.346178	37.66	Pk	29	1.1	-95.2	-28.4	-55.84	-13	-42.84	V
2.019867	36.18	Pk	31.5	.5	-95.2	-27.09	-54.11	-13	-41.11	H
2.019867	35.89	Pk	31.5	.5	-95.2	-27.09	-54.40	-13	-41.40	V
2.692578	35.12	Pk	32.3	.5	-95.2	-26	-53.28	-13	-40.28	V
2.693067	36.4	Pk	32.3	.5	-95.2	-25.99	-51.99	-13	-38.99	H
Mid Channel, 683MHz										
1.361333	39.93	Pk	28.9	1	-95.2	-28.37	-53.74	-13	-40.74	H
1.361333	38.10	Pk	28.9	1	-95.2	-28.37	-55.57	-13	-42.57	V
2.042356	37.12	Pk	31.6	.5	-95.2	-26.76	-52.74	-13	-39.74	H
2.042356	36.66	Pk	31.6	.5	-95.2	-26.76	-53.20	-13	-40.20	V
2.722400	35.38	Pk	32.4	.5	-95.2	-25.66	-52.58	-13	-39.58	H
2.722400	35.62	Pk	32.4	.5	-95.2	-25.66	-52.34	-13	-39.34	V
High Channel, 688MHz										
1.376000	37.24	Pk	28.7	1	-95.2	-28.40	-56.66	-13	-43.66	H
1.376000	36.79	Pk	28.7	1	-95.2	-28.40	-57.11	-13	-44.11	V
2.064845	35.29	Pk	31.6	.5	-95.2	-26.9	-54.71	-13	-41.71	H
2.064845	36.78	Pk	31.6	.5	-95.2	-26.9	-53.22	-13	-40.22	V
2.752223	36.43	Pk	32.3	.5	-95.2	-25.68	-51.65	-13	-38.65	H
2.752223	37.48	Pk	32.3	.5	-95.2	-25.68	-50.60	-13	-37.60	V

BPSK 5G NR n71 (20.0MHZ BANDWIDTH)

Project #:	14982479
Date:	4/3/2024
Test Engineer:	25369
Configuration:	EUT only
Mode	5G NR n71 BPSK 20MHz
Chamber #:	04-RDE-S

Frequency (GHz)	Meter Reading (dBuV)	Det	200784 ACF 3m (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	ILimit	Margin (dB)	Polarity
Low Channel, 673MHz									
1.345150	59.72	Pk	28.8	-95.2	-49.5	-56.18	-13	-43.18	H
1.338850	59.54	Pk	28.8	-95.2	-49.53	-56.39	-13	-43.39	V
2.021950	58.33	Pk	31.0	-95.2	-49.31	-55.18	-13	-42.18	H
2.021950	58.50	Pk	31.0	-95.2	-49.31	-55.01	-13	-42.01	V
2.692900	56.43	Pk	32.2	-95.2	-48.23	-54.80	-13	-41.80	H
2.695600	57.54	Pk	32.2	-95.2	-48.1	-53.56	-13	-40.56	V
Mid Channel, 683MHz									
1.355500	58.7	Pk	28.8	-95.2	-49.5	-57.20	-13	-44.20	H
1.347850	59.	Pk	28.8	-95.2	-49.54	-56.94	-13	-43.94	V
2.055700	57.88	Pk	31.1	-95.2	-49.14	-55.36	-13	-42.36	H
2.052100	56.65	Pk	31.1	-95.2	-49.13	-56.58	-13	-43.58	V
2.730700	56.39	Pk	32.1	-95.2	-48.53	-55.24	-13	-42.24	H
2.736550	56.24	Pk	32.1	-95.2	-48.52	-55.38	-13	-42.38	V
High Channel, 688MHz									
1.386100	58.93	Pk	28.6	-95.2	-49.40	-57.07	-13	-44.07	H
1.380250	58.14	Pk	28.7	-95.2	-49.40	-57.76	-13	-44.76	V
2.072350	59.68	Pk	31.1	-95.2	-49.35	-53.77	-13	-40.77	H
2.068300	58.27	Pk	31.1	-95.2	-49.30	-55.13	-13	-42.13	V
2.763100	56.61	Pk	32.1	-95.2	-48.77	-55.26	-13	-42.26	H
2.752300	57.20	Pk	32.1	-95.2	-48.58	-54.48	-13	-41.48	V

10.2. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 2

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

Both QPSK and 16QAM modes are tested, widest QPSK bandwidths results are reported as worst case for LTE bands.

Both BPSK and 16QAM modes are tested, widest BPSK bandwidths results are reported as worst case for 5G NRs

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 #:	14982479
Date:	4/5/2024
Test Engineer:	45258
Configuration:	EUT Only
Mode	LTE B7 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	BRF 2495-2690MHz T1790 1-18GHz (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2510MHz										
5.019844	32.75	Pk	34.2	.8	-95.2	-22.12	-49.57	-25	-24.57	H
5.019844	31.07	Pk	34.2	.8	-95.2	-22.12	-51.25	-25	-26.25	V
7.530469	29.74	Pk	35.7	.3	-95.2	-18.30	-47.76	-25	-22.76	H
7.530938	28.7	Pk	35.7	.3	-95.2	-18.30	-48.80	-25	-23.80	V
10.039219	27.06	Pk	37.5	.7	-95.2	-15.88	-45.82	-25	-20.82	H
10.039219	26.1	Pk	37.5	.7	-95.2	-15.88	-46.78	-25	-21.78	V
Mid Channel, 2535MHz										
5.070469	31.35	Pk	34.2	0.7	-95.2	-21.9	-50.85	-25	-25.85	H
5.070469	32.89	Pk	34.2	0.7	-95.2	-21.9	-49.31	-25	-24.31	V
7.605469	28.46	Pk	35.7	0.4	-95.2	-18.1	-48.74	-25	-23.74	H
7.605000	30.06	Pk	35.7	0.4	-95.2	-18.1	-47.14	-25	-22.14	V
10.140938	27.77	Pk	37.6	0.6	-95.2	-15.8	-45.03	-25	-20.03	H
10.140938	27.03	Pk	37.6	0.6	-95.2	-15.8	-45.77	-25	-20.77	V
High Channel, 2560MHz										
5.120156	31.84	Pk	34.2	.8	-95.2	-21.92	-50.28	-25	-25.28	H
5.120156	32.83	Pk	34.2	.8	-95.2	-21.92	-49.29	-25	-24.29	V
7.680938	29.27	Pk	35.8	.5	-95.2	-17.80	-47.43	-25	-22.43	H
7.680938	28.89	Pk	35.8	.5	-95.2	-17.80	-47.81	-25	-22.81	V
10.240313	26.94	Pk	37.6	.8	-95.2	-15.37	-45.23	-25	-20.23	H
10.240781	27.5	Pk	37.6	.8	-95.2	-15.32	-44.62	-25	-19.62	V

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	14982479
Date:	5/8/2024
Test Engineer:	32934
Configuration:	EUT only
Mode	5G NR n7 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF (dB/m)	155051 BRF 2495-2690MHz (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2520MHz										
5.036719	38.96	Pk	34.1	0.4	-95.2	-30.97	-52.71	-25	-27.71	H
5.016094	39.32	Pk	34.1	0.8	-95.2	-30.89	-51.87	-25	-26.87	V
7.558594	34.00	Pk	35.7	0.5	-95.2	-27.06	-52.06	-25	-27.06	H
7.523438	35.14	Pk	35.6	0.5	-95.2	-26.90	-50.86	-25	-25.86	V
10.073906	34.68	Pk	37.2	0.7	-95.2	-25.20	-47.82	-25	-22.82	H
10.124531	36.02	Pk	37.3	0.6	-95.2	-25.05	-46.33	-25	-21.33	V
Mid Channel, 2535MHz										
5.080313	38.82	Pk	34.1	0.6	-95.2	-30.97	-52.65	-25	-27.65	H
5.091563	38.12	Pk	34.1	0.5	-95.2	-30.86	-53.34	-25	-28.34	V
7.618594	35.30	Pk	35.7	0.4	-95.2	-27.20	-51.00	-25	-26.00	H
7.593281	35.56	Pk	35.7	0.5	-95.2	-27.17	-50.61	-25	-25.61	V
10.130625	34.5	Pk	37.3	0.6	-95.2	-24.90	-47.70	-25	-22.70	H
10.125469	35.93	Pk	37.3	0.6	-95.2	-24.95	-46.32	-25	-21.32	V
High Channel, 2550MHz										
5.124844	38.22	Pk	34.1	0.8	-95.2	-30.67	-52.75	-25	-27.75	H
5.093438	39.4	Pk	34.1	0.5	-95.2	-30.86	-52.06	-25	-27.06	V
7.629844	35.58	Pk	35.7	0.4	-95.2	-27.02	-50.54	-25	-25.54	H
7.658438	35.57	Pk	35.7	0.6	-95.2	-26.96	-50.29	-25	-25.29	V
10.18125	34.14	Pk	37.4	0.7	-95.2	-24.93	-47.89	-25	-22.89	H
10.144219	34.55	Pk	37.3	0.5	-95.2	-24.7	-47.55	-25	-22.55	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	14982479
Date:	4/3/2024
Test Engineer:	48258
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 (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 704MHz										
1.408267	40.19	Pk	28.4	0.9	-95.2	-28.33	-54.04	-13	-41.04	H
1.408267	38.63	Pk	28.4	0.9	-95.2	-28.33	-55.6	-13	-42.6	V
2.112756	36.47	Pk	31.5	0.5	-95.2	-26.48	-53.21	-13	-40.21	H
2.112267	37.24	Pk	31.5	0.5	-95.2	-26.43	-52.39	-13	-39.39	V
2.819689	39.50	Pk	32.4	0.6	-95.2	-25.47	-48.17	-13	-35.17	H
2.819200	37.57	Pk	32.4	0.6	-95.2	-25.42	-50.05	-13	-37.05	V
Mid Channel, 707.5MHz										
1.415111	38.69	Pk	28.3	0.9	-95.2	-28.20	-55.51	-13	-42.51	H
1.415111	38.21	Pk	28.3	0.9	-95.2	-28.20	-55.99	-13	-42.99	V
2.122534	36.22	Pk	31.5	0.5	-95.2	-26.60	-53.58	-13	-40.58	H
2.122534	35.85	Pk	31.5	0.5	-95.2	-26.60	-53.95	-13	-40.95	V
2.809911	36.75	Pk	32.4	0.6	-95.2	-25.40	-50.85	-13	-37.85	H
2.809911	36.15	Pk	32.4	0.6	-95.2	-25.40	-51.45	-13	-38.45	V
High Channel, 711MHz										
1.422445	37.56	Pk	28.3	0.9	-95.2	-28.10	-56.54	-13	-43.54	H
1.422445	36.73	Pk	28.3	0.9	-95.2	-28.10	-57.37	-13	-44.37	V
2.133778	36.57	Pk	31.5	0.5	-95.2	-26.68	-53.31	-13	-40.31	H
2.133778	35.37	Pk	31.5	0.5	-95.2	-26.68	-54.51	-13	-41.51	V
2.843156	35.31	Pk	32.4	0.6	-95.2	-25.40	-52.19	-13	-39.19	H
2.843156	35.83	Pk	32.4	0.6	-95.2	-25.40	-51.67	-13	-38.67	V

BPSK 5G NR n12 (15.0MHZ BANDWIDTH)

Project	14982479
Date:	5/3/2024
Test Engineer:	32145
Configuration:	EUT only
Mode	5G NR n12 BPSK 15MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 706.5MHz									
1.404550	59.04	Pk	28.2	-95.2	-49.21	-57.17	-13	-44.17	H
1.399600	60.78	Pk	28.3	-95.2	-49.14	-55.26	-13	-42.26	V
2.110600	60.15	Pk	31.5	-95.2	-49.88	-53.43	-13	-40.43	H
2.114200	58.76	Pk	31.5	-95.2	-49.75	-54.69	-13	-41.69	V
2.845900	56.63	Pk	32.5	-95.2	-48.51	-54.58	-13	-41.58	H
2.847700	57.52	Pk	32.5	-95.2	-48.43	-53.61	-13	-40.61	V
Mid Channel, 707.5MHz									
1.417150	60.52	Pk	28.2	-95.2	-49.18	-55.66	-13	-42.66	H
2.836000	57.02	Pk	32.4	-95.2	-48.49	-54.27	-13	-41.27	H
1.415350	58.81	Pk	28.2	-95.2	-49.16	-57.35	-13	-44.35	V
2.827900	56.98	Pk	32.4	-95.2	-48.26	-54.08	-13	-41.08	V
2.116450	58.89	Pk	31.5	-95.2	-49.9	-54.71	-13	-41.71	V
2.121850	59.33	Pk	31.5	-95.2	-49.83	-54.20	-13	-41.20	H
High Channel, 708.5MHz									
1.4032000	61.45	Pk	28.2	-95.2	-49.14	-54.69	-13	-41.69	H
2.829700	56.91	Pk	32.4	-95.2	-48.2	-54.09	-13	-41.09	H
1.4027500	62.49	Pk	28.2	-95.2	-49.12	-53.63	-13	-40.63	V
2.828350	56.27	Pk	32.4	-95.2	-48.23	-54.76	-13	-41.76	V
2.136250	58.69	Pk	31.5	-95.2	-50.07	-55.08	-13	-42.08	H
2.151550	58.30	Pk	31.4	-95.2	-49.97	-55.47	-13	-42.47	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	14982479
Date:	4/3/2024
Test Engineer:	45258
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)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 782MHz										
1.564711	37.24	Pk	28.2	.9	-95.2	-27.83	-56.69	-40	-16.69	H
1.564711	38.39	Pk	28.2	.9	-95.2	-27.83	-55.54	-40	-15.54	V
2.346445	35.54	Pk	32	.5	-95.2	-26.1	-53.26	-13	-40.26	H
2.346445	36.41	Pk	32	.5	-95.2	-26.1	-52.39	-13	-39.39	V
3.128178	34.83	Pk	32.9	.6	-95.2	-25.4	-52.27	-13	-39.27	H
3.128178	33.77	Pk	32.9	.6	-95.2	-25.4	-53.33	-13	-40.33	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	14982479
Date:	4/3/2024
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE B14 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)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.586222	38.22	Pk	28.3	.8	-95.2	-27.88	-55.76	-40	-15.76	H
1.586222	38.33	Pk	28.3	.8	-95.2	-27.88	-55.65	-40	-15.65	V
2.378222	36.86	Pk	32.1	.5	-95.2	-26	-51.74	-13	-38.74	H
2.378222	35.68	Pk	32.1	.5	-95.2	-26	-52.92	-13	-39.92	V
3.172667	36.02	Pk	33	.5	-95.2	-25.33	-51.01	-13	-38.01	H
3.172667	35.59	Pk	33	.5	-95.2	-25.33	-51.44	-13	-38.44	V

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

BPSK 5G NR n14 (10.0MHZ BANDWIDTH)

Project	14982479
Date:	5/3/2024
Test Engineer:	32145
Configuration:	EUT only
Mode	FR1 N14 10MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 793MHz									
1.589500	58.41	Pk	28.1	-95.2	-49.54	-58.23	-40	-18.23	H
1.580050	58.07	Pk	28	-95.2	-49.51	-58.64	-40	-18.64	V
2.387350	59.19	Pk	32.1	-95.2	-49.83	-53.74	-13	-40.74	H
2.392300	58.70	Pk	32.1	-95.2	-49.88	-54.28	-13	-41.28	V
3.173050	56.89	Pk	32.9	-95.2	-47.34	-52.75	-13	-39.75	H
3.172600	56.45	Pk	32.9	-95.2	-47.36	-53.21	-13	-40.21	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 #:	14982479
Date:	4/9/2024
Test Engineer:	31300
Configuration:	EUT only
Mode	LTE B17 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)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 709MHz										
1.418044	37.19	Pk	28.3	.9	-95.2	-28.10	-56.91	-13	-43.91	H
1.418044	36.88	Pk	28.3	.9	-95.2	-28.10	-57.22	-13	-44.22	V
2.127911	37.59	Pk	31.5	.5	-95.2	-26.69	-52.30	-13	-39.30	H
2.127911	36.70	Pk	31.5	.5	-95.2	-26.69	-53.19	-13	-40.19	V
2.836800	37.04	Pk	32.4	.7	-95.2	-25.50	-50.56	-13	-37.56	H
2.836800	34.99	Pk	32.4	.7	-95.2	-25.50	-52.61	-13	-39.61	V
Mid Channel, 710MHz										
1.420000	37.76	Pk	28.3	.9	-95.2	-28.00	-56.24	-13	-43.24	H
1.420000	38.17	Pk	28.3	.9	-95.2	-28.00	-55.83	-13	-42.83	V
2.129867	36.93	Pk	31.5	.5	-95.2	-26.70	-52.97	-13	-39.97	H
2.130845	37.28	Pk	31.5	.5	-95.2	-26.62	-52.54	-13	-39.54	V
2.839734	36.09	Pk	32.4	.7	-95.2	-25.33	-51.34	-13	-38.34	H
2.840711	36.42	Pk	32.4	.7	-95.2	-25.30	-50.98	-13	-37.98	V
High Channel, 711MHz										
1.421956	37.55	Pk	28.3	.9	-95.2	-28.10	-56.55	-13	-43.55	H
1.421956	37.62	Pk	28.3	.9	-95.2	-28.10	-56.48	-13	-43.48	V
2.132800	36.73	Pk	31.5	.5	-95.2	-26.60	-53.07	-13	-40.07	H
2.132800	37.06	Pk	31.5	.5	-95.2	-26.60	-52.74	-13	-39.74	V
2.844134	34.70	Pk	32.4	.7	-95.2	-25.40	-52.80	-13	-39.80	H
2.844134	34.92	Pk	32.4	.7	-95.2	-25.40	-52.58	-13	-39.58	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 #:	14982479
Date:	4/4/2024
Test Engineer:	45258
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	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.720000	34.01	Pk	33.0	-95.2	-23.7	-51.89	-13	-38.89	H
3.720469	35.26	Pk	33.0	-95.2	-23.7	-50.64	-13	-37.64	V
5.580938	31.35	Pk	34.5	-95.2	-20.2	-49.55	-13	-36.55	H
5.580938	32.46	Pk	34.5	-95.2	-20.2	-48.44	-13	-35.44	V
7.440000	30.16	Pk	35.6	-95.2	-18.7	-48.14	-13	-35.14	H
7.440000	28.87	Pk	35.6	-95.2	-18.7	-49.43	-13	-36.43	V
Mid Channel, 1882.5MHz									
3.766406	34.35	Pk	33.2	-95.2	-23.7	-51.35	-13	-38.35	H
3.766406	33.05	Pk	33.2	-95.2	-23.7	-52.65	-13	-39.65	V
5.647969	30.96	Pk	34.6	-95.2	-20.2	-49.84	-13	-36.84	H
5.647500	30.94	Pk	34.6	-95.2	-20.2	-49.86	-13	-36.86	V
7.530938	29.62	Pk	35.7	-95.2	-18	-47.88	-13	-34.88	H
7.530469	30.34	Pk	35.7	-95.2	-18	-47.16	-13	-34.16	V
High Channel, 1905MHz									
3.810469	34.2	Pk	33.3	-95.2	-23.95	-51.65	-13	-38.65	H
3.810469	32.9	Pk	33.3	-95.2	-23.95	-52.95	-13	-39.95	V
5.688281	34.47	Pk	34.6	-95.2	-21	-47.13	-13	-34.13	H
5.688281	36.96	Pk	34.6	-95.2	-21	-44.64	-13	-31.64	V
7.620469	28.21	Pk	35.8	-95.2	-16.75	-47.94	-13	-34.94	H
7.620469	28.74	Pk	35.8	-95.2	-16.75	-47.41	-13	-34.41	V

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	14982479
Date:	6/30/2024
Test Engineer:	32934
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	Amp/Cbl (dB)	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.740156	34.8	Pk	33.1	-95.2	-23.40	-50.70	-13	-37.70	H
3.740156	33.77	Pk	33.1	-95.2	-23.40	-51.73	-13	-38.73	V
5.610000	29.97	Pk	34.5	-95.2	-20.30	-51.03	-13	-38.03	H
5.610000	31.23	Pk	34.5	-95.2	-20.30	-49.77	-13	-36.77	V
7.480313	30.31	Pk	35.6	-95.2	-18.60	-47.89	-13	-34.89	H
7.480313	29.26	Pk	35.6	-95.2	-18.60	-48.94	-13	-35.94	V
Mid Channel, 1882.5MHz									
3.765469	34.54	Pk	33.2	-95.2	-23.70	-51.16	-13	-38.16	H
3.765469	33.58	Pk	33.2	-95.2	-23.70	-52.12	-13	-39.12	V
5.647500	31.12	Pk	34.6	-95.2	-20.20	-49.68	-13	-36.68	H
5.647500	30.24	Pk	34.6	-95.2	-20.20	-50.56	-13	-37.56	V
7.530000	29.87	Pk	35.7	-95.2	-18.00	-47.63	-13	-34.63	H
7.530000	28.09	Pk	35.7	-95.2	-18.00	-49.41	-13	-36.41	V
High Channel, 1895MHz									
3.790313	33.78	Pk	33.2	-95.2	-23.93	-52.15	-13	-39.15	H
3.790313	33.67	Pk	33.2	-95.2	-23.93	-52.26	-13	-39.26	V
5.685469	31.32	Pk	34.6	-95.2	-20.95	-50.23	-13	-37.23	H
5.685469	30.69	Pk	34.6	-95.2	-20.95	-50.86	-13	-37.86	V
7.580156	28.55	Pk	35.7	-95.2	-17.20	-48.15	-13	-35.15	H
7.580156	28.35	Pk	35.7	-95.2	-17.20	-48.35	-13	-35.35	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 #:	14982479
Date:	4/4/2024
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE B26 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 819MHz										
1.663956	37.65	Pk	29.0	.8	-95.2	-27.8	-55.55	-13	-42.55	H
1.663956	37.46	Pk	29.0	.8	-95.2	-27.8	-55.74	-13	-42.74	V
2.494089	35.28	Pk	32.5	.6	-95.2	-26.2	-53.02	-13	-40.02	H
2.494578	35.77	Pk	32.5	.6	-95.2	-26.2	-52.53	-13	-39.53	V
3.326667	35.02	Pk	32.8	.6	-95.2	-25.0	-51.78	-13	-38.78	H
3.326667	34.51	Pk	32.8	.6	-95.2	-25.0	-52.29	-13	-39.29	V

BPSK 5G NR n26 (10.0MHZ BANDWIDTH)

Project #:	14982479
Date:	5/13/2024
Test Engineer:	32934
Configuration:	EUT Only
Mode	5G NR n25 BPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF (dB/m)	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 819MHz										
1.628756	47.96	Pk	28.3	-.6	-95.2	-35.28	-54.82	-13	-41.82	H
1.629245	49.25	Pk	28.3	-.6	-95.2	-35.30	-53.55	-13	-40.55	V
2.430534	42.09	Pk	32.2	-.6	-95.2	-35.00	-56.51	-13	-43.51	V
2.443245	43.32	Pk	32.2	-.5	-95.2	-34.98	-55.16	-13	-42.16	H
3.287556	41.45	Pk	32.8	-.4	-95.2	-34.00	-55.35	-13	-42.35	H
3.300267	41.00	Pk	32.8	-.4	-95.2	-34.00	-55.80	-13	-42.80	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 #:	14982479
Date:	4/9/2024
Test Engineer:	31300
Configuration:	EUT only
Mode	LTE B26 QPSK 10MHz
Chamber #:	04-RDE-O

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)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 829MHz										
1.659067	38.41	Pk	29	0.8	-95.2	-27.69	-54.68	-13	-41.68	H
1.659067	37.68	Pk	29	0.8	-95.2	-27.69	-55.41	-13	-42.41	V
2.486756	37.75	Pk	32.5	0.5	-95.2	-26.10	-50.55	-13	-37.55	H
2.486756	36.53	Pk	32.5	0.5	-95.2	-26.10	-51.77	-13	-38.77	V
3.315912	35.31	Pk	32.9	0.6	-95.2	-25.10	-51.49	-13	-38.49	H
3.316889	34.87	Pk	32.9	0.6	-95.2	-25.10	-51.93	-13	-38.93	V
Mid Channel, 836.5MHz										
1.673733	37.85	Pk	29.1	0.7	-95.2	-27.53	-55.08	-13	-42.08	H
1.673245	38.03	Pk	29.1	0.7	-95.2	-27.58	-54.95	-13	-41.95	V
2.509245	36.95	Pk	32.5	0.7	-95.2	-26.28	-51.33	-13	-38.33	H
2.509245	35.24	Pk	32.5	0.7	-95.2	-26.28	-53.04	-13	-40.04	V
3.346712	35	Pk	32.8	0.5	-95.2	-25.10	-52.00	-13	-39.00	H
3.346712	35.8	Pk	32.8	0.5	-95.2	-25.10	-51.20	-13	-38.20	V
High Channel, 844MHz										
1.687911	37.63	Pk	29.3	.7	-95.2	-27.50	-55.07	-13	-42.07	H
1.689378	37.97	Pk	29.3	.7	-95.2	-27.34	-54.57	-13	-41.57	V
2.533200	37.85	Pk	32.5	.7	-95.2	-25.90	-50.05	-13	-37.05	H
2.532711	37.22	Pk	32.5	.7	-95.2	-25.90	-50.68	-13	-37.68	V
3.371156	37.31	Pk	32.8	.6	-95.2	-24.90	-49.39	-13	-36.39	H
3.355512	36.52	Pk	32.8	.6	-95.2	-25.00	-50.28	-13	-37.28	V

BPSK 5G NR n26 (20.0MHZ BANDWIDTH)

Project #:	14982479
Date:	7/1/2024
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	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 834MHz										
1.670800	37.29	Pk	29.1	.7	-95.2	-27.78	-55.89	-13	-42.89	H
1.670800	37.67	Pk	29.1	.7	-95.2	-27.78	-55.51	-13	-42.51	V
2.505823	36.20	Pk	32.5	.7	-95.2	-26.20	-52.00	-13	-39.00	H
2.505823	35.64	Pk	32.5	.7	-95.2	-26.20	-52.56	-13	-39.56	V
3.339867	35.14	Pk	32.8	.5	-95.2	-25.10	-51.86	-13	-38.86	H
3.339867	35.52	Pk	32.8	.5	-95.2	-25.10	-51.48	-13	-38.48	V
Mid Channel, 836.5MHz										
1.673245	37.87	Pk	29.1	.7	-95.2	-27.58	-55.11	-13	-42.11	H
1.673245	38.3	Pk	29.1	.7	-95.2	-27.58	-54.68	-13	-41.68	V
2.509734	36.72	Pk	32.5	.7	-95.2	-26.23	-51.51	-13	-38.51	H
2.509734	35.49	Pk	32.5	.7	-95.2	-26.23	-52.74	-13	-39.74	V
3.346223	34.41	Pk	32.8	.5	-95.2	-25.10	-52.59	-13	-39.59	H
3.346712	34.94	Pk	32.8	.5	-95.2	-25.10	-52.06	-13	-39.06	V
High Channel, 839MHz										
1.678133	38.21	Pk	29.2	.7	-95.2	-27.60	-54.69	-13	-41.69	H
1.678133	39.17	Pk	29.2	.7	-95.2	-27.60	-53.73	-13	-40.73	V
2.517556	37.37	Pk	32.5	.8	-95.2	-26.10	-50.63	-13	-37.63	H
2.517556	36.06	Pk	32.5	.8	-95.2	-26.10	-51.94	-13	-38.94	V
3.356489	36.17	Pk	32.8	.6	-95.2	-24.95	-50.58	-13	-37.58	H
3.356489	35.66	Pk	32.8	.6	-95.2	-24.95	-51.09	-13	-38.09	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 #:	14982479
Date:	4/5/2024
Test Engineer:	45258
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									
4.620469	22.97	RMS	34	-95.2	-23.2	-61.43	-40	-21.43	H
4.620469	22.69	RMS	34	-95.2	-23.2	-61.71	-40	-21.71	V
6.916875	22.25	RMS	35.6	-95.2	-19.19	-56.54	-40	-16.54	H
6.916406	24.28	RMS	35.6	-95.2	-19.14	-54.46	-40	-14.46	V
9.240469	18.18	RMS	36.1	-95.2	-16.7	-57.62	-40	-17.62	H
9.240469	18.71	RMS	36.1	-95.2	-16.7	-57.09	-40	-17.09	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	14982479
Date:	6/12/2024
Test Engineer:	45258
Configuration:	EUT only
Mode	5G NR n30 BPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.620000	26.5	RMS	34.1	-95.2	-28.8	-63.40	-40	-23.40	H
4.620000	25.68	RMS	34.1	-95.2	-28.8	-64.22	-40	-24.22	V
6.930938	23.68	RMS	35.6	-95.2	-26.4	-62.32	-40	-22.32	H
6.932813	24.08	RMS	35.6	-95.2	-26.4	-61.92	-40	-21.92	V
9.240469	21.72	RMS	36.3	-95.2	-23.7	-60.88	-40	-20.88	H
9.240469	22.06	RMS	36.3	-95.2	-23.7	-60.54	-40	-20.54	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 #:	14982479
Date:	4/8/2024
Test Engineer:	31300
Configuration:	EUT only
Mode	LTE B41 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	BRF 2495-2690MHz T1790 1-18GHz (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2506MHz										
5.012344	31.24	Pk	34.2	0.8	-95.2	-22.3	-51.26	-25	-26.26	H
5.012344	29.94	Pk	34.2	0.8	-95.2	-22.3	-52.56	-25	-27.56	V
7.518750	28.55	Pk	35.7	0.3	-95.2	-18.28	-48.93	-25	-23.93	H
7.518281	28.05	Pk	35.7	0.3	-95.2	-18.23	-49.38	-25	-24.38	V
10.025156	26.87	Pk	37.5	0.6	-95.2	-15.78	-46.01	-25	-21.01	H
10.025156	27.03	Pk	37.5	0.6	-95.2	-15.78	-45.85	-25	-20.85	V
Mid Channel, 2593MHz										
5.186250	31.90	Pk	34.1	0.8	-95.2	-21.9	-50.30	-25	-25.30	H
5.186250	30.65	Pk	34.1	0.8	-95.2	-21.9	-51.55	-25	-26.55	V
7.779844	28.25	Pk	35.8	0.3	-95.2	-17.9	-48.75	-25	-23.75	H
7.779375	29.87	Pk	35.8	0.3	-95.2	-17.9	-47.13	-25	-22.13	V
10.372031	28.10	Pk	37.8	0.8	-95.2	-15.1	-43.60	-25	-18.60	H
10.372031	27.72	Pk	37.8	0.8	-95.2	-15.1	-43.98	-25	-18.98	V
High Channel, 2680MHz										
5.360156	31.08	Pk	34.4	.5	-95.2	-22.0	-51.22	-25	-26.22	H
5.360156	30.90	Pk	34.4	.5	-95.2	-22.0	-51.4	-25	-26.4	V
8.040469	28.17	Pk	35.9	.4	-95.2	-17.6	-48.33	-25	-23.33	H
8.040469	28.25	Pk	35.9	.4	-95.2	-17.6	-48.25	-25	-23.25	V
10.720313	27.94	Pk	37.9	.6	-95.2	-14.9	-43.66	-25	-18.66	H
10.720313	27.12	Pk	37.9	.6	-95.2	-14.9	-44.48	-25	-19.48	V

BPSK LTE BAND n41 (100.0MHZ BANDWIDTH)

Project #:	14982479
Date:	5/8/2024
Test Engineer:	32934
Configuration:	EUT only
Mode	N41 BPSK 100MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF (dB/m)	155050 BRF 2495-2690MHz (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2546MHz										
5.103750	39.16	Pk	34.1	0	-95.2	-30.65	-52.59	-25	-27.59	H
5.087344	38.84	Pk	34.1	-0.1	-95.2	-30.93	-53.29	-25	-28.29	V
7.528594	36.84	Pk	35.6	0.4	-95.2	-27.00	-49.36	-25	-24.36	H
7.492031	44.07	Pk	35.6	0.4	-95.2	-26.90	-42.03	-25	-17.03	V
10.228125	34.03	Pk	37.4	0.8	-95.2	-24.89	-47.86	-25	-22.86	H
10.125000	34.88	Pk	37.3	0.7	-95.2	-25.00	-47.32	-25	-22.32	V
Mid Channel, 2593MHz										
5.186250	39.15	Pk	34.2	-0.1	-95.2	-30.33	-52.28	-25	-27.28	H
5.182500	38.47	Pk	34.2	-0.1	-95.2	-30.30	-52.93	-25	-27.93	V
7.633125	40.37	Pk	35.7	0.5	-95.2	-27.03	-45.66	-25	-20.66	H
7.633125	38.60	Pk	35.7	0.5	-95.2	-27.03	-47.43	-25	-22.43	V
10.358438	33.94	Pk	37.5	0.6	-95.2	-24.91	-48.07	-25	-23.07	H
10.336875	33.84	Pk	37.5	0.8	-95.2	-25.00	-48.06	-25	-23.06	V
High Channel, 2640MHz										
5.306250	39.26	Pk	34.4	0	-95.2	-30.60	-52.14	-25	-27.14	H
5.285156	38.61	Pk	34.4	0.3	-95.2	-30.70	-52.59	-25	-27.59	V
7.774219	39.72	Pk	35.8	0.3	-95.2	-26.98	-46.36	-25	-21.36	H
7.773750	44.82	Pk	35.8	0.3	-95.2	-27.03	-41.31	-25	-16.31	V
10.548281	33.46	Pk	37.6	0.9	-95.2	-24.67	-47.91	-25	-22.91	H
10.539375	34.29	Pk	37.6	0.7	-95.2	-24.80	-47.41	-25	-22.41	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 #:	14982479
Date:	4/11/2024
Test Engineer:	31300
Configuration:	EUT only
Mode	LTE 66 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.439219	36.14	Pk	32.8	-95.2	-24.98	-51.24	-13	-38.24	H
3.440156	33.36	Pk	32.7	-95.2	-24.9	-54.04	-13	-41.04	V
5.160938	31.96	Pk	34.1	-95.2	-22.19	-51.33	-13	-38.33	H
5.160938	33.02	Pk	34.1	-95.2	-22.19	-50.27	-13	-37.27	V

6.880781	29.79	Pk	35.6	-95.2	-19.38	-49.19	-13	-36.19	H
6.880781	28.91	Pk	35.6	-95.2	-19.38	-50.07	-13	-37.07	V
Mid Channel, 1745MHz									
3.491250	34.87	Pk	32.8	-95.2	-24.3	-51.83	-13	-38.83	H
3.490781	33.95	Pk	32.8	-95.2	-24.32	-52.77	-13	-39.77	V
5.235000	34.52	Pk	34.2	-95.2	-21.9	-48.38	-13	-35.38	H
5.234766	35.24	Pk	34.2	-95.2	-21.92	-47.68	-13	-34.68	V
6.979688	29.00	Pk	35.7	-95.2	-18.57	-49.07	-13	-36.07	H
6.979219	31.05	Pk	35.7	-95.2	-18.52	-46.97	-13	-33.97	V
High Channel, 1770MHz									
3.540000	36.29	Pk	32.9	-95.2	-23.9	-49.91	-13	-36.91	H
3.540000	32.54	Pk	32.9	-95.2	-23.9	-53.66	-13	-40.66	V
5.310000	34.54	Pk	34.3	-95.2	-21.3	-47.66	-13	-34.66	H
5.309531	36.32	Pk	34.3	-95.2	-21.3	-45.88	-13	-32.88	V
7.080469	29.98	Pk	35.6	-95.2	-18.45	-48.07	-13	-35.07	H
7.080469	29.16	Pk	35.6	-95.2	-18.45	-48.89	-13	-35.89	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	14982479
Date:	5/10/2024
Test Engineer:	32934
Configuration:	EUT Only
Mode	5G NR n66 BPSK 40MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.452813	41.37	Pk	32.9	-95.2	-33.08	-54.01	-13	-41.01	H
3.448594	40.17	Pk	32.9	-95.2	-33	-55.13	-13	-42.13	V
5.188125	37.38	Pk	34.2	-95.2	-29.21	-52.83	-13	-39.83	H
5.181094	38.11	Pk	34.2	-95.2	-29.4	-52.29	-13	-39.29	V
6.908438	34.3	Pk	35.6	-95.2	-26.44	-51.74	-13	-38.74	H
6.906094	34.71	Pk	35.6	-95.2	-26.41	-51.3	-13	-38.3	V
Mid Channel, 1745MHz									
3.485625	41.09	Pk	33	-95.2	-33.06	-54.17	-13	-41.17	H
3.485625	41.09	Pk	33	-95.2	-33.06	-54.17	-13	-41.17	H
5.248125	37.3	Pk	34.4	-95.2	-28.9	-52.4	-13	-39.4	H
5.248125	37.3	Pk	34.4	-95.2	-28.9	-52.4	-13	-39.4	H
6.986719	34.61	Pk	35.6	-95.2	-26.5	-51.49	-13	-38.49	H
6.986719	34.61	Pk	35.6	-95.2	-26.5	-51.49	-13	-38.49	H
High Channel, 1760MHz									
3.532969	41.05	Pk	33	-95.2	-32.8	-53.95	-13	-40.95	H
3.544219	41.45	Pk	33	-95.2	-32.8	-53.55	-13	-40.55	V
5.299688	38.5	Pk	34.4	-95.2	-29.57	-51.87	-13	-38.87	H
5.315625	37.74	Pk	34.5	-95.2	-29.9	-52.86	-13	-39.86	V
7.014375	36.68	Pk	35.6	-95.2	-26.6	-49.52	-13	-36.52	H
7.028906	35.05	Pk	35.6	-95.2	-26.8	-51.35	-13	-38.35	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 #:	14982479
Date:	5/17/2024
Test Engineer:	32934
Configuration:	EUT only
Mode	5G NR n70 BPSK 15MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 1702.5MHz									
3.391406	35.71	Pk	32.8	-95.2	-24.6	-51.29	-13	-38.29	V
3.412500	35.24	Pk	32.8	-95.2	-24.85	-52.01	-13	-39.01	H
5.100469	31.22	Pk	34.2	-95.2	-20.9	-50.68	-13	-37.68	V
5.107500	31.63	Pk	34.2	-95.2	-21.05	-50.42	-13	-37.42	H
6.828750	30.03	Pk	35.6	-95.2	-18.9	-48.47	-13	-35.47	V
6.835313	31.64	Pk	35.6	-95.2	-19.03	-46.99	-13	-33.99	H

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 #:	14982479
Date:	4/11/2024
Test Engineer:	31300
Configuration:	EUT only
Mode	LTE B71 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB/m)	HPF 1.2GHz T1737 1-18GHz (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 673MHz										
1.346178	38.22	Pk	29.0	1.1	-95.2	-28.4	-55.28	-13	-42.28	H
1.346178	37.57	Pk	29.0	1.1	-95.2	-28.4	-55.93	-13	-42.93	V
2.018889	36.83	Pk	31.5	.5	-95.2	-26.99	-53.36	-13	-40.36	H
2.018889	35.96	Pk	31.5	.5	-95.2	-26.99	-54.23	-13	-41.23	V
2.691600	36.99	Pk	32.3	.5	-95.2	-26.00	-51.41	-13	-38.41	H
2.692089	36.61	Pk	32.3	.5	-95.2	-26.00	-51.79	-13	-38.79	V
Mid Channel, 683MHz										
1.361333	37.36	Pk	28.9	1	-95.2	-28.37	-56.31	-13	-43.31	H
1.361333	37.99	Pk	28.9	1	-95.2	-28.37	-55.68	-13	-42.68	V
2.041867	37.38	Pk	31.6	.5	-95.2	-26.80	-52.52	-13	-39.52	H
2.041867	37.07	Pk	31.6	.5	-95.2	-26.80	-52.83	-13	-39.83	V
2.722400	35.89	Pk	32.4	.5	-95.2	-25.66	-52.07	-13	-39.07	H
2.722889	35.42	Pk	32.4	.5	-95.2	-25.61	-52.49	-13	-39.49	V
High Channel, 688MHz										
1.345689	37.65	Pk	29.0	1.1	-95.2	-28.4	-55.85	-13	-42.85	V
1.346178	37.83	Pk	29.0	1.1	-95.2	-28.4	-55.67	-13	-42.67	H
2.064356	36.63	Pk	31.6	.5	-95.2	-26.9	-53.37	-13	-40.37	H
2.064356	36.64	Pk	31.6	.5	-95.2	-26.9	-53.36	-13	-40.36	V
2.752223	36.48	Pk	32.3	.5	-95.2	-25.68	-51.60	-13	-38.60	H
2.752223	35.77	Pk	32.3	.5	-95.2	-25.68	-52.31	-13	-39.31	V

BPSK 5G NR n71 (20.0MHZ BANDWIDTH)

Project #:	14982479
Date:	5/13/2024
Test Engineer:	32934
Configuration:	EUT only
Mode	5G NR n71 BPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF (dB/m)	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz										
1.355956	41.44	Pk	28.7	-.9	-95.2	-35.1	-61.06	-13	-48.06	V
1.358889	42.46	Pk	28.7	-1	-95.2	-35.19	-60.23	-13	-47.23	H
2.019378	42.41	Pk	31.7	-.5	-95.2	-35.04	-56.63	-13	-43.63	H
2.024756	43.34	Pk	31.7	-.5	-95.2	-35	-55.66	-13	-42.66	V
2.6784	42.98	Pk	32.4	-.5	-95.2	-34.86	-55.18	-13	-42.18	V
2.680356	43.03	Pk	32.4	-.6	-95.2	-34.76	-55.13	-13	-42.13	H
Mid Channel, 683MHz										
1.342267	42.17	Pk	28.7	-1	-95.2	-35.1	-60.43	-13	-47.43	H
1.342267	50.24	Pk	28.7	-1	-95.2	-35.1	-52.36	-13	-39.36	V
2.008134	41.55	Pk	31.7	-.5	-95.2	-35	-57.45	-13	-44.45	H
2.013511	45.26	Pk	31.7	-.5	-95.2	-35.1	-53.84	-13	-40.84	V
2.717023	41.71	Pk	32.4	-.5	-95.2	-34.7	-56.29	-13	-43.29	V
2.725334	42.14	Pk	32.5	-.5	-95.2	-34.67	-55.73	-13	-42.73	H
High Channel, 688MHz										
1.357422	47.24	Pk	28.7	-1	-95.2	-35.04	-55.3	-13	-42.3	H
1.357422	47.63	Pk	28.7	-1	-95.2	-35.04	-54.91	-13	-41.91	V
2.045778	41.97	Pk	31.7	-.5	-95.2	-35	-57.03	-13	-44.03	V
2.047245	43.76	Pk	31.7	-.5	-95.2	-35.1	-55.34	-13	-42.34	H
2.755156	42.2	Pk	32.5	-.6	-95.2	-34.62	-55.72	-13	-42.72	H
2.761023	41.61	Pk	32.5	-.5	-95.2	-34.7	-56.29	-13	-43.29	V

10.3. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 3

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

Both QPSK and 16QAM modes are tested, widest QPSK bandwidths results are reported as worst case for LTE bands.

Both BPSK and 16QAM modes are tested, widest BPSK bandwidths results are reported as worst case for 5G NRs

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 #:	14982479
Date:	4/24/2024
Test Engineer:	31300
Configuration:	EUT Only
Mode	LTE B7 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	BRF 2495-2690MHz T1790 1-18GHz (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2510MHz										
5.020781	31.37	Pk	34.1	0.7	-95.2	-22.1	-51.13	-25	-26.13	H
5.02125	33.42	Pk	34.1	0.7	-95.2	-22.1	-49.08	-25	-24.08	V
7.531406	30.89	Pk	35.7	0.3	-95.2	-18.3	-46.61	-25	-21.61	H
7.530938	28.78	Pk	35.7	0.3	-95.2	-18.3	-48.72	-25	-23.72	V
10.041563	27.06	Pk	37.5	0.7	-95.2	-15.8	-45.74	-25	-20.74	H
10.041563	27.45	Pk	37.5	0.7	-95.2	-15.8	-45.35	-25	-20.35	V
Mid Channel, 2535MHz										
5.068125	32.87	Pk	34.2	0.6	-95.2	-22.00	-49.53	-25	-24.53	H
5.069063	32.25	Pk	34.2	0.7	-95.2	-21.99	-50.04	-25	-25.04	V
7.606875	28.29	Pk	35.7	0.4	-95.2	-18.10	-48.91	-25	-23.91	H
7.606875	29.3	Pk	35.7	0.4	-95.2	-18.10	-47.90	-25	-22.90	V
10.140938	27.2	Pk	37.6	0.6	-95.2	-15.80	-45.60	-25	-20.60	H
10.140000	27.07	Pk	37.6	0.7	-95.2	-15.80	-45.63	-25	-20.63	V
High Channel, 2560MHz										
5.120156	32.00	Pk	34.2	0.8	-95.2	-21.92	-50.12	-25	-25.12	H
5.120156	32.10	Pk	34.2	0.8	-95.2	-21.92	-50.02	-25	-25.02	V
7.680469	29.74	Pk	35.8	0.5	-95.2	-17.8	-46.96	-25	-21.96	H
7.680000	27.95	Pk	35.8	0.5	-95.2	-17.8	-48.75	-25	-23.75	V
10.240313	26.81	Pk	37.6	0.8	-95.2	-15.37	-45.36	-25	-20.36	H
10.239844	26.64	Pk	37.6	0.8	-95.2	-15.4	-45.56	-25	-20.56	V

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	14982479
Date:	5/13/2024
Test Engineer:	32934
Configuration:	EUT only
Mode	5G NR n7 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF (dB/m)	155051 BRF 2495-2690MHz (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2520MHz										
5.025938	39.11	Pk	34.1	0.5	-95.2	-30.99	-52.48	-25	-27.48	H
5.019844	38.95	Pk	34.1	0.7	-95.2	-30.9	-52.35	-25	-27.35	V
7.558125	35.32	Pk	35.7	0.5	-95.2	-27.01	-50.69	-25	-25.69	H
7.582969	35.49	Pk	35.7	0.4	-95.2	-27.2	-50.81	-25	-25.81	V
10.087969	34.35	Pk	37.3	0.6	-95.2	-25.1	-48.05	-25	-23.05	H
10.114688	34.56	Pk	37.3	0.6	-95.2	-25.23	-47.97	-25	-22.97	V
Mid Channel, 2535MHz										
5.089688	38.67	Pk	34.1	0.5	-95.2	-30.83	-52.76	-25	-27.76	H
5.092500	38.83	Pk	34.1	0.5	-95.2	-30.9	-52.67	-25	-27.67	V
7.599844	35.21	Pk	35.7	0.5	-95.2	-27.27	-51.06	-25	-26.06	H
7.588594	35.13	Pk	35.7	0.5	-95.2	-27.1	-50.97	-25	-25.97	V
10.15875	34.5	Pk	37.3	0.5	-95.2	-24.88	-47.78	-25	-22.78	H
10.184063	35.46	Pk	37.4	0.7	-95.2	-24.9	-46.54	-25	-21.54	V
High Channel, 2550MHz										
5.104688	39.22	Pk	34.1	0.7	-95.2	-30.67	-51.85	-25	-26.85	H
5.100469	38.80	Pk	34.1	0.6	-95.2	-30.70	-52.40	-25	-27.40	V
7.669219	35.80	Pk	35.7	0.7	-95.2	-26.72	-49.72	-25	-24.72	H
7.635000	35.37	Pk	35.7	0.4	-95.2	-27.00	-50.73	-25	-25.73	V
10.206563	34.84	Pk	37.4	0.5	-95.2	-24.89	-47.35	-25	-22.35	H
10.143750	34.64	Pk	37.3	0.5	-95.2	-24.70	-47.46	-25	-22.46	V

10.3.2. LTE BAND 25 AND 5G NR n25

LIMITS

FCC: §24.238(a)

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

QPSK LTE BAND 25 (20.0MHZ BANDWIDTH)

Project #:	14982479
Date:	4/24/2024
Test Engineer:	31300
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	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.720938	33.94	Pk	33	-95.2	-23.7	-51.96	-13	-38.96	H
3.720938	32.58	Pk	33	-95.2	-23.7	-53.32	-13	-40.32	V
5.580000	30.86	Pk	34.5	-95.2	-20.2	-50.04	-13	-37.04	H
5.580469	31.37	Pk	34.5	-95.2	-20.2	-49.53	-13	-36.53	V
7.442344	30.28	Pk	35.6	-95.2	-18.63	-47.95	-13	-34.95	H
7.441406	29.25	Pk	35.6	-95.2	-18.6	-48.95	-13	-35.95	V
Mid Channel, 1882.5MHz									
3.765469	34.79	Pk	33.2	-95.2	-23.7	-50.91	-13	-37.91	H
3.765469	33.49	Pk	33.2	-95.2	-23.7	-52.21	-13	-39.21	V
5.646563	31.42	Pk	34.6	-95.2	-20.2	-49.38	-13	-36.38	H
5.646563	30.55	Pk	34.6	-95.2	-20.2	-50.25	-13	-37.25	V
7.530469	29.71	Pk	35.7	-95.2	-18	-47.79	-13	-34.79	H
7.530469	28.01	Pk	35.7	-95.2	-18	-49.49	-13	-36.49	V
High Channel, 1905MHz									
3.810000	33.77	Pk	33.3	-95.2	-24	-52.13	-13	-39.13	H
3.810000	34.6	Pk	33.3	-95.2	-24	-51.30	-13	-38.30	V
5.715469	31.93	Pk	34.6	-95.2	-21.3	-49.97	-13	-36.97	H
5.715000	31.30	Pk	34.6	-95.2	-21.3	-50.60	-13	-37.60	V
7.619531	29.02	Pk	35.8	-95.2	-16.8	-47.18	-13	-34.18	H
7.621406	29.29	Pk	35.8	-95.2	-16.74	-46.85	-13	-33.85	V

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	14982479
Date:	5/13/2024
Test Engineer:	32934
Configuration:	EUT only
Mode	5G NR n25 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.733125	40.52	Pk	33.4	-95.2	-32.2	-53.48	-13	-40.48	H
3.726094	40.68	Pk	33.3	-95.2	-32.2	-53.42	-13	-40.42	V
5.606719	38.29	Pk	34.6	-95.2	-29.8	-52.11	-13	-39.11	H
5.605781	37.44	Pk	34.6	-95.2	-29.82	-52.98	-13	-39.98	V
7.49625	35.74	Pk	35.6	-95.2	-26.2	-50.06	-13	-37.06	H
7.497656	34.79	Pk	35.6	-95.2	-26.2	-51.01	-13	-38.01	V
Mid Channel, 1882.5MHz									
3.765938	39.23	Pk	33.4	-95.2	-32.1	-54.67	-13	-41.67	H
3.754688	39.93	Pk	33.4	-95.2	-32.1	-53.97	-13	-40.97	V
5.640469	37.9	Pk	34.7	-95.2	-29.91	-52.51	-13	-39.51	H
5.589375	39.55	Pk	34.6	-95.2	-29.7	-50.75	-13	-37.75	V
7.525781	34.87	Pk	35.6	-95.2	-26.4	-51.13	-13	-38.13	H
7.529531	34.6	Pk	35.6	-95.2	-26.3	-51.30	-13	-38.30	V
High Channel, 1895MHz									
3.793594	39.80	Pk	33.4	-95.2	-31.74	-53.74	-13	-40.74	H
3.796875	39.96	Pk	33.4	-95.2	-31.79	-53.63	-13	-40.63	V
5.680781	37.65	Pk	34.7	-95.2	-29.68	-52.53	-13	-39.53	H
5.627344	39.73	Pk	34.7	-95.2	-29.97	-50.74	-13	-37.74	V
7.568438	34.72	Pk	35.7	-95.2	-26.2	-50.98	-13	-37.98	H
7.562813	35.41	Pk	35.7	-95.2	-26.32	-50.41	-13	-37.41	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 #:	14982479
Date:	4/5/2024
Test Engineer:	45258
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									
4.620703	23.53	RMS	34.0	-95.2	-23.20	-60.87	-40	-20.87	H
4.620469	24.24	RMS	34.0	-95.2	-23.20	-60.16	-40	-20.16	V
6.930000	19.87	RMS	35.7	-95.2	-19.00	-58.63	-40	-18.63	H
6.930000	19.70	RMS	35.7	-95.2	-19.00	-58.80	-40	-18.80	V
9.239063	19.73	RMS	36.1	-95.2	-16.79	-56.16	-40	-16.16	H
9.239063	18.95	RMS	36.1	-95.2	-16.79	-56.94	-40	-16.94	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	14982479
Date:	4/12/2024
Test Engineer:	28567
Configuration:	EUT only
Mode	5G NR n30 BPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF(dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.620469	26.10	RMS	34.1	-95.2	-28.80	-63.80	-40	-23.80	H
4.620469	26.12	RMS	34.1	-95.2	-28.80	-63.78	-40	-23.78	V
6.930469	23.45	RMS	35.6	-95.2	-26.40	-62.55	-40	-22.55	H
6.930469	23.43	RMS	35.6	-95.2	-26.40	-62.57	-40	-22.57	V
9.240469	21.60	RMS	36.3	-95.2	-23.70	-61.00	-40	-21.00	H
9.240000	22.16	RMS	36.3	-95.2	-23.70	-60.44	-40	-20.44	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 #:	14982479
Date:	4/24/2024
Test Engineer:	31300
Configuration:	EUT only
Mode	LTE B41 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 AF 3m (dB/m)	BRF 2495-2690MHz T1790 1-18GHz (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2506MHz										
5.012344	33.26	Pk	34.2	.8	-95.2	-22.30	-49.24	-25	-24.24	H
5.012344	33.31	Pk	34.2	.8	-95.2	-22.30	-49.19	-25	-24.19	V
7.518281	30.04	Pk	35.7	.3	-95.2	-18.23	-47.39	-25	-22.39	H
7.518281	28.71	Pk	35.7	.3	-95.2	-18.23	-48.72	-25	-23.72	V
10.024688	28.04	Pk	37.5	.6	-95.2	-15.77	-44.83	-25	-19.83	H
10.024688	27.57	Pk	37.5	.6	-95.2	-15.77	-45.30	-25	-20.30	V
Mid Channel, 2593MHz										
5.185313	33.37	Pk	34.1	.8	-95.2	-21.90	-48.83	-25	-23.83	H
5.185313	30.47	Pk	34.1	.8	-95.2	-21.90	-51.73	-25	-26.73	V
7.778906	29.26	Pk	35.8	.3	-95.2	-17.90	-47.74	-25	-22.74	H
7.778906	29.89	Pk	35.8	.3	-95.2	-17.90	-47.11	-25	-22.11	V
10.371563	29.67	Pk	37.8	.8	-95.2	-15.06	-41.99	-25	-16.99	H
10.371563	29.47	Pk	37.8	.8	-95.2	-15.06	-42.19	-25	-17.19	V
High Channel, 2680MHz										
5.360625	32.92	Pk	34.4	.5	-95.2	-22.00	-49.38	-25	-24.38	H
5.361094	32.22	Pk	34.4	.5	-95.2	-21.99	-50.07	-25	-25.07	V
8.040469	27.83	Pk	35.9	.4	-95.2	-17.60	-48.67	-25	-23.67	V
8.040938	28.03	Pk	35.9	.4	-95.2	-17.60	-48.47	-25	-23.47	H
10.719844	27.77	Pk	37.9	.6	-95.2	-14.90	-43.83	-25	-18.83	H
10.719844	25.24	Pk	37.9	.6	-95.2	-14.90	-46.36	-25	-21.36	V

BPSK 5G NR n41 (100.0MHZ BANDWIDTH)

Project #:	14982479
Date:	5/13/2024
Test Engineer:	32934
Configuration:	EUT only
Mode	5G NR n41 BPSK 100MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF (dB/m)	155051 BRF 2495-2690MHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2546MHz										
5.099063	39.59	Pk	34.1	0.6	-95.2	-30.79	-51.70	-25	-26.70	H
5.085938	40.24	Pk	34.1	0.5	-95.2	-30.9	-51.26	-25	-26.26	V
7.637344	35.25	Pk	35.7	0.4	-95.2	-27.00	-50.85	-25	-25.85	H
7.649531	35.22	Pk	35.7	0.4	-95.2	-27.00	-50.88	-25	-25.88	V
10.182656	34.87	Pk	37.4	0.7	-95.2	-24.93	-47.16	-25	-22.16	H
10.190156	34.11	Pk	37.4	0.7	-95.2	-25.00	-47.99	-25	-22.99	V
Mid Channel, 2593MHz										
5.175000	37.72	Pk	34.2	0.5	-95.2	-30.40	-53.18	-25	-28.18	H
5.092031	40.40	Pk	34.1	0.5	-95.2	-30.90	-51.10	-25	-26.10	V
7.715625	37.26	Pk	35.8	0.4	-95.2	-26.80	-48.54	-25	-23.54	H
7.702031	35.58	Pk	35.8	0.4	-95.2	-26.80	-50.22	-25	-25.22	V
10.383750	34.35	Pk	37.5	0.5	-95.2	-24.80	-47.65	-25	-22.65	H
10.410469	32.83	Pk	37.5	0.6	-95.2	-24.95	-49.22	-25	-24.22	V
High Channel, 2640MHz										
5.301563	39.82	Pk	34.4	0.7	-95.2	-30.64	-50.92	-25	-25.92	H
5.300625	38.33	Pk	34.4	0.7	-95.2	-30.70	-52.47	-25	-27.47	V
7.934531	35.58	Pk	35.8	0.4	-95.2	-26.50	-49.92	-25	-24.92	H
7.902656	35.66	Pk	35.8	0.6	-95.2	-26.43	-49.57	-25	-24.57	V
10.549688	34.05	Pk	37.6	0.7	-95.2	-24.67	-47.52	-25	-22.52	H
10.510313	33.81	Pk	37.6	0.3	-95.2	-24.50	-47.99	-25	-22.99	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 #:	14982479
Date:	4/25/2024
Test Engineer:	31300
Configuration:	EUT only
Mode	LTE B66 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.440156	35.26	Pk	32.7	-95.2	-24.90	-52.14	-13	-39.14	H
3.439688	34.98	Pk	32.7	-95.2	-24.93	-52.45	-13	-39.45	V
5.160000	33.48	Pk	34.1	-95.2	-22.10	-49.72	-13	-36.72	H
5.160469	33.33	Pk	34.1	-95.2	-22.15	-49.92	-13	-36.92	V

6.879375	31.99	Pk	35.6	-95.2	-19.36	-46.97	-13	-33.97	H
6.879375	29.74	Pk	35.6	-95.2	-19.36	-49.22	-13	-36.22	V
Mid Channel, 1745MHz									
3.491719	36.32	Pk	32.8	-95.2	-24.30	-50.38	-13	-37.38	H
3.491719	34.82	Pk	32.8	-95.2	-24.30	-51.88	-13	-38.88	V
5.235938	32.96	Pk	34.2	-95.2	-21.99	-50.03	-13	-37.03	H
5.235938	31.41	Pk	34.2	-95.2	-21.99	-51.58	-13	-38.58	V
6.979688	29.48	Pk	35.7	-95.2	-18.57	-48.59	-13	-35.59	H
6.981094	29.99	Pk	35.7	-95.2	-18.60	-48.11	-13	-35.11	V
High Channel, 1770MHz									
3.541875	36.77	Pk	32.9	-95.2	-23.81	-49.34	-13	-36.34	H
3.541875	35.37	Pk	32.9	-95.2	-23.81	-50.74	-13	-37.74	V
5.311875	33.00	Pk	34.3	-95.2	-21.30	-49.20	-13	-36.20	H
5.310938	32.10	Pk	34.3	-95.2	-21.30	-50.10	-13	-37.10	V
7.080000	30.15	Pk	35.6	-95.2	-18.40	-47.85	-13	-34.85	H
7.080000	29.16	Pk	35.6	-95.2	-18.40	-48.84	-13	-35.84	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	14982479
Date:	5/14/2024
Test Engineer:	32934
Configuration:	EUT Only
Mode	5G NR n66 BPSK 40MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671_ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.448594	40.92	Pk	32.9	-95.2	-33.00	-54.38	-13	-41.38	H
3.430313	42.13	Pk	32.8	-95.2	-33.10	-53.37	-13	-40.37	V
5.193750	38.24	Pk	34.2	-95.2	-29.10	-51.86	-13	-38.86	H
5.212500	37.12	Pk	34.3	-95.2	-28.75	-52.53	-13	-39.53	V
6.913594	35.13	Pk	35.6	-95.2	-26.40	-50.87	-13	-37.87	H
6.937500	35.06	Pk	35.6	-95.2	-26.50	-51.04	-13	-38.04	V
Mid Channel, 1745MHz									
3.490781	41.07	Pk	33.0	-95.2	-33.00	-54.13	-13	-41.13	H
3.476250	40.28	Pk	32.9	-95.2	-33.10	-55.12	-13	-42.12	V
5.237813	37.76	Pk	34.3	-95.2	-28.78	-51.92	-13	-38.92	H
5.241094	37.53	Pk	34.3	-95.2	-28.80	-52.17	-13	-39.17	V
6.926719	36.80	Pk	35.6	-95.2	-26.30	-49.10	-13	-36.10	H
6.919688	34.86	Pk	35.6	-95.2	-26.23	-50.97	-13	-37.97	V
High Channel, 1760MHz									
3.513750	41.55	Pk	33.0	-95.2	-33.00	-53.65	-13	-40.65	H
3.515156	40.79	Pk	33.0	-95.2	-32.90	-54.31	-13	-41.31	V
5.282344	36.75	Pk	34.4	-95.2	-29.10	-53.15	-13	-40.15	H
5.277188	38.13	Pk	34.4	-95.2	-28.92	-51.59	-13	-38.59	V
7.044844	35.41	Pk	35.6	-95.2	-26.8	-50.99	-13	-37.99	H
6.998906	36.47	Pk	35.6	-95.2	-26.4	-49.53	-13	-36.53	V

10.3.6. 5G NR n70

LIMITS

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

BPSK 5G NR n70 (15.0MHZ BANDWIDTH)

Project #:	14982479
Date:	5/15/2024
Test Engineer:	28567
Configuration:	EUT only
Mode	5G NR n70 BPSK 15MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 1702.5MHz									
3.405000	34.88	Pk	32.8	-95.2	-24.80	-52.32	-13	-39.32	H
3.405000	33.68	Pk	32.8	-95.2	-24.80	-53.52	-13	-40.52	V
5.100938	30.84	Pk	34.2	-95.2	-20.90	-51.06	-13	-38.06	H
5.100938	30.85	Pk	34.2	-95.2	-20.90	-51.05	-13	-38.05	V
6.801094	29.38	Pk	35.5	-95.2	-18.51	-48.83	-13	-35.83	H
6.801094	29.47	Pk	35.5	-95.2	-18.51	-48.74	-13	-35.74	V

10.4. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 4

TEST PROCEDURE

KDB 971168 D01 /D02

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

RESULTS

10.4.1. LTE BAND 7 AND 5G NR n7

LIMITS

FCC: §27.53 (m)

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

QPSK LTE BAND 7 (20.0MHZ BANDWIDTH)

Project #:	14982479
Date:	5/1/2024
Test Engineer:	28567
Configuration:	EUT Only
Mode	LTE B7 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	BRF 2495-2690MHz T1790 1-18GHz (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	limit	Margin (dB)	Polarity
Low Channel, 2510MHz										
5.020313	31.63	Pk	34.2	0.8	-95.2	-22.10	-50.67	-25	-25.67	H
5.020313	32.70	Pk	34.2	0.8	-95.2	-22.10	-49.60	-25	-24.60	V
7.530000	30.47	Pk	35.7	0.3	-95.2	-18.30	-47.03	-25	-22.03	H
7.530000	28.50	Pk	35.7	0.3	-95.2	-18.30	-49.00	-25	-24.00	V
10.040156	29.48	Pk	37.5	0.7	-95.2	-15.80	-43.32	-25	-18.32	H
10.040156	28.04	Pk	37.5	0.7	-95.2	-15.80	-44.76	-25	-19.76	V
Mid Channel, 2535MHz										
5.070938	32.66	Pk	34.2	0.7	-95.2	-21.90	-49.54	-25	-24.54	H
5.071406	33.03	Pk	34.2	0.7	-95.2	-21.90	-49.17	-25	-24.17	V
7.605000	29.68	Pk	35.7	0.4	-95.2	-18.10	-47.52	-25	-22.52	H
7.605000	28.67	Pk	35.7	0.4	-95.2	-18.10	-48.53	-25	-23.53	V
10.140938	27.60	Pk	37.6	0.6	-95.2	-15.80	-45.20	-25	-20.20	H
10.140938	28.55	Pk	37.6	0.6	-95.2	-15.80	-44.25	-25	-19.25	V
High Channel, 2560MHz										
5.120156	33.54	Pk	34.2	0.8	-95.2	-21.92	-48.58	-25	-23.58	H
5.120625	30.96	Pk	34.2	0.8	-95.2	-21.96	-51.20	-25	-26.20	V
7.680000	30.07	Pk	35.8	0.5	-95.2	-17.80	-46.63	-25	-21.63	H
7.680000	28.14	Pk	35.8	0.5	-95.2	-17.80	-48.56	-25	-23.56	V
10.240313	26.46	Pk	37.6	0.8	-95.2	-15.37	-45.71	-25	-20.71	H
10.240313	27.81	Pk	37.6	0.8	-95.2	-15.37	-44.36	-25	-19.36	V

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	14982479
Date:	5/16/2024
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n7 BPSK 40MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	BRF 2495-2690MHz T1790 1-18GHz (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2520MHz										
5.040469	30.95	Pk	34.1	0.6	-95.2	-21.95	-51.50	-25	-26.50	H
5.040000	29.81	Pk	34.1	0.6	-95.2	-22.00	-52.69	-25	-27.69	V
7.559531	28.07	Pk	35.7	0.3	-95.2	-18.25	-49.38	-25	-24.38	H
7.560000	29.45	Pk	35.7	0.3	-95.2	-18.20	-47.95	-25	-22.95	V
10.080469	27.52	Pk	37.6	0.6	-95.2	-15.90	-45.38	-25	-20.38	H
10.080469	26.67	Pk	37.6	0.6	-95.2	-15.90	-46.23	-25	-21.23	V
Mid Channel, 2535MHz										
5.070469	30.69	Pk	34.2	0.7	-95.2	-21.90	-51.51	-25	-26.51	H
5.069063	31.47	Pk	34.2	0.7	-95.2	-21.99	-50.82	-25	-25.82	V
7.604531	29.43	Pk	35.7	0.4	-95.2	-18.15	-47.82	-25	-22.82	H
7.604531	28.99	Pk	35.7	0.4	-95.2	-18.15	-48.26	-25	-23.26	V
10.140469	27.33	Pk	37.6	0.6	-95.2	-15.80	-45.47	-25	-20.47	H
10.140469	27.91	Pk	37.6	0.6	-95.2	-15.80	-44.89	-25	-19.89	V
High Channel, 2550MHz										
5.100000	32.10	Pk	34.2	0.8	-95.2	-21.90	-50.00	-25	-25.00	H
5.100000	30.48	Pk	34.2	0.8	-95.2	-21.90	-51.62	-25	-26.62	V
7.650000	29.07	Pk	35.8	0.3	-95.2	-17.70	-47.73	-25	-22.73	H
7.650000	27.98	Pk	35.8	0.3	-95.2	-17.70	-48.82	-25	-23.82	V
10.200000	29.23	Pk	37.6	0.8	-95.2	-15.70	-43.27	-25	-18.27	H
10.200000	27.16	Pk	37.6	0.8	-95.2	-15.70	-45.34	-25	-20.34	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 #:	14982479
Date:	5/1/2024
Test Engineer:	104996
Configuration:	EUT Only
Mode	LTE B25 QPSK 20MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	limit	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.700500	53.03	Pk	33.5	-95.2	-47.20	-55.87	-13	-42.87	H
3.700500	52.83	Pk	33.5	-95.2	-47.20	-56.07	-13	-43.07	V
7.401000	53.50	Pk	35.9	-95.2	-47.80	-53.60	-13	-40.60	H
7.401000	54.63	Pk	35.9	-95.2	-47.80	-52.47	-13	-39.47	V
5.550500	54.85	Pk	34.4	-95.2	-48.60	-54.55	-13	-41.55	H
5.550500	53.37	Pk	34.4	-95.2	-48.60	-56.03	-13	-43.03	V
Mid Channel, 1882.5MHz									
3.745000	54.98	Pk	33.6	-95.2	-47.70	-54.32	-13	-41.32	H
3.745000	53.54	Pk	33.6	-95.2	-47.70	-55.76	-13	-42.76	V
7.490000	54.86	Pk	35.9	-95.2	-48.20	-52.64	-13	-39.64	H
7.490000	54.19	Pk	35.9	-95.2	-48.20	-53.31	-13	-40.31	V
5.617500	56.23	Pk	34.4	-95.2	-48.50	-53.07	-13	-40.07	H
5.617500	54.42	Pk	34.4	-95.2	-48.50	-54.88	-13	-41.88	V
High Channel, 1905MHz									
3.791000	55.25	Pk	33.6	-95.2	-48.00	-54.35	-13	-41.35	H
3.791000	54.16	Pk	33.6	-95.2	-48.00	-55.44	-13	-42.44	V
7.580500	53.41	Pk	35.9	-95.2	-47.40	-53.29	-13	-40.29	H
7.580500	54.05	Pk	35.9	-95.2	-47.40	-52.65	-13	-39.65	V
5.686000	55.03	Pk	34.4	-95.2	-48.30	-54.07	-13	-41.07	H
5.686000	54.17	Pk	34.4	-95.2	-48.30	-54.93	-13	-41.93	V

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	14982479
Date:	5/16/2024
Test Engineer:	28567
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	32.76	Pk	33.1	-95.2	-23.40	-52.74	-13	-39.74	H
3.738750	32.25	Pk	33.1	-95.2	-23.40	-53.25	-13	-40.25	V
5.610000	29.64	Pk	34.5	-95.2	-20.30	-51.36	-13	-38.36	H
5.610469	31.02	Pk	34.5	-95.2	-20.30	-49.98	-13	-36.98	V
7.480313	28.70	Pk	35.6	-95.2	-18.60	-49.50	-13	-36.50	H
7.480313	29.82	Pk	35.6	-95.2	-18.60	-48.38	-13	-35.38	V
Mid Channel, 1882.5MHz									
3.765000	33.86	Pk	33.2	-95.2	-23.70	-51.84	-13	-38.84	H
3.765000	32.60	Pk	33.2	-95.2	-23.70	-53.10	-13	-40.10	V
5.647500	30.12	Pk	34.6	-95.2	-20.20	-50.68	-13	-37.68	H
5.647500	30.00	Pk	34.6	-95.2	-20.20	-50.80	-13	-37.80	V
7.530000	28.69	Pk	35.7	-95.2	-18.00	-48.81	-13	-35.81	H
7.530469	29.56	Pk	35.7	-95.2	-18.00	-47.94	-13	-34.94	V
High Channel, 1895MHz									
3.790313	32.94	Pk	33.2	-95.2	-23.93	-52.99	-13	-39.99	H
3.788906	32.62	Pk	33.2	-95.2	-23.91	-53.29	-13	-40.29	V
5.685000	31.35	Pk	34.6	-95.2	-20.90	-50.15	-13	-37.15	H
5.685000	29.67	Pk	34.6	-95.2	-20.90	-51.83	-13	-38.83	V
7.580156	28.39	Pk	35.7	-95.2	-17.20	-48.31	-13	-35.31	H
7.580156	29.18	Pk	35.7	-95.2	-17.20	-47.52	-13	-34.52	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 #	14982479
Date:	5/3/2024
Test Engineer:	45258
Configuration:	EUT Only
Mode	LTE B30 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									
4.620469	24.30	RMS	34.0	-95.2	-23.20	-60.10	-40	-20.10	H
4.620469	23.89	RMS	34.0	-95.2	-23.20	-60.51	-40	-20.51	V
6.930000	19.54	RMS	35.7	-95.2	-19.00	-58.96	-40	-18.96	H
6.930000	20.47	RMS	35.7	-95.2	-19.00	-58.03	-40	-18.03	V
9.239531	19.52	RMS	36.1	-95.2	-16.75	-56.33	-40	-16.33	H
9.240000	19.05	RMS	36.1	-95.2	-16.70	-56.75	-40	-16.75	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #	14982479
Date:	6/12/2024
Test Engineer:	28567
Configuration:	EUT Only
Mode	FR1 n30 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.620000	26.71	RMS	34.1	-95.2	-28.80	-63.19	-40	-23.19	H
4.620000	25.94	RMS	34.1	-95.2	-28.80	-63.96	-40	-23.96	V
6.930469	23.64	RMS	35.6	-95.2	-26.40	-62.36	-40	-22.36	H
6.930469	23.45	RMS	35.6	-95.2	-26.40	-62.55	-40	-22.55	V
9.240000	21.55	RMS	36.3	-95.2	-23.70	-61.05	-40	-21.05	V
9.240469	21.93	RMS	36.3	-95.2	-23.70	-60.67	-40	-20.67	H

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 #	14982479
Date:	5/3/2024
Test Engineer:	45258
Configuration:	EUT Only
Mode	LTE B41 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	BRF 2495-2690MHz T1790 1-18GHz (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	limit	Margin (dB)	Polarity
Low Channel, 2506MHz										
5.012813	33.25	Pk	34.2	0.8	-95.2	-22.30	-49.25	-25	-24.25	H
5.013281	33.40	Pk	34.2	0.8	-95.2	-22.30	-49.10	-25	-24.10	V
7.518281	29.02	Pk	35.7	0.3	-95.2	-18.23	-48.41	-25	-23.41	H
7.517813	30.09	Pk	35.7	0.3	-95.2	-18.20	-47.31	-25	-22.31	V
10.024219	27.40	Pk	37.5	0.6	-95.2	-15.72	-45.42	-25	-20.42	H
10.024219	27.88	Pk	37.5	0.6	-95.2	-15.72	-44.94	-25	-19.94	V
Mid Channel, 2593MHz										
5.186719	33.68	Pk	34.1	0.8	-95.2	-21.90	-48.52	-25	-23.52	H
5.186719	33.17	Pk	34.1	0.8	-95.2	-21.90	-49.03	-25	-24.03	V
7.779375	29.28	Pk	35.8	0.3	-95.2	-17.90	-47.72	-25	-22.72	H
7.779375	30.18	Pk	35.8	0.3	-95.2	-17.90	-46.82	-25	-21.82	V
10.372031	28.53	Pk	37.8	0.8	-95.2	-15.10	-43.17	-25	-18.17	H
10.372031	27.12	Pk	37.8	0.8	-95.2	-15.10	-44.58	-25	-19.58	V
High Channel, 2680MHz										
5.360156	33.57	Pk	34.4	0.5	-95.2	-22.00	-48.73	-25	-23.73	H
5.360156	33.04	Pk	34.4	0.5	-95.2	-22.00	-49.26	-25	-24.26	V
8.040000	28.13	Pk	35.9	0.4	-95.2	-17.60	-48.37	-25	-23.37	H
8.040000	28.91	Pk	35.9	0.4	-95.2	-17.60	-47.59	-25	-22.59	V
10.720313	26.62	Pk	37.9	0.6	-95.2	-14.90	-44.98	-25	-19.98	H
10.720313	26.97	Pk	37.9	0.6	-95.2	-14.90	-44.63	-25	-19.63	V

BPSK 5G NR n41 (100.0MHZ BANDWIDTH)

Project #	14982479
Date:	5/16/2024
Test Engineer:	32934
Configuration:	EUT Only
Mode	FR1 n41 100MHz
Chamber #:	03-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF (dB/m)	155051 BRF 2495-2690MHz (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	limit	Margin (dB)	Polarity
Low Channel, 2546MHz										
5.106094	38.22	Pk	34.1	0.7	-95.2	-30.61	-52.79	-25	-27.79	H
5.097656	38.72	Pk	34.1	0.6	-95.2	-30.70	-52.48	-25	-27.48	V
7.633125	35.17	Pk	35.7	0.4	-95.2	-27.03	-50.96	-25	-25.96	H
7.612500	36.01	Pk	35.7	0.5	-95.2	-27.15	-50.14	-25	-25.14	V
10.199531	34.99	Pk	37.4	0.5	-95.2	-24.90	-47.21	-25	-22.21	H
10.279219	36.19	Pk	37.4	0.4	-95.2	-25.04	-46.25	-25	-21.25	V
Mid Channel, 2593MHz										
5.170313	38.14	Pk	34.2	0.5	-95.2	-30.60	-52.96	-25	-27.96	H
5.165625	38.29	Pk	34.2	0.5	-95.2	-30.64	-52.85	-25	-27.85	V
7.633125	36.51	Pk	35.7	0.4	-95.2	-27.03	-49.62	-25	-24.62	H
7.632656	40.90	Pk	35.7	0.4	-95.2	-27.03	-45.23	-25	-20.23	V
10.367813	33.55	Pk	37.5	0.5	-95.2	-24.90	-48.55	-25	-23.55	H
10.393125	33.94	Pk	37.5	0.6	-95.2	-25.01	-48.17	-25	-23.17	V
High Channel, 2640MHz										
5.295469	38.60	Pk	34.4	0.8	-95.2	-30.60	-52.00	-25	-27.00	H
5.286094	37.88	Pk	34.4	0.7	-95.2	-30.70	-52.92	-25	-27.92	V
7.919531	35.79	Pk	35.8	0.3	-95.2	-26.35	-49.66	-25	-24.66	H
7.855781	37.11	Pk	35.8	0.5	-95.2	-26.80	-48.59	-25	-23.59	V
10.544063	33.25	Pk	37.6	0.6	-95.2	-24.79	-48.54	-25	-23.54	H
10.554375	33.45	Pk	37.6	0.7	-95.2	-24.70	-48.15	-25	-23.15	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 #	14982479
Date:	5/3/2024
Test Engineer:	31300
Configuration:	EUT Only
Mode	LTE B66 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, 1720MHz									
3.441094	36.35	Pk	32.7	-95.2	-24.90	-51.05	-13	-38.05	H
3.441563	35.99	Pk	32.7	-95.2	-24.90	-51.41	-13	-38.41	V
5.160469	33.32	Pk	34.1	-95.2	-22.15	-49.93	-13	-36.93	H
5.160469	32.22	Pk	34.1	-95.2	-22.15	-51.03	-13	-38.03	V
6.882188	30.41	Pk	35.6	-95.2	-19.40	-48.59	-13	-35.59	H
6.881719	30.86	Pk	35.6	-95.2	-19.40	-48.14	-13	-35.14	V
Mid Channel, 1745MHz									
3.490313	35.41	Pk	32.8	-95.2	-24.37	-51.36	-13	-38.36	H
3.490781	35.35	Pk	32.8	-95.2	-24.32	-51.37	-13	-38.37	V
5.234531	33.68	Pk	34.2	-95.2	-21.95	-49.27	-13	-36.27	H
5.234531	32.53	Pk	34.2	-95.2	-21.95	-50.42	-13	-37.42	V
6.980156	29.26	Pk	35.7	-95.2	-18.60	-48.84	-13	-35.84	H
6.980156	28.52	Pk	35.7	-95.2	-18.60	-49.58	-13	-36.58	V
High Channel, 1770MHz									
3.540469	35.43	Pk	32.9	-95.2	-23.90	-50.77	-13	-37.77	H
3.540469	34.07	Pk	32.9	-95.2	-23.90	-52.13	-13	-39.13	V
5.310469	32.33	Pk	34.3	-95.2	-21.30	-49.87	-13	-36.87	H
5.310469	31.62	Pk	34.3	-95.2	-21.30	-50.58	-13	-37.58	V
7.080000	30.30	Pk	35.6	-95.2	-18.40	-47.70	-13	-34.70	H
7.080000	28.83	Pk	35.6	-95.2	-18.40	-49.17	-13	-36.17	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #	14982479
Date:	5/17/2024
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n66 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, 1730MHz									
3.460313	33.12	Pk	32.7	-95.2	-24.80	-54.18	-13	-41.18	H
3.459375	34.26	Pk	32.7	-95.2	-24.86	-53.10	-13	-40.10	V
5.190469	32.40	Pk	34.1	-95.2	-22.50	-51.20	-13	-38.20	H
5.190469	31.92	Pk	34.1	-95.2	-22.50	-51.68	-13	-38.68	V
6.920156	29.04	Pk	35.6	-95.2	-19.10	-49.66	-13	-36.66	H
6.919688	30.86	Pk	35.6	-95.2	-19.13	-47.87	-13	-34.87	V
Mid Channel, 1745MHz									
3.493125	36.34	Pk	32.8	-95.2	-24.30	-50.36	-13	-37.36	H
3.493125	34.28	Pk	32.8	-95.2	-24.30	-52.42	-13	-39.42	V
5.235938	30.70	Pk	34.2	-95.2	-21.99	-52.29	-13	-39.29	H
5.235469	31.52	Pk	34.2	-95.2	-21.95	-51.43	-13	-38.43	V
6.980625	28.51	Pk	35.7	-95.2	-18.60	-49.59	-13	-36.59	H
6.981094	29.05	Pk	35.7	-95.2	-18.60	-49.05	-13	-36.05	V
High Channel, 1760MHz									
3.519844	33.66	Pk	32.9	-95.2	-24.20	-52.84	-13	-39.84	H
3.519375	35.57	Pk	32.9	-95.2	-24.20	-50.93	-13	-37.93	V
5.280000	31.44	Pk	34.3	-95.2	-21.60	-51.06	-13	-38.06	H
5.280000	32.19	Pk	34.3	-95.2	-21.60	-50.31	-13	-37.31	V
7.040156	28.23	Pk	35.6	-95.2	-18.00	-49.37	-13	-36.37	H
7.039688	27.49	Pk	35.6	-95.2	-17.97	-50.08	-13	-37.08	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 #	14982479
Date:	5/15/2024
Test Engineer:	28567
Configuration:	EUT ONLY
Mode	5G NR n70 BPSK 15MHz
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, 1702.5MHz									
3.400313	34.76	Pk	32.8	-95.2	-24.73	-52.37	-13	-39.37	H
3.400313	34.21	Pk	32.8	-95.2	-24.73	-52.92	-13	-39.92	V
5.100938	31.00	Pk	34.2	-95.2	-20.90	-50.90	-13	-37.90	H
5.100938	31.30	Pk	34.2	-95.2	-20.90	-50.60	-13	-37.60	V
6.801094	29.21	Pk	35.5	-95.2	-18.51	-49.00	-13	-36.00	H
6.801094	29.45	Pk	35.5	-95.2	-18.51	-48.76	-13	-35.76	V

10.4.7. 5G NR n77A (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 #	14982479
Date:	5/15/2024
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	T1792 3400- 3800MHz BRF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz										
6.999356	23.58	Pk	35.6	0.5	-95.2	-18.9	-54.42	-13	-41.42	H
6.999356	23.15	Pk	35.6	0.5	-95.2	-18.9	-54.85	-13	-41.85	V
10.498359	21.59	Pk	37.9	0.6	-95.2	-15.26	-50.37	-13	-37.37	H
10.499241	22.34	Pk	37.9	0.6	-95.2	-15.22	-49.58	-13	-36.58	V
13.999125	22.1	Pk	39	0.7	-95.2	-13.11	-46.51	-13	-33.51	V
13.999566	21.24	Pk	39	0.7	-95.2	-13.16	-47.42	-13	-34.42	H

10.4.8. 5G NR n77C (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	14982479
Date:	5/17/2024
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n77 BPSK 100MHz
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, 3750MHz									
7.500500	27.26	Pk	35.7	-95.2	-17.10	-49.34	-13	-36.34	H
7.499500	27.02	Pk	35.7	-95.2	-17.10	-49.58	-13	-36.58	V
11.250500	27.86	Pk	37.8	-95.2	-14.05	-43.59	-13	-30.59	H
11.250500	26.43	Pk	37.8	-95.2	-14.05	-45.02	-13	-32.02	V
15.000250	26.65	Pk	39.9	-95.2	-12.93	-41.58	-13	-28.58	H
15.000500	26.67	Pk	39.9	-95.2	-12.95	-41.58	-13	-28.58	V
Mid Channel, 3840MHz									
7.685500	29.77	Pk	35.8	-95.2	-17.05	-46.68	-13	-33.68	H
7.685000	27.91	Pk	35.8	-95.2	-17.10	-48.59	-13	-35.59	V
11.520000	27.16	Pk	37.9	-95.2	-14.60	-44.74	-13	-31.74	H
11.520500	26.29	Pk	37.9	-95.2	-14.60	-45.61	-13	-32.61	V
15.360000	27.56	Pk	40.2	-95.2	-13.20	-40.64	-13	-27.64	H
15.358000	27.43	Pk	40.2	-95.2	-13.40	-40.97	-13	-27.97	V
High Channel, 3930MHz									
7.859500	29.41	Pk	35.8	-95.2	-17.70	-47.69	-13	-34.69	V
7.860500	29.38	Pk	35.8	-95.2	-17.70	-47.72	-13	-34.72	H
11.791000	28.15	Pk	38.3	-95.2	-13.90	-42.65	-13	-29.65	H
11.790000	27.37	Pk	38.3	-95.2	-14.00	-43.53	-13	-30.53	V
15.719000	27.24	Pk	40.5	-95.2	-12.30	-39.76	-13	-26.76	H
15.720500	26.14	Pk	40.5	-95.2	-12.35	-40.91	-13	-27.91	V

10.5. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 7

TEST PROCEDURE

KDB 971168 D01 /D02

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

RESULTS

10.5.1. 5G NR n77 (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 #	14982479
Date:	5/1/2024
Test Engineer:	32145
Configuration:	EUT Only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	226673_ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz									
7.002069	46.50	Pk	35.8	-95.2	-45.49	-58.39	-13	-45.39	H
6.989935	46.13	Pk	35.8	-95.2	-45.45	-58.72	-13	-45.72	V
10.513271	46.21	Pk	37.6	-95.2	-44.95	-56.34	-13	-43.34	H
10.490405	46.45	Pk	37.6	-95.2	-45.03	-56.18	-13	-43.18	V
13.989007	45.27	Pk	39.0	-95.2	-43.17	-54.10	-13	-41.10	H
13.942340	44.89	Pk	39.0	-95.2	-43.22	-54.53	-13	-41.53	V

10.5.2. 5G NR n77C (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 #	14982479
Date:	5/2/2024
Test Engineer:	32145
Configuration:	EUT Only
Mode	5G NR n78 BPSK 100MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	226673 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.505509	54.88	Pk	35.8	-95.2	-46.10	-50.62	-13	-37.62	H
7.491169	54.65	Pk	35.8	-95.2	-45.96	-50.71	-13	-37.71	V
11.247847	54.68	Pk	38.0	-95.2	-44.22	-46.74	-13	-33.74	H
11.262586	53.21	Pk	38.0	-95.2	-44.18	-48.17	-13	-35.17	V
14.986999	53.46	Pk	39.6	-95.2	-42.45	-44.59	-13	-31.59	H
14.995364	52.36	Pk	39.7	-95.2	-42.36	-45.50	-13	-32.50	V
Mid Channel, 3840MHz									
7.675995	54.49	Pk	35.9	-95.2	-45.04	-49.85	-13	-36.85	H
7.672809	53.55	Pk	35.9	-95.2	-45.01	-50.76	-13	-37.76	V
11.496407	53.26	Pk	38.2	-95.2	-43.54	-47.28	-13	-34.28	H
11.465337	53.40	Pk	38.1	-95.2	-43.85	-47.55	-13	-34.55	V
15.308056	52.59	Pk	40.0	-95.2	-41.71	-44.32	-13	-31.32	H
15.300089	51.96	Pk	40.0	-95.2	-41.71	-44.95	-13	-31.95	V
High Channel, 3930MHz									
7.886315	54.03	Pk	36.0	-95.2	-45.37	-50.54	-13	-37.54	H
7.894680	53.62	Pk	36.0	-95.2	-45.36	-50.94	-13	-37.94	V
10.803308	54.73	Pk	37.7	-95.2	-44.86	-47.63	-13	-34.63	H
10.786179	53.48	Pk	37.7	-95.2	-44.84	-48.86	-13	-35.86	V
15.517180	52.12	Pk	40.3	-95.2	-40.38	-43.16	-13	-30.16	H
15.453845	51.43	Pk	40.2	-95.2	-41.67	-45.24	-13	-32.24	V

10.6. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 8

TEST PROCEDURE

KDB 971168 D01 /D02

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

RESULTS

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

LIMITS

FCC: §27.53

Emission limits

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

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

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	14982479
Date:	5/13/2024
Test Engineer:	32934
Configuration:	EUT Only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	226671_ACF (dB/m)	T1792 3400-3800MHz BRF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz										
6.995391	29.29	Pk	35.6	0.5	-95.2	-27.3	-57.11	-13	-44.11	H
6.974681	29.55	Pk	35.6	0.4	-95.2	-27.4	-57.05	-13	-44.05	V
10.509375	28.18	Pk	37.6	0.6	-95.2	-24.5	-53.32	-13	-40.32	H
10.493513	27.31	Pk	37.6	0.6	-95.2	-24.7	-54.39	-13	-41.39	V
14.008819	25.35	Pk	38.9	0.7	-95.2	-20.52	-50.77	-13	-37.77	H
14.012784	25.31	Pk	38.9	0.7	-95.2	-20.66	-50.95	-13	-37.95	V

10.6.3. 5G NR n77C (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 #:	14982479
Date:	5/10/2024
Test Engineer:	32934
Configuration:	EUT Only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.515000	35.25	Pk	35.6	-95.2	-26.80	-51.15	-13	-38.15	H
7.479500	34.98	Pk	35.6	-95.2	-26.85	-51.47	-13	-38.47	V
10.230000	34.86	Pk	37.4	-95.2	-24.40	-47.34	-13	-34.34	H
10.195500	34.59	Pk	37.4	-95.2	-24.40	-47.61	-13	-34.61	V
15.021500	31.60	Pk	39.6	-95.2	-19.35	-43.35	-13	-30.35	H
15.023500	31.00	Pk	39.6	-95.2	-19.40	-44.00	-13	-31.00	V
Mid Channel, 3840MHz									
7.649000	33.03	Pk	35.7	-95.2	-26.20	-52.67	-13	-39.67	H
7.715000	33.67	Pk	35.8	-95.2	-26.80	-52.53	-13	-39.53	V
11.443000	31.09	Pk	38.1	-95.2	-22.50	-48.51	-13	-35.51	H
11.522000	29.40	Pk	38.2	-95.2	-22.00	-49.60	-13	-36.60	V
15.254500	28.89	Pk	39.9	-95.2	-18.95	-45.36	-13	-32.36	H
15.333500	28.24	Pk	40.0	-95.2	-19.25	-46.21	-13	-33.21	V
High Channel, 3930MHz									
7.901000	36.97	Pk	35.8	-95.2	-26.20	-48.63	-13	-35.63	H
7.874000	36.54	Pk	35.8	-95.2	-26.40	-49.26	-13	-36.26	V
11.790000	30.53	Pk	38.6	-95.2	-21.30	-47.37	-13	-34.37	H
11.793500	30.62	Pk	38.6	-95.2	-21.35	-47.33	-13	-34.33	V
15.715000	30.14	Pk	40.6	-95.2	-18.50	-42.96	-13	-29.96	H
15.704500	30.16	Pk	40.6	-95.2	-18.70	-43.14	-13	-30.14	V

10.7. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 9

TEST PROCEDURE

KDB 971168 D01 /D02

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

RESULTS

10.7.2. 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 #:	14982479
Date:	5/15/2024
Test Engineer:	28567
Configuration:	EUT Only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF 3m (dB/m)	T1792 3400-3800MHz BRF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 3500MHz										
6.999797	24.81	Pk	35.6	.5	-95.2	-18.90	-53.19	-13	-40.19	H
6.999797	23.86	Pk	35.6	.5	-95.2	-18.90	-54.14	-13	-41.14	V
10.499681	22.00	Pk	37.9	.6	-95.2	-15.27	-49.97	-13	-36.97	H
10.499681	21.73	Pk	37.9	.6	-95.2	-15.27	-50.24	-13	-37.24	V
13.999566	21.92	Pk	39.0	.7	-95.2	-13.16	-46.74	-13	-33.74	H
13.999566	20.80	Pk	39.0	.7	-95.2	-13.16	-47.86	-13	-34.86	V

10.7.3. 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 #:	14982479
Date:	5/14/2024
Test Engineer:	32934
Configuration:	EUT Only
Mode	5G NR n77 BPSK 100MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	226671 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.502000	34.66	Pk	35.6	-95.2	-26.80	-51.74	-13	-38.74	H
7.471000	35.15	Pk	35.6	-95.2	-26.70	-51.15	-13	-38.15	V
11.244000	31.53	Pk	37.9	-95.2	-22.40	-48.17	-13	-35.17	H
11.238500	31.73	Pk	37.9	-95.2	-22.50	-48.07	-13	-35.07	V
15.005500	31.85	Pk	39.6	-95.2	-19.45	-43.20	-13	-30.20	H
14.977000	29.99	Pk	39.5	-95.2	-18.90	-44.61	-13	-31.61	V
Mid Channel, 3840MHz									
7.676000	35.58	Pk	35.8	-95.2	-26.30	-50.12	-13	-37.12	H
7.666500	35.44	Pk	35.7	-95.2	-26.25	-50.31	-13	-37.31	V
11.513500	31.65	Pk	38.2	-95.2	-21.90	-47.25	-13	-34.25	H
11.477000	33.74	Pk	38.2	-95.2	-22.10	-45.36	-13	-32.36	V
15.371000	29.93	Pk	40.1	-95.2	-19.30	-44.47	-13	-31.47	H
15.373000	29.72	Pk	40.1	-95.2	-19.30	-44.68	-13	-31.68	V
High Channel, 3930MHz									
7.875500	35.32	Pk	35.8	-95.2	-26.40	-50.48	-13	-37.48	H
7.862000	34.68	Pk	35.8	-95.2	-26.50	-51.22	-13	-38.22	V
11.799000	31.97	Pk	38.6	-95.2	-21.50	-46.13	-13	-33.13	H
11.782000	30.89	Pk	38.6	-95.2	-21.00	-46.71	-13	-33.71	V
15.714000	30.39	Pk	40.6	-95.2	-18.40	-42.61	-13	-29.61	H
15.750000	30.42	Pk	40.7	-95.2	-18.30	-42.38	-13	-29.38	V

11. SETUP PHOTOS

Please refer to 14982479-EP1V1 Setup Photo Report.

END OF REPORT