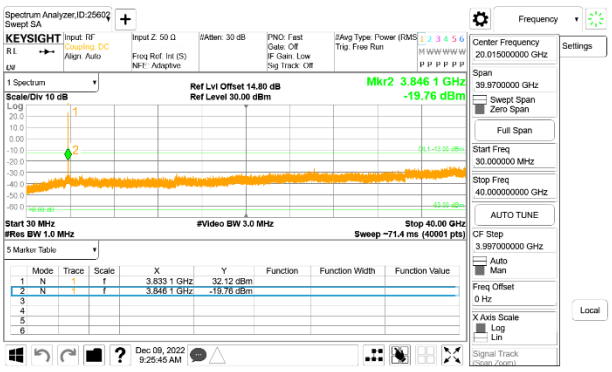
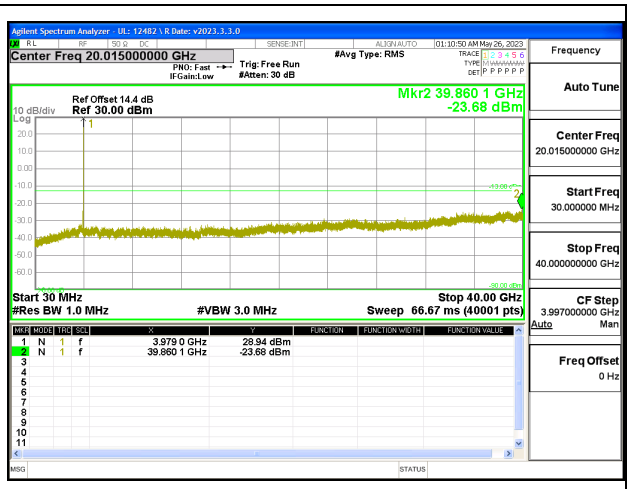
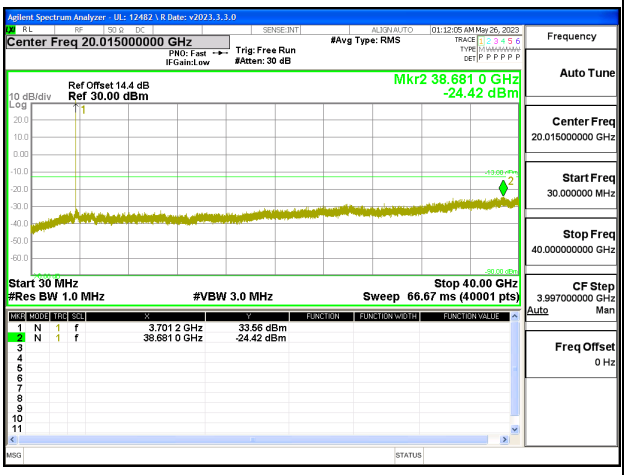


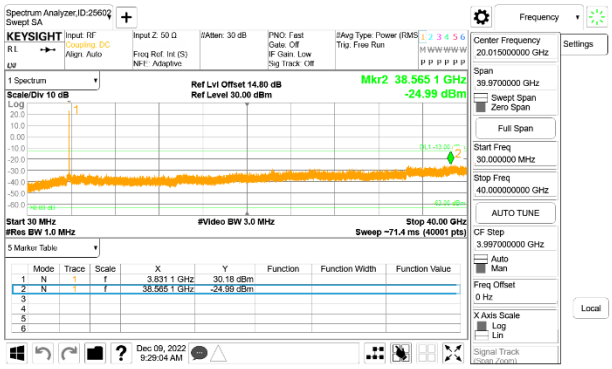
5G NR n77 15MHz BPSK Middle Channel RB1-1



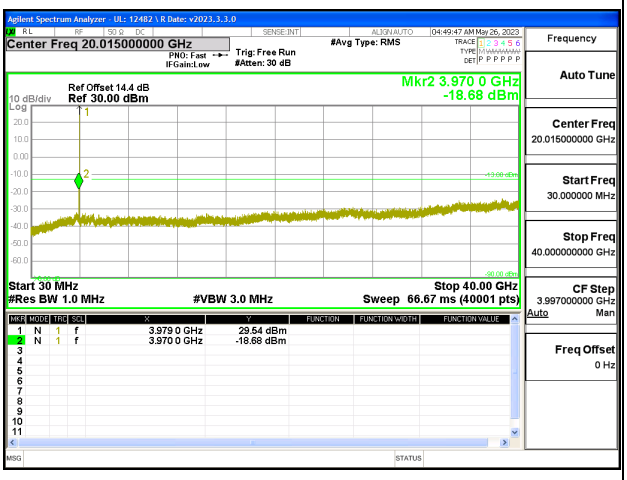
5G NR n77 15MHz BPSK High Channel RB1-37



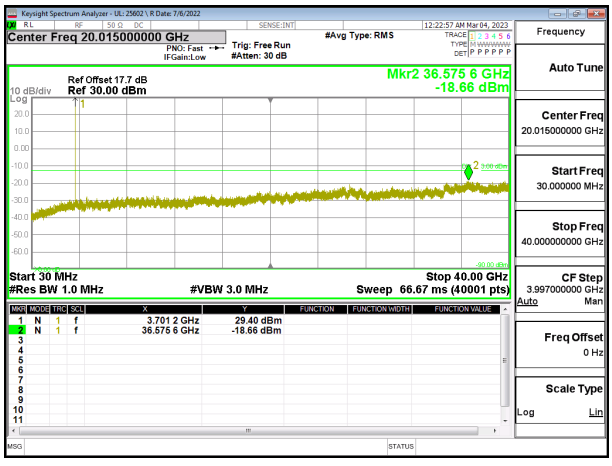
5G NR n77 20MHz BPSK Low Channel RB1-1



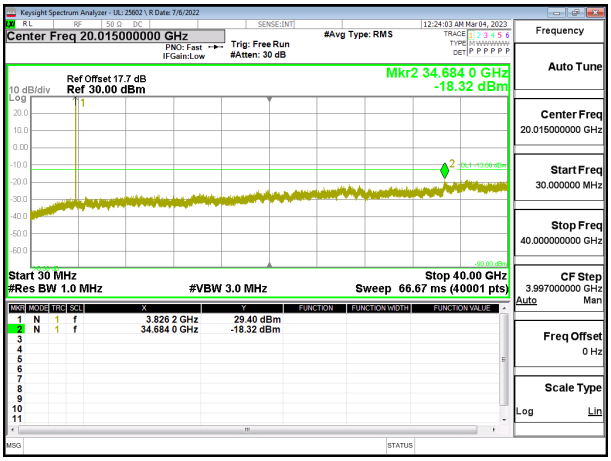
5G NR n77 20MHz BPSK Middle Channel RB1-1



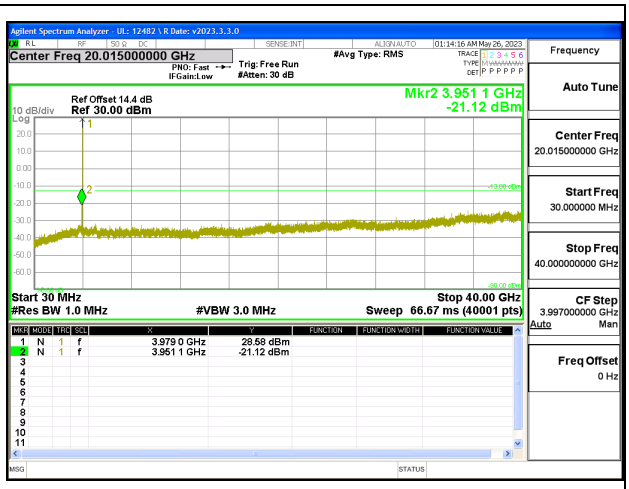
5G NR n77 20MHz BPSK High Channel RB1-50



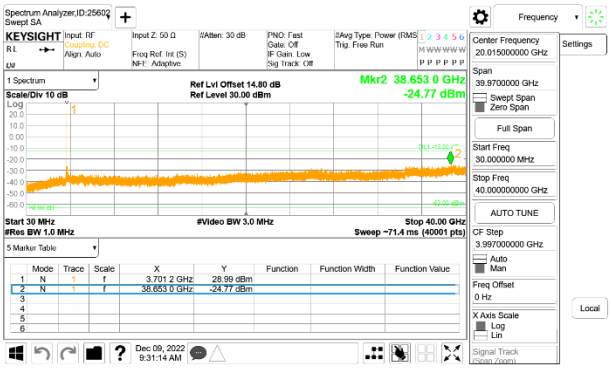
5G NR n77 30MHz BPSK Low Channel RB1-0



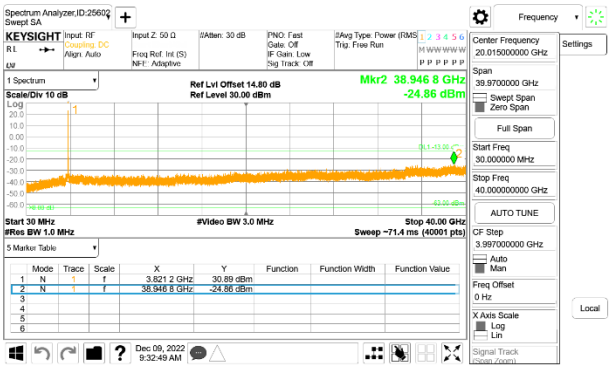
5G NR n77 30MHz BPSK Middle Channel RB1-1



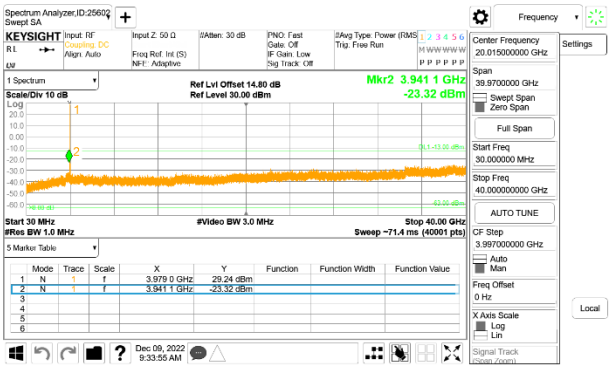
5G NR n77 30MHz BPSK High Channel RB1-77



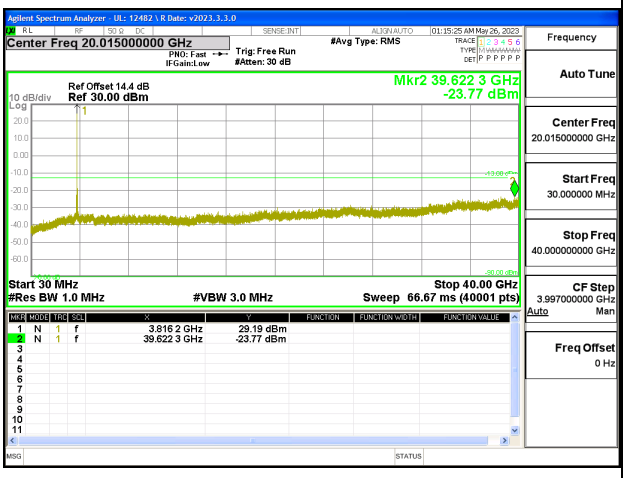
5G NR n77 40MHz BPSK Low Channel RB1-0



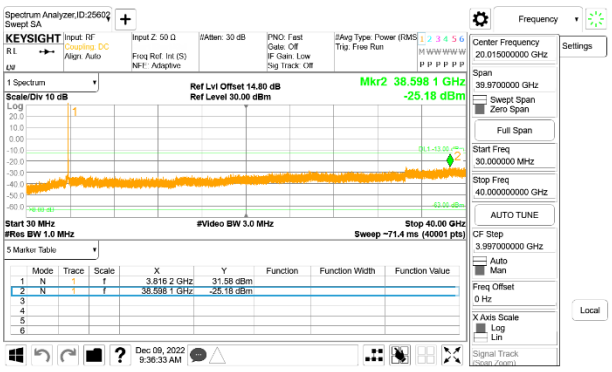
5G NR n77 40MHz BPSK Middle Channel RB1-1



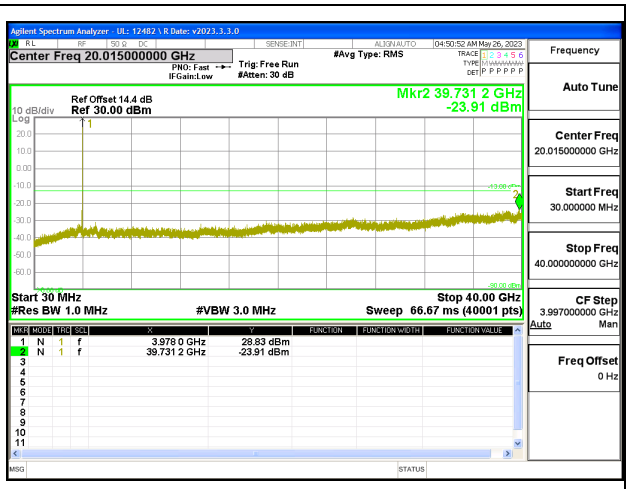
5G NR n77 40MHz BPSK High Channel RB1-105



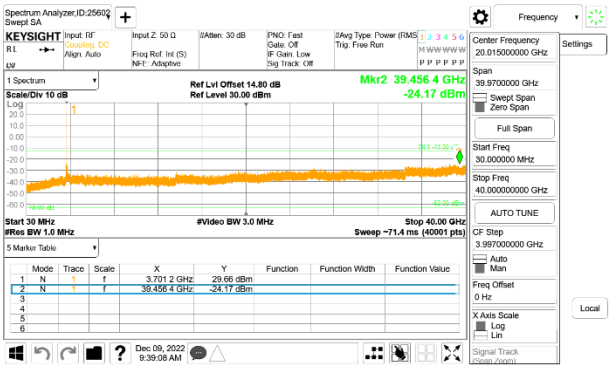
5G NR n77 50MHz BPSK Middle Channel RB1-0



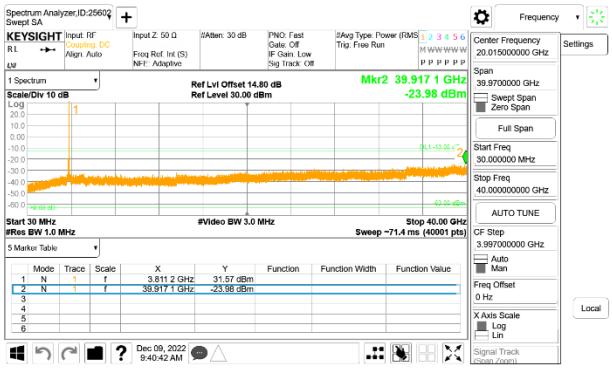
5G NR n77 50MHz BPSK Middle Channel RB1-1



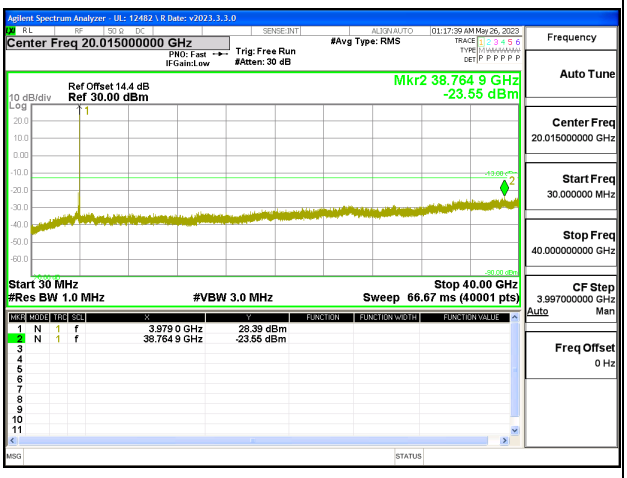
5G NR n77 50MHz BPSK High Channel RB1-132



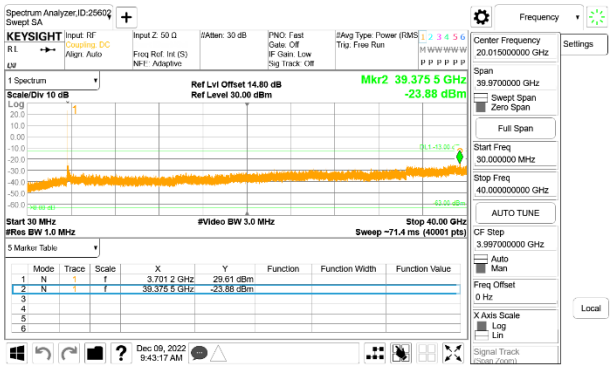
5G NR n77 60MHz BPSK Low Channel RB1-0



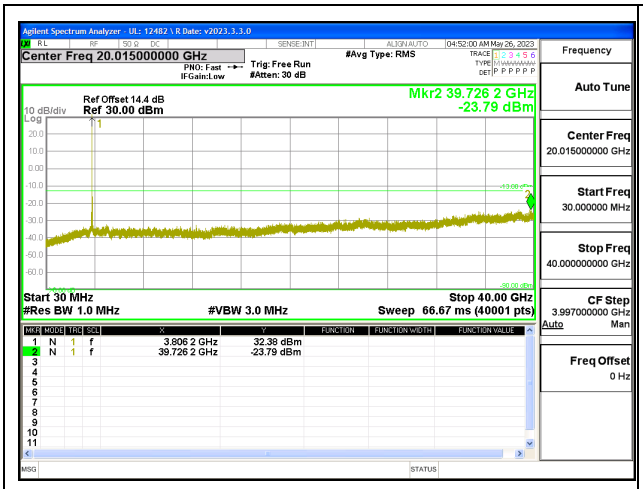
5G NR n77 60MHz BPSK Middle Channel RB1-1



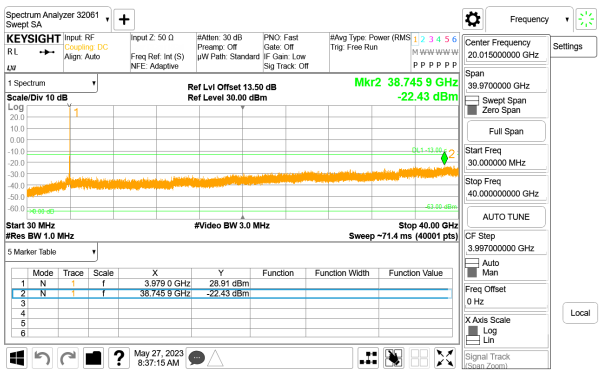
5G NR n77 60MHz BPSK High Channel RB1-161



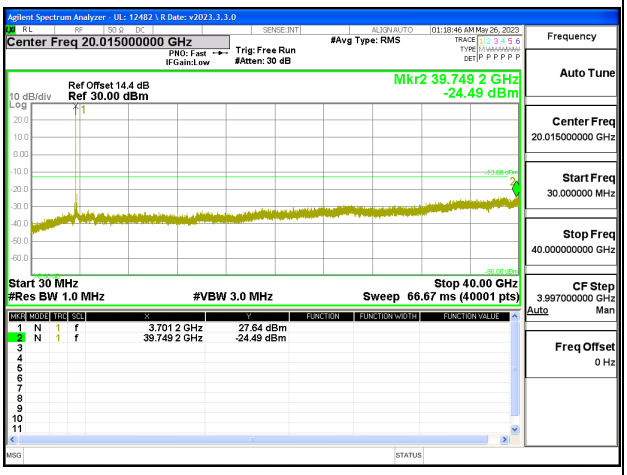
5G NR n77 70MHz BPSK Low Channel RB1-0



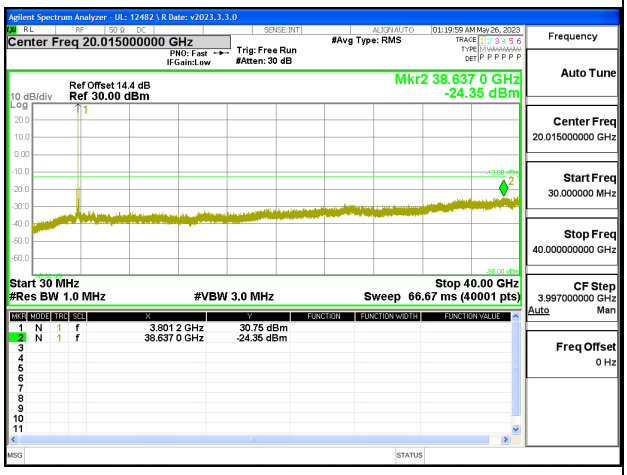
5G NR n77 70MHz BPSK Middle Channel RB1-1



5G NR n77 70MHz BPSK High Channel RB1-188

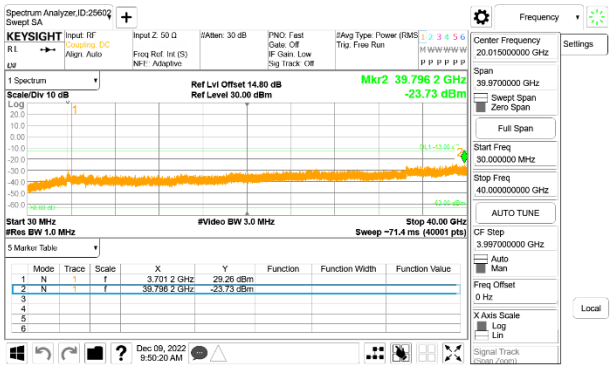


5G NR n77 80MHz BPSK Low Channel RB1-0



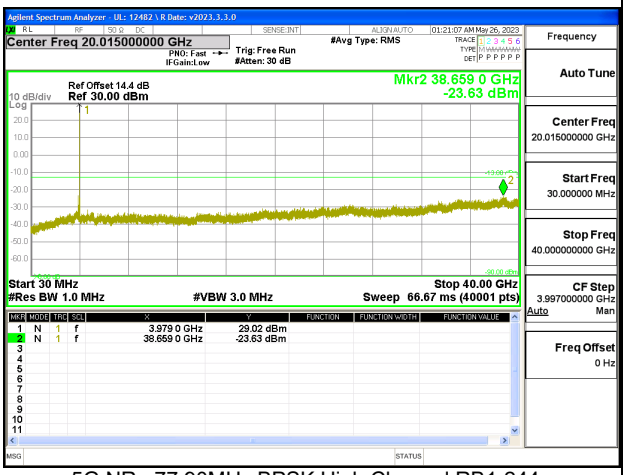
5G NR n77 80MHz BPSK Middle Channel RB1-1

5G NR n77 80MHz BPSK High Channel RB1-216

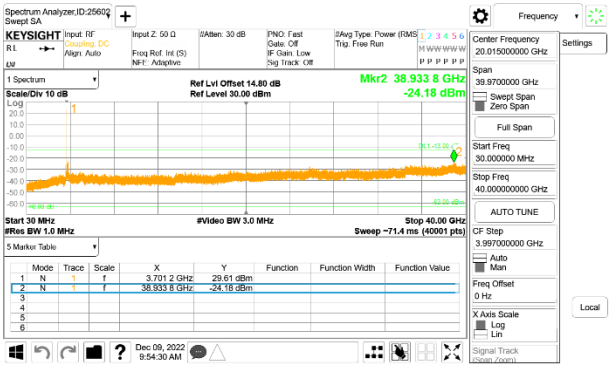


5G NR n77 90MHz BPSK Low Channel RB1-0

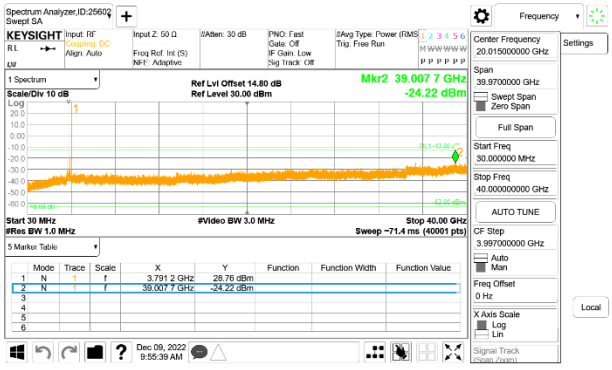
5G NR n77 90MHz BPSK Middle Channel RB1-1



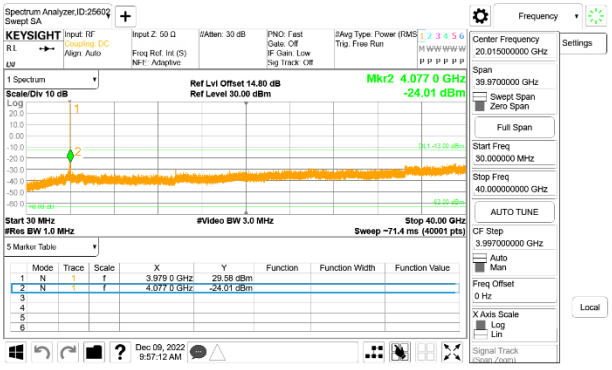
5G NR n77 90MHz BPSK High Channel RB1-244



5G NR n77 100MHz BPSK Low Channel RB1-1



5G NR n77 100MHz BPSK Middle Channel RB1-1



5G NR n77 100MHz BPSK High Channel RB1-272

9.4. FREQUENCY STABILITY

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- Temp. = −30°C to +50°C
- Voltage = (85% - 115%)

  Low voltage, 3.23VDC, Normal, 3.8VDC and High voltage, 4.37VDC.
  End Voltage, 2.85VDC.

Frequency Stability vs Temperature:
The EUT is place inside a temperature chamber. The temperature is set to 20ºC and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50ºC is reached.

Frequency Stability vs Voltage:
The peak frequency error is recorded (worst-case).

RESULTS

See the following pages.

9.4.1. LTE BAND 7 AND 5G NR n7

LIMITS

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

Test Engineer ID:	28774	Test Date:	3/6/2023

LTE BAND 7 QPSK (20MHz BANDWIDTH)

Band	7	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2500	2570			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	2501.0644	2568.9631			
Extreme (50°C)		2501.0644	2568.9631	-5.7	-0.002	Yes
Extreme (40°C)		2501.0644	2568.9631	5.6	0.002	Yes
Extreme (30°C)		2501.0644	2568.9631	-4.8	-0.002	Yes
Extreme (10°C)		2501.0644	2568.9631	-12.4	-0.005	Yes
Extreme (0°C)		2501.0644	2568.9631	-12.1	-0.005	Yes
Extreme (-10°C)		2501.0644	2568.9631	-10.4	-0.004	Yes
Extreme (-20°C)		2501.0644	2568.9631	-9.5	-0.004	Yes
Extreme (-30°C)		2501.0644	2568.9631	-7.9	-0.003	Yes
20°C	15%	2501.0644	2568.9631	5.5	0.002	Yes
	-15%	2501.0644	2568.9631	-6.2	-0.002	Yes
	End Point Voltage	2501.0644	2568.9631	-6.8	-0.003	Yes

5G NR n7 BPSK (40MHz BANDWIDTH)

Band	7	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2500	2570			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	2500.6548	2569.3301			
Extreme (50°C)		2500.6548	2569.3301	-8.0	-0.003	Yes
Extreme (40°C)		2500.6548	2569.3301	-9.0	-0.004	Yes
Extreme (30°C)		2500.6548	2569.3301	-10.3	-0.004	Yes
Extreme (10°C)		2500.6548	2569.3301	-9.0	-0.004	Yes
Extreme (0°C)		2500.6548	2569.3301	-9.4	-0.004	Yes
Extreme (-10°C)		2500.6548	2569.3301	-9.0	-0.004	Yes
Extreme (-20°C)		2500.6548	2569.3301	-9.4	-0.004	Yes
Extreme (-30°C)		2500.6548	2569.3301	-6.9	-0.003	Yes
20°C	15%	2500.6548	2569.3301	-8.3	-0.003	Yes
	-15%	2500.6548	2569.3301	-8.3	-0.003	Yes
	End Point Voltage	2500.6548	2569.3301	-7.5	-0.003	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.

Test Engineer ID:	32061	Test Date:	1/17/2023

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	699.5200	715.4840			
Extreme (50°C)		699.5200	715.4840	3.4	0.005	Yes
Extreme (40°C)		699.5200	715.4840	-3.5	-0.005	Yes
Extreme (30°C)		699.5200	715.4840	4.4	0.006	Yes
Extreme (10°C)		699.5200	715.4840	-3.4	-0.005	Yes
Extreme (0°C)		699.5200	715.4840	4.3	0.006	Yes
Extreme (-10°C)		699.5200	715.4840	4.1	0.006	Yes
Extreme (-20°C)		699.5200	715.4840	4.5	0.006	Yes
Extreme (-30°C)		699.5200	715.4840	3.0	0.004	Yes
20°C	15%	699.5200	715.4840	3.7	0.005	Yes
	-15%	699.5200	715.4840	2.7	0.004	Yes
	End Point Voltage	699.5200	715.4840	-3.9	-0.006	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	699.6054	715.0662			
Extreme (50°C)		699.6054	715.0662	1.7	0.002	Yes
Extreme (40°C)		699.6054	715.0662	1.9	0.003	Yes
Extreme (30°C)		699.6054	715.0662	1.9	0.003	Yes
Extreme (10°C)		699.6054	715.0662	2.5	0.004	Yes
Extreme (0°C)		699.6054	715.0662	2.6	0.004	Yes
Extreme (-10°C)		699.6054	715.0662	2.7	0.004	Yes
Extreme (-20°C)		699.6054	715.0662	2.1	0.003	Yes
Extreme (-30°C)		699.6054	715.0662	1.5	0.002	Yes
20°C	15%	699.6054	715.0662	2.1	0.003	Yes
	-15%	699.6054	715.0662	1.5	0.002	Yes
	End Point Voltage	699.6054	715.0662	1.6	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.

Test Engineer ID:	28774	Test Date:	3/6/2023

QPSK (10MHz BANDWIDTH)

Band	13	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		777	787			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)		777.5313	786.4700			
Extreme (50°C)		777.5313	786.4700	3.8	0.005	Yes
Extreme (40°C)		777.5313	786.4700	3.5	0.005	Yes
Extreme (30°C)		777.5313	786.4700	2.3	0.003	Yes
Extreme (10°C)	Normal	777.5313	786.4700	5.6	0.007	Yes
Extreme (0°C)		777.5313	786.4700	4.3	0.005	Yes
Extreme (-10°C)		777.5313	786.4700	4.2	0.005	Yes
Extreme (-20°C)		777.5313	786.4700	4.2	0.005	Yes
Extreme (-30°C)		777.5313	786.4700	5.7	0.007	Yes
20°C	15%	777.5313	786.4700	5.1	0.007	Yes
	-15%	777.5313	786.4700	2.9	0.004	Yes
	End Point Voltage	777.5313	786.4700	4.7	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.

Test Engineer ID:	28774	Test Date:	3/6/2023

LTE BAND 14 QPSK (10MHz BANDWIDTH)

Band	14	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		788	798			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	788.5176	797.4806			
Extreme (50°C)		788.5176	797.4806	3.3	0.004	Yes
Extreme (40°C)		788.5176	797.4806	2.7	0.003	Yes
Extreme (30°C)		788.5176	797.4806	3.5	0.004	Yes
Extreme (10°C)		788.5176	797.4806	3.2	0.004	Yes
Extreme (0°C)		788.5176	797.4806	3.4	0.004	Yes
Extreme (-10°C)		788.5176	797.4806	4.2	0.005	Yes
Extreme (-20°C)		788.5176	797.4806	4.2	0.005	Yes
Extreme (-30°C)		788.5176	797.4806	3.9	0.005	Yes
20°C	15%	788.5176	797.4806	3.1	0.004	Yes
	-15%	788.5176	797.4806	3.3	0.004	Yes
	End Point Voltage	788.5176	797.4806	-4.6	-0.006	Yes

5G NR n14 BPSK (10MHz BANDWIDTH)

Band	14	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		788	798			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	788.3465	797.5199			
Extreme (50°C)		788.3465	797.5199	2.3	0.003	Yes
Extreme (40°C)		788.3465	797.5199	1.6	0.002	Yes
Extreme (30°C)		788.3465	797.5199	1.9	0.002	Yes
Extreme (10°C)		788.3465	797.5199	2.0	0.003	Yes
Extreme (0°C)		788.3465	797.5198	-1.8	-0.002	Yes
Extreme (-10°C)		788.3465	797.5199	2.4	0.003	Yes
Extreme (-20°C)		788.3465	797.5199	2.4	0.003	Yes
Extreme (-30°C)		788.3465	797.5199	1.7	0.002	Yes
20°C	15%	788.3465	797.5199	2.3	0.003	Yes
	-15%	788.3465	797.5199	2.3	0.003	Yes
	End Point Voltage	788.3465	797.5199	2.2	0.003	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.

Test Engineer ID:	28774	Test Date:	3/6/2023

QPSK (10MHz BANDWIDTH)

Band	17	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		704	716			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)		704.5263	715.4799			
Extreme (50°C)		704.5263	715.4799	-3.1	-0.004	Yes
Extreme (40°C)		704.5263	715.4799	2.6	0.004	Yes
Extreme (30°C)		704.5263	715.4799	2.4	0.003	Yes
Extreme (10°C)	Normal	704.5263	715.4799	3.3	0.005	Yes
Extreme (0°C)		704.5263	715.4799	3.1	0.004	Yes
Extreme (-10°C)		704.5263	715.4799	3.8	0.005	Yes
Extreme (-20°C)		704.5263	715.4799	4.6	0.007	Yes
Extreme (-30°C)		704.5263	715.4799	3.3	0.005	Yes
20°C	15%	704.5263	715.4799	-3.0	-0.004	Yes
	-15%	704.5263	715.4799	2.8	0.004	Yes
	End Point Voltage	704.5263	715.4799	2.8	0.004	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.

Test Engineer ID:	28774	Test Date:	3/6/2023

LTE BAND 25 QPSK (20MHz BANDWIDTH)

Band	25	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1850	1915		2.5	
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)		1851.0565	1913.9277			
Extreme (50°C)		1851.0565	1913.9277	-5.5	-0.003	Yes
Extreme (40°C)		1851.0565	1913.9277	-5.3	-0.003	Yes
Extreme (30°C)		1851.0565	1913.9277	-5.5	-0.003	Yes
Extreme (10°C)	Normal	1851.0565	1913.9277	-11.5	-0.006	Yes
Extreme (0°C)		1851.0565	1913.9277	-8.9	-0.005	Yes
Extreme (-10°C)		1851.0565	1913.9277	-10.5	-0.006	Yes
Extreme (-20°C)		1851.0565	1913.9277	-10.8	-0.006	Yes
Extreme (-30°C)		1851.0565	1913.9277	-10.3	-0.005	Yes
20°C	15%	1851.0565	1913.9277	-5.5	-0.003	Yes
	-15%	1851.0565	1913.9277	-6.3	-0.003	Yes
	End Point Voltage	1851.0565	1913.9277	-5.7	-0.003	Yes

5G NR n25 BPSK (40MHz BANDWIDTH)

Band	25	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1850	1915		2.5	
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	1850.6785	1914.3025			
Extreme (50°C)		1850.6785	1914.3025	-5.4	-0.003	Yes
Extreme (40°C)		1850.6785	1914.3025	-5.9	-0.003	Yes
Extreme (30°C)		1850.6785	1914.3025	3.1	0.002	Yes
Extreme (10°C)		1850.6785	1914.3025	-5.8	-0.003	Yes
Extreme (0°C)		1850.6785	1914.3025	-3.1	-0.002	Yes
Extreme (-10°C)		1850.6785	1914.3025	-5.3	-0.003	Yes
Extreme (-20°C)		1850.6785	1914.3025	-4.3	-0.002	Yes
Extreme (-30°C)		1850.6785	1914.3025	4.3	0.002	Yes
20°C	15%	1850.6785	1914.3025	-4.0	-0.002	Yes
	-15%	1850.6785	1914.3025	-3.1	-0.002	Yes
	End Point Voltage	1850.6785	1914.3025	-5.1	-0.003	Yes

9.4.7. LTE BAND 26 AND 5G NR n26 (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.

Test Engineer ID:	28774	Test Date:	3/6/2023

LTE BAND 26 QPSK (10MHz BANDWIDTH)

Band	26	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		814	824		2.5	
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	814.5298	823.4720			
Extreme (50°C)		814.5298	823.4720	3.0	0.004	Yes
Extreme (40°C)		814.5298	823.4720	-3.5	-0.004	Yes
Extreme (30°C)		814.5298	823.4720	3.1	0.004	Yes
Extreme (10°C)		814.5298	823.4720	3.3	0.004	Yes
Extreme (0°C)		814.5298	823.4720	2.8	0.003	Yes
Extreme (-10°C)		814.5299	823.4720	4.7	0.006	Yes
Extreme (-20°C)		814.5299	823.4720	4.7	0.006	Yes
Extreme (-30°C)		814.5299	823.4720	4.9	0.006	Yes
20°C	15%	814.5298	823.4720	3.5	0.004	Yes
	-15%	814.5299	823.4720	4.2	0.005	Yes
	End Point Voltage	814.5299	823.4720	4.7	0.006	Yes

5G NR n26 BPSK (10MHz BANDWIDTH)

Band	26	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		814	824		2.5	
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	814.2844	823.2836			
Extreme (50°C)		814.2844	823.2836	1.8	0.002	Yes
Extreme (40°C)		814.2844	823.2836	2.4	0.003	Yes
Extreme (30°C)		814.2844	823.2836	2.5	0.003	Yes
Extreme (10°C)		814.2844	823.2836	-2.1	-0.003	Yes
Extreme (0°C)		814.2844	823.2836	2.0	0.002	Yes
Extreme (-10°C)		814.2844	823.2836	2.2	0.003	Yes
Extreme (-20°C)		814.2844	823.2836	2.8	0.003	Yes
Extreme (-30°C)		814.2844	823.2836	3.7	0.005	Yes
20°C	15%	814.2844	823.2836	2.1	0.003	Yes
	-15%	814.2844	823.2836	2.6	0.003	Yes
	End Point Voltage	814.2844	823.2836	-2.5	-0.003	Yes

9.4.8. LTE BAND 26 AND 5G NR n26 (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.

Test Engineer ID:	28774	Test Date:	3/6/2023

LTE BAND 26 QPSK (10MHz BANDWIDTH)

Band	26	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		824	849		2.5	
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	824.7927	848.2198			
Extreme (50°C)		824.7927	848.2198	-3.2	-0.004	Yes
Extreme (40°C)		824.7927	848.2198	-2.8	-0.003	Yes
Extreme (30°C)		824.7927	848.2198	2.7	0.003	Yes
Extreme (10°C)		824.7927	848.2198	-3.5	-0.004	Yes
Extreme (0°C)		824.7927	848.2198	-3.1	-0.004	Yes
Extreme (-10°C)		824.7927	848.2198	-4.1	-0.005	Yes
Extreme (-20°C)		824.7927	848.2198	-2.8	-0.003	Yes
Extreme (-30°C)		824.7927	848.2198	3.7	0.004	Yes
20°C	15%	824.7927	848.2198	-2.9	-0.004	Yes
	-15%	824.7927	848.2198	-3.9	-0.005	Yes
	End Point Voltage	824.7927	848.2198	4.5	0.005	Yes

5G NR n26 BPSK (20MHz BANDWIDTH)

Band	26	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		824	849		2.5	
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	1850.6785	848.2942			
Extreme (50°C)		1850.6785	848.2942	2.6	0.003	Yes
Extreme (40°C)		1850.6785	848.2942	2.0	0.002	Yes
Extreme (30°C)		1850.6785	848.2942	2.5	0.003	Yes
Extreme (10°C)		1850.6785	848.2942	-3.0	-0.004	Yes
Extreme (0°C)		1850.6785	848.2942	2.7	0.003	Yes
Extreme (-10°C)		1850.6785	848.2942	3.2	0.004	Yes
Extreme (-20°C)		1850.6785	848.2942	2.6	0.003	Yes
Extreme (-30°C)		1850.6785	848.2942	-3.6	-0.004	Yes
20°C	15%	1850.6785	848.2942	2.8	0.003	Yes
	-15%	1850.6785	848.2942	-3.1	-0.004	Yes
	End Point Voltage	1850.6785	848.2942	-1.6	-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.

Test Engineer ID:	28774	Test Date:	3/6/2023

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)		2305.5157	2314.4757			
Extreme (50°C)		2305.5157	2314.4757	-4.8	-0.002	Yes
Extreme (40°C)		2305.5157	2314.4757	-5.4	-0.002	Yes
Extreme (30°C)		2305.5157	2314.4757	-5.0	-0.002	Yes
Extreme (10°C)	Normal	2305.5157	2314.4757	-9.3	-0.004	Yes
Extreme (0°C)		2305.5157	2314.4757	-9.8	-0.004	Yes
Extreme (-10°C)		2305.5157	2314.4757	-8.6	-0.004	Yes
Extreme (-20°C)		2305.5157	2314.4757	-8.3	-0.004	Yes
Extreme (-30°C)		2305.5157	2314.4757	-8.7	-0.004	Yes
20°C	15%	2305.5157	2314.4757	-7.1	-0.003	Yes
	-15%	2305.5157	2314.4757	-6.0	-0.003	Yes
	End Point Voltage	2305.5157	2314.4757	-4.9	-0.002	Yes

5G NR n30 BPSK (10MHz BANDWIDTH)

Band	30	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2305	2315			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	2305.3415	2314.2872			
Extreme (50°C)		2305.3415	2314.2872	-10.2	-0.004	Yes
Extreme (40°C)		2305.3415	2314.2872	-9.6	-0.004	Yes
Extreme (30°C)		2305.3416	2314.2872	9.8	0.004	Yes
Extreme (10°C)		2305.3415	2314.2872	-10.4	-0.005	Yes
Extreme (0°C)		2305.3415	2314.2872	-10.1	-0.004	Yes
Extreme (-10°C)		2305.3415	2314.2872	-9.9	-0.004	Yes
Extreme (-20°C)		2305.3415	2314.2872	-11.1	-0.005	Yes
Extreme (-30°C)		2305.3415	2314.2872	-9.7	-0.004	Yes
20°C	15%	2305.3415	2314.2872	-10.4	-0.005	Yes
	-15%	2305.3415	2314.2872	-8.6	-0.004	Yes
	End Point Voltage	2305.3415	2314.2872	-9.8	-0.004	Yes

9.4.10. LTE BAND 41 AND 5G NR n41

LIMITS

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

Test Engineer ID:	28774	Test Date:	3/6/2023

LTE BAND 41 QPSK (20MHz BANDWIDTH)

Band	41	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2496	2690		0	
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	2497.0120	2689.0618			
Extreme (50°C)		2497.0120	2689.0618	-10.3	-0.004	Yes
Extreme (40°C)		2497.0120	2689.0618	-10.0	-0.004	Yes
Extreme (30°C)		2497.0120	2689.0618	-11.2	-0.004	Yes
Extreme (10°C)		2497.0120	2689.0618	-15.8	-0.006	Yes
Extreme (0°C)		2497.0120	2689.0618	-18.5	-0.007	Yes
Extreme (-10°C)		2497.0120	2689.0618	-13.4	-0.005	Yes
Extreme (-20°C)		2497.0120	2689.0618	-18.4	-0.007	Yes
Extreme (-30°C)		2497.0120	2689.0618	-16.6	-0.006	Yes
20°C	15%	2497.0120	2689.0618	-8.2	-0.003	Yes
	-15%	2497.0120	2689.0618	-11.0	-0.004	Yes
	End Point Voltage	2497.0120	2689.0618	-12.1	-0.005	Yes

5G NR n41 BPSK (100MHz BANDWIDTH)

Band	41	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2496	2690		0	
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	2497.0707	2687.7896			
Extreme (50°C)		2497.0707	2687.7896	-19.6	-0.008	Yes
Extreme (40°C)		2497.0707	2687.7896	-18.3	-0.007	Yes
Extreme (30°C)		2497.0707	2687.7896	-20.5	-0.008	Yes
Extreme (10°C)		2497.0707	2687.7896	-19.6	-0.008	Yes
Extreme (0°C)		2497.0707	2687.7896	-18.0	-0.007	Yes
Extreme (-10°C)		2497.0707	2687.7896	-19.5	-0.008	Yes
Extreme (-20°C)		2497.0707	2687.7896	-22.4	-0.009	Yes
Extreme (-30°C)		2497.0707	2687.7896	-22.7	-0.009	Yes
20°C	15%	2497.0707	2687.7896	-19.7	-0.008	Yes
	-15%	2497.0707	2687.7896	-19.2	-0.007	Yes
	End Point Voltage	2497.0707	2687.7896	-10.2	-0.004	Yes

9.4.11. LTE BAND 48 AND 5G NR n48

Test Engineer ID:	28774	Test Date:	3/6/2023

LTE BAND 48 QPSK (20MHz BANDWIDTH)

Band	48	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		3550	3700			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)		3550.8498	3699.0005			
Extreme (50°C)		3550.8498	3699.0005	6.2	0.002	Yes
Extreme (40°C)		3550.8498	3699.0005	6.0	0.002	Yes
Extreme (30°C)		3550.8498	3699.0005	6.8	0.002	Yes
Extreme (10°C)	Normal	3550.8498	3699.0005	8.7	0.002	Yes
Extreme (0°C)		3550.8498	3699.0005	-7.9	-0.002	Yes
Extreme (-10°C)		3550.8498	3699.0005	6.7	0.002	Yes
Extreme (-20°C)		3550.8498	3699.0005	6.8	0.002	Yes
Extreme (-30°C)		3550.8498	3699.0005	7.5	0.002	Yes
20°C	15%	3550.8498	3699.0005	-7.2	-0.002	Yes
	-15%	3550.8498	3699.0005	8.3	0.002	Yes
	End Point Voltage	3550.8498	3699.0005	7.5	0.002	Yes

5G NR n48 BPSK (40MHz BANDWIDTH)

Band	48	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		3550	3700			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	3550.9916	3696.8506			
Extreme (50°C)		3550.9916	3696.8505	-13.0	-0.004	Yes
Extreme (40°C)		3550.9916	3696.8505	-13.8	-0.004	Yes
Extreme (30°C)		3550.9916	3696.8506	-11.6	-0.003	Yes
Extreme (10°C)		3550.9916	3696.8505	-12.6	-0.003	Yes
Extreme (0°C)		3550.9916	3696.8506	-10.6	-0.003	Yes
Extreme (-10°C)		3550.9916	3696.8506	-9.5	-0.003	Yes
Extreme (-20°C)		3550.9916	3696.8506	-9.7	-0.003	Yes
Extreme (-30°C)		3550.9916	3696.8505	-16.4	-0.005	Yes
20°C	15%	3550.9916	3696.8506	-9.6	-0.003	Yes
	-15%	3550.9916	3696.8506	-10.8	-0.003	Yes
	End Point Voltage	3550.9916	3696.8505	-12.7	-0.004	Yes

9.4.12. 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:	28774	Test Date:	3/7/2023

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	1711.0670	1778.9552			
Extreme (50°C)		1711.0670	1778.9552	-4.5	-0.003	Yes
Extreme (40°C)		1711.0670	1778.9552	-4.2	-0.002	Yes
Extreme (30°C)		1711.0670	1778.9552	-5.9	-0.003	Yes
Extreme (10°C)		1711.0670	1778.9552	-9.2	-0.005	Yes
Extreme (0°C)		1711.0670	1778.9552	-8.7	-0.005	Yes
Extreme (-10°C)		1711.0670	1778.9552	-7.2	-0.004	Yes
Extreme (-20°C)		1711.0670	1778.9552	-9.4	-0.005	Yes
Extreme (-30°C)		1711.0670	1778.9552	-8.5	-0.005	Yes
20°C	15%	1711.0670	1778.9552	-5.3	-0.003	Yes
	-15%	1711.0670	1778.9552	-4.5	-0.003	Yes
	End Point Voltage	1711.0670	1778.9552	-6.0	-0.003	Yes

5G NR n66 BPSK (40MHz BANDWIDTH)

Band	66	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1710	1780			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	1710.6132	1779.3273			
Extreme (50°C)		1710.6132	1779.3273	-6.7	-0.004	Yes
Extreme (40°C)		1710.6131	1779.3273	-8.7	-0.005	Yes
Extreme (30°C)		1710.6131	1779.3273	-11.9	-0.007	Yes
Extreme (10°C)		1710.6131	1779.3273	-7.7	-0.004	Yes
Extreme (0°C)		1710.6131	1779.3273	-9.0	-0.005	Yes
Extreme (-10°C)		1710.6131	1779.3273	-10.6	-0.006	Yes
Extreme (-20°C)		1710.6132	1779.3273	8.7	0.005	Yes
Extreme (-30°C)		1710.6131	1779.3273	-8.9	-0.005	Yes
20°C	15%	1710.6132	1779.3273	7.5	0.004	Yes
	-15%	1710.6131	1779.3273	-8.7	-0.005	Yes
	End Point Voltage	1710.6131	1779.3273	-9.6	-0.006	Yes

9.4.13. 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:	28774	Test Date:	3/6/2023

5G NR n70 BPSK (15MHz BANDWIDTH)

Band	70	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1695	1710			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	1695.4055	1708.8474			
Extreme (50°C)		1695.4055	1708.8474	-6.8	-0.004	Yes
Extreme (40°C)		1695.4055	1708.8474	-7.2	-0.004	Yes
Extreme (30°C)		1695.4055	1708.8474	-8.1	-0.005	Yes
Extreme (10°C)		1695.4055	1708.8474	-8.5	-0.005	Yes
Extreme (0°C)		1695.4055	1708.8474	-8.1	-0.005	Yes
Extreme (-10°C)		1695.4055	1708.8474	-8.2	-0.005	Yes
Extreme (-20°C)		1695.4055	1708.8474	-9.0	-0.005	Yes
Extreme (-30°C)		1695.4055	1708.8474	-9.4	-0.005	Yes
20°C	15%	1695.4055	1708.8474	-7.6	-0.004	Yes
	-15%	1695.4055	1708.8474	-6.6	-0.004	Yes
	End Point Voltage	1695.4055	1708.8474	-8.2	-0.005	Yes

9.4.14. 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:	28774	Test Date:	3/6/2023

LTE BAND 71 QPSK (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	664.0636	696.9287			
Extreme (50°C)		664.0636	696.9287	-3.8	-0.006	Yes
Extreme (40°C)		664.0636	696.9287	-3.6	-0.005	Yes
Extreme (30°C)		664.0636	696.9287	-3.6	-0.005	Yes
Extreme (10°C)		664.0636	696.9287	-3.0	-0.004	Yes
Extreme (0°C)		664.0636	696.9287	2.6	0.004	Yes
Extreme (-10°C)		664.0636	696.9287	3.8	0.006	Yes
Extreme (-20°C)		664.0636	696.9287	3.6	0.005	Yes
Extreme (-30°C)		664.0636	696.9287	3.1	0.004	Yes
20°C	15%	664.0636	696.9287	-2.9	-0.004	Yes
	-15%	664.0636	696.9287	-2.2	-0.003	Yes
	End Point Voltage	664.0636	696.9287	-2.6	-0.004	Yes

5G NR n71 BPSK (20MHz BANDWIDTH)

Band	71	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		663	698			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	663.5228	696.3879			
Extreme (50°C)		663.5228	696.3879	-5.4	-0.008	Yes
Extreme (40°C)		663.5228	696.3879	-5.5	-0.008	Yes
Extreme (30°C)		663.5228	696.3879	-5.3	-0.008	Yes
Extreme (10°C)		663.5228	696.3879	-6.4	-0.009	Yes
Extreme (0°C)		663.5228	696.3879	-6.0	-0.009	Yes
Extreme (-10°C)		663.5228	696.3879	-5.5	-0.008	Yes
Extreme (-20°C)		663.5228	696.3879	-5.8	-0.009	Yes
Extreme (-30°C)		663.5228	696.3879	-6.1	-0.009	Yes
20°C	15%	663.5228	696.3879	-5.4	-0.008	Yes
	-15%	663.5228	696.3879	-5.6	-0.008	Yes
	End Point Voltage	663.5228	696.3879	-5.6	-0.008	Yes

9.4.15. 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:	28774	Test Date:	3/6/2023

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)		3451.0834	3547.7786			
Extreme (50°C)		3451.0834	3547.7786	-10.4	-0.003	Yes
Extreme (40°C)		3451.0834	3547.7786	-15.2	-0.004	Yes
Extreme (30°C)		3451.0834	3547.7786	-14.3	-0.004	Yes
Extreme (10°C)	Normal	3451.0835	3547.7786	9.4	0.003	Yes
Extreme (0°C)		3451.0834	3547.7786	-10.5	-0.003	Yes
Extreme (-10°C)		3451.0834	3547.7786	-12.4	-0.004	Yes
Extreme (-20°C)		3451.0834	3547.7786	-13.1	-0.004	Yes
Extreme (-30°C)		3451.0834	3547.7786	-13.6	-0.004	Yes
20°C	15%	3451.0834	3547.7786	-14.8	-0.004	Yes
	-15%	3451.0834	3547.7786	-16.3	-0.005	Yes
	End Point Voltage	3451.0835	3547.7786	15.8	0.005	Yes

9.4.16. 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:	28774	Test Date:	3/6/2023

5G NR n77 BPSK (100MHz BANDWIDTH)

Band	77	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		3700	3980			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	3701.0898	3977.7998			
Extreme (50°C)		3701.0898	3977.7998	-13.5	-0.004	Yes
Extreme (40°C)		3701.0898	3977.7998	14.4	0.004	Yes
Extreme (30°C)		3701.0898	3977.7998	17.1	0.004	Yes
Extreme (10°C)		3701.0898	3977.7998	-8.7	-0.002	Yes
Extreme (0°C)		3701.0898	3977.7998	-10.0	-0.003	Yes
Extreme (-10°C)		3701.0898	3977.7998	-12.7	-0.003	Yes
Extreme (-20°C)		3701.0898	3977.7998	-7.0	-0.002	Yes
Extreme (-30°C)		3701.0898	3977.7998	10.0	0.003	Yes
20°C	15%	3701.0898	3977.7998	-14.2	-0.004	Yes
	-15%	3701.0898	3977.7998	-15.2	-0.004	Yes
	End Point Voltage	3701.0898	3977.7998	-13.6	-0.004	Yes

9.5. PEAK-TO-AVERAGE POWER RATIO

LIMIT

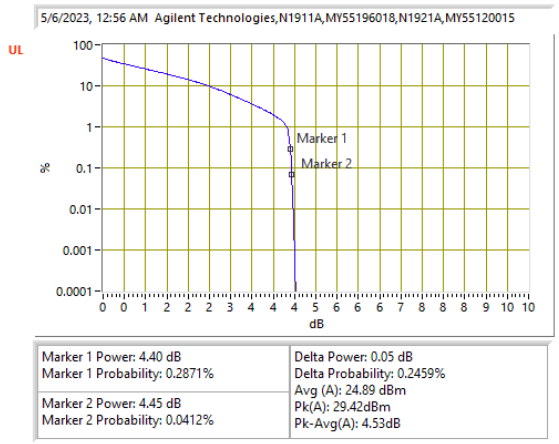
In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

RESULT

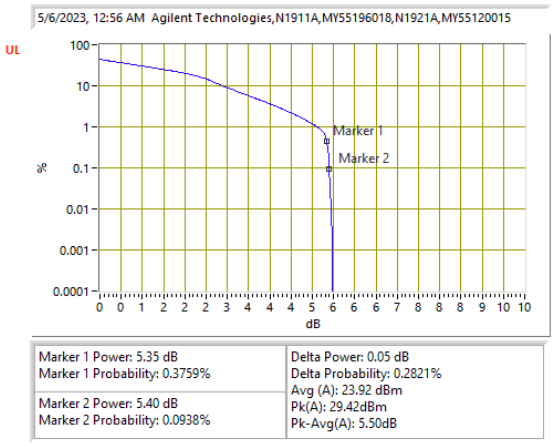
Antenna 1 was used to measure as the worst case; full resource block (FRB) for each bandwidth was used to measure as the worst case. The results from all CCDF measurements are passed with 13dB peak-to-average power ratio criteria.

9.5.1. LTE BAND 7 AND 5G NR n7

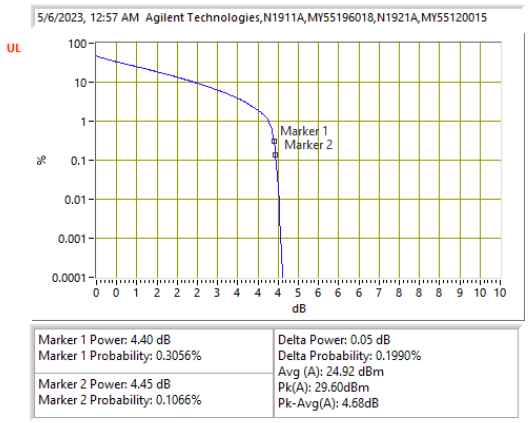
LTE BAND 7



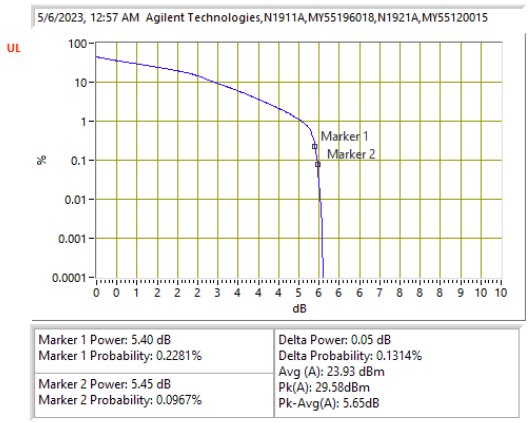
LTE B7 5MHz QPSK Middle Channel, ID:32061



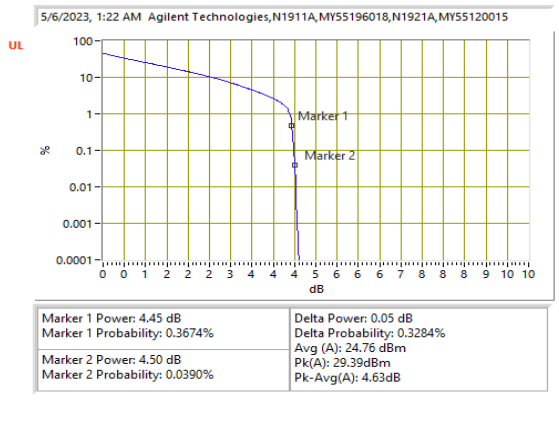
LTE B7 5MHz 16QAM Middle Channel, ID:32061



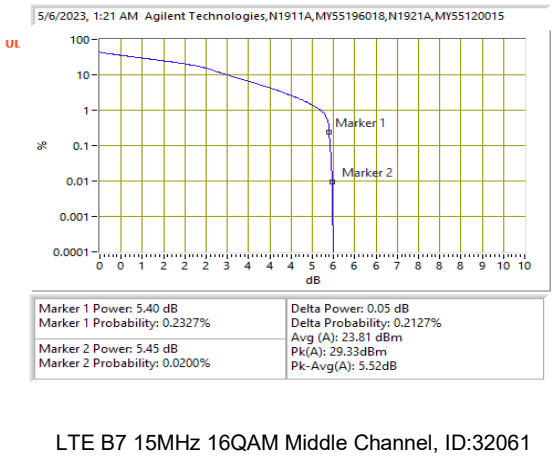
LTE B7 10MHz QPSK Middle Channel, ID:32061



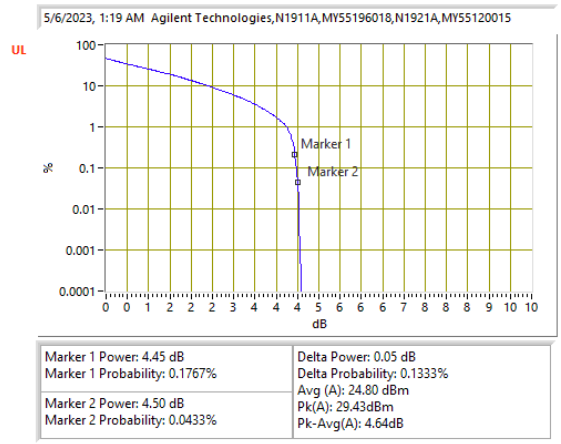
LTE B7 10MHz 16QAM Middle Channel, ID:32061



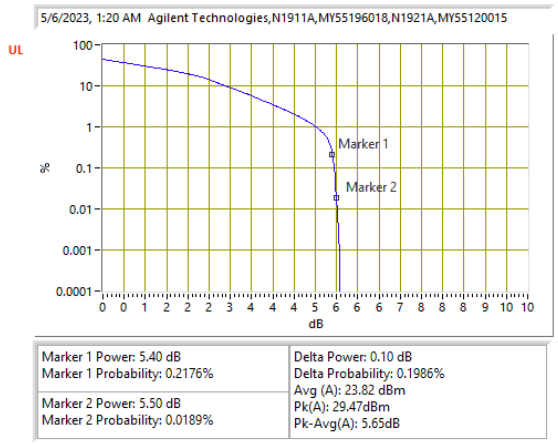
LTE B7 15MHz QPSK Middle Channel, ID:32061



LTE B7 15MHz 16QAM Middle Channel, ID:32061



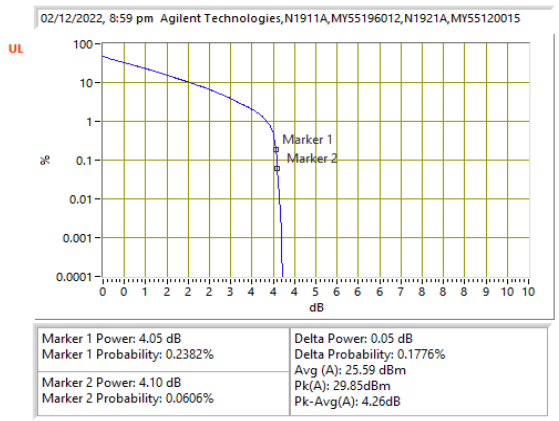
LTE B7 20MHz QPSK Middle Channel, ID:32061



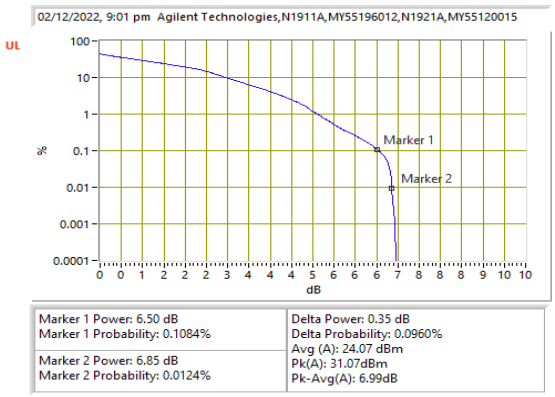
LTE B7 20MHz 16QAM Middle Channel, ID:32061

5G NR n7

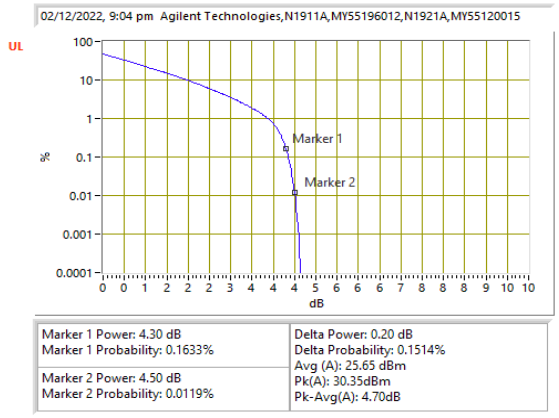
Test Engineer ID:	50822	Test Date:	12/5/2022



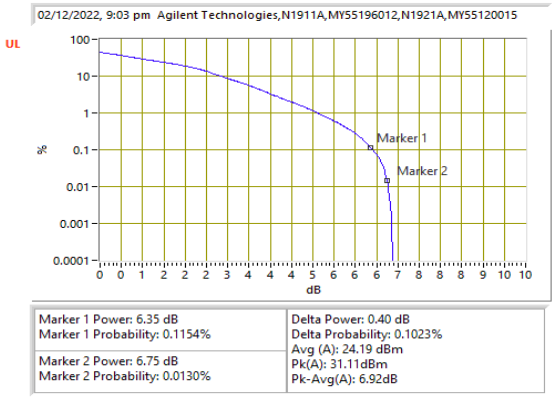
5G NR n7 5MHz BPSK Middle Channel



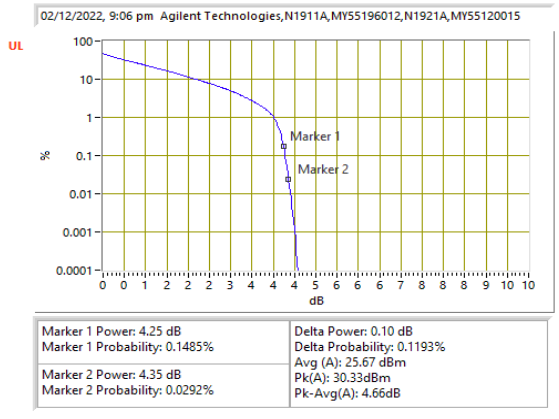
5G NR n7 5MHz 16QAM Middle Channel



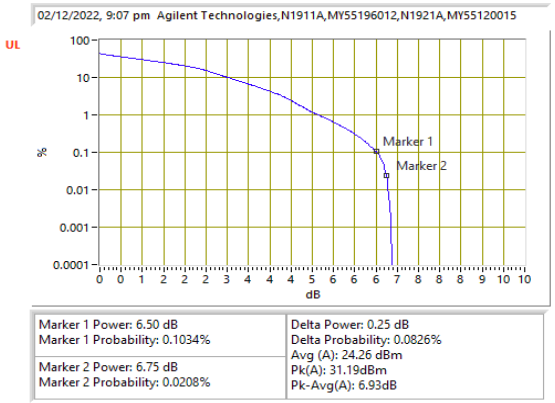
5G NR n7 10MHz BPSK Middle Channel



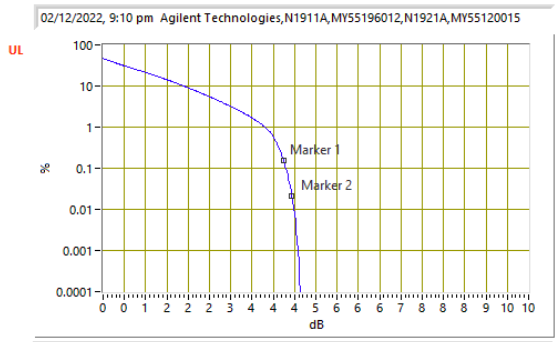
5G NR n7 10MHz 16QAM Middle Channel



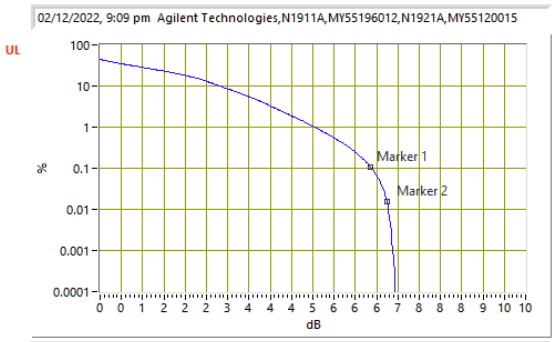
5G NR n7 15MHz BPSK Middle Channel



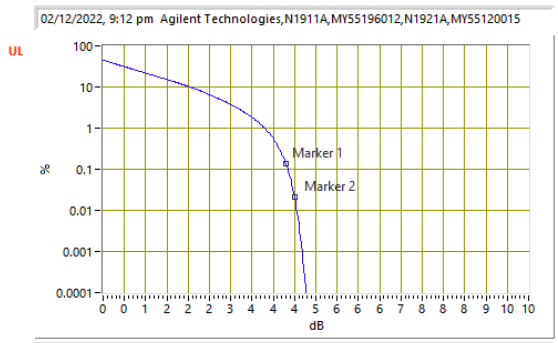
5G NR n7 15MHz 16QAM Middle Channel



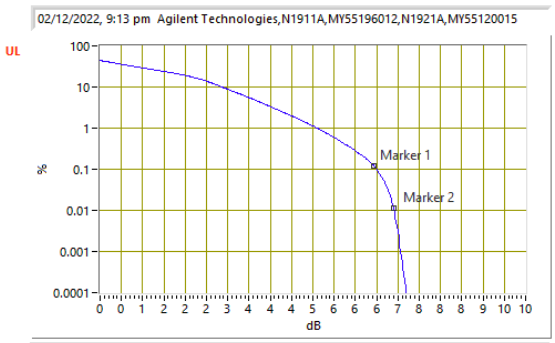
5G NR n7 20MHz BPSK Middle Channel



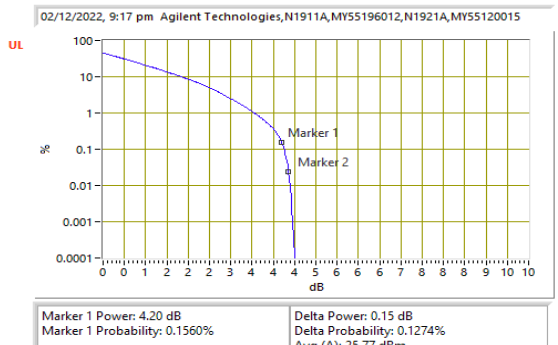
5G NR n7 20MHz 16QAM Middle Channel



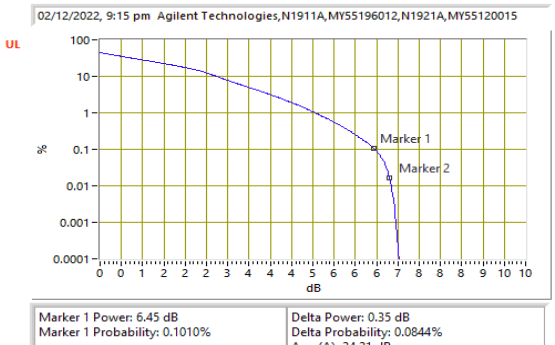
5G NR n7 25MHz BPSK Middle Channel



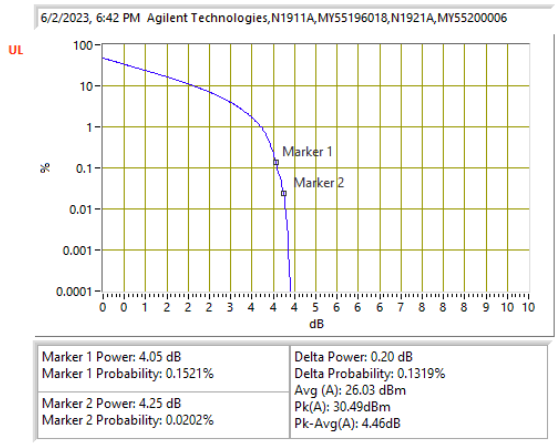
5G NR n7 25MHz 16QAM Middle Channel



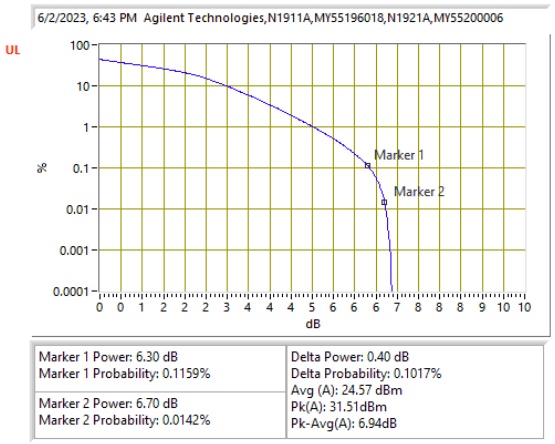
5G NR n7 30MHz BPSK Middle Channel



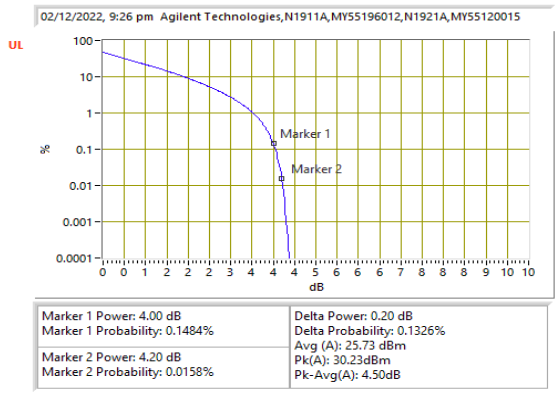
5G NR n7 30MHz 16QAM Middle Channel



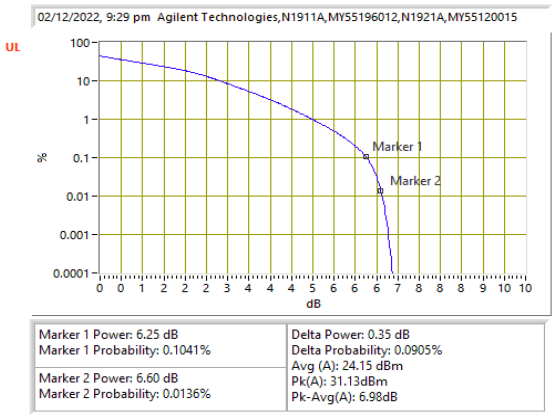
5G NR n7 35MHz BPSK Middle Channel



5G NR n7 35MHz 16QAM Middle Channel



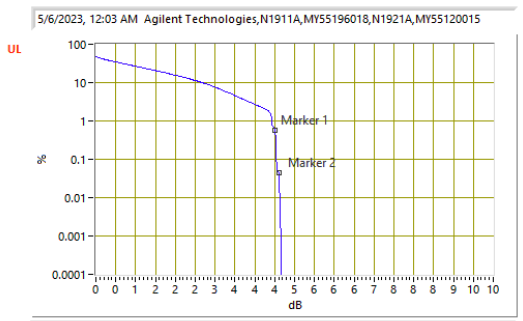
5G NR n7 40MHz BPSK Middle Channel



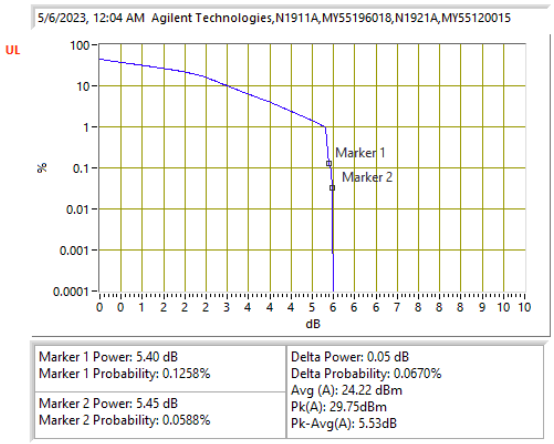
5G NR n7 40MHz 16QAM Middle Channel

9.5.2. LTE BAND 12 AND 5G NR n12

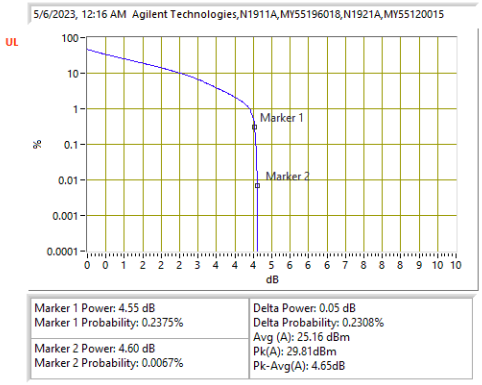
LTE BAND 12



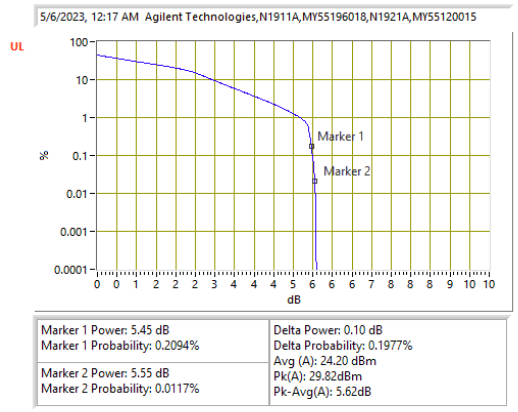
LTE B12 1.4MHz QPSK Middle Channel, ID:32061



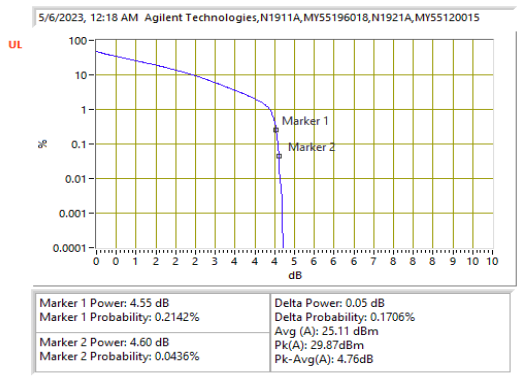
LTE B12 1.4MHz 16QAM Middle Channel



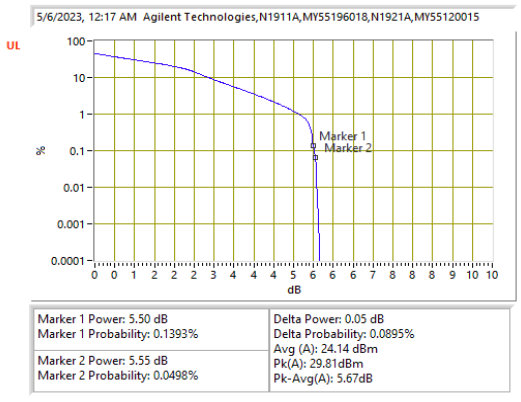
LTE B12 3MHz QPSK Middle Channel



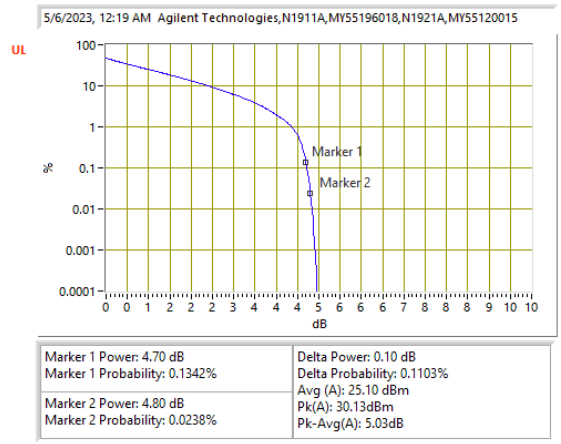
LTE B12 3MHz 16QAM Middle Channel



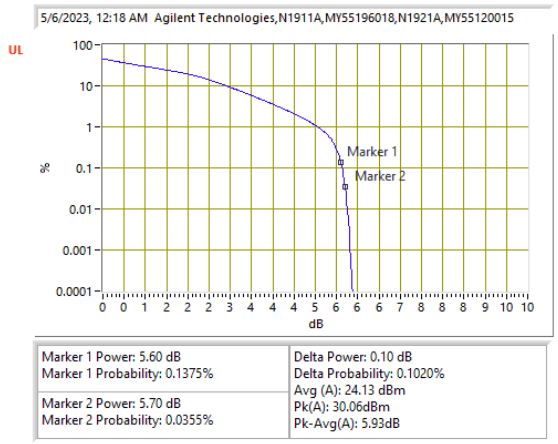
LTE B12 5MHz QPSK Middle Channel



LTE B12 5MHz 16QAM Middle Channel

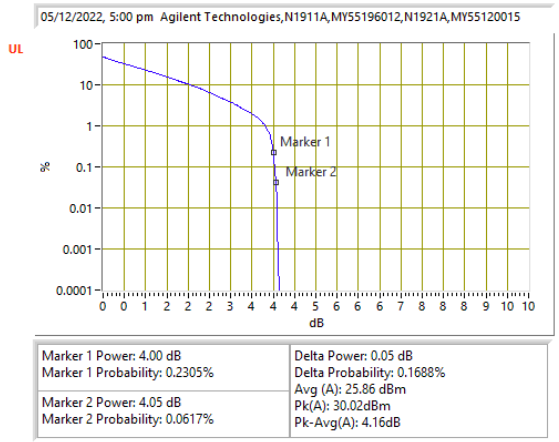


LTE B12 10MHz QPSK Middle Channel

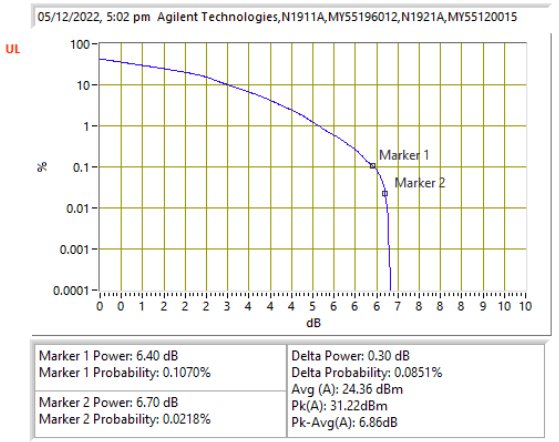


LTE B12 10MHz 16QAM Middle Channel

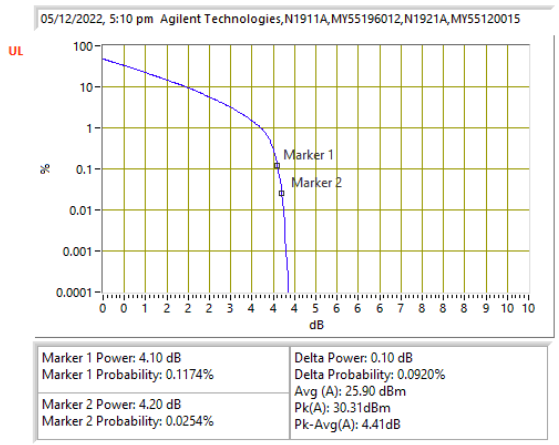
5G NR n12



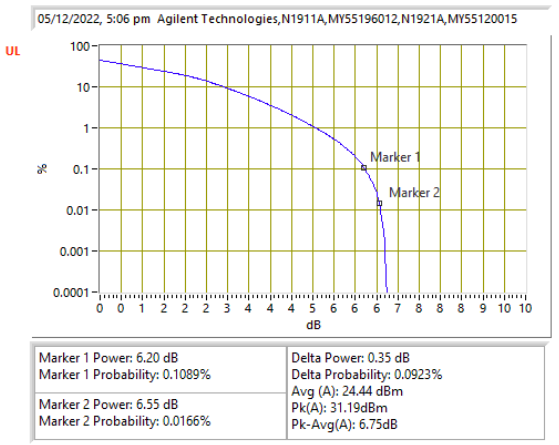
5G NR n12 5MHz BPSK Middle Channel, ID:50822



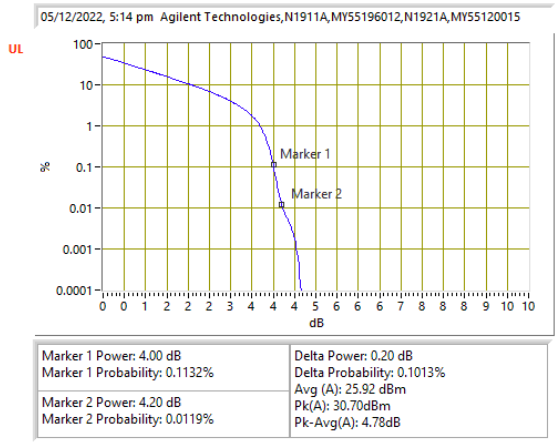
5G NR n12 5MHz 16QAM Middle Channel, ID:50822



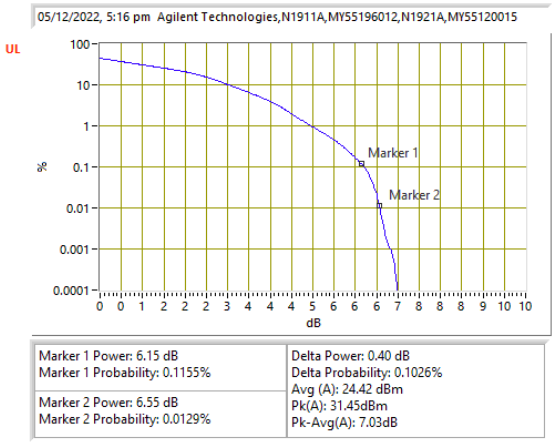
5G NR n12 10MHz BPSK Middle Channel, ID:50822



5G NR n12 10MHz 16QAM Middle Channel, ID:50822



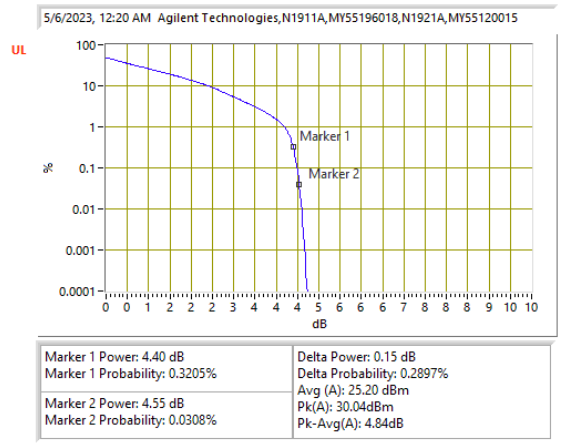
5G NR n12 15MHz BPSK Middle Channel, ID:50822



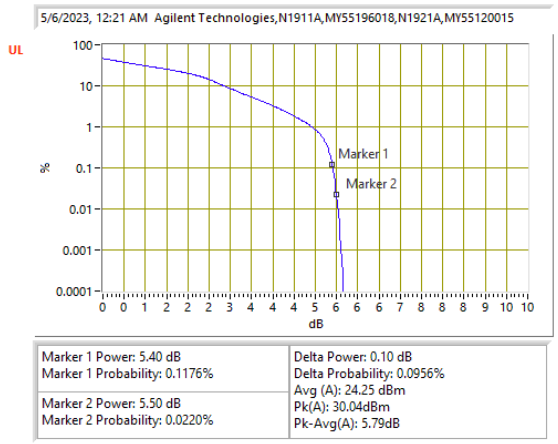
5G NR n12 15MHz 16QAM Middle Channel, ID:50822

9.5.3. LTE BAND 13

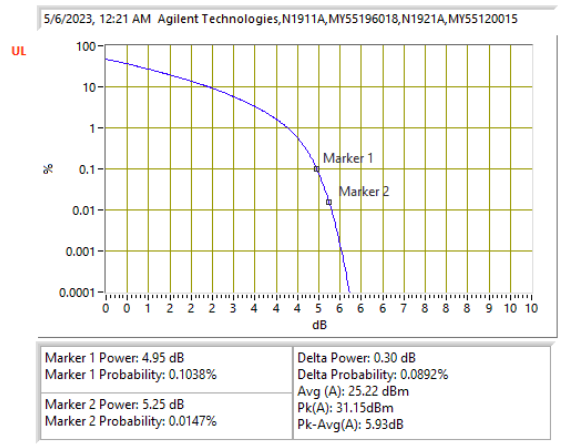
Test Engineer ID:	28774	Test Date:	5/6/2023



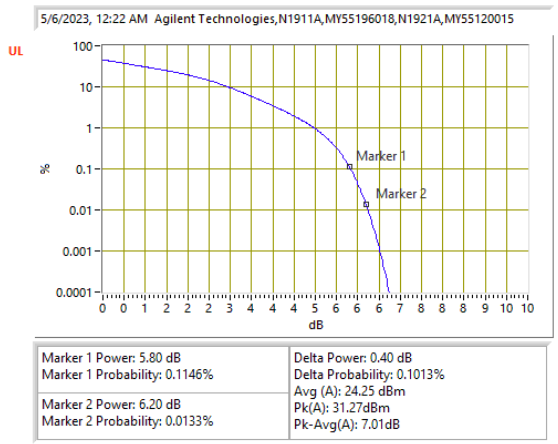
LTE B13 5MHz QPSK Middle Channel



LTE B13 5MHz 16QAM Middle Channel



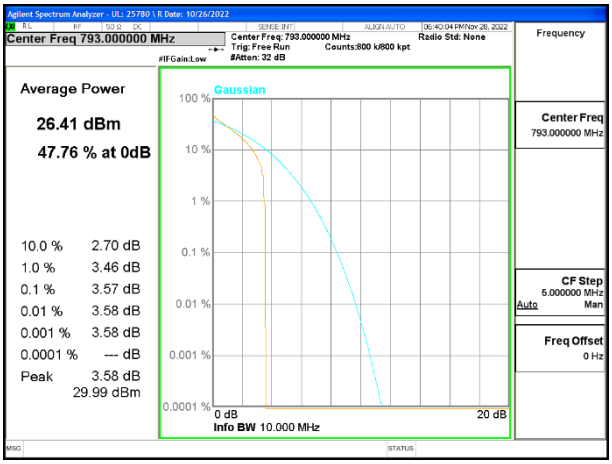
LTE B13 10MHz QPSK Middle Channel



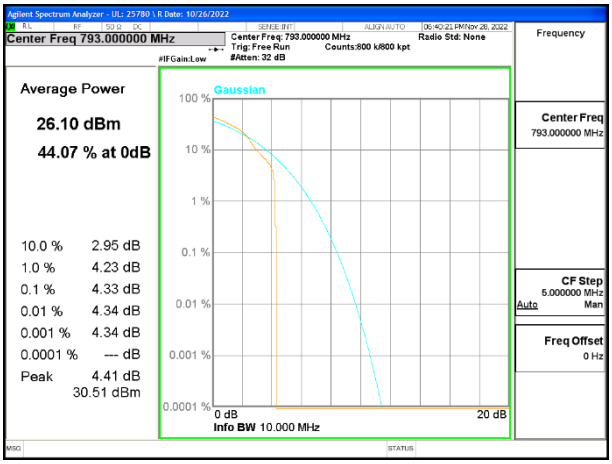
LTE B13 10MHz 16QAM Middle Channel

9.5.4. LTE BAND 14 AND 5G NR n14

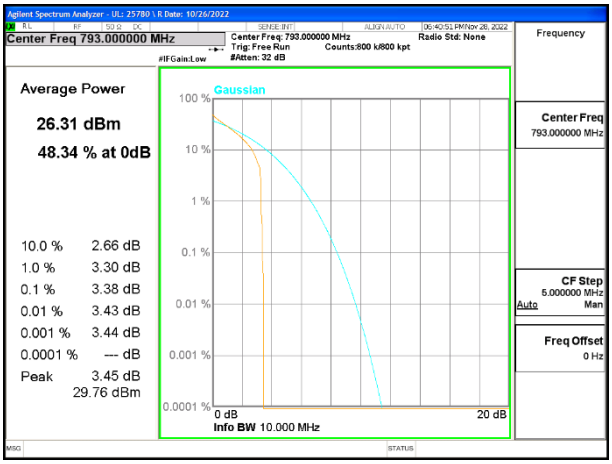
LTE BAND 14



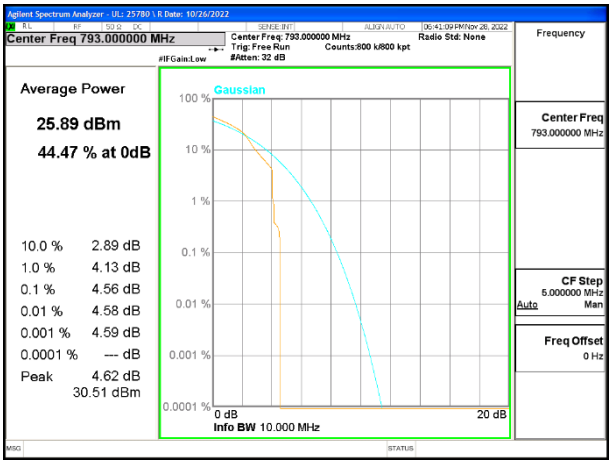
LTE B14 5MHz QPSK Middle Channel



LTE B14 5MHz 16QAM Middle Channel



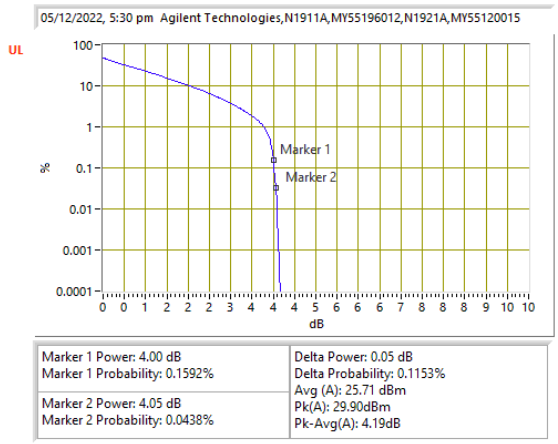
LTE B14 10MHz QPSK Middle Channel



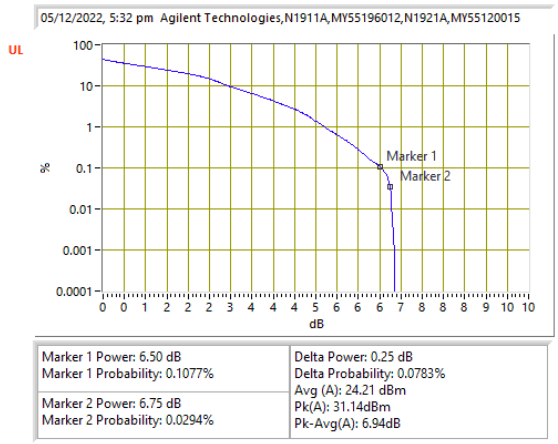
LTE B14 10MHz 16QAM Middle Channel

5G NR n14

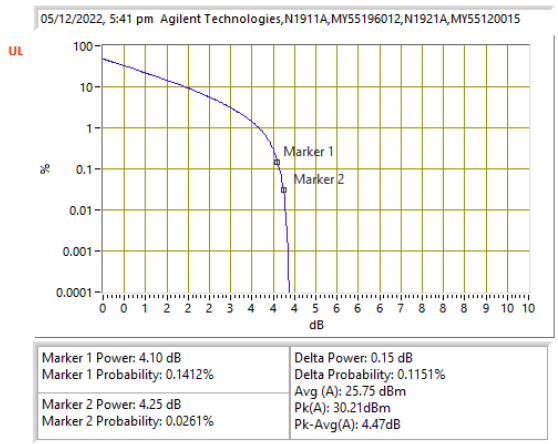
Test Engineer ID:	50822	Test Date:	12/5/2022



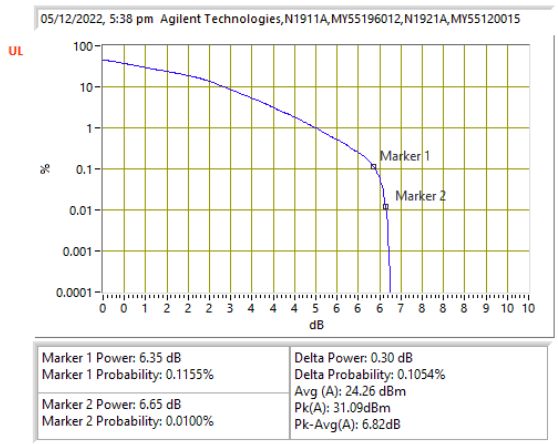
5G NR n14 5MHz BPSK Middle Channel



5G NR n14 5MHz 16QAM Middle Channel

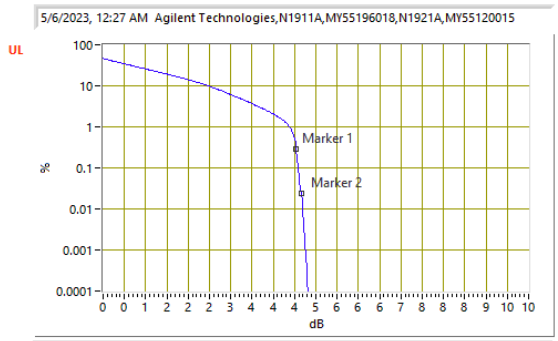


5G NR n14 10MHz BPSK Middle Channel



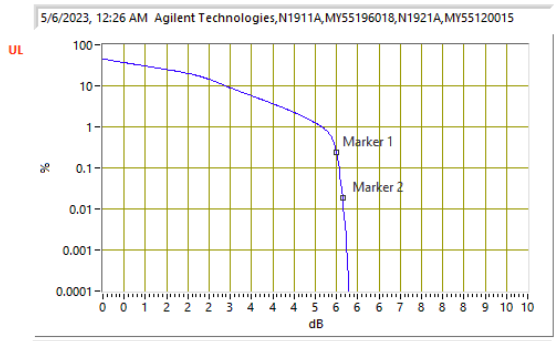
5G NR n14 10MHz 16QAM Middle Channel

9.5.5. LTE BAND 17



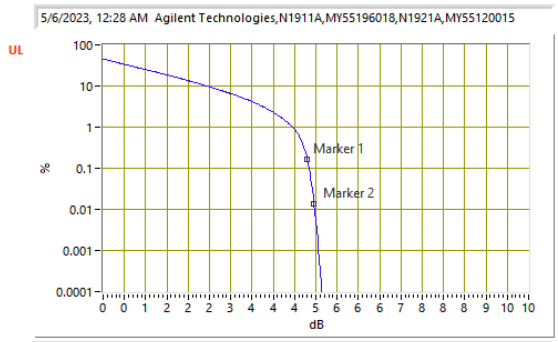
Marker 1 Power: 4.55 dB Marker 1 Probability: 0.2244%	Delta Power: 0.10 dB Delta Probability: 0.1959% Avg (A): 25.22 dBm Pk(A): 30.10dBm Pk-Avg(A): 4.88dB
Marker 2 Power: 4.65 dB Marker 2 Probability: 0.0285%	

LTE B17 5MHz QPSK Middle Channel, ID:28774



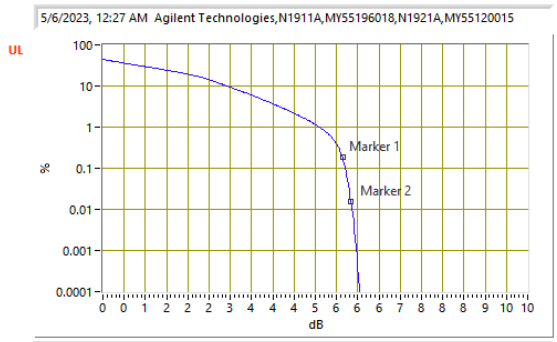
Marker 1 Power: 5.50 dB Marker 1 Probability: 0.2324%	Delta Power: 0.15 dB Delta Probability: 0.2179% Avg (A): 24.25 dBm Pk(A): 30.07dBm Pk-Avg(A): 5.83dB
Marker 2 Power: 5.65 dB Marker 2 Probability: 0.0145%	

LTE B17 5MHz 16QAM Middle Channel, ID:28774



Marker 1 Power: 4.80 dB Marker 1 Probability: 0.1641%	Delta Power: 0.15 dB Delta Probability: 0.1471% Avg (A): 25.23 dBm Pk(A): 30.50dBm Pk-Avg(A): 5.27dB
Marker 2 Power: 4.95 dB Marker 2 Probability: 0.0170%	

LTE B17 10MHz QPSK Middle Channel, ID:28774

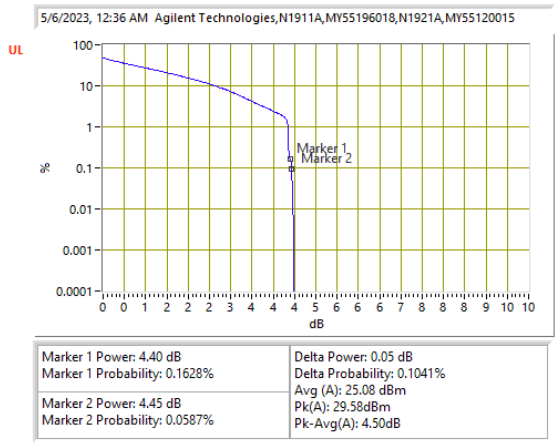


Marker 1 Power: 5.65 dB Marker 1 Probability: 0.1681%	Delta Power: 0.20 dB Delta Probability: 0.1548% Avg (A): 24.24 dBm Pk(A): 30.39dBm Pk-Avg(A): 6.16dB
Marker 2 Power: 5.85 dB Marker 2 Probability: 0.0134%	

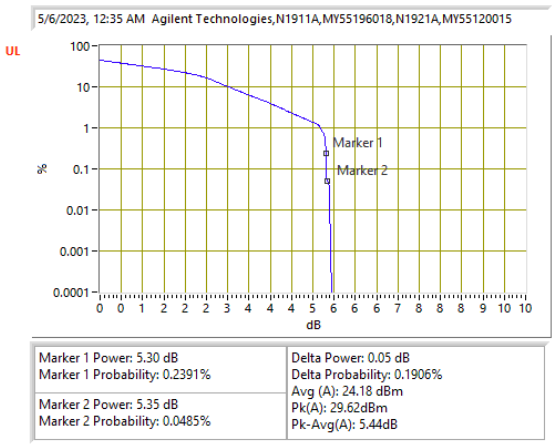
LTE B17 10MHz 16QAM Middle Channel, ID:28774

9.5.6. LTE BAND 25 AND 5G NR n25

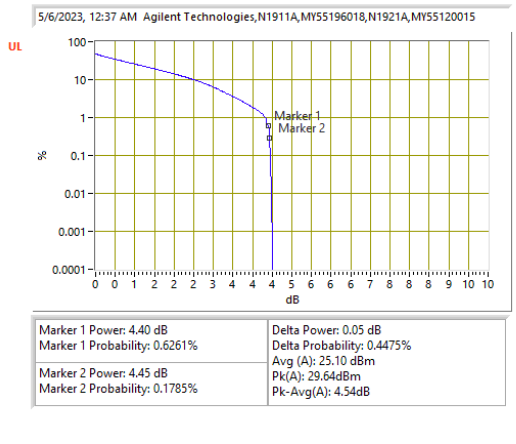
LTE BAND 25



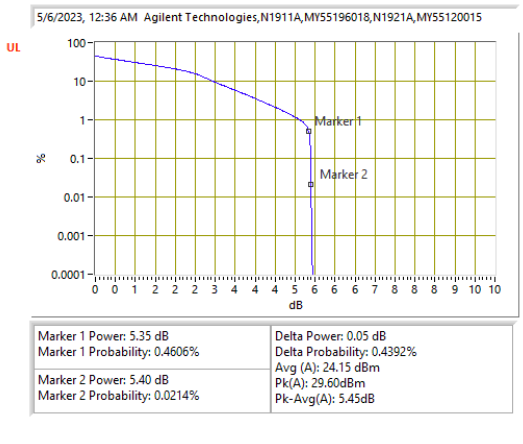
LTE B25 1.4MHz QPSK Middle Channel, ID:28774



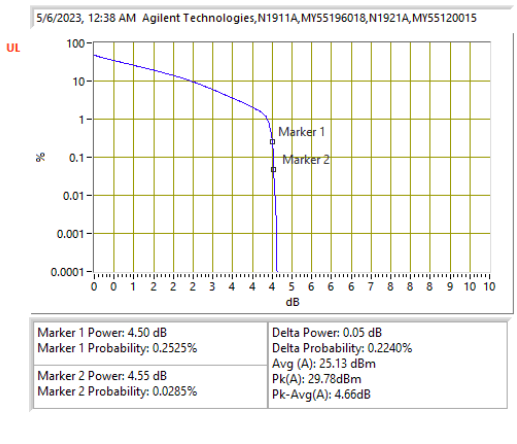
LTE B25 1.4MHz 16QAM Middle Channel, ID:28774



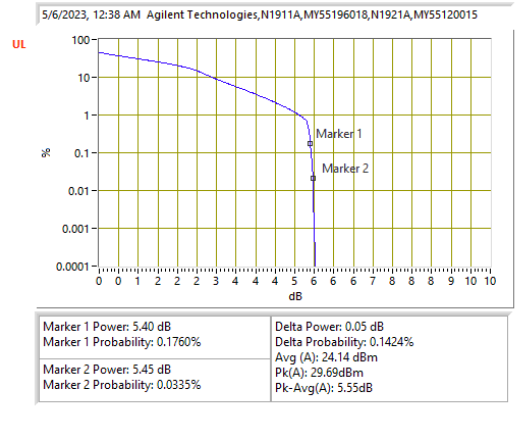
LTE B25 3MHz QPSK Middle Channel, ID:28774



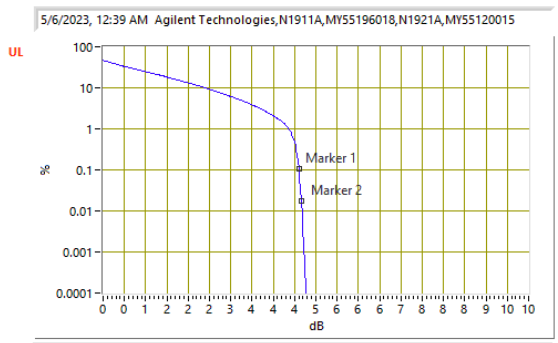
LTE B25 3MHz 16QAM Middle Channel, ID:28774



LTE B2 5MHz QPSK Middle Channel, ID:28774

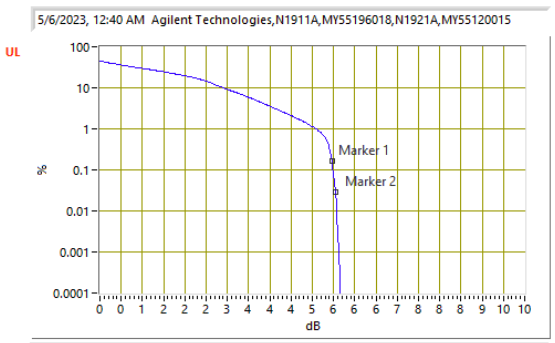


LTE B2 5MHz 16QAM Middle Channel, ID:28774



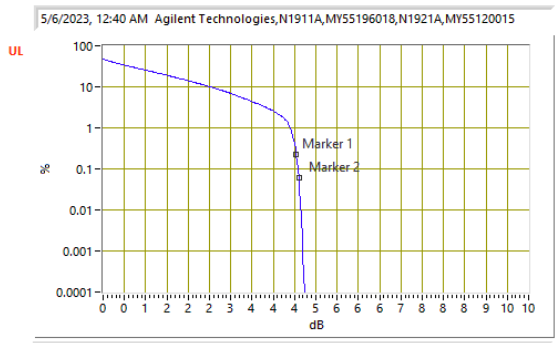
Marker 1 Power: 4.60 dB Marker 1 Probability: 0.1088%	Delta Power: 0.05 dB Delta Probability: 0.0835% Avg (A): 25.14 dBm Pk(A): 29.94dBm Pk-Avg(A): 4.80dB
Marker 2 Power: 4.65 dB Marker 2 Probability: 0.0253%	

LTE B25 10MHz QPSK Middle Channel, ID:28774



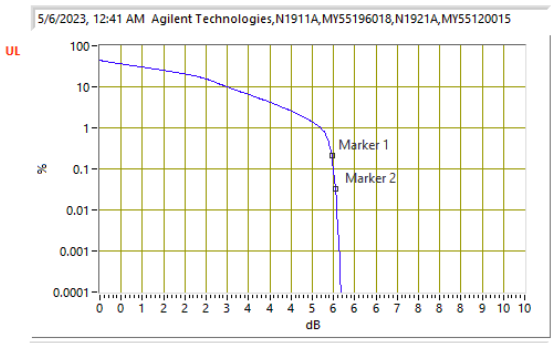
Marker 1 Power: 5.45 dB Marker 1 Probability: 0.1946%	Delta Power: 0.10 dB Delta Probability: 0.1731% Avg (A): 24.14 dBm Pk(A): 29.87dBm Pk-Avg(A): 5.73dB
Marker 2 Power: 5.55 dB Marker 2 Probability: 0.0215%	

LTE B25 10MHz 16QAM Middle Channel, ID:28774



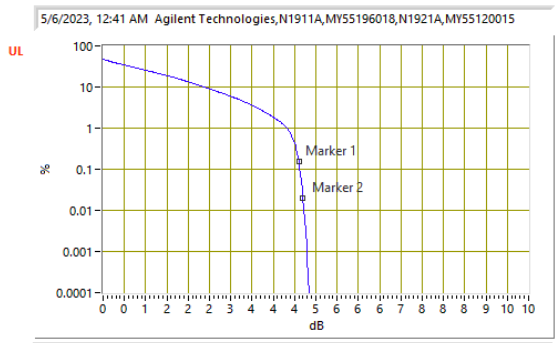
Marker 1 Power: 4.55 dB Marker 1 Probability: 0.1905%	Delta Power: 0.05 dB Delta Probability: 0.1314% Avg (A): 24.97 dBm Pk(A): 29.75dBm Pk-Avg(A): 4.78dB
Marker 2 Power: 4.60 dB Marker 2 Probability: 0.0591%	

LTE B25 15MHz QPSK Middle Channel, ID:28774



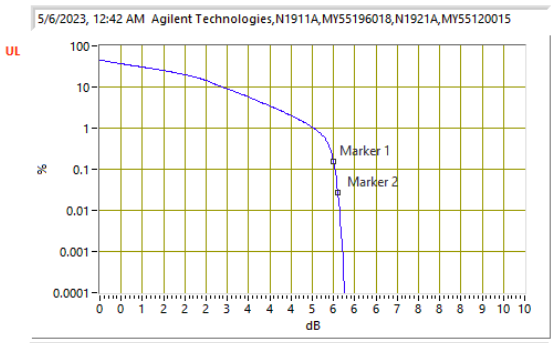
Marker 1 Power: 5.45 dB Marker 1 Probability: 0.2388%	Delta Power: 0.10 dB Delta Probability: 0.2143% Avg (A): 24.01 dBm Pk(A): 29.76dBm Pk-Avg(A): 5.75dB
Marker 2 Power: 5.55 dB Marker 2 Probability: 0.0245%	

LTE B25 15MHz 16QAM Middle Channel, ID:28774



Marker 1 Power: 4.60 dB Marker 1 Probability: 0.1523%	Delta Power: 0.10 dB Delta Probability: 0.1324% Avg (A): 24.99 dBm Pk(A): 29.95dBm Pk-Avg(A): 4.96dB
Marker 2 Power: 4.70 dB Marker 2 Probability: 0.0198%	

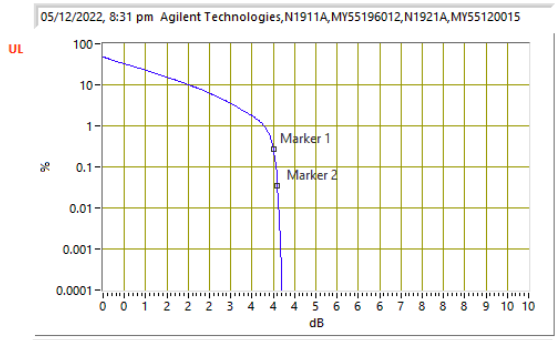
LTE B25 20MHz QPSK Middle Channel, ID:28774



Marker 1 Power: 5.50 dB Marker 1 Probability: 0.1521%	Delta Power: 0.10 dB Delta Probability: 0.1253% Avg (A): 23.99 dBm Pk(A): 29.85dBm Pk-Avg(A): 5.87dB
Marker 2 Power: 5.60 dB Marker 2 Probability: 0.0268%	

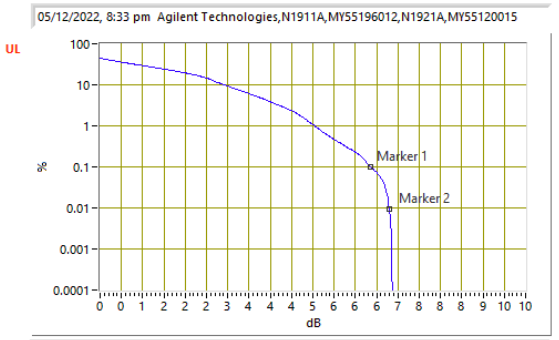
LTE B25 20MHz 16QAM Middle Channel, ID:28774

5G NR n25



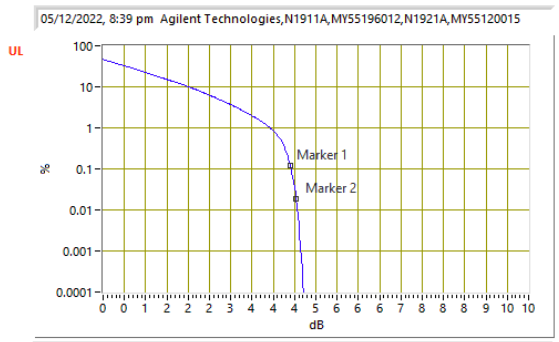
Marker 1 Power: 4.00 dB	Delta Power: 0.10 dB
Marker 1 Probability: 0.2759%	Delta Probability: 0.2406%
	Avg (A): 25.70 dBm
Marker 2 Power: 4.10 dB	Pk(A): 29.91dBm
Marker 2 Probability: 0.0353%	Pk-Avg(A): 4.20dB

5G NR n25 5MHz BPSK Middle Channel, ID:50822



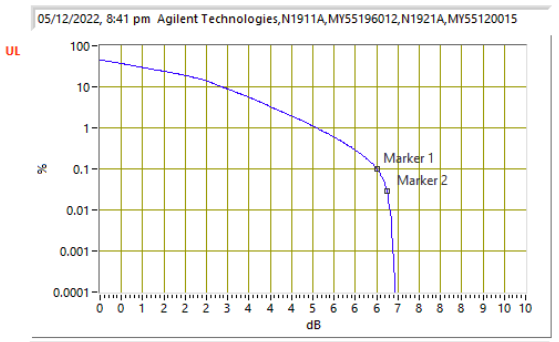
Marker 1 Power: 6.35 dB	Delta Power: 0.45 dB
Marker 1 Probability: 0.1037%	Delta Probability: 0.0941%
	Avg (A): 24.24 dBm
Marker 2 Power: 6.80 dB	Pk(A): 31.13dBm
Marker 2 Probability: 0.0095%	Pk-Avg(A): 6.89dB

5G NR n25 5MHz 16QAM Middle Channel, ID:50822



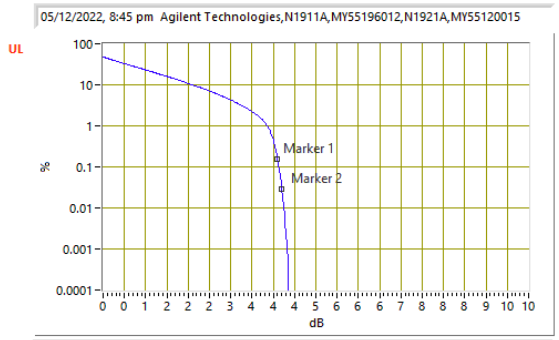
Marker 1 Power: 4.40 dB	Delta Power: 0.15 dB
Marker 1 Probability: 0.1181%	Delta Probability: 0.1033%
	Avg (A): 25.75 dBm
Marker 2 Power: 4.55 dB	Pk(A): 30.56dBm
Marker 2 Probability: 0.0149%	Pk-Avg(A): 4.81dB

5G NR n25 10MHz BPSK Middle Channel, ID:50822



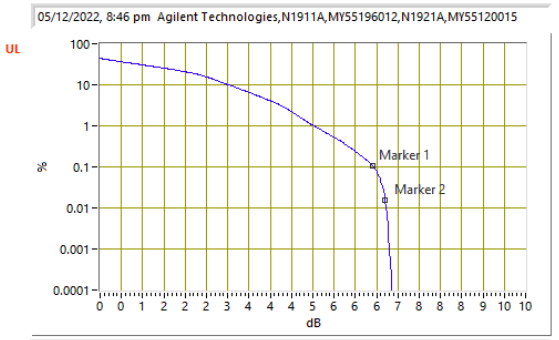
Marker 1 Power: 6.50 dB	Delta Power: 0.25 dB
Marker 1 Probability: 0.1021%	Delta Probability: 0.0768%
	Avg (A): 24.19 dBm
Marker 2 Power: 6.75 dB	Pk(A): 31.17dBm
Marker 2 Probability: 0.0253%	Pk-Avg(A): 6.97dB

5G NR n25 10MHz 16QAM Middle Channel, ID:50822



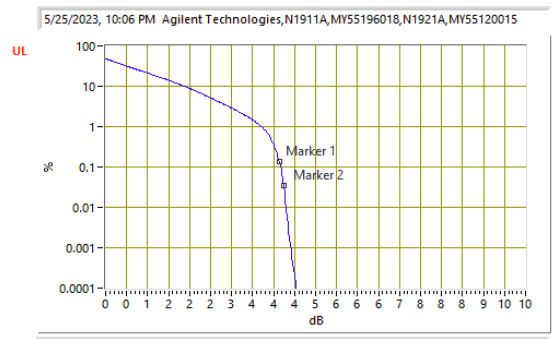
Marker 1 Power: 4.10 dB	Delta Power: 0.10 dB
Marker 1 Probability: 0.1520%	Delta Probability: 0.1237%
	Avg (A): 25.71 dBm
Marker 2 Power: 4.20 dB	Pk(A): 30.17dBm
Marker 2 Probability: 0.0283%	Pk-Avg(A): 4.46dB

5G NR n25 15MHz BPSK Middle Channel, ID:50822



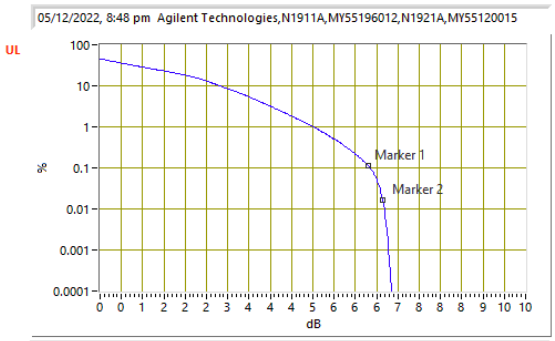
Marker 1 Power: 6.40 dB	Delta Power: 0.30 dB
Marker 1 Probability: 0.1080%	Delta Probability: 0.0925%
	Avg (A): 24.33 dBm
Marker 2 Power: 6.70 dB	Pk(A): 31.21dBm
Marker 2 Probability: 0.0155%	Pk-Avg(A): 6.88dB

5G NR n25 15MHz 16QAM Middle Channel, ID:50822



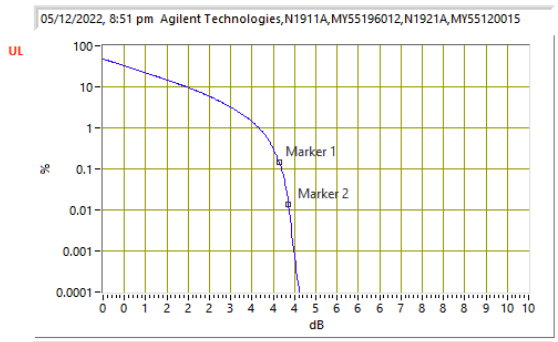
Marker 1 Power: 4.15 dB Marker 1 Probability: 0.1208%	Delta Power: 0.10 dB Delta Probability: 0.0919% Avg (A): 26.09 dBm Pk(A): 30.68dBm Pk-Avg(A): 4.59dB
Marker 2 Power: 4.25 dB Marker 2 Probability: 0.0289%	

5G NR n25 20MHz BPSK Middle Channel, ID:50822



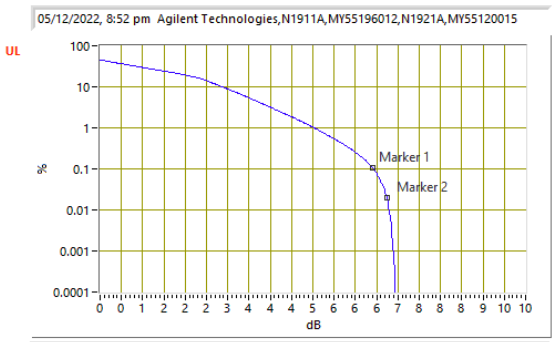
Marker 1 Power: 6.30 dB Marker 1 Probability: 0.1116%	Delta Power: 0.35 dB Delta Probability: 0.0968% Avg (A): 24.24 dBm Pk(A): 31.11dBm Pk-Avg(A): 6.88dB
Marker 2 Power: 6.65 dB Marker 2 Probability: 0.0148%	

5G NR n25 20MHz 16QAM Middle Channel, ID:50822



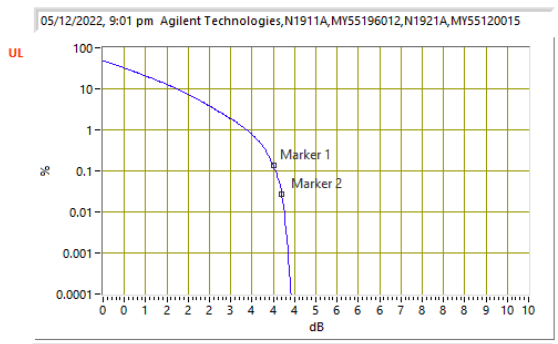
Marker 1 Power: 4.15 dB Marker 1 Probability: 0.1372%	Delta Power: 0.20 dB Delta Probability: 0.1213% Avg (A): 25.75 dBm Pk(A): 30.56dBm Pk-Avg(A): 4.80dB
Marker 2 Power: 4.35 dB Marker 2 Probability: 0.0159%	

5G NR n25 25MHz BPSK Middle Channel, ID:50822



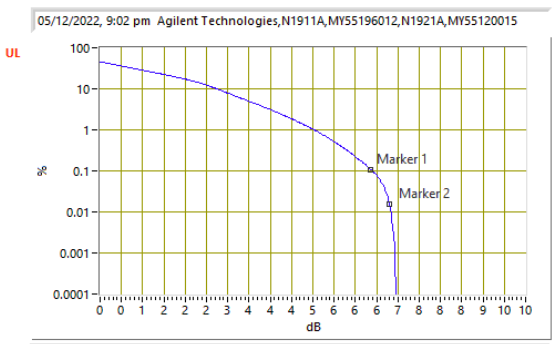
Marker 1 Power: 6.40 dB Marker 1 Probability: 0.1060%	Delta Power: 0.35 dB Delta Probability: 0.0886% Avg (A): 24.29 dBm Pk(A): 31.25dBm Pk-Avg(A): 6.96dB
Marker 2 Power: 6.75 dB Marker 2 Probability: 0.0174%	

5G NR n25 25MHz 16QAM Middle Channel, ID:50822



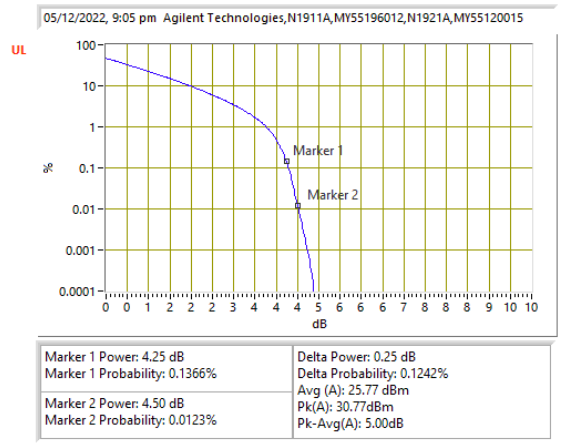
Marker 1 Power: 4.00 dB Marker 1 Probability: 0.1337%	Delta Power: 0.20 dB Delta Probability: 0.1074% Avg (A): 25.82 dBm Pk(A): 30.30dBm Pk-Avg(A): 4.48dB
Marker 2 Power: 4.20 dB Marker 2 Probability: 0.0263%	

5G NR n25 30MHz BPSK Middle Channel, ID:50822

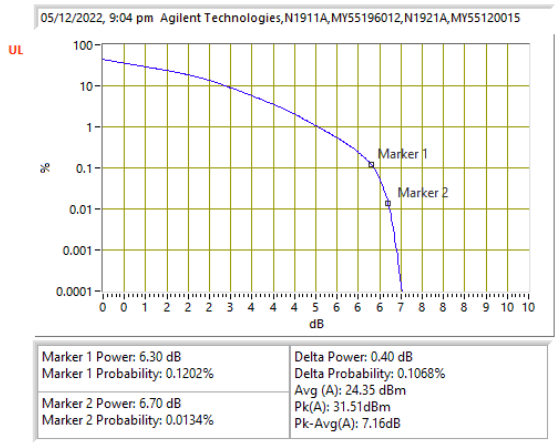


Marker 1 Power: 6.35 dB Marker 1 Probability: 0.1113%	Delta Power: 0.45 dB Delta Probability: 0.0960% Avg (A): 24.37 dBm Pk(A): 31.38dBm Pk-Avg(A): 7.00dB
Marker 2 Power: 6.80 dB Marker 2 Probability: 0.0153%	

5G NR n25 30MHz 16QAM Middle Channel, ID:50822



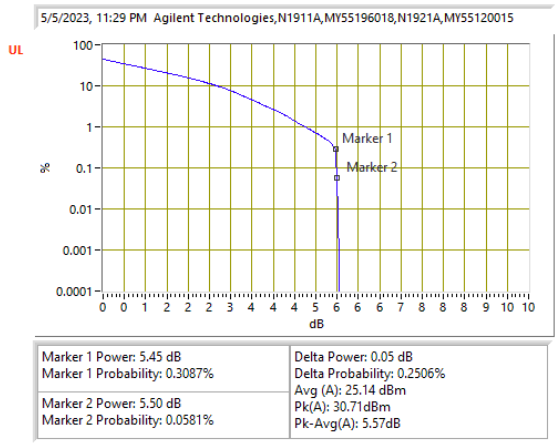
5G NR n25 40MHz BPSK Middle Channel, ID:50822



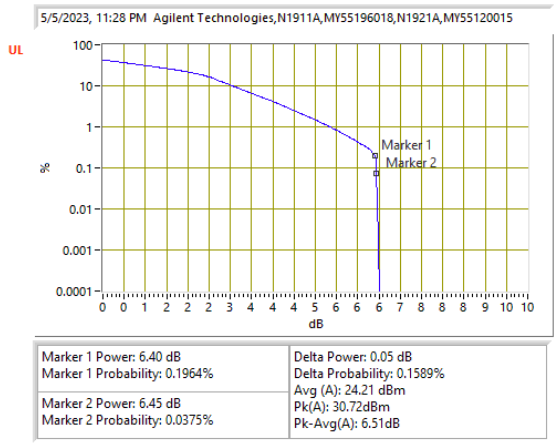
5G NR n25 40MHz 16QAM Middle Channel, ID:50822

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

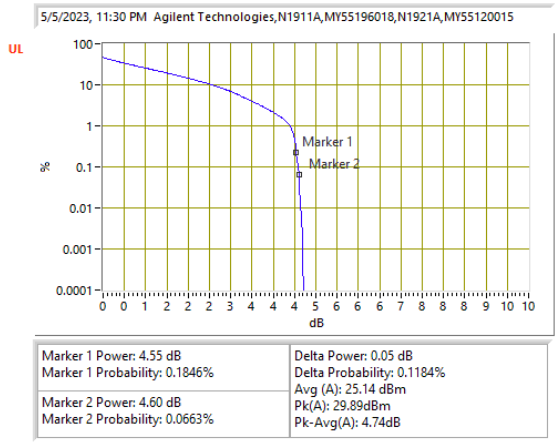
LTE BAND 26



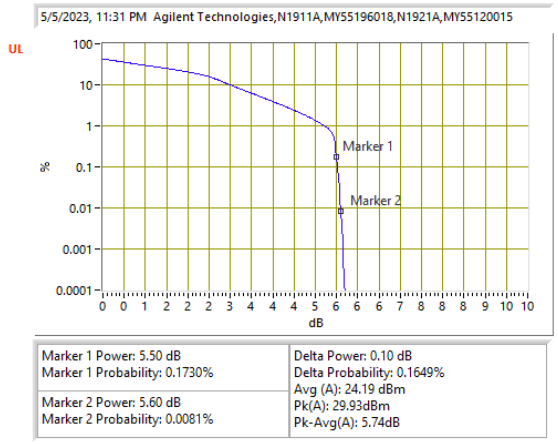
LTE B26 1.4MHz QPSK Middle Channel, ID:28774



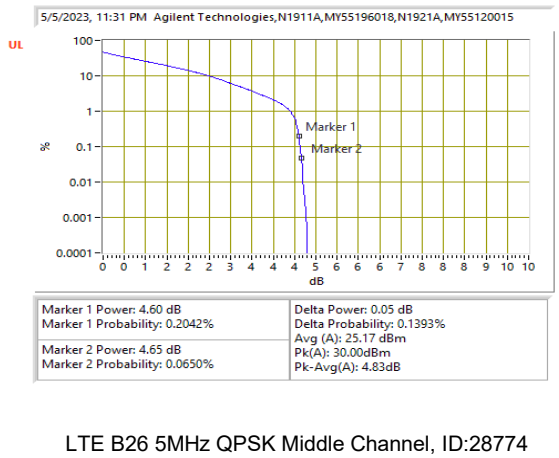
LTE B26 1.4MHz 16QAM Middle Channel, ID:28774



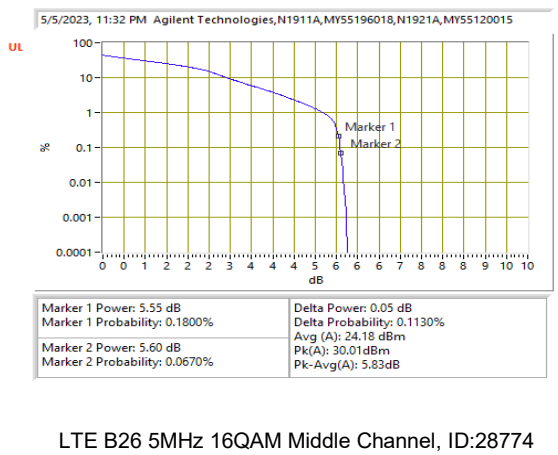
LTE B26 3MHz QPSK Middle Channel, ID:28774



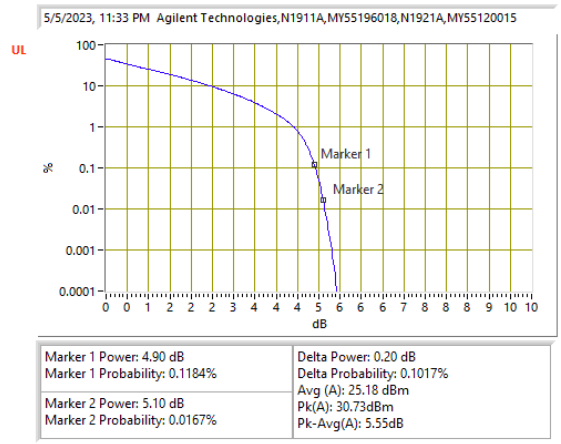
LTE B26 3MHz 16QAM Middle Channel, ID:28774



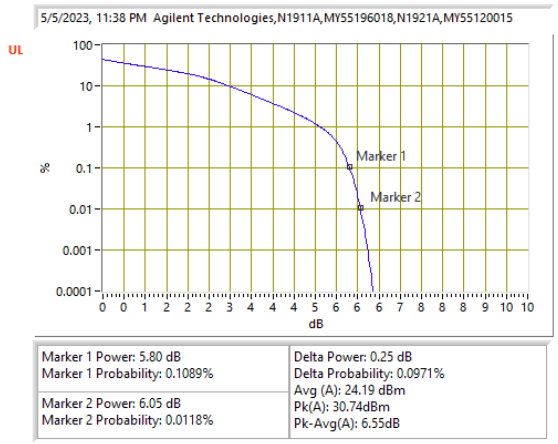
LTE B26 5MHz QPSK Middle Channel, ID:28774



LTE B26 5MHz 16QAM Middle Channel, ID:28774

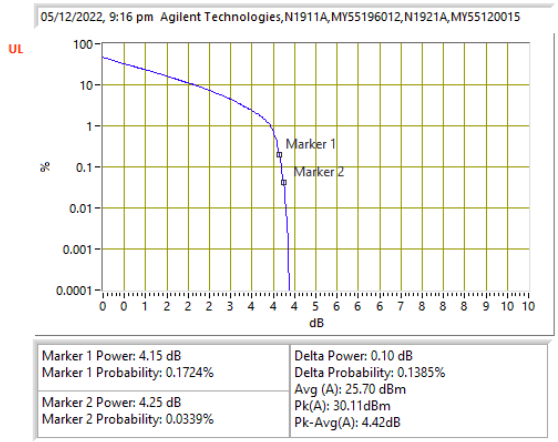


LTE B26 10MHz QPSK Middle Channel, ID:28774

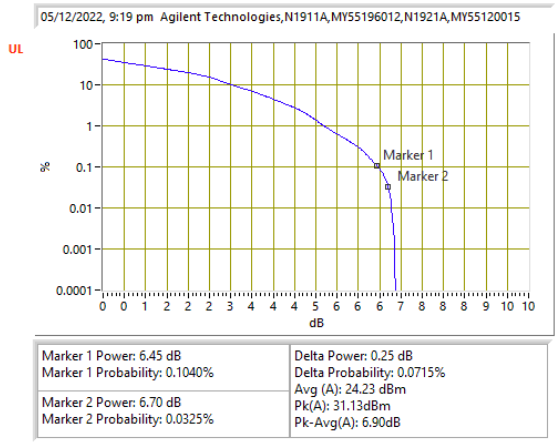


LTE B26 10MHz 16QAM Middle Channel, ID:28774

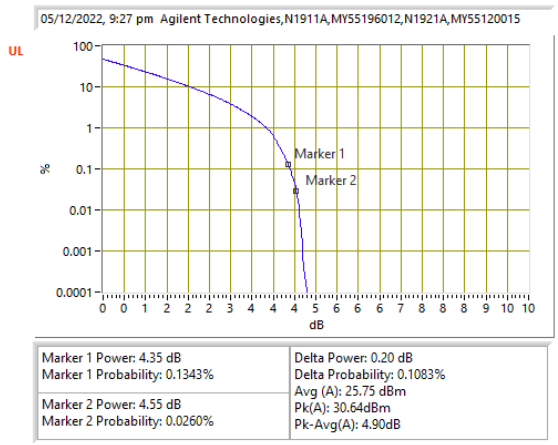
5G NR n26



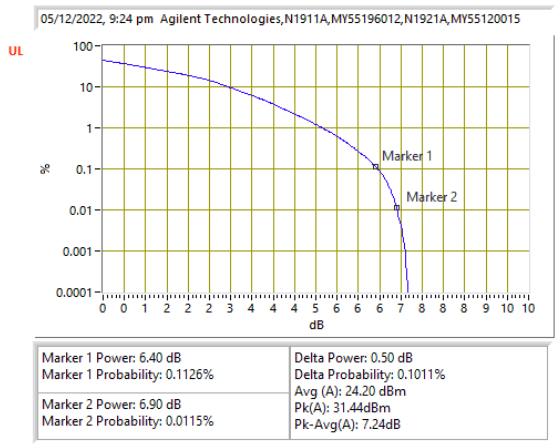
5G NR n26 5MHz BPSK Middle Channel, ID:50822



5G NR n26 5MHz 16QAM Middle Channel, ID:50822



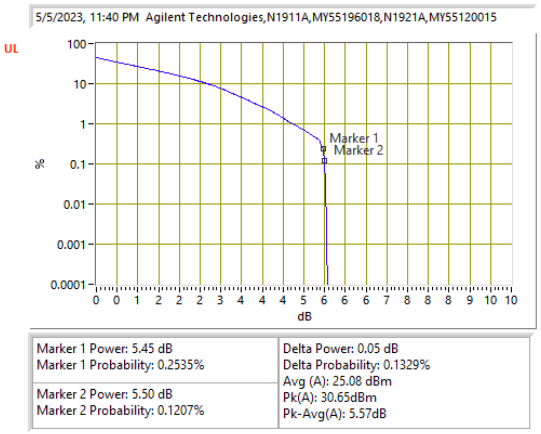
5G NR n26 10MHz BPSK Middle Channel, ID:50822



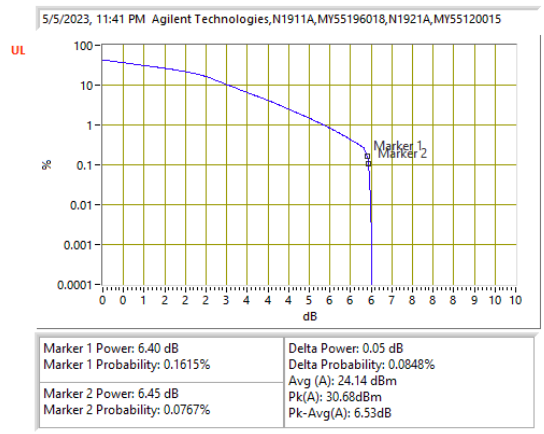
5G NR n26 10MHz 16QAM Middle Channel, ID:50822

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

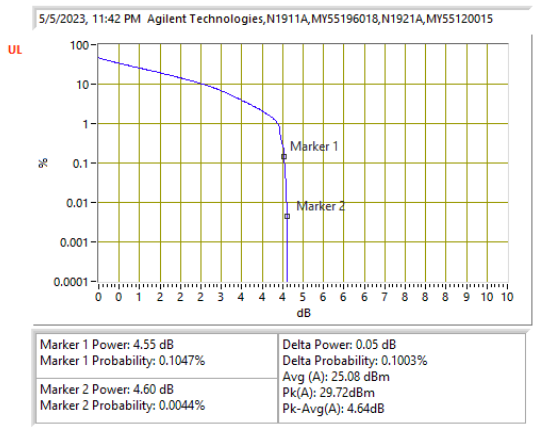
LTE BAND 26



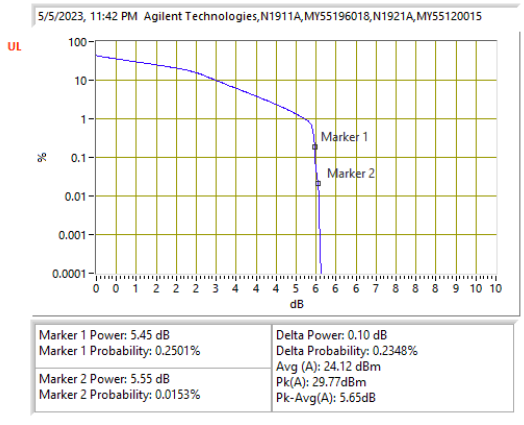
LTE B26 1.4MHz QPSK Middle Channel, ID:32061



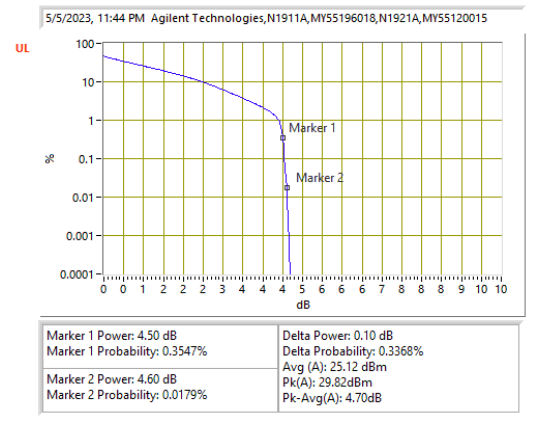
LTE B26 1.4MHz 16QAM Middle Channel, ID:32061



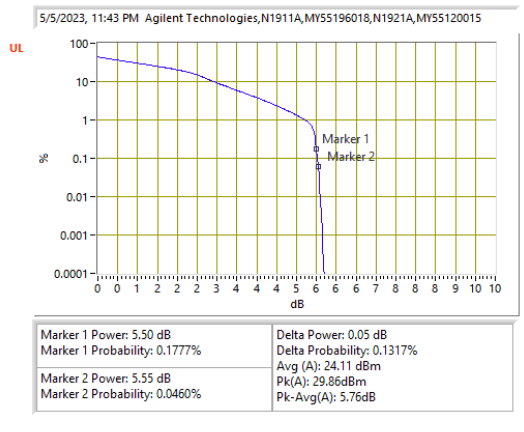
LTE B26 3MHz QPSK Middle Channel, ID:32061



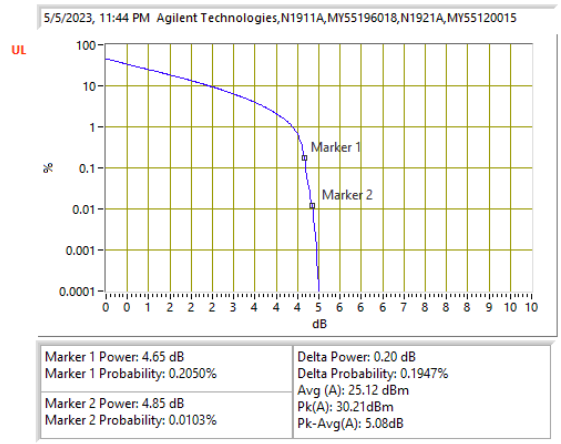
LTE B26 3MHz 16QAM Middle Channel, ID:32061



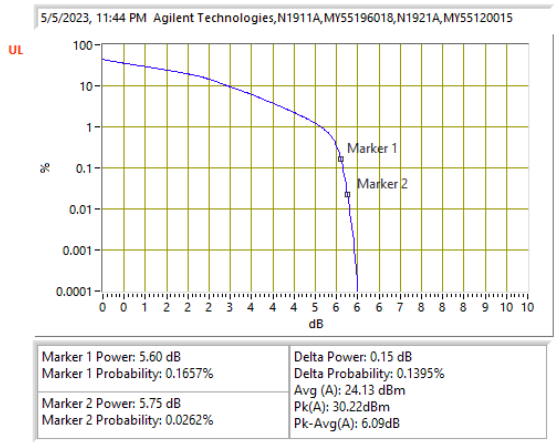
LTE B26 5MHz QPSK Middle Channel, ID:32061



LTE B26 5MHz 16QAM Middle Channel, ID:32061

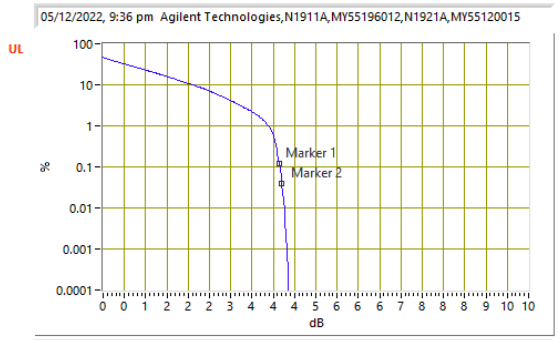


LTE B26 10MHz QPSK Middle Channel, ID:32061



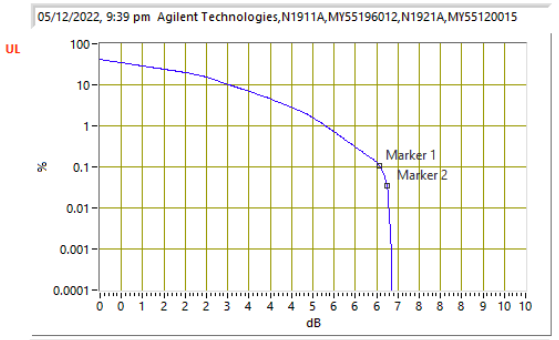
LTE B26 10MHz 16QAM Middle Channel, ID:32061

5G NR n26



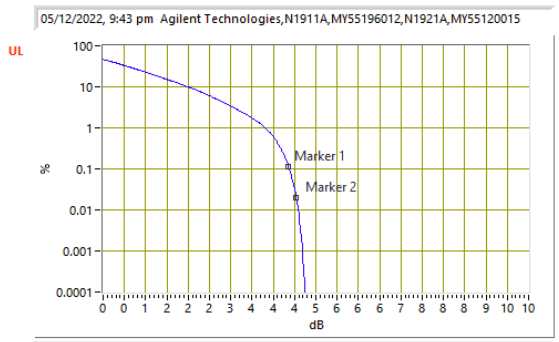
Marker 1 Power: 4.15 dB	Delta Power: 0.05 dB
Marker 1 Probability: 0.1052%	Delta Probability: 0.0670%
	Avg (A): 25.66 dBm
Marker 2 Power: 4.20 dB	Pk(A): 30.07dBm
Marker 2 Probability: 0.0382%	Pk-Avg(A): 4.41dB

5G NR n26 5MHz BPSK Middle Channel, ID:50822



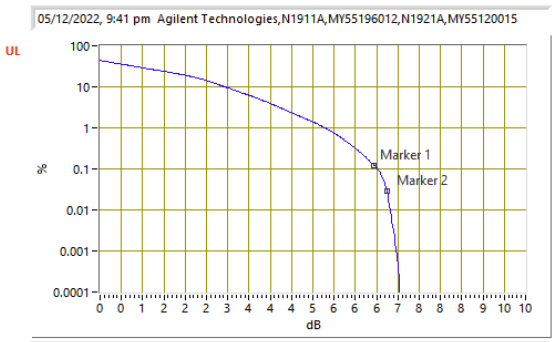
Marker 1 Power: 6.55 dB	Delta Power: 0.20 dB
Marker 1 Probability: 0.1116%	Delta Probability: 0.0824%
	Avg (A): 24.19 dBm
Marker 2 Power: 6.75 dB	Pk(A): 31.06dBm
Marker 2 Probability: 0.0292%	Pk-Avg(A): 6.87dB

5G NR n26 5MHz 16QAM Middle Channel, ID:50822



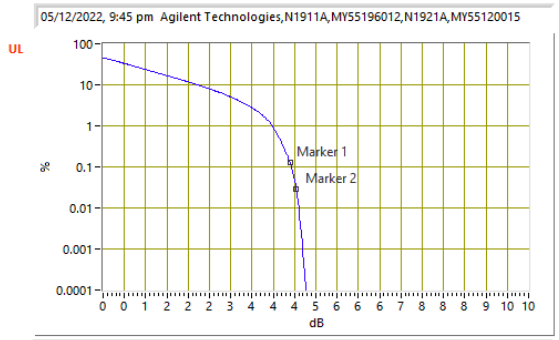
Marker 1 Power: 4.35 dB	Delta Power: 0.20 dB
Marker 1 Probability: 0.1233%	Delta Probability: 0.1058%
	Avg (A): 25.68 dBm
Marker 2 Power: 4.55 dB	Pk(A): 30.48dBm
Marker 2 Probability: 0.0175%	Pk-Avg(A): 4.80dB

5G NR n26 10MHz BPSK Middle Channel, ID:50822



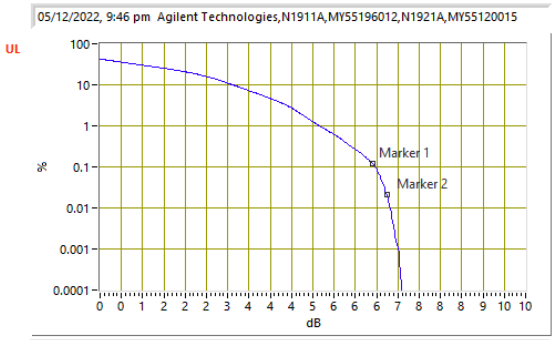
Marker 1 Power: 6.45 dB	Delta Power: 0.30 dB
Marker 1 Probability: 0.1205%	Delta Probability: 0.0946%
	Avg (A): 24.16 dBm
Marker 2 Power: 6.75 dB	Pk(A): 31.25dBm
Marker 2 Probability: 0.0259%	Pk-Avg(A): 7.09dB

5G NR n26 10MHz 16QAM Middle Channel, ID:50822



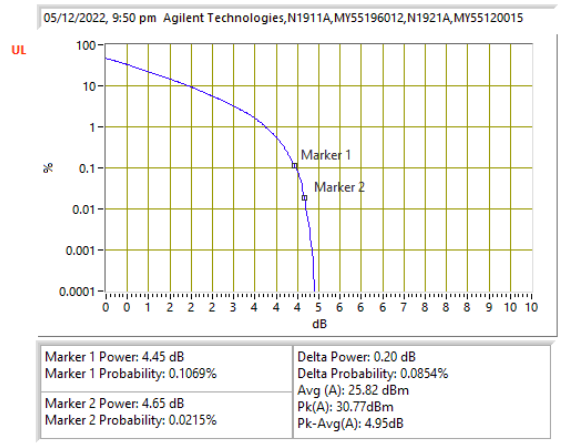
Marker 1 Power: 4.40 dB	Delta Power: 0.15 dB
Marker 1 Probability: 0.1272%	Delta Probability: 0.1027%
	Avg (A): 25.77 dBm
Marker 2 Power: 4.55 dB	Pk(A): 30.63dBm
Marker 2 Probability: 0.0245%	Pk-Avg(A): 4.86dB

5G NR n26 15MHz BPSK Middle Channel, ID:50822

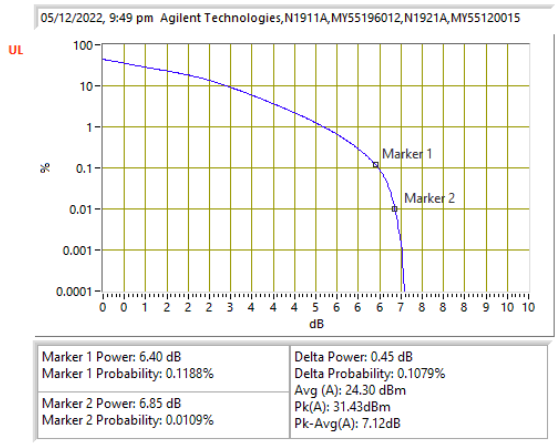


Marker 1 Power: 6.40 dB	Delta Power: 0.35 dB
Marker 1 Probability: 0.1200%	Delta Probability: 0.1012%
	Avg (A): 24.30 dBm
Marker 2 Power: 6.75 dB	Pk(A): 31.43dBm
Marker 2 Probability: 0.0189%	Pk-Avg(A): 7.13dB

5G NR n26 15MHz 16QAM Middle Channel, ID:50822



5G NR n26 20MHz BPSK Middle Channel, ID:50822

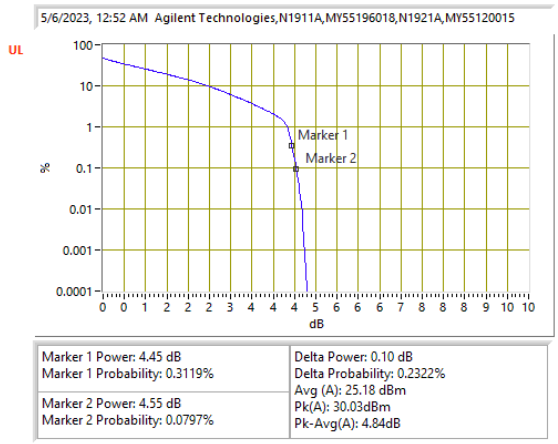


5G NR n26 20MHz 16QAM Middle Channel, ID:50822

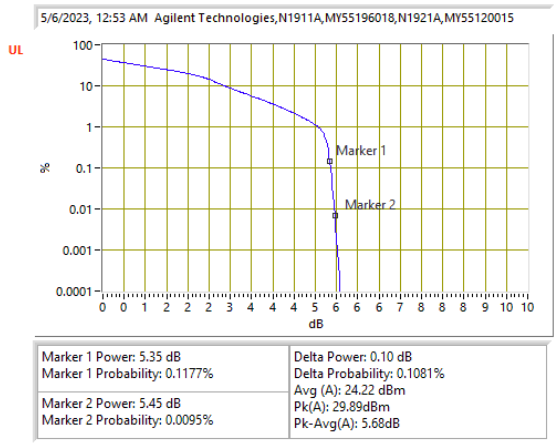
9.5.9. LTE BAND 30 AND 5G NR n30

LTE BAND 30

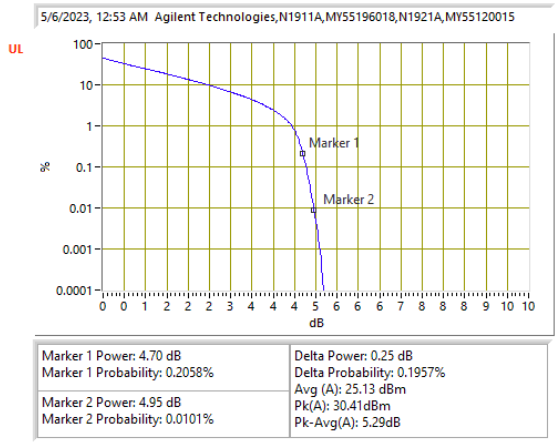
Test Engineer ID:	28774	Test Date:	3/5/2022



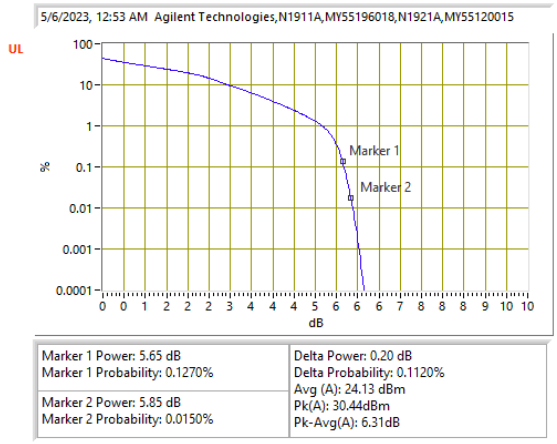
LTE B30 5MHz QPSK Middle Channel



LTE B30 5MHz 16QAM Middle Channel



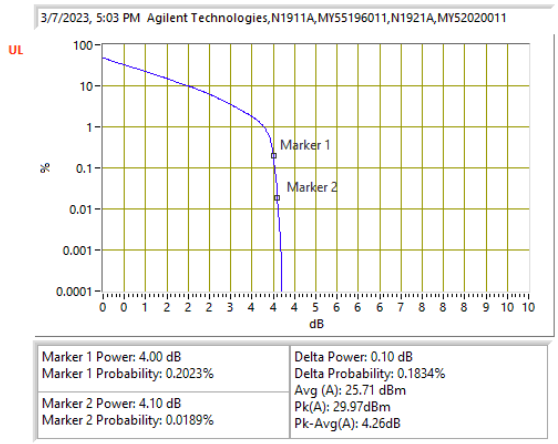
LTE B30 10MHz QPSK Middle Channel



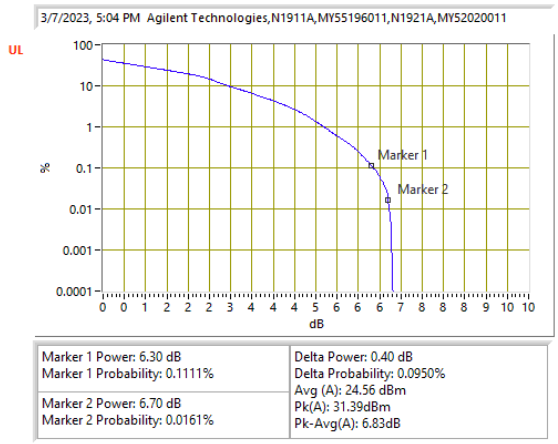
LTE B30 10MHz 16QAM Middle Channel

5G NR n30

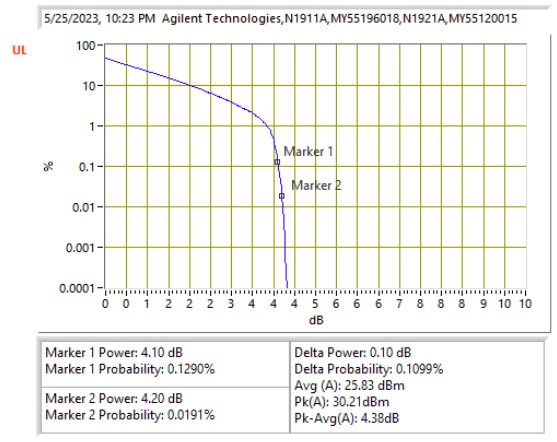
Test Engineer ID:	50822	Test Date:	12/5/2022



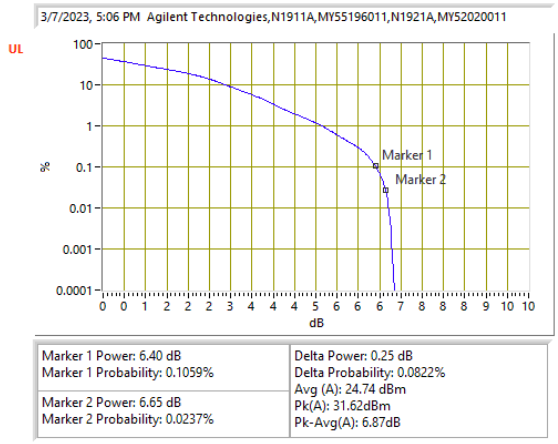
5G NR n30 5MHz BPSK Middle Channel



5G NR n30 5MHz 16QAM Middle Channel



5G NR n30 10MHz BPSK Middle Channel



5G NR n30 10MHz 16QAM Middle Channel

9.5.10. LTE BAND 41 AND 5G NR n41

Test Engineer ID:	50822	Test Date:	12/9/2022

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	32.99	21.37	*4.63
					16QAM	32.97	20.36	*5.62
	10MHz		50	0	QPSK	32.94	21.37	*4.58
					16QAM	32.97	20.38	*5.6
	15MHz		75	0	QPSK	32.91	21.27	*4.65
					16QAM	32.85	20.29	*5.57
	20MHz		100	0	QPSK	32.92	21.29	*4.64
					16QAM	32.93	20.3	*5.64
5G NR n41 (FCC)	10MHz		24	0	BPSK	32.15	28.36	3.79
					16QAM	33.13	26.99	6.14
	15MHz		36	0	BPSK	32.52	28.94	3.58
					16QAM	33.22	27.12	6.10
	20MHz		50	0	BPSK	32.41	28.8	3.61
					16QAM	32.32	26.16	6.16
	30MHz		75	0	BPSK	31.92	28.25	3.67
					16QAM	32.63	26.48	6.15
	40MHz		100	0	BPSK	32.27	28.66	3.61
					16QAM	32.76	26.75	6.01
	50MHz		128	0	BPSK	31.39	27.76	3.63
					16QAM	31.99	25.95	6.04
	60MHz		162	0	BPSK	31.77	28.2	3.57
					16QAM	32.63	26.36	6.27
	70MHz		180	0	BPSK	32.06	28.32	3.74
					16QAM	32.06	25.94	6.12
	80MHz		216	0	BPSK	31.69	28.36	3.33
					16QAM	31.90	26.22	5.68
	90MHz		243	0	BPSK	31.41	28.05	3.36
					16QAM	31.85	25.96	5.89
	100MHz		270	0	BPSK	31.28	27.94	3.34
					16QAM	31.47	25.61	5.86
* Duty Cycle Correction Factor (dB) =			6.99					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

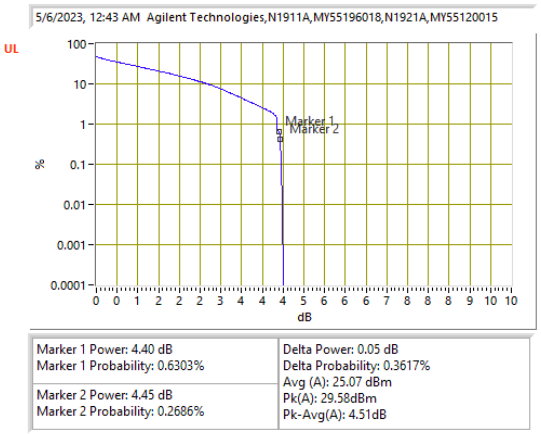
9.5.11. LTE BAND 48 AND 5G NR n48

Test Engineer ID:	50822	Test Date:	3/6/2023

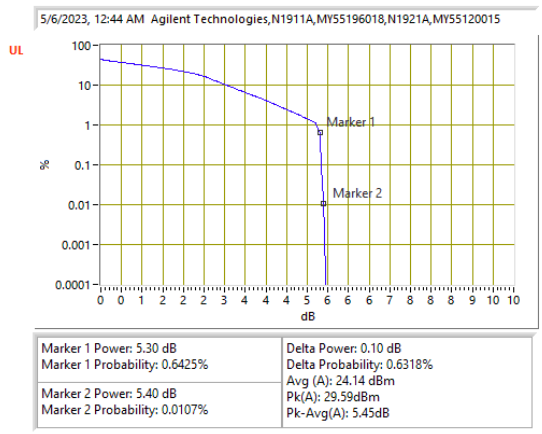
Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
Band 48	5MHz	3625.0	25	0	QPSK	30.25	18.60	*4.66
					16QAM	30.19	17.59	*5.61
	10MHz		50	0	QPSK	30.37	18.61	*4.77
					16QAM	30.30	17.61	*5.7
	15MHz		75	0	QPSK	30.16	18.45	*4.72
					16QAM	30.14	17.5	*5.65
	20MHz		100	0	QPSK	30.17	18.49	*4.69
					16QAM	30.14	17.48	*5.67
5G NR n48	10MHz		24	0	BPSK	30.49	25.96	4.53
					16QAM	31.29	24.51	6.78
	15MHz		36	0	BPSK	30.62	26.21	4.41
					16QAM	31.65	24.72	6.93
	20MHz		50	0	BPSK	30.42	26.09	4.33
					16QAM	31.39	24.6	6.79
	30MHz		75	0	BPSK	30.83	26.57	4.26
					16QAM	31.85	25.14	6.71
	40MHz		100	0	BPSK	30.29	26.13	4.16
					16QAM	31.28	24.49	6.79
* Duty Cycle Correction Factor (dB) =			6.99					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9.5.12. LTE BAND 66 AND 5G NR n66

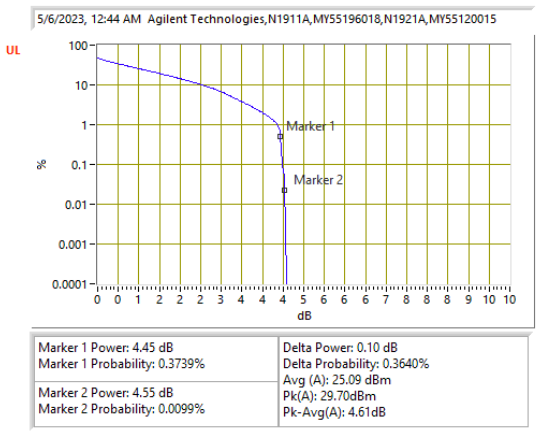
LTE BAND 66



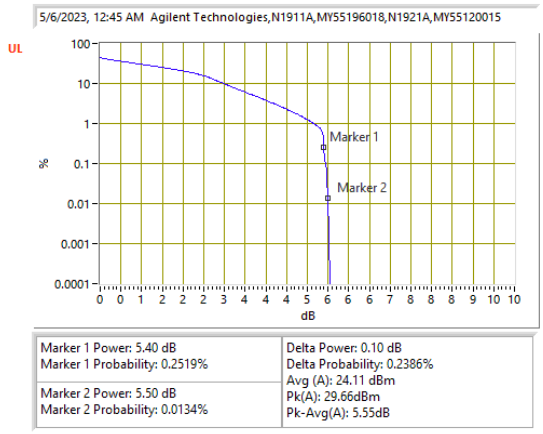
LTE B66 1.4MHz QPSK Middle Channel, ID:28774



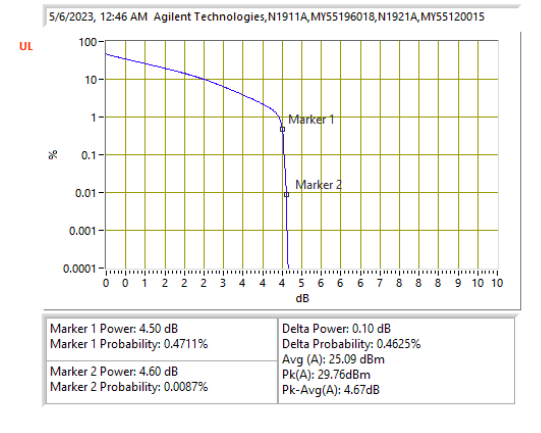
LTE B66 1.4MHz 16QAM Middle Channel, ID:28774



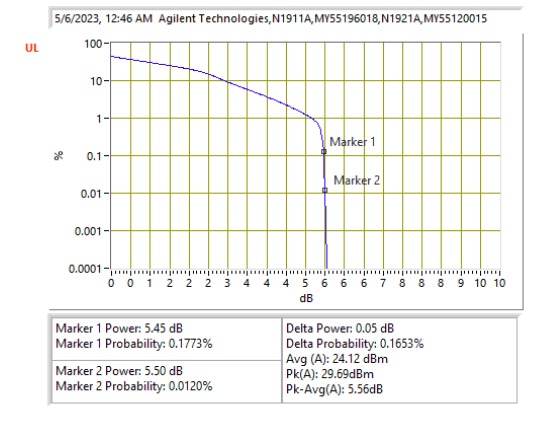
LTE B66 3MHz QPSK Middle Channel, ID:28774



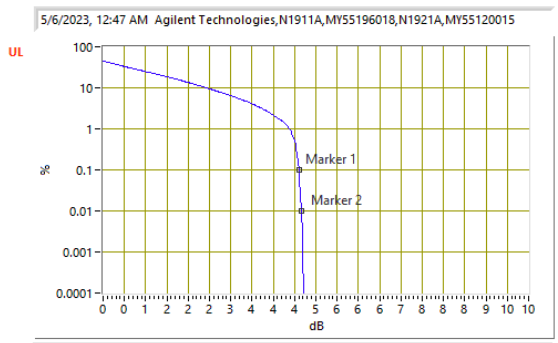
LTE B66 3MHz 16QAM Middle Channel, ID:28774



LTE B66 5MHz QPSK Middle Channel, ID:28774

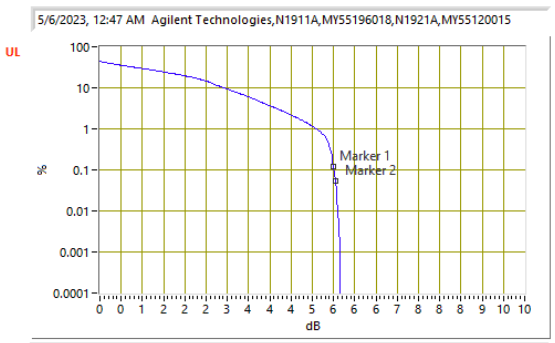


LTE B66 5MHz 16QAM Middle Channel, ID:28774



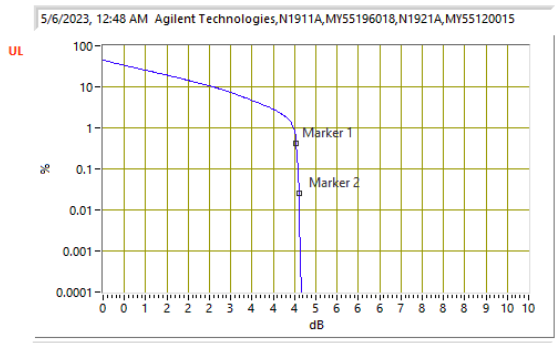
Marker 1 Power: 4.60 dB Marker 1 Probability: 0.1021%	Delta Power: 0.05 dB Delta Probability: 0.0858% Avg (A): 25.09 dBm Pk(A): 29.87dBm Pk-Avg(A): 4.78dB
Marker 2 Power: 4.65 dB Marker 2 Probability: 0.0163%	

LTE B66 10MHz QPSK Middle Channel, ID:28774



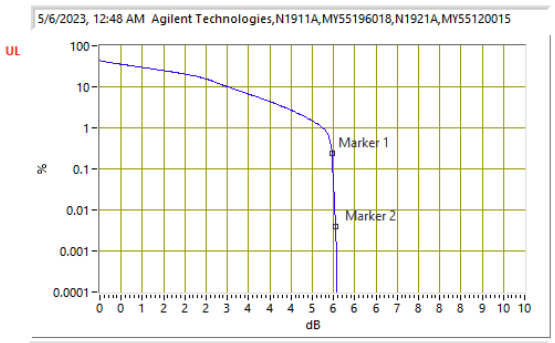
Marker 1 Power: 5.50 dB Marker 1 Probability: 0.1238%	Delta Power: 0.05 dB Delta Probability: 0.0810% Avg (A): 24.11 dBm Pk(A): 29.83dBm Pk-Avg(A): 5.72dB
Marker 2 Power: 5.55 dB Marker 2 Probability: 0.0428%	

LTE B66 10MHz 16QAM Middle Channel, ID:28774



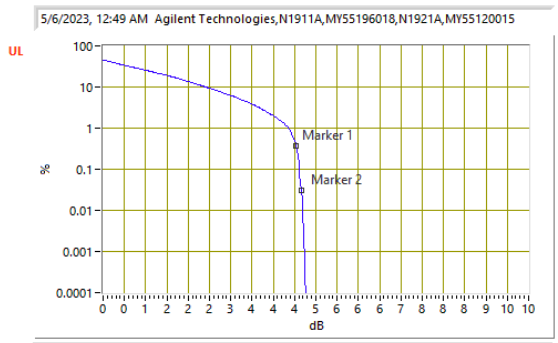
Marker 1 Power: 4.55 dB Marker 1 Probability: 0.3225%	Delta Power: 0.05 dB Delta Probability: 0.2966% Avg (A): 24.94 dBm Pk(A): 29.61dBm Pk-Avg(A): 4.67dB
Marker 2 Power: 4.60 dB Marker 2 Probability: 0.0259%	

LTE B66 15MHz QPSK Middle Channel, ID:28774



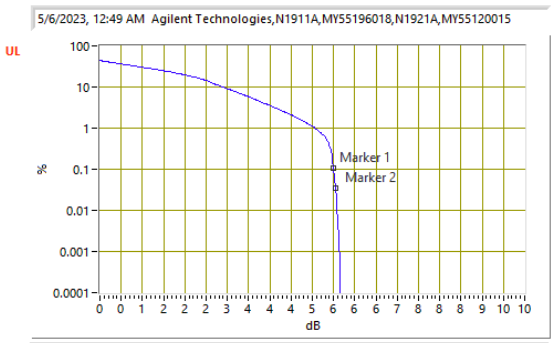
Marker 1 Power: 5.45 dB Marker 1 Probability: 0.3054%	Delta Power: 0.10 dB Delta Probability: 0.3036% Avg (A): 24.00 dBm Pk(A): 29.60dBm Pk-Avg(A): 5.60dB
Marker 2 Power: 5.55 dB Marker 2 Probability: 0.0018%	

LTE B66 15MHz 16QAM Middle Channel, ID:28774



Marker 1 Power: 4.55 dB Marker 1 Probability: 0.3315%	Delta Power: 0.10 dB Delta Probability: 0.2943% Avg (A): 24.96 dBm Pk(A): 29.75dBm Pk-Avg(A): 4.79dB
Marker 2 Power: 4.65 dB Marker 2 Probability: 0.0371%	

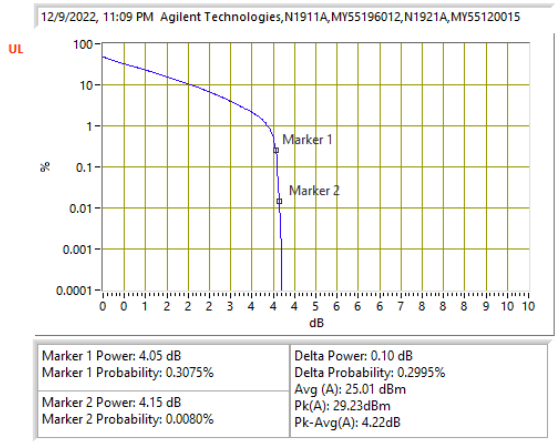
LTE B66 20MHz QPSK Middle Channel, ID:28774



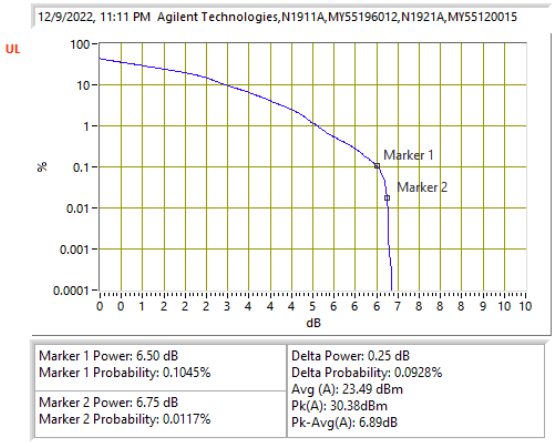
Marker 1 Power: 5.50 dB Marker 1 Probability: 0.1075%	Delta Power: 0.05 dB Delta Probability: 0.0801% Avg (A): 23.98 dBm Pk(A): 29.66dBm Pk-Avg(A): 5.68dB
Marker 2 Power: 5.55 dB Marker 2 Probability: 0.0274%	

LTE B66 20MHz 16QAM Middle Channel, ID:28774

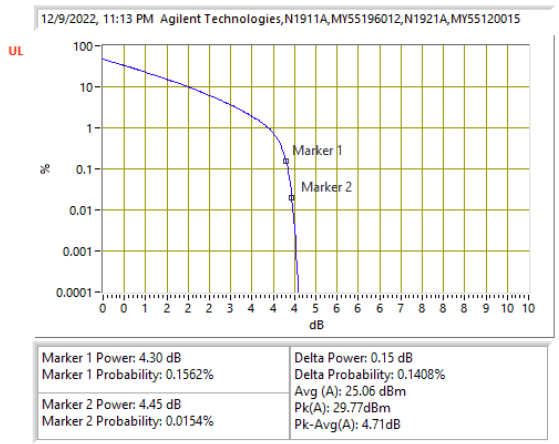
5G NR n66



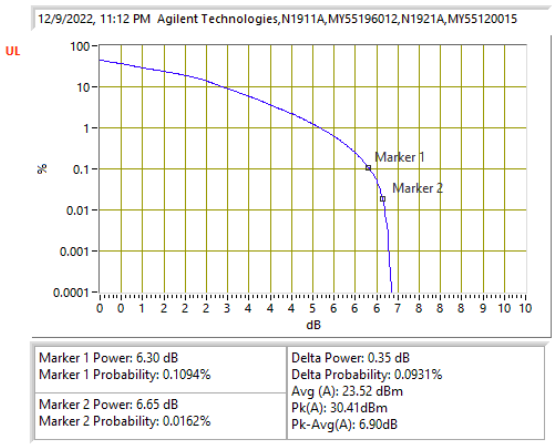
5G NR n66 5MHz BPSK Middle Channel, ID:50822



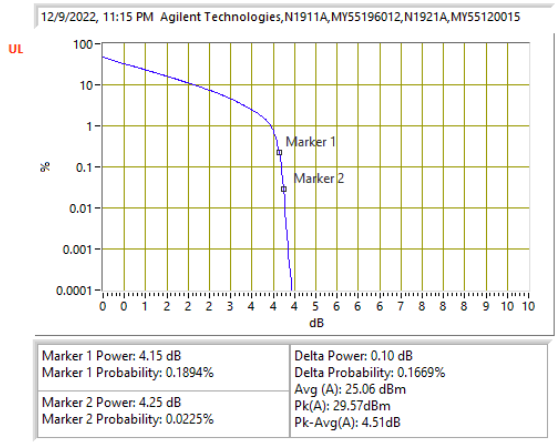
5G NR n66 5MHz 16QAM Middle Channel, ID:50822



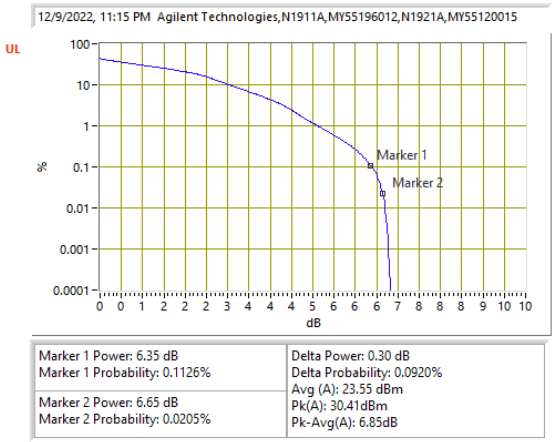
5G NR n66 10MHz BPSK Middle Channel, ID:50822



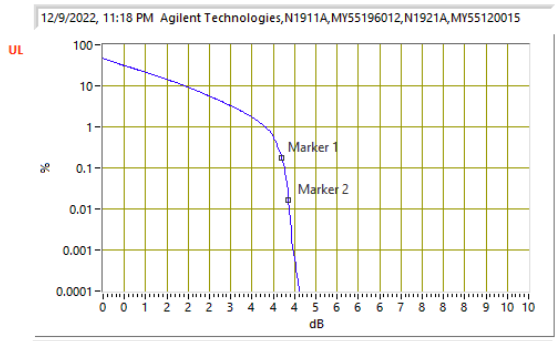
5G NR n66 10MHz 16QAM Middle Channel, ID:50822



5G NR n66 15MHz BPSK Middle Channel, ID:50822

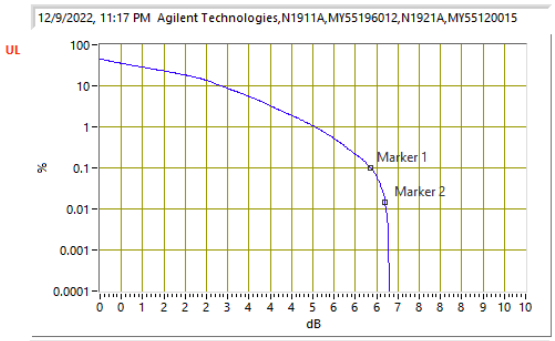


5G NR n66 15MHz 16QAM Middle Channel, ID:50822



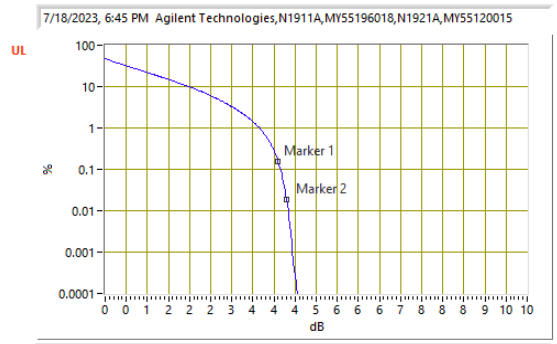
Marker 1 Power: 4.20 dB Marker 1 Probability: 0.1769%	Delta Power: 0.15 dB Delta Probability: 0.1553% Avg (A): 25.07 dBm Pk(A): 29.75dBm Pk-Avg(A): 4.69dB
Marker 2 Power: 4.35 dB Marker 2 Probability: 0.0217%	

5G NR n66 20MHz BPSK Middle Channel, ID:50822



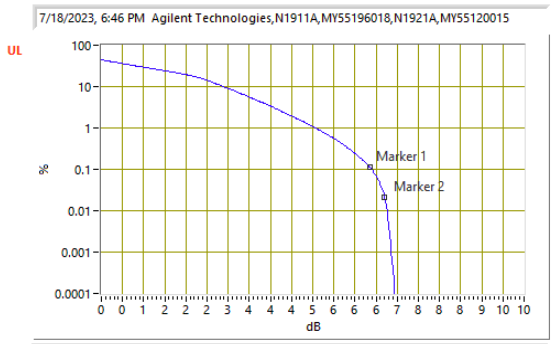
Marker 1 Power: 6.35 dB Marker 1 Probability: 0.1031%	Delta Power: 0.35 dB Delta Probability: 0.0889% Avg (A): 23.54 dBm Pk(A): 30.38dBm Pk-Avg(A): 6.84dB
Marker 2 Power: 6.70 dB Marker 2 Probability: 0.0142%	

5G NR n66 20MHz 16QAM Middle Channel, ID:50822



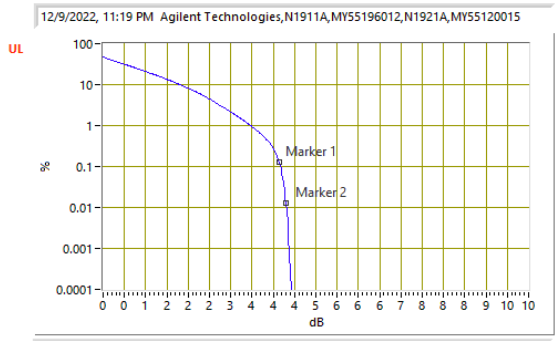
Marker 1 Power: 4.10 dB Marker 1 Probability: 0.1547%	Delta Power: 0.20 dB Delta Probability: 0.1360% Avg (A): 26.39 dBm Pk(A): 31.10dBm Pk-Avg(A): 4.71dB
Marker 2 Power: 4.30 dB Marker 2 Probability: 0.0187%	

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



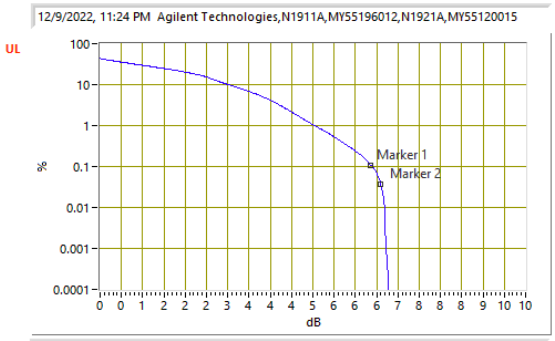
Marker 1 Power: 6.35 dB Marker 1 Probability: 0.1129%	Delta Power: 0.35 dB Delta Probability: 0.0917% Avg (A): 24.75 dBm Pk(A): 31.78dBm Pk-Avg(A): 7.03dB
Marker 2 Power: 6.70 dB Marker 2 Probability: 0.0212%	

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



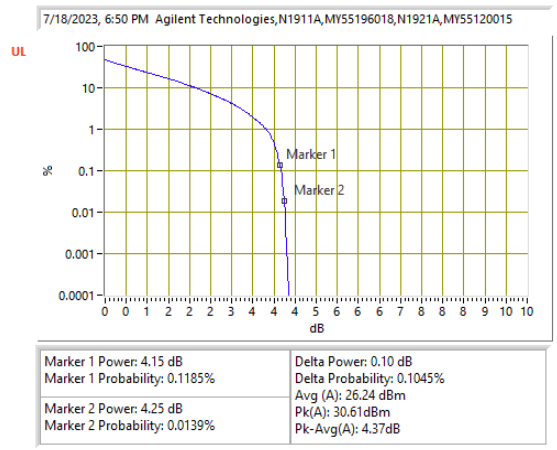
Marker 1 Power: 4.15 dB Marker 1 Probability: 0.1186%	Delta Power: 0.15 dB Delta Probability: 0.1059% Avg (A): 25.15 dBm Pk(A): 29.65dBm Pk-Avg(A): 4.51dB
Marker 2 Power: 4.30 dB Marker 2 Probability: 0.0127%	

5G NR n66 30MHz BPSK Middle Channel, ID:50822

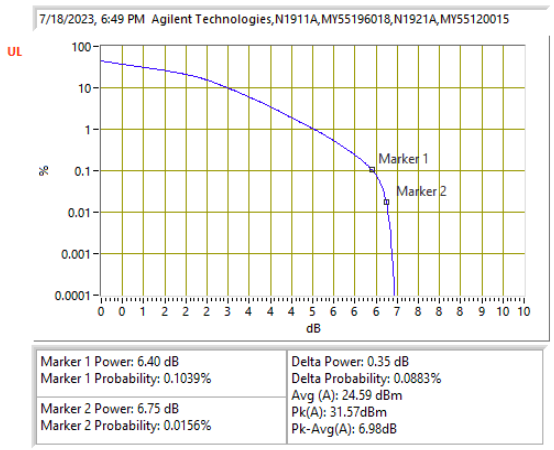


Marker 1 Power: 6.35 dB Marker 1 Probability: 0.1128%	Delta Power: 0.25 dB Delta Probability: 0.0750% Avg (A): 23.80 dBm Pk(A): 30.62dBm Pk-Avg(A): 6.82dB
Marker 2 Power: 6.60 dB Marker 2 Probability: 0.0378%	

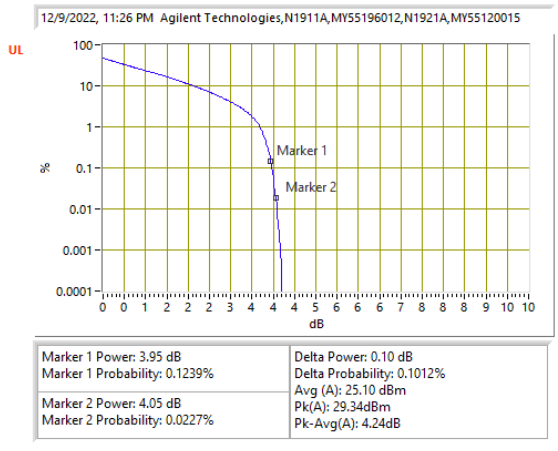
5G NR n66 30MHz 16QAM Middle Channel, ID:50822



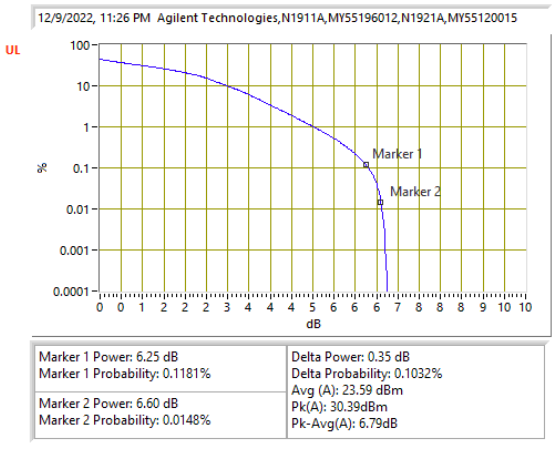
5G NR n66 35MHz BPSK Middle Channel ID:27342



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



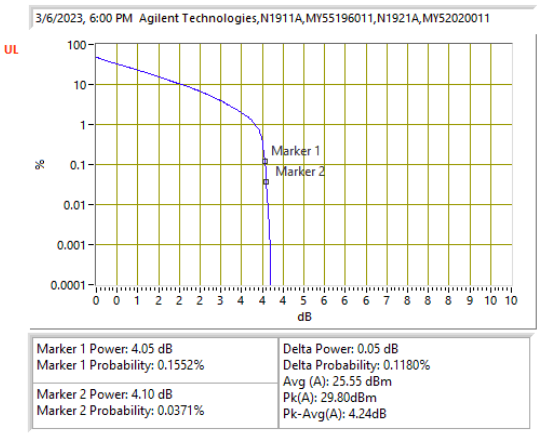
5G NR n66 40MHz BPSK Middle Channel, ID:50822



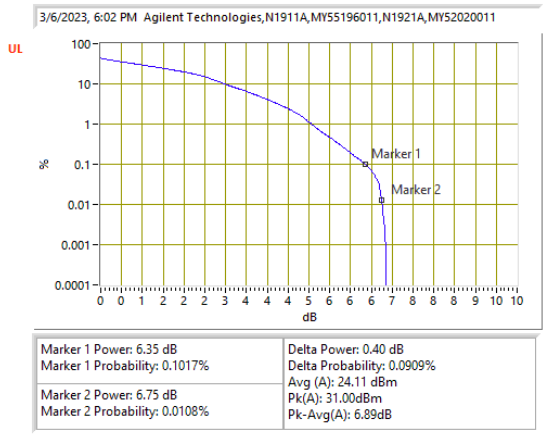
5G NR n66 40MHz 16QAM Middle Channel, ID:50822

9.5.13. 5G NR n70

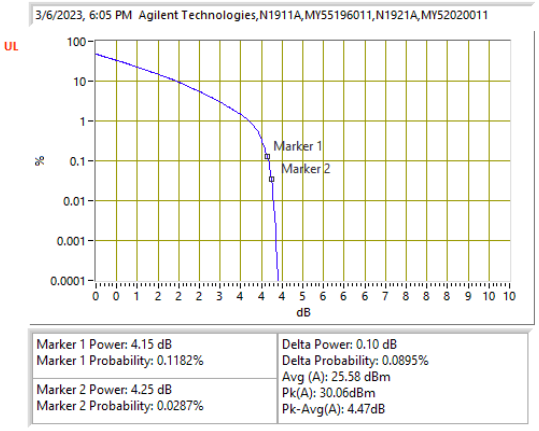
5G NR n70



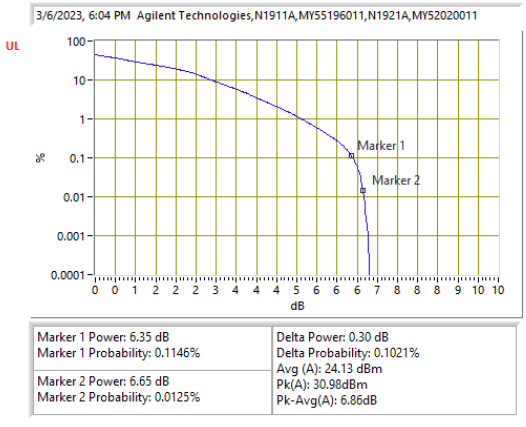
5G NR n70 5MHz BPSK Middle Channel, ID:50822



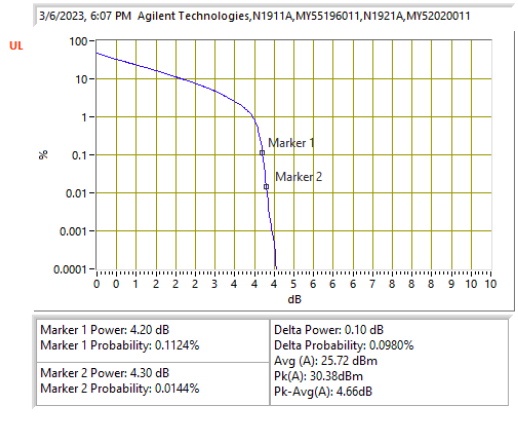
5G NR n70 5MHz 16QAM Middle Channel, ID:50822



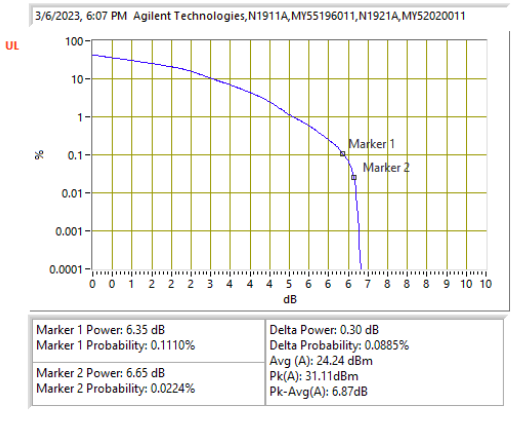
5G NR n70 10MHz BPSK Middle Channel, ID:50822



5G NR n70 10MHz 16QAM Middle Channel, ID:50822



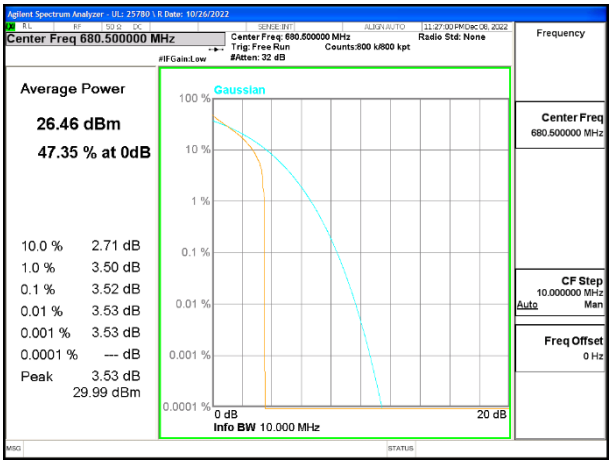
5G NR n70 15MHz BPSK Middle Channel



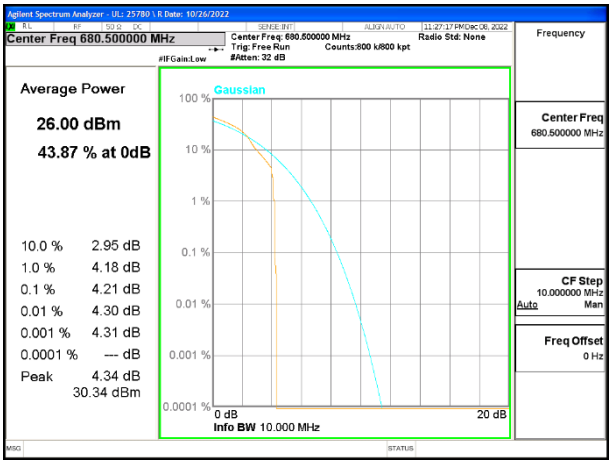
5G NR n70 15MHz 16QAM Middle Channel

9.5.14. LTE BAND 71 AND 5G NR n71

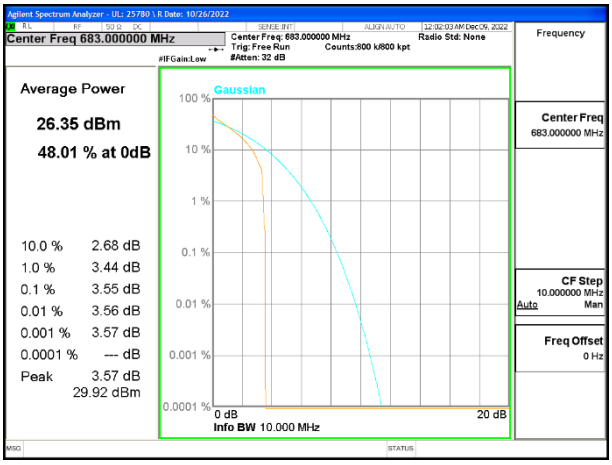
LTE BAND 71



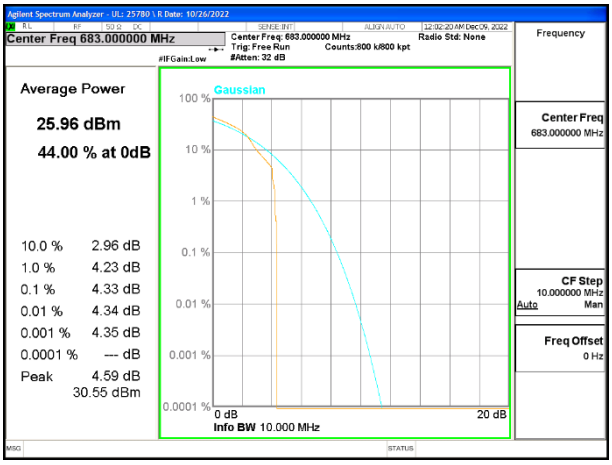
LTE B71 5MHz QPSK Middle Channel



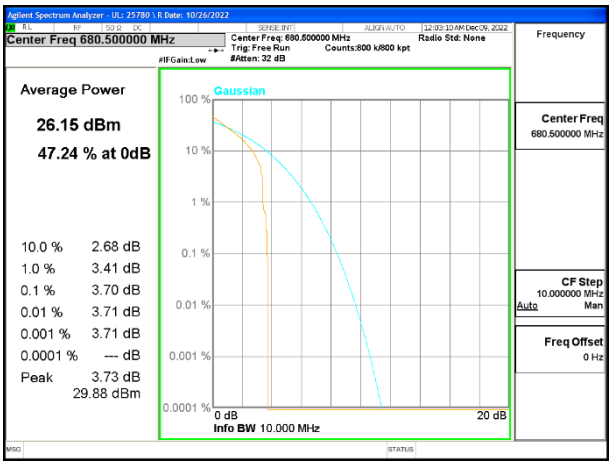
LTE B71 5MHz 16QAM Middle Channel



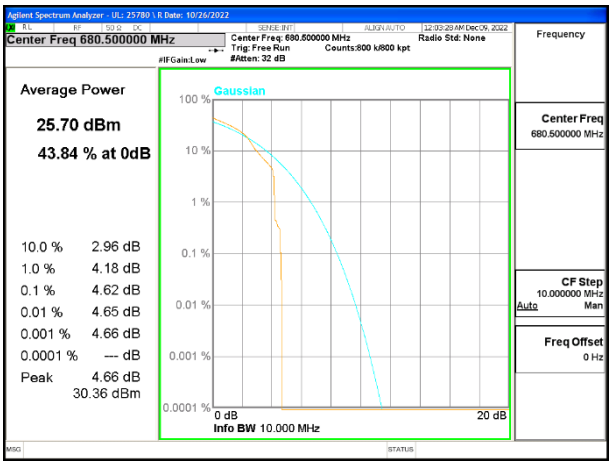
LTE B71 10MHz QPSK Middle Channel



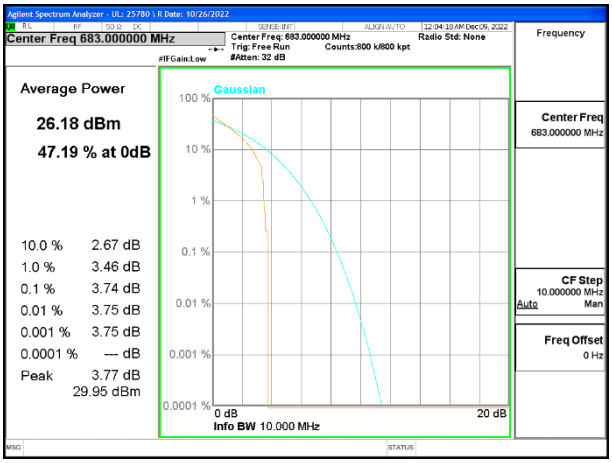
LTE B71 10MHz 16QAM Middle Channel



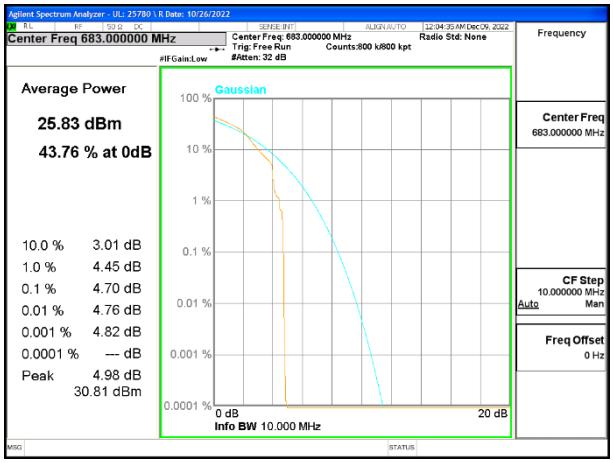
LTE B71 15MHz QPSK Middle Channel



LTE B71 15MHz 16QAM Middle Channel

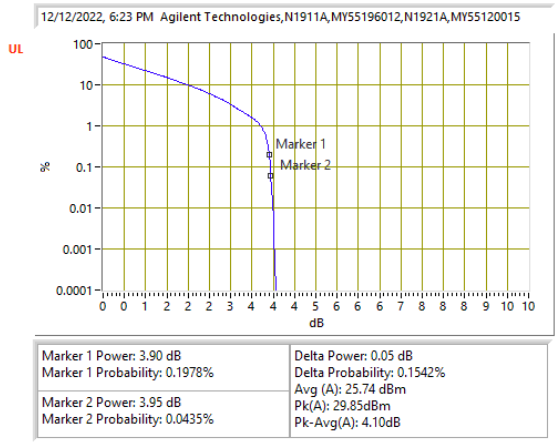


LTE B71 20MHz QPSK Middle Channel

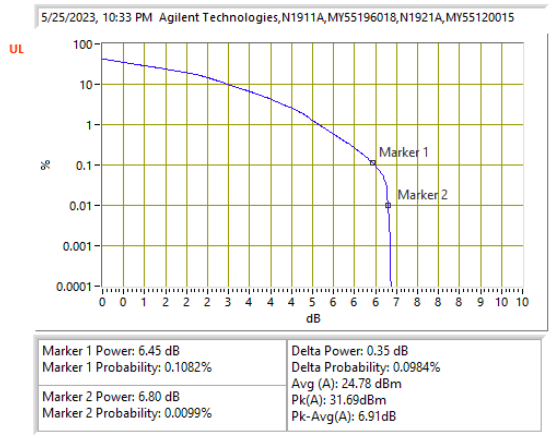


LTE B71 20MHz 16QAM Middle Channel

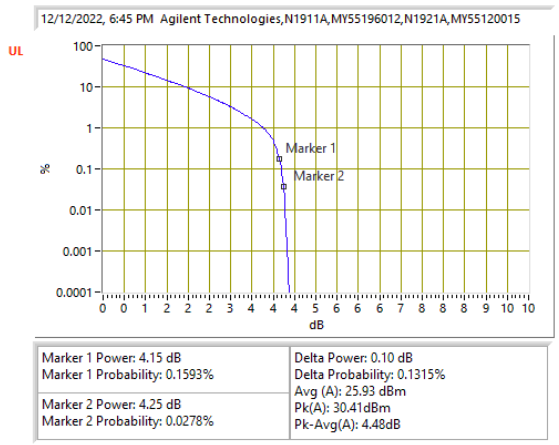
5G NR n71



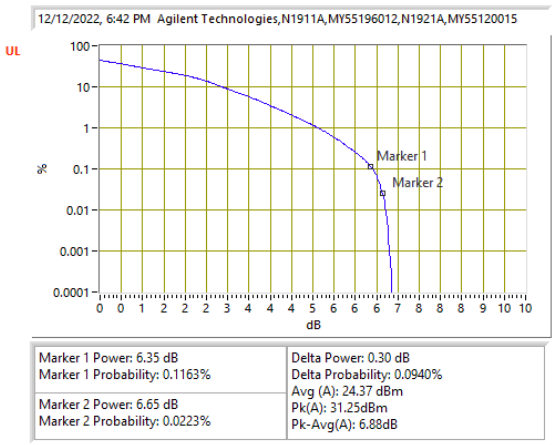
5G NR n71 5MHz BPSK Middle Channel, ID:50822



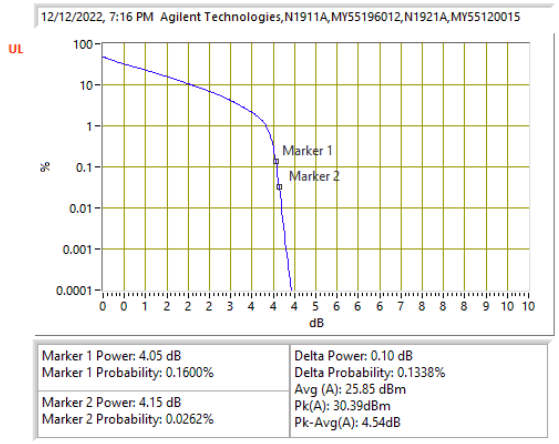
5G NR n71 5MHz 16QAM Middle Channel, ID:50822



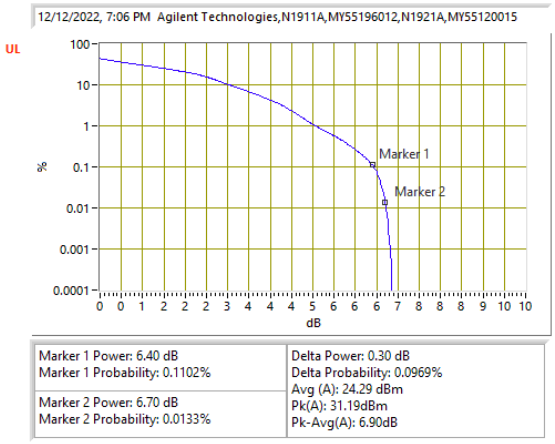
5G NR n71 10MHz BPSK Middle Channel, ID:50822



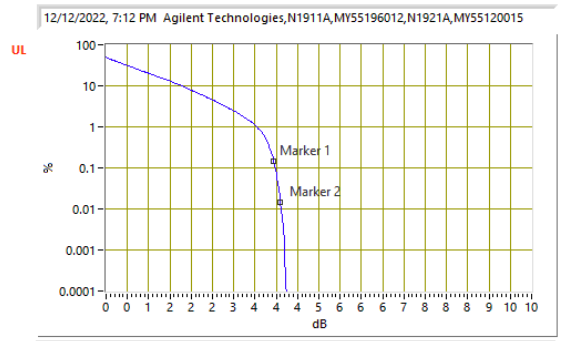
5G NR n71 10MHz 16QAM Middle Channel, ID:50822



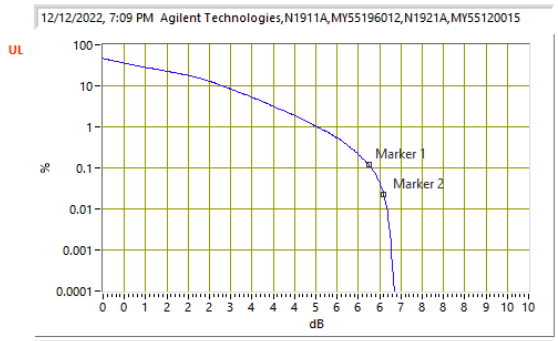
5G NR n71 15MHz BPSK Middle Channel, ID:50822



5G NR n71 15MHz 16QAM Middle Channel, ID:50822



5G NR n71 20MHz BPSK Middle Channel, ID:50822



5G NR n71 20MHz 16QAM Middle Channel, ID:50822

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

Test Engineer ID:	50822	Test Date:	12/12/2022

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
5G NR n77 (FCC Part 27 3450-3550MHz)	10MHz	3500.0	24	0	BPSK	33.27	28.95	4.32
					16QAM	34.29	27.34	6.95
	15MHz		36	0	BPSK	33.17	28.96	4.21
					16QAM	34.14	27.42	6.72
	20MHz		50	0	BPSK	32.30	27.94	4.36
					16QAM	34.05	27.22	6.83
	30MHz		75	0	BPSK	32.41	28	4.41
					16QAM	34.14	27.24	6.90
	40MHz		100	0	BPSK	32.16	28.1	4.06
					16QAM	34.09	27.32	6.77
	50MHz		128	0	BPSK	31.59	27.7	3.89
					16QAM	33.42	27.05	6.37
	60MHz		162	0	BPSK	31.84	27.77	4.07
					16QAM	33.30	26.95	6.35
	70MHz		180	0	BPSK	31.86	27.78	4.08
					16QAM	33.59	27.07	6.52
	80MHz		216	0	BPSK	31.38	27.78	3.60
					16QAM	33.08	27.03	6.05
	90MHz		243	0	BPSK	32.97	26.93	6.04
					16QAM	31.23	27.75	3.48
	100MHz		270	0	BPSK	31.06	27.74	3.32
					16QAM	32.82	26.9	5.92
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

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

Test Engineer ID:	50822	Test Date:	12/12/2022

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
5G NR n77 (FCC Part 27 3700-3980MHz)	10MHz	3840.0	10	0	BPSK	33.35	29.07	4.28
					16QAM	34.30	27.5	6.80
	15MHz		24	0	BPSK	33.30	29.16	4.14
					16QAM	34.36	27.66	6.70
	20MHz		36	0	BPSK	32.58	28.29	4.29
					16QAM	34.50	27.69	6.81
	30MHz		50	0	BPSK	32.72	28.35	4.37
					16QAM	34.55	27.59	6.96
	40MHz		100	0	BPSK	32.58	28.32	4.26
					16QAM	34.45	27.61	6.84
	50MHz		128	0	BPSK	32.00	28.04	3.96
					16QAM	33.81	27.36	6.45
	60MHz		162	0	BPSK	32.07	28.06	4.01
					16QAM	33.65	27.16	6.49
	70MHz		180	0	BPSK	32.52	28.52	4.00
					16QAM	33.70	27.09	6.61
	80MHz		216	0	BPSK	32.17	28.63	3.54
					16QAM	33.09	27.08	6.01
	90MHz		243	0	BPSK	32.07	28.66	3.41
					16QAM	32.94	27	5.94
	100MHz		270	0	BPSK	31.75	28.59	3.16
					16QAM	32.75	26.96	5.79
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

10. RADIATED TEST RESULTS

Radiated measurement using the Field Strength Method

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

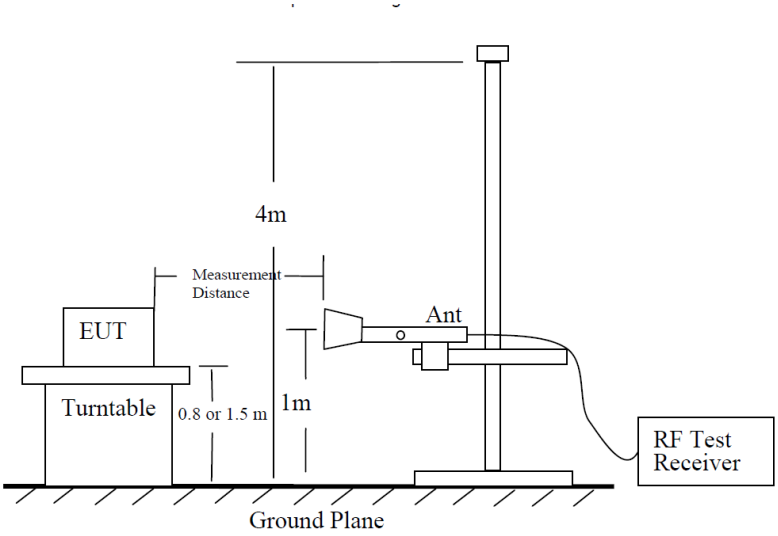


Figure 6 —Test site-up for radiated ERP and/or EIRP measurements

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

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

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

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

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

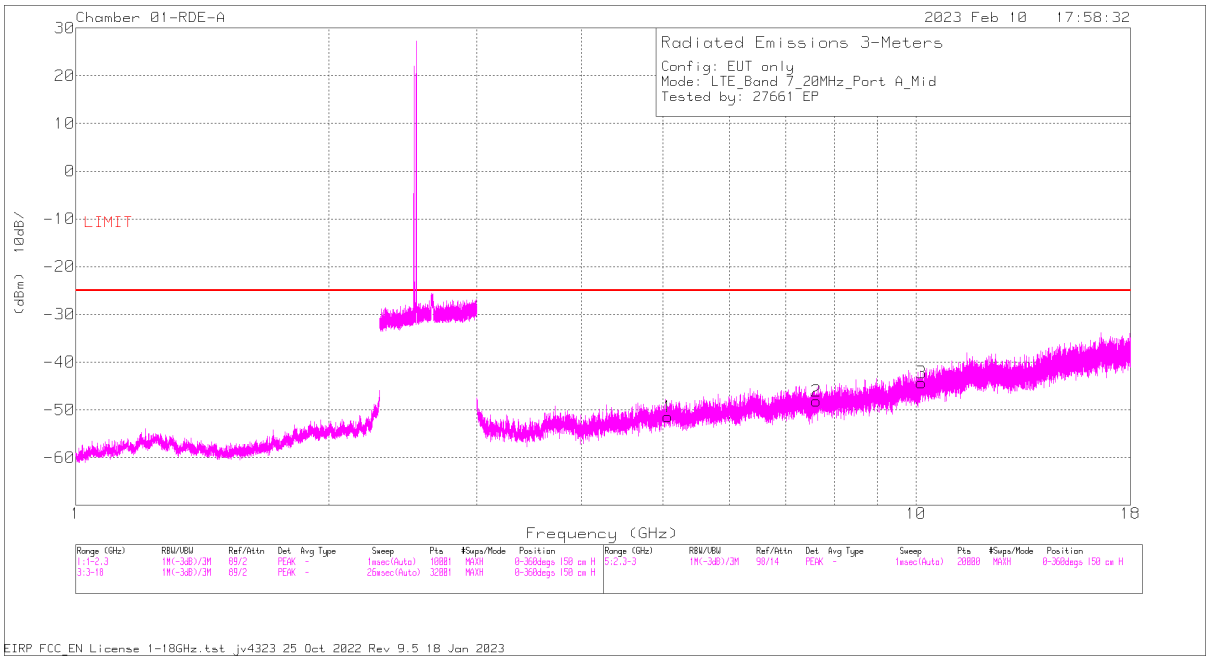
So, from d)

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

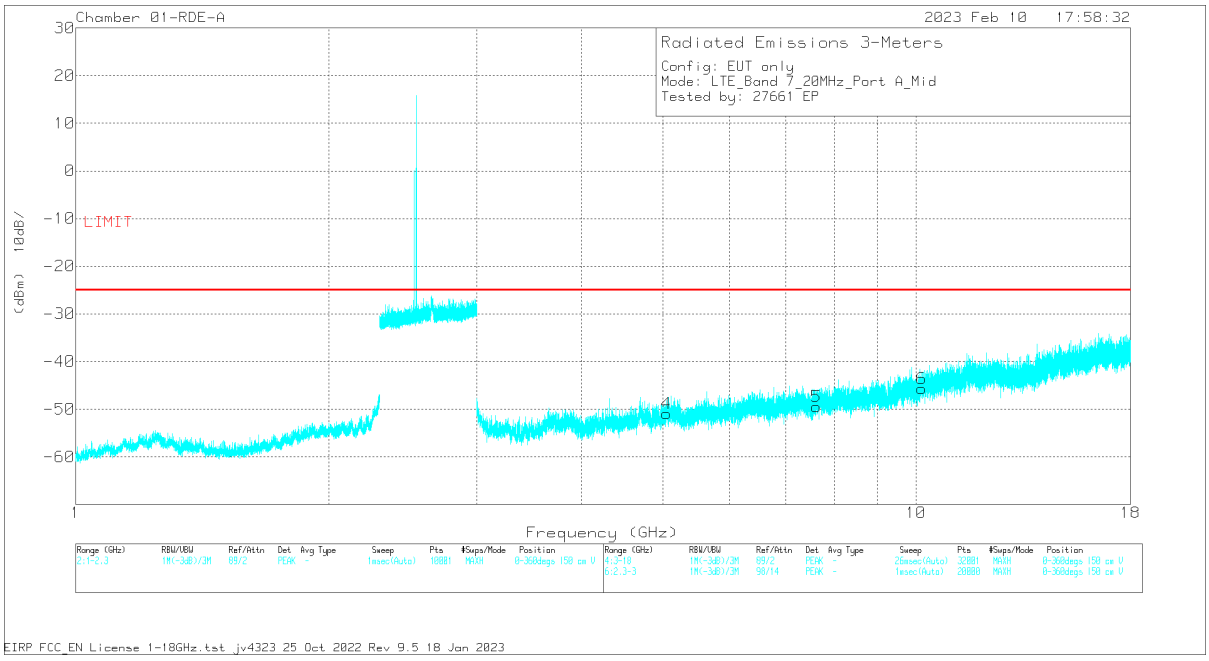
Then, EIRP (dBm) = E (dBμV/m) + 9.5424 − 104.8 = E (dBμV/m) – 95.2576

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

Example Plot



Horizontal Polarity



Vertical Polarity

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
4	5.054063	32.59	Pk	34.3	.6	-95.2	-23.25	-50.96	-25	-25.96	V
1	5.064844	32.11	Pk	34.3	.6	-95.2	-23.28	-51.47	-25	-26.47	H
5	7.606875	28.96	Pk	35.5	.4	-95.2	-19.16	-49.50	-25	-24.50	V
2	7.614844	30.32	Pk	35.5	.4	-95.2	-19.20	-48.18	-25	-23.18	H
3	10.150781	30.24	Pk	37.0	.6	-95.2	-16.92	-44.28	-25	-19.28	H
6	10.161563	28.84	Pk	37.0	.5	-95.2	-16.83	-45.69	-25	-20.69	V

Pk - Peak detector

10.1. FIELD STRENGTH OF SPURIOUS RADIATION, ANT1

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

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

RESULTS

10.1.1. 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 #:	4790592262
Date:	2/10/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	LTE7 QPSK 20MHz
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2510MHz										
5.027344	32.48	Pk	34.2	.7	-95.2	-23.49	-51.31	-25	-26.31	V
5.0325	32.34	Pk	34.2	.7	-95.2	-23.45	-51.41	-25	-26.41	H
7.494375	28.95	Pk	35.5	.3	-95.2	-19.43	-49.88	-25	-24.88	V
7.542188	30.96	Pk	35.5	.3	-95.2	-19.45	-47.89	-25	-22.89	H
10.335938	29.66	Pk	37.2	.6	-95.2	-16.41	-44.15	-25	-19.15	V
10.402500	32.54	Pk	37.2	.8	-95.2	-16.23	-40.89	-25	-15.89	H
Mid Channel, 2535MHz										
5.054063	32.59	Pk	34.3	.6	-95.2	-23.25	-50.96	-25	-25.96	V
5.064844	32.11	Pk	34.3	.6	-95.2	-23.28	-51.47	-25	-26.47	H
7.606875	28.96	Pk	35.5	.4	-95.2	-19.16	-49.5	-25	-24.50	V
7.614844	30.32	Pk	35.5	.4	-95.2	-19.2	-48.18	-25	-23.18	H
10.150781	30.24	Pk	37	.6	-95.2	-16.92	-44.28	-25	-19.28	H
10.161563	28.84	Pk	37	.5	-95.2	-16.83	-45.69	-25	-20.69	V
High Channel, 2560MHz										
5.098125	33.07	Pk	34.4	.8	-95.2	-23.31	-50.24	-25	-25.24	V
5.119219	32.08	Pk	34.3	.8	-95.2	-23.26	-51.28	-25	-26.28	H
7.663594	30.86	Pk	35.5	.3	-95.2	-18.95	-47.49	-25	-22.49	V
7.687969	27.19	Pk	35.6	.5	-95.2	-18.97	-50.88	-25	-25.88	H
10.222969	29.29	Pk	37.1	.9	-95.2	-16.74	-44.65	-25	-19.65	V
10.244531	29.31	Pk	37.1	.8	-95.2	-16.66	-44.65	-25	-19.65	H

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	2/13/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	n7 BPSK 40MHz
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2520MHz										
5.040938	33.91	Pk	34.3	.6	-95.2	-23.25	-49.64	-25	-24.64	H
5.040938	31.59	Pk	34.3	.6	-95.2	-23.25	-51.96	-25	-26.96	V
7.560000	31.31	Pk	35.6	.3	-95.2	-19.5	-47.49	-25	-22.49	H
7.560000	29.64	Pk	35.6	.3	-95.2	-19.5	-49.16	-25	-24.16	V
10.079063	32.15	Pk	37.0	.6	-95.2	-17.17	-42.62	-25	-17.62	H
10.079063	29.75	Pk	37.0	.6	-95.2	-17.17	-45.02	-25	-20.02	V
Mid Channel, 2535MHz										
5.070938	33.17	Pk	34.3	.7	-95.2	-23.2	-50.23	-25	-25.23	H
5.070938	32.17	Pk	34.3	.7	-95.2	-23.2	-51.23	-25	-26.23	V
7.605938	28.88	Pk	35.5	.4	-95.2	-19.17	-49.59	-25	-24.59	H
7.605938	29.55	Pk	35.5	.4	-95.2	-19.17	-48.92	-25	-23.92	V
10.14000	30.16	Pk	37.0	.7	-95.2	-16.95	-44.29	-25	-19.29	H
10.14000	31.09	Pk	37.0	.7	-95.2	-16.95	-43.36	-25	-18.36	V
High Channel, 2550MHz										
5.10000	34.27	Pk	34.4	.8	-95.2	-23.27	-49.00	-25	-24.00	H
5.10000	32.03	Pk	34.4	.8	-95.2	-23.27	-51.24	-25	-26.24	V
7.650469	32.8	Pk	35.6	.3	-95.2	-18.87	-45.37	-25	-20.37	H
7.650469	29.78	Pk	35.6	.3	-95.2	-18.87	-48.39	-25	-23.39	V
10.200000	28.88	Pk	37.0	.8	-95.2	-16.9	-45.42	-25	-20.42	H
10.200000	30.93	Pk	37.0	.8	-95.2	-16.9	-43.37	-25	-18.37	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 #:	4790592262
Date:	2/9/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	LTE12 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 704MHz										
1.405822	38.11	Pk	28.6	.9	-95.2	-29.36	-56.95	-13	-43.95	V
1.416578	37.21	Pk	28.5	.9	-95.2	-29.25	-57.84	-13	-44.84	H
2.107378	36.48	Pk	31.9	.5	-95.2	-28.15	-54.47	-13	-41.47	V
2.110800	36.54	Pk	31.9	.5	-95.2	-27.98	-54.24	-13	-41.24	H
2.797689	36.25	Pk	32.6	.5	-95.2	-26.66	-52.51	-13	-39.51	V
2.814800	36.48	Pk	32.6	.6	-95.2	-26.73	-52.25	-13	-39.25	H
Mid Channel, 707.5MHz										
1.418533	37	Pk	28.5	.9	-95.2	-29.17	-57.97	-13	-44.97	H
1.420489	36.48	Pk	28.5	.9	-95.2	-29.1	-58.42	-13	-45.42	V
2.109334	36.69	Pk	31.9	.5	-95.2	-28.02	-54.13	-13	-41.13	V
2.111289	36.88	Pk	31.9	.5	-95.2	-27.99	-53.91	-13	-40.91	H
2.830445	35.15	Pk	32.6	.7	-95.2	-26.78	-53.53	-13	-40.53	V
2.846578	36.02	Pk	32.6	.6	-95.2	-26.7	-52.68	-13	-39.68	H
High Channel, 711MHz										
1.484045	39.44	Pk	27.8	.9	-95.2	-29.03	-56.09	-13	-43.09	V
1.491378	37.11	Pk	27.8	.9	-95.2	-28.97	-58.36	-13	-45.36	H
2.190978	35.72	Pk	31.7	.6	-95.2	-27.74	-54.92	-13	-41.92	H
2.208578	37.19	Pk	31.9	.6	-95.2	-27.89	-53.40	-13	-40.40	V
2.874934	36.55	Pk	32.5	.5	-95.2	-26.79	-52.44	-13	-39.44	V
2.907689	34.8	Pk	32.7	.4	-95.2	-26.86	-54.16	-13	-41.16	H

BPSK 5G NR n12 (15.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/23/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	N12 BPSK 15MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 706.5MHz									
1.400050	57.13	Pk	28.4	-95.2	-46.14	-55.81	-13	-42.81	V
1.404100	55.49	Pk	28.2	-95.2	-46.10	-57.61	-13	-44.61	H
2.131300	55.16	Pk	31.6	-95.2	-46.32	-54.76	-13	-41.76	H
2.132650	55.16	Pk	31.6	-95.2	-46.35	-54.79	-13	-41.79	V
2.807650	55.01	Pk	32.4	-95.2	-45.90	-53.69	-13	-40.69	V
2.814400	55.22	Pk	32.5	-95.2	-45.99	-53.47	-13	-40.47	H
Mid Channel, 707.5MHz									
1.397350	55.60	Pk	28.4	-95.2	-46.09	-57.29	-13	-44.29	V
1.401850	57.03	Pk	28.3	-95.2	-46.12	-55.99	-13	-42.99	H
2.132650	55.89	Pk	31.6	-95.2	-46.35	-54.06	-13	-41.06	H
2.139850	55.77	Pk	31.6	-95.2	-46.23	-54.06	-13	-41.06	V
2.830150	54.89	Pk	32.5	-95.2	-46.09	-53.9	-13	-40.90	V
2.843200	55.25	Pk	32.7	-95.2	-46.00	-53.25	-13	-40.25	H
High Channel, 708.5MHz									
1.409950	55.23	Pk	28.0	-95.2	-46.06	-58.03	-13	-45.03	H
1.411300	55.52	Pk	28.0	-95.2	-46.09	-57.77	-13	-44.77	V
2.127250	55.87	Pk	31.6	-95.2	-46.45	-54.18	-13	-41.18	H
2.127250	55.63	Pk	31.6	-95.2	-46.45	-54.42	-13	-41.42	V
2.836000	54.88	Pk	32.5	-95.2	-45.98	-53.80	-13	-40.80	V
2.846350	54.61	Pk	32.7	-95.2	-46.16	-54.05	-13	-41.05	H

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 #:	4790592262
Date:	5/12/2023
Test Engineer:	32268
Configuration:	EUT only
Mode	LTE13 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 782MHz										
1.565200	39.46	Pk	27.8	.9	-95.2	-28.89	-55.93	-40	-15.93	V
1.569111	39.95	Pk	27.8	.9	-95.2	-29.05	-55.60	-40	-15.60	H
2.332267	38.22	Pk	31.7	.6	-95.2	-27.55	-52.23	-13	-39.23	V
2.341067	37.98	Pk	31.8	.5	-95.2	-27.47	-52.39	-13	-39.39	H
3.114489	36.18	Pk	32.6	.7	-95.2	-26.32	-52.04	-13	-39.04	V
3.120356	37.12	Pk	32.5	.6	-95.2	-26.47	-51.45	-13	-38.45	H

*** 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

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 #:	4790592262
Date:	6/1/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	LTE14 QPSK 10MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF(dB) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 793MHz									
1.592200	55.29	Pk	28.0	-95.2	-46.47	-58.38	-40	-18.38	H
1.592200	56.11	Pk	28.0	-95.2	-46.47	-57.56	-40	-17.56	V
2.391850	57.59	Pk	32.2	-95.2	-46.94	-52.35	-13	-39.35	H
2.397250	56.07	Pk	32.3	-95.2	-46.96	-53.79	-13	-40.79	V
3.169450	54.43	Pk	32.9	-95.2	-45.22	-53.09	-13	-40.09	H
3.175300	53.64	Pk	32.9	-95.2	-45.34	-54.00	-13	-41.00	V

BPSK 5G NR n14 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	2/17/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	N14 BPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	HPF 1.2GHz T1737 1-18GHz	HP EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.586711	41.93	Pk	28.2	.8	-95.2	-35.22	-59.49	-40	-19.49	H
1.587689	42.63	Pk	28.2	.8	-95.2	-35.19	-58.76	-40	-18.76	V
2.379200	41.36	Pk	32.2	.6	-95.2	-34.89	-55.93	-13	-42.93	H
2.379200	41.61	Pk	32.2	.6	-95.2	-34.89	-55.68	-13	-42.68	V
3.173156	41.12	Pk	33.2	.5	-95.2	-34.03	-54.41	-13	-41.41	H
3.173645	40.63	Pk	33.2	.5	-95.2	-34.01	-54.88	-13	-41.88	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 #:	4790592262
Date:	2/15/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE17 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
Low Channel, 709MHz										
1.419511	36.41	Pk	28.5	.9	-95.2	-29.12	-58.51	-13	-45.51	V
1.421956	35.98	Pk	28.5	.9	-95.2	-29.15	-58.97	-13	-45.97	H
2.112267	37.49	Pk	31.9	.5	-95.2	-28.06	-53.37	-13	-40.37	V
2.119600	35.94	Pk	31.8	.5	-95.2	-28.05	-55.01	-13	-42.01	H
2.828489	35.68	Pk	32.6	.7	-95.2	-26.74	-52.96	-13	-39.96	V
2.833378	36.04	Pk	32.6	.7	-95.2	-26.67	-52.53	-13	-39.53	H
Mid Channel, 710MHz										
1.406311	37.28	Pk	28.6	.9	-95.2	-29.37	-57.79	-13	-44.79	V
1.416578	36.37	Pk	28.5	.9	-95.2	-29.25	-58.68	-13	-45.68	H
2.118134	36.26	Pk	31.8	.5	-95.2	-27.97	-54.61	-13	-41.61	V
2.126445	36.07	Pk	31.7	.5	-95.2	-28.06	-54.99	-13	-41.99	H
2.849023	35.62	Pk	32.6	.6	-95.2	-26.67	-53.05	-13	-40.05	V
2.852445	35.54	Pk	32.6	.6	-95.2	-26.75	-53.21	-13	-40.21	H
High Channel, 711MHz										
1.421956	34.51	Pk	28.5	.9	-95.2	-29.15	-60.44	-13	-47.44	H
1.421956	36.59	Pk	28.5	.9	-95.2	-29.15	-58.36	-13	-45.36	V
2.11956	39.54	Pk	31.8	.5	-95.2	-28.04	-51.40	-13	-38.40	H
2.120089	34.72	Pk	31.8	.5	-95.2	-28.09	-56.27	-13	-43.27	V
2.843645	33.06	Pk	32.6	.7	-95.2	-26.82	-55.66	-13	-42.66	H
2.843645	34.01	Pk	32.6	.7	-95.2	-26.82	-54.71	-13	-41.71	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 #:	4790592262
Date:	2/13/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	LTE 25 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.715781	36.92	Pk	33.1	-95.2	-24.98	-50.16	-13	-37.16	H
3.719531	36.30	Pk	33.1	-95.2	-24.94	-50.74	-13	-37.74	V
5.571563	34.82	Pk	34.7	-95.2	-21.16	-46.84	-13	-33.84	H
5.580000	34.02	Pk	34.7	-95.2	-21.00	-47.48	-13	-34.48	V
7.465781	32.62	Pk	35.5	-95.2	-19.03	-46.11	-13	-33.11	V
7.485938	32.26	Pk	35.5	-95.2	-18.99	-46.43	-13	-33.43	H
Mid Channel, 1882.5MHz									
3.756094	37.13	Pk	32.9	-95.2	-24.91	-50.08	-13	-37.08	V
3.765000	37.00	Pk	32.9	-95.2	-24.96	-50.26	-13	-37.26	H
5.643750	33.65	Pk	34.6	-95.2	-20.73	-47.68	-13	-34.68	V
5.658984	34.15	Pk	34.7	-95.2	-20.70	-47.05	-13	-34.05	H
7.509844	32.66	Pk	35.5	-95.2	-18.85	-45.89	-13	-32.89	V
7.522500	33.47	Pk	35.5	-95.2	-18.60	-44.83	-13	-31.83	H
High Channel, 1905MHz									
3.825000	36.90	Pk	32.9	-95.2	-25.04	-50.44	-13	-37.44	H
3.825000	36.90	Pk	32.9	-95.2	-25.04	-50.44	-13	-37.44	H
5.724844	35.02	Pk	34.7	-95.2	-21.67	-47.15	-13	-34.15	H
5.724844	35.02	Pk	34.7	-95.2	-21.67	-47.15	-13	-34.15	H
7.590000	32.19	Pk	35.5	-95.2	-17.87	-45.38	-13	-32.38	H
7.612031	31.72	Pk	35.5	-95.2	-17.74	-45.72	-13	-32.72	H

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	2/17/2022
Test Engineer:	45258
Configuration:	EUT only
Mode	N25 BPSK 40MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.739219	34.62	Pk	33	-95.2	-24.65	-52.23	-13	-39.23	H
3.739219	35.04	Pk	33	-95.2	-24.65	-51.81	-13	-38.81	V
5.610469	31.30	Pk	34.7	-95.2	-20.74	-49.94	-13	-36.94	V
5.610938	34.39	Pk	34.7	-95.2	-20.75	-46.86	-13	-33.86	H
7.479844	30.53	Pk	35.5	-95.2	-19.02	-48.19	-13	-35.19	H
7.479844	30.11	Pk	35.5	-95.2	-19.02	-48.61	-13	-35.61	V
Mid Channel, 1882.5MHz									
3.764063	35.38	Pk	32.9	-95.2	-24.97	-51.89	-13	-38.89	H
3.764531	34.56	Pk	32.9	-95.2	-24.96	-52.70	-13	-39.70	V
5.648438	32.86	Pk	34.6	-95.2	-20.76	-48.50	-13	-35.50	H
5.648438	32.47	Pk	34.6	-95.2	-20.76	-48.89	-13	-35.89	V
7.530000	29.92	Pk	35.5	-95.2	-18.49	-48.27	-13	-35.27	H
7.530000	31.04	Pk	35.5	-95.2	-18.49	-47.15	-13	-34.15	V
High Channel, 1895MHz									
3.791250	35.22	Pk	33.1	-95.2	-25.06	-51.94	-13	-38.94	H
3.791250	33.69	Pk	33.1	-95.2	-25.06	-53.47	-13	-40.47	V
5.685000	32.77	Pk	34.7	-95.2	-21.19	-48.92	-13	-35.92	V
5.685938	32.18	Pk	34.7	-95.2	-21.19	-49.51	-13	-36.51	H
7.580625	29.85	Pk	35.5	-95.2	-18.00	-47.85	-13	-34.85	H
7.580625	31.69	Pk	35.5	-95.2	-18.00	-46.01	-13	-33.01	V

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

LIMITS

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

QPSK LTE BAND 26 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	2/15/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE 26 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										
1.629141	44.85	Pk	28.2	.7	-95.2	-28.89	-50.34	-13	-37.34	H
1.629245	35.53	Pk	28.2	.7	-95.2	-28.88	-59.65	-13	-46.65	V
2.443502	40.11	Pk	32.2	.5	-95.2	-27.65	-50.04	-13	-37.04	V
2.445266	38.05	Pk	32.2	.5	-95.2	-27.62	-52.07	-13	-39.07	H
3.276312	35.32	Pk	33.2	.8	-95.2	-25.93	-51.81	-13	-38.81	H
3.276800	34.03	Pk	33.2	.8	-95.2	-25.94	-53.11	-13	-40.11	V

BPSK 5G NR n26 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	2/16/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	N26 BPSK 10MHz
Chamber #:	01-RDE-B

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										
1.649585	46.51	Av	28.4	.7	-95.2	-35.06	-54.65	-13	-41.65	V
1.673245	43.72	Pk	28.6	.7	-95.2	-35.2	-57.38	-13	-44.38	H
2.497023	42.35	Pk	32.7	.5	-95.2	-34.88	-54.53	-13	-41.53	V
2.513156	42.45	Pk	32.7	.5	-95.2	-34.86	-54.41	-13	-41.41	H
3.337912	41.27	Pk	33.1	.5	-95.2	-33.85	-54.18	-13	-41.18	H
3.347200	42.43	Pk	33.1	.4	-95.2	-33.81	-53.08	-13	-40.08	V

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

LIMITS

FCC: §22.917(a)
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

QPSK LTE BAND 26 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	2/13/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	LTE 26 QPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 831.5MHz										
1.659067	37.45	Pk	28.5	.8	-95.2	-28.89	-57.34	-13	-44.34	H
1.662000	37.58	Pk	28.5	.8	-95.2	-28.93	-57.25	-13	-44.25	V
2.445689	36.5	Pk	32.1	.5	-95.2	-27.6	-53.70	-13	-40.70	V
2.454489	36.86	Pk	32.2	.5	-95.2	-27.58	-53.22	-13	-40.22	H
3.305156	35.01	Pk	32.7	.7	-95.2	-26.06	-52.85	-13	-39.85	H
3.310534	35.21	Pk	32.7	.7	-95.2	-26.23	-52.82	-13	-39.82	V
Mid Channel, 836.5MHz										
1.668845	38.34	Pk	28.5	.7	-95.2	-28.78	-56.44	-13	-43.44	V
1.675689	37.19	Pk	28.6	.7	-95.2	-28.64	-57.35	-13	-44.35	H
2.503378	36.79	Pk	32.2	.7	-95.2	-27.53	-53.04	-13	-40.04	V
2.515600	36.43	Pk	32.2	.7	-95.2	-27.43	-53.30	-13	-40.30	H
3.327156	35.41	Pk	32.6	.6	-95.2	-26.16	-52.75	-13	-39.75	V
3.334489	35.55	Pk	32.5	.5	-95.2	-26.17	-52.82	-13	-39.82	H
High Channel, 841.5MHz										
1.685956	37.55	Pk	28.7	.7	-95.2	-28.74	-56.99	-13	-43.99	H
1.685956	37.36	Pk	28.7	.7	-95.2	-28.74	-57.18	-13	-44.18	V
2.507289	36.46	Pk	32.2	.7	-95.2	-27.48	-53.320	-13	-40.32	V
2.513645	36.43	Pk	32.2	.7	-95.2	-27.39	-53.26	-13	-40.26	H
3.370667	34.63	Pk	32.4	.6	-95.2	-26.07	-53.64	-13	-40.64	V
3.371156	35.24	Pk	32.4	.6	-95.2	-26.06	-53.02	-13	-40.02	H

BPSK 5G NR n26 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	2/16/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	N26 BPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 834.0MHz										
1.649585	46.51	Av	28.4	.7	-95.2	-35.06	-54.65	-13	-41.65	V
1.673245	43.72	Pk	28.6	.7	-95.2	-35.2	-57.38	-13	-44.38	H
2.497023	42.35	Pk	32.7	.5	-95.2	-34.88	-54.53	-13	-41.53	V
2.513156	42.45	Pk	32.7	.5	-95.2	-34.86	-54.41	-13	-41.41	H
3.337912	41.27	Pk	33.1	.5	-95.2	-33.85	-54.18	-13	-41.18	H
3.347200	42.43	Pk	33.1	.4	-95.2	-33.81	-53.08	-13	-40.08	V
Mid Channel, 836.5MHz										
1.669333	42.5	Pk	28.6	.7	-95.2	-35.24	-58.64	-13	-45.64	V
1.677156	42.29	Pk	28.7	.7	-95.2	-35.14	-58.65	-13	-45.65	H
2.509734	42.62	Pk	32.7	.5	-95.2	-34.87	-54.25	-13	-41.25	V
2.519023	42.84	Pk	32.7	.5	-95.2	-34.99	-54.15	-13	-41.15	H
3.332045	41.45	Pk	33.1	.5	-95.2	-33.87	-54.02	-13	-41.02	V
3.341823	41.8	Pk	33.1	.4	-95.2	-33.8	-53.7	-13	-40.7	H
High Channel, 839.0Hz										
1.659312	40.69	Av	28.4	.7	-95.2	-35.09	-60.50	-13	-47.50	H
1.659347	47.4	Av	28.4	.7	-95.2	-35.09	-53.79	-13	-40.79	V
2.494578	41.95	Pk	32.7	.5	-95.2	-34.93	-54.98	-13	-41.98	V
2.508756	42.97	Pk	32.7	.5	-95.2	-34.93	-53.96	-13	-40.96	H
3.355023	41.55	Pk	33.1	.4	-95.2	-33.73	-53.88	-13	-40.88	V
3.361867	42.02	Pk	33.1	.5	-95.2	-33.69	-53.27	-13	-40.27	H

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 #:	4790592262
Date:	5/25/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE 30 QPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.610625	27.70	RMS	34.3	-95.2	-29.26	-62.46	-40	-22.46	H
4.611055	31.69	RMS	34.3	-95.2	-29.27	-58.48	-40	-18.48	V
6.916406	27.87	RMS	35.7	-95.2	-26.41	-58.04	-40	-18.04	H
6.916973	31.98	RMS	35.7	-95.2	-26.46	-53.98	-40	-13.98	V
9.253125	22.87	RMS	36.2	-95.2	-23.67	-59.80	-40	-19.80	V
9.263906	22.78	RMS	36.2	-95.2	-23.56	-59.78	-40	-19.78	H

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	4/6/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	N30 BPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.622813	27.03	RMS	34.3	-95.2	-29.06	-62.93	-40	-22.93	V
4.650938	26.26	RMS	34.3	-95.2	-29.04	-63.68	-40	-23.68	H
6.907031	24.61	RMS	35.7	-95.2	-26.60	-61.49	-40	-21.49	V
6.930000	24.61	RMS	35.7	-95.2	-26.42	-61.31	-40	-21.31	H
9.238594	22.87	RMS	36.1	-95.2	-23.83	-60.06	-40	-20.06	H
9.253594	22.78	RMS	36.2	-95.2	-23.61	-59.83	-40	-19.83	V

10.1.10. LTE BAND 41 AND 5G NR n41

LIMITS

FCC: §27.53 (m)
At least 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

QPSK LTE BAND 41 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	2/10/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	LTE 41 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2506MHz										
4.962188	34.71	Pk	34.1	.5	-95.2	-23.98	-49.87	-25	-24.87	V
5.003906	35.81	Pk	34.2	.8	-95.2	-23.63	-48.02	-25	-23.02	H
7.518750	31.74	Pk	35.4	.3	-95.2	-19.53	-47.29	-25	-22.29	V
7.531875	32.78	Pk	35.5	.3	-95.2	-19.38	-46	-25	-21.00	H
9.993750	30.25	Pk	36.8	.5	-95.2	-16.54	-44.19	-25	-19.19	V
10.00500	32.21	Pk	36.9	.6	-95.2	-16.71	-42.2	-25	-17.20	H
Mid Channel, 2593MHz										
5.168906	35.11	Pk	34.4	.7	-95.2	-23.16	-48.15	-25	-23.15	V
5.175469	34.3	Pk	34.5	.7	-95.2	-23.11	-48.81	-25	-23.81	H
7.782188	33.02	Pk	35.6	.3	-95.2	-18.97	-45.25	-25	-20.25	V
7.788750	32.75	Pk	35.6	.4	-95.2	-18.97	-45.42	-25	-20.42	H
10.359844	31.9	Pk	37.2	.8	-95.2	-16.31	-41.61	-25	-16.61	H
10.387969	31.17	Pk	37.2	.8	-95.2	-16.35	-42.38	-25	-17.38	V
High Channel, 2680MHz										
5.374688	33.68	Pk	34.7	.6	-95.2	-23.13	-49.35	-25	-24.35	V
5.387344	33.29	Pk	34.6	.7	-95.2	-23.27	-49.88	-25	-24.88	H
8.039531	31.59	Pk	35.8	.4	-95.2	-18.78	-46.19	-25	-21.19	V
8.078906	32.27	Pk	35.7	.3	-95.2	-18.71	-45.64	-25	-20.64	H
10.698281	31.46	Pk	37.5	.5	-95.2	-16.29	-42.03	-25	-17.03	V
10.711875	31.83	Pk	37.5	.5	-95.2	-16.27	-41.64	-25	-16.64	H

BPSK LTE BAND n41 (100.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	2/20/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	N41 BPSK 100MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Det	AF T348 (dB/m)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2546MHz									
5.062000	53.67	Pk	34.3	-95.2	-45.2	-52.43	-25	-27.43	V
5.065000	53.76	Pk	34.3	-95.2	-45.3	-52.44	-25	-27.44	H
7.626000	51.56	Pk	35.8	-95.2	-42.59	-50.43	-25	-25.43	V
7.635500	50.84	Pk	35.9	-95.2	-42.32	-50.78	-25	-25.78	H
10.134000	51.07	Pk	37.5	-95.2	-41.39	-48.02	-25	-23.02	V
10.182000	51.39	Pk	37.6	-95.2	-41.67	-47.88	-25	-22.88	H
Mid Channel, 2593MHz									
5.205000	53.46	Pk	34.5	-95.2	-45.15	-52.39	-25	-27.39	H
5.223500	53.06	Pk	34.6	-95.2	-45.23	-52.77	-25	-27.77	V
7.725500	50.58	Pk	35.9	-95.2	-42.25	-50.97	-25	-25.97	V
7.763000	51.79	Pk	36	-95.2	-42.35	-49.76	-25	-24.76	H
10.387000	50.61	Pk	37.7	-95.2	-40.3	-47.19	-25	-22.19	H
10.389000	51.25	Pk	37.7	-95.2	-40.33	-46.58	-25	-21.58	V
High Channel, 2640MHz									
5.281000	52.88	Pk	34.7	-95.2	-45.09	-52.71	-25	-27.71	H
5.287000	53.32	Pk	34.6	-95.2	-45.11	-52.39	-25	-27.39	V
7.927500	51.01	Pk	35.7	-95.2	-42.2	-50.69	-25	-25.69	H
7.968000	50.42	Pk	35.7	-95.2	-42.04	-51.12	-25	-26.12	V
10.569500	51.02	Pk	37.6	-95.2	-41.24	-47.82	-25	-22.82	H
10.579000	50.69	Pk	37.6	-95.2	-40.94	-47.85	-25	-22.85	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 #:	4790592262
Date:	2/16/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE 66 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.440156	32.58	Pk	32.6	-95.2	-25.6	-55.62	-13	-42.62	H
3.440156	33.98	Pk	32.6	-95.2	-25.6	-54.22	-13	-41.22	V
5.157656	33.15	Pk	34.4	-95.2	-22.85	-50.50	-13	-37.50	V
5.158594	34.89	Pk	34.4	-95.2	-22.86	-48.77	-13	-35.77	H
6.881250	32.69	Pk	35.5	-95.2	-19.96	-46.97	-13	-33.97	H
6.881250	32.4	Pk	35.5	-95.2	-19.96	-47.26	-13	-34.26	V
Mid Channel, 1745MHz									
3.488906	33.84	Pk	32.6	-95.2	-24.65	-53.41	-13	-40.41	H
3.488906	32.81	Pk	32.6	-95.2	-24.65	-54.44	-13	-41.44	V
5.260313	31.71	Pk	34.6	-95.2	-22.3	-51.19	-13	-38.19	H
5.261839	42.72	Pk	34.6	-95.2	-22.32	-40.20	-13	-27.20	V
6.980625	31.49	Pk	35.4	-95.2	-19.11	-47.42	-13	-34.42	V
6.981094	30.8	Pk	35.4	-95.2	-19.09	-48.09	-13	-35.09	H
High Channel, 1770MHz									
3.538594	32.72	Pk	32.7	-95.2	-24.07	-53.85	-13	-40.85	H
3.538594	33.71	Pk	32.7	-95.2	-24.07	-52.86	-13	-39.86	V
5.309063	31.69	Pk	34.6	-95.2	-21.77	-50.68	-13	-37.68	V
5.309531	32.04	Pk	34.6	-95.2	-21.77	-50.33	-13	-37.33	H
7.080469	31.74	Pk	35.5	-95.2	-18.96	-46.92	-13	-33.92	H
7.080938	31.05	Pk	35.5	-95.2	-18.94	-47.59	-13	-34.59	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	3/24/2022
Test Engineer:	27661
Configuration:	EUT only
Mode	N66 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.460313	34.14	Pk	32.5	-95.2	-25.45	-54.01	-13	-41.01	H
3.460781	34.9	Pk	32.5	-95.2	-25.43	-53.23	-13	-40.23	V
5.189531	33.61	Pk	34.5	-95.2	-23.08	-50.17	-13	-37.17	H
5.190469	33.07	Pk	34.5	-95.2	-23.09	-50.72	-13	-37.72	V
6.921094	31.85	Pk	35.5	-95.2	-19.69	-47.54	-13	-34.54	H
6.921563	32.01	Pk	35.5	-95.2	-19.68	-47.37	-13	-34.37	V
Mid Channel, 1745MHz									
3.489844	34.69	Pk	32.5	-95.2	-24.61	-52.62	-13	-39.62	H
3.490781	34.25	Pk	32.5	-95.2	-24.54	-52.99	-13	-39.99	V
5.233594	34.07	Pk	34.5	-95.2	-22.62	-49.25	-13	-36.25	H
5.234063	33.52	Pk	34.5	-95.2	-22.63	-49.81	-13	-36.81	V
6.979688	30.72	Pk	35.4	-95.2	-19.14	-48.22	-13	-35.22	H
6.980156	30.47	Pk	35.4	-95.2	-19.12	-48.45	-13	-35.45	V
High Channel, 1760MHz									
3.519844	34.95	Pk	32.5	-95.2	-24.31	-52.06	-13	-39.06	V
3.520781	33.52	Pk	32.5	-95.2	-24.27	-53.45	-13	-40.45	H
5.280469	33.51	Pk	34.6	-95.2	-22.21	-49.30	-13	-36.30	H
5.280469	32.54	Pk	34.6	-95.2	-22.21	-50.27	-13	-37.27	V
7.040625	30.12	Pk	35.4	-95.2	-18.72	-48.40	-13	-35.40	H
7.040625	30.93	Pk	35.4	-95.2	-18.72	-47.59	-13	-34.59	V

10.1.12. 5G NR n70

LIMITS

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

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

Project #:	4790592262
Date:	3/2/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	N70 BPSK 15MHz
Chamber #:	01-RDE-B

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									
3.419063	35.81	Pk	32.6	-95.2	-25.76	-52.55	-13	-39.55	H
3.422813	35.61	Pk	32.6	-95.2	-25.81	-52.80	-13	-39.80	V
5.095313	34.66	Pk	34.4	-95.2	-21.89	-48.03	-13	-35.03	V
5.095781	35.89	Pk	34.4	-95.2	-21.90	-46.81	-13	-33.81	H
6.820781	32.45	Pk	35.5	-95.2	-19.62	-46.87	-13	-33.87	V
6.827813	33.79	Pk	35.4	-95.2	-19.74	-45.75	-13	-32.75	H

10.1.13. LTE BAND 71 AND 5G NR n71

LIMITS

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

QPSK LTE BAND 71 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	2/15/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE 71 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	HPF 1.2GHz T1737 1-18GHz)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz										
1.346667	35.88	Pk	29.1	1.1	-95.2	-29.56	-58.68	-13	-45.68	H
1.346667	36.41	Pk	29.1	1.1	-95.2	-29.56	-58.15	-13	-45.15	V
2.006100	38.24	Pk	31.7	.5	-95.2	-28.33	-53.09	-13	-40.09	H
2.007565	38.73	Pk	31.7	.5	-95.2	-28.23	-52.50	-13	-39.50	V
2.690623	34.92	Pk	32.5	.5	-95.2	-27.29	-54.57	-13	-41.57	H
2.690623	35.88	Pk	32.5	.5	-95.2	-27.29	-53.61	-13	-40.61	V
Mid Channel, 680.5MHz										
1.360844	36.42	Pk	29.2	1	-95.2	-29.49	-58.07	-13	-45.07	H
1.361822	36.63	Pk	29.2	1	-95.2	-29.43	-57.80	-13	-44.80	V
2.028294	42.26	Pk	31.5	.5	-95.2	-28.27	-49.21	-13	-36.21	V
2.028430	40.26	Pk	31.5	.5	-95.2	-28.26	-51.20	-13	-38.20	H
2.721911	35.1	Pk	32.6	.5	-95.2	-27.14	-54.14	-13	-41.14	V
2.722400	35.41	Pk	32.5	.5	-95.2	-27.11	-53.9	-13	-40.9	H
High Channel, 688MHz										
1.366711	36.2	Pk	29.2	1	-95.2	-29.47	-58.27	-13	-45.27	V
1.364964	39.74	Pk	29.2	1	-95.2	-29.4	-54.66	-13	-41.66	H
2.049495	39.11	Pk	31.6	.5	-95.2	-28.19	-52.18	-13	-39.18	V
2.049699	38.45	Pk	31.6	.5	-95.2	-28.18	-52.83	-13	-39.83	H
2.752711	34.5	Pk	32.3	.5	-95.2	-26.84	-54.74	-13	-41.74	H
2.752711	35.22	Pk	32.3	.5	-95.2	-26.84	-54.02	-13	-41.02	V

BPSK 5G NR n71 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/23/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	N71 BPSK 20MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz									
1.357300	57.91	Pk	28.6	-95.2	-46.16	-54.85	-13	-41.85	H
1.360900	55.36	Pk	28.8	-95.2	-46.14	-57.18	-13	-44.18	V
1.994050	56.27	Pk	31.7	-95.2	-46.44	-53.67	-13	-40.67	V
2.000800	55.83	Pk	31.6	-95.2	-46.28	-54.05	-13	-41.05	H
2.711350	55.35	Pk	32.2	-95.2	-46.49	-54.14	-13	-41.14	H
2.719450	55.30	Pk	32.2	-95.2	-46.49	-54.19	-13	-41.19	V
Mid Channel, 680.5MHz									
1.355500	55.00	Pk	28.9	-95.2	-47.33	-58.63	-13	-45.63	V
1.359100	56.14	Pk	28.9	-95.2	-47.36	-57.52	-13	-44.52	H
2.020600	55.56	Pk	31.0	-95.2	-47.63	-56.27	-13	-43.27	V
2.023300	55.90	Pk	31.0	-95.2	-47.62	-55.92	-13	-42.92	H
2.698300	53.44	Pk	32.5	-95.2	-46.61	-55.87	-13	-42.87	H
2.705950	53.76	Pk	32.5	-95.2	-46.53	-55.47	-13	-42.47	V
High Channel, 688MHz									
1.362700	55.91	Pk	28.8	-95.2	-46.19	-56.68	-13	-43.68	V
1.365400	54.91	Pk	28.7	-95.2	-46.2	-57.79	-13	-44.79	H
2.076850	56.05	Pk	32.2	-95.2	-46.67	-53.62	-13	-40.62	V
2.082250	55.69	Pk	32.3	-95.2	-46.74	-53.95	-13	-40.95	H
2.764000	55.43	Pk	32.5	-95.2	-46.23	-53.50	-13	-40.50	H
2.768500	55.31	Pk	32.5	-95.2	-46.31	-53.70	-13	-40.70	V

10.2. FIELD STRENGTH OF SPURIOUS RADIATION, ANT2

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

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

RESULTS

10.2.1. LTE BAND 7 AND 5G NR n7

LIMITS

FCC: §27.53 (m)
At least 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

QPSK LTE BAND 7 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	4/17/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE7 QPSK 20MHz
Chamber #:	04-RDE-T

Frequency (GHz)	Meter Reading (dBuV)	AF T348 (dB/m)	BRF 2495-2690MHz T1790 1-18GHz)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2510MHz									
5.027500	53.52	Pk	34.0	-95.2	-45.89	-53.57	-25	-28.57	H
7.517500	51.26	Pk	35.7	-95.2	-42.96	-51.20	-25	-26.20	H
5.010500	53.75	Pk	34.0	-95.2	-45.96	-53.41	-25	-28.41	V
7.503000	51.28	Pk	35.7	-95.2	-43.04	-51.26	-25	-26.26	V
10.049000	51.59	Pk	37.1	-95.2	-41.95	-48.46	-25	-23.46	H
10.057500	51.12	Pk	37.2	-95.2	-42.03	-48.91	-25	-23.91	V
Mid Channel, 2535MHz									
5.070500	53.37	Pk	34.1	-95.2	-45.65	-53.38	-25	-28.38	H
7.608000	52.51	Pk	35.8	-95.2	-42.76	-49.65	-25	-24.65	H
5.052500	53.35	Pk	34.1	-95.2	-45.7	-53.45	-25	-28.45	V
7.644500	51.13	Pk	35.8	-95.2	-42.71	-50.98	-25	-25.98	V
10.118500	51.76	Pk	37.2	-95.2	-42.07	-48.31	-25	-23.31	V
10.141500	52.36	Pk	37.2	-95.2	-42.07	-47.71	-25	-22.71	H
High Channel, 2560MHz									
5.123500	52.65	Pk	34.2	-95.2	-45.41	-53.76	-25	-28.76	H
7.684000	51.26	Pk	35.8	-95.2	-42.63	-50.77	-25	-25.77	H
5.094500	53.71	Pk	34.1	-95.2	-45.48	-52.87	-25	-27.87	V
7.712500	51.10	Pk	35.8	-95.2	-42.64	-50.94	-25	-25.94	V
10.186000	51.81	Pk	37.2	-95.2	-41.79	-47.98	-25	-22.98	V
10.255000	52.23	Pk	37.3	-95.2	-41.88	-47.55	-25	-22.55	H

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/24/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	n7 BPSK 40MHz
Chamber #:	04-RDE-O

Frequency (MHz)	Meter Reading (dBuV)	Det	80404_ ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2520MHz									
5.025500	54.65	Pk	34.2	-95.2	-45.54	-51.89	-25	-26.89	H
5.027000	54.17	Pk	34.2	-95.2	-45.59	-52.42	-25	-27.42	V
7.555000	51.53	Pk	36.0	-95.2	-42.67	-50.34	-25	-25.34	V
7.571500	51.31	Pk	35.9	-95.2	-42.55	-50.54	-25	-25.54	H
10.107500	50.46	Pk	37.5	-95.2	-40.87	-48.11	-25	-23.11	H
10.140000	51.51	Pk	37.5	-95.2	-41.56	-47.75	-25	-22.75	V
Mid Channel, 2535MHz									
5.046000	53.77	Pk	34.4	-95.2	-45.31	-52.34	-25	-27.34	V
5.064500	54.12	Pk	34.3	-95.2	-45.29	-52.07	-25	-27.07	H
7.598000	50.71	Pk	35.9	-95.2	-42.66	-51.25	-25	-26.25	V
7.606500	51.36	Pk	35.9	-95.2	-42.66	-50.60	-25	-25.60	H
10.115000	50.69	Pk	37.5	-95.2	-40.90	-47.91	-25	-22.91	H
10.146500	51.33	Pk	37.6	-95.2	-41.65	-47.92	-25	-22.92	V
High Channel, 2550MHz									
5.099000	53.4	Pk	34.3	-95.2	-44.81	-52.31	-25	-27.31	H
5.101500	53.91	Pk	34.3	-95.2	-44.89	-51.88	-25	-26.88	V
7.664500	50.98	Pk	36	-95.2	-42.35	-50.57	-25	-25.57	H
7.674500	50.94	Pk	35.9	-95.2	-42.35	-50.71	-25	-25.71	V
10.192500	51.61	Pk	37.5	-95.2	-41.67	-47.76	-25	-22.76	V
10.199000	51.66	Pk	37.5	-95.2	-41.88	-47.92	-25	-22.92	H

10.2.2. LTE BAND 12 AND 5G NR n12

LIMITS

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

QPSK LTE BAND 12 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/18/2022
Test Engineer:	19118
Configuration:	EUT only
Mode	LTE12 QPSK 10MHz
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 704MHz									
1.648800	57.84	Pk	28.7	-95.2	-47.62	-56.28	-13	-43.28	H
1.648800	57.66	Pk	28.7	-95.2	-47.62	-56.46	-13	-43.46	V
2.473728	63.34	Pk	32.1	-95.2	-47.86	-47.62	-13	-34.62	V
2.473787	62.64	Pk	32.1	-95.2	-47.85	-48.31	-13	-35.31	H
3.311560	55.39	Pk	32.9	-95.2	-46.35	-53.26	-13	-40.26	H
3.315080	54.39	Pk	32.8	-95.2	-46.39	-54.40	-13	-41.40	V
Mid Channel, 707.5MHz									
1.664063	63.35	Pk	29	-95.2	-47.70	-50.55	-13	-37.55	H
1.664200	57.49	Pk	29	-95.2	-47.70	-56.41	-13	-43.41	V
2.517800	56.04	Pk	32.3	-95.2	-47.85	-54.71	-13	-41.71	H
2.520880	56.06	Pk	32.3	-95.2	-47.78	-54.62	-13	-41.62	V
3.347200	54.10	Pk	32.8	-95.2	-46.31	-54.61	-13	-41.61	H
3.357320	54.28	Pk	32.8	-95.2	-46.09	-54.21	-13	-41.21	V
High Channel, 711MHz									
1.678720	56.6	Pk	29.2	-95.2	-47.71	-57.11	-13	-44.11	H
2.518696	62.28	Pk	32.3	-95.2	-47.84	-48.46	-13	-35.46	V
2.518680	58.02	Pk	32.3	-95.2	-47.84	-52.72	-13	-39.72	H
2.518680	59.46	Pk	32.3	-95.2	-47.84	-51.28	-13	-38.28	V
3.365240	54.35	Pk	32.8	-95.2	-46.18	-54.23	-13	-41.23	V
3.372720	53.84	Pk	32.8	-95.2	-46.17	-54.73	-13	-41.73	H

BPSK 5G NR n12 (15.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	3/20/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	N12 BPSK 15MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 706.5MHz										
1.423911	37.21	Pk	28.5	.9	-95.2	-29.17	-57.76	-13	-44.76	V
1.430756	37.72	Pk	28.4	.9	-95.2	-29.07	-57.25	-13	-44.25	H
2.102489	36.10	Pk	31.8	.5	-95.2	-28.12	-54.92	-13	-41.92	V
2.107867	37.43	Pk	31.9	.5	-95.2	-28.14	-53.51	-13	-40.51	H
2.825556	36.02	Pk	32.6	.7	-95.2	-26.62	-52.50	-13	-39.50	H
2.840711	35.18	Pk	32.6	.7	-95.2	-26.65	-53.37	-13	-40.37	V
Mid Channel, 707.5MHz										
1.403867	38.94	Pk	28.7	.9	-95.2	-29.41	-56.07	-13	-43.07	V
1.406800	38.04	Pk	28.6	.9	-95.2	-29.38	-57.04	-13	-44.04	H
2.102489	38.34	Pk	31.8	.5	-95.2	-28.12	-52.68	-13	-39.68	V
2.112267	36.79	Pk	31.9	.5	-95.2	-28.06	-54.07	-13	-41.07	H
2.850978	35.97	Pk	32.6	.6	-95.2	-26.82	-52.85	-13	-39.85	H
2.855867	35.58	Pk	32.6	.6	-95.2	-26.64	-53.06	-13	-40.06	V
High Channel, 708.5MHz										
1.401422	38.09	Pk	28.7	.9	-95.2	-29.44	-56.95	-13	-43.95	H
1.401422	38.09	Pk	28.7	.9	-95.2	-29.44	-56.95	-13	-43.95	H
2.126445	37.28	Pk	31.7	.5	-95.2	-28.06	-53.78	-13	-40.78	H
2.126445	37.28	Pk	31.7	.5	-95.2	-28.06	-53.78	-13	-40.78	H
2.831423	35.14	Pk	32.6	.7	-95.2	-26.73	-53.49	-13	-40.49	H
2.844134	36.42	Pk	32.6	.7	-95.2	-26.81	-52.29	-13	-39.29	H

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 #:	4790592262
Date:	2/14/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE13 QPSK 10MHz
Chamber #:	04-RDE-T

Frequency (GHz)	Meter Reading (dBuV)	Det	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 782MHz									
1.568720	55.87	Pk	27.9	-95.2	-46.28	-57.71	-40	-17.71	H
2.335640	56.59	Pk	31.9	-95.2	-46.88	-53.59	-13	-40.59	H
1.563440	56.16	Pk	27.8	-95.2	-46.26	-57.50	-40	-17.50	V
2.347960	57.55	Pk	31.9	-95.2	-46.78	-52.53	-13	-39.53	V
3.099480	54.44	Pk	32.9	-95.2	-45.30	-53.16	-13	-40.16	V
3.125000	53.84	Pk	32.9	-95.2	-45.19	-53.65	-13	-40.65	H

*** 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 #:	4790592262
Date:	5/16/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE14 QPSK 10MHz
Chamber #:	04-RDE-T

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ ACF(dB) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 793MHz									
1.577960	55.72	Pk	27.9	-95.2	-46.35	-57.93	-40	-17.93	H
2.386680	56.12	Pk	32.1	-95.2	-46.51	-53.49	-13	-40.49	H
1.568720	56.93	Pk	27.9	-95.2	-46.28	-56.65	-40	-16.65	V
2.386680	55.93	Pk	32.1	-95.2	-46.51	-53.68	-13	-40.68	V
3.172960	54.23	Pk	32.8	-95.2	-44.86	-53.03	-13	-40.03	H
3.178240	53.38	Pk	32.8	-95.2	-44.94	-53.96	-13	-40.96	V

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

BPSK 5G NR n14 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/24/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	N14 BPSK 10MHz
Chamber #:	04-RDE-O

Frequency (MHz)	Meter Reading (dBuV)	Det	80404_ ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 793MHz									
1.580050	55.66	Pk	27.8	-95.2	-46.4	-58.14	-40	-18.14	H
1.581400	55.15	Pk	27.8	-95.2	-46.4	-58.65	-40	-18.65	V
2.365300	54.54	Pk	32.2	-95.2	-46.71	-55.17	-13	-42.17	V
2.369350	54.55	Pk	32.2	-95.2	-46.77	-55.22	-13	-42.22	H
3.174850	53.13	Pk	32.9	-95.2	-45.38	-54.55	-13	-41.55	V
3.181150	53.57	Pk	32.9	-95.2	-45.39	-54.12	-13	-41.12	H

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

10.2.5. LTE BAND 17

LIMITS

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

QPSK LTE BAND 17 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	6/1/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE17 QPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 709MHz										
1.415600	41.69	Pk	28.2	.9	-95.2	-35.22	-59.63	-13	-46.63	V
1.417556	41.13	Pk	28.1	.9	-95.2	-35.21	-60.28	-13	-47.28	H
2.113245	40.82	Pk	31.5	.6	-95.2	-35.01	-57.29	-13	-44.29	V
2.127911	42.09	Pk	31.6	.5	-95.2	-35.11	-56.12	-13	-43.12	H
2.820667	41.31	Pk	32.3	.5	-95.2	-34.59	-55.68	-13	-42.68	V
2.836311	41.16	Pk	32.3	.5	-95.2	-34.52	-55.76	-13	-42.76	H
Mid Channel, 710MHz										
1.417556	40.99	Pk	28.1	.9	-95.2	-35.21	-60.42	-13	-47.42	V
1.419511	41.98	Pk	28.1	.9	-95.2	-35.25	-59.47	-13	-46.47	H
2.130845	42.32	Pk	31.6	.5	-95.2	-35.12	-55.90	-13	-42.90	H
2.133778	41.81	Pk	31.6	.5	-95.2	-35.02	-56.31	-13	-43.31	V
2.828489	40.98	Pk	32.3	.5	-95.2	-34.59	-56.01	-13	-43.01	V
2.840223	42.61	Pk	32.3	.6	-95.2	-34.47	-54.16	-13	-41.16	H
High Channel, 711MHz										
1.422933	41.91	Pk	28.1	.9	-95.2	-35.20	-59.49	-13	-46.49	H
1.424889	40.83	Pk	28.1	.9	-95.2	-35.23	-60.60	-13	-47.60	V
2.127911	40.32	Pk	31.6	.5	-95.2	-35.11	-57.89	-13	-44.89	V
2.133778	43.17	Pk	31.6	.5	-95.2	-35.02	-54.95	-13	-41.95	H
2.840223	41.04	Pk	32.3	.6	-95.2	-34.47	-55.73	-13	-42.73	V
2.844134	40.89	Pk	32.3	.6	-95.2	-34.56	-55.97	-13	-42.97	H

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 #:	4790592262
Date:	5/17/2023
Test Engineer:	19118
Configuration:	EUT only
Mode	LTE 25 QPSK 20MHz
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.712000	53.79	Pk	32.8	-95.2	-45.79	-54.40	-13	-41.40	V
3.744000	54.86	Pk	32.7	-95.2	-46.01	-53.65	-13	-40.65	H
5.580000	54.37	Pk	34.7	-95.2	-45.90	-52.03	-13	-39.03	V
5.590000	54.37	Pk	34.6	-95.2	-45.88	-52.11	-13	-39.11	H
7.457500	53.62	Pk	35.4	-95.2	-44.60	-50.78	-13	-37.78	V
7.464500	53.50	Pk	35.5	-95.2	-44.52	-50.72	-13	-37.72	H
Mid Channel, 1882.5MHz									
3.785000	56.59	Pk	32.8	-95.2	-46.17	-51.98	-13	-38.98	H
3.790500	55.09	Pk	32.8	-95.2	-46.12	-53.43	-13	-40.43	V
5.642500	54.67	Pk	34.7	-95.2	-45.86	-51.69	-13	-38.69	H
5.660000	53.98	Pk	34.7	-95.2	-45.78	-52.30	-13	-39.30	V
7.334500	53.42	Pk	35.5	-95.2	-44.50	-50.78	-13	-37.78	H
7.547000	52.56	Pk	35.5	-95.2	-44.00	-51.14	-13	-38.14	V
High Channel, 1905MHz									
3.7845	55.01	Pk	32.8	-95.2	-46.19	-53.58	-13	-40.58	V
3.818	56.17	Pk	32.8	-95.2	-46.37	-52.6	-13	-39.6	H
5.7155	54.34	Pk	34.8	-95.2	-45.76	-51.82	-13	-38.82	V
5.7355	53.9	Pk	34.9	-95.2	-45.62	-52.02	-13	-39.02	H
7.599	53.61	Pk	35.5	-95.2	-44.18	-50.27	-13	-37.27	V
7.6135	52.54	Pk	35.5	-95.2	-44.23	-51.39	-13	-38.39	H

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	3/8/2023
Test Engineer:	26771
Configuration:	EUT only
Mode	N25 BPSK 40MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.701719	39.37	Pk	33.0	-95.2	-25.06	-47.89	-13	-34.89	V
3.746250	36.67	Pk	32.9	-95.2	-24.70	-50.33	-13	-37.33	H
5.642344	33.92	Pk	34.6	-95.2	-20.73	-47.41	-13	-34.41	V
5.656875	34.76	Pk	34.6	-95.2	-20.70	-46.54	-13	-33.54	H
7.485469	33.17	Pk	35.5	-95.2	-18.99	-45.52	-13	-32.52	H
7.492500	33.39	Pk	35.5	-95.2	-18.94	-45.25	-13	-32.25	V
Mid Channel, 1882.5MHz									
3.722344	36.95	Pk	33.0	-95.2	-24.92	-50.17	-13	-37.17	V
3.727031	38.58	Pk	33.1	-95.2	-24.9	-48.42	-13	-35.42	H
5.590313	36.86	Pk	34.6	-95.2	-20.81	-44.55	-13	-31.55	V
5.668594	34.54	Pk	34.7	-95.2	-20.79	-46.75	-13	-33.75	H
7.559063	31.89	Pk	35.6	-95.2	-18.27	-45.98	-13	-32.98	H
7.564219	32.06	Pk	35.5	-95.2	-18.14	-45.78	-13	-32.78	V
High Channel, 1895MHz									
3.788906	36.99	Pk	33.0	-95.2	-24.98	-50.19	-13	-37.19	V
3.798281	36.39	Pk	33.1	-95.2	-25.04	-50.75	-13	-37.75	H
5.589844	37.96	Pk	34.7	-95.2	-20.83	-43.37	-13	-30.37	V
5.692500	33.77	Pk	34.7	-95.2	-21.27	-48.00	-13	-35.00	H
7.601719	32.04	Pk	35.5	-95.2	-17.69	-45.35	-13	-32.35	H
7.611094	31.59	Pk	35.5	-95.2	-17.75	-45.86	-13	-32.86	V

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

LIMITS

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

QPSK LTE BAND 26 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	2/14/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE 26 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										
1.629697	40.06	Pk	28.3	.7	-95.2	-28.84	-54.98	-13	-41.98	V
1.628756	41.37	Pk	28.2	.7	-95.2	-28.91	-53.84	-13	-40.84	H
2.443245	35.99	Pk	32.2	.5	-95.2	-27.66	-54.17	-13	-41.17	V
2.443766	48.49	Pk	32.1	.5	-95.2	-27.64	-41.75	-13	-28.75	H
3.276800	35.68	Pk	33.2	.8	-95.2	-25.94	-51.46	-13	-38.46	H
3.276800	33.99	Pk	33.2	.8	-95.2	-25.94	-53.15	-13	-40.15	V

BPSK 5G NR n26 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	3/9/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	N26 BPSK 10MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	EIRP CF	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 819MHz										
1.652222	37.32	Pk	28.4	.8	-95.2	-28.90	-57.58	-13	-44.58	H
1.654667	37.28	Pk	28.4	.8	-95.2	-28.99	-57.71	-13	-44.71	V
2.450975	47.44	Pk	32.1	.5	-95.2	-27.65	-42.81	-13	-29.81	V
2.462800	37.06	Pk	32.3	.5	-95.2	-27.58	-52.92	-13	-39.92	H
3.291956	35.01	Pk	32.9	.8	-95.2	-25.99	-52.48	-13	-39.48	V
3.301734	35.94	Pk	32.8	.8	-95.2	-26.21	-51.87	-13	-38.87	H

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

LIMITS

FCC: §22.917(a)
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

QPSK LTE BAND 26 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/17/2023
Test Engineer:	19118
Configuration:	EUT only
Mode	LTE 26 QPSK 10MHz
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 831.5MHz									
1.664200	56.74	Pk	29.0	-95.2	-47.7	-57.16	-13	-44.16	V
1.672560	56.45	Pk	29.1	-95.2	-47.69	-57.34	-13	-44.34	H
2.484800	56.35	Pk	32.1	-95.2	-47.76	-54.51	-13	-41.51	H
2.509880	56.82	Pk	32.2	-95.2	-47.82	-54.00	-13	-41.00	V
3.329600	54.84	Pk	32.8	-95.2	-46.39	-53.95	-13	-40.95	V
3.405280	54.19	Pk	32.8	-95.2	-46.52	-54.73	-13	-41.73	H
Mid Channel, 836.5MHz									
1.666840	56.31	Pk	29.0	-95.2	-47.72	-57.61	-13	-44.61	V
1.675200	56.45	Pk	29.2	-95.2	-47.78	-57.33	-13	-44.33	H
2.50372	55.62	Pk	32.2	-95.2	-47.82	-55.20	-13	-42.20	V
2.520440	56.70	Pk	32.3	-95.2	-47.80	-54.00	-13	-41.00	H
3.341920	54.14	Pk	32.8	-95.2	-46.20	-54.46	-13	-41.46	H
3.350280	54.73	Pk	32.8	-95.2	-46.20	-53.87	-13	-40.87	V
High Channel, 841.5MHz									
1.672120	56.05	Pk	29.1	-95.2	-47.67	-57.72	-13	-44.72	V
1.695880	55.79	Pk	29.5	-95.2	-47.83	-57.74	-13	-44.74	H
2.520951	58.34	Pk	32.3	-95.2	-47.77	-52.33	-13	-39.33	V
2.528360	56.66	Pk	32.3	-95.2	-47.78	-54.02	-13	-41.02	H
3.351160	54.26	Pk	32.8	-95.2	-46.25	-54.39	-13	-41.39	V
3.363480	54.43	Pk	32.8	-95.2	-46.19	-54.16	-13	-41.16	H

BPSK 5G NR n26 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/24/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	N26 BPSK 20MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 834.0MHz									
1.661050	55.54	Pk	29.0	-95.2	-46.52	-57.18	-13	-44.18	V
1.665000	55.86	Pk	28.9	-95.2	-46.48	-56.92	-13	-43.92	H
2.503900	54.60	Pk	32.2	-95.2	-46.03	-54.43	-13	-41.43	V
2.509300	55.04	Pk	32.3	-95.2	-46.14	-54.00	-13	-41.00	H
3.326050	54.16	Pk	33.0	-95.2	-45.00	-53.04	-13	-40.04	V
3.337300	54.09	Pk	32.8	-95.2	-44.83	-53.14	-13	-40.14	H
Mid Channel, 836.5MHz									
1.665550	56.61	Pk	28.9	-95.2	-46.46	-56.15	-13	-43.15	V
1.666900	54.75	Pk	28.9	-95.2	-46.54	-58.09	-13	-45.09	H
2.521450	55.49	Pk	32.2	-95.2	-46.26	-53.77	-13	-40.77	H
2.523700	53.59	Pk	32.2	-95.2	-46.41	-55.82	-13	-42.82	V
3.338200	53.11	Pk	32.9	-95.2	-44.82	-54.01	-13	-41.01	H
3.348100	53.51	Pk	32.8	-95.2	-44.98	-53.87	-13	-40.87	V
High Channel, 839MHz									
1.673650	55.04	Pk	28.9	-95.2	-46.52	-57.78	-13	-44.78	H
1.679050	55.55	Pk	28.9	-95.2	-46.48	-57.23	-13	-44.23	V
2.503450	55.13	Pk	32.2	-95.2	-46.05	-53.92	-13	-40.92	H
2.503450	55.47	Pk	32.2	-95.2	-46.05	-53.58	-13	-40.58	V
3.346750	53.23	Pk	32.8	-95.2	-44.88	-54.05	-13	-41.05	V
3.348550	53.76	Pk	32.8	-95.2	-45.00	-53.64	-13	-40.64	H

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 #:	4790592262
Date:	5/25/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE 30 QPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.604063	27.65	RMS	34.3	-95.2	-29.34	-62.59	-40	-22.59	V
4.627031	27.10	RMS	34.3	-95.2	-29.02	-62.82	-40	-22.82	H
6.894375	25.06	RMS	35.7	-95.2	-26.66	-61.10	-40	-21.10	V
6.932813	24.88	RMS	35.7	-95.2	-26.43	-61.05	-40	-21.05	H
9.246094	22.93	RMS	36.2	-95.2	-23.71	-59.78	-40	-19.78	H
9.250781	22.95	RMS	36.2	-95.2	-23.61	-59.66	-40	-19.66	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/30/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	N30 BPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.609219	27.36	RMS	34.3	-95.2	-29.33	-62.87	-40	-22.87	V
4.621875	27.03	RMS	34.3	-95.2	-29.01	-62.88	-40	-22.88	H
6.549844	25.11	RMS	35.6	-95.2	-27.02	-61.51	-40	-21.51	V
6.944531	24.76	RMS	35.7	-95.2	-26.41	-61.15	-40	-21.15	H
9.239531	22.9	RMS	36.1	-95.2	-23.81	-60.01	-40	-20.01	H
9.249844	22.87	RMS	36.2	-95.2	-23.58	-59.71	-40	-19.71	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 #:	4790592262
Date:	5/19/2023
Test Engineer:	19118
Configuration:	EUT only
Mode	LTE 41 QPSK 20MHz
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2506MHz									
4.992500	54.64	Pk	34.3	-95.2	-46.59	-52.85	-25	-27.85	H
5.024000	54.55	Pk	34.3	-95.2	-46.61	-52.96	-25	-27.96	V
7.494000	53.43	Pk	35.5	-95.2	-44.83	-51.10	-25	-26.10	H
7.531000	52.95	Pk	35.5	-95.2	-44.44	-51.19	-25	-26.19	V
10.013000	53.60	Pk	37.1	-95.2	-44.04	-48.54	-25	-23.54	H
10.035500	53.72	Pk	37.1	-95.2	-44.33	-48.71	-25	-23.71	V
Mid Channel, 2593MHz									
5.161000	53.49	Pk	34.2	-95.2	-46.36	-53.87	-25	-28.87	V
5.169000	54.15	Pk	34.2	-95.2	-46.35	-53.20	-25	-28.20	H
7.758000	52.94	Pk	35.6	-95.2	-44.70	-51.36	-25	-26.36	V
7.763500	53.18	Pk	35.6	-95.2	-44.68	-51.10	-25	-26.10	H
10.36900	54.46	Pk	37.4	-95.2	-44.68	-48.02	-25	-23.02	V
10.370500	56.13	Pk	37.4	-95.2	-44.69	-46.36	-25	-21.36	H
High Channel, 2680MHz									
5.364000	54.20	Pk	34.2	-95.2	-46.26	-53.06	-25	-28.06	V
5.366000	54.52	Pk	34.2	-95.2	-46.32	-52.80	-25	-27.80	H
8.021000	54.24	Pk	35.7	-95.2	-44.56	-49.82	-25	-24.82	V
8.041000	53.64	Pk	35.7	-95.2	-44.26	-50.12	-25	-25.12	H
10.710500	55.49	Pk	37.7	-95.2	-44.92	-46.93	-25	-21.93	H
10.725500	54.49	Pk	37.7	-95.2	-44.87	-47.88	-25	-22.88	V

BPSK LTE BAND n41 (100.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/25/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	N41 BPSK 100MHz
Chamber #:	04-RDE-O

Frequency (MHz)	Meter Reading (dBuV)	Det	80404_ ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2546MHz									
5.091500	53.67	Pk	34.2	-95.2	-44.97	-52.30	-25	-27.30	H
5.097500	53.84	Pk	34.2	-95.2	-44.91	-52.07	-25	-27.07	V
7.605000	51.61	Pk	35.9	-95.2	-42.67	-50.36	-25	-25.36	V
7.626000	51.77	Pk	35.8	-95.2	-42.59	-50.22	-25	-25.22	H
10.189000	52.75	Pk	37.5	-95.2	-41.67	-46.62	-25	-21.62	H
10.192000	51.23	Pk	37.5	-95.2	-41.66	-48.13	-25	-23.13	V
Mid Channel, 2593MHz									
5.162000	53.44	Pk	34.4	-95.2	-44.93	-52.29	-25	-27.29	H
5.170000	53.56	Pk	34.4	-95.2	-45.06	-52.30	-25	-27.30	V
7.785000	50.38	Pk	35.9	-95.2	-42.27	-51.19	-25	-26.19	V
7.795000	51.35	Pk	36.0	-95.2	-42.21	-50.06	-25	-25.06	H
10.368000	50.80	Pk	37.5	-95.2	-40.24	-47.14	-25	-22.14	V
10.392000	51.49	Pk	37.7	-95.2	-40.35	-46.36	-25	-21.36	H
High Channel, 2640MHz									
5.273500	53.09	Pk	34.6	-95.2	-45.11	-52.62	-25	-27.62	V
5.287500	54.81	Pk	34.6	-95.2	-45.10	-50.89	-25	-25.89	H
7.910000	50.38	Pk	36.0	-95.2	-42.13	-50.95	-25	-25.95	V
7.944500	50.93	Pk	35.9	-95.2	-42.09	-50.46	-25	-25.46	H
10.550500	50.98	Pk	37.7	-95.2	-41.37	-47.89	-25	-22.89	V
10.575500	51.27	Pk	37.6	-95.2	-41.05	-47.38	-25	-22.38	H

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 #:	4790592262
Date:	2/16/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE 66 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.435938	36.78	Pk	32.5	-95.2	-25.72	-51.64	-13	-38.64	V
3.436406	35.07	Pk	32.5	-95.2	-25.73	-53.36	-13	-40.36	H
5.158125	35.47	Pk	34.4	-95.2	-22.85	-48.18	-13	-35.18	V
5.159063	32.28	Pk	34.4	-95.2	-22.87	-51.39	-13	-38.39	H
6.880313	32.02	Pk	35.5	-95.2	-19.96	-47.64	-13	-34.64	H
6.881250	31.56	Pk	35.5	-95.2	-19.96	-48.10	-13	-35.10	V
Mid Channel, 1745MHz									
3.490313	31.84	Pk	32.5	-95.2	-24.58	-55.44	-13	-42.44	H
3.490313	32.75	Pk	32.5	-95.2	-24.58	-54.53	-13	-41.53	V
5.235000	31.88	Pk	34.5	-95.2	-22.57	-51.39	-13	-38.39	V
5.235469	33.04	Pk	34.5	-95.2	-22.57	-50.23	-13	-37.23	H
6.979688	30.38	Pk	35.4	-95.2	-19.14	-48.56	-13	-35.56	V
6.980625	30.52	Pk	35.4	-95.2	-19.11	-48.39	-13	-35.39	H
High Channel, 1770MHz									
3.540938	35.98	Pk	32.7	-95.2	-23.98	-50.50	-13	-37.50	H
3.542344	35.03	Pk	32.7	-95.2	-23.88	-51.35	-13	-38.35	V
5.310000	31.87	Pk	34.6	-95.2	-21.77	-50.50	-13	-37.50	V
5.310938	32.48	Pk	34.6	-95.2	-21.76	-49.88	-13	-36.88	H
7.079531	30.81	Pk	35.5	-95.2	-18.95	-47.84	-13	-34.84	H
7.079531	33.22	Pk	35.5	-95.2	-18.95	-45.43	-13	-32.43	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	2/21/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	N66 BPSK 40MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.460313	34.66	Pk	32.5	-95.2	-25.45	-53.49	-13	-40.49	H
3.460313	33.75	Pk	32.5	-95.2	-25.45	-54.40	-13	-41.40	V
5.190938	31.87	Pk	34.5	-95.2	-23.08	-51.91	-13	-38.91	V
5.191875	33.59	Pk	34.5	-95.2	-23.06	-50.17	-13	-37.17	H
6.920625	30.87	Pk	35.5	-95.2	-19.7	-48.53	-13	-35.53	H
6.921563	30.22	Pk	35.5	-95.2	-19.68	-49.16	-13	-36.16	V
Mid Channel, 1745MHz									
3.490781	32.94	Pk	32.5	-95.2	-24.54	-54.30	-13	-41.30	H
3.490781	34.37	Pk	32.5	-95.2	-24.54	-52.87	-13	-39.87	V
5.235938	32.61	Pk	34.5	-95.2	-22.56	-50.65	-13	-37.65	H
5.235938	33.17	Pk	34.5	-95.2	-22.56	-50.09	-13	-37.09	V
6.981094	31.81	Pk	35.4	-95.2	-19.09	-47.08	-13	-34.08	H
6.981563	32.53	Pk	35.4	-95.2	-19.09	-46.36	-13	-33.36	V
High Channel, 1760MHz									
3.519844	33.11	Pk	32.5	-95.2	-24.31	-53.90	-13	-40.90	H
3.520781	33.51	Pk	32.5	-95.2	-24.27	-53.46	-13	-40.46	V
5.279531	32.73	Pk	34.6	-95.2	-22.22	-50.09	-13	-37.09	V
5.280000	32.52	Pk	34.6	-95.2	-22.22	-50.30	-13	-37.30	H
7.040156	32.35	Pk	35.4	-95.2	-18.71	-46.16	-13	-33.16	H
7.040625	29.31	Pk	35.4	-95.2	-18.72	-49.21	-13	-36.21	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 #:	4790592262
Date:	3/13/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	N70 BPSK 15MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 1702.5MHz									
3.407344	36.75	Pk	32.5	-95.2	-25.81	-51.76	-13	-38.76	V
3.420938	36.44	Pk	32.6	-95.2	-25.75	-51.91	-13	-38.91	H
5.086875	40.79	Pk	34.3	-95.2	-21.74	-41.85	-13	-28.85	V
5.087344	39.79	Pk	34.3	-95.2	-21.75	-42.86	-13	-29.86	H
6.834375	34.33	Pk	35.5	-95.2	-19.76	-45.13	-13	-32.13	V
6.838594	33.99	Pk	35.5	-95.2	-19.8	-45.51	-13	-32.51	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 #:	4790592262
Date:	6/2/2023
Test Engineer:	23934
Configuration:	EUT only
Mode	LTE 71 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	172654 HPF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz										
1.335911	41.77	Pk	28.6	1.3	-95.2	-35.13	-58.66	-13	-45.66	V
1.350578	42.66	Pk	28.6	1.2	-95.2	-35.18	-57.92	-13	-44.92	H
2.013022	42.38	Pk	31.1	.6	-95.2	-35.10	-56.22	-13	-43.22	V
2.014000	42.64	Pk	31.1	.6	-95.2	-35.09	-55.95	-13	-42.95	H
2.691600	42.42	Pk	32.1	.5	-95.2	-34.70	-54.88	-13	-41.88	V
2.696978	42.46	Pk	32.1	.6	-95.2	-34.73	-54.77	-13	-41.77	H
Mid Channel, 680.5MHz										
1.354978	43.38	Pk	28.5	1.2	-95.2	-35.08	-57.2	-13	-44.20	V
1.361822	42.95	Pk	28.5	1.1	-95.2	-34.98	-57.63	-13	-44.63	H
2.141600	43.45	Pk	31.6	.5	-95.2	-35.01	-54.66	-13	-41.66	H
2.146489	43.37	Pk	31.6	.5	-95.2	-35.07	-54.8	-13	-41.8	V
2.718000	41.83	Pk	32.1	.5	-95.2	-34.66	-55.43	-13	-42.43	V
2.719956	42.28	Pk	32.1	.5	-95.2	-34.69	-55.01	-13	-42.01	H
High Channel, 688MHz										
1.371111	42.43	Pk	28.4	1	-95.2	-35.12	-58.49	-13	-45.49	V
1.376000	42.60	Pk	28.4	1	-95.2	-35.13	-58.33	-13	-45.33	H
2.054578	42.28	Pk	31.3	.6	-95.2	-34.96	-55.98	-13	-42.98	V
2.065334	42.16	Pk	31.4	.6	-95.2	-34.99	-56.03	-13	-43.03	H
2.741467	42.62	Pk	32.1	.6	-95.2	-34.61	-54.49	-13	-41.49	V
2.755156	43.24	Pk	32.2	.6	-95.2	-34.72	-53.88	-13	-40.88	H

BPSK 5G NR n71 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	6/1/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	N71 BPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	172654 HPF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz										
1.343733	41.69	Pk	28.6	1.3	-95.2	-35.05	-58.66	-13	-45.66	V
1.345689	40.97	Pk	28.6	1.3	-95.2	-35.07	-59.4	-13	-46.4	H
2.014489	40.57	Pk	31.1	.6	-95.2	-35.06	-57.99	-13	-44.99	V
2.019867	41.40	Pk	31.1	.6	-95.2	-35	-57.10	-13	-44.10	H
2.692578	41.28	Pk	32.1	.5	-95.2	-34.63	-55.95	-13	-42.95	H
2.692578	41.22	Pk	32.1	.5	-95.2	-34.63	-56.01	-13	-43.01	V
Mid Channel, 680.5MHz										
1.356444	41.34	Pk	28.5	1.1	-95.2	-35.11	-59.37	-13	-46.37	V
1.362311	41.50	Pk	28.5	1.1	-95.2	-35.01	-59.11	-13	-46.11	H
1.928445	40.89	Pk	30.6	.6	-95.2	-35.08	-58.19	-13	-45.19	V
1.941645	41.18	Pk	30.7	.6	-95.2	-35.07	-57.79	-13	-44.79	H
2.718489	39.92	Pk	32.1	.5	-95.2	-34.66	-57.34	-13	-44.34	V
2.721911	41.79	Pk	32.1	.5	-95.2	-34.56	-55.37	-13	-42.37	H
High Channel, 688MHz										
1.376978	41.23	Pk	28.4	1	-95.2	-35.19	-59.76	-13	-46.76	H
1.376978	42.12	Pk	28.4	1	-95.2	-35.19	-58.87	-13	-45.87	V
2.064845	40.82	Pk	31.4	.6	-95.2	-35	-57.38	-13	-44.38	H
2.064845	42.13	Pk	31.4	.6	-95.2	-35	-56.07	-13	-43.07	V
2.740734	40.96	Pk	32.1	.6	-95.2	-34.63	-56.17	-13	-43.17	V
2.752223	41.12	Pk	32.2	.6	-95.2	-34.58	-55.86	-13	-42.86	H

10.3. FIELD STRENGTH OF SPURIOUS RADIATION, ANT3

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

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

RESULTS

10.3.1. LTE BAND 7 AND 5G NR n7

LIMITS

FCC: §27.53 (m)
At least 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

QPSK LTE BAND 7 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	2/9/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	n7 BPSK 50MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2510MHz										
5.042813	35.97	Pk	34.3	.6	-95.2	-23.24	-47.57	-25	-22.57	V
5.043281	35.76	Pk	34.2	.6	-95.2	-23.25	-47.89	-25	-22.89	H
7.556719	34.33	Pk	35.6	.3	-95.2	-19.51	-44.48	-25	-19.48	H
7.586719	33.65	Pk	35.5	.5	-95.2	-19.35	-44.90	-25	-19.90	V
10.002188	32.36	Pk	36.9	.5	-95.2	-16.65	-42.09	-25	-17.09	V
10.018125	32.23	Pk	36.9	.6	-95.2	-16.89	-42.36	-25	-17.36	H
Mid Channel, 2535MHz										
5.069531	35.85	Pk	34.3	.7	-95.2	-23.22	-47.57	-25	-22.57	H
5.071875	36.26	Pk	34.3	.7	-95.2	-23.19	-47.13	-25	-22.13	V
7.601250	33.48	Pk	35.5	.4	-95.2	-19.2	-45.02	-25	-20.02	V
7.609688	33.14	Pk	35.5	.4	-95.2	-19.16	-45.32	-25	-20.32	H
10.087500	33.29	Pk	37	.6	-95.2	-17.2	-41.51	-25	-16.51	V
10.127344	33.35	Pk	36.9	.7	-95.2	-17.01	-41.26	-25	-16.26	H
High Channel, 2560MHz										
5.108906	36.25	Pk	34.4	.8	-95.2	-23.24	-46.99	-25	-21.99	V
5.127188	37.11	Pk	34.4	.8	-95.2	-23.3	-46.19	-25	-21.19	H
7.687031	33.75	Pk	35.6	.5	-95.2	-18.98	-44.33	-25	-19.33	V
7.694063	33.65	Pk	35.6	.5	-95.2	-19.04	-44.49	-25	-19.49	H
10.268438	34.53	Pk	37.1	.7	-95.2	-16.6	-39.47	-25	-14.47	H
10.27125	32.57	Pk	37.1	.7	-95.2	-16.54	-41.37	-25	-16.37	V

BPSK 5G NR n7 (40.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	3/9/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	n7 BPSK 40MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2520MHz										
5.026406	35.33	Pk	34.3	.7	-95.2	-23.5	-48.37	-25	-23.37	V
5.033906	35.89	Pk	34.2	.7	-95.2	-23.36	-47.77	-25	-22.77	H
7.526719	31.8	Pk	35.5	.3	-95.2	-19.43	-47.03	-25	-22.03	V
7.543594	33.19	Pk	35.5	.3	-95.2	-19.46	-45.67	-25	-20.67	H
10.069219	32.12	Pk	37	.7	-95.2	-17.11	-42.49	-25	-17.49	H
10.090781	31.63	Pk	37	.6	-95.2	-17.13	-43.10	-25	-18.10	V
Mid Channel, 2535MHz										
5.091563	34.54	Pk	34.4	.8	-95.2	-23.25	-48.71	-25	-23.71	V
5.092969	36.12	Pk	34.3	.8	-95.2	-23.22	-47.20	-25	-22.20	H
7.597500	32.53	Pk	35.5	.4	-95.2	-19.24	-46.01	-25	-21.01	V
7.604063	33.22	Pk	35.5	.4	-95.2	-19.15	-45.23	-25	-20.23	H
10.164375	34.24	Pk	37	.5	-95.2	-16.82	-40.28	-25	-15.28	H
10.187344	31.78	Pk	37	.7	-95.2	-16.9	-42.62	-25	-17.62	V
High Channel, 2550MHz										
5.085938	35.99	Pk	34.3	.8	-95.2	-23.15	-47.26	-25	-22.26	V
5.113594	35.11	Pk	34.3	.8	-95.2	-23.19	-48.18	-25	-23.18	H
7.591875	35.56	Pk	35.5	.5	-95.2	-19.31	-42.95	-25	-17.95	V
7.666406	33.34	Pk	35.5	.3	-95.2	-18.92	-44.98	-25	-19.98	H
10.185000	33.73	Pk	37	.6	-95.2	-16.89	-40.76	-25	-15.76	V
10.244063	33.18	Pk	37.1	.8	-95.2	-16.67	-40.79	-25	-15.79	H

10.3.2. LTE BAND 12 AND 5G NR n12

LIMITS

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

QPSK LTE BAND 12 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/26/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	LTE12 QPSK 10MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 704MHz									
1.395550	56.28	Pk	28.5	-95.2	-46.08	-56.50	-13	-43.50	H
1.395550	55.63	Pk	28.5	-95.2	-46.08	-57.15	-13	-44.15	V
2.092600	55.65	Pk	32.2	-95.2	-46.74	-54.09	-13	-41.09	V
2.102500	56.63	Pk	31.8	-95.2	-46.78	-53.55	-13	-40.55	H
2.820700	53.39	Pk	32.5	-95.2	-45.91	-55.22	-13	-42.22	V
2.826550	56.25	Pk	32.5	-95.2	-45.87	-52.32	-13	-39.32	H
Mid Channel, 707.5MHz									
1.401400	55.67	Pk	28.3	-95.2	-46.13	-57.36	-13	-44.36	V
1.406350	55.65	Pk	28.1	-95.2	-46.04	-57.49	-13	-44.49	H
2.136700	55.66	Pk	31.6	-95.2	-46.13	-54.07	-13	-41.07	H
2.143900	55.74	Pk	31.6	-95.2	-46.08	-53.94	-13	-40.94	V
2.815750	55.14	Pk	32.5	-95.2	-46.00	-53.56	-13	-40.56	V
2.818000	54.70	Pk	32.5	-95.2	-45.83	-53.83	-13	-40.83	H
High Channel, 711MHz									
1.407250	55.31	Pk	28.1	-95.2	-46.06	-57.85	-13	-44.85	H
1.412200	55.72	Pk	27.9	-95.2	-46.10	-57.68	-13	-44.68	V
2.143900	55.96	Pk	31.6	-95.2	-46.08	-53.72	-13	-40.72	H
2.150200	55.53	Pk	31.7	-95.2	-46.16	-54.13	-13	-41.13	V
2.843650	53.68	Pk	32.7	-95.2	-46.04	-54.86	-13	-41.86	V
2.848600	53.93	Pk	32.8	-95.2	-46.00	-54.47	-13	-41.47	H

BPSK 5G NR n12 (15.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	6/1/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	N12 BPSK 15MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 706.5MHz										
1.405822	40.47	Pk	28.2	1	-95.2	-35.23	-60.76	-13	-47.76	V
1.413644	40.43	Pk	28.2	.9	-95.2	-35.21	-60.88	-13	-47.88	H
2.107378	41.19	Pk	31.5	.6	-95.2	-34.96	-56.87	-13	-43.87	V
2.119111	41.87	Pk	31.5	.5	-95.2	-34.92	-56.25	-13	-43.25	H
2.828489	40.08	Pk	32.3	.5	-95.2	-34.59	-56.91	-13	-43.91	H
2.828489	41.87	Pk	32.3	.5	-95.2	-34.59	-55.12	-13	-42.12	V
Mid Channel, 707.5MHz										
1.413644	41.02	Pk	28.2	.9	-95.2	-35.21	-60.29	-13	-47.29	V
1.415600	41.33	Pk	28.2	.9	-95.2	-35.22	-59.99	-13	-46.99	H
2.116178	40.78	Pk	31.5	.5	-95.2	-35.02	-57.44	-13	-44.44	V
2.122045	41.66	Pk	31.5	.5	-95.2	-35.02	-56.56	-13	-43.56	H
2.828489	40.30	Pk	32.3	.5	-95.2	-34.59	-56.69	-13	-43.69	H
2.832400	40.43	Pk	32.3	.5	-95.2	-34.49	-56.46	-13	-43.46	V
High Channel, 708.5MHz										
1.409733	42.15	Pk	28.2	1	-95.2	-35.19	-59.04	-13	-46.04	V
1.417556	41.37	Pk	28.1	.9	-95.2	-35.21	-60.04	-13	-47.04	H
2.113245	42.12	Pk	31.5	.6	-95.2	-35.01	-55.99	-13	-42.99	V
2.124978	42.42	Pk	31.5	.5	-95.2	-35.09	-55.87	-13	-42.87	H
2.816756	42.29	Pk	32.3	.5	-95.2	-34.57	-54.68	-13	-41.68	V
2.836311	41.28	Pk	32.3	.5	-95.2	-34.52	-55.64	-13	-42.64	H

10.3.3. LTE BAND 13

LIMITS

FCC: §27.53
(c) The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.
(f) Emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

QPSK LTE BAND 13 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/26/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	LTE13 QPSK 10MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF(dB) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 782MHz									
1.573750	55.64	Pk	27.7	-95.2	-46.37	-58.23	-40	-18.23	V
1.578250	56.70	Pk	27.8	-95.2	-46.38	-57.08	-40	-17.08	H
2.359047	60.59	Pk	32.2	-95.2	-46.55	-48.96	-13	-35.96	V
2.359361	60.43	Pk	32.2	-95.2	-46.56	-49.13	-13	-36.13	H
3.106900	54.79	Pk	33.3	-95.2	-45.40	-52.51	-13	-39.51	V
3.124900	55.54	Pk	33.2	-95.2	-45.29	-51.75	-13	-38.75	H

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

10.3.4. LTE BAND 14 AND 5G NR n14

LIMITS

FCC: §90.543 Emission Limitations. (Band 14)
(e) For operations in the 758-768 MHz and the 788-798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:
(3) On any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, by at least 43 + 10 log (P) dB.

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

QPSK LTE BAND 14 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/26/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	LTE14 QPSK 10MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF(dB) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 782MHz									
1.581850	55.15	Pk	27.8	-95.2	-46.41	-58.66	-40	-18.66	V
1.583200	56.12	Pk	27.8	-95.2	-46.48	-57.76	-40	-17.76	H
2.380600	54.62	Pk	32.1	-95.2	-46.83	-55.31	-13	-42.31	V
2.381950	55.47	Pk	32.2	-95.2	-46.82	-54.35	-13	-41.35	H
3.169450	53.76	Pk	32.9	-95.2	-45.22	-53.76	-13	-40.76	H
3.178900	54.24	Pk	32.9	-95.2	-45.19	-53.25	-13	-40.25	V

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

BPSK 5G NR n14 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/31/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	N14 BPSK 10MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF(dB) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 793MHz									
1.588600	55.35	Pk	27.9	-95.2	-46.36	-58.31	-40	-18.31	H
1.592200	55.78	Pk	28.0	-95.2	-46.47	-57.89	-40	-17.89	V
2.368450	56.27	Pk	32.2	-95.2	-46.73	-53.46	-13	-40.46	V
2.369350	56.02	Pk	32.2	-95.2	-46.77	-53.75	-13	-40.75	H
3.155050	53.8	Pk	32.9	-95.2	-45.19	-53.69	-13	-40.69	H
3.166300	53.71	Pk	32.9	-95.2	-45.41	-54	-13	-41.00	V

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

10.3.5. LTE BAND 17

LIMITS

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

QPSK LTE BAND 17 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/26/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	LTE17 QPSK 10MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF(dB) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 709MHz									
1.401850	54.94	Pk	28.3	-95.2	-46.12	-58.08	-13	-45.08	V
1.405450	55.62	Pk	28.2	-95.2	-46.06	-57.44	-13	-44.44	H
2.129050	56.22	Pk	31.6	-95.2	-46.33	-53.71	-13	-40.71	H
2.140300	56.06	Pk	31.6	-95.2	-46.24	-53.78	-13	-40.78	V
2.838700	54.32	Pk	32.6	-95.2	-46.1	-54.38	-13	-41.38	H
2.840950	54.28	Pk	32.6	-95.2	-45.94	-54.26	-13	-41.26	V
Mid Channel, 710MHz									
1.403650	56.25	Pk	28.2	-95.2	-46.1	-56.85	-13	-43.85	V
1.410400	55.9	Pk	28	-95.2	-46.07	-57.37	-13	-44.37	H
2.142100	55.73	Pk	31.6	-95.2	-46.2	-54.07	-13	-41.07	H
2.145250	56.42	Pk	31.6	-95.2	-46.06	-53.24	-13	-40.24	V
2.834650	54.84	Pk	32.5	-95.2	-45.91	-53.77	-13	-40.77	V
2.839600	54.59	Pk	32.6	-95.2	-46.04	-54.05	-13	-41.05	H
High Channel, 711MHz									
1.4054500	55.54	Pk	28.2	-95.2	-46.06	-57.52	-13	-44.52	V
1.409500	55.10	Pk	28	-95.2	-46.08	-58.18	-13	-45.18	H
2.127700	56.29	Pk	31.6	-95.2	-46.41	-53.72	-13	-40.72	H
2.136250	55.25	Pk	31.6	-95.2	-46.15	-54.50	-13	-41.50	V
2.832850	53.66	Pk	32.5	-95.2	-45.95	-54.99	-13	-41.99	V
2.834650	54.62	Pk	32.5	-95.2	-45.91	-53.99	-13	-40.99	H

10.3.6. LTE BAND 25 AND 5G NR n25

LIMITS

FCC: §24.238(a)
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

QPSK LTE BAND 25 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	2/22/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE 25 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.719063	33.63	Pk	33.0	-95.2	-24.93	-53.50	-13	-40.50	H
3.719063	35.28	Pk	33.0	-95.2	-24.93	-51.85	-13	-38.85	V
5.579531	32.46	Pk	34.7	-95.2	-21.00	-49.04	-13	-36.04	H
5.580469	32.95	Pk	34.7	-95.2	-21.00	-48.55	-13	-35.55	V
7.440469	30.05	Pk	35.4	-95.2	-18.90	-48.65	-13	-35.65	H
7.440938	29.27	Pk	35.4	-95.2	-18.91	-49.44	-13	-36.44	V
Mid Channel, 1882.5MHz									
3.765938	33.85	Pk	32.9	-95.2	-24.9	-53.35	-13	-40.35	H
3.766406	35.38	Pk	32.9	-95.2	-24.89	-51.81	-13	-38.81	V
5.647031	32.29	Pk	34.6	-95.2	-20.78	-49.09	-13	-36.09	H
5.647500	33.14	Pk	34.6	-95.2	-20.78	-48.24	-13	-35.24	V
7.530938	29.55	Pk	35.5	-95.2	-18.47	-48.62	-13	-35.62	H
7.530938	28.68	Pk	35.5	-95.2	-18.47	-49.49	-13	-36.49	V
High Channel, 1905MHz									
3.811875	35.36	Pk	33.0	-95.2	-25.05	-51.89	-13	-38.89	H
3.812813	34.63	Pk	33.0	-95.2	-25.07	-52.64	-13	-39.64	V
5.713125	33.33	Pk	34.7	-95.2	-21.55	-48.72	-13	-35.72	V
5.714063	31.69	Pk	34.7	-95.2	-21.54	-50.35	-13	-37.35	H
7.619531	31.18	Pk	35.5	-95.2	-17.86	-46.38	-13	-33.38	V
7.620000	31.16	Pk	35.5	-95.2	-17.87	-46.41	-13	-33.41	H

BPSK 5G NR n25 (40.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	3/13/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	N25 BPSK 40MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.723750	37.43	Pk	33.0	-95.2	-24.88	-49.65	-13	-36.65	H
3.724219	35.26	Pk	33.0	-95.2	-24.88	-51.82	-13	-38.82	V
5.589375	35.79	Pk	34.7	-95.2	-20.85	-45.56	-13	-32.56	V
5.633438	34.54	Pk	34.7	-95.2	-20.6	-46.56	-13	-33.56	H
7.421719	32.38	Pk	35.5	-95.2	-18.69	-46.01	-13	-33.01	V
7.457813	32.8	Pk	35.4	-95.2	-19.02	-46.02	-13	-33.02	H
Mid Channel, 1882.5MHz									
3.745313	35.83	Pk	32.9	-95.2	-24.71	-51.18	-13	-38.18	V
3.756094	36.67	Pk	32.9	-95.2	-24.91	-50.54	-13	-37.54	H
5.643750	34.24	Pk	34.6	-95.2	-20.73	-47.09	-13	-34.09	H
5.647500	34.8	Pk	34.6	-95.2	-20.78	-46.58	-13	-33.58	V
7.582031	33.31	Pk	35.5	-95.2	-18	-44.39	-13	-31.39	H
7.609688	33.28	Pk	35.5	-95.2	-17.71	-44.13	-13	-31.13	V
High Channel, 1895MHz									
3.778125	36.76	Pk	33.0	-95.2	-24.97	-50.41	-13	-37.41	H
3.792188	37.33	Pk	33.1	-95.2	-25.09	-49.86	-13	-36.86	V
5.664844	34.23	Pk	34.7	-95.2	-20.71	-46.98	-13	-33.98	H
5.680781	33.78	Pk	34.7	-95.2	-21.08	-47.80	-13	-34.80	V
7.563750	32.83	Pk	35.5	-95.2	-18.16	-45.03	-13	-32.03	H
7.577344	32.02	Pk	35.5	-95.2	-18.02	-45.70	-13	-32.70	V

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

LIMITS

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

QPSK LTE BAND 26 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/31/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE 26 QPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	172654 HPF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 819MHz										
1.628981	49.61	Pk	28.1	.7	-95.2	-35.12	-51.91	-13	-38.91	V
1.629218	51.62	Pk	28.1	.7	-95.2	-35.14	-49.92	-13	-36.92	H
2.453023	43.05	Pk	32.2	.6	-95.2	-34.98	-54.33	-13	-41.33	H
2.460356	42.96	Pk	32.2	.5	-95.2	-34.92	-54.46	-13	-41.46	V
3.280223	42.06	Pk	32.8	.5	-95.2	-33.92	-53.76	-13	-40.76	H
3.282178	42.14	Pk	32.8	.5	-95.2	-33.87	-53.63	-13	-40.63	V

BPSK 5G NR n26 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	6/1/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	N26 BPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	172654 HPF (dB)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 819MHz										
1.629392	49.86	Pk	28.1	.7	-95.2	-35.15	-51.69	-13	-38.69	V
1.646356	42.37	Pk	28.2	.7	-95.2	-35.23	-59.16	-13	-46.16	H
2.458889	42.70	Pk	32.2	.5	-95.2	-34.86	-54.66	-13	-41.66	V
2.464267	41.91	Pk	32.2	.5	-95.2	-34.88	-55.47	-13	-42.47	H
3.285600	41.8	Pk	32.8	.5	-95.2	-33.94	-54.04	-13	-41.04	V
3.296356	41.61	Pk	32.8	.5	-95.2	-33.85	-54.14	-13	-41.14	H

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

LIMITS

FCC: §22.917(a)
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P)

QPSK LTE BAND 26 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	6/1/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE 26 QPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	172654 HPF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 831.5MHz										
1.649287	49.45	Pk	28.3	.7	-95.2	-35.09	-51.84	-13	-38.84	V
1.672756	42.13	Pk	28.6	.7	-95.2	-35.19	-58.96	-13	-45.96	H
2.498000	42.51	Pk	32.3	.5	-95.2	-34.77	-54.66	-13	-41.66	H
2.514623	44.2	Pk	32.3	.5	-95.2	-34.93	-53.13	-13	-40.13	V
3.332045	41.29	Pk	32.7	.5	-95.2	-33.87	-54.58	-13	-41.58	H
3.349645	42.54	Pk	32.6	.4	-95.2	-33.76	-53.42	-13	-40.42	V
Mid Channel, 836.5MHz										
1.654509	50.44	Pk	28.3	.7	-95.2	-35.18	-50.94	-13	-37.94	V
1.680089	42.85	Pk	28.7	.7	-95.2	-35.13	-58.08	-13	-45.08	H
2.498978	41.67	Pk	32.3	.5	-95.2	-34.93	-55.66	-13	-42.66	V
2.503867	41.71	Pk	32.3	.5	-95.2	-34.87	-55.56	-13	-42.56	H
3.330578	42.03	Pk	32.7	.5	-95.2	-33.89	-53.86	-13	-40.86	V
3.353556	41.37	Pk	32.6	.4	-95.2	-33.74	-54.57	-13	-41.57	H
High Channel, 841.5MHz										
1.659390	53.37	Pk	28.4	.7	-95.2	-35.10	-47.83	-13	-34.83	V
1.674222	42.00	Pk	28.6	.7	-95.2	-35.11	-59.01	-13	-46.01	H
2.505334	41.85	Pk	32.3	.5	-95.2	-34.85	-55.4	-13	-42.40	V
2.518045	41.92	Pk	32.3	.5	-95.2	-34.89	-55.37	-13	-42.37	H
3.341823	40.51	Pk	32.6	.4	-95.2	-33.80	-55.49	-13	-42.49	V
3.348667	41.75	Pk	32.6	.4	-95.2	-33.79	-54.24	-13	-41.24	H

BPSK 5G NR n26 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	6/1/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	N26 BPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	172654 HPF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Azimuth (Degs)
Low Channel, 834.0MHz										
1.649287	49.45	Pk	28.3	.7	-95.2	-35.09	-51.84	-13	-38.84	V
1.672756	42.13	Pk	28.6	.7	-95.2	-35.19	-58.96	-13	-45.96	H
2.498000	42.51	Pk	32.3	.5	-95.2	-34.77	-54.66	-13	-41.66	H
2.514623	44.2	Pk	32.3	.5	-95.2	-34.93	-53.13	-13	-40.13	V
3.332045	41.29	Pk	32.7	.5	-95.2	-33.87	-54.58	-13	-41.58	H
3.349645	42.54	Pk	32.6	.4	-95.2	-33.76	-53.42	-13	-40.42	V
Mid Channel, 836.5MHz										
1.654509	50.44	Pk	28.3	.7	-95.2	-35.18	-50.94	-13	-37.94	V
1.680089	42.85	Pk	28.7	.7	-95.2	-35.13	-58.08	-13	-45.08	H
2.498978	41.67	Pk	32.3	.5	-95.2	-34.93	-55.66	-13	-42.66	V
2.503867	41.71	Pk	32.3	.5	-95.2	-34.87	-55.56	-13	-42.56	H
3.330578	42.03	Pk	32.7	.5	-95.2	-33.89	-53.86	-13	-40.86	V
3.353556	41.37	Pk	32.6	.4	-95.2	-33.74	-54.57	-13	-41.57	H
High Channel, 839.0Hz										
1.659390	53.37	Pk	28.4	.7	-95.2	-35.10	-47.83	-13	-34.83	V
1.674222	42.00	Pk	28.6	.7	-95.2	-35.11	-59.01	-13	-46.01	H
2.505334	41.85	Pk	32.3	.5	-95.2	-34.85	-55.40	-13	-42.40	V
2.518045	41.92	Pk	32.3	.5	-95.2	-34.89	-55.37	-13	-42.37	H
3.341823	40.51	Pk	32.6	.4	-95.2	-33.8	-55.49	-13	-42.49	V
3.348667	41.75	Pk	32.6	.4	-95.2	-33.79	-54.24	-13	-41.24	H

10.3.9. LTE BAND 30 AND 5G NR n30

LIMITS

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

QPSK LTE BAND 30 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/25/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE 30 QPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.597031	27.50	RMS	34.3	-95.2	-29.45	-62.85	-40	-22.85	V
4.630313	26.94	RMS	34.3	-95.2	-28.92	-62.88	-40	-22.88	H
6.916875	24.89	RMS	35.7	-95.2	-26.45	-61.06	-40	-21.06	V
6.928125	24.78	RMS	35.7	-95.2	-26.38	-61.1	-40	-21.1	H
9.244219	22.92	RMS	36.2	-95.2	-23.73	-59.81	-40	-19.81	H
9.254531	22.92	RMS	36.2	-95.2	-23.55	-59.63	-40	-19.63	V

BPSK 5G NR n30 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/30/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	N30 BPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.590938	27.34	RMS	34.3	-95.2	-29.52	-63.08	-40	-23.08	V
4.616719	27.24	RMS	34.3	-95.2	-29.13	-62.79	-40	-22.79	H
6.885469	24.85	RMS	35.7	-95.2	-26.50	-61.15	-40	-21.15	V
6.925313	24.44	RMS	35.7	-95.2	-26.40	-61.46	-40	-21.46	H
9.203906	22.9	RMS	36.1	-95.2	-23.58	-59.78	-40	-19.78	V
9.254531	22.84	RMS	36.2	-95.2	-23.55	-59.71	-40	-19.71	H

10.3.10. LTE BAND 41 AND 5G NR n41

LIMITS

FCC: §27.53 (m)
At least 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

QPSK LTE BAND 41 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/20/2023
Test Engineer:	19118
Configuration:	EUT only
Mode	LTE 41 QPSK 20MHz
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2506MHz									
5.00250	55.24	Pk	34.3	-95.2	-46.67	-52.33	-25	-27.33	V
5.023000	54.73	Pk	34.3	-95.2	-46.57	-52.74	-25	-27.74	H
7.520000	53.84	Pk	35.5	-95.2	-44.64	-50.5	-25	-25.50	H
7.525000	53.82	Pk	35.5	-95.2	-44.47	-50.35	-25	-25.35	V
10.007500	54.24	Pk	37.1	-95.2	-44.02	-47.88	-25	-22.88	V
10.028500	53.78	Pk	37.1	-95.2	-44.21	-48.53	-25	-23.53	H
Mid Channel, 2593MHz									
5.168500	53.74	Pk	34.2	-95.2	-46.38	-53.64	-25	-28.64	V
5.171500	55.57	Pk	34.2	-95.2	-46.40	-51.83	-25	-26.83	H
7.787000	53.21	Pk	35.6	-95.2	-44.35	-50.74	-25	-25.74	H
7.795000	52.94	Pk	35.6	-95.2	-44.33	-50.99	-25	-25.99	V
10.365000	54.21	Pk	37.4	-95.2	-44.54	-48.13	-25	-23.13	V
10.376500	54.76	Pk	37.5	-95.2	-44.61	-47.55	-25	-22.55	H
High Channel, 2680MHz									
5.365000	54.92	Pk	34.2	-95.2	-46.28	-52.36	-25	-27.36	H
5.376000	53.90	Pk	34.2	-95.2	-46.23	-53.33	-25	-28.33	V
8.045000	53.45	Pk	35.7	-95.2	-44.12	-50.17	-25	-25.17	V
8.045500	54.67	Pk	35.7	-95.2	-44.11	-48.94	-25	-23.94	H
10.704500	55.22	Pk	37.7	-95.2	-45.09	-47.37	-25	-22.37	V
10.737500	54.29	Pk	37.7	-95.2	-44.93	-48.14	-25	-23.14	H

BPSK LTE BAND n41 (100.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	03/9/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	N41 BPSK 100MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2546MHz										
5.111250	36.34	Pk	34.3	.8	-95.2	-23.26	-47.02	-25	-22.02	H
5.117344	35.39	Pk	34.4	.8	-95.2	-23.25	-47.86	-25	-22.86	V
7.627969	32.59	Pk	35.6	.4	-95.2	-19.16	-45.77	-25	-20.77	V
7.641094	32.98	Pk	35.6	.4	-95.2	-18.95	-45.17	-25	-20.17	H
10.174219	32.6	Pk	37	.6	-95.2	-16.8	-41.80	-25	-16.80	H
10.193438	32.82	Pk	37	.7	-95.2	-16.9	-41.58	-25	-16.58	V
Mid Channel, 2593MHz										
5.186250	35.32	Pk	34.5	.8	-95.2	-23.03	-47.61	-25	-22.61	H
5.202188	35.75	Pk	34.5	.9	-95.2	-23.05	-47.10	-25	-22.10	V
7.763906	33.65	Pk	35.6	.3	-95.2	-19.07	-44.72	-25	-19.72	H
7.795781	35.48	Pk	35.5	.4	-95.2	-19.02	-42.84	-25	-17.84	V
10.348594	32.69	Pk	37.2	.7	-95.2	-16.36	-40.97	-25	-15.97	H
10.349531	31.57	Pk	37.2	.7	-95.2	-16.32	-42.05	-25	-17.05	V
High Channel, 2640MHz										
5.256563	33.95	Pk	34.6	.4	-95.2	-23.3	-49.55	-25	-24.55	V
5.263594	34.31	Pk	34.6	.3	-95.2	-23.35	-49.34	-25	-24.34	H
7.910625	32.25	Pk	35.7	.3	-95.2	-19.01	-45.96	-25	-20.96	V
7.919531	33.62	Pk	35.6	.2	-95.2	-19.13	-44.91	-25	-19.91	H
10.587188	32.93	Pk	37.4	.9	-95.2	-16.15	-40.12	-25	-15.12	H
10.603594	32.36	Pk	37.4	.8	-95.2	-16.03	-40.67	-25	-15.67	V

10.3.11. LTE BAND 66 AND 5G NR n66

LIMITS

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

QPSK LTE BAND 66 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	3/3/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	LTE 66 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.427969	36.24	Pk	32.6	-95.2	-25.78	-52.14	-13	-39.14	V
3.447188	36.08	Pk	32.5	-95.2	-25.56	-52.18	-13	-39.18	H
5.166094	35.69	Pk	34.4	-95.2	-22.94	-48.05	-13	-35.05	V
5.173125	35.72	Pk	34.4	-95.2	-22.98	-48.06	-13	-35.06	H
6.885938	33.46	Pk	35.4	-95.2	-19.91	-46.25	-13	-33.25	H
6.904219	33.38	Pk	35.5	-95.2	-19.82	-46.14	-13	-33.14	V
Mid Channel, 1745MHz									
3.478594	36.34	Pk	32.5	-95.2	-24.98	-51.34	-13	-38.34	V
3.486094	34.94	Pk	32.5	-95.2	-24.7	-52.46	-13	-39.46	H
5.240156	35.13	Pk	34.5	-95.2	-22.54	-48.11	-13	-35.11	V
5.257969	34.6	Pk	34.6	-95.2	-22.32	-48.32	-13	-35.32	H
6.963281	34.13	Pk	35.4	-95.2	-19.25	-44.92	-13	-31.92	H
6.967500	35.04	Pk	35.4	-95.2	-19.28	-44.04	-13	-31.04	V
High Channel, 1770MHz									
3.538125	34.6	Pk	32.7	-95.2	-24.06	-51.96	-13	-38.96	V
3.546563	35.8	Pk	32.8	-95.2	-23.87	-50.47	-13	-37.47	H
5.320781	32.59	Pk	34.6	-95.2	-21.81	-49.82	-13	-36.82	V
5.332031	33.62	Pk	34.6	-95.2	-21.66	-48.64	-13	-35.64	H
7.062188	33.56	Pk	35.5	-95.2	-18.66	-44.80	-13	-31.80	V
7.064063	33.26	Pk	35.5	-95.2	-18.67	-45.11	-13	-32.11	H

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	2/21/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	N66 BPSK 40MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.459375	34.70	Pk	32.5	-95.2	-25.48	-53.48	-13	-40.48	H
3.459844	33.19	Pk	32.5	-95.2	-25.47	-54.98	-13	-41.98	V
5.189531	34.48	Pk	34.5	-95.2	-23.08	-49.30	-13	-36.30	V
5.190000	32.53	Pk	34.5	-95.2	-23.09	-51.26	-13	-38.26	H
6.920156	32.80	Pk	35.5	-95.2	-19.71	-46.61	-13	-33.61	V
6.920625	31.22	Pk	35.5	-95.2	-19.70	-48.18	-13	-35.18	H
Mid Channel, 1745MHz									
3.490781	34.54	Pk	32.5	-95.2	-24.54	-52.70	-13	-39.70	H
3.491719	33.20	Pk	32.5	-95.2	-24.50	-54.00	-13	-41.00	V
5.235000	34.42	Pk	34.5	-95.2	-22.57	-48.85	-13	-35.85	V
5.236406	33.12	Pk	34.5	-95.2	-22.54	-50.12	-13	-37.12	H
6.981094	31.65	Pk	35.4	-95.2	-19.09	-47.24	-13	-34.24	H
6.981094	29.77	Pk	35.4	-95.2	-19.09	-49.12	-13	-36.12	V
High Channel, 1760MHz									
3.520781	32.20	Pk	32.5	-95.2	-24.27	-54.77	-13	-41.77	H
3.520781	34.09	Pk	32.5	-95.2	-24.27	-52.88	-13	-39.88	V
5.280469	30.64	Pk	34.6	-95.2	-22.21	-52.17	-13	-39.17	H
5.280938	31.65	Pk	34.6	-95.2	-22.19	-51.14	-13	-38.14	V
7.040156	30.87	Pk	35.4	-95.2	-18.71	-47.64	-13	-34.64	H
7.040156	32.02	Pk	35.4	-95.2	-18.71	-46.49	-13	-33.49	V

10.3.12. 5G NR n70

LIMITS

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

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

Project #:	4790592262
Date:	3/17/20233
Test Engineer:	27661
Configuration:	EUT only
Mode	N70 BPSK 15MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 1702.5MHz									
3.413906	36.00	Pk	32.6	-95.2	-25.78	-52.38	-13	-39.38	V
3.424688	36.61	Pk	32.6	-95.2	-25.78	-51.77	-13	-38.77	H
5.077031	36.36	Pk	34.3	-95.2	-21.73	-46.27	-13	-33.27	V
5.103281	36.61	Pk	34.4	-95.2	-21.98	-46.17	-13	-33.17	H
6.799688	33.58	Pk	35.5	-95.2	-19.38	-45.50	-13	-32.50	V
6.832500	34.01	Pk	35.5	-95.2	-19.78	-45.47	-13	-32.47	H

10.3.13. LTE BAND 71 AND 5G NR n71

LIMITS

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

QPSK LTE BAND 71 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/19/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	LTE 71 QPSK 20MHz
Chamber #:	04-RDE-N

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz									
1.342000	63.70	Pk	28.9	-95.2	-52.75	-55.35	-13	-42.35	H
1.343800	62.92	Pk	29.0	-95.2	-52.70	-55.98	-13	-42.98	V
2.029150	62.04	Pk	32.1	-95.2	-52.40	-53.46	-13	-40.46	V
2.030050	61.62	Pk	32.1	-95.2	-52.39	-53.87	-13	-40.87	H
2.706400	60.91	Pk	32.3	-95.2	-51.32	-53.31	-13	-40.31	H
2.713150	60.25	Pk	32.4	-95.2	-51.16	-53.71	-13	-40.71	V
Mid Channel, 680.5MHz									
1.369000	62.55	Pk	29.3	-95.2	-52.89	-56.24	-13	-43.24	H
1.373950	63.82	Pk	28.9	-95.2	-52.95	-55.43	-13	-42.43	V
2.039500	61.12	Pk	32.3	-95.2	-52.34	-54.12	-13	-41.12	V
2.040400	62.02	Pk	32.3	-95.2	-52.39	-53.27	-13	-40.27	H
2.712700	60.31	Pk	32.4	-95.2	-51.13	-53.62	-13	-40.62	H
2.717200	60.39	Pk	32.4	-95.2	-51.13	-53.54	-13	-40.54	V
High Channel, 688MHz									
1.371250	63.16	Pk	29.1	-95.2	-52.86	-55.80	-13	-42.80	H
1.374850	63.57	Pk	28.9	-95.2	-53.04	-55.77	-13	-42.77	V
2.072800	62.52	Pk	32.1	-95.2	-52.86	-53.44	-13	-40.44	H
2.079550	62.96	Pk	32.1	-95.2	-52.83	-52.97	-13	-39.97	V
2.759950	59.14	Pk	32.6	-95.2	-50.36	-53.82	-13	-40.82	V
2.762200	60.00	Pk	32.5	-95.2	-50.58	-53.28	-13	-40.28	H

BPSK 5G NR n71 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/26/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	N71 BPSK 20MHz
Chamber #:	04-RDE-O

Frequency (MHz)	Meter Reading (dBuV)	Det	80404_ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz									
1.355950	56.07	Pk	28.6	-95.2	-46.16	-56.69	-13	-43.69	V
1.356850	55.46	Pk	28.6	-95.2	-46.15	-57.29	-13	-44.29	H
2.006200	55.40	Pk	31.6	-95.2	-46.32	-54.52	-13	-41.52	H
2.007100	54.39	Pk	31.6	-95.2	-46.29	-55.50	-13	-42.50	V
2.710450	55.19	Pk	32.2	-95.2	-46.53	-54.34	-13	-41.34	H
2.720800	54.74	Pk	32.2	-95.2	-46.54	-54.80	-13	-41.80	V
Mid Channel, 680.5MHz									
1.355950	55.89	Pk	28.6	-95.2	-46.16	-56.87	-13	-43.87	H
1.358650	56.38	Pk	28.7	-95.2	-46.18	-56.30	-13	-43.30	V
2.047600	55.48	Pk	32.0	-95.2	-46.62	-54.34	-13	-41.34	V
2.049400	56.08	Pk	32.1	-95.2	-46.73	-53.75	-13	-40.75	H
2.717200	55.52	Pk	32.2	-95.2	-46.60	-54.08	-13	-41.08	H
2.722150	54.85	Pk	32.2	-95.2	-46.65	-54.80	-13	-41.80	V
High Channel, 688MHz									
1.364500	54.76	Pk	28.7	-95.2	-46.18	-57.92	-13	-44.92	H
1.366750	55.01	Pk	28.6	-95.2	-46.22	-57.81	-13	-44.81	V
2.044900	55.55	Pk	31.9	-95.2	-46.50	-54.25	-13	-41.25	V
2.050300	56.38	Pk	32.1	-95.2	-46.72	-53.44	-13	-40.44	H
2.762200	55.10	Pk	32.4	-95.2	-46.37	-54.07	-13	-41.07	H
2.772100	55.01	Pk	32.5	-95.2	-46.12	-53.81	-13	-40.81	V

10.4. FIELD STRENGTH OF SPURIOUS RADIATION, ANT4

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

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

RESULTS

10.4.1. LTE BAND 7 AND 5G NR n7

LIMITS

FCC: §27.53 (m)
At least 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

QPSK LTE BAND 7 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	03/6/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	LTE7 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2510MHz										
5.068125	35.10	Pk	34.3	.6	-95.2	-23.26	-48.46	-25	-23.46	H
5.095313	35.76	Pk	34.4	.8	-95.2	-23.31	-47.55	-25	-22.55	V
7.576875	32.41	Pk	35.5	.5	-95.2	-19.4	-46.19	-25	-21.19	V
7.577344	33.03	Pk	35.5	.5	-95.2	-19.39	-45.56	-25	-20.56	H
10.10625	31.28	Pk	36.9	.7	-95.2	-17.05	-43.37	-25	-18.37	H
10.107656	31.57	Pk	36.9	.7	-95.2	-17.04	-43.07	-25	-18.07	V
Mid Channel, 2535MHz										
5.036250	35.08	Pk	34.2	.6	-95.2	-23.36	-48.68	-25	-23.68	H
5.051719	35.35	Pk	34.3	.6	-95.2	-23.28	-48.23	-25	-23.23	V
7.623750	32.44	Pk	35.5	.4	-95.2	-19.20	-46.06	-25	-21.06	H
7.632188	33.39	Pk	35.6	.4	-95.2	-19.09	-44.9	-25	-19.90	V
10.199063	33.16	Pk	37.0	.8	-95.2	-16.91	-41.15	-25	-16.15	H
10.235625	31.59	Pk	37.1	.8	-95.2	-16.72	-42.43	-25	-17.43	V
High Channel, 2560MHz										
5.123906	35.09	Pk	34.3	.8	-95.2	-23.29	-48.30	-25	-23.30	H
5.129063	35.55	Pk	34.4	.8	-95.2	-23.24	-47.69	-25	-22.69	V
7.663594	32.99	Pk	35.5	.3	-95.2	-18.95	-45.36	-25	-20.36	V
7.687969	32.55	Pk	35.6	.5	-95.2	-18.97	-45.52	-25	-20.52	H
10.239844	31.72	Pk	37.1	.8	-95.2	-16.71	-42.29	-25	-17.29	H
10.252969	31.41	Pk	37.1	.7	-95.2	-16.65	-42.64	-25	-17.64	V

BPSK 5G NR 7 (40.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	3/10/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	n7 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2520MHz										
5.054531	35.81	Pk	34.3	.6	-95.2	-23.24	-47.73	-25	-22.73	H
5.062969	35.79	Pk	34.3	.6	-95.2	-23.27	-47.78	-25	-22.78	V
7.590469	33.65	Pk	35.5	.5	-95.2	-19.34	-44.89	-25	-19.89	V
7.597031	33.17	Pk	35.5	.4	-95.2	-19.24	-45.37	-25	-20.37	H
10.046719	33.29	Pk	36.9	.7	-95.2	-17.06	-41.37	-25	-16.37	H
10.064063	32.29	Pk	36.9	.7	-95.2	-17.11	-42.42	-25	-17.42	V
Mid Channel, 2535MHz										
5.055000	36.12	Pk	34.2	.6	-95.2	-23.24	-47.52	-25	-22.52	H
5.069531	34.61	Pk	34.3	.7	-95.2	-23.22	-48.81	-25	-23.81	V
7.625625	33.53	Pk	35.5	.4	-95.2	-19.19	-44.96	-25	-19.96	H
7.639688	33.12	Pk	35.6	.4	-95.2	-18.96	-45.04	-25	-20.04	V
10.18125	32.43	Pk	37	.6	-95.2	-16.84	-42.01	-25	-17.01	H
10.20000	32.51	Pk	37	.8	-95.2	-16.9	-41.79	-25	-16.79	V
High Channel, 2550MHz										
5.103281	35.46	Pk	34.4	.8	-95.2	-23.31	-47.85	-25	-22.85	V
5.113594	35.15	Pk	34.3	.8	-95.2	-23.19	-48.14	-25	-23.14	H
7.680000	33.41	Pk	35.6	.5	-95.2	-18.91	-44.6	-25	-19.60	H
7.717031	33.74	Pk	35.6	.4	-95.2	-18.86	-44.32	-25	-19.32	V
10.232813	32.5	Pk	37.1	.8	-95.2	-16.75	-41.55	-25	-16.55	H
10.248281	32.72	Pk	37.1	.7	-95.2	-16.66	-41.34	-25	-16.34	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 #:	4790592262
Date:	02/22/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE25 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.718594	33.78	Pk	33.1	-95.2	-24.92	-53.24	-13	-40.24	H
3.719531	34.28	Pk	33.1	-95.2	-24.94	-52.76	-13	-39.76	V
5.580000	32.45	Pk	34.7	-95.2	-21.00	-49.05	-13	-36.05	V
5.580938	32.36	Pk	34.7	-95.2	-21.00	-49.14	-13	-36.14	H
7.439063	32.42	Pk	35.4	-95.2	-18.89	-46.27	-13	-33.27	V
7.440469	30.74	Pk	35.4	-95.2	-18.90	-47.96	-13	-34.96	H
Mid Channel, 1882.5MHz									
3.764531	34.68	Pk	32.9	-95.2	-24.96	-52.58	-13	-39.58	H
3.765469	33.91	Pk	32.9	-95.2	-24.93	-53.32	-13	-40.32	V
5.646563	33.11	Pk	34.6	-95.2	-20.78	-48.27	-13	-35.27	H
5.647031	33.45	Pk	34.6	-95.2	-20.78	-47.93	-13	-34.93	V
7.530938	30.81	Pk	35.5	-95.2	-18.47	-47.36	-13	-34.36	H
7.530938	30.42	Pk	35.5	-95.2	-18.47	-47.75	-13	-34.75	V
High Channel, 1905MHz									
3.810938	35.12	Pk	33.0	-95.2	-25.03	-52.11	-13	-39.11	V
3.811406	35.78	Pk	33.0	-95.2	-25.04	-51.46	-13	-38.46	H
5.715000	31.86	Pk	34.8	-95.2	-21.55	-50.09	-13	-37.09	H
5.715469	31.11	Pk	34.7	-95.2	-21.55	-50.94	-13	-37.94	V
7.620000	31.06	Pk	35.5	-95.2	-17.87	-46.51	-13	-33.51	H
7.620938	32.32	Pk	35.5	-95.2	-17.87	-45.25	-13	-32.25	V

BPSK 5G NR 25 (40.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	3/13/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	n25 BPSK 40MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	EIRP CF	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.761250	37.45	Pk	32.9	-95.2	-24.89	-49.74	-13	-36.74	H
3.762656	35.76	Pk	32.9	-95.2	-24.94	-51.48	-13	-38.48	V
5.617031	34.09	Pk	34.6	-95.2	-20.66	-47.17	-13	-34.17	V
5.623125	33.84	Pk	34.6	-95.2	-20.58	-47.34	-13	-34.34	H
7.450781	32.69	Pk	35.4	-95.2	-19	-46.11	-13	-33.11	V
7.498125	32.26	Pk	35.5	-95.2	-18.93	-46.37	-13	-33.37	H
Mid Channel, 1882.5MHz									
3.732188	37.21	Pk	33	-95.2	-24.75	-49.74	-13	-36.74	H
3.734531	36.51	Pk	33	-95.2	-24.82	-50.51	-13	-37.51	V
5.646094	34.51	Pk	34.6	-95.2	-20.77	-46.86	-13	-33.86	V
5.655938	34.95	Pk	34.7	-95.2	-20.73	-46.28	-13	-33.28	H
7.539844	32.92	Pk	35.5	-95.2	-18.45	-45.23	-13	-32.23	H
7.543594	32.99	Pk	35.5	-95.2	-18.47	-45.18	-13	-32.18	V
High Channel, 1995MHz									
3.789375	37.53	Pk	33.1	-95.2	-24.98	-49.55	-13	-36.55	V
3.790313	37.12	Pk	33.1	-95.2	-25	-49.98	-13	-36.98	H
5.643281	35.29	Pk	34.6	-95.2	-20.73	-46.04	-13	-33.04	V
5.668594	35.57	Pk	34.7	-95.2	-20.79	-45.72	-13	-32.72	H
7.545938	33.55	Pk	35.5	-95.2	-18.48	-44.63	-13	-31.63	V
7.560469	33.23	Pk	35.6	-95.2	-18.23	-44.60	-13	-31.60	H

10.4.3. LTE BAND 30 AND 5G NR n30

LIMITS

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

QPSK LTE BAND 30 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/25/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE30 QPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.602656	27.60	RMS	34.3	-95.2	-29.37	-62.67	-40	-22.67	V
4.619063	27.36	RMS	34.3	-95.2	-29.07	-62.61	-40	-22.61	H
6.916406	24.84	RMS	35.7	-95.2	-26.41	-61.07	-40	-21.07	V
6.937969	24.92	RMS	35.7	-95.2	-26.36	-60.94	-40	-20.94	H
9.202969	22.97	RMS	36.1	-95.2	-23.57	-59.70	-40	-19.70	V
9.242344	22.97	RMS	36.2	-95.2	-23.71	-59.74	-40	-19.74	H

BPSK 5G NR 30 (10.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/30/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	n30 BPSK 10MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.611094	27.4	RMS	34.3	-95.2	-29.27	-62.77	-40	-22.77	V
4.628438	26.78	RMS	34.3	-95.2	-28.96	-63.08	-40	-23.08	H
6.871406	24.72	RMS	35.7	-95.2	-26.51	-61.29	-40	-21.29	V
6.91875	24.58	RMS	35.7	-95.2	-26.39	-61.31	-40	-21.31	H
9.223125	22.97	RMS	36.1	-95.2	-23.75	-59.88	-40	-19.88	V
9.241875	22.83	RMS	36.2	-95.2	-23.71	-59.88	-40	-19.88	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 (20MHZ BANDWIDTH)

Project #:	4790592262
Date:	03/6/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	LTE41 QPSK 20MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2506MHz										
5.027344	35.10	Pk	34.2	.7	-95.2	-23.49	-48.69	-25	-23.69	H
5.041875	35.07	Pk	34.3	.6	-95.2	-23.26	-48.49	-25	-23.49	V
7.544531	33.84	Pk	35.5	.3	-95.2	-19.48	-45.04	-25	-20.04	H
7.553906	32.39	Pk	35.6	.3	-95.2	-19.52	-46.43	-25	-21.43	V
10.000313	31.84	Pk	36.9	.5	-95.2	-16.61	-42.57	-25	-17.57	V
10.018125	31.10	Pk	36.9	.6	-95.2	-16.89	-43.49	-25	-18.49	H
Mid Channel, 2593MHz										
5.197031	35.10	Pk	34.5	.8	-95.2	-23.05	-47.85	-25	-22.85	H
5.202188	34.45	Pk	34.5	.9	-95.2	-23.05	-48.4	-25	-23.4	V
7.802344	32.74	Pk	35.6	.4	-95.2	-19.1	-45.56	-25	-20.56	H
7.817813	31.62	Pk	35.6	.4	-95.2	-19.07	-46.65	-25	-21.65	V
10.336875	32.21	Pk	37.2	.6	-95.2	-16.41	-41.60	-25	-16.60	H
10.375781	31.46	Pk	37.3	.8	-95.2	-16.37	-42.01	-25	-17.01	V
High Channel, 2680MHz										
5.357813	34.9	Pk	34.6	.5	-95.2	-23.23	-48.43	-25	-23.43	H
5.367188	33.26	Pk	34.6	.5	-95.2	-23.14	-49.98	-25	-24.98	V
8.050313	33.42	Pk	35.7	.4	-95.2	-18.75	-44.43	-25	-19.43	H
8.054063	31.78	Pk	35.7	.4	-95.2	-18.8	-46.12	-25	-21.12	V
10.777500	32.15	Pk	37.5	.9	-95.2	-15.91	-40.56	-25	-15.56	H
10.794844	32.03	Pk	37.4	.8	-95.2	-15.94	-40.91	-25	-15.91	V

BPSK 5G NR n41 (100.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	03/10/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	n41 BPSK 100MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2546MHz										
5.111250	35.98	Pk	34.3	.8	-95.2	-23.26	-47.38	-25	-22.38	H
5.123906	36.32	Pk	34.3	.8	-95.2	-23.29	-47.07	-25	-22.07	V
7.650000	33.37	Pk	35.6	.3	-95.2	-18.86	-44.79	-25	-19.79	V
7.659375	33.17	Pk	35.5	.3	-95.2	-18.92	-45.15	-25	-20.15	H
10.167656	32.80	Pk	37.0	.5	-95.2	-16.81	-41.71	-25	-16.71	H
10.202344	32.20	Pk	37.1	.8	-95.2	-16.89	-41.99	-25	-16.99	V
Mid Channel, 2593MHz										
5.163281	38.45	Pk	34.7	.7	-95.2	-30.49	-51.84	-25	-26.84	V
5.184844	37.19	Pk	34.7	.8	-95.2	-30.61	-53.12	-25	-28.12	H
7.753125	34.54	Pk	35.9	.3	-95.2	-27.01	-51.47	-25	-26.47	V
7.770469	35.16	Pk	35.9	.3	-95.2	-26.98	-50.82	-25	-25.82	H
10.365000	34.81	Pk	37.7	.8	-95.2	-25.19	-47.08	-25	-22.08	V
10.376250	34.05	Pk	37.7	.8	-95.2	-24.96	-47.61	-25	-22.61	H
High Channel, 2640MHz										
5.249531	34.33	Pk	34.6	.5	-95.2	-23.25	-49.02	-25	-24.02	V
5.264531	34.25	Pk	34.6	.3	-95.2	-23.34	-49.39	-25	-24.39	H
7.863750	32.8	Pk	35.6	.3	-95.2	-19.01	-45.51	-25	-20.51	V
7.938750	33.55	Pk	35.6	.2	-95.2	-19.07	-44.92	-25	-19.92	H
10.546875	32.35	Pk	37.3	.6	-95.2	-16.5	-41.45	-25	-16.45	H
10.552969	32.15	Pk	37.3	.6	-95.2	-16.46	-41.61	-25	-16.61	V

10.4.5. LTE BAND 48 AND 5G NR n48

LIMITS

FCC: §96.41
(e) 3.5 GHz Emissions and Interference Limits—
(2) Additional protection levels. Notwithstanding paragraph (d)(1) of this section, the conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed −40dBm/MHz.

QPSK LTE BAND 48 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/25/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE48 QPSK 20MHz
Chamber #:	01-RDE-5

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3560MHz										
7.111777	28.06	RMS	35.7	.5	-95.2	-27.22	-58.16	-40	-18.16	V
7.128794	27.14	RMS	35.7	.5	-95.2	-27.14	-59.00	-40	-19.00	H
10.687866	24.44	RMS	37.8	.6	-95.2	-24.35	-56.71	-40	-16.71	V
10.702874	24.44	RMS	37.7	.5	-95.2	-24.26	-56.82	-40	-16.82	H
14.222868	24.31	RMS	39.3	.8	-95.2	-20.04	-50.83	-40	-10.83	H
14.222990	24.79	RMS	39.3	.8	-95.2	-20.02	-50.33	-40	-10.33	V
Mid Channel, 3625MHz										
7.196809	26.87	RMS	35.8	.6	-95.2	-27.03	-58.96	-40	-18.96	V
7.258100	28.92	RMS	35.8	.6	-95.2	-26.86	-56.74	-40	-16.74	H
10.854309	25.52	RMS	37.7	.5	-95.2	-24.01	-55.49	-40	-15.49	V
10.872535	27.09	RMS	37.7	.5	-95.2	-24.05	-53.96	-40	-13.96	H
14.52777	24.91	RMS	39.7	.8	-95.2	-19.62	-49.41	-40	-9.41	H
14.532083	25.56	RMS	39.8	.8	-95.2	-19.64	-48.68	-40	-8.68	V
High Channel, 3690MHz										
7.366402	27.67	RMS	35.8	.7	-95.2	-27.05	-58.08	-40	-18.08	V
7.382753	27.34	RMS	35.8	.7	-95.2	-27	-58.36	-40	-18.36	H
10.98889	25.81	RMS	37.7	.6	-95.2	-23.37	-54.46	-40	-14.46	V
11.041598	25.85	RMS	37.8	.6	-95.2	-23.65	-54.6	-40	-14.60	H
14.731112	25.54	RMS	40.0	.9	-95.2	-19.82	-48.58	-40	-8.58	V
14.798122	23.61	RMS	40.2	1	-95.2	-19.86	-50.25	-40	-10.25	H

BPSK 5G NR n48 (40.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/30/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	n48 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3570MHz										
7.072500	24.49	RMS	35.7	.6	-95.2	-27.38	-61.79	-40	-21.79	V
7.123613	24.7	RMS	35.7	.5	-95.2	-27.24	-61.54	-40	-21.54	H
10.716469	22.49	RMS	37.7	.5	-95.2	-24.01	-58.52	-40	-18.52	H
10.742906	22.42	RMS	37.7	.6	-95.2	-24.04	-58.52	-40	-18.52	V
14.215913	20.31	RMS	39.2	.8	-95.2	-20.17	-55.06	-40	-15.06	V
14.267906	20.31	RMS	39.4	.8	-95.2	-20.16	-54.85	-40	-14.85	H
Mid Channel, 3625MHz										
7.215263	24.42	RMS	35.8	.6	-95.2	-27.08	-61.46	-40	-21.46	V
7.247428	24.65	RMS	35.8	.6	-95.2	-26.82	-60.97	-40	-20.97	H
10.842488	22.30	RMS	37.7	.5	-95.2	-24.12	-58.82	-40	-18.82	V
10.889634	22.19	RMS	37.7	.6	-95.2	-23.99	-58.7	-40	-18.70	H
14.487338	19.45	RMS	39.7	.7	-95.2	-19.71	-55.06	-40	-15.06	H
14.507606	19.26	RMS	39.7	.8	-95.2	-19.96	-55.4	-40	-15.40	V
High Channel, 3680MHz										
7.314403	24.49	RMS	35.8	.5	-95.2	-26.84	-61.25	-40	-21.25	V
7.364194	24.34	RMS	35.8	.7	-95.2	-27.04	-61.40	-40	-21.40	H
11.028872	21.95	RMS	37.8	.6	-95.2	-23.62	-58.47	-40	-18.47	V
11.057513	22.15	RMS	37.8	.6	-95.2	-23.51	-58.16	-40	-18.16	H
14.699719	19.35	RMS	40.0	.9	-95.2	-19.83	-54.78	-40	-14.78	V
14.719547	19.49	RMS	40.0	.9	-95.2	-19.99	-54.80	-40	-14.80	H

10.4.6. LTE BAND 66 AND 5G NR n66

LIMITS

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

QPSK LTE BAND 66 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	3/7/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	LTE66 QPSK 20MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.439219	35.66	Pk	32.5	-95.2	-25.69	-52.73	-13	-39.73	H
3.441563	34.90	Pk	32.5	-95.2	-25.58	-53.38	-13	-40.38	V
5.178750	34.46	Pk	34.5	-95.2	-23.05	-49.29	-13	-36.29	H
5.188594	35.15	Pk	34.5	-95.2	-23.06	-48.61	-13	-35.61	V
6.847500	33.81	Pk	35.5	-95.2	-19.86	-45.75	-13	-32.75	V
6.855938	33.58	Pk	35.5	-95.2	-19.94	-46.06	-13	-33.06	H
Mid Channel, 1745MHz									
3.480938	35.52	Pk	32.5	-95.2	-24.96	-52.14	-13	-39.14	H
3.483750	34.30	Pk	32.5	-95.2	-24.78	-53.18	-13	-40.18	V
5.208281	34.44	Pk	34.5	-95.2	-22.93	-49.19	-13	-36.19	V
5.216719	35.35	Pk	34.5	-95.2	-22.91	-48.26	-13	-35.26	H
6.949219	33.15	Pk	35.5	-95.2	-19.37	-45.92	-13	-32.92	H
6.958594	32.17	Pk	35.4	-95.2	-19.25	-46.88	-13	-33.88	V
High Channel, 1770MHz									
3.529219	34.53	Pk	32.6	-95.2	-24.15	-52.22	-13	-39.22	V
3.539531	34.70	Pk	32.7	-95.2	-24.05	-51.85	-13	-38.85	H
5.317031	33.18	Pk	34.6	-95.2	-21.78	-49.20	-13	-36.20	V
5.328750	33.43	Pk	34.6	-95.2	-21.74	-48.91	-13	-35.91	H
7.066406	32.33	Pk	35.5	-95.2	-18.64	-46.01	-13	-33.01	H
7.086094	33.27	Pk	35.5	-95.2	-19.12	-45.55	-13	-32.55	V

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	3/16/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	n66 BPSK 40MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1730MHz									
3.425625	35.70	Pk	32.6	-95.2	-25.74	-52.64	-13	-39.64	V
3.435000	36.25	Pk	32.6	-95.2	-25.69	-52.04	-13	-39.04	H
5.175938	35.98	Pk	34.4	-95.2	-23.09	-47.91	-13	-34.91	H
5.187656	35.37	Pk	34.5	-95.2	-23.04	-48.37	-13	-35.37	V
6.948281	34.55	Pk	35.5	-95.2	-19.39	-44.54	-13	-31.54	V
6.949688	33.69	Pk	35.5	-95.2	-19.36	-45.37	-13	-32.37	H
Mid Channel, 1745MHz									
3.497109	35.18	Pk	32.6	-95.2	-24.52	-51.94	-13	-38.94	V
3.502031	36.81	Pk	32.5	-95.2	-24.49	-50.38	-13	-37.38	H
5.236875	35.49	Pk	34.5	-95.2	-22.52	-47.73	-13	-34.73	V
5.245781	35.07	Pk	34.6	-95.2	-22.46	-47.99	-13	-34.99	H
6.970781	34.36	Pk	35.4	-95.2	-19.25	-44.69	-13	-31.69	H
6.986250	33.82	Pk	35.5	-95.2	-19.01	-44.89	-13	-31.89	V
High Channel, 1760MHz									
3.526875	36.43	Pk	32.6	-95.2	-24.22	-50.39	-13	-37.39	H
3.536719	35.44	Pk	32.7	-95.2	-24.03	-51.09	-13	-38.09	V
5.290781	35.75	Pk	34.6	-95.2	-22.10	-46.95	-13	-33.95	V
5.296406	34.54	Pk	34.6	-95.2	-21.95	-48.01	-13	-35.01	H
7.027969	33.89	Pk	35.5	-95.2	-18.63	-44.44	-13	-31.44	H
7.052344	33.49	Pk	35.5	-95.2	-18.76	-44.97	-13	-31.97	V

10.4.7. 5G NR n70

LIMITS

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

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

Project #:	4790592262
Date:	3/17/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	N70 BPSK 15MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 1702.5MHz									
3.402188	36.97	Pk	32.5	-95.2	-25.77	-51.50	-13	-38.50	H
3.412500	36.18	Pk	32.6	-95.2	-25.69	-52.11	-13	-39.11	V
5.105156	35.75	Pk	34.4	-95.2	-22.04	-47.09	-13	-34.09	V
5.122031	36.38	Pk	34.3	-95.2	-22.24	-46.76	-13	-33.76	H
6.815625	33.09	Pk	35.5	-95.2	-19.56	-46.17	-13	-33.17	V
6.817500	33.23	Pk	35.5	-95.2	-19.59	-46.06	-13	-33.06	H

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

LIMITS

FCC: §27.53
Emission limits
(n) 3.45 GHz Service. The following emission limits apply to stations transmitting in the 3450-3550 MHz band:
(2) For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz.

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	3/17/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	n77 BPSK 100MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 3500MHz										
7.000238	26.66	RMS	35.5	.5	-95.2	-20.23	-52.77	-13	-39.77	H
7.000238	27.50	RMS	35.5	.5	-95.2	-20.23	-51.93	-13	-38.93	V
10.500122	25.99	RMS	37.4	.6	-95.2	-16.53	-47.74	-13	-34.74	H
10.500122	24.80	RMS	37.4	.6	-95.2	-16.53	-48.93	-13	-35.93	V
14.000447	25.70	RMS	39.0	.7	-95.2	-14.90	-44.70	-13	-31.70	H
14.000447	25.73	RMS	39.0	.7	-95.2	-14.90	-44.67	-13	-31.67	V

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

LIMITS

FCC: §27.53
(l) 3.7 GHz Service.The following emission limits apply to stations transmitting in the 3700-3980 MHz band:
(2) For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz.

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	3/16/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	n77 BPSK 100MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.532000	33.36	Pk	35.5	-95.2	-18.79	-45.13	-13	-32.13	H
7.559250	32.84	Pk	35.6	-95.2	-19.21	-45.97	-13	-32.97	V
11.25000	32.01	Pk	37.8	-95.2	-15.38	-40.77	-13	-27.77	H
11.25300	32.82	Pk	37.9	-95.2	-15.38	-39.86	-13	-26.86	V
15.00250	32.51	Pk	39.9	-95.2	-14.46	-37.25	-13	-24.25	H
15.04400	32.59	Pk	39.9	-95.2	-14.25	-36.96	-13	-23.96	V
Mid Channel, 3840MHz									
7.650500	33.17	Pk	35.6	-95.2	-18.72	-45.15	-13	-32.15	V
7.655500	34.09	Pk	35.6	-95.2	-18.62	-44.13	-13	-31.13	H
11.52350	34.23	Pk	38.3	-95.2	-15.61	-38.28	-13	-25.28	H
11.52600	32.33	Pk	38.3	-95.2	-15.61	-40.18	-13	-27.18	V
15.38800	32.68	Pk	40.0	-95.2	-14.34	-36.86	-13	-23.86	H
15.42850	32.74	Pk	40.0	-95.2	-13.76	-36.22	-13	-23.22	V
High Channel, 3930MHz									
7.889000	33.53	Pk	35.6	-95.2	-18.90	-44.97	-13	-31.97	H
7.891500	32.86	Pk	35.6	-95.2	-18.89	-45.63	-13	-32.63	V
11.77900	32.96	Pk	38.6	-95.2	-15.29	-38.93	-13	-25.93	H
11.77950	33.19	Pk	38.6	-95.2	-15.29	-38.70	-13	-25.70	V
15.71700	33.39	Pk	40.1	-95.2	-13.78	-35.49	-13	-22.49	H
15.72100	32.92	Pk	40.1	-95.2	-13.90	-36.08	-13	-23.08	V

10.5. FIELD STRENGTH OF SPURIOUS RADIATION, ANT7

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

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

RESULTS

10.5.1. LTE BAND 48 AND 5G NR n48

LIMITS

FCC: §96.41
(e) 3.5 GHz Emissions and Interference Limits—
(2) Additional protection levels. Notwithstanding paragraph (d)(1) of this section, the conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed −40dBm/MHz

QPSK LTE BAND 48 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/25/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE48 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3560MHz										
7.102173	30.05	RMS	35.7	.5	-95.2	-27.23	-56.18	-40	-16.18	V
7.122252	28.31	RMS	35.7	.5	-95.2	-27.15	-57.84	-40	-17.84	H
10.688101	27.75	RMS	37.8	.6	-95.2	-24.35	-53.40	-40	-13.40	V
10.700979	26.32	RMS	37.7	.5	-95.2	-24.32	-55.00	-40	-15.00	H
14.20363	24.35	RMS	39.2	.7	-95.2	-20.18	-51.13	-40	-11.13	V
14.252802	24.15	RMS	39.3	.8	-95.2	-20.20	-51.15	-40	-11.15	H
Mid Channel, 3625MHz										
7.225348	29.20	RMS	35.8	.5	-95.2	-27.06	-56.76	-40	-16.76	V
7.253308	28.77	RMS	35.8	.6	-95.2	-26.84	-56.87	-40	-16.87	H
10.861494	26.69	RMS	37.7	.4	-95.2	-24.02	-54.43	-40	-14.43	H
10.889937	26.82	RMS	37.7	.6	-95.2	-23.99	-54.07	-40	-14.07	V
14.489765	23.98	RMS	39.7	.7	-95.2	-19.69	-50.51	-40	-10.51	V
14.503884	23.90	RMS	39.7	.8	-95.2	-19.98	-50.78	-40	-10.78	H
High Channel, 3690MHz										
7.304102	29.08	RMS	35.8	.6	-95.2	-26.96	-56.68	-40	-16.68	V
7.345844	28.84	RMS	35.8	.6	-95.2	-27.12	-57.08	-40	-17.08	H
10.987536	25.15	RMS	37.7	.6	-95.2	-23.52	-55.27	-40	-15.27	V
11.005858	26.32	RMS	37.8	.7	-95.2	-23.61	-53.99	-40	-13.99	H
14.700099	24.05	RMS	40.0	.9	-95.2	-19.80	-50.05	-40	-10.05	V
14.782563	26.25	RMS	40.2	.9	-95.2	-19.96	-47.81	-40	-7.81	H

BPSK 5G NR n48 (40.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/25/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	n48 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3570MHz										
7.122731	24.47	RMS	35.7	.5	-95.2	-27.20	-61.73	-40	-21.73	V
7.143000	24.24	RMS	35.7	.6	-95.2	-27.18	-61.84	-40	-21.84	H
10.725281	22.46	RMS	37.7	.5	-95.2	-24.02	-58.56	-40	-18.56	H
10.725722	22.42	RMS	37.7	.5	-95.2	-24.03	-58.61	-40	-18.61	V
14.245875	20.23	RMS	39.3	.8	-95.2	-20.30	-55.17	-40	-15.17	V
14.292141	20.47	RMS	39.4	.7	-95.2	-20.44	-55.07	-40	-15.07	H
Mid Channel, 3625MHz										
7.194994	24.62	RMS	35.8	.6	-95.2	-27.06	-61.24	-40	-21.24	V
7.246988	24.30	RMS	35.8	.6	-95.2	-26.83	-61.33	-40	-21.33	H
10.853063	22.24	RMS	37.7	.5	-95.2	-24.14	-58.9	-40	-18.90	H
10.860553	22.29	RMS	37.7	.4	-95.2	-24.00	-58.81	-40	-18.81	V
14.452969	19.52	RMS	39.7	.8	-95.2	-19.69	-54.87	-40	-14.87	V
14.498353	19.54	RMS	39.7	.8	-95.2	-19.86	-55.02	-40	-15.02	H
High Channel, 3680MHz										
7.273425	24.24	RMS	35.8	.5	-95.2	-26.94	-61.6	-40	-21.60	V
7.344366	24.29	RMS	35.8	.6	-95.2	-27.13	-61.64	-40	-21.64	H
11.010806	22.05	RMS	37.8	.6	-95.2	-23.70	-58.45	-40	-18.45	V
11.064563	22.24	RMS	37.8	.6	-95.2	-23.45	-58.01	-40	-18.01	H
14.742900	19.73	RMS	40.1	.8	-95.2	-19.57	-54.14	-40	-14.14	V
14.745984	19.63	RMS	40.1	.8	-95.2	-19.45	-54.12	-40	-14.12	H

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

LIMITS

FCC: §27.53
Emission limits
(n) 3.45 GHz Service. The following emission limits apply to stations transmitting in the 3450-3550 MHz band:
(2) For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz.

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	2/27/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	N77 BPSK 100MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 3500MHz										
6.969834	29.10	RMS	35.4	.4	-95.2	-20.30	-50.60	-13	-37.60	V
6.984375	29.78	RMS	35.5	.4	-95.2	-20.19	-49.71	-13	-36.71	H
10.484700	27.98	RMS	37.3	.6	-95.2	-16.45	-45.77	-13	-32.77	V
10.508934	28.25	RMS	37.3	.6	-95.2	-16.59	-45.64	-13	-32.64	H
14.012344	28.79	RMS	39.0	.7	-95.2	-14.92	-41.63	-13	-28.63	H
14.038341	29.32	RMS	39.1	.8	-95.2	-15.28	-41.26	-13	-28.26	V

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

LIMITS

FCC: §27.53
(l) 3.7 GHz Service.The following emission limits apply to stations transmitting in the 3700-3980 MHz band:
(2) For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz.

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	3/2/2023
Test Engineer:	27661
Configuration:	EUT only
Mode	N77 BPSK 100MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.508000	32.95	Pk	35.5	-95.2	-18.50	-45.25	-13	-32.25	V
7.522000	33.33	Pk	35.5	-95.2	-18.51	-44.88	-13	-31.88	H
11.264000	31.77	Pk	37.9	-95.2	-15.27	-40.80	-13	-27.80	V
11.274000	31.33	Pk	37.9	-95.2	-15.20	-41.17	-13	-28.17	H
14.956000	31.80	Pk	39.9	-95.2	-14.25	-37.75	-13	-24.75	V
14.987000	32.38	Pk	39.9	-95.2	-14.35	-37.27	-13	-24.27	H
Mid Channel, 3840MHz									
7.671500	33.02	Pk	35.6	-95.2	-18.28	-44.86	-13	-31.86	V
7.675500	33.65	Pk	35.6	-95.2	-18.18	-44.13	-13	-31.13	H
11.503000	32.74	Pk	38.2	-95.2	-15.70	-39.96	-13	-26.96	V
11.504500	33.95	Pk	38.2	-95.2	-15.68	-38.73	-13	-25.73	H
15.353000	33.58	Pk	40.0	-95.2	-14.70	-36.32	-13	-23.32	H
15.353000	32.44	Pk	40.0	-95.2	-14.70	-37.46	-13	-24.46	V
High Channel, 3930MHz									
7.865500	33.31	Pk	35.6	-95.2	-18.96	-45.25	-13	-32.25	H
7.867000	33.27	Pk	35.6	-95.2	-18.93	-45.26	-13	-32.26	V
11.772500	32.24	Pk	38.7	-95.2	-15.28	-39.54	-13	-26.54	V
11.779500	32.42	Pk	38.6	-95.2	-15.29	-39.47	-13	-26.47	H
15.704000	32.33	Pk	40.2	-95.2	-13.79	-36.46	-13	-23.46	V
15.723500	32.88	Pk	40.1	-95.2	-13.91	-36.13	-13	-23.13	H

10.6. FIELD STRENGTH OF SPURIOUS RADIATION, ANT8

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

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

RESULT

10.6.1. LTE BAND 48 AND 5G NR n48

LIMITS

FCC: §96.41
(e) 3.5 GHz Emissions and Interference Limits—
(2) Additional protection levels. Notwithstanding paragraph (d)(1) of this section, the conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed −40dBm/MHz.

QPSK LTE BAND 48 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/25/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE 48 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3560MHz										
7.116266	27.91	RMS	35.7	.5	-95.2	-27.21	-58.30	-40	-18.30	H
7.136410	27.58	RMS	35.7	.6	-95.2	-27.16	-58.48	-40	-18.48	V
10.628641	26.23	RMS	37.8	.6	-95.2	-24.61	-55.18	-40	-15.18	V
10.671552	25.98	RMS	37.8	.6	-95.2	-24.47	-55.29	-40	-15.29	H
14.234168	23.24	RMS	39.3	.8	-95.2	-20.21	-52.07	-40	-12.07	V
14.239649	24.29	RMS	39.3	.8	-95.2	-20.32	-51.13	-40	-11.13	H
Mid Channel, 3625MHz										
7.369677	27.12	RMS	35.8	.7	-95.2	-26.96	-58.54	-40	-18.54	V
7.383473	28.73	RMS	35.8	.7	-95.2	-27	-56.97	-40	-16.97	H
11.066292	25.69	RMS	37.8	.6	-95.2	-23.43	-54.54	-40	-14.54	V
11.082118	25.68	RMS	37.8	.7	-95.2	-23.33	-54.35	-40	-14.35	H
14.728466	24.63	RMS	40	.9	-95.2	-19.76	-49.43	-40	-9.43	V
14.780605	24.62	RMS	40.2	.8	-95.2	-19.98	-49.56	-40	-9.56	H
High Channel, 3690MHz										
7.363086	28.02	RMS	35.8	.7	-95.2	-27.07	-57.75	-40	-17.75	V
7.389458	27.72	RMS	35.8	.7	-95.2	-27.02	-58.00	-40	-18.00	H
11.03146	26.04	RMS	37.8	.6	-95.2	-23.59	-54.35	-40	-14.35	V
11.064612	27.53	RMS	37.8	.6	-95.2	-23.45	-52.72	-40	-12.72	H
14.764168	23.24	RMS	40.1	.8	-95.2	-20.09	-51.15	-40	-11.15	V
14.82414	24.01	RMS	40.2	.8	-95.2	-20.1	-50.29	-40	-10.29	H

BPSK 5G NR n48 (40.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/26/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	N48 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m))	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3570MHz										
7.128900	24.58	RMS	35.7	.5	-95.2	-27.15	-61.57	-40	-21.57	V
7.161947	24.40	RMS	35.7	.6	-95.2	-27.09	-61.59	-40	-21.59	H
10.723959	22.49	RMS	37.7	.5	-95.2	-23.94	-58.45	-40	-18.45	H
10.780800	22.39	RMS	37.7	.6	-95.2	-23.92	-58.43	-40	-18.43	V
14.216353	20.49	RMS	39.2	.8	-95.2	-20.14	-54.85	-40	-14.85	V
14.296988	20.52	RMS	39.4	.6	-95.2	-20.51	-55.19	-40	-15.19	H
Mid Channel, 3625MHz										
7.233769	24.40	RMS	35.8	.5	-95.2	-27.01	-61.51	-40	-21.51	V
7.267256	24.50	RMS	35.8	.6	-95.2	-26.92	-61.22	-40	-21.22	H
10.876856	22.30	RMS	37.7	.5	-95.2	-24.17	-58.87	-40	-18.87	H
10.907259	22.04	RMS	37.7	.6	-95.2	-23.83	-58.69	-40	-18.69	V
14.400975	19.97	RMS	39.6	.8	-95.2	-19.57	-54.40	-40	-14.40	V
14.498794	19.57	RMS	39.7	.8	-95.2	-19.82	-54.95	-40	-14.95	H
High Channel, 3680MHz										
7.36155	24.32	RMS	35.8	.7	-95.2	-27.08	-61.46	-40	-21.46	V
7.376972	24.64	RMS	35.8	.7	-95.2	-26.88	-60.94	-40	-20.94	H
10.995384	21.96	RMS	37.7	.7	-95.2	-23.52	-58.36	-40	-18.36	V
11.044294	22.10	RMS	37.8	.6	-95.2	-23.54	-58.24	-40	-18.24	H
14.649928	19.52	RMS	39.9	.9	-95.2	-19.75	-54.63	-40	-14.63	V
14.712497	19.84	RMS	40.0	.9	-95.2	-19.97	-54.43	-40	-14.43	H

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

LIMITS

FCC: §27.53
Emission limits
(n) 3.45 GHz Service. The following emission limits apply to stations transmitting in the 3450-3550 MHz band:
(2) For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz.

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	3/17/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	N77 BPSK 100MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 3500MHz										
6.999797	27.34	RMS	35.5	.5	-95.2	-20.23	-52.09	-13	-39.09	H
6.999797	30.27	RMS	35.5	.5	-95.2	-20.23	-49.16	-13	-36.16	V
10.501003	26.34	RMS	37.4	.6	-95.2	-16.55	-47.41	-13	-34.41	H
10.501003	26.03	RMS	37.4	.6	-95.2	-16.55	-47.72	-13	-34.72	V
14.000006	25.73	RMS	39.0	.7	-95.2	-14.90	-44.67	-13	-31.67	H
14.000006	26.65	RMS	39.0	.7	-95.2	-14.90	-43.75	-13	-30.75	V

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

LIMITS

FCC: §27.53
(l) 3.7 GHz Service.The following emission limits apply to stations transmitting in the 3700-3980 MHz band:
(2) For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz.

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/25/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	N77 BPSK 100MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.495550	50.90	Pk	36.1	-95.2	-42.39	-50.59	-13	-37.59	V
7.501127	51.84	Pk	36.0	-95.2	-42.43	-49.79	-13	-36.79	H
11.242271	51.08	Pk	37.8	-95.2	-40.77	-47.09	-13	-34.09	V
11.267366	49.75	Pk	37.9	-95.2	-40.62	-48.17	-13	-35.17	H
15.000543	50.91	Pk	40.1	-95.2	-40.22	-44.41	-13	-31.41	V
15.022451	51.59	Pk	40.0	-95.2	-40.17	-43.78	-13	-30.78	H
Mid Channel, 3840MHz									
7.673605	51.22	Pk	36.0	-95.2	-42.05	-50.03	-13	-37.03	H
7.678385	50.57	Pk	35.9	-95.2	-42.16	-50.89	-13	-37.89	V
11.527477	50.69	Pk	38.2	-95.2	-40.78	-47.09	-13	-34.09	H
11.566912	50.39	Pk	38.3	-95.2	-40.70	-47.21	-13	-34.21	V
15.352669	51.58	Pk	40.4	-95.2	-39.68	-42.90	-13	-29.90	H
15.353067	51.36	Pk	40.3	-95.2	-39.68	-43.22	-13	-30.22	V
High Channel, 3930MHz									
7.673605	51.22	Pk	36	-95.2	-42.05	-50.03	-13	-37.03	H
7.678385	50.57	Pk	35.9	-95.2	-42.16	-50.89	-13	-37.89	V
11.527477	50.69	Pk	38.2	-95.2	-40.78	-47.09	-13	-34.09	H
11.566912	50.39	Pk	38.3	-95.2	-40.7	-47.21	-13	-34.21	V
15.352669	51.58	Pk	40.4	-95.2	-39.68	-42.9	-13	-29.9	H
15.353067	51.36	Pk	40.3	-95.2	-39.68	-43.22	-13	-30.22	V

10.7. FIELD STRENGTH OF SPURIOUS RADIATION, ANT9

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

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

RESULTS

10.7.1. LTE BAND 48 AND 5G NR n48

LIMITS

FCC: §96.41
(e) 3.5 GHz Emissions and Interference Limits—
(2) Additional protection levels. Notwithstanding paragraph (d)(1) of this section, the conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed −40dBm/MHz.

QPSK LTE BAND 48 (20.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/25/2022
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE48 QPSK 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3560MHz										
7.195875	25.13	RMS	35.8	.6	-95.2	-27.02	-60.69	-40	-20.69	V
7.246988	24.9	RMS	35.8	.6	-95.2	-26.83	-60.73	-40	-20.73	H
10.871569	22.38	RMS	37.7	.4	-95.2	-24.1	-58.82	-40	-18.82	V
10.885669	22.21	RMS	37.7	.5	-95.2	-24.04	-58.83	-40	-18.83	H
14.396569	20.01	RMS	39.6	.8	-95.2	-19.73	-54.52	-40	-14.52	V
14.493066	24.86	RMS	39.7	.7	-95.2	-19.95	-52.90	-40	-13.89	H
Mid Channel, 3625MHz										
7.195875	25.30	RMS	35.8	.6	-95.2	-27.02	-60.52	-40	-20.52	V
7.229363	24.81	RMS	35.8	.5	-95.2	-27.05	-61.14	-40	-21.14	H
10.838522	22.37	RMS	37.7	.6	-95.2	-24.20	-58.73	-40	-18.73	V
10.877297	22.41	RMS	37.7	.5	-95.2	-24.16	-58.75	-40	-18.75	H
14.400975	20.08	RMS	39.6	.8	-95.2	-19.57	-54.29	-40	-14.29	V
14.487778	19.73	RMS	39.7	.7	-95.2	-19.73	-54.80	-40	-14.80	H
High Channel, 3690MHz										
7.375209	24.98	RMS	35.8	.7	-95.2	-27.06	-60.78	-40	-20.78	V
7.382700	25.05	RMS	35.8	.7	-95.2	-27.01	-60.66	-40	-20.66	H
11.024906	22.07	RMS	37.8	.6	-95.2	-23.58	-58.31	-40	-18.31	V
11.059716	22.32	RMS	37.8	.6	-95.2	-23.41	-57.89	-40	-17.89	H
14.686500	19.71	RMS	40.0	.9	-95.2	-19.84	-54.43	-40	-14.43	V
14.745103	19.82	RMS	40.1	.8	-95.2	-19.55	-54.03	-40	-14.03	H

BPSK 5G NR n48 (40.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	5/25/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	N48 BPSK 40MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3570MHz										
7.105988	24.46	RMS	35.7	.5	-95.2	-27.27	-61.81	-40	-21.81	V
7.131984	24.47	RMS	35.7	.5	-95.2	-27.12	-61.65	-40	-21.65	H
10.654341	22.93	RMS	37.8	.6	-95.2	-24.43	-58.30	-40	-18.30	V
10.721316	22.49	RMS	37.7	.5	-95.2	-23.96	-58.47	-40	-18.47	H
14.250281	20.30	RMS	39.3	.8	-95.2	-20.17	-54.97	-40	-14.97	V
14.268788	20.37	RMS	39.4	.8	-95.2	-20.22	-54.85	-40	-14.85	H
Mid Channel, 3625MHz										
7.264613	24.49	RMS	35.8	.6	-95.2	-26.91	-61.22	-40	-21.22	H
7.268138	24.42	RMS	35.8	.6	-95.2	-26.92	-61.30	-40	-21.30	V
10.835438	22.27	RMS	37.7	.6	-95.2	-24.17	-58.80	-40	-18.80	V
10.85835	22.32	RMS	37.7	.4	-95.2	-24.07	-58.85	-40	-18.85	H
14.460459	19.56	RMS	39.7	.7	-95.2	-19.48	-54.72	-40	-14.72	V
14.511572	19.48	RMS	39.7	.8	-95.2	-20.01	-55.23	-40	-15.23	H
High Channel, 3680MHz										
7.316166	30.03	Pk	35.8	.5	-95.2	-26.89	-55.76	-40	-20.56	V
7.354500	24.25	RMS	35.8	.7	-95.2	-27.15	-61.60	-40	-21.60	H
11.005519	21.98	RMS	37.8	.7	-95.2	-23.61	-58.33	-40	-18.33	V
11.038125	21.93	RMS	37.8	.6	-95.2	-23.47	-58.34	-40	-18.34	H
14.692228	19.63	RMS	40	.9	-95.2	-19.74	-54.41	-40	-14.41	V
14.727038	19.70	RMS	40	.9	-95.2	-19.89	-54.49	-40	-14.49	H

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

LIMITS

FCC: §27.53
Emission limits
(n) 3.45 GHz Service. The following emission limits apply to stations transmitting in the 3450-3550 MHz band:
(2) For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz.

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	3/17/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	n77 BPSK 100MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl (dB	208398 3400-3800MHz BRF	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 3500MHz										
6.999797	27.57	RMS	35.5	.5	-95.2	-20.23	-51.86	-13	-38.86	H
6.999797	27.31	RMS	35.5	.5	-95.2	-20.23	-52.12	-13	-39.12	V
10.501444	27.80	RMS	37.4	.6	-95.2	-16.56	-45.96	-13	-32.96	V
10.501884	27.30	RMS	37.4	.6	-95.2	-16.57	-46.47	-13	-33.47	H
14.000447	25.81	RMS	39.0	.7	-95.2	-14.90	-44.59	-13	-31.59	H
14.000447	25.73	RMS	39.0	.7	-95.2	-14.90	-44.67	-13	-31.67	V

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

LIMITS

FCC: §27.53
(l) 3.7 GHz Service.The following emission limits apply to stations transmitting in the 3700-3980 MHz band:
(2) For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz.

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	4790592262
Date:	3/16/2023
Test Engineer:	45258
Configuration:	EUT only
Mode	n77 BPSK 100MHz
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.500000	31.68	Pk	35.5	-95.2	-18.44	-46.46	-13	-33.46	H
7.500000	30.98	Pk	35.5	-95.2	-18.44	-47.16	-13	-34.16	V
11.25000	32.03	Pk	37.8	-95.2	-15.38	-40.75	-13	-27.75	H
11.25000	33.71	Pk	37.8	-95.2	-15.38	-39.07	-13	-26.07	V
14.99950	31.51	Pk	39.9	-95.2	-14.42	-38.21	-13	-25.21	H
15.00000	30.06	Pk	39.9	-95.2	-14.42	-39.66	-13	-26.66	V
Mid Channel, 3840MHz									
7.683500	31.57	Pk	35.6	-95.2	-18.01	-46.04	-13	-33.04	H
7.683500	33.23	Pk	35.6	-95.2	-18.01	-44.38	-13	-31.38	V
11.52050	30.49	Pk	38.3	-95.2	-15.63	-42.04	-13	-29.04	H
11.52050	30.07	Pk	38.3	-95.2	-15.63	-42.46	-13	-29.46	V
15.35950	31.91	Pk	39.9	-95.2	-14.63	-38.02	-13	-25.02	H
15.36000	30.67	Pk	39.9	-95.2	-14.61	-39.24	-13	-26.24	V
High Channel, 3930MHz									
7.860500	31.84	Pk	35.6	-95.2	-18.99	-46.75	-13	-33.75	H
7.860500	29.57	Pk	35.6	-95.2	-18.99	-49.02	-13	-36.02	V
11.79050	30.56	Pk	38.7	-95.2	-15.41	-41.35	-13	-28.35	V
11.79100	30.06	Pk	38.7	-95.2	-15.41	-41.85	-13	-28.85	H
15.72000	31.31	Pk	40.1	-95.2	-13.87	-37.66	-13	-24.66	H
15.72000	29.12	Pk	40.1	-95.2	-13.87	-39.85	-13	-26.85	V

11. SETUP PHOTOS

Please refer to 14523744-EP1V1 Setup Photo Report for setup photos.

END OF REPORT