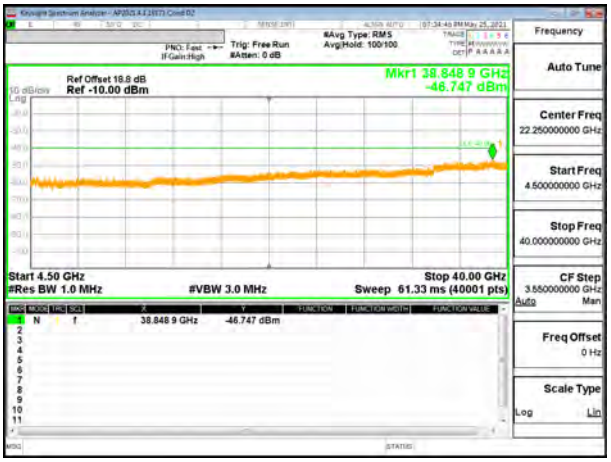
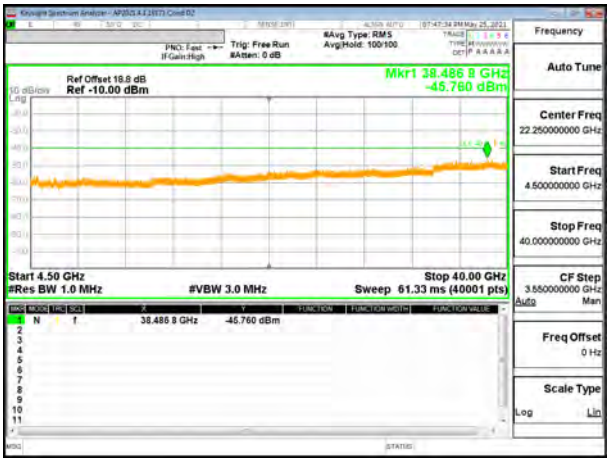
LTE B48 5MHz QPSK High Channel RB1-0 (30M to 4.5G)



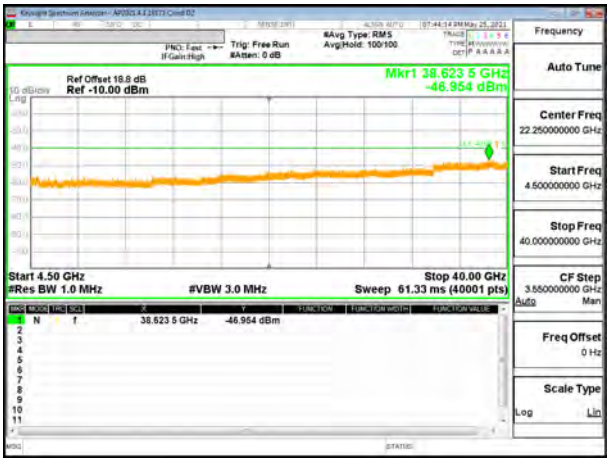
LTE B48 5MHz QPSK High Channel RB1-0 (4.5G to 40G)

LTE B48 10MHz QPSK Low Channel RB1-0 (30M to 4.5G)



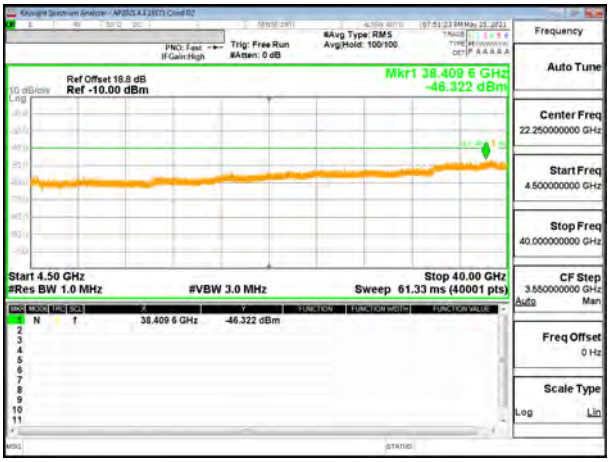
LTE B48 10MHz QPSK Low Channel RB1-0 (4.5G to 40G)

LTE B48 10MHz QPSK Mid Channel RB1-0 (30M to 4.5G)



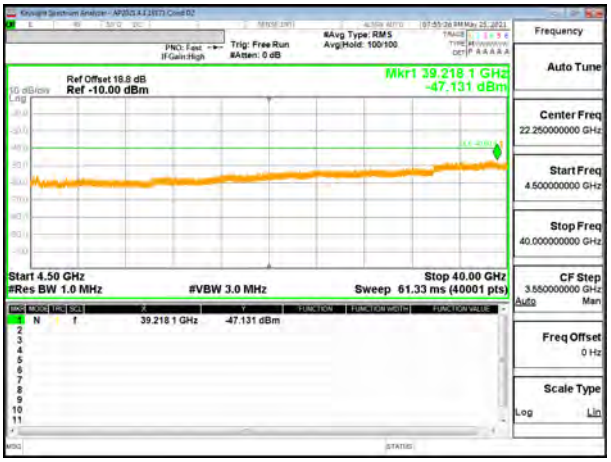
LTE B48 10MHz QPSK Middle Channel RB1-0 (4.5G to 40G)

LTE B48 10MHz QPSK High Channel RB1-0 (30M to 4.5G)



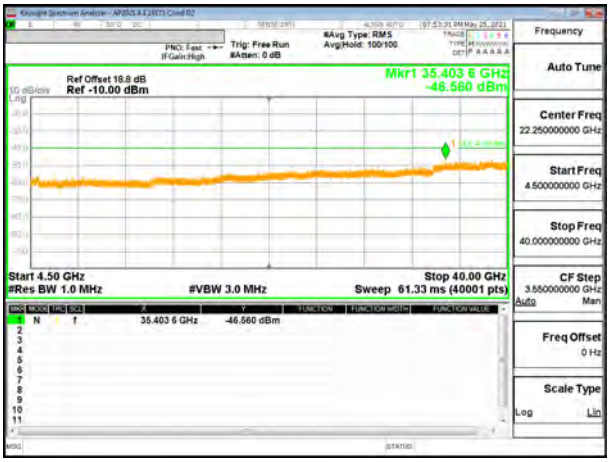
LTE B48 10MHz QPSK High Channel RB1-0 (4.5G to 40G)

LTE B48 15MHz QPSK Low Channel RB1-0 (30M to 4.5G)



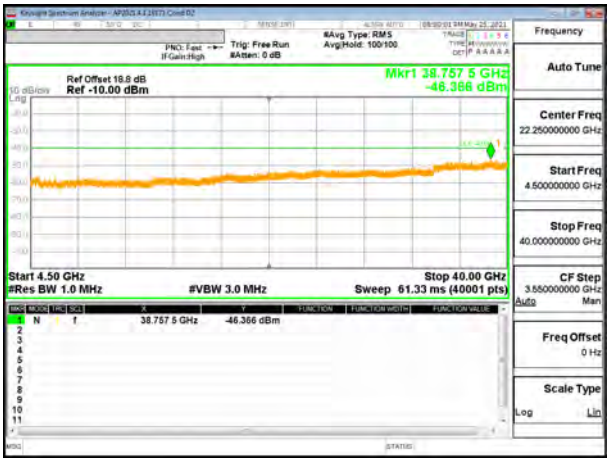
LTE B48 15MHz QPSK Low Channel RB1-0 (4.5G to 40G)

LTE B48 15MHz QPSK Mid Channel RB1-0 (30M to 4.5G)



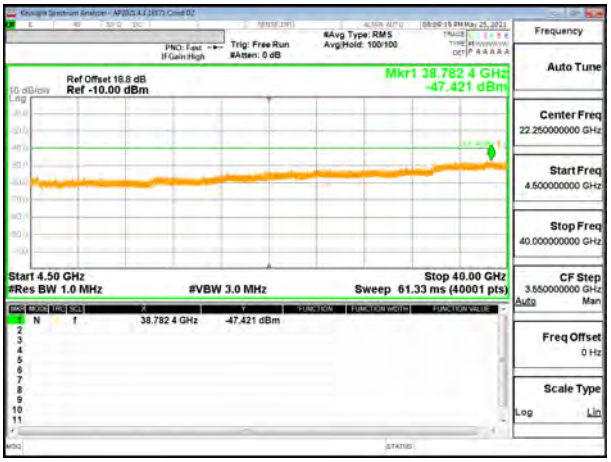
LTE B48 15MHz QPSK Middle Channel RB1-0 (4.5G to 40G)

LTE B48 15MHz QPSK High Channel RB1-0 (30M to 4.5G)



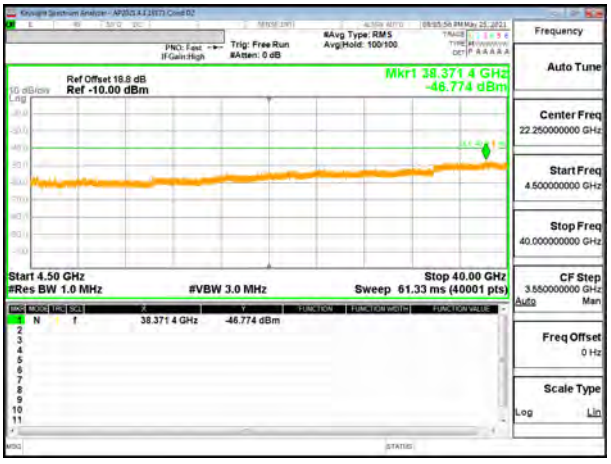
LTE B48 15MHz QPSK High Channel RB1-0 (4.5G to 40G)

LTE B48 20MHz QPSK Low Channel RB1-0 (30M to 4.5G)



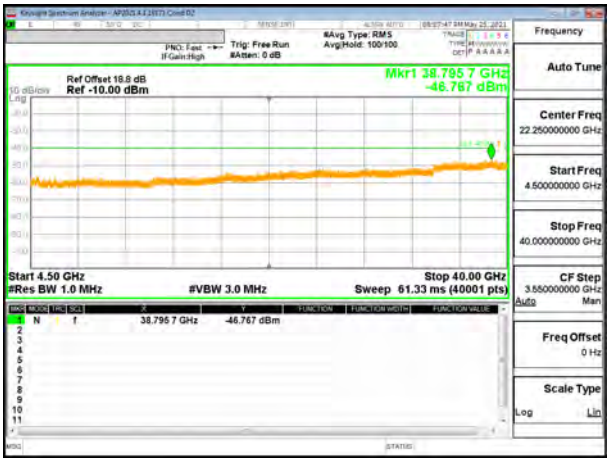
LTE B48 20MHz QPSK Low Channel RB1-0 (4.5G to 40G)

LTE B48 20MHz QPSK Mid Channel RB1-0 (30M to 4.5G)



LTE B48 20MHz QPSK Middle Channel RB1-0 (4.5G to 40G)

LTE B48 20MHz QPSK High Channel RB1-0 (30M to 4.5G)



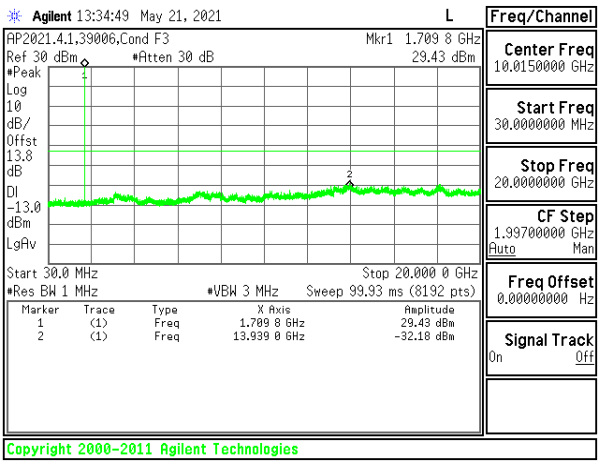
LTE B48 20MHz QPSK High Channel RB1-0 (4.5G to 40G)

9.3.13. LTE BAND 66 AND 5G NR n66

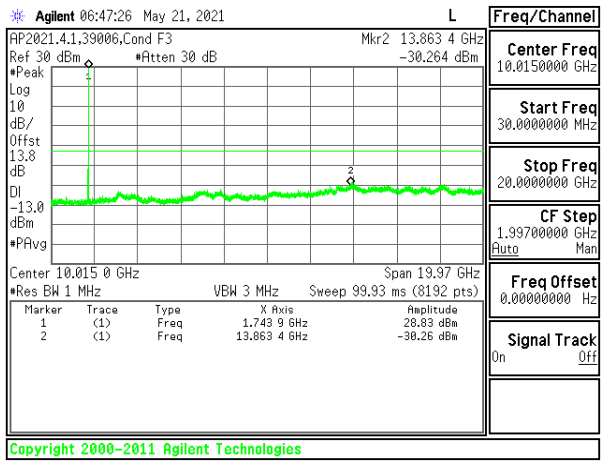
LIMITS

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

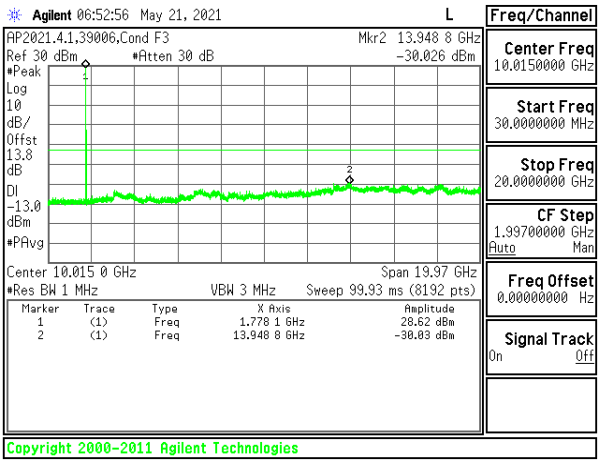
LTE BAND 66



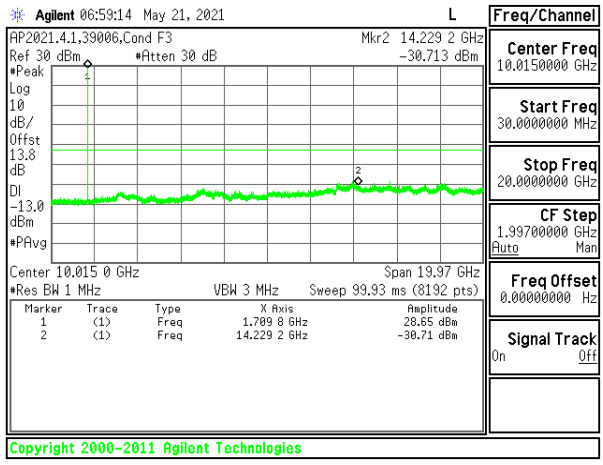
LTE B66 1.4MHz QPSK Low Channel RB1-0



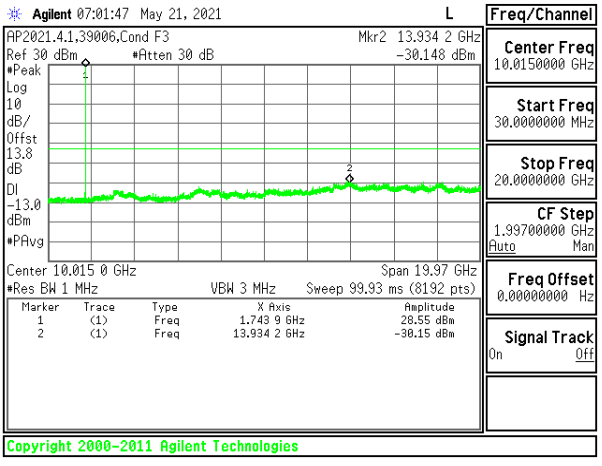
LTE B66 1.4MHz QPSK Middle Channel RB1-0



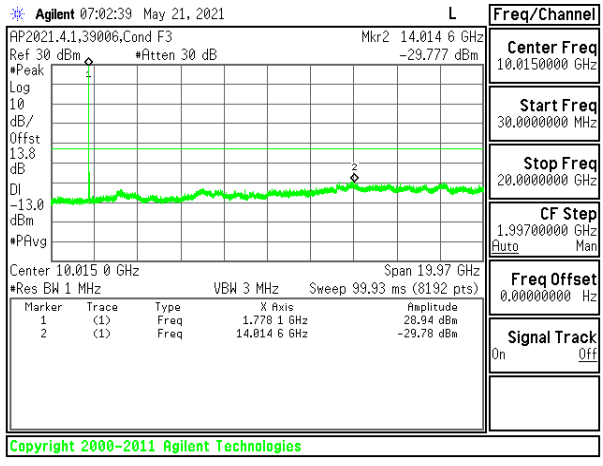
LTE B66 1.4MHz QPSK High Channel RB1-0



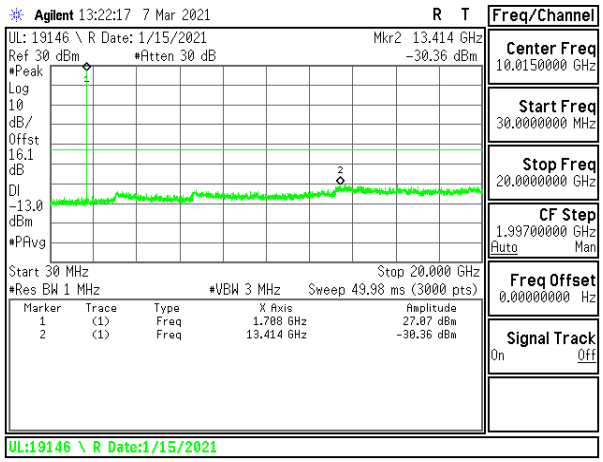
LTE B66 3MHz QPSK Low Channel RB1-0



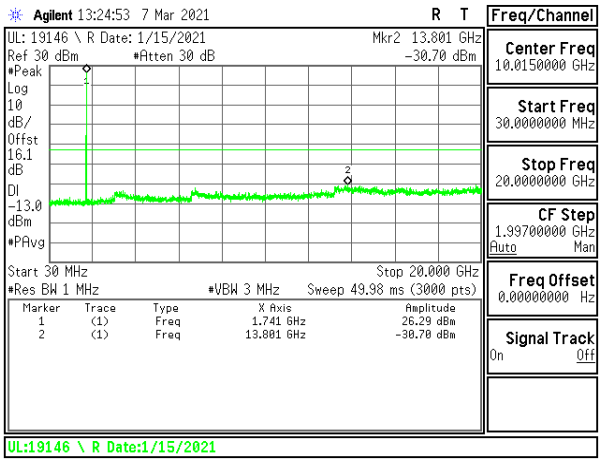
LTE B66 3MHz QPSK Middle Channel RB1-0



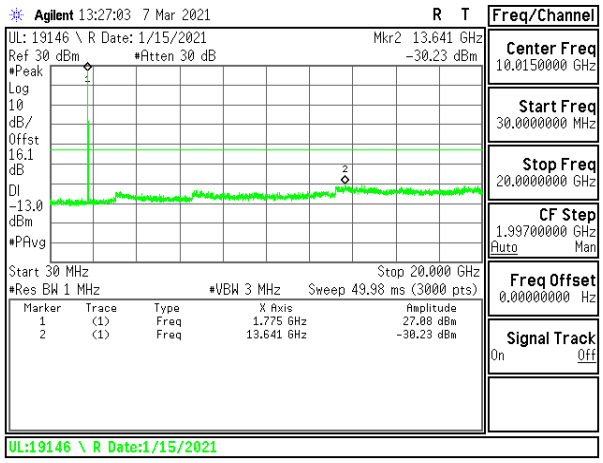
LTE B66 3MHz QPSK High Channel RB1-0



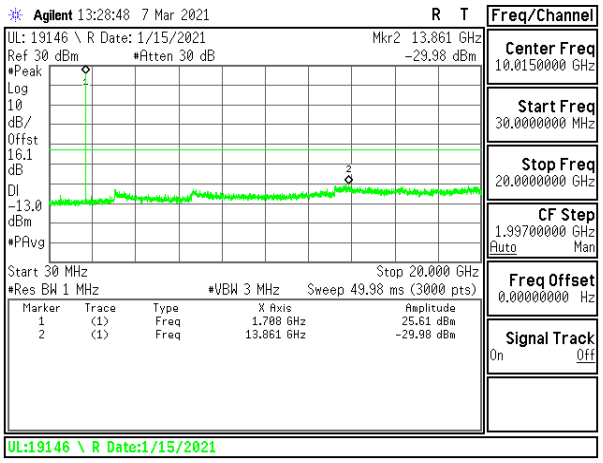
LTE B66 5MHz QPSK Low Channel RB1-0



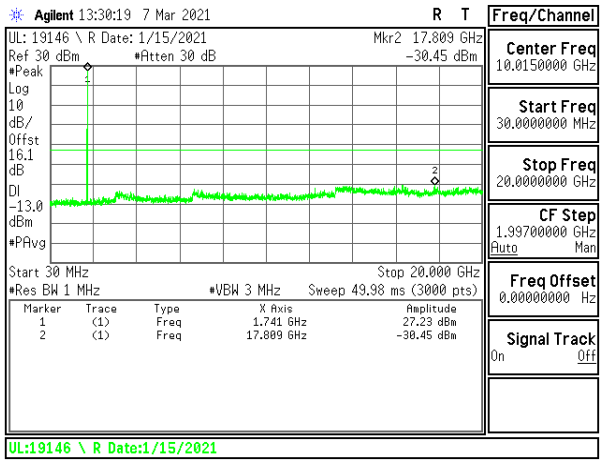
LTE B66 5MHz QPSK Middle Channel RB1-0



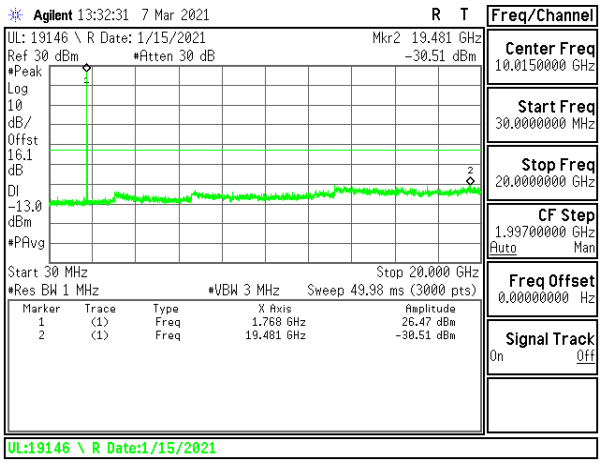
LTE B66 5MHz QPSK High Channel RB1-0



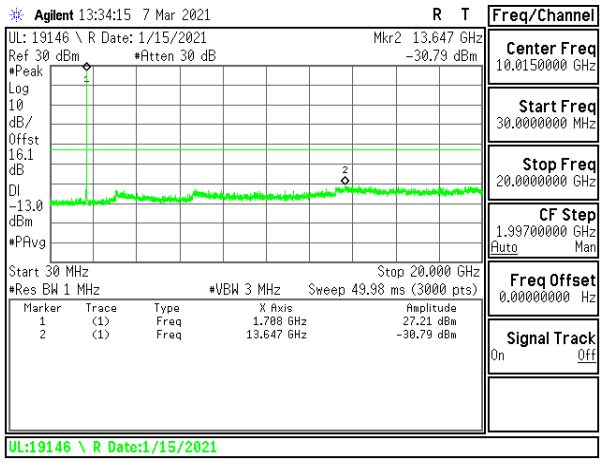
LTE B66 10MHz QPSK Low Channel RB1-0



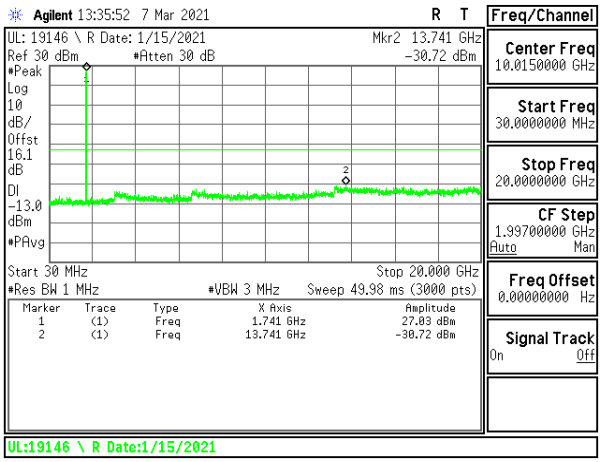
LTE B66 10MHz QPSK Middle Channel RB1-0



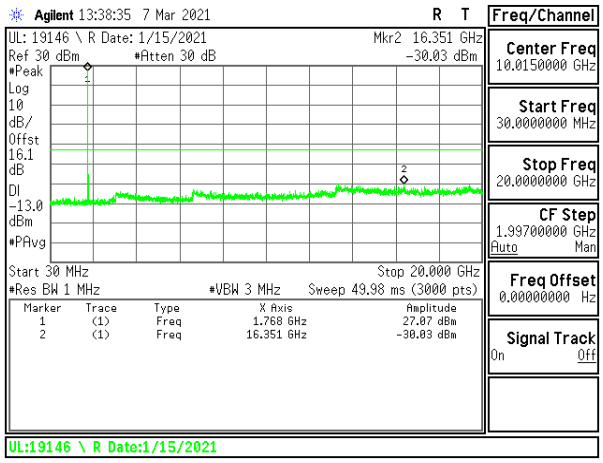
LTE B66 10MHz QPSK High Channel RB1-0



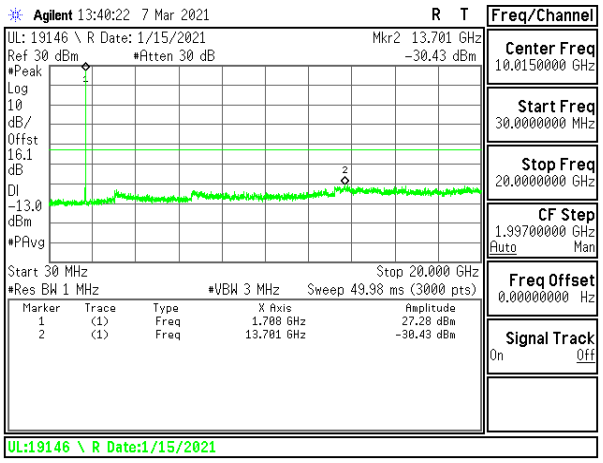
LTE B66 15MHz QPSK Low Channel RB1-0



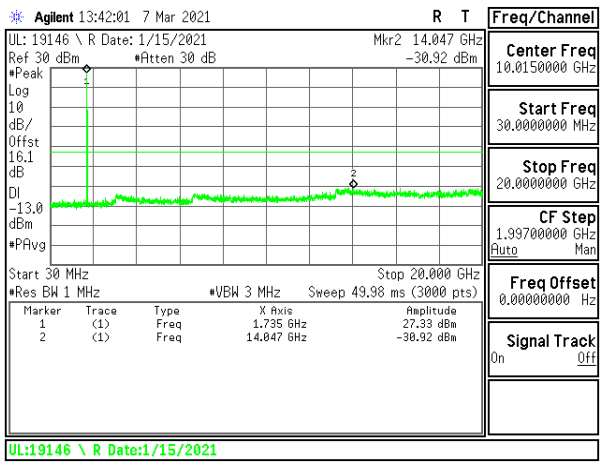
LTE B66 15MHz QPSK Middle Channel RB1-0



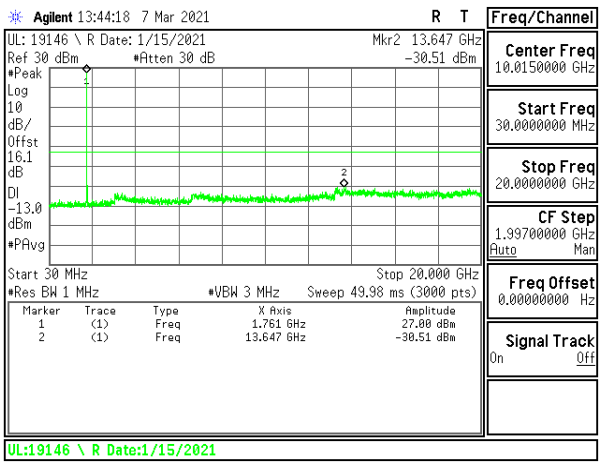
LTE B66 15MHz QPSK High Channel RB1-0



LTE B66 20MHz QPSK Low Channel RB1-0



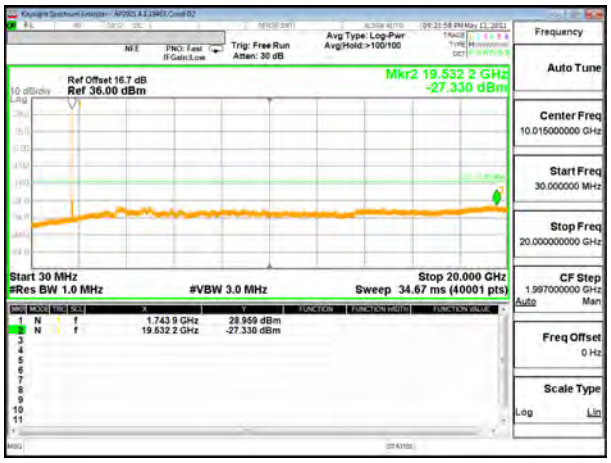
LTE B66 20MHz QPSK Middle Channel RB1-0



LTE B66 20MHz QPSK High Channel RB1-0

5G NR n66

5G NR n66 5MHz BPSK Low Channel RB1-0



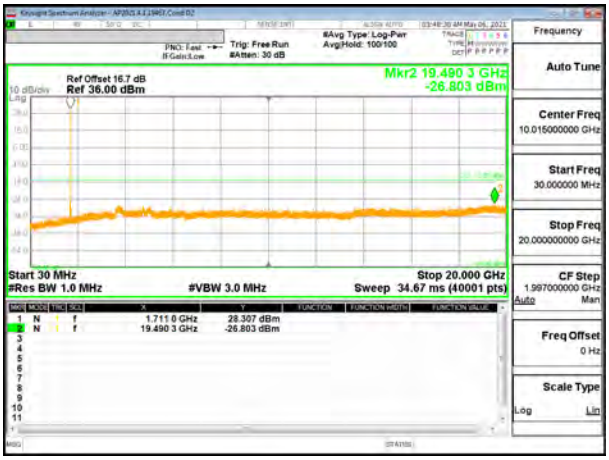
5G NR n66 5MHz BPSK Middle Channel RB1-1

5G NR n66 5MHz BPSK High Channel RB1-24

5G NR n66 10MHz BPSK Low Channel RB1-0

5G NR n66 10MHz BPSK Middle Channel RB1-1

5G NR n66 10MHz BPSK High Channel RB1-51



5G NR n66 15MHz BPSK Low Channel RB1-0

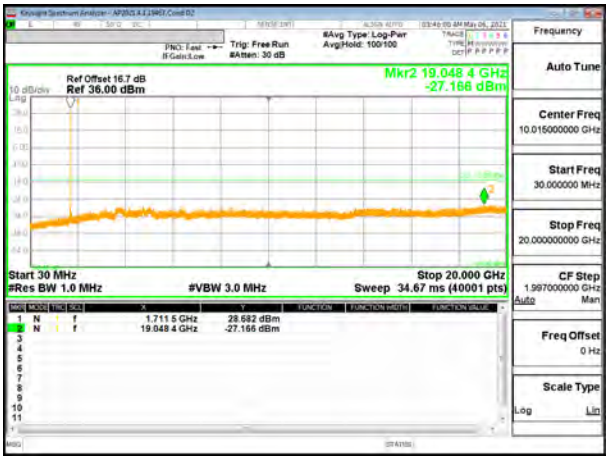
5G NR n66 15MHz BPSK Middle Channel RB1-1

5G NR n66 15MHz BPSK High Channel RB1-78

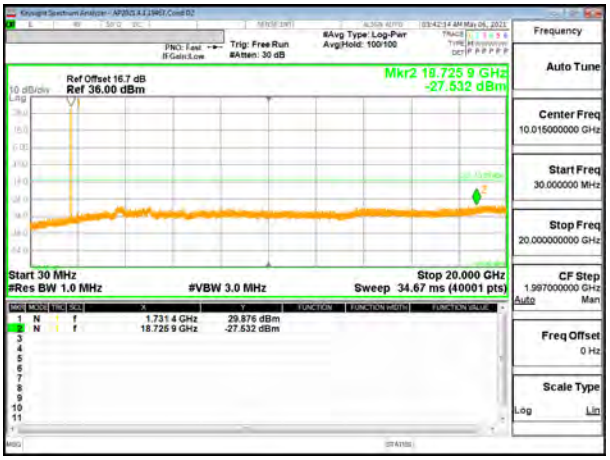
5G NR n66 20MHz BPSK Low Channel RB1-0

5G NR n66 20MHz BPSK Middle Channel RB1-1

5G NR n66 20MHz BPSK High Channel RB1-105



5G NR n66 30MHz BPSK Low Channel RB1-0

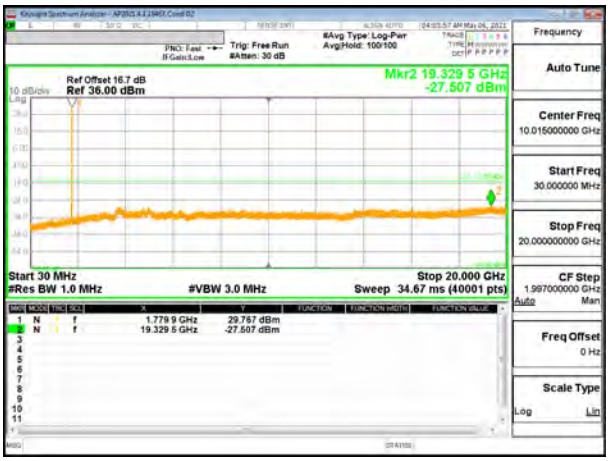


5G NR n66 30MHz BPSK Middle Channel RB1-1

5G NR n66 30MHz BPSK High Channel RB1-159

5G NR n66 40MHz BPSK Low Channel RB1-0

5G NR n66 40MHz BPSK Middle Channel RB1-1



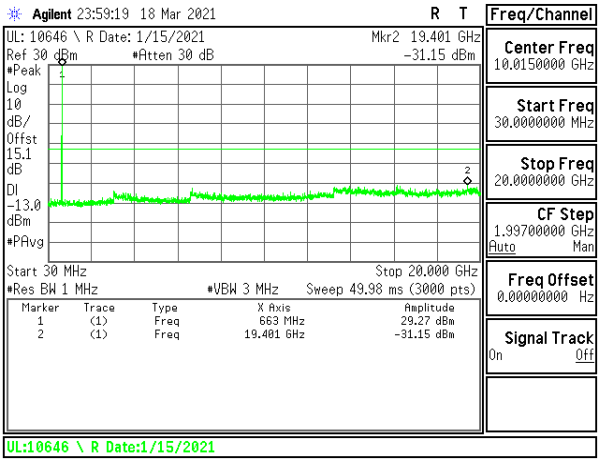
5G NR n66 40MHz BPSK High Channel RB1-215

9.3.14. LTE BAND 71 AND 5G NR n71

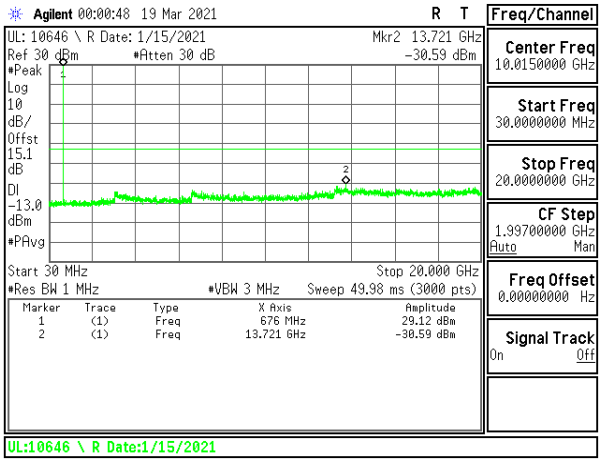
LIMITS

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

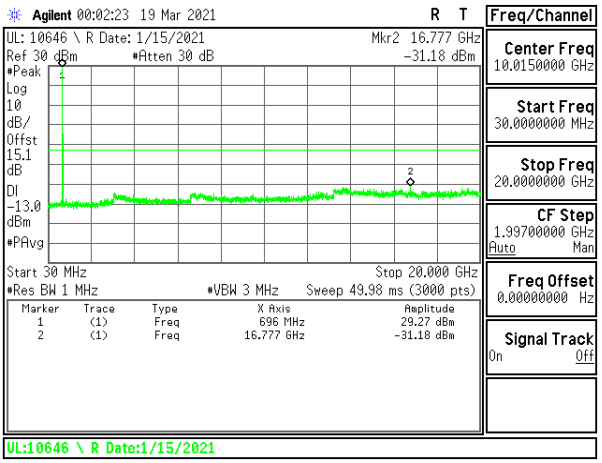
LTE BAND 71



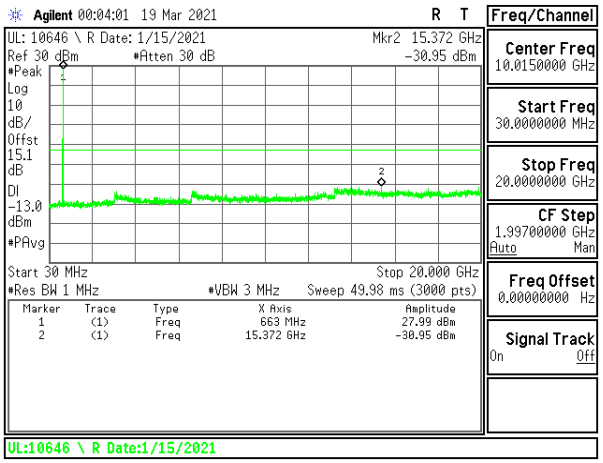
LTE B71 5MHz QPSK Low Channel RB1-0



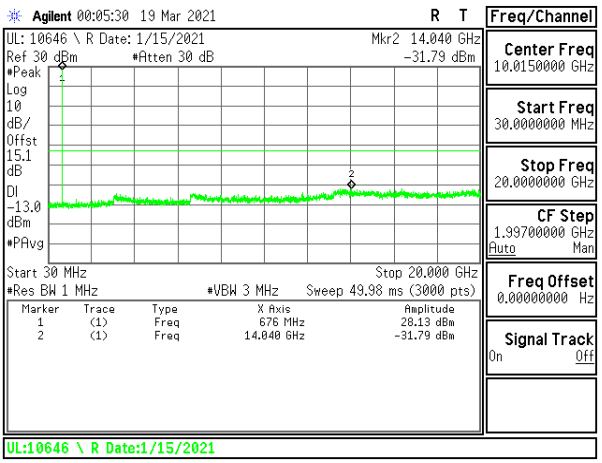
LTE B71 5MHz QPSK Middle Channel RB1-0



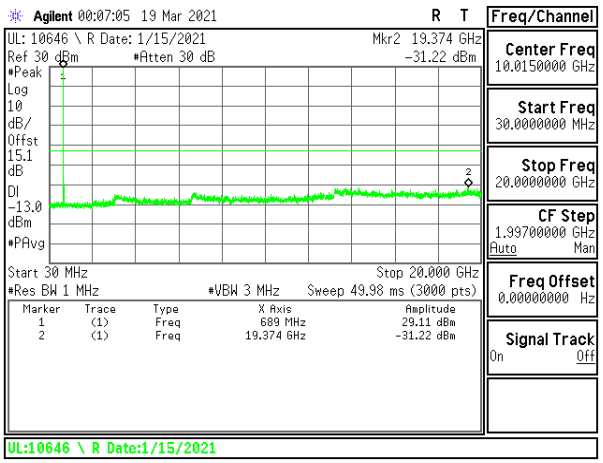
LTE B71 5MHz QPSK High Channel RB1-0



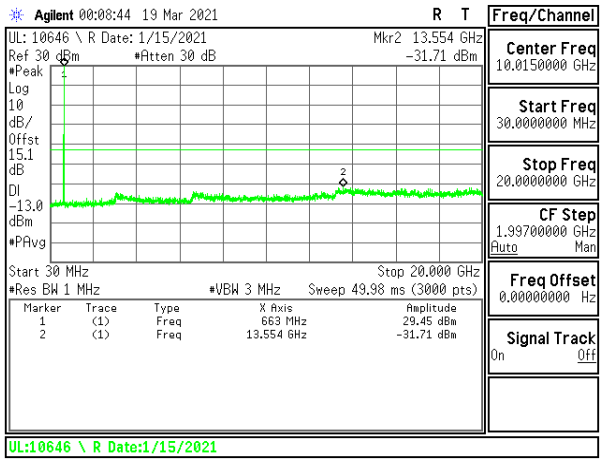
LTE B71 10MHz QPSK Low Channel RB1-0



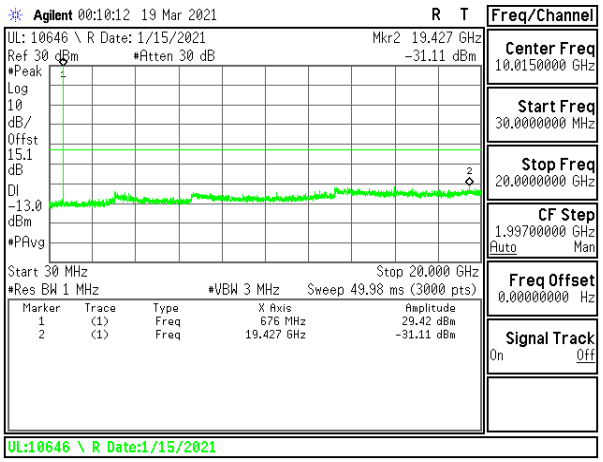
LTE B71 10MHz QPSK Middle Channel RB1-0



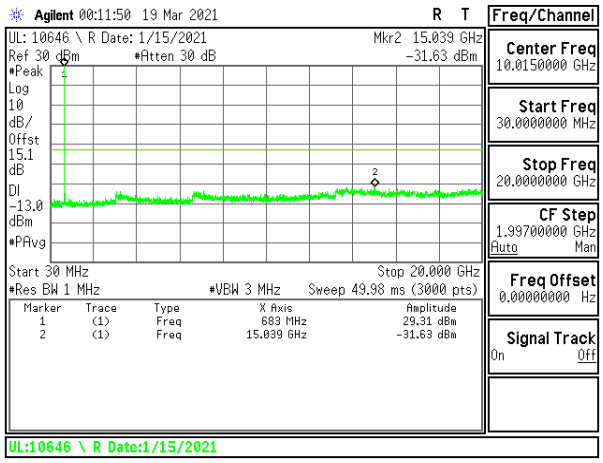
LTE 71 10MHz QPSK High Channel RB1-0



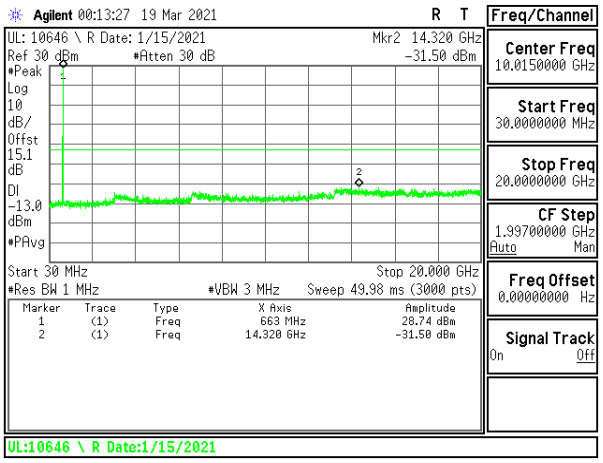
LTE B71 15MHz QPSK Low Channel RB1-0



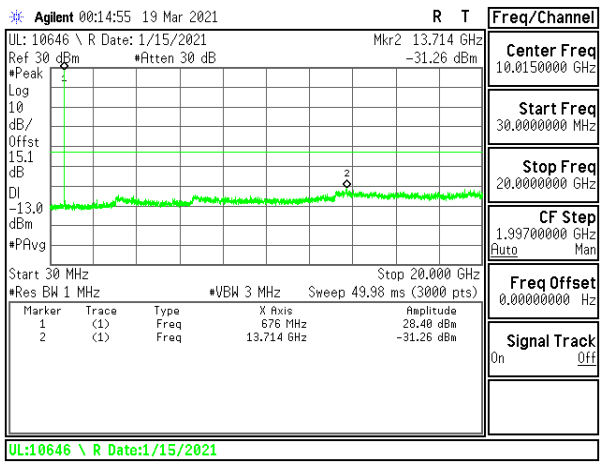
LTE B71 15MHz QPSK Middle Channel RB1-0



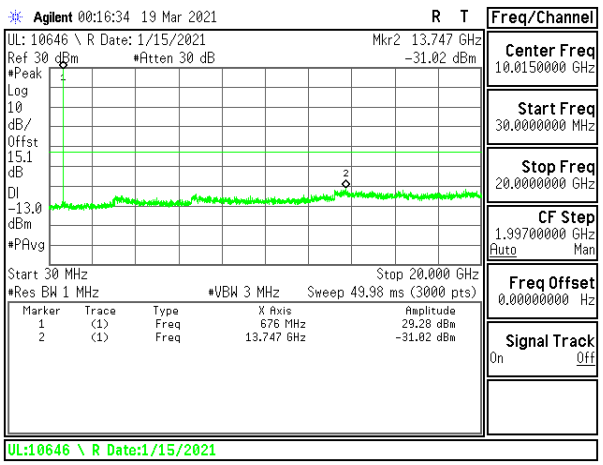
LTE B71 15MHz QPSK High Channel RB1-0



LTE B71 20MHz QPSK Low Channel RB1-0



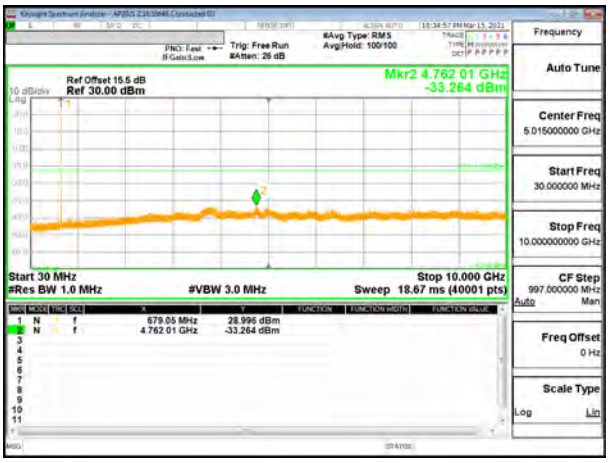
LTE B71 20MHz QPSK Middle Channel RB1-0



LTE B71 20MHz QPSK High Channel RB1-0

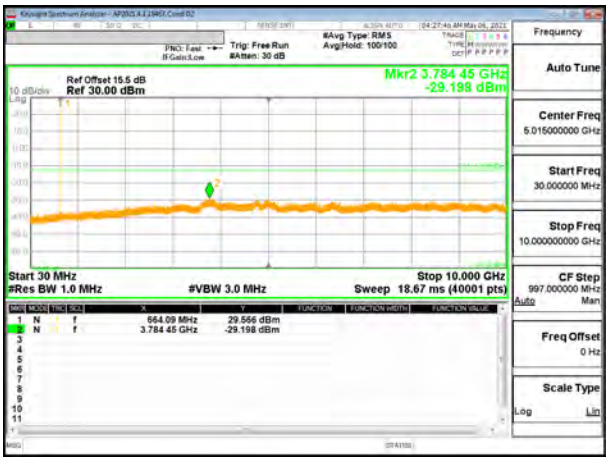
5G NR n71

5G NR n71 5MHz BPSK Low Channel RB1-0



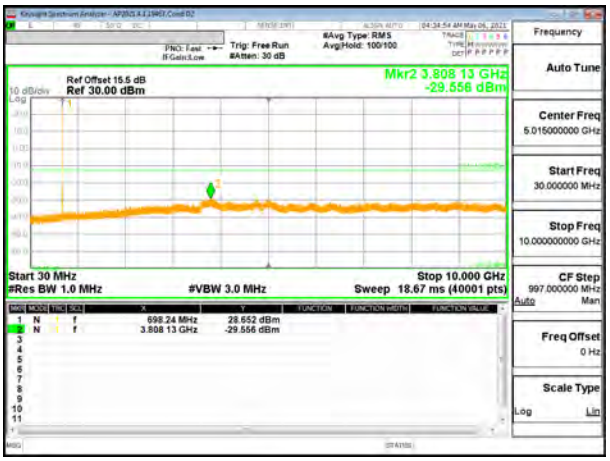
5G NR n71 5MHz BPSK Middle Channel RB1-1

5G NR n71 5MHz BPSK High Channel RB1-24

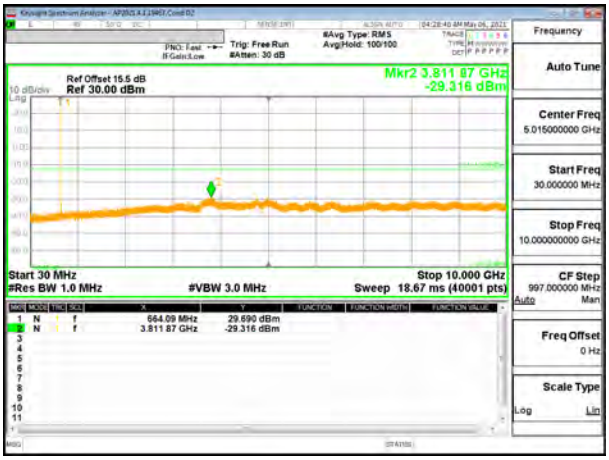


5G NR n71 10MHz BPSK Low Channel RB1-0

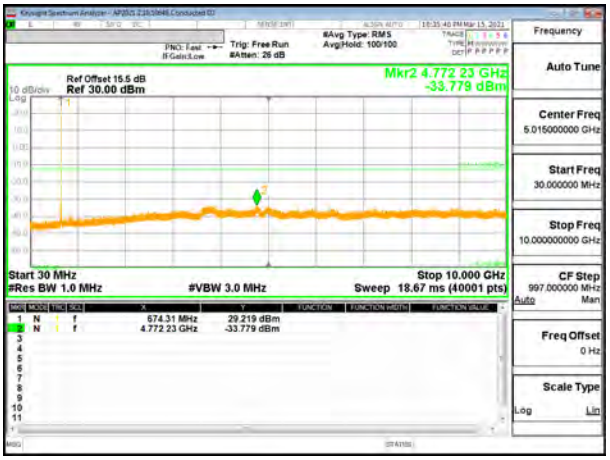
5G NR n71 10MHz BPSK Middle Channel RB1-1



5G NR n71 10MHz BPSK High Channel RB1-51



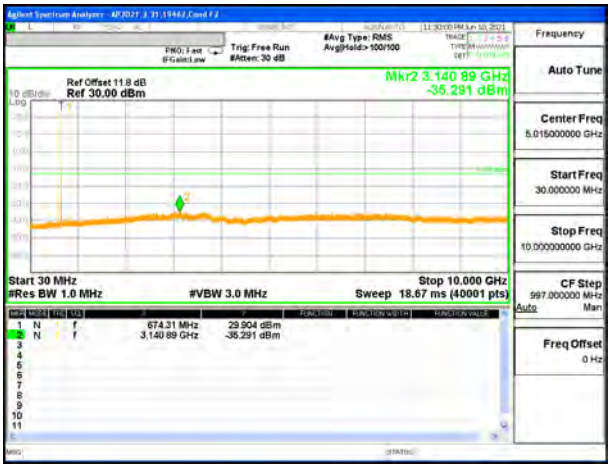
5G NR n71 15MHz BPSK Low Channel RB1-0



5G NR n71 15MHz BPSK Middle Channel RB1-1

5G NR n71 15MHz BPSK High Channel RB1-78

5G NR n7120MHz BPSK Low Channel RB1-0



5G NR n71 20MHz BPSK Middle Channel RB1-1

5G NR n71 20MHz BPSK High Channel RB1-105

9.3.15. 5G NR n77 (FCC Part 27 3450-3550MHz)

LIMITS

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

5G NR n77 20MHz BPSK Low Channel RB1-0

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

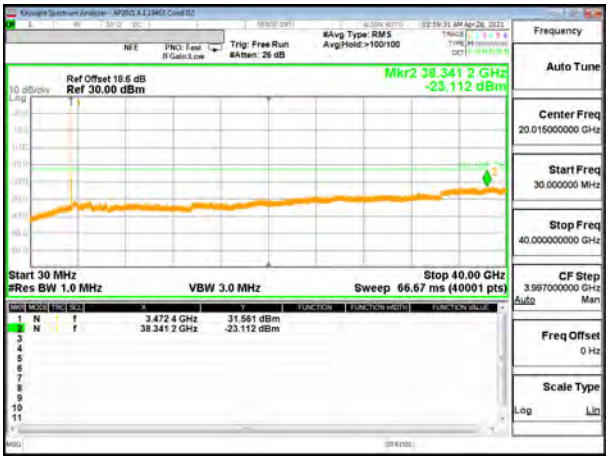
5G NR n77 30MHz BPSK High Channel RB1-77

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 Low Channel RB1-0



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

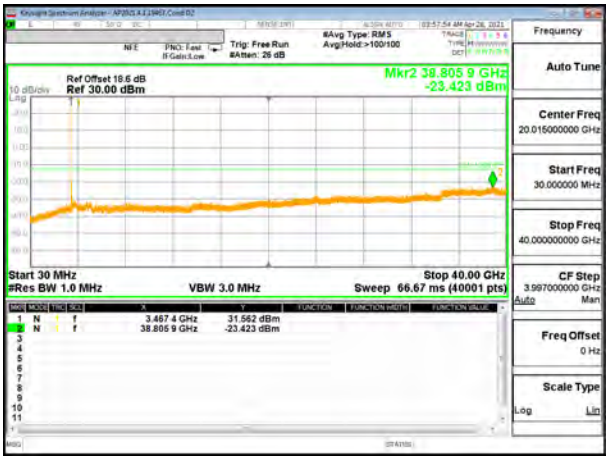
5G NR n77 50MHz BPSK High Channel RB1-132

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

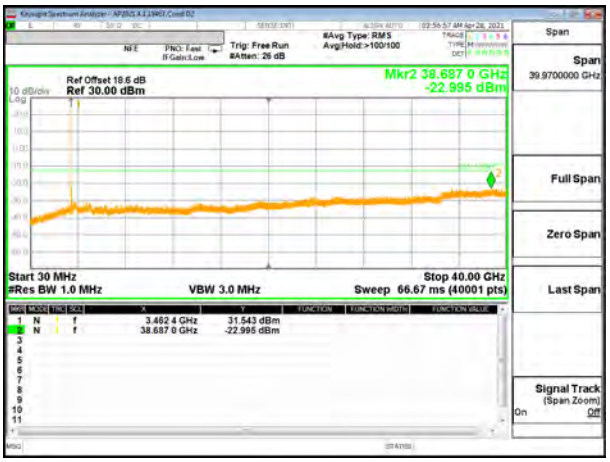
5G NR n77 70MHz BPSK Low Channel RB1-0



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

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

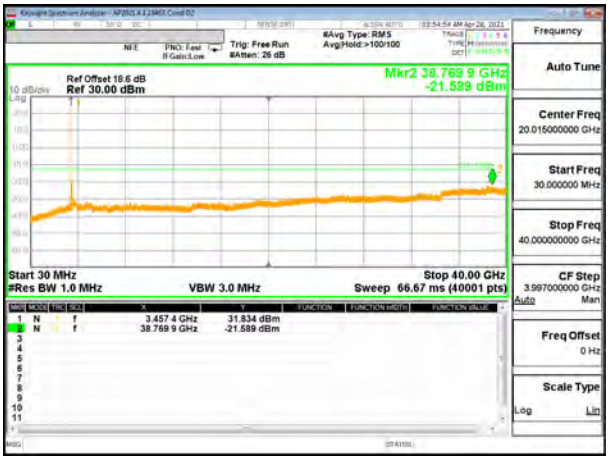
5G NR n77 80MHz BPSK Low Channel RB1-0



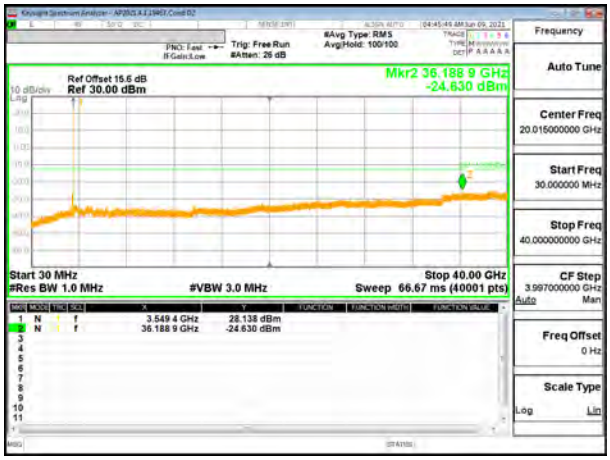
5G NR n77 80MHz BPSK Middle Channel RB1-1

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 Middle Channel RB1-1

9.3.16. 5G NR n77 (FCC Part 27 3700-3980MHz)

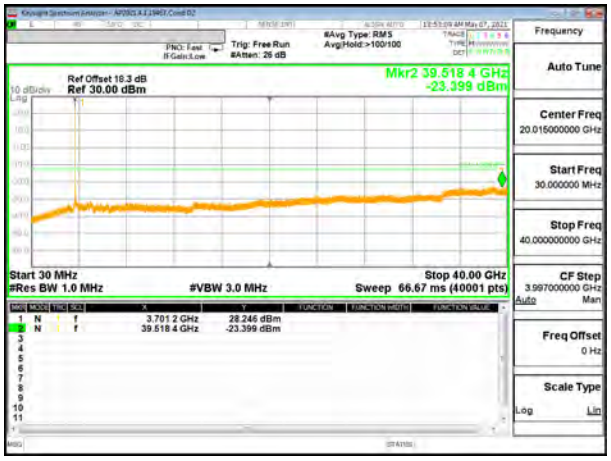
LIMITS

FCC: §27.53
Emission limits
(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.

5G NR n77 20MHz BPSK Low Channel RB1-0

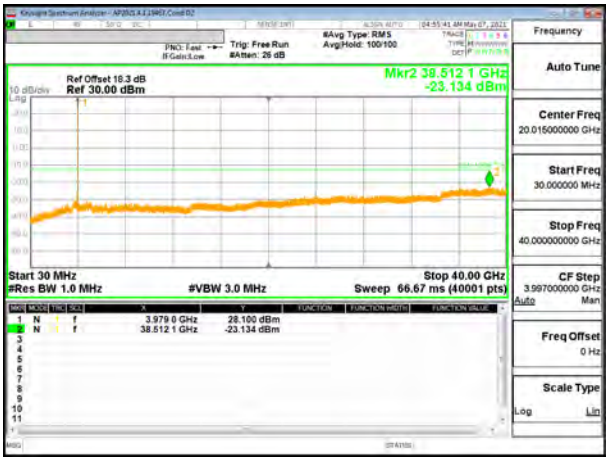
5G NR n77 20MHz BPSK Middle Channel RB1-1

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



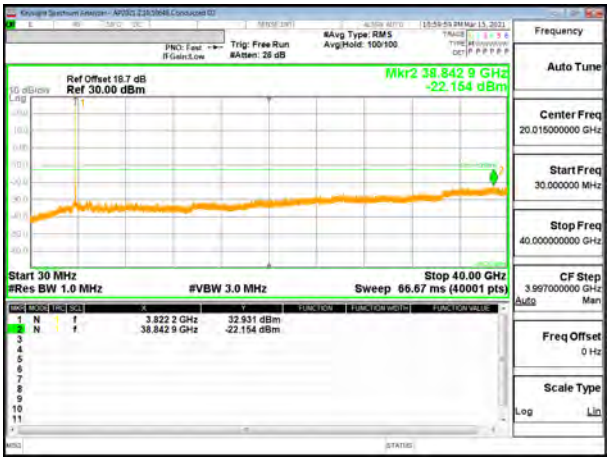
5G NR n77 30MHz BPSK Low Channel RB1-0

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

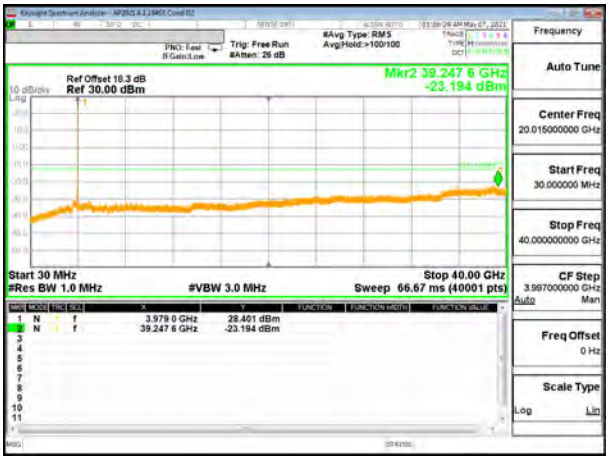


5G NR n77 30MHz BPSK High Channel RB1-77

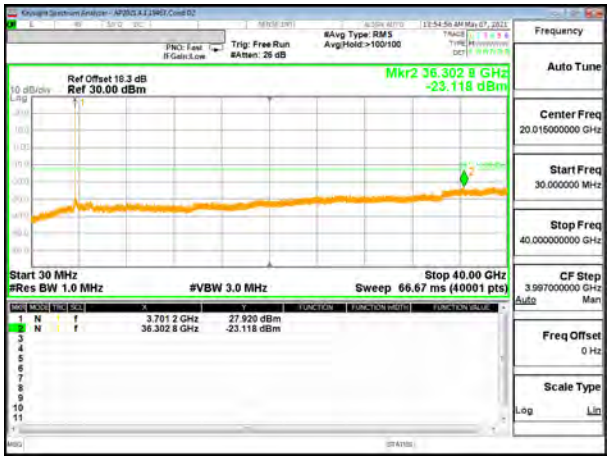
5G NR n77 40MHz BPSK Low Channel RB1-0



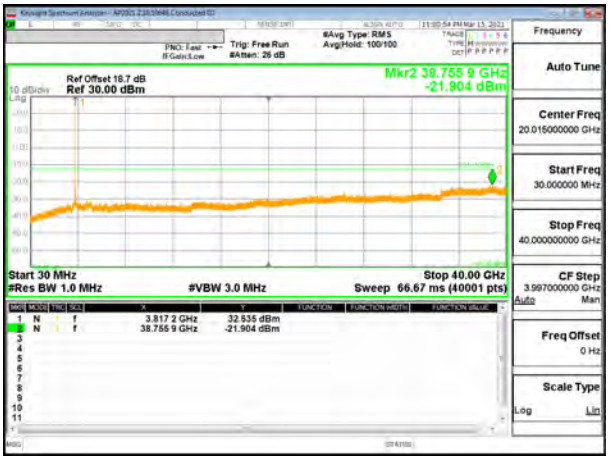
5G NR n77 40MHz BPSK Middle Channel RB1-1



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



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



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

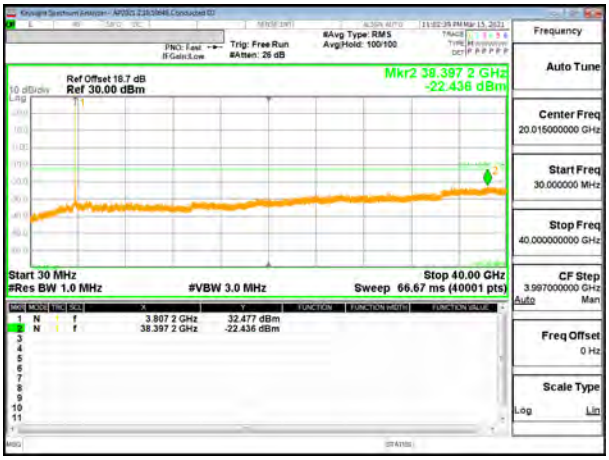
5G NR n77 50MHz BPSK High Channel RB1-132

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

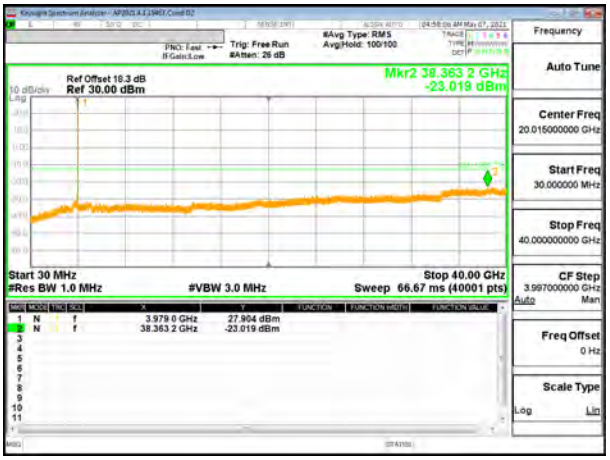
5G NR n77 60MHz BPSK Middle Channel RB1-1

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

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



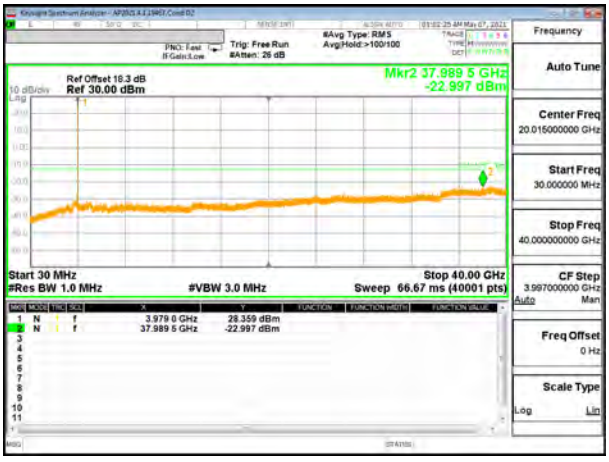
5G NR n77 70MHz BPSK Middle Channel RB1-1



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

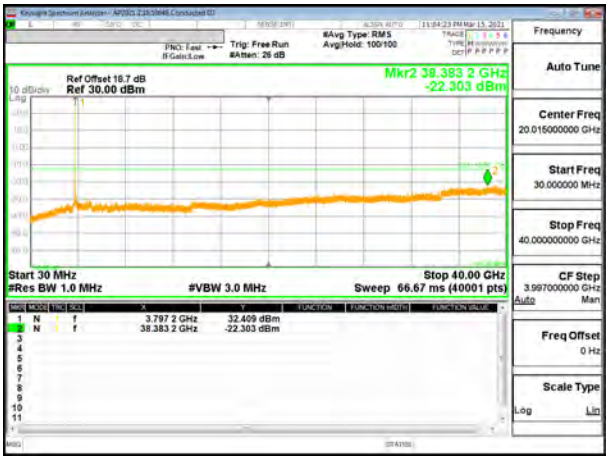
5G NR n77 80MHz BPSK Low Channel RB1-0

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

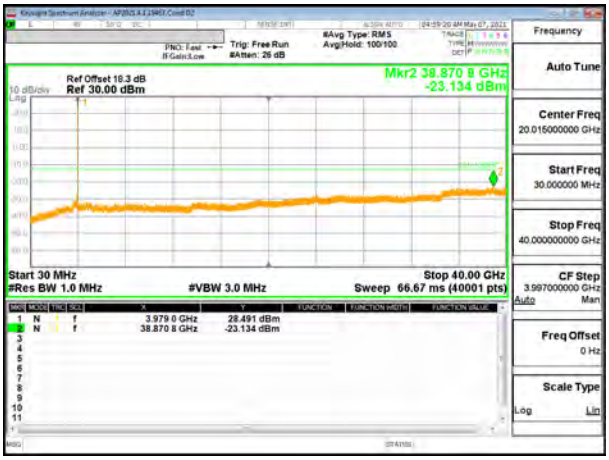


5G NR n77 90MHz BPSK Middle Channel RB1-1

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

5G NR n77 100MHz BPSK Low Channel RB1-0

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, 3.80VDC and High voltage, 4.37VDC.
  End Voltage, 3.00VDC.

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. 5G NR n5

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:	10646	Test Date:	5/10/2021

5G NR n5 QPSK (20MHz BANDWIDTH)

Limit		824	849	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	824.5509	847.3967		
Extreme (50C)		824.5509	847.3967	-7.1	-0.008
Extreme (40C)		824.5509	847.3967	-7.5	-0.009
Extreme (30C)		824.5509	847.3967	-6.6	-0.008
Extreme (10C)		824.5509	847.3967	-6.2	-0.007
Extreme (0C)		824.5509	847.3967	-7.4	-0.009
Extreme (-10C)		824.5509	847.3967	-6.7	-0.008
Extreme (-20C)		824.5509	847.3967	-7.2	-0.009
Extreme (-30C)		824.5509	847.3967	-6.6	-0.008
20C	15%	824.5509	847.3967	-7.4	-0.009
	-15%	824.5509	847.3967	-8.0	-0.010
	End Point	824.5509	847.3967	-6.0	-0.007

9.4.2. 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:	19146	Test Date:	6/1/2021

LTE BAND 7 QPSK (20MHz BANDWIDTH)

Limit		2500	2570	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	2501.0620	2568.9258		
Extreme (50C)		2501.0620	2568.9259	27.3	0.011
Extreme (40C)		2501.0620	2568.9259	33.4	0.013
Extreme (30C)		2501.0620	2568.9259	32.2	0.013
Extreme (10C)		2501.0620	2568.9259	30.7	0.012
Extreme (0C)		2501.0620	2568.9259	32.8	0.013
Extreme (-10C)		2501.0620	2568.9259	31.7	0.013
Extreme (-20C)		2501.0620	2568.9259	33.6	0.013
Extreme (-30C)		2501.0620	2568.9259	31.7	0.013
20C	15%	2501.0620	2568.9258	-17.1	-0.007
	-15%	2501.0620	2568.9259	28.1	0.011
	End Point	2501.0620	2568.9258	23.3	0.009

5G NR n7 QPSK (40MHz BANDWIDTH)

Limit		2500	2570	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	2500.6871	2569.2891		
Extreme (50C)		2500.6871	2569.2891	7.7	0.003
Extreme (40C)		2500.6871	2569.2891	11.3	0.004
Extreme (30C)		2500.6871	2569.2891	14.4	0.006
Extreme (10C)		2500.6871	2569.2891	17.8	0.007
Extreme (0C)		2500.6871	2569.2891	17.2	0.007
Extreme (-10C)		2500.6871	2569.2891	15.8	0.006
Extreme (-20C)		2500.6871	2569.2891	16.3	0.006
Extreme (-30C)		2500.6871	2569.2891	15.8	0.006
20C	15%	2500.6871	2569.2891	14.5	0.006
	-15%	2500.6871	2569.2891	14.3	0.006
	End Point	2500.6871	2569.2891	14.9	0.006

9.4.3. 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:	10646	Test Date:	5/10/2021

LTE BAND 12 QPSK (10MHz BANDWIDTH)

Limit		699	716	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	699.5279	715.4748		
Extreme (50C)		699.5279	715.4748	-15.7	-0.022
Extreme (40C)		699.5279	715.4748	-11.3	-0.016
Extreme (30C)		699.5279	715.4748	-10.4	-0.015
Extreme (10C)		699.5279	715.4748	-8.3	-0.012
Extreme (0C)		699.5279	715.4748	-11.5	-0.016
Extreme (-10C)		699.5279	715.4748	14.4	0.020
Extreme (-20C)		699.5279	715.4748	12.8	0.018
Extreme (-30C)		699.5279	715.4748	-19.6	-0.028
20C	15%	699.5279	715.4748	6.2	0.009
	-15%	699.5279	715.4748	6.3	0.009
	End Point	699.5279	715.4748	-9.4	-0.013

5G NR n12 QPSK (15MHz BANDWIDTH)

Limit		699	716	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	699.4199	714.8464		
Extreme (50C)		699.4199	714.8464	5.9	0.008
Extreme (40C)		699.4199	714.8464	26.9	0.038
Extreme (30C)		699.4199	714.8464	-5.3	-0.007
Extreme (10C)		699.4199	714.8464	-5.7	-0.008
Extreme (0C)		699.4199	714.8464	5.4	0.008
Extreme (-10C)		699.4199	714.8464	-6.4	-0.009
Extreme (-20C)		699.4199	714.8464	-5.2	-0.007
Extreme (-30C)		699.4199	714.8464	-5.6	-0.008
20C	15%	699.4199	714.8464	-6.3	-0.009
	-15%	699.4199	714.8464	-6.1	-0.009
	End Point	699.4199	714.8464	-6.9	-0.010

9.4.4. 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:	19171	Test Date:	5/7/2021

QPSK (10MHz BANDWIDTH)

Limit		777	787	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	777.5330	786.4753		
Extreme (50C)		777.5330	786.4753	9.4	0.012
Extreme (40C)		777.5330	786.4753	-9.8	-0.012
Extreme (30C)		777.5330	786.4753	11.5	0.015
Extreme (10C)		777.5330	786.4753	-10.2	-0.013
Extreme (0C)		777.5330	786.4753	-9.3	-0.012
Extreme (-10C)		777.5330	786.4753	-8.9	-0.011
Extreme (-20C)		777.5330	786.4753	-9.9	-0.013
Extreme (-30C)		777.5330	786.4753	-10.6	-0.014
20C	15%	777.5330	786.4753	-5.0	-0.006
	-15%	777.5330	786.4753	8.0	0.010
	End Point	777.5330	786.4753	10.1	0.013

9.4.5. LTE BAND 14

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:	19171	Test Date:	5/7/2021

QPSK (10MHz BANDWIDTH)

Limit		788	798	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	788.5275	797.4718		
Extreme (50C)		788.5275	797.4718	11.4	0.014
Extreme (40C)		788.5275	797.4718	-7.6	-0.010
Extreme (30C)		788.5275	797.4718	10.6	0.013
Extreme (10C)		788.5275	797.4718	-5.2	-0.007
Extreme (0C)		788.5275	797.4718	-8.8	-0.011
Extreme (-10C)		788.5275	797.4718	-12.3	-0.016
Extreme (-20C)		788.5275	797.4718	-6.6	-0.008
Extreme (-30C)		788.5275	797.4718	9.3	0.012
20C	15%	788.5275	797.4718	-4.7	-0.006
	-15%	788.5275	797.4718	-7.0	-0.009
	End Point	788.5275	797.4718	5.9	0.007

9.4.6. 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:	19171	Test Date:	5/7/2021

QPSK (10MHz BANDWIDTH)

Limit		704	716	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	704.5225	715.4730		
Extreme (50C)		704.5225	715.4730	-11.3	-0.016
Extreme (40C)		704.5225	715.4730	16.1	0.023
Extreme (30C)		704.5225	715.4730	-9.1	-0.013
Extreme (10C)		704.5225	715.4730	-12.3	-0.017
Extreme (0C)		704.5225	715.4730	-10.1	-0.014
Extreme (-10C)		704.5225	715.4730	16.3	0.023
Extreme (-20C)		704.5225	715.4730	14.8	0.021
Extreme (-30C)		704.5225	715.4730	13.7	0.019
20C	15%	704.5225	715.4730	-7.4	-0.010
	-15%	704.5225	715.4730	-8.2	-0.012
	End Point	704.5225	715.4730	-9.9	-0.014

9.4.7. 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:	19171	Test Date:	6/1/2021

LTE BAND 25 QPSK (20MHz BANDWIDTH)

Limit		1850	1915	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	1851.0666	1913.9360		
Extreme (50C)		1851.0666	1913.9360	-14.5	-0.008
Extreme (40C)		1851.0665	1913.9360	-16.6	-0.009
Extreme (30C)		1851.0666	1913.9360	-12.9	-0.007
Extreme (10C)		1851.0666	1913.9360	-13.9	-0.007
Extreme (0C)		1851.0666	1913.9360	18.4	0.010
Extreme (-10C)		1851.0666	1913.9360	-11.6	-0.006
Extreme (-20C)		1851.0666	1913.9360	12.9	0.007
Extreme (-30C)		1851.0666	1913.9360	-10.7	-0.006
20C	15%	1851.0666	1913.9360	16.2	0.009
	-15%	1851.0666	1913.9360	18.7	0.010
	End Point	1851.0666	1913.9360	17.8	0.009

5G NR n25 QPSK (40MHz BANDWIDTH)

Limit		1850	1915	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	1850.6937	1914.2878		
Extreme (50C)		1850.6937	1914.2878	18.3	0.010
Extreme (40C)		1850.6937	1914.2878	-16.4	-0.009
Extreme (30C)		1850.6937	1914.2878	-17.0	-0.009
Extreme (10C)		1850.6937	1914.2878	-19.7	-0.010
Extreme (0C)		1850.6937	1914.2878	-18.4	-0.010
Extreme (-10C)		1850.6937	1914.2878	-17.2	-0.009
Extreme (-20C)		1850.6937	1914.2878	-18.0	-0.010
Extreme (-30C)		1850.6937	1914.2878	-18.9	-0.010
20C	15%	1850.6937	1914.2878	-20.6	-0.011
	-15%	1850.6937	1914.2878	-17.1	-0.009
	End Point	1850.6937	1914.2878	-18.0	-0.010

9.4.8. LTE BAND 26 (FCC PART 90S)

LIMITS

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

Test Engineer ID:	19171	Test Date:	5/7/2021

QPSK (5MHz BANDWIDTH)

Limit		814	824	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	814.2611	823.7419		
Extreme (50C)		814.2611	823.7419	-10.8	-0.013
Extreme (40C)		814.2611	823.7419	-10.9	-0.013
Extreme (30C)		814.2611	823.7419	-13.6	-0.017
Extreme (10C)		814.2611	823.7419	-13.3	-0.016
Extreme (0C)		814.2611	823.7419	-11.3	-0.014
Extreme (-10C)		814.2611	823.7419	-8.4	-0.010
Extreme (-20C)		814.2611	823.7419	-9.8	-0.012
Extreme (-30C)		814.2611	823.7419	-10.0	-0.012
20C	15%	814.2611	823.7419	-6.8	-0.008
	-15%	814.2611	823.7419	-6.0	-0.007
	End Point	814.2611	823.7419	-6.6	-0.008

9.4.9. LTE BAND 26 (FCC PART 22)

LIMITS

FCC: §22.355
The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.

Test Engineer ID:	19171	Test Date:	5/7/2021

QPSK (10MHz BANDWIDTH)

Limit		824	849	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	824.7995	848.2084		
Extreme (50C)		824.7995	848.2084	-19.2	-0.023
Extreme (40C)		824.7995	848.2084	11.5	0.014
Extreme (30C)		824.7995	848.2084	15.4	0.018
Extreme (10C)		824.7995	848.2084	-9.7	-0.012
Extreme (0C)		824.7995	848.2084	10.2	0.012
Extreme (-10C)		824.7995	848.2084	-7.7	-0.009
Extreme (-20C)		824.7995	848.2084	-15.7	-0.019
Extreme (-30C)		824.7995	848.2084	8.1	0.010
20C	15%	824.7995	848.2084	-5.6	-0.007
	-15%	824.7995	848.2084	6.4	0.008
	End Point	824.7995	848.2084	-10.5	-0.013

9.4.10. 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:	19171	Test Date:	5/7/2021

LTE BAND 30 QPSK (10MHz BANDWIDTH)

Limit		2305	2315		
Condition		F low @ -13dBm	F high @ -13dBm	Delta (Hz)	Frequency Stability (ppm)
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	2305.5204	2314.4676		
Extreme (50C)		2305.5204	2314.4677	17.4	0.008
Extreme (40C)		2305.5204	2314.4677	16.8	0.007
Extreme (30C)		2305.5204	2314.4676	-13.3	-0.006
Extreme (10C)		2305.5204	2314.4677	18.1	0.008
Extreme (0C)		2305.5204	2314.4677	19.9	0.009
Extreme (-10C)		2305.5204	2314.4677	20.7	0.009
Extreme (-20C)		2305.5204	2314.4677	13.8	0.006
Extreme (-30C)		2305.5204	2314.4676	-13.0	-0.006
20C	15%	2305.5204	2314.4677	12.4	0.005
	-15%	2305.5204	2314.4677	21.3	0.009
	End Point	2305.5204	2314.4677	14.1	0.006

5G NR n30 QPSK (10MHz BANDWIDTH)

Limit		2305	2315	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	2305.3497	2314.2859		
Extreme (50C)		2305.3497	2314.2859	13.5	0.006
Extreme (40C)		2305.3497	2314.2859	-16.9	-0.007
Extreme (30C)		2305.3497	2314.2859	14.6	0.006
Extreme (10C)		2305.3497	2314.2859	14.6	0.006
Extreme (0C)		2305.3497	2314.2859	13.1	0.006
Extreme (-10C)		2305.3497	2314.2859	14.2	0.006
Extreme (-20C)		2305.3497	2314.2859	16.6	0.007
Extreme (-30C)		2305.3497	2314.2859	15.2	0.007
20C	15%	2305.3497	2314.2859	16.3	0.007
	-15%	2305.3497	2314.2859	12.8	0.006
	End Point	2305.3497	2314.2859	-17.2	-0.007

9.4.11. 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:	10646	Test Date:	5/10/2021

LTE BAND 41 QPSK (20MHz BANDWIDTH)

Limit		2496	2690	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	2496.8184	2689.2114		
Extreme (50C)		2496.8184	2689.2113	-20.0	-0.008
Extreme (40C)		2496.8184	2689.2113	-20.2	-0.008
Extreme (30C)		2496.8184	2689.2113	-19.6	-0.008
Extreme (10C)		2496.8184	2689.2113	-17.8	-0.007
Extreme (0C)		2496.8184	2689.2113	-17.4	-0.007
Extreme (-10C)		2496.8184	2689.2113	-16.6	-0.006
Extreme (-20C)		2496.8184	2689.2113	-20.0	-0.008
Extreme (-30C)		2496.8184	2689.2113	-18.5	-0.007
20C	15%	2496.8184	2689.2113	-21.5	-0.008
	-15%	2496.8184	2689.2113	-18.1	-0.007
	End Point	2496.8184	2689.2113	-22.5	-0.009

5G NR n41 QPSK (100MHz BANDWIDTH)

Limit		2496	2690	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	2497.2109	2687.8716		
Extreme (50C)		2497.2109	2687.8716	-25.6	-0.010
Extreme (40C)		2497.2109	2687.8716	-25.1	-0.010
Extreme (30C)		2497.2109	2687.8716	-24.2	-0.009
Extreme (10C)		2497.2109	2687.8716	-24.5	-0.009
Extreme (0C)		2497.2109	2687.8716	-25.7	-0.010
Extreme (-10C)		2497.2109	2687.8716	-22.3	-0.009
Extreme (-20C)		2497.2109	2687.8716	-25.1	-0.010
Extreme (-30C)		2497.2109	2687.8716	-23.7	-0.009
20C	15%	2497.2109	2687.8716	-23.6	-0.009
	-15%	2497.2109	2687.8716	-20.1	-0.008
	End Point	2497.2109	2687.8716	-25.2	-0.010

9.4.12. LTE BAND 48

Test Engineer ID:	10646	Test Date:	5/16/2021

LTE BAND 48 QPSK (20MHz BANDWIDTH)

Limit		3550	3700	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	3550.5918	3699.2406		
Extreme (50C)		3550.5918	3699.2406	-26.2	-0.007
Extreme (40C)		3550.5918	3699.2406	-29.6	-0.008
Extreme (30C)		3550.5918	3699.2406	-24.1	-0.007
Extreme (10C)		3550.5918	3699.2406	-30.5	-0.008
Extreme (0C)		3550.5918	3699.2406	-27.8	-0.008
Extreme (-10C)		3550.5918	3699.2406	-31.1	-0.009
Extreme (-20C)		3550.5918	3699.2406	-30.5	-0.008
Extreme (-30C)		3550.5918	3699.2406	-33.3	-0.009
20C	15%	3550.5918	3699.2406	-30.0	-0.008
	-15%	3550.5918	3699.2406	-27.4	-0.008
	End Point	3550.5918	3699.2406	-26.0	-0.007

5G NR n48 QPSK (100MHz BANDWIDTH)

Limit		3550	3700	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	3551.0550	3696.7908		
Extreme (50C)		3551.0549	3696.7908	-22.2	-0.006
Extreme (40C)		3551.0549	3696.7908	-16.6	-0.005
Extreme (30C)		3551.0549	3696.7908	-30.5	-0.008
Extreme (10C)		3551.0549	3696.7908	-26.8	-0.007
Extreme (0C)		3551.0549	3696.7908	-27.7	-0.008
Extreme (-10C)		3551.0549	3696.7908	-32.6	-0.009
Extreme (-20C)		3551.0549	3696.7908	-22.4	-0.006
Extreme (-30C)		3551.0549	3696.7908	-30.3	-0.008
20C	15%	3551.0549	3696.7908	-22.9	-0.006
	-15%	3551.0549	3696.7908	-21.8	-0.006
	End Point	3551.0549	3696.7908	-25.7	-0.007

9.4.13. 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:	10646	Test Date:	5/10/2021

LTE BAND 66 QPSK (20MHz BANDWIDTH)

Limit		1710	1780	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	1711.0633	1778.9504		
Extreme (50C)		1711.0633	1778.9504	11.7	0.007
Extreme (40C)		1711.0633	1778.9504	-13.4	-0.008
Extreme (30C)		1711.0633	1778.9504	-13.4	-0.008
Extreme (10C)		1711.0633	1778.9504	-12.0	-0.007
Extreme (0C)		1711.0633	1778.9504	-14.2	-0.008
Extreme (-10C)		1711.0633	1778.9504	-12.6	-0.007
Extreme (-20C)		1711.0633	1778.9504	11.0	0.006
Extreme (-30C)		1711.0633	1778.9504	-12.8	-0.007
20C	15%	1711.0633	1778.9504	-14.6	-0.008
	-15%	1711.0633	1778.9504	-15.0	-0.009
	End Point	1711.0633	1778.9504	12.6	0.007

5G NR n66 QPSK (40MHz BANDWIDTH)

Limit		1710	1780	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	1710.6912	1779.3079		
Extreme (50C)		1710.6912	1779.3079	13.5	0.008
Extreme (40C)		1710.6912	1779.3079	3.7	0.002
Extreme (30C)		1710.6912	1779.3079	15.4	0.009
Extreme (10C)		1710.6912	1779.3079	-15.0	-0.009
Extreme (0C)		1710.6912	1779.3079	-16.1	-0.009
Extreme (-10C)		1710.6912	1779.3079	-14.2	-0.008
Extreme (-20C)		1710.6912	1779.3079	-15.3	-0.009
Extreme (-30C)		1710.6912	1779.3079	-10.7	-0.006
20C	15%	1710.6912	1779.3079	-13.8	-0.008
	-15%	1710.6912	1779.3079	-13.9	-0.008
	End Point	1710.6912	1779.3079	-12.2	-0.007

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:	10646	Test Date:	5/10/2021

LTE BAND 71 QPSK (20MHz BANDWIDTH)

Limit		663	698	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	664.0653	696.9458		
Extreme (50C)		664.0653	696.9458	-27.6	-0.041
Extreme (40C)		664.0652	696.9457	-40.5	-0.059
Extreme (30C)		664.0653	696.9458	-28.4	-0.042
Extreme (10C)		664.0653	696.9458	-7.1	-0.010
Extreme (0C)		664.0654	696.9459	84.8	0.125
Extreme (-10C)		664.0654	696.9459	80.7	0.119
Extreme (-20C)		664.0652	696.9457	-93.3	-0.137
Extreme (-30C)		664.0659	696.9464	578.6	0.850
20C	15%	664.0653	696.9458	-3.1	-0.005
	-15%	664.0653	696.9458	-3.8	-0.006
	End Point	664.0653	696.9458	-10.2	-0.015

5G NR n71 QPSK (20MHz BANDWIDTH)

Limit		663	698	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)		663.5247	696.4019		
Extreme (50C)		663.5247	696.4019	-6.5	-0.010
Extreme (40C)		663.5247	696.4019	-5.2	-0.008
Extreme (30C)		663.5247	696.4019	-5.6	-0.008
Extreme (10C)	Normal	663.5247	696.4019	-6.3	-0.009
Extreme (0C)		663.5247	696.4019	-6.7	-0.010
Extreme (-10C)		663.5247	696.4019	-6.6	-0.010
Extreme (-20C)		663.5247	696.4019	-6.2	-0.009
Extreme (-30C)		663.5247	696.4019	-5.8	-0.008
	15%	663.5247	696.4019	-5.9	-0.009
20C	-15%	663.5247	696.4019	-5.7	-0.008
	End Point	663.5247	696.4019	-5.9	-0.009

9.4.15. 5G NR n77 (FCC Part 27 3450-3550MHz)

LIMITS

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

Test Engineer ID:	10646	Test Date:	5/10/2021

5G NR n77 QPSK (100MHz BANDWIDTH)

Limit		3450	3550	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	3451.1933	3547.8164		
Extreme (50C)		3451.1933	3547.8164	-24.8	-0.007
Extreme (40C)		3451.1933	3547.8164	-17.9	-0.005
Extreme (30C)		3451.1933	3547.8164	-21.2	-0.006
Extreme (10C)		3451.1933	3547.8164	-18.8	-0.005
Extreme (0C)		3451.1933	3547.8164	-20.3	-0.006
Extreme (-10C)		3451.1933	3547.8164	17.7	0.005
Extreme (-20C)		3451.1933	3547.8164	-24.9	-0.007
Extreme (-30C)		3451.1933	3547.8164	25.1	0.007
20C	15%	3451.1933	3547.8164	-29.8	-0.009
	-15%	3451.1933	3547.8164	-27.3	-0.008
	End Point	3451.1933	3547.8164	26.2	0.007

9.4.16. 5G NR n77 (FCC Part 27 3700-3980MHz)

LIMITS

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

Test Engineer ID:	10646	Test Date:	5/10/2021

5G NR n77 QPSK (100MHz BANDWIDTH)

Limit		3700	3980	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	3701.1685	3977.8195		
Extreme (50C)		3701.1685	3977.8195	-22.0	-0.006
Extreme (40C)		3701.1685	3977.8195	-17.2	-0.004
Extreme (30C)		3701.1686	3977.8195	16.1	0.004
Extreme (10C)		3701.1685	3977.8195	-18.9	-0.005
Extreme (0C)		3701.1685	3977.8195	-21.3	-0.006
Extreme (-10C)		3701.1685	3977.8195	-26.5	-0.007
Extreme (-20C)		3701.1685	3977.8194	-35.9	-0.009
Extreme (-30C)		3701.1685	3977.8194	-37.5	-0.010
20C	15%	3701.1685	3977.8195	-27.3	-0.007
	-15%	3701.1685	3977.8195	-23.6	-0.006
	End Point	3701.1686	3977.8195	26.0	0.007

9.5. PEAK-TO-AVERAGE POWER RATIO

LIMIT

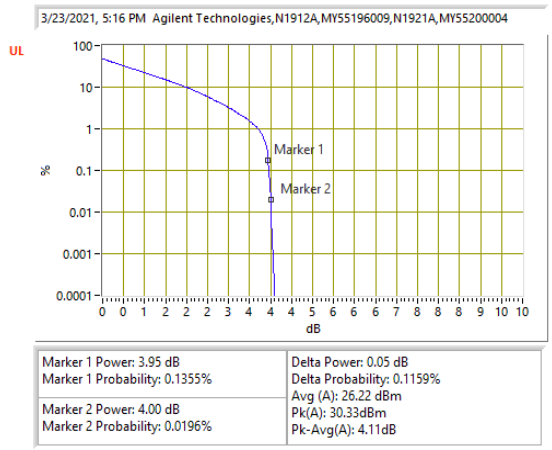
In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

RESULT

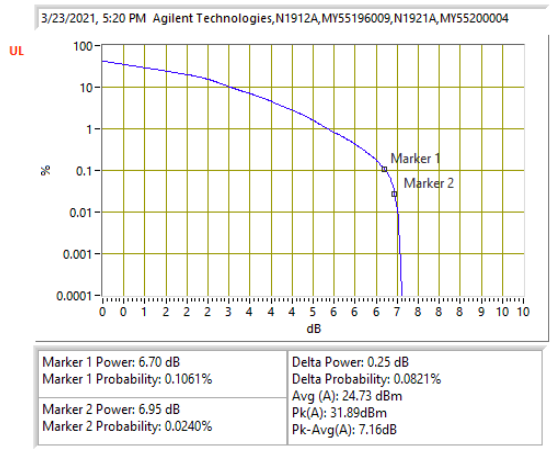
Antenna 1 or 7 was used to measure as the worst case; full resource block (FRB) for each bandwidth was used to measure as the worst case. The results from all CCDF measurements are passed with 13dB peak-to-average power ratio criteria.

Test Engineer ID:	10646	**Test Date:**	5/24/2021

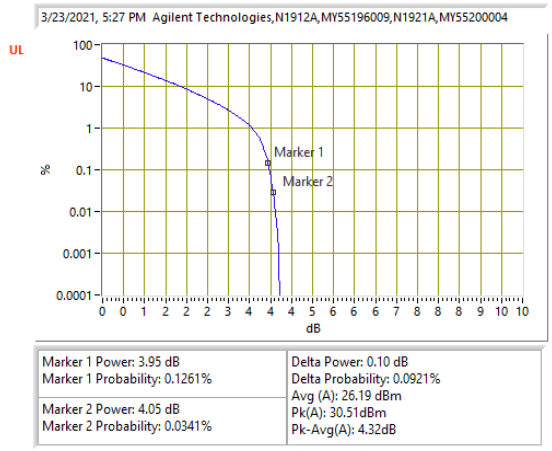
9.5.1. 5G NR n5



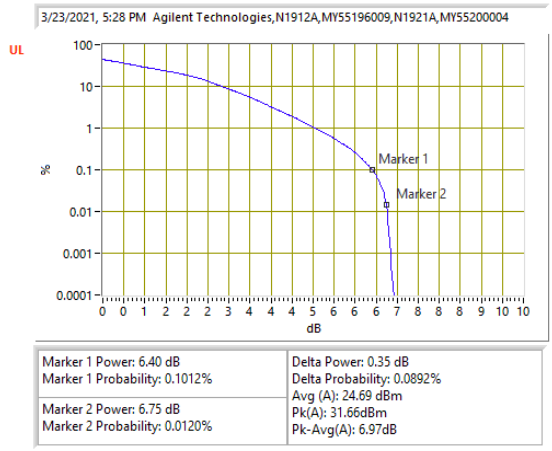
5G NR n5 5MHz BPSK Middle Channel



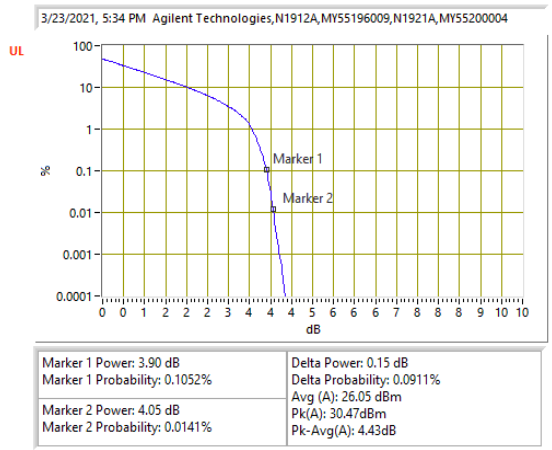
5G NR n5 5MHz 16QAM Middle Channel

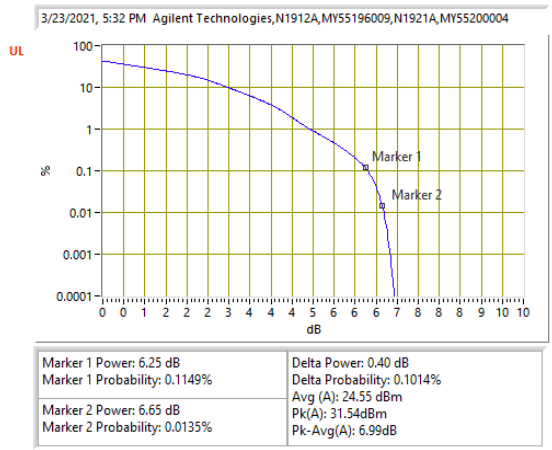


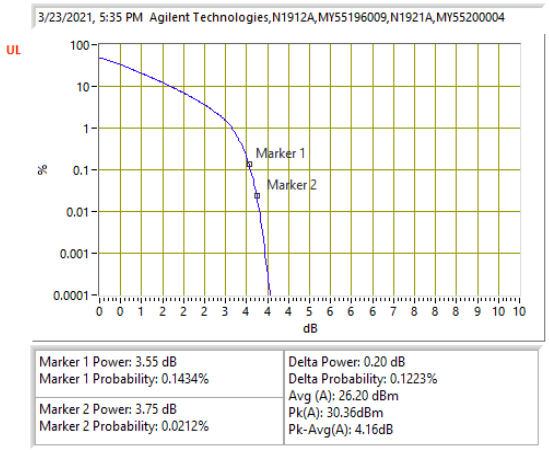
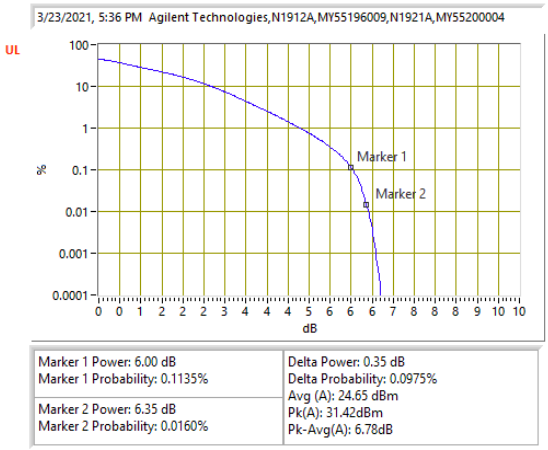
5G NR n5 10MHz BPSK Middle Channel



5G NR n5 10MHz 16QAM Middle Channel

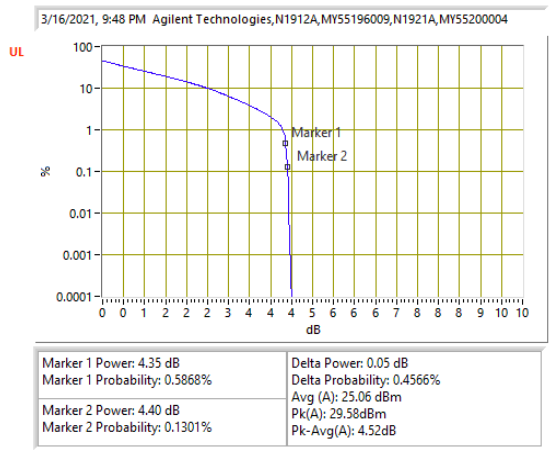




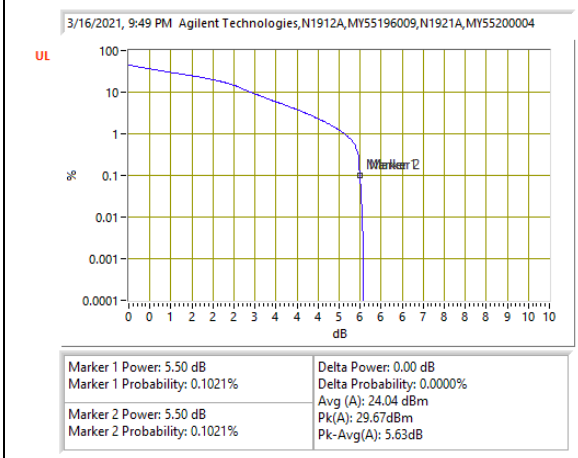
5G NR n5 15MHz BPSK Middle Channel	5G NR n5 15MHz 16QAM Middle Channel
	
5G NR n5 20MHz BPSK Middle Channel	5G NR n5 20MHz 16QAM Middle Channel

9.5.2. LTE BAND 7 AND 5G NR n7

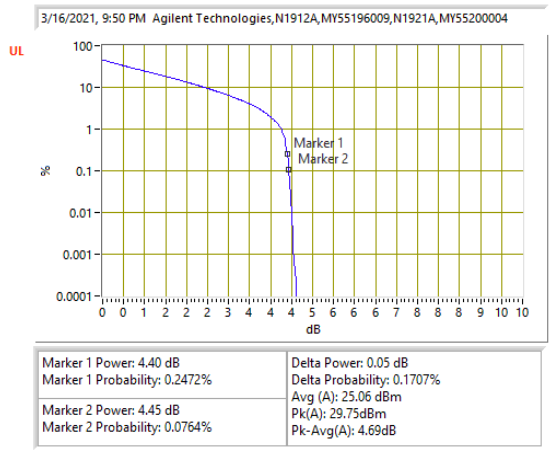
LTE BAND 7



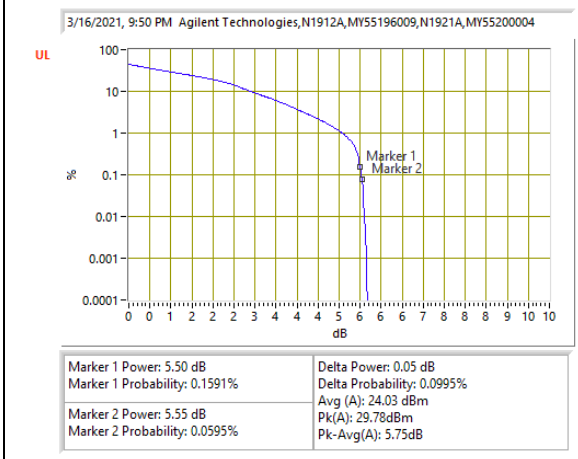
LTE B7 5MHz QPSK Middle Channel



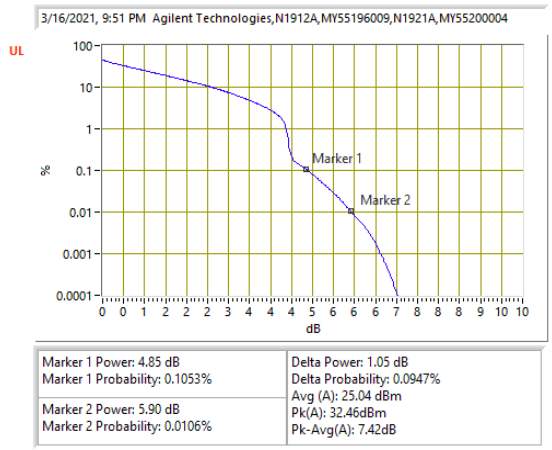
LTE B7 5MHz 16QAM Middle Channel



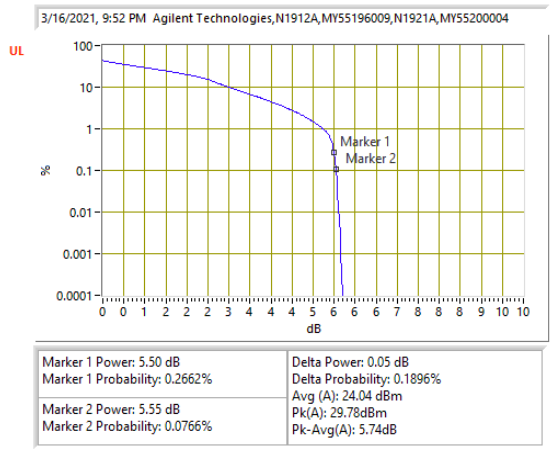
LTE B7 10MHz QPSK Middle Channel



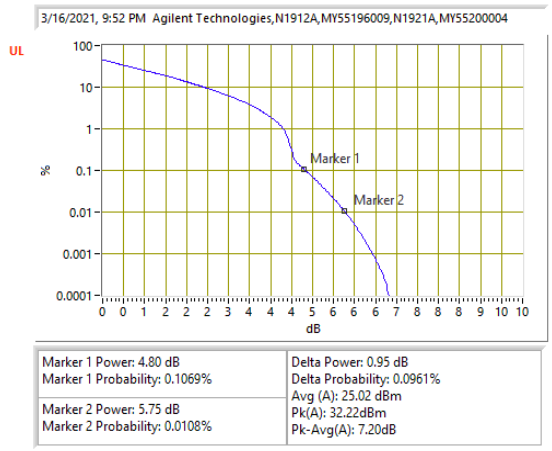
LTE B7 10MHz 16QAM Middle Channel



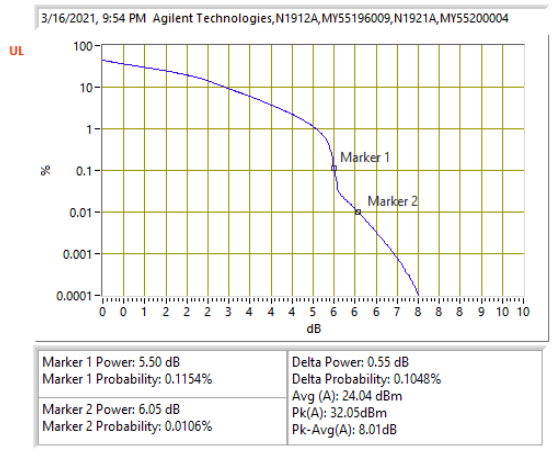
LTE B7 15MHz QPSK Middle Channel



LTE B7 15MHz 16QAM Middle Channel

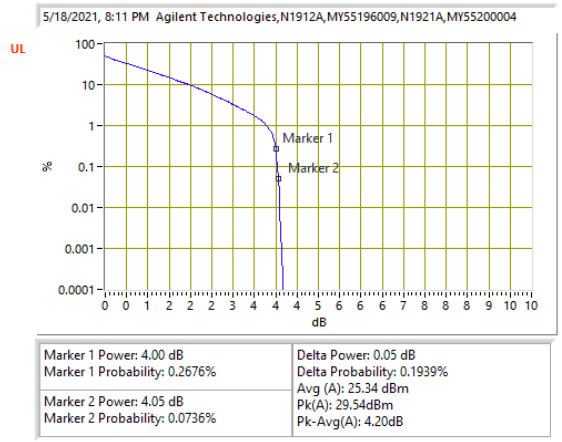


LTE B7 20MHz QPSK Middle Channel

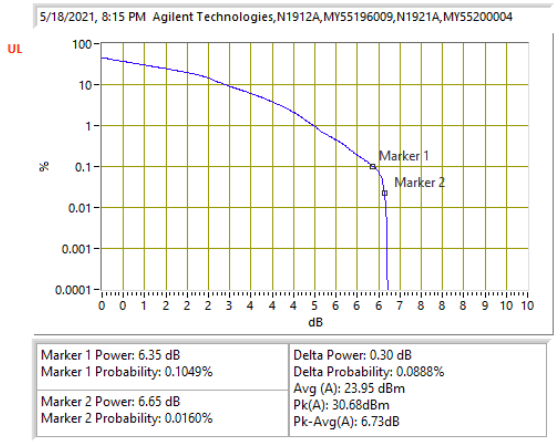


LTE B7 20MHz 16QAM Middle Channel

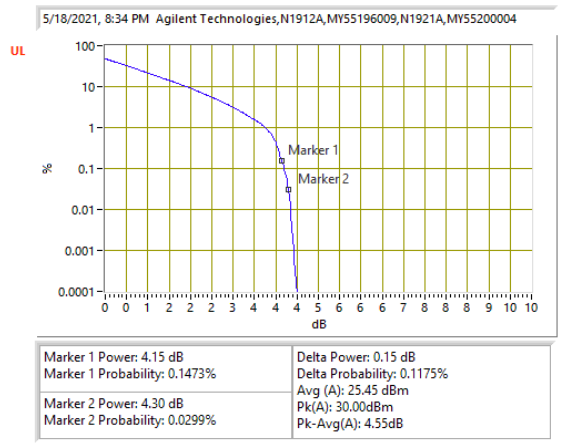
5G NR n7



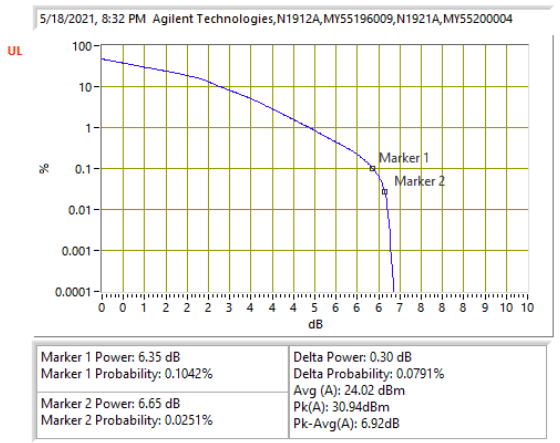
5G NR n7 5MHz BPSK Middle Channel



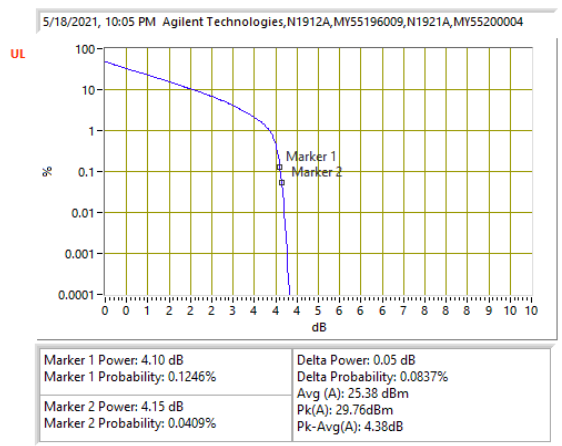
5G NR n7 5MHz 16QAM Middle Channel



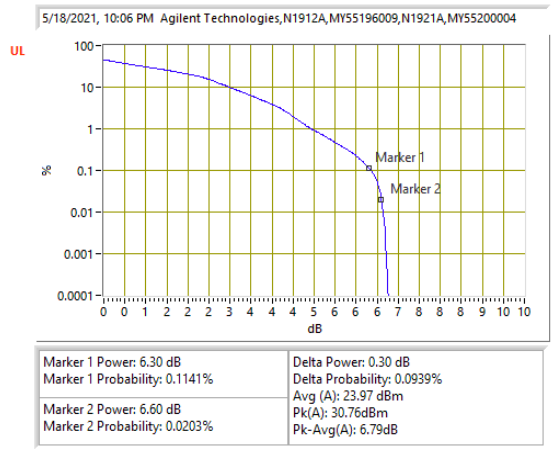
5G NR n7 10MHz BPSK Middle Channel



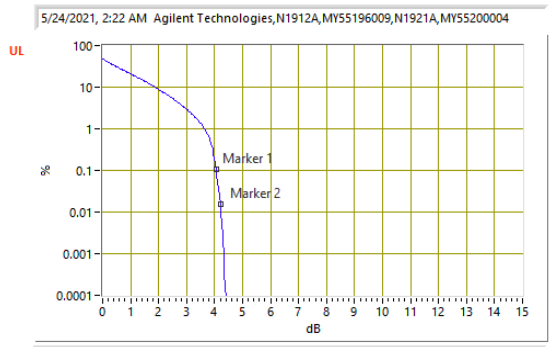
5G NR n7 10MHz 16QAM Middle Channel



5G NR n7 15MHz BPSK Middle Channel

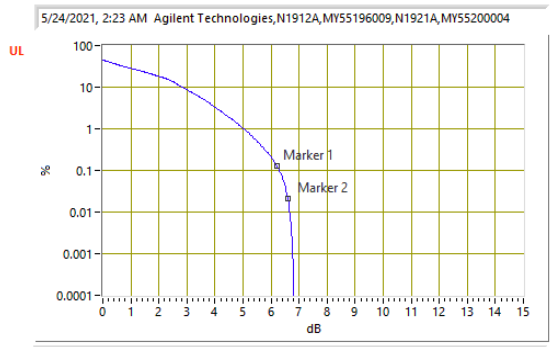


5G NR n7 15MHz 16QAM Middle Channel



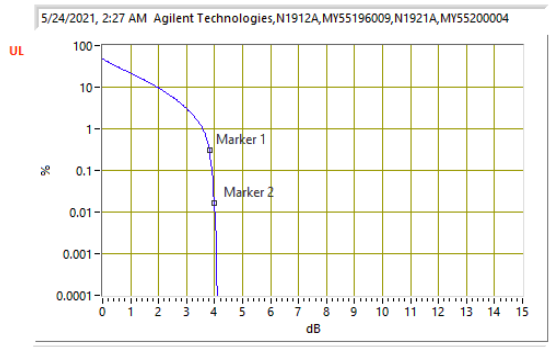
Marker 1 Power: 4.05 dB Marker 1 Probability: 0.1093%	Delta Power: 0.15 dB Delta Probability: 0.0939%
Marker 2 Power: 4.20 dB Marker 2 Probability: 0.0154%	Avg (A): 25.57 dBm Pk(A): 30.03dBm Pk-Avg(A): 4.47dB

5G NR n7 20MHz BPSK Middle Channel



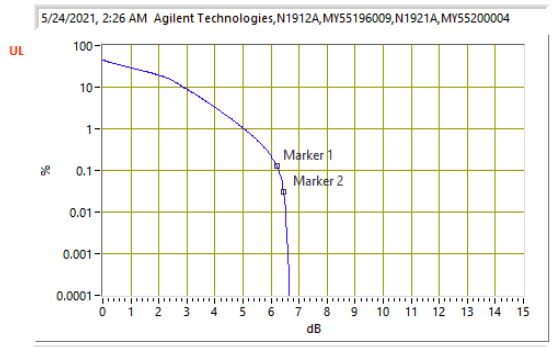
Marker 1 Power: 6.22 dB Marker 1 Probability: 0.1201%	Delta Power: 0.37 dB Delta Probability: 0.0990%
Marker 2 Power: 6.60 dB Marker 2 Probability: 0.0211%	Avg (A): 24.07 dBm Pk(A): 30.89dBm Pk-Avg(A): 6.82dB

5G NR n7 20MHz 16QAM Middle Channel



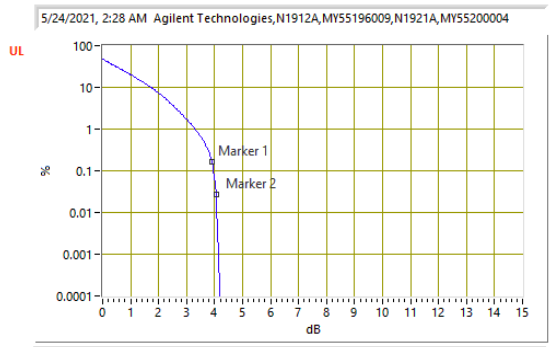
Marker 1 Power: 3.83 dB Marker 1 Probability: 0.2675%	Delta Power: 0.15 dB Delta Probability: 0.2439%
Marker 2 Power: 3.98 dB Marker 2 Probability: 0.0236%	Avg (A): 24.03 dBm Pk(A): 28.19dBm Pk-Avg(A): 4.16dB

5G NR n7 25MHz BPSK Middle Channel



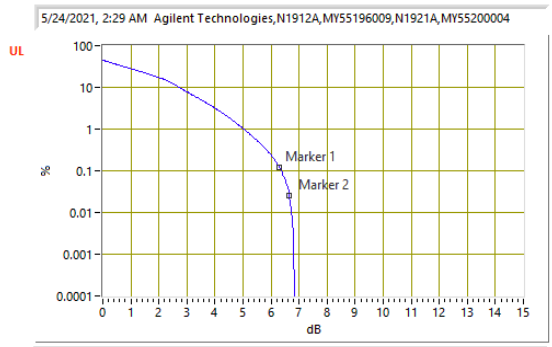
Marker 1 Power: 6.22 dB Marker 1 Probability: 0.1206%	Delta Power: 0.22 dB Delta Probability: 0.0899%
Marker 2 Power: 6.45 dB Marker 2 Probability: 0.0307%	Avg (A): 22.56 dBm Pk(A): 29.27dBm Pk-Avg(A): 6.71dB

5G NR n7 25MHz 16QAM Middle Channel



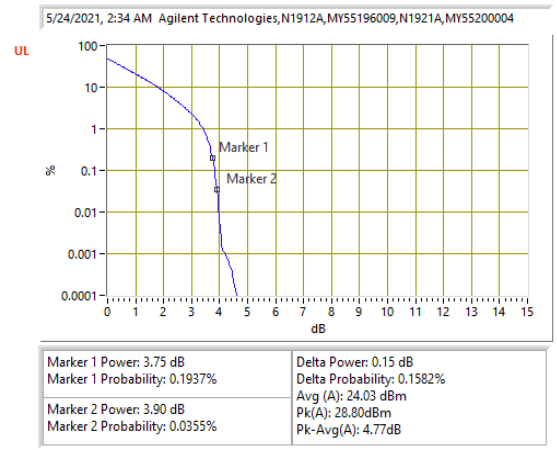
Marker 1 Power: 3.90 dB Marker 1 Probability: 0.1689%	Delta Power: 0.15 dB Delta Probability: 0.1425%
Marker 2 Power: 4.05 dB Marker 2 Probability: 0.0264%	Avg (A): 24.00 dBm Pk(A): 28.23dBm Pk-Avg(A): 4.23dB

5G NR n7 30MHz BPSK Middle Channel

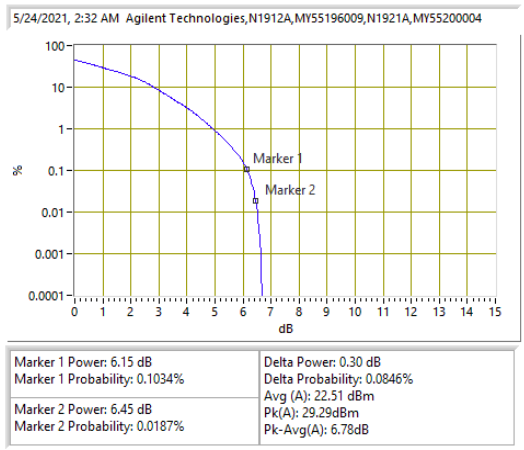


Marker 1 Power: 6.30 dB Marker 1 Probability: 0.1196%	Delta Power: 0.37 dB Delta Probability: 0.0983%
Marker 2 Power: 6.67 dB Marker 2 Probability: 0.0212%	Avg (A): 22.49 dBm Pk(A): 29.39dBm Pk-Avg(A): 6.91dB

5G NR n7 30MHz 16QAM Middle Channel



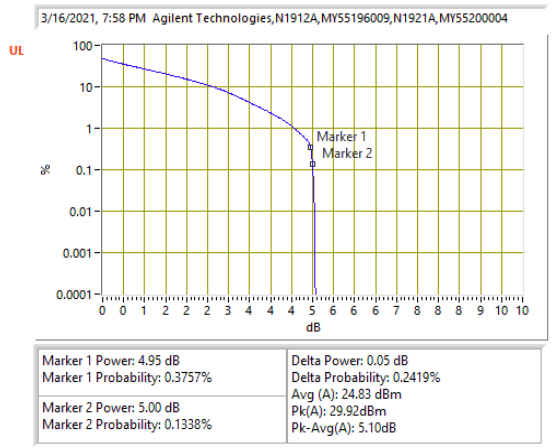
5G NR n7 40MHz BPSK Middle Channel



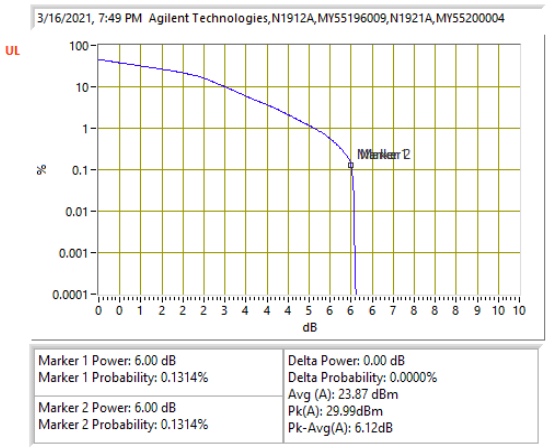
5G NR n7 40MHz 16QAM Middle Channel

9.5.3. LTE BAND 12 AND 5G NR n12

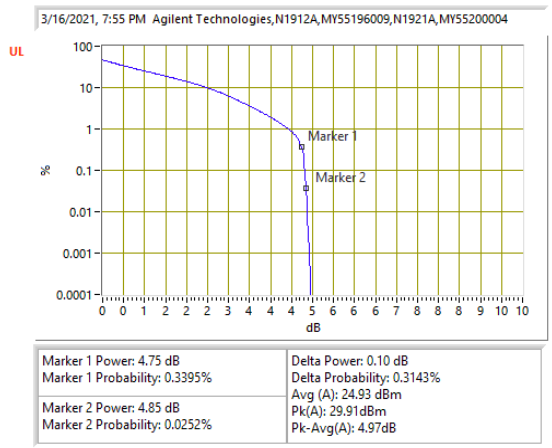
LTE BAND 12



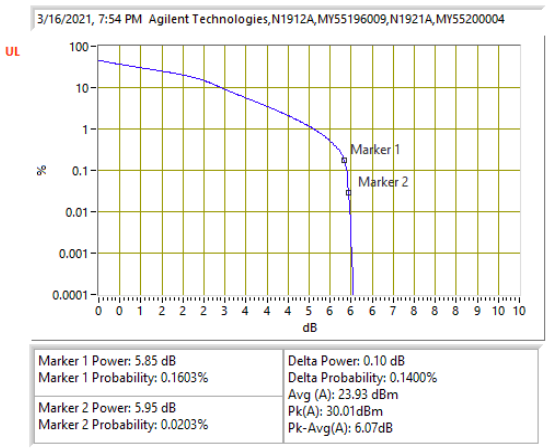
LTE B12 1.4MHz QPSK Middle Channel



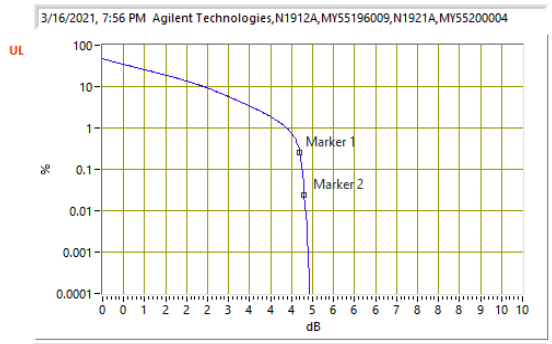
LTE B12 1.4MHz 16QAM Middle Channel



LTE B12 3MHz QPSK Middle Channel

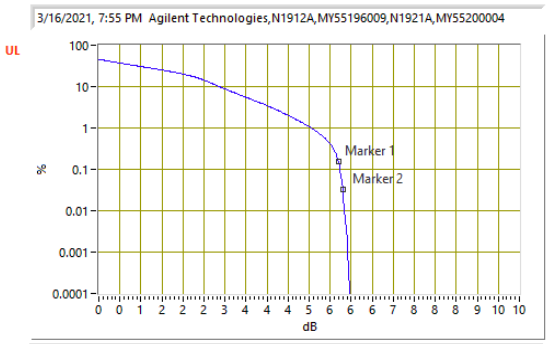


LTE B12 3MHz 16QAM Middle Channel



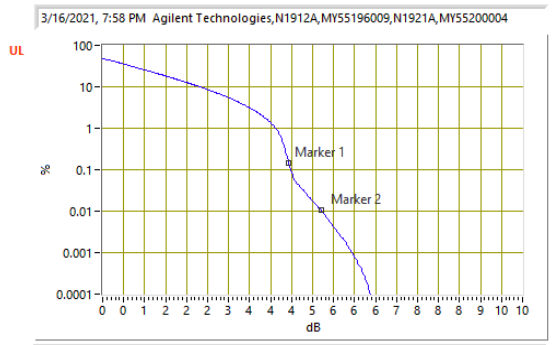
Marker 1 Power: 4.70 dB Marker 1 Probability: 0.2506%	Delta Power: 0.10 dB Delta Probability: 0.2260% Avg (A): 24.89 dBm Pk(A): 29.85dBm Pk-Avg(A): 4.96dB
Marker 2 Power: 4.80 dB Marker 2 Probability: 0.0246%	

LTE B12 5MHz QPSK Middle Channel



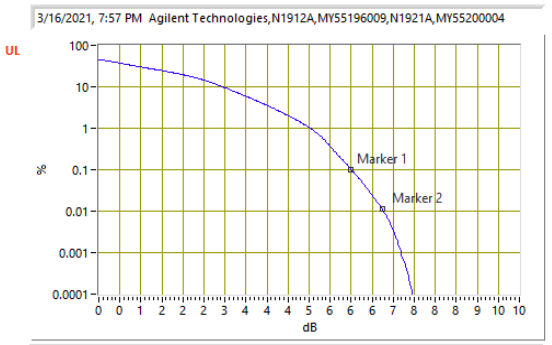
Marker 1 Power: 5.70 dB Marker 1 Probability: 0.1502%	Delta Power: 0.10 dB Delta Probability: 0.1182% Avg (A): 23.95 dBm Pk(A): 29.94dBm Pk-Avg(A): 5.99dB
Marker 2 Power: 5.80 dB Marker 2 Probability: 0.0320%	

LTE B12 5MHz 16QAM Middle Channel



Marker 1 Power: 4.45 dB Marker 1 Probability: 0.1303%	Delta Power: 0.75 dB Delta Probability: 0.1199% Avg (A): 24.97 dBm Pk(A): 31.58dBm Pk-Avg(A): 6.61dB
Marker 2 Power: 5.20 dB Marker 2 Probability: 0.0104%	

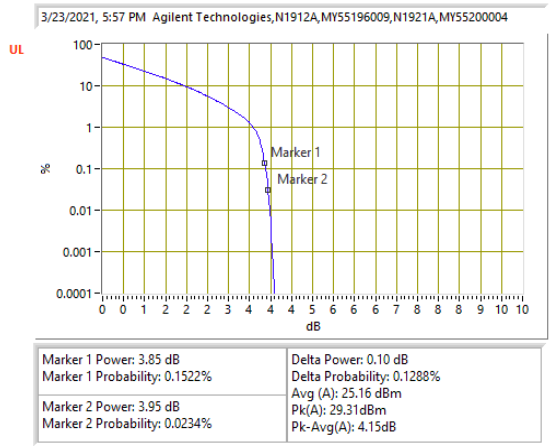
LTE B12 10MHz QPSK Middle Channel



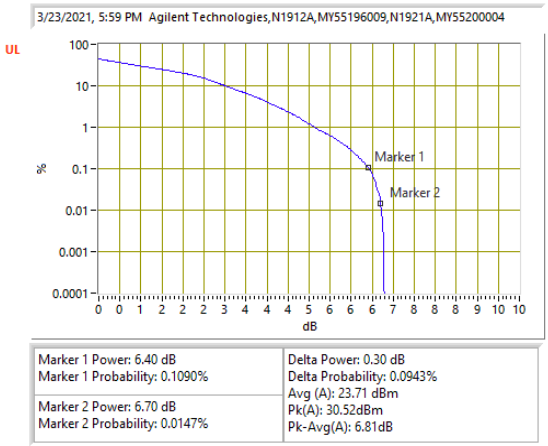
Marker 1 Power: 6.00 dB Marker 1 Probability: 0.1022%	Delta Power: 0.75 dB Delta Probability: 0.0916% Avg (A): 23.93 dBm Pk(A): 31.51dBm Pk-Avg(A): 7.57dB
Marker 2 Power: 6.75 dB Marker 2 Probability: 0.0106%	

LTE B12 10MHz 16QAM Middle Channel

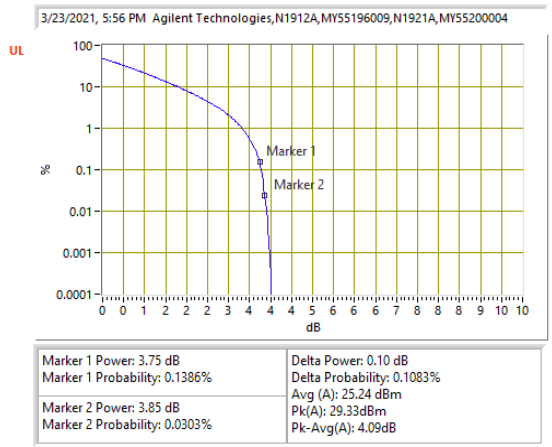
5G NR n12



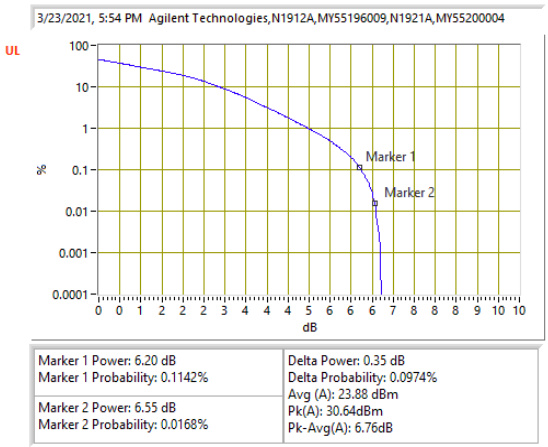
5G NR n12 5MHz BPSK Middle Channel



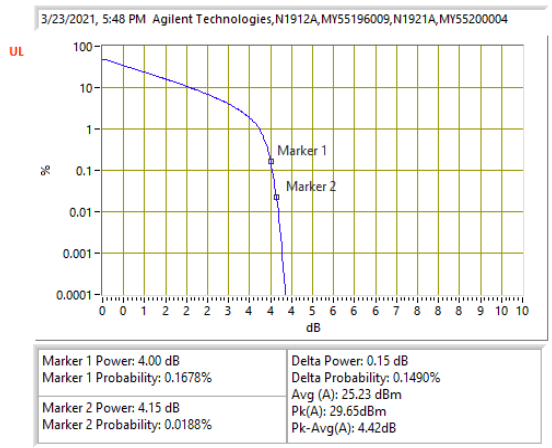
5G NR n12 5MHz 16QAM Middle Channel



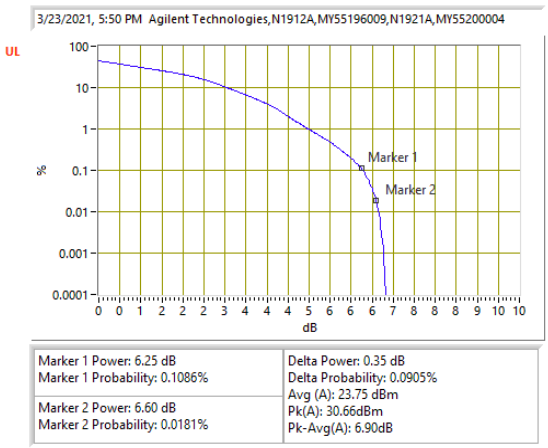
5G NR n12 10MHz BPSK Middle Channel



5G NR n12 10MHz 16QAM Middle Channel

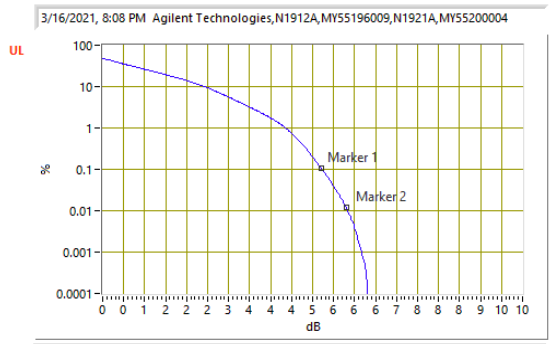


5G NR n12 15MHz BPSK Middle Channel

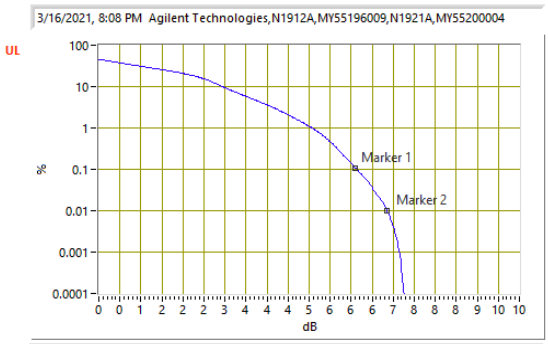


5G NR n12 15MHz 16QAM Middle Channel

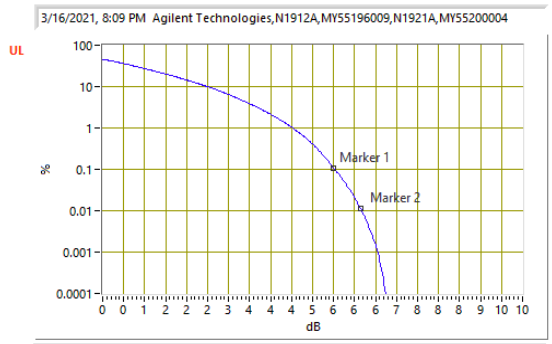
9.5.4. LTE BAND 13



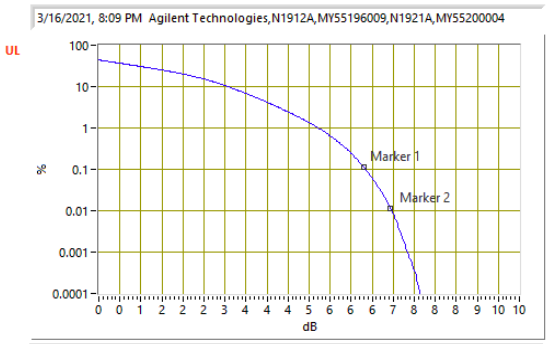
LTE B13 5MHz QPSK Middle Channel



LTE B13 5MHz 16QAM Middle Channel

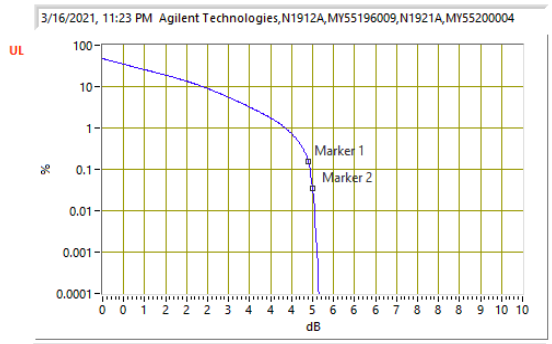


LTE B13 10MHz QPSK Middle Channel

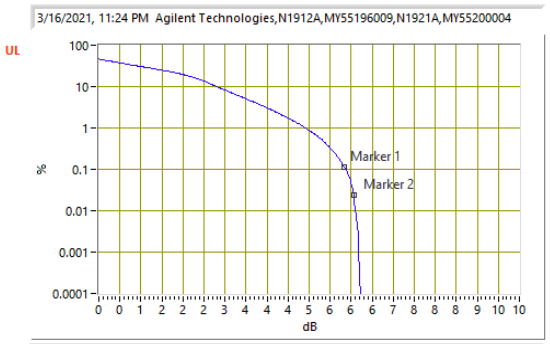


LTE B13 10MHz 16QAM Middle Channel

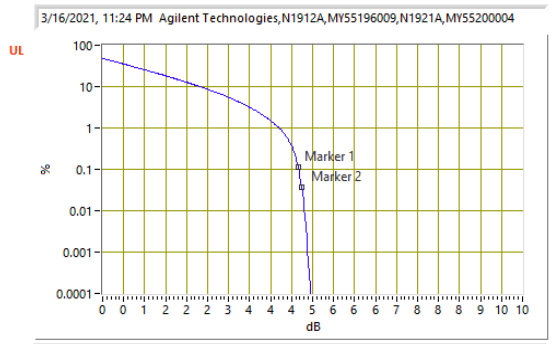
9.5.5. LTE BAND 14



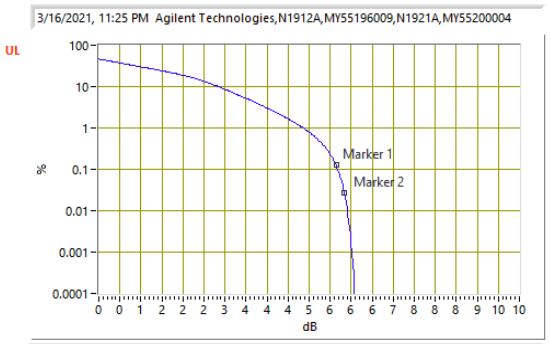
LTE B14 5MHz QPSK Middle Channel



LTE B14 5MHz 16QAM Middle Channel

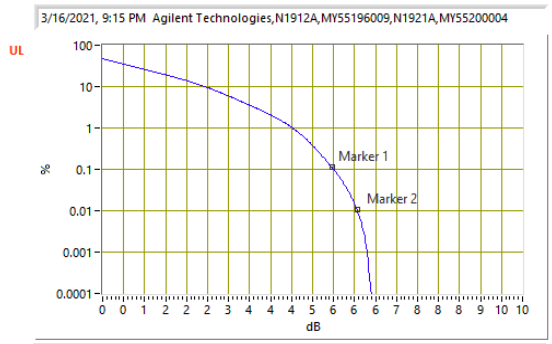


LTE B14 10MHz QPSK Middle Channel



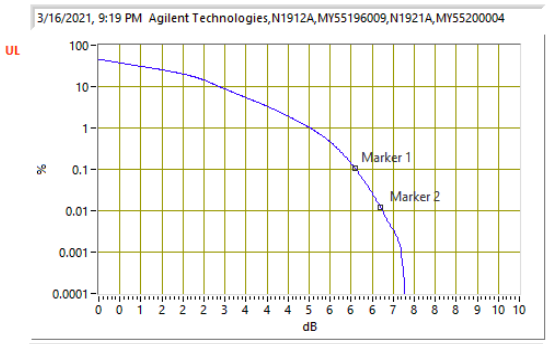
LTE B14 10MHz 16QAM Middle Channel

9.5.6. LTE BAND 17



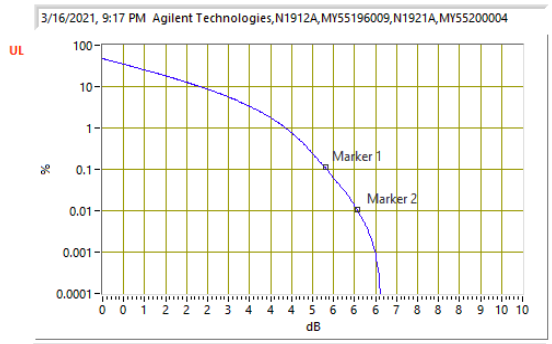
Marker 1 Power: 5.45 dB Marker 1 Probability: 0.1135%	Delta Power: 0.60 dB Delta Probability: 0.1021% Avg (A): 24.95 dBm Pk(A): 31.57dBm Pk-Avg(A): 6.62dB
Marker 2 Power: 6.05 dB Marker 2 Probability: 0.0114%	

LTE B17 5MHz QPSK Middle Channel



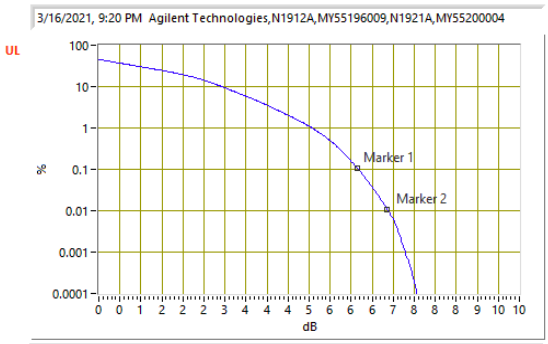
Marker 1 Power: 6.10 dB Marker 1 Probability: 0.1045%	Delta Power: 0.60 dB Delta Probability: 0.0924% Avg (A): 23.96 dBm Pk(A): 31.28dBm Pk-Avg(A): 7.32dB
Marker 2 Power: 6.70 dB Marker 2 Probability: 0.0121%	

LTE B17 5MHz 16QAM Middle Channel



Marker 1 Power: 5.30 dB Marker 1 Probability: 0.1107%	Delta Power: 0.75 dB Delta Probability: 0.0998% Avg (A): 24.96 dBm Pk(A): 31.72dBm Pk-Avg(A): 6.76dB
Marker 2 Power: 6.05 dB Marker 2 Probability: 0.0109%	

LTE B17 10MHz QPSK Middle Channel

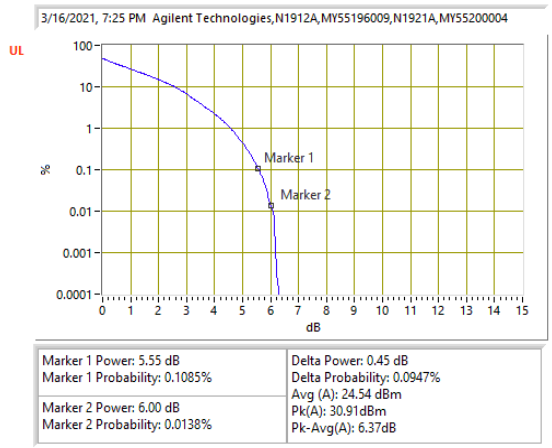


Marker 1 Power: 6.15 dB Marker 1 Probability: 0.1050%	Delta Power: 0.70 dB Delta Probability: 0.0939% Avg (A): 23.93 dBm Pk(A): 31.61dBm Pk-Avg(A): 7.67dB
Marker 2 Power: 6.85 dB Marker 2 Probability: 0.0111%	

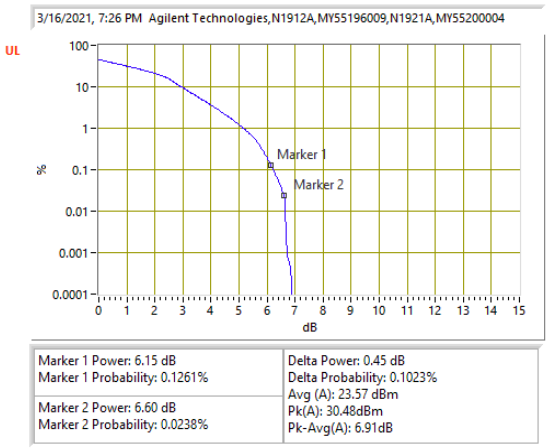
LTE B17 10MHz 16QAM Middle Channel

9.5.7. LTE BAND 25 AND 5G NR n25

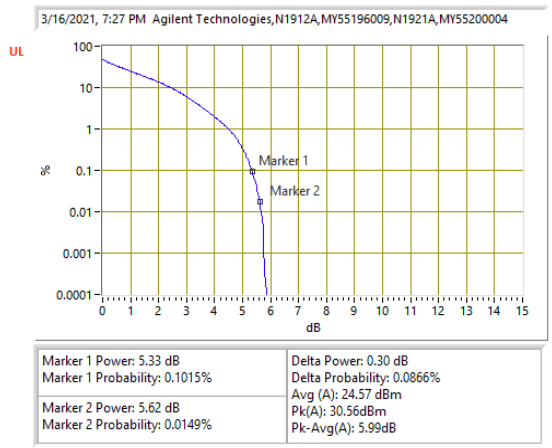
LTE BAND 25



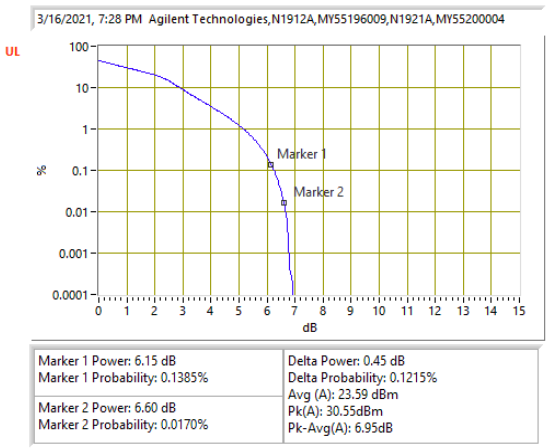
LTE B25 1.4MHz QPSK Middle Channel



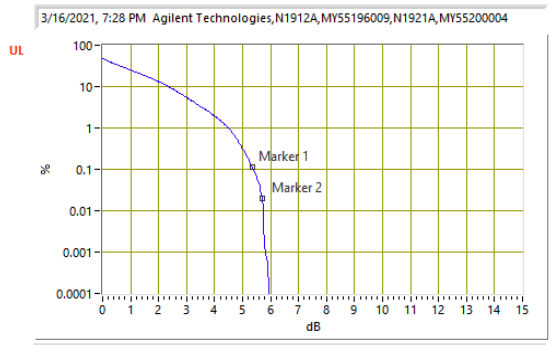
LTE B25 1.4MHz 16QAM Middle Channel



LTE B25 3MHz QPSK Middle Channel

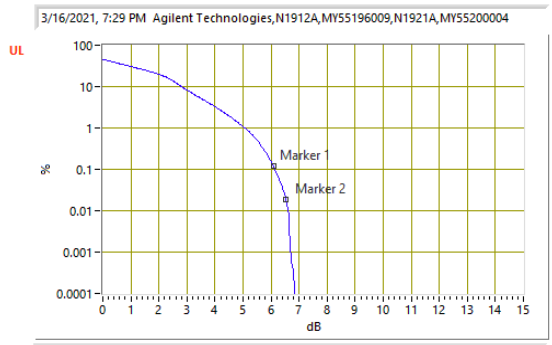


LTE B25 3MHz 16QAM Middle Channel



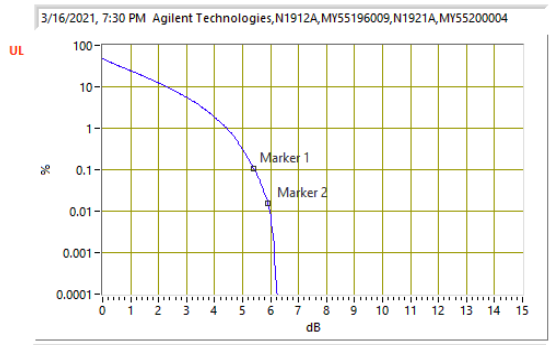
Marker 1 Power: 5.33 dB Marker 1 Probability: 0.1225%	Delta Power: 0.37 dB Delta Probability: 0.1024% Avg (A): 24.55 dBm Pk(A): 30.58dBm Pk-Avg(A): 6.03dB
Marker 2 Power: 5.70 dB Marker 2 Probability: 0.0201%	

LTE B2 5MHz QPSK Middle Channel



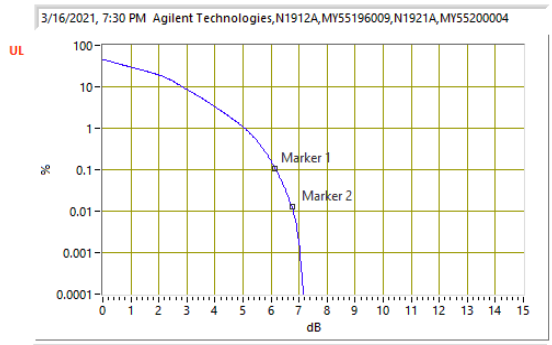
Marker 1 Power: 6.08 dB Marker 1 Probability: 0.1229%	Delta Power: 0.45 dB Delta Probability: 0.1026% Avg (A): 23.64 dBm Pk(A): 30.55dBm Pk-Avg(A): 6.91dB
Marker 2 Power: 6.53 dB Marker 2 Probability: 0.0203%	

LTE B2 5MHz 16QAM Middle Channel



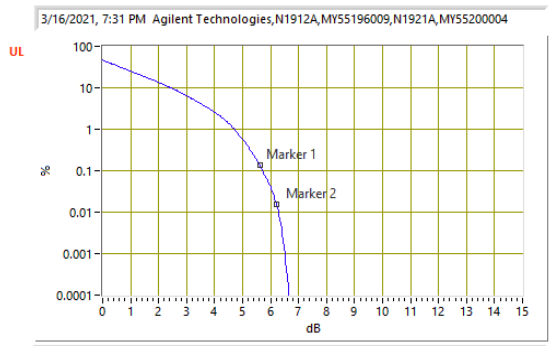
Marker 1 Power: 5.40 dB Marker 1 Probability: 0.1088%	Delta Power: 0.53 dB Delta Probability: 0.0948% Avg (A): 24.56 dBm Pk(A): 30.93dBm Pk-Avg(A): 6.37dB
Marker 2 Power: 5.92 dB Marker 2 Probability: 0.0140%	

LTE B25 10MHz QPSK Middle Channel



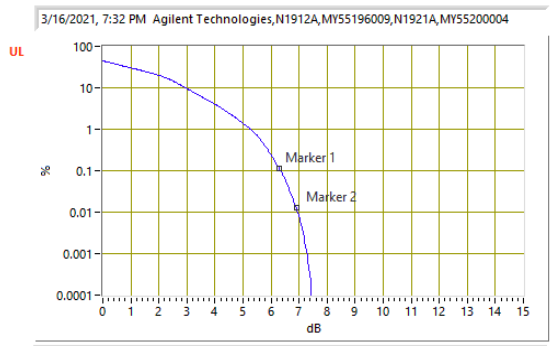
Marker 1 Power: 6.15 dB Marker 1 Probability: 0.1068%	Delta Power: 0.60 dB Delta Probability: 0.0943% Avg (A): 23.59 dBm Pk(A): 30.92dBm Pk-Avg(A): 7.33dB
Marker 2 Power: 6.75 dB Marker 2 Probability: 0.0125%	

LTE B25 10MHz 16QAM Middle Channel



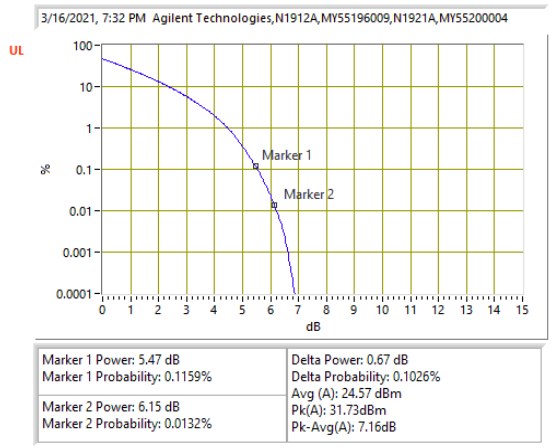
Marker 1 Power: 5.62 dB Marker 1 Probability: 0.1315%	Delta Power: 0.60 dB Delta Probability: 0.1172% Avg (A): 24.56 dBm Pk(A): 31.29dBm Pk-Avg(A): 6.73dB
Marker 2 Power: 6.22 dB Marker 2 Probability: 0.0144%	

LTE B25 15MHz QPSK Middle Channel

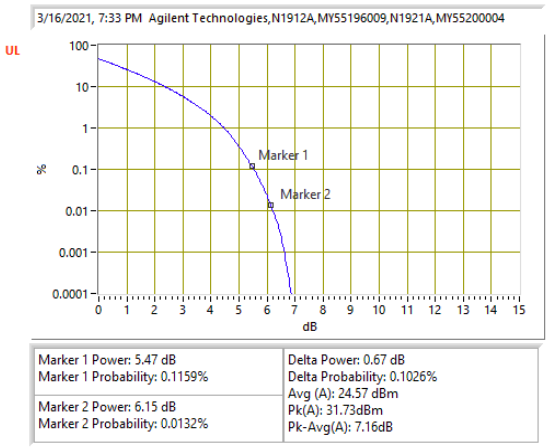


Marker 1 Power: 6.30 dB Marker 1 Probability: 0.1100%	Delta Power: 0.60 dB Delta Probability: 0.0971% Avg (A): 23.59 dBm Pk(A): 31.18dBm Pk-Avg(A): 7.59dB
Marker 2 Power: 6.90 dB Marker 2 Probability: 0.0129%	

LTE B25 15MHz 16QAM Middle Channel

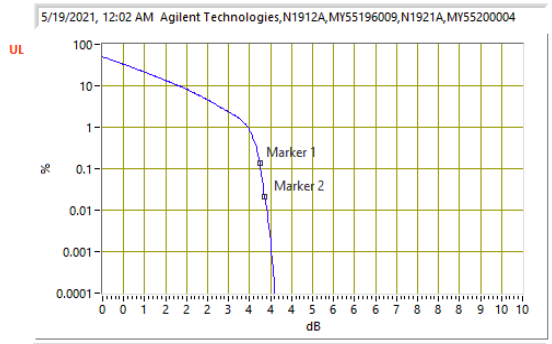


LTE B25 20MHz QPSK Middle Channel

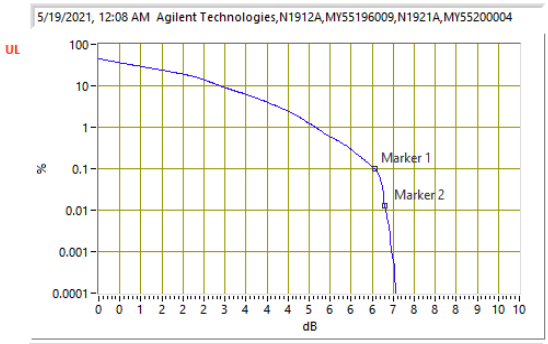


LTE B25 20MHz 16QAM Middle Channel

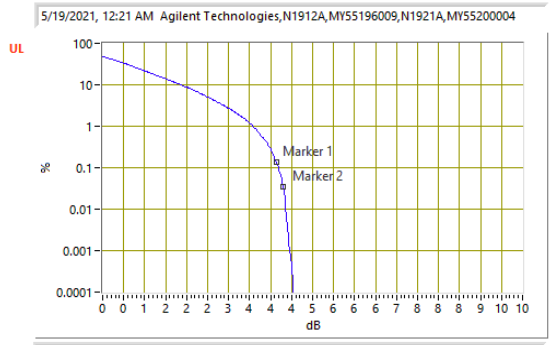
5G NR n25



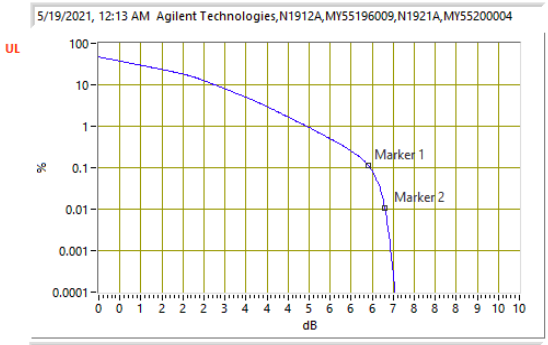
5G NR n25 5MHz BPSK Middle Channel



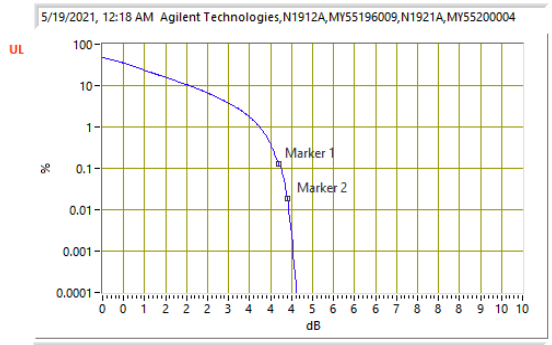
5G NR n25 5MHz 16QAM Middle Channel



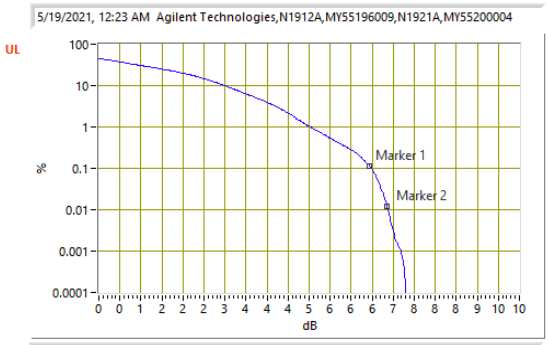
5G NR n25 10MHz BPSK Middle Channel



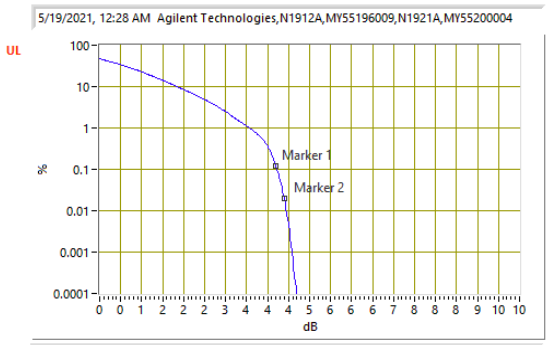
5G NR n25 10MHz 16QAM Middle Channel



5G NR n25 15MHz BPSK Middle Channel

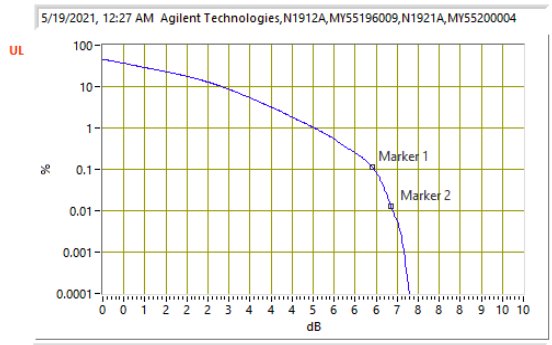


5G NR n25 15MHz 16QAM Middle Channel



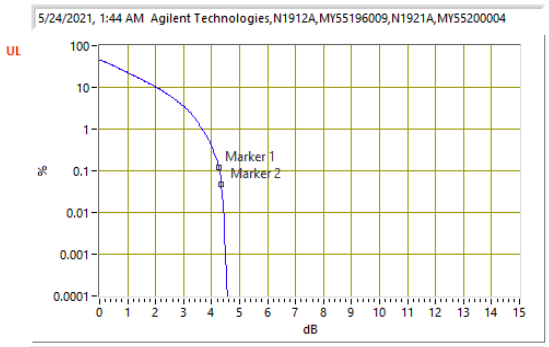
Marker 1 Power: 4.20 dB Marker 1 Probability: 0.1186%	Delta Power: 0.20 dB Delta Probability: 0.0993% Avg (A): 25.01 dBm Pk(A): 30.05dBm Pk-Avg(A): 5.04dB
Marker 2 Power: 4.40 dB Marker 2 Probability: 0.0194%	

5G NR n25 20MHz BPSK Middle Channel



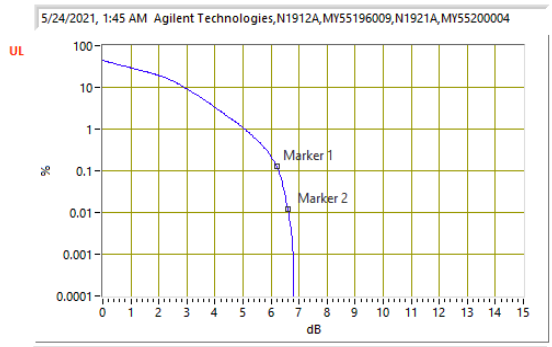
Marker 1 Power: 6.40 dB Marker 1 Probability: 0.1131%	Delta Power: 0.45 dB Delta Probability: 0.0995% Avg (A): 23.54 dBm Pk(A): 30.91dBm Pk-Avg(A): 7.38dB
Marker 2 Power: 6.85 dB Marker 2 Probability: 0.0135%	

5G NR n25 20MHz 16QAM Middle Channel



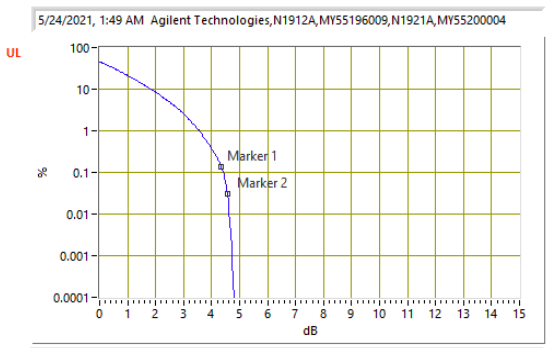
Marker 1 Power: 4.28 dB Marker 1 Probability: 0.1080%	Delta Power: 0.08 dB Delta Probability: 0.0615% Avg (A): 23.78 dBm Pk(A): 28.41dBm Pk-Avg(A): 4.63dB
Marker 2 Power: 4.35 dB Marker 2 Probability: 0.0465%	

5G NR n25 25MHz BPSK Middle Channel



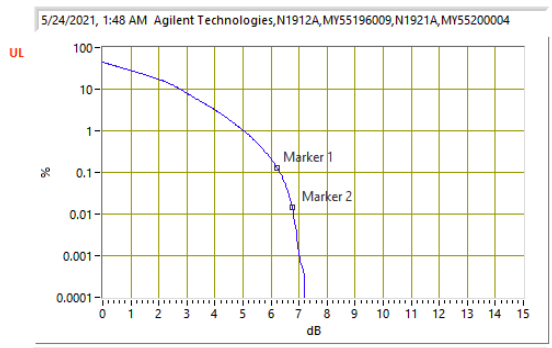
Marker 1 Power: 6.22 dB Marker 1 Probability: 0.1199%	Delta Power: 0.37 dB Delta Probability: 0.1079% Avg (A): 22.23 dBm Pk(A): 29.09dBm Pk-Avg(A): 6.86dB
Marker 2 Power: 6.60 dB Marker 2 Probability: 0.0120%	

5G NR n25 25MHz 16QAM Middle Channel



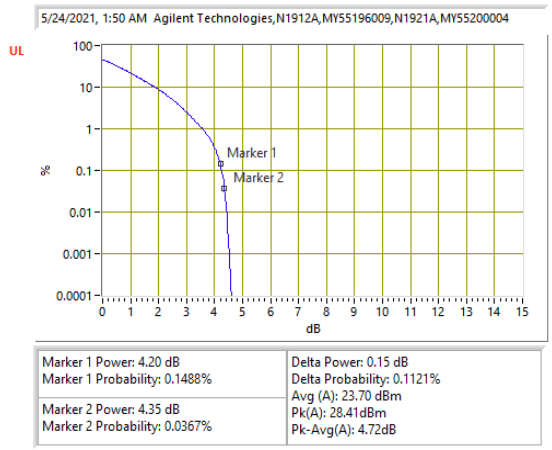
Marker 1 Power: 4.35 dB Marker 1 Probability: 0.1390%	Delta Power: 0.22 dB Delta Probability: 0.1135% Avg (A): 23.72 dBm Pk(A): 28.61dBm Pk-Avg(A): 4.89dB
Marker 2 Power: 4.58 dB Marker 2 Probability: 0.0255%	

5G NR n25 30MHz BPSK Middle Channel

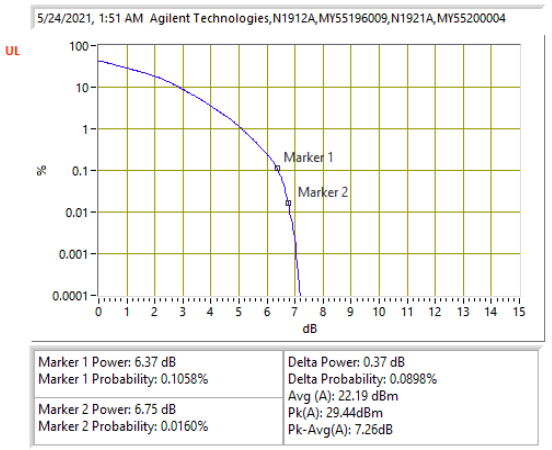


Marker 1 Power: 6.22 dB Marker 1 Probability: 0.1257%	Delta Power: 0.53 dB Delta Probability: 0.1111% Avg (A): 22.22 dBm Pk(A): 29.49dBm Pk-Avg(A): 7.28dB
Marker 2 Power: 6.75 dB Marker 2 Probability: 0.0146%	

5G NR n25 30MHz 16QAM Middle Channel

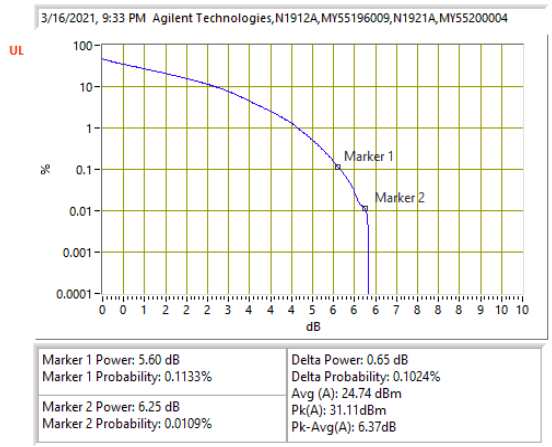


5G NR n25 40MHz BPSK Middle Channel

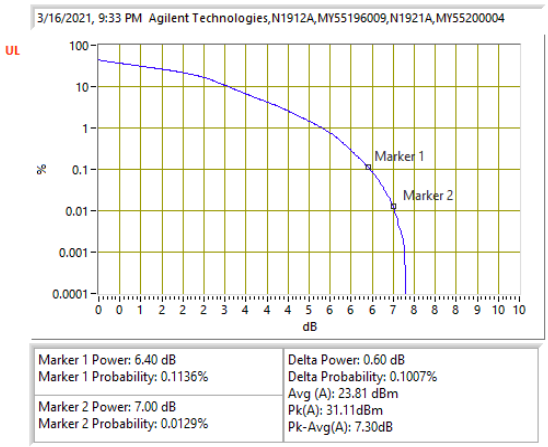


5G NR n25 40MHz 16QAM Middle Channel

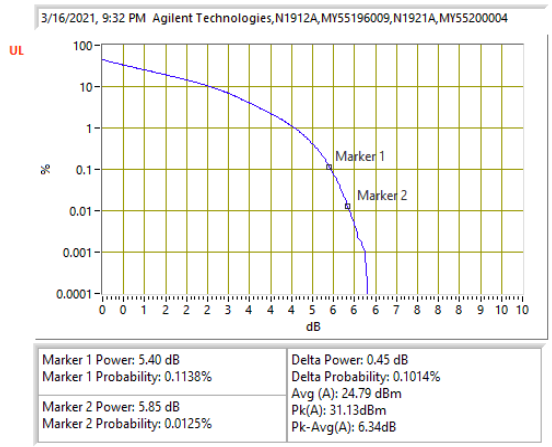
9.5.8. LTE BAND 26 (FCC PART 90S)



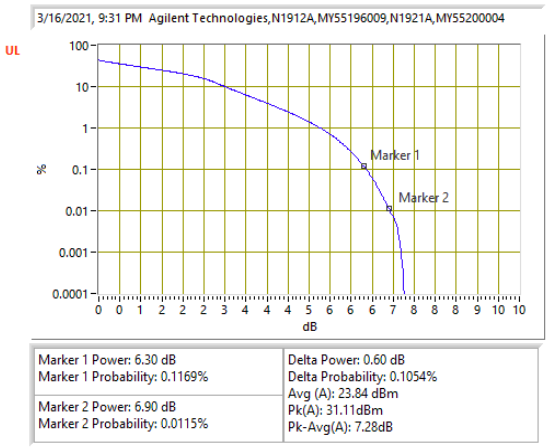
LTE B26 1.4MHz QPSK Middle Channel



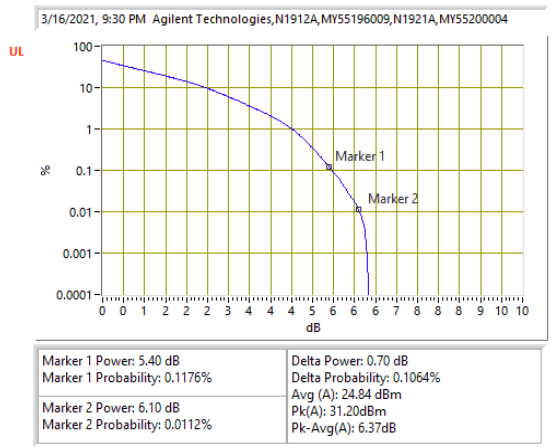
LTE B26 1.4MHz 16QAM Middle Channel



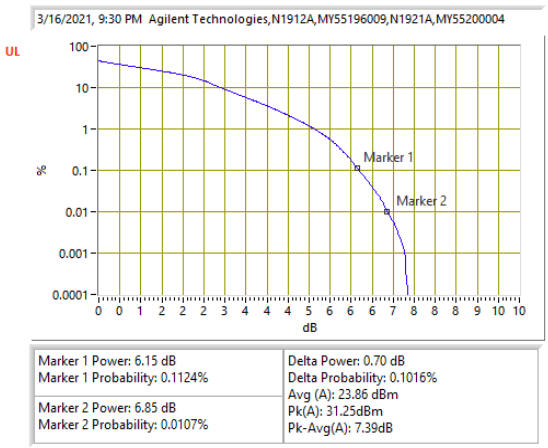
LTE B26 3MHz QPSK Middle Channel



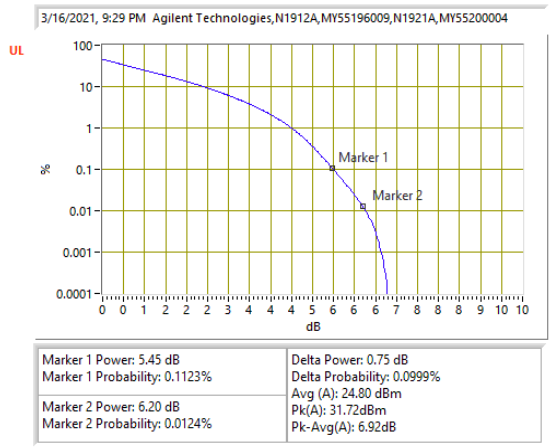
LTE B26 3MHz 16QAM Middle Channel



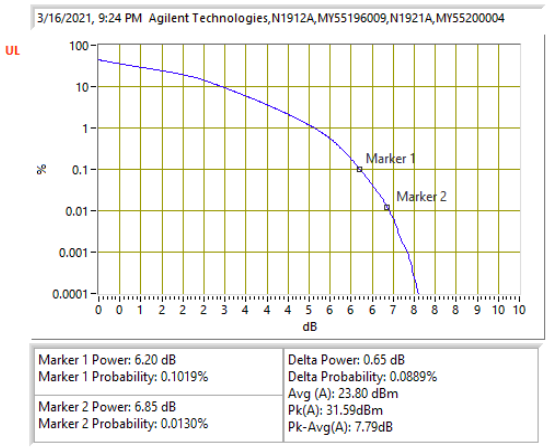
LTE B26 5MHz QPSK Middle Channel



LTE B26 5MHz 16QAM Middle Channel

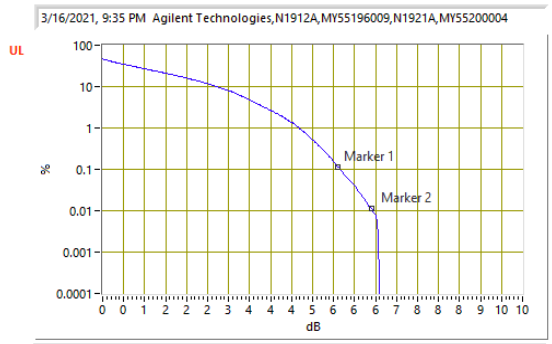


LTE B26 10MHz QPSK Middle Channel



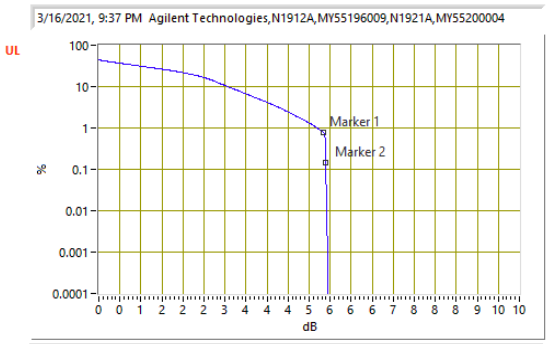
LTE B26 10MHz 16QAM Middle Channel

9.5.9. LTE BAND 26 (FCC PART 22)



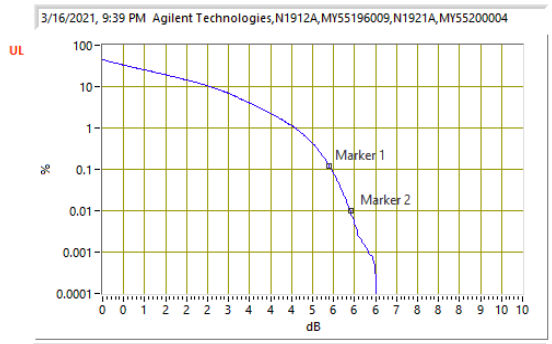
Marker 1 Power: 5.60 dB Marker 1 Probability: 0.1166%	Delta Power: 0.80 dB Delta Probability: 0.1054% Avg (A): 24.68 dBm Pk(A): 31.28dBm Pk-Avg(A): 6.60dB
Marker 2 Power: 6.40 dB Marker 2 Probability: 0.0112%	

LTE B26 1.4MHz QPSK Middle Channel



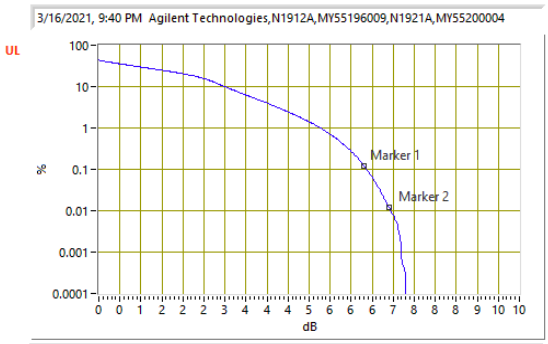
Marker 1 Power: 5.35 dB Marker 1 Probability: 0.7626%	Delta Power: 0.05 dB Delta Probability: 0.6166% Avg (A): 23.78 dBm Pk(A): 29.24dBm Pk-Avg(A): 5.46dB
Marker 2 Power: 5.40 dB Marker 2 Probability: 0.1460%	

LTE B26 1.4MHz 16QAM Middle Channel



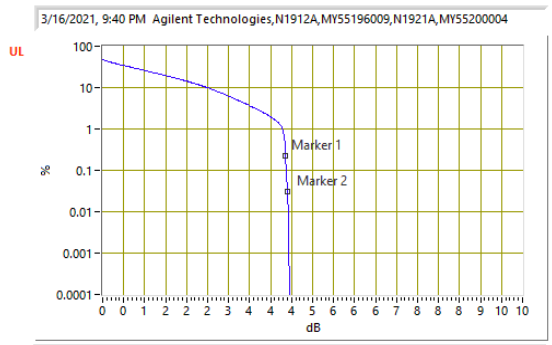
Marker 1 Power: 5.40 dB Marker 1 Probability: 0.1179%	Delta Power: 0.50 dB Delta Probability: 0.1081% Avg (A): 24.76 dBm Pk(A): 31.28dBm Pk-Avg(A): 6.52dB
Marker 2 Power: 5.90 dB Marker 2 Probability: 0.0098%	

LTE B26 3MHz QPSK Middle Channel



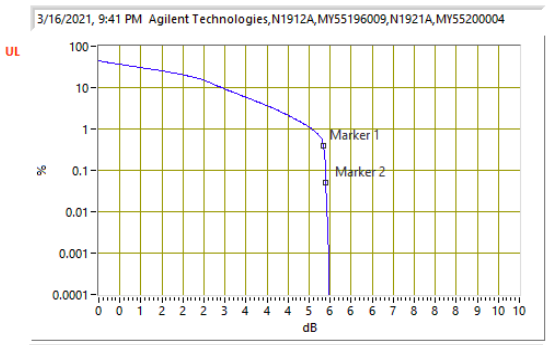
Marker 1 Power: 6.30 dB Marker 1 Probability: 0.1224%	Delta Power: 0.60 dB Delta Probability: 0.1103% Avg (A): 23.79 dBm Pk(A): 31.13dBm Pk-Avg(A): 7.34dB
Marker 2 Power: 6.90 dB Marker 2 Probability: 0.0121%	

LTE B26 3MHz 16QAM Middle Channel



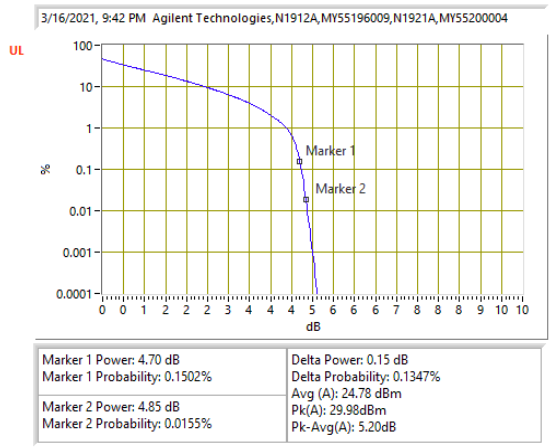
Marker 1 Power: 4.35 dB Marker 1 Probability: 0.3118%	Delta Power: 0.05 dB Delta Probability: 0.2812% Avg (A): 24.78 dBm Pk(A): 29.27dBm Pk-Avg(A): 4.49dB
Marker 2 Power: 4.40 dB Marker 2 Probability: 0.0306%	

LTE B26 5MHz QPSK Middle Channel

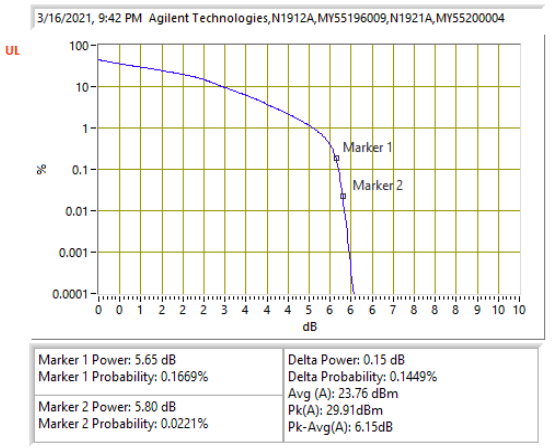


Marker 1 Power: 5.35 dB Marker 1 Probability: 0.3172%	Delta Power: 0.05 dB Delta Probability: 0.2666% Avg (A): 23.81 dBm Pk(A): 29.31dBm Pk-Avg(A): 5.51dB
Marker 2 Power: 5.40 dB Marker 2 Probability: 0.0506%	

LTE B26 5MHz 16QAM Middle Channel



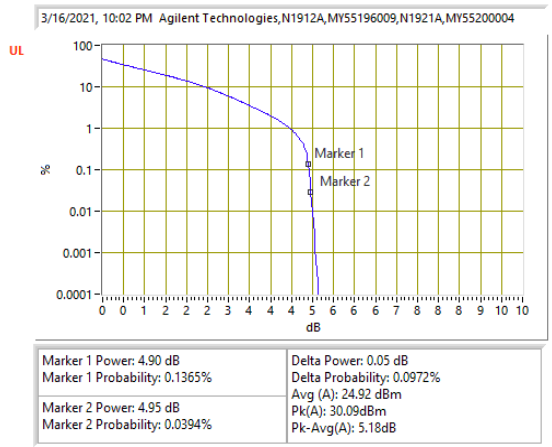
LTE B26 10MHz QPSK Middle Channel



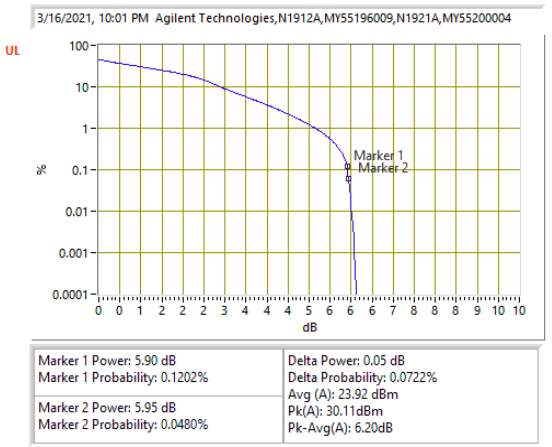
LTE B26 10MHz 16QAM Middle Channel

9.5.10. LTE BAND 30 AND 5G NR n30

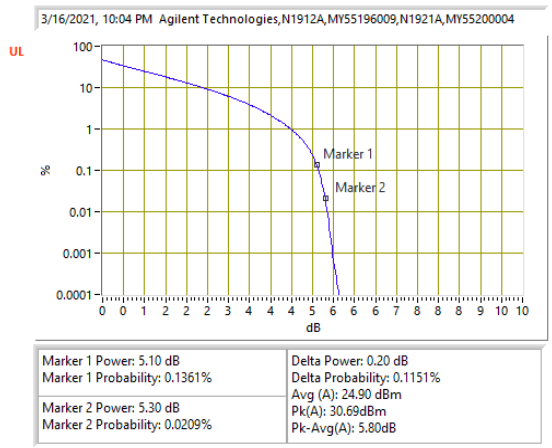
LTE BAND 30



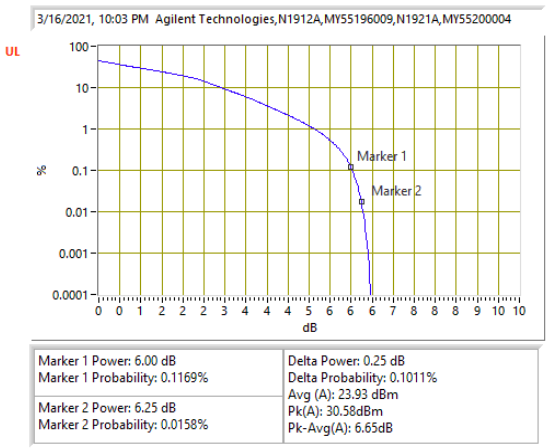
LTE B30 5MHz QPSK Middle Channel



LTE B30 5MHz 16QAM Middle Channel

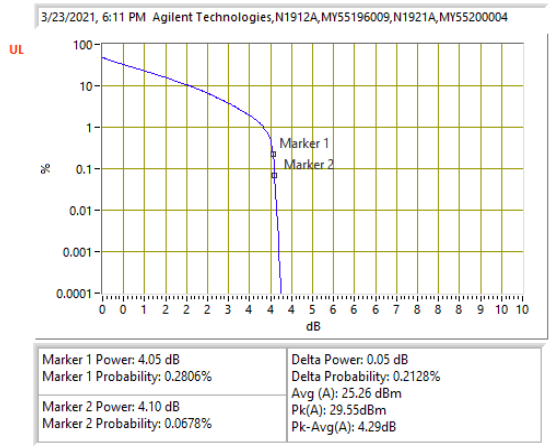


LTE B30 10MHz QPSK Middle Channel

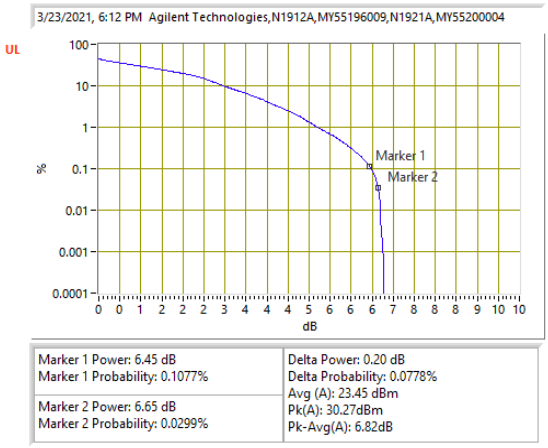


LTE B30 10MHz 16QAM Middle Channel

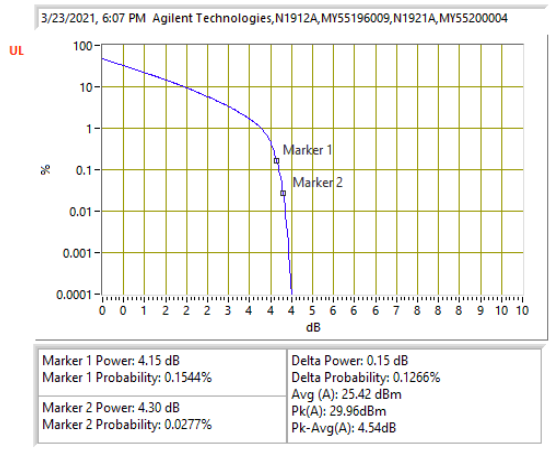
5G NR n30



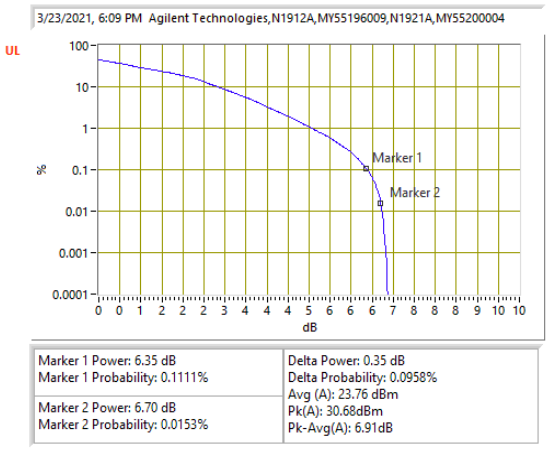
5G NR n30 5MHz BPSK Middle Channel



5G NR n30 5MHz 16QAM Middle Channel



5G NR n30 10MHz BPSK Middle Channel



5G NR n30 10MHz 16QAM Middle Channel

9.5.11. LTE BAND 41 AND 5G NR n41

Test Engineer ID:	10646	Test Date:	3/26/2021

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	31.78	19.73	*5.06
					16QAM	31.91	18.82	*6.1
	10MHz		50	0	QPSK	31.94	19.8	*5.15
					16QAM	31.97	18.79	*6.19
	15MHz		75	0	QPSK	31.88	19.77	*5.12
					16QAM	31.95	18.74	*6.22
	20MHz		100	0	QPSK	32.04	19.77	*5.28
					16QAM	32.02	18.76	*6.27
LTE 5G NR n41	20MHz		50	0	BPSK	32.14	28.13	4.01
					16QAM	32.75	26.62	6.13
	30MHz		75	0	BPSK	32.16	28.17	3.99
					16QAM	33.06	26.69	6.37
	40MHz		100	0	BPSK	31.87	28.19	3.68
					16QAM	32.78	26.60	6.18
	50MHz		128	0	BPSK	31.99	28.05	3.94
					16QAM	32.61	26.45	6.16
	60MHz		162	0	BPSK	31.49	28.04	3.45
					16QAM	32.33	26.53	5.80
	80MHz		216	0	BPSK	31.4	28.15	3.25
					16QAM	32.04	26.32	5.72
	90MHz		243	0	BPSK	31.38	28.20	3.18
					16QAM	31.7	26.44	5.26
	100MHz		270	0	BPSK	31.01	28.15	2.86
					16QAM	31.56	26.41	5.15
*Duty Cycle Correction Factor (dB) =			6.99					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

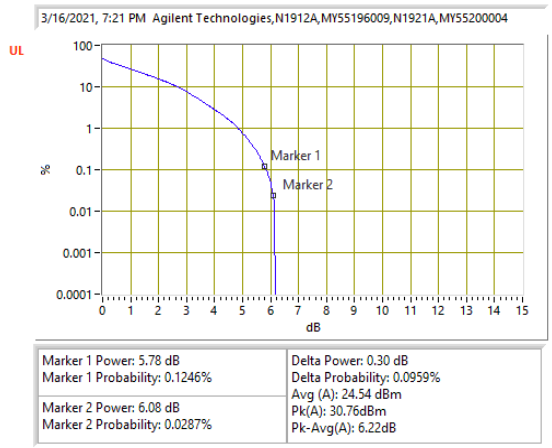
9.5.12. LTE BAND 48

Test Engineer ID:	10646	Test Date:	3/16/2021

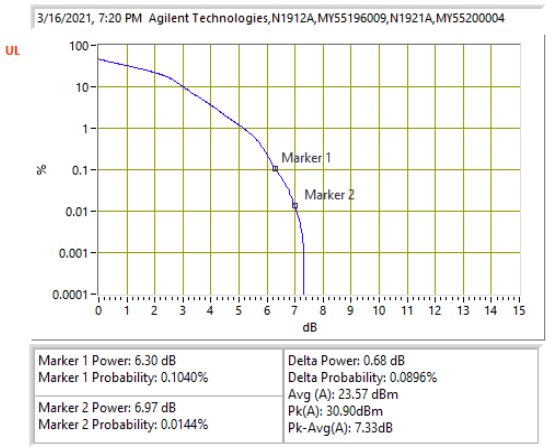
Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
Band 48	5MHz	3625.0	25	0	QPSK	31.18	18.97	*5.22
					16QAM	31.33	18.02	*6.32
	10MHz		50	0	QPSK	31.38	19.01	*5.38
					16QAM	31.16	18.02	*6.15
	15MHz		75	0	QPSK	31.36	18.97	*5.4
					16QAM	31.31	18	*6.32
	20MHz		100	0	QPSK	31.31	19.04	*5.28
					16QAM	31.23	18.02	*6.22
LTE 5G NR n48	10MHz		24	0	BPSK	31.02	26.37	4.65
					16QAM	31.78	24.87	6.91
	20MHz		50	0	BPSK	30.92	26.34	4.58
					16QAM	31.83	24.82	7.01
	40MHz		100	0	BPSK	30.79	26.39	4.40
					16QAM	31.59	24.89	6.70
*Duty Cycle Correction Factor (dB) =			6.99					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9.5.13. LTE BAND 66 AND 5G NR n66

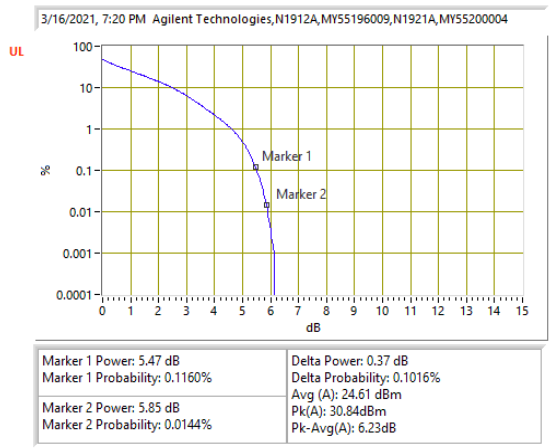
LTE BAND 66



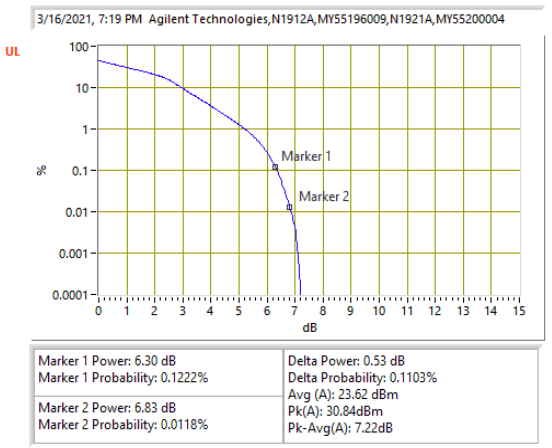
LTE B66 1.4MHz QPSK Middle Channel



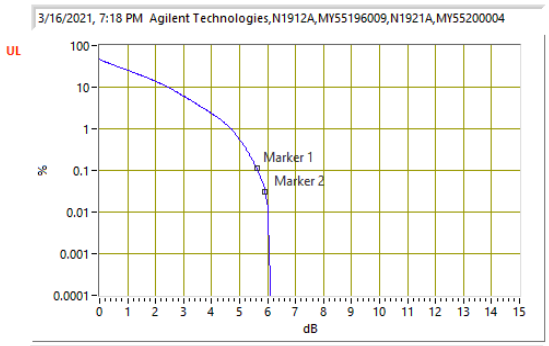
LTE B66 1.4MHz 16QAM Middle Channel



LTE B66 3MHz QPSK Middle Channel

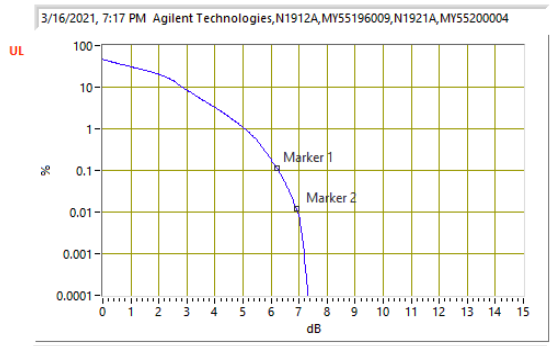


LTE B66 3MHz 16QAM Middle Channel



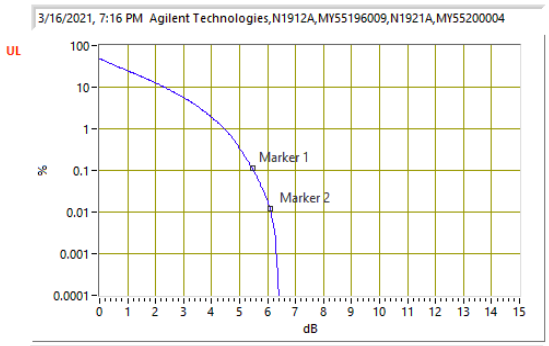
Marker 1 Power: 5.62 dB	Delta Power: 0.30 dB
Marker 1 Probability: 0.1059%	Delta Probability: 0.0788%
	Avg (A): 24.60 dBm
Marker 2 Power: 5.92 dB	Pk(A): 30.75dBm
Marker 2 Probability: 0.0271%	Pk-Avg(A): 6.15dB

LTE B66 5MHz QPSK Middle Channel



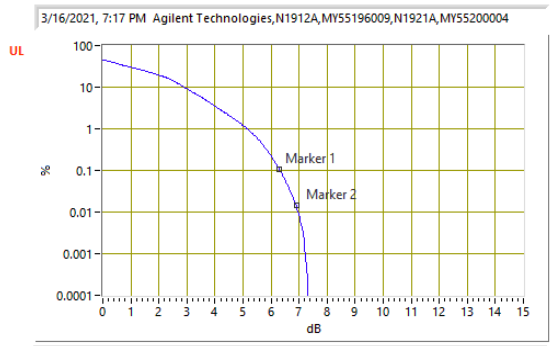
Marker 1 Power: 6.22 dB	Delta Power: 0.67 dB
Marker 1 Probability: 0.1071%	Delta Probability: 0.0948%
	Avg (A): 23.62 dBm
Marker 2 Power: 6.90 dB	Pk(A): 30.98dBm
Marker 2 Probability: 0.0124%	Pk-Avg(A): 7.36dB

LTE B66 5MHz 16QAM Middle Channel



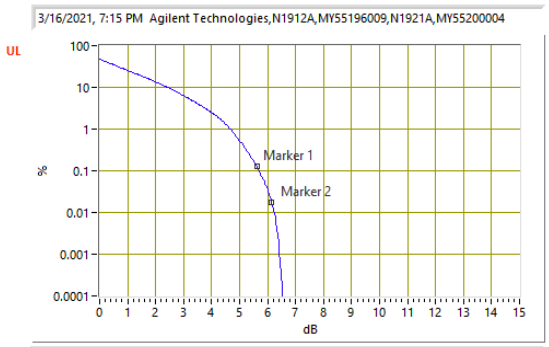
Marker 1 Power: 5.47 dB	Delta Power: 0.60 dB
Marker 1 Probability: 0.1066%	Delta Probability: 0.0935%
	Avg (A): 24.60 dBm
Marker 2 Power: 6.08 dB	Pk(A): 31.06dBm
Marker 2 Probability: 0.0130%	Pk-Avg(A): 6.46dB

LTE B66 10MHz QPSK Middle Channel



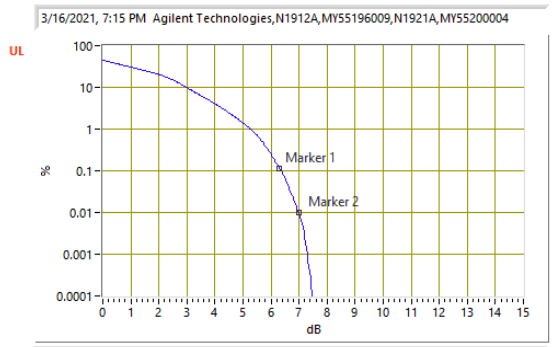
Marker 1 Power: 6.30 dB	Delta Power: 0.60 dB
Marker 1 Probability: 0.1042%	Delta Probability: 0.0900%
	Avg (A): 23.62 dBm
Marker 2 Power: 6.90 dB	Pk(A): 31.18dBm
Marker 2 Probability: 0.0142%	Pk-Avg(A): 7.56dB

LTE B66 10MHz 16QAM Middle Channel



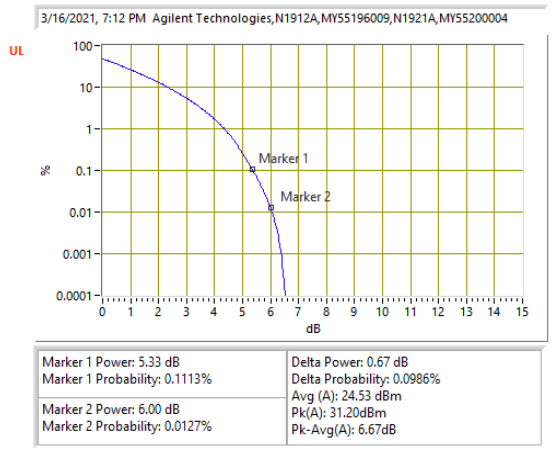
Marker 1 Power: 5.62 dB	Delta Power: 0.53 dB
Marker 1 Probability: 0.1222%	Delta Probability: 0.1045%
	Avg (A): 24.53 dBm
Marker 2 Power: 6.15 dB	Pk(A): 31.12dBm
Marker 2 Probability: 0.0177%	Pk-Avg(A): 6.59dB

LTE B66 15MHz QPSK Middle Channel

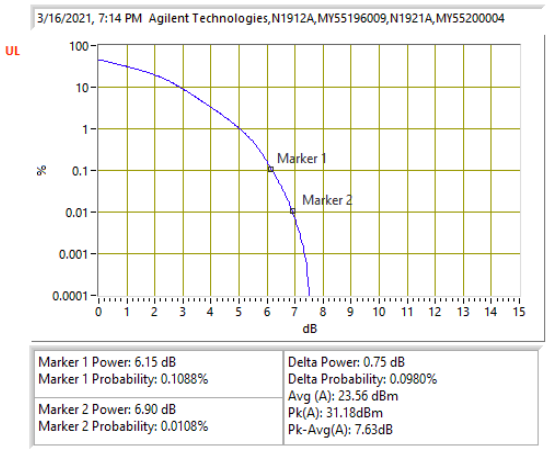


Marker 1 Power: 6.30 dB	Delta Power: 0.68 dB
Marker 1 Probability: 0.1164%	Delta Probability: 0.1054%
	Avg (A): 23.56 dBm
Marker 2 Power: 6.97 dB	Pk(A): 31.14dBm
Marker 2 Probability: 0.0109%	Pk-Avg(A): 7.58dB

LTE B66 15MHz 16QAM Middle Channel

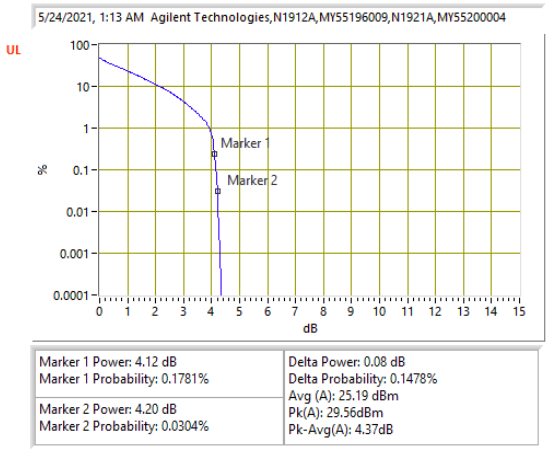


LTE B66 20MHz QPSK Middle Channel

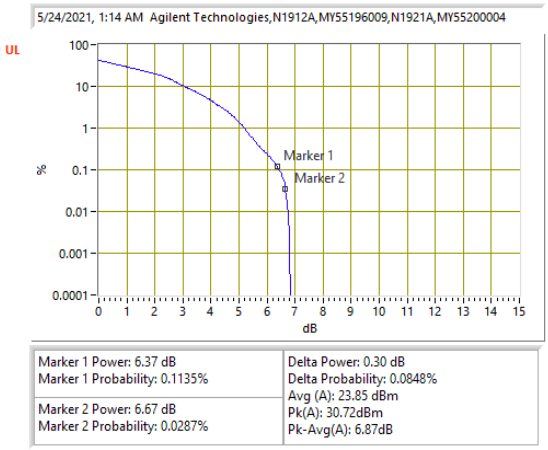


LTE B66 20MHz 16QAM Middle Channel

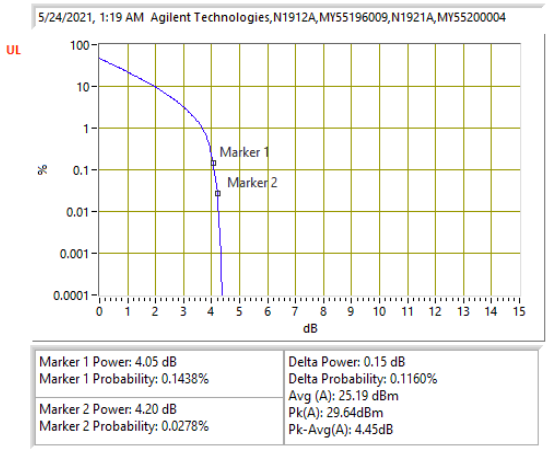
5G NR n66



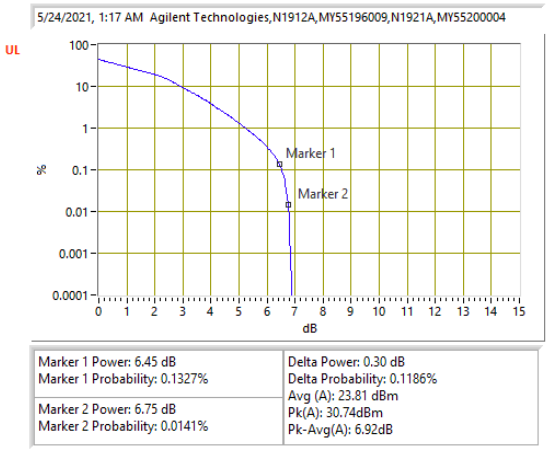
5G NR n66 5MHz BPSK Middle Channel



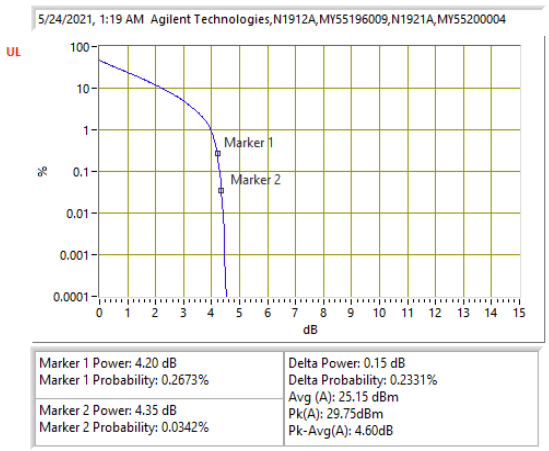
5G NR n66 5MHz 16QAM Middle Channel



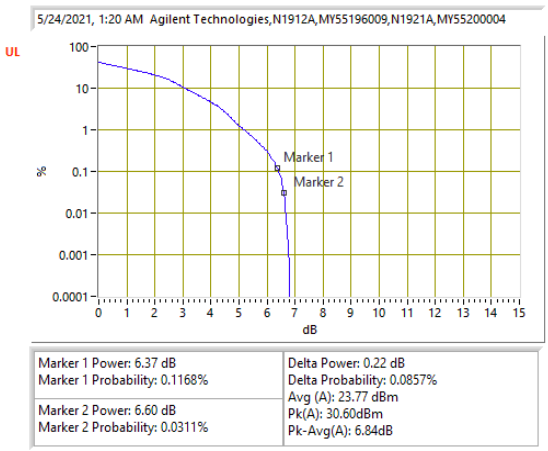
5G NR n66 10MHz BPSK Middle Channel



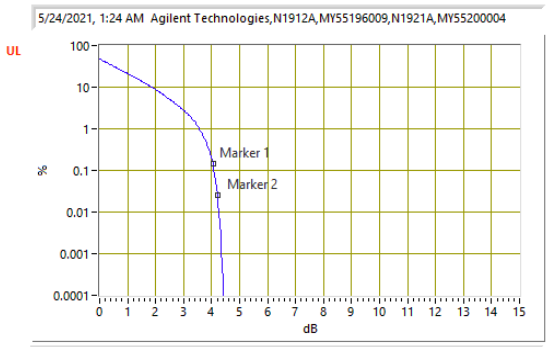
5G NR n66 10MHz 16QAM Middle Channel



5G NR n66 15MHz BPSK Middle Channel

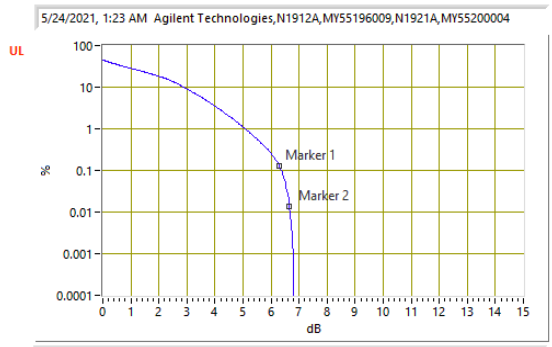


5G NR n66 15MHz 16QAM Middle Channel



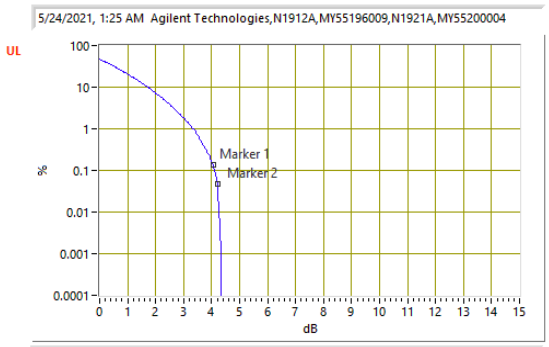
Marker 1 Power: 4.05 dB	Delta Power: 0.15 dB
Marker 1 Probability: 0.1429%	Delta Probability: 0.1177%
	Avg (A): 25.20 dBm
Marker 2 Power: 4.20 dB	Pk(A): 29.67dBm
Marker 2 Probability: 0.0253%	Pk-Avg(A): 4.47dB

5G NR n66 20MHz BPSK Middle Channel



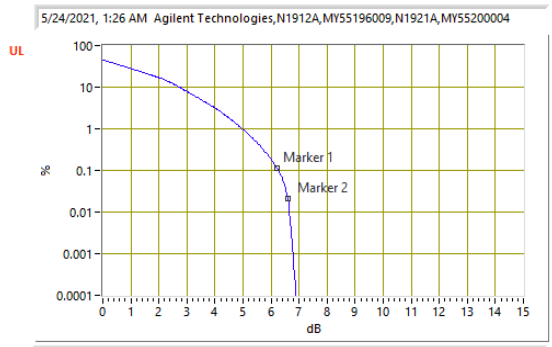
Marker 1 Power: 6.30 dB	Delta Power: 0.37 dB
Marker 1 Probability: 0.1263%	Delta Probability: 0.1150%
	Avg (A): 23.68 dBm
Marker 2 Power: 6.67 dB	Pk(A): 30.54dBm
Marker 2 Probability: 0.0113%	Pk-Avg(A): 6.86dB

5G NR n66 20MHz 16QAM Middle Channel



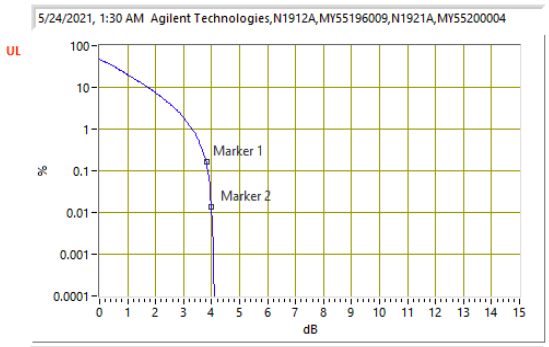
Marker 1 Power: 4.05 dB	Delta Power: 0.15 dB
Marker 1 Probability: 0.1406%	Delta Probability: 0.0945%
	Avg (A): 23.66 dBm
Marker 2 Power: 4.20 dB	Pk(A): 28.06dBm
Marker 2 Probability: 0.0461%	Pk-Avg(A): 4.40dB

5G NR n66 30MHz BPSK Middle Channel



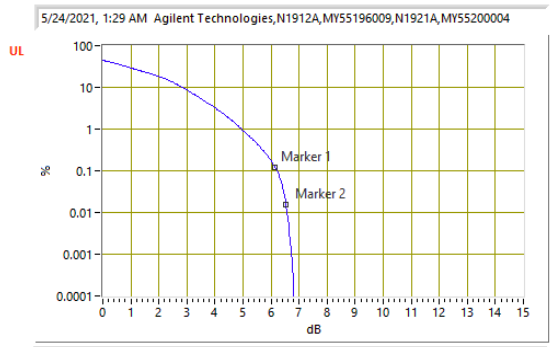
Marker 1 Power: 6.22 dB	Delta Power: 0.37 dB
Marker 1 Probability: 0.1094%	Delta Probability: 0.0885%
	Avg (A): 22.16 dBm
Marker 2 Power: 6.60 dB	Pk(A): 29.09dBm
Marker 2 Probability: 0.0209%	Pk-Avg(A): 6.93dB

5G NR n66 30MHz 16QAM Middle Channel



Marker 1 Power: 3.83 dB	Delta Power: 0.15 dB
Marker 1 Probability: 0.1440%	Delta Probability: 0.1239%
	Avg (A): 23.65 dBm
Marker 2 Power: 3.98 dB	Pk(A): 27.89dBm
Marker 2 Probability: 0.0201%	Pk-Avg(A): 4.24dB

5G NR n66 40MHz BPSK Middle Channel

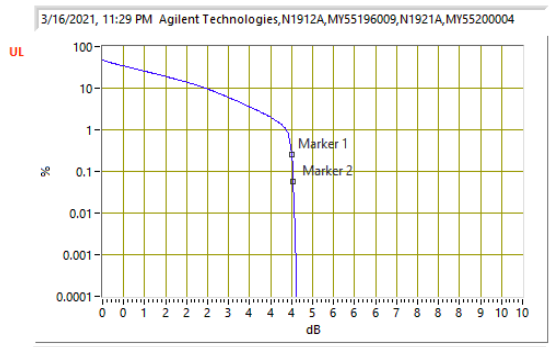


Marker 1 Power: 6.15 dB	Delta Power: 0.37 dB
Marker 1 Probability: 0.1208%	Delta Probability: 0.1033%
	Avg (A): 22.12 dBm
Marker 2 Power: 6.53 dB	Pk(A): 29.00dBm
Marker 2 Probability: 0.0175%	Pk-Avg(A): 6.88dB

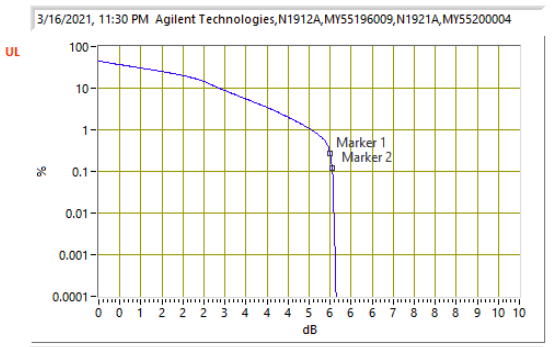
5G NR n66 40MHz 16QAM Middle Channel

9.5.14. LTE BAND 71 AND 5G NR n71

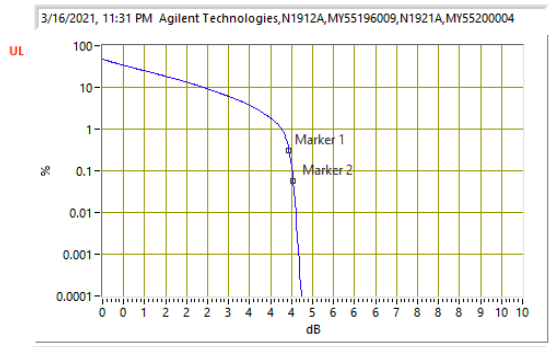
LTE BAND 71



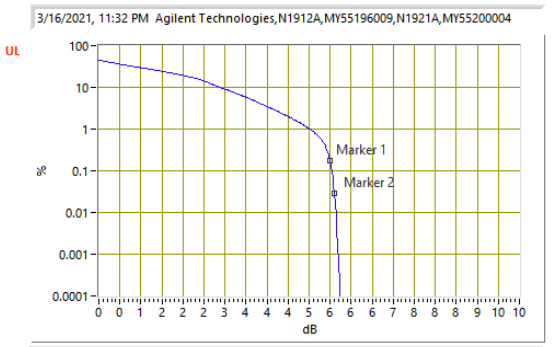
LTE B71 5MHz QPSK Middle Channel



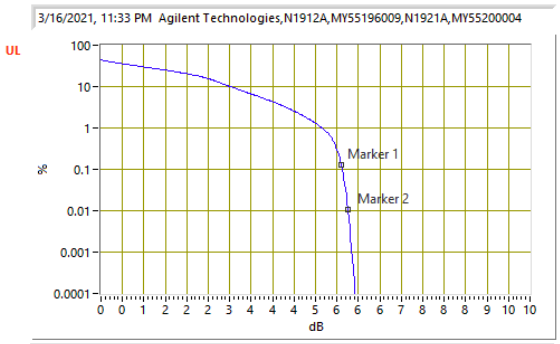
LTE B71 5MHz 16QAM Middle Channel



LTE B71 10MHz QPSK Middle Channel

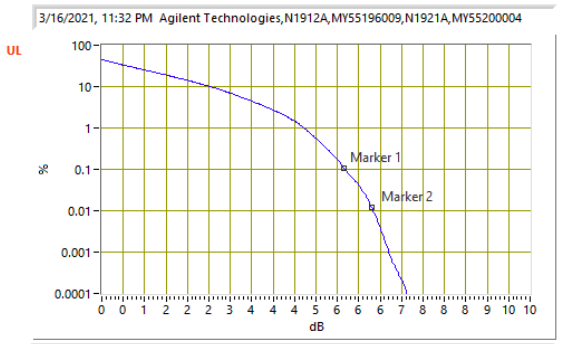


LTE B71 10MHz 16QAM Middle Channel



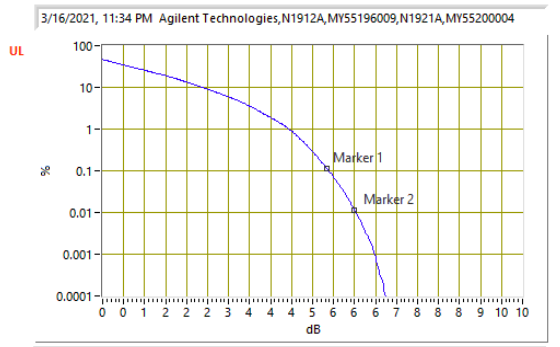
Marker 1 Power: 5.60 dB Marker 1 Probability: 0.1277%	Delta Power: 0.15 dB Delta Probability: 0.1147% Avg (A): 23.84 dBm Pk(A): 29.89dBm Pk-Avg(A): 6.05dB
Marker 2 Power: 5.75 dB Marker 2 Probability: 0.0130%	

LTE B71 15MHz QPSK Middle Channel



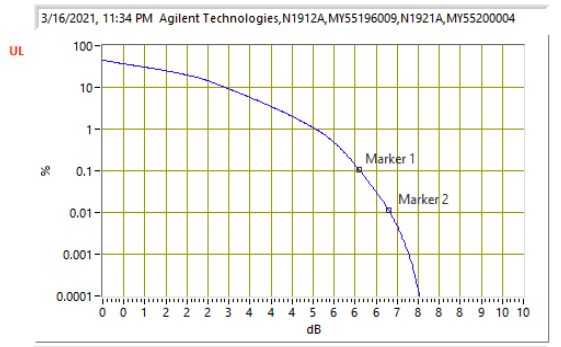
Marker 1 Power: 5.65 dB Marker 1 Probability: 0.1064%	Delta Power: 0.65 dB Delta Probability: 0.0940% Avg (A): 24.79 dBm Pk(A): 32.03dBm Pk-Avg(A): 7.24dB
Marker 2 Power: 6.30 dB Marker 2 Probability: 0.0123%	

LTE B71 15MHz 16QAM Middle Channel



Marker 1 Power: 5.35 dB Marker 1 Probability: 0.1111%	Delta Power: 0.65 dB Delta Probability: 0.0994% Avg (A): 24.81 dBm Pk(A): 31.71dBm Pk-Avg(A): 6.90dB
Marker 2 Power: 6.00 dB Marker 2 Probability: 0.0116%	

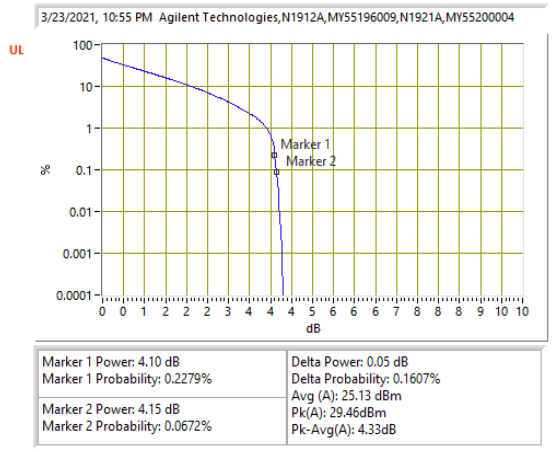
LTE B71 20MHz QPSK Middle Channel



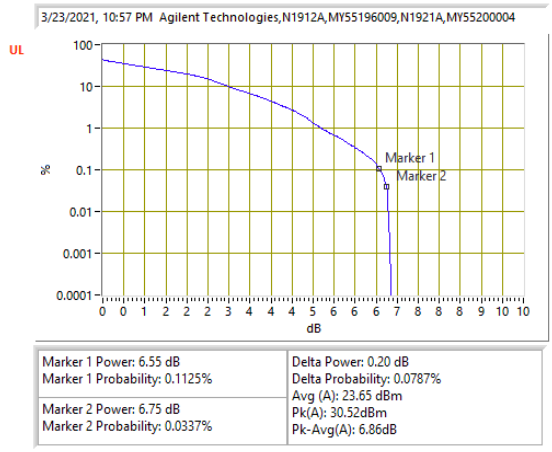
Marker 1 Power: 6.10 dB Marker 1 Probability: 0.1033%	Delta Power: 0.70 dB Delta Probability: 0.0920% Avg (A): 23.85 dBm Pk(A): 31.50dBm Pk-Avg(A): 7.65dB
Marker 2 Power: 6.80 dB Marker 2 Probability: 0.0113%	

LTE B71 20MHz 16QAM Middle Channel

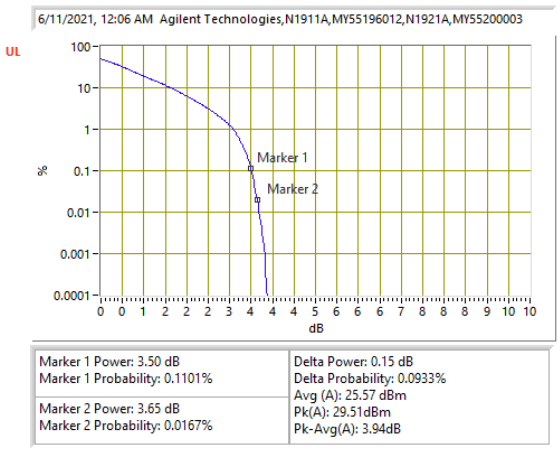
5G NR n71



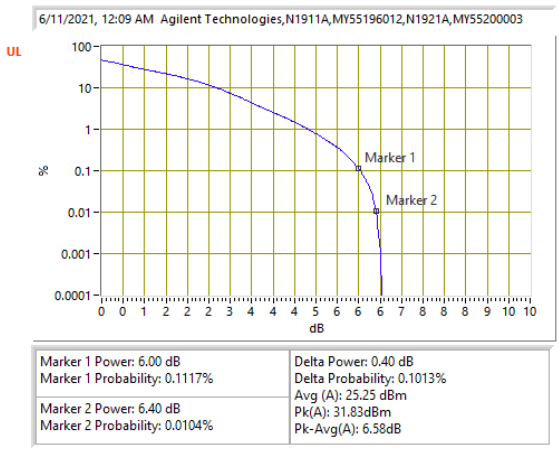
5G NR n71 5MHz BPSK Middle Channel



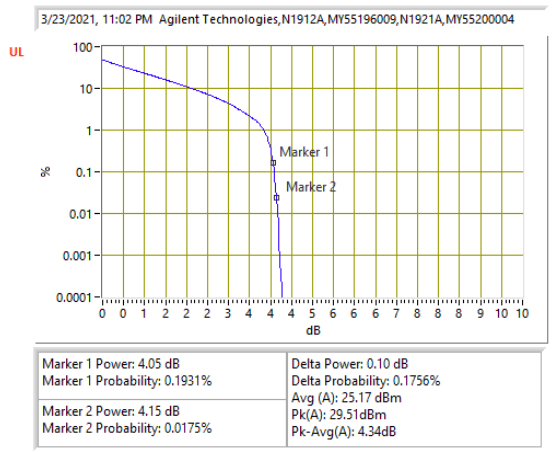
5G NR n71 5MHz 16QAM Middle Channel



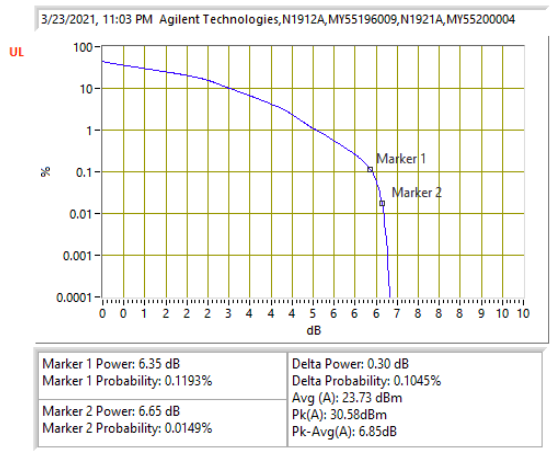
5G NR n71 10MHz BPSK Middle Channel



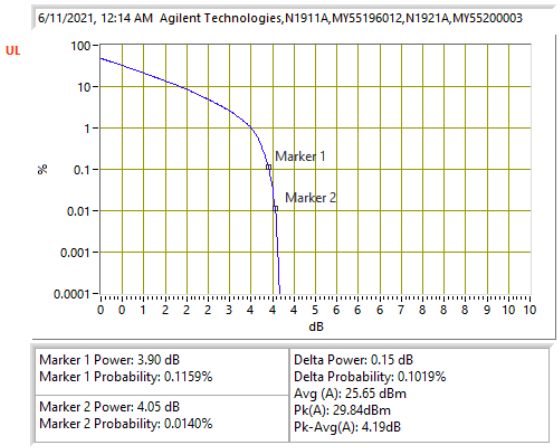
5G NR n71 10MHz 16QAM Middle Channel



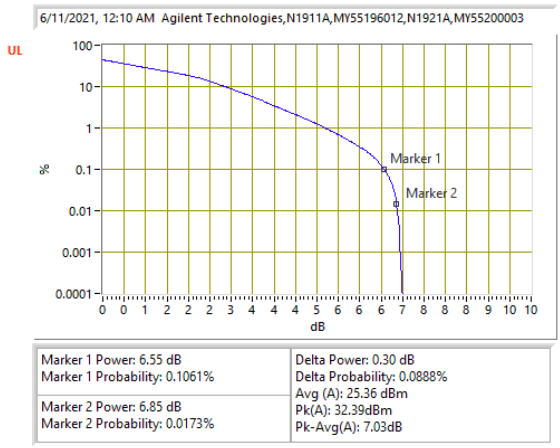
5G NR n71 15MHz BPSK Middle Channel



5G NR n71 15MHz 16QAM Middle Channel



5G NR n71 20MHz BPSK Middle Channel



5G NR n71 20MHz 16QAM Middle Channel

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

Test Engineer ID:	19467	Test Date:	4/28/2021

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
LTE 5G NR n77	20MHz	3500.0	50	0	BPSK	32.25	28.88	3.37
					16QAM	32.67	27.24	5.43
	30MHz		75	0	BPSK	32.07	28.9	3.17
					16QAM	32.51	27.23	5.28
	40MHz		100	0	BPSK	31.73	28.89	2.84
					16QAM	32.37	27.27	5.10
	50MHz		128	0	BPSK	31.49	28.62	2.87
					16QAM	31.89	27.06	4.83
	60MHz		162	0	BPSK	31.33	28.46	2.87
					16QAM	31.32	26.68	4.64
	70MHz		180	0	BPSK	31.10	28.33	2.77
					16QAM	31.25	26.69	4.56
	80MHz		216	0	BPSK	30.58	28.46	2.12
					16QAM	30.95	26.7	4.25
	90MHz		243	0	BPSK	30.83	28.4	2.43
					16QAM	30.76	26.56	4.20
	100MHz		270	0	BPSK	30.70	28.42	2.28
					16QAM	30.94	26.67	4.27

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

Test Engineer ID:	19467	Test Date:	4/28/2021

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
LTE 5G NR n77	20MHz	3840.0	50	0	BPSK	33.13	28.82	4.31
					16QAM	33.47	27.31	6.16
	30MHz		75	0	BPSK	32.96	28.66	4.30
					16QAM	33.29	27.09	6.20
	40MHz		100	0	BPSK	32.71	28.67	4.04
					16QAM	33.20	27.23	5.97
	50MHz		128	0	BPSK	32.54	28.58	3.96
					16QAM	33.35	27.11	6.24
	60MHz		162	0	BPSK	32.27	28.28	3.99
					16QAM	32.96	26.76	6.20
	70MHz		180	0	BPSK	32.30	28.23	4.07
					16QAM	32.93	26.72	6.21
	80MHz		216	0	BPSK	31.57	28.27	3.30
					16QAM	32.75	26.73	6.02
	90MHz		243	0	BPSK	31.86	28.16	3.70
					16QAM	32.38	26.59	5.79
	100MHz		270	0	BPSK	31.41	28.2	3.21
					16QAM	32.24	26.67	5.57

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.

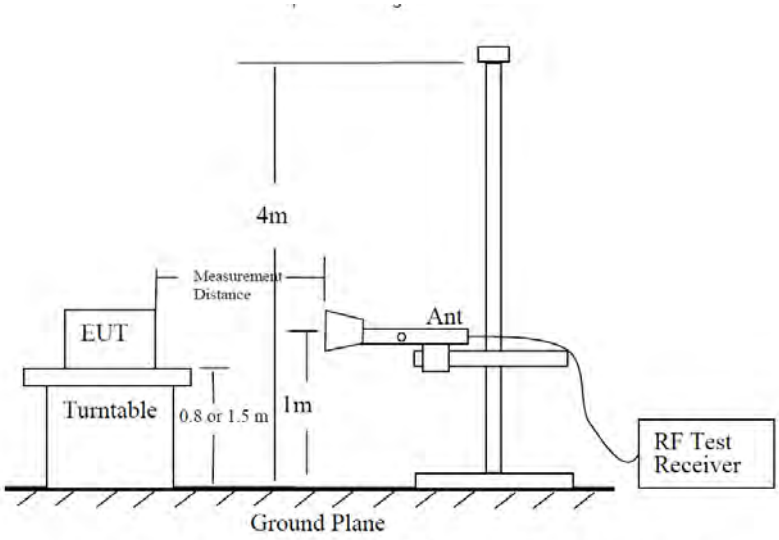


Figure 6—Test site-up for radiated ERP and/or EIRP measurements

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)

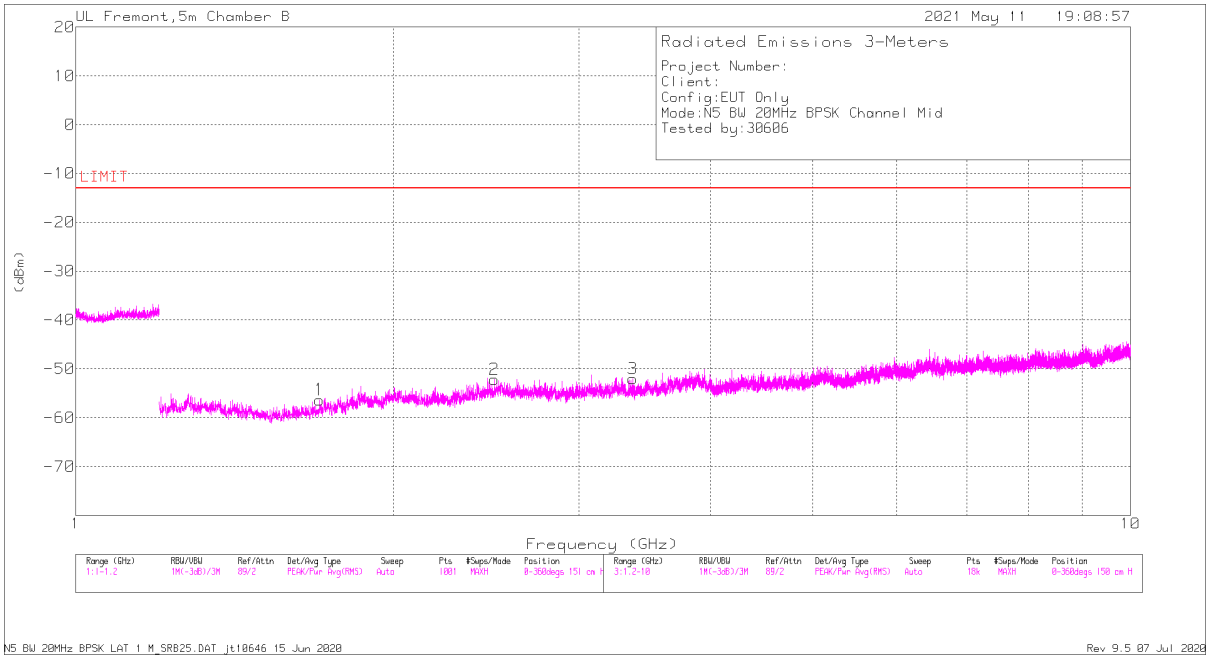
The measuring distance is usually at 3m, then 20*Log(3)=9.5424

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

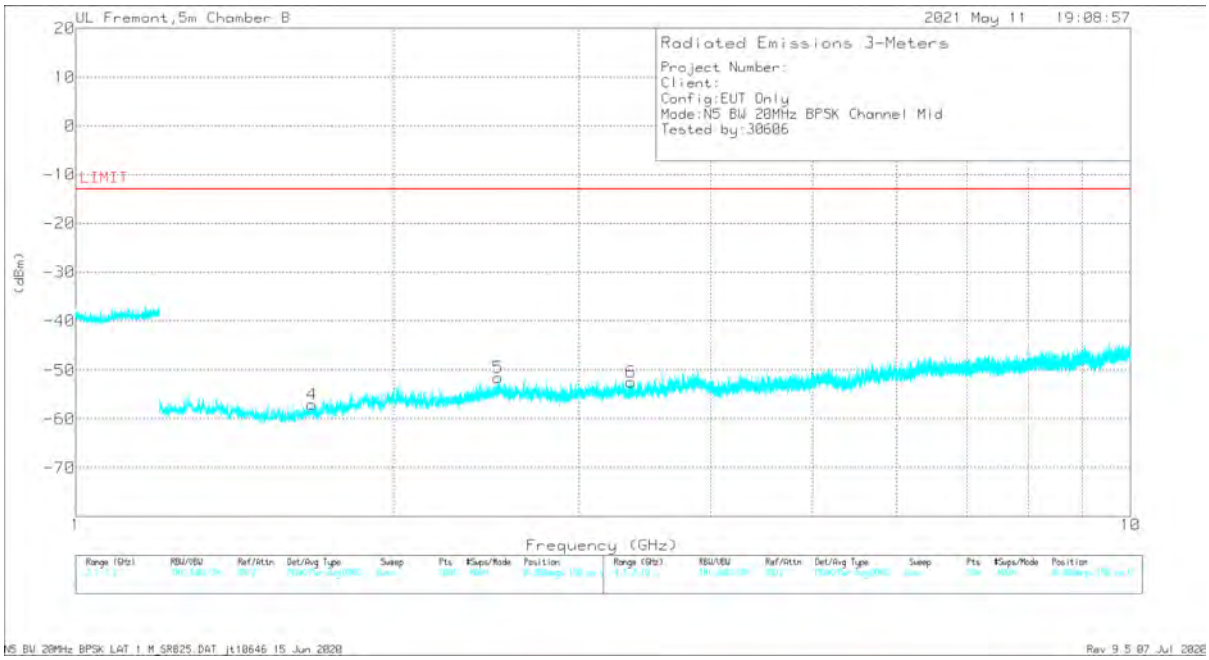
Note that: we do confidence check to our chambers every day to see if any degradation from expected/normal reading reference data. Also we do ambient check to all our chambers every month.

10.1. Example Plot

Horizontal Polarity



Vertical Polarity



Trace Markers

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
1.67543	40.84	Pk	29	-30.6	.7	-95.2	-55.26	-13	-42.26	V
1.70384	39.61	Pk	29.4	-30.5	.6	-95.2	-56.09	-13	-43.09	H
2.49443	40.45	Pk	33.5	-29.8	.6	-95.2	-50.45	-13	-37.45	H
2.51346	39.4	Pk	33.5	-29.6	.7	-95.2	-51.2	-13	-38.2	V
3.35927	38.26	Pk	33	-28.5	.6	-95.2	-51.84	-13	-38.84	V
3.3681	38.56	Pk	33	-28.5	.6	-95.2	-51.54	-13	-38.54	H

Pk - Peak detector

Radiated Emissions

10.2. FIELD STRENGTH OF SPURIOUS RADIATION, Ant 1

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r01

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

RESULTS

10.2.1. 5G NR n5

LIMITS

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

BPSK 5G NR n5 (20.0MHZ BANDWIDTH)

Project #:	13571607
Date:	5/11/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n5 BPSK 20MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 834MHz										
1.67003	40.21	Pk	28.9	-30.6	.7	-95.2	-55.99	-13	-42.99	H
1.68349	40.06	Pk	29	-30.6	.7	-95.2	-56.04	-13	-43.04	V
2.50203	38.93	Pk	33.5	-29.8	.6	-95.2	-51.97	-13	-38.97	V
2.56391	39.68	Pk	33.1	-29.4	.4	-95.2	-51.42	-13	-38.42	H
3.32538	39.29	Pk	33	-28.7	.6	-95.2	-51.01	-13	-38.01	V
3.34595	38.08	Pk	33	-28.5	.5	-95.2	-52.12	-13	-39.12	H
Mid Channel, 836.5MHz										
1.67543	40.84	Pk	29	-30.6	.7	-95.2	-55.26	-13	-42.26	V
1.70384	39.61	Pk	29.4	-30.5	.6	-95.2	-56.09	-13	-43.09	H
2.49443	40.45	Pk	33.5	-29.8	.6	-95.2	-50.45	-13	-37.45	H
2.51346	39.4	Pk	33.5	-29.6	.7	-95.2	-51.2	-13	-38.2	V
3.35927	38.26	Pk	33	-28.5	.6	-95.2	-51.84	-13	-38.84	V
3.3681	38.56	Pk	33	-28.5	.6	-95.2	-51.54	-13	-38.54	H
High Channel, 839MHz										
1.66158	40.46	Pk	29	-30.7	.8	-95.2	-55.64	-13	-42.64	V
1.67648	41.08	Pk	29	-30.6	.7	-95.2	-55.02	-13	-42.02	H
2.51187	39.27	Pk	33.5	-29.7	.7	-95.2	-51.43	-13	-38.43	V
2.51525	40.65	Pk	33.5	-29.6	.7	-95.2	-49.95	-13	-36.95	H
3.30095	37.97	Pk	33	-28.4	.8	-95.2	-51.83	-13	-38.83	V
3.36849	38.85	Pk	33	-28.5	.6	-95.2	-51.25	-13	-38.25	H

10.2.2. LTE BAND 7 AND 5G NR n7

LIMITS

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

QPSK LTE BAND 7 (20.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/8/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE7 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2510MHz										
5.04463	36.65	Pk	33.7	-23.5	.6	-95.2	-47.75	-25	-22.75	V
5.0773	36.46	Pk	33.8	-23.6	.7	-95.2	-47.84	-25	-22.84	H
7.21748	35.09	Pk	37.2	-20.9	.3	-95.2	-43.51	-25	-18.51	V
7.34913	35.66	Pk	37	-20.9	.4	-95.2	-43.04	-25	-18.04	H
10.36652	33.83	Pk	39.1	-17.1	.8	-95.2	-38.57	-25	-13.57	V
10.56317	34.75	Pk	39.6	-17	.8	-95.2	-37.05	-25	-12.05	H
Mid Channel, 2535MHz										
5.07107	36.76	Pk	33.8	-23.6	.7	-95.2	-47.54	-25	-22.54	V
5.07169	36.91	Pk	33.8	-23.6	.7	-95.2	-47.39	-25	-22.39	H
7.65009	35.03	Pk	36.9	-20.8	.3	-95.2	-43.77	-25	-18.77	V
7.65121	35.32	Pk	36.9	-20.8	.3	-95.2	-43.48	-25	-18.48	H
10.14011	34.2	Pk	38.4	-17.7	.7	-95.2	-39.6	-25	-14.6	V
10.14129	34.19	Pk	38.4	-17.7	.6	-95.2	-39.71	-25	-14.71	H
High Channel, 2560MHz										
4.9965	36.81	Pk	33.6	-23	.8	-95.2	-46.99	-25	-21.99	H
5.0176	36.32	Pk	33.7	-23.5	.8	-95.2	-47.88	-25	-22.88	V
7.27259	34.98	Pk	37.2	-20.6	.4	-95.2	-43.22	-25	-18.22	V
7.27914	36.18	Pk	37.1	-20.4	.4	-95.2	-41.92	-25	-16.92	H
10.43383	33.04	Pk	39.5	-16.9	.8	-95.2	-38.76	-25	-13.76	V
10.4498	33.35	Pk	39.4	-17	.7	-95.2	-38.75	-25	-13.75	H

BPSK 5G NR 7 (40.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/19/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n7 BPSK 40MHz
Chamber #:	Chamber A
Project #:	13571607

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2520MHz										
5.01237	36.11	Pk	34.2	-26.7	.8	-95.2	-50.79	-25	-25.79	H
5.09132	36.4	Pk	34.4	-26.1	.8	-95.2	-49.7	-25	-24.7	V
7.49076	33.05	Pk	36.1	-22.8	.3	-95.2	-48.55	-25	-23.55	V
7.51739	33.69	Pk	36	-22.7	.3	-95.2	-47.91	-25	-22.91	H
10.4039	30.66	Pk	37.7	-19.5	.8	-95.2	-45.54	-25	-20.54	H
10.58081	32	Pk	37.8	-19.5	.9	-95.2	-44	-25	-19	V
Mid Channel, 2535MHz										
5.1526	35.85	Pk	34.6	-26.3	.8	-95.2	-50.25	-25	-25.25	V
5.20611	36.54	Pk	34.5	-25.8	.9	-95.2	-49.06	-25	-24.06	H
7.51415	32.53	Pk	36.1	-22.6	.3	-95.2	-48.87	-25	-23.87	V
7.67422	34.04	Pk	35.9	-22.2	.4	-95.2	-47.06	-25	-22.06	H
10.43328	31.24	Pk	37.7	-19.7	.8	-95.2	-45.16	-25	-20.16	V
10.89002	30.81	Pk	37.8	-19.2	.6	-95.2	-45.19	-25	-20.19	H
High Channel, 2550MHz										
5.07586	36.91	Pk	34.4	-25.9	.7	-95.2	-49.09	-25	-24.09	H
5.08016	36.95	Pk	34.4	-26	.7	-95.2	-49.15	-25	-24.15	V
7.80222	33.34	Pk	35.9	-22.3	.4	-95.2	-47.86	-25	-22.86	V
7.88225	32.02	Pk	36.1	-22.5	.5	-95.2	-49.08	-25	-24.08	H
10.70153	31.99	Pk	37.8	-19.7	.5	-95.2	-44.61	-25	-19.61	H
11.06822	31.77	Pk	37.8	-18.9	.7	-95.2	-43.83	-25	-18.83	V

10.2.3. LTE BAND 12 AND 5G NR n12

LIMITS

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

QPSK LTE BAND 12 (10.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/10/2021
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE12 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 704MHz										
1.40833	39.24	Pk	25.4	-28.1	.9	-95.2	-57.76	-13	-44.76	V
1.40874	38.73	Pk	25.4	-28.1	.9	-95.2	-58.27	-13	-45.27	H
2.09876	47.37	Pk	26.9	-26.8	.5	-95.2	-47.23	-13	-34.23	V
2.09877	63.26	Pk	26.9	-26.8	.5	-95.2	-31.34	-13	-18.34	H
2.81517	37.52	Pk	28.8	-26	.6	-95.2	-54.28	-13	-41.28	H
2.81581	37.13	Pk	28.8	-26	.6	-95.2	-54.67	-13	-41.67	V
Mid Channel, 707.5MHz										
1.4062	44.29	Pk	25.4	-28.1	.9	-95.2	-52.71	-13	-39.71	V
1.40638	40.94	Pk	25.4	-28.1	.9	-95.2	-56.06	-13	-43.06	H
2.10933	48.39	Pk	26.9	-26.9	.5	-95.2	-46.31	-13	-33.31	H
2.11036	37.14	Pk	26.9	-26.8	.5	-95.2	-57.46	-13	-44.46	V
2.82863	37.32	Pk	28.8	-25.8	.7	-95.2	-54.18	-13	-41.18	H
2.8306	37.83	Pk	28.8	-25.8	.7	-95.2	-53.67	-13	-40.67	V
High Channel, 711MHz										
1.41311	43.43	Pk	25.4	-28.1	.9	-95.2	-53.57	-13	-40.57	H
1.41502	38.11	Pk	25.3	-28	.9	-95.2	-58.89	-13	-45.89	V
2.11961	44.37	Pk	26.9	-26.9	.5	-95.2	-50.33	-13	-37.33	V
2.11974	54.08	Pk	26.9	-26.9	.5	-95.2	-40.62	-13	-27.62	H
2.84255	36.93	Pk	28.8	-25.8	.7	-95.2	-54.57	-13	-41.57	V
2.84385	37.25	Pk	28.8	-25.8	.7	-95.2	-54.25	-13	-41.25	H

BPSK 5G NR n12 (15.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/12/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n12 BPSK 10MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)		EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 706.5MHz										
1.44597	40.94	Pk	28.9	-30.9	.9	-95.2	-55.36	-13	-42.36	H
1.44653	40.43	Pk	28.9	-30.9	.9	-95.2	-55.87	-13	-42.87	V
2.53128	38.36	Pk	33.4	-29.4	.7	-95.2	-52.14	-13	-39.14	V
2.61901	38.98	Pk	33	-29.4	.6	-95.2	-52.02	-13	-39.02	H
4.52906	37.26	Pk	33.9	-27.2	.5	-95.2	-50.74	-13	-37.74	V
4.77422	35.91	Pk	34.2	-26.5	.4	-95.2	-51.19	-13	-38.19	H
Mid Channel, 707.5MHz										
1.47314	41.03	Pk	28.7	-30.9	.9	-95.2	-55.47	-13	-42.47	H
1.4789	41.01	Pk	28.6	-30.9	.9	-95.2	-55.59	-13	-42.59	V
2.54135	38.66	Pk	33.4	-29.4	.7	-95.2	-51.84	-13	-38.84	V
2.56389	39	Pk	33.1	-29.4	.4	-95.2	-52.1	-13	-39.1	H
3.89456	37.03	Pk	33.8	-27.4	.6	-95.2	-51.17	-13	-38.17	V
4.70582	36.97	Pk	34.1	-26.7	.6	-95.2	-50.23	-13	-37.23	H
High Channel, 708.5MHz										
1.48429	40.37	Pk	28.6	-30.8	.9	-95.2	-56.13	-13	-43.13	H
1.58916	40.77	Pk	28.5	-30.9	.8	-95.2	-56.03	-13	-43.03	V
2.12428	43.45	Pk	31.6	-30	.5	-95.2	-49.65	-13	-36.65	H
2.39254	39.2	Pk	32.6	-29.7	.5	-95.2	-52.6	-13	-39.6	V
3.32118	38.13	Pk	33	-28.6	.6	-95.2	-52.07	-13	-39.07	H
3.84156	36.81	Pk	33.8	-27.6	.3	-95.2	-51.89	-13	-38.89	V

10.2.4. LTE BAND 13

LIMITS

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

QPSK LTE BAND 13 (10.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/13/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE13 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 782MHz										
1.57828	38.52	Pk	24.9	-27.9	.9	-95.2	-58.78	-40	-18.78	H
1.5873	38.41	Pk	24.9	-27.9	.8	-95.2	-58.99	-40	-18.99	V
2.14846	38.55	Pk	26.9	-26.9	.5	-95.2	-56.15	-13	-43.15	H
2.15828	38.86	Pk	26.9	-26.9	.6	-95.2	-55.74	-13	-42.74	V
3.02107	36.78	Pk	30.1	-25.8	.4	-95.2	-53.72	-13	-40.72	H
3.03669	37.29	Pk	30.2	-25.7	.5	-95.2	-52.91	-13	-39.91	V

10.2.5. LTE BAND 14

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 #:	13571607
Date:	3/18/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE14 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 793MHz										
1.56979	38.59	Pk	24.9	-27.9	.9	-95.2	-58.71	-40	-18.71	H
1.57505	38.25	Pk	24.9	-27.9	.9	-95.2	-59.05	-40	-19.05	V
2.36571	46.14	Pk	32.4	-29.6	.5	-95.2	-45.76	-13	-32.76	H
2.36578	48.43	Pk	28.2	-27	.6	-95.2	-44.97	-13	-31.97	V
3.05931	37.48	Pk	30.2	-25.7	.5	-95.2	-52.72	-13	-39.72	H
3.13901	37.1	Pk	30.8	-26	.6	-95.2	-52.7	-13	-39.7	V

10.2.6. LTE BAND 17

LIMITS

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

QPSK LTE BAND 17 (10.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/17/2021
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE14 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 709MHz										
1.40899	39.03	Pk	25.4	-28.1	.9	-95.2	-57.97	-13	-44.97	V
1.40916	41.99	Pk	25.4	-28.1	.9	-95.2	-55.01	-13	-42.01	H
2.1137	44.39	Pk	26.9	-26.8	.5	-95.2	-50.21	-13	-37.21	V
2.11375	52.36	Pk	26.9	-26.8	.5	-95.2	-42.24	-13	-29.24	H
2.83517	37.8	Pk	28.8	-25.8	.7	-95.2	-53.7	-13	-40.7	V
2.83571	37.61	Pk	28.8	-25.8	.7	-95.2	-53.89	-13	-40.89	H
Mid Channel, 710MHz										
1.41109	44.02	Pk	25.4	-28.1	.9	-95.2	-52.98	-13	-39.98	V
1.41116	47.41	Pk	25.4	-28.1	.9	-95.2	-49.59	-13	-36.59	H
2.11676	51.04	Pk	26.9	-26.9	.5	-95.2	-43.66	-13	-30.66	V
2.11682	55.27	Pk	26.9	-26.9	.5	-95.2	-39.43	-13	-26.43	H
2.8402	37.33	Pk	28.8	-25.7	.7	-95.2	-54.07	-13	-41.07	V
2.84134	37.42	Pk	28.8	-25.7	.7	-95.2	-53.98	-13	-40.98	H
High Channel, 711MHz										
1.41318	42.76	Pk	25.4	-28.1	.9	-95.2	-54.24	-13	-41.24	V
1.41321	41.22	Pk	25.4	-28.1	.9	-95.2	-55.78	-13	-42.78	H
2.11968	52.93	Pk	26.9	-26.9	.5	-95.2	-41.77	-13	-28.77	H
2.11978	47.28	Pk	26.9	-26.9	.5	-95.2	-47.42	-13	-34.42	V
2.84531	37.57	Pk	28.9	-25.8	.7	-95.2	-53.83	-13	-40.83	H
2.84592	37.66	Pk	28.9	-25.9	.7	-95.2	-53.84	-13	-40.84	V

10.2.7. LTE BAND 25 AND 5G NR n25

LIMITS

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

QPSK LTE BAND 25 (20.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/14/2021
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE25 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.71955	38.31	Pk	30.4	-24.9	-95.2	-51.39	-13	-38.39	H
3.72179	37.78	Pk	30.4	-25	-95.2	-52.02	-13	-39.02	V
5.58187	36.7	Pk	33.2	-23.1	-95.2	-48.4	-13	-35.4	V
5.5823	36.75	Pk	33.2	-23.1	-95.2	-48.35	-13	-35.35	H
7.43888	34.87	Pk	36.9	-20.3	-95.2	-43.73	-13	-30.73	H
7.44113	35.55	Pk	36.8	-20.3	-95.2	-43.15	-13	-30.15	V
Mid Channel, 1882.5MHz									
3.76388	37.83	Pk	30.7	-24.9	-95.2	-51.57	-13	-38.57	V
3.76727	38.19	Pk	30.8	-24.9	-95.2	-51.11	-13	-38.11	H
5.64608	35.91	Pk	33.1	-22.1	-95.2	-48.29	-13	-35.29	V
5.64815	36.43	Pk	33.1	-22	-95.2	-47.67	-13	-34.67	H
7.52968	35.02	Pk	36.9	-20.7	-95.2	-43.98	-13	-30.98	H
7.53076	35.59	Pk	36.9	-20.7	-95.2	-43.41	-13	-30.41	V
High Channel, 1905MHz									
3.80877	38.63	Pk	30.9	-24.6	-95.2	-50.27	-13	-37.27	H
3.80994	38.53	Pk	30.9	-24.6	-95.2	-50.37	-13	-37.37	V
5.71447	35.91	Pk	33	-21.6	-95.2	-47.89	-13	-34.89	V
5.7146	35.9	Pk	33	-21.6	-95.2	-47.9	-13	-34.9	H
7.6193	34.77	Pk	37	-20.9	-95.2	-44.33	-13	-31.33	V
7.62084	35.98	Pk	37	-21	-95.2	-43.22	-13	-30.22	H

BPSK 5G NR 25 (40.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/11/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n25 BPSK 20MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.84766	36.93	Pk	33.7	-27.4	-95.2	-51.97	-13	-38.97	H
3.86225	37.41	Pk	33.8	-27.3	-95.2	-51.29	-13	-38.29	V
5.07888	36.77	Pk	34.4	-24.7	-95.2	-48.73	-13	-35.73	V
5.64995	35.25	Pk	35.1	-24.3	-95.2	-49.15	-13	-36.15	H
7.65144	34.59	Pk	35.8	-21.4	-95.2	-46.21	-13	-33.21	H
8.22308	34.08	Pk	36.1	-20.6	-95.2	-45.62	-13	-32.62	V
Mid Channel, 1882.5MHz									
3.77692	36.74	Pk	33.6	-26.9	-95.2	-51.76	-13	-38.76	H
3.84755	38.08	Pk	33.7	-27.4	-95.2	-50.82	-13	-37.82	V
5.63277	36.13	Pk	35.1	-24.3	-95.2	-48.27	-13	-35.27	V
5.9117	34.71	Pk	35.7	-23.7	-95.2	-48.49	-13	-35.49	H
8.1486	32.99	Pk	36.1	-20.5	-95.2	-46.61	-13	-33.61	V
8.17352	33.91	Pk	36.1	-20.4	-95.2	-45.59	-13	-32.59	H
High Channel, 1895MHz									
3.75869	37.45	Pk	33.6	-27	-95.2	-51.15	-13	-38.15	H
3.88364	37.17	Pk	33.8	-27	-95.2	-51.23	-13	-38.23	V
5.68058	39.2	Pk	35.2	-24.6	-95.2	-45.4	-13	-32.4	V
5.82146	34.58	Pk	35.5	-25	-95.2	-50.12	-13	-37.12	H
8.45842	33.22	Pk	36.2	-20.6	-95.2	-46.38	-13	-33.38	V
9.08404	32.96	Pk	36.4	-20.3	-95.2	-46.14	-13	-33.14	H

10.2.8. LTE BAND 26 (FCC PART 90S)

LIMITS

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

QPSK LTE BAND 26 (10.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/10/2021
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE26 QPSK 10MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 819MHz										
1.62916	41.51	Pk	25	-27.9	.7	-95.2	-55.89	-13	-42.89	H
1.62937	40.91	Pk	25	-27.9	.7	-95.2	-56.49	-13	-43.49	V
2.4437	53.08	Pk	28.8	-26.8	.5	-95.2	-39.62	-13	-26.62	H
2.44377	51.52	Pk	28.8	-26.8	.5	-95.2	-41.18	-13	-28.18	V
3.27585	37.46	Pk	31.3	-25.4	.7	-95.2	-51.14	-13	-38.14	V
3.27711	37.21	Pk	31.3	-25.3	.8	-95.2	-51.19	-13	-38.19	H

10.2.9. LTE BAND 26 (FCC PART 22)

LIMITS

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

QPSK LTE BAND 26 (10.0MHZ BANDWIDTH)

Project #:	13571607
Date:	6/9/2021
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE26 QPSK 10MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 829MHz										
1.6576	42.13	Pk	25	-34.9	.8	-95.2	-62.17	-13	-49.17	V
1.66347	43.65	Pk	25	-34.9	.8	-95.2	-60.65	-13	-47.65	H
2.55178	43.01	Pk	29.3	-34.7	.6	-95.2	-56.99	-13	-43.99	H
2.57133	43.14	Pk	29.4	-34.6	.5	-95.2	-56.76	-13	-43.76	V
3.31542	43	Pk	31.1	-33.8	.6	-95.2	-54.3	-13	-41.3	H
3.36773	42.68	Pk	31	-33.7	.6	-95.2	-54.62	-13	-41.62	V
Mid Channel, 836.5MHz										
1.67243	38.83	Pk	25	-27.8	.7	-95.2	-58.47	-13	-45.47	H
1.67346	39.73	Pk	25	-27.8	.7	-95.2	-57.57	-13	-44.57	V
2.49466	37.78	Pk	29	-26.6	.6	-95.2	-54.42	-13	-41.42	V
2.49509	38.2	Pk	29	-26.6	.6	-95.2	-54	-13	-41	H
3.34494	37.07	Pk	30.9	-25.6	.6	-95.2	-52.23	-13	-39.23	V
3.34792	37.65	Pk	31	-25.6	.6	-95.2	-51.55	-13	-38.55	H
High Channel, 844MHz										
1.79449	43.01	Pk	25.9	-34.9	.6	-95.2	-60.59	-13	-47.59	H
1.81649	42.63	Pk	25.9	-34.8	.6	-95.2	-60.87	-13	-47.87	V
2.35916	43.55	Pk	28.2	-34.8	.6	-95.2	-57.65	-13	-44.65	H
2.38996	43.01	Pk	28.4	-34.8	.6	-95.2	-57.99	-13	-44.99	V
3.18342	42.79	Pk	31.1	-34	.6	-95.2	-54.71	-13	-41.71	H
3.2856	42.76	Pk	31.3	-33.8	.8	-95.2	-54.14	-13	-41.14	V

10.2.10. LTE BAND 30 AND 5G NR n30

LIMITS

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

QPSK LTE BAND 30 (10.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/11/2021
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE30 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.62043	33.17	RMS	32.2	-24.5	-95.2	-54.33	-40	-14.33	V
4.62156	33.29	RMS	32.3	-24.5	-95.2	-54.11	-40	-14.11	H
6.92917	30.28	RMS	36.3	-20.9	-95.2	-49.52	-40	-9.52	H
6.92921	30.38	RMS	36.3	-20.9	-95.2	-49.42	-40	-9.42	V
9.23924	29.16	RMS	38.7	-17.8	-95.2	-45.14	-40	-5.14	V
9.2409	29.13	RMS	38.7	-17.8	-95.2	-45.17	-40	-5.17	H

BPSK 5G NR 30 (10.0MHZ BANDWIDTH)

Project #:	13571607
Date:	6/9/2021
Test Engineer:	25196
Configuration:	EUT only
Mode	n30 BPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.7912	35.51	RMS	33	-30.2	-95.2	-56.89	-40	-16.89	H
4.79592	36.05	RMS	32.9	-30.2	-95.2	-56.45	-40	-16.45	V
4.79745	36.52	RMS	32.9	-30.3	-95.2	-56.08	-40	-16.08	H
7.25616	32.74	RMS	37.2	-25.9	-95.2	-51.16	-40	-11.16	V
7.28947	32.12	RMS	37.2	-25.8	-95.2	-51.68	-40	-11.68	H
9.73609	26.99	RMS	38.6	-24.2	-95.2	-53.81	-40	-13.81	V

10.2.11. LTE BAND 41 AND 5G NR n41

LIMITS

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

QPSK LTE BAND 41 (20.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/10/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE41 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2506MHz										
5.0674	37.49	Pk	33.8	-23.5	.6	-95.2	-46.81	-25	-21.81	H
5.12971	37.09	Pk	33.8	-23.5	.8	-95.2	-47.01	-25	-22.01	V
7.28838	35.88	Pk	37.2	-20.5	.4	-95.2	-42.22	-25	-17.22	V
7.28925	34.92	Pk	37.2	-20.5	.4	-95.2	-43.18	-25	-18.18	H
10.50753	33.89	Pk	39.5	-17.1	.6	-95.2	-38.31	-25	-13.31	H
10.56827	34.19	Pk	39.6	-17.1	.8	-95.2	-37.71	-25	-12.71	V
Mid Channel, 2593MHz										
5.12449	36.87	Pk	33.9	-23.6	.8	-95.2	-47.23	-25	-22.23	H
5.13043	37.06	Pk	33.8	-23.5	.8	-95.2	-47.04	-25	-22.04	V
7.543	35.21	Pk	36.8	-21.4	.3	-95.2	-44.29	-25	-19.29	H
7.69627	35.83	Pk	37.1	-21	.5	-95.2	-42.77	-25	-17.77	V
10.43902	33.24	Pk	39.4	-16.9	.8	-95.2	-38.66	-25	-13.66	H
10.57526	34.84	Pk	39.5	-17.1	.9	-95.2	-37.06	-25	-12.06	V
High Channel, 2680MHz										
5.00256	36.57	Pk	33.7	-23.2	.8	-95.2	-47.33	-25	-22.33	H
5.1151	36.75	Pk	33.9	-23.6	.8	-95.2	-47.35	-25	-22.35	V
7.27248	35.81	Pk	37.2	-20.6	.4	-95.2	-42.39	-25	-17.39	V
7.29304	36.33	Pk	37.1	-20.6	.4	-95.2	-41.97	-25	-16.97	H
9.6298	34.31	Pk	38.8	-17.5	.6	-95.2	-38.99	-25	-13.99	V
9.70258	34.17	Pk	38.7	-17.7	.8	-95.2	-39.23	-25	-14.23	H

BPSK 5G NR 41 (100.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/21/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n41 BPSK 100MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2546MHz										
4.9337	36.12	Pk	34.1	-27	1	-95.2	-50.98	-25	-25.98	V
5.19313	36.46	Pk	34.6	-25.9	.8	-95.2	-49.24	-25	-24.24	H
7.58945	32.88	Pk	35.9	-22.7	.5	-95.2	-48.62	-25	-23.62	H
7.67767	33.46	Pk	35.9	-22.1	.4	-95.2	-47.54	-25	-22.54	V
10.58441	31.7	Pk	37.8	-19.4	.9	-95.2	-44.2	-25	-19.2	H
10.69033	31.22	Pk	37.8	-19.8	.5	-95.2	-45.48	-25	-20.48	V
Mid Channel, 2593MHz										
4.88318	36.19	Pk	34.1	-26.9	.8	-95.2	-51.01	-25	-26.01	H
5.04684	35.4	Pk	34.4	-26.3	.6	-95.2	-51.1	-25	-26.1	V
7.44911	33.53	Pk	36.1	-22.7	.4	-95.2	-47.87	-25	-22.87	V
7.69868	33.27	Pk	35.9	-22.2	.5	-95.2	-47.73	-25	-22.73	H
10.41545	31.45	Pk	37.7	-19.5	.8	-95.2	-44.75	-25	-19.75	H
10.72356	30.9	Pk	37.8	-19.8	.6	-95.2	-45.7	-25	-20.7	V
High Channel, 2640MHz										
5.07923	36.6	Pk	34.4	-26	.7	-95.2	-49.5	-25	-24.5	H
5.2094	35.46	Pk	34.6	-25.8	1	-95.2	-49.94	-25	-24.94	V
7.66759	32.69	Pk	35.9	-22.3	.3	-95.2	-48.61	-25	-23.61	V
7.91984	33	Pk	36.2	-22.4	.2	-95.2	-48.2	-25	-23.2	H
10.19482	32.15	Pk	37.6	-20.4	.7	-95.2	-45.15	-25	-20.15	V
11.03912	31.92	Pk	37.8	-18.9	.5	-95.2	-43.88	-25	-18.88	H

10.2.12. LTE BAND 66 AND 5G NR n66

LIMITS

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

QPSK LTE BAND 66 (20.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/6/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE66 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.69422	36.27	Pk	30.3	-24.5	-95.2	-53.13	-13	-40.13	H
3.71813	38.51	Pk	30.4	-24.9	-95.2	-51.19	-13	-38.19	V
4.80328	36.8	Pk	33	-22.5	-95.2	-47.9	-13	-34.9	H
5.04281	35.38	Pk	33.7	-22	-95.2	-48.12	-13	-35.12	V
7.07578	35	Pk	36.6	-21	-95.2	-44.6	-13	-31.6	V
7.19766	36.34	Pk	37.1	-19.9	-95.2	-41.66	-13	-28.66	H
Mid Channel, 1745MHz									
3.84609	36.45	Pk	31.2	-24.4	-95.2	-51.95	-13	-38.95	V
3.8625	36.91	Pk	31.3	-24.2	-95.2	-51.19	-13	-38.19	H
5.07375	35.91	Pk	33.8	-22	-95.2	-47.49	-13	-34.49	V
5.12953	35.79	Pk	33.8	-22.3	-95.2	-47.91	-13	-34.91	H
7.20234	34.02	Pk	37.1	-19.7	-95.2	-43.78	-13	-30.78	V
7.2075	32.54	Pk	37.1	-19.6	-95.2	-45.16	-13	-32.16	H
High Channel, 1770MHz									
3.90563	35.98	Pk	31.4	-24	-95.2	-51.82	-13	-38.82	V
3.91547	35.75	Pk	31.5	-23.9	-95.2	-51.85	-13	-38.85	H
5.01984	35.72	Pk	33.7	-22.6	-95.2	-48.38	-13	-35.38	V
5.06625	35.35	Pk	33.8	-22.1	-95.2	-48.15	-13	-35.15	H
7.19813	33.77	Pk	37.1	-19.8	-95.2	-44.13	-13	-31.13	V
7.2	34.09	Pk	37.1	-19.8	-95.2	-43.81	-13	-30.81	H

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/26/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n66 BPSK 40MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1730MHz										
3.45826	36.83	Pk	33.1	-28	.6	-95.2	-52.67	-13	-39.67	V
3.47914	38.41	Pk	33.1	-28	.6	-95.2	-51.09	-13	-38.09	H
5.18506	36.9	Pk	34.6	-26	.5	-95.2	-49.2	-13	-36.2	H
5.21318	35.32	Pk	34.6	-25.8	.5	-95.2	-50.58	-13	-37.58	V
6.86675	32.68	Pk	36.3	-22.9	.6	-95.2	-48.52	-13	-35.52	V
6.9385	32.82	Pk	36.2	-23.6	.4	-95.2	-49.38	-13	-36.38	H
Mid Channel, 1745MHz										
3.87356	36.87	Pk	33.8	-27.4	.7	-95.2	-51.23	-13	-38.23	V
3.88434	37.36	Pk	33.8	-27.3	.7	-95.2	-50.64	-13	-37.64	H
5.99583	35.31	Pk	35.8	-25	.7	-95.2	-48.39	-13	-35.39	V
6.38361	33.77	Pk	36.3	-24.2	.4	-95.2	-48.93	-13	-35.93	H
7.96805	32.83	Pk	36.1	-22.3	.5	-95.2	-48.07	-13	-35.07	V
9.55262	31.66	Pk	36.9	-20.5	.6	-95.2	-46.54	-13	-33.54	H
High Channel, 1760MHz										
3.87356	36.87	Pk	33.8	-27.4	.7	-95.2	-51.23	-13	-38.23	V
3.88434	37.36	Pk	33.8	-27.3	.7	-95.2	-50.64	-13	-37.64	H
5.99583	35.31	Pk	35.8	-25	.7	-95.2	-48.39	-13	-35.39	V
6.38361	33.77	Pk	36.3	-24.2	.4	-95.2	-48.93	-13	-35.93	H
7.96805	32.83	Pk	36.1	-22.3	.5	-95.2	-48.07	-13	-35.07	V
9.55262	31.66	Pk	36.9	-20.5	.6	-95.2	-46.54	-13	-33.54	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 #:	13571607
Date:	4/10/2021
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE71 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz										
1.34464	38.63	Pk	25.3	-28.1	1.1	-95.2	-58.27	-13	-45.27	H
1.34627	38.24	Pk	25.3	-28.1	1.1	-95.2	-58.66	-13	-45.66	V
1.99371	38.34	Pk	27.4	-27.3	.5	-95.2	-56.26	-13	-43.26	V
1.99403	38.52	Pk	27.4	-27.3	.5	-95.2	-56.08	-13	-43.08	H
2.6915	37.16	Pk	29.1	-26.2	.6	-95.2	-54.54	-13	-41.54	H
2.69235	37.99	Pk	29.1	-26.2	.6	-95.2	-53.71	-13	-40.71	V
Mid Channel, 680.5MHz										
1.34194	39.48	Pk	25.3	-28.2	1.1	-95.2	-57.52	-13	-44.52	V
1.34321	39.33	Pk	25.3	-28.1	1.1	-95.2	-57.57	-13	-44.57	H
2.01431	38.46	Pk	27.2	-27	.5	-95.2	-56.04	-13	-43.04	H
2.0149	42.71	Pk	27.2	-27	.5	-95.2	-51.79	-13	-38.79	V
2.72106	37.74	Pk	29	-26.2	.5	-95.2	-54.16	-13	-41.16	H
2.72261	38.31	Pk	29	-26.2	.5	-95.2	-53.59	-13	-40.59	V
High Channel, 688MHz										
1.37442	39.23	Pk	25.4	-28.1	1	-95.2	-57.67	-13	-44.67	V
1.37559	38.82	Pk	25.4	-28.1	1	-95.2	-58.08	-13	-45.08	H
2.03516	38.41	Pk	27	-26.9	.6	-95.2	-56.09	-13	-43.09	H
2.03826	38.4	Pk	27	-27	.6	-95.2	-56.2	-13	-43.2	V
2.75212	37.36	Pk	29	-26.2	.6	-95.2	-54.44	-13	-41.44	V
2.75229	38.05	Pk	29	-26.2	.6	-95.2	-53.75	-13	-40.75	H

BPSK 5G NR 71 (20.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/10/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	n71 BPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz										
1.42196	36.93	Pk	25.3	-28.1	.9	-95.2	-60.17	-13	-47.17	V
1.42782	37.83	Pk	25.2	-28	.9	-95.2	-59.27	-13	-46.27	H
1.98858	64.1	Pk	27.4	-27.3	.6	-95.2	-30.4	-13	-17.4	H
1.98907	59.76	Pk	27.4	-27.3	.6	-95.2	-34.74	-13	-21.74	V
2.65591	34.86	Pk	29.3	-26.1	.5	-95.2	-56.64	-13	-43.64	V
2.66031	36.31	Pk	29.2	-26.1	.5	-95.2	-55.29	-13	-42.29	H
Mid Channel, 680.5MHz										
1.41951	37.44	Pk	25.3	-28	.9	-95.2	-59.56	-13	-46.56	H
1.42782	36.65	Pk	25.2	-28	.9	-95.2	-60.45	-13	-47.45	V
1.98874	66.25	Pk	27.4	-27.3	.6	-95.2	-28.25	-13	-15.25	H
1.98858	60.4	Pk	27.4	-27.3	.6	-95.2	-34.1	-13	-21.1	V
2.5288	35.81	Pk	29.2	-26.6	.8	-95.2	-55.99	-13	-42.99	H
2.5552	36.68	Pk	29.3	-26.6	.6	-95.2	-55.22	-13	-42.22	V
High Channel, 688MHz										
1.37844	37.92	Pk	25.5	-28.2	1	-95.2	-58.98	-13	-45.98	V
1.39213	37.37	Pk	25.5	-28.2	1	-95.2	-59.53	-13	-46.53	H
1.98855	64.71	Pk	27.4	-27.3	.6	-95.2	-29.79	-13	-16.79	V
1.98874	66.1	Pk	27.4	-27.3	.6	-95.2	-28.4	-13	-15.4	H
2.64467	36.95	Pk	29.2	-26.1	.5	-95.2	-54.65	-13	-41.65	H
2.71018	36.63	Pk	29.1	-26.1	.5	-95.2	-55.07	-13	-42.07	V

10.3. FIELD STRENGTH OF SPURIOUS RADIATION, Ant 2

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r01

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

RESULTS

10.3.1. 5G NR n5

LIMITS

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

QPSK 5G NR n5 (20.0MHZ BANDWIDTH)

Project #:	13571607
Date:	5/12/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n5 BPSK 20MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 829MHz										
1.67854	40.17	Pk	28.9	-30.6	.7	-95.2	-56.03	-13	-43.03	H
1.6828	40.4	Pk	28.9	-30.6	.7	-95.2	-55.8	-13	-42.8	V
2.4684	39.06	Pk	33.3	-29.8	.5	-95.2	-52.14	-13	-39.14	V
2.5235	38.94	Pk	33.4	-29.5	.8	-95.2	-51.56	-13	-38.56	H
3.28185	37.82	Pk	33.1	-28.3	.8	-95.2	-51.78	-13	-38.78	V
3.32665	37.94	Pk	33	-28.7	.6	-95.2	-52.36	-13	-39.36	H
Mid Channel, 836.5MHz										
1.66166	40.07	Pk	29	-30.7	.8	-95.2	-56.03	-13	-43.03	H
1.67745	40.24	Pk	28.9	-30.6	.7	-95.2	-55.96	-13	-42.96	V
2.49459	42.14	Pk	33.5	-29.8	.6	-95.2	-48.76	-13	-35.76	H
2.49954	39.39	Pk	33.5	-29.8	.6	-95.2	-51.51	-13	-38.51	V
3.35925	38.87	Pk	33	-28.5	.6	-95.2	-51.23	-13	-38.23	H
3.3634	39.05	Pk	33	-28.4	.6	-95.2	-50.95	-13	-37.95	V
High Channel, 844MHz										
1.66193	40.49	Pk	29	-30.7	.8	-95.2	-55.61	-13	-42.61	V
1.69802	39.97	Pk	29.1	-30.5	.6	-95.2	-56.03	-13	-43.03	H
2.5155	42.18	Pk	33.5	-29.6	.7	-95.2	-48.42	-13	-35.42	V
2.5156	48.64	Pk	33.5	-29.5	.7	-95.2	-41.86	-13	-28.86	H
3.32976	38.43	Pk	33	-28.7	.6	-95.2	-51.87	-13	-38.87	V
3.35503	38.12	Pk	33	-28.5	.6	-95.2	-51.98	-13	-38.98	H
1.66193	40.49	Pk	29	-30.7	.8	-95.2	-55.61	-13	-42.61	V

10.3.2. LTE BAND 7 AND 5G NR n7

LIMITS

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

QPSK LTE BAND 7 (20.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/8/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE7 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2510MHz										
5.03563	36.36	Pk	33.7	-23.5	.7	-95.2	-47.94	-25	-22.94	V
5.13404	37.35	Pk	33.8	-23.5	.8	-95.2	-46.75	-25	-21.75	H
7.34808	35.18	Pk	37	-20.9	.4	-95.2	-43.52	-25	-18.52	V
7.50376	35.19	Pk	36.7	-21.6	.3	-95.2	-44.61	-25	-19.61	H
10.21641	34	Pk	38.7	-17.4	.9	-95.2	-39.00	-25	-14.00	V
10.56171	33.72	Pk	39.5	-17	.7	-95.2	-38.28	-25	-13.28	H
Mid Channel, 2535MHz										
5.13132	37.33	Pk	33.8	-23.5	.8	-95.2	-46.77	-25	-21.77	H
5.44015	35.68	Pk	32.7	-24.1	.6	-95.2	-50.32	-25	-25.32	V
7.19526	35.13	Pk	37.1	-21.3	.4	-95.2	-43.87	-25	-18.87	H
7.27688	35.2	Pk	37.1	-20.4	.4	-95.2	-42.9	-25	-17.9	V
11.06413	34.25	Pk	39.4	-17.1	.6	-95.2	-38.05	-25	-13.05	V
11.60456	34.03	Pk	39.3	-17.1	.8	-95.2	-38.17	-25	-13.17	H
High Channel, 2560MHz										
4.99858	36.97	Pk	33.6	-23	.8	-95.2	-46.83	-25	-21.83	H
5.13025	36.93	Pk	33.8	-23.5	.8	-95.2	-47.17	-25	-22.17	V
7.23337	35.36	Pk	37.2	-21.3	.3	-95.2	-43.64	-25	-18.64	V
7.34409	35.08	Pk	37	-20.9	.4	-95.2	-43.62	-25	-18.62	H
10.60761	34.08	Pk	39.5	-17.2	.8	-95.2	-38.02	-25	-13.02	H
10.61203	34.86	Pk	39.5	-17.1	.7	-95.2	-37.24	-25	-12.24	V

BPSK 5G NR 7 (40.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/19/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n7 BPSK 40MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2520MHz										
5.01237	36.11	Pk	34.2	-26.7	.8	-95.2	-50.79	-25	-25.79	H
5.09132	36.4	Pk	34.4	-26.1	.8	-95.2	-49.7	-25	-24.7	V
7.49076	33.05	Pk	36.1	-22.8	.3	-95.2	-48.55	-25	-23.55	V
7.51739	33.69	Pk	36	-22.7	.3	-95.2	-47.91	-25	-22.91	H
10.4039	30.66	Pk	37.7	-19.5	.8	-95.2	-45.54	-25	-20.54	H
10.58081	32	Pk	37.8	-19.5	.9	-95.2	-44.00	-25	-19.00	V
Mid Channel, 2535MHz										
5.1526	35.85	Pk	34.6	-26.3	.8	-95.2	-50.25	-25	-25.25	V
5.20611	36.54	Pk	34.5	-25.8	.9	-95.2	-49.06	-25	-24.06	H
7.51415	32.53	Pk	36.1	-22.6	.3	-95.2	-48.87	-25	-23.87	V
7.67422	34.04	Pk	35.9	-22.2	.4	-95.2	-47.06	-25	-22.06	H
10.43328	31.24	Pk	37.7	-19.7	.8	-95.2	-45.16	-25	-20.16	V
10.89002	30.81	Pk	37.8	-19.2	.6	-95.2	-45.19	-25	-20.19	H
High Channel, 2550MHz										
5.07586	36.91	Pk	34.4	-25.9	.7	-95.2	-49.09	-25	-24.09	H
5.08016	36.95	Pk	34.4	-26	.7	-95.2	-49.15	-25	-24.15	V
7.80222	33.34	Pk	35.9	-22.3	.4	-95.2	-47.86	-25	-22.86	V
7.88225	32.02	Pk	36.1	-22.5	.5	-95.2	-49.08	-25	-24.08	H
10.70153	31.99	Pk	37.8	-19.7	.5	-95.2	-44.61	-25	-19.61	H
11.06822	31.77	Pk	37.8	-18.9	.7	-95.2	-43.83	-25	-18.83	V

10.3.3. LTE BAND 12 AND 5G NR n12

LIMITS

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

QPSK LTE BAND 12 (10.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/9/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE12 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1- 18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 704MHz										
1.41195	42.2	Pk	29.1	-31	.9	-95.2	-54	-13	-41	V
1.41361	41.25	Pk	29.1	-31	.9	-95.2	-54.95	-13	-41.95	H
2.0989	45.89	Pk	31.9	-30.2	.5	-95.2	-47.11	-13	-34.11	H
2.09915	41.8	Pk	31.9	-30.2	.5	-95.2	-51.2	-13	-38.2	V
2.83439	38.29	Pk	32.5	-28.9	.7	-95.2	-52.61	-13	-39.61	H
2.83707	39.23	Pk	32.5	-28.9	.7	-95.2	-51.67	-13	-38.67	V
Mid Channel, 707.5MHz										
1.41614	38.81	Pk	25.3	-28	.9	-95.2	-58.19	-13	-45.19	V
1.41695	38.66	Pk	25.3	-28	.9	-95.2	-58.34	-13	-45.34	H
2.12161	37.73	Pk	26.9	-26.9	.5	-95.2	-56.97	-13	-43.97	H
2.12436	37.85	Pk	26.9	-26.9	.5	-95.2	-56.85	-13	-43.85	V
2.8313	37.41	Pk	28.8	-25.8	.7	-95.2	-54.09	-13	-41.09	V
2.83173	37.23	Pk	28.8	-25.8	.7	-95.2	-54.27	-13	-41.27	H
High Channel, 711MHz										
1.42149	41.78	Pk	29	-30.9	.9	-95.2	-54.42	-13	-41.42	V
1.47212	41.53	Pk	28.7	-30.9	.9	-95.2	-54.97	-13	-41.97	H
2.11966	46.81	Pk	31.6	-30	.5	-95.2	-46.29	-13	-33.29	H
2.1401	39.49	Pk	31.5	-29.9	.5	-95.2	-53.61	-13	-40.61	V
2.83227	38.43	Pk	32.6	-28.9	.7	-95.2	-52.37	-13	-39.37	H
2.83691	39.44	Pk	32.5	-28.9	.7	-95.2	-51.46	-13	-38.46	V

BPSK 5G NR n12 (15.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/12/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n12 BPSK 15MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1- 18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 706.5MHz										
1.41286	40.48	Pk	29.1	-31	.9	-95.2	-55.72	-13	-42.72	V
1.49188	41	Pk	28.4	-30.9	.9	-95.2	-55.8	-13	-42.8	H
2.49739	39.28	Pk	33.5	-29.8	.6	-95.2	-51.62	-13	-38.62	H
2.49803	39.42	Pk	33.5	-29.8	.6	-95.2	-51.48	-13	-38.48	V
3.88268	37.39	Pk	33.8	-27.3	.6	-95.2	-50.71	-13	-37.71	V
3.94459	38.21	Pk	33.7	-27.6	.6	-95.2	-50.29	-13	-37.29	H
Mid Channel, 707.5MHz										
1.48741	40.58	Pk	28.5	-30.8	.9	-95.2	-56.02	-13	-43.02	V
1.49862	41.18	Pk	28.3	-30.8	.8	-95.2	-55.72	-13	-42.72	H
2.43816	39.27	Pk	33	-29.8	.5	-95.2	-52.23	-13	-39.23	V
2.50986	39.54	Pk	33.4	-29.7	.7	-95.2	-51.26	-13	-38.26	H
3.88124	38.23	Pk	33.8	-27.3	.6	-95.2	-49.87	-13	-36.87	V
3.88669	38.58	Pk	33.9	-27.3	.6	-95.2	-49.42	-13	-36.42	H
High Channel, 708.5MHz										
1.40528	41.55	Pk	29.1	-31	.9	-95.2	-54.65	-13	-41.65	H
1.48217	41.21	Pk	28.6	-30.8	.9	-95.2	-55.29	-13	-42.29	V
2.12442	51.51	Pk	31.6	-30	.5	-95.2	-41.59	-13	-28.59	H
2.42793	39.35	Pk	32.9	-29.7	.5	-95.2	-52.15	-13	-39.15	V
3.88658	37.96	Pk	33.9	-27.3	.6	-95.2	-50.04	-13	-37.04	H
3.90785	36.58	Pk	33.8	-27.6	.6	-95.2	-51.82	-13	-38.82	V

10.3.4. LTE BAND 13

LIMITS

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

QPSK LTE BAND 13 (10.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/11/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE13 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1- 18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 782MHz										
1.569	38.14	Pk	24.9	-27.9	.9	-95.2	-59.16	-40	-19.16	V
1.58382	38.95	Pk	24.9	-27.8	.8	-95.2	-58.35	-40	-18.35	H
2.42977	38.27	Pk	28.8	-26.8	.5	-95.2	-54.43	-13	-41.43	H
2.46051	37.04	Pk	28.9	-26.6	.5	-95.2	-55.36	-13	-42.36	V
3.22143	37.7	Pk	31.3	-25.5	.5	-95.2	-51.2	-13	-38.2	V
3.22966	37.19	Pk	31.4	-25.6	.4	-95.2	-51.81	-13	-38.81	H

10.3.5. LTE BAND 14

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 #:	13571607
Date:	3/11/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE14 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1- 18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 793MHz										
1.57721	40.64	Pk	24.9	-27.9	.9	-95.2	-56.66	-40	-16.66	H
1.58933	39	Pk	24.9	-27.9	.8	-95.2	-58.4	-40	-18.4	V
2.36561	41.87	Pk	28.2	-27	.6	-95.2	-51.53	-13	-38.53	H
2.36564	42.22	Pk	28.2	-27	.6	-95.2	-51.18	-13	-38.18	V
3.33823	36.93	Pk	31.1	-25.6	.6	-95.2	-52.17	-13	-39.17	V
3.34242	37.23	Pk	31	-25.5	.6	-95.2	-51.87	-13	-38.87	H

10.3.6. LTE BAND 17

LIMITS

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

QPSK LTE BAND 17 (10.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/11/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE17 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 709MHz										
1.46742	42.9	Pk	25	-34.9	.9	-95.2	-61.3	-13	-48.3	V
1.48111	43.04	Pk	24.9	-34.9	.9	-95.2	-61.26	-13	-48.26	H
2.11376	65.95	Pk	26.9	-34.9	.5	-95.2	-36.75	-13	-23.75	H
2.11383	54.25	Pk	26.9	-34.9	.5	-95.2	-48.45	-13	-35.45	V
2.62804	43.02	Pk	29.2	-34.6	.6	-95.2	-56.98	-13	-43.98	H
2.67498	42.95	Pk	29.2	-34.7	.6	-95.2	-57.15	-13	-44.15	V
Mid Channel, 710MHz										
1.42001	38.39	Pk	25.3	-28	.9	-95.2	-58.61	-13	-45.61	H
1.42101	39.06	Pk	25.3	-28.1	.9	-95.2	-58.04	-13	-45.04	V
2.12893	38.42	Pk	26.9	-26.9	.5	-95.2	-56.28	-13	-43.28	V
2.13042	37.56	Pk	26.9	-26.9	.5	-95.2	-57.14	-13	-44.14	H
2.83957	37.25	Pk	28.8	-25.8	.7	-95.2	-54.25	-13	-41.25	H
2.84095	37.89	Pk	28.8	-25.7	.7	-95.2	-53.51	-13	-40.51	V
High Channel, 711MHz										
1.71871	43.6	Pk	25.3	-34.9	.6	-95.2	-60.6	-13	-47.6	H
1.74658	41.93	Pk	25.6	-34.8	.7	-95.2	-61.77	-13	-48.77	V
2.21884	42.7	Pk	27.3	-34.9	.6	-95.2	-59.5	-13	-46.5	H
2.22227	43.17	Pk	27.3	-34.9	.6	-95.2	-59.03	-13	-46.03	V
2.80209	43.65	Pk	28.8	-34.5	.6	-95.2	-56.65	-13	-43.65	V
2.92627	42.27	Pk	29.3	-34.4	.5	-95.2	-57.53	-13	-44.53	H

10.3.7. LTE BAND 25 AND 5G NR n25

LIMITS

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

QPSK LTE BAND 25 (20.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/11/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE25 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	PK Margin (dB)	Polarity
Low Channel, 1860MHz									
3.61817	37.59	Pk	30.1	-24.7	-95.2	-52.21	-13	-39.21	V
3.63635	37.68	Pk	30.1	-24.5	-95.2	-51.92	-13	-38.92	H
5.50202	36.83	Pk	33.1	-23.7	-95.2	-48.97	-13	-35.97	H
5.51266	37.28	Pk	33.2	-23.6	-95.2	-48.32	-13	-35.32	V
7.69715	35.83	Pk	37.1	-20.5	-95.2	-42.77	-13	-29.77	V
7.77928	35.05	Pk	37.2	-19.3	-95.2	-42.25	-13	-29.25	H
Mid Channel, 1882.5MHz									
3.80922	39.07	Pk	30.9	-24.6	-95.2	-49.83	-13	-36.83	H
3.92381	38.06	Pk	31.4	-23.8	-95.2	-49.54	-13	-36.54	V
5.62141	36.12	Pk	33.1	-22.4	-95.2	-48.38	-13	-35.38	H
5.64605	37.07	Pk	33.1	-22.1	-95.2	-47.13	-13	-34.13	V
7.66234	35.53	Pk	37	-20.9	-95.2	-43.57	-13	-30.57	H
7.67677	35.47	Pk	37	-20.6	-95.2	-43.33	-13	-30.33	V
High Channel, 1905MHz									
3.69592	38.35	Pk	30.3	-24.6	-95.2	-51.15	-13	-38.15	H
3.76716	37.9	Pk	30.8	-24.9	-95.2	-51.4	-13	-38.4	V
5.66807	36.41	Pk	33	-21.5	-95.2	-47.29	-13	-34.29	V
5.69222	36.02	Pk	33	-21.4	-95.2	-47.58	-13	-34.58	H
7.71905	35.23	Pk	37.1	-19.9	-95.2	-42.77	-13	-29.77	H
7.73556	35.56	Pk	37.1	-19.5	-95.2	-42.04	-13	-29.04	V

BPSK 5G NR 25 (40.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/14/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n25 BPSK 40MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	PK Margin (dB)	Polarity
Low Channel, 1870MHz									
3.69144	36.82	Pk	33.3	-27.5	-95.2	-52.58	-13	-39.58	H
3.72616	37.09	Pk	33.5	-26.8	-95.2	-51.41	-13	-38.41	V
5.85226	34.73	Pk	35.5	-24.7	-95.2	-49.67	-13	-36.67	H
6.19644	34.4	Pk	36	-23.3	-95.2	-48.1	-13	-35.1	V
9.01922	33.53	Pk	36.4	-19.7	-95.2	-44.97	-13	-31.97	V
9.6739	31.47	Pk	37.1	-20	-95.2	-46.63	-13	-33.63	H
Mid Channel, 1882.5MHz									
3.56895	37.59	Pk	33.3	-26.8	-95.2	-51.11	-13	-38.11	V
3.74034	36.6	Pk	33.5	-26.9	-95.2	-52	-13	-39	H
5.53069	35.98	Pk	34.9	-25.1	-95.2	-49.42	-13	-36.42	V
5.90302	35.51	Pk	35.7	-23.7	-95.2	-47.69	-13	-34.69	H
8.17869	33.1	Pk	36.1	-20.4	-95.2	-46.4	-13	-33.4	H
8.22023	33.27	Pk	36.1	-20.6	-95.2	-46.43	-13	-33.43	V
High Channel, 1895MHz									
3.63762	38.35	Pk	33.5	-27.6	-95.2	-50.95	-13	-37.95	V
3.72942	36.93	Pk	33.5	-26.8	-95.2	-51.57	-13	-38.57	H
5.90281	35.06	Pk	35.7	-23.7	-95.2	-48.14	-13	-35.14	V
6.14065	35.5	Pk	35.9	-24.1	-95.2	-47.9	-13	-34.9	H
9.00537	33.2	Pk	36.4	-19.7	-95.2	-45.3	-13	-32.3	V
9.42499	33.45	Pk	36.7	-20.9	-95.2	-45.95	-13	-32.95	H

10.3.8. LTE BAND 26 (FCC PART 90S)

LIMITS

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

QPSK LTE BAND 26 (10.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/11/2021
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE25 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1- 18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 819MHz										
1.63948	39.36	Pk	25	-27.8	.7	-95.2	-57.94	-13	-44.94	V
1.63975	39.11	Pk	25	-27.8	.7	-95.2	-58.19	-13	-45.19	H
2.45548	38.41	Pk	28.8	-26.7	.5	-95.2	-54.19	-13	-41.19	V
2.45898	38.16	Pk	28.9	-26.6	.5	-95.2	-54.24	-13	-41.24	H
3.27509	37.08	Pk	31.3	-25.4	.7	-95.2	-51.52	-13	-38.52	H
3.27539	37.75	Pk	31.3	-25.4	.7	-95.2	-50.85	-13	-37.85	V

10.3.9. LTE BAND 26 (FCC PART 22)

LIMITS

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

QPSK LTE BAND 26 (10.0MHZ BANDWIDTH)

Project #:	13571607
Date:	6/9/2021
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE26 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 829MHz										
1.57498	43.59	Pk	25	-34.9	.9	-95.2	-60.61	-13	-47.61	H
1.59062	43.11	Pk	24.9	-34.9	.8	-95.2	-61.29	-13	-48.29	V
2.24964	43.22	Pk	27.3	-34.9	.5	-95.2	-59.08	-13	-46.08	V
2.2956	43.44	Pk	27.5	-34.9	.5	-95.2	-58.66	-13	-45.66	H
3.1976	42.64	Pk	31.2	-33.9	.6	-95.2	-54.66	-13	-41.66	V
3.23133	43.28	Pk	31.4	-33.8	.4	-95.2	-53.92	-13	-40.92	H
Mid Channel, 836.5MHz										
1.6717	38.71	Pk	25	-27.8	.7	-95.2	-58.59	-13	-45.59	V
1.67524	38.17	Pk	25	-27.8	.7	-95.2	-59.13	-13	-46.13	H
2.50829	37.78	Pk	29.1	-26.5	.7	-95.2	-54.12	-13	-41.12	V
2.50885	37.55	Pk	29.1	-26.5	.7	-95.2	-54.35	-13	-41.35	H
3.34499	36.79	Pk	30.9	-25.6	.6	-95.2	-52.51	-13	-39.51	V
3.34624	37.77	Pk	30.9	-25.6	.6	-95.2	-51.53	-13	-38.53	H
High Channel, 844MHz										
1.74609	43.05	Pk	25.6	-34.8	.7	-95.2	-60.65	-13	-47.65	V
1.75782	43.84	Pk	25.6	-34.8	.7	-95.2	-59.86	-13	-46.86	H
2.45107	45.07	Pk	28.8	-34.8	.5	-95.2	-55.63	-13	-42.63	H
2.45449	43.26	Pk	28.8	-34.7	.5	-95.2	-57.34	-13	-44.34	V
3.18196	42.56	Pk	31.1	-34	.5	-95.2	-55.04	-13	-42.04	V
3.29391	42.89	Pk	31.2	-33.9	.8	-95.2	-54.21	-13	-41.21	H

10.3.10. LTE BAND 30 AND 5G NR n30

LIMITS

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

QPSK LTE BAND 30 (10.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/17/2021
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE30 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.61946	32.32	RMS	32.2	-24.5	-95.2	-55.18	-40	-15.18	H
4.62183	32.6	RMS	32.3	-24.5	-95.2	-54.8	-40	-15.8	V
6.93052	30.65	RMS	36.3	-20.9	-95.2	-49.15	-40	-9.15	H
6.93253	30.48	RMS	36.3	-20.9	-95.2	-49.32	-40	-9.32	V
9.23983	29.24	RMS	38.7	-17.8	-95.2	-45.06	-40	-5.06	V
9.24185	29.57	RMS	38.7	-17.8	-95.2	-44.73	-40	-4.73	H

BPSK 5G NR 30 (10.0MHZ BANDWIDTH)

Project #:	13571607
Date:	6/9/2021
Test Engineer:	25196
Configuration:	EUT only
Mode	n30 BPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 2310MHz									
5.09538	36.56	RMS	33.9	-30.4	-95.2	-55.14	-40	-15.14	H
5.12383	37.26	RMS	33.9	-30.1	-95.2	-54.14	-40	-14.14	V
7.76205	31.78	RMS	37.1	-25.6	-95.2	-51.92	-40	-11.92	V
7.95302	32.3	RMS	37.2	-26.2	-95.2	-51.9	-40	-11.9	H
10.40831	30.96	RMS	39.3	-24	-95.2	-48.94	-40	-8.94	V
10.51868	30.39	RMS	39.5	-24	-95.2	-49.31	-40	-9.31	H

10.3.11. LTE BAND 41 AND 5G NR n41

LIMITS

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

QPSK LTE BAND 41 (20.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/9/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE41 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2506MHz										
5.01563	34.35	Pk	33.7	-23.4	.8	-95.2	-49.75	-25	-24.75	H
5.05078	33.93	Pk	33.8	-23.3	.6	-95.2	-50.17	-25	-25.17	V
7.21734	34.38	Pk	37.2	-20.9	.3	-95.2	-44.22	-25	-19.22	H
7.25016	33.09	Pk	37.2	-21.4	.5	-95.2	-45.81	-25	-20.81	V
10.50281	31.1	Pk	39.5	-17	.6	-95.2	-41	-25	-16.00	V
10.55438	33.1	Pk	39.5	-17.1	.7	-95.2	-39	-25	-14.00	H
Mid Channel, 2593MHz										
4.89141	35.72	Pk	33.3	-23.9	.9	-95.2	-49.18	-25	-24.18	V
5.04703	34.55	Pk	33.8	-23.5	.6	-95.2	-49.75	-25	-24.75	H
7.28719	34.37	Pk	37.2	-20.4	.4	-95.2	-43.63	-25	-18.63	H
7.31297	35.18	Pk	37.1	-21.2	.3	-95.2	-43.82	-25	-18.82	V
10.56422	32.57	Pk	39.6	-17	.8	-95.2	-39.23	-25	-14.23	H
10.68281	33.17	Pk	39.4	-17.1	.5	-95.2	-39.23	-25	-14.23	V
High Channel, 2680MHz										
5.07562	36.99	Pk	33.8	-23.6	.7	-95.2	-47.31	-25	-22.31	H
5.09633	36.79	Pk	33.9	-23.8	.8	-95.2	-47.51	-25	-22.51	V
8.16758	35.39	Pk	37.3	-20.5	.3	-95.2	-42.71	-25	-17.71	V
8.25705	34.84	Pk	37.4	-20.6	.3	-95.2	-43.26	-25	-18.26	H
10.90426	33.25	Pk	39.4	-17.4	.7	-95.2	-39.25	-25	-14.25	H
10.92954	34.41	Pk	39.4	-17	.8	-95.2	-37.59	-25	-12.59	V

BPSK 5G NR n41 (100.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/21/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n41 BPSK 100MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2546MHz										
4.90907	38.33	Pk	34.1	-26.8	1.1	-95.2	-48.47	-25	-23.47	H
5.06366	36.72	Pk	34.3	-26.1	.6	-95.2	-49.68	-25	-24.68	V
7.67506	33.26	Pk	35.9	-22.1	.4	-95.2	-47.74	-25	-22.74	V
7.75637	33.43	Pk	35.9	-22.4	.3	-95.2	-47.97	-25	-22.97	H
10.27094	31.6	Pk	37.7	-20	.7	-95.2	-45.2	-25	-20.2	H
10.45998	34.14	Pk	37.7	-19.6	.7	-95.2	-42.26	-25	-17.26	V
Mid Channel, 2593MHz										
5.0769	36.48	Pk	34.4	-25.9	.7	-95.2	-49.52	-25	-24.52	H
5.07821	35.76	Pk	34.4	-25.9	.7	-95.2	-50.24	-25	-25.24	V
7.64128	33.71	Pk	35.9	-22.4	.4	-95.2	-47.59	-25	-22.59	H
7.77661	32.71	Pk	35.9	-22.5	.3	-95.2	-48.79	-25	-23.79	V
10.59394	31.43	Pk	37.8	-19.4	.9	-95.2	-44.47	-25	-19.47	V
10.65924	31.38	Pk	37.9	-19.8	.5	-95.2	-45.22	-25	-20.22	H
High Channel, 2640MHz										
5.09102	36.77	Pk	34.4	-26.1	.8	-95.2	-49.33	-25	-24.33	V
5.48748	36.83	Pk	34.9	-25.6	.6	-95.2	-48.47	-25	-23.47	H
7.23249	33.88	Pk	36.1	-23	.3	-95.2	-47.92	-25	-22.92	V
7.45787	33.09	Pk	36.2	-22.7	.4	-95.2	-48.21	-25	-23.21	H
10.40077	31.03	Pk	37.7	-19.5	.8	-95.2	-45.17	-25	-20.17	V
10.75838	32	Pk	37.8	-19.2	.9	-95.2	-43.7	-25	-18.7	H

10.3.12. LTE BAND 66 AND 5G NR n66

LIMITS

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

QPSK LTE BAND 66 (20.0MHZ BANDWIDTH)

Project #:	13571607
Date:	5/6/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE66 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.41531	36.8	Pk	30.6	-24.8	-95.2	-52.6	-13	-39.6	H
3.46828	35.63	Pk	30.3	-24.4	-95.2	-53.67	-13	-40.67	V
5.05172	36.66	Pk	33.8	-21.9	-95.2	-46.64	-13	-33.64	H
5.10281	34.82	Pk	34	-21.8	-95.2	-48.18	-13	-35.18	V
7.74516	35.44	Pk	37.1	-19.5	-95.2	-42.16	-13	-29.16	H
7.76766	33.66	Pk	37.2	-19.5	-95.2	-43.84	-13	-30.84	V
Mid Channel, 1745MHz									
3.64313	38.19	Pk	30.1	-24.4	-95.2	-51.31	-13	-38.31	H
3.69	37.13	Pk	30.3	-24.5	-95.2	-52.27	-13	-39.27	V
5.10375	35.9	Pk	34	-21.8	-95.2	-47.1	-13	-34.1	H
5.14734	34.8	Pk	33.8	-22.4	-95.2	-49	-13	-36	V
7.215	34.7	Pk	37.2	-19.6	-95.2	-42.9	-13	-29.9	V
7.26141	34.98	Pk	37.1	-20.5	-95.2	-43.62	-13	-30.62	H
High Channel, 1770MHz									
3.77906	37	Pk	30.8	-25	-95.2	-52.4	-13	-39.4	V
3.81844	36.87	Pk	30.9	-24.6	-95.2	-52.03	-13	-39.03	H
5.08875	35.62	Pk	33.8	-21.7	-95.2	-47.48	-13	-34.48	V
5.11406	34.58	Pk	33.9	-22	-95.2	-48.72	-13	-35.72	H
7.17	34.31	Pk	36.9	-20.2	-95.2	-44.19	-13	-31.19	V
7.22625	34.06	Pk	37.1	-19.9	-95.2	-43.94	-13	-30.94	H

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	13571607
Date:	5/13/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n66 BPSK 40MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1730MHz										
3.45004	37.05	Pk	33.1	-28.1	.7	-95.2	-52.45	-13	-39.45	H
3.4841	37.64	Pk	33.1	-28	.6	-95.2	-51.86	-13	-38.86	V
5.13285	35.88	Pk	34.5	-26.3	.5	-95.2	-50.62	-13	-37.62	H
5.17191	35.03	Pk	34.6	-26.3	.5	-95.2	-51.37	-13	-38.37	V
6.92012	34.36	Pk	36.2	-23.4	.5	-95.2	-47.54	-13	-34.54	V
7.09197	33.47	Pk	36	-23.4	.6	-95.2	-48.53	-13	-35.53	H
Mid Channel, 1745MHz										
3.60065	37.65	Pk	33.3	-28.2	.9	-95.2	-51.55	-13	-38.55	V
3.6782	37.71	Pk	33.4	-27.8	.7	-95.2	-51.19	-13	-38.19	H
5.15807	36.29	Pk	34.6	-26.3	.5	-95.2	-50.11	-13	-37.11	V
5.92731	35.24	Pk	35.7	-25	.5	-95.2	-48.76	-13	-35.76	H
7.79531	33.92	Pk	36	-22.3	.4	-95.2	-47.18	-13	-34.18	V
9.07095	32.7	Pk	36.4	-20.9	.7	-95.2	-46.3	-13	-33.3	H
High Channel, 1760MHz										
3.49761	37.41	Pk	33.1	-27.9	.7	-95.2	-51.89	-13	-38.89	H
3.5417	36.93	Pk	33.4	-28.1	.7	-95.2	-52.27	-13	-39.27	V
5.26865	35.63	Pk	34.7	-26.3	.7	-95.2	-50.47	-13	-37.47	V
5.29149	35.11	Pk	34.7	-26.8	.4	-95.2	-51.79	-13	-38.79	H
6.89316	32.5	Pk	36.4	-23.5	.6	-95.2	-49.2	-13	-36.2	H
6.92083	32.85	Pk	36.2	-23.4	.5	-95.2	-49.05	-13	-36.05	V

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 #:	13571607
Date:	3/30/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE71 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz										
1.37922	40.19	Pk	25.5	-28.2	1	-95.2	-56.71	-13	-43.71	H
1.39175	40.3	Pk	25.5	-28.2	1	-95.2	-56.6	-13	-43.6	V
2.02611	38.94	Pk	27.1	-26.9	.5	-95.2	-55.56	-13	-42.56	V
2.04516	38.95	Pk	27	-26.9	.6	-95.2	-55.55	-13	-42.55	H
2.59196	38.96	Pk	29.2	-26.5	.4	-95.2	-53.14	-13	-40.14	V
2.64854	38.99	Pk	29.2	-26.1	.5	-95.2	-52.61	-13	-39.61	H
Mid Channel, 680.5MHz										
1.35998	38.83	Pk	25.3	-28.1	1	-95.2	-58.17	-13	-45.17	V
1.36069	38.83	Pk	25.3	-28.1	1	-95.2	-58.17	-13	-45.17	H
2.03954	37.95	Pk	27	-26.9	.6	-95.2	-56.55	-13	-43.55	H
2.04164	37.92	Pk	27	-26.9	.6	-95.2	-56.58	-13	-43.58	V
2.72147	37.96	Pk	29	-26.2	.5	-95.2	-53.94	-13	-40.94	V
2.72363	38.02	Pk	29	-26.2	.5	-95.2	-53.88	-13	-40.88	H
High Channel, 688MHz										
1.37941	40.47	Pk	25.5	-28.2	1	-95.2	-56.43	-13	-43.43	H
1.3836	40.38	Pk	25.5	-28.2	1	-95.2	-56.52	-13	-43.52	V
1.86853	39.69	Pk	26.1	-27.4	.6	-95.2	-56.21	-13	-43.21	H
2.01945	38.5	Pk	27.2	-27	.5	-95.2	-56	-13	-43	V
2.49588	38.54	Pk	29	-26.6	.6	-95.2	-53.66	-13	-40.66	H
2.70731	38.03	Pk	29.1	-26.1	.5	-95.2	-53.67	-13	-40.67	V

BPSK 5G NR 71 (20.0MHZ BANDWIDTH)

Project #:	13571607
Date:	5/15/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	n71 BPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz										
1.41609	37.03	Pk	25.3	-28	.9	-95.2	-59.97	-13	-46.97	H
1.42636	37.37	Pk	25.2	-28	.9	-95.2	-59.73	-13	-46.73	V
1.98876	65.9	Pk	27.4	-27.3	.6	-95.2	-28.6	-13	-15.6	H
1.9888	64.5	Pk	27.4	-27.3	.6	-95.2	-30	-13	-17	V
3.00938	34.7	Pk	30	-26	.5	-95.2	-56	-13	-43	V
3.02942	36.43	Pk	30.1	-25.7	.5	-95.2	-53.87	-13	-40.87	H
Mid Channel, 680.5MHz										
1.44053	37.58	Pk	25.1	-28	.9	-95.2	-59.62	-13	-46.62	H
1.44591	36.41	Pk	25.1	-28	.9	-95.2	-60.79	-13	-47.79	V
1.98864	64.55	Pk	27.4	-27.3	.6	-95.2	-29.95	-13	-16.95	V
1.98874	66.29	Pk	27.4	-27.3	.6	-95.2	-28.21	-13	-15.21	H
2.47453	36.67	Pk	29	-26.6	.5	-95.2	-55.63	-13	-42.63	H
2.4804	36.07	Pk	29	-26.6	.5	-95.2	-56.23	-13	-43.23	V
High Channel, 688MHz										
1.3848	37.11	Pk	25.5	-28.2	1	-95.2	-59.79	-13	-46.79	H
1.39653	37.5	Pk	25.5	-28.1	1	-95.2	-59.3	-13	-46.3	V
1.98875	65.43	Pk	27.4	-27.3	.6	-95.2	-29.07	-13	-16.07	V
1.98879	65.96	Pk	27.4	-27.3	.6	-95.2	-28.54	-13	-15.54	H
2.98884	36.88	Pk	29.9	-26	.6	-95.2	-53.82	-13	-40.82	H
3.06364	36.47	Pk	30.3	-25.7	.5	-95.2	-53.63	-13	-40.63	V

10.4. FIELD STRENGTH OF SPURIOUS RADIATION, Ant 3

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r01

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 #:	13571607
Date:	4/15/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE7 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2510MHz										
5.00186	37.11	Pk	33.6	-23.2	.8	-95.2	-46.89	-25	-21.89	V
5.00807	37.59	Pk	33.6	-23.3	.8	-95.2	-46.51	-25	-21.51	H
7.27037	36.01	Pk	37.2	-20.6	.4	-95.2	-42.19	-25	-17.19	V
7.31972	34.64	Pk	37	-21.2	.3	-95.2	-44.46	-25	-19.46	H
10.25048	34.41	Pk	38.9	-16.9	.7	-95.2	-38.09	-25	-13.09	H
10.25283	33.96	Pk	38.8	-17	.7	-95.2	-38.74	-25	-13.74	V
Mid Channel, 2535MHz										
5.00619	36.99	Pk	33.7	-23.2	.8	-95.2	-46.91	-25	-21.91	V
5.01696	36.9	Pk	33.8	-23.5	.8	-95.2	-47.2	-25	-22.2	H
7.58072	35.3	Pk	36.9	-21.4	.5	-95.2	-43.9	-25	-18.9	V
7.66962	35.01	Pk	36.9	-20.9	.3	-95.2	-43.89	-25	-18.89	H
10.63613	33.78	Pk	39.4	-17.1	.5	-95.2	-38.62	-25	-13.62	H
10.68911	34.14	Pk	39.3	-17.1	.5	-95.2	-38.36	-25	-13.36	V
High Channel, 2560MHz										
5.10226	36.66	Pk	34	-23.8	.8	-95.2	-47.54	-25	-22.54	H
5.12411	36.93	Pk	33.9	-23.6	.8	-95.2	-47.17	-25	-22.17	V
7.86463	34.41	Pk	37.3	-20.5	.3	-95.2	-43.69	-25	-18.69	H
8.00324	35.58	Pk	37.1	-20.5	.3	-95.2	-42.72	-25	-17.72	V
10.53511	34.39	Pk	39.5	-17.5	.5	-95.2	-38.31	-25	-13.31	H
10.74142	34.09	Pk	39.3	-17	.8	-95.2	-38.01	-25	-13.01	V

BPSK 5G NR 7 (40.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/20/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n7 BPSK 40MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2520MHz										
5.02295	38.89	Pk	34.2	-26.4	.7	-95.2	-47.81	-25	-22.81	V
5.09218	37.24	Pk	34.4	-26.1	.8	-95.2	-48.86	-25	-23.86	H
7.50237	34.59	Pk	36	-22.6	.4	-95.2	-46.81	-25	-21.81	V
7.65063	34.44	Pk	35.8	-22.4	.3	-95.2	-47.06	-25	-22.06	H
10.58449	32.03	Pk	37.8	-19.4	.9	-95.2	-43.87	-25	-18.87	H
10.78033	31.65	Pk	37.8	-19.5	.8	-95.2	-44.45	-25	-19.45	V
Mid Channel, 2535MHz										
5.02972	35.98	Pk	34.2	-26.4	.7	-95.2	-50.72	-25	-25.72	V
5.06664	36.36	Pk	34.3	-26.1	.6	-95.2	-50.04	-25	-25.04	H
7.51324	33.34	Pk	36	-22.6	.3	-95.2	-48.16	-25	-23.16	H
7.56152	33.31	Pk	35.9	-22.7	.4	-95.2	-48.29	-25	-23.29	V
10.07308	32.07	Pk	37.3	-20.6	.7	-95.2	-45.73	-25	-20.73	H
10.11543	31.57	Pk	37.4	-20.4	.7	-95.2	-45.93	-25	-20.93	V
High Channel, 2550MHz										
5.08082	37.21	Pk	34.4	-26	.7	-95.2	-48.89	-25	-23.89	H
5.11439	36.15	Pk	34.5	-26.4	.8	-95.2	-50.15	-25	-25.15	V
7.66321	33.38	Pk	35.9	-22.3	.3	-95.2	-47.92	-25	-22.92	H
7.91561	32.87	Pk	36.2	-22.4	.2	-95.2	-48.33	-25	-23.33	V
10.5093	31.84	Pk	37.8	-20.2	.6	-95.2	-45.16	-25	-20.16	V
10.98797	31.52	Pk	37.8	-19.4	.7	-95.2	-44.58	-25	-19.58	H

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 #:	13571607
Date:	4/12/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE25 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.87022	38.89	Pk	31.2	-24.2	-95.2	-49.31	-13	-36.31	H
3.87987	37.83	Pk	31.4	-24.3	-95.2	-50.27	-13	-37.27	V
5.4089	36.5	Pk	32.8	-22.9	-95.2	-48.8	-13	-35.8	H
5.66187	35.86	Pk	33.1	-21.5	-95.2	-47.74	-13	-34.74	V
7.2114	35.23	Pk	37.1	-19.6	-95.2	-42.47	-13	-29.47	V
7.27497	36.34	Pk	37.1	-20.3	-95.2	-42.06	-13	-29.06	H
Mid Channel, 1882.5MHz									
3.80199	39.57	Pk	30.9	-24.7	-95.2	-49.43	-13	-36.43	V
3.80545	38.28	Pk	30.9	-24.6	-95.2	-50.62	-13	-37.62	H
5.63412	36.22	Pk	33.1	-22.3	-95.2	-48.18	-13	-35.18	H
5.67725	36.64	Pk	33	-21.3	-95.2	-46.86	-13	-33.86	V
7.72018	36.55	Pk	37.1	-19.9	-95.2	-41.45	-13	-28.45	H
7.80447	35.63	Pk	37.2	-19.2	-95.2	-41.57	-13	-28.57	V
High Channel, 1905MHz									
3.85396	38.67	Pk	31.1	-24.2	-95.2	-49.63	-13	-36.63	H
3.90943	37.77	Pk	31.4	-24	-95.2	-50.03	-13	-37.03	V
5.55524	37.75	Pk	33.3	-23.3	-95.2	-47.45	-13	-34.45	H
5.68281	36.05	Pk	33.1	-21.3	-95.2	-47.35	-13	-34.35	V
6.90834	35.83	Pk	36.2	-20.8	-95.2	-43.97	-13	-30.97	V
8.43455	35.87	Pk	37.5	-18.8	-95.2	-40.63	-13	-27.63	H

BPSK 5G NR 25 (40.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/11/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n25 BPSK 40MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.91839	37.39	Pk	33.8	-27.3	-95.2	-51.31	-13	-38.31	H
4.09948	36.92	Pk	33.4	-27	-95.2	-51.88	-13	-38.88	V
6.13465	33.98	Pk	36	-24	-95.2	-49.22	-13	-36.22	H
6.35768	35.8	Pk	36.3	-23.8	-95.2	-46.9	-13	-33.9	V
9.6644	31.56	Pk	37	-19.9	-95.2	-46.54	-13	-33.54	V
9.89871	31.75	Pk	37.3	-19.3	-95.2	-45.45	-13	-32.45	H
Mid Channel, 1882.5MHz									
3.91971	37.61	Pk	33.8	-27.3	-95.2	-51.09	-13	-38.09	H
3.92203	38.21	Pk	33.8	-27.3	-95.2	-50.49	-13	-37.49	V
6.41272	34.59	Pk	36.4	-23.3	-95.2	-47.51	-13	-34.51	V
6.75763	33.2	Pk	36.7	-21.9	-95.2	-47.2	-13	-34.2	H
9.81552	32.64	Pk	37.2	-20	-95.2	-45.36	-13	-32.36	V
10.13552	32.57	Pk	37.5	-19.6	-95.2	-44.73	-13	-31.73	H
High Channel, 1895MHz									
3.85396	38.67	Pk	31.1	-24.2	-95.2	-49.63	-13	-36.63	H
3.90943	37.77	Pk	31.4	-24	-95.2	-50.03	-13	-37.03	V
5.55524	37.75	Pk	33.3	-23.3	-95.2	-47.45	-13	-34.45	H
5.68281	36.05	Pk	33.1	-21.3	-95.2	-47.35	-13	-34.35	V
6.90834	35.83	Pk	36.2	-20.8	-95.2	-43.97	-13	-30.97	V
8.43455	35.87	Pk	37.5	-18.8	-95.2	-40.63	-13	-27.63	H

10.4.3. LTE BAND 30 AND 5G NR n30

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 #:	13571607
Date:	3/17/2021
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE30 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.61911	31.9	RMS	32.2	-24.5	-95.2	-55.6	-40	-15.6	H
4.6219	32.66	RMS	32.3	-24.5	-95.2	-54.74	-40	-14.74	V
6.92889	29.97	RMS	36.3	-20.9	-95.2	-49.83	-40	-9.83	H
6.93089	30.33	RMS	36.3	-20.9	-95.2	-49.47	-40	-9.47	V
9.23897	28.61	RMS	38.7	-17.8	-95.2	-45.69	-40	-5.69	H
9.24203	29.38	RMS	38.7	-17.8	-95.2	-44.92	-40	-4.92	V

BPSK 5G NR 30 (10.0MHZ BANDWIDTH)

Project #:	13571607
Date:	6/9/2021
Test Engineer:	25196
Configuration:	EUT only
Mode	n30 BPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.79182	35.96	RMS	33	-30.2	-95.2	-56.44	-40	-16.44	V
4.79735	36.25	RMS	32.9	-30.3	-95.2	-56.35	-40	-16.35	V
4.84791	35.9	RMS	33.2	-30.1	-95.2	-56.2	-40	-16.2	H
6.94746	31.75	RMS	36.3	-26.1	-95.2	-53.25	-40	-13.25	H
7.10896	32.28	RMS	36.7	-26.5	-95.2	-52.72	-40	-12.72	V
8.77176	30.24	RMS	37.5	-24	-95.2	-51.46	-40	-11.46	H

10.4.4. LTE BAND 41 AND 5G NR n41

LIMITS

FCC: §27.53 (m)

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

QPSK LTE BAND 41 (20.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/11/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE41 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2506MHz										
4.64813	37.73	Pk	32.3	-24.6	.4	-95.2	-49.37	-25	-24.37	V
5.00859	35.26	Pk	33.7	-23.3	.8	-95.2	-48.74	-25	-23.74	H
7.27641	33.84	Pk	37.1	-20.4	.4	-95.2	-44.26	-25	-19.26	V
7.28344	32.34	Pk	37.1	-20.3	.4	-95.2	-45.66	-25	-20.66	H
10.7475	32.18	Pk	39.3	-17	.8	-95.2	-39.92	-25	-14.92	V
10.75547	32.99	Pk	39.3	-17.1	.9	-95.2	-39.11	-25	-14.11	H
Mid Channel, 2593MHz										
5.06813	35.46	Pk	33.8	-23.5	.6	-95.2	-48.84	-25	-23.84	V
5.09766	35.51	Pk	33.9	-23.8	.8	-95.2	-48.79	-25	-23.79	H
7.04672	34.83	Pk	36.6	-21.4	.7	-95.2	-44.47	-25	-19.47	V
7.29234	33.69	Pk	37.1	-20.6	.4	-95.2	-44.61	-25	-19.61	H
10.91766	32.12	Pk	39.4	-17.2	.7	-95.2	-40.18	-25	-15.18	V
10.95281	33.6	Pk	39.5	-17.2	.9	-95.2	-38.4	-25	-13.4	H
High Channel, 2680MHz										
5.06625	35.25	Pk	33.8	-23.5	.6	-95.2	-49.05	-25	-24.05	V
5.08547	34.38	Pk	33.8	-23.8	.8	-95.2	-50.02	-25	-25.02	H
7.20891	34.11	Pk	37.1	-20.9	.4	-95.2	-44.49	-25	-19.49	V
7.28344	32.81	Pk	37.1	-20.3	.4	-95.2	-45.19	-25	-20.19	H
10.48359	33.18	Pk	39.5	-17	.7	-95.2	-38.82	-25	-13.82	V
10.93547	33.71	Pk	39.4	-17	.8	-95.2	-38.29	-25	-13.29	H

BPSK LTE BAND 41 (100.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/22/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n41 BPSK 100MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2546MHz										
4.44623	37.76	Pk	33.8	-27.5	.4	-95.2	-50.74	-25	-25.74	V
5.1556	36.28	Pk	34.6	-26.3	.8	-95.2	-49.82	-25	-24.82	H
6.25139	34.1	Pk	36	-24.6	.5	-95.2	-49.2	-25	-24.2	V
7.44352	33.17	Pk	36.1	-22.7	.4	-95.2	-48.23	-25	-23.23	H
9.6824	33.34	Pk	37.1	-21.1	.8	-95.2	-45.06	-25	-20.06	V
10.23145	32.67	Pk	37.6	-20	.8	-95.2	-44.13	-25	-19.13	H
Mid Channel, 2593MHz										
4.94074	36.33	Pk	34	-26.9	.9	-95.2	-50.87	-25	-25.87	H
5.11743	37.1	Pk	34.5	-26.4	.8	-95.2	-49.2	-25	-24.2	V
7.32518	33.8	Pk	36.1	-22.5	.3	-95.2	-47.5	-25	-22.5	H
7.56633	34.18	Pk	35.9	-22.7	.4	-95.2	-47.42	-25	-22.42	V
10.28565	31.65	Pk	37.7	-19.7	.7	-95.2	-44.85	-25	-19.85	H
10.42179	32.21	Pk	37.7	-19.5	.8	-95.2	-43.99	-25	-18.99	V
High Channel, 2640MHz										
5.09996	37.13	Pk	34.5	-26.1	.8	-95.2	-48.87	-25	-23.87	V
5.11873	36.22	Pk	34.5	-26.4	.8	-95.2	-50.08	-25	-25.08	H
7.47732	33.85	Pk	36.2	-22.8	.3	-95.2	-47.65	-25	-22.65	V
7.5754	34.09	Pk	35.9	-22.7	.4	-95.2	-47.51	-25	-22.51	H
10.29527	32.41	Pk	37.6	-19.7	.6	-95.2	-44.29	-25	-19.29	V
11.05769	32.57	Pk	37.8	-18.8	.6	-95.2	-43.03	-25	-18.03	H

10.4.5. LTE BAND 66 AND 5G NR n66

LIMITS

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

QPSK LTE BAND 66 (20.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/6/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE66 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.66609	37.82	Pk	30.1	-24.7	-95.2	-51.98	-13	-38.98	H
3.6825	36.82	Pk	30.2	-24.7	-95.2	-52.88	-13	-39.88	V
5.10609	35.51	Pk	34	-21.8	-95.2	-47.49	-13	-34.49	H
5.16469	35.54	Pk	33.7	-22.8	-95.2	-48.76	-13	-35.76	V
7.57172	34.65	Pk	36.9	-20.5	-95.2	-44.15	-13	-31.15	H
7.65609	34.92	Pk	37	-21.2	-95.2	-44.48	-13	-31.48	V
Mid Channel, 1745MHz									
3.27422	36.51	Pk	31.3	-25.2	-95.2	-52.59	-13	-39.59	V
3.30891	36.62	Pk	31.1	-24.9	-95.2	-52.38	-13	-39.38	H
5.05828	35.4	Pk	33.8	-22	-95.2	-48	-13	-35	H
5.09625	34.67	Pk	33.9	-21.7	-95.2	-48.33	-13	-35.33	V
6.89484	35.56	Pk	36.3	-21.1	-95.2	-44.44	-13	-31.44	V
7.22484	34.44	Pk	37.1	-19.8	-95.2	-43.46	-13	-30.46	H
High Channel, 1770MHz									
3.61969	35.61	Pk	30.1	-24.6	-95.2	-54.09	-13	-41.09	V
3.66375	37.72	Pk	30.1	-24.7	-95.2	-52.08	-13	-39.08	H
5.07844	34.85	Pk	33.8	-21.8	-95.2	-48.35	-13	-35.35	H
5.09484	33.25	Pk	33.9	-21.7	-95.2	-49.75	-13	-36.75	V
7.23563	33.9	Pk	37.2	-20.4	-95.2	-44.5	-13	-31.5	V
7.25859	34.88	Pk	37.2	-20.6	-95.2	-43.72	-13	-30.72	H

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	13571607
Date:	5/14/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n66 BPSK 40MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1730MHz										
3.43768	37.59	Pk	33.1	-28.3	.7	-95.2	-52.11	-13	-39.11	H
3.44726	37.87	Pk	33.1	-28.2	.7	-95.2	-51.73	-13	-38.73	V
5.17921	35.75	Pk	34.6	-26.2	.5	-95.2	-50.55	-13	-37.55	V
5.19373	35.81	Pk	34.6	-25.8	.5	-95.2	-50.09	-13	-37.09	H
6.87008	34.62	Pk	36.3	-22.9	.6	-95.2	-46.58	-13	-33.58	V
6.9258	33.26	Pk	36.2	-23.4	.5	-95.2	-48.64	-13	-35.64	H
Mid Channel, 1745MHz										
3.84338	36.71	Pk	33.8	-27.7	.5	-95.2	-51.89	-13	-38.89	V
3.95979	37.86	Pk	33.7	-27.8	.6	-95.2	-50.84	-13	-37.84	H
5.52494	35.26	Pk	34.9	-25.6	.6	-95.2	-50.04	-13	-37.04	V
6.20094	33.6	Pk	36	-24.9	.5	-95.2	-50	-13	-37	H
7.86351	33.66	Pk	36	-22.3	.6	-95.2	-47.24	-13	-34.24	V
9.1736	32.06	Pk	36.5	-21.4	.6	-95.2	-47.44	-13	-34.44	H
High Channel, 1760MHz										
3.51342	37.29	Pk	33.2	-28.1	.8	-95.2	-52.01	-13	-39.01	H
3.54205	37.29	Pk	33.4	-28.1	.7	-95.2	-51.91	-13	-38.91	V
5.18789	35.65	Pk	34.6	-26	.5	-95.2	-50.45	-13	-37.45	H
5.2237	35.26	Pk	34.6	-26	.5	-95.2	-50.84	-13	-37.84	V
7.02944	33.41	Pk	36.1	-23.4	.4	-95.2	-48.69	-13	-35.69	H
7.1492	32.94	Pk	36	-22.9	.6	-95.2	-48.56	-13	-35.56	V

10.5. FIELD STRENGTH OF SPURIOUS RADIATION, Ant 4

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r01

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

RESULTS

10.5.1. 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 #:	13571607
Date:	3/18/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE7 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2510MHz										
5.04172	36.44	Pk	33.7	-23.5	.6	-95.2	-47.96	-25	-22.96	H
5.07174	37.47	Pk	33.8	-23.6	.7	-95.2	-46.83	-25	-21.83	V
7.62855	35.29	Pk	36.9	-21.2	.4	-95.2	-43.81	-25	-18.81	H
8.09265	35.2	Pk	37.2	-20	.3	-95.2	-42.5	-25	-17.5	V
10.12773	34.41	Pk	38.4	-17.6	.7	-95.2	-39.29	-25	-14.29	H
10.20277	33.85	Pk	38.7	-17.4	.8	-95.2	-39.25	-25	-14.25	V
Mid Channel, 2535MHz										
4.80313	37.59	Pk	33	-24.4	.9	-95.2	-48.11	-25	-23.11	H
4.87154	37.63	Pk	33.2	-24	.7	-95.2	-47.67	-25	-22.67	V
7.57578	35.7	Pk	36.9	-21.4	.4	-95.2	-43.6	-25	-18.6	V
7.62474	34.86	Pk	37	-21.3	.4	-95.2	-44.24	-25	-19.24	H
10.24871	34.29	Pk	38.9	-16.9	.7	-95.2	-38.21	-25	-13.21	H
10.49877	33.78	Pk	39.5	-17	.6	-95.2	-38.32	-25	-13.32	V
High Channel, 2560MHz										
5.1202	36.52	Pk	33.9	-23.6	.8	-95.2	-47.58	-25	-22.58	V
5.17751	37.25	Pk	33.7	-23.6	.7	-95.2	-47.15	-25	-22.15	H
7.27101	36.24	Pk	37.2	-20.6	.4	-95.2	-41.96	-25	-16.96	H
7.59567	35.68	Pk	36.8	-21.2	.5	-95.2	-43.42	-25	-18.42	V
10.74294	34.45	Pk	39.3	-17	.8	-95.2	-37.65	-25	-12.65	V
10.79606	33.48	Pk	39.3	-17.1	.8	-95.2	-38.72	-25	-13.72	H

BPSK 5G NR 7 (40.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/20/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n7 BPSK 40MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2520MHz										
5.14563	36.09	Pk	34.5	-26.3	.8	-95.2	-50.11	-25	-25.11	H
5.19402	36.85	Pk	34.6	-25.8	.8	-95.2	-48.75	-25	-23.75	V
7.55229	33.65	Pk	36	-22.8	.3	-95.2	-48.05	-25	-23.05	V
7.63393	33.86	Pk	35.9	-22.4	.4	-95.2	-47.44	-25	-22.44	H
10.57597	32.9	Pk	37.8	-19.6	.9	-95.2	-43.2	-25	-18.2	V
10.57733	32.62	Pk	37.8	-19.5	.9	-95.2	-43.38	-25	-18.38	H
Mid Channel, 2535MHz										
5.08465	35.84	Pk	34.4	-26	.8	-95.2	-50.16	-25	-25.16	H
5.09887	36.8	Pk	34.5	-26.1	.8	-95.2	-49.2	-25	-24.2	V
7.45403	34.74	Pk	36.1	-22.7	.4	-95.2	-46.66	-25	-21.66	H
7.64763	33.76	Pk	35.9	-22.4	.4	-95.2	-47.54	-25	-22.54	V
10.41956	32.28	Pk	37.7	-19.5	.8	-95.2	-43.92	-25	-18.92	H
11.04918	32.61	Pk	37.8	-18.8	.6	-95.2	-42.99	-25	-17.99	V
High Channel, 2550MHz										
5.09434	36.9	Pk	34.4	-26.1	.8	-95.2	-49.2	-25	-24.2	V
5.22888	35.92	Pk	34.7	-26.2	.9	-95.2	-49.88	-25	-24.88	H
7.63476	33.41	Pk	35.9	-22.4	.4	-95.2	-47.89	-25	-22.89	H
7.69282	33.13	Pk	35.9	-22.1	.5	-95.2	-47.77	-25	-22.77	V
10.58892	32.02	Pk	37.8	-19.4	.9	-95.2	-43.88	-25	-18.88	V
10.60781	30.85	Pk	37.8	-19.6	.8	-95.2	-45.35	-25	-20.35	H

10.5.2. 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 #:	13571607
Date:	3/17/2021
Test Engineer:	45258
Configuration:	EUT only
Mode	LTE25 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.61864	37.5	Pk	30.1	-24.7	-95.2	-52.3	-13	-39.3	V
3.6498	38.07	Pk	30.1	-24.5	-95.2	-51.53	-13	-38.53	H
5.69435	36.13	Pk	33	-21.4	-95.2	-47.47	-13	-34.47	V
5.69964	36.1	Pk	33.1	-21.4	-95.2	-47.4	-13	-34.4	H
7.81321	34.88	Pk	37.3	-19.5	-95.2	-42.52	-13	-29.52	H
7.84645	34.58	Pk	37.3	-19.7	-95.2	-43.02	-13	-30.02	V
Mid Channel, 1882.5MHz									
3.84274	37.77	Pk	31.2	-24.5	-95.2	-50.73	-13	-37.73	H
3.90818	37.58	Pk	31.4	-24	-95.2	-50.22	-13	-37.22	V
5.96842	36.63	Pk	34.4	-22.2	-95.2	-46.37	-13	-33.37	V
6.34266	35.01	Pk	34.5	-21.4	-95.2	-47.09	-13	-34.09	H
7.75144	34.92	Pk	37.1	-19.6	-95.2	-42.78	-13	-29.78	H
7.81016	35.02	Pk	37.3	-19.3	-95.2	-42.18	-13	-29.18	V
High Channel, 1905MHz									
3.87678	37.76	Pk	31.4	-24.3	-95.2	-50.34	-13	-37.34	V
3.93541	36.95	Pk	31.6	-23.9	-95.2	-50.55	-13	-37.55	H
4.78403	37.22	Pk	32.9	-22.6	-95.2	-47.68	-13	-34.68	V
5.58555	36.73	Pk	33.2	-23.1	-95.2	-48.37	-13	-35.37	H
7.18083	35.47	Pk	37	-20.4	-95.2	-43.13	-13	-30.13	V
7.78381	34.69	Pk	37.2	-19.2	-95.2	-42.51	-13	-29.51	H

BPSK 5G NR 25 (40.0MHZ BANDWIDTH)

Project #:	13571607
Date:	3/19/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n25 BPSK 40MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1870MHz									
3.76817	37.08	Pk	33.6	-27	-95.2	-51.52	-13	-38.52	H
3.79087	36.87	Pk	33.6	-27.1	-95.2	-51.83	-13	-38.83	V
5.82932	36.36	Pk	35.5	-24.7	-95.2	-48.04	-13	-35.04	V
6.00118	34.42	Pk	35.7	-24.8	-95.2	-49.88	-13	-36.88	H
8.78393	31.83	Pk	36.2	-20.4	-95.2	-47.57	-13	-34.57	H
9.60278	32	Pk	36.9	-19.4	-95.2	-45.7	-13	-32.7	V
Mid Channel, 1882.5MHz									
3.76159	38.15	Pk	33.7	-27	-95.2	-50.35	-13	-37.35	V
3.88169	38.05	Pk	33.8	-27.1	-95.2	-50.45	-13	-37.45	H
6.19078	34.21	Pk	36	-23.2	-95.2	-48.19	-13	-35.19	H
6.3581	34.02	Pk	36.3	-23.8	-95.2	-48.68	-13	-35.68	V
9.02473	32.02	Pk	36.4	-19.7	-95.2	-46.48	-13	-33.48	V
9.83521	32.59	Pk	37.2	-19.6	-95.2	-45.01	-13	-32.01	H
High Channel, 1995MHz									
3.47614	38.61	Pk	33.1	-28	-95.2	-51.49	-13	-38.49	V
3.74917	37.52	Pk	33.6	-27	-95.2	-51.08	-13	-38.08	H
5.21954	36.89	Pk	34.6	-26.1	-95.2	-49.81	-13	-36.81	V
6.01442	35.41	Pk	35.7	-24.8	-95.2	-48.89	-13	-35.89	H
8.16101	32.54	Pk	36.1	-20.4	-95.2	-46.96	-13	-33.96	V
9.67015	32.57	Pk	37	-20	-95.2	-45.63	-13	-32.63	H

10.5.3. 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 #:	13571607
Date:	3/18/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE30 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.77327	32.58	RMS	32.9	-22.6	-95.2	-52.32	-40	-12.32	H
4.8073	32.22	RMS	33	-22.5	-95.2	-52.48	-40	-12.48	V
7.02905	30.5	RMS	36.5	-21.6	-95.2	-49.8	-40	-9.8	H
7.10217	30.26	RMS	36.7	-20.6	-95.2	-48.84	-40	-8.84	V
8.74874	29.33	RMS	37.5	-18.6	-95.2	-46.97	-40	-6.97	V
8.77433	28.96	RMS	37.5	-18.6	-95.2	-47.34	-40	-7.34	H

BPSK 5G NR 30 (10.0MHZ BANDWIDTH)

Project #:	13571607
Date:	6/9/2021
Test Engineer:	25196
Configuration:	EUT only
Mode	n30 BPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 2310MHz									
5.13703	35.85	RMS	33.9	-29.9	-95.2	-55.35	-40	-15.35	H
5.15197	35.87	RMS	33.8	-29.8	-95.2	-55.33	-40	-15.33	V
7.22354	24.2	RMS	37.1	-25.7	-95.2	-59.6	-40	-12.6	V
7.27287	32.09	RMS	37.2	-25.9	-95.2	-51.81	-40	-11.81	H
10.60103	30.3	RMS	39.6	-23.4	-95.2	-48.7	-40	-8.7	V
10.69193	30.5	RMS	39.3	-23.6	-95.2	-49	-40	-9	H

10.5.4. 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 #:	13571607
Date:	3/12/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE41 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2506MHz										
4.91816	36.2	Pk	33.4	-23.7	1.1	-95.2	-48.2	-25	-23.2	V
4.98541	37.63	Pk	33.6	-23.1	.6	-95.2	-46.47	-25	-21.47	H
7.26251	35.45	Pk	37.1	-20.9	.5	-95.2	-43.05	-25	-18.05	V
7.30179	35.84	Pk	37.1	-21	.4	-95.2	-42.86	-25	-17.86	H
9.71655	34.52	Pk	38.6	-17.9	.8	-95.2	-39.18	-25	-14.18	V
9.93764	34.51	Pk	38.4	-17.5	.7	-95.2	-39.09	-25	-14.09	H
Mid Channel, 2593MHz										
4.80441	37.21	Pk	33.1	-24.4	.9	-95.2	-48.39	-25	-23.39	V
4.83289	37.19	Pk	33.1	-24.6	.6	-95.2	-48.91	-25	-23.91	H
7.29054	36.07	Pk	37.1	-20.6	.4	-95.2	-42.23	-25	-17.23	V
8.00063	35.07	Pk	37.1	-20.6	.3	-95.2	-43.33	-25	-18.33	H
10.43515	33.85	Pk	39.5	-16.9	.8	-95.2	-37.95	-25	-12.95	H
10.56468	34.4	Pk	39.6	-17	.8	-95.2	-37.4	-25	-12.4	V
High Channel, 2680MHz										
5.55923	36.93	Pk	33.2	-23.4	.3	-95.2	-48.17	-25	-23.17	V
5.58165	36.19	Pk	33.2	-23.4	.4	-95.2	-48.81	-25	-23.81	H
7.86431	34.53	Pk	37.3	-20.5	.3	-95.2	-43.57	-25	-18.57	V
7.9018	35.04	Pk	37.3	-20.1	.5	-95.2	-42.46	-25	-17.46	H
10.60471	34.62	Pk	39.5	-17.3	.8	-95.2	-37.58	-25	-12.58	H
10.68499	34.52	Pk	39.3	-17.1	.5	-95.2	-37.98	-25	-12.98	V

BPSK 5G NR n41 (100.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/21/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n41 BPSK 100MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2546MHz										
5.08612	37.36	Pk	34.4	-26	.8	-95.2	-48.64	-25	-23.64	H
5.11773	36.74	Pk	34.5	-26.4	.8	-95.2	-49.56	-25	-24.56	V
7.49767	34.48	Pk	36	-22.7	.4	-95.2	-47.02	-25	-22.02	H
7.50514	34.05	Pk	36	-22.6	.3	-95.2	-47.45	-25	-22.45	V
10.39043	32.61	Pk	37.7	-19.8	.8	-95.2	-43.89	-25	-18.89	V
10.42274	32.3	Pk	37.7	-19.5	.8	-95.2	-43.9	-25	-18.9	H
Mid Channel, 2593MHz										
5.09317	35.52	Pk	34.5	-26.1	.8	-95.2	-50.48	-25	-25.48	H
5.19033	36.73	Pk	34.6	-25.9	.8	-95.2	-48.97	-25	-23.97	V
7.36407	33.92	Pk	36.1	-22.9	.5	-95.2	-47.58	-25	-22.58	H
7.81567	34.39	Pk	36	-22.2	.4	-95.2	-46.61	-25	-21.61	V
9.9052	33.62	Pk	37.2	-20.3	.8	-95.2	-43.88	-25	-18.88	V
10.47445	31.7	Pk	37.7	-19.7	.7	-95.2	-44.8	-25	-19.8	H
High Channel, 2640MHz										
5.08953	36.29	Pk	34.4	-26	.8	-95.2	-49.71	-25	-24.71	V
5.10228	36.1	Pk	34.5	-26.2	.8	-95.2	-50	-25	-25	H
7.62738	33.31	Pk	35.9	-22.4	.4	-95.2	-47.99	-25	-22.99	H
7.71417	33.65	Pk	35.9	-22.3	.4	-95.2	-47.55	-25	-22.55	V
10.03428	32.87	Pk	37.3	-20.5	.7	-95.2	-44.83	-25	-19.83	H
10.2304	31.94	Pk	37.6	-20	.8	-95.2	-44.86	-25	-19.86	V

10.5.5. LTE BAND 48

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 #:	13571607
Date:	4/31/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE48 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	T1792 3400-3800MHz BRF	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3560MHz										
7.17208	29.57	RMS	37	-21.6	.6	-95.2	-49.63	-40	-9.63	H
7.28896	29.73	RMS	37.2	-20.5	.6	-95.2	-48.17	-40	-8.17	V
9.76528	28.04	RMS	38.6	-17.8	.7	-95.2	-45.66	-40	-5.66	H
9.79222	27.48	RMS	38.5	-17.8	.9	-95.2	-46.12	-40	-6.12	V
13.15201	26.93	RMS	40.3	-18.6	.9	-95.2	-45.67	-40	-5.67	V
13.16666	27.73	RMS	40.2	-18.5	.7	-95.2	-45.07	-40	-5.07	H
Mid Channel, 3625MHz										
7.19852	24.98	RMS	37.1	-21.2	.6	-95.2	-53.72	-40	-13.72	H
7.2157	26.03	RMS	37.2	-20.8	.6	-95.2	-52.17	-40	-12.17	V
9.83169	24.72	RMS	38.5	-17.9	.6	-95.2	-49.28	-40	-9.28	H
9.95859	23.7	RMS	38.3	-17.6	.7	-95.2	-50.1	-40	-10.1	V
13.47743	23.48	RMS	40	-18.3	.7	-95.2	-49.32	-40	-9.32	H
13.53735	23.95	RMS	40	-18.3	.7	-95.2	-48.85	-40	-8.85	V
High Channel, 3690MHz										
7.34869	28.69	RMS	36.1	-22.6	.6	-95.2	-52.41	-40	-12.41	H
7.40435	28.76	RMS	36.2	-22.9	.6	-95.2	-52.54	-40	-12.54	V
11.03762	26.23	RMS	37.8	-19	.6	-95.2	-49.57	-40	-9.57	H
11.04647	26.45	RMS	37.8	-18.8	.6	-95.2	-49.15	-40	-9.15	V
14.69603	26.65	RMS	40	-18.2	.9	-95.2	-45.85	-40	-5.85	H
14.73471	25.61	RMS	40	-18.1	.8	-95.2	-46.89	-40	-6.89	V

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 #:	13571607
Date:	3/16/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE66 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.418	37.12	Pk	30.6	-24.8	-95.2	-52.28	-13	-39.28	V
3.42243	41.05	Pk	30.6	-24.6	-95.2	-48.15	-13	-35.15	H
5.13249	36.88	Pk	33.8	-22.3	-95.2	-46.82	-13	-33.82	V
5.1332	44.9	Pk	33.8	-22.3	-95.2	-38.8	-13	-25.8	H
6.89681	34.89	Pk	36.4	-21	-95.2	-44.91	-13	-31.91	H
7.06011	35.45	Pk	36.6	-21.1	-95.2	-44.25	-13	-31.25	V
Mid Channel, 1745MHz									
3.52752	37.83	Pk	30.2	-24.7	-95.2	-51.87	-13	-38.87	H
3.53613	36.77	Pk	30.1	-24.7	-95.2	-53.03	-13	-40.03	V
5.08596	35.98	Pk	33.8	-21.7	-95.2	-47.12	-13	-34.12	H
5.09306	36.15	Pk	33.9	-21.7	-95.2	-46.85	-13	-33.85	V
7.227	34.52	Pk	37.1	-19.9	-95.2	-43.48	-13	-30.48	V
7.2755	35.77	Pk	37.1	-20.3	-95.2	-42.63	-13	-29.63	H
High Channel, 1770MHz									
3.24799	37.15	Pk	31.4	-24.9	-95.2	-51.55	-13	-38.55	V
3.24813	37.78	Pk	31.4	-24.9	-95.2	-50.92	-13	-37.92	H
5.28321	46.84	Pk	33.4	-23.6	-95.2	-38.56	-13	-25.56	H
5.28554	36.13	Pk	33.4	-23.5	-95.2	-49.17	-13	-36.17	V
7.14578	34.77	Pk	36.8	-19.8	-95.2	-43.43	-13	-30.43	V
7.16428	34.74	Pk	36.9	-20.1	-95.2	-43.66	-13	-30.66	H

BPSK 5G NR n66 (40.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/26/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n66 BPSK 40MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1730MHz										
3.45826	36.83	Pk	33.1	-28	.6	-95.2	-52.67	-13	-39.67	V
3.47914	38.41	Pk	33.1	-28	.6	-95.2	-51.09	-13	-38.09	H
5.18506	36.9	Pk	34.6	-26	.5	-95.2	-49.2	-13	-36.2	H
5.21318	35.32	Pk	34.6	-25.8	.5	-95.2	-50.58	-13	-37.58	V
6.86675	32.68	Pk	36.3	-22.9	.6	-95.2	-48.52	-13	-35.52	V
6.9385	32.82	Pk	36.2	-23.6	.4	-95.2	-49.38	-13	-36.38	H
Mid Channel, 1745MHz										
3.47363	37.09	Pk	33.1	-27.9	.6	-95.2	-52.31	-13	-39.31	H
3.47514	37.27	Pk	33.1	-27.9	.6	-95.2	-52.13	-13	-39.13	V
5.20026	35.86	Pk	34.6	-25.8	.5	-95.2	-50.04	-13	-37.04	V
5.20835	35.33	Pk	34.6	-25.8	.5	-95.2	-50.57	-13	-37.57	H
6.98008	34.45	Pk	36.1	-23.5	.5	-95.2	-47.65	-13	-34.65	H
7.05246	33.52	Pk	36	-23.4	.6	-95.2	-48.48	-13	-35.48	V
High Channel, 1760MHz										
3.87356	36.87	Pk	33.8	-27.4	.7	-95.2	-51.23	-13	-38.23	V
3.88434	37.36	Pk	33.8	-27.3	.7	-95.2	-50.64	-13	-37.64	H
5.99583	35.31	Pk	35.8	-25	.7	-95.2	-48.39	-13	-35.39	V
6.38361	33.77	Pk	36.3	-24.2	.4	-95.2	-48.93	-13	-35.93	H
7.96805	32.83	Pk	36.1	-22.3	.5	-95.2	-48.07	-13	-35.07	V
9.55262	31.66	Pk	36.9	-20.5	.6	-95.2	-46.54	-13	-33.54	H

10.5.6. 5G NR n77 (FCC Part 27 3450-3550MHz)

LIMITS

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

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	13571607
Date:	6/9/2021
Test Engineer:	25196
Configuration:	EUT only
Mode	n77 BPSK 100MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 3500MHz									
7.30616	38.36	Pk	37.1	-25.3	-95.2	-45.04	-13	-32.04	H
7.32005	38.75	Pk	37	-25.4	-95.2	-44.85	-13	-31.85	V
10.53782	36.36	Pk	39.5	-24.4	-95.2	-43.74	-13	-30.74	H
10.70884	36.37	Pk	39.3	-24	-95.2	-43.53	-13	-30.53	V
13.9395	35.42	Pk	40.6	-19.7	-95.2	-38.88	-13	-25.88	H
14.07343	35.41	Pk	40.8	-18.7	-95.2	-37.69	-13	-24.69	V

10.5.7. 5G NR n77 (FCC Part 27 3700-3980MHz)

LIMITS

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

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	13571607
Date:	5/3/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n77 BPSK 100MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.55828	32.89	Pk	35.9	-22.4	-95.2	-48.81	-13	-35.81	V
7.6206	33.42	Pk	35.9	-22.6	-95.2	-48.48	-13	-35.48	H
11.22289	30.11	Pk	38	-18.9	-95.2	-45.99	-13	-32.99	V
11.28167	30.72	Pk	38	-18.4	-95.2	-44.88	-13	-31.88	H
15.18292	32.76	Pk	40.4	-17.9	-95.2	-39.94	-13	-26.94	V
15.19193	33.06	Pk	40.4	-18.1	-95.2	-39.84	-13	-26.84	H
Mid Channel, 3840MHz									
7.66958	32.49	Pk	35.9	-21.8	-95.2	-48.61	-13	-35.61	V
7.70049	32.48	Pk	35.9	-21	-95.2	-47.82	-13	-34.82	H
11.53175	32.44	Pk	38.4	-19.2	-95.2	-43.56	-13	-30.56	H
11.56142	30.46	Pk	38.5	-18.5	-95.2	-44.74	-13	-31.74	V
15.33934	32.73	Pk	40.9	-18.2	-95.2	-39.77	-13	-26.77	V
15.41117	32.12	Pk	41	-17.3	-95.2	-39.38	-13	-26.38	H
High Channel, 3930MHz									
7.84945	33.31	Pk	36	-22.4	-95.2	-48.29	-13	-35.29	H
7.88704	33.08	Pk	36.1	-22.1	-95.2	-48.12	-13	-35.12	V
11.7744	31.13	Pk	38.8	-18.8	-95.2	-44.07	-13	-31.07	H
11.81379	31.18	Pk	38.8	-18.9	-95.2	-44.12	-13	-31.12	V
15.77169	32.73	Pk	40.6	-17.3	-95.2	-39.17	-13	-26.17	H
15.86746	31.69	Pk	40.7	-16.5	-95.2	-39.31	-13	-26.31	V

10.6. FIELD STRENGTH OF SPURIOUS RADIATION, Ant 7

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r01

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

RESULTS

10.6.1. LTE BAND 48

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 #:	13571607
Date:	4/31/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE48 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	T1792 3400-3800MHz BRF	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3560MHz										
7.41621	30.42	RMS	36.9	-21.4	.5	-95.2	-48.78	-40	-8.78	H
7.53536	28.67	RMS	36.9	-21.2	.5	-95.2	-50.33	-40	-10.33	V
9.93642	27.39	RMS	38.3	-17.5	.6	-95.2	-46.41	-40	-6.41	H
10.07679	26.86	RMS	38.4	-17.5	.6	-95.2	-46.84	-40	-6.84	V
13.45678	26.77	RMS	39.9	-18.5	.9	-95.2	-46.13	-40	-6.13	H
13.4727	27.42	RMS	40	-18.3	.8	-95.2	-45.28	-40	-5.28	V
Mid Channel, 3625MHz										
7.17272	29.99	RMS	37	-21.7	.6	-95.2	-49.31	-40	-9.31	H
7.22288	29.32	RMS	37.1	-20.9	.5	-95.2	-49.18	-40	-9.18	V
10.01091	26.87	RMS	38.3	-17.4	.6	-95.2	-46.83	-40	-6.83	V
10.06367	27.13	RMS	38.3	-17.4	.6	-95.2	-46.57	-40	-6.57	H
13.29905	27.1	RMS	39.9	-18.1	.8	-95.2	-45.5	-40	-5.5	V
13.45235	26.69	RMS	39.9	-18.6	.9	-95.2	-46.31	-40	-6.31	H
High Channel, 3690MHz										
7.21539	28.95	RMS	37.2	-20.8	.6	-95.2	-49.25	-40	-9.25	H
7.29535	29.34	RMS	37.1	-20.7	.6	-95.2	-48.86	-40	-8.86	V
9.99507	26.37	RMS	38.3	-17.3	.7	-95.2	-47.13	-40	-7.13	V
10.1188	27.96	RMS	38.4	-17.6	.6	-95.2	-45.84	-40	-5.84	H
13.23675	27.43	RMS	40	-18.1	.6	-95.2	-45.27	-40	-5.27	H
13.40123	26.74	RMS	39.8	-18.8	.8	-95.2	-46.66	-40	-6.66	V

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

LIMITS

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

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	13571607
Date:	6/9/2021
Test Engineer:	25196
Configuration:	EUT only
Mode	n77 BPSK 100MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 3500MHz									
7.29107	38.1	Pk	37.1	-25.6	-95.2	-45.6	-13	-32.6	V
7.71738	38.3	Pk	37.1	-26.8	-95.2	-46.6	-13	-33.6	H
11.50224	35.58	Pk	39.2	-21.8	-95.2	-42.22	-13	-29.22	V
11.56326	35.71	Pk	39.3	-21.8	-95.2	-41.99	-13	-28.99	H
14.8509	34.92	Pk	42.3	-19.3	-95.2	-37.28	-13	-24.28	H
14.91862	33.98	Pk	42.4	-18.6	-95.2	-37.42	-13	-24.42	V

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

LIMITS

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

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	13571607
Date:	5/3/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n77 BPSK 100MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.47644	33.33	Pk	36.2	-21.4	-95.2	-47.07	-13	-34.07	V
7.57735	32.98	Pk	35.9	-22.6	-95.2	-48.92	-13	-35.92	H
11.30624	31.4	Pk	38.1	-18.6	-95.2	-44.3	-13	-31.3	V
11.33264	31.77	Pk	38.1	-18.3	-95.2	-43.63	-13	-30.63	H
14.94973	33.68	Pk	39.8	-17.7	-95.2	-39.42	-13	-26.42	H
15.07694	32.1	Pk	40	-17.8	-95.2	-40.9	-13	-27.9	V
Mid Channel, 3840MHz									
7.65233	32.82	Pk	35.8	-22	-95.2	-48.58	-13	-35.58	V
7.7204	32.87	Pk	35.9	-20.9	-95.2	-47.33	-13	-34.33	H
11.44898	31.38	Pk	38.3	-18.8	-95.2	-44.32	-13	-31.32	V
11.57597	30.72	Pk	38.5	-18.5	-95.2	-44.48	-13	-31.48	H
15.42375	32.07	Pk	41	-17.3	-95.2	-39.43	-13	-26.43	H
15.43203	31.83	Pk	41.1	-17.4	-95.2	-39.67	-13	-26.67	V
High Channel, 3930MHz									
7.88056	33.23	Pk	36.1	-22.1	-95.2	-47.97	-13	-34.97	V
7.90121	32.75	Pk	36.1	-21.9	-95.2	-48.25	-13	-35.25	H
11.77337	31.75	Pk	38.8	-18.8	-95.2	-43.45	-13	-30.45	V
11.8048	31.11	Pk	38.8	-18.9	-95.2	-44.19	-13	-31.19	H
15.69884	30.74	Pk	40.7	-16.4	-95.2	-40.16	-13	-27.16	V
15.73559	32.05	Pk	40.6	-17.1	-95.2	-39.65	-13	-26.65	H

10.7. FIELD STRENGTH OF SPURIOUS RADIATION, Ant 8

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r01

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

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 #:	13571607
Date:	4/12/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE48 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	T1792 3400-3800MHz BRF	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3560MHz										
7.23457	28.76	RMS	37.2	-21.3	.5	-95.2	-50.04	-40	-10.04	H
7.26138	28.58	RMS	37.1	-21	.6	-95.2	-49.92	-40	-9.92	V
10.56565	26.93	RMS	39.6	-17	.6	-95.2	-45.07	-40	-5.07	H
10.63439	27.58	RMS	39.4	-17.1	.6	-95.2	-44.72	-40	-4.72	V
13.85807	27.61	RMS	40.6	-18.3	.7	-95.2	-44.59	-40	-4.59	V
13.88932	26.72	RMS	40.5	-18.8	.7	-95.2	-46.08	-40	-6.08	H
Mid Channel, 3625MHz										
7.28972	29.04	RMS	37.2	-20.5	.6	-95.2	-48.86	-40	-8.86	V
7.30526	29.83	RMS	37.1	-21	.6	-95.2	-48.67	-40	-8.67	H
10.99954	26.36	RMS	39.4	-16.8	.7	-95.2	-45.54	-40	-5.54	V
11.03016	26.68	RMS	39.4	-17.3	.6	-95.2	-45.82	-40	-5.82	H
14.52332	27.42	RMS	41.6	-18.7	.8	-95.2	-44.08	-40	-4.08	V
14.60192	26.66	RMS	41.7	-18.3	.9	-95.2	-44.24	-40	-4.24	H
High Channel, 3690MHz										
7.24635	28.11	RMS	37.2	-21.4	.6	-95.2	-50.69	-40	-10.69	H
7.28594	28.55	RMS	37.1	-20.4	.5	-95.2	-49.45	-40	-9.45	V
10.52253	26.76	RMS	39.5	-17.4	.6	-95.2	-45.74	-40	-5.74	H
10.69586	27.16	RMS	39.4	-17.2	.5	-95.2	-45.34	-40	-5.34	V
13.88858	28.25	RMS	40.5	-18.8	.7	-95.2	-44.55	-40	-4.55	H
14.08822	28.45	RMS	40.8	-18.7	.7	-95.2	-43.95	-40	-3.95	V

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

LIMITS

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

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	13571607
Date:	6/9/2021
Test Engineer:	25196
Configuration:	EUT only
Mode	n77 BPSK 100MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 3500MHz									
7.91078	36.9	Pk	37.2	-26.4	-95.2	-47.5	-13	-34.5	V
8.08343	37.9	Pk	37.2	-26	-95.2	-46.1	-13	-33.1	H
10.15404	36.71	Pk	38.6	-24.3	-95.2	-44.19	-13	-31.19	V
10.39032	36.83	Pk	39.2	-24.2	-95.2	-43.37	-13	-30.37	H
14.12522	33.95	Pk	40.9	-18.5	-95.2	-38.85	-13	-25.85	V
14.1375	34.95	Pk	41	-18	-95.2	-37.25	-13	-24.25	H

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

LIMITS

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

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/30/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n77 BPSK 100MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.49881	33.46	Pk	36	-21.4	-95.2	-47.14	-13	-34.14	V
7.59181	33.06	Pk	35.9	-22.6	-95.2	-48.84	-13	-35.84	H
11.04157	31.4	Pk	37.8	-18.6	-95.2	-44.6	-13	-31.6	V
11.35104	31.57	Pk	38.1	-18.5	-95.2	-44.03	-13	-31.03	H
14.94202	32.8	Pk	39.9	-17.8	-95.2	-40.3	-13	-27.3	H
15.01574	31.3	Pk	39.9	-17.4	-95.2	-41.4	-13	-28.4	V
Mid Channel, 3840MHz									
7.68701	32.47	Pk	35.8	-21.4	-95.2	-48.33	-13	-35.33	H
7.6911	32.7	Pk	35.9	-21.3	-95.2	-47.9	-13	-34.9	V
11.54039	30.67	Pk	38.4	-19	-95.2	-45.13	-13	-32.13	V
11.57069	30.59	Pk	38.5	-18.5	-95.2	-44.61	-13	-31.61	H
15.27532	34.09	Pk	40.8	-18	-95.2	-38.31	-13	-25.31	H
15.3259	33.93	Pk	40.9	-18.3	-95.2	-38.67	-13	-25.67	V
High Channel, 3930MHz									
7.88505	33.35	Pk	36.1	-22.1	-95.2	-47.85	-13	-34.85	V
7.89869	32.03	Pk	36.1	-21.9	-95.2	-48.97	-13	-35.97	H
11.74683	31.09	Pk	38.7	-18.3	-95.2	-43.71	-13	-30.71	V
11.78163	31.83	Pk	38.8	-18.8	-95.2	-43.37	-13	-30.37	H
15.69101	31.69	Pk	40.7	-16.3	-95.2	-39.11	-13	-26.11	V
15.69494	32.28	Pk	40.7	-16.4	-95.2	-38.62	-13	-25.62	H

10.8. FIELD STRENGTH OF SPURIOUS RADIATION, Ant 9

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r01

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

RESULTS

10.8.1. LTE BAND 48

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 #:	13571607
Date:	4/12/2021
Test Engineer:	50822
Configuration:	EUT only
Mode	LTE48 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	T1792 3400-3800MHz BRF	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3560MHz										
7.22313	28.6	RMS	37.1	-20.9	.5	-95.2	-49.9	-40	-9.9	H
7.22645	29.11	RMS	37.1	-21	.5	-95.2	-49.49	-40	-9.49	V
10.66774	27.12	RMS	39.4	-17.3	.6	-95.2	-45.38	-40	-5.38	V
10.68899	27.81	RMS	39.3	-17.1	.6	-95.2	-44.59	-40	-4.59	H
14.17337	28.61	RMS	41	-19	.7	-95.2	-43.89	-40	-3.89	V
14.20579	28.4	RMS	41.1	-19	.7	-95.2	-44	-40	-4	H
Mid Channel, 3625MHz										
7.29656	29.18	RMS	37	-20.7	.6	-95.2	-49.12	-40	-9.12	H
7.30571	28.6	RMS	37.1	-21.1	.6	-95.2	-50	-40	-10	V
10.60986	26.29	RMS	39.5	-17.2	.6	-95.2	-46.01	-40	-6.01	V
10.69539	27.21	RMS	39.4	-17.2	.5	-95.2	-45.29	-40	-5.29	H
13.82001	27.07	RMS	40.7	-18.9	.6	-95.2	-45.73	-40	-5.73	H
13.91303	27.74	RMS	40.6	-18.6	.7	-95.2	-44.76	-40	-4.76	V
High Channel, 3690MHz										
7.27808	28.1	RMS	37.1	-20.4	.5	-95.2	-49.9	-40	-9.9	V
7.3025	28.19	RMS	37.1	-21	.6	-95.2	-50.31	-40	-10.31	H
10.65382	26.5	RMS	39.4	-17.4	.6	-95.2	-46.1	-40	-6.1	V
10.69857	26.76	RMS	39.4	-17.3	.5	-95.2	-45.84	-40	-5.84	H
14.30806	27.59	RMS	41.3	-18.7	.7	-95.2	-44.31	-40	-4.31	V
14.40918	27.6	RMS	41.4	-18.8	.8	-95.2	-44.2	-40	-4.2	H

10.8.2. 5G NR n77 (FCC Part 27 3450-3550MHz)

LIMITS

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

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	13571607
Date:	6/9/2021
Test Engineer:	25196
Configuration:	EUT only
Mode	n77 BPSK 100MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 3500MHz									
7.34624	33.36	Pk	37	-25.6	-95.2	-50.44	-13	-37.44	H
7.37796	37.9	Pk	36.9	-25.7	-95.2	-46.1	-13	-33.1	V
10.39825	36.22	Pk	39.3	-24.3	-95.2	-43.98	-13	-30.98	V
10.6213	36.67	Pk	39.5	-23.9	-95.2	-42.93	-13	-29.93	H
13.63364	35.66	Pk	40.3	-20.1	-95.2	-39.34	-13	-26.34	H
13.79397	35.09	Pk	40.6	-19.5	-95.2	-39.01	-13	-26.01	V

10.8.3. 5G NR n77 (FCC Part 27 3700-3980MHz)

LIMITS

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

BPSK 5G NR n77 (100.0MHZ BANDWIDTH)

Project #:	13571607
Date:	4/31/2021
Test Engineer:	30606
Configuration:	EUT only
Mode	n77 BPSK 100MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 3750MHz									
7.49731	33.33	Pk	36	-21.3	-95.2	-47.17	-13	-34.17	H
7.50633	31.88	Pk	36	-21.5	-95.2	-48.82	-13	-35.82	V
11.22706	30.54	Pk	38	-19	-95.2	-45.66	-13	-32.66	H
11.25686	29.95	Pk	38	-18.9	-95.2	-46.15	-13	-33.15	V
15.08517	31.52	Pk	40.1	-17.5	-95.2	-41.08	-13	-28.08	V
15.13962	32.13	Pk	40.2	-17.7	-95.2	-40.57	-13	-27.57	H
Mid Channel, 3840MHz									
7.66439	32.19	Pk	35.9	-21.9	-95.2	-49.01	-13	-36.01	V
7.699	32.79	Pk	35.9	-21.1	-95.2	-47.61	-13	-34.61	H
10.92076	31.51	Pk	37.8	-19.2	-95.2	-45.09	-13	-32.09	V
11.56415	31.2	Pk	38.5	-18.5	-95.2	-44.00	-13	-31.00	H
15.35028	32.75	Pk	40.9	-18.2	-95.2	-39.75	-13	-26.75	H
15.47394	31.3	Pk	41	-16.9	-95.2	-39.8	-13	-26.8	V
High Channel, 3930MHz									
7.87269	34.22	Pk	36.1	-22.1	-95.2	-46.98	-13	-33.98	V
7.87966	33.27	Pk	36.1	-22.1	-95.2	-47.93	-13	-34.93	H
11.81183	30.34	Pk	38.8	-18.9	-95.2	-44.96	-13	-31.96	V
11.81485	30.95	Pk	38.8	-18.9	-95.2	-44.35	-13	-31.35	H
15.70463	32.25	Pk	40.7	-16.5	-95.2	-38.75	-13	-25.75	V
15.71164	32.47	Pk	40.7	-16.7	-95.2	-38.73	-13	-25.73	H

11. SETUP PHOTOS

Please refer to 13571607-EP1V1 for setup photos

END OF REPORT