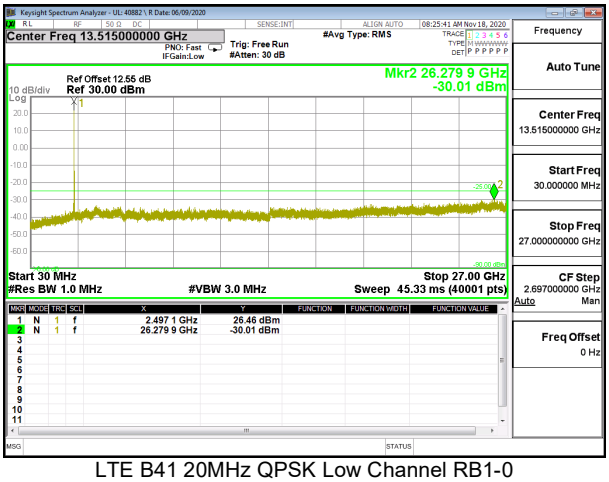
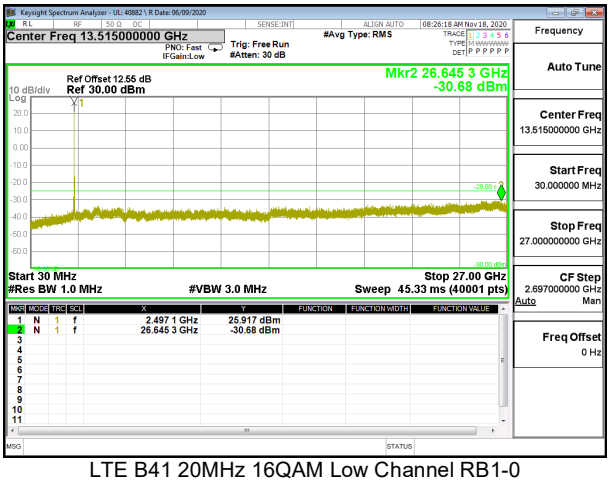
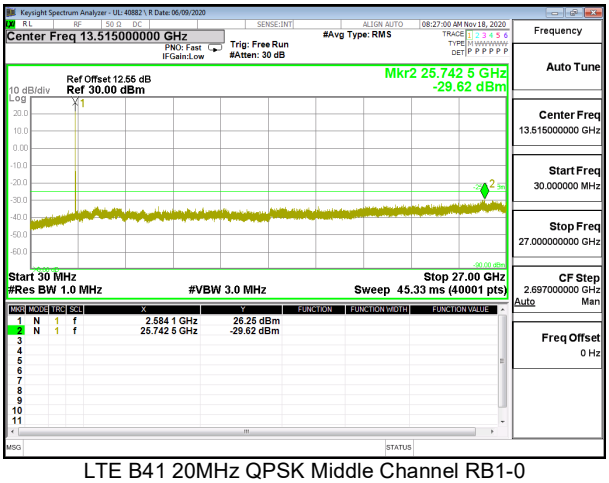


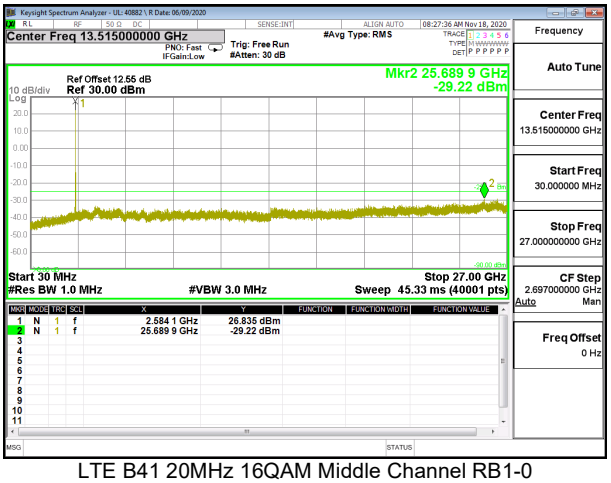
LTE B41 20MHz QPSK Low Channel RB1-0



LTE B41 20MHz 16QAM Low Channel RB1-0



LTE B41 20MHz QPSK Middle Channel RB1-0



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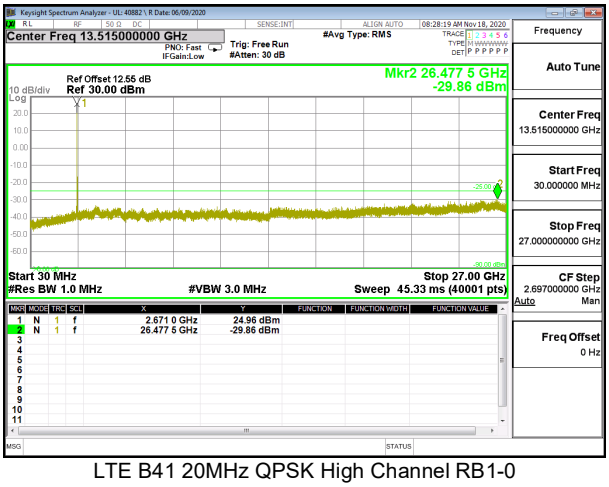
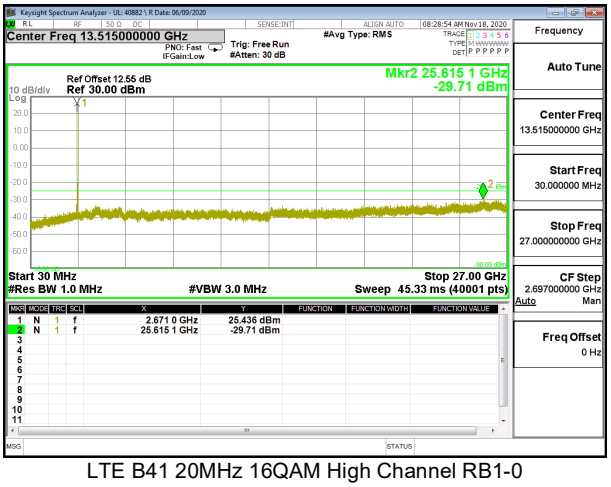
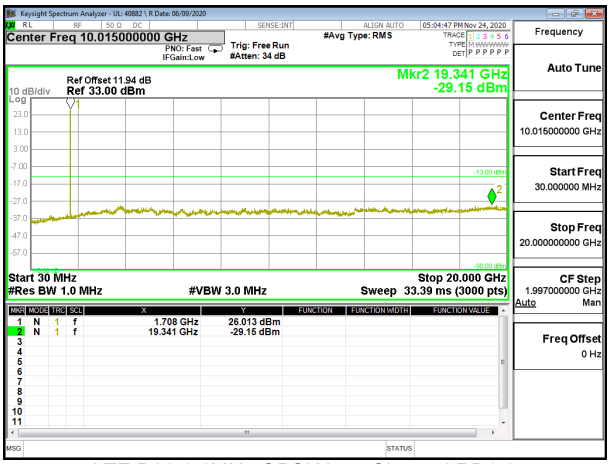


LTE B41 20MHz QPSK High Channel RB1-0

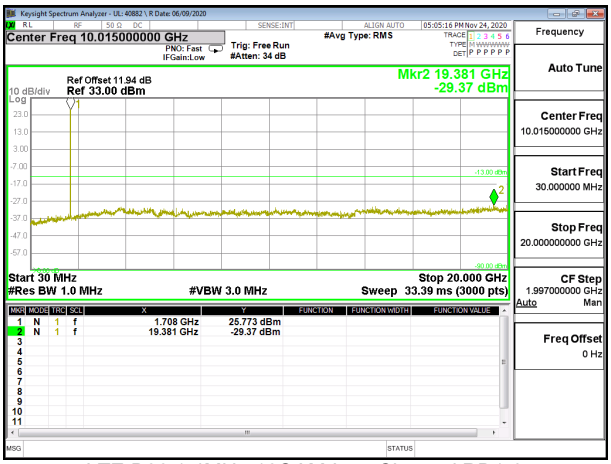


LTE B41 20MHz 16QAM High Channel RB1-0

8.3.6. LTE BAND 66



LTE B66 1.4MHz QPSK Low Channel RB1-0



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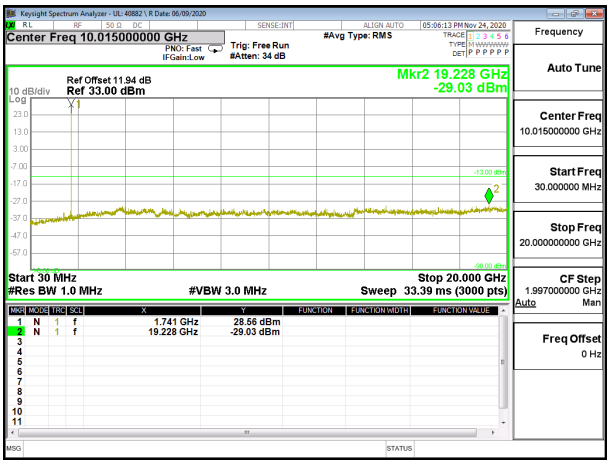
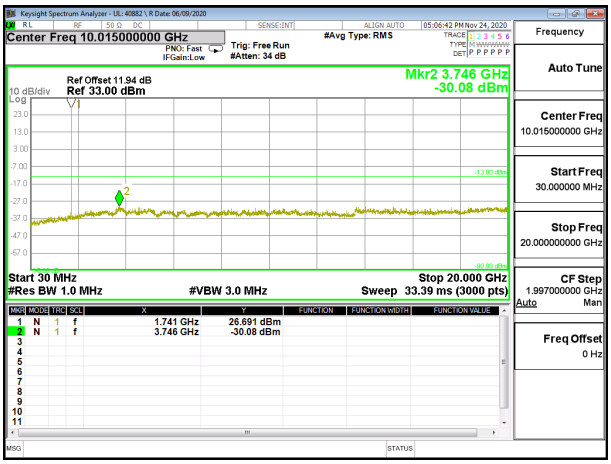
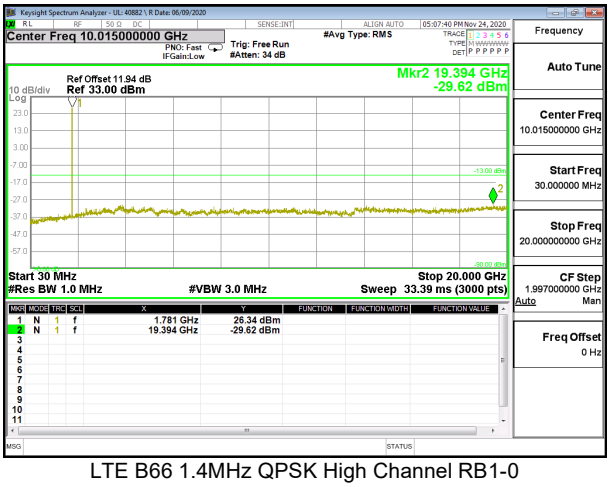


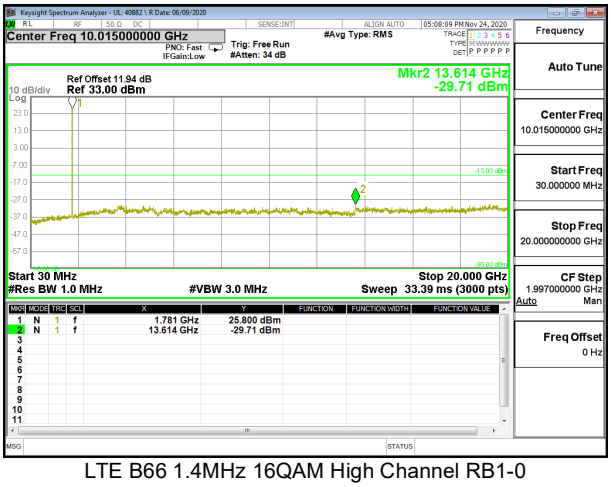
LTE B66 1.4MHz QPSK Middle Channel RB1-0



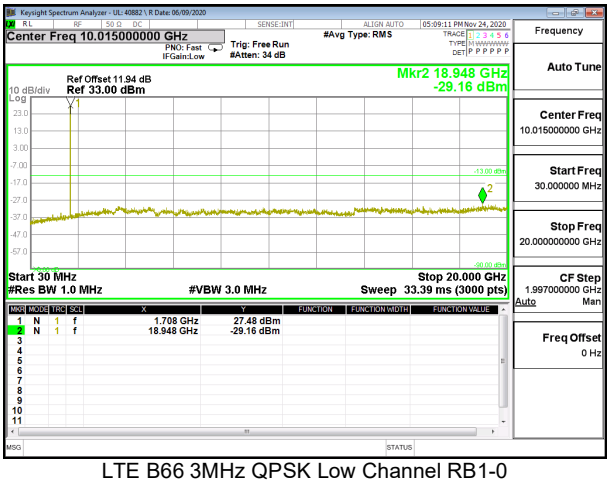
LTE B66 1.4MHz 16QAM Middle Channel RB1-0



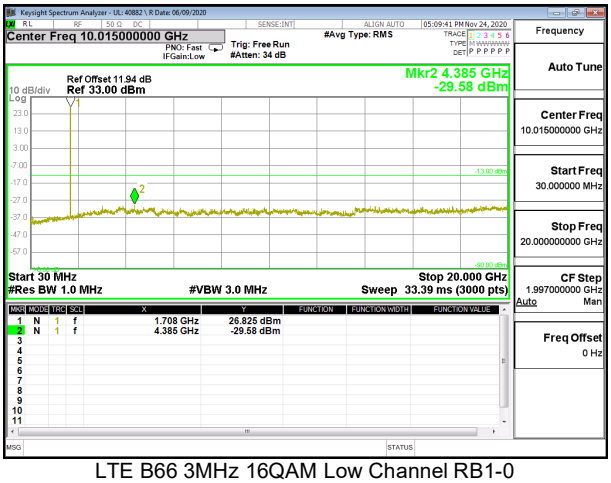
LTE B66 1.4MHz QPSK High Channel RB1-0



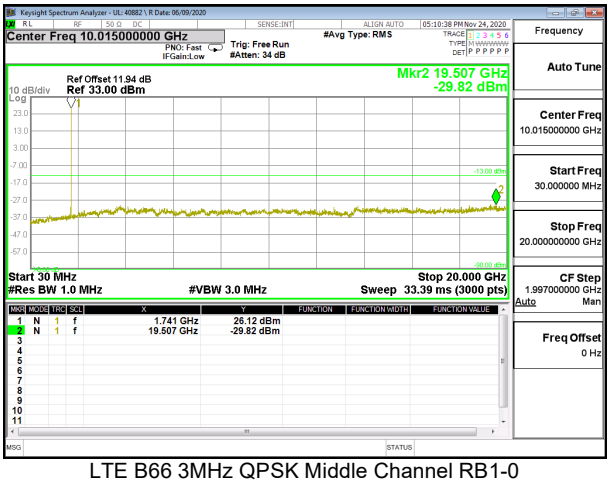
LTE B66 1.4MHz 16QAM High Channel RB1-0



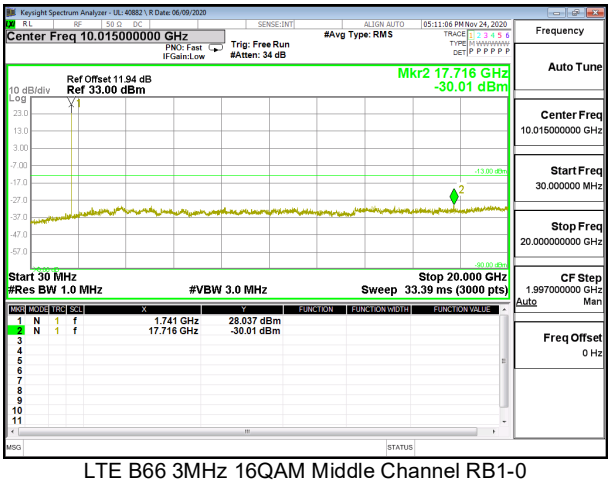
LTE B66 3MHz QPSK Low Channel RB1-0



LTE B66 3MHz 16QAM Low Channel RB1-0



LTE B66 3MHz QPSK Middle Channel RB1-0



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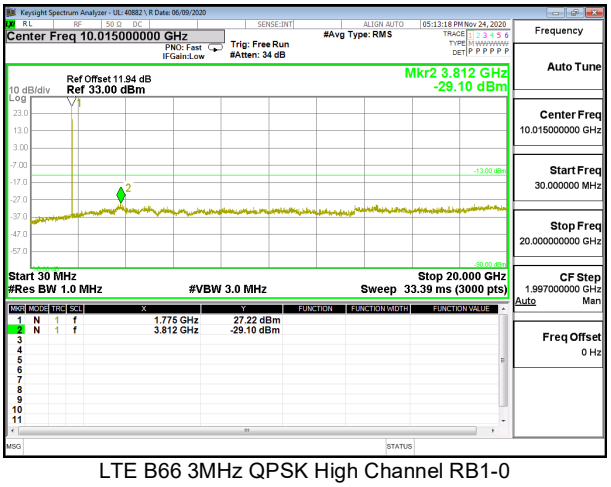
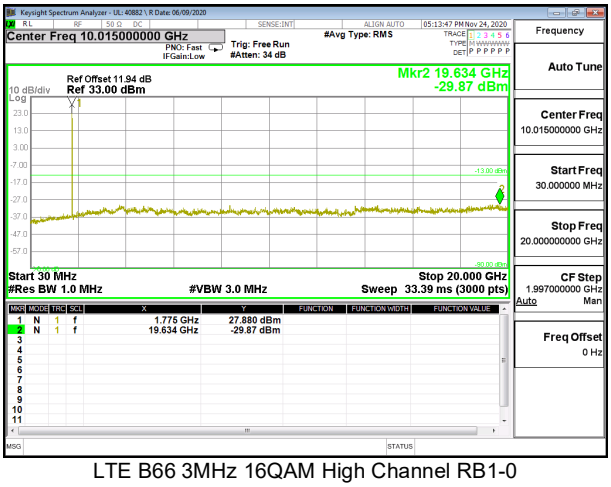
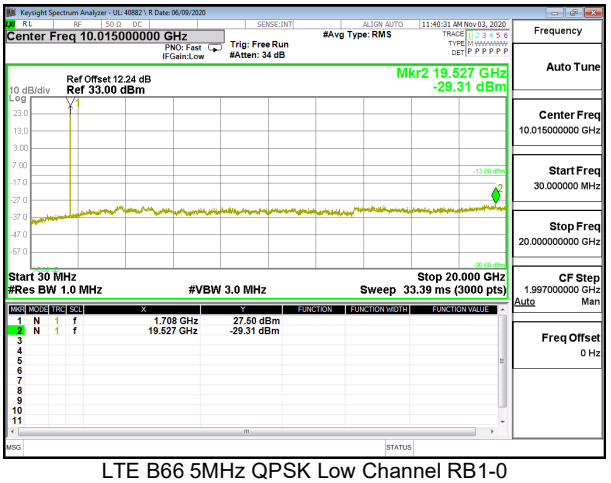


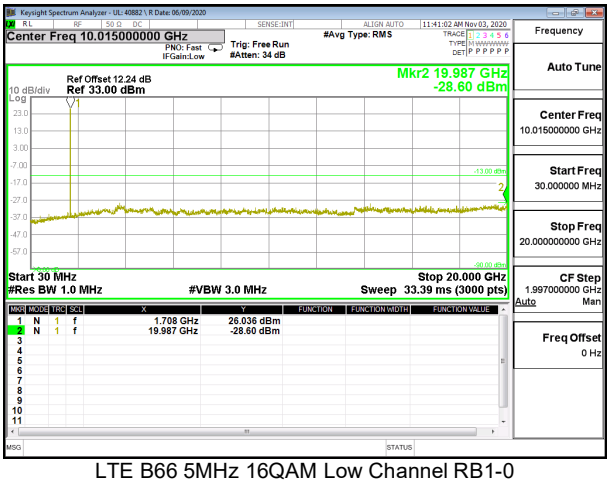
LTE B66 3MHz QPSK High Channel RB1-0



LTE B66 3MHz 16QAM High Channel RB1-0



LTE B66 5MHz QPSK Low Channel RB1-0



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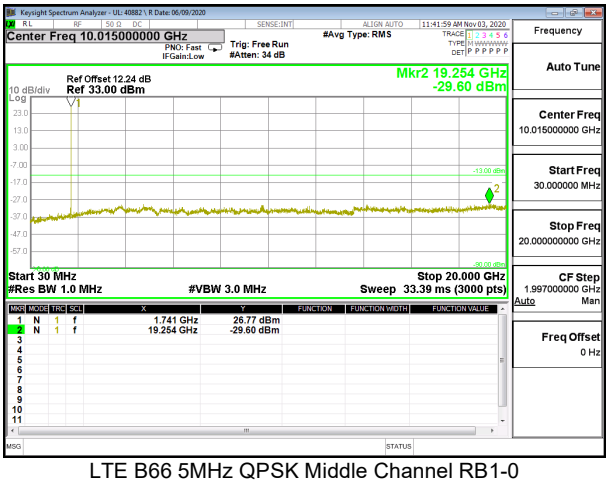
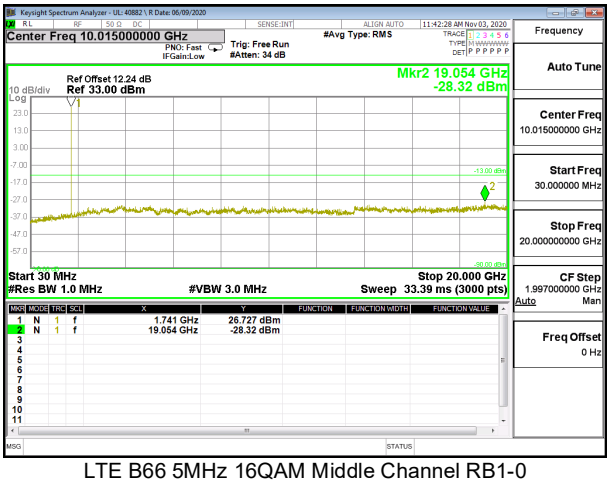


LTE B66 5MHz QPSK Middle Channel RB1-0



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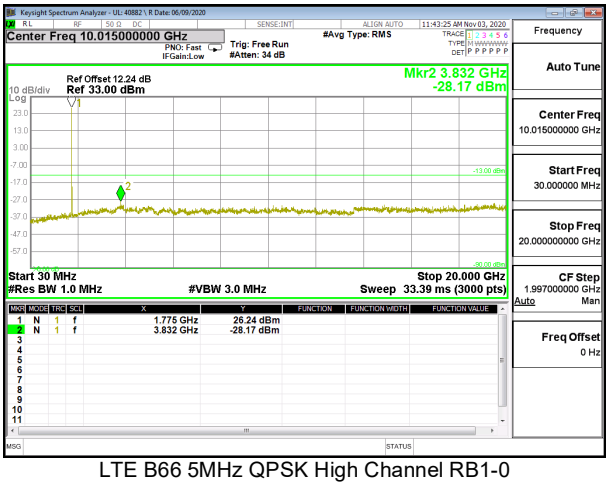
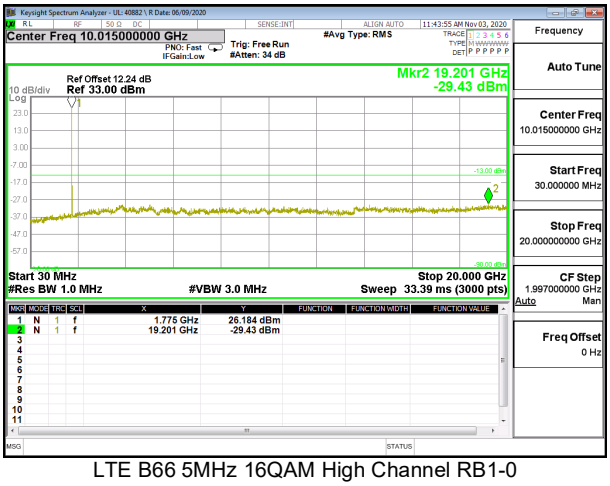
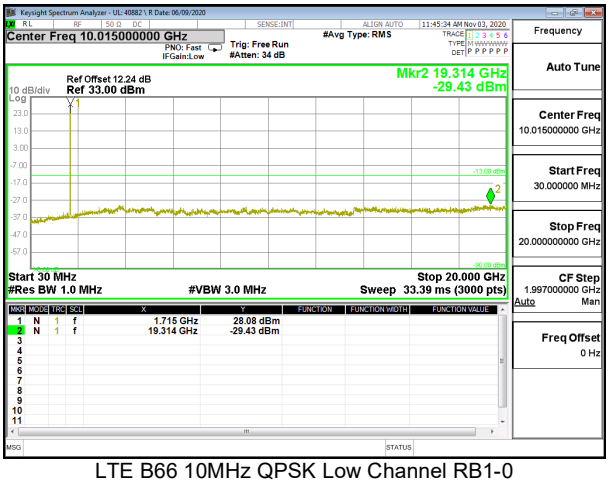


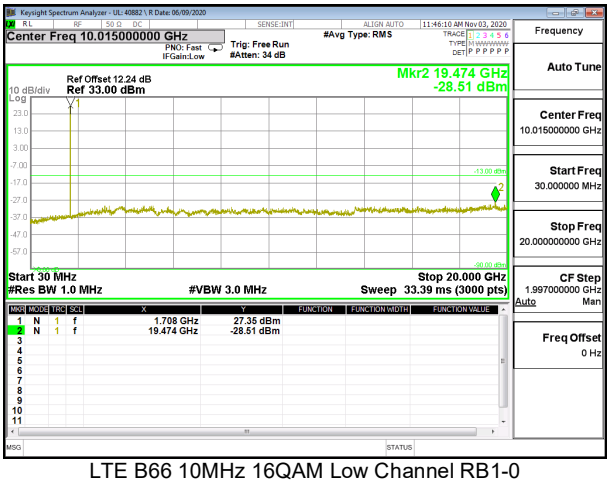
LTE B66 5MHz QPSK High Channel RB1-0



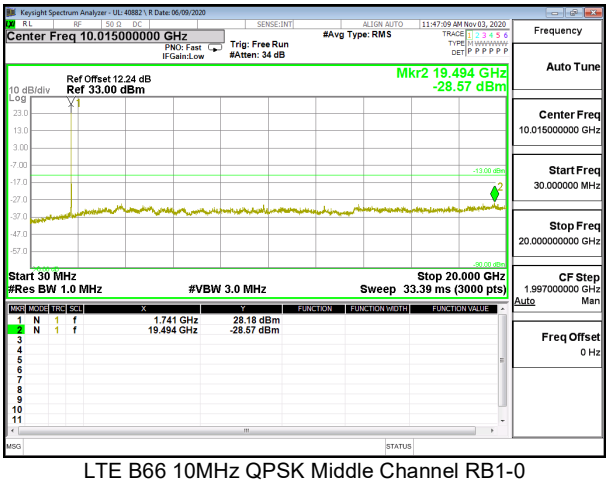
LTE B66 5MHz 16QAM High Channel RB1-0



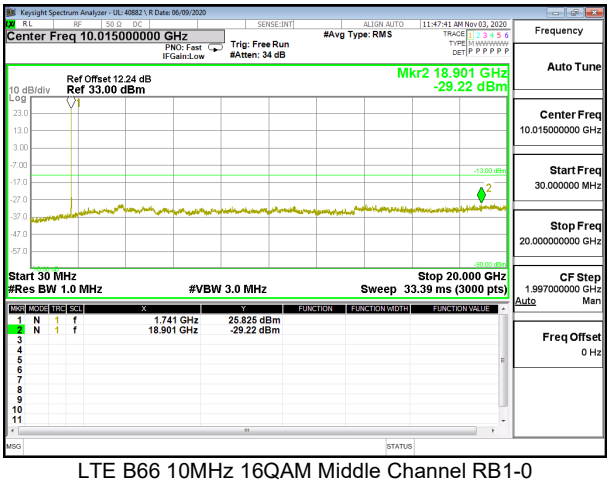
LTE B66 10MHz QPSK Low Channel RB1-0



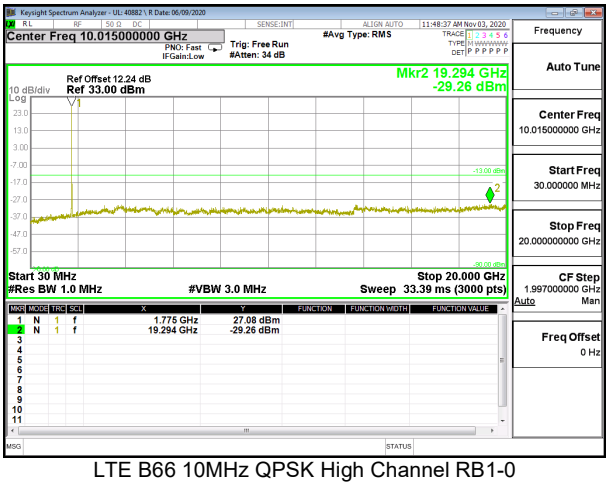
LTE B66 10MHz 16QAM Low Channel RB1-0



LTE B66 10MHz QPSK Middle Channel RB1-0



LTE B66 10MHz 16QAM Middle Channel RB1-0



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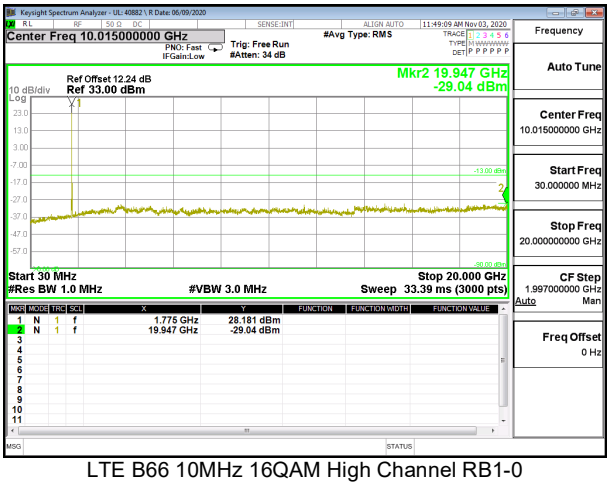
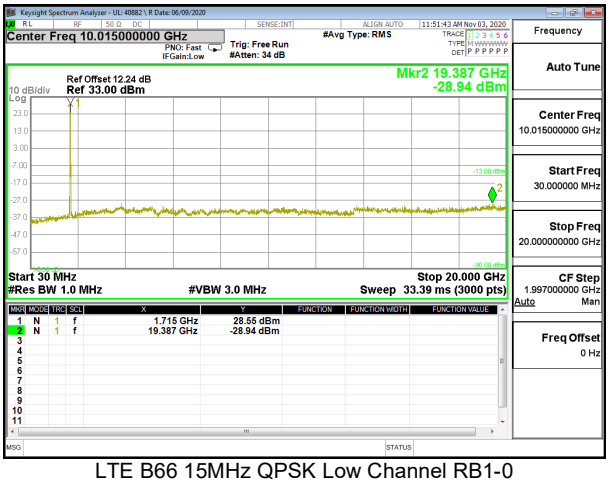
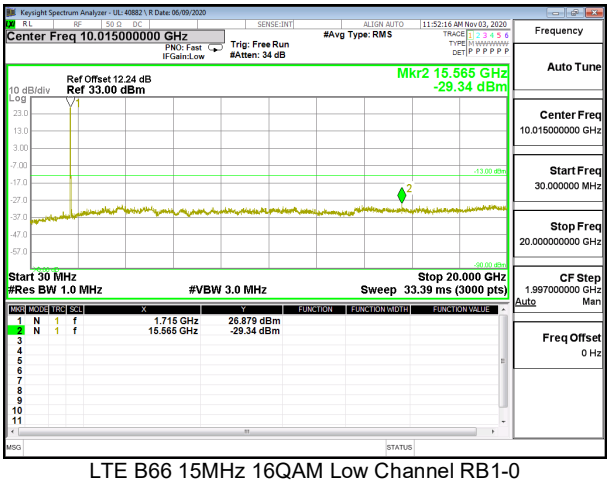


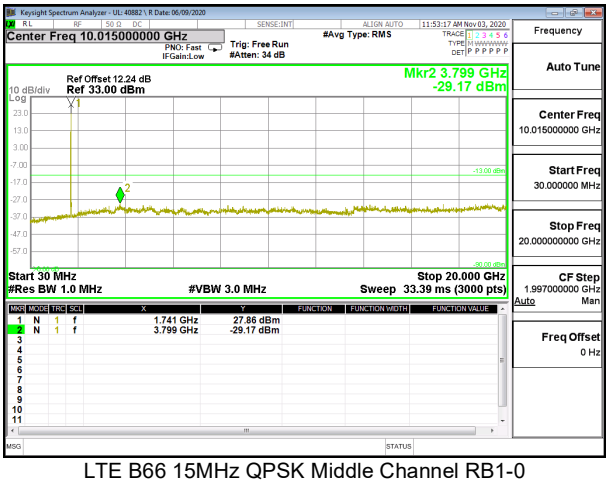
LTE B66 10MHz 16QAM High Channel RB1-0



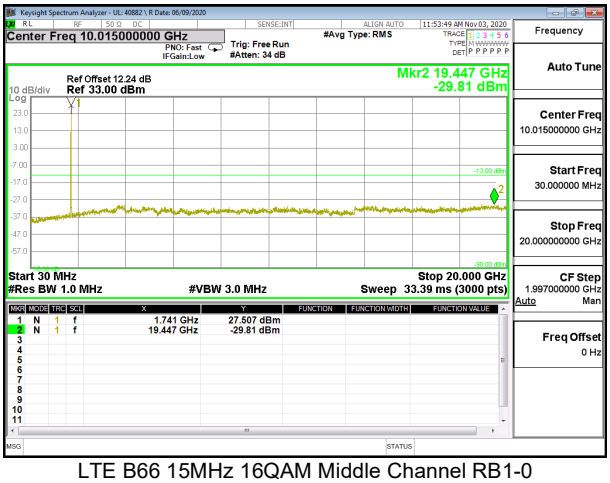
LTE B66 15MHz QPSK Low Channel RB1-0



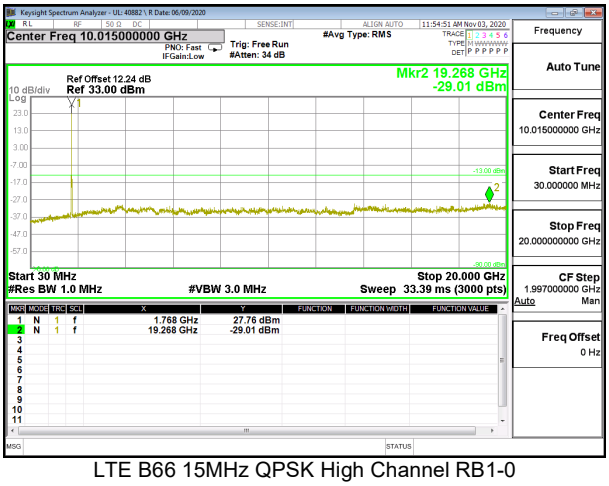
LTE B66 15MHz 16QAM Low Channel RB1-0



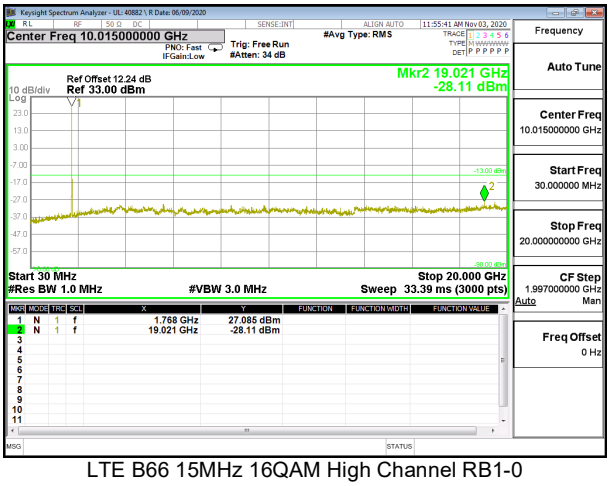
LTE B66 15MHz QPSK Middle Channel RB1-0



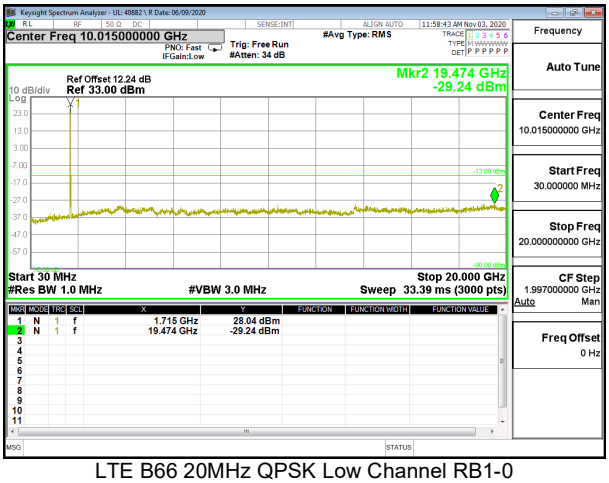
LTE B66 15MHz 16QAM Middle Channel RB1-0



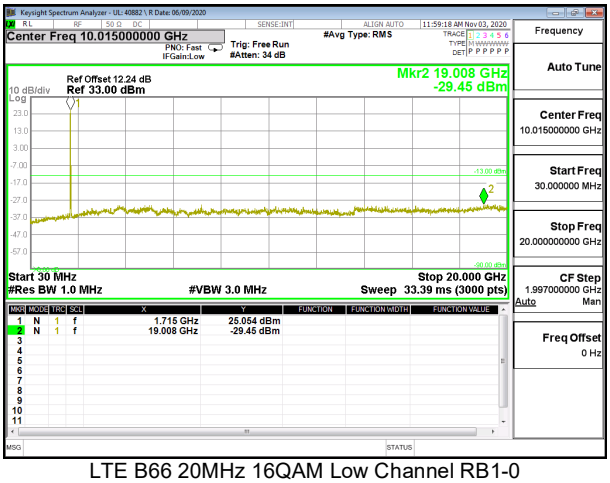
LTE B66 15MHz QPSK High Channel RB1-0



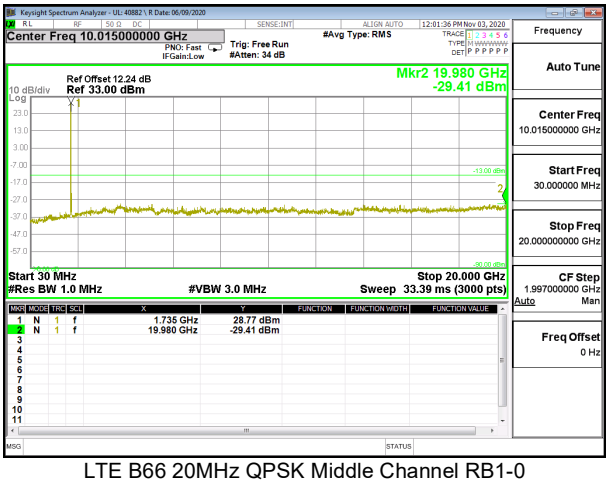
LTE B66 15MHz 16QAM High Channel RB1-0



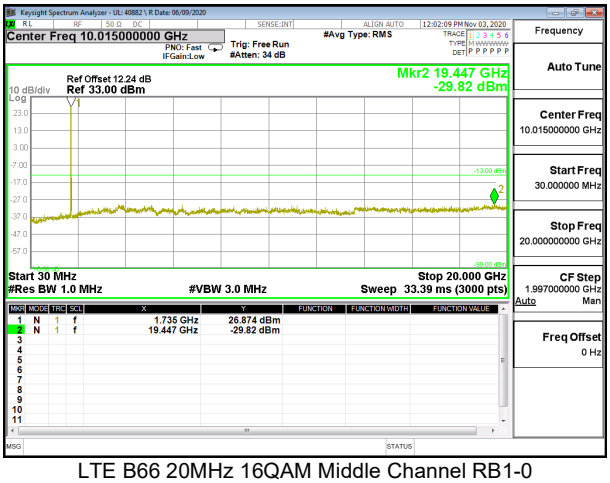
LTE B66 20MHz QPSK Low Channel RB1-0



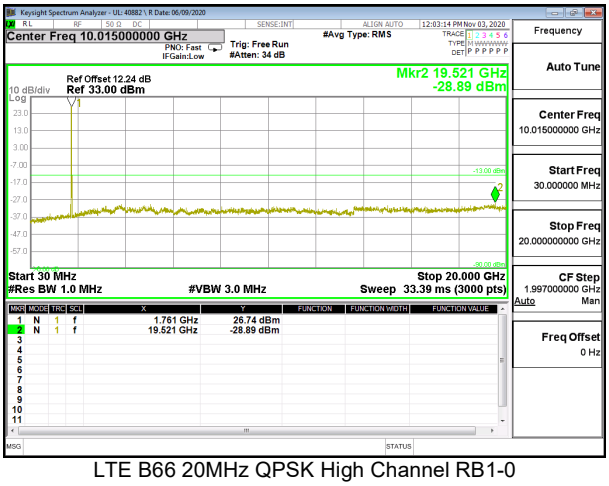
LTE B66 20MHz 16QAM Low Channel RB1-0



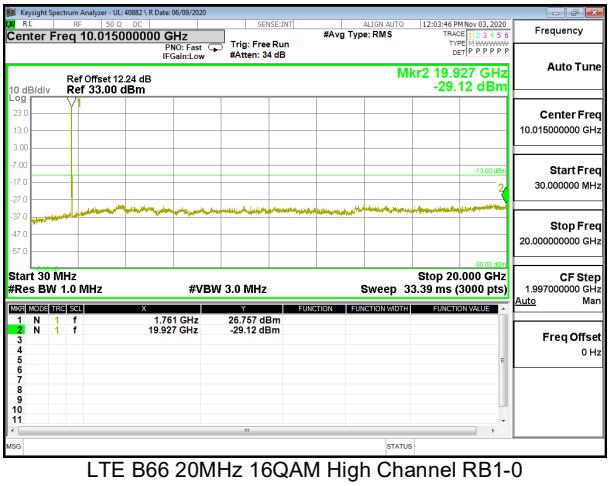
LTE B66 20MHz QPSK Middle Channel RB1-0



LTE B66 20MHz 16QAM Middle Channel RB1-0



LTE B66 20MHz QPSK High Channel RB1-0



LTE B66 20MHz 16QAM High Channel RB1-0

8.4. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355, §24.235, and §27.54

LIMITS

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

FCC: §24.235 & §27.54
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- Temp. = −30°C to +50°C
- Voltage = (85% - 115%)
  Low voltage, 3.23VDC, Normal, 3.8VDC and High voltage, 4.37VDC.
  End Voltage, 2.8VDC.

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.

8.4.1. LTE BAND 2

Test Engineer ID:	40882	Test Date:	2020-11-14 – 2020-11-17

QPSK, (20MHz BANDWIDTH)

Limit		1860	1900	Delta (Hz) LOW	Delta (Hz) HIGH	Frequency Stability (ppm) LOW	Frequency Stability (ppm) HIGH
Condition		F low @ -13dBm	F high @ -13dBm				
Temperature	Voltage	(MHz)	(MHz)				
Normal (20C)	Normal	1860.0000	1900.0000				
Extreme (50C)		1860.0000	1900.0000	-4.69	-3.19	-0.0025	-0.0017
Extreme (40C)		1860.0000	1900.0000	-5.54	-3.75	-0.0029	-0.0020
Extreme (30C)		1860.0000	1900.0000	-6.38	-5.53	-0.0034	-0.0029
Extreme (10C)		1860.0000	1900.0000	-2.49	-1.27	-0.0013	-0.0007
Extreme (0C)		1860.0000	1900.0000	-2.64	-3.19	-0.0014	-0.0017
Extreme (-10C)		1860.0000	1900.0000	-2.35	-2.79	-0.0012	-0.0015
Extreme (-20C)		1860.0000	1900.0000	9.54	-4.16	0.0051	-0.0022
Extreme (-30C)		1860.0000	1900.0000	-9.78	-6.91	-0.0052	-0.0037
20C	15%	1860.0000	1900.0000	-7.71	-7.28	-0.0041	-0.0039
	-15%	1860.0000	1900.0000	-8.80	-5.59	-0.0047	-0.0030
	End Point	1860.0000	1900.0000	-6.19	-6.91	-0.0033	-0.0037

8.4.2. LTE BAND 4

Test Engineer ID:		Test Date:	

QPSK, (20MHz BANDWIDTH)

Limit		1710	1755	Delta (Hz) LOW	Delta (Hz) HIGH	Frequency Stability (ppm) LOW	Frequency Stability (ppm) HIGH
Condition		F low @ -13dBm	F high @ -13dBm				
Temperature	Voltage	(MHz)	(MHz)				
Normal (20C)	Normal						
Extreme (50C)				#######	#######	##########	##########
Extreme (40C)				#######	#######	##########	##########
Extreme (30C)				#######	#######	##########	##########
Extreme (10C)				#######	#######	##########	##########
Extreme (0C)				#######	#######	##########	##########
Extreme (-10C)				#######	#######	##########	##########
Extreme (-20C)				#######	#######	##########	##########
Extreme (-30C)				#######	#######	##########	##########
20C	15%			#######	#######	##########	##########
	-15%			#######	#######	##########	##########
	End Point			#######	#######	##########	##########

8.4.3. LTE BAND 12

Test Engineer ID:	40882	Test Date:	2020-11-14 – 2020-11-17

QPSK, (10MHz BANDWIDTH)

Limit		704	711	Delta (Hz) LOW	Delta (Hz) HIGH	Frequency Stability (ppm) LOW	Frequency Stability (ppm) HIGH
Condition		F low @ -13dBm	F high @ -13dBm				
Temperature	Voltage	(MHz)	(MHz)				
Normal (20C)	Normal	704.0000	711.0000				
Extreme (50C)		704.0000	711.0000	-9.41	-8.49	-0.0133	-0.0120
Extreme (40C)		704.0000	711.0000	-2.54	-1.46	-0.0036	-0.0021
Extreme (30C)		704.0000	711.0000	-3.67	-6.48	-0.0052	-0.0092
Extreme (10C)		704.0000	711.0000	-3.93	-4.68	-0.0056	-0.0066
Extreme (0C)		704.0000	711.0000	-3.21	-2.61	-0.0045	-0.0037
Extreme (-10C)		704.0000	711.0000	-5.11	-2.82	-0.0072	-0.0040
Extreme (-20C)		704.0000	711.0000	-7.04	-3.84	-0.0100	-0.0054
Extreme (-30C)		704.0000	711.0000	-8.84	-7.96	-0.0125	-0.0113
20C	15%	704.0000	711.0000	-3.20	-2.27	-0.0045	-0.0032
	-15%	704.0000	711.0000	-1.96	-4.29	-0.0028	-0.0061
	End Point	704.0000	711.0000	-3.22	-3.08	-0.0046	-0.0044

8.4.4. LTE BAND 26 (FCC PART 90S)

Test Engineer ID:	84740/40882	Test Date:	2020-11-25

QPSK, (15MHz BANDWIDTH)

Limit		817	824	Delta (Hz) LOW	Delta (Hz) HIGH	Frequency Stability (ppm) LOW	Frequency Stability (ppm) HIGH
Condition		F low @ -13dBm	F high @ -13dBm				
Temperature	Voltage	(MHz)	(MHz)				
Normal (20C)	Normal	817.0000	824.0000				
Extreme (50C)		817.0000	824.0000	-4.6	-5.6	-0.0056	-0.0068
Extreme (40C)		817.0000	824.0000	-4.3	-5.0	-0.0053	-0.0061
Extreme (30C)		817.0000	824.0000	-5.2	-4.5	-0.0063	-0.0055
Extreme (10C)		817.0000	824.0000	-2.6	-5.2	-0.0031	-0.0063
Extreme (0C)		817.0000	824.0000	-3.5	-2.4	-0.0043	-0.0029
Extreme (-10C)		817.0000	824.0000	-3.9	-5.1	-0.0048	-0.0063
Extreme (-20C)		817.0000	824.0000	-4.5	-5.1	-0.0055	-0.0062
Extreme (-30C)		817.0000	824.0000	-5.6	-6.5	-0.0068	-0.0080
20C	15%	817.0000	824.0000	-3.7	-3.5	-0.0045	-0.0043
	-15%	817.0000	824.0000	-3.3	-3.4	-0.0040	-0.0041
	End Point	817.0000	824.0000	-3.6	-3.0	-0.0044	-0.0036

8.4.5. LTE BAND 26 (FCC PART 22)

Test Engineer ID:	84740/40882	Test Date:	2020-11-25

QPSK, (15MHz BANDWIDTH)

Limit		824	849	Delta (Hz) LOW	Delta (Hz) HIGH	Frequency Stability (ppm) LOW	Frequency Stability (ppm) HIGH
Condition		F low @ -13dBm	F high @ -13dBm				
Temperature	Voltage	(MHz)	(MHz)				
Normal (20C)	Normal	824.0000	849.0000				
Extreme (50C)		824.0000	849.0000	-4.9	-3.8	-0.0059	-0.0045
Extreme (40C)		824.0000	849.0000	-5.2	-6.1	-0.0063	-0.0074
Extreme (30C)		824.0000	849.0000	-2.6	-4.0	-0.0031	-0.0047
Extreme (10C)		824.0000	849.0000	-3.2	-6.2	-0.0039	-0.0074
Extreme (0C)		824.0000	849.0000	-4.6	-3.4	-0.0055	-0.0040
Extreme (-10C)		824.0000	849.0000	-2.5	-3.3	-0.0030	-0.0040
Extreme (-20C)		824.0000	849.0000	-3.5	-4.5	-0.0041	-0.0054
Extreme (-30C)		824.0000	849.0000	-3.6	-6.5	-0.0043	-0.0078
20C	15%	824.0000	849.0000	-3.6	-4.9	-0.0043	-0.0059
	-15%	824.0000	849.0000	-5.2	-4.7	-0.0062	-0.0056
	End Point	824.0000	849.0000	-3.8	-4.5	-0.0046	-0.0054

8.4.6. LTE BAND 41 (FCC)

Test Engineer ID:	40882	Test Date:	2020-11-14 – 2020-11-17

QPSK, (20MHz BANDWIDTH)

Limit		2506	2680	Delta (Hz) LOW	Delta (Hz) HIGH	Frequency Stability (ppm) LOW	Frequency Stability (ppm) HIGH
Condition		F low @ -13dBm	F high @ -13dBm				
Temperature	Voltage	(MHz)	(MHz)				
Normal (20C)	Normal	2506.0000	2680.0000				
Extreme (50C)		2506.0000	2680.0000	-4.8	-10.7	-0.0018	-0.0041
Extreme (40C)		2506.0000	2680.0000	-4.5	-5.2	-0.0018	-0.0020
Extreme (30C)		2506.0000	2680.0000	-5.5	-2.1	-0.0021	-0.0008
Extreme (10C)		2506.0000	2680.0000	-7.9	-7.1	-0.0030	-0.0027
Extreme (0C)		2506.0000	2680.0000	-4.6	-5.5	-0.0018	-0.0021
Extreme (-10C)		2506.0000	2680.0000	-7.5	-7.8	-0.0029	-0.0030
Extreme (-20C)		2506.0000	2680.0000	-9.8	-8.1	-0.0038	-0.0031
Extreme (-30C)		2506.0000	2680.0000	-20.1	-18.5	-0.0077	-0.0071
20C	15%	2506.0000	2680.0000	-9.0	-13.4	-0.0035	-0.0052
	-15%	2506.0000	2680.0000	-12.0	-13.2	-0.0046	-0.0051
	End Point	2506.0000	2680.0000	-10.7	-16.0	-0.0041	-0.0062

8.4.7. LTE BAND 66

Test Engineer ID:	40882	Test Date:	2020-11-14 – 2020-11-17

QPSK, (20MHz BANDWIDTH)

Limit		1720	1770	Delta (Hz) LOW	Delta (Hz) HIGH	Frequency Stability (ppm) LOW	Frequency Stability (ppm) HIGH
Condition		F low @ -13dBm	F high @ -13dBm				
Temperature	Voltage	(MHz)	(MHz)				
Normal (20C)	Normal	1720.0000	1770.0000				
Extreme (50C)		1720.0000	1770.0000	-2.78	-6.15	-0.0016	-0.0035
Extreme (40C)		1720.0000	1770.0000	-6.69	-10.47	-0.0038	-0.0060
Extreme (30C)		1720.0000	1770.0000	-6.55	-6.98	-0.0038	-0.0040
Extreme (10C)		1720.0000	1770.0000	-10.76	-6.27	-0.0062	-0.0036
Extreme (0C)		1720.0000	1770.0000	-4.59	-4.67	-0.0026	-0.0027
Extreme (-10C)		1720.0000	1770.0000	-2.51	-3.65	-0.0014	-0.0021
Extreme (-20C)		1720.0000	1770.0000	-10.09	-11.60	-0.0058	-0.0066
Extreme (-30C)		1720.0000	1770.0000	-9.99	-9.43	-0.0057	-0.0054
20C	15%	1720.0000	1770.0000	-6.31	-6.81	-0.0036	-0.0039
	-15%	1720.0000	1770.0000	-5.95	-8.98	-0.0034	-0.0051
	End Point	1720.0000	1770.0000	-6.55	-7.48	-0.0038	-0.0043

8.5. PEAK-TO-AVERAGE POWER RATIO

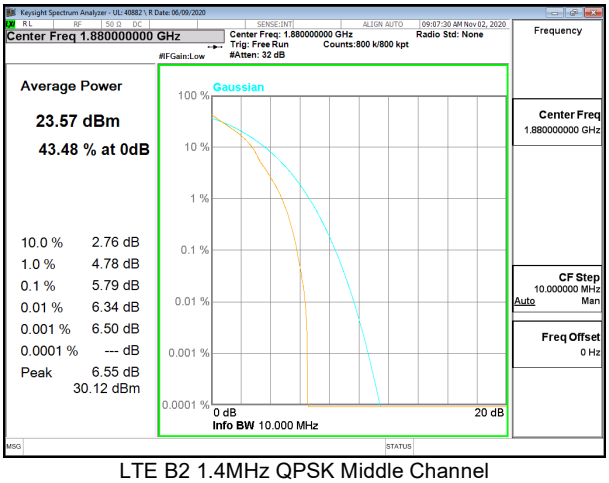
LIMIT

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

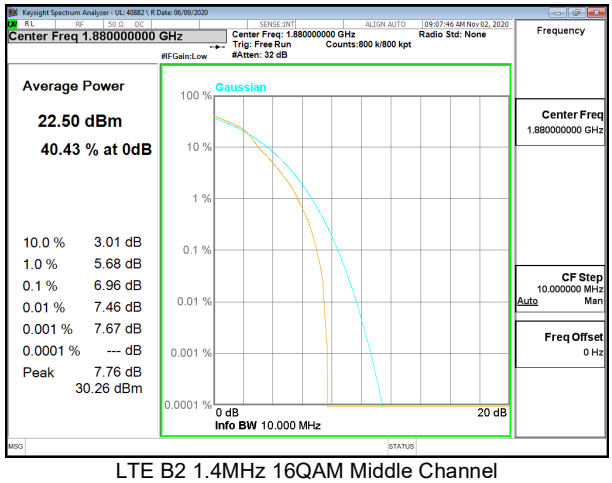
RESULT

The results from all CCDF measurements are passed with 13dB peak-to-average power ratio criteria.

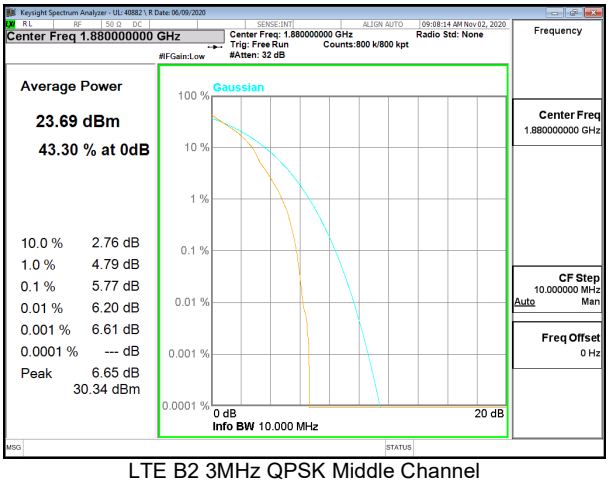
8.5.1. LTE BAND 2



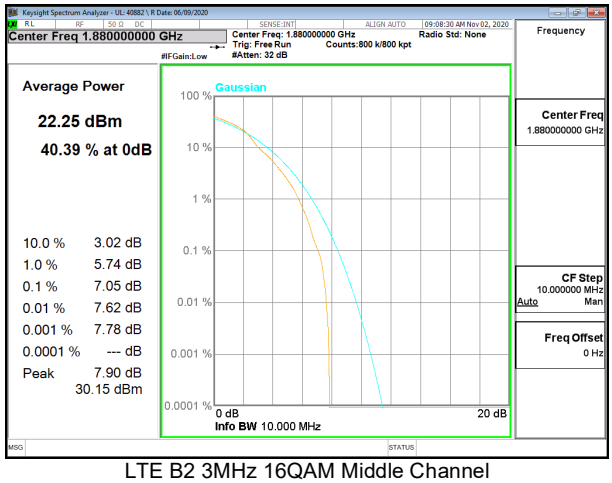
LTE B2 1.4MHz QPSK Middle Channel



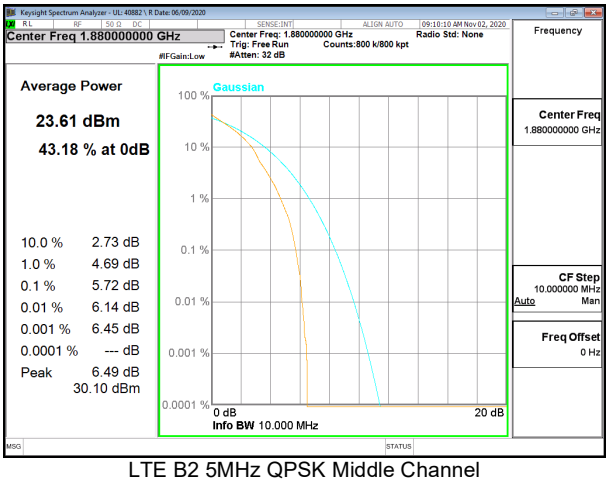
LTE B2 1.4MHz 16QAM Middle Channel



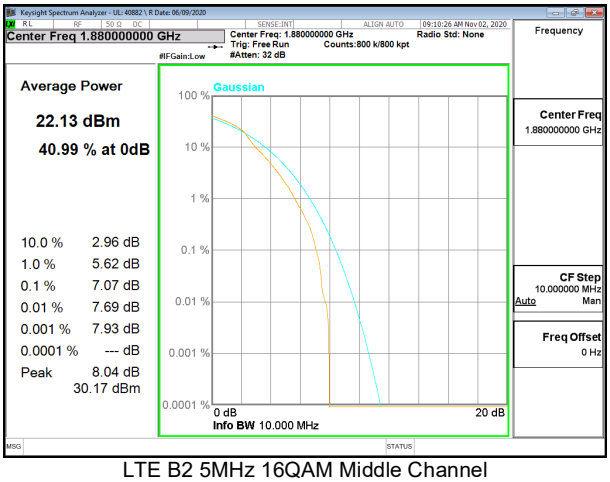
LTE B2 3MHz QPSK Middle Channel



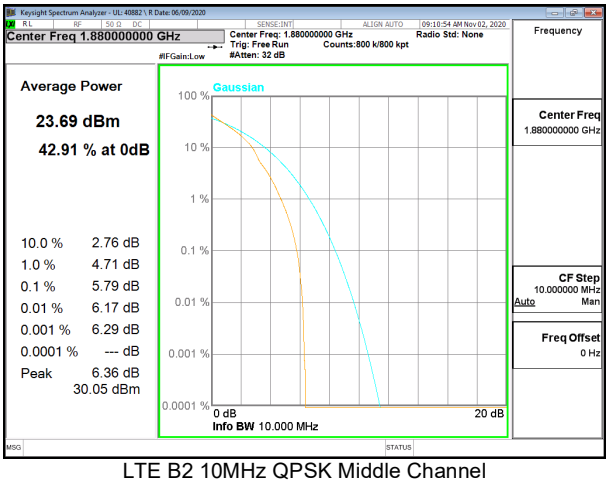
LTE B2 3MHz 16QAM Middle Channel



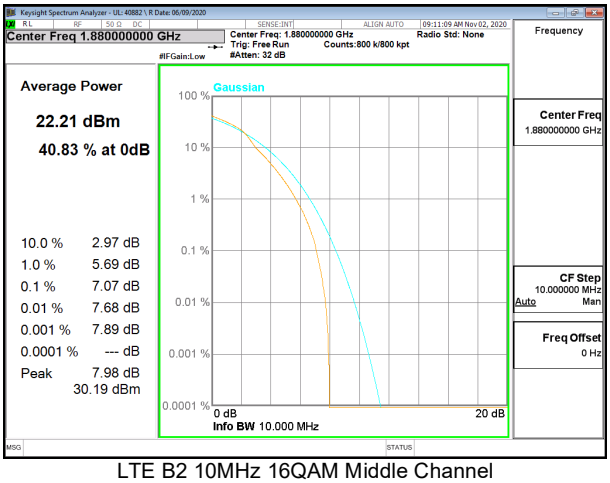
LTE B2 5MHz QPSK Middle Channel



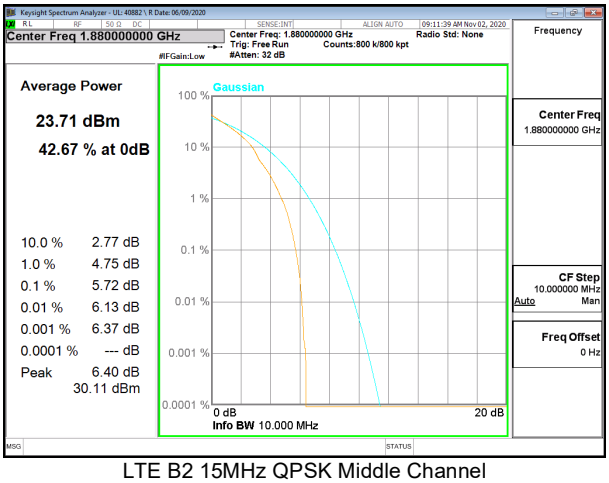
LTE B2 5MHz 16QAM Middle Channel



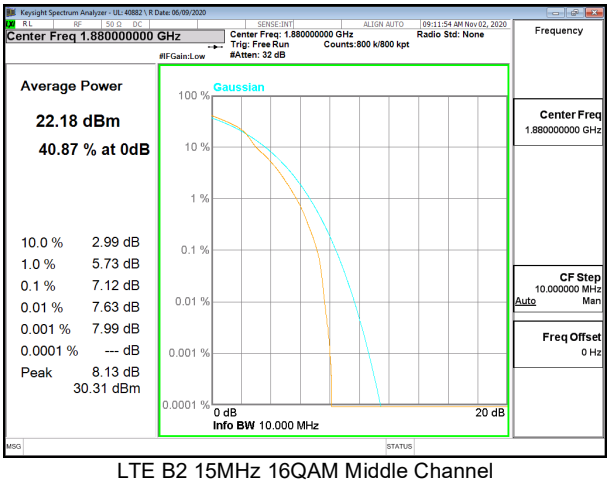
LTE B2 10MHz QPSK Middle Channel



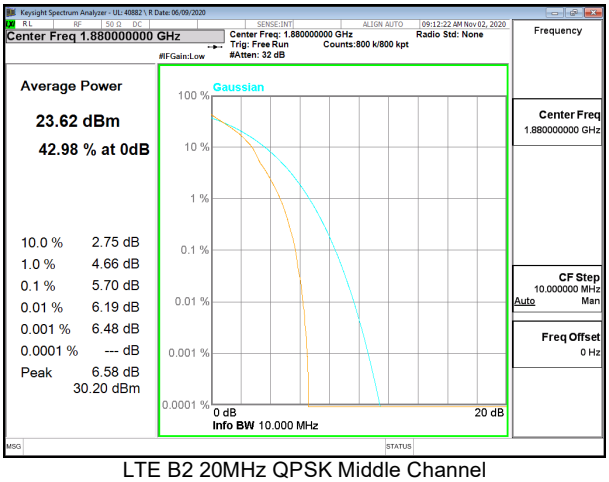
LTE B2 10MHz 16QAM Middle Channel



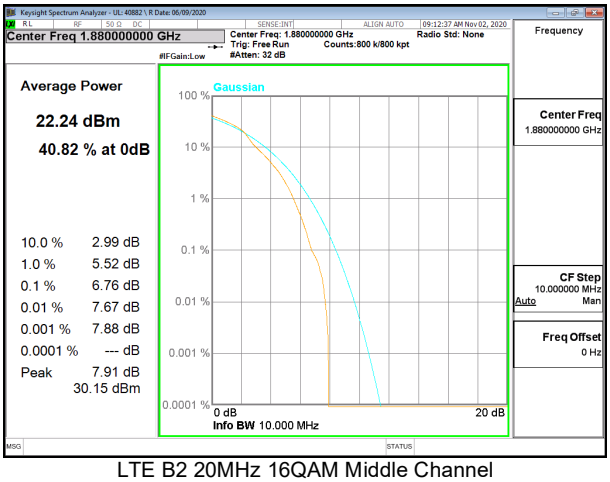
LTE B2 15MHz QPSK Middle Channel



LTE B2 15MHz 16QAM Middle Channel

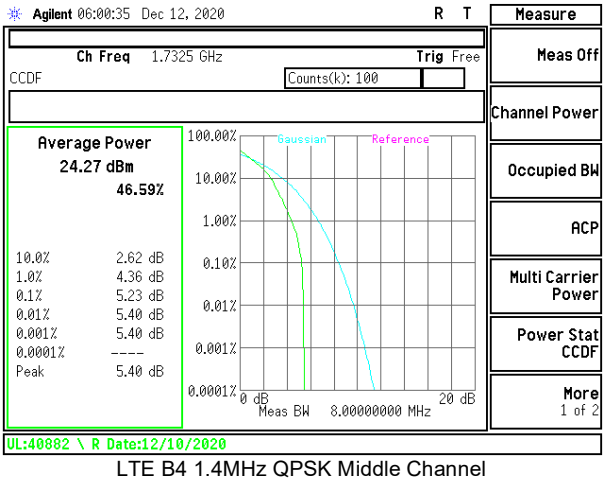


LTE B2 20MHz QPSK Middle Channel

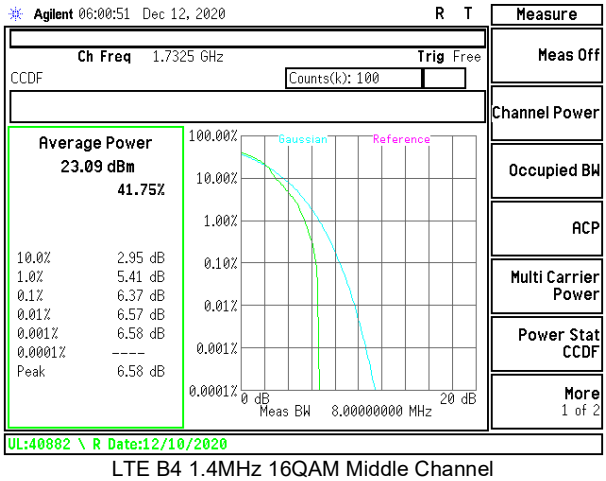


LTE B2 20MHz 16QAM Middle Channel

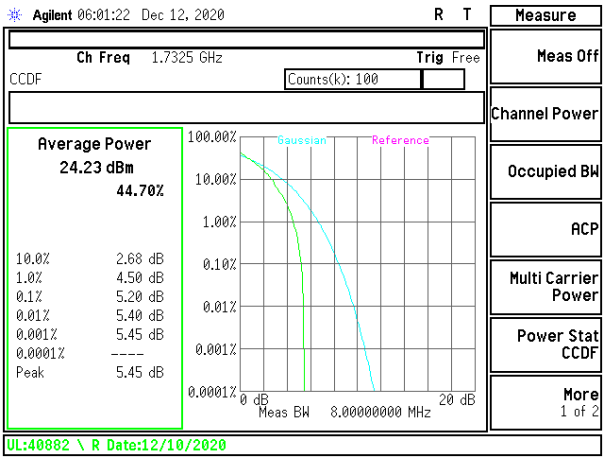
8.5.2. LTE BAND 4



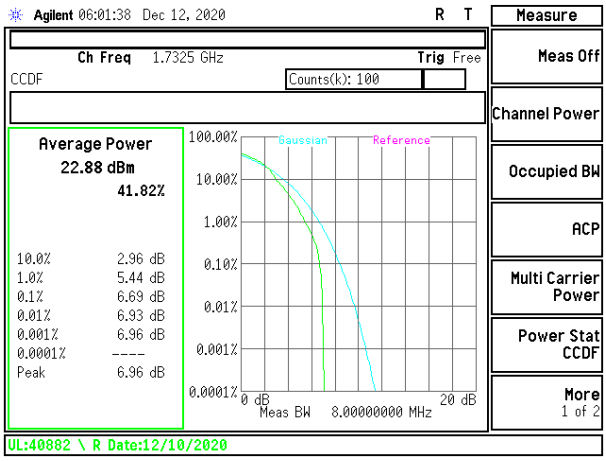
LTE B4 1.4MHz QPSK Middle Channel



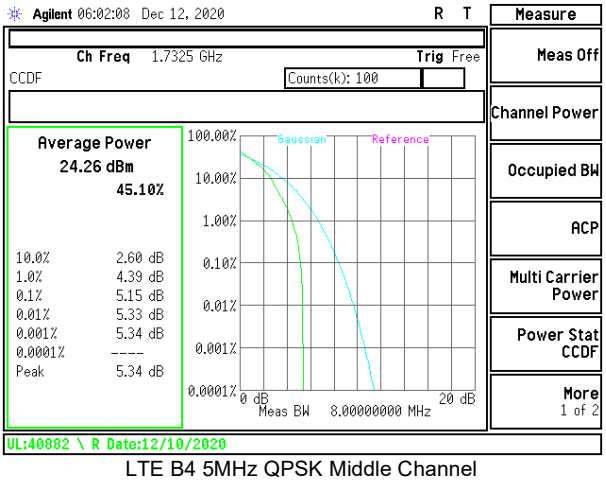
LTE B4 1.4MHz 16QAM Middle Channel



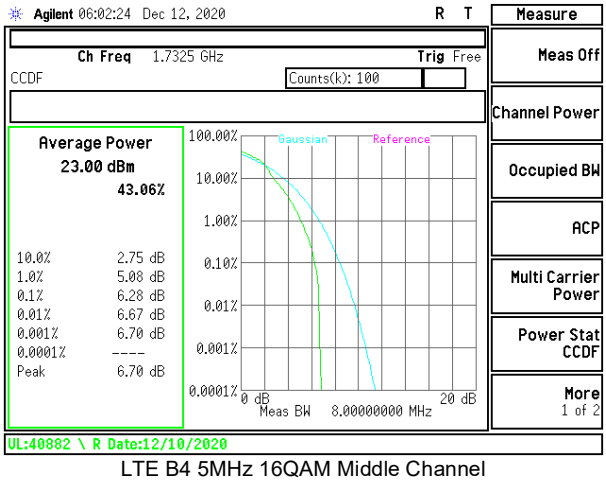
LTE B4 3MHz QPSK Middle Channel



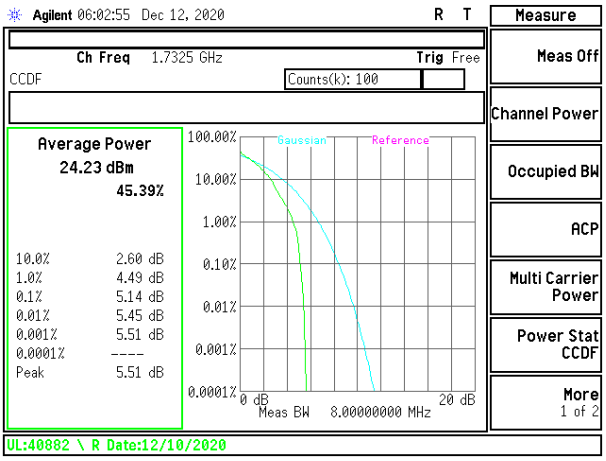
LTE B4 3MHz 16QAM Middle Channel



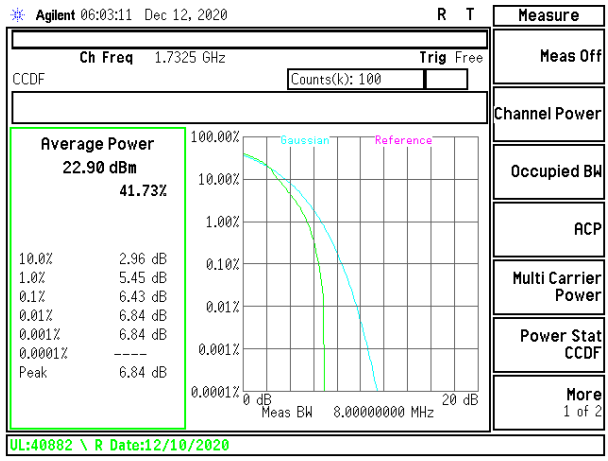
LTE B4 5MHz QPSK Middle Channel



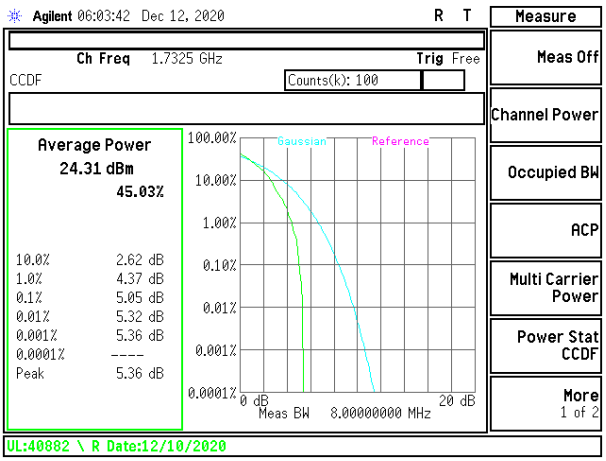
LTE B4 5MHz 16QAM Middle Channel



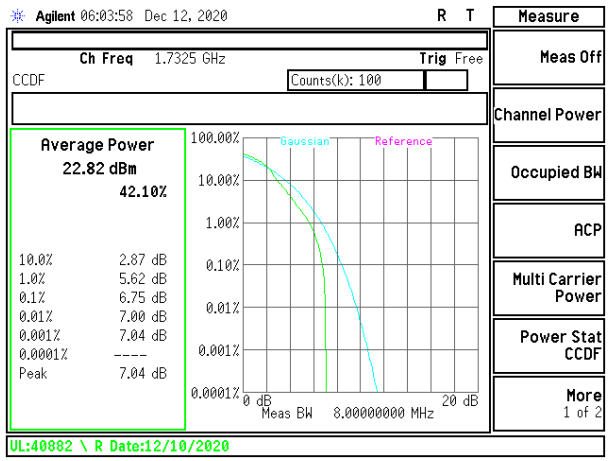
LTE B4 10MHz QPSK Middle Channel



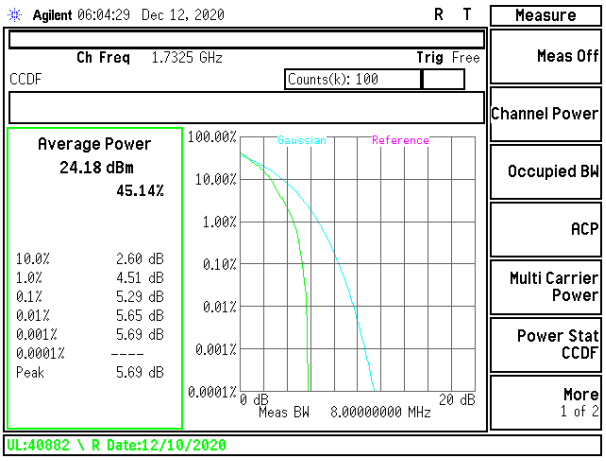
LTE B4 10MHz 16QAM Middle Channel



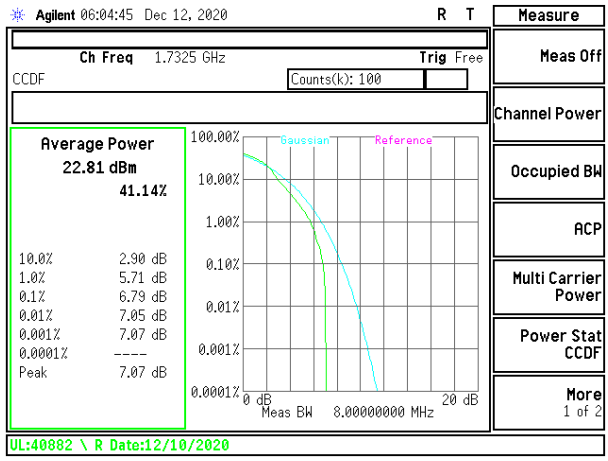
LTE B4 15MHz QPSK Middle Channel



LTE B4 15MHz 16QAM Middle Channel

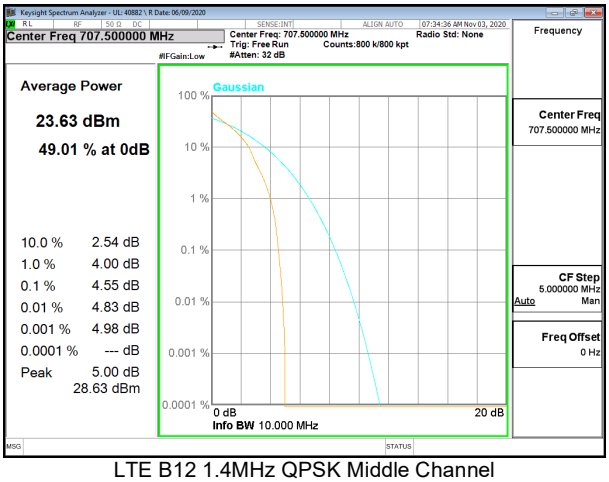


LTE B4 20MHz QPSK Middle Channel

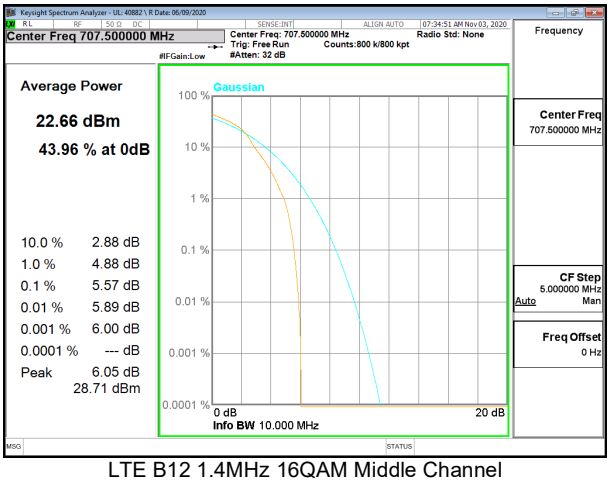


LTE B4 20MHz 16QAM Middle Channel

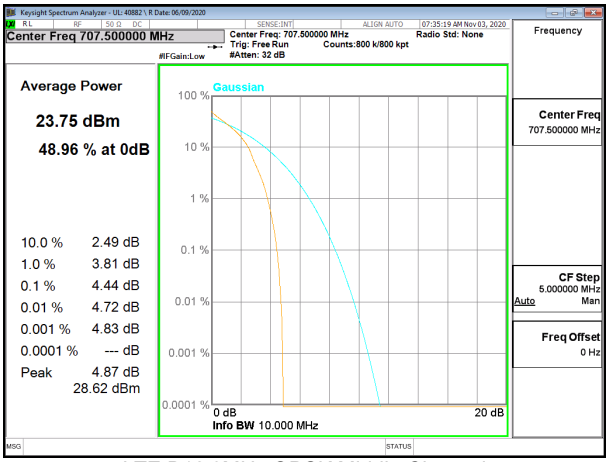
8.5.3. LTE BAND 12



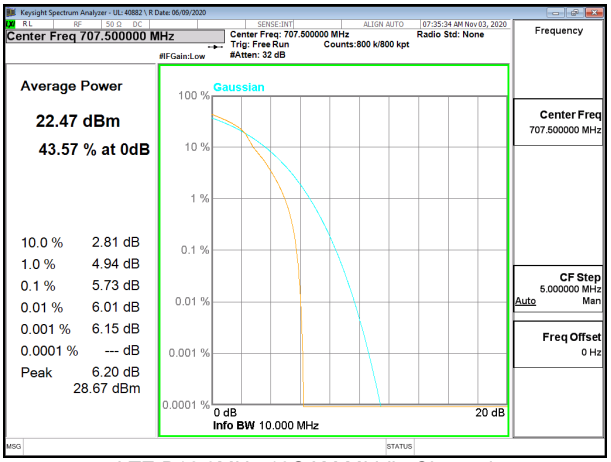
LTE B12 1.4MHz QPSK Middle Channel



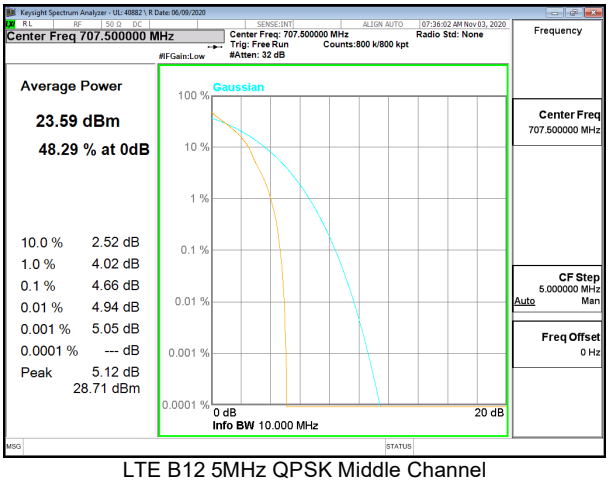
LTE B12 1.4MHz 16QAM Middle Channel



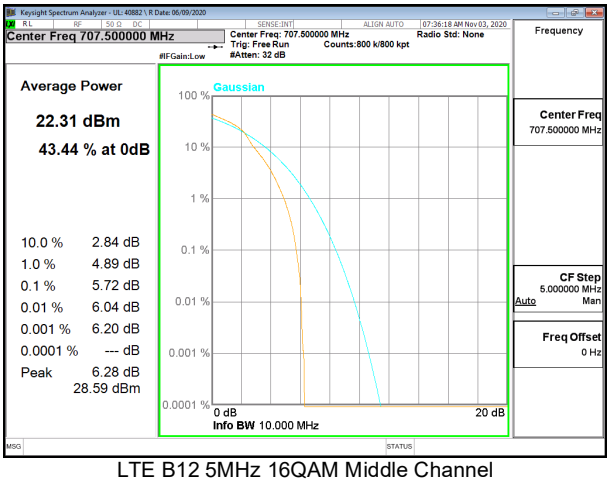
LTE B12 3MHz QPSK Middle Channel



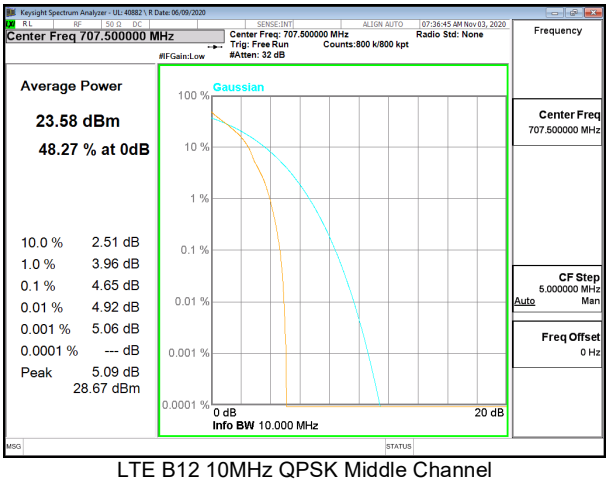
LTE B12 3MHz 16QAM Middle Channel



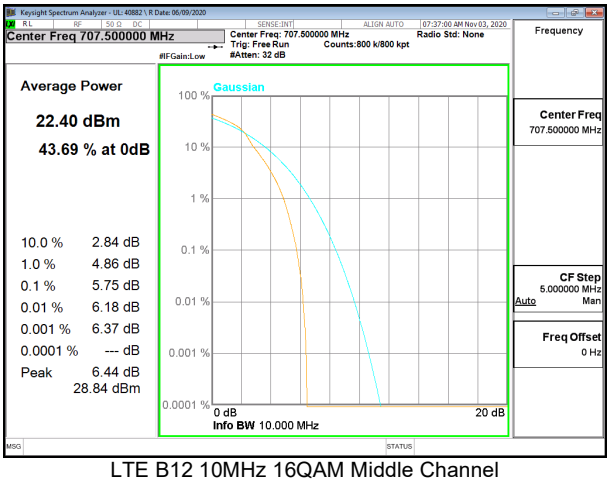
LTE B12 5MHz QPSK Middle Channel



LTE B12 5MHz 16QAM Middle Channel

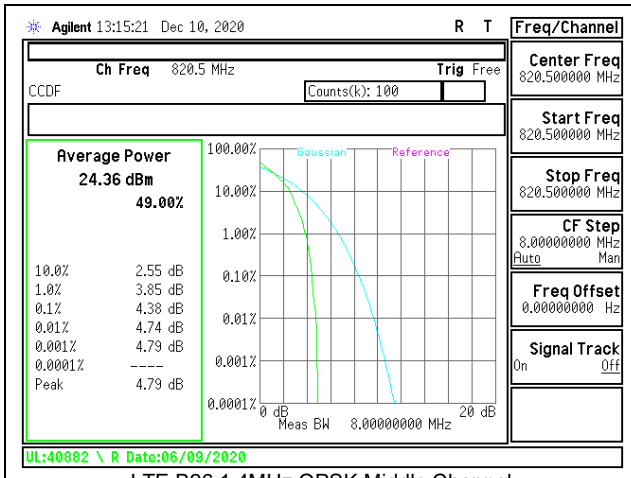


LTE B12 10MHz QPSK Middle Channel

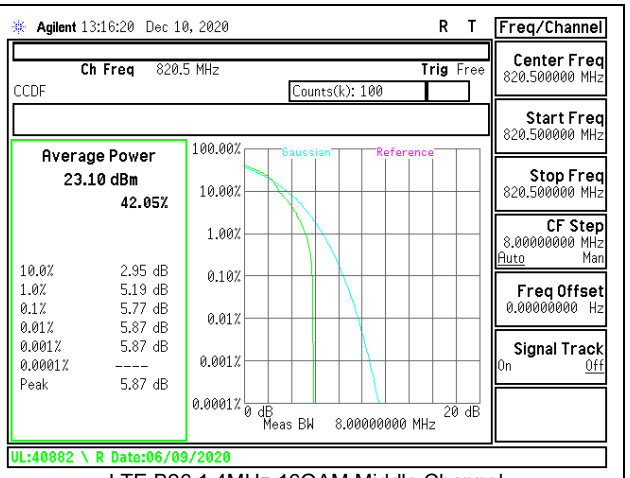


LTE B12 10MHz 16QAM Middle Channel

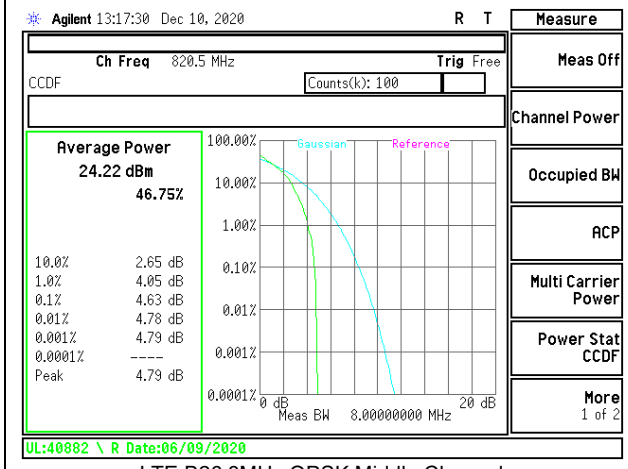
8.5.4. LTE BAND 26 (PART 90S)



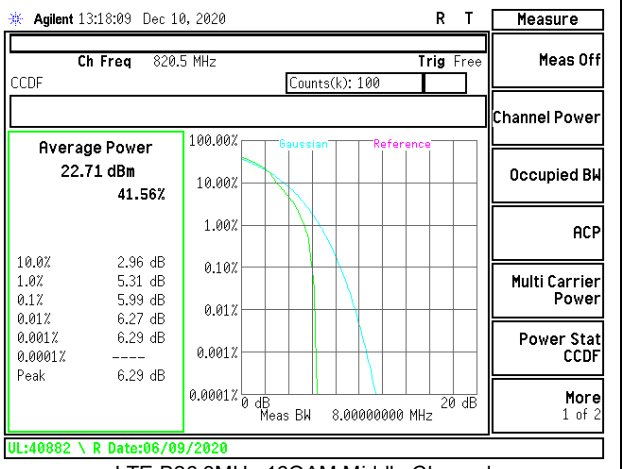
LTE B26 1.4MHz QPSK Middle Channel



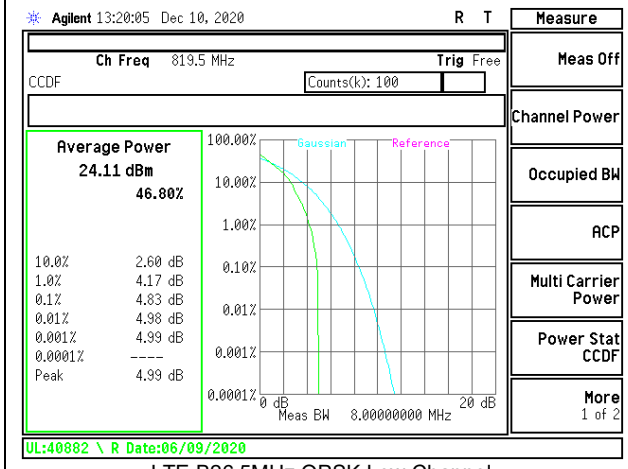
LTE B26 1.4MHz 16QAM Middle Channel



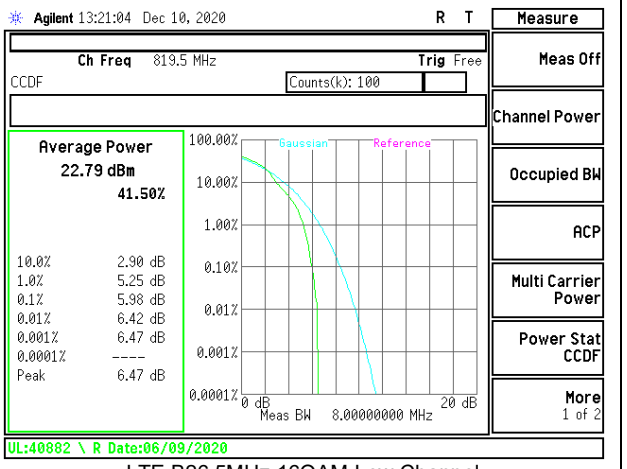
LTE B26 3MHz QPSK Middle Channel



LTE B26 3MHz 16QAM Middle Channel

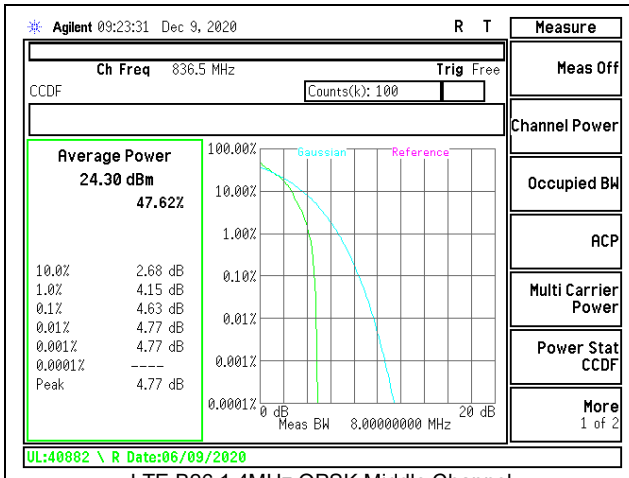


LTE B26 5MHz QPSK Low Channel

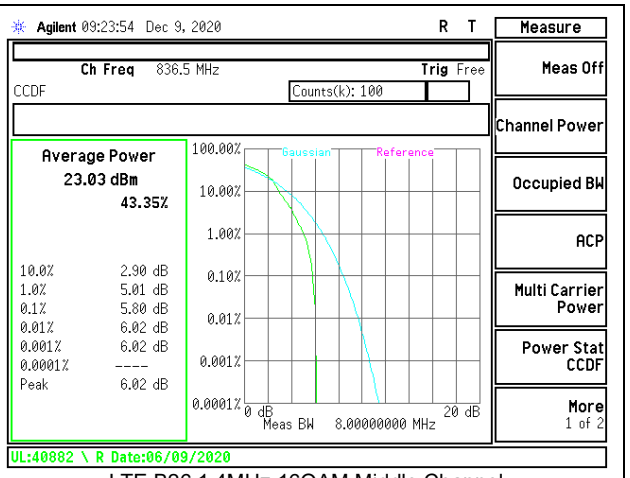


LTE B26 5MHz 16QAM Low Channel

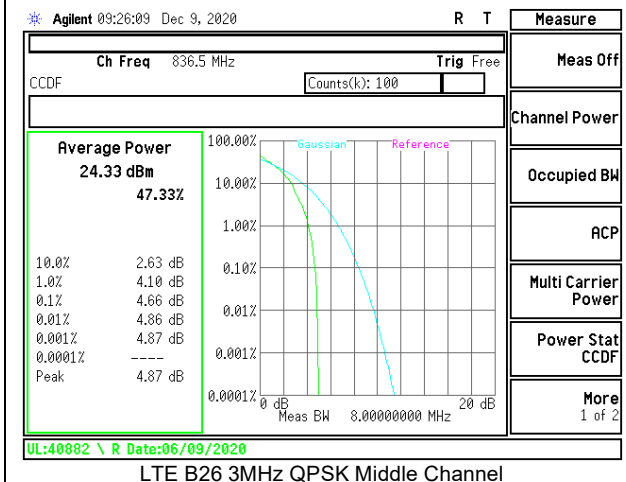
8.5.5. LTE BAND 26 (PART 22)



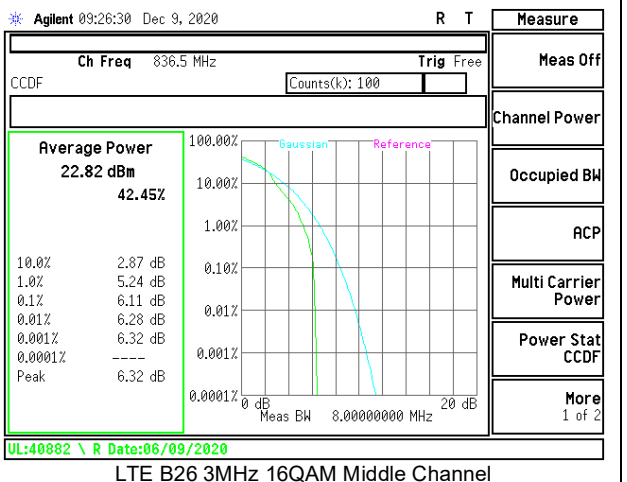
LTE B26 1.4MHz QPSK Middle Channel



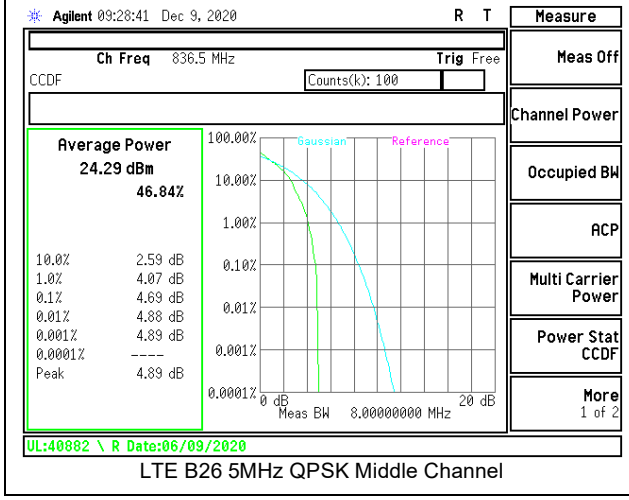
LTE B26 1.4MHz 16QAM Middle Channel



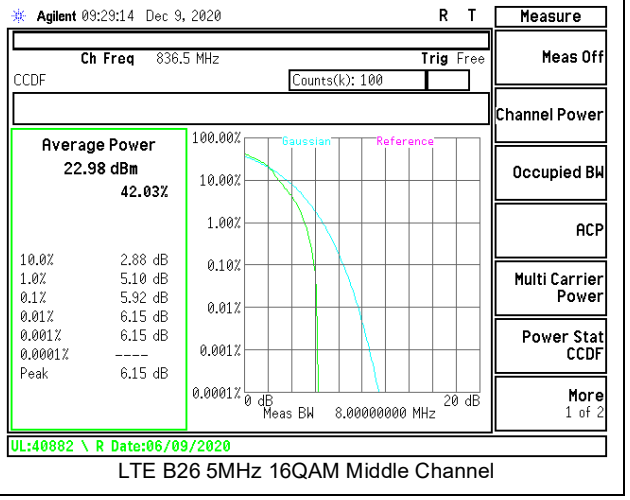
LTE B26 3MHz QPSK Middle Channel



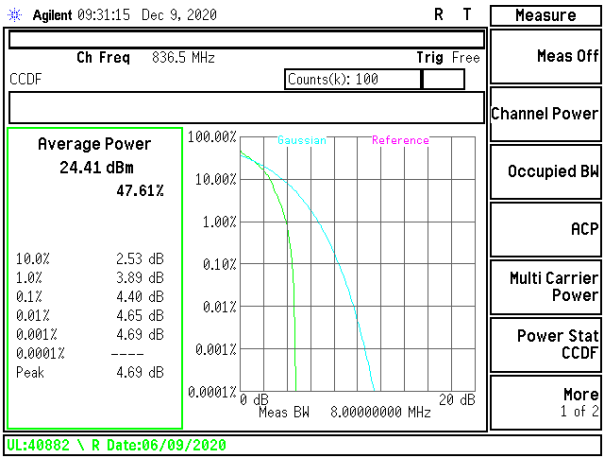
LTE B26 3MHz 16QAM Middle Channel



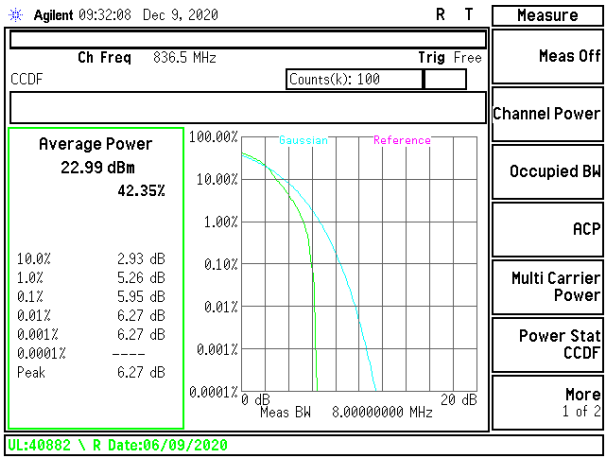
LTE B26 5MHz QPSK Middle Channel



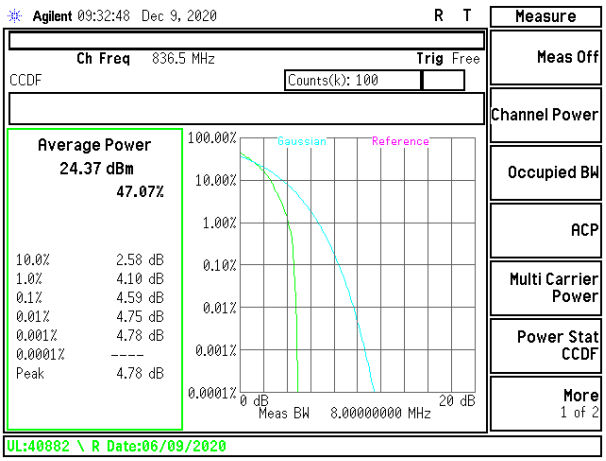
LTE B26 5MHz 16QAM Middle Channel



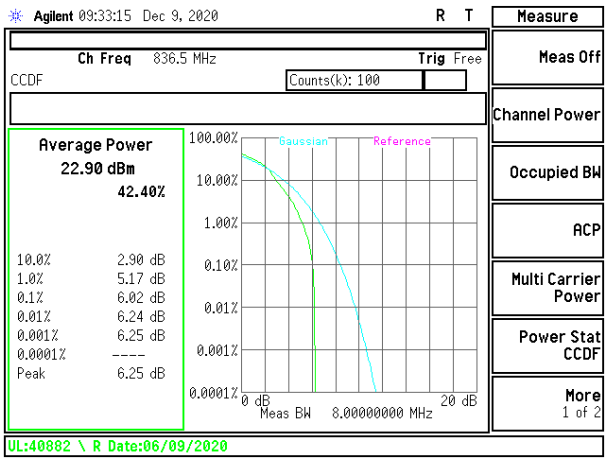
LTE B26 10MHz QPSK Middle Channel



LTE B26 10MHz 16QAM Middle Channel

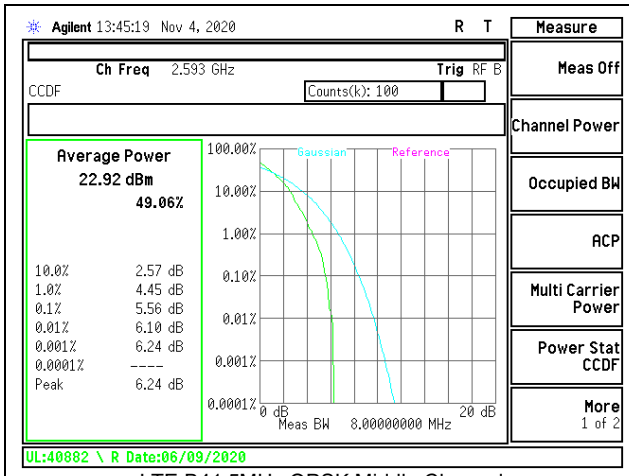


LTE B26 15MHz QPSK Middle Channel

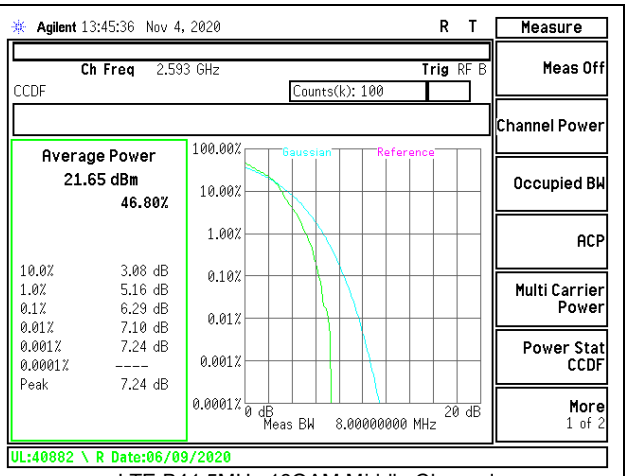


LTE B26 15MHz 16QAM Middle Channel

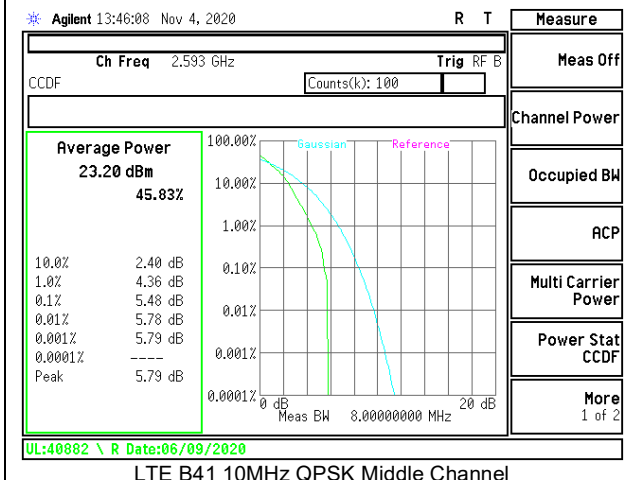
8.5.6. LTE BAND 41 (FCC)



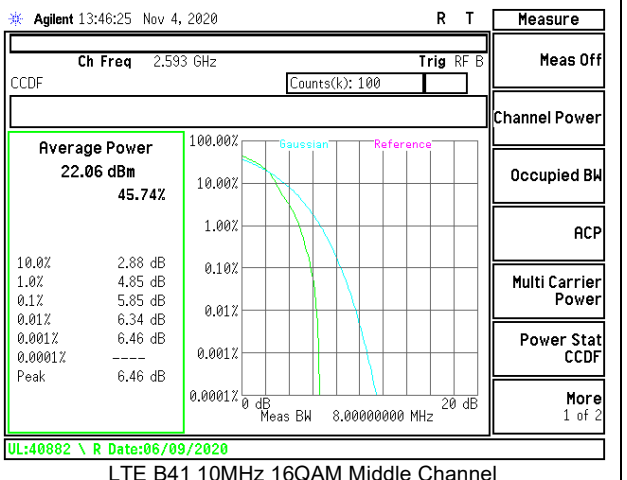
LTE B41 5MHz QPSK Middle Channel



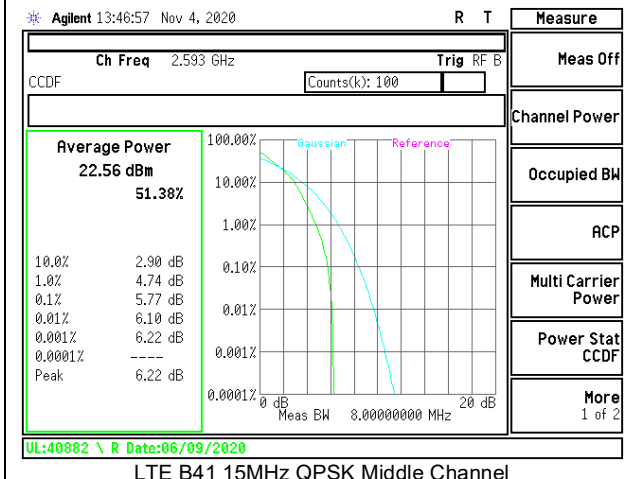
LTE B41 5MHz 16QAM Middle Channel



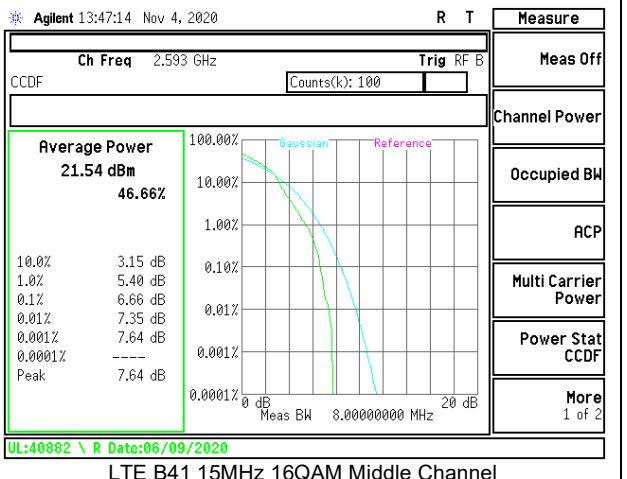
LTE B41 10MHz QPSK Middle Channel



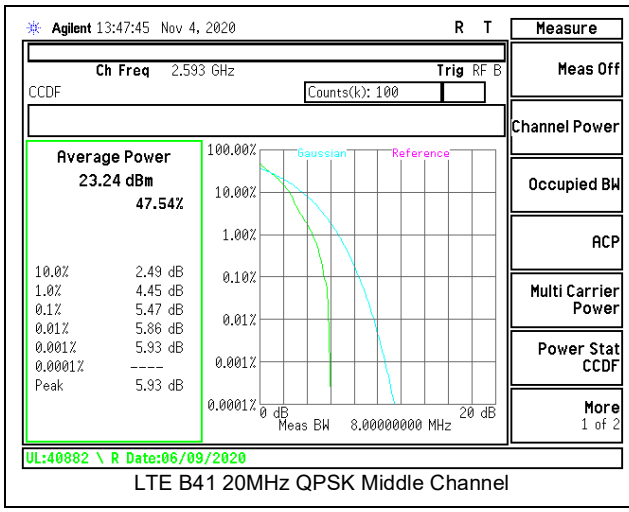
LTE B41 10MHz 16QAM Middle Channel



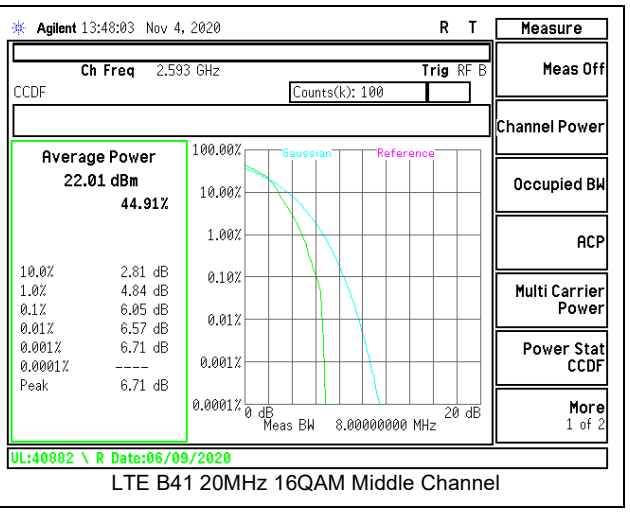
LTE B41 15MHz QPSK Middle Channel



LTE B41 15MHz 16QAM Middle Channel

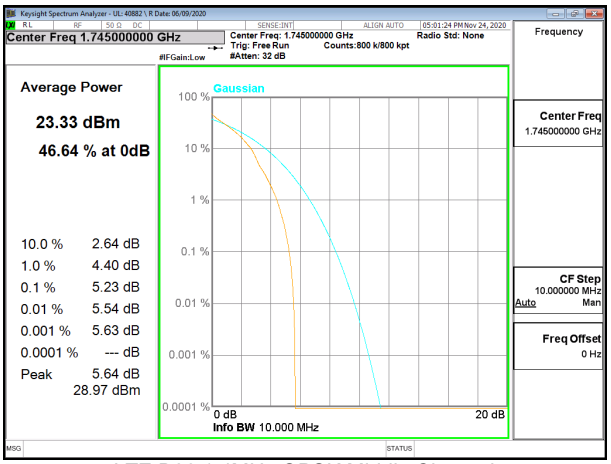


LTE B41 20MHz QPSK Middle Channel

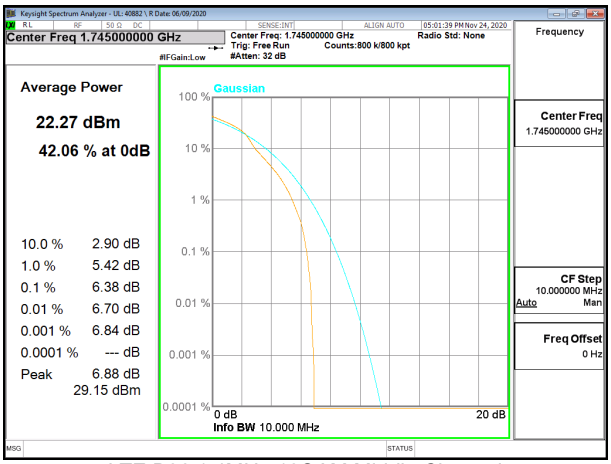


LTE B41 20MHz 16QAM Middle Channel

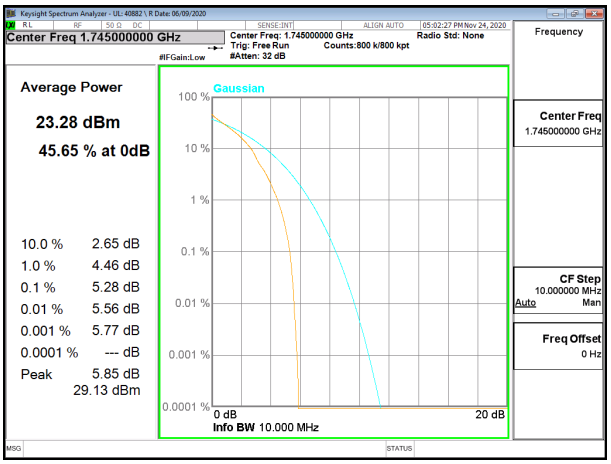
8.5.7. LTE BAND 66



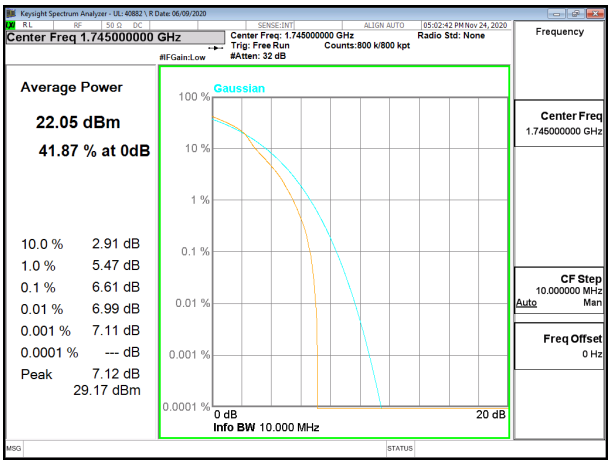
LTE B66 1.4MHz QPSK Middle Channel



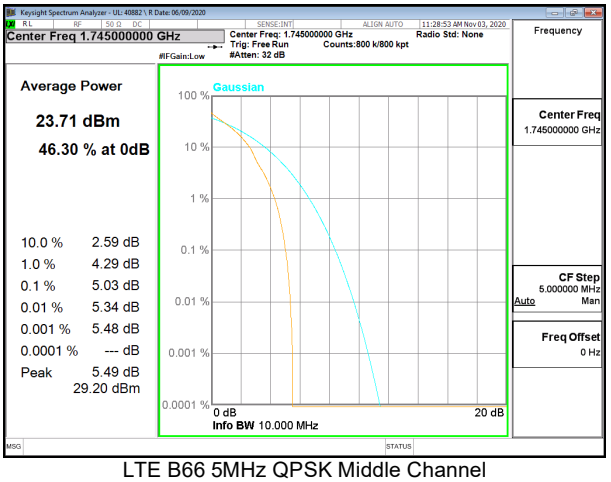
LTE B66 1.4MHz 16QAM Middle Channel



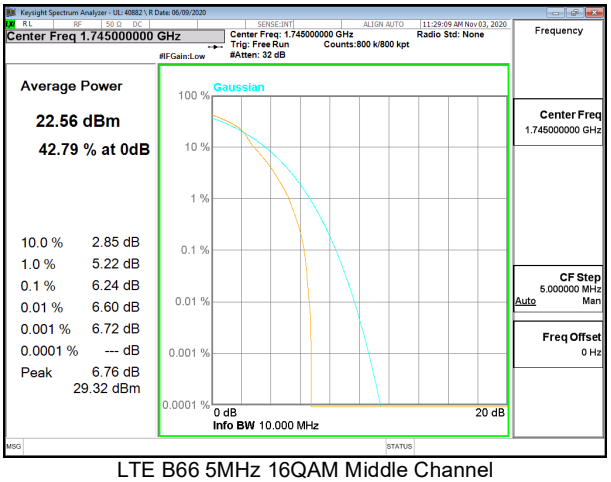
LTE B66 3MHz QPSK Middle Channel



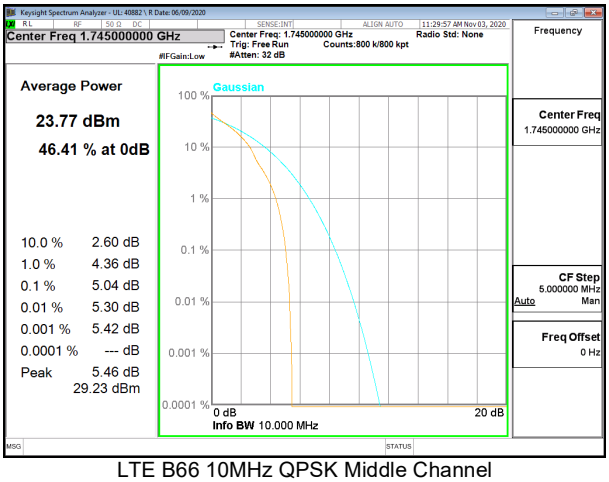
LTE B66 3MHz 16QAM Middle Channel



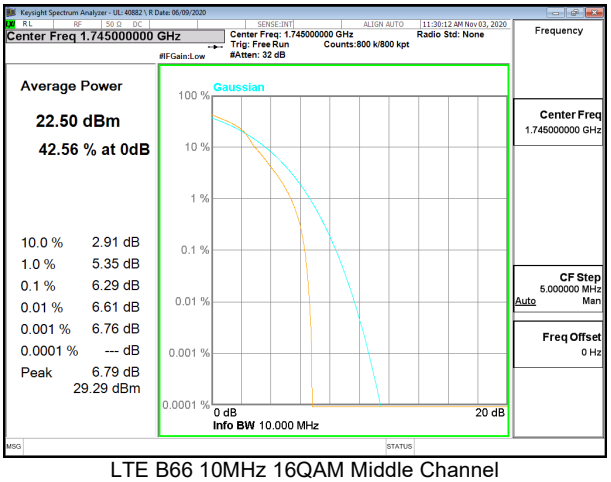
LTE B66 5MHz QPSK Middle Channel



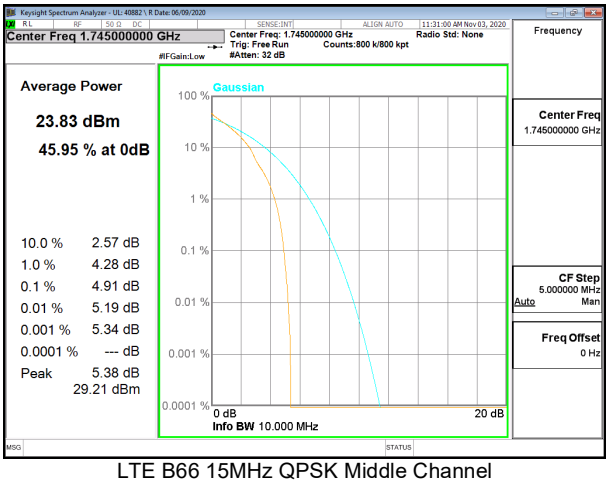
LTE B66 5MHz 16QAM Middle Channel



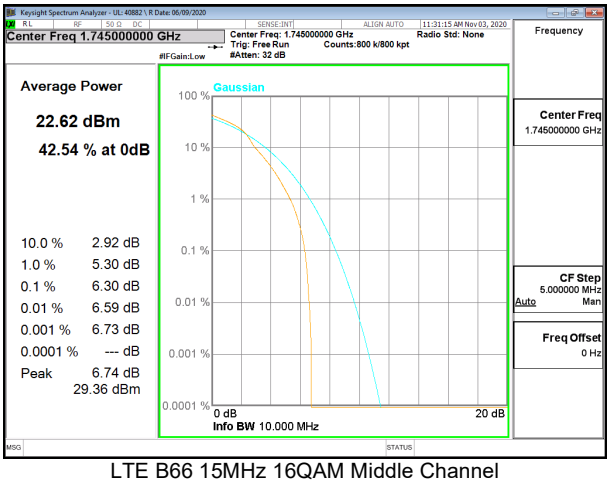
LTE B66 10MHz QPSK Middle Channel



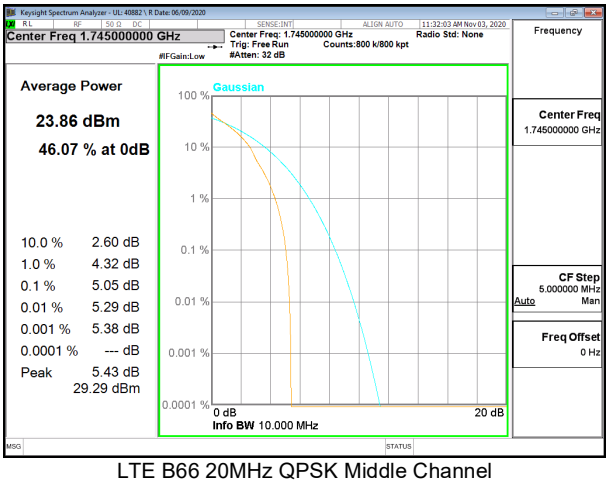
LTE B66 10MHz 16QAM Middle Channel



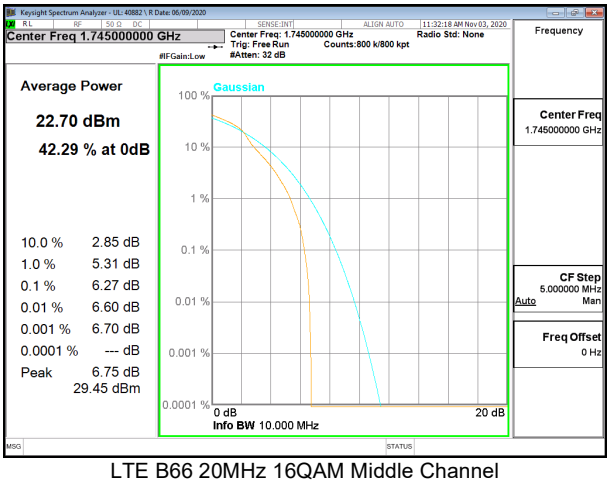
LTE B66 15MHz QPSK Middle Channel



LTE B66 15MHz 16QAM Middle Channel



LTE B66 20MHz QPSK Middle Channel



LTE B66 20MHz 16QAM Middle Channel

9. RADIATED TEST RESULTS

9.1. EFFECTIVE RADIATED POWER ERP/EIRP

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, §27.50, and §90.691

LIMITS

22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

24.232(c) - Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

27.50(c) - (10) Portable stations (hand-held devices) are limited to 3 watts ERP; (LTE B12)

27.50(d) - (4) Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.(Band 66)

In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13dB.

TEST PROCEDURE

ANSI / TIA / EIA 603-E (2016), Clause 2.2.17; PSA setting reference to 971168 D01 v03r01

For peak power measurement with a PSA:

a) Set the RBW ≥ OBW; b) Set VBW ≥ 3 × RBW; c) Set span ≥ 2 x RBW; d) Sweep time = auto couple; e) Detector = peak; f) Ensure that the number of measurement points ≥ span/RBW; g) Trace mode = max hold;

For average power measurement with a PSA:

a) Set span to at least 1.5 times the OBW; b) Set RBW = 1-5% of the OBW, not to exceed 1 MHz; c) Set VBW ≥ 3 x RBW; d) Set number of points in sweep ≥ 2 × span / RBW; e) Sweep time = auto-couple; f) Detector = RMS (power averaging); g) Use free run trigger If burst duty cycle ≥ 98; h) Use trigger to capture bursts If burst duty cycle < 98; i) Trace average at least 100 traces in power averaging (*i.e.*, RMS) mode. j) Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function.

TEST RESULTS

9.1.1. LTE Band 2

BW (MHz)	Mode	RB/RB Size	f(MHz)	EIRP	
				dBm	W
20	QPSK	1/0	1860	23.80	0.2398
		1/0	1880	21.48	0.1407
		1/0	1900	22.22	0.1666
	16QAM	1/0	1860	21.10	0.1288
		1/0	1880	21.83	0.1523
		1/0	1900	19.61	0.0915
15	QPSK	1/0	1857.5	23.52	0.2247
		1/0	1880	22.21	0.1662
		1/0	1902.5	22.17	0.1649
	16QAM	1/0	1857.5	22.80	0.1903
		1/0	1880	21.67	0.1468
		1/0	1902.5	21.04	0.1270
10	QPSK	1/0	1855	21.70	0.1480
		1/0	1880	22.78	0.1895
		1/0	1905	20.45	0.1109
	16QAM	1/0	1855	22.66	0.1846
		1/0	1880	21.12	0.1295
		1/0	1905	22.81	0.1910
5	QPSK	1/0	1852.5	22.85	0.1926
		1/0	1880	22.74	0.1878
		1/0	1907.5	20.64	0.1158
	16QAM	1/0	1852.5	22.43	0.1751
		1/0	1880	21.40	0.1379
		1/0	1907.5	23.33	0.2151
3	QPSK	1/0	1851.5	22.80	0.1906
		1/0	1880	22.11	0.1624
		1/0	1908.5	21.37	0.1372
	16QAM	1/0	1851.5	22.82	0.1915
		1/0	1880	21.59	0.1443
		1/0	1908.5	23.79	0.2392
1.4	QPSK	1/0	1850.7	23.47	0.2225
		1/0	1880	22.46	0.1761
		1/0	1909.3	21.34	0.1363
	16QAM	1/0	1850.7	23.04	0.2013
		1/0	1880	21.23	0.1328
		1/0	1909.3	22.16	0.1644

20MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/19/2020, 11/20/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 2 QPSK 20MHz BW	1860	21.841	H	0.97	2.929	23.80	33	-9.20
	1860	18.783	V	0.97	2.929	20.74	33	-12.26
	1880	19.532	H	0.98	2.929	21.48	33	-11.52
	1880	18.905	V	0.98	2.929	20.86	33	-12.14
	1900	20.014	H	0.98	3.187	22.22	33	-10.78
	1900	15.801	V	0.98	3.187	18.00	33	-15.00
LTE Band 2 16QAM 20MHz BW	1860	19.141	H	0.97	2.929	21.10	33	-11.90
	1860	18.783	V	0.97	2.929	20.74	33	-12.26
	1880	17.612	H	0.98	2.929	19.56	33	-13.44
	1880	19.875	V	0.98	2.929	21.83	33	-11.17
	1900	15.354	H	0.98	3.187	17.56	33	-15.44
	1900	17.411	V	0.98	3.187	19.61	33	-13.39

15MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/19/2020, 11/20/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 2 QPSK 15MHz BW	1857.5	21.557	H	0.97	2.929	23.52	33	-9.48
	1857.5	18.775	V	0.97	2.929	20.73	33	-12.27
	1880	19.722	H	0.98	2.929	21.67	33	-11.33
	1880	20.255	V	0.98	2.929	22.21	33	-10.79
	1902.5	19.971	H	0.98	3.187	22.17	33	-10.83
	1902.5	17.976	V	0.98	3.187	20.18	33	-12.82
LTE Band 2 16QAM 15MHz BW	1857.5	20.837	H	0.97	2.929	22.80	33	-10.20
	1857.5	20.015	V	0.97	2.929	21.97	33	-11.03
	1880	17.372	H	0.98	2.929	19.32	33	-13.68
	1880	19.715	V	0.98	2.929	21.67	33	-11.33
	1902.5	17.021	H	0.98	3.187	19.22	33	-13.78
	1902.5	18.836	V	0.98	3.187	21.04	33	-11.96

10MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/19/2020, 11/20/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 2 QPSK 10MHz BW	1855	19.744	H	0.97	2.929	21.70	33	-11.30
	1855	19.526	V	0.97	2.929	21.48	33	-11.52
	1880	15.352	H	0.98	2.929	17.30	33	-15.70
	1880	20.825	V	0.98	2.929	22.78	33	-10.22
	1905	18.251	H	0.99	3.187	20.45	33	-12.55
	1905	17.865	V	0.99	3.187	20.06	33	-12.94
LTE Band 2 16QAM 10MHz BW	1855	20.704	H	0.97	2.929	22.66	33	-10.34
	1855	19.676	V	0.97	2.929	21.63	33	-11.37
	1880	19.172	H	0.98	2.929	21.12	33	-11.88
	1880	18.975	V	0.98	2.929	20.93	33	-12.07
	1905	20.611	H	0.99	3.187	22.81	33	-10.19
	1905	18.105	V	0.99	3.187	20.30	33	-12.70

5MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/19/2020, 11/20/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 2 QPSK 5MHz BW	1852.5	16.735	H	0.97	2.929	18.69	33	-14.31
	1852.5	20.888	V	0.97	2.929	22.85	33	-10.15
	1880	16.742	H	0.98	2.929	18.69	33	-14.31
	1880	20.785	V	0.98	2.929	22.74	33	-10.26
	1907.5	18.437	H	0.99	3.187	20.64	33	-12.36
	1907.5	17.42	V	0.99	3.187	19.62	33	-13.38
LTE Band 2 16QAM 5MHz BW	1852.5	20.475	H	0.97	2.929	22.43	33	-10.57
	1852.5	19.678	V	0.97	2.929	21.64	33	-11.36
	1880	19.092	H	0.98	2.929	21.04	33	-11.96
	1880	19.445	V	0.98	2.929	21.40	33	-11.60
	1907.5	21.127	H	0.99	3.187	23.33	33	-9.67
	1907.5	18.57	V	0.99	3.187	20.77	33	-12.23

3MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/19/2020, 11/20/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 2 QPSK 3MHz BW	1851.5	16.944	H	0.97	2.929	18.90	33	-14.10
	1851.5	20.843	V	0.97	2.929	22.80	33	-10.20
	1880	13.692	H	0.98	2.929	15.64	33	-17.36
	1880	20.155	V	0.98	2.929	22.11	33	-10.89
	1908.5	16.779	H	0.99	3.187	18.98	33	-14.02
	1908.5	19.174	V	0.99	3.187	21.37	33	-11.63
LTE Band 2 16QAM 3MHz BW	1851.5	20.864	H	0.97	2.929	22.82	33	-10.18
	1851.5	20.143	V	0.97	2.929	22.10	33	-10.90
	1880	19.642	H	0.98	2.929	21.59	33	-11.41
	1880	16.425	V	0.98	2.929	18.38	33	-14.62
	1908.5	21.589	H	0.99	3.187	23.79	33	-9.21
	1908.5	19.164	V	0.99	3.187	21.36	33	-11.64

1.4Hz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/19/2020, 11/20/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 2 QPSK 1.4MHz BW	1850.7	16.641	H	0.97	2.929	18.60	33	-14.40
	1850.7	21.516	V	0.97	2.929	23.47	33	-9.53
	1880	14.082	H	0.98	2.929	16.03	33	-16.97
	1880	20.505	V	0.98	2.929	22.46	33	-10.54
	1909.3	16.03	H	0.99	3.187	18.23	33	-14.77
	1909.3	19.146	V	0.99	3.187	21.34	33	-11.66
LTE Band 2 16QAM 1.4MHz BW	1850.7	21.081	H	0.97	2.929	23.04	33	-9.96
	1850.7	20.076	V	0.97	2.929	22.03	33	-10.97
	1880	19.282	H	0.98	2.929	21.23	33	-11.77
	1880	17.125	V	0.98	2.929	19.08	33	-13.92
	1909.3	19.96	H	0.99	3.187	22.16	33	-10.84
	1909.3	18.666	V	0.99	3.187	20.86	33	-12.14

9.1.2. LTE Band 4

BW (MHz)	Mode	RB/RB Size	f(MHz)	EIRP	
				dBm	W
20	QPSK	1/0	1720.0	21.27	0.1341
		1/0	1732.5	22.27	0.1687
		1/0	1745.0	22.77	0.1894
	16QAM	1/0	1720.0	20.59	0.1146
		1/0	1732.5	21.82	0.1521
		1/0	1745.0	21.95	0.1568
15	QPSK	1/0	1717.5	21.28	0.1344
		1/0	1732.5	19.78	0.0951
		1/0	1747.5	21.83	0.1525
	16QAM	1/0	1717.5	20.59	0.1146
		1/0	1732.5	20.87	0.1222
		1/0	1747.5	18.91	0.0779
10	QPSK	1/0	1715.0	18.92	0.0780
		1/0	1732.5	21.16	0.1307
		1/0	1750.0	19.19	0.0830
	16QAM	1/0	1715.0	18.32	0.0680
		1/0	1732.5	21.15	0.1304
		1/0	1750.0	18.73	0.0746
5	QPSK	1/0	1712.5	18.70	0.0742
		1/0	1732.5	19.73	0.0940
		1/0	1752.5	19.52	0.0895
	16QAM	1/0	1712.5	18.67	0.0737
		1/0	1732.5	19.37	0.0865
		1/0	1752.5	19.11	0.0815
3	QPSK	1/0	1711.5	19.15	0.0822
		1/0	1732.5	19.67	0.0927
		1/0	1753.5	19.52	0.0895
	16QAM	1/0	1711.5	18.61	0.0726
		1/0	1732.5	18.77	0.0754
		1/0	1753.5	19.16	0.0824
1.4	QPSK	1/0	1710.7	18.84	0.0765
		1/0	1732.5	19.54	0.0900
		1/0	1754.3	19.70	0.0933
	16QAM	1/0	1710.7	18.19	0.0659
		1/0	1732.5	19.31	0.0853
		1/0	1754.3	18.93	0.0782

20MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 2020-11-19, 2020-11-20, 2020-12-10, 2020-12-14
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 4 QPSK 20MHz BW	1720	16.17	H	0.93	3.773	19.01	30	-10.99
	1720	18.43	V	0.93	3.773	21.27	30	-8.73
	1732.5	16.64	H	0.93	3.773	19.48	30	-10.52
	1732.5	19.43	V	0.93	3.773	22.27	30	-7.73
	1745	17.47	H	0.94	3.773	20.30	30	-9.70
	1745	19.94	V	0.94	3.773	22.77	30	-7.23
LTE Band 4 16QAM 20MHz BW	1720	15.33	H	0.93	3.773	18.17	30	-11.83
	1720	17.75	V	0.93	3.773	20.59	30	-9.41
	1732.5	16.68	H	0.93	3.773	19.52	30	-10.48
	1732.5	18.98	V	0.93	3.773	21.82	30	-8.18
	1745	16.71	H	0.94	3.773	19.54	30	-10.46
	1745	19.12	V	0.94	3.773	21.95	30	-8.05

15MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 2020-11-19, 2020-11-20, 2020-12-10, 2020-12-14
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 4 QPSK 15MHz BW	1717.5	15.81	H	0.93	3.773	18.65	30	-11.35
	1717.5	18.44	V	0.93	3.773	21.28	30	-8.72
	1732.5	16.94	H	0.93	3.773	19.78	30	-10.22
	1732.5	15.97	V	0.93	3.773	18.81	30	-11.19
	1747.5	16.51	H	0.94	3.773	19.34	30	-10.66
	1747.5	19	V	0.94	3.773	21.83	30	-8.17
LTE Band 4 16QAM 15MHz BW	1717.5	15.57	H	0.93	3.773	18.41	30	-11.59
	1717.5	17.75	V	0.93	3.773	20.59	30	-9.41
	1732.5	16.11	H	0.93	3.773	18.95	30	-11.05
	1732.5	18.03	V	0.93	3.773	20.87	30	-9.13
	1747.5	16.08	H	0.94	3.773	18.91	30	-11.09
	1747.5	14.44	V	0.94	3.773	17.27	30	-12.73

10MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 2020-11-19, 2020-11-20, 2020-12-10, 2020-12-14
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 4 QPSK 10MHz BW	1715	16.08	H	0.93	3.773	18.92	30	-11.08
	1715	14.54	V	0.93	3.773	17.38	30	-12.62
	1732.5	16.65	H	0.93	3.773	19.49	30	-10.51
	1732.5	18.32	V	0.93	3.773	21.16	30	-8.84
	1750	16.71	H	0.94	3.419	19.19	30	-10.81
	1750	15.27	V	0.94	3.419	17.75	30	-12.25
LTE Band 4 16QAM 10MHz BW	1715	15.48	H	0.93	3.773	18.32	30	-11.68
	1715	14	V	0.93	3.773	16.84	30	-13.16
	1732.5	16.01	H	0.93	3.773	18.85	30	-11.15
	1732.5	18.31	V	0.93	3.773	21.15	30	-8.85
	1750	16.25	H	0.94	3.419	18.73	30	-11.27
	1750	15.63	V	0.94	3.419	18.11	30	-11.89

5MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 2020-11-19, 2020-11-20, 2020-12-10, 2020-12-14
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 4 QPSK 5MHz BW	1712.5	15.86	H	0.93	3.773	18.70	30	-11.30
	1712.5	14.42	V	0.93	3.773	17.26	30	-12.74
	1732.5	16.89	H	0.93	3.773	19.73	30	-10.27
	1732.5	15.53	V	0.93	3.773	18.37	30	-11.63
	1752.5	17.04	H	0.94	3.419	19.52	30	-10.48
	1752.5	15.43	V	0.94	3.419	17.91	30	-12.09
LTE Band 4 16QAM 5MHz BW	1712.5	15.83	H	0.93	3.773	18.67	30	-11.33
	1712.5	13.96	V	0.93	3.773	16.80	30	-13.20
	1732.5	16.53	H	0.93	3.773	19.37	30	-10.63
	1732.5	14.94	V	0.93	3.773	17.78	30	-12.22
	1752.5	16.63	H	0.94	3.419	19.11	30	-10.89
	1752.5	15.27	V	0.94	3.419	17.75	30	-12.25

3MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 2020-11-19, 2020-11-20, 2020-12-10, 2020-12-14
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 4 QPSK 3MHz BW	1711.5	16.31	H	0.94	3.773	19.15	30	-10.85
	1711.5	14.55	V	0.94	3.773	17.39	30	-12.61
	1732.5	16.83	H	0.93	3.773	19.67	30	-10.33
	1732.5	15.79	V	0.93	3.773	18.63	30	-11.37
	1753.5	17.04	H	0.94	3.419	19.52	30	-10.48
	1753.5	15.77	V	0.94	3.419	18.25	30	-11.75
LTE Band 4 16QAM 3MHz BW	1711.5	15.77	H	0.94	3.773	18.61	30	-11.39
	1711.5	14.44	V	0.94	3.773	17.28	30	-12.72
	1732.5	15.93	H	0.93	3.773	18.77	30	-11.23
	1732.5	14.89	V	0.93	3.773	17.73	30	-12.27
	1753.5	16.68	H	0.94	3.419	19.16	30	-10.84
	1753.5	15.48	V	0.94	3.419	17.96	30	-12.04

1.4Hz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 2020-11-19, 2020-11-20, 2020-12-10, 2020-12-14
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 4 QPSK 1.4MHz BW	1710.7	16	H	0.94	3.773	18.84	30	-11.16
	1710.7	14.65	V	0.94	3.773	17.49	30	-12.51
	1732.5	16.7	H	0.93	3.773	19.54	30	-10.46
	1732.5	15.55	V	0.93	3.773	18.39	30	-11.61
	1754.3	16.11	H	0.94	3.419	18.59	30	-11.41
	1754.3	17.22	V	0.94	3.419	19.70	30	-10.30
LTE Band 4 16QAM 1.4MHz BW	1710.7	15.35	H	0.94	3.773	18.19	30	-11.81
	1710.7	14.18	V	0.94	3.773	17.02	30	-12.98
	1732.5	16.47	H	0.93	3.773	19.31	30	-10.69
	1732.5	15.21	V	0.93	3.773	18.05	30	-11.95
	1754.3	16.45	H	0.94	3.419	18.93	30	-11.07
	1754.3	14.97	V	0.94	3.419	17.45	30	-12.55

9.1.3. LTE Band 12

BW (MHz)	Mode	RB/RB Size	f(MHz)	ERP	
				dBm	W
10	QPSK	1/0	704	12.54	0.0180
		1/0	707.5	12.41	0.0174
		1/0	711	13.31	0.0214
	16QAM	1/0	704	12.08	0.0162
		1/0	707.5	12.42	0.0175
		1/0	711	12.43	0.0175
5	QPSK	1/0	701.5	12.46	0.0176
		1/0	707.5	12.45	0.0176
		1/0	713.5	13.60	0.0229
	16QAM	1/0	701.5	12.03	0.0160
		1/0	707.5	12.49	0.0177
		1/0	713.5	13.12	0.0205
3	QPSK	1/0	700.5	12.71	0.0187
		1/0	707.5	12.72	0.0187
		1/0	714.5	13.90	0.0245
	16QAM	1/0	700.5	12.11	0.0163
		1/0	707.5	11.86	0.0154
		1/0	714.5	13.17	0.0207
1.4	QPSK	1/0	699.7	12.44	0.0176
		1/0	707.5	12.68	0.0185
		1/0	715.3	13.85	0.0243
	16QAM	1/0	699.7	12.24	0.0168
		1/0	707.5	12.47	0.0177
		1/0	715.3	13.60	0.0229

10MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/19/2020, 11/20/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	ERP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 12 QPSK 10MHz BW	704	9.045	H	0.57	4.07	12.54	34.8	-22.26
	704	7.522	V	0.57	4.08	11.03	34.8	-23.77
	707.5	8.894	H	0.57	4.09	12.41	34.8	-22.39
	707.5	7.376	V	0.57	4.06	10.86	34.8	-23.94
	711	9.742	H	0.57	4.14	13.31	34.8	-21.49
	711	7.236	V	0.57	4.07	10.73	34.8	-24.07
LTE Band 12 16QAM 10MHz BW	704	8.585	H	0.57	4.07	12.08	34.8	-22.72
	704	6.422	V	0.57	4.08	9.93	34.8	-24.87
	707.5	8.904	H	0.57	4.09	12.42	34.8	-22.38
	707.5	6.536	V	0.57	4.06	10.02	34.8	-24.78
	711	8.862	H	0.57	4.14	12.43	34.8	-22.37
	711	6.966	V	0.57	4.07	10.46	34.8	-24.34

5MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/19/2020, 11/20/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 12 QPSK 5MHz BW	701.5	8.961	H	0.57	4.07	12.46	34.8	-22.34
	701.5	6.795	V	0.57	4.09	10.32	34.8	-24.48
	707.5	8.934	H	0.57	4.09	12.45	34.8	-22.35
	707.5	6.936	V	0.57	4.06	10.42	34.8	-24.38
	713.5	10.007	H	0.57	4.17	13.60	34.8	-21.20
	713.5	7.03	V	0.57	4.06	10.52	34.8	-24.28
LTE Band 12 16QAM 5MHz BW	701.5	8.531	H	0.57	4.07	12.03	34.8	-22.77
	701.5	6.325	V	0.57	4.09	9.85	34.8	-24.95
	707.5	8.974	H	0.57	4.09	12.49	34.8	-22.31
	707.5	6.356	V	0.57	4.06	9.84	34.8	-24.96
	713.5	9.527	H	0.57	4.17	13.12	34.8	-21.68
	713.5	7.04	V	0.57	4.06	10.53	34.8	-24.27

3MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/19/2020, 11/20/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 12 QPSK 3MHz BW	700.5	9.199	H	0.57	4.08	12.71	34.8	-22.09
	700.5	6.893	V	0.57	4.11	10.43	34.8	-24.37
	707.5	9.204	H	0.57	4.09	12.72	34.8	-22.08
	707.5	7.156	V	0.57	4.06	10.64	34.8	-24.16
	714.5	10.293	H	0.57	4.18	13.90	34.8	-20.90
	714.5	7.601	V	0.57	4.07	11.10	34.8	-23.70
LTE Band 12 16QAM 3MHz BW	700.5	8.599	H	0.57	4.08	12.11	34.8	-22.69
	700.5	6.663	V	0.57	4.11	10.20	34.8	-24.60
	707.5	8.344	H	0.57	4.09	11.86	34.8	-22.94
	707.5	6.606	V	0.57	4.06	10.09	34.8	-24.71
	714.5	9.563	H	0.57	4.18	13.17	34.8	-21.63
	714.5	6.761	V	0.57	4.07	10.26	34.8	-24.54

1.4Hz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/19/2020, 11/20/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 12 QPSK 1.4MHz BW	699.7	8.934	H	0.57	4.08	12.44	34.8	-22.36
	699.7	6.934	V	0.57	4.12	10.48	34.8	-24.32
	707.5	9.164	H	0.57	4.09	12.68	34.8	-22.12
	707.5	6.866	V	0.57	4.06	10.35	34.8	-24.45
	714.5	10.243	H	0.57	4.18	13.85	34.8	-20.95
	714.5	7.311	V	0.57	4.07	10.81	34.8	-23.99
LTE Band 12 16QAM 1.4MHz BW	699.7	8.734	H	0.57	4.08	12.24	34.8	-22.56
	699.7	6.394	V	0.57	4.12	9.94	34.8	-24.86
	707.5	8.954	H	0.57	4.09	12.47	34.8	-22.33
	707.5	6.526	V	0.57	4.06	10.01	34.8	-24.79
	714.5	9.993	H	0.57	4.18	13.60	34.8	-21.20
	714.5	7.061	V	0.57	4.07	10.56	34.8	-24.24

9.1.4. LTE Band 26 (PART 22)

BW (MHz)	Mode	RB/RB Size	f(MHz)	ERP	
				dBm	W
15	QPSK	1/0	831.5	17.39	0.0548
		1/0	836.5	18.42	0.0695
		1/0	841.5	16.18	0.0415
	16QAM	1/0	831.5	17.27	0.0533
		1/0	836.5	16.95	0.0495
		1/0	841.5	16.14	0.0411
10	QPSK	1/0	829	18.26	0.0669
		1/0	836.5	18.37	0.0687
		1/0	844	15.95	0.0393
	16QAM	1/0	829	17.01	0.0502
		1/0	836.5	17.09	0.0512
		1/0	844	16.05	0.0403
5	QPSK	1/0	826.5	17.74	0.0594
		1/0	836.5	18.65	0.0733
		1/0	846.5	15.89	0.0388
	16QAM	1/0	826.5	16.87	0.0486
		1/0	836.5	16.96	0.0497
		1/0	846.5	15.88	0.0387
3	QPSK	1/0	825.5	17.75	0.0596
		1/0	836.5	17.34	0.0542
		1/0	847.5	15.84	0.0383
	16QAM	1/0	825.5	17.26	0.0532
		1/0	836.5	17.45	0.0556
		1/0	847.5	14.92	0.0310
1.4	QPSK	1/0	824.7	17.26	0.0532
		1/0	836.5	17.36	0.0545
		1/0	848.3	15.86	0.0385
	16QAM	1/0	824.7	17.40	0.0550
		1/0	836.5	18.16	0.0655
		1/0	848.3	15.45	0.0350

15MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 2020-11-19, 2020-11-20, 2020-12-10
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	ERP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 26 QPSK 15MHz BW	831.5	14.068	H	0.62	3.94	17.39	38.5	-21.11
	831.5	6.743	V	0.62	3.49	9.61	38.5	-28.89
	836.5	15.159	H	0.62	3.89	18.42	38.5	-20.08
	836.5	9.34	V	0.62	3.54	12.26	38.5	-26.24
	841.5	12.88	H	0.63	3.93	16.18	38.5	-22.32
	841.5	5.683	V	0.63	3.61	8.67	38.5	-29.83
LTE Band 26 16QAM 15MHz BW	831.5	13.948	H	0.62	3.94	17.27	38.5	-21.23
	831.5	6.563	V	0.62	3.49	9.43	38.5	-29.07
	836.5	13.689	H	0.62	3.89	16.95	38.5	-21.55
	836.5	10.13	V	0.62	3.54	13.05	38.5	-25.45
	841.5	12.84	H	0.63	3.93	16.14	38.5	-22.36
	841.5	5.623	V	0.63	3.61	8.61	38.5	-29.89

10MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 2020-11-19, 2020-11-20, 2020-12-10
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 26 QPSK 10MHz BW	829	14.917	H	0.62	3.96	18.26	38.5	-20.24
	829	9.542	V	0.62	3.48	12.40	38.5	-26.10
	836.5	15.109	H	0.62	3.89	18.37	38.5	-20.13
	836.5	8.87	V	0.62	3.54	11.79	38.5	-26.71
	844	12.62	H	0.63	3.96	15.95	38.5	-22.55
	844	4.577	V	0.63	3.65	7.60	38.5	-30.90
LTE Band 26 16QAM 10MHz BW	829	13.667	H	0.62	3.96	17.01	38.5	-21.49
	829	9.052	V	0.62	3.48	11.91	38.5	-26.59
	836.5	13.829	H	0.62	3.89	17.09	38.5	-21.41
	836.5	8.52	V	0.62	3.54	11.44	38.5	-27.06
	844	12.72	H	0.63	3.96	16.05	38.5	-22.45
	844	5.387	V	0.63	3.65	8.41	38.5	-30.09

5MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 2020-11-19, 2020-11-20, 2020-12-10
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 26 QPSK 5MHz BW	826.5	14.353	H	0.62	4.01	17.74	38.5	-20.76
	826.5	9.58	V	0.62	3.49	12.45	38.5	-26.05
	836.5	15.389	H	0.62	3.89	18.65	38.5	-19.85
	836.5	8.95	V	0.62	3.54	11.87	38.5	-26.63
	846.5	12.534	H	0.63	3.98	15.89	38.5	-22.61
	846.5	6.121	V	0.63	3.70	9.19	38.5	-29.31
LTE Band 26 16QAM 5MHz BW	826.5	13.483	H	0.62	4.01	16.87	38.5	-21.63
	826.5	9.08	V	0.62	3.49	11.95	38.5	-26.55
	836.5	13.699	H	0.62	3.89	16.96	38.5	-21.54
	836.5	8.17	V	0.62	3.54	11.09	38.5	-27.41
	846.5	12.524	H	0.63	3.98	15.88	38.5	-22.62
	846.5	5.591	V	0.63	3.70	8.66	38.5	-29.84

3MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 2020-11-19, 2020-11-20, 2020-12-10
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 26 QPSK 3MHz BW	825.5	14.351	H	0.62	4.02	17.75	38.5	-20.75
	825.5	9.723	V	0.62	3.48	12.58	38.5	-25.92
	836.5	14.079	H	0.62	3.89	17.34	38.5	-21.16
	836.5	11.34	V	0.62	3.54	14.26	38.5	-24.24
	847.5	12.476	H	0.63	3.99	15.84	38.5	-22.66
	847.5	10.167	V	0.63	3.71	13.25	38.5	-25.25
LTE Band 26 16QAM 3MHz BW	825.5	13.861	H	0.62	4.02	17.26	38.5	-21.24
	825.5	8.903	V	0.62	3.48	11.76	38.5	-26.74
	836.5	14.189	H	0.62	3.89	17.45	38.5	-21.05
	836.5	7.75	V	0.62	3.54	10.67	38.5	-27.83
	847.5	11.556	H	0.63	3.99	14.92	38.5	-23.58
	847.5	3.587	V	0.63	3.71	6.67	38.5	-31.83

1.4MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 2020-11-19, 2020-11-20, 2020-12-10
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 26 QPSK 1.4MHz BW	824.7	13.847	H	0.62	4.03	17.26	38.5	-21.24
	824.7	9.624	V	0.62	3.50	12.51	38.5	-25.99
	836.5	14.099	H	0.62	3.89	17.36	38.5	-21.14
	836.5	11.04	V	0.62	3.54	13.96	38.5	-24.54
	848.3	12.494	H	0.63	3.99	15.86	38.5	-22.64
	848.3	7.685	V	0.63	3.73	10.79	38.5	-27.71
LTE Band 26 16QAM 1.4MHz BW	824.7	13.987	H	0.62	4.03	17.40	38.5	-21.10
	824.7	8.954	V	0.62	3.50	11.84	38.5	-26.66
	836.5	14.899	H	0.62	3.89	18.16	38.5	-20.34
	836.5	7.75	V	0.62	3.54	10.67	38.5	-27.83
	848.3	12.084	H	0.63	3.99	15.45	38.5	-23.05
	848.3	3.495	V	0.63	3.73	6.60	38.5	-31.90

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9.1.5. LTE Band 41 (FCC)

BW (MHz)	Mode	RB/RB Size	f(MHz)	EIRP	
				dBm	W
20	QPSK	1/0	2506	18.19	0.06587
		1/0	2593	18.66	0.07343
		1/0	2680	18.58	0.07214
	16QAM	1/0	2506	18.81	0.07597
		1/0	2593	19.93	0.09838
		1/0	2680	19.32	0.08554
15	QPSK	1/0	2503.5	22.74	0.18809
		1/0	2593	19.26	0.08431
		1/0	2682.5	18.17	0.06556
	16QAM	1/0	2503.5	19.49	0.08900
		1/0	2593	19.84	0.09636
		1/0	2682.5	18.58	0.07206
10	QPSK	1/0	2501	18.57	0.07199
		1/0	2593	19.23	0.08373
		1/0	2685	18.77	0.07531
	16QAM	1/0	2501	18.86	0.07696
		1/0	2593	19.21	0.08335
		1/0	2685	18.88	0.07724
5	QPSK	1/0	2498.5	19.25	0.08419
		1/0	2593	18.10	0.06455
		1/0	2687.5	16.34	0.0423
	16QAM	1/0	2498.5	19.52	0.08959
		1/0	2593	19.92	0.09815
		1/0	2687.5	18.98	0.07899

20MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/25/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
	2506	11.083	H	1.14	3.489	13.43	33	-19.57
LTE Band 41	2506	15.839	V	1.14	3.489	18.19	33	-14.81
(FCC)	2593	9.126	H	1.17	3.819	11.78	33	-21.22
QPSK	2593	16.006	V	1.17	3.819	18.66	33	-14.34
20MHz BW	2680	8.851	H	1.19	4.257	11.92	33	-21.08
	2680	15.517	V	1.19	4.257	18.58	33	-14.42
	2506	11.703	H	1.14	3.489	14.05	33	-18.95
LTE Band 41	2506	16.459	V	1.14	3.489	18.81	33	-14.19
(FCC)	2593	10.816	H	1.17	3.819	13.47	33	-19.53
16QAM	2593	17.276	V	1.17	3.819	19.93	33	-13.07
20MHz BW	2680	10.421	H	1.19	4.257	13.49	33	-19.51
	2680	16.257	V	1.19	4.257	19.32	33	-13.68

15MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/25/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
	2503.5	10.568	H	1.14	3.489	12.92	33	-20.08
LTE Band 41	2503.5	20.396	V	1.14	3.489	22.74	33	-10.26
(FCC)	2593	10.506	H	1.17	3.819	13.16	33	-19.84
QPSK	2593	16.606	V	1.17	3.819	19.26	33	-13.74
15MHz BW	2682.5	8.773	H	1.19	4.257	11.84	33	-21.16
	2682.5	15.102	V	1.19	4.257	18.17	33	-14.83
	2503.5	11.368	H	1.14	3.489	13.72	33	-19.28
LTE Band 41	2503.5	17.146	V	1.14	3.489	19.49	33	-13.51
(FCC)	2593	10.636	H	1.17	3.819	13.29	33	-19.71
16QAM	2593	17.186	V	1.17	3.819	19.84	33	-13.16
15MHz BW	2682.5	9.903	H	1.19	4.257	12.97	33	-20.03
	2682.5	15.512	V	1.19	4.257	18.58	33	-14.42

10MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/25/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
	2501	11.586	H	1.14	3.489	13.93	33	-19.07
LTE Band 41	2501	16.225	V	1.14	3.489	18.57	33	-14.43
(FCC)	2593	10.476	H	1.17	3.819	13.13	33	-19.87
QPSK	2593	16.576	V	1.17	3.819	19.23	33	-13.77
10MHz BW	2685	10.499	H	1.19	4.257	13.56	33	-19.44
	2685	15.704	V	1.19	4.257	18.77	33	-14.23
	2501	12.326	H	1.14	3.489	14.67	33	-18.33
LTE Band 41	2501	16.515	V	1.14	3.489	18.86	33	-14.14
(FCC)	2593	10.446	H	1.17	3.819	13.10	33	-19.90
16QAM	2593	16.556	V	1.17	3.819	19.21	33	-13.79
10MHz BW	2685	11.139	H	1.19	4.257	14.20	33	-18.80
	2685	15.814	V	1.19	4.257	18.88	33	-14.12

5MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/25/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
	2498.5	11.143	H	1.14	3.746	13.75	33	-19.25
LTE Band 41	2498.5	16.648	V	1.14	3.746	19.25	33	-13.75
(FCC)	2593	9.286	H	1.17	3.819	11.94	33	-21.06
QPSK	2593	15.446	V	1.17	3.819	18.10	33	-14.90
5MHz BW	2687.5	9.712	H	1.19	4.257	12.78	33	-20.22
	2687.5	13.271	V	1.19	4.257	16.34	33	-16.66
	2498.5	11.533	H	1.14	3.746	14.14	33	-18.86
LTE Band 41	2498.5	16.918	V	1.14	3.746	19.52	33	-13.48
(FCC)	2593	10.116	H	1.17	3.819	12.77	33	-20.23
16QAM	2593	17.266	V	1.17	3.819	19.92	33	-13.08
5MHz BW	2687.5	11.522	H	1.19	4.257	14.59	33	-18.41
	2687.5	15.911	V	1.19	4.257	18.98	33	-14.02

9.1.6. LTE Band 66

BW (MHz)	Mode	RB/RB Size	f(MHz)	EIRP	
				dBm	W
20	QPSK	1/0	1720	19.80	0.0956
		1/0	1745	21.16	0.1306
		1/0	1770	20.80	0.1201
	16QAM	1/0	1720	22.15	0.1642
		1/0	1745	22.83	0.1919
		1/0	1770	23.51	0.2242
15	QPSK	1/0	1717.5	20.93	0.1238
		1/0	1745	22.85	0.1927
		1/0	1772.5	23.94	0.2477
	16QAM	1/0	1717.5	22.07	0.1609
		1/0	1745	22.93	0.1964
		1/0	1772.5	23.61	0.2297
10	QPSK	1/0	1715	20.29	0.1069
		1/0	1745	22.97	0.1980
		1/0	1775	23.51	0.2244
	16QAM	1/0	1715	20.88	0.1223
		1/0	1745	23.33	0.2153
		1/0	1775	23.69	0.2339
5	QPSK	1/0	1712.5	20.45	0.1110
		1/0	1745	23.24	0.2108
		1/0	1777.5	22.49	0.1774
	16QAM	1/0	1712.5	19.88	0.0973
		1/0	1745	20.77	0.1193
		1/0	1777.5	19.67	0.0927
3	QPSK	1/0	1711.5	20.61	0.1151
		1/0	1745	23.08	0.2031
		1/0	1778.5	22.24	0.1676
	16QAM	1/0	1711.5	19.44	0.0879
		1/0	1745	20.47	0.1114
		1/0	1778.5	19.51	0.0894
1.4	QPSK	1/0	1710.7	19.79	0.0953
		1/0	1745	20.84	0.1213
		1/0	1779.3	22.08	0.1615
	16QAM	1/0	1710.7	19.21	0.0834
		1/0	1745	20.59	0.1145
		1/0	1779.3	19.27	0.0845

20MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/19/2020, 11/20/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 66 QPSK 20MHz BW	1720	16.96	H	0.93	3.773	19.80	30	-10.20
	1720	16.383	V	0.93	3.773	19.23	30	-10.77
	1745	18.327	H	0.94	3.773	21.16	30	-8.84
	1745	16.794	V	0.94	3.773	19.63	30	-10.37
	1770	18.326	H	0.95	3.419	20.80	30	-9.20
	1770	17.386	V	0.95	3.419	19.86	30	-10.14
LTE Band 66 16QAM 20MHz BW	1720	19.31	H	0.93	3.773	22.15	30	-7.85
	1720	18.983	V	0.93	3.773	21.83	30	-8.17
	1745	19.997	H	0.94	3.773	22.83	30	-7.17
	1745	19.414	V	0.94	3.773	22.25	30	-7.75
	1770	21.036	H	0.95	3.419	23.51	30	-6.49
	1770	20.556	V	0.95	3.419	23.03	30	-6.97

15MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/19/2020, 11/20/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 66 QPSK 15MHz BW	1717.5	16.677	H	0.93	3.773	19.52	30	-10.48
	1717.5	18.083	V	0.93	3.773	20.93	30	-9.07
	1745	17.797	H	0.94	3.773	20.63	30	-9.37
	1745	20.014	V	0.94	3.773	22.85	30	-7.15
	1772.5	18.992	H	0.95	3.419	21.46	30	-8.54
	1772.5	21.47	V	0.95	3.419	23.94	30	-6.06
LTE Band 66 16QAM 15MHz BW	1717.5	19.097	H	0.93	3.773	21.94	30	-8.06
	1717.5	19.223	V	0.93	3.773	22.07	30	-7.93
	1745	20.097	H	0.94	3.773	22.93	30	-7.07
	1745	19.164	V	0.94	3.773	22.00	30	-8.00
	1772.5	21.142	H	0.95	3.419	23.61	30	-6.39
	1772.5	20.81	V	0.95	3.419	23.28	30	-6.72

10MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/19/2020, 11/20/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 66 QPSK 10MHz BW	1715	16.453	H	0.93	3.773	19.30	30	-10.70
	1715	17.447	V	0.93	3.773	20.29	30	-9.71
	1745	17.927	H	0.94	3.773	20.76	30	-9.24
	1745	20.134	V	0.94	3.773	22.97	30	-7.03
	1775	18.883	H	0.95	3.419	21.35	30	-8.65
	1775	21.04	V	0.95	3.419	23.51	30	-6.49
LTE Band 66 16QAM 10MHz BW	1715	18.033	H	0.93	3.773	20.88	30	-9.12
	1715	17.827	V	0.93	3.773	20.67	30	-9.33
	1745	20.497	H	0.94	3.773	23.33	30	-6.67
	1745	19.914	V	0.94	3.773	22.75	30	-7.25
	1775	20.733	H	0.95	3.419	23.20	30	-6.80
	1775	21.22	V	0.95	3.419	23.69	30	-6.31

5MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/19/2020, 11/20/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 66 QPSK 5MHz BW	1712.5	16.013	H	0.93	3.773	18.86	30	-11.14
	1712.5	17.61	V	0.93	3.773	20.45	30	-9.55
	1745	18.067	H	0.94	3.773	20.90	30	-9.10
	1745	20.404	V	0.94	3.773	23.24	30	-6.76
	1777.5	17.861	H	0.95	3.419	20.33	30	-9.67
	1777.5	20.019	V	0.95	3.419	22.49	30	-7.51
LTE Band 66 16QAM 5MHz BW	1712.5	15.743	H	0.93	3.773	18.59	30	-11.41
	1712.5	17.04	V	0.93	3.773	19.88	30	-10.12
	1745	17.697	H	0.94	3.773	20.53	30	-9.47
	1745	17.934	V	0.94	3.773	20.77	30	-9.23
	1777.5	16.611	H	0.95	3.419	19.08	30	-10.92
	1777.5	17.199	V	0.95	3.419	19.67	30	-10.33

3MHz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/19/2020, 11/20/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 66 QPSK 3MHz BW	1711.5	15.972	H	0.94	3.773	18.81	30	-11.19
	1711.5	17.774	V	0.94	3.773	20.61	30	-9.39
	1745	17.947	H	0.94	3.773	20.78	30	-9.22
	1745	20.244	V	0.94	3.773	23.08	30	-6.92
	1778.5	17.872	H	0.95	3.419	20.34	30	-9.66
	1778.5	19.773	V	0.95	3.419	22.24	30	-7.76
LTE Band 66 16QAM 3MHz BW	1711.5	15.252	H	0.94	3.773	18.09	30	-11.91
	1711.5	16.604	V	0.94	3.773	19.44	30	-10.56
	1745	17.287	H	0.94	3.773	20.12	30	-9.88
	1745	17.634	V	0.94	3.773	20.47	30	-9.53
	1778.5	16.522	H	0.95	3.419	18.99	30	-11.01
	1778.5	17.043	V	0.95	3.419	19.51	30	-10.49

1.4Hz QPSK/16QAM

Company: Samsung
Project #: 13548896
Date: 11/19/2020, 11/20/2020
Test Engineer: 11322, 11993
Configuration: EUT w/ PS and Earbuds
Location: S-SAC

Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 66 QPSK 1.4MHz BW	1710.7	15.962	H	0.94	3.773	18.80	30	-11.20
	1710.7	16.954	V	0.94	3.773	19.79	30	-10.21
	1745	17.967	H	0.94	3.773	20.80	30	-9.20
	1745	18.004	V	0.94	3.773	20.84	30	-9.16
	1779.3	17.549	H	0.95	3.419	20.02	30	-9.98
	1779.3	19.611	V	0.95	3.419	22.08	30	-7.92
LTE Band 66 16QAM 1.4MHz BW	1710.7	15.502	H	0.94	3.773	18.34	30	-11.66
	1710.7	16.374	V	0.94	3.773	19.21	30	-10.79
	1745	17.297	H	0.94	3.773	20.13	30	-9.87
	1745	17.754	V	0.94	3.773	20.59	30	-9.41
	1779.3	16.429	H	0.95	3.419	18.90	30	-11.10
	1779.3	16.801	V	0.95	3.419	19.27	30	-10.73

9.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, §27.53

LIMITS

FCC: §22.917(a), §24.238(a), §27.53 (g), (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.

FCC: §27.53 (m) (Band 41)
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.

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

No spurious emissions were detected above system noise floor from 18-26GHz.

9.2.1. LTE BAND 2

QPSK LTE BAND 2 (20.0MHZ BANDWIDTH)

Project Number	13548896
Client	Lions
Test Location	N-SAC
Mode	LTE2/20MHz/QPSK
Tested by	19289 / 11993
Date	2020-11-09

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AT0074 (dB/m)	Amp/Cbl (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1860MHz													
4	34.3	-71.34	Pk	23.9	-31.3	.1	9.7	-68.94	-13	-55.94	0-360	101	V
5	114.55	-70.53	Pk	19.4	-30.1	.2	9.7	-71.33	-13	-58.33	0-360	101	V
1	114.6	-74.34	Pk	19.4	-30.1	.2	9.7	-75.14	-13	-62.14	0-360	400	H
6	188.4	-69.47	Pk	17.5	-29.4	.3	9.7	-71.37	-13	-58.37	0-360	101	V
2	194.05	-75.71	Pk	18.1	-29.2	.3	9.7	-76.81	-13	-63.81	0-360	101	H
7	230.9	-71.58	Pk	17.2	-28.9	.3	9.7	-73.28	-13	-60.28	0-360	99	V
3	239.9	-74.79	Pk	17.7	-28.8	.3	9.7	-75.89	-13	-62.89	0-360	101	H
1880MHz													
4	34.15	-72.67	Pk	24	-31.3	.1	9.7	-70.17	-13	-57.17	0-360	100	V
5	71.15	-66.32	Pk	14.2	-30.8	.1	9.7	-73.12	-13	-60.12	0-360	100	V
6	76.1	-66.49	Pk	14	-30.7	.2	9.7	-73.29	-13	-60.29	0-360	100	V
1	114.2	-73.71	Pk	19.3	-30.1	.2	9.7	-74.61	-13	-61.61	0-360	299	H
7	114.6	-70.21	Pk	19.4	-30.1	.2	9.7	-71.01	-13	-58.01	0-360	100	V
8	189.5	-68.83	Pk	17.6	-29.4	.3	9.7	-70.63	-13	-57.63	0-360	100	V
2	197.65	-76.62	Pk	18.8	-29.3	.3	9.7	-77.12	-13	-64.12	0-360	99	H
9	232.2	-71.11	Pk	17.2	-28.9	.3	9.7	-72.81	-13	-59.81	0-360	99	V
3	240.05	-75.25	Pk	17.7	-28.8	.3	9.7	-76.35	-13	-63.35	0-360	200	H
1900MHz													
4	34.3	-69.25	Pk	23.9	-31.3	.1	9.7	-66.85	-13	-53.85	0-360	100	V
5	41.9	-72.42	Pk	18.3	-31.2	.1	9.7	-75.52	-13	-62.52	0-360	100	V
6	60.5	-70.7	Pk	13.6	-30.9	.1	9.7	-78.2	-13	-65.2	0-360	100	V
7	76.3	-65.97	Pk	14	-30.7	.2	9.7	-72.77	-13	-59.77	0-360	100	V
8	106.95	-71.27	Pk	18.1	-30.2	.2	9.7	-73.47	-13	-60.47	0-360	100	V
1	107.9	-76.2	Pk	18.3	-30.2	.2	9.7	-78.2	-13	-65.2	0-360	400	H
2	195.65	-78.16	Pk	18.4	-29.3	.3	9.7	-79.06	-13	-66.06	0-360	299	H
9	200.65	-74.52	Pk	18.8	-29.1	.3	9.7	-74.82	-13	-61.82	0-360	99	V
3	327.05	-75.05	Pk	20.1	-28.2	.3	9.7	-73.15	-13	-60.15	0-360	100	H

Pk - Peak detector