



TEST REPORT

Report Number : 13259310-E8V5

Applicant : APPLE, INC
1 APPLE PARK WAY
CUPERTINO, CA 95014, U.S.A.

Model : A2403, A2404, AND A2405

FCC ID : BCG-E3544A

EUT Description : SMARTPHONE

Test Standard(s) : FCC CFR47 PART 22H, 24E, 27, 90S, 90R, AND 96

Date Of Issue:
SEPTEMBER 29, 2020

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NVLAP Lab code: 200065-0

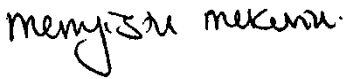
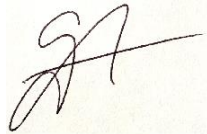
Revision History

Rev.	Issue Date	Revisions	Revised By
V1	9/15/2020	Initial Review	Mengistu Mekuria
V2	9/15/2020	Address TCB Questions	Mengistu Mekuria
V3	9/18/2020	5G NR band description	Mengistu Mekuria
V4	9/28/2020	Revision on n41	Mengistu Mekuria
V5	9/29/2020	Updated Antenna gains, Updated spotcheck table to match Parent report for V4, Updated Section 5.8.	John Thompson

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1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	APPLE, INC 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.	
Model	A2403, A2404, AND A2405	
FCC ID	BCG-E3544A	
EUT Description	SMARTPHONE	
Serial Number	MODEL (A2403, A2404, And A2405): C07029201EDPRW13 (Conducted) and G6TD203Y04HT (Radiated)	
Date Tested	APRIL 21, 2020 to SEPTEMBER 29, 2020	
Applicable Standards	FCC CFR47 22H, 24E, 27, 90S, 90R, AND 96	
Test Results	COMPLIES	
UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.		
Approved & Released By:	Reviewed By:	Prepared By:
		
Mengistu Mekuria Lead Test Engineer UL Verification Services Inc.	Glenn Escano Project Engineer UL Verification Services Inc.	Sintia Andrean Laboratory Engineer UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with the following:

- ANSI C63.26:2015
- FCC CFR 47 Part 2, Part 22, Part 24, Part 27, Part 90, and Part 96
- [FCC KDB 971168 D01 v03r01](#): Power Meas License Digital Systems
- [FCC KDB 971168 D02 v02r01](#): Misc Rev Approv License Devices
- [FCC KDB 412172 D01 v01r01](#): Determining ERP and EIRP

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, and 47658 Kato Road, Fremont, California, USA. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street	47658 Kato Rd.
☒ Chamber A (IC:2324B-1)	☐ Chamber D (IC:22541-1)	☒ Chamber I (IC: 2324A-5)
☒ Chamber B (IC:2324B-2)	☐ Chamber E (IC:22541-2)	☐ Chamber J (IC: 2324A-6)
☐ Chamber C (IC:2324B-3)	☐ Chamber F (IC:22541-3)	☐ Chamber K (IC: 2324A-1)
	☐ Chamber G (IC:22541-4)	☐ Chamber L (IC: 2324A-3)
	☐ Chamber H (IC:22541-5)	☐ Chamber M (IC: 2324A-2)

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers above are covered under Industry Canada company address and respective code: 2324A.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0

4. DECISION RULES AND MEASUREMENT UNCERTAINTY

4.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

4.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	U _{Lab}
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.39 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.07 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.52 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	4.88 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.24 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.37 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.17 dB
Occupied Channel Bandwidth	±0.39 %
Temperature	±0.9 °C
Supply voltages	±0.45 %
Time	±0.02 %

Uncertainty figures are valid to a confidence level of 95%.

4.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
 $36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.
 $36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The Apple iPhone is a smartphone with multimedia functions (music, application support, and video), cellular GSM, GPRS, EGPRS, UMTS, LTE, 5G, CDMA, IEEE 802.11a/b/g/n/ac/ax, Bluetooth, Ultra-Wideband, GPS, NFC and WPT. All models support at least one UICC based SIM. The second SIM is either an UICC based p-SIM (physical SIM) or e-SIM (electronic SIM). The device supports a built-in inductive charging transmitter and receiver. The rechargeable battery is not user accessible.

5.2. INTRODUCTION

This application for certification is leveraging the data reuse procedures from KDB 484596 D01 based on reference FCC ID BCG-E3542A and BCG-E3543A to cover variant model BCG-E3544A. The major difference between the parent/reference model and the variant model is the depopulation in the variant model of the mmWave transmitter or cellular bands. All other circuitry and features are identical. The data reuse test plan was approved via manufacturer KDB inquiry.

5.3. MODEL DIFFERENCES

The manufacturer hereby declares the following for models A2172, A2402, A2403, A2404 and A2405.

A2172, A2402, A2403, A2404 and A2405 are highly similar, with the only difference being the supported cellular bands.

They have the same PCB layout, design, common components, antennas, antenna locations and housing cases.

More specifically, their cellular modem, Wi-Fi, BT, NFC, WPT and UWB transmitters are identical, and removal of cellular bands is done by software and depopulation of band-specific components associated with the removed bands.

A2403, A2404 and A2405 are allocated for marketing and logistic purposes only. Spot check verification has been done on model A2403 in accordance with the test plan approved via KDB inquiry. Comparison of the models, upper deviation is within 3dB range and all tests are under FCC/ ISED Technical Limits. The test reports for model A2172 and model A2402 ANT2 RSE test results may be applied as representative to models A2403, A2404 and A2405.

5.4. SPOT CHECK VERIFICATION RESULTS SUMMARY

A2403, A2404, A2405 SPOT CHECK RESULTS								
Technology	Worst Mode	Test Item	Channel	Measured	Original Model: A2172	Sub Model: A2403, A2404, A2405	Delta (dB)	Remarks
				Frequency MHz	FCC ID: BCG-E3542A	FCC ID: BCG-E3544A		
LTE BAND 2	QPSK @ 20 MHz BW	EIRP	Low	1860	26 dBm	26 dBm	0	
	QPSK @ highest BW	RSE	Low	7092.05	-45.16 dBm	-45.36 dBm	-0.2	Noise Floor Level
LTE BAND 5	QPSK @ 10 MHz BW	ERP	High	844	18.35 dBm	18.35 dBm	0	
5G NR BAND N5	QPSK @ 20 MHz BW	ERP	Mid	836.5	18.15 dBm	17.75 dBm	-0.4	
	QPSK @ highest BW	RSE	High	2516.73	-45.74 dBm	-51.26 dBm	-5.52	Noise Floor Level
LTE BAND 7	QPSK @ 20 MHz BW	EIRP	Mid	2535	25.9 dBm	25.9 dBm	0	
	QPSK @ highest BW	RSE	High	10297.32	-43.33 dBm	-42.66 dBm	0.67	Noise Floor Level
LTE BAND 12	QPSK @ 10 MHz BW	ERP	High	711	18.55 dBm	18.35 dBm	-0.2	
5G NR BAND N12	QPSK @ 15 MHz BW	ERP	Mid	707.5	18.05 dBm	18.05 dBm	0	
LTE BAND 13	QPSK @ 10 MHz BW	ERP	Mid	782	18.05 dBm	18.05 dBm	0	
LTE BAND 17	QPSK @ 10 MHz BW	ERP	High	711	18.55 dBm	18.55 dBm	0	
LTE BAND 25	QPSK @ 20 MHz BW	EIRP	Mid	1882.5	26 dBm	25.5dBm	-0.5	
LTE BAND 26 (90S)	QPSK @10 MHz BW	ERP	Mid	819	18.35 dBm	18.35 dBm	0	
LTE BAND 30 (NS1)	QPSK @ 10 MHz BW	EIRP	Mid	2310	23.5 dBm	23.5 dBm	0	
LTE BAND 41 (FCC)	QPSK @ 20 MHz BW	EIRP	Low	2506	26.9 dBm	26.9 dBm	0	
5G NR BAND N41 (FCC)	QPSK @ 100 MHz BW	EIRP	High	2640	27.6 dBm	26.1 dBm	-1.5	
LTE BAND 48	QPSK @ 20 MHz BW	EIRP	Low	3560	22.7 dBm	21.9 dBm	-0.8	
LTE BAND 66	QPSK @ 20 MHz BW	EIRP	Mid	1745	23.8 dBm	23.5 dBm	-0.3	
5G NR BAND N77	QPSK @ 100 MHz BW	EIRP	Low	3750	26.6 dBm	26.6 dBm	0	

5.5. REFERENCE DETAIL

Reference application that contains the reused reference data.

Equipment Class	Reference FCC ID	Reference Application	Report Title/Section
PCE, CBE	BCG-E3542A	13179116-E8	FCC LTE Report/ All Sections except Radiated spurious emission on ANT2
PCE, CBE	BCG-E3543A	13171736-E8	FCC LTE Report Radiated spurious emission on ANT2

5.6. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was version 0.28.03-1.

5.7. MAXIMUM ANTENNA GAIN

Please see table below:

LTE Bands AND 5G NR Bands	Antenna Gain (dBi)						
	ANT 1	ANT 2	ANT 3	ANT 4	ANT 7	ANT 8	ANT 9
LTE Band 12, 5G NR Band n12, 699 – 716 MHz	-5.0	-6.0	NA	NA	NA	NA	NA
LTE Band 17, 704 – 716 MHz	-5.0	-6.0	NA	NA	NA	NA	NA
LTE Band 13, 777 – 787 MHz	-5.5	-5.0	NA	NA	NA	NA	NA
LTE Band 26, 814 – 824 MHz (Part 90S)	-5.2	-5.8	NA	NA	NA	NA	NA
LTE Band 5, 5G NR Band n5, 824 – 849 MHz	-5.2	-5.6	NA	NA	NA	NA	NA
LTE Band 66, 5G NR Band n66, 1710 – 1780 MHz	-1.9	-2.0	-1.5	-3.0	NA	NA	NA
LTE Band 2, 5G NR Band n2, 1850 – 1910 MHz	-2.2	-3.9	1.0	-1.8	NA	NA	NA
LTE Band 25, 5G NR Band n25, 1850 – 1915 MHz	-2.2	-3.9	1.0	-1.8	NA	NA	NA
LTE Band 30, 2305 – 2315 MHz	-3.3	-2.1	-1.2	-2.3	NA	NA	NA
LTE Band 7, 2500 – 2570 MHz	-2.9	-0.4	0.9	-3.0	NA	NA	NA
LTE Band 41, 5G NR Band n41, 2496 – 2690 MHz	-2.5	-0.4	0.9	-2.8	NA	NA	NA
5G NR Band n77, 3700 – 3980 MHz	NA	NA	NA	-2.2	-0.1	-3.2	-2.9
LTE Band 48, 3550 – 3700 MHz	NA	NA	NA	-0.5	-0.1	-5.3	-0.9

5.8. WORST-CASE CONFIGURATION AND MODE

The EUT supports the following LTE and 5G NR Bands:

Band 2, Band 4, Band 5, Band 7, Band 12, Band 13, Band 17, Band 25, Band 26, Band 30, Band 41, Band 48, Band 66, 5G NR Band n2, 5G NR Band n5, 5G NR Band n12, 5G NR Band n25, 5G NR Band n41, 5G NR Band n66 and 5G NR n77.

For 5G NR Bands (n2, n5, n12, n25, n41, and n66) having the same operations bandwidth and Power are covered by LTE bands of (Band 2, Band 5, Band 12, Band 25, Band 41, and Band 66). Additional tests for 5G NR bands with higher BW modes than LTE Bands, includes 5G NR Bands n5, n12, and n41 were performed.

LTE Band 4 (1710-1755MHz, 5/10/15/20MHz bandwidth) is covered by LTE Band 66 because it is a subset of LTE band 66 and they have same output power.

FCC rule Part 22.905 of LTE Band 26 (824-849MHz) is covered by LTE Band 5 of same rule since they have the same output power and supported bandwidths.

For 5G NR bands, conducted spurious emission tests were conducted on wider bandwidth with inner 1RB since this is the worst bandwidth and the highest output power.

BPSK modulation applied only for 5G NR band frequencies and has the same tune up power as QPSK modulations.

The DFT-s-OFDM and CP-OFDM waveforms were investigated, and DFT-s-OFDM was found to be the worst case.

The worst-case scenario for all measurements is based on an engineering evaluation and QPSK was observed as the worst one and set for all conducted and radiated. Output power measurements were measured on QPSK, 16QAM, 64QAM, 256QAM, and BPSK, modulations. For testing purposes emissions on sections 8 and 9 were measured while QPSK was set at or above target power for all bands. Conducted tests were performed on the worst case antenna because it has the highest conducted power. ANT1 is the worst case for all bands except Band 48, 5G NR Band 41, and 5G NR Band 77. For 5G NR Band 41 ANT2 is the worst case antenna. For band 48 ANT9 is the worst case antenna. For 5G NR Band n77 ANT7 is the worst case antenna.

For 5G NR Band n41 20MHz BW, antenna 2 and antenna 4 powers are higher than LTE band 41. Therefore, additional power measurements and occupied bandwidth tests were performed on antenna 2 and antenna 4 for 20MHz BW. Since LTE antenna 1 the highest output power of all (LTE band 41 and 5G NR Band n41) antennas, all other conducted tests for 20MHz BW were performed only on LTE antenna 1.

The EUT was investigated in three orthogonal orientations X/Y/Z on all ANT 1, ANT2, ANT3, ANT4, ANT7, ANT8 and ANT 9 antennas to determine the worst case orientation. The following table exhibit the worst case orientation for different frequency bands. The full tests of the EUT have made upon the orientations that shown in the table below.

Freq Bands	ANT1	ANT2	ANT3	ANT4	ANT7	ANT8	ANT9
663 – 849 MHz	Y	X	N/A	N/A	N/A	N/A	N/A
1710 – 1915 MHz	X	X	X	X	N/A	N/A	N/A
2300 – 2700 MHz	Y	Y	Y	X	N/A	N/A	N/A
3300 – 3980 MHz	N/A	N/A	N/A	X	Y	X	Y

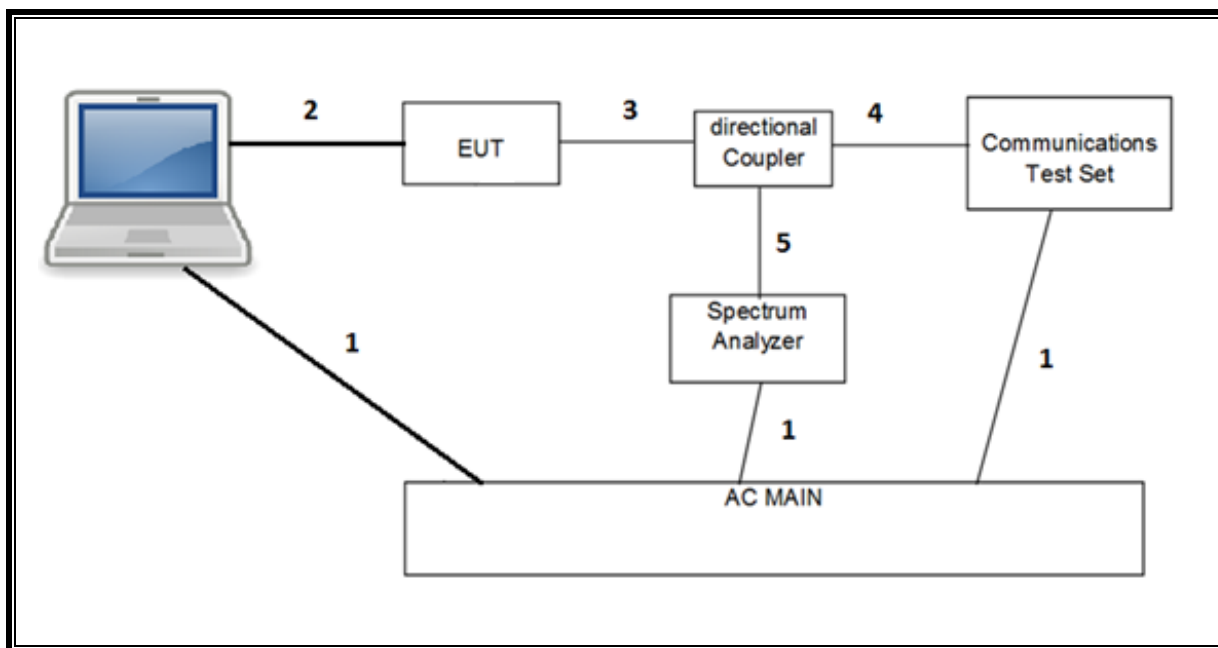
Radiated spurious emissions were investigated from 9kHz to 30MHz, 30MHz-1GHz and above 1GHz. There were no emissions found with less than 20dB of margin from 9kHz to 1GHz.

For simultaneous transmission of multiple channels in the 2.4GHz/5GH WLAN, UWB, and Cellular bands, tests were conducted for various configurations having the highest power, least separation in frequencies and widest operation bandwidths. No noticeable new emission was found.

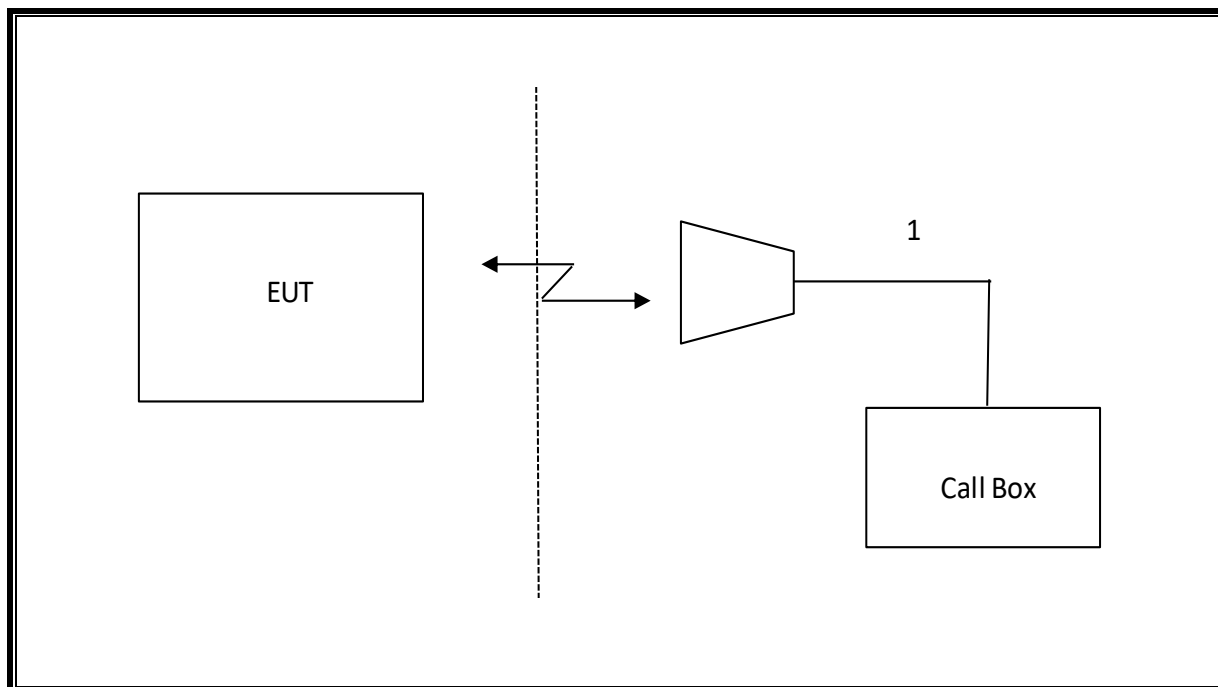
5.9. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT						
Description		Manufacturer	Model	Serial Number		FCC ID/ DoC
Laptop AC/DC adapter		Apple	85W MagSafe 2	C0651730MMMG6P4AL		
Laptop		Apple	Macbook Pro	C02PM012G3QD		
Laptop		Apple	Macbook Pro	C02P52HGG085		
I/O CABLES (RF CONDUCTED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	3	US 115V	Un-shielded	2.0	N/A
2	USB	1	DC	Un-shielded	1.0	N/A
3	RF In/Out	1	EUT	Shielded	0.6	N/A
4	RF In/Out	1	Communication Test Set	Shielded	1.2	N/A
5	RF In/Out	1	Barrel	N/A	N/A	N/A
I/O CABLES (RF RADIATED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	RF In/Out	1	Antenna	Shielded	5.0	N/A

CONDUCTED SETUP



RADIATED SETUP



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Asset	Cal Due
Antenna, Horn 1-18GHz	A.H. Systems, Inc.	SAS-571	T961	01/25/2021
Antenna, Horn 1-18GHz	ETS Lindgren	3117	T136	07/07/2021
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences Corp.	JB3	T407	05/20/2021
Amplifier, 1 to 18GHz	MITEQ	AFS42-00101800-25-S-42	T931	05/11/2021
Amplifier, 1 to 18GHz	MITEQ	AFS42-00101800-25-S-42	T1165	08/10/2021
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310	PRE0180176	07/14/2021
Filter, BRF 2495 to 2690MHz	MICRO-TRONICS	BRM50709-02	T1790	06/23/2021
Filter, BRF 1850 – 1910 MHz	Micro-Tronics	BRM50714-02	T1796	06/23/2021
Filter, BRF 824 – 848 MHz	Micro-Tronics	BRM20025	PRE0191180	06/23/2021
*Directional Coupler	KRYTAR	152610	T1161	08/14/2020
Spectrum Analyzer, PXA 3Hz to 44GHZ	Keysight	N9030A	T340	01/22/2021
Spectrum Analyzer, PXA 3Hz to 44GHZ	Keysight	N9030A	T907	01/22/2021
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	T260	02/19/2021
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	T959	02/19/2021
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	T1871	02/25/2021
Power Meter, P-series single channel	Keysight	N1912A	T1245	01/22/2021
Power Sensor	Keysight	N1921A	T1225	02/23/2021
UL AUTOMATION SOFTWARE				
CLT Software	UL	UL RF	Ver 7.6, November 11, 2017	
Power Measurement Software	UL	UL RF	Ver 2.7, 2019	
Radiated test software	UL	UL RF	Ver 9.5 June 15, 2019	

NOTES:

* Testing is completed before equipment expiration date.

7. SETUP PHOTOS

Please refer to 13179116-EP1 for setup photos

Appendix A – Reference Test Report 13179116-E8

Attached is the test report from the parent / reference model. The data from the reference report is being reused for the variant model described in this test report (13259310-E8).



TEST REPORT

Report Number. : 13179116-E8V4

Applicant : APPLE, INC
1 APPLE PARK WAY
CUPERTINO, CA 95014, U.S.A.

Model : A2172

FCC ID : BCG-E3542A

EUT Description : SMARTPHONE

Test Standard(s) : FCC CFR47 PART 22H, 24E, 27, 90S, 90R, AND 96

Date Of Issue:
SEPTEMBER 29, 2020

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NVLAP Lab code: 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	8/24/2020	Initial Review	Mengistu Mekuria
V2	9/14/2020	Addressed TCB Questions	Mengistu Mekuria
V3	9/28/2020	5G NR band description & Changes 5G NR Band n41 Antenna Port Naming	Mengistu Mekuria
V4	9/29/2020	Updated Antenna gains, Updated Section 5.5, Added 20MHz Power and OBW for 5G NR Band 41, updated OBW tables to include BPSK for all 5G NR Bands. Updated EIRP data for 5G NR 41 to reflect changes in V3.	John Thompson

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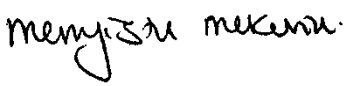
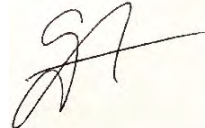
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1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	APPLE, INC 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.	
Model	A2172	
FCC ID	BCG-E3542A	
EUT Description	SMARTPHONE	
Serial Number	MODEL (A2172): C070033L5P573(Conducted) and G6TCN00YQ5HL (Radiated)	
Date Tested	APRIL 06, 2020 to SEPTEMBER 29, 2020	
Applicable Standards	FCC CFR47 22H, 24E, 27, 90S, 90R, AND 96	
Test Results	COMPLIES	
UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.		
Approved & Released By:	Reviewed By:	Prepared By:
		
Mengistu Mekuria Lead Test Engineer UL Verification Services Inc.	Glenn Escano Project Engineer UL Verification Services Inc.	Sintia Andrean Laboratory Engineer UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with the following:

- ANSI C63.26:2015
- FCC CFR 47 Part 2, Part 22, Part 24, Part 27, Part 90, and Part 96
- [FCC KDB 971168 D01 v03r01](#): Power Meas License Digital Systems
- [FCC KDB 971168 D02 v02r01](#): Misc Rev Approv License Devices
- [FCC KDB 412172 D01 v01r01](#): Determining ERP and EIRP.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, and 47658 Kato Road, Fremont, California, USA. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street	47658 Kato Rd.
☒ Chamber A (IC:2324B-1)	☐ Chamber D (IC:22541-1)	☒ Chamber I (IC: 2324A-5)
☒ Chamber B (IC:2324B-2)	☐ Chamber E (IC:22541-2)	☐ Chamber J (IC: 2324A-6)
☐ Chamber C (IC:2324B-3)	☐ Chamber F (IC:22541-3)	☐ Chamber K (IC: 2324A-1)
	☐ Chamber G (IC:22541-4)	☐ Chamber L (IC: 2324A-3)
	☐ Chamber H (IC:22541-5)	☐ Chamber M (IC: 2324A-2)

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers above are covered under Industry Canada company address and respective code: 2324A.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0

4. DECISION RULES AND MEASUREMENT UNCERTAINTY

4.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

4.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	U _{Lab}
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.39 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.07 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.52 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	4.88 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.24 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.37 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.17 dB
Occupied Channel Bandwidth	±0.39 %
Temperature	±0.9 °C
Supply voltages	±0.45 %
Time	±0.02 %

Uncertainty figures are valid to a confidence level of 95%.

4.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.
36.5 dBuV + 0 dB + 10.1 dB + 0 dB = 46.6 dBuV

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The Apple iPhone is a smartphone with multimedia functions (music, application support, and video), cellular GSM, GPRS, EGPRS, UMTS, LTE, 5G, CDMA, IEEE 802.11a/b/g/n/ac/ax, Bluetooth, Ultra-Wideband, GPS, NFC and WPT. All models support at least one UICC based SIM. The second SIM is either an UICC based p-SIM (physical SIM) or e-SIM (electronic SIM). The device supports a built-in inductive charging transmitter and receiver. The rechargeable battery is not user accessible.

5.2. MAXIMUM OUTPUT POWER

EIRP/ERP TEST PROCEDURE

ANSI C63.26:2015
KDB 971168 D01 Section 5.6

$ERP/EIRP = P_{Meas} + GT - LC$

where: ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as P_{Meas} , typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

For devices utilizing multiple antennas, KDB 662911 provides guidance for determining the effective array transmit antenna gain term to be used in the above equation.

EUT includes different power levels for head use configuration and body use configuration and the below tables contain the highest of all configurations average conducted and ERP/EIRP output powers as follows:

LTE BAND 2

Part 24 / RSS 133								
EIRP Limit (W)			2.00					
Antenna Gain (dBi)			1.00					
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% BW (kHz)	Emission Designator
1.4	QPSK	1850.7	1909.3	25.0	26.00	0.398	1080	1M08G7W
	16QAM			24.7	25.70	0.372	1082	1M08D7W
3.0	QPSK	1851.5	1908.5	25.0	26.00	0.398	2687	2M69G7W
	16QAM			24.6	25.60	0.363	2685	2M69D7W
5.0	QPSK	1852.5	1907.5	25.0	26.00	0.398	4504	4M50G7W
	16QAM			24.8	25.80	0.380	4487	4M49D7W
10.0	QPSK	1855.0	1905.0	25.0	26.00	0.398	8963	8M96G7W
	16QAM			24.9	25.90	0.389	8932	8M93D7W
15.0	QPSK	1857.5	1902.5	25.0	26.00	0.398	13381	13M4G7W
	16QAM			25.0	26.00	0.398	13392	13M4D7W
20.0	QPSK	1860.0	1900.0	25.0	26.00	0.398	17834	17M8G7W
	16QAM			25.0	26.00	0.398	17823	17M8D7W

LTE BAND 5

Part 22H								
ERP Limit (W)			7.00					
Antenna Gain (dBi)			-5.20					
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% BW (kHz)	Emission Designator
1.4	QPSK	824.7	848.3	25.7	18.35	0.068	1082	1M08G7W
	16QAM			25.1	17.75	0.060	1084	1M08D7W
3.0	QPSK	825.5	847.5	25.7	18.35	0.068	2693	2M69G7W
	16QAM			25.1	17.75	0.060	2692	2M69D7W
5.0	QPSK	826.5	846.5	25.7	18.35	0.068	4493	4M49G7W
	16QAM			25.3	17.95	0.062	4479	4M48D7W
10.0	QPSK	829.0	844.0	25.7	18.35	0.068	8976	8M98G7W
	16QAM			25.1	17.75	0.060	8974	8M97D7W

5G NR Band n5

Part 22H								
ERP Limit (W)			7.00					
Antenna Gain (dBi)			-5.20					
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% BW (kHz)	Emission Designator
15.0	BPSK	831.5	841.5	25.7	18.35	0.068	13388	13M4G7W
	QPSK			25.4	18.05	0.064	13440	13M4G7W
	16QAM			24.2	16.85	0.048	13436	13M4D7W
20.0	BPSK	834.0	839.0	25.7	18.35	0.068	17834	17M8G7W
	QPSK			25.5	18.15	0.065	17851	17M9G7W
	16QAM			24.2	16.85	0.048	17821	17M8D7W

LTE BAND 7

Part 27 / RSS 199								
EIRP Limit (W)		2.00						
Antenna Gain (dBi)		0.90						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% BW (kHz)	Emission Designator
5.0	QPSK	2502.5	2567.5	25.0	25.90	0.389	4499	4M50G7W
	16QAM			24.9	25.80	0.380	4487	4M49D7W
10.0	QPSK	2505.0	2565.0	25.0	25.90	0.389	8942	8M94G7W
	16QAM			24.9	25.80	0.380	8937	8M94D7W
15.0	QPSK	2507.5	2562.5	25.0	25.90	0.389	13401	13M4G7W
	16QAM			24.9	25.80	0.380	13415	13M4D7W
20.0	QPSK	2510.0	2560.0	25.0	25.90	0.389	17821	17M8G7W
	16QAM			25.0	25.90	0.389	17869	17M9D7W

LTE BAND 12

Part 27 / RSS 130								
ERP Limit (W)		3.00						
Antenna Gain (dBi)		-5.00						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% BW (kHz)	Emission Designator
1.4	QPSK	699.7	715.3	25.7	18.55	0.072	1079	1M08G7W
	16QAM			25.2	18.05	0.064	1085	1M09D7W
3.0	QPSK	700.5	714.5	25.7	18.55	0.072	2686	2M69G7W
	16QAM			25.2	18.05	0.064	2681	2M68D7W
5.0	QPSK	701.5	713.5	25.7	18.55	0.072	4491	4M49G7W
	16QAM			25.3	18.15	0.065	4482	4M48D7W
10.0	QPSK	704.0	711.0	25.7	18.55	0.072	8949	8M95G7W
	16QAM			25.1	17.95	0.062	8923	8M92D7W

5G NR Band n12

Part 27 / RSS 130								
ERP Limit (W)		3.00						
Antenna Gain (dBi)		-5.00						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% BW (kHz)	Emission Designator
15.0	BPSK	706.5	708.5	25.7	18.55	0.072	13352	13M4G7W
	QPSK			25.2	18.05	0.064	13420	13M4G7W
	16QAM			24.1	16.95	0.050	13342	13M3D7W

LTE BAND 13

Part 27 / RSS 130								
ERP Limit (W)			3.00					
Antenna Gain (dBi)			-5.50					
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% BW (kHz)	Emission Designator
5.0	QPSK	779.5	784.5	25.7	18.05	0.064	4510	4M51G7W
	16QAM			25.2	17.55	0.057	4497	4M50D7W
10.0	QPSK	782.0	782.0	25.7	18.05	0.064	8973	8M97G7W
	16QAM			24.9	17.25	0.053	8971	8M97D7W

LTE BAND 14

Part 90R / RSS 140								
ERP Limit (W)			3.00					
Antenna Gain (dBi)			-5.60					
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% BW (kHz)	Emission Designator
5.0	QPSK	790.5	795.5	25.7	17.95	0.062	4487	4M49G7W
	16QAM			25.1	17.35	0.054	4483	4M48D7W
10.0	QPSK	793.0	793.0	25.7	17.95	0.062	8985	8M99G7W
	16QAM			24.9	17.15	0.052	8977	8M98D7W

LTE BAND 17

Part 27 / RSS 130								
ERP Limit (W)			3.00					
Antenna Gain (dBi)			-5.00					
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% BW (kHz)	Emission Designator
5.0	QPSK	706.5	713.5	25.7	18.55	0.072	4495	4M50G7W
	16QAM			25.2	18.05	0.064	4476	4M48D7W
10.0	QPSK	709.0	711.0	25.7	18.55	0.072	8958	8M96G7W
	16QAM			25.1	17.95	0.062	8973	8M97D7W

LTE BAND 25

Part 24 / RSS 133								
EIRP Limit (W)			2.00					
Antenna Gain (dBi)			1.00					
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% BW (kHz)	Emission Designator
1.4	QPSK	1850.7	1914.3	25.0	26.00	0.398	1077	1M08G7W
	16QAM			24.9	25.90	0.389	1085	1M09D7W
3.0	QPSK	1851.5	1913.5	25.0	26.00	0.398	2683	2M68G7W
	16QAM			24.7	25.70	0.372	2688	2M69D7W
5.0	QPSK	1852.5	1912.5	25.0	26.00	0.398	4492	4M49G7W
	16QAM			24.8	25.80	0.380	4489	4M49D7W
10.0	QPSK	1855.0	1910.0	25.0	26.00	0.398	8908	8M91G7W
	16QAM			24.9	25.90	0.389	8924	8M92D7W
15.0	QPSK	1857.5	1907.5	25.0	26.00	0.398	13427	13M4G7W
	16QAM			25.0	26.00	0.398	13386	13M4D7W
20.0	QPSK	1860.0	1905.0	25.0	26.00	0.398	17836	17M8G7W
	16QAM			25.0	26.00	0.398	17826	17M8D7W

LTE BAND 26 (Part 90S)

Part 90S								
Conducted Limit (W)			100.00					
Antenna Gain (dBi)			-5.20					
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% BW (kHz)	Emission Designator
1.4	QPSK	814.7	823.3	25.7	18.35	0.068	1086	1M09G7W
	16QAM			25.1	17.75	0.060	1088	1M09D7W
3.0	QPSK	815.5	822.5	25.7	18.35	0.068	2689	2M69G7W
	16QAM			25.1	17.75	0.060	2693	2M69D7W
5.0	QPSK	816.5	821.5	25.7	18.35	0.068	4493	4M49G7W
	16QAM			25.2	17.85	0.061	4509	4M51D7W
10.0	QPSK	819.0	819.0	25.7	18.35	0.068	8937	8M94G7W
	16QAM			24.9	17.55	0.057	8943	8M94D7W

LTE BAND 30

Part 27 / RSS 195								
EIRP Limit (W)			0.25					
Antenna Gain (dBi)			-1.20					
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% BW (kHz)	Emission Designator
5.0	QPSK	2307.5	2312.5	24.7	23.50	0.224	4491.8	4M49G7W
	16QAM			24.2	23.03	0.201	4492.5	4M49D7W
10.0	QPSK	2310.0	2310.0	24.7	23.50	0.224	8962.5	8M96G7W
	16QAM			24.6	23.38	0.218	8938.8	8M94D7W

LTE BAND 41

Part 27								
EIRP Limit (W)			2.00					
Antenna Gain (dBi)			0.90					
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% BW (kHz)	Emission Designator
5.0	QPSK	2498.5	2687.5	26.0	26.90	0.490	4501.1	4M50G7W
	16QAM			25.3	26.20	0.417	4495.6	4M50D7W
10.0	QPSK	2501.0	2685.0	26.0	26.90	0.490	8930.5	8M93G7W
	16QAM			25.4	26.30	0.427	8963.1	8M96D7W
15.0	QPSK	2503.5	2682.5	26.0	26.90	0.490	13420.8	13M4G7W
	16QAM			25.4	26.30	0.427	13433.7	13M4D7W
20.0	QPSK	2506.0	2680.0	26.0	26.90	0.490	17780.4	17M8G7W
	16QAM			25.1	26.00	0.398	17844	17M8D7W

5G NR Band n41

Part 27								
EIRP Limit (W)			2.00					
Antenna Gain (dBi)			0.90					
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% BW (kHz)	Emission Designator
20.0	QPSK	2506.0	2680.0	26.7	27.60	0.575	17876	17M9G7W
	16QAM			26.1	27.00	0.501	17890	17M9D7W
40.0	QPSK	2516.0	2670.0	26.7	27.60	0.575	35595	35M6G7W
	16QAM			26.5	27.40	0.550	35662	35M7D7W
50.0	QPSK	2521.0	2665.0	26.7	27.60	0.575	45486	45M5G7W
	16QAM			26.4	27.30	0.537	45557	45M6D7W
60.0	QPSK	2526.0	2660.0	26.7	27.60	0.575	57754	57M8G7W
	16QAM			26.2	27.10	0.513	57757	57M8D7W
80.0	QPSK	2536.0	2650.0	26.5	27.40	0.550	76864	76M9G7W
	16QAM			26.5	27.40	0.550	76903	76M9D7W
90.0	QPSK	2541.0	2645.0	26.7	27.60	0.575	85516	85M5G7W
	16QAM			25.9	26.80	0.479	85428	85M4D7W
100.0	QPSK	2546.0	2640.0	26.7	27.60	0.575	96467	96M5G7W
	16QAM			26.6	27.50	0.562	95743	95M7D7W

LTE BAND 48

Part 96								
EIRP Limit (W)/ 10MHz		0.20						
Antenna Gain (dBi)		-0.90						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% BW (kHz)	Emission Designator
5.0	QPSK	3552.5	3697.5	23.6	22.70	0.186	4469.4	4M47G7W
	16QAM			23.0	22.10	0.162	4480.5	4M48D7W
10.0	QPSK	3555.0	3695.0	23.6	22.70	0.186	9002	9M00G7W
	16QAM			23.2	22.30	0.170	8942.9	8M94D7W
15.0	QPSK	3557.5	3692.5	23.6	22.70	0.186	13337.7	13M3G7W
	16QAM			23.1	22.20	0.166	13362	13M4D7W
20.0	QPSK	3560.0	3690.0	23.6	22.70	0.186	17858.5	17M9G7W
	16QAM			23.0	22.10	0.162	17893.1	17M9D7W

LTE BAND 66

Part 27 / RSS 139								
EIRP Limit (W)		1.00						
Antenna Gain (dBi)		-1.90						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% BW (kHz)	Emission Designator
1.4	QPSK	1710.7	1779.3	25.7	23.80	0.240	1092	1M09G7W
	16QAM			25.1	23.20	0.209	1080	1M08D7W
3.0	QPSK	1711.5	1778.5	25.7	23.80	0.240	2689	2M69G7W
	16QAM			24.9	23.00	0.200	2682	2M68D7W
5.0	QPSK	1712.5	1777.5	25.7	23.80	0.240	4496	4M50G7W
	16QAM			25.1	23.20	0.209	4497	4M50D7W
10.0	QPSK	1715.0	1775.0	25.7	23.80	0.240	8966	8M97G7W
	16QAM			24.9	23.00	0.200	8942	8M94D7W
15.0	QPSK	1717.5	1772.5	25.7	23.80	0.240	13416	13M4G7W
	16QAM			25.3	23.40	0.219	13403	13M4D7W
20.0	QPSK	1720.0	1770.0	25.7	23.80	0.240	17832	17M8G7W
	16QAM			25.2	23.30	0.214	17875	17M9D7W

LTE BAND 71

Part 27 / RSS 130								
ERP Limit (W)			3.00					
Antenna Gain (dBi)			-5.90					
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% BW (kHz)	Emission Designator
5.0	QPSK	665.5	695.5	25.7	17.65	0.058	4491	4M49G7W
	16QAM			25.2	17.15	0.052	4488	4M49D7W
10.0	QPSK	668.0	693.0	25.7	17.65	0.058	8936	8M94G7W
	16QAM			25.1	17.05	0.051	8953	8M95D7W
15.0	QPSK	670.5	690.5	25.7	17.65	0.058	13395	13M4G7W
	16QAM			25.2	17.15	0.052	13398	13M4D7W
20.0	QPSK	673.0	688.0	25.7	17.65	0.058	17836	17M8G7W
	16QAM			25.3	17.25	0.053	17885	17M9D7W

5G NR Band n77

Part 27								
EIRP Limit (W)			1.00					
Antenna Gain (dBi)			-0.10					
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% BW (kHz)	Emission Designator
20.0	QPSK	3710.0	3970.0	26.7	26.59	0.456	17825	17M8G7W
	16QAM			26.6	26.47	0.444	17897	17M9D7W
40.0	BPSK	3720.0	3960.0	26.7	26.63	0.460	37894	37M9G7W
	16QAM			26.1	25.99	0.397	35601	35M6D7W
50.0	QPSK	3725.0	3955.0	26.7	26.60	0.457	45590	45M6G7W
	16QAM			26.6	26.49	0.446	45695	45M7D7W
60.0	QPSK	3730.0	3950.0	26.7	26.60	0.457	57679	57M7G7W
	16QAM			24.9	24.76	0.299	57667	57M7D7W
80.0	QPSK	3740.0	3940.0	26.7	26.60	0.457	77007	77M0G7W
	16QAM			26.5	26.38	0.435	76648	76M6D7W
90.0	QPSK	3745.0	3935.0	26.7	26.60	0.457	85525	85M5G7W
	16QAM			26.3	26.15	0.412	86689	86M7D7W
100.0	QPSK	3750.0	3930.0	26.7	26.60	0.457	96242	96M2G7W
	16QAM			26.5	26.35	0.432	96240	96M2D7W

5.3. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was version 0.28.03-1.

5.4. MAXIMUM ANTENNA GAIN

Please see table below:

LTE Bands	Antenna Gain (dBi)						
	ANT 1	ANT 2	ANT 3	ANT 4	ANT 7	ANT 8	ANT 9
LTE Band 71, 5G NR Band n71, 663 – 698 MHz	-5.9	-5.3	NA	NA	NA	NA	NA
LTE Band 12, 5G NR Band n12, 699 – 716 MHz	-5.0	-5.5	NA	NA	NA	NA	NA
LTE Band 17, 704 – 716 MHz	-5.0	-5.5	NA	NA	NA	NA	NA
LTE Band 13, 777 – 787 MHz	-5.5	-5.6	NA	NA	NA	NA	NA
LTE Band 14, 788 – 798 MHz	-5.6	-5.8	NA	NA	NA	NA	NA
LTE Band 26, 814 – 824 MHz (Part 90S)	-5.2	-5.4	NA	NA	NA	NA	NA
LTE Band 5, 5G NR Band n5, 824 – 849 MHz	-5.2	-5.4	NA	NA	NA	NA	NA
LTE Band 66, 5G NR Band n66, 1710 – 1780 MHz	-1.9	-1.0	-1.5	-3.0	NA	NA	NA
LTE Band 2, 5G NR Band n2, 1850 – 1910 MHz	-2.2	-3.8	1.0	-1.8	NA	NA	NA
LTE Band 25, 5G NR Band n25 1850 – 1915 MHz	-2.2	-3.8	1.0	-1.8	NA	NA	NA
LTE Band 30, 2305 – 2315 MHz	-3.3	-1.7	-1.2	-2.3	NA	NA	NA
LTE Band 7, 2500 – 2570 MHz	-2.9	0.9	0.9	-3.0	NA	NA	NA
LTE Band 41, 5G NR Band n41, 2496 – 2690 MHz	-2.5	0.9	0.9	-2.8	NA	NA	NA
5G NR Band n77, 3300 – 3980 MHz	NA	NA	NA	-2.2	-0.1	-3.2	-2.9
LTE Band 48, 3550 – 3700 MHz	NA	NA	NA	-0.5	-0.1	-5.3	-0.9

5.5. WORST-CASE CONFIGURATION AND MODE

The EUT supports the following LTE and 5G NR Bands:

Band 2, Band 4, Band 5, Band 7, Band 12, Band 13, Band 14, Band 17, Band 25, Band 26, Band 30, Band 41, Band 48, Band 66, Band 71, 5G NR Band n2, 5G NR Band n5, 5G NR Band n12, 5G NR Band n25, 5G NR Band n41, 5G NR Band n66, 5G NR Band n71 and 5G NR Band n77.

For 5G NR Bands (n2, n5, n12, n25, n41, n66, and n71) having the same operations bandwidth and Power are covered by LTE bands of (Band 2, Band5, Band12, Band 25, Band 41, Band 66, and Band 71). Additional tests for 5G NR bands with higher BW modes than LTE Bands, includes 5G NR Bands n5, n12, and n41 were performed.

LTE Band 4 (1710-1755MHz, 5/10/15/20MHz bandwidth) is covered by LTE Band 66 because it is a subset of LTE band 66 and they have same output power.

FCC rule Part 22.905 of LTE Band 26 (824-849MHz) is covered by LTE Band 5 of same rule since they have the same output power and supported bandwidths.

For 5G NR bands, conducted spurious emission tests were conducted on wider bandwidth with inner 1RB since this is the worst bandwidth and the highest output power.

BPSK modulation applied only for 5G NR band frequencies and has the same tune up power as QPSK modulations.

The DFT-s-OFDM and CP-OFDM waveforms were investigated, and DFT-s-OFDM was found to be the worst case.

The worst-case scenario for all measurements is based on an engineering evaluation and QPSK was observed as the worst one and set for all conducted and radiated. Output power measurements were measured on QPSK, 16QAM, 64QAM, 256QAM, and BPSK, modulations. For testing purposes emissions on sections 8 and 9 were measured while QPSK was set at or above target power for all bands. Conducted tests were performed on the worst case antenna because it has the highest conducted power. ANT1 is the worst case for all bands except Band 48, 5G NR Band 41, and 5G NR Band 77. For 5G NR Band 41 ANT2 is the worst case antenna. For band 48 ANT9 is the worst case antenna. For 5G NR Band n77 ANT7 is the worst case antenna.

For 5G NR Band n41 20MHz BW, antenna 2 and antenna 4 powers are higher than LTE band 41. Therefore, additional power measurements and occupied bandwidth tests were performed on antenna 2 and antenna 4 for 20MHz BW. Since LTE antenna 1 the highest output power of all (LTE band 41 and 5G NR Band n41) antennas, all other conducted tests for 20MHz BW were performed only on LTE antenna 1.

The EUT was investigated in three orthogonal orientations X/Y/Z on all ANT 1, ANT2, ANT3, ANT4, ANT7, ANT8 and ANT 9 antennas to determine the worst case orientation. The following table exhibit the worst case orientation for different frequency bands. The full tests of the EUT have made upon the orientations that shown in the table below.

Freq Bands	ANT1	ANT2	ANT3	ANT4	ANT7	ANT8	ANT9
663 – 849 MHz	Y	Z	N/A	N/A	N/A	N/A	N/A
1710 – 1915 MHz	X	Y	X	X	N/A	N/A	N/A
2300 – 2700 MHz	Y	Z	Y	X	N/A	N/A	N/A
3300 – 3980 MHz	N/A	N/A	N/A	X	Y	X	Y

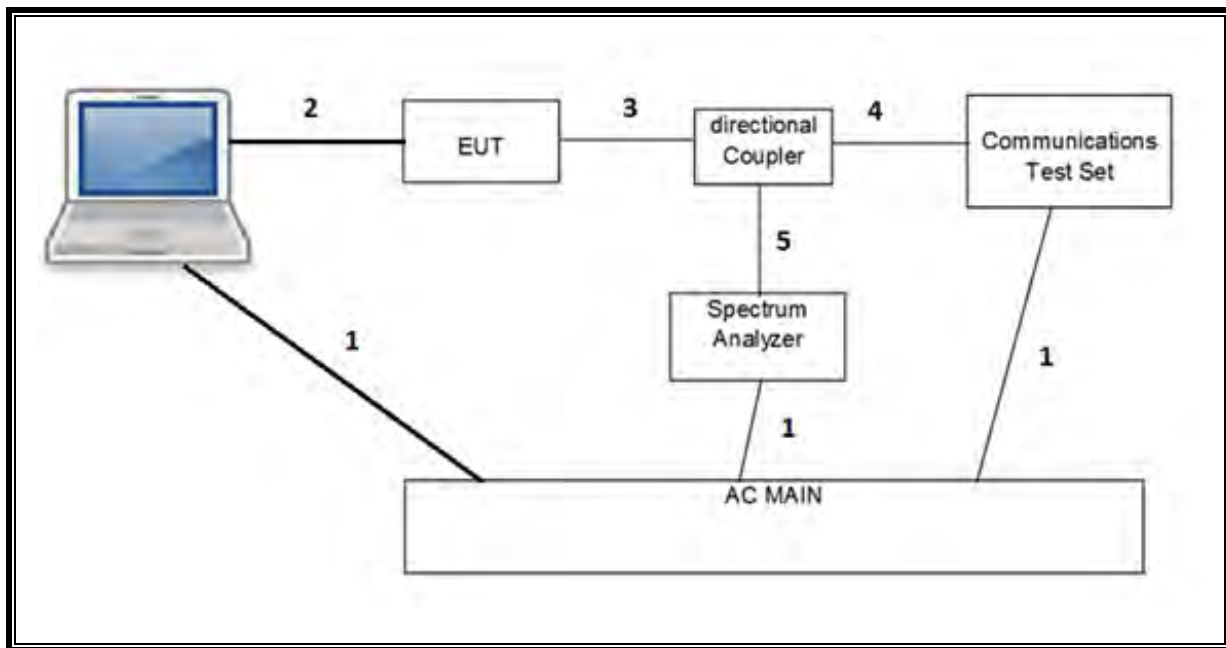
Radiated spurious emissions were investigated from 9kHz to 30MHz, 30MHz-1GHz and above 1GHz. There were no emissions found with less than 20dB of margin from 9kHz to 1GHz.

For simultaneous transmission of multiple channels in the 2.4GHz/5GH WLAN, UWB, and Cellular bands, tests were conducted for various configurations having the highest power, least separation in frequencies and widest operation bandwidths. No noticeable new emission was found.

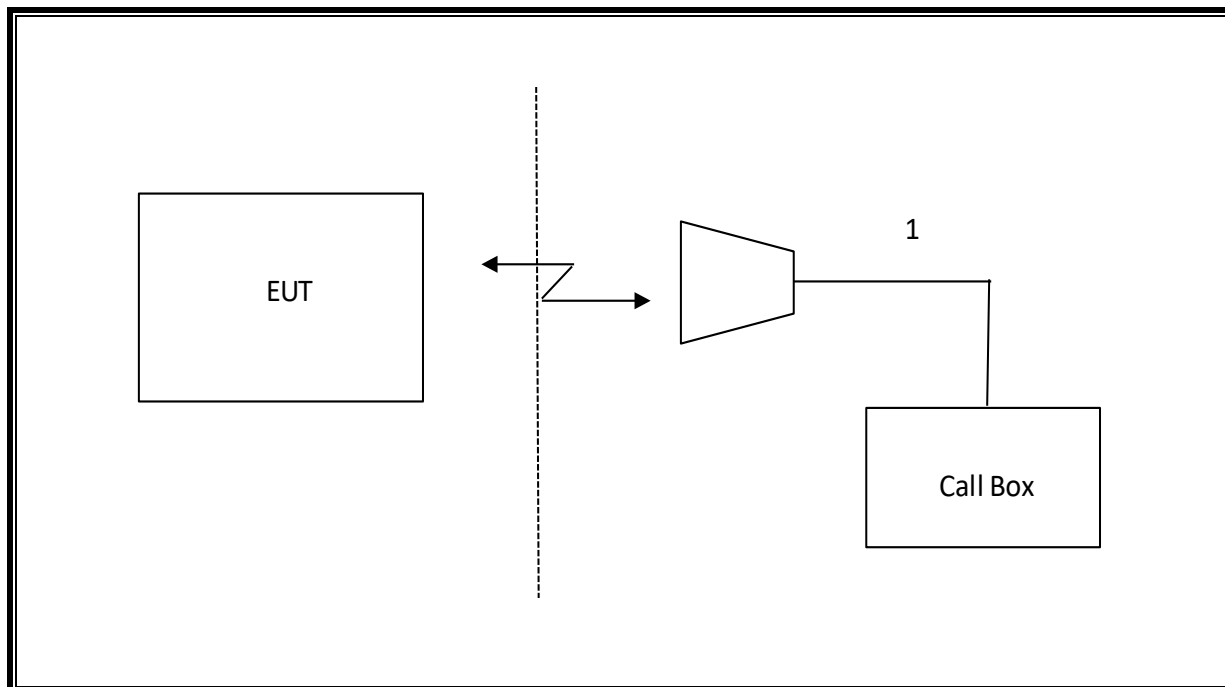
5.6. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT						
Description		Manufacturer	Model	Serial Number	FCC ID/ DoC	
Laptop AC/DC adapter		Apple	85W MagSafe 2	C0651730MMM6P4AL		
Laptop		Apple	Macbook Pro	C02PM012G3QD		
Laptop		Apple	Macbook Pro	C02P52HGG085		
I/O CABLES (RF CONDUCTED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	3	US 115V	Un-shielded	2.0	N/A
2	USB	1	DC	Un-shielded	1.0	N/A
3	RF In/Out	1	EUT	Shielded	0.6	N/A
4	RF In/Out	1	Communication Test Set	Shielded	1.2	N/A
5	RF In/Out	1	Barrel	N/A	N/A	N/A
I/O CABLES (RF RADIATED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	RF In/Out	1	Antenna	Shielded	5.0	N/A

CONDUCTED SETUP



RADIATED SETUP



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Asset	Cal Due
Antenna, Horn 1-18GHz	A.H. Systems, Inc.	SAS-571	T962	01/25/2021
Antenna, Horn 1-18GHz	ETS Lindgren	3117	T346	07/20/2021
Antenna, Horn 1-18GHz	ETS Lindgren	3117	T136	07/07/2021
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	T407	05/20/2021
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	PRE0184052	11/12/2020
*Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	PRE0181575	09/05/2020
Antenna, Active Loop 9KHz to 30MHz	ETS-Lindgren	6502	T757	10/01/2020
Antenna Horn, 18 to 26GHz	ARA	SWH-28	T125	04/17/2021
Antenna, Horn 26-40GHz	ARA	MWH-2640/B	PRE0182203	04/17/2021
*Amplifier, 1 to 18GHz	MITEQ	AFS42-00101800-25-S-42	T1165	05/18/2020
Amplifier, 1 to 18GHz	MITEQ	AFS42-00101800-25-S-42	PRE0181078	05/06/2021
Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	PRE0180176	07/14/2021
Amplifier, 100KHz to 1GHz, 32dB	Keysight	8447D	T15	10/26/2020
*Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	PRE0180175	05/29/2020
Pre-Amp 18-26GHz	Agilent Technology	8449B	T404	04/08/2021
Amplifier, 26-40GHz	Miteq	TTA2640	T1864	04/08/2021
Filter, BRF 1850 – 1910 MHz	Micro-Tronics	BRM50714-02	T1796	06/23/2021
Filter, BRF 824 – 848 MHz	Micro-Tronics	BRM20025	PRE0191180	06/23/2021
Filter, HPF 1.2 GHz	MICRO-TRONICS	MICRO-TRONICS	T1737	06/23/2021
*Directional Coupler	KRYTAR	152610	T1536	06/09/2020
*Directional Coupler	KRYTAR	152610	T1161	08/14/2020
*Directional Coupler	KRYTAR	152613	T1537	06/08/2020
Spectrum Analyzer, PXA 3Hz to 44GHz	Keysight	N9030A	T340	01/22/2021
Spectrum Analyzer, PXA 3Hz to 44GHz	Keysight	N9030A	T1454	07/15/2021
Spectrum Analyzer, PXA 3Hz to 44GHz	Keysight	N9030A	T907	01/22/2021
Spectrum Analyzer, PSA, 3Hz to 44GHz	Keysight	N9030A	T908	05/05/2021
Spectrum Analyzer, PSA, 3Hz to 26.5GHz	Keysight	E4440A	T198	01/28/2021
Spectrum Analyzer, PSA, 3Hz to 44GHz	Keysight	E4440A	T200	01/24/2021
EMI Test Receiver	Rohde & Schwarz	ESW44	PRE0179522	02/18/2021
Wireless Communications Test Set, 8960 Series 10	Agilent	E5515C	T211	02/18/2021
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	T948	08/10/2021
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	T1871	02/25/2021
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	T972	02/24/2021
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	T260	02/19/2021
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	T959	02/19/2021
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	163287	10/23/2020
UXM 5G Wireless Test Platform	Keysight	E7515B	MY59321399	10/09/2020
Chamber, Environmental	Cincinnati Sub Zero	ZPHS-8-3.5-SCT/WC	T754	12/22/2020
Environmental Chamber	Cincinnati Sub Zero	ZPHS-8-3.5-SCT/WC	T1154	12/22/2020
Power Meter, P-series single channel	Keysight	N1912A	T1245	01/22/2021
Power Sensor	Keysight	N1921A	T1225	02/23/2021
UL AUTOMATION SOFTWARE				
CLT Software	UL	UL RF	Ver 7.6, November 11, 2017	
Power Measurement Software	UL	UL RF	Ver 2.7, 2019	
Radiated test software	UL	UL RF	Ver 9.5 June 15, 2019	
Signal Generation Software	Apple	5G NR GUI	Automation_v495	

Notes:

*Testing is completed before equipment expiration date.

7. RF OUTPUT POWER VERIFICATION

CONDUCTED OUTPUT POWER MEASUREMENT PROCEDURE

All LTE bands conducted average power is obtained from the CMW500 telecommunication test set.

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS136.101 specification.

UE Power Class: 3 (23 +/- 2dBm). Band 41 UE Power Class: 2 (26 +/-2 dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS136.101.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3

Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3
256 QAM	≥ 1						≤ 5

The allowed A-MPR values specified below in Table 6.2.4.-1 of 3GPP TS136.101 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signaling Value of "NS_01".

Table 6.2.4-1: Additional Maximum Power Reduction (A-MPR)

Network Signalling value	Requirements (subclause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01	6.6.2.1.1	Table 5.5-1	1.4, 3, 5, 10, 15, 20	Table 5.6-1	N/A
NS_03	6.6.2.2.1	2, 4, 10, 23, 25, 35, 36, 66, 70	3	>5	≤ 1
			5	>6	≤ 1
			10	>6	≤ 1
			15	>8	≤ 1
			20	>10	≤ 1
NS_04	6.6.2.2.2, 6.6.3.3.19	41	5, 10, 15, 20	Table 6.2.4-4, Table 6.2.4-4a	

Table 6.2.2.3-1: Maximum Power Reduction (MPR) for Power 3

Modulation	MPR (dB)		
	Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM PI/2 BPSK	$\leq 3.5^1$	$\leq 1.2^1$	$\leq 0.2^1$
	$\leq 0.5^2$		0^2
DFT-s-OFDM QPSK	≤ 1		0
DFT-s-OFDM 16 QAM	≤ 2		≤ 1
DFT-s-OFDM 64 QAM		≤ 2.5	
DFT-s-OFDM 256 QAM		≤ 4.5	
CP-OFDM QPSK	≤ 3		≤ 1.5
CP-OFDM 16 QAM	≤ 3		≤ 2
CP-OFDM 64 QAM		≤ 3.5	
CP-OFDM 256 QAM		≤ 6.5	
NOTE 1: Applicable for UE operating in TDD mode with PI/2 BPSK modulation and UE indicates support for UE capability <i>powerBoosting-pi2BPSK</i> and if the IE <i>powerBoostPi2BPSK</i> is set to 1 and 40 % or less slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79. The reference power of 0dB MPR is 26dBm.			
NOTE 2: Applicable for UE operating in FDD mode, or in TDD mode in bands other than n40, n41, n77, n78 and n79 and if the IE <i>powerBoostPi2BPSK</i> is set to 0 and if more than 40% of slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79.			

Table 6.2.2.3-2: Maximum Power Reduction (MPR) for Power Class 2

Modulation	MPR (dB)		
	Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM PI/2 BPSK	≤ 3.5	≤ 0.5	0
DFT-s-OFDM QPSK	≤ 3.5	≤ 1	0
DFT-s-OFDM 16 QAM	≤ 3.5	≤ 2	≤ 1
DFT-s-OFDM 64 QAM	≤ 3.5	≤ 2.5	
DFT-s-OFDM 256 QAM		≤ 4.5	
CP-OFDM QPSK	≤ 3.5	≤ 3	≤ 1.5
CP-OFDM 16 QAM	≤ 3.5	≤ 3	≤ 2
CP-OFDM 64 QAM		≤ 3.5	
CP-OFDM 256 QAM		≤ 6.5	

RESULTS

EUT includes different power levels for head use configuration and body use configuration and the below tables contain the highest of all configurations average conducted output powers as follows:

7.1. LTE BAND 2

Test Engineer ID: 39004 Test Date: 3/9/2020

OUTPUT POWER FOR LTE BAND 2 (1.4 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				18607	18900	19193	18607	18900	19193	18607	18900	19193	18607	18900	19193
1.4	QPSK	1	0	25.3	25.6	25.7	22.8	23.1	22.9	24.9	24.8	24.7	22.7	23.0	22.9
		1	2	25.4	25.7	25.7	22.9	23.1	23.0	25.0	24.9	24.7	22.8	23.0	23.0
		1	5	25.4	25.6	25.5	22.8	23.1	22.9	24.8	24.8	24.6	22.7	22.9	22.9
		3	0	25.5	25.6	25.4	22.9	23.0	23.0	24.9	24.8	24.7	22.7	22.9	22.9
		3	1	25.5	25.7	25.4	22.9	23.1	23.0	24.9	24.8	24.7	22.8	22.9	23.0
		3	2	25.5	25.7	25.3	22.9	23.1	23.0	24.9	24.8	24.7	22.7	22.9	23.0
	16QAM	6	0	24.5	24.7	24.5	22.0	22.1	22.1	24.5	24.3	24.2	22.3	22.5	22.5
		1	0	25.0	24.8	24.6	22.1	22.3	22.5	24.5	24.5	24.6	22.4	22.6	22.9
		1	2	25.0	24.9	24.6	22.1	22.3	22.5	24.6	24.5	24.6	22.4	22.7	22.9
		1	5	25.0	24.8	24.6	22.1	22.1	22.4	24.5	24.4	24.5	22.3	22.5	22.8
		3	0	24.8	25.0	24.6	22.2	22.1	22.3	24.7	24.4	24.4	22.5	22.5	22.7
		3	1	24.9	25.0	24.6	22.3	22.2	22.3	24.7	24.5	24.5	22.6	22.6	22.8
	64QAM	3	2	24.9	25.0	24.6	22.3	22.2	22.3	24.7	24.5	24.4	22.6	22.6	22.7
		6	0	23.6	24.0	23.8	21.3	21.3	21.0	23.7	23.5	23.1	21.6	21.6	21.4
		1	0	24.0	23.8	23.9	21.1	20.7	20.7	22.1	22.5	22.9	21.4	21.3	21.3
		1	2	24.1	23.9	23.9	21.1	20.8	20.7	22.1	22.6	22.9	21.4	21.3	21.4
		1	5	24.0	23.8	23.7	21.0	20.7	20.7	22.1	22.4	22.8	21.3	21.2	21.3
		3	0	24.0	23.9	23.6	21.0	20.8	20.5	21.8	22.4	22.8	21.3	21.3	21.1
	256QAM	3	1	24.1	23.9	23.6	21.1	20.8	20.5	21.8	22.4	22.8	21.4	21.4	21.2
		3	2	24.1	24.0	23.5	21.0	20.9	20.5	21.8	22.4	22.8	21.4	21.4	21.2
		6	0	22.7	23.1	22.7	19.7	19.9	19.6	20.9	21.1	21.9	20.0	20.5	20.3
		1	0	21.2	20.7	20.6	13.2	20.9	20.9	18.6	18.9	18.6	21.2	18.6	21.4
		1	2	21.2	20.8	20.7	13.1	20.9	20.9	18.7	19.0	18.7	18.7	18.7	19.3
		1	5	21.1	20.7	20.6	20.7	20.9	20.9	18.5	18.9	18.5	18.7	18.7	19.4
		3	0	21.2	21.1	21.1	20.7	20.9	20.9	19.0	18.9	18.9	18.8	18.8	19.1
		3	1	21.2	21.2	21.2	20.8	20.9	20.9	19.1	18.9	18.9	18.7	18.8	19.1
		3	2	21.2	21.2	21.2	20.8	20.9	20.9	19.1	18.9	18.9	18.8	18.8	19.2
		6	0	21.3	21.0	21.2	20.8	21.0	20.9	19.0	18.9	18.7	18.7	18.6	19.2

OUTPUT POWER FOR LTE BAND 2 (3.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				18615	18900	19185	18615	18900	19185	18615	18900	19185	18615	18900	19185
				1851.5	1880.0	1908.5	1851.5	1880.0	1908.5	1851.5	1880.0	1908.5	1851.5	1880.0	1908.5
3.0	QPSK	1	0	25.7	25.7	25.7	23.1	23.1	23.1	25.0	24.8	24.7	22.9	22.9	23.0
		1	7	25.7	25.7	25.5	23.1	23.1	23.1	24.9	24.7	24.7	22.9	22.9	22.9
		1	14	25.7	25.7	25.3	23.0	23.1	23.0	24.9	24.8	24.3	22.8	22.9	22.9
		8	0	24.8	24.8	24.7	22.2	22.2	22.1	24.6	24.4	24.3	22.5	22.5	22.6
		8	4	24.8	24.8	24.6	22.3	22.2	22.1	24.6	24.4	24.3	22.4	22.6	22.6
		8	7	24.8	24.9	24.6	22.2	22.3	22.1	24.6	24.5	24.3	22.5	22.6	22.6
		15	0	24.8	24.8	24.6	22.2	22.2	22.1	24.6	24.4	24.7	22.4	22.5	22.6
	16QAM	1	0	24.9	24.9	25.0	22.3	22.2	22.5	24.6	24.2	24.6	22.8	22.6	22.6
		1	7	24.8	24.8	24.8	22.2	22.3	22.4	24.6	24.2	24.6	22.8	22.5	22.4
		1	14	24.7	24.8	24.7	22.1	22.2	22.4	24.5	24.2	23.4	22.7	22.5	22.4
		8	0	23.9	23.9	23.8	21.3	21.3	21.2	23.7	23.5	23.5	21.5	21.6	21.7
		8	4	23.9	23.9	23.8	21.3	21.4	21.2	23.6	23.5	23.4	21.6	21.7	21.7
		8	7	23.8	24.0	23.8	21.3	21.4	21.2	23.6	23.5	23.3	21.5	21.6	21.7
		15	0	23.8	23.8	23.8	21.2	21.2	21.2	23.6	23.4	22.9	21.4	21.5	21.6
	64QAM	1	0	23.9	24.0	23.8	20.9	20.9	20.6	22.1	22.5	22.9	21.4	21.5	21.3
		1	7	23.8	24.0	23.7	20.8	20.9	20.6	22.1	22.4	22.9	21.3	21.5	21.3
		1	14	23.8	24.0	23.6	20.8	20.8	20.5	22.3	22.4	21.8	21.2	21.5	21.3
		8	0	22.6	22.8	22.8	19.6	19.6	19.6	20.9	21.3	21.9	20.1	20.3	20.3
		8	4	22.6	22.8	22.8	19.7	19.6	19.6	21.0	21.3	21.9	20.1	20.3	20.3
		8	7	22.7	22.8	22.8	19.7	19.7	19.6	21.0	21.3	21.8	20.1	20.4	20.3
		15	0	22.7	22.7	22.7	19.7	19.6	19.6	21.1	21.2	-0.8	20.2	20.2	20.3
	256QAM	1	0	20.9	21.1	21.1	20.4	20.5	20.5	18.9	18.9	18.9	20.3	19.9	20.1
		1	7	20.9	21.0	21.0	20.5	20.5	20.5	18.8	18.9	18.9	20.3	19.8	20.1
		1	14	20.8	20.9	21.0	20.4	20.5	20.5	18.7	18.9	18.8	20.2	19.8	20.0
		8	0	21.4	21.1	21.1	20.4	20.5	20.5	19.1	18.9	18.8	20.3	20.2	20.0
		8	4	21.4	21.2	21.2	20.4	20.5	20.5	19.1	18.9	18.8	20.3	20.2	20.0
		8	7	21.3	21.2	21.2	20.4	20.5	20.5	19.1	18.9	18.8	20.3	20.2	20.0
		15	0	21.3	21.1	21.3	20.4	20.5	20.5	19.0	18.8	18.9	20.1	20.1	20.2

OUTPUT POWER FOR LTE BAND 2 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				18625	18900	19175	18625	18900	19175	18625	18900	19175	18625	18900	19175
				1852.5	1880.0	1907.5	1852.5	1880.0	1907.5	1852.5	1880.0	1907.5	1852.5	1880.0	1907.5
5.0	QPSK	1	0	25.4	25.6	25.4	22.9	23.0	22.7	25.0	24.8	24.7	22.6	22.8	22.9
		1	12	25.5	25.7	25.2	23.0	23.1	22.8	25.0	24.9	24.7	22.8	22.9	23.0
		1	24	25.5	25.5	24.9	22.9	23.0	22.7	24.9	24.9	24.7	22.7	22.8	22.9
		12	0	24.4	24.6	24.5	22.0	21.9	21.8	24.6	24.4	24.3	22.3	22.4	22.4
		12	6	24.5	24.6	24.4	22.1	22.0	22.0	24.7	24.4	24.3	22.4	22.5	22.4
		12	11	24.5	24.6	24.2	22.0	22.0	21.9	24.6	24.4	24.3	22.3	22.4	22.4
		25	0	24.4	24.6	24.3	22.0	22.0	21.9	24.6	24.4	24.3	22.3	22.4	22.4
	16QAM	1	0	24.4	24.7	25.0	22.2	22.1	22.4	24.7	24.5	24.7	22.8	22.5	22.6
		1	12	24.5	24.8	24.8	22.4	22.2	22.5	24.7	24.6	24.8	22.9	22.6	22.6
		1	24	24.6	24.7	24.4	22.1	22.1	22.3	24.6	24.5	24.7	22.8	22.5	22.6
		12	0	23.5	23.7	23.7	21.1	21.1	21.1	23.7	23.5	23.5	21.5	21.5	21.5
		12	6	23.6	23.7	23.7	21.1	21.1	21.1	23.7	23.5	23.5	21.5	21.5	21.6
		12	11	23.6	23.6	23.6	21.0	21.1	21.1	23.6	23.5	23.4	21.4	21.5	21.5
		25	0	23.5	23.5	23.6	20.9	21.0	20.9	23.5	23.4	23.3	21.4	21.4	21.4
	64QAM	1	0	23.5	23.2	23.6	20.8	20.2	20.5	22.1	22.3	23.0	21.2	21.0	21.4
		1	12	23.6	23.3	23.7	20.8	20.3	20.6	22.3	22.1	23.0	21.3	21.1	21.4
		1	24	23.6	23.2	23.4	20.7	20.3	20.5	22.5	22.0	23.1	21.2	21.0	21.3
		12	0	22.4	22.4	22.3	19.6	19.4	19.2	21.0	21.3	21.7	20.1	20.2	20.1
		12	6	22.5	22.4	22.4	19.6	19.4	19.3	21.2	21.3	21.8	20.1	20.2	20.1
		12	11	22.4	22.4	22.3	19.5	19.4	19.3	21.2	21.3	21.8	20.1	20.2	20.1
		25	0	22.3	22.3	22.3	19.5	19.4	19.2	21.1	21.2	21.7	20.0	20.1	20.1
	256QAM	1	0	21.1	20.6	21.1	20.6	20.6	20.5	19.0	18.5	18.8	20.3	20.1	19.7
		1	12	21.1	20.8	21.2	20.6	20.6	20.5	19.0	18.6	18.9	20.2	20.1	19.9
		1	24	21.0	20.7	21.2	20.5	20.6	20.5	18.9	18.5	18.8	20.2	20.1	19.7
		12	0	21.3	21.2	21.2	20.6	20.6	20.5	19.0	18.9	18.8	20.3	20.1	20.0
		12	6	21.4	21.2	21.2	20.5	20.6	20.5	19.1	18.9	18.9	20.3	20.1	20.1
		12	11	21.3	21.2	21.1	20.5	20.6	20.5	19.0	18.8	18.8	20.3	20.1	20.0
		25	0	21.3	21.2	21.2	20.5	20.6	20.6	19.0	18.9	18.8	20.3	20.1	20.0

OUTPUT POWER FOR LTE BAND 2 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				18650	18900	19150	18650	18900	19150	18650	18900	19150	18650	18900	19150
10.0	QPSK	1	0	25.1	25.4	25.7	22.6	22.7	23.0	24.7	24.6	25.0	22.6	22.7	23.0
		1	24	25.5	25.7	25.6	22.9	23.1	22.9	25.0	24.9	24.9	23.0	23.0	23.0
		1	49	25.3	25.0	24.9	22.6	22.8	22.7	24.7	24.8	24.8	22.8	22.7	23.0
		25	0	24.3	24.6	24.6	21.9	22.0	21.9	24.5	24.4	24.4	22.4	22.5	22.5
		25	12	24.6	24.7	24.7	22.1	22.1	22.0	24.6	24.5	24.5	22.6	22.7	22.7
		25	24	24.6	24.6	24.3	21.9	22.0	21.9	24.5	24.5	24.4	22.5	22.5	22.6
		50	0	24.4	24.6	24.5	22.0	21.9	21.9	24.5	24.4	24.4	22.5	22.6	22.6
	16QAM	1	0	23.9	24.5	25.2	21.6	21.8	22.5	24.4	24.1	24.9	22.5	22.3	22.6
		1	24	24.5	24.6	24.9	22.1	22.1	22.4	24.6	24.4	24.8	22.9	22.6	22.6
		1	49	24.3	23.9	24.3	21.7	21.8	22.1	24.3	24.2	24.7	22.7	22.3	22.6
		25	0	23.5	23.6	23.7	21.0	21.0	21.0	23.6	23.4	23.4	21.5	21.6	21.6
		25	12	23.8	23.7	23.7	21.2	21.1	21.0	23.8	23.5	23.6	21.6	21.8	21.7
		25	24	23.7	23.7	23.5	21.0	21.0	21.0	23.6	23.5	23.4	21.5	21.7	21.6
		50	0	23.6	23.6	23.6	21.0	20.9	20.9	23.6	23.4	23.5	21.5	21.6	21.6
	64QAM	1	0	23.0	23.4	23.6	20.3	20.3	20.4	21.7	22.6	23.4	21.0	21.3	21.4
		1	24	23.6	23.8	23.6	20.6	20.7	20.4	22.4	22.5	22.9	21.3	21.7	21.4
		1	49	23.3	23.3	23.3	20.3	20.5	20.4	22.5	22.0	22.9	21.1	21.4	21.5
		25	0	22.2	22.5	22.5	19.4	19.3	19.3	21.0	21.4	21.9	20.2	20.3	20.3
		25	12	22.5	22.6	22.6	19.6	19.4	19.4	21.4	21.3	21.9	20.3	20.4	20.5
		25	24	22.5	22.5	22.6	19.5	19.4	19.4	21.5	21.2	21.8	20.2	20.4	20.4
		50	0	22.3	22.5	22.4	19.4	19.3	19.3	21.2	21.2	21.8	20.2	20.3	20.4
	256QAM	1	0	20.7	20.6	20.8	20.5	20.6	20.6	18.5	18.4	18.5	19.7	19.8	19.7
		1	24	21.0	21.1	21.2	20.5	20.5	20.6	18.8	18.8	18.9	20.1	20.3	20.1
		1	49	20.7	20.8	21.0	20.5	20.6	20.6	18.5	18.6	18.7	19.8	20.0	19.9
		25	0	21.3	21.1	21.1	20.5	20.6	20.6	18.9	18.7	18.6	20.2	20.1	19.9
		25	12	21.4	21.2	21.2	20.5	20.6	20.6	19.0	18.9	18.8	20.3	20.1	20.0
		25	24	21.2	21.1	21.2	20.5	20.6	20.6	18.9	18.8	18.7	20.2	20.1	20.0
		50	0	21.3	21.1	21.1	20.4	20.6	20.6	18.9	18.8	18.6	20.2	20.0	19.9

OUTPUT POWER FOR LTE BAND 2 (15.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				18675	18900	19125	18675	18900	19125	18675	18900	19125	18675	18900	19125
				1857.5	1880.0	1902.5	1857.5	1880.0	1902.5	1857.5	1880.0	1902.5	1857.5	1880.0	1902.5
15.0	QPSK	1	0	25.3	25.7	25.7	22.9	23.0	23.1	24.9	24.9	25.0	22.7	23.0	22.9
		1	37	25.3	25.5	25.7	23.0	23.1	23.0	25.0	24.9	24.8	22.8	22.9	22.9
		1	74	25.7	25.0	24.6	23.0	23.0	22.4	24.9	24.9	24.8	22.9	22.9	22.9
		36	0	24.2	24.7	24.6	22.0	22.1	22.1	24.5	24.4	24.4	22.3	22.4	22.3
		36	16	24.4	24.6	24.6	22.2	22.2	22.1	24.6	24.5	24.4	22.4	22.4	22.4
		36	35	24.5	24.4	24.3	22.2	22.3	22.2	24.6	24.6	24.5	22.5	22.5	22.5
		75	0	24.4	24.5	24.3	22.1	22.2	22.1	24.5	24.4	24.4	22.4	22.5	22.4
	16QAM	1	0	24.5	24.9	24.8	22.3	22.3	22.4	24.9	24.3	24.9	22.6	22.9	22.4
		1	37	24.7	24.4	24.9	22.6	22.2	22.6	25.0	24.3	24.8	22.8	22.9	22.4
		1	74	25.1	24.0	24.0	22.5	22.0	21.8	24.9	24.4	24.7	22.8	22.9	22.4
		36	0	23.4	23.7	23.7	21.0	21.0	21.2	23.5	23.4	23.4	21.3	21.4	21.4
		36	16	23.6	23.8	23.8	21.2	21.2	21.2	23.6	23.5	23.4	21.5	21.4	21.4
		36	35	23.7	23.6	23.6	21.1	21.2	21.2	23.5	23.5	23.5	21.5	21.5	21.5
		75	0	23.6	23.7	23.7	21.1	21.1	20.9	23.5	23.4	23.4	21.4	21.5	21.4
	64QAM	1	0	23.6	23.8	23.6	20.9	20.7	20.5	22.2	23.1	23.4	21.3	21.5	21.3
		1	37	23.8	23.8	23.7	21.0	20.7	20.5	22.8	22.1	22.8	21.4	21.4	21.3
		1	74	24.0	23.3	23.1	20.9	20.7	20.5	23.8	22.2	22.6	21.6	21.2	21.2
		36	0	22.1	22.5	22.6	19.4	19.4	19.4	20.8	21.4	22.0	19.8	20.2	20.3
		36	16	22.2	22.6	22.8	19.5	19.5	19.4	21.1	21.1	21.8	19.9	20.2	20.3
		36	35	22.4	22.4	22.8	19.5	19.5	19.5	21.6	21.0	21.7	20.1	20.2	20.4
		75	0	22.3	22.5	22.7	19.5	19.4	19.3	21.2	21.2	21.8	19.9	20.1	20.3
	256QAM	1	0	21.1	20.7	20.9	20.9	21.0	20.9	18.8	18.5	18.6	20.1	19.9	19.8
		1	37	21.2	20.9	21.1	20.9	21.0	20.9	18.8	18.7	18.8	20.2	20.2	20.0
		1	74	21.1	20.9	21.0	20.9	21.0	20.9	18.7	18.6	18.8	20.1	20.1	19.9
		36	0	21.1	21.0	21.1	20.9	21.0	20.9	18.7	18.6	18.6	20.0	20.0	19.9
		36	16	21.2	21.1	21.2	20.9	21.0	20.9	18.8	18.7	18.7	20.2	20.1	19.9
		36	35	21.2	21.2	21.2	20.9	21.0	20.9	18.8	18.7	18.8	20.1	20.1	20.0
		75	0	21.2	21.1	21.1	20.9	21.0	20.9	18.8	18.7	18.6	20.2	20.0	19.9

OUTPUT POWER FOR LTE BAND 2 (20.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				18700 1860.0	18900 1880.0	19100 1900.0	18700 1860.0	18900 1880.0	19100 1900.0	18700 1860.0	18900 1880.0	19100 1900.0	18700 1860.0	18900 1880.0	19100 1900.0
20.0	QPSK	1	0	25.3	25.6	24.3	23.1	22.9	23.0	25.0	24.9	25.0	22.8	23.0	22.9
		1	49	25.1	25.3	24.0	23.0	23.0	22.9	24.9	24.9	24.9	22.8	22.9	22.9
		1	99	25.7	24.8	23.5	23.0	23.0	22.8	24.9	25.0	24.8	22.9	22.9	22.9
		50	0	23.9	24.6	23.3	21.9	21.9	21.9	24.4	24.4	24.4	22.3	22.4	22.3
		50	24	24.2	24.4	23.1	22.1	22.0	21.9	24.6	24.5	24.5	22.5	22.5	22.4
		50	49	24.5	24.1	22.8	22.0	22.0	22.0	24.5	24.5	24.4	22.5	22.5	22.5
	16QAM	100	0	24.1	24.4	23.1	22.0	21.9	21.9	24.5	24.4	24.4	22.4	22.5	22.4
		1	0	24.6	25.3	24.0	22.5	22.5	22.5	25.0	25.0	25.0	22.8	22.9	23.0
		1	49	24.6	24.9	23.6	22.4	22.5	22.4	24.9	25.0	24.9	22.8	22.9	23.0
		1	99	25.0	24.5	23.2	22.4	22.6	22.4	24.8	25.0	24.8	22.9	22.8	23.0
		50	0	23.1	23.6	22.3	20.9	20.9	20.9	23.4	23.4	23.4	21.3	21.4	21.4
		50	24	23.4	23.7	22.4	21.1	21.0	21.0	23.6	23.5	23.4	21.5	21.5	21.5
	64QAM	50	49	23.6	23.4	22.1	21.0	21.1	21.0	23.5	23.6	23.5	21.5	21.5	21.5
		100	0	23.3	23.6	22.3	21.0	21.0	20.9	23.5	23.4	23.4	21.4	21.5	21.4
		1	0	23.3	23.8	22.5	21.2	21.3	21.6	22.2	23.5	23.5	21.1	21.5	21.8
		1	49	23.2	23.6	22.3	21.2	21.3	21.6	22.7	22.1	23.6	21.1	21.4	21.8
		1	99	23.7	23.1	21.8	21.2	21.4	21.6	23.6	22.4	23.2	21.4	21.2	21.8
		50	0	21.8	22.5	21.2	20.0	20.0	19.9	20.8	21.4	21.7	19.6	20.2	20.2
	256QAM	50	24	22.1	22.3	21.0	20.1	20.1	20.1	21.4	21.0	21.9	20.0	20.2	20.3
		50	49	22.3	21.9	20.6	20.1	20.1	20.0	21.9	20.9	21.7	20.2	20.0	20.3
		100	0	21.9	22.2	20.9	20.1	20.0	20.0	21.2	21.2	21.6	19.8	20.1	20.2
		1	0	21.3	20.7	20.7	21.2	21.3	21.3	18.9	18.4	18.3	20.2	19.6	19.7
		1	49	21.4	21.1	20.9	21.2	21.3	21.3	19.1	18.8	18.6	20.4	20.0	20.0
		1	99	21.2	21.0	20.8	21.2	21.3	21.3	19.0	18.7	18.5	20.3	19.8	19.8
		50	0	21.0	20.9	20.9	21.2	21.3	21.3	18.7	18.5	18.5	20.0	19.8	19.8
		50	24	21.2	21.1	21.1	21.2	21.3	21.2	18.8	18.7	18.6	20.1	20.1	19.9
		50	49	21.1	21.1	21.1	21.2	21.3	21.2	18.8	18.7	18.7	20.1	20.0	19.9
		100	0	21.1	21.0	21.0	21.2	21.3	21.3	18.8	18.7	18.6	20.1	20.0	19.9

7.2. LTE BAND 5

Test Engineer ID: 39004 Test Date: 3/9/2020

OUTPUT POWER FOR LTE BAND 5 (1.4 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				20407	20525	20643	20407	20525	20643
				824.7	836.5	848.3	824.7	836.5	848.3
1.4	QPSK	1	0	25.5	25.6	25.6	24.4	24.4	24.3
		1	2	25.6	25.7	25.7	24.4	24.5	24.4
		1	5	25.5	25.6	25.7	24.4	24.5	24.3
		3	0	25.4	25.5	25.7	24.3	24.4	24.3
		3	1	25.5	25.6	25.7	24.4	24.4	24.4
		3	2	25.5	25.6	25.7	24.4	24.5	24.4
	16QAM	6	0	24.6	24.6	24.7	23.4	23.5	23.5
		1	0	24.6	24.8	25.1	23.6	23.9	23.5
		1	2	24.6	24.9	25.1	23.6	23.9	23.5
		1	5	24.6	24.8	25.0	23.5	23.9	23.5
		3	0	24.7	24.7	24.9	23.5	23.6	23.6
		3	1	24.8	24.7	25.0	23.6	23.7	23.7
	64QAM	3	2	24.8	24.8	25.0	23.5	23.8	23.7
		6	0	23.8	23.7	23.6	22.6	22.4	22.6
		1	0	24.2	24.3	24.0	22.9	23.1	22.6
		1	2	24.2	24.5	24.1	23.0	23.2	22.7
		1	5	24.2	24.4	24.0	23.0	23.1	22.6
		3	0	23.9	24.3	24.0	22.6	23.0	22.7
	256QAM	3	1	24.0	24.3	24.1	22.7	23.1	22.8
		3	2	24.0	24.4	24.1	22.7	23.1	22.7
		6	0	23.1	22.9	23.2	21.8	21.7	21.9
		1	0	20.9	20.7	21.2	23.1	23.1	23.1
		1	2	21.0	20.7	20.8	23.1	23.1	23.1
		1	5	20.9	20.7	20.7	23.1	23.1	23.1
		3	0	21.2	21.1	21.2	23.1	23.1	23.1
		3	1	21.2	21.2	21.2	23.1	23.1	23.1
		3	2	21.3	21.2	21.2	23.1	23.1	23.1
		6	0	21.1	21.2	21.2	23.1	23.1	23.1

OUTPUT POWER FOR LTE BAND 5 (3.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				20415	20525	20635	20415	20525	20635
3.0	QPSK	1	0	825.5	836.5	847.5	825.5	836.5	847.5
		1	7	25.4	25.5	25.6	24.7	24.8	24.4
		1	14	25.4	25.5	25.7	24.7	24.8	24.5
		8	0	25.5	25.6	25.7	24.8	24.8	24.5
		8	4	24.5	24.6	24.6	23.8	23.9	23.5
		8	7	24.6	24.6	24.7	23.9	23.9	23.6
		15	0	24.6	24.7	24.7	23.9	24.0	23.6
	16QAM	1	0	24.6	24.6	24.6	23.9	23.9	23.5
		1	7	24.5	24.6	25.0	23.8	23.8	23.9
		1	14	24.5	24.6	25.1	23.9	23.8	23.9
		8	0	24.6	24.7	25.0	23.9	23.8	23.9
		8	4	23.5	23.7	23.7	22.9	23.0	22.6
		8	7	23.6	23.7	23.8	23.0	23.0	22.7
		15	0	23.6	23.8	23.8	23.0	23.1	22.7
	64QAM	1	0	23.5	23.7	23.7	22.9	23.0	22.6
		1	7	24.1	24.3	23.9	23.2	23.3	22.7
		1	14	24.2	24.3	24.0	23.3	23.3	22.7
		8	0	24.2	24.3	24.0	23.3	23.4	22.7
		8	4	22.9	23.0	22.9	22.0	22.1	21.6
		8	7	23.0	23.0	23.0	22.1	22.1	21.7
		15	0	23.0	23.1	23.0	22.1	22.2	21.7
	256QAM	1	0	23.1	22.9	23.0	22.2	22.0	21.7
		1	2	20.9	21.1	21.2	23.4	23.4	23.3
		1	5	21.0	21.1	21.3	23.4	23.4	23.3
		3	0	21.0	21.1	21.3	23.4	23.4	23.3
		3	1	21.3	21.1	21.0	23.4	23.4	23.3
		3	2	21.3	21.2	21.1	23.4	23.4	23.3
		6	0	21.3	21.2	21.2	23.4	23.4	23.3

OUTPUT POWER FOR LTE BAND 5 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				20425	20525	20625	20425	20525	20625
5.0	QPSK	1	0	826.5	836.5	846.5	826.5	836.5	846.5
		1	12	25.4	25.6	25.5	24.3	24.4	24.3
		1	24	25.5	25.7	25.6	24.4	24.5	24.3
		12	0	25.5	25.7	25.6	24.4	24.5	24.3
		12	6	24.5	24.6	24.6	23.3	23.4	23.4
		12	11	24.6	24.6	24.7	23.4	23.4	23.5
		25	0	24.6	24.7	24.7	23.4	23.5	23.5
	16QAM	1	0	24.6	24.8	25.2	23.4	23.6	23.9
		1	12	24.8	24.9	25.3	23.6	23.6	24.0
		1	24	24.8	24.9	25.2	23.6	23.6	23.9
		12	0	23.6	23.7	23.8	22.4	22.5	22.5
		12	6	23.7	23.7	23.9	22.5	22.5	22.6
		12	11	23.7	23.7	23.9	22.5	22.5	22.6
		25	0	23.5	23.7	23.8	22.4	22.4	22.5
	64QAM	1	0	24.2	23.9	24.2	22.8	22.4	22.8
		1	12	24.4	24.0	24.3	22.9	22.5	22.8
		1	24	24.3	23.9	24.2	22.9	22.5	22.8
		12	0	23.1	23.0	22.9	21.6	21.6	21.5
		12	6	23.2	23.1	23.0	21.7	21.6	21.5
		12	11	23.1	23.1	23.0	21.7	21.7	21.5
		25	0	23.1	23.0	22.9	21.6	21.5	21.4
	256QAM	1	0	21.1	20.7	21.1	22.6	22.6	22.6
		1	12	21.2	20.9	21.2	22.5	22.6	22.6
		1	24	21.2	20.9	21.2	22.5	22.6	22.6
		12	0	21.2	21.1	21.1	22.5	22.6	22.6
		12	6	21.3	21.1	21.1	22.5	22.6	22.6
		12	11	21.2	21.1	21.1	22.5	22.6	22.6
		25	0	21.2	21.2	21.1	22.5	22.6	22.6

OUTPUT POWER FOR LTE BAND 5 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				20450	20525	20600	20450	20525	20600
10.0	QPSK	1	0	829.0	836.5	844.0	829.0	836.5	844.0
		1	0	25.5	25.6	25.7	24.4	24.5	24.5
		1	24	25.5	25.6	25.7	24.4	24.4	24.5
		1	49	25.5	24.6	25.7	24.4	24.5	24.5
		25	0	24.5	24.6	24.6	23.4	23.5	23.5
		25	12	24.6	24.7	24.7	23.5	23.5	23.5
		25	24	24.6	24.5	24.7	23.5	23.5	23.5
		50	0	24.5	24.6	24.7	23.5	23.4	23.5
	16QAM	1	0	24.6	24.6	25.1	23.5	23.6	23.9
		1	24	24.6	24.6	25.1	23.4	23.4	23.9
		1	49	24.7	23.7	25.1	23.5	23.5	23.9
		25	0	23.6	23.7	23.7	22.6	22.5	22.6
		25	12	23.7	23.7	23.7	22.6	22.5	22.6
		25	24	23.7	23.6	23.8	22.6	22.6	22.6
		50	0	23.6	24.4	23.7	22.5	22.4	22.6
	64QAM	1	0	24.2	24.4	24.1	22.9	23.0	22.7
		1	24	24.2	24.3	24.1	22.9	23.0	22.7
		1	49	24.2	23.1	24.1	22.9	23.0	22.8
		25	0	23.1	23.1	23.0	21.7	21.7	21.7
		25	12	23.2	23.1	23.1	21.8	21.7	21.7
		25	24	23.1	22.9	23.1	21.7	21.7	21.7
		50	0	23.0	-0.6	23.0	21.7	21.6	21.6
	256QAM	1	0	20.7	20.8	21.0	22.8	22.8	22.7
		1	24	21.0	21.2	21.2	22.9	22.8	22.7
		1	49	20.8	20.9	21.0	22.9	22.8	22.7
		25	0	21.1	21.0	21.0	22.9	22.8	22.7
		25	12	21.2	21.1	21.2	22.9	22.8	22.7
		25	24	21.2	21.1	21.1	22.9	22.8	22.7
		50	0	21.2	21.1	21.1	22.9	22.8	22.7

7.3. 5G NR Band n5

Test Engineer ID: 23547 Test Date: 8/14/2020

OUTPUT POWER FOR 5G NR Band n5 (15.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Ant 1			Ant 2		
				Conducted Average (dBm)			Conducted Average (dBm)		
				166300	167300	168300	166300	167300	168300
				831.5 MHz	836.5 MHz	841.5 MHz	831.5 MHz	836.5 MHz	841.5 MHz
15.0	BPSK	1	0	25.5	25.2	24.9	23.9	23.9	23.8
		1	1	25.7	25.7	25.7	24.5	24.3	24.4
		36	18	25.4	25.5	25.3	20.1	20.4	22.3
		75	0	25.0	24.9	24.8	24.1	22.8	22.2
	QPSK	1	0	24.4	24.1	24.0	23.6	23.4	23.3
		1	1	25.4	25.1	25.0	24.3	24.3	24.3
		36	18	25.0	25.1	24.9	24.4	24.5	23.9
		75	0	24.1	23.9	23.7	23.3	23.3	22.9
	16QAM	1	0	23.3	22.9	23.0	22.4	22.3	22.2
		1	1	24.2	24.1	24.1	23.2	23.7	23.3
		36	18	24.2	24.1	23.9	23.4	23.4	22.9
		75	0	23.1	23.0	22.9	22.4	22.4	22.0
	64QAM	1	0	22.5	23.0	22.7	21.8	22.0	22.0
		1	1	22.9	22.6	22.5	22.1	22.2	21.7
		36	18	22.6	22.5	22.3	21.9	22.0	21.5
		75	0	22.6	22.5	22.4	21.8	21.8	21.8
	256QAM	1	0	20.8	20.8	21.0	20.1	20.1	19.9
		1	1	20.9	21.1	20.9	20.2	19.8	20.0
		36	18	20.6	20.5	20.4	19.9	19.8	19.8
		75	0	20.6	20.5	20.4	19.8	19.9	19.8

OUTPUT POWER FOR 5G NR Band n5 (20.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Ant 1			Ant 2		
				Conducted Average (dBm)			Conducted Average (dBm)		
				166800	167300	167800	166800	167300	167800
				834.0 MHz	836.5 MHz	839.0 MHz	834.0 MHz	836.5 MHz	839.0 MHz
20.0	BPSK	1	0	25.3	25.3	25.3	24.1	24.0	24.0
		1	1	25.6	25.7	25.5	24.5	24.4	24.4
		50	25	25.5	25.5	25.5	24.0	23.7	23.8
		100	1	25.1	20.6	21.7	23.4	23.3	23.3
	QPSK	1	0	24.2	24.2	24.1	23.3	23.4	23.3
		1	1	25.4	25.5	25.0	24.3	24.3	24.4
		50	25	25.2	25.3	24.9	24.4	24.4	24.3
		100	1	24.4	24.2	24.2	23.2	23.5	23.1
	16QAM	1	0	23.1	23.0	23.3	22.5	22.5	22.6
		1	1	24.2	24.1	24.1	23.6	23.1	23.8
		50	25	24.0	24.0	24.0	23.4	23.5	23.3
		100	1	23.1	23.0	23.1	22.1	22.4	22.0
	64QAM	1	0	22.6	22.8	22.7	21.5	21.6	22.2
		1	1	22.8	22.2	22.9	21.7	22.0	22.6
		50	25	22.6	22.6	22.5	21.9	21.9	22.8
		100	1	22.5	22.6	22.5	21.7	21.9	21.7
	256QAM	1	0	20.4	20.9	20.6	20.1	20.0	20.2
		1	1	20.5	20.7	20.8	20.0	20.0	19.7
		50	25	20.7	20.7	20.5	19.8	19.9	19.7
		100	1	20.6	20.5	20.5	19.8	19.9	19.9

7.4. LTE BAND 7

Test Engineer ID: 39004 Test Date: 3/9/2020

OUTPUT POWER FOR LTE BAND 7 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				20775	21100	21425	20775	21100	21425	20775	21100	21425	20775	21100	21425
5.0	QPSK	1	0	24.7	25.4	25.7	22.6	22.8	21.8	24.9	25.0	24.8	22.0	22.5	22.1
		1	12	24.9	25.5	25.7	22.6	22.8	21.5	25.0	24.9	24.8	22.4	22.4	22.1
		1	24	24.9	25.6	25.5	22.7	22.8	21.5	25.0	25.0	24.9	22.5	22.4	22.1
		12	0	24.0	24.6	24.8	21.6	21.9	21.1	24.5	24.4	24.3	21.7	21.5	21.4
		12	6	24.3	24.7	25.0	21.7	21.9	20.9	24.6	24.4	24.4	21.7	21.6	21.4
		12	11	24.3	24.7	24.9	21.6	21.9	20.8	24.5	24.4	24.4	21.7	21.5	21.4
		25	0	24.0	24.6	24.6	21.7	21.9	20.7	24.5	24.4	24.3	21.7	21.5	21.4
	16QAM	1	0	23.9	25.2	24.8	21.9	22.4	20.9	24.7	24.7	24.9	21.7	21.7	21.9
		1	12	24.0	25.3	24.6	21.9	22.3	20.7	24.8	24.6	24.9	21.9	21.7	21.8
		1	24	24.2	25.3	24.5	21.9	22.4	20.6	24.8	24.6	24.9	21.9	21.7	21.9
		12	0	23.2	23.8	24.0	20.8	21.0	20.4	23.7	23.5	23.5	20.8	20.6	20.5
		12	6	23.5	23.9	24.0	20.9	21.1	20.2	23.7	23.5	23.5	20.9	20.6	20.6
		12	11	23.5	23.9	24.0	20.9	21.0	20.1	23.6	23.4	23.5	20.8	20.6	20.5
		25	0	23.2	23.7	23.8	20.8	20.9	20.0	23.5	23.4	23.4	20.7	20.5	20.4
	64QAM	1	0	22.4	23.1	23.7	19.6	19.4	19.8	21.4	23.0	23.0	17.9	21.1	19.9
		1	12	22.6	23.2	23.7	19.7	19.4	19.7	21.7	23.0	23.0	18.6	20.8	19.5
		1	24	22.9	23.2	23.8	19.7	19.5	19.7	22.0	23.0	22.7	19.0	20.6	19.1
		12	0	21.4	22.2	22.3	18.5	18.5	18.3	21.2	21.6	21.8	18.0	20.3	18.8
		12	6	21.7	22.3	22.4	18.5	18.6	18.4	21.6	21.6	21.9	18.7	20.2	18.5
		12	11	22.0	22.3	22.4	18.5	18.5	18.4	21.8	21.6	21.8	19.2	20.1	18.1
		25	0	21.6	22.2	22.4	18.4	18.4	18.3	21.2	21.6	21.7	18.4	19.8	18.2
	256QAM	1	0	22.0	19.7	19.6	21.9	22.9	22.9	18.2	19.6	19.5	16.3	17.4	17.0
		1	12	18.5	19.7	19.6	22.9	22.9	22.9	18.4	19.5	19.4	16.5	17.3	17.0
		1	24	18.4	19.7	19.6	22.9	22.9	22.8	18.4	19.5	19.4	16.5	17.3	17.0
		12	0	18.7	19.7	19.6	22.9	22.9	22.9	18.5	19.5	19.4	16.4	17.4	17.2
		12	6	18.7	19.7	19.7	22.9	22.9	22.9	18.7	19.5	19.5	16.4	17.4	17.3
		12	11	18.7	19.7	19.6	22.9	22.9	22.9	18.7	19.5	19.4	16.5	17.4	17.3
		25	0	18.8	19.7	19.6	22.9	22.9	22.9	18.7	19.5	19.4	16.5	17.4	17.3

OUTPUT POWER FOR LTE BAND 7 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				20800	21100	21400	20800	21100	21400	20800	21100	21400	20800	21100	21400
				2505.0	2535.0	2565.0	2505.0	2535.0	2565.0	2505.0	2535.0	2565.0	2505.0	2535.0	2565.0
10.0	QPSK	1	0	25.1	25.7	25.7	22.3	22.8	22.7	24.9	25.0	24.9	22.4	22.4	22.2
		1	24	25.4	25.7	25.4	22.3	22.8	22.0	25.0	24.9	24.9	22.5	22.4	22.2
		1	49	25.5	25.7	25.0	22.5	22.7	21.8	25.0	24.9	24.9	22.5	22.3	22.2
		25	0	24.7	24.8	24.9	21.9	21.9	21.7	24.6	24.5	24.4	21.8	21.7	21.5
		25	12	24.7	24.8	24.7	21.9	22.0	21.2	24.7	24.5	24.5	21.9	21.6	21.5
		25	24	24.7	24.9	24.4	21.8	22.0	20.8	24.7	24.5	24.5	21.8	21.6	21.5
		50	0	24.7	24.7	24.8	21.9	21.9	21.5	24.7	24.5	24.5	21.8	21.6	21.4
	16QAM	1	0	24.6	24.8	24.8	21.9	22.0	22.3	24.7	24.5	24.9	21.8	21.6	21.9
		1	24	25.1	24.8	24.6	21.9	21.9	21.6	24.7	24.4	24.9	21.8	21.6	21.8
		1	49	25.1	24.9	24.2	22.0	21.9	21.4	24.8	24.4	24.9	21.9	21.5	21.8
		25	0	23.7	23.8	23.9	21.0	21.0	20.9	23.8	23.6	23.5	20.9	20.7	20.6
		25	12	23.8	23.9	23.8	21.0	21.0	20.5	23.9	23.6	23.5	21.0	20.7	20.5
		25	24	23.8	23.9	23.6	21.1	21.0	20.0	23.8	23.5	23.6	20.9	20.6	20.5
		50	0	23.7	23.7	23.7	20.9	20.8	20.6	23.7	23.5	23.5	20.9	20.6	20.5
	64QAM	1	0	22.0	23.5	23.4	19.6	19.7	19.4	21.8	23.1	22.9	19.1	21.2	20.6
		1	24	22.8	23.5	23.5	19.5	19.8	19.6	22.5	23.1	23.1	20.1	20.9	19.9
		1	49	23.4	23.6	23.4	19.6	19.8	19.6	23.0	23.2	22.9	20.2	20.5	19.2
		25	0	21.7	22.2	22.5	18.4	18.5	18.4	21.7	21.9	21.9	18.8	20.1	19.6
		25	12	22.3	22.2	22.5	18.5	18.5	18.5	22.0	21.9	22.0	19.2	19.9	19.0
		25	24	22.4	22.3	22.5	18.5	18.6	18.5	22.0	21.9	22.0	19.1	19.5	18.2
		50	0	22.0	22.1	22.4	18.4	18.4	18.3	21.7	21.8	21.9	18.7	19.6	18.9
	256QAM	1	0	18.6	19.2	19.4	18.7	19.7	19.7	18.5	19.2	19.2	16.2	17.2	17.3
		1	24	18.8	19.5	19.6	18.7	19.7	19.7	18.9	19.3	19.5	16.6	17.4	17.5
		1	49	18.6	19.3	19.4	18.7	19.7	19.7	18.8	19.2	19.2	16.3	17.2	17.3
		25	0	18.7	19.7	19.5	18.7	19.7	19.7	18.7	19.5	19.3	16.6	17.3	17.3
		25	12	18.8	19.7	19.6	18.7	19.7	19.7	18.9	19.5	19.4	16.7	17.4	17.3
		25	24	18.7	19.7	19.5	18.8	19.7	19.7	18.8	19.5	19.4	16.6	17.3	17.3
		50	0	18.7	19.7	19.5	18.7	19.7	19.7	18.8	19.5	19.3	16.7	17.3	17.3

OUTPUT POWER FOR LTE BAND 7 (15.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				20825	21100	21375	20825	21100	21375	20825	21100	21375	20825	21100	21375
				2507.5	2535.0	2562.5	2507.5	2535.0	2562.5	2507.5	2535.0	2562.5	2507.5	2535.0	2562.5
15.0	QPSK	1	0	24.6	25.7	25.4	22.6	22.8	22.5	25.0	24.7	24.7	22.4	22.4	-26.4
		1	37	25.2	25.6	25.1	22.5	22.5	21.8	25.0	24.6	24.6	22.5	22.2	-26.3
		1	74	25.3	25.6	24.5	22.6	22.1	21.4	25.0	24.6	24.7	22.5	22.1	-26.3
		36	0	24.5	25.2	24.7	21.8	21.9	21.8	24.5	24.3	24.2	21.8	21.5	-25.7
		36	16	24.6	25.3	24.5	21.6	21.9	21.3	24.5	24.3	24.3	21.9	21.5	-25.7
		36	35	24.6	25.2	24.3	21.2	21.5	20.7	24.5	24.3	24.3	21.8	21.5	-25.6
		75	0	24.5	25.0	24.2	21.7	21.9	21.3	24.4	24.2	24.3	21.8	21.5	-25.6
	16QAM	1	0	24.3	24.8	24.9	21.9	22.0	22.2	24.9	24.2	24.7	22.2	21.5	-26.1
		1	37	24.9	24.9	24.6	21.8	21.7	21.5	24.9	24.1	24.6	22.2	21.4	-26.0
		1	74	24.9	24.9	24.2	22.0	21.3	21.1	24.9	24.0	24.6	22.1	21.3	-25.9
		36	0	23.7	24.2	24.0	20.8	21.0	21.0	23.5	23.3	23.3	20.8	20.5	-24.7
		36	16	23.9	24.2	23.9	20.6	20.9	20.6	23.4	23.2	23.3	20.9	20.5	-24.7
		36	35	23.8	24.3	23.7	20.3	20.7	20.0	23.4	23.2	23.3	20.8	20.4	-24.7
		75	0	23.6	24.1	23.7	20.7	20.9	20.6	23.4	23.2	23.2	20.8	20.5	-24.6
	64QAM	1	0	22.5	23.7	23.3	19.9	19.5	19.3	21.6	22.7	23.0	19.6	20.6	-24.1
		1	37	23.8	23.7	23.5	19.8	19.6	19.4	22.5	22.6	23.1	20.1	20.3	-24.0
		1	74	21.9	22.5	22.4	18.2	18.3	18.3	21.2	21.7	21.8	18.5	19.7	-23.7
		36	0	21.9	22.5	22.4	18.2	18.3	18.3	21.2	21.7	21.8	18.5	19.7	-23.7
		36	16	22.5	22.5	22.6	18.4	18.3	18.4	21.5	21.8	21.9	18.5	19.4	-23.3
		36	35	22.6	22.5	22.5	18.3	18.4	18.4	21.4	21.8	21.5	18.1	18.9	-22.5
		75	0	22.0	22.4	22.3	18.3	18.3	18.3	21.1	21.6	21.8	18.3	19.1	-22.9
	256QAM	1	0	18.5	19.5	19.5	18.8	19.7	19.8	18.5	19.5	19.3	21.6	21.6	21.7
		1	37	18.8	19.7	19.5	18.8	19.7	19.7	18.9	19.5	19.4	21.6	21.6	21.7
		1	74	18.7	19.6	19.4	18.8	19.7	19.7	18.9	19.4	19.2	21.6	21.6	21.7
		36	0	18.7	19.6	19.6	18.8	19.7	19.7	18.7	19.4	19.4	21.5	21.6	21.6
		36	16	18.8	19.6	19.6	18.8	19.7	19.7	18.9	19.4	19.4	21.6	21.6	21.7
		36	35	18.7	19.6	19.5	18.8	19.7	19.8	18.9	19.4	19.3	21.6	21.6	21.6
		75	0	18.7	19.6	19.5	18.8	19.7	19.7	18.7	19.4	19.4	21.6	21.6	21.7

OUTPUT POWER FOR LTE BAND 7 (20.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				20850	21100	21350	20850	21100	21350	20850	21100	21350	20850	21100	21350
				2510.0	2535.0	2560.0	2510.0	2535.0	2560.0	2510.0	2535.0	2560.0	2510.0	2535.0	2560.0
20.0	QPSK	1	0	24.6	25.6	25.5	22.2	22.7	22.7	24.9	24.8	24.7	22.4	22.4	22.2
		1	49	25.3	25.7	25.3	22.2	22.4	22.1	25.0	24.7	24.8	22.5	22.3	22.1
		1	99	25.1	25.6	24.6	22.8	22.1	21.4	25.0	24.7	24.7	22.5	22.2	22.1
		50	0	24.8	25.2	24.8	21.7	21.9	21.8	24.6	24.4	24.3	21.8	21.6	21.5
		50	24	24.9	25.3	24.8	21.3	21.9	21.6	24.6	24.4	24.3	21.7	21.6	21.5
		50	49	24.6	25.2	24.4	21.1	21.3	20.8	24.5	24.3	24.4	21.7	21.5	21.4
		100	0	24.9	25.2	24.7	21.7	21.8	21.4	24.5	24.3	24.2	21.7	21.5	21.4
	16QAM	1	0	24.8	25.5	25.3	21.9	22.5	22.3	24.9	24.9	24.8	22.1	22.1	22.0
		1	49	25.3	25.7	25.2	21.7	22.4	21.9	24.9	24.8	24.7	22.2	22.0	21.8
		1	99	25.0	25.6	24.6	22.3	22.0	21.1	25.0	24.8	24.8	22.2	22.0	21.9
		50	0	23.6	24.3	23.9	20.7	20.9	20.9	23.5	23.4	23.3	20.8	20.6	20.5
		50	24	23.8	24.3	24.0	20.4	20.9	20.8	23.6	23.4	23.3	20.7	20.6	20.5
		50	49	23.7	24.3	23.7	20.2	20.5	20.1	23.5	23.3	23.3	20.7	20.5	20.4
		100	0	23.7	24.1	23.7	20.7	20.8	20.6	23.5	23.3	23.2	20.7	20.5	20.4
	64QAM	1	0	22.3	23.6	23.8	19.3	19.4	19.7	21.5	22.9	23.0	18.9	20.5	20.0
		1	49	23.7	23.8	23.9	19.3	19.5	19.7	22.5	22.8	23.1	19.4	20.3	20.7
		1	99	23.4	23.8	23.8	19.4	19.6	19.8	22.7	22.9	22.5	19.4	19.5	19.3
		50	0	22.1	22.6	22.2	18.2	18.2	18.1	21.3	21.8	21.8	18.4	19.6	19.2
		50	24	22.5	22.6	22.5	18.2	18.3	18.2	21.4	21.8	21.9	18.2	19.4	19.3
		50	49	22.3	22.6	22.5	18.2	18.4	18.2	21.4	21.9	21.9	17.6	18.7	18.6
		100	0	21.9	22.4	22.2	18.2	18.2	18.1	21.2	21.8	21.8	18.2	19.0	18.6
	256QAM	1	0	18.2	19.7	19.5	18.6	19.6	19.7	18.1	19.8	19.3	16.5	17.1	17.1
		1	49	18.6	20.0	19.6	18.6	19.6	19.7	18.8	19.7	19.4	17.0	17.2	17.3
		1	99	18.4	19.9	19.2	18.6	19.6	19.7	18.5	19.7	19.0	16.8	17.1	17.0
		50	0	18.5	19.6	19.5	18.6	19.6	19.7	18.5	19.4	19.3	16.5	17.2	17.2
		50	24	18.7	19.6	19.5	18.6	19.6	19.7	18.7	19.4	19.4	16.7	17.3	17.3
		50	49	18.6	19.6	19.4	18.6	19.6	19.7	18.8	19.4	19.2	16.6	17.2	17.2
		100	0	18.6	19.6	19.5	18.6	19.6	19.7	18.6	19.3	19.3	16.5	17.2	17.2

7.5. LTE BAND 12

Test Engineer ID: 39004 Test Date: 3/10/2020

OUTPUT POWER FOR LTE BAND 12 (1.4 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				23017	23095	23173	23017	23095	23173
1.4	QPSK	1	0	699.7	707.5	715.3	699.7	707.5	715.3
		1	2	25.5	25.6	25.6	23.8	23.7	23.5
		1	5	25.6	25.7	25.7	23.9	23.8	23.7
		3	0	25.6	25.7	25.6	23.8	23.8	23.6
		3	1	25.5	25.6	25.6	23.8	23.7	23.6
		3	2	25.6	25.7	25.7	23.8	23.7	23.7
		6	0	25.6	25.7	25.7	23.8	23.8	23.7
	16QAM	1	0	24.6	24.7	24.7	22.9	22.7	22.7
		1	2	24.7	25.1	24.8	22.9	23.1	22.7
		1	5	24.9	25.2	24.9	23.0	23.2	22.8
		3	0	24.8	25.1	24.8	23.0	23.2	22.8
		3	1	24.7	24.8	24.9	22.9	22.9	22.8
		3	2	24.8	24.9	24.9	23.0	22.9	22.9
	64QAM	6	0	24.8	25.0	25.0	23.0	23.0	22.9
		1	0	23.8	23.6	23.9	22.0	21.6	21.9
		1	2	24.1	23.8	24.0	22.2	21.9	21.9
		1	5	24.2	24.2	23.9	22.3	21.9	22.0
		3	0	24.1	23.9	23.7	22.2	21.9	21.7
		3	1	24.1	23.9	23.8	22.3	22.0	21.8
	256QAM	3	2	24.1	24.0	23.9	22.3	22.0	21.8
		6	0	22.7	23.0	22.8	20.9	21.0	20.8
		1	0	20.0	20.4	20.2	22.2	22.3	22.2
		1	2	20.1	20.6	20.3	22.2	22.3	22.2
		1	5	20.0	20.5	20.2	22.2	22.2	22.2
		3	0	20.5	20.5	20.5	22.2	22.2	22.2
		3	1	20.6	20.5	20.5	22.2	22.2	22.2
		3	2	20.6	20.6	20.6	22.2	22.2	22.2
		6	0	20.6	20.5	20.3	22.2	22.3	22.2

OUTPUT POWER FOR LTE BAND 12 (3.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				23025	23095	23165	23025	23095	23165
				700.5	707.5	714.5	700.5	707.5	714.5
3.0	QPSK	1	0	25.6	25.6	25.7	23.5	23.8	23.6
		1	7	25.6	25.6	25.7	23.5	23.8	23.5
		1	14	25.7	25.7	25.7	23.6	23.9	23.5
		8	0	24.7	24.7	24.7	22.6	22.9	22.5
		8	4	24.8	24.7	24.7	22.7	22.9	22.5
		8	7	24.8	24.8	24.8	22.7	23.0	22.6
		15	0	24.8	24.7	24.7	22.7	22.9	22.5
	16QAM	1	0	24.8	24.7	25.1	22.7	22.9	23.0
		1	7	24.7	24.6	25.1	22.6	22.8	22.9
		1	14	24.8	24.6	25.2	22.7	22.9	23.0
		8	0	23.8	23.8	23.8	21.6	22.0	21.6
		8	4	23.8	23.8	23.8	21.7	22.0	21.6
		8	7	23.8	23.9	23.9	21.8	22.1	21.7
		15	0	23.7	23.7	23.8	21.6	21.9	21.6
	64QAM	1	0	24.0	24.1	23.9	21.9	22.3	21.8
		1	7	23.9	24.1	23.9	21.8	22.3	21.7
		1	14	24.0	24.1	23.9	21.9	22.3	21.8
		8	0	22.7	22.8	22.8	20.6	21.0	20.7
		8	4	22.8	22.8	22.8	20.7	21.0	20.7
		8	7	22.8	22.9	22.9	20.7	21.1	20.7
		15	0	22.8	22.8	22.8	20.8	20.9	20.7
	256QAM	1	0	20.3	20.6	20.5	22.1	22.1	22.2
		1	7	20.3	20.5	20.5	22.1	22.1	22.2
		1	14	20.4	20.6	20.6	22.1	22.1	22.2
		8	0	20.6	20.4	20.4	22.1	22.1	22.2
		8	4	20.7	20.5	20.5	22.1	22.1	22.2
		8	7	20.6	20.5	20.5	22.1	22.2	22.2
		15	0	20.6	20.4	20.6	22.1	22.1	22.2

OUTPUT POWER FOR LTE BAND 12 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				23035	23095	23155	23035	23095	23155
				701.5	707.5	713.5	701.5	707.5	713.5
5.0	QPSK	1	0	25.6	25.6	25.5	23.6	23.8	23.5
		1	12	25.6	25.7	25.6	23.6	23.9	23.6
		1	24	25.7	25.7	25.6	23.6	23.9	23.6
		12	0	24.6	24.6	24.6	22.6	22.8	22.6
		12	6	24.7	24.6	24.6	22.7	22.8	22.6
		12	11	24.7	24.6	24.7	22.7	22.8	22.6
		25	0	24.7	24.6	24.6	22.6	22.8	22.6
	16QAM	1	0	24.7	24.8	25.2	22.8	23.0	23.2
		1	12	24.9	24.8	25.3	22.8	23.1	23.2
		1	24	24.9	24.8	25.2	22.8	23.0	23.2
		12	0	23.7	23.7	23.8	21.7	21.9	21.8
		12	6	23.7	23.7	23.8	21.8	21.9	21.8
		12	11	23.7	23.7	23.8	21.7	21.9	21.8
		25	0	23.6	23.6	23.7	21.6	21.8	21.7
	64QAM	1	0	23.9	23.5	24.0	21.9	21.7	22.0
		1	12	24.0	23.6	24.1	22.0	21.8	21.9
		1	24	24.0	23.6	24.1	22.0	21.8	22.0
		12	0	22.8	22.7	22.7	20.7	20.9	20.6
		12	6	22.8	22.7	22.7	20.8	20.9	20.6
		12	11	22.8	22.8	22.7	20.8	20.9	20.6
		25	0	22.8	22.6	22.6	20.7	20.8	20.6
	256QAM	1	0	20.5	20.6	20.2	21.6	21.8	21.8
		1	12	20.5	20.5	20.2	21.6	21.7	21.8
		1	24	20.5	20.5	20.2	21.6	21.8	21.7
		12	0	20.4	20.5	20.5	21.6	21.8	21.7
		12	6	20.5	20.5	20.5	21.6	21.7	21.7
		12	11	20.4	20.5	20.5	21.6	21.8	21.7
		25	0	20.5	20.6	20.6	21.6	21.8	21.7

OUTPUT POWER FOR LTE BAND 12 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				23060	23095	23130	23060	23095	23130
				704.0	707.5	711.0	704.0	707.5	711.0
10.0	QPSK	1	0	25.5	25.5	25.7	23.5	23.8	23.7
		1	24	25.5	25.5	25.6	23.5	23.9	23.5
		1	49	25.6	25.6	25.6	23.5	23.8	23.5
		25	0	24.5	24.6	24.5	22.5	22.9	22.5
		25	12	24.7	24.6	24.7	22.7	22.9	22.6
		25	24	24.6	24.6	24.6	22.6	22.9	22.6
	16QAM	50	0	24.6	24.6	24.7	22.6	22.9	22.6
		1	0	24.6	24.5	25.1	22.6	22.8	23.0
		1	24	24.6	24.6	25.0	22.6	22.9	22.9
		1	49	24.7	24.6	25.0	22.7	22.8	23.0
		25	0	23.6	23.6	23.6	21.6	21.9	21.6
		25	12	23.8	23.7	23.8	21.8	21.9	21.7
	64QAM	25	24	23.8	23.7	23.7	21.7	21.9	21.6
		50	0	23.7	23.5	23.7	21.6	21.8	21.6
		1	0	23.8	24.0	23.8	21.8	22.2	21.7
		1	24	23.8	24.0	23.8	21.9	22.3	21.8
		1	49	24.0	24.0	23.8	21.9	22.3	21.8
		25	0	22.7	22.6	22.8	20.7	20.9	20.7
	256QAM	25	12	22.8	22.8	22.9	20.8	21.0	20.9
		25	24	22.8	22.8	22.8	20.8	21.0	20.8
		50	0	22.7	22.7	22.8	20.7	20.9	20.7
		1	0	20.0	20.2	20.5	22.1	22.1	22.0
		1	24	20.4	20.6	20.6	22.1	22.1	22.1
		1	49	20.2	20.3	20.5	22.1	22.1	22.1
		25	0	20.5	20.4	20.4	22.1	22.1	22.1
		25	12	20.6	20.5	20.5	22.1	22.1	22.1
		25	24	20.5	20.5	20.5	22.1	22.1	22.1
		50	0	20.5	20.4	20.4	22.1	22.1	22.1

7.6. 5G NR Band n12

Test Engineer ID: 23547 Test Date: 8/14/2020

OUTPUT POWER FOR 5G NR Band n12 (15.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Ant 1			Ant 2		
				Conducted Average (dBm)			Conducted Average (dBm)		
				141300	141500	141700	141300	141500	141700
				706.5 MHz	707.5 MHz	708.5 MHz	706.5 MHz	707.5 MHz	708.5 MHz
15.0	BPSK	1	0	25.2	25.5	25.3	23.2	23.4	23.4
		1	1	25.7	25.6	25.5	23.9	23.9	23.7
		36	18	25.6	25.6	25.4	20.9	20.6	20.7
		75	0	25.2	25.0	25.1	23.4	22.0	21.9
	QPSK	1	0	23.9	24.3	24.0	22.3	22.3	22.4
		1	1	24.9	25.2	25.1	23.0	23.0	23.0
		36	18	24.9	24.8	24.8	20.3	20.4	20.6
		75	0	23.8	23.8	23.8	20.3	19.4	19.3
	16QAM	1	0	23.1	23.0	22.8	21.4	21.3	21.4
		1	1	24.1	23.9	23.8	22.2	22.2	22.2
		36	18	23.9	23.9	23.9	19.3	19.5	19.6
		75	0	22.8	22.8	22.7	19.3	18.4	18.4
	64QAM	1	0	22.5	22.8	22.4	21.1	21.0	21.2
		1	1	22.3	22.5	22.4	21.0	21.1	21.1
		36	18	22.4	22.3	22.3	18.8	19.0	19.0
		75	0	22.5	22.4	22.4	18.8	17.8	17.8
	256QAM	1	0	20.6	20.0	20.4	19.0	18.8	19.1
		1	1	20.8	20.1	20.0	19.0	18.8	18.9
		36	18	20.3	20.4	20.3	17.1	17.1	17.3
		75	0	20.4	20.4	20.4	17.0	15.9	15.9

7.7. LTE BAND 13

Test Engineer ID: 39004 Test Date: 3/10/2020

OUTPUT POWER FOR LTE BAND 13 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				23205	23230	23255	23205	23230	23255
5.0	QPSK	1	0	779.5	782.0	784.5	779.5	782.0	784.5
		1	12	25.5	25.6	25.6	23.6	23.8	23.7
		1	24	25.6	25.7	25.6	23.6	23.8	23.7
		12	0	25.6	25.7	25.6	23.8	23.9	23.8
		12	6	24.6	24.6	24.6	22.7	22.8	22.7
		12	11	24.7	24.6	24.6	22.8	22.8	22.8
		25	0	24.7	24.7	24.6	22.8	22.9	22.8
	16QAM	1	0	24.7	24.6	24.7	22.8	22.8	22.7
		1	12	24.7	24.8	25.1	22.7	22.9	23.2
		1	24	24.7	24.8	25.2	22.8	23.0	23.2
		12	0	24.8	24.8	25.1	22.9	23.1	23.3
		12	6	23.6	23.7	23.7	21.8	21.9	21.9
		12	11	23.7	23.7	23.8	21.9	21.9	21.9
		25	0	23.7	23.7	23.8	21.9	22.0	22.0
	64QAM	1	0	23.6	23.6	23.7	21.8	21.9	21.8
		1	12	24.0	23.9	24.3	22.2	21.9	22.2
		1	24	24.1	23.9	24.3	22.3	22.0	22.2
		12	0	24.2	24.0	24.4	22.3	22.0	22.2
		12	6	22.9	23.0	22.9	21.0	21.0	20.8
		12	11	23.0	23.0	23.0	21.1	21.1	20.9
		25	0	23.0	23.1	23.0	21.1	21.1	21.0
	256QAM	1	0	23.0	23.0	23.0	21.1	21.0	20.9
		1	12	20.1	20.3	20.4	22.0	22.1	22.0
		1	24	20.1	20.4	20.4	22.1	22.1	21.9
		12	0	20.2	20.4	20.5	22.1	22.0	21.9
		12	6	20.3	20.3	20.3	22.1	22.0	21.9
		12	11	20.4	20.4	20.4	22.1	22.0	21.9
		25	0	20.4	20.4	20.4	22.1	22.0	21.9

OUTPUT POWER FOR LTE BAND 13 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				N/A	23230	N/A	N/A	23230	N/A
				N/A	782.0	N/A	N/A	782.0	N/A
10.0	QPSK	1	0		25.7			23.6	
		1	24		25.7			23.8	
		1	49		25.7			23.9	
		25	0		24.8			22.9	
		25	12		24.8			22.9	
		25	24		24.8			23.0	
	16QAM	50	0		24.8			22.9	
		1	0		24.9			22.8	
		1	24		24.9			22.9	
		1	49		24.8			23.0	
		25	0		23.9			22.0	
		25	12		23.9			22.0	
	64QAM	25	24		23.9			22.1	
		50	0		23.8			21.9	
		1	0		24.4			22.4	
		1	24		24.5			22.4	
		1	49		24.4			22.4	
		25	0		23.3			21.2	
	256QAM	25	12		23.3			21.2	
		25	24		23.4			21.3	
		50	0		23.1			21.1	
		1	0		20.0			22.2	
		1	24		20.3			22.2	
		1	49		20.2			22.2	
		25	0		20.3			22.2	
		25	12		20.4			22.2	
		25	24		20.3			22.2	
		50	0		20.4			22.2	

7.8. LTE BAND 14

Test Engineer ID: 39004 Test Date: 3/10/2020

OUTPUT POWER FOR LTE BAND 14 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				23305	23330	23355	23305	23330	23355
5.0	QPSK	1	0	790.5	793.0	795.5	790.5	793.0	795.5
		1	12	25.5	25.6	25.5	23.7	23.7	23.6
		1	12	25.6	25.7	25.6	23.8	23.9	23.8
		1	24	25.6	25.6	25.5	23.7	23.8	23.7
		12	0	24.6	24.6	24.6	22.8	22.9	22.8
		12	6	24.7	24.6	24.7	22.9	22.9	22.8
		12	11	24.6	24.6	24.6	22.8	22.8	22.7
	16QAM	25	0	24.6	24.6	24.6	22.8	22.9	22.8
		1	0	24.7	24.7	25.1	22.9	23.3	23.2
		1	12	24.8	24.8	25.1	23.0	23.4	23.3
		1	24	24.8	24.8	25.1	22.9	23.4	23.3
		12	0	23.7	23.7	23.8	21.9	22.0	21.9
		12	6	23.8	23.7	23.8	21.9	22.1	22.0
		12	11	23.7	23.7	23.7	21.9	22.0	21.9
	64QAM	25	0	23.6	23.6	23.7	21.8	22.0	21.9
		1	0	23.7	24.1	24.1	22.5	22.9	22.8
		1	12	23.7	24.1	24.1	22.6	23.0	22.9
		1	24	23.7	24.1	24.0	22.5	23.0	22.9
		12	0	22.9	22.8	22.9	21.8	21.7	21.7
		12	6	22.9	22.8	22.9	21.8	21.7	21.7
		12	11	22.8	22.8	22.8	21.7	21.7	21.7
	256QAM	25	0	22.8	22.8	22.8	21.7	21.6	21.6
		1	0	23.4	21.1	21.1	20.3	22.6	22.6
		1	12	20.9	21.1	21.2	21.1	22.6	22.6
		1	24	20.9	21.1	21.1	21.2	22.6	22.6
		12	0	21.2	21.1	21.1	21.2	22.6	22.6
		12	6	21.2	21.1	21.1	21.2	22.6	22.6
		12	11	21.1	21.0	21.1	21.2	22.6	22.6
		25	0	21.2	21.1	21.1	21.2	22.6	22.6

OUTPUT POWER FOR LTE BAND 14 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				N/A	23330	N/A	N/A	23330	N/A
				N/A	793.0	N/A	N/A	793.0	N/A
10.0	QPSK	1	0		25.7			23.9	
		1	24		25.7			23.9	
		1	49		25.6			23.9	
		25	0		24.7			22.9	
		25	12		24.8			23.1	
		25	24		24.8			22.9	
		50	0		24.7			23.0	
	16QAM	1	0		24.9			23.0	
		1	24		24.9			23.0	
		1	49		24.8			23.1	
		25	0		23.9			22.0	
		25	12		23.9			22.2	
		25	24		23.8			22.1	
		50	0		23.8			22.0	
	64QAM	1	0		24.3			23.2	
		1	24		24.2			23.2	
		1	49		24.2			23.1	
		25	0		23.0			22.0	
		25	12		23.1			22.0	
		25	24		23.1			22.0	
		50	0		23.0			21.9	
	256QAM	1	0		20.7			22.6	
		1	24		21.0			22.6	
		1	49		20.7			22.6	
		25	0		21.0			22.6	
		25	12		21.2			22.6	
		25	24		21.1			22.6	
		50	0		21.1			22.6	

7.9. LTE BAND 17

Test Engineer ID: 39004 Test Date: 3/10/2020

OUTPUT POWER FOR LTE BAND 17 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				23755	23790	23825	23755	23790	23825
5.0	QPSK	1	0	25.7	25.5	25.6	23.6	23.9	23.5
		1	12	25.7	25.6	25.7	23.6	23.9	23.6
		1	24	25.7	25.6	25.7	23.6	23.9	23.6
		12	0	24.6	24.6	24.7	22.5	23.0	22.6
		12	6	24.7	24.7	24.8	22.6	23.0	22.7
		12	11	24.7	24.7	24.8	22.6	23.0	22.6
		25	0	24.7	24.6	24.7	22.6	23.0	22.6
	16QAM	1	0	24.9	25.2	24.8	22.8	23.5	22.8
		1	12	24.9	25.2	25.0	22.8	23.5	22.8
		1	24	24.9	25.2	24.9	22.8	23.5	22.8
		12	0	23.7	23.8	23.8	21.7	22.1	21.6
		12	6	23.9	23.8	23.8	21.8	22.2	21.7
		12	11	23.8	23.9	23.8	21.8	22.2	21.7
		25	0	23.7	23.7	23.7	21.7	22.0	21.6
	64QAM	1	0	24.3	24.0	24.4	22.3	23.0	22.6
		1	12	24.4	24.1	24.5	22.3	23.1	22.7
		1	24	24.4	24.1	24.4	22.3	23.1	22.3
		12	0	23.2	23.2	23.0	21.4	21.7	21.4
		12	6	23.3	23.2	23.0	21.4	21.7	21.4
		12	11	23.2	23.2	23.1	21.4	21.7	21.4
		25	0	23.2	23.1	23.1	21.4	21.7	21.4
	256QAM	1	0	23.5	21.3	21.3	22.0	22.9	22.9
		1	12	21.0	21.3	21.3	22.9	22.9	22.9
		1	24	21.1	21.4	21.3	22.9	22.9	22.9
		12	0	21.2	21.2	21.3	22.9	22.9	22.9
		12	6	21.3	21.3	21.4	22.9	22.9	22.9
		12	11	21.3	21.3	21.4	22.9	22.9	22.9
		25	0	21.3	21.3	21.3	22.9	22.9	22.9

OUTPUT POWER FOR LTE BAND 17 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				23780	23790	23800	23780	23790	23800
				709.0	710.0	711.0	709.0	710.0	711.0
10.0	QPSK	1	0	25.6	25.6	25.7	23.6	23.9	23.7
		1	24	25.6	25.6	25.6	23.5	23.8	23.6
		1	49	25.6	25.7	25.7	23.4	23.8	23.5
		25	0	24.7	24.7	24.7	22.6	22.9	22.6
		25	12	24.8	24.7	24.7	22.7	22.9	22.6
		25	24	24.8	24.7	24.7	22.7	22.9	22.6
		50	0	24.8	24.7	24.7	22.7	22.9	22.6
	16QAM	1	0	24.8	24.6	25.1	22.7	22.9	23.0
		1	24	24.7	24.6	25.1	22.6	22.8	23.0
		1	49	24.7	24.7	25.1	22.6	22.8	23.0
		25	0	23.8	23.7	23.7	21.7	21.9	21.7
		25	12	23.9	23.7	23.7	21.8	21.9	21.7
		25	24	23.9	23.8	23.8	21.8	21.9	21.7
		50	0	23.8	23.7	23.7	21.8	21.9	21.6
	64QAM	1	0	24.2	24.4	24.1	22.5	22.9	22.4
		1	24	24.3	24.5	24.3	22.6	23.0	22.5
		1	49	24.3	24.5	24.3	22.6	23.0	22.6
		25	0	23.2	23.2	23.3	21.4	21.7	21.5
		25	12	23.3	23.2	23.3	21.6	21.8	21.5
		25	24	23.3	23.2	23.3	21.6	21.8	21.6
		50	0	23.2	23.2	23.2	21.5	21.7	21.4
	256QAM	1	0	21.4	21.1	21.4	22.9	22.7	22.7
		1	24	21.4	21.2	21.3	22.9	22.7	22.7
		1	49	21.4	21.2	21.3	22.9	22.8	22.7
		25	0	21.3	21.3	21.2	22.9	22.8	22.7
		25	12	21.4	21.4	21.3	22.8	22.7	22.7
		25	24	21.3	21.4	21.3	22.9	22.8	22.7
		50	0	21.3	21.4	21.3	22.8	22.8	22.7

7.10. LTE BAND 25

Test Engineer ID: 39004 Test Date: 3/10/2020

OUTPUT POWER FOR LTE BAND 25 (1.4 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				26047	26365	26683	26047	26365	26683	26047	26365	26683	26047	26365	26683
				1850.7	1882.5	1914.3	1850.7	1882.5	1914.3	1850.7	1882.5	1914.3	1850.7	1882.5	1914.3
1.4	QPSK	1	0	25.3	25.6	25.3	23.0	23.1	23.0	24.9	24.9	24.9	22.6	22.9	22.9
		1	2	25.4	25.7	24.9	23.1	23.1	23.0	25.0	24.9	24.9	22.8	23.0	23.0
		1	5	25.5	25.7	24.4	23.0	23.1	23.0	25.0	24.9	24.9	22.7	23.0	23.0
		3	0	25.4	25.6	24.5	22.9	23.0	23.0	24.9	24.8	24.9	22.7	22.9	22.9
		3	1	25.5	25.7	24.3	23.0	23.1	23.0	25.0	24.9	25.0	22.8	22.9	23.0
		3	2	25.5	25.7	24.1	23.1	23.1	23.0	25.0	24.9	25.0	22.8	22.9	23.0
	16QAM	6	0	24.6	24.7	23.5	22.1	22.1	22.1	24.6	24.5	24.5	22.3	22.5	22.5
		1	0	24.6	24.8	24.0	22.1	22.2	22.4	24.6	24.5	24.8	22.3	22.6	22.9
		1	2	24.7	24.9	23.9	22.2	22.3	22.4	24.7	24.7	24.9	22.4	22.7	23.0
		1	5	24.7	24.9	23.6	22.2	22.2	22.5	24.6	24.6	24.9	22.4	22.6	23.0
		3	0	24.8	24.8	23.7	22.3	22.2	22.3	24.8	24.5	24.7	22.5	22.5	22.6
		3	1	24.9	24.8	23.6	22.3	22.2	22.3	24.8	24.6	24.7	22.6	22.6	22.7
	64QAM	3	2	24.9	24.9	23.5	22.3	22.2	22.3	24.8	24.6	24.7	22.6	22.6	22.8
		6	0	23.9	23.9	22.6	21.3	21.3	21.0	23.8	23.6	23.4	21.5	21.6	21.4
		1	0	23.7	24.0	23.8	22.8	22.5	20.8	22.6	22.5	22.6	21.0	21.4	20.3
		1	2	23.7	24.1	24.0	22.8	22.4	20.8	22.6	22.5	22.4	21.1	21.5	20.3
		1	5	23.8	24.1	23.9	22.6	22.3	20.7	22.4	22.5	22.0	21.2	21.5	20.1
		3	0	23.6	24.0	23.9	22.4	22.3	20.5	22.4	22.2	22.3	20.9	21.4	20.2
	256QAM	3	1	23.6	24.1	24.0	22.4	22.3	20.5	22.4	22.2	22.2	21.0	21.4	20.2
		3	2	23.7	24.1	23.9	22.4	22.3	20.4	22.3	22.2	22.1	21.0	21.5	20.1
		6	0	22.7	22.7	22.5	20.9	21.4	19.6	21.4	21.4	20.9	20.0	20.1	19.3
		1	0	19.7	20.0	19.6	21.1	21.2	21.1	18.5	18.9	18.8	20.5	20.5	20.5
		1	2	19.8	20.0	19.7	21.1	21.1	21.1	18.5	18.5	19.0	20.5	20.5	20.5
		1	5	19.7	20.0	19.6	21.1	21.2	21.1	18.5	18.3	18.8	20.5	20.5	20.5
		3	0	20.1	19.9	19.9	21.1	21.1	21.1	18.9	18.8	18.8	20.5	20.5	20.4
		3	1	20.2	20.0	20.0	21.1	21.1	21.1	19.0	18.9	18.9	20.5	20.5	20.4
		3	2	20.2	20.0	20.0	21.1	21.1	21.1	19.0	18.9	18.9	20.5	20.5	20.5
		6	0	20.1	20.0	19.8	21.1	21.2	21.1	19.0	18.8	18.9	20.5	20.5	20.4

OUTPUT POWER FOR LTE BAND 25 (3.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				26055	26365	26675	26055	26365	26675	26055	26365	26675	26055	26365	26675
				1851.5	1882.5	1913.5	1851.5	1882.5	1913.5	1851.5	1882.5	1913.5	1851.5	1882.5	1913.5
3.0	QPSK	1	0	25.5	25.6	25.0	22.9	23.0	22.9	24.9	24.8	24.7	22.7	22.9	22.9
		1	7	25.6	25.7	24.6	22.9	22.9	22.9	24.9	24.8	24.7	22.7	22.8	22.9
		1	14	25.6	25.7	23.8	23.0	23.1	22.9	25.0	25.0	24.8	22.8	22.9	23.0
		8	0	24.7	24.7	23.7	22.0	22.1	22.0	24.6	24.4	24.3	22.3	22.4	22.5
		8	4	24.7	24.7	23.6	22.1	22.1	22.0	24.6	24.5	24.3	22.4	22.5	22.5
		8	7	24.7	24.7	23.5	22.1	22.1	22.0	24.6	24.5	24.3	22.4	22.5	22.5
		15	0	24.7	24.7	23.5	22.1	22.1	21.9	24.6	24.5	24.3	22.3	22.5	22.5
	16QAM	1	0	24.7	24.7	24.0	22.1	22.1	22.3	24.6	24.3	24.6	22.3	22.5	22.8
		1	7	24.7	24.7	23.8	22.0	22.1	22.2	24.6	24.4	24.6	22.3	22.4	22.8
		1	14	24.7	24.6	23.4	22.1	22.2	22.4	24.6	24.5	24.7	22.4	22.5	23.0
		8	0	23.7	23.8	22.8	21.1	21.2	21.0	23.7	23.5	23.3	21.4	21.6	21.6
		8	4	23.8	23.8	22.9	21.1	21.2	21.0	23.6	23.6	23.4	21.4	21.6	21.6
		8	7	23.8	23.8	22.8	21.2	21.2	21.1	23.7	23.6	23.4	21.4	21.6	21.6
		15	0	23.7	23.7	22.8	21.0	21.1	21.0	23.6	23.5	23.4	21.3	21.5	21.5
	64QAM	1	0	23.6	23.8	23.0	21.9	22.2	20.7	22.2	22.4	22.5	21.1	21.3	20.5
		1	7	23.7	23.8	22.9	21.9	22.1	20.4	22.2	22.4	22.0	21.0	21.4	20.2
		1	14	23.7	23.9	22.8	21.9	22.0	20.3	22.3	22.4	21.4	21.1	21.3	20.0
		8	0	22.5	22.6	21.9	20.5	20.9	19.5	20.9	21.2	21.2	19.8	20.1	19.3
		8	4	22.5	22.6	21.9	20.6	21.0	19.5	21.0	21.3	21.1	19.8	20.1	19.3
		8	7	22.5	22.7	21.9	20.6	21.0	19.5	21.1	21.3	20.9	19.8	20.2	19.2
		15	0	22.5	22.5	21.8	20.6	20.8	19.5	21.1	21.2	21.0	19.8	20.1	19.2
	256QAM	1	0	20.0	20.0	19.7	21.2	21.2	21.3	18.9	18.9	18.6	20.5	20.6	20.5
		1	7	20.2	20.0	19.7	21.2	21.3	21.3	18.9	18.9	18.6	20.5	20.6	20.5
		1	14	20.3	20.1	19.8	21.2	21.2	21.3	19.0	18.9	18.6	20.5	20.6	20.5
		8	0	20.1	19.9	20.0	21.2	21.2	21.2	18.9	18.8	18.9	20.5	20.6	20.5
		8	4	20.1	19.9	20.1	21.2	21.3	21.3	19.0	18.8	18.9	20.5	20.6	20.5
		8	7	20.1	20.0	20.1	21.2	21.2	21.3	19.0	18.8	18.9	20.5	20.6	20.6
		15	0	20.0	20.0	20.0	21.2	21.3	21.2	18.9	18.9	18.8	20.5	20.6	20.6

OUTPUT POWER FOR LTE BAND 25 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				26065	26365	26665	26065	26365	26665	26065	26365	26665	26065	26365	26665
				1852.5	1882.5	1912.5	1852.5	1882.5	1912.5	1852.5	1882.5	1912.5	1852.5	1882.5	1912.5
5.0	QPSK	1	0	25.4	25.6	25.0	23.0	23.0	23.1	24.9	24.8	24.6	22.7	23.0	22.9
		1	12	25.5	25.7	24.5	23.0	23.1	23.1	24.9	24.9	24.6	22.8	23.0	22.9
		1	24	25.5	25.6	23.5	23.0	23.1	23.1	25.0	24.9	24.7	22.8	23.0	22.9
		12	0	24.5	24.6	23.6	22.1	22.0	22.1	24.5	24.3	24.2	22.2	22.4	22.4
		12	6	24.6	24.6	23.5	22.1	22.1	22.1	24.5	24.3	24.3	22.3	22.5	22.4
		12	11	24.6	24.6	23.3	22.1	22.1	22.2	24.5	24.4	24.3	22.4	22.5	22.6
		25	0	24.6	24.6	23.3	22.1	22.1	22.1	24.5	24.4	24.3	22.4	22.5	22.5
	16QAM	1	0	24.6	24.7	24.2	22.3	22.2	22.6	24.6	24.5	24.8	22.5	22.6	23.0
		1	12	24.8	24.8	23.8	22.5	22.3	22.6	24.7	24.5	24.7	22.6	22.7	23.0
		1	24	24.8	24.7	23.1	22.4	22.4	22.7	24.7	24.6	24.7	22.6	22.7	23.0
		12	0	23.6	23.7	22.8	21.2	21.1	21.2	23.6	23.4	23.4	21.3	21.5	21.6
		12	6	23.6	23.7	22.7	21.2	21.2	21.3	23.6	23.5	23.4	21.4	21.6	21.6
		12	11	23.6	23.7	22.6	21.2	21.2	21.4	23.5	23.5	23.4	21.4	21.6	21.7
		25	0	23.5	23.6	22.6	21.1	21.1	21.1	23.5	23.4	23.3	21.3	21.5	21.5
	64QAM	1	0	23.5	23.3	23.2	21.8	21.8	21.6	22.0	21.9	22.8	21.1	20.9	21.1
		1	12	23.6	23.4	22.9	22.0	21.8	21.0	22.2	21.9	22.3	21.1	21.0	20.5
		1	24	23.6	23.2	22.6	22.0	21.7	20.6	22.3	21.9	21.3	21.1	20.9	20.1
		12	0	22.3	22.5	21.6	20.6	20.9	20.0	20.8	21.1	21.2	19.8	20.1	19.5
		12	6	22.4	22.6	21.6	20.7	20.9	19.8	21.0	21.1	21.1	19.9	20.2	19.3
		12	11	22.3	22.5	21.5	20.7	20.9	19.6	21.0	21.1	20.8	19.9	20.1	19.1
		25	0	22.2	22.4	21.6	20.6	20.8	19.8	20.9	21.0	20.9	19.7	20.0	19.3
	256QAM	1	0	20.0	20.0	19.6	21.3	21.3	21.3	18.8	18.7	18.5	20.8	20.8	20.8
		1	12	20.0	20.1	19.7	21.3	21.3	21.3	18.9	18.8	18.6	20.7	20.8	20.8
		1	24	20.1	20.1	19.7	21.3	21.3	21.3	18.9	18.9	18.6	20.7	20.8	20.8
		12	0	20.0	19.9	19.9	21.3	21.3	21.3	18.8	18.7	18.7	20.7	20.8	20.8
		12	6	20.1	20.0	20.0	21.3	21.3	21.3	18.9	18.8	18.8	20.7	20.8	20.8
		12	11	20.1	20.0	20.0	21.3	21.3	21.3	18.9	18.8	18.9	20.7	20.8	20.8
		25	0	20.1	20.0	20.0	21.3	21.3	21.3	18.9	18.8	18.9	20.7	20.8	20.8

OUTPUT POWER FOR LTE BAND 25 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				26090	26365	26640	26090	26365	26640	26090	26365	26640	26090	26365	26640
10.0	QPSK	1	0	25.2	25.6	25.7	22.9	22.9	23.1	24.8	24.8	25.0	22.5	22.8	23.0
		1	24	25.5	25.7	24.9	23.1	23.1	23.1	25.0	25.0	24.9	22.8	22.9	23.0
		1	49	25.3	25.1	23.8	22.9	23.0	23.1	24.7	24.9	24.8	22.6	22.8	23.0
		25	0	24.5	24.7	24.3	22.1	22.1	22.0	24.6	24.5	24.4	22.3	22.5	22.5
		25	12	24.7	24.8	24.0	22.3	22.3	22.1	24.7	24.6	24.5	22.5	22.6	22.6
		25	24	24.7	24.6	23.5	22.2	22.2	22.1	24.6	24.6	24.4	22.4	22.5	22.6
		50	0	24.5	24.7	23.9	22.2	22.2	22.0	24.6	24.5	24.5	22.4	22.5	22.6
	16QAM	1	0	24.0	24.5	25.2	22.1	21.9	22.5	24.5	24.3	24.9	22.2	22.3	22.9
		1	24	24.6	24.6	24.2	22.2	22.1	22.5	24.6	24.5	24.8	22.4	22.4	22.9
		1	49	24.5	24.1	23.3	22.0	21.9	22.5	24.4	24.3	24.8	22.2	22.2	23.0
		25	0	23.5	23.7	23.4	21.3	21.1	21.1	23.7	23.5	23.5	21.4	21.5	21.5
		25	12	23.8	23.8	23.1	21.4	21.3	21.1	23.8	23.6	23.6	21.6	21.7	21.7
		25	24	23.8	23.7	22.7	21.3	21.2	21.1	23.7	23.7	23.5	21.6	21.6	21.6
		50	0	23.6	23.7	23.0	21.3	21.1	21.1	23.7	23.5	23.5	21.4	21.6	21.6
	64QAM	1	0	23.1	23.7	23.7	21.5	21.8	22.5	21.7	22.3	23.0	20.7	21.2	21.3
		1	24	23.5	23.7	22.9	22.2	22.1	21.3	22.4	22.3	22.6	21.1	21.4	20.9
		1	49	23.5	23.1	22.4	22.0	21.6	20.3	22.7	22.1	21.4	21.0	21.0	19.9
		25	0	22.1	22.6	22.3	20.7	20.7	20.8	20.9	21.1	21.6	19.7	20.1	20.2
		25	12	22.4	22.5	21.9	21.0	20.9	20.3	21.3	21.2	21.5	20.0	20.2	19.8
		25	24	22.4	22.3	21.6	20.9	20.7	19.8	21.4	21.1	21.1	20.0	20.0	19.4
		50	0	22.1	22.3	21.9	20.6	20.6	20.2	21.0	21.1	21.2	19.7	19.9	19.6
	256QAM	1	0	19.9	19.5	19.7	21.3	21.2	21.2	18.8	18.4	18.5	20.3	20.1	21.2
		1	24	20.2	19.8	19.9	21.3	21.2	21.2	19.0	18.6	18.8	20.3	20.1	21.2
		1	49	19.9	19.7	19.8	21.3	21.2	21.2	18.7	18.4	18.7	20.2	20.2	21.2
		25	0	20.1	19.9	19.8	21.3	21.3	21.2	18.8	18.7	18.6	20.1	20.1	21.2
		25	12	20.1	20.0	20.0	21.3	21.3	21.2	18.9	18.9	18.8	20.3	20.2	21.2
		25	24	20.0	20.0	20.0	21.2	21.2	21.2	18.8	18.8	18.8	20.2	20.2	21.2
		50	0	20.0	19.9	19.9	21.3	21.2	21.2	18.8	18.8	18.8	20.2	20.2	21.2

OUTPUT POWER FOR LTE BAND 25 (15.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				26115	26365	26615	26115	26365	26615	26115	26365	26615	26115	26365	26615
				1857.5	1882.5	1907.5	1857.5	1882.5	1907.5	1857.5	1882.5	1907.5	1857.5	1882.5	1907.5
15.0	QPSK	1	0	25.2	25.7	25.7	22.9	23.1	23.0	24.9	24.9	25.0	22.6	23.0	23.0
		1	37	25.4	25.0	24.7	23.0	23.1	23.0	25.0	25.0	24.8	22.9	22.9	22.9
		1	74	25.4	24.8	23.0	22.9	23.1	22.9	24.8	25.0	24.8	22.8	22.9	23.0
		36	0	24.1	24.5	24.3	22.0	22.0	21.9	24.5	24.4	24.4	22.2	22.4	22.4
		36	16	24.2	24.2	23.8	22.1	22.2	22.0	24.6	24.5	24.5	22.4	22.6	22.6
		36	35	24.5	24.0	23.2	22.1	22.2	22.0	24.6	24.6	24.4	22.5	22.5	22.5
		75	0	24.2	24.2	23.7	22.0	22.1	21.9	24.6	24.5	24.4	22.4	22.5	22.5
	16QAM	1	0	24.2	24.8	25.1	22.5	22.1	22.5	24.9	24.5	24.9	22.7	22.5	22.9
		1	37	24.5	23.9	24.0	22.6	22.2	22.4	25.0	24.5	24.8	22.9	22.5	22.9
		1	74	25.0	23.7	22.6	22.4	22.1	22.4	25.0	24.6	24.7	22.8	22.4	22.9
		36	0	23.1	23.6	23.5	21.0	21.0	21.0	23.5	23.4	23.4	21.3	21.4	21.5
		36	16	23.3	23.3	23.0	21.1	21.2	21.0	23.6	23.4	23.5	21.5	21.6	21.6
		36	35	23.5	23.2	22.5	21.1	21.2	21.0	23.6	23.5	23.5	21.4	21.5	21.6
		75	0	23.4	23.4	23.0	21.0	21.1	20.9	23.6	23.4	23.4	21.4	21.5	21.6
	64QAM	1	0	23.4	23.8	23.7	21.6	22.0	22.0	22.0	22.6	23.1	20.7	21.4	21.4
		1	37	23.5	23.1	23.0	21.9	21.6	21.5	22.6	21.9	22.4	21.0	20.8	20.9
		1	74	23.9	22.9	21.9	22.2	21.4	19.7	23.8	22.3	21.0	21.5	20.7	19.4
		36	0	21.7	22.3	22.5	20.1	20.5	20.7	20.6	20.9	21.6	19.2	19.8	20.1
		36	16	21.8	22.0	22.0	20.3	20.4	20.4	20.9	20.8	21.4	19.4	19.7	19.9
		36	35	22.1	21.8	21.4	20.4	20.3	19.7	21.4	20.9	21.1	19.7	19.6	19.3
		75	0	21.9	22.0	21.9	20.3	20.3	20.1	21.1	20.9	21.2	19.5	19.7	19.6
	256QAM	1	0	19.9	19.8	19.6	21.3	21.2	21.3	18.7	18.7	18.5	21.1	21.3	21.3
		1	37	20.2	20.1	19.9	21.3	21.2	21.3	19.0	18.9	18.8	21.1	21.3	21.3
		1	74	20.0	20.0	19.9	21.3	21.3	21.3	18.8	18.8	18.7	21.1	21.2	21.3
		36	0	20.0	19.9	19.8	21.3	21.3	21.3	18.8	18.7	18.6	21.1	21.3	21.3
		36	16	20.2	19.9	19.9	21.3	21.3	21.3	19.0	18.8	18.7	21.1	21.3	21.3
		36	35	20.1	20.0	19.9	21.3	21.3	21.3	18.9	18.8	18.8	21.1	21.3	21.3
		75	0	20.0	19.9	19.9	21.3	21.3	21.3	18.8	18.8	18.7	21.0	21.3	21.3

OUTPUT POWER FOR LTE BAND 25 (20.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				26140	26365	26590	26140	26365	26590	26140	26365	26590	26140	26365	26590
				1860.0	1882.5	1905.0	1860.0	1882.5	1905.0	1860.0	1882.5	1905.0	1860.0	1882.5	1905.0
20.0	QPSK	1	0	25.4	25.7	25.6	23.1	23.1	23.0	25.0	24.9	24.9	22.7	22.9	22.8
		1	49	25.4	24.9	25.3	23.0	23.1	22.9	24.9	24.9	24.8	22.8	22.8	22.8
		1	99	25.6	24.8	23.2	23.0	23.1	22.8	24.8	24.9	24.7	22.8	22.8	22.9
		50	0	24.1	24.5	24.5	22.1	22.1	21.9	24.5	24.4	24.4	22.3	22.4	22.4
		50	24	24.3	24.0	24.1	22.1	22.1	22.0	24.5	24.4	24.3	22.4	22.5	22.4
		50	49	24.6	23.9	23.4	22.0	22.1	21.9	24.4	24.5	24.3	22.4	22.4	22.4
		100	0	24.1	24.0	23.8	22.0	22.1	21.9	24.4	24.3	24.3	22.3	22.3	22.3
	16QAM	1	0	24.4	25.4	24.7	22.6	22.7	22.5	25.0	25.0	24.9	22.7	23.0	22.9
		1	49	24.6	24.5	24.6	22.5	22.7	22.4	24.9	25.0	24.8	22.8	23.0	22.8
		1	99	25.0	24.5	22.8	22.5	22.7	22.3	24.8	25.0	24.7	22.8	22.9	23.0
		50	0	23.0	23.7	23.7	21.0	21.1	21.0	23.5	23.4	23.4	21.3	21.5	21.4
		50	24	23.3	23.3	23.3	21.1	21.2	21.0	23.5	23.4	23.3	21.4	21.5	21.4
		50	49	23.6	23.1	22.7	21.1	21.2	20.9	23.4	23.5	23.4	21.4	21.4	21.5
		100	0	23.2	23.3	23.1	21.0	21.1	20.9	23.4	23.3	23.3	21.3	21.4	21.3
	64QAM	1	0	23.2	23.9	24.1	21.5	22.1	21.9	21.8	23.0	23.7	20.6	21.4	21.6
		1	49	23.3	23.1	24.1	21.5	21.6	22.4	22.5	21.8	23.0	20.8	20.8	21.7
		1	99	23.7	23.0	22.7	21.9	21.3	20.4	23.5	22.4	21.7	21.2	20.7	20.1
		50	0	21.7	22.4	22.6	20.2	20.6	20.6	20.6	21.0	21.8	19.3	19.9	20.1
		50	24	22.0	21.9	22.3	20.3	20.3	20.5	21.2	20.7	21.4	19.6	19.6	20.0
		50	49	22.3	21.7	21.6	20.5	20.2	19.9	21.8	20.8	21.1	19.9	19.5	19.4
		100	0	21.8	21.8	22.0	20.1	20.1	20.1	20.9	20.8	21.3	19.4	19.5	19.6
	256QAM	1	0	19.6	19.9	19.5	22.1	22.1	22.2	18.4	18.8	18.4	21.5	21.5	21.6
		1	49	19.9	20.3	20.0	22.1	22.1	22.2	18.7	19.2	18.8	21.5	21.5	21.6
		1	99	19.6	20.2	19.7	22.1	22.2	22.2	18.5	19.0	18.7	21.5	21.5	21.6
		50	0	19.8	19.8	19.7	22.1	22.2	22.2	18.7	18.6	18.6	21.5	21.5	21.6
		50	24	20.0	19.9	19.9	22.1	22.1	22.2	18.8	18.8	18.7	21.5	21.5	21.6
		50	49	19.9	19.9	19.8	22.1	22.1	22.2	18.7	18.8	18.8	21.4	21.5	21.6
		100	0	19.9	19.8	19.8	22.1	22.1	22.2	18.7	18.8	18.6	21.4	21.5	21.6

7.11. LTE BAND 26 (Part 90S)

Test Engineer ID: 39004 Test Date: 3/11/2020

OUTPUT POWER FOR LTE BAND 26 (1.4 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				26697	26740	26783	26697	26740	26783
1.4	QPSK	1	0	814.7	819.0	823.3	814.7	819.0	823.3
		1	2	25.6	25.6	25.6	24.3	24.3	24.3
		1	5	25.7	25.7	25.7	24.4	24.5	24.4
		3	0	25.6	25.7	25.6	24.3	24.4	24.4
		3	1	25.6	25.7	25.7	24.3	24.4	24.4
		3	2	25.6	25.7	25.7	24.3	24.4	24.4
		6	0	24.7	24.7	24.8	23.4	23.5	23.5
	16QAM	1	0	24.7	25.0	24.8	23.4	23.8	23.4
		1	2	24.9	25.1	24.8	23.6	23.9	23.5
		1	5	24.8	25.1	24.8	23.5	23.8	23.6
		3	0	24.7	24.9	24.9	23.4	23.7	23.7
		3	1	24.8	25.0	25.0	23.5	23.7	23.7
		3	2	24.8	24.9	25.0	23.5	23.7	23.7
	64QAM	6	0	23.9	23.6	24.0	22.6	22.4	22.7
		1	0	24.4	24.6	24.3	23.7	23.3	23.4
		1	2	24.4	24.8	24.4	23.8	23.5	23.5
		1	5	24.4	24.7	24.4	23.6	23.4	23.5
		3	0	24.2	24.6	24.4	23.6	23.4	23.3
		3	1	24.2	24.6	24.5	23.6	23.5	23.3
		3	2	24.2	24.7	24.5	23.6	23.5	23.3
	256QAM	6	0	23.3	23.3	23.6	22.2	22.6	22.4
		1	0	24.2	24.3	24.4	22.9	23.0	23.0
		1	2	24.3	24.3	24.4	23.0	23.0	23.0
		1	5	24.3	24.3	24.4	22.9	23.0	23.0
		3	0	24.3	24.3	24.4	23.0	23.0	23.0
		3	1	24.3	24.3	24.4	23.0	23.0	23.0
		3	2	24.3	24.3	24.4	23.0	23.0	23.0
		6	0	24.3	24.3	24.4	23.0	23.0	23.0

OUTPUT POWER FOR LTE BAND 26 (3.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				26705	26740	26775	26705	26740	26775
				815.5	819.0	822.5	815.5	819.0	822.5
3.0	QPSK	1	0	25.4	25.5	25.6	24.3	24.3	24.4
		1	7	25.5	25.5	25.6	24.3	24.3	24.4
		1	14	25.5	25.6	25.7	24.4	24.4	24.5
		8	0	24.6	24.6	24.6	23.4	23.4	23.4
		8	4	24.7	24.7	24.7	23.5	23.5	23.5
		8	7	24.7	24.7	24.8	23.5	23.5	23.5
	16QAM	15	0	24.6	24.7	24.7	23.5	23.5	23.4
		1	0	24.6	24.6	25.0	23.4	23.4	23.8
		1	7	24.6	24.7	25.1	23.5	23.3	23.8
		1	14	24.6	24.7	25.1	23.5	23.4	23.9
		8	0	23.6	23.7	23.7	22.4	22.5	22.5
		8	4	23.7	23.8	23.8	22.5	22.6	22.6
	64QAM	8	7	23.7	23.8	23.9	22.6	22.6	22.6
		15	0	23.6	23.7	23.8	22.4	22.5	22.5
		1	0	24.3	24.4	24.2	23.5	23.6	23.4
		1	7	24.3	24.5	24.3	23.5	23.5	23.4
		1	14	24.4	24.5	24.3	23.5	23.7	23.5
		8	0	23.1	23.2	23.2	22.2	22.3	22.3
	256QAM	8	4	23.2	23.3	23.3	22.3	22.4	22.4
		8	7	23.2	23.3	23.3	22.3	22.5	22.4
		15	0	23.2	23.2	23.2	22.4	22.3	22.4
		1	0	24.3	24.3	24.3	23.1	23.1	23.1
		1	7	24.3	24.3	24.3	23.1	23.1	23.1
		1	14	24.3	24.3	24.3	23.1	23.1	23.1
		8	0	24.3	24.3	24.3	23.1	23.1	23.1
		8	4	24.3	24.3	24.3	23.1	23.1	23.1
		8	7	24.3	24.3	24.3	23.1	23.1	23.1
		15	0	24.3	24.3	24.3	23.1	23.1	23.1

OUTPUT POWER FOR LTE BAND 26 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				26715	26740	26765	26715	26740	26765
				816.5	819.0	821.5	816.5	819.0	821.5
5.0	QPSK	1	0	25.4	25.6	25.5	24.3	24.5	24.4
		1	12	25.6	25.7	25.6	24.4	24.5	24.4
		1	24	25.6	25.7	25.6	24.4	24.5	24.4
		12	0	24.6	24.5	24.6	23.4	23.4	23.4
		12	6	24.7	24.6	24.7	23.5	23.5	23.5
		12	11	24.6	24.6	24.6	23.5	23.5	23.5
		25	0	24.6	24.6	24.6	23.4	23.5	23.5
	16QAM	1	0	24.7	24.8	25.1	23.5	23.7	23.9
		1	12	24.9	24.9	25.2	23.6	23.6	24.0
		1	24	24.9	24.9	25.2	23.6	23.7	24.0
		12	0	23.6	23.6	23.7	22.5	22.5	22.6
		12	6	23.7	23.8	23.9	22.6	22.6	22.6
		12	11	23.7	23.7	23.8	22.5	22.6	22.6
		25	0	23.6	23.7	23.7	22.5	22.5	22.5
	64QAM	1	0	24.3	24.1	24.4	23.5	23.3	23.6
		1	12	24.4	24.0	24.4	23.6	23.3	23.6
		1	24	24.4	24.1	24.5	23.6	23.3	23.7
		12	0	23.1	23.1	23.0	22.3	22.3	22.2
		12	6	23.2	23.2	23.1	22.4	22.4	22.3
		12	11	23.2	23.2	23.1	22.4	22.4	22.3
		25	0	23.1	23.1	23.1	22.3	22.3	22.3
	256QAM	1	0	24.2	24.3	24.3	23.4	23.5	23.5
		1	12	24.2	24.3	24.3	23.4	23.5	23.5
		1	24	24.2	24.3	24.3	23.4	23.5	23.5
		12	0	24.2	24.3	24.3	23.4	23.5	23.5
		12	6	24.2	24.3	24.3	23.4	23.5	23.5
		12	11	24.2	24.3	24.3	23.4	23.5	23.5
		25	0	24.2	24.3	24.3	23.4	23.5	23.5

OUTPUT POWER FOR LTE BAND 26 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				N/A	26740	N/A	N/A	26740	N/A
				N/A	819.0	N/A	N/A	819.0	N/A
10.0	QPSK	1	0		25.7			24.5	
		1	24		25.7			24.5	
		1	49		25.7			24.4	
		25	0		24.7			23.4	
		25	12		24.9			23.6	
		25	24		24.8			23.5	
		50	0		24.8			23.5	
		1	0		24.9			23.6	
	16QAM	1	24		24.8			23.6	
		1	49		24.8			23.5	
		25	0		23.8			22.5	
		25	12		23.9			22.7	
		25	24		23.9			22.6	
		50	0		23.8			22.6	
	64QAM	1	0		24.4			23.6	
		1	24		24.5			23.6	
		1	49		24.5			23.6	
		25	0		23.2			22.4	
		25	12		23.4			22.6	
		25	24		23.3			22.5	
	256QAM	50	0		23.3			22.4	
		1	0		24.3			23.0	
		1	24		24.3			23.0	
		1	49		24.3			23.0	
		25	0		24.2			23.0	
		25	12		24.3			23.0	
		25	24		24.3			23.0	
		50	0		24.2			23.0	

7.12. LTE BAND 30(NS1)

Test Engineer ID: 39006 Test Date: 8/1/2020

OUTPUT POWER FOR LTE BAND 30 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				27685	27710	27735	27685	27710	27735	27685	27710	27735	27685	27710	27735
				2307.5	2310.0	2312.5	2307.5	2310.0	2312.5	2307.5	2310.0	2312.5	2307.5	2310.0	2312.5
5.0	QPSK	1	0	25.5	25.5	25.6	22.6	22.7	22.6	24.5	24.5	24.4	22.3	22.2	22.3
		1	12	25.7	25.7	24.9	22.6	22.7	22.7	24.6	24.6	22.9	22.4	22.4	22.5
		1	24	25.7	24.8	23.9	22.6	22.6	22.6	24.6	23.0	22.5	22.3	22.3	21.7
		12	0	25.0	25.0	25.1	22.7	22.7	22.7	24.5	24.6	24.5	22.4	22.4	22.4
		12	6	25.1	25.1	25.1	22.7	22.8	22.7	24.5	24.7	24.4	22.5	22.5	22.4
		12	11	25.1	25.0	25.0	22.7	22.7	22.8	24.6	24.7	24.1	22.5	22.5	22.4
		25	0	25.1	25.0	25.0	22.7	22.7	22.7	24.6	24.5	24.1	22.4	22.4	22.4
	16QAM	1	0	25.0	24.9	24.8	22.6	22.7	22.5	24.2	23.7	23.3	22.1	22.3	22.3
		1	12	25.1	25.0	23.2	22.7	22.8	22.6	24.0	23.7	21.7	22.3	22.4	21.6
		1	24	25.1	23.5	22.7	22.6	22.7	22.1	23.9	21.9	21.4	22.3	21.9	20.7
		12	0	24.0	24.0	24.0	22.7	22.7	22.7	23.8	24.0	23.9	21.7	21.7	22.3
		12	6	24.1	24.1	24.1	22.7	22.8	22.8	23.9	24.0	23.8	21.7	21.9	22.5
		12	11	24.1	24.1	24.1	22.8	22.7	22.8	24.0	24.0	23.7	21.6	22.2	22.5
		25	0	24.1	24.0	24.1	22.6	22.8	22.7	23.7	23.9	23.7	21.5	21.8	22.4
	64QAM	1	0	23.5	23.3	23.2	21.5	21.5	21.5	22.6	22.1	21.9	20.7	20.6	20.6
		1	12	23.5	23.5	21.8	21.6	21.8	20.9	22.3	22.3	20.4	20.7	20.9	20.0
		1	24	23.6	22.1	21.5	21.8	21.1	20.6	22.4	20.7	20.3	20.8	20.2	19.5
		12	0	22.9	23.0	23.0	20.9	20.9	21.5	21.9	22.2	22.2	19.8	19.8	20.4
		12	6	23.0	23.1	23.0	20.9	21.2	21.8	22.1	22.5	22.3	20.0	20.0	20.8
		12	11	23.1	23.1	23.0	20.8	21.3	21.9	22.1	22.6	22.2	19.8	20.2	21.1
		25	0	22.9	23.0	23.1	20.9	21.1	21.6	22.0	22.2	22.1	19.7	19.9	20.7
	256QAM	1	0	20.9	20.9	21.0	20.6	20.5	20.5	20.9	20.8	20.9	19.7	19.7	19.6
		1	12	21.0	21.0	21.0	20.7	20.8	20.0	20.9	21.0	19.8	19.8	19.9	19.1
		1	24	21.0	21.0	21.0	20.8	20.2	19.8	21.0	20.2	19.8	19.9	19.4	18.9
		12	0	21.0	21.0	21.0	20.9	20.9	20.9	20.9	20.9	20.9	20.0	19.9	20.4
		12	6	21.1	21.1	21.0	21.0	21.0	21.0	21.0	21.0	21.0	20.0	20.1	20.7
		12	11	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	19.9	20.2	21.1
		25	0	21.1	21.0	21.0	20.8	21.0	20.9	21.0	21.0	21.0	19.8	20.0	20.6

OUTPUT POWER FOR LTE BAND 30 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				N/A	27710	N/A	N/A	27710	N/A	N/A	27710	N/A	N/A	27710	N/A
				N/A	2310.0	N/A	N/A	2310.0	N/A	N/A	2310.0	N/A	N/A	2310.0	N/A
10.0	QPSK	1	0		25.7			22.6			24.6			22.4	
		1	24		25.7			22.7			24.5			22.3	
		1	49		25.0			22.7			24.0			22.3	
		25	0		25.0			22.7			24.5			22.4	
		25	12		25.2			22.8			24.7			22.5	
		25	24		25.1			22.7			24.5			22.4	
	16QAM	50	0		25.0			22.7			24.6			22.4	
		1	0		25.0			22.7			24.5			22.4	
		1	24		25.1			22.7			24.6			22.3	
		1	49		25.1			22.8			23.9			22.1	
		25	0		24.0			22.7			23.9			21.7	
		25	12		24.2			22.8			24.0			22.0	
	64QAM	25	24		24.1			22.7			24.0			22.5	
		50	0		24.0			22.7			23.9			22.1	
		1	0		24.1			22.2			23.3			21.4	
		1	24		24.0			22.3			23.5			21.4	
		1	49		23.6			21.8			22.2			20.7	
		25	0		23.0			21.0			22.2			20.0	
	256QAM	25	12		23.2			21.2			22.2			20.1	
		25	24		23.1			21.5			22.2			20.5	
		50	0		23.0			21.2			22.2			20.2	
		1	0		20.8			20.7			20.7			19.9	
		1	24		21.2			21.0			21.0			20.5	
		1	49		20.8			20.8			20.7			19.6	
		25	0		21.0			20.9			20.8			20.0	
		25	12		21.1			21.0			20.9			20.0	
		25	24		21.0			21.0			20.9			20.6	
		50	0		21.0			20.9			20.9			20.2	

7.13. LTE BAND 41 (NS04)

Test Engineer ID: 39004 Test Date: 7/19/2020

OUTPUT POWER FOR LTE BAND 41 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				39675	40620	41565	39675	40620	41565	39675	40620	41565	39675	40620	41565
5.0	QPSK	1	0	24.7	27.5	27.4	21.9	24.6	24.6	21.8	26.0	25.8	22.9	24.1	23.9
		1	12	27.7	27.4	27.2	24.8	24.6	24.6	25.1	25.9	25.7	24.3	24.0	24.0
		1	24	27.7	27.4	27.4	24.8	24.6	24.5	25.4	25.9	25.7	24.5	24.1	23.9
		12	0	23.8	26.6	26.4	20.9	23.7	23.7	21.1	25.0	24.8	22.1	24.2	24.0
		12	6	23.8	26.6	26.4	20.8	23.7	23.7	21.2	25.0	24.9	22.2	24.2	24.0
		12	11	26.8	26.5	26.4	23.9	23.7	23.7	24.2	25.0	24.9	24.0	24.2	24.0
		25	0	23.7	26.6	26.3	20.8	23.7	23.6	21.1	25.0	24.9	22.1	24.1	24.0
	16QAM	1	0	24.0	26.8	26.5	21.2	24.0	24.0	21.3	25.3	25.1	22.3	24.5	24.4
		1	12	27.0	26.8	26.4	24.1	24.0	24.0	24.5	25.3	25.1	23.9	24.5	24.3
		1	24	27.1	26.8	26.4	24.1	24.0	23.9	24.7	25.2	25.1	24.4	24.4	24.3
		12	0	22.8	25.6	25.4	20.0	22.8	22.7	20.2	24.1	23.8	21.0	24.1	24.0
		12	6	22.9	25.6	25.4	19.9	22.8	22.7	20.3	24.1	23.9	21.2	24.1	23.9
		12	11	25.8	25.5	25.4	22.9	22.8	22.6	23.3	24.0	23.9	23.0	24.0	23.9
	64QAM	25	0	22.7	25.6	25.4	19.9	22.7	22.7	20.1	24.0	23.9	21.2	24.0	23.8
		1	0	21.4	24.0	23.5	19.2	21.1	20.7	22.7	23.3	23.3	21.0	21.4	21.9
		1	12	23.4	24.0	23.5	21.1	21.1	20.6	23.0	23.3	23.4	21.5	21.4	22.0
		1	24	23.4	24.0	23.5	21.1	21.1	20.6	23.3	23.3	23.3	21.7	21.4	22.0
		12	0	20.6	22.6	22.0	17.8	19.7	19.6	21.9	21.8	21.9	20.0	20.4	20.5
		12	6	20.7	22.2	22.1	17.8	19.6	19.6	22.0	21.9	22.0	20.1	20.4	20.6
		12	11	22.7	22.2	22.0	19.7	19.7	19.6	22.1	21.8	22.0	20.1	20.4	20.5
		25	0	20.7	22.2	22.0	17.8	19.6	19.6	22.0	21.7	21.9	20.0	20.4	20.4
	256QAM	1	0	23.6	23.9	21.0	21.0	20.9	20.9	23.2	23.2	23.2	18.9	21.9	21.8
		1	12	23.7	23.9	21.0	20.3	20.9	20.9	23.3	23.2	23.2	18.9	22.0	21.8
		1	24	23.7	23.9	21.0	20.8	20.9	20.9	23.3	23.2	23.2	18.9	21.9	21.8
		12	0	23.7	23.9	21.0	20.9	21.0	20.9	23.3	23.2	23.2	18.9	21.9	21.8
		12	6	23.7	23.9	21.0	20.9	20.9	20.9	23.3	23.2	23.2	18.9	21.9	21.8
		12	11	23.7	23.9	21.0	20.9	20.9	20.9	23.3	23.2	23.2	18.9	21.9	21.8
		25	0	23.7	23.9	21.0	20.9	20.9	20.9	23.3	23.2	23.2	18.9	21.9	21.8

OUTPUT POWER FOR LTE BAND 41 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				39700	40620	41540	39700	40620	41540	39700	40620	41540	39700	40620	41540
				2501.0	2593.0	2685.0	2501.0	2593.0	2685.0	2501.0	2593.0	2685.0	2501.0	2593.0	2685.0
10.0	QPSK	1	0	22.7	27.2	27.0	19.9	24.5	24.4	20.0	25.9	25.6	20.4	23.4	23.1
		1	24	27.7	27.5	27.2	24.8	24.7	24.6	25.5	26.0	25.8	24.1	23.5	23.3
		1	49	27.6	27.2	27.0	24.8	24.5	24.4	25.9	25.7	25.5	24.2	23.3	23.1
		25	0	23.7	26.6	26.4	21.0	23.8	23.7	21.3	25.1	24.9	21.7	23.7	23.5
		25	12	26.8	26.6	26.4	24.0	23.8	23.8	24.5	25.1	25.0	23.8	23.7	23.5
		25	24	25.7	26.5	26.3	22.9	23.8	23.7	23.6	25.0	24.8	24.0	23.6	23.4
	16QAM	50	0	23.6	26.5	26.4	20.8	23.7	23.7	21.4	25.0	24.9	21.8	23.6	23.4
		1	0	22.3	26.7	26.5	19.3	24.1	23.8	19.5	25.3	25.0	19.9	23.8	23.7
		1	24	27.2	26.9	26.7	24.2	24.2	24.1	24.9	25.4	25.2	24.1	24.0	23.9
		1	49	27.3	26.6	26.5	24.3	24.0	23.8	25.2	25.1	24.9	24.5	23.7	23.6
		25	0	22.8	25.6	25.4	20.0	22.8	22.7	20.4	24.1	23.9	20.8	23.5	23.3
		25	12	25.8	25.6	25.4	22.9	22.9	22.8	23.5	24.1	23.9	22.8	23.5	23.3
	64QAM	25	24	24.8	25.5	25.4	21.9	22.8	22.7	22.7	24.0	23.9	22.9	23.5	23.3
		50	0	22.7	25.6	25.3	19.9	22.8	22.7	20.5	24.1	23.9	20.8	23.5	23.2
		1	0	20.4	22.8	23.4	17.7	20.5	20.8	22.6	23.2	23.0	20.6	20.5	21.2
		1	24	23.3	23.0	23.6	20.7	20.9	21.2	23.2	23.3	23.2	21.1	20.7	21.5
		1	49	23.4	22.7	23.4	20.7	20.7	21.0	23.6	23.0	23.0	21.4	20.5	21.4
		25	0	20.2	22.1	21.9	17.9	19.6	19.5	22.1	21.6	21.8	19.7	19.9	19.8
	256QAM	25	12	22.2	22.2	22.0	19.9	19.7	19.6	22.4	21.7	22.0	19.9	20.0	20.0
		25	24	21.3	22.1	21.9	18.9	19.6	19.5	22.5	21.6	21.8	20.0	19.9	19.9
		50	0	20.2	22.0	21.8	17.5	19.4	19.3	22.2	21.6	21.8	19.8	19.8	19.9
		1	0	19.8	23.5	22.4	20.1	21.0	20.1	23.4	22.4	22.4	17.6	21.3	20.2
		1	24	19.8	23.5	22.4	20.1	21.0	20.1	23.5	22.4	22.4	17.6	21.4	20.2
		1	49	19.8	23.4	22.3	20.1	21.1	20.1	23.4	22.4	22.4	17.5	21.4	20.2
		25	0	19.8	23.4	22.0	20.1	21.0	20.1	23.5	22.4	22.4	17.5	21.4	20.2
		25	12	19.8	23.4	22.4	20.1	21.0	20.1	23.5	22.4	22.4	17.5	21.4	20.2
		25	24	19.8	23.4	22.4	20.1	21.1	20.1	23.4	22.4	22.4	17.6	21.3	20.2
		50	0	19.8	23.5	22.4	20.1	21.1	20.1	23.5	22.4	22.4	17.5	21.3	20.3

OUTPUT POWER FOR LTE BAND 41 (15.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				39725	40620	41515	39725	40620	41515	39725	40620	41515	39725	40620	41515
				2503.5	2593.0	2682.5	2503.5	2593.0	2682.5	2503.5	2593.0	2682.5	2503.5	2593.0	2682.5
15.0	QPSK	1	0	22.7	27.4	27.2	19.9	24.6	24.4	19.8	25.8	25.5	20.5	23.6	23.3
		1	37	27.7	27.5	27.4	24.8	24.7	24.6	25.7	25.8	25.7	24.2	23.6	23.4
		1	74	27.7	27.4	27.4	24.8	24.6	24.6	26.0	25.6	25.6	24.4	23.5	23.4
		36	0	22.8	26.6	26.4	19.9	23.8	23.6	20.3	24.9	24.7	20.8	23.8	23.5
		36	16	26.8	26.7	26.5	23.9	23.9	23.8	24.6	24.9	24.8	24.2	23.8	23.6
		36	35	23.8	26.6	26.5	20.9	23.8	23.8	21.8	24.9	24.8	22.1	23.8	23.6
		75	0	22.8	26.6	26.4	19.9	23.8	23.7	20.5	24.9	24.6	20.9	23.7	23.6
	16QAM	1	0	22.2	26.7	26.6	19.3	24.0	23.8	19.3	25.2	24.9	19.9	24.0	23.8
		1	37	27.2	27.0	26.9	24.2	24.1	24.1	25.0	25.2	25.1	24.4	24.2	24.0
		1	74	27.2	26.7	26.8	24.2	24.0	24.0	25.4	25.0	25.0	24.5	23.9	23.9
		36	0	21.9	25.6	25.4	19.0	22.8	22.6	19.3	23.9	23.7	19.9	23.5	23.3
		36	16	25.8	25.7	25.5	22.9	22.9	22.8	23.6	24.0	23.8	23.3	23.6	23.4
		36	35	22.8	25.6	25.5	19.9	22.8	22.8	20.8	23.9	23.8	21.2	23.6	23.4
		75	0	21.8	25.6	25.4	18.9	22.8	22.7	19.5	23.9	23.7	19.9	23.5	23.4
	64QAM	1	0	20.5	22.8	23.4	17.8	20.5	20.8	22.9	22.6	23.3	21.3	20.9	21.5
		1	37	23.4	22.9	23.6	20.7	20.7	21.1	23.8	22.5	23.6	21.6	21.0	21.8
		1	74	23.4	22.9	23.6	20.7	20.6	21.1	24.0	22.5	23.6	21.5	20.9	21.8
		36	0	19.3	22.2	22.1	17.0	19.6	19.5	22.3	21.8	21.9	19.9	20.2	20.1
		36	16	22.3	22.3	22.1	20.0	19.7	19.6	22.6	21.9	22.1	20.1	20.3	20.3
		36	35	21.3	22.3	22.2	18.9	19.6	19.6	22.9	21.9	22.1	20.0	20.2	20.3
		75	0	19.3	22.2	22.0	16.8	19.7	19.5	22.6	21.8	22.0	20.0	20.1	20.2
	256QAM	1	0	19.5	23.4	23.4	21.0	21.0	21.0	23.9	23.9	23.9	18.0	21.7	21.7
		1	37	19.5	23.4	23.4	21.0	21.0	21.0	23.9	23.9	23.9	18.0	21.8	21.7
		1	74	19.5	23.5	23.4	21.0	21.0	21.0	23.9	23.9	23.9	18.1	21.8	21.7
		36	0	19.5	23.5	23.4	21.0	21.0	21.0	23.9	23.9	23.9	18.0	21.8	21.7
		36	16	19.5	23.4	23.4	21.0	21.0	21.0	23.9	23.9	23.9	18.0	21.7	21.7
		36	35	19.6	23.4	23.4	21.0	21.0	21.0	23.9	23.9	23.9	18.0	21.7	21.7
		75	0	19.5	23.5	23.4	21.0	21.0	21.0	23.9	23.9	23.9	18.1	21.8	21.7

OUTPUT POWER FOR LTE BAND 41 (20.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				39750 2506.0	40620 2593.0	41490 2680.0	39750 2506.0	40620 2593.0	41490 2680.0	39750 2506.0	40620 2593.0	41490 2680.0	39750 2506.0	40620 2593.0	41490 2680.0
20.0	QPSK	1	0	22.7	27.1	27.0	19.9	24.3	24.3	19.8	25.5	25.3	20.7	23.6	23.3
		1	49	27.7	27.5	27.4	24.7	24.6	24.6	25.6	25.6	25.6	24.5	23.8	23.6
		1	99	27.6	27.1	27.3	24.8	24.3	24.6	26.0	25.3	25.5	24.5	23.5	23.5
		50	0	22.7	26.5	26.3	19.9	23.6	23.5	20.2	24.7	24.5	21.1	23.8	23.6
		50	24	26.7	26.6	26.4	23.8	23.7	23.6	24.6	24.8	24.6	24.4	23.9	23.7
		50	49	23.7	26.5	26.4	20.8	23.6	23.7	21.8	24.7	24.6	22.3	23.8	23.7
		100	0	22.6	26.5	26.4	19.8	23.6	23.6	20.4	24.7	24.5	21.1	23.9	23.6
	16QAM	1	0	21.9	26.4	26.4	19.3	23.6	23.4	18.8	24.8	24.7	19.8	24.1	23.6
		1	49	26.8	26.8	26.8	24.2	24.0	23.7	24.8	24.9	25.0	24.5	24.2	24.0
		1	99	26.8	26.5	26.7	24.2	23.7	23.7	25.1	24.6	24.8	24.4	24.0	23.9
		50	0	21.8	25.5	25.4	19.0	22.6	22.5	19.2	23.7	23.5	20.1	23.7	23.4
		50	24	25.7	25.6	25.5	22.9	22.7	22.7	23.6	23.8	23.6	23.4	23.8	23.5
		50	49	22.7	25.5	25.5	19.9	22.6	22.7	20.8	23.6	23.6	21.3	23.7	23.5
		100	0	21.6	25.5	25.3	18.8	22.6	22.6	19.4	23.7	23.5	20.1	23.7	23.4
	64QAM	1	0	20.5	23.2	22.7	18.3	20.5	20.2	23.3	22.7	22.6	21.1	21.4	20.9
		1	49	23.5	23.5	23.0	21.2	20.8	20.5	24.2	22.7	23.1	21.9	21.7	21.4
		1	99	23.5	23.3	23.0	21.2	20.5	20.5	24.2	22.5	23.1	22.1	21.5	21.5
		50	0	19.3	22.0	21.9	16.8	19.5	19.3	22.2	21.6	21.7	20.4	20.2	20.2
		50	24	22.3	22.2	22.0	19.7	19.6	19.5	22.7	21.7	21.9	20.6	20.3	20.4
		50	49	21.2	22.1	22.0	18.7	19.6	19.5	22.6	21.6	21.9	20.7	20.3	20.4
		100	0	19.2	22.0	21.9	16.7	19.5	19.4	22.6	21.6	21.8	20.5	20.2	20.3
	256QAM	1	0	19.5	23.4	23.3	21.0	21.0	21.1	23.9	23.9	23.9	18.4	22.1	21.9
		1	49	19.4	23.4	23.3	21.0	21.0	21.1	23.9	23.9	23.9	18.4	22.1	21.9
		1	99	19.5	23.4	23.3	21.1	21.0	21.1	23.9	23.9	23.9	18.4	22.0	21.9
		50	0	19.5	23.4	23.4	21.1	21.0	21.1	23.9	23.9	23.9	18.4	22.0	21.9
		50	24	19.4	23.4	23.3	21.0	21.0	21.1	23.9	23.9	23.9	18.4	22.0	21.9
		50	49	19.5	23.4	23.3	21.0	21.0	21.1	23.9	23.9	23.9	18.4	22.0	21.9
		100	0	19.5	23.4	23.3	21.1	21.0	21.1	23.9	23.9	23.9	18.4	22.1	21.9

7.14. 5G NR Band n41

Test Engineer ID: 23547 Test Date: 8/18/2020

OUTPUT POWER FOR 5G NR Band n41 (20.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 2			ANT 1			ANT 4			ANT 3		
				501200	518600	536000	501200	518600	536000	501200	518600	536000	501200	518600	536000
				2506.0	2593.0	2680.0	2506.0	2593.0	2680.0	2506.0	2593.0	2680.0	2506.0	2593.0	2680.0
20.0	BPSK	1	0	23.3	25.3	25.2				21.9	23.7	23.6			
		1	1	23.5	26.6	26.7				22.0	26.5	24.9			
		25	12	25.3	26.4	26.3				23.5	26.2	24.7			
		50	0	25.3	26.3	26.3				23.6	26.2	24.7			
	QPSK	1	0	22.8	25.3	25.3				21.2	23.5	23.7			
		1	1	23.0	26.7	26.4				21.5	26.3	24.9			
		25	12	24.2	26.3	26.4				22.5	26.3	24.8			
		50	0	24.1	26.3	26.2				22.4	25.4	24.7			
	16QAM	1	0	22.3	24.5	24.5				21.1	23.7	23.3			
		1	1	22.1	26.1	25.2				21.1	25.3	24.7			
		25	12	22.9	25.6	25.6				22.1	25.5	24.6			
		50	0	22.9	25.6	24.7				22.0	24.9	24.9			
	64QAM	1	0	21.4	24.7	24.5				21.0	23.7	23.3			
		1	1	21.7	25.5	24.2				20.8	24.2	23.4			
		25	12	23.0	25.4	24.6				22.1	24.3	23.6			
		50	0	22.9	25.3	24.5				22.0	24.2	23.4			
	256QAM	1	0	20.5	24.0	23.5				19.4	22.6	22.4			
		1	1	20.7	24.0	23.0				19.4	22.8	22.5			
		25	12	21.5	23.3	23.3				20.5	22.5	22.3			
		50	0	21.4	23.3	23.2				20.4	22.3	22.3			

Ant1 and Ant3 are covered by LTE Band 41

OUTPUT POWER FOR 5G NR Band n41 (40.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 2			ANT 1			ANT 4			ANT 3		
				503200	518600	534000	503200	518600	534000	503200	518600	534000	503200	518600	534000
				2516.0	2593.0	2670.0	2516.0	2593.0	2670.0	2516.0	2593.0	2670.0	2516.0	2593.0	2670.0
40.0	BPSK	1	0	22.2	24.1	23.8	19.0	20.1	20.7	20.1	23.3	23.4	16.7	19.5	19.4
		1	1	22.2	26.3	26.2	20.1	23.1	24.7	20.3	26.5	26.3	16.7	23.0	22.9
		50	25	23.8	26.4	26.2	20.0	23.5	23.2	22.7	26.3	26.3	19.5	22.6	22.8
		100	0	23.9	26.4	26.0	20.5	22.9	22.9	23.1	26.4	26.4	19.5	22.1	22.2
	QPSK	1	0	21.9	24.1	24.2	18.4	20.4	20.6	20.2	23.5	23.6	16.1	19.5	19.1
		1	1	21.9	26.7	26.4	18.1	23.4	24.1	20.3	26.0	26.5	16.1	22.9	22.7
		50	25	23.3	26.5	26.4	19.5	23.8	23.9	22.3	26.4	26.3	18.5	21.8	22.7
		100	0	23.2	26.5	26.4	19.4	22.9	22.4	22.3	26.0	25.8	18.6	21.8	21.9
	16QAM	1	0	21.8	24.4	23.5	18.2	20.6	20.3	20.3	23.6	23.7	15.9	19.3	19.1
		1	1	22.1	26.2	26.2	18.1	22.9	22.7	20.5	25.6	25.7	16.0	22.2	21.7
		50	25	22.8	26.5	26.2	18.9	22.9	22.8	22.0	25.9	25.4	18.1	20.9	21.7
		100	0	22.7	25.7	25.7	19.0	21.9	21.9	21.9	25.0	24.9	18.1	20.8	20.8
	64QAM	1	0	21.5	24.7	24.4	17.9	20.8	20.7	20.2	24.3	24.1	15.5	20.1	19.0
		1	1	21.7	25.4	25.5	17.8	21.8	21.6	20.3	24.6	25.1	15.7	21.3	20.5
		50	25	23.0	24.8	25.0	19.0	21.5	21.4	21.9	24.4	24.3	17.9	20.3	20.3
		100	0	22.8	25.2	25.2	19.1	21.5	21.4	21.9	24.4	24.4	17.9	20.3	20.3
	256QAM	1	0	20.2	23.2	22.9	16.1	19.3	19.5	18.2	22.7	22.4	14.5	18.5	18.5
		1	1	20.2	23.4	23.3	16.2	19.3	19.4	18.2	22.4	22.4	14.5	19.0	18.7
		50	25	21.3	22.9	23.2	17.5	19.4	19.5	20.4	22.4	22.5	16.6	18.2	18.2
		100	0	21.3	23.2	23.3	17.6	19.4	19.4	20.4	22.5	22.4	16.6	18.3	18.2

OUTPUT POWER FOR 5G NR Band n41 (50.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 2			ANT 1			ANT 4			ANT 3		
				504200	518600	533000	504200	518600	533000	504200	518600	533000	504200	518600	533000
				2521.0	2593.0	2665.0	2521.0	2593.0	2665.0	2521.0	2593.0	2665.0	2521.0	2593.0	2665.0
50.0	BPSK	1	0	21.9	23.9	23.8	19.0	20.7	20.7	20.5	23.5	23.1	16.8	19.6	19.5
		1	1	22.0	26.3	26.2	18.6	24.7	23.9	20.6	26.3	26.2	16.8	23.0	22.9
		64	32	23.7	26.1	26.1	21.0	24.3	23.9	23.4	26.3	26.2	19.8	22.7	22.7
		128	0	23.7	26.2	25.8	20.7	23.6	23.5	22.9	26.0	26.2	19.6	22.1	22.2
	QPSK	1	0	21.8	24.3	23.8	18.8	20.9	20.6	20.6	23.7	23.4	16.0	19.5	19.2
		1	1	21.9	26.7	25.9	18.6	24.7	24.3	20.5	26.4	26.4	16.1	22.8	22.6
		64	32	23.2	26.6	25.9	19.9	24.4	24.0	22.8	26.5	26.2	18.5	21.8	22.5
		128	0	23.2	26.4	25.9	20.0	23.2	23.0	22.6	25.9	25.8	18.5	21.9	22.0
	16QAM	1	0	21.9	24.1	23.8	18.3	20.6	20.9	20.8	24.0	23.5	15.8	19.3	19.2
		1	1	21.9	26.3	25.5	18.3	23.0	23.1	20.6	26.1	25.3	16.0	22.2	21.8
		64	32	22.8	26.4	25.9	19.4	23.2	23.1	22.2	25.9	25.7	18.1	20.8	21.9
		128	0	22.7	25.3	25.2	19.4	22.3	22.0	22.1	24.9	24.8	18.1	20.9	21.9
	64QAM	1	0	21.4	24.0	23.6	18.6	21.2	20.9	20.5	24.2	23.6	15.5	20.1	18.9
		1	1	21.3	24.9	24.4	18.4	22.1	22.0	20.4	24.8	24.7	15.6	21.3	20.5
		64	32	22.8	24.8	24.7	19.5	21.7	21.5	22.3	24.4	24.4	17.9	20.3	20.2
		128	0	22.7	24.9	24.8	19.5	21.8	21.5	22.1	24.3	24.4	17.9	20.4	20.4
	256QAM	1	0	19.7	22.9	22.7	16.6	19.8	19.7	18.6	22.6	22.2	14.4	18.8	18.5
		1	1	19.6	23.2	22.7	16.8	19.6	19.8	18.4	22.6	22.3	14.5	18.9	18.7
		64	32	21.2	23.0	22.9	17.9	19.7	19.3	20.7	22.4	22.2	16.6	18.3	18.3
		128	0	21.3	23.0	22.8	17.9	19.8	19.6	20.6	22.4	22.3	16.6	18.3	18.2

OUTPUT POWER FOR 5G NR Band n41 (60.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 2			ANT 1			ANT 4			ANT 3		
				505200	518600	532000	505200	518600	532000	505200	518600	532000	505200	518600	532000
				2526.0	2593.0	2660.0	2526.0	2593.0	2660.0	2526.0	2593.0	2660.0	2526.0	2593.0	2660.0
60.0	BPSK	1	0	21.8	23.4	23.4	19.7	20.4	20.3	20.4	23.4	23.1	16.6	19.4	19.4
		1	1	21.6	26.3	26.4	19.2	24.7	24.6	20.8	26.2	25.9	16.6	23.0	22.6
		81	40	23.4	26.5	25.7	20.4	24.1	23.5	23.4	26.0	26.0	19.6	22.6	23.0
		162	0	23.5	26.2	25.8	20.5	23.3	23.2	23.3	26.0	26.0	19.7	22.2	22.1
	QPSK	1	0	21.5	23.7	23.8	18.3	20.8	20.6	20.3	23.6	23.5	16.0	19.4	19.3
		1	1	21.6	26.7	26.4	18.5	24.3	24.2	20.5	26.5	26.3	16.0	22.9	22.6
		81	40	23.0	26.6	26.4	19.8	24.2	24.2	22.7	26.4	26.5	18.5	21.7	22.7
		162	0	22.7	26.4	26.1	19.7	23.1	23.2	22.6	25.9	26.0	18.5	21.8	21.9
	16QAM	1	0	21.2	23.6	23.6	18.1	20.8	20.5	20.3	23.8	23.5	15.8	19.2	19.1
		1	1	21.2	26.2	25.5	18.2	23.3	23.0	20.4	26.1	26.0	15.8	21.8	21.7
		81	40	22.5	25.8	26.2	19.2	23.2	23.2	22.3	25.9	25.5	18.0	20.7	21.8
		162	0	22.4	25.4	25.0	19.3	22.2	22.2	22.1	24.9	25.0	18.0	20.8	20.9
	64QAM	1	0	21.0	23.7	24.0	17.9	20.9	20.8	20.2	23.8	23.3	15.4	19.7	18.8
		1	1	21.2	25.2	24.8	18.0	22.2	22.1	20.2	24.7	24.6	15.6	20.8	20.4
		81	40	22.4	25.0	24.9	19.2	21.6	21.6	22.3	24.3	24.6	17.8	20.2	20.1
		162	0	22.3	25.0	24.8	19.3	21.6	21.6	22.1	24.5	24.5	17.8	20.3	20.3
	256QAM	1	0	19.4	22.8	22.8	16.3	19.6	19.7	18.0	22.5	22.3	14.3	18.8	18.4
		1	1	19.5	22.9	22.8	16.3	19.7	19.6	18.1	22.4	22.3	14.3	18.8	18.6
		81	40	20.9	23.1	22.7	17.8	19.7	19.7	20.6	22.5	22.5	16.5	18.2	18.1
		162	0	20.8	23.0	22.7	17.8	19.6	19.6	20.7	22.5	22.6	16.5	18.3	18.2

OUTPUT POWER FOR 5G NR Band n41 (80.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 2			ANT 1			ANT 4			ANT 3		
				507200	518600	530000	507200	518600	530000	507200	518600	530000	507200	518600	530000
				2536.0	2593.0	2650.0	2536.0	2593.0	2650.0	2536.0	2593.0	2650.0	2536.0	2593.0	2650.0
80.0	BPSK	1	0	21.4	21.4	23.3	19.0	18.5	20.9	20.6	21.5	23.3	17.0	17.9	19.6
		1	1	21.3	21.2	25.8	19.5	18.4	24.7	20.7	21.6	26.2	17.0	17.9	23.0
		108	54	23.3	26.2	25.7	20.1	24.6	23.4	23.5	26.1	26.1	20.0	22.9	23.0
		216	0	23.2	26.2	25.1	20.9	23.2	23.1	23.3	26.1	26.0	19.9	22.6	22.4
	QPSK	1	0	21.5	21.4	23.6	18.1	18.2	20.5	20.8	21.2	23.6	16.3	17.2	19.4
		1	1	21.5	21.5	25.9	18.2	18.3	23.9	20.4	21.3	26.3	16.3	16.8	23.0
		108	54	23.1	26.5	25.9	19.7	24.0	23.9	22.7	26.4	26.5	18.8	22.0	22.9
		216	0	23.0	26.1	25.6	19.6	22.9	22.9	22.6	26.0	25.6	18.7	22.2	22.0
	16QAM	1	0	21.1	21.7	23.6	18.2	18.3	20.5	20.5	21.2	23.5	16.0	17.2	19.3
		1	1	21.3	21.8	25.2	18.2	18.2	23.0	20.6	21.4	25.4	16.1	16.8	21.9
		108	54	22.6	26.5	25.8	19.1	22.9	22.9	22.2	26.0	26.0	18.3	21.1	21.8
		216	0	22.5	25.2	24.6	19.1	21.9	21.8	22.1	25.0	24.9	18.3	21.2	21.0
	64QAM	1	0	20.7	21.4	23.7	17.9	17.9	20.4	20.0	20.7	23.8	15.7	17.0	19.1
		1	1	21.0	21.3	23.9	17.9	17.7	21.6	19.9	20.7	24.6	15.9	16.6	20.8
		108	54	22.6	25.0	24.4	19.1	21.4	21.4	22.2	24.5	24.3	18.1	20.6	20.5
		216	0	22.6	24.9	23.6	19.1	21.4	21.4	22.0	24.5	24.3	18.1	20.1	20.6
	256QAM	1	0	19.4	20.0	22.6	16.2	16.2	19.3	18.3	18.8	23.4	14.6	15.7	18.7
		1	1	19.4	19.9	21.4	16.4	16.1	19.2	18.3	19.0	22.4	14.7	16.2	18.9
		108	54	21.0	22.9	22.7	17.6	19.4	19.4	20.7	22.4	22.4	16.8	18.5	18.5
		216	0	21.1	22.9	21.7	17.6	19.5	19.4	20.6	22.5	22.4	16.8	18.7	18.5

OUTPUT POWER FOR 5G NR Band n41 (90.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 2			ANT 1			ANT 4			ANT 3		
				508200	518600	529000	508200	518600	529000	508200	518600	529000	508200	518600	529000
				2541.0	2593.0	2645.0	2541.0	2593.0	2645.0	2541.0	2593.0	2645.0	2541.0	2593.0	2645.0
90.0	BPSK	1	0	22.0	21.8	23.6	18.1	19.0	20.7	20.9	21.5	23.6	17.0	18.0	19.5
		1	1	21.9	21.6	26.1	18.2	18.7	24.7	20.6	21.6	26.3	17.0	17.9	22.9
		120	60	23.8	26.6	26.0	20.0	19.5	23.0	23.4	26.2	26.1	20.1	23.0	23.0
		240	0	23.6	26.7	26.0	19.9	19.6	23.4	23.5	26.1	26.1	19.9	22.5	22.4
	QPSK	1	0	21.8	24.3	24.8	18.2	18.3	20.6	20.5	21.5	23.6	16.3	17.4	19.4
		1	1	26.3	25.9	26.7	18.2	18.3	24.1	20.6	21.5	26.5	16.4	17.6	22.8
		120	60	22.2	25.6	25.2	19.8	19.7	22.8	22.7	26.2	26.1	18.8	21.9	22.9
		240	0	19.7	24.7	24.9	19.7	19.6	23.0	22.7	26.0	26.0	18.8	21.9	22.0
	16QAM	1	0	21.2	23.8	24.5	18.2	18.3	20.7	20.7	21.5	23.6	16.1	17.4	19.2
		1	1	25.9	24.9	25.8	18.2	18.1	23.1	20.7	21.4	26.1	16.2	17.5	22.3
		120	60	20.5	25.2	24.8	19.2	19.2	22.0	22.2	25.0	25.1	18.3	20.9	22.1
		240	0	18.7	24.1	23.9	19.2	19.2	21.9	22.3	25.0	24.9	18.3	20.9	21.1
	64QAM	1	0	20.1	23.2	24.0	18.0	18.1	20.6	20.3	21.2	23.6	15.7	16.9	19.4
		1	1	24.9	24.2	24.9	18.0	17.9	22.0	20.0	20.9	24.5	15.9	17.0	20.4
		120	60	20.3	24.5	24.3	19.2	19.1	21.5	22.1	24.7	24.6	18.2	20.5	20.5
		240	0	17.9	23.5	23.8	19.3	19.1	21.4	22.2	24.6	24.5	18.2	20.4	20.5
	256QAM	1	0	19.6	23.2	23.1	16.0	16.0	19.2	18.6	19.3	22.6	14.8	15.9	18.5
		1	1	24.0	23.0	23.4	15.9	16.1	19.2	18.5	19.0	22.7	14.8	16.0	18.7
		120	60	19.1	23.1	23.2	17.7	17.7	19.3	20.6	22.6	22.6	16.8	18.4	18.5
		240	0	16.6	22.0	23.0	17.7	17.6	19.5	20.7	22.5	22.5	16.8	17.9	18.4

OUTPUT POWER FOR 5G NR Band n41 (100.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 2			ANT 1			ANT 4			ANT 3		
				509200	528600	528000	509200	528600	528000	509200	528600	528000	509200	528600	528000
				2546.0	2593.0	2640.0	2546.0	2593.0	2640.0	2546.0	2593.0	2640.0	2546.0	2593.0	2640.0
100.0	BPSK	1	0	22.1	21.9	24.1	18.5	18.1	20.6	20.7	21.5	23.5	16.9	18.0	19.4
		1	1	21.7	22.1	26.7	18.8	18.6	24.4	20.8	21.4	26.3	17.0	18.1	23.0
		135	67	23.7	26.4	26.6	19.5	24.7	24.1	23.4	26.0	26.2	20.0	22.9	22.9
		270	0	23.7	26.5	26.6	19.3	23.5	23.1	23.3	26.1	26.1	19.8	22.5	22.3
	QPSK	1	0	22.1	23.0	24.0	18.0	17.8	20.4	20.6	21.2	23.4	16.2	17.5	19.3
		1	1	22.5	21.8	26.0	18.0	17.9	23.8	20.3	21.5	26.5	16.3	17.5	22.8
		135	67	23.7	26.7	26.6	19.3	23.8	23.6	22.7	26.4	26.4	18.9	21.8	22.8
		270	0	23.8	25.4	26.3	19.3	22.9	22.8	22.5	25.8	25.7	18.7	21.9	22.0
	16QAM	1	0	22.0	22.6	23.5	17.8	17.7	20.4	20.5	21.3	23.7	16.1	17.3	19.2
		1	1	21.1	21.2	25.2	18.0	18.1	22.8	20.6	21.4	25.7	16.2	17.4	21.8
		135	67	23.1	26.6	26.5	18.9	22.8	22.6	22.1	25.9	25.8	18.3	20.8	21.8
		270	0	23.0	24.4	25.3	18.8	21.9	21.8	22.0	24.9	24.8	18.2	21.0	20.9
	64QAM	1	0	20.9	21.8	23.6	17.7	17.5	20.8	20.1	20.6	23.4	15.8	16.8	19.1
		1	1	20.3	21.2	23.1	17.8	17.6	21.7	20.0	20.7	24.6	15.8	16.9	20.6
		135	67	23.1	25.0	24.9	18.9	21.3	21.1	22.1	24.3	24.3	18.2	20.4	20.4
		270	0	23.0	23.9	25.0	18.9	21.4	21.2	22.0	24.4	24.3	18.1	20.5	20.4
	256QAM	1	0	20.5	19.9	22.2	15.9	15.8	19.1	18.3	19.1	22.5	14.9	15.9	18.6
		1	1	19.2	20.1	22.5	15.9	16.0	19.0	18.4	19.1	22.3	14.9	15.9	18.9
		135	67	21.8	22.9	23.0	17.3	19.3	19.2	20.6	22.4	22.4	16.8	18.3	18.4
		270	0	21.9	22.1	22.9	17.4	19.3	19.2	20.5	22.4	22.4	16.8	18.5	18.4

7.15. LTE BAND 48

Test Engineer ID: 19467 Test Date: 6/30/2020

OUTPUT POWER FOR LTE BAND 48 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				55265	55990	56715	55265	55990	56715	55265	55990	56715	55265	55990	56715
5.0	QPSK	1	0	22.7	22.6	22.6	22.6	22.3	22.2	23.2	23.4	23.4	23.0	23.1	23.0
		1	12	22.8	22.7	22.7	22.7	22.1	22.4	23.5	23.6	23.5	22.9	23.3	23.2
		1	24	22.8	22.7	22.7	22.6	21.9	22.4	23.5	23.5	23.5	22.9	23.2	23.3
		12	0	22.0	21.9	21.8	21.7	21.1	21.4	22.5	22.6	22.5	22.8	22.3	22.2
		12	6	22.1	22.0	21.8	21.8	21.2	21.5	22.7	22.7	22.6	22.9	22.4	22.3
		12	11	22.0	22.0	22.0	21.7	21.5	21.5	22.6	22.7	22.6	22.9	22.4	22.3
		25	0	21.9	21.9	21.8	21.7	21.4	21.4	22.6	22.6	22.5	22.8	22.4	22.3
	16QAM	1	0	21.9	21.7	21.6	21.9	21.6	21.7	22.9	22.9	22.8	22.8	22.5	22.5
		1	12	22.1	21.8	21.8	22.1	21.7	21.9	23.0	23.0	23.0	23.0	22.6	22.7
		1	24	22.1	21.8	21.7	22.1	21.7	21.8	22.9	22.9	22.9	22.9	22.5	22.7
		12	0	21.0	21.0	20.9	20.4	20.4	20.6	21.7	21.5	21.7	21.6	21.3	21.4
		12	6	21.2	21.0	20.9	20.8	20.5	20.6	21.7	21.6	21.7	21.7	21.4	21.4
		12	11	21.2	21.0	20.9	20.5	20.5	20.7	21.7	21.6	21.7	21.7	21.3	21.5
		25	0	21.0	20.9	20.9	20.6	20.5	20.5	21.6	21.6	21.6	21.6	21.3	21.3
	64QAM	1	0	20.2	19.7	20.4	21.5	21.2	21.8	22.3	22.0	21.7	22.9	23.4	23.1
		1	12	20.3	19.8	20.5	21.7	21.3	22.0	22.4	22.1	21.8	23.0	23.5	23.2
		1	24	20.3	19.8	20.5	21.6	21.3	21.9	22.3	22.1	21.7	23.0	23.5	23.1
		12	0	19.3	19.3	19.3	20.2	20.3	20.3	20.8	20.7	20.7	21.9	22.0	21.7
		12	6	19.3	19.3	19.3	20.3	20.3	20.5	20.9	20.8	20.8	22.0	22.0	21.7
		12	11	19.3	19.3	19.3	20.3	20.3	20.5	20.9	20.8	20.8	22.0	22.0	21.7
		25	0	19.2	19.2	19.1	20.2	20.3	20.3	20.7	20.7	20.7	22.0	21.8	21.7
	256QAM	1	0	20.0	20.3	20.3	21.5	21.7	21.7	22.3	22.3	22.2	22.3	22.6	22.7
		1	12	20.0	20.3	20.3	21.5	21.7	21.8	22.3	22.3	22.2	22.3	22.6	22.7
		1	24	20.0	20.3	20.3	21.6	21.7	21.8	22.3	22.3	22.2	22.3	22.6	22.7
		12	0	20.1	20.3	20.3	21.6	21.8	21.8	22.3	22.3	22.2	22.3	22.6	22.8
		12	6	20.1	20.3	20.3	21.6	21.8	21.8	22.3	22.3	22.2	22.3	22.6	22.8
		12	11	20.1	20.3	20.3	21.6	21.8	21.8	22.3	22.3	22.2	22.3	22.6	22.8
		25	0	20.1	20.3	20.4	21.6	21.8	21.8	22.3	22.3	22.2	22.3	22.6	22.8

OUTPUT POWER FOR LTE BAND 48 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				55290	55990	56690	55290	55990	56690	55290	55990	56690	55290	55990	56690
				3555.0	3625.0	3695.0	3555.0	3625.0	3695.0	3555.0	3625.0	3695.0	3555.0	3625.0	3695.0
10.0	QPSK	1	0	22.5	22.3	22.2	22.2	22.3	22.3	23.2	23.2	23.1	23.2	23.0	22.6
		1	24	22.8	22.6	22.4	22.6	22.6	22.7	23.6	23.5	23.4	23.5	23.2	23.0
		1	49	22.6	22.4	22.3	22.5	22.4	22.6	23.4	23.4	23.2	23.2	22.9	23.0
		25	0	21.8	21.7	21.5	21.8	21.6	21.6	22.5	22.5	22.5	22.5	22.3	22.0
		25	12	21.9	21.7	21.6	22.0	21.8	21.7	22.6	22.7	22.7	22.6	22.3	22.2
		25	24	21.9	21.7	21.6	22.0	21.7	21.8	22.6	22.7	22.6	22.6	22.2	22.3
	16QAM	50	0	21.9	21.7	21.5	21.9	21.7	21.7	22.6	22.6	22.6	22.6	22.3	22.1
		1	0	21.7	21.3	21.3	22.0	22.1	21.8	22.9	22.7	22.8	22.9	22.4	22.2
		1	24	21.9	21.6	21.6	22.3	22.3	22.2	23.2	23.0	23.0	23.1	22.6	22.6
		1	49	21.9	21.5	21.4	22.1	22.2	22.1	23.0	22.9	22.9	23.0	22.4	22.5
		25	0	20.8	20.6	20.4	20.8	20.8	20.6	21.6	21.6	21.5	21.5	21.3	21.0
		25	12	21.0	20.7	20.6	20.9	20.9	20.8	21.7	21.6	21.6	21.7	21.3	21.1
	64QAM	25	24	20.9	20.7	20.6	20.8	20.8	20.9	21.6	21.6	21.6	21.6	21.3	21.2
		50	0	20.9	20.7	20.5	20.9	20.8	20.7	21.6	21.6	21.6	21.6	21.2	21.2
		1	0	20.1	19.8	19.1	21.3	20.7	21.6	21.9	21.3	22.1	23.0	22.5	23.1
		1	24	20.4	20.0	19.5	21.6	21.1	21.9	22.2	21.7	22.3	23.3	22.7	23.4
		1	49	20.2	20.0	19.3	21.5	20.9	21.7	22.1	21.5	22.2	23.1	22.6	23.2
		25	0	19.1	18.9	18.8	20.1	20.1	20.1	20.7	20.8	20.6	21.8	21.8	21.6
	256QAM	25	12	19.2	19.0	18.9	20.3	20.2	20.2	20.7	20.9	20.8	21.9	22.0	21.8
		25	24	19.2	18.9	18.9	20.1	20.2	20.2	20.7	20.9	20.7	21.9	21.9	21.7
		50	0	19.1	18.9	18.8	20.2	20.1	20.0	20.8	20.7	20.6	21.9	21.8	21.6
		1	0	20.2	19.6	19.6	21.8	21.2	21.3	21.6	22.3	21.5	22.8	22.6	22.6
		1	24	20.2	19.6	19.6	21.8	21.3	21.3	21.6	22.3	21.5	22.8	22.6	22.6
		1	49	20.2	19.6	19.5	21.8	21.2	21.2	21.6	22.2	21.5	22.9	22.5	22.6
		25	0	20.2	19.6	19.5	21.8	21.3	21.2	21.6	22.2	21.5	22.9	22.6	22.7
		25	12	20.1	19.6	19.6	21.8	21.3	21.2	21.6	22.3	21.5	22.9	22.6	22.6
		25	24	20.1	19.6	19.5	21.8	21.2	21.2	21.6	22.2	21.5	22.9	22.6	22.7
		50	0	20.1	19.6	19.5	21.8	21.3	21.3	21.6	22.2	21.5	22.9	22.6	22.7

OUTPUT POWER FOR LTE BAND 48 (15.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				55315	55990	56665	55315	55990	56665	55315	55990	56665	55315	55990	56665
				3557.5	3625.0	3692.5	3557.5	3625.0	3692.5	3557.5	3625.0	3692.5	3557.5	3625.0	3692.5
15.0	QPSK	1	0	22.5	22.5	22.4	22.7	22.3	22.2	23.4	23.4	23.3	23.2	23.2	22.8
		1	37	22.5	22.5	22.4	22.6	22.3	22.5	23.6	23.5	23.4	23.5	23.1	22.9
		1	74	22.8	22.6	22.2	22.5	22.3	22.5	23.5	23.5	23.3	23.3	23.0	22.9
		36	0	21.6	21.7	21.5	21.6	21.5	21.6	22.7	22.6	22.6	22.5	22.3	22.0
		36	16	21.7	21.8	21.6	21.7	21.6	21.6	22.7	22.7	22.7	22.6	22.3	22.1
		36	35	21.7	21.8	21.6	21.7	21.5	21.6	22.6	22.7	22.6	22.5	22.2	22.2
		75	0	21.6	21.6	21.6	21.7	21.5	21.5	22.6	22.6	22.6	22.5	22.2	22.1
	16QAM	1	0	21.5	21.6	21.4	21.8	22.0	21.9	22.9	22.8	22.9	22.8	22.6	22.4
		1	37	21.7	21.7	21.5	22.1	22.0	22.1	23.1	23.1	23.1	23.0	22.7	22.6
		1	74	21.8	21.5	21.3	22.0	21.9	22.0	22.9	22.9	22.9	22.8	22.4	22.6
		36	0	20.6	20.7	20.5	20.5	20.6	20.6	21.7	21.6	21.6	21.5	21.2	21.0
		36	16	20.7	20.7	20.6	20.7	20.8	20.6	21.7	21.6	21.6	21.6	21.3	21.1
		36	35	20.6	20.7	20.5	20.6	20.7	20.6	21.6	21.6	21.6	21.5	21.2	21.2
		75	0	20.6	20.7	20.5	20.8	20.6	20.5	21.6	21.7	21.6	21.5	21.3	21.1
	64QAM	1	0	20.0	19.6	19.2	21.0	21.0	21.7	21.7	21.4	22.2	22.9	22.6	23.2
		1	37	20.2	19.8	19.4	21.3	21.3	21.8	21.9	21.6	22.4	23.1	22.7	23.3
		1	74	20.2	19.7	19.2	21.3	21.3	21.6	21.8	21.6	22.2	23.0	22.6	23.1
		36	0	18.8	18.9	18.8	20.1	20.1	20.2	20.7	20.8	20.8	21.9	21.9	21.7
		36	16	19.0	19.0	18.9	20.2	20.2	20.1	20.8	20.9	20.9	22.0	21.9	21.7
		36	35	18.9	18.9	18.9	20.2	20.2	20.1	20.8	20.9	20.8	21.8	21.9	21.7
		75	0	18.8	19.0	18.8	20.2	20.2	20.0	20.8	20.8	20.7	21.9	21.8	21.6
	256QAM	1	0	20.0	20.1	20.0	21.5	21.6	21.6	22.3	22.3	22.2	22.3	22.6	22.6
		1	37	19.9	20.1	20.0	21.5	21.6	21.6	22.3	22.3	22.2	22.3	22.6	22.6
		1	74	20.0	20.0	20.0	21.5	21.6	21.6	22.3	22.3	22.1	22.3	22.6	22.6
		36	0	20.0	20.0	20.0	21.5	21.6	21.6	22.3	22.3	22.1	22.3	22.6	22.6
		36	16	20.0	20.0	20.0	21.5	21.6	21.6	22.3	22.3	22.1	22.3	22.6	22.6
		36	35	20.0	20.0	20.0	21.5	21.6	21.6	22.3	22.3	22.1	22.3	22.6	22.6
		75	0	20.0	20.0	20.0	21.5	21.7	21.6	22.3	22.3	22.1	22.3	22.6	22.6

OUTPUT POWER FOR LTE BAND 48 (20.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				55340	55990	56640	55340	55990	56640	55340	55990	56640	55340	55990	56640
				3560.0	3625.0	3690.0	3560.0	3625.0	3690.0	3560.0	3625.0	3690.0	3560.0	3625.0	3690.0
20.0	QPSK	1	0	22.5	22.4	22.3	22.4	22.2	22.1	23.4	23.2	23.2	23.4	23.2	23.0
		1	49	22.8	22.6	22.6	22.7	22.3	22.3	23.6	23.5	23.3	23.5	23.2	23.1
		1	99	22.5	22.5	22.2	22.3	22.0	22.1	23.4	23.4	22.8	23.2	22.9	22.9
		50	0	21.7	21.6	21.4	21.5	21.3	21.3	22.4	22.5	22.3	22.5	22.3	22.1
		50	24	21.9	21.7	21.5	21.6	21.4	21.3	22.5	22.6	22.3	22.5	22.3	22.2
		50	49	21.8	21.6	21.5	21.5	21.3	21.4	22.5	22.5	22.2	22.4	22.2	22.2
	16QAM	100	0	21.8	21.6	21.4	21.5	21.4	21.3	22.5	22.5	22.3	22.5	22.2	22.2
		1	0	21.6	21.4	21.1	21.9	21.5	21.1	22.8	22.5	22.1	22.8	22.5	22.0
		1	49	21.9	21.7	21.4	22.1	21.6	21.3	23.0	22.7	22.3	23.0	22.5	22.2
		1	99	21.7	21.5	21.1	21.7	21.4	21.1	22.8	22.4	21.8	22.6	22.2	22.0
		50	0	20.8	20.6	20.5	20.5	20.3	20.3	21.5	21.5	21.3	21.5	21.3	21.2
		50	24	20.9	20.7	20.5	20.7	20.4	20.4	21.6	21.6	21.4	21.6	21.3	21.2
	64QAM	50	49	20.9	20.6	20.5	20.5	20.3	20.3	21.5	21.5	21.0	21.5	21.1	21.2
		100	0	20.8	20.6	20.4	20.5	20.3	20.3	21.5	21.5	21.2	21.4	21.3	21.1
		1	0	19.6	19.8	19.9	20.8	21.0	20.8	21.6	21.9	21.5	22.8	23.1	22.7
		1	49	20.1	20.0	20.2	21.1	21.3	21.1	22.0	22.2	21.9	23.2	23.2	22.9
		1	99	19.8	19.9	19.9	20.9	21.1	20.7	22.0	22.0	21.5	22.8	23.1	22.5
		50	0	19.1	19.0	18.8	19.9	19.7	19.8	20.7	20.7	20.6	21.8	21.8	21.6
	256QAM	50	24	19.2	19.1	18.8	19.9	19.8	19.8	20.8	20.8	20.7	21.8	21.8	21.7
		50	49	19.2	19.0	18.8	19.9	19.7	19.7	20.7	20.7	20.7	21.8	21.8	21.6
		100	0	19.1	19.0	18.7	19.9	19.7	19.7	20.7	20.7	20.6	21.8	21.8	21.6
		1	0	20.1	20.2	20.1	21.2	21.3	21.3	22.2	22.2	22.0	22.3	22.6	22.7
		1	49	20.1	20.2	20.1	21.2	21.3	21.3	22.2	22.2	22.0	22.3	22.6	22.7
		1	99	20.1	20.2	20.1	21.2	21.3	21.3	22.2	22.2	22.0	22.3	22.6	22.7
		50	0	20.1	20.2	20.1	21.3	21.3	21.3	22.2	22.2	22.0	22.3	22.6	22.7
		50	24	20.0	20.2	20.1	21.2	21.3	21.3	22.2	22.2	22.0	22.3	22.6	22.6
		50	49	20.1	20.2	20.1	21.2	21.3	21.3	22.2	22.2	22.0	22.3	22.6	22.6
		100	0	20.1	20.2	20.1	21.3	21.3	21.3	22.2	22.2	22.0	22.3	22.6	22.6

7.16. LTE BAND 66

Test Engineer ID: 39004 Test Date: 3/11/2020

OUTPUT POWER FOR LTE BAND 66 (1.4 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				131979	132322	132665	131979	132322	132665	131979	132322	132665	131979	132322	132665
1.4	QPSK	1	0	25.6	25.6	25.5	23.1	22.9	22.9	24.6	24.8	24.9	22.7	23.0	22.9
		1	2	25.6	25.7	25.6	23.1	23.0	23.0	24.7	24.8	24.9	22.8	23.0	22.9
		1	5	25.5	25.6	25.5	23.0	22.9	22.8	24.6	24.8	24.9	22.7	22.9	22.8
		3	0	25.6	25.6	25.6	23.0	23.0	22.9	24.7	24.8	25.0	22.7	22.9	22.9
		3	1	25.7	25.7	25.7	23.0	23.0	23.0	24.8	24.9	25.0	22.8	23.0	22.9
		3	2	25.7	25.7	25.6	23.1	23.0	22.9	24.8	24.9	24.8	22.8	22.9	22.9
	16QAM	6	0	24.7	24.7	24.7	22.5	22.4	22.4	23.8	24.0	23.9	22.4	22.5	22.5
		1	0	25.1	24.8	25.0	22.6	22.8	22.4	24.3	24.3	24.2	22.5	22.7	22.9
		1	2	25.1	24.8	25.0	22.7	22.8	22.5	24.3	24.3	24.2	22.6	22.7	23.0
		1	5	25.0	24.7	25.0	22.6	22.7	22.4	24.3	24.3	24.2	22.6	22.6	22.9
		3	0	24.9	24.9	24.9	22.6	22.7	22.6	24.0	24.0	23.9	22.6	22.5	22.6
		3	1	25.0	24.9	24.9	22.6	22.7	22.6	24.0	24.1	23.9	22.7	22.6	22.7
	64QAM	3	2	25.0	24.9	24.9	22.6	22.7	22.6	24.0	24.0	23.9	22.7	22.6	22.7
		6	0	23.6	23.9	23.6	21.7	21.3	21.5	22.8	22.8	22.7	21.7	21.8	21.4
		1	0	24.1	23.8	24.0	22.8	21.4	22.0	22.5	22.9	22.7	21.8	21.5	21.5
		1	2	24.1	23.8	24.1	22.8	21.4	22.0	22.5	22.9	22.7	21.9	21.6	21.5
		1	5	24.0	23.7	24.0	22.7	21.3	22.0	22.4	22.7	22.5	21.8	21.5	21.4
		3	0	24.0	23.9	24.0	22.5	21.3	21.7	22.4	22.6	22.5	21.8	21.5	21.3
	256QAM	3	1	24.1	23.9	24.0	22.5	21.4	21.7	22.4	22.7	22.6	21.8	21.6	21.3
		3	2	24.0	23.9	24.0	22.4	21.4	21.7	22.4	22.6	22.5	21.9	21.6	21.3
		6	0	22.7	23.0	22.6	21.0	20.5	20.8	21.5	21.2	21.7	20.5	20.7	20.4
		1	0	24.0	24.0	24.0	21.3	21.3	21.3	18.6	19.1	18.6	21.3	21.3	21.1
		1	2	24.0	24.0	23.9	21.3	21.3	21.3	18.7	19.1	18.8	21.3	21.2	21.1
		1	5	24.0	23.9	24.0	21.3	21.3	21.3	18.6	19.1	18.5	21.3	21.2	21.1
		3	0	24.0	23.9	24.0	21.3	21.3	21.3	19.1	19.1	19.0	21.3	21.2	21.1
		3	1	24.0	24.0	24.0	21.3	21.3	21.3	19.1	19.1	19.0	21.2	21.3	21.1
		3	2	24.0	23.9	24.0	21.3	21.3	21.3	19.1	19.1	19.1	21.2	21.3	21.1
		6	0	24.0	24.0	24.0	21.3	21.3	21.3	19.1	19.1	18.8	21.2	21.2	21.1

OUTPUT POWER FOR LTE BAND 66 (3.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				131987	132322	132657	131987	132322	132657	131987	132322	132657	131987	132322	132657
				1711.5	1745.0	1778.5	1711.5	1745.0	1778.5	1711.5	1745.0	1778.5	1711.5	1745.0	1778.5
3.0	QPSK	1	0	25.6	25.7	25.7	23.1	23.0	23.1	24.9	24.9	25.0	22.8	22.9	23.0
		1	7	25.6	25.7	25.6	23.1	22.9	23.0	24.9	24.9	25.0	22.8	23.0	23.0
		1	14	25.6	25.7	25.6	23.1	22.9	22.9	24.9	25.0	25.0	22.8	23.0	22.9
		8	0	24.8	24.8	24.8	22.6	22.4	22.5	24.1	24.1	24.2	22.5	22.6	22.5
		8	4	24.8	24.8	24.8	22.6	22.5	22.5	24.1	24.1	24.3	22.5	22.6	22.5
		8	7	24.8	24.8	24.8	22.6	22.5	22.5	24.0	24.2	24.3	22.5	22.6	22.5
	16QAM	15	0	24.8	24.8	24.8	22.6	22.5	22.5	23.9	24.1	24.2	22.5	22.5	22.5
		1	0	24.9	24.9	24.9	22.7	22.4	22.9	23.9	24.1	24.2	22.6	22.6	23.0
		1	7	24.8	24.8	24.7	22.6	22.3	22.8	23.9	24.0	24.1	22.6	22.6	22.9
		1	14	24.8	24.8	24.7	22.6	22.3	22.8	23.9	24.0	24.0	22.5	22.6	22.9
		8	0	23.9	23.9	23.9	21.7	21.6	21.6	22.9	23.1	23.2	21.6	21.7	21.7
		8	4	23.9	23.9	23.8	21.7	21.6	21.6	23.0	23.2	23.2	21.6	21.8	21.7
	64QAM	8	7	23.9	23.9	23.8	21.7	21.6	21.6	23.0	23.2	23.2	21.6	21.8	21.7
		15	0	23.8	23.7	23.7	21.6	21.5	21.5	22.9	23.0	23.1	21.6	21.6	21.6
		1	0	24.0	24.0	24.0	21.5	21.1	21.7	22.6	22.8	23.0	21.8	21.7	21.4
		1	7	23.9	23.9	23.8	21.6	21.1	21.7	22.5	22.7	22.9	21.7	21.7	21.3
		1	14	23.9	24.0	23.9	21.7	21.1	21.7	22.5	22.6	22.9	21.7	21.7	21.3
		8	0	22.8	22.8	22.8	20.3	20.0	20.6	21.2	21.4	21.6	20.5	20.5	20.4
	256QAM	8	4	22.8	22.8	22.8	20.4	20.0	20.7	21.3	21.5	21.7	20.5	20.6	20.4
		8	7	22.8	22.8	22.8	20.5	20.1	20.7	21.3	21.5	21.7	20.5	20.6	20.4
		15	0	22.9	22.8	22.8	20.5	20.0	20.7	21.3	21.5	21.7	20.6	20.4	20.4
		1	0	23.9	23.8	23.8	21.4	21.4	21.4	19.2	19.4	19.0	21.4	21.4	21.2
		1	7	23.9	23.9	23.8	21.4	21.4	21.4	19.1	19.3	18.9	21.3	21.4	21.2
		1	14	24.0	23.9	23.8	21.4	21.4	21.4	19.1	19.3	18.8	21.4	21.4	21.2
		8	0	23.9	23.9	23.8	21.4	21.4	21.4	19.3	19.3	19.2	21.3	21.4	21.2
		8	4	23.9	23.9	23.8	21.4	21.4	21.4	19.3	19.3	19.2	21.3	21.4	21.2
		8	7	24.0	23.9	23.9	21.4	21.4	21.4	19.3	19.2	19.2	21.4	21.4	21.2
		15	0	23.9	23.9	23.8	21.4	21.4	21.4	19.2	19.4	19.1	21.3	21.4	21.2

OUTPUT POWER FOR LTE BAND 66 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				131997	132322	132647	131997	132322	132647	131997	132322	132647	131997	132322	132647
				1712.5	1745.0	1777.5	1712.5	1745.0	1777.5	1712.5	1745.0	1777.5	1712.5	1745.0	1777.5
5.0	QPSK	1	0	25.6	25.6	25.7	23.1	22.9	23.0	24.8	24.8	24.9	22.7	22.9	22.6
		1	12	25.7	25.7	25.6	23.1	23.0	22.9	24.9	24.9	25.0	22.8	23.0	22.7
		1	24	25.7	25.7	25.6	23.0	22.9	22.9	24.9	24.9	24.9	22.8	23.0	22.6
		12	0	24.7	24.7	24.7	22.5	22.3	22.5	23.9	24.0	24.1	22.3	22.4	22.4
		12	6	24.8	24.8	24.7	22.6	22.4	22.5	24.0	24.0	24.2	22.4	22.4	22.4
		12	11	24.7	24.7	24.7	22.5	22.4	22.4	23.9	24.0	24.1	22.3	22.4	22.3
	16QAM	25	0	24.8	24.7	24.7	22.5	22.4	22.4	23.7	23.9	24.0	22.4	22.4	22.4
		1	0	24.9	24.9	25.0	22.7	22.5	22.9	23.7	23.9	23.9	22.6	22.5	22.9
		1	12	25.1	25.0	25.0	22.9	22.5	22.8	23.8	23.9	24.1	22.8	22.6	23.0
		1	24	25.0	24.9	24.9	22.8	22.5	22.8	23.8	23.8	24.0	22.7	22.6	22.9
		12	0	23.8	23.9	23.9	21.6	21.4	21.7	22.7	22.9	22.9	21.4	21.5	21.6
		12	6	23.9	23.8	23.8	21.7	21.5	21.6	22.9	23.0	23.1	21.5	21.5	21.5
	64QAM	12	11	23.8	23.8	23.8	21.6	21.4	21.5	22.9	23.0	23.1	21.5	21.6	21.5
		25	0	23.7	23.7	23.7	21.5	21.4	21.5	22.6	22.8	22.8	21.4	21.4	21.5
		1	0	23.9	23.6	24.0	21.3	20.6	21.8	22.4	22.6	22.7	21.5	21.4	21.0
		1	12	24.1	23.7	24.0	21.5	20.6	21.7	22.4	22.6	22.9	21.6	21.5	21.0
		1	24	24.0	23.6	23.9	21.6	20.6	21.7	22.4	22.4	22.8	21.6	21.4	20.9
		12	0	22.8	22.8	22.8	20.2	19.8	20.4	21.1	21.3	21.4	20.2	20.3	20.2
	256QAM	12	6	22.9	22.8	22.8	20.3	19.9	20.5	21.2	21.4	21.6	20.2	20.3	20.2
		12	11	22.8	22.8	22.7	20.4	19.9	20.5	21.2	21.4	21.6	20.2	20.3	20.1
		25	0	22.8	22.7	22.8	20.2	19.8	20.4	21.0	21.3	21.4	20.3	20.2	20.1
		1	0	24.0	24.0	24.0	21.6	21.7	21.8	19.0	19.1	18.8	21.4	21.3	21.2
		1	12	24.1	24.0	24.1	21.6	21.7	21.8	19.1	19.2	18.7	21.4	21.3	21.2
		1	24	24.1	24.1	24.0	21.6	21.7	21.7	19.1	19.1	18.6	21.3	21.3	21.2
		12	0	24.1	24.1	24.1	21.6	21.7	21.7	19.0	19.2	19.0	21.4	21.3	21.2
		12	6	24.0	24.1	24.1	21.6	21.7	21.7	19.1	19.2	19.0	21.3	21.3	21.2
		12	11	24.1	24.1	24.1	21.6	21.7	21.7	19.0	19.1	19.0	21.3	21.3	21.2
		25	0	24.1	24.1	24.0	21.6	21.7	21.7	19.1	19.1	19.0	21.3	21.3	21.2

OUTPUT POWER FOR LTE BAND 66 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				132022	132322	132622	132022	132322	132622	132022	132322	132622	132022	132322	132622
				1715.0	1745.0	1775.0	1715.0	1745.0	1775.0	1715.0	1745.0	1775.0	1715.0	1745.0	1775.0
10.0	QPSK	1	0	25.4	25.4	25.3	22.8	22.7	22.9	24.5	24.6	24.6	22.5	22.7	22.7
		1	24	25.7	25.7	25.6	23.1	22.9	23.0	24.9	24.9	25.0	22.9	23.0	22.9
		1	49	25.5	25.5	25.4	22.8	22.8	22.8	24.7	24.7	24.8	22.6	22.9	22.7
		25	0	24.7	24.7	24.7	22.5	22.4	22.4	23.8	24.0	24.0	22.4	22.5	22.4
		25	12	24.9	24.8	24.7	22.6	22.5	22.5	24.0	24.1	24.2	22.5	22.5	22.4
		25	24	24.8	24.8	24.7	22.5	22.4	22.4	23.9	23.9	24.0	22.5	22.6	22.4
		50	0	24.8	24.7	24.7	22.6	22.4	22.4	23.7	23.8	23.8	22.5	22.5	22.4
	16QAM	1	0	24.6	24.6	24.5	22.4	22.1	22.6	23.3	23.6	23.1	22.3	22.3	22.7
		1	24	24.9	24.9	24.8	22.6	22.3	22.9	23.8	23.9	24.0	22.5	22.6	22.9
		1	49	24.8	24.7	24.6	22.4	22.1	22.6	23.5	23.5	23.6	22.3	22.4	22.7
		25	0	23.8	23.8	23.8	21.6	21.4	21.5	22.6	22.8	22.6	21.5	21.5	21.5
		25	12	24.0	23.9	23.8	21.8	21.5	21.5	22.8	23.0	23.0	21.7	21.6	21.5
		25	24	23.9	23.9	23.8	21.7	21.4	21.5	22.8	22.9	22.9	21.6	21.6	21.5
		50	0	23.8	23.8	23.7	21.6	21.4	21.5	22.6	22.8	22.7	21.6	21.5	21.4
	64QAM	1	0	23.6	23.6	23.6	21.0	20.9	21.5	21.9	22.3	22.0	21.3	21.4	21.1
		1	24	24.0	24.1	23.9	21.8	21.1	21.7	22.4	22.6	22.8	21.6	21.7	21.5
		1	49	23.7	23.8	23.7	21.5	20.9	21.4	22.1	22.1	22.4	21.4	21.6	21.2
		25	0	22.8	22.8	22.7	20.2	19.8	20.6	21.0	21.2	21.1	20.5	20.3	20.4
		25	12	23.0	22.9	22.8	20.5	20.0	20.7	21.2	21.4	21.5	20.6	20.5	20.5
		25	24	22.9	22.9	22.8	20.5	19.9	20.6	21.1	21.3	21.4	20.6	20.5	20.4
		50	0	22.8	22.7	22.7	20.2	19.9	20.6	20.9	21.1	21.2	20.5	20.3	20.4
	256QAM	1	0	23.3	23.4	23.9	21.4	21.4	21.3	18.9	18.6	18.8	21.5	20.8	20.7
		1	24	23.4	23.4	23.8	21.4	21.4	21.3	19.2	18.9	19.0	21.5	20.8	20.6
		1	49	23.4	23.3	23.8	21.4	21.4	21.3	19.0	18.8	18.8	21.5	20.9	20.7
		25	0	23.4	23.3	23.8	21.4	21.4	21.3	19.0	19.0	18.9	21.4	20.8	20.7
		25	12	23.4	23.3	23.8	21.4	21.4	21.3	19.2	19.1	19.0	21.5	20.9	20.6
		25	24	23.4	23.3	23.9	21.4	21.4	21.3	19.1	19.1	18.9	21.5	20.8	20.6
		50	0	23.4	23.4	23.8	21.4	21.4	21.3	19.1	19.1	18.9	21.4	20.8	20.6

OUTPUT POWER FOR LTE BAND 66 (15.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				132047	132322	132597	132047	132322	132597	132047	132322	132597	132047	132322	132597
				1717.5	1745.0	1772.5	1717.5	1745.0	1772.5	1717.5	1745.0	1772.5	1717.5	1745.0	1772.5
15.0	QPSK	1	0	25.5	25.6	25.7	22.9	22.8	23.0	24.8	24.9	25.0	22.5	22.7	22.8
		1	37	25.7	25.7	25.7	23.0	22.8	22.9	24.8	24.8	25.0	22.6	22.9	22.6
		1	74	25.6	25.6	25.6	22.9	22.6	22.8	24.9	24.4	24.7	22.5	22.8	22.6
		36	0	24.7	24.7	24.7	22.4	22.3	22.3	23.5	23.7	23.2	22.2	22.1	22.3
		36	16	24.8	24.7	24.7	22.5	22.3	22.3	23.5	23.5	23.4	22.3	22.1	22.3
		36	35	24.8	24.8	24.7	22.5	22.3	22.3	23.5	23.4	23.4	22.3	22.2	22.3
		75	0	24.7	24.7	24.6	22.4	22.3	22.3	23.3	23.4	23.1	22.3	22.1	22.2
	16QAM	1	0	25.2	25.1	25.3	22.9	22.1	22.8	23.6	23.9	23.2	22.8	21.9	22.7
		1	37	25.3	25.2	25.3	23.1	22.1	22.7	23.6	23.7	23.6	23.0	22.0	22.7
		1	74	25.2	25.1	25.1	22.9	22.0	22.6	24.0	23.6	23.7	22.8	22.3	22.6
		36	0	23.7	23.7	23.7	21.4	21.3	21.4	22.3	22.6	21.9	21.4	21.2	21.4
		36	16	23.8	23.7	23.7	21.5	21.3	21.4	22.4	22.5	22.3	21.5	21.3	21.4
		36	35	23.7	23.8	23.7	21.4	21.3	21.4	22.5	22.4	22.4	21.4	21.4	21.4
		75	0	23.8	23.7	23.7	21.5	21.3	21.3	22.4	22.5	22.2	21.5	21.3	21.3
	64QAM	1	0	24.1	24.1	24.3	21.7	20.8	21.4	22.4	22.8	22.3	21.5	20.7	21.2
		1	37	24.3	24.2	24.3	22.0	20.6	21.4	22.4	22.5	22.7	21.7	20.7	21.0
		1	74	24.2	24.1	24.2	22.2	20.8	21.1	22.7	22.4	22.7	21.6	21.1	21.0
		36	0	22.7	22.7	22.7	20.1	19.6	20.2	20.8	21.1	20.6	20.2	19.6	19.9
		36	16	22.8	22.7	22.7	20.2	19.5	20.3	20.8	21.0	20.9	20.3	19.6	19.9
		36	35	22.8	22.8	22.7	20.2	19.6	20.2	20.9	20.9	21.1	20.2	19.7	19.9
		75	0	22.8	22.8	22.7	20.1	19.5	20.1	20.9	21.0	20.9	20.1	19.6	19.8
	256QAM	1	0	24.2	24.1	24.2	21.9	21.9	22.1	19.0	18.9	18.9	21.7	20.8	20.6
		1	37	24.3	24.1	24.2	21.9	21.8	22.1	19.2	19.1	19.0	21.7	20.8	20.6
		1	74	24.3	24.1	24.2	21.9	21.9	22.0	19.0	19.1	18.8	21.7	20.8	20.6
		36	0	24.2	24.1	24.2	21.9	21.8	22.1	19.1	19.0	19.0	21.7	20.8	20.6
		36	16	24.2	24.1	24.2	21.9	21.8	22.1	19.1	19.1	19.0	21.7	20.8	20.6
		36	35	24.2	24.1	24.3	21.9	21.9	22.1	19.1	19.1	19.0	21.6	20.8	20.6
		75	0	24.3	24.1	24.2	21.9	21.9	22.1	19.0	19.1	18.9	21.7	20.8	20.6

OUTPUT POWER FOR LTE BAND 66 (20.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				132072	132322	132572	132072	132322	132572	132072	132322	132572	132072	132322	132572
				1720.0	1745.0	1770.0	1720.0	1745.0	1770.0	1720.0	1745.0	1770.0	1720.0	1745.0	1770.0
20.0	QPSK	1	0	25.4	25.4	25.7	22.9	22.8	23.1	24.8	24.9	24.8	22.6	22.7	22.9
		1	49	25.7	25.7	25.7	23.1	23.0	23.1	24.9	24.9	25.0	23.0	23.0	22.7
		1	99	25.5	25.5	25.6	22.8	22.8	22.9	24.7	24.2	24.9	22.7	22.8	22.7
		50	0	24.7	24.7	24.7	22.6	22.4	22.5	23.4	23.7	22.9	22.4	22.0	22.2
		50	24	24.9	24.8	24.9	22.7	22.5	22.6	23.5	23.6	23.4	22.6	22.1	22.5
		50	49	24.8	24.8	24.7	22.5	22.4	22.5	23.5	23.3	23.5	22.5	22.2	22.3
		100	0	24.8	24.7	24.7	22.6	22.4	22.5	23.3	23.3	23.0	22.4	22.0	22.2
	16QAM	1	0	24.9	24.9	25.2	22.8	22.8	23.0	23.4	23.7	23.3	22.4	22.3	23.0
		1	49	25.2	25.2	25.2	23.0	23.0	23.0	23.9	23.9	23.7	23.0	22.5	22.9
		1	99	24.9	25.0	25.1	22.7	22.8	22.9	23.8	23.4	24.0	22.6	22.6	22.9
		50	0	23.7	23.7	23.7	21.6	21.5	21.5	22.2	22.5	21.7	21.4	21.1	21.2
		50	24	23.8	23.8	23.8	21.7	21.6	21.6	22.5	22.6	22.3	21.6	21.3	21.5
		50	49	23.7	23.8	23.7	21.5	21.5	21.5	22.5	22.4	22.5	21.5	21.4	21.4
		100	0	23.7	23.7	23.7	21.6	21.5	21.5	22.4	22.4	22.1	21.4	21.3	21.4
	64QAM	1	0	23.6	23.6	23.9	21.5	21.2	21.5	21.9	22.3	21.9	21.2	20.7	21.8
		1	49	24.0	24.0	23.9	22.1	21.2	21.8	22.3	22.4	22.3	21.5	20.9	21.7
		1	99	23.7	23.7	23.9	21.7	21.2	21.5	22.3	21.8	22.6	21.3	21.0	21.7
		50	0	22.8	22.7	22.7	20.2	19.7	19.9	20.8	21.1	20.3	20.2	19.6	19.7
		50	24	22.9	22.8	22.9	20.4	19.7	20.5	21.0	21.1	21.0	20.3	19.7	20.0
		50	49	22.8	22.8	22.7	20.4	19.7	20.4	21.0	20.9	21.2	20.1	19.7	19.9
		100	0	22.8	22.7	22.7	20.1	19.6	20.2	20.9	20.9	20.7	19.9	19.6	19.8
	256QAM	1	0	23.5	23.6	23.7	21.6	21.6	21.9	18.6	19.0	18.8	21.5	21.5	21.6
		1	49	23.5	23.6	23.8	21.6	21.6	21.9	18.9	19.4	19.0	21.5	21.5	21.6
		1	99	23.5	23.6	23.7	21.6	21.5	21.9	18.7	19.3	18.7	21.5	21.5	21.7
		50	0	23.5	23.6	23.8	21.6	21.6	21.9	18.9	18.9	18.9	21.5	21.5	21.6
		50	24	23.5	23.6	23.8	21.5	21.6	21.9	19.1	19.1	19.0	21.4	21.5	21.7
		50	49	23.5	23.6	23.7	21.6	21.6	21.9	19.0	19.0	18.8	21.5	21.4	21.6
		100	0	23.5	23.6	23.8	21.6	21.5	21.9	19.0	19.0	18.9	21.4	21.5	21.7

7.17. LTE BAND 71

Test Engineer ID: 39004 Test Date: 3/11/2020

OUTPUT POWER FOR LTE BAND 71 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				133147	133297	133447	133147	133297	133447
				665.5	680.5	695.5	665.5	680.5	695.5
5.0	QPSK	1	0	25.6	25.6	25.5	24.5	24.2	24.2
		1	12	25.6	25.7	25.6	24.5	24.3	24.1
		1	24	25.7	25.7	25.5	24.4	24.3	24.1
		12	0	24.6	24.6	24.7	24.3	24.3	24.3
		12	6	24.7	24.7	24.7	24.3	24.4	24.2
		12	11	24.7	24.7	24.7	24.3	24.4	23.7
		25	0	24.7	24.7	24.7	24.2	24.4	24.0
	16QAM	1	0	24.8	24.7	25.1	24.3	24.3	24.2
		1	12	24.8	24.9	25.2	24.2	24.4	24.2
		1	24	25.0	24.9	25.1	24.2	24.4	23.4
		12	0	23.7	23.7	23.8	23.4	23.8	23.7
		12	6	23.8	23.8	23.8	23.4	24.0	23.4
		12	11	23.8	23.8	23.8	23.4	23.9	22.9
		25	0	23.7	23.7	23.7	23.4	23.9	23.2
	64QAM	1	0	23.5	23.7	23.7	22.5	23.1	22.9
		1	12	23.5	23.9	23.8	22.3	23.0	22.6
		1	24	23.6	23.9	23.8	22.2	23.0	21.7
		12	0	22.6	22.5	22.6	21.6	22.2	21.9
		12	6	22.7	22.5	22.6	21.6	22.2	21.5
		12	11	22.7	22.6	22.6	21.5	22.2	21.1
		25	0	22.6	22.5	22.6	21.5	22.2	21.3
	256QAM	1	0	23.5	21.1	21.1	21.0	20.8	20.7
		1	12	21.0	21.2	21.2	21.0	20.9	20.8
		1	24	20.9	21.3	21.1	20.9	21.1	20.7
		12	0	21.2	21.1	21.1	21.0	20.9	20.8
		12	6	21.3	21.2	21.2	21.0	21.0	20.9
		12	11	21.3	21.2	21.2	21.0	21.0	20.9
		25	0	21.3	21.2	21.2	21.0	21.0	20.9

OUTPUT POWER FOR LTE BAND 71 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				133172	133297	133422	133172	133297	133422
				668.0	680.5	693.0	668.0	680.5	693.0
10.0	QPSK	1	0	25.6	25.7	25.7	24.4	24.4	24.3
		1	24	25.6	25.6	25.7	24.2	24.3	24.3
		1	49	25.6	25.6	25.7	24.3	24.3	24.2
		25	0	24.7	24.7	24.7	24.4	24.3	24.3
		25	12	24.8	24.7	24.7	24.4	24.4	24.2
		25	24	24.7	24.7	24.7	24.3	24.3	24.2
		50	0	24.7	24.6	24.6	24.3	24.3	24.2
	16QAM	1	0	24.8	24.7	25.1	24.3	24.4	24.2
		1	24	24.7	24.6	25.1	24.0	24.3	24.2
		1	49	24.7	24.6	25.1	24.2	24.5	23.6
		25	0	23.8	23.7	23.7	23.4	23.8	23.8
		25	12	23.9	23.7	23.7	23.5	23.9	23.7
		25	24	23.8	23.8	23.7	23.8	23.9	23.3
		50	0	23.8	23.6	23.6	23.5	23.8	23.7
	64QAM	1	0	23.8	23.8	23.7	22.4	23.0	22.9
		1	24	23.8	23.9	23.7	22.0	23.0	23.0
		1	49	23.7	23.9	23.7	22.4	22.7	21.9
		25	0	22.7	22.6	22.6	21.6	22.1	22.3
		25	12	22.7	22.6	22.7	21.6	22.2	22.1
		25	24	22.7	22.6	22.7	21.8	22.2	21.5
		50	0	22.6	22.5	22.6	21.6	22.2	21.8
	256QAM	1	0	21.1	21.1	20.8	20.8	20.7	20.4
		1	24	21.4	21.3	21.0	20.9	21.0	20.8
		1	49	21.1	21.1	20.8	20.8	20.7	20.4
		25	0	21.2	21.1	21.1	20.9	20.7	20.7
		25	12	21.3	21.2	21.2	21.0	20.9	20.8
		25	24	21.3	21.2	21.2	20.9	20.9	20.8
		50	0	21.3	21.1	21.1	20.9	20.9	20.7

OUTPUT POWER FOR LTE BAND 71 (15.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				133197	133297	133397	133197	133297	133397
				670.5	680.5	690.5	670.5	680.5	690.5
15.0	QPSK	1	0	25.7	25.7	25.7	24.4	24.3	24.3
		1	37	25.7	25.6	25.6	24.3	24.3	24.2
		1	74	25.7	25.6	25.7	24.3	24.2	24.1
		36	0	24.8	24.8	24.7	24.3	24.3	24.3
		36	16	24.8	24.7	24.7	24.4	24.3	24.3
		36	35	24.8	24.8	24.8	24.3	24.3	24.2
		75	0	24.8	24.7	24.7	24.3	24.3	24.1
	16QAM	1	0	25.2	24.7	25.1	24.2	24.4	24.2
		1	37	25.1	24.6	25.1	24.4	24.3	24.1
		1	74	25.2	24.7	25.0	24.5	24.4	23.6
		36	0	23.8	23.7	23.8	23.5	23.8	23.8
		36	16	23.8	23.7	23.8	23.8	23.8	23.7
		36	35	23.8	23.8	23.8	23.8	23.8	23.7
		75	0	23.8	23.7	23.6	23.7	23.8	23.7
	64QAM	1	0	24.1	23.9	23.7	22.6	22.9	23.0
		1	37	24.1	23.8	23.7	22.4	22.9	22.9
		1	74	24.2	23.9	23.7	22.6	22.6	22.0
		36	0	22.6	22.6	22.7	21.5	22.2	22.2
		36	16	22.7	22.6	22.7	21.7	22.2	22.3
		36	35	22.6	22.7	22.7	22.1	22.2	21.9
		75	0	22.7	22.5	22.6	21.8	22.1	21.9
	256QAM	1	0	21.0	21.1	21.0	20.7	20.6	20.5
		1	37	21.3	21.3	21.3	20.9	20.9	20.6
		1	74	21.2	21.2	21.1	20.7	20.6	20.4
		36	0	21.1	21.2	21.0	20.8	20.8	20.7
		36	16	21.3	21.3	21.1	20.9	20.8	20.7
		36	35	21.3	21.3	21.1	20.9	20.9	20.8
		75	0	21.3	21.2	21.1	20.9	20.9	20.7

OUTPUT POWER FOR LTE BAND 71 (20.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				133222	133297	133372	133222	133297	133372
				673.0	680.5	688.0	673.0	680.5	688.0
20.0	QPSK	1	0	25.7	25.7	25.7	24.3	24.3	24.3
		1	49	25.7	25.7	25.6	24.3	24.3	24.3
		1	99	25.7	25.7	25.6	24.2	24.2	24.1
		50	0	24.8	24.7	24.7	24.4	24.4	24.4
		50	24	24.8	24.7	24.7	24.4	24.3	24.3
		50	49	24.7	24.7	24.7	24.4	24.3	24.3
		100	0	24.8	24.7	24.7	24.3	24.3	24.2
	16QAM	1	0	25.2	25.3	25.2	24.4	24.4	24.5
		1	49	25.2	25.3	25.1	24.3	24.4	24.4
		1	99	25.1	25.3	25.1	24.2	24.3	23.8
		50	0	23.8	23.8	23.7	23.6	23.9	23.9
		50	24	23.8	23.7	23.7	23.9	23.8	23.8
		50	49	23.8	23.8	23.7	23.9	23.8	23.8
		100	0	23.8	23.7	23.7	23.8	23.8	23.7
	64QAM	1	0	23.8	23.9	24.2	22.7	23.2	23.0
		1	49	23.8	23.9	24.1	22.7	23.2	23.0
		1	99	23.8	23.9	24.2	22.9	23.0	22.0
		50	0	22.7	22.7	22.6	21.7	22.2	22.2
		50	24	22.7	22.7	22.6	22.0	22.2	22.2
		50	49	22.7	22.7	22.6	22.2	22.2	21.9
		100	0	22.7	22.5	22.5	22.0	22.0	21.9
	256QAM	1	0	20.9	20.8	21.2	20.6	20.5	20.5
		1	49	21.2	21.0	21.5	21.2	20.8	20.8
		1	99	21.0	21.0	21.3	20.8	20.7	20.5
		50	0	21.1	21.0	21.0	20.8	20.8	20.8
		50	24	21.2	21.2	21.2	21.0	20.9	20.8
		50	49	21.2	21.1	21.1	21.0	20.9	20.8
		100	0	21.2	21.1	21.1	20.9	20.9	20.8

7.18. 5G NR Band n77

Test Engineer ID: 19171 Test Date: 8/14/2020

OUTPUT POWER FOR 5G NR Band n77 (20.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				647333 3710.0	656000 3840.0	664666 3970.0	647333 3710.0	656000 3840.0	664666 3970.0	647333 3710.0	656000 3840.0	664666 3970.0	647333 3710.0	656000 3840.0	664666 3970.0
20.0	BPSK	1	0	23.7	24.3	23.9	18.2	18.8	18.8	23.6	23.1	23.4	20.7	20.7	20.7
		1	1	26.6	26.5	26.1	21.1	21.9	22.1	26.1	25.9	26.3	23.8	24.0	24.1
		25	12	26.6	26.5	26.4	20.9	23.7	20.9	26.1	26.0	26.5	23.7	24.0	24.0
		50	0	26.7	26.5	26.3	20.3	21.1	20.5	25.8	25.7	26.5	23.3	23.4	23.5
	QPSK	1	0	24.3	24.0	24.0	19.7	19.8	20.0	22.3	22.5	22.9	20.8	21.0	21.0
		1	1	26.7	26.7	26.7	23.1	23.0	23.3	25.5	25.8	26.5	24.2	24.5	24.3
		25	12	26.5	26.6	26.5	23.0	23.1	23.3	25.5	25.6	25.8	24.1	24.4	24.4
		50	0	26.7	26.5	26.5	21.9	22.2	22.3	25.1	25.1	25.4	23.1	23.4	23.4
	16QAM	1	0	24.1	23.9	23.8	19.6	19.5	19.7	22.4	22.7	22.9	20.5	20.7	20.8
		1	1	26.6	26.5	26.5	22.1	22.0	22.4	25.0	25.1	25.3	22.7	23.1	23.4
		25	12	26.6	26.6	26.5	21.9	22.1	22.2	25.0	25.0	26.0	23.1	23.4	23.5
		50	0	25.5	25.5	25.5	21.0	21.1	21.3	24.0	24.1	24.4	22.2	22.4	22.4
	64QAM	1	0	24.4	24.3	24.2	20.0	20.1	19.8	22.6	22.8	23.1	21.0	21.1	21.1
		1	1	25.5	25.2	25.4	20.9	20.9	21.0	23.6	23.8	24.2	21.9	22.0	22.1
		25	12	25.1	25.1	25.0	20.5	20.5	20.7	23.6	23.7	23.9	21.7	22.0	22.0
		50	0	25.1	25.0	25.0	20.5	20.6	20.8	23.6	23.6	23.9	21.6	21.9	21.9
	256QAM	1	0	23.1	23.0	23.0	18.4	18.6	18.6	21.5	21.8	22.2	19.7	19.9	20.0
		1	1	23.1	23.1	23.1	18.4	18.7	18.7	21.4	21.8	22.2	19.7	19.9	20.1
		25	12	23.1	23.0	23.0	18.5	18.5	18.8	21.6	21.7	21.9	19.6	20.0	19.9
		50	0	23.1	23.0	23.0	18.5	18.5	18.8	21.6	21.5	21.9	19.7	19.9	19.9

OUTPUT POWER FOR 5G NR Band n77 (40.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				648000 3720.0	656000 3840.0	664000 3960.0	648000 3720.0	656000 3840.0	664000 3960.0	648000 3720.0	656000 3840.0	664000 3960.0	648000 3720.0	656000 3840.0	664000 3960.0
40.0	BPSK	1	0	24.2	23.9	23.8	20.4	20.2	19.3	23.1	22.6	23.0	19.9	19.9	19.9
		1	1	26.7	26.4	26.3	22.9	22.5	22.0	25.8	25.5	26.2	23.0	23.3	23.3
		50	25	26.5	26.4	26.3	23.1	21.7	22.4	25.4	25.5	25.9	22.7	23.2	23.2
		100	0	26.5	26.4	26.4	22.4	20.9	21.0	25.2	25.3	25.9	22.5	22.6	22.6
	QPSK	1	0	23.8	24.2	23.6	19.8	19.8	20.3	23.1	23.4	23.6	20.3	20.9	20.4
		1	1	26.4	26.3	26.2	23.5	23.7	23.7	26.1	26.3	26.5	23.5	24.5	23.6
		50	25	26.5	26.3	25.9	23.4	23.5	23.6	26.1	26.2	26.1	22.9	23.6	23.4
		100	0	25.6	25.5	25.1	22.4	22.5	22.6	25.5	25.7	25.7	22.0	22.4	22.3
	16QAM	1	0	23.6	23.5	23.6	20.0	20.0	19.9	23.6	23.7	23.4	19.9	20.5	20.8
		1	1	25.8	26.0	25.6	22.7	22.6	22.8	26.0	26.2	26.4	22.5	23.0	23.5
		50	25	26.0	26.1	25.8	22.3	22.5	22.5	25.6	25.7	25.6	22.0	22.7	22.2
		100	0	25.2	25.3	25.0	21.5	21.5	21.6	24.5	24.8	24.8	21.2	21.5	21.2
	64QAM	1	0	23.9	24.3	23.6	20.1	20.5	20.5	23.3	23.6	23.6	19.8	20.7	20.6
		1	1	24.4	25.4	25.0	21.2	21.3	21.4	24.6	24.9	25.0	20.7	21.6	21.6
		50	25	24.7	24.6	24.4	20.9	21.1	21.1	24.0	24.3	24.3	20.4	21.1	20.7
		100	0	24.7	24.8	24.4	21.0	21.0	21.1	24.0	24.4	24.2	20.4	20.9	20.7
	256QAM	1	0	22.4	22.7	22.3	18.8	18.8	18.9	22.1	22.8	22.5	18.5	19.8	19.3
		1	1	22.9	22.7	22.3	19.0	18.7	18.9	22.1	22.6	22.8	19.0	19.6	19.1
		50	25	22.6	22.7	22.4	18.9	19.0	19.1	22.1	22.2	22.2	18.5	18.9	18.6
		100	0	22.7	22.8	22.4	18.9	19.0	19.0	22.0	22.3	22.2	18.4	18.8	18.8

OUTPUT POWER FOR 5G NR Band n77 (50.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				648333 3725.0	656000 3840.0	663666 3955.0	648333 3725.0	656000 3840.0	663666 3955.0	648333 3725.0	656000 3840.0	663666 3955.0	648333 3725.0	656000 3840.0	663666 3955.0
50.0	BPSK	1	0	24.0	24.1	23.9	18.8	19.4	19.7	22.8	22.5	23.2	20.4	20.4	20.4
		1	1	26.5	26.6	26.3	21.5	22.1	21.0	25.7	25.3	25.7	23.7	23.8	23.8
		64	32	26.6	26.5	26.3	21.8	22.3	21.9	25.8	25.6	25.9	23.5	23.7	23.7
		128	0	26.5	26.5	26.4	21.0	21.2	21.0	25.7	25.6	25.9	23.2	23.2	23.1
	QPSK	1	0	23.9	23.7	23.6	20.1	20.0	20.2	23.1	23.2	23.3	20.7	21.2	21.2
		1	1	26.3	26.4	26.3	23.7	23.5	23.7	26.2	26.5	26.4	24.0	24.2	24.3
		64	32	26.7	26.3	26.0	23.5	23.5	23.6	26.3	26.2	26.3	24.0	24.5	24.0
		128	0	25.7	25.6	25.3	22.7	22.5	22.6	25.5	25.8	25.7	22.6	23.2	23.0
	16QAM	1	0	24.3	23.7	23.8	19.9	19.6	20.1	23.4	24.0	24.0	21.1	21.9	20.8
		1	1	26.0	26.3	26.6	22.6	22.6	22.9	25.7	26.2	26.3	23.4	23.5	23.4
		64	32	26.4	26.3	25.9	22.7	22.7	22.7	25.6	25.8	25.8	22.8	23.4	23.0
		128	0	25.4	25.3	25.0	21.6	21.5	21.6	24.5	24.8	24.7	21.6	22.3	21.9
	64QAM	1	0	23.9	24.1	23.7	20.4	20.1	20.7	23.2	22.8	22.9	20.7	21.4	21.4
		1	1	25.2	24.9	25.3	21.5	21.1	21.7	24.6	23.8	24.0	22.1	22.3	22.1
		64	32	24.9	24.9	24.6	21.1	21.2	21.1	24.1	24.3	24.3	21.3	22.1	21.5
		128	0	24.9	24.9	24.5	21.1	21.1	21.1	24.0	24.3	24.3	21.1	21.7	21.5
	256QAM	1	0	22.2	22.8	22.4	18.8	18.4	18.9	22.3	22.2	22.2	19.5	20.2	20.9
		1	1	22.6	22.3	22.5	19.0	18.7	18.8	22.5	22.0	22.2	19.6	20.4	20.0
		64	32	22.9	22.8	22.5	19.0	19.0	19.0	22.0	22.2	22.2	19.2	19.8	19.8
		128	0	22.8	22.7	22.4	19.1	18.9	19.0	21.9	22.2	22.3	19.1	19.7	19.4

OUTPUT POWER FOR 5G NR Band n77 (60.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				648666 3730.0	656000 3840.0	663333 3950.0	648666 3730.0	656000 3840.0	663333 3950.0	648666 3730.0	656000 3840.0	663333 3950.0	648666 3730.0	656000 3840.0	663333 3950.0
60.0	BPSK	1	0	22.28	22.7	21.8	19.6	19.9	20.3	22.8	22.5	22.6	20.3	20.4	20.4
		1	1	24.96	26.7	23.8	22.0	21.0	22.0	25.6	25.4	25.2	24.0	23.9	23.8
		81	40	24.66	24.5	24.1	21.9	21.6	22.3	25.7	25.4	25.5	23.9	23.7	23.7
		162	0	24.12	23.3	23.5	21.3	21.2	21.2	25.5	25.6	25.6	23.2	23.2	23.3
	QPSK	1	0	22.2	22.4	22.3	19.8	19.7	20.3	22.8	23.5	23.1	20.4	20.8	20.7
		1	1	24.5	26.7	24.5	23.3	23.4	23.7	26.0	26.1	26.5	23.9	24.5	24.2
		81	40	25.0	24.9	24.5	23.4	23.3	23.6	25.8	26.2	26.1	24.0	24.3	24.1
		162	0	24.2	24.1	23.8	22.5	22.4	22.6	25.4	25.6	25.6	22.9	23.1	22.9
	16QAM	1	0	22.3	22.2	21.9	19.7	19.5	20.2	23.3	23.4	23.4	20.8	21.4	20.4
		1	1	24.5	24.9	23.5	22.4	22.3	22.6	25.5	25.4	25.9	23.1	23.8	23.2
		81	40	24.6	24.8	24.5	22.4	22.5	22.6	25.4	25.7	25.6	22.9	23.1	23.0
		162	0	23.5	23.9	23.6	21.5	21.5	21.7	24.4	24.6	24.7	21.9	22.2	22.1
	64QAM	1	0	22.7	21.9	22.3	20.4	20.4	20.5	22.7	22.9	22.8	20.7	21.0	20.8
		1	1	23.4	23.4	23.1	21.5	20.8	21.8	24.0	24.1	24.0	21.7	22.3	22.0
		81	40	23.2	23.2	23.0	20.9	20.9	21.1	23.9	24.2	24.2	21.3	21.8	21.5
		162	0	23.4	23.4	23.1	20.9	20.9	21.2	23.8	24.1	24.1	21.4	21.8	21.4
	256QAM	1	0	20.8	21.3	21.2	18.3	18.6	18.8	21.6	22.2	21.7	19.3	20.1	19.4
		1	1	20.7	21.0	20.7	18.8	18.6	19.3	22.2	21.8	21.9	19.7	20.1	19.6
		81	40	21.1	21.3	21.0	19.0	19.1	19.1	21.8	22.2	22.2	19.4	19.9	19.4
		162	0	21.5	21.4	21.1	19.0	18.9	19.2	21.9	22.1	22.1	19.4	19.9	19.4

OUTPUT POWER FOR 5G NR Band n77 (80.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				649333 3740.0	656000 3840.0	662666 3940.0	649333 3740.0	656000 3840.0	662666 3940.0	649333 3740.0	656000 3840.0	662666 3940.0	649333 3740.0	656000 3840.0	662666 3940.0
80.0	BPSK	1	0	23.4	23.4	23.4	19.4	19.4	20.3	22.7	22.5	22.7	20.1	20.4	20.4
		1	1	26.0	26.2	25.4	22.0	22.1	21.5	25.5	25.5	25.8	23.6	23.8	23.7
		108	54	26.3	26.1	26.4	20.9	22.3	21.5	25.2	25.3	25.5	23.7	23.7	23.7
		216	0	25.4	25.2	25.2	20.4	21.3	21.3	25.4	25.3	25.6	23.1	23.1	23.1
	QPSK	1	0	23.6	23.9	23.5	19.7	20.1	20.5	23.4	23.6	23.4	20.6	20.8	20.8
		1	1	26.3	26.7	26.2	23.3	23.7	23.7	25.9	26.5	26.5	23.9	24.5	24.3
		108	54	26.5	26.4	26.2	23.2	23.5	23.7	26.1	25.7	26.2	23.7	23.7	24.0
		216	0	25.7	25.7	25.2	21.7	22.8	22.8	25.5	25.7	25.7	22.8	23.3	23.0
	16QAM	1	0	23.2	23.7	23.6	19.9	20.1	20.5	23.6	23.7	23.7	20.2	20.5	20.2
		1	1	26.1	26.2	26.1	22.5	22.7	22.9	25.9	25.8	26.0	22.9	23.4	23.2
		108	54	26.5	26.4	26.1	22.4	22.6	22.8	25.4	24.7	25.7	22.5	23.2	23.0
		216	0	25.4	25.4	25.0	20.7	21.6	21.8	24.5	24.7	24.6	21.8	22.2	21.4
	64QAM	1	0	23.8	24.2	24.0	19.7	20.4	20.9	23.0	22.9	22.6	20.5	21.3	21.4
		1	1	24.9	25.0	24.9	21.1	20.6	21.5	23.5	24.5	23.9	21.7	22.1	21.7
		108	54	24.8	24.9	24.4	20.8	21.0	21.3	23.9	24.2	24.2	21.4	21.7	21.5
		216	0	25.0	24.8	24.4	20.7	21.1	21.3	23.9	24.2	24.2	21.4	21.8	21.5
	256QAM	1	0	22.6	22.9	22.6	18.7	18.8	19.0	22.3	22.0	22.0	19.6	19.9	19.8
		1	1	23.0	22.8	22.4	18.7	18.8	19.4	22.0	22.3	22.5	19.1	19.7	19.8
		108	54	22.9	22.8	22.5	18.5	19.0	19.3	22.0	22.2	22.1	19.3	19.8	19.3
		216	0	22.9	22.6	22.5	18.6	19.1	19.2	22.0	22.3	22.1	19.4	19.7	19.4

OUTPUT POWER FOR 5G NR Band n77 (90.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				649666 3745.0	656000 3840.0	662333 3935.0	649666 3745.0	656000 3840.0	662333 3935.0	649666 3745.0	656000 3840.0	662333 3935.0	649666 3745.0	656000 3840.0	662333 3935.0
90.0	BPSK	1	0	23.3	23.7	23.2	21.0	21.6	20.5	22.9	22.5	23.0	20.7	21.0	20.9
		1	1	25.7	26.1	25.0	23.0	22.5	23.1	25.8	25.3	25.6	24.1	24.2	24.2
		120	60	25.6	25.8	25.6	22.3	22.4	22.8	25.5	25.2	25.6	24.2	24.2	24.2
		240	0	25.6	25.2	24.5	21.9	22.1	22.4	25.5	25.4	25.6	23.6	23.6	23.6
	QPSK	1	0	23.6	23.9	23.7	20.9	21.2	21.5	23.2	23.7	23.4	21.2	21.1	21.0
		1	1	26.2	26.7	26.1	24.8	24.7	24.9	26.2	26.5	26.4	24.5	24.5	24.5
		120	60	26.3	26.1	26.3	24.6	24.5	24.7	26.0	26.2	26.2	23.1	23.8	23.4
		240	0	25.9	25.5	25.1	23.5	23.5	23.7	25.5	25.8	25.8	23.1	23.8	23.4
	16QAM	1	0	23.3	23.5	23.8	21.1	21.4	21.2	23.4	23.5	23.9	20.6	21.7	21.5
		1	1	25.9	26.3	26.0	23.7	23.7	23.7	25.7	26.1	25.6	22.6	23.8	24.2
		120	60	25.9	26.0	26.0	23.6	23.5	23.6	25.5	25.7	25.7	22.0	22.8	22.5
		240	0	25.8	25.5	25.1	22.5	22.5	22.7	24.5	24.8	24.8	22.2	22.8	21.9
	64QAM	1	0	23.8	24.2	23.9	21.4	21.7	21.3	22.9	23.2	23.0	21.4	21.5	21.4
		1	1	25.1	25.4	26.0	22.5	22.2	22.7	23.9	24.7	23.8	22.1	22.8	22.1
		120	60	25.3	25.4	25.5	22.1	22.0	22.2	24.1	24.2	24.3	21.7	22.3	21.9
		240	0	25.4	25.3	25.1	22.0	22.0	22.1	24.0	24.3	24.2	21.7	22.2	22.1
	256QAM	1	0	23.2	23.4	23.2	19.8	20.0	20.2	22.1	22.4	22.7	19.8	19.9	20.0
		1	1	23.3	23.1	23.5	20.2	20.1	19.7	22.1	22.5	22.0	20.1	20.2	20.1
		120	60	23.3	23.3	23.4	20.1	20.0	20.2	22.1	22.3	22.3	19.7	20.2	19.9
		240	0	23.4	23.3	22.8	19.9	20.0	20.1	22.0	22.3	22.2	19.9	20.3	19.8

OUTPUT POWER FOR 5G NR Band n77 (100.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				650000 3750.0	656000 3840.0	662000 3930.0	650000 3750.0	656000 3840.0	662000 3930.0	650000 3750.0	656000 3840.0	662000 3930.0	650000 3750.0	656000 3840.0	662000 3930.0
100.0	BPSK	1	0	23.7	23.1	22.2	20.1	19.8	20.2	23.2	22.5	23.1	20.5	20.7	20.7
		1	1	25.5	25.8	25.0	21.2	21.4	21.5	25.5	25.4	25.9	23.9	24.2	24.1
		135	67	26.0	25.7	25.4	21.2	21.9	21.1	25.6	25.5	25.8	24.0	24.0	24.0
		270	0	25.4	24.5	25.4	21.1	20.9	21.0	25.7	25.6	25.8	23.4	23.6	23.6
	QPSK	1	0	23.8	23.8	23.4	20.0	20.2	20.2	23.4	23.6	23.7	20.6	20.9	21.2
		1	1	26.4	26.5	26.2	23.6	23.4	23.7	26.3	26.4	26.5	24.2	24.4	24.5
		135	67	26.7	26.3	26.0	23.4	23.3	23.6	26.1	26.4	26.4	24.3	24.3	24.4
		270	0	25.6	25.3	26.0	22.4	22.4	22.5	25.5	26.1	25.8	23.2	23.3	23.4
	16QAM	1	0	24.2	24.0	23.6	20.2	20.3	20.3	23.2	23.8	23.7	20.3	20.5	20.9
		1	1	26.1	26.3	26.2	22.5	22.3	22.5	26.0	26.3	26.5	23.0	23.2	23.2
		135	67	26.5	26.3	26.0	22.4	22.2	22.5	25.7	25.8	25.9	23.3	23.3	23.5
		270	0	25.7	25.3	25.7	21.4	21.3	21.5	24.6	25.0	24.9	22.3	22.3	22.4
	64QAM	1	0	24.2	24.4	23.5	19.9	20.0	20.3	22.4	23.2	22.8	20.9	20.9	21.4
		1	1	26.3	25.9	25.6	21.0	21.3	21.4	24.1	24.5	24.6	22.1	21.9	22.3
		135	67	25.8	25.6	25.4	20.9	20.7	21.0	24.0	24.4	24.4	21.8	21.8	21.9
		270	0	25.6	25.3	25.1	20.9	20.8	21.0	24.1	24.5	24.4	21.7	21.8	21.9
	256QAM	1	0	23.6	23.3	22.6	18.7	18.6	18.6	22.0	22.3	21.9	19.7	19.8	20.0
		1	1	23.8	23.8	23.0	19.0	18.7	18.9	22.3	22.2	22.4	19.8	19.8	19.9
		135	67	23.8	23.5	23.5	18.8	18.8	19.0	22.2	22.4	22.4	19.8	19.8	19.9
		270	0	23.8	23.5	23.1	18.8	18.8	19.1	22.1	22.5	22.4	19.7	19.8	19.9

8. CONDUCTED TEST RESULTS

8.1. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

LIMITS

For reporting purposes only.

TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the middle channel in each band. The 99% and -26dB bandwidths was also measured and recorded.

RESULTS

There is no limit required and power is the same for low, middle and high channel; therefore, only middle channel was tested. Only QPSK plots are reported to show setting parameter complies with testing method/procedure.

LTE BAND 2

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 2	1.4MHz, QPSK	6/0	1880.0	1.080	1.223
	1.4MHz,16QAM			1.082	1.226
	3MHz, QPSK	15/0		2.687	2.975
	3MHz, 16QAM			2.685	2.993
	5MHz, QPSK	25/0		4.504	4.901
	5MHz, 16QAM			4.487	4.931
	10MHz, QPSK	50/0		8.963	9.602
	10MHz, 16QAM			8.932	9.583
	15MHz, QPSK	75/0		13.381	14.493
	15MHz, 16QAM			13.392	14.378
	20MHz, QPSK	100/0		17.834	19.268
	20MHz, 16QAM			17.823	19.126
	20MHz, QPSK	1/0		0.31782	0.488

LTE BAND 5

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 5	1.4MHz, QPSK	6/0	836.5	1.082	1.226
	1.4MHz, 16QAM			1.084	1.230
	3MHz, QPSK	15/0		2.693	2.980
	3MHz, 16QAM			2.692	3.002
	5MHz, QPSK	25/0		4.493	4.914
	5MHz, 16QAM			4.479	4.916
	10MHz, QPSK	50/0		8.970	9.692
	10MHz, 16QAM			8.974	9.749

5G NR Band n5

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
5G NR Band n5	15MHz, BPSK	75/0	836.5	13.388	14.065
	15MHz, QPSK			13.440	14.51
	15MHz, 16QAM			13.436	14.47
	20MHz, BPSK	100/0		17.834	18.60
	20MHz, QPSK			17.851	19.00
	20MHz, 16QAM			17.821	18.81

LTE BAND 7

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 7	5MHz, QPSK	25/0	2535.0	4.499	4.924
	5MHz, 16QAM			4.487	4.930
	10MHz, QPSK	50/0		8.942	9.639
	10MHz, 16QAM			8.937	9.615
	15MHz, QPSK	75/0		13.401	14.342
	15MHz, 16QAM			13.415	14.427
	20MHz, QPSK	100/0		17.821	19.177
	20MHz, 16QAM			17.869	19.113
	20MHz, QPSK	1/0		0.3011	0.5183

LTE BAND 12

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 12	1.4MHz, QPSK	6/0	707.5	1.079	1.208
	1.4MHz,16QAM			1.085	1.227
	3MHz, QPSK	15/0		2.686	2.964
	3MHz, 16QAM			2.681	2.932
	5MHz, QPSK	25/0		4.491	4.937
	5MHz, 16QAM			4.482	4.910
	10MHz, QPSK	50/0		8.949	9.680
	10MHz, 16QAM			8.923	9.618

5G NR Band n12

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
5G NR Band n12	15MHz, BPSK	75/0	707.5	13.352	13.927
	15MHz, QPSK			13.420	14.15
	15MHz, 16QAM			13.342	13.89
	15MHz, QPSK	1/0		0.3216	0.6637

LTE BAND 13

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 13	5MHz, QPSK	25/0	782.0	4.510	4.973
	5MHz, 16QAM			4.497	4.975
	10MHz, QPSK	50/0		8.973	9.661
	10MHz, 16QAM			8.971	9.719

LTE BAND 14

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 14	5MHz, QPSK	25/0	793.0	4.487	4.936
	5MHz, 16QAM			4.483	4.918
	10MHz, QPSK	50/0		8.985	9.740
	10MHz, 16QAM			8.977	9.747

LTE BAND 17

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 17	5MHz, QPSK	25/0	710.0	4.495	4.918
	5MHz, 16QAM			4.476	4.882
	10MHz, QPSK	50/0		8.958	9.793
	10MHz, 16QAM			8.973	9.768

LTE BAND 25

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 25	1.4MHz, QPSK	6/0	1882.5	1.077	1.216
	1.4MHz, 16QAM			1.085	1.232
	3MHz, QPSK	15/0		2.683	2.959
	3MHz, 16QAM			2.688	2.939
	5MHz, QPSK	25/0		4.492	4.933
	5MHz, 16QAM			4.489	4.900
	10MHz, QPSK	50/0		8.908	9.695
	10MHz, 16QAM			8.924	9.751
	15MHz, QPSK	75/0		13.427	14.481
	15MHz, 16QAM			13.386	14.506
	20MHz, QPSK	100/0		17.836	19.249
	20MHz, 16QAM			17.826	19.213
	20MHz, QPSK	1/0		0.3173	0.5205

LTE BAND 26 (PART 90S)

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 26	1.4MHz, QPSK	6/0	819.0	1.078	1.219
	1.4MHz, 16QAM			1.083	1.224
	3MHz, QPSK	15/0		2.692	2.955
	3MHz, 16QAM			2.677	2.985
	5MHz, QPSK	25/0		4.493	4.935
	5MHz, 16QAM			4.492	4.922
	10MHz, QPSK	50/0		8.962	9.745
	10MHz, 16QAM			8.982	9.777

LTE BAND 30

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 30	5MHz, QPSK	25/0	2310.0	4.4918	4.922
	5MHz, 16QAM			4.4925	4.904
	10MHz, QPSK	50/0		8.9625	9.649
	10MHz, 16QAM			8.9388	9.695

LTE BAND 41

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 41	5MHz, QPSK	25/0	2593.0	4.5011	4.835
	5MHz, 16QAM			4.4956	4.851
	10MHz, QPSK	50/0		8.9305	9.561
	10MHz, 16QAM			8.9631	9.461
	15MHz, QPSK	75/0		13.4208	14.202
	15MHz, 16QAM			13.4337	14.394
	20MHz, QPSK	100/0		17.7804	19.275
	20MHz, 16QAM			17.8440	18.844
	20MHz, QPSK	1/0		0.3122	0.4518

5G NR Band n41

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
5G NR Band n41	20MHz, BPSK	50/0	2593.0	17.884	19.33
	20MHz, QPSK			17.876	19.27
	20MHz, 16QAM			17.890	19.483
	40MHz, BPSK	100/0		35.472	37.12
	40MHz, QPSK			35.595	36.86
	40MHz, 16QAM			35.662	36.66
	50MHz, BPSK	128/0		45.578	47.33
	50MHz, QPSK			45.486	47.22
	50MHz, 16QAM			45.557	47.32
	60MHz, BPSK	162/0		57.693	59.71
	60MHz, QPSK			57.754	59.63
	60MHz, 16QAM			57.757	59.67
	80MHz, BPSK	216/0		76.856	79.59
	80MHz, QPSK			76.864	79.49
	80MHz, 16QAM			76.903	76.57
	90MHz, BPSK	240/0		85.565	88.40
	90MHz, QPSK			85.516	88.33
	90MHz, 16QAM			85.428	88.28
	100MHz, BPSK	270/0		95.975	99.29
	100MHz, QPSK			96.467	99.34
	100MHz, 16QAM			95.743	99.35
	100MHz, QPSK	1/0		0.4971	0.8054

LTE BAND 48

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 48	5MHz, QPSK	25/0	3625.0	4.4694	4.705
	5MHz, 16QAM			4.4805	4.904
	10MHz, QPSK	50/0		9.0020	9.679
	10MHz, 16QAM			8.9429	9.451
	15MHz, QPSK	75/0		13.3377	14.087
	15MHz, 16QAM			13.3620	14.056
	20MHz, QPSK	100/0		17.8585	18.765
	20MHz, 16QAM			17.8931	18.994

LTE BAND 66

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 66	1.4MHz, QPSK	6/0	1745.0	1.092	1.236
	1.4MHz,16QAM			1.080	1.233
	3MHz, QPSK	15/0		2.689	2.946
	3MHz, 16QAM			2.682	2.956
	5MHz, QPSK	25/0		4.496	4.870
	5MHz, 16QAM			4.497	4.879
	10MHz, QPSK	50/0		8.966	9.619
	10MHz, 16QAM			8.942	9.577
	15MHz, QPSK	75/0		13.416	14.513
	15MHz, 16QAM			13.403	14.414
	20MHz, QPSK	100/0		17.832	19.158
	20MHz, 16QAM			17.875	19.277
	20MHz, QPSK	1/0		0.30876	0.519

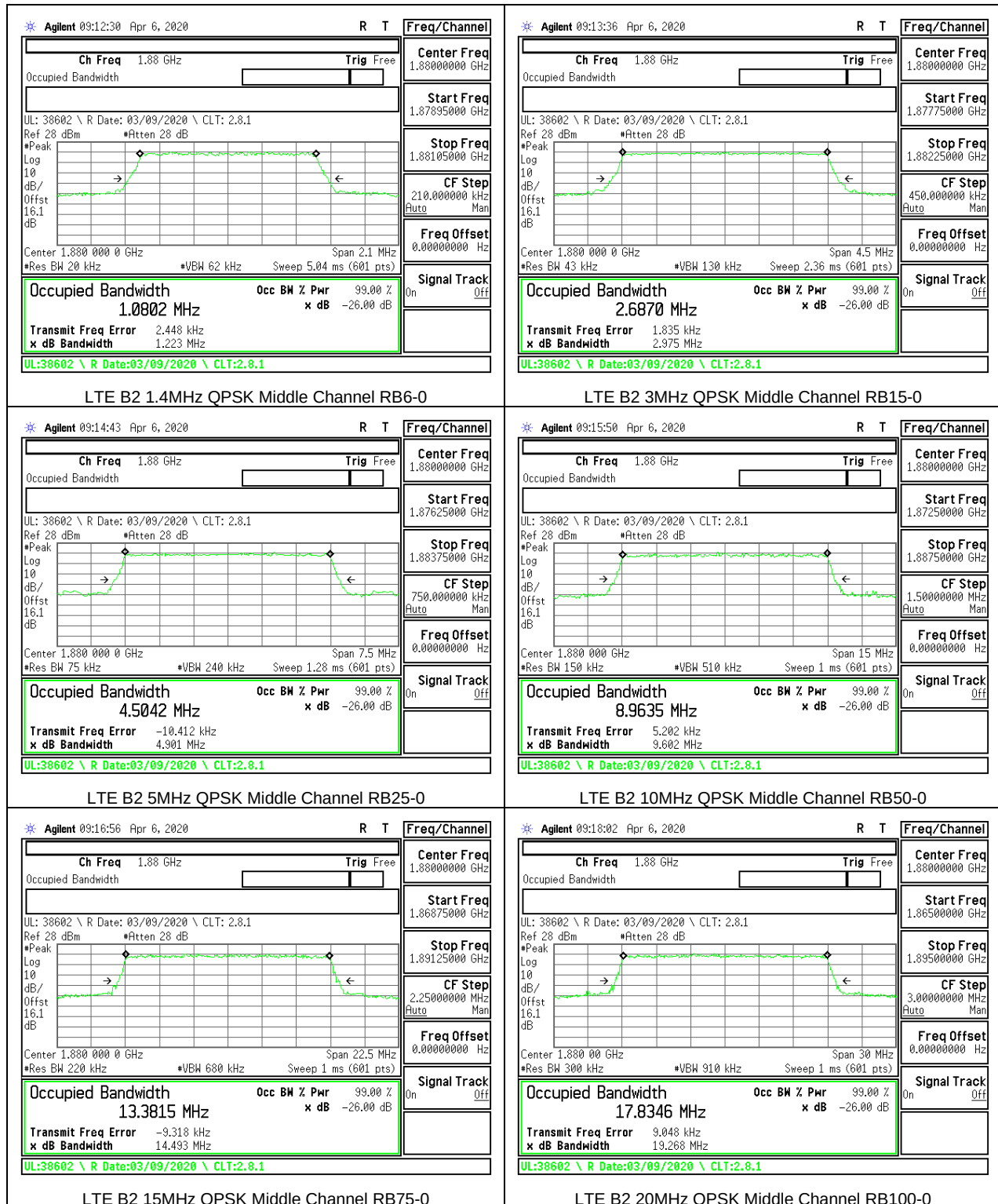
LTE BAND 71

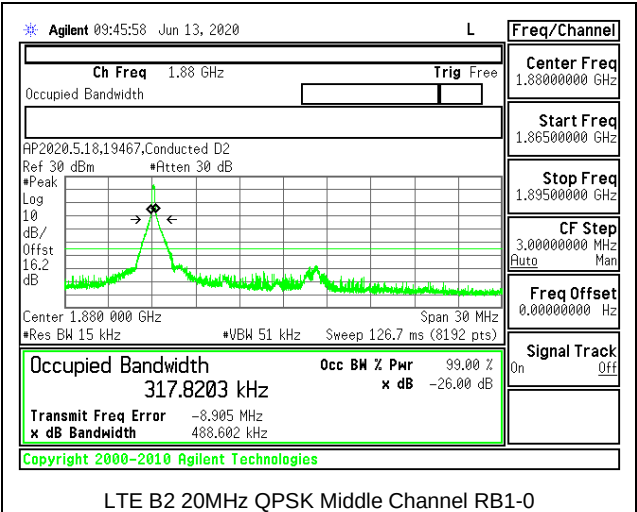
Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 71	5MHz, QPSK	25/0	680.5	4.491	4.873
	5MHz, 16QAM			4.488	4.899
	10MHz, QPSK	50/0		8.936	9.671
	10MHz, 16QAM			8.953	9.510
	15MHz, QPSK	75/0		13.395	14.335
	15MHz, 16QAM			13.398	14.391
	20MHz, QPSK	100/0		17.836	19.141
	20MHz, 16QAM			17.885	19.235

5G NR Band n77

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
5G NR Band n77	20MHz, BPSK	50/0	3840.0	17.724	18.75
	20MHz, QPSK			17.825	18.59
	20MHz, 16QAM			17.897	18.55
	40MHz, BPSK	100/0		37.894	39.17
	40MHz, QPSK			35.717	36.99
	40MHz, 16QAM			35.601	37.06
	50MHz, BPSK	128/0		45.502	47.31
	50MHz, QPSK			45.590	47.33
	50MHz, 16QAM			45.695	47.45
	60MHz, BPSK	162/0		57.679	59.95
	60MHz, QPSK			57.679	59.63
	60MHz, 16QAM			57.667	59.73
	80MHz, BPSK	216/0		76.967	79.51
	80MHz, QPSK			77.007	79.43
	80MHz, 16QAM			76.648	79.69
	90MHz, BPSK	240/0		85.396	88.36
	90MHz, QPSK			85.525	88.62
	90MHz, 16QAM			86.689	88.48
	100MHz, BPSK	270/0		95.982	99.14
	100MHz, QPSK			96.242	99.54
	100MHz, 16QAM			96.240	99.27
	100MHz, QPSK	1/0		0.4957	0.797

8.1.1. LTE BAND 2

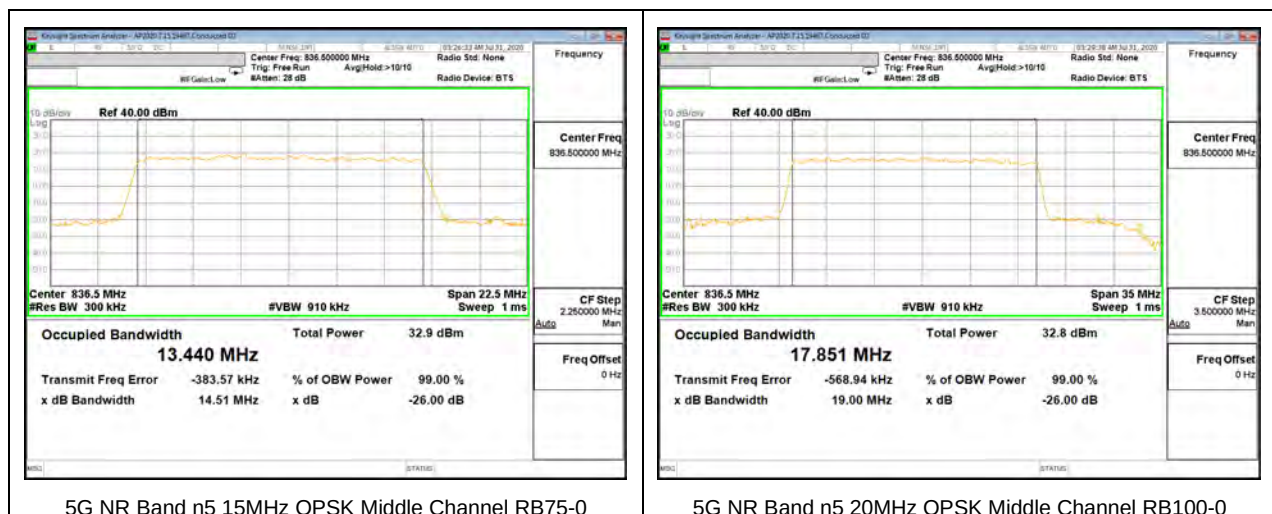




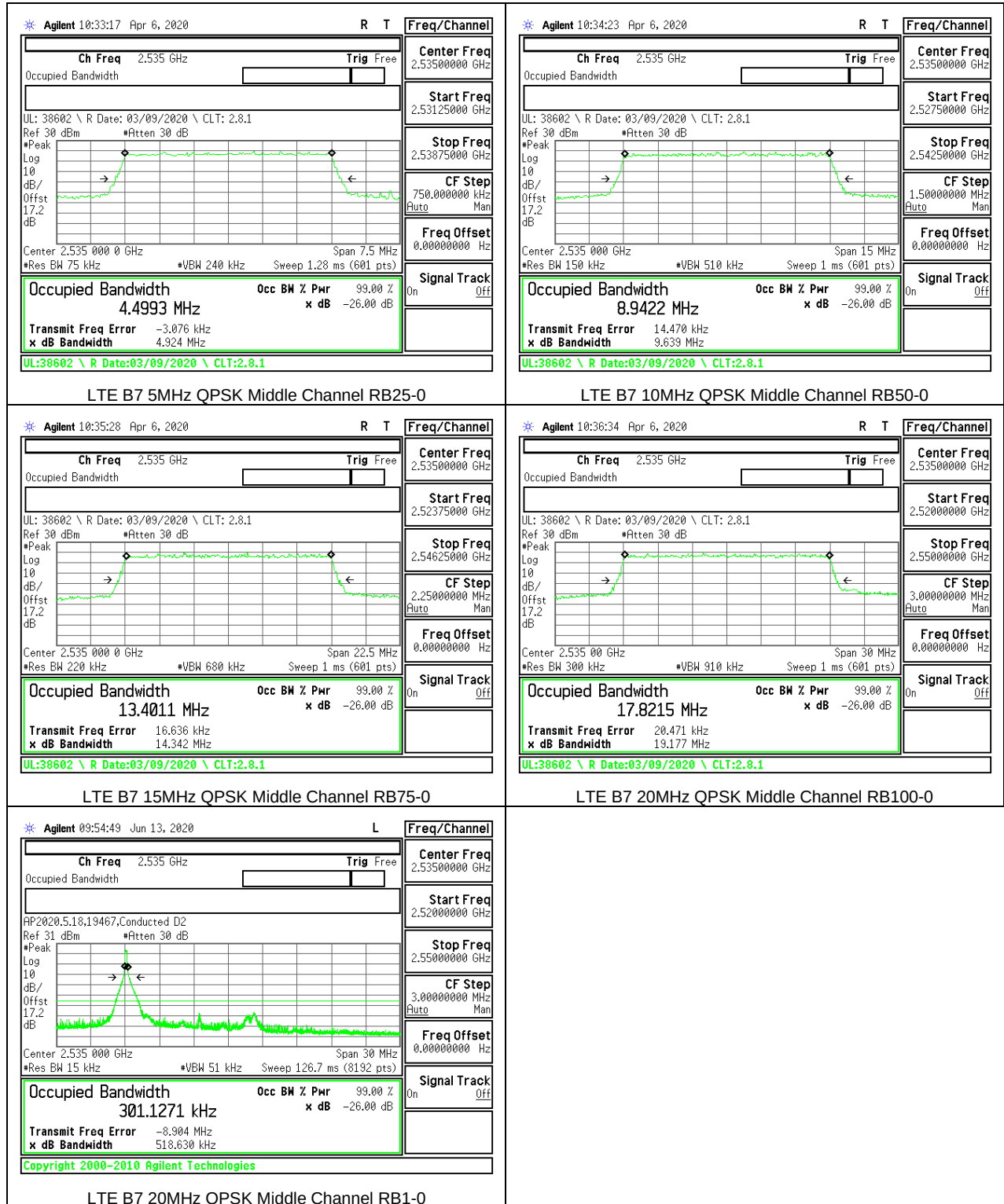
8.1.2. LTE BAND 5



8.1.3. 5G NR Band n5



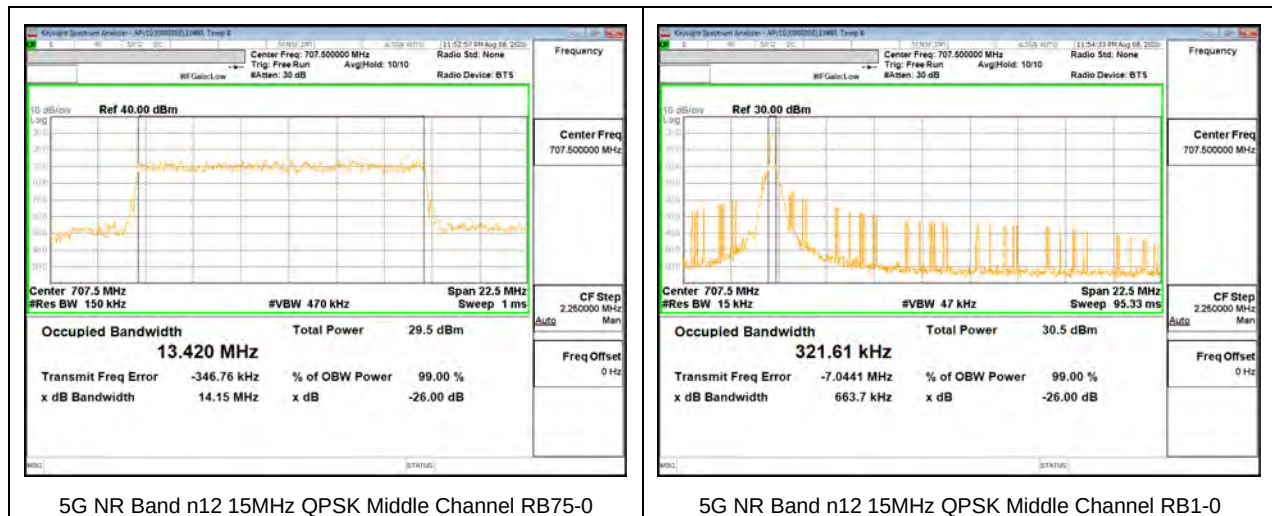
8.1.4. LTE BAND 7



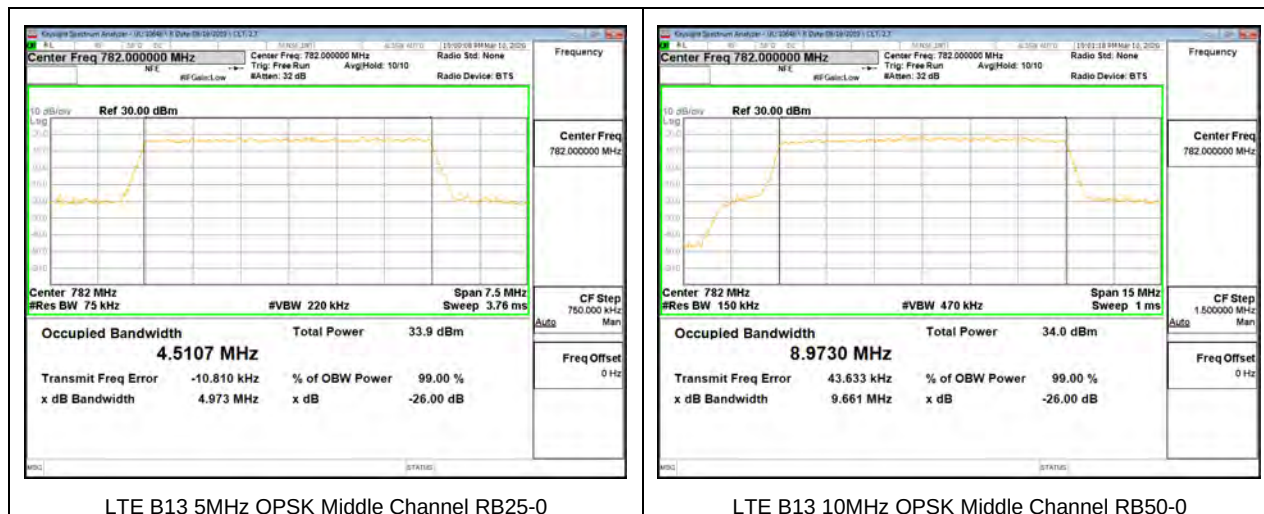
8.1.5. LTE BAND 12



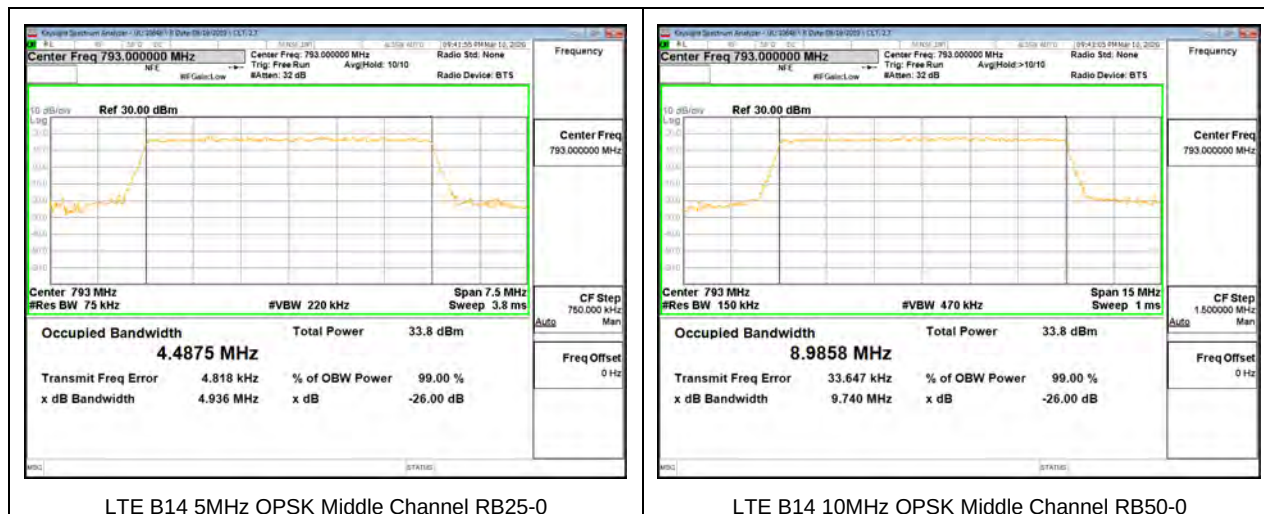
8.1.6. 5G NR Band n12



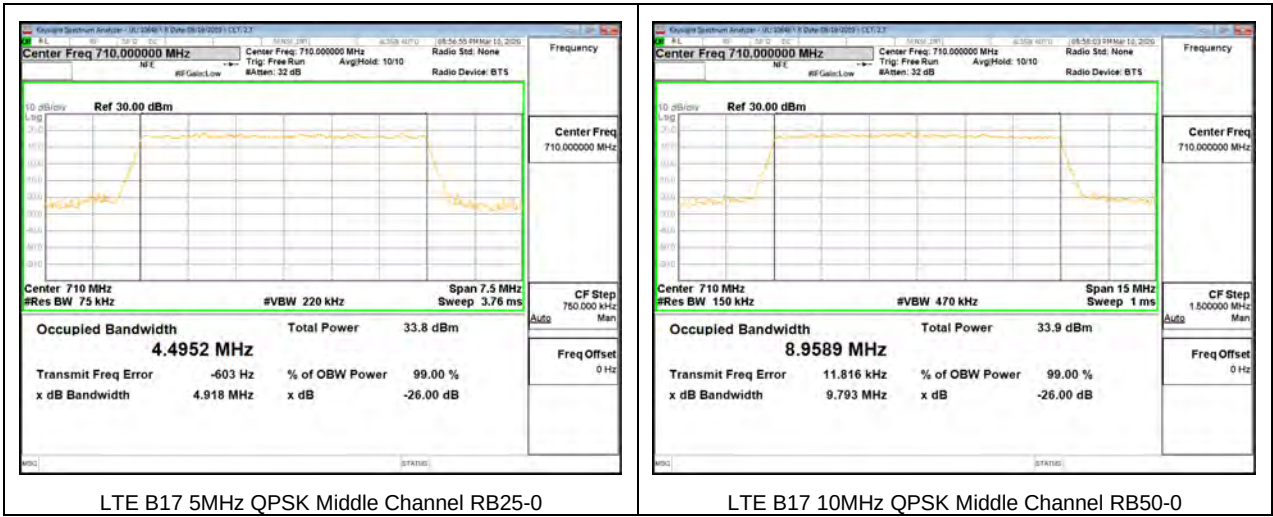
8.1.7. LTE BAND 13



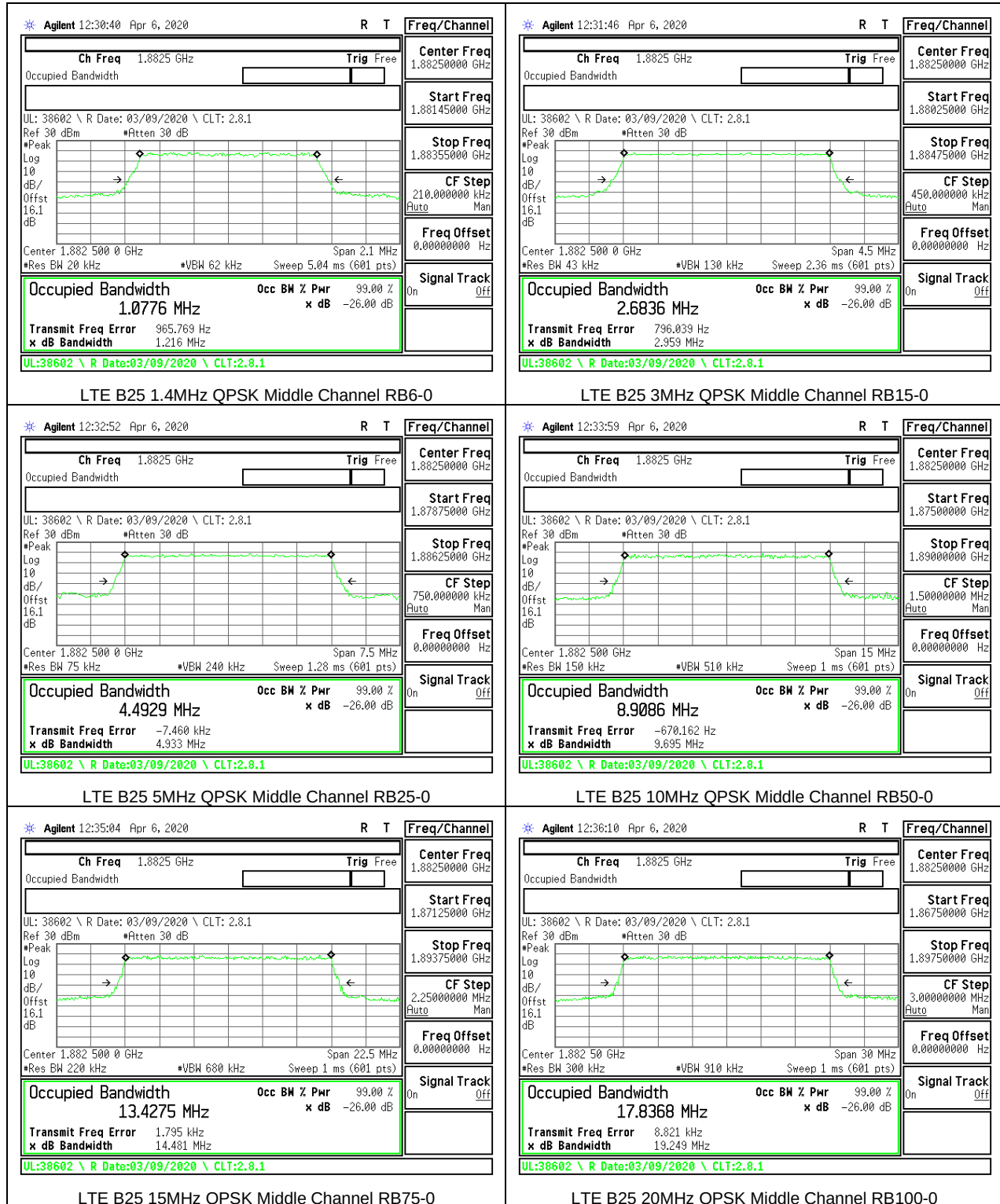
8.1.8. LTE BAND 14

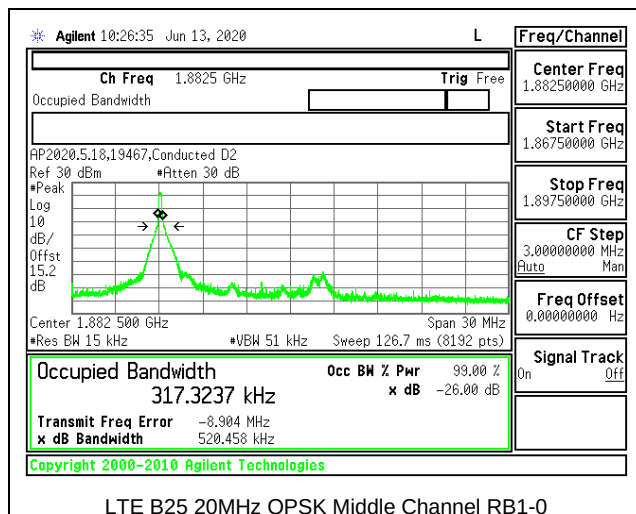


8.1.9. LTE BAND 17

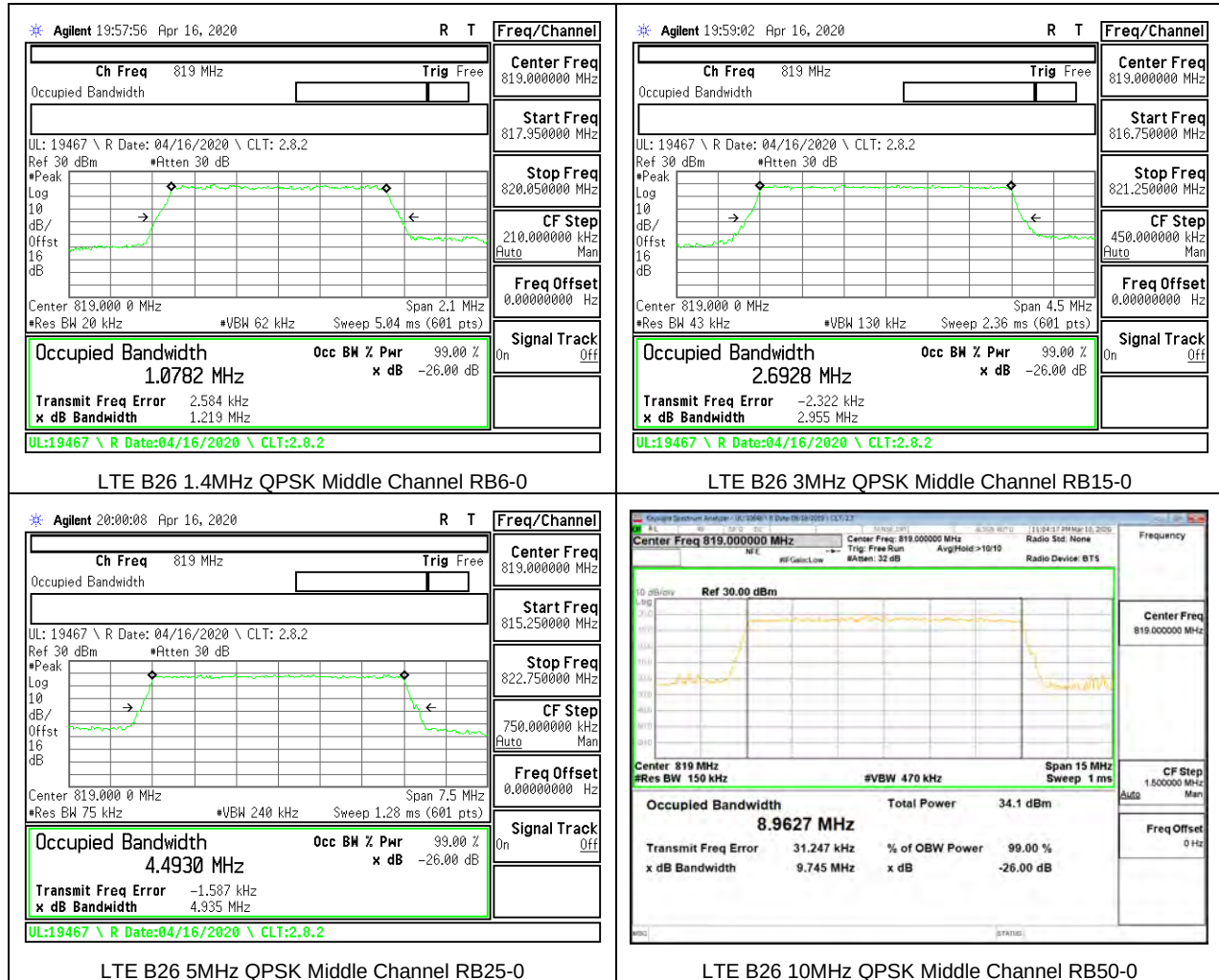


8.1.10. LTE BAND 25

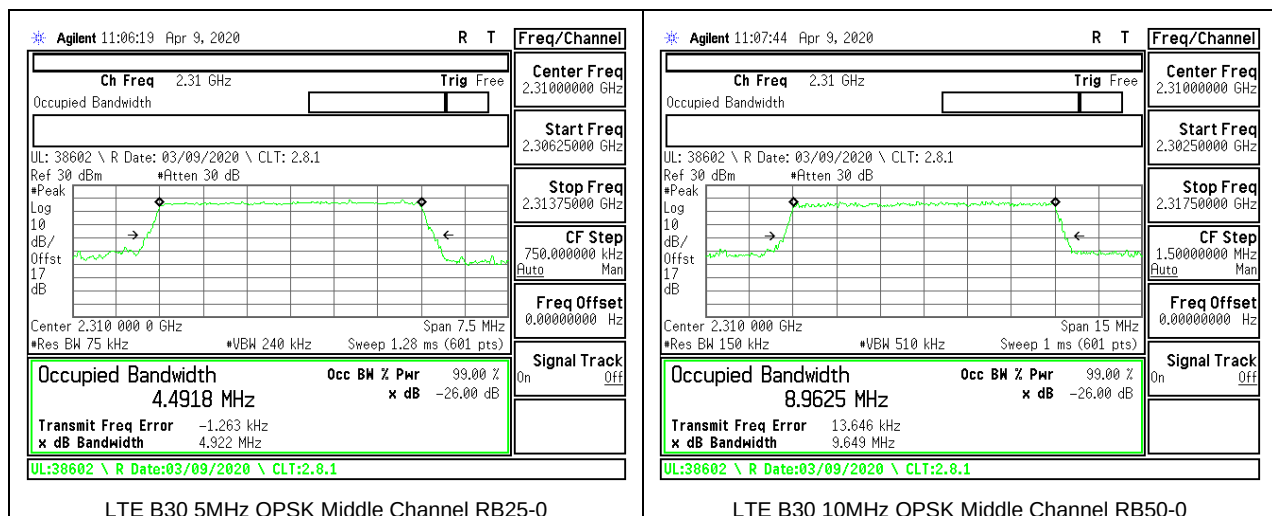




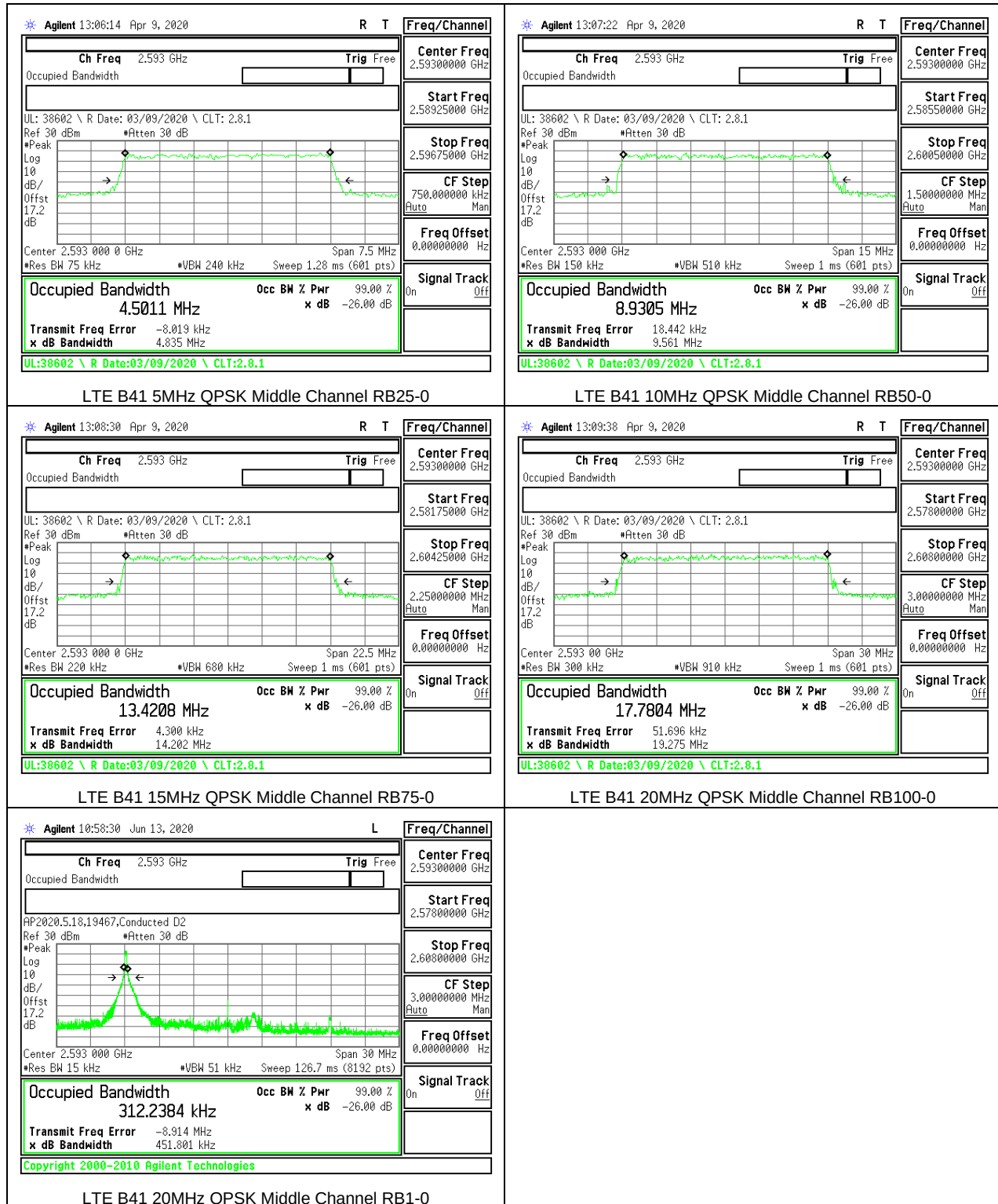
8.1.11. LTE BAND 26 (PART 90S)



8.1.12. LTE BAND 30

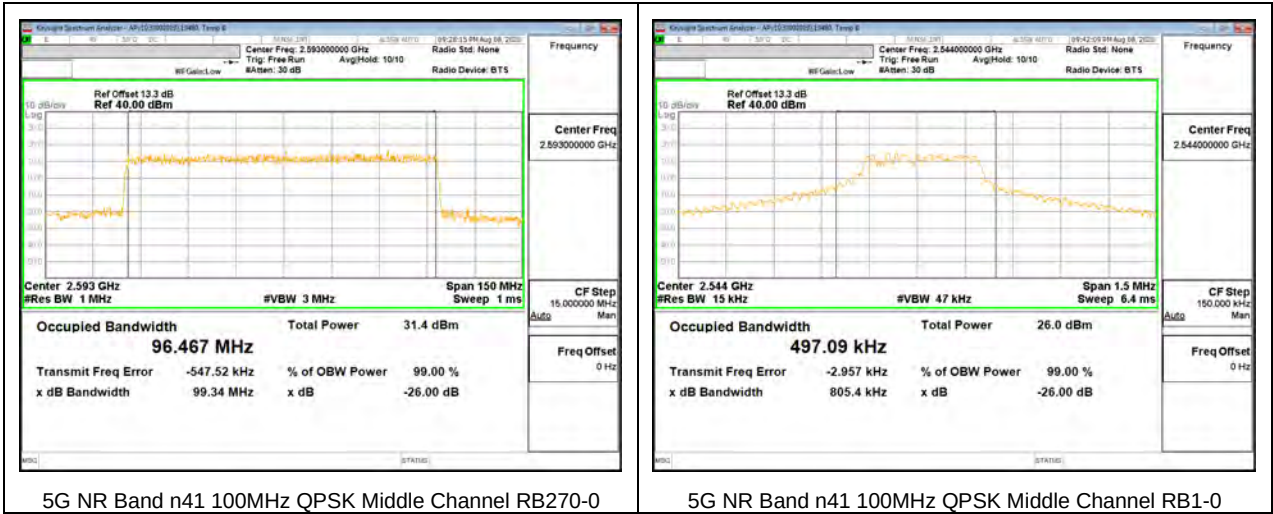


8.1.13. LTE BAND 41



8.1.14. 5G NR Band n41

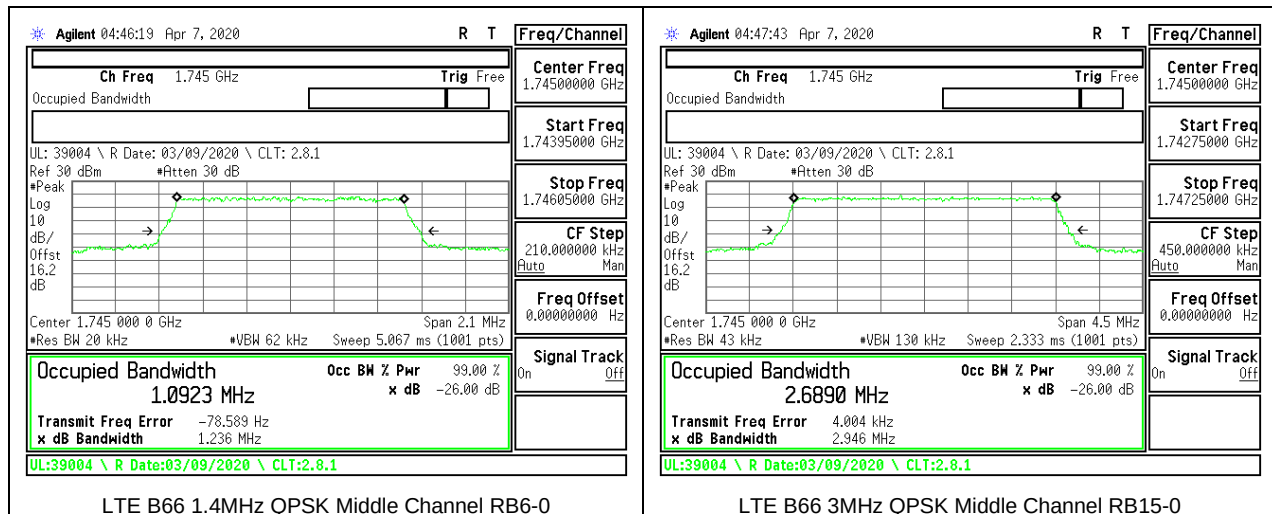


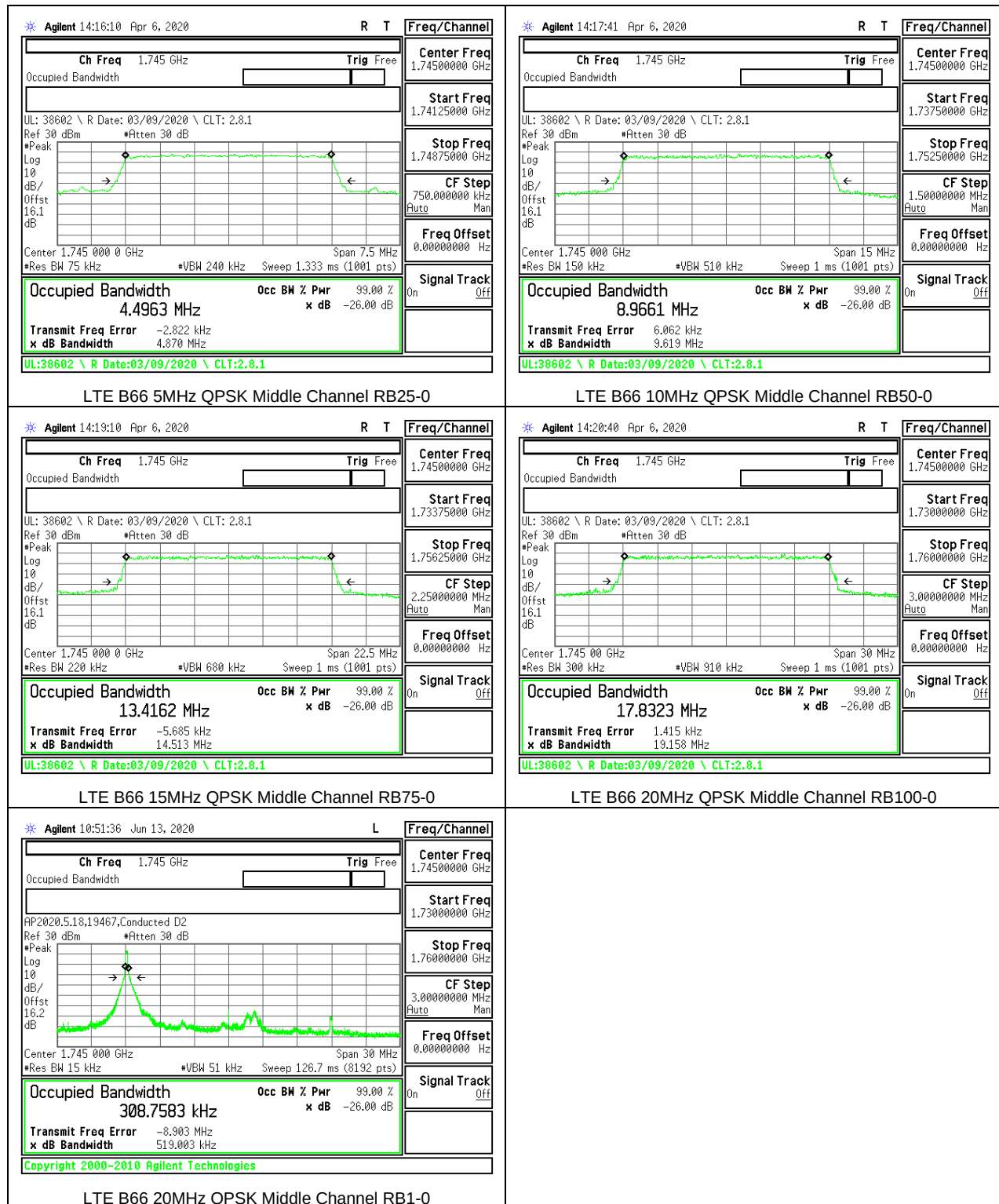


8.1.15. LTE BAND 48



8.1.16. LTE BAND 66



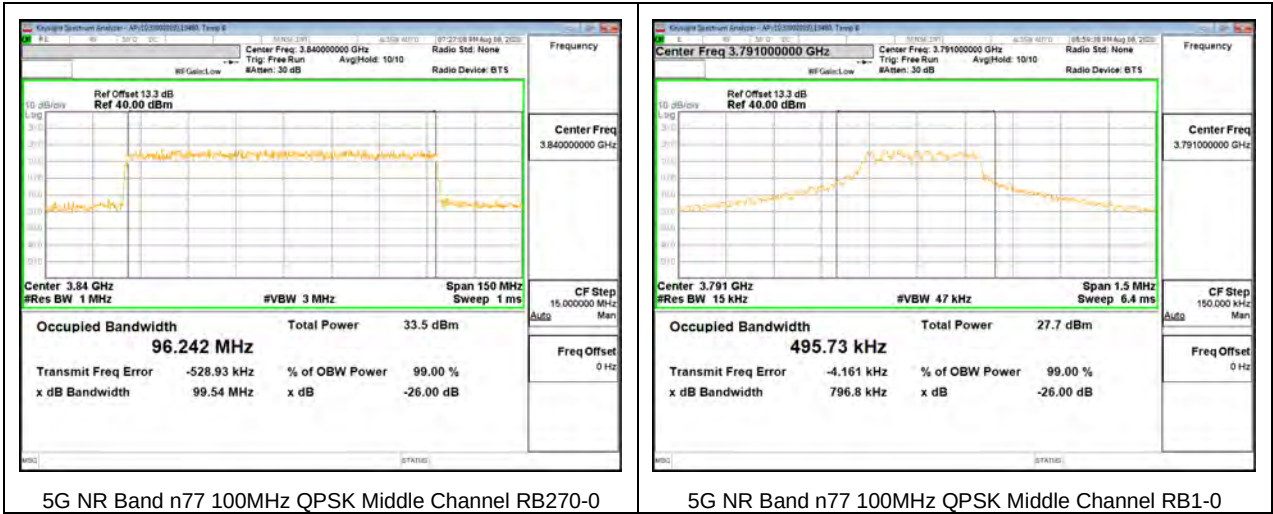


8.1.17. LTE BAND 71



8.1.18. 5G NR Band n77





8.2. BAND EDGE AND EMISSION MASK

TEST PROCEDURE

The transmitter output was connected to a CMW500Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

For each band edge measurement:

1. Set the spectrum analyzer span to include the block edge frequency.
2. Set a marker to point the corresponding band edge frequency in each test case.
3. Set display line at -13 dBm
4. Set resolution bandwidth to at least 1% of emission bandwidth.

TEST PROCEDURE (FCC LTE BAND 14)

(b)ACP measurement procedure. The following are the procedures for making the transmitter ACP measurements. For all measurements modulate the transmitter as it would be modulated in normal operating conditions. For time division multiple access (TDMA) systems, the measurements are to be made under TDMA operation only during time slots when the transmitter is active. All measurements are made at the transmitter's output port. If a transmitter has an integral antenna, a suitable power coupling device shall be used to couple the RF signal to the measurement instrument. The coupling device shall substantially maintain the proper transmitter load impedance. The ACP measurements may be made with a spectrum analyzer capable of making direct ACP measurements. "Measurement bandwidth", as used for non-swept measurements, implies an instrument that measures the power in many narrow bandwidths equal to the nominal resolution bandwidth and integrates these powers to determine the total power in the specified measurement bandwidth.

(1)Setting reference level. Set transmitter to maximum output power. Using a spectrum analyzer capable of ACP measurements, set the measurement bandwidth to the channel size. For example, for a 6.25 kHz transmitter set the measurement bandwidth to 6.25 kHz. Set the frequency offset of the measurement bandwidth to zero and adjust the center frequency of the instrument to the assigned center frequency to measure the average power level of the transmitter. Record this power level in dBm as the "reference power level."

(2)Non-swept power measurement. Using a spectrum analyzer capable of ACP measurements, set the measurement bandwidth and frequency offset from the assigned center frequency as shown in the tables in §90.543 (a) above. Any value of resolution bandwidth may be used as long as it does not exceed 2 percent of the specified measurement bandwidth. Measure the power level in dBm. These measurements should be made at maximum power. Calculate ACP by subtracting the reference power level measured in (b)(1) from the measurements made in this step. The absolute value of the calculated ACP must be greater than or equal to the absolute value of the ACP given in the table for each condition above.

(3)Swept power measurement. Set a spectrum analyzer to 30 kHz resolution bandwidth, 1 MHz video bandwidth and average, sample, or RMS detection. Set the reference level of the spectrum analyzer to the RMS value of the transmitter power. Sweep above and below the carrier frequency to the limits defined in the tables. Calculate ACP by subtracting the reference power level measured in (b)(1) from the measurements made in this step. The absolute value of the calculated ACP must be greater than or equal to the absolute value of the ACP given in the table for each condition above.

TEST PROCEDURE (FCC LTE BAND 7, 41)

(m)(6) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may

be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

TEST PROCEDURE (FCC LTE BAND 30)

(5) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the channel blocks at 2305, 2310, 2315, 2320, 2345, 2350, 2355, and 2360 MHz, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e., 1 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

TEST PROCEDURE (FCC LTE BAND 48)

(i) Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's authorized frequency channel, a resolution bandwidth of no less than one percent of the fundamental emission bandwidth may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full reference bandwidth (i.e., 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(ii) When measuring unwanted emissions to demonstrate compliance with the limits, the CBSD and End User Device nominal carrier frequency/channel shall be adjusted as close to the licensee's authorized frequency block edges, both upper and lower, as the design permits.

(iii) Compliance with emission limits shall be demonstrated using either average (RMS)-detected or peak-detected power measurement techniques.

RESULTS

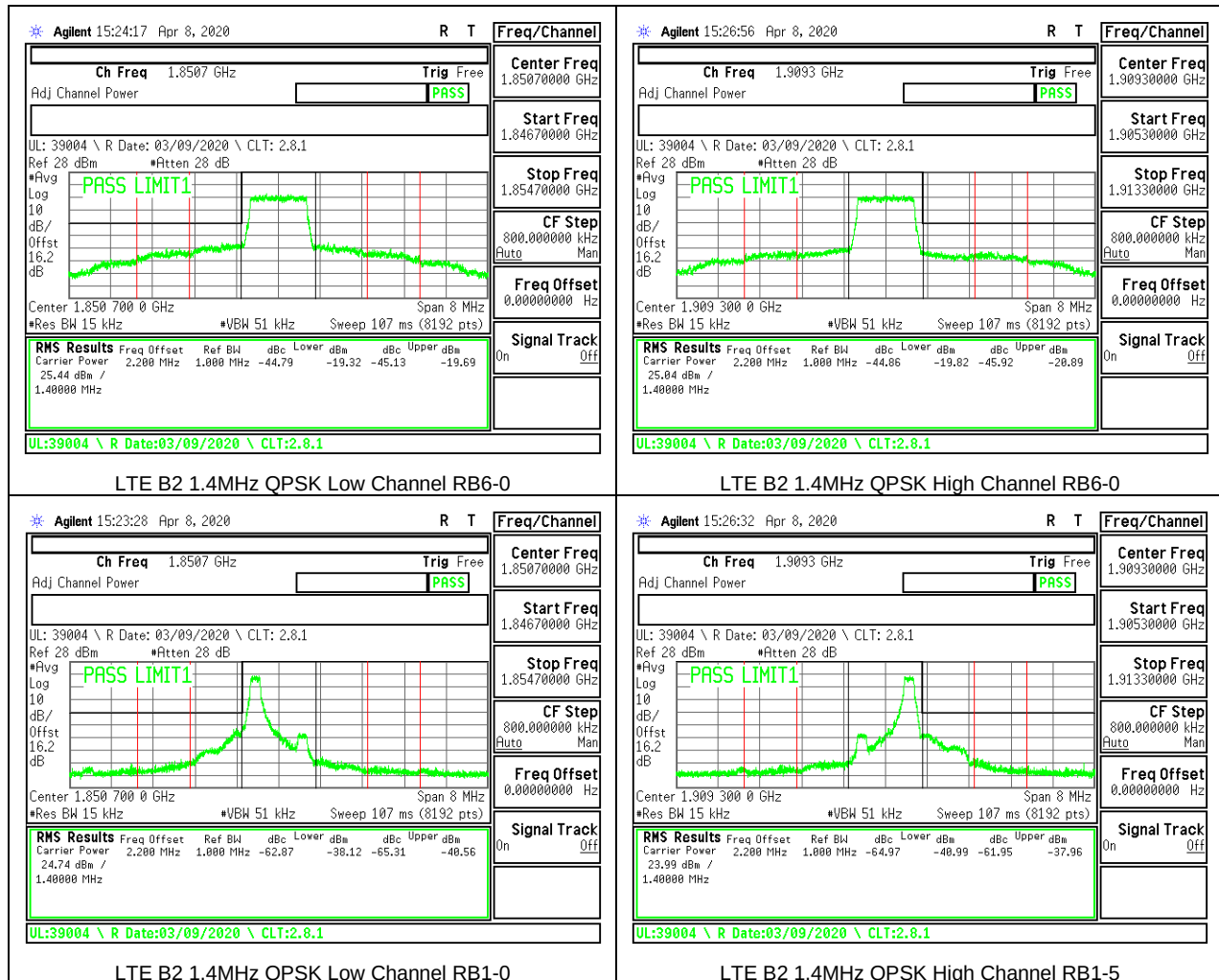
Both QPSK and 16QAM modes are tested, QPSK bandwidths results are reported as worst case

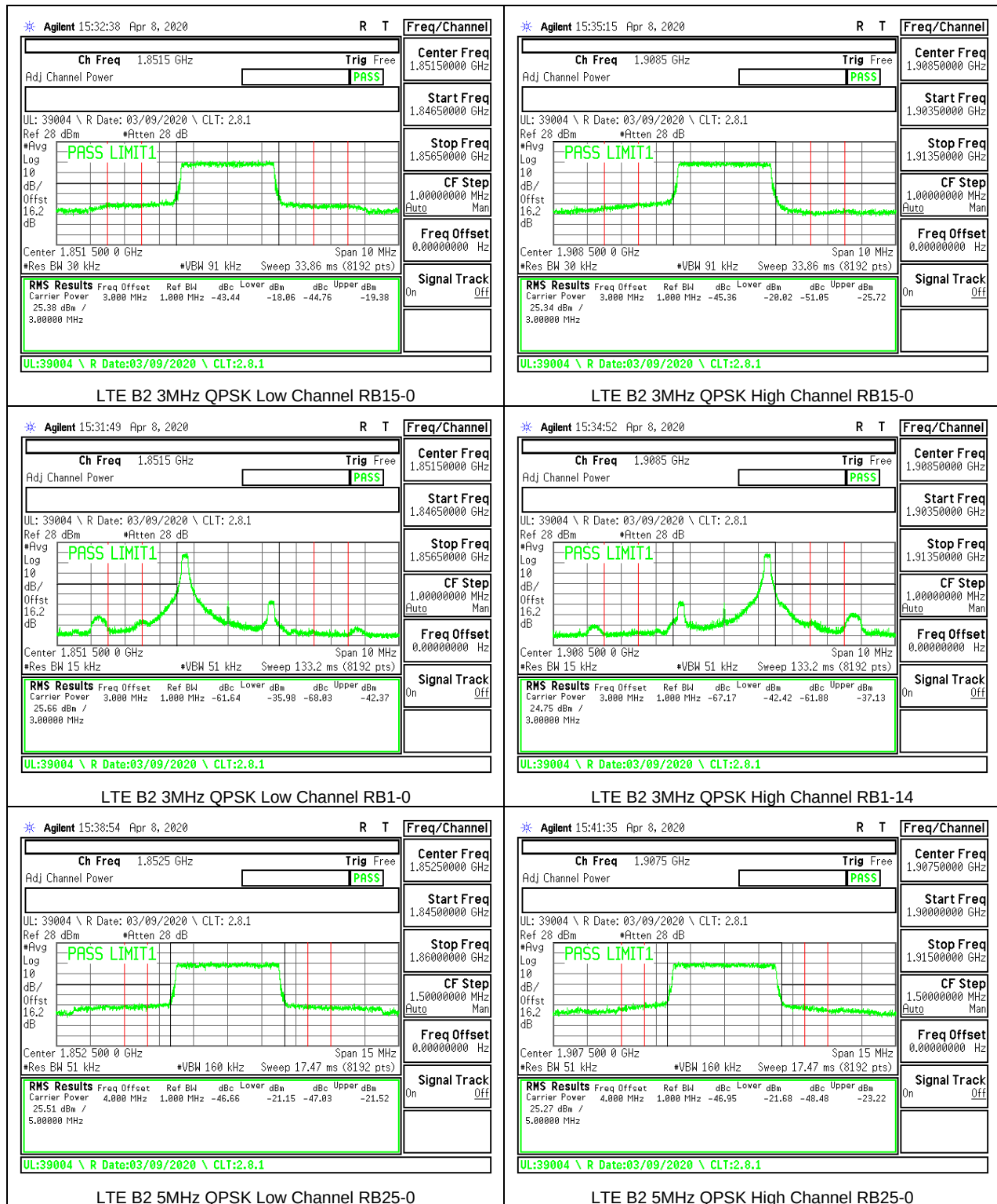
8.2.1. LTE BAND 2 BANDEDGE

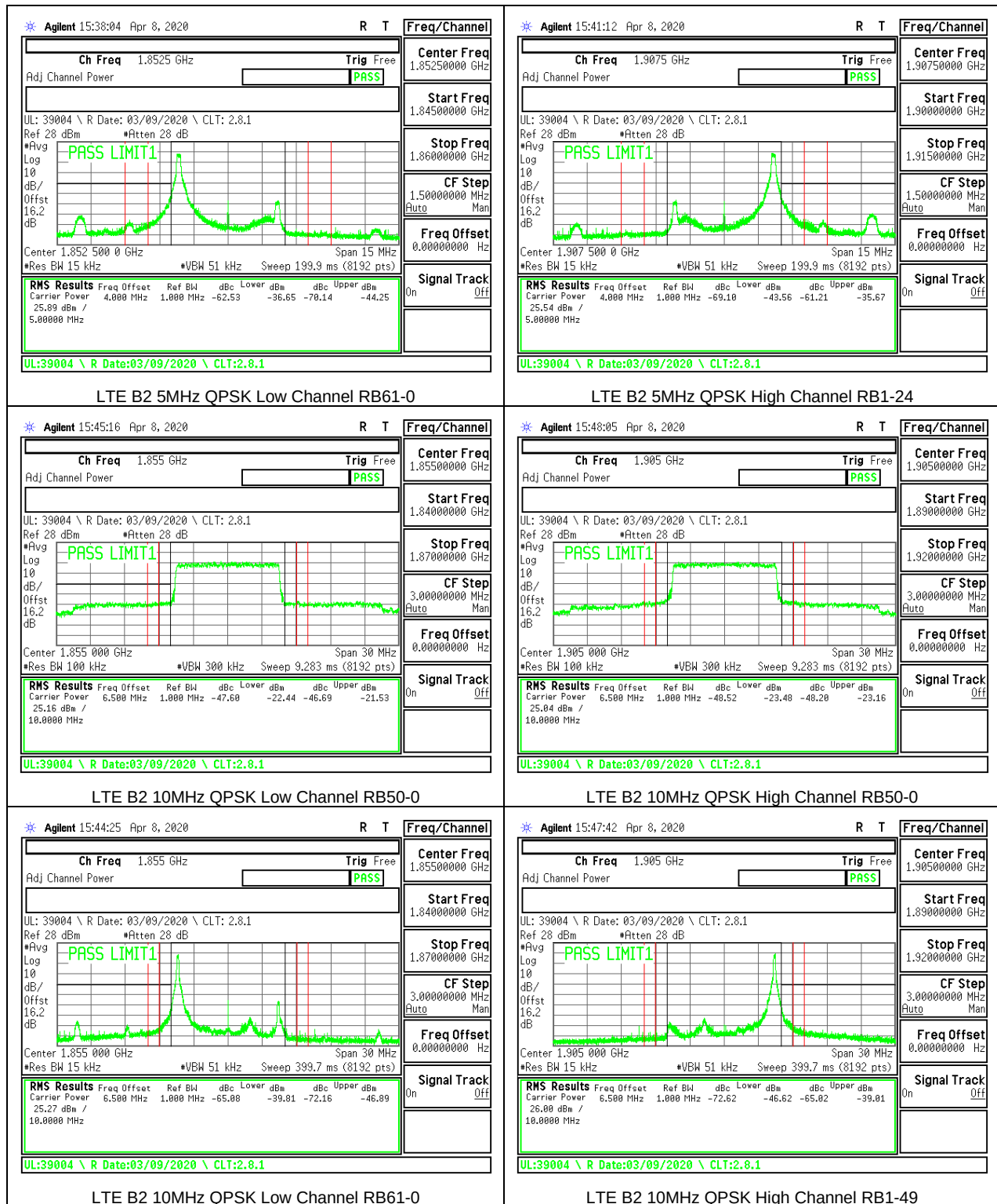
LIMITS

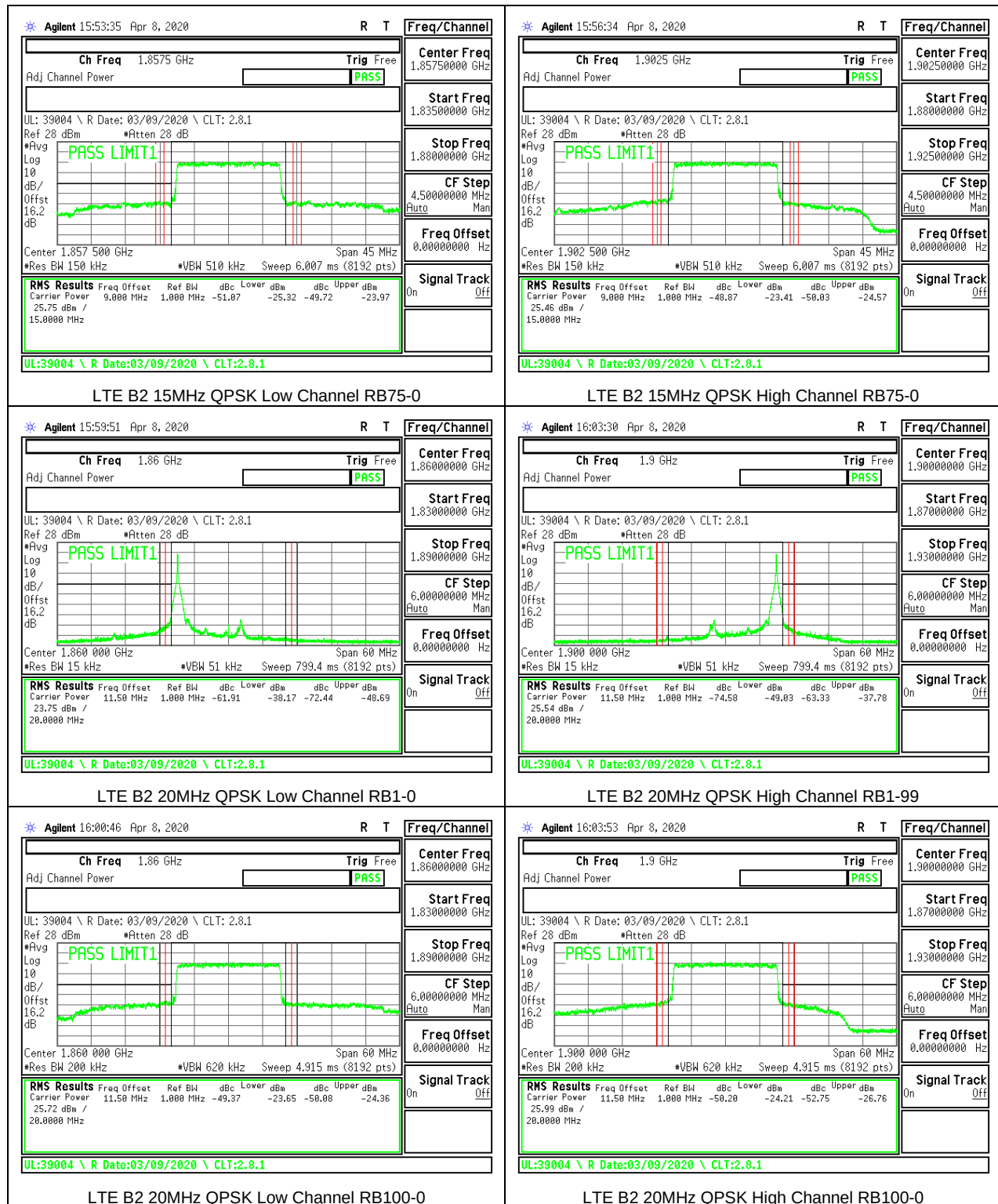
FCC: §24.238

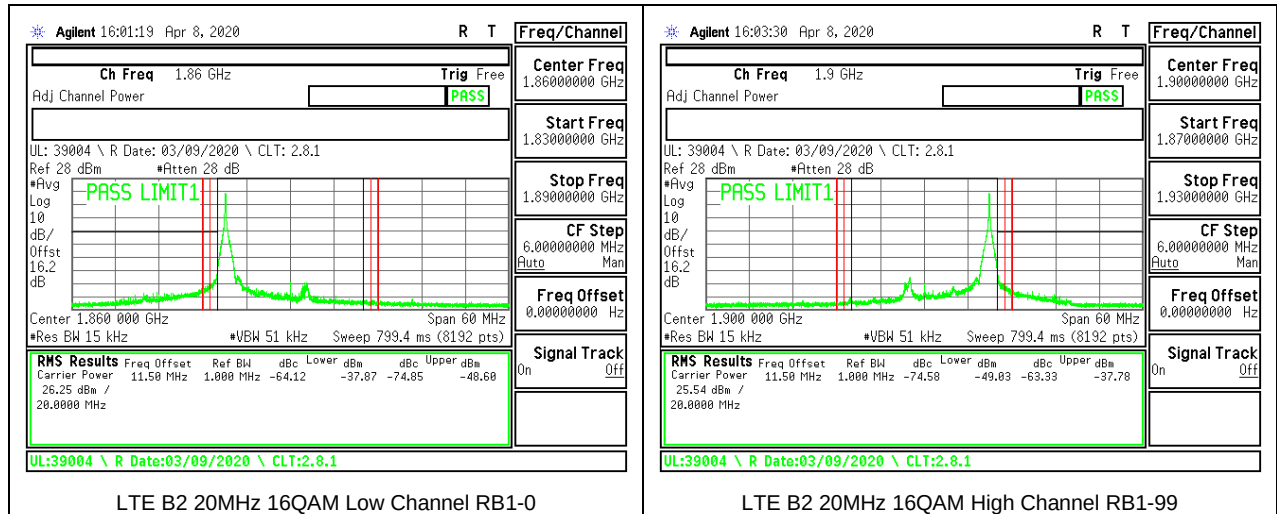
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.











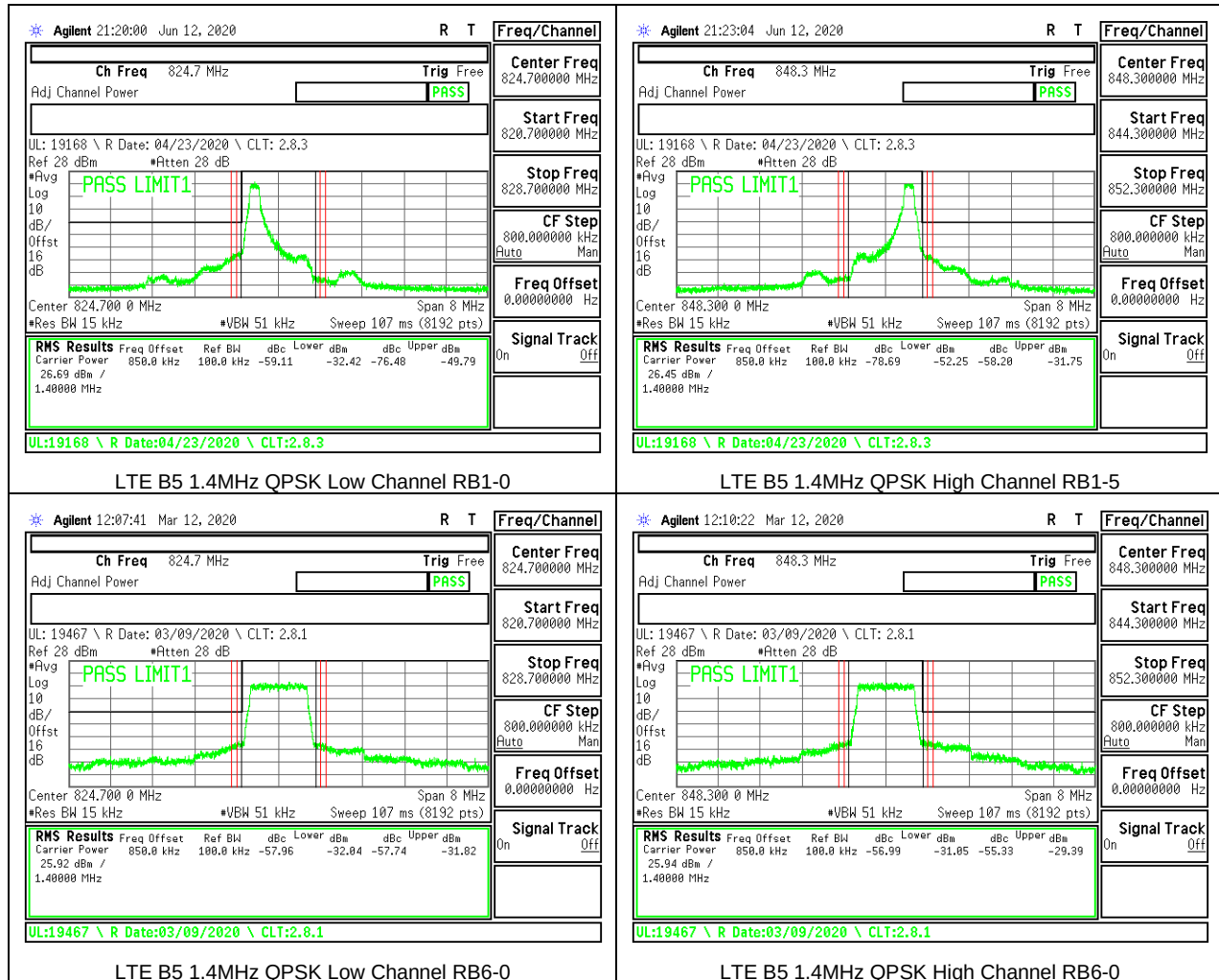
8.2.2. LTE BAND 5 AND 5G NR Band n5 BANDEDGE

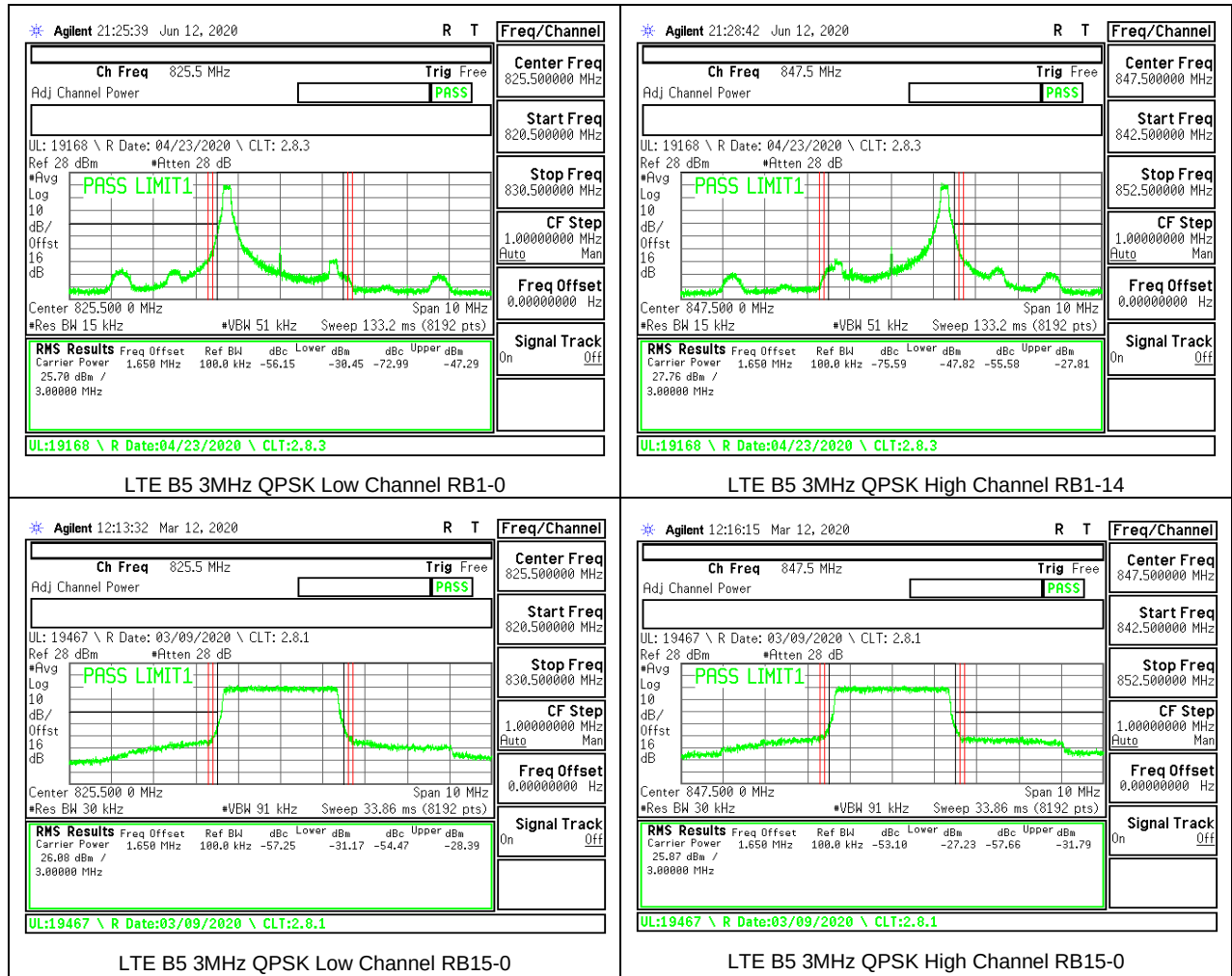
LIMITS

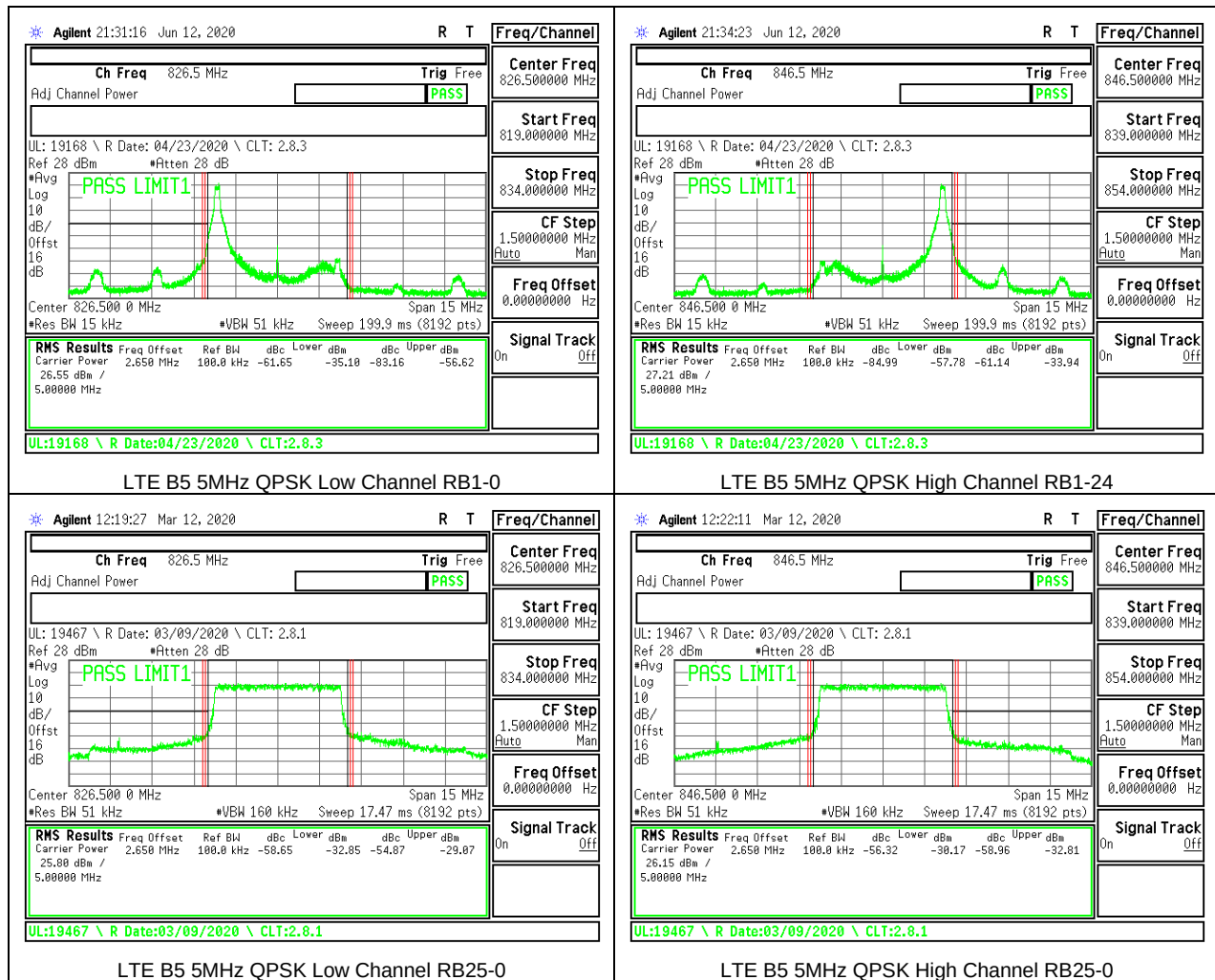
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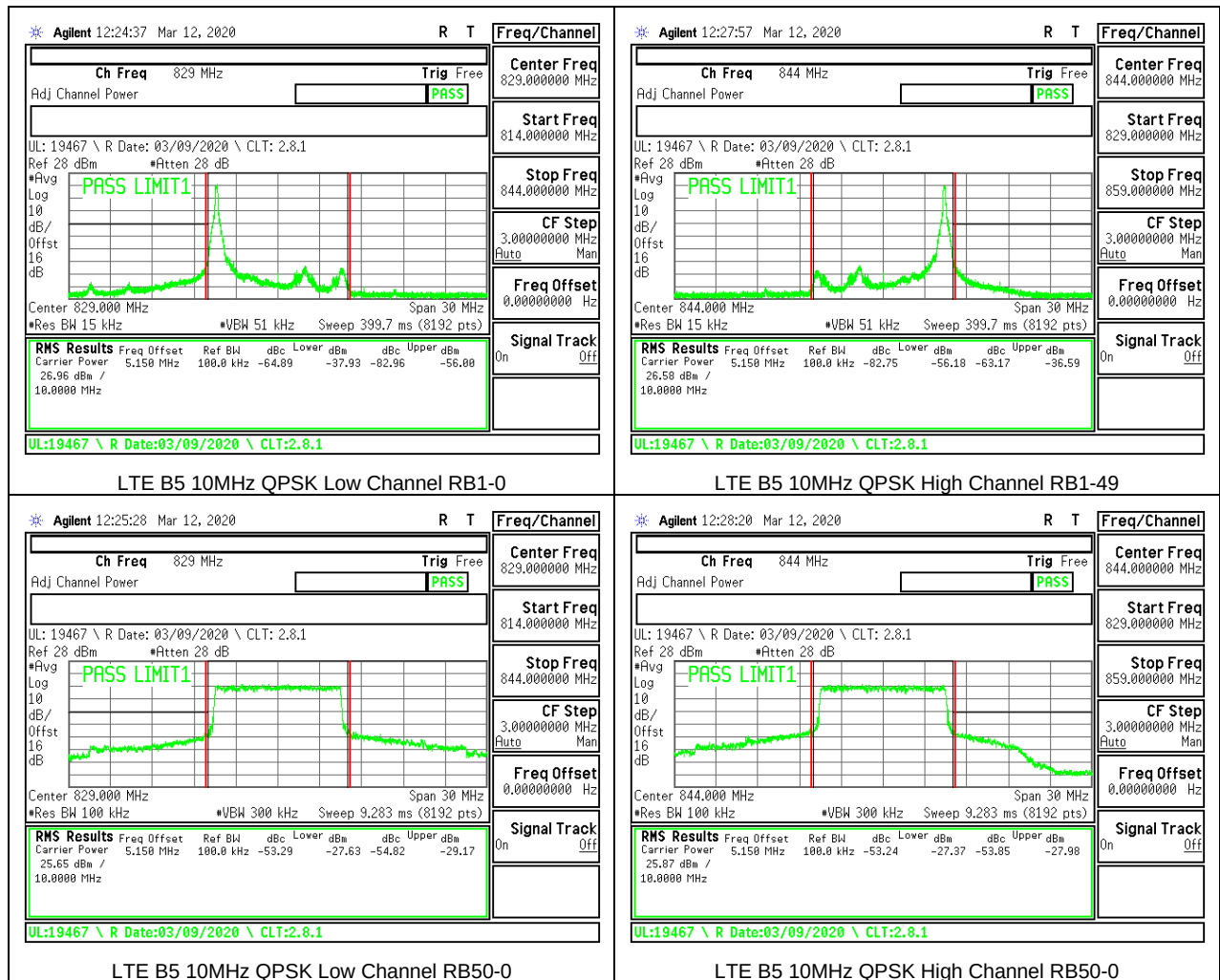
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

LTE BAND 5 BANDEGE



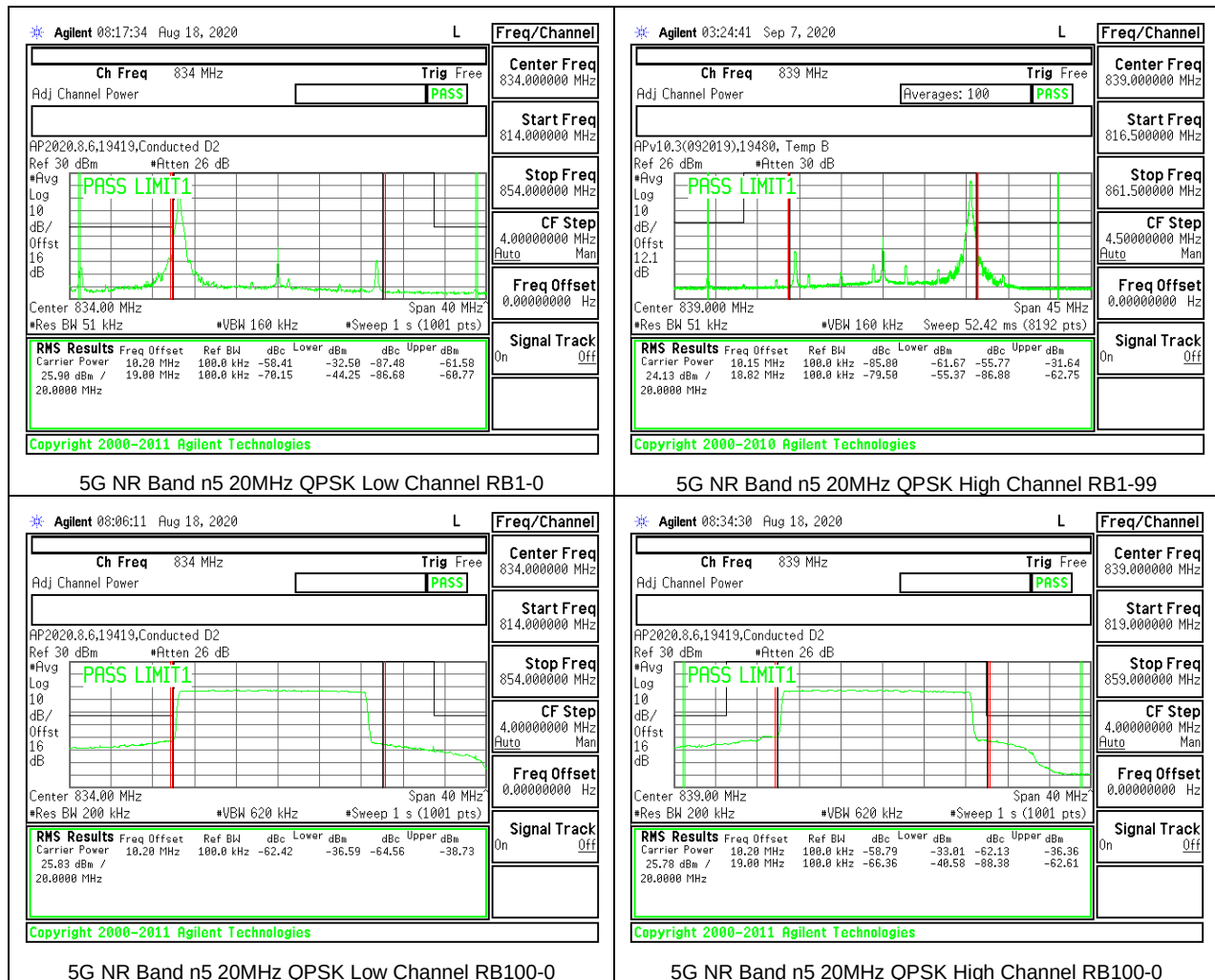






5G NR Band n5 BANDEDGE



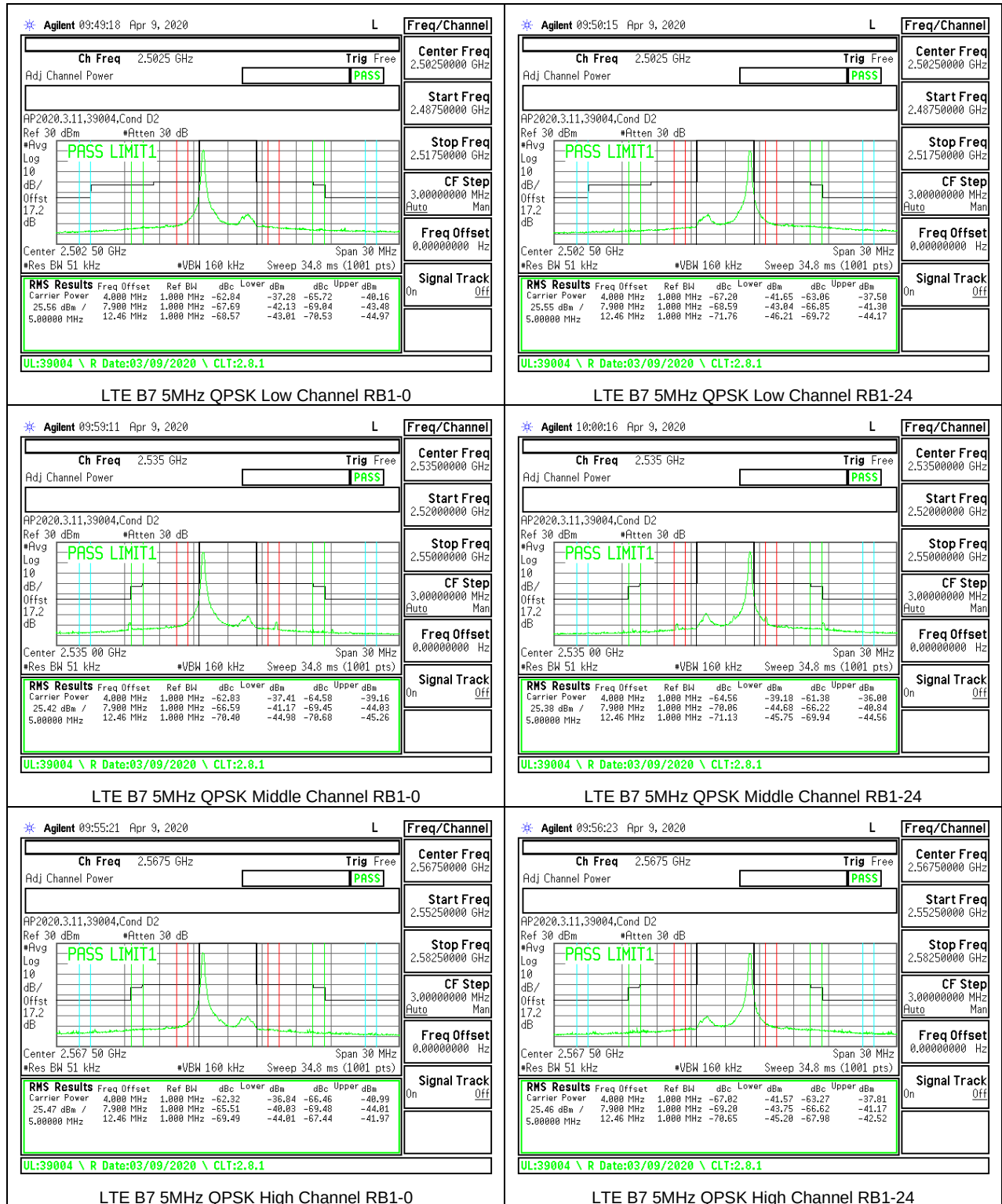


8.2.3. LTE BAND 7 ADJACENT CHANNEL POWER

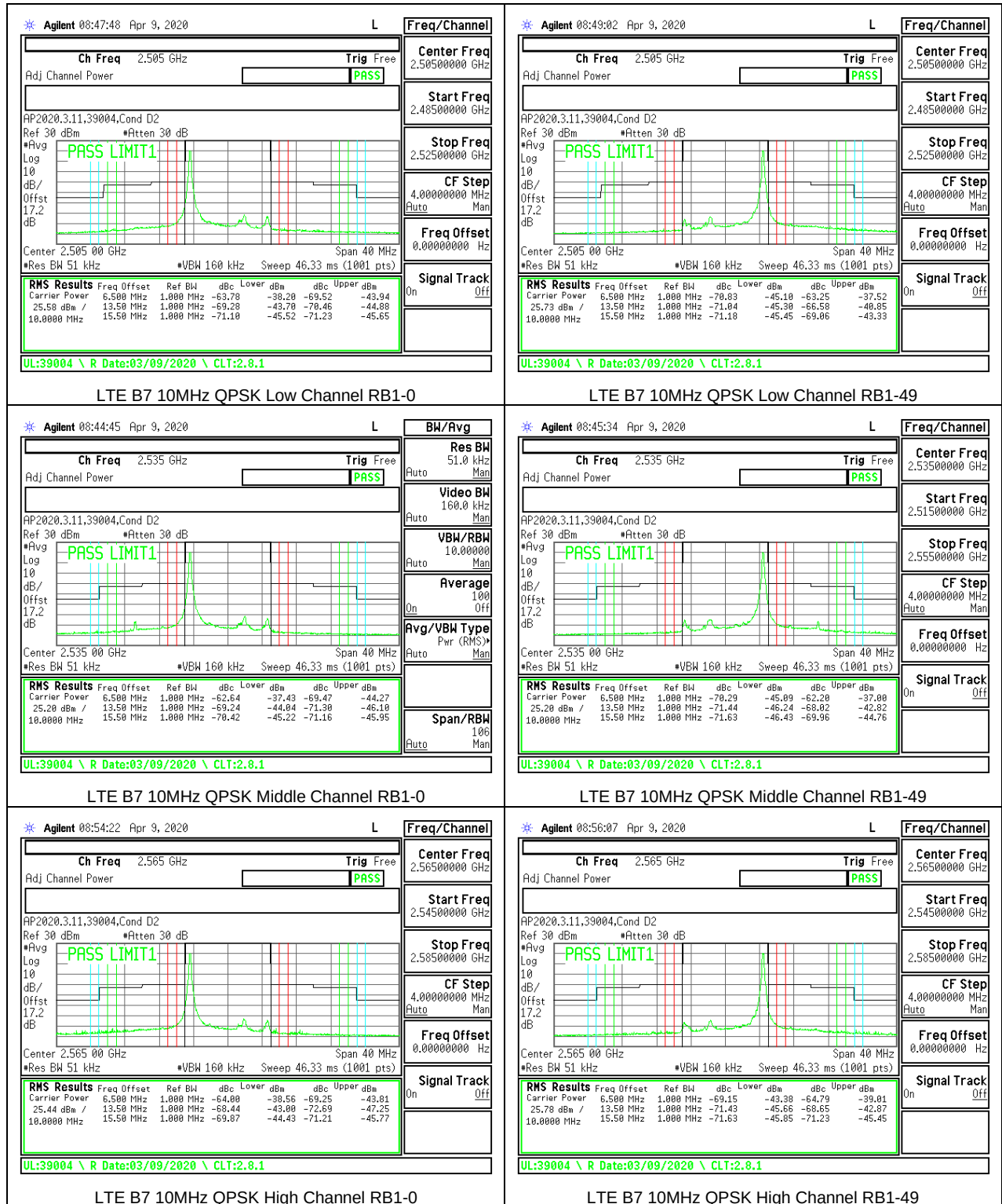
LIMITS

FCC: §27.53

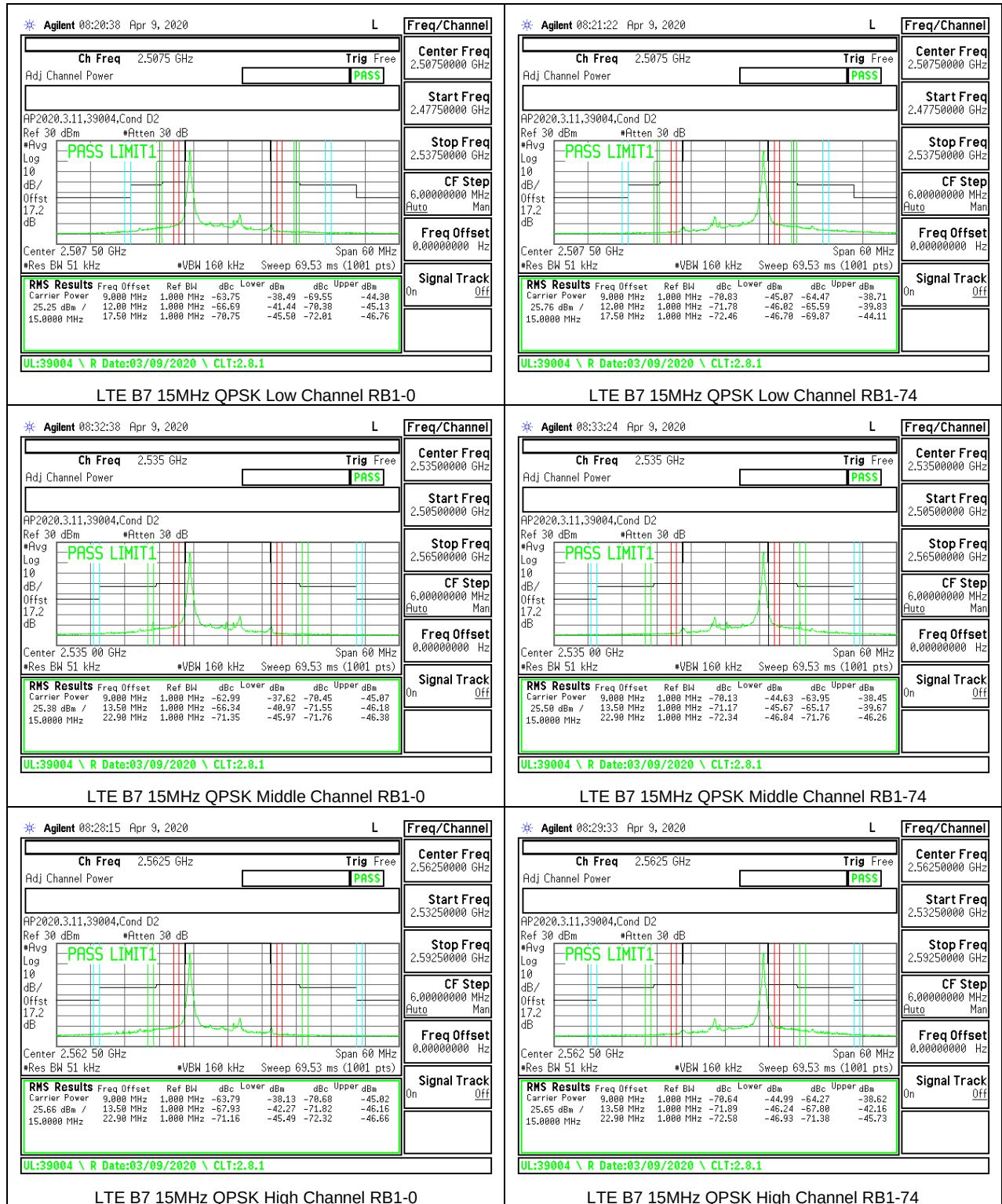
(m)(4) For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ 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. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.



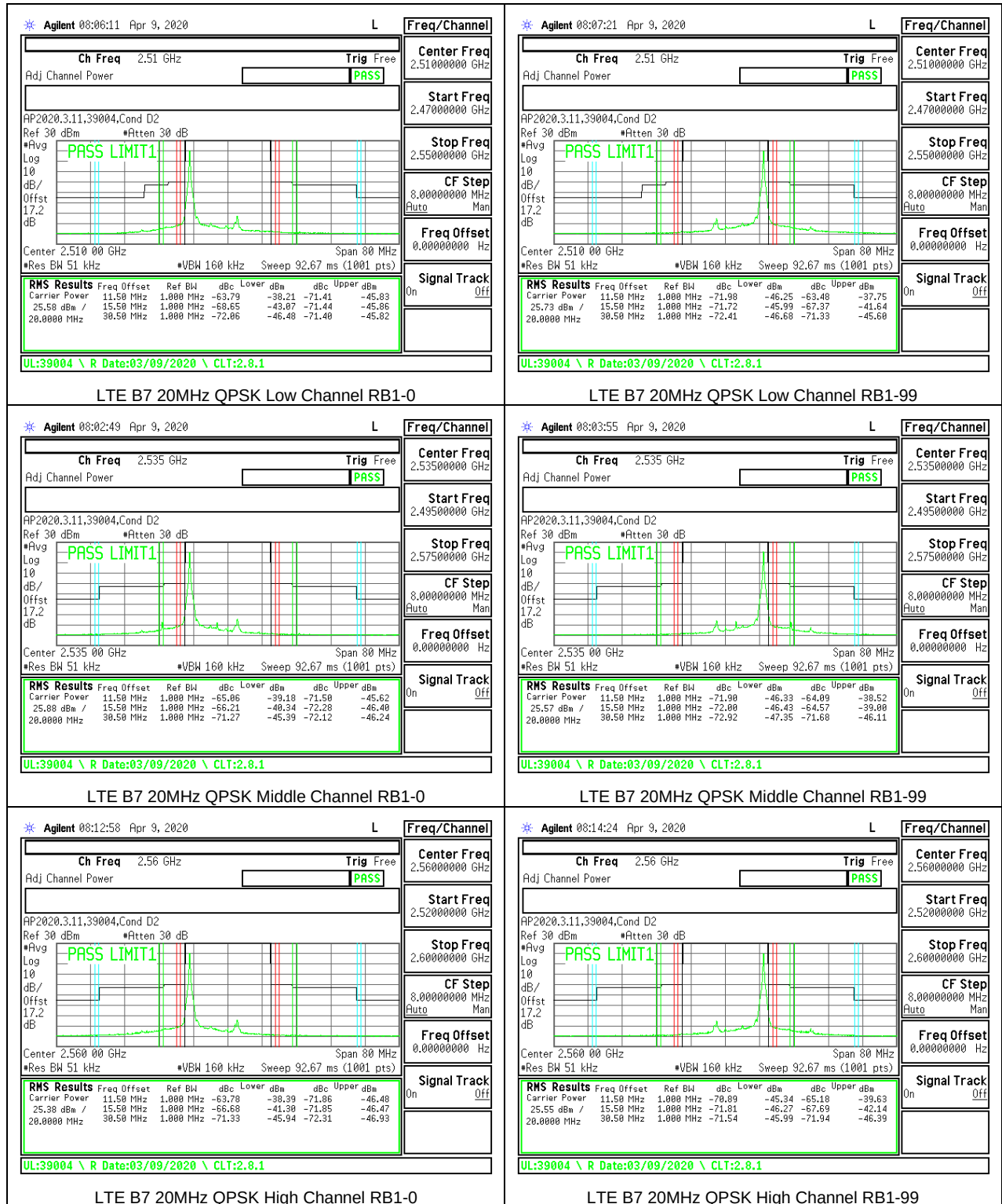














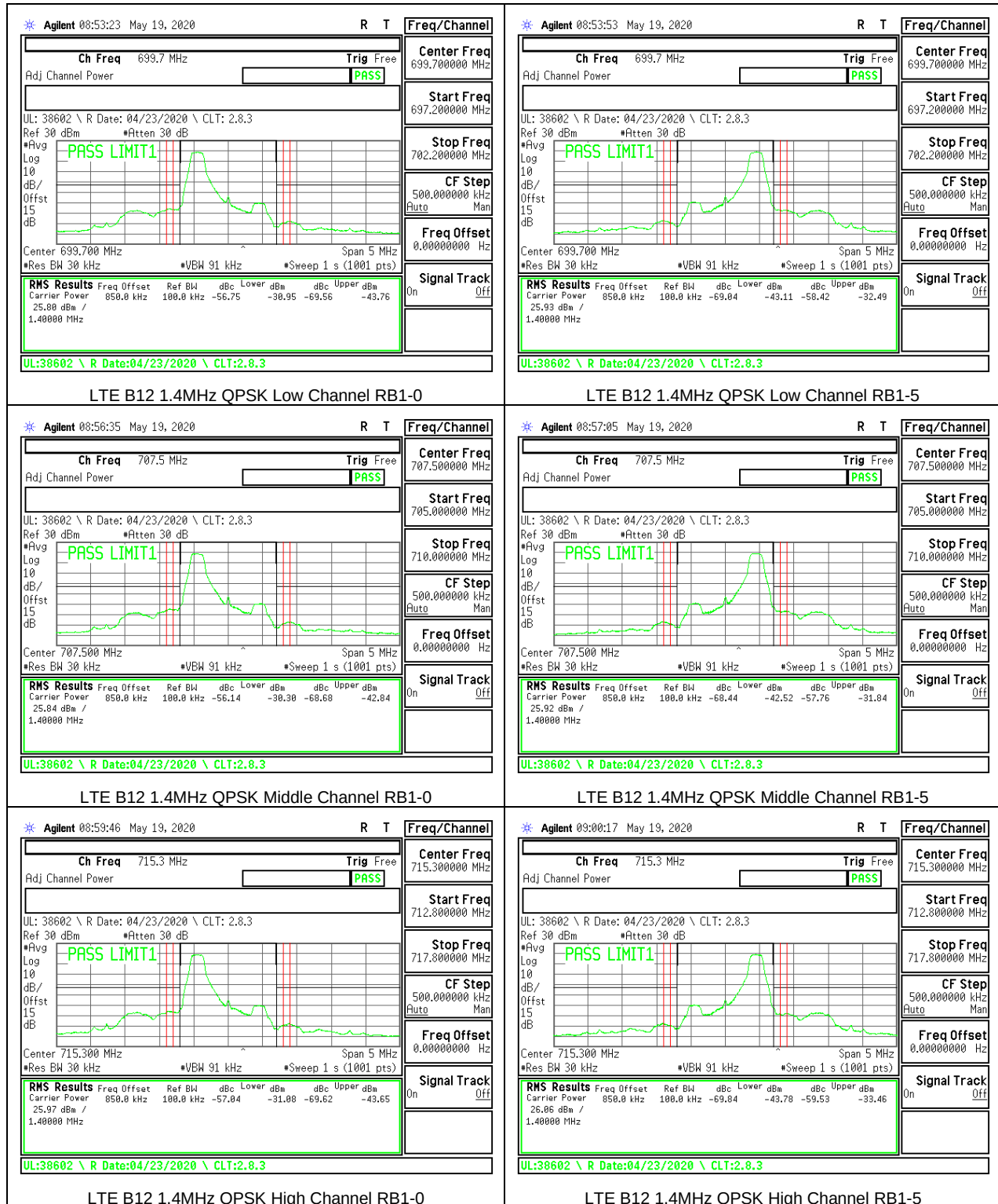
8.2.4. LTE BAND 12 AND n12 ADJACENT CHANNEL POWER

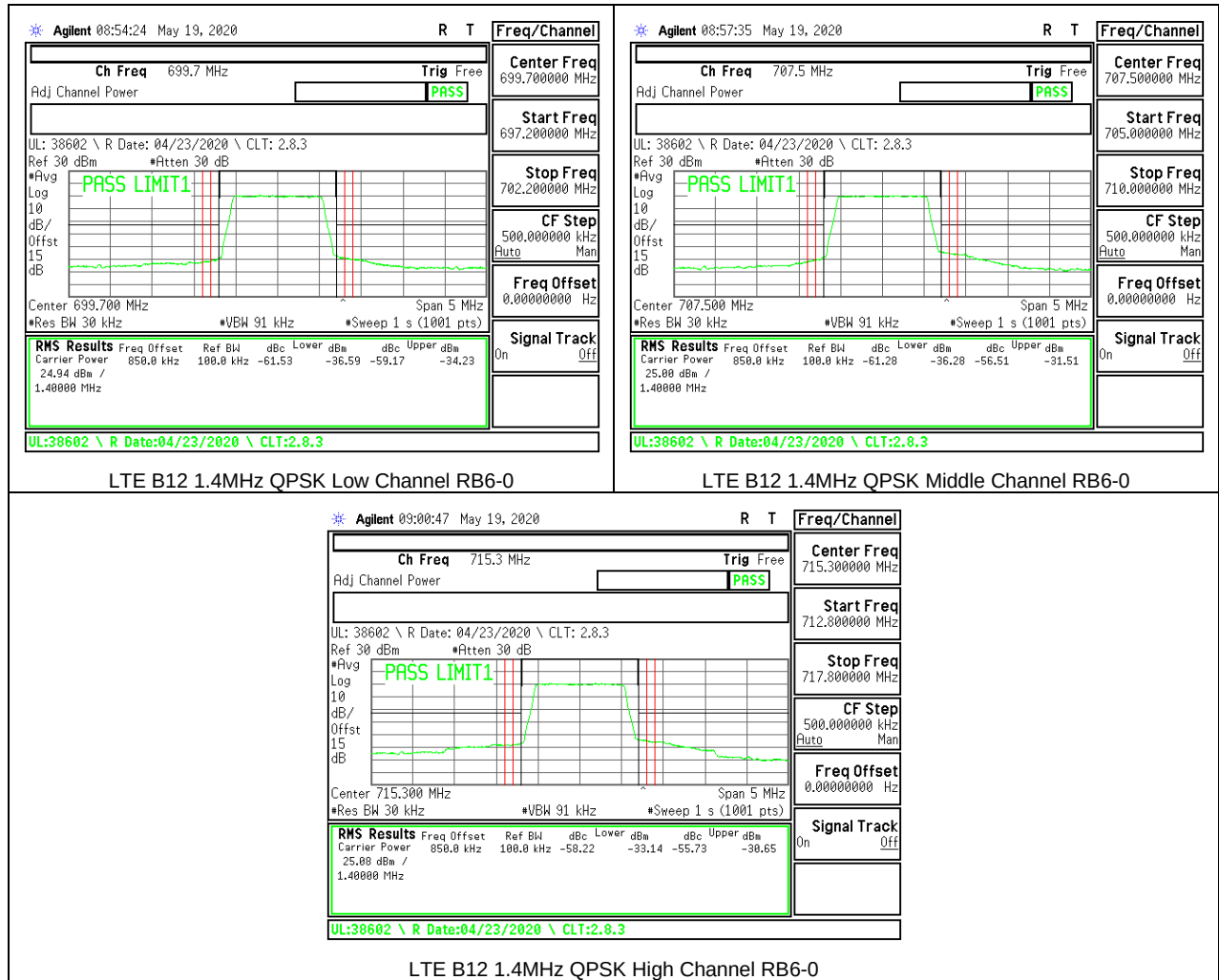
LIMITS

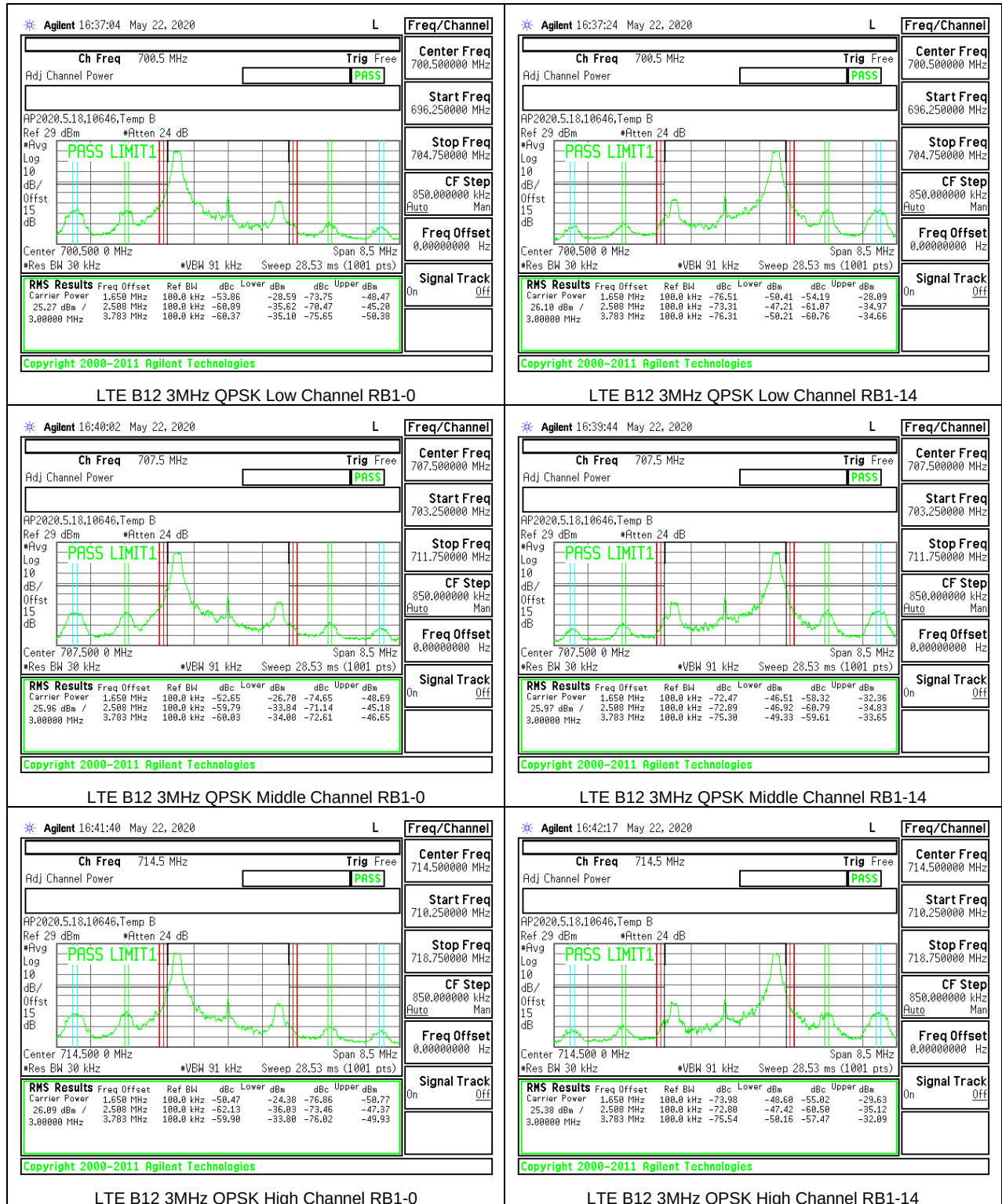
FCC: §27.53

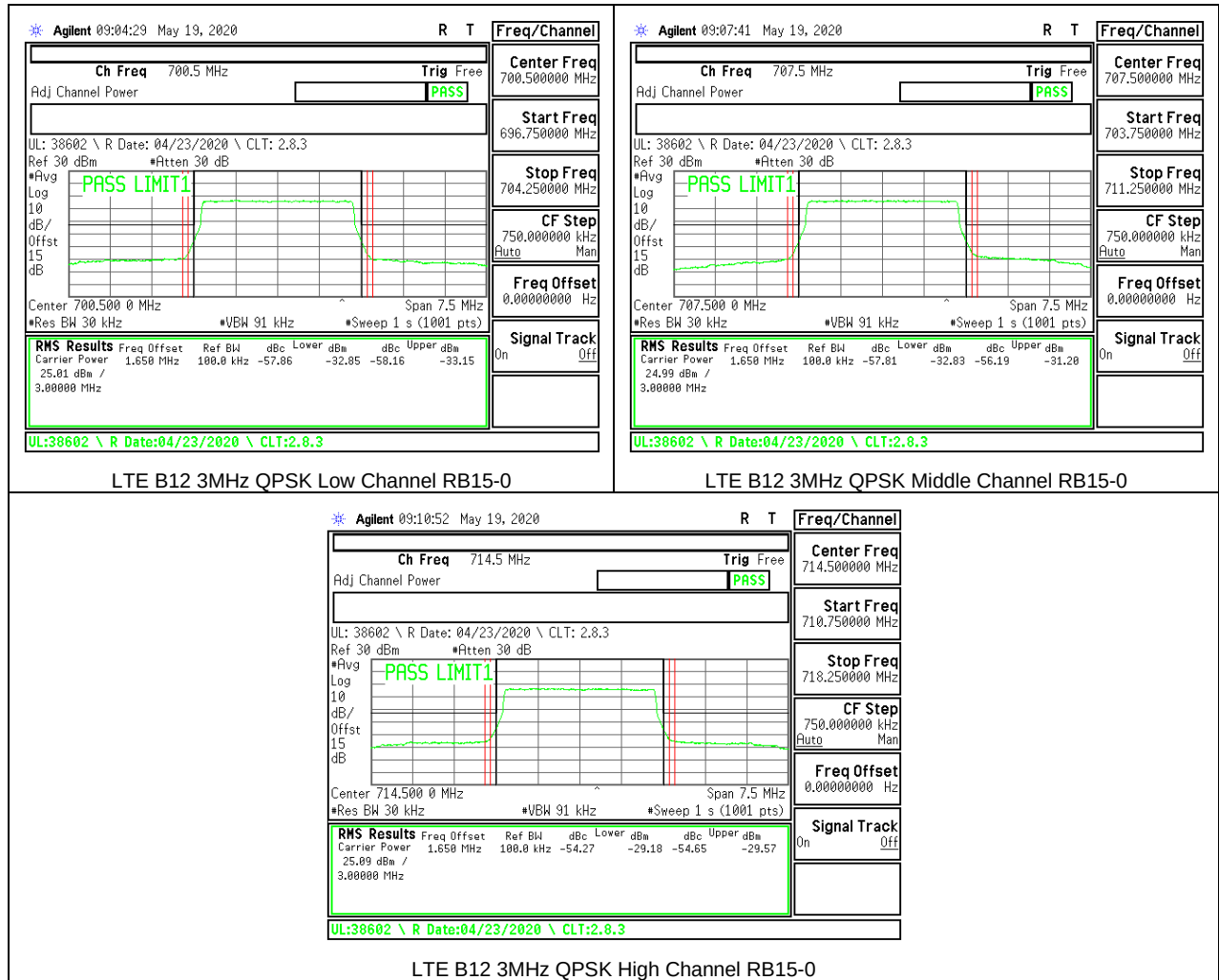
(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

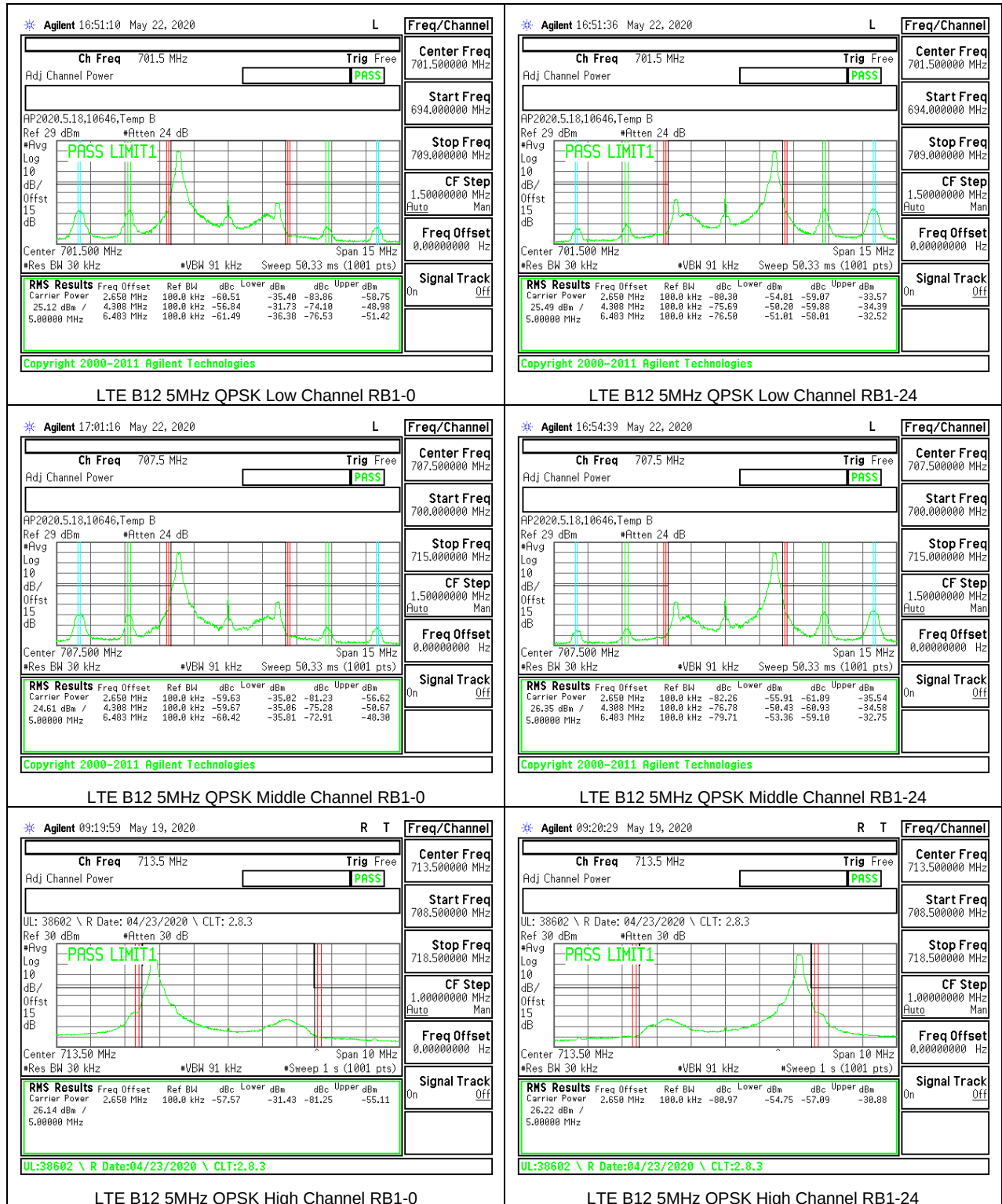
LTE BAND 12 ADJACENT CHANNEL POWER

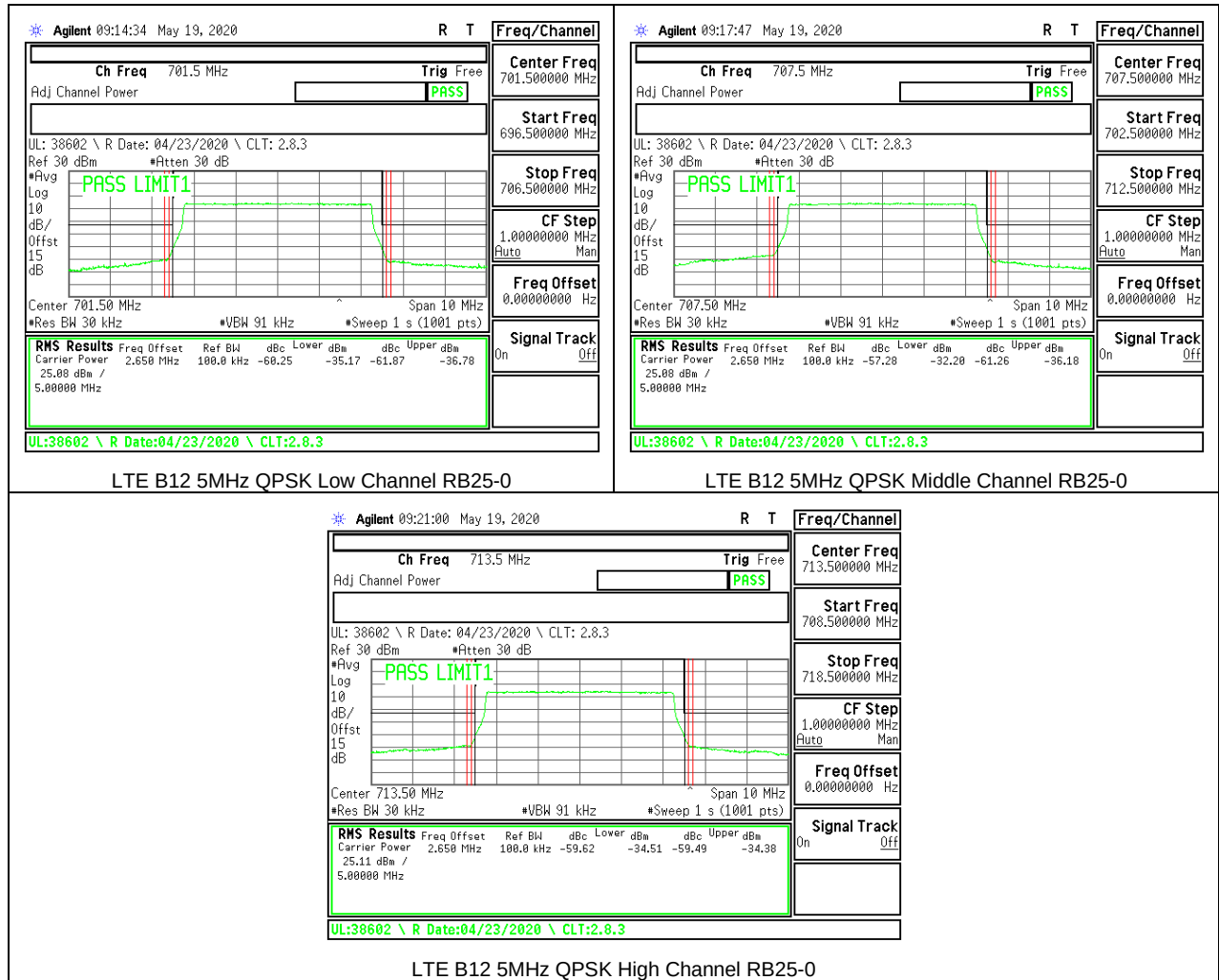


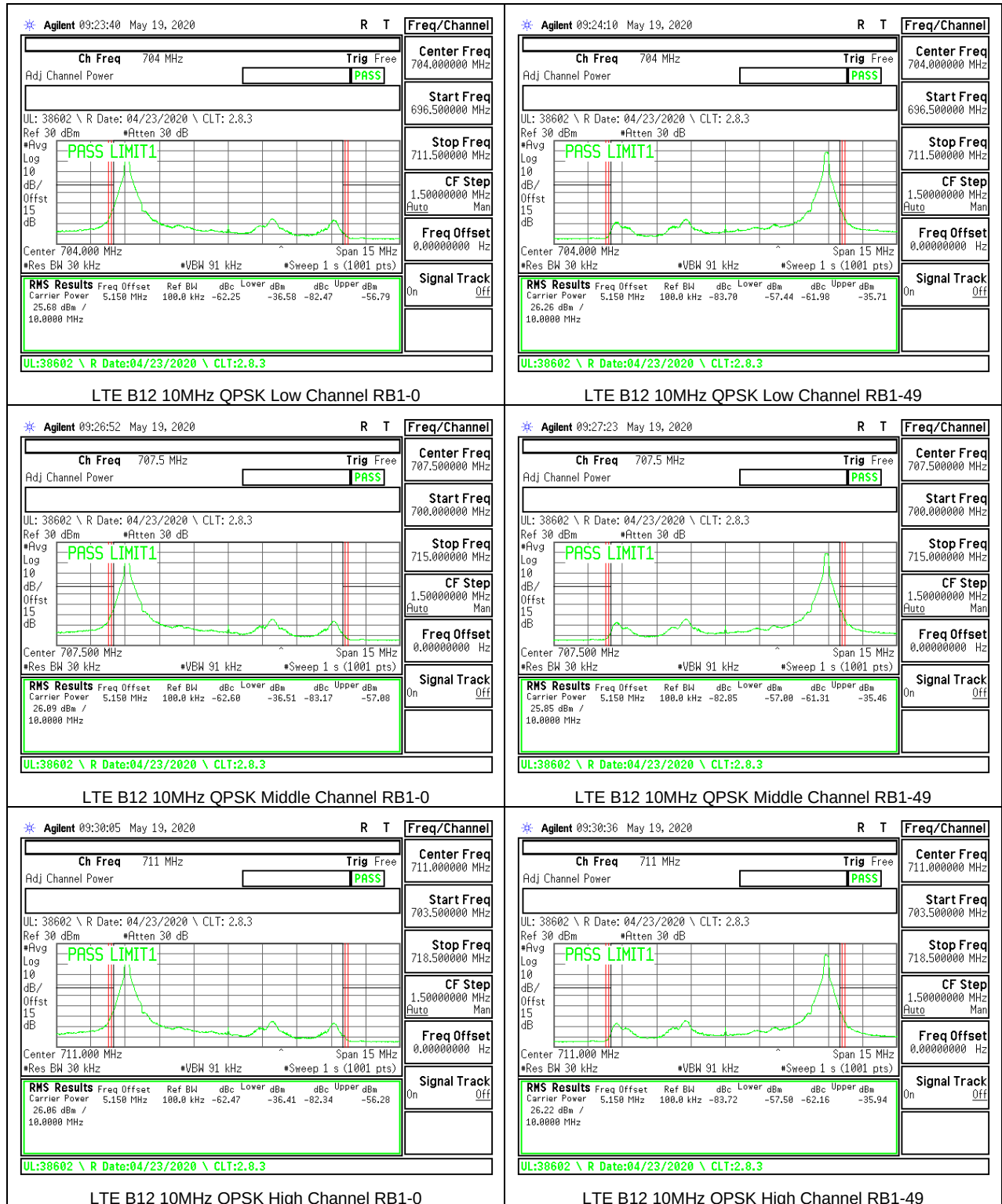






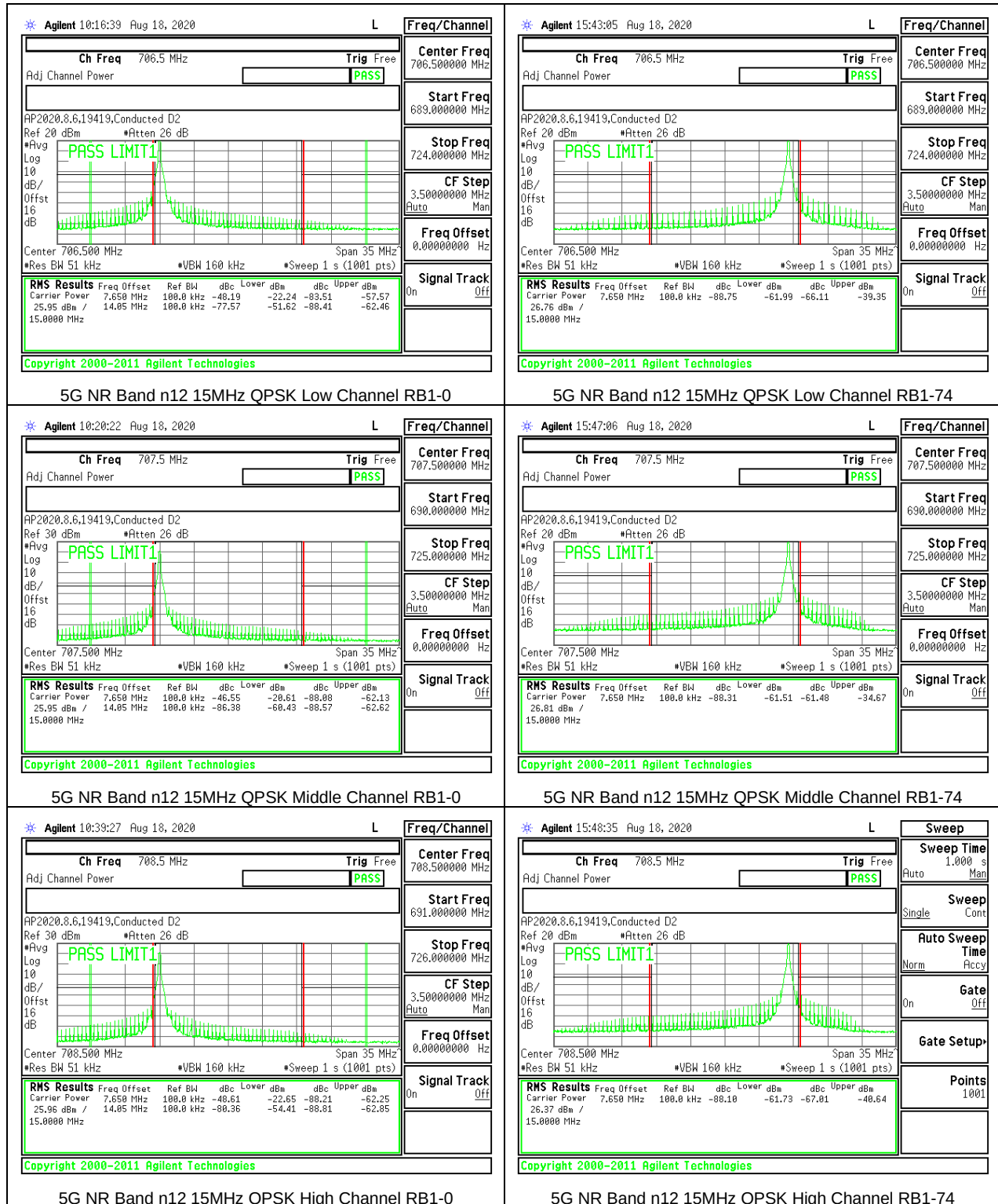


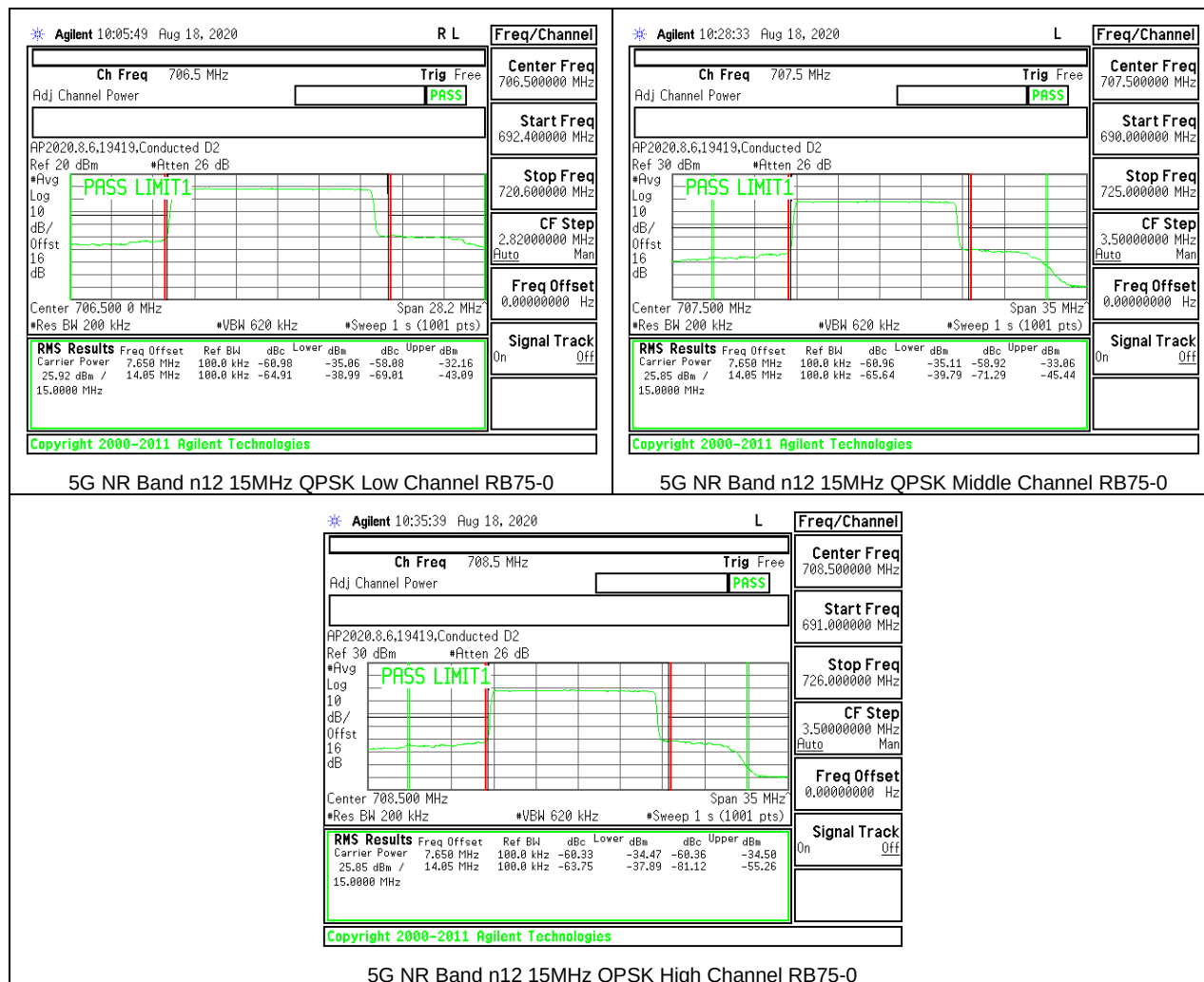






5G NR Band n12 ADJACENT CHANNEL POWER





8.2.5. LTE BAND 13 ADJACENT CHANNEL POWER

LIMITS

FCC: §27.53

(c) For operations in the 746-758 MHz band and the 776-788 MHz band, 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:

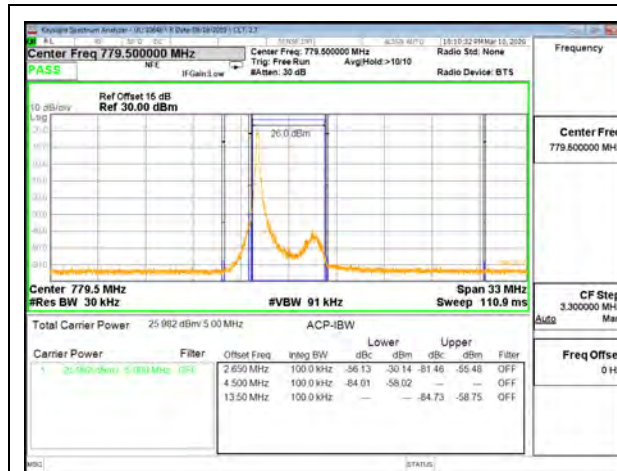
(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;

(5) Compliance with the provisions of paragraphs (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

(6) Compliance with the provisions of paragraphs (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

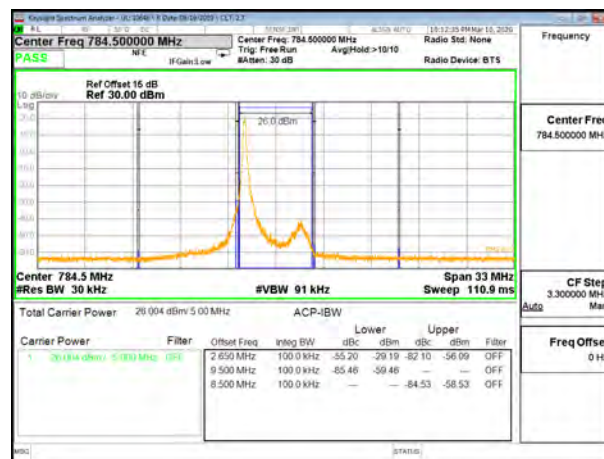
(f) Emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals. (-70 dBW/MHz = -40dBm/MHz).



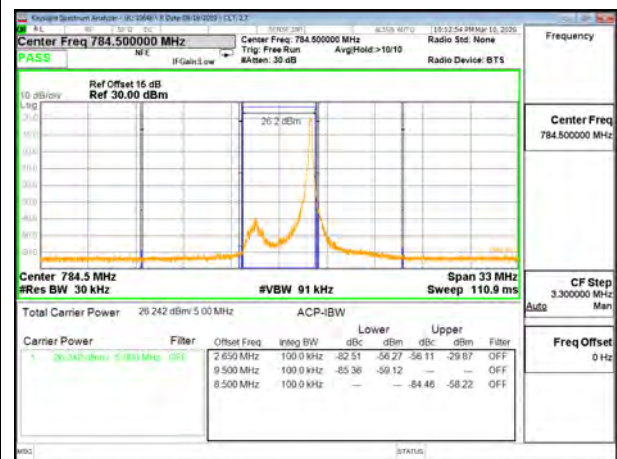
LTE B13 5MHz QPSK Low Channel RB1-0



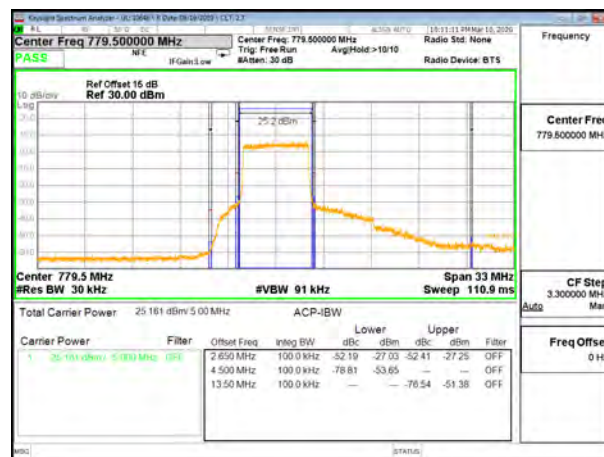
LTE B13 5MHz QPSK Low Channel RB1-24



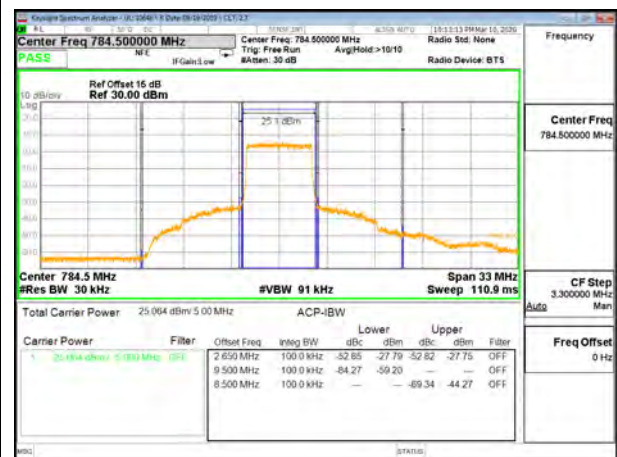
LTE B13 5MHz QPSK High Channel RB1-0



LTE B13 5MHz QPSK High Channel RB1-24



LTE B13 5MHz QPSK Low Channel RB25-0



LTE B13 5MHz QPSK High Channel RB25-0



8.2.6. LTE BAND 14 ADJACENT CHANNEL POWER

LIMITS

FCC: §90.543 Emission Limitations.

(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:

(2) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations.

(3) On any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, by at least $43 + 10 \log (P)$ dB.

(4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

(5) Compliance with the provisions of paragraph (e)(3) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of 30 kHz may be employed.

(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.



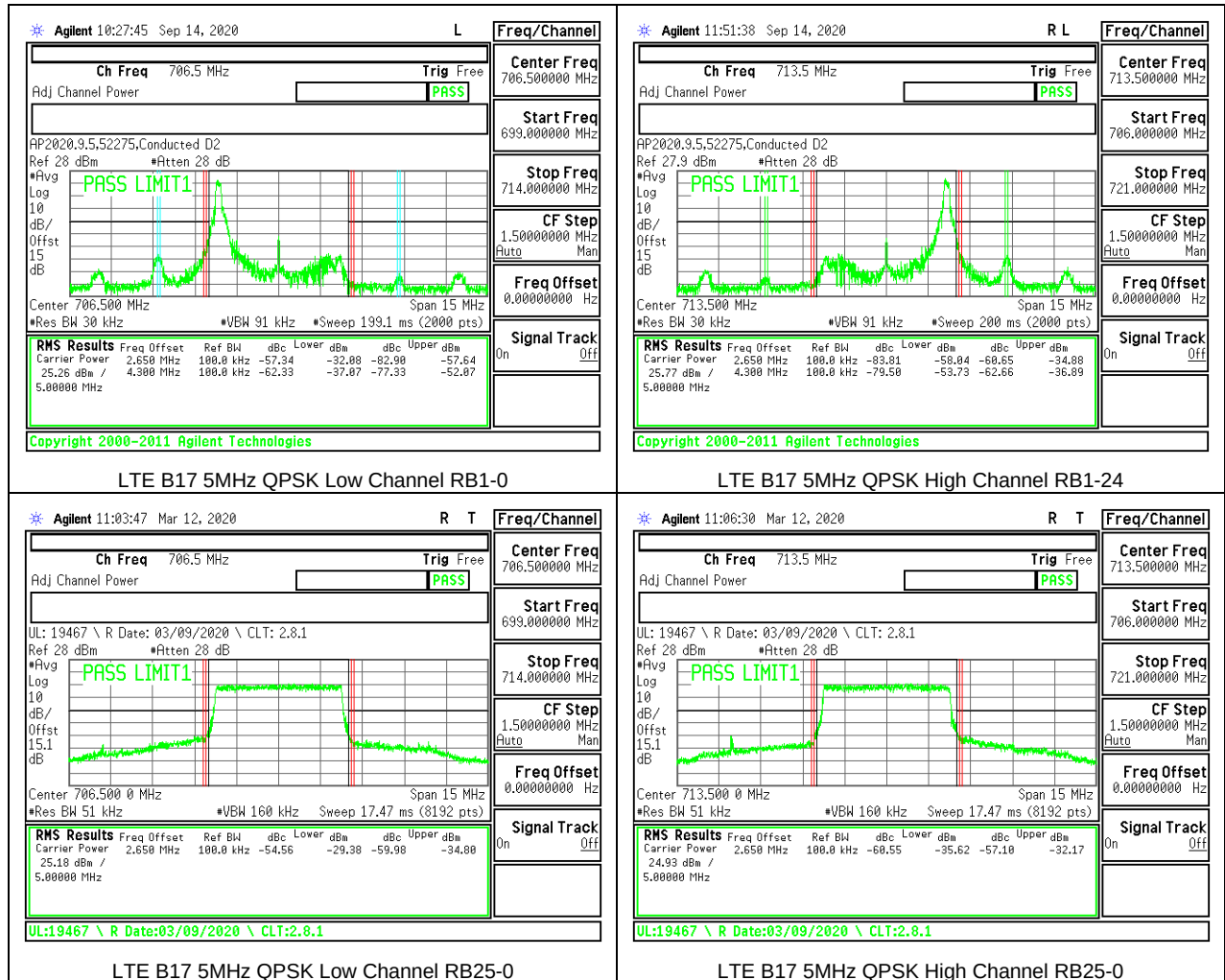


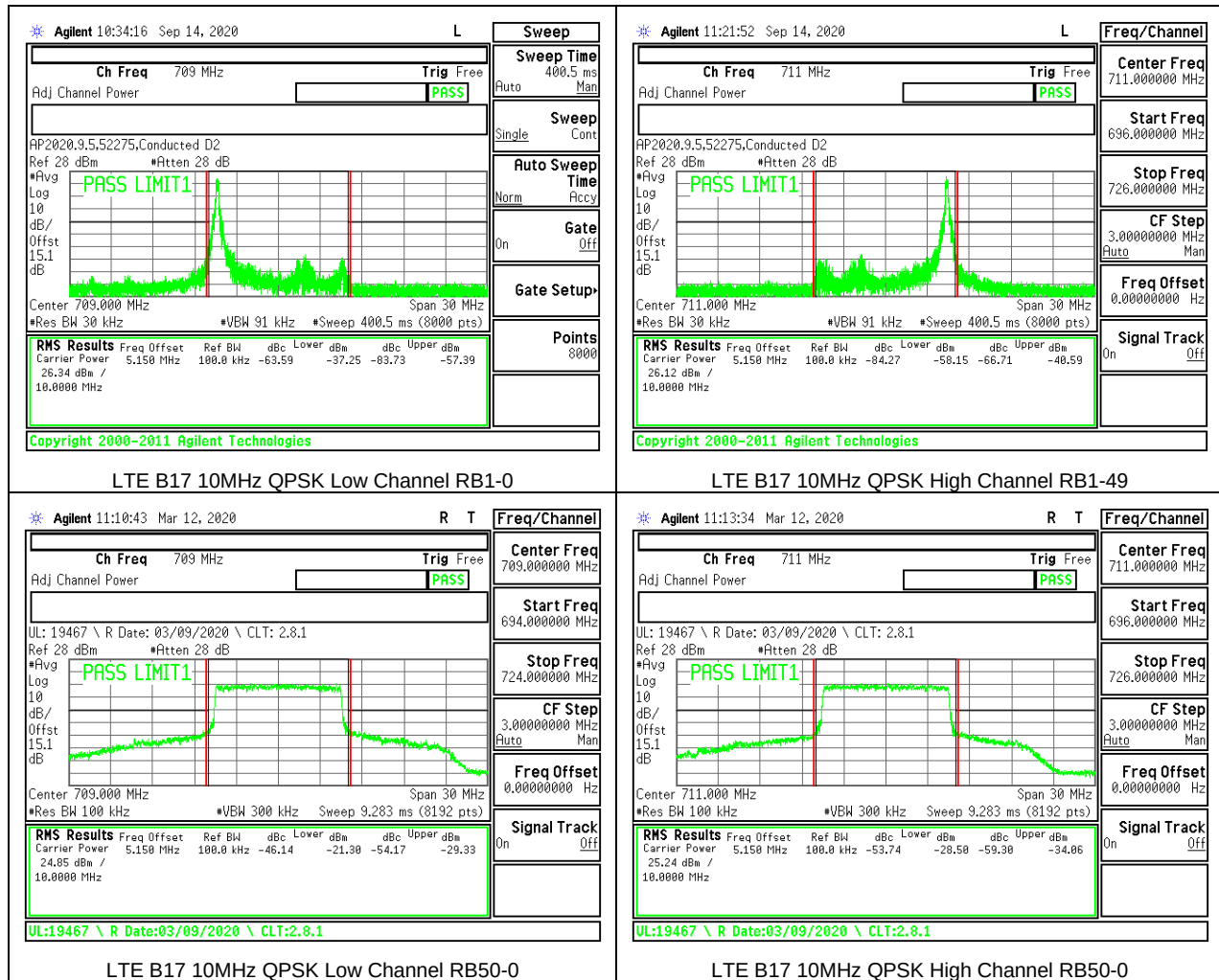
8.2.7. LTE BAND 17 BANDEDGE

LIMITS

FCC: §27.53

(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a 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, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.





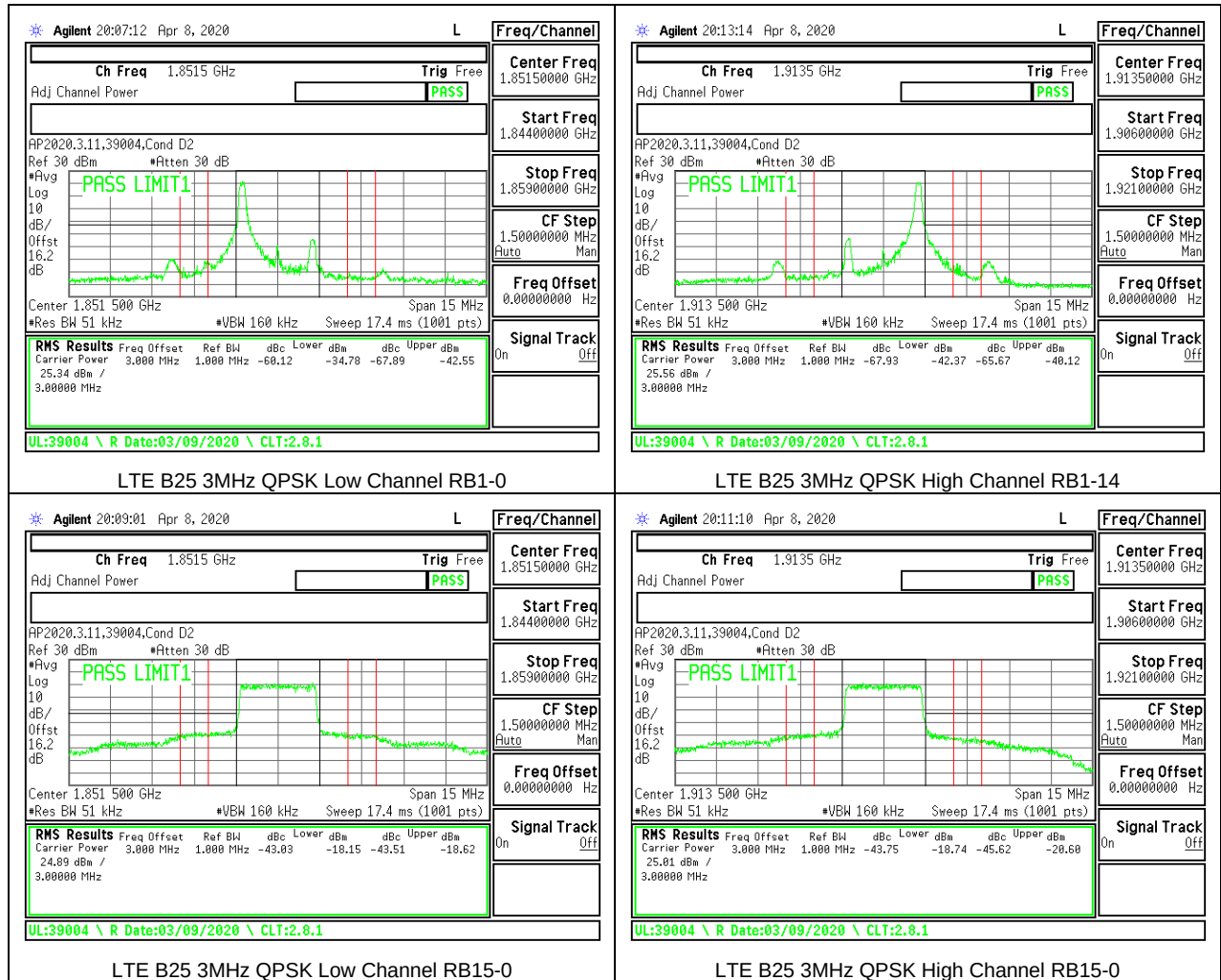
8.2.8. LTE BAND 25 BANDEDGE

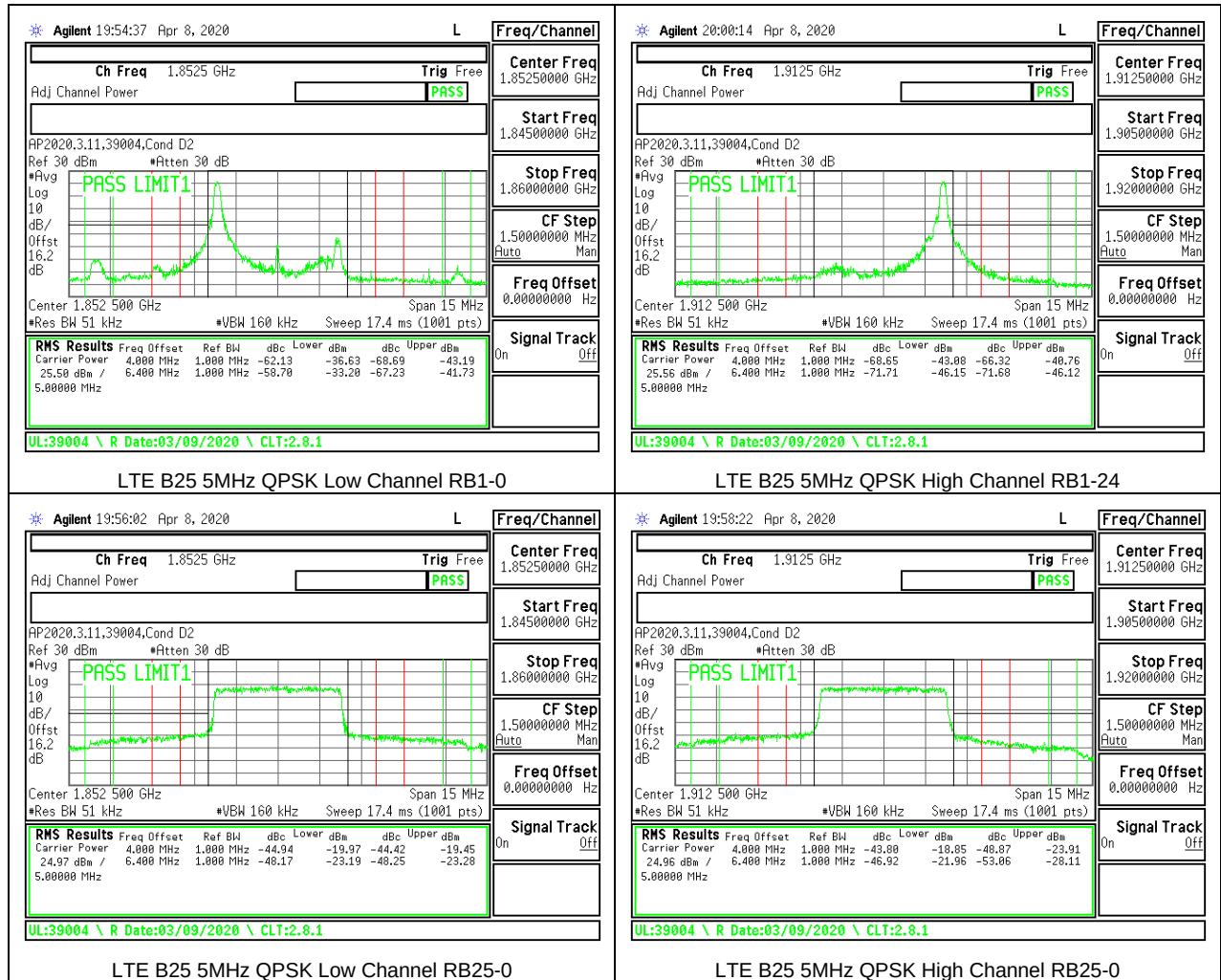
LIMITS

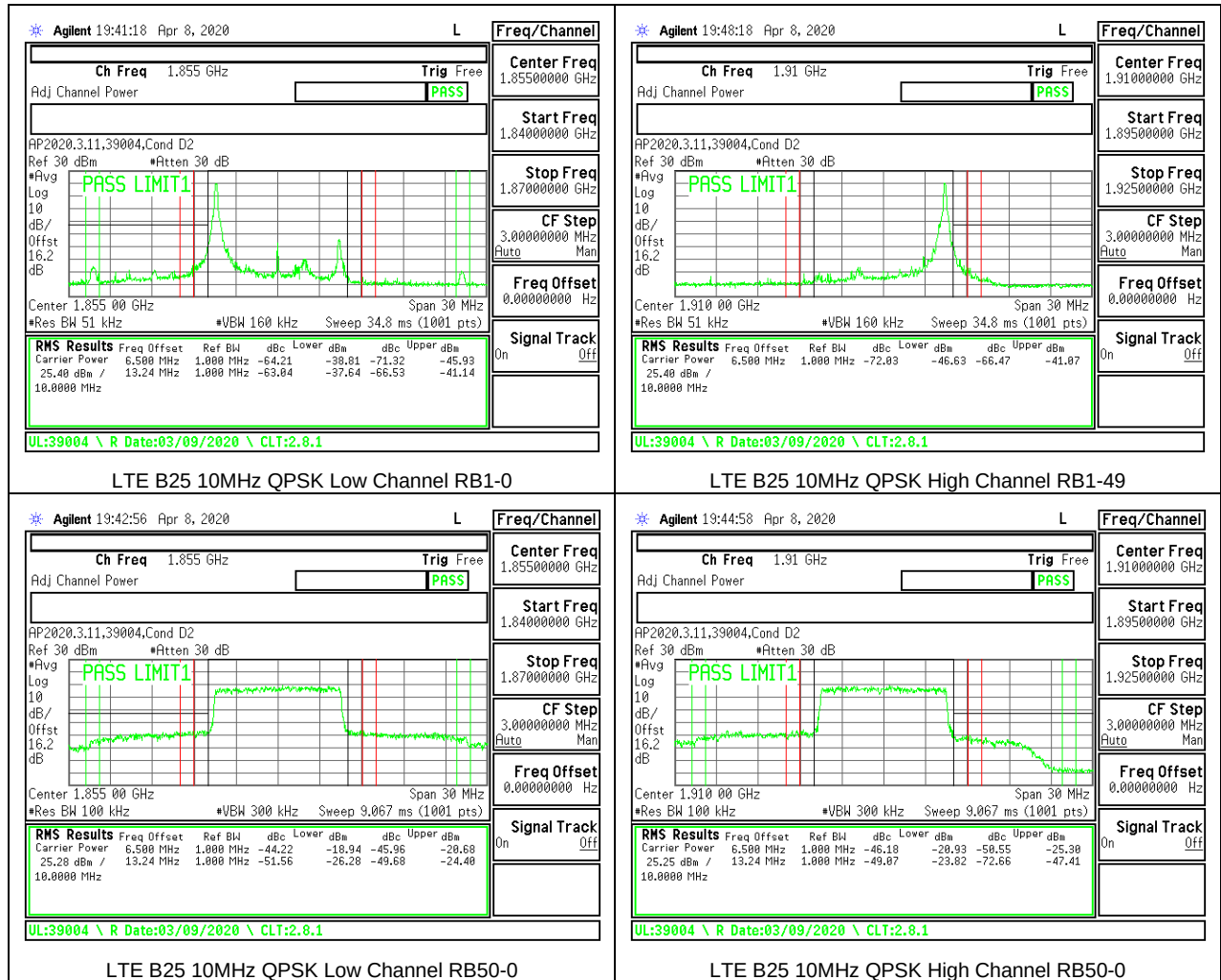
FCC: §24.238

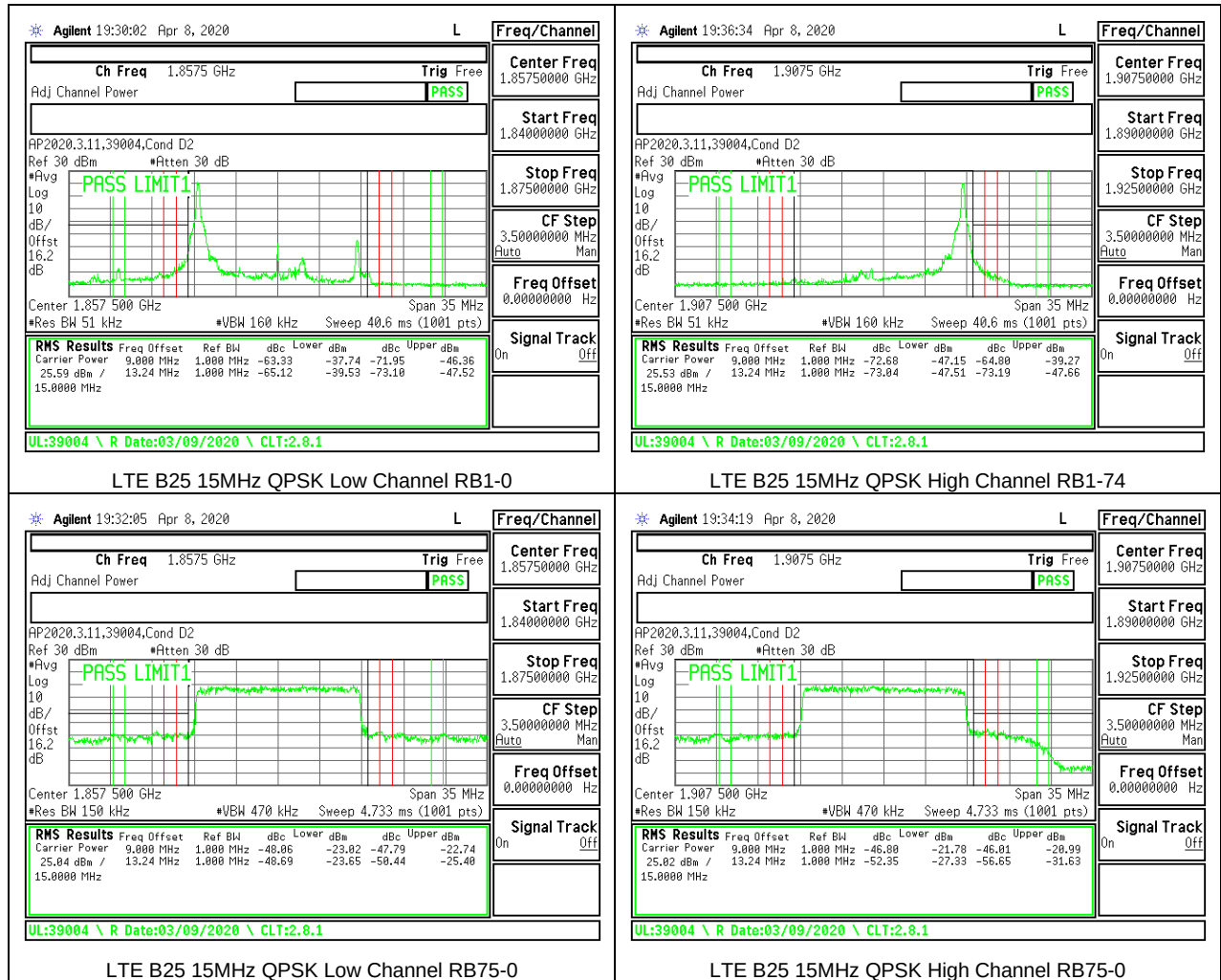
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

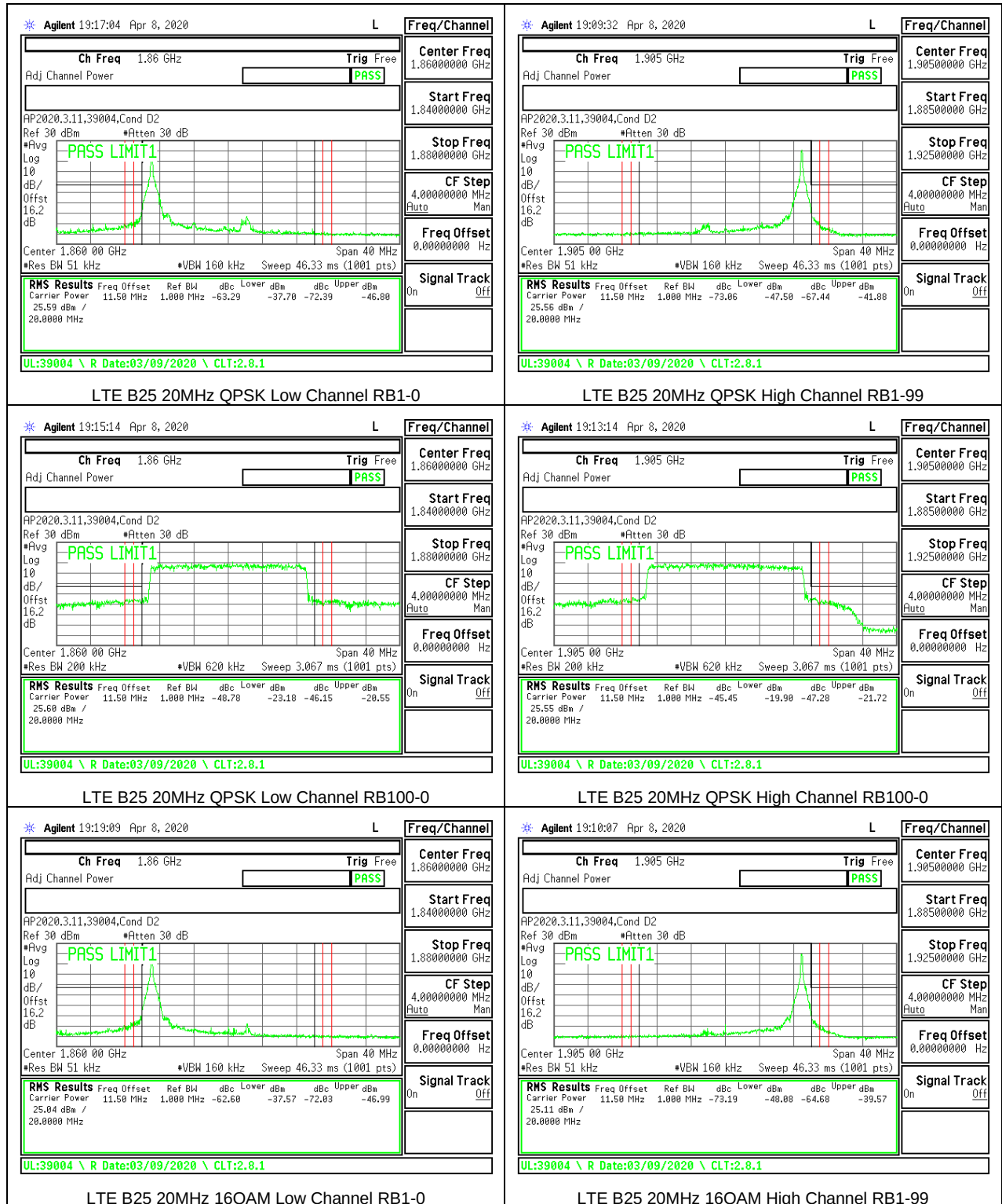












8.2.9. LTE BAND 26 EMISSION MASK (PART 90S)

LIMITS

FCC: §90.691 Emission mask requirements for EA-based systems.

(a) Out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

