



TEST REPORT

Report Number. : 13389132-E8V2

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

Model : A2411, A2412, AND A2413

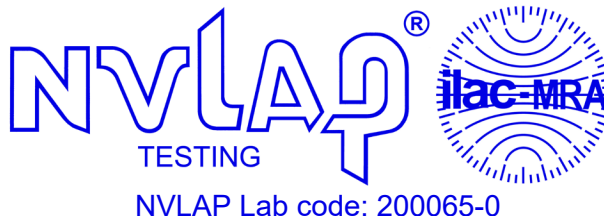
FCC ID : BCG-E3550A

EUT Description : SMARTPHONE

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

Date Of Issue:
OCTOBER 02, 2020

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Revision History

Rev.	Issue Date	Revisions	Revised By
V1	9/21/2020	Initial Review	Mengistu Mekuria
V2	10/02/2020	Addressed TCB Feedback	Glenn Escano

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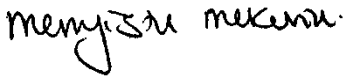
1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	APPLE, INC 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	A2411, A2412, AND A2413
FCC ID	BCG-E3550A
EUT Description	SMARTPHONE
Serial Number	MODEL (A2411, A2412 and A2413): C07029700DEP5625 (Conducted) and G6TD401N06R1 (Radiated)
Date Tested	APRIL 21, 2020 to SEPTEMBER 18, 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 Andean 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. INTRODUCTION OF TEST DATA REUSE

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-E3548A and BCG-E3549A to cover variant model BCG-E3550A. The major difference between the parent/reference model and the variant model is the depopulation in the variant model of the mmWave transmitter. 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 A2342, A2410, A2411, A2412 and A2413.

A2342, A2410, A2411, A2412 and A2413 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.

A2411, A2412 and A2413 are allocated for marketing and logistic purposes only. Spot check verification has been done on model A2411 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 Technical Limits. The test reports for model A2342 and model A2410 ANT2 RSE test results may be applied as representative to models A2411, A2412 and A2413.

5.4. SPOT CHECK VERIFICATION RESULTS SUMMARY

A2411, A2412, A2413 Spotcheck Results								
Technology	Worst Mode	Test Item	Channel	Measured Frequency (MHz)	Original Model: A2432 FCC ID: BCG-E3548A	Sub Model: A2411, A2412, A2413 FCC ID: BCG-E3550A	Delta (dB)	Remarks
LTE BAND 2	QPSK @ 20 MHz BW	EIRP	Low	1860	25.8 dBm	25.8 dBm	0.00	
	QPSK @ highest BW	RSE	Low	7868.34	-46.19 dBm	-45.08 dBm	1.11	Noise Floor Level
LTE BAND 5	QPSK @ 10 MHz BW	ERP	Low	829	18.25 dBm	18.25 dBm	0	
	QPSK @ highest BW	RSE	High	3315.45	-51.54 dBm	-51.9 dBm	-0.36	Noise Floor Level
5G NR BAND N5	QPSK @ 20 MHz BW	ERP	High	839	18.25 dBm	18.25 dBm	0	
LTE BAND 7	QPSK @ 20 MHz BW	EIRP	Low	2510	23.7 dBm	23.7 dBm	0	
	QPSK @ highest BW	RSE	Mid	10138.52	-43.08 dBm	-43.62 dBm	-0.54	Noise Floor Level
LTE BAND 12	QPSK @ 10 MHz BW	ERP	High	711	18.45 dBm	17.85 dBm	-0.6	
5G NR BAND N12	QPSK @ 15 MHz BW	ERP	Mid	707.5	18.45 dBm	18.45 dBm	0	
LTE BAND 13	QPSK @ 10 MHz BW	ERP	Mid	782	18.45 dBm	18.45 dBm	0	
LTE BAND 14	QPSK @ 10 MHz BW	ERP	Mid	793	17.95 dBm	17.95 dBm	0	
LTE BAND 17	QPSK @ 10 MHz BW	ERP	Mid	710	18.45 dBm	18.45 dBm	0	
LTE BAND 25	QPSK @ 20 MHz BW	EIRP	High	1905	25.8 dBm	25.8 dBm	0	
LTE BAND 26 (90S)	QPSK @ 10 MHz BW	ERP	Mid	819	18.3 dBm	18.3 dBm	0	
LTE BAND 30 (NS1)	QPSK @ 10 MHz BW	EIRP	Mid	2310	23.5 dBm	23.5 dBm	0	
LTE BAND 41	QPSK @ 20 MHz BW	EIRP	Mid	2593	25.7 dBm	25.7 dBm	0	
5G NR BAND N41	QPSK @ 100 MHz BW	EIRP	High	2640	26 dBm	26 dBm	0	
LTE BAND 48	QPSK @ 20 MHz BW	EIRP	Mid	3625	22.2 dBm	22.2 dBm	0	
LTE BAND 66	QPSK @ 20 MHz BW	EIRP	High	1770	25.1 dBm	25.1 dBm	0	
LTE BAND 71	QPSK @ 20MHz BW	ERP	High	688	19.15 dBm	19.15 dBm	0	
5G NR BAND N77	QPSK @ 100 MHz BW	EIRP	Mid	3840	19.8 dBm	19.8 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-E3548A	13335182-E8	FCC LTE Report/ All Sections except Radiated spurious emission on ANT2
	BCG-E3549A	13171738-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	-5.1	-6.9	NA	NA	NA	NA	NA
LTE Band 17, 704 – 716 MHz	-5.1	-6.9	NA	NA	NA	NA	NA
LTE Band 13, 777 – 787 MHz	-5.1	-6.4	NA	NA	NA	NA	NA
LTE Band 26, 814 – 824 MHz (Part 90S)	-5.3	-5.4	NA	NA	NA	NA	NA
LTE Band 5, 5G NR Band n5, 824 – 849 MHz	-5.3	-4.9	NA	NA	NA	NA	NA
LTE Band 66, 5G NR Band n66, 1710 – 1780 MHz	-3.1	-1.8	0.4	-1.7	NA	NA	NA
LTE Band 2, 5G NR Band n2, 1850 – 1910 MHz	-2.8	-1.4	1.1	-0.7	NA	NA	NA
LTE Band 25, 5G NR Band n25, 1850 – 1915 MHz	-2.8	-1.4	1.1	-0.7	NA	NA	NA
LTE Band 30, 2305 – 2315 MHz	-2.9	-1.1	0.4	1.0	NA	NA	NA
LTE Band 7, 2500 – 2570 MHz	-2.0	-1.5	-1.1	-0.2	NA	NA	NA
LTE Band 41, 5G NR Band n41, 2496 – 2690 MHz	-2.0	-1.1	0	-0.2	NA	NA	NA
5G NR Band n77, 3300 – 3980 MHz	NA	NA	NA	-3.2	-5.9	-5.9	-5.5
LTE Band 48, 3550 – 3700 MHz	NA	NA	NA	-3.0	-4.9	-4.9	-3.0

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 Band n77.

For 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 Band 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 as 5G NR Band n5, 5G NR Band n12, and 5G NR Band 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. 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 n41, and 5G NR Band n77. For 5G NR Band n41 ANT2 is the worst case antenna. For bands 48 and 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

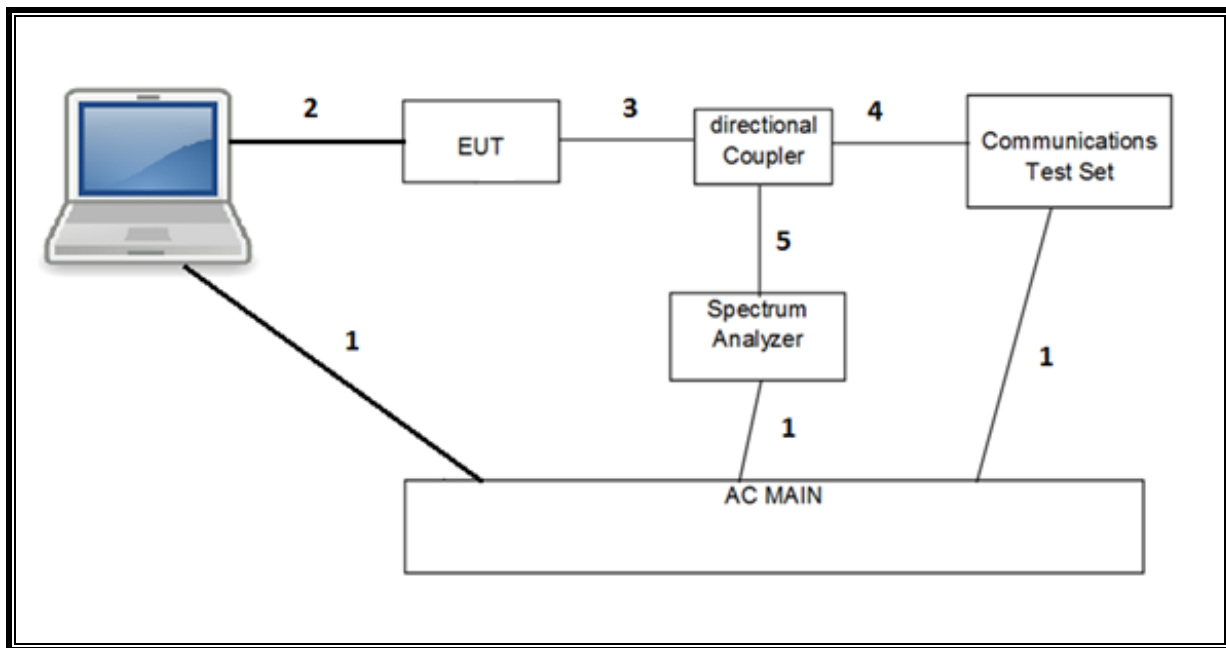
Radiated spurious emissions were investigated from 9kHz to 30MHz, 30MHz-1GHz and above 1GHz. There were no emissions found with less than 20dB of margin from 9kHz to 1GHz.

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.

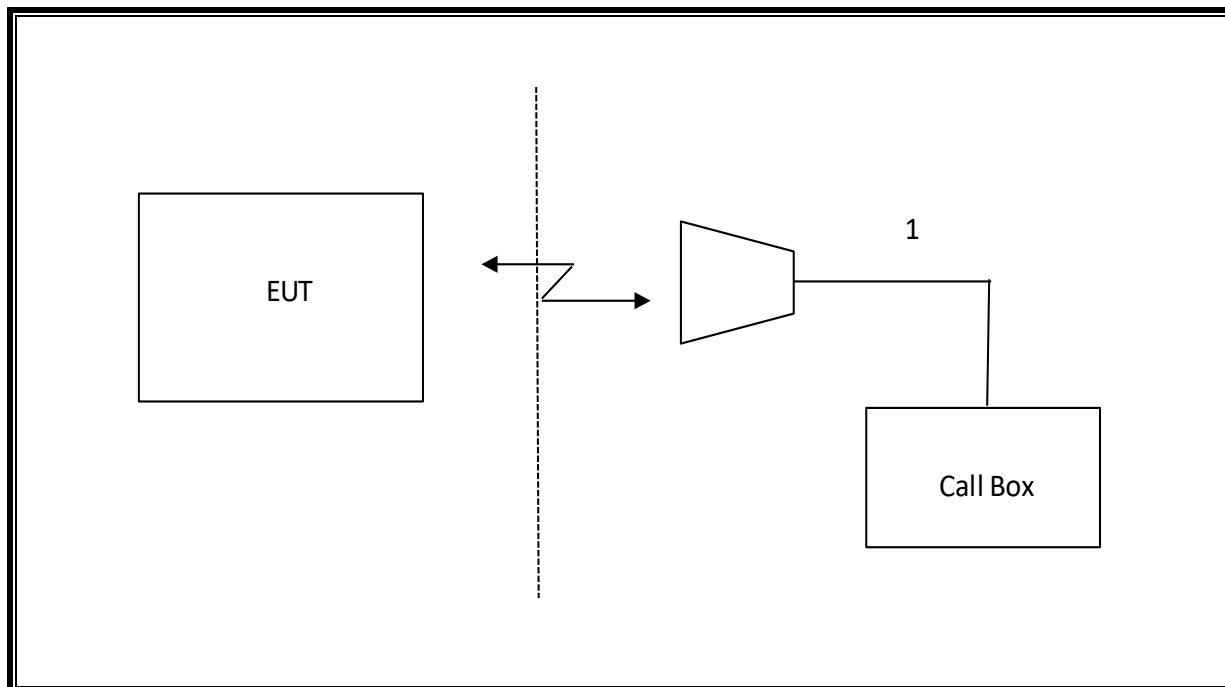
5.9. DESCRIPTION OF TEST SETUP

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	T962	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 13335182-EP1 for setup photos

Appendix A – Reference Test Report 13335182-E8

Attached is the test report (13335182-E8) containing the reference data from the parent model as detailed in section 5.5.



TEST REPORT

Report Number. : 13335182-E8V2

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

Model : A2342

FCC ID : BCG-E3548A

EUT Description : SMARTPHONE

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

Date Of Issue:
OCTOBER 02, 2020

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NVLAP Lab code: 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	10/2/2020	Initial Review	Mengistu Mekuria
V2	10/2/2020	Updated Antenna gains and EIRP table for Band 48	John Thompson

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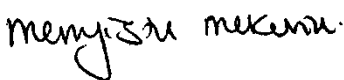
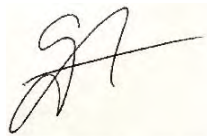
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1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	APPLE, INC 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.	
Model	A2342	
FCC ID	BCG-E3548A	
EUT Description	SMARTPHONE	
Serial Number	MODEL (A2342): C0703040073P5635 (Conducted), G6TD609K06PR (Radiated)	
Date Tested	APRIL 21, 2020 to SEPTEMBER 30, 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)		1.10						
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	24.7	25.80	0.380	1085.3	1M09G7W
	16QAM			24.0	25.10	0.324	1089.8	1M09D7W
3.0	QPSK	1851.5	1908.5	24.7	25.80	0.380	2689.8	2M69G7W
	16QAM			24.0	25.10	0.324	2685.4	2M69D7W
5.0	QPSK	1852.5	1907.5	24.7	25.80	0.380	4494	4M49G7W
	16QAM			24.2	25.30	0.339	4495.7	4M50D7W
10.0	QPSK	1855.0	1905.0	24.7	25.80	0.380	8948.3	8M95G7W
	16QAM			24.1	25.20	0.331	8924.1	8M92D7W
15.0	QPSK	1857.5	1902.5	24.7	25.80	0.380	13386.6	13M4G7W
	16QAM			24.3	25.40	0.347	13390.6	13M4D7W
20.0	QPSK	1860.0	1900.0	24.7	25.80	0.380	17880.8	17M9G7W
	16QAM			24.3	25.40	0.347	17873.9	17M9D7W

LTE BAND 5

Part 22H								
ERP Limit (W)		7.00						
Antenna Gain (dBi)		-5.30						
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	18.25	0.067	1081.5	1M08G7W
	16QAM			25.0	17.55	0.057	1086.1	1M09D7W
3.0	QPSK	825.5	847.5	25.7	18.25	0.067	2690.6	2M69G7W
	16QAM			25.0	17.55	0.057	2681.1	2M68D7W
5.0	QPSK	826.5	846.5	25.7	18.25	0.067	4496.1	4M50G7W
	16QAM			25.1	17.65	0.058	4499.3	4M50D7W
10.0	QPSK	829.0	844.0	25.7	18.25	0.067	8940.7	8M94G7W
	16QAM			25.1	17.65	0.058	8921.4	8M92D7W

5G NR Band n5

Part 22H								
ERP Limit (W)		7.00						
Antenna Gain (dBi)		-5.30						
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	QPSK	831.5	841.5	25.7	18.25	0.067	13374	13M4G7W
	16QAM			24.5	17.05	0.051	13361	13M4D7W
20.0	BPSK	834.0	839.0	25.7	18.25	0.067	17795	17M8G7W
	16QAM			24.7	17.25	0.053	17765	17M8D7W

LTE BAND 7

Part 27 / RSS 199								
EIRP Limit (W)		2.00						
Antenna Gain (dBi)		-2.00						
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	25.7	23.70	0.234	4514.9	4M51G7W
	16QAM			24.3*	23.20	0.209	4487.4	4M49D7W
10.0	QPSK	2505.0	2565.0	25.7	23.70	0.234	8922.7	8M92G7W
	16QAM			25.0	23.00	0.200	8923.8	8M92D7W
15.0	QPSK	2507.5	2562.5	25.7	23.70	0.234	13398.2	13M4G7W
	16QAM			25.2	23.20	0.209	13411	13M4D7W
20.0	QPSK	2510.0	2560.0	25.7	23.70	0.234	17797.2	17M8G7W
	16QAM			25.2	23.20	0.209	17848.9	17M8D7W

*Values from Ant3 with a gain of -1.1dBi, which have a higher EIRP than Ant1.

LTE BAND 12

Part 27 / RSS 130								
ERP Limit (W)		3.00						
Antenna Gain (dBi)		-5.10						
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	18.45	0.070	1081.7	1M08G7W
	16QAM			25.1	17.85	0.061	1084	1M08D7W
3.0	QPSK	700.5	714.5	25.7	18.45	0.070	2683.1	2M68G7W
	16QAM			25.1	17.85	0.061	2678.1	2M68D7W
5.0	QPSK	701.5	713.5	25.7	18.45	0.070	4496.1	4M50G7W
	16QAM			25.2	17.95	0.062	4492.1	4M49D7W
10.0	QPSK	704.0	711.0	25.7	18.45	0.070	8925.3	8M93G7W
	16QAM			25.1	17.85	0.061	8954.1	8M95D7W

5G NR Band n12

Part 27 / RSS 130								
ERP Limit (W)		3.00						
Antenna Gain (dBi)		-5.10						
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	QPSK	706.5	708.5	25.7	18.45	0.070	13375	13M4G7W
	16QAM			24.7	17.45	0.056	13373	13M4D7W

LTE BAND 13

Part 27 / RSS 130								
ERP Limit (W)		3.00						
Antenna Gain (dBi)		-5.10						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% BW (MHz)	Emission Designator
5.0	QPSK	779.5	784.5	25.7	18.45	0.070	4489.2	4M49G7W
	16QAM			25.3	18.05	0.064	4499.6	4M50D7W
10.0	QPSK	782.0	782.0	25.7	18.45	0.070	8935.4	8M94G7W
	16QAM			24.8	17.55	0.057	8925.7	8M93D7W

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	4490.7	4M49G7W
	16QAM			25.1	17.35	0.054	4503.3	4M50D7W
10.0	QPSK	793.0	793.0	25.7	17.95	0.062	8950.4	8M95G7W
	16QAM			24.8	17.05	0.051	8933	8M93D7W

LTE BAND 17

Part 27 / RSS 130								
ERP Limit (W)		3.00						
Antenna Gain (dBi)		-5.10						
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	18.45	0.070	4506.8	4M51G7W
	16QAM			25.2	17.95	0.062	4498.9	4M50D7W
10.0	QPSK	709.0	711.0	25.7	18.45	0.070	8938.3	8M94G7W
	16QAM			25.0	17.75	0.060	8927.5	8M93D7W

LTE BAND 25

Part 24 / RSS 133								
EIRP Limit (W)		2.00						
Antenna Gain (dBi)		1.10						
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	24.7	25.80	0.380	1084.8	1M08G7W
	16QAM			24.0	25.10	0.324	1092.3	1M09D7W
3.0	QPSK	1851.5	1913.5	24.7	25.80	0.380	2696.5	2M70G7W
	16QAM			23.9	25.00	0.316	2685.2	2M69D7W
5.0	QPSK	1852.5	1912.5	24.7	25.80	0.380	4490.6	4M49G7W
	16QAM			24.0	25.10	0.324	4500.5	4M50D7W
10.0	QPSK	1855.0	1910.0	24.7	25.80	0.380	8963.3	8M96G7W
	16QAM			24.0	25.10	0.324	8931.6	8M93D7W
15.0	QPSK	1857.5	1907.5	24.7	25.80	0.380	13382.1	13M4G7W
	16QAM			24.3	25.40	0.347	13426.8	13M4D7W
20.0	QPSK	1860.0	1905.0	24.7	25.80	0.380	17806.2	17M8G7W
	16QAM			24.3	25.40	0.347	17871.9	17M9D7W

LTE BAND 26 (FCC Part 90S)

Part 90S								
Conducted Limit (W)		100.00						
Antenna Gain (dBi)		-5.30						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP (dBm)	Average (W)	99% BW (kHz)	Emission Designator
1.4	QPSK	814.7	823.3	25.7	18.3	0.067	1080.3	1M08G7W
	16QAM			25.0	17.6	0.057	1080.3	1M08D7W
3.0	QPSK	815.5	822.5	25.7	18.3	0.067	2686.8	2M69G7W
	16QAM			25.1	17.7	0.058	2687.4	2M69D7W
5.0	QPSK	816.5	821.5	25.7	18.3	0.067	4498.3	4M50G7W
	16QAM			25.2	17.8	0.060	4493.5	4M49D7W
10.0	QPSK	819.0	819.0	25.7	18.3	0.067	8942	8M94G7W
	16QAM			24.8	17.4	0.054	8939.1	8M94D7W

LTE BAND 30

Part 27 / RSS 195								
EIRP Limit (W)		0.25						
Antenna Gain (dBi)		0.40						
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	23.1	23.50	0.224	4488.2	4M49G7W
	16QAM			21.8	22.20	0.166	4494.1	4M49D7W
10.0	QPSK	2310.0	2310.0	23.1	23.50	0.224	8954.4	8M95G7W
	16QAM			22.1	22.50	0.178	8954.4	8M95D7W

LTE BAND 41 (NS04)

Part 27								
EIRP Limit (W)		2.00						
Antenna Gain (dBi)		-2.00						
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	27.7	25.70	0.372	4504.2	4M50G7W
	16QAM			26.8	24.80	0.302	4489.7	4M49D7W
10.0	QPSK	2501.0	2685.0	27.7	25.70	0.372	8949.9	8M95G7W
	16QAM			26.9	24.90	0.309	8898.3	8M90D7W
15.0	QPSK	2503.5	2682.5	27.7	25.70	0.372	13376.2	13M4G7W
	16QAM			24.7*	24.70	0.295	13390.1	13M4D7W
20.0	QPSK	2506.0	2680.0	27.7	25.70	0.372	17801	17M8G7W
	16QAM			24.8*	24.80	0.302	17842.9	17M8D7W

*Values from Ant 3 with a gain of 0dBi, which has a higher EIRP than Ant 1.

5G NR Band n41 (NS04)

Part 27								
EIRP Limit (W)		2.00						
Antenna Gain (dBi)		-0.20						
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	26.2	26.00	0.398	17986	18M0G7W
	16QAM			25.4	25.23	0.333	17925	17M9D7W
40.0	BPSK	2516.0	2670.0	26.2	26.00	0.398	35678	35M7G7W
	16QAM			25.4	25.23	0.333	35624	35M6D7W
50.0	QPSK	2521.0	2665.0	26.2	25.98	0.396	45675	45M7G7W
	16QAM			25.4	25.19	0.330	45489	45M5D7W
60.0	BPSK	2526.0	2660.0	26.2	26.00	0.398	57700	57M7G7W
	16QAM			25.2	25.03	0.318	57743	57M7D7W
80.0	QPSK	2536.0	2650.0	26.2	25.97	0.395	76971	77M0G7W
	16QAM			25.4	25.18	0.330	76955	77M0D7W
90.0	BPSK	2541.0	2645.0	26.2	26.00	0.398	85414	85M4G7W
	16QAM			25.2	24.97	0.314	85689	85M7D7W
100.0	QPSK	2546.0	2640.0	26.2	26.00	0.398	96026	96M0G7W
	16QAM			24.6	24.40	0.275	96042	96M0D7W

LTE BAND 48

Part 96								
EIRP Limit (W)/ 10MHz		0.20						
Antenna Gain (dBi)		-3.00						
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	25.0	22.00	0.158	4557.6	4M56G7W
	16QAM			24.3	21.30	0.135	4463.1	4M46D7W
10.0	QPSK	3555.0	3695.0	25.0	22.00	0.158	8933.8	8M93G7W
	16QAM			24.4	21.40	0.138	8933.1	8M93D7W
15.0	QPSK	3557.5	3692.5	25.0	22.00	0.158	13391.5	13M4G7W
	16QAM			24.5	21.50	0.141	13409.1	13M4D7W
20.0	QPSK	3560.0	3690.0	25.2	22.20	0.166	17891.1	17M9G7W
	16QAM			24.4	21.40	0.138	17906.9	17M9D7W

LTE BAND 66

Part 27 / RSS 139								
EIRP Limit (W)		1.00						
Antenna Gain (dBi)		0.40						
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	24.7	25.10	0.324	1085.4	1M09G7W
	16QAM			24.2	24.60	0.288	1087.9	1M09D7W
3.0	QPSK	1711.5	1778.5	24.7	25.10	0.324	2683.1	2M68G7W
	16QAM			24.1	24.50	0.282	2683.3	2M68D7W
5.0	QPSK	1712.5	1777.5	24.7	25.10	0.324	4492.8	4M49G7W
	16QAM			24.2	24.60	0.288	4485.8	4M49D7W
10.0	QPSK	1715.0	1775.0	24.7	25.10	0.324	8942.5	8M94G7W
	16QAM			24.1	24.50	0.282	8954	8M95D7W
15.0	QPSK	1717.5	1772.5	24.7	25.10	0.324	13379	13M4G7W
	16QAM			24.2	24.60	0.288	13391.8	13M4D7W
20.0	QPSK	1720.0	1770.0	24.7	25.10	0.324	17853	17M9G7W
	16QAM			24.3	24.70	0.295	17848.9	17M8D7W

LTE BAND 71

Part 27 / RSS 130								
ERP Limit (W)			3.00					
Antenna Gain (dBi)			-4.40					
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	19.15	0.082	4493.9	4M49G7W
	16QAM			25.0	18.45	0.070	4490.3	4M49D7W
10.0	QPSK	668.0	693.0	25.7	19.15	0.082	8956	8M96G7W
	16QAM			25.0	18.45	0.070	8960.9	8M96D7W
15.0	QPSK	670.5	690.5	25.7	19.15	0.082	13441.9	13M4G7W
	16QAM			25.1	18.55	0.072	13445.8	13M4D7W
20.0	QPSK	673.0	688.0	25.7	19.15	0.082	17921.4	17M9G7W
	16QAM			25.3	18.75	0.075	17.8446	17K8D7W

5G NR Band n77

Part 27								
EIRP Limit (W)			1.00					
Antenna Gain (dBi)			-5.90					
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	3710.0	3970.0	25.7	19.80	0.095	17823	17M8G7W
	16QAM			24.9	19.00	0.079	17899	17M9D7W
40.0	QPSK	3720.0	3960.0	25.7	19.80	0.095	35690	35M7G7W
	16QAM			22.1*	18.90	0.078	35695	35M7D7W
50.0	QPSK	3725.0	3955.0	25.7	19.80	0.095	45608	45M6G7W
	16QAM			24.7	18.80	0.076	45640	45M6D7W
60.0	QPSK	3730.0	3950.0	25.7	19.80	0.095	57844	57M8G7W
	16QAM			22.1*	18.90	0.078	57862	57M9D7W
80.0	QPSK	3740.0	3940.0	25.7	19.80	0.095	76934	76M9G7W
	16QAM			22.1*	18.90	0.078	77084	77M1D7W
90.0	BPSK	3745.0	3935.0	25.7	19.80	0.095	85608	85M6G7W
	16QAM			22.1*	18.90	0.078	85585	85M6D7W
100.0	BPSK	3750.0	3930.0	25.7	19.80	0.095	96520	96M5G7W
	16QAM			24.8	18.90	0.078	96519	96M5D7W

*Values from Ant4 with a gain of -3.2dBi, which has a higher eirp than Ant7.

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 and 5G NR 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	-4.4	-5.4	NA	NA	NA	NA	NA
LTE Band 12, 5G NR Band n12, 699 – 716 MHz	-5.1	-6.4	NA	NA	NA	NA	NA
LTE Band 17, 704 – 716 MHz	-5.1	-6.4	NA	NA	NA	NA	NA
LTE Band 13, 777 – 787 MHz	-5.1	-6.6	NA	NA	NA	NA	NA
LTE Band 14, 788 – 798 MHz	-5.6	-7.3	NA	NA	NA	NA	NA
LTE Band 26, 814 – 824 MHz (Part 90S)	-5.3	-5.5	NA	NA	NA	NA	NA
LTE Band 5, 5G NR Band n5, 824 – 849 MHz	-5.3	-5.0	NA	NA	NA	NA	NA
LTE Band 66, 5G NR Band n66, 1710 – 1780 MHz	-3.1	-2.2	0.4	-1.7	NA	NA	NA
LTE Band 2, 5G NR Band n2, 1850 – 1910 MHz	-2.8	-1.6	1.1	-0.7	NA	NA	NA
LTE Band 25, 5G NR Band n25 1850 – 1915 MHz	-2.8	-1.6	1.1	-0.7	NA	NA	NA
LTE Band 30, 2305 – 2315 MHz	-2.9	-0.3	0.4	1.0	NA	NA	NA
LTE Band 7, 2500 – 2570 MHz	-2.0	-2.4	-1.1	-0.2	NA	NA	NA
LTE Band 41, 5G NR Band n41, 2496 – 2690 MHz	-2.0	-1.7	0	-0.2	NA	NA	NA
5G NR Band n77, 3700 – 3980 MHz	NA	NA	NA	-3.2	-5.9	-5.9	-5.5
LTE Band 48, 3550 – 3700 MHz	NA	NA	NA	-3.0	-4.9	-4.9	-3.0

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 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 Band 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 with Higher BW modes than LTE Bands as 5G NR Band n5, 5G NR Band n12, and 5G NR Band 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 BANDS 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 and 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.

Frequency 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	Y	X	Y	Y	N/A	N/A	N/A
2300 – 2700 MHz	Y	Z	Z	X	N/A	N/A	N/A
3300 – 3980 MHz	N/A	N/A	N/A	X	Y	Y	Y

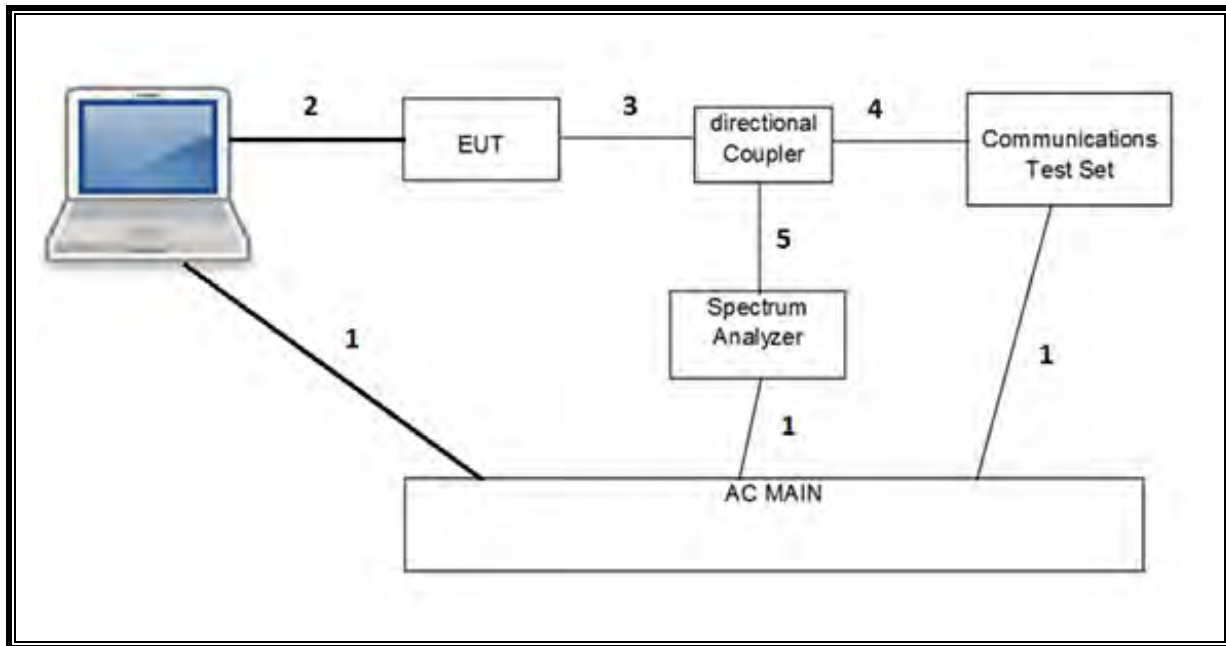
Radiated spurious emissions were investigated from 9kHz to 30MHz, 30MHz-1GHz and above 1GHz. There were no emissions found with less than 20dB of margin from 9kHz to 1GHz.

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.

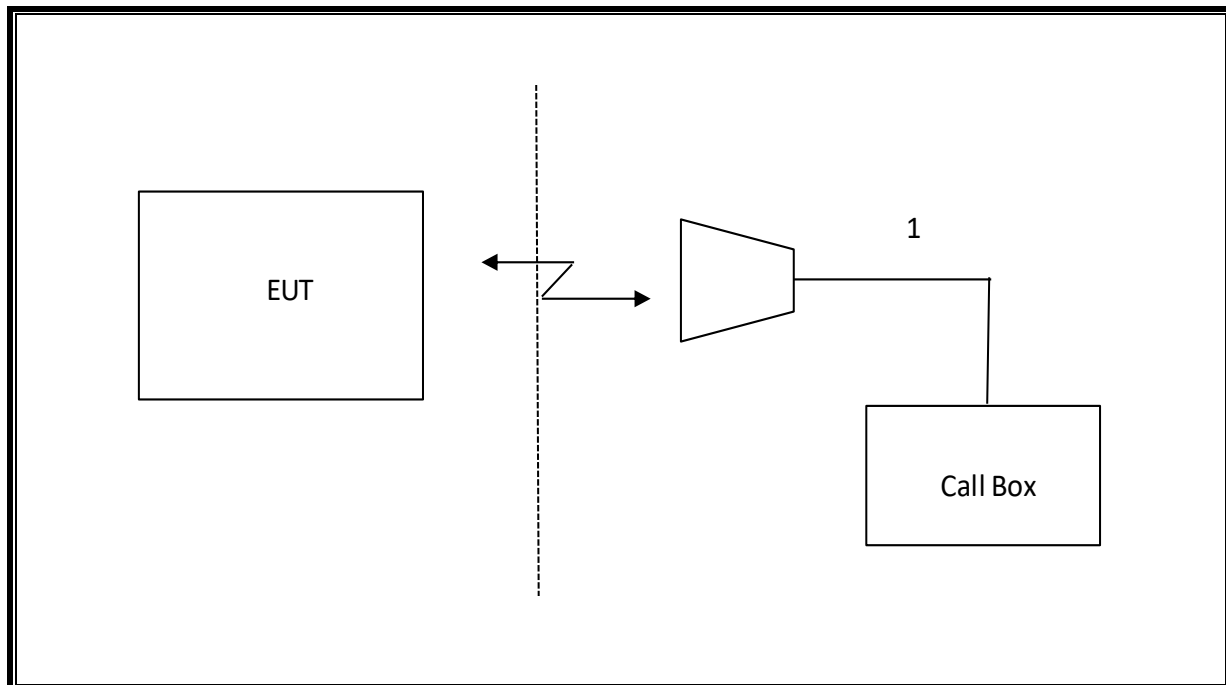
5.6. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT						
Description		Manufacturer	Model	Serial Number		FCC ID/ DoC
Laptop AC/DC adapter		Apple	85W MagSafe 2	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	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	09/16/2021
Directional Coupler	KRYTAR	152610	T1161	09/16/2021
Directional Coupler	KRYTAR	152613	T1537	09/16/2021
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:	5/8/2020 & 8/31/2020
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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 1850.7	18900 1880.0	19193 1909.3	18607 1850.7	18900 1880.0	19193 1909.3	18607 1850.7	18900 1880.0	19193 1909.3	18607 1850.7	18900 1880.0	19193 1909.3
1.4	QPSK	1	0	25.6	25.7	25.6	23.1	23.0	22.8	24.7	24.5	24.4	22.6	22.1	22.1
		1	2	25.7	25.7	25.6	23.1	23.0	22.9	24.7	24.5	24.5	22.7	22.3	22.2
		1	5	25.6	25.6	25.6	23.0	22.9	22.7	24.6	24.5	24.4	22.7	22.2	22.2
		3	0	25.6	25.6	25.6	23.0	22.9	22.7	24.6	24.5	24.4	22.6	22.1	22.2
		3	1	25.7	25.7	25.6	23.0	23.0	22.8	24.6	24.5	24.5	22.7	22.2	22.2
		3	2	25.7	25.7	25.6	23.0	23.0	22.8	24.6	24.5	24.4	22.7	22.2	22.3
	16QAM	6	0	24.8	24.7	24.6	22.1	22.0	21.9	23.7	23.6	23.5	21.7	21.2	21.3
		1	0	24.8	24.8	25.1	22.2	22.4	21.9	23.8	24.0	23.6	21.6	21.4	21.2
		1	2	24.8	24.8	25.1	22.3	22.3	21.9	23.9	24.0	23.6	21.7	21.5	21.3
		1	5	24.8	24.7	25.0	22.2	22.3	21.9	23.8	23.9	23.5	21.7	21.4	21.2
		3	0	24.9	24.7	24.9	22.2	22.2	22.1	23.7	23.7	23.7	21.7	21.2	21.3
		3	1	25.0	24.7	24.9	22.2	22.2	22.1	23.7	23.8	23.7	21.7	21.2	21.3
	64QAM	3	2	25.0	24.7	24.9	22.2	22.2	22.1	23.8	23.8	23.7	21.8	21.2	21.3
		6	0	23.9	23.9	23.6	21.3	20.9	21.1	22.9	22.5	22.7	20.9	20.2	20.2
		1	0	24.1	24.3	24.0	21.8	21.3	21.4	22.9	22.5	22.8	21.0	20.4	20.5
		1	2	24.1	24.3	24.0	21.8	21.3	21.4	22.9	22.6	22.8	21.1	20.4	20.6
		1	5	24.1	24.2	23.9	21.7	21.2	21.3	22.8	22.4	22.8	21.0	20.3	20.5
		3	0	23.9	24.2	24.0	21.7	21.3	21.1	22.7	22.5	22.6	20.8	20.3	20.2
	256QAM	3	1	23.9	24.2	24.0	21.7	21.4	21.2	22.7	22.5	22.6	20.9	20.3	20.2
		3	2	23.9	24.2	24.0	21.7	21.4	21.1	22.7	22.5	22.6	20.9	20.3	20.2
		6	0	23.0	22.9	23.2	20.3	20.5	20.2	21.3	21.7	21.7	19.7	19.3	19.2
		1	0	20.5	20.0	20.1	17.5	17.3	17.7	19.8	20.1	19.8	17.3	17.5	17.2
		1	2	20.6	20.1	20.2	17.7	17.5	17.8	19.9	20.3	19.8	17.4	17.5	17.3
		1	5	20.5	20.1	20.1	17.6	17.5	17.7	19.8	20.2	19.8	17.3	17.5	17.2
		3	0	20.3	20.1	20.2	17.5	17.5	17.8	19.9	20.1	19.8	17.5	17.1	17.2
		3	1	20.4	20.2	20.3	17.5	17.6	17.9	20.0	20.1	19.9	17.6	17.1	17.2
		3	2	20.4	20.2	20.3	17.6	17.6	17.9	20.0	20.1	19.9	17.6	17.1	17.2
		6	0	20.3	20.3	20.2	17.8	17.7	17.8	19.9	20.0	20.1	17.7	17.3	17.1

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	25.6	25.7	23.1	22.9	23.0	24.7	24.5	24.6	22.7	22.1	22.3
		1	7	25.7	25.6	25.7	23.0	22.9	23.0	24.6	24.5	24.6	22.7	22.1	22.3
		1	14	25.6	25.6	25.6	22.9	22.9	22.9	24.6	24.5	24.5	22.7	22.2	22.3
		8	0	24.8	24.8	24.7	22.1	22.0	22.0	23.8	23.6	23.6	21.8	21.2	21.3
		8	4	24.8	24.8	24.7	22.2	22.0	22.1	23.8	23.6	23.6	21.8	21.3	21.3
		8	7	24.7	24.8	24.7	22.1	22.0	22.0	23.8	23.7	23.6	21.8	21.2	21.3
		15	0	24.8	24.8	24.7	22.1	22.1	22.0	23.8	23.6	23.6	21.7	21.3	21.3
	16QAM	1	0	24.9	24.7	25.1	22.2	22.0	22.5	23.8	23.5	24.0	21.7	21.1	21.5
		1	7	24.7	24.7	25.0	22.1	21.9	22.4	23.7	23.5	23.9	21.7	21.2	21.5
		1	14	24.7	24.7	25.0	22.1	21.9	22.4	23.7	23.5	23.8	21.8	21.2	21.5
		8	0	23.8	23.9	23.8	21.2	21.1	21.2	22.8	22.8	22.7	20.8	20.1	20.3
		8	4	23.8	23.9	23.8	21.2	21.2	21.2	22.8	22.8	22.7	20.9	20.2	20.3
		8	7	23.8	23.8	23.8	21.2	21.2	21.2	22.8	22.8	22.7	20.8	20.2	20.3
		15	0	23.7	23.8	23.8	21.1	21.0	21.1	22.7	22.7	22.6	20.7	20.3	20.3
	64QAM	1	0	24.2	24.2	24.0	21.6	21.4	21.3	22.6	22.8	22.8	20.3	20.5	20.4
		1	7	24.1	24.2	24.0	21.5	21.5	21.2	22.6	22.6	22.7	20.3	20.5	20.4
		1	14	24.1	24.1	23.9	21.5	21.4	21.2	22.7	22.5	22.7	20.4	20.5	20.5
		8	0	22.9	23.0	23.0	20.4	20.3	20.2	21.3	21.5	21.8	19.8	19.3	19.3
		8	4	23.0	23.0	23.0	20.4	20.3	20.3	21.4	21.5	21.8	19.8	19.3	19.3
		8	7	23.0	23.0	23.0	20.4	20.3	20.2	21.4	21.6	21.8	19.8	19.3	19.3
		15	0	23.0	22.9	23.0	20.4	20.2	20.2	21.5	21.5	21.7	19.7	19.2	19.3
	256QAM	1	0	20.4	20.6	19.9	18.1	17.8	17.2	19.9	20.5	19.8	17.7	16.8	17.6
		1	7	20.4	20.7	19.9	18.0	17.8	17.2	19.9	20.6	19.8	17.7	16.9	17.6
		1	14	20.4	20.8	20.0	18.1	17.9	17.3	19.9	20.6	19.9	17.8	16.9	17.6
		8	0	20.6	20.4	20.1	17.8	17.5	17.4	20.0	20.2	20.0	17.7	17.2	17.2
		8	4	20.6	20.4	20.2	17.9	17.6	17.4	20.1	20.2	20.0	17.8	17.2	17.2
		8	7	20.6	20.4	20.2	17.9	17.6	17.5	20.1	20.3	20.1	17.8	17.2	17.2
		15	0	20.5	20.3	20.3	17.8	17.5	17.6	20.0	20.2	20.2	17.7	17.2	17.2

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
5.0	QPSK	1	0	25.6	25.6	25.5	23.1	22.9	22.9	24.7	24.6	24.4	22.6	22.1	22.3
		1	12	25.7	25.7	25.6	23.1	23.0	22.9	24.7	24.6	24.5	22.7	22.2	22.3
		1	24	25.6	25.6	25.4	23.0	23.0	22.8	24.7	24.6	24.4	22.7	22.3	22.3
		12	0	24.7	24.7	24.6	22.1	22.0	21.9	23.8	23.7	23.6	21.8	21.3	21.4
		12	6	24.7	24.7	24.6	22.2	22.0	21.9	23.8	23.6	23.6	21.8	21.3	21.4
		12	11	24.6	24.6	24.6	22.1	22.0	21.9	23.7	23.6	23.5	21.8	21.3	21.4
		25	0	24.6	24.6	24.6	22.1	22.0	21.9	23.7	23.6	23.5	21.8	21.3	21.4
	16QAM	1	0	24.8	24.8	25.1	22.2	22.1	22.4	23.8	23.7	24.1	21.9	21.1	21.4
		1	12	24.9	24.8	25.2	22.4	22.2	22.5	23.9	23.7	24.2	21.9	21.2	21.5
		1	24	24.8	24.7	25.1	22.3	22.1	22.4	23.9	23.7	24.1	22.0	21.2	21.5
		12	0	23.8	23.8	23.8	21.2	21.1	21.1	22.8	22.7	22.7	20.9	20.4	20.4
		12	6	23.8	23.8	23.8	21.3	21.1	21.1	22.9	22.7	22.7	20.9	20.4	20.4
		12	11	23.7	23.7	23.7	21.2	21.1	21.1	22.8	22.7	22.7	20.9	20.3	20.4
		25	0	23.7	23.7	23.6	21.1	21.0	21.0	22.7	22.6	22.6	20.8	20.3	20.4
	64QAM	1	0	24.1	23.7	24.1	21.5	20.9	21.2	22.6	22.5	22.9	21.0	20.0	20.9
		1	12	24.1	23.7	24.1	21.5	20.9	21.3	22.7	22.3	23.0	21.0	20.1	20.9
		1	24	24.0	23.7	24.0	21.4	20.9	21.2	22.8	22.2	22.9	21.1	20.1	20.9
		12	0	23.0	22.9	22.8	20.3	20.1	20.0	21.4	21.5	21.6	19.8	19.3	19.5
		12	6	23.0	22.9	22.8	20.3	20.1	20.0	21.5	21.5	21.6	19.8	19.4	19.5
		12	11	22.9	22.8	22.8	20.3	20.1	19.9	21.6	21.5	21.5	19.8	19.4	19.5
		25	0	22.9	22.8	22.8	20.3	20.0	19.9	21.4	21.4	21.6	19.7	19.4	19.4
	256QAM	1	0	20.3	19.9	20.3	17.6	16.9	17.5	20.0	19.8	20.2	18.1	17.5	17.6
		1	12	20.4	19.9	20.3	17.6	17.0	17.5	20.0	19.9	20.2	18.0	17.5	17.6
		1	24	20.4	20.0	20.3	17.7	17.1	17.6	20.0	19.9	20.3	18.1	17.6	17.6
		12	0	20.3	20.1	20.2	17.6	17.3	17.4	19.9	20.1	20.1	17.8	17.3	17.3
		12	6	20.3	20.2	20.2	17.6	17.3	17.4	20.0	20.2	20.2	17.8	17.3	17.3
		12	11	20.4	20.2	20.2	17.7	17.3	17.4	20.0	20.2	20.1	17.8	17.3	17.3
		25	0	20.4	20.3	20.1	17.7	17.4	17.4	20.0	20.2	20.1	17.8	17.3	17.4

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	25.2	25.3	25.7	22.7	22.6	23.1	24.3	24.3	24.7	22.6	22.1	22.3
		1	24	25.5	25.5	25.6	23.1	23.0	23.0	24.7	24.5	24.6	22.7	22.2	22.2
		1	49	25.3	25.4	25.6	22.7	22.9	23.0	24.4	24.4	24.6	22.7	22.2	22.3
		25	0	24.5	24.5	24.6	22.0	21.9	21.9	23.7	23.5	23.6	21.8	21.2	21.3
		25	12	24.7	24.7	24.7	22.2	22.1	22.0	23.8	23.7	23.7	21.8	21.3	21.3
		25	24	24.6	24.6	24.6	22.1	22.0	22.0	23.7	23.6	23.6	21.8	21.3	21.4
		50	0	24.6	24.6	24.6	22.1	22.0	21.9	23.7	23.6	23.6	21.8	21.3	21.4
	16QAM	1	0	24.3	24.2	25.1	21.9	21.6	22.4	23.4	23.3	24.1	21.9	21.3	21.4
		1	24	24.6	24.5	25.0	22.2	22.0	22.4	23.7	23.6	24.0	21.9	21.3	21.3
		1	49	24.4	24.4	25.0	21.9	21.8	22.4	23.5	23.5	24.0	21.9	21.4	21.4
		25	0	23.6	23.5	23.6	21.1	20.9	21.0	22.7	22.6	22.6	20.8	20.2	20.4
		25	12	23.8	23.7	23.8	21.3	21.1	21.1	22.9	22.7	22.8	20.9	20.4	20.4
		25	24	23.7	23.6	23.6	21.2	21.0	21.0	22.8	22.6	22.6	20.9	20.4	20.5
		50	0	23.6	23.6	23.7	21.1	21.0	21.0	22.7	22.6	22.6	20.9	20.4	20.5
	64QAM	1	0	23.6	23.7	24.0	21.1	21.0	21.2	22.2	22.6	22.9	20.9	19.8	20.7
		1	24	24.0	24.1	24.0	21.4	21.1	21.1	22.9	22.7	22.9	21.0	19.9	20.7
		1	49	23.7	23.9	23.9	21.1	21.1	21.1	22.8	22.1	22.7	21.0	20.0	20.8
		25	0	22.8	22.8	22.8	20.2	20.0	20.1	21.4	21.6	21.8	19.8	19.3	19.4
		25	12	22.9	22.9	23.0	20.4	20.2	20.2	21.8	21.6	21.9	19.8	19.4	19.4
		25	24	22.8	22.8	22.9	20.3	20.1	20.1	21.8	21.4	21.7	19.8	19.4	19.5
		50	0	22.8	22.8	22.9	20.2	20.1	20.0	21.5	21.5	21.7	19.9	19.4	19.4
	256QAM	1	0	20.8	19.9	20.3	17.7	17.8	17.2	20.4	19.9	20.1	18.1	17.3	17.1
		1	24	20.8	20.0	20.2	17.7	17.8	17.3	20.4	20.0	20.1	18.1	17.3	17.1
		1	49	20.9	20.0	20.2	17.7	17.9	17.3	20.5	19.9	20.2	18.1	17.3	17.0
		25	0	20.4	20.2	20.3	17.7	17.4	17.5	20.0	20.2	20.1	17.9	17.2	17.4
		25	12	20.4	20.3	20.3	17.8	17.5	17.5	20.0	20.3	20.1	17.8	17.4	17.5
		25	24	20.4	20.3	20.3	17.8	17.5	17.6	20.0	20.3	20.2	17.8	17.4	17.5
		50	0	20.4	20.2	20.2	17.8	17.5	17.5	20.0	20.2	20.1	17.9	17.4	17.4

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
15.0	QPSK	1	0	1857.5	1880.0	1902.5	1857.5	1880.0	1902.5	1857.5	1880.0	1902.5	1857.5	1880.0	1902.5
		1	37	25.5	25.6	25.7	23.0	22.9	23.1	24.6	24.6	24.7	22.7	22.3	22.4
		1	74	25.6	25.6	25.6	23.0	23.1	23.0	24.6	24.6	24.6	22.6	22.3	22.3
		36	0	24.6	24.6	24.6	22.0	21.9	22.0	23.7	23.5	23.6	21.8	21.3	21.4
		36	16	24.7	24.7	24.7	22.2	22.1	22.0	23.8	23.7	23.7	21.8	21.4	21.5
		36	35	24.7	24.7	24.7	22.1	22.1	22.1	23.8	23.7	23.7	21.8	21.4	21.5
		75	0	24.7	24.7	24.7	22.1	22.1	22.1	23.7	23.6	23.7	21.7	21.4	21.5
	16QAM	1	0	25.0	24.6	25.1	22.6	21.9	22.5	24.0	23.6	24.1	21.7	21.3	21.5
		1	37	25.2	24.7	25.1	22.7	22.0	22.4	24.3	23.6	24.1	21.8	21.3	21.5
		1	74	25.2	24.7	25.0	22.6	22.1	22.4	24.3	23.7	24.0	21.8	21.4	21.4
		36	0	23.6	23.6	23.7	21.0	20.9	21.0	22.7	22.6	22.7	20.9	20.3	20.5
		36	16	23.7	23.7	23.7	21.2	21.1	21.1	22.8	22.7	22.7	20.9	20.5	20.5
		36	35	23.7	23.7	23.8	21.1	21.1	21.1	22.8	22.7	22.8	20.8	20.5	20.6
		75	0	23.7	23.7	23.6	21.1	21.0	21.1	22.7	22.7	22.7	20.8	20.4	20.6
	64QAM	1	0	24.2	24.1	23.9	21.7	21.3	21.2	22.7	23.0	22.8	20.7	20.0	20.9
		1	37	24.4	24.1	24.0	21.8	21.4	21.2	23.3	22.4	22.9	20.8	20.0	20.8
		1	74	24.4	24.1	23.9	21.7	21.5	21.1	23.3	22.5	22.7	20.8	20.0	20.9
		36	0	22.8	22.8	22.9	20.1	20.0	20.1	21.3	21.7	21.8	19.9	19.5	19.6
		36	16	22.9	23.0	23.0	20.3	20.2	20.2	21.7	21.4	21.8	19.9	19.5	19.7
		36	35	22.9	23.0	23.0	20.2	20.2	20.2	21.9	21.2	21.9	19.9	19.6	19.8
		75	0	22.9	22.9	22.9	20.2	20.1	20.1	21.7	21.4	21.8	19.9	19.5	19.6
	256QAM	1	0	20.6	19.8	20.3	17.6	17.6	17.2	19.9	20.1	19.6	18.0	17.4	17.2
		1	37	20.6	19.9	20.3	17.7	17.7	17.3	20.0	20.2	19.6	18.1	17.4	17.3
		1	74	20.6	20.0	20.3	17.8	17.7	17.3	20.1	20.3	19.7	18.1	17.5	17.2
		36	0	20.2	20.0	20.1	17.5	17.3	17.5	19.7	19.8	19.8	17.9	17.5	17.6
		36	16	20.3	20.2	20.2	17.6	17.4	17.6	19.5	19.9	19.8	17.9	17.5	17.6
		36	35	20.3	20.2	20.1	17.6	17.4	17.6	19.7	19.9	20.0	17.8	17.5	17.6
		75	0	20.3	20.1	20.1	17.6	17.4	17.5	19.7	19.9	19.8	17.9	17.5	17.6

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	18900	19100	18700	18900	19100	18700	18900	19100	18700	18900	19100
				1860.0	1880.0	1900.0	1860.0	1880.0	1900.0	1860.0	1880.0	1900.0	1860.0	1880.0	1900.0
20.0	QPSK	1	0	25.6	25.6	25.6	23.1	22.9	23.0	24.7	24.7	24.7	22.7	22.4	22.5
		1	49	25.6	25.6	25.7	22.9	22.9	23.0	24.7	24.6	24.7	22.7	22.3	22.5
		1	99	25.5	25.6	25.6	22.9	23.0	22.9	24.6	24.6	24.6	22.5	22.3	22.4
		50	0	24.5	24.6	24.6	22.0	21.8	21.9	23.6	23.6	23.6	21.6	21.2	21.4
		50	24	24.7	24.7	24.8	22.1	22.0	22.0	23.8	23.7	23.8	21.7	21.3	21.5
		50	49	24.6	24.7	24.7	22.0	22.0	22.0	23.7	23.7	23.7	21.6	21.3	21.5
	16QAM	100	0	24.6	24.6	24.7	22.0	22.0	22.0	23.8	23.6	23.7	21.7	21.4	21.5
		1	0	25.0	25.2	25.1	22.5	22.5	22.5	24.1	24.2	24.1	21.8	21.5	21.4
		1	49	25.0	25.2	25.1	22.4	22.5	22.5	24.1	24.3	24.1	21.8	21.4	21.4
		1	99	25.0	25.2	25.1	22.4	22.5	22.4	24.1	24.3	24.1	21.7	21.5	21.3
		50	0	23.5	23.6	23.6	20.9	20.9	21.0	22.6	22.6	22.6	20.7	20.3	20.5
		50	24	23.7	23.7	23.8	21.0	21.1	21.1	22.8	22.7	22.8	20.8	20.4	20.6
	64QAM	50	49	23.6	23.7	23.8	21.0	21.1	21.1	22.7	22.7	22.7	20.8	20.4	20.6
		100	0	23.7	23.7	23.7	21.0	21.0	21.0	22.8	22.7	22.7	20.8	20.5	20.6
		1	0	24.0	24.1	24.4	21.3	21.3	21.7	22.6	23.0	23.3	20.8	20.9	20.5
		1	49	24.0	24.2	24.5	21.3	21.3	21.7	23.2	22.5	23.4	20.8	20.8	20.6
		1	99	24.0	24.2	24.4	21.2	21.4	21.6	23.0	22.8	23.2	20.7	20.9	20.5
		50	0	22.7	22.8	22.8	20.1	20.0	20.0	21.3	21.7	21.7	19.8	19.4	19.6
	256QAM	50	24	22.9	23.0	23.0	20.2	20.2	20.1	21.9	21.4	21.9	19.9	19.5	19.6
		50	49	22.9	23.0	22.9	20.1	20.2	20.1	21.8	21.2	21.8	19.8	19.5	19.7
		100	0	22.8	22.9	22.8	20.1	20.1	20.0	21.7	21.5	21.8	19.8	19.5	19.6
		1	0	20.0	20.2	20.2	17.3	17.4	17.5	19.7	20.1	20.0	18.0	17.6	17.6
		1	49	20.0	20.2	20.3	17.3	17.4	17.6	19.7	20.1	20.1	18.1	17.6	17.7
		1	99	20.0	20.3	20.2	17.4	17.5	17.6	19.8	20.2	20.1	18.1	17.7	17.5
		50	0	20.2	20.1	20.1	17.4	17.2	17.4	19.7	19.9	19.9	17.8	17.4	17.6
		50	24	20.3	20.1	20.2	17.6	17.3	17.5	19.9	20.1	19.9	17.8	17.5	17.6
		50	49	20.2	20.2	20.2	17.6	17.3	17.5	19.9	20.1	20.0	17.8	17.5	17.7
		100	0	20.2	20.0	20.1	17.5	17.3	17.5	19.9	19.9	19.9	17.8	17.5	17.6

7.2. LTE BAND 5

Test Engineer ID:	39004	Test Date:	5/7/2020 & 8/29/2020
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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	25.5	25.5	23.8	23.8	23.9
		1	2	25.7	25.6	25.5	23.9	23.9	23.9
		1	5	25.6	25.6	25.5	23.8	23.8	23.8
		3	0	25.6	25.5	25.5	23.8	23.8	23.8
		3	1	25.6	25.6	25.5	23.9	23.8	23.9
		3	2	25.7	25.6	25.6	23.9	23.8	23.8
		6	0	24.7	24.6	24.5	22.9	22.8	22.9
	16QAM	1	0	24.7	24.6	25.0	22.9	22.9	23.3
		1	2	24.8	24.8	25.0	23.0	23.1	23.3
		1	5	24.8	24.7	25.0	23.0	23.0	23.2
		3	0	24.9	24.7	24.8	23.1	22.9	23.1
		3	1	24.9	24.7	24.8	23.2	23.0	23.2
		3	2	24.9	24.7	24.8	23.2	23.0	23.2
		6	0	23.9	23.7	23.5	22.1	22.0	21.8
	64QAM	1	0	24.0	24.1	23.8	22.3	22.0	22.2
		1	2	24.1	24.3	23.9	22.5	22.1	22.2
		1	5	24.1	24.2	23.8	22.3	22.0	22.0
		3	0	23.9	24.1	23.8	22.3	22.0	21.9
		3	1	23.9	24.1	23.9	22.4	22.1	22.0
		3	2	23.9	24.2	23.9	22.3	22.1	21.9
		6	0	23.0	22.8	23.0	20.9	21.2	21.0
	256QAM	1	0	20.1	19.6	19.8	17.6	17.3	18.4
		1	2	20.2	19.7	19.9	17.7	18.2	18.4
		1	5	20.1	19.6	19.7	17.5	18.2	18.3
		3	0	19.9	19.7	19.9	17.5	18.2	18.3
		3	1	20.1	19.7	19.9	17.6	18.3	18.2
		3	2	20.0	19.8	19.9	17.5	18.3	18.2
		6	0	19.9	19.9	19.8	17.5	18.4	18.2

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
				825.5	836.5	847.5	825.5	836.5	847.5
3.0	QPSK	1	0	25.6	25.5	25.5	23.9	23.8	23.9
		1	7	25.7	25.5	25.6	23.9	23.8	23.9
		1	14	25.7	25.6	25.6	23.9	23.9	23.9
		8	0	24.8	24.6	24.6	23.0	22.9	22.9
		8	4	24.8	24.7	24.7	23.0	23.0	22.9
		8	7	24.8	24.7	24.7	23.0	23.0	23.0
		15	0	24.8	24.7	24.6	23.0	22.9	22.9
	16QAM	1	0	24.8	24.5	25.0	22.9	22.8	23.3
		1	7	24.8	24.7	25.0	23.0	22.9	23.3
		1	14	24.8	24.7	25.0	23.0	22.9	23.3
		8	0	23.9	23.7	23.7	22.0	22.0	22.0
		8	4	23.9	23.8	23.8	22.1	22.1	22.0
		8	7	23.9	23.9	23.8	22.1	22.1	22.1
		15	0	23.8	23.8	23.6	22.0	22.0	22.0
	64QAM	1	0	24.2	24.0	23.8	22.2	22.2	22.1
		1	7	24.2	24.1	23.9	22.2	22.2	22.1
		1	14	24.1	24.2	23.9	22.2	22.2	22.1
		8	0	22.9	22.8	22.8	21.0	21.0	21.0
		8	4	23.0	22.9	22.9	21.1	21.1	21.0
		8	7	23.0	22.9	22.9	21.1	21.1	21.1
		15	0	23.0	22.9	22.8	21.1	21.0	21.0
	256QAM	1	0	20.2	20.4	19.7	18.2	18.9	18.1
		1	2	20.1	20.3	19.7	18.1	18.9	18.0
		1	5	20.0	20.4	19.7	18.1	18.9	18.0
		3	0	20.2	20.0	19.9	18.3	18.6	18.2
		3	1	20.2	20.1	19.9	18.3	18.6	18.2
		3	2	20.2	20.0	19.9	18.6	18.3	18.2
		6	0	20.2	20.0	20.0	18.5	18.2	18.3

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
				826.5	836.5	846.5	826.5	836.5	846.5
5.0	QPSK	1	0	25.6	25.6	25.4	23.8	23.8	23.7
		1	12	25.7	25.7	25.5	23.9	23.8	23.8
		1	24	25.7	25.6	25.5	23.9	23.8	23.8
		12	0	24.7	24.6	24.5	22.9	22.8	22.8
		12	6	24.8	24.7	24.6	22.9	22.9	22.9
		12	11	24.8	24.6	24.6	22.9	22.8	22.9
		25	0	24.7	24.6	24.6	22.9	22.8	22.9
	16QAM	1	0	24.8	24.7	25.1	23.0	22.9	23.4
		1	12	25.0	24.9	25.1	23.2	23.0	23.5
		1	24	24.9	24.9	25.1	23.1	23.0	23.3
		12	0	23.7	23.6	23.7	21.9	21.9	22.0
		12	6	23.8	23.7	23.8	22.0	21.9	22.1
		12	11	23.8	23.7	23.7	22.0	21.9	22.0
		25	0	23.7	23.7	23.7	21.9	21.9	22.0
	64QAM	1	0	24.1	23.6	24.0	22.2	21.7	22.2
		1	12	24.3	23.7	24.0	22.3	21.8	22.2
		1	24	24.1	23.7	24.0	22.3	21.8	22.1
		12	0	22.9	22.8	22.6	21.0	20.9	20.8
		12	6	23.0	22.8	22.7	21.0	21.0	20.9
		12	11	23.0	22.8	22.7	21.0	21.0	20.9
		25	0	22.9	22.7	22.7	21.0	20.9	20.9
	256QAM	1	0	20.2	19.6	20.1	18.3	18.0	18.6
		1	12	20.0	19.6	20.0	18.2	18.0	18.5
		1	24	20.0	19.6	19.9	18.2	18.0	18.4
		12	0	20.1	19.9	20.0	18.2	18.2	18.4
		12	6	20.1	19.8	19.9	18.2	18.3	18.4
		12	11	20.0	19.8	19.9	18.1	18.3	18.4
		25	0	20.1	19.9	19.8	18.2	18.4	18.4

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
				829.0	836.5	844.0	829.0	836.5	844.0
10.0	QPSK	1	0	25.7	25.6	25.7	23.9	23.8	23.9
		1	24	25.6	25.6	25.6	23.8	23.8	23.9
		1	49	25.5	25.6	25.6	23.8	23.9	23.8
		25	0	24.7	24.6	24.6	22.9	22.8	22.9
		25	12	24.7	24.7	24.6	23.0	22.9	22.9
		25	24	24.7	24.7	24.6	22.9	22.9	22.9
		50	0	24.7	24.6	24.6	22.9	22.8	22.8
	16QAM	1	0	24.8	24.6	25.1	23.0	22.9	23.3
		1	24	24.7	24.6	25.0	22.9	22.8	23.3
		1	49	24.7	24.7	25.0	22.9	22.8	23.3
		25	0	23.8	23.6	23.7	22.0	21.9	21.9
		25	12	23.8	23.7	23.7	22.1	21.9	21.9
		25	24	23.8	23.7	23.7	22.1	21.9	21.9
		50	0	23.7	23.6	23.6	21.9	21.9	21.8
	64QAM	1	0	24.1	24.1	23.9	22.2	22.2	22.0
		1	24	24.0	24.1	23.9	22.1	22.2	22.0
		1	49	23.9	24.2	23.9	22.1	22.2	22.1
		25	0	22.9	22.8	22.9	21.0	20.9	20.9
		25	12	23.0	22.9	22.9	21.1	21.0	21.0
		25	24	22.9	22.9	22.9	21.1	21.0	21.0
		50	0	22.8	22.8	22.8	21.0	20.9	20.8
	256QAM	1	0	20.1	20.3	19.6	18.3	18.8	18.2
		1	24	20.1	20.3	19.7	18.3	18.9	18.3
		1	49	20.0	20.3	19.7	18.3	18.9	18.2
		25	0	20.2	19.9	20.0	18.5	18.4	18.5
		25	12	20.2	20.0	19.9	18.5	18.5	18.5
		25	24	20.1	19.9	19.9	18.4	18.5	18.5
		50	0	20.1	20.0	19.9	18.5	18.5	18.4

7.3. 5G NR Band n5

Test Engineer ID:	23547	Test Date:	8/14/2020
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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	25.2	25.2	24.7	23.3	23.5	23.6
		1	1	25.4	25.1	25.3	22.3	22.9	23.1
		36	18	25.5	25.3	25.4	23.3	23.2	23.2
		75	0	25.0	24.9	24.8	23.4	23.3	23.1
	QPSK	1	0	24.3	24.4	24.3	22.8	22.8	23.1
		1	1	25.2	25.7	25.2	23.9	23.5	23.3
		36	18	25.5	25.4	25.5	23.2	23.3	23.1
		75	0	24.5	24.4	24.4	23.0	22.8	22.8
	16QAM	1	0	22.8	22.5	19.6	21.3	21.2	21.4
		1	1	24.2	23.3	23.3	22.1	22.2	21.9
		36	18	24.5	23.4	23.5	21.8	22.0	21.7
		75	0	23.5	22.4	22.4	21.0	20.9	20.8
	64QAM	1	0	21.8	21.0	21.0	21.2	21.1	20.8
		1	1	23.1	21.0	21.1	21.3	21.6	21.3
		36	18	22.5	20.9	20.9	21.5	21.2	21.2
		75	0	21.5	20.9	20.9	21.6	21.3	21.2
	256QAM	1	0	20.6	20.7	20.8	19.1	19.1	18.4
		1	1	20.3	20.6	20.5	19.4	19.1	19.2
		36	18	20.5	20.4	20.5	19.0	18.8	19.0
		75	0	20.5	20.5	20.5	19.0	18.9	18.9

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	25.2	24.9	24.6	23.8	23.3	23.6
		1	1	25.5	25.6	25.7	23.9	23.4	23.6
		50	25	25.5	25.4	25.5	23.4	23.2	23.1
		100	1	22.0	22.0	22.0	20.8	20.3	20.2
	QPSK	1	0	24.6	24.3	24.7	22.9	22.6	22.9
		1	1	25.0	25.5	25.4	23.4	23.4	23.2
		50	25	25.4	25.5	25.6	23.3	23.3	23.3
		100	1	24.4	24.4	24.4	22.9	22.8	22.7
	16QAM	1	0	23.7	23.4	23.5	21.2	21.2	20.9
		1	1	24.5	24.7	24.3	22.4	22.3	22.0
		50	25	24.4	24.4	24.5	21.9	21.8	21.8
		100	1	23.5	23.5	23.5	20.9	20.9	20.8
	64QAM	1	0	23.1	22.8	23.1	21.5	20.9	21.4
		1	1	23.3	23.2	23.5	21.1	21.3	21.2
		50	25	23.0	22.9	22.9	21.4	21.3	21.3
		100	1	23.1	22.9	23.0	21.4	21.4	21.3
	256QAM	1	0	20.9	20.7	20.7	19.3	19.4	19.0
		1	1	21.0	20.3	20.5	18.8	18.8	18.9
		50	25	20.4	20.4	20.3	18.9	18.9	18.9
		100	1	20.4	20.3	20.4	18.9	18.9	18.9

7.4. LTE BAND 7

Test Engineer ID:	39004	Test Date:	5/7/2020 & 8/31/2020
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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
				2502.5	2535.0	2567.5	2502.5	2535.0	2567.5	2502.5	2535.0	2567.5	2502.5	2535.0	2567.5
5.0	QPSK	1	0	24.3	25.6	25.4	22.7	22.6	22.7	24.5	24.7	24.6	22.1	22.2	22.1
		1	12	24.6	25.6	25.4	22.7	22.6	22.8	24.6	24.6	24.7	22.1	22.1	22.1
		1	24	24.7	25.7	25.5	22.7	22.7	22.8	24.7	24.7	24.7	22.1	22.2	22.1
		12	0	24.3	24.6	24.5	21.6	21.7	21.7	23.9	23.8	23.7	21.1	21.2	21.1
		12	6	24.6	24.6	24.5	21.7	21.8	21.8	24.0	23.8	23.7	21.1	21.2	21.1
		12	11	24.7	24.6	24.5	21.7	21.7	21.8	24.1	23.8	23.7	21.1	21.2	21.1
		25	0	24.4	24.6	24.5	21.7	21.7	21.8	23.8	23.7	23.6	21.1	21.2	21.1
	16QAM	1	0	24.2	24.8	25.0	21.9	22.2	21.9	23.8	24.3	23.8	21.3	21.8	21.3
		1	12	24.5	24.8	25.0	21.9	22.2	21.9	23.9	24.2	23.8	21.4	21.7	21.2
		1	24	24.7	24.9	25.0	21.9	22.2	22.0	24.1	24.3	23.9	21.4	21.7	21.3
		12	0	23.3	23.7	23.6	20.8	20.9	20.8	22.9	22.9	22.7	20.2	20.4	20.3
		12	6	23.5	23.7	23.7	20.9	20.9	20.9	23.1	22.9	22.8	20.3	20.4	20.3
		12	11	23.7	23.7	23.6	20.8	20.9	20.9	23.2	22.9	22.7	20.3	20.4	20.3
		25	0	23.3	23.6	23.6	20.8	20.8	20.8	22.9	22.8	22.6	20.2	20.3	20.2
	64QAM	1	0	22.5	23.6	24.0	20.3	20.1	20.5	21.7	23.1	22.9	19.2	20.7	20.7
		1	12	22.7	23.6	23.9	20.6	20.2	20.5	22.0	23.0	22.9	19.8	20.6	20.6
		1	24	23.2	23.7	24.0	20.6	20.2	20.5	22.3	23.0	22.9	20.1	20.7	20.5
		12	0	21.5	22.8	22.6	19.3	19.3	19.1	21.3	21.6	21.6	19.1	19.3	19.4
		12	6	21.8	22.8	22.6	19.3	19.3	19.2	21.6	21.7	21.7	19.5	19.4	19.5
		12	11	22.1	22.8	22.6	19.3	19.3	19.2	21.7	21.7	21.7	19.5	19.3	19.4
		25	0	21.7	22.7	22.6	19.3	19.3	19.2	21.4	21.7	21.6	19.2	19.3	19.4
	256QAM	1	0	19.0	20.6	20.5	17.1	18.4	18.4	19.0	20.1	20.2	16.4	17.9	17.2
		1	12	18.9	20.5	20.4	17.0	18.4	18.3	19.1	20.0	20.2	16.5	17.8	17.2
		1	24	19.0	20.6	20.4	17.1	18.5	18.3	19.5	20.1	20.2	16.6	17.9	17.3
		12	0	19.5	20.5	20.4	17.4	18.3	18.3	19.0	20.2	20.1	16.7	17.8	17.3
		12	6	19.5	20.5	20.4	17.4	18.3	18.3	19.2	20.2	20.1	16.8	17.8	17.4
		12	11	19.5	20.5	20.4	17.3	18.3	18.3	19.2	20.2	20.1	16.8	17.8	17.3
		25	0	19.6	20.6	20.4	17.4	18.4	18.4	19.2	20.3	20.1	16.9	17.8	17.1

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	25.2	25.6	25.6	22.7	22.8	22.6	24.4	24.2	24.2	22.0	22.1	22.1
		1	24	25.6	25.6	25.6	22.7	22.7	22.6	24.6	24.2	24.2	22.1	22.1	22.0
		1	49	25.6	25.7	25.6	22.7	22.7	22.7	24.7	24.3	24.3	22.2	22.1	22.1
		25	0	24.8	24.8	24.6	21.8	21.8	21.7	23.7	23.3	23.3	21.2	21.2	21.1
		25	12	24.8	24.8	24.6	21.8	21.8	21.8	23.8	23.4	23.3	21.3	21.3	21.2
		25	24	24.7	24.8	24.6	21.8	21.8	21.8	23.7	23.4	23.3	21.2	21.2	21.2
		50	0	24.7	24.7	24.5	21.7	21.8	21.8	23.7	23.3	23.2	21.2	21.2	21.1
	16QAM	1	0	24.8	24.6	25.0	21.7	22.2	21.8	23.8	23.3	23.6	21.1	21.3	21.1
		1	24	24.7	24.6	25.0	21.7	22.1	21.8	23.7	23.2	23.6	21.3	21.2	21.0
		1	49	24.7	24.7	25.0	21.7	22.2	21.9	23.8	23.3	23.7	21.4	21.3	21.1
		25	0	23.9	23.8	23.6	20.9	20.9	20.8	22.8	22.4	22.3	20.3	20.4	20.2
		25	12	23.9	23.8	23.6	20.8	20.9	21.0	22.9	22.4	22.3	20.4	20.4	20.2
		25	24	23.8	23.8	23.7	20.9	20.9	20.9	22.8	22.4	22.3	20.4	20.4	20.2
		50	0	23.7	23.7	23.5	20.8	20.8	20.8	22.7	22.3	22.2	20.3	20.2	20.2
	64QAM	1	0	22.6	24.2	23.8	20.3	20.5	20.2	21.7	22.6	22.3	19.5	20.7	19.1
		1	24	23.5	24.2	23.9	20.3	20.5	20.3	22.5	22.6	22.3	20.3	20.6	20.4
		1	49	24.1	24.2	23.9	20.4	20.6	20.4	22.9	22.7	22.5	20.7	20.7	20.5
		25	0	22.2	22.9	22.8	19.2	19.3	19.2	21.4	21.3	21.3	19.5	19.4	19.3
		25	12	22.9	23.0	22.8	19.3	19.3	19.3	21.8	21.4	21.3	19.6	19.4	19.3
		25	24	23.0	22.9	22.9	19.3	19.3	19.3	21.7	21.4	21.3	19.6	19.3	19.3
		50	0	22.7	22.9	22.7	19.1	19.2	19.2	21.6	21.2	21.2	19.5	19.2	19.1
	256QAM	1	0	20.1	20.6	20.6	17.3	18.4	18.7	18.8	20.5	20.7	16.6	18.2	17.4
		1	24	20.1	20.5	20.4	17.1	18.3	18.7	19.2	20.3	20.5	16.7	18.1	17.3
		1	49	20.1	20.6	20.5	17.1	18.4	18.7	19.5	20.4	20.6	16.8	18.1	17.4
		25	0	20.3	20.5	20.5	17.5	18.5	18.3	19.3	20.5	20.2	16.8	17.8	17.5
		25	12	20.3	20.6	20.5	17.5	18.5	18.4	19.5	20.5	20.2	16.8	17.8	17.5
		25	24	20.3	20.6	20.4	17.4	18.4	18.4	19.6	20.4	20.2	16.8	17.8	17.5
		50	0	20.3	20.6	20.4	17.4	18.4	18.3	19.4	20.4	20.2	16.8	17.8	17.5

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	25.1	25.6	25.6	22.5	22.7	22.7	24.0	24.3	24.2	21.9	22.2	22.0
		1	37	25.7	25.6	25.5	22.5	22.7	22.7	24.7	24.2	24.1	22.2	22.1	21.9
		1	74	25.7	25.6	25.6	22.5	22.7	22.8	24.6	24.2	24.3	22.2	22.1	22.0
		36	0	24.8	24.8	24.6	21.7	21.9	21.8	23.7	23.3	23.2	21.2	21.2	21.1
		36	16	24.8	24.8	24.7	21.8	21.9	21.9	23.8	23.4	23.2	21.3	21.2	21.1
		36	35	24.8	24.7	24.6	21.8	21.9	21.9	23.7	23.4	23.3	21.1	21.2	21.1
		75	0	24.7	24.7	24.6	21.8	21.8	21.8	23.6	23.3	23.2	21.2	21.1	21.1
	16QAM	1	0	24.8	24.6	25.0	21.8	22.2	22.2	23.4	23.2	23.6	21.5	21.6	21.0
		1	37	25.2	24.6	25.0	21.7	22.1	22.1	24.2	23.2	23.6	21.6	21.5	21.0
		1	74	25.1	24.6	25.0	21.7	22.1	22.1	24.1	23.2	23.7	21.7	21.5	21.0
		36	0	23.8	23.8	23.7	20.9	20.9	20.8	22.7	22.3	22.2	20.3	20.2	20.1
		36	16	23.8	23.7	23.7	20.9	20.9	20.9	22.8	22.4	22.3	20.4	20.2	20.2
		36	35	23.7	23.7	23.7	20.9	20.8	20.9	22.7	22.3	22.3	20.3	20.2	20.2
		75	0	23.7	23.7	23.7	20.9	20.8	20.9	22.6	22.3	22.2	20.3	20.1	20.1
	64QAM	1	0	22.5	24.0	23.8	20.5	20.3	20.1	21.7	22.6	22.2	19.3	20.3	20.7
		1	37	23.6	24.1	23.8	20.6	20.3	20.1	22.9	22.4	22.3	20.5	20.2	20.7
		1	74	23.9	24.0	23.8	20.6	20.4	20.3	23.1	22.5	22.4	20.3	20.2	20.6
		36	0	22.1	22.9	22.8	19.2	19.2	19.1	21.4	21.3	21.2	19.3	19.2	19.2
		36	16	22.9	22.9	22.9	19.1	19.2	19.2	21.7	21.4	21.3	19.4	19.2	19.2
		36	35	22.9	22.9	22.8	19.1	19.2	19.2	21.6	21.4	21.3	19.2	19.2	19.2
		75	0	22.6	22.8	22.8	19.1	19.1	19.1	21.4	21.3	21.2	19.0	19.1	19.2
	256QAM	1	0	20.2	20.4	20.6	17.2	18.5	18.6	19.4	20.3	20.5	17.1	17.7	17.9
		1	37	20.3	20.5	20.6	17.2	18.6	18.7	20.0	20.1	20.4	17.3	17.6	17.9
		1	74	20.3	20.6	20.5	17.3	18.6	18.7	20.2	20.1	20.4	17.3	17.5	17.9
		36	0	20.3	20.6	20.6	17.5	18.3	18.3	19.4	20.5	20.3	16.9	17.9	17.6
		36	16	20.3	20.6	20.5	17.5	18.4	18.3	19.7	20.4	20.2	16.9	17.9	17.7
		36	35	20.3	20.6	20.5	17.5	18.3	18.4	19.7	20.4	20.2	16.9	17.8	17.6
		75	0	20.3	20.6	20.5	17.5	18.4	18.3	19.5	20.4	20.2	16.9	17.8	17.7

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	25.3	25.6	25.6	22.5	22.8	22.7	24.3	24.4	24.3	22.0	22.0	22.0
		1	49	25.6	25.7	25.6	22.6	22.7	22.7	24.7	24.4	24.3	22.2	22.0	22.0
		1	99	25.7	25.7	25.6	22.6	22.7	22.8	24.6	24.4	24.3	22.2	22.0	22.0
		50	0	24.8	24.7	24.7	21.6	21.8	21.8	23.8	23.5	23.3	21.2	21.1	21.1
		50	24	24.8	24.8	24.7	21.8	21.9	21.8	23.8	23.5	23.3	21.3	21.2	21.1
		50	49	24.7	24.8	24.7	21.8	21.9	21.9	23.7	23.5	23.4	20.9	21.1	21.1
		100	0	24.7	24.7	24.6	21.8	21.8	21.8	23.7	23.4	23.2	21.2	21.1	21.0
	16QAM	1	0	25.1	25.2	25.2	22.3	22.4	22.2	24.1	23.9	23.8	21.5	21.6	21.5
		1	49	25.1	25.2	25.1	22.3	22.2	22.2	24.2	23.9	23.8	21.6	21.6	21.5
		1	99	25.2	25.2	25.1	22.4	22.3	22.3	24.0	24.0	23.9	21.7	21.7	21.6
		50	0	23.7	23.7	23.7	20.8	20.9	20.8	22.8	22.5	22.3	20.2	20.2	20.1
		50	24	23.7	23.8	23.8	20.9	20.9	20.8	22.8	22.5	22.3	20.3	20.2	20.1
		50	49	23.7	23.8	23.7	20.9	20.8	20.9	22.7	22.5	22.4	20.2	20.2	20.1
		100	0	23.7	23.7	23.7	20.8	20.8	20.7	22.7	22.4	22.3	20.2	20.1	20.1
	64QAM	1	0	22.9	24.1	24.4	20.2	20.3	20.6	22.2	22.7	22.9	19.6	20.5	20.7
		1	49	24.0	24.1	24.4	20.2	20.3	20.6	22.9	22.6	22.9	20.4	20.3	20.7
		1	99	24.1	24.1	24.4	20.3	20.4	20.7	22.8	22.7	23.0	20.5	20.4	20.8
		50	0	22.9	22.9	22.8	19.1	19.1	19.0	21.7	21.5	21.3	19.2	19.2	19.2
		50	24	22.9	23.0	22.9	19.1	19.2	19.1	21.7	21.5	21.3	19.2	19.2	19.2
		50	49	22.9	22.9	22.8	19.1	19.2	19.1	21.7	21.5	21.4	18.8	19.2	19.2
		100	0	22.9	22.9	22.7	19.0	19.1	18.9	21.6	21.4	21.2	19.1	19.1	19.1
	256QAM	1	0	20.5	20.5	20.4	17.5	18.2	18.4	18.9	20.8	20.4	16.9	18.0	17.6
		1	49	20.6	20.6	20.4	17.6	18.3	18.5	19.6	20.5	20.4	17.1	18.0	17.5
		1	99	20.6	20.6	20.3	17.5	18.3	18.5	19.7	20.6	20.4	17.1	17.9	17.6
		50	0	20.2	20.5	20.5	17.5	18.4	18.3	19.5	20.5	20.3	16.9	17.9	17.7
		50	24	20.3	20.6	20.4	17.5	18.5	18.4	19.7	20.5	20.3	17.0	17.9	17.7
		50	49	20.3	20.6	20.4	17.4	18.4	18.4	19.8	20.4	20.3	16.9	17.9	17.7
		100	0	20.3	20.5	20.4	17.4	18.4	18.3	19.7	20.4	20.3	16.8	17.9	17.7

7.5. LTE BAND 12

Test Engineer ID:	39004	Test Date:	5/7/2020 & 8/29/2020
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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
				699.7	707.5	715.3	699.7	707.5	715.3
1.4	QPSK	1	0	25.5	25.6	25.6	23.8	23.8	23.8
		1	2	25.6	25.6	25.7	23.8	23.9	23.8
		1	5	25.6	25.6	25.6	23.8	23.8	23.9
		3	0	25.6	25.5	25.6	23.8	23.8	23.8
		3	1	25.6	25.6	25.7	23.8	23.8	23.8
		3	2	25.7	25.6	25.7	23.8	23.8	23.8
		6	0	24.7	24.6	24.7	22.9	22.8	22.9
	16QAM	1	0	24.7	24.7	25.0	22.9	22.9	23.2
		1	2	24.8	24.8	25.1	23.0	23.0	23.3
		1	5	24.7	24.7	25.1	22.9	23.0	23.3
		3	0	24.9	24.7	24.8	23.1	22.9	23.0
		3	1	24.9	24.7	25.0	23.1	23.0	23.1
		3	2	24.9	24.7	24.9	23.1	23.0	23.1
		6	0	23.9	23.8	23.6	22.1	22.0	21.8
	64QAM	1	0	24.1	24.2	24.1	22.2	22.3	22.1
		1	2	24.2	24.4	24.1	22.2	22.4	22.1
		1	5	24.2	24.2	24.0	22.2	22.3	22.1
		3	0	23.9	24.2	24.0	21.9	22.3	22.1
		3	1	24.0	24.3	24.2	22.0	22.3	22.1
		3	2	24.0	24.3	24.1	22.0	22.3	22.2
		6	0	23.1	22.9	23.3	21.1	20.9	21.3
	256QAM	1	0	20.7	21.0	20.7	18.0	17.6	17.7
		1	2	20.8	20.5	20.3	18.1	17.7	17.8
		1	5	20.6	20.4	20.2	18.1	17.6	17.7
		3	0	21.2	20.8	20.7	18.0	17.7	17.6
		3	1	21.3	20.9	20.8	18.1	17.8	17.7
		3	2	21.2	20.9	20.8	18.0	17.8	17.7
		6	0	21.2	20.9	20.7	17.9	18.0	17.6

OUTPUT POWER FOR LTE BAND 12 (3.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				23025 700.5	23095 707.5	23165 714.5	23025 700.5	23095 707.5	23165 714.5
3.0	QPSK	1	0	25.6	25.6	25.6	23.8	23.8	23.9
		1	7	25.6	25.5	25.7	23.8	23.8	23.8
		1	14	25.6	25.5	25.7	23.8	23.8	23.9
		8	0	24.7	24.6	24.7	22.9	22.8	22.9
		8	4	24.8	24.7	24.8	22.9	22.9	22.9
		8	7	24.8	24.6	24.8	23.0	22.9	23.0
		15	0	24.7	24.6	24.7	22.9	22.9	22.9
	16QAM	1	0	24.8	24.6	25.1	22.9	22.7	23.3
		1	7	24.7	24.5	25.1	22.9	22.8	23.3
		1	14	24.8	24.5	25.1	22.9	22.8	23.3
		8	0	23.7	23.7	23.7	21.9	21.9	22.0
		8	4	23.8	23.8	23.8	22.0	22.0	22.0
		8	7	23.8	23.8	23.8	22.0	22.0	22.1
		15	0	23.7	23.7	23.8	21.9	21.9	21.9
	64QAM	1	0	24.2	24.1	24.0	22.2	22.2	22.1
		1	7	24.0	24.1	24.0	22.1	22.2	22.1
		1	14	24.2	24.1	24.0	22.2	22.2	22.1
		8	0	22.9	22.9	22.9	20.9	21.0	21.0
		8	4	23.0	23.0	23.0	21.0	21.0	21.0
		8	7	23.0	23.0	23.0	21.0	21.0	21.1
		15	0	23.0	22.9	23.0	21.1	21.0	21.0
	256QAM	1	0	21.1	20.8	20.5	18.0	18.9	18.5
		1	7	20.9	20.6	20.4	18.0	18.9	18.3
		1	14	20.9	20.7	20.4	18.1	18.8	18.4
		8	0	20.9	20.7	20.6	18.5	18.3	18.0
		8	4	20.9	20.7	20.7	18.5	18.3	18.0
		8	7	20.9	20.7	20.7	18.5	18.3	18.0
		15	0	20.8	20.9	20.6	18.4	18.2	18.1

OUTPUT POWER FOR LTE BAND 12 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				23035 701.5	23095 707.5	23155 713.5	23035 701.5	23095 707.5	23155 713.5
5.0	QPSK	1	0	25.6	25.6	25.5	23.9	23.8	23.8
		1	12	25.7	25.6	25.6	23.9	23.9	23.8
		1	24	25.7	25.6	25.6	23.9	23.9	23.8
		12	0	24.6	24.5	24.6	22.9	22.8	22.9
		12	6	24.7	24.6	24.6	23.0	22.9	22.8
		12	11	24.7	24.5	24.6	22.9	22.9	22.9
		25	0	24.7	24.6	24.6	22.9	22.9	22.9
	16QAM	1	0	24.8	24.7	25.1	23.0	23.0	23.4
		1	12	24.8	24.7	25.2	23.0	23.0	23.4
		1	24	24.9	24.7	25.2	23.0	23.0	23.4
		12	0	23.7	23.7	23.7	21.9	21.9	22.0
		12	6	23.8	23.7	23.7	22.0	22.0	22.0
		12	11	23.8	23.6	23.8	22.0	21.9	22.0
		25	0	23.7	23.6	23.7	21.9	21.9	22.0
	64QAM	1	0	24.1	23.7	24.1	22.2	21.7	22.2
		1	12	24.1	23.7	24.2	22.2	21.8	22.3
		1	24	24.0	23.7	24.2	22.2	21.8	22.3
		12	0	22.9	22.9	22.8	21.0	20.9	20.9
		12	6	22.9	22.9	22.8	21.1	21.0	20.9
		12	11	23.0	22.8	22.8	21.0	21.0	20.9
		25	0	22.9	22.8	22.8	21.0	20.9	20.9
	256QAM	1	0	21.0	20.8	20.4	18.5	18.2	18.3
		1	12	20.8	20.8	20.3	18.3	18.2	18.2
		1	24	20.8	20.7	20.3	18.3	18.2	18.3
		12	0	20.8	20.7	20.7	18.3	18.1	18.1
		12	6	20.8	20.7	20.6	18.3	18.2	18.0
		12	11	20.8	20.7	20.6	18.2	18.1	18.0
		25	0	20.8	20.7	20.7	18.3	18.2	18.1

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	25.6	25.6	23.8	23.8	23.8
		1	24	25.5	25.5	25.5	23.8	23.8	23.8
		1	49	25.5	25.6	25.7	23.8	23.8	23.9
		25	0	24.6	24.6	24.5	22.8	22.8	22.8
		25	12	24.7	24.7	24.6	22.9	22.9	22.9
		25	24	24.6	24.6	24.7	22.9	22.9	22.9
		50	0	24.7	24.6	24.6	22.9	22.9	22.8
	16QAM	1	0	24.7	24.6	25.0	23.0	22.9	23.2
		1	24	24.7	24.5	25.0	22.8	22.8	23.3
		1	49	24.6	24.6	25.1	22.9	22.9	23.3
		25	0	23.7	23.6	23.5	21.9	21.8	21.9
		25	12	23.8	23.7	23.6	22.0	21.9	21.9
		25	24	23.7	23.6	23.7	22.0	21.9	21.9
		50	0	23.7	23.6	23.6	21.9	21.8	21.8
	64QAM	1	0	24.1	24.1	23.8	22.2	22.2	21.9
		1	24	24.1	24.1	23.9	22.1	22.3	22.1
		1	49	24.0	24.2	24.1	22.2	22.3	22.1
		25	0	22.9	22.8	22.8	21.0	20.9	21.0
		25	12	23.0	22.9	22.9	21.1	21.0	21.1
		25	24	22.9	22.9	22.9	21.0	21.0	21.1
		50	0	22.9	22.8	22.9	21.0	20.9	20.9
	256QAM	1	0	20.9	20.5	20.6	18.1	18.3	18.7
		1	24	20.9	20.5	20.6	18.0	18.3	18.6
		1	49	21.0	20.5	20.6	18.0	18.3	18.6
		25	0	20.9	20.7	20.6	18.4	18.3	18.2
		25	12	20.9	20.8	20.6	18.3	18.4	18.2
		25	24	20.7	20.7	20.6	18.3	18.3	18.2
		50	0	20.8	20.8	20.6	18.4	18.2	18.2

7.6. 5G NR Band n12

Test Engineer ID:	23547	Test Date:	8/14/2020
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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	24.9	24.5	24.7	23.2	23.2	23.2
		1	1	24.8	25.5	25.4	23.8	23.3	23.8
		36	18	25.2	25.3	25.1	23.4	23.5	23.6
		75	0	24.6	24.6	24.7	23.0	23.0	22.9
	QPSK	1	0	24.4	23.8	23.9	22.4	22.4	22.4
		1	1	25.5	25.7	25.1	23.9	23.6	23.5
		36	18	25.1	25.4	25.4	23.6	23.4	23.5
		75	0	24.2	24.3	24.3	22.5	22.5	22.4
	16QAM	1	0	23.4	23.2	23.3	22.2	21.8	21.7
		1	1	24.4	24.2	24.7	22.8	22.4	22.6
		36	18	24.2	24.3	24.4	22.5	22.4	22.4
		75	0	23.2	23.2	23.3	21.5	21.6	21.5
	64QAM	1	0	23.1	22.9	22.8	20.8	21.6	20.8
		1	1	23.0	23.0	22.7	21.5	21.4	21.4
		36	18	22.5	22.7	22.8	21.1	21.0	21.0
		75	0	22.7	22.8	22.7	21.1	21.1	21.1
	256QAM	1	0	20.2	20.6	20.4	19.0	18.3	18.8
		1	1	20.5	20.8	20.5	19.0	18.8	18.9
		36	18	20.1	20.3	20.4	18.7	18.3	18.7
		75	0	20.4	20.3	20.3	18.6	18.5	18.6

7.7. LTE BAND 13

Test Engineer ID:	39004	Test Date:	5/7/2020 & 8/29/2020
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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
				779.5	782.0	784.5	779.5	782.0	784.5
5.0	QPSK	1	0	25.5	25.6	25.6	23.8	23.9	23.8
		1	12	25.5	25.7	25.6	23.8	23.8	23.8
		1	24	25.7	25.7	25.6	23.9	23.9	23.9
		12	0	24.6	24.6	24.6	22.9	22.8	22.8
		12	6	24.7	24.7	24.6	23.0	22.9	22.9
		12	11	24.7	24.6	24.7	23.0	22.9	22.9
		25	0	24.7	24.6	24.7	22.9	22.9	22.9
	16QAM	1	0	24.8	24.7	25.1	23.1	23.0	23.3
		1	12	25.0	24.9	25.2	22.9	23.0	23.3
		1	24	24.9	24.9	25.3	23.0	23.0	23.4
		12	0	23.7	23.7	23.7	22.0	21.9	22.0
		12	6	23.7	23.8	23.8	22.1	22.0	22.0
		12	11	23.7	23.8	23.8	22.0	22.0	22.0
		25	0	23.6	23.7	23.7	21.9	21.9	21.9
	64QAM	1	0	24.0	23.7	24.1	22.2	21.8	22.2
		1	12	24.1	23.8	24.1	22.2	21.8	22.2
		1	24	24.2	23.8	24.2	22.3	21.8	22.2
		12	0	22.8	22.8	22.7	20.9	20.9	20.8
		12	6	22.9	22.9	22.7	21.0	21.0	20.8
		12	11	22.9	22.9	22.8	21.0	20.9	20.8
		25	0	22.9	22.8	22.8	21.0	20.9	20.8
	256QAM	1	0	20.2	20.4	20.3	17.9	17.6	18.1
		1	12	19.9	20.3	20.3	17.9	17.6	18.0
		1	24	19.9	20.4	20.5	17.9	17.7	18.1
		12	0	20.4	20.3	20.2	17.9	17.9	18.0
		12	6	20.3	20.2	20.2	17.9	18.0	18.0
		12	11	20.2	20.2	20.3	17.9	18.0	18.0
		25	0	20.4	20.3	20.3	18.0	18.1	18.0

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		25.6			23.9	
		1	24		25.7			23.9	
		1	49		25.7			23.9	
		25	0		24.8			23.0	
		25	12		24.9			23.1	
		25	24		24.8			23.0	
		50	0		24.8			23.0	
	16QAM	1	0		24.8			23.1	
		1	24		24.8			23.0	
		1	49		24.8			23.0	
		25	0		23.9			22.1	
		25	12		24.0			22.2	
		25	24		24.0			22.2	
		50	0		23.8			22.1	
	64QAM	1	0		24.2			22.2	
		1	24		24.2			22.3	
		1	49		24.2			22.2	
		25	0		23.0			21.1	
		25	12		23.1			21.2	
		25	24		23.1			21.1	
		50	0		23.0			21.1	
	256QAM	1	0		20.6			18.0	
		1	24		20.4			18.0	
		1	49		20.6			18.0	
		25	0		20.6			18.3	
		25	12		20.6			18.4	
		25	24		20.5			18.3	
		50	0		20.5			18.3	

7.8. LTE BAND 14

Test Engineer ID:	39004	Test Date:	5/7/2020 & 8/29/2020
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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
				790.5	793.0	795.5	790.5	793.0	795.5
5.0	QPSK	1	0	25.5	25.7	25.6	23.8	23.8	23.7
		1	12	25.6	25.7	25.6	23.9	23.9	23.9
		1	24	25.6	25.7	25.5	23.8	23.9	23.8
		12	0	24.7	24.7	24.7	22.9	22.9	22.9
		12	6	24.7	24.7	24.7	23.0	22.9	23.0
		12	11	24.7	24.7	24.6	22.9	22.9	22.9
		25	0	24.7	24.7	24.6	22.9	22.9	22.9
	16QAM	1	0	24.7	24.8	25.1	23.0	22.9	23.3
		1	12	24.8	24.9	25.1	23.0	23.0	23.4
		1	24	24.8	24.8	25.1	22.9	23.0	23.4
		12	0	23.8	23.8	23.8	22.0	22.0	22.0
		12	6	23.8	23.9	23.8	22.0	22.0	22.1
		12	11	23.8	23.7	23.8	22.0	22.0	22.1
		25	0	23.7	23.8	23.7	21.9	21.9	22.0
	64QAM	1	0	24.0	23.8	24.1	22.1	21.7	22.1
		1	12	24.0	23.9	24.2	22.1	21.9	22.2
		1	24	24.2	23.8	24.1	22.1	21.8	22.2
		12	0	22.8	23.0	22.9	21.0	21.0	20.9
		12	6	22.8	23.0	22.9	21.0	21.0	21.0
		12	11	22.8	22.9	22.8	21.0	21.0	20.9
		25	0	22.7	22.9	22.9	21.0	20.9	20.9
	256QAM	1	0	20.0	20.5	20.6	18.3	18.5	18.5
		1	12	20.1	20.7	20.6	18.3	18.4	18.6
		1	24	20.2	20.5	20.4	18.3	18.5	18.6
		12	0	20.3	20.4	20.5	18.3	18.4	18.3
		12	6	20.4	20.5	20.4	18.4	18.4	18.4
		12	11	20.4	20.4	20.3	18.4	18.4	18.4
		25	0	20.5	20.4	20.4	18.4	18.4	18.4

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			23.8	
		1	49		25.6			23.9	
		25	0		24.7			22.9	
		25	12		24.8			23.0	
		25	24		24.7			22.9	
		50	0		24.7			22.9	
	16QAM	1	0		24.8			23.0	
		1	24		24.8			22.9	
		1	49		24.7			23.1	
		25	0		23.8			22.0	
		25	12		23.9			22.1	
		25	24		23.8			22.0	
		50	0		23.8			22.0	
	64QAM	1	0		24.3			22.2	
		1	24		24.2			22.2	
		1	49		24.1			22.4	
		25	0		23.0			21.0	
		25	12		23.1			21.1	
		25	24		23.0			21.0	
		50	0		23.0			21.0	
	256QAM	1	0		20.4			18.4	
		1	24		20.7			18.5	
		1	49		20.5			18.6	
		25	0		20.5			18.5	
		25	12		20.6			18.4	
		25	24		20.6			18.4	
		50	0		20.5			18.3	

7.9. LTE BAND 17

Test Engineer ID:	39004	Test Date:	5/8/2020 & 8/29/2020
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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
				706.5	710.0	713.5	706.5	710.0	713.5
5.0	QPSK	1	0	25.7	25.7	25.5	23.8	23.8	23.7
		1	12	25.7	25.6	25.7	23.8	23.9	23.8
		1	24	25.6	25.7	25.6	23.9	23.9	23.8
		12	0	24.7	24.6	24.6	22.8	22.8	22.8
		12	6	24.8	24.7	24.7	22.9	22.9	22.9
		12	11	24.7	24.7	24.7	22.9	22.9	22.9
		25	0	24.8	24.6	24.7	22.9	22.9	22.8
	16QAM	1	0	24.8	24.8	25.1	23.0	23.0	23.4
		1	12	25.0	24.8	25.2	23.1	23.0	23.4
		1	24	24.8	24.8	25.2	23.0	23.1	23.4
		12	0	23.8	23.7	23.8	21.9	21.9	22.0
		12	6	23.8	23.8	23.9	22.0	22.0	22.1
		12	11	23.8	23.7	23.9	22.0	22.0	22.0
		25	0	23.7	23.7	23.7	21.9	21.9	21.9
	64QAM	1	0	23.8	24.1	24.0	22.1	21.7	22.2
		1	12	23.8	24.1	23.9	22.2	21.8	22.2
		1	24	23.8	24.1	23.7	22.2	21.8	22.2
		12	0	22.9	22.7	22.8	20.9	20.9	20.8
		12	6	23.0	22.8	22.9	21.0	21.0	20.9
		12	11	22.9	22.8	22.9	21.0	20.9	20.9
		25	0	22.9	22.8	22.8	20.9	20.9	20.8
	256QAM	1	0	20.1	20.5	20.4	18.5	18.2	18.6
		1	12	20.2	20.5	20.4	18.5	18.3	18.6
		1	24	20.2	20.6	20.5	18.6	18.3	18.6
		12	0	20.3	20.4	20.4	18.5	18.5	18.5
		12	6	20.4	20.4	20.4	18.6	18.5	18.5
		12	11	20.4	20.5	20.4	18.6	18.5	18.5
		25	0	20.5	20.4	20.4	18.6	18.6	18.4

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	25.7	25.6	23.7	23.8	23.9
		1	24	25.5	25.5	25.5	23.8	23.8	23.8
		1	49	25.6	25.7	25.6	23.8	23.9	23.8
		25	0	24.7	24.6	24.6	22.9	22.9	22.9
		25	12	24.7	24.7	24.7	23.0	23.0	22.9
		25	24	24.7	24.7	24.7	23.0	22.9	23.0
		50	0	24.7	24.7	24.7	23.0	23.0	22.9
	16QAM	1	0	24.7	24.6	25.0	22.9	22.8	23.2
		1	24	24.6	24.5	25.0	22.9	22.8	23.3
		1	49	24.8	24.7	25.0	23.0	22.8	23.3
		25	0	23.8	23.7	23.7	22.0	21.9	22.0
		25	12	23.8	23.7	23.7	22.1	22.0	22.0
		25	24	23.8	23.7	23.7	22.1	22.0	22.0
		50	0	23.8	23.7	23.7	22.0	21.9	21.9
	64QAM	1	0	24.0	24.1	23.8	22.1	22.2	21.9
		1	24	23.9	24.1	23.9	22.1	22.2	22.0
		1	49	24.2	24.2	23.9	22.2	22.3	22.1
		25	0	22.9	22.8	22.9	21.0	20.9	21.0
		25	12	23.0	22.9	23.0	21.1	21.1	21.0
		25	24	23.0	22.9	22.9	21.1	21.0	21.1
		50	0	22.9	22.9	22.9	21.0	21.0	20.9
	256QAM	1	0	20.3	20.7	20.2	18.1	18.3	18.8
		1	24	20.4	20.8	20.1	18.1	18.4	18.9
		1	49	20.5	20.9	20.3	18.3	18.5	19.0
		25	0	20.4	20.3	20.4	18.4	18.4	18.4
		25	12	20.5	20.5	20.4	18.5	18.6	18.4
		25	24	20.4	20.5	20.5	18.5	18.5	18.5
		50	0	20.5	20.4	20.4	18.4	18.5	18.4

7.10. LTE BAND 25

Test Engineer ID:	39004	Test Date:	5/8/2020 & 8/31/2020
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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
1.4	QPSK	1	0	25.6	25.6	25.6	23.1	22.8	22.6	24.6	24.4	24.3	22.7	22.5	20.9
		1	2	25.7	25.7	25.7	23.1	22.9	22.8	24.7	24.5	24.0	22.7	22.4	20.6
		1	5	25.7	25.6	25.7	23.1	22.9	22.7	24.7	24.5	23.6	22.6	22.3	20.2
		3	0	25.6	25.6	25.6	23.0	22.9	22.6	24.6	24.4	23.8	22.5	22.3	20.4
		3	1	25.7	25.7	25.7	23.1	22.9	22.8	24.7	24.5	23.7	22.5	22.2	20.3
		3	2	25.7	25.7	25.7	23.0	22.9	22.7	24.7	24.5	23.5	22.5	22.2	20.2
	16QAM	6	0	24.8	24.6	24.6	22.1	21.9	21.7	23.7	23.5	22.9	21.7	21.5	19.6
		1	0	24.8	24.8	25.0	22.2	22.3	21.8	23.7	23.5	23.4	21.7	21.4	19.9
		1	2	24.8	24.8	25.1	22.2	22.3	21.9	23.8	23.7	23.3	21.7	21.4	19.8
		1	5	24.8	24.8	25.1	22.2	22.3	21.8	23.8	23.6	23.0	21.6	21.4	19.5
		3	0	24.9	24.7	24.8	22.1	22.1	21.9	23.9	23.5	23.2	21.8	21.6	19.9
		3	1	25.0	24.8	24.9	22.2	22.2	22.0	24.0	23.6	23.1	21.8	21.6	19.8
	64QAM	3	2	25.0	24.8	24.9	22.2	22.2	22.1	24.0	23.6	23.1	21.8	21.6	19.7
		6	0	23.9	23.8	23.5	21.3	20.8	20.9	22.9	22.6	22.1	20.9	20.8	19.1
		1	0	24.1	24.1	23.8	21.6	21.2	21.0	22.3	22.5	22.2	20.3	20.2	19.2
		1	2	24.1	24.2	24.0	21.7	21.3	21.1	22.3	22.5	22.0	20.3	20.2	19.1
		1	5	24.1	24.2	23.9	21.6	21.2	21.1	22.3	22.4	21.6	20.2	20.2	18.8
		3	0	23.8	24.1	23.8	21.5	21.2	20.8	22.0	22.4	22.0	20.1	20.2	18.8
	256QAM	3	1	23.9	24.1	23.9	21.6	21.3	20.9	22.0	22.4	21.9	20.2	20.2	18.7
		3	2	23.9	24.1	24.0	21.6	21.3	21.0	22.0	22.4	21.8	20.2	20.2	18.7
		6	0	23.0	22.8	23.1	20.2	20.3	19.9	21.1	21.1	21.1	18.8	19.4	17.9
		1	0	20.0	19.5	20.4	17.5	17.4	17.5	19.5	19.3	19.6	17.5	17.3	17.5
		1	2	20.1	20.3	20.6	17.5	17.5	17.6	19.6	19.4	19.7	17.7	17.5	17.7
		1	5	20.1	20.4	20.5	17.5	17.5	17.6	19.6	19.5	19.7	17.6	17.4	17.7
		3	0	19.8	20.4	20.6	17.4	17.5	17.4	19.4	19.4	19.7	17.5	17.4	17.5
		3	1	19.9	20.4	20.6	17.5	17.6	17.5	19.5	19.5	19.8	17.5	17.5	17.6
		3	2	20.0	20.5	20.7	17.6	17.6	17.5	19.5	19.5	19.8	17.6	17.6	17.6
		6	0	19.9	20.6	20.5	17.7	17.5	17.4	19.4	19.7	19.6	17.4	17.6	17.5

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	25.6	25.5	25.6	23.0	22.9	22.9	24.6	24.4	24.4	22.6	22.6	22.3
		1	7	25.6	25.5	25.7	23.0	22.9	22.9	24.6	24.4	24.2	22.6	22.6	21.6
		1	14	25.7	25.7	25.7	23.1	23.0	22.9	24.7	24.6	23.5	22.7	22.7	21.1
		8	0	24.7	24.6	24.7	22.2	21.9	21.8	23.7	23.5	23.5	21.7	21.7	21.1
		8	4	24.8	24.7	24.7	22.1	22.0	21.9	23.8	23.5	23.3	21.7	21.7	20.9
		8	7	24.8	24.7	24.7	22.2	22.1	21.9	23.8	23.6	23.2	21.8	21.8	20.8
		15	0	24.7	24.7	24.7	22.2	22.0	21.9	23.7	23.5	23.2	21.8	21.7	20.9
	16QAM	1	0	24.7	24.7	25.0	22.2	22.0	22.2	23.7	23.4	23.9	22.1	21.8	21.2
		1	7	24.8	24.6	25.0	22.2	22.0	22.1	23.7	23.5	23.5	22.1	21.8	20.6
		1	14	24.8	24.7	25.1	22.2	22.1	22.4	23.8	23.4	22.9	22.2	21.8	20.2
		8	0	23.8	23.7	23.7	21.2	21.1	20.9	22.8	22.6	22.5	20.9	20.8	20.4
		8	4	23.8	23.8	23.8	21.3	21.2	21.0	22.8	22.6	22.6	20.9	20.8	20.3
		8	7	23.8	23.8	23.8	21.3	21.2	21.0	22.8	22.7	22.5	20.9	20.9	20.2
		15	0	23.7	23.7	23.7	21.2	21.1	21.0	22.7	22.5	22.6	20.8	20.8	20.2
	64QAM	1	0	24.0	24.0	23.8	21.5	21.4	21.1	22.2	22.3	22.4	20.1	20.1	20.0
		1	7	24.0	24.0	23.8	21.5	21.4	21.1	22.2	22.3	22.1	20.2	20.1	19.3
		1	14	24.1	24.1	23.9	21.5	21.5	21.1	22.3	22.2	21.5	20.3	20.2	18.8
		8	0	22.8	22.8	22.8	20.2	20.2	20.1	21.0	21.1	21.3	18.9	19.1	18.6
		8	4	22.8	22.8	22.9	20.3	20.2	20.1	21.0	21.2	21.2	19.0	19.2	18.4
		8	7	22.8	22.8	22.8	20.3	20.2	20.1	21.1	21.2	21.1	19.1	19.2	18.3
		15	0	22.9	22.7	22.8	20.4	20.2	20.1	21.1	21.1	21.1	18.9	19.2	18.5
	256QAM	1	0	21.1	19.5	19.7	17.8	18.0	17.4	19.5	20.1	19.5	17.5	17.6	17.5
		1	7	21.2	19.6	19.8	17.8	18.1	17.3	19.6	20.1	19.4	17.5	17.5	17.6
		1	14	20.6	19.7	19.9	17.9	18.3	17.5	19.7	20.3	19.6	17.7	17.4	17.7
		8	0	20.0	19.7	19.8	17.9	17.7	17.5	19.7	19.8	19.7	17.6	17.4	17.7
		8	4	20.1	19.8	19.9	18.0	17.8	17.6	19.7	19.8	19.7	17.5	17.5	17.7
		8	7	20.1	19.8	20.0	18.0	17.8	17.6	19.8	19.9	19.8	17.5	17.6	17.8
		15	0	20.0	19.9	19.9	18.0	17.7	17.7	19.7	19.8	19.9	17.5	17.6	17.7

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	25.6	25.6	25.5	23.0	22.9	22.7	24.5	24.4	24.3	22.5	22.6	22.2
		1	12	25.7	25.6	25.6	23.1	23.0	22.8	24.6	24.5	24.4	22.5	22.6	21.7
		1	24	25.7	25.7	25.6	23.1	23.0	22.8	24.7	24.5	23.4	22.6	22.7	20.8
		12	0	24.7	24.5	24.5	22.1	21.8	21.7	23.7	23.4	23.4	21.6	21.5	21.3
		12	6	24.7	24.6	24.5	22.1	22.0	21.8	23.7	23.4	23.5	21.6	21.5	21.1
		12	11	24.7	24.6	24.6	22.1	22.0	21.8	23.7	23.5	23.2	21.6	21.6	20.7
		25	0	24.7	24.6	24.6	22.1	21.9	21.8	23.6	23.4	23.4	21.6	21.5	21.0
	16QAM	1	0	24.8	24.7	25.1	22.2	22.1	22.4	23.6	23.5	24.0	21.7	21.6	21.8
		1	12	24.9	24.8	25.2	22.4	22.2	22.3	23.8	23.6	23.9	21.8	21.8	21.4
		1	24	24.9	24.8	25.2	22.4	22.2	22.3	23.9	23.6	22.9	21.8	21.8	20.5
		12	0	23.7	23.6	23.7	21.2	21.0	20.9	22.7	22.4	22.5	20.7	20.6	20.4
		12	6	23.8	23.7	23.7	21.2	21.0	20.9	22.7	22.5	22.6	20.7	20.6	20.5
		12	11	23.7	23.7	23.8	21.2	21.1	21.0	22.7	22.5	22.6	20.7	20.7	20.1
		25	0	23.6	23.6	23.6	21.1	21.0	20.8	22.6	22.4	22.5	20.6	20.6	20.4
	64QAM	1	0	23.9	23.5	23.9	21.4	20.8	21.2	22.1	21.9	22.6	19.3	19.8	19.9
		1	12	24.0	23.6	24.0	21.5	20.9	21.2	22.2	21.8	22.5	19.6	20.0	19.3
		1	24	24.0	23.6	24.0	21.5	21.0	21.2	22.3	21.8	21.6	19.7	20.0	18.4
		12	0	22.8	22.7	22.5	20.3	20.0	19.8	20.9	21.0	21.1	18.5	18.6	18.7
		12	6	22.9	22.7	22.6	20.3	20.1	19.8	21.0	21.1	21.2	18.7	18.7	18.4
		12	11	22.9	22.7	22.7	20.3	20.1	19.9	21.1	21.0	21.0	18.7	18.7	18.1
		25	0	22.8	22.7	22.6	20.2	20.0	19.8	20.9	20.9	21.1	18.5	18.7	18.2
	256QAM	1	0	19.9	19.4	19.9	18.1	17.6	17.3	19.8	19.8	19.6	17.4	17.3	17.9
		1	12	19.9	19.5	19.9	18.1	17.7	17.4	19.8	19.9	19.6	17.5	17.4	17.9
		1	24	19.9	19.5	19.9	18.1	17.7	17.5	19.8	19.9	19.6	17.5	17.5	18.0
		12	0	19.8	19.6	19.7	17.9	17.6	17.6	19.7	19.8	19.8	17.5	17.7	17.7
		12	6	19.9	19.7	19.8	18.0	17.7	17.7	19.7	19.8	19.8	17.6	17.7	17.8
		12	11	19.9	19.8	19.8	18.0	17.8	17.7	19.7	19.9	19.9	17.6	17.8	17.9
		25	0	19.9	19.8	19.7	17.9	17.7	17.7	19.6	19.8	19.9	17.6	17.8	17.8

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
				1855.0	1882.5	1910.0	1855.0	1882.5	1910.0	1855.0	1882.5	1910.0	1855.0	1882.5	1910.0
10.0	QPSK	1	0	25.4	25.5	25.6	22.9	22.7	22.9	24.4	24.4	24.6	22.4	22.4	22.6
		1	24	25.6	25.6	25.6	23.1	23.0	22.9	24.7	24.6	24.6	22.6	22.7	22.4
		1	49	25.4	25.5	25.7	22.8	22.9	22.9	24.5	24.4	23.6	22.3	22.5	20.9
		25	0	24.6	24.6	24.6	22.2	21.9	21.8	23.7	23.5	23.5	21.6	21.6	21.4
		25	12	24.8	24.7	24.7	22.2	22.1	21.9	23.9	23.6	23.7	21.7	21.7	21.6
		25	24	24.7	24.7	24.7	22.2	22.1	21.9	23.8	23.6	23.5	21.6	21.7	21.0
		50	0	24.7	24.7	24.7	22.1	22.0	21.9	23.8	23.5	23.6	21.6	21.6	21.4
	16QAM	1	0	24.5	24.4	25.0	22.0	21.7	22.3	23.2	23.5	24.0	21.2	21.4	22.0
		1	24	24.7	24.6	25.0	22.2	22.0	22.3	23.8	23.6	23.9	21.6	21.7	21.9
		1	49	24.5	24.4	25.1	22.0	21.9	22.3	23.6	23.3	23.0	21.3	21.5	20.4
		25	0	23.7	23.6	23.6	21.3	21.0	20.9	22.8	22.5	22.6	20.7	20.6	20.5
		25	12	23.9	23.7	23.7	21.4	21.1	21.0	23.0	22.6	22.7	20.8	20.7	20.6
		25	24	23.8	23.7	23.7	21.2	21.1	20.9	22.9	22.6	22.6	20.7	20.7	20.4
		50	0	23.7	23.6	23.7	21.2	21.0	20.9	22.8	22.5	22.6	20.7	20.6	20.6
	64QAM	1	0	23.6	23.7	23.7	21.2	21.1	21.8	21.8	22.2	22.6	19.3	19.3	20.0
		1	24	24.0	24.0	23.7	21.4	21.1	22.1	22.5	22.3	22.5	20.2	19.8	19.9
		1	49	23.7	23.8	23.8	21.1	21.2	21.9	22.6	22.0	21.8	19.9	19.5	18.5
		25	0	22.7	22.6	22.7	20.3	20.0	20.4	21.0	21.1	21.4	18.4	18.6	18.7
		25	12	22.9	22.8	22.8	20.4	20.1	20.6	21.4	21.2	21.6	18.9	18.8	18.9
		25	24	22.8	22.8	22.8	20.3	20.1	20.5	21.5	21.1	21.4	19.0	18.7	18.4
		50	0	22.8	22.7	22.7	20.3	20.0	20.5	21.1	21.1	21.4	18.6	18.6	18.5
	256QAM	1	0	19.7	19.7	20.2	17.8	17.7	18.1	19.5	19.8	20.3	17.8	17.3	17.7
		1	24	19.7	19.8	20.2	17.7	17.8	18.1	19.4	19.8	20.3	17.8	17.3	17.6
		1	49	19.6	19.9	20.3	17.7	17.8	18.2	19.4	19.9	20.3	17.9	17.3	17.6
		25	0	20.0	19.8	19.7	18.0	17.8	17.6	19.7	19.9	19.8	17.5	17.7	17.6
		25	12	20.0	19.9	19.7	18.1	17.8	17.7	19.8	19.9	19.8	17.5	17.7	17.6
		25	24	20.0	19.9	19.8	18.0	17.8	17.8	19.7	20.0	19.9	17.4	17.8	17.7
		50	0	19.9	19.8	19.8	18.0	17.8	17.7	19.7	19.9	19.8	17.4	17.7	17.7

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 1857.5	26365 1882.5	26615 1907.5	26115 1857.5	26365 1882.5	26615 1907.5	26115 1857.5	26365 1882.5	26615 1907.5	26115 1857.5	26365 1882.5	26615 1907.5
15.0	QPSK	1	0	25.5	25.6	25.7	22.9	22.9	23.0	24.4	24.5	24.5	22.6	22.6	22.7
		1	37	25.7	25.6	25.6	23.1	23.0	22.9	24.7	24.4	24.3	22.7	22.6	22.5
		1	74	25.5	25.6	25.6	22.9	23.1	22.9	24.5	24.6	23.2	22.5	22.7	20.7
		36	0	24.6	24.6	24.6	22.0	21.9	21.9	23.6	23.4	23.3	21.6	21.6	21.5
		36	16	24.8	24.7	24.6	22.2	22.1	22.0	23.8	23.5	23.4	21.6	21.7	21.7
		36	35	24.7	24.7	24.7	22.1	22.1	22.0	23.7	23.6	23.4	21.5	21.8	21.5
		75	0	24.7	24.6	24.6	22.1	22.0	21.9	23.7	23.4	23.3	21.5	21.7	21.6
	16QAM	1	0	25.0	24.6	25.1	22.5	21.9	22.4	23.6	23.6	23.9	21.6	21.8	22.2
		1	37	25.2	24.7	25.0	22.7	22.0	22.4	24.3	23.2	23.8	22.2	21.7	22.1
		1	74	25.2	24.7	25.1	22.5	22.1	22.3	24.2	23.4	22.9	22.0	22.0	20.5
		36	0	23.6	23.5	23.6	21.0	20.9	20.9	22.6	22.3	22.4	20.5	20.7	20.6
		36	16	23.7	23.7	23.6	21.2	21.1	21.1	22.7	22.4	22.5	20.6	20.7	20.8
		36	35	23.7	23.6	23.7	21.1	21.1	21.0	22.7	22.4	22.5	20.5	20.8	20.7
		75	0	23.7	23.6	23.6	21.1	21.0	21.0	22.7	22.3	22.4	20.6	20.7	20.7
	64QAM	1	0	24.0	23.9	23.8	21.6	21.3	21.2	22.2	22.7	22.6	19.7	19.8	20.4
		1	37	24.2	23.9	23.8	21.8	21.4	21.1	22.8	22.0	22.5	20.4	19.7	20.5
		1	74	24.2	23.9	23.6	21.7	21.4	21.1	23.1	22.4	21.6	20.2	20.1	18.9
		36	0	22.6	22.6	22.7	20.1	20.0	20.0	20.8	21.1	21.4	18.6	18.7	18.9
		36	16	22.8	22.7	22.7	20.3	20.2	20.2	21.2	20.9	21.5	19.1	18.8	19.0
		36	35	22.7	22.7	22.7	20.2	20.2	20.1	21.6	21.0	21.4	19.2	18.9	18.8
		75	0	22.7	22.6	22.6	20.2	20.1	20.1	21.4	21.1	21.4	19.1	18.8	18.7
	256QAM	1	0	20.0	19.2	19.8	17.7	17.9	18.1	19.4	20.1	20.2	17.6	17.3	17.9
		1	37	20.0	19.3	19.7	17.7	18.0	18.1	19.5	20.1	20.3	17.7	17.4	17.8
		1	74	20.0	19.3	19.7	17.7	18.0	18.2	19.5	20.1	20.3	17.8	17.4	17.9
		36	0	19.7	19.5	19.5	18.0	17.7	17.8	19.7	19.9	19.9	17.4	17.6	17.6
		36	16	19.7	19.5	19.5	18.0	17.7	17.8	19.7	19.9	19.9	17.5	17.6	17.6
		36	35	19.6	19.5	19.5	17.9	17.8	17.8	19.7	19.9	19.9	17.4	17.7	17.7
		75	0	19.7	19.5	19.4	17.9	17.8	17.8	19.7	19.9	19.9	17.5	17.5	17.6

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 1860.0	26365 1882.5	26590 1905.0	26140 1860.0	26365 1882.5	26590 1905.0	26140 1860.0	26365 1882.5	26590 1905.0	26140 1860.0	26365 1882.5	26590 1905.0
20.0	QPSK	1	0	25.7	25.7	25.7	23.1	22.9	23.0	24.7	24.6	24.7	22.7	22.7	22.6
		1	49	25.6	25.6	25.7	23.0	22.9	22.9	24.7	24.4	24.6	22.5	22.6	22.5
		1	99	25.6	25.6	25.7	22.9	23.0	22.9	24.6	24.6	23.6	22.5	22.6	20.9
		50	0	24.7	24.6	24.7	22.1	21.9	22.0	23.7	23.6	23.6	21.6	21.6	21.6
		50	24	24.8	24.7	24.7	22.1	22.0	22.1	23.8	23.6	23.6	21.6	21.6	21.6
		50	49	24.7	24.7	24.7	22.0	22.0	22.0	23.7	23.6	23.6	21.6	21.7	21.5
		100	0	24.6	24.6	24.6	22.0	21.9	22.0	23.7	23.5	23.5	21.6	21.5	21.5
	16QAM	1	0	25.1	25.2	25.2	22.6	22.5	22.5	23.9	24.2	24.1	22.1	22.4	22.2
		1	49	25.1	25.2	25.1	22.5	22.5	22.4	24.1	24.0	24.2	22.0	22.3	22.1
		1	99	25.1	25.2	25.4	22.4	22.6	22.5	24.0	24.3	23.2	22.0	22.3	20.6
		50	0	23.7	23.7	23.7	21.1	21.0	21.0	22.7	22.6	22.7	20.6	20.7	20.7
		50	24	23.7	23.7	23.7	21.1	21.1	21.0	22.7	22.6	22.7	20.6	20.7	20.7
		50	49	23.7	23.7	23.7	21.0	21.1	21.0	22.7	22.6	22.6	20.6	20.7	20.5
		100	0	23.7	23.6	23.6	21.1	21.0	21.0	22.7	22.6	22.5	20.6	20.6	20.4
	64QAM	1	0	23.9	24.0	24.3	21.4	21.3	21.7	22.3	22.9	23.3	19.8	20.4	20.0
		1	49	23.9	24.0	24.4	21.4	21.4	21.7	23.1	22.1	23.2	20.2	20.1	19.9
		1	99	23.9	24.0	24.3	21.2	21.5	21.6	22.8	22.9	22.4	20.2	20.5	18.6
		50	0	22.7	22.7	22.7	20.2	20.1	20.1	21.2	21.4	21.7	18.7	18.6	18.9
		50	24	22.8	22.8	22.7	20.2	20.2	20.2	21.7	21.0	21.6	19.1	18.5	18.8
		50	49	22.8	22.8	22.7	20.2	20.2	20.0	21.7	21.1	21.5	19.0	18.7	18.6
		100	0	22.7	22.7	22.6	20.1	20.1	20.0	21.4	21.1	21.5	18.9	18.4	18.6
	256QAM	1	0	19.8	19.6	19.5	18.0	17.7	18.0	19.6	19.7	19.9	17.1	17.4	17.8
		1	49	19.7	19.7	19.4	18.1	17.7	18.0	19.6	19.6	19.9	17.2	17.5	17.7
		1	99	19.7	19.7	19.3	18.1	17.7	18.0	19.6	19.6	19.9	17.3	17.5	17.8
		50	0	19.6	19.5	19.6	17.9	17.8	17.9	19.4	19.8	19.8	17.2	17.6	17.6
		50	24	19.6	19.6	19.5	18.0	17.9	17.9	19.5	19.8	19.8	17.3	17.6	17.7
		50	49	19.6	19.6	19.6	18.0	17.8	17.9	19.6	19.8	19.8	17.3	17.7	17.6
		100	0	19.6	19.5	19.5	18.0	17.9	17.8	19.6	19.8	19.7	17.3	17.7	17.6

7.11. LTE BAND 26 (FCC Part 90S)

Test Engineer ID:	39004	Test Date:	5/7/2020 & 8/29/2020
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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
				814.7	819.0	823.3	814.7	819.0	823.3
1.4	QPSK	1	0	25.5	25.5	25.7	23.8	23.8	23.8
		1	2	25.6	25.7	25.7	23.9	23.8	23.9
		1	5	25.6	25.6	25.6	23.8	23.8	23.8
		3	0	25.6	25.6	25.6	23.8	23.7	23.7
		3	1	25.6	25.7	25.6	23.9	23.8	23.8
		3	2	25.6	25.7	25.6	23.9	23.8	23.8
		6	0	24.6	24.7	24.7	22.9	22.9	22.8
	16QAM	1	0	24.9	24.7	24.8	23.2	22.9	22.9
		1	2	25.0	24.8	24.9	23.3	22.9	23.0
		1	5	25.0	24.8	24.8	23.3	22.9	22.9
		3	0	24.8	24.9	24.7	23.1	23.0	22.8
		3	1	24.9	24.9	24.8	23.1	23.1	22.9
		3	2	24.9	24.9	24.8	23.1	23.1	22.9
		6	0	23.6	23.9	23.8	21.8	22.0	22.0
	64QAM	1	0	24.0	23.8	23.9	22.3	22.0	22.0
		1	2	24.2	23.9	23.9	22.4	22.1	22.2
		1	5	24.1	23.8	23.9	22.3	22.0	22.1
		3	0	24.0	23.8	23.7	22.2	22.0	21.9
		3	1	24.0	23.9	23.7	22.2	22.1	21.9
		3	2	24.1	23.9	23.7	22.3	22.1	22.0
		6	0	22.7	23.0	22.8	20.9	21.2	21.0
	256QAM	1	0	20.1	19.8	19.7	17.9	17.9	17.8
		1	2	20.2	20.0	20.0	18.0	18.0	17.9
		1	5	20.0	19.9	19.9	17.8	17.8	17.8
		3	0	19.9	19.9	19.8	17.6	17.7	17.7
		3	1	20.0	19.9	19.8	17.7	17.8	17.8
		3	2	20.0	19.9	19.9	17.7	17.8	17.8
		6	0	19.9	19.8	19.8	17.6	17.7	17.7

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	25.6	25.6	23.8	23.8	23.8
		1	7	25.5	25.6	25.7	23.8	23.8	23.9
		1	14	25.6	25.7	25.6	23.8	23.9	23.9
		8	0	24.7	24.7	24.7	23.0	22.9	22.8
		8	4	24.7	24.8	24.7	23.0	23.0	22.9
		8	7	24.7	24.8	24.8	23.0	23.0	22.9
		15	0	24.7	24.8	24.7	23.0	22.9	22.9
	16QAM	1	0	24.6	24.6	25.1	22.9	22.7	23.2
		1	7	24.6	24.6	25.0	22.9	22.9	23.3
		1	14	24.7	24.7	25.1	22.9	22.9	23.4
		8	0	23.7	23.8	23.8	22.0	22.0	21.9
		8	4	23.7	23.9	23.8	22.1	22.1	22.0
		8	7	23.8	23.9	23.8	22.0	22.1	22.0
		15	0	23.6	23.8	23.7	21.9	22.0	22.0
	64QAM	1	0	23.9	24.0	23.7	22.2	22.3	22.0
		1	7	23.9	24.0	23.7	22.2	22.2	22.0
		1	14	24.0	24.1	23.8	22.2	22.3	22.1
		8	0	22.7	22.7	22.7	20.9	21.0	21.0
		8	4	22.7	22.8	22.8	21.0	21.1	21.1
		8	7	22.7	22.9	22.8	21.0	21.1	21.1
		15	0	22.8	22.7	22.7	21.0	21.0	21.1
	256QAM	1	0	20.0	20.5	19.7	17.8	18.2	17.1
		1	7	20.0	20.3	19.7	17.8	18.0	17.1
		1	14	19.9	20.3	19.6	17.7	17.8	17.0
		8	0	20.1	20.1	19.9	17.9	17.5	17.3
		8	4	20.2	20.1	19.9	17.9	17.5	17.3
		8	7	20.2	20.1	19.8	17.9	17.5	17.3
		15	0	20.1	20.0	20.0	17.7	17.4	17.5

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	23.7	23.8	23.7
		1	12	25.5	25.6	25.5	23.8	23.8	23.7
		1	24	25.6	25.7	25.5	23.8	23.9	23.8
		12	0	24.5	24.5	24.5	22.8	22.7	22.7
		12	6	24.6	24.7	24.6	22.9	22.9	22.8
		12	11	24.6	24.6	24.6	22.8	22.8	22.8
		25	0	24.6	24.6	24.6	22.8	22.8	22.8
	16QAM	1	0	24.6	24.7	25.1	22.9	23.0	23.2
		1	12	24.7	24.8	25.1	23.0	23.0	23.4
		1	24	24.8	24.8	25.2	23.0	23.1	23.4
		12	0	23.5	23.6	23.7	21.9	21.8	21.9
		12	6	23.7	23.7	23.7	21.9	21.9	22.0
		12	11	23.7	23.7	23.7	21.9	21.9	22.0
		25	0	23.5	23.6	23.6	21.8	21.8	21.9
	64QAM	1	0	23.8	23.5	23.7	22.1	21.8	22.1
		1	12	23.9	23.6	23.9	22.2	21.8	22.2
		1	24	23.9	23.6	23.9	22.2	21.8	22.1
		12	0	22.6	22.6	22.5	20.8	20.8	20.8
		12	6	22.7	22.7	22.6	21.0	20.9	20.8
		12	11	22.7	22.7	22.6	20.9	20.9	20.8
		25	0	22.6	22.6	22.6	20.9	20.8	20.9
	256QAM	1	0	20.0	19.7	20.0	18.6	18.3	18.7
		1	12	19.9	19.6	19.9	18.5	18.2	18.7
		1	24	19.9	19.5	19.9	18.4	18.1	18.6
		12	0	19.9	19.9	19.8	18.5	18.5	18.5
		12	6	19.9	19.8	19.8	18.5	18.5	18.6
		12	11	19.8	19.8	19.8	18.4	18.5	18.6
		25	0	19.9	19.9	19.8	18.5	18.6	18.5

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		25.6			23.9	
		1	24		25.7			23.8	
		1	49		25.6			23.8	
		25	0		24.6			22.8	
		25	12		24.8			23.0	
		25	24		24.8			22.9	
		50	0		24.7			22.9	
	16QAM	1	0		24.8			23.0	
		1	24		24.8			22.9	
		1	49		24.8			23.0	
		25	0		23.8			21.9	
		25	12		24.0			22.1	
		25	24		23.9			22.0	
		50	0		23.8			21.9	
	64QAM	1	0		23.9			22.2	
		1	24		24.0			22.2	
		1	49		24.0			22.1	
		25	0		22.7			21.0	
		25	12		23.0			21.1	
		25	24		22.9			21.1	
		50	0		22.8			20.9	
	256QAM	1	0		20.1			18.6	
		1	24		20.0			18.5	
		1	49		20.0			18.5	
		25	0		20.2			18.7	
		25	12		20.2			18.7	
		25	24		20.0			18.6	
		50	0		20.1			18.6	

7.12. LTE BAND 30(NS21)

Test Engineer ID:	39006	Test Date:	7/10/2020
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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
5.0	QPSK	1	0	25.6	25.6	25.0	22.6	22.6	22.6	23.1	22.1	21.8	21.9	22.0	22.0
		1	12	25.7	25.5	25.1	22.7	22.7	22.6	23.1	22.2	22.2	22.1	22.1	22.1
		1	24	25.7	25.3	24.8	22.8	22.8	22.8	22.8	22.3	22.2	22.2	22.2	22.2
		12	0	24.7	24.6	24.1	21.7	21.8	21.7	21.9	21.2	21.1	21.2	21.2	21.2
		12	6	24.7	24.6	24.2	21.9	21.8	21.9	21.9	21.3	21.3	21.3	21.3	21.3
		12	11	24.7	24.5	24.2	21.8	21.8	21.9	21.8	21.4	21.4	21.3	21.3	21.3
	16QAM	25	0	24.7	24.5	24.1	21.8	21.8	21.8	21.7	21.3	21.3	21.2	21.3	21.3
		1	0	24.8	25.0	24.0	21.8	21.7	21.7	21.6	21.6	20.9	21.5	21.4	21.5
		1	12	24.8	24.9	24.2	21.9	21.7	21.8	21.8	21.7	21.3	21.6	21.4	21.5
		1	24	24.8	24.8	24.0	21.9	21.8	21.8	21.6	21.8	21.5	21.7	21.6	21.6
		12	0	23.8	23.7	23.2	20.8	20.8	20.8	20.8	20.4	20.2	20.3	20.3	20.3
		12	6	23.8	23.7	23.3	20.8	20.8	20.9	20.9	20.5	20.4	20.4	20.4	20.4
	64QAM	12	11	23.8	23.7	23.4	20.8	20.9	20.9	20.8	20.5	20.6	20.3	20.3	20.4
		25	0	23.7	23.6	23.2	20.8	20.8	20.8	20.7	20.4	20.4	20.3	20.3	20.3
		1	0	22.3	23.3	23.2	20.8	20.8	20.8	19.2	19.5	19.4	20.5	20.5	20.5
		1	12	22.4	23.3	23.3	20.9	20.9	20.9	19.3	19.6	18.7	20.6	20.6	20.4
		1	24	22.4	23.4	23.3	20.9	21.0	20.9	19.3	19.1	19.5	20.6	20.5	20.3
		12	0	22.5	22.5	22.6	19.8	19.8	19.7	19.4	19.3	19.4	19.3	19.3	19.4
	256QAM	12	6	22.6	22.6	22.7	19.9	19.9	19.9	19.4	19.3	19.4	19.4	19.4	19.4
		12	11	22.6	22.6	22.7	19.9	19.9	19.9	19.4	19.3	19.4	19.4	19.4	19.3
		25	0	22.6	22.6	22.7	19.9	19.8	19.9	19.4	19.3	19.4	19.3	19.3	19.3
		1	0	19.5	20.6	20.4	17.7	17.8	17.7	19.1	19.5	19.4	17.4	17.3	17.4
		1	12	20.2	20.6	20.5	17.8	17.9	17.8	19.2	19.6	19.5	17.4	17.3	17.4
		1	24	20.3	20.7	20.6	18.0	17.8	17.9	19.3	19.7	19.6	17.5	17.5	17.4
		12	0	20.5	20.5	20.4	17.8	17.8	17.8	19.4	19.5	19.4	17.3	17.3	17.3
		12	6	20.5	20.6	20.5	17.9	17.9	17.9	19.5	19.5	19.5	17.3	17.3	17.3
		12	11	20.5	20.5	20.6	17.9	17.9	17.9	19.5	19.6	19.6	17.3	17.3	17.3
		25	0	20.5	20.5	20.5	17.9	17.9	17.9	19.6	19.5	19.6	17.3	17.3	17.3

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		21.5			18.8			20.0			18.2	
		1	24		25.4			22.8			23.1			22.2	
		1	49		21.5			18.8			20.0			18.2	
		25	0		24.4			21.8			22.0			21.3	
		25	12		24.4			21.8			22.2			21.4	
		25	24		24.2			21.9			22.2			21.4	
	16QAM	50	0		21.6			18.9			20.1			18.4	
		1	0		20.7			17.7			19.1			17.5	
		1	24		24.4			21.7			22.1			21.5	
		1	49		20.6			17.8			19.1			17.5	
		25	0		23.5			20.8			21.2			20.4	
		25	12		23.6			20.9			21.3			20.4	
	64QAM	25	24		23.4			20.9			21.4			20.4	
		50	0		20.7			17.9			19.1			17.4	
		1	0		23.1			16.9			20.3			16.6	
		1	24		23.1			21.0			20.3			20.8	
		1	49		23.1			17.0			20.2			16.6	
		25	0		22.6			19.9			20.3			19.3	
	256QAM	25	12		22.8			19.9			20.4			19.4	
		25	24		22.7			19.9			20.3			19.4	
		50	0		22.7			16.9			20.3			16.4	
		1	0		20.4			13.6			14.1			13.4	
		1	24		20.5			17.8			17.9			17.5	
		1	49		20.6			13.9			14.2			13.4	
		25	0		20.6			17.9			18.0			17.4	
		25	12		20.6			17.9			18.1			17.4	
		25	24		20.6			17.9			18.1			17.4	
		50	0		20.6			14.9			15.2			14.4	

7.13. LTE BAND 41 (NS04)

Test Engineer ID:	39004	Test Date:	7/22/2020
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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	24.6	27.6	27.5	21.7	24.6	24.5	22.6	25.1	24.9	20.9	23.8	23.4
		1	12	27.6	27.6	27.5	24.8	24.6	24.5	25.6	25.1	25.0	24.1	23.8	23.5
		1	24	27.7	27.7	27.6	24.8	24.7	24.5	25.7	25.1	25.0	24.2	23.8	23.5
		12	0	23.8	26.7	26.6	20.8	24.7	24.5	21.6	24.3	24.0	20.1	22.9	22.6
		12	6	23.8	26.8	26.6	20.8	24.8	24.6	21.7	24.2	24.0	20.2	22.9	22.6
		12	11	26.8	26.8	26.6	23.9	24.8	24.5	24.6	24.2	24.0	23.1	22.9	22.6
		25	0	23.8	26.7	26.6	20.7	24.7	24.5	21.6	24.2	24.0	20.1	22.9	22.6
	16QAM	1	0	23.7	26.7	26.7	20.7	24.0	23.9	21.7	24.1	24.1	20.0	23.0	22.5
		1	12	26.6	26.8	26.7	23.7	24.0	23.9	24.7	24.1	24.1	23.2	23.0	22.5
		1	24	26.7	26.8	26.7	23.7	24.0	24.0	24.7	24.1	24.2	23.3	23.0	22.5
		12	0	22.8	25.7	25.6	19.7	23.7	23.7	20.6	23.2	23.1	19.1	21.9	21.6
		12	6	22.8	25.7	25.6	19.8	23.8	23.7	20.6	23.2	23.1	19.2	22.0	21.6
		12	11	25.8	25.7	25.7	22.8	23.8	23.6	23.6	23.1	23.1	22.1	21.9	21.6
		25	0	22.8	25.8	25.6	19.9	23.8	23.5	20.7	23.2	23.0	19.1	21.9	21.6
	64QAM	1	0	22.4	26.1	25.7	19.7	22.0	21.7	20.5	22.9	23.5	19.4	22.1	21.3
		1	12	24.6	26.2	25.8	22.8	23.1	22.6	23.6	22.9	23.7	22.5	22.1	21.3
		1	24	25.1	26.2	25.7	22.8	23.0	22.6	23.7	22.9	23.9	22.6	22.0	21.3
		12	0	21.8	24.8	24.5	18.8	21.7	21.6	19.7	22.2	22.4	18.2	20.9	20.6
		12	6	21.8	24.8	24.6	18.7	21.7	21.6	19.6	22.2	22.5	18.2	20.9	20.6
		12	11	24.1	24.8	24.5	21.9	21.8	21.6	22.7	22.2	22.6	21.2	20.8	20.6
		25	0	21.8	24.7	24.5	18.8	21.7	21.6	19.7	22.2	22.2	18.1	20.8	20.6
	256QAM	1	0	19.9	22.9	22.9	16.9	19.9	19.9	17.6	19.2	19.3	16.3	19.3	19.0
		1	12	22.9	23.0	22.8	19.7	20.0	19.8	20.6	19.1	19.3	19.5	19.3	18.9
		1	24	22.9	22.9	22.9	19.9	20.0	19.9	20.7	19.1	19.3	19.5	19.4	18.9
		12	0	19.8	22.6	22.6	16.8	19.8	19.6	17.7	19.1	19.2	16.2	19.0	18.7
		12	6	19.7	22.7	22.6	16.7	19.8	19.6	17.6	19.1	19.3	16.3	19.1	18.7
		12	11	22.7	22.6	22.5	19.7	19.8	19.6	20.6	19.1	19.2	19.3	19.0	18.7
		25	0	19.8	22.7	22.5	16.7	19.8	19.6	17.6	19.1	19.2	16.2	19.0	18.7

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	22.6	27.6	27.5	19.8	24.5	24.3	22.2	24.6	24.4	18.7	23.7	23.4
		1	24	27.7	27.7	27.4	24.8	24.5	24.3	25.5	24.8	24.7	24.0	23.6	23.3
		1	49	27.7	27.7	27.5	24.8	24.5	24.3	25.7	24.6	24.4	24.2	23.6	23.3
		25	0	23.8	26.7	26.5	20.8	24.7	24.5	22.5	23.9	23.7	20.0	22.7	22.4
		25	12	26.8	26.8	26.6	23.8	24.7	24.5	24.6	24.0	23.7	23.1	22.7	22.4
		25	24	25.8	26.7	26.6	23.7	24.7	24.5	23.7	23.9	23.7	22.1	22.7	22.4
	16QAM	50	0	23.8	26.7	26.5	20.8	24.7	24.5	22.6	23.9	23.7	20.0	22.7	22.4
		1	0	21.6	26.9	26.5	18.7	24.0	23.9	21.5	23.6	23.5	17.6	22.9	22.4
		1	24	26.6	26.8	26.5	23.7	24.0	23.8	24.5	23.8	23.7	23.0	22.8	22.3
		1	49	26.7	26.8	26.6	23.7	24.0	23.9	24.9	23.6	23.5	23.2	22.9	22.4
		25	0	22.8	25.8	25.6	19.7	23.8	23.5	21.6	22.9	22.7	19.0	21.8	21.5
		25	12	25.8	25.8	25.6	22.7	23.8	23.5	23.7	23.0	22.7	22.1	21.8	21.4
	64QAM	25	24	24.8	25.8	25.6	22.8	23.8	23.5	22.8	22.9	22.7	21.1	21.8	21.4
		50	0	22.8	25.8	25.5	19.7	23.8	23.5	21.7	22.9	22.7	19.1	21.8	21.4
		1	0	20.9	25.8	25.0	17.7	22.2	22.9	22.7	22.2	23.0	17.0	21.8	21.0
		1	24	25.6	25.8	25.1	22.8	22.3	22.9	22.9	22.4	23.3	22.1	21.8	20.9
		1	49	26.0	25.9	25.1	22.8	22.3	23.0	22.6	22.3	23.9	22.2	21.8	21.0
		25	0	21.8	24.7	24.6	18.7	21.5	21.2	21.6	21.9	22.1	18.0	20.7	20.5
	256QAM	25	12	24.4	24.7	24.7	21.8	21.5	21.2	21.7	22.0	22.3	20.9	20.7	20.5
		25	24	23.8	24.7	24.7	21.8	21.5	21.2	21.7	21.9	22.5	20.1	20.7	20.5
		50	0	21.8	24.7	24.5	18.8	21.5	21.2	21.7	21.9	22.1	18.0	20.7	20.4
		1	0	17.3	23.1	22.4	14.8	19.6	19.1	18.3	21.2	19.4	13.4	19.0	18.5
		1	24	22.3	23.0	22.5	19.8	19.7	19.1	21.1	21.1	19.3	18.6	19.0	18.4
		1	49	22.4	23.1	22.5	19.7	19.7	19.1	22.0	21.2	19.3	18.8	19.0	18.3
		25	0	19.9	22.7	22.5	16.8	19.5	19.3	19.7	19.0	19.2	16.1	18.7	18.5
		25	12	22.8	22.7	22.6	19.7	19.5	19.3	21.4	19.0	19.2	19.1	18.7	18.5
		25	24	21.8	22.7	22.6	19.7	19.5	19.3	21.0	19.0	19.2	18.2	18.7	18.4
		50	0	19.8	22.7	22.5	16.8	19.6	19.2	19.9	19.0	19.2	16.0	18.7	18.5

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	22.6	27.6	27.4	19.7	24.6	24.4	22.5	24.5	24.3	18.8	23.7	23.4
		1	37	27.5	27.6	27.5	24.8	24.5	24.3	25.7	24.8	24.7	24.1	23.6	23.3
		1	74	27.6	27.7	27.5	24.6	24.6	24.4	25.7	24.5	24.6	24.2	23.8	23.3
		36	0	22.8	26.7	26.5	19.7	24.7	24.4	21.6	23.8	23.5	19.1	22.8	22.5
		36	16	26.8	26.7	26.5	23.8	24.7	24.4	24.7	23.9	23.7	23.1	22.7	22.5
		36	35	23.8	26.7	26.6	20.7	24.7	24.5	23.7	23.8	23.7	20.2	22.7	22.5
		75	0	22.7	26.7	26.5	19.7	24.6	24.4	21.6	23.8	23.6	19.1	22.7	22.5
	16QAM	1	0	21.6	26.7	26.5	18.8	23.9	23.5	21.6	23.5	23.2	17.8	22.7	22.4
		1	37	26.6	26.7	26.5	23.7	23.9	23.5	24.8	23.8	23.6	23.1	22.5	22.3
		1	74	26.6	26.7	26.7	23.7	24.0	23.5	24.9	23.7	23.4	23.2	22.6	22.4
		36	0	21.7	25.7	25.5	18.7	23.6	23.5	20.7	22.8	22.5	18.1	21.8	21.5
		36	16	25.8	25.8	25.5	22.7	23.8	23.5	23.7	22.9	22.7	22.1	21.8	21.5
		36	35	22.7	25.7	25.6	19.8	23.7	23.5	22.7	22.8	22.7	19.2	21.7	21.4
		75	0	21.8	25.7	25.5	18.7	23.6	23.5	20.6	22.8	22.6	18.2	21.7	21.5
	64QAM	1	0	20.9	25.5	24.9	17.7	22.9	22.6	22.5	22.9	22.5	16.7	21.3	21.8
		1	37	25.9	25.5	25.0	22.8	22.9	22.4	22.7	23.1	23.2	21.9	21.2	21.8
		1	74	25.9	25.7	25.1	22.8	23.0	22.5	22.6	22.9	23.7	22.0	21.3	21.8
		36	0	20.9	24.6	24.6	17.7	21.5	21.3	21.6	21.8	22.0	17.1	20.8	20.6
		36	16	24.7	24.7	24.6	21.7	21.6	21.3	21.7	21.9	22.5	21.0	20.8	20.6
		36	35	21.8	24.7	24.7	18.7	21.6	21.3	21.7	21.9	22.7	18.2	20.8	20.6
		75	0	20.8	24.7	24.5	17.7	21.5	21.3	21.6	21.8	22.3	17.2	20.8	20.5
	256QAM	1	0	17.2	22.8	22.5	14.8	19.6	19.4	15.9	19.0	18.7	14.1	18.8	18.2
		1	37	22.3	22.8	22.5	19.8	19.7	19.3	19.7	18.6	18.7	19.3	18.7	18.1
		1	74	22.4	23.0	22.6	19.8	19.7	19.3	20.4	18.8	18.8	19.6	18.7	18.1
		36	0	18.8	22.6	22.6	15.8	19.5	19.3	16.3	18.8	18.8	15.2	18.8	18.5
		36	16	22.8	22.7	22.5	19.8	19.5	19.3	19.8	18.8	19.0	19.1	18.8	18.5
		36	35	19.8	22.7	22.6	16.7	19.5	19.3	18.9	18.7	18.9	16.2	18.8	18.5
		75	0	18.7	22.7	22.5	15.7	19.4	19.3	16.6	18.7	18.8	15.2	18.8	18.5

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	22.6	27.7	27.4	21.8	24.7	24.5	22.5	24.5	24.3	18.7	23.7	23.3
		1	49	27.6	27.6	27.4	24.6	24.6	24.3	25.7	24.8	24.7	24.1	23.5	23.2
		1	99	27.6	27.7	27.5	24.7	24.6	24.5	25.7	24.5	24.6	24.2	23.6	23.3
		50	0	22.7	26.6	26.5	21.8	24.7	24.5	21.6	23.8	23.5	19.0	22.6	22.4
		50	24	26.8	26.7	26.6	24.8	24.8	24.5	24.7	23.9	23.7	23.2	22.7	22.4
		50	49	23.8	26.7	26.6	22.9	24.8	24.5	23.7	23.8	23.7	20.2	22.6	22.4
		100	0	22.8	26.7	26.5	22.0	24.7	24.5	21.6	23.8	23.6	19.2	22.6	22.4
	16QAM	1	0	21.5	26.8	26.5	20.2	24.0	23.6	21.6	23.5	23.2	17.5	22.8	22.3
		1	49	26.4	26.7	26.5	24.0	24.0	23.5	24.8	23.8	23.6	23.0	22.7	22.3
		1	99	26.5	26.8	26.5	24.0	24.0	23.6	24.9	23.7	23.4	23.1	22.8	22.4
		50	0	21.7	25.7	25.5	19.9	23.7	23.5	20.7	22.8	22.5	18.1	21.7	21.4
		50	24	25.8	25.7	25.6	23.3	23.8	23.5	23.7	22.9	22.7	22.2	21.7	21.4
		50	49	22.7	25.7	25.5	21.0	23.8	23.5	22.7	22.8	22.7	19.2	21.7	21.4
		100	0	21.8	25.7	25.5	20.0	23.7	23.5	20.6	22.8	22.6	18.2	21.7	21.4
	64QAM	1	0	20.5	25.7	24.9	22.7	23.0	22.6	22.5	22.9	22.5	16.6	21.8	21.8
		1	49	25.7	25.7	25.9	22.7	22.9	22.5	22.7	23.1	23.2	21.9	21.6	21.7
		1	99	25.7	25.7	26.0	22.7	23.0	22.5	22.6	22.9	23.7	22.1	21.7	21.8
		50	0	20.7	24.7	24.5	21.5	21.5	21.4	21.6	21.8	22.0	17.1	20.7	20.5
		50	24	24.8	24.8	24.6	21.6	21.6	21.4	21.7	21.9	22.5	20.9	20.7	20.5
		50	49	21.8	24.7	24.6	21.6	21.6	21.3	21.7	21.9	22.7	18.2	20.7	20.4
		100	0	20.8	24.8	24.6	21.6	21.5	21.3	21.6	21.8	22.3	17.2	20.7	20.4
	256QAM	1	0	17.6	23.0	22.7	20.0	19.7	19.5	15.9	19.0	18.7	13.8	19.1	18.8
		1	49	22.6	22.9	22.6	19.9	19.7	19.3	19.7	18.6	18.7	19.1	18.9	18.6
		1	99	22.7	23.0	22.8	20.1	19.8	19.4	20.4	18.8	18.8	19.3	18.9	18.6
		50	0	18.7	22.6	22.4	19.4	19.5	19.4	16.3	18.8	18.8	15.2	18.7	18.4
		50	24	22.8	22.7	22.5	19.6	19.6	19.3	19.8	18.8	19.0	19.2	18.7	18.5
		50	49	19.8	22.7	22.5	19.6	19.5	19.3	18.9	18.7	18.9	16.3	18.7	18.4
		100	0	18.8	22.7	22.5	19.6	19.5	19.3	16.6	18.7	18.8	15.2	18.7	18.5

7.14. 5G NR BAND n41 (NS04)

Test Engineer ID:	10646	Test Date:	8/222/20
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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	20.9	23.3	23.3				20.2	22.7	22.5			
		1	1	21.0	26.3	26.1				20.3	25.9	26.0			
		25	12	23.2	26.5	26.7				22.7	26.0	26.0			
		50	0	22.0	26.0	26.1				22.6	25.5	25.6			
	QPSK	1	0	20.6	23.3	23.3				20.0	22.5	22.7			
		1	1	20.6	26.3	25.4				19.5	26.2	26.0			
		25	12	22.1	26.5	26.6				21.6	26.0	26.0			
		50	0	21.0	25.5	25.7				21.6	25.0	25.0			
	16QAM	1	0	20.3	22.6	23.0				19.8	22.5	22.7			
		1	1	20.4	25.5	25.3				19.7	25.0	25.4			
		25	12	21.7	25.4	25.7				21.0	24.9	24.9			
		50	0	20.6	24.6	24.6				21.1	24.1	24.1			
	64QAM	1	0	19.9	23.1	23.3				19.7	22.7	22.9			
		1	1	20.2	24.2	23.3				19.4	24.0	24.0			
		25	12	21.5	24.0	24.1				21.0	23.4	23.5			
		50	0	20.6	24.0	24.1				21.1	23.6	23.6			
	256QAM	1	0	18.5	21.9	22.3				17.6	21.4	21.6			
		1	1	18.5	21.7	22.0				17.6	21.5	21.7			
		25	12	20.2	21.9	22.2				19.5	21.5	21.5			
		50	0	19.1	22.0	22.0				19.5	21.5	21.6			

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	21.1	23.6	22.7	19.3	24.2	21.0	19.4	22.0	22.4	16.8	20.0	18.7
		1	1	21.4	26.6	26.6	18.5	24.4	24.4	19.3	26.2	25.4	17.1	22.7	22.2
		50	25	23.2	26.7	26.6	20.7	24.2	24.2	22.2	25.6	25.8	20.2	22.0	22.2
		100	0	23.2	26.3	26.2	20.8	23.8	23.7	22.2	25.2	25.3	20.1	22.2	21.7
	QPSK	1	0	21.0	23.3	22.9	18.8	21.2	20.6	18.8	22.6	22.2	16.7	20.1	18.5
		1	1	20.8	26.7	26.7	18.2	24.2	24.5	19.3	26.1	25.2	16.5	22.3	22.1
		50	25	22.1	26.7	26.7	19.8	24.2	24.1	21.3	25.6	25.8	19.3	21.9	22.1
		100	0	22.2	25.7	25.6	19.9	23.3	23.3	21.2	24.7	24.8	19.2	22.2	21.1
	16QAM	1	0	20.0	22.9	22.5	19.0	21.3	20.7	19.2	22.8	22.6	16.3	19.6	18.5
		1	1	20.2	25.5	25.7	18.6	23.5	23.3	19.5	25.1	25.4	16.5	21.7	21.1
		50	25	21.2	25.2	25.1	19.2	23.2	23.1	20.7	24.6	24.7	18.2	21.6	20.6
		100	0	21.2	24.1	24.2	19.3	22.3	22.2	20.8	23.7	23.8	18.2	20.6	19.7
	64QAM	1	0	20.4	23.5	23.2	18.3	21.3	20.9	19.1	22.9	22.5	15.4	19.4	18.1
		1	1	20.8	24.0	24.1	18.0	22.0	22.4	19.3	23.9	23.8	15.5	20.7	19.3
		50	25	21.7	24.2	24.1	19.2	21.8	21.7	20.7	23.2	23.2	17.7	19.6	18.6
		100	0	21.7	24.2	24.2	19.4	21.8	21.7	20.8	23.2	23.3	17.7	19.6	18.7
	256QAM	1	0	18.9	22.5	22.2	15.3	18.9	18.5	17.1	21.2	21.3	13.5	18.1	16.8
		1	1	18.2	22.4	22.4	15.5	19.0	18.8	16.9	20.9	20.8	14.1	17.9	16.7
		50	25	20.2	22.1	22.0	16.9	18.7	18.7	19.2	21.2	21.2	16.1	17.6	16.7
		100	0	20.2	22.1	22.1	16.9	18.8	18.8	19.2	21.1	21.3	16.1	17.6	16.6

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	20.8	23.2	23.2	18.4	20.7	21.0	20.1	23.0	22.5	16.7	19.4	19.5
		1	1	21.3	26.7	26.3	19.0	24.4	24.2	20.1	26.2	26.2	17.3	22.7	22.0
		64	32	23.0	26.3	26.4	20.8	24.2	24.2	22.6	26.2	26.1	19.9	21.7	21.8
		128	0	23.0	26.0	25.9	20.9	23.8	23.7	22.7	25.7	25.6	19.8	21.9	21.7
	QPSK	1	0	20.4	23.1	23.1	18.7	20.4	20.4	19.4	22.7	22.8	16.4	19.9	19.5
		1	1	20.3	26.6	26.6	18.2	24.6	24.7	19.6	26.2	25.9	16.3	22.1	22.0
		64	32	21.9	26.5	26.4	19.8	24.3	24.3	21.6	26.2	26.2	18.9	21.7	21.9
		128	0	22.0	25.5	25.4	19.8	23.3	23.2	21.6	25.2	25.2	18.8	21.8	21.7
	16QAM	1	0	20.6	22.8	22.5	18.5	21.3	20.9	19.6	23.0	22.8	16.2	19.5	19.4
		1	1	20.6	25.2	25.8	18.7	23.5	23.2	19.8	25.4	25.2	16.0	21.8	21.9
		64	32	21.1	25.2	25.1	19.3	23.3	23.3	21.2	25.2	25.1	18.0	21.3	21.3
		128	0	21.3	24.2	24.1	19.4	22.3	22.2	21.2	24.2	24.2	17.8	20.4	20.3
	64QAM	1	0	20.0	23.1	23.3	18.3	21.3	20.6	19.5	23.3	22.6	15.7	19.6	18.9
		1	1	20.5	24.2	24.1	18.2	22.0	22.3	19.3	24.2	23.6	15.7	20.5	20.1
		64	32	21.4	23.9	23.8	19.4	21.8	21.8	21.1	23.7	23.6	17.7	19.5	19.6
		128	0	21.5	24.0	23.9	19.4	21.8	21.8	21.2	23.7	23.7	17.5	19.6	19.5
	256QAM	1	0	17.6	21.2	21.1	15.3	19.0	19.1	18.7	20.8	20.6	13.2	17.8	17.9
		1	1	17.2	21.2	20.7	15.8	18.8	18.7	16.4	21.0	20.5	13.3	17.7	17.3
		64	32	18.9	21.0	20.9	16.8	18.7	18.7	18.6	20.7	20.7	15.9	17.3	17.3
		128	0	19.0	21.0	20.9	16.8	18.8	18.7	18.6	20.7	20.7	15.8	17.4	17.4

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	21.5	23.0	22.9	18.6	20.7	20.6	19.9	22.5	22.4	16.9	19.7	19.6
		1	1	21.4	26.7	26.7	18.4	24.2	24.1	19.6	26.2	25.9	16.3	22.7	22.1
		81	40	23.1	26.6	26.5	20.8	24.2	24.3	22.6	25.9	26.0	20.2	21.9	22.0
		162	0	23.1	26.1	26.2	20.9	23.8	23.8	22.5	25.5	25.5	20.0	21.9	22.0
	QPSK	1	0	20.5	23.2	23.4	18.4	21.0	20.7	19.3	22.5	22.5	16.5	19.8	19.4
		1	1	20.9	26.5	26.5	18.3	24.1	23.8	19.6	26.0	25.7	16.3	22.2	21.7
		81	40	22.2	26.6	26.6	19.8	24.2	24.2	21.6	25.9	26.0	19.2	21.8	22.0
		162	0	22.2	25.7	25.7	19.9	23.3	23.3	21.5	24.9	25.0	19.0	22.0	22.0
	16QAM	1	0	20.2	22.5	22.5	18.9	21.2	20.8	19.4	22.7	22.6	16.0	19.5	18.6
		1	1	20.3	25.3	25.6	18.6	23.5	23.2	19.9	25.2	24.7	16.1	22.1	21.1
		81	40	21.1	25.2	25.1	19.3	23.3	23.3	21.1	24.9	25.0	18.1	21.4	21.5
		162	0	21.1	24.1	24.1	19.4	22.2	22.3	21.0	24.0	24.0	18.0	20.5	20.5
	64QAM	1	0	20.6	23.5	23.2	17.8	20.8	20.7	18.9	22.9	22.8	16.3	20.2	19.2
		1	1	20.5	24.0	23.9	18.0	21.9	21.6	19.1	23.7	23.4	16.4	20.8	20.7
		81	40	21.6	24.1	24.1	19.3	21.7	21.8	21.1	23.4	23.5	18.6	20.4	20.4
		162	0	21.7	24.2	24.0	19.4	21.8	21.7	20.5	23.4	23.5	18.5	20.5	20.5
	256QAM	1	0	17.7	20.8	21.1	15.8	19.0	18.8	16.5	20.9	20.2	13.7	17.9	17.1
		1	1	17.9	20.7	20.9	15.3	18.6	18.7	16.6	20.6	20.7	13.6	17.8	17.6
		81	40	18.9	20.9	20.8	16.8	18.7	18.7	18.8	20.6	20.7	16.0	17.3	17.2
		162	0	18.9	20.9	20.8	16.9	18.8	18.8	18.8	20.7	20.7	15.8	17.4	17.3

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	21.2	20.8	23.1	18.6	19.2	21.0	19.9	20.9	22.4	16.8	18.0	19.6
		1	1	21.2	21.0	26.7	18.8	19.5	24.5	20.3	21.1	26.0	17.0	17.8	22.7
		108	54	23.1	26.5	26.4	20.9	24.3	24.2	22.9	26.2	26.2	20.2	22.1	22.0
		216	0	23.0	26.0	25.9	20.9	23.8	23.7	22.8	25.7	25.7	20.0	22.3	22.0
	QPSK	1	0	20.3	20.6	22.8	18.2	18.8	20.9	19.6	20.0	22.6	16.5	17.4	19.4
		1	1	20.5	20.6	26.5	17.9	18.3	24.6	19.6	20.3	26.0	16.2	17.7	22.1
		108	54	22.1	26.4	26.4	19.9	24.3	24.2	22.0	26.2	26.2	19.2	22.1	22.0
		216	0	22.0	25.5	25.5	19.9	23.3	23.2	21.8	25.2	25.2	19.0	22.3	22.0
	16QAM	1	0	20.1	20.7	23.1	18.6	18.8	21.1	19.6	20.3	22.7	15.8	17.4	19.1
		1	1	20.3	20.4	25.6	18.7	18.6	23.5	19.8	20.9	25.4	16.0	17.3	21.6
		108	54	21.3	25.2	25.2	19.5	23.4	23.2	21.4	25.2	25.2	18.2	21.7	21.5
		216	0	21.2	24.2	24.2	19.4	22.4	22.2	21.4	24.2	24.2	18.0	20.7	20.5
	64QAM	1	0	20.4	20.3	23.3	17.7	18.1	20.9	19.1	20.0	22.6	15.3	16.7	19.3
		1	1	20.4	20.3	23.8	18.3	18.1	21.9	19.3	20.3	23.8	15.3	16.5	20.1
		108	54	21.5	24.0	24.0	19.5	21.8	21.7	21.4	23.7	23.7	17.7	19.6	19.5
		216	0	21.5	24.0	24.0	19.4	21.9	21.7	21.3	23.7	23.7	17.5	19.8	19.5
	256QAM	1	0	17.6	17.4	20.4	15.7	15.5	18.4	16.4	17.6	20.2	13.9	14.3	17.7
		1	1	17.9	17.6	21.0	15.4	15.4	18.6	16.5	17.0	20.6	13.4	14.4	17.4
		108	54	19.0	21.0	21.0	16.9	18.8	18.7	18.9	20.7	20.7	15.8	17.3	17.1
		216	0	19.1	21.0	21.1	16.9	18.9	18.7	18.9	20.7	20.7	15.7	17.4	17.2

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 2541.0	518600 2593.0	529000 2645.0	508200 2541.0	518600 2593.0	529000 2645.0	508200 2541.0	518600 2593.0	529000 2645.0	508200 2541.0	518600 2593.0	529000 2645.0
90.0	BPSK	1	0	21.0	20.9	22.7	18.8	19.2	20.7	20.2	20.9	22.3	17.3	19.1	20.0
		1	1	20.6	20.7	26.7	18.8	18.8	24.4	20.6	20.9	26.2	17.2	18.8	22.5
		120	60	22.6	26.2	26.1	20.9	24.4	24.3	22.8	26.1	26.1	20.7	22.6	22.5
		240	0	22.7	25.7	25.6	21.0	23.9	23.8	22.7	25.6	25.6	20.5	22.7	22.5
	QPSK	1	0	20.0	20.2	22.6	18.3	18.9	20.7	19.8	20.3	22.5	17.0	18.2	20.2
		1	1	20.2	20.2	26.6	18.5	18.3	23.7	19.5	20.8	26.0	17.0	17.8	22.5
		120	60	21.6	26.2	26.0	19.9	24.4	24.3	21.9	26.1	26.1	19.7	22.6	22.5
		240	0	21.6	25.0	25.1	19.9	23.4	23.3	21.8	25.1	25.1	19.5	22.7	22.5
	16QAM	1	0	20.3	20.4	22.8	18.9	18.7	21.3	19.6	20.6	22.8	16.6	17.8	19.9
		1	1	20.5	20.3	25.4	18.9	18.7	23.4	19.3	20.4	25.2	16.5	18.0	22.1
		120	60	21.1	25.2	25.1	19.4	23.4	23.4	21.4	25.0	25.1	18.6	22.2	22.0
		240	0	21.1	24.0	24.1	19.4	22.3	22.3	21.3	24.1	24.1	18.5	21.2	21.0
	64QAM	1	0	19.8	19.8	22.8	17.8	18.3	20.6	19.2	20.3	22.9	15.4	16.5	19.1
		1	1	20.0	19.7	23.5	18.0	18.2	21.7	19.1	19.9	23.8	15.6	16.3	20.2
		120	60	21.2	23.7	23.6	19.4	21.8	21.8	21.4	23.6	23.6	17.7	19.7	19.5
		240	0	21.2	23.6	23.6	19.4	21.9	21.8	21.3	23.6	20.6	17.5	19.8	19.5
	256QAM	1	0	17.7	17.5	21.0	15.1	15.5	18.7	15.7	17.6	21.0	13.4	14.8	17.6
		1	1	17.7	17.4	21.2	15.3	15.5	18.9	16.3	17.6	20.7	13.4	14.4	17.8
		120	60	19.1	21.1	21.0	16.9	18.8	18.7	18.9	20.7	20.7	15.8	17.3	17.2
		240	0	19.1	21.0	21.0	16.9	18.8	18.8	18.9	20.7	20.8	15.7	17.4	17.2

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 2546.0	528600 2593.0	528000 2640.0	509200 2546.0	528600 2593.0	528000 2640.0	509200 2546.0	528600 2593.0	528000 2640.0	509200 2546.0	528600 2593.0	528000 2640.0
100.0	BPSK	1	0	21.4	20.8	23.2	19.3	18.8	21.1	19.6	20.2	22.1	18.0	18.8	20.0
		1	1	21.6	21.4	26.6	18.9	18.8	24.2	19.4	20.3	25.8	17.6	18.8	22.7
		135	67	23.1	26.4	26.6	20.9	24.3	24.3	22.4	25.7	25.7	20.7	22.7	22.5
		270	0	23.2	26.7	26.1	20.9	23.8	23.8	22.3	25.1	25.1	20.6	22.7	22.5
	QPSK	1	0	20.9	26.2	22.9	18.2	18.1	20.9	19.1	20.0	22.0	17.1	18.3	20.1
		1	1	21.2	20.7	26.5	18.2	18.5	24.5	19.1	20.0	26.2	16.8	18.3	22.5
		135	67	22.2	20.8	26.6	19.9	24.3	24.2	21.4	25.6	25.6	19.7	22.7	22.5
		270	0	22.2	26.6	25.6	19.9	23.4	23.4	21.3	24.6	24.7	19.6	22.7	22.5
	16QAM	1	0	21.0	25.6	23.3	18.5	18.7	21.0	19.2	20.0	22.2	16.5	18.0	19.8
		1	1	21.1	20.5	25.8	18.3	18.9	23.6	19.6	20.2	24.6	16.7	17.8	22.3
		135	67	21.6	20.8	25.5	19.5	23.3	23.3	20.9	24.6	24.6	18.8	22.2	22.0
		270	0	21.6	25.5	24.6	19.4	22.3	22.4	20.8	23.6	23.7	18.6	21.3	21.1
	64QAM	1	0	20.4	24.7	23.2	18.0	18.3	21.5	18.8	19.1	22.1	15.7	16.7	18.9
		1	1	20.3	20.5	24.2	18.0	18.1	21.8	18.9	19.8	23.0	15.7	16.8	20.2
		135	67	21.7	20.2	24.0	19.4	21.8	21.8	20.9	23.1	23.1	17.7	19.6	19.5
		270	0	21.7	24.2	24.1	19.4	21.8	21.9	20.8	23.2	23.1	17.5	19.8	19.5
	256QAM	1	0	17.7	17.4	21.3	15.5	15.1	18.8	16.4	17.4	20.4	12.8	14.7	17.8
		1	1	17.6	18.0	21.4	15.4	15.1	19.0	16.6	17.6	20.6	13.6	14.7	17.5
		135	67	19.1	21.0	21.0	16.9	18.8	18.9	19.0	20.7	20.7	15.9	17.3	17.2
		270	0	19.1	21.1	21.0	16.9	18.8	18.9	18.9	20.8	20.7	15.7	17.4	17.2

7.15. LTE BAND 48

Test Engineer ID:	19467	Test Date:	7/23/2020
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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	25.7	25.1	25.5	21.8	22.0	22.1	24.8	25.0	24.7	22.1	22.1	21.8
		1	12	25.6	25.1	25.4	21.6	21.9	22.0	24.7	24.9	24.7	22.1	22.0	21.7
		1	24	25.7	25.2	25.5	21.8	22.0	22.1	24.8	25.0	24.7	22.1	22.1	21.7
		12	0	24.7	24.4	24.6	20.8	21.0	21.2	23.9	24.0	23.8	21.2	21.2	20.9
		12	6	24.7	24.4	24.5	20.9	21.0	21.1	23.8	24.0	23.8	21.2	21.3	21.0
		12	11	24.7	24.4	24.5	20.8	21.0	21.1	23.8	24.0	23.8	21.2	21.3	21.0
		25	0	24.7	24.4	24.6	20.8	21.0	21.1	23.8	24.0	23.8	21.2	21.2	20.9
	16QAM	1	0	25.1	24.7	24.9	21.2	21.3	21.6	24.1	24.3	24.2	21.3	21.3	20.8
		1	12	25.0	24.7	24.8	21.2	21.3	21.5	24.1	24.3	24.0	21.3	21.3	20.7
		1	24	25.1	24.7	25.0	21.2	21.3	21.6	24.2	24.3	24.2	21.3	21.3	20.8
		12	0	23.9	23.5	23.7	20.0	20.0	20.2	22.9	23.1	22.9	20.2	20.3	20.0
		12	6	23.8	23.6	23.7	19.9	20.0	20.3	22.9	23.1	22.9	20.1	20.3	19.9
		12	11	23.8	23.5	23.7	20.0	20.0	20.2	22.9	23.0	22.9	20.2	20.2	19.9
		25	0	23.8	23.5	23.6	19.9	20.0	20.1	22.9	23.1	22.8	20.2	20.2	19.9
	64QAM	1	0	23.9	23.6	23.7	20.1	20.6	20.7	23.0	23.6	23.2	20.7	20.4	19.6
		1	12	23.7	23.5	23.6	20.0	20.6	20.7	22.9	23.6	23.3	20.7	20.3	19.5
		1	24	23.8	23.6	23.6	20.1	20.6	20.6	23.0	23.6	23.3	20.7	20.4	19.6
		12	0	22.8	22.7	22.7	19.1	20.6	20.6	22.0	23.6	23.3	19.3	19.2	19.0
		12	6	22.8	22.7	22.7	19.1	20.6	20.6	22.0	23.6	23.3	19.3	19.2	19.0
		12	11	22.8	22.6	22.7	19.1	20.6	20.6	22.0	23.6	23.3	19.3	19.2	19.0
		25	0	22.8	22.7	22.6	19.1	20.6	20.6	22.0	23.6	23.3	19.2	19.1	19.0
	256QAM	1	0	21.1	20.9	21.0	17.4	17.5	17.5	20.3	20.4	20.1	17.6	17.6	17.2
		1	12	21.1	20.9	20.9	17.4	17.4	17.4	20.3	20.4	20.1	17.5	17.5	17.1
		1	24	21.2	20.9	21.0	17.4	17.5	17.5	20.3	20.5	20.1	17.5	17.6	17.0
		12	0	20.8	20.7	20.6	17.1	17.1	17.2	19.9	20.1	19.9	17.3	17.2	16.9
		12	6	20.7	20.6	20.6	17.0	17.1	17.2	20.0	20.1	19.9	17.2	17.2	16.9
		12	11	20.8	20.6	20.6	17.0	17.0	17.2	19.9	20.1	19.8	17.2	17.2	16.8
		25	0	20.8	20.6	20.6	17.1	17.1	17.2	20.0	20.1	19.8	17.2	17.2	16.9

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
10.0	QPSK	1	0	25.5	25.7	25.5	21.8	22.0	22.0	24.7	25.0	24.8	22.2	22.2	21.9
		1	24	25.4	25.7	25.5	21.7	22.0	21.9	24.6	24.9	24.7	22.1	22.2	21.8
		1	49	25.5	25.7	25.5	21.8	22.0	22.0	24.7	24.9	24.8	22.2	22.1	21.9
		25	0	24.5	24.8	24.6	20.9	21.1	21.1	23.9	24.1	23.8	21.3	21.3	21.1
		25	12	24.5	24.8	24.7	21.0	21.0	21.1	23.9	24.2	23.9	21.3	21.3	21.1
		25	24	24.5	24.8	24.7	20.9	21.0	21.2	23.9	24.1	23.9	21.3	21.3	21.0
		50	0	24.5	24.9	24.6	21.0	21.0	21.1	23.9	24.1	23.9	21.3	21.3	21.0
	16QAM	1	0	25.0	25.2	25.0	21.4	21.5	21.4	24.2	24.4	24.3	21.2	21.5	21.0
		1	24	24.8	25.1	25.0	21.3	21.5	21.4	24.1	24.4	24.2	21.1	21.4	20.8
		1	49	24.9	25.1	25.0	21.3	21.5	21.5	24.2	24.3	24.3	21.2	21.5	20.9
		25	0	23.5	23.8	23.6	20.0	20.1	20.1	22.9	23.0	22.9	20.3	20.3	20.1
		25	12	23.6	23.9	23.7	19.9	20.1	20.1	22.9	23.1	22.9	20.2	20.4	20.0
		25	24	23.6	23.9	23.7	19.9	20.1	20.1	22.9	23.1	22.9	20.2	20.4	20.0
		50	0	23.5	23.9	23.6	20.0	20.1	20.0	22.9	23.2	22.9	20.3	20.3	20.0
	64QAM	1	0	23.4	23.6	23.4	20.8	20.2	20.3	23.2	23.2	23.3	20.7	20.3	19.6
		1	24	23.3	23.6	23.4	20.6	20.2	20.3	23.1	23.2	23.4	20.5	20.3	19.5
		1	49	23.4	23.6	23.5	20.7	20.2	20.3	23.3	23.3	23.4	20.6	20.4	19.5
		25	0	22.6	22.8	22.6	19.0	20.2	20.3	21.9	23.3	23.4	19.3	19.3	19.1
		25	12	22.6	22.9	22.7	19.1	20.2	20.3	22.0	23.3	23.4	19.3	19.3	19.1
		25	24	22.5	22.8	22.7	19.0	20.2	20.4	21.9	23.3	23.4	19.3	19.3	19.1
		50	0	22.5	22.9	22.6	19.0	20.2	20.4	21.9	23.3	23.4	19.3	19.3	19.0
	256QAM	1	0	20.8	21.0	20.8	16.9	17.3	17.4	20.1	20.3	19.8	17.0	17.6	17.1
		1	24	20.7	21.0	20.8	16.9	17.2	17.4	20.1	20.3	19.7	16.9	17.5	17.0
		1	49	20.7	21.0	20.8	16.9	17.2	17.5	20.1	20.3	19.7	17.0	17.7	16.8
		25	0	20.6	20.8	20.6	17.1	17.1	17.2	20.0	20.1	20.0	17.4	17.2	17.0
		25	12	20.6	20.8	20.7	17.1	17.1	17.2	20.0	20.2	20.0	17.4	17.3	17.1
		25	24	20.5	20.8	20.6	17.1	17.1	17.3	20.0	20.1	20.0	17.3	17.3	17.0
		50	0	20.6	20.9	20.6	17.0	17.1	17.2	20.0	20.2	19.9	17.3	17.3	17.1

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
15.0	QPSK	1	0	3557.5	3625.0	3692.5	3557.5	3625.0	3692.5	3557.5	3625.0	3692.5	3557.5	3625.0	3692.5
		1	37	25.5	25.7	25.5	21.8	22.0	22.0	24.7	25.0	24.8	22.1	22.1	21.8
		1	74	25.4	25.6	25.5	21.7	21.9	21.9	24.7	24.9	24.7	22.0	22.1	21.8
		36	0	25.5	25.7	25.6	21.9	22.0	22.1	24.9	25.0	24.8	22.2	22.2	21.8
		36	16	24.7	24.9	24.7	20.9	21.2	21.2	24.0	24.1	23.9	21.2	21.2	21.0
		36	35	24.6	24.9	24.6	21.0	21.1	21.2	24.0	24.2	23.9	21.3	21.2	21.0
		75	0	24.6	24.9	24.7	21.0	21.1	21.2	23.9	24.1	23.9	21.2	21.2	21.0
	16QAM	1	0	24.6	24.9	24.6	21.0	21.1	21.1	24.0	24.0	23.9	21.2	21.1	20.9
		1	37	24.9	25.2	25.0	21.4	21.5	21.4	24.3	24.5	24.2	21.1	21.3	20.9
		1	74	24.9	25.2	25.0	21.4	21.4	21.5	24.2	24.4	24.2	21.1	21.2	20.8
		36	0	25.0	25.2	25.2	21.4	21.4	21.6	24.3	24.5	24.3	21.1	21.3	20.8
		36	16	23.7	23.9	23.7	20.0	20.2	20.1	23.0	23.1	22.9	20.2	20.3	19.9
		36	35	23.6	23.9	23.7	20.0	20.2	20.1	22.9	23.2	22.9	20.2	20.2	20.0
		75	0	23.7	23.8	23.7	20.0	20.1	20.2	22.9	23.1	22.9	20.2	20.2	19.9
	64QAM	1	0	23.6	23.9	23.7	20.0	20.1	20.2	23.0	23.0	22.9	20.2	20.2	20.0
		1	37	23.4	23.7	23.5	20.6	20.4	20.2	23.5	23.5	23.0	20.5	20.2	19.5
		1	74	23.4	23.7	23.5	20.6	20.4	20.2	23.5	23.4	23.0	20.5	20.2	19.4
		36	0	23.5	23.7	23.7	20.7	20.4	20.2	23.6	23.5	23.0	20.6	20.2	19.5
		36	16	22.8	23.0	22.8	19.1	20.4	20.2	22.1	23.5	23.0	19.3	19.2	19.1
		36	35	22.8	23.0	22.8	19.1	20.4	20.3	22.1	23.5	23.0	19.3	19.2	19.1
		75	0	22.7	22.9	22.7	19.1	20.4	20.2	22.0	23.5	23.0	19.3	19.2	19.0
	256QAM	1	0	20.8	21.1	20.9	16.9	17.4	17.3	19.7	20.4	20.1	16.8	17.4	17.0
		1	37	20.7	21.0	20.9	16.8	17.3	17.3	19.8	20.3	19.9	16.8	17.4	16.8
		1	74	20.9	21.1	21.1	16.9	17.4	17.5	19.8	20.4	20.1	16.9	17.5	17.0
		36	0	20.8	21.0	20.8	17.1	17.1	17.2	20.0	20.1	19.9	17.3	17.2	17.0
		36	16	20.7	21.0	20.7	17.1	17.1	17.2	20.0	20.2	19.9	17.3	17.2	17.0
		36	35	20.7	21.0	20.8	17.1	17.1	17.3	20.0	20.1	20.0	17.2	17.2	17.0
		75	0	20.7	21.0	20.7	17.1	17.1	17.2	20.0	20.1	19.9	17.3	17.3	17.0

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	25.6	23.6	25.7	22.1	22.2	22.1	24.9	25.2	25.0	22.2	22.2	21.9
		1	49	25.5	23.5	25.6	21.9	22.0	22.1	24.8	25.1	24.8	22.0	22.1	21.7
		1	99	25.6	23.5	25.7	22.1	22.1	22.2	24.9	25.0	24.9	22.0	22.1	21.7
		50	0	24.6	23.5	24.7	21.1	21.2	21.2	23.9	24.1	23.9	21.2	21.2	20.9
		50	24	24.6	23.6	24.7	21.0	21.1	21.1	24.0	24.2	23.9	21.1	21.2	20.9
		50	49	24.6	23.6	24.7	21.0	21.1	20.9	24.0	24.2	23.9	21.1	21.2	20.9
		100	0	24.7	23.5	24.7	21.1	21.2	20.6	24.0	24.1	24.0	21.2	21.2	20.9
	16QAM	1	0	25.1	23.7	25.1	21.1	21.6	20.9	24.3	24.3	24.4	21.1	21.3	21.0
		1	49	24.9	23.6	25.0	21.0	21.5	20.9	24.2	24.1	24.3	21.0	21.2	20.7
		1	99	25.1	23.6	25.2	21.1	21.5	21.0	24.3	24.2	24.3	21.1	21.3	20.8
		50	0	23.6	22.9	23.7	20.1	20.2	19.8	22.9	23.1	23.0	20.2	20.2	19.9
		50	24	23.7	23.0	23.8	20.1	20.2	19.8	23.0	23.2	23.0	20.2	20.2	19.9
		50	49	23.7	23.0	23.7	20.0	20.1	20.0	23.0	23.2	23.0	20.2	20.2	19.8
		100	0	23.6	23.0	23.7	20.1	20.1	19.9	23.0	23.1	22.9	20.2	20.1	19.8
	64QAM	1	0	24.1	23.6	24.2	20.3	20.5	20.6	23.2	23.5	23.4	20.1	20.1	20.3
		1	49	24.0	23.4	24.1	20.2	20.5	20.6	23.2	23.4	23.5	20.1	20.1	20.1
		1	99	24.2	23.4	24.2	20.3	20.5	20.6	23.3	23.4	23.5	20.2	20.2	20.1
		50	0	22.6	22.9	22.7	19.1	20.5	20.6	22.0	23.5	23.5	19.2	19.2	19.0
		50	24	22.7	23.0	22.8	19.1	20.5	20.7	22.1	23.5	23.5	19.2	19.2	19.0
		50	49	22.7	23.0	22.7	19.1	20.5	20.6	22.1	23.4	23.5	19.2	19.2	18.9
		100	0	22.7	22.9	22.7	19.1	20.5	20.6	22.0	23.5	23.5	19.2	19.2	18.9
	256QAM	1	0	20.9	20.2	21.0	17.4	17.6	17.4	20.3	20.5	20.2	17.1	17.4	17.3
		1	49	20.8	20.2	20.9	17.2	17.5	17.4	20.2	20.5	20.1	17.1	17.4	17.0
		1	99	20.9	20.2	21.0	17.3	17.6	17.5	20.3	20.6	20.1	17.2	17.5	17.0
		50	0	20.6	20.0	20.7	17.2	17.2	17.0	20.0	20.2	20.0	17.3	17.2	16.9
		50	24	20.7	20.1	20.8	17.1	17.2	17.1	20.1	20.2	20.0	17.2	17.2	16.9
		50	49	20.7	20.0	20.8	17.1	17.2	17.2	20.1	20.2	20.0	17.2	17.1	16.9
		100	0	20.7	20.0	20.8	17.1	17.2	17.1	20.1	20.2	20.0	17.2	17.2	16.9

7.16. LTE BAND 66

Test Engineer ID:	19467	Test Date:	5/7/2020
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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	25.6	23.1	23.1	23.0	24.6	24.7	24.6	22.5	22.5	22.5
		1	2	25.7	25.7	25.7	23.1	23.1	23.0	24.7	24.7	24.6	22.6	22.6	22.5
		1	5	25.6	25.6	25.6	23.0	23.0	22.9	24.6	24.6	24.6	22.5	22.5	22.4
		3	0	25.6	25.6	25.6	23.0	23.0	23.0	24.6	24.6	24.6	22.6	22.5	22.4
		3	1	25.6	25.7	25.7	23.0	23.0	23.0	24.6	24.7	24.6	22.7	22.6	22.4
		3	2	25.6	25.7	25.6	23.0	23.0	23.0	24.6	24.6	24.6	22.7	22.6	22.4
	16QAM	6	0	24.7	24.7	24.7	22.1	22.0	22.0	23.6	23.7	23.6	21.7	21.6	21.4
		1	0	24.7	24.8	24.8	22.2	22.4	22.4	23.7	23.8	24.2	21.6	21.6	21.6
		1	2	24.8	24.8	24.8	22.2	22.4	22.4	23.8	23.9	24.1	21.7	21.7	21.8
		1	5	24.7	24.7	24.7	22.2	22.4	22.3	23.7	23.7	24.0	21.7	21.6	21.6
		3	0	24.9	24.9	24.9	22.3	22.3	22.2	23.9	23.7	23.8	21.7	21.6	21.5
		3	1	24.9	25.0	24.9	22.3	22.3	22.3	23.9	23.8	23.9	21.7	21.6	21.5
	64QAM	3	2	24.9	25.0	24.9	22.3	22.3	22.2	23.9	23.7	23.9	21.7	21.6	21.4
		6	0	23.9	23.9	23.9	21.3	21.0	20.9	22.8	22.8	22.5	20.6	20.5	20.6
		1	0	24.0	23.9	24.1	21.6	21.5	21.0	23.2	22.9	22.9	20.8	20.8	20.8
		1	2	24.1	23.9	24.2	21.7	21.6	21.0	23.3	23.0	22.9	20.9	20.9	20.8
		1	5	24.0	23.8	24.0	21.5	21.5	20.9	23.1	22.8	22.9	20.8	20.8	20.8
		3	0	24.0	23.9	24.1	21.5	21.4	20.9	23.1	22.9	22.7	20.7	20.5	20.6
	256QAM	3	1	24.0	24.0	24.1	21.6	21.5	21.0	23.2	23.0	22.8	20.8	20.5	20.6
		3	2	24.0	24.0	24.1	21.6	21.5	20.9	23.1	22.9	22.7	20.8	20.5	20.6
		6	0	22.7	23.0	22.7	20.2	20.1	19.5	21.8	22.1	21.8	19.8	19.6	19.5
		1	0	20.7	20.1	20.4	17.8	17.7	17.6	19.4	19.1	19.4	18.1	17.7	17.3
		1	2	20.7	20.3	20.5	18.0	17.6	17.7	19.5	19.3	19.5	18.1	17.8	17.4
		1	5	20.6	20.3	20.4	17.9	17.5	17.6	19.4	19.3	19.4	18.1	17.7	17.3
		3	0	20.5	20.3	20.5	17.8	17.6	17.7	19.4	19.3	19.5	17.7	17.8	17.5
		3	1	20.6	20.3	20.6	17.9	17.7	17.8	19.4	19.3	19.5	17.8	17.7	17.6
		3	2	20.5	20.3	20.6	17.9	17.7	17.8	19.4	19.3	19.5	17.8	17.6	17.5
		6	0	20.4	20.5	20.5	17.8	17.9	17.7	19.3	19.5	19.5	17.7	17.7	17.7

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	25.7	25.7	25.7	23.0	23.0	23.1	24.6	24.6	24.7	22.7	22.6	22.5
		1	7	25.7	25.6	25.6	22.9	23.0	22.9	24.6	24.6	24.7	22.7	22.7	22.4
		1	14	25.6	25.6	25.6	22.9	23.0	22.9	24.5	24.6	24.6	22.7	22.7	22.5
		8	0	24.8	24.8	24.7	22.1	22.1	22.1	23.7	23.7	23.7	21.8	21.7	21.5
		8	4	24.8	24.8	24.7	22.1	22.1	22.1	23.7	23.7	23.7	21.8	21.7	21.6
		8	7	24.8	24.8	24.8	22.0	22.1	22.1	23.7	23.7	23.7	21.8	21.7	21.6
		15	0	24.8	24.8	24.7	22.1	22.1	22.1	23.7	23.7	23.7	21.8	21.7	21.5
	16QAM	1	0	24.8	24.8	24.8	22.1	22.2	22.2	23.7	23.7	24.1	21.7	21.8	21.5
		1	7	24.8	24.8	24.7	22.1	22.1	22.1	23.7	23.6	24.0	21.6	21.8	21.5
		1	14	24.8	24.8	24.7	22.0	22.1	22.0	23.6	23.6	23.9	21.7	21.9	21.4
		8	0	23.9	23.9	23.8	21.2	21.2	21.2	22.8	22.8	22.8	20.7	20.7	20.6
		8	4	23.9	23.9	23.8	21.2	21.2	21.2	22.8	22.8	22.8	20.7	20.7	20.6
		8	7	23.9	23.8	23.8	21.2	21.2	21.2	22.7	22.8	22.8	20.7	20.7	20.5
		15	0	23.8	23.7	23.7	21.1	21.1	21.1	22.7	22.7	22.7	20.8	20.7	20.5
	64QAM	1	0	24.1	24.0	24.0	21.4	21.4	21.4	23.0	23.0	22.8	21.1	20.8	20.1
		1	7	24.0	24.0	23.8	21.3	21.3	21.2	22.9	23.0	22.8	21.0	20.9	20.1
		1	14	24.0	24.0	23.9	21.3	21.3	21.3	22.9	22.9	22.7	21.1	20.8	20.1
		8	0	22.8	22.8	22.8	20.1	20.1	20.2	21.7	21.8	21.8	19.8	19.7	19.6
		8	4	22.8	22.8	22.8	20.2	20.2	20.2	21.8	21.8	21.8	19.9	19.7	19.6
		8	7	22.8	22.8	22.8	20.2	20.2	20.1	21.7	21.8	21.8	19.8	19.7	19.6
		15	0	22.8	22.8	22.8	20.2	20.2	20.2	21.8	21.7	21.8	19.8	19.7	19.5
	256QAM	1	0	20.6	20.8	20.2	18.4	17.8	17.7	19.8	19.3	19.4	17.6	18.2	17.8
		1	7	20.5	20.8	20.1	18.3	17.8	17.8	19.8	19.1	19.4	17.6	18.2	17.7
		1	14	20.5	20.8	20.2	18.5	17.8	17.7	19.8	19.2	19.4	17.6	18.2	17.8
		8	0	20.7	20.6	20.4	18.1	18.0	17.9	19.6	19.3	19.6	18.1	17.9	17.8
		8	4	20.7	20.5	20.5	18.1	18.0	17.9	19.6	19.4	19.6	18.0	18.0	17.8
		8	7	20.7	20.5	20.5	18.2	18.1	17.9	19.6	19.4	19.6	18.0	17.9	17.8
		15	0	20.6	20.5	20.6	18.2	18.2	17.9	19.5	19.5	19.5	18.0	17.9	17.8

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	23.0	23.1	24.6	24.7	24.5	22.6	22.6	22.5
		1	12	25.7	25.7	25.7	23.1	23.0	23.0	24.7	24.7	24.5	22.7	22.7	22.5
		1	24	25.7	25.7	25.6	23.0	23.0	22.9	24.6	24.7	24.4	22.7	22.7	22.5
		12	0	24.7	24.8	24.7	22.1	22.1	22.1	23.6	23.6	23.6	21.8	21.8	21.6
		12	6	24.8	24.7	24.7	22.1	22.1	22.1	23.6	23.6	23.6	21.9	21.7	21.6
		12	11	24.7	24.7	24.7	22.0	22.1	22.0	23.6	23.6	23.5	21.8	21.8	21.6
		25	0	24.7	24.7	24.6	22.1	22.1	22.0	23.6	23.6	23.6	21.9	21.8	21.6
	16QAM	1	0	24.8	24.9	25.0	22.3	22.2	22.3	23.8	23.7	24.2	21.7	21.8	21.7
		1	12	24.9	24.9	25.1	22.4	22.2	22.3	23.9	23.8	24.2	21.7	21.8	21.7
		1	24	24.8	24.8	24.9	22.3	22.2	22.2	23.8	23.7	24.1	21.7	21.8	21.7
		12	0	23.8	23.8	23.8	21.2	21.2	21.2	22.7	22.7	22.7	20.9	20.7	20.7
		12	6	23.8	23.8	23.8	21.2	21.2	21.2	22.7	22.7	22.7	20.9	20.8	20.7
		12	11	23.7	23.8	23.7	21.2	21.1	21.0	22.6	22.7	22.7	20.9	20.8	20.7
		25	0	23.7	23.7	23.6	21.1	21.0	21.0	22.5	22.6	22.6	20.9	20.8	20.6
	64QAM	1	0	23.9	23.9	24.0	21.4	21.3	21.5	22.8	22.5	23.0	20.6	21.2	20.8
		1	12	24.0	24.0	24.0	21.5	21.4	21.4	22.9	22.5	22.9	20.6	21.2	20.8
		1	24	23.9	23.9	23.9	21.4	21.3	21.3	22.8	22.5	22.8	20.6	21.2	20.8
		12	0	22.8	22.8	22.8	20.3	20.2	20.2	21.8	21.7	21.6	19.9	19.9	19.6
		12	6	22.8	22.8	22.8	20.3	20.2	20.2	21.8	21.7	21.6	19.9	19.9	19.7
		12	11	22.8	22.8	22.8	20.2	20.1	20.1	21.7	21.7	21.5	19.9	19.9	19.6
		25	0	22.7	22.8	22.7	20.2	20.1	20.1	21.6	21.6	21.6	19.9	19.8	19.6
	256QAM	1	0	20.5	20.0	20.6	18.4	18.0	17.6	19.4	19.5	19.6	18.2	18.1	18.1
		1	12	20.4	20.1	20.5	18.3	18.1	17.5	19.4	19.6	19.6	18.3	18.0	18.1
		1	24	20.4	20.1	20.5	18.3	18.1	17.5	19.3	19.6	19.6	18.2	18.1	18.0
		12	0	20.5	20.3	20.5	18.3	18.1	17.8	19.6	19.5	19.6	18.0	17.9	17.8
		12	6	20.5	20.4	20.5	18.3	18.1	17.7	19.6	19.6	19.6	18.0	17.9	17.8
		12	11	20.5	20.3	20.4	18.2	18.1	17.7	19.6	19.6	19.6	18.0	17.9	17.8
		25	0	20.5	20.4	20.4	18.2	18.1	17.8	19.7	19.5	19.6	18.0	17.9	17.8

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	25.4	22.8	22.8	22.8	24.3	24.4	24.4	22.5	22.7	22.5
		1	24	25.7	25.7	25.7	23.1	23.0	23.1	24.6	24.7	24.7	22.7	22.7	22.5
		1	49	25.5	25.5	25.4	22.9	22.8	22.8	24.4	24.6	24.5	22.7	22.7	22.4
		25	0	24.7	24.7	24.7	22.1	22.0	22.1	23.7	23.7	23.7	21.8	21.7	21.5
		25	12	24.9	24.9	24.8	22.2	22.2	22.1	23.7	23.7	23.7	21.9	21.7	21.5
		25	24	24.8	24.8	24.7	22.1	22.1	22.1	23.7	23.7	23.6	21.8	21.7	21.5
		50	0	24.8	24.8	24.7	22.1	22.1	22.0	23.7	23.7	23.6	21.9	21.8	21.5
	16QAM	1	0	24.6	24.6	24.6	21.9	21.9	21.9	23.4	23.5	23.9	21.8	21.9	21.6
		1	24	24.8	24.8	24.8	22.2	22.2	22.2	23.7	23.7	24.1	21.7	21.8	21.5
		1	49	24.6	24.7	24.6	22.0	22.0	21.9	23.5	23.5	23.9	21.7	21.9	21.5
		25	0	23.8	23.8	23.8	21.2	21.1	21.2	22.8	22.6	22.7	20.8	20.7	20.5
		25	12	24.0	24.0	23.8	21.3	21.3	21.2	22.9	22.8	22.7	20.9	20.8	20.5
		25	24	23.9	23.9	23.8	21.3	21.2	21.2	22.8	22.7	22.7	20.9	20.8	20.6
		50	0	23.8	23.8	23.7	21.2	21.1	21.1	22.7	22.7	22.6	20.9	20.7	20.5
	64QAM	1	0	23.7	23.6	23.6	21.1	21.1	21.1	22.6	22.7	22.4	21.1	20.9	20.1
		1	24	24.1	24.1	23.9	21.4	21.4	21.4	23.1	23.1	22.8	21.1	20.9	20.2
		1	49	23.8	23.9	23.7	21.1	21.2	21.0	22.8	22.7	22.5	21.2	20.9	20.1
		25	0	22.8	22.8	22.8	20.2	20.2	20.2	21.8	21.7	21.7	19.8	19.6	19.6
		25	12	23.0	23.0	22.8	20.4	20.3	20.2	21.9	21.9	21.8	19.8	19.7	19.6
		25	24	22.9	22.9	22.8	20.3	20.3	20.2	21.8	21.8	21.8	19.8	19.7	19.6
		50	0	22.8	22.8	22.7	20.2	20.2	20.1	21.8	21.8	21.7	19.8	19.7	19.5
	256QAM	1	0	20.4	20.4	21.0	18.0	18.0	18.1	20.0	19.2	19.5	18.2	18.3	18.0
		1	24	20.4	20.4	20.9	17.9	18.0	18.1	20.0	19.3	19.5	18.2	18.2	18.1
		1	49	20.3	20.5	21.0	17.8	18.0	18.1	19.9	19.2	19.5	18.3	18.3	18.0
		25	0	20.6	20.5	20.5	18.2	18.0	17.7	19.6	19.6	19.5	18.1	17.9	17.8
		25	12	20.7	20.6	20.5	18.2	18.1	17.7	19.6	19.6	19.5	18.1	18.0	17.8
		25	24	20.7	20.5	20.6	18.1	18.1	17.8	19.6	19.5	19.6	18.1	18.0	17.8
		50	0	20.6	20.5	20.5	18.1	18.0	17.7	19.6	19.5	19.5	18.0	18.0	17.8

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 1717.5	132322 1745.0	132597 1772.5	132047 1717.5	132322 1745.0	132597 1772.5	132047 1717.5	132322 1745.0	132597 1772.5	132047 1717.5	132322 1745.0	132597 1772.5
15.0	QPSK	1	0	25.6	25.5	25.7	23.0	23.0	23.1	24.5	24.6	24.7	22.5	22.5	22.7
		1	37	25.6	25.7	25.6	23.1	23.0	23.0	24.6	24.7	24.6	22.6	22.5	22.6
		1	74	25.5	25.6	25.6	23.0	23.0	22.9	24.5	24.5	24.6	22.4	22.4	22.5
		36	0	24.7	24.7	24.7	22.1	22.1	22.0	23.7	23.7	23.7	21.6	21.6	21.7
		36	16	24.8	24.8	24.7	22.2	22.2	22.0	23.8	23.8	23.7	21.7	21.6	21.7
		36	35	24.7	24.7	24.7	22.2	22.1	22.0	23.7	23.7	23.7	21.7	21.6	21.7
		75	0	24.7	24.7	24.7	22.1	22.1	22.0	23.7	23.7	23.6	21.6	21.6	21.6
	16QAM	1	0	25.0	25.2	25.2	22.6	22.5	22.7	24.0	23.6	24.1	21.9	21.5	22.1
		1	37	25.2	25.2	25.3	22.7	22.5	22.6	24.2	23.8	24.2	22.1	21.7	22.1
		1	74	25.1	25.0	25.2	22.6	22.5	22.5	24.2	23.6	24.1	22.1	21.4	22.0
		36	0	23.7	23.7	23.7	21.1	21.1	21.0	22.7	22.6	22.7	20.6	20.6	20.7
		36	16	23.8	23.8	23.7	21.2	21.2	21.0	22.7	22.7	22.8	20.7	20.7	20.7
		36	35	23.7	23.7	23.7	21.2	21.1	21.0	22.7	22.7	22.8	20.7	20.6	20.7
		75	0	23.7	23.8	23.7	21.2	21.1	21.0	22.7	22.7	22.7	20.7	20.6	20.7
	64QAM	1	0	24.1	24.1	24.0	21.6	21.6	21.8	23.1	22.8	22.7	20.7	20.4	20.9
		1	37	24.3	24.2	24.0	21.9	21.7	21.7	23.2	22.9	22.8	20.8	20.2	21.1
		1	74	24.1	24.1	23.9	21.7	21.6	21.6	23.2	22.6	22.7	20.7	19.8	21.0
		36	0	22.7	22.7	22.7	20.2	20.1	20.1	21.7	21.7	21.8	19.5	19.6	19.4
		36	16	22.8	22.8	22.8	20.3	20.2	20.1	21.8	21.8	21.8	19.6	19.3	19.5
		36	35	22.7	22.7	22.8	20.2	20.2	20.1	21.8	21.7	21.8	19.6	19.1	19.5
		75	0	22.8	22.8	22.7	20.3	20.3	20.1	21.8	21.7	21.7	19.6	19.2	19.5
	256QAM	1	0	20.0	20.3	20.6	17.8	18.2	18.0	20.1	19.3	19.7	18.8	18.1	18.5
		1	37	20.1	20.4	20.7	17.8	18.2	18.1	20.0	19.4	19.8	18.8	18.2	18.6
		1	74	20.0	20.5	20.6	17.9	18.2	18.1	20.0	19.4	19.8	18.8	18.2	18.5
		36	0	20.3	20.1	20.3	18.0	18.0	17.7	19.8	19.6	19.5	18.4	18.4	18.3
		36	16	20.3	20.2	20.3	18.1	18.0	17.7	19.8	19.7	19.6	18.5	18.5	18.3
		36	35	20.3	20.2	20.3	18.1	17.9	17.8	19.7	19.6	19.6	18.5	18.4	18.3
		75	0	20.3	20.2	20.3	18.1	18.0	17.7	19.7	19.6	19.6	18.5	18.4	18.3

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 1720.0	132322 1745.0	132572 1770.0	132072 1720.0	132322 1745.0	132572 1770.0	132072 1720.0	132322 1745.0	132572 1770.0	132072 1720.0	132322 1745.0	132572 1770.0
20.0	QPSK	1	0	25.4	25.3	25.7	22.7	22.7	23.1	24.3	24.3	24.6	22.4	22.3	22.7
		1	49	25.6	25.6	25.6	23.0	22.9	23.0	24.6	24.6	24.7	22.6	22.6	22.7
		1	99	25.4	25.5	25.6	22.7	22.8	22.9	24.4	24.4	24.6	22.4	22.3	22.6
		50	0	24.7	24.6	24.6	21.9	21.9	22.0	23.6	23.6	23.6	21.6	21.6	21.7
		50	24	24.8	24.8	24.7	22.1	22.0	22.1	23.7	23.7	23.6	21.8	21.8	21.8
		50	49	24.7	24.7	24.6	22.0	22.0	22.0	23.6	23.6	23.6	21.7	21.6	21.7
		100	0	24.7	24.7	24.6	22.0	22.0	22.0	23.6	23.6	23.5	21.7	21.7	21.6
	16QAM	1	0	24.8	24.7	25.1	22.1	22.1	22.5	23.7	23.9	24.1	21.8	21.9	22.1
		1	49	25.1	25.1	25.0	22.4	22.4	22.5	24.0	24.3	24.0	22.1	22.3	22.0
		1	99	24.8	24.9	25.0	22.2	22.2	22.4	23.8	24.1	24.0	21.8	21.8	22.1
		50	0	23.6	23.6	23.6	20.9	20.9	21.0	22.6	22.6	22.6	20.6	20.7	20.7
		50	24	23.7	23.8	23.7	21.1	21.1	21.1	22.7	22.7	22.6	20.8	20.8	20.9
		50	49	23.6	23.7	23.6	21.0	21.0	21.0	22.6	22.6	22.6	20.7	20.7	20.7
		100	0	23.7	23.7	23.6	21.0	21.0	21.0	22.7	22.7	22.6	20.7	20.7	20.7
	64QAM	1	0	23.6	23.5	23.8	20.9	20.9	21.3	22.5	22.6	22.8	20.6	20.8	20.3
		1	49	23.9	23.9	23.8	21.3	21.2	21.3	22.9	22.9	23.2	20.9	20.8	20.8
		1	99	23.7	23.5	23.8	21.0	21.1	21.2	22.7	22.2	23.2	20.7	20.2	20.7
		50	0	22.7	22.7	22.5	20.1	20.0	20.1	21.6	21.7	21.2	19.6	19.6	19.1
		50	24	22.8	22.8	22.8	20.2	20.2	20.2	21.8	21.7	21.7	19.8	19.3	19.7
		50	49	22.7	22.7	22.7	20.1	20.1	20.1	21.7	21.4	21.7	19.7	19.0	19.6
		100	0	22.7	22.7	22.6	20.1	20.1	20.0	21.7	21.5	21.4	19.6	19.2	19.4
	256QAM	1	0	20.5	20.0	20.4	18.2	17.8	17.8	19.7	19.8	19.8	18.3	18.5	18.5
		1	49	20.5	20.1	20.4	18.2	17.8	17.8	19.6	19.8	19.8	18.2	18.5	18.5
		1	99	20.4	20.2	20.4	18.2	17.9	17.8	19.5	19.8	19.8	18.4	18.5	18.5
		50	0	20.3	20.2	20.2	18.0	17.9	17.6	19.7	19.6	19.6	18.1	18.3	18.3
		50	24	20.4	20.2	20.2	18.1	18.0	17.7	19.7	19.7	19.7	18.2	18.4	18.4
		50	49	20.3	20.2	20.2	18.0	17.9	17.7	19.7	19.7	19.7	18.0	18.4	18.3
		100	0	20.3	20.2	20.1	18.0	17.9	17.5	19.7	19.6	19.6	18.1	18.4	18.3

7.17. LTE BAND 71

Test Engineer ID:	10646	Test Date:	5/7/2020 & 8/29/2020
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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	25.4	25.3	23.9	23.5	23.5
		1	12	25.6	25.6	25.3	23.8	23.6	23.5
		1	24	25.7	25.6	25.3	23.9	23.6	23.5
		12	0	24.6	24.5	24.4	22.8	22.6	22.5
		12	6	24.7	24.6	24.5	22.8	22.7	22.6
		12	11	24.7	24.6	24.4	22.8	22.7	22.5
		25	0	24.7	24.6	24.5	22.8	22.7	22.5
	16QAM	1	0	24.8	24.5	24.9	23.0	23.1	22.6
		1	12	24.8	24.7	25.0	23.0	23.2	22.7
		1	24	24.9	24.7	24.9	23.0	23.3	22.6
		12	0	23.7	23.6	23.6	21.8	21.8	21.6
		12	6	23.8	23.7	23.6	21.9	21.9	21.6
		12	11	23.8	23.7	23.6	21.9	21.8	21.6
		25	0	23.7	23.6	23.5	21.9	21.7	21.4
	64QAM	1	0	24.0	23.5	23.8	21.9	21.3	21.5
		1	12	24.1	23.6	23.9	21.9	21.4	21.6
		1	24	24.1	23.6	23.8	21.9	21.3	21.5
		12	0	22.8	22.7	22.5	20.6	20.4	20.2
		12	6	22.9	22.8	22.6	20.7	20.5	20.2
		12	11	22.9	22.8	22.6	20.6	20.5	20.2
		25	0	22.9	22.7	22.5	20.6	20.4	20.3
	256QAM	1	0	20.0	20.4	20.3	18.0	17.6	18.0
		1	12	19.9	20.3	20.0	17.9	17.5	17.8
		1	24	19.9	20.3	20.0	17.8	17.5	17.8
		12	0	20.3	20.3	20.1	17.9	17.8	17.9
		12	6	20.2	20.3	20.0	17.8	17.8	17.9
		12	11	20.1	20.2	20.0	17.8	17.8	17.8
		25	0	20.2	20.2	20.0	17.8	17.9	17.8

OUTPUT POWER FOR LTE BAND 71 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				133172 668.0	133297 680.5	133422 693.0	133172 668.0	133297 680.5	133422 693.0
10.0	QPSK	1	0	25.7	25.6	25.6	23.9	23.8	23.8
		1	24	25.7	25.6	25.6	23.8	23.7	23.7
		1	49	25.5	25.5	25.5	23.8	23.7	23.6
		25	0	24.8	24.7	24.6	22.9	22.8	22.7
		25	12	24.8	24.7	24.6	22.9	22.9	22.7
		25	24	24.7	24.7	24.6	22.9	22.8	22.7
		50	0	24.7	24.5	24.5	22.9	22.8	22.6
	16QAM	1	0	24.8	24.7	25.0	23.0	22.8	23.2
		1	24	24.7	24.7	25.0	22.9	22.7	23.1
		1	49	24.7	24.6	24.9	23.0	22.7	23.1
		25	0	23.9	23.7	23.6	22.0	21.8	21.8
		25	12	23.9	23.7	23.6	22.1	21.9	21.8
		25	24	23.8	23.7	23.7	22.0	21.8	21.8
		50	0	23.8	23.5	23.6	22.0	21.8	21.7
	64QAM	1	0	24.1	24.1	23.8	22.0	22.0	21.7
		1	24	24.1	24.1	23.9	21.9	21.9	21.7
		1	49	24.0	24.0	23.8	21.9	22.0	21.6
		25	0	23.0	22.8	22.8	20.8	20.7	20.6
		25	12	23.0	22.8	22.8	20.9	20.7	20.6
		25	24	23.0	22.8	22.8	20.8	20.7	20.6
		50	0	22.9	22.7	22.7	20.8	20.6	20.5
	256QAM	1	0	20.4	20.8	20.0	18.4	18.6	17.7
		1	24	20.3	20.7	20.0	18.3	18.6	18.3
		1	49	20.4	20.8	19.9	18.3	18.4	18.4
		25	0	20.5	20.4	20.3	18.4	18.0	18.4
		25	12	20.4	20.3	20.2	18.3	18.1	17.9
		25	24	20.4	20.3	20.2	18.2	18.0	18.0
		50	0	20.3	20.3	20.2	18.3	18.1	17.9

OUTPUT POWER FOR LTE BAND 71 (15.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				133197 670.5	133297 680.5	133397 690.5	133197 670.5	133297 680.5	133397 690.5
15.0	QPSK	1	0	25.7	25.5	25.6	23.9	23.8	23.8
		1	37	25.6	25.5	25.5	23.8	23.7	23.7
		1	74	25.6	25.5	25.4	23.8	23.7	23.6
		36	0	24.7	24.6	24.6	22.9	22.9	22.8
		36	16	24.7	24.6	24.5	23.0	22.9	22.8
		36	35	24.6	24.6	24.6	22.9	22.8	22.7
		75	0	24.7	24.5	24.5	22.9	22.8	22.7
	16QAM	1	0	25.1	25.1	25.1	23.4	23.4	23.4
		1	37	25.0	25.1	24.9	23.3	23.4	23.2
		1	74	25.0	25.1	24.9	23.3	23.3	23.3
		36	0	23.7	23.6	23.6	21.9	21.9	21.8
		36	16	23.7	23.6	23.6	22.0	21.9	21.9
		36	35	23.7	23.6	23.6	21.9	21.8	21.8
		75	0	23.7	23.5	23.5	21.9	21.8	21.7
	64QAM	1	0	24.0	23.9	24.3	22.0	22.0	22.3
		1	37	23.9	24.0	24.1	22.0	22.0	22.3
		1	74	24.0	24.0	24.2	22.0	22.0	22.1
		36	0	22.9	22.8	22.7	20.8	20.8	20.7
		36	16	22.9	22.8	22.7	20.9	20.8	20.8
		36	35	22.8	22.8	22.7	20.8	20.8	20.6
		75	0	22.8	22.6	22.6	20.8	20.7	20.6
	256QAM	1	0	19.9	20.1	20.1	17.9	17.9	17.8
		1	37	19.9	20.2	20.2	17.9	17.8	17.9
		1	74	20.0	20.2	20.1	17.9	17.8	17.9
		36	0	20.0	20.1	20.1	17.8	17.7	17.8
		36	16	20.1	20.1	20.0	17.8	17.6	17.8
		36	35	20.2	20.0	20.0	17.8	17.8	17.8
		75	0	20.1	20.0	20.0	17.8	17.8	17.7

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	23.8	23.9	23.9
		1	49	25.5	25.7	25.6	23.7	23.8	23.8
		1	99	25.6	25.6	25.6	23.7	23.8	23.7
		50	0	24.7	24.8	24.7	22.8	22.9	22.9
		50	24	24.7	24.7	24.7	22.9	22.9	22.9
		50	49	24.6	24.7	24.7	22.8	22.9	22.8
		100	0	24.7	24.6	24.6	22.8	22.9	22.8
	16QAM	1	0	25.1	25.2	25.2	23.3	23.5	23.5
		1	49	25.0	25.3	25.0	23.2	23.5	23.3
		1	99	25.0	25.2	25.1	23.2	23.4	23.4
		50	0	23.7	23.8	23.8	21.9	22.0	21.9
		50	24	23.7	23.7	23.7	21.9	22.0	22.0
		50	49	23.6	23.7	23.7	21.8	21.9	21.9
		100	0	23.7	23.6	23.7	21.9	21.9	21.8
	64QAM	1	0	23.9	24.1	24.4	21.9	22.1	22.4
		1	49	23.9	24.1	24.3	21.9	22.0	22.4
		1	99	24.0	24.2	24.4	21.9	22.1	22.2
		50	0	22.9	23.0	22.9	20.8	20.9	20.8
		50	24	22.9	22.9	22.8	20.8	20.9	20.9
		50	49	22.8	22.9	22.8	20.7	20.8	20.7
		100	0	22.8	22.8	22.8	20.7	20.7	20.7
	256QAM	1	0	19.9	20.3	20.3	17.8	17.7	17.9
		1	49	19.9	20.3	20.3	17.8	17.7	18.0
		1	99	20.0	20.4	20.2	17.8	17.8	18.0
		50	0	20.0	20.2	20.2	17.7	17.9	17.9
		50	24	20.1	20.2	20.2	17.7	17.9	17.9
		50	49	20.1	20.2	20.1	17.7	17.9	17.9
		100	0	20.1	20.1	20.1	17.7	17.9	17.8

7.18. 5G NR BAND n77

Test Engineer ID:	10646	Test Date:	8/14/2020
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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	22.3	22.2	22.7	18.7	18.9	18.8	22.0	22.0	22.1	18.6	15.5	18.1
		1	1	24.8	25.6	25.2	22.3	22.3	22.4	24.7	25.2	25.0	22.2	16.2	21.5
		25	12	24.9	25.7	25.4	22.3	22.5	22.4	24.7	25.1	25.0	21.8	21.4	21.4
		50	0	25.1	25.6	25.4	21.9	22.0	21.9	24.8	25.2	25.0	21.4	21.1	20.9
	QPSK	1	0	22.4	22.6	22.9	18.7	19.0	18.9	21.6	21.9	22.0	20.8	20.6	20.4
		1	1	24.6	25.7	25.3	22.0	22.5	22.4	24.9	24.9	25.0	21.8	21.2	21.4
		25	12	24.8	25.7	25.3	22.4	22.4	22.4	24.7	25.1	25.0	22.0	16.1	21.5
		50	0	24.8	25.4	25.4	21.4	21.6	21.4	24.6	24.9	24.8	18.3	15.2	17.9
	16QAM	1	0	21.9	22.0	22.2	19.2	19.2	19.4	21.8	22.3	22.2	18.1	15.0	18.0
		1	1	24.1	24.6	24.7	21.8	22.0	21.9	23.5	23.9	23.8	20.9	15.9	20.6
		25	12	24.3	24.8	24.9	21.2	21.5	21.4	23.5	23.8	23.8	20.8	20.4	20.5
		50	0	23.4	23.9	24.0	20.4	20.5	20.5	22.5	22.9	22.7	19.8	19.5	19.4
	64QAM	1	0	22.8	22.8	23.4	18.7	19.0	19.1	21.9	22.3	22.4	19.5	19.2	18.8
		1	1	23.7	24.2	24.1	20.1	20.4	20.1	23.2	23.3	23.6	19.4	18.9	18.9
		25	12	23.3	23.9	23.8	19.9	20.0	19.9	23.0	23.4	23.3	19.5	15.7	19.3
		50	0	23.3	23.9	23.9	20.0	20.0	20.0	23.1	23.4	23.3	18.6	15.4	18.4
	256QAM	1	0	20.7	20.4	21.1	17.2	17.6	17.5	20.3	20.4	20.4	17.6	14.8	17.4
		1	1	20.3	21.0	21.1	17.0	17.1	17.3	20.0	20.7	20.5	17.4	14.7	17.2
		25	12	20.3	20.9	20.8	17.4	17.5	17.4	20.1	20.4	20.3	17.3	17.1	16.9
		50	0	20.2	20.9	20.9	17.3	17.4	17.4	20.0	20.4	20.2	17.3	17.1	16.9

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	656000	664000	648000	656000	664000	648000	656000	664000	648000	656000	664000
				3720.0	3840.0	3960.0	3720.0	3840.0	3960.0	3720.0	3840.0	3960.0	3720.0	3840.0	3960.0
40.0	BPSK	1	0	21.9	22.3	21.5	19.1	19.1	19.2	21.1	21.0	21.3	18.8	18.5	18.4
		1	1	25.3	25.7	25.3	22.5	22.3	22.0	24.7	24.6	24.8	22.2	21.9	22.0
		50	25	25.3	25.5	25.1	22.1	22.3	22.0	24.3	24.3	24.6	22.1	22.0	21.7
		100	0	24.8	25.1	24.7	22.2	22.3	22.1	23.9	23.9	24.2	21.6	21.4	21.3
	QPSK	1	0	21.6	22.2	22.0	19.2	19.0	19.1	20.7	21.0	21.3	18.7	18.5	18.5
		1	1	25.6	25.7	25.5	22.2	22.5	22.4	24.6	24.4	25.2	22.2	21.9	21.9
		50	25	25.3	25.6	25.2	22.2	22.3	22.0	24.4	24.4	24.6	22.0	21.9	21.7
		100	0	24.4	24.5	24.2	21.7	21.8	21.5	23.3	23.5	23.7	21.1	20.9	20.7
	16QAM	1	0	21.5	21.7	21.3	19.5	19.6	19.5	20.4	20.8	21.0	18.9	18.5	18.7
		1	1	24.1	24.5	24.0	21.9	22.1	21.9	23.4	23.0	23.3	21.2	21.1	20.9
		50	25	24.2	24.5	24.1	21.7	21.8	21.5	22.9	22.9	23.0	21.0	21.0	20.8
		100	0	23.5	23.6	23.3	20.7	20.8	20.5	22.0	22.0	22.2	20.1	20.0	19.7
	64QAM	1	0	21.7	22.3	21.9	19.2	19.5	19.0	21.1	21.2	21.2	18.8	18.6	18.8
		1	1	22.8	22.9	22.7	20.0	20.3	20.1	22.4	22.0	22.4	19.9	19.8	19.6
		50	25	22.8	23.1	22.7	20.1	20.3	20.0	21.9	22.0	22.1	19.5	19.5	19.2
		100	0	22.9	23.0	22.8	20.2	20.3	20.0	22.0	22.0	22.3	19.6	19.4	19.3
	256QAM	1	0	21.2	21.0	20.9	17.4	17.5	17.1	20.2	19.8	20.3	17.3	17.1	17.3
		1	1	21.4	21.0	20.3	17.3	17.1	16.9	19.9	20.1	20.4	17.6	17.2	17.4
		50	25	20.8	21.1	20.6	17.1	17.2	16.9	20.0	20.0	20.1	17.1	16.9	16.7
		100	0	20.9	21.1	20.8	17.1	17.2	16.9	19.8	20.0	20.2	17.1	16.9	16.8

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	656000	663666	648333	656000	663666	648333	656000	663666	648333	656000	663666
				3725.0	3840.0	3955.0	3725.0	3840.0	3955.0	3725.0	3840.0	3955.0	3725.0	3840.0	3955.0
50.0	BPSK	1	0	22.1	21.6	22.0	19.3	19.7	18.9	21.3	20.8	21.0	18.7	18.4	18.5
		1	1	25.6	25.7	25.6	22.5	22.3	22.1	25.2	24.2	24.7	22.0	22.1	22.1
		64	32	25.5	25.6	25.4	22.3	22.4	22.1	24.6	24.7	24.8	22.2	22.0	21.7
		128	0	24.9	25.2	25.0	22.2	22.4	22.1	24.0	24.2	24.3	21.6	21.5	21.3
	QPSK	1	0	21.9	22.0	21.9	19.1	19.3	19.6	22.2	21.2	21.4	18.6	18.2	18.5
		1	1	25.6	25.6	25.6	22.4	22.5	22.2	24.8	24.9	24.9	22.1	21.8	21.9
		64	32	25.5	25.7	25.4	22.3	22.4	22.1	24.6	24.5	24.8	22.1	22.0	21.8
		128	0	24.4	24.7	24.4	21.7	21.9	21.6	23.5	23.6	23.8	21.1	21.0	20.7
	16QAM	1	0	21.3	21.9	21.6	19.0	19.0	19.0	20.8	20.9	20.7	18.6	18.5	18.6
		1	1	24.2	24.3	24.1	21.7	21.6	21.8	23.3	23.1	23.4	21.1	20.7	21.0
		64	32	24.5	24.7	24.4	21.7	21.9	21.5	23.5	23.6	23.8	21.2	21.0	20.8
		128	0	23.4	23.6	23.4	20.7	20.8	20.6	22.6	22.6	22.8	20.2	19.9	19.8
	64QAM	1	0	22.2	21.7	22.1	19.2	19.1	19.4	21.3	21.0	21.5	18.7	18.7	18.7
		1	1	22.9	23.1	23.1	20.3	20.1	20.0	22.3	21.8	22.2	19.8	19.5	19.5
		64	32	23.0	23.2	22.9	20.3	20.4	20.1	22.1	22.2	22.3	19.6	19.5	19.2
		128	0	23.0	23.2	22.9	20.3	20.4	20.1	22.1	22.1	22.3	19.6	19.4	19.3
	256QAM	1	0	20.6	20.5	20.9	17.5	17.6	17.4	20.2	20.1	20.2	17.8	17.0	17.3
		1	1	20.9	21.0	21.0	17.4	17.3	17.4	20.2	20.1	20.6	17.4	17.2	17.8
		64	32	20.8	21.1	21.0	17.2	17.4	17.0	20.0	20.1	20.2	17.3	17.1	16.8
		128	0	20.9	21.2	20.9	17.1	17.3	17.0	20.1	20.1	20.3	17.2	17.0	16.9

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	21.8	22.0	22.0	19.1	19.1	19.2	21.5	21.5	21.4	18.6	18.2	18.2
		1	1	25.7	25.5	25.4	22.5	22.3	22.0	25.2	24.9	24.9	22.2	22.0	21.6
		81	40	25.5	25.7	25.4	22.1	22.3	22.0	25.1	25.1	25.1	22.1	21.9	21.6
		162	0	25.0	25.1	24.9	22.2	22.3	22.1	24.7	24.8	24.6	21.5	21.4	21.1
	QPSK	1	0	22.0	22.1	21.8	19.2	19.0	19.1	21.6	21.5	21.6	18.6	18.2	18.2
		1	1	25.2	25.7	25.0	22.2	22.5	22.4	25.1	25.2	25.2	22.2	21.8	21.5
		81	40	25.5	25.5	25.4	22.2	22.3	22.0	25.1	25.2	25.1	22.1	21.9	21.6
		162	0	24.5	24.6	24.4	21.7	21.8	21.5	24.1	24.3	24.1	21.0	20.9	20.6
	16QAM	1	0	22.3	22.2	23.9	19.5	19.6	19.5	21.0	21.0	20.9	18.5	18.3	18.1
		1	1	24.8	24.6	24.6	21.9	22.1	21.9	23.5	23.6	23.2	21.2	20.8	20.6
		81	40	24.4	24.6	24.4	21.7	21.8	21.5	23.6	23.7	23.6	21.1	21.0	20.6
		162	0	23.5	23.6	23.5	20.7	20.8	20.5	22.7	22.8	22.6	19.0	19.9	19.5
	64QAM	1	0	21.8	21.7	21.6	19.2	19.5	19.0	21.7	21.7	21.4	18.8	18.4	18.1
		1	1	22.5	22.8	22.9	20.0	20.3	20.1	22.2	22.5	22.4	19.9	19.8	19.3
		81	40	23.0	23.1	23.0	20.1	20.3	20.0	22.7	22.7	22.6	19.5	19.4	19.0
		162	0	23.0	23.1	22.9	20.2	20.3	20.0	22.7	22.6	22.5	19.4	19.4	19.0
	256QAM	1	0	21.1	20.8	21.0	17.5	17.6	17.2	19.6	19.5	19.4	17.8	17.4	17.4
		1	1	21.0	20.9	21.0	17.4	17.2	17.0	19.5	19.1	18.9	17.6	17.2	17.2
		81	40	20.9	21.0	20.9	17.2	17.3	17.0	19.0	19.1	19.0	17.2	17.1	16.8
		162	0	20.9	21.1	20.9	17.2	17.3	17.0	19.0	19.2	19.0	17.3	17.1	16.8

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	656000	662666	649333	656000	662666	649333	656000	662666	649333	656000	662666
				3740.0	3840.0	3940.0	3740.0	3840.0	3940.0	3740.0	3840.0	3940.0	3740.0	3840.0	3940.0
80.0	BPSK	1	0	21.8	22.0	21.6	19.1	19.1	19.2	22.7	23.0	22.3	18.8	18.6	18.3
		1	1	25.1	25.6	25.1	22.5	22.3	22.0	25.2	24.9	24.9	22.2	22.1	22.1
		108	54	25.3	25.7	25.2	22.1	22.3	22.0	24.7	24.8	24.3	22.2	22.0	21.8
		216	0	24.8	25.1	24.7	22.2	22.3	22.1	24.8	24.8	24.3	20.6	21.5	21.3
	QPSK	1	0	21.4	22.3	21.7	19.2	19.0	19.1	22.9	22.9	22.7	18.7	18.5	18.2
		1	1	25.1	25.5	25.5	22.2	22.5	22.4	25.2	24.9	24.9	22.2	22.1	21.8
		108	54	25.3	25.7	25.2	22.2	22.3	22.0	24.7	24.8	24.2	22.1	22.0	21.8
		216	0	24.3	24.5	24.2	21.7	21.8	21.5	24.8	24.9	24.3	20.0	21.1	20.8
	16QAM	1	0	22.0	22.3	21.7	19.5	19.6	19.5	22.3	22.7	22.1	18.7	18.3	18.0
		1	1	24.6	24.7	21.2	21.9	22.1	21.9	23.1	24.3	23.8	21.2	21.2	20.8
		108	54	24.3	24.7	24.3	21.7	21.8	21.5	23.3	23.4	23.4	21.2	21.1	20.8
		216	0	22.3	23.5	23.2	20.7	20.8	20.5	23.3	23.1	22.9	19.1	20.1	19.8
	64QAM	1	0	21.6	21.6	21.1	19.2	19.5	19.0	23.0	22.8	22.2	18.6	18.7	18.5
		1	1	22.7	22.7	22.9	20.0	20.3	20.1	23.3	23.7	23.0	20.1	19.7	19.5
		108	54	22.8	23.2	22.7	20.1	20.3	20.0	22.6	22.8	22.3	19.7	19.6	19.3
		216	0	22.7	23.1	22.7	20.2	20.3	20.0	22.7	22.8	23.0	18.6	19.6	19.3
	256QAM	1	0	20.2	21.1	20.5	17.5	17.6	17.2	19.9	20.5	19.9	17.7	17.2	17.2
		1	1	20.0	20.9	20.5	17.4	17.2	17.0	20.4	20.6	20.0	17.8	17.1	17.6
		108	54	20.5	20.8	20.4	17.2	17.3	17.0	19.8	20.0	19.4	17.2	17.0	16.8
		216	0	20.4	20.8	20.4	17.2	17.3	17.0	19.9	20.0	19.5	16.1	17.1	16.8

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	21.8	22.1	22.4	19.1	19.1	19.2	22.6	22.8	22.3	18.5	18.3	18.0
		1	1	25.4	25.7	25.3	22.5	22.3	22.0	25.0	24.9	24.8	22.1	22.2	21.7
		120	60	25.2	25.6	25.1	22.1	22.3	22.0	24.6	24.7	24.2	22.0	21.9	21.6
		240	0	24.9	25.3	24.7	22.2	22.3	22.1	24.3	24.9	24.2	21.5	21.5	21.2
	QPSK	1	0	22.2	22.2	22.2	19.2	19.0	19.1	22.6	19.8	22.4	18.4	18.2	18.0
		1	1	25.2	25.5	25.6	22.2	22.5	22.4	25.2	24.7	24.8	22.0	22.0	21.6
		120	60	25.3	25.6	25.2	22.2	22.3	22.0	24.5	24.8	24.3	21.9	21.9	21.6
		240	0	24.5	24.9	24.3	21.7	21.8	21.5	24.3	24.8	24.2	21.0	20.9	20.6
	16QAM	1	0	21.8	21.8	21.6	19.5	19.6	19.5	21.7	21.6	21.1	18.5	18.1	18.0
		1	1	23.7	24.7	24.2	21.9	22.1	21.9	23.2	23.7	23.2	21.2	21.1	20.7
		120	60	23.8	24.1	23.7	21.7	21.8	21.5	22.7	22.8	22.5	20.9	20.9	20.7
		240	0	22.9	23.2	22.8	20.7	20.8	20.5	22.3	22.9	22.4	19.9	19.9	19.6
	64QAM	1	0	22.0	21.7	21.8	19.2	19.5	19.0	21.8	21.8	21.3	18.7	18.6	18.1
		1	1	22.2	22.8	22.8	20.0	20.3	20.1	21.9	22.9	22.0	19.7	19.5	19.3
		120	60	23.0	23.3	22.7	20.1	20.3	20.0	21.6	21.8	21.2	19.4	19.5	19.1
		240	0	23.0	23.4	22.7	20.2	20.3	20.0	21.3	21.8	21.2	19.4	19.4	19.2
	256QAM	1	0	20.8	21.1	20.7	17.5	17.6	17.2	20.0	19.9	19.5	17.6	17.3	16.8
		1	1	20.5	20.8	20.8	17.4	17.2	17.0	20.3	20.3	20.1	17.8	17.8	16.8
		120	60	20.5	20.9	20.3	17.2	17.3	17.0	19.1	20.0	19.4	17.1	17.1	16.9
		240	0	20.3	20.8	20.3	17.2	17.3	17.0	19.5	20.1	19.5	17.2	17.2	16.9

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	656000	662000	650000	656000	662000	650000	656000	662000	650000	656000	662000
				3750.0	3840.0	3930.0	3750.0	3840.0	3930.0	3750.0	3840.0	3930.0	3750.0	3840.0	3930.0
100.0	BPSK	1	0	21.9	21.8	22.2	19.1	19.4	19.5	22.5	22.8	22.4	18.3	18.2	17.8
		1	1	25.0	25.2	25.5	22.3	22.1	22.3	25.1	24.8	24.8	22.2	21.9	21.7
		135	67	25.4	25.7	25.3	22.4	22.5	22.3	24.8	24.2	24.3	22.0	22.0	21.9
		270	0	24.8	25.2	24.8	22.4	22.5	22.2	24.8	24.3	24.1	21.5	21.4	21.3
	QPSK	1	0	22.0	21.8	21.8	19.4	19.4	19.4	22.6	22.6	22.4	18.5	18.0	17.9
		1	1	25.6	25.6	25.1	22.1	22.5	22.5	25.2	24.7	25.1	22.2	21.9	21.6
		135	67	25.4	25.6	25.3	22.3	22.5	22.3	24.7	24.3	24.3	22.0	22.0	21.8
		270	0	24.3	24.5	24.3	21.9	22.0	21.8	24.8	24.3	24.0	20.9	21.0	20.8
	16QAM	1	0	22.1	22.2	22.0	19.3	19.4	19.6	22.6	22.4	22.0	18.3	18.3	18.0
		1	1	24.4	24.3	24.8	21.7	21.6	21.8	23.8	23.7	23.3	21.2	20.9	21.2
		135	67	24.4	24.7	24.4	21.8	21.9	21.7	22.7	23.2	22.9	21.0	20.9	20.7
		270	0	23.4	23.6	23.3	20.9	21.0	20.7	22.8	23.0	22.6	19.9	20.0	19.7
	64QAM	1	0	22.1	22.2	22.3	19.1	19.7	19.1	21.6	21.8	20.7	18.5	18.4	18.1
		1	1	23.2	23.2	23.1	20.4	20.5	20.7	22.3	23.0	21.9	19.6	19.7	19.4
		135	67	22.9	23.2	22.7	20.4	20.4	20.1	21.7	22.2	21.3	19.5	19.4	19.3
		270	0	22.9	23.2	22.8	20.4	20.5	20.2	21.7	22.4	22.1	19.4	19.5	19.3
	256QAM	1	0	20.0	20.2	20.7	17.1	17.4	17.1	20.3	19.9	19.8	17.3	16.9	16.6
		1	1	20.7	20.7	21.0	17.5	17.6	17.6	20.5	20.4	19.8	17.7	17.4	17.1
		135	67	20.5	20.7	20.3	17.3	17.5	17.3	19.9	19.8	19.6	17.5	17.5	17.3
		270	0	20.4	20.7	20.4	17.4	17.5	17.3	19.9	19.9	19.6	17.5	17.5	17.3

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	1.0853	1.219
	1.4MHz, 16QAM			1.0898	1.233
	3MHz, QPSK	15/0		2.6898	2.989
	3MHz, 16QAM			2.6854	2.980
	5MHz, QPSK	25/0		4.4940	4.882
	5MHz, 16QAM			4.4957	4.913
	10MHz, QPSK	50/0		8.9483	9.659
	10MHz, 16QAM			8.9241	9.674
	15MHz, QPSK	75/0		13.3866	14.483
	15MHz, 16QAM			13.3906	14.519
	20MHz, QPSK	100/0		17.8808	19.202
	20MHz, 16QAM			17.8739	19.308
	20MHz, QPSK	1/0		0.3259	0.4932

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	1.0815	1.222
	1.4MHz, 16QAM			1.0861	1.221
	3MHz, QPSK	15/0		2.6906	2.984
	3MHz, 16QAM			2.6811	3.012
	5MHz, QPSK	25/0		4.4961	4.881
	5MHz, 16QAM			4.4993	4.949
	10MHz, QPSK	50/0		8.9407	9.684
	10MHz, 16QAM			8.9214	9.582

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	13.368	14.10	
	15MHz, QPSK			13.374	13.98	
	15MHz, 16QAM			13.361	14.02	
	20MHz, BPSK	100/0		17.795	18.53	
	20MHz, QPSK			17.804	18.56	
	20MHz, 16QAM			17.765	18.51	

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	4.5049	4.935
	5MHz, 16QAM			4.4874	4.892
	10MHz, QPSK	50/0		8.9227	9.622
	10MHz, 16QAM			8.9238	9.661
	15MHz, QPSK	75/0		13.3982	14.486
	15MHz, 16QAM			13.4110	14.346
	20MHz, QPSK	100/0		17.7972	19.088
	20MHz, 16QAM			17.8489	19.386
	20MHz, QPSK	1/0		0.3044	0.5282

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	1.0817	1.222
	1.4MHz, 16QAM			1.0840	1.221
	3MHz, QPSK	15/0		2.6831	2.965
	3MHz, 16QAM			2.6781	2.988
	5MHz, QPSK	25/0		4.4961	4.895
	5MHz, 16QAM			4.4927	4.885
	10MHz, QPSK	50/0		8.9253	9.692
	10MHz, 16QAM			8.9541	9.627

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	13.370	14.01
	15MHz, QPSK			13.375	13.91
	15MHz, 16QAM			13.373	13.96
	15MHz, QPSK	1/0		0.3372	0.5445

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	4.4892	4.903
	5MHz, 16QAM			4.4996	4.961
	10MHz, QPSK	50/0		8.9354	9.615
	10MHz, 16QAM			8.9527	9.566

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	4.4907	4.936
	5MHz, 16QAM			4.5033	4.946
	10MHz, QPSK	50/0		8.9504	9.631
	10MHz, 16QAM			8.9330	9.579

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	4.5068	4.883
	5MHz, 16QAM			4.4989	4.903
	10MHz, QPSK	50/0		8.9383	9.760
	10MHz, 16QAM			8.9275	9.619

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	1.0848	1.229
	1.4MHz, 16QAM			1.0923	1.232
	3MHz, QPSK	15/0		2.6965	2.980
	3MHz, 16QAM			2.6852	3.002
	5MHz, QPSK	25/0		4.4906	4.937
	5MHz, 16QAM			4.5005	4.913
	10MHz, QPSK	50/0		8.9633	9.652
	10MHz, 16QAM			8.9316	9.671
	15MHz, QPSK	75/0		13.3821	14.633
	15MHz, 16QAM			13.4268	14.445
	20MHz, QPSK	100/0		17.8062	19.377
	20MHz, 16QAM			17.8719	19.199
	20MHz, QPSK	1/0		0.3037	0.516

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	1.0803	1.220
	1.4MHz, 16QAM			1.0803	1.222
	3MHz, QPSK	15/0		2.6868	2.966
	3MHz, 16QAM			2.6874	2.994
	5MHz, QPSK	25/0		4.4983	4.900
	5MHz, 16QAM			4.4935	4.882
	10MHz, QPSK	50/0		8.9420	9.605
	10MHz, 16QAM			8.9391	9.666

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	4.4882	4.880
	5MHz, 16QAM			4.4941	4.896
	10MHz, QPSK	50/0		8.9544	9.665
	10MHz, 16QAM			8.9544	9.688

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	4.5042	4.875
	5MHz, 16QAM			4.4897	4.909
	10MHz, QPSK	50/0		8.9499	9.760
	10MHz, 16QAM			8.8983	9.470
	15MHz, QPSK	75/0		13.3762	14.243
	15MHz, 16QAM			13.3901	14.454
	20MHz, QPSK	100/0		17.8010	19.129
	20MHz, 16QAM			17.8429	18.919
	20MHz, QPSK	1/0		0.3016	0.4924

5G NR BAND n41

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LET BAND n41	20MHz, BPSK	50/0	2593.0	17.9131	19.565
	20MHz, QPSK			17.9861	19.780
	20MHz, 16QAM			17.9254	19.709
	40MHz, BPSK	100/0		35.5162	36.753
	40MHz, QPSK			35.6784	37.400
	40MHz, 16QAM			35.6240	37.289
	50MHz, BPSK	128/0		45.6130	47.158
	50MHz, QPSK			45.6748	48.310
	50MHz, 16QAM			45.4892	47.791
	60MHz, BPSK	162/0		57.8532	59.578
	60MHz, QPSK			57.7002	60.122
	60MHz, 16QAM			57.7430	60.247
	80MHz, BPSK	216/0		76.9678	79.154
	80MHz, QPSK			76.9709	80.035
	80MHz, 16QAM			76.9545	79.929
	90MHz, BPSK	240/0		85.6494	88.344
	90MHz, QPSK			85.4138	88.394
	90MHz, 16QAM			85.6894	88.440
	100MHz, BPSK	270/0		96.0656	99.105
	100MHz, QPSK			96.0255	99.395
	100MHz, 16QAM			96.0422	99.465
	100MHz, QPSK	1/0		0.4898	0.7892

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	4.5576	5.119
	5MHz, 16QAM			4.4631	4.908

	10MHz, QPSK	50/0		8.9338	9.653
	10MHz, 16QAM			8.9331	9.660
	15MHz, QPSK	75/0		13.3915	14.405
	15MHz, 16QAM			13.4091	14.353
	20MHz, QPSK	100/0		17.8911	19.218
	20MHz, 16QAM			17.9069	19.023
	20MHz, QPSK	1/0		0.32768	0.5627

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	1.0854	1.224
	1.4MHz, 16QAM			1.0879	1.235
	3MHz, QPSK	15/0		2.6831	2.957
	3MHz, 16QAM			2.6833	2.960
	5MHz, QPSK	25/0		4.4928	4.860
	5MHz, 16QAM			4.4858	4.939
	10MHz, QPSK	50/0		8.9425	9.676
	10MHz, 16QAM			8.9540	9.652
	15MHz, QPSK	75/0		13.3790	14.418
	15MHz, 16QAM			13.3918	14.363
	20MHz, QPSK	100/0		17.8530	19.191
	20MHz, 16QAM			17.8489	19.328
	20MHz, QPSK	1/0		0.3079	0.5001

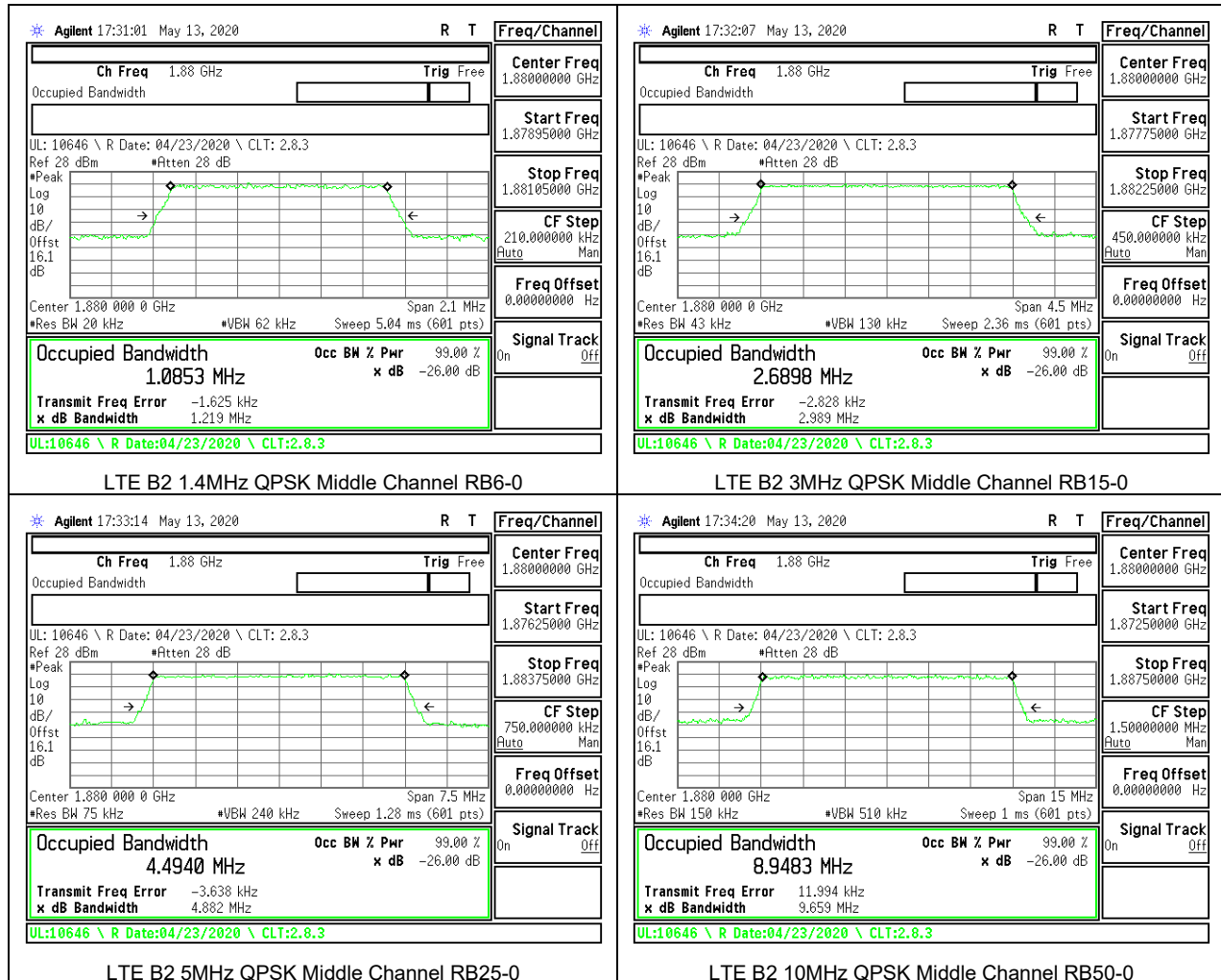
LTE BAND 71

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 71	5MHz, QPSK	25/0	680.5	4.4939	4.925
	5MHz, 16QAM			4.4903	4.851
	10MHz, QPSK	50/0	683	8.9560	9.688
	10MHz, 16QAM			8.9609	9.696
	15MHz, QPSK	75/0	680.5	13.4419	14.534
	15MHz, 16QAM			13.4458	14.505
	20MHz, QPSK	100/0	683	17.9214	19.387
	20MHz, 16QAM			17.8446	19.154
	20MHz, QPSK	1/0		0.3176	0.5806

5G NR BAND n77

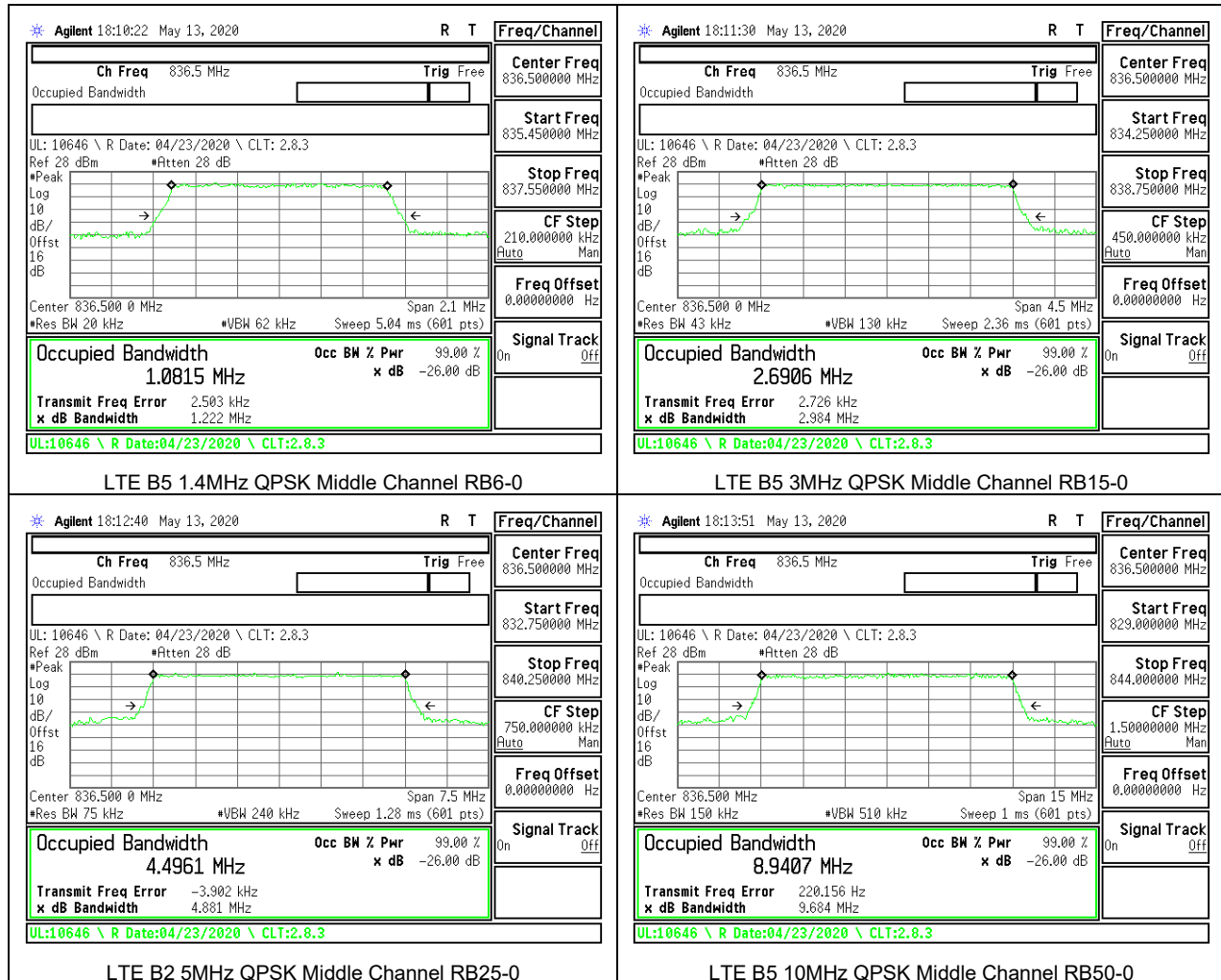
Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
5G NR BAND n77	20MHz, BPSK	50/0	3840.0	17.775	18.61
	20MHz, QPSK			17.823	18.84
	20MHz, 16QAM			17.899	18.72
	40MHz, BPSK	100/0		35.638	37.14
	40MHz, QPSK			35.690	37.10
	40MHz, 16QAM			35.695	37.10
	50MHz, BPSK	128/0		45.657	47.21
	50MHz, QPSK			45.608	47.61
	50MHz, 16QAM			45.640	47.34
	60MHz, BPSK	162/0		57.710	59.85
	60MHz, QPSK			57.844	59.73
	60MHz, 16QAM			57.862	59.92
	80MHz, BPSK	216/0		77.047	79.57
	80MHz, QPSK			76.934	79.59
	80MHz, 16QAM			77.084	79.68
	90MHz, BPSK	240/0		85.608	88.37
	90MHz, QPSK			85.868	88.58
	90MHz, 16QAM			85.585	88.47
	100MHz, BPSK	270/0		96.520	99.60
	100MHz, QPSK			96.490	99.44
	100MHz, 16QAM			96.519	99.35
		100MHz, QPSK		1/0	0.4670

8.1.1. LTE BAND 2





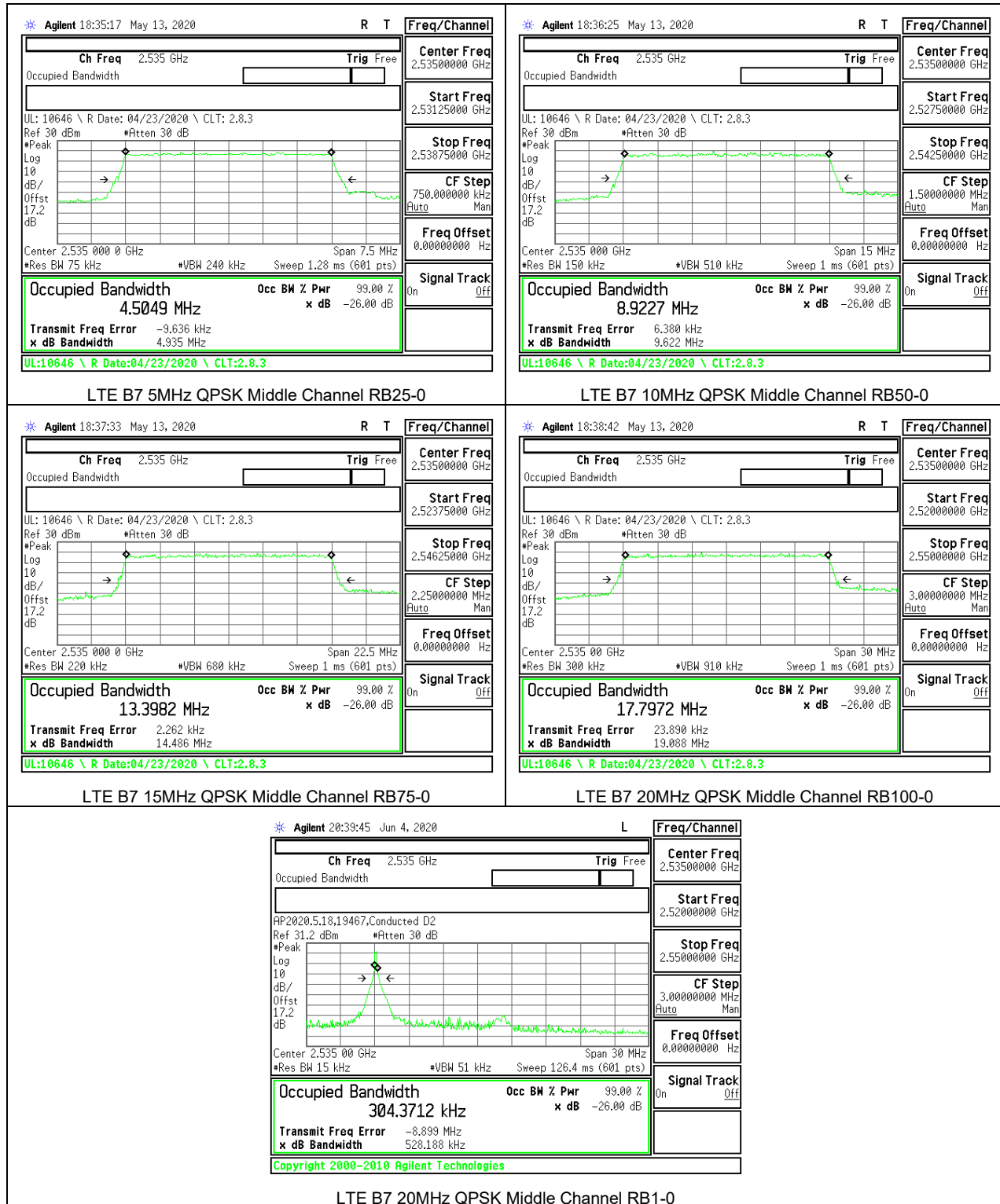
8.1.2. LTE BAND 5



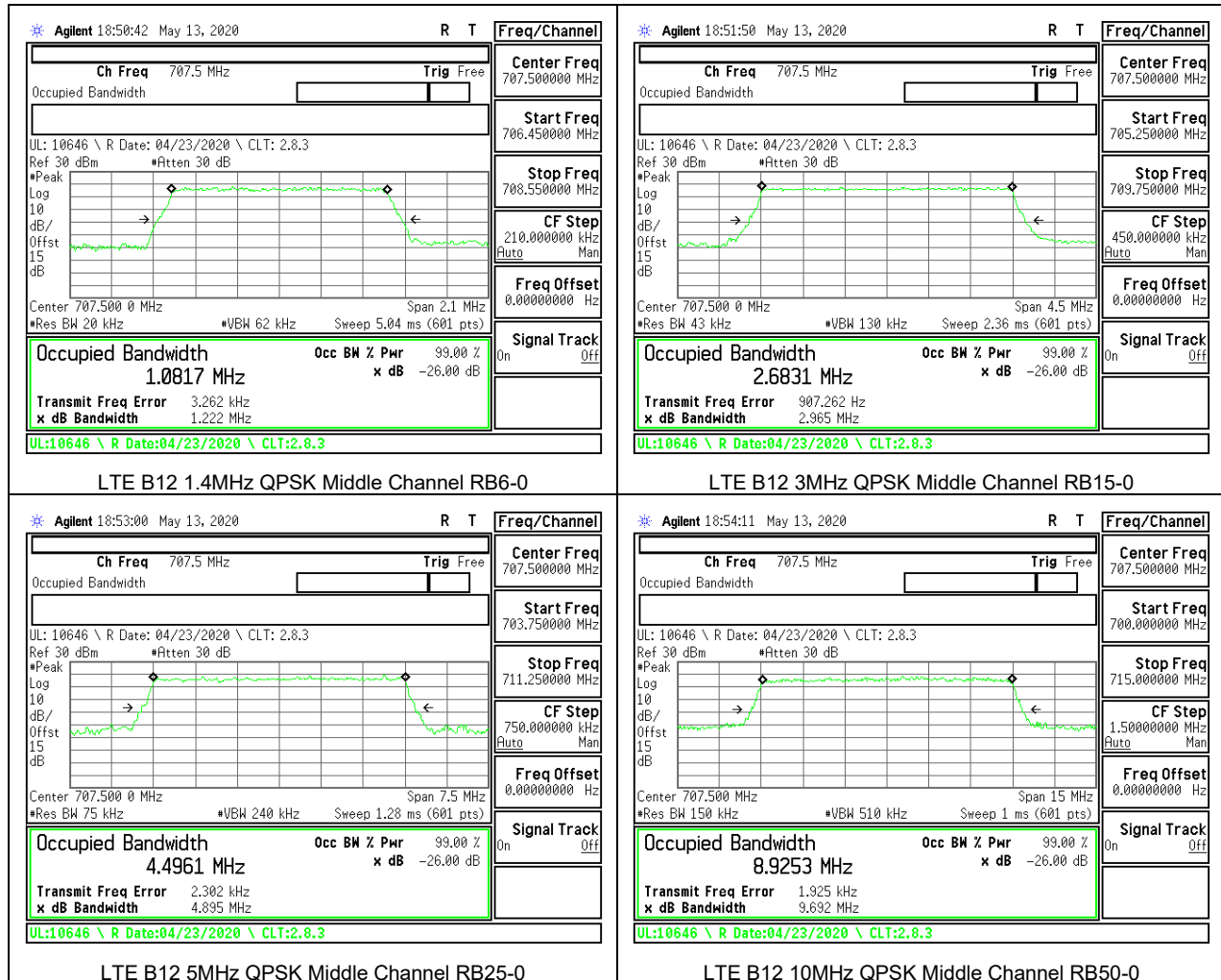
8.1.3. 5G NR BAND n5



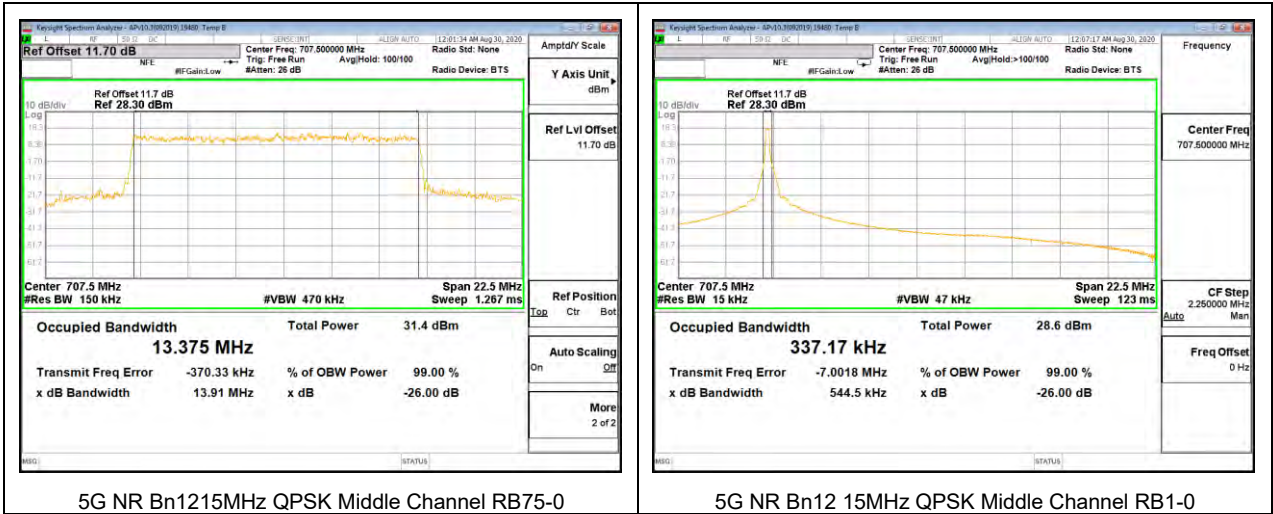
8.1.4. LTE BAND 7



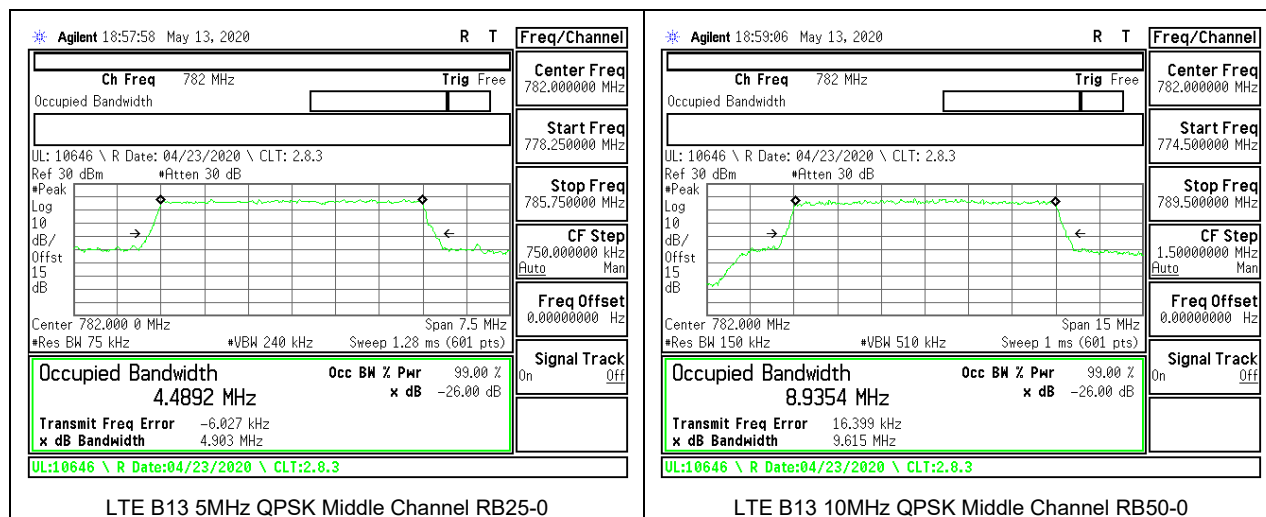
8.1.5. LTE BAND 12



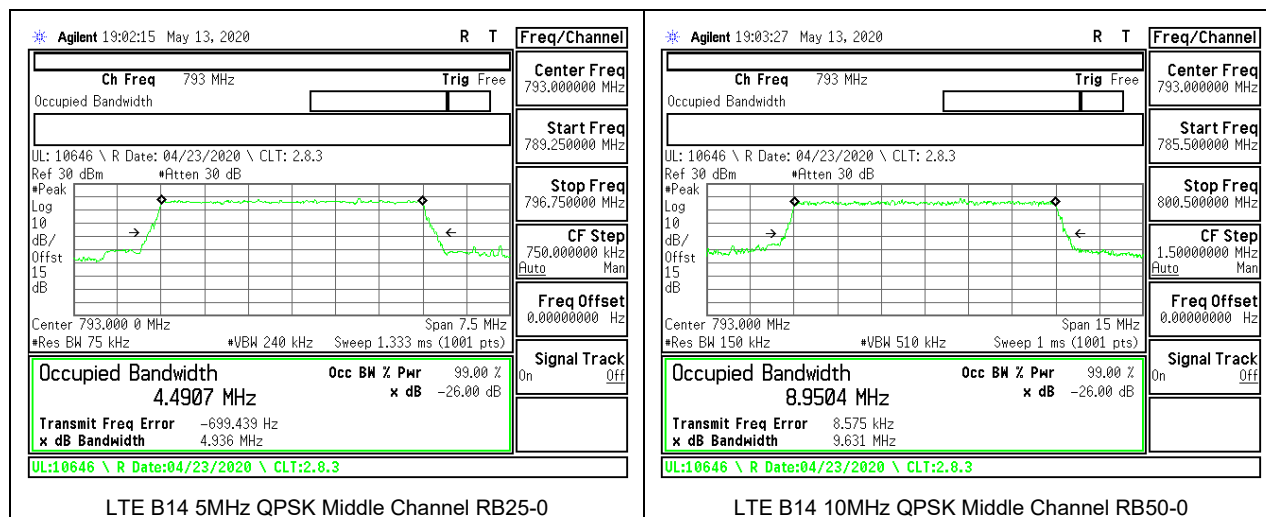
8.1.6. 5G NR BAND n12



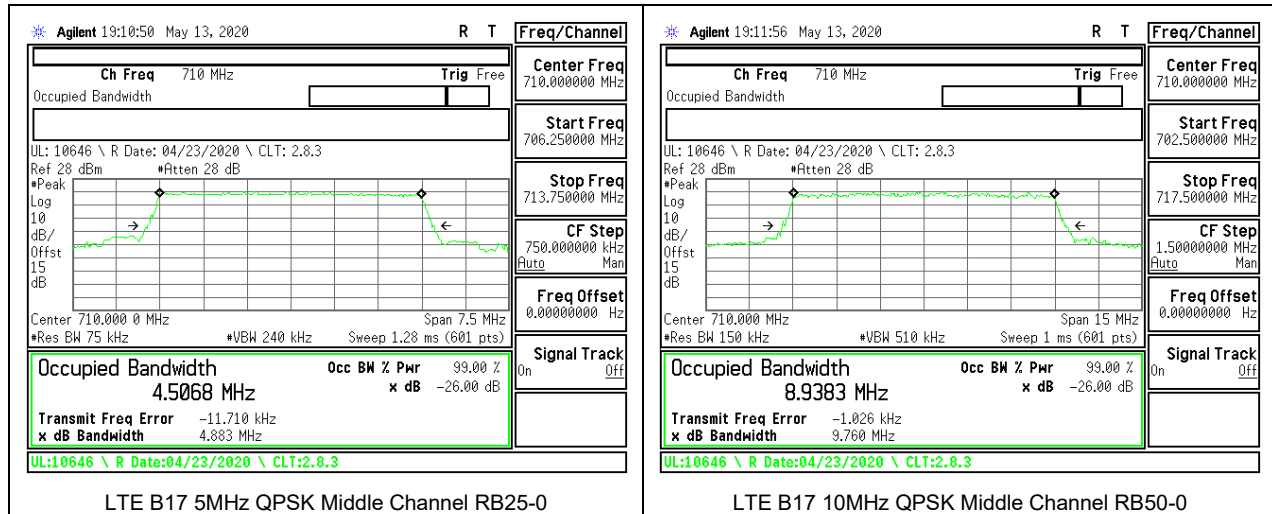
8.1.7. LTE BAND 13



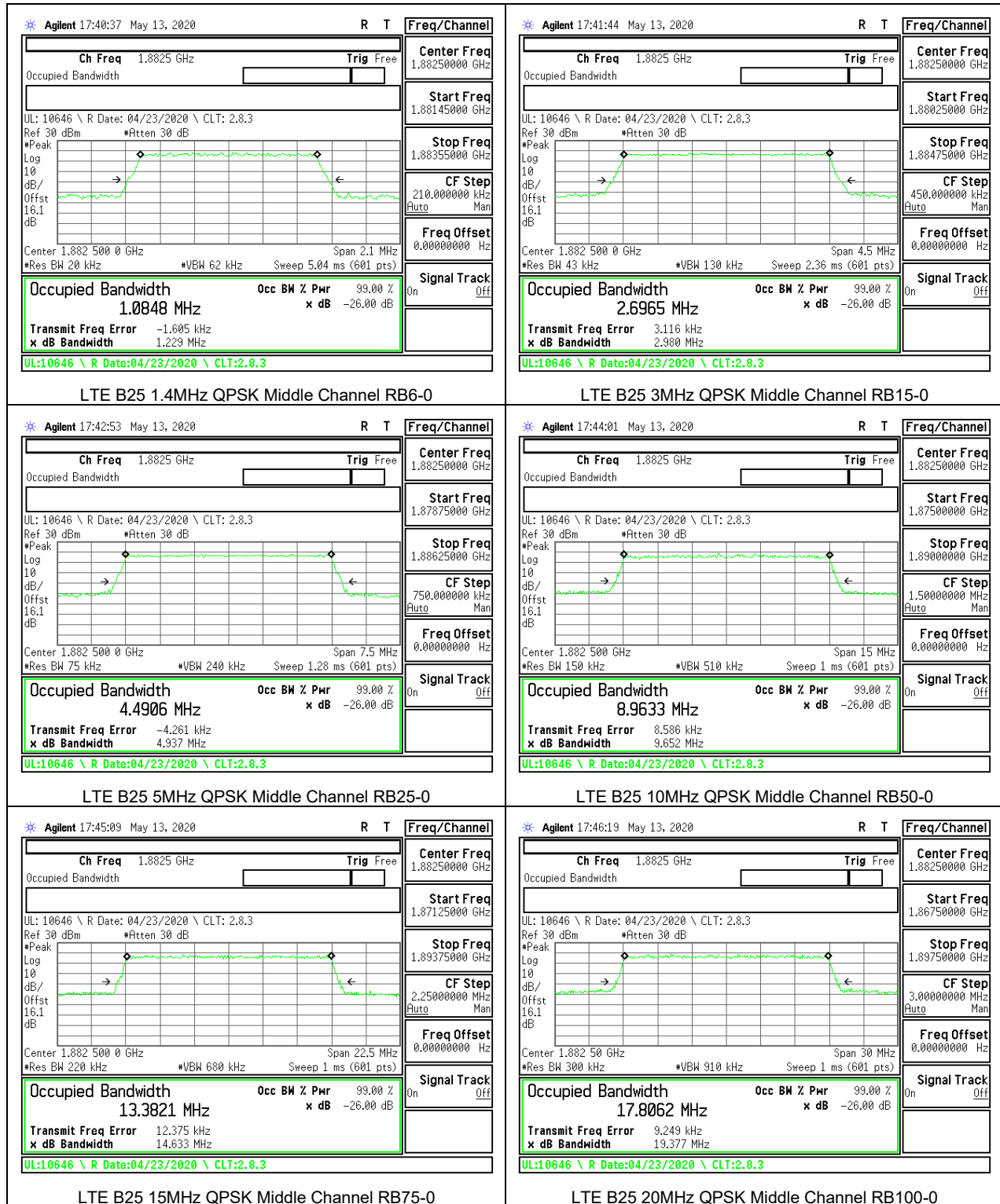
8.1.8. LTE BAND 14



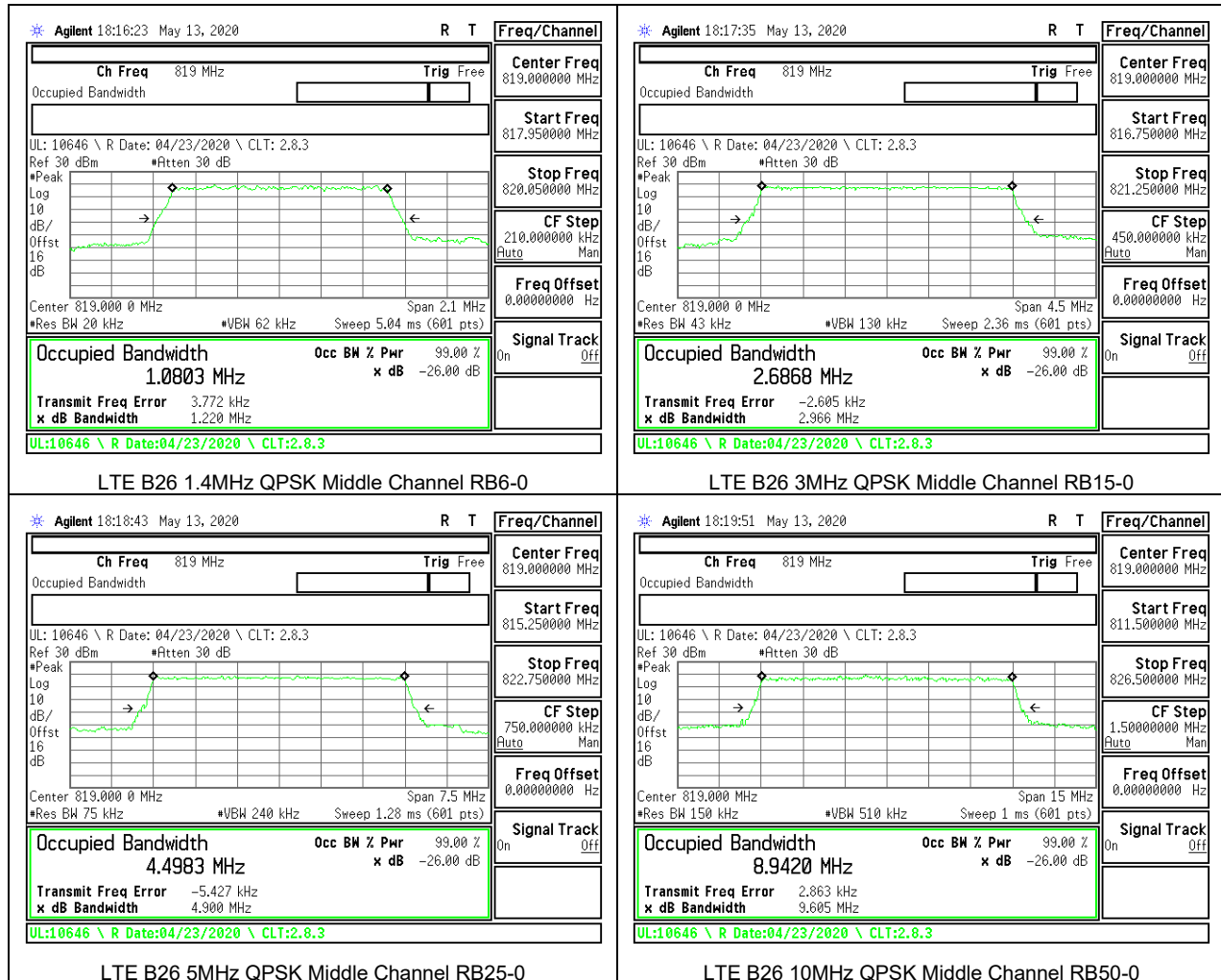
8.1.9. LTE BAND 17



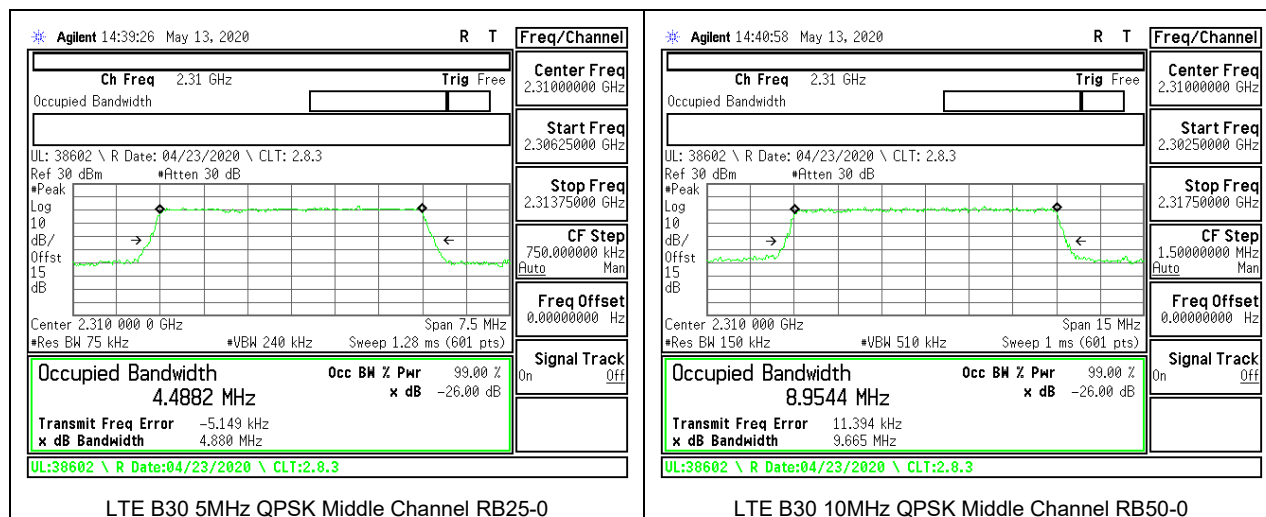
8.1.10. LTE BAND 25



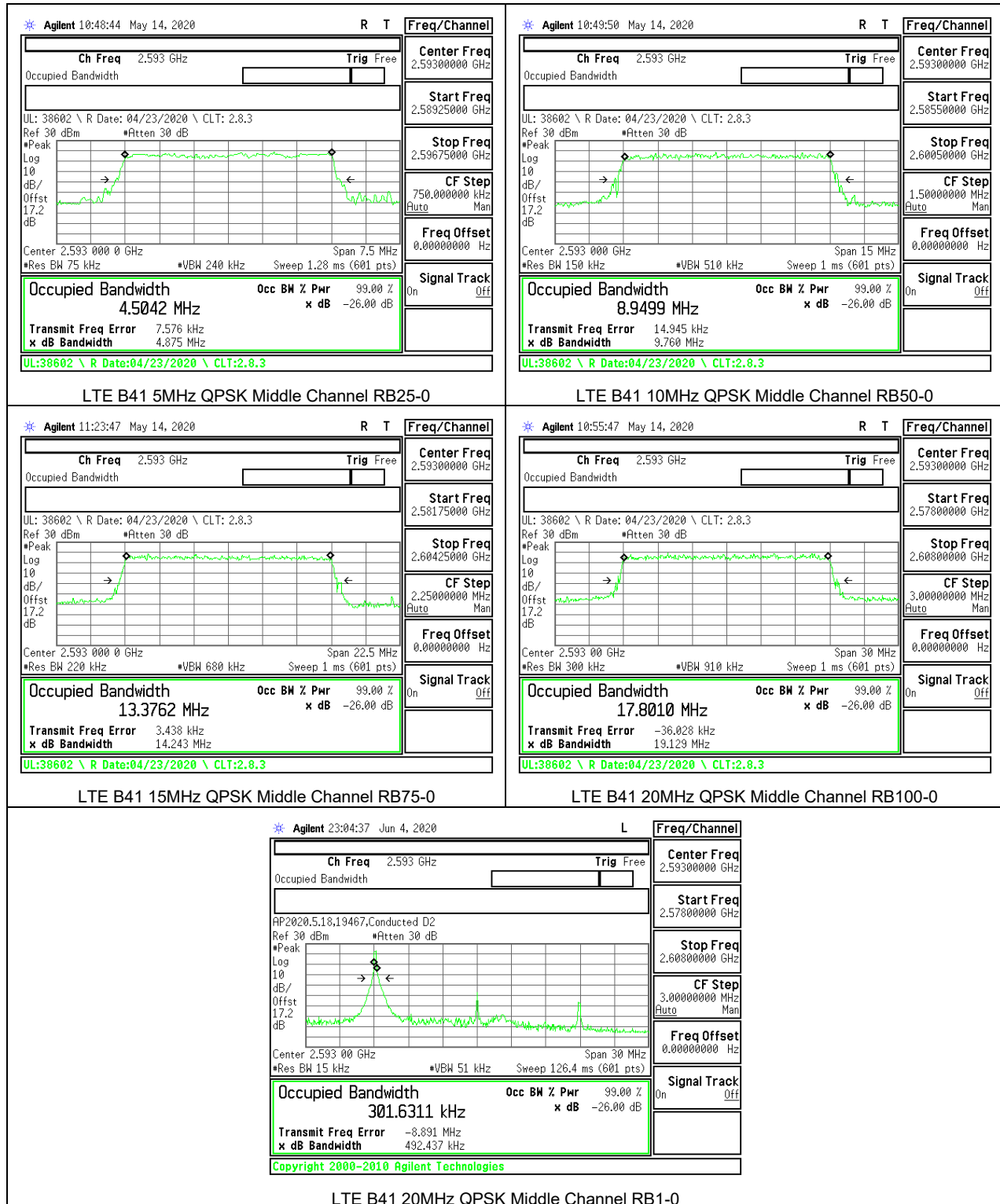
8.1.11. LTE BAND 26 (PART 90S)



8.1.12. LTE BAND 30



8.1.13. LTE BAND 41

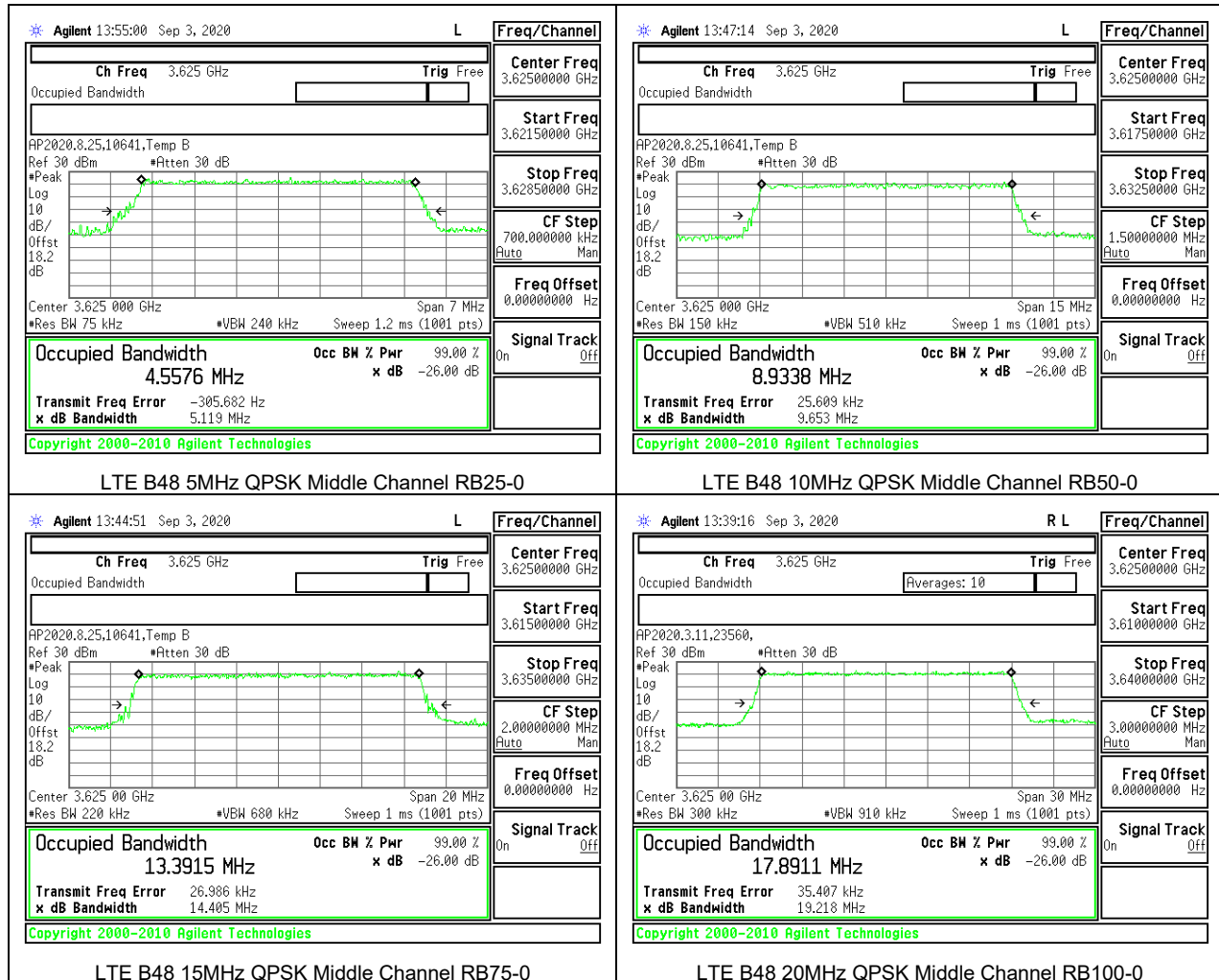


8.1.14. 5G NR BAND n41

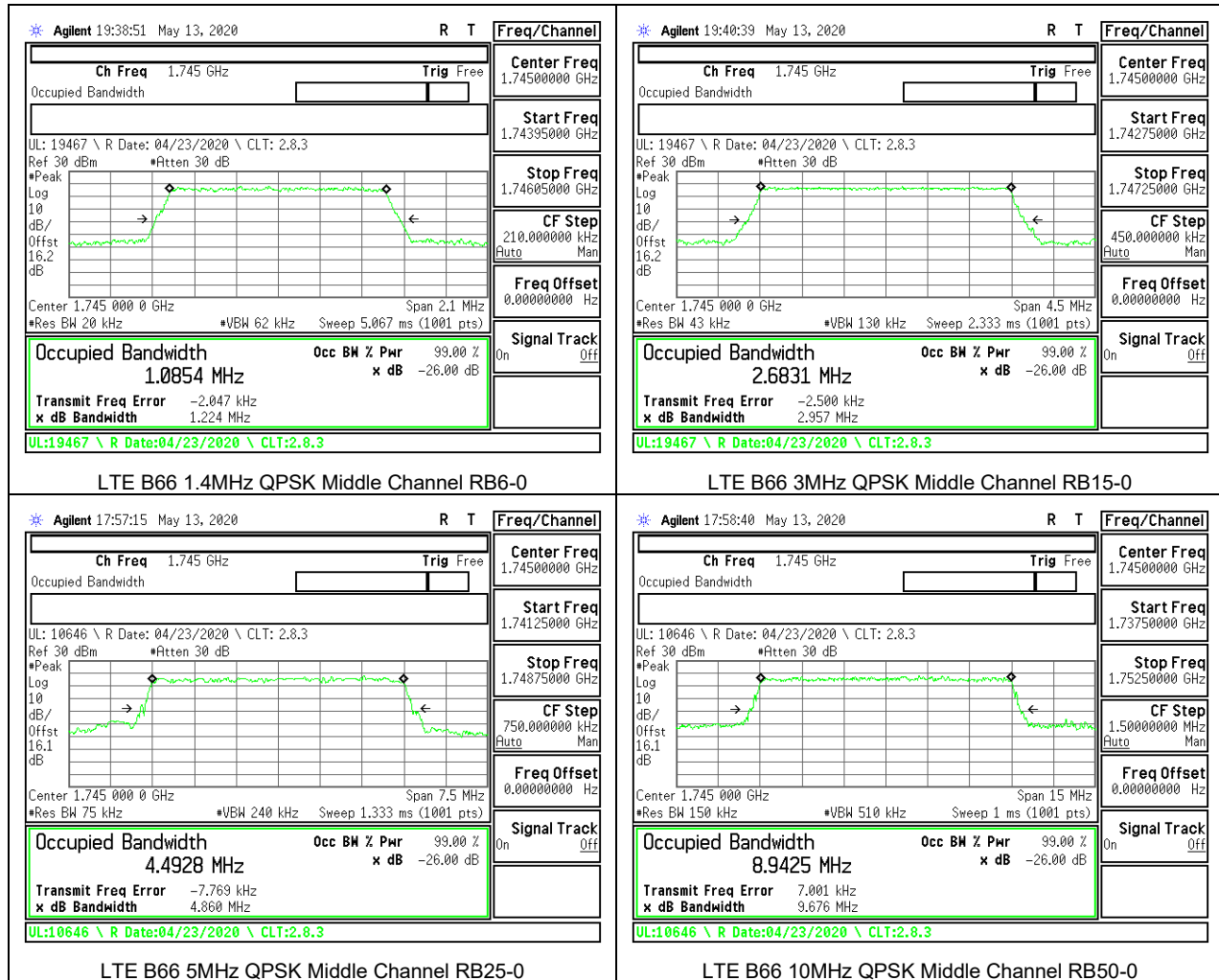


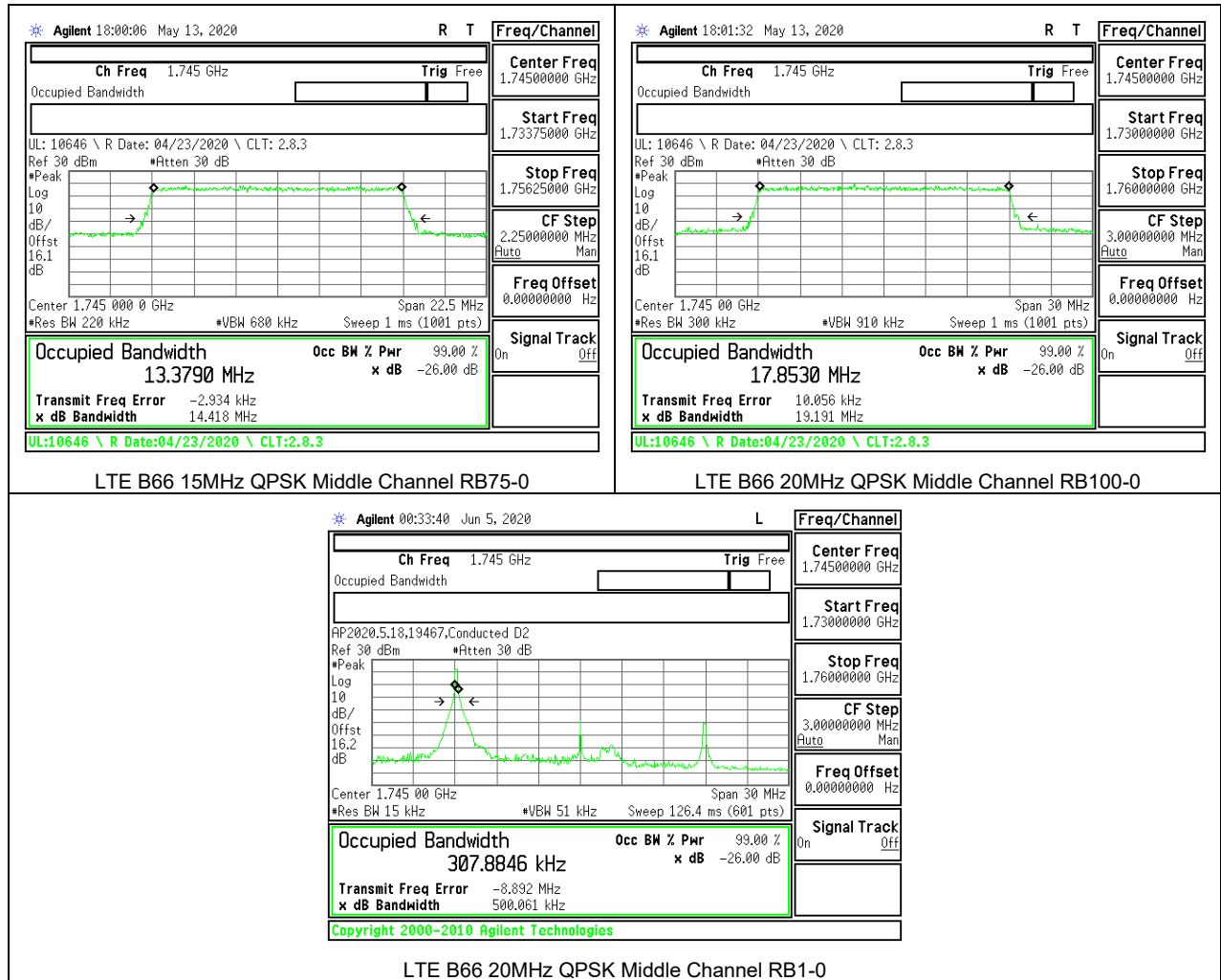


8.1.15. LTE BAND 48

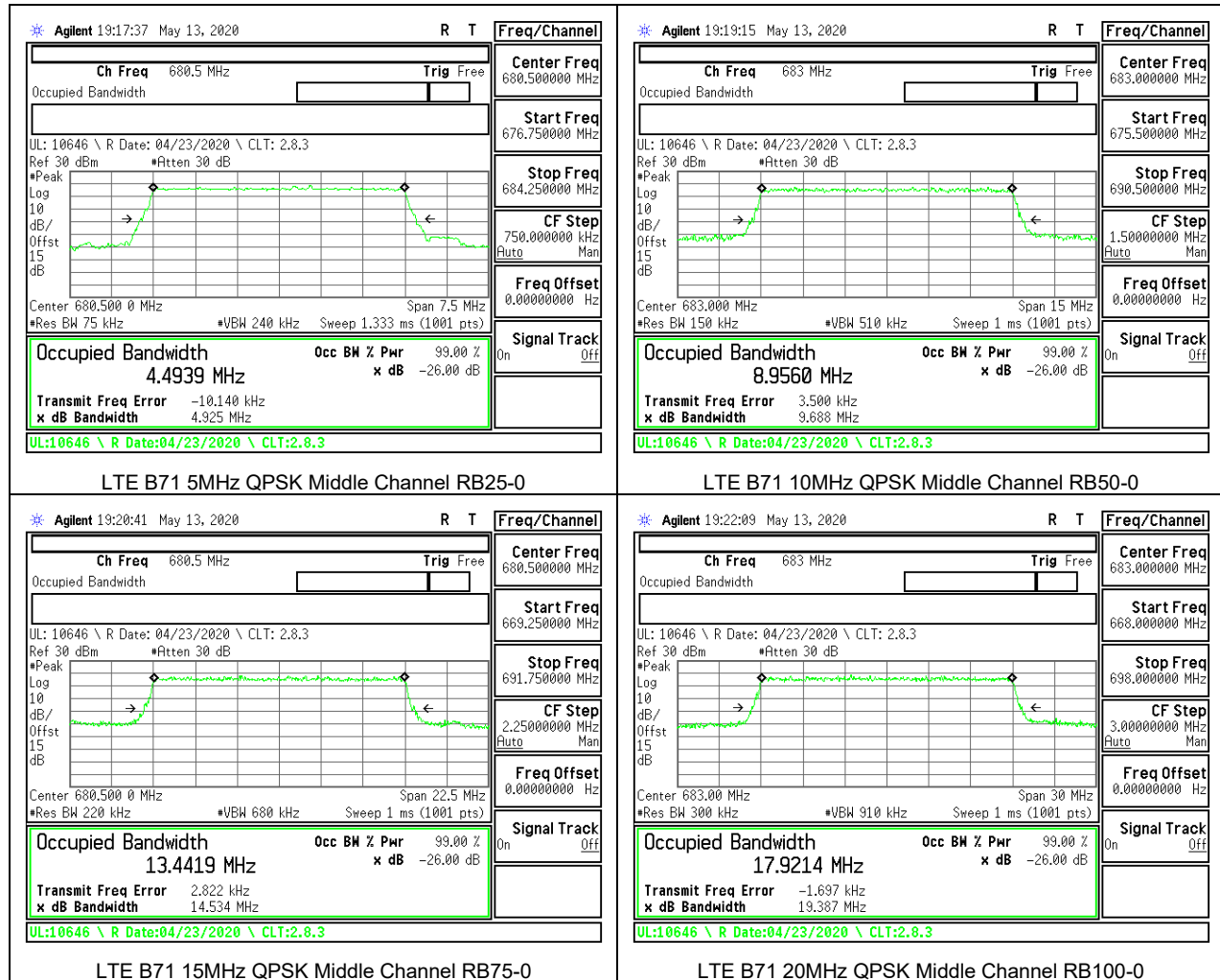


8.1.16. LTE BAND 66

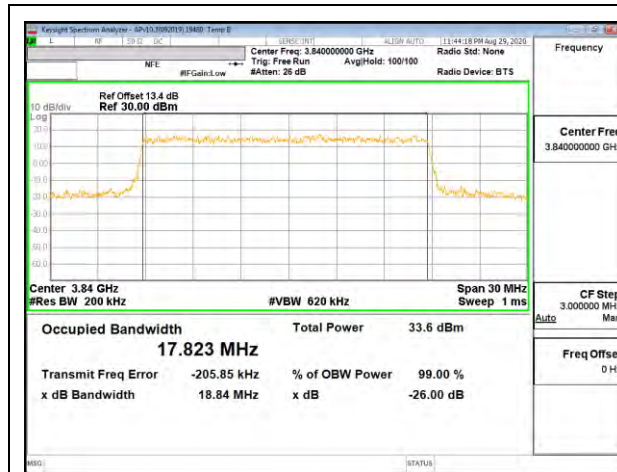




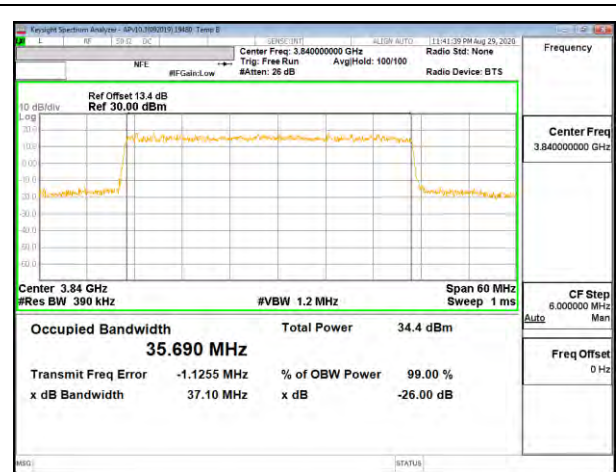
8.1.17. LTE BAND 71



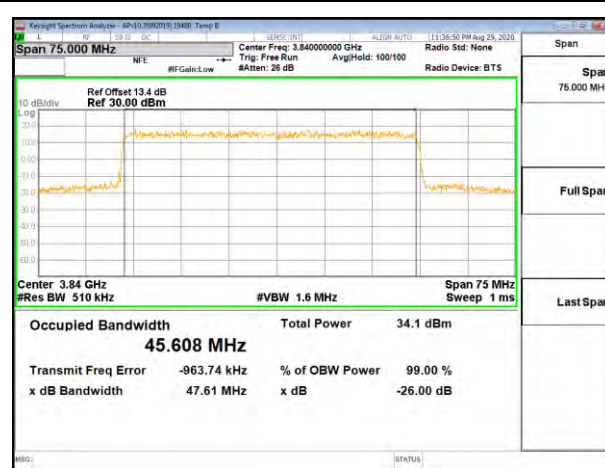
8.1.18. 5G NR BAND n77



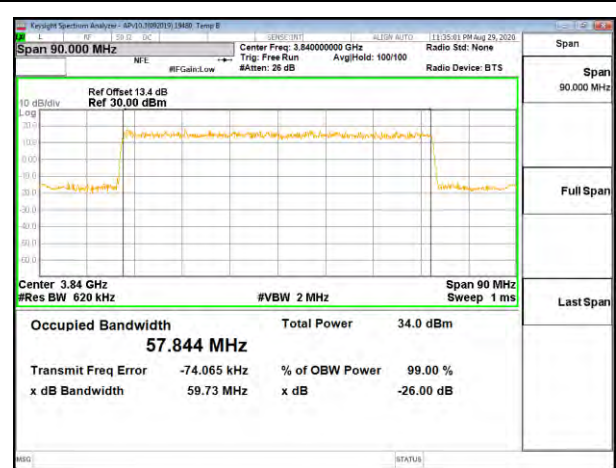
5G NR Bn77 20MHz QPSK Middle Channel RB100-0



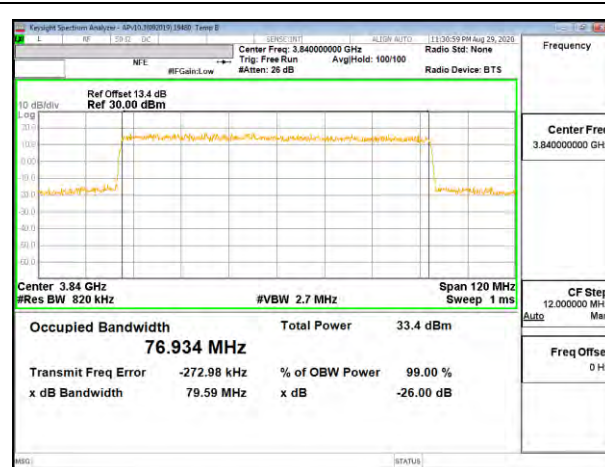
5G NR Bn77 40MHz QPSK Middle Channel RB100-0



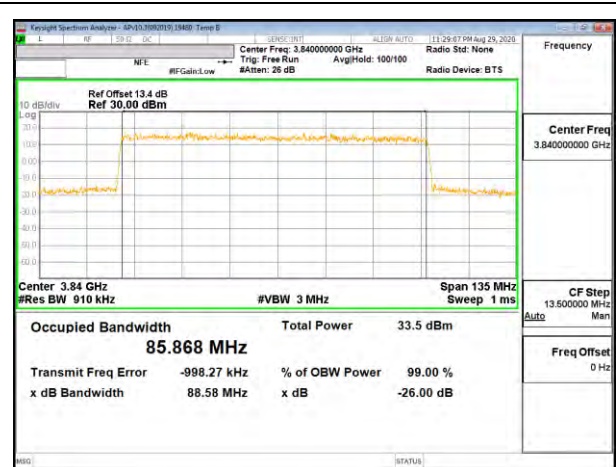
5G NR Bn77 50MHz QPSK Middle Channel RB128-0



5G NR Bn77 60MHz QPSK Middle Channel RB162-0



5G NR Bn77 80MHz QPSK Middle Channel RB216-0



5G NR Bn77 90MHz QPSK Middle Channel RB240-0



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.

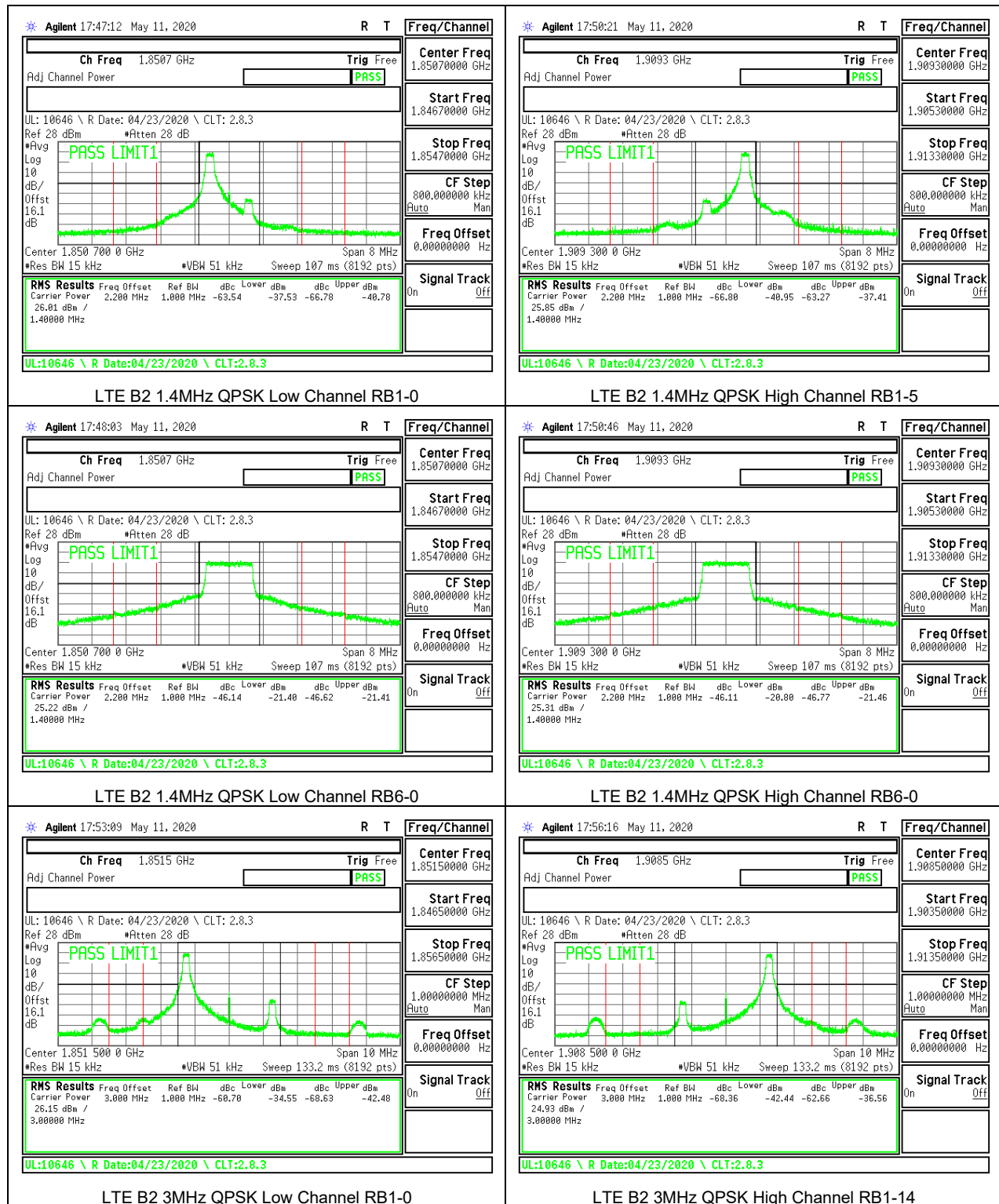
RESULTS

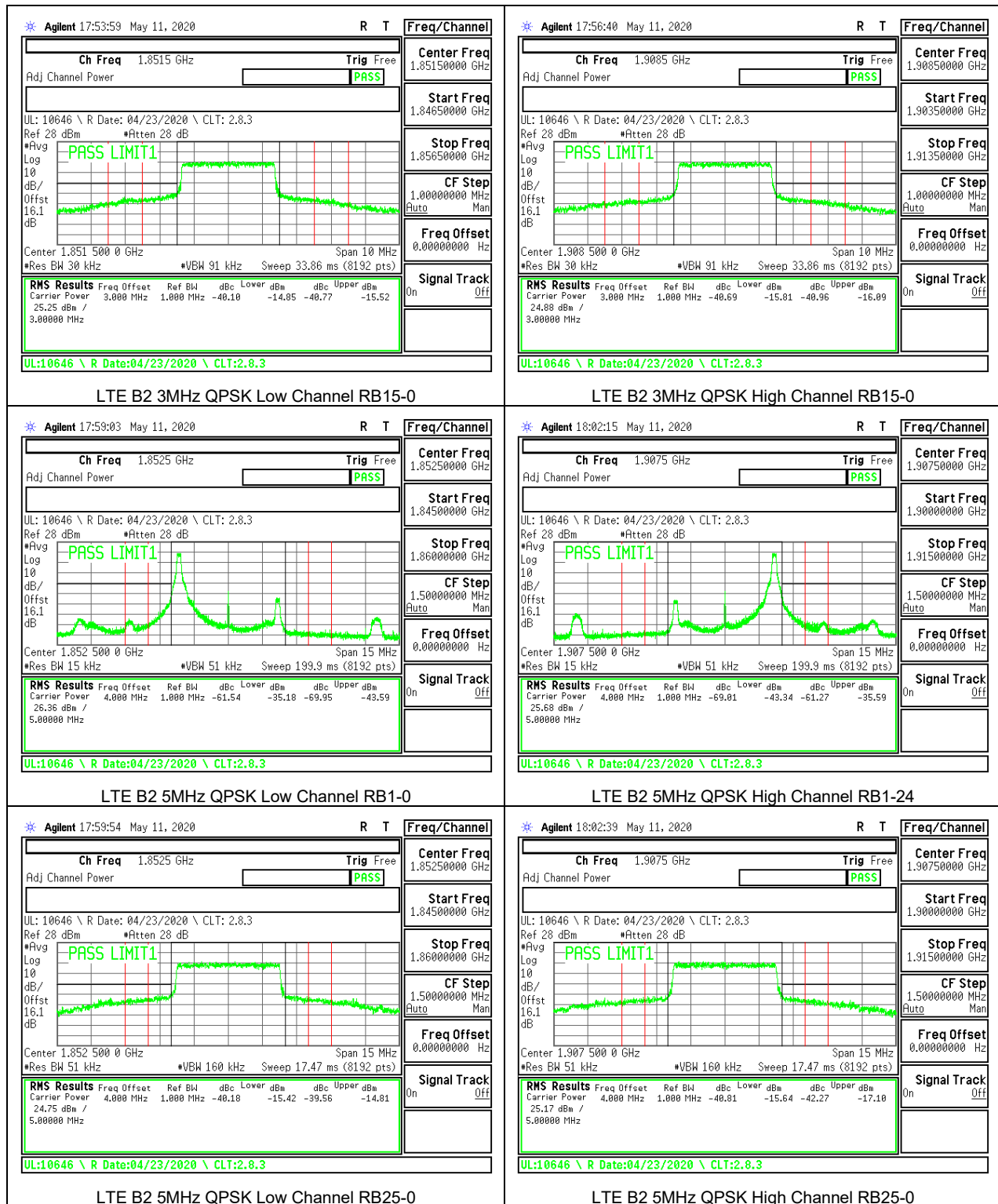
8.2.1. LTE BAND 2 BANDEDGE

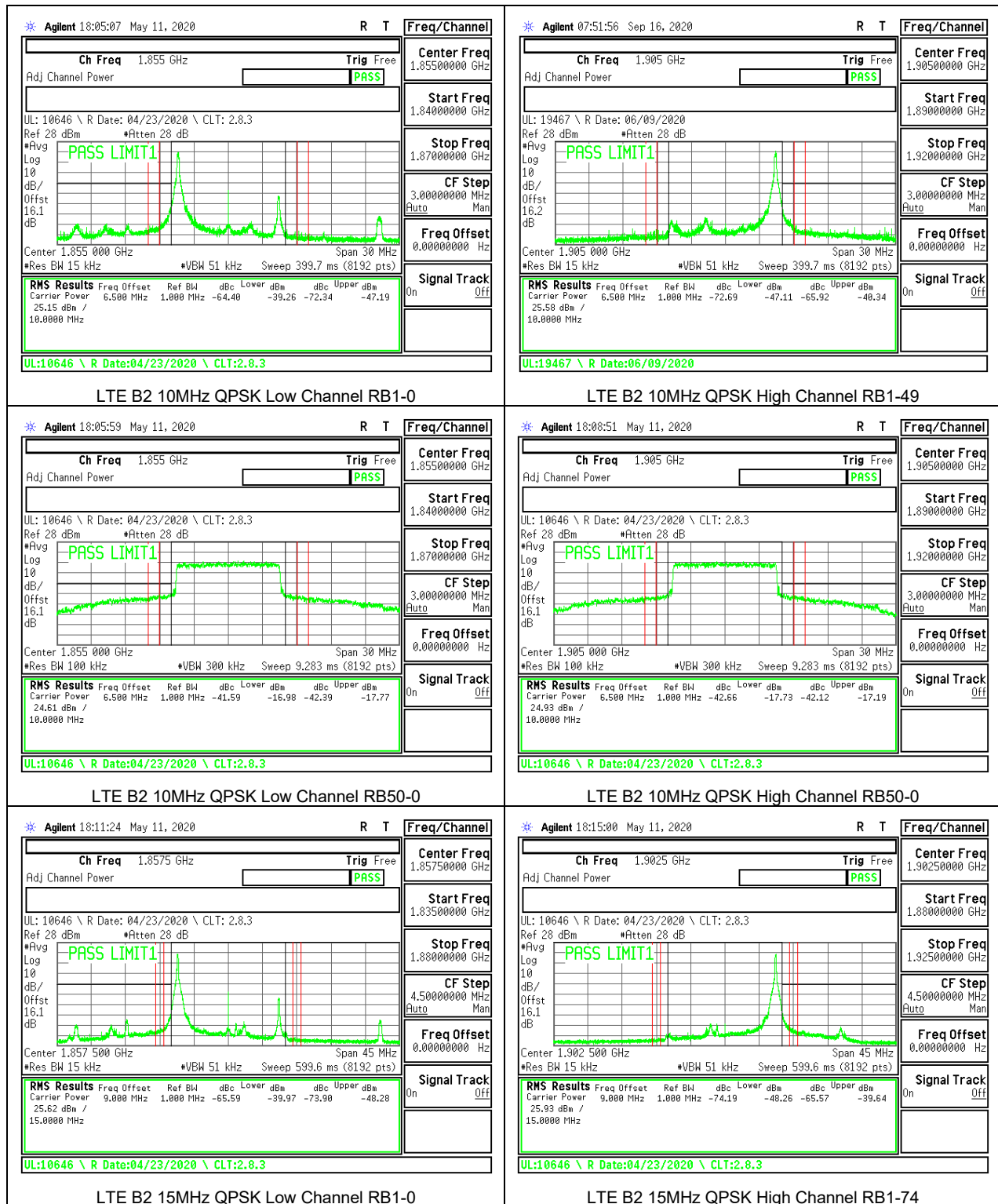
LIMITS

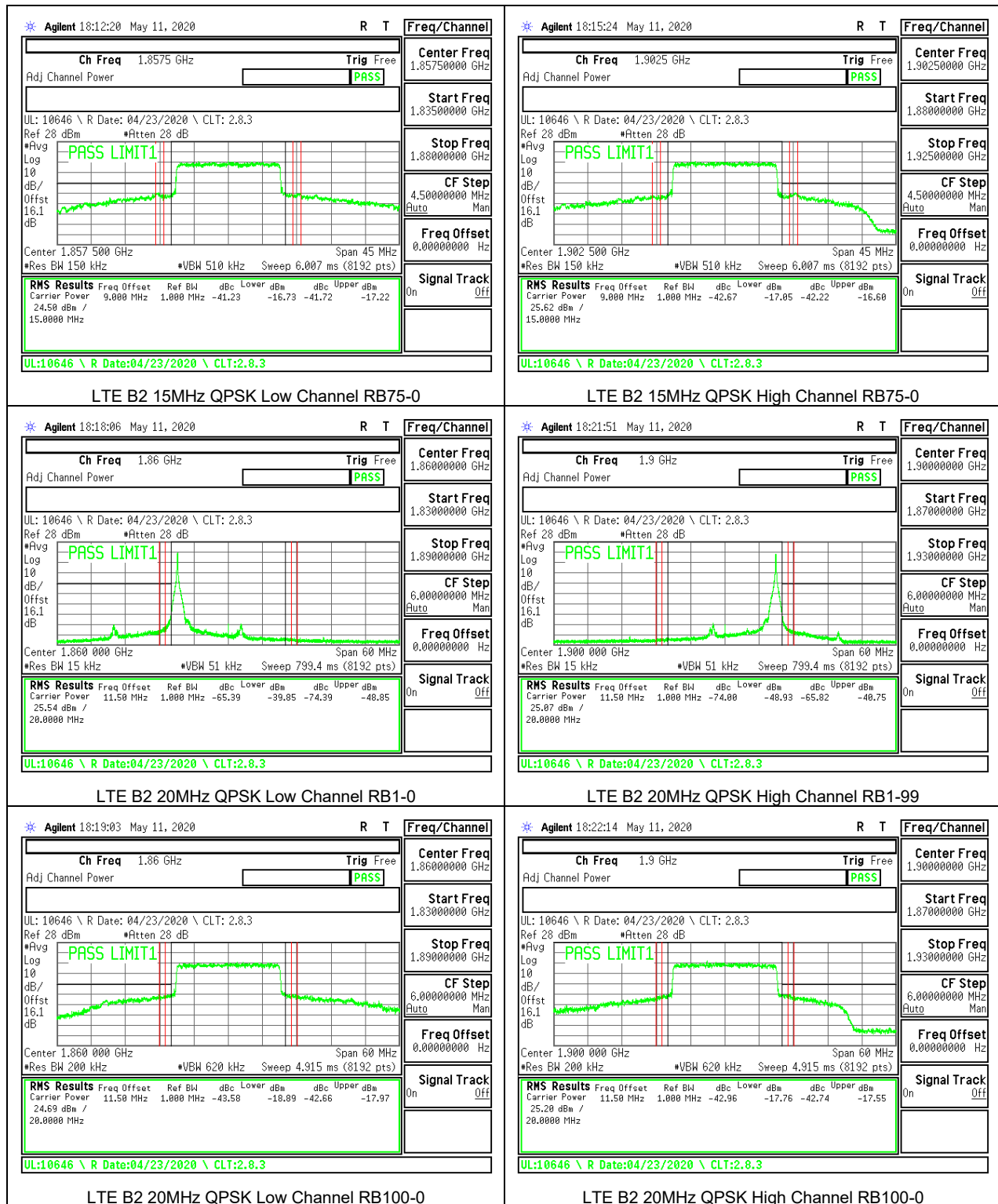
FCC: §24.238

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.









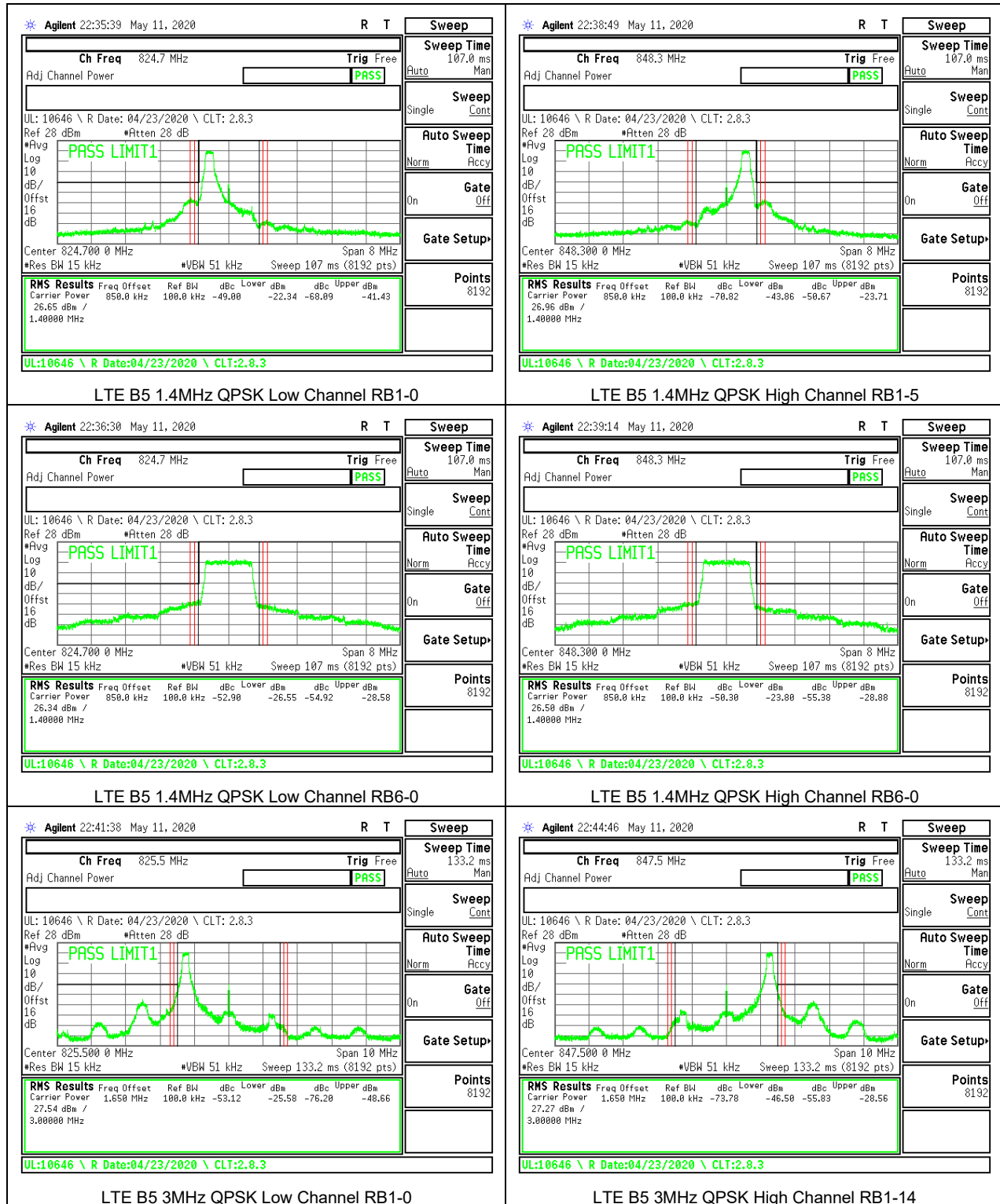
8.2.2. LTE BAND 5 AND 5G NR BAND n5 BANDEDGE

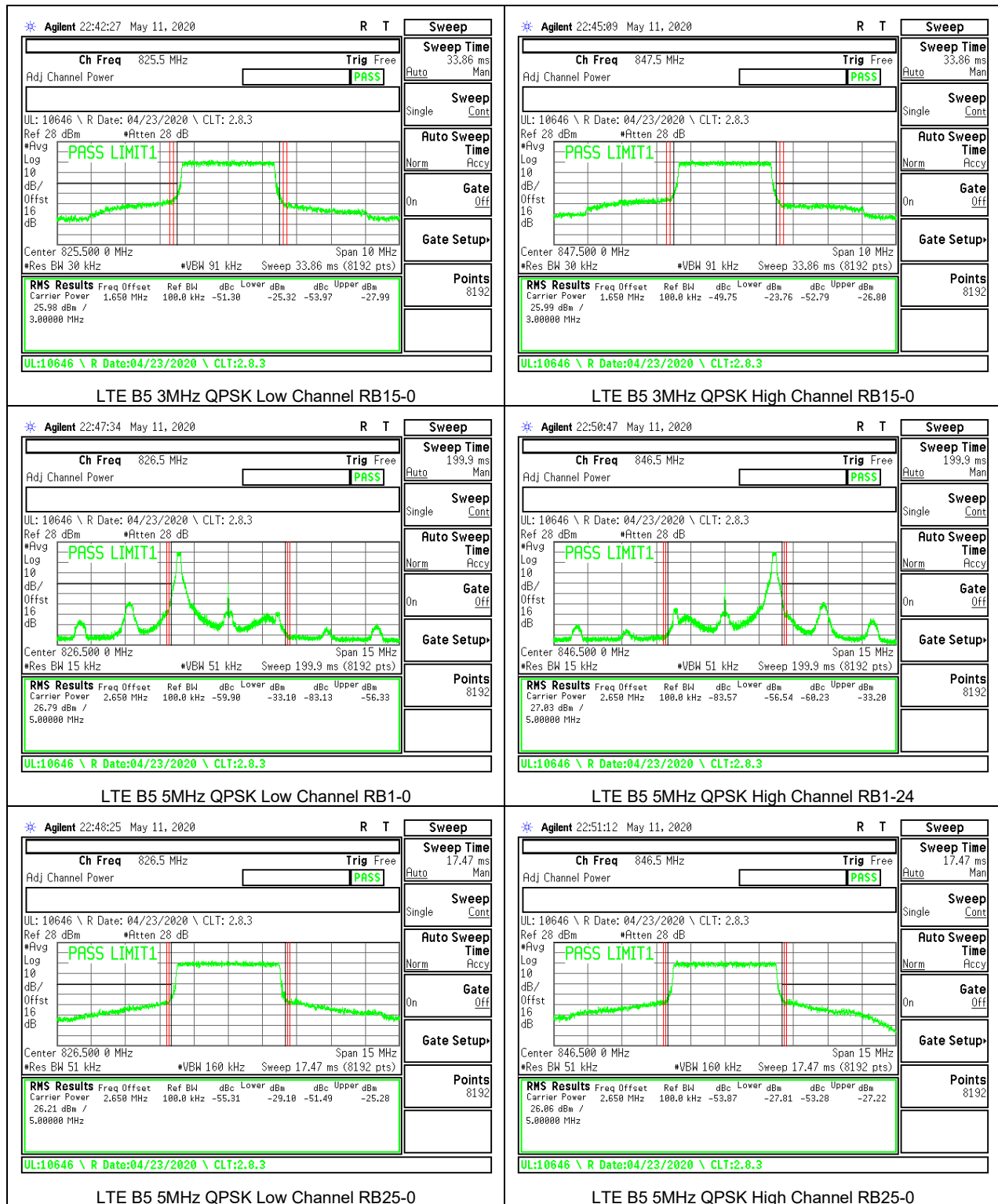
LIMITS

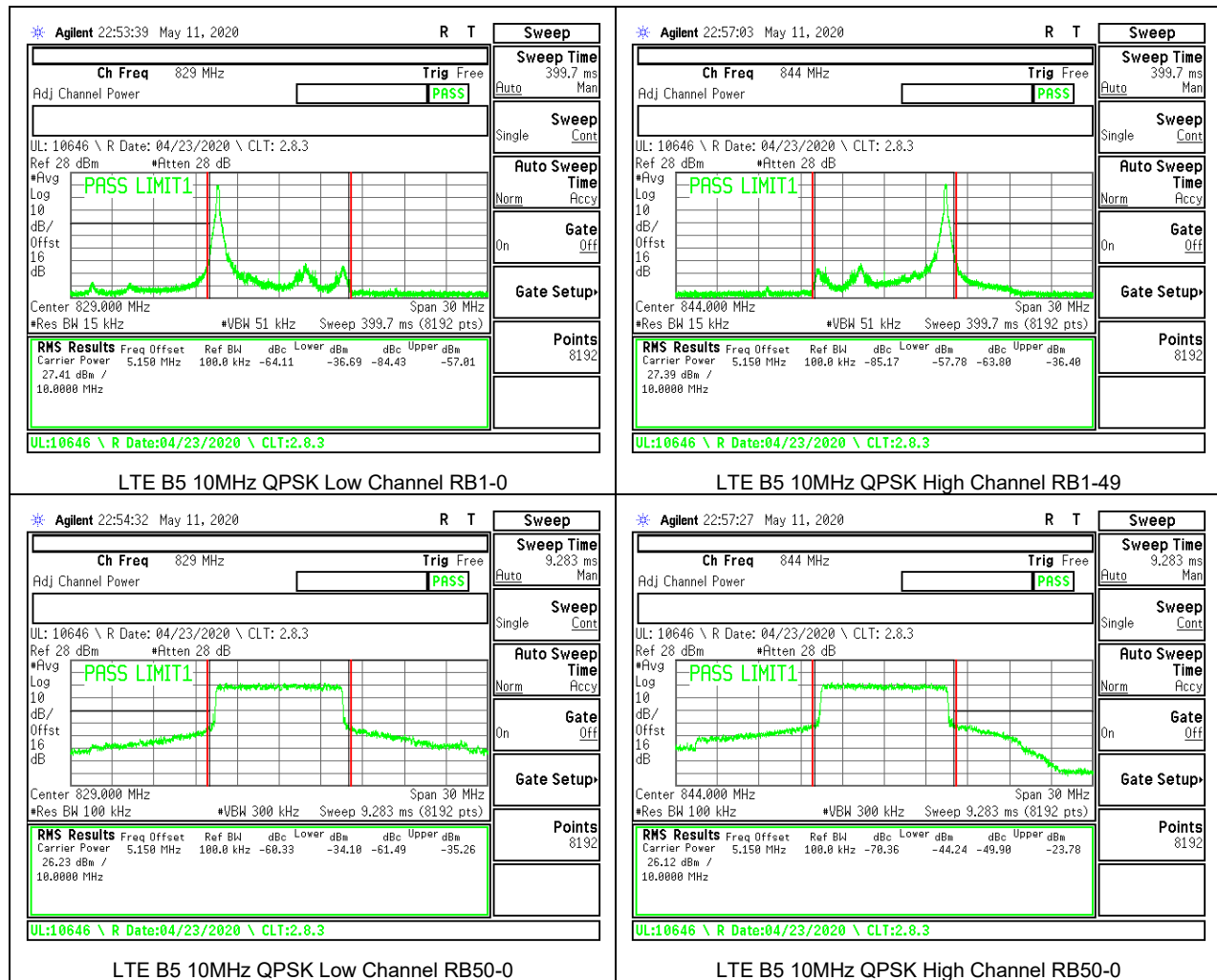
FCC: §22.917

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.

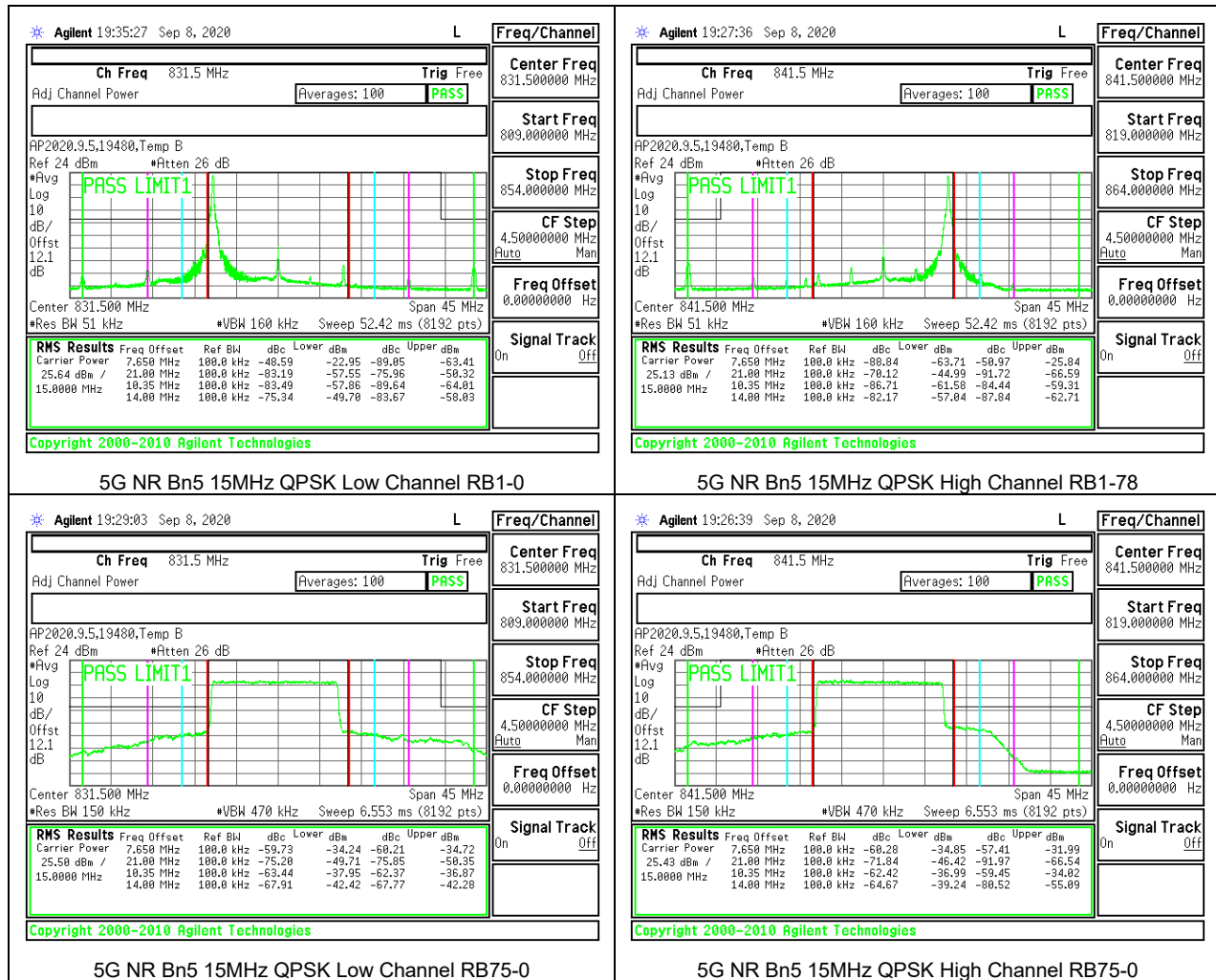
LTE BAND 5 BANDEGE

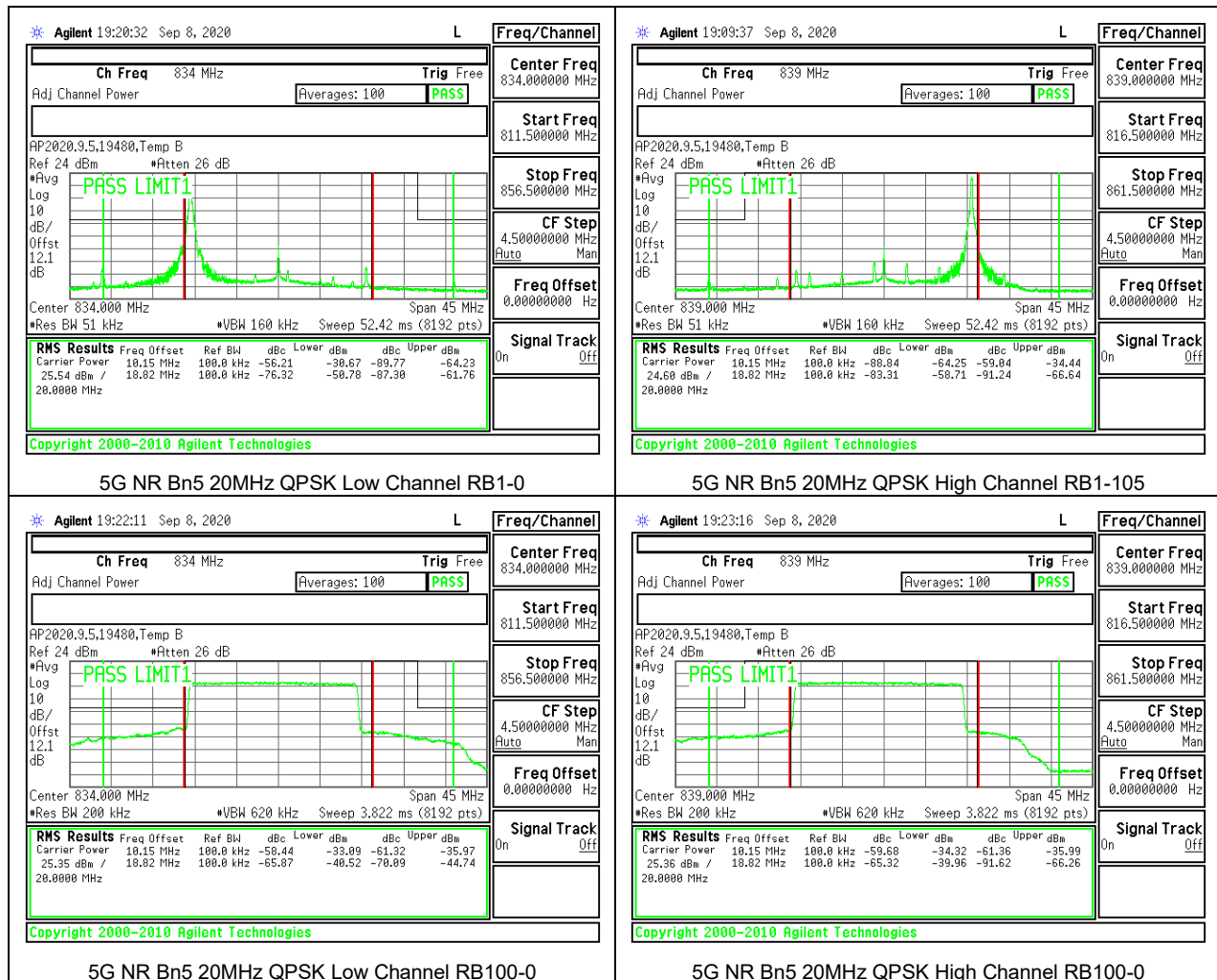






5G NR BAND n5 BANDEDGE





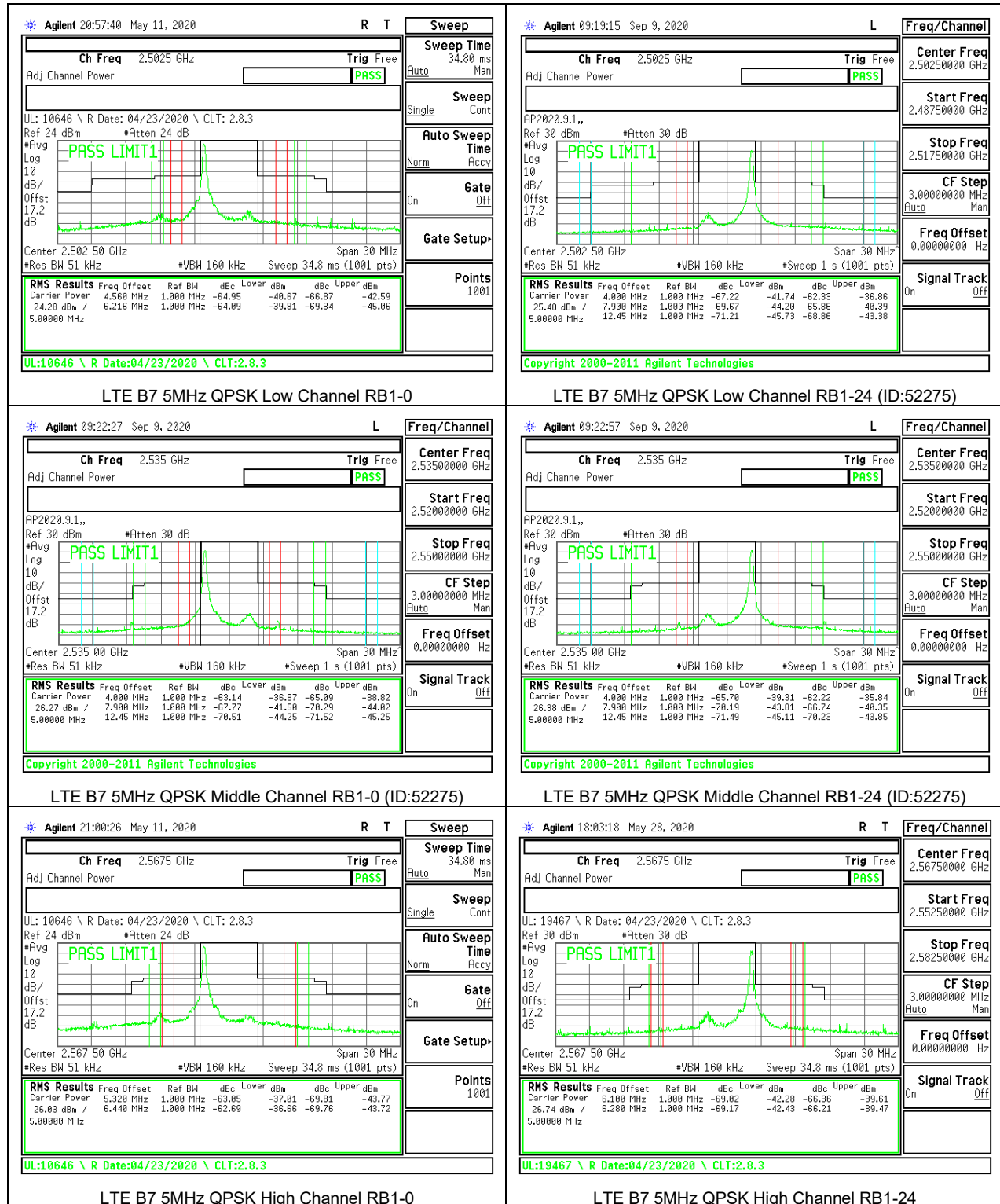
8.2.3. LTE BAND 7 ADJACENT CHANNEL POWER

LIMITS

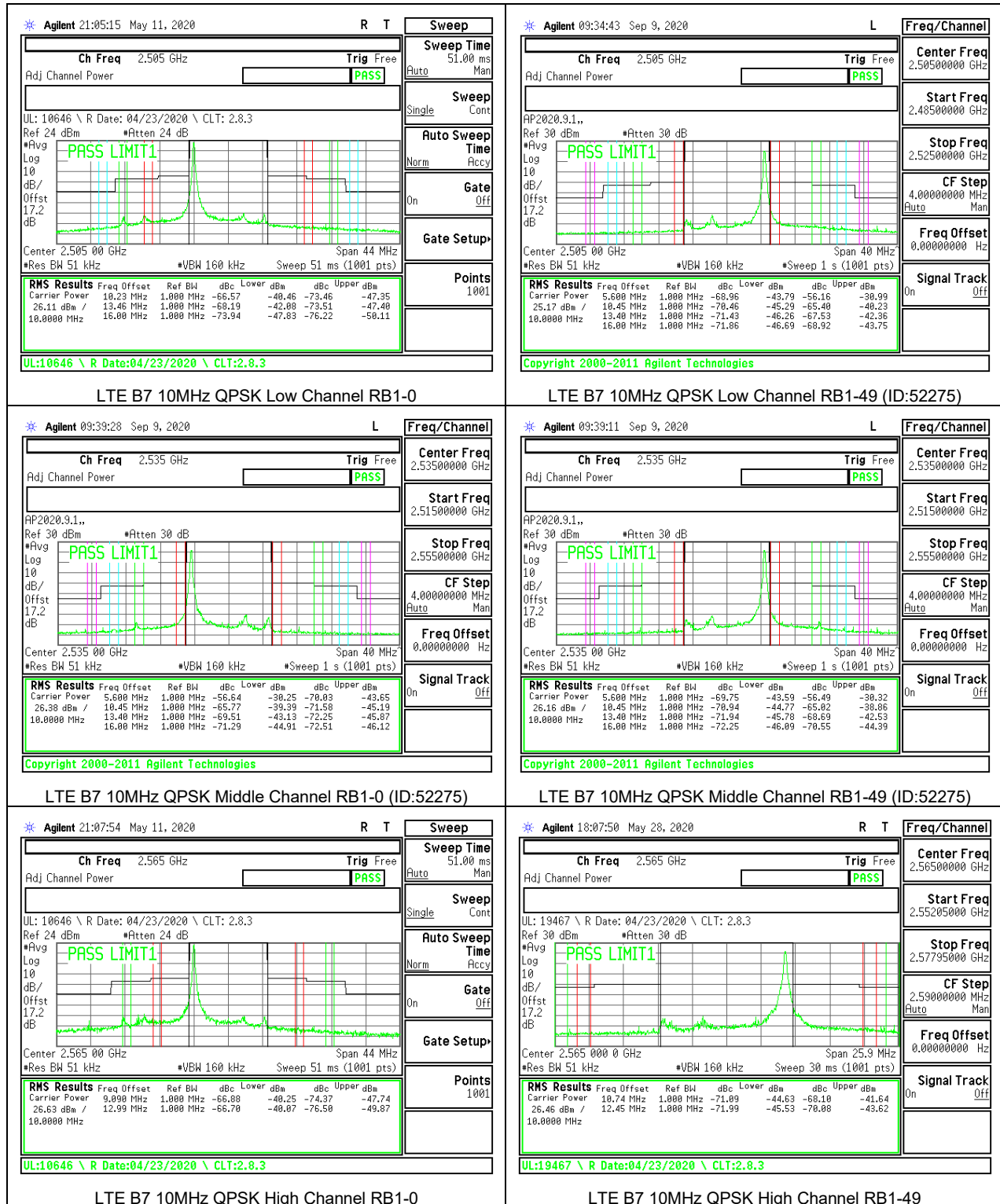
FCC: §27.53

(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.

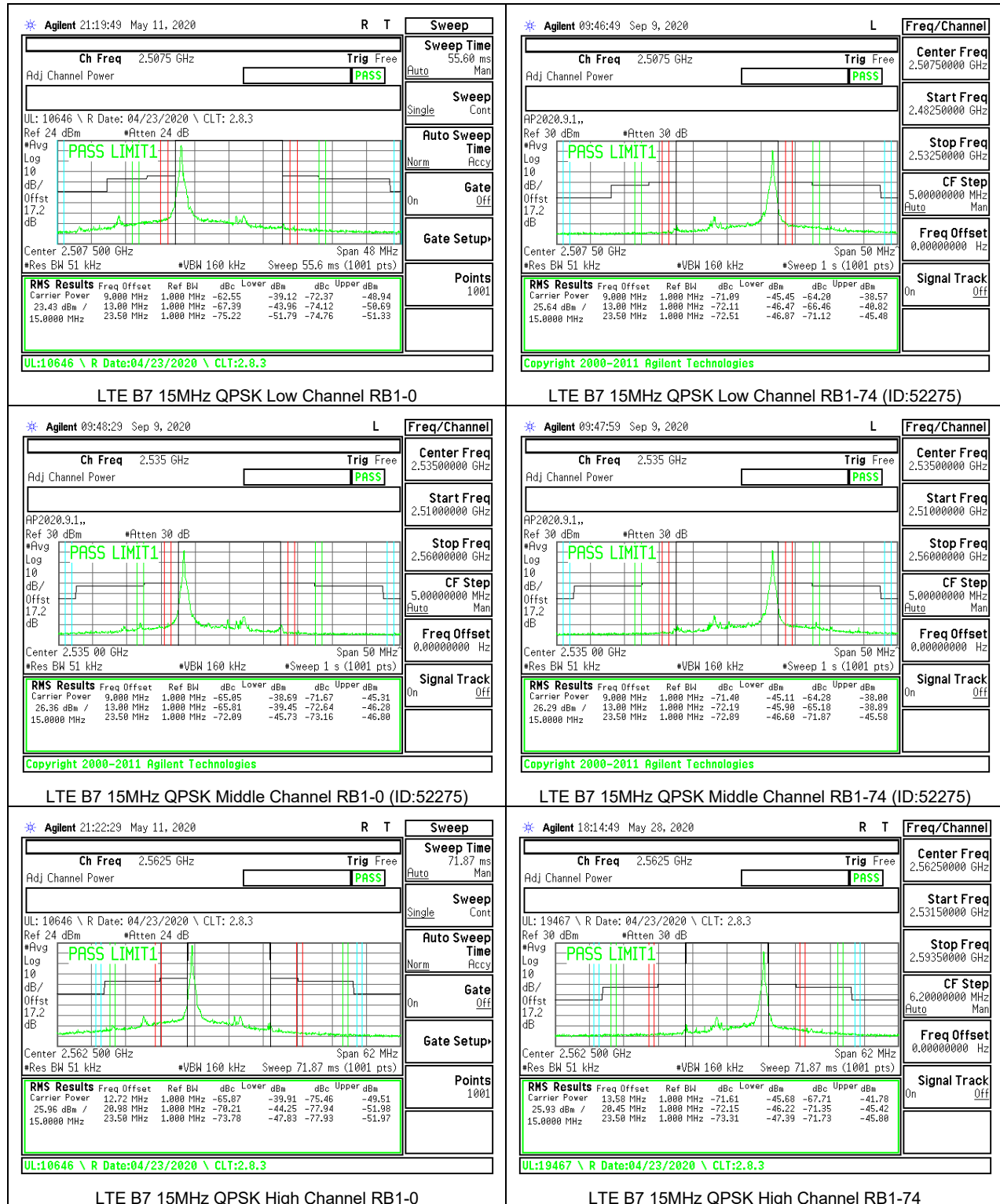
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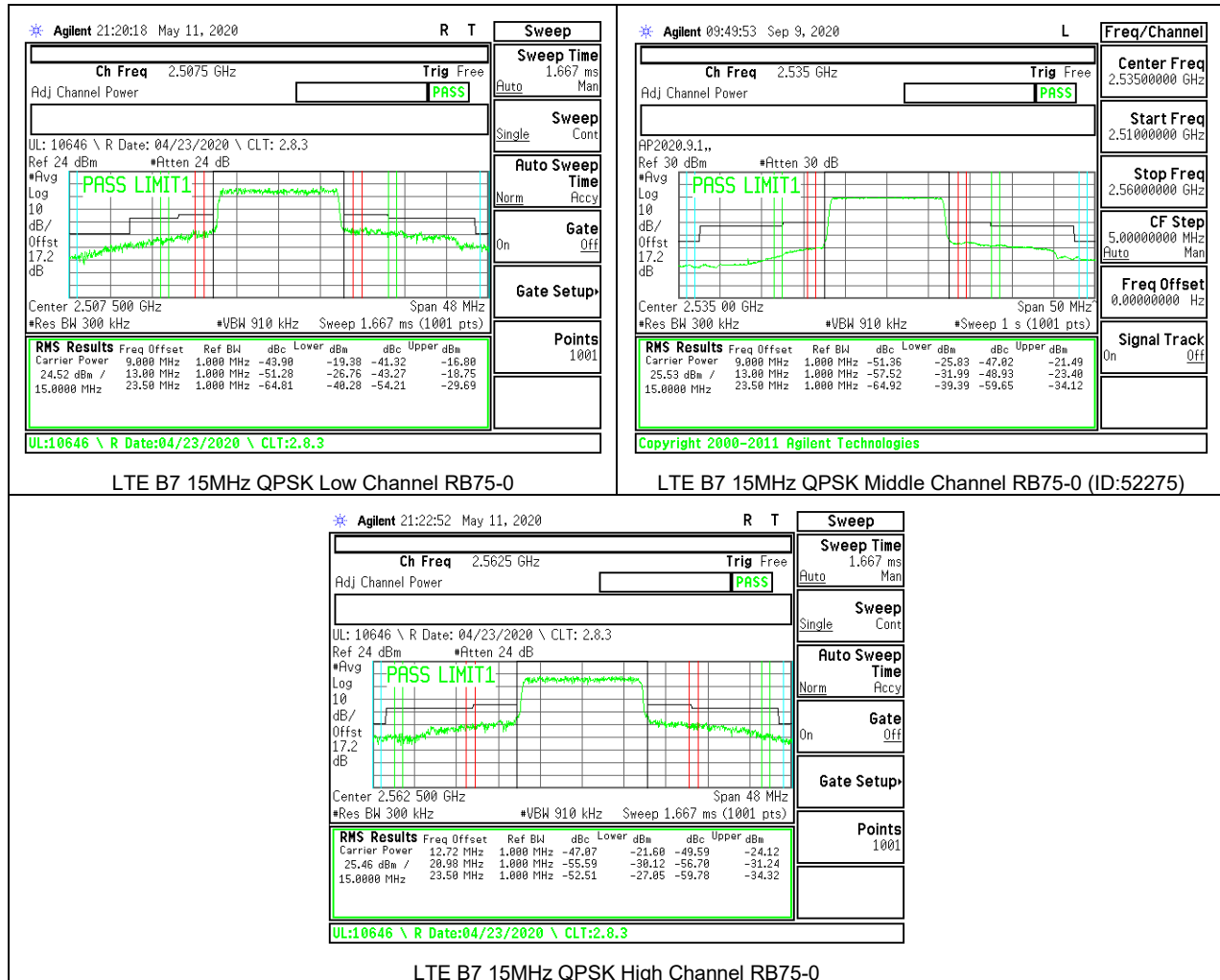


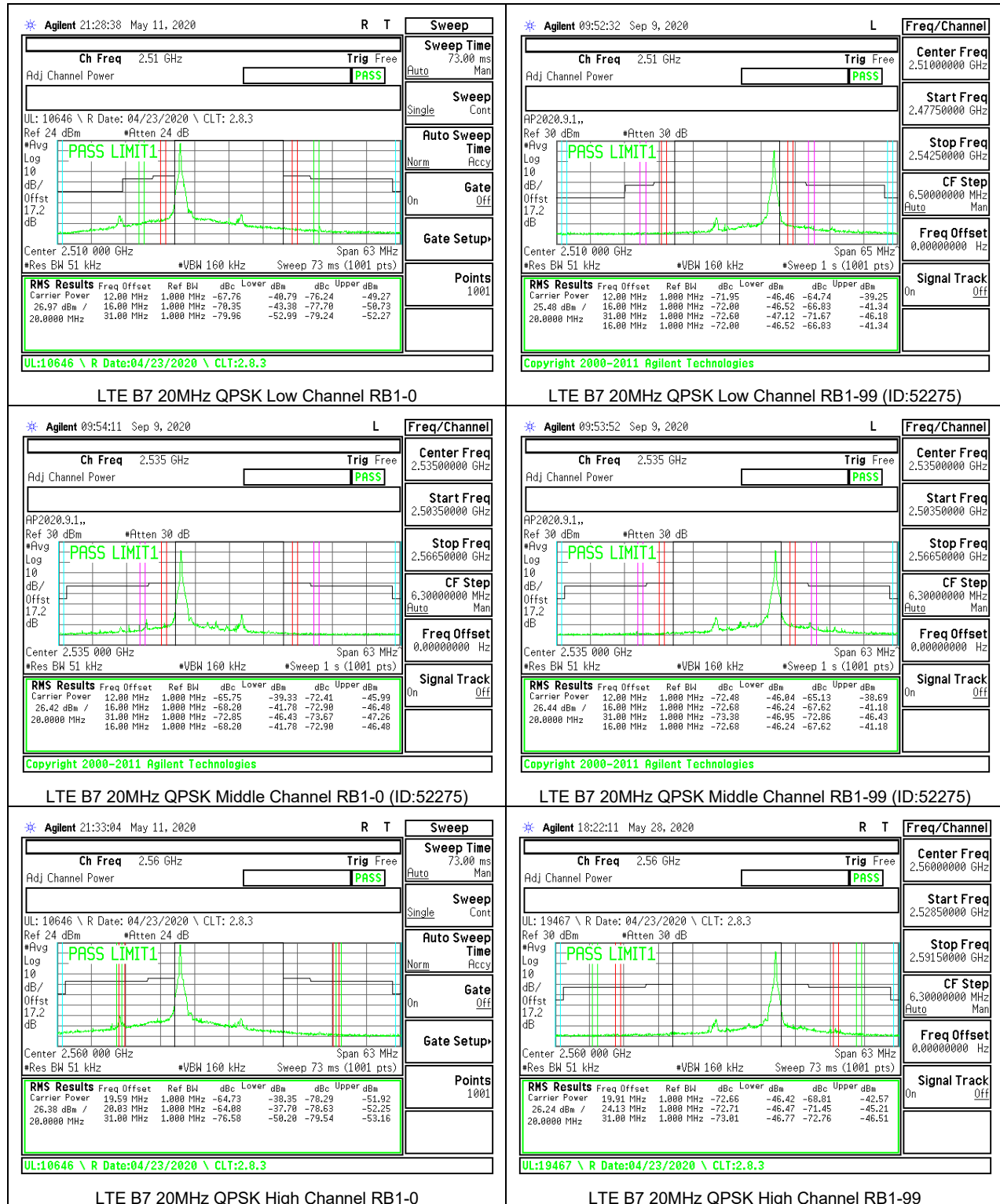














8.2.4. LTE BAND 12 AND 5G NR BAND n12 ADJACENT CHANNEL POWER

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

