TEST REPORT

Report Number. : 13171736-E8V3

Applicant	:	APPLE, INC 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	:	A2402
FCC ID	:	BCG-E3543A
EUT Description	:	SMARTPHONE
Test Standard(s)	:	FCC CFR47 PART 22H, 24E, 27, 90S, 90R, AND 96

Date Of Issue:
SEPTEMBER 29, 2020

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
Fremont, CA 94538, U.S.A.
TEL: (510) 319-4000
FAX: (510) 661-0888

NVLAP TESTING

NVLAP Lab code: 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	9/14/2020	Initial Review	Mengistu Mekuria
V2	9/15/2020	Address TCB Questions	John Thompson
V3	9/18/2020	5G NR band description	John Thompson
V4	9/29/2020	Updated Antenna gains, Updated spotcheck table to match Parent report for V4, Updated Section 5.8.	John Thompson

TABLE OF CONTENTS

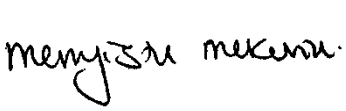
1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	APPLE, INC 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	A2402
FCC ID	BCG-E3543A
EUT Description	SMARTPHONE
Serial Number	MODEL (A2102): C070287008PP5595 (Conducted) and G6TD200504HT (Radiated)
Date Tested	APRIL 21, 2020 to SEPTEMBER 29, 2020
Applicable Standards	FCC CFR47 22H, 24E, 27, 90S, 90R, AND 96
Test Results	COMPLIES

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released By:	Reviewed By:	Prepared By:
		
Mengistu Mekuria Lead Test Engineer UL Verification Services Inc.	Glenn Escano Project Engineer UL Verification Services Inc.	Sintia Andrean Laboratory Engineer UL Verification Services Inc.

2. TEST METHODOLOGY

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

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

3. FACILITIES AND ACCREDITATION

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

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

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

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

4. DECISION RULES AND MEASUREMENT UNCERTAINTY

4.1. METROLOGICAL TRACEABILITY

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

4.2. DECISION RULES

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

4.3. MEASUREMENT UNCERTAINTY

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

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

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

4.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:
Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 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-E3542A to cover variant model BCG-E3543A. 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 A2172 and A2402.

A2172 and A2402 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.

Spot check verification and additional full radiated spurious emission test on ANT2 have been done on model A2402 in accordance with the test plan approved via KDB inquiry. Comparison of the models, upper deviation is within 3dB range and all tests are under FCC/ISED Technical Limits. The results documented for model A2172 may be applied as representative to model A2402.

5.4. SPOT CHECK VERIFICATION RESULTS SUMMARY

A2402 SPOT CHECK RESULTS								
Technology	Worst Mode	Test Item	Channel	Measured Frequency MHz	Original Model: A2172 FCC ID: BCG-E3542A	Sub Model: A2402 FCC ID: BCG-E3543A	Delta (dB)	Remarks
LTE	QPSK @ 20 MHz BW	EIRP	Low	1860	26 dBm	26 dBm	0	
BAND 2	QPSK @ highest BW	RSE	Low	7092.05	-45.16 dBm	-45.87 dBm	-0.71	Noise Floor Level
LTE	QPSK @ 10 MHz BW	ERP	High	844	18.35 dBm	18.35 dBm	0	
BAND 5	QPSK @ highest BW	RSE	Mid	1668.51	-42.64 dBm	-58.17 dBm	-15.53	Noise Floor Level
5G NR	QPSK @ 20 MHz BW	ERP	Mid	836.5	18.15 dBm	18.15 dBm	0	
BAND N5	QPSK @ highest BW	RSE	High	2516.73	-45.74 dBm	-51.26 dBm	-5.52	Noise Floor Level
LTE	QPSK @ 20 MHz BW	EIRP	Mid	2535	25.9 dBm	25.9 dBm	0	
BAND 7	QPSK @ highest BW	RSE	High	10297.32	-43.33 dBm	-40.52 dBm	2.81	Noise Floor Level
LTE	QPSK @ 10 MHz BW	ERP	High	711	18.55 dBm	18.35 dBm	-0.2	
BAND 12	QPSK @ highest BW	RSE	Mid	2829.43				
5G NR	QPSK @ 15 MHz BW	ERP	Mid	707.5	18.05 dBm	18.05 dBm	0	
BAND N12	QPSK @ highest BW	RSE	Low	2818				
LTE	QPSK @ 10 MHz BW	ERP	Mid	782	18.05 dBm	17.65 dBm	-0.4	
BAND 13	QPSK @ highest BW	RSE	Mid	1563.95				
LTE	QPSK @ 10 MHz BW	ERP	Mid	793	17.95 dBm	17.75 dBm	-0.2	
BAND 14	QPSK @ highest BW	RSE	Mid	1587.34				
LTE	QPSK @ 10 MHz BW	ERP	High	711	18.55 dBm	17.95 dBm	-0.6	
BAND 17	QPSK @ highest BW	RSE	Mid	2840.43				
LTE	QPSK @ 20 MHz BW	EIRP	Mid	1882.5	26 dBm	26 dBm	0	
BAND 25	QPSK @ highest BW	RSE	Low	7428				
LTE	QPSK @10 MHz BW	ERP	Mid	819	18.35 dBm	18.35 dBm	0	
BAND 26 (90S)	QPSK @ highest BW	RSE	Mid	3274.57				
LTE	QPSK @ 10 MHz BW	EIRP	Mid	2310	23.5 dBm	22.6 dBm	-0.9	
BAND 30 (NS1)	QPSK @ highest BW	RSE	Mid	9246.62				
LTE	QPSK @ 20 MHz BW	EIRP	Low	2506	26.9 dBm	26.9 dBm	0	
BAND 41	QPSK @ highest BW	RSE	High	10709.39				
5G NR	QPSK @ 100 MHz BW	EIRP	High	2640	27.6 dBm	26.1 dBm	-1.5	
BAND N41	QPSK @ highest BW	RSE	Low	10363.82				
LTE	QPSK @ 20 MHz BW	EIRP	Low	3560	22.7 dBm	21.9 dBm	-0.8	
BAND 48	QPSK @ highest BW	RSE	Mid	14498.91				
LTE	QPSK @ 20 MHz BW	EIRP	Mid	1745	23.8 dBm	23.5 dBm	-0.3	
BAND 66	QPSK @ highest BW	RSE	Mid	6986.58				
LTE	QPSK @ 20MHz BW	ERP	Low	673	17.65 dBm	17.15 dBm	-0.5	
BAND 71	QPSK @ highest BW	RSE	Low	2021.01				
5G NR	QPSK @ 100 MHz BW	EIRP	Low	3750	26.6 dBm	26.6 dBm	0	
BAND N77	QPSK @ highest BW	RSE	High	15723.61				

5.5. REFERENCE DETAIL

Reference application that contains the reused reference data.

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

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 71, 5G NR Band n71, 663 – 698 MHz	-5.9	-5.5	NA	NA	NA	NA	NA
LTE Band 12, 5G NR Band n12, 699 – 716 MHz	-5.0	-6.0	NA	NA	NA	NA	NA
LTE Band 17, 704 – 716 MHz	-5.0	-6.0	NA	NA	NA	NA	NA
LTE Band 13, 777 – 787 MHz	-5.5	-5.0	NA	NA	NA	NA	NA
LTE Band 14, 788 – 798 MHz	-5.6	-5.1	NA	NA	NA	NA	NA
LTE Band 26, 814 – 824 MHz (Part 90S)	-5.2	-5.8	NA	NA	NA	NA	NA
LTE Band 5, 5G NR Band n5, 824 – 849 MHz	-5.2	-5.6	NA	NA	NA	NA	NA
LTE Band 66, 5G NR Band n66, 1710 – 1780 MHz	-1.9	-2.0	-1.5	-3.0	NA	NA	NA
LTE Band 2, 5G NR Band n2, 1850 – 1910 MHz	-2.2	-3.9	1.0	-1.8	NA	NA	NA
LTE Band 25, 5G NR Band n25, 1850 – 1915 MHz	-2.2	-3.9	1.0	-1.8	NA	NA	NA
LTE Band 30, 2305 – 2315 MHz	-3.3	-2.1	-1.2	-2.3	NA	NA	NA
LTE Band 7, 2500 – 2570 MHz	-2.9	-0.4	0.9	-3.0	NA	NA	NA
LTE Band 41, 5G NR Band n41, 2496 – 2690 MHz	-2.5	-0.4	0.9	-2.8	NA	NA	NA
5G NR Band n77, 3300 – 3980 MHz	NA	NA	NA	-2.2	-0.1	-3.2	-2.9
LTE Band 48, 3550 – 3700 MHz	NA	NA	NA	-0.5	-0.1	-5.3	-0.9

5.8. 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 14, Band 17, Band 25, Band 26, Band 30, Band 41, Band 48, Band 66, Band 71, 5G NR Band n2, 5G NR Band n5, 5G NR Band n12, 5G NR Band n25, 5G NR Band n41, 5G NR Band n66, 5G NR Band n71 and 5G NR Band n77.

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

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

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

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

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

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

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

For 5G NR Band n41 20MHz BW, antenna 2 and antenna 4 powers are higher than LTE band 41. Therefore, additional power measurements and occupied bandwidth tests were performed on antenna 2 and antenna 4 for 20MHz BW. Since LTE antenna 1 the highest outpout 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 exabit the worst case orientation for different frequency bands. The full tests of the EUT have made upon the orientations that shown in the table below.

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

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

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

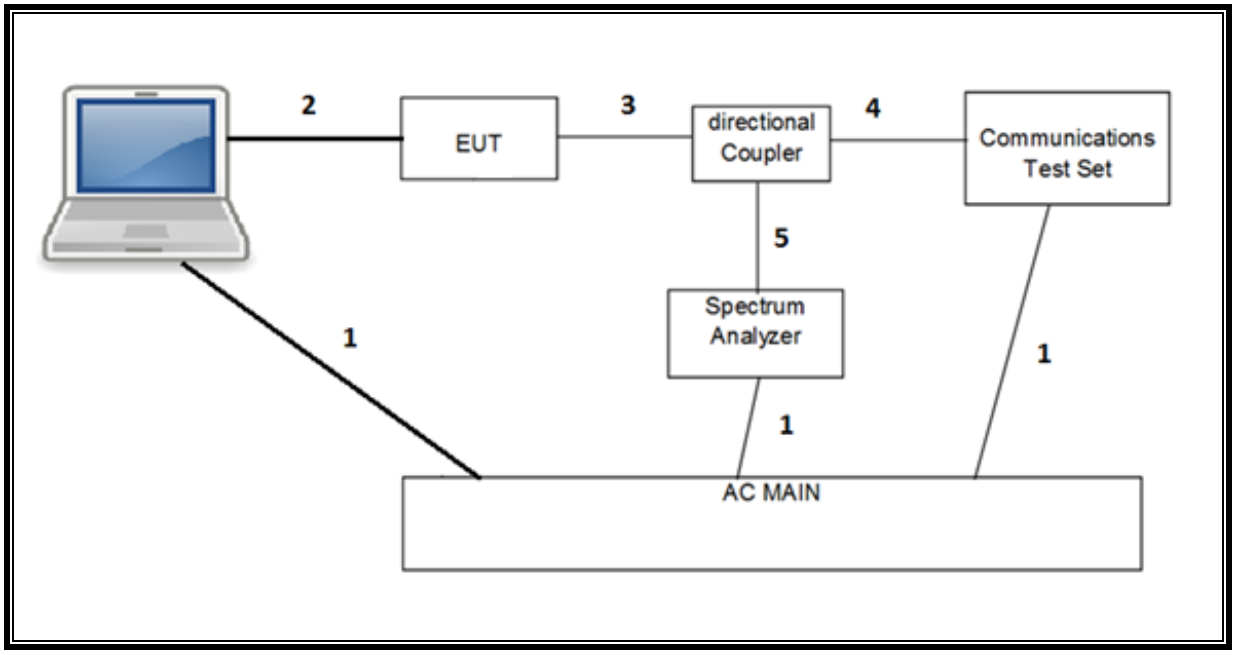
5.9. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID/ DoC**
Laptop AC/DC adapter	Apple	85W MagSafe 2	C0651730MMMG6P4AL	
Laptop	Apple	Macbook Pro	C02PM012G3QD	
Laptop	Apple	Macbook Pro	C02P52HGG085	

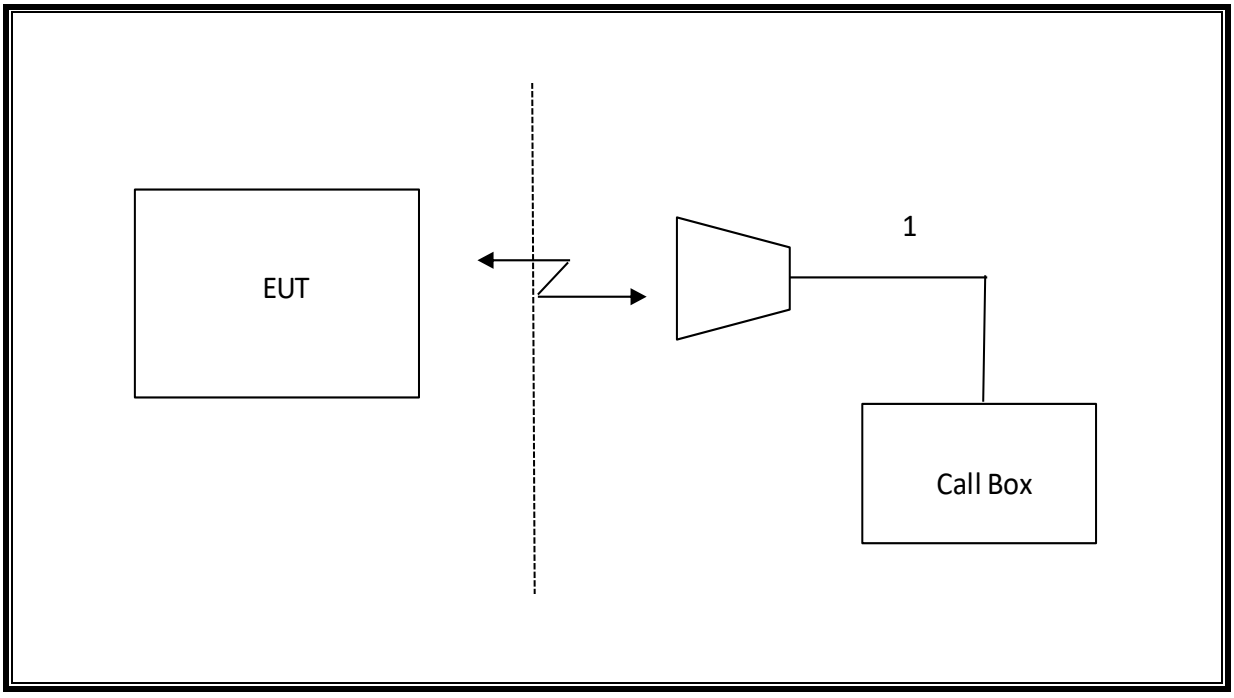
I/O CABLES (RF CONDUCTED TEST)						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	AC	3	US 115V	Un-shielded	2.0	N/A
2	USB	1	DC	Un-shielded	1.0	N/A
3	RF In/Out	1	EUT	Shielded	0.6	N/A
4	RF In/Out	1	Communication Test Set	Shielded	1.2	N/A
5	RF In/Out	1	Barrel	N/A	N/A	N/A

I/O CABLES (RF RADIATED TEST)						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	RF In/Out	1	Antenna	Shielded	5.0	N/A

CONDUCTED SETUP



RADIATED SETUP



6. TEST AND MEASUREMENT EQUIPMENT

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

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

NOTES:

* Testing is completed before equipment expiration date.

7. RADIATED TEST RESULTS

7.1. FIELD STRENGTH OF SPURIOUS RADIATION, ABOVE 1GHz, ANT2

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r01

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

RESULTS

7.1.1. LTE BAND 2

LIMITS

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

QPSK LTE BAND 2 (20.0MHZ BANDWIDTH)

Project #:	13171736
Date:	5/18/2020
Test Engineer:	30606
Configuration:	EUT only
Mode	LTE2 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.73825	39.82	Pk	30.5	-27.8	-95.2	-52.68	-13	-39.68	H
3.74672	39.45	Pk	30.6	-27.7	-95.2	-52.85	-13	-39.85	V
5.62699	37.85	Pk	33.2	-26	-95.2	-50.15	-13	-37.15	H
5.62965	37.89	Pk	33.2	-26.1	-95.2	-50.21	-13	-37.21	V
7.52226	36.01	Pk	36.7	-23.9	-95.2	-46.39	-13	-33.39	V
7.53949	36.43	Pk	36.8	-23.9	-95.2	-45.87	-13	-32.87	H
Mid Channel, 1880MHz									
3.77332	39.21	Pk	30.7	-27.8	-95.2	-53.09	-13	-40.09	H
3.78016	39.65	Pk	30.8	-27.8	-95.2	-52.55	-13	-39.55	V
5.63442	38.29	Pk	33.1	-26	-95.2	-49.81	-13	-36.81	H
5.67592	36.94	Pk	33	-25.7	-95.2	-50.96	-13	-37.96	V
7.50432	36.56	Pk	36.7	-23.9	-95.2	-45.84	-13	-32.84	V
7.5081	36.37	Pk	36.8	-23.9	-95.2	-45.93	-13	-32.93	H
High Channel, 1900MHz									
3.77691	39.77	Pk	30.7	-27.8	-95.2	-52.53	-13	-39.53	V
3.78476	39.76	Pk	30.8	-27.8	-95.2	-52.44	-13	-39.44	H
5.67276	36.88	Pk	33	-25.7	-95.2	-51.02	-13	-38.02	V
5.71393	39.5	Pk	33	-25.4	-95.2	-48.1	-13	-35.1	H
7.60862	36.63	Pk	37	-23.7	-95.2	-45.27	-13	-32.27	V
7.61466	36.37	Pk	36.9	-23.6	-95.2	-45.53	-13	-32.53	H

7.1.2. LTE BAND 5 AND 5G NR BAND n5

LIMITS

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

QPSK LTE BAND 5 (10.0MHZ BANDWIDTH)

Project #:	13171736
Date:	7/29/2020
Test Engineer:	19140
Configuration:	EUT only
Mode	LTE5 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 829MHz									
1.65722	41.44	Pk	25	-30.5	-95.2	-58.46	-13	-45.46	V
1.65923	40.35	Pk	25	-30.4	-95.2	-59.45	-13	-46.45	H
2.48663	40.22	Pk	29	-29.2	-95.2	-54.68	-13	-41.68	V
2.48914	39.62	Pk	29	-29.2	-95.2	-55.18	-13	-42.18	H
3.3155	39.58	Pk	31.1	-28	-95.2	-51.92	-13	-38.92	V
3.31571	39.31	Pk	31.1	-28	-95.2	-52.19	-13	-39.19	H
Mid Channel, 836.5MHz									
1.67288	41.03	Pk	25	-30.4	-95.2	-58.87	-13	-45.87	V
1.67509	41.73	Pk	25	-30.4	-95.2	-58.17	-13	-45.17	H
2.50809	40.54	Pk	29.1	-29.3	-95.2	-54.16	-13	-41.16	V
2.50813	40.47	Pk	29.1	-29.3	-95.2	-54.23	-13	-41.23	H
3.34395	38.06	Pk	31	-28.2	-95.2	-53.74	-13	-40.74	V
3.34745	38.29	Pk	31	-28.2	-95.2	-53.51	-13	-40.51	H
High Channel, 844MHz									
1.68737	41.05	Pk	25	-30.4	-95.2	-58.85	-13	-45.85	V
1.68794	40.92	Pk	25	-30.4	-95.2	-58.98	-13	-45.98	H
2.53183	38.51	Pk	29.2	-29.3	-95.2	-55.99	-13	-42.99	V
2.53198	38.85	Pk	29.2	-29.3	-95.2	-55.65	-13	-42.65	H
3.37505	39.34	Pk	30.8	-28	-95.2	-52.46	-13	-39.46	V
3.37576	39.05	Pk	30.8	-28	-95.2	-52.75	-13	-39.75	H

QPSK 5G NR BAND n5 (20.0MHZ BANDWIDTH)

Project #:	13171736
Date:	7/30/2020
Test Engineer:	19169
Configuration:	EUT only
Mode	5G NR n5 QPSK 20MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 834MHz									
1.65819	40.67	Pk	29	-32.3	-95.2	-57.03	-13	-44.03	H
1.66393	41.43	Pk	29	-32.2	-95.2	-56.17	-13	-43.17	V
2.49905	41.35	Pk	33.5	-31.4	-95.2	-51.15	-13	-38.15	V
2.50347	40.51	Pk	33.5	-31.3	-95.2	-51.79	-13	-38.79	H
3.32883	39.61	Pk	33	-30.2	-95.2	-52.19	-13	-39.19	H
3.33058	40.09	Pk	33	-30.2	-95.2	-51.81	-13	-38.81	V
Mid Channel, 836.5MHz									
1.67993	41.98	Pk	28.9	-32.2	-95.2	-55.82	-13	-42.82	H
1.68904	42.11	Pk	29.1	-32.2	-95.2	-55.49	-13	-42.49	V
2.50457	41.11	Pk	33.5	-31.4	-95.2	-51.29	-13	-38.29	H
2.51142	40.99	Pk	33.5	-31.4	-95.2	-51.41	-13	-38.41	V
3.35412	39.7	Pk	33	-30.1	-95.2	-52	-13	-39	H
3.36264	39.39	Pk	33	-30.1	-95.2	-52.31	-13	-39.31	V
High Channel, 839MHz									
1.67683	41.82	Pk	28.9	-32.2	-95.2	-55.98	-13	-42.98	V
1.67965	42.06	Pk	28.9	-32.2	-95.2	-55.74	-13	-42.74	H
2.51691	40.87	Pk	33.5	-31.4	-95.2	-51.53	-13	-38.53	V
2.51746	41.04	Pk	33.5	-31.3	-95.2	-51.26	-13	-38.26	H
3.35412	41.08	Pk	33	-30.1	-95.2	-50.62	-13	-37.62	V
3.35413	40.31	Pk	33	-30.1	-95.2	-51.39	-13	-38.39	H

7.1.3. LTE BAND 7

LIMITS

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

QPSK LTE BAND 7 (20.0MHZ BANDWIDTH)

Project #:	13171736
Date:	5/18/2020
Test Engineer:	50820
Configuration:	EUT only
Mode	LTE7 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2510MHz									
5.02141	38.29	Pk	33.7	-25.9	-95.2	-49.11	-25	-24.11	H
5.02225	37.59	Pk	33.7	-25.9	-95.2	-49.81	-25	-24.81	V
7.52852	35.91	Pk	36.9	-23.9	-95.2	-46.29	-25	-21.29	V
7.53135	35.36	Pk	36.9	-23.8	-95.2	-46.74	-25	-21.74	H
10.04015	33.98	Pk	38.4	-20	-95.2	-42.82	-25	-17.82	V
10.04036	34.68	Pk	38.4	-20	-95.2	-42.12	-25	-17.12	H
Mid Channel, 2535MHz									
5.07252	-69.6	Pk	33.8	-26.1	8.4	-53.5	-25	-28.5	236
5.07274	-69.64	Pk	33.8	-26.1	8.5	-53.44	-25	-28.44	61
7.60551	-71.05	Pk	37	-23.7	7.7	-50.05	-25	-25.05	130
7.60638	-71.59	Pk	37	-23.7	7.5	-50.79	-25	-25.79	184
10.13975	-72.76	Pk	38.4	-19.9	6.4	-47.86	-25	-22.86	97
10.14199	-72.87	Pk	38.4	-20	6.5	-47.97	-25	-22.97	351
High Channel, 2560MHz									
5.12	37.56	Pk	33.9	-26.4	-95.2	-50.14	-25	-25.14	H
5.12083	37.47	Pk	33.9	-26.4	-95.2	-50.23	-25	-25.23	V
7.67892	35.33	Pk	37	-23.3	-95.2	-46.17	-25	-21.17	H
7.67968	35.13	Pk	37	-23.3	-95.2	-46.37	-25	-21.37	V
10.24059	35.12	Pk	38.8	-19.4	-95.2	-40.68	-25	-15.68	V
10.24267	34.28	Pk	38.8	-19.4	-95.2	-41.52	-25	-16.52	H

7.1.4. LTE BAND 12 AND 5G NR BAND n12

LIMITS

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

QPSK LTE BAND 12 (10.0MHZ BANDWIDTH)

Project #:	13171736
Date:	5/22/2020
Test Engineer:	29435
Configuration:	EUT only
Mode	LTE12 QPSK 10MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 704MHz									
1.40792	40.72	Pk	25.4	-30.8	-95.2	-59.88	-13	-46.88	V
1.40999	40.87	Pk	25.4	-30.8	-95.2	-59.73	-13	-46.73	H
2.11202	39.35	Pk	26.9	-29.5	-95.2	-58.45	-13	-45.45	V
2.1127	39.66	Pk	26.9	-29.5	-95.2	-58.14	-13	-45.14	H
2.81491	37.96	Pk	28.8	-28.7	-95.2	-57.14	-13	-44.14	V
2.81563	38.13	Pk	28.8	-28.7	-95.2	-56.97	-13	-43.97	H
Mid Channel, 707.5MHz									
1.41363	40.22	Pk	25.4	-30.7	-95.2	-60.28	-13	-47.28	H
1.41519	41.02	Pk	25.3	-30.7	-95.2	-59.58	-13	-46.58	H
1.41661	41.43	Pk	25.3	-30.7	-95.2	-59.17	-13	-46.17	V
2.12223	38.58	Pk	26.9	-29.6	-95.2	-59.32	-13	-46.32	V
2.82923	37.92	Pk	28.8	-28.7	-95.2	-57.18	-13	-44.18	V
2.83121	38.89	Pk	28.8	-28.7	-95.2	-56.21	-13	-43.21	H
High Channel, 711MHz									
1.42192	-66.32	Pk	25.3	-30.7	8.8	-62.92	-13	-49.92	164
1.423	-66.38	Pk	25.3	-30.7	8.7	-63.08	-13	-50.08	201
2.13156	-67.93	Pk	26.9	-29.6	10.3	-60.33	-13	-47.33	176
2.13223	-68.01	Pk	26.9	-29.6	11.1	-59.61	-13	-46.61	153
2.84251	-68.08	Pk	28.8	-28.7	9.2	-58.78	-13	-45.78	187
2.84526	-68.28	Pk	28.9	-28.7	8.7	-59.38	-13	-46.38	187

QPSK 5G NR BAND n12 (15.0MHZ BANDWIDTH)

Project #:	13171736
Date:	7/20/2020
Test Engineer:	30606
Configuration:	EUT only
Mode	5G NR n12 QPSK 15MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 706.5MHz									
1.42067	41.8	Pk	29	-32.6	-95.2	-56.1	-13	-43.1	H
1.43191	41.49	Pk	29	-32.5	-95.2	-56.31	-13	-43.31	V
2.09945	40.76	Pk	31.9	-31.8	-95.2	-53.84	-13	-40.84	H
2.10932	40.7	Pk	31.7	-31.9	-95.2	-54.2	-13	-41.2	V
2.818	40.96	Pk	32.6	-30.7	-95.2	-51.74	-13	-38.74	H
2.82605	40.45	Pk	32.6	-30.6	-95.2	-52.05	-13	-39.05	V
Mid Channel, 707.5MHz									
1.4085	41.65	Pk	29.1	-32.7	-95.2	-56.25	-13	-43.25	H
1.41462	42.67	Pk	29.1	-32.7	-95.2	-55.23	-13	-42.23	V
2.12027	41.52	Pk	31.6	-31.7	-95.2	-53.28	-13	-40.28	H
2.1289	40.45	Pk	31.5	-31.5	-95.2	-54.25	-13	-41.25	V
2.83486	40.1	Pk	32.5	-30.6	-95.2	-52.5	-13	-39.5	H
2.83673	40.58	Pk	32.5	-30.6	-95.2	-52.02	-13	-39.02	V
High Channel, 708.5MHz									
1.4148	42.03	Pk	29.1	-32.7	-95.2	-55.87	-13	-42.87	H
1.41816	42.03	Pk	29.1	-32.6	-95.2	-55.77	-13	-42.77	V
2.11478	41.75	Pk	31.7	-31.8	-95.2	-53.05	-13	-40.05	H
2.11646	41.42	Pk	31.7	-31.8	-95.2	-53.38	-13	-40.38	V
2.83381	40.36	Pk	32.5	-30.6	-95.2	-52.24	-13	-39.24	H
2.83524	39.95	Pk	32.5	-30.6	-95.2	-52.65	-13	-39.65	V

7.1.5. LTE BAND 13

LIMITS

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

QPSK LTE BAND 13 (10.0MHZ BANDWIDTH)

Project #:	13171736
Date:	5/22/2020
Test Engineer:	19169
Configuration:	EUT only
Mode	LTE13 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 782MHz									
1.56286	40.04	Pk	24.9	-30.5	-95.2	-60.76	-40	-20.76	H
1.56463	40.36	Pk	24.9	-30.5	-95.2	-60.44	-40	-20.44	V
2.34537	39.15	Pk	28	-29.5	-95.2	-57.55	-13	-44.55	H
2.34538	39.45	Pk	28	-29.5	-95.2	-57.25	-13	-44.25	V
3.12927	38.87	Pk	30.7	-28.5	-95.2	-54.13	-13	-41.13	V
3.12961	39.39	Pk	30.7	-28.5	-95.2	-53.61	-13	-40.61	H

7.1.6. LTE BAND 14

LIMITS

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

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

QPSK LTE BAND 14 (10.0MHZ BANDWIDTH)

Project #:	13171736
Date:	6/16/2020
Test Engineer:	19410
Configuration:	EUT only
Mode	LTE14 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 793MHz									
1.58491	40.52	Pk	24.9	-30.5	-95.2	-60.28	-40	-20.28	H
1.58496	40.99	Pk	24.9	-30.5	-95.2	-59.81	-40	-10.81	V
2.37817	39.91	Pk	28.3	-29.5	-95.2	-56.49	-13	-43.49	V
2.38053	39.54	Pk	28.4	-29.5	-95.2	-56.76	-13	-43.76	H
3.17178	38.45	Pk	31	-28.5	-95.2	-54.25	-13	-41.25	V
3.17264	38.15	Pk	31.1	-28.5	-95.2	-54.45	-13	-41.45	H

7.1.7. LTE BAND 17

LIMITS

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

QPSK LTE BAND 17 (10.0MHZ BANDWIDTH)

Project #:	13171736
Date:	6/26/2020
Test Engineer:	50820
Configuration:	EUT only
Mode	LTE17 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 710MHz									
1.42023	40.17	Pk	25.3	-30.7	-95.2	-60.43	-13	-47.43	V
1.42132	40.02	Pk	25.3	-30.7	-95.2	-60.58	-13	-47.58	H
2.1294	39.06	Pk	26.9	-29.6	-95.2	-58.84	-13	-45.84	H
2.13196	39.64	Pk	26.9	-29.6	-95.2	-58.26	-13	-45.26	V
2.84074	37.94	Pk	28.8	-28.7	-95.2	-57.16	-13	-44.16	H
2.84153	38.72	Pk	28.8	-28.7	-95.2	-56.38	-13	-43.38	V

7.1.8. LTE BAND 25

LIMITS

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

QPSK LTE BAND 25 (20.0MHZ BANDWIDTH)

Project #:	13171736
Date:	5/18/2020
Test Engineer:	30606
Configuration:	EUT only
Mode	LTE25 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1860MHz									
3.69309	39.71	Pk	30.3	-27.6	-95.2	-52.79	-13	-39.79	V
3.73179	39.57	Pk	30.5	-27.8	-95.2	-52.93	-13	-39.93	H
5.55951	37.82	Pk	33.2	-26.1	-95.2	-50.28	-13	-37.28	V
5.57143	41.99	Pk	33.2	-26	-95.2	-46.01	-13	-33.01	H
7.46356	36.75	Pk	36.7	-23.8	-95.2	-45.55	-13	-32.55	V
7.46843	36.17	Pk	36.7	-23.8	-95.2	-46.13	-13	-33.13	H
Mid Channel, 1882.5MHz									
3.78711	39.55	Pk	30.8	-27.8	-95.2	-52.65	-13	-39.65	V
3.79153	39.97	Pk	30.8	-27.8	-95.2	-52.23	-13	-39.23	H
5.65161	38.74	Pk	33	-25.8	-95.2	-49.26	-13	-36.26	H
5.65464	38.44	Pk	33.1	-25.9	-95.2	-49.56	-13	-36.56	V
7.53553	36.78	Pk	36.9	-23.9	-95.2	-45.42	-13	-32.42	H
7.55651	36.75	Pk	36.8	-24	-95.2	-45.65	-13	-32.65	V
High Channel, 1905MHz									
3.8029	39.63	Pk	30.9	-27.8	-95.2	-52.47	-13	-39.47	H
3.8286	39.2	Pk	31.1	-27.8	-95.2	-52.7	-13	-39.7	V
5.70322	38.43	Pk	33.1	-25.4	-95.2	-49.07	-13	-36.07	H
5.72376	38.89	Pk	33	-25.4	-95.2	-48.71	-13	-35.71	V
7.60472	36.85	Pk	37	-23.7	-95.2	-45.05	-13	-32.05	H
7.61949	36.62	Pk	37	-23.6	-95.2	-45.18	-13	-32.18	V

7.1.9. LTE BAND 26 (PART 90S)

LIMITS

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

QPSK LTE BAND 26 (10.0MHZ BANDWIDTH)

Project #:	13171736
Date:	6/14/2020
Test Engineer:	19212
Configuration:	EUT only
Mode	LTE26 QPSK 10MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 819MHz									
1.63713	35.12	Pk	28.5	-32.5	-95.2	-64.08	-13	-51.08	V
1.63754	42.16	Pk	28.5	-32.5	-95.2	-57.04	-13	-44.04	H
2.45575	34.07	Pk	32.5	-31.4	-95.2	-60.03	-13	-47.03	V
2.45778	41.52	Pk	32.5	-31.4	-95.2	-52.58	-13	-39.58	H
3.27629	40.72	Pk	32.9	-30.2	-95.2	-51.78	-13	-38.78	V
3.2781	40.53	Pk	32.9	-30.2	-95.2	-51.97	-13	-38.97	H

7.1.10. LTE BAND 30

LIMITS

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

QPSK LTE BAND 30 (10.0MHZ BANDWIDTH)

Project #:	13171736
Date:	8/7/2020
Test Engineer:	19169
Configuration:	EUT only
Mode:	LTE30 QPSK 20MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Mid Channel, 2310MHz									
4.6202	39.23	Pk	34.2	-26.8	-95.2	-48.57	-40	-8.57	H
4.62099	40.25	Pk	34.2	-26.8	-95.2	-47.55	-40	-7.55	V
6.931	36.85	Pk	36.3	-24.5	-95.2	-46.55	-40	-6.55	V
6.93179	38.34	Pk	36.3	-24.5	-95.2	-45.06	-40	-5.06	H
9.24136	35.75	Pk	36.4	-21.8	-95.2	-44.85	-40	-4.85	H
9.24182	35.54	Pk	36.4	-21.8	-95.2	-45.06	-40	-5.06	V

7.1.11. LTE BAND 41 AND 5G NR BAND n41

LIMITS

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

QPSK LTE BAND 41 (20.0MHZ BANDWIDTH)

Project #:	13171736
Date:	8/7/2020
Test Engineer:	39005
Configuration:	EUT Only
Mode:	LTE41FCC QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T962 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	PK Margin (dB)	Polarity
Low Channel, 2506MHz									
5.00627	36.65	Pk	33.7	-25.9	-95.2	-50.75	-25	-25.75	H
5.15779	36.36	Pk	33.8	-26.4	-95.2	-51.44	-25	-26.44	V
7.66688	35.07	Pk	36.9	-23.4	-95.2	-46.63	-25	-21.63	V
7.66831	36.21	Pk	36.9	-23.3	-95.2	-45.39	-25	-20.39	H
9.93217	33.78	Pk	38.4	-19.8	-95.2	-42.82	-25	-17.82	H
10.55277	33.38	Pk	39.5	-19.6	-95.2	-41.92	-25	-16.92	V
Mid Channel, 2593MHz									
4.80002	36.25	Pk	33	-27	-95.2	-52.95	-25	-27.95	H
5.09262	36.83	Pk	33.9	-26.3	-95.2	-50.77	-25	-25.77	V
7.69879	35.4	Pk	37.1	-23.2	-95.2	-45.9	-25	-20.9	V
7.77288	35.02	Pk	37.2	-23.4	-95.2	-46.38	-25	-21.38	H
10.38066	32.81	Pk	39.2	-19.3	-95.2	-42.49	-25	-17.49	H
10.55865	33.28	Pk	39.5	-19.5	-95.2	-41.92	-25	-16.92	V
High Channel, 2680MHz									
5.11968	37.4	Pk	33.9	-26.4	-95.2	-50.3	-25	-25.3	H
5.1487	34.8	Pk	33.8	-26.3	-95.2	-52.9	-25	-27.9	V
8.08516	36.21	Pk	37.2	-22.6	-95.2	-44.39	-25	-19.39	H
8.28894	33.91	Pk	37.5	-22.7	-95.2	-46.49	-25	-21.49	V
10.96109	33.59	Pk	39.4	-19.4	-95.2	-41.61	-25	-16.61	H
10.96699	33.64	Pk	39.4	-19.5	-95.2	-41.66	-25	-16.66	V

QPSK 5G NR BAND n41 (100.0MHZ BANDWIDTH)

Project #:	13171736
Date:	8/19/2020
Test Engineer:	50822
Configuration:	EUT only
Mode	5G NR n41 QPSK 100MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 2546MHz									
5.84283	36.57	Pk	33.6	-25.6	-95.2	-49.93	-25	-24.93	H
5.85328	37.14	Pk	33.7	-25.8	-95.2	-49.56	-25	-24.56	V
7.88503	34.81	Pk	37.3	-22.9	-95.2	-45.49	-25	-20.49	H
8.02712	35.34	Pk	37.1	-22.7	-95.2	-45.16	-25	-20.16	V
10.25183	33.46	Pk	38.8	-19.4	-95.2	-41.64	-25	-16.64	H
10.5066	34.24	Pk	39.5	-19.2	-95.2	-40.06	-25	-15.06	V
Mid Channel, 2593MHz									
5.77995	36.55	Pk	33.2	-25.2	-95.2	-50.05	-25	-25.05	V
5.81347	36.41	Pk	33.4	-25.5	-95.2	-49.99	-25	-24.99	H
7.97872	34.69	Pk	37.2	-22.9	-95.2	-45.91	-25	-20.91	H
8.17804	34.89	Pk	37.3	-22.9	-95.2	-45.61	-25	-20.61	V
10.56589	33.99	Pk	39.6	-19.4	-95.2	-40.21	-25	-15.21	H
10.75613	34.14	Pk	39.2	-19.4	-95.2	-40.36	-25	-15.36	V
High Channel, 2640MHz									
5.5698	36.24	Pk	33.2	-26.1	-95.2	-51.56	-25	-26.56	V
5.69093	36.06	Pk	33.1	-25.5	-95.2	-50.74	-25	-25.74	H
8.14701	35.48	Pk	37.3	-23	-95.2	-45.12	-25	-20.12	H
8.34636	35.06	Pk	37.5	-22.7	-95.2	-44.94	-25	-19.94	V
10.87133	33.82	Pk	39.3	-19.5	-95.2	-41.28	-25	-16.28	V
11.11309	33.67	Pk	39.2	-19.7	-95.2	-41.13	-25	-16.13	H

7.1.12. LTE BAND 66

LIMITS

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

QPSK LTE BAND 66 (20.0MHZ BANDWIDTH)

Project #:	13171736
Date:	5/15/2020
Test Engineer:	50820
Configuration:	EUT only
Mode	LTE66 QPSK 20MHz
Chamber #:	Chamber A

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 1720MHz									
3.43989	30.86	Pk	30.4	-27.9	-95.2	-61.84	-13	-48.84	H
3.44017	30.63	Pk	30.4	-27.9	-95.2	-62.07	-13	-49.07	V
5.15854	30.3	Pk	33.8	-26.4	-95.2	-57.5	-13	-44.5	H
5.15939	30.37	Pk	33.8	-26.4	-95.2	-57.43	-13	-44.43	V
6.87875	29.58	Pk	36.3	-24.7	-95.2	-54.02	-13	-41.02	V
6.87923	28.62	Pk	36.3	-24.7	-95.2	-54.98	-13	-41.98	H
Mid Channel, 1745MHz									
3.49063	31.22	Pk	30.2	-27.7	-95.2	-61.48	-13	-48.48	H
3.49197	31.2	Pk	30.2	-27.7	-95.2	-61.5	-13	-48.5	V
5.23496	29.72	Pk	33.5	-26.6	-95.2	-58.58	-13	-45.58	V
5.23675	29.89	Pk	33.5	-26.6	-95.2	-58.41	-13	-45.41	H
6.98083	28.88	Pk	36.3	-24.4	-95.2	-54.42	-13	-41.42	H
6.98112	29.24	Pk	36.3	-24.4	-95.2	-54.06	-13	-41.06	V
High Channel, 1770MHz									
3.54041	31.46	Pk	30.2	-27.8	-95.2	-61.34	-13	-48.34	V
3.54109	32.25	Pk	30.2	-27.8	-95.2	-60.55	-13	-47.55	H
5.3103	29.67	Pk	33.3	-26.5	-95.2	-58.73	-13	-45.73	V
5.31233	29.39	Pk	33.2	-26.4	-95.2	-59.01	-13	-46.01	H
7.07962	28.22	Pk	36.6	-23.7	-95.2	-54.08	-13	-41.08	H
7.08217	28.49	Pk	36.7	-23.7	-95.2	-53.71	-13	-40.71	V

7.1.13. LTE BAND 71

LIMITS

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

QPSK LTE BAND 71 (20.0MHZ BANDWIDTH)

Project #:	13171736
Date:	6/16/2020
Test Engineer:	19140
Configuration:	EUT only
Mode	LTE77 QPSK 20MHz
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T348 (dB/m)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
Low Channel, 673MHz									
1.34585	40.78	Pk	25.3	-30.8	-95.2	-59.92	-13	-46.92	H
1.34738	40.8	Pk	25.3	-30.8	-95.2	-59.9	-13	-46.9	V
2.01996	39.4	Pk	27.2	-29.8	-95.2	-58.4	-13	-45.4	V
2.02025	39.74	Pk	27.2	-29.7	-95.2	-57.96	-13	-44.96	H
2.69084	38.77	Pk	29.2	-29	-95.2	-56.23	-13	-43.23	H
2.69125	39.31	Pk	29.2	-29	-95.2	-55.69	-13	-42.69	V
Mid Channel, 680.5MHz									
1.36251	41.44	Pk	25.3	-30.8	-95.2	-59.26	-13	-46.26	H
1.3629	42.66	Pk	25.4	-30.8	-95.2	-57.94	-13	-44.94	V
2.03951	40.48	Pk	27	-29.7	-95.2	-57.42	-13	-44.42	V
2.03958	39.74	Pk	27	-29.7	-95.2	-58.16	-13	-45.16	H
2.72022	39.28	Pk	29	-28.9	-95.2	-55.82	-13	-42.82	H
2.72323	38.87	Pk	29	-28.9	-95.2	-56.23	-13	-43.23	V
High Channel, 688MHz									
1.37398	41.45	Pk	25.4	-30.7	-95.2	-59.05	-13	-46.05	H
1.37473	44.03	Pk	25.4	-30.8	-95.2	-56.57	-13	-43.57	V
2.06327	40.17	Pk	27	-29.6	-95.2	-57.63	-13	-44.63	H
2.06591	38.98	Pk	27	-29.6	-95.2	-58.82	-13	-45.82	V
2.75007	38.68	Pk	29	-28.9	-95.2	-56.42	-13	-43.42	H
2.7515	38.64	Pk	29	-28.9	-95.2	-56.46	-13	-43.46	V

8. SETUP PHOTOS

Please refer to 13179116-EP1 for setup photos

Appendix A – Reference Test Report 13179116-E8

Attached is the test report from the parent / reference model. The data from the reference report is being reused for the variant model described in this test report (13171736-E8).

TEST REPORT

Report Number. : 13179116-E8V4

Applicant	:	APPLE, INC 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	:	A2172
FCC ID	:	BCG-E3542A
EUT Description	:	SMARTPHONE
Test Standard(s)	:	FCC CFR47 PART 22H, 24E, 27, 90S, 90R, AND 96

Date Of Issue:
SEPTEMBER 29, 2020

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
Fremont, CA 94538, U.S.A.
TEL: (510) 319-4000
FAX: (510) 661-0888

NVLAP Lab code: 200065-0

Revision History

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

TABLE OF CONTENTS

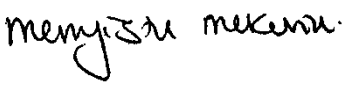
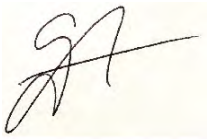
1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	APPLE, INC 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	A2172
FCC ID	BCG-E3542A
EUT Description	SMARTPHONE
Serial Number	MODEL (A2172): C070033L5P573(Conducted) and G6TCN00YQ5HL (Radiated)
Date Tested	APRIL 06, 2020 to SEPTEMBER 29, 2020
Applicable Standards	FCC CFR47 22H, 24E, 27, 90S, 90R, AND 96
Test Results	COMPLIES

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released By:	Reviewed By:	Prepared By:
		
Mengistu Mekuria Lead Test Engineer UL Verification Services Inc.	Glenn Escano Project Engineer UL Verification Services Inc.	Sintia Andrean Laboratory Engineer UL Verification Services Inc.

2. TEST METHODOLOGY

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

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

3. FACILITIES AND ACCREDITATION

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

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

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

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

4. DECISION RULES AND MEASUREMENT UNCERTAINTY

4.1. METROLOGICAL TRACEABILITY

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

4.2. DECISION RULES

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

4.3. MEASUREMENT UNCERTAINTY

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

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

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

4.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:
Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:
Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.
36.5 dBuV + 0 dB +10.1 dB+ 0 dB = 46.6 dBuV

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

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

5.2. MAXIMUM OUTPUT POWER

EIRP/ERP TEST PROCEDURE

ANSI C63.26:2015
KDB 971168 D01 Section 5.6

ERP/EIRP = PMeas + GT − LC
where: ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as PMeas, typically dBW or dBm);
PMeas = measured transmitter output power or PSD, in dBm or dBW;
GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);
LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

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

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

LTE BAND 2

Part 24 / RSS 133	
EIRP Limit (W)	2.00
Antenna Gain (dBi)	1.00

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

LTE BAND 5

Part 22H	
ERP Limit (W)	7.00
Antenna Gain (dBi)	-5.20

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

5G NR Band n5

Part 22H	
ERP Limit (W)	7.00
Antenna Gain (dBi)	-5.20

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

LTE BAND 7

Part 27 / RSS 199	
EIRP Limit (W)	2.00
Antenna Gain (dBi)	0.90

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

LTE BAND 12

Part 27 / RSS 130	
ERP Limit (W)	3.00
Antenna Gain (dBi)	-5.00

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

5G NR Band n12

Part 27 / RSS 130	
ERP Limit (W)	3.00
Antenna Gain (dBi)	-5.00

Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% BW (kHz)	Emission Designator
15.0	BPSK	706.5	708.5	25.7	18.55	0.072	13352	13M4G7W
	QPSK			25.2	18.05	0.064	13420	13M4G7W
	16QAM			24.1	16.95	0.050	13342	13M3D7W

LTE BAND 13

Part 27 / RSS 130	
ERP Limit (W)	3.00
Antenna Gain (dBi)	-5.50

Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% BW (kHz)	Emission Designator
5.0	QPSK	779.5	784.5	25.7	18.05	0.064	4510	4M51G7W
	16QAM			25.2	17.55	0.057	4497	4M50D7W
10.0	QPSK	782.0	782.0	25.7	18.05	0.064	8973	8M97G7W
	16QAM			24.9	17.25	0.053	8971	8M97D7W

LTE BAND 14

Part 90R / RSS 140	
ERP Limit (W)	3.00
Antenna Gain (dBi)	-5.60

Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% BW (kHz)	Emission Designator
5.0	QPSK	790.5	795.5	25.7	17.95	0.062	4487	4M49G7W
	16QAM			25.1	17.35	0.054	4483	4M48D7W
10.0	QPSK	793.0	793.0	25.7	17.95	0.062	8985	8M99G7W
	16QAM			24.9	17.15	0.052	8977	8M98D7W

LTE BAND 17

Part 27 / RSS 130	
ERP Limit (W)	3.00
Antenna Gain (dBi)	-5.00

Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% BW (kHz)	Emission Designator
5.0	QPSK	706.5	713.5	25.7	18.55	0.072	4495	4M50G7W
	16QAM			25.2	18.05	0.064	4476	4M48D7W
10.0	QPSK	709.0	711.0	25.7	18.55	0.072	8958	8M96G7W
	16QAM			25.1	17.95	0.062	8973	8M97D7W

LTE BAND 25

Part 24 / RSS 133	
EIRP Limit (W)	2.00
Antenna Gain (dBi)	1.00

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

LTE BAND 26 (Part 90S)

Part 90S	
Conducted Limit (W)	100.00
Antenna Gain (dBi)	-5.20

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

LTE BAND 30

Part 27 / RSS 195	
EIRP Limit (W)	0.25
Antenna Gain (dBi)	-1.20

Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% BW (kHz)	Emission Designator
5.0	QPSK	2307.5	2312.5	24.7	23.50	0.224	4491.8	4M49G7W
	16QAM			24.2	23.03	0.201	4492.5	4M49D7W
10.0	QPSK	2310.0	2310.0	24.7	23.50	0.224	8962.5	8M96G7W
	16QAM			24.6	23.38	0.218	8938.8	8M94D7W

LTE BAND 41

Part 27	
EIRP Limit (W)	2.00
Antenna Gain (dBi)	0.90

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

5G NR Band n41

Part 27	
EIRP Limit (W)	2.00
Antenna Gain (dBi)	0.90

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

LTE BAND 48

Part 96	
EIRP Limit (W)/ 10MHz	0.20
Antenna Gain (dBi)	-0.90

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

LTE BAND 66

Part 27 / RSS 139	
EIRP Limit (W)	1.00
Antenna Gain (dBi)	-1.90

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

LTE BAND 71

Part 27 / RSS 130	
ERP Limit (W)	3.00
Antenna Gain (dBi)	-5.90

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

5G NR Band n77

Part 27	
EIRP Limit (W)	1.00
Antenna Gain (dBi)	-0.10

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

5.3. SOFTWARE AND FIRMWARE

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

5.4. MAXIMUM ANTENNA GAIN

Please see table below:

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

5.5. WORST-CASE CONFIGURATION AND MODE

The EUT supports the following LTE and 5G NR Bands:
Band 2, Band 4, Band 5, Band 7, Band 12, Band 13, Band 14, Band 17, Band 25, Band 26, Band 30, Band 41, Band 48, Band 66, Band 71, 5G NR Band n2, 5G NR Band n5, 5G NR Band n12, 5G NR Band n25, 5G NR Band n41, 5G NR Band n66, 5G NR Band n71 and 5G NR Band n77.

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

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

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

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

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

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

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

For 5G NR Band n41 20MHz BW, antenna 2 and antenna 4 powers are higher than LTE band 41. Therefore, additional power measurements and occupied bandwidth tests were performed on antenna 2 and antenna 4 for 20MHz BW. Since LTE antenna 1 the highest outpout 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 exabit the worst case orientation for different frequency bands. The full tests of the EUT have made upon the orientations that shown in the table below.

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

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

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

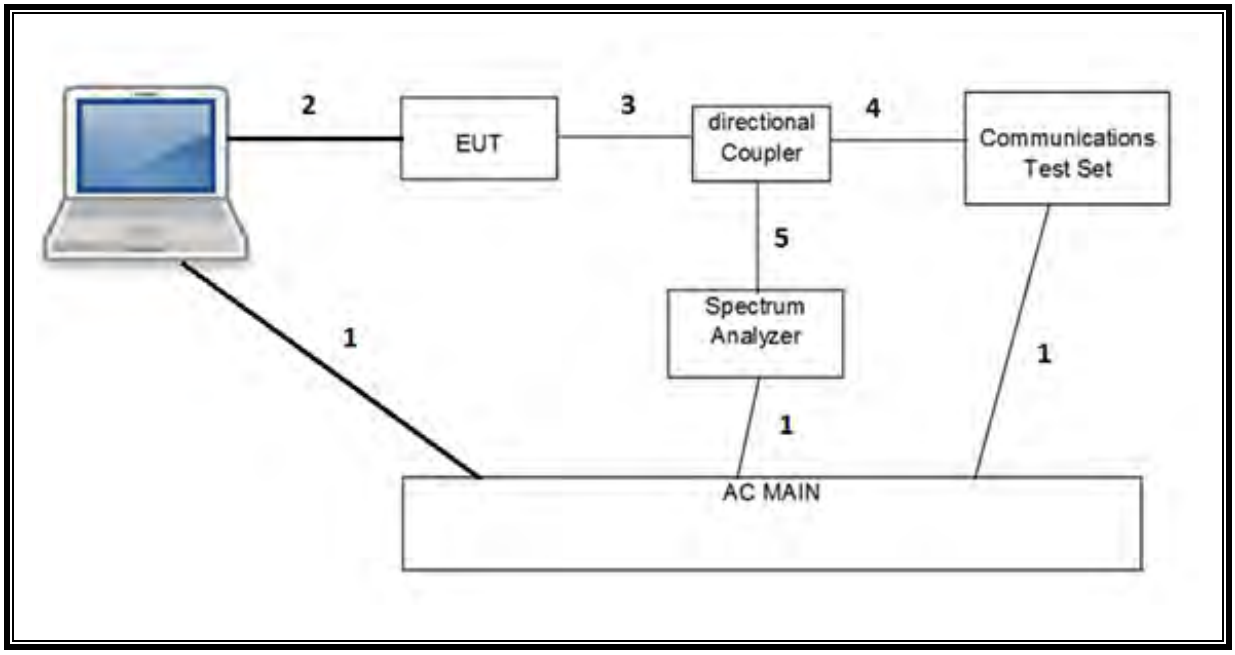
5.6. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID/ DoC**
Laptop AC/DC adapter	Apple	85W MagSafe 2	C0651730MMMG6P4AL	
Laptop	Apple	Macbook Pro	C02PM012G3QD	
Laptop	Apple	Macbook Pro	C02P52HGG085	

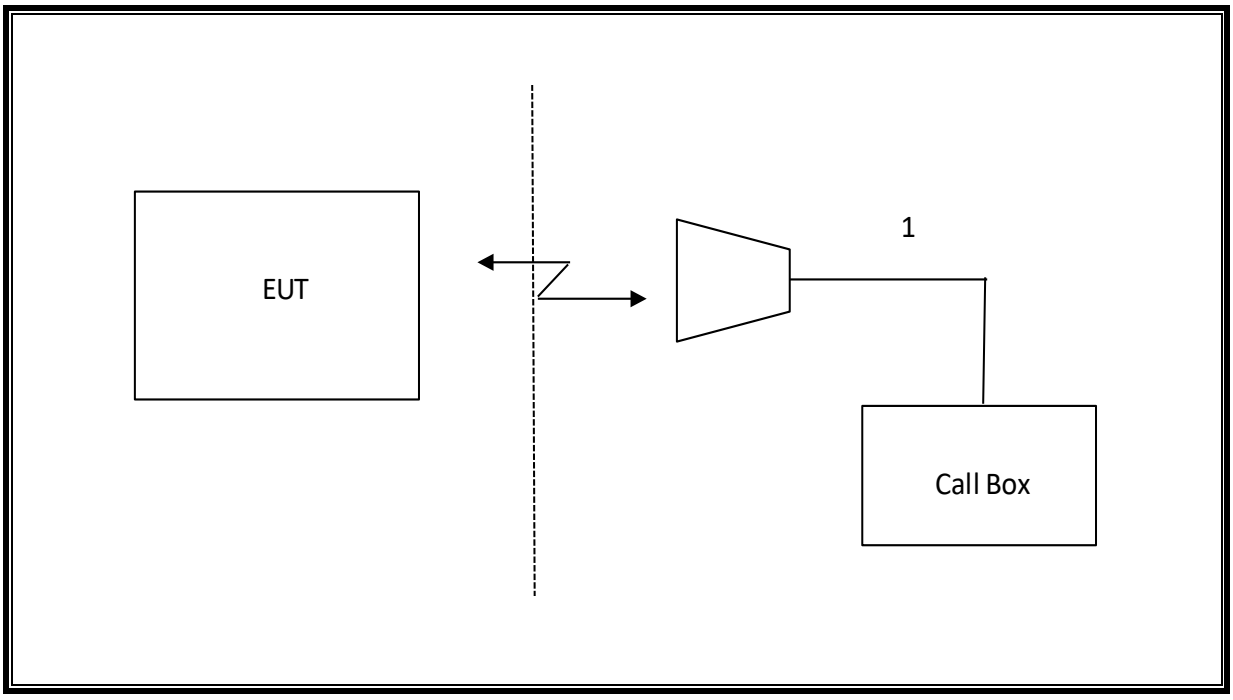
I/O CABLES (RF CONDUCTED TEST)						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	AC	3	US 115V	Un-shielded	2.0	N/A
2	USB	1	DC	Un-shielded	1.0	N/A
3	RF In/Out	1	EUT	Shielded	0.6	N/A
4	RF In/Out	1	Communication Test Set	Shielded	1.2	N/A
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	06/09/2020
*Directional Coupler	KRYTAR	152610	T1161	08/14/2020
*Directional Coupler	KRYTAR	152613	T1537	06/08/2020
Spectrum Analyzer, PXA 3Hz to 44GHZ	Keysight	N9030A	T340	01/22/2021
Spectrum Analyzer, PXA 3Hz to 44GHz	Keysight	N9030A	T1454	07/15/2021
Spectrum Analyzer, PXA 3Hz to 44GHz	Keysight	N9030A	T907	01/22/2021
Spectrum Analyzer, PSA, 3Hz to 44GHz	Keysight	N9030A	T908	05/05/2021
Spectrum Analyzer, PSA, 3Hz to 26.5GHz	Keysight	E4440A	T198	01/28/2021
Spectrum Analyzer, PSA, 3Hz to 44GHz	Keysight	E4440A	T200	01/24/2021
EMI Test Receiver	Rohde & Schwarz	ESW44	PRE0179522	02/18/2021
Wireless Communications Test Set, 8960 Series 10	Agilent	E5515C	T211	02/18/2021
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	T948	08/10/2021
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	T1871	02/25/2021
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	T972	02/24/2021
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	T260	02/19/2021
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	T959	02/19/2021
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	163287	10/23/2020
UXM 5G Wireless Test Platform	Keysight	E7515B	MY59321399	10/09/2020
Chamber, Environmental	Cincinnati Sub Zero	ZPHS-8-3.5-SCT/WC	T754	12/22/2020
Environmental Chamber	Cincinnati Sub Zero	ZPHS-8-3.5-SCT/WC	T1154	12/22/2020
Power Meter, P-series single channel	Keysight	N1912A	T1245	01/22/2021
Power Sensor	Keysight	N1921A	T1225	02/23/2021

UL AUTOMATION SOFTWARE			
CLT Software	UL	UL RF	Ver 7.6, November 11, 2017
Power Measurement Software	UL	UL RF	Ver 2.7, 2019
Radiated test software	UL	UL RF	Ver 9.5 June 15, 2019
Signal Generation Software	Apple	5G NR GUI	Automation_v495

Notes:

*Testing is completed before equipment expiration date.

7. RF OUTPUT POWER VERIFICATION

CONDUCTED OUTPUT POWER MEASUREMENT PROCEDURE

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

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

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

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

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

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

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

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

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

Modulation	MPR (dB)		
	Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM PI/2 BPSK	≤ 3.5[1]	≤ 1.2[1]	≤ 0.2[1]
	≤ 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 *powerBoosting-pi2BPSK* and if the IE *powerBoostPi2BPSK* 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 *powerBoostPi2BPSK* is set to 0 and if more than 40% of slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79.

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

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

RESULTS

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

7.1. LTE BAND 2

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

OUTPUT POWER FOR LTE BAND 2 (1.4 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				18607	18900	19193	18607	18900	19193	18607	18900	19193	18607	18900	19193
				1850.7	1880.0	1909.3	1850.7	1880.0	1909.3	1850.7	1880.0	1909.3	1850.7	1880.0	1909.3
1.4	QPSK	1	0	25.3	25.6	25.7	22.8	23.1	22.9	24.9	24.8	24.7	22.7	23.0	22.9
		1	2	25.4	25.7	25.7	22.9	**23.1**	23.0	**25.0**	24.9	24.7	22.8	**23.0**	23.0
		1	5	25.4	25.6	25.5	22.8	23.1	22.9	24.8	24.8	24.6	22.7	22.9	22.9
		3	0	25.5	25.6	25.4	22.9	23.0	23.0	24.9	24.8	24.7	22.7	22.9	22.9
		3	1	25.5	**25.7**	25.4	22.9	23.1	23.0	24.9	24.8	24.7	22.8	22.9	23.0
		3	2	25.5	25.7	25.3	22.9	23.1	23.0	24.9	24.8	24.7	22.7	22.9	23.0
		6	0	24.5	24.7	24.5	22.0	22.1	22.1	24.5	24.3	24.2	22.3	22.5	22.5
	16QAM	1	0	25.0	24.8	24.6	22.1	22.3	22.5	24.5	24.5	24.6	22.4	22.6	22.9
		1	2	**25.0**	24.9	24.6	22.1	22.3	**22.5**	24.6	24.5	24.6	22.4	22.7	**22.9**
		1	5	25.0	24.8	24.6	22.1	22.1	22.4	24.5	24.4	24.5	22.3	22.5	22.8
		3	0	24.8	25.0	24.6	22.2	22.1	22.3	24.7	24.4	24.4	22.5	22.5	22.7
		3	1	24.9	25.0	24.6	22.3	22.2	22.3	**24.7**	24.5	24.5	22.6	22.6	22.8
		3	2	24.9	25.0	24.6	22.3	22.2	22.3	24.7	24.5	24.4	22.6	22.6	22.7
		6	0	23.6	24.0	23.8	21.3	21.3	21.0	23.7	23.5	23.1	21.6	21.6	21.4
	64QAM	1	0	24.0	23.8	23.9	21.1	20.7	20.7	22.1	22.5	22.9	21.4	21.3	21.3
		1	2	**24.1**	23.9	23.9	**21.1**	20.8	20.7	22.1	22.6	**22.9**	**21.4**	21.3	21.4
		1	5	24.0	23.8	23.7	21.0	20.7	20.7	22.1	22.4	22.8	21.3	21.2	21.3
		3	0	24.0	23.9	23.6	21.0	20.8	20.5	21.8	22.4	22.8	21.3	21.3	21.1
		3	1	24.1	23.9	23.6	21.1	20.8	20.5	21.8	22.4	22.8	21.4	21.4	21.2
		3	2	24.1	24.0	23.5	21.0	20.9	20.5	21.8	22.4	22.8	21.4	21.4	21.2
		6	0	22.7	23.1	22.7	19.7	19.9	19.6	20.9	21.1	21.9	20.0	20.5	20.3
	256QAM	1	0	21.2	20.7	20.6	13.2	20.9	20.9	18.6	18.9	18.6	**21.2**	18.6	**21.4**
		1	2	21.2	20.8	20.7	13.1	20.9	20.9	18.7	19.0	18.7	18.7	18.7	19.3
		1	5	21.1	20.7	20.6	20.7	20.9	20.9	18.5	18.9	18.5	18.7	18.7	19.4
		3	0	21.2	21.1	21.1	20.7	20.9	20.9	19.0	18.9	18.9	18.8	**18.8**	19.1
		3	1	21.2	21.2	21.2	20.8	20.9	20.9	**19.1**	18.9	18.9	18.7	18.8	19.1
		3	2	21.2	21.2	21.2	20.8	20.9	20.9	19.1	18.9	18.9	18.8	18.8	19.2
		6	0	**21.3**	21.0	21.2	20.8	**21.0**	20.9	19.0	18.9	18.7	18.7	18.6	19.2

OUTPUT POWER FOR LTE BAND 2 (3.0 MHz)

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

OUTPUT POWER FOR LTE BAND 2 (5.0 MHz)

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

OUTPUT POWER FOR LTE BAND 2 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				18650	18900	19150	18650	18900	19150	18650	18900	19150	18650	18900	19150
				1855.0	1880.0	1905.0	1855.0	1880.0	1905.0	1855.0	1880.0	1905.0	1855.0	1880.0	1905.0
10.0	QPSK	1	0	25.1	25.4	**25.7**	22.6	22.7	23.0	24.7	24.6	**25.0**	22.6	22.7	23.0
		1	24	25.5	25.7	25.6	22.9	**23.1**	22.9	25.0	24.9	24.9	23.0	23.0	23.0
		1	49	25.3	25.0	24.9	22.6	22.8	22.7	24.7	24.8	24.8	22.8	22.7	**23.0**
		25	0	24.3	24.6	24.6	21.9	22.0	21.9	24.5	24.4	24.4	22.4	22.5	22.5
		25	12	24.6	24.7	24.7	22.1	22.1	22.0	24.6	24.5	24.5	22.6	22.7	22.7
		25	24	24.6	24.6	24.3	21.9	22.0	21.9	24.5	24.5	24.4	22.5	22.5	22.6
		50	0	24.4	24.6	24.5	22.0	21.9	21.9	24.5	24.4	24.4	22.5	22.6	22.6
	16QAM	1	0	23.9	24.5	**25.2**	21.6	21.8	**22.5**	24.4	24.1	**24.9**	22.5	22.3	22.6
		1	24	24.5	24.6	24.9	22.1	22.1	22.4	24.6	24.4	24.8	**22.9**	22.6	22.6
		1	49	24.3	23.9	24.3	21.7	21.8	22.1	24.3	24.2	24.7	22.7	22.3	22.6
		25	0	23.5	23.6	23.7	21.0	21.0	21.0	23.6	23.4	23.4	21.5	21.6	21.6
		25	12	23.8	23.7	23.7	21.2	21.1	21.0	23.8	23.5	23.6	21.6	21.8	21.7
		25	24	23.7	23.7	23.5	21.0	21.0	21.0	23.6	23.5	23.4	21.5	21.7	21.6
		50	0	23.6	23.6	23.6	21.0	20.9	20.9	23.6	23.4	23.5	21.5	21.6	21.6
	64QAM	1	0	23.0	23.4	23.6	20.3	20.3	20.4	21.7	22.6	**23.4**	21.0	21.3	21.4
		1	24	23.6	**23.8**	23.6	20.6	**20.7**	20.4	22.4	22.5	22.9	21.3	**21.7**	21.4
		1	49	23.3	23.3	23.3	20.3	20.5	20.4	22.5	22.0	22.9	21.1	21.4	21.5
		25	0	22.2	22.5	22.5	19.4	19.3	19.3	21.0	21.4	21.9	20.2	20.3	20.3
		25	12	22.5	22.6	22.6	19.6	19.4	19.4	21.4	21.3	21.9	20.3	20.4	20.5
		25	24	22.5	22.5	22.6	19.5	19.4	19.4	21.5	21.2	21.8	20.2	20.4	20.4
		50	0	22.3	22.5	22.4	19.4	19.3	19.3	21.2	21.2	21.8	20.2	20.3	20.4
	256QAM	1	0	20.7	20.6	20.8	20.5	20.6	20.6	18.5	18.4	18.5	19.7	19.8	19.7
		1	24	21.0	21.1	21.2	20.5	20.5	20.6	18.8	18.8	18.9	20.1	20.3	20.1
		1	49	20.7	20.8	21.0	20.5	20.6	20.6	18.5	18.6	18.7	19.8	20.0	19.9
		25	0	21.3	21.1	21.1	20.5	20.6	20.6	18.9	18.7	18.6	20.2	20.1	19.9
		25	12	**21.4**	21.2	21.2	20.5	20.6	20.6	**19.0**	18.9	18.8	**20.3**	20.1	20.0
		25	24	21.2	21.1	21.2	20.5	20.6	20.6	18.9	18.8	18.7	20.2	20.1	20.0
		50	0	21.3	21.1	21.1	20.4	**20.6**	20.6	18.9	18.8	18.6	20.2	20.0	19.9

OUTPUT POWER FOR LTE BAND 2 (15.0 MHz)

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

OUTPUT POWER FOR LTE BAND 2 (20.0 MHz)

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

7.2. LTE BAND 5

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

OUTPUT POWER FOR LTE BAND 5 (1.4 MHz)

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

OUTPUT POWER FOR LTE BAND 5 (3.0 MHz)

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

OUTPUT POWER FOR LTE BAND 5 (5.0 MHz)

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

OUTPUT POWER FOR LTE BAND 5 (10.0 MHz)

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

7.3. 5G NR Band n5

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

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

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

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

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

7.4. LTE BAND 7

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

OUTPUT POWER FOR LTE BAND 7 (5.0 MHz)

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

OUTPUT POWER FOR LTE BAND 7 (10.0 MHz)

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

OUTPUT POWER FOR LTE BAND 7 (15.0 MHz)

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

OUTPUT POWER FOR LTE BAND 7 (20.0 MHz)

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

7.5. LTE BAND 12

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

OUTPUT POWER FOR LTE BAND 12 (1.4 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				23017	23095	23173	23017	23095	23173
				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	23.7	23.5
		1	2	25.6	25.7	25.7	**23.9**	23.8	23.7
		1	5	25.6	25.7	25.6	23.8	23.8	23.6
		3	0	25.5	25.6	25.6	23.8	23.7	23.6
		3	1	25.6	25.7	25.7	23.8	23.7	23.7
		3	2	25.6	25.7	**25.7**	23.8	23.8	23.7
		6	0	24.6	24.7	24.7	22.9	22.7	22.7
	16QAM	1	0	24.7	25.1	24.8	22.9	23.1	22.7
		1	2	24.9	**25.2**	24.9	23.0	**23.2**	22.8
		1	5	24.8	25.1	24.8	23.0	23.2	22.8
		3	0	24.7	24.8	24.9	22.9	22.9	22.8
		3	1	24.8	24.9	24.9	23.0	22.9	22.9
		3	2	24.8	25.0	25.0	23.0	23.0	22.9
		6	0	23.8	23.6	23.9	22.0	21.6	21.9
	64QAM	1	0	24.1	23.8	24.0	22.2	21.9	21.9
		1	2	**24.2**	23.9	24.0	**22.4**	22.0	22.0
		1	5	24.2	23.9	24.0	22.3	21.9	22.0
		3	0	24.1	23.9	23.7	22.2	21.9	21.7
		3	1	24.1	23.9	23.8	22.3	22.0	21.8
		3	2	24.1	24.0	23.9	22.3	22.0	21.8
		6	0	22.7	23.0	22.8	20.9	21.0	20.8
	256QAM	1	0	20.0	20.4	20.2	22.2	22.3	22.2
		1	2	20.1	20.6	20.3	22.2	22.3	22.2
		1	5	20.0	20.5	20.2	22.2	22.2	22.2
		3	0	20.5	20.5	20.5	22.2	22.2	22.2
		3	1	20.6	20.5	20.5	**22.3**	22.2	22.2
		3	2	20.6	20.6	**20.6**	22.2	22.2	22.2
		6	0	20.6	20.5	20.3	22.2	22.3	22.2

OUTPUT POWER FOR LTE BAND 12 (3.0 MHz)

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

OUTPUT POWER FOR LTE BAND 12 (5.0 MHz)

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

OUTPUT POWER FOR LTE BAND 12 (10.0 MHz)

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

7.6. 5G NR Band n12

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

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

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

7.7. LTE BAND 13

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

OUTPUT POWER FOR LTE BAND 13 (5.0 MHz)

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

OUTPUT POWER FOR LTE BAND 13 (10.0 MHz)

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

7.8. LTE BAND 14

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

OUTPUT POWER FOR LTE BAND 14 (5.0 MHz)

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

OUTPUT POWER FOR LTE BAND 14 (10.0 MHz)

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

7.9. LTE BAND 17

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

OUTPUT POWER FOR LTE BAND 17 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)					
				ANT 1			ANT 2		
				23755	23790	23825	23755	23790	23825
				706.5	710.0	713.5	706.5	710.0	713.5
5.0	QPSK	1	0	25.7	25.5	25.6	23.6	23.9	23.5
		1	12	**25.7**	25.6	25.7	23.6	**23.9**	23.6
		1	24	25.7	25.6	25.7	23.6	23.9	23.6
		12	0	24.6	24.6	24.7	22.5	23.0	22.6
		12	6	24.7	24.7	24.8	22.6	23.0	22.7
		12	11	24.7	24.7	24.8	22.6	23.0	22.6
		25	0	24.7	24.6	24.7	22.6	23.0	22.6
	16QAM	1	0	24.9	25.2	24.8	22.8	23.5	22.8
		1	12	24.9	25.2	25.0	22.8	**23.5**	22.8
		1	24	24.9	**25.2**	24.9	22.8	23.5	22.8
		12	0	23.7	23.8	23.8	21.7	22.1	21.6
		12	6	23.9	23.8	23.8	21.8	22.2	21.7
		12	11	23.8	23.9	23.8	21.8	22.2	21.7
		25	0	23.7	23.7	23.7	21.7	22.0	21.6
	64QAM	1	0	24.3	24.0	24.4	22.3	23.0	22.6
		1	12	24.4	24.1	**24.5**	22.3	**23.1**	22.7
		1	24	24.4	24.1	24.4	22.3	23.1	22.3
		12	0	23.2	23.2	23.0	21.4	21.7	21.4
		12	6	23.3	23.2	23.0	21.4	21.7	21.4
		12	11	23.2	23.2	23.1	21.4	21.7	21.4
		25	0	23.2	23.1	23.1	21.4	21.7	21.4
	256QAM	1	0	**23.5**	21.3	21.3	22.0	22.9	22.9
		1	12	21.0	21.3	21.3	22.9	22.9	22.9
		1	24	21.1	21.4	21.3	22.9	22.9	22.9
		12	0	21.2	21.2	21.3	22.9	22.9	**22.9**
		12	6	21.3	21.3	21.4	22.9	22.9	22.9
		12	11	21.3	21.3	21.4	22.9	22.9	22.9
		25	0	21.3	21.3	21.3	22.9	22.9	22.9

OUTPUT POWER FOR LTE BAND 17 (10.0 MHz)

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

7.10. LTE BAND 25

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

OUTPUT POWER FOR LTE BAND 25 (1.4 MHz)

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

OUTPUT POWER FOR LTE BAND 25 (3.0 MHz)

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

OUTPUT POWER FOR LTE BAND 25 (5.0 MHz)

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

OUTPUT POWER FOR LTE BAND 25 (10.0 MHz)

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

OUTPUT POWER FOR LTE BAND 25 (15.0 MHz)

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

OUTPUT POWER FOR LTE BAND 25 (20.0 MHz)

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

7.11. LTE BAND 26 (Part 90S)

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

OUTPUT POWER FOR LTE BAND 26 (1.4 MHz)

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

OUTPUT POWER FOR LTE BAND 26 (3.0 MHz)

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

OUTPUT POWER FOR LTE BAND 26 (5.0 MHz)

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

OUTPUT POWER FOR LTE BAND 26 (10.0 MHz)

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

7.12. LTE BAND 30(NS1)

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

OUTPUT POWER FOR LTE BAND 30 (5.0 MHz)

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

OUTPUT POWER FOR LTE BAND 30 (10.0 MHz)

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

7.13. LTE BAND 41 (NS04)

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

OUTPUT POWER FOR LTE BAND 41 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				39675	40620	41565	39675	40620	41565	39675	40620	41565	39675	40620	41565
				2498.5	2593.0	2687.5	2498.5	2593.0	2687.5	2498.5	2593.0	2687.5	2498.5	2593.0	2687.5
5.0	QPSK	1	0	24.7	27.5	27.4	21.9	24.6	24.6	21.8	**26.0**	25.8	22.9	24.1	23.9
		1	12	27.7	27.4	27.2	24.8	24.6	24.6	25.1	25.9	25.7	24.3	24.0	24.0
		1	24	**27.7**	27.4	27.4	**24.8**	24.6	24.5	25.4	25.9	25.7	**24.5**	24.1	23.9
		12	0	23.8	26.6	26.4	20.9	23.7	23.7	21.1	25.0	24.8	22.1	24.2	24.0
		12	6	23.8	26.6	26.4	20.8	23.7	23.7	21.2	25.0	24.9	22.2	24.2	24.0
		12	11	26.8	26.5	26.4	23.9	23.7	23.7	24.2	25.0	24.9	24.0	24.2	24.0
		25	0	23.7	26.6	26.3	20.8	23.7	23.6	21.1	25.0	24.9	22.1	24.1	24.0
	16QAM	1	0	24.0	26.8	26.5	21.2	24.0	24.0	21.3	**25.3**	25.1	22.3	**24.5**	24.4
		1	12	27.0	26.8	26.4	**24.1**	24.0	24.0	24.5	25.3	25.1	23.9	24.5	24.3
		1	24	**27.1**	26.8	26.4	24.1	24.0	23.9	24.7	25.2	25.1	24.4	24.4	24.3
		12	0	22.8	25.6	25.4	20.0	22.8	22.7	20.2	24.1	23.8	21.0	24.1	24.0
		12	6	22.9	25.6	25.4	19.9	22.8	22.7	20.3	24.1	23.9	21.2	24.1	23.9
		12	11	25.8	25.5	25.4	22.9	22.8	22.6	23.3	24.0	23.9	23.0	24.0	23.9
		25	0	22.7	25.6	25.4	19.9	22.7	22.7	20.1	24.0	23.9	21.2	24.0	23.8
	64QAM	1	0	21.4	24.0	23.5	19.2	21.1	20.7	22.7	23.3	23.3	21.0	21.4	21.9
		1	12	23.4	**24.0**	23.5	**21.1**	21.1	20.6	23.0	23.3	**23.4**	21.5	21.4	**22.0**
		1	24	23.4	24.0	23.5	21.1	21.1	20.6	23.3	23.3	23.3	21.7	21.4	22.0
		12	0	20.6	22.6	22.0	17.8	19.7	19.6	21.9	21.8	21.9	20.0	20.4	20.5
		12	6	20.7	22.2	22.1	17.8	19.6	19.6	22.0	21.9	22.0	20.1	20.4	20.6
		12	11	22.7	22.2	22.0	19.7	19.7	19.6	22.1	21.8	22.0	20.1	20.4	20.5
		25	0	20.7	22.2	22.0	17.8	19.6	19.6	22.0	21.7	21.9	20.0	20.4	20.4
	256QAM	1	0	23.6	23.9	21.0	**21.0**	20.9	20.9	23.2	23.2	23.2	18.9	21.9	21.8
		1	12	23.7	23.9	21.0	20.3	20.9	20.9	23.3	23.2	23.2	18.9	**22.0**	21.8
		1	24	23.7	23.9	21.0	20.8	20.9	20.9	23.3	23.2	23.2	18.9	21.9	21.8
		12	0	23.7	23.9	21.0	20.9	21.0	20.9	23.3	23.2	23.2	18.9	21.9	21.8
		12	6	23.7	23.9	21.0	20.9	20.9	20.9	**23.3**	23.2	23.2	18.9	21.9	21.8
		12	11	23.7	23.9	21.0	20.9	20.9	20.9	23.3	23.2	23.2	18.9	21.9	21.8
		25	0	23.7	**23.9**	21.0	20.9	20.9	20.9	23.3	23.2	23.2	18.9	21.9	21.8

OUTPUT POWER FOR LTE BAND 41 (10.0 MHz)

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

OUTPUT POWER FOR LTE BAND 41 (15.0 MHz)

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

OUTPUT POWER FOR LTE BAND 41 (20.0 MHz)

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

7.14. 5G NR Band n41

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

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

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

Ant1 and Ant3 are covered by LTE Band 41

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

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

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

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

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

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

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

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

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

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

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

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

7.15. LTE BAND 48

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

OUTPUT POWER FOR LTE BAND 48 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				55265	55990	56715	55265	55990	56715	55265	55990	56715	55265	55990	56715
				3552.5	3625.0	3697.5	3552.5	3625.0	3697.5	3552.5	3625.0	3697.5	3552.5	3625.0	3697.5
5.0	QPSK	1	0	22.7	22.6	22.6	22.6	22.3	22.2	23.2	23.4	23.4	23.0	23.1	23.0
		1	12	22.8	22.7	22.7	**22.7**	22.1	22.4	23.5	**23.6**	23.5	22.9	**23.3**	23.2
		1	24	**22.8**	22.7	22.7	22.6	21.9	22.4	23.5	23.5	23.5	22.9	23.2	23.3
		12	0	22.0	21.9	21.8	21.7	21.1	21.4	22.5	22.6	22.5	22.8	22.3	22.2
		12	6	22.1	22.0	21.8	21.8	21.2	21.5	22.7	22.7	22.6	22.9	22.4	22.3
		12	11	22.0	22.0	22.0	21.7	21.5	21.5	22.6	22.7	22.6	22.9	22.4	22.3
		25	0	21.9	21.9	21.8	21.7	21.4	21.4	22.6	22.6	22.5	22.8	22.4	22.3
	16QAM	1	0	21.9	21.7	21.6	21.9	21.6	21.7	22.9	22.9	22.8	22.8	22.5	22.5
		1	12	22.1	21.8	21.8	**22.1**	21.7	21.9	23.0	**23.0**	23.0	**23.0**	22.6	22.7
		1	24	**22.1**	21.8	21.7	22.1	21.7	21.8	22.9	22.9	22.9	22.9	22.5	22.7
		12	0	21.0	21.0	20.9	20.4	20.4	20.6	21.7	21.5	21.7	21.6	21.3	21.4
		12	6	21.2	21.0	20.9	20.8	20.5	20.6	21.7	21.6	21.7	21.7	21.4	21.4
		12	11	21.2	21.0	20.9	20.5	20.5	20.7	21.7	21.6	21.7	21.7	21.3	21.5
		25	0	21.0	20.9	20.9	20.6	20.5	20.5	21.6	21.6	21.6	21.6	21.3	21.3
	64QAM	1	0	20.2	19.7	20.4	21.5	21.2	21.8	22.3	22.0	21.7	22.9	23.4	23.1
		1	12	20.3	19.8	**20.5**	21.7	21.3	**22.0**	**22.4**	22.1	21.8	23.0	**23.5**	23.2
		1	24	20.3	19.8	20.5	21.6	21.3	21.9	22.3	22.1	21.7	23.0	23.5	23.1
		12	0	19.3	19.3	19.3	20.2	20.3	20.3	20.8	20.7	20.7	21.9	22.0	21.7
		12	6	19.3	19.3	19.3	20.3	20.3	20.5	20.9	20.8	20.8	22.0	22.0	21.7
		12	11	19.3	19.3	19.3	20.3	20.3	20.5	20.9	20.8	20.8	22.0	22.0	21.7
		25	0	19.2	19.2	19.1	20.2	20.3	20.3	20.7	20.7	20.7	22.0	21.8	21.7
	256QAM	1	0	20.0	20.3	20.3	21.5	21.7	21.7	**22.3**	22.3	22.2	22.3	22.6	22.7
		1	12	20.0	20.3	20.3	21.5	21.7	**21.8**	22.3	22.3	22.2	22.3	22.6	22.7
		1	24	20.0	20.3	20.3	21.6	21.7	21.8	22.3	22.3	22.2	22.3	22.6	22.7
		12	0	20.1	20.3	20.3	21.6	21.8	21.8	22.3	22.3	22.2	22.3	22.6	**22.8**
		12	6	20.1	20.3	20.3	21.6	21.8	21.8	22.3	22.3	22.2	22.3	22.6	22.8
		12	11	20.1	20.3	20.3	21.6	21.8	21.8	22.3	22.3	22.2	22.3	22.6	22.8
		25	0	20.1	20.3	**20.4**	21.6	21.8	21.8	22.3	22.3	22.2	22.3	22.6	22.8

OUTPUT POWER FOR LTE BAND 48 (10.0 MHz)

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

OUTPUT POWER FOR LTE BAND 48 (15.0 MHz)

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

OUTPUT POWER FOR LTE BAND 48 (20.0 MHz)

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

7.16. LTE BAND 66

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

OUTPUT POWER FOR LTE BAND 66 (1.4 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 1			ANT 2			ANT 3			ANT 4		
				131979	132322	132665	131979	132322	132665	131979	132322	132665	131979	132322	132665
				1710.7	1745.0	1779.3	1710.7	1745.0	1779.3	1710.7	1745.0	1779.3	1710.7	1745.0	1779.3
1.4	QPSK	1	0	25.6	25.6	25.5	23.1	22.9	22.9	24.6	24.8	24.9	22.7	23.0	22.9
		1	2	25.6	25.7	25.6	**23.1**	23.0	23.0	24.7	24.8	24.9	22.8	**23.0**	22.9
		1	5	25.5	25.6	25.5	23.0	22.9	22.8	24.6	24.8	24.9	22.7	22.9	22.8
		3	0	25.6	25.6	25.6	23.0	23.0	22.9	24.7	24.8	**25.0**	22.7	22.9	22.9
		3	1	25.7	25.7	25.7	23.0	23.0	23.0	24.8	24.9	25.0	22.8	23.0	22.9
		3	2	25.7	**25.7**	25.6	23.1	23.0	22.9	24.8	24.9	24.8	22.8	22.9	22.9
		6	0	24.7	24.7	24.7	22.5	22.4	22.4	23.8	24.0	23.9	22.4	22.5	22.5
	16QAM	1	0	25.1	24.8	25.0	22.6	22.8	22.4	24.3	24.3	24.2	22.5	22.7	22.9
		1	2	**25.1**	24.8	25.0	22.7	**22.8**	22.5	24.3	**24.3**	24.2	22.6	22.7	**23.0**
		1	5	25.0	24.7	25.0	22.6	22.7	22.4	24.3	24.3	24.2	22.6	22.6	22.9
		3	0	24.9	24.9	24.9	22.6	22.7	22.6	24.0	24.0	23.9	22.6	22.5	22.6
		3	1	25.0	24.9	24.9	22.6	22.7	22.6	24.0	24.1	23.9	22.7	22.6	22.7
		3	2	25.0	24.9	24.9	22.6	22.7	22.6	24.0	24.0	23.9	22.7	22.6	22.7
		6	0	23.6	23.9	23.6	21.7	21.3	21.5	22.8	22.8	22.7	21.7	21.8	21.4
	64QAM	1	0	24.1	23.8	24.0	22.8	21.4	22.0	22.5	22.9	22.7	21.8	21.5	21.5
		1	2	**24.1**	23.8	24.1	**22.8**	21.4	22.0	22.5	**22.9**	22.7	**21.9**	21.6	21.5
		1	5	24.0	23.7	24.0	22.7	21.3	22.0	22.4	22.7	22.5	21.8	21.5	21.4
		3	0	24.0	23.9	24.0	22.5	21.3	21.7	22.4	22.6	22.5	21.8	21.5	21.3
		3	1	24.1	23.9	24.0	22.5	21.4	21.7	22.4	22.7	22.6	21.8	21.6	21.3
		3	2	24.0	23.9	24.0	22.4	21.4	21.7	22.4	22.6	22.5	21.9	21.6	21.3
		6	0	22.7	23.0	22.6	21.0	20.5	20.8	21.5	21.2	21.7	20.5	20.7	20.4
	256QAM	1	0	24.0	24.0	24.0	21.3	21.3	21.3	18.6	19.1	18.6	**21.3**	21.3	21.1
		1	2	24.0	24.0	23.9	21.3	21.3	21.3	18.7	**19.1**	18.8	21.3	21.2	21.1
		1	5	24.0	23.9	24.0	21.3	21.3	21.3	18.6	19.1	18.5	21.3	21.2	21.1
		3	0	**24.0**	23.9	24.0	21.3	**21.3**	21.3	19.1	19.1	19.0	21.3	21.2	21.1
		3	1	24.0	24.0	24.0	21.3	21.3	21.3	19.1	19.1	19.0	21.2	21.3	21.1
		3	2	24.0	23.9	24.0	21.3	21.3	21.3	19.1	19.1	19.1	21.2	21.3	21.1
		6	0	24.0	24.0	24.0	21.3	21.3	21.3	19.1	19.1	18.8	21.2	21.2	21.1

OUTPUT POWER FOR LTE BAND 66 (3.0 MHz)

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

OUTPUT POWER FOR LTE BAND 66 (5.0 MHz)

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

OUTPUT POWER FOR LTE BAND 66 (10.0 MHz)

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

OUTPUT POWER FOR LTE BAND 66 (15.0 MHz)

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

OUTPUT POWER FOR LTE BAND 66 (20.0 MHz)

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

7.17. LTE BAND 71

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

OUTPUT POWER FOR LTE BAND 71 (5.0 MHz)

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

OUTPUT POWER FOR LTE BAND 71 (10.0 MHz)

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

OUTPUT POWER FOR LTE BAND 71 (15.0 MHz)

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

OUTPUT POWER FOR LTE BAND 71 (20.0 MHz)

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

7.18. 5G NR Band n77

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

8. CONDUCTED TEST RESULTS

8.1. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

LIMITS

For reporting purposes only.

TEST PROCEDURE

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

RESULTS

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

LTE BAND 2

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

LTE BAND 5

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

5G NR Band n5

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

LTE BAND 7

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

LTE BAND 12

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

5G NR Band n12

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

LTE BAND 13

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

LTE BAND 14

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

LTE BAND 17

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

LTE BAND 25

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

LTE BAND 26 (PART 90S)

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

LTE BAND 30

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

LTE BAND 41

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

5G NR Band n41

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

LTE BAND 48

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

LTE BAND 66

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

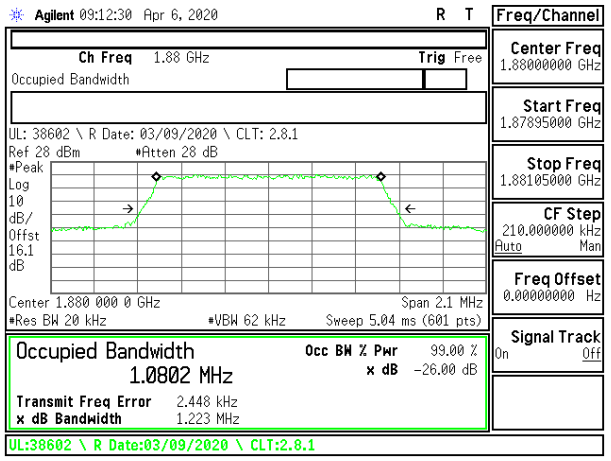
LTE BAND 71

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

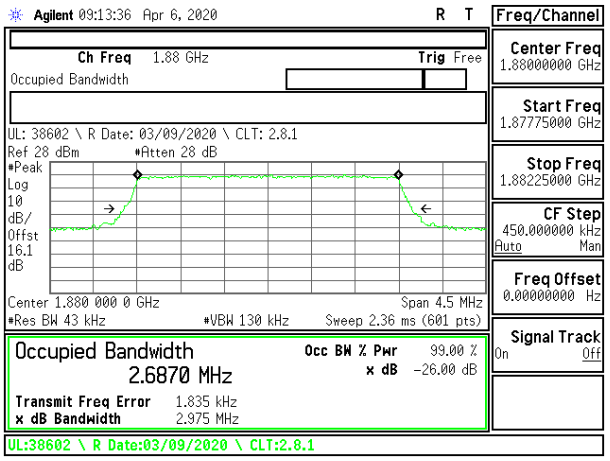
5G NR Band n77

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

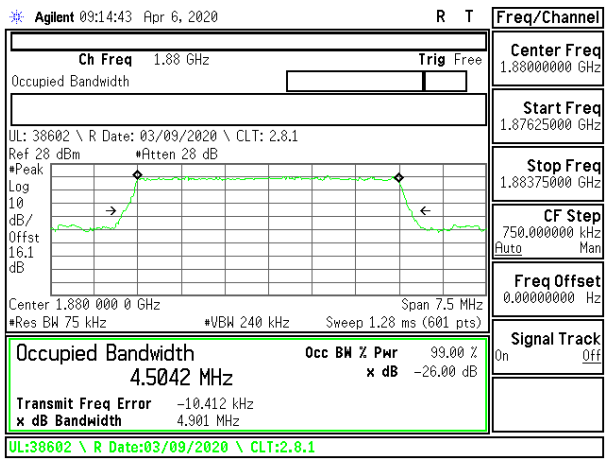
8.1.1. LTE BAND 2



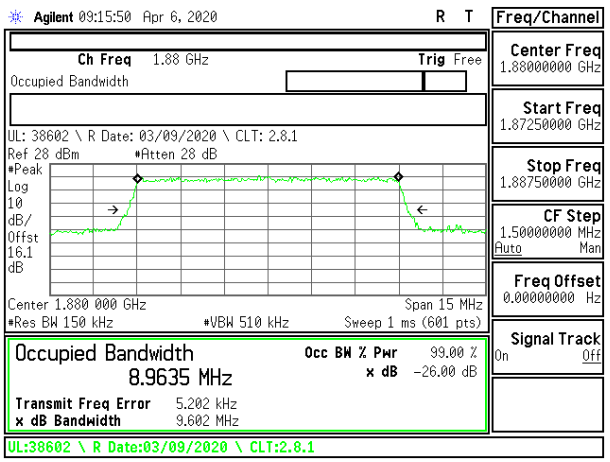
LTE B2 1.4MHz QPSK Middle Channel RB6-0



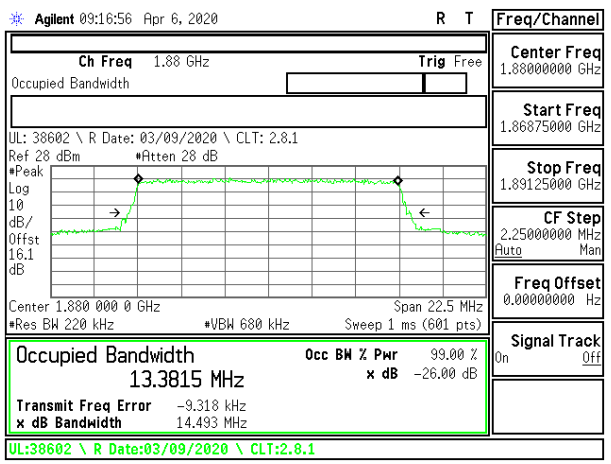
LTE B2 3MHz QPSK Middle Channel RB15-0



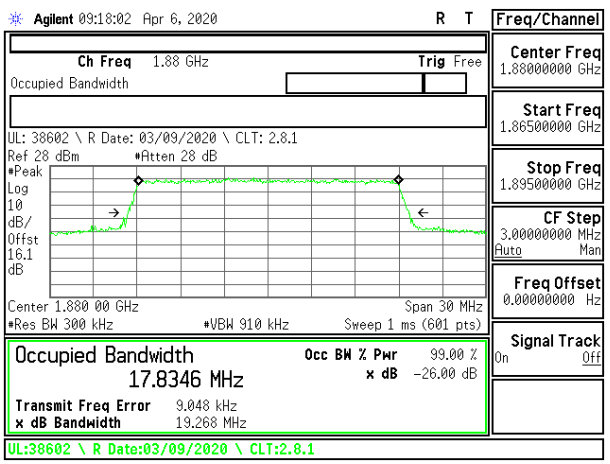
LTE B2 5MHz QPSK Middle Channel RB25-0



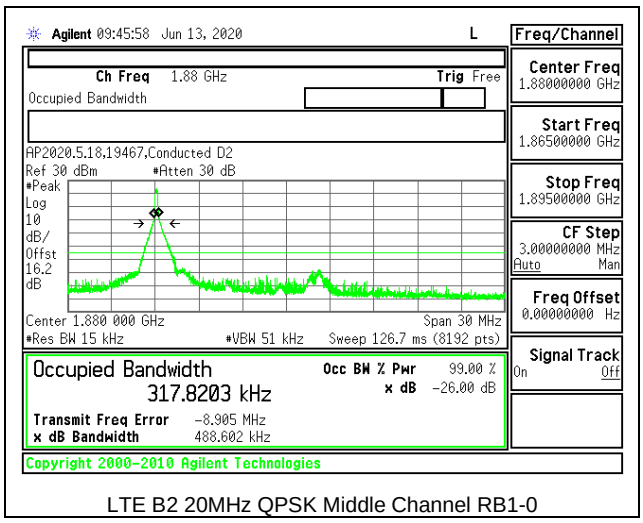
LTE B2 10MHz QPSK Middle Channel RB50-0



LTE B2 15MHz QPSK Middle Channel RB75-0

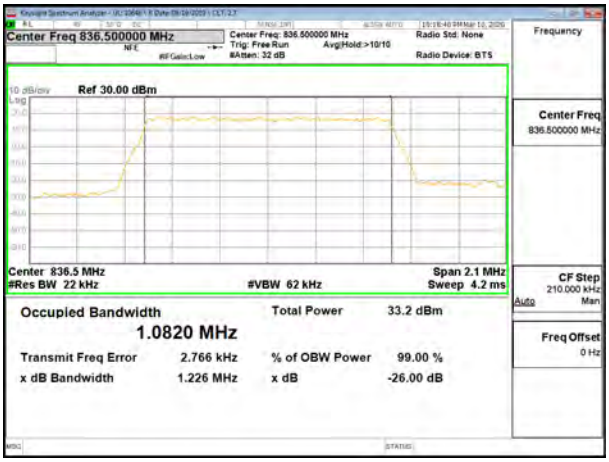


LTE B2 20MHz QPSK Middle Channel RB100-0

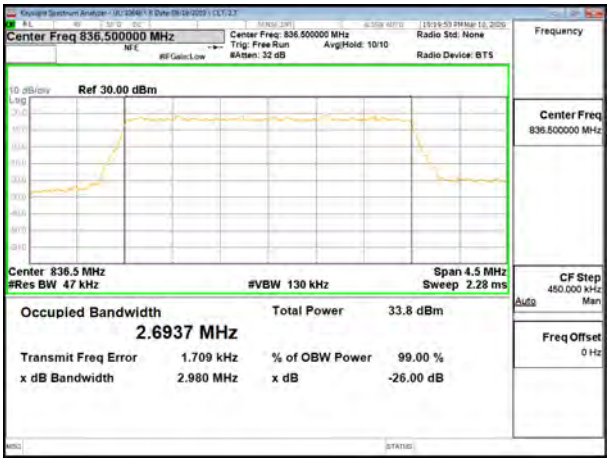


LTE B2 20MHz QPSK Middle Channel RB1-0

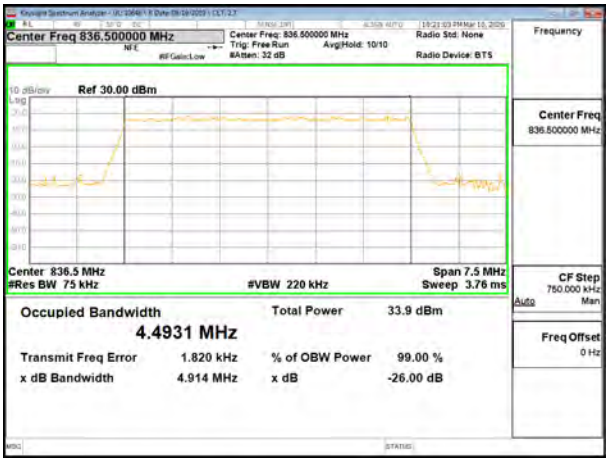
8.1.2. LTE BAND 5



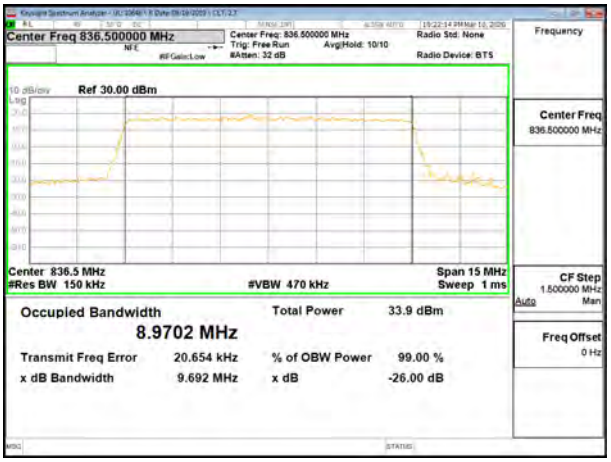
LTE B5 1.4MHz QPSK Middle Channel RB6-0



LTE B5 3MHz QPSK Middle Channel RB15-0

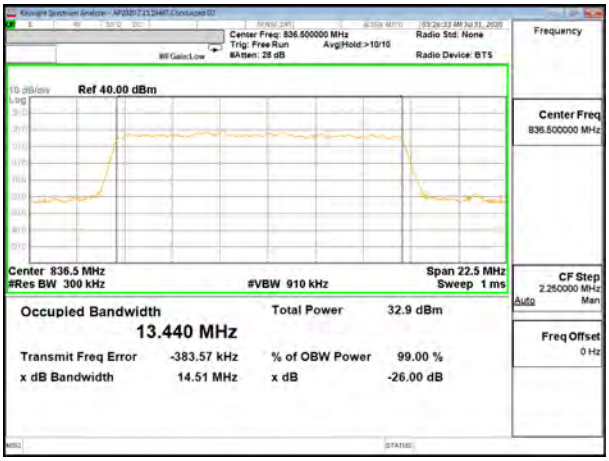


LTE B2 5MHz QPSK Middle Channel RB25-0

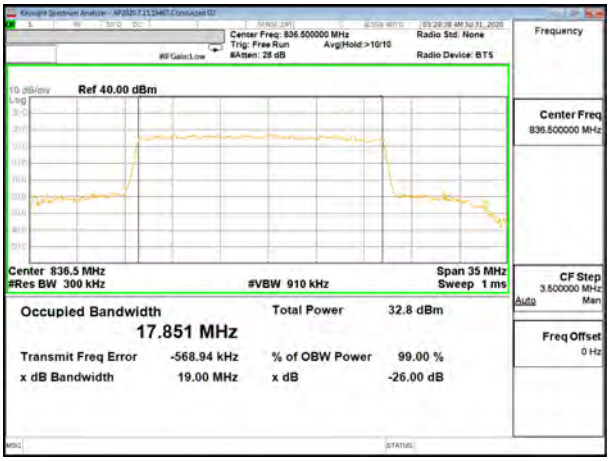


LTE B5 10MHz QPSK Middle Channel RB50-0

8.1.3. 5G NR Band n5

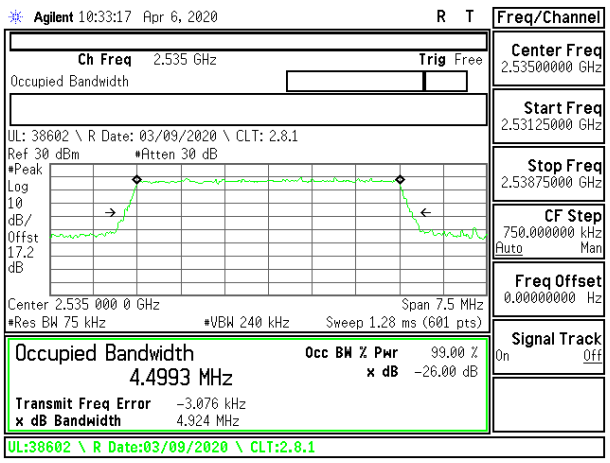


5G NR Band n5 15MHz QPSK Middle Channel RB75-0

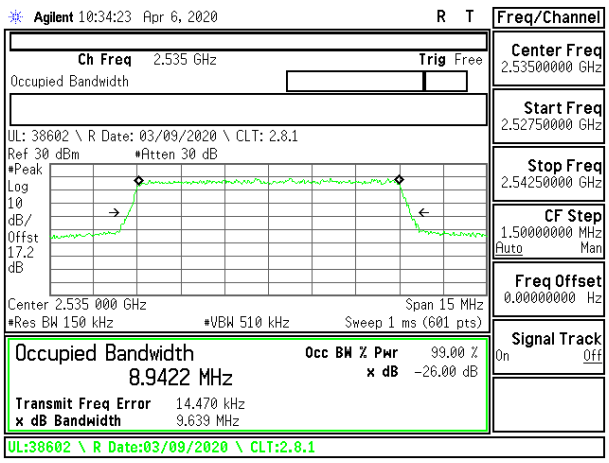


5G NR Band n5 20MHz QPSK Middle Channel RB100-0

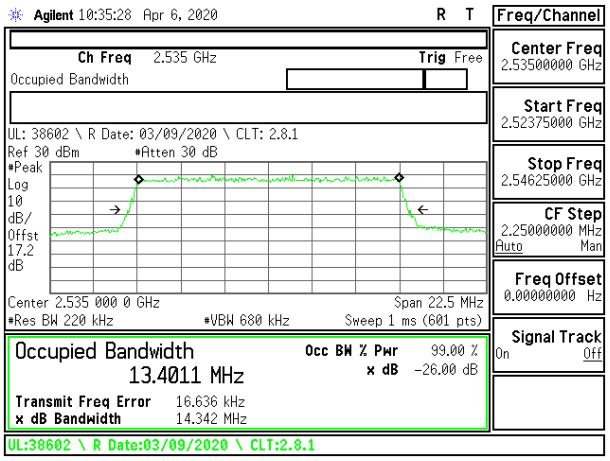
8.1.4. LTE BAND 7



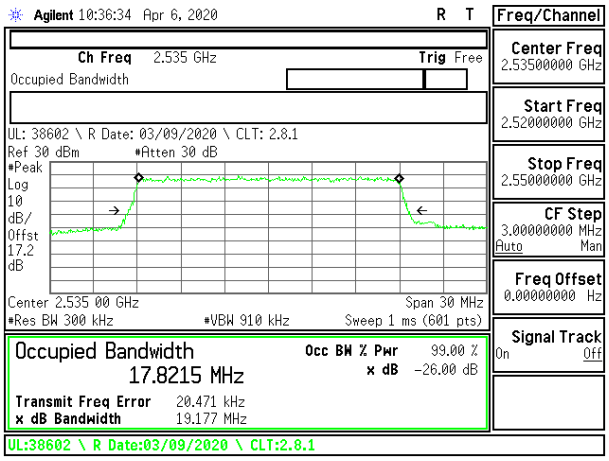
LTE B7 5MHz QPSK Middle Channel RB25-0



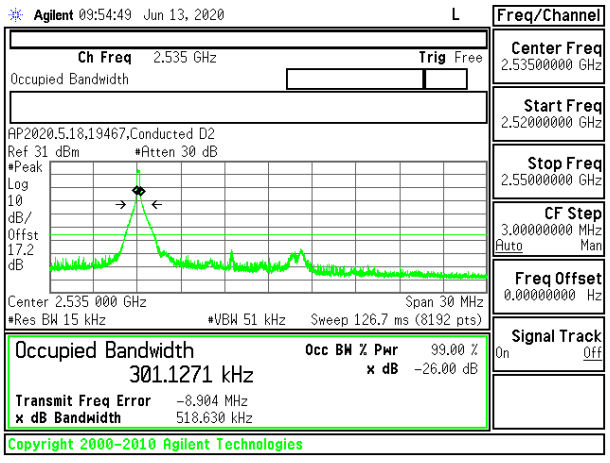
LTE B7 10MHz QPSK Middle Channel RB50-0



LTE B7 15MHz QPSK Middle Channel RB75-0

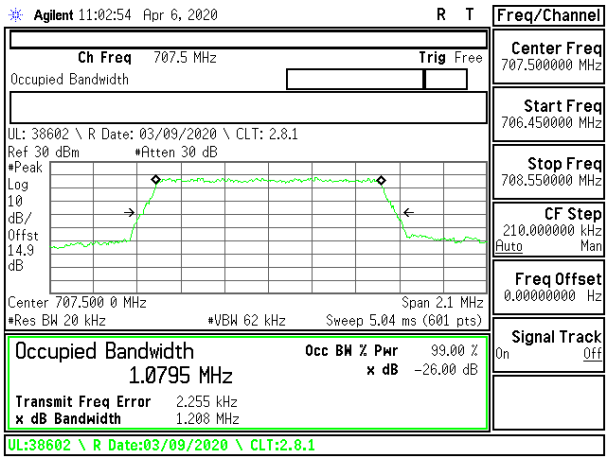


LTE B7 20MHz QPSK Middle Channel RB100-0

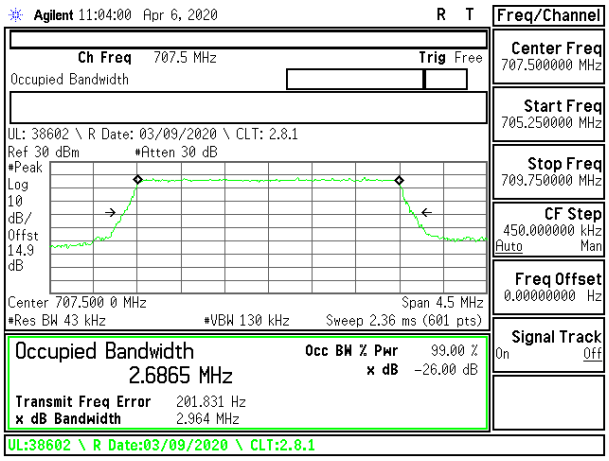


LTE B7 20MHz QPSK Middle Channel RB1-0

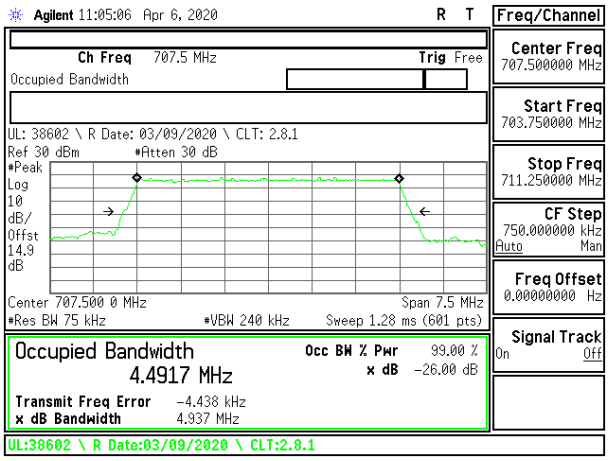
8.1.5. LTE BAND 12



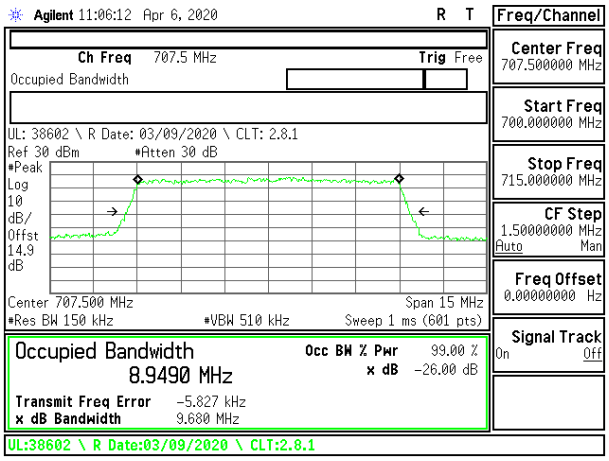
LTE B12 1.4MHz QPSK Middle Channel RB6-0



LTE B12 3MHz QPSK Middle Channel RB15-0



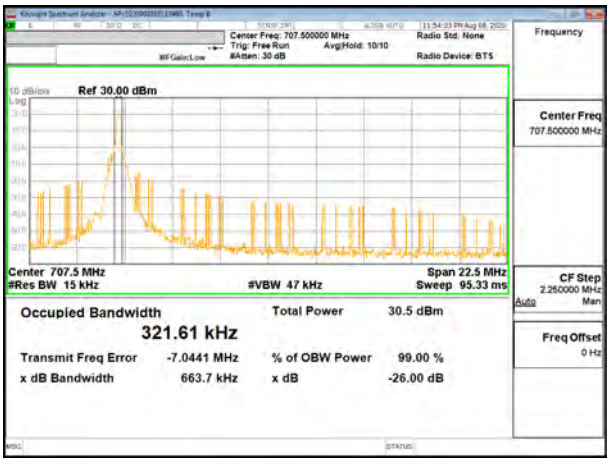
LTE B12 5MHz QPSK Middle Channel RB25-0



LTE B12 10MHz QPSK Middle Channel RB50-0

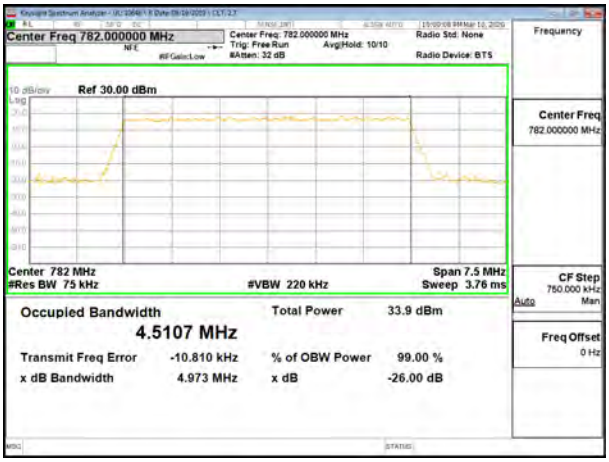
8.1.6. 5G NR Band n12

5G NR Band n12 15MHz QPSK Middle Channel RB75-0

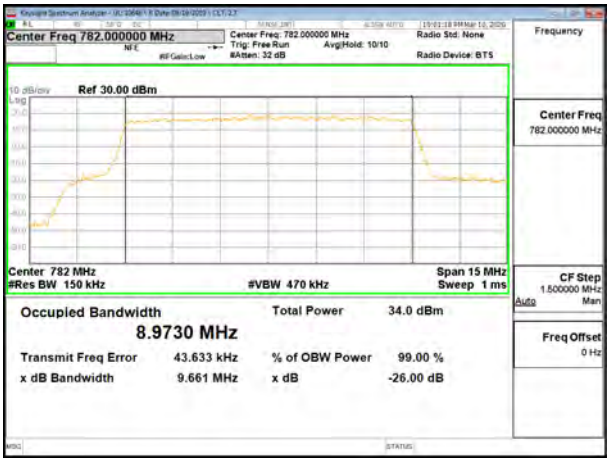


5G NR Band n12 15MHz QPSK Middle Channel RB1-0

8.1.7. LTE BAND 13

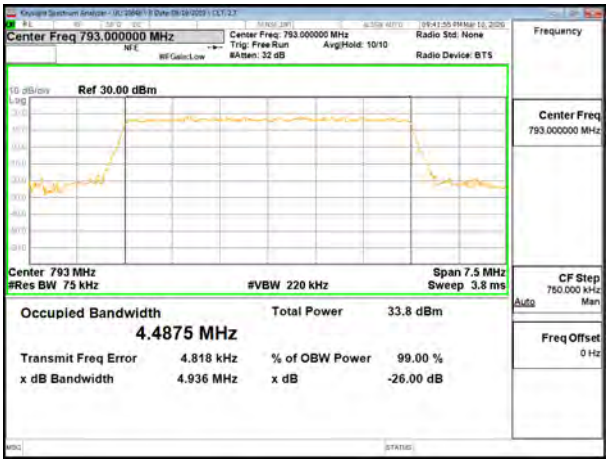


LTE B13 5MHz QPSK Middle Channel RB25-0

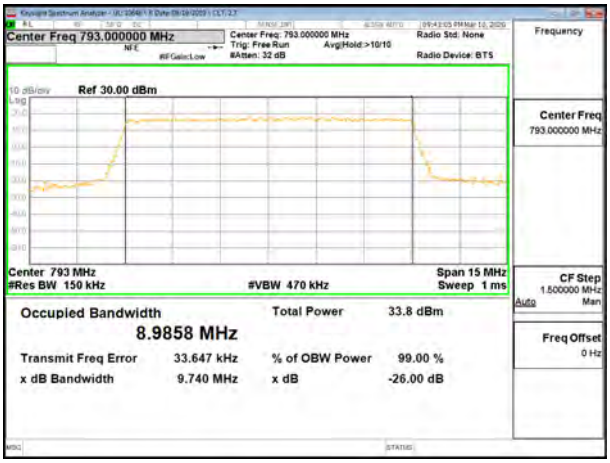


LTE B13 10MHz QPSK Middle Channel RB50-0

8.1.8. LTE BAND 14

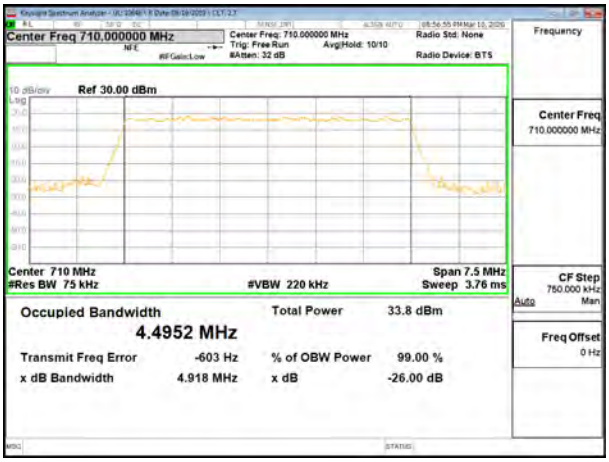


LTE B14 5MHz QPSK Middle Channel RB25-0

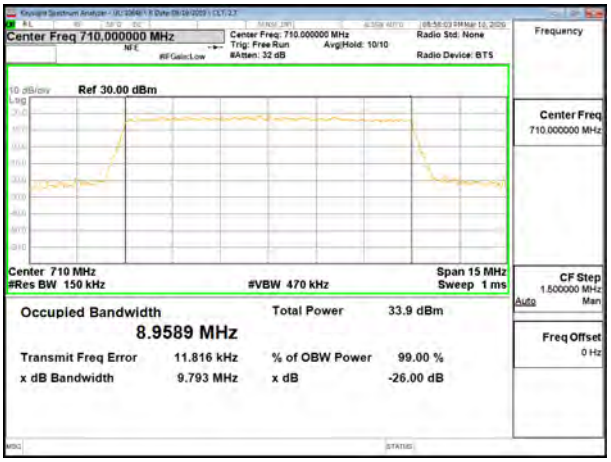


LTE B14 10MHz QPSK Middle Channel RB50-0

8.1.9. LTE BAND 17

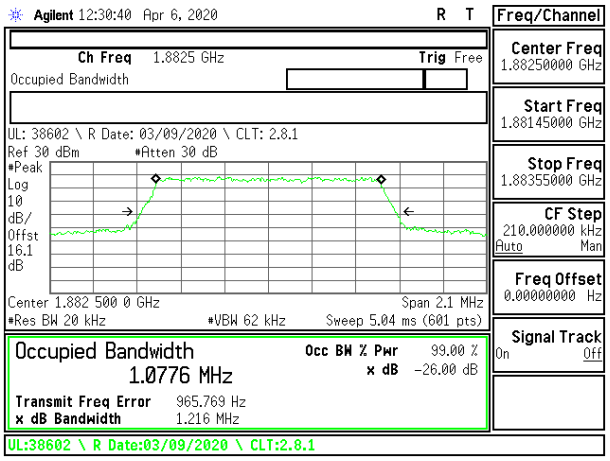


LTE B17 5MHz QPSK Middle Channel RB25-0

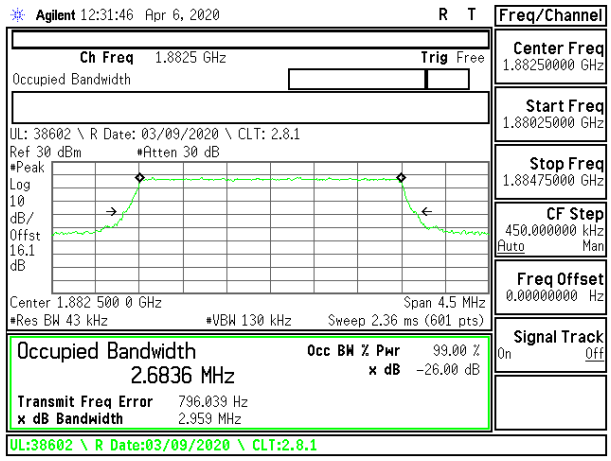


LTE B17 10MHz QPSK Middle Channel RB50-0

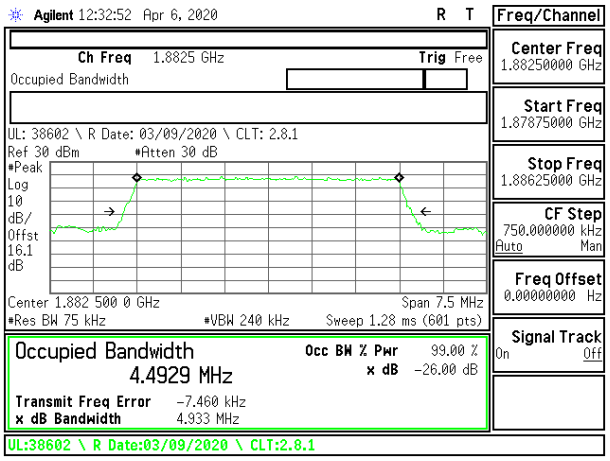
8.1.10. LTE BAND 25



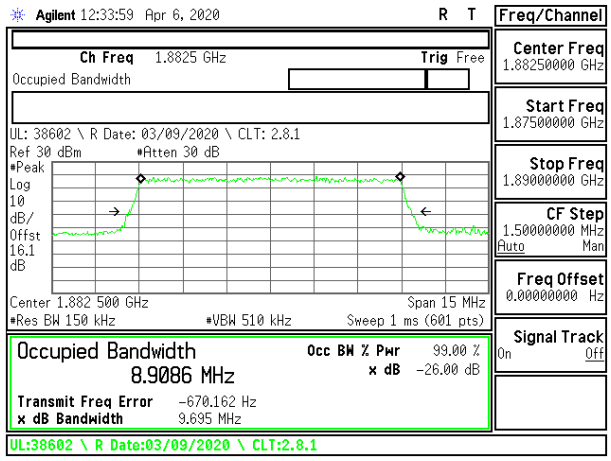
LTE B25 1.4MHz QPSK Middle Channel RB6-0



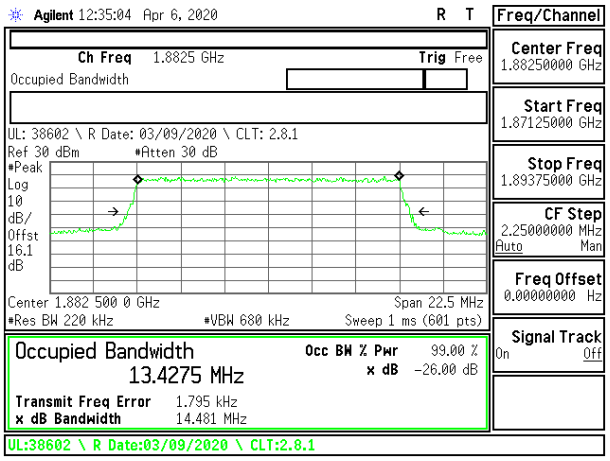
LTE B25 3MHz QPSK Middle Channel RB15-0



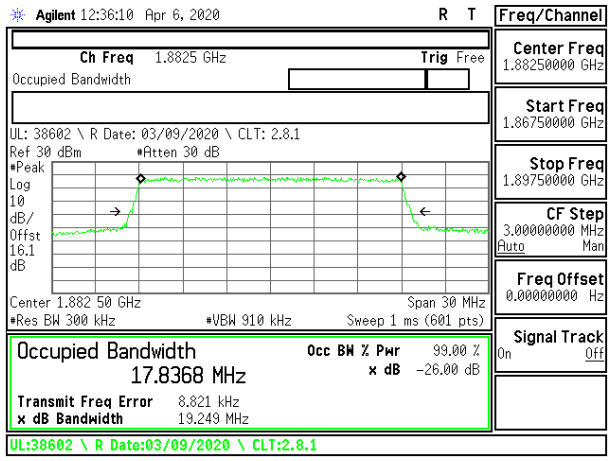
LTE B25 5MHz QPSK Middle Channel RB25-0



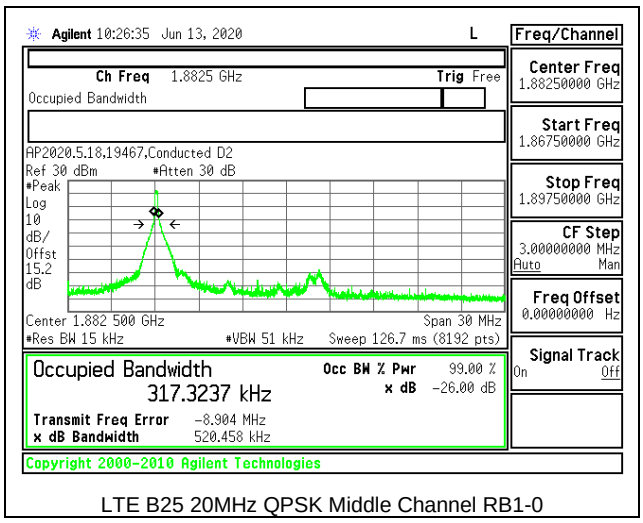
LTE B25 10MHz QPSK Middle Channel RB50-0



LTE B25 15MHz QPSK Middle Channel RB75-0

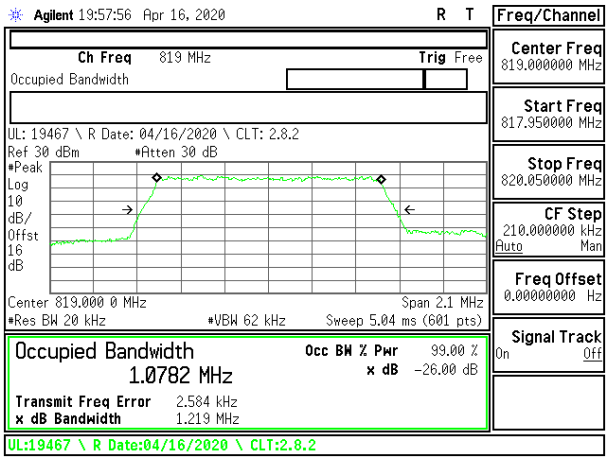


LTE B25 20MHz QPSK Middle Channel RB100-0

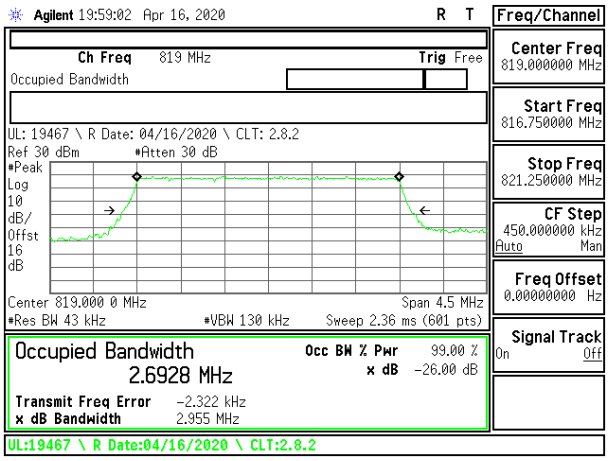


LTE B25 20MHz QPSK Middle Channel RB1-0

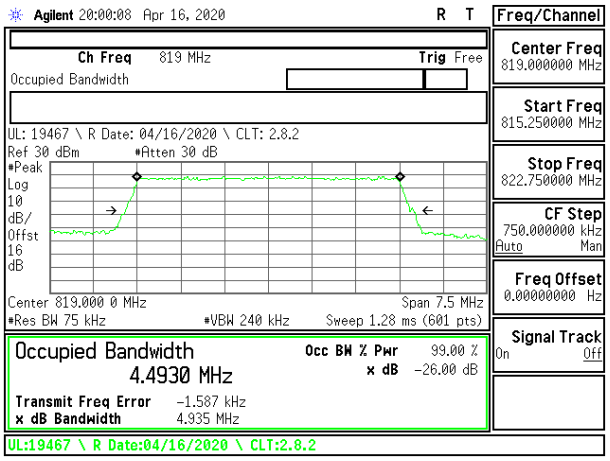
8.1.11. LTE BAND 26 (PART 90S)



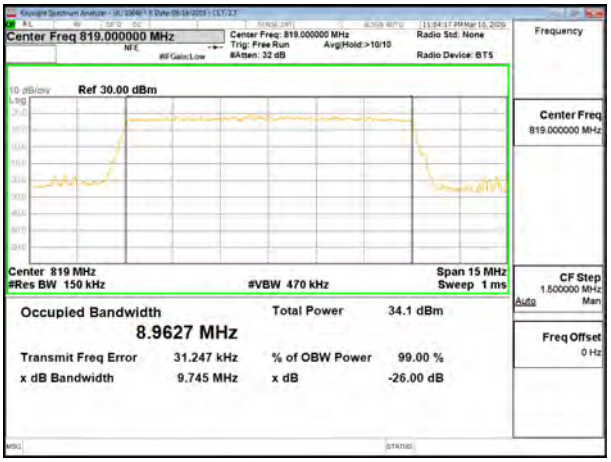
LTE B26 1.4MHz QPSK Middle Channel RB6-0



LTE B26 3MHz QPSK Middle Channel RB15-0

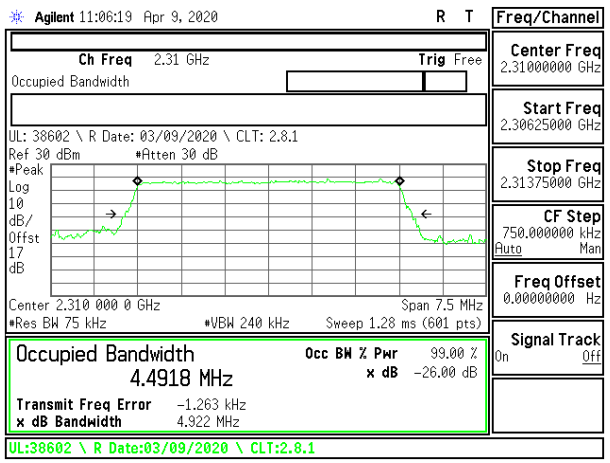


LTE B26 5MHz QPSK Middle Channel RB25-0

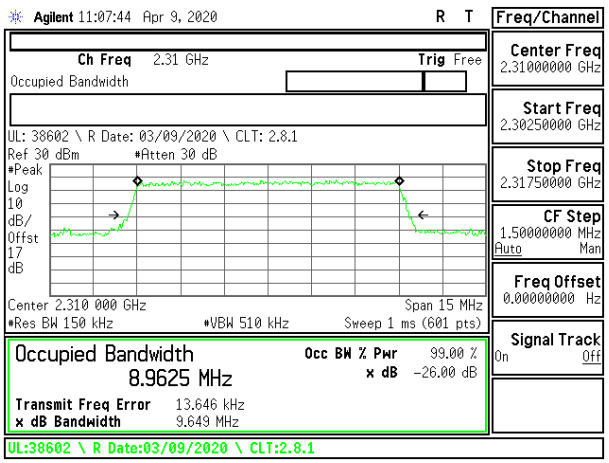


LTE B26 10MHz QPSK Middle Channel RB50-0

8.1.12. LTE BAND 30

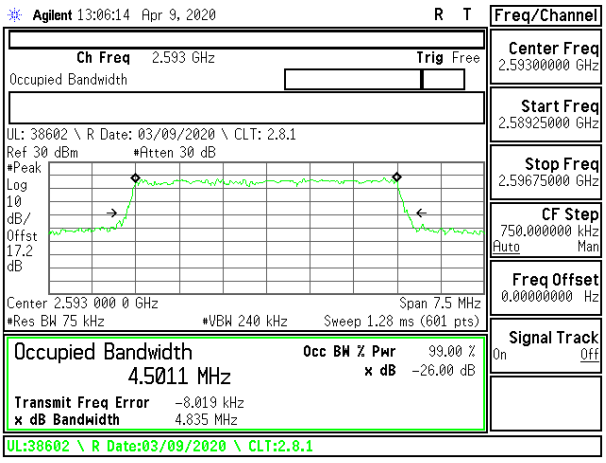


LTE B30 5MHz QPSK Middle Channel RB25-0

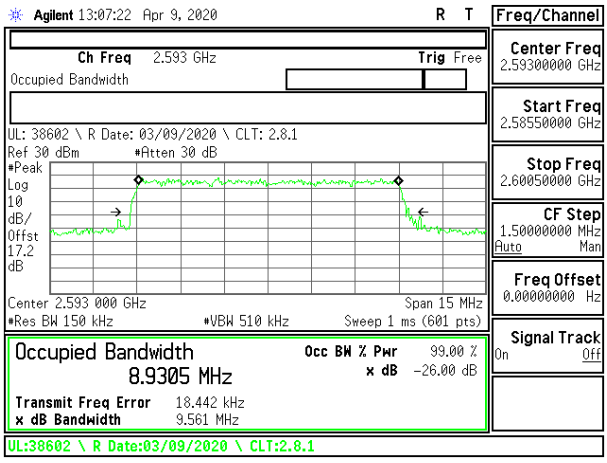


LTE B30 10MHz QPSK Middle Channel RB50-0

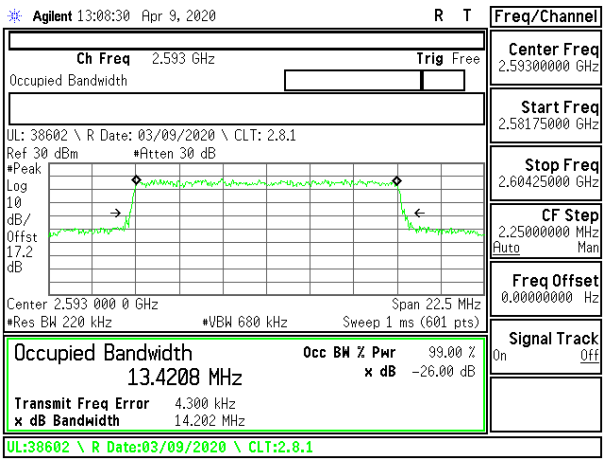
8.1.13. LTE BAND 41



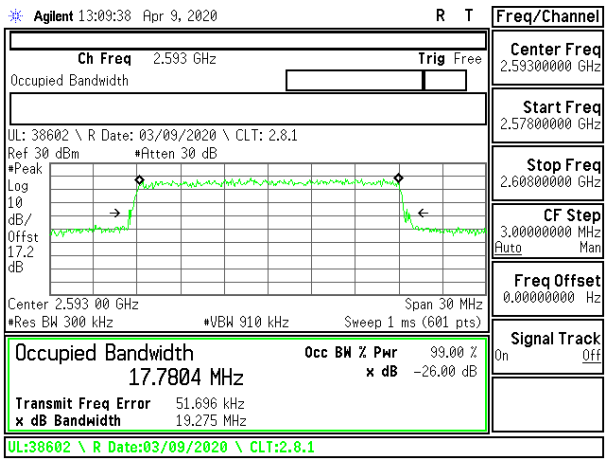
LTE B41 5MHz QPSK Middle Channel RB25-0



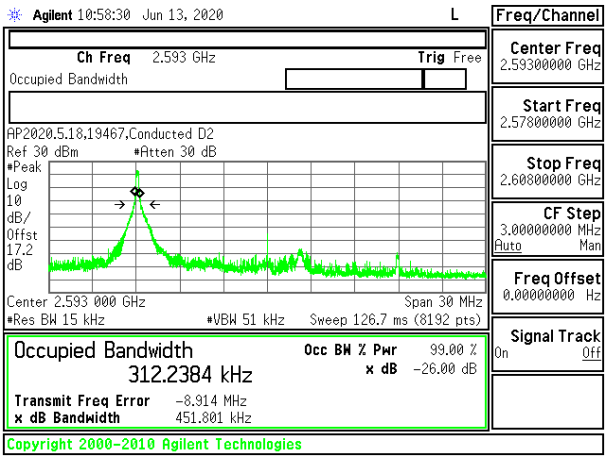
LTE B41 10MHz QPSK Middle Channel RB50-0



LTE B41 15MHz QPSK Middle Channel RB75-0

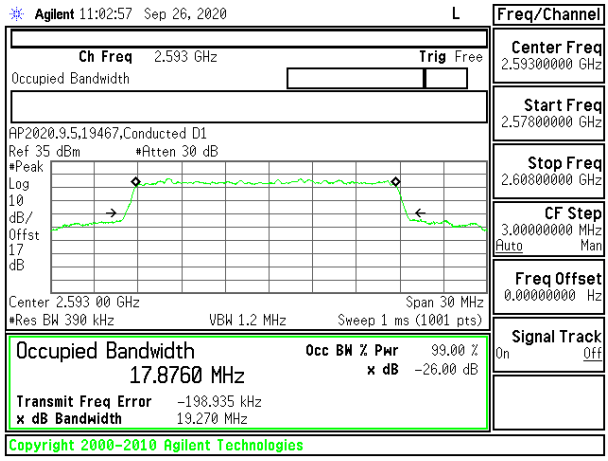


LTE B41 20MHz QPSK Middle Channel RB100-0



LTE B41 20MHz QPSK Middle Channel RB1-0

8.1.14. 5G NR Band n41



5G NR Band n41 20MHz QPSK Middle Channel RB50-0

5G NR Band n41 40MHz QPSK Middle Channel RB100-0

5G NR Band n41 50MHz QPSK Middle Channel RB128-0

5G NR Band n41 60MHz QPSK Middle Channel RB162-0

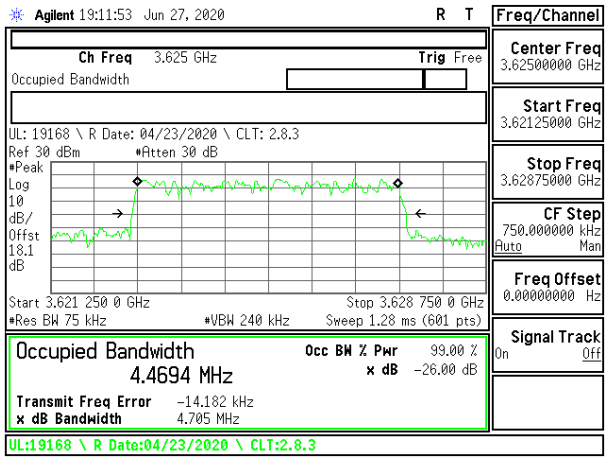
5G NR Band n41 80MHz QPSK Middle Channel RB216-0

5G NR Band n41 90MHz QPSK Middle Channel RB240-0

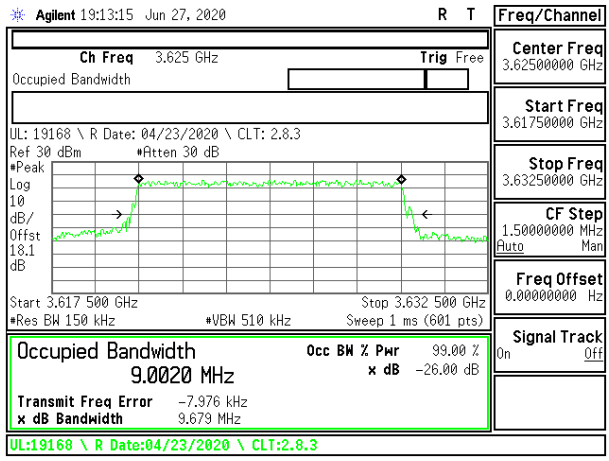
5G NR Band n41 100MHz QPSK Middle Channel RB270-0

5G NR Band n41 100MHz QPSK Middle Channel RB1-0

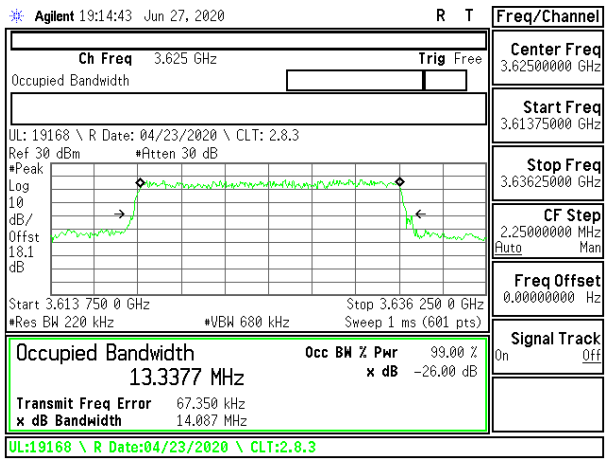
8.1.15. LTE BAND 48



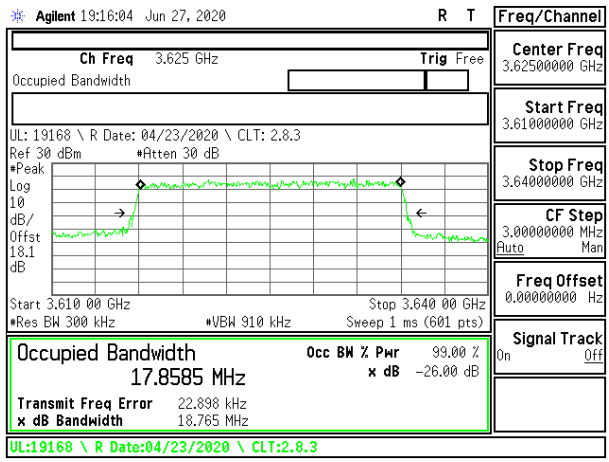
LTE B48 5MHz QPSK Middle Channel RB25-0



LTE B48 10MHz QPSK Middle Channel RB50-0

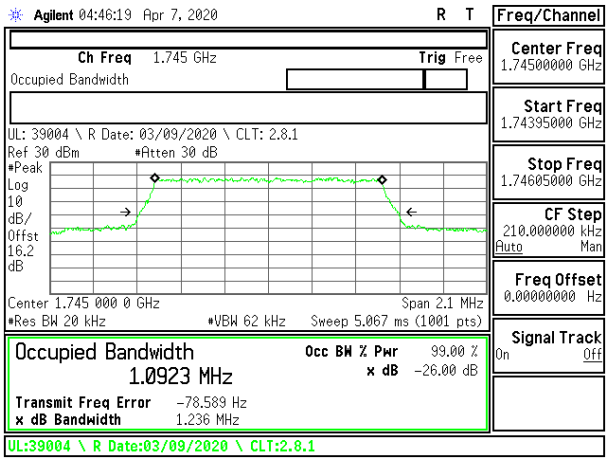


LTE B48 15MHz QPSK Middle Channel RB75-0

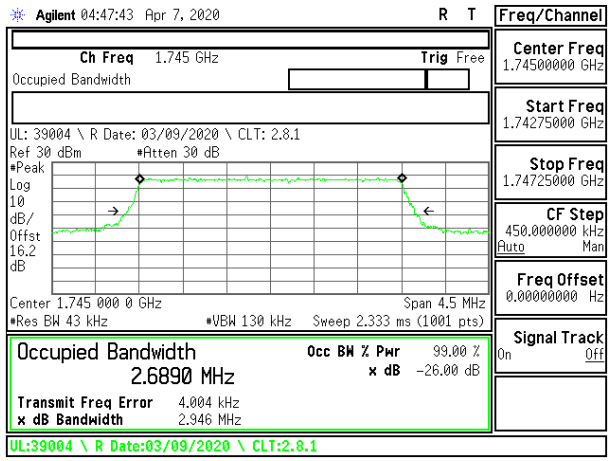


LTE B48 20MHz QPSK Middle Channel RB100-0

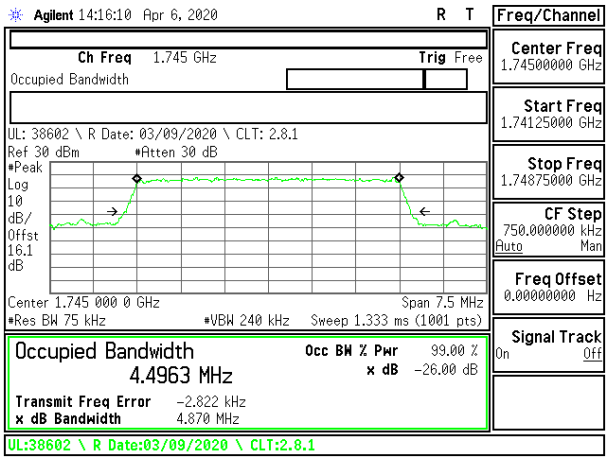
8.1.16. LTE BAND 66



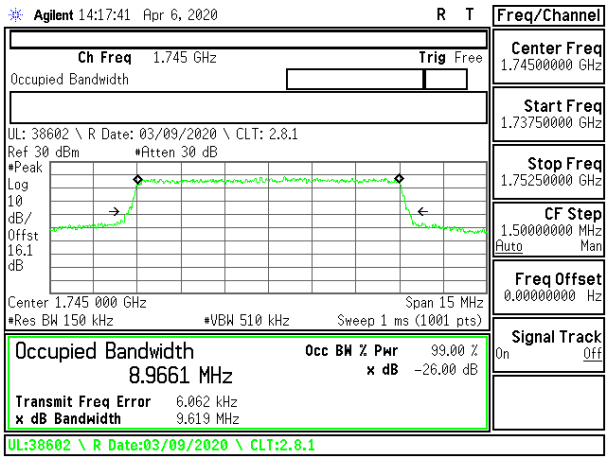
LTE B66 1.4MHz QPSK Middle Channel RB6-0



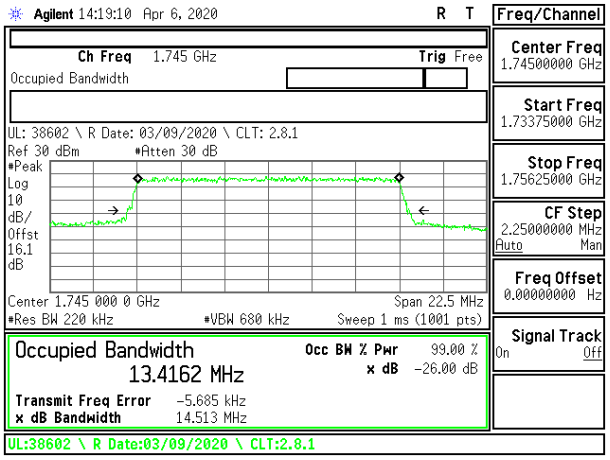
LTE B66 3MHz QPSK Middle Channel RB15-0



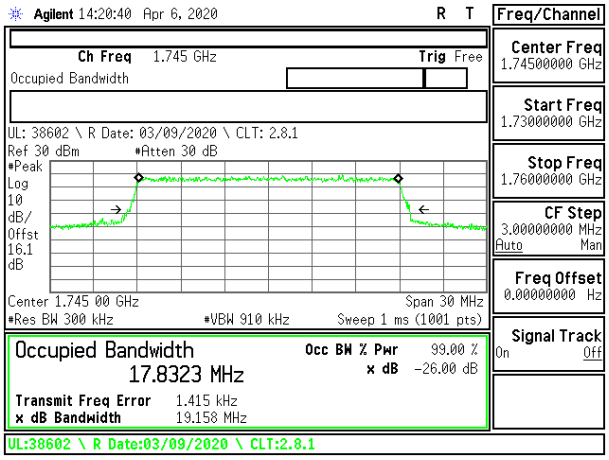
LTE B66 5MHz QPSK Middle Channel RB25-0



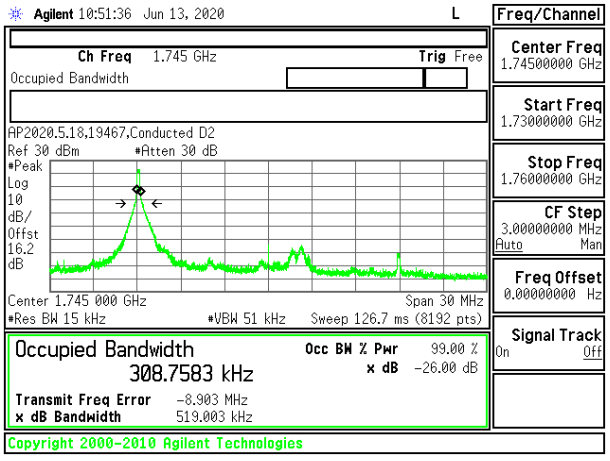
LTE B66 10MHz QPSK Middle Channel RB50-0



LTE B66 15MHz QPSK Middle Channel RB75-0

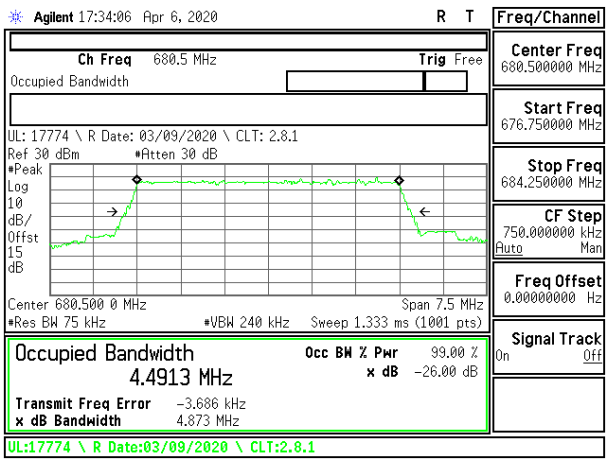


LTE B66 20MHz QPSK Middle Channel RB100-0

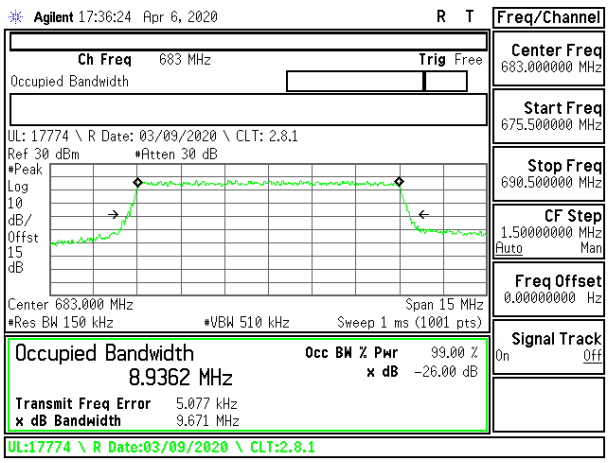


LTE B66 20MHz QPSK Middle Channel RB1-0

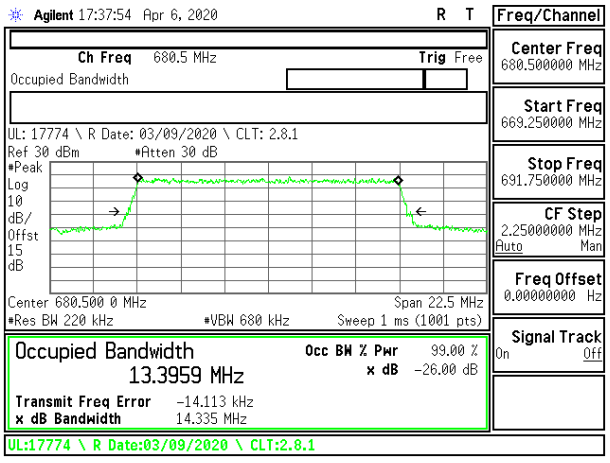
8.1.17. LTE BAND 71



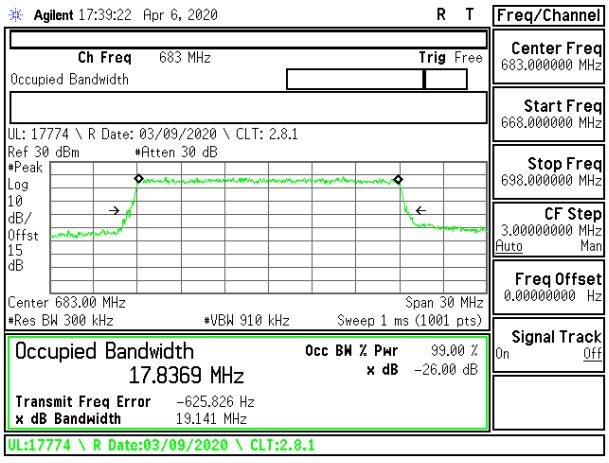
LTE B71 5MHz QPSK Middle Channel RB25-0



LTE B71 10MHz QPSK Middle Channel RB50-0



LTE B71 15MHz QPSK Middle Channel RB75-0



LTE B71 20MHz QPSK Middle Channel RB100-0

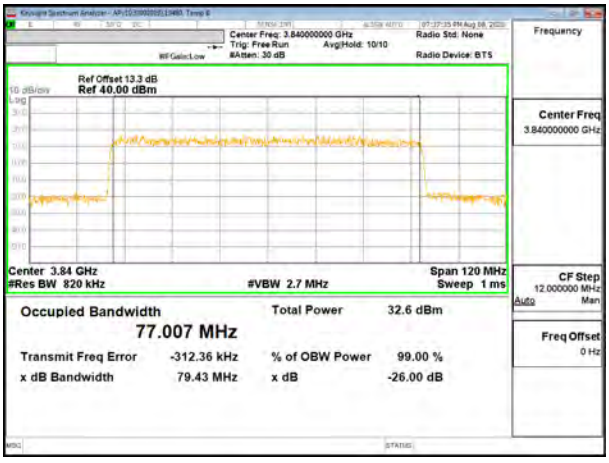
8.1.18. 5G NR Band n77

5G NR Band n77 20MHz QPSK Middle Channel RB50-0

5G NR Band n77 40MHz QPSK Middle Channel RB100-0

5G NR Band n77 50MHz QPSK Middle Channel RB128-0

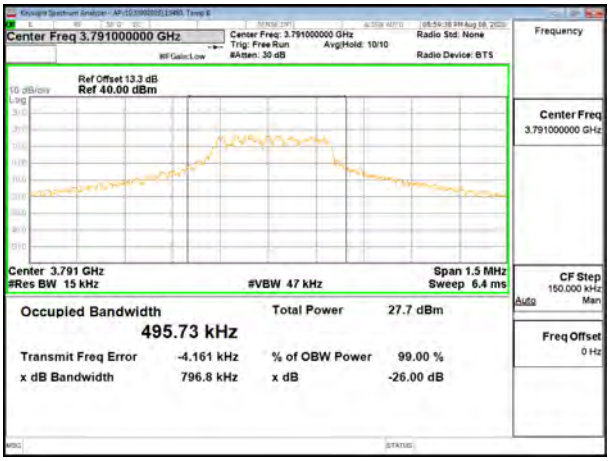
5G NR Band n77 60MHz QPSK Middle Channel RB162-0



5G NR Band n77 80MHz QPSK Middle Channel RB216-0

5G NR Band n77 90MHz QPSK Middle Channel RB240-0

5G NR Band n77 100MHz QPSK Middle Channel RB270-0



5G NR Band n77 100MHz QPSK Middle Channel RB1-0

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 mesurement 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 substracting 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 substracting the reference power level measured in (b)(1) from the measurements made in this step. The absolute value of the calculated ACP must be greater than or equal to the absolute value of the ACP given in the table for each condition above.

TEST PROCEDURE (FCC LTE BAND 7, 41)

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

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

TEST PROCEDURE (FCC LTE BAND 30)

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

TEST PROCEDURE (FCC LTE BAND 48)

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

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

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

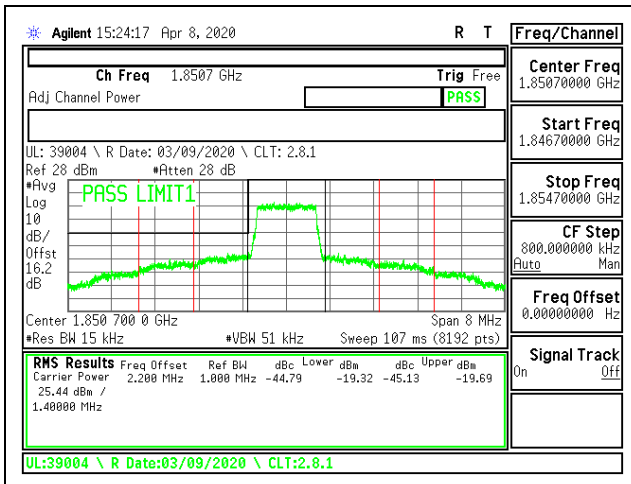
RESULTS

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

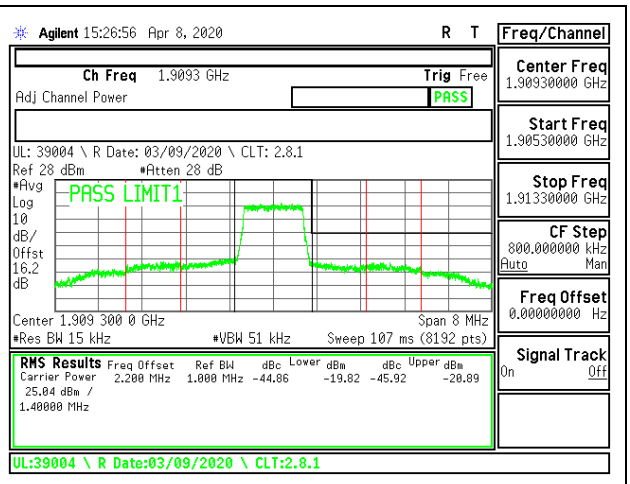
8.2.1. LTE BAND 2 BANDEDGE

LIMITS

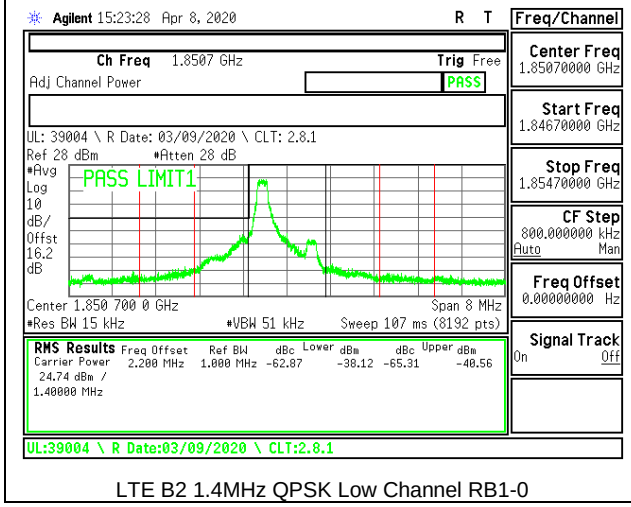
FCC: §24.238
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.



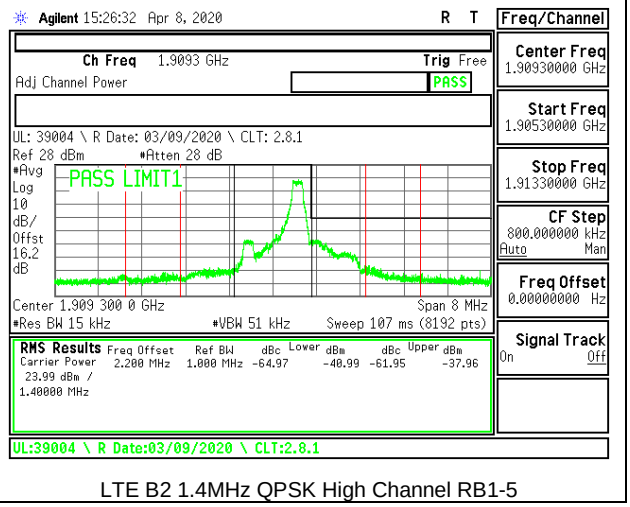
LTE B2 1.4MHz QPSK Low Channel RB6-0



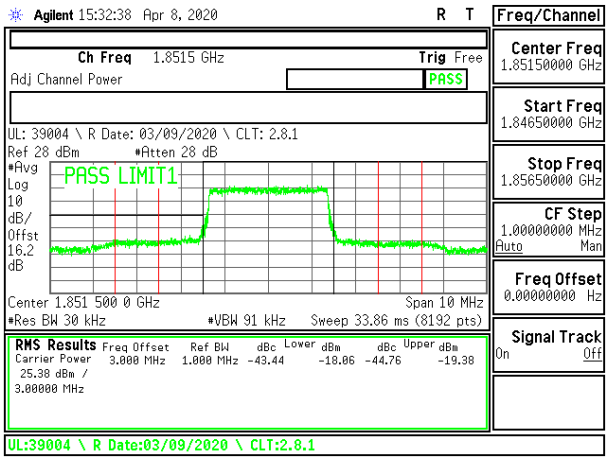
LTE B2 1.4MHz QPSK High Channel RB6-0



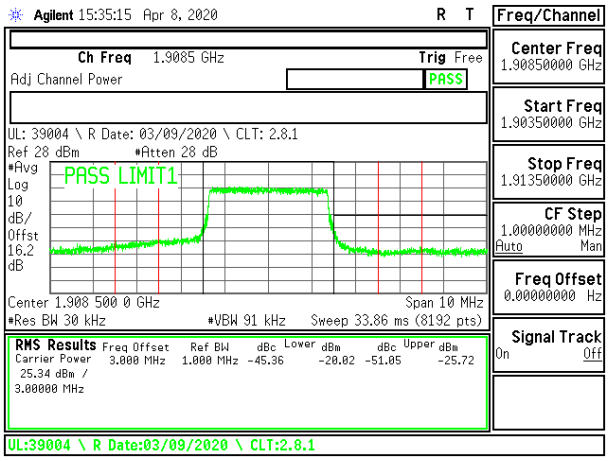
LTE B2 1.4MHz QPSK Low Channel RB1-0



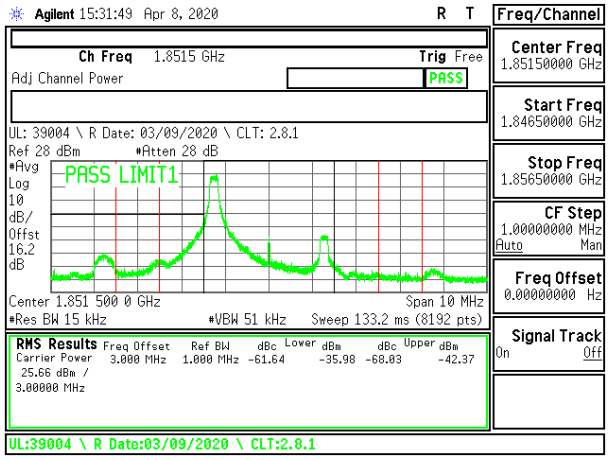
LTE B2 1.4MHz QPSK High Channel RB1-5



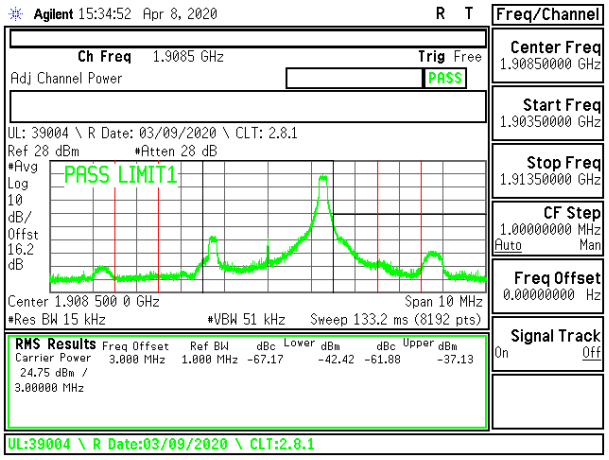
LTE B2 3MHz QPSK Low Channel RB15-0



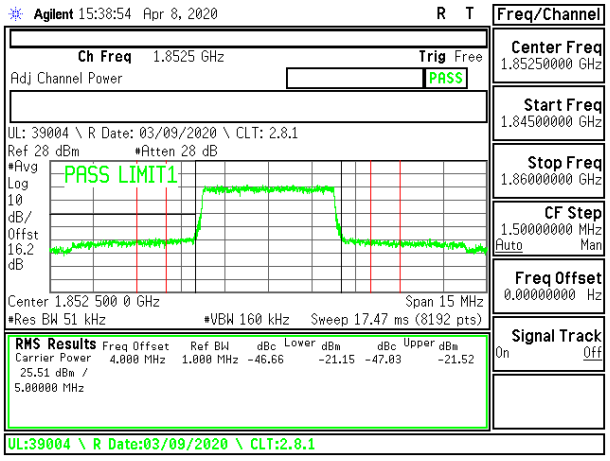
LTE B2 3MHz QPSK High Channel RB15-0



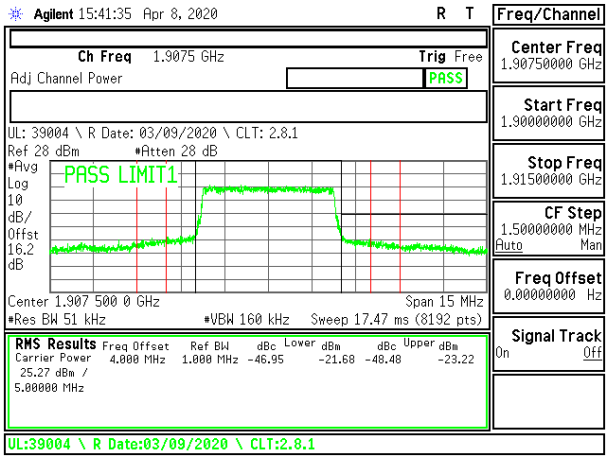
LTE B2 3MHz QPSK Low Channel RB1-0



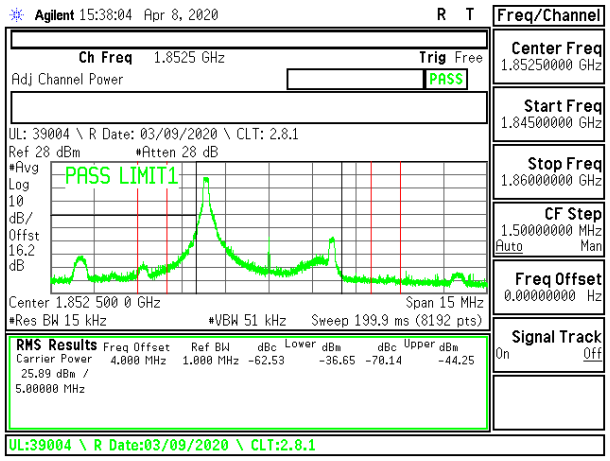
LTE B2 3MHz QPSK High Channel RB1-14



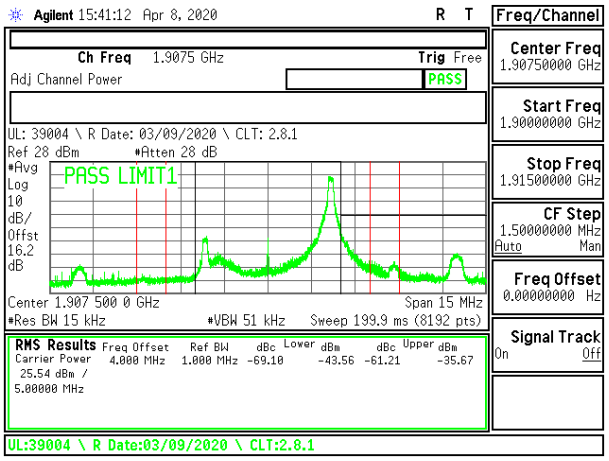
LTE B2 5MHz QPSK Low Channel RB25-0



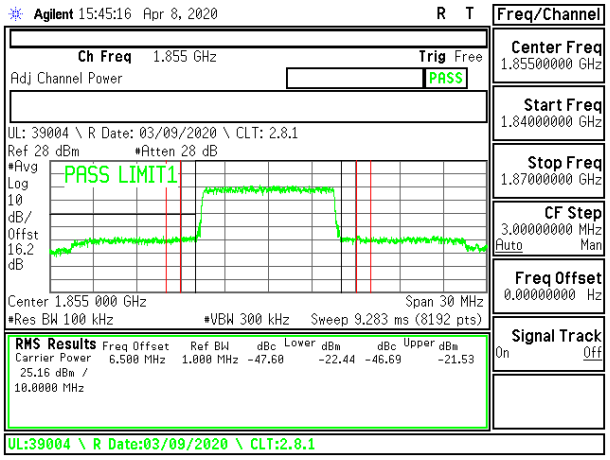
LTE B2 5MHz QPSK High Channel RB25-0



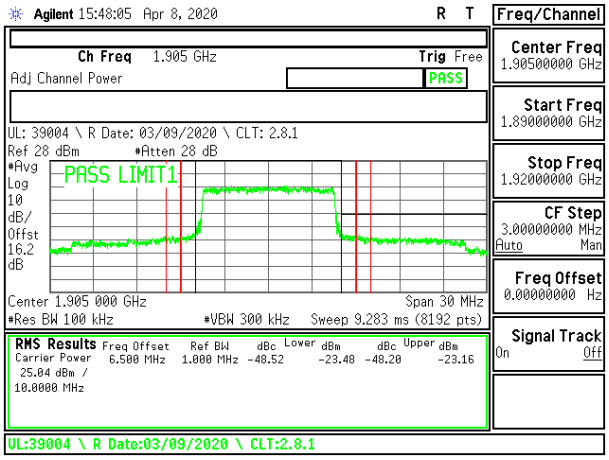
LTE B2 5MHz QPSK Low Channel RB61-0



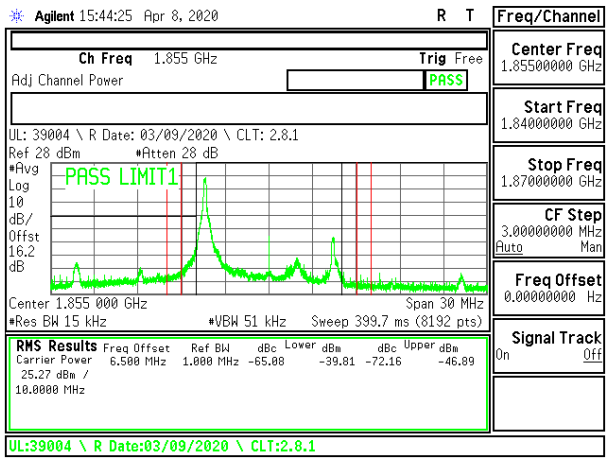
LTE B2 5MHz QPSK High Channel RB1-24



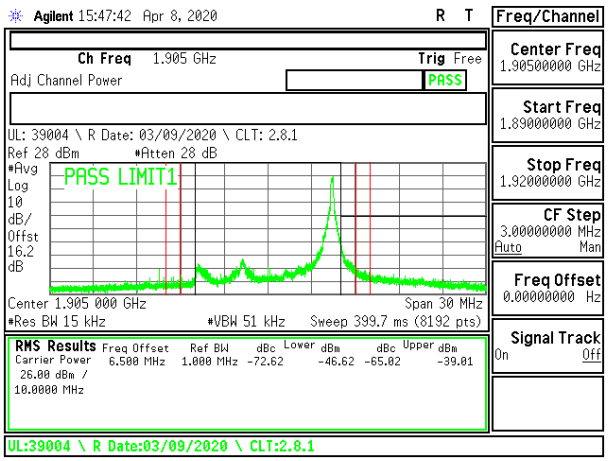
LTE B2 10MHz QPSK Low Channel RB50-0



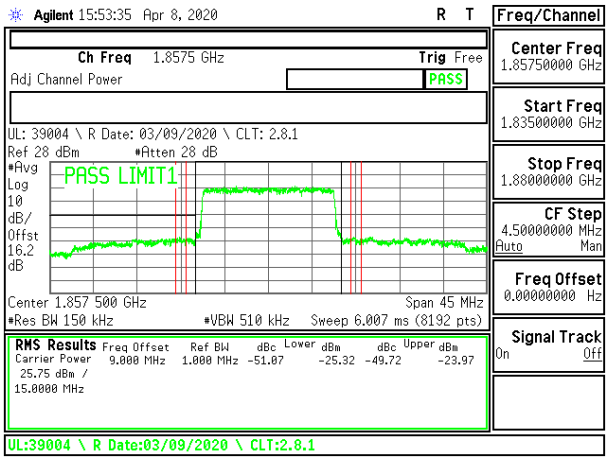
LTE B2 10MHz QPSK High Channel RB50-0



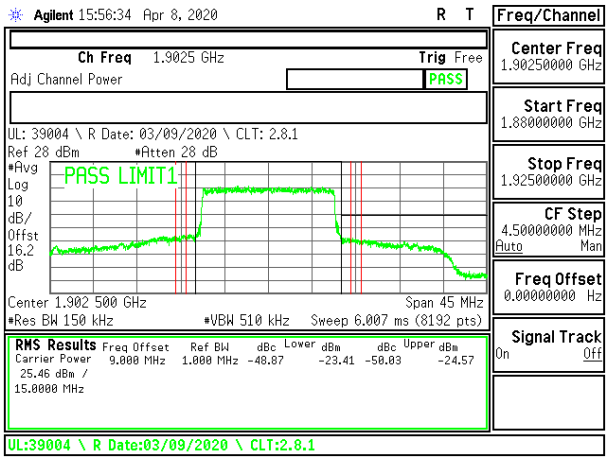
LTE B2 10MHz QPSK Low Channel RB61-0



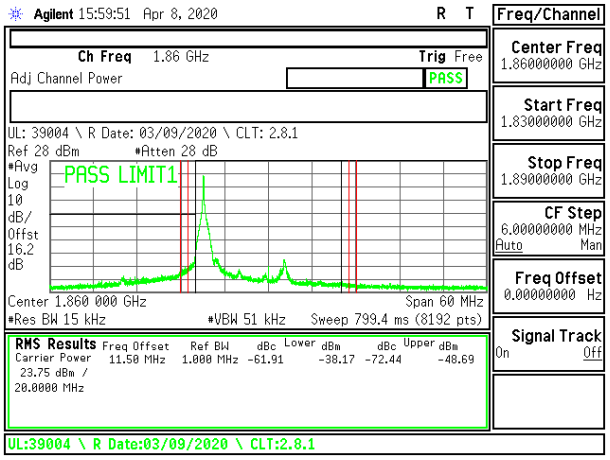
LTE B2 10MHz QPSK High Channel RB1-49



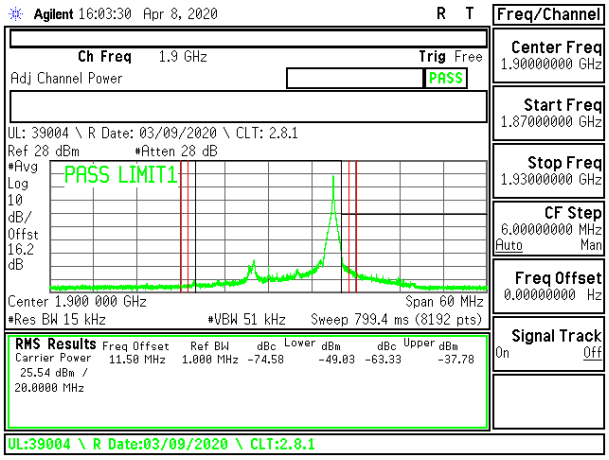
LTE B2 15MHz QPSK Low Channel RB75-0



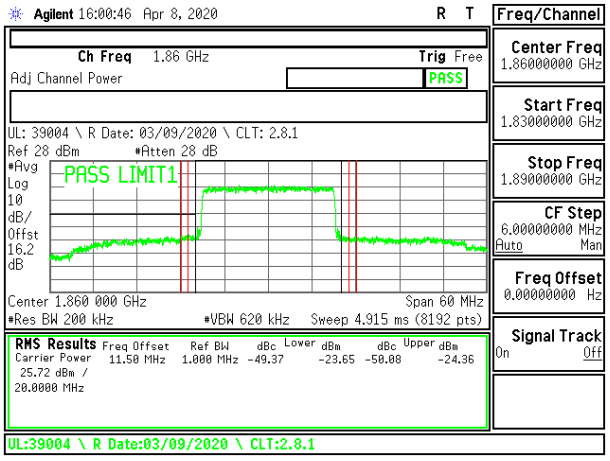
LTE B2 15MHz QPSK High Channel RB75-0



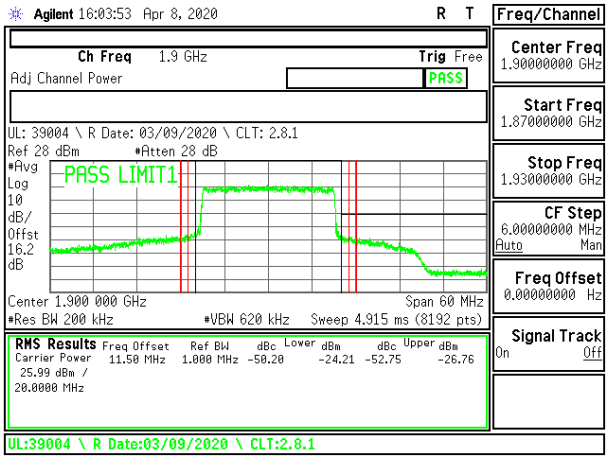
LTE B2 20MHz QPSK Low Channel RB1-0



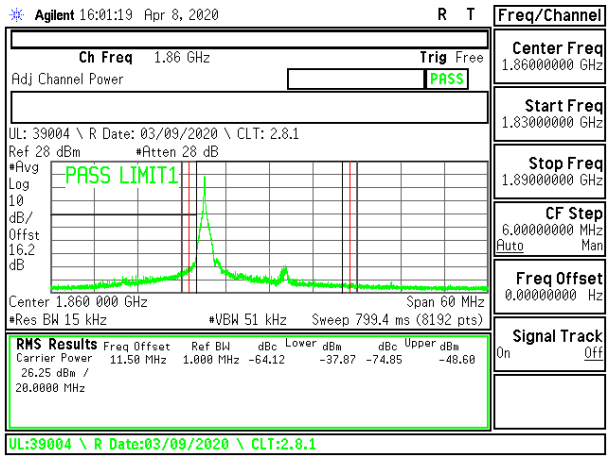
LTE B2 20MHz QPSK High Channel RB1-99



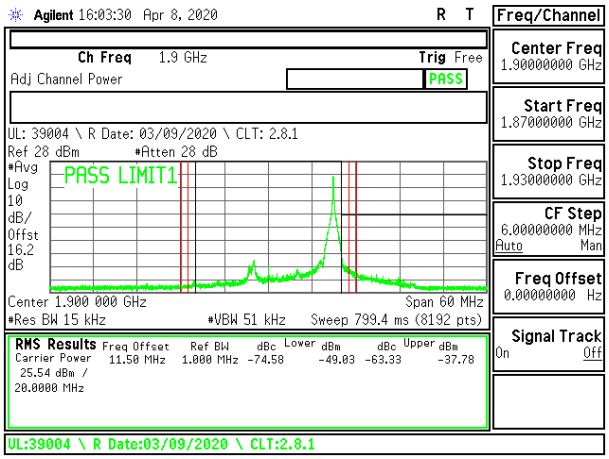
LTE B2 20MHz QPSK Low Channel RB100-0



LTE B2 20MHz QPSK High Channel RB100-0



LTE B2 20MHz 16QAM Low Channel RB1-0



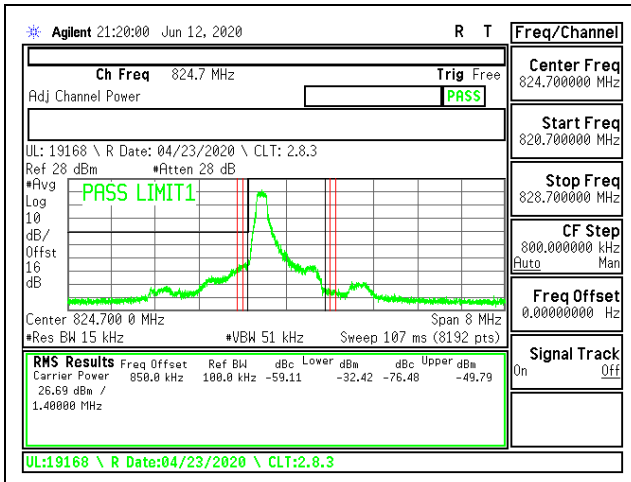
LTE B2 20MHz 16QAM High Channel RB1-99

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

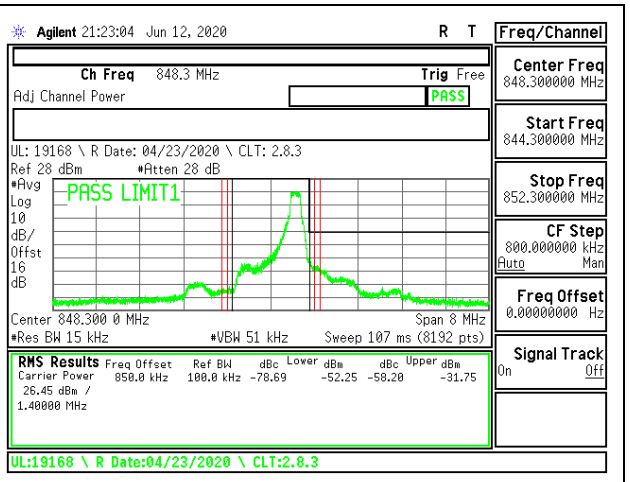
LIMITS

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.

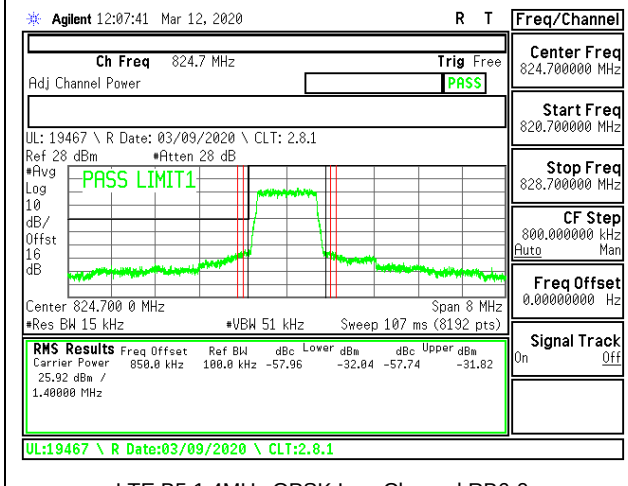
LTE BAND 5 BANDEGE



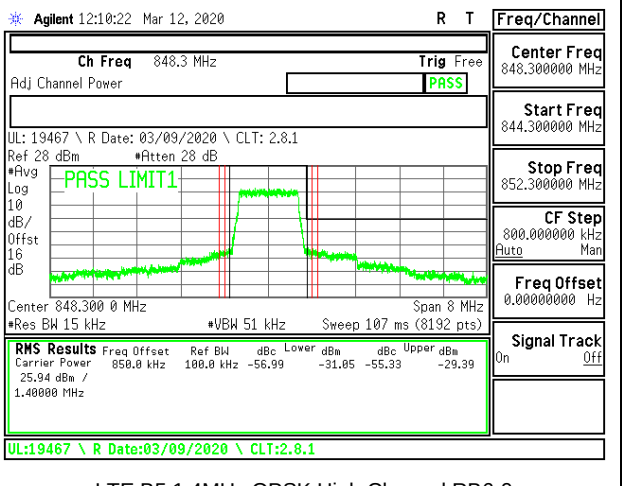
LTE B5 1.4MHz QPSK Low Channel RB1-0



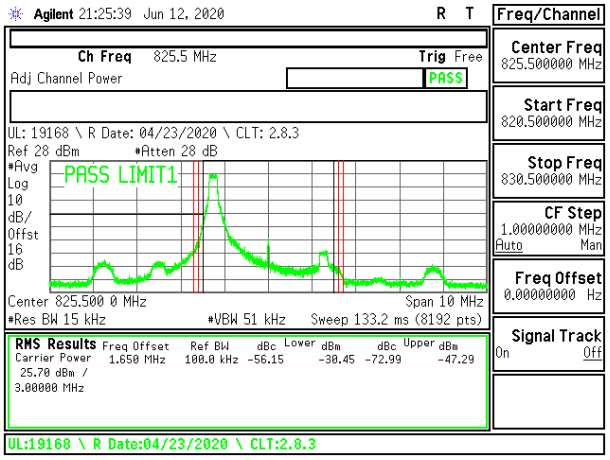
LTE B5 1.4MHz QPSK High Channel RB1-5



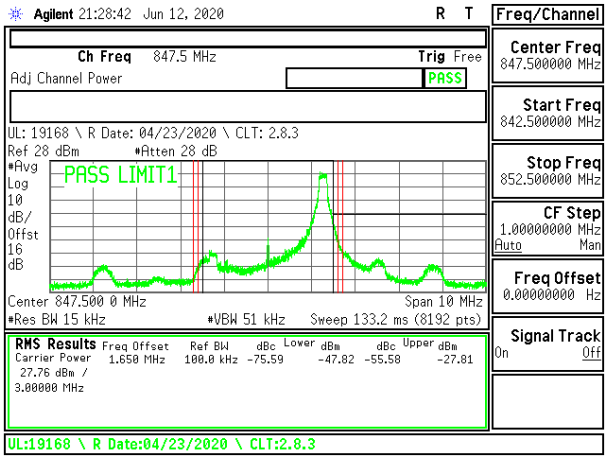
LTE B5 1.4MHz QPSK Low Channel RB6-0



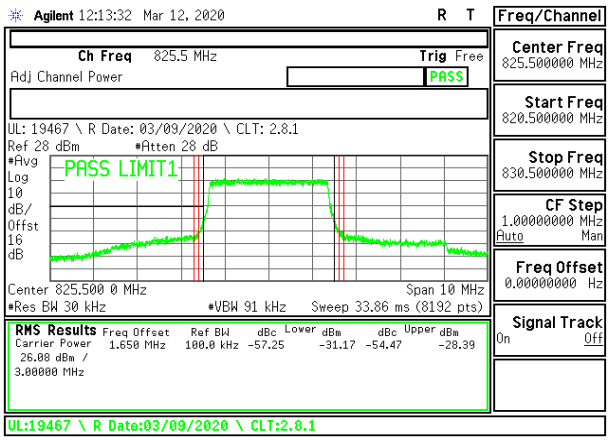
LTE B5 1.4MHz QPSK High Channel RB6-0



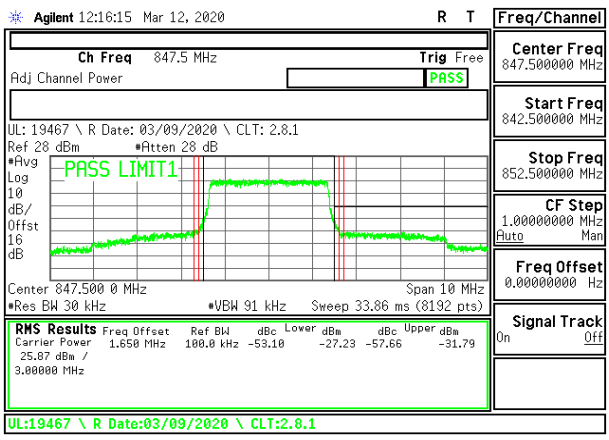
LTE B5 3MHz QPSK Low Channel RB1-0



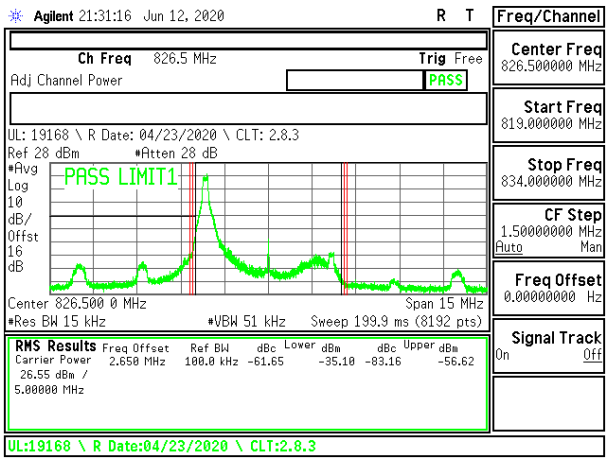
LTE B5 3MHz QPSK High Channel RB1-14



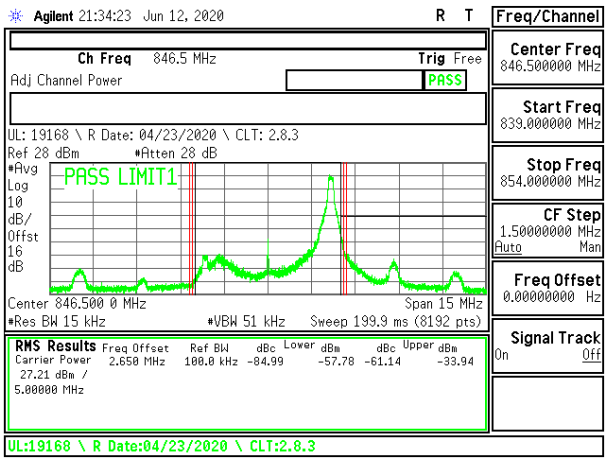
LTE B5 3MHz QPSK Low Channel RB15-0



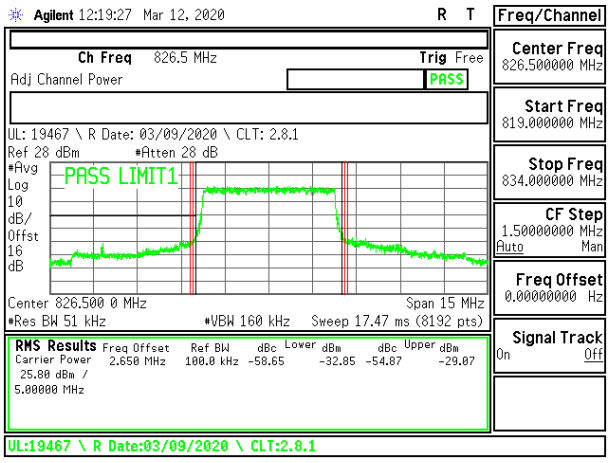
LTE B5 3MHz QPSK High Channel RB15-0



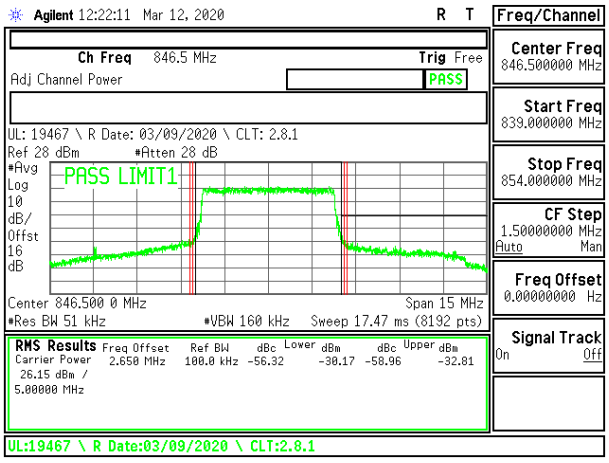
LTE B5 5MHz QPSK Low Channel RB1-0



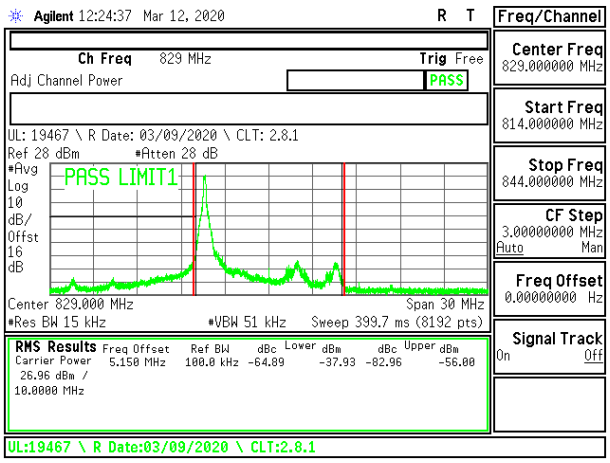
LTE B5 5MHz QPSK High Channel RB1-24



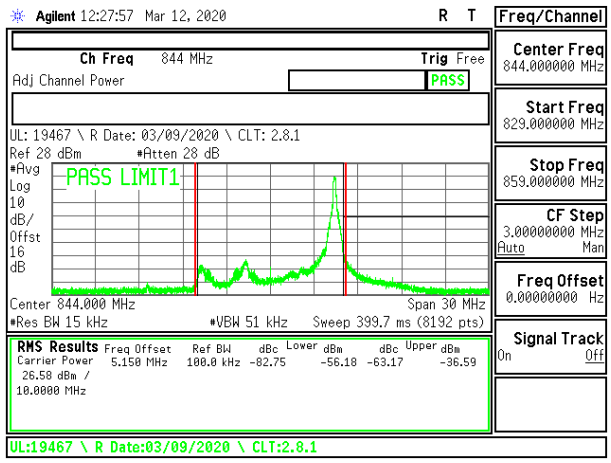
LTE B5 5MHz QPSK Low Channel RB25-0



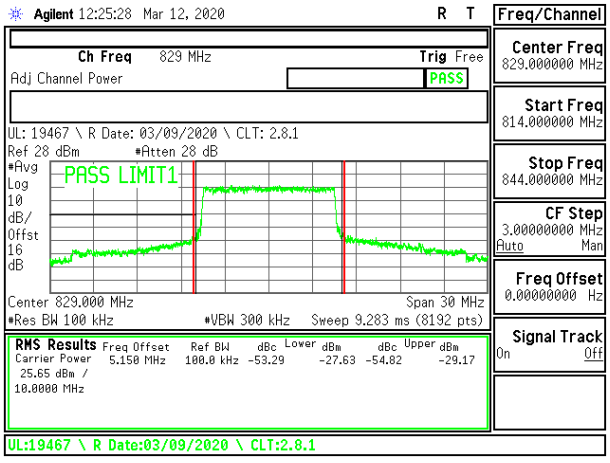
LTE B5 5MHz QPSK High Channel RB25-0



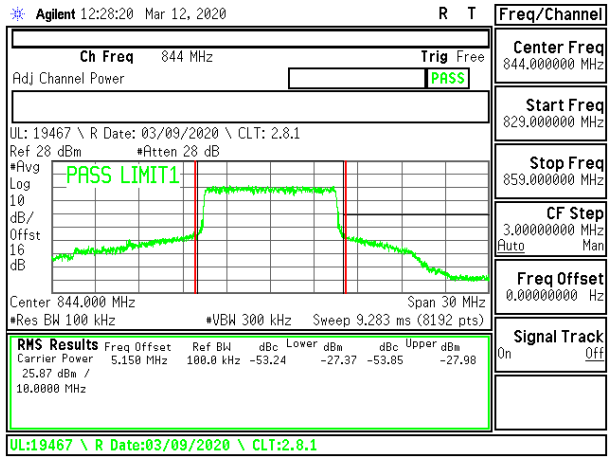
LTE B5 10MHz QPSK Low Channel RB1-0



LTE B5 10MHz QPSK High Channel RB1-49

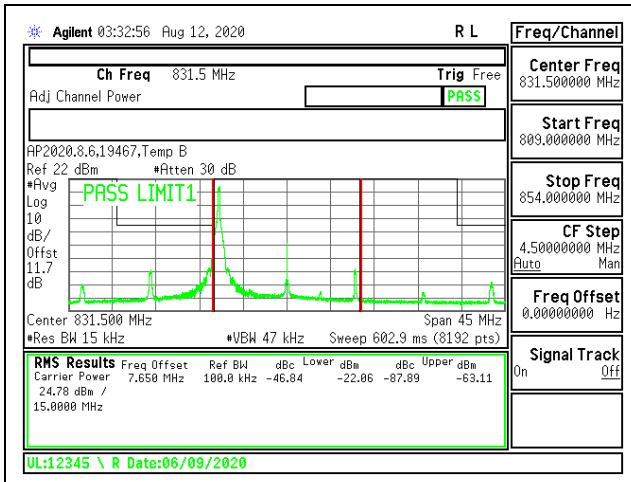


LTE B5 10MHz QPSK Low Channel RB50-0

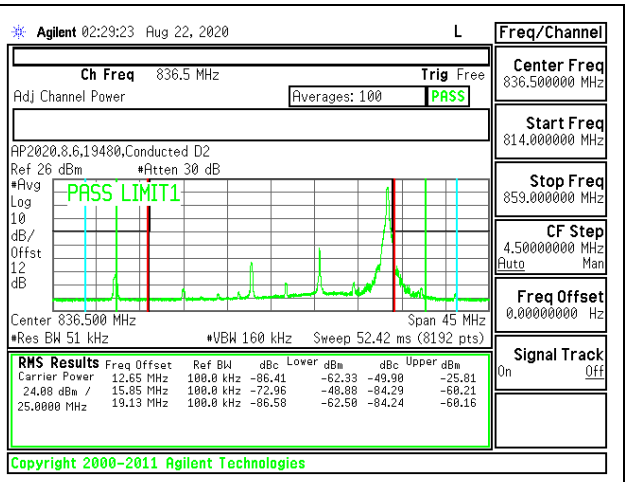


LTE B5 10MHz QPSK High Channel RB50-0

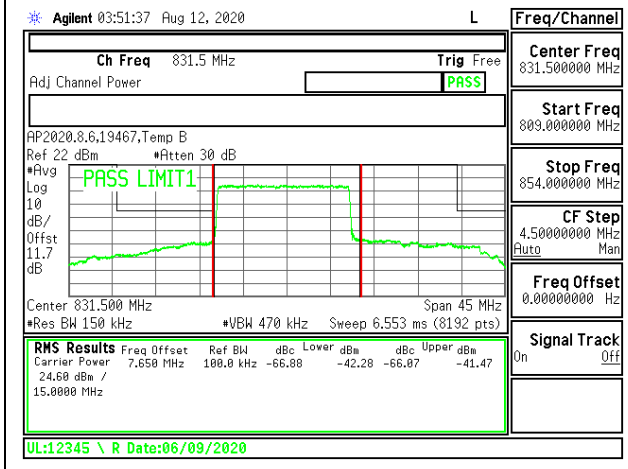
5G NR Band n5 BANDEDGE



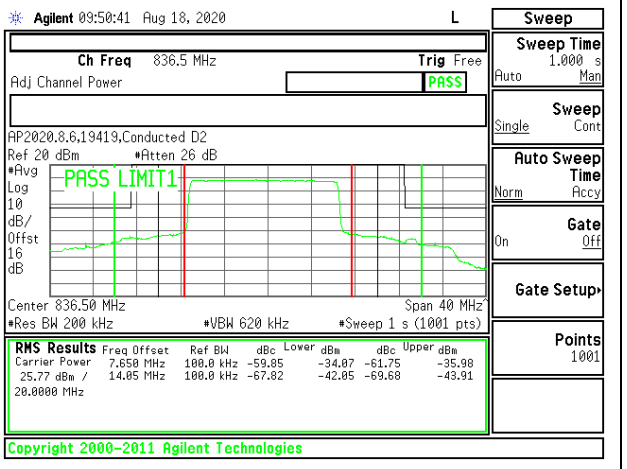
5G NR Band n5 15MHz QPSK Low Channel RB1-0



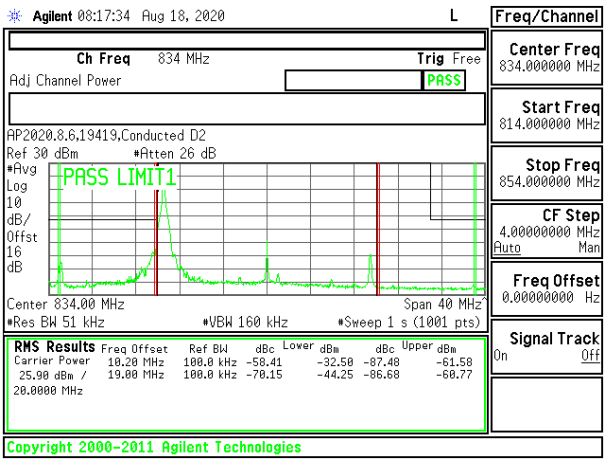
5G NR Band n5 15MHz QPSK High Channel RB1-74



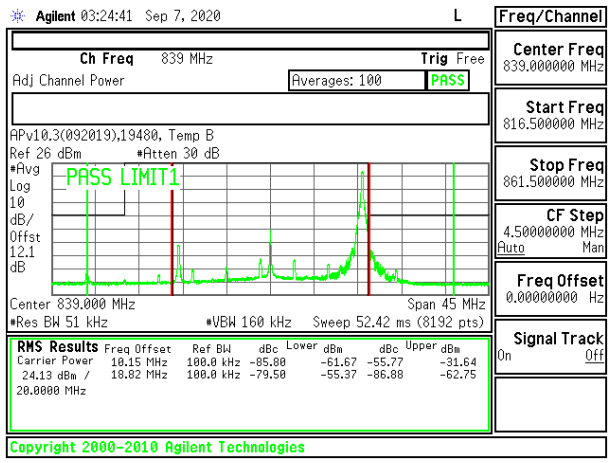
5G NR Band n5 15MHz QPSK Low Channel RB75-0



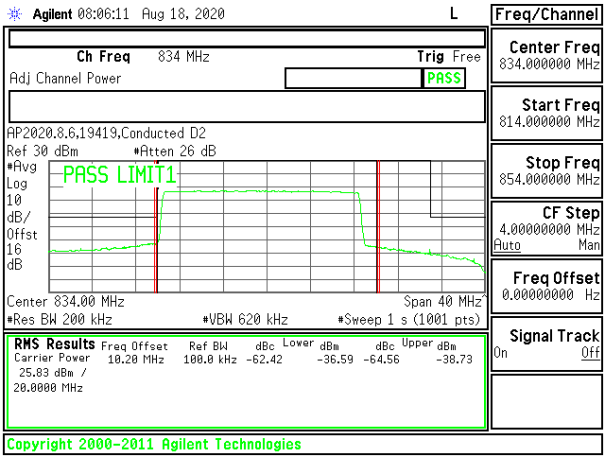
5G NR Band n5 15MHz QPSK High Channel RB75-0



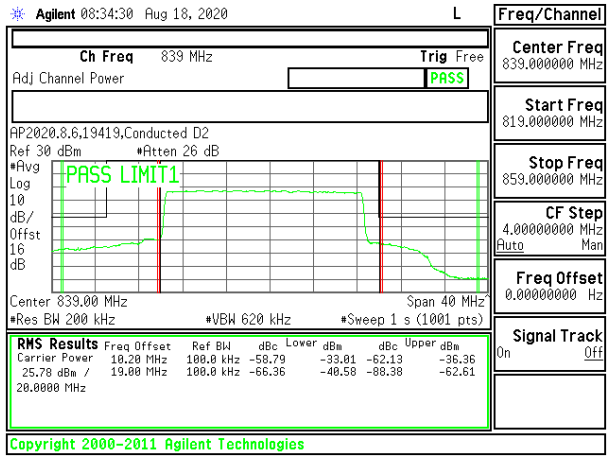
5G NR Band n5 20MHz QPSK Low Channel RB1-0



5G NR Band n5 20MHz QPSK High Channel RB1-99



5G NR Band n5 20MHz QPSK Low Channel RB100-0

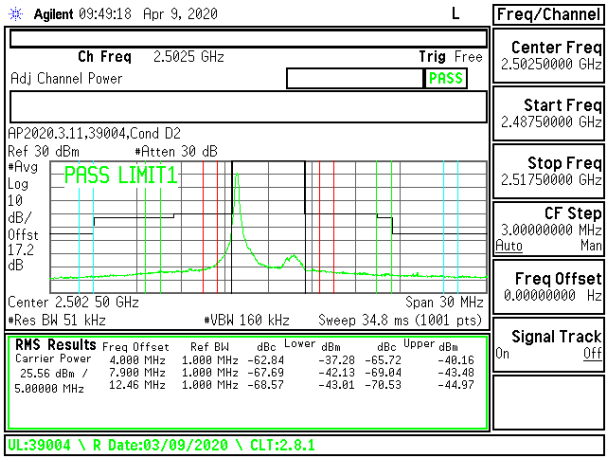


5G NR Band n5 20MHz QPSK High Channel RB100-0

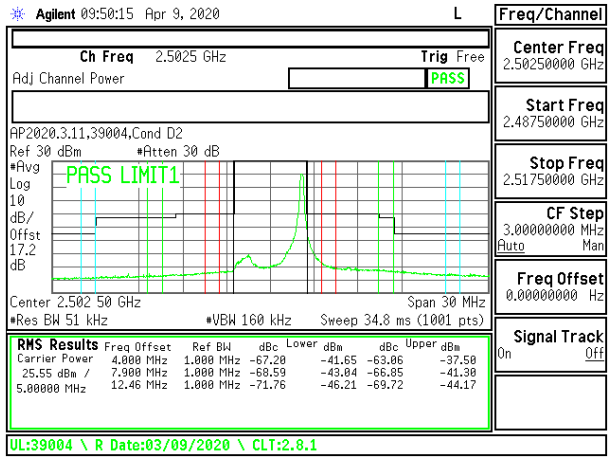
8.2.3. LTE BAND 7 ADJACENT CHANNEL POWER

LIMITS

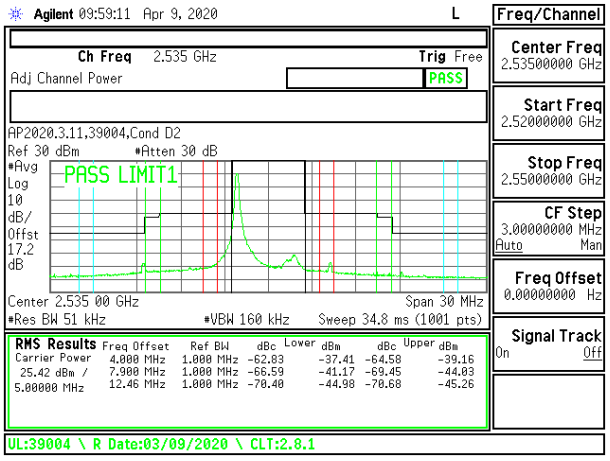
FCC: §27.53
(m)(4) For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 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 that 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.



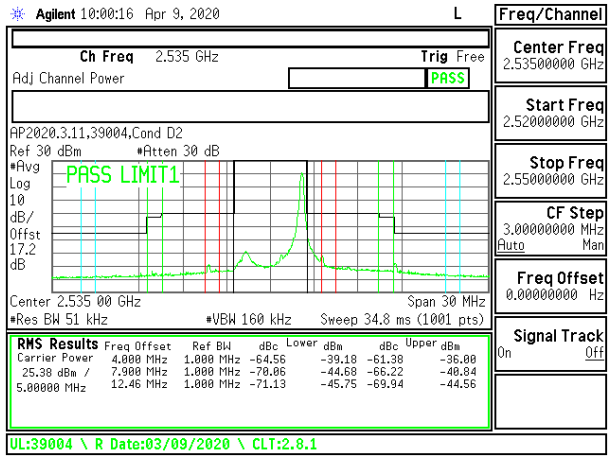
LTE B7 5MHz QPSK Low Channel RB1-0



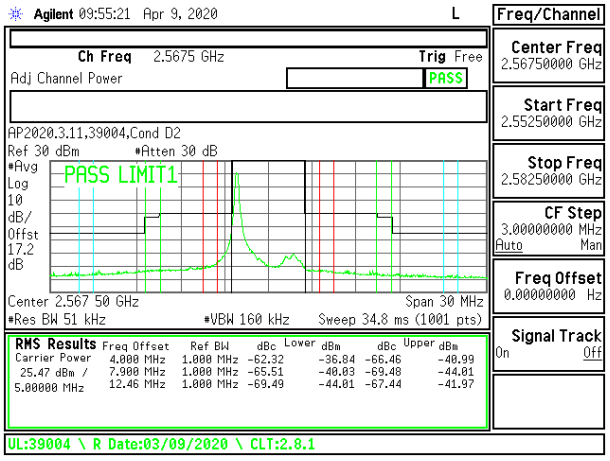
LTE B7 5MHz QPSK Low Channel RB1-24



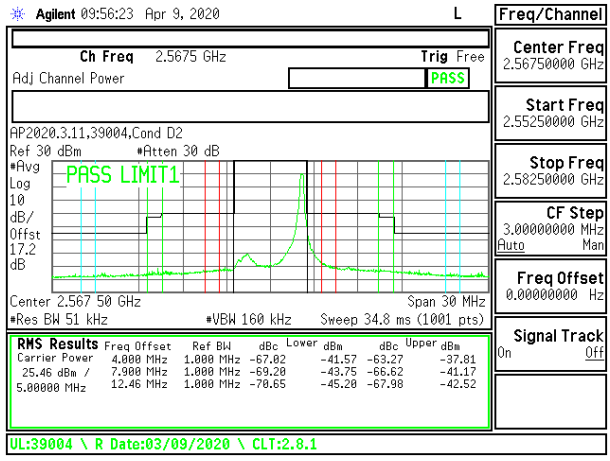
LTE B7 5MHz QPSK Middle Channel RB1-0



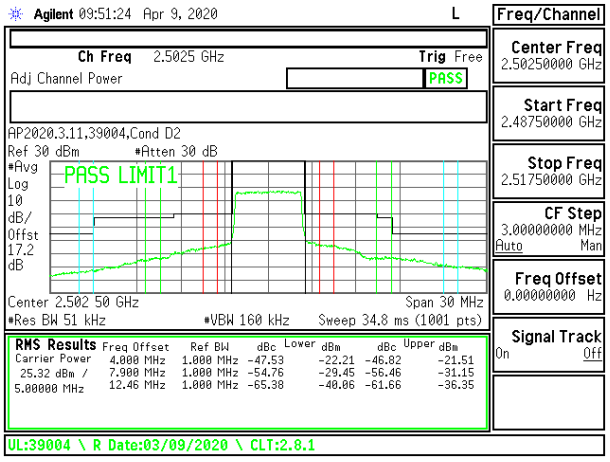
LTE B7 5MHz QPSK Middle Channel RB1-24



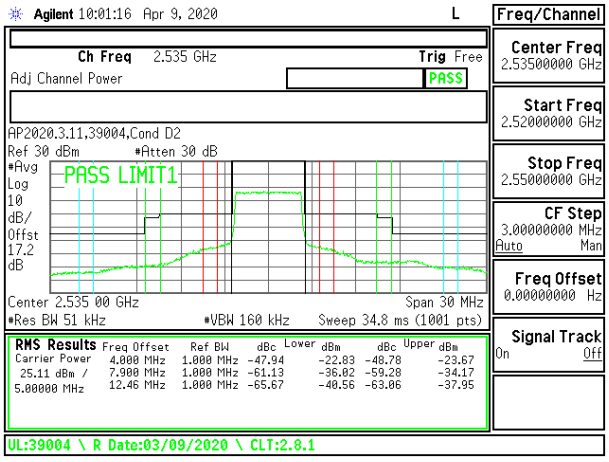
LTE B7 5MHz QPSK High Channel RB1-0



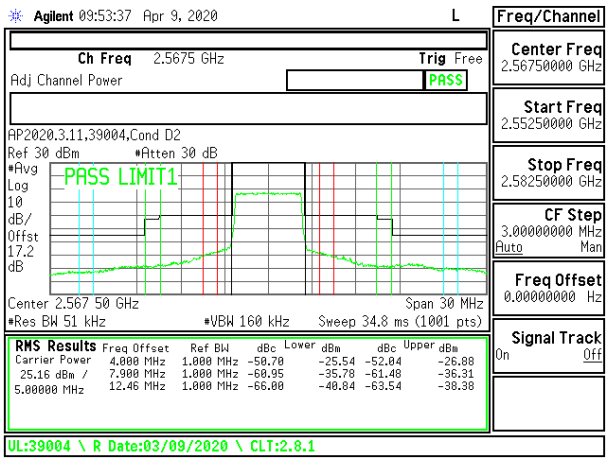
LTE B7 5MHz QPSK High Channel RB1-24



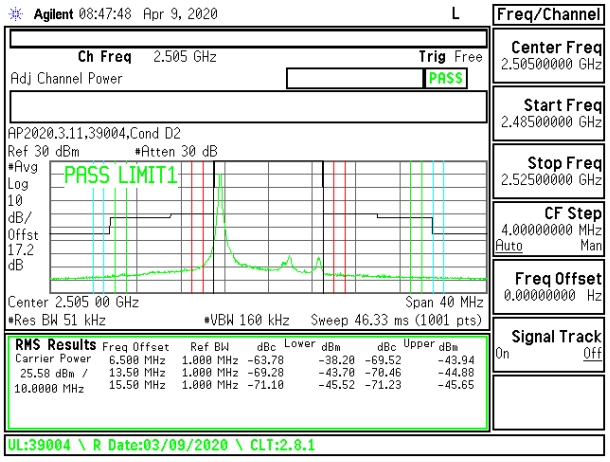
LTE B7 5MHz QPSK Low Channel RB25-0



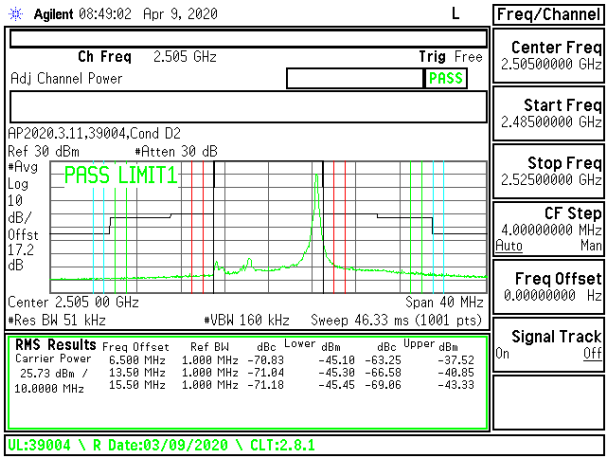
LTE B7 5MHz QPSK Middle Channel RB25-0



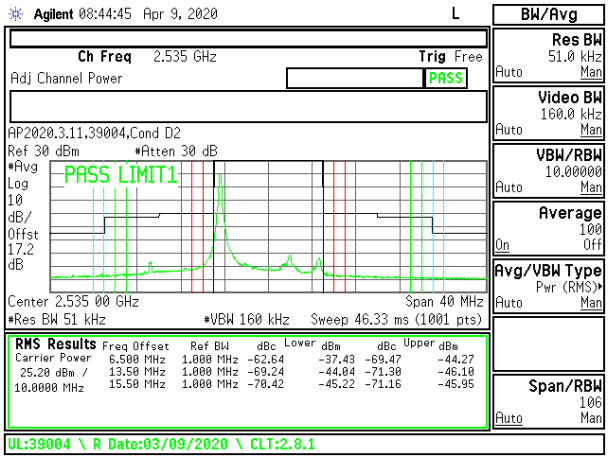
LTE B7 5MHz QPSK High Channel RB25-0



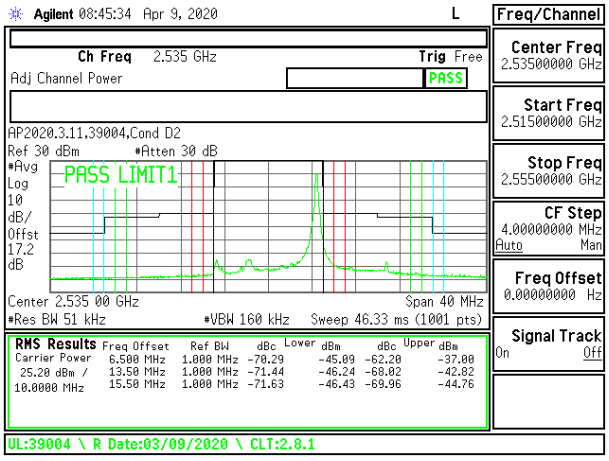
LTE B7 10MHz QPSK Low Channel RB1-0



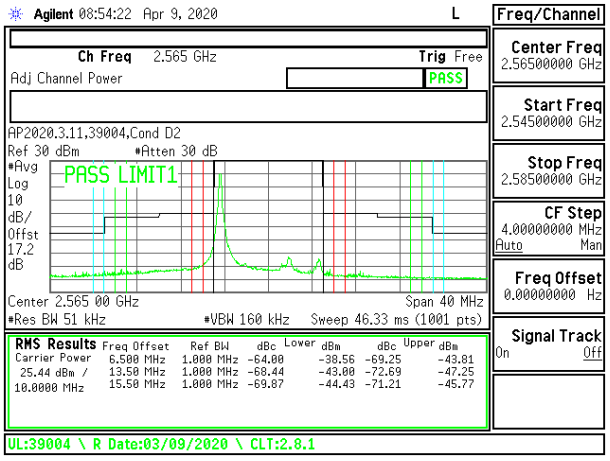
LTE B7 10MHz QPSK Low Channel RB1-49



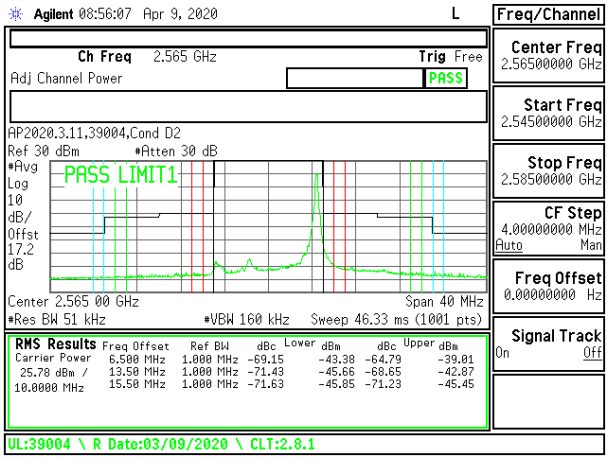
LTE B7 10MHz QPSK Middle Channel RB1-0



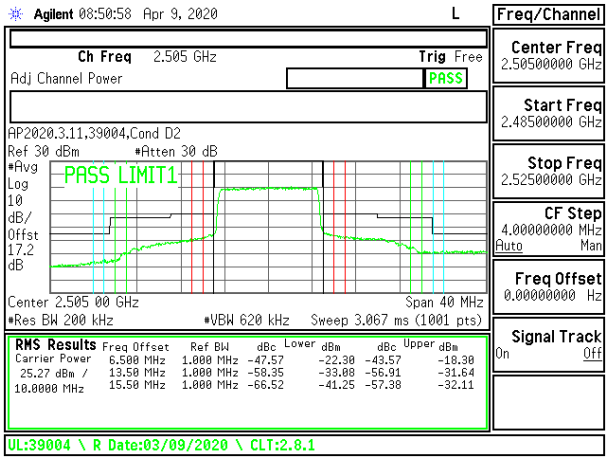
LTE B7 10MHz QPSK Middle Channel RB1-49



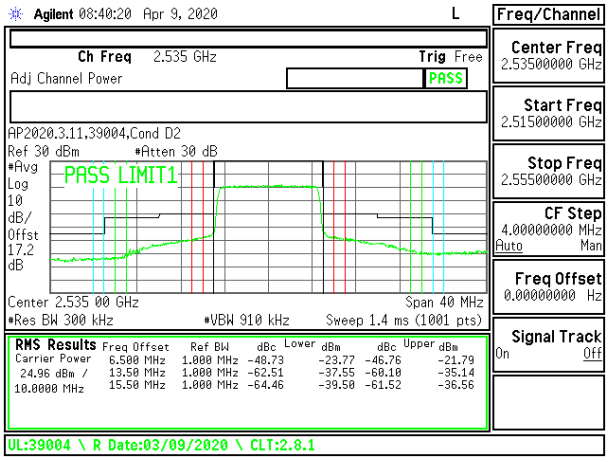
LTE B7 10MHz QPSK High Channel RB1-0



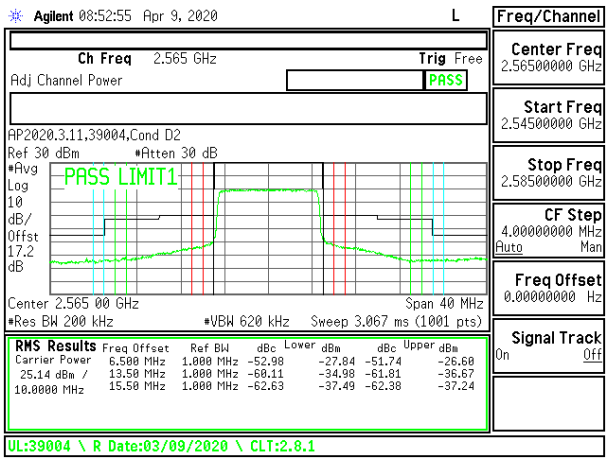
LTE B7 10MHz QPSK High Channel RB1-49



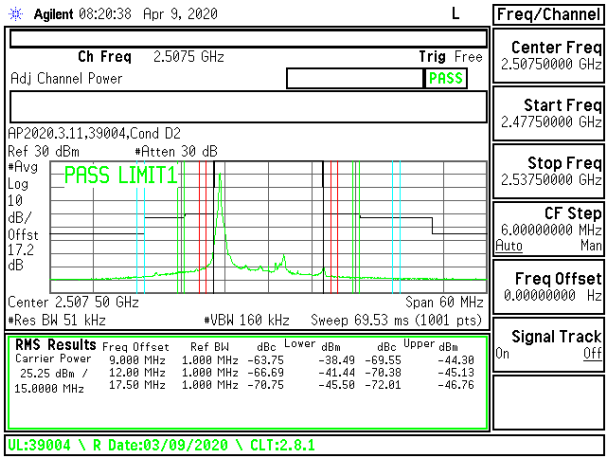
LTE B7 10MHz QPSK Low Channel RB50-0



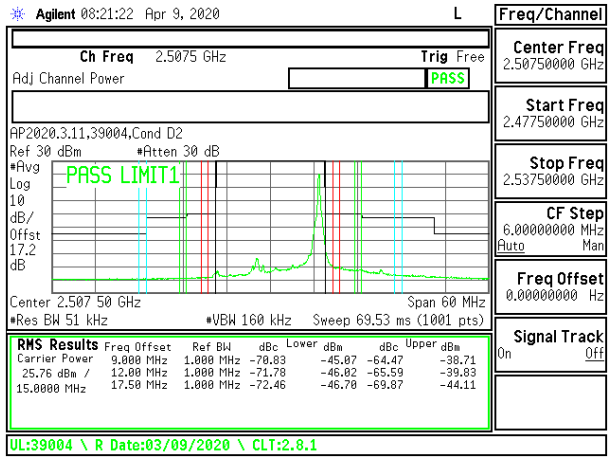
LTE B7 10MHz QPSK Middle Channel RB50-0



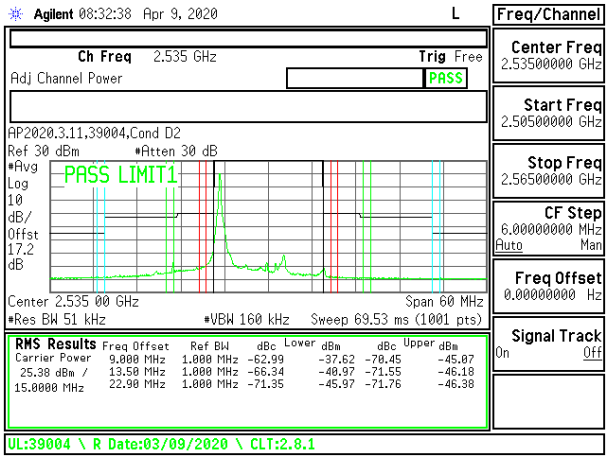
LTE B7 10MHz QPSK High Channel RB50-0



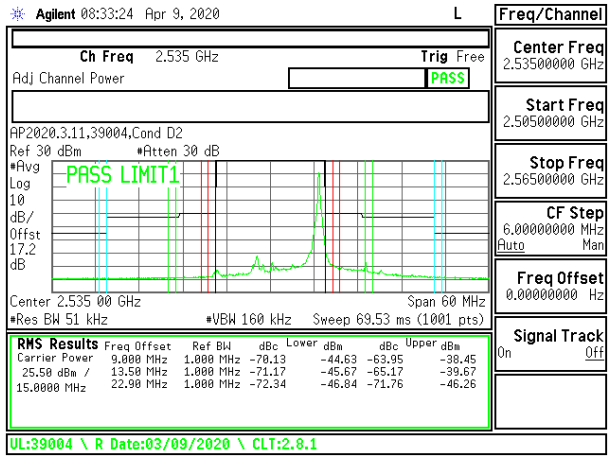
LTE B7 15MHz QPSK Low Channel RB1-0



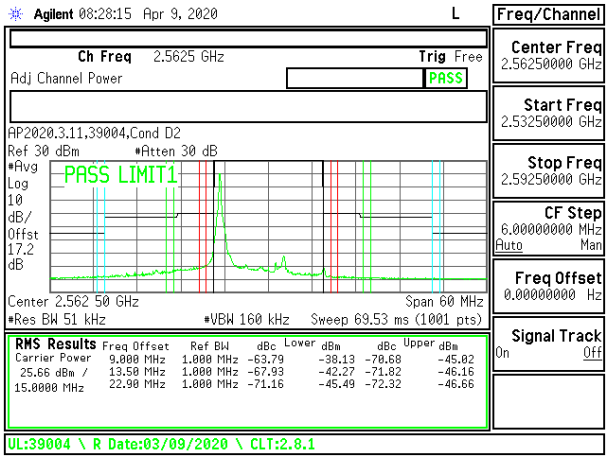
LTE B7 15MHz QPSK Low Channel RB1-74



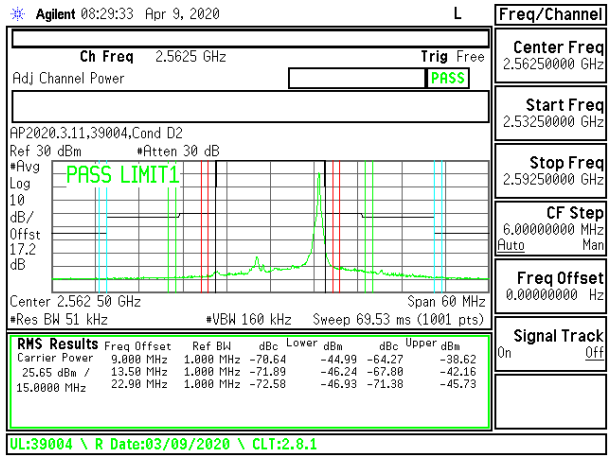
LTE B7 15MHz QPSK Middle Channel RB1-0



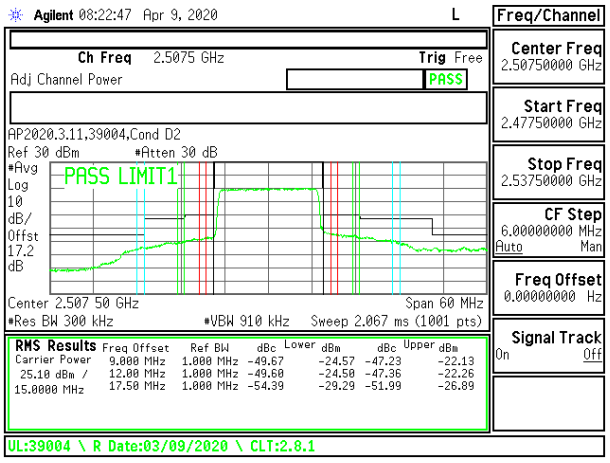
LTE B7 15MHz QPSK Middle Channel RB1-74



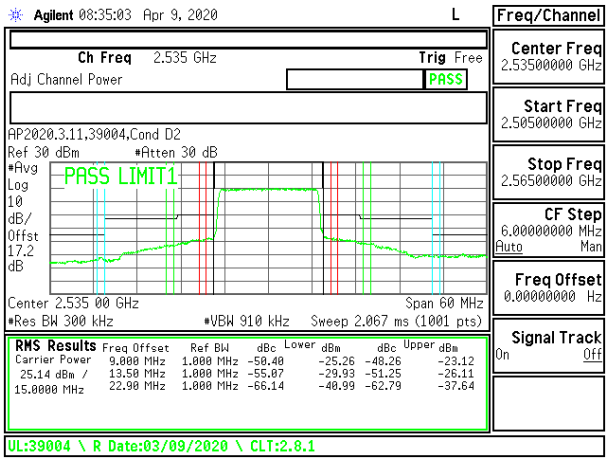
LTE B7 15MHz QPSK High Channel RB1-0



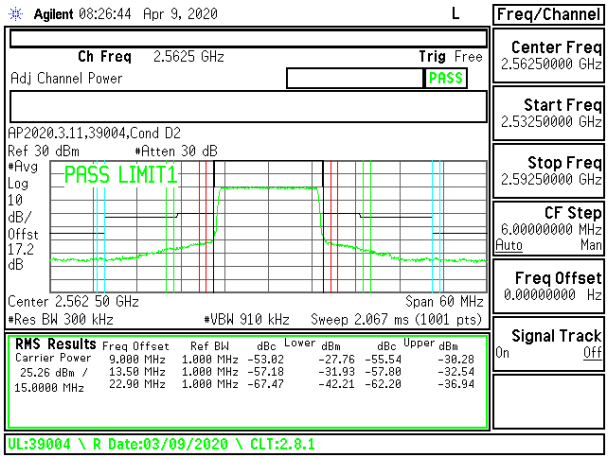
LTE B7 15MHz QPSK High Channel RB1-74



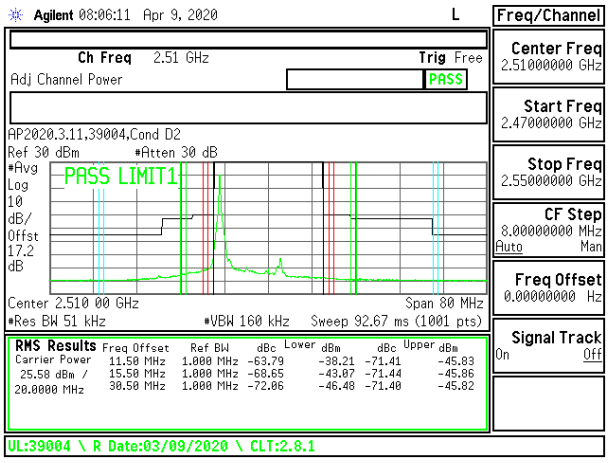
LTE B7 15MHz QPSK Low Channel RB75-0



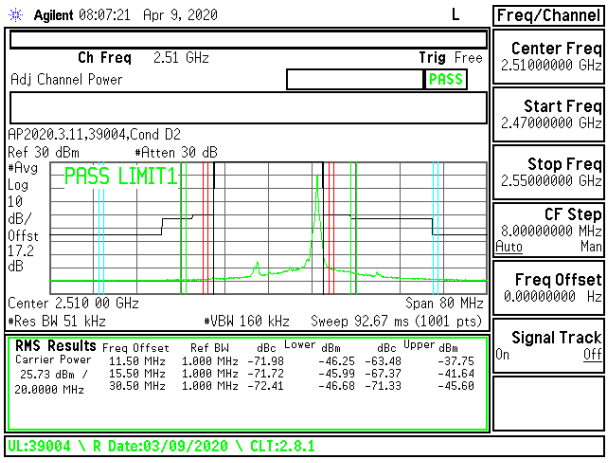
LTE B7 15MHz QPSK Middle Channel RB75-0



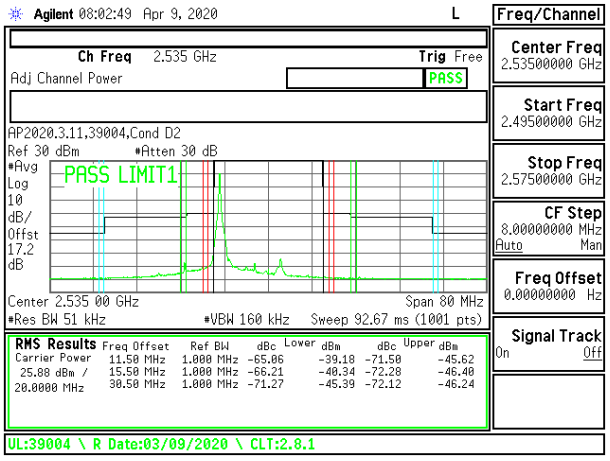
LTE B7 15MHz QPSK High Channel RB75-0



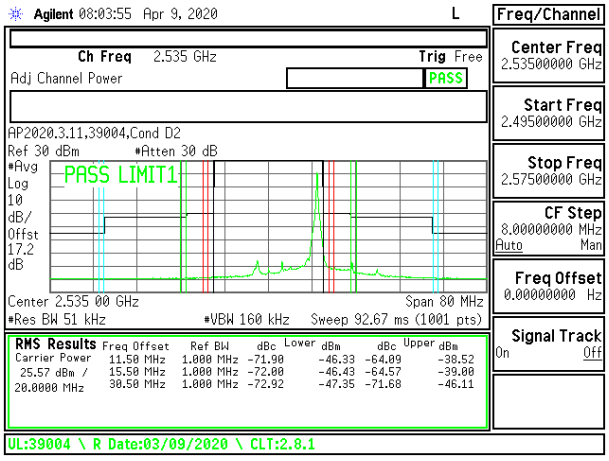
LTE B7 20MHz QPSK Low Channel RB1-0



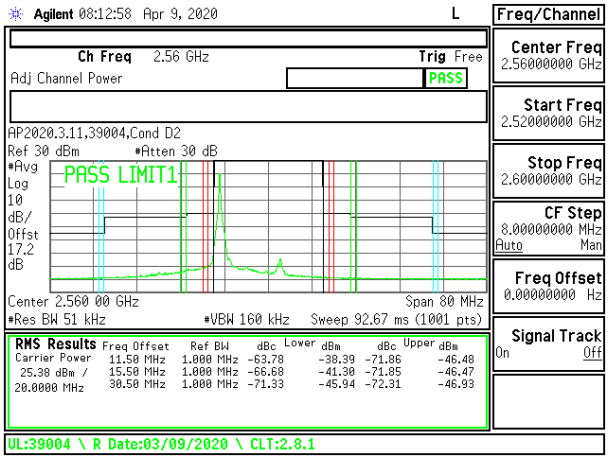
LTE B7 20MHz QPSK Low Channel RB1-99



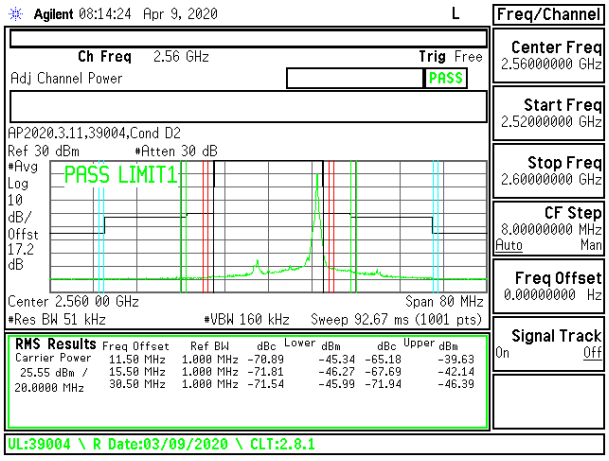
LTE B7 20MHz QPSK Middle Channel RB1-0



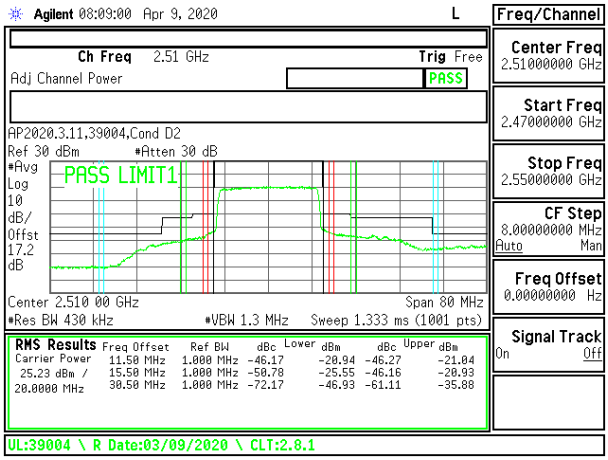
LTE B7 20MHz QPSK Middle Channel RB1-99



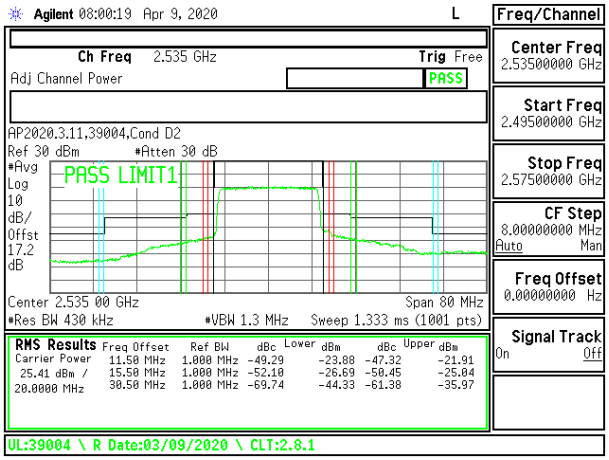
LTE B7 20MHz QPSK High Channel RB1-0



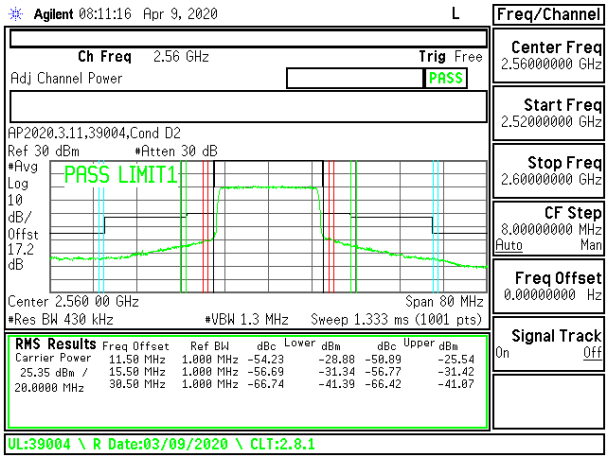
LTE B7 20MHz QPSK High Channel RB1-99



LTE B7 20MHz QPSK Low Channel RB100-0



LTE B7 20MHz QPSK Middle Channel RB100-0



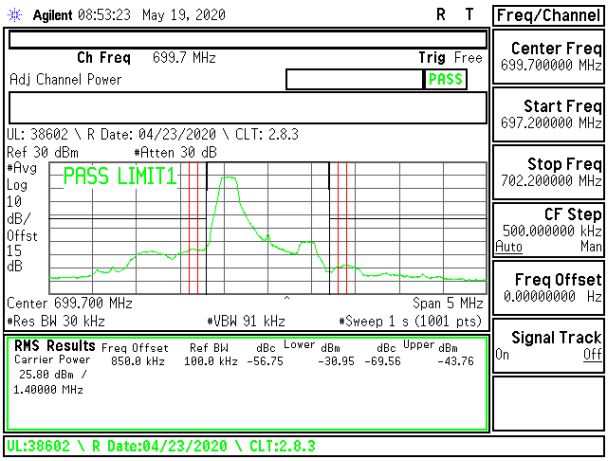
LTE B7 20MHz QPSK High Channel RB100-0

8.2.4. LTE BAND 12 AND n12 ADJACENT CHANNEL POWER

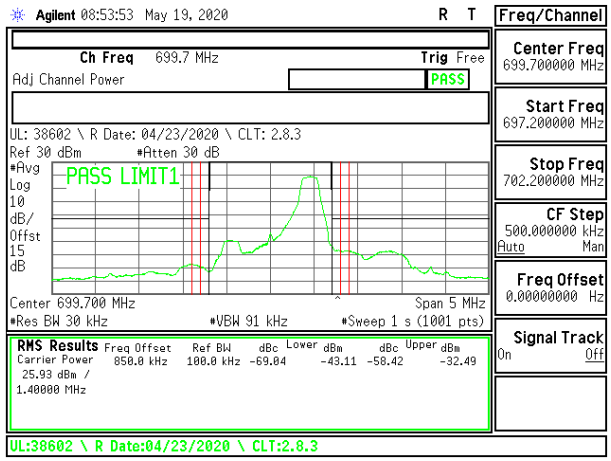
LIMITS

FCC: §27.53
(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

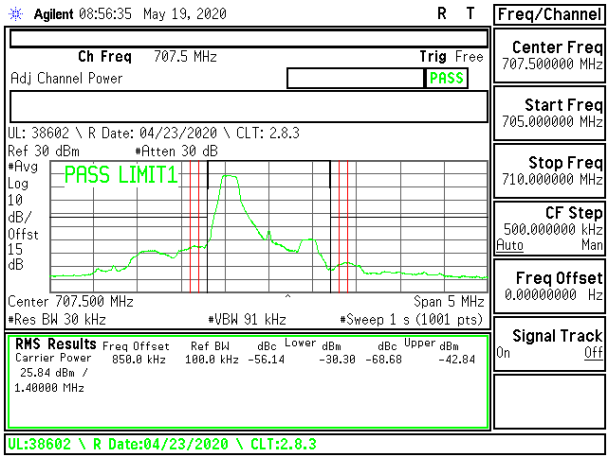
LTE BAND 12 ADJACENT CHANNEL POWER



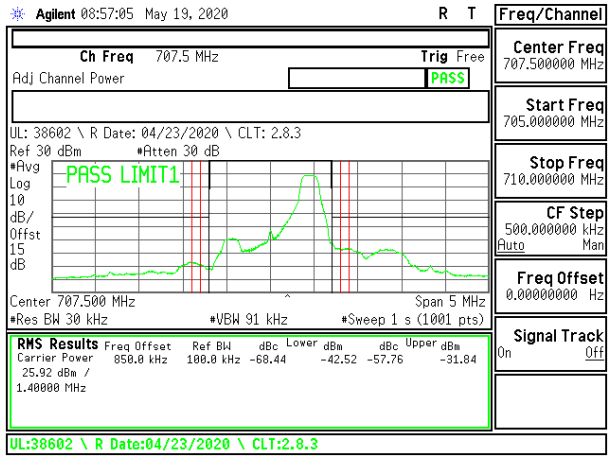
LTE B12 1.4MHz QPSK Low Channel RB1-0



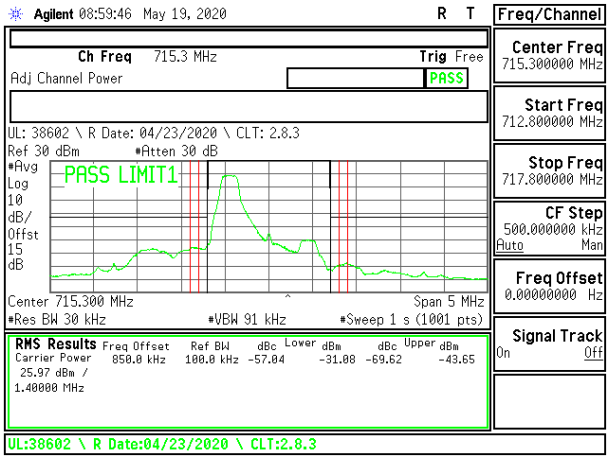
LTE B12 1.4MHz QPSK Low Channel RB1-5



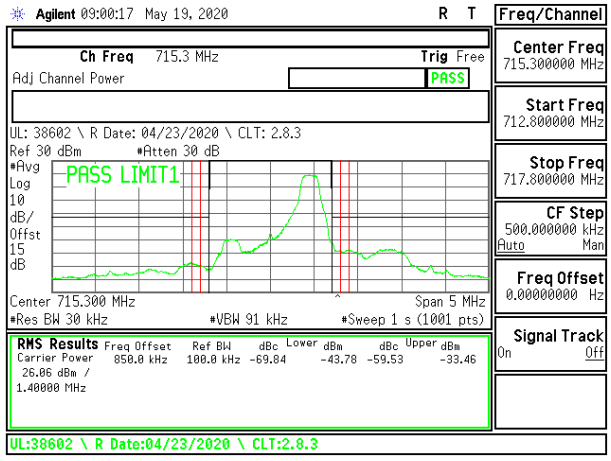
LTE B12 1.4MHz QPSK Middle Channel RB1-0



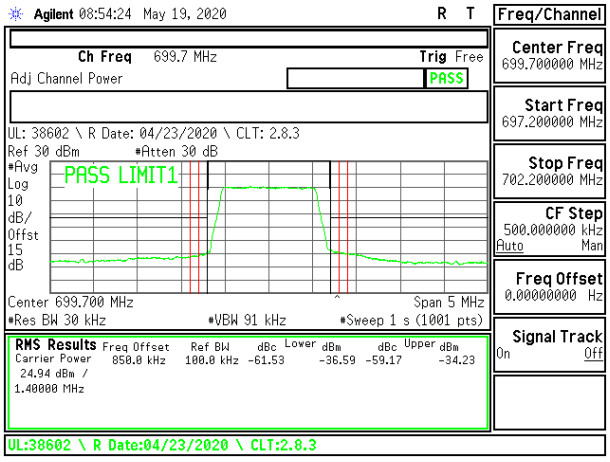
LTE B12 1.4MHz QPSK Middle Channel RB1-5



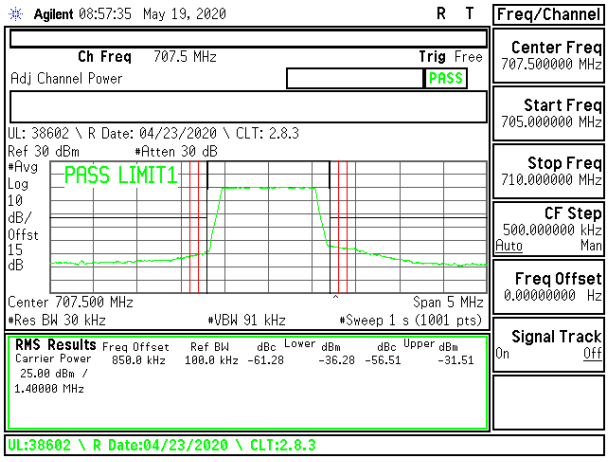
LTE B12 1.4MHz QPSK High Channel RB1-0



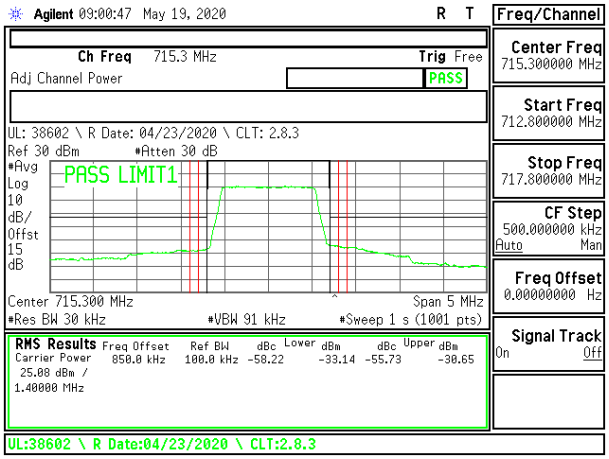
LTE B12 1.4MHz QPSK High Channel RB1-5



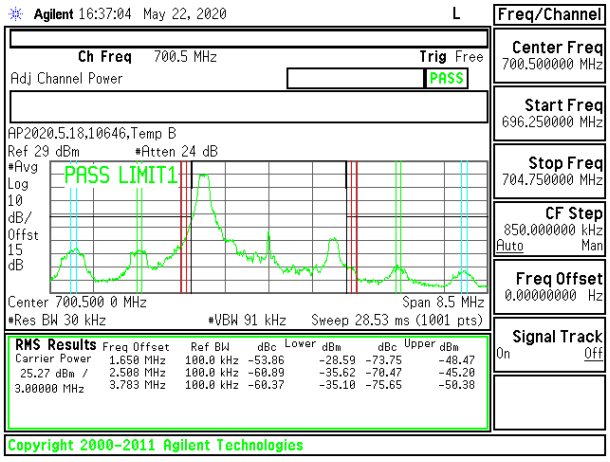
LTE B12 1.4MHz QPSK Low Channel RB6-0



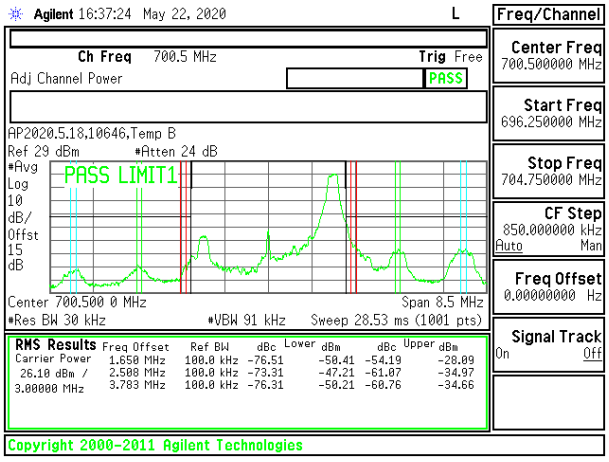
LTE B12 1.4MHz QPSK Middle Channel RB6-0



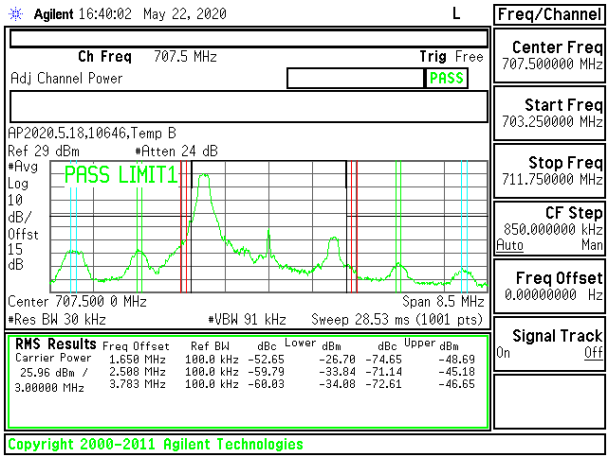
LTE B12 1.4MHz QPSK High Channel RB6-0



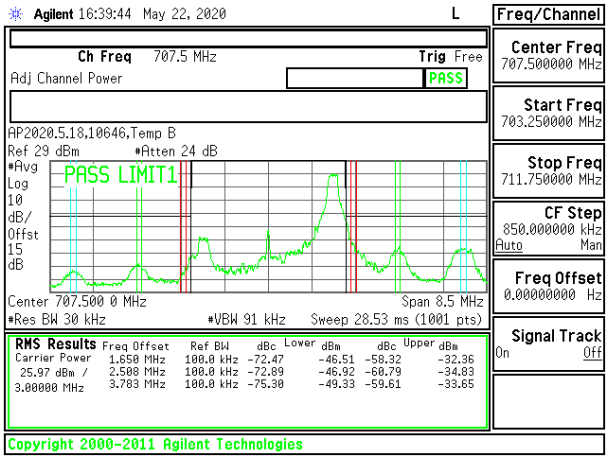
LTE B12 3MHz QPSK Low Channel RB1-0



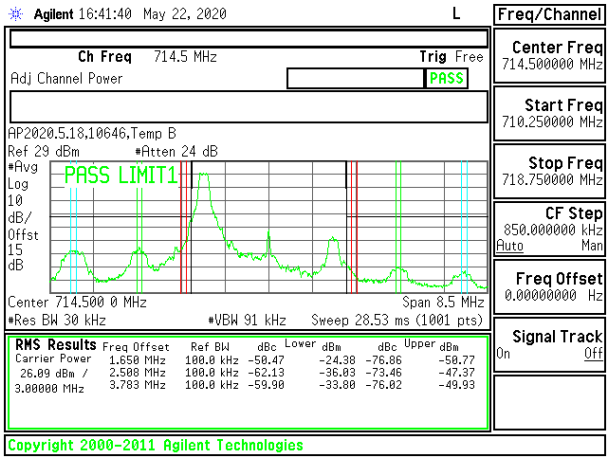
LTE B12 3MHz QPSK Low Channel RB1-14



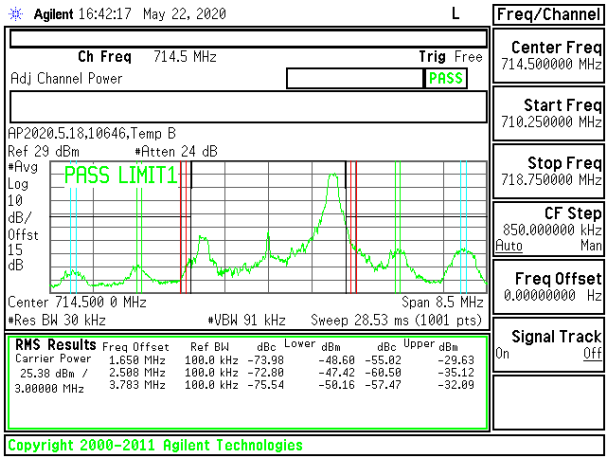
LTE B12 3MHz QPSK Middle Channel RB1-0



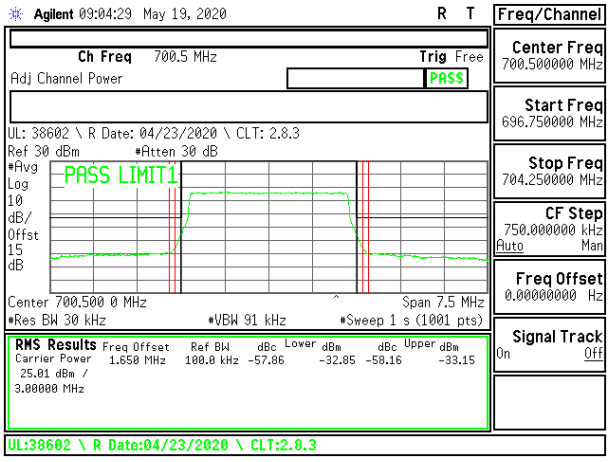
LTE B12 3MHz QPSK Middle Channel RB1-14



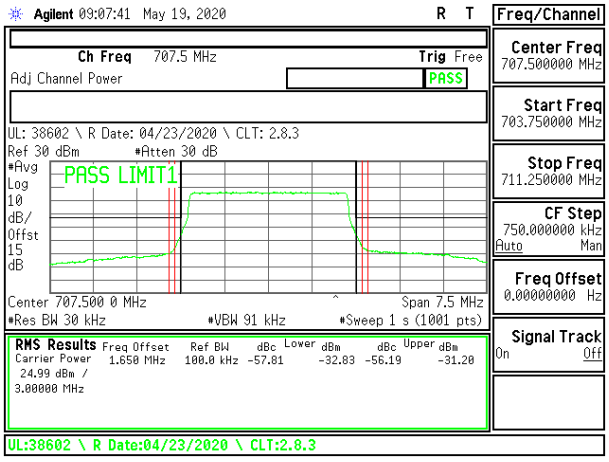
LTE B12 3MHz QPSK High Channel RB1-0



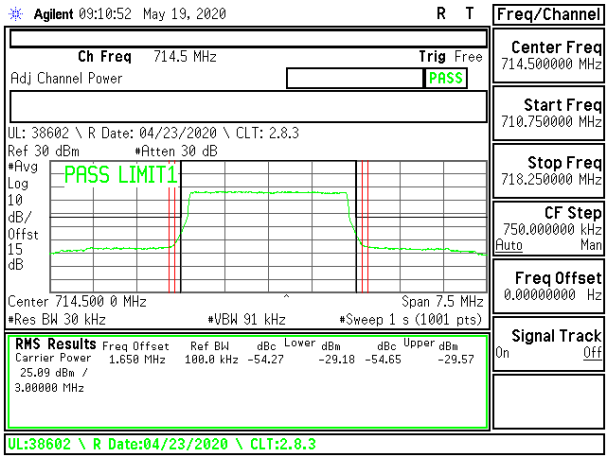
LTE B12 3MHz QPSK High Channel RB1-14



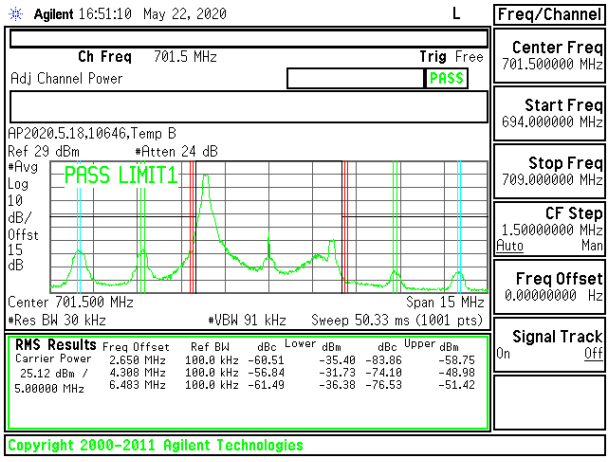
LTE B12 3MHz QPSK Low Channel RB15-0



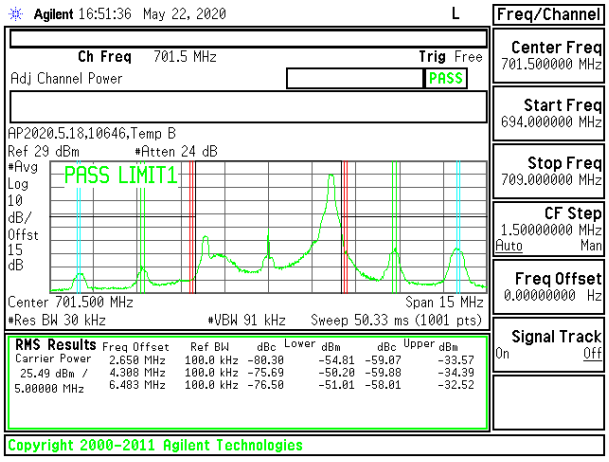
LTE B12 3MHz QPSK Middle Channel RB15-0



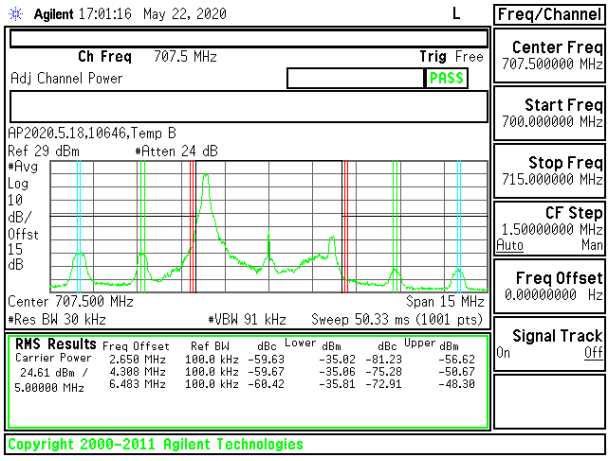
LTE B12 3MHz QPSK High Channel RB15-0



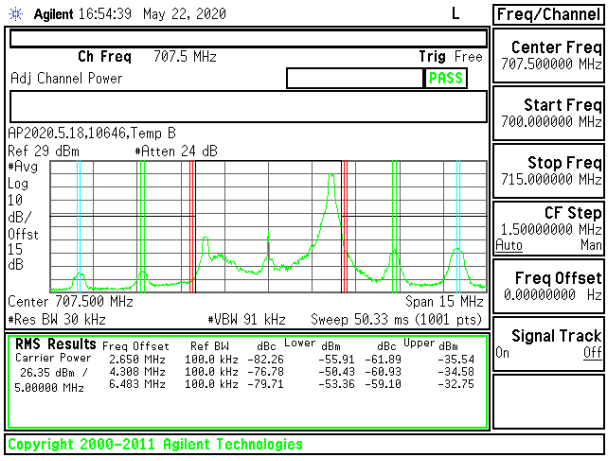
LTE B12 5MHz QPSK Low Channel RB1-0



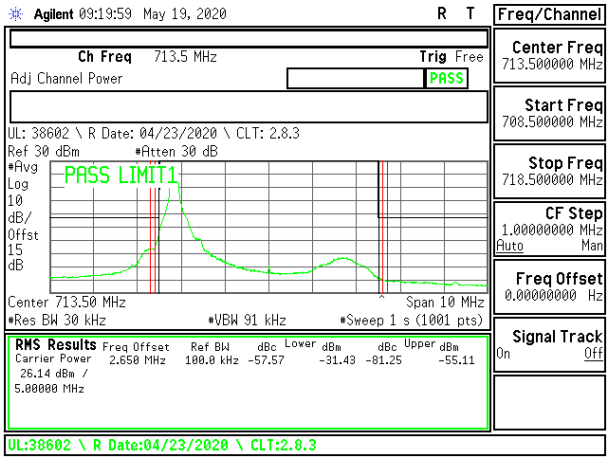
LTE B12 5MHz QPSK Low Channel RB1-24



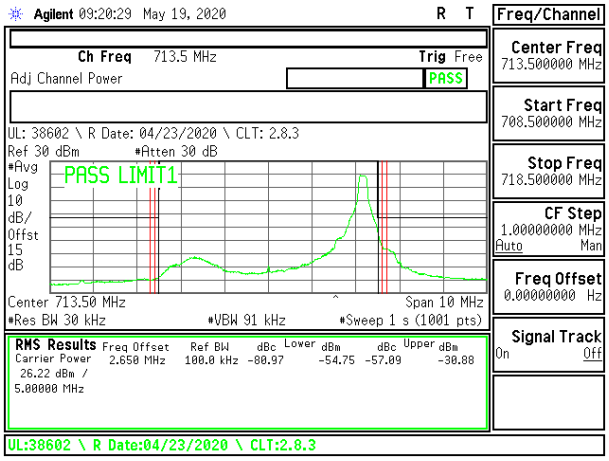
LTE B12 5MHz QPSK Middle Channel RB1-0



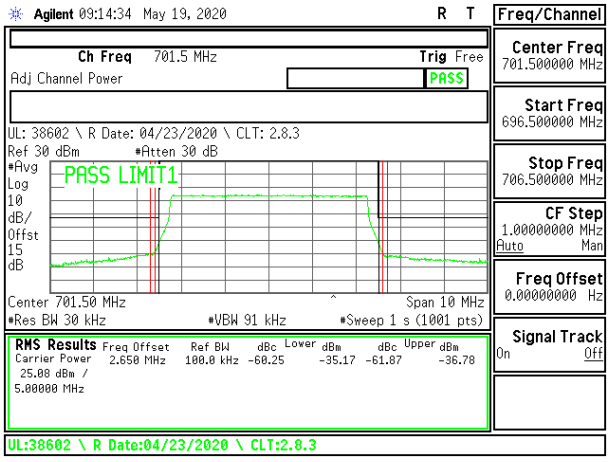
LTE B12 5MHz QPSK Middle Channel RB1-24



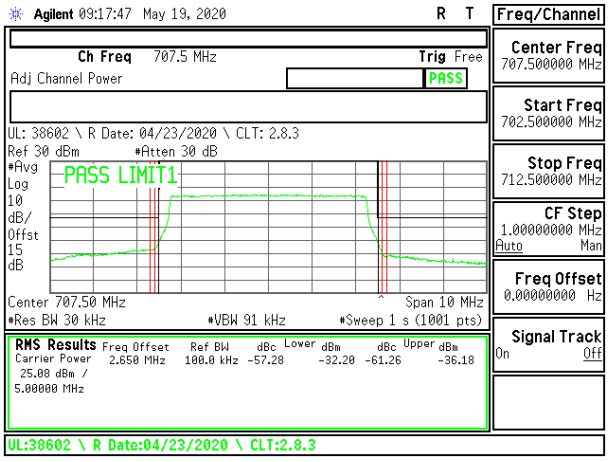
LTE B12 5MHz QPSK High Channel RB1-0



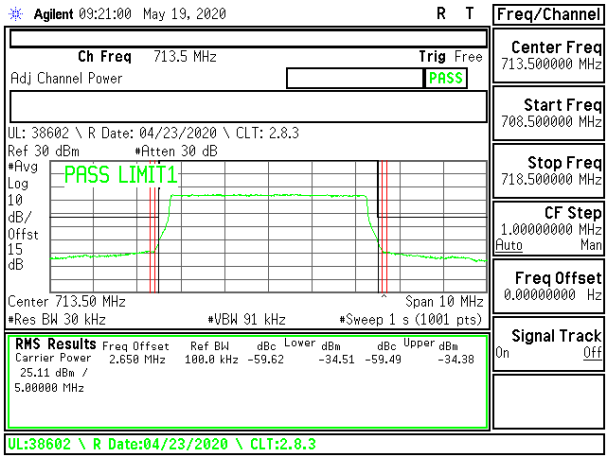
LTE B12 5MHz QPSK High Channel RB1-24



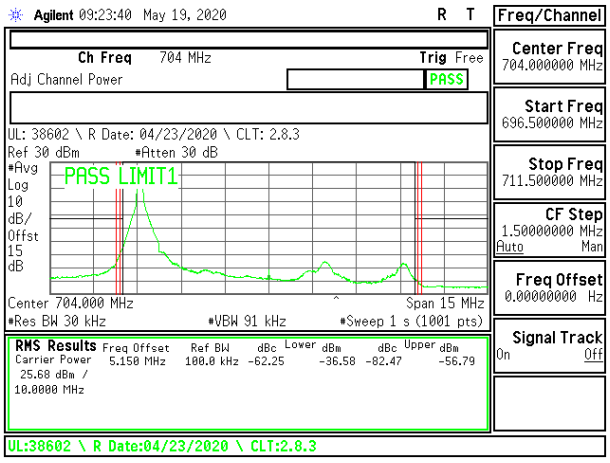
LTE B12 5MHz QPSK Low Channel RB25-0



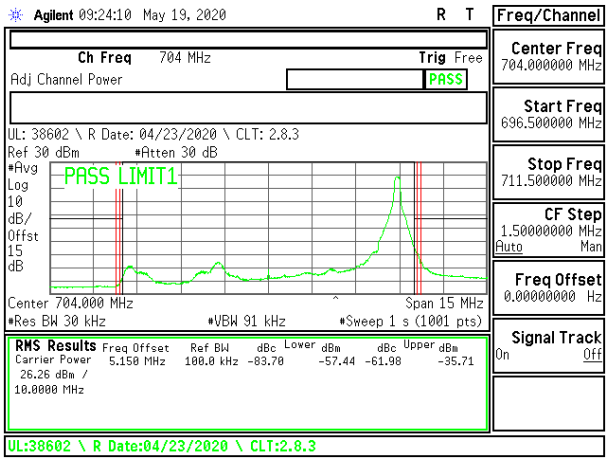
LTE B12 5MHz QPSK Middle Channel RB25-0



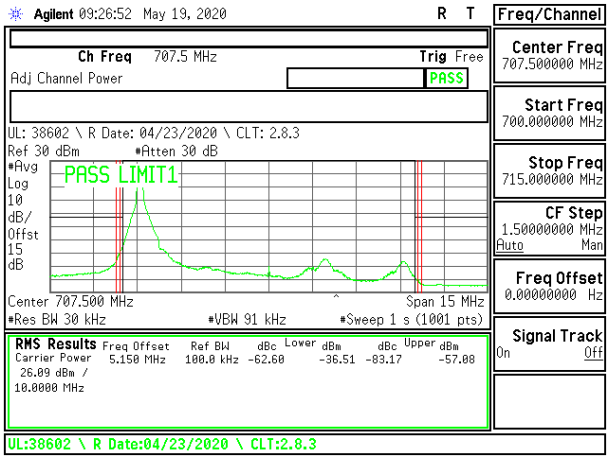
LTE B12 5MHz QPSK High Channel RB25-0



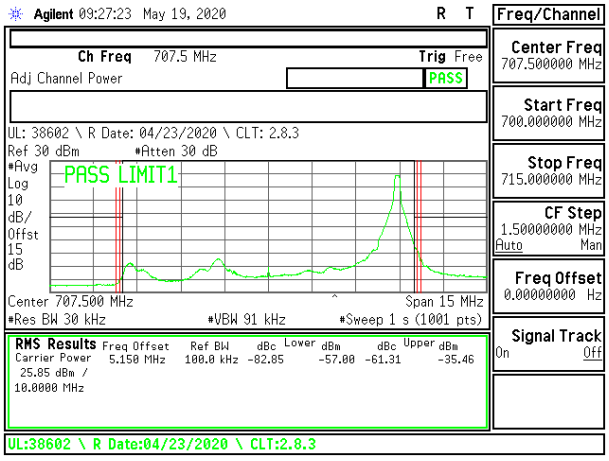
LTE B12 10MHz QPSK Low Channel RB1-0



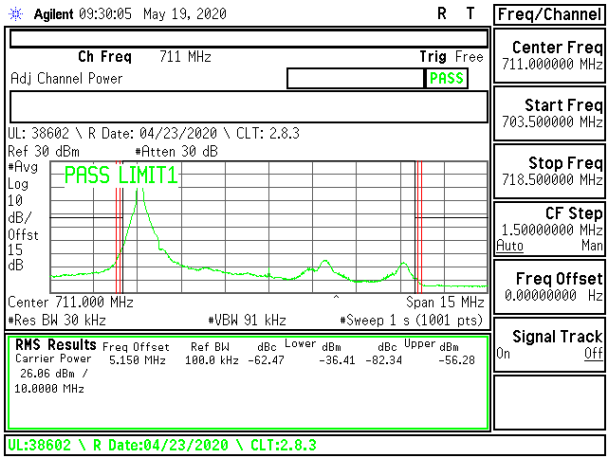
LTE B12 10MHz QPSK Low Channel RB1-49



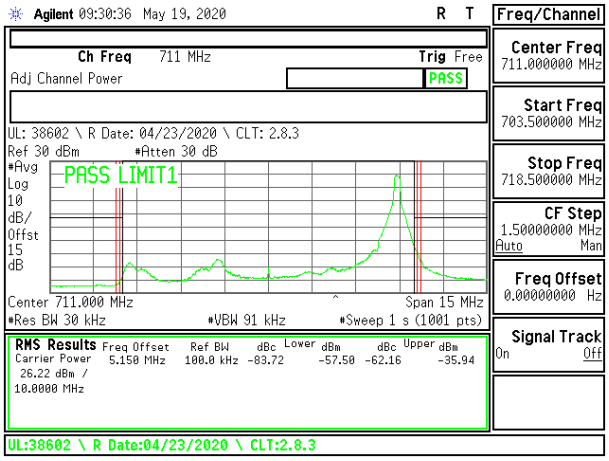
LTE B12 10MHz QPSK Middle Channel RB1-0



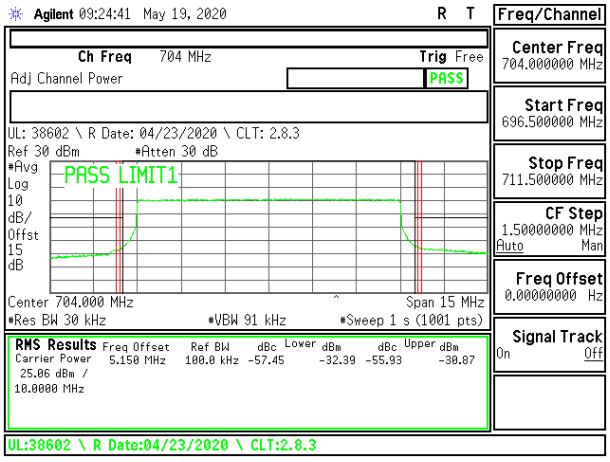
LTE B12 10MHz QPSK Middle Channel RB1-49



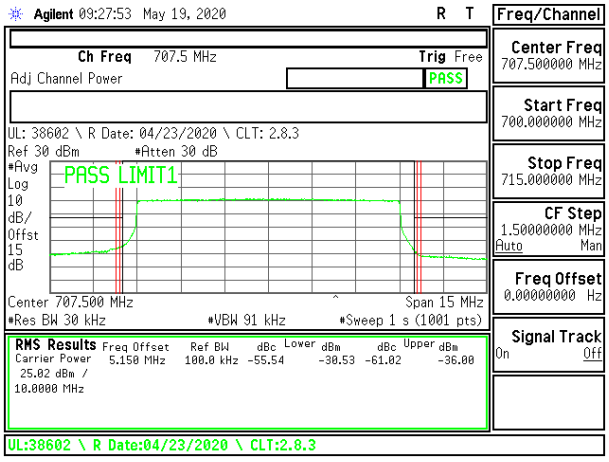
LTE B12 10MHz QPSK High Channel RB1-0



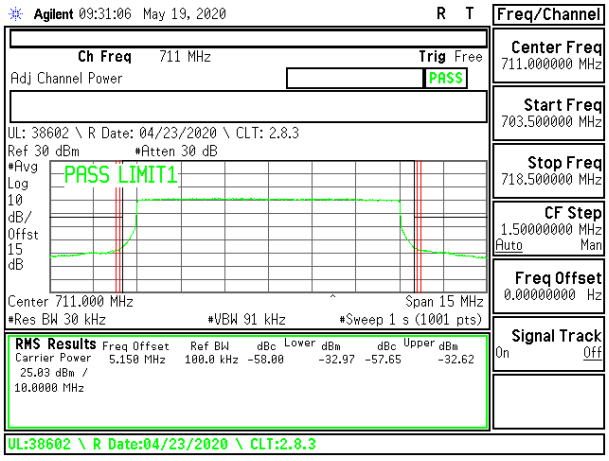
LTE B12 10MHz QPSK High Channel RB1-49



LTE B12 10MHz QPSK Low Channel RB50-0

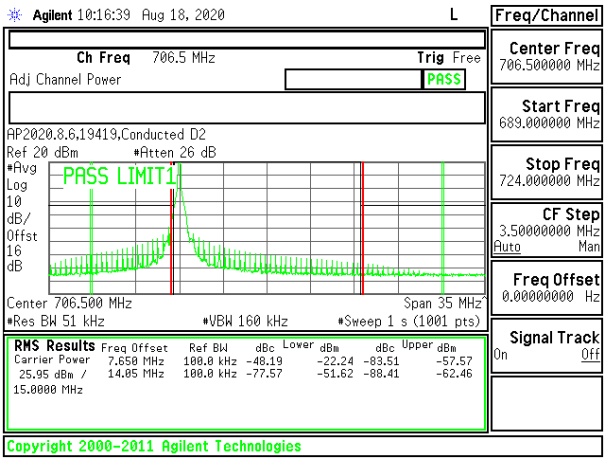


LTE B12 10MHz QPSK Middle Channel RB50-0

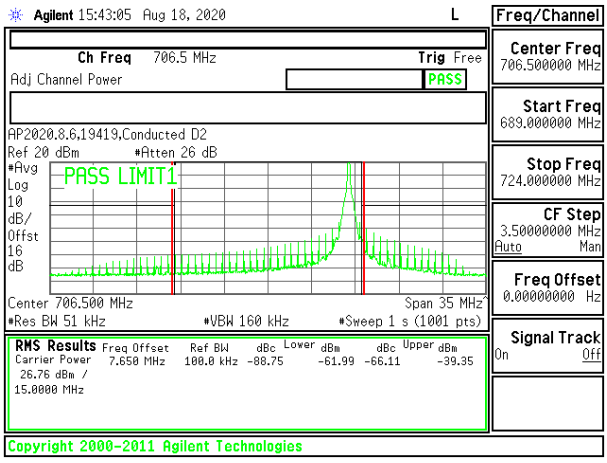


LTE B12 10MHz QPSK High Channel RB50-0

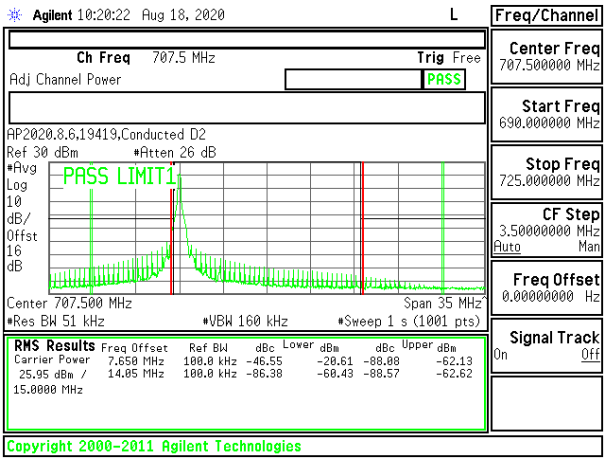
5G NR Band n12 ADJACENT CHANNEL POWER



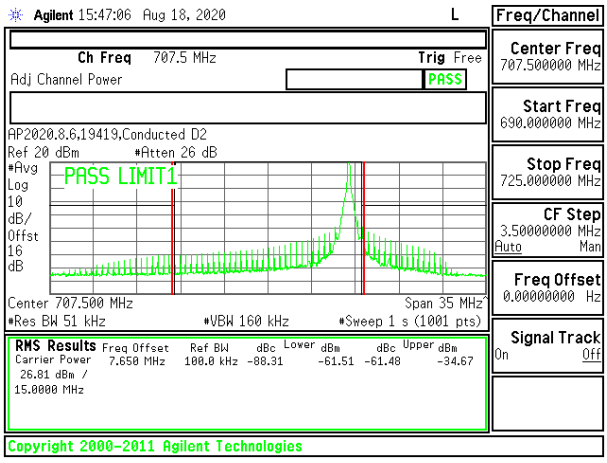
5G NR Band n12 15MHz QPSK Low Channel RB1-0



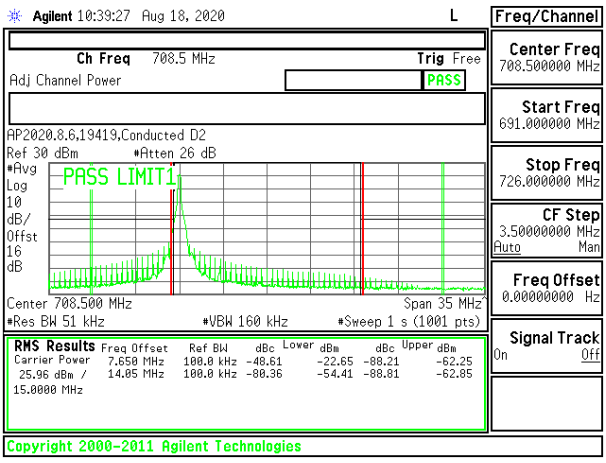
5G NR Band n12 15MHz QPSK Low Channel RB1-74



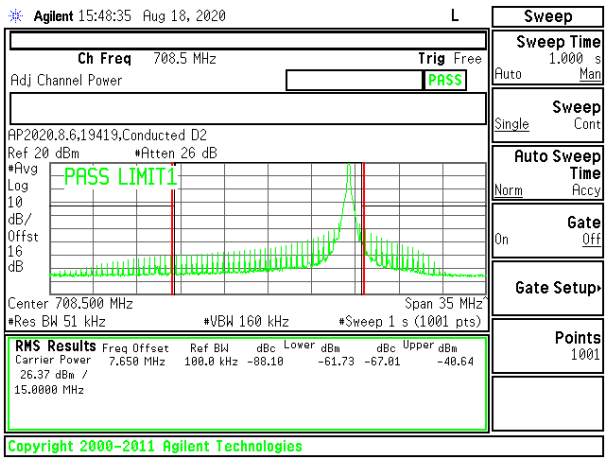
5G NR Band n12 15MHz QPSK Middle Channel RB1-0



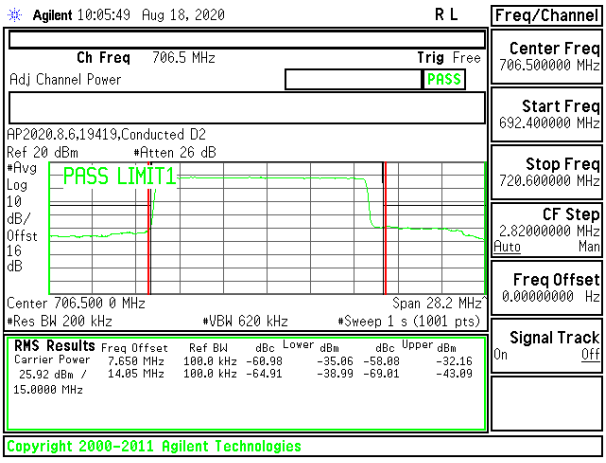
5G NR Band n12 15MHz QPSK Middle Channel RB1-74



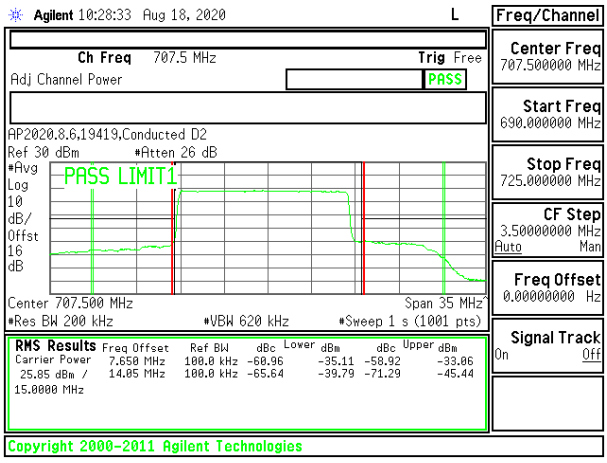
5G NR Band n12 15MHz QPSK High Channel RB1-0



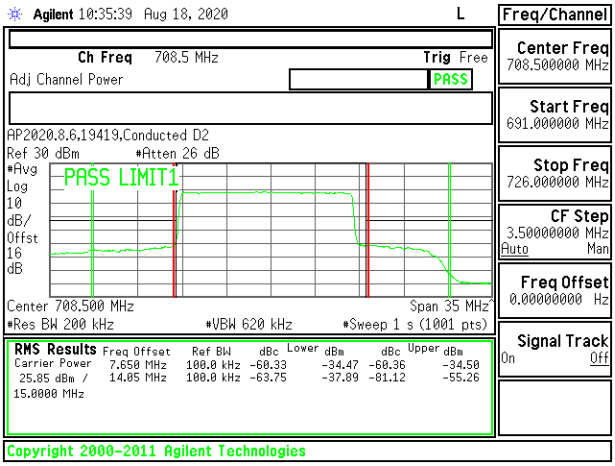
5G NR Band n12 15MHz QPSK High Channel RB1-74



5G NR Band n12 15MHz QPSK Low Channel RB75-0



5G NR Band n12 15MHz QPSK Middle Channel RB75-0



5G NR Band n12 15MHz QPSK High Channel RB75-0

8.2.5. LTE BAND 13 ADJACENT CHANNEL POWER

LIMITS

FCC: §27.53
(c)For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

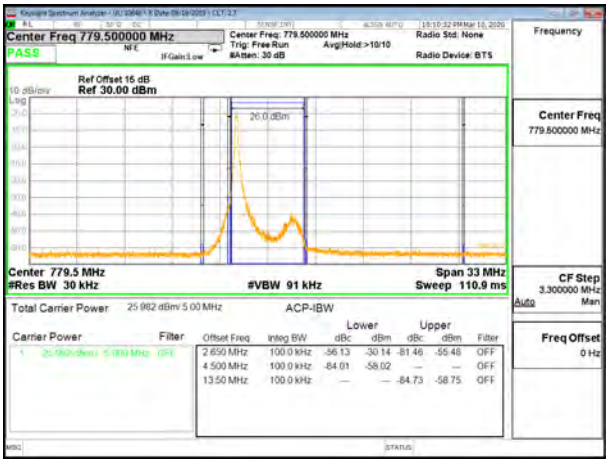
(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;

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

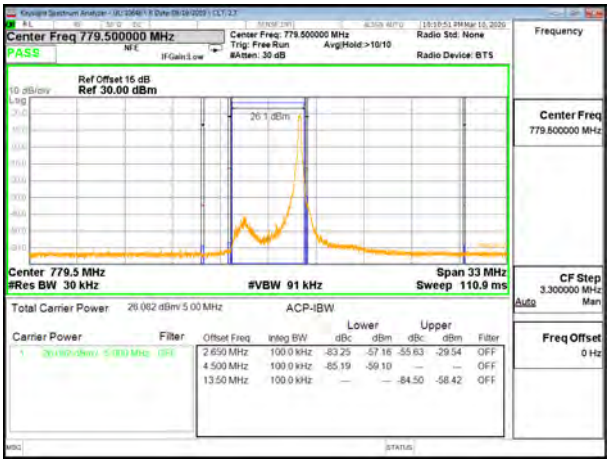
(5) Compliance with the provisions of paragraphs (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least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

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

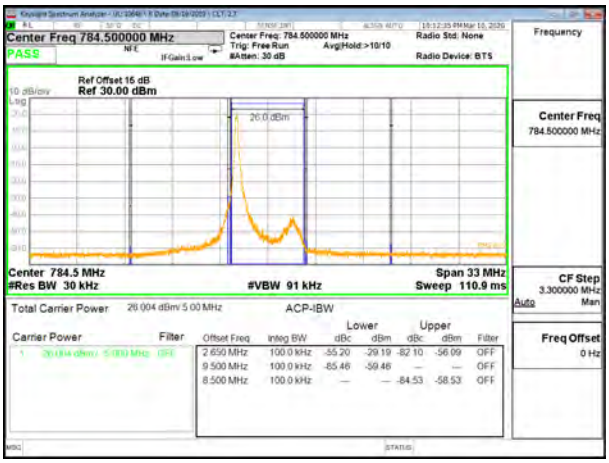
(f) Emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals. (-70 dBW/MHz = -40dBm/MHz).



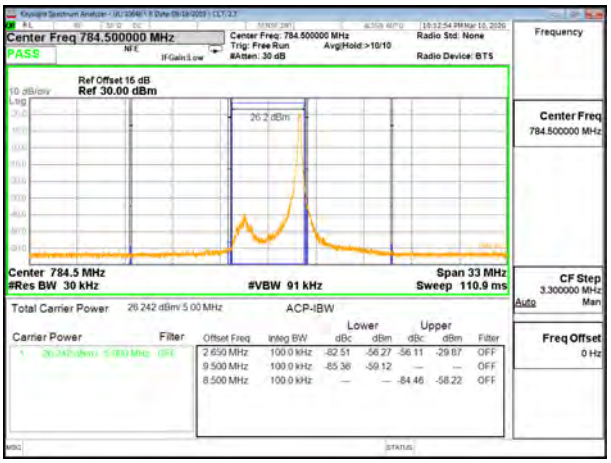
LTE B13 5MHz QPSK Low Channel RB1-0



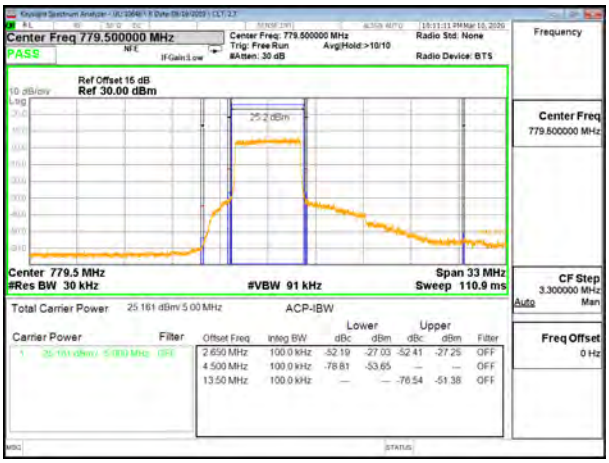
LTE B13 5MHz QPSK Low Channel RB1-24



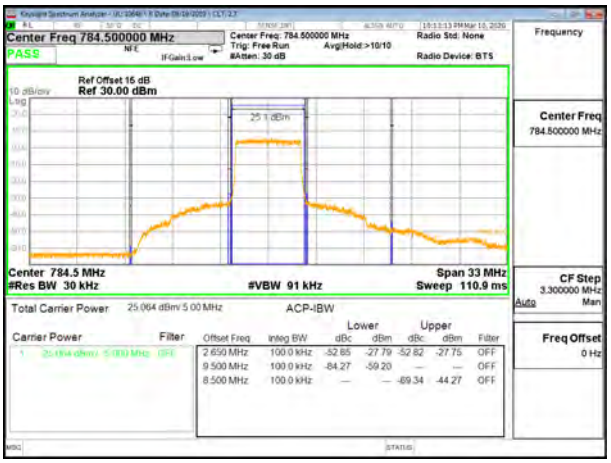
LTE B13 5MHz QPSK High Channel RB1-0



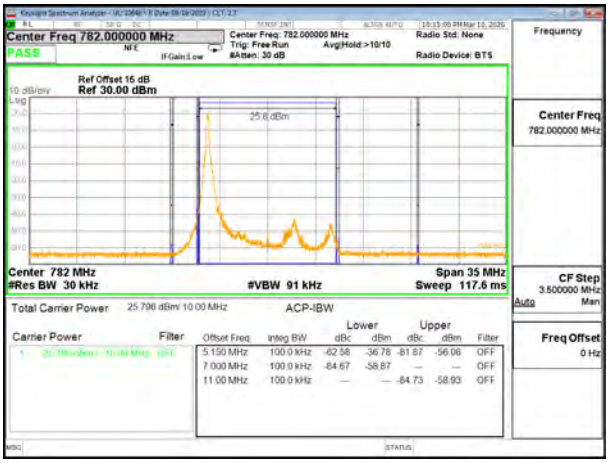
LTE B13 5MHz QPSK High Channel RB1-24



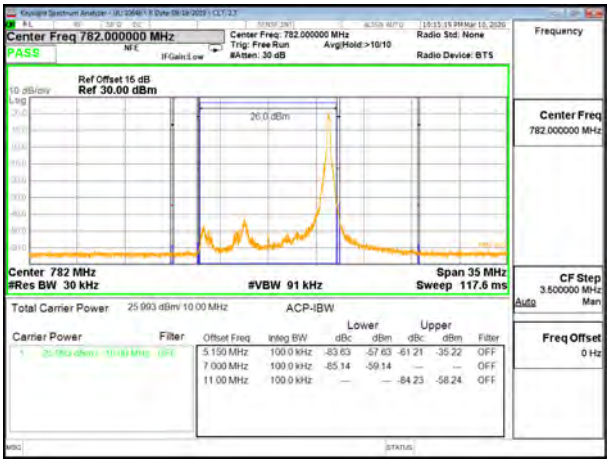
LTE B13 5MHz QPSK Low Channel RB25-0



LTE B13 5MHz QPSK High Channel RB25-0



LTE B13 10MHz QPSK Middle Channel RB1-0



LTE B13 10MHz QPSK Middle Channel RB1-49

LTE B13 10MHz QPSK Middle Channel RB50-0

8.2.6. LTE BAND 14 ADJACENT CHANNEL POWER

LIMITS

FCC: §90.543 Emission Limitations.
(e) For operations in the 758-768 MHz and the 788-798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

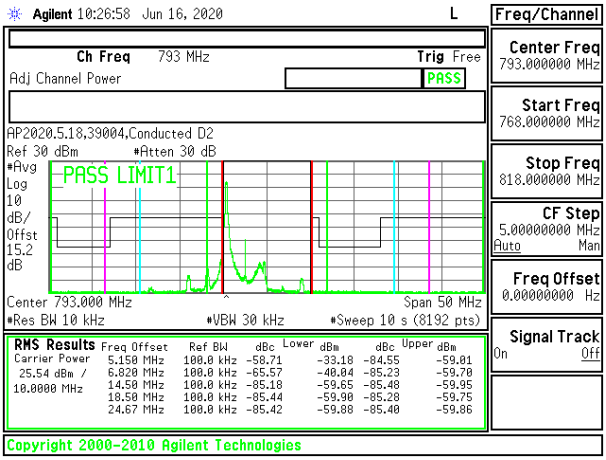
(2) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations.

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

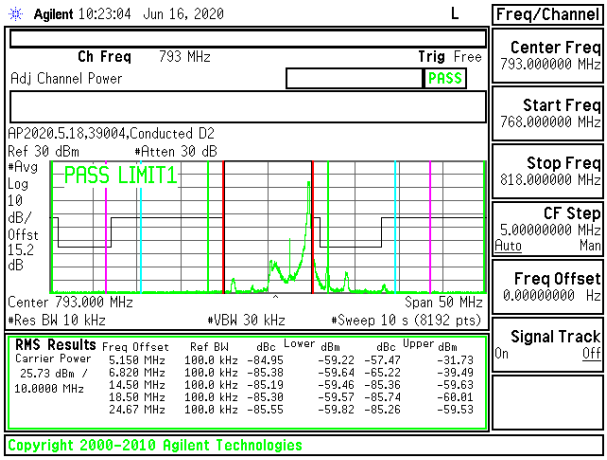
(4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

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

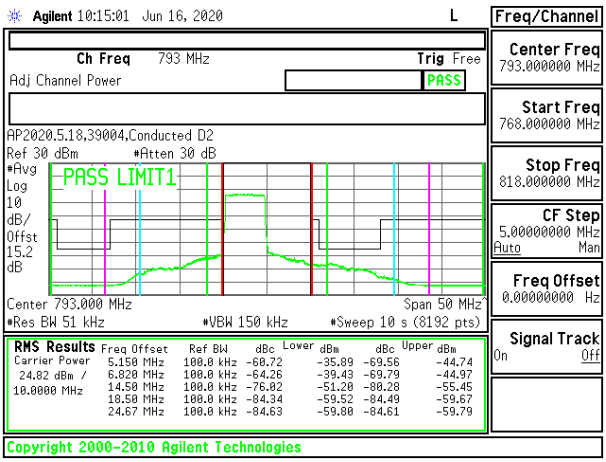
(f) For operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the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



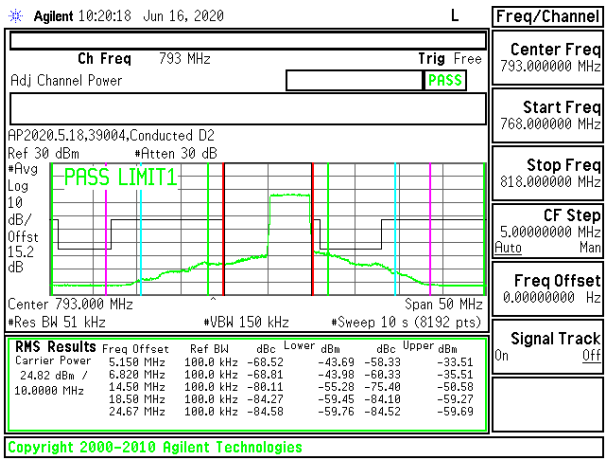
LTE B14 5MHz QPSK Low Channel RB1-0



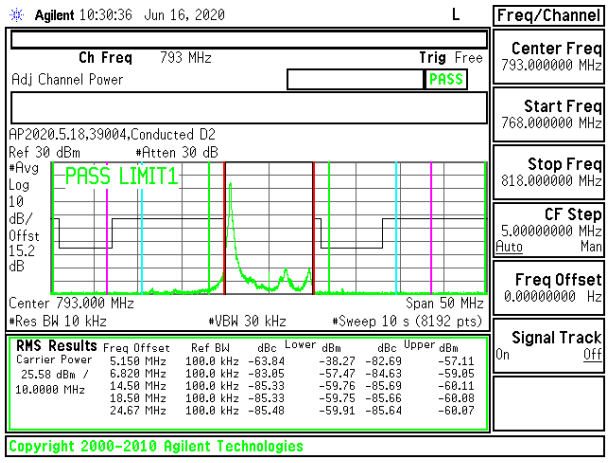
LTE B14 5MHz QPSK High Channel RB1-24



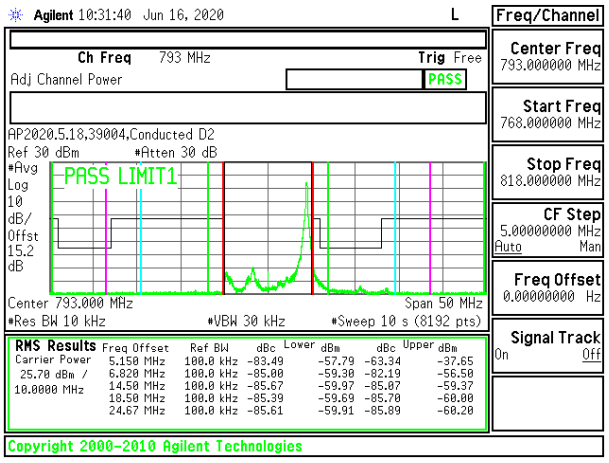
LTE B14 5MHz QPSK Low Channel RB25-0



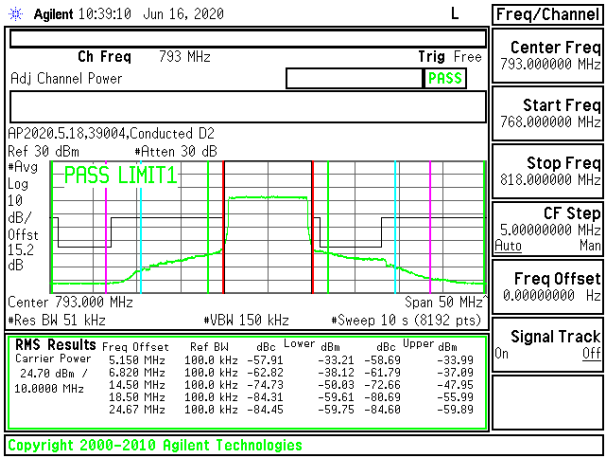
LTE B14 5MHz QPSK High Channel RB25-0



LTE B14 10MHz QPSK Middle Channel RB1-0



LTE B14 10MHz QPSK Middle Channel RB1-49

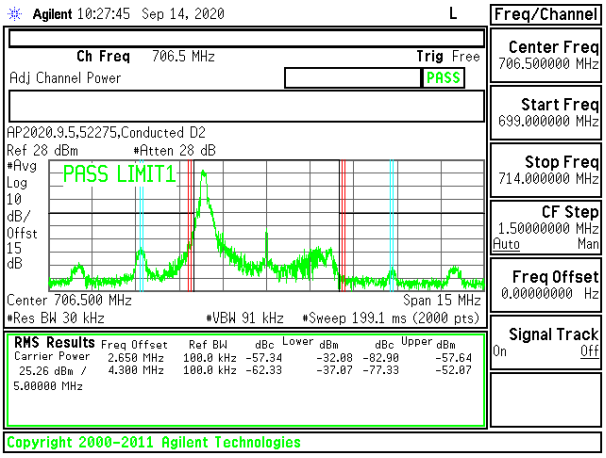


LTE B14 10MHz QPSK Middle Channel RB50-0

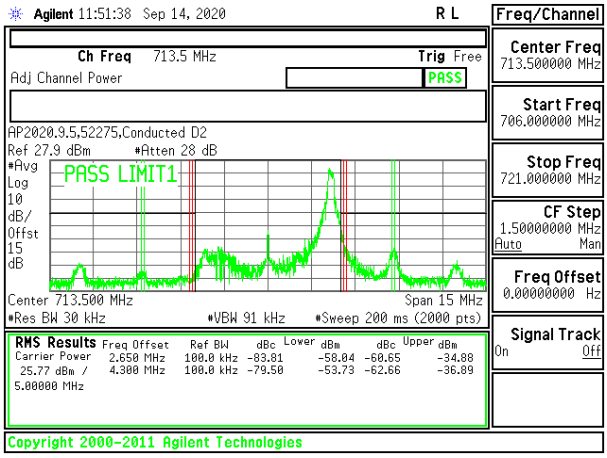
8.2.7. LTE BAND 17 BANDEDGE

LIMITS

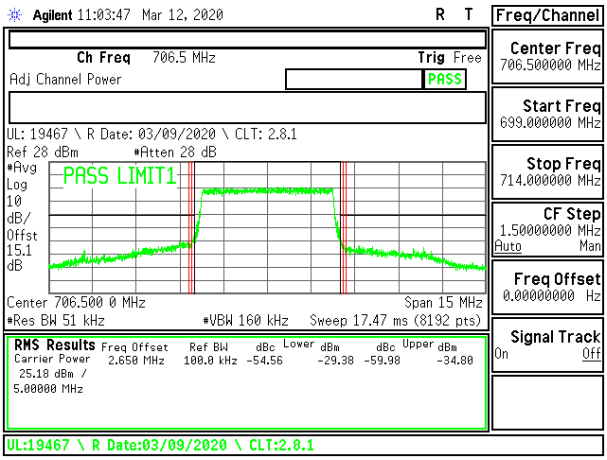
FCC: §27.53
(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.



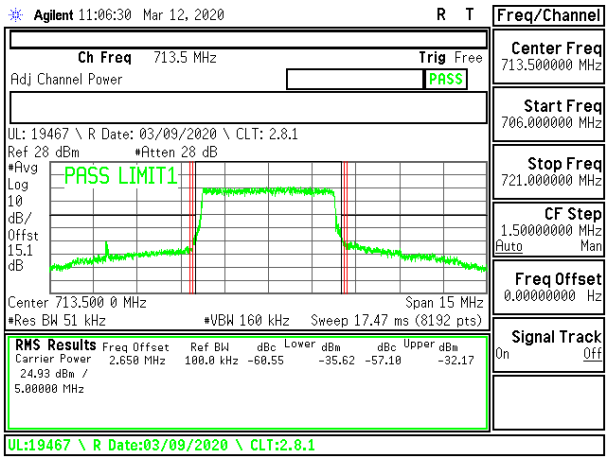
LTE B17 5MHz QPSK Low Channel RB1-0



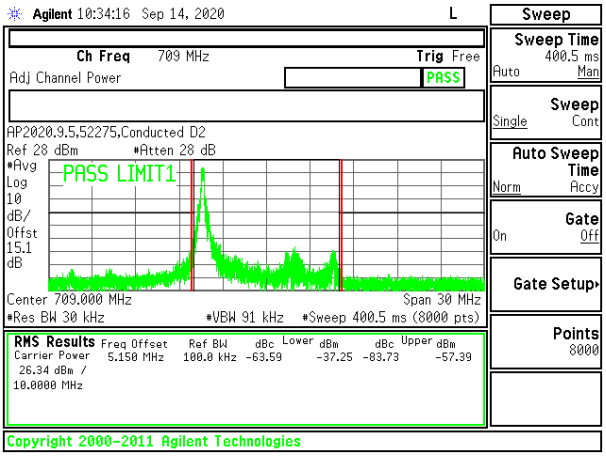
LTE B17 5MHz QPSK High Channel RB1-24



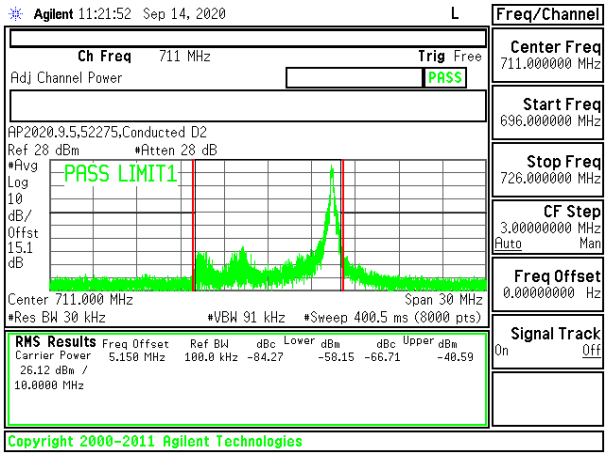
LTE B17 5MHz QPSK Low Channel RB25-0



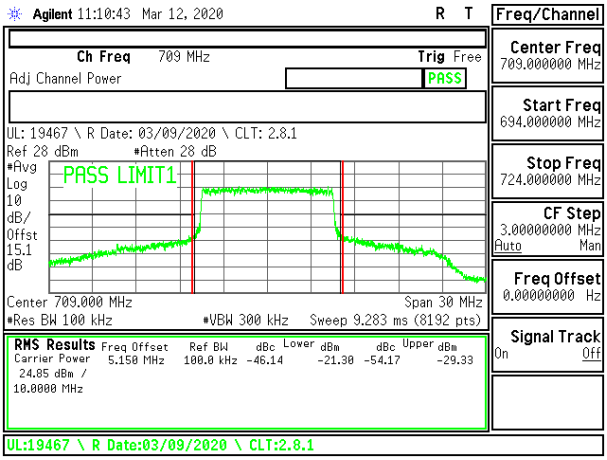
LTE B17 5MHz QPSK High Channel RB25-0



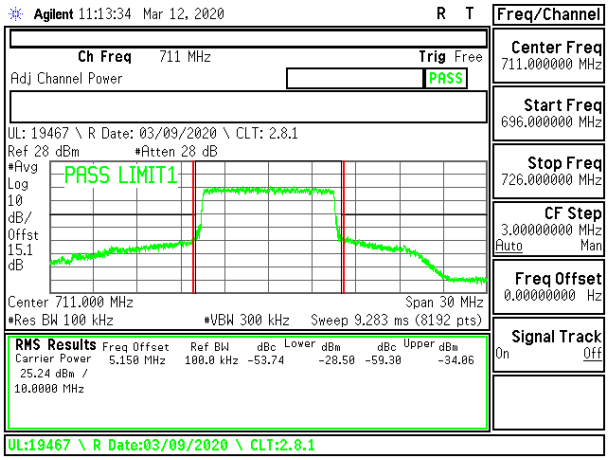
LTE B17 10MHz QPSK Low Channel RB1-0



LTE B17 10MHz QPSK High Channel RB1-49



LTE B17 10MHz QPSK Low Channel RB50-0

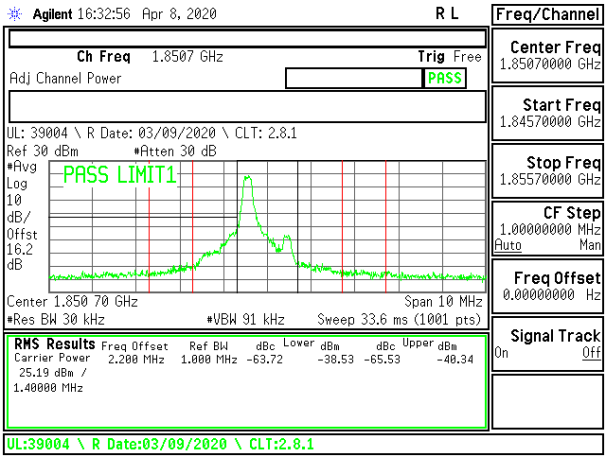


LTE B17 10MHz QPSK High Channel RB50-0

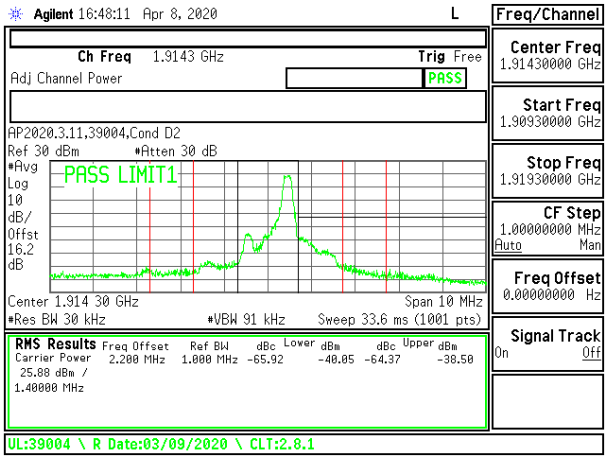
8.2.8. LTE BAND 25 BANDEDGE

LIMITS

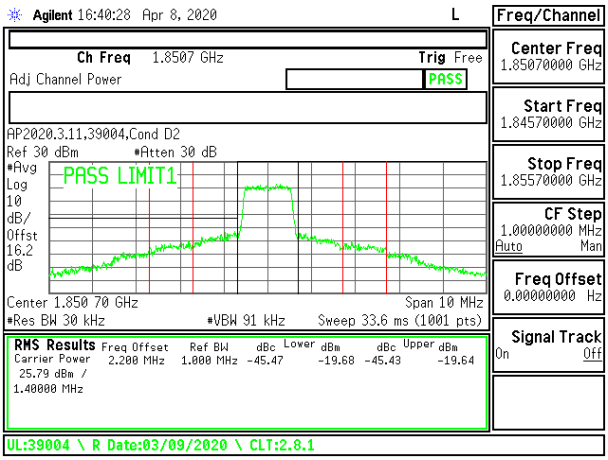
FCC: §24.238
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.



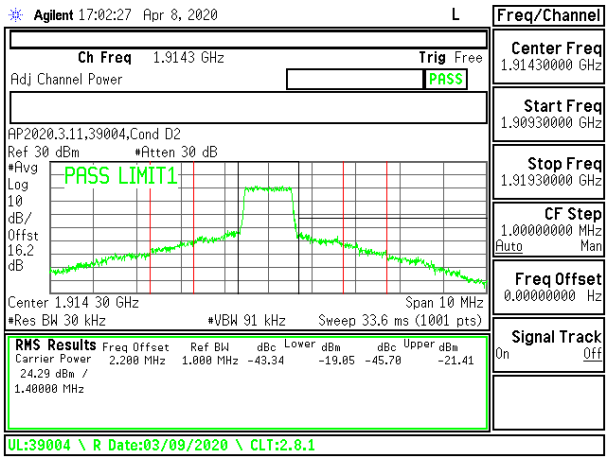
LTE B25 1.4MHz QPSK Low Channel RB1-0



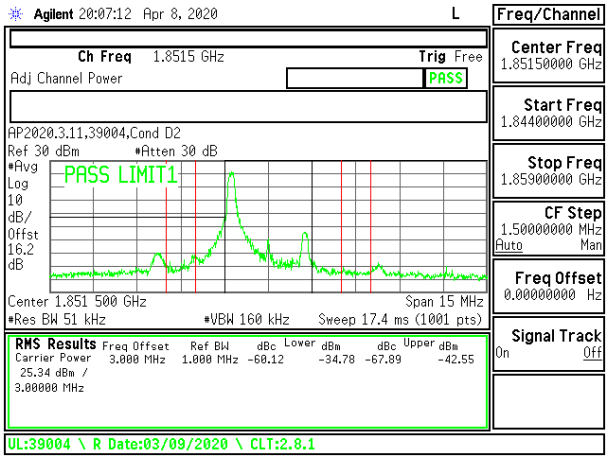
LTE B25 1.4MHz QPSK High Channel RB1-5



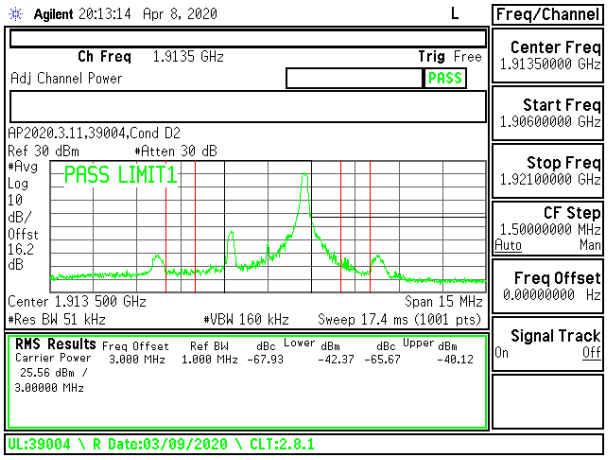
LTE B25 1.4MHz QPSK Low Channel RB6-0



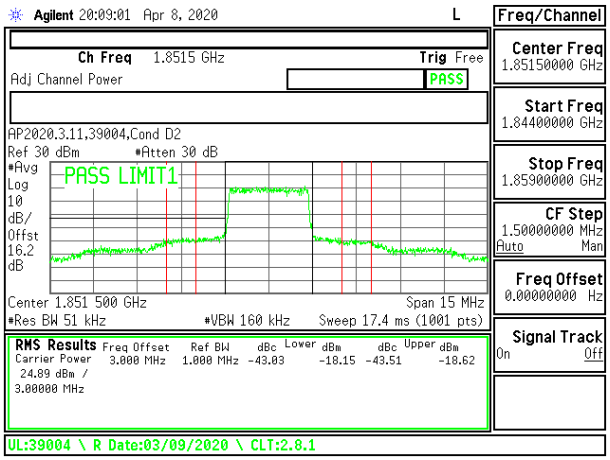
LTE B25 1.4MHz QPSK High Channel RB6-0



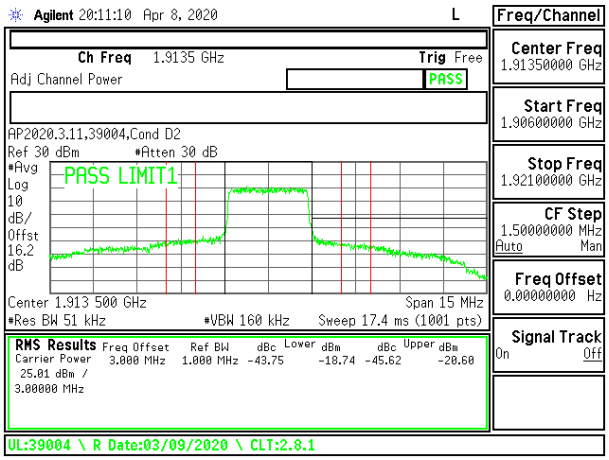
LTE B25 3MHz QPSK Low Channel RB1-0



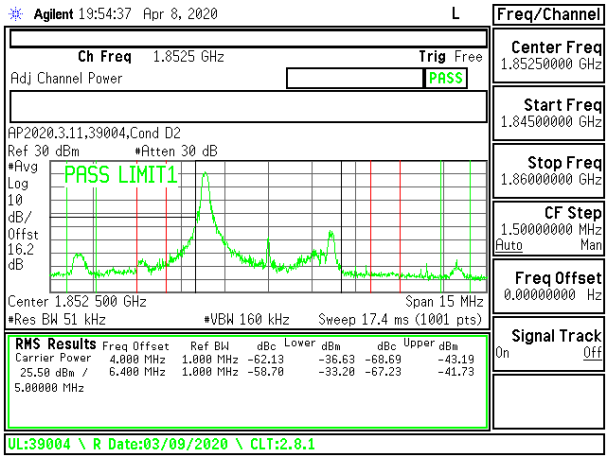
LTE B25 3MHz QPSK High Channel RB1-14



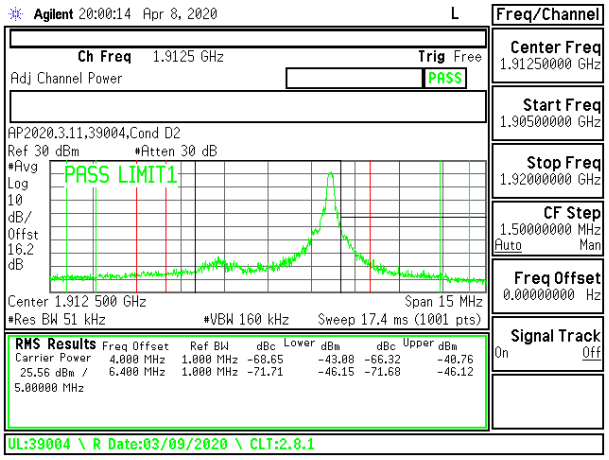
LTE B25 3MHz QPSK Low Channel RB15-0



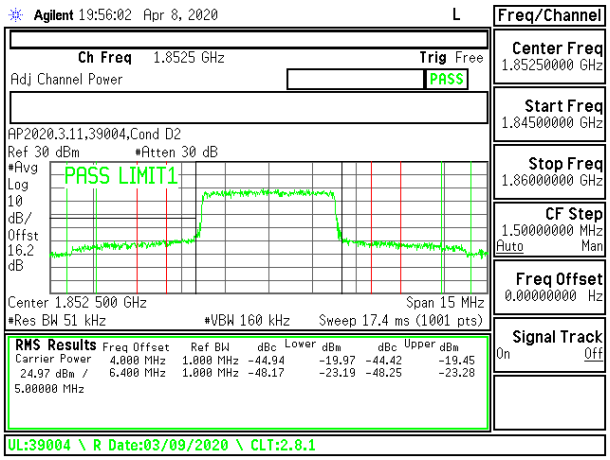
LTE B25 3MHz QPSK High Channel RB15-0



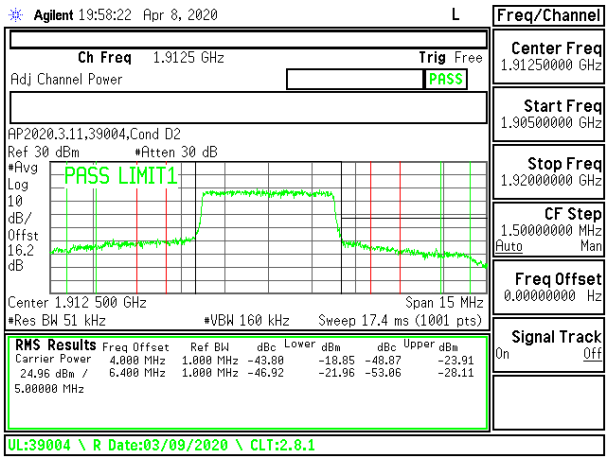
LTE B25 5MHz QPSK Low Channel RB1-0



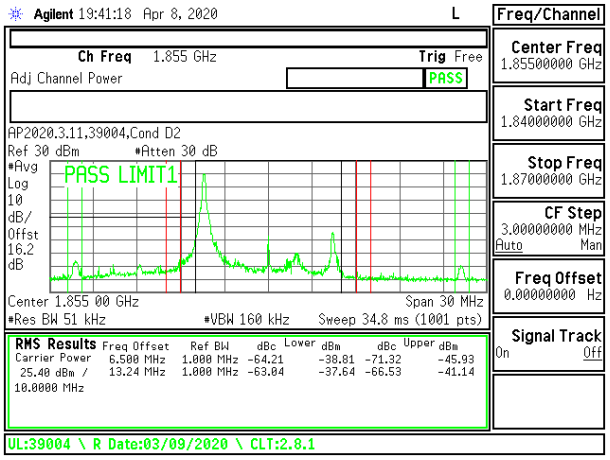
LTE B25 5MHz QPSK High Channel RB1-24



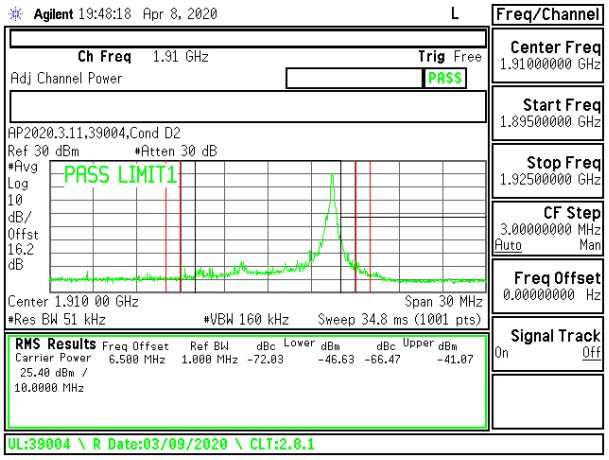
LTE B25 5MHz QPSK Low Channel RB25-0



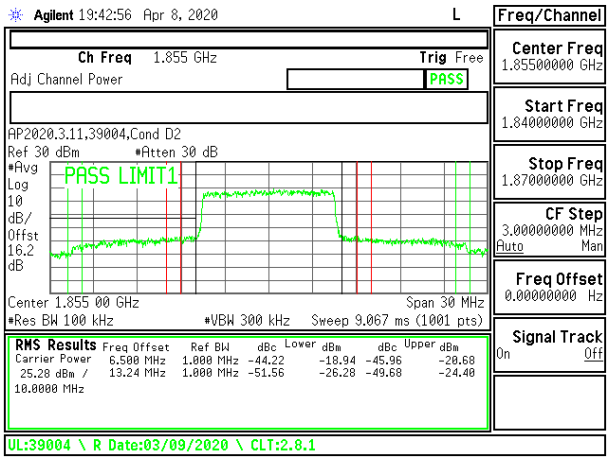
LTE B25 5MHz QPSK High Channel RB25-0



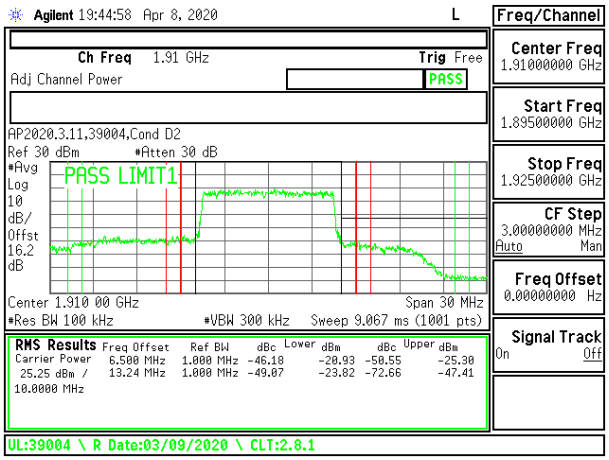
LTE B25 10MHz QPSK Low Channel RB1-0



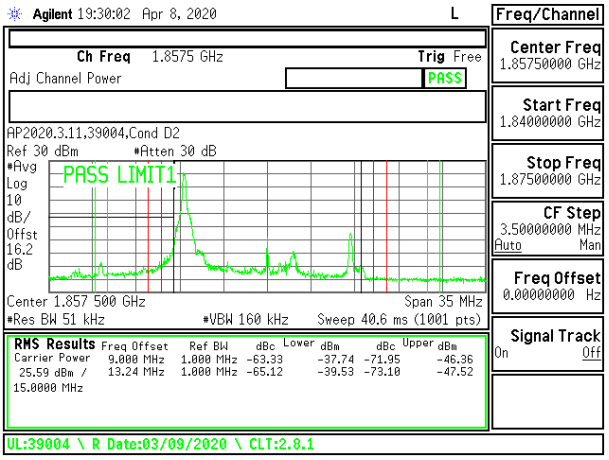
LTE B25 10MHz QPSK High Channel RB1-49



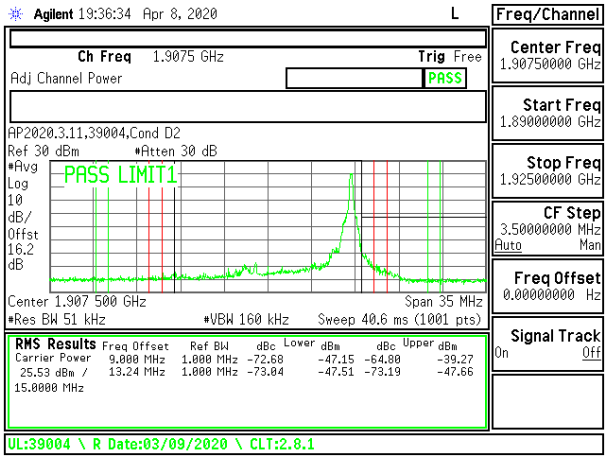
LTE B25 10MHz QPSK Low Channel RB50-0



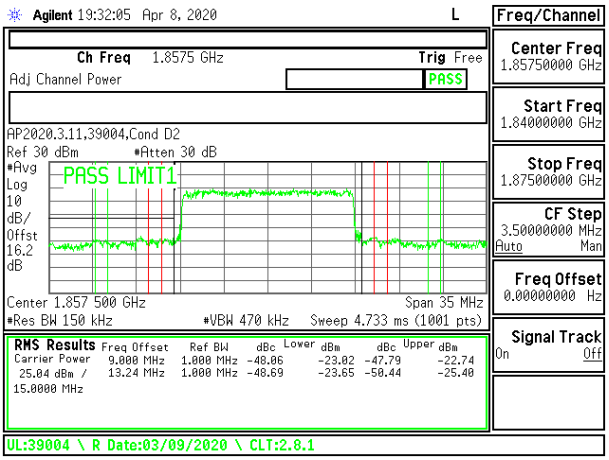
LTE B25 10MHz QPSK High Channel RB50-0



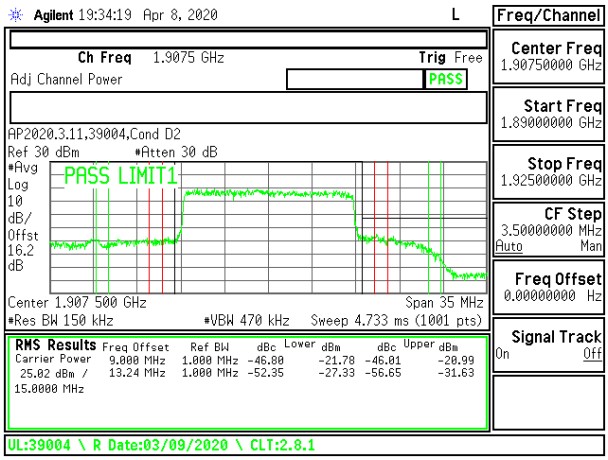
LTE B25 15MHz QPSK Low Channel RB1-0



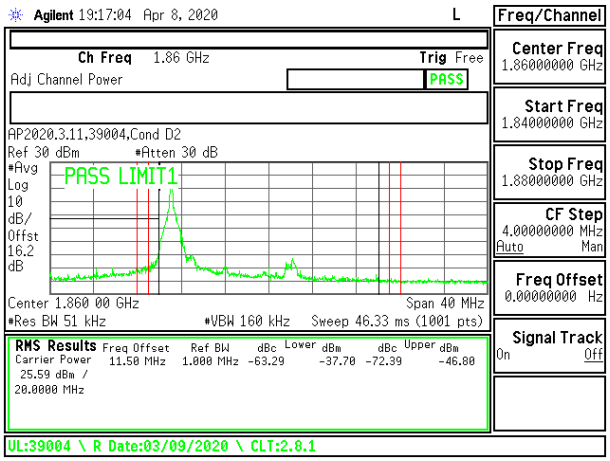
LTE B25 15MHz QPSK High Channel RB1-74



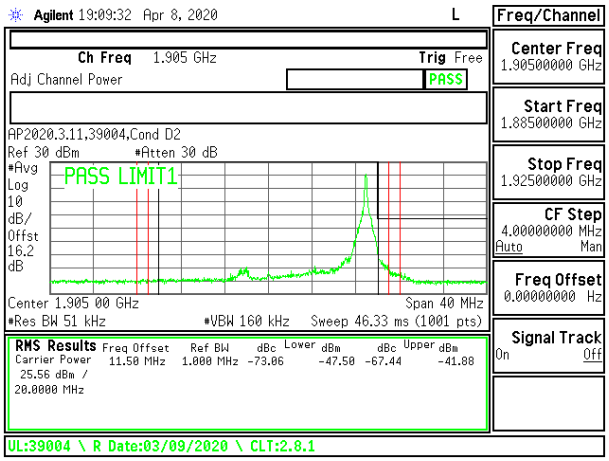
LTE B25 15MHz QPSK Low Channel RB75-0



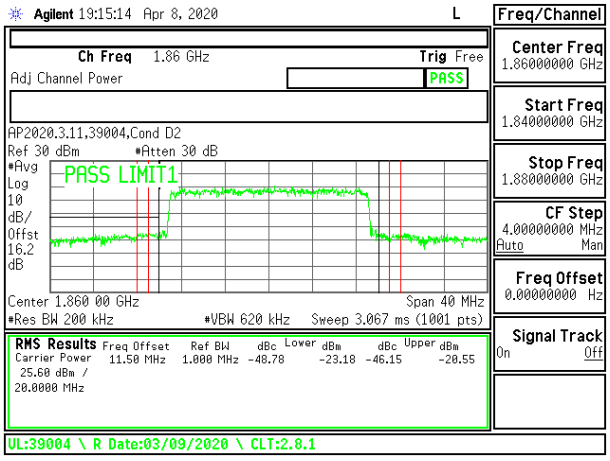
LTE B25 15MHz QPSK High Channel RB75-0



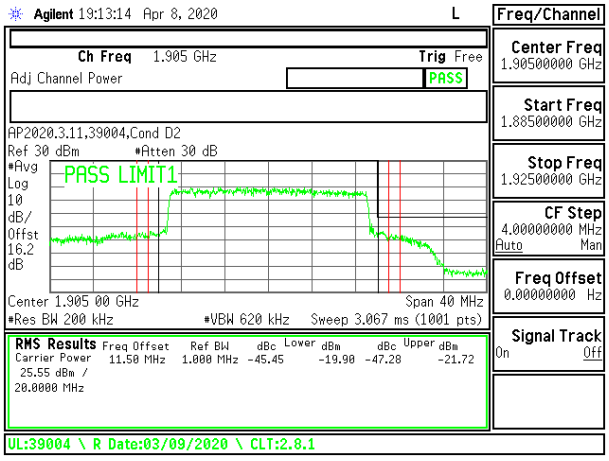
LTE B25 20MHz QPSK Low Channel RB1-0



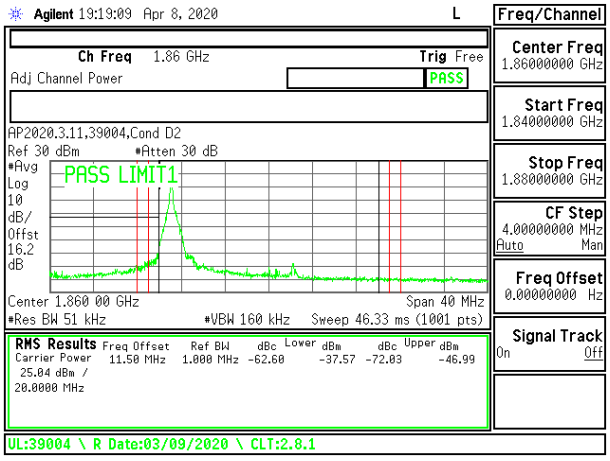
LTE B25 20MHz QPSK High Channel RB1-99



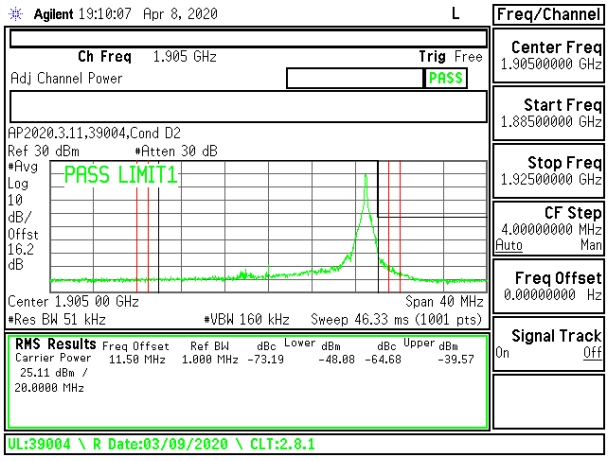
LTE B25 20MHz QPSK Low Channel RB100-0



LTE B25 20MHz QPSK High Channel RB100-0



LTE B25 20MHz 16QAM Low Channel RB1-0



LTE B25 20MHz 16QAM High Channel RB1-99

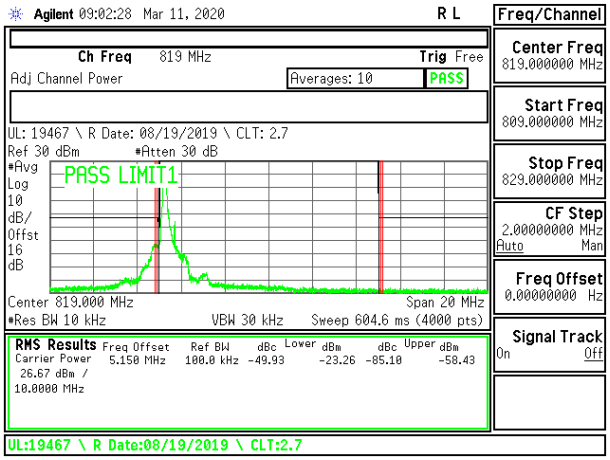
8.2.9. LTE BAND 26 EMISSION MASK (PART 90S)

LIMITS

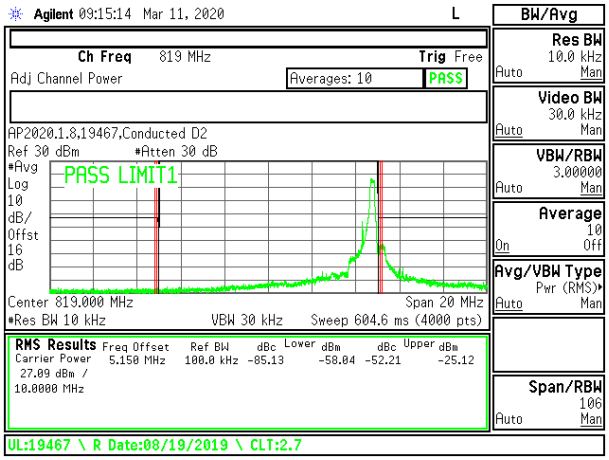
FCC: §90.691 Emission mask requirements for EA-based systems.
(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

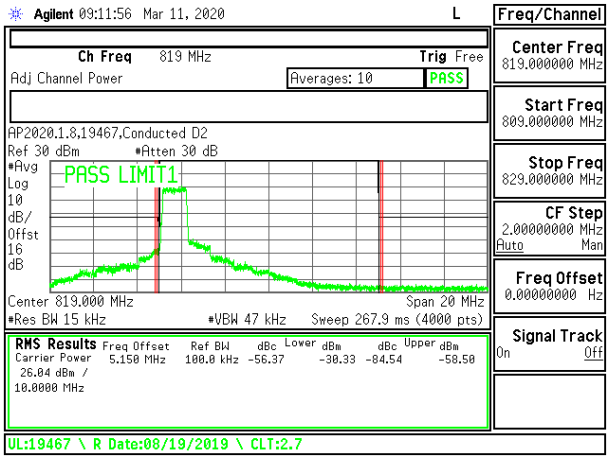
(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.



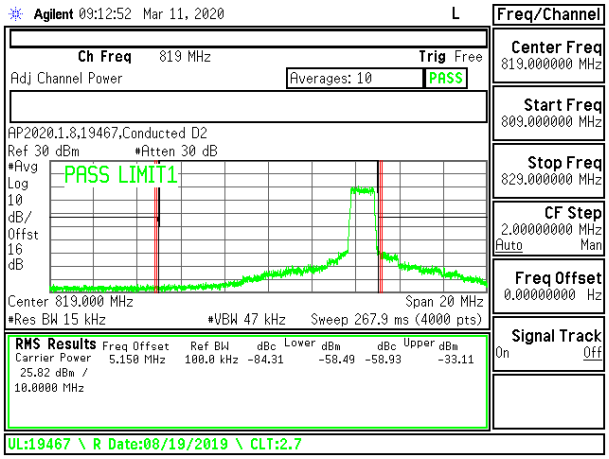
LTE B26 1.4MHz QPSK Low Channel RB1-0



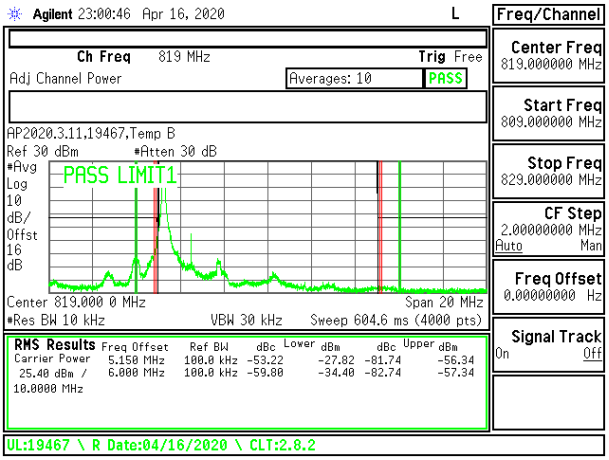
LTE B26 1.4MHz QPSK High Channel RB1-5



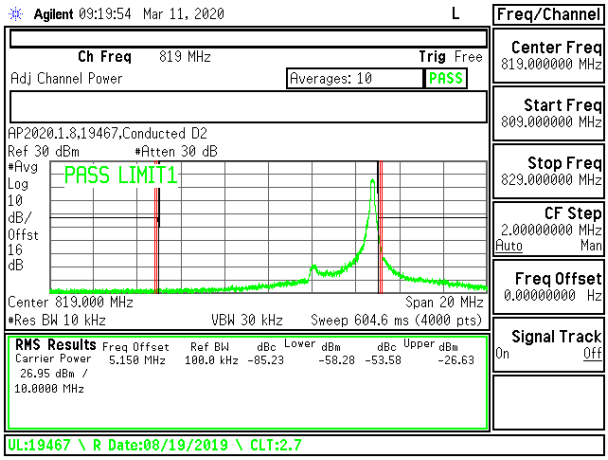
LTE B26 1.4MHz QPSK Low Channel RB6-0



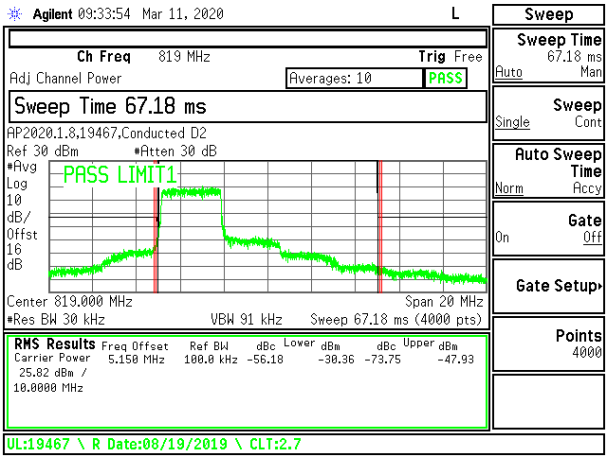
LTE B26 1.4MHz QPSK High Channel RB6-0



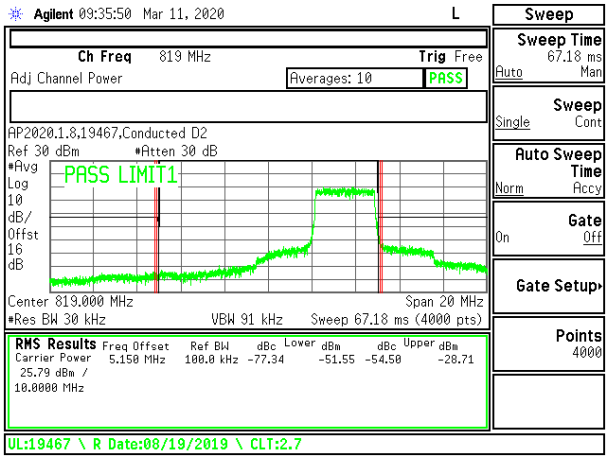
LTE B26 3MHz QPSK Low Channel RB1-0



LTE B26 3MHz QPSK High Channel RB1-14



LTE B26 3MHz QPSK Low Channel RB15-0



LTE B26 3MHz QPSK High Channel RB15-0