# TEST REPORT

**Report Number. :** 13259315-E8V6

| | | |
|---|---|---|
| **Applicant** | : | APPLE, INC<br>1 APPLE PARK WAY<br>CUPERTINO, CA 95014, U.S.A. |
| **Model** | : | A2341 |
| **FCC ID** | : | BCG-E3545A |
| **EUT Description** | : | SMARTPHONE |
| **Test Standard(s)** | : | FCC CFR47 PART 22H, 24E, 27, 90S, 90R, AND 96 |

**Date Of Issue:**
SEPTEMBER 29, 2020

**Prepared by:**
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NVLAP TESTING ilac-MRA
NVLAP Lab code: 200065-0

Revision History

| Rev. | Issue Date | Revisions | Revised By |
|---|---|---|---|
| V1 | 9/16/2020 | Initial Review | Mengistu Mekuria |
| V2 | 9/18/2020 | Address TCB Questions | Mengistu Mekuria |
| V3 | 9/21/2020 | Address TCB Questions | John Thompson |
| V4 | 9/22/2020 | Address TCB Questions | John Thompson |
| V5 | 9/25/2020 | Address TCB Questions | Sintia Andrean |
| V6 | 9/29/2020 | 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. | Sintia Andrean |



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# 1. ATTESTATION OF TEST RESULTS

| | |
|---|---|
| Applicant Name and Address | APPLE, INC<br>1 APPLE PARK WAY<br>CUPERTINO, CA 95014, U.S.A. |
| Model | A2341 |
| FCC ID | BCG-E3545A |
| EUT Description | SMARTPHONE |
| Serial Number | MODEL (A2341): C07018700XDPRW02 (Conducted) and G6TCQ02MQ5WF (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<br>Lead Test Engineer<br>UL Verification Services Inc. | Glenn Escano<br>Project Engineer<br>UL Verification Services Inc. | Sintia Andrean<br>Laboratory Engineer<br>UL Verification Services Inc. |




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# 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


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# 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




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# 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:




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## LTE BAND 2

| Part 24 / RSS 133 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 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 |
| 1.4 | QPSK | 1850.7 | 1909.3 | 25.0 | 25.90 | 0.389 | 1084.6 | 1M08G7W |
| | 16QAM | | | 24.3 | 25.20 | 0.331 | 1082.1 | 1M08D7W |
| 3.0 | QPSK | 1851.5 | 1908.5 | 25.0 | 25.90 | 0.389 | 2684.5 | 2M68G7W |
| | 16QAM | | | 23.9 | 24.80 | 0.302 | 2.6829 | 2K68D7W |
| 5.0 | QPSK | 1852.5 | 1907.5 | 25.0 | 25.90 | 0.389 | 4508.2 | 4M51G7W |
| | 16QAM | | | 24.1 | 25.00 | 0.316 | 4498.2 | 4M50D7W |
| 10.0 | QPSK | 1855.0 | 1905.0 | 25.0 | 25.90 | 0.389 | 8934.9 | 8M93G7W |
| | 16QAM | | | 24.1 | 25.00 | 0.316 | 8977.9 | 8M98D7W |
| 15.0 | QPSK | 1857.5 | 1902.5 | 25.0 | 25.90 | 0.389 | 13410.2 | 13M4G7W |
| | 16QAM | | | 24.1 | 25.00 | 0.316 | 13380.9 | 13M4D7W |
| 20.0 | QPSK | 1860.0 | 1900.0 | 25.0 | 25.90 | 0.389 | 17838.7 | 17M8G7W |
| | 16QAM | | | 24.6 | 25.50 | 0.355 | 17858.5 | 17M9D7W |

## LTE BAND 5

| Part 22H | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ERP Limit (W) | | 7.00 | | | | | | |
| 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 | 824.7 | 848.3 | 25.7 | 18.55 | 0.072 | 1080.3 | 1M08G7W |
| | 16QAM | | | 25.0 | 17.85 | 0.061 | 1085.7 | 1M09D7W |
| 3.0 | QPSK | 825.5 | 847.5 | 25.7 | 18.55 | 0.072 | 2683.1 | 2M68G7W |
| | 16QAM | | | 25.1 | 17.95 | 0.062 | 2686.6 | 2M69D7W |
| 5.0 | QPSK | 826.5 | 846.5 | 25.7 | 18.55 | 0.072 | 4504.3 | 4M50G7W |
| | 16QAM | | | 25.3 | 18.15 | 0.065 | 4493.4 | 4M49D7W |
| 10.0 | QPSK | 829.0 | 844.0 | 25.7 | 18.55 | 0.072 | 8943.9 | 8M94G7W |
| | 16QAM | | | 25.1 | 17.95 | 0.062 | 8970.7 | 8M97D7W |

## 5G NR Band n5

| Part 22H | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ERP Limit (W) | | 7.00 | | | | | | |
| 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 | QPSK | 831.5 | 841.5 | 25.7 | 18.55 | 0.072 | 13475 | 13M5G7W |
| | 16QAM | | | 24.6 | 17.45 | 0.056 | 13467 | 13M5D7W |
| 20.0 | QPSK | 834.0 | 839.0 | 25.7 | 18.55 | 0.072 | 17884 | 17M9G7W |
| | 16QAM | | | 24.8 | 17.65 | 0.058 | 17856 | 17M9D7W |



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## LTE BAND 7

| Part 27 / RSS 199 | |
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| EIRP Limit (W) | 2.00 |
| Antenna Gain (dBi) | -0.20 |

| Bandwidth (MHz) | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | EIRP Average (dBm) | EIRP Average (W) | 99% BW (kHz) | Emission Designator |
|---|---|---|---|---|---|---|---|---|
| 5.0 | QPSK | 2502.5 | 2567.5 | 25.0 | 24.80 | 0.302 | 4493.9 | 4M49G7W |
| | 16QAM | | | 24.2 | 24.00 | 0.251 | 4502.8 | 4M50D7W |
| 10.0 | QPSK | 2505.0 | 2565.0 | 25.0 | 24.80 | 0.302 | 8974.5 | 8M97G7W |
| | 16QAM | | | 24.5 | 24.30 | 0.269 | 8947 | 8M95D7W |
| 15.0 | QPSK | 2507.5 | 2562.5 | 25.0 | 24.80 | 0.302 | 13401 | 13M4G7W |
| | 16QAM | | | 24.1 | 23.90 | 0.245 | 13409 | 13M4D7W |
| 20.0 | QPSK | 2510.0 | 2560.0 | 25.0 | 24.80 | 0.302 | 17803.5 | 17M8G7W |
| | 16QAM | | | 24.8 | 24.60 | 0.288 | 17840 | 17M8D7W |

## 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 | 1078.8 | 1M08G7W |
| | 16QAM | | | 24.8 | 17.62 | 0.058 | 1082.3 | 1M08D7W |
| 3.0 | QPSK | 700.5 | 714.5 | 25.7 | 18.55 | 0.072 | 2684.9 | 2M68G7W |
| | 16QAM | | | 24.8 | 17.62 | 0.058 | 2685.7 | 2M69D7W |
| 5.0 | QPSK | 701.5 | 713.5 | 25.7 | 18.55 | 0.072 | 4489.8 | 4M49G7W |
| | 16QAM | | | 24.8 | 17.64 | 0.058 | 4485.1 | 4M49D7W |
| 10.0 | QPSK | 704.0 | 711.0 | 25.7 | 18.55 | 0.072 | 8931.9 | 8M93G7W |
| | 16QAM | | | 24.7 | 17.53 | 0.057 | 8946.2 | 8M95D7W |

## 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 | 13453 | 13M5G7W |
| | 16QAM | | | 24.6 | 17.43 | 0.055 | 13488 | 13M5D7W |




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## LTE BAND 13

| Part 27 / RSS 130 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ERP Limit (W) | | 3.00 | | | | | | |
| Antenna Gain (dBi) | | -5.30 | | | | | | |
| Bandwidth (MHz) | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | ERP Average (dBm) | ERP Average (W) | 99% BW (kHz) | Emission Designator |
| 5.0 | QPSK | 779.5 | 784.5 | 25.7 | 18.25 | 0.067 | 4487.3 | 4M49G7W |
| | 16QAM | | | 25.3 | 17.85 | 0.061 | 4494.2 | 4M49D7W |
| 10.0 | QPSK | 782.0 | 782.0 | 25.7 | 18.25 | 0.067 | 8939.6 | 8M94G7W |
| | 16QAM | | | 24.9 | 17.45 | 0.056 | 8917.9 | 8M92D7W |

## LTE BAND 14

| Part 90R / RSS 140 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 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 | 790.5 | 795.5 | 25.7 | 18.05 | 0.064 | 4489.3 | 4M49G7W |
| | 16QAM | | | 25.2 | 17.55 | 0.057 | 4491.5 | 4M49D7W |
| 10.0 | QPSK | 793.0 | 793.0 | 25.7 | 18.05 | 0.064 | 8957.2 | 8M96G7W |
| | 16QAM | | | 24.9 | 17.25 | 0.053 | 8985.5 | 8M99D7W |

## 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 | 4495.8 | 4M50G7W |
| | 16QAM | | | 25.3 | 18.15 | 0.065 | 4487.4 | 4M49D7W |
| 10.0 | QPSK | 709.0 | 711.0 | 25.7 | 18.55 | 0.072 | 8935 | 8M94G7W |
| | 16QAM | | | 25.2 | 18.05 | 0.064 | 8945 | 8M95D7W |




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## LTE BAND 25

| Part 24 / RSS 133 | |
|---|---|
| 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 |
|---|---|---|---|---|---|---|---|---|
| 1.4 | QPSK | 1850.7 | 1914.3 | 25.0 | 25.90 | 0.389 | 1080.5 | 1M08G7W |
| | 16QAM | | | 24.2 | 25.10 | 0.324 | 1086.9 | 1M09D7W |
| 3.0 | QPSK | 1851.5 | 1913.5 | 25.0 | 25.90 | 0.389 | 2962.2 | 2M96G7W |
| | 16QAM | | | 23.9 | 24.80 | 0.302 | 2685.8 | 2M69D7W |
| 5.0 | QPSK | 1852.5 | 1912.5 | 25.0 | 25.90 | 0.389 | 4493.7 | 4M49G7W |
| | 16QAM | | | 24.0 | 24.90 | 0.309 | 4490.7 | 4M49D7W |
| 10.0 | QPSK | 1855.0 | 1910.0 | 25.0 | 25.90 | 0.389 | 8948 | 8M95G7W |
| | 16QAM | | | 24.1 | 25.00 | 0.316 | 8940.3 | 8M94D7W |
| 15.0 | QPSK | 1857.5 | 1907.5 | 25.0 | 25.90 | 0.389 | 13428.9 | 13M4G7W |
| | 16QAM | | | 24.0 | 24.90 | 0.309 | 13411.9 | 13M4D7W |
| 20.0 | QPSK | 1860.0 | 1905.0 | 25.0 | 25.90 | 0.389 | 17854.6 | 17M9G7W |
| | 16QAM | | | 24.0 | 24.90 | 0.309 | 17861.7 | 17M9D7W |

## LTE BAND 26 (FCC Part 90S)

| Part 90S | |
|---|---|
| Conducted Limit (W) | 100.00 |
| 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 | 814.7 | 823.3 | 25.7 | 18.55 | 0.072 | 1093.8 | 1M09G7W |
| | 16QAM | | | 25.1 | 17.95 | 0.062 | 1083.4 | 1M08D7W |
| 3.0 | QPSK | 815.5 | 822.5 | 25.7 | 18.55 | 0.072 | 2687 | 2M69G7W |
| | 16QAM | | | 24.9 | 17.75 | 0.060 | 2680.2 | 2M68D7W |
| 5.0 | QPSK | 816.5 | 821.5 | 25.7 | 18.55 | 0.072 | 4491.3 | 4M49G7W |
| | 16QAM | | | 24.9 | 17.75 | 0.060 | 4493.2 | 4M49D7W |
| 10.0 | QPSK | 819.0 | 819.0 | 25.7 | 18.55 | 0.072 | 8946.3 | 8M95G7W |
| | 16QAM | | | 24.9 | 17.75 | 0.060 | 8931.8 | 8M93D7W |

## LTE BAND 30

| Part 27 / RSS 195 | |
|---|---|
| EIRP Limit (W) | 0.25 |
| Antenna Gain (dBi) | -0.20 |

| Bandwidth (MHz) | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | EIRP Average (dBm) | EIRP Average (W) | 99% BW (kHz) | Emission Designator |
|---|---|---|---|---|---|---|---|---|
| 5.0 | QPSK | 2307.5 | 2312.5 | 23.7 | 23.50 | 0.224 | 4499.9 | 4M50G7W |
| | 16QAM | | | 22.9 | 22.65 | 0.184 | 4487.8 | 4M49D7W |
| 10.0 | QPSK | 2310.0 | 2310.0 | 23.7 | 23.50 | 0.224 | 8939.9 | 8M94G7W |
| | 16QAM | | | 22.8 | 22.63 | 0.183 | 8918.5 | 8M92D7W |




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## LTE BAND 41 (NS04)

| Part 27 | |
|---|---|
| EIRP Limit (W) | 2.00 |
| Antenna Gain (dBi) | -0.20 |

| Bandwidth (MHz) | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | EIRP Average (dBm) | EIRP Average (W) | 99% BW (kHz) | Emission Designator |
|---|---|---|---|---|---|---|---|---|
| 5.0 | QPSK | 2498.5 | 2687.5 | 26.0 | 25.80 | 0.380 | 4495.9 | 4M50G7W |
| | 16QAM | | | 25.3 | 25.13 | 0.326 | 4495 | 4M50D7W |
| 10.0 | QPSK | 2501.0 | 2685.0 | 26.0 | 25.80 | 0.380 | 8931 | 8M93G7W |
| | 16QAM | | | 25.7 | 25.46 | 0.352 | 8923.6 | 8M92D7W |
| 15.0 | QPSK | 2503.5 | 2682.5 | 26.0 | 25.80 | 0.380 | 13410.1 | 13M4G7W |
| | 16QAM | | | 25.5 | 25.34 | 0.342 | 13428.5 | 13M4D7W |
| 20.0 | QPSK | 2506.0 | 2680.0 | 26.0 | 25.80 | 0.380 | 17859.8 | 17M9G7W |
| | 16QAM | | | 27.3* | 25.43 | 0.350 | 17862.9 | 17M9D7W |

*Values from Ant 1 with Antenna Gain of -1.9dBi, which have a higher EIRP than Ant 3.

## 5G NR Band n41 (NS04)

| Part 27 | |
|---|---|
| EIRP Limit (W) | 2.00 |
| Antenna Gain (dBi) | -0.60 |

| Bandwidth (MHz) | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | EIRP Average (dBm) | EIRP Average (W) | 99% BW (kHz) | Emission Designato |
|---|---|---|---|---|---|---|---|---|
| 20.0 | QPSK | 2506.0 | 2680.0 | 26.7 | 26.10 | 0.407 | 17888 | 17M9G7W |
| | 16QAM | | | 26.0 | 25.40 | 0.347 | 17882 | 17M9D7W |
| 40.0 | BPSK | 2516.0 | 2670.0 | 26.7 | 26.10 | 0.407 | 35591 | 35M6G7W |
| | 16QAM | | | 26.1 | 25.53 | 0.357 | 35629 | 35M6D7W |
| 50.0 | BPSK | 2521.0 | 2665.0 | 26.7 | 26.10 | 0.407 | 45514 | 45M5G7W |
| | 16QAM | | | 26.4 | 25.84 | 0.384 | 45516 | 45M5D7W |
| 60.0 | QPSK | 2526.0 | 2660.0 | 26.7 | 26.10 | 0.407 | 57732 | 57M7G7W |
| | 16QAM | | | 26.1 | 25.47 | 0.352 | 57661 | 57M7D7W |
| 80.0 | BPSK | 2536.0 | 2650.0 | 26.7 | 26.10 | 0.407 | 76908 | 76M9G7W |
| | 16QAM | | | 26.1 | 25.48 | 0.353 | 76993 | 77M0D7W |
| 90.0 | BPSK | 2541.0 | 2645.0 | 26.7 | 26.10 | 0.407 | 85293 | 85M3G7W |
| | 16QAM | | | 25.9 | 25.32 | 0.340 | 85422 | 85M4D7W |
| 100.0 | BPSK | 2546.0 | 2640.0 | 26.7 | 26.10 | 0.407 | 95826 | 95M8G7W |
| | 16QAM | | | 26.0 | 25.44 | 0.350 | 96077 | 96M1D7W |




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## LTE BAND 48

| Part 96 | |
|---|---|
| EIRP Limit (W)/ 10MHz | 0.20 |
| Antenna Gain (dBi) | -3.00 |

| Bandwidth (MHz) | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | EIRP Average (dBm) | EIRP Average (W) | 99% BW (kHz) | Emission Designator |
|---|---|---|---|---|---|---|---|---|
| 5.0 | QPSK | 3552.5 | 3697.5 | 24.1 | 21.10 | 0.129 | 4484.1 | 4M48G7W |
| | 16QAM | | | 23.6 | 20.56 | 0.114 | 4468.8 | 4M47D7W |
| 10.0 | QPSK | 3555.0 | 3695.0 | 24.1 | 21.10 | 0.129 | 8947.5 | 8M95G7W |
| | 16QAM | | | 23.6 | 20.60 | 0.115 | 8957.8 | 8M96D7W |
| 15.0 | QPSK | 3557.5 | 3692.5 | 24.1 | 21.10 | 0.129 | 13429 | 13M4G7W |
| | 16QAM | | | 23.7 | 20.69 | 0.117 | 13373.8 | 13M4D7W |
| 20.0 | QPSK | 3560.0 | 3690.0 | 24.1 | 21.10 | 0.129 | 17845.3 | 17M8G7W |
| | 16QAM | | | 23.5 | 20.49 | 0.112 | 17879.4 | 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 | 1083.4 | 1M08G7W |
| | 16QAM | | | 25.1 | 23.20 | 0.209 | 1084 | 1M08D7W |
| 3.0 | QPSK | 1711.5 | 1778.5 | 25.7 | 23.80 | 0.240 | 2679.2 | 2M68G7W |
| | 16QAM | | | 25.0 | 23.10 | 0.204 | 2685.7 | 2M69D7W |
| 5.0 | QPSK | 1712.5 | 1777.5 | 25.7 | 23.80 | 0.240 | 4498.9 | 4M50G7W |
| | 16QAM | | | 25.1 | 23.20 | 0.209 | 4488.7 | 4M49D7W |
| 10.0 | QPSK | 1715.0 | 1775.0 | 25.7 | 23.80 | 0.240 | 8972.8 | 8M97G7W |
| | 16QAM | | | 25.1 | 23.20 | 0.209 | 8947.3 | 8M95D7W |
| 15.0 | QPSK | 1717.5 | 1772.5 | 25.7 | 23.80 | 0.240 | 13426.2 | 13M4G7W |
| | 16QAM | | | 24.5 | 22.60 | 0.182 | 13414.8 | 13M4D7W |
| 20.0 | QPSK | 1720.0 | 1770.0 | 25.7 | 23.80 | 0.240 | 17873.1 | 17M9G7W |
| | 16QAM | | | 24.6 | 22.70 | 0.186 | 17862.4 | 17M9D7W |




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## LTE BAND 71

| Part 27 / RSS 130 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ERP Limit (W) | | 3.00 | | | | | | |
| Antenna Gain (dBi) | | -6.00 | | | | | | |
| 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 | 665.5 | 695.5 | 25.7 | 17.55 | 0.057 | 4493.9 | 4M49G7W |
| | 16QAM | | | 25.1 | 16.95 | 0.050 | 4487.2 | 4M49D7W |
| 10.0 | QPSK | 668.0 | 693.0 | 25.7 | 17.55 | 0.057 | 8962.4 | 8M96G7W |
| | 16QAM | | | 25.1 | 16.95 | 0.050 | 8941.2 | 8M94D7W |
| 15.0 | QPSK | 670.5 | 690.5 | 25.7 | 17.55 | 0.057 | 13440.9 | 13M4G7W |
| | 16QAM | | | 25.1 | 16.95 | 0.050 | 13435.2 | 13M4D7W |
| 20.0 | QPSK | 673.0 | 688.0 | 25.7 | 17.55 | 0.057 | 17851.9 | 17M9G7W |
| | 16QAM | | | 25.3 | 17.15 | 0.052 | 17873.2 | 17M9D7W |

## 5G NR Band n77

| Part 27 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| EIRP Limit (W) | | 1.00 | | | | | | |
| Antenna Gain (dBi) | | -2.30 | | | | | | |
| 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 | BPSK | 3710.0 | 3970.0 | 25.5 | 23.20 | 0.209 | 17827 | 17M8G7W |
| | 16QAM | | | 24.6 | 22.27 | 0.169 | 17878 | 17M9D7W |
| 40.0 | BPSK | 3720.0 | 3960.0 | 25.5 | 23.20 | 0.209 | 35837 | 35M8G7W |
| | 16QAM | | | 24.6 | 22.26 | 0.168 | 35749 | 35M7D7W |
| 50.0 | BPSK | 3725.0 | 3955.0 | 25.5 | 23.20 | 0.209 | 45608 | 45M6G7W |
| | 16QAM | | | 24.4 | 22.10 | 0.162 | 45666 | 45M7D7W |
| 60.0 | BPSK | 3730.0 | 3950.0 | 25.5 | 23.20 | 0.209 | 57592 | 57M6G7W |
| | 16QAM | | | 24.5 | 22.20 | 0.166 | 57725 | 57M7D7W |
| 80.0 | BPSK | 3740.0 | 3940.0 | 25.5 | 23.20 | 0.209 | 76936 | 76M9G7W |
| | 16QAM | | | 24.5 | 22.22 | 0.167 | 77041 | 77M0D7W |
| 90.0 | BPSK | 3745.0 | 3935.0 | 25.5 | 23.20 | 0.209 | 85508 | 85M5G7W |
| | 16QAM | | | 24.5 | 22.18 | 0.165 | 85558 | 85M6D7W |
| 100.0 | BPSK | 3750.0 | 3930.0 | 25.5 | 23.20 | 0.209 | 96168 | 96M2G7W |
| | 16QAM | | | 24.5 | 22.20 | 0.166 | 96385 | 96M4D7W |



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## 5.3. SOFTWARE AND FIRMWARE

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

## 5.4. MAXIMUM ANTENNA GAIN

Please see table below:

| LTE Bands and 5G NR Bands | Antenna Gain (dBi) | | | | | | |
|---|---|---|---|---|---|---|---|
| | ANT 1 | ANT 2 | ANT 3 | ANT 4 | ANT 7 | ANT 8 | ANT 9 |
| LTE Band 71, 5G NR Band n71, 663 – 698 MHz | -6.0 | -6.0 | NA | NA | NA | NA | NA |
| LTE Band 12, 5G NR Band n12, 699 – 716 MHz | -5.0 | -6.2 | NA | NA | NA | NA | NA |
| LTE Band 17, 704 – 716 MHz | -5.0 | -6.2 | NA | NA | NA | NA | NA |
| LTE Band 13, 777 – 787 MHz | -5.3 | -6.6 | NA | NA | NA | NA | NA |
| LTE Band 14, 788 – 798 MHz | -5.5 | -6.7 | NA | NA | NA | NA | NA |
| LTE Band 26, 814 – 824 MHz (Part 90S ) | -5.0 | -6.5 | NA | NA | NA | NA | NA |
| LTE Band 5, 5G NR Band n5, 824 – 849 MHz | -5.0 | -6.4 | NA | NA | NA | NA | NA |
| LTE Band 66, 5G NR Band n66,1710 – 1780 MHz | -1.9 | -4.0 | -1.5 | -3.2 | NA | NA | NA |
| LTE Band 2, 5G NR Band n2, 1850 – 1910 MHz | -2.1 | -4.3 | 0.9 | -1.5 | NA | NA | NA |
| LTE Band 25, 5G NR Band n25 1850 – 1915 MHz | -2.1 | -4.3 | 0.9 | -1.5 | NA | NA | NA |
| LTE Band 30, 2305 – 2315 MHz | -3.4 | -1.9 | -0.2 | -2.2 | NA | NA | NA |
| LTE Band 7, 2500 – 2570 MHz | -2.7 | -0.6 | -0.2 | -2.1 | NA | NA | NA |
| LTE Band 41, 5G NR Band n41, 2496 – 2690 MHz | -1.9 | -0.6 | -0.2 | -1.7 | NA | NA | NA |
| 5G NR Band n77, 3700 – 3980 MHz | NA | NA | NA | -2.5 | -3 | -4.8 | -2.3 |
| LTE Band 48, 3550 – 3700 MHz | NA | NA | NA | -3.3 | -3 | -4.8 | -3.1 |




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## 5.5. WORST-CASE CONFIGURATION AND MODE

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

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

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

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

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

BPSK modulation applied only for 5G NR 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 bands 48 and 5G NR Band 77 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.




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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.

| Bands | ANT1 | ANT2 | ANT3 | ANT4 | ANT7 | ANT8 | ANT9 |
|---|---|---|---|---|---|---|---|
| Cell (850MHz) | X | X | N/A | N/A | N/A | N/A | N/A |
| PCS (1900) | Y | Z | Y | X | N/A | N/A | N/A |
| Band 41 | Y | Z | X | X | N/A | N/A | N/A |
| Band 48, 5G NR Band n77 | N/A | N/A | N/A | X | Y | X | X |

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.



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## 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 |



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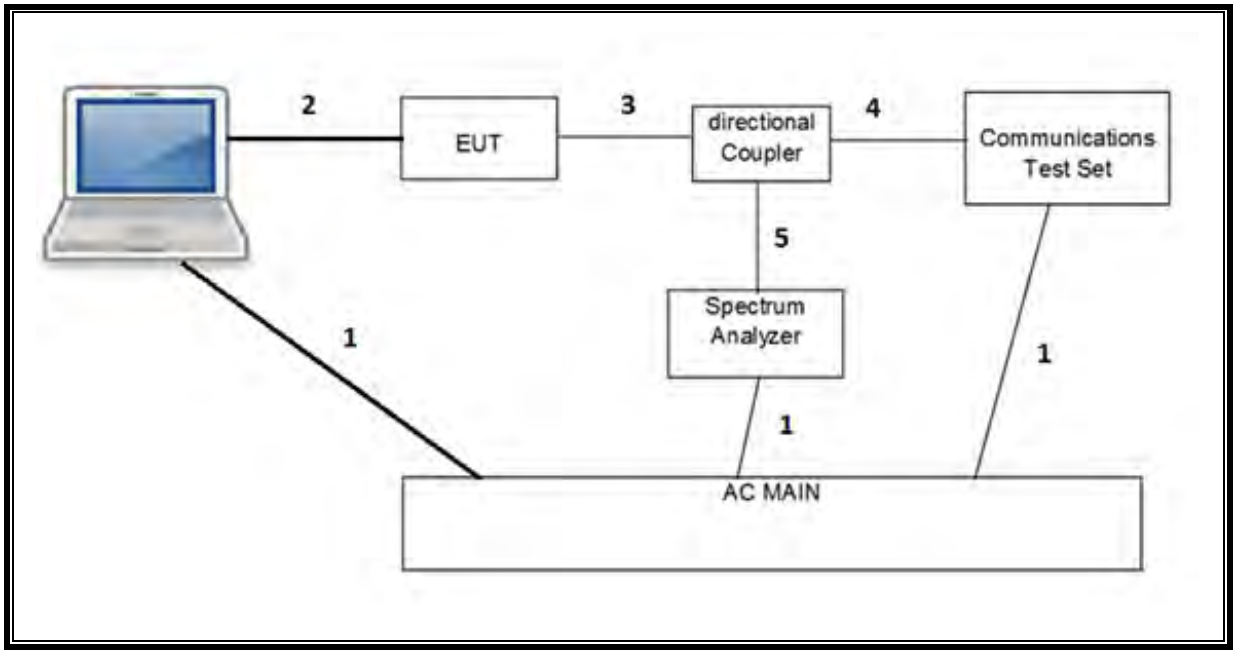
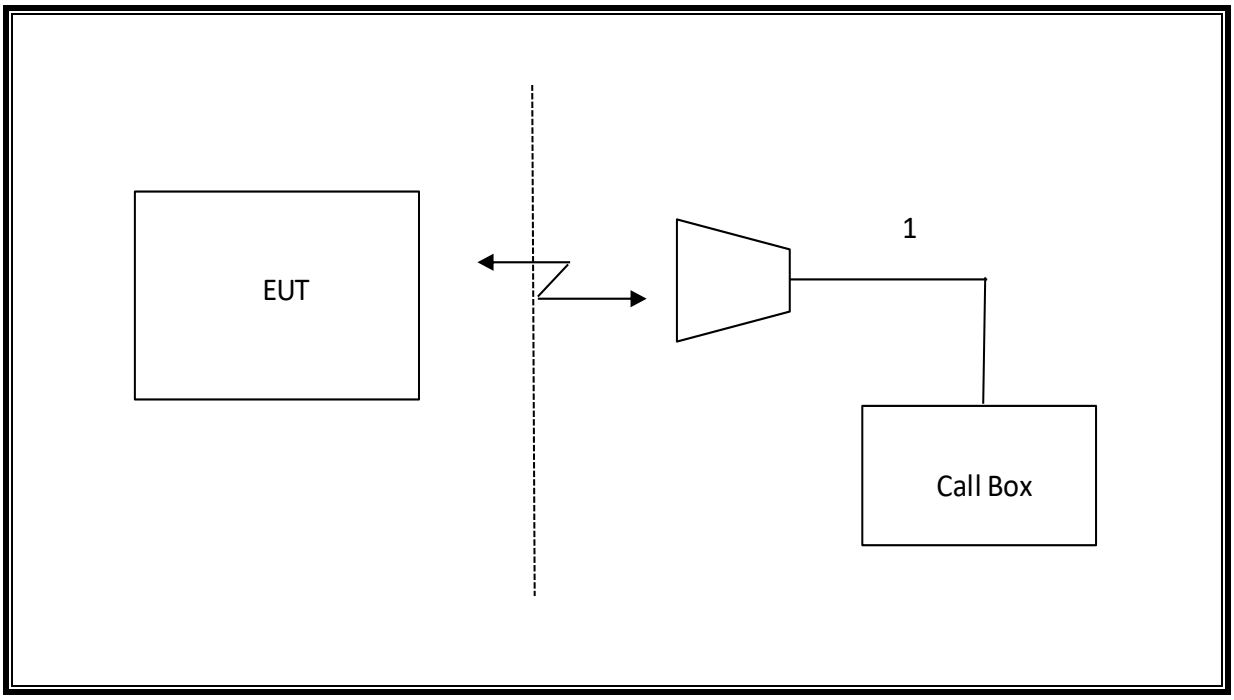
## CONDUCTED SETUP




## RADIATED SETUP







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# 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.



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# 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 | |




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**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:




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## 7.1. LTE BAND 2

| Test Engineer ID: | 39004 | Test Date: | 5/7/2020 |
|---|---|---|---|

## OUTPUT POWER FOR LTE BAND 2 (1.4 MHz) ANTENNA

| 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 | 25.2 | 25.6 | 24.6 | 22.6 | 23.0 | 22.5 | 23.8 | 25.0 | 24.5 | 22.7 | **23.0** | 22.2 |
| | | 1 | 2 | 25.3 | **25.7** | 24.5 | 22.7 | **23.1** | 22.3 | 24.9 | **25.0** | 24.4 | 22.7 | 23.0 | 22.0 |
| | | 1 | 5 | 25.2 | 25.7 | 24.2 | 22.6 | 23.0 | 22.1 | 24.8 | 24.9 | 24.1 | 22.6 | 22.9 | 21.8 |
| | | 3 | 0 | 25.2 | 25.6 | 24.2 | 22.7 | 23.0 | 22.2 | 24.6 | 24.8 | 24.0 | 22.4 | 22.7 | 21.9 |
| | | 3 | 1 | 25.3 | 25.6 | 24.2 | 22.7 | 23.1 | 22.1 | 24.6 | 24.8 | 24.0 | 22.5 | 22.7 | 21.8 |
| | | 3 | 2 | 25.4 | 25.5 | 24.1 | 22.7 | 23.1 | 22.0 | 24.5 | 24.8 | 23.9 | 22.4 | 22.7 | 21.7 |
| | | 6 | 0 | 24.5 | 24.6 | 23.4 | 21.8 | 22.1 | 21.3 | 23.6 | 23.9 | 23.2 | 21.6 | 21.8 | 21.0 |
| | 16QAM | 1 | 0 | 24.5 | 25.0 | 23.4 | 21.9 | 22.2 | 21.7 | 23.7 | 24.2 | 23.2 | 21.6 | 21.9 | 21.4 |
| | | 1 | 2 | 24.6 | **25.0** | 23.4 | 22.0 | **22.2** | 21.7 | 23.7 | **24.3** | 23.2 | 21.7 | **22.0** | 21.4 |
| | | 1 | 5 | 24.5 | 24.9 | 23.3 | 21.9 | 22.2 | 21.5 | 23.7 | 24.3 | 23.1 | 21.7 | 22.0 | 21.2 |
| | | 3 | 0 | 24.5 | 24.7 | 23.6 | 22.0 | 22.1 | 21.6 | 23.6 | 24.0 | 23.3 | 21.8 | 21.9 | 21.2 |
| | | 3 | 1 | 24.6 | 24.8 | 23.6 | 22.1 | 22.2 | 21.5 | 23.7 | 24.1 | 23.4 | 21.8 | 22.0 | 21.2 |
| | | 3 | 2 | 24.5 | 24.8 | 23.6 | 22.1 | 22.2 | 21.5 | 23.7 | 24.1 | 23.3 | 21.8 | 22.0 | 21.2 |
| | | 6 | 0 | 23.7 | 23.6 | 22.8 | 21.1 | 21.4 | 20.4 | 22.8 | 22.9 | 22.5 | 20.9 | 21.1 | 20.1 |
| | 64QAM | 1 | 0 | 23.2 | 23.1 | 23.1 | 21.1 | 20.9 | 20.6 | 22.7 | 22.4 | 22.2 | 20.5 | 21.0 | 21.2 |
| | | 1 | 2 | **23.3** | 23.2 | 23.1 | **21.1** | 21.0 | 20.5 | **22.8** | 22.5 | 22.2 | 20.7 | 21.0 | **21.2** |
| | | 1 | 5 | 23.2 | 23.1 | 23.1 | 21.0 | 20.9 | 20.3 | 22.7 | 22.3 | 22.2 | 20.6 | 20.9 | 21.1 |
| | | 3 | 0 | 23.2 | 23.1 | 22.9 | 20.9 | 20.8 | 20.3 | 22.7 | 22.5 | 22.0 | 20.7 | 20.8 | 21.1 |
| | | 3 | 1 | 23.3 | 23.2 | 22.9 | 20.9 | 20.9 | 20.3 | 22.8 | 22.5 | 22.0 | 20.7 | 20.8 | 21.2 |
| | | 3 | 2 | 23.3 | 23.2 | 22.9 | 20.9 | 20.9 | 20.2 | 22.7 | 22.5 | 22.0 | 20.7 | 20.8 | 21.1 |
| | | 6 | 0 | 21.9 | 22.3 | 22.0 | 19.5 | 20.0 | 19.4 | 21.4 | 21.6 | 21.1 | 19.8 | 19.9 | 19.7 |
| | 256QAM | 1 | 0 | 20.1 | 20.2 | 20.2 | 17.4 | 17.0 | 17.4 | 18.7 | 18.5 | 18.7 | 16.9 | 17.0 | 17.2 |
| | | 1 | 2 | 20.2 | 20.2 | 20.1 | 17.1 | 17.1 | 17.3 | 18.8 | 18.5 | 18.8 | **17.2** | 17.0 | 17.2 |
| | | 1 | 5 | 20.2 | 20.1 | 20.1 | 17.0 | 17.0 | 17.1 | 18.6 | 18.4 | 18.7 | 17.0 | 16.9 | 17.1 |
| | | 3 | 0 | 20.2 | 20.2 | 20.1 | 17.1 | 17.1 | 17.5 | 18.6 | 18.5 | 18.8 | 16.9 | 17.0 | 17.3 |
| | | 3 | 1 | 20.2 | 20.1 | **20.2** | 17.1 | 17.1 | 17.5 | 18.6 | 18.5 | 18.9 | 17.0 | 17.1 | 17.3 |
| | | 3 | 2 | 20.2 | 20.1 | 20.2 | 16.9 | 17.1 | **17.5** | 18.6 | 18.5 | **18.9** | 17.0 | 17.1 | **17.3** |
| | | 6 | 0 | 20.2 | 20.1 | 20.1 | 17.1 | 17.1 | 17.3 | 18.5 | 18.7 | 18.8 | 16.9 | **17.2** | 17.2 |



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## 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 | 25.2 | **25.7** | 25.0 | 23.0 | **23.1** | 22.6 | 24.3 | **25.0** | 24.8 | 22.3 | **23.0** | 22.5 |
| | | 1 | 7 | 25.1 | 25.5 | 24.7 | 22.9 | 23.0 | 22.2 | 24.2 | 24.9 | 24.6 | 22.3 | 22.9 | 22.3 |
| | | 1 | 14 | 25.1 | 25.3 | 24.4 | 22.9 | 22.8 | 21.8 | 24.2 | 24.8 | 24.2 | 22.4 | 22.7 | 21.9 |
| | | 8 | 0 | 24.2 | 24.6 | 23.9 | 22.0 | 22.0 | 21.5 | 23.3 | 24.0 | 23.6 | 21.4 | 21.9 | 21.5 |
| | | 8 | 4 | 24.2 | 24.7 | 23.8 | 22.1 | 22.0 | 21.4 | 23.4 | 24.1 | 23.6 | 21.5 | 22.0 | 21.4 |
| | | 8 | 7 | 24.3 | 24.7 | 23.8 | 22.1 | 22.1 | 21.3 | 23.4 | 24.1 | 23.5 | 21.5 | 22.0 | 21.4 |
| | | 15 | 0 | 24.2 | 24.6 | 23.8 | 22.0 | 22.0 | 21.4 | 23.4 | 24.0 | 23.4 | 21.5 | 22.0 | 21.3 |
| | 16QAM | 1 | 0 | 24.2 | **24.5** | 24.2 | 21.9 | 21.8 | 21.9 | 23.4 | **23.9** | 23.8 | 21.4 | **21.9** | 21.8 |
| | | 1 | 7 | 24.2 | 24.5 | 24.1 | **22.0** | 21.8 | 21.6 | 23.4 | 23.8 | 23.7 | 21.5 | 21.8 | 21.6 |
| | | 1 | 14 | 24.2 | 24.3 | 23.9 | 22.0 | 21.6 | 21.4 | 23.5 | 23.8 | 23.6 | 21.6 | 21.7 | 21.4 |
| | | 8 | 0 | 23.3 | 23.8 | 23.1 | 21.0 | 21.1 | 20.7 | 22.6 | 23.2 | 22.7 | 20.6 | 21.2 | 20.7 |
| | | 8 | 4 | 23.4 | 23.9 | 23.1 | 21.1 | 21.3 | 20.7 | 22.7 | 23.3 | 22.7 | 20.7 | 21.3 | 20.7 |
| | | 8 | 7 | 23.5 | 23.9 | 23.1 | 21.1 | 21.3 | 20.7 | 22.7 | 23.3 | 22.8 | 20.8 | 21.3 | 20.7 |
| | | 15 | 0 | 23.3 | 23.8 | 23.1 | 21.0 | 21.2 | 20.7 | 22.6 | 23.2 | 22.7 | 20.7 | 21.2 | 20.6 |
| | 64QAM | 1 | 0 | 23.5 | 23.5 | 23.3 | 20.8 | 21.1 | 21.0 | **22.8** | 22.7 | 22.3 | 20.7 | 21.1 | **21.2** |
| | | 1 | 7 | 23.3 | **23.5** | 23.3 | 20.8 | **21.1** | 20.7 | 22.7 | 22.7 | 22.3 | 20.7 | 21.0 | 21.1 |
| | | 1 | 14 | 23.3 | 23.5 | 23.3 | 20.9 | 21.1 | 20.3 | 22.7 | 22.7 | 22.2 | 20.7 | 21.0 | 21.1 |
| | | 8 | 0 | 22.2 | 22.3 | 22.3 | 19.5 | 19.8 | 19.8 | 21.6 | 21.5 | 21.3 | 19.7 | 19.8 | 20.0 |
| | | 8 | 4 | 22.2 | 22.3 | 22.3 | 19.7 | 19.9 | 19.8 | 21.6 | 21.5 | 21.3 | 19.7 | 19.8 | 20.0 |
| | | 8 | 7 | 22.2 | 22.4 | 22.3 | 19.7 | 20.0 | 19.7 | 21.6 | 21.6 | 21.3 | 19.7 | 19.9 | 19.9 |
| | | 15 | 0 | 22.3 | 22.2 | 22.3 | 19.7 | 19.9 | 19.7 | 21.7 | 21.5 | 21.2 | 19.7 | 19.9 | 19.9 |
| | 256QAM | 1 | 0 | 20.4 | 20.4 | 20.4 | **17.4** | 17.0 | 17.4 | 18.8 | **19.2** | 18.8 | 17.1 | 17.6 | 17.1 |
| | | 1 | 7 | 20.4 | 20.4 | 20.5 | 17.1 | 17.1 | 17.3 | 18.7 | 19.2 | 18.7 | 17.1 | 17.6 | 16.9 |
| | | 1 | 14 | 20.4 | 20.4 | 20.3 | 17.0 | 17.0 | 17.1 | 18.7 | 19.2 | 18.6 | 17.0 | **17.6** | 16.9 |
| | | 8 | 0 | 20.5 | 20.4 | 20.4 | 17.1 | 17.1 | 17.5 | **18.9** | 18.9 | 18.9 | 17.2 | 17.4 | 17.2 |
| | | 8 | 4 | 20.4 | 20.4 | 20.5 | 17.1 | 17.1 | 17.5 | 18.9 | 18.9 | 18.9 | 17.2 | 17.3 | 17.2 |
| | | 8 | 7 | 20.5 | 20.4 | **20.5** | 16.9 | 17.1 | **17.5** | 18.9 | 18.9 | 18.9 | 17.2 | 17.3 | 17.2 |
| | | 15 | 0 | 20.5 | 20.5 | 20.5 | 17.1 | **17.1** | 17.3 | 18.8 | 18.9 | **19.0** | 17.1 | 17.3 | 17.4 |



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## 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 | 25.1 | **25.7** | 24.8 | 22.9 | 23.0 | 22.3 | 24.2 | **25.0** | 24.7 | 22.4 | **23.0** | 22.3 |
| | | 1 | 12 | 25.2 | 25.6 | 24.6 | **23.1** | 23.0 | 22.2 | 24.4 | 25.0 | 24.5 | 22.6 | 22.9 | 22.2 |
| | | 1 | 24 | 25.0 | 25.3 | 24.0 | 23.0 | 22.7 | 21.6 | 24.3 | 24.7 | 24.0 | 22.5 | 22.6 | 21.6 |
| | | 12 | 0 | 24.1 | 24.5 | 23.8 | 21.8 | 21.7 | 21.5 | 23.2 | 23.8 | 23.5 | 21.4 | 21.8 | 21.3 |
| | | 12 | 6 | 24.2 | 24.6 | 23.7 | 22.0 | 21.9 | 21.4 | 23.4 | 24.0 | 23.5 | 21.6 | 21.9 | 21.3 |
| | | 12 | 11 | 24.2 | 24.5 | 23.6 | 22.0 | 21.9 | 21.3 | 23.4 | 24.0 | 23.4 | 21.6 | 21.9 | 21.2 |
| | | 25 | 0 | 24.1 | 24.3 | 23.6 | 21.9 | 21.8 | 21.3 | 23.3 | 23.9 | 23.4 | 21.5 | 21.8 | 21.2 |
| | 16QAM | 1 | 0 | 24.0 | 24.5 | 24.2 | 21.7 | 21.9 | 21.8 | 23.2 | 24.0 | 23.9 | 21.4 | 22.0 | 21.6 |
| | | 1 | 12 | 24.2 | **24.5** | 24.1 | **22.0** | 21.9 | 21.8 | 23.5 | **24.1** | 23.9 | 21.7 | **22.0** | 21.7 |
| | | 1 | 24 | 24.1 | 24.2 | 23.6 | 22.0 | 21.7 | 21.2 | 23.4 | 23.9 | 23.5 | 21.6 | 21.7 | 21.2 |
| | | 12 | 0 | 23.2 | 23.5 | 23.0 | 20.9 | 20.9 | 20.8 | 22.4 | 23.1 | 22.7 | 20.6 | 21.0 | 20.6 |
| | | 12 | 6 | 23.4 | 23.7 | 23.0 | 21.1 | 21.1 | 20.8 | 22.6 | 23.2 | 22.9 | 20.8 | 21.2 | 20.7 |
| | | 12 | 11 | 23.4 | 23.6 | 22.9 | 21.2 | 21.2 | 20.7 | 22.7 | 23.3 | 22.8 | 20.8 | 21.2 | 20.6 |
| | | 25 | 0 | 23.2 | 23.5 | 22.9 | 21.0 | 21.0 | 20.7 | 22.5 | 23.1 | 22.7 | 20.6 | 21.1 | 20.5 |
| | 64QAM | 1 | 0 | 23.4 | 23.1 | 23.4 | 20.8 | 20.7 | **21.3** | 22.8 | 22.3 | 22.5 | 20.8 | 21.1 | 20.7 |
| | | 1 | 12 | **23.5** | 23.2 | 23.5 | 21.0 | 20.8 | 21.1 | **22.8** | 22.4 | 22.5 | 20.9 | **21.2** | 20.8 |
| | | 1 | 24 | 23.4 | 23.1 | 23.3 | 21.0 | 20.8 | 20.5 | 22.7 | 22.4 | 22.4 | 20.8 | 21.1 | 20.7 |
| | | 12 | 0 | 22.3 | 22.3 | 22.1 | 19.7 | 19.8 | 20.0 | 21.7 | 21.5 | 21.3 | 19.6 | 19.9 | 19.9 |
| | | 12 | 6 | 22.3 | 22.3 | 22.2 | 19.8 | 20.0 | 19.9 | 21.7 | 21.5 | 21.3 | 19.6 | 19.9 | 19.9 |
| | | 12 | 11 | 22.2 | 22.3 | 22.1 | 19.9 | 20.0 | 19.7 | 21.6 | 21.5 | 21.2 | 19.6 | 19.9 | 19.9 |
| | | 25 | 0 | 22.2 | 22.2 | 22.1 | 19.7 | 19.8 | 19.8 | 21.6 | 21.4 | 21.2 | 19.7 | 19.9 | 19.8 |
| | 256QAM | 1 | 0 | 20.4 | 20.4 | 20.4 | 17.4 | 17.0 | 17.4 | 18.8 | 18.5 | 19.0 | 17.0 | 16.9 | 17.3 |
| | | 1 | 12 | 20.4 | 20.3 | 20.4 | 17.1 | 17.1 | 17.3 | 18.8 | 18.7 | **19.1** | 17.1 | 17.0 | **17.5** |
| | | 1 | 24 | **20.4** | 20.4 | 20.4 | 17.0 | 17.0 | 17.1 | 18.7 | 18.5 | 19.0 | 17.0 | 16.9 | 17.3 |
| | | 12 | 0 | 20.4 | 20.4 | 20.4 | 17.1 | 17.1 | 17.5 | 18.8 | 18.9 | 18.9 | 17.0 | 17.2 | 17.2 |
| | | 12 | 6 | 20.4 | 20.3 | 20.4 | 17.1 | 17.1 | 17.5 | 18.8 | 18.9 | 19.0 | 17.1 | 17.3 | 17.3 |
| | | 12 | 11 | 20.4 | 20.3 | 20.4 | 16.9 | 17.1 | **17.5** | 18.8 | 18.8 | 19.0 | 17.1 | 17.2 | 17.3 |
| | | 25 | 0 | 20.4 | 20.3 | 20.4 | 17.1 | 17.1 | 17.3 | 18.8 | 18.8 | 18.9 | 17.0 | 17.3 | 17.2 |



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## 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 | 24.4 | 25.0 | **25.7** | 22.1 | 22.4 | **23.1** | 23.3 | 24.1 | **25.0** | 21.7 | 22.4 | **23.0** |
| | | 1 | 24 | 25.1 | 25.5 | 25.1 | 23.0 | 22.9 | 22.6 | 23.9 | 24.4 | 24.3 | 22.6 | 22.8 | 22.4 |
| | | 1 | 49 | 24.5 | 24.4 | 24.3 | 22.5 | 21.9 | 21.9 | 23.4 | 23.5 | 23.7 | 22.1 | 21.8 | 21.8 |
| | | 25 | 0 | 23.8 | 24.3 | 24.0 | 21.7 | 21.7 | 21.5 | 22.6 | 23.3 | 23.3 | 21.2 | 21.7 | 21.3 |
| | | 25 | 12 | 24.1 | 24.5 | 24.1 | 22.1 | 21.9 | 21.6 | 23.0 | 23.5 | 23.3 | 21.6 | 21.9 | 21.3 |
| | | 25 | 24 | 24.0 | 24.2 | 23.7 | 22.0 | 21.7 | 21.3 | 22.9 | 23.3 | 22.9 | 21.5 | 21.6 | 21.0 |
| | | 50 | 0 | 23.9 | 24.2 | 23.8 | 21.8 | 21.6 | 21.3 | 22.7 | 23.3 | 23.0 | 21.4 | 21.6 | 21.0 |
| | 16QAM | 1 | 0 | 23.3 | 23.9 | **24.8** | 20.9 | 21.1 | **22.3** | 22.1 | 23.0 | **24.1** | 20.6 | 21.2 | **22.1** |
| | | 1 | 24 | 24.1 | 24.4 | 24.4 | 22.0 | 21.8 | 21.9 | 23.0 | 23.4 | 23.6 | 21.6 | 21.8 | 21.7 |
| | | 1 | 49 | 23.6 | 23.4 | 23.7 | 21.5 | 20.9 | 21.3 | 22.6 | 22.6 | 23.1 | 21.2 | 20.8 | 21.2 |
| | | 25 | 0 | 23.0 | 23.6 | 23.1 | 20.8 | 20.8 | 20.6 | 21.8 | 22.5 | 22.3 | 20.4 | 20.9 | 20.4 |
| | | 25 | 12 | 23.3 | 23.8 | 23.2 | 21.2 | 21.0 | 20.9 | 22.2 | 22.7 | 22.5 | 20.9 | 21.1 | 20.6 |
| | | 25 | 24 | 23.2 | 23.5 | 22.9 | 21.2 | 20.8 | 20.6 | 22.2 | 22.5 | 22.1 | 20.8 | 20.8 | 20.3 |
| | | 50 | 0 | 23.1 | 23.5 | 23.0 | 21.0 | 20.8 | 20.6 | 22.0 | 22.5 | 22.2 | 20.6 | 20.8 | 20.4 |
| | 64QAM | 1 | 0 | 23.1 | 23.3 | 23.4 | 20.3 | 20.7 | **21.3** | 22.0 | 22.0 | 22.2 | 20.6 | 21.0 | 21.1 |
| | | 1 | 24 | 23.5 | **23.7** | 23.5 | 21.0 | 21.2 | 21.3 | 22.3 | **22.5** | 22.1 | 21.0 | **21.4** | 21.2 |
| | | 1 | 49 | 23.3 | 23.5 | 23.5 | 20.6 | 20.5 | 20.5 | 22.0 | 22.3 | 22.0 | 20.8 | 21.1 | 21.2 |
| | | 25 | 0 | 22.3 | 22.4 | 22.3 | 19.6 | 19.7 | 20.0 | 21.2 | 21.1 | 21.0 | 19.8 | 20.0 | 20.0 |
| | | 25 | 12 | 22.5 | 22.4 | 22.5 | 20.0 | 19.9 | 20.2 | 21.3 | 21.2 | 21.1 | 20.0 | 20.0 | 20.1 |
| | | 25 | 24 | 22.4 | 22.4 | 22.4 | 19.8 | 19.8 | 19.9 | 21.2 | 21.2 | 20.9 | 19.9 | 20.0 | 20.0 |
| | | 50 | 0 | 22.3 | 22.3 | 22.4 | 19.7 | 19.7 | 19.8 | 21.2 | 21.1 | 21.0 | 19.8 | 19.9 | 19.9 |
| | 256QAM | 1 | 0 | 20.5 | 20.2 | 20.4 | 17.4 | 17.0 | 17.4 | 18.1 | 18.5 | 18.0 | 16.9 | 17.3 | 16.9 |
| | | 1 | 24 | 20.5 | 20.2 | 20.2 | 17.1 | 17.1 | 17.3 | 18.5 | **18.9** | 18.4 | 17.2 | **17.8** | 17.2 |
| | | 1 | 49 | 20.5 | 20.2 | 20.3 | 17.0 | 17.0 | 17.1 | 18.3 | 18.7 | 18.1 | 17.0 | 17.6 | 17.0 |
| | | 25 | 0 | 20.4 | 20.2 | 20.4 | 17.1 | 17.1 | 17.5 | 18.5 | 18.5 | 18.5 | 17.1 | 17.2 | 17.3 |
| | | 25 | 12 | 20.5 | 20.2 | 20.4 | 17.1 | 17.1 | 17.5 | 18.6 | 18.6 | 18.7 | 17.3 | 17.4 | 17.5 |
| | | 25 | 24 | **20.6** | 20.2 | 20.3 | 16.9 | 17.1 | **17.5** | 18.5 | 18.5 | 18.6 | 17.2 | 17.3 | 17.4 |
| | | 50 | 0 | 20.5 | 20.1 | 20.3 | 17.1 | 17.1 | 17.3 | 18.4 | 18.5 | 18.5 | 17.1 | 17.3 | 17.3 |



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## 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 | 24.5 | **25.7** | 24.8 | 22.3 | **23.1** | 22.4 | 23.8 | 25.0 | **25.0** | 22.1 | **23.0** | 22.3 |
| | | 1 | 37 | 24.7 | 24.8 | 24.8 | 22.7 | 22.3 | 22.3 | 24.1 | 24.3 | 24.6 | 22.4 | 22.2 | 22.1 |
| | | 1 | 74 | 24.9 | 24.3 | 23.7 | 22.7 | 22.1 | 21.4 | 24.6 | 24.0 | 23.8 | 22.6 | 21.7 | 21.3 |
| | | 36 | 0 | 23.5 | 24.1 | 23.5 | 21.4 | 21.5 | 21.1 | 22.8 | 23.6 | 23.6 | 21.0 | 21.5 | 20.9 |
| | | 36 | 16 | 23.6 | 23.9 | 23.6 | 21.6 | 21.4 | 21.2 | 23.1 | 23.5 | 23.6 | 21.3 | 21.3 | 21.0 |
| | | 36 | 35 | 23.8 | 23.7 | 23.3 | 21.7 | 21.2 | 21.0 | 23.4 | 23.4 | 23.2 | 21.5 | 21.1 | 20.7 |
| | | 75 | 0 | 23.6 | 23.8 | 23.3 | 21.5 | 21.2 | 21.0 | 23.1 | 23.4 | 23.4 | 21.1 | 21.1 | 20.8 |
| | 16QAM | 1 | 0 | 23.6 | **24.5** | 23.9 | 21.4 | 21.8 | 21.5 | 22.9 | 24.0 | 24.1 | 20.9 | 21.8 | 21.4 |
| | | 1 | 37 | 24.0 | 23.8 | 24.1 | 22.0 | 21.2 | 21.7 | 23.5 | 23.4 | 23.9 | 21.6 | 21.1 | 21.5 |
| | | 1 | 74 | 24.3 | 23.3 | 23.2 | **22.1** | 21.1 | 20.9 | **24.1** | 23.2 | 23.3 | **21.9** | 20.8 | 20.8 |
| | | 36 | 0 | 22.6 | 23.3 | 22.8 | 20.6 | 20.6 | 20.4 | 21.9 | 22.8 | 22.8 | 20.1 | 20.6 | 20.2 |
| | | 36 | 16 | 22.8 | 23.1 | 22.9 | 20.8 | 20.5 | 20.6 | 22.3 | 22.8 | 22.8 | 20.3 | 20.5 | 20.3 |
| | | 36 | 35 | 23.0 | 23.0 | 22.7 | 20.9 | 20.5 | 20.4 | 22.6 | 22.7 | 22.6 | 20.6 | 20.3 | 20.1 |
| | | 75 | 0 | 22.9 | 23.1 | 22.8 | 20.8 | 20.5 | 20.4 | 22.3 | 22.8 | 22.7 | 20.4 | 20.4 | 20.2 |
| | 64QAM | 1 | 0 | 23.5 | 23.5 | 23.3 | 21.0 | 20.9 | 20.2 | 22.9 | 22.6 | 22.5 | 20.3 | **21.2** | 20.8 |
| | | 1 | 37 | **23.7** | 23.5 | 23.3 | **21.1** | 20.7 | 20.7 | **23.0** | 22.7 | 22.4 | 20.6 | 21.2 | 20.8 |
| | | 1 | 74 | 23.6 | 23.5 | 23.3 | 21.1 | 20.5 | 20.0 | 22.9 | 22.8 | 22.3 | 20.6 | 21.2 | 20.9 |
| | | 36 | 0 | 22.1 | 22.2 | 22.2 | 19.5 | 19.5 | 19.3 | 21.4 | 21.4 | 21.4 | 19.4 | 19.6 | 19.6 |
| | | 36 | 16 | 22.2 | 22.3 | 22.2 | 19.5 | 19.4 | 19.5 | 21.6 | 21.5 | 21.4 | 19.6 | 19.6 | 19.6 |
| | | 36 | 35 | 22.2 | 22.3 | 22.3 | 19.6 | 19.4 | 19.4 | 21.5 | 21.6 | 21.4 | 19.7 | 19.7 | 19.7 |
| | | 75 | 0 | 22.2 | 22.1 | 22.2 | 19.5 | 19.3 | 19.3 | 21.5 | 21.4 | 21.4 | 19.5 | 19.6 | 19.6 |
| | 256QAM | 1 | 0 | 20.1 | 20.2 | 20.0 | 17.4 | 17.0 | 17.4 | 18.5 | 18.7 | 18.2 | 16.6 | 16.9 | 16.4 |
| | | 1 | 37 | 20.0 | 20.1 | 20.1 | 17.1 | 17.1 | 17.3 | 18.7 | 18.9 | 18.5 | 16.8 | 17.1 | 16.6 |
| | | 1 | 74 | 20.0 | 20.1 | 20.0 | 17.0 | 17.0 | 17.1 | 18.7 | **18.9** | 18.4 | 16.8 | **17.2** | 16.5 |
| | | 36 | 0 | 20.0 | 20.2 | 20.0 | 17.1 | 17.1 | 17.5 | 18.4 | 18.4 | 18.6 | 16.5 | 16.7 | 16.7 |
| | | 36 | 16 | 19.9 | 20.2 | 20.0 | 17.1 | 17.1 | 17.5 | 18.6 | 18.6 | 18.7 | 16.6 | 16.8 | 16.8 |
| | | 36 | 35 | 20.1 | **20.3** | 20.0 | 16.9 | 17.1 | **17.5** | 18.6 | 18.6 | 18.7 | 16.6 | 16.8 | 16.8 |
| | | 75 | 0 | 20.0 | 20.1 | 20.0 | 17.1 | 17.1 | 17.3 | 18.5 | 18.5 | 18.7 | 16.6 | 16.8 | 16.7 |




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## 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 | 24.8 | **25.7** | 24.7 | 22.7 | **23.1** | 22.4 | 24.0 | **25.0** | 24.4 | 22.1 | **23.0** | 22.0 |
| | | 1 | 49 | 24.5 | 24.7 | 24.8 | 22.5 | 22.4 | 22.4 | 24.0 | 24.1 | 24.5 | 22.0 | 22.0 | 22.0 |
| | | 1 | 99 | 25.1 | 24.1 | 23.8 | 22.7 | 22.1 | 21.5 | 24.8 | 23.7 | 23.6 | 22.5 | 21.6 | 21.3 |
| | | 50 | 0 | 23.1 | 23.9 | 23.1 | 21.2 | 21.5 | 20.9 | 22.5 | 23.3 | 23.0 | 20.6 | 21.2 | 20.5 |
| | | 50 | 24 | 23.5 | 23.7 | 23.5 | 21.6 | 21.3 | 21.3 | 23.1 | 23.2 | 23.4 | 21.1 | 21.0 | 20.9 |
| | | 50 | 49 | 23.5 | 23.4 | 23.4 | 21.5 | 21.1 | 21.1 | 23.3 | 22.9 | 23.1 | 21.1 | 20.6 | 20.7 |
| | | 100 | 0 | 23.3 | 23.6 | 23.2 | 21.4 | 21.2 | 20.8 | 22.9 | 23.1 | 23.0 | 20.9 | 20.8 | 20.5 |
| | 16QAM | 1 | 0 | 24.0 | **25.1** | 23.8 | 22.0 | **22.6** | 21.6 | 23.2 | **24.6** | 23.6 | 21.3 | **22.4** | 21.2 |
| | | 1 | 49 | 23.8 | 24.3 | 24.2 | 22.0 | 21.9 | 21.8 | 23.5 | 23.7 | 24.0 | 21.4 | 21.6 | 21.4 |
| | | 1 | 99 | 24.6 | 23.8 | 23.3 | 22.3 | 21.7 | 21.1 | 24.3 | 23.6 | 23.3 | 22.0 | 21.2 | 20.8 |
| | | 50 | 0 | 22.2 | 23.2 | 22.3 | 20.4 | 20.6 | 20.0 | 21.7 | 22.6 | 22.3 | 19.7 | 20.3 | 19.7 |
| | | 50 | 24 | 22.7 | 23.1 | 22.9 | 20.8 | 20.6 | 20.5 | 22.3 | 22.5 | 22.7 | 20.3 | 20.2 | 20.2 |
| | | 50 | 49 | 22.8 | 22.7 | 22.7 | 20.7 | 20.4 | 20.4 | 22.5 | 22.3 | 22.5 | 20.4 | 19.9 | 20.0 |
| | | 100 | 0 | 22.6 | 23.0 | 22.5 | 20.7 | 20.5 | 20.2 | 22.1 | 22.5 | 22.5 | 20.1 | 20.2 | 19.8 |
| | 64QAM | 1 | 0 | 23.1 | 23.3 | 23.6 | 20.9 | 21.0 | 20.7 | 22.4 | 22.4 | **22.9** | 20.3 | 20.7 | 20.9 |
| | | 1 | 49 | 23.2 | 23.4 | **23.7** | 20.6 | 20.8 | **21.0** | 22.4 | 22.6 | 22.8 | 20.5 | 20.7 | 21.0 |
| | | 1 | 99 | 23.2 | 23.4 | 23.6 | 20.8 | 20.4 | 20.7 | 22.3 | 22.6 | 22.6 | 20.6 | 20.7 | **21.1** |
| | | 50 | 0 | 21.9 | 22.0 | 21.9 | 19.3 | 19.4 | 18.9 | 21.2 | 21.2 | 21.2 | 19.2 | 19.4 | 19.3 |
| | | 50 | 24 | 22.1 | 22.1 | 22.1 | 19.5 | 19.4 | 19.3 | 21.4 | 21.3 | 21.2 | 19.4 | 19.5 | 19.5 |
| | | 50 | 49 | 22.1 | 22.2 | 22.1 | 19.3 | 19.2 | 19.5 | 21.2 | 21.4 | 21.1 | 19.4 | 19.5 | 19.5 |
| | | 100 | 0 | 22.0 | 22.0 | 22.0 | 19.3 | 19.2 | 19.0 | 21.3 | 21.2 | 21.1 | 19.4 | 19.4 | 19.4 |
| | 256QAM | 1 | 0 | 19.9 | 19.5 | 19.8 | 17.4 | 17.0 | 17.4 | 17.9 | 18.1 | 18.3 | 16.0 | 16.3 | 16.4 |
| | | 1 | 49 | 19.9 | 19.5 | 19.8 | 17.1 | 17.1 | 17.3 | 18.1 | 18.5 | **18.5** | 16.3 | 16.7 | **16.7** |
| | | 1 | 99 | 19.9 | 19.6 | 19.8 | 17.0 | 17.0 | 17.1 | 18.1 | 18.5 | 18.5 | 16.3 | 16.6 | 16.6 |
| | | 50 | 0 | 19.9 | 19.5 | 19.8 | 17.1 | 17.1 | 17.5 | 18.2 | 18.2 | 18.3 | 16.3 | 16.4 | 16.4 |
| | | 50 | 24 | 19.9 | 19.5 | 19.8 | 17.1 | 17.1 | 17.5 | 18.4 | 18.4 | 18.4 | 16.5 | 16.6 | 16.6 |
| | | 50 | 49 | **19.9** | 19.6 | 19.8 | 16.9 | 17.1 | **17.5** | 18.3 | 18.4 | 18.5 | 16.5 | 16.6 | 16.6 |
| | | 100 | 0 | 19.9 | 19.5 | 19.8 | 17.1 | 17.1 | 17.3 | 18.3 | 18.3 | 18.4 | 16.4 | 16.5 | 16.5 |




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## 7.2. LTE BAND 5

| Test Engineer ID: | 39004 | Test Date: | 5/7/2020 |
|---|---|---|---|

### 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 | 25.4 | 25.4 | 25.7 | 24.3 | 24.4 | 24.5 |
| | | 1 | 2 | 25.4 | 25.6 | **25.7** | 24.4 | 24.5 | **24.5** |
| | | 1 | 5 | 25.4 | 25.5 | 25.7 | 24.3 | 24.4 | 24.4 |
| | | 3 | 0 | 25.4 | 25.4 | 25.6 | 24.3 | 24.3 | 24.4 |
| | | 3 | 1 | 25.5 | 25.5 | 25.7 | 24.4 | 24.4 | 24.5 |
| | | 3 | 2 | 25.5 | 25.6 | 25.7 | 24.4 | 24.4 | 24.5 |
| | | 6 | 0 | 24.5 | 24.6 | 24.7 | 23.4 | 23.5 | 23.5 |
| | 16QAM | 1 | 0 | 24.9 | 24.6 | 24.9 | 23.4 | 23.6 | 23.9 |
| | | 1 | 2 | 24.9 | 24.7 | **25.0** | 23.5 | 23.7 | **23.9** |
| | | 1 | 5 | 24.9 | 24.7 | 24.9 | 23.5 | 23.6 | 23.9 |
| | | 3 | 0 | 24.7 | 24.8 | 24.8 | 23.6 | 23.5 | 23.7 |
| | | 3 | 1 | 24.8 | 24.9 | 24.8 | 23.7 | 23.6 | 23.8 |
| | | 3 | 2 | 24.8 | 24.9 | 24.9 | 23.7 | 23.6 | 23.8 |
| | | 6 | 0 | 23.5 | 23.8 | 23.9 | 22.7 | 22.6 | 22.5 |
| | 64QAM | 1 | 0 | 24.2 | 24.4 | 24.1 | 22.7 | 22.0 | 22.0 |
| | | 1 | 2 | 24.3 | **24.6** | 24.2 | **22.7** | 22.0 | 22.0 |
| | | 1 | 5 | 24.4 | 24.4 | 24.1 | 22.6 | 22.0 | 22.0 |
| | | 3 | 0 | 24.1 | 24.3 | 24.1 | 22.6 | 22.0 | 21.9 |
| | | 3 | 1 | 24.1 | 24.4 | 24.2 | 22.6 | 22.0 | 21.9 |
| | | 3 | 2 | 24.1 | 24.4 | 24.2 | 22.6 | 22.0 | 21.9 |
| | | 6 | 0 | 23.2 | 23.1 | 23.3 | 21.2 | 22.0 | 21.9 |
| | 256QAM | 1 | 0 | 20.2 | 19.8 | 20.3 | 19.6 | 19.2 | 19.5 |
| | | 1 | 2 | 20.2 | 19.9 | 19.9 | **19.8** | 19.7 | 19.6 |
| | | 1 | 5 | 20.2 | 19.8 | 19.8 | 19.6 | 19.6 | 19.4 |
| | | 3 | 0 | 20.5 | 20.3 | 20.3 | 19.5 | 19.5 | 19.4 |
| | | 3 | 1 | 20.5 | 20.3 | 20.3 | 19.5 | 19.5 | 19.4 |
| | | 3 | 2 | **20.5** | 20.3 | 20.3 | 19.6 | 19.5 | 19.4 |
| | | 6 | 0 | 20.3 | 20.3 | 20.3 | 19.5 | 19.4 | 19.3 |




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## 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 | 25.5 | 25.6 | 25.6 | 24.4 | 24.4 | 24.5 |
| | | 1 | 7 | 25.5 | 25.6 | **25.7** | 24.4 | 24.4 | **24.5** |
| | | 1 | 14 | 25.6 | 25.7 | 25.7 | 24.4 | 24.5 | 24.5 |
| | | 8 | 0 | 24.5 | 24.7 | 24.7 | 23.5 | 23.5 | 23.5 |
| | | 8 | 4 | 24.7 | 24.7 | 24.8 | 23.5 | 23.5 | 23.6 |
| | | 8 | 7 | 24.7 | 24.8 | 24.8 | 23.5 | 23.6 | 23.6 |
| | | 15 | 0 | 24.7 | 24.7 | 24.7 | 23.5 | 23.6 | 23.5 |
| | 16QAM | 1 | 0 | 24.6 | 24.6 | 25.1 | 23.5 | 23.4 | 23.9 |
| | | 1 | 7 | 24.7 | 24.7 | 25.1 | 23.5 | 23.5 | **23.9** |
| | | 1 | 14 | 24.6 | 24.7 | **25.1** | 23.5 | 23.5 | 23.9 |
| | | 8 | 0 | 23.6 | 23.8 | 23.8 | 22.6 | 22.6 | 22.6 |
| | | 8 | 4 | 23.7 | 23.8 | 23.9 | 22.6 | 22.6 | 22.7 |
| | | 8 | 7 | 23.8 | 23.9 | 23.9 | 22.7 | 22.7 | 22.7 |
| | | 15 | 0 | 23.6 | 23.7 | 23.8 | 22.5 | 22.6 | 22.6 |
| | 64QAM | 1 | 0 | 24.2 | 24.3 | 24.0 | **22.6** | 22.2 | 22.1 |
| | | 1 | 7 | 24.3 | **24.3** | 24.1 | 22.5 | 22.1 | 22.1 |
| | | 1 | 14 | 24.2 | 24.3 | 24.1 | 22.5 | 22.2 | 22.1 |
| | | 8 | 0 | 23.0 | 23.0 | 23.0 | 21.2 | 22.2 | 22.1 |
| | | 8 | 4 | 23.1 | 23.1 | 23.1 | 21.3 | 22.2 | 22.1 |
| | | 8 | 7 | 23.1 | 23.1 | 23.0 | 21.3 | 22.2 | 22.1 |
| | | 15 | 0 | 23.1 | 23.0 | 23.0 | 21.3 | 22.2 | 22.1 |
| | 256QAM | 1 | 0 | 20.1 | 20.1 | 20.3 | 19.6 | 20.1 | 19.2 |
| | | 1 | 2 | 20.1 | 20.1 | 20.2 | 19.6 | **20.1** | 19.2 |
| | | 1 | 5 | 20.1 | 20.2 | 20.3 | 19.6 | 20.1 | 19.3 |
| | | 3 | 0 | 20.4 | 20.2 | 20.1 | 19.8 | 19.6 | 19.5 |
| | | 3 | 1 | 20.4 | 20.2 | 20.2 | 19.8 | 19.7 | 19.5 |
| | | 3 | 2 | **20.4** | 20.3 | 20.2 | 19.8 | 19.7 | 19.5 |
| | | 6 | 0 | 20.4 | 20.1 | 20.2 | 19.7 | 19.6 | 19.6 |




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## 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** | 24.4 |
| | | 1 | 24 | 25.5 | 25.7 | 25.6 | 24.4 | 24.5 | 24.4 |
| | | 12 | 0 | 24.5 | 24.6 | 24.7 | 23.4 | 23.4 | 23.4 |
| | | 12 | 6 | 24.6 | 24.6 | 24.7 | 23.5 | 23.4 | 23.5 |
| | | 12 | 11 | 24.6 | 24.7 | 24.7 | 23.5 | 23.5 | 23.5 |
| | | 25 | 0 | 24.6 | 24.6 | 24.7 | 23.5 | 23.5 | 23.5 |
| | 16QAM | 1 | 0 | 24.7 | 24.8 | 25.2 | 23.5 | 23.6 | 24.0 |
| | | 1 | 12 | 24.8 | 24.9 | **25.3** | 23.7 | 23.6 | **24.0** |
| | | 1 | 24 | 24.8 | 24.9 | 25.2 | 23.6 | 23.6 | 24.0 |
| | | 12 | 0 | 23.6 | 23.7 | 23.8 | 22.5 | 22.5 | 22.6 |
| | | 12 | 6 | 23.7 | 23.7 | 23.9 | 22.6 | 22.5 | 22.7 |
| | | 12 | 11 | 23.7 | 23.7 | 23.9 | 22.5 | 22.6 | 22.7 |
| | | 25 | 0 | 23.6 | 23.6 | 23.8 | 22.4 | 22.5 | 22.6 |
| | 64QAM | 1 | 0 | 24.2 | 23.8 | 24.2 | 22.5 | 22.2 | 22.2 |
| | | 1 | 12 | **24.3** | 23.9 | 24.2 | **22.5** | 22.2 | 22.2 |
| | | 1 | 24 | 24.3 | 23.8 | 24.1 | 22.5 | 22.1 | 22.2 |
| | | 12 | 0 | 23.0 | 23.0 | 22.8 | 21.3 | 22.2 | 22.2 |
| | | 12 | 6 | 23.1 | 23.0 | 22.9 | 21.4 | 22.2 | 22.1 |
| | | 12 | 11 | 23.1 | 23.0 | 22.9 | 21.3 | 22.2 | 22.1 |
| | | 25 | 0 | 23.0 | 22.9 | 22.8 | 21.2 | 22.2 | 22.1 |
| | 256QAM | 1 | 0 | 20.2 | 19.8 | 20.1 | 19.7 | 19.3 | 19.6 |
| | | 1 | 12 | **20.3** | 19.8 | 20.1 | 19.7 | 19.4 | 19.6 |
| | | 1 | 24 | 20.2 | 19.8 | 20.1 | 19.7 | 19.3 | 19.5 |
| | | 12 | 0 | 20.2 | 20.1 | 20.1 | 19.7 | 19.5 | 19.5 |
| | | 12 | 6 | 20.3 | 20.1 | 20.1 | **19.8** | 19.6 | 19.5 |
| | | 12 | 11 | 20.3 | 20.1 | 20.1 | 19.7 | 19.6 | 19.5 |
| | | 25 | 0 | 20.2 | 20.1 | 20.1 | 19.7 | 19.7 | 19.5 |




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## 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 | 25.4 | 25.6 | **25.7** | 24.4 | 24.5 | **24.5** |
| | | 1 | 24 | 25.4 | 25.6 | 25.7 | 24.3 | 24.4 | 24.5 |
| | | 1 | 49 | 25.5 | 25.6 | 25.6 | 24.3 | 24.5 | 24.4 |
| | | 25 | 0 | 24.5 | 24.7 | 24.7 | 23.4 | 23.5 | 23.5 |
| | | 25 | 12 | 24.6 | 24.7 | 24.7 | 23.5 | 23.5 | 23.5 |
| | | 25 | 24 | 24.6 | 24.7 | 24.8 | 23.5 | 23.5 | 23.5 |
| | | 50 | 0 | 24.5 | 24.6 | 24.7 | 23.4 | 23.5 | 23.5 |
| | 16QAM | 1 | 0 | 24.6 | 24.7 | **25.1** | 23.6 | 23.5 | **23.9** |
| | | 1 | 24 | 24.6 | 24.6 | 25.1 | 23.4 | 23.4 | 23.9 |
| | | 1 | 49 | 24.7 | 24.6 | 25.1 | 23.5 | 23.4 | 23.9 |
| | | 25 | 0 | 23.7 | 23.7 | 23.7 | 22.6 | 22.5 | 22.5 |
| | | 25 | 12 | 23.8 | 23.7 | 23.8 | 22.6 | 22.5 | 22.6 |
| | | 25 | 24 | 23.7 | 23.7 | 23.8 | 22.6 | 22.6 | 22.5 |
| | | 50 | 0 | 23.6 | 23.6 | 23.7 | 22.5 | 22.5 | 22.6 |
| | 64QAM | 1 | 0 | 24.1 | **24.2** | 23.9 | **22.5** | 22.0 | 22.0 |
| | | 1 | 24 | 24.1 | 24.2 | 23.9 | 22.3 | 22.0 | 22.0 |
| | | 1 | 49 | 24.0 | 24.2 | 24.0 | 22.2 | 22.0 | 22.0 |
| | | 25 | 0 | 23.0 | 22.9 | 22.9 | 21.2 | 22.0 | 22.0 |
| | | 25 | 12 | 23.0 | 22.9 | 22.9 | 21.2 | 22.0 | 22.0 |
| | | 25 | 24 | 23.0 | 22.9 | 22.9 | 21.1 | 22.0 | 22.0 |
| | | 50 | 0 | 22.9 | 22.8 | 22.8 | 21.0 | 22.0 | 22.0 |
| | 256QAM | 1 | 0 | 19.7 | 19.7 | 19.8 | 19.4 | 19.7 | 19.1 |
| | | 1 | 24 | 20.0 | 20.0 | 20.2 | 19.6 | **20.0** | 19.4 |
| | | 1 | 49 | 19.7 | 19.8 | 19.9 | 19.3 | 19.7 | 19.0 |
| | | 25 | 0 | 20.1 | 19.9 | 20.0 | 19.6 | 19.5 | 19.5 |
| | | 25 | 12 | **20.2** | 20.0 | 20.0 | 19.7 | 19.7 | 19.6 |
| | | 25 | 24 | 20.1 | 19.9 | 20.0 | 19.6 | 19.6 | 19.5 |
| | | 50 | 0 | 20.1 | 19.9 | 20.0 | 19.6 | 19.6 | 19.4 |



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## 7.3. 5G NR Band n5

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

### 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 | 24.6 | 24.9 | 24.9 | 24.0 | 24.1 | 23.9 |
| | | 1 | 1 | **25.7** | 25.0 | 25.1 | 24.4 | 24.4 | 24.4 |
| | | 36 | 18 | 24.8 | 22.5 | 20.5 | 22.3 | 23.3 | **24.5** |
| | | 75 | 0 | 24.8 | 23.5 | 21.1 | 22.0 | 21.2 | 21.2 |
| | QPSK | 1 | 0 | 24.7 | 24.6 | 24.5 | 23.4 | 23.0 | 23.2 |
| | | 1 | 1 | **25.7** | 25.6 | 25.5 | **24.5** | 24.3 | **24.5** |
| | | 36 | 18 | 25.5 | 25.5 | 25.2 | 24.1 | 24.1 | 24.0 |
| | | 75 | 0 | 24.5 | 24.5 | 24.5 | 23.2 | 23.0 | 23.1 |
| | 16QAM | 1 | 0 | 23.1 | 23.4 | 22.9 | 22.1 | 22.0 | 21.6 |
| | | 1 | 1 | 24.3 | **24.6** | 23.9 | **23.2** | 22.8 | 22.9 |
| | | 36 | 18 | 24.0 | 24.0 | 24.0 | 22.7 | 22.7 | 22.7 |
| | | 75 | 0 | 23.0 | 23.0 | 23.0 | 21.8 | 21.7 | 21.7 |
| | 64QAM | 1 | 0 | 22.7 | 22.9 | 22.8 | 21.8 | 21.5 | 21.4 |
| | | 1 | 1 | 23.1 | 23.0 | 22.8 | 21.2 | 21.5 | 21.1 |
| | | 36 | 18 | 22.7 | 22.6 | 22.5 | 21.1 | 21.2 | 21.2 |
| | | 75 | 0 | 22.6 | 22.5 | 22.4 | 21.2 | 21.2 | 21.1 |
| | 256QAM | 1 | 0 | 20.9 | **21.0** | 20.2 | **19.9** | 19.6 | 19.6 |
| | | 1 | 1 | 20.9 | 20.6 | 20.4 | 19.4 | 19.4 | 19.2 |
| | | 36 | 18 | 20.6 | 20.3 | 20.4 | 19.2 | 19.1 | 19.2 |
| | | 75 | 0 | 20.5 | 20.4 | 20.4 | 19.3 | 19.3 | 19.2 |

### 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 | 25.1 | 25.1 | 24.0 | 24.1 | 23.9 |
| | | 1 | 1 | **25.7** | 25.5 | 25.4 | 24.4 | 24.4 | 24.4 |
| | | 50 | 25 | 25.1 | 25.1 | 19.9 | 22.3 | 23.3 | **24.5** |
| | | 100 | 1 | 23.2 | 21.8 | 22.7 | 22.0 | 21.2 | 21.2 |
| | QPSK | 1 | 0 | 24.6 | 24.8 | 24.6 | 23.4 | 23.0 | 23.2 |
| | | 1 | 1 | 25.4 | **25.7** | 25.4 | **24.5** | 24.3 | **24.5** |
| | | 50 | 25 | 25.6 | 25.5 | 25.6 | 24.1 | 24.1 | 24.0 |
| | | 100 | 1 | 24.6 | 24.6 | 24.6 | 23.2 | 23.0 | 23.1 |
| | 16QAM | 1 | 0 | 23.5 | 24.0 | 23.4 | 22.1 | 22.0 | 21.6 |
| | | 1 | 1 | **24.8** | 24.3 | 24.7 | **23.2** | 22.8 | 22.9 |
| | | 50 | 25 | 24.5 | 24.4 | 24.5 | 22.7 | 22.7 | 22.7 |
| | | 100 | 1 | 23.5 | 23.5 | 23.4 | 21.8 | 21.7 | 21.7 |
| | 64QAM | 1 | 0 | 23.9 | 23.3 | 23.3 | 21.8 | 21.5 | 21.4 |
| | | 1 | 1 | 23.4 | 23.7 | 23.0 | 21.2 | 21.5 | 21.1 |
| | | 50 | 25 | 22.9 | 22.9 | 22.9 | 21.1 | 21.2 | 21.2 |
| | | 100 | 1 | 23.0 | 22.9 | 22.9 | 21.2 | 21.2 | 21.1 |
| | 256QAM | 1 | 0 | 21.4 | 21.3 | 21.4 | **19.9** | 19.6 | 19.6 |
| | | 1 | 1 | 20.9 | **21.5** | 21.4 | 19.4 | 19.4 | 19.2 |
| | | 50 | 25 | 21.0 | 21.0 | 21.0 | 19.2 | 19.1 | 19.2 |
| | | 100 | 1 | 21.0 | 21.0 | 21.0 | 19.3 | 19.3 | 19.2 |



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## 7.4. LTE BAND 7

| Test Engineer ID: | 39004 | Test Date: | 5/7/2020 |
|---|---|---|---|

## 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 | 24.2 | 25.6 | 24.7 | 22.3 | 22.7 | 22.2 | 24.6 | **25.0** | 24.1 | 21.2 | 22.4 | 22.5 |
| | | 1 | 12 | 24.3 | 25.6 | 24.5 | 22.3 | 22.7 | 21.9 | 24.6 | 25.0 | 23.8 | 21.3 | 22.4 | **22.5** |
| | | 1 | 24 | 24.2 | **25.7** | 24.3 | 22.4 | **22.8** | 21.7 | 24.6 | 25.0 | 23.7 | 21.4 | 22.4 | 22.5 |
| | | 12 | 0 | 24.1 | 24.8 | 24.3 | 21.4 | 21.7 | 21.4 | 23.9 | 24.0 | 23.3 | 20.2 | 21.4 | 21.5 |
| | | 12 | 6 | 24.4 | 24.8 | 24.2 | 21.5 | 21.8 | 21.1 | 24.0 | 24.0 | 23.1 | 20.3 | 21.5 | 21.5 |
| | | 12 | 11 | 24.4 | 24.8 | 23.9 | 21.5 | 21.8 | 21.0 | 24.0 | 24.0 | 23.1 | 20.4 | 21.4 | 21.5 |
| | | 25 | 0 | 23.7 | 24.7 | 23.6 | 21.5 | 21.9 | 20.9 | 23.2 | 24.0 | 22.9 | 20.3 | 21.4 | 21.5 |
| | 16QAM | 1 | 0 | 23.6 | **25.3** | 23.8 | 21.7 | 22.0 | 21.5 | 23.2 | **24.2** | 23.6 | 20.1 | **21.6** | 21.5 |
| | | 1 | 12 | 23.8 | 25.2 | 23.7 | 21.8 | 22.0 | 21.3 | 23.3 | 24.1 | 23.3 | 20.3 | 21.6 | 21.4 |
| | | 1 | 24 | 24.0 | 25.2 | 23.6 | 21.8 | **22.1** | 21.2 | 23.5 | 24.1 | 23.3 | 20.4 | 21.6 | 21.4 |
| | | 12 | 0 | 23.2 | 24.0 | 23.5 | 20.7 | 20.9 | 20.7 | 22.9 | 23.0 | 22.7 | 19.3 | 20.4 | 20.5 |
| | | 12 | 6 | 23.5 | 24.0 | 23.4 | 20.8 | 21.0 | 20.6 | 23.0 | 23.1 | 22.6 | 19.4 | 20.5 | 20.6 |
| | | 12 | 11 | 23.7 | 24.0 | 23.3 | 20.8 | 21.0 | 20.4 | 23.1 | 23.0 | 22.4 | 19.4 | 20.5 | 20.5 |
| | | 25 | 0 | 23.0 | 23.9 | 22.9 | 20.7 | 20.9 | 20.3 | 22.5 | 23.0 | 22.3 | 19.3 | 20.5 | 20.5 |
| | 64QAM | 1 | 0 | 22.3 | 22.6 | 23.1 | 19.5 | 19.7 | 20.1 | 21.2 | 21.4 | 21.8 | 19.3 | 20.6 | 20.6 |
| | | 1 | 12 | 22.3 | 22.7 | 23.1 | 19.8 | 19.7 | 20.2 | 21.6 | 21.3 | 21.8 | 19.4 | **20.6** | 20.6 |
| | | 1 | 24 | 22.5 | 22.7 | **23.1** | 20.0 | 19.7 | **20.2** | **21.9** | 21.4 | 21.8 | 19.6 | 20.6 | 20.6 |
| | | 12 | 0 | 21.2 | 21.8 | 21.8 | 18.8 | 18.8 | 18.8 | 20.3 | 20.5 | 20.4 | 18.2 | 19.5 | 19.5 |
| | | 12 | 6 | 21.3 | 21.8 | 21.8 | 18.8 | 18.8 | 18.8 | 20.7 | 20.5 | 20.5 | 18.4 | 19.5 | 19.6 |
| | | 12 | 11 | 21.4 | 21.8 | 21.8 | 18.8 | 18.8 | 18.8 | 20.7 | 20.5 | 20.5 | 18.4 | 19.5 | 19.6 |
| | | 25 | 0 | 21.1 | 21.7 | 21.8 | 18.8 | 18.7 | 18.8 | 20.3 | 20.4 | 20.4 | 18.4 | 19.5 | 19.5 |
| | 256QAM | 1 | 0 | 20.6 | 20.6 | 20.8 | 18.2 | 17.9 | 18.1 | 18.7 | **20.6** | 20.3 | 16.1 | 17.6 | 17.5 |
| | | 1 | 12 | 20.7 | 20.6 | 20.8 | 18.2 | 18.0 | 18.2 | 19.0 | 20.6 | 20.3 | 16.3 | 17.5 | 17.6 |
| | | 1 | 24 | 20.6 | 20.6 | 20.8 | 18.1 | 17.8 | 18.1 | 19.1 | 20.5 | 20.2 | 16.4 | 17.5 | 17.4 |
| | | 12 | 0 | 20.7 | 20.9 | 20.8 | 18.2 | 18.2 | 18.1 | 19.1 | 20.5 | 20.3 | 16.3 | 17.5 | 17.6 |
| | | 12 | 6 | 20.7 | 20.8 | 20.8 | 18.2 | 18.2 | 18.1 | 19.3 | 20.6 | 20.3 | 16.4 | 17.6 | **17.6** |
| | | 12 | 11 | 20.7 | 20.9 | 20.8 | 18.2 | 18.2 | 18.1 | 19.3 | 20.5 | 20.3 | 16.4 | 17.6 | 17.6 |
| | | 25 | 0 | 20.6 | **20.9** | 20.8 | 18.2 | **18.2** | 18.1 | 19.3 | 20.5 | 20.3 | 16.4 | 17.5 | 17.6 |




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## 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 | 23.9 | **25.7** | 25.2 | 22.5 | **22.8** | 22.4 | 23.9 | **25.0** | 24.9 | 21.2 | 22.4 | **22.5** |
| | | 1 | 24 | 24.0 | 25.6 | 24.9 | 22.5 | 22.8 | 21.9 | 24.1 | 24.9 | 24.4 | 21.4 | 22.4 | 22.5 |
| | | 1 | 49 | 24.8 | 25.5 | 24.5 | 22.5 | 22.6 | 21.7 | 24.6 | 24.8 | 24.1 | 21.5 | 22.4 | 22.5 |
| | | 25 | 0 | 24.2 | 25.1 | 24.4 | 21.7 | 21.9 | 21.7 | 23.6 | 24.1 | 24.0 | 20.4 | 21.5 | 21.4 |
| | | 25 | 12 | 24.5 | 25.1 | 24.1 | 21.8 | 22.0 | 21.1 | 23.7 | 24.1 | 23.5 | 20.4 | 21.5 | 21.5 |
| | | 25 | 24 | 24.6 | 25.0 | 23.9 | 21.8 | 21.8 | 20.6 | 23.7 | 24.0 | 23.0 | 20.4 | 21.5 | 21.5 |
| | | 50 | 0 | 24.4 | 25.1 | 24.2 | 21.7 | 21.9 | 21.4 | 23.7 | 24.0 | 23.8 | 20.3 | 21.4 | 21.4 |
| | 16QAM | 1 | 0 | 24.1 | **25.1** | 24.9 | 21.8 | 22.0 | **22.2** | 23.4 | 24.1 | **24.5** | 20.1 | 21.5 | 21.4 |
| | | 1 | 24 | 24.4 | 25.1 | 24.6 | 21.8 | 21.9 | 21.6 | 23.7 | 24.0 | 24.0 | 20.3 | 21.5 | 21.4 |
| | | 1 | 49 | 24.7 | 25.0 | 24.3 | 21.9 | 21.9 | 21.4 | 24.1 | 24.1 | 23.7 | 20.4 | **21.5** | 21.5 |
| | | 25 | 0 | 23.5 | 24.2 | 23.5 | 21.0 | 21.0 | 20.8 | 22.8 | 23.1 | 23.1 | 19.4 | 20.5 | 20.5 |
| | | 25 | 12 | 23.7 | 24.2 | 23.3 | 21.0 | 21.0 | 20.3 | 22.9 | 23.1 | 22.6 | 19.4 | 20.5 | 20.5 |
| | | 25 | 24 | 23.8 | 24.2 | 23.1 | 21.0 | 20.9 | 19.8 | 22.9 | 23.1 | 22.2 | 19.5 | 20.5 | 20.5 |
| | | 50 | 0 | 23.2 | 24.0 | 23.2 | 20.8 | 20.9 | 20.3 | 22.6 | 23.0 | 22.7 | 19.3 | 20.4 | 20.4 |
| | 64QAM | 1 | 0 | 22.0 | 22.8 | 22.9 | 19.7 | 19.8 | 19.6 | 20.5 | 21.7 | 21.5 | 19.2 | 20.5 | 20.7 |
| | | 1 | 24 | 22.3 | 22.8 | 23.0 | 19.7 | 19.8 | 19.8 | 21.8 | 21.7 | 21.6 | 19.3 | 20.4 | 20.7 |
| | | 1 | 49 | 23.0 | 22.9 | **23.0** | 19.8 | 19.8 | **19.9** | **21.9** | 21.7 | 21.7 | 19.4 | 20.6 | **20.8** |
| | | 25 | 0 | 21.1 | 21.8 | 21.8 | 18.6 | 18.5 | 18.7 | 20.5 | 20.4 | 20.5 | 18.4 | 19.5 | 19.5 |
| | | 25 | 12 | 21.5 | 21.8 | 21.9 | 18.7 | 18.6 | 18.8 | 20.8 | 20.5 | 20.5 | 18.4 | 19.5 | 19.5 |
| | | 25 | 24 | 21.7 | 21.8 | 21.9 | 18.7 | 18.6 | 18.8 | 20.7 | 20.5 | 20.6 | 18.5 | 19.5 | 19.5 |
| | | 50 | 0 | 21.4 | 21.7 | 21.7 | 18.5 | 18.5 | 18.7 | 20.6 | 20.4 | 20.4 | 18.3 | 19.4 | 19.4 |
| | 256QAM | 1 | 0 | 20.1 | 20.6 | 20.7 | 18.1 | 17.8 | 18.0 | 18.7 | 20.4 | 20.5 | 16.0 | 17.4 | 17.1 |
| | | 1 | 24 | 20.5 | 20.8 | **20.9** | **18.2** | 18.0 | 18.2 | 19.2 | 20.5 | **20.7** | 16.4 | **17.6** | 17.4 |
| | | 1 | 49 | 20.2 | 20.7 | 20.7 | 18.0 | 17.8 | 17.9 | 19.1 | 20.2 | 20.4 | 16.2 | 17.3 | 17.3 |
| | | 25 | 0 | 20.6 | 20.8 | 20.7 | 18.1 | 18.2 | 18.1 | 19.3 | 20.5 | 20.3 | 16.4 | 17.5 | 17.5 |
| | | 25 | 12 | 20.6 | 20.8 | 20.8 | 18.2 | 18.2 | 18.2 | 19.4 | 20.6 | 20.3 | 16.4 | 17.5 | 17.5 |
| | | 25 | 24 | 20.6 | 20.8 | 20.7 | 18.0 | 18.2 | 18.1 | 19.5 | 20.5 | 20.3 | 16.4 | 17.5 | 17.5 |
| | | 50 | 0 | 20.6 | 20.8 | 20.7 | 18.1 | 18.2 | 18.1 | 19.3 | 20.4 | 20.2 | 16.4 | 17.5 | 17.4 |




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## 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 | 24.1 | **25.7** | 25.0 | 21.6 | **22.8** | 22.0 | 23.7 | **25.0** | 24.6 | 21.2 | 22.4 | 22.5 |
| | | 1 | 37 | 24.5 | 25.4 | 24.8 | 22.1 | 22.2 | 21.6 | 24.3 | 24.5 | 24.2 | 21.4 | 22.3 | 22.4 |
| | | 1 | 74 | 25.0 | 25.3 | 24.2 | 22.3 | 22.0 | 21.2 | 24.6 | 24.3 | 23.7 | 21.6 | 22.4 | **22.5** |
| | | 36 | 0 | 24.2 | 25.1 | 24.5 | 21.6 | 22.0 | 21.5 | 23.4 | 24.2 | 24.2 | 20.4 | 21.4 | 21.5 |
| | | 36 | 16 | 24.4 | 24.9 | 24.3 | 21.5 | 21.7 | 21.2 | 23.5 | 24.0 | 23.7 | 20.5 | 21.4 | 21.5 |
| | | 36 | 35 | 24.4 | 24.8 | 23.9 | 21.1 | 21.3 | 20.4 | 23.4 | 23.7 | 23.0 | 20.4 | 21.4 | 21.5 |
| | | 75 | 0 | 24.2 | 24.7 | 23.8 | 21.7 | 21.8 | 20.9 | 23.4 | 24.1 | 23.5 | 20.3 | 21.4 | 21.4 |
| | 16QAM | 1 | 0 | 24.1 | 24.7 | 24.7 | 21.8 | 21.8 | 21.4 | 23.1 | 24.1 | 24.1 | 20.1 | 21.4 | **21.5** |
| | | 1 | 37 | 24.6 | 24.6 | 24.4 | 21.8 | 21.4 | 21.2 | 23.7 | 23.9 | 23.8 | 20.4 | 21.4 | 21.4 |
| | | 1 | 74 | **24.8** | 24.6 | 23.9 | **22.0** | 21.1 | 20.8 | **24.1** | 23.7 | 23.4 | 20.5 | 21.3 | 21.5 |
| | | 36 | 0 | 23.5 | 24.1 | 23.7 | 20.7 | 21.1 | 20.9 | 22.5 | 23.2 | 23.3 | 19.4 | 20.5 | 20.5 |
| | | 36 | 16 | 23.6 | 24.2 | 23.6 | 20.4 | 20.9 | 20.4 | 22.6 | 23.2 | 22.9 | 19.5 | 20.5 | 20.5 |
| | | 36 | 35 | 23.6 | 24.1 | 23.3 | 20.2 | 20.4 | 19.8 | 22.6 | 22.9 | 22.4 | 19.5 | 20.5 | 20.5 |
| | | 75 | 0 | 23.3 | 24.0 | 23.3 | 20.5 | 20.8 | 20.3 | 22.5 | 23.1 | 22.8 | 19.4 | 20.4 | 20.5 |
| | 64QAM | 1 | 0 | 22.3 | 23.0 | 23.5 | 20.0 | 19.7 | 19.6 | 21.1 | 21.7 | 21.5 | 19.3 | 20.5 | 20.4 |
| | | 1 | 37 | 22.9 | 23.1 | 23.5 | 20.0 | 19.8 | 19.7 | 22.2 | 21.6 | 21.6 | 19.6 | 20.4 | **20.6** |
| | | 1 | 74 | 23.3 | 23.0 | **23.6** | **20.1** | 19.8 | 19.8 | **22.2** | 21.7 | 21.7 | 19.7 | 20.6 | 20.5 |
| | | 36 | 0 | 21.6 | 22.0 | 22.0 | 18.6 | 18.5 | 18.7 | 20.6 | 20.5 | 20.5 | 18.5 | 19.5 | 19.5 |
| | | 36 | 16 | 22.1 | 22.0 | 22.1 | 18.6 | 18.5 | 18.7 | 20.8 | 20.5 | 20.5 | 18.6 | 19.5 | 19.6 |
| | | 36 | 35 | 22.1 | 22.0 | 22.0 | 18.6 | 18.6 | 18.8 | 20.7 | 20.5 | 20.6 | 18.5 | 19.5 | 19.6 |
| | | 75 | 0 | 21.8 | 21.9 | 22.0 | 18.7 | 18.5 | 18.6 | 20.6 | 20.4 | 20.4 | 18.4 | 19.5 | 19.5 |
| | 256QAM | 1 | 0 | 20.5 | 20.5 | 20.8 | 18.1 | 18.2 | 18.0 | 18.6 | 20.6 | 20.6 | 16.0 | 17.4 | 17.4 |
| | | 1 | 37 | 20.6 | 20.8 | 20.9 | 18.2 | 18.2 | 18.1 | 19.3 | 20.6 | **20.7** | 16.5 | 17.5 | 17.5 |
| | | 1 | 74 | 20.6 | 20.6 | 20.8 | 18.2 | 18.1 | 18.0 | 19.3 | 20.4 | 20.4 | 16.4 | 17.4 | 17.4 |
| | | 36 | 0 | 20.5 | 20.8 | 20.8 | 18.1 | 18.2 | 18.1 | 19.3 | 20.4 | 20.3 | 16.4 | 17.5 | 17.5 |
| | | 36 | 16 | 20.6 | 20.8 | **20.9** | **18.2** | 18.2 | 18.2 | 19.5 | 20.5 | 20.3 | 16.6 | 17.5 | **17.6** |
| | | 36 | 35 | 20.6 | 20.8 | 20.9 | 18.2 | 18.1 | 18.1 | 19.6 | 20.4 | 20.3 | 16.5 | 17.4 | 17.5 |
| | | 75 | 0 | 20.6 | 20.8 | 20.7 | 18.1 | 18.2 | 18.1 | 19.4 | 20.4 | 20.3 | 16.4 | 17.5 | 17.5 |




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## 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 | 24.2 | **25.7** | 25.5 | 22.0 | **22.8** | 22.2 | 23.7 | **25.0** | 24.6 | 21.2 | **22.5** | 22.5 |
| | | 1 | 49 | 24.9 | 25.4 | 25.1 | 22.1 | 22.1 | 21.7 | 24.2 | 24.4 | 24.2 | 21.5 | 22.4 | 22.4 |
| | | 1 | 99 | 25.0 | 25.3 | 24.5 | 22.4 | 22.0 | 21.2 | 24.5 | 24.4 | 23.6 | 21.5 | 22.4 | 22.5 |
| | | 50 | 0 | 24.7 | 25.2 | 24.9 | 21.7 | 21.9 | 21.7 | 23.4 | 24.1 | 24.1 | 20.4 | 21.5 | 21.4 |
| | | 50 | 24 | 24.8 | 25.2 | 24.8 | 21.2 | 21.8 | 21.4 | 23.4 | 24.0 | 23.9 | 20.5 | 21.5 | 21.5 |
| | | 50 | 49 | 24.6 | 25.0 | 24.3 | 20.9 | 21.1 | 20.6 | 23.4 | 23.5 | 23.1 | 20.5 | 21.5 | 21.5 |
| | | 100 | 0 | 24.9 | 25.1 | 24.6 | 21.6 | 21.9 | 21.2 | 23.7 | 24.0 | 23.8 | 20.3 | 21.4 | 21.4 |
| | 16QAM | 1 | 0 | 24.7 | 25.7 | 25.3 | 21.6 | **22.7** | 22.0 | 23.3 | **24.8** | 24.5 | 20.3 | 21.5 | 21.5 |
| | | 1 | 49 | 25.2 | **25.7** | 25.1 | 21.7 | 22.2 | 21.7 | 23.9 | 24.5 | 24.2 | 20.5 | 21.4 | 21.5 |
| | | 1 | 99 | 24.9 | 25.5 | 24.5 | 22.2 | 21.9 | 21.0 | 24.4 | 24.4 | 23.5 | 20.6 | 21.4 | **21.6** |
| | | 50 | 0 | 23.4 | 24.3 | 23.9 | 20.5 | 21.1 | 20.8 | 22.3 | 23.1 | 23.2 | 19.4 | 20.5 | 20.4 |
| | | 50 | 24 | 23.6 | 24.3 | 23.8 | 20.2 | 20.8 | 20.5 | 22.4 | 23.1 | 22.9 | 19.5 | 20.5 | 20.5 |
| | | 50 | 49 | 23.4 | 24.2 | 23.5 | 20.0 | 20.2 | 19.8 | 22.5 | 22.7 | 22.3 | 19.5 | 20.5 | 20.5 |
| | | 100 | 0 | 23.4 | 24.0 | 23.5 | 20.4 | 20.7 | 20.1 | 22.4 | 23.0 | 22.6 | 19.4 | 20.4 | 20.5 |
| | 64QAM | 1 | 0 | 22.2 | 23.5 | 23.8 | 19.6 | 19.7 | 20.0 | 20.8 | 21.7 | 21.9 | 19.2 | 20.5 | 20.5 |
| | | 1 | 49 | 23.4 | 23.5 | 23.9 | 19.7 | 19.7 | 20.1 | 21.8 | 21.5 | 22.0 | 19.4 | 20.4 | **20.6** |
| | | 1 | 99 | 23.5 | 23.6 | **24.0** | 19.8 | 19.8 | **20.2** | 21.7 | 21.6 | **22.0** | 19.5 | 20.4 | 20.6 |
| | | 50 | 0 | 22.1 | 22.3 | 22.2 | 18.6 | 18.5 | 18.5 | 20.5 | 20.4 | 20.3 | 18.5 | 19.5 | 19.5 |
| | | 50 | 24 | 22.3 | 22.3 | 22.4 | 18.6 | 18.6 | 18.6 | 20.7 | 20.4 | 20.5 | 18.6 | 19.5 | 19.6 |
| | | 50 | 49 | 22.3 | 22.4 | 22.4 | 18.4 | 18.6 | 18.6 | 20.5 | 20.4 | 20.4 | 18.5 | 19.5 | 19.6 |
| | | 100 | 0 | 22.2 | 22.2 | 22.2 | 18.6 | 18.5 | 18.5 | 20.4 | 20.3 | 20.3 | 18.4 | 19.5 | 19.5 |
| | 256QAM | 1 | 0 | 20.6 | 20.6 | 20.8 | 18.2 | 17.9 | 18.1 | 18.7 | **20.6** | 20.3 | 15.9 | 17.3 | 17.3 |
| | | 1 | 49 | 20.7 | 20.6 | 20.8 | 18.2 | 18.0 | 18.2 | 19.0 | 20.6 | 20.3 | 16.5 | 17.5 | **17.6** |
| | | 1 | 99 | 20.6 | 20.6 | 20.8 | 18.1 | 17.8 | 18.1 | 19.1 | 20.5 | 20.2 | 16.3 | 17.3 | 17.2 |
| | | 50 | 0 | 20.7 | 20.9 | 20.8 | 18.2 | 18.2 | 18.1 | 19.1 | 20.5 | 20.3 | 16.4 | 17.5 | 17.4 |
| | | 50 | 24 | 20.7 | 20.8 | 20.8 | 18.2 | 18.2 | 18.1 | 19.3 | 20.6 | 20.3 | 16.6 | 17.5 | 17.6 |
| | | 50 | 49 | 20.7 | 20.9 | 20.8 | 18.2 | 18.2 | 18.1 | 19.3 | 20.5 | 20.3 | 16.5 | 17.4 | 17.4 |
| | | 100 | 0 | 20.6 | **20.9** | 20.8 | 18.2 | **18.2** | 18.1 | 19.3 | 20.5 | 20.3 | 16.4 | 17.5 | 17.5 |



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## 7.5. LTE BAND 12

| Test Engineer ID: | 39004 | Test Date: | 5/7/2020 |
|---|---|---|---|

### 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 | 25.5 | 25.6 | 23.8 | 23.7 | 23.7 |
| | | 1 | 2 | 25.6 | 25.6 | **25.7** | **23.9** | 23.8 | 23.8 |
| | | 1 | 5 | 25.6 | 25.4 | 25.6 | 23.8 | 23.7 | 23.7 |
| | | 3 | 0 | 25.5 | 25.5 | 25.5 | 23.8 | 23.7 | 23.6 |
| | | 3 | 1 | 25.6 | 25.6 | 25.6 | 23.8 | 23.8 | 23.7 |
| | | 3 | 2 | 25.6 | 25.5 | 25.7 | 23.9 | 23.8 | 23.7 |
| | | 6 | 0 | 24.7 | 24.6 | 24.7 | 22.9 | 22.9 | 22.7 |
| | 16QAM | 1 | 0 | 24.5 | 24.5 | 24.5 | 22.7 | 22.6 | 22.6 |
| | | 1 | 2 | 24.6 | 24.5 | 24.6 | 22.8 | 22.8 | 22.7 |
| | | 1 | 5 | 24.5 | 24.5 | 24.6 | 22.7 | 22.6 | 22.6 |
| | | 3 | 0 | 24.6 | 24.5 | 24.7 | 22.9 | 22.7 | 22.8 |
| | | 3 | 1 | 24.7 | 24.5 | **24.8** | 22.9 | 22.8 | 22.8 |
| | | 3 | 2 | 24.7 | 24.6 | 24.8 | **22.9** | 22.8 | 22.9 |
| | | 6 | 0 | 23.7 | 23.6 | 23.7 | 21.9 | 21.8 | 21.8 |
| | 64QAM | 1 | 0 | 23.5 | 23.7 | 23.7 | 21.8 | 22.0 | 21.9 |
| | | 1 | 2 | 23.6 | 23.7 | **23.8** | 21.9 | **22.0** | 21.9 |
| | | 1 | 5 | 23.6 | 23.6 | 23.7 | 21.9 | 22.0 | 21.7 |
| | | 3 | 0 | 23.6 | 23.6 | 23.5 | 21.9 | 21.8 | 21.0 |
| | | 3 | 1 | 23.7 | 23.6 | 23.4 | 21.9 | 21.9 | 21.0 |
| | | 3 | 2 | 23.7 | 23.6 | 23.3 | 21.9 | 21.8 | 21.0 |
| | | 6 | 0 | 22.7 | 22.6 | 22.4 | 21.0 | 20.8 | 20.0 |
| | 256QAM | 1 | 0 | 20.6 | 20.6 | 20.5 | 18.9 | 18.8 | 18.7 |
| | | 1 | 2 | 20.8 | 20.7 | 20.6 | **19.0** | 18.9 | 18.7 |
| | | 1 | 5 | 20.6 | 20.6 | 20.6 | 18.9 | 18.8 | 18.7 |
| | | 3 | 0 | 20.7 | 20.6 | 20.7 | 18.9 | 18.9 | 18.8 |
| | | 3 | 1 | 20.7 | 20.6 | **20.8** | 19.0 | 18.9 | 18.9 |
| | | 3 | 2 | 20.7 | 20.6 | 20.8 | 19.0 | 18.9 | 18.9 |
| | | 6 | 0 | 20.7 | 20.6 | 20.7 | 19.0 | 18.9 | 18.8 |




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## 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 | 25.6 | 23.9 | 23.9 | 23.8 |
| | | 1 | 7 | 25.6 | 25.6 | 25.6 | 23.9 | 23.7 | 23.7 |
| | | 1 | 14 | 25.6 | 25.6 | **25.7** | **23.9** | 23.8 | 23.7 |
| | | 8 | 0 | 24.7 | 24.7 | 24.7 | 23.0 | 22.9 | 22.8 |
| | | 8 | 4 | 24.7 | 24.6 | 24.8 | 23.0 | 22.9 | 22.8 |
| | | 8 | 7 | 24.7 | 24.7 | 24.7 | 23.0 | 22.9 | 22.9 |
| | | 15 | 0 | 24.7 | 24.7 | 24.7 | 23.0 | 22.9 | 22.8 |
| | 16QAM | 1 | 0 | 24.6 | 24.5 | 24.6 | **23.0** | 22.7 | 22.8 |
| | | 1 | 7 | 24.6 | 24.5 | 24.5 | 22.8 | 22.9 | 22.8 |
| | | 1 | 14 | **24.8** | 24.5 | 24.6 | 22.8 | 22.8 | 22.7 |
| | | 8 | 0 | 23.7 | 23.7 | 23.7 | 22.0 | 21.9 | 21.8 |
| | | 8 | 4 | 23.8 | 23.7 | 23.7 | 22.0 | 21.9 | 21.9 |
| | | 8 | 7 | 23.7 | 23.7 | 23.7 | 22.0 | 21.9 | 21.9 |
| | | 15 | 0 | 23.7 | 23.7 | 23.8 | 22.0 | 21.9 | 21.8 |
| | 64QAM | 1 | 0 | 23.6 | 23.7 | 23.5 | 22.0 | 21.8 | 21.8 |
| | | 1 | 7 | 23.6 | 23.7 | 23.5 | **22.0** | 21.8 | 21.7 |
| | | 1 | 14 | 23.7 | **23.8** | 23.5 | 22.0 | 21.9 | 21.7 |
| | | 8 | 0 | 22.7 | 22.7 | 22.7 | 21.0 | 20.9 | 20.5 |
| | | 8 | 4 | 22.7 | 22.7 | 22.7 | 21.0 | 21.0 | 20.3 |
| | | 8 | 7 | 22.7 | 22.7 | 22.4 | 21.0 | 20.9 | 20.0 |
| | | 15 | 0 | 22.7 | 22.7 | 22.6 | 21.0 | 20.9 | 20.1 |
| | 256QAM | 1 | 0 | 20.7 | 20.5 | 20.7 | 18.9 | 18.9 | 19.0 |
| | | 1 | 7 | 20.7 | 20.5 | 20.8 | 18.9 | 18.9 | 19.0 |
| | | 1 | 14 | 20.7 | 20.6 | **20.8** | 18.8 | 18.9 | 19.0 |
| | | 8 | 0 | 20.7 | 20.7 | 20.7 | 19.0 | 18.9 | 18.8 |
| | | 8 | 4 | 20.7 | 20.7 | 20.8 | 19.0 | 19.0 | 18.8 |
| | | 8 | 7 | 20.7 | 20.6 | 20.7 | 19.0 | 19.0 | 18.9 |
| | | 15 | 0 | 20.7 | 20.7 | 20.8 | **19.1** | 18.9 | 18.9 |




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## 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 | 25.5 | 25.6 | 23.9 | 23.8 | 23.8 |
| | | 1 | 12 | 25.7 | 25.6 | **25.7** | **23.9** | 23.8 | 23.7 |
| | | 1 | 24 | 25.6 | 25.6 | 25.7 | 23.8 | 23.8 | 23.8 |
| | | 12 | 0 | 24.8 | 24.7 | 24.7 | 23.0 | 22.9 | 22.8 |
| | | 12 | 6 | 24.8 | 24.7 | 24.8 | 23.0 | 22.9 | 22.9 |
| | | 12 | 11 | 24.7 | 24.7 | 24.7 | 23.0 | 22.9 | 22.8 |
| | | 25 | 0 | 24.7 | 24.7 | 24.7 | 23.0 | 22.9 | 22.8 |
| | 16QAM | 1 | 0 | 24.8 | **24.8** | 24.6 | 22.9 | 22.7 | 22.8 |
| | | 1 | 12 | 24.8 | 24.7 | 24.6 | **23.0** | 22.8 | 22.7 |
| | | 1 | 24 | 24.7 | 24.5 | 24.7 | 22.9 | 22.8 | 22.7 |
| | | 12 | 0 | 23.7 | 23.7 | 23.7 | 22.0 | 22.0 | 21.9 |
| | | 12 | 6 | 23.7 | 23.7 | 23.8 | 22.0 | 22.0 | 21.9 |
| | | 12 | 11 | 23.7 | 23.7 | 23.7 | 22.0 | 21.9 | 21.8 |
| | | 25 | 0 | 23.7 | 23.7 | 23.7 | 22.0 | 21.9 | 21.9 |
| | 64QAM | 1 | 0 | 23.7 | 23.7 | 23.7 | 21.9 | 21.9 | 21.8 |
| | | 1 | 12 | **23.8** | 23.7 | 23.7 | 21.9 | **22.0** | 21.8 |
| | | 1 | 24 | 23.7 | 23.7 | 23.8 | 21.9 | 21.8 | 21.8 |
| | | 12 | 0 | 22.8 | 22.7 | 22.7 | 21.0 | 21.0 | 20.8 |
| | | 12 | 6 | 22.8 | 22.7 | 22.8 | 20.9 | 21.0 | 20.8 |
| | | 12 | 11 | 22.7 | 22.7 | 22.7 | 20.7 | 20.9 | 20.4 |
| | | 25 | 0 | 22.7 | 22.7 | 22.6 | 20.8 | 20.9 | 20.7 |
| | 256QAM | 1 | 0 | **20.9** | 20.6 | 20.6 | **19.2** | 18.9 | 18.7 |
| | | 1 | 12 | 20.7 | 20.6 | 20.7 | 18.9 | 18.9 | 18.8 |
| | | 1 | 24 | 20.7 | 20.7 | 20.7 | 18.9 | 18.8 | 18.9 |
| | | 12 | 0 | 20.7 | 20.7 | 20.7 | 19.0 | 19.0 | 18.9 |
| | | 12 | 6 | 20.8 | 20.7 | 20.8 | 19.0 | 19.0 | 18.9 |
| | | 12 | 11 | 20.7 | 20.7 | 20.8 | 19.0 | 19.0 | 18.9 |
| | | 25 | 0 | 20.8 | 20.7 | 20.8 | 19.0 | 18.9 | 18.9 |




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## 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 | **25.7** | 25.6 | 25.6 | **23.9** | 23.8 | 23.7 |
| | | 1 | 24 | 25.7 | 25.6 | 25.6 | 23.9 | 23.8 | 23.7 |
| | | 1 | 49 | 25.6 | 25.6 | 25.6 | 23.8 | 23.7 | 23.7 |
| | | 25 | 0 | 24.6 | 24.6 | 24.6 | 22.8 | 22.8 | 22.8 |
| | | 25 | 12 | 24.7 | 24.7 | 24.7 | 23.0 | 22.9 | 22.8 |
| | | 25 | 24 | 24.6 | 24.7 | 24.7 | 22.9 | 22.9 | 22.8 |
| | | 50 | 0 | 24.7 | 24.7 | 24.7 | 22.9 | 22.9 | 22.8 |
| | 16QAM | 1 | 0 | 24.7 | 24.5 | 24.6 | 22.8 | 22.8 | **22.9** |
| | | 1 | 24 | 24.5 | 24.5 | 24.7 | 22.8 | 22.9 | 22.8 |
| | | 1 | 49 | 24.6 | 24.6 | **24.7** | 22.8 | 22.7 | 22.7 |
| | | 25 | 0 | 23.6 | 23.6 | 23.6 | 21.8 | 21.8 | 21.8 |
| | | 25 | 12 | 23.8 | 23.7 | 23.7 | 22.0 | 22.0 | 21.9 |
| | | 25 | 24 | 23.7 | 23.7 | 23.7 | 21.9 | 21.9 | 21.9 |
| | | 50 | 0 | 23.7 | 23.7 | 23.7 | 21.9 | 21.9 | 21.7 |
| | 64QAM | 1 | 0 | 23.8 | 23.6 | 23.6 | **22.0** | 21.8 | 21.9 |
| | | 1 | 24 | **23.8** | 23.6 | 23.8 | 22.0 | 21.7 | 21.9 |
| | | 1 | 49 | 23.7 | 23.7 | 23.7 | 22.0 | 21.7 | 21.8 |
| | | 25 | 0 | 22.6 | 22.6 | 22.6 | 20.9 | 20.8 | 20.8 |
| | | 25 | 12 | 22.8 | 22.8 | 22.7 | 21.0 | 21.0 | 20.8 |
| | | 25 | 24 | 22.7 | 22.7 | 22.7 | 20.9 | 20.9 | 20.9 |
| | | 50 | 0 | 22.7 | 22.7 | 22.7 | 20.9 | 20.9 | 20.7 |
| | 256QAM | 1 | 0 | 20.3 | 20.3 | 20.5 | 18.5 | 18.7 | 18.7 |
| | | 1 | 24 | 20.6 | 20.6 | **20.9** | 18.9 | 19.0 | 18.9 |
| | | 1 | 49 | 20.3 | 20.5 | 20.6 | 18.8 | 18.8 | 18.8 |
| | | 25 | 0 | 20.6 | 20.6 | 20.6 | 18.8 | 18.8 | 18.7 |
| | | 25 | 12 | 20.8 | 20.8 | 20.7 | **19.0** | 19.0 | 18.8 |
| | | 25 | 24 | 20.7 | 20.7 | 20.7 | 18.9 | 18.9 | 18.9 |
| | | 50 | 0 | 20.7 | 20.7 | 20.7 | 18.9 | 18.9 | 18.8 |



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## 7.6. 5G NR Band n12

| Test Engineer ID: | 19171 | Test Date: | 8/20/2020 |
|---|---|---|---|

### 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 | 24.6 | 24.6 | 24.6 | 23.1 | 23.2 | 23.1 |
| | | 1 | 1 | 25.5 | 25.4 | 25.5 | 23.6 | **23.9** | 23.7 |
| | | 36 | 18 | **25.7** | 25.7 | 25.6 | 23.8 | 23.6 | 23.2 |
| | | 75 | 0 | 25.2 | 25.2 | 24.5 | 23.2 | 23.1 | 23.1 |
| | QPSK | 1 | 0 | 24.6 | 24.5 | 24.3 | 22.7 | 22.8 | 22.7 |
| | | 1 | 1 | 25.5 | 25.5 | **25.6** | 23.7 | **23.9** | 23.8 |
| | | 36 | 18 | 25.3 | 25.3 | 25.4 | 23.7 | 23.7 | 23.7 |
| | | 75 | 0 | 24.3 | 24.4 | 24.4 | 22.7 | 22.7 | 22.7 |
| | 16QAM | 1 | 0 | 23.4 | 23.3 | 23.5 | 22.1 | 22.0 | 22.1 |
| | | 1 | 1 | **24.6** | 24.4 | 24.3 | 23.2 | **23.2** | 23.1 |
| | | 36 | 18 | 24.3 | 24.4 | 24.4 | 22.8 | 22.7 | 22.6 |
| | | 75 | 0 | 23.4 | 23.4 | 23.4 | 21.7 | 21.7 | 21.7 |
| | 64QAM | 1 | 0 | 23.0 | 23.2 | **23.6** | 21.5 | 21.3 | 21.1 |
| | | 1 | 1 | 23.5 | 23.1 | 23.1 | 21.3 | 21.3 | 21.3 |
| | | 36 | 18 | 23.0 | 23.0 | 22.9 | 21.4 | 21.4 | 21.3 |
| | | 75 | 0 | 22.9 | 22.9 | 22.9 | 21.4 | 21.2 | 21.3 |
| | 256QAM | 1 | 0 | 21.3 | 21.4 | 21.1 | 19.5 | 19.2 | 19.3 |
| | | 1 | 1 | 21.1 | **21.6** | 21.2 | 19.5 | **19.6** | 19.4 |
| | | 36 | 18 | 20.8 | 20.7 | 20.7 | 19.2 | 19.2 | 19.2 |
| | | 75 | 0 | 20.8 | 20.8 | 20.7 | 19.2 | 19.2 | 19.2 |




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## 7.7. LTE BAND 13

| Test Engineer ID: | 39004 | Test Date: | 5/7/2020 |
|---|---|---|---|

### 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 | 25.3 | 25.6 | 25.6 | 23.7 | 23.9 | 23.8 |
| | | 1 | 12 | 25.4 | **25.7** | 25.6 | 23.7 | 23.9 | 23.8 |
| | | 1 | 24 | 25.5 | 25.7 | 25.6 | 23.8 | **23.9** | 23.8 |
| | | 12 | 0 | 24.4 | 24.5 | 24.6 | 22.7 | 22.8 | 22.8 |
| | | 12 | 6 | 24.5 | 24.7 | 24.7 | 22.8 | 22.9 | 22.8 |
| | | 12 | 11 | 24.5 | 24.6 | 24.7 | 22.8 | 22.9 | 22.9 |
| | | 25 | 0 | 24.5 | 24.6 | 24.7 | 22.9 | 22.8 | 22.9 |
| | 16QAM | 1 | 0 | 24.6 | 24.8 | 25.2 | 22.9 | 23.0 | 23.4 |
| | | 1 | 12 | 24.7 | 24.9 | **25.3** | 23.1 | 23.1 | 23.4 |
| | | 1 | 24 | 24.8 | 24.9 | 25.3 | 23.1 | 23.1 | **23.5** |
| | | 12 | 0 | 23.6 | 23.7 | 23.8 | 21.8 | 21.9 | 22.0 |
| | | 12 | 6 | 23.6 | 23.7 | 23.9 | 21.9 | 22.0 | 22.0 |
| | | 12 | 11 | 23.6 | 23.7 | 23.8 | 21.9 | 22.0 | 22.1 |
| | | 25 | 0 | 23.5 | 23.7 | 23.8 | 21.8 | 21.9 | 22.0 |
| | 64QAM | 1 | 0 | 23.7 | 23.5 | 23.9 | 21.9 | 21.5 | 21.9 |
| | | 1 | 12 | 23.8 | 23.6 | 23.9 | 22.0 | 21.6 | 21.9 |
| | | 1 | 24 | **23.9** | 23.6 | 23.9 | **22.0** | 21.6 | 22.0 |
| | | 12 | 0 | 22.6 | 22.6 | 22.5 | 20.6 | 20.6 | 20.6 |
| | | 12 | 6 | 22.7 | 22.7 | 22.6 | 20.8 | 20.7 | 20.7 |
| | | 12 | 11 | 22.7 | 22.7 | 22.6 | 20.7 | 20.7 | 20.7 |
| | | 25 | 0 | 22.7 | 22.6 | 22.6 | 20.7 | 20.6 | 20.7 |
| | 256QAM | 1 | 0 | 20.9 | 20.8 | 20.8 | 17.2 | 17.7 | 17.7 |
| | | 1 | 12 | 20.9 | 20.8 | 20.8 | 17.4 | 17.9 | 17.8 |
| | | 1 | 24 | 20.9 | 20.8 | 20.8 | 17.5 | **17.9** | 17.8 |
| | | 12 | 0 | 20.9 | 20.8 | 20.8 | 17.5 | 17.7 | 17.7 |
| | | 12 | 6 | **20.9** | 20.8 | 20.8 | 17.7 | 17.8 | 17.8 |
| | | 12 | 11 | 20.9 | 20.8 | 20.8 | 17.7 | 17.8 | 17.8 |
| | | 25 | 0 | 20.9 | 20.8 | 20.8 | 17.7 | 17.8 | 17.8 |



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## OUTPUT POWER FOR LTE BAND 13 (10.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Conducted Average (dBm) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | ANT 1 | | | ANT 2 | | |
| | | | | N/A | 23230 | N/A | N/A | 23230 | N/A |
| | | | | N/A | 782.0 | N/A | N/A | 782.0 | N/A |
| 10.0 | QPSK | 1 | 0 | | 25.6 | | | 23.8 | |
| | | 1 | 24 | | **25.7** | | | **23.9** | |
| | | 1 | 49 | | 25.6 | | | 23.8 | |
| | | 25 | 0 | | 24.8 | | | 23.0 | |
| | | 25 | 12 | | 24.8 | | | 23.0 | |
| | | 25 | 24 | | 24.9 | | | 23.0 | |
| | | 50 | 0 | | 24.8 | | | 22.9 | |
| | 16QAM | 1 | 0 | | 24.8 | | | **23.0** | |
| | | 1 | 24 | | **24.9** | | | 23.0 | |
| | | 1 | 49 | | 24.8 | | | 23.0 | |
| | | 25 | 0 | | 24.0 | | | 22.1 | |
| | | 25 | 12 | | 24.0 | | | 22.1 | |
| | | 25 | 24 | | 24.0 | | | 22.2 | |
| | | 50 | 0 | | 23.8 | | | 22.0 | |
| | 64QAM | 1 | 0 | | 24.0 | | | 22.0 | |
| | | 1 | 24 | | **24.1** | | | **22.0** | |
| | | 1 | 49 | | 24.0 | | | 22.0 | |
| | | 25 | 0 | | 22.8 | | | 20.9 | |
| | | 25 | 12 | | 22.9 | | | 20.9 | |
| | | 25 | 24 | | 22.9 | | | 21.0 | |
| | | 50 | 0 | | 22.8 | | | 20.8 | |
| | 256QAM | 1 | 0 | | 21.1 | | | 17.2 | |
| | | 1 | 24 | | **21.1** | | | 17.6 | |
| | | 1 | 49 | | 21.1 | | | 17.4 | |
| | | 25 | 0 | | 21.1 | | | 17.7 | |
| | | 25 | 12 | | 20.9 | | | 17.9 | |
| | | 25 | 24 | | 20.9 | | | **17.9** | |
| | | 50 | 0 | | 20.9 | | | 17.8 | |



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## 7.8. LTE BAND 14

| Test Engineer ID: | 39004 | Test Date: | 5/7/2020 |
|---|---|---|---|

### 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 | 25.4 | 25.6 | 25.6 | 23.7 | 23.8 | 23.7 |
| | | 1 | 12 | 25.5 | **25.7** | 25.7 | 23.8 | **23.9** | 23.9 |
| | | 1 | 24 | 25.5 | 25.6 | 25.6 | 23.7 | 23.9 | 23.8 |
| | | 12 | 0 | 24.5 | 24.6 | 24.7 | 22.8 | 22.8 | 22.9 |
| | | 12 | 6 | 24.6 | 24.7 | 24.8 | 22.9 | 22.8 | 23.0 |
| | | 12 | 11 | 24.6 | 24.6 | 24.7 | 22.8 | 22.8 | 22.9 |
| | | 25 | 0 | 24.6 | 24.7 | 24.7 | 22.8 | 22.9 | 22.9 |
| | 16QAM | 1 | 0 | 24.7 | 24.8 | 25.2 | 23.0 | 23.0 | 23.4 |
| | | 1 | 12 | 24.8 | 24.9 | **25.2** | 23.0 | 23.1 | **23.4** |
| | | 1 | 24 | 24.8 | 24.8 | 25.2 | 23.0 | 23.0 | 23.4 |
| | | 12 | 0 | 23.7 | 23.8 | 23.9 | 21.9 | 22.0 | 22.0 |
| | | 12 | 6 | 23.7 | 23.8 | 23.9 | 22.0 | 22.0 | 22.1 |
| | | 12 | 11 | 23.7 | 23.7 | 23.8 | 21.9 | 21.9 | 22.0 |
| | | 25 | 0 | 23.6 | 23.7 | 23.8 | 21.8 | 21.9 | 22.0 |
| | 64QAM | 1 | 0 | 23.5 | 23.9 | 23.9 | 21.8 | 21.5 | 21.8 |
| | | 1 | 12 | 23.6 | **24.0** | 23.9 | 21.9 | 21.6 | **22.0** |
| | | 1 | 24 | 23.6 | 23.9 | 23.9 | 21.8 | 21.5 | 21.9 |
| | | 12 | 0 | 22.7 | 22.6 | 22.8 | 20.6 | 20.6 | 20.5 |
| | | 12 | 6 | 22.8 | 22.6 | 22.8 | 20.7 | 20.6 | 20.6 |
| | | 12 | 11 | 22.7 | 22.6 | 22.7 | 20.6 | 20.6 | 20.5 |
| | | 25 | 0 | 22.7 | 22.7 | 22.7 | 20.6 | 20.6 | 20.6 |
| | 256QAM | 1 | 0 | 20.2 | 19.9 | 20.1 | 17.4 | 17.8 | 17.8 |
| | | 1 | 12 | **20.3** | 19.9 | 20.2 | 17.6 | 17.8 | **17.9** |
| | | 1 | 24 | 20.1 | 19.9 | 20.2 | 17.6 | 17.8 | 17.9 |
| | | 12 | 0 | 20.2 | 20.2 | 20.1 | 17.8 | 17.8 | 17.9 |
| | | 12 | 6 | 20.2 | 20.2 | 20.1 | 17.9 | 17.9 | 17.9 |
| | | 12 | 11 | 20.1 | 20.1 | 20.1 | 17.8 | 17.8 | 17.8 |
| | | 25 | 0 | 20.2 | 20.2 | 20.1 | 17.7 | 17.7 | 17.6 |




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## OUTPUT POWER FOR LTE BAND 14 (10.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Conducted Average (dBm) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | ANT 1 | | | ANT 2 | | |
| | | | | N/A | 23330 | N/A | N/A | 23330 | N/A |
| | | | | N/A | 793.0 | N/A | N/A | 793.0 | N/A |
| 10.0 | QPSK | 1 | 0 | | 25.7 | | | **23.9** | |
| | | 1 | 24 | | **25.7** | | | 23.8 | |
| | | 1 | 49 | | 25.6 | | | 23.8 | |
| | | 25 | 0 | | 24.7 | | | 22.9 | |
| | | 25 | 12 | | 24.8 | | | 23.0 | |
| | | 25 | 24 | | 24.8 | | | 22.9 | |
| | | 50 | 0 | | 24.7 | | | 22.9 | |
| | 16QAM | 1 | 0 | | **24.9** | | | **23.1** | |
| | | 1 | 24 | | 24.8 | | | 22.9 | |
| | | 1 | 49 | | 24.8 | | | 22.9 | |
| | | 25 | 0 | | 23.9 | | | 21.9 | |
| | | 25 | 12 | | 23.9 | | | 22.1 | |
| | | 25 | 24 | | 23.9 | | | 22.0 | |
| | | 50 | 0 | | 23.7 | | | 21.9 | |
| | 64QAM | 1 | 0 | | 24.0 | | | 21.8 | |
| | | 1 | 24 | | **24.0** | | | **21.8** | |
| | | 1 | 49 | | 24.0 | | | 21.8 | |
| | | 25 | 0 | | 22.8 | | | 20.6 | |
| | | 25 | 12 | | 22.8 | | | 20.7 | |
| | | 25 | 24 | | 22.8 | | | 20.7 | |
| | | 50 | 0 | | 22.8 | | | 20.6 | |
| | 256QAM | 1 | 0 | | 19.7 | | | 17.4 | |
| | | 1 | 24 | | 20.0 | | | 17.8 | |
| | | 1 | 49 | | 19.8 | | | 17.5 | |
| | | 25 | 0 | | 20.1 | | | 17.9 | |
| | | 25 | 12 | | **20.2** | | | **18.0** | |
| | | 25 | 24 | | 20.1 | | | 17.8 | |
| | | 50 | 0 | | 20.1 | | | 17.9 | |




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## 7.9. LTE BAND 17

| Test Engineer ID: | 39004 | Test Date: | 5/7/2020 |
|---|---|---|---|

### 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 | 25.5 | 25.6 | 25.6 | 23.7 | 23.8 | 23.8 |
| | | 1 | 12 | 25.5 | 25.7 | 25.7 | 23.7 | 23.9 | 23.8 |
| | | 1 | 24 | 25.6 | **25.7** | 25.7 | 23.8 | **23.9** | 23.8 |
| | | 12 | 0 | 24.5 | 24.6 | 24.7 | 22.7 | 22.8 | 22.9 |
| | | 12 | 6 | 24.6 | 24.7 | 24.8 | 22.8 | 22.8 | 22.9 |
| | | 12 | 11 | 24.6 | 24.7 | 24.8 | 22.8 | 22.9 | 22.9 |
| | | 25 | 0 | 24.7 | 24.7 | 24.7 | 22.8 | 22.8 | 22.9 |
| | 16QAM | 1 | 0 | 24.8 | 24.8 | 25.2 | 22.9 | 23.0 | 23.4 |
| | | 1 | 12 | 24.8 | 24.9 | **25.3** | 23.0 | 23.0 | **23.4** |
| | | 1 | 24 | 24.8 | 24.9 | 25.2 | 23.1 | 23.1 | 23.4 |
| | | 12 | 0 | 23.7 | 23.8 | 23.9 | 21.8 | 21.9 | 22.0 |
| | | 12 | 6 | 23.7 | 23.8 | 24.0 | 21.9 | 21.9 | 22.1 |
| | | 12 | 11 | 23.7 | 23.8 | 23.9 | 21.9 | 22.0 | 22.1 |
| | | 25 | 0 | 23.7 | 23.7 | 23.8 | 21.8 | 21.9 | 21.9 |
| | 64QAM | 1 | 0 | 23.9 | 23.6 | 24.0 | 21.9 | 21.6 | 22.1 |
| | | 1 | 12 | 24.0 | 23.7 | **24.1** | 22.1 | 21.7 | 22.1 |
| | | 1 | 24 | 24.1 | 23.7 | 24.1 | **22.1** | 21.7 | 22.0 |
| | | 12 | 0 | 22.8 | 22.8 | 22.7 | 20.8 | 20.7 | 20.7 |
| | | 12 | 6 | 22.9 | 22.8 | 22.8 | 20.9 | 20.8 | 20.8 |
| | | 12 | 11 | 22.9 | 22.8 | 22.7 | 20.9 | 20.9 | 20.7 |
| | | 25 | 0 | 22.8 | 22.7 | 22.7 | 20.8 | 20.7 | 20.7 |
| | 256QAM | 1 | 0 | 20.0 | 20.3 | 20.3 | 18.7 | 18.9 | 19.0 |
| | | 1 | 12 | 20.1 | 20.3 | 20.3 | 18.7 | 19.0 | 19.0 |
| | | 1 | 24 | 20.1 | 20.4 | 20.3 | 18.7 | **19.0** | 19.0 |
| | | 12 | 0 | 20.4 | 20.3 | 20.3 | 18.9 | 18.9 | 18.9 |
| | | 12 | 6 | 20.4 | 20.3 | 20.3 | 19.0 | 18.9 | 19.0 |
| | | 12 | 11 | 20.4 | 20.3 | 20.4 | 18.9 | 18.9 | 19.0 |
| | | 25 | 0 | **20.4** | 20.3 | 20.3 | 19.0 | 18.9 | 18.9 |




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## 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 | 23.8 | 23.8 | **23.9** |
| | | 1 | 24 | 25.6 | 25.6 | **25.7** | 23.8 | 23.8 | 23.8 |
| | | 1 | 49 | 25.5 | 25.7 | 25.7 | 23.8 | 23.8 | 23.8 |
| | | 25 | 0 | 24.7 | 24.8 | 24.8 | 22.9 | 22.9 | 23.0 |
| | | 25 | 12 | 24.8 | 24.8 | 24.8 | 23.0 | 22.9 | 22.9 |
| | | 25 | 24 | 24.8 | 24.8 | 24.8 | 22.9 | 23.0 | 23.0 |
| | | 50 | 0 | 24.8 | 24.8 | 24.8 | 22.9 | 22.9 | 22.9 |
| | 16QAM | 1 | 0 | 24.8 | 24.7 | 25.2 | 23.2 | 23.0 | 22.9 |
| | | 1 | 24 | 24.7 | 24.7 | 25.2 | 23.3 | 22.9 | 22.9 |
| | | 1 | 49 | 24.7 | 24.7 | **25.2** | **23.3** | 22.9 | 22.8 |
| | | 25 | 0 | 23.8 | 23.8 | 23.8 | 22.0 | 22.0 | 22.0 |
| | | 25 | 12 | 23.9 | 23.8 | 23.8 | 22.0 | 22.0 | 22.0 |
| | | 25 | 24 | 23.9 | 23.8 | 23.9 | 21.9 | 22.1 | 22.0 |
| | | 50 | 0 | 23.9 | 23.7 | 23.8 | 22.0 | 22.0 | 21.9 |
| | 64QAM | 1 | 0 | 23.9 | 24.0 | 23.7 | 21.9 | 22.0 | 21.8 |
| | | 1 | 24 | 24.0 | 24.1 | 23.9 | 21.9 | 22.1 | 21.9 |
| | | 1 | 49 | 23.9 | **24.1** | 23.9 | 22.0 | **22.1** | 22.0 |
| | | 25 | 0 | 22.8 | 22.8 | 22.9 | 20.8 | 20.8 | 20.9 |
| | | 25 | 12 | 22.9 | 22.8 | 22.9 | 20.9 | 20.8 | 20.9 |
| | | 25 | 24 | 23.0 | 22.9 | 22.9 | 21.0 | 20.9 | 21.0 |
| | | 50 | 0 | 22.8 | 22.7 | 22.8 | 20.8 | 20.8 | 20.8 |
| | 256QAM | 1 | 0 | 20.2 | 20.4 | 20.5 | 18.8 | 19.0 | **19.2** |
| | | 1 | 24 | 20.2 | 20.3 | **20.5** | 18.8 | 19.0 | 19.1 |
| | | 1 | 49 | 20.2 | 20.3 | 20.5 | 18.8 | 19.0 | 19.0 |
| | | 25 | 0 | 20.3 | 20.2 | 20.3 | 18.9 | 18.8 | 18.9 |
| | | 25 | 12 | 20.4 | 20.4 | 20.3 | 19.0 | 18.9 | 19.0 |
| | | 25 | 24 | 20.3 | 20.3 | 20.4 | 19.0 | 18.9 | 18.9 |
| | | 50 | 0 | 20.4 | 20.3 | 20.3 | 19.0 | 18.9 | 19.0 |




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## 7.10. LTE BAND 25

| Test Engineer ID: | 39004 | Test Date: | 5/7/2020 |
|---|---|---|---|

### 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 | 25.5 | 25.5 | 25.2 | 22.9 | 22.9 | 22.7 | 23.7 | 24.8 | 24.9 | 22.8 | 23.0 | 22.8 |
| | | 1 | 2 | **25.7** | 25.6 | 25.3 | **23.1** | 22.9 | 22.8 | 24.7 | 24.9 | **25.0** | 22.9 | **23.0** | 23.0 |
| | | 1 | 5 | 25.6 | 25.5 | 25.3 | 23.1 | 22.9 | 22.7 | 24.7 | 24.8 | 25.0 | 22.8 | 22.9 | 22.9 |
| | | 3 | 0 | 25.6 | 25.5 | 25.3 | 23.0 | 22.9 | 22.7 | 24.6 | 24.8 | 25.0 | 22.8 | 22.9 | 22.9 |
| | | 3 | 1 | 25.7 | 25.5 | 25.3 | 23.0 | 22.9 | 22.7 | 24.7 | 24.8 | 25.0 | 22.9 | 23.0 | 22.9 |
| | | 3 | 2 | 25.7 | 25.5 | 25.3 | 23.0 | 22.9 | 22.7 | 24.7 | 24.8 | 25.0 | 22.9 | 23.0 | 22.9 |
| | | 6 | 0 | 24.7 | 24.6 | 24.4 | 22.0 | 22.0 | 21.7 | 23.7 | 23.9 | 24.0 | 21.9 | 22.0 | 21.9 |
| | 16QAM | 1 | 0 | 24.6 | 24.5 | 24.2 | 21.9 | 21.8 | 21.7 | 23.6 | 23.7 | 24.2 | 21.7 | 21.9 | 21.9 |
| | | 1 | 2 | 24.6 | 24.6 | 24.2 | 22.0 | 21.9 | 21.7 | 23.6 | 23.9 | **24.2** | 21.9 | 21.9 | 22.0 |
| | | 1 | 5 | 24.7 | 24.5 | 24.2 | 22.0 | 21.8 | 21.7 | 23.6 | 23.8 | 24.2 | 21.8 | 21.9 | 21.9 |
| | | 3 | 0 | 24.7 | 24.6 | 24.3 | 22.1 | 21.9 | 21.8 | 23.7 | 23.7 | 24.0 | 21.9 | 22.0 | 22.0 |
| | | 3 | 1 | 24.8 | 24.6 | 24.3 | 22.1 | 21.9 | 21.8 | 23.7 | 23.8 | 24.1 | 22.0 | 22.0 | 22.0 |
| | | 3 | 2 | **24.8** | 24.6 | 24.3 | **22.1** | 21.9 | 21.9 | 23.8 | 23.8 | 24.0 | 21.9 | 22.0 | **22.1** |
| | | 6 | 0 | 23.7 | 23.5 | 23.3 | 21.1 | 20.9 | 20.7 | 22.7 | 22.8 | 22.7 | 20.9 | 21.0 | 21.0 |
| | 64QAM | 1 | 0 | 23.7 | 23.4 | 23.4 | 20.9 | 21.0 | 20.8 | 22.6 | 22.5 | 22.2 | 20.7 | 21.1 | 20.9 |
| | | 1 | 2 | **23.8** | 23.5 | 23.5 | 21.0 | 21.1 | 20.9 | **23.0** | 22.6 | 22.3 | 20.8 | **21.1** | 20.9 |
| | | 1 | 5 | 23.8 | 23.4 | 23.5 | 21.1 | 21.1 | 20.8 | 22.9 | 22.5 | 22.3 | 20.8 | 21.1 | 20.7 |
| | | 3 | 0 | 23.7 | 23.5 | 23.3 | 21.1 | 20.9 | 20.8 | 22.8 | 22.6 | 22.1 | 20.9 | 21.0 | 21.0 |
| | | 3 | 1 | 23.8 | 23.6 | 23.4 | 21.1 | 21.0 | 20.8 | 22.8 | 22.6 | 22.1 | 20.9 | 21.1 | 21.1 |
| | | 3 | 2 | 23.8 | 23.6 | 23.4 | **21.1** | 21.0 | 20.9 | 22.9 | 22.6 | 22.1 | 20.9 | 21.1 | 21.1 |
| | | 6 | 0 | 22.7 | 22.6 | 22.3 | 20.1 | 19.9 | 19.8 | 21.5 | 21.7 | 21.2 | 19.9 | 20.0 | 20.0 |
| | 256QAM | 1 | 0 | 21.0 | 21.0 | 20.7 | 18.3 | 18.2 | 17.9 | 19.9 | 19.6 | 20.0 | 18.1 | 18.2 | 18.1 |
| | | 1 | 2 | 21.1 | 21.1 | 20.8 | **18.4** | 18.3 | 18.0 | 20.1 | 19.7 | 20.1 | 18.3 | 18.3 | 18.3 |
| | | 1 | 5 | 21.0 | 21.0 | 20.7 | 18.4 | 18.2 | 17.9 | 20.0 | 19.7 | 20.0 | 18.2 | 18.3 | 18.2 |
| | | 3 | 0 | 21.1 | 20.9 | 20.7 | 18.3 | 18.2 | 18.1 | 19.8 | 19.7 | 20.1 | 18.2 | 18.3 | 18.3 |
| | | 3 | 1 | **21.2** | 21.0 | 20.8 | 18.4 | 18.3 | 18.1 | 19.9 | 19.7 | 20.2 | 18.2 | 18.4 | **18.4** |
| | | 3 | 2 | 21.2 | 21.0 | 20.7 | 18.4 | 18.3 | 18.1 | 19.9 | 19.8 | **20.2** | 18.2 | 18.4 | 18.4 |
| | | 6 | 0 | 21.1 | 21.0 | 20.7 | 18.4 | 18.2 | 18.0 | 19.7 | 19.9 | 20.0 | 18.2 | 18.3 | 18.3 |




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## OUTPUT POWER FOR LTE BAND 25 (3.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Conducted Average (dBm) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ANT 1 | | | ANT 2 | | | ANT 3 | | | ANT 4 | | |
| | | | | 26055 | 26365 | 26675 | 26055 | 26365 | 26675 | 26055 | 26365 | 26675 | 26055 | 26365 | 26675 |
| | | | | 1851.5 | 1882.5 | 1913.5 | 1851.5 | 1882.5 | 1913.5 | 1851.5 | 1882.5 | 1913.5 | 1851.5 | 1882.5 | 1913.5 |
| 3.0 | QPSK | 1 | 0 | 25.6 | 25.6 | 25.3 | 23.0 | 22.9 | 22.7 | 24.5 | 24.7 | 24.9 | 22.9 | 22.9 | 22.9 |
| | | 1 | 7 | 25.6 | 25.5 | 25.4 | 23.0 | 22.9 | 22.7 | 24.5 | 24.7 | 24.9 | 22.9 | 22.9 | 23.0 |
| | | 1 | 14 | **25.7** | 25.5 | 25.4 | **23.1** | 23.0 | 22.7 | 24.6 | 24.8 | **25.0** | 22.9 | **23.0** | 22.9 |
| | | 8 | 0 | 24.7 | 24.6 | 24.3 | 22.1 | 21.9 | 21.8 | 23.6 | 23.8 | 23.9 | 21.9 | 22.0 | 22.0 |
| | | 8 | 4 | 24.7 | 24.7 | 24.4 | 22.1 | 22.0 | 21.8 | 23.7 | 23.9 | 23.9 | 22.0 | 22.1 | 22.0 |
| | | 8 | 7 | 24.7 | 24.7 | 24.4 | 22.1 | 22.0 | 21.8 | 23.7 | 23.9 | 23.9 | 22.0 | 22.1 | 22.1 |
| | | 15 | 0 | 24.7 | 24.6 | 24.4 | 22.1 | 22.0 | 21.8 | 23.7 | 23.8 | 23.9 | 22.0 | 22.1 | 22.0 |
| | 16QAM | 1 | 0 | 24.6 | 24.5 | 24.4 | 21.9 | 21.8 | 21.7 | 23.2 | 23.2 | 23.8 | 21.8 | 22.0 | 21.9 |
| | | 1 | 7 | 24.6 | 24.5 | 24.4 | 22.1 | 21.9 | 21.8 | 23.2 | 23.2 | 23.8 | 21.8 | 22.0 | 22.0 |
| | | 1 | 14 | **24.7** | 24.6 | 24.5 | **22.1** | 21.9 | 21.8 | 23.3 | 23.3 | **23.9** | 21.9 | **22.2** | 22.0 |
| | | 8 | 0 | 23.8 | 23.6 | 23.3 | 21.1 | 20.9 | 20.8 | 22.2 | 22.4 | 22.4 | 20.9 | 21.0 | 21.0 |
| | | 8 | 4 | 23.8 | 23.6 | 23.4 | 21.2 | 21.0 | 20.8 | 22.3 | 22.4 | 22.5 | 21.0 | 21.1 | 21.1 |
| | | 8 | 7 | 23.8 | 23.6 | 23.4 | 21.2 | 21.0 | 20.8 | 22.3 | 22.5 | 22.5 | 20.9 | 21.1 | 21.1 |
| | | 15 | 0 | 23.7 | 23.6 | 23.3 | 21.1 | 21.0 | 20.8 | 22.2 | 22.4 | 22.5 | 21.0 | 21.1 | 21.0 |
| | 64QAM | 1 | 0 | 23.8 | 23.5 | 23.3 | 21.0 | 20.8 | 20.8 | 22.6 | 22.6 | 22.1 | 20.8 | 21.0 | 21.1 |
| | | 1 | 7 | 23.7 | 23.4 | 23.3 | 21.2 | 20.9 | 20.8 | 22.6 | 22.6 | 22.1 | 20.8 | 21.0 | 21.2 |
| | | 1 | 14 | **23.8** | 23.6 | 23.4 | **21.3** | 20.9 | 20.8 | **22.7** | 22.7 | 22.2 | 20.9 | **21.2** | 20.8 |
| | | 8 | 0 | 22.7 | 22.6 | 22.3 | 20.1 | 20.0 | 19.8 | 21.4 | 21.4 | 21.1 | 20.0 | 20.0 | 20.0 |
| | | 8 | 4 | 22.8 | 22.7 | 22.4 | 20.2 | 20.0 | 19.8 | 21.4 | 21.4 | 21.1 | 20.0 | 20.1 | 20.0 |
| | | 8 | 7 | 22.7 | 22.6 | 22.4 | 20.1 | 20.0 | 19.8 | 21.5 | 21.5 | 21.2 | 20.0 | 20.1 | 20.1 |
| | | 15 | 0 | 22.7 | 22.6 | 22.3 | 20.1 | 20.0 | 19.8 | 21.5 | 21.4 | 21.1 | 20.0 | 20.1 | 20.0 |
| | 256QAM | 1 | 0 | 21.0 | 21.0 | 20.8 | 18.3 | 18.3 | 18.2 | 20.3 | 19.8 | 20.0 | 18.2 | 18.3 | 18.2 |
| | | 1 | 7 | 21.1 | 21.1 | 20.8 | 18.4 | 18.3 | 18.1 | 20.4 | 19.7 | 20.1 | 18.4 | 18.4 | 18.3 |
| | | 1 | 14 | 21.1 | 21.1 | 20.8 | 18.4 | 18.4 | 18.1 | **20.5** | 19.8 | 20.1 | 18.4 | **18.5** | 18.3 |
| | | 8 | 0 | 21.1 | 21.1 | 20.8 | 18.4 | 18.3 | 18.1 | 20.0 | 19.8 | 20.2 | 18.3 | 18.3 | 18.3 |
| | | 8 | 4 | 21.2 | 21.1 | 20.8 | 18.5 | 18.4 | 18.1 | 20.0 | 19.9 | 20.2 | 18.3 | 18.5 | 18.4 |
| | | 8 | 7 | **21.2** | 21.1 | 20.8 | 18.5 | 18.4 | 18.1 | 20.0 | 19.9 | 20.3 | 18.3 | 18.4 | 18.4 |
| | | 15 | 0 | 21.2 | 21.1 | 20.8 | **18.5** | 18.3 | 18.1 | 20.0 | 20.0 | 20.2 | 18.3 | 18.4 | 18.3 |




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## OUTPUT POWER FOR LTE BAND 25 (5.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Conducted Average (dBm) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ANT 1 | | | ANT 2 | | | ANT 3 | | | ANT 4 | | |
| | | | | 26065 | 26365 | 26665 | 26065 | 26365 | 26665 | 26065 | 26365 | 26665 | 26065 | 26365 | 26665 |
| | | | | 1852.5 | 1882.5 | 1912.5 | 1852.5 | 1882.5 | 1912.5 | 1852.5 | 1882.5 | 1912.5 | 1852.5 | 1882.5 | 1912.5 |
| 5.0 | QPSK | 1 | 0 | 25.6 | 25.5 | 25.3 | 23.0 | 22.9 | 22.8 | 24.6 | 24.8 | 24.9 | 22.7 | 22.8 | 22.8 |
| | | 1 | 24 | 25.7 | 25.6 | 25.3 | **23.1** | 23.0 | 22.8 | 24.7 | 24.9 | 25.0 | 22.8 | 22.9 | 22.9 |
| | | 1 | 49 | **25.7** | 25.6 | 25.4 | 23.1 | 23.0 | 22.8 | 24.7 | 25.0 | **25.0** | 22.8 | **23.0** | 22.9 |
| | | 25 | 0 | 24.7 | 24.6 | 24.3 | 22.1 | 21.9 | 21.8 | 23.7 | 23.8 | 23.9 | 21.8 | 21.9 | 21.9 |
| | | 25 | 12 | 24.8 | 24.7 | 24.4 | 22.1 | 22.1 | 21.8 | 23.8 | 23.9 | 24.0 | 21.9 | 22.0 | 21.9 |
| | | 25 | 24 | 24.8 | 24.7 | 24.4 | 22.2 | 22.0 | 21.8 | 23.8 | 23.9 | 24.0 | 21.9 | 22.0 | 22.0 |
| | | 50 | 0 | 24.8 | 24.7 | 24.4 | 22.1 | 22.0 | 21.7 | 23.7 | 23.9 | 24.0 | 21.9 | 22.0 | 21.9 |
| | 16QAM | 1 | 0 | 24.8 | 24.6 | 24.2 | 22.1 | 21.8 | 21.7 | 23.3 | 23.5 | 23.9 | 21.8 | 21.8 | 22.0 |
| | | 1 | 24 | **24.9** | 24.6 | 24.3 | 22.2 | 21.9 | 21.7 | 23.4 | 23.5 | 24.0 | 21.9 | 21.9 | **22.0** |
| | | 1 | 49 | 24.9 | 24.6 | 24.4 | **22.3** | 22.0 | 21.7 | 23.5 | 23.7 | **24.0** | 22.0 | 22.0 | 22.0 |
| | | 25 | 0 | 23.7 | 23.7 | 23.3 | 21.1 | 20.9 | 20.8 | 22.3 | 22.4 | 22.6 | 20.9 | 21.0 | 20.9 |
| | | 25 | 12 | 23.7 | 23.7 | 23.4 | 21.2 | 21.0 | 20.8 | 22.3 | 22.5 | 22.6 | 20.9 | 21.0 | 21.0 |
| | | 25 | 24 | 23.8 | 23.7 | 23.4 | 21.2 | 21.0 | 20.9 | 22.3 | 22.5 | 22.7 | 20.9 | 21.1 | 21.0 |
| | | 50 | 0 | 23.8 | 23.6 | 23.4 | 21.2 | 21.0 | 20.8 | 22.2 | 22.4 | 22.6 | 20.9 | 21.0 | 20.9 |
| | 64QAM | 1 | 0 | 23.8 | 23.7 | 23.4 | 21.1 | 21.0 | 20.9 | 22.6 | 22.3 | 22.4 | 21.0 | 20.9 | 21.1 |
| | | 1 | 24 | **23.8** | 23.8 | 23.5 | 21.2 | 21.1 | 20.8 | **22.7** | 22.3 | 22.4 | 20.9 | **21.1** | 21.0 |
| | | 1 | 49 | 23.7 | 23.7 | 23.4 | **21.3** | 21.1 | 20.9 | 22.7 | 22.4 | 22.4 | 20.9 | 21.0 | 20.7 |
| | | 25 | 0 | 22.7 | 22.6 | 22.3 | 20.2 | 20.0 | 19.8 | 21.5 | 21.4 | 21.1 | 19.9 | 20.0 | 19.9 |
| | | 25 | 12 | 22.7 | 22.7 | 22.4 | 20.2 | 20.1 | 19.8 | 21.6 | 21.5 | 21.1 | 20.0 | 20.1 | 20.0 |
| | | 25 | 24 | 22.8 | 22.7 | 22.4 | 20.2 | 20.1 | 19.9 | 21.6 | 21.5 | 21.1 | 20.0 | 20.1 | 20.1 |
| | | 50 | 0 | 22.7 | 22.7 | 22.3 | 20.2 | 20.1 | 19.8 | 21.5 | 21.4 | 21.1 | 19.9 | 20.0 | 19.9 |
| | 256QAM | 1 | 0 | 21.1 | 21.1 | 20.7 | 18.3 | 18.2 | 18.1 | 20.0 | 19.9 | 19.7 | 18.2 | 18.3 | 18.4 |
| | | 1 | 24 | **21.3** | 21.1 | 20.8 | 18.5 | 18.3 | 18.1 | 20.1 | 20.0 | 19.9 | 18.3 | 18.5 | 18.5 |
| | | 1 | 49 | 21.2 | 21.1 | 20.8 | 18.5 | 18.4 | 18.2 | 20.1 | 20.1 | 19.9 | 18.3 | 18.4 | **18.6** |
| | | 25 | 0 | 21.1 | 21.1 | 20.8 | 18.5 | 18.3 | 18.1 | 20.0 | 19.9 | 20.0 | 18.3 | 18.4 | 18.3 |
| | | 25 | 12 | 21.2 | 21.1 | 20.9 | 18.5 | 18.4 | 18.1 | 20.0 | 19.9 | 20.1 | 18.4 | 18.5 | 18.4 |
| | | 25 | 24 | 21.2 | 21.1 | 20.9 | 18.5 | 18.4 | 18.2 | 20.0 | 20.0 | 20.1 | 18.3 | 18.5 | 18.5 |
| | | 50 | 0 | 21.2 | 21.1 | 20.8 | **18.5** | 18.4 | 18.1 | 20.0 | 19.9 | **20.1** | 18.3 | 18.5 | 18.3 |



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## OUTPUT POWER FOR LTE BAND 25 (10.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Conducted Average (dBm) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ANT 1 | | | ANT 2 | | | ANT 3 | | | ANT 4 | | |
| | | | | 26090 | 26365 | 26640 | 26090 | 26365 | 26640 | 26090 | 26365 | 26640 | 26090 | 26365 | 26640 |
| | | | | 1855.0 | 1882.5 | 1910.0 | 1855.0 | 1882.5 | 1910.0 | 1855.0 | 1882.5 | 1910.0 | 1855.0 | 1882.5 | 1910.0 |
| 10.0 | QPSK | 1 | 0 | 25.4 | 25.4 | 25.4 | 22.8 | 22.7 | 22.9 | 24.5 | 24.7 | 25.0 | 22.6 | 22.7 | 22.8 |
| | | 1 | 24 | **25.7** | 25.6 | 25.4 | **23.1** | 22.9 | 22.8 | 24.8 | 24.9 | 25.0 | 22.8 | 22.9 | 22.9 |
| | | 1 | 49 | 25.4 | 25.4 | 25.3 | 22.8 | 22.7 | 22.7 | 24.6 | 24.8 | **25.0** | 22.6 | 22.7 | **23.0** |
| | | 25 | 0 | 24.6 | 24.6 | 24.4 | 22.0 | 21.8 | 21.7 | 23.8 | 23.9 | 24.0 | 21.8 | 21.9 | 21.8 |
| | | 25 | 12 | 24.7 | 24.7 | 24.4 | 22.1 | 22.0 | 21.8 | 23.9 | 24.0 | 24.2 | 21.9 | 22.0 | 21.9 |
| | | 25 | 24 | 24.6 | 24.6 | 24.4 | 22.1 | 22.0 | 21.8 | 23.8 | 24.0 | 24.1 | 21.8 | 21.9 | 21.9 |
| | | 50 | 0 | 24.7 | 24.6 | 24.4 | 22.1 | 21.9 | 21.7 | 23.8 | 24.0 | 24.1 | 21.8 | 22.0 | 21.9 |
| | 16QAM | 1 | 0 | 24.3 | 24.4 | 24.4 | 21.7 | 21.6 | 21.9 | 23.4 | 23.9 | 23.8 | 21.7 | 21.6 | 21.9 |
| | | 1 | 24 | 24.6 | **24.6** | 24.3 | **22.0** | 21.8 | 21.8 | 23.5 | **24.1** | 23.9 | 21.8 | 21.9 | 21.9 |
| | | 1 | 49 | 24.4 | 24.4 | 24.3 | 21.6 | 21.7 | 21.8 | 23.4 | 24.0 | 24.0 | 21.5 | 21.8 | **22.0** |
| | | 25 | 0 | 23.7 | 23.6 | 23.4 | 21.0 | 20.9 | 20.8 | 22.6 | 22.7 | 22.9 | 20.8 | 20.9 | 20.8 |
| | | 25 | 12 | 23.8 | 23.7 | 23.4 | 21.1 | 21.0 | 20.8 | 22.7 | 22.9 | 23.0 | 21.0 | 21.1 | 20.9 |
| | | 25 | 24 | 23.7 | 23.6 | 23.4 | 21.1 | 21.0 | 20.8 | 22.7 | 22.9 | 23.0 | 20.9 | 21.0 | 21.0 |
| | | 50 | 0 | 23.6 | 23.6 | 23.4 | 21.1 | 20.9 | 20.7 | 22.6 | 22.8 | 22.9 | 20.9 | 21.0 | 20.8 |
| | 64QAM | 1 | 0 | 23.3 | 23.4 | **23.6** | 20.9 | 20.5 | 20.9 | 22.5 | 22.4 | 22.3 | 20.7 | 20.6 | 20.8 |
| | | 1 | 24 | 23.6 | 23.5 | 23.6 | **21.2** | 20.8 | 20.8 | 22.8 | **22.8** | 22.3 | 21.0 | 20.9 | 20.8 |
| | | 1 | 49 | 23.4 | 23.4 | 23.6 | 21.1 | 20.7 | 20.8 | 22.4 | 22.6 | 22.4 | 20.8 | 20.7 | **21.0** |
| | | 25 | 0 | 22.7 | 22.6 | 22.3 | 20.0 | 19.9 | 19.8 | 21.5 | 21.4 | 21.2 | 19.8 | 19.9 | 19.9 |
| | | 25 | 12 | 22.8 | 22.7 | 22.5 | 20.2 | 20.1 | 19.8 | 21.7 | 21.6 | 21.4 | 19.9 | 20.1 | 19.9 |
| | | 25 | 24 | 22.7 | 22.6 | 22.4 | 20.1 | 20.0 | 19.8 | 21.6 | 21.6 | 21.3 | 19.9 | 20.0 | 20.0 |
| | | 50 | 0 | 22.6 | 22.6 | 22.4 | 20.1 | 19.9 | 19.7 | 21.5 | 21.5 | 21.2 | 19.9 | 20.0 | 19.9 |
| | 256QAM | 1 | 0 | 20.9 | 20.9 | 20.6 | 18.2 | 18.0 | 17.9 | 19.5 | 19.7 | 20.2 | 18.0 | 18.1 | 18.1 |
| | | 1 | 24 | 21.0 | 21.1 | 20.6 | 18.5 | 18.3 | 18.2 | 19.8 | 20.0 | **20.5** | 18.2 | 18.4 | 18.3 |
| | | 1 | 49 | 21.0 | 20.8 | 20.6 | 18.1 | 18.1 | 18.1 | 19.5 | 19.8 | 20.4 | 17.9 | 18.1 | 18.2 |
| | | 25 | 0 | 21.1 | 21.0 | 20.8 | 18.4 | 18.2 | 18.1 | 19.9 | 19.9 | 20.0 | 18.2 | 18.3 | 18.2 |
| | | 25 | 12 | **21.2** | 21.1 | 20.9 | **18.5** | 18.4 | 18.1 | 20.0 | 20.0 | 20.1 | 18.3 | **18.5** | 18.3 |
| | | 25 | 24 | 21.1 | 21.1 | 20.8 | 18.5 | 18.4 | 18.1 | 20.0 | 20.0 | 20.1 | 18.2 | 18.4 | 18.4 |
| | | 50 | 0 | 21.1 | 21.1 | 20.8 | 18.4 | 18.3 | 18.1 | 19.9 | 19.9 | 20.0 | 18.2 | 18.4 | 18.3 |




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## 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 | 25.5 | 25.6 | 25.5 | 22.8 | 23.0 | 23.0 | 24.5 | 24.9 | 25.0 | 22.6 | 22.9 | 22.9 |
| | | 1 | 37 | 25.6 | 25.7 | 25.4 | **23.1** | 23.0 | 22.9 | 24.7 | 24.9 | 25.0 | 22.8 | 22.9 | 22.8 |
| | | 1 | 74 | 25.5 | **25.7** | 25.5 | 22.9 | 23.1 | 22.8 | 24.7 | 25.0 | **25.0** | 22.6 | **23.0** | 22.9 |
| | | 36 | 0 | 24.7 | 24.6 | 24.4 | 22.0 | 21.8 | 21.8 | 23.6 | 23.8 | 23.9 | 21.7 | 21.8 | 21.7 |
| | | 36 | 16 | 24.8 | 24.7 | 24.4 | 22.1 | 21.9 | 21.8 | 23.8 | 24.0 | 24.0 | 21.8 | 21.9 | 21.8 |
| | | 36 | 35 | 24.7 | 24.7 | 24.5 | 22.1 | 22.0 | 21.8 | 23.8 | 24.0 | 24.1 | 21.8 | 22.0 | 21.9 |
| | | 75 | 0 | 24.7 | 24.7 | 24.4 | 22.0 | 21.9 | 21.8 | 23.7 | 23.9 | 24.0 | 21.7 | 21.9 | 21.9 |
| | 16QAM | 1 | 0 | 24.4 | 24.6 | 24.4 | 21.8 | 21.8 | 21.9 | 23.4 | 23.8 | 23.5 | 21.6 | 21.7 | 21.8 |
| | | 1 | 37 | 24.6 | **24.7** | 24.5 | 22.0 | 22.0 | 22.0 | 23.6 | 23.8 | 23.4 | 21.7 | 22.0 | 21.9 |
| | | 1 | 74 | 24.5 | 24.7 | 24.5 | 21.8 | **22.3** | 21.8 | 23.6 | **24.0** | 23.5 | 21.6 | **22.2** | 21.9 |
| | | 36 | 0 | 23.7 | 23.6 | 23.4 | 21.0 | 20.8 | 20.8 | 22.2 | 22.3 | 22.4 | 20.7 | 20.8 | 20.8 |
| | | 36 | 16 | 23.8 | 23.7 | 23.5 | 21.2 | 20.9 | 20.9 | 22.4 | 22.5 | 22.5 | 20.8 | 20.9 | 20.8 |
| | | 36 | 35 | 23.7 | 23.7 | 23.5 | 21.1 | 21.0 | 20.8 | 22.4 | 22.5 | 22.6 | 20.8 | 21.0 | 20.9 |
| | | 75 | 0 | 23.7 | 23.6 | 23.4 | 21.1 | 20.9 | 20.8 | 22.3 | 22.4 | 22.3 | 20.8 | 20.9 | 20.9 |
| | 64QAM | 1 | 0 | 23.6 | 23.7 | 23.5 | 21.0 | 20.9 | 21.0 | 22.9 | 22.8 | 22.6 | 20.7 | 20.9 | 20.8 |
| | | 1 | 37 | **23.8** | 23.8 | 23.5 | **21.2** | 21.1 | 20.8 | **23.2** | 22.9 | 22.5 | 21.0 | 20.9 | 20.9 |
| | | 1 | 74 | 23.6 | 23.7 | 23.6 | 21.0 | 21.2 | 20.8 | 23.0 | 22.9 | 22.5 | 20.8 | **21.0** | 20.8 |
| | | 36 | 0 | 22.7 | 22.6 | 22.4 | 20.0 | 19.8 | 19.9 | 21.6 | 21.5 | 21.4 | 19.7 | 19.9 | 19.8 |
| | | 36 | 16 | 22.8 | 22.7 | 22.5 | 20.2 | 20.0 | 19.9 | 21.7 | 21.6 | 21.4 | 19.9 | 20.0 | 19.9 |
| | | 36 | 35 | 22.7 | 22.7 | 22.5 | 20.1 | 20.1 | 19.9 | 21.6 | 21.7 | 21.5 | 19.9 | 20.0 | 19.9 |
| | | 75 | 0 | 22.7 | 22.7 | 22.4 | 20.1 | 19.9 | 19.8 | 21.7 | 21.5 | 21.3 | 19.8 | 19.9 | 19.9 |
| | 256QAM | 1 | 0 | 20.8 | 20.8 | 20.7 | 18.0 | 18.1 | 18.1 | 19.5 | 19.9 | 20.2 | 18.0 | 18.1 | 18.1 |
| | | 1 | 37 | 21.1 | 21.1 | 20.9 | 18.4 | 18.4 | 18.3 | 19.8 | 20.2 | 20.5 | 18.2 | **18.5** | 18.4 |
| | | 1 | 74 | 20.9 | 21.0 | 20.8 | 18.3 | 18.4 | 18.0 | 19.7 | 20.1 | **20.5** | 18.1 | 18.3 | 18.4 |
| | | 36 | 0 | 21.1 | 21.0 | 20.8 | 18.4 | 18.2 | 18.2 | 20.0 | 19.8 | 20.0 | 18.2 | 18.3 | 18.2 |
| | | 36 | 16 | **21.2** | 21.1 | 20.8 | **18.6** | 18.3 | 18.3 | 20.0 | 19.9 | 20.1 | 18.3 | 18.4 | 18.3 |
| | | 36 | 35 | 21.1 | 21.1 | 20.8 | 18.5 | 18.4 | 18.2 | 20.0 | 20.0 | 20.2 | 18.3 | 18.5 | 18.4 |
| | | 75 | 0 | 21.1 | 21.1 | 20.8 | 18.5 | 18.3 | 18.2 | 20.0 | 20.0 | 20.0 | 18.3 | 18.4 | 18.4 |



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## 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 | **25.7** | 25.6 | 25.6 | **23.1** | 22.8 | 23.0 | 24.7 | 24.8 | 24.9 | 22.8 | 22.8 | **23.0** |
| | | 1 | 49 | 25.7 | 25.7 | 25.5 | 23.0 | 22.9 | 22.8 | 24.7 | 24.9 | 24.9 | 22.8 | 23.0 | 22.9 |
| | | 1 | 99 | 25.7 | 25.6 | 25.4 | 22.8 | 22.9 | 22.6 | 24.8 | 24.9 | **25.0** | 22.8 | 22.9 | 22.9 |
| | | 50 | 0 | 24.8 | 24.7 | 24.5 | 22.0 | 21.8 | 21.9 | 23.7 | 23.8 | 23.9 | 21.8 | 21.9 | 21.9 |
| | | 50 | 24 | 24.7 | 24.7 | 24.5 | 22.0 | 21.9 | 21.9 | 23.8 | 23.9 | 24.0 | 21.8 | 22.0 | 21.9 |
| | | 50 | 49 | 24.7 | 24.7 | 24.5 | 21.9 | 21.9 | 21.8 | 23.8 | 23.9 | 24.0 | 21.8 | 22.0 | 21.9 |
| | | 100 | 0 | 24.6 | 24.6 | 24.4 | 21.9 | 21.7 | 21.8 | 23.7 | 23.8 | 23.9 | 21.8 | 21.9 | 21.8 |
| | 16QAM | 1 | 0 | **24.9** | 24.6 | 24.7 | **22.1** | 21.8 | 22.1 | 23.6 | 23.9 | 24.0 | 21.9 | 21.9 | **22.0** |
| | | 1 | 49 | 24.7 | 24.7 | 24.6 | 22.0 | 21.9 | 22.0 | 23.6 | 23.9 | 24.0 | 21.8 | 22.0 | 22.0 |
| | | 1 | 99 | 24.6 | 24.6 | 24.5 | 22.0 | 22.0 | 21.7 | 23.7 | **24.0** | 24.0 | 21.9 | 22.0 | 22.0 |
| | | 50 | 0 | 23.8 | 23.7 | 23.5 | 21.0 | 20.8 | 20.9 | 22.2 | 22.4 | 22.4 | 20.8 | 20.9 | 20.9 |
| | | 50 | 24 | 23.8 | 23.7 | 23.5 | 21.0 | 20.8 | 20.9 | 22.2 | 22.5 | 22.5 | 20.9 | 21.0 | 20.9 |
| | | 50 | 49 | 23.7 | 23.7 | 23.5 | 20.9 | 20.9 | 20.8 | 22.2 | 22.5 | 22.5 | 20.8 | 20.9 | 20.9 |
| | | 100 | 0 | 23.7 | 23.6 | 23.4 | 21.0 | 20.8 | 20.8 | 22.2 | 22.4 | 22.5 | 20.8 | 20.9 | 20.8 |
| | 64QAM | 1 | 0 | 23.7 | 23.6 | 23.6 | **21.0** | 20.9 | 21.0 | 22.8 | 22.8 | **23.2** | 20.8 | 20.8 | 21.0 |
| | | 1 | 49 | **23.7** | 23.7 | 23.6 | 20.9 | 20.9 | 20.9 | 22.8 | 22.9 | 23.0 | 20.8 | **21.1** | 21.0 |
| | | 1 | 99 | 23.6 | 23.7 | 23.5 | 20.9 | 21.0 | 20.7 | 22.7 | 23.0 | 22.9 | 20.8 | 20.9 | 21.1 |
| | | 50 | 0 | 22.8 | 22.7 | 22.5 | 20.0 | 19.9 | 19.9 | 21.7 | 21.6 | 21.5 | 19.8 | 20.0 | 19.9 |
| | | 50 | 24 | 22.8 | 22.7 | 22.5 | 20.1 | 19.9 | 19.9 | 21.7 | 21.6 | 21.5 | 19.9 | 20.1 | 19.9 |
| | | 50 | 49 | 22.7 | 22.7 | 22.5 | 20.0 | 20.0 | 19.8 | 21.6 | 21.7 | 21.4 | 19.8 | 20.0 | 19.9 |
| | | 100 | 0 | 22.7 | 22.6 | 22.4 | 20.0 | 19.8 | 19.8 | 21.6 | 21.5 | 21.4 | 19.8 | 19.9 | 19.8 |
| | 256QAM | 1 | 0 | 20.7 | 20.7 | 20.6 | 17.7 | 18.0 | 18.0 | 19.7 | 19.5 | 19.8 | 17.9 | 18.0 | 18.1 |
| | | 1 | 49 | 21.1 | **21.1** | 20.8 | 18.5 | 18.5 | 18.3 | 20.2 | 19.9 | **20.2** | 18.4 | **18.5** | 18.4 |
| | | 1 | 99 | 20.8 | 20.9 | 20.5 | 18.1 | 18.2 | 17.9 | 19.9 | 19.6 | 20.1 | 18.0 | 18.3 | 18.0 |
| | | 50 | 0 | 21.1 | 21.0 | 20.8 | 18.4 | 18.2 | 18.2 | 19.8 | 19.8 | 19.9 | 18.1 | 18.3 | 18.2 |
| | | 50 | 24 | 21.1 | 21.1 | 20.9 | **18.5** | 18.3 | 18.4 | 20.0 | 20.0 | 20.1 | 18.3 | 18.5 | 18.3 |
| | | 50 | 49 | 21.1 | 21.1 | 20.8 | 18.4 | 18.4 | 18.2 | 20.0 | 20.0 | 20.1 | 18.2 | 18.4 | 18.3 |
| | | 100 | 0 | 21.0 | 21.0 | 20.8 | 18.4 | 18.3 | 18.3 | 19.9 | 19.9 | 20.0 | 18.2 | 18.4 | 18.3 |




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## 7.11. LTE BAND 26 (Part 90S)

| Test Engineer ID: | 39004 | Test Date: | 5/7/2020 |
|---|---|---|---|

### 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 | 25.5 | 25.4 | 25.4 | 24.2 | 24.3 | 24.3 |
| | | 1 | 2 | 25.7 | 25.5 | 25.4 | 24.3 | 24.5 | **24.5** |
| | | 1 | 5 | 25.6 | 25.4 | 25.4 | 24.2 | 24.4 | 24.4 |
| | | 3 | 0 | 25.7 | 25.5 | 25.4 | 24.3 | 24.4 | 24.5 |
| | | 3 | 1 | **25.7** | 25.5 | 25.5 | 24.3 | 24.4 | 24.5 |
| | | 3 | 2 | 25.7 | 25.5 | 25.5 | 24.3 | 24.4 | 24.5 |
| | | 6 | 0 | 24.7 | 24.5 | 24.5 | 23.4 | 23.4 | 23.5 |
| | 16QAM | 1 | 0 | 25.0 | 24.9 | 24.6 | 23.3 | 23.5 | 23.8 |
| | | 1 | 2 | **25.1** | 25.0 | 24.6 | 23.5 | 23.7 | **23.9** |
| | | 1 | 5 | 25.0 | 24.9 | 24.6 | 23.4 | 23.6 | 23.9 |
| | | 3 | 0 | 24.8 | 24.8 | 24.7 | 23.6 | 23.5 | 23.7 |
| | | 3 | 1 | 24.9 | 24.8 | 24.8 | 23.7 | 23.6 | 23.7 |
| | | 3 | 2 | 24.9 | 24.8 | 24.8 | 23.7 | 23.6 | 23.7 |
| | | 6 | 0 | 23.6 | 23.5 | 23.7 | 22.6 | 22.6 | 22.4 |
| | 64QAM | 1 | 0 | 23.6 | 23.7 | 24.0 | 21.1 | 22.5 | 22.2 |
| | | 1 | 2 | 23.8 | 23.7 | **24.1** | 22.3 | **22.6** | 22.3 |
| | | 1 | 5 | 23.7 | 23.8 | 24.0 | 22.3 | 22.5 | 22.2 |
| | | 3 | 0 | 23.7 | 23.5 | 23.9 | 22.0 | 22.5 | 22.2 |
| | | 3 | 1 | 23.8 | 23.6 | 23.9 | 22.1 | 22.5 | 22.3 |
| | | 3 | 2 | 23.8 | 23.6 | 23.9 | 22.1 | 22.5 | 22.3 |
| | | 6 | 0 | 22.9 | 22.6 | 22.5 | 21.2 | 21.1 | 21.4 |
| | 256QAM | 1 | 0 | 20.4 | 20.1 | 20.2 | 19.4 | 19.2 | 19.3 |
| | | 1 | 2 | 20.6 | **20.6** | 20.6 | 19.4 | 19.2 | 19.4 |
| | | 1 | 5 | 20.5 | 20.5 | 20.4 | 19.4 | 19.2 | 19.3 |
| | | 3 | 0 | 20.3 | 20.4 | 20.4 | 19.4 | 19.4 | 19.3 |
| | | 3 | 1 | 20.4 | 20.4 | 20.4 | 19.4 | 19.4 | 19.4 |
| | | 3 | 2 | 20.4 | 20.4 | 20.4 | 19.4 | **19.5** | 19.3 |
| | | 6 | 0 | 20.3 | 20.3 | 20.3 | 19.4 | 19.3 | 19.4 |




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## 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 | 25.6 | 25.6 | 25.6 | 24.4 | 24.4 | 24.5 |
| | | 1 | 7 | 25.6 | 25.6 | 25.6 | 24.4 | 24.4 | 24.5 |
| | | 1 | 14 | **25.7** | 25.6 | 25.7 | 24.4 | **24.5** | 24.5 |
| | | 8 | 0 | 24.7 | 24.7 | 24.7 | 23.4 | 23.5 | 23.5 |
| | | 8 | 4 | 24.8 | 24.8 | 24.8 | 23.5 | 23.6 | 23.6 |
| | | 8 | 7 | 24.9 | 24.8 | 24.8 | 23.5 | 23.6 | 23.6 |
| | | 15 | 0 | 24.8 | 24.8 | 24.7 | 23.5 | 23.6 | 23.5 |
| | 16QAM | 1 | 0 | 24.8 | 24.8 | 24.8 | 23.5 | 23.4 | 23.9 |
| | | 1 | 7 | 24.8 | 24.8 | 24.8 | 23.5 | 23.5 | 23.9 |
| | | 1 | 14 | 24.8 | 24.8 | **24.9** | 23.5 | 23.5 | **24.0** |
| | | 8 | 0 | 23.8 | 23.8 | 23.8 | 22.5 | 22.6 | 22.6 |
| | | 8 | 4 | 23.9 | 23.9 | 23.9 | 22.6 | 22.7 | 22.6 |
| | | 8 | 7 | 23.9 | 23.9 | 23.9 | 22.6 | 22.7 | 22.7 |
| | | 15 | 0 | 23.8 | 23.7 | 23.8 | 22.5 | 22.6 | 22.6 |
| | 64QAM | 1 | 0 | 23.9 | 24.0 | 23.9 | 22.4 | 22.5 | 22.3 |
| | | 1 | 7 | 24.0 | 23.9 | 23.9 | 22.3 | 22.5 | 22.3 |
| | | 1 | 14 | 24.0 | **24.0** | 24.0 | 22.4 | **22.6** | 22.3 |
| | | 8 | 0 | 22.7 | 22.6 | 22.6 | 21.2 | 21.3 | 21.2 |
| | | 8 | 4 | 22.8 | 22.8 | 22.8 | 21.2 | 21.3 | 21.3 |
| | | 8 | 7 | 22.9 | 22.8 | 22.8 | 21.2 | 21.4 | 21.3 |
| | | 15 | 0 | 22.7 | 22.8 | 22.7 | 21.3 | 21.2 | 21.3 |
| | 256QAM | 1 | 0 | 20.4 | 20.8 | 20.2 | 19.7 | 19.7 | 19.7 |
| | | 1 | 7 | 20.5 | 20.9 | 20.2 | 19.9 | 19.7 | 19.8 |
| | | 1 | 14 | 20.5 | **20.9** | 20.2 | 19.7 | 19.8 | 19.8 |
| | | 8 | 0 | 20.6 | 20.5 | 20.4 | 19.9 | 19.8 | 19.7 |
| | | 8 | 4 | 20.6 | 20.6 | 20.5 | **19.9** | 19.8 | 19.9 |
| | | 8 | 7 | 20.6 | 20.6 | 20.5 | 19.8 | 19.8 | 19.8 |
| | | 15 | 0 | 20.6 | 20.5 | 20.6 | 19.9 | 19.8 | 19.8 |




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## 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 | 25.6 | 24.3 | 24.5 | 24.3 |
| | | 1 | 12 | 25.5 | 25.6 | 25.6 | 24.4 | 24.5 | 24.4 |
| | | 1 | 24 | 25.5 | 25.7 | **25.7** | 24.4 | **24.5** | 24.4 |
| | | 12 | 0 | 24.5 | 24.6 | 24.6 | 23.4 | 23.4 | 23.4 |
| | | 12 | 6 | 24.7 | 24.7 | 24.7 | 23.5 | 23.5 | 23.5 |
| | | 12 | 11 | 24.6 | 24.6 | 24.7 | 23.5 | 23.4 | 23.4 |
| | | 25 | 0 | 24.7 | 24.6 | 24.7 | 23.4 | 23.4 | 23.4 |
| | 16QAM | 1 | 0 | 24.6 | 24.8 | 24.8 | 23.6 | 23.6 | 24.0 |
| | | 1 | 12 | 24.8 | 24.9 | 24.9 | 23.6 | 23.6 | 24.0 |
| | | 1 | 24 | 24.9 | 24.9 | **24.9** | 23.6 | 23.7 | **24.1** |
| | | 12 | 0 | 23.6 | 23.7 | 23.7 | 22.4 | 22.4 | 22.5 |
| | | 12 | 6 | 23.8 | 23.8 | 23.8 | 22.5 | 22.5 | 22.6 |
| | | 12 | 11 | 23.7 | 23.8 | 23.8 | 22.5 | 22.5 | 22.6 |
| | | 25 | 0 | 23.6 | 23.6 | 23.6 | 22.4 | 22.5 | 22.5 |
| | 64QAM | 1 | 0 | 23.8 | 23.9 | 23.9 | 22.4 | 22.1 | 22.4 |
| | | 1 | 12 | 24.0 | 24.0 | 24.0 | 22.4 | 22.1 | 22.5 |
| | | 1 | 24 | 23.9 | 24.0 | **24.0** | 22.4 | 22.1 | **22.5** |
| | | 12 | 0 | 22.6 | 22.7 | 22.7 | 21.2 | 21.2 | 21.1 |
| | | 12 | 6 | 22.8 | 22.7 | 22.8 | 21.3 | 21.3 | 21.2 |
| | | 12 | 11 | 22.7 | 22.7 | 22.8 | 21.3 | 21.3 | 21.2 |
| | | 25 | 0 | 22.7 | 22.7 | 22.7 | 21.2 | 21.2 | 21.1 |
| | 256QAM | 1 | 0 | 20.4 | 20.1 | 20.4 | 19.7 | 19.7 | 19.6 |
| | | 1 | 12 | 20.5 | 20.2 | **20.6** | 19.8 | 19.7 | 19.8 |
| | | 1 | 24 | 20.5 | 20.2 | 20.6 | 19.8 | 19.7 | 19.8 |
| | | 12 | 0 | 20.4 | 20.4 | 20.4 | 19.8 | 19.8 | 19.8 |
| | | 12 | 6 | 20.5 | 20.5 | 20.5 | **19.9** | 19.9 | 19.8 |
| | | 12 | 11 | 20.5 | 20.4 | 20.5 | 19.9 | 19.8 | 19.9 |
| | | 25 | 0 | 20.5 | 20.5 | 20.5 | 19.9 | 19.8 | 19.8 |



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## 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 | | 25.6 | | | 24.4 | |
| | | 25 | 0 | | 24.7 | | | 23.4 | |
| | | 25 | 12 | | 24.8 | | | 23.6 | |
| | | 25 | 24 | | 24.8 | | | 23.6 | |
| | | 50 | 0 | | 24.8 | | | 23.5 | |
| | 16QAM | 1 | 0 | | **24.9** | | | **23.7** | |
| | | 1 | 24 | | 24.9 | | | 23.6 | |
| | | 1 | 49 | | 24.9 | | | 23.6 | |
| | | 25 | 0 | | 23.8 | | | 22.6 | |
| | | 25 | 12 | | 24.0 | | | 22.7 | |
| | | 25 | 24 | | 23.9 | | | 22.7 | |
| | | 50 | 0 | | 23.9 | | | 22.6 | |
| | 64QAM | 1 | 0 | | **24.0** | | | 22.5 | |
| | | 1 | 24 | | 24.0 | | | **22.6** | |
| | | 1 | 49 | | 24.0 | | | 22.5 | |
| | | 25 | 0 | | 22.8 | | | 21.3 | |
| | | 25 | 12 | | 23.0 | | | 21.5 | |
| | | 25 | 24 | | 22.9 | | | 21.4 | |
| | | 50 | 0 | | 22.8 | | | 21.3 | |
| | 256QAM | 1 | 0 | | 20.1 | | | 19.6 | |
| | | 1 | 24 | | 20.5 | | | **19.9** | |
| | | 1 | 49 | | 20.3 | | | 19.6 | |
| | | 25 | 0 | | 20.4 | | | 19.7 | |
| | | 25 | 12 | | **20.6** | | | 19.8 | |
| | | 25 | 24 | | 20.5 | | | 19.7 | |
| | | 50 | 0 | | 20.4 | | | 19.7 | |




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## 7.12. LTE BAND 30(NS1)

| Test Engineer ID: | 39006 | Test Date: | 7/22/2020 |
|---|---|---|---|

### 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 | 25.5 | 22.6 | 22.5 | 22.7 | 23.6 | 23.6 | 23.2 | 22.4 | 22.4 | 22.3 |
| | | 1 | 12 | **25.7** | 25.6 | 25.3 | 22.7 | 22.8 | **22.8** | **23.7** | 23.7 | 22.2 | 22.4 | 22.4 | **22.5** |
| | | 1 | 24 | 25.6 | 25.3 | 24.4 | 22.7 | 22.7 | 22.7 | 23.6 | 22.2 | 21.8 | 22.4 | 22.4 | 22.4 |
| | | 12 | 0 | 24.7 | 24.6 | 24.6 | 21.7 | 21.7 | 21.8 | 22.7 | 22.8 | 22.7 | 21.4 | 21.4 | 21.4 |
| | | 12 | 6 | 24.7 | 24.7 | 24.7 | 21.8 | 21.8 | 21.8 | 22.8 | 22.8 | 22.5 | 21.5 | 21.5 | 21.5 |
| | | 12 | 11 | 24.7 | 24.6 | 24.7 | 21.8 | 21.8 | 21.8 | 22.8 | 22.8 | 22.2 | 21.5 | 21.5 | 21.5 |
| | | 25 | 0 | 24.7 | 24.6 | 24.7 | 21.8 | 21.8 | 21.8 | 22.8 | 22.8 | 22.3 | 21.5 | 21.5 | 21.5 |
| | 16QAM | 1 | 0 | 24.5 | 24.5 | **24.6** | 21.6 | 21.7 | 21.7 | 22.8 | 22.6 | 22.1 | 21.2 | 21.3 | 21.4 |
| | | 1 | 12 | 24.6 | 24.5 | 23.8 | 21.7 | **21.9** | 21.9 | **22.9** | 22.6 | 20.7 | 21.3 | 21.3 | **21.6** |
| | | 1 | 24 | 24.6 | 23.9 | 23.2 | 21.7 | 21.9 | 21.8 | 22.7 | 20.8 | 20.6 | 21.3 | 21.4 | 20.9 |
| | | 12 | 0 | 23.7 | 23.7 | 23.6 | 20.8 | 20.8 | 20.8 | 21.8 | 21.8 | 21.8 | 20.5 | 20.5 | 20.4 |
| | | 12 | 6 | 23.7 | 23.7 | 23.7 | 20.9 | 20.9 | 20.9 | 21.8 | 21.9 | 21.9 | 20.5 | 20.5 | 20.5 |
| | | 12 | 11 | 23.7 | 23.6 | 23.7 | 20.8 | 20.9 | 20.9 | 21.8 | 21.8 | 21.8 | 20.5 | 20.5 | 20.5 |
| | | 25 | 0 | 23.7 | 23.6 | 23.7 | 20.8 | 20.8 | 20.8 | 21.8 | 21.8 | 21.8 | 20.5 | 20.5 | 20.5 |
| | 64QAM | 1 | 0 | 23.3 | 23.4 | 23.3 | 20.7 | 20.8 | 20.8 | 21.3 | 21.1 | 20.8 | 19.6 | 20.3 | 20.4 |
| | | 1 | 12 | 23.7 | **23.7** | 22.2 | 20.8 | 20.9 | 20.9 | **21.4** | 21.3 | 19.5 | **20.6** | 20.5 | 20.0 |
| | | 1 | 24 | 23.7 | 22.4 | 21.9 | 20.9 | **20.9** | 20.9 | 21.3 | 19.8 | 19.5 | 20.5 | 20.1 | 19.4 |
| | | 12 | 0 | 22.6 | 22.6 | 22.6 | 19.8 | 19.8 | 19.9 | 20.7 | 20.8 | 20.5 | 19.2 | 19.1 | 19.4 |
| | | 12 | 6 | 22.7 | 22.7 | 22.7 | 19.8 | 19.9 | 19.9 | 20.8 | 20.9 | 20.4 | 19.2 | 19.4 | 19.6 |
| | | 12 | 11 | 22.7 | 22.6 | 22.6 | 19.9 | 19.9 | 19.9 | 20.9 | 20.8 | 20.2 | 19.3 | 19.5 | 19.6 |
| | | 25 | 0 | 22.7 | 22.7 | 22.6 | 19.8 | 19.9 | 19.9 | 20.7 | 20.7 | 20.3 | 19.1 | 19.4 | 19.5 |
| | 256QAM | 1 | 0 | 20.6 | 20.5 | 20.5 | 17.7 | 17.7 | 17.8 | 18.7 | 18.7 | 18.6 | 17.4 | 17.4 | 17.4 |
| | | 1 | 12 | 20.5 | 20.6 | **20.8** | 17.9 | 17.8 | 17.9 | 18.9 | 18.8 | 18.9 | 17.4 | 17.5 | 17.5 |
| | | 1 | 24 | 20.6 | 20.5 | 20.7 | 17.8 | 17.8 | 17.8 | 18.8 | 18.8 | 18.7 | 17.4 | 17.5 | **17.6** |
| | | 12 | 0 | 20.6 | 20.6 | 20.6 | 17.8 | 17.8 | 17.9 | 18.8 | 18.8 | 18.8 | 17.5 | 17.5 | 17.4 |
| | | 12 | 6 | 20.7 | 20.7 | 20.7 | 17.9 | 17.9 | **18.0** | 18.8 | 18.8 | **18.9** | 17.5 | 17.6 | 17.6 |
| | | 12 | 11 | 20.7 | 20.6 | 20.6 | 17.9 | 17.9 | 17.9 | 18.8 | 18.8 | 18.9 | 17.6 | 17.6 | 17.6 |
| | | 25 | 0 | 20.6 | 20.6 | 20.6 | 17.9 | 17.9 | 17.9 | 18.8 | 18.8 | 18.8 | 17.5 | 17.5 | 17.6 |




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## 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 | | | 22.7 | | | 23.6 | | | 22.4 | |
| | | 1 | 24 | | **25.7** | | | 22.7 | | | **23.7** | | | 22.4 | |
| | | 1 | 49 | | 24.7 | | | **22.8** | | | 23.5 | | | **22.5** | |
| | | 25 | 0 | | 24.7 | | | 21.8 | | | 22.8 | | | 21.4 | |
| | | 25 | 12 | | 24.7 | | | 21.9 | | | 22.8 | | | 21.5 | |
| | | 25 | 24 | | 24.7 | | | 21.8 | | | 22.8 | | | 21.4 | |
| | | 50 | 0 | | 24.7 | | | 21.8 | | | 22.8 | | | 21.4 | |
| | 16QAM | 1 | 0 | | **24.7** | | | 21.8 | | | 22.7 | | | 21.5 | |
| | | 1 | 24 | | 24.7 | | | 21.8 | | | 22.8 | | | 21.4 | |
| | | 1 | 49 | | 24.4 | | | **21.9** | | | **22.8** | | | **21.5** | |
| | | 25 | 0 | | 23.7 | | | 20.8 | | | 21.8 | | | 20.4 | |
| | | 25 | 12 | | 23.7 | | | 20.9 | | | 21.8 | | | 20.5 | |
| | | 25 | 24 | | 23.6 | | | 20.9 | | | 21.8 | | | 20.4 | |
| | | 50 | 0 | | 23.7 | | | 20.8 | | | 21.7 | | | 20.4 | |
| | 64QAM | 1 | 0 | | 23.8 | | | 20.9 | | | 21.7 | | | 20.3 | |
| | | 1 | 24 | | **23.8** | | | 20.8 | | | **21.8** | | | 20.4 | |
| | | 1 | 49 | | 22.5 | | | **20.9** | | | 21.4 | | | **20.5** | |
| | | 25 | 0 | | 22.6 | | | 19.8 | | | 20.7 | | | 19.4 | |
| | | 25 | 12 | | 22.7 | | | 19.9 | | | 20.8 | | | 19.5 | |
| | | 25 | 24 | | 22.7 | | | 19.8 | | | 20.8 | | | 19.5 | |
| | | 50 | 0 | | 22.6 | | | 19.9 | | | 20.7 | | | 19.5 | |
| | 256QAM | 1 | 0 | | 20.4 | | | 17.6 | | | 18.5 | | | 17.2 | |
| | | 1 | 24 | | 20.5 | | | **17.9** | | | **18.8** | | | **17.5** | |
| | | 1 | 49 | | 20.2 | | | 17.6 | | | 18.6 | | | 17.3 | |
| | | 25 | 0 | | 20.6 | | | 17.8 | | | 18.7 | | | 17.4 | |
| | | 25 | 12 | | **20.7** | | | 17.9 | | | 18.8 | | | 17.5 | |
| | | 25 | 24 | | 20.6 | | | 17.9 | | | 18.8 | | | 17.5 | |
| | | 50 | 0 | | 20.6 | | | 17.9 | | | 18.7 | | | 17.4 | |



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## 7.13. LTE BAND 41 (NS04)

| Test Engineer ID: | 39004 | Test Date: | 7/22/2020 |
|---|---|---|---|

### 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 | 27.3 | 27.2 | 21.9 | 24.7 | 24.5 | 22.0 | 25.8 | 25.9 | 21.2 | 24.5 | 24.3 |
| | | 1 | 12 | 27.3 | 27.2 | 27.2 | 24.7 | 24.7 | 24.5 | 25.2 | 25.9 | **26.0** | 24.3 | 24.4 | 24.4 |
| | | 1 | 24 | **27.7** | 27.3 | 27.1 | **24.8** | 24.7 | 24.5 | 25.3 | 25.8 | 25.9 | 24.5 | **24.5** | 24.3 |
| | | 12 | 0 | 23.6 | 26.4 | 26.3 | 20.9 | 23.8 | 23.6 | 21.1 | 24.9 | 25.0 | 20.3 | 23.5 | 23.4 |
| | | 12 | 6 | 23.6 | 26.4 | 26.2 | 20.8 | 23.8 | 23.6 | 21.1 | 24.9 | 25.0 | 20.5 | 23.5 | 23.4 |
| | | 12 | 11 | 26.6 | 26.4 | 26.2 | 23.9 | 23.8 | 23.6 | 24.2 | 24.9 | 24.9 | 23.5 | 23.5 | 23.3 |
| | | 25 | 0 | 23.5 | 26.4 | 26.2 | 20.9 | 23.8 | 23.5 | 21.1 | 24.9 | 25.0 | 20.4 | 23.5 | 23.3 |
| | 16QAM | 1 | 0 | 23.7 | 26.6 | 26.5 | 21.2 | 24.0 | 23.9 | 21.2 | **25.3** | 25.3 | 20.4 | 23.9 | 23.7 |
| | | 1 | 12 | 26.4 | 26.6 | 26.5 | 24.1 | 24.0 | 24.0 | 24.5 | **25.3** | 25.2 | 23.6 | 23.9 | 23.7 |
| | | 1 | 24 | **26.6** | 26.6 | 26.6 | 24.1 | **24.1** | 23.9 | 24.6 | 25.3 | 25.3 | 23.8 | **23.9** | 23.7 |
| | | 12 | 0 | 22.7 | 25.4 | 25.3 | 20.0 | 22.8 | 22.6 | 20.2 | 23.9 | 24.1 | 19.5 | 22.5 | 22.4 |
| | | 12 | 6 | 22.7 | 25.4 | 25.4 | 20.0 | 22.9 | 22.7 | 20.2 | 23.9 | 24.1 | 19.6 | 22.6 | 22.5 |
| | | 12 | 11 | 25.6 | 25.4 | 25.3 | 23.0 | 22.8 | 22.6 | 23.3 | 23.9 | 24.1 | 22.5 | 22.5 | 22.4 |
| | | 25 | 0 | 22.6 | 25.4 | 25.3 | 19.9 | 22.9 | 22.6 | 20.1 | 24.0 | 24.0 | 19.4 | 22.5 | 22.3 |
| | 64QAM | 1 | 0 | 22.8 | **26.6** | 26.1 | 19.9 | **23.4** | 22.9 | 20.0 | **24.7** | 24.3 | 19.3 | 23.1 | 22.7 |
| | | 1 | 12 | 25.9 | 26.6 | 26.1 | 22.7 | 23.4 | 22.9 | 23.1 | 24.6 | 24.3 | 21.5 | 23.1 | 22.7 |
| | | 1 | 24 | 25.9 | 26.6 | 26.1 | 22.7 | **23.4** | 22.9 | 23.3 | 24.6 | 24.3 | 21.9 | **23.1** | 22.6 |
| | | 12 | 0 | 22.0 | 25.2 | 24.7 | 19.0 | 21.9 | 21.6 | 19.2 | 23.0 | 22.9 | 18.4 | 21.6 | 21.3 |
| | | 12 | 6 | 22.1 | 25.2 | 24.8 | 18.9 | 22.0 | 21.6 | 19.2 | 23.0 | 23.0 | 18.5 | 21.6 | 21.3 |
| | | 12 | 11 | 25.2 | 25.1 | 24.7 | 21.7 | 22.0 | 21.5 | 22.3 | 23.0 | 22.9 | 20.7 | 21.7 | 21.3 |
| | | 25 | 0 | 22.2 | 25.0 | 24.6 | 18.9 | 21.8 | 21.4 | 19.2 | 22.9 | 22.8 | 18.4 | 21.5 | 21.3 |
| | 256QAM | 1 | 0 | 20.4 | 23.4 | 23.1 | 17.3 | 20.2 | 20.1 | 17.4 | 21.4 | 21.5 | 16.6 | **20.0** | 19.9 |
| | | 1 | 12 | 23.4 | 23.4 | 23.0 | **20.2** | 20.2 | 20.0 | 20.7 | **21.6** | 21.5 | 19.7 | 19.9 | 19.8 |
| | | 1 | 24 | **23.4** | 23.4 | 23.0 | 20.2 | 20.1 | 20.0 | 20.7 | 21.6 | 21.5 | 19.9 | 19.9 | 19.8 |
| | | 12 | 0 | 20.3 | 23.0 | 22.7 | 17.0 | 19.8 | 19.6 | 17.1 | 20.9 | 21.0 | 16.3 | 19.5 | 19.3 |
| | | 12 | 6 | 20.2 | 23.0 | 22.7 | 17.0 | 19.8 | 19.6 | 17.2 | 20.9 | 20.9 | 16.5 | 19.6 | 19.4 |
| | | 12 | 11 | 23.2 | 23.0 | 22.7 | 19.8 | 19.8 | 19.6 | 20.1 | 20.8 | 20.9 | 19.4 | 19.5 | 19.4 |
| | | 25 | 0 | 20.3 | 23.1 | 22.7 | 17.0 | 19.9 | 19.6 | 17.1 | 20.9 | 20.9 | 16.4 | 19.6 | 19.4 |




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## OUTPUT POWER FOR LTE BAND 41 (10.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Conducted Average (dBm) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ANT 1 | | | ANT 2 | | | ANT 3 | | | ANT 4 | | |
| | | | | 39700 | 40620 | 41540 | 39700 | 40620 | 41540 | 39700 | 40620 | 41540 | 39700 | 40620 | 41540 |
| | | | | 2501.0 | 2593.0 | 2685.0 | 2501.0 | 2593.0 | 2685.0 | 2501.0 | 2593.0 | 2685.0 | 2501.0 | 2593.0 | 2685.0 |
| 10.0 | QPSK | 1 | 0 | 22.6 | 27.3 | 27.2 | 19.8 | **24.8** | 24.5 | 19.8 | **26.0** | 25.8 | 19.1 | 24.2 | 24.0 |
| | | 1 | 24 | 27.6 | 27.6 | 27.5 | 24.8 | 24.8 | 24.5 | 25.3 | 25.9 | 25.8 | 24.4 | 24.3 | 24.0 |
| | | 1 | 49 | **27.7** | 27.3 | 27.2 | 24.8 | 24.7 | 24.5 | 25.6 | 26.0 | 25.9 | **24.5** | 24.3 | 24.0 |
| | | 25 | 0 | 23.9 | 26.6 | 26.5 | 20.9 | 23.8 | 23.5 | 21.3 | 25.0 | 25.0 | 20.3 | 23.4 | 23.1 |
| | | 25 | 12 | 26.8 | 26.7 | 26.5 | 23.9 | 23.8 | 23.6 | 24.4 | 25.0 | 25.0 | 23.4 | 23.4 | 23.2 |
| | | 25 | 24 | 25.8 | 26.6 | 26.4 | 22.9 | 23.8 | 23.6 | 23.5 | 25.0 | 25.0 | 22.5 | 23.3 | 23.2 |
| | | 50 | 0 | 23.8 | 26.6 | 26.5 | 20.8 | 23.8 | 23.5 | 21.3 | 25.0 | 24.9 | 20.3 | 23.4 | 23.1 |
| | 16QAM | 1 | 0 | 22.1 | 26.8 | 26.8 | 19.2 | **24.2** | 23.9 | 19.4 | **25.7** | 25.2 | 18.6 | 23.7 | 23.4 |
| | | 1 | 24 | 27.1 | 27.0 | 26.9 | 24.1 | 24.2 | 23.8 | 24.6 | 25.5 | 25.2 | 23.8 | 23.6 | 23.4 |
| | | 1 | 49 | **27.2** | 26.8 | 26.8 | 24.1 | 24.2 | 23.8 | 24.9 | 25.5 | 25.3 | **23.9** | 23.7 | 23.4 |
| | | 25 | 0 | 22.9 | 25.7 | 25.5 | 19.9 | 22.9 | 22.6 | 20.3 | 24.0 | 23.9 | 19.3 | 22.4 | 22.0 |
| | | 25 | 12 | 25.9 | 25.7 | 25.6 | 22.9 | 22.9 | 22.6 | 23.5 | 24.0 | 24.0 | 22.4 | 22.4 | 22.2 |
| | | 25 | 24 | 24.8 | 25.6 | 25.5 | 21.9 | 22.8 | 22.6 | 22.4 | 24.0 | 24.0 | 21.5 | 22.4 | 22.2 |
| | | 50 | 0 | 22.8 | 25.6 | 25.5 | 19.9 | 22.9 | 22.6 | 20.4 | 24.0 | 24.0 | 19.4 | 22.3 | 22.1 |
| | 64QAM | 1 | 0 | 21.7 | 25.9 | 26.5 | 18.3 | 23.3 | 22.4 | 18.7 | **24.2** | 23.3 | 17.4 | 22.3 | 22.8 |
| | | 1 | 24 | 25.9 | 26.2 | **26.7** | 23.1 | **23.4** | 22.4 | 23.9 | 24.1 | 23.7 | 21.9 | 22.2 | 22.8 |
| | | 1 | 49 | 26.4 | 26.0 | 26.5 | 22.8 | 23.1 | 22.4 | 24.1 | 24.2 | 23.8 | 22.1 | 22.2 | **22.8** |
| | | 25 | 0 | 22.4 | 25.4 | 25.0 | 18.9 | 21.8 | 21.6 | 19.2 | 22.9 | 23.0 | 18.2 | 21.4 | 21.1 |
| | | 25 | 12 | 24.9 | 25.4 | 25.1 | 21.6 | 21.8 | 21.6 | 22.4 | 22.9 | 23.1 | 20.6 | 21.5 | 21.1 |
| | | 25 | 24 | 24.4 | 25.3 | 25.1 | 20.8 | 21.8 | 21.6 | 21.5 | 22.9 | 23.1 | 20.4 | 21.4 | 21.1 |
| | | 50 | 0 | 22.3 | 25.3 | 25.0 | 18.9 | 21.9 | 21.6 | 19.3 | 23.0 | 22.9 | 18.3 | 21.3 | 21.1 |
| | 256QAM | 1 | 0 | 17.8 | **23.4** | 22.8 | 14.8 | **20.2** | 19.7 | 14.9 | **21.4** | 21.1 | 14.5 | 19.5 | 18.9 |
| | | 1 | 24 | 22.8 | 23.3 | 22.7 | 19.6 | 20.2 | 19.7 | 20.1 | 21.3 | 20.9 | 19.8 | 19.5 | 18.9 |
| | | 1 | 49 | 22.9 | 23.4 | 22.8 | 19.6 | 20.2 | 19.7 | 20.3 | 21.3 | 21.1 | **19.9** | 19.6 | 19.0 |
| | | 25 | 0 | 20.3 | 23.1 | 22.8 | 17.0 | 19.9 | 19.6 | 17.4 | 21.0 | 21.0 | 16.4 | 19.4 | 19.2 |
| | | 25 | 12 | 23.3 | 23.1 | 22.8 | 19.9 | 19.9 | 19.7 | 20.4 | 21.0 | 21.0 | 19.4 | 19.5 | 19.1 |
| | | 25 | 24 | 22.3 | 23.1 | 22.8 | 18.9 | 19.8 | 19.6 | 19.5 | 21.0 | 21.0 | 18.4 | 19.4 | 19.2 |
| | | 50 | 0 | 20.2 | 23.1 | 22.8 | 16.9 | 19.8 | 19.6 | 17.3 | 21.0 | 20.9 | 16.4 | 19.4 | 19.1 |



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## OUTPUT POWER FOR LTE BAND 41 (15.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Conducted Average (dBm) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ANT 1 | | | ANT 2 | | | ANT 3 | | | ANT 4 | | |
| | | | | 39725 | 40620 | 41515 | 39725 | 40620 | 41515 | 39725 | 40620 | 41515 | 39725 | 40620 | 41515 |
| | | | | 2503.5 | 2593.0 | 2682.5 | 2503.5 | 2593.0 | 2682.5 | 2503.5 | 2593.0 | 2682.5 | 2503.5 | 2593.0 | 2682.5 |
| 15.0 | QPSK | 1 | 0 | 22.6 | 27.2 | 27.1 | 19.8 | 24.8 | 24.5 | 19.9 | **26.0** | 25.9 | 19.1 | 24.4 | 24.1 |
| | | 1 | 37 | 27.7 | 27.4 | 27.2 | **24.8** | 24.7 | 24.5 | 25.5 | 25.8 | 25.8 | 24.5 | 24.3 | 24.1 |
| | | 1 | 74 | **27.7** | 27.3 | 27.3 | 24.7 | 24.8 | 24.6 | 25.8 | 26.0 | 26.0 | **24.5** | 24.4 | 24.1 |
| | | 36 | 0 | 22.7 | 26.5 | 26.3 | 20.0 | 23.9 | 23.6 | 20.4 | 25.0 | 25.0 | 19.5 | 23.4 | 23.2 |
| | | 36 | 16 | 26.8 | 26.6 | 26.5 | 23.9 | 23.8 | 23.5 | 24.5 | 25.0 | 24.9 | 23.5 | 23.4 | 23.1 |
| | | 36 | 35 | 23.7 | 26.6 | 26.5 | 20.8 | 23.8 | 23.6 | 21.6 | 24.9 | 25.0 | 20.6 | 23.4 | 23.2 |
| | | 75 | 0 | 22.7 | 26.5 | 26.4 | 19.9 | 23.9 | 23.6 | 20.6 | 25.0 | 24.9 | 19.5 | 23.4 | 23.2 |
| | 16QAM | 1 | 0 | 22.1 | 26.6 | 26.6 | 19.2 | **24.1** | 23.9 | 19.4 | **25.5** | 25.4 | 18.4 | 23.7 | 23.5 |
| | | 1 | 37 | 27.2 | 26.9 | 26.9 | 24.0 | 24.0 | 23.8 | 24.8 | 25.3 | 25.3 | 23.8 | 23.6 | 23.5 |
| | | 1 | 74 | **27.2** | 26.7 | 26.8 | 24.0 | 24.0 | 23.9 | 25.1 | 25.3 | 25.4 | **23.9** | 23.7 | 23.6 |
| | | 36 | 0 | 21.8 | 25.5 | 25.3 | 18.9 | 22.9 | 22.6 | 19.3 | 24.0 | 23.9 | 18.5 | 22.5 | 22.2 |
| | | 36 | 16 | 25.7 | 25.6 | 25.4 | 22.9 | 22.9 | 22.6 | 23.5 | 24.0 | 23.9 | 22.5 | 22.4 | 22.1 |
| | | 36 | 35 | 22.8 | 25.6 | 25.5 | 19.8 | 22.9 | 22.6 | 20.7 | 24.0 | 24.0 | 19.6 | 22.4 | 22.2 |
| | | 75 | 0 | 21.7 | 25.5 | 25.4 | 18.9 | 22.9 | 22.6 | 19.6 | 24.0 | 24.0 | 18.5 | 22.4 | 22.2 |
| | 64QAM | 1 | 0 | 21.5 | 25.9 | 26.3 | 18.4 | 23.0 | 22.4 | 18.6 | **24.4** | 23.0 | 17.7 | 22.6 | 22.0 |
| | | 1 | 37 | 26.2 | 26.1 | 26.6 | **23.0** | 23.0 | 22.3 | 24.0 | 24.1 | 23.6 | 22.4 | 22.6 | 22.1 |
| | | 1 | 74 | 26.6 | 26.0 | **26.6** | 22.6 | 23.0 | 22.5 | 24.0 | 24.2 | 23.9 | 22.2 | **22.7** | 22.1 |
| | | 36 | 0 | 21.4 | 25.3 | 24.9 | 18.1 | 21.8 | 21.7 | 18.4 | 23.0 | 23.0 | 17.6 | 21.4 | 21.2 |
| | | 36 | 16 | 25.3 | 25.4 | 25.1 | 21.6 | 21.9 | 21.7 | 22.6 | 23.0 | 23.0 | 20.8 | 21.4 | 21.3 |
| | | 36 | 35 | 22.4 | 25.4 | 25.1 | 18.9 | 21.8 | 21.7 | 19.7 | 22.9 | 23.1 | 18.7 | 21.4 | 21.3 |
| | | 75 | 0 | 21.3 | 25.2 | 25.0 | 18.0 | 21.9 | 21.6 | 18.6 | 23.0 | 23.0 | 17.6 | 21.4 | 21.2 |
| | 256QAM | 1 | 0 | 17.7 | 23.2 | 22.7 | 14.6 | 20.2 | 19.7 | 14.9 | **21.6** | 21.1 | 13.8 | 19.9 | 19.2 |
| | | 1 | 37 | 22.8 | 23.1 | 22.5 | 19.6 | 20.1 | 19.7 | 20.2 | 21.3 | 21.0 | 19.2 | 19.7 | 19.3 |
| | | 1 | 74 | 22.8 | **23.2** | 22.7 | 19.6 | **20.4** | 19.8 | 20.6 | 21.4 | 21.1 | 19.5 | **19.9** | 19.3 |
| | | 36 | 0 | 19.3 | 23.1 | 22.8 | 16.1 | 19.8 | 19.7 | 16.4 | 21.1 | 21.0 | 15.5 | 19.4 | 19.2 |
| | | 36 | 16 | 23.2 | 23.0 | 22.8 | 19.9 | 19.9 | 19.6 | 20.5 | 21.0 | 21.0 | 19.5 | 19.4 | 19.2 |
| | | 36 | 35 | 20.2 | 23.0 | 22.8 | 17.0 | 19.9 | 19.7 | 17.7 | 21.0 | 21.1 | 16.7 | 19.4 | 19.3 |
| | | 75 | 0 | 19.2 | 23.1 | 22.8 | 15.9 | 19.9 | 19.6 | 16.6 | 21.0 | 21.0 | 15.5 | 19.5 | 19.2 |




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## 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 | 22.4 | 27.0 | 26.7 | 19.7 | **24.8** | 24.4 | 19.7 | **26.0** | 25.2 | 19.1 | **24.5** | 24.1 |
| | | 1 | 49 | **27.7** | 27.3 | 27.1 | 24.5 | 24.6 | 24.3 | 25.2 | 25.7 | 25.5 | 24.5 | 24.3 | 24.1 |
| | | 1 | 99 | 27.6 | 27.0 | 27.1 | 24.6 | 24.7 | 24.4 | 25.6 | 25.6 | 25.7 | 24.4 | 24.4 | 24.1 |
| | | 50 | 0 | 22.5 | 26.2 | 26.1 | 19.8 | 23.7 | 23.5 | 20.2 | 24.8 | 24.6 | 19.5 | 23.4 | 23.1 |
| | | 50 | 24 | 26.5 | 26.4 | 26.2 | 23.8 | 23.7 | 23.5 | 24.4 | 24.7 | 24.6 | 23.6 | 23.4 | 23.2 |
| | | 50 | 49 | 23.5 | 26.3 | 26.3 | 20.7 | 23.7 | 23.5 | 21.5 | 24.7 | 24.7 | 20.6 | 23.4 | 23.2 |
| | | 100 | 0 | 22.5 | 26.3 | 26.2 | 19.8 | 23.8 | 23.5 | 20.4 | 24.7 | 24.6 | 19.6 | 23.4 | 23.2 |
| | 16QAM | 1 | 0 | 21.7 | 26.4 | 26.0 | 18.8 | **24.1** | 23.9 | 18.9 | **25.3** | 24.5 | 18.2 | **23.9** | 23.4 |
| | | 1 | 49 | **27.3** | 26.7 | 26.5 | 23.8 | 24.0 | 23.7 | 24.5 | 25.0 | 25.2 | 23.7 | 23.7 | 23.4 |
| | | 1 | 99 | 27.3 | 26.5 | 26.4 | 23.7 | 24.1 | 23.8 | 24.8 | 25.1 | 25.1 | 23.6 | 23.8 | 23.5 |
| | | 50 | 0 | 21.7 | 25.3 | 25.1 | 18.8 | 22.8 | 22.5 | 19.2 | 23.8 | 23.7 | 18.5 | 22.4 | 22.1 |
| | | 50 | 24 | 25.6 | 25.5 | 25.2 | 22.8 | 22.8 | 22.5 | 23.4 | 23.7 | 23.6 | 22.6 | 22.4 | 22.2 |
| | | 50 | 49 | 22.7 | 25.3 | 25.3 | 19.7 | 22.7 | 22.5 | 20.5 | 23.7 | 23.7 | 19.6 | 22.4 | 22.1 |
| | | 100 | 0 | 21.6 | 25.3 | 25.2 | 18.8 | 22.8 | 22.5 | 19.4 | 23.7 | 23.6 | 18.6 | 22.4 | 22.2 |
| | 64QAM | 1 | 0 | 21.4 | 26.2 | 25.6 | 18.0 | **23.1** | **23.1** | 18.0 | **24.2** | 22.8 | 17.4 | 22.7 | 22.7 |
| | | 1 | 49 | 26.5 | **26.6** | 26.0 | 22.4 | 22.9 | 23.0 | 23.4 | 23.9 | 23.8 | 22.0 | 22.6 | 22.7 |
| | | 1 | 99 | 26.5 | 26.4 | 26.0 | 22.0 | 22.8 | 23.0 | 23.4 | 24.0 | 24.2 | 21.8 | 22.8 | **22.8** |
| | | 50 | 0 | 21.3 | 25.0 | 24.7 | 17.8 | 21.8 | 21.5 | 18.2 | 22.8 | 22.2 | 17.6 | 21.5 | 21.2 |
| | | 50 | 24 | 25.2 | 25.2 | 24.9 | 21.2 | 21.8 | 21.6 | 22.4 | 22.7 | 22.7 | 20.7 | 21.4 | 21.2 |
| | | 50 | 49 | 22.2 | 25.1 | 24.9 | 18.8 | 21.7 | 21.5 | 19.6 | 22.7 | 22.8 | 18.7 | 21.4 | 21.2 |
| | | 100 | 0 | 21.2 | 25.0 | 24.7 | 17.8 | 21.8 | 21.5 | 18.4 | 22.7 | 22.7 | 17.6 | 21.5 | 21.2 |
| | 256QAM | 1 | 0 | 18.2 | **23.4** | 23.1 | 15.1 | **20.2** | 19.8 | 15.1 | **21.3** | 21.0 | 14.4 | 19.9 | 19.5 |
| | | 1 | 49 | 23.1 | 23.3 | 22.9 | 19.7 | 20.0 | 19.7 | 20.4 | 21.0 | 20.9 | 19.6 | 19.7 | 19.5 |
| | | 1 | 99 | 23.2 | 23.3 | 23.2 | 19.7 | 20.1 | 19.8 | 20.8 | 21.1 | 20.9 | 19.8 | **19.9** | 19.5 |
| | | 50 | 0 | 19.4 | 23.1 | 22.8 | 15.8 | 19.7 | 19.5 | 16.3 | 20.8 | 20.7 | 15.6 | 19.4 | 19.1 |
| | | 50 | 24 | 23.3 | 23.1 | 22.8 | 19.8 | 19.8 | 19.6 | 20.5 | 20.7 | 20.7 | 19.7 | 19.4 | 19.2 |
| | | 50 | 49 | 20.3 | 23.1 | 22.8 | 16.8 | 19.7 | 19.5 | 17.6 | 20.7 | 20.7 | 16.7 | 19.5 | 19.2 |
| | | 100 | 0 | 19.3 | 23.1 | 22.8 | 15.8 | 19.8 | 19.5 | 16.3 | 20.8 | 20.6 | 15.7 | 19.4 | 19.2 |



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## 7.14. 5G NR Band n41

| Test Engineer ID: | 19171 | Test Date: | 8/21/2020 |
|---|---|---|---|

### 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 | 21.4 | 24.0 | 23.7 | | | | 20.8 | 23.4 | 23.3 | | | |
| | | 1 | 1 | 21.7 | **26.7** | 26.0 | | | | 20.6 | 26.3 | **26.5** | | | |
| | | 25 | 12 | 23.7 | 26.2 | 26.2 | | | | 23.2 | 26.4 | 26.3 | | | |
| | | 50 | 0 | 23.6 | 26.2 | 26.3 | | | | 23.1 | 26.4 | 26.3 | | | |
| | QPSK | 1 | 0 | 21.7 | 23.8 | 23.9 | | | | 19.9 | 23.5 | 23.3 | | | |
| | | 1 | 1 | 21.3 | **26.7** | 26.5 | | | | 20.0 | 26.2 | 26.4 | | | |
| | | 25 | 12 | 23.0 | 26.5 | 26.5 | | | | 22.2 | **26.4** | 26.3 | | | |
| | | 50 | 0 | 23.0 | 26.6 | 26.6 | | | | 22.1 | 25.9 | 25.9 | | | |
| | 16QAM | 1 | 0 | 20.5 | 23.2 | 22.9 | | | | 19.5 | 22.9 | 23.0 | | | |
| | | 1 | 1 | 20.8 | 25.5 | 24.5 | | | | 19.9 | 25.6 | 25.6 | | | |
| | | 25 | 12 | 21.9 | **26.0** | 25.8 | | | | 20.2 | **25.8** | 25.8 | | | |
| | | 50 | 0 | 22.0 | 25.1 | 25.1 | | | | 21.7 | 24.9 | 24.8 | | | |
| | 64QAM | 1 | 0 | 20.6 | 23.9 | 24.0 | | | | 19.2 | 23.3 | 23.7 | | | |
| | | 1 | 1 | 20.7 | 25.1 | 24.3 | | | | 20.0 | 24.3 | 24.5 | | | |
| | | 25 | 12 | 22.6 | 25.0 | 25.2 | | | | 21.6 | 24.4 | 24.3 | | | |
| | | 50 | 0 | 22.6 | 25.0 | 25.1 | | | | 21.7 | 24.4 | 24.4 | | | |
| | 256QAM | 1 | 0 | 18.7 | 22.4 | 22.6 | | | | 17.1 | 21.8 | **21.9** | | | |
| | | 1 | 1 | 18.9 | **22.7** | 22.4 | | | | 17.5 | 21.6 | 21.8 | | | |
| | | 25 | 12 | 19.9 | 22.0 | 22.1 | | | | 19.1 | 21.5 | 21.3 | | | |
| | | 50 | 0 | 20.0 | 22.0 | 22.2 | | | | 19.1 | 21.3 | 21.4 | | | |

### 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 | 24.0 | 19.2 | 21.1 | 20.9 | 20.4 | 23.0 | 23.0 | 17.8 | 20.4 | 20.4 |
| | | 1 | 1 | 22.3 | **26.7** | 26.6 | 19.4 | **24.7** | 24.4 | 20.6 | **26.5** | 26.2 | 17.9 | **23.0** | 22.8 |
| | | 50 | 25 | 24.3 | 26.6 | 26.5 | 21.1 | 24.5 | 24.2 | 23.0 | 26.3 | 26.1 | 20.9 | 22.6 | 22.8 |
| | | 100 | 0 | 24.3 | 26.5 | 26.3 | 21.1 | 24.2 | 23.8 | 23.0 | 25.9 | 25.7 | 20.9 | 22.5 | 22.9 |
| | QPSK | 1 | 0 | 21.5 | 24.0 | 23.9 | 19.4 | 21.5 | 21.5 | 23.1 | 23.9 | 23.6 | 19.8 | 18.3 | 19.5 |
| | | 1 | 1 | 21.5 | 26.4 | **26.5** | 19.4 | 23.6 | **24.2** | 24.6 | 26.1 | 25.9 | **22.6** | 22.3 | 22.6 |
| | | 50 | 25 | 22.9 | 26.3 | 26.0 | 20.7 | 23.7 | 24.1 | 25.5 | **26.2** | 26.1 | 19.0 | 21.9 | 22.2 |
| | | 100 | 0 | 22.8 | 26.2 | 25.0 | 19.7 | 22.7 | 22.8 | 24.3 | 25.8 | 25.3 | 18.8 | 21.6 | 21.4 |
| | 16QAM | 1 | 0 | 21.6 | 23.9 | 24.0 | 18.8 | 21.4 | 21.3 | 22.8 | 23.7 | 23.7 | 19.7 | 18.8 | 19.4 |
| | | 1 | 1 | 21.3 | 25.4 | 25.3 | 19.2 | 22.8 | **23.4** | 23.8 | 25.0 | 25.2 | 15.5 | **22.0** | 21.2 |
| | | 50 | 25 | 22.4 | **26.1** | 24.8 | 19.9 | 23.0 | 23.1 | 24.7 | **25.7** | 25.4 | 18.4 | 21.5 | 21.9 |
| | | 100 | 0 | 22.3 | 25.2 | 24.3 | 18.8 | 22.0 | 22.1 | 23.5 | 24.9 | 24.5 | 18.1 | 20.6 | 20.8 |
| | 64QAM | 1 | 0 | 21.2 | 24.2 | 24.0 | 17.7 | 21.3 | 21.1 | 22.7 | 23.3 | 23.4 | 16.3 | 18.7 | 19.2 |
| | | 1 | 1 | 21.3 | 24.6 | 25.0 | 18.4 | 21.6 | 22.4 | 22.6 | 23.7 | 24.0 | 14.6 | 20.3 | 20.1 |
| | | 50 | 25 | 22.4 | 24.6 | 24.0 | 18.6 | 21.7 | 21.9 | 23.2 | 24.5 | 24.1 | 18.5 | 20.1 | 20.5 |
| | | 100 | 0 | 22.3 | 24.8 | 24.1 | 18.4 | 21.6 | 21.8 | 23.1 | 24.5 | 24.1 | 18.0 | 20.1 | 20.5 |
| | 256QAM | 1 | 0 | 19.4 | 22.6 | 22.7 | 16.4 | 20.2 | 20.2 | 20.7 | 22.3 | 22.2 | 13.9 | 17.7 | 18.2 |
| | | 1 | 1 | 19.2 | 22.7 | 22.8 | 16.6 | 19.9 | **20.6** | 21.1 | **22.8** | 22.2 | 12.0 | 18.4 | **19.1** |
| | | 50 | 25 | 20.9 | 22.7 | 22.7 | 17.3 | 20.2 | 20.2 | 21.8 | 22.3 | 22.2 | 16.9 | 17.9 | 18.5 |
| | | 100 | 0 | 20.9 | **22.9** | 22.8 | 17.1 | 20.4 | 20.5 | 21.7 | 22.3 | 22.3 | 16.6 | 18.2 | 18.5 |




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## 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 | 22.1 | 24.1 | 24.0 | 19.3 | 21.1 | 21.0 | 20.3 | 23.0 | 22.8 | 17.9 | 20.6 | 20.3 |
| | | 1 | 1 | 22.1 | 26.7 | **26.7** | 19.4 | **24.7** | 24.5 | 20.4 | **26.5** | 26.2 | 18.1 | **23.0** | 22.9 |
| | | 64 | 32 | 24.2 | 26.6 | 26.4 | 21.2 | 24.6 | 24.4 | 22.9 | 26.3 | 26.1 | 21.0 | 22.7 | 22.8 |
| | | 128 | 0 | 24.3 | 26.6 | 26.4 | 21.2 | 24.1 | 23.9 | 22.9 | 25.8 | 25.6 | 20.9 | 22.8 | 22.8 |
| | QPSK | 1 | 0 | 21.8 | 24.1 | 23.6 | 19.2 | 21.6 | 21.3 | 23.0 | 23.5 | 23.4 | 19.1 | 19.7 | 19.2 |
| | | 1 | 1 | 21.8 | 26.3 | **26.3** | 19.1 | 24.0 | **24.1** | 24.6 | **26.5** | 26.0 | 20.9 | 22.3 | 21.9 |
| | | 64 | 32 | 23.2 | 26.2 | 26.2 | 20.5 | 23.8 | 23.7 | 25.2 | 26.1 | 26.1 | **22.5** | 21.9 | 22.2 |
| | | 128 | 0 | 22.9 | 26.2 | 26.2 | 20.5 | 23.2 | 23.4 | 24.9 | 25.8 | 25.6 | 21.8 | 21.7 | 21.8 |
| | 16QAM | 1 | 0 | 21.7 | 24.0 | 23.4 | 18.6 | 21.2 | 21.2 | 23.1 | 23.6 | 23.6 | 19.1 | 19.4 | 19.3 |
| | | 1 | 1 | 21.6 | **26.4** | 26.1 | 18.8 | 23.3 | 23.0 | 23.9 | **25.8** | 25.4 | 20.1 | **22.1** | 21.8 |
| | | 64 | 32 | 22.6 | 26.2 | 26.2 | 20.3 | 23.3 | **23.4** | 24.6 | 25.7 | 25.6 | 21.7 | 21.6 | 21.8 |
| | | 128 | 0 | 22.5 | 25.1 | 25.1 | 20.4 | 22.4 | 22.5 | 23.8 | 24.9 | 24.7 | 20.9 | 20.7 | 20.8 |
| | 64QAM | 1 | 0 | 21.6 | 24.1 | 24.0 | 18.3 | 20.4 | 20.9 | 22.7 | 23.6 | 23.3 | 19.2 | 19.9 | 19.2 |
| | | 1 | 1 | 21.5 | 25.4 | 25.0 | 18.1 | 21.7 | 22.3 | 22.6 | 24.6 | 24.0 | 18.9 | 20.7 | 20.8 |
| | | 64 | 32 | 22.2 | 24.7 | 24.9 | 19.0 | 22.2 | 22.2 | 23.4 | 24.3 | 24.3 | 20.7 | 20.2 | 20.4 |
| | | 128 | 0 | 22.3 | 24.7 | 24.6 | 19.3 | 20.9 | 21.2 | 23.2 | 24.4 | 24.3 | 20.7 | 20.3 | 20.4 |
| | 256QAM | 1 | 0 | 19.6 | 22.7 | 22.2 | 15.7 | 20.0 | 20.2 | 21.1 | 22.4 | 22.2 | 17.7 | 18.4 | 18.4 |
| | | 1 | 1 | 19.5 | 22.8 | 22.6 | 16.0 | **21.0** | 21.0 | 21.2 | 22.4 | **22.4** | 17.6 | 18.4 | 18.8 |
| | | 64 | 32 | 20.8 | **22.8** | 22.8 | 17.5 | 20.2 | 20.4 | 22.1 | 22.3 | 22.2 | **18.9** | 18.1 | 18.3 |
| | | 128 | 0 | 20.9 | 22.6 | 22.6 | 17.9 | 20.2 | 20.2 | 21.9 | 22.3 | 22.3 | 18.8 | 18.2 | 18.4 |



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## 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 | 22.1 | 24.3 | 24.0 | 19.3 | 21.0 | 20.9 | 20.4 | 23.0 | 22.8 | 17.9 | 20.8 | 20.2 |
| | | 1 | 1 | 22.2 | 26.5 | 26.6 | 19.2 | **24.7** | 24.4 | 20.5 | **26.5** | 26.3 | 18.1 | **23.0** | 22.7 |
| | | 81 | 40 | 24.2 | 26.5 | 26.3 | 21.1 | 24.6 | 24.4 | 23.1 | 26.4 | 26.2 | 21.0 | 22.7 | 22.8 |
| | | 162 | 0 | 24.1 | **26.6** | 26.4 | 21.2 | 24.1 | 23.9 | 23.0 | 26.0 | 25.8 | 20.9 | 22.8 | 22.8 |
| | QPSK | 1 | 0 | 21.2 | 23.5 | 23.5 | 18.9 | 21.7 | 21.6 | 18.1 | 23.8 | 23.1 | 18.7 | 19.8 | 21.3 |
| | | 1 | 1 | 21.5 | 26.6 | **26.7** | 18.8 | 24.0 | **24.7** | 20.2 | **26.4** | 26.0 | 21.1 | **22.6** | 14.1 |
| | | 81 | 40 | 22.4 | 26.3 | 26.3 | 20.8 | 24.2 | 24.4 | 21.7 | 25.2 | 25.8 | 19.0 | 15.9 | 15.1 |
| | | 162 | 0 | 22.5 | 26.2 | 26.1 | 20.8 | 22.8 | 23.0 | 21.6 | 25.1 | 24.5 | 18.9 | 15.6 | 15.0 |
| | 16QAM | 1 | 0 | 21.2 | 23.3 | 23.0 | 18.4 | 21.3 | 21.1 | 18.2 | 24.2 | 22.9 | 18.4 | 19.5 | 11.2 |
| | | 1 | 1 | 21.3 | 25.3 | 25.3 | 18.4 | 22.9 | **24.1** | 20.5 | **25.9** | 24.8 | 20.4 | **22.3** | 14.1 |
| | | 81 | 40 | 21.5 | **26.1** | 25.4 | 19.6 | 23.2 | 23.0 | 21.2 | 24.9 | 24.5 | 18.4 | 15.6 | 14.9 |
| | | 162 | 0 | 21.5 | 25.1 | 25.2 | 20.4 | 22.1 | 22.0 | 19.3 | 24.1 | 23.6 | 18.3 | 14.6 | 13.7 |
| | 64QAM | 1 | 0 | 20.1 | 23.0 | 21.7 | 17.8 | 20.4 | 20.4 | 17.7 | 23.0 | 23.3 | 18.3 | 19.4 | 10.6 |
| | | 1 | 1 | 21.1 | 24.2 | 24.6 | 18.1 | 22.0 | 21.7 | 19.8 | 24.7 | 25.1 | 19.6 | 20.7 | 12.5 |
| | | 81 | 40 | 20.6 | 25.3 | 24.3 | 19.0 | 22.2 | 21.7 | 21.2 | 23.7 | 23.5 | 18.5 | 14.1 | 13.1 |
| | | 162 | 0 | 20.6 | 24.2 | 24.2 | 19.0 | 20.8 | 20.7 | 21.3 | 23.6 | 23.3 | 18.4 | 14.1 | 13.2 |
| | 256QAM | 1 | 0 | 18.6 | 22.0 | 21.5 | 16.2 | 19.6 | 19.4 | 15.9 | **23.9** | 22.5 | 17.8 | 18.1 | 9.7 |
| | | 1 | 1 | 20.2 | 23.4 | 23.6 | 16.1 | **20.3** | 19.8 | 17.7 | 23.1 | 22.7 | 18.0 | **18.2** | 10.3 |
| | | 81 | 40 | 19.4 | **24.4** | 23.5 | 17.9 | 20.2 | 19.7 | 19.7 | 21.4 | 21.6 | 17.0 | 12.1 | 10.9 |
| | | 162 | 0 | 19.5 | 23.1 | 23.3 | 17.7 | 19.2 | 19.6 | 19.6 | 21.6 | 21.5 | 17.0 | 12.1 | 10.9 |

## 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 | 22.2 | 22.1 | 24.2 | 19.2 | 19.2 | 20.9 | 20.5 | 21.2 | 22.6 | 18.0 | 19.0 | 20.3 |
| | | 1 | 1 | 22.2 | 22.3 | **26.7** | 19.4 | 19.3 | **24.7** | 20.1 | 21.2 | 26.4 | 18.1 | 19.1 | 22.7 |
| | | 108 | 54 | 24.3 | 26.6 | 26.4 | 21.2 | 24.6 | 24.5 | 23.1 | **26.5** | 26.4 | 21.1 | 22.8 | 22.9 |
| | | 216 | 0 | 24.2 | 26.5 | 26.5 | 21.3 | 24.1 | 24.0 | 23.2 | 26.0 | 25.9 | 20.9 | **23.0** | 23.0 |
| | QPSK | 1 | 0 | 20.9 | 20.9 | 23.8 | 18.6 | 21.9 | 21.7 | 18.7 | 21.8 | 24.6 | 16.6 | 17.9 | 19.5 |
| | | 1 | 1 | 21.0 | 21.0 | **26.6** | 21.1 | 24.3 | 24.1 | 18.6 | 21.6 | **26.5** | 16.9 | 17.3 | 21.3 |
| | | 108 | 54 | 22.1 | 26.2 | 26.3 | 20.8 | **24.6** | 23.7 | 21.0 | 25.9 | 25.8 | **23.0** | 22.3 | 22.5 |
| | | 216 | 0 | 22.3 | 25.5 | 25.1 | 21.4 | 24.5 | 23.7 | 21.0 | 25.5 | 25.1 | 21.8 | 21.0 | 21.3 |
| | 16QAM | 1 | 0 | 19.9 | 20.2 | 23.5 | 17.7 | 22.0 | 21.4 | 18.8 | 22.3 | 24.7 | 17.0 | 17.8 | 19.2 |
| | | 1 | 1 | 20.5 | 21.0 | 25.0 | 20.3 | 23.7 | 23.4 | 18.6 | 21.8 | **25.7** | 17.4 | 17.7 | 20.3 |
| | | 108 | 54 | 21.1 | **26.1** | 25.3 | 20.4 | **24.1** | 23.4 | 20.4 | 25.2 | 25.5 | **22.4** | 22.0 | 21.6 |
| | | 216 | 0 | 21.2 | 24.5 | 24.2 | 19.8 | 23.5 | 22.7 | 20.5 | 24.4 | 24.3 | 21.2 | 21.1 | 20.3 |
| | 64QAM | 1 | 0 | 19.4 | 19.7 | 22.7 | 17.0 | 22.1 | 20.4 | 18.2 | 21.9 | 23.7 | 15.8 | 18.0 | 19.2 |
| | | 1 | 1 | 20.0 | 19.8 | 24.4 | 19.3 | 22.6 | 21.7 | 18.4 | 21.3 | 23.9 | 16.6 | 16.9 | 20.0 |
| | | 108 | 54 | 21.0 | 25.3 | 24.3 | 19.2 | 23.0 | 22.3 | 20.5 | 24.2 | 24.1 | 20.9 | 20.6 | 20.2 |
| | | 216 | 0 | 20.3 | 24.6 | 23.3 | 19.4 | 23.0 | 22.2 | 20.4 | 24.0 | 23.8 | 18.9 | 20.4 | 20.3 |
| | 256QAM | 1 | 0 | 19.2 | 18.9 | 22.1 | 16.0 | 20.8 | 20.1 | 16.8 | 20.1 | **23.7** | 14.6 | 16.7 | 18.2 |
| | | 1 | 1 | 19.5 | 19.0 | 23.0 | 18.5 | **21.1** | 20.6 | 16.5 | 19.6 | 23.0 | 13.5 | 15.6 | 17.7 |
| | | 108 | 54 | 20.1 | 23.3 | 23.4 | 18.0 | 21.0 | 20.6 | 19.0 | 22.2 | 22.2 | **19.4** | 18.6 | 18.6 |
| | | 216 | 0 | 19.3 | **23.6** | 22.2 | 17.8 | 20.9 | 20.4 | 18.9 | 22.2 | 22.0 | 17.4 | 18.7 | 18.7 |




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## 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 | 21.9 | 22.1 | 23.8 | 19.1 | 19.1 | 21.0 | 20.1 | 21.2 | 22.7 | 17.7 | 18.9 | 20.1 |
| | | 1 | 1 | 21.9 | 22.3 | 26.6 | 19.2 | 19.1 | **24.7** | 20.5 | 21.3 | **26.5** | 17.9 | 19.0 | 22.9 |
| | | 120 | 60 | 24.2 | **26.7** | 26.4 | 21.1 | 24.7 | 24.5 | 23.3 | 26.5 | 26.4 | 21.1 | 22.9 | 22.9 |
| | | 240 | 0 | 24.1 | 26.6 | 26.3 | 21.2 | 24.1 | 24.0 | 23.2 | 26.1 | 25.9 | 21.0 | **23.0** | 23.0 |
| | QPSK | 1 | 0 | 20.5 | 21.0 | 23.4 | 22.2 | 22.1 | 21.9 | 21.1 | 21.5 | 23.8 | 16.7 | 17.8 | 19.4 |
| | | 1 | 1 | 21.1 | 21.2 | 26.6 | 24.1 | **24.6** | 24.6 | 21.6 | 21.5 | **26.0** | 17.3 | 17.9 | 22.0 |
| | | 120 | 60 | 22.6 | 26.4 | **26.7** | 23.0 | 24.3 | 24.2 | 22.5 | 25.9 | 25.7 | 16.9 | **22.3** | 21.1 |
| | | 240 | 0 | 22.6 | 25.9 | 25.8 | 23.6 | 24.3 | 24.1 | 22.4 | 25.5 | 24.4 | 19.2 | 21.8 | 20.4 |
| | 16QAM | 1 | 0 | 19.5 | 20.3 | 23.2 | 22.1 | 21.9 | 22.2 | 21.2 | 21.5 | 23.8 | 16.9 | 17.5 | 19.5 |
| | | 1 | 1 | 20.3 | 20.1 | **25.9** | 23.0 | **24.1** | 23.5 | 21.2 | 22.2 | **25.6** | 17.0 | 18.1 | 19.9 |
| | | 120 | 60 | 22.3 | 25.8 | 25.9 | 22.9 | 23.4 | 23.0 | 21.9 | 25.3 | 24.7 | 16.8 | **21.8** | 20.1 |
| | | 240 | 0 | 22.2 | 24.9 | 24.8 | 23.0 | 23.3 | 23.1 | 21.9 | 24.6 | 23.6 | 18.8 | 20.9 | 19.6 |
| | 64QAM | 1 | 0 | 19.1 | 19.6 | 22.4 | 21.9 | 21.6 | 21.8 | 20.7 | 22.5 | 22.9 | 16.0 | 16.9 | 19.3 |
| | | 1 | 1 | 19.1 | 19.4 | 25.3 | 21.9 | 22.4 | 22.2 | 21.2 | 21.5 | 23.7 | 16.1 | 17.3 | 19.3 |
| | | 120 | 60 | 20.5 | 24.9 | 24.8 | 22.7 | 22.8 | 22.6 | 22.0 | 24.2 | 24.0 | 16.0 | 20.4 | 20.7 |
| | | 240 | 0 | 21.3 | 23.8 | 23.7 | 22.5 | 22.8 | 22.6 | 22.0 | 24.2 | 23.4 | 18.7 | 20.5 | 19.0 |
| | 256QAM | 1 | 0 | 18.8 | 19.2 | 22.3 | 20.8 | 20.9 | **21.1** | 19.1 | 19.8 | **23.1** | 14.6 | 16.5 | **18.8** |
| | | 1 | 1 | 19.0 | 19.0 | **24.0** | 20.5 | 21.0 | 20.8 | 19.4 | 19.6 | 22.7 | 15.0 | 15.2 | 17.4 |
| | | 120 | 60 | 19.4 | 23.9 | 23.9 | 21.0 | 20.8 | 20.8 | 20.6 | 22.3 | 22.0 | 14.7 | 18.6 | 18.7 |
| | | 240 | 0 | 20.1 | 22.9 | 22.9 | 21.0 | 20.8 | 20.7 | 20.4 | 22.3 | 22.2 | 17.4 | 18.7 | 17.7 |

## 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 | 21.9 | 22.0 | 23.9 | 18.9 | 18.8 | 20.8 | 20.2 | 21.0 | 22.7 | 17.7 | 18.8 | 19.8 |
| | | 1 | 1 | 21.9 | 22.3 | 26.6 | 19.3 | 19.1 | 24.6 | 20.5 | 21.1 | **26.5** | 17.9 | 18.8 | 22.6 |
| | | 135 | 67 | 24.2 | 26.6 | 26.6 | 21.2 | **24.7** | 24.6 | 23.3 | 26.5 | 26.4 | 21.0 | 22.8 | 22.8 |
| | | 270 | 0 | 24.2 | 26.6 | **26.7** | 21.2 | 24.1 | 24.1 | 23.2 | 26.1 | 26.0 | 20.9 | **23.0** | 22.8 |
| | QPSK | 1 | 0 | 20.5 | 20.6 | 23.1 | 22.2 | 21.8 | 22.0 | 20.4 | 20.9 | 22.8 | 16.6 | 17.8 | 19.7 |
| | | 1 | 1 | 20.6 | 20.6 | 26.2 | 24.1 | 23.7 | 24.6 | 20.1 | 21.2 | **26.4** | 16.8 | 18.1 | 21.7 |
| | | 135 | 67 | 22.0 | 26.5 | **26.6** | **24.7** | 24.6 | 24.4 | 21.6 | 25.1 | 25.0 | 19.2 | 22.1 | **22.5** |
| | | 270 | 0 | 22.1 | 25.4 | 25.5 | 24.0 | 24.3 | 24.1 | 21.4 | 24.0 | 24.5 | 18.8 | 21.9 | 21.7 |
| | 16QAM | 1 | 0 | 19.8 | 19.6 | 22.6 | 22.1 | 22.1 | 21.7 | 20.7 | 20.3 | 23.8 | 17.1 | 18.2 | 19.5 |
| | | 1 | 1 | 19.8 | 20.0 | **26.0** | 23.4 | 22.4 | 24.2 | 20.7 | 21.6 | **26.2** | 17.8 | 18.0 | 21.7 |
| | | 135 | 67 | 22.0 | 25.4 | 25.4 | **24.3** | 24.3 | 24.1 | 21.0 | 24.5 | 24.7 | 18.7 | 21.9 | **22.1** |
| | | 270 | 0 | 22.0 | 24.5 | 24.4 | 23.2 | 23.3 | 23.2 | 21.0 | 23.5 | 23.7 | 18.6 | 20.8 | 21.0 |
| | 64QAM | 1 | 0 | 18.1 | 18.6 | 21.4 | 21.8 | 21.8 | 21.7 | 19.5 | 20.2 | 23.4 | 16.5 | 17.7 | 20.0 |
| | | 1 | 1 | 19.9 | 19.9 | 25.7 | 22.2 | 22.5 | 22.4 | 20.2 | 20.4 | 24.6 | 16.5 | 17.3 | 20.5 |
| | | 135 | 67 | 20.1 | 24.4 | 24.5 | 22.9 | 22.8 | 22.6 | 21.1 | 23.3 | 23.2 | 18.5 | 20.4 | 20.6 |
| | | 270 | 0 | 20.0 | 23.5 | 23.4 | 22.8 | 22.8 | 22.6 | 20.9 | 23.1 | 23.2 | 17.7 | 20.6 | 20.5 |
| | 256QAM | 1 | 0 | 18.0 | 18.3 | 21.1 | **21.0** | 20.3 | 21.0 | 18.0 | 17.9 | **21.6** | 15.1 | 16.1 | **19.4** |
| | | 1 | 1 | 18.7 | 19.0 | **24.0** | 20.4 | 20.7 | 20.6 | 18.3 | 18.6 | 21.6 | 15.0 | 15.3 | 18.3 |
| | | 135 | 67 | 19.0 | 23.5 | 23.3 | 20.9 | 20.7 | 20.6 | 19.5 | 21.3 | 21.1 | 17.0 | 18.4 | 18.5 |
| | | 270 | 0 | 19.0 | 22.4 | 22.6 | 20.9 | 20.7 | 20.6 | 19.4 | 21.3 | 21.2 | 16.9 | 18.6 | 18.6 |




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## 7.15. LTE BAND 48

| Test Engineer ID: | 19467 | Test Date: | 7/23/2020 |
|---|---|---|---|

### 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 | 24.0 | 23.9 | 23.6 | 22.7 | 22.5 | 22.5 | 23.6 | 23.8 | 23.5 | 22.9 | 23.3 | 23.3 |
| | | 1 | 12 | **24.1** | 24.0 | 23.8 | 22.1 | 22.5 | 22.7 | 23.8 | **23.9** | 23.6 | 23.1 | **23.5** | 23.4 |
| | | 1 | 24 | 24.1 | 24.0 | 23.7 | 22.5 | 22.5 | **22.7** | 23.8 | 23.9 | 23.6 | 23.1 | 23.4 | 23.4 |
| | | 12 | 0 | 23.2 | 23.1 | 22.7 | 21.8 | 21.6 | 21.6 | 22.7 | 23.0 | 22.6 | 22.1 | 22.5 | 22.5 |
| | | 12 | 6 | 23.3 | 23.2 | 22.9 | 22.0 | 21.7 | 21.8 | 22.8 | 23.1 | 22.7 | 22.2 | 22.6 | 22.6 |
| | | 12 | 11 | 23.3 | 23.2 | 22.9 | 22.0 | 21.7 | 21.8 | 22.9 | 23.1 | 22.7 | 22.2 | 22.6 | 22.6 |
| | | 25 | 0 | 23.3 | 23.1 | 22.9 | 21.9 | 21.6 | 21.7 | 22.8 | 23.0 | 22.6 | 22.2 | 22.6 | 22.5 |
| | 16QAM | 1 | 0 | 23.5 | 23.3 | 23.1 | 22.1 | 21.9 | 22.0 | 23.0 | 23.3 | 23.0 | 22.4 | 22.7 | 22.7 |
| | | 1 | 12 | **23.6** | 23.4 | 23.2 | **22.4** | 22.0 | 22.1 | 23.2 | **23.4** | 23.0 | 22.6 | 22.9 | **22.9** |
| | | 1 | 24 | 23.5 | 23.4 | 23.3 | 22.4 | 21.9 | 22.1 | 23.2 | 23.3 | 23.0 | 22.6 | 22.9 | 22.9 |
| | | 12 | 0 | 22.2 | 22.1 | 22.0 | 21.1 | 20.7 | 20.8 | 21.8 | 22.0 | 21.7 | 21.3 | 21.6 | 21.6 |
| | | 12 | 6 | 22.3 | 22.2 | 22.0 | 21.1 | 20.7 | 20.9 | 21.9 | 21.9 | 21.8 | 21.4 | 21.6 | 21.6 |
| | | 12 | 11 | 22.3 | 22.2 | 22.0 | 21.1 | 20.6 | 20.9 | 21.8 | 22.0 | 21.8 | 21.4 | 21.6 | 21.7 |
| | | 25 | 0 | 22.3 | 22.2 | 21.9 | 21.1 | 20.7 | 20.7 | 21.8 | 22.0 | 21.7 | 21.3 | 21.6 | 21.5 |
| | 64QAM | 1 | 0 | 20.6 | 21.2 | 20.7 | 21.1 | 21.0 | 21.7 | 21.6 | 22.3 | 22.0 | 21.4 | 22.4 | 22.3 |
| | | 1 | 12 | 20.7 | **21.3** | 20.9 | 21.4 | 21.1 | **21.8** | 21.7 | **22.5** | 22.1 | 21.6 | **22.6** | 22.4 |
| | | 1 | 24 | 20.7 | 21.3 | 20.8 | 21.4 | 21.1 | 21.8 | 21.8 | 22.4 | 22.1 | 21.5 | 22.5 | 22.3 |
| | | 12 | 0 | 20.0 | 20.1 | 19.7 | 19.9 | 20.1 | 20.3 | 20.9 | 21.0 | 20.8 | 20.5 | 20.9 | 20.9 |
| | | 12 | 6 | 20.1 | 20.0 | 19.7 | 20.0 | 20.1 | 20.3 | 21.0 | 21.1 | 20.9 | 20.5 | 21.1 | 21.0 |
| | | 12 | 11 | 19.9 | 20.0 | 19.7 | 20.0 | 20.1 | 20.3 | 21.0 | 21.1 | 20.9 | 20.6 | 21.0 | 21.0 |
| | | 25 | 0 | 20.1 | 19.9 | 19.6 | 19.9 | 20.0 | 20.1 | 20.9 | 20.9 | 20.8 | 20.5 | 20.8 | 20.9 |
| | 256QAM | 1 | 0 | 18.8 | 18.8 | 18.8 | 17.7 | 17.9 | 17.7 | 18.9 | 18.9 | 18.7 | 18.8 | 18.7 | 18.3 |
| | | 1 | 12 | 18.9 | 18.9 | 19.0 | 17.9 | **18.1** | 17.9 | 19.0 | **19.0** | 18.8 | 18.7 | **18.9** | 18.1 |
| | | 1 | 24 | 18.9 | 18.8 | **19.0** | 17.8 | 18.1 | 17.9 | 18.9 | 18.9 | 18.7 | 18.8 | 18.8 | 18.1 |
| | | 12 | 0 | 18.5 | 18.5 | 18.6 | 17.5 | 17.5 | 17.5 | 18.6 | 18.6 | 18.3 | 18.3 | 18.3 | 18.1 |
| | | 12 | 6 | 18.6 | 18.5 | 18.7 | 17.5 | 17.7 | 17.5 | 18.7 | 18.6 | 18.5 | 18.4 | 18.5 | 18.1 |
| | | 12 | 11 | 18.6 | 18.5 | 18.7 | 17.5 | 17.6 | 17.6 | 18.7 | 18.6 | 18.4 | 18.4 | 18.5 | 18.1 |
| | | 25 | 0 | 18.5 | 18.5 | 18.7 | 17.6 | 17.7 | 17.5 | 18.6 | 18.6 | 18.4 | 18.4 | 18.4 | 18.1 |




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## 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 | 23.7 | 23.7 | 23.3 | 22.4 | 22.0 | 21.7 | 23.3 | 23.7 | 23.4 | 22.8 | 23.1 | 23.2 |
| | | 1 | 24 | **24.1** | 24.0 | 23.6 | **22.7** | 22.2 | 22.1 | 23.6 | **23.9** | 23.7 | 23.2 | 23.4 | **23.5** |
| | | 1 | 49 | 23.9 | 23.8 | 23.4 | 22.4 | 22.0 | 22.1 | 23.7 | 23.7 | 23.5 | 23.1 | 23.2 | 23.3 |
| | | 25 | 0 | 23.0 | 23.0 | 22.8 | 21.6 | 21.3 | 21.1 | 22.5 | 23.1 | 22.7 | 22.2 | 22.5 | 22.4 |
| | | 25 | 12 | 23.2 | 23.1 | 23.1 | 21.8 | 21.4 | 20.9 | 22.8 | 23.2 | 22.8 | 22.4 | 22.6 | 22.6 |
| | | 25 | 24 | 23.1 | 23.1 | 23.2 | 21.7 | 21.3 | 21.2 | 22.9 | 23.1 | 22.7 | 22.3 | 22.6 | 22.5 |
| | | 50 | 0 | 23.2 | 23.1 | 23.1 | 21.7 | 21.3 | 20.9 | 22.9 | 23.0 | 22.7 | 22.3 | 22.5 | 22.5 |
| | 16QAM | 1 | 0 | 23.4 | 23.1 | 23.3 | 22.0 | 21.5 | 21.2 | 22.9 | 23.2 | 23.1 | 22.4 | 22.8 | 22.8 |
| | | 1 | 24 | **23.6** | 23.4 | 23.5 | **22.2** | 21.7 | 21.6 | 23.3 | **23.6** | 23.3 | 22.7 | 23.0 | **23.1** |
| | | 1 | 49 | 23.5 | 23.3 | 23.4 | 22.1 | 21.4 | 21.6 | 23.1 | 23.3 | 23.1 | 22.5 | 22.8 | 23.0 |
| | | 25 | 0 | 22.1 | 22.0 | 22.1 | 20.7 | 20.3 | 20.1 | 21.6 | 22.1 | 21.8 | 21.2 | 21.5 | 21.5 |
| | | 25 | 12 | 22.2 | 22.1 | 22.2 | 20.8 | 20.3 | 20.2 | 21.9 | 22.1 | 21.9 | 21.4 | 21.6 | 21.6 |
| | | 25 | 24 | 22.2 | 22.1 | 22.2 | 20.8 | 20.3 | 20.3 | 22.0 | 22.1 | 21.7 | 21.3 | 21.6 | 21.6 |
| | | 50 | 0 | 22.2 | 22.1 | 22.2 | 20.8 | 20.3 | 20.2 | 21.9 | 22.1 | 21.7 | 21.3 | 21.6 | 21.6 |
| | 64QAM | 1 | 0 | 20.9 | 20.7 | 19.8 | 20.4 | 20.3 | 21.1 | 21.5 | 21.3 | 22.2 | 21.3 | 20.5 | 22.5 |
| | | 1 | 24 | **21.1** | 20.8 | 20.1 | 20.8 | 20.5 | **21.4** | 21.9 | 21.7 | **22.5** | 21.6 | 21.7 | **22.8** |
| | | 1 | 49 | 21.0 | 20.7 | 20.0 | 20.7 | 20.4 | 21.2 | 21.7 | 21.6 | 22.3 | 21.6 | 21.6 | 22.6 |
| | | 25 | 0 | 19.8 | 19.6 | 19.5 | 19.6 | 19.6 | 19.5 | 20.8 | 20.9 | 20.9 | 20.4 | 20.8 | 20.9 |
| | | 25 | 12 | 19.9 | 19.7 | 19.6 | 19.7 | 19.8 | 19.6 | 21.0 | 21.0 | 21.0 | 20.6 | 20.9 | 21.1 |
| | | 25 | 24 | 19.9 | 19.6 | 19.6 | 19.6 | 19.7 | 19.7 | 20.9 | 21.0 | 20.9 | 20.5 | 20.9 | 21.0 |
| | | 50 | 0 | 19.8 | 19.6 | 19.5 | 19.6 | 19.5 | 19.5 | 20.9 | 20.9 | 20.8 | 20.5 | 20.9 | 21.0 |
| | 256QAM | 1 | 0 | 18.3 | 17.9 | 18.7 | 17.0 | 17.7 | 17.3 | 18.6 | 18.6 | 18.1 | 17.8 | 18.4 | 17.7 |
| | | 1 | 24 | 18.6 | 18.2 | **19.0** | 17.2 | **18.0** | 17.4 | **18.9** | 18.9 | 18.4 | 18.1 | **18.8** | 18.3 |
| | | 1 | 49 | 18.4 | 18.1 | 18.8 | 17.1 | 17.9 | 17.4 | 18.7 | 18.6 | 18.2 | 18.0 | 18.7 | 18.1 |
| | | 25 | 0 | 18.5 | 18.5 | 18.5 | 17.5 | 17.5 | 17.4 | 18.6 | 18.6 | 18.4 | 18.4 | 18.3 | 18.1 |
| | | 25 | 12 | 18.6 | 18.6 | 18.7 | 17.6 | 17.7 | 17.5 | 18.7 | 18.7 | 18.6 | 18.4 | 18.4 | 18.2 |
| | | 25 | 24 | 18.6 | 18.6 | 18.7 | 17.5 | 17.7 | 17.5 | 18.7 | 18.6 | 18.5 | 18.4 | 18.4 | 18.2 |
| | | 50 | 0 | 18.5 | 18.4 | 18.6 | 17.5 | 17.6 | 17.4 | 18.6 | 18.6 | 18.4 | 18.3 | 18.4 | 18.1 |



UL VERIFICATION SERVICES INC. FORM NO: CCSUP4031B
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## 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 | 23.9 | 23.9 | 23.7 | 22.5 | 22.5 | 22.3 | 23.5 | 23.7 | 23.5 | 22.9 | 23.4 | 23.3 |
| | | 1 | 37 | 24.0 | **24.1** | 23.8 | **22.7** | 22.4 | 22.5 | 23.8 | 23.8 | 23.5 | 23.1 | 23.5 | **23.5** |
| | | 1 | 74 | 24.0 | 24.1 | 23.7 | 22.5 | 22.2 | 22.5 | **23.9** | 23.7 | 23.3 | 23.1 | 23.4 | 23.4 |
| | | 36 | 0 | 23.2 | 23.2 | 23.0 | 21.9 | 21.6 | 21.5 | 22.9 | 22.9 | 22.7 | 22.3 | 22.6 | 22.6 |
| | | 36 | 16 | 23.3 | 23.2 | 23.0 | 21.9 | 21.5 | 21.6 | 23.0 | 23.0 | 22.7 | 22.4 | 22.7 | 22.6 |
| | | 36 | 35 | 23.2 | 23.2 | 22.9 | 21.7 | 21.6 | 21.7 | 23.0 | 22.9 | 22.6 | 22.4 | 22.7 | 22.6 |
| | | 75 | 0 | 23.2 | 23.2 | 22.9 | 21.7 | 21.6 | 21.5 | 22.9 | 22.9 | 22.6 | 22.4 | 22.6 | 22.5 |
| | 16QAM | 1 | 0 | 23.5 | 23.5 | 23.2 | 22.1 | 22.0 | 21.9 | 23.0 | 23.1 | 23.1 | 22.5 | 23.0 | 23.0 |
| | | 1 | 37 | **23.7** | 23.6 | 23.3 | **22.2** | 22.0 | 22.0 | **23.3** | 23.3 | 23.1 | 22.8 | **23.1** | 23.0 |
| | | 1 | 74 | 23.6 | 23.6 | 23.2 | 22.0 | 21.8 | 22.1 | 23.3 | 23.1 | 22.9 | 22.7 | 23.0 | 22.9 |
| | | 36 | 0 | 22.2 | 22.2 | 22.0 | 20.8 | 20.6 | 20.5 | 21.9 | 21.9 | 21.7 | 21.2 | 21.6 | 21.6 |
| | | 36 | 16 | 22.3 | 22.3 | 22.0 | 21.0 | 20.6 | 20.6 | 22.0 | 22.0 | 21.7 | 21.4 | 21.7 | 21.6 |
| | | 36 | 35 | 22.2 | 22.3 | 21.9 | 20.8 | 20.4 | 20.6 | 22.0 | 21.9 | 21.6 | 21.4 | 21.6 | 21.6 |
| | | 75 | 0 | 22.3 | 22.2 | 22.0 | 20.9 | 20.6 | 20.6 | 21.9 | 22.0 | 21.7 | 21.4 | 21.7 | 21.5 |
| | 64QAM | 1 | 0 | 20.6 | 20.2 | 19.7 | 20.8 | 20.5 | 21.5 | 21.6 | 21.3 | 22.2 | 21.8 | 21.8 | 22.9 |
| | | 1 | 37 | 20.6 | 20.2 | 19.8 | 21.0 | 20.6 | **21.6** | 21.8 | 21.5 | **22.3** | 22.0 | 22.0 | **23.0** |
| | | 1 | 74 | **20.9** | 20.0 | 19.7 | 21.0 | 20.5 | 21.4 | 21.7 | 21.5 | 22.1 | 22.0 | 22.0 | 22.8 |
| | | 36 | 0 | 19.3 | 19.5 | 19.4 | 19.8 | 19.8 | 19.9 | 20.7 | 20.8 | 20.9 | 20.7 | 21.2 | 21.3 |
| | | 36 | 16 | 19.5 | 19.5 | 19.5 | 19.9 | 19.9 | 20.0 | 20.8 | 21.0 | 20.9 | 20.9 | 21.3 | 21.4 |
| | | 36 | 35 | 19.4 | 19.4 | 19.3 | 19.8 | 19.8 | 20.0 | 20.7 | 20.9 | 20.8 | 20.8 | 21.2 | 21.4 |
| | | 75 | 0 | 19.4 | 19.5 | 19.3 | 19.8 | 19.8 | 19.9 | 20.8 | 20.8 | 20.8 | 20.8 | 21.1 | 21.2 |
| | 256QAM | 1 | 0 | 18.5 | 19.0 | 19.0 | 16.9 | 17.6 | 17.4 | 18.7 | 18.7 | 18.3 | 17.8 | 18.4 | 18.2 |
| | | 1 | 37 | 18.6 | **19.2** | 19.2 | 17.2 | **17.9** | 17.3 | **19.0** | 18.8 | 18.4 | 18.0 | 18.5 | 18.3 |
| | | 1 | 74 | 18.6 | 19.1 | 19.1 | 17.0 | 17.7 | 17.4 | 18.9 | 18.6 | 18.1 | 18.1 | **18.6** | 18.1 |
| | | 36 | 0 | 19.0 | 19.0 | 19.1 | 17.5 | 17.5 | 17.4 | 18.7 | 18.6 | 18.6 | 18.4 | 18.3 | 18.1 |
| | | 36 | 16 | 19.0 | 19.0 | 19.1 | 17.5 | 17.6 | 17.4 | 18.7 | 18.7 | 18.6 | 18.5 | 18.4 | 18.2 |
| | | 36 | 35 | 18.9 | 19.0 | 19.1 | 17.4 | 17.6 | 17.4 | 18.6 | 18.6 | 18.5 | 18.4 | 18.4 | 18.2 |
| | | 75 | 0 | 19.0 | 19.0 | 19.1 | 17.5 | 17.7 | 17.3 | 18.7 | 18.6 | 18.5 | 18.4 | 18.4 | 18.2 |




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## 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 | 23.7 | 23.8 | 23.6 | 22.3 | 22.2 | 22.0 | 23.5 | 23.5 | 23.4 | 22.7 | 23.3 | 23.4 |
| | | 1 | 49 | 24.0 | **24.1** | 23.7 | **22.7** | 22.2 | 22.2 | **23.9** | 23.6 | 23.5 | 23.1 | 23.5 | **23.5** |
| | | 1 | 99 | 23.8 | 24.0 | 23.4 | 22.2 | 21.9 | 22.0 | 23.7 | 23.2 | 23.0 | 22.9 | 23.2 | 23.2 |
| | | 50 | 0 | 23.0 | 23.0 | 22.8 | 21.6 | 21.3 | 21.1 | 22.6 | 22.7 | 22.5 | 22.1 | 22.4 | 22.4 |
| | | 50 | 24 | 23.1 | 23.1 | 22.9 | 21.6 | 21.3 | 21.1 | 22.9 | 22.7 | 22.5 | 22.3 | 22.5 | 22.4 |
| | | 50 | 49 | 23.0 | 23.0 | 22.8 | 21.5 | 21.2 | 21.2 | 22.8 | 22.7 | 22.3 | 22.2 | 22.4 | 22.4 |
| | | 100 | 0 | 23.1 | 23.0 | 22.8 | 21.6 | 21.2 | 21.1 | 22.7 | 22.7 | 22.5 | 22.2 | 22.5 | 22.3 |
| | 16QAM | 1 | 0 | 22.8 | 23.3 | 22.9 | 21.9 | 21.5 | 21.1 | 22.7 | 22.8 | 22.4 | 22.2 | 22.3 | 22.8 |
| | | 1 | 49 | 23.1 | **23.5** | 23.1 | **22.1** | 21.4 | 21.2 | **23.2** | 23.0 | 22.5 | 22.5 | 22.5 | **22.9** |
| | | 1 | 99 | 22.9 | 23.4 | 22.8 | 21.6 | 21.2 | 21.1 | 23.0 | 22.7 | 22.1 | 22.3 | 22.3 | 22.6 |
| | | 50 | 0 | 22.1 | 22.0 | 21.8 | 20.6 | 20.3 | 20.2 | 21.6 | 21.8 | 21.6 | 21.1 | 21.4 | 21.5 |
| | | 50 | 24 | 22.2 | 22.1 | 21.9 | 20.7 | 20.3 | 20.2 | 21.8 | 21.8 | 21.6 | 21.3 | 21.5 | 21.5 |
| | | 50 | 49 | 22.2 | 22.1 | 21.8 | 20.4 | 20.1 | 20.3 | 21.8 | 21.7 | 21.4 | 21.2 | 21.4 | 21.4 |
| | | 100 | 0 | 22.1 | 22.0 | 21.8 | 20.5 | 20.2 | 20.2 | 21.7 | 21.7 | 21.5 | 21.2 | 21.5 | 21.3 |
| | 64QAM | 1 | 0 | 19.9 | 19.9 | 19.9 | 20.4 | 20.6 | 20.6 | 21.4 | 21.6 | 21.2 | 21.6 | 22.1 | 22.1 |
| | | 1 | 49 | 20.3 | 20.2 | **20.3** | 20.8 | **20.8** | 20.8 | 21.7 | **22.0** | 21.6 | 22.0 | **22.4** | 22.4 |
| | | 1 | 99 | 20.0 | 19.9 | 20.0 | 20.5 | 20.7 | 20.4 | 21.5 | 21.8 | 21.2 | 21.8 | 22.2 | 22.0 |
| | | 50 | 0 | 19.4 | 19.2 | 18.8 | 19.3 | 19.3 | 19.5 | 20.5 | 20.5 | 20.6 | 20.5 | 20.8 | 21.0 |
| | | 50 | 24 | 19.4 | 19.2 | 19.0 | 19.5 | 19.4 | 19.6 | 20.6 | 20.5 | 20.6 | 20.7 | 20.9 | 21.1 |
| | | 50 | 49 | 19.3 | 19.1 | 18.9 | 19.5 | 19.4 | 19.5 | 20.6 | 20.5 | 20.5 | 20.6 | 20.9 | 20.9 |
| | | 100 | 0 | 19.3 | 19.1 | 18.8 | 19.5 | 19.3 | 19.5 | 20.5 | 20.5 | 20.5 | 20.6 | 20.8 | 20.9 |
| | 256QAM | 1 | 0 | 19.0 | 18.8 | 19.2 | 17.2 | 17.7 | 17.5 | 18.9 | 18.6 | 18.6 | 18.2 | 18.5 | 18.4 |
| | | 1 | 49 | 19.4 | 19.0 | **19.5** | 17.6 | **18.1** | 17.8 | **19.1** | 18.9 | 18.8 | 18.6 | **18.8** | 18.5 |
| | | 1 | 99 | 19.1 | 18.9 | 19.1 | 17.4 | 17.9 | 17.4 | 19.0 | 18.6 | 18.4 | 18.3 | 18.6 | 18.1 |
| | | 50 | 0 | 19.0 | 19.0 | 19.0 | 17.4 | 17.6 | 17.3 | 18.7 | 18.7 | 18.6 | 18.5 | 18.4 | 18.2 |
| | | 50 | 24 | 19.0 | 19.1 | 19.1 | 17.6 | 17.7 | 17.3 | 18.7 | 18.7 | 18.6 | 18.5 | 18.4 | 18.2 |
| | | 50 | 49 | 19.0 | 19.0 | 19.0 | 17.5 | 17.5 | 17.3 | 18.7 | 18.5 | 18.4 | 18.5 | 18.4 | 18.0 |
| | | 100 | 0 | 19.0 | 19.0 | 19.0 | 17.5 | 17.7 | 17.3 | 18.7 | 18.6 | 18.5 | 18.4 | 18.4 | 18.1 |




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## 7.16. LTE BAND 66

| Test Engineer ID: | 19467 | Test Date: | 5/7/2020 |
|---|---|---|---|

### 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 | 25.3 | 25.4 | 25.4 | 23.0 | 22.5 | 22.9 | 24.8 | 24.9 | **25.0** | 22.8 | 22.9 | 22.9 |
| | | 1 | 2 | 25.3 | 25.6 | 25.6 | **23.1** | 22.5 | 22.9 | 24.8 | 24.9 | 24.9 | 22.9 | 23.0 | 22.9 |
| | | 1 | 5 | 25.3 | 25.5 | 25.5 | 23.0 | 22.4 | 22.7 | 24.6 | 24.8 | 24.8 | 22.8 | 22.9 | 22.8 |
| | | 3 | 0 | 25.3 | 25.6 | 25.6 | 23.0 | 22.3 | 22.7 | 24.5 | 24.6 | 24.7 | 22.8 | 23.0 | 22.9 |
| | | 3 | 1 | 25.4 | 25.6 | 25.7 | 23.0 | 22.3 | 22.7 | 24.5 | 24.7 | 24.6 | 22.8 | **23.0** | 22.9 |
| | | 3 | 2 | 25.4 | 25.7 | **25.7** | 22.9 | 22.3 | 22.6 | 24.4 | 24.6 | 24.6 | 22.8 | 23.0 | 22.9 |
| | | 6 | 0 | 24.5 | 24.7 | 24.8 | 22.0 | 21.4 | 21.7 | 23.5 | 23.7 | 23.7 | 21.9 | 22.0 | 21.9 |
| | 16QAM | 1 | 0 | 24.6 | 24.8 | 24.9 | 22.0 | 21.5 | 22.1 | 23.6 | 23.9 | 24.1 | 22.1 | 22.3 | 21.9 |
| | | 1 | 2 | 24.7 | 24.8 | 24.9 | 22.0 | 21.6 | **22.1** | 23.6 | 23.9 | **24.1** | 22.1 | **22.4** | 22.0 |
| | | 1 | 5 | 24.6 | 24.8 | 24.9 | 22.0 | 21.6 | 22.1 | 23.6 | 23.9 | 24.1 | 22.0 | 22.3 | 22.0 |
| | | 3 | 0 | 24.6 | 25.0 | 25.1 | 22.0 | 21.5 | 21.9 | 23.7 | 23.9 | 23.9 | 22.0 | 22.3 | 22.2 |
| | | 3 | 1 | 24.7 | 25.0 | 25.1 | 22.1 | 21.6 | 22.0 | 23.8 | 23.9 | 24.0 | 22.1 | 22.3 | 22.2 |
| | | 3 | 2 | 24.7 | 25.0 | **25.1** | 22.1 | 21.6 | 21.9 | 23.8 | 23.9 | 23.9 | 22.1 | 22.2 | 22.2 |
| | | 6 | 0 | 23.8 | 24.0 | 24.1 | 21.1 | 20.7 | 20.7 | 22.8 | 23.0 | 22.8 | 21.1 | 20.9 | 21.2 |
| | 64QAM | 1 | 0 | 23.9 | 23.4 | 24.1 | 20.9 | 20.6 | 20.6 | 22.5 | 22.6 | 22.9 | 21.1 | 21.2 | 21.2 |
| | | 1 | 2 | 23.9 | 23.5 | **24.2** | 20.9 | 20.7 | 20.6 | 22.6 | 22.6 | **23.0** | 21.2 | 21.2 | 21.2 |
| | | 1 | 5 | 23.9 | 23.3 | 24.0 | 20.9 | 20.6 | 20.6 | 22.5 | 22.6 | 22.9 | 21.0 | 21.1 | 21.2 |
| | | 3 | 0 | 23.9 | 23.3 | 24.0 | 20.8 | 20.7 | 20.4 | 22.6 | 22.5 | 22.9 | 21.2 | 21.0 | 21.0 |
| | | 3 | 1 | 24.0 | 23.4 | 24.0 | 20.9 | 20.7 | 20.5 | 22.7 | 22.5 | 22.9 | **21.2** | 21.1 | 21.0 |
| | | 3 | 2 | 23.9 | 23.3 | 23.9 | **20.9** | 20.7 | 20.5 | 22.7 | 22.5 | 22.9 | 21.2 | 21.0 | 21.0 |
| | | 6 | 0 | 22.5 | 22.5 | 22.6 | 19.6 | 19.8 | 19.5 | 21.8 | 21.5 | 21.5 | 20.3 | 20.1 | 20.1 |
| | 256QAM | 1 | 0 | 19.9 | 20.5 | 20.2 | 18.6 | 18.6 | 18.6 | 20.0 | 19.9 | 19.6 | 18.1 | 17.6 | 17.7 |
| | | 1 | 2 | 19.9 | **20.5** | 20.3 | 18.5 | 18.6 | 18.5 | 20.1 | 20.0 | 19.8 | **18.2** | 17.7 | 17.8 |
| | | 1 | 5 | 19.8 | 20.4 | 20.1 | 18.5 | 18.6 | 18.5 | 20.0 | 19.9 | 19.6 | 18.1 | 17.6 | 17.7 |
| | | 3 | 0 | 20.3 | 20.4 | 20.4 | 18.7 | 18.7 | 18.6 | 20.1 | 19.8 | 19.7 | 18.0 | 17.7 | 17.8 |
| | | 3 | 1 | 20.4 | 20.5 | 20.5 | 18.7 | 18.6 | 18.5 | **20.2** | 19.9 | 19.8 | 18.1 | 17.8 | 17.8 |
| | | 3 | 2 | 20.3 | 20.5 | 20.4 | 18.7 | 18.6 | 18.5 | 20.1 | 19.8 | 19.8 | 18.0 | 17.7 | 17.8 |
| | | 6 | 0 | 20.3 | 20.4 | 20.4 | **18.7** | 18.6 | 18.5 | 20.1 | 19.8 | 20.0 | 17.9 | 17.9 | 17.8 |




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## OUTPUT POWER FOR LTE BAND 66 (3.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Conducted Average (dBm) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ANT 1 | | | ANT 2 | | | ANT 3 | | | ANT 4 | | |
| | | | | 131987 | 132322 | 132657 | 131987 | 132322 | 132657 | 131987 | 132322 | 132657 | 131987 | 132322 | 132657 |
| | | | | 1711.5 | 1745.0 | 1778.5 | 1711.5 | 1745.0 | 1778.5 | 1711.5 | 1745.0 | 1778.5 | 1711.5 | 1745.0 | 1778.5 |
| 3.0 | QPSK | 1 | 0 | 25.7 | 25.7 | 25.5 | 22.9 | 22.5 | **23.1** | 24.6 | 24.9 | **25.0** | 23.0 | **23.0** | 23.0 |
| | | 1 | 7 | 25.7 | 25.7 | 25.5 | 22.9 | 22.5 | 22.9 | 24.6 | 24.9 | 24.9 | 22.9 | 23.0 | 22.9 |
| | | 1 | 14 | **25.7** | 25.7 | 25.5 | 22.8 | 22.5 | 22.8 | 24.6 | 24.8 | 24.8 | 22.9 | 22.9 | 22.9 |
| | | 8 | 0 | 24.9 | 24.8 | 24.7 | 21.8 | 21.6 | 22.0 | 23.6 | 23.9 | 23.8 | 22.1 | 22.1 | 22.0 |
| | | 8 | 4 | 25.0 | 24.9 | 24.7 | 21.9 | 21.6 | 22.0 | 23.7 | 24.0 | 23.9 | 22.0 | 22.1 | 22.0 |
| | | 8 | 7 | 24.9 | 24.9 | 24.8 | 21.9 | 21.7 | 22.0 | 23.7 | 24.0 | 23.9 | 22.1 | 22.1 | 22.0 |
| | | 15 | 0 | 24.9 | 24.8 | 24.7 | 21.8 | 21.6 | 21.9 | 23.7 | 23.9 | 23.8 | 22.1 | 22.1 | 22.0 |
| | 16QAM | 1 | 0 | 25.0 | 25.0 | 24.9 | 21.8 | 21.4 | **22.3** | 23.7 | 23.8 | 24.2 | **22.2** | 22.2 | 22.1 |
| | | 1 | 7 | **25.0** | 25.0 | 24.8 | 21.9 | 21.5 | 22.3 | 23.7 | 23.8 | **24.2** | 22.1 | 22.1 | 22.0 |
| | | 1 | 14 | 24.9 | 24.9 | 24.8 | 21.9 | 21.4 | 22.2 | 23.7 | 23.7 | 24.2 | 22.1 | 22.1 | 22.0 |
| | | 8 | 0 | 24.0 | 24.0 | 23.9 | 20.9 | 20.8 | 21.1 | 22.7 | 23.1 | 23.0 | 21.1 | 21.1 | 21.1 |
| | | 8 | 4 | 24.1 | 24.0 | 23.9 | 21.0 | 20.9 | 21.2 | 22.9 | 23.2 | 23.1 | 21.1 | 21.2 | 21.2 |
| | | 8 | 7 | 24.1 | 24.0 | 23.9 | 21.1 | 20.9 | 21.2 | 22.9 | 23.3 | 23.1 | 21.2 | 21.2 | 21.1 |
| | | 15 | 0 | 23.9 | 23.9 | 23.8 | 20.9 | 20.8 | 21.1 | 22.8 | 23.1 | 23.0 | 21.1 | 21.1 | 21.0 |
| | 64QAM | 1 | 0 | 23.6 | 23.8 | **24.1** | 21.1 | **21.1** | 20.8 | 22.8 | **22.9** | 22.8 | 21.4 | **21.4** | 21.4 |
| | | 1 | 7 | 23.5 | 23.8 | 23.9 | 21.1 | 21.1 | 20.8 | 22.7 | 22.9 | 22.8 | 21.2 | 21.2 | 21.1 |
| | | 1 | 14 | 23.6 | 23.8 | 24.0 | 21.0 | 21.1 | 20.7 | 22.8 | 22.8 | 22.7 | 21.3 | 21.3 | 21.2 |
| | | 8 | 0 | 22.2 | 22.6 | 22.8 | 19.9 | 19.8 | 19.8 | 21.6 | 21.6 | 21.8 | 20.1 | 20.1 | 20.1 |
| | | 8 | 4 | 22.3 | 22.6 | 22.8 | 19.9 | 19.9 | 19.8 | 21.6 | 21.7 | 21.8 | 20.1 | 20.1 | 20.1 |
| | | 8 | 7 | 22.3 | 22.7 | 22.9 | 19.9 | 19.9 | 19.8 | 21.6 | 21.7 | 21.8 | 20.1 | 20.1 | 20.1 |
| | | 15 | 0 | 22.3 | 22.6 | 22.9 | 20.0 | 19.8 | 19.8 | 21.7 | 21.6 | 21.8 | 20.2 | 20.2 | 20.2 |
| | 256QAM | 1 | 0 | 20.4 | **20.5** | 20.1 | 18.6 | 18.6 | 18.6 | 20.4 | 19.8 | 19.9 | **18.5** | 17.8 | 17.8 |
| | | 1 | 7 | 20.3 | 20.5 | 20.0 | 18.5 | 18.6 | 18.5 | 20.3 | 19.7 | 19.9 | 18.4 | 17.6 | 17.8 |
| | | 1 | 14 | 20.4 | 20.5 | 20.0 | 18.5 | 18.6 | 18.5 | **20.4** | 19.7 | 19.8 | 18.5 | 17.6 | 17.7 |
| | | 8 | 0 | 20.5 | 20.4 | 20.3 | 18.7 | 18.7 | 18.6 | 20.2 | 19.9 | 20.0 | 18.2 | 17.8 | 17.9 |
| | | 8 | 4 | 20.5 | 20.4 | 20.3 | 18.7 | 18.6 | 18.5 | 20.2 | 19.9 | 20.0 | 18.2 | 17.9 | 17.9 |
| | | 8 | 7 | 20.5 | 20.4 | 20.3 | 18.7 | 18.6 | 18.5 | 20.2 | 19.9 | 20.0 | 18.2 | 17.8 | 17.9 |
| | | 15 | 0 | 20.4 | 20.5 | 20.3 | **18.7** | 18.6 | 18.5 | 20.2 | 20.0 | 20.0 | 18.1 | 18.0 | 17.9 |




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## 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 | 25.5 | 25.6 | 25.6 | 23.0 | 22.5 | 23.0 | 24.2 | 24.9 | 24.7 | 23.0 | 22.9 | 22.9 |
| | | 1 | 12 | 25.7 | **25.7** | 25.7 | **23.1** | 22.6 | 22.9 | 24.4 | **25.0** | 24.9 | **23.0** | 22.9 | 22.9 |
| | | 1 | 24 | 25.7 | 25.7 | 25.6 | 22.8 | 22.5 | 22.7 | 24.3 | 24.8 | 24.7 | 22.9 | 22.9 | 22.8 |
| | | 12 | 0 | 24.8 | 24.8 | 24.8 | 21.8 | 21.5 | 22.0 | 23.3 | 23.8 | 23.7 | 22.0 | 22.0 | 22.0 |
| | | 12 | 6 | 24.8 | 24.8 | 24.8 | 21.9 | 21.6 | 22.0 | 23.5 | 23.9 | 23.9 | 22.1 | 22.0 | 22.0 |
| | | 12 | 11 | 24.7 | 24.8 | 24.8 | 21.9 | 21.6 | 21.9 | 23.5 | 23.9 | 23.9 | 22.0 | 22.0 | 22.0 |
| | | 25 | 0 | 24.8 | 24.7 | 24.8 | 21.7 | 21.6 | 21.9 | 23.3 | 23.9 | 23.7 | 22.0 | 22.0 | 22.0 |
| | 16QAM | 1 | 0 | 24.9 | 24.8 | 25.0 | 21.7 | 21.6 | 22.3 | 23.4 | 23.9 | 24.0 | 22.2 | 22.1 | 22.2 |
| | | 1 | 12 | 25.0 | 24.9 | **25.1** | 21.9 | 21.7 | **22.4** | 23.6 | 24.1 | **24.3** | **22.4** | 22.1 | 22.1 |
| | | 1 | 24 | 24.9 | 24.8 | 24.9 | 21.8 | 21.7 | 22.2 | 23.5 | 23.9 | 24.2 | 22.2 | 22.1 | 22.1 |
| | | 12 | 0 | 23.9 | 23.9 | 24.0 | 20.8 | 20.7 | 21.1 | 22.6 | 23.0 | 22.9 | 21.1 | 21.1 | 21.0 |
| | | 12 | 6 | 23.9 | 23.9 | 24.0 | 21.0 | 20.8 | 21.2 | 22.8 | 23.2 | 23.2 | 21.2 | 21.1 | 21.1 |
| | | 12 | 11 | 23.8 | 23.9 | 23.9 | 21.0 | 20.9 | 21.2 | 22.8 | 23.2 | 23.2 | 21.1 | 21.1 | 21.0 |
| | | 25 | 0 | 23.7 | 23.7 | 23.9 | 20.7 | 20.7 | 21.0 | 22.6 | 23.1 | 22.9 | 21.0 | 21.0 | 21.0 |
| | 64QAM | 1 | 0 | 23.3 | 23.4 | 23.8 | 21.2 | 20.7 | 21.1 | 22.9 | 22.6 | **23.1** | 21.2 | 21.2 | 21.3 |
| | | 1 | 12 | 23.5 | 23.4 | **23.9** | **21.3** | 20.7 | 21.0 | 23.0 | 22.6 | 23.1 | **21.4** | 21.3 | 21.3 |
| | | 1 | 24 | 23.4 | 23.3 | 23.6 | 21.2 | 20.7 | 20.9 | 23.0 | 22.6 | 23.0 | 21.3 | 21.2 | 21.2 |
| | | 12 | 0 | 22.1 | 22.2 | 22.5 | 20.1 | 20.0 | 19.8 | 21.9 | 21.7 | 21.8 | 20.1 | 20.1 | 20.1 |
| | | 12 | 6 | 22.3 | 22.3 | 22.6 | 20.1 | 19.9 | 19.8 | 21.9 | 21.8 | 21.8 | 20.1 | 20.1 | 20.1 |
| | | 12 | 11 | 22.3 | 22.3 | 22.6 | 20.0 | 19.9 | 19.7 | 21.8 | 21.8 | 21.7 | 20.1 | 20.1 | 20.0 |
| | | 25 | 0 | 22.0 | 22.2 | 22.4 | 20.0 | 19.8 | 19.7 | 21.8 | 21.7 | 21.8 | 20.1 | 20.1 | 20.0 |
| | 256QAM | 1 | 0 | 20.4 | 20.4 | 20.0 | 18.6 | 18.5 | 18.6 | 20.2 | 19.9 | 19.7 | 17.8 | 18.0 | 17.9 |
| | | 1 | 12 | 20.4 | 20.4 | 20.0 | 18.6 | 18.5 | 18.5 | **20.2** | 20.0 | 19.7 | 17.8 | 18.0 | 17.9 |
| | | 1 | 24 | 20.5 | 20.4 | 19.9 | 18.6 | 18.5 | 18.4 | 20.2 | 19.9 | 19.6 | 17.8 | 18.0 | 17.8 |
| | | 12 | 0 | 20.4 | 20.5 | 20.3 | 18.7 | 18.7 | 18.7 | 20.2 | 20.0 | 19.9 | 18.1 | 18.0 | 17.8 |
| | | 12 | 6 | 20.5 | **20.5** | 20.3 | **18.7** | 18.6 | 18.7 | 20.2 | 20.0 | 20.0 | 18.1 | 18.0 | 17.8 |
| | | 12 | 11 | 20.4 | 20.4 | 20.2 | 18.7 | 18.6 | 18.6 | 20.1 | 19.9 | 19.9 | 18.1 | 17.9 | 17.8 |
| | | 25 | 0 | 20.5 | 20.5 | 20.3 | 18.7 | 18.6 | 18.6 | 20.1 | 20.0 | 20.0 | **18.2** | 17.9 | 17.8 |




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## 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 | 25.2 | 25.4 | 22.3 | 22.0 | 22.4 | 23.7 | 24.5 | 23.9 | 22.7 | 22.6 | 22.5 |
| | | 1 | 24 | **25.7** | 25.6 | 25.7 | 23.0 | 22.4 | **23.1** | 24.6 | **25.0** | 25.0 | **23.0** | 22.9 | 22.9 |
| | | 1 | 49 | 25.6 | 25.4 | 25.4 | 22.2 | 22.0 | 22.3 | 24.1 | 24.4 | 24.4 | 22.7 | 22.7 | 22.6 |
| | | 25 | 0 | 24.8 | 24.7 | 24.8 | 21.5 | 21.3 | 21.8 | 23.3 | 23.7 | 23.4 | 22.0 | 21.9 | 21.8 |
| | | 25 | 12 | 25.0 | 24.8 | 24.9 | 21.8 | 21.5 | 22.1 | 23.6 | 24.0 | 23.8 | 22.1 | 22.1 | 22.0 |
| | | 25 | 24 | 24.8 | 24.7 | 24.8 | 21.6 | 21.5 | 21.8 | 23.6 | 23.9 | 23.7 | 22.0 | 22.0 | 21.9 |
| | | 50 | 0 | 24.6 | 24.8 | 24.9 | 21.5 | 21.4 | 21.8 | 23.4 | 23.8 | 23.5 | 22.1 | 22.0 | 21.9 |
| | 16QAM | 1 | 0 | 24.1 | 24.7 | 24.2 | 21.0 | 21.0 | 21.5 | 22.9 | 23.3 | 23.0 | 21.9 | 21.8 | 21.7 |
| | | 1 | 24 | 24.9 | 24.9 | **25.1** | 21.8 | 21.4 | **22.4** | 23.8 | 24.0 | **24.2** | **22.1** | 22.1 | 22.0 |
| | | 1 | 49 | 24.3 | 24.6 | 24.5 | 21.1 | 21.1 | 21.7 | 23.3 | 23.4 | 23.8 | 21.8 | 21.9 | 21.8 |
| | | 25 | 0 | 23.6 | 23.9 | 23.8 | 20.5 | 20.5 | 20.9 | 22.6 | 22.9 | 22.5 | 21.1 | 21.1 | 21.0 |
| | | 25 | 12 | 23.9 | 24.0 | 24.1 | 20.9 | 20.7 | 21.2 | 22.9 | 23.2 | 23.0 | 21.3 | 21.2 | 21.0 |
| | | 25 | 24 | 23.8 | 23.9 | 23.9 | 20.7 | 20.6 | 20.9 | 22.9 | 23.0 | 22.9 | 21.1 | 21.1 | 21.1 |
| | | 50 | 0 | 23.6 | 23.8 | 23.8 | 20.5 | 20.6 | 20.9 | 22.7 | 22.9 | 22.7 | 21.1 | 21.1 | 20.9 |
| | 64QAM | 1 | 0 | 23.6 | 23.2 | 22.9 | 20.9 | 20.9 | 20.6 | 22.9 | 23.0 | 22.8 | 20.9 | 20.9 | 20.8 |
| | | 1 | 24 | **23.9** | 23.5 | 23.8 | 21.2 | **21.3** | 21.0 | 23.2 | **23.3** | 23.2 | 21.2 | **21.3** | 21.2 |
| | | 1 | 49 | 23.7 | 23.1 | 23.2 | 20.9 | 21.1 | 20.8 | 23.1 | 23.2 | 22.9 | 20.9 | 21.1 | 21.0 |
| | | 25 | 0 | 22.6 | 22.2 | 22.2 | 20.0 | 20.0 | 19.9 | 22.1 | 22.0 | 22.1 | 20.1 | 20.1 | 20.0 |
| | | 25 | 12 | 22.8 | 22.3 | 22.6 | 20.2 | 20.0 | 20.0 | 22.2 | 22.1 | 22.2 | 20.2 | 20.2 | 20.0 |
| | | 25 | 24 | 22.7 | 22.2 | 22.4 | 20.1 | 20.0 | 19.9 | 22.1 | 22.0 | 22.1 | 20.1 | 20.1 | 20.1 |
| | | 50 | 0 | 22.5 | 22.0 | 22.2 | 20.1 | 19.9 | 19.8 | 22.1 | 22.0 | 22.1 | 20.1 | 20.1 | 19.9 |
| | 256QAM | 1 | 0 | 20.3 | 19.9 | 20.0 | 18.3 | 18.3 | 18.4 | 19.6 | 19.7 | 20.0 | 18.2 | 17.4 | 17.5 |
| | | 1 | 24 | **20.6** | 20.3 | 20.2 | 18.6 | 18.7 | **18.7** | 20.0 | 19.9 | **20.4** | **18.5** | 17.7 | 17.8 |
| | | 1 | 49 | 20.4 | 20.1 | 20.0 | 18.4 | 18.5 | 18.4 | 19.7 | 19.7 | 20.2 | 18.3 | 17.4 | 17.6 |
| | | 25 | 0 | 20.4 | 20.4 | 20.1 | 18.6 | 18.5 | 18.5 | 20.1 | 20.0 | 19.8 | 18.1 | 17.9 | 17.8 |
| | | 25 | 12 | 20.5 | 20.5 | 20.1 | 18.7 | 18.7 | 18.6 | 20.2 | 20.0 | 20.0 | 18.2 | 18.0 | 17.8 |
| | | 25 | 24 | 20.5 | 20.4 | 20.1 | 18.7 | 18.6 | 18.6 | 20.1 | 19.9 | 19.9 | 18.1 | 17.9 | 17.8 |
| | | 50 | 0 | 20.4 | 20.4 | 20.1 | 18.6 | 18.6 | 18.5 | 20.1 | 19.9 | 19.8 | 18.1 | 17.9 | 17.7 |




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## 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 | 25.4 | 25.4 | 25.6 | **23.1** | 22.0 | 22.6 | 24.3 | **25.0** | 24.7 | 22.8 | 22.9 | 22.9 |
| | | 1 | 37 | 25.6 | 25.3 | **25.7** | 23.0 | 21.9 | 22.7 | 24.6 | 24.9 | 24.9 | 22.9 | 23.0 | 23.0 |
| | | 1 | 74 | 25.5 | 25.2 | 25.4 | 22.6 | 22.0 | 22.2 | 24.7 | 24.7 | 24.8 | 22.7 | 22.8 | **23.0** |
| | | 36 | 0 | 24.2 | 24.2 | 24.1 | 21.5 | 21.1 | 21.3 | 23.5 | 24.0 | 23.3 | 21.9 | 22.0 | 22.0 |
| | | 36 | 16 | 24.2 | 24.1 | 24.3 | 21.4 | 21.1 | 21.5 | 23.7 | 23.9 | 23.7 | 22.0 | 22.1 | 22.0 |
| | | 36 | 35 | 24.2 | 24.0 | 24.2 | 21.4 | 21.1 | 21.4 | 23.7 | 23.9 | 23.8 | 21.9 | 22.1 | 22.1 |
| | | 75 | 0 | 24.0 | 23.9 | 24.0 | 21.1 | 21.1 | 21.2 | 23.6 | 23.8 | 23.5 | 21.9 | 22.1 | 22.0 |
| | 16QAM | 1 | 0 | 24.2 | 24.3 | 24.2 | 21.4 | 21.1 | 21.4 | 23.8 | 23.9 | 23.7 | 22.4 | 22.4 | **22.6** |
| | | 1 | 37 | 24.4 | 24.2 | **24.5** | 21.6 | 21.0 | **21.9** | 24.1 | 23.9 | 24.2 | 22.6 | 22.5 | 22.6 |
| | | 1 | 74 | 24.5 | 24.2 | 24.4 | 21.6 | 21.1 | 21.6 | 24.2 | 23.8 | **24.3** | 22.3 | 22.4 | 22.6 |
| | | 36 | 0 | 23.0 | 23.1 | 22.8 | 20.2 | 20.4 | 20.4 | 22.7 | 23.2 | 22.5 | 20.9 | 21.1 | 21.0 |
| | | 36 | 16 | 23.1 | 23.0 | 23.1 | 20.3 | 20.3 | 20.6 | 22.9 | 23.2 | 22.9 | 21.0 | 21.1 | 21.1 |
| | | 36 | 35 | 23.1 | 23.0 | 23.2 | 20.3 | 20.3 | 20.6 | 23.0 | 23.2 | 23.1 | 20.8 | 21.1 | 21.1 |
| | | 75 | 0 | 23.0 | 22.9 | 23.0 | 20.2 | 20.3 | 20.4 | 22.9 | 23.2 | 22.8 | 20.9 | 21.2 | 21.1 |
| | 64QAM | 1 | 0 | 23.0 | 23.2 | 23.2 | 21.3 | 21.0 | 20.8 | 23.7 | 23.4 | 23.5 | 21.2 | 21.5 | 21.6 |
| | | 1 | 37 | 23.2 | 23.0 | **23.5** | **21.5** | 20.9 | 20.9 | **23.8** | 23.5 | 23.5 | 21.3 | **21.7** | 21.6 |
| | | 1 | 74 | 23.3 | 23.0 | 23.3 | 21.3 | 21.0 | 20.8 | 23.8 | 23.4 | 23.4 | 21.1 | 21.5 | 21.6 |
| | | 36 | 0 | 21.5 | 21.6 | 21.4 | 19.9 | 19.9 | 19.9 | 22.3 | 22.3 | 22.5 | 20.1 | 20.1 | 20.0 |
| | | 36 | 16 | 21.6 | 21.5 | 21.7 | 20.0 | 19.8 | 19.9 | 22.4 | 22.3 | 22.5 | 20.2 | 20.1 | 20.1 |
| | | 36 | 35 | 21.6 | 21.5 | 21.8 | 19.9 | 19.8 | 19.9 | 22.4 | 22.3 | 22.5 | 20.1 | 20.2 | 20.1 |
| | | 75 | 0 | 21.5 | 21.5 | 21.6 | 20.0 | 19.8 | 19.8 | 22.4 | 22.3 | 22.3 | 20.1 | 20.2 | 20.1 |
| | 256QAM | 1 | 0 | 20.4 | 20.3 | 20.2 | 18.4 | 18.5 | 18.5 | 19.8 | 20.0 | 20.1 | 18.3 | 17.5 | 17.8 |
| | | 1 | 37 | 20.6 | 20.6 | 20.3 | 18.6 | 18.6 | 18.7 | 19.9 | 20.1 | **20.3** | **18.4** | 17.6 | 18.0 |
| | | 1 | 74 | 20.5 | 20.5 | 20.2 | 18.4 | 18.4 | 18.4 | 19.7 | 20.0 | 20.2 | 18.3 | 17.4 | 17.9 |
| | | 36 | 0 | 20.6 | 20.4 | 20.3 | 18.6 | 18.5 | 18.6 | 20.1 | 19.8 | 19.9 | 18.1 | 17.9 | 17.7 |
| | | 36 | 16 | **20.6** | 20.5 | 20.3 | **18.7** | 18.6 | 18.6 | 20.1 | 19.9 | 19.9 | 18.1 | 17.9 | 17.8 |
| | | 36 | 35 | 20.5 | 20.4 | 20.3 | 18.7 | 18.5 | 18.6 | 20.1 | 19.9 | 19.9 | 18.1 | 17.8 | 17.7 |
| | | 75 | 0 | 20.5 | 20.5 | 20.3 | 18.7 | 18.6 | 18.6 | 20.1 | 19.9 | 19.8 | 18.1 | 17.8 | 17.7 |




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## 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 | 22.6 | 22.3 | 23.1 | 24.5 | 24.8 | 24.8 | 22.8 | 22.7 | 22.9 |
| | | 1 | 49 | 25.6 | 25.4 | **25.7** | 22.9 | 22.5 | **23.1** | **25.0** | 25.0 | 24.7 | **23.0** | 23.0 | 22.9 |
| | | 1 | 99 | 24.9 | 24.9 | 25.5 | 22.3 | 22.2 | 22.7 | 24.6 | 24.4 | 24.9 | 22.7 | 22.8 | 23.0 |
| | | 50 | 0 | 23.9 | 24.2 | 23.8 | 21.5 | 21.5 | 21.2 | 23.6 | 23.9 | 23.0 | 22.1 | 22.0 | 21.9 |
| | | 50 | 24 | 24.0 | 24.1 | 24.2 | 21.6 | 21.6 | 21.8 | 23.8 | 24.0 | 23.6 | 22.2 | 22.2 | 22.1 |
| | | 50 | 49 | 23.8 | 23.9 | 24.1 | 21.4 | 21.5 | 21.8 | 23.8 | 23.7 | 23.6 | 22.1 | 22.1 | 22.0 |
| | | 100 | 0 | 23.7 | 23.8 | 23.8 | 21.3 | 21.5 | 21.5 | 23.6 | 23.7 | 23.2 | 22.1 | 22.1 | 22.0 |
| | 16QAM | 1 | 0 | 23.8 | 24.2 | 24.4 | 21.5 | 22.0 | 22.0 | 23.7 | 24.2 | 23.9 | 22.3 | 22.2 | 22.5 |
| | | 1 | 49 | 24.4 | 24.4 | 24.5 | 22.1 | 22.2 | **22.3** | 24.3 | **24.6** | 24.1 | 22.5 | **22.5** | 22.4 |
| | | 1 | 99 | 24.0 | 24.0 | **24.6** | 21.7 | 22.0 | 22.1 | 24.0 | 24.0 | 24.4 | 22.3 | 22.3 | 22.5 |
| | | 50 | 0 | 22.7 | 23.0 | 22.5 | 20.5 | 20.8 | 20.3 | 22.7 | 23.1 | 22.1 | 21.1 | 21.1 | 20.9 |
| | | 50 | 24 | 23.0 | 23.1 | 23.1 | 20.7 | 20.8 | 21.0 | 23.0 | 23.2 | 22.7 | 21.2 | 21.2 | 21.1 |
| | | 50 | 49 | 22.9 | 22.9 | 23.1 | 20.6 | 20.7 | 21.0 | 22.9 | 23.0 | 22.8 | 21.1 | 21.1 | 21.0 |
| | | 100 | 0 | 22.8 | 23.0 | 22.9 | 20.5 | 20.8 | 20.7 | 22.8 | 23.1 | 22.5 | 21.2 | 21.2 | 21.0 |
| | 64QAM | 1 | 0 | 22.5 | 22.8 | 23.0 | 21.3 | 21.4 | **21.9** | 23.1 | 23.2 | 23.9 | 21.3 | 21.0 | 21.2 |
| | | 1 | 49 | 23.0 | 22.8 | 23.1 | 21.6 | 21.4 | 21.9 | 23.5 | 23.5 | **23.9** | **21.6** | 21.3 | 21.2 |
| | | 1 | 99 | 22.6 | 22.5 | **23.2** | 21.4 | 21.3 | 21.9 | 23.3 | 23.4 | 23.9 | 21.4 | 21.1 | 21.2 |
| | | 50 | 0 | 21.4 | 21.6 | 21.1 | 20.4 | 20.3 | 20.3 | 22.2 | 22.3 | 22.3 | 20.1 | 20.1 | 20.0 |
| | | 50 | 24 | 21.6 | 21.6 | 21.7 | 20.5 | 20.3 | 20.4 | 22.4 | 22.4 | 22.4 | 20.2 | 20.2 | 20.1 |
| | | 50 | 49 | 21.5 | 21.4 | 21.7 | 20.4 | 20.2 | 20.3 | 22.3 | 22.3 | 22.3 | 20.1 | 20.2 | 20.1 |
| | | 100 | 0 | 21.4 | 21.4 | 21.4 | 20.5 | 20.3 | 20.2 | 22.3 | 22.3 | 22.3 | 20.1 | 20.1 | 20.0 |
| | 256QAM | 1 | 0 | 20.1 | 20.5 | 20.1 | 18.2 | 18.4 | 18.4 | 19.9 | 19.5 | 19.7 | 17.9 | 17.5 | 17.7 |
| | | 1 | 49 | 20.4 | **20.8** | 20.4 | 18.7 | 18.6 | 18.6 | **20.2** | 19.8 | 20.0 | **18.2** | 17.8 | 17.9 |
| | | 1 | 99 | 20.1 | 20.7 | 20.1 | 18.5 | 18.5 | 18.3 | 20.0 | 19.5 | 19.8 | 18.0 | 17.5 | 17.7 |
| | | 50 | 0 | 20.4 | 20.3 | 20.3 | 18.6 | 18.5 | 18.6 | 20.0 | 19.8 | 19.8 | 18.1 | 17.9 | 17.7 |
| | | 50 | 24 | 20.5 | 20.5 | 20.3 | **18.8** | 18.6 | 18.7 | 20.1 | 19.9 | 19.9 | 18.1 | 17.9 | 17.7 |
| | | 50 | 49 | 20.4 | 20.4 | 20.2 | 18.7 | 18.5 | 18.5 | 20.0 | 19.9 | 19.8 | 18.0 | 17.8 | 17.7 |
| | | 100 | 0 | 20.4 | 20.4 | 20.3 | 18.7 | 18.6 | 18.5 | 20.0 | 19.9 | 19.7 | 18.0 | 17.9 | 17.6 |




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## 7.17. LTE BAND 71

| Test Engineer ID: | 10646 | Test Date: | 5/7/2020 |
|---|---|---|---|

### 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 | 25.5 | 25.5 | 25.4 | 24.4 | 24.2 | 24.3 |
| | | 1 | 12 | 25.5 | 25.7 | 25.4 | 24.4 | 24.3 | 24.3 |
| | | 1 | 24 | 25.6 | **25.7** | 25.4 | **24.5** | 24.3 | 24.3 |
| | | 12 | 0 | 24.5 | 24.6 | 24.5 | 23.3 | 23.3 | 23.3 |
| | | 12 | 6 | 24.7 | 24.6 | 24.5 | 23.5 | 23.4 | 23.4 |
| | | 12 | 11 | 24.7 | 24.7 | 24.5 | 23.5 | 23.5 | 23.4 |
| | | 25 | 0 | 24.6 | 24.7 | 24.6 | 23.5 | 23.5 | 23.3 |
| | 16QAM | 1 | 0 | 24.8 | 24.7 | 25.0 | 23.6 | 23.9 | 23.5 |
| | | 1 | 12 | 24.8 | 24.9 | **25.1** | 23.6 | 24.0 | 23.5 |
| | | 1 | 24 | 24.9 | 24.9 | 25.0 | 23.7 | **24.1** | 23.5 |
| | | 12 | 0 | 23.7 | 23.7 | 23.7 | 22.5 | 22.5 | 22.4 |
| | | 12 | 6 | 23.8 | 23.7 | 23.7 | 22.6 | 22.6 | 22.4 |
| | | 12 | 11 | 23.8 | 23.8 | 23.7 | 22.6 | 22.6 | 22.4 |
| | | 25 | 0 | 23.6 | 23.7 | 23.6 | 22.5 | 22.6 | 22.3 |
| | 64QAM | 1 | 0 | 23.8 | 23.3 | 23.7 | 22.5 | 22.0 | 22.3 |
| | | 1 | 12 | 23.9 | 23.4 | 23.7 | 22.5 | 22.1 | 22.4 |
| | | 1 | 24 | **23.9** | 23.4 | 23.7 | **22.6** | 22.1 | 22.4 |
| | | 12 | 0 | 22.6 | 22.5 | 22.4 | 21.2 | 21.2 | 21.1 |
| | | 12 | 6 | 22.7 | 22.5 | 22.4 | 21.3 | 21.3 | 21.1 |
| | | 12 | 11 | 22.7 | 22.6 | 22.4 | 21.3 | 21.3 | 21.1 |
| | | 25 | 0 | 22.6 | 22.4 | 22.4 | 21.3 | 21.2 | 21.0 |
| | 256QAM | 1 | 0 | 20.3 | 20.7 | 20.7 | 19.7 | 19.8 | 19.8 |
| | | 1 | 12 | 20.6 | 20.8 | 20.7 | 19.8 | 20.0 | 19.6 |
| | | 1 | 24 | 20.6 | **20.9** | 20.6 | 19.9 | 19.9 | 19.7 |
| | | 12 | 0 | 20.7 | 20.7 | 20.6 | 20.0 | 19.9 | 19.9 |
| | | 12 | 6 | 20.8 | 20.8 | 20.7 | **20.0** | 20.0 | 19.8 |
| | | 12 | 11 | 20.8 | 20.8 | 20.7 | 20.0 | 20.0 | 19.9 |
| | | 25 | 0 | 20.8 | 20.7 | 20.7 | 20.0 | 20.0 | 19.8 |




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## 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 | 25.7 | 25.7 | **25.7** | 24.5 | 24.4 | **24.5** |
| | | 1 | 24 | 25.6 | 25.7 | 25.6 | 24.4 | 24.4 | 24.4 |
| | | 1 | 49 | 25.6 | 25.6 | 25.6 | 24.4 | 24.4 | 24.4 |
| | | 25 | 0 | 24.7 | 24.7 | 24.7 | 23.5 | 23.5 | 23.5 |
| | | 25 | 12 | 24.8 | 24.8 | 24.7 | 23.6 | 23.5 | 23.4 |
| | | 25 | 24 | 24.8 | 24.8 | 24.7 | 23.5 | 23.5 | 23.5 |
| | | 50 | 0 | 24.7 | 24.7 | 24.6 | 23.5 | 23.5 | 23.4 |
| | 16QAM | 1 | 0 | 24.8 | 24.7 | **25.1** | 23.5 | 23.5 | **23.9** |
| | | 1 | 24 | 24.8 | 24.7 | 25.0 | 23.5 | 23.4 | 23.8 |
| | | 1 | 49 | 24.8 | 24.7 | 25.0 | 23.5 | 23.4 | 23.8 |
| | | 25 | 0 | 23.8 | 23.8 | 23.7 | 22.6 | 22.5 | 22.5 |
| | | 25 | 12 | 24.0 | 23.8 | 23.7 | 22.7 | 22.6 | 22.5 |
| | | 25 | 24 | 23.9 | 23.8 | 23.7 | 22.6 | 22.6 | 22.5 |
| | | 50 | 0 | 23.8 | 23.7 | 23.6 | 22.6 | 22.5 | 22.4 |
| | 64QAM | 1 | 0 | 23.8 | **23.9** | 23.6 | 22.4 | **22.6** | 22.3 |
| | | 1 | 24 | 23.8 | 23.8 | 23.6 | 22.5 | 22.5 | 22.3 |
| | | 1 | 49 | 23.8 | 23.9 | 23.6 | 22.5 | 22.6 | 22.3 |
| | | 25 | 0 | 22.7 | 22.6 | 22.6 | 21.3 | 21.3 | 21.3 |
| | | 25 | 12 | 22.7 | 22.6 | 22.6 | 21.4 | 21.3 | 21.3 |
| | | 25 | 24 | 22.7 | 22.6 | 22.6 | 21.3 | 21.3 | 21.3 |
| | | 50 | 0 | 22.6 | 22.5 | 22.4 | 21.2 | 21.2 | 21.1 |
| | 256QAM | 1 | 0 | 20.5 | 20.9 | 20.2 | 19.5 | 19.6 | 19.5 |
| | | 1 | 24 | 20.8 | **21.1** | 20.5 | 19.9 | 19.9 | 19.8 |
| | | 1 | 49 | 20.7 | 20.9 | 20.2 | 19.5 | 19.9 | 19.6 |
| | | 25 | 0 | 20.7 | 20.6 | 20.6 | 19.9 | 19.8 | 19.7 |
| | | 25 | 12 | 20.9 | 20.7 | 20.7 | **20.0** | 19.9 | 19.8 |
| | | 25 | 24 | 20.9 | 20.7 | 20.7 | 19.9 | 19.9 | 19.8 |
| | | 50 | 0 | 20.8 | 20.6 | 20.6 | 19.9 | 19.8 | 19.8 |



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## 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** | 25.6 | 25.6 | 24.5 | 24.5 | 24.5 |
| | | 1 | 37 | 25.7 | 25.5 | 25.5 | 24.5 | 24.5 | 24.4 |
| | | 1 | 74 | 25.7 | 25.5 | 25.4 | **24.5** | 24.5 | 24.4 |
| | | 36 | 0 | 24.7 | 24.6 | 24.6 | 23.5 | 23.6 | 23.5 |
| | | 36 | 16 | 24.7 | 24.6 | 24.6 | 23.6 | 23.5 | 23.5 |
| | | 36 | 35 | 24.7 | 24.6 | 24.6 | 23.5 | 23.5 | 23.5 |
| | | 75 | 0 | 24.7 | 24.6 | 24.5 | 23.6 | 23.5 | 23.4 |
| | 16QAM | 1 | 0 | 25.1 | 24.6 | 25.0 | 23.9 | 23.5 | 23.9 |
| | | 1 | 37 | 25.1 | 24.6 | 24.9 | **24.1** | 23.5 | 23.9 |
| | | 1 | 74 | **25.1** | 24.5 | 24.8 | 24.0 | 23.5 | 23.8 |
| | | 36 | 0 | 23.7 | 23.6 | 23.6 | 22.6 | 22.6 | 22.6 |
| | | 36 | 16 | 23.7 | 23.6 | 23.6 | 22.6 | 22.5 | 22.5 |
| | | 36 | 35 | 23.7 | 23.6 | 23.6 | 22.6 | 22.5 | 22.5 |
| | | 75 | 0 | 23.7 | 23.5 | 23.5 | 22.6 | 22.5 | 22.4 |
| | 64QAM | 1 | 0 | 23.9 | 23.6 | 23.4 | 22.8 | 22.5 | 22.3 |
| | | 1 | 37 | 23.9 | 23.6 | 23.4 | 22.8 | 22.5 | 22.3 |
| | | 1 | 74 | **24.0** | 23.6 | 23.3 | **22.9** | 22.5 | 22.2 |
| | | 36 | 0 | 22.4 | 22.4 | 22.4 | 21.3 | 21.3 | 21.3 |
| | | 36 | 16 | 22.5 | 22.4 | 22.4 | 21.3 | 21.3 | 21.3 |
| | | 36 | 35 | 22.4 | 22.4 | 22.4 | 21.3 | 21.3 | 21.3 |
| | | 75 | 0 | 22.4 | 22.3 | 22.3 | 21.3 | 21.2 | 21.2 |
| | 256QAM | 1 | 0 | 20.7 | 20.9 | 20.2 | 19.6 | 19.8 | 19.6 |
| | | 1 | 37 | 21.0 | **21.1** | 20.5 | 20.0 | 19.9 | **20.1** |
| | | 1 | 74 | 20.9 | 21.0 | 20.3 | 20.0 | 19.9 | 19.7 |
| | | 36 | 0 | 20.7 | 20.7 | 20.6 | 19.8 | 19.8 | 19.8 |
| | | 36 | 16 | 20.8 | 20.7 | 20.6 | 19.9 | 19.9 | 19.8 |
| | | 36 | 35 | 20.8 | 20.7 | 20.7 | 19.9 | 19.9 | 19.9 |
| | | 75 | 0 | 20.8 | 20.7 | 20.7 | 19.9 | 19.9 | 19.8 |



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## 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 | 25.6 | 24.4 | **24.5** | 24.4 |
| | | 1 | 49 | 25.7 | 25.6 | 25.6 | 24.4 | 24.4 | 24.4 |
| | | 1 | 99 | 25.7 | 25.6 | 25.5 | 24.4 | 24.4 | 24.3 |
| | | 50 | 0 | 24.8 | 24.7 | 24.7 | 23.5 | 23.5 | 23.5 |
| | | 50 | 24 | 24.8 | 24.7 | 24.7 | 23.6 | 23.5 | 23.5 |
| | | 50 | 49 | 24.7 | 24.7 | 24.6 | 23.5 | 23.5 | 23.4 |
| | | 100 | 0 | 24.8 | 24.7 | 24.6 | 23.5 | 23.5 | 23.4 |
| | 16QAM | 1 | 0 | 25.2 | **25.3** | 25.2 | 24.0 | **24.1** | 23.9 |
| | | 1 | 49 | 25.2 | 25.2 | 25.1 | 23.9 | 24.0 | 23.9 |
| | | 1 | 99 | 25.2 | 25.2 | 25.0 | 23.9 | 24.0 | 23.8 |
| | | 50 | 0 | 23.8 | 23.7 | 23.7 | 22.6 | 22.6 | 22.5 |
| | | 50 | 24 | 23.8 | 23.8 | 23.8 | 22.6 | 22.6 | 22.5 |
| | | 50 | 49 | 23.7 | 23.7 | 23.7 | 22.5 | 22.5 | 22.4 |
| | | 100 | 0 | 23.8 | 23.7 | 23.6 | 22.6 | 22.5 | 22.4 |
| | 64QAM | 1 | 0 | 23.6 | 23.7 | **24.0** | 22.3 | 22.5 | **22.8** |
| | | 1 | 49 | 23.7 | 23.7 | 24.0 | 22.4 | 22.4 | 22.8 |
| | | 1 | 99 | 23.7 | 23.8 | 23.9 | 22.5 | 22.5 | 22.7 |
| | | 50 | 0 | 22.5 | 22.5 | 22.5 | 21.3 | 21.3 | 21.2 |
| | | 50 | 24 | 22.6 | 22.5 | 22.5 | 21.3 | 21.3 | 21.2 |
| | | 50 | 49 | 22.6 | 22.5 | 22.4 | 21.3 | 21.2 | 21.2 |
| | | 100 | 0 | 22.5 | 22.4 | 22.3 | 21.3 | 21.1 | 21.1 |
| | 256QAM | 1 | 0 | 20.4 | 20.5 | 20.6 | 19.6 | 19.5 | 19.5 |
| | | 1 | 49 | 20.6 | **20.9** | 20.8 | **20.2** | 19.9 | 19.8 |
| | | 1 | 99 | 20.6 | 20.8 | 20.6 | 20.0 | 19.6 | 19.5 |
| | | 50 | 0 | 20.7 | 20.7 | 20.7 | 19.8 | 19.8 | 19.8 |
| | | 50 | 24 | 20.9 | 20.7 | 20.7 | 19.9 | 19.9 | 19.9 |
| | | 50 | 49 | 20.9 | 20.7 | 20.7 | 19.9 | 19.9 | 19.8 |
| | | 100 | 0 | 20.8 | 20.6 | 20.6 | 19.9 | 19.8 | 19.8 |



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## 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 | 22.9 | 21.4 | 22.0 | 19.0 | 19.2 | 18.0 | 22.4 | 22.0 | 22.0 | 19.5 | 19.6 | 19.0 |
| | | 1 | 1 | **25.7** | 24.2 | 24.1 | **22.7** | 22.1 | 21.9 | **25.5** | 25.3 | 25.1 | 23.0 | **23.5** | 22.5 |
| | | 25 | 12 | 24.5 | 24.2 | 23.8 | 22.5 | 22.3 | 21.8 | 25.3 | 25.1 | 25.2 | 22.9 | 23.1 | 22.7 |
| | | 50 | 0 | 22.3 | 24.0 | 22.7 | 22.0 | 21.7 | 21.1 | 25.3 | 25.1 | 25.2 | 22.4 | 22.6 | 22.2 |
| | QPSK | 1 | 0 | 22.1 | 22.0 | 22.2 | 19.1 | 19.1 | 19.0 | 22.0 | 22.0 | 21.8 | 19.8 | 19.7 | 19.7 |
| | | 1 | 1 | 25.5 | 25.4 | 25.5 | 22.6 | **22.7** | 22.7 | **25.5** | 25.4 | 25.4 | 23.1 | 23.1 | 23.3 |
| | | 25 | 12 | 25.5 | **25.6** | 25.5 | 22.6 | 22.5 | 22.7 | 25.4 | 25.3 | 25.4 | 23.2 | **23.4** | 23.2 |
| | | 50 | 0 | 24.6 | 24.4 | 24.6 | 21.8 | 21.7 | 21.6 | 24.4 | 24.4 | 24.4 | 22.3 | 22.1 | 22.1 |
| | 16QAM | 1 | 0 | 22.2 | 22.2 | 22.1 | 19.3 | 19.2 | 19.3 | 22.1 | 22.0 | 21.9 | 19.7 | 19.8 | 19.7 |
| | | 1 | 1 | 24.7 | 24.7 | 24.7 | **21.9** | 21.8 | 21.9 | **24.6** | 24.6 | 24.5 | 22.2 | **22.4** | 22.3 |
| | | 25 | 12 | **24.8** | 24.7 | 24.6 | 21.7 | 21.7 | 21.9 | 24.6 | 24.5 | 24.5 | 22.3 | 22.3 | 22.2 |
| | | 50 | 0 | 23.7 | 23.7 | 23.6 | 20.8 | 20.7 | 20.7 | 23.5 | 23.4 | 23.6 | 21.3 | 21.3 | 21.2 |
| | 64QAM | 1 | 0 | 22.2 | 22.3 | 22.1 | 19.3 | 19.2 | 19.3 | 22.0 | 22.1 | 22.0 | 19.8 | 19.8 | 19.7 |
| | | 1 | 1 | 23.2 | 23.2 | 23.1 | 20.3 | **20.4** | 20.3 | 22.9 | 23.0 | 23.1 | 20.8 | 20.7 | 20.9 |
| | | 25 | 12 | **23.3** | 23.3 | 23.2 | 20.2 | 20.3 | 20.2 | **23.1** | 22.9 | 23.1 | 20.8 | 20.8 | 20.8 |
| | | 50 | 0 | 23.2 | 23.1 | 23.3 | 20.2 | 20.2 | 20.3 | 22.9 | 23.1 | 23.1 | 20.9 | **20.9** | 20.8 |
| | 256QAM | 1 | 0 | **21.3** | 21.3 | 21.3 | 18.3 | 18.2 | **18.3** | 21.1 | 20.9 | **21.1** | 18.8 | 18.9 | 18.9 |
| | | 1 | 1 | 21.2 | 21.3 | 21.2 | 18.2 | 18.2 | 18.2 | 20.9 | 21.0 | 21.0 | **18.9** | 18.7 | 18.9 |
| | | 25 | 12 | 21.3 | 21.3 | 21.2 | 18.2 | 18.3 | 18.3 | 21.0 | 21.0 | 21.1 | 18.9 | 18.9 | 18.8 |
| | | 50 | 0 | 21.2 | 21.1 | 21.2 | 18.3 | 18.2 | 18.2 | 21.0 | 21.0 | 20.9 | 18.9 | 18.8 | 18.8 |




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## 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 | 22.5 | 22.3 | 21.6 | 18.5 | 18.8 | 18.2 | 22.4 | 22.6 | 22.4 | 19.4 | 19.9 | 18.8 |
| | | 1 | 1 | 24.9 | 25.1 | **25.7** | 22.3 | **22.7** | 21.9 | 25.3 | 22.5 | 25.2 | 22.5 | 23.2 | 22.6 |
| | | 50 | 25 | 25.3 | 24.8 | 24.3 | 22.2 | 22.3 | 20.8 | 25.3 | 25.3 | 24.9 | 22.8 | **23.5** | 22.0 |
| | | 100 | 0 | 25.2 | 24.9 | 24.5 | 21.6 | 21.8 | 20.8 | 25.3 | **25.5** | 24.9 | 22.3 | 22.6 | 21.6 |
| | QPSK | 1 | 0 | 21.9 | 21.9 | 22.0 | 18.8 | 19.0 | 18.9 | 21.9 | 21.9 | 22.0 | 19.8 | 20.0 | 19.9 |
| | | 1 | 1 | **25.6** | 25.6 | 25.5 | 22.3 | 22.4 | 22.3 | 25.4 | 25.3 | 25.4 | 23.4 | 23.3 | 23.3 |
| | | 50 | 25 | 25.5 | 25.5 | 25.5 | **22.6** | 22.3 | 22.5 | **25.5** | 25.3 | 25.4 | **23.5** | 23.4 | 23.4 |
| | | 100 | 0 | 24.5 | 24.6 | 24.6 | 21.5 | 21.5 | 21.4 | 24.5 | 24.4 | 24.3 | 22.3 | 22.3 | 22.3 |
| | 16QAM | 1 | 0 | 22.0 | 22.1 | 22.2 | 19.0 | 18.9 | 19.0 | 22.1 | 21.9 | 22.0 | 19.9 | 20.0 | 20.0 |
| | | 1 | 1 | 24.5 | 24.6 | **24.7** | 21.5 | 21.4 | 21.5 | 24.5 | 24.5 | **24.6** | 22.4 | **22.5** | 22.4 |
| | | 50 | 25 | 24.5 | 24.6 | 24.5 | 21.5 | **21.6** | 21.5 | 24.6 | 24.5 | 24.5 | 22.4 | 22.4 | 22.5 |
| | | 100 | 0 | 23.7 | 23.6 | 23.6 | 20.5 | 20.5 | 20.6 | 23.6 | 23.5 | 23.5 | 21.3 | 21.4 | 21.5 |
| | 64QAM | 1 | 0 | 22.1 | 22.1 | 22.1 | 19.1 | 18.9 | 19.1 | 22.1 | 22.0 | 21.9 | 19.9 | 19.8 | 19.8 |
| | | 1 | 1 | 23.2 | 23.1 | 23.2 | 19.9 | 20.0 | 19.9 | 23.1 | 23.0 | 23.1 | 21.0 | 20.9 | 20.9 |
| | | 50 | 25 | 23.1 | 23.1 | 23.2 | 20.1 | 20.0 | 19.9 | 22.9 | 23.0 | 23.0 | 20.9 | 20.9 | 21.0 |
| | | 100 | 0 | 23.1 | 23.2 | 23.1 | 20.0 | 20.0 | 20.0 | 22.9 | 23.1 | 23.1 | 21.0 | 21.0 | 21.0 |
| | 256QAM | 1 | 0 | 21.1 | 21.1 | 21.0 | 18.0 | 18.0 | 17.9 | 21.0 | 21.0 | 21.1 | 19.0 | 18.9 | 18.8 |
| | | 1 | 1 | 21.0 | 21.0 | 21.1 | 18.1 | 17.9 | 18.0 | 20.9 | 21.1 | 21.1 | 19.0 | 18.9 | **19.0** |
| | | 50 | 25 | **21.2** | 21.0 | 21.1 | 18.0 | 18.0 | 18.1 | 21.1 | 21.0 | **21.1** | 18.9 | 18.8 | 19.0 |
| | | 100 | 0 | 21.1 | 21.1 | 21.1 | 17.9 | 18.1 | **18.1** | 21.0 | 20.9 | 20.9 | 18.9 | 19.0 | 18.9 |

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

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Conducted Average (dBm) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ANT 7 | | | ANT 4 | | | ANT 9 | | | ANT 8 | | |
| | | | | 648333 | 656000 | 663666 | 648333 | 656000 | 663666 | 648333 | 656000 | 663666 | 648333 | 656000 | 663666 |
| | | | | 3725.0 | 3840.0 | 3955.0 | 3725.0 | 3840.0 | 3955.0 | 3725.0 | 3840.0 | 3955.0 | 3725.0 | 3840.0 | 3955.0 |
| 50.0 | BPSK | 1 | 0 | 22.6 | 24.6 | 22.4 | 18.6 | 18.9 | 18.0 | 22.1 | 23.5 | 21.9 | 19.4 | 19.6 | 18.4 |
| | | 1 | 1 | 25.1 | **25.7** | 24.1 | 21.8 | **22.7** | 21.8 | 22.0 | 25.0 | **25.5** | 22.4 | **23.5** | 22.0 |
| | | 64 | 32 | 25.0 | 25.0 | 24.7 | 22.1 | 21.9 | 21.1 | 24.9 | 25.0 | 24.6 | 22.5 | 23.0 | 22.0 |
| | | 128 | 0 | 25.1 | 24.8 | 24.5 | 21.5 | 21.9 | 20.6 | 24.9 | 25.1 | 24.6 | 22.1 | 22.3 | 21.5 |
| | QPSK | 1 | 0 | 21.9 | 22.2 | 22.1 | 19.0 | 18.9 | 19.0 | 21.9 | 21.8 | 21.7 | 19.7 | 19.9 | 19.8 |
| | | 1 | 1 | **25.5** | 25.4 | 25.5 | 22.5 | 22.5 | 22.3 | 25.4 | 25.3 | **25.4** | 23.3 | 23.3 | 23.3 |
| | | 64 | 32 | 25.4 | 25.5 | 25.4 | 22.6 | 22.5 | **22.6** | 25.2 | 25.3 | 25.2 | 23.2 | **23.4** | 23.4 |
| | | 128 | 0 | 24.5 | 24.5 | 24.4 | 21.4 | 21.4 | 21.3 | 24.3 | 24.2 | 24.4 | 22.2 | 22.2 | 22.4 |
| | 16QAM | 1 | 0 | 22.1 | 22.2 | 22.2 | 19.2 | 19.1 | 19.1 | 21.8 | 21.9 | 21.9 | 19.9 | 19.9 | 20.0 |
| | | 1 | 1 | 24.6 | 24.6 | 24.5 | 21.6 | 21.5 | 21.6 | 24.4 | 24.4 | 24.4 | **22.5** | 22.4 | 22.5 |
| | | 64 | 32 | **24.6** | 24.6 | 24.5 | 21.6 | 21.5 | **21.7** | 24.4 | 24.4 | **24.4** | 22.4 | 22.5 | 22.3 |
| | | 128 | 0 | 23.6 | 23.5 | 23.5 | 20.5 | 20.7 | 20.6 | 23.3 | 23.4 | 23.5 | 21.4 | 21.4 | 21.4 |
| | 64QAM | 1 | 0 | 22.1 | 22.1 | 22.2 | 19.1 | 19.0 | 19.1 | 21.9 | 21.9 | 21.9 | 19.9 | 19.8 | 19.9 |
| | | 1 | 1 | 23.0 | 23.2 | 23.1 | 20.2 | 20.0 | 20.1 | 23.0 | 22.9 | 22.8 | 21.0 | 21.0 | 20.8 |
| | | 64 | 32 | **23.2** | 23.2 | 23.1 | **20.2** | 20.0 | 20.1 | 22.9 | **23.0** | 23.0 | 21.0 | 20.9 | 20.9 |
| | | 128 | 0 | 23.0 | 23.0 | 23.1 | 20.2 | 20.2 | 20.1 | 22.9 | 22.9 | 22.9 | 21.0 | 20.9 | **21.0** |
| | 256QAM | 1 | 0 | 21.0 | 21.1 | 21.1 | 18.2 | 18.0 | 18.1 | 20.9 | 21.0 | 21.0 | 18.8 | 18.9 | 18.8 |
| | | 1 | 1 | 21.0 | 21.2 | 21.1 | **18.2** | 18.1 | 18.0 | 20.9 | 20.9 | 20.8 | 19.0 | 18.8 | 18.9 |
| | | 64 | 32 | 21.1 | **21.2** | 21.1 | 18.1 | 18.2 | 18.1 | 20.9 | **21.0** | 20.9 | 18.8 | **19.0** | 18.9 |
| | | 128 | 0 | 21.0 | 21.1 | 21.0 | 18.1 | 18.0 | 18.0 | 20.9 | 20.8 | 20.9 | 18.9 | 18.8 | 18.8 |




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## 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 | 22.1 | 22.3 | 21.3 | 18.2 | 19.1 | 18.5 | 22.0 | 22.5 | 21.6 | 19.7 | 19.8 | 19.1 |
| | | 1 | 1 | 24.2 | **25.7** | 23.1 | 22.4 | **22.7** | 21.8 | 25.0 | **25.5** | 24.8 | 22.9 | **23.5** | 22.6 |
| | | 81 | 40 | 23.5 | 24.2 | 23.7 | 21.9 | 22.4 | 21.5 | 24.9 | 25.0 | 24.5 | 22.9 | 22.9 | 22.2 |
| | | 162 | 0 | 24.5 | 23.6 | 23.9 | 20.6 | 22.3 | 21.0 | 24.9 | 25.1 | 24.5 | 22.3 | 22.4 | 21.6 |
| | QPSK | 1 | 0 | 21.8 | 22.0 | 22.0 | 19.1 | 19.1 | 19.1 | 21.8 | 21.8 | 21.7 | 19.9 | 19.9 | 19.9 |
| | | 1 | 1 | 25.5 | **25.7** | 25.5 | 22.4 | 22.4 | 22.4 | 25.4 | **25.4** | 25.1 | 23.3 | **23.4** | 23.4 |
| | | 81 | 40 | 25.5 | 25.4 | 25.6 | **22.6** | 22.4 | 22.5 | 25.2 | 25.3 | 25.3 | 23.4 | 23.4 | 23.3 |
| | | 162 | 0 | 24.6 | 24.5 | 24.6 | 21.6 | 21.7 | 21.4 | 24.4 | 24.3 | 24.3 | 22.4 | 22.2 | 22.5 |
| | 16QAM | 1 | 0 | 22.2 | 22.0 | 22.1 | 19.2 | 19.1 | 19.0 | 21.8 | 21.8 | 21.8 | 20.0 | 20.0 | 20.0 |
| | | 1 | 1 | **24.7** | 24.6 | 24.6 | **21.7** | 21.6 | 21.6 | 24.4 | 24.3 | 24.4 | 22.4 | **22.6** | 22.5 |
| | | 81 | 40 | 24.5 | 24.6 | 24.6 | 21.6 | 21.6 | 21.6 | **24.5** | 24.4 | 24.4 | 22.5 | 22.4 | 22.4 |
| | | 162 | 0 | 23.6 | 23.6 | 23.7 | 20.5 | 20.5 | 20.7 | 23.3 | 23.4 | 23.4 | 21.5 | 21.6 | 21.5 |
| | 64QAM | 1 | 0 | 22.1 | 22.0 | 22.1 | 19.2 | 19.1 | 19.1 | 21.9 | 21.8 | 21.9 | 20.0 | 19.9 | 20.1 |
| | | 1 | 1 | 23.1 | 23.2 | **23.2** | 20.0 | 20.0 | 20.1 | 22.9 | 22.9 | 22.8 | 20.9 | 21.0 | 21.0 |
| | | 81 | 40 | 23.1 | 23.2 | 23.1 | 20.1 | 20.1 | 20.1 | 22.9 | 22.8 | 23.0 | **21.1** | 21.1 | 21.1 |
| | | 162 | 0 | 23.1 | 23.1 | 23.1 | 20.1 | **20.2** | 20.1 | **23.0** | 22.9 | 23.0 | 21.0 | 21.0 | 21.0 |
| | 256QAM | 1 | 0 | 21.0 | 21.1 | 21.1 | 18.2 | 18.0 | 18.1 | 20.9 | 21.0 | 20.8 | 19.0 | 19.1 | 19.1 |
| | | 1 | 1 | 21.2 | 21.2 | 21.1 | 18.0 | 18.2 | 18.1 | 21.0 | 20.9 | 20.8 | **19.1** | 19.0 | 19.1 |
| | | 81 | 40 | 21.2 | 21.2 | **21.2** | 18.0 | 18.1 | 18.0 | **21.0** | 20.9 | 20.8 | 19.0 | 19.0 | 18.9 |
| | | 162 | 0 | 21.0 | 21.1 | 21.1 | 18.0 | **18.2** | 18.1 | 21.0 | 20.9 | 20.9 | 19.1 | 19.0 | 19.0 |




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## 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 | 22.7 | 22.6 | 23.0 | 18.9 | 19.5 | 18.3 | 21.4 | 21.5 | 21.6 | 20.0 | 19.6 | 19.7 |
| | | 1 | 1 | 25.3 | **25.7** | 25.2 | 22.0 | 21.9 | 21.7 | 24.0 | 24.5 | **25.5** | 23.1 | 23.0 | 23.1 |
| | | 108 | 54 | 25.1 | 24.7 | 24.7 | 21.4 | 22.4 | 20.6 | 23.9 | 24.0 | 23.7 | **23.5** | 22.5 | 22.6 |
| | | 216 | 0 | 23.7 | 25.0 | 24.7 | **22.7** | 21.9 | 20.5 | 23.8 | 24.0 | 23.3 | 22.6 | 22.6 | 22.2 |
| | QPSK | 1 | 0 | 22.0 | 22.2 | 22.1 | 19.1 | 19.2 | 19.0 | 21.8 | 22.0 | 21.8 | 19.7 | 19.7 | 19.7 |
| | | 1 | 1 | 25.5 | **25.6** | 25.4 | 22.7 | 22.7 | 22.5 | 25.4 | 25.3 | 25.4 | 23.2 | 23.2 | **23.3** |
| | | 108 | 54 | 25.3 | 25.5 | 25.5 | 22.7 | 22.5 | **22.7** | 25.3 | 25.4 | **25.4** | 23.2 | 23.2 | 23.3 |
| | | 216 | 0 | 24.5 | 24.3 | 24.6 | 21.5 | 21.6 | 21.7 | 24.3 | 24.4 | 24.3 | 22.2 | 22.2 | 22.1 |
| | 16QAM | 1 | 0 | 22.1 | 22.2 | 22.1 | 19.2 | 19.1 | 19.1 | 22.1 | 22.0 | 22.1 | 19.7 | 19.8 | 19.7 |
| | | 1 | 1 | 24.7 | 24.7 | 24.6 | 21.7 | 21.7 | **21.8** | **24.5** | 24.4 | 24.5 | **22.4** | 22.2 | 22.3 |
| | | 108 | 54 | 24.6 | **24.7** | 24.6 | 21.8 | 21.8 | 21.7 | 24.4 | 24.4 | 24.4 | 22.4 | 22.2 | 22.2 |
| | | 216 | 0 | 23.6 | 23.6 | 23.6 | 20.7 | 20.7 | 20.7 | 23.4 | 23.5 | 23.6 | 21.3 | 21.4 | 21.4 |
| | 64QAM | 1 | 0 | 22.2 | 22.0 | 22.1 | 19.1 | 19.3 | 19.2 | 21.9 | 22.0 | 21.9 | 19.8 | 19.8 | 19.7 |
| | | 1 | 1 | 23.0 | 23.1 | 23.0 | 20.2 | 20.3 | 20.1 | 23.0 | **23.1** | 23.1 | 20.8 | 20.8 | 20.8 |
| | | 108 | 54 | 23.0 | **23.2** | 23.0 | **20.3** | 20.2 | 20.2 | 23.0 | 23.1 | 23.0 | 20.8 | 20.8 | 20.7 |
| | | 216 | 0 | 23.1 | 23.0 | 23.2 | 20.2 | 20.2 | 20.2 | 22.9 | 23.0 | 23.1 | 20.8 | **20.8** | 20.8 |
| | 256QAM | 1 | 0 | 21.1 | 21.1 | 21.1 | 18.2 | **18.3** | 18.2 | 21.1 | 21.0 | 21.0 | 18.7 | 18.9 | 18.7 |
| | | 1 | 1 | 21.2 | 21.0 | 21.1 | 18.2 | 18.1 | 18.1 | **21.1** | 20.9 | 21.0 | 18.8 | 18.8 | 18.7 |
| | | 108 | 54 | 21.1 | 21.0 | 21.1 | 18.2 | 18.2 | 18.1 | 20.9 | 21.0 | 21.0 | 18.9 | 18.8 | **18.9** |
| | | 216 | 0 | 21.0 | 21.0 | **21.2** | 18.1 | 18.2 | 18.2 | 21.1 | 21.0 | 20.9 | 18.8 | 18.8 | 18.8 |

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

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Conducted Average (dBm) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ANT 7 | | | ANT 4 | | | ANT 9 | | | ANT 8 | | |
| | | | | 649666 | 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 | 22.6 | 23.6 | 23.2 | 18.9 | 18.5 | 18.5 | 20.2 | 22.4 | 21.9 | 19.1 | 19.4 | 19.7 |
| | | 1 | 1 | 24.9 | **25.7** | 25.4 | 22.3 | **22.7** | 21.8 | 25.1 | **25.5** | 24.9 | **23.5** | 22.9 | 22.7 |
| | | 120 | 60 | 25.3 | 24.9 | 25.0 | 22.1 | 21.7 | 21.2 | 24.5 | 24.8 | 24.5 | 22.8 | 22.6 | 22.3 |
| | | 240 | 0 | 24.5 | 24.5 | 24.7 | 21.5 | 21.2 | 20.7 | 24.6 | 24.9 | 24.5 | 22.2 | 22.0 | 21.9 |
| | QPSK | 1 | 0 | 22.1 | 22.0 | 22.0 | 18.9 | 18.8 | 18.8 | 21.7 | 21.8 | 22.0 | 19.7 | 19.7 | 19.7 |
| | | 1 | 1 | **25.6** | 25.5 | 25.5 | 22.4 | 22.5 | 22.5 | 25.1 | 25.4 | **25.4** | **23.3** | 23.2 | 23.3 |
| | | 120 | 60 | 25.4 | 25.6 | 25.6 | 22.4 | 22.5 | **22.6** | 25.1 | 25.4 | 25.3 | 23.2 | 23.2 | 23.1 |
| | | 240 | 0 | 24.6 | 24.5 | 24.5 | 21.4 | 21.5 | 21.5 | 24.2 | 24.3 | 24.3 | 22.2 | 22.3 | 22.1 |
| | 16QAM | 1 | 0 | 22.1 | 22.1 | 22.1 | 19.1 | 19.1 | 19.2 | 21.9 | 22.0 | 21.9 | 19.7 | 19.8 | 19.8 |
| | | 1 | 1 | **24.6** | 24.6 | 24.5 | 21.6 | **21.6** | 21.6 | 24.4 | 24.5 | 24.3 | 22.2 | 22.3 | 22.3 |
| | | 120 | 60 | 24.6 | 24.6 | 24.6 | 21.6 | 21.6 | 21.6 | **24.5** | 24.4 | 24.5 | 22.2 | 22.3 | **22.4** |
| | | 240 | 0 | 23.5 | 23.7 | 23.7 | 20.6 | 20.7 | 20.5 | 23.5 | 23.5 | 23.3 | 21.3 | 21.3 | 21.2 |
| | 64QAM | 1 | 0 | 22.0 | 22.2 | 22.1 | 19.1 | 19.0 | 19.0 | 22.0 | 22.0 | 21.9 | 19.8 | 19.9 | 19.7 |
| | | 1 | 1 | 23.1 | 23.2 | 23.0 | 20.0 | 20.1 | 20.1 | 22.8 | **22.9** | 22.9 | 20.8 | 20.8 | 20.8 |
| | | 120 | 60 | 23.1 | 23.2 | 23.1 | 20.1 | 20.2 | 20.2 | 22.8 | 22.9 | 22.9 | 20.8 | 20.8 | **20.9** |
| | | 240 | 0 | 23.0 | **23.2** | 23.1 | **20.2** | 20.1 | 20.2 | 22.9 | 22.9 | 22.8 | 20.7 | 20.8 | 20.8 |
| | 256QAM | 1 | 0 | 21.1 | **21.2** | 21.0 | 18.1 | 18.1 | 18.1 | 20.9 | 20.9 | 20.9 | 18.8 | 18.9 | 18.8 |
| | | 1 | 1 | 21.1 | 21.1 | 21.1 | 18.1 | 18.0 | 18.0 | 20.8 | 20.9 | 20.9 | 18.7 | 18.7 | 18.9 |
| | | 120 | 60 | 21.2 | 21.1 | 21.1 | 18.0 | 18.1 | 18.0 | **21.0** | 21.0 | 20.9 | 18.8 | 18.8 | **18.9** |
| | | 240 | 0 | 21.1 | 21.1 | 21.1 | **18.2** | 18.1 | 18.2 | 20.9 | 21.0 | 20.8 | 18.8 | 18.8 | 18.8 |




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## 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 | 22.9 | 23.3 | 22.5 | 18.1 | 18.5 | 18.2 | 21.6 | 20.3 | 21.4 | 19.8 | 19.9 | 19.1 |
| | | 1 | 1 | 24.8 | **25.7** | 24.6 | 22.1 | **22.7** | 21.2 | 25.0 | **25.5** | 24.4 | 22.9 | 23.3 | **23.5** |
| | | 135 | 67 | 25.0 | 25.1 | 24.8 | 21.8 | 21.0 | 21.0 | 24.0 | 24.4 | 23.6 | 22.8 | 22.7 | 21.9 |
| | | 270 | 0 | 24.0 | 24.6 | 24.7 | 21.3 | 20.8 | 20.6 | 24.0 | 24.3 | 23.9 | 22.1 | 22.3 | 21.8 |
| | QPSK | 1 | 0 | 22.2 | 22.2 | 22.0 | 18.9 | 19.0 | 19.0 | 21.7 | 21.7 | 21.9 | 19.8 | 19.9 | 19.8 |
| | | 1 | 1 | 25.6 | 25.6 | **25.7** | 22.5 | 22.4 | 22.4 | 25.3 | 25.2 | 25.4 | 23.4 | 23.3 | **23.5** |
| | | 135 | 67 | 25.6 | 25.6 | 25.6 | **22.5** | 22.4 | 22.5 | 25.3 | 25.1 | **25.4** | 23.4 | 23.4 | 23.4 |
| | | 270 | 0 | 24.6 | 24.7 | 24.6 | 21.3 | 21.5 | 21.6 | 24.3 | 24.4 | 24.2 | 22.3 | 22.4 | 22.3 |
| | 16QAM | 1 | 0 | 22.2 | 22.2 | 22.2 | 19.1 | 19.2 | 19.0 | 21.8 | 21.9 | 21.8 | 19.9 | 20.1 | 20.1 |
| | | 1 | 1 | 24.7 | 24.6 | **24.8** | 21.7 | **21.7** | 21.6 | **24.5** | 24.4 | 24.4 | 22.5 | 22.5 | 22.5 |
| | | 135 | 67 | 24.7 | 24.8 | 24.7 | 21.6 | 21.5 | 21.6 | 24.4 | 24.4 | 24.4 | **22.6** | 22.4 | 22.5 |
| | | 270 | 0 | 23.7 | 23.8 | 23.7 | 20.6 | 20.5 | 20.6 | 23.5 | 23.3 | 23.4 | 21.5 | 21.5 | 21.4 |
| | 64QAM | 1 | 0 | 22.2 | 22.3 | 22.3 | 19.1 | 19.2 | 19.1 | 21.8 | 21.9 | 21.9 | 19.9 | 20.1 | 20.0 |
| | | 1 | 1 | 23.2 | 23.2 | 23.3 | 20.1 | 20.2 | 20.1 | 22.9 | 22.9 | **23.0** | 21.0 | 20.9 | 20.9 |
| | | 135 | 67 | **23.3** | 23.2 | 23.2 | 20.0 | **20.2** | 20.1 | 22.8 | 22.9 | 22.9 | 21.0 | 21.0 | 21.0 |
| | | 270 | 0 | 23.2 | 23.2 | 23.3 | 20.1 | 20.1 | 20.1 | 22.9 | 22.8 | 22.9 | 21.0 | 21.0 | **21.0** |
| | 256QAM | 1 | 0 | 21.3 | **21.3** | 21.2 | 18.0 | 18.0 | 18.1 | **21.0** | 20.9 | 20.8 | 19.1 | 19.0 | 18.9 |
| | | 1 | 1 | 21.3 | 21.1 | 21.2 | **18.2** | 18.1 | 18.2 | 20.9 | 20.9 | 20.9 | 19.0 | 19.0 | 19.0 |
| | | 135 | 67 | 21.2 | 21.2 | 21.3 | 18.1 | 18.2 | 18.0 | 20.9 | 20.8 | 20.9 | 19.0 | **19.1** | 19.0 |
| | | 270 | 0 | 21.3 | 21.3 | 21.2 | 18.2 | 18.1 | 18.1 | 20.9 | 20.9 | 21.0 | 18.9 | 18.9 | 18.9 |

# 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.



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## 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.



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## 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 | 1.0846 | 1.208 |
| | 1.4MHz,16QAM | | | 1.0821 | 1.232 |
| | 3MHz, QPSK | 15/0 | | 2.6845 | 2.968 |
| | 3MHz, 16QAM | | | 2.6829 | 2.98 |
| | 5MHz, QPSK | 25/0 | | 4.5082 | 4.953 |
| | 5MHz, 16QAM | | | 4.4982 | 4.9 |
| | 10MHz, QPSK | 50/0 | | 8.9349 | 9.608 |
| | 10MHz, 16QAM | | | 8.9779 | 9.645 |
| | 15MHz, QPSK | 75/0 | | 13.4102 | 14.371 |
| | 15MHz, 16QAM | | | 13.3809 | 14.483 |
| | 20MHz, QPSK | 100/0 | | 17.8387 | 19.106 |
| | 20MHz, 16QAM | | | 17.8585 | 19.209 |
| | 20MHz, QPSK | 1/0 | | 0.32475 | 0.563 |

## 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 | 1.0803 | 1.223 |
| | 1.4MHz,16QAM | | | 1.0857 | 1.219 |
| | 3MHz, QPSK | 15/0 | | 2.6831 | 2.967 |
| | 3MHz, 16QAM | | | 2.6866 | 2.991 |
| | 5MHz, QPSK | 25/0 | | 4.5043 | 4.927 |
| | 5MHz, 16QAM | | | 4.4934 | 4.86 |
| | 10MHz, QPSK | 50/0 | | 8.9439 | 9.605 |
| | 10MHz, 16QAM | | | 8.9707 | 9.631 |
| | 10MHz, QPSK | 1/0 | | 0.27316 | 0.4557 |

## 5G NR Band n5

| Band | Mode | RB Allocation/RB Offset | f(MHz) | 99% BW (MHz) | -26dB BW (MHz) |
|---|---|---|---|---|---|
| 5G NR Band n5 | 15MHz, BPSK | 25/0 | 836.5 | 13.442 | 14.16 |
| | 15MHz, QPSK | | | 13.475 | 14.35 |
| | 15MHz, 16QAM | | | 13.467 | 14.37 |
| | 20MHz, BPSK | 50/0 | | 17.862 | 19.99 |
| | 20MHz, QPSK | | | 17.884 | 18.85 |
| | 20MHz, 16QAM | | | 17.856 | 18.83 |
| | 20MHz, QPSK | 1/0 | | 0.4148 | 0.613 |




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## 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 | 4.4939 | 4.913 |
| | 5MHz, 16QAM | | | 4.5028 | 4.968 |
| | 10MHz, QPSK | 50/0 | | 8.9745 | 9.695 |
| | 10MHz, 16QAM | | | 8.947 | 9.735 |
| | 15MHz, QPSK | 75/0 | | 13.401 | 14.407 |
| | 15MHz, 16QAM | | | 13.409 | 14.478 |
| | 20MHz, QPSK | 100/0 | | 17.8035 | 19.18 |
| | 20MHz, 16QAM | | | 17.84 | 19.253 |
| | 20MHz, QPSK | 1/0 | | 0.3156 | 0.5434 |

## 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 | 1.0788 | 1.22 |
| | 1.4MHz,16QAM | | | 1.0823 | 1.218 |
| | 3MHz, QPSK | 15/0 | | 2.6849 | 2.981 |
| | 3MHz, 16QAM | | | 2.6857 | 2.983 |
| | 5MHz, QPSK | 25/0 | | 4.4898 | 4.905 |
| | 5MHz, 16QAM | | | 4.4851 | 4.924 |
| | 10MHz, QPSK | 50/0 | | 8.9319 | 9.663 |
| | 10MHz, 16QAM | | | 8.9462 | 9.673 |
| | 10MHz, QPSK | 1/0 | | 0.26835 | 0.4869 |

## 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 | 13.453 | 14.35 |
| | 15MHz, QPSK | | | 13.453 | 14.35 |
| | 15MHz, 16QAM | | | 13.488 | 14.34 |
| | 15MHz, QPSK | 1/0 | | 0.5415 | 0.911 |

## 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 | 4.4873 | 4.93 |
| | 5MHz, 16QAM | | | 4.4942 | 4.909 |
| | 10MHz, QPSK | 50/0 | | 8.9396 | 9.57 |
| | 10MHz, 16QAM | | | 8.9179 | 9.613 |
| | 10MHz, QPSK | 1/0 | | 0.28617 | 0.4752 |



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## 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 | 4.4893 | 4.915 |
| | 5MHz, 16QAM | | | 4.4915 | 4.832 |
| | 10MHz, QPSK | 50/0 | | 8.9572 | 9.737 |
| | 10MHz, 16QAM | | | 8.9855 | 9.686 |
| | 10MHz, QPSK | 1/0 | | 0.28282 | 0.4534 |

## 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 | 4.4958 | 4.887 |
| | 5MHz, 16QAM | | | 4.4874 | 4.908 |
| | 10MHz, QPSK | 50/0 | | 8.935 | 9.721 |
| | 10MHz, 16QAM | | | 8.945 | 9.555 |
| | 10MHz, QPSK | 1/0 | | 0.27305 | 0.4587 |

## 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 | 1.0805 | 1.221 |
| | 1.4MHz,16QAM | | | 1.0869 | 1.227 |
| | 3MHz, QPSK | 15/0 | | 2.9622 | 2.956 |
| | 3MHz, 16QAM | | | 2.6858 | 2.972 |
| | 5MHz, QPSK | 25/0 | | 4.4937 | 4.926 |
| | 5MHz, 16QAM | | | 4.4907 | 4.908 |
| | 10MHz, QPSK | 50/0 | | 8.948 | 9.617 |
| | 10MHz, 16QAM | | | 8.9403 | 9.652 |
| | 15MHz, QPSK | 75/0 | | 13.4289 | 14.348 |
| | 15MHz, 16QAM | | | 13.4119 | 14.549 |
| | 20MHz, QPSK | 100/0 | | 17.8546 | 19.227 |
| | 20MHz, 16QAM | | | 17.8617 | 19.187 |
| | 20MHz, QPSK | 1/0 | | 0.31074 | 0.5544 |

## 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 | 836.5 | 1.0938 | 1.232 |
| | 1.4MHz,16QAM | | | 1.0834 | 1.217 |
| | 3MHz, QPSK | 15/0 | | 2.6870 | 2.979 |
| | 3MHz, 16QAM | | | 2.6802 | 2.942 |
| | 5MHz, QPSK | 25/0 | | 4.4913 | 4.971 |
| | 5MHz, 16QAM | | | 4.4932 | 4.927 |
| | 10MHz, QPSK | 50/0 | | 8.9463 | 9.732 |
| | 10MHz, 16QAM | | | 8.9318 | 4.358 |
| | 15MHz, QPSK | 1/0 | | 0.27737 | 0.45319 |



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## 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 | 4.4999 | 4.869 |
| | 5MHz, 16QAM | | | 4.4878 | 4.92 |
| | 10MHz, QPSK | 50/0 | | 8.9399 | 9.653 |
| | 10MHz, 16QAM | | | 8.9185 | 9.581 |
| | 10MHz, QPSK | 1/0 | | 0.27255 | 0.4689 |

## 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 | 4.4959 | 4.841 |
| | 5MHz, 16QAM | | | 4.495 | 4.967 |
| | 10MHz, QPSK | 50/0 | | 8.931 | 9.633 |
| | 10MHz, 16QAM | | | 8.9236 | 9.806 |
| | 15MHz, QPSK | 75/0 | | 13.4101 | 14.326 |
| | 15MHz, 16QAM | | | 13.4285 | 14.58 |
| | 20MHz, QPSK | 100/0 | | 17.8598 | 18.718 |
| | 20MHz, 16QAM | | | 17.8629 | 19.111 |
| | 20MHz, QPSK | 1/0 | | 0.39584 | 0.6247 |

## 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 | 17.882 | 19.35 |
| | 20MHz, QPSK | | | 17.888 | 19.28 |
| | 20MHz, 16QAM | | | 17.882 | 19.38 |
| | 40MHz, BPSK | 100/0 | | 35.591 | 37.06 |
| | 40MHz, QPSK | | | 35.576 | 37.12 |
| | 40MHz, 16QAM | | | 35.629 | 37.23 |
| | 50MHz, BPSK | 128/0 | | 45.514 | 46.86 |
| | 50MHz, QPSK | | | 45.417 | 47.21 |
| | 50MHz, 16QAM | | | 45.516 | 47.15 |
| | 60MHz, BPSK | 162/0 | | 57.773 | 59.85 |
| | 60MHz, QPSK | | | 57.732 | 59.88 |
| | 60MHz, 16QAM | | | 57.661 | 59.73 |
| | 80MHz, BPSK | 216/0 | | 76.908 | 79.55 |
| | 80MHz, QPSK | | | 76.887 | 79.66 |
| | 80MHz, 16QAM | | | 76.993 | 79.49 |
| | 90MHz, BPSK | 240/0 | | 85.293 | 88.36 |
| | 90MHz, QPSK | | | 85.357 | 88.51 |
| | 90MHz, 16QAM | | | 85.422 | 88.45 |
| | 100MHz, BPSK | 270/0 | | 95.826 | 99.34 |
| | 100MHz, QPSK | | | 96.170 | 99.41 |
| | 100MHz, 16QAM | | | 96.077 | 99.23 |
| | 100MHz, QPSK | 1/0 | | 0.51102 | 0.832 |



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## 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 | 4.4841 | 4.886 |
| | 5MHz, 16QAM | | | 4.4688 | 4.948 |
| | 10MHz, QPSK | 50/0 | | 8.9475 | 9.793 |
| | 10MHz, 16QAM | | | 8.9578 | 9.640 |
| | 15MHz, QPSK | 75/0 | | 13.4290 | 14.473 |
| | 15MHz, 16QAM | | | 13.3738 | 14.385 |
| | 20MHz, QPSK | 100/0 | | 17.8453 | 18.834 |
| | 20MHz, 16QAM | | | 17.8794 | 19.207 |
| | 20MHz, QPSK | 1/0 | | 0.31219 | 0.5345 |

## 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 | 1.0834 | 1.22 |
| | 1.4MHz,16QAM | | | 1.084 | 1.221 |
| | 3MHz, QPSK | 15/0 | | 2.6792 | 2.943 |
| | 3MHz, 16QAM | | | 2.6857 | 2.99 |
| | 5MHz, QPSK | 25/0 | | 4.4989 | 4.871 |
| | 5MHz, 16QAM | | | 4.4887 | 4.871 |
| | 10MHz, QPSK | 50/0 | | 8.9728 | 9.581 |
| | 10MHz, 16QAM | | | 8.9473 | 9.692 |
| | 15MHz, QPSK | 75/0 | | 13.4262 | 14.395 |
| | 15MHz, 16QAM | | | 13.4148 | 14.395 |
| | 20MHz, QPSK | 100/0 | | 17.8731 | 19.341 |
| | 20MHz, 16QAM | | | 17.8624 | 19.211 |
| | 20MHz, QPSK | 1/0 | | 0.32314 | 0.5776 |

## 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 (5/15MHz)<br>683 (10/20MHz) | 4.4939 | 4.887 |
| | 5MHz, 16QAM | | | 4.4872 | 4.887 |
| | 10MHz, QPSK | 50/0 | | 8.9624 | 9.814 |
| | 10MHz, 16QAM | | | 8.9412 | 9.696 |
| | 15MHz, QPSK | 75/0 | | 13.4409 | 14.535 |
| | 15MHz, 16QAM | | | 13.4352 | 14.613 |
| | 20MHz, QPSK | 100/0 | | 17.8519 | 19.069 |
| | 20MHz, 16QAM | | | 17.8732 | 19.282 |
| | 20MHz, QPSK | 1/0 | | 0.31035 | 0.5471 |




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## 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 | 17.827 | 18.88 |
| | 20MHz, QPSK | | | 17.864 | 18.59 |
| | 20MHz, 16QAM | | | 17.878 | 18.54 |
| | 40MHz, BPSK | 100/0 | | 35.837 | 38.05 |
| | 40MHz, QPSK | | | 35.805 | 38.16 |
| | 40MHz, 16QAM | | | 35.749 | 38.10 |
| | 50MHz, BPSK | 128/0 | | 45.608 | 48.11 |
| | 50MHz, QPSK | | | 45.767 | 48.26 |
| | 50MHz, 16QAM | | | 45.666 | 48.15 |
| | 60MHz, BPSK | 162/0 | | 57.592 | 60.43 |
| | 60MHz, QPSK | | | 57.701 | 60.59 |
| | 60MHz, 16QAM | | | 57.725 | 60.55 |
| | 80MHz, BPSK | 216/0 | | 76.936 | 79.94 |
| | 80MHz, QPSK | | | 77.089 | 79.96 |
| | 80MHz, 16QAM | | | 77.041 | 79.95 |
| | 90MHz, BPSK | 240/0 | | 85.508 | 88.58 |
| | 90MHz, QPSK | | | 85.639 | 88.65 |
| | 90MHz, 16QAM | | | 85.558 | 88.55 |
| | 100MHz, BPSK | 270/0 | | 96.168 | 99.40 |
| | 100MHz, QPSK | | | 96.249 | 99.54 |
| | 100MHz, 16QAM | | | 96.385 | 99.45 |
| | 100MHz, QPSK | 1/0 | | 0.4797 | 0.733 |



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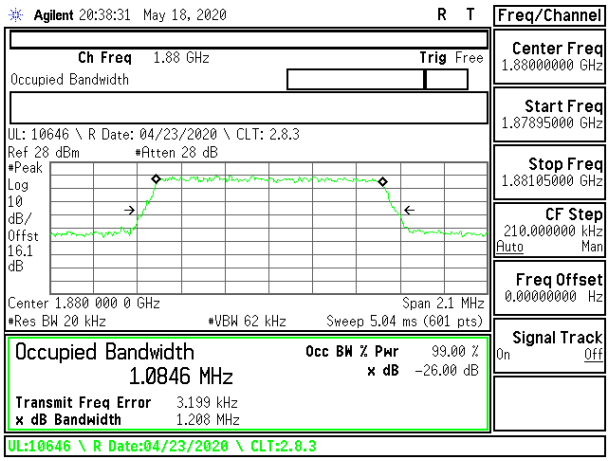
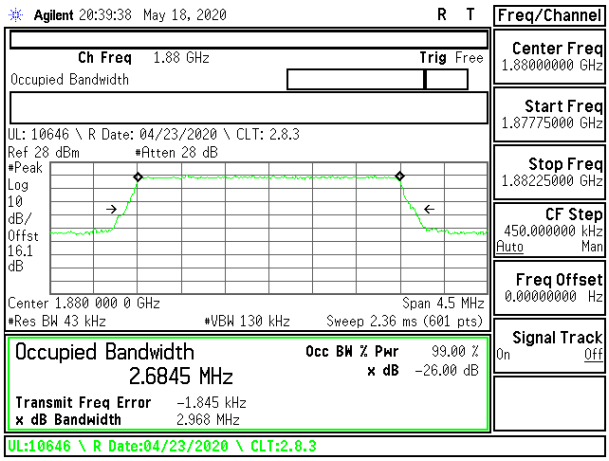
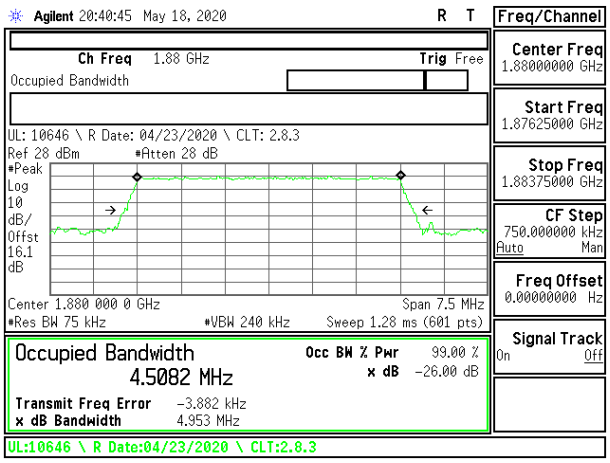
### 8.1.1. LTE BAND 2



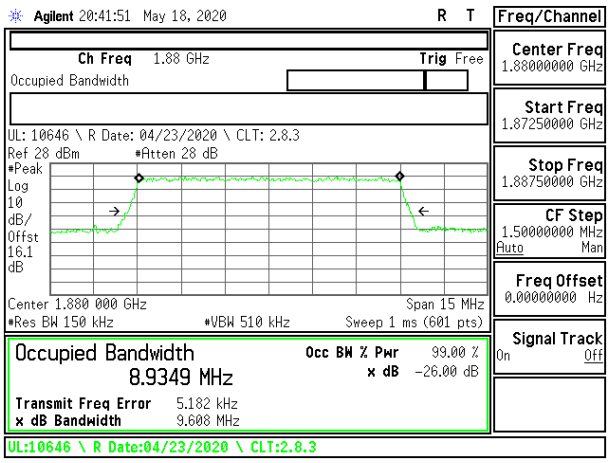

LTE B2 1.4MHz QPSK Middle Channel RB6-0




LTE B2 3MHz QPSK Middle Channel RB15-0




LTE B2 5MHz QPSK Middle Channel RB25-0




LTE B2 10MHz QPSK Middle Channel RB50-0



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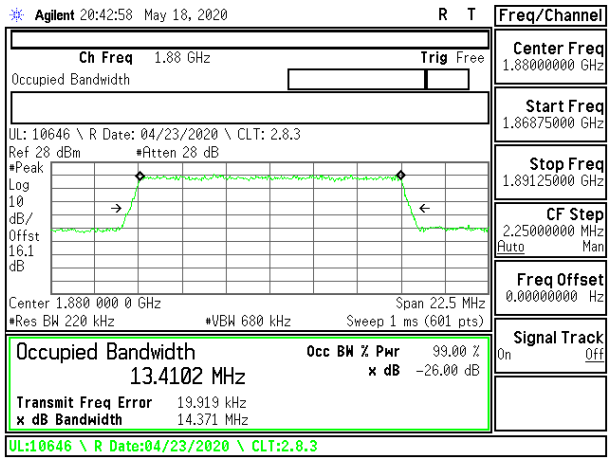
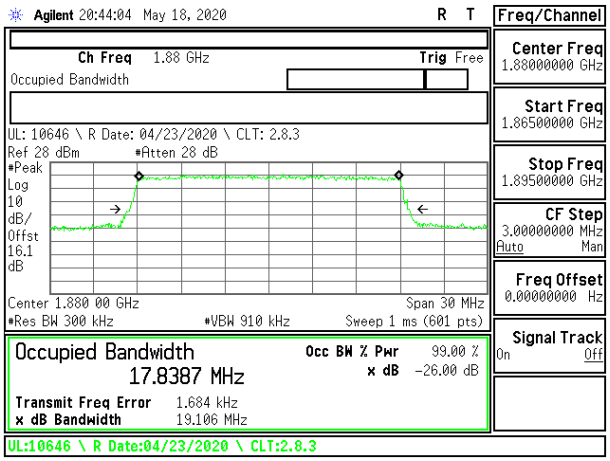
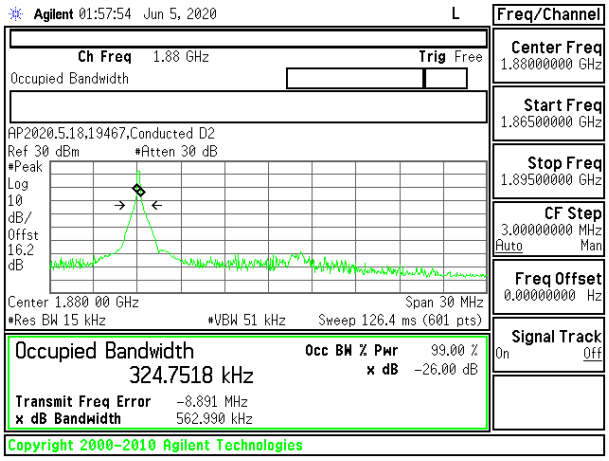



LTE B2 15MHz QPSK Middle Channel RB75-0




LTE B2 20MHz QPSK Middle Channel RB100-0




LTE B2 20MHz QPSK Middle Channel RB1-0

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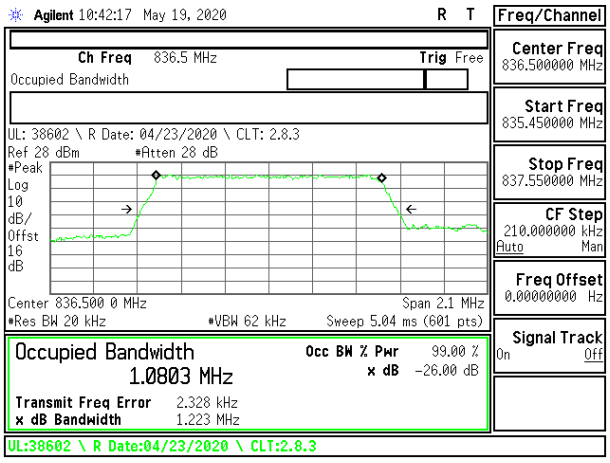
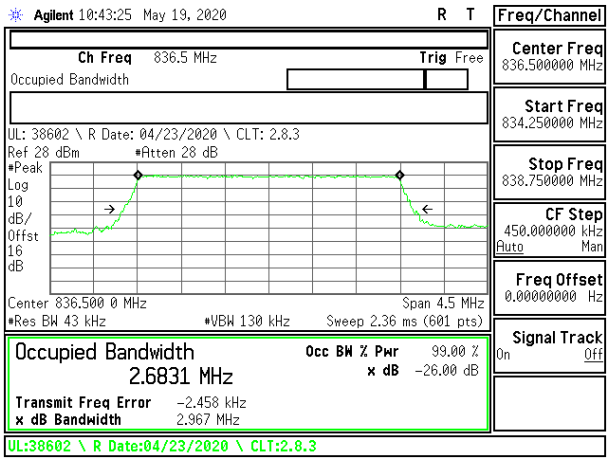
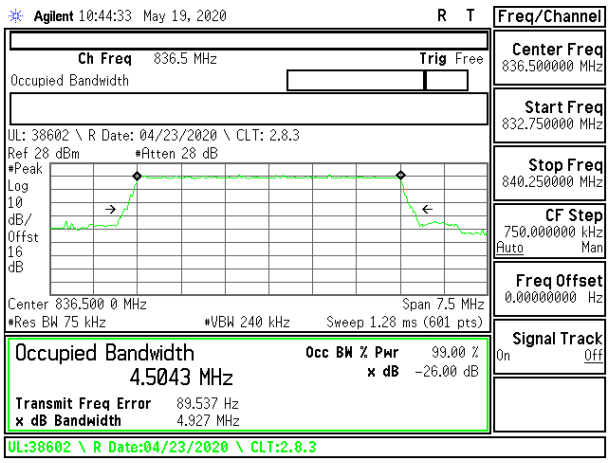
## 8.1.2. LTE BAND 5



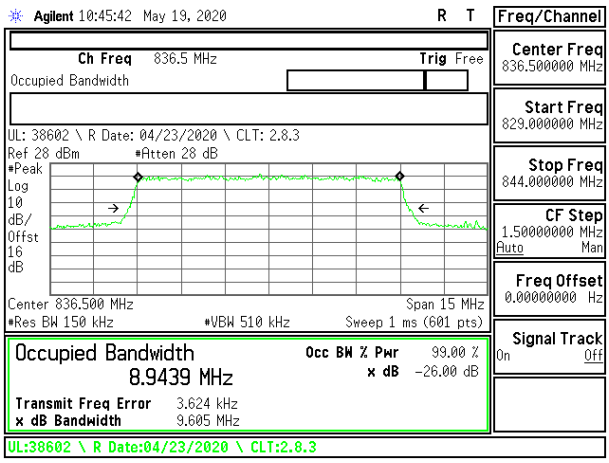

LTE B5 1.4MHz QPSK Middle Channel RB6-0




LTE B5 3MHz QPSK Middle Channel RB15-0




LTE B2 5MHz QPSK Middle Channel RB25-0




LTE B5 10MHz QPSK Middle Channel RB50-0



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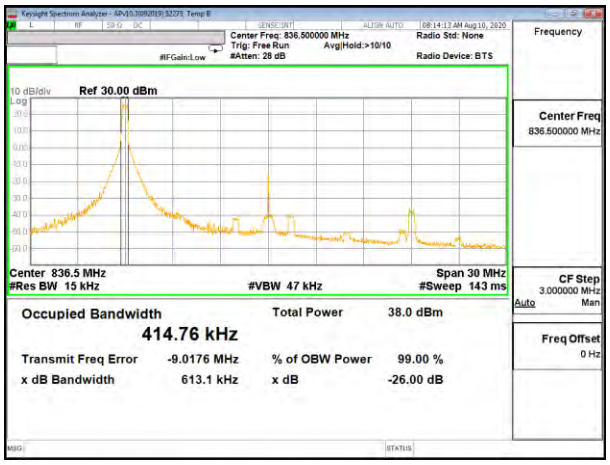
### 8.1.3. 5G NR Band n5

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

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




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

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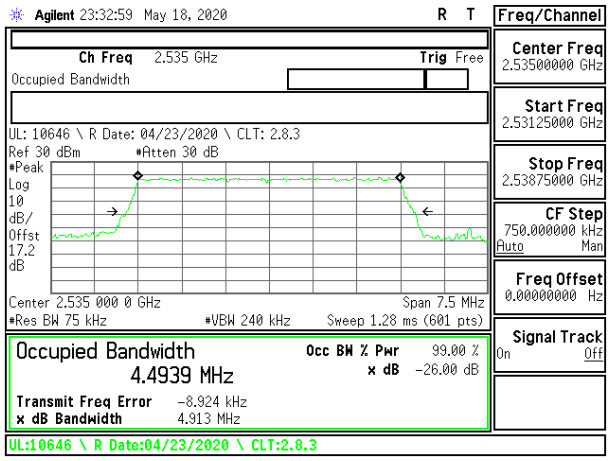
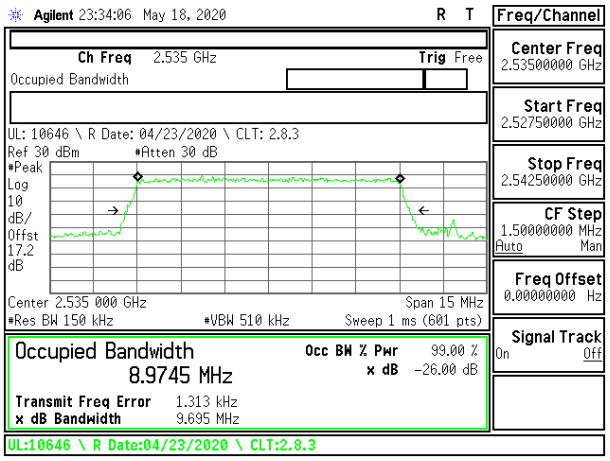
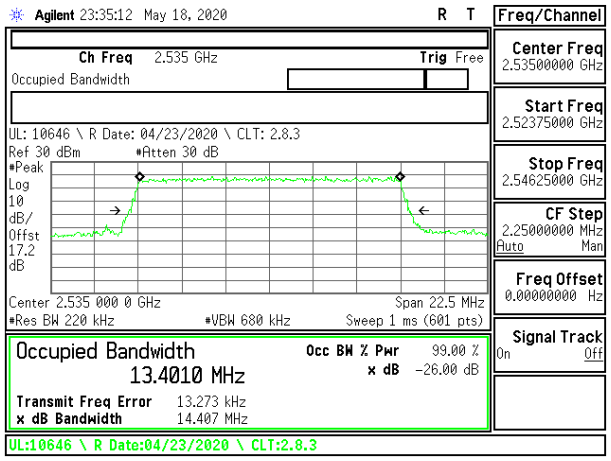
### 8.1.4. LTE BAND 7



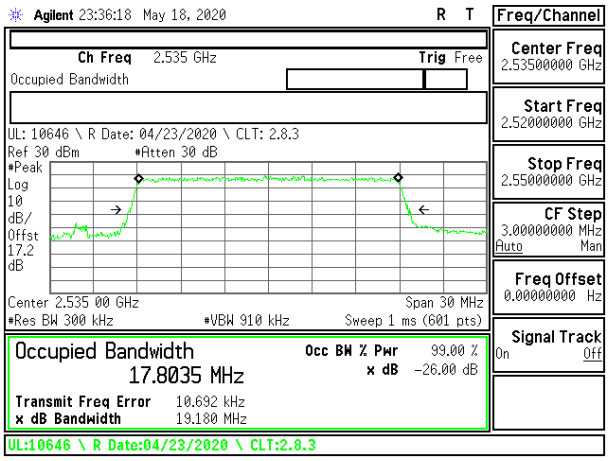

LTE B7 5MHz QPSK Middle Channel RB25-0



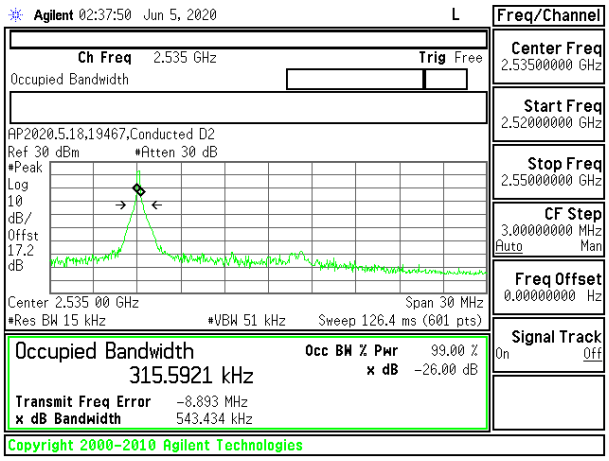

LTE B7 10MHz QPSK Middle Channel RB50-0




LTE B7 15MHz QPSK Middle Channel RB75-0




LTE B7 20MHz QPSK Middle Channel RB100-0




LTE B7 20MHz QPSK Middle Channel RB1-0

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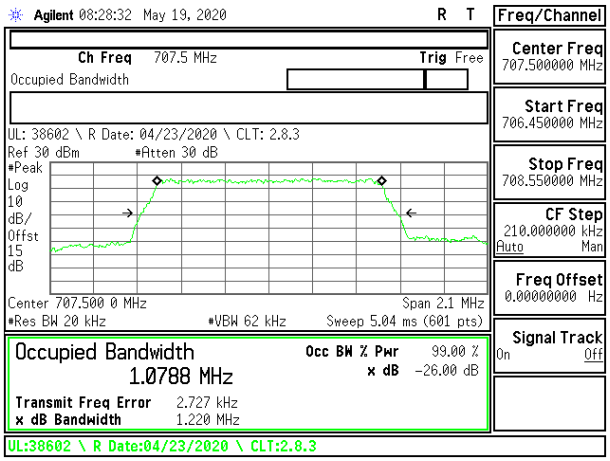
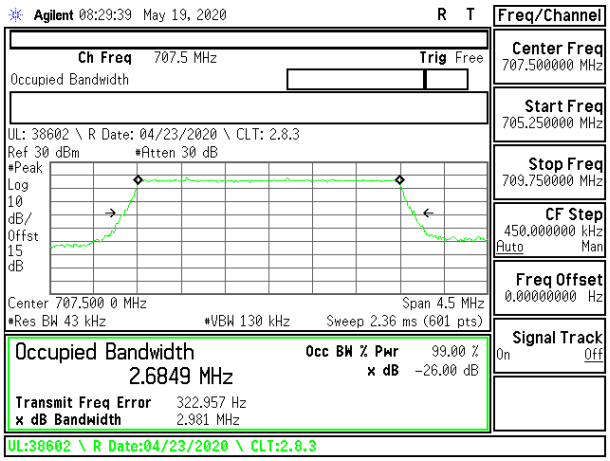
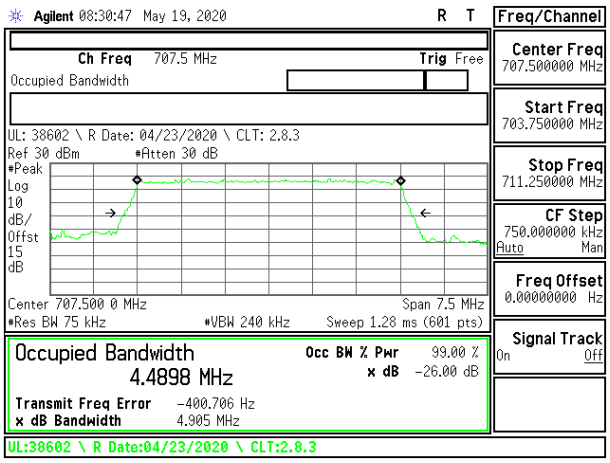
### 8.1.5. LTE BAND 12



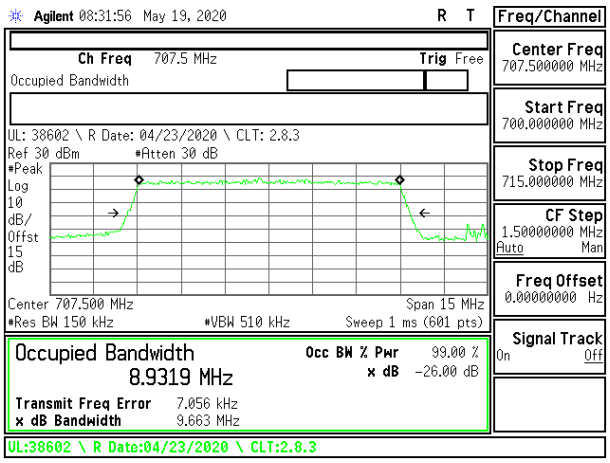

LTE B12 1.4MHz QPSK Middle Channel RB6-0




LTE B12 3MHz QPSK Middle Channel RB15-0




LTE B12 5MHz QPSK Middle Channel RB25-0




LTE B12 10MHz QPSK Middle Channel RB50-0



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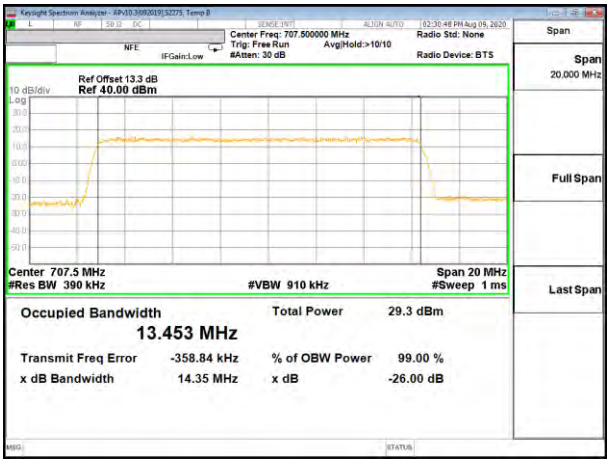
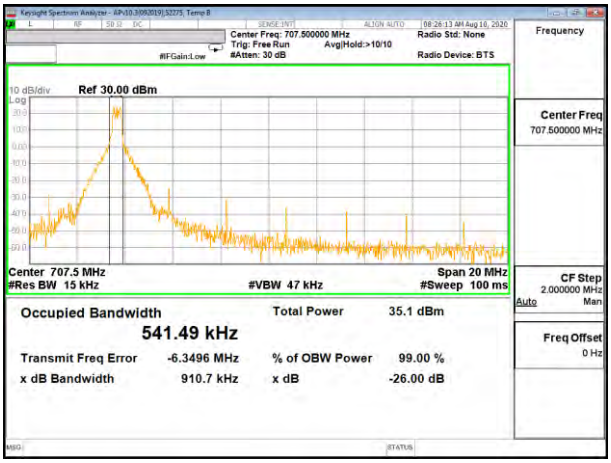
### 8.1.6. 5G NR Band n12




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




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



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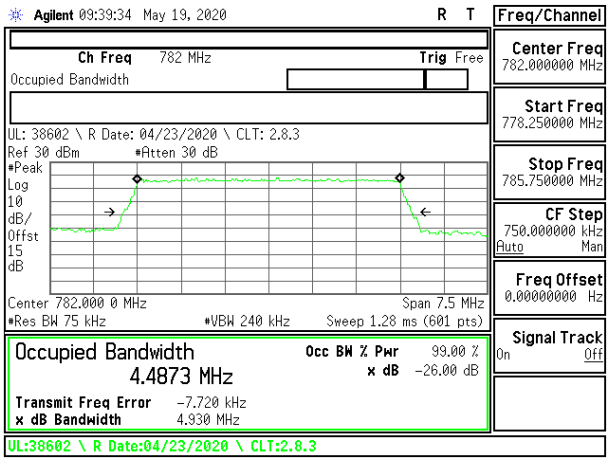
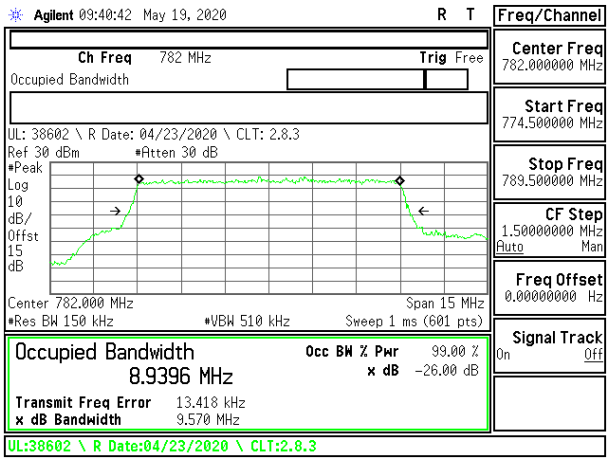
## 8.1.7. LTE BAND 13




LTE B13 5MHz QPSK Middle Channel RB25-0




LTE B13 10MHz QPSK Middle Channel RB50-0



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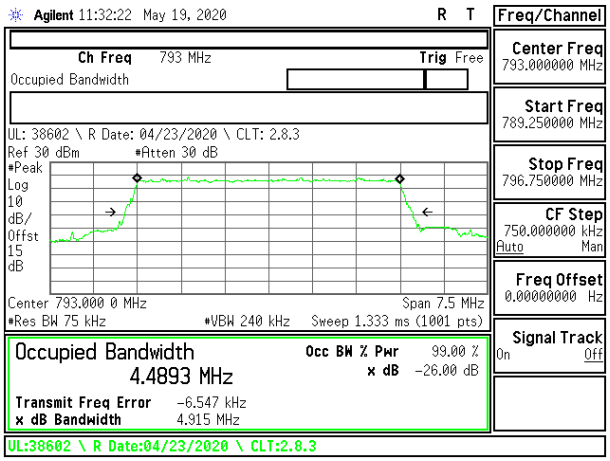
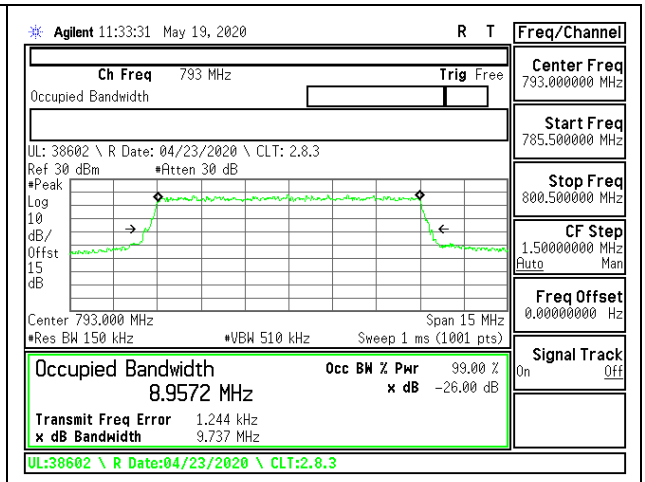
## 8.1.8. LTE BAND 14




LTE B14 5MHz QPSK Middle Channel RB25-0




LTE B14 10MHz QPSK Middle Channel RB50-0



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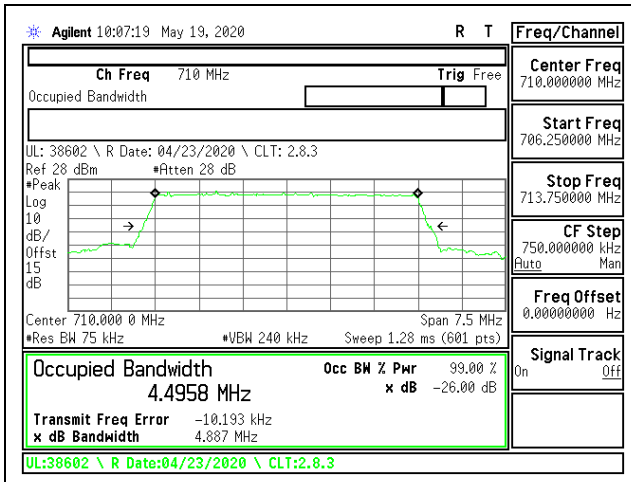
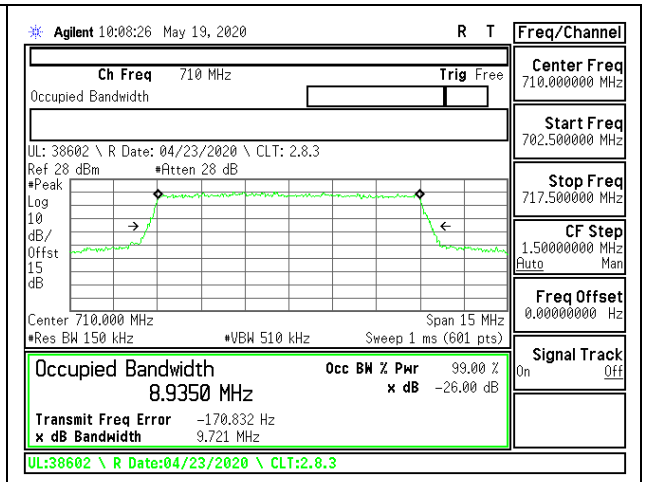
## 8.1.9. LTE BAND 17




LTE B17 5MHz QPSK Middle Channel RB25-0




LTE B17 10MHz QPSK Middle Channel RB50-0



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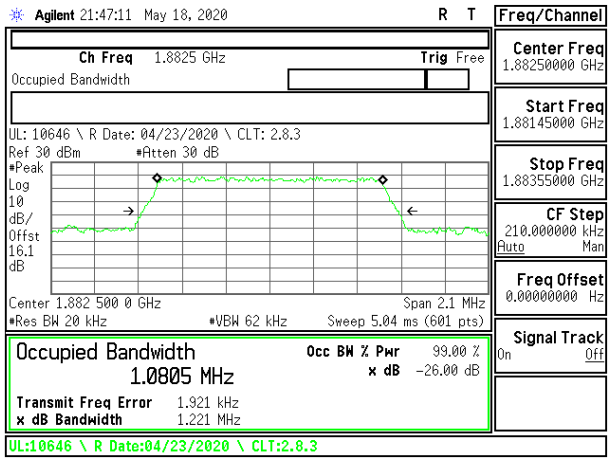
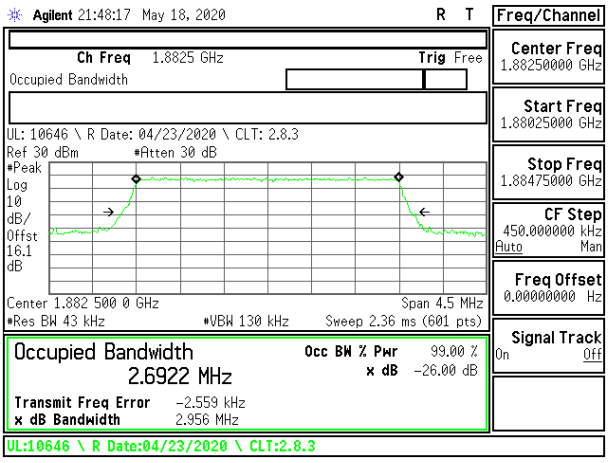
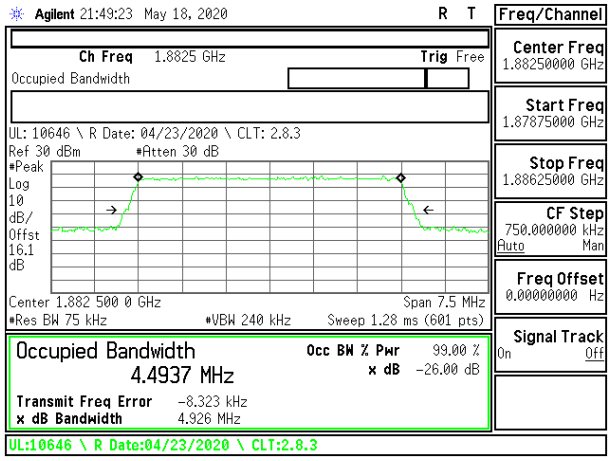
## 8.1.10. LTE BAND 25



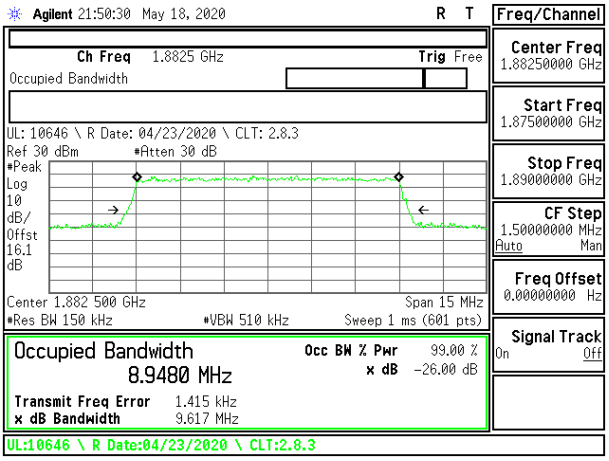

LTE B25 1.4MHz QPSK Middle Channel RB6-0



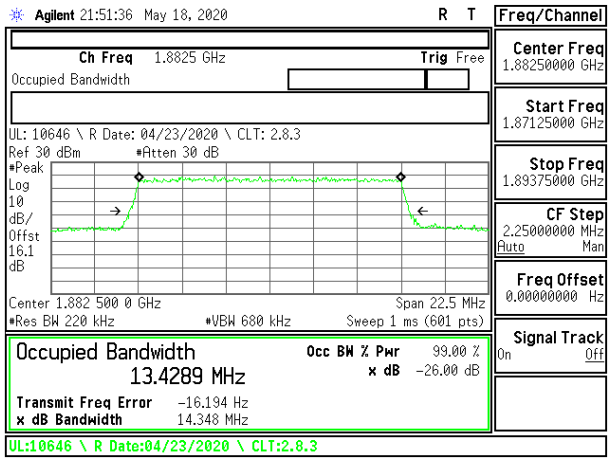

LTE B25 3MHz QPSK Middle Channel RB15-0



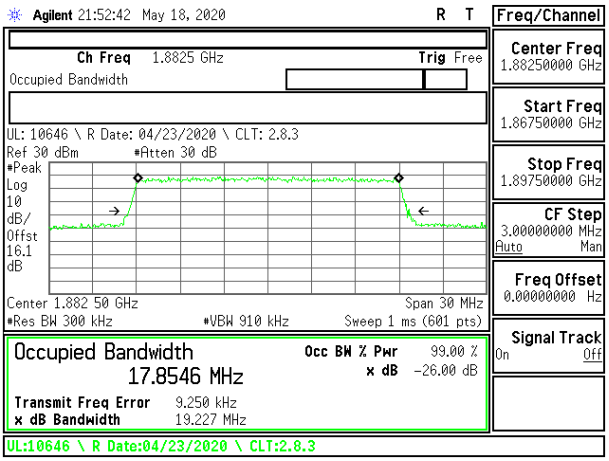

LTE B25 5MHz QPSK Middle Channel RB25-0




LTE B25 10MHz QPSK Middle Channel RB50-0




LTE B25 15MHz QPSK Middle Channel RB75-0




LTE B25 20MHz QPSK Middle Channel RB100-0



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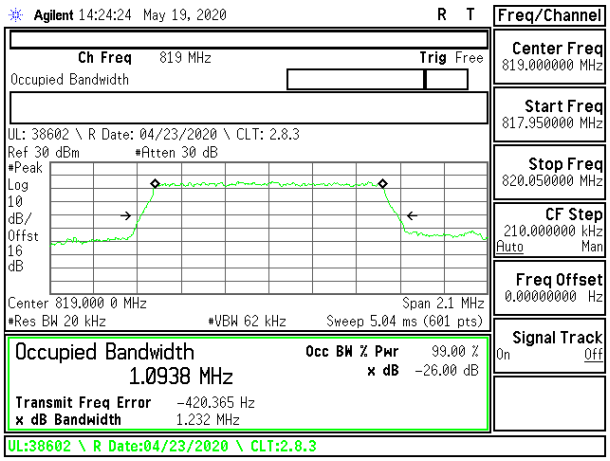
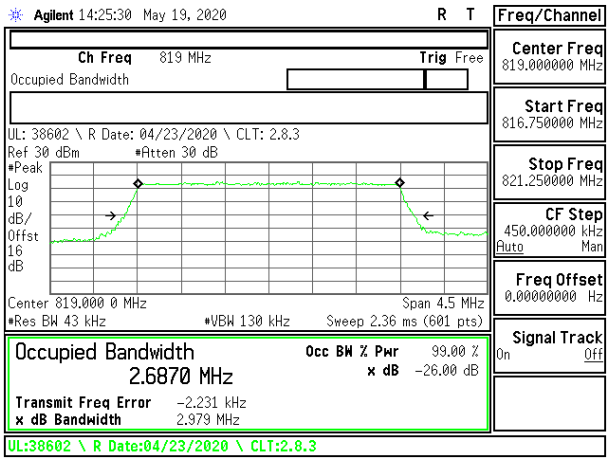
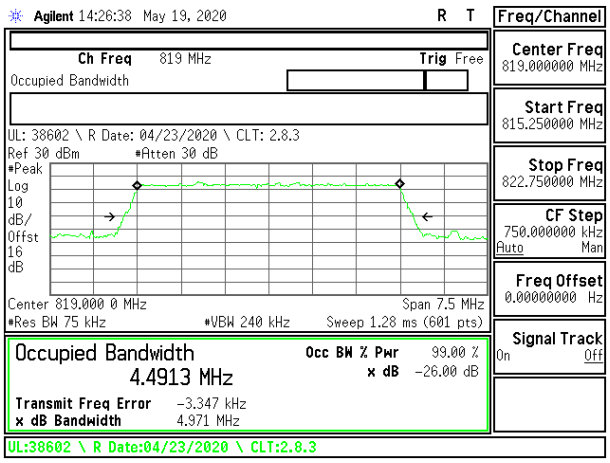
## 8.1.11. LTE BAND 26 (PART 90S)



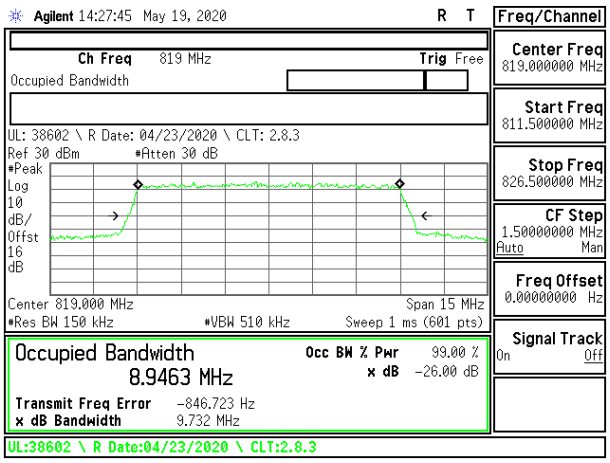

LTE B26 1.4MHz QPSK Middle Channel RB6-0




LTE B26 3MHz QPSK Middle Channel RB15-0




LTE B26 5MHz QPSK Middle Channel RB25-0




LTE B26 10MHz QPSK Middle Channel RB50-0



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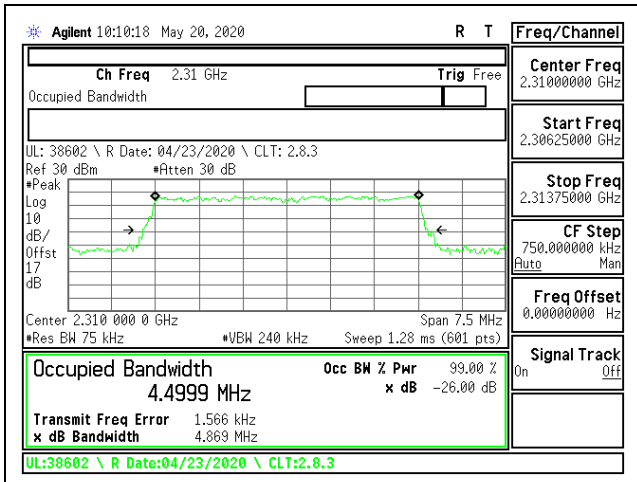
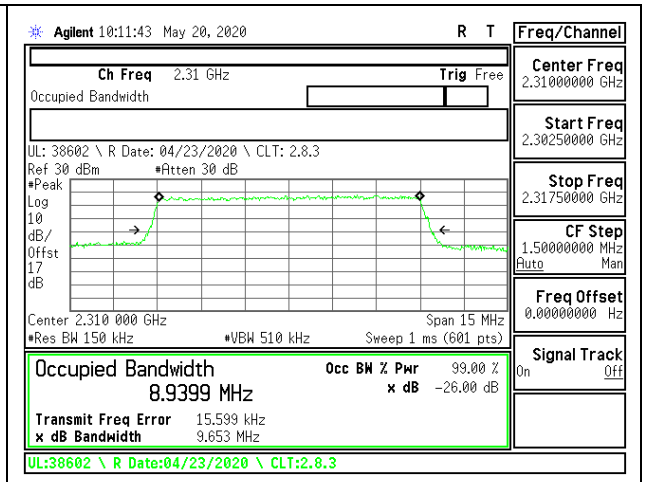
## 8.1.12. LTE BAND 30




LTE B30 5MHz QPSK Middle Channel RB25-0




LTE B30 10MHz QPSK Middle Channel RB50-0



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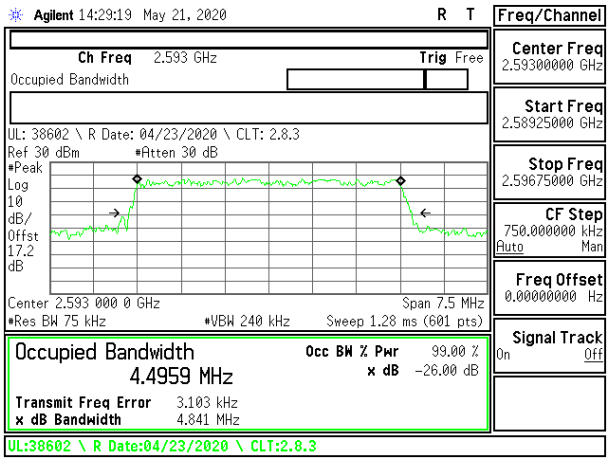
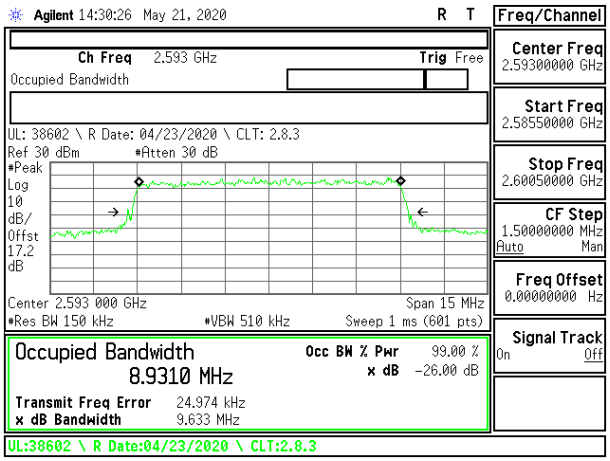
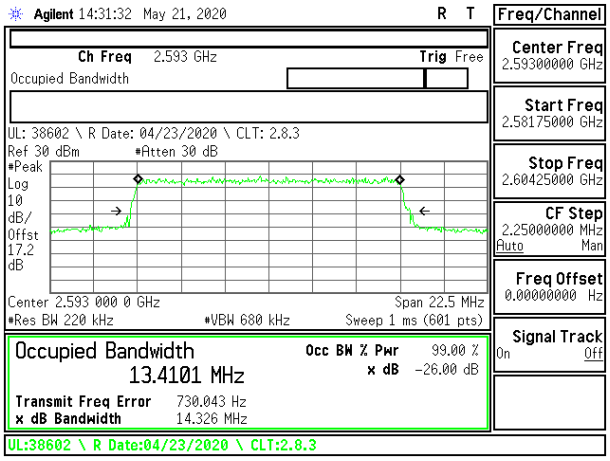
## 8.1.13. LTE BAND 41



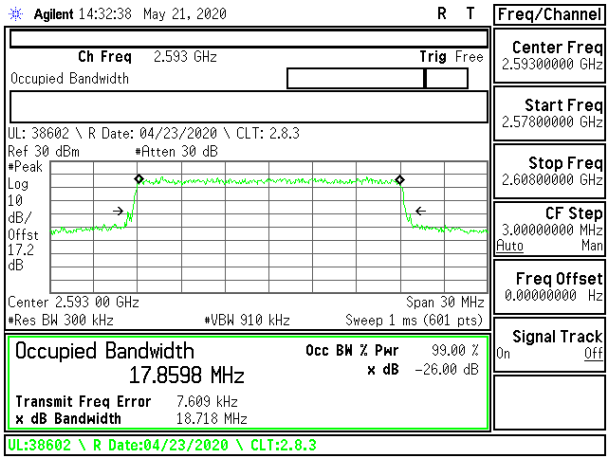

LTE B41 5MHz QPSK Middle Channel RB25-0



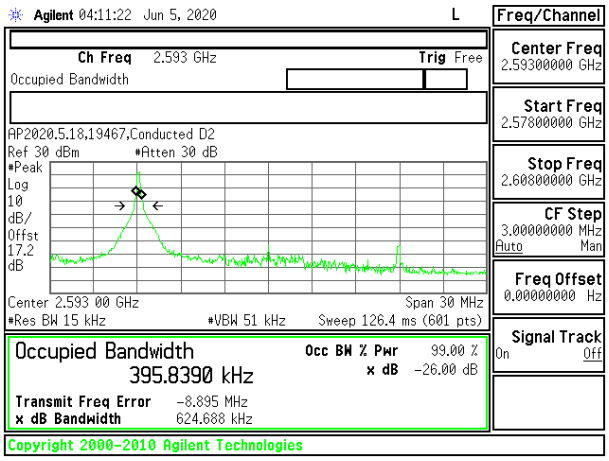

LTE B41 10MHz QPSK Middle Channel RB50-0




LTE B41 15MHz QPSK Middle Channel RB75-0




LTE B41 20MHz QPSK Middle Channel RB100-0




LTE B41 20MHz QPSK Middle Channel RB1-0

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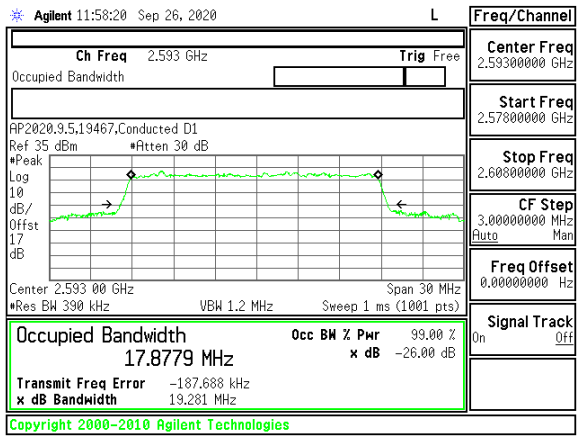
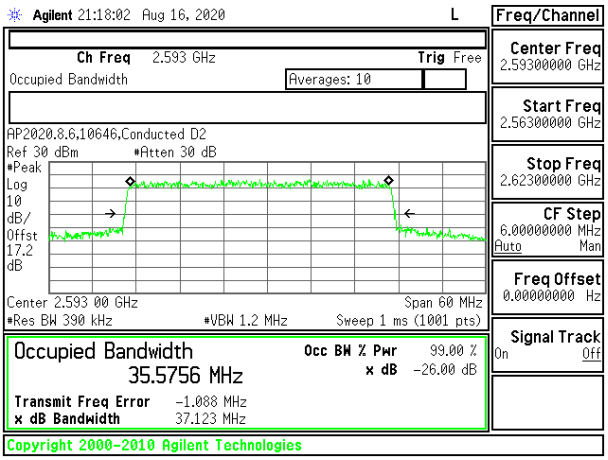
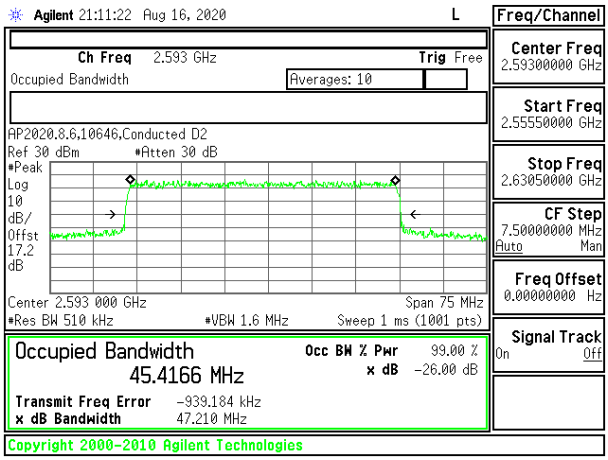
## 8.1.14. 5G NR Band n41



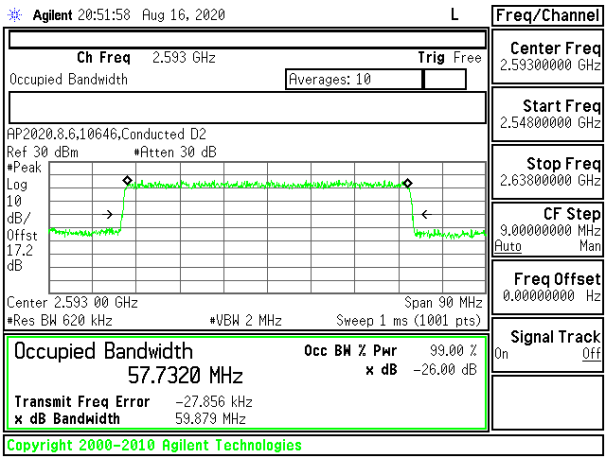

5G NR Band n41 20MHz QPSK Middle Channel RB50-0



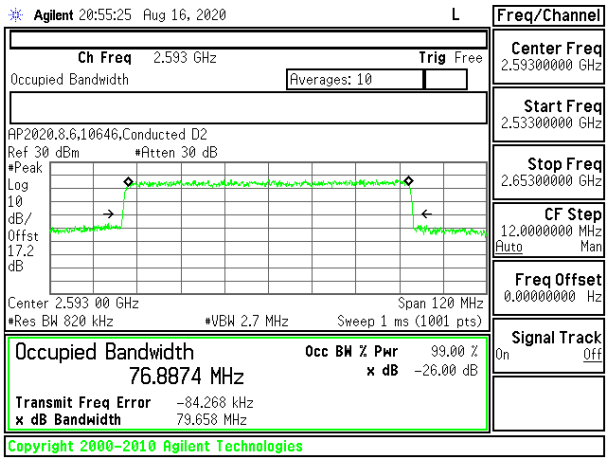

5G NR Band n41 40MHz QPSK Middle Channel RB100-0



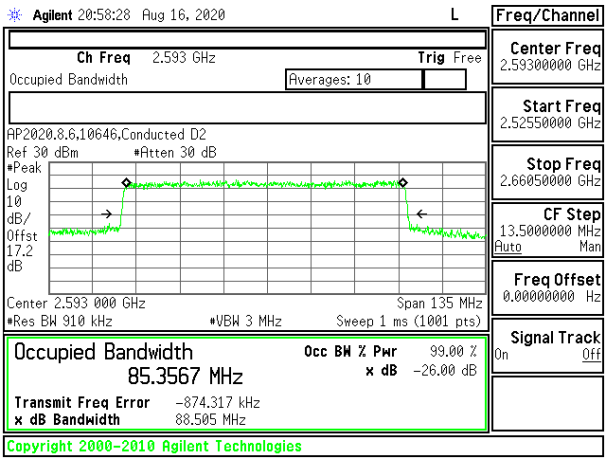

5G NR Band n41 50MHz QPSK Middle Channel RB128-0




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

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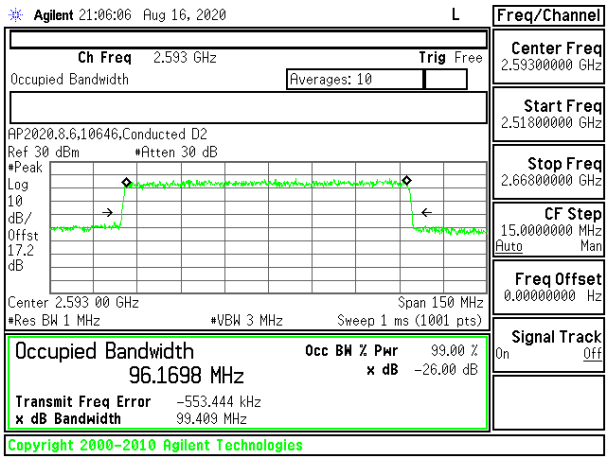
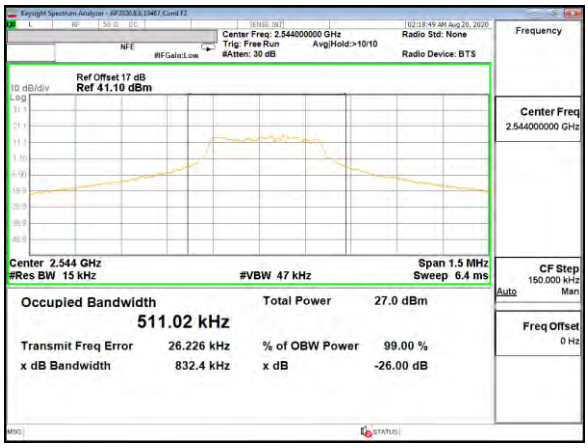



5G NR Band n41 100MHz QPSK Middle Channel RB270-0




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

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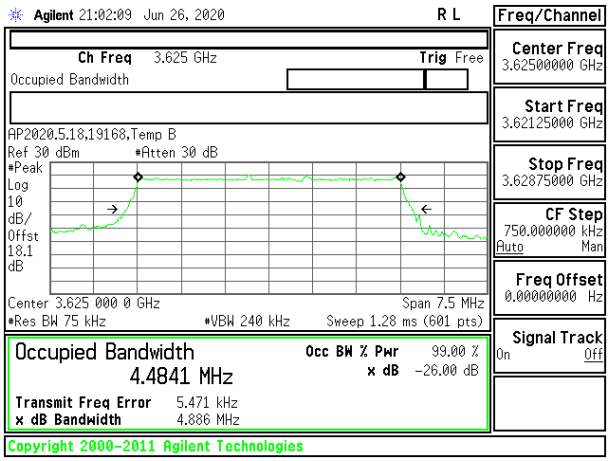
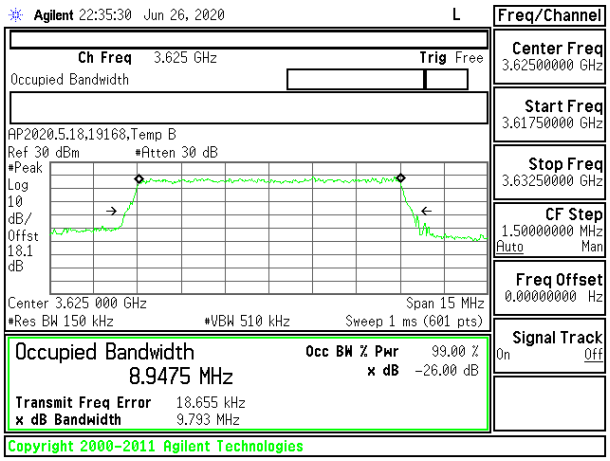
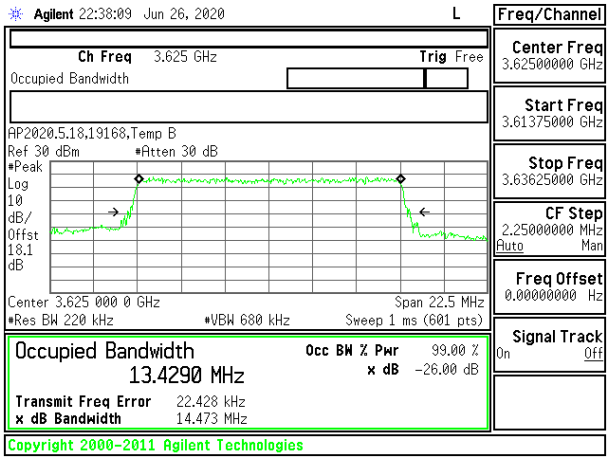
## 8.1.15. LTE BAND 48



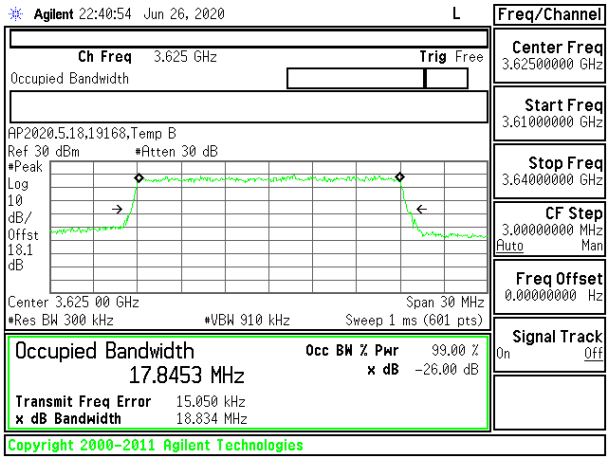

LTE B48 5MHz QPSK Middle Channel RB25-0




LTE B48 10MHz QPSK Middle Channel RB50-0




LTE B48 15MHz QPSK Middle Channel RB75-0




LTE B48 20MHz QPSK Middle Channel RB100-0

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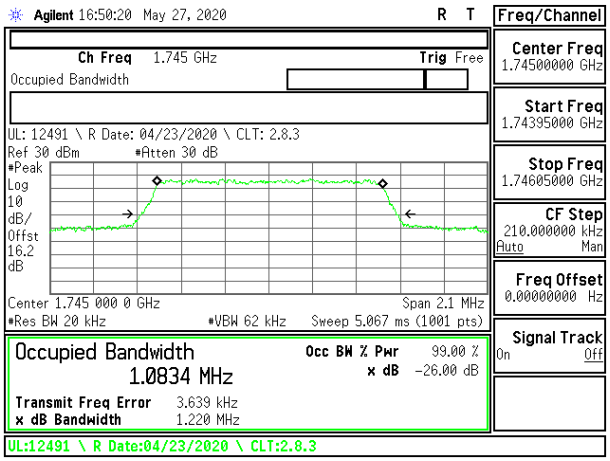
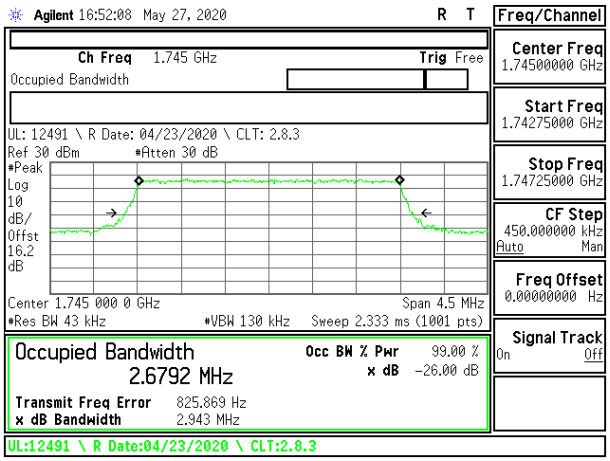
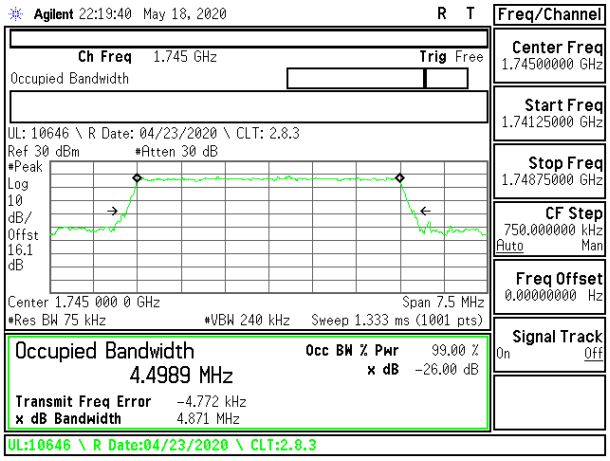
## 8.1.16. LTE BAND 66



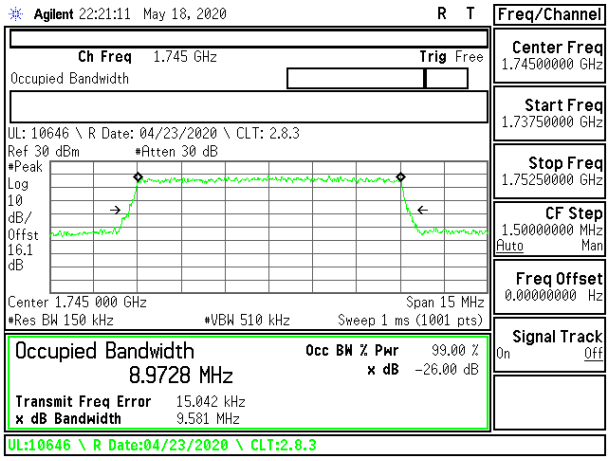

LTE B66 1.4MHz QPSK Middle Channel RB6-0




LTE B66 3MHz QPSK Middle Channel RB15-0




LTE B66 5MHz QPSK Middle Channel RB25-0




LTE B66 10MHz QPSK Middle Channel RB50-0



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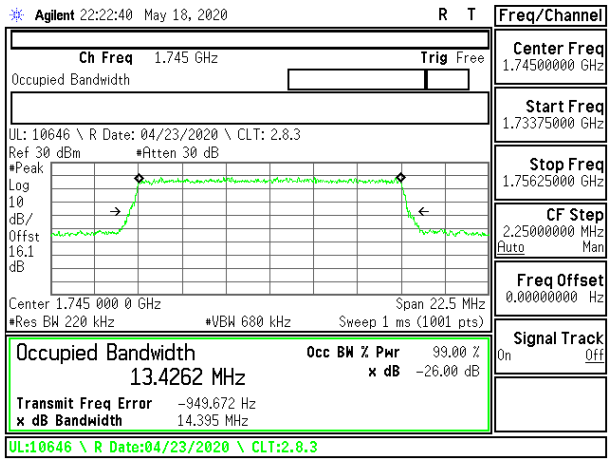
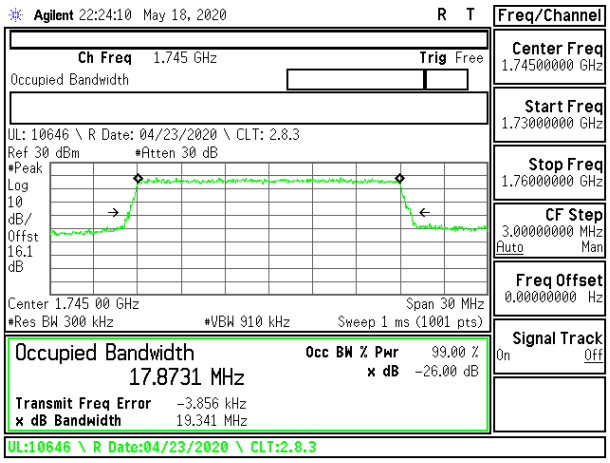
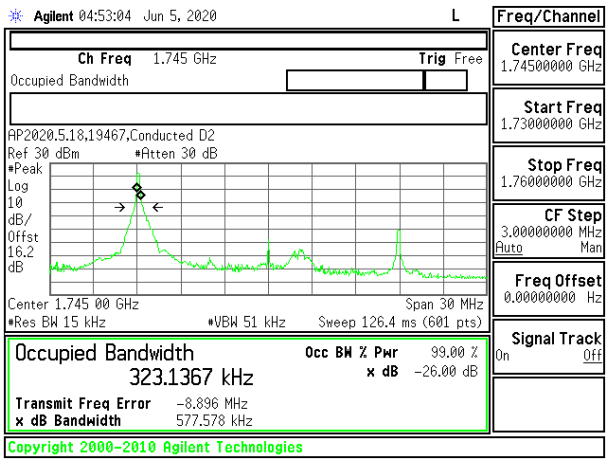



LTE B66 15MHz QPSK Middle Channel RB75-0




LTE B66 20MHz QPSK Middle Channel RB100-0




LTE B66 20MHz QPSK Middle Channel RB1-0

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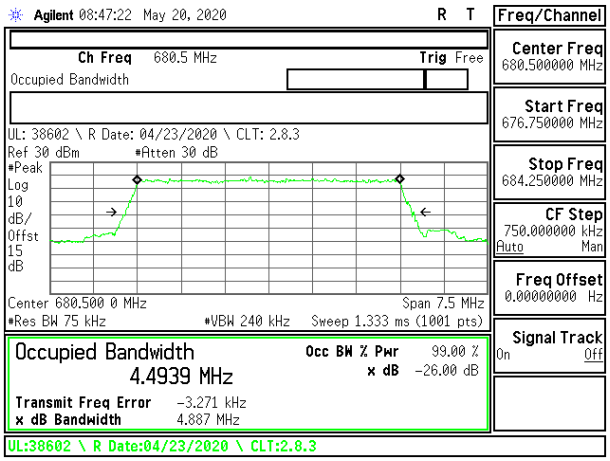
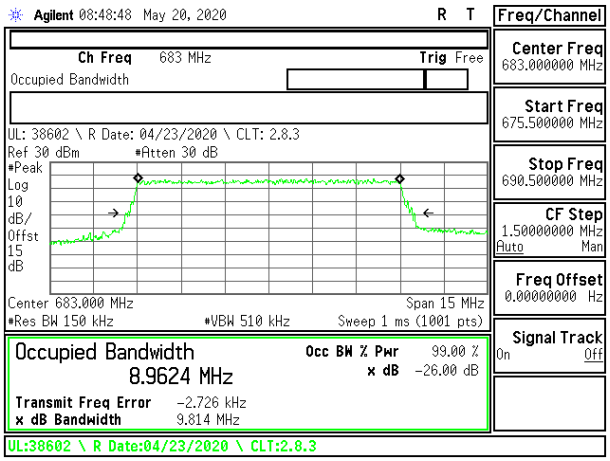
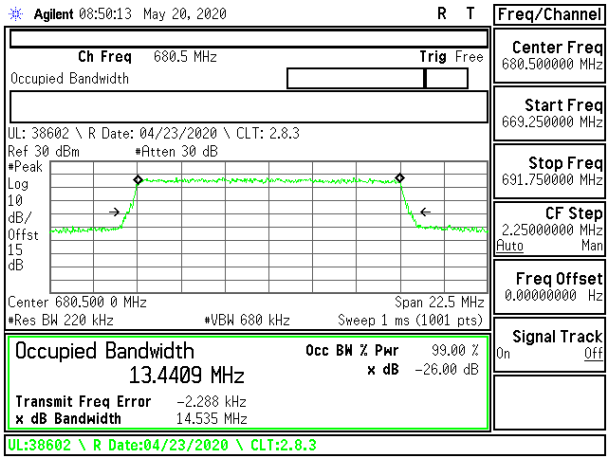
## 8.1.17. LTE BAND 71



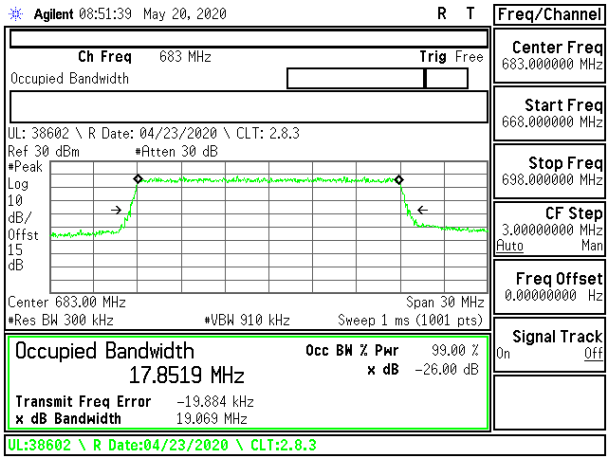

LTE B71 5MHz QPSK Middle Channel RB25-0




LTE B71 10MHz QPSK Middle Channel RB50-0




LTE B71 15MHz QPSK Middle Channel RB75-0




LTE B71 20MHz QPSK Middle Channel RB100-0

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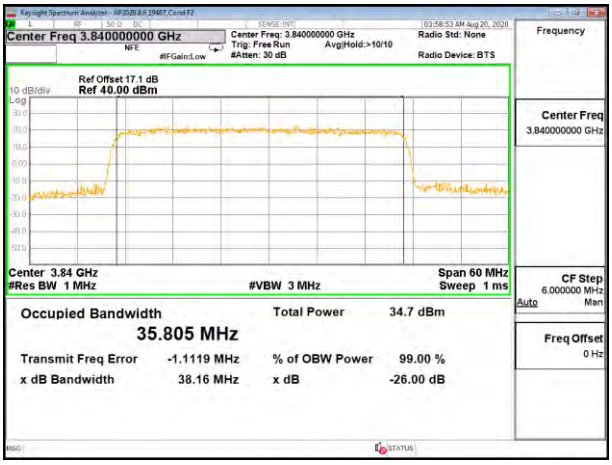
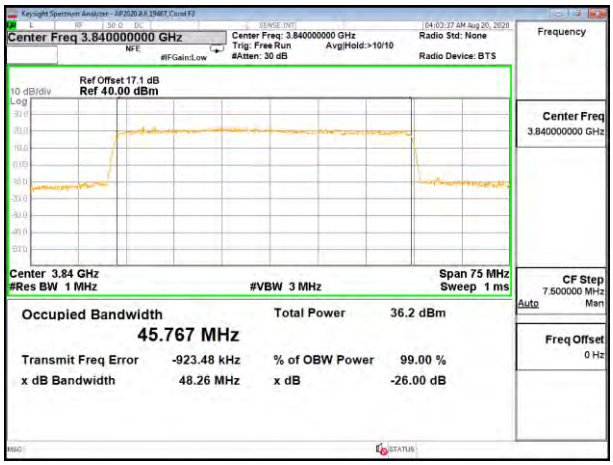
### 8.1.18. 5G NR Band n77

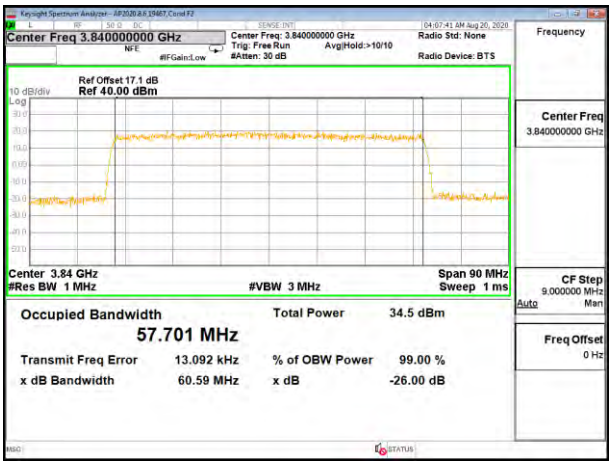
5G NR Band n77 20MHz QPSK Middle Channel RB50-0




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

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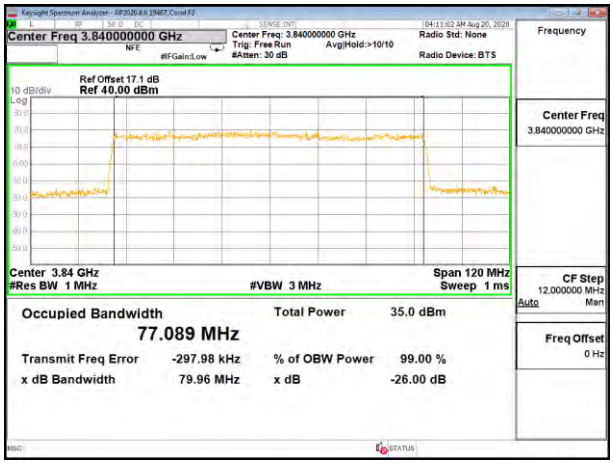
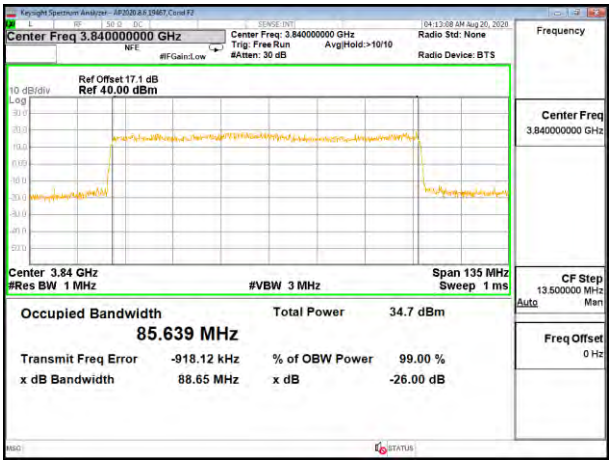
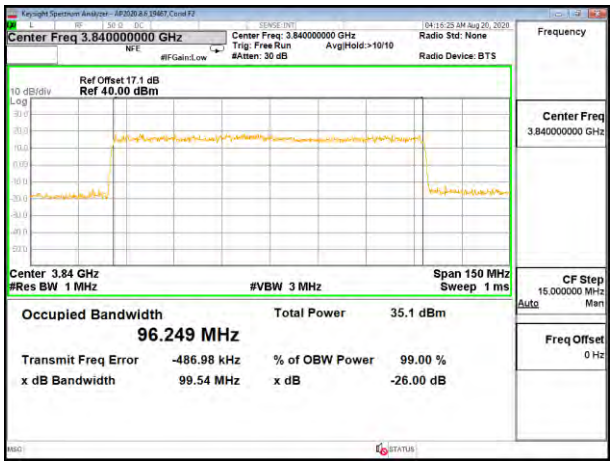


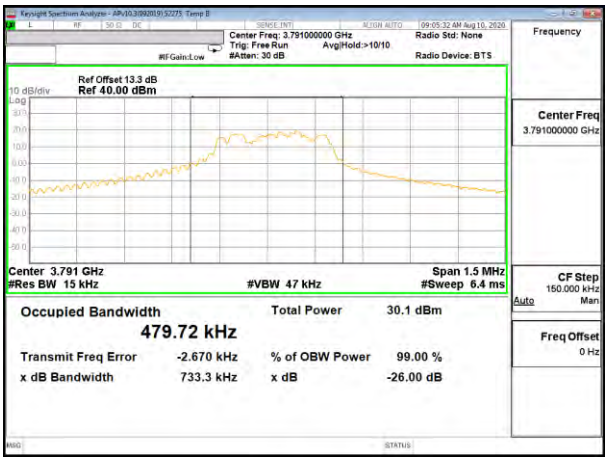

5G NR Band n77 80MHz QPSK Middle Channel RB216-0




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



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## 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




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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




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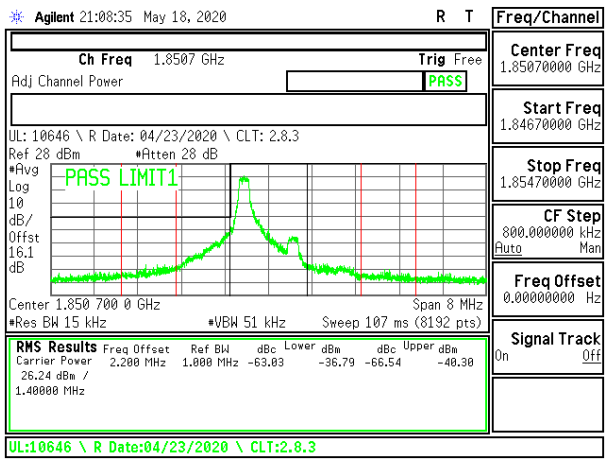
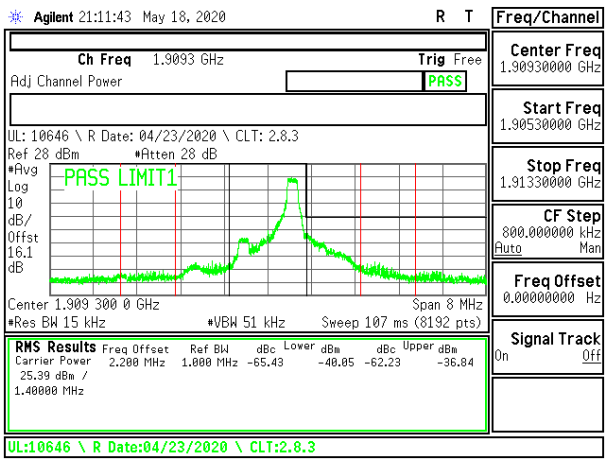
### 8.2.1. LTE BAND 2 BANDEDGE

## LIMITS

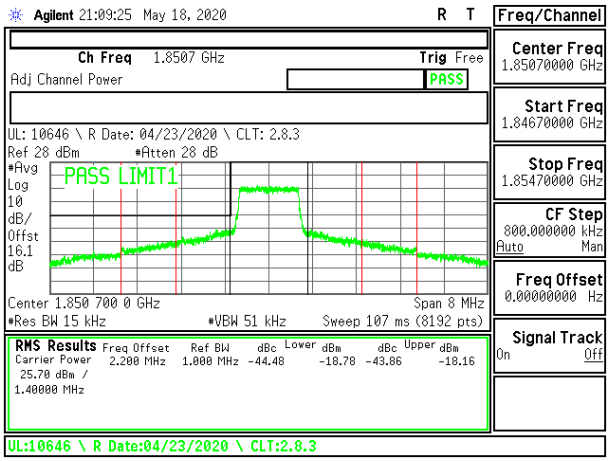
FCC: §24.238
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.



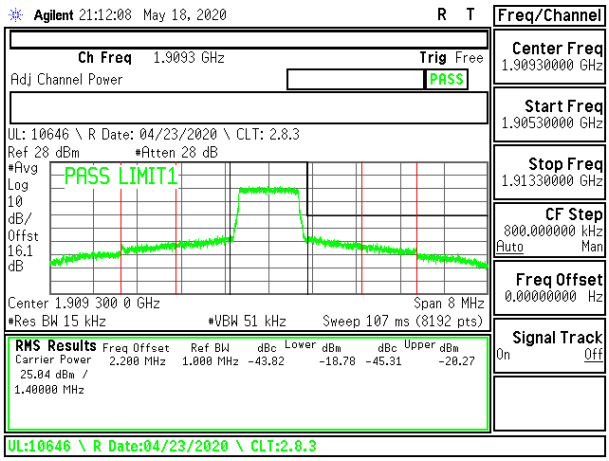

LTE B2 1.4MHz QPSK Low Channel RB1-0




LTE B2 1.4MHz QPSK High Channel RB1-5




LTE B2 1.4MHz QPSK Low Channel RB6-0




LTE B2 1.4MHz QPSK High Channel RB6-0

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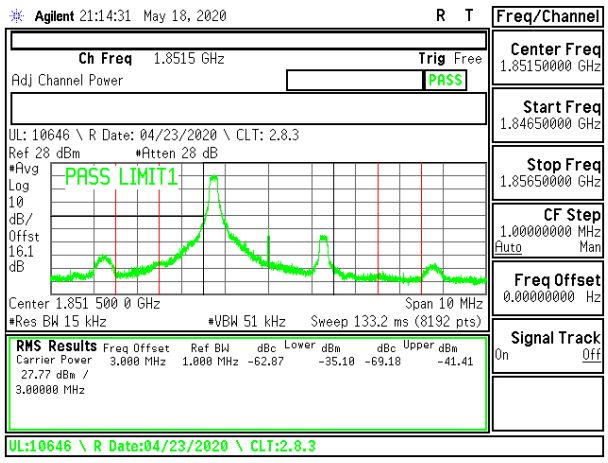
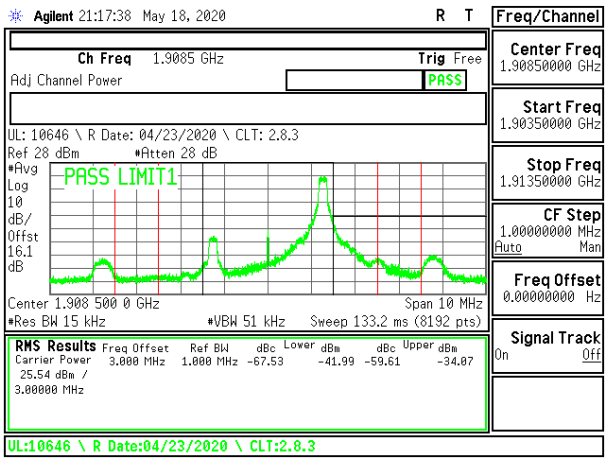
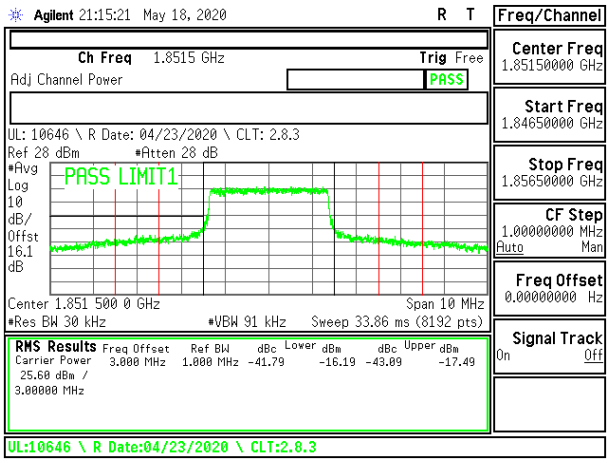


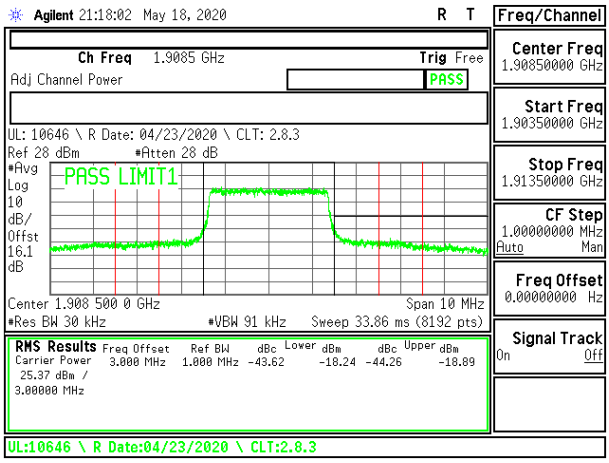

LTE B2 3MHz QPSK Low Channel RB1-0




LTE B2 3MHz QPSK High Channel RB1-14




LTE B2 3MHz QPSK Low Channel RB15-0




LTE B2 3MHz QPSK High Channel RB15-0



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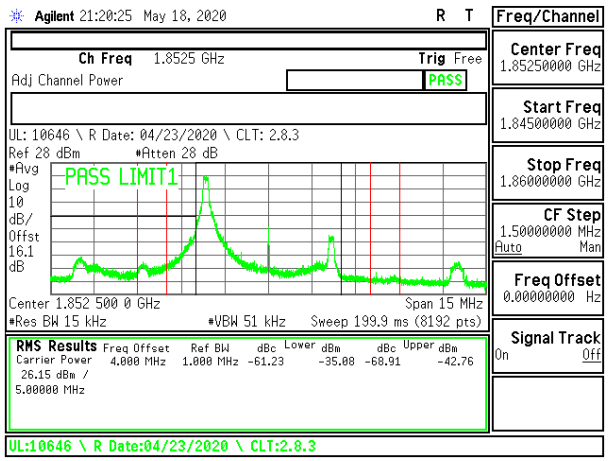
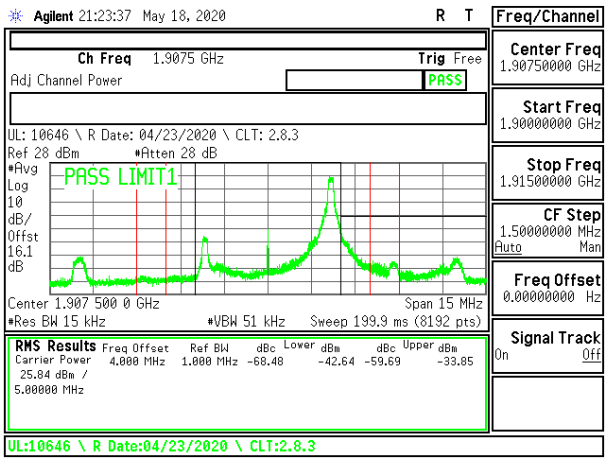
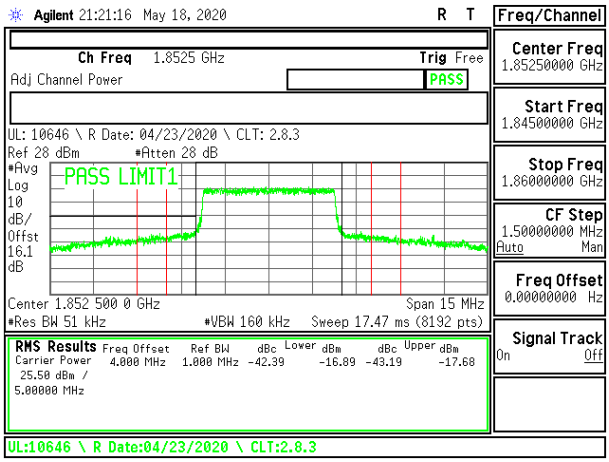


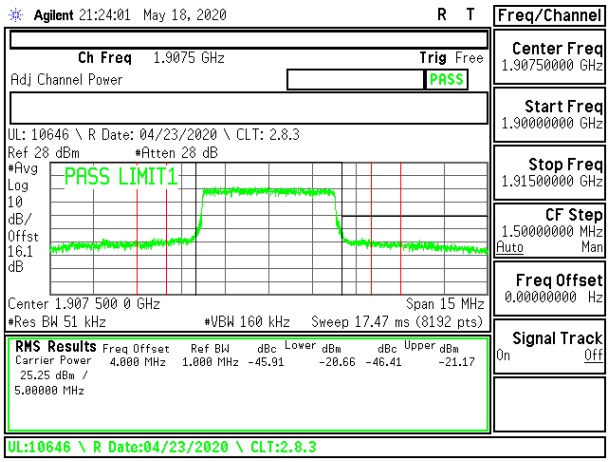

LTE B2 5MHz QPSK Low Channel RB1-0




LTE B2 5MHz QPSK High Channel RB1-24




LTE B2 5MHz QPSK Low Channel RB25-0




LTE B2 5MHz QPSK High Channel RB25-0



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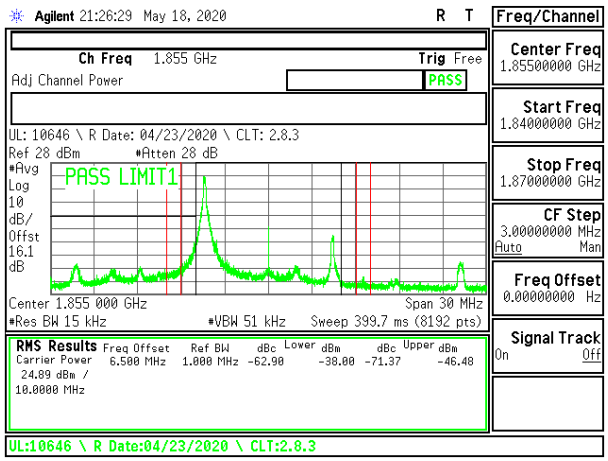
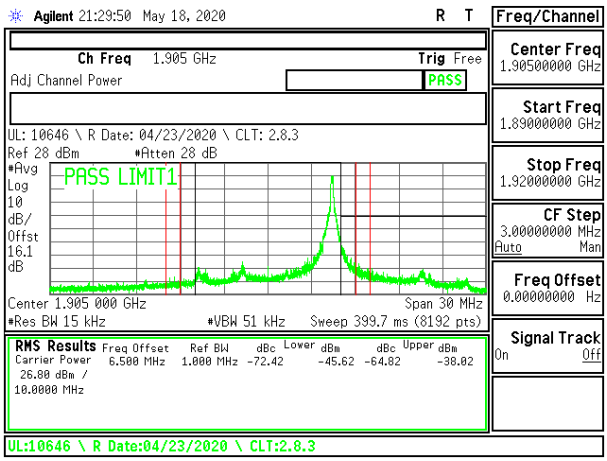
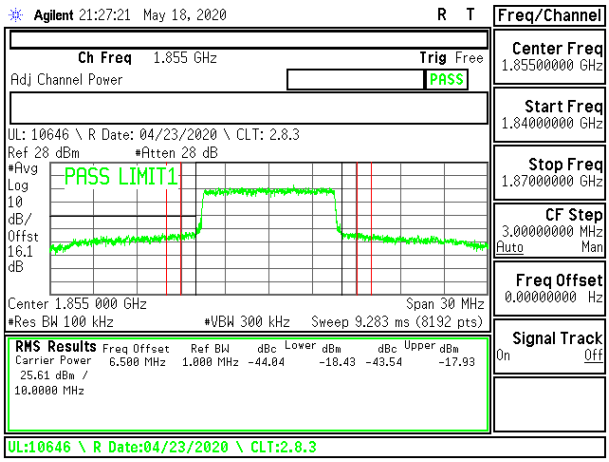


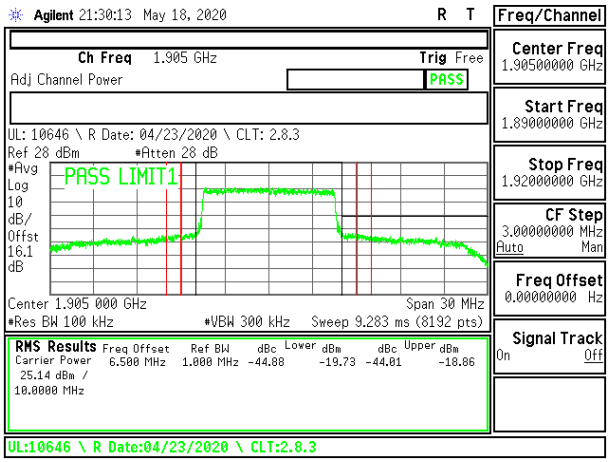

LTE B2 10MHz QPSK Low Channel RB1-0




LTE B2 10MHz QPSK High Channel RB1-49




LTE B2 10MHz QPSK Low Channel RB50-0




LTE B2 10MHz QPSK High Channel RB50-0



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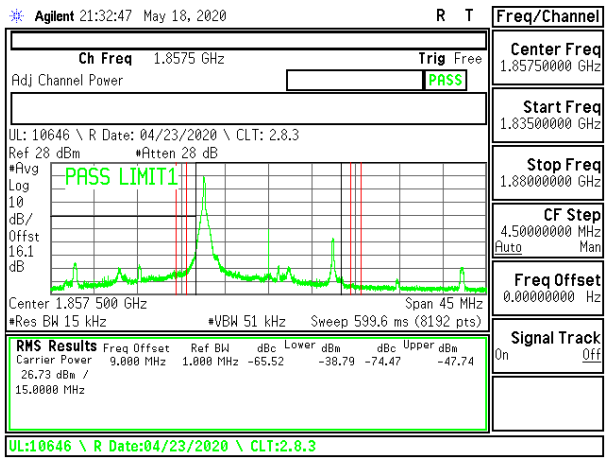
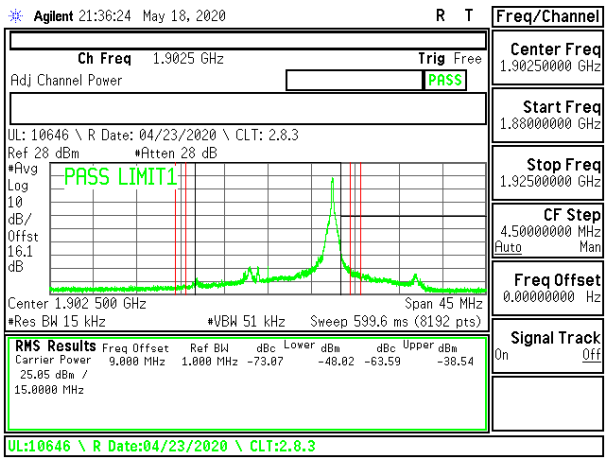
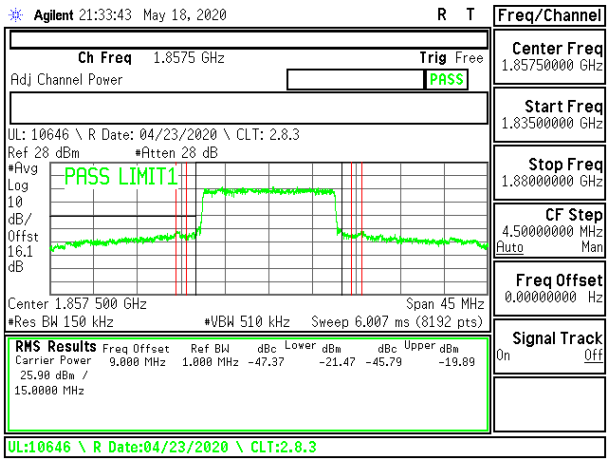


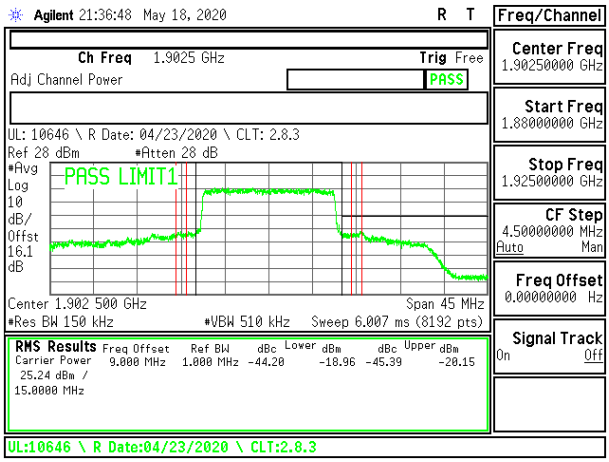

LTE B2 15MHz QPSK Low Channel RB1-0




LTE B2 15MHz QPSK High Channel RB1-74




LTE B2 15MHz QPSK Low Channel RB75-0




LTE B2 15MHz QPSK High Channel RB75-0



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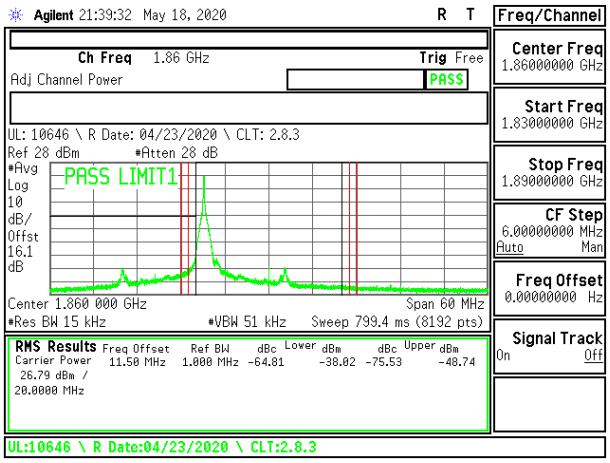
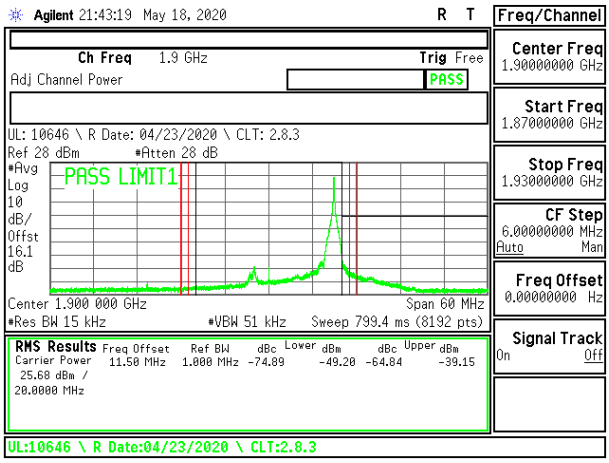
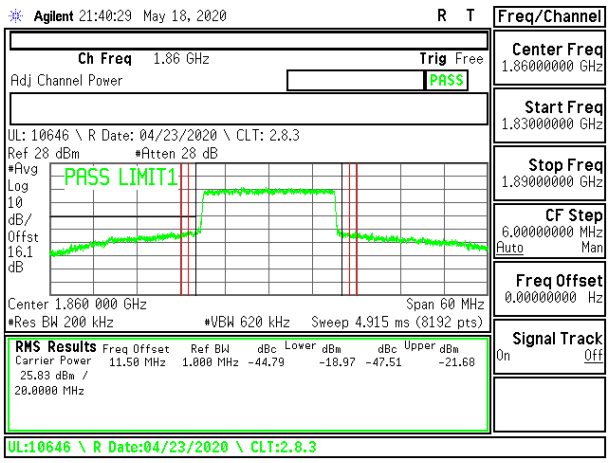


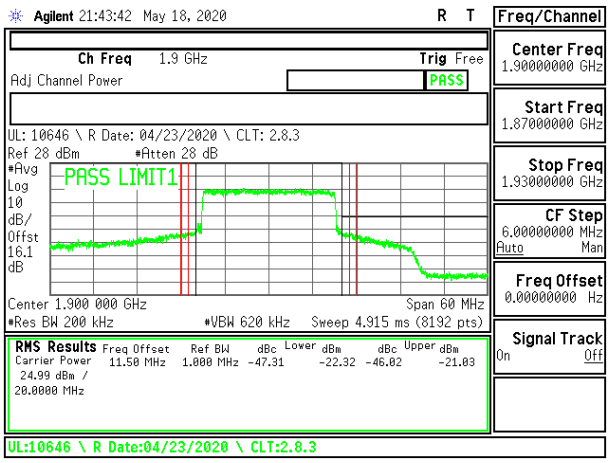

LTE B2 20MHz QPSK Low Channel RB1-0




LTE B2 20MHz QPSK High Channel RB1-99




LTE B2 20MHz QPSK Low Channel RB100-0




LTE B2 20MHz QPSK High Channel RB100-0



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## 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.




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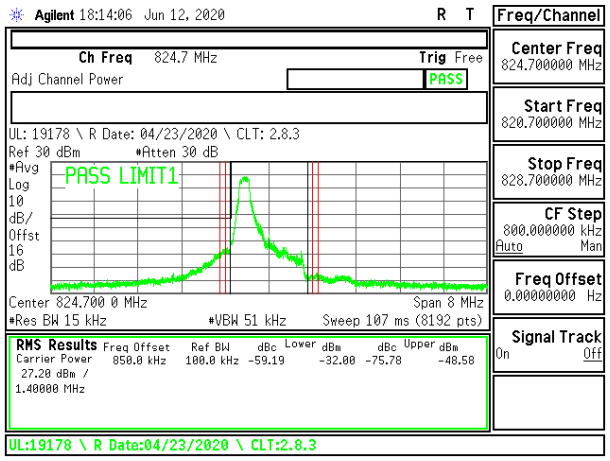
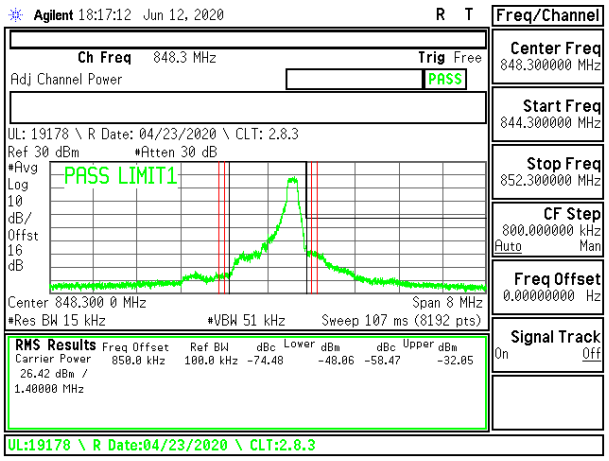
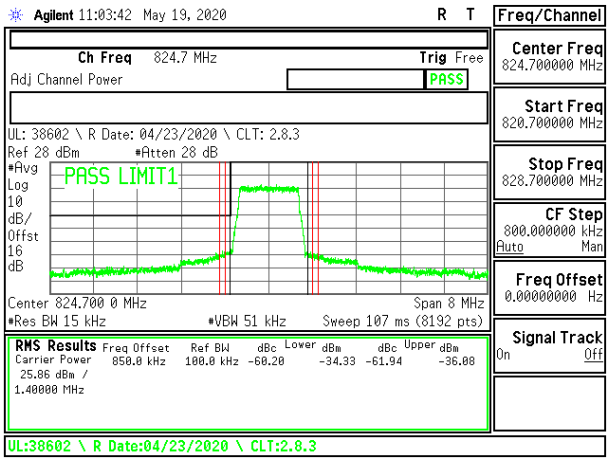
## LTE BAND 5 BANDEGE



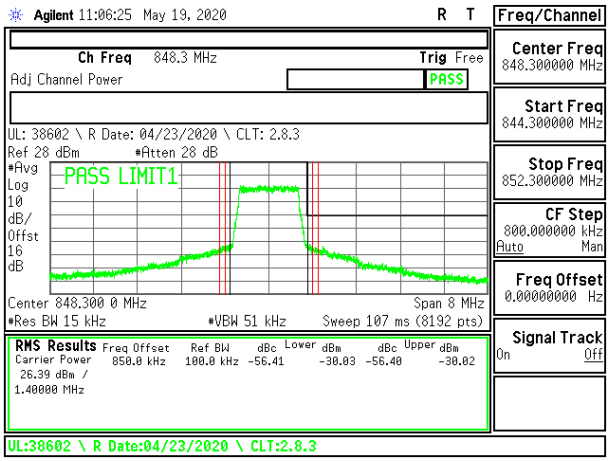

LTE B5 1.4MHz QPSK Low Channel RB1-0




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



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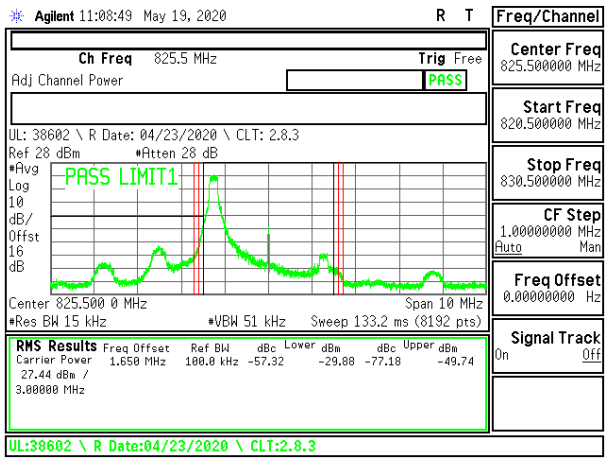
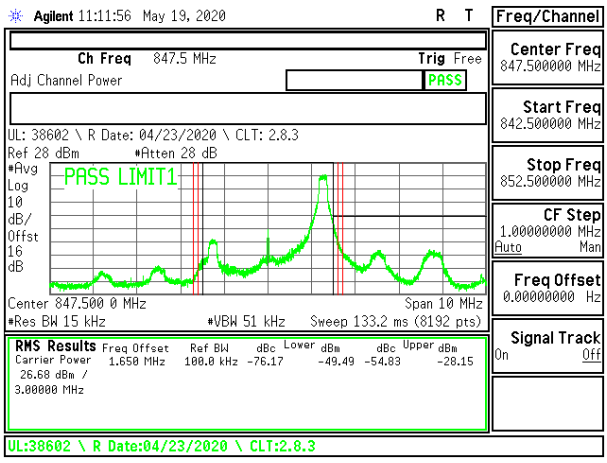
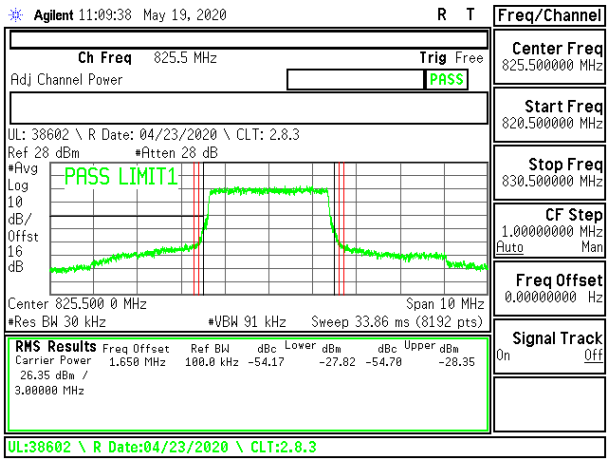


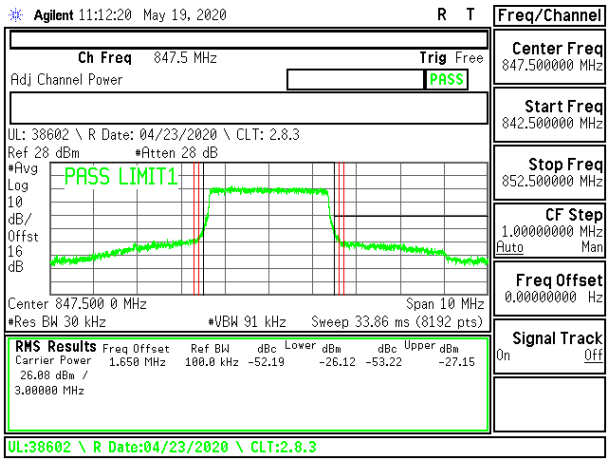

LTE B5 3MHz QPSK Low Channel RB1-0




LTE B5 3MHz QPSK High Channel RB1-14




LTE B5 3MHz QPSK Low Channel RB15-0




LTE B5 3MHz QPSK High Channel RB15-0



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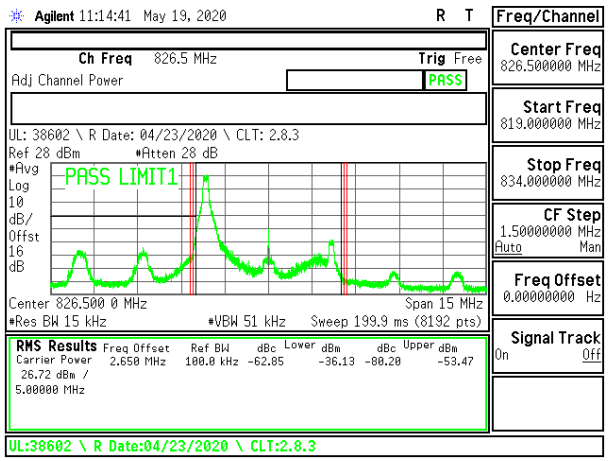
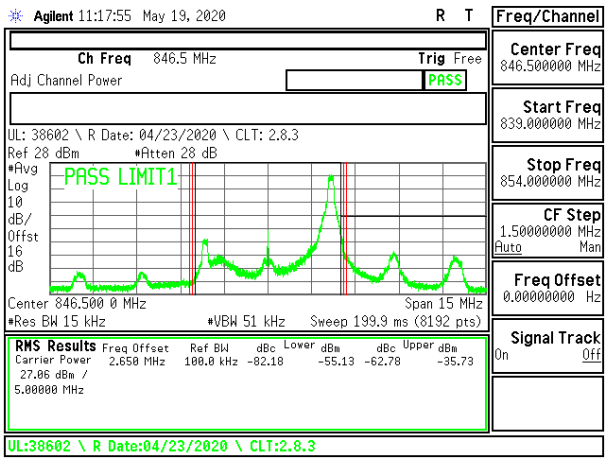
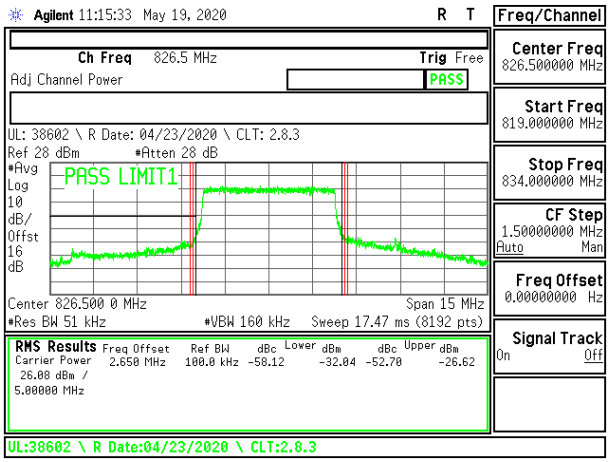



LTE B5 5MHz QPSK Low Channel RB1-0




LTE B5 5MHz QPSK High Channel RB1-24

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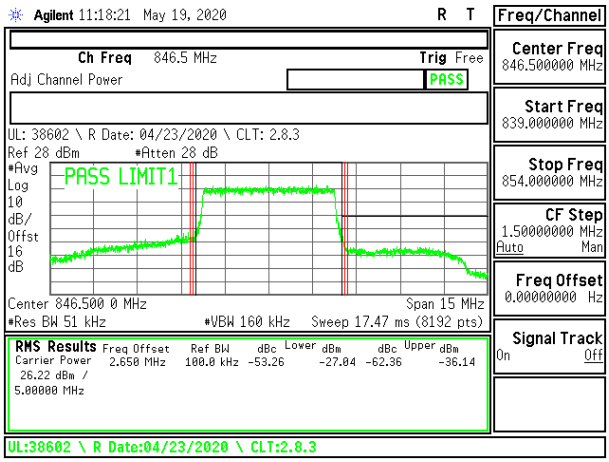


LTE B5 5MHz QPSK High Channel RB25-0




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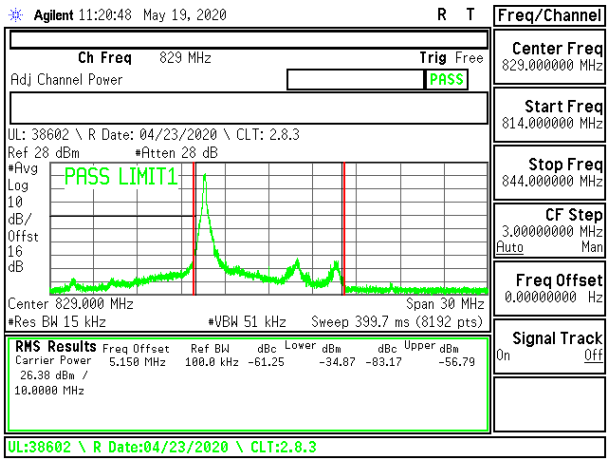
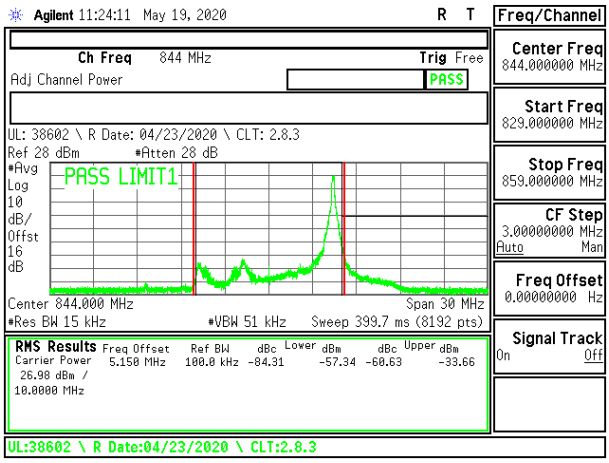
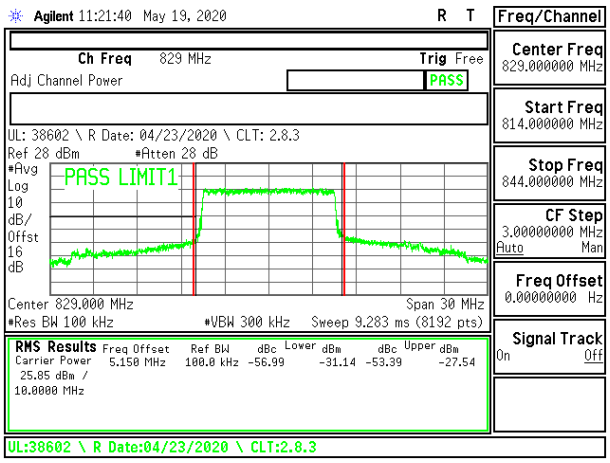


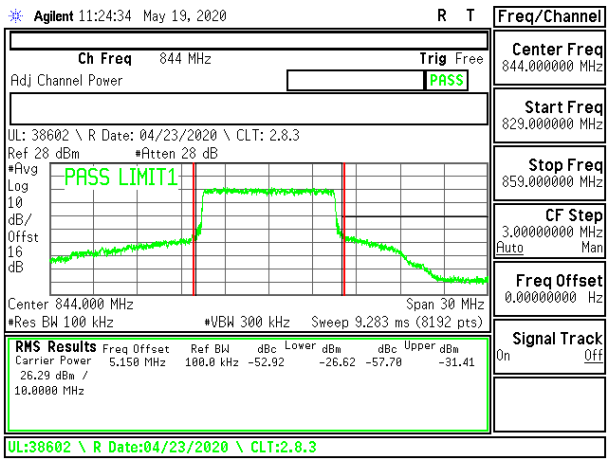

LTE B5 10MHz QPSK Low Channel RB1-0




LTE B5 10MHz QPSK High Channel RB1-49




LTE B5 10MHz QPSK Low Channel RB50-0




LTE B5 10MHz QPSK High Channel RB50-0



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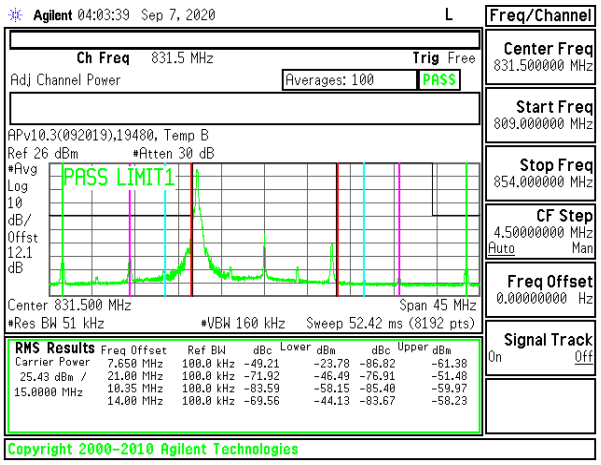
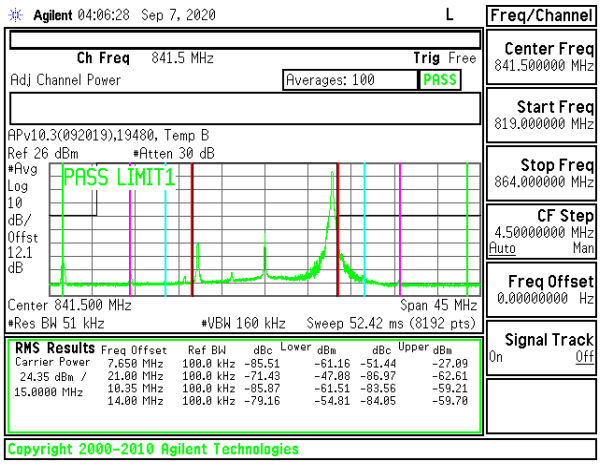
## 5G NR Band n5 BANDEDGE




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

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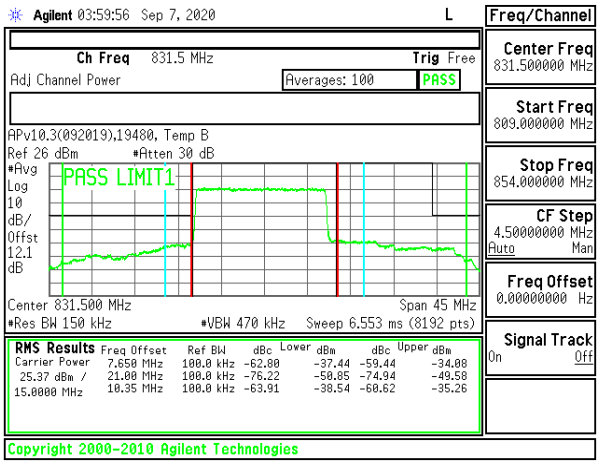
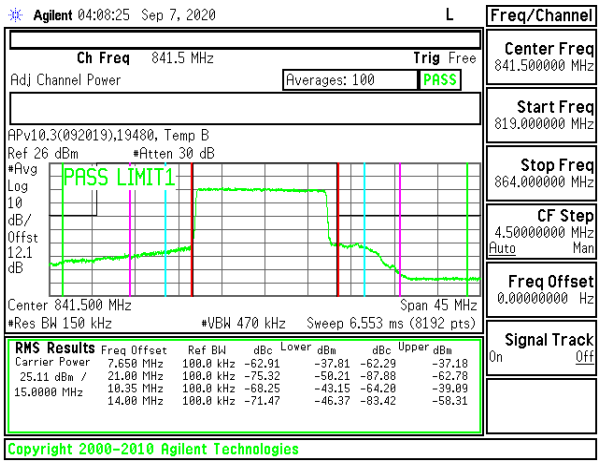



5G NR Band n5 15MHz QPSK Low Channel RB75-0




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

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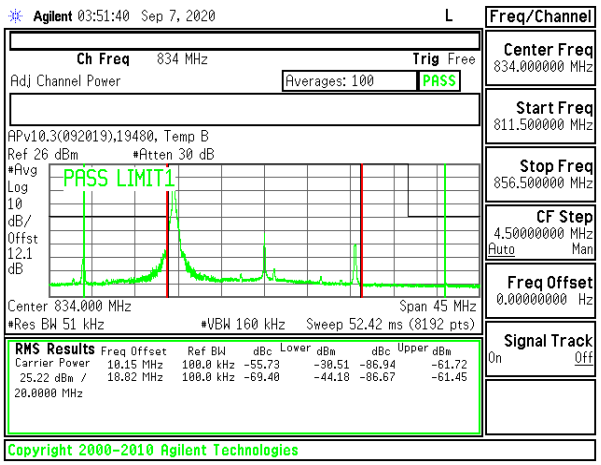
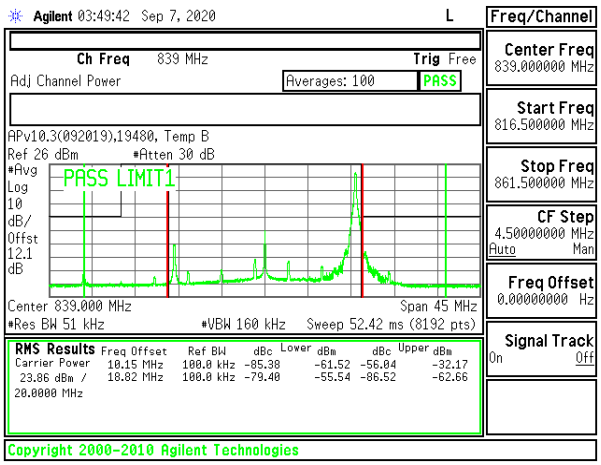
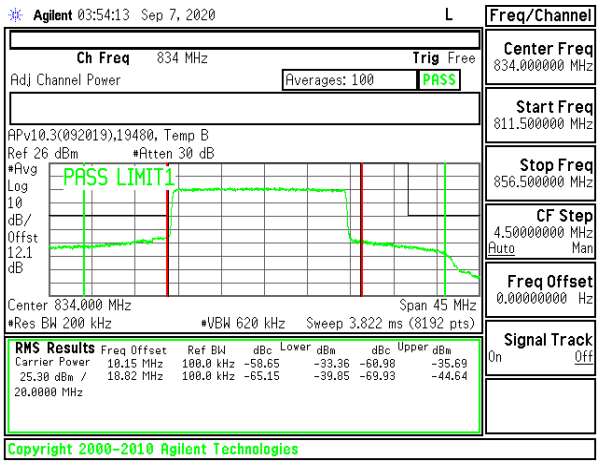


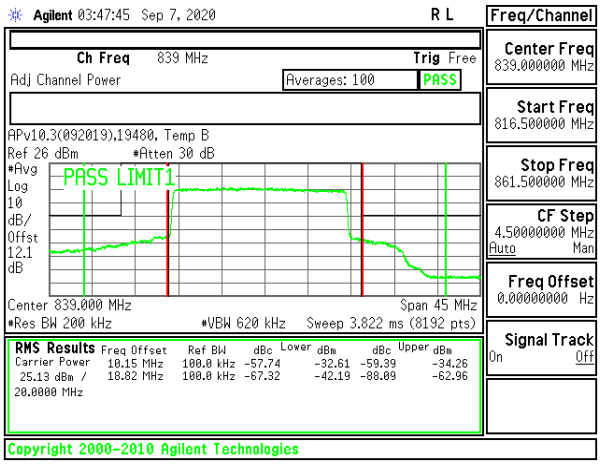

5G NR Band n5 20MHz QPSK Low Channel RB1-0




5G NR Band n5 20MHz QPSK High Channel RB1-105




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




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



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## 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.




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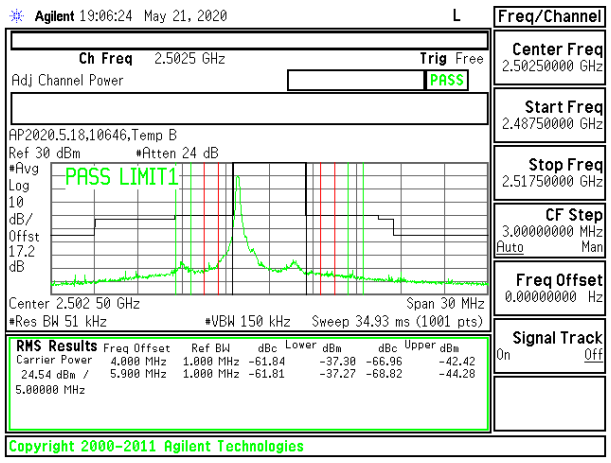
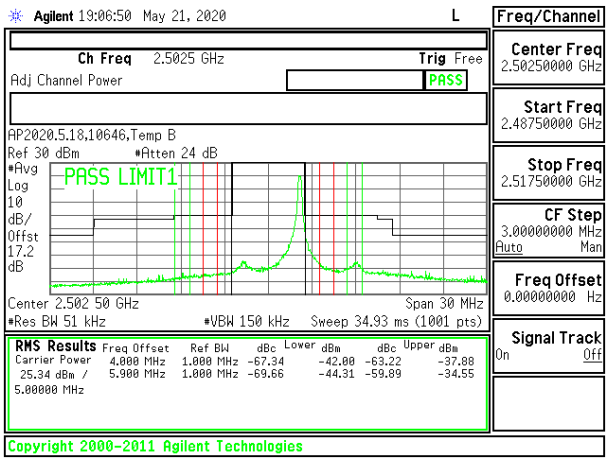
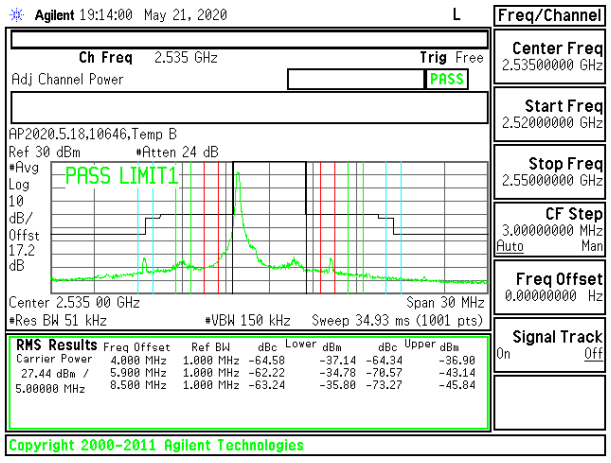


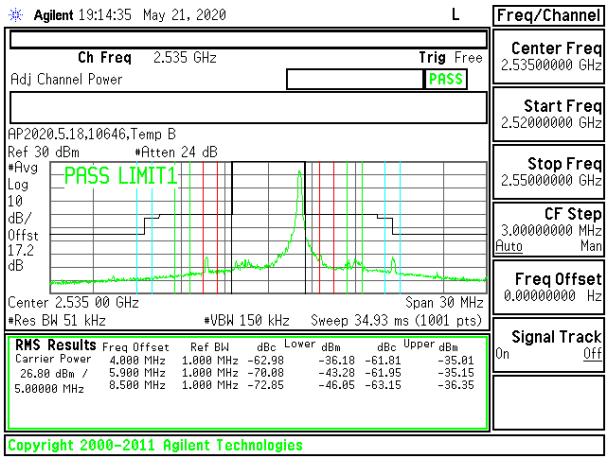

LTE B7 5MHz QPSK Low Channel RB1-0



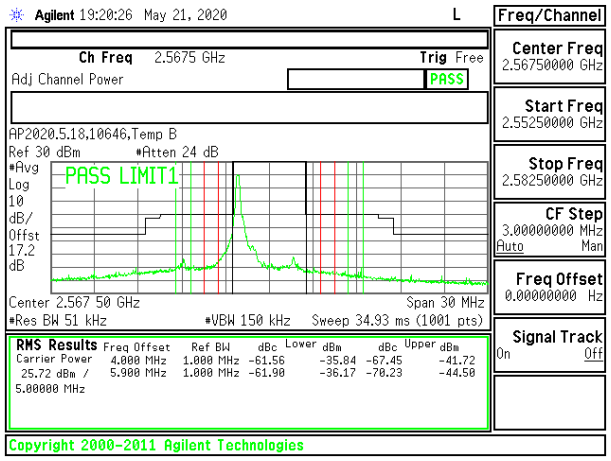

LTE B7 5MHz QPSK Low Channel RB1-24



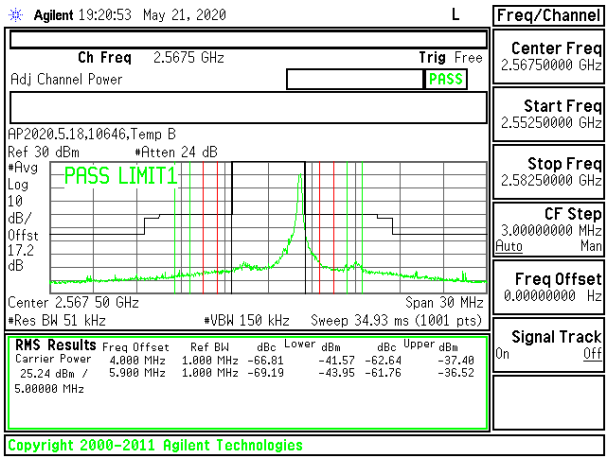

LTE B7 5MHz QPSK Middle Channel RB1-0




LTE B7 5MHz QPSK Middle Channel RB1-24




LTE B7 5MHz QPSK High Channel RB1-0




LTE B7 5MHz QPSK High Channel RB1-24



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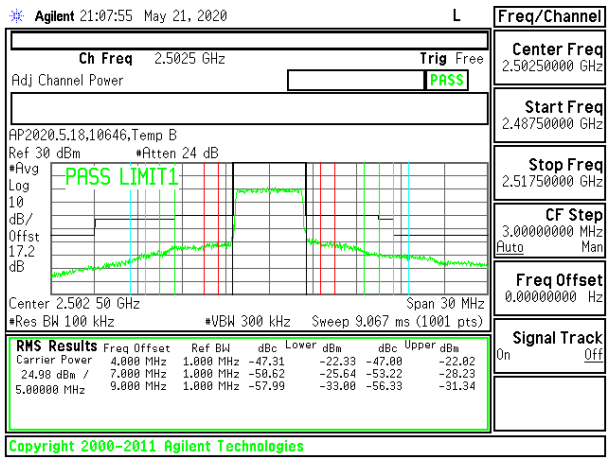
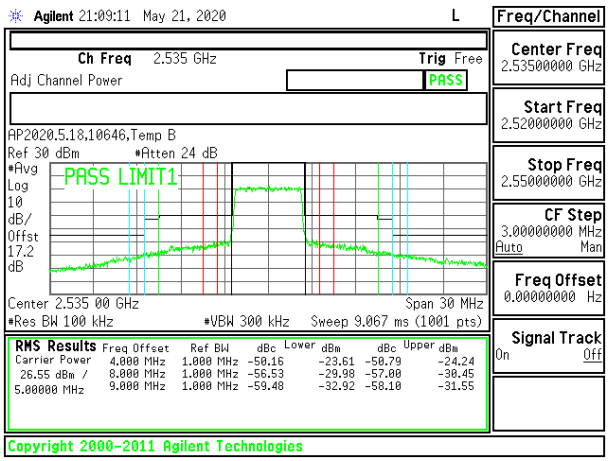
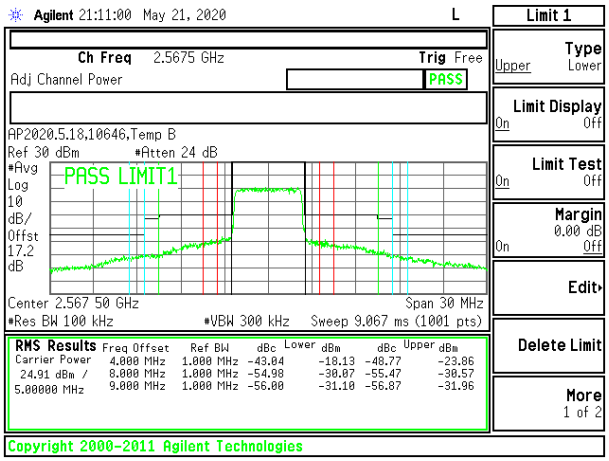



LTE B7 5MHz QPSK Low Channel RB25-0




LTE B7 5MHz QPSK Middle Channel RB25-0




LTE B7 5MHz QPSK High Channel RB25-0



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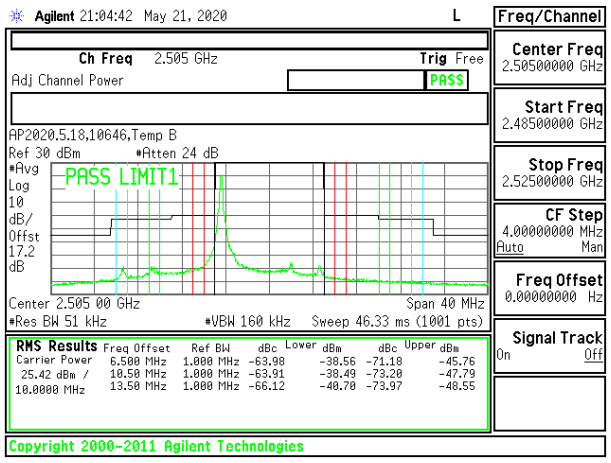
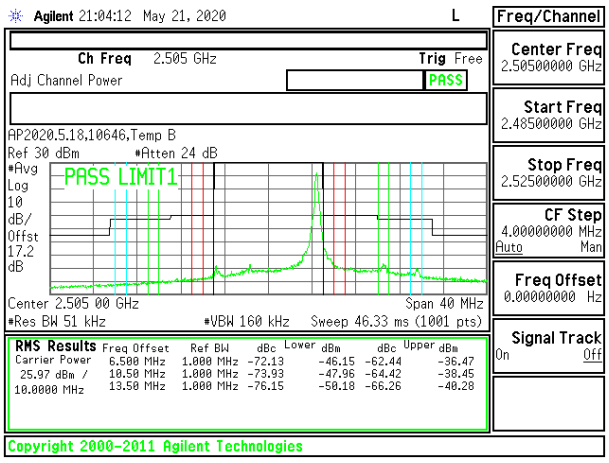
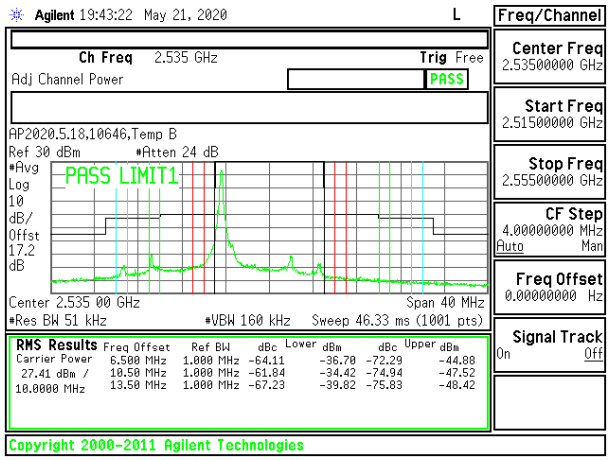


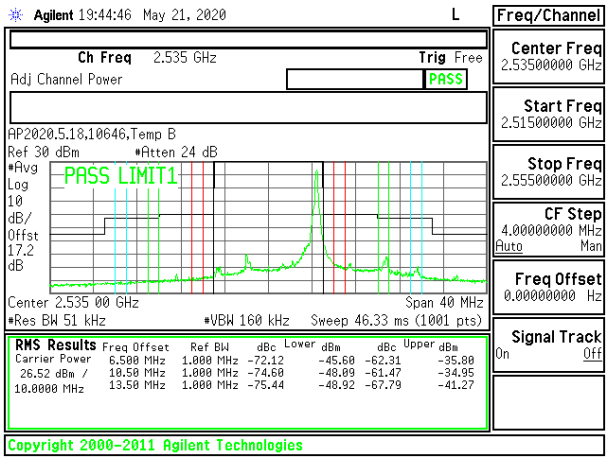

LTE B7 10MHz QPSK Low Channel RB1-0



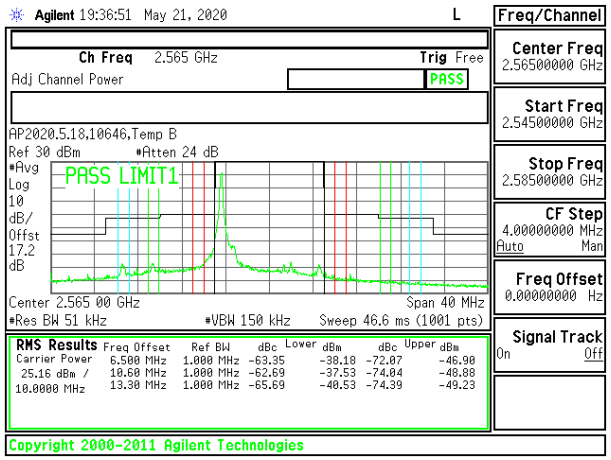

LTE B7 10MHz QPSK Low Channel RB1-49



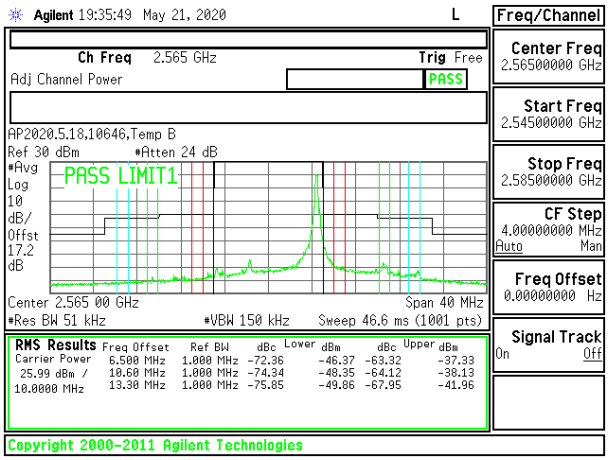

LTE B7 10MHz QPSK Middle Channel RB1-0




LTE B7 10MHz QPSK Middle Channel RB1-49




LTE B7 10MHz QPSK High Channel RB1-0




LTE B7 10MHz QPSK High Channel RB1-49



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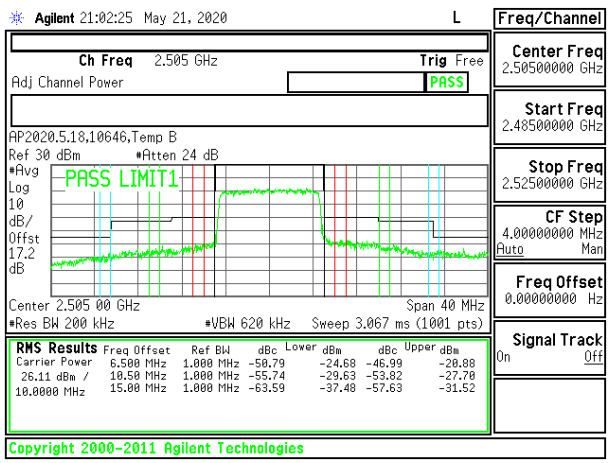
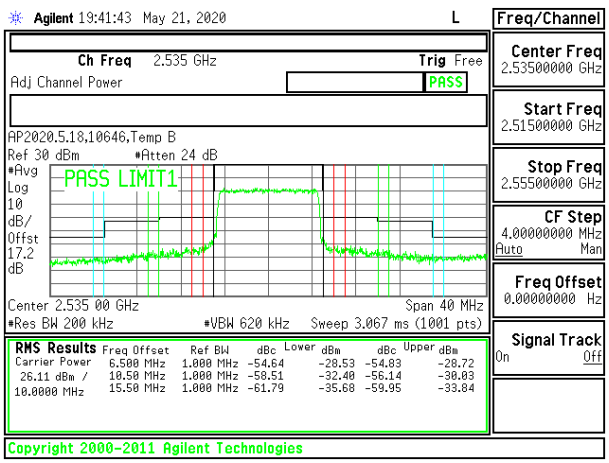
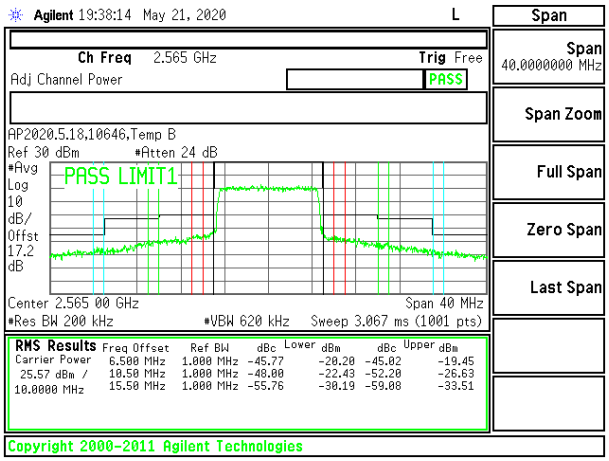



LTE B7 10MHz QPSK Low Channel RB50-0




LTE B7 10MHz QPSK Middle Channel RB50-0




LTE B7 10MHz QPSK High Channel RB50-0

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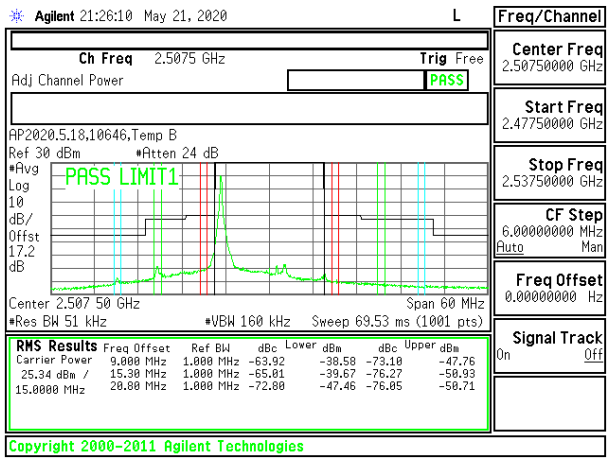
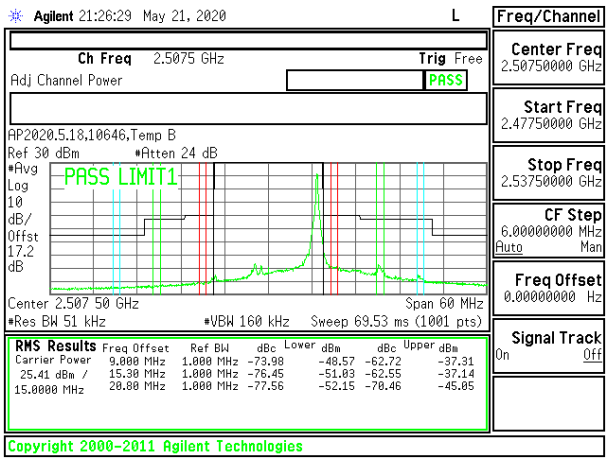
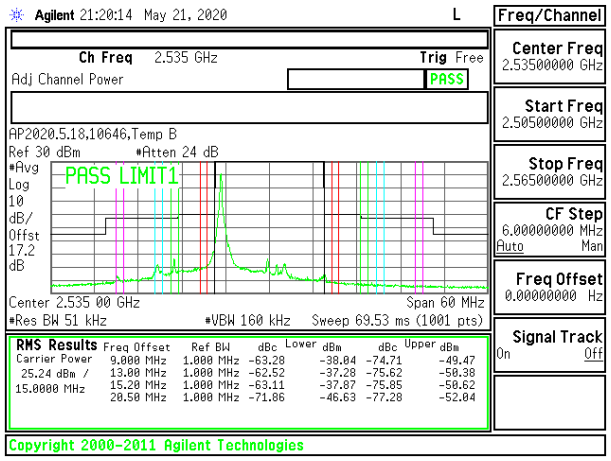


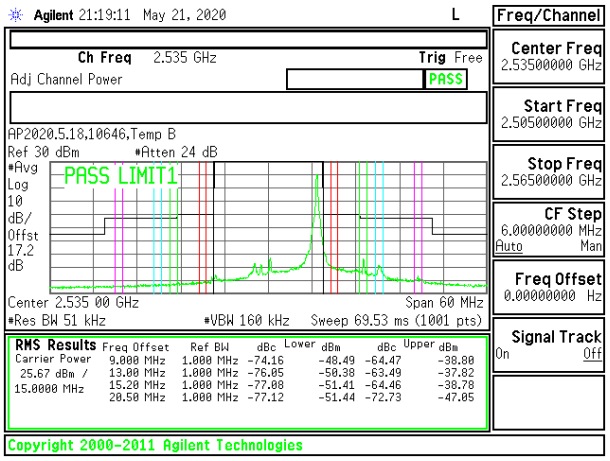

LTE B7 15MHz QPSK Low Channel RB1-0



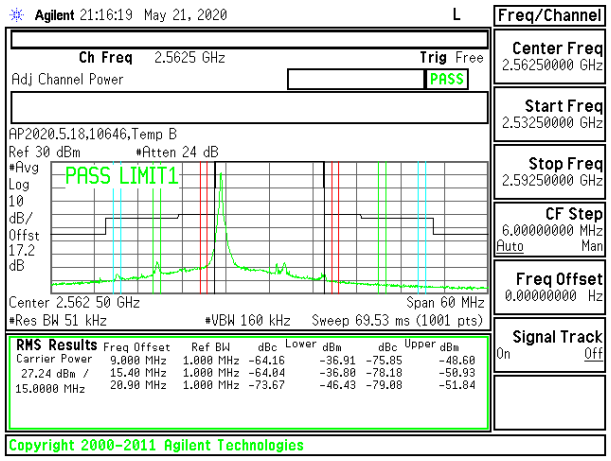

LTE B7 15MHz QPSK Low Channel RB1-74



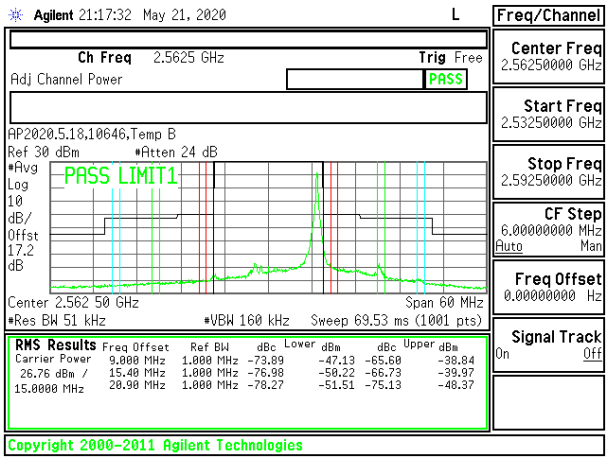

LTE B7 15MHz QPSK Middle Channel RB1-0




LTE B7 15MHz QPSK Middle Channel RB1-74




LTE B7 15MHz QPSK High Channel RB1-0




LTE B7 15MHz QPSK High Channel RB1-74



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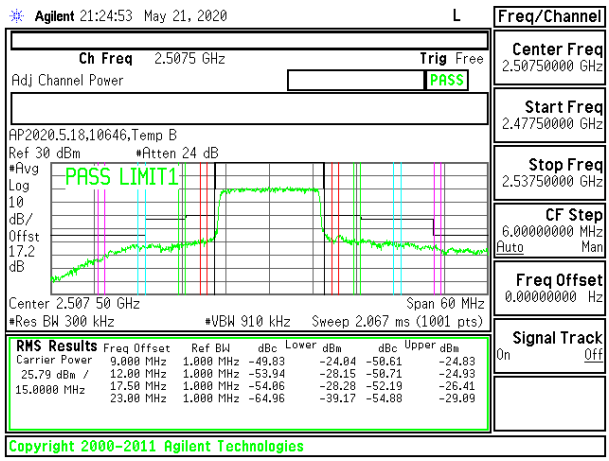
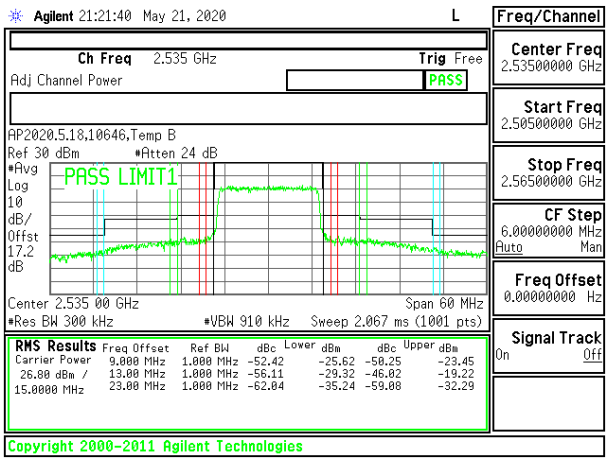
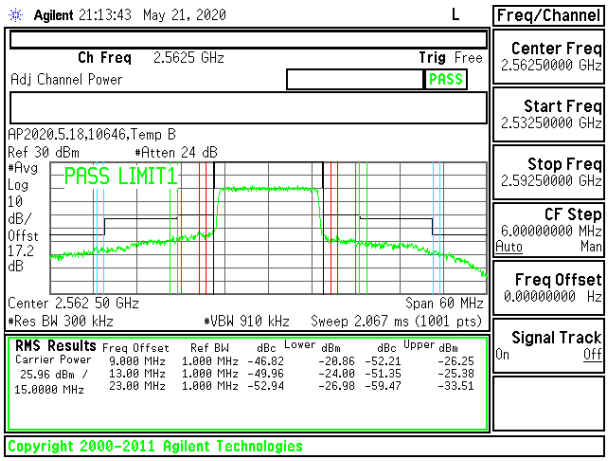



LTE B7 15MHz QPSK Low Channel RB75-0




LTE B7 15MHz QPSK Middle Channel RB75-0




LTE B7 15MHz QPSK High Channel RB75-0

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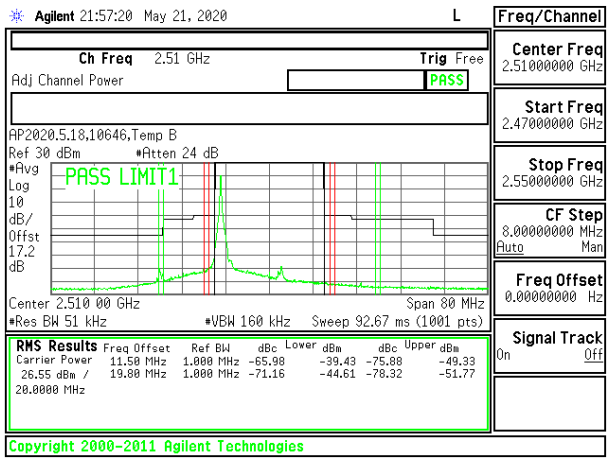
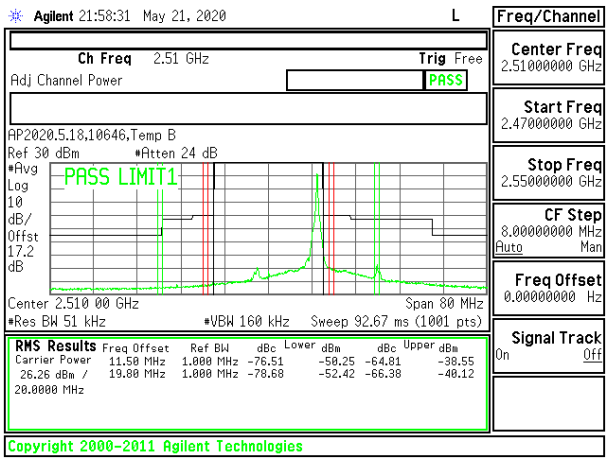



LTE B7 20MHz QPSK Low Channel RB1-0

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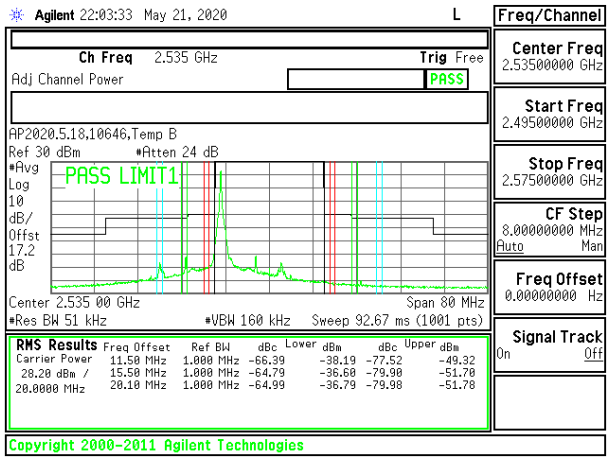


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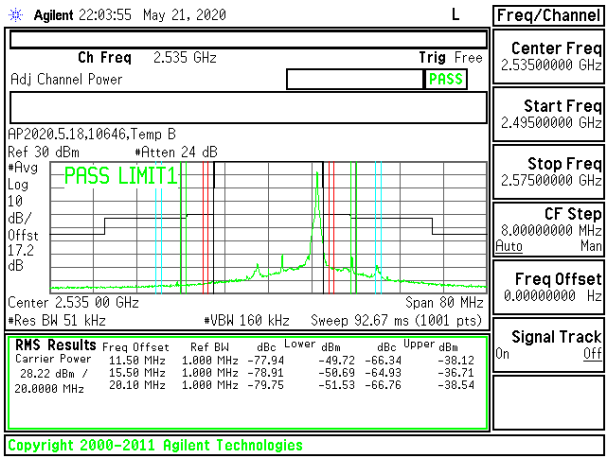
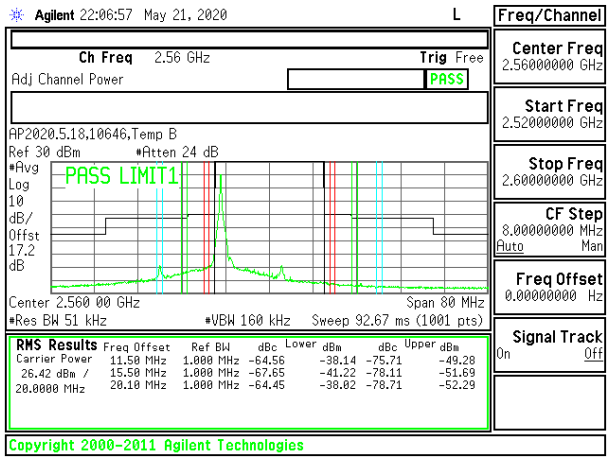



LTE B7 20MHz QPSK Middle Channel RB1-99

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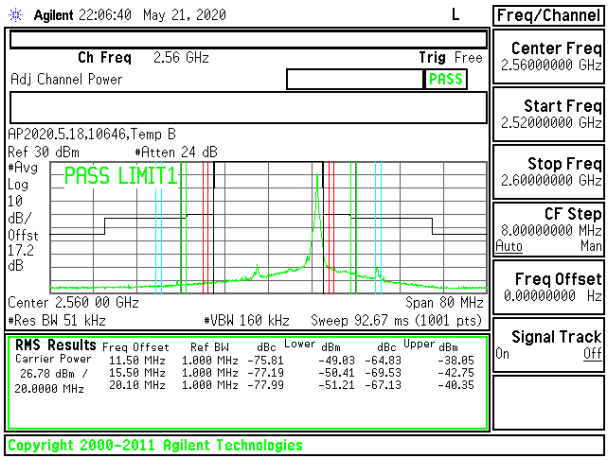


LTE B7 20MHz QPSK High Channel RB1-99



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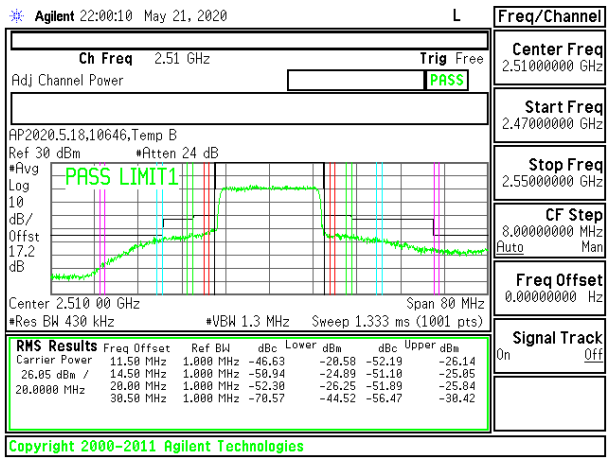
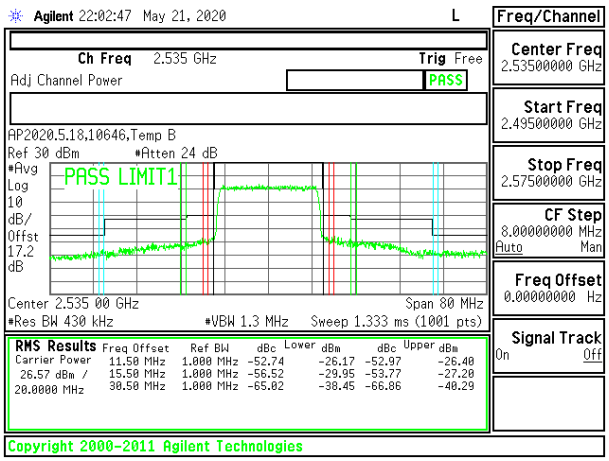
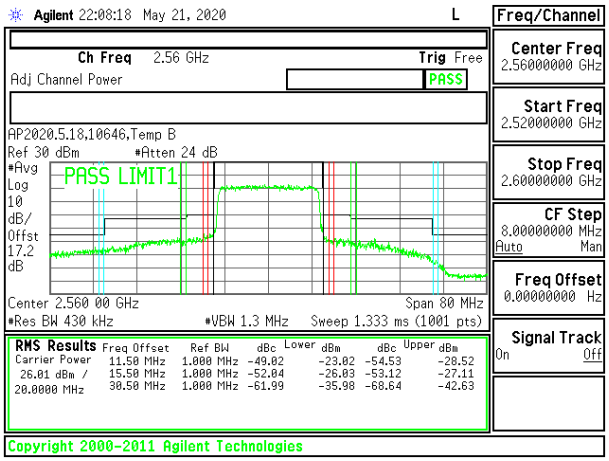



LTE B7 20MHz QPSK Low Channel RB100-0




LTE B7 20MHz QPSK Middle Channel RB100-0




LTE B7 20MHz QPSK High Channel RB100-0

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

## LIMITS

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



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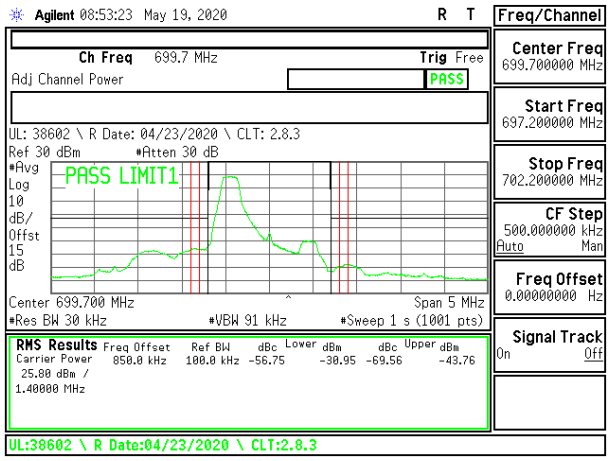
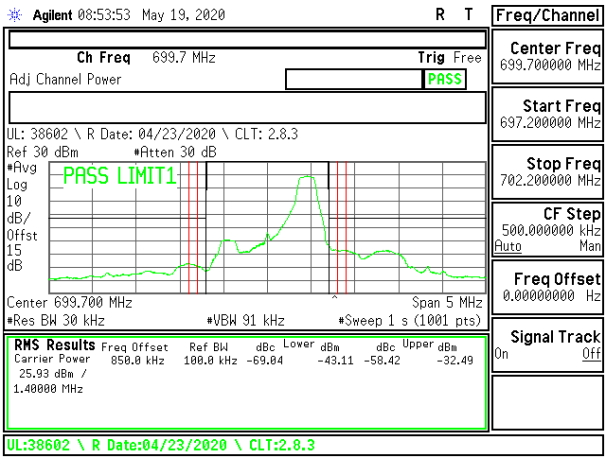
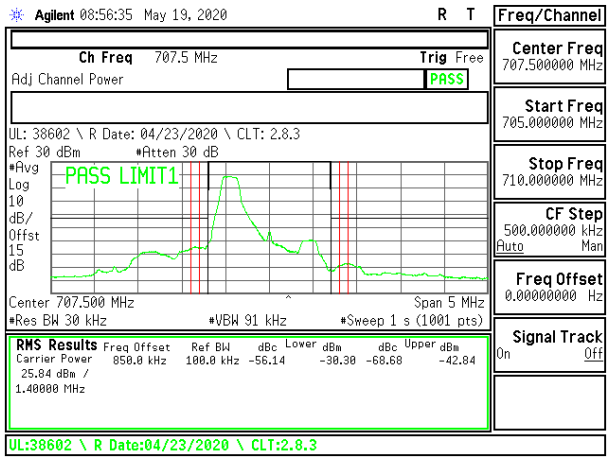
## LTE BAND 12 ADJACENT CHANNEL POWER



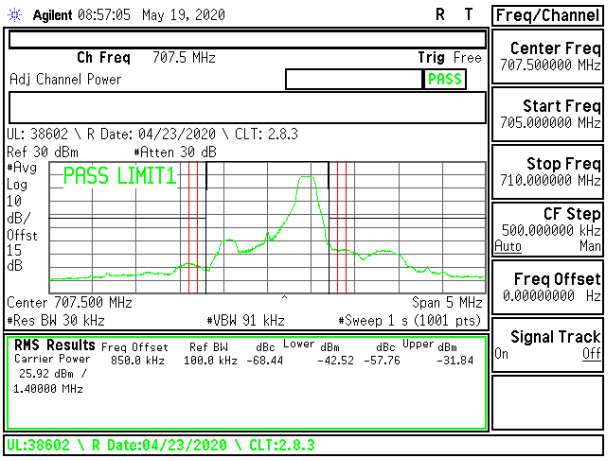

LTE B12 1.4MHz QPSK Low Channel RB1-0



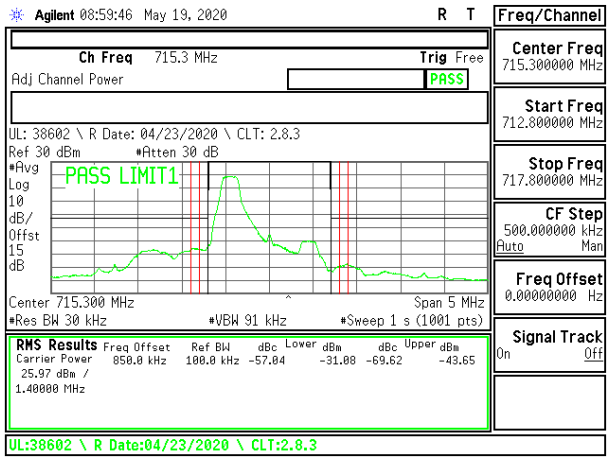

LTE B12 1.4MHz QPSK Low Channel RB1-5



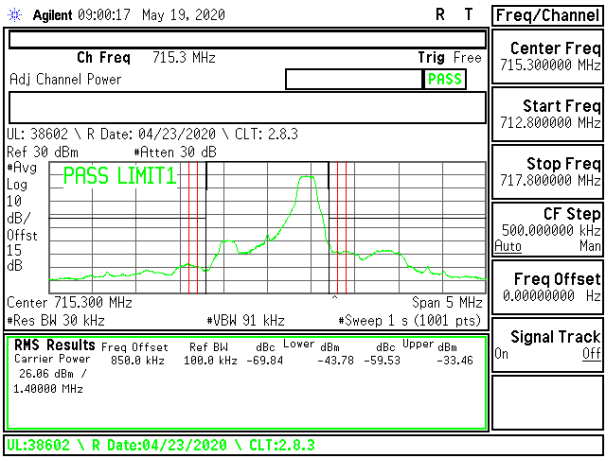

LTE B12 1.4MHz QPSK Middle Channel RB1-0




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

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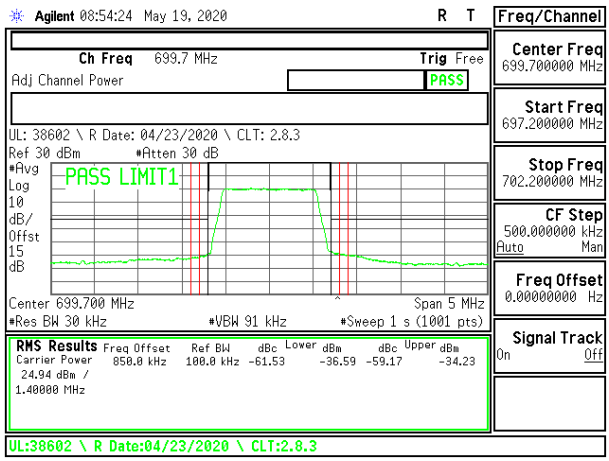
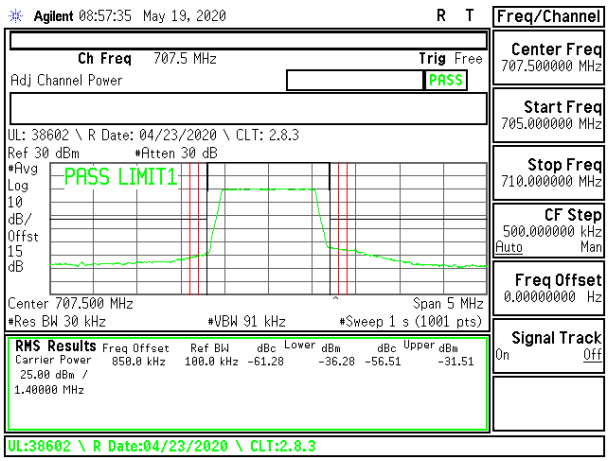
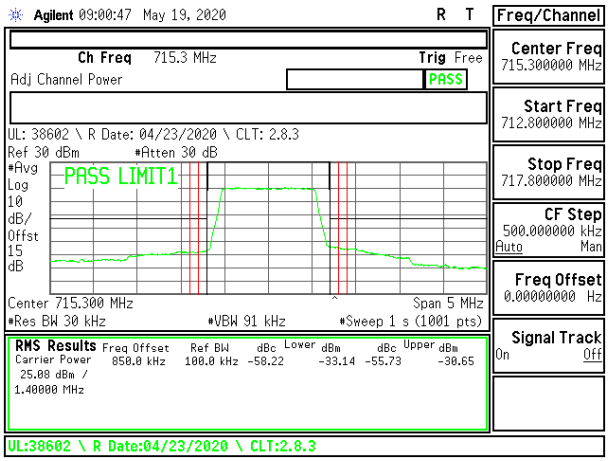



LTE B12 1.4MHz QPSK Low Channel RB6-0




LTE B12 1.4MHz QPSK Middle Channel RB6-0




LTE B12 1.4MHz QPSK High Channel RB6-0



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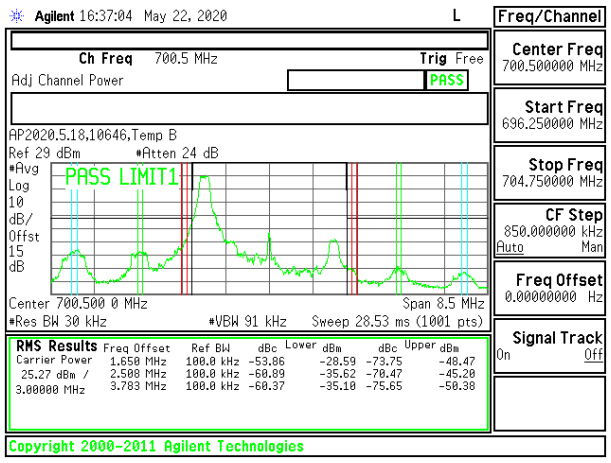
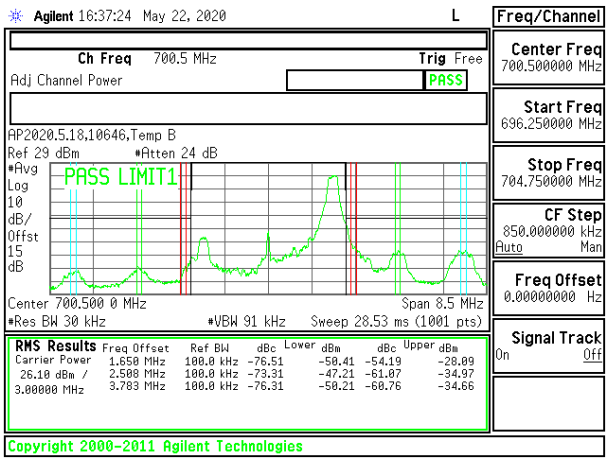
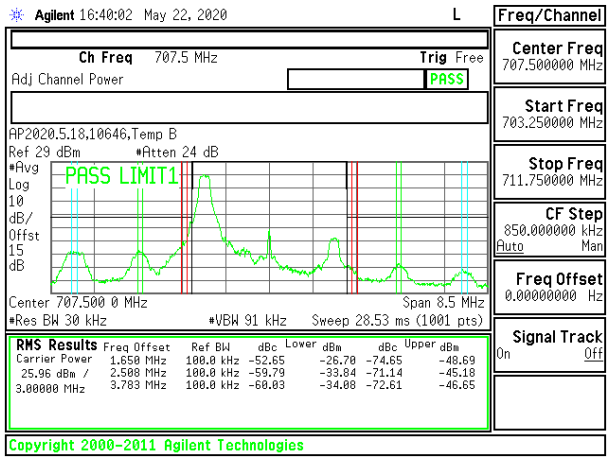


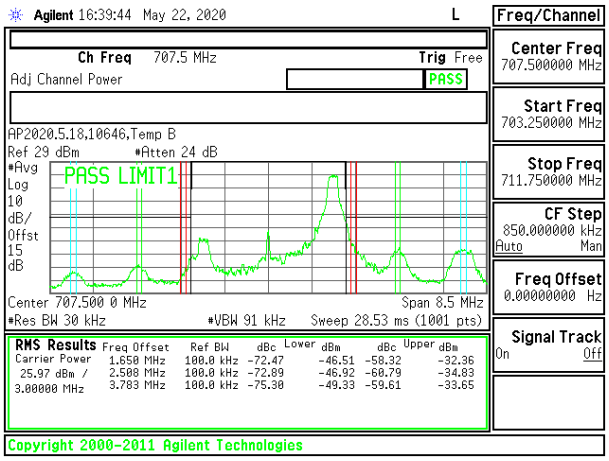

LTE B12 3MHz QPSK Low Channel RB1-0



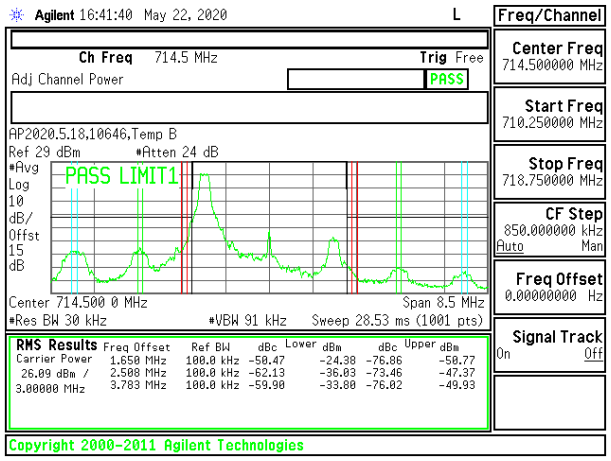

LTE B12 3MHz QPSK Low Channel RB1-14



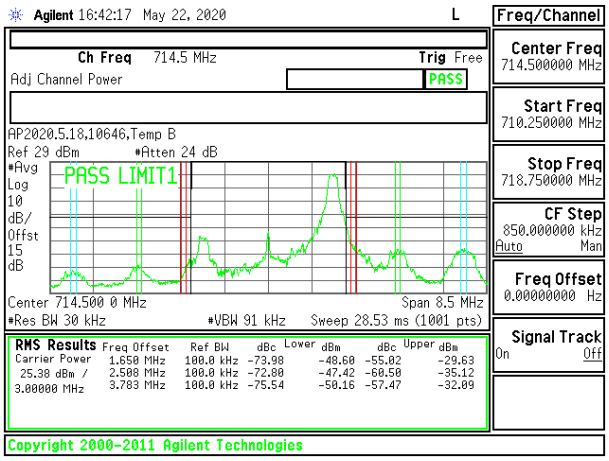

LTE B12 3MHz QPSK Middle Channel RB1-0




LTE B12 3MHz QPSK Middle Channel RB1-14




LTE B12 3MHz QPSK High Channel RB1-0




LTE B12 3MHz QPSK High Channel RB1-14



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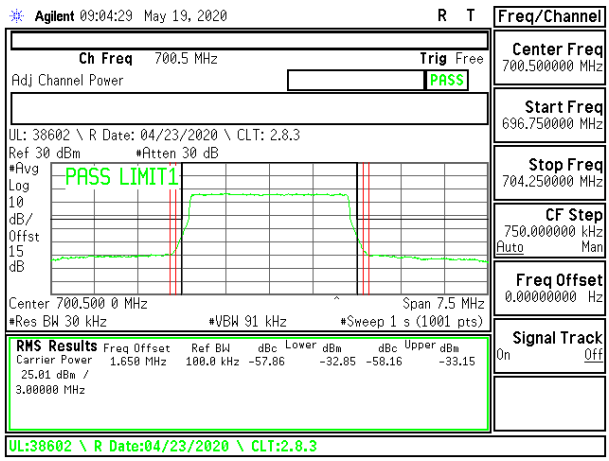
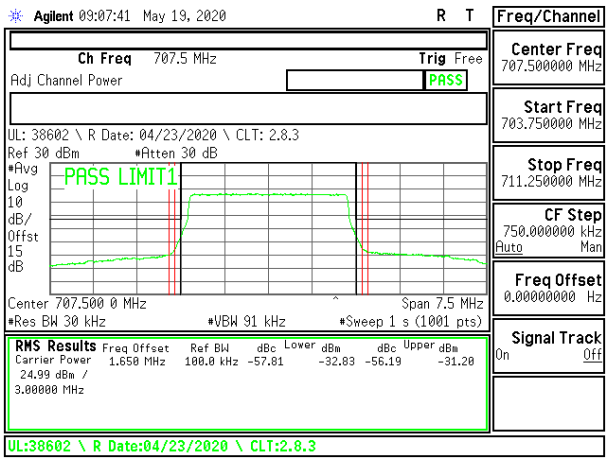
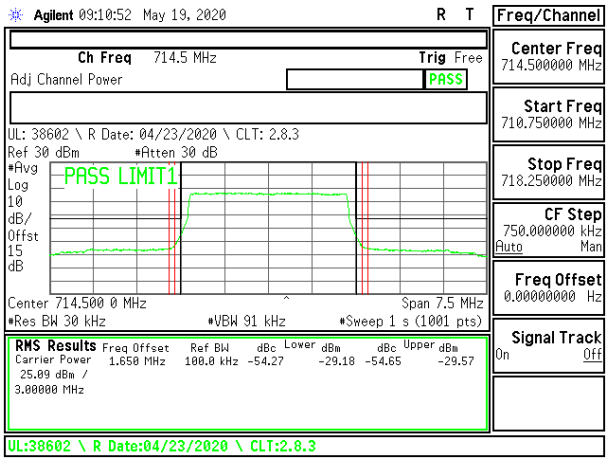



LTE B12 3MHz QPSK Low Channel RB15-0




LTE B12 3MHz QPSK Middle Channel RB15-0




LTE B12 3MHz QPSK High Channel RB15-0

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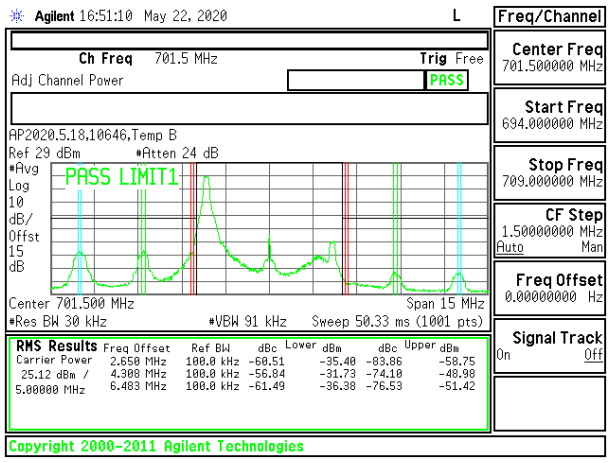
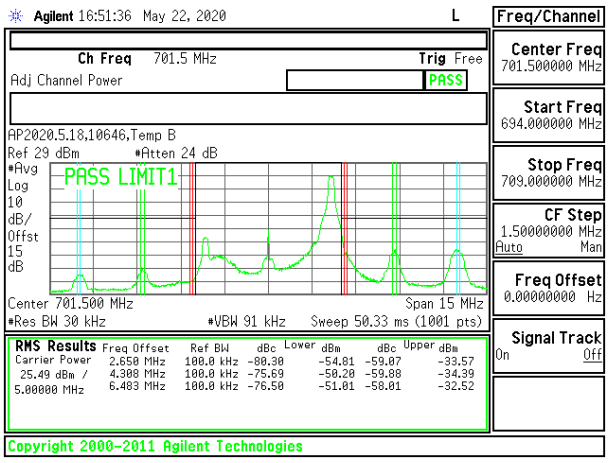
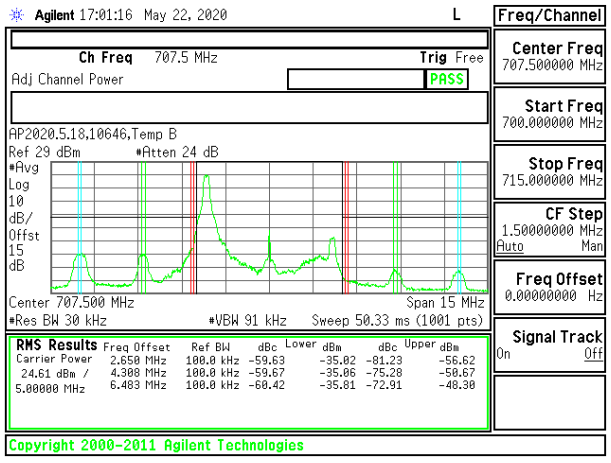


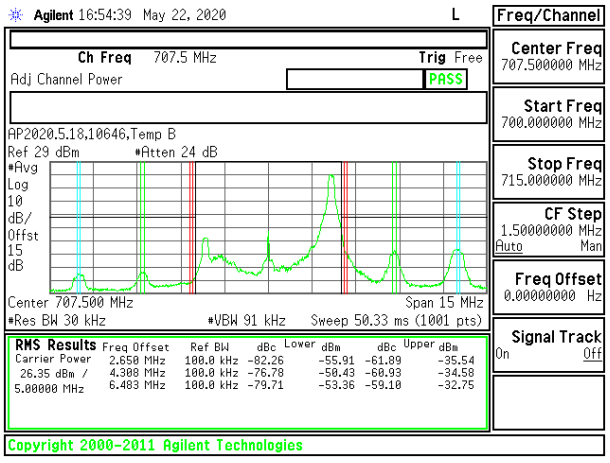

LTE B12 5MHz QPSK Low Channel RB1-0




LTE B12 5MHz QPSK Low Channel RB1-24




LTE B12 5MHz QPSK Middle Channel RB1-0

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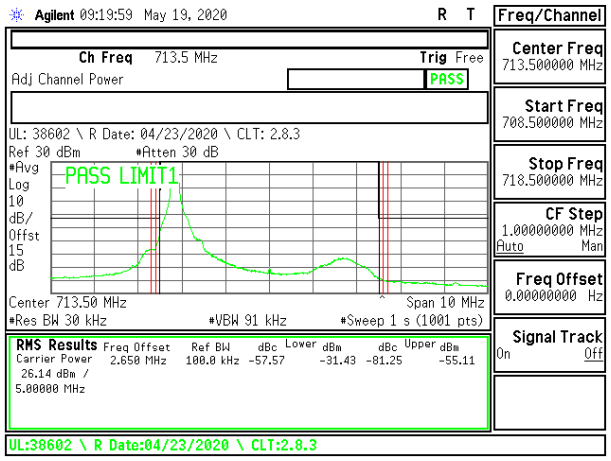
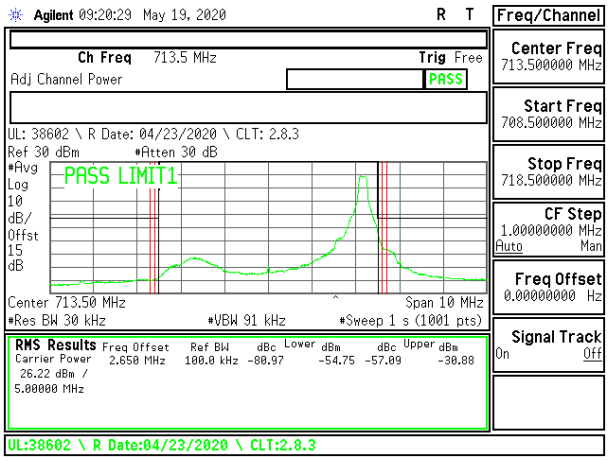



LTE B12 5MHz QPSK High Channel RB1-0




LTE B12 5MHz QPSK High Channel RB1-24



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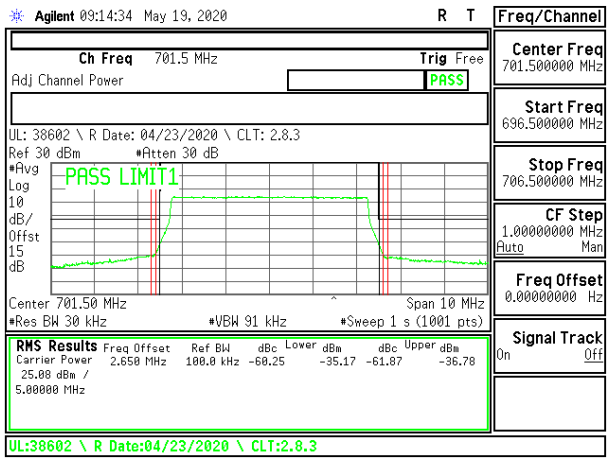
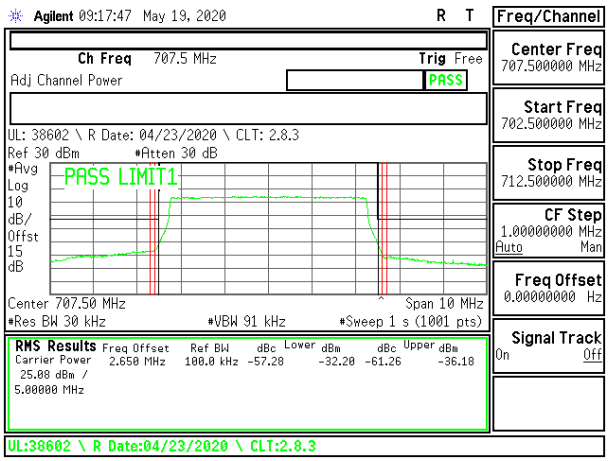
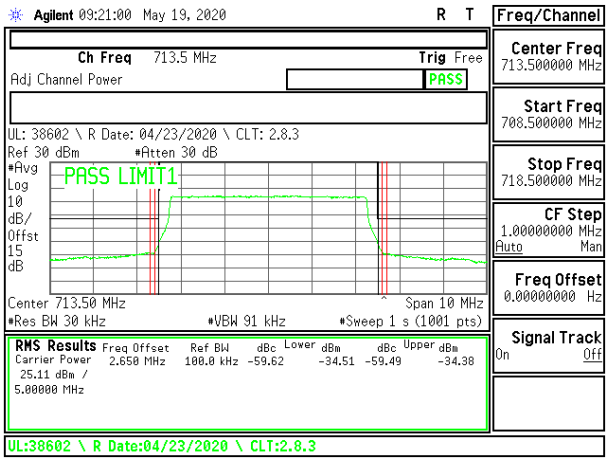



LTE B12 5MHz QPSK Low Channel RB25-0




LTE B12 5MHz QPSK Middle Channel RB25-0




LTE B12 5MHz QPSK High Channel RB25-0

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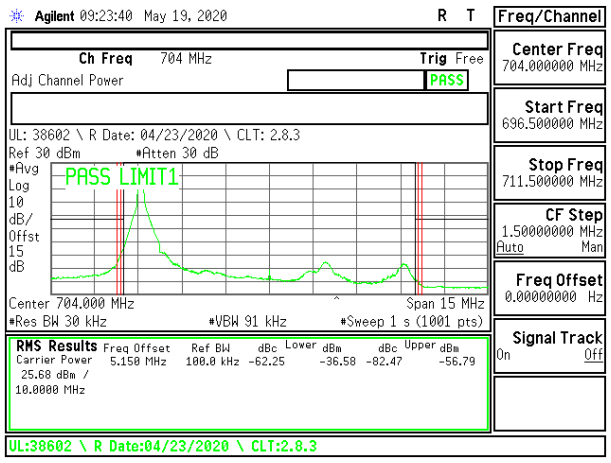
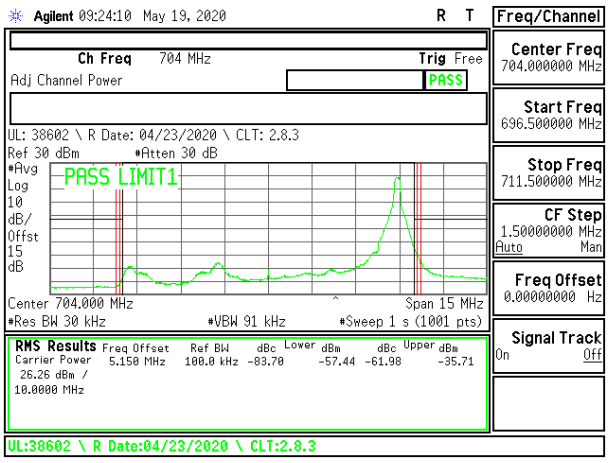
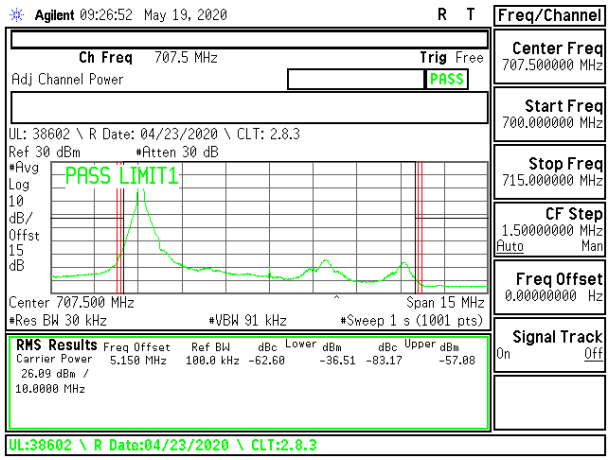


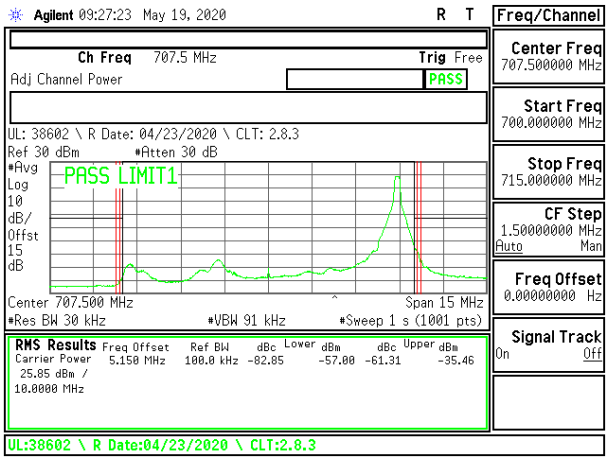

LTE B12 10MHz QPSK Low Channel RB1-0



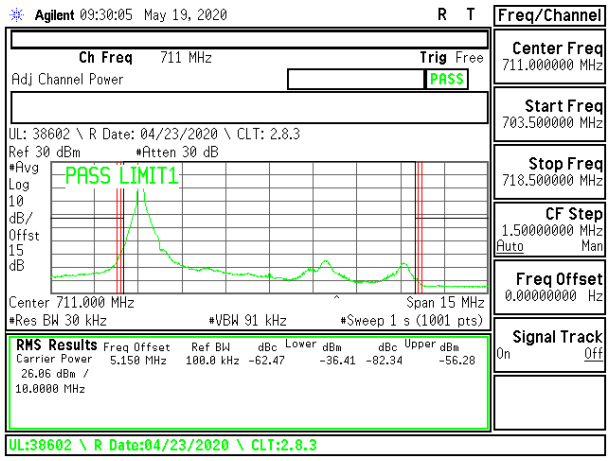

LTE B12 10MHz QPSK Low Channel RB1-49



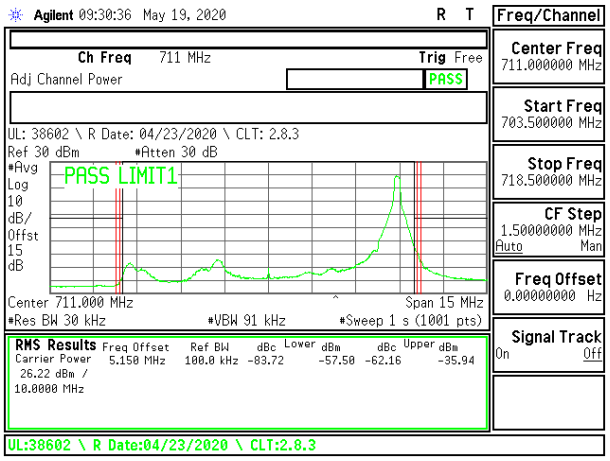

LTE B12 10MHz QPSK Middle Channel RB1-0




LTE B12 10MHz QPSK Middle Channel RB1-49




LTE B12 10MHz QPSK High Channel RB1-0




LTE B12 10MHz QPSK High Channel RB1-49



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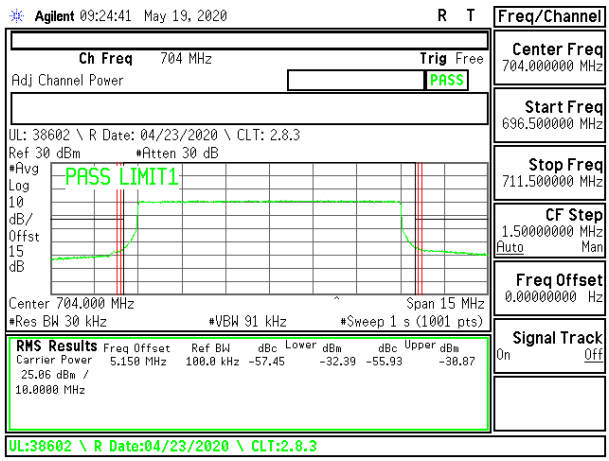
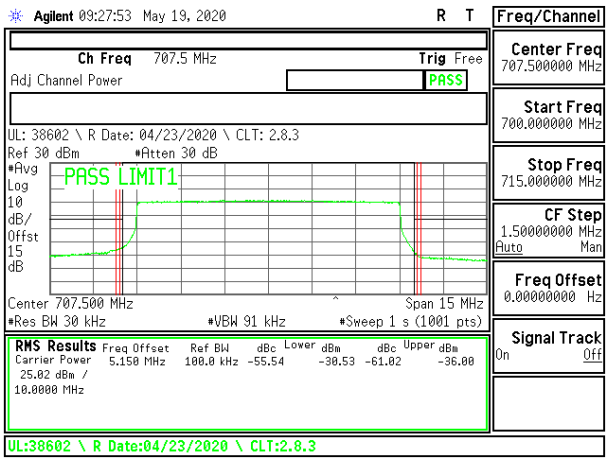
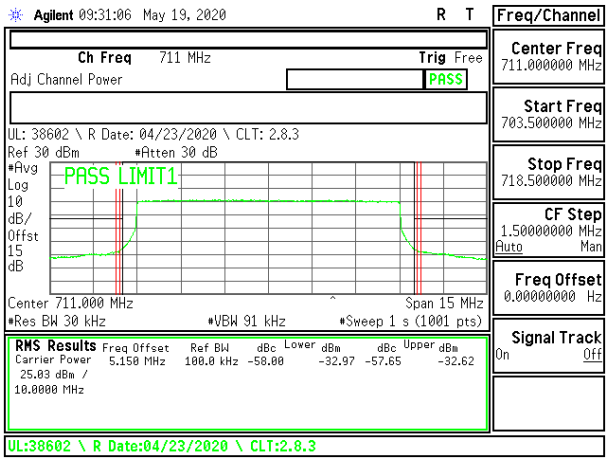



LTE B12 10MHz QPSK Low Channel RB50-0




LTE B12 10MHz QPSK Middle Channel RB50-0




LTE B12 10MHz QPSK High Channel RB50-0

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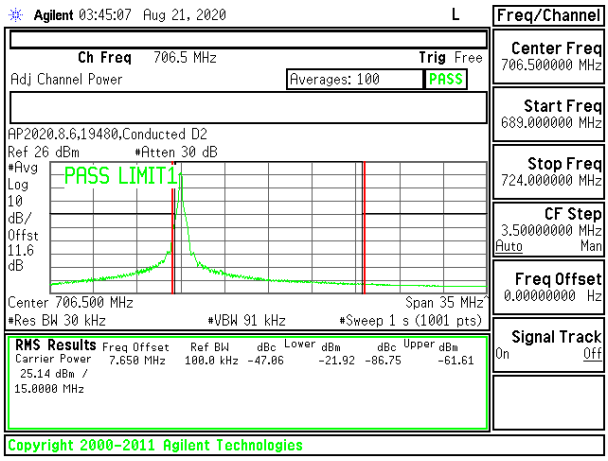
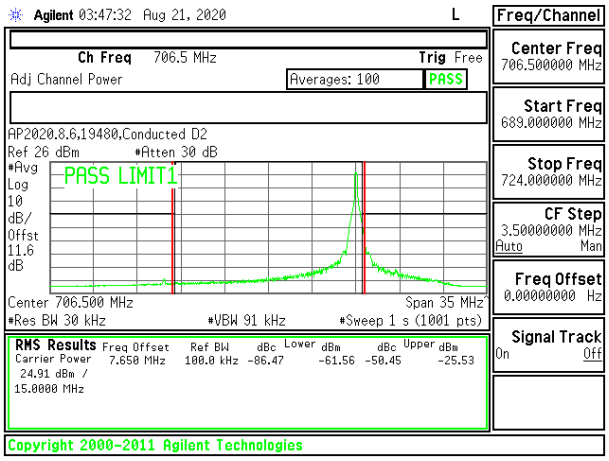
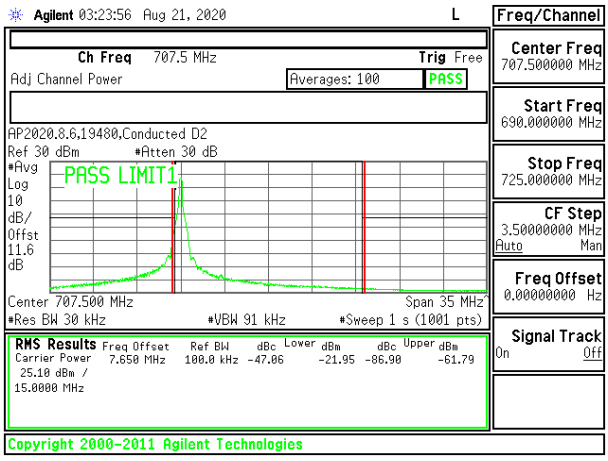
## 5G NR Band n12 ADJACENT CHANNEL POWER



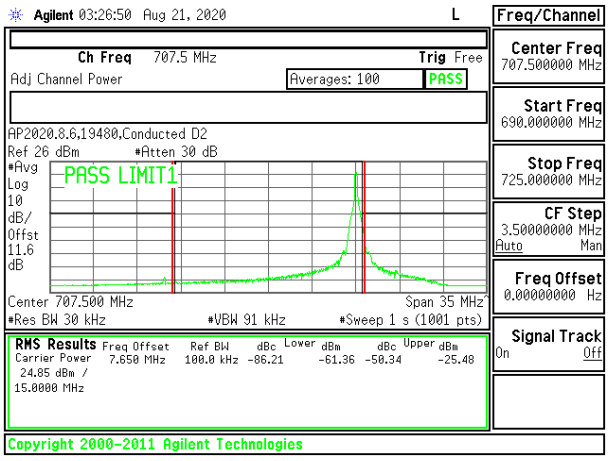

5G NR Band n12 15MHz QPSK Low Channel RB1-0



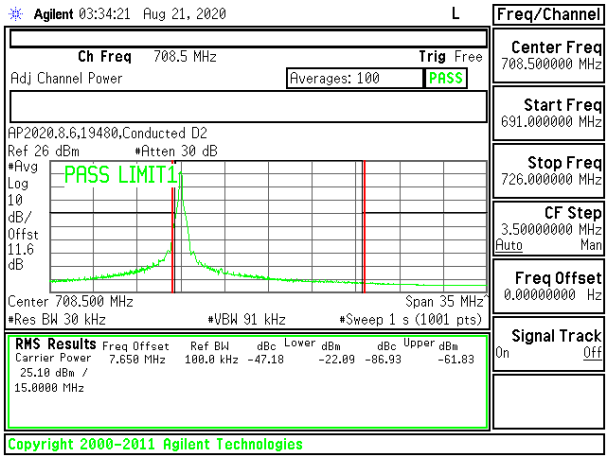

5G NR Band n12 15MHz QPSK Low Channel RB1-78



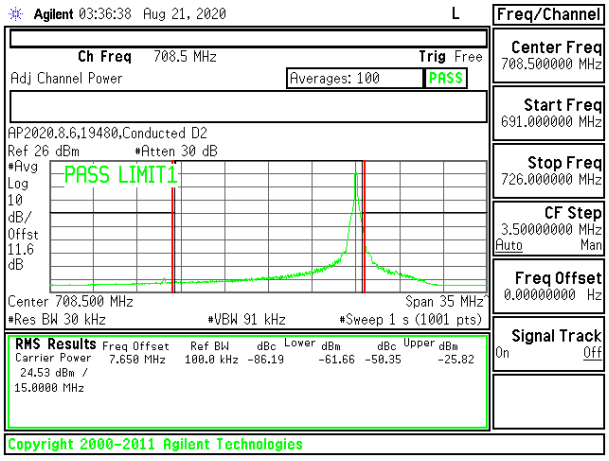

5G NR Band n12 15MHz QPSK Middle Channel RB1-0




5G NR Band n12 15MHz QPSK Middle Channel RB1-78




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




5G NR Band n12 15MHz QPSK High Channel RB1-78



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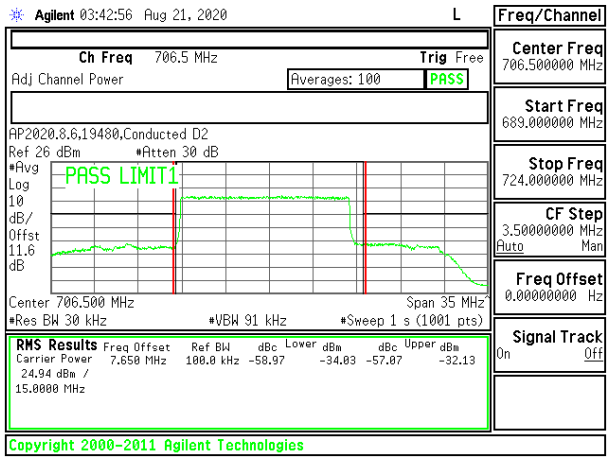
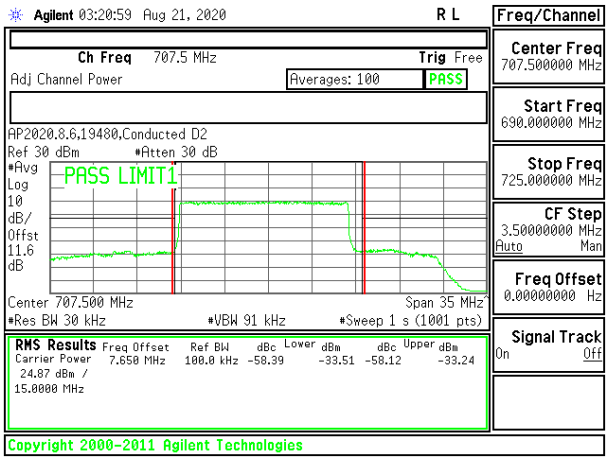
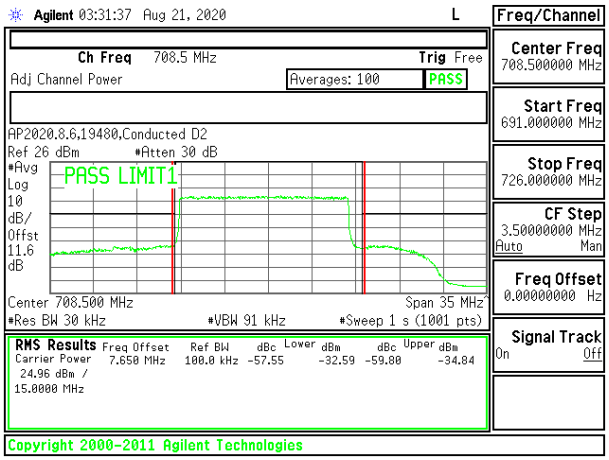



5G NR Band n12 15MHz QPSK Low Channel RB75-0




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




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



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## 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).




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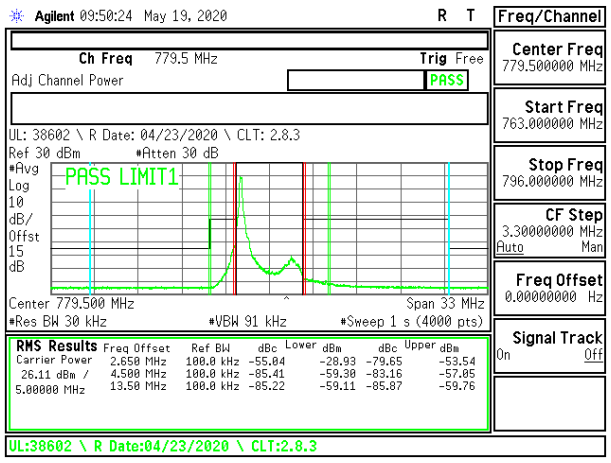
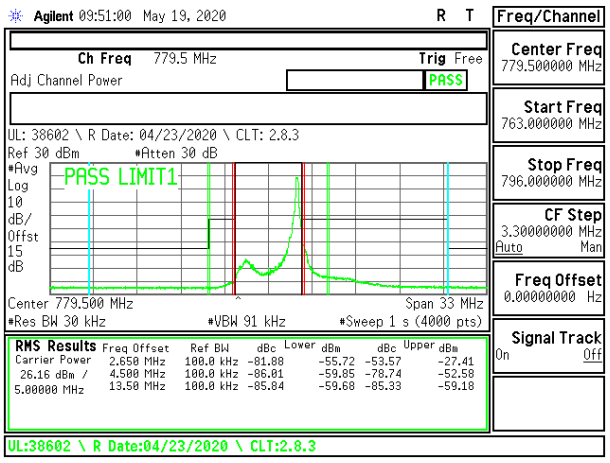
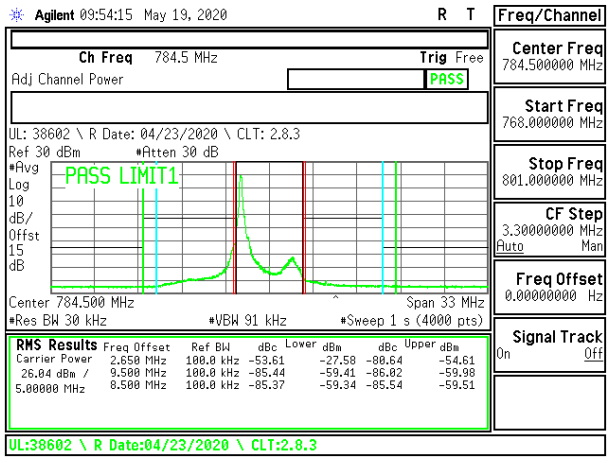


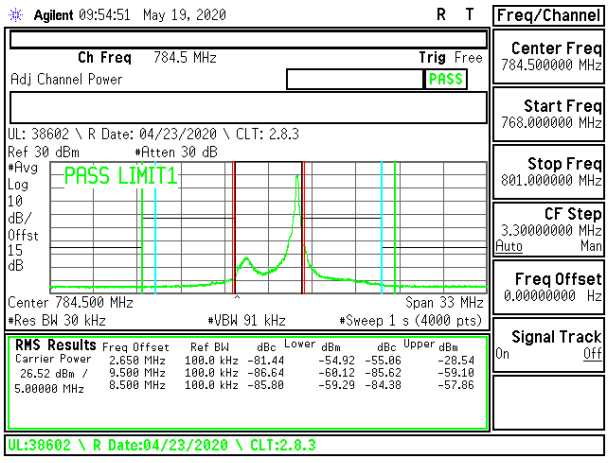

LTE B13 5MHz QPSK Low Channel RB1-0



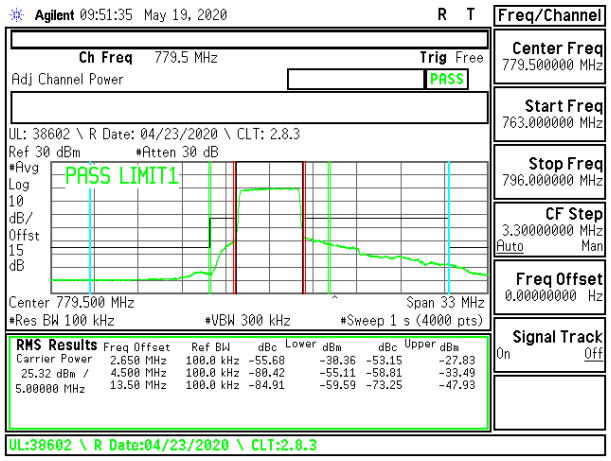

LTE B13 5MHz QPSK Low Channel RB1-24



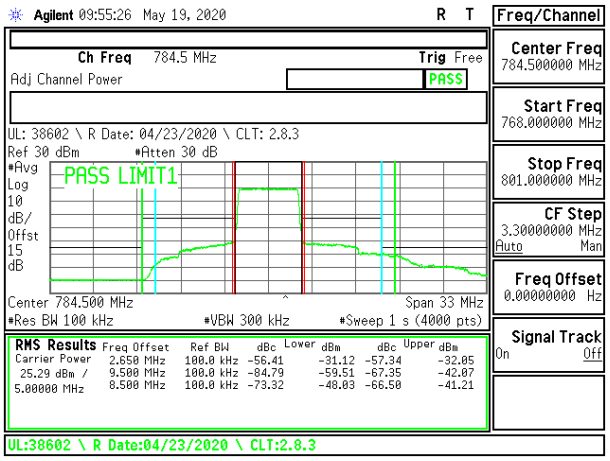

LTE B13 5MHz QPSK High Channel RB1-0




LTE B13 5MHz QPSK High Channel RB1-24




LTE B13 5MHz QPSK Low Channel RB25-0




LTE B13 5MHz QPSK High Channel RB25-0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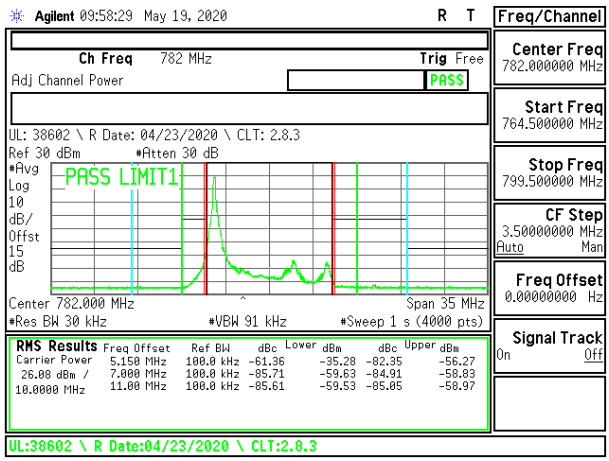
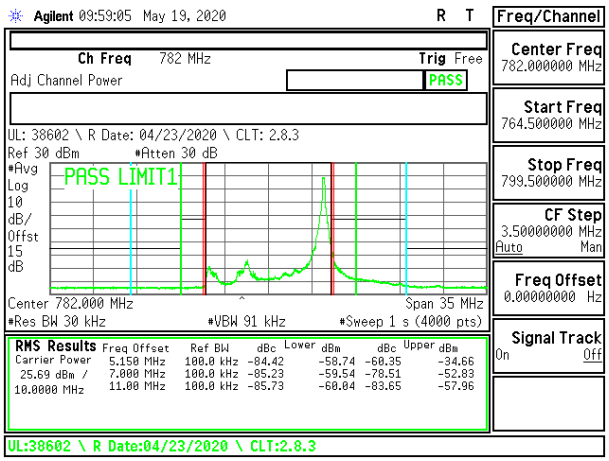
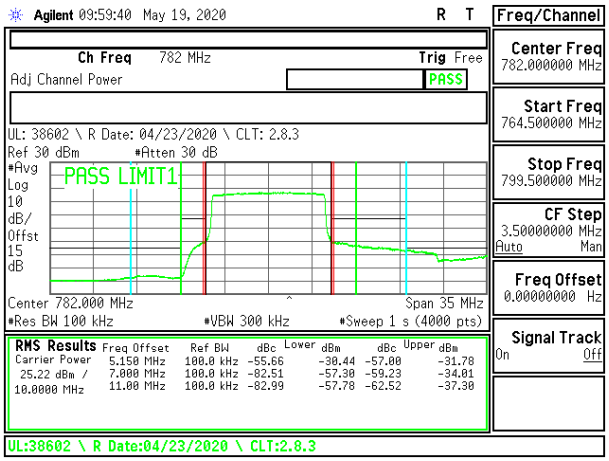



LTE B13 10MHz QPSK Middle Channel RB1-0




LTE B13 10MHz QPSK Middle Channel RB1-49




LTE B13 10MHz QPSK Middle Channel RB50-0



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## 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.




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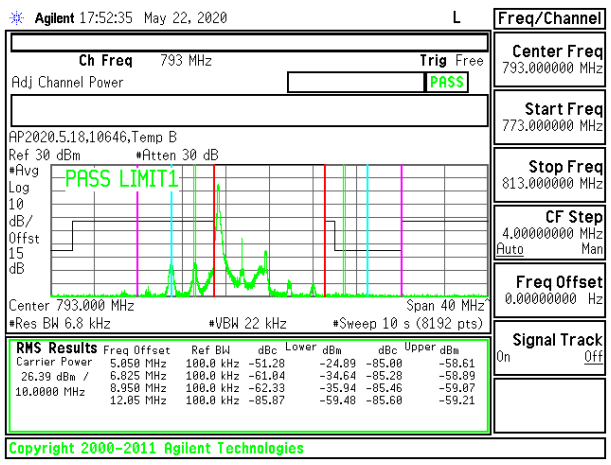
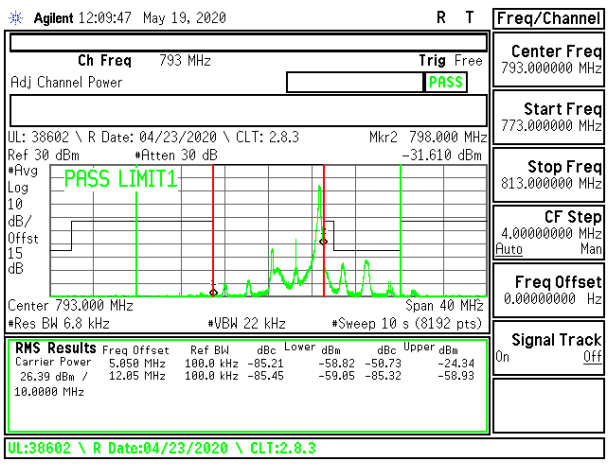
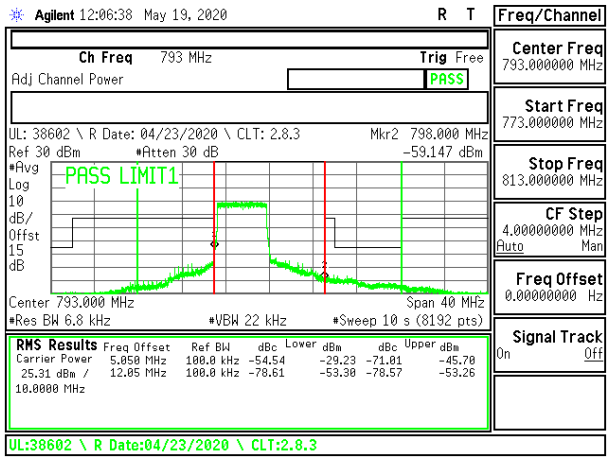


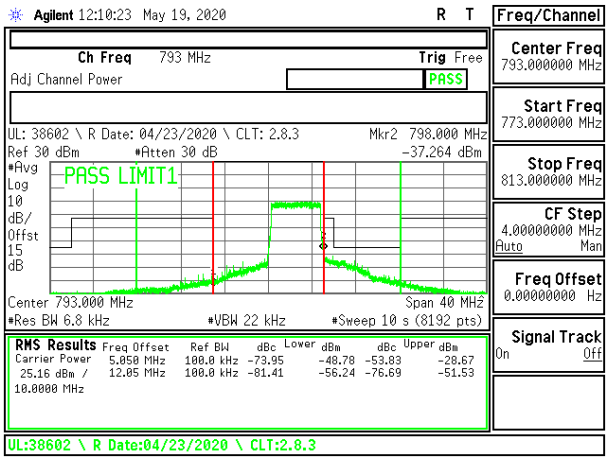

LTE B14 5MHz QPSK Low Channel RB1-0




LTE B14 5MHz QPSK High Channel RB1-24




LTE B14 5MHz QPSK Low Channel RB25-0




LTE B14 5MHz QPSK High Channel RB25-0



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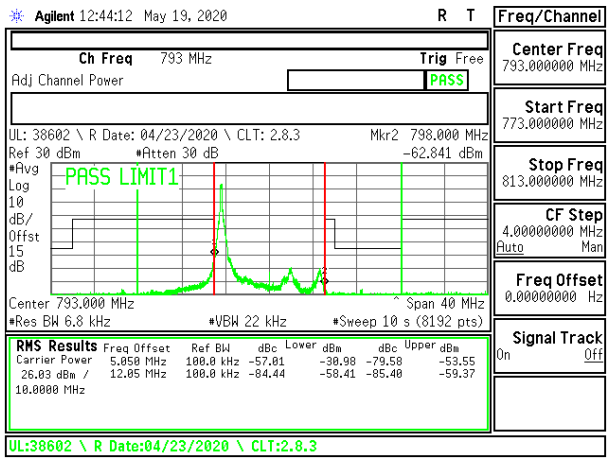
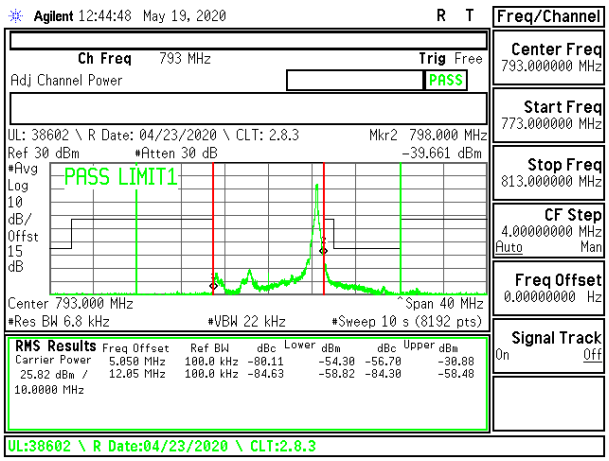
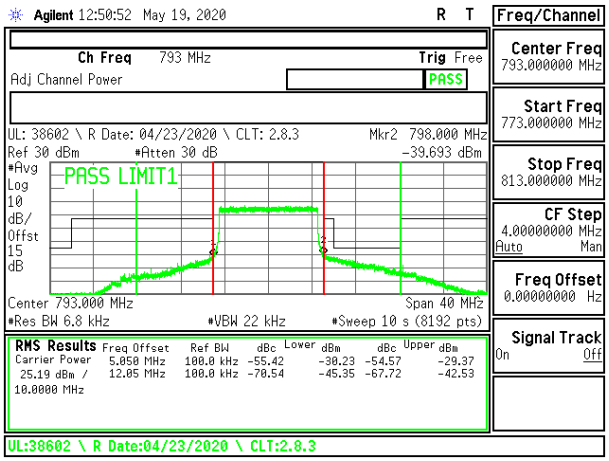



LTE B14 10MHz QPSK Middle Channel RB1-0




LTE B14 10MHz QPSK Middle Channel RB1-49




LTE B14 10MHz QPSK Middle Channel RB50-0

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### 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.




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