

TEST REPORT

Report Number: 15982168-E34V3

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

Model : A3716 (Parent)
A3717, A3718 (Variants)

Brand : APPLE

FCC ID : BCG-E9195A (Parent)
BCG-E9196A, BCG-E9197A (Variants)

EUT Description : SMARTPHONE

Test Standard(s) : FCC 47 CFR PART 2, PART 96

Date Of Issue:
2026-08-20

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



Revision History

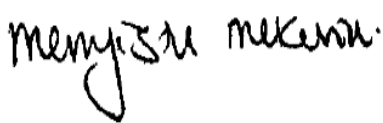
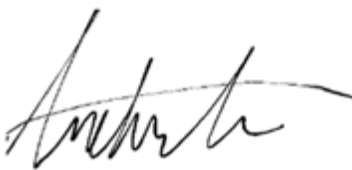
Rev.	Issue Date	Revisions	Revised By
V1	2026-07-27	Initial Review	--
V2	2026-08-18	Addressed TCB Feedback Section 10	Andrew Le
V3	2026-08-20	Addressed TCB Feedback Section 6.2, 8.3	Andrew Le

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	5
2. SUMMARY OF TEST RESULTS	6
3. TEST METHODOLOGY	7
4. FACILITIES AND ACCREDITATION	7
5. DECISION RULES AND MEASUREMENT UNCERTAINTY	8
5.1. METROLOGICAL TRACEABILITY	8
5.2. DECISION RULES	8
5.3. MEASUREMENT UNCERTAINTY	8
5.4. SAMPLE CALCULATION.....	8
6. EQUIPMENT UNDER TEST	9
6.1. DESCRIPTION OF EUT	9
6.2. MAXIMUM OUTPUT POWER.....	9
6.3. SOFTWARE AND FIRMWARE	14
6.4. MAXIMUM ANTENNA GAIN AND MAXIMUM ALLOWED OUTPUT POWER	14
6.5. WORST-CASE CONFIGURATION AND MODE	15
6.6. DESCRIPTION OF TEST SETUP.....	16
7. TEST AND MEASUREMENT EQUIPMENT	18
8. RF OUTPUT POWER MEASUREMENTS	19
8.1. LTE BAND 48 SISO	20
8.2. 5G NR n48 SISO	22
8.3. ULCA LTE BAND 48C SISO	25
8.4. 5G NR n48 MIMO.....	27
9. CONDUCTED TEST RESULTS.....	30
9.1. OCCUPIED BANDWIDTH.....	30
9.1.1. LTE BAND 48 SISO	33
9.1.2. 5G NR n48 SISO.....	34
9.1.3. ULCA LTE BAND 48C SISO	35
9.2. EMISSION MASK AND ADJACENT CHANNEL POWER	37
9.2.1. LTE BAND 48 SISO EMISSION MASK	38
9.2.2. LTE BAND 48 SISO ADJACENT CHANNEL POWER	45

9.2.3.	5G NR n48 SISO EMISSION MASK.....	52
9.2.4.	5G NR n48 SISO ADJACENT CHANNEL POWER.....	60
9.2.5.	ULCA LTE BAND 48C SISO EMISSION MASK.....	68
9.2.6.	ULCA LTE BAND 48C SISO ADJACENT CHANNEL POWER.....	70
9.2.7.	5G NR n48 MIMO EMISSION MASK.....	72
9.2.8.	5G NR n48 MIMO ADJACENT CHANNEL POWER.....	80
9.3.	OUT OF BAND EMISSIONS.....	88
9.3.1.	LTE BAND 48 SISO.....	89
9.3.2.	5G NR n48 SISO.....	90
9.3.3.	ULCA LTE BAND 48C SISO Low power.....	91
9.3.4.	5G NR n48 MIMO.....	92
9.4.	FREQUENCY STABILITY.....	93
9.4.1.	LTE BAND 48 QPSK (20MHz BANDWIDTH).....	94
9.4.2.	5G NR n48 BPSK (40MHz BANDWIDTH).....	94
9.4.3.	ULCA LTE BAND 48C QPSK (20MHz + 20MHz BANDWIDTH).....	95
9.5.	PEAK-TO-AVERAGE POWER RATIO.....	96
9.5.1.	LTE BAND 48.....	98
9.5.2.	5G NR n48.....	98
9.5.3.	ULCA LTE BAND 48C.....	99
10.	RADIATED TEST RESULTS.....	100
10.1.	FIELD STRENGTH OF SPURIOUS RADIATION, ABOVE 1GHz.....	104
10.1.1.	LTE BAND 48 SISO.....	105
10.1.2.	5G NR n48 SISO.....	107
10.1.3.	ULCA LTE BAND 48C SISO.....	109
10.1.4.	5G NR n48 MIMO.....	111
11.	SETUP PHOTOS.....	114

1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	APPLE, INC 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.	
Model	A3716 (Parent) A3717, A3718 (Variants)	
Brand	APPLE	
FCC ID	BCG-E9195A (Parent) BCG-E9196A, BCG-E9197A (Variants)	
EUT Description	SMARTPHONE	
Serial Number	RADIATED: D7JLJ0FVL2, H9PQGK9C7 CONDUCTED: 00003_7, 00004_7 00005_7, 00006_7	
Sample Receipt Date	2026-04-23	
Date Tested	2026-04-24 to 2026-07-13	
Applicable Standards	FCC 47 CFR Part 2, Part 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.		
Approved & Released By:	Reviewed By:	Prepared By:
		
Mengistu Mekuria Staff Engineer UL Verification Services Inc.	Andrew Le Laboratory Supervisor UL Solutions Inc.	Carlos Caudana Laboratory Engineer UL Verification Services Inc.

2. SUMMARY OF TEST RESULTS

This report contains data provided by the customer which can impact on the validity of results. UL Verification Services Inc. is only responsible for correctly integrating customer-provided data with measurements performed by UL Verification Services Inc.

Below is a list of the data provided by the customer:

1. Antenna gain and type (see section 6.4.)

Requirement Description	Requirement Clause Number (FCC)	Result	Remarks
Equivalent Isotropic Radiated Power	2.1046, 96.41 (b)	Complies	
Occupied Bandwidth	2.1049	Complies	
Band Edge and Emission Mask	2.1051, 96.41(e)	Complies	
Out of Band Emissions	2.1051, 96.41(e)	Complies	
Frequency Stability	2.1055	Complies	
Peak-to-Average Ratio	96.41 (g)	Complies	
Field Strength of Spurious Radiation	2.1053, 96.41(e)	Complies	

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with the following.
FCC published lists of [measurement procedures](#) for compliance testing.

- ANSI C63.26:2015
- ANSI/TIA-603-E (2016)
- FCC 47 CFR Part 2, Part 96
- [FCC KDB 971168 D01](#) : Power Meas License Digital Systems
- [FCC KDB 971168 D02](#): Misc Rev Approv License Devices
- [FCC KDB 412172 D01](#) : Determining ERP and EIRP
- [FCC KDB 662911 D01](#): Multiple Transmitter Output

4. FACILITIES AND ACCREDITATION

UL Verification Services Inc. is accredited by A2LA, certification #0751.05, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☒	Building 1: 47173 Benicia Street, Fremont, CA 94538, USA	US0104	2324A	550739
☐	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA			
☐	Building 3: 843 Auburn Court, Fremont, CA 94538, USA			
☒	Building 4: 47658 Kato Rd, Fremont, CA 94538, USA			
☒	Building 5: 47670 Kato Rd, Fremont, CA 94538, USA			

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. 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.

5.2. 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.)

5.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	U _{Lab}
Conducted Antenna Port Emission Measurement	1.940 dB
Power Spectral Density	2.466 dB
RF Power Measurement Direct Method Using Power Meter	0.450 dB Ave. 1.300 dB Peak
Radio Frequency (Spectrum Analyzer)	141.16 Hz
Occupied Bandwidth	1.22%
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.78 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.87 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.29 dB

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

5.4. 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

6. EQUIPMENT UNDER TEST

6.1. DESCRIPTION OF EUT

The Apple iPhone is a smartphone with GSM, GPRS, EGPRS, WCDMA, LTE, 5G NR1, IEEE 802.11a/b/g/n/ac/ax, Bluetooth (BT), Global Positioning System (GPS), Near-Field Communication (NFC) and Mobile Satellite Service (MSS) technologies. The rechargeable battery is not user accessible. This device is not user-serviceable and requires special tools to disassemble.

This test report for A3716 (FCC ID: BCG-E9195A) may be used to support certification for variant models A3717 and A3718 (FCC ID: BCG-E9196A and BCG-E9197A) in conjunction with spot check test report 15982169-E1 using the procedures for data referencing as permitted by the FCC.

6.2. MAXIMUM OUTPUT POWER

LIMITS

FCC: §96.41

(b) Power Limits—

Unless otherwise specified in this section, the maximum effective isotropic radiated power (EIRP) and maximum Power Spectral Density (PSD) of any CBSD and End User Device must comply with the limits shown in the table in this paragraph (b):

Device	Maximum EIRP (dBm/10megahertz)	Maximum PSD (dBm/MHz)
End User Device	23 (0.2 W/10 MHz)	n/a
Category A CBSD	30	20
Category B CBSD1	47	37

EIRP/ERP TEST PROCEDURE

ANSI C63.26:2015

KDB 971168 D01 Section 5.6

$$\text{ERP/EIRP} = \text{PMeas} + \text{GT} - \text{LC}$$

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 tables below contain the highest of all configurations average conducted and peak EIRP output powers as follows:

LTE BAND 48 SISO (LOW)

Part 96									
EIRP Limit (W)/ 10MHz		0.20							
Antenna Gain (dBi)		-2.90							
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% BW (MHz)	99% BW (kHz)	Emission Designator
5.0	QPSK	3552.5	3697.5	25.30	22.40	0.174	4.496	4496	4M50G7W
	16QAM			23.06	20.16	0.104	4.508	4508	4M51D7W
10.0	QPSK	3555.0	3695.0	25.30	22.40	0.174	9.018	9018	9M02G7W
	16QAM			24.16	21.26	0.134	8.955	8955	8M96D7W
15.0	QPSK	3557.5	3692.5	25.30	22.40	0.174	13.436	13436	13M4G7W
	16QAM			23.80	20.90	0.123	13.483	13483	13M5D7W
20.0	QPSK	3560.0	3690.0	25.30	22.40	0.174	17.837	17837	17M8G7W
	16QAM			24.60	21.70	0.148	17.899	17899	17M9D7W

LTE BAND 48 SISO (MID)

Part 96									
EIRP Limit (W)/ 10MHz		0.20							
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 (MHz)	99% BW (kHz)	Emission Designator
5.0	QPSK	3552.5	3697.5	24.40	22.50	0.178	4.496	4496	4M50G7W
	16QAM			22.78	20.88	0.122	4.508	4508	4M51D7W
10.0	QPSK	3555.0	3695.0	24.40	22.50	0.178	9.018	9018	9M02G7W
	16QAM			23.90	22.00	0.158	8.955	8955	8M96D7W
15.0	QPSK	3557.5	3692.5	24.40	22.50	0.178	13.436	13436	13M4G7W
	16QAM			24.17	22.27	0.169	13.483	13483	13M5D7W
20.0	QPSK	3560.0	3690.0	24.40	22.50	0.178	17.837	17837	17M8G7W
	16QAM			23.44	21.54	0.143	17.899	17899	17M9D7W

LTE BAND 48 SISO (HIGH)

Part 96									
EIRP Limit (W)/ 10MHz		0.20							
Antenna Gain (dBi)		-3.90							
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% BW (MHz)	99% BW (kHz)	Emission Designator
5.0	QPSK	3552.5	3697.5	26.00	22.10	0.162	4.496	4496	4M50G7W
	16QAM			24.63	20.73	0.118	4.508	4508	4M51D7W
10.0	QPSK	3555.0	3695.0	26.00	22.10	0.162	9.018	9018	9M02G7W
	16QAM			25.36	21.46	0.140	8.955	8955	8M96D7W
15.0	QPSK	3557.5	3692.5	26.00	22.10	0.162	13.436	13436	13M4G7W
	16QAM			24.11	20.21	0.105	13.483	13483	13M5D7W
20.0	QPSK	3560.0	3690.0	26.00	22.10	0.162	17.837	17837	17M8G7W
	16QAM			25.54	21.64	0.146	17.899	17899	17M9D7W

5G NR n48 SISO (LOW)

Part 96									
EIRP Limit (W) /10MHz		0.20							
Antenna Gain (dBi)		-2.90							
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% BW (MHz)	99% BW (kHz)	Emission Designator
10.0	BPSK	3555.0	3695.0	25.29	22.39	0.173	8.642	8642	8M64G7W
	QPSK			25.25	22.35	0.172	8.603	8603	8M60G7W
	16QAM			24.13	21.23	0.133	8.657	8657	8M66D7W
15.0	BPSK	3557.5	3692.5	25.30	22.40	0.174	12.933	12933	12M9G7W
	QPSK			25.25	22.35	0.172	12.938	12938	12M9G7W
	16QAM			24.23	21.33	0.136	12.916	12916	12M9D7W
20.0	BPSK	3560.0	3690.0	25.29	22.39	0.173	17.952	17952	18M0G7W
	QPSK			25.24	22.34	0.171	17.927	17927	17M9G7W
	16QAM			24.21	21.31	0.135	17.983	17983	18M0D7W
30.0	BPSK	3565.0	3685.0	25.29	22.39	0.173	26.888	26888	26M9G7W
	QPSK			25.24	22.34	0.171	26.913	26913	26M9G7W
	16QAM			24.00	21.10	0.129	26.969	26969	27M0D7W
40.0	BPSK	3570.0	3680.0	25.28	22.38	0.173	35.891	35891	35M9G7W
	QPSK			25.26	22.36	0.172	35.850	35850	35M9G7W
	16QAM			24.21	21.31	0.135	35.879	35879	35M9D7W

5G NR n48 SISO (MID)

Part 96									
EIRP Limit (W) /10MHz		0.20							
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 (MHz)	99% BW (kHz)	Emission Designator
10.0	BPSK	3555.0	3695.0	24.39	22.49	0.177	8.642	8642	8M64G7W
	QPSK			24.36	22.46	0.176	8.603	8603	8M60G7W
	16QAM			23.28	21.38	0.137	8.657	8657	8M66D7W
15.0	BPSK	3557.5	3692.5	24.39	22.49	0.177	12.933	12933	12M9G7W
	QPSK			24.35	22.45	0.176	12.938	12938	12M9G7W
	16QAM			23.34	21.44	0.139	12.916	12916	12M9D7W
20.0	BPSK	3560.0	3690.0	24.39	22.49	0.177	17.952	17952	18M0G7W
	QPSK			24.37	22.47	0.177	17.927	17927	17M9G7W
	16QAM			23.17	21.27	0.134	17.983	17983	18M0D7W
30.0	BPSK	3565.0	3685.0	24.39	22.49	0.177	26.888	26888	26M9G7W
	QPSK			24.36	22.46	0.176	26.913	26913	26M9G7W
	16QAM			23.26	21.36	0.137	26.969	26969	27M0D7W
40.0	BPSK	3570.0	3680.0	24.38	22.48	0.177	35.891	35891	35M9G7W
	QPSK			24.35	22.45	0.176	35.850	35850	35M9G7W
	16QAM			23.23	21.33	0.136	35.879	35879	35M9D7W

5G NR n48 SISO (HIGH)

Part 96									
EIRP Limit (W) /10MHz		0.20							
Antenna Gain (dBi)		-3.90							
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% BW (MHz)	99% BW (kHz)	Emission Designator
10.0	BPSK	3555.0	3695.0	25.98	22.08	0.161	8.642	8642	8M64G7W
	QPSK			25.94	22.04	0.160	8.603	8603	8M60G7W
	16QAM			24.97	21.07	0.128	8.657	8657	8M66D7W
15.0	BPSK	3557.5	3692.5	25.76	21.86	0.153	12.933	12933	12M9G7W
	QPSK			25.90	22.00	0.158	12.938	12938	12M9G7W
	16QAM			24.92	21.02	0.126	12.916	12916	12M9D7W
20.0	BPSK	3560.0	3690.0	25.99	22.09	0.162	17.952	17952	18M0G7W
	QPSK			25.95	22.05	0.160	17.927	17927	17M9G7W
	16QAM			24.97	21.07	0.128	17.983	17983	18M0D7W
30.0	BPSK	3565.0	3685.0	25.99	22.09	0.162	26.888	26888	26M9G7W
	QPSK			25.95	22.05	0.160	26.913	26913	26M9G7W
	16QAM			24.85	20.95	0.124	26.969	26969	27M0D7W
40.0	BPSK	3570.0	3680.0	25.99	22.09	0.162	35.891	35891	35M9G7W
	QPSK			25.95	22.05	0.160	35.850	35850	35M9G7W
	16QAM			24.83	20.93	0.124	35.879	35879	35M9D7W

ULCA LTE BAND 48C SISO

Part 96									
EIRP Limit (W)/ 10MHz		0.20							
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 (MHz)	99% BW (kHz)	Emission Designator
5+20	QPSK	3553.3	3690.0	23.32	21.42	0.139	23.224	23224	23M2G7W
	16QAM			23.31	21.41	0.138	23.179	23179	23M2D7W
20+5	QPSK	3560.0	3696.7	23.35	21.45	0.140	23.301	23301	23M3G7W
	16QAM			23.29	21.39	0.138	23.195	23195	23M2D7W
10+20	QPSK	3555.5	3690.0	23.85	21.95	0.157	27.931	27931	27M9G7W
	16QAM			23.83	21.93	0.156	27.668	27668	27M7D7W
20+10	QPSK	3560.0	3694.5	23.83	21.93	0.156	28.082	28082	28M1G7W
	16QAM			23.82	21.92	0.156	28.004	28004	28M0D7W
15+20	QPSK	3557.8	3690.0	24.37	22.47	0.177	32.941	32941	32M9G7W
	16QAM			24.00	22.10	0.162	32.816	32816	32M8D7W
20+15	QPSK	3560.0	3692.2	24.00	22.10	0.162	32.927	32927	32M9G7W
	16QAM			24.00	22.10	0.162	32.853	32853	32M9D7W
20+20	QPSK	3560.0	3690.0	24.40	22.50	0.178	37.808	37808	37M8G7W
	16QAM			24.33	22.43	0.175	37.605	37605	37M6D7W

5G NR n48 MIMO

Part 96									
EIRP Limit (W) /10MHz		0.20							
Antenna Gain (dBi)		-2.00							
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% BW (MHz)	99% BW (kHz)	Emission Designator
10.0	BPSK	3555.0	3695.0	24.50	22.50	0.178	8.642	8642	8M64G7W
	QPSK			24.38	22.38	0.173	8.603	8603	8M60G7W
	16QAM			23.36	21.36	0.137	8.657	8657	8M66D7W
15.0	BPSK	3557.5	3692.5	24.50	22.50	0.178	12.933	12933	12M9G7W
	QPSK			24.39	22.39	0.173	12.938	12938	12M9G7W
	16QAM			23.39	21.39	0.138	12.916	12916	12M9D7W
20.0	BPSK	3560.0	3690.0	24.50	22.50	0.178	17.952	17952	18M0G7W
	QPSK			23.87	21.87	0.154	17.927	17927	17M9G7W
	16QAM			23.39	21.39	0.138	17.983	17983	18M0D7W
30.0	BPSK	3565.0	3685.0	24.50	22.50	0.178	26.888	26888	26M9G7W
	QPSK			24.23	22.23	0.167	26.913	26913	26M9G7W
	16QAM			23.30	21.30	0.135	26.969	26969	27M0D7W
40.0	BPSK	3570.0	3680.0	24.50	22.50	0.178	35.891	35891	35M9G7W
	QPSK			24.34	22.34	0.171	35.850	35850	35M9G7W
	16QAM			23.39	21.39	0.138	35.879	35879	35M9D7W

6.3. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was version 24A349.

6.4. MAXIMUM ANTENNA GAIN AND MAXIMUM ALLOWED OUTPUT POWER

The antenna(s) gain/allowed output power, as provided by the manufacturer are as follows:

SISO MODE

Bands	Frequency Range (MHz)	Antenna Gain (dBi)				Max Allowed Conducted Output Power (dBm)				ERP/EIRP (dBm)			
		ANT7	ANT4	ANT9	ANT8	ANT7	ANT4	ANT9	ANT8	ANT7	ANT4	ANT9	ANT8
LTE Band 48 (Low)	3550 – 3700	-3.80	-2.60	-2.00	-2.90	26.00	24.30	24.40	25.30	22.20	21.70	22.40	22.40
LTE Band 48 (Mid)		-3.80	-1.90	-1.90	-3.60	26.00	24.30	24.40	25.30	22.20	22.40	22.50	21.70
LTE Band 48 (High)		-3.90	-3.80	-2.30	-4.80	26.00	24.30	24.40	25.30	22.10	20.50	22.10	20.50
5G NR n48 (Low)		-3.80	-2.60	-2.00	-2.90	26.00	24.30	24.40	25.30	22.20	21.70	22.40	22.40
5G NR n48 (Mid)		-3.80	-1.90	-1.90	-3.60	26.00	24.30	24.40	25.30	22.20	22.40	22.50	21.70
5G NR n48 (High)		-3.90	-3.80	-2.30	-4.80	26.00	24.30	24.40	25.30	22.10	20.50	22.10	20.50
LTE ULCA Band 48B, 48C (LOW)		-3.80	-2.60	-2.00	-2.90	25.00	24.30	24.40	25.30	21.20	21.70	22.40	22.40
LTE ULCA Band 48B, 48C (MID)		-3.80	-1.90	-1.90	-3.60	25.00	24.30	24.40	25.30	21.20	22.40	22.50	21.70
LTE ULCA Band 48B, 48C (HIGH)		-3.90	-3.80	-2.30	-4.80	25.00	24.30	24.40	25.30	21.10	20.50	22.10	20.50

MIMO MODE

Bands	Frequency Range (MHz)	Antenna	Max Allowed Combined Conducted Output Power (dBm)	Gain (dBi)	EIRP (dBm)
5G NR n48	3550 – 3700	ANT 7+4	24.7	-2.30	22.40
		ANT 7+8	25.9	-3.50	22.40
		ANT 7+9	23.6	-1.10	22.50
		ANT 9+4	24.5	-2.00	22.50
		ANT 9+8	25.9	-3.50	22.40
		ANT8+4	24.3	-1.90	22.40

6.5. WORST-CASE CONFIGURATION AND MODE

For 5G NRs, 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 frequencies and has the same tune up power as QPSK modulations.

LTE Band 48 and 5G NR n48, SISO data were used for OBW, PAR and FS because these measurements are independent of the number of antennas used simultaneously.

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

For MIMO N48, the client declares that the antenna ports combination 7+8 is the highest power of all other combinations. Therefore, all the antenna port measurements can be done with the combination of antenna port 7+8 as a worst-case.

The worst-case scenario for all measurements is based on an engineering evaluation made on different modulations. Then, QPSK and BPSK were observed as the worst mode to LTE bands and 5G NR bands respectively and set for all conducted and radiated. Output power measurements were measured on BPSK, QPSK, 16QAM, 64QAM, and 256QAM modulations. For testing purposes emissions on Section 9 were measured while QPSK/BPSK was set at or above target power for all bands. Conducted tests were performed on the worst-case antenna port because it has the highest conducted power. The worst-case antenna port is shown in the table below.

	Worst case Antenna Port
LTE BAND 48, FR1 5G NR 48, ULCA LTE BAND 48	Ant 7
FR1 5G NR 48 MIMO	Ant 7+8

The EUT was investigated in three orthogonal orientations X/Y/Z on all available SISO and MIMO antennas to determine the worst-case orientation. The following table exhibits the worst-case orientations. The full tests of the EUT have made upon the orientations shown in the table below.

Frequency Range	ANT9	ANT8	ANT7	ANT4	ANT 9+8	ANT 9+7	ANT 9+4	ANT 7+8	ANT 7+4	ANT 4+8
3550 – 3700 MHz	Y	Z	Z	Z	X	X	Y	X	X	Z

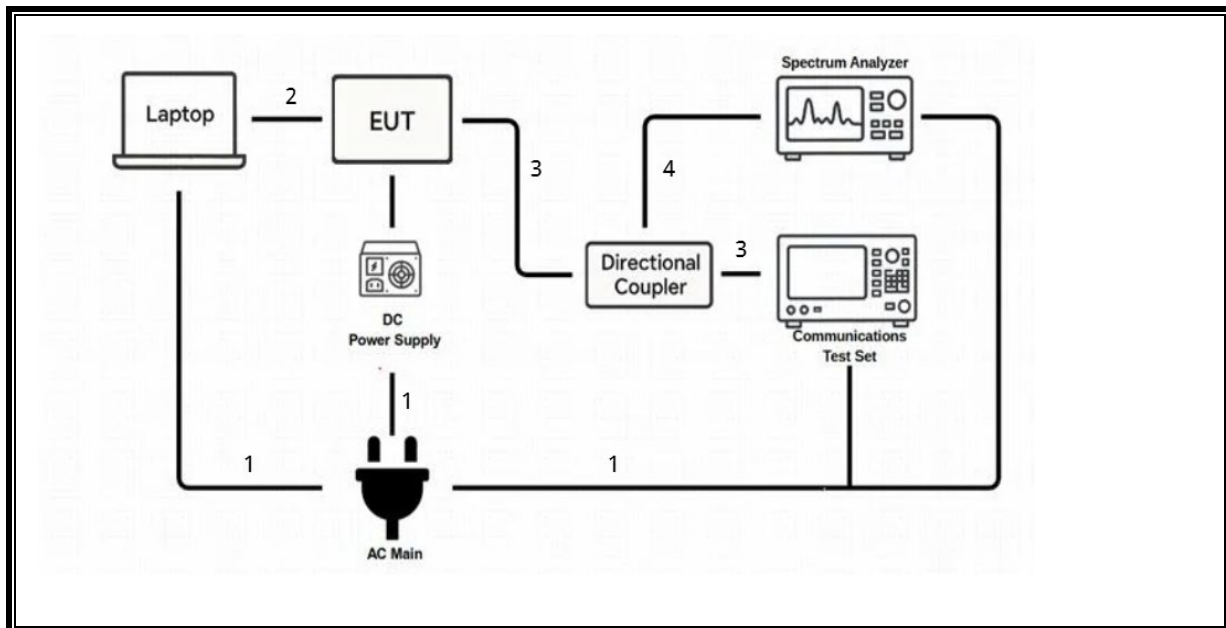
Radiated spurious emissions were investigated from 9kHz to 30MHz, 30MHz-1GHz and above 1GHz. There were no emissions found with less than 20dB of margin from 9kHz to 30MHz, 30MHz-1GHz and above 18GHz.

For simultaneous transmission of multiple channels in the 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.

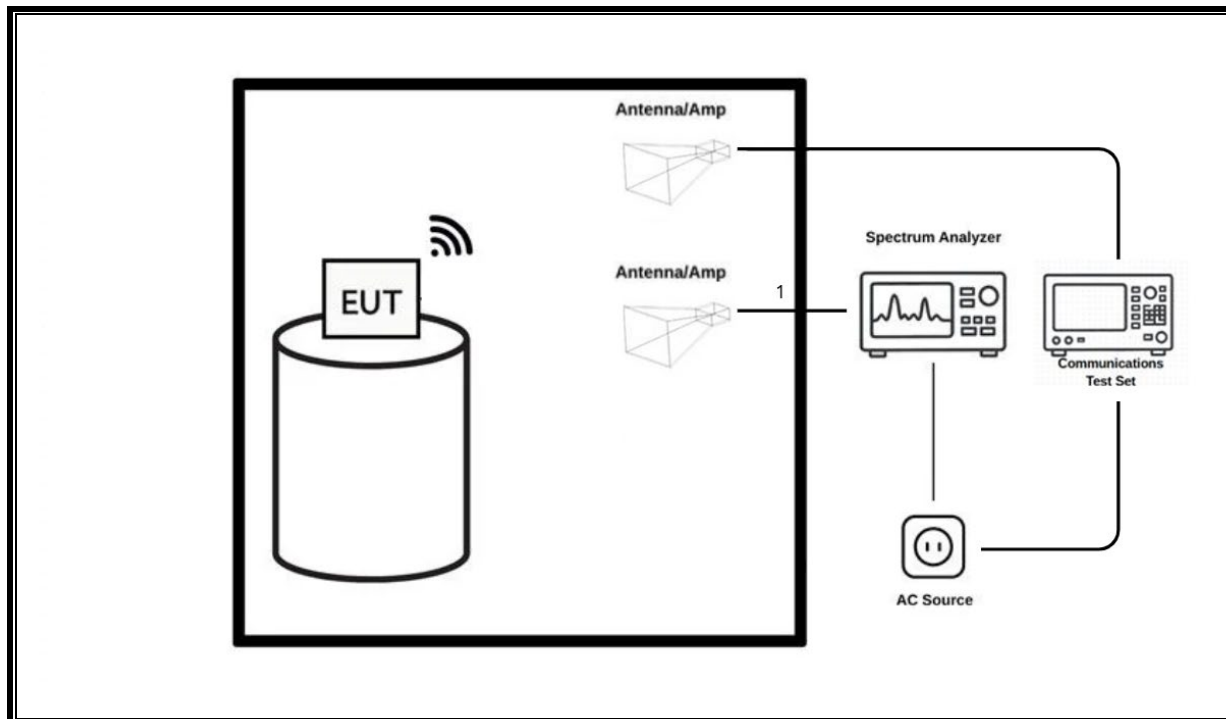
6.6. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT						
Description	Manufacturer	Model	Serial Number	FCC ID/ DoC		
Laptop	Apple	MacBook Pro	F5JJ42D7R9	BCGA1708		
Laptop	Apple	MacBook Pro	JWV2QWM0DT	BCGA2338		
Laptop	Apple	MacBook Pro	FG6Q9RW54Y	BCGA2338		
Laptop	Apple	MacBook Pro	XC2KF6F2D7	BCGA2338		
Laptop	Apple	MacBook Pro	YWCT4V933R	BCGA2338		
Laptop	Apple	MacBook Pro	HRP127004	BCGA2338		
AC/DC adapter	Apple	A1718	C4H64450HH3GN8RA6	--		
AC/DC adapter	Apple	A2130	F16H69002MD000000P	--		
AC/DC adapter	Apple	A1555 P	XQ76XLCJ2D	--		
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	Shielded	1.0	N/A
3	RF In/Out	2	SMA	Shielded	0.9	N/A
4	RF In/Out	1	Barrel	Shielded	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	SMA	Shielded	5.0	N/A

CONDUCTED SETUP



RADIATED SETUP



7. 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
Wideband Communication Test Set, Call Box	R&S GmbH & Co.	CMW500	222796	2027-03-03
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	169933	2027-02-28
Antenna, Horn 1-18GHz	ETS Lindgren	3117	80402	2027-07-31
RF Filter Box, 1-18GHz, 12 Port	UL-FR1	Frankenstein	231874	2027-01-31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	170063	2027-02-27
RF Filter Box, 1-18GHz, 12 Port	UL-FR1	Frankenstein	231875	2026-12-31
Antenna, Horn 1-18GHz	ETS Lindgren	3117	223084	2026-12-31
Antenna, Broadband Hybrid, 30MHz to 3GHz	Sunol Sciences Corp.	JB3	174374	2027-06-30
Amplifier 9 kHz - 1 GHz	SONOMA INSTRUMENT	310N	224490	2026-05-06
Antenna, Passive Loop 30Hz - 1MHz	ELECTRO-METRICS	EM-6871	170013	2026-09-30
Antenna, Passive Loop 100KHz - 30MHz	ELECTRO-METRICS	EM-6872	170015	2026-09-30
Antenna, Horn 18 to 26.5GHz	A.R.A.	MWH-1826/B	199659	2028-05-31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	169937	2027-05-31
Antenna, Horn 1-18GHz	ETS Lindgren	84797	80402	2026-10-31
RF Filter Box, 1-18GHz, 17 Port	UL-FR1	RATS 2	225079	2027-05-31
RF Filter Box, 1-18GHz, 12 Port	UL-FR1	Frankenstein	230878	2028-05-31
Antenna, Horn 1-18GHz	ETS Lindgren	84797	200897	2027-03-18
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	169935	2027-05-31
PXA Signal Analyzer	Keysight Technologies Inc	N9030B	272589	2026-10-03
PXA Signal Analyzer	Keysight Technologies Inc	N9030B	231739	2027-01-31
PXA Signal Analyzer	Keysight Technologies Inc	N9030B	276680	2027-01-31
PXA Signal Analyzer	Keysight Technologies Inc	N9030B	272595	2026-11-30
Wideband Communication Call Box	Rohde & Schwarz	CMW500	230298	2027-02-28
Wideband Communication Call Box	Rohde & Schwarz	CMW500	230295	2027-02-28
Wideband Communication Call Box	Rohde & Schwarz	CMW500	262742	2027-02-11
Wideband Communication Call Box	Rohde & Schwarz	CMW500	262741	2027-02-11
Conducted Switch Box	N/A	CSB	245778	2026-10-31
Conducted Switch Box	N/A	CSB	262354	2026-10-31
Filter, BRF 3400-3800MHz, 18GHz max	Micro-Tronics	BRM50711	217364	2026-11-24
*Filter, BRF 2305-2315	Micro-Tronics	BRC20553	224186	2026-06-29
Directional Coupler	KRYTAR	152610	254457	2026-09-04
Directional Coupler	KRYTAR	101040010K	254458	2026-09-04
*Chamber, Environmental	Cincinnati Sub Zero	ZPHS-8-3.5-SCT/WC	89097	2026-05-31
UL AUTOMATION SOFTWARE				
Conducted Software	UL	Antenna Port	Ver.2022.8.16	
Conducted Software	UL	Station Tool	Ver. 12.2, 2.0, 5.0	
Radiated Software	UL	UL EMC	Ver 9.5, May 1, 2023	

NOTES:

- * Testing is completed before equipment expiration date.

8. RF OUTPUT POWER MEASUREMENTS

RULE PART(S)

FCC: §2.1046

CONDUCTED OUTPUT POWER MEASUREMENT PROCEDURE

All bands conducted average power is obtained from the base station simulator.

The following tests were conducted according to the test requirements outlined in ANSI C63.26 Section 5.2.

In band power measurements for MIMO modes are made by summing the channel power for the individual chains to calculate the total power following the measure and sum method E)1) from KDB 662911 D01.

RESULTS

The EUT has different power levels for head use configuration and body use configuration. All measurements are made with the device operating at the highest average conducted output powers.

8.1. LTE BAND 48 SISO

Test Engineer ID:	115434	Test Date:	2026-04-30
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OUTPUT POWER FOR LTE BAND 48 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				55265	55990	56715	55265	55990	56715	55265	55990	56715	55265	55990	56715
5.0	QPSK	1	0	3552.5	3625.0	3697.5	3552.5	3625.0	3697.5	3552.5	3625.0	3697.5	3552.5	3625.0	3697.5
		1	12	24.57	24.59	24.85	23.22	23.11	23.24	24.40	23.90	23.76	24.79	24.61	24.72
		1	24	24.54	24.68	24.91	23.19	23.43	23.71	23.35	23.16	23.29	24.87	24.82	24.74
		2	0	25.38	26.00	25.71	24.30	24.30	24.10	23.79	23.61	23.78	25.30	24.75	24.81
		2	23	26.00	25.75	26.00	23.88	23.51	24.30	24.12	24.40	23.97	25.15	24.91	24.85
		12	0	24.55	24.79	24.37	22.60	22.81	22.71	23.63	22.97	23.15	23.75	23.61	23.50
		12	6	24.61	24.45	24.59	23.32	23.62	23.49	23.53	22.44	22.61	23.91	24.11	23.81
		12	11	25.17	24.91	25.00	22.92	23.17	22.43	22.90	23.56	22.50	23.76	23.88	23.91
		25	0	25.11	25.42	25.28	22.61	22.73	22.38	23.19	22.66	22.54	23.84	23.30	23.51
		1	0	23.70	24.20	23.80	22.30	22.10	22.43	22.61	22.43	22.51	22.95	23.52	23.81
		1	12	24.15	24.11	23.88	22.16	22.01	22.28	23.96	22.44	23.61	23.66	23.71	23.25
		1	24	23.74	24.05	24.12	22.29	22.51	22.43	23.58	23.51	23.28	23.51	23.22	24.13
	16QAM	2	0	24.49	24.79	24.11	22.43	22.35	22.75	23.27	23.15	22.70	24.03	23.91	24.11
		2	23	24.61	25.09	24.63	22.64	23.44	23.54	24.30	23.82	23.91	23.77	24.04	23.81
		12	0	23.61	23.59	23.55	21.60	23.12	22.71	22.30	22.77	22.71	22.59	23.21	24.82
		12	6	23.38	23.75	23.22	21.33	21.51	21.76	22.27	22.34	21.91	23.91	24.58	23.52
		12	11	23.42	23.52	23.61	22.19	22.30	22.08	23.24	22.78	23.31	22.55	22.36	22.71
		25	0	23.48	23.54	23.68	22.00	21.99	21.79	21.90	21.79	22.00	23.61	23.53	22.99
		1	0	23.49	23.36	23.13	21.57	21.77	22.22	21.51	21.38	21.77	22.52	22.36	22.48
		1	12	22.71	23.00	22.81	21.37	22.42	22.66	22.41	22.73	22.03	21.97	22.00	23.55
		1	24	24.18	23.22	24.02	22.80	21.72	21.62	21.47	21.88	22.18	23.71	23.86	24.03
		2	0	23.84	23.74	23.05	21.73	22.44	22.52	22.78	22.61	22.58	23.11	23.08	23.00
		2	23	23.72	24.24	23.12	22.68	22.55	22.49	22.71	22.48	22.00	23.01	22.82	23.13
		12	0	22.43	22.71	22.09	22.11	22.08	22.10	22.21	21.99	22.21	22.10	21.61	22.35
	64QAM	12	6	22.58	22.77	22.82	21.92	21.99	21.89	22.47	21.33	22.10	22.14	21.94	22.21
		12	11	22.85	22.38	22.24	21.16	21.09	20.98	21.08	21.00	21.11	21.71	21.83	21.43
		25	0	23.00	23.47	22.30	20.46	20.98	21.08	20.82	20.99	20.83	21.49	21.67	21.76
		1	0	21.49	21.09	21.75	19.78	19.61	19.44	20.38	19.73	19.61	21.00	20.73	20.35
		1	12	21.32	21.72	21.61	19.38	19.62	19.57	20.18	19.73	19.89	20.35	20.73	20.56
		1	24	21.32	21.56	21.04	19.71	19.49	19.49	19.75	19.63	19.94	20.63	20.50	20.51
		2	0	21.25	21.36	21.16	19.34	19.51	19.91	19.50	19.84	19.63	21.00	20.83	20.95
		2	23	21.01	21.03	21.27	20.02	19.67	19.71	19.96	19.98	19.83	20.31	20.88	20.44
		12	0	21.25	21.54	21.42	19.90	19.92	19.93	19.42	19.88	19.91	20.48	20.31	20.52
		12	6	21.41	21.10	21.34	19.48	19.92	19.68	20.20	19.91	20.00	20.70	20.43	20.97
		12	11	21.01	21.61	21.31	19.87	19.94	19.74	19.78	19.50	19.87	20.72	21.01	20.84
		25	0	21.16	21.23	21.35	20.03	19.67	19.33	19.85	20.14	19.79	20.69	20.39	20.92
	256QAM	1	0	55290	55990	56690	55290	55990	56690	55290	55990	56690	55290	55990	56690
1		12	24.71	24.64	24.54	23.48	24.11	24.30	23.91	23.82	23.47	24.60	23.91	25.30	
1		24	24.54	24.68	24.91	23.19	23.43	23.71	23.35	23.16	23.29	24.87	24.82	24.74	
2		0	25.38	26.00	25.71	24.30	24.30	24.10	23.79	23.61	23.78	25.30	24.75	24.81	
2		23	26.00	25.75	26.00	23.88	23.51	24.30	24.12	24.40	23.97	25.15	24.91	24.85	
12		0	24.55	24.79	24.37	22.60	22.81	22.71	23.63	22.97	23.15	23.75	23.61	23.50	
12		6	24.61	24.45	24.59	23.32	23.62	23.49	23.53	22.44	22.61	23.91	24.11	23.81	
12		11	25.17	24.91	25.00	22.92	23.17	22.43	22.90	23.56	22.50	23.76	23.88	23.91	
25		0	25.11	25.42	25.28	22.61	22.73	22.38	23.19	22.66	22.54	23.84	23.30	23.51	
1		0	23.70	24.20	23.80	22.30	22.10	22.43	22.61	22.43	22.51	22.95	23.52	23.81	
1		12	24.15	24.11	23.88	22.16	22.01	22.28	23.96	22.44	23.61	23.66	23.71	23.25	
1		24	23.74	24.05	24.12	22.29	22.51	22.43	23.58	23.51	23.28	23.51	23.22	24.13	
5.0	16QAM	2	0	24.49	24.79	24.11	22.43	22.35	22.75	23.27	23.15	22.70	24.03	23.91	24.11
		2	23	24.61	25.09	24.63	22.64	23.44	23.54	24.30	23.82	23.91	23.77	24.04	23.81
		12	0	23.61	23.59	23.55	21.60	23.12	22.71	22.30	22.77	22.71	22.59	23.21	24.82
		12	6	23.38	23.75	23.22	21.33	21.51	21.76	22.27	22.34	21.91	23.91	24.58	23.52
		12	11	23.42	23.52	23.61	22.19	22.30	22.08	23.24	22.78	23.31	22.55	22.36	22.71
		25	0	23.48	23.54	23.68	22.00	21.99	21.79	21.90	21.79	22.00	23.61	23.53	22.99
		1	0	23.49	23.36	23.13	21.57	21.77	22.22	21.51	21.38	21.77	22.52	22.36	22.48
		1	12	22.71	23.00	22.81	21.37	22.42	22.66	22.41	22.73	22.03	21.97	22.00	23.55
		1	24	24.18	23.22	24.02	22.80	21.72	21.62	21.47	21.88	22.18	23.71	23.86	24.03
		2	0	23.84	23.74	23.05	21.73	22.44	22.52	22.78	22.61	22.58	23.11	23.08	23.00
		2	23	23.72	24.24	23.12	22.68	22.55	22.49	22.71	22.48	22.00	23.01	22.82	23.13
		12	0	22.43	22.71	22.09	22.11	22.08	22.10	22.21	21.99	22.21	22.10	21.61	22.35
64QAM	12	6	22.58	22.77	22.82	21.92	21.99	21.89	22.47	21.33	22.10	22.14	21.94	22.21	
	12	11	22.85	22.38	22.24	21.16	21.09	20.98	21.08	21.00	21.11	21.71	21.83	21.43	
	25	0	23.00	23.47	22.30	20.46	20.98	21.08	20.82	20.99	20.83	21.49	21.67	21.76	
	1	0	21.49	21.09	21.75	19.78	19.61	19.44	20.38	19.73	19.61	21.00	20.73	20.35	
	1	12	21.32	21.72	21.61	19.38	19.62	19.57	20.18	19.73	19.89	20.35	20.73	20.56	
	1	24	21.32	21.56	21.04	19.71	19.49	19.49	19.75	19.63	19.94	20.63	20.50	20.51	
	2	0	21.25	21.36	21.16	19.34	19.51	19.91	19.50	19.84	19.63	21.00	20.83	20.95	
	2	23	21.01	21.03	21.27	20.02	19.67	19.71	19.96	19.98	19.83	20.31	20.88	20.44	
	12	0	21.25	21.54	21.42	19.90	19.92	19.93	19.42	19.88	19.91	20.48	20.31	20.52	
	12	6	21.41	21.10	21.34	19.48	19.92	19.68	20.20	19.91	20.00	20.70	20.43	20.97	
	12	11	21.01	21.61	21.31	19.87	19.94	19.74	19.78	19.50	19.87	20.72	21.01	20.84	
	25	0	21.16	21.23	21.35	20.03	19.67	19.33	19.85	20.14	19.79	20.69	20.39	20.92	

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 3557.5	55940 3620.0	56665 3692.5	55315 3557.5	55940 3620.0	56665 3692.5	55315 3557.5	55940 3620.0	56665 3692.5	55315 3557.5	55940 3620.0	56665 3692.5
15.0	QPSK	1	0	25.11	25.45	25.34	23.55	23.48	23.73	23.40	24.10	24.40	24.49	25.00	25.26
		1	37	24.51	25.37	26.00	23.58	23.47	23.33	24.40	24.35	24.04	24.45	25.30	24.73
		1	74	25.01	25.34	25.18	23.26	24.10	24.30	22.98	23.48	23.17	25.30	25.10	24.67
		2	0	25.45	26.00	25.93	24.30	24.15	23.73	23.64	23.83	23.73	24.97	25.08	25.11
		2	73	26.00	25.65	25.11	23.80	23.70	23.92	24.00	24.40	24.16	24.74	25.00	24.69
		36	0	24.22	24.43	24.00	23.99	24.30	23.87	23.33	22.46	22.40	24.12	23.88	23.93
		36	16	24.25	24.58	24.76	22.37	23.76	22.46	23.53	22.97	23.32	24.02	23.31	25.30
		36	35	24.31	24.78	24.61	22.78	23.10	22.45	22.88	22.68	24.12	23.86	23.67	23.55
		75	0	24.37	24.51	24.68	24.14	24.10	24.05	22.84	23.00	23.11	24.17	24.52	24.88
		1	0	24.10	24.63	24.11	22.13	23.02	22.62	22.11	22.04	22.63	23.41	23.68	23.71
	16QAM	1	37	24.00	24.26	24.18	22.84	23.38	22.93	23.55	24.17	23.76	23.11	23.47	23.43
		1	74	23.91	23.78	23.56	22.54	22.48	22.34	23.44	24.01	23.15	23.43	23.62	24.18
		2	0	24.17	24.03	24.33	22.67	22.95	23.30	23.74	22.91	23.15	23.75	24.11	23.93
		2	73	25.15	25.55	25.35	23.31	23.15	23.19	22.73	22.83	23.00	23.80	24.18	24.53
		36	0	23.08	23.11	23.61	22.15	22.48	22.61	22.22	23.45	23.10	23.11	23.00	22.93
		36	16	23.55	23.62	23.91	22.26	22.18	21.70	21.96	21.46	22.00	23.05	23.00	23.11
		36	35	24.11	23.84	24.08	22.29	22.18	21.99	21.57	22.95	21.96	23.35	23.18	22.98
		75	0	23.60	23.66	23.71	21.55	21.67	21.85	22.22	22.25	22.19	22.42	22.73	22.58
		1	0	23.72	23.89	23.55	21.54	22.04	21.06	22.61	23.29	22.91	23.00	22.53	22.93
		1	37	23.18	23.81	23.57	21.91	21.87	21.88	21.83	21.55	21.62	23.18	22.75	23.11
	64QAM	1	74	24.11	24.23	24.08	21.18	21.11	21.43	21.45	23.39	22.00	22.06	22.15	22.07
		2	0	23.57	23.75	23.91	22.19	22.15	22.31	23.44	23.52	23.37	23.65	23.51	23.76
		2	73	23.43	23.85	23.73	21.74	22.00	22.15	21.74	21.96	21.56	23.07	22.75	22.93
		36	0	22.51	22.82	22.64	21.62	21.85	21.58	20.84	21.50	21.37	21.73	22.17	22.06
		36	16	22.37	22.17	22.55	21.46	21.58	21.62	21.26	21.37	20.65	22.34	22.50	22.25
		36	35	22.34	22.58	23.38	21.04	21.37	20.99	21.68	22.10	22.36	22.17	22.07	21.99
		75	0	22.71	22.86	22.99	20.61	20.99	20.78	21.29	21.67	22.23	22.00	22.11	22.51
		1	0	21.43	21.65	21.15	19.87	19.54	19.58	19.76	20.09	19.43	20.39	20.73	20.88
		1	37	21.44	21.72	21.12	19.83	19.60	19.31	19.87	19.98	19.89	20.45	20.30	20.67
		1	74	21.63	21.38	21.72	19.44	19.92	19.85	19.72	19.42	19.44	20.73	20.74	20.86
	256QAM	2	0	21.14	21.00	21.13	19.33	19.85	20.05	19.62	19.50	20.07	20.95	20.60	20.47
		2	73	21.04	21.51	21.69	19.35	19.82	19.42	19.48	19.94	19.40	20.99	20.50	21.01
		36	0	21.38	21.19	21.51	19.94	19.70	19.92	19.90	19.99	19.62	20.69	21.02	21.00
		36	16	21.01	21.08	21.14	19.77	19.72	19.31	20.13	19.59	19.93	20.47	20.31	20.72
		36	35	21.45	21.12	21.48	20.01	19.35	19.46	19.51	20.13	19.97	20.39	20.74	20.31
		75	0	21.48	21.14	21.73	19.39	20.05	19.77	20.10	20.08	20.40	20.77	20.69	20.48

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 MHz	55940 3620.0 MHz	56640 3690 MHz	55340 MHz	55940 3620.0 MHz	56640 3690 MHz	55340 MHz	55940 3620.0 MHz	56640 3690 MHz	55340 MHz	55940 3620.0 MHz	56640 3690 MHz
20.0	QPSK	1	0	26.00	25.44	25.19	23.29	24.00	23.75	24.32	24.10	24.40	24.66	25.30	25.00
		1	49	25.17	25.71	26.00	24.30	24.00	23.61	23.81	23.73	23.24	25.30	24.75	24.96
		1	99	25.22	25.04	25.11	23.96	23.81	24.11	23.25	23.72	23.53	24.84	24.86	24.61
		2	0	25.96	25.55	25.63	24.00	24.11	24.27	24.40	24.40	24.38	24.95	24.59	24.83
		2	98	25.71	26.00	25.77	24.15	24.30	24.30	24.29	24.31	24.18	24.74	24.52	24.76
		50	0	24.43	24.30	24.82	22.30	22.47	22.52	23.05	23.18	22.73	23.68	23.83	24.01
		50	24	25.00	25.06	24.59	22.79	22.35	22.53	22.96	22.63	23.11	24.58	24.61	25.30
		50	49	24.75	25.40	25.11	23.82	24.30	23.79	23.52	23.35	23.18	23.57	23.79	23.82
		100	0	24.83	24.75	25.59	23.25	22.83	24.10	23.34	22.49	23.00	23.73	23.78	23.91
		1	0	24.26	24.00	24.11	23.18	22.87	23.78	22.91	23.00	23.07	24.39	24.33	24.33
	16QAM	1	49	24.32	23.68	24.58	22.53	22.41	22.27	23.23	23.11	23.17	24.60	24.25	24.37
		1	99	23.87	24.44	24.18	23.01	23.51	23.85	23.13	21.94	22.52	23.76	24.00	24.18
		2	0	24.37	24.71	25.54	23.31	23.43	23.18	23.18	23.44	23.43	24.05	24.18	24.07
		2	98	24.65	24.68	24.19	22.58	22.75	23.00	23.94	23.40	23.51	24.58	24.18	23.73
		50	0	24.40	23.41	23.97	22.10	22.18	22.43	22.29	22.18	22.30	22.69	22.82	22.72
		50	24	23.55	23.45	23.71	22.18	22.14	22.07	22.73	21.75	22.43	23.19	23.17	23.10
		50	49	24.08	23.41	24.04	21.72	22.07	21.94	22.60	21.92	22.44	23.41	23.54	23.72
		100	0	23.42	23.52	23.66	23.07	23.13	23.03	21.79	22.28	22.17	23.28	23.13	23.07
		1	0	23.04	23.41	23.37	21.09	21.27	21.17	23.15	23.37	23.27	22.50	22.61	22.47
		1	49	23.49	23.18	23.25	21.61	21.55	21.62	22.17	22.33	22.47	22.87	22.91	22.75
	64QAM	1	99	23.02	23.68	23.51	21.34	21.28	21.08	22.03	22.11	22.18	23.10	23.07	23.31
		2	0	24.65	24.11	23.83	21.89	22.00	22.10	22.00	21.86	21.46	23.60	23.55	23.51
		2	98	23.52	24.01	23.00	21.75	21.66	21.66	21.84	21.72	21.92	23.78	23.51	23.63
		50	0	23.04	23.00	23.13	21.51	21.95	21.75	22.03	22.15	21.99	22.27	22.42	22.47
		50	24	22.41	22.51	22.40	20.72	21.00	20.97	21.37	21.47	21.52	21.96	22.00	22.17
		50	49	23.14	22.90	22.45	21.25	21.51	21.37	21.23	21.44	21.48	21.72	22.13	22.07
		100	0	23.37	23.49	22.64	20.61	20.76	20.91	21.41	21.42	21.18	22.08	22.40	21.97
		1	0	21.67	21.68	21.18	19.31	19.98	19.48	20.08	19.66	19.90	20.34	20.47	20.54
		1	49	21.09	21.01	21.10	19.61	19.58	19.32	19.86	19.81	19.77	20.97	20.72	20.31
		1	99	21.10	21.28	21.48	19.47	19.32	19.83	19.60	19.63	19.90	20.77	20.33	20.48
	256QAM	2	0	21.00	21.19	21.00	19.70	19.59	19.83	19.90	19.49	20.02	20.97	20.82	20.69
2		98	21.71	21.22	21.15	19.53	19.48	19.49	19.75	20.32	19.73	20.64	20.39	20.31	
50		0	21.15	21.58	21.65	20.02	19.67	19.39	19.78	19.51	19.78	20.51	20.58	20.34	
50		24	21.01	21.65	21.18	19.90	19.85	19.47	19.89	19.52	19.52	20.30	20.47	21.03	
50		49	21.08	21.42	21.23	19.45	19.49	19.53	19.48	19.70	19.96	20.76	20.95	20.94	
100		0	21.07	21.55	21.26	19.86	19.53	19.80	19.94	20.15	20.07	20.38	20.93	20.92	

8.2. 5G NR n48 SISO

Test Engineer ID:	19146	Test Date:	2026-05-15
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OUTPUT POWER FOR 5G NR n48 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				637000	641666	646333	637000	641666	646333	637000	641666	646333	637000	641666	646333
10.0	BPSK	1	0	24.72	24.74	24.79	23.09	23.25	23.18	23.18	23.12	23.38	24.14	24.05	24.13
		1	1	25.35	25.37	25.41	23.61	23.58	23.72	23.68	23.71	23.87	24.74	24.76	24.71
		1	22	25.28	25.25	25.29	23.60	23.59	23.51	23.82	23.66	23.80	24.60	24.63	24.63
		1	23	24.94	24.78	24.86	23.10	23.06	23.18	23.13	23.16	23.26	24.05	24.19	24.18
		12	6	25.90	25.99	25.98	24.29	24.29	24.30	24.40	24.39	24.38	25.29	25.30	25.30
		24	0	25.37	25.34	25.31	23.78	23.62	23.75	23.68	23.71	23.64	24.70	24.66	24.62
	QPSK	1	0	24.30	24.38	24.45	22.57	22.53	22.64	22.64	22.66	22.66	23.70	23.68	23.63
		1	1	25.25	25.43	25.32	23.74	23.71	23.74	23.60	23.85	23.76	24.77	24.73	24.70
		1	22	25.26	25.41	25.27	23.63	23.78	23.75	23.74	23.61	23.63	24.57	24.56	24.52
		1	23	24.33	24.46	24.48	22.51	22.78	22.67	22.82	22.65	22.71	23.63	23.51	23.72
		12	6	26.00	25.96	25.94	24.24	24.23	24.34	24.36	24.34	24.34	25.25	25.27	25.24
		24	0	24.72	24.76	24.93	23.27	23.18	23.09	23.38	23.14	23.17	24.14	24.04	24.26
	16QAM	1	0	23.28	23.47	23.38	21.71	21.52	21.61	21.62	21.70	21.69	22.66	22.76	22.76
		1	1	24.37	24.43	24.22	22.69	22.70	22.68	22.62	22.61	22.78	23.69	23.66	23.67
		1	22	24.31	24.37	24.26	22.56	22.53	22.69	22.71	22.65	22.80	23.57	23.51	23.57
		1	23	23.29	23.30	23.20	21.73	21.51	21.60	21.85	21.85	21.72	22.73	22.65	22.64
		12	6	24.76	24.86	24.97	23.16	23.22	23.22	23.21	23.28	23.15	24.13	24.20	24.08
		24	0	23.97	23.70	23.89	22.16	22.01	22.21	22.21	22.23	22.30	23.13	23.02	23.09
	64QAM	1	0	22.76	22.76	22.74	21.14	21.26	21.12	21.38	21.29	21.14	22.20	22.25	22.09
		1	1	22.70	22.77	22.74	21.26	21.01	21.01	21.33	21.19	21.24	22.23	22.06	22.11
		1	22	22.75	22.74	22.97	21.23	21.26	21.27	21.26	21.21	21.33	22.03	22.03	22.20
		1	23	22.80	22.86	22.96	21.15	21.25	21.02	21.10	21.25	21.27	22.25	22.28	22.18
		12	6	23.23	23.41	23.34	21.70	21.67	21.69	21.77	21.76	21.74	22.57	22.73	22.53
		24	0	23.38	23.38	23.22	21.71	21.73	21.61	21.80	21.84	21.77	22.52	22.58	22.51
	256QAM	1	0	20.77	20.80	20.71	19.06	19.07	19.15	19.23	19.20	19.10	20.08	20.22	20.16
		1	1	20.82	20.85	20.95	19.11	19.25	19.07	19.31	19.26	19.16	20.16	20.04	20.13
		1	22	20.96	20.71	20.91	19.06	19.02	19.09	19.28	19.22	19.14	20.15	20.20	20.03
		1	23	20.79	20.98	20.73	19.27	19.06	19.16	19.23	19.33	19.31	20.27	20.26	20.18
		12	6	21.45	21.29	21.33	19.62	19.75	19.62	19.69	19.80	19.64	20.75	20.63	20.67
		24	0	21.33	21.46	21.23	19.67	19.61	19.58	19.69	19.76	19.70	20.72	20.61	20.51

OUTPUT POWER FOR 5G NR n48 (15.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				637166 3557.5	641333 3620.0	646166 3692.5	637166 3557.5	641333 3620.0	646166 3692.5	637166 3557.5	641333 3620.0	646166 3692.5	637166 3557.5	641333 3620.0	646166 3692.5
15.0	BPSK	1	0	24.87	24.85	24.91	23.27	23.10	23.06	23.21	23.36	23.12	24.09	24.25	24.11
		1	1	25.29	25.34	25.26	23.69	23.68	23.65	23.84	23.86	23.61	24.68	24.73	24.56
		1	36	25.28	25.23	25.23	23.61	23.69	23.58	23.71	23.68	23.76	24.66	24.66	24.55
		1	37	24.85	24.75	24.85	23.06	23.26	23.11	23.25	23.37	23.16	24.12	24.10	24.09
		18	9	25.87	25.95	25.76	24.29	24.29	24.30	24.38	24.39	24.40	25.30	25.29	25.29
		36	0	25.27	25.38	25.22	23.67	23.64	23.70	23.73	23.63	23.68	24.73	24.60	24.69
	QPSK	1	0	24.34	24.41	24.47	22.71	22.53	22.66	22.73	22.80	22.84	23.75	23.60	23.55
		1	1	25.29	25.45	25.29	23.57	23.72	23.74	23.73	23.61	23.73	24.53	24.62	24.57
		1	36	25.44	25.35	25.47	23.51	23.57	23.76	23.76	23.76	23.75	24.71	24.70	24.67
		1	37	24.42	24.47	24.32	22.66	22.71	22.68	22.66	22.75	22.61	23.66	23.58	23.55
		18	9	25.87	25.94	25.90	24.24	24.24	24.23	24.35	24.35	24.36	25.25	25.25	25.26
		36	0	24.84	24.89	24.89	23.23	23.05	23.25	23.20	23.12	23.37	24.16	24.08	24.26
	16QAM	1	0	23.43	23.25	23.47	21.58	21.76	21.72	21.68	21.66	21.63	22.68	22.71	22.66
		1	1	24.20	24.23	24.21	22.62	22.63	22.68	22.83	22.71	22.69	23.65	23.52	23.72
		1	36	24.31	24.25	24.22	22.68	22.57	22.63	22.70	22.69	22.76	23.70	23.58	23.62
		1	37	23.23	23.27	23.42	21.56	21.67	21.50	21.80	21.62	21.81	22.66	22.58	22.66
		18	9	24.78	24.88	24.92	23.12	23.07	23.02	23.18	23.34	23.11	24.23	24.04	24.06
		36	0	23.75	23.79	23.94	22.03	22.09	22.14	22.27	22.26	22.28	23.17	23.07	23.17
	64QAM	1	0	22.79	22.86	22.93	21.04	21.04	21.12	21.25	21.25	21.34	22.07	22.22	22.19
		1	1	22.94	22.92	22.92	21.13	21.06	21.03	21.12	21.22	21.24	22.25	22.19	22.20
		1	36	22.85	22.96	22.84	21.15	21.13	21.23	21.32	21.28	21.14	22.22	22.27	22.24
		1	37	22.87	22.75	22.72	21.06	21.02	21.20	21.18	21.19	21.15	22.27	22.11	22.04
		18	9	23.44	23.20	23.29	21.60	21.53	21.72	21.88	21.76	21.62	22.74	22.55	22.58
		36	0	23.25	23.40	23.43	21.63	21.56	21.67	21.68	21.63	21.77	22.57	22.52	22.58
	256QAM	1	0	20.75	20.98	20.72	19.27	19.04	19.19	19.30	19.35	19.11	20.00	20.14	20.04
		1	1	20.92	20.94	20.86	19.09	19.12	19.22	19.27	19.11	19.30	20.26	20.18	20.17
		1	36	20.77	20.90	20.83	19.22	19.01	19.22	19.25	19.16	19.29	20.21	20.11	20.01
		1	37	20.86	20.77	20.87	19.11	19.05	19.28	19.38	19.35	19.12	20.27	20.05	20.20
		18	9	21.47	21.35	21.24	19.70	19.63	19.64	19.84	19.84	19.79	20.73	20.50	20.60
		36	0	21.43	21.44	21.38	19.75	19.55	19.73	19.69	19.64	19.77	20.50	20.51	20.72

OUTPUT POWER FOR 5G NR n48 (20.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				637333	641333	646000	637333	641333	646000	637333	641333	646000	637333	641333	646000
20.0	BPSK	1	0	3560.0	3620.0	3690.0	3560.0	3620.0	3690.0	3560.0	3620.0	3690.0	3560.0	3620.0	3690.0
		1	1	24.77	24.71	24.98	23.06	23.15	23.25	23.29	23.28	23.27	24.15	24.18	24.16
		1	49	25.47	25.47	25.33	23.74	23.59	23.58	23.88	23.74	23.86	24.72	24.65	24.66
		1	50	25.48	25.23	25.36	23.55	23.57	23.53	23.87	23.67	23.62	24.61	24.51	24.77
		1	50	24.75	24.84	24.98	23.14	23.27	23.02	23.26	23.37	23.22	24.25	24.21	24.07
		25	12	25.99	25.99	25.99	24.29	24.30	24.29	24.39	24.39	25.29	25.30	25.29	25.29
	QPSK	50	0	25.38	25.28	25.43	23.69	23.61	23.72	23.71	23.81	24.77	24.75	24.74	24.74
		1	0	24.36	24.22	24.33	22.61	22.55	22.53	22.81	22.63	22.79	23.64	23.75	23.75
		1	1	25.37	25.45	25.21	23.60	23.56	23.73	23.87	23.84	23.76	24.72	24.63	24.70
		1	49	25.31	25.40	25.28	23.66	23.64	23.74	23.85	23.84	23.66	24.54	24.66	24.77
		1	50	24.37	24.26	24.42	22.52	22.57	22.68	22.85	22.76	22.67	23.51	23.58	23.64
		25	12	25.94	25.94	25.95	24.23	24.24	24.26	24.35	24.37	24.36	25.24	25.26	25.24
	16QAM	50	0	24.30	24.72	24.97	23.02	23.17	23.15	22.86	23.30	23.21	24.28	24.23	24.25
		1	0	23.31	23.47	23.39	21.68	21.65	21.53	21.79	21.61	21.64	22.54	22.67	22.64
		1	1	24.33	24.27	24.33	22.57	22.57	22.51	22.64	22.67	22.68	23.54	23.51	23.61
		1	49	24.36	24.43	24.47	22.68	22.63	22.53	22.87	22.72	22.63	23.70	23.75	23.60
		1	50	23.28	23.21	23.34	21.73	21.67	21.66	21.87	21.77	21.82	22.55	22.73	22.61
		25	12	24.88	24.78	24.97	23.26	23.11	23.21	23.15	23.17	23.34	24.21	24.11	24.20
	64QAM	50	0	23.71	23.84	23.88	22.23	22.15	22.20	22.37	22.28	22.28	23.13	23.19	23.01
		1	0	22.85	22.94	22.91	21.10	21.26	21.16	21.30	21.20	21.38	22.09	22.08	22.14
		1	1	22.96	22.78	22.94	21.16	21.24	21.03	21.11	21.26	21.15	22.26	22.11	22.05
		1	49	22.77	22.96	22.77	21.05	21.28	21.20	21.22	21.19	21.20	22.02	22.02	22.02
		1	50	22.91	22.89	22.98	21.21	21.03	21.24	21.18	21.18	21.24	22.01	22.26	22.09
		25	12	23.28	23.44	23.23	21.68	21.69	21.58	21.69	21.84	21.84	22.73	22.56	22.76
	256QAM	50	0	23.21	23.37	23.30	21.53	21.58	21.58	21.69	21.69	21.69	22.67	22.53	22.76
		1	0	20.90	20.79	20.77	19.05	19.08	19.03	19.22	19.24	19.33	20.23	20.05	20.12
		1	1	20.73	20.71	20.80	19.25	19.02	19.18	19.10	19.26	19.38	20.26	20.15	20.03
		1	49	20.94	20.86	20.87	19.22	19.22	19.19	19.24	19.12	19.14	20.11	20.01	20.23
		1	50	20.79	20.98	20.86	19.15	19.03	19.05	19.26	19.28	19.26	20.01	20.11	20.21
		25	12	21.20	21.45	21.41	19.64	19.72	19.51	19.86	19.82	19.63	20.74	20.59	20.69
		50	0	21.25	21.30	21.29	19.77	19.66	19.75	19.77	19.83	19.68	20.59	20.68	20.69

OUTPUT POWER FOR 5G NR n48 (30.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				637666	641666	645666	637666	641666	645666	637666	641666	645666	637666	641666	645666
30.0	BPSK	1	0	3565.0	3625.0	3685.0	3565.0	3625.0	3685.0	3565.0	3625.0	3685.0	3565.0	3625.0	3685.0
		1	1	24.85	24.97	24.75	23.10	23.27	23.26	23.22	23.27	23.12	24.03	24.26	24.15
		1	76	25.30	25.41	25.33	23.57	23.76	23.60	23.73	23.87	23.81	24.63	24.58	24.70
		1	77	24.88	24.77	24.82	23.14	23.05	23.27	23.22	23.16	23.18	24.23	24.14	24.21
		36	18	26.00	25.99	25.99	24.29	24.28	24.30	24.39	24.39	24.39	25.29	25.29	25.28
		75	0	23.79	25.35	25.42	23.69	23.75	23.66	23.55	23.69	23.41	24.66	24.69	22.51
	QPSK	1	0	24.31	24.34	24.31	22.66	22.55	22.75	22.76	22.68	22.68	23.51	23.67	23.60
		1	1	25.38	25.26	25.35	23.73	23.65	23.57	23.60	23.63	23.85	24.54	24.77	24.50
		1	76	25.21	25.36	25.25	23.70	23.64	23.66	23.85	23.71	23.79	24.72	24.51	24.68
		1	77	24.40	24.27	24.37	22.63	22.56	22.75	22.64	22.75	22.73	23.73	23.58	23.67
		36	18	25.93	25.97	25.95	24.25	24.27	24.26	24.35	24.36	24.37	25.24	25.24	25.23
		75	0	22.73	24.91	24.41	23.11	23.15	23.07	21.30	23.36	21.78	24.20	24.19	21.74
	16QAM	1	0	23.23	23.28	23.33	21.76	21.57	21.72	21.64	21.77	21.64	22.75	22.59	22.75
		1	1	24.29	24.24	24.29	22.60	22.70	22.73	22.65	22.72	22.64	23.73	23.71	23.59
		1	76	24.31	24.20	24.35	22.70	22.61	22.61	22.66	22.69	22.82	23.66	23.59	23.62
		1	77	23.23	23.35	23.28	21.59	21.70	21.69	21.67	21.62	21.87	22.76	22.77	22.57
		36	18	24.89	24.75	24.85	23.02	23.07	23.24	23.16	23.26	23.30	24.00	24.19	24.22
		75	0	22.82	23.95	23.76	21.69	22.27	21.54	22.31	22.27	22.13	23.27	23.23	23.13
	64QAM	1	0	22.91	22.92	22.89	21.27	21.24	21.22	21.37	21.11	21.13	22.25	22.19	22.05
		1	1	22.85	22.92	22.86	21.26	21.19	21.19	21.36	21.33	21.23	22.01	22.20	22.19
		1	76	22.88	22.90	22.72	21.01	21.08	21.28	21.32	21.28	21.13	22.00	22.20	22.23
		1	77	22.82	22.75	22.96	21.05	21.15	21.02	21.16	21.11	21.33	22.26	22.24	22.19
		36	18	23.28	23.36	23.33	21.50	21.52	21.65	21.82	21.66	21.61	22.63	22.58	22.75
		75	0	22.95	23.37	23.31	21.69	21.70	21.74	21.17	21.61	21.78	22.51	22.75	21.51
	256QAM	1	0	20.97	20.90	20.90	19.05	19.12	19.08	19.28	19.23	19.10	20.20	20.01	20.07
		1	1	20.74	20.93	20.85	19.23	19.22	19.27	19.22	19.36	19.30	20.13	20.27	20.25
		1	76	20.98	20.80	20.91	19.11	19.02	19.03	19.25	19.35	19.36	20.15	20.07	20.20
		1	77	20.75	20.94	20.71	19.04	19.11	19.04	19.13	19.16	19.20	20.14	20.09	20.24
		36	18	21.44	21.46	21.26	19.75	19.69	19.55	19.76	19.79	19.83	20.71	20.73	20.70
		75	0	21.46	21.21	21.25	19.52	19.64	19.66	19.76	19.82	19.61	20.77	20.52	20.59

OUTPUT POWER FOR 5G NR n48 (40.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 7			ANT 4			ANT 9			ANT 8		
				638000	641333	645333	638000	641333	645333	638000	641333	645333	638000	641333	645333
40.0	BPSK	1	0	3570.0	3620.0	3680.0	3570.0	3620.0	3680.0	3570.0	3620.0	3680.0	3570.0	3620.0	3680.0
		1	1	24.89	24.97	24.92	23.13	23.13	23.23	23.12	23.15	23.20	24.07	24.03	24.22
		1	1	25.21	25.36	25.26	23.71	23.51	23.67	23.69	23.86	23.73	24.69	24.63	24.55
		1	104	25.20	25.29	25.35	23.67	23.63	23.61	23.61	23.85	23.60	24.58	24.78	24.75
		1	105	24.94	24.95	24.90	23.20	23.12	23.20	23.38	23.32	23.14	24.25	24.02	24.04
		50	25	25.99	26.00	25.99	24.28	24.29	24.29	24.38	24.38	24.38	25.28	25.30	25.29
		100	0	22.47	25.28	23.45	23.04	23.67	21.11	23.43	23.79	22.37	24.66	24.65	20.77
		1	0	24.38	24.21	24.26	22.78	22.54	22.69	22.64	22.76	22.86	23.72	23.69	23.57
		1	1	25.25	25.33	25.22	23.52	23.76	23.50	23.80	23.77	23.75	24.73	24.65	24.61
		1	104	25.23	25.28	25.27	23.66	23.53	23.59	23.65	23.66	23.61	24.59	24.65	24.77
	QPSK	1	105	24.43	24.28	24.45	22.73	22.64	22.60	22.72	22.67	22.61	23.65	23.53	23.69
		50	25	25.96	25.93	25.95	24.24	24.24	24.23	24.34	24.35	24.35	25.26	25.25	25.24
		100	0	21.97	24.86	22.91	22.68	23.10	19.60	20.73	23.31	20.24	24.13	24.16	19.64
		1	0	23.36	23.24	23.34	21.62	21.57	21.62	21.67	21.82	21.87	22.74	22.78	22.64
		1	1	24.38	24.41	24.23	22.59	22.73	22.74	22.67	22.62	22.83	23.58	23.70	23.66
		1	104	24.43	24.33	24.38	22.62	22.53	22.50	22.73	22.63	22.63	23.76	23.78	23.52
		1	105	23.36	23.43	23.22	21.63	21.77	21.73	21.61	21.83	21.62	22.68	22.64	22.74
		50	25	24.98	24.84	24.83	23.19	23.02	23.22	23.16	23.23	23.29	24.21	24.20	24.08
		100	0	21.78	23.90	22.84	22.24	22.26	22.13	22.14	22.13	22.07	23.24	23.21	19.72
		1	0	22.79	22.86	22.71	21.22	21.11	21.02	21.16	21.15	21.18	22.20	22.21	22.06
	64QAM	1	1	22.93	22.92	22.76	21.19	21.21	21.13	21.12	21.38	21.23	22.03	22.02	22.13
		1	104	22.72	22.82	22.95	21.21	21.28	21.07	21.18	21.22	21.20	22.23	22.14	22.24
		1	105	22.83	22.77	22.84	21.21	21.10	21.07	21.37	21.18	21.28	22.25	22.14	22.05
		50	25	23.25	23.26	23.29	21.78	21.51	21.64	21.69	21.67	21.77	22.52	22.58	22.59
		100	0	21.77	23.41	22.87	21.75	21.56	19.68	20.60	21.68	20.37	22.68	22.70	19.67
		1	0	20.87	20.80	20.89	19.22	19.13	19.07	19.11	19.32	19.16	20.07	20.18	20.04
		1	1	20.72	20.72	20.72	19.20	19.01	19.00	19.27	19.32	19.25	20.00	20.13	20.05
		1	104	20.77	20.80	20.80	19.25	19.03	19.07	19.24	19.35	19.26	20.15	20.08	20.05
		1	105	20.75	20.95	20.95	19.06	19.27	19.02	19.11	19.20	19.33	20.27	20.19	20.15
		50	25	21.42	21.35	21.21	19.71	19.53	19.52	19.75	19.75	19.86	20.50	20.56	20.67
		100	0	21.33	21.23	21.33	19.64	19.77	19.55	19.74	19.60	19.79	20.51	20.64	19.53
	256QAM	1	0	20.87	20.80	20.89	19.22	19.13	19.07	19.11	19.32	19.16	20.07	20.18	20.04
		1	1	20.72	20.72	20.72	19.20	19.01	19.00	19.27	19.32	19.25	20.00	20.13	20.05
		1	104	20.77	20.80	20.80	19.25	19.03	19.07	19.24	19.35	19.26	20.15	20.08	20.05
		1	105	20.75	20.95	20.95	19.06	19.27	19.02	19.11	19.20	19.33	20.27	20.19	20.15
		50	25	21.42	21.35	21.21	19.71	19.53	19.52	19.75	19.75	19.86	20.50	20.56	20.67
		100	0	21.33	21.23	21.33	19.64	19.77	19.55	19.74	19.60	19.79	20.51	20.64	19.53

8.3. ULCA LTE BAND 48C SISO

Test Engineer ID:	116839	Test Date:	2026-06-21
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OUTPUT POWER FOR ULCA LTE BAND 48C (5.0MHz + 20.0MHz)

Bandwidth	PCC Frequency (MHz)	SCC1 Frequency (MHz)	PCC RB		SCC1 RB		Conducted Average (dBm)															
							ANT 7				ANT 4				ANT 9				ANT 8			
			Size	Offset	Size	Offset	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
5MHz / 20MHz	3553.3	3565.0	1	24	1	0	20.42	20.44	20.47	20.48	19.77	19.76	19.73	19.79	19.82	19.88	19.90	19.83	20.72	20.73	20.80	20.21
			25	0	100	0	13.96	14.00	13.98	13.88	13.26	13.28	13.24	13.20	13.31	13.37	13.31	13.40	14.29	14.13	14.29	14.29
	3615.8	3627.5	1	24	1	0	23.98	23.87	23.95	20.75	23.29	23.24	23.28	20.21	23.32	23.31	23.38	20.37	24.27	24.22	24.28	21.21
			25	0	100	0	21.96	21.85	21.98	20.84	21.21	21.28	21.29	20.21	21.33	21.33	21.25	20.34	22.27	22.03	22.12	21.28
	3678.3	3690.0	1	24	1	0	20.49	20.47	20.45	20.50	19.77	19.79	19.79	19.73	19.83	19.84	19.89	19.85	20.79	20.45	20.75	20.73
			25	0	100	0	13.93	14.00	13.87	13.91	13.28	13.30	13.26	13.30	13.30	13.38	13.35	13.40	14.25	14.23	14.22	14.25

OUTPUT POWER FOR ULCA LTE BAND 48C (20.0MHz + 5.0MHz)

Bandwidth	PCC Frequency (MHz)	SCC1 Frequency (MHz)	PCC RB		SCC1 RB		Conducted Average (dBm)															
							ANT 7				ANT 4				ANT 9				ANT 8			
			Size	Offset	Size	Offset	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
20MHz / 5MHz	3560.0	3571.7	1	99	1	0	20.92	20.86	20.92	20.90	20.23	20.23	20.27	20.30	20.32	20.36	20.32	20.30	21.14	20.97	20.89	21.27
			100	0	25	0	13.96	13.87	14.00	13.96	13.25	13.20	13.28	13.29	13.37	13.40	13.31	13.31	14.27	14.03	14.26	14.29
	3622.5	3634.2	1	99	1	0	23.99	23.95	23.97	21.00	23.28	23.20	23.20	20.28	23.35	23.29	23.26	20.33	24.24	24.27	24.21	21.29
			100	0	25	0	21.99	21.98	21.97	20.92	21.29	21.25	21.20	20.27	21.37	21.34	21.39	20.34	22.29	22.28	22.23	21.27
	3685.0	3696.7	1	99	1	0	20.91	20.92	20.95	20.94	20.24	20.23	20.29	20.22	20.32	20.31	20.30	20.27	21.29	21.25	21.12	21.28
			100	0	25	0	13.97	13.93	14.00	13.98	13.23	13.28	13.29	13.24	13.40	13.35	13.37	13.37	14.27	14.27	13.88	14.29

OUTPUT POWER FOR ULCA LTE BAND 48C (10.0MHz + 20.0MHz)

Bandwidth	PCC Frequency (MHz)	SCC1 Frequency (MHz)	PCC RB		SCC1 RB		Conducted Average (dBm)															
							ANT 7				ANT 4				ANT 9				ANT 8			
			Size	Offset	Size	Offset	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
10MHz / 20MHz	3555.5	3569.9	1	49	1	0	19.83	19.84	19.98	19.88	19.28	19.20	19.26	19.25	19.34	19.33	19.40	19.31	20.25	20.06	20.11	20.00
			50	0	100	0	14.82	14.91	14.78	14.89	14.21	14.24	14.20	14.30	14.34	14.40	14.36	14.36	15.26	15.24	15.25	15.29
	3615.6	3630.0	1	49	1	0	24.50	24.42	24.00	20.94	23.72	23.74	23.25	20.20	23.85	23.83	23.36	20.31	24.76	24.79	24.21	21.30
			50	0	100	0	21.47	21.42	21.33	20.90	20.76	20.75	20.78	19.84	20.84	20.89	20.85	20.34	21.35	21.77	21.76	21.21
	3675.6	3690.0	1	49	1	0	19.85	19.89	19.84	19.91	19.28	19.28	19.03	19.27	19.23	19.30	19.33	19.37	20.25	20.28	19.81	20.24
			50	0	100	0	14.81	14.94	14.93	14.92	14.30	14.21	14.22	14.22	14.38	14.36	14.36	14.08	15.24	14.82	15.30	14.86

OUTPUT POWER FOR ULCA LTE BAND 48C (20.0MHz + 10.0MHz)

Bandwidth	PCC Frequency (MHz)	SCC1 Frequency (MHz)	PCC RB		SCC1 RB		Conducted Average (dBm)															
							ANT 7				ANT 4				ANT 9				ANT 8			
			Size	Offset	Size	Offset	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
20MHz / 10MHz	3560.0	3574.4	1	99	1	0	19.99	19.97	19.92	19.91	19.27	19.27	19.24	19.27	19.35	19.31	19.39	19.32	20.01	20.22	19.90	20.26
			100	0	50	0	14.94	14.95	14.93	14.94	14.22	14.29	14.28	14.23	14.31	14.37	14.35	14.31	15.26	15.26	15.21	15.25
	3620.1	3634.5	1	99	1	0	24.50	24.42	23.93	21.01	23.77	23.70	23.28	20.22	23.83	23.82	23.00	20.38	24.76	24.77	24.05	21.25
			100	0	50	0	21.47	21.45	21.45	20.93	20.80	20.75	20.76	20.24	20.86	20.87	20.85	20.33	21.70	21.80	21.72	21.28
	3680.1	3694.5	1	99	1	0	20.00	19.95	19.97	19.94	19.29	19.24	19.21	19.26	19.38	19.13	19.00	19.32	20.15	20.25	19.87	20.21
			100	0	50	0	14.98	14.91	14.97	14.98	14.21	14.22	14.27	14.22	14.32	14.31	14.33	14.30	15.27	15.26	15.26	15.27

OUTPUT POWER FOR ULCA LTE BAND 48C (15.0MHz + 20.0MHz)

Bandwidth	PCC Frequency (MHz)	SCC1 Frequency (MHz)	PCC		SCC1		Conducted Average (dBm)															
			RB	Offset	RB	Offset	ANT 7				ANT 4				ANT 9				ANT 8			
			Size	Offset	Size	Offset	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
15MHz / 20MHz	3557.8	3574.9	1	74	1	0	19.89	19.96	19.87	19.95	19.30	19.21	19.26	19.23	19.38	19.38	19.34	19.32	20.25	20.21	20.27	20.26
			75	0	100	0	14.91	14.98	14.98	14.96	14.30	14.26	14.28	14.23	14.30	14.30	14.35	14.30	15.22	15.24	15.27	15.23
	3615.3	3632.4	1	74	1	0	24.96	24.95	23.97	20.90	24.29	24.24	23.22	20.27	24.37	24.00	23.35	20.39	25.30	25.30	24.23	21.26
			75	0	100	0	21.48	21.48	21.50	20.99	20.72	20.76	20.71	20.21	20.82	20.89	20.87	20.30	21.80	21.78	21.74	21.23
	3672.9	3690.0	1	74	1	0	19.91	20.00	19.90	19.94	19.27	19.22	19.27	19.24	19.35	19.37	19.37	19.24	20.23	20.24	19.90	20.22
			75	0	100	0	14.92	14.96	14.97	14.97	14.21	14.28	14.22	14.29	14.00	14.37	14.37	14.36	15.21	15.21	15.26	15.30

OUTPUT POWER FOR ULCA LTE BAND 48C (20.0MHz + 15.0MHz)

Bandwidth	PCC Frequency (MHz)	SCC1 Frequency (MHz)	PCC RB		SCC1 RB		Conducted Average (dBm)															
			Size	Offset	Size	Offset	ANT 7				ANT 4				ANT 9				ANT 8			
							QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
20MHz / 15MHz	3560.0	3577.1	1	99	1	0	19.90	19.86	19.79	19.89	19.29	19.21	19.27	19.21	19.33	19.37	19.35	19.38	20.29	20.26	20.30	20.29
			100	0	75	0	14.98	14.89	14.92	14.96	14.26	14.23	14.20	14.23	14.39	14.36	14.38	14.32	15.25	15.23	15.27	15.25
	3617.6	3634.7	1	99	1	0	25.00	25.00	23.94	20.88	24.00	24.00	23.22	20.22	24.00	24.00	23.31	20.38	25.20	25.29	24.28	21.21
			100	0	75	0	21.49	21.46	21.50	20.90	20.76	20.71	20.72	20.23	20.87	20.81	20.88	20.37	21.78	21.73	21.63	21.22
	3675.1	3692.2	1	99	1	0	19.91	20.00	19.90	19.91	19.24	19.30	19.22	19.20	19.37	19.38	19.30	19.36	20.29	20.21	20.25	20.07
			100	0	75	0	14.96	14.94	15.00	14.92	14.23	14.29	14.29	14.28	14.39	14.37	14.32	14.32	15.24	15.28	15.29	15.24

OUTPUT POWER FOR ULCA LTE BAND 48C (20.0MHz + 20.0MHz)

Bandwidth	PCC Frequency (MHz)	SCC1 Frequency (MHz)	PCC RB		SCC1 RB		Conducted Average (dBm)															
			Size	Offset	Size	Offset	ANT 7				ANT 4				ANT 9				ANT 8			
							QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
20MHz/ 20MHz	3560.0	3579.8	1	99	1	0	21.48	21.50	21.27	20.84	20.77	20.78	20.70	20.26	20.83	20.86	20.85	20.31	21.71	21.80	21.80	21.25
			1	0	1	99	7.98	7.96	8.00	7.84	7.28	7.22	7.28	7.23	7.39	7.36	7.36	7.31	8.27	8.29	8.29	8.26
			100	0	100	0	14.87	14.91	14.87	15.00	14.25	14.28	14.29	14.23	14.35	14.39	14.31	14.35	15.23	15.24	15.28	15.30
			1	99	1	0	25.00	25.00	24.00	20.84	24.28	24.21	23.28	20.28	24.40	24.33	23.35	20.33	25.26	25.28	24.30	21.22
	3610.1	3629.9	1	99	1	0	14.47	14.42	14.36	14.42	13.79	13.79	13.71	13.74	13.82	13.90	13.86	13.89	14.79	14.46	14.77	14.72
			100	0	100	0	21.47	21.49	21.50	20.91	20.79	20.72	20.75	20.24	20.81	20.81	20.85	20.34	21.79	21.79	21.73	21.28
			1	99	1	0	21.47	21.48	21.43	20.95	20.71	20.70	20.79	20.23	20.88	20.89	20.87	20.31	21.77	21.75	21.73	21.29
			1	0	1	99	7.89	7.78	7.94	8.00	7.23	7.28	7.26	7.26	7.39	7.34	7.34	7.35	8.20	8.29	8.30	8.28
	3670.2	3690.0	100	0	100	0	14.98	14.85	15.00	14.97	14.27	14.26	14.21	14.24	14.39	14.35	14.39	14.34	15.22	15.22	15.26	15.24

8.4. 5G NR n48 MIMO

Test Engineer ID:	32061	Test Date:	2026-04-24
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OUTPUT POWER FOR 5G NR n48 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average					
				ANT 7+8			ANT 9+4		
				637000	641666	646333	637000	641666	646333
10.0	BPSK	1	0	24.65	24.70	24.73	23.36	23.32	23.31
		1	1	25.13	25.25	25.22	23.88	23.71	23.75
		1	22	25.13	25.29	25.25	23.87	23.72	23.75
		1	23	24.76	24.67	24.76	23.40	23.38	23.35
		12	6	25.90	25.90	25.90	24.50	24.50	24.50
		24	0	25.27	25.26	25.26	23.81	23.71	23.76
	QPSK	1	0	24.20	24.11	24.27	22.84	22.75	22.75
		1	1	25.23	25.28	25.15	23.82	23.85	23.71
		1	22	25.13	25.25	25.17	23.75	23.79	23.85
		1	23	24.15	24.18	24.11	22.78	22.78	22.84
		12	6	24.99	25.19	25.62	24.34	24.38	23.78
		24	0	24.77	24.63	24.80	23.25	23.30	23.27
	16QAM	1	0	23.12	23.12	23.13	21.87	21.75	21.90
		1	1	24.18	24.16	24.17	22.88	22.72	22.73
		1	22	24.22	24.17	24.21	22.83	22.82	22.73
		1	23	23.12	23.12	23.22	21.80	21.79	21.72
		12	6	24.74	24.70	24.73	23.20	23.36	23.28
		24	0	23.72	23.69	23.72	22.36	22.24	22.39
	64QAM	1	0	22.62	22.71	22.61	21.36	21.23	21.26
		1	1	22.71	22.65	22.80	21.27	21.39	21.27
		1	22	22.74	22.73	22.63	21.34	21.31	21.28
		1	23	22.72	22.75	22.65	21.30	21.39	21.37
		12	6	23.13	23.22	23.18	21.85	21.72	21.71
		24	0	23.22	23.10	23.19	21.74	21.86	21.82
	256QAM	1	0	20.79	20.63	20.61	19.23	19.30	19.26
		1	1	20.74	20.66	20.74	19.35	19.38	19.31
		1	22	20.79	20.73	20.80	19.21	19.40	19.33
		1	23	20.72	20.66	20.65	19.32	19.38	19.37
		12	6	21.28	21.29	21.14	19.85	19.88	19.73
		24	0	21.15	21.22	21.16	19.79	19.74	19.73

OUTPUT POWER FOR 5G NR n48 (15.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average					
				ANT 7+8			ANT 9+4		
				637166	641333	646166	637166	641333	646166
15.0	BPSK	1	0	24.69	24.64	24.72	23.28	23.29	23.33
		1	1	25.18	25.11	25.11	23.75	23.89	23.73
		1	36	25.27	25.17	25.24	23.86	23.88	23.87
		1	37	24.65	24.72	24.73	23.32	23.35	23.33
		18	9	25.90	25.90	25.90	24.50	24.50	24.50
		36	0	25.29	25.24	25.12	23.81	23.85	23.82
	QPSK	1	0	24.16	24.22	24.26	22.81	22.71	22.70
		1	1	25.21	25.27	25.24	23.78	23.75	23.73
		1	36	25.26	25.11	25.20	23.80	23.72	23.79
		1	37	24.26	24.21	24.29	22.86	22.72	22.89
		18	9	25.01	24.94	25.80	24.39	24.32	23.65
		36	0	24.79	24.62	24.76	23.24	23.27	23.32
	16QAM	1	0	23.13	23.25	23.15	21.86	21.74	21.78
		1	1	24.14	24.15	24.24	22.70	22.85	22.74
		1	36	24.18	24.26	24.20	22.90	22.88	22.78
		1	37	23.19	23.20	23.14	21.77	21.80	21.73
		18	9	24.73	24.72	24.73	23.25	23.39	23.20
		36	0	23.62	23.73	23.71	22.25	22.36	22.22
	64QAM	1	0	22.77	22.68	22.68	21.36	21.34	21.37
		1	1	22.72	22.63	22.64	21.27	21.35	21.27
		1	36	22.60	22.79	22.74	21.21	21.24	21.39
		1	37	22.72	22.72	22.64	21.33	21.34	21.38
		18	9	23.26	23.17	23.25	21.79	21.90	21.76
		36	0	23.14	23.23	23.11	21.90	21.74	21.71
	256QAM	1	0	20.71	20.72	20.72	19.29	19.38	19.36
		1	1	20.72	20.68	20.65	19.31	19.26	19.24
		1	36	20.66	20.71	20.62	19.33	19.40	19.39
		1	37	20.65	20.76	20.73	19.28	19.23	19.38
		18	9	21.20	21.24	21.26	19.79	19.70	19.86
		36	0	21.12	21.20	21.23	19.83	19.83	19.87

OUTPUT POWER FOR 5G NR n48 (20.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average					
				ANT 7+8			ANT 9+4		
				637333	641333	646000	637333	641333	646000
20.0	BPSK	1	0	3560.0	3620.0	3690.0	3560.0	3620.0	3690.0
		1	1	24.70	24.75	24.72	23.37	23.20	23.36
		1	1	25.17	25.23	25.18	23.75	23.85	23.75
		1	49	25.28	25.20	25.22	23.75	23.78	23.74
		1	50	24.64	24.79	24.80	23.35	23.23	23.25
		25	12	25.90	25.90	25.90	24.50	24.50	24.50
	QPSK	50	0	25.28	25.11	25.28	23.76	23.86	23.89
		1	0	24.16	24.18	24.24	22.71	22.78	22.71
		1	1	25.16	25.28	25.11	23.87	23.72	23.71
		1	49	25.12	25.19	25.17	23.84	23.71	23.76
		1	50	24.21	24.27	24.20	22.72	22.87	22.82
		25	12	25.29	24.91	25.51	23.73	23.68	23.80
	16QAM	50	0	24.76	24.74	24.79	23.21	23.27	23.20
		1	0	23.11	23.22	23.25	21.76	21.86	21.79
		1	1	24.22	24.24	24.16	22.77	22.73	22.74
		1	49	24.13	24.18	24.20	22.83	22.74	22.87
		1	50	23.10	23.10	23.25	21.74	21.85	21.89
		25	12	24.70	24.76	24.78	23.24	23.37	23.39
	64QAM	50	0	23.62	23.76	23.60	22.23	22.23	22.24
		1	0	22.65	22.64	22.69	21.25	21.32	21.33
		1	1	22.65	22.64	22.69	21.30	21.33	21.28
		1	49	22.77	22.77	22.60	21.37	21.34	21.38
		1	50	22.79	22.60	22.61	21.38	21.26	21.34
		25	12	23.17	23.16	23.18	21.81	21.77	21.70
	256QAM	50	0	23.17	23.12	23.20	21.89	21.76	21.75
		1	0	20.71	20.70	20.72	19.23	19.39	19.23
		1	1	20.72	20.78	20.75	19.31	19.21	19.39
		1	49	20.80	20.77	20.77	19.27	19.22	19.27
		1	50	20.74	20.67	20.70	19.26	19.35	19.40
		25	12	21.20	21.23	21.19	19.78	19.80	19.71
		50	0	21.29	21.15	21.19	19.73	19.75	19.75

OUTPUT POWER FOR 5G NR n48 (30.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average					
				ANT 7+8			ANT 9+4		
				637666	641666	645666	637666	641666	645666
30.0	BPSK	1	0	3565.0	3625.0	3685.0	3565.0	3625.0	3685.0
		1	1	24.60	24.62	24.64	23.26	23.32	23.31
		1	1	25.13	25.12	25.20	23.77	23.74	23.84
		1	76	25.13	25.13	25.20	23.80	23.79	23.71
		1	77	24.76	24.67	24.70	23.40	23.26	23.31
		36	18	25.90	25.90	25.90	24.50	24.50	24.50
	QPSK	75	0	25.29	25.19	25.20	23.76	23.78	23.77
		1	0	24.21	24.16	24.10	22.75	22.85	22.78
		1	1	25.21	25.24	25.17	23.72	23.83	23.72
		1	76	25.27	25.20	25.23	23.76	23.89	23.74
		1	77	24.29	24.23	24.19	22.88	22.87	22.78
		36	18	25.73	25.01	25.63	23.61	23.78	24.23
	16QAM	75	0	24.61	24.67	20.75	23.27	23.31	19.24
		1	0	23.22	23.18	23.27	21.72	21.86	21.75
		1	1	24.27	24.12	24.20	22.85	22.70	22.79
		1	76	24.23	24.29	24.13	22.74	22.80	22.77
		1	77	23.14	23.15	23.17	21.82	21.83	21.90
		36	18	24.61	24.80	24.70	23.25	23.30	23.26
	64QAM	75	0	23.70	23.71	23.78	22.32	22.26	22.18
		1	0	22.70	22.71	22.70	21.27	21.36	21.29
		1	1	22.78	22.65	22.77	21.28	21.20	21.39
		1	76	22.67	22.79	22.75	21.34	21.25	21.25
		1	77	22.62	22.74	22.72	21.25	21.20	21.33
		36	18	23.16	23.20	23.24	21.86	21.85	21.76
	256QAM	75	0	23.17	23.15	23.11	21.83	21.72	21.81
		1	0	20.64	20.67	20.73	19.25	19.22	19.33
		1	1	20.74	20.70	20.79	19.32	19.36	19.20
		1	76	20.62	20.75	20.64	19.25	19.34	19.22
		1	77	20.78	20.73	20.63	19.39	19.32	19.38
		36	18	21.22	21.22	21.17	19.70	19.88	19.84
		75	0	21.30	21.11	20.67	19.74	19.87	19.26

OUTPUT POWER FOR 5G NR n48 (40.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average					
				ANT 7+8			ANT 9+4		
				638000	641333	645333	638000	641333	645333
40.0	BPSK	1	0	3570.0	3620.0	3680.0	3570.0	3620.0	3680.0
		1	1	24.75	24.70	24.64	23.21	23.20	23.21
		1	1	25.16	25.21	25.16	23.87	23.81	23.81
		1	104	25.26	25.28	25.25	23.86	23.88	23.84
		1	105	24.71	24.71	24.74	23.40	23.25	23.24
		50	25	25.90	25.90	25.90	24.50	24.50	24.50
		100	0	24.40	25.25	23.18	23.77	23.82	22.41
	QPSK	1	0	24.15	24.21	24.25	22.87	22.86	22.80
		1	1	25.22	25.16	25.13	23.77	23.79	23.85
		1	104	25.26	25.13	25.20	23.84	23.83	23.85
		1	105	24.15	24.14	24.22	22.79	22.86	22.84
		50	25	25.39	25.00	25.19	23.99	24.34	23.74
		100	0	23.77	24.78	21.88	23.31	23.30	21.99
	16QAM	1	0	23.14	23.27	23.20	21.71	21.70	21.84
		1	1	24.10	24.20	24.22	22.83	22.79	22.72
		1	104	24.20	24.15	24.22	22.74	22.85	22.71
		1	105	23.16	23.14	23.12	21.81	21.82	21.78
		50	25	24.65	24.71	24.72	23.39	23.27	23.31
		100	0	23.14	23.71	22.42	22.41	22.23	21.89
	64QAM	1	0	22.66	22.77	22.80	21.24	21.28	21.39
		1	1	22.66	22.75	22.69	21.31	21.34	21.37
		1	104	22.77	22.69	22.78	21.33	21.24	21.26
		1	105	22.73	22.63	22.60	21.36	21.31	21.25
		50	25	23.26	23.22	23.17	21.71	21.81	21.88
		100	0	23.33	23.29	22.15	21.73	21.90	21.54
	256QAM	1	0	20.61	20.72	20.70	19.36	19.25	19.29
		1	1	20.74	20.65	20.70	19.23	19.32	19.25
		1	104	20.68	20.69	20.80	19.31	19.24	19.33
		1	105	20.73	20.71	20.75	19.40	19.31	19.38
		50	25	21.10	21.24	21.16	19.72	19.87	19.79
		100	0	20.62	21.28	21.11	19.35	19.72	19.61

9. CONDUCTED TEST RESULTS

9.1. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

LIMITS

For reporting purposes only.

TEST PROCEDURE

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

RESULTS

There is no limit required, and power is the same for low, middle and high channel; therefore, only middle channel was tested.

LTE BAND 48 SISO

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 48	5MHz, QPSK	25/0	3625.0	4.496	5.03
	5MHz, 16QAM			4.508	4.93
	10MHz, QPSK	50/0		9.018	9.62
	10MHz, 16QAM			8.955	9.58
	15MHz, QPSK	75/0	3620.0	13.436	14.54
	15MHz, 16QAM			13.483	14.39
	20MHz, QPSK	100/0		17.837	19.16
	20MHz, 16QAM			17.899	19.06
	20MHz, QPSK	1/0		0.265	0.37

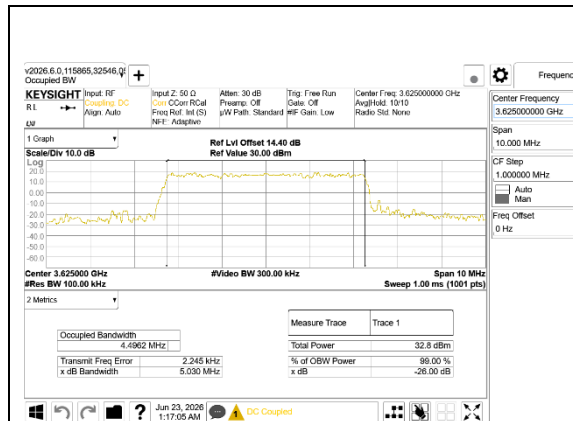
5G NR n48 SISO

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
5G NR n48	10MHz, BPSK	24/0	3625.0	8.642	9.65
	10MHz, QPSK			8.603	9.67
	10MHz, 16QAM			8.657	9.78
	15MHz, BPSK	36/0	3620.0	12.933	14.15
	15MHz, QPSK			12.938	14.12
	15MHz, 16QAM			12.916	14.08
	20MHz, BPSK	50/0		17.952	19.21
	20MHz, QPSK			17.927	19.27
	20MHz, 16QAM			17.983	19.20
	30MHz, BPSK	75/0	3625.0	26.888	28.64
	30MHz, QPSK			26.913	28.81
	30MHz, 16QAM			26.969	28.65
	40MHz, BPSK	100/0	3620.0	35.891	37.97
	40MHz, QPSK			35.850	38.05
	40MHz, 16QAM			35.879	37.92
	40MHz, BPSK	1/0		0.479	0.88

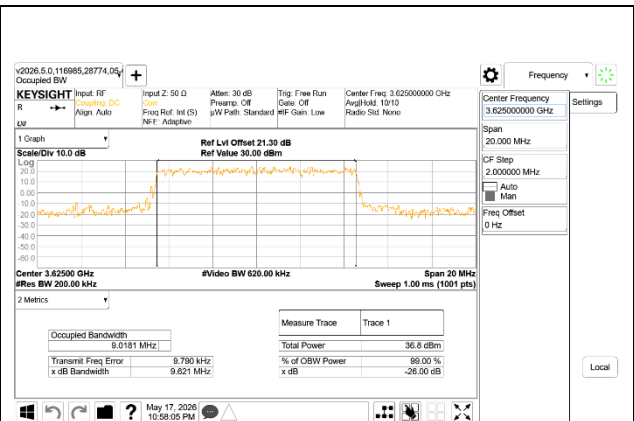
ULCA LTE BAND 48C SISO

Band	Mode	RB Allocation/RB Offset	f (MHz)	99% BW (MHz)	- 26dB BW (MHz)
ULCA LTE BAND 48C	5MHz + 20MHz BAND QPSK	25/0 + 100/0	3625	23.224	24.97
	5MHz + 20MHz BAND 16QAM			23.179	25.03
	20MHz + 5MHz BAND QPSK	100/0 + 25/0		23.301	24.78
	20MHz + 5MHz BAND 16QAM			23.195	25.03
	10MHz + 20MHz BAND QPSK	50/0 + 100/0		27.931	30.06
	10MHz + 20MHz BAND 16QAM			27.668	29.78
	20MHz + 10MHz BAND QPSK	100/0 + 50/0		28.082	29.96
	20MHz + 10MHz BAND 16QAM			28.004	29.84
	15MHz + 20MHz BAND QPSK	75/0 + 100/0		32.941	35.00
	15MHz + 20MHz BAND 16QAM			32.816	34.98
	20MHz + 15MHz BAND QPSK	100/0 + 75/0		32.927	34.89
	20MHz + 15MHz BAND 16QAM			32.853	34.79
	20MHz + 20MHz BAND QPSK	100/0 + 100/0		37.808	39.82
	20MHz + 20MHz BAND 16QAM			37.605	41.54

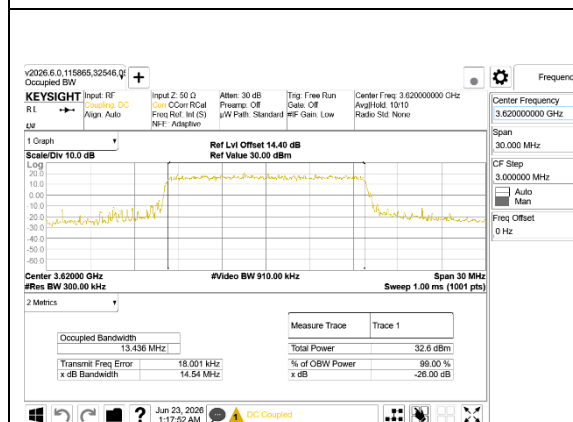
9.1.1. LTE BAND 48 SISO



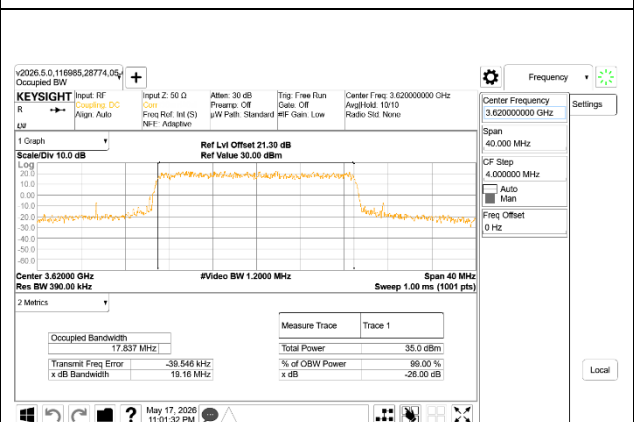
LTE B48 5MHz QPSK Middle Channel RB25-0



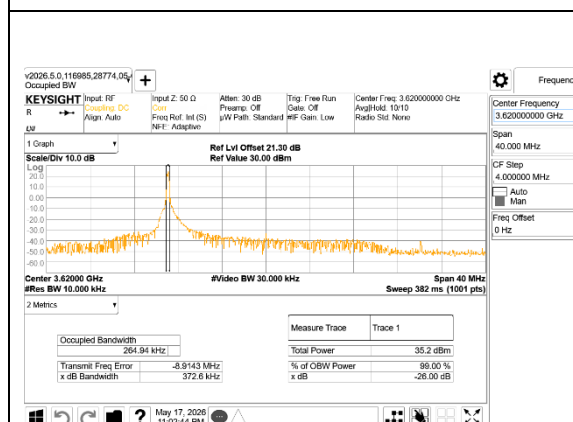
LTE B48 10MHz QPSK Middle Channel RB50-0



LTE B48 15MHz QPSK Middle Channel RB75-0



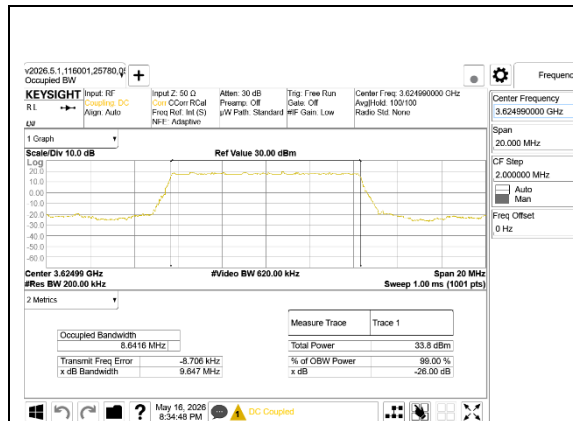
LTE B48 20MHz QPSK Middle Channel RB100-0



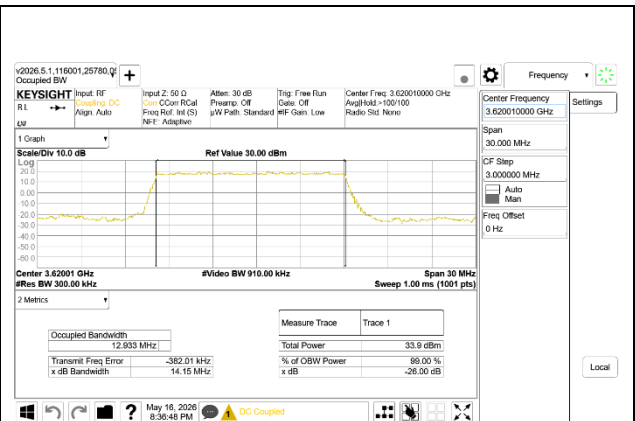
LTE B48 20MHz QPSK Middle Channel RB1-0

Intentionally Blank

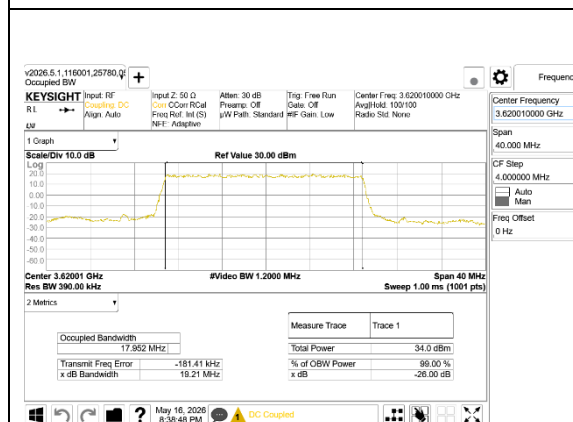
9.1.2. 5G NR n48 SISO



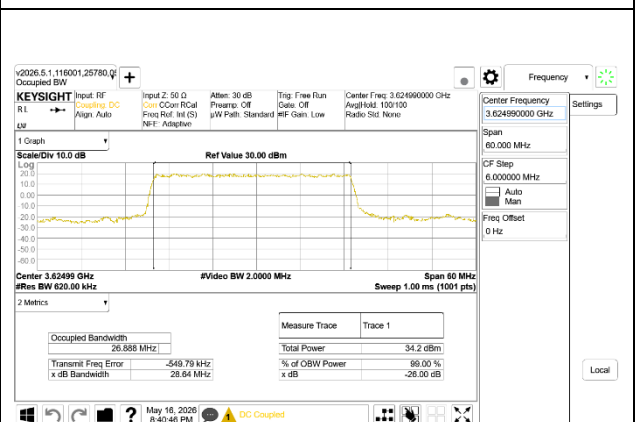
5G NR n48 10MHz BPSK Middle Channel RB24-0



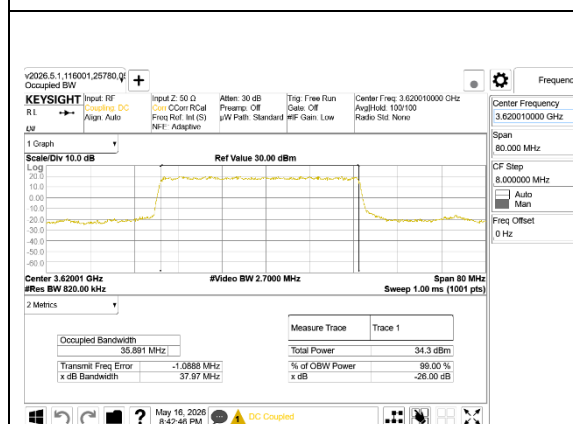
5G NR n48 15MHz BPSK Middle Channel RB36-0



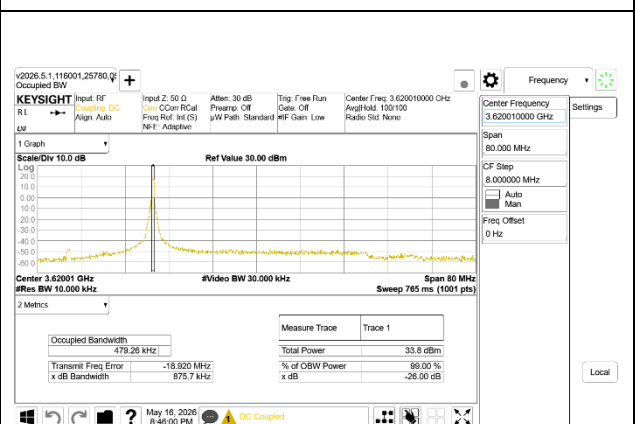
5G NR n48 20MHz BPSK Middle Channel RB50-0



5G NR n48 30MHz BPSK Middle Channel RB75-0

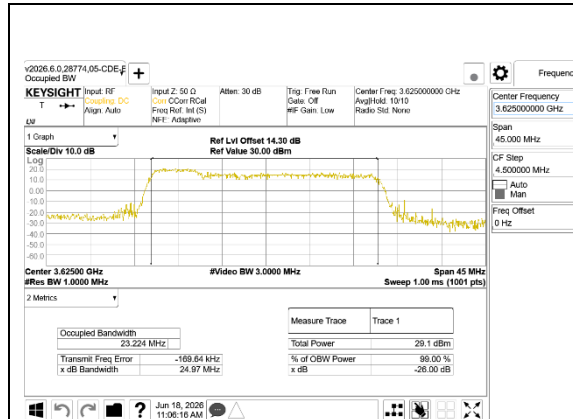


5G NR n48 40MHz BPSK Middle Channel RB100-0

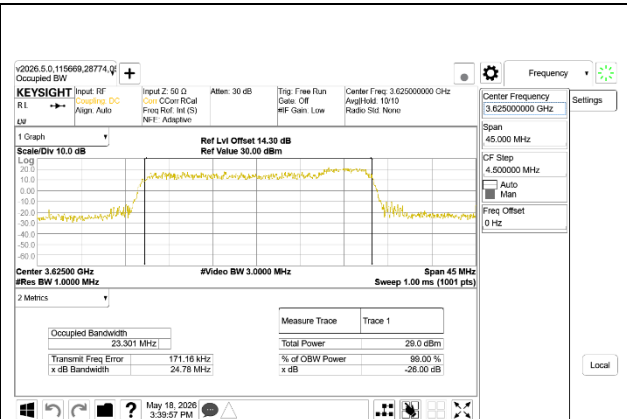


5G NR n48 40MHz BPSK Middle Channel RB1-0

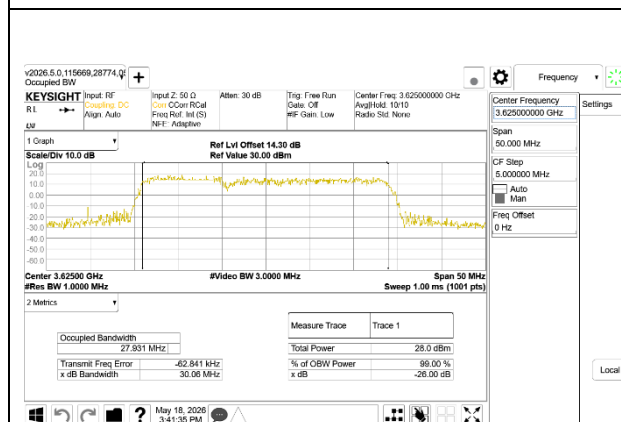
9.1.3. ULCA LTE BAND 48C SISO



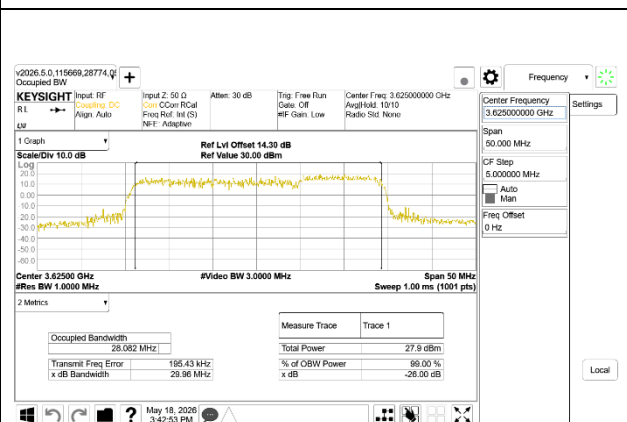
ULCA LTE B48C 5MHz + 20MHz QPSK RB25-0 + RB100-0



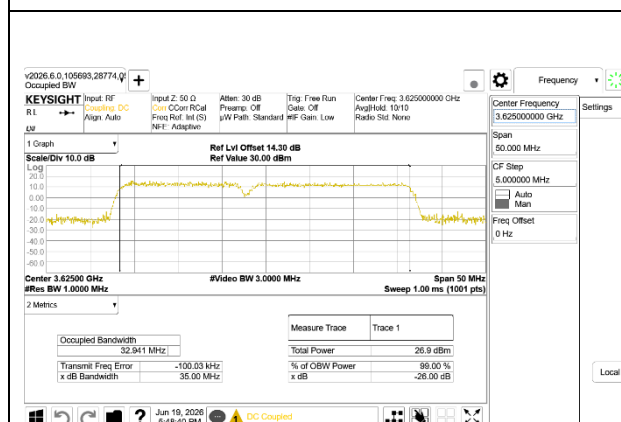
ULCA LTE B48C 20MHz + 5MHz QPSK RB100-0 + RB25-0



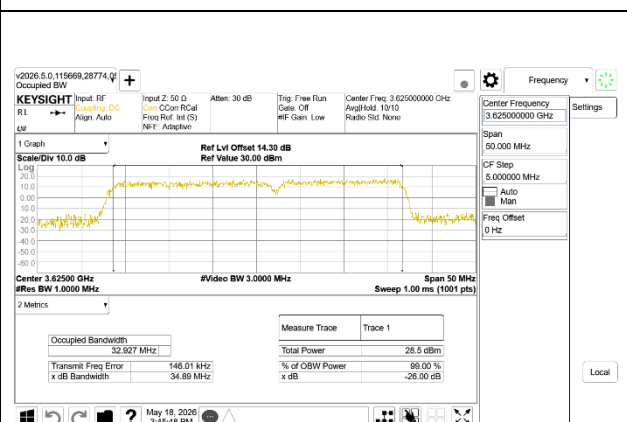
ULCA LTE B48C 10MHz + 20MHz QPSK RB50-0 + RB100-0



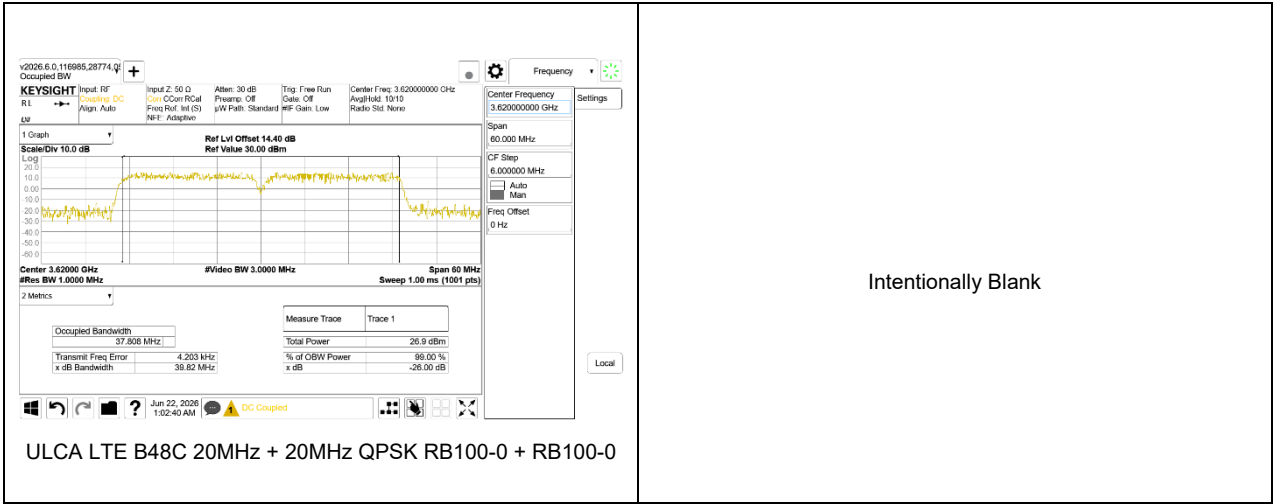
ULCA LTE B48C 20MHz + 10MHz QPSK RB100-0 + RB50-0



ULCA LTE B48C 15MHz + 20MHz QPSK RB75-0 + RB100-0



ULCA LTE B48C 20MHz + 15MHz QPSK RB100-0 + RB75-0



9.2. EMISSION MASK AND ADJACENT CHANNEL POWER

LIMITS

FCC: §96.41

(e) 3.5 GHz Emissions and Interference Limits—

(1) General protection levels

(ii) Except as otherwise specified in paragraph (e)(2) of this section, for channel and frequency assignments made by a CBSD to End User Devices, the conducted power of any End User Device emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0 to B megahertz (where B is the bandwidth in megahertz of the assigned channel or multiple contiguous channels of the End User Device) above the upper CBSD-assigned channel edge and within 0 to B megahertz below the lower CBSD-assigned channel edge. At all frequencies greater than B megahertz above the upper CBSD assigned channel edge and less than B megahertz below the lower CBSD-assigned channel edge, the conducted power of any End User Device emission shall not exceed -25 dBm/MHz. Notwithstanding the emission limits in this paragraph, the Adjacent Channel Leakage Ratio for End User Devices shall be at least 30 dB.

(2) Additional protection levels. Notwithstanding paragraph (e)(1) of this section, for CBSDs and End User Devices, the conducted power of emissions below 3540 MHz or above 3710 MHz shall not exceed -25 dBm/MHz, and the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/MHz.

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.

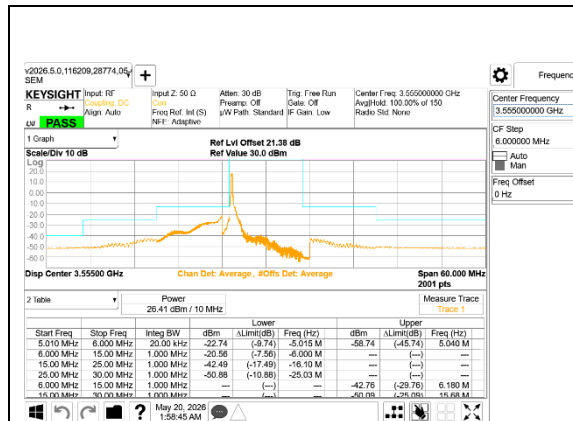
(iii) Compliance with emission limits shall be demonstrated using either average (RMS)-detected or peak-detected power measurement techniques.

(2) Additional protection levels. Notwithstanding paragraph (e)(1) of this section, for CBSDs and End User Devices, the conducted power of emissions below 3540 MHz or above 3710 MHz shall not exceed -25 dBm/MHz, and the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/MHz.

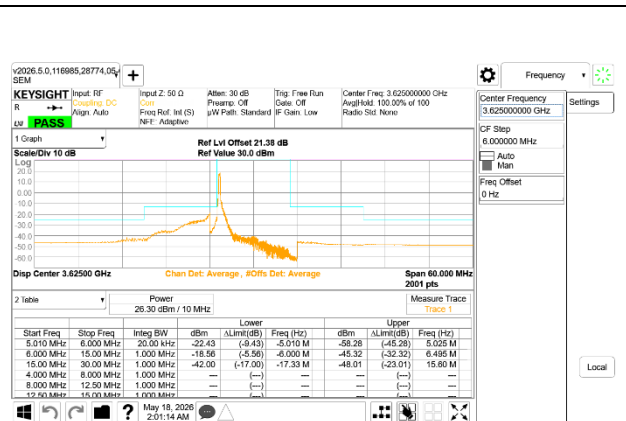
For MIMO modes are made using the measure and sum the spectra method E3)a)ii) / E)2)a) from KDB 662911 D01. The measurements for each antenna are stored in separate traces (i.e. trace 1/port A and trace 2/port B). The spectrum analyzer's math function is used to perform a linear sum of powers of the two traces and store the result in trace 3/port A+B). Trace 3/port A+B is compared to the in-band or out of band limit as applicable.

RESULTS

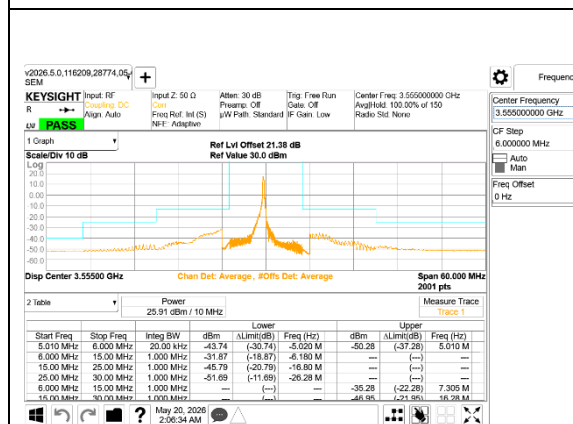
9.2.1. LTE BAND 48 SISO EMISSION MASK



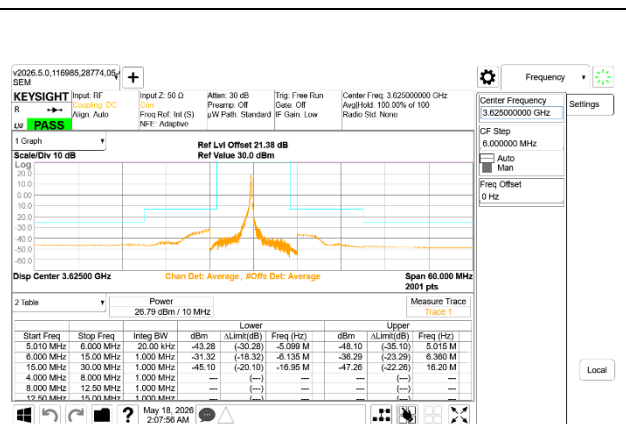
LTE B48 5MHz QPSK Low Channel RB1-0



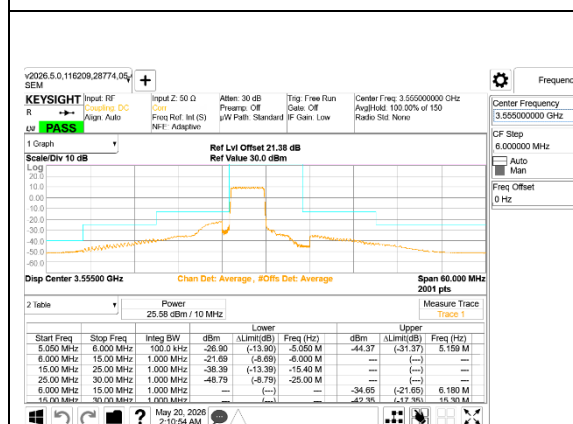
LTE B48 5MHz QPSK Middle Channel RB1-0 (3622.5MHz)



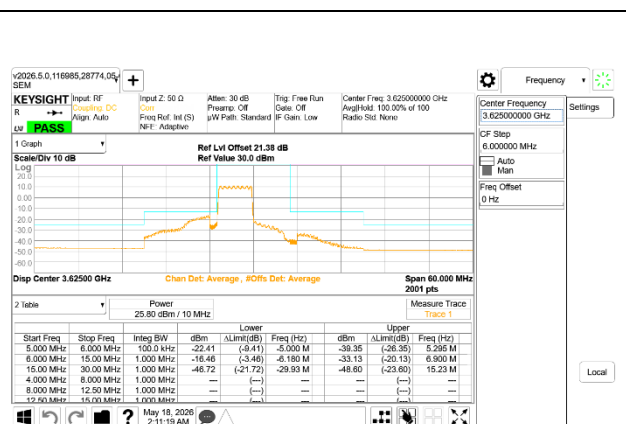
LTE B48 5MHz QPSK Low Channel RB1-24



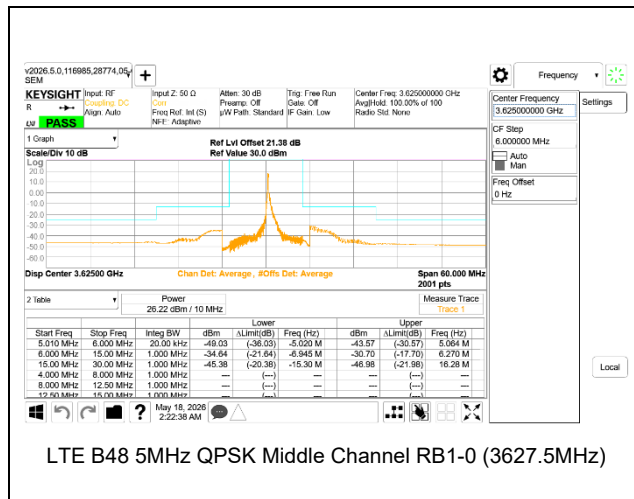
LTE B48 5MHz QPSK Middle Channel RB1-24 (3622.5MHz)



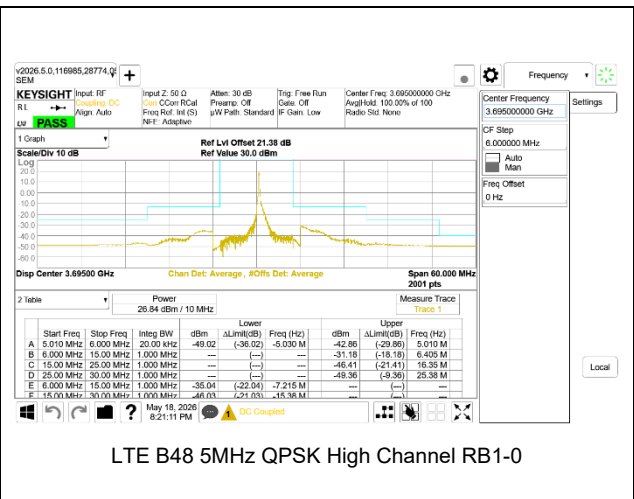
LTE B48 5MHz QPSK Low Channel RB25-0



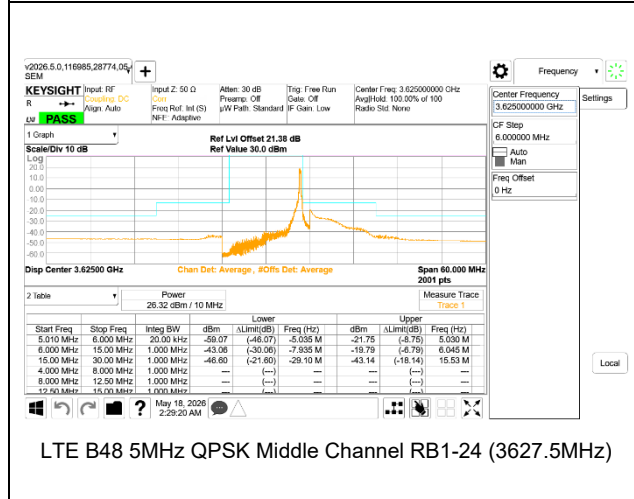
LTE B48 5MHz QPSK Middle Channel RB25-0 (3622.5MHz)



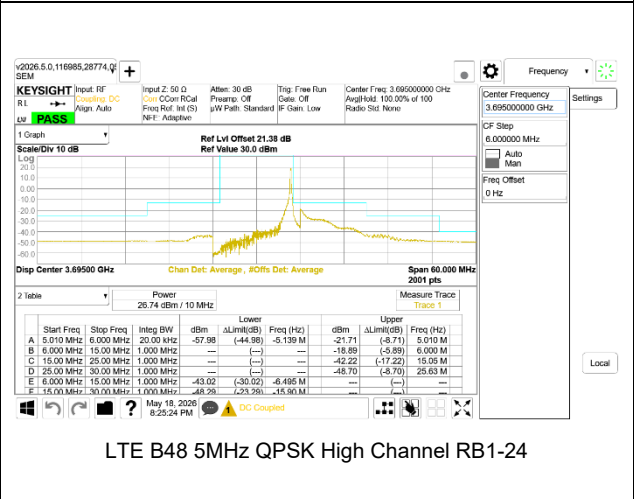
LTE B48 5MHz QPSK Middle Channel RB1-0 (3627.5MHz)



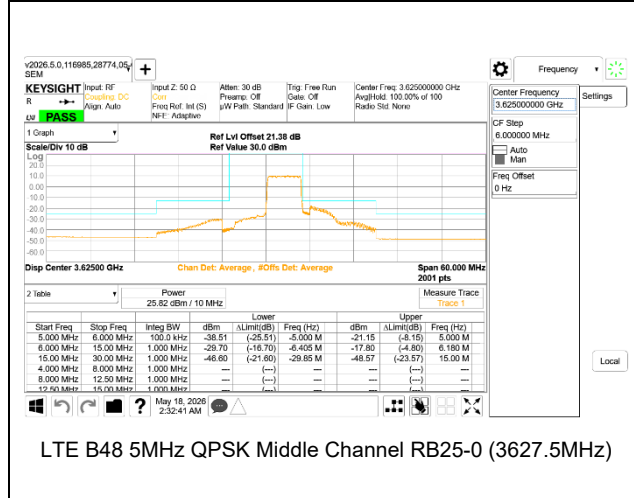
LTE B48 5MHz QPSK High Channel RB1-0



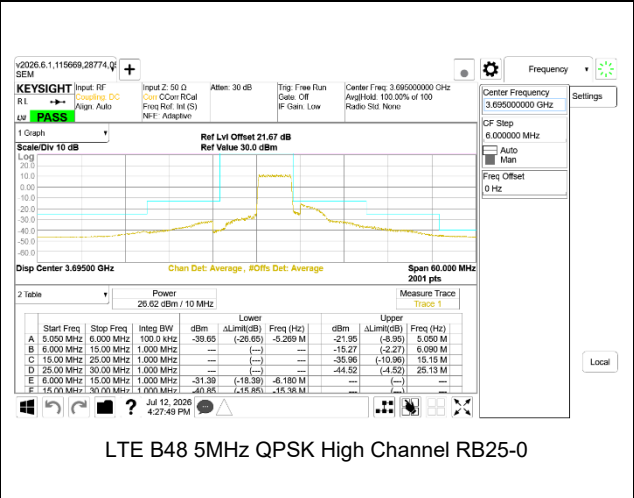
LTE B48 5MHz QPSK Middle Channel RB1-24 (3627.5MHz)



LTE B48 5MHz QPSK High Channel RB1-24



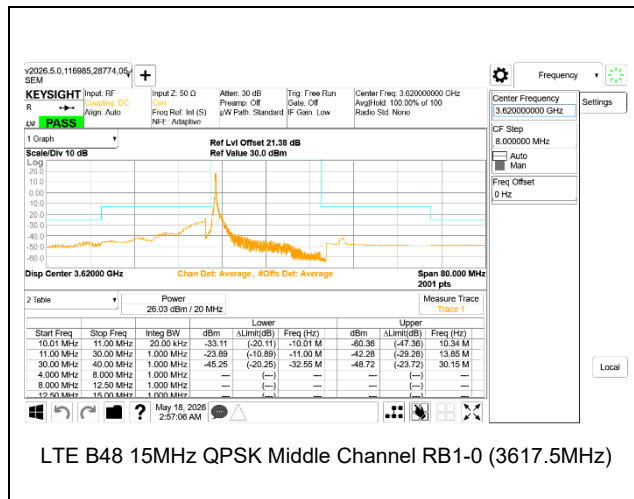
LTE B48 5MHz QPSK Middle Channel RB25-0 (3627.5MHz)



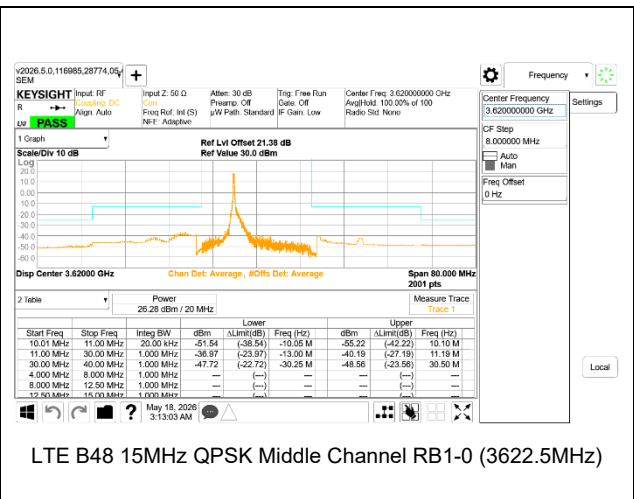
LTE B48 5MHz QPSK High Channel RB25-0



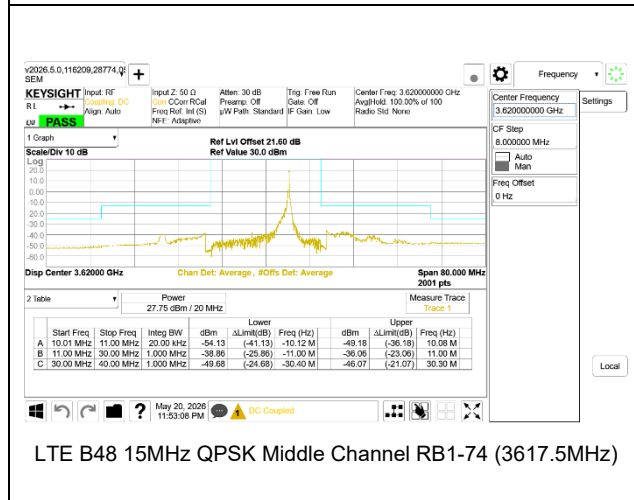




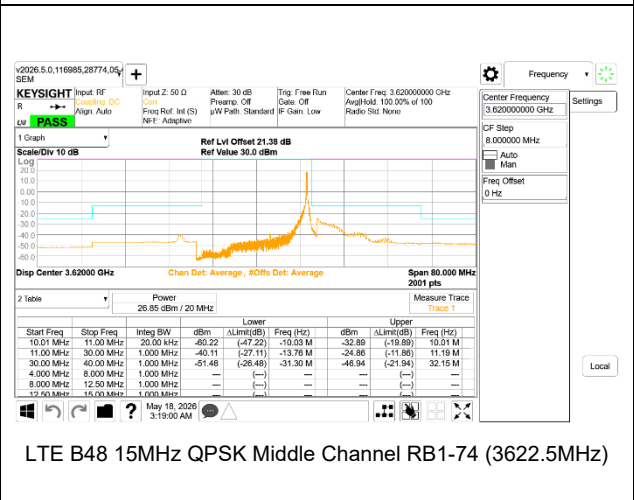
LTE B48 15MHz QPSK Middle Channel RB1-0 (3617.5MHz)



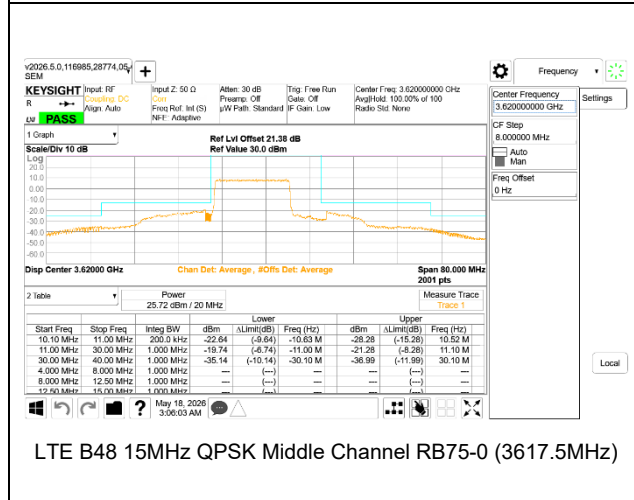
LTE B48 15MHz QPSK Middle Channel RB1-0 (3622.5MHz)



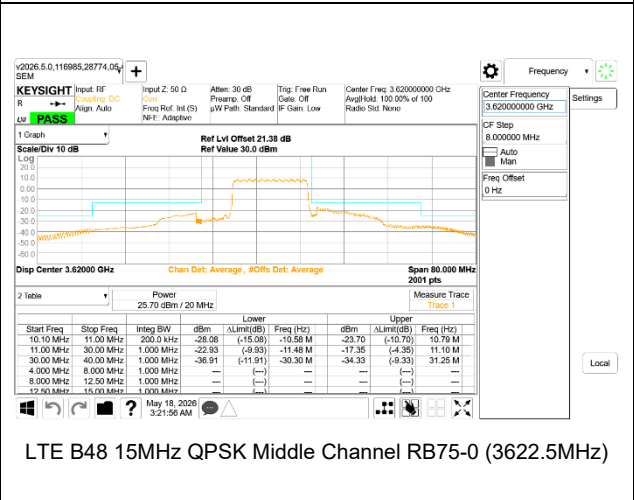
LTE B48 15MHz QPSK Middle Channel RB1-74 (3617.5MHz)



LTE B48 15MHz QPSK Middle Channel RB1-74 (3622.5MHz)

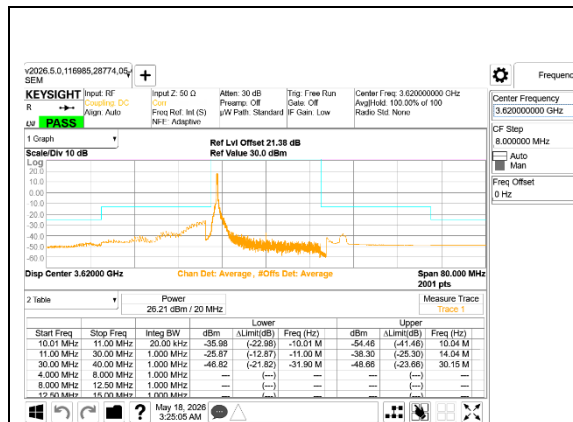


LTE B48 15MHz QPSK Middle Channel RB75-0 (3617.5MHz)

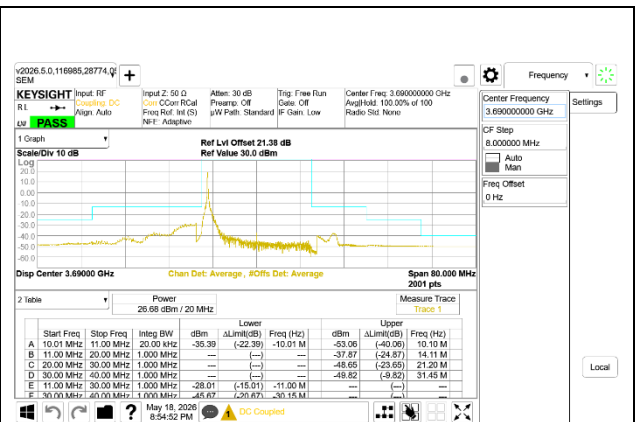


LTE B48 15MHz QPSK Middle Channel RB75-0 (3622.5MHz)

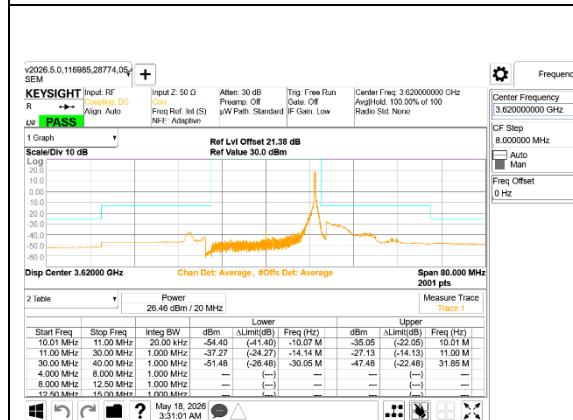




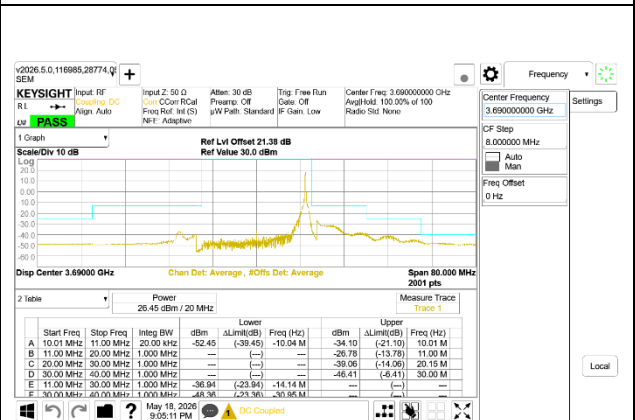
LTE B48 20MHz QPSK Middle Channel RB1-0



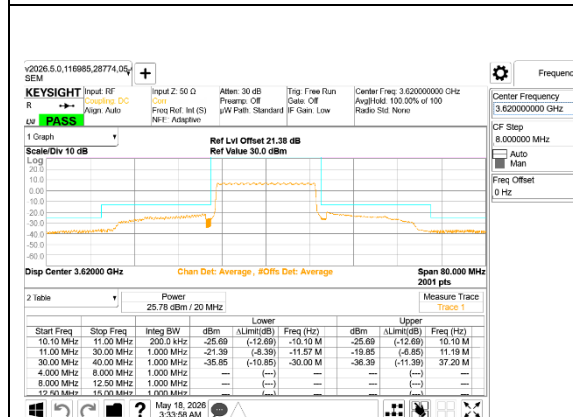
LTE B48 20MHz QPSK High Channel RB1-0



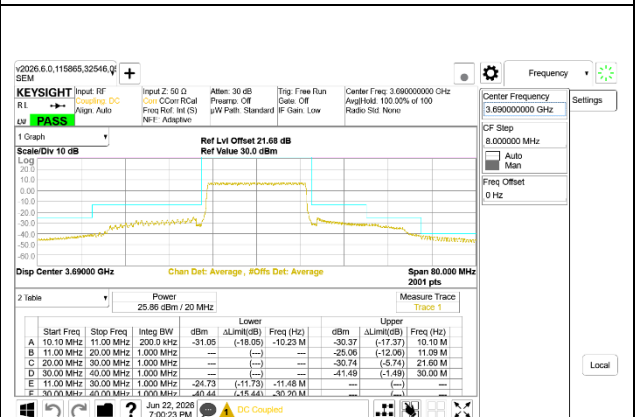
LTE B48 20MHz QPSK Middle Channel RB1-99



LTE B48 20MHz QPSK High Channel RB1-99

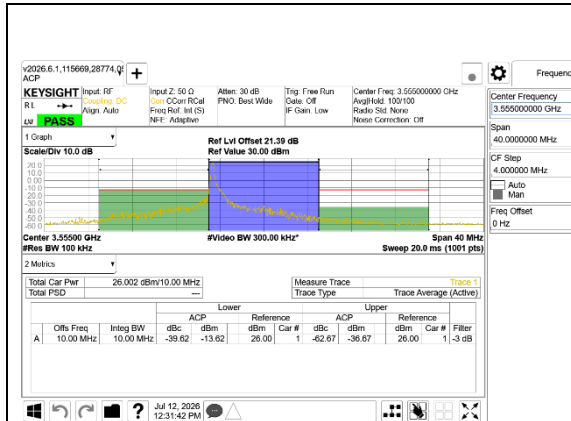


LTE B48 20MHz QPSK Middle Channel RB100-0



LTE B48 20MHz QPSK High Channel RB100-0

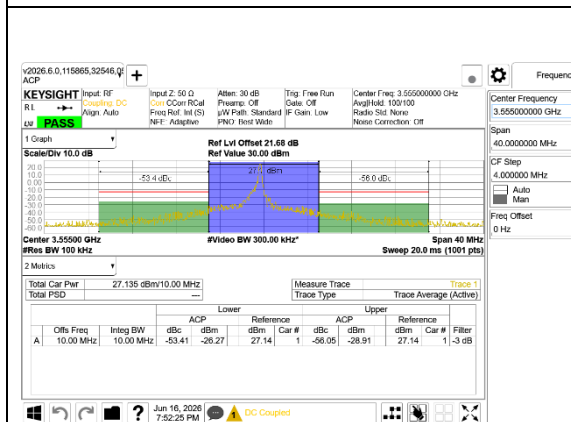
9.2.2. LTE BAND 48 SISO ADJACENT CHANNEL POWER



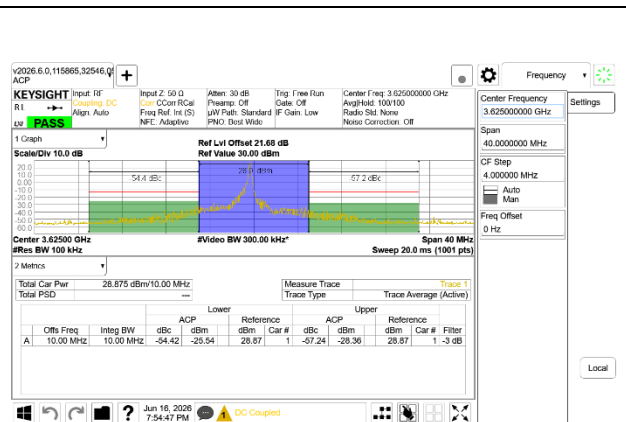
LTE B48 5MHz QPSK Low Channel RB1-0



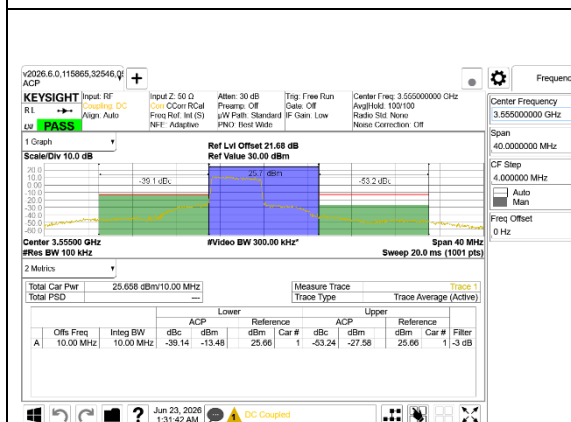
LTE B48 5MHz QPSK Middle Channel RB1-0 (3622.5MHz)



LTE B48 5MHz QPSK Low Channel RB1-24



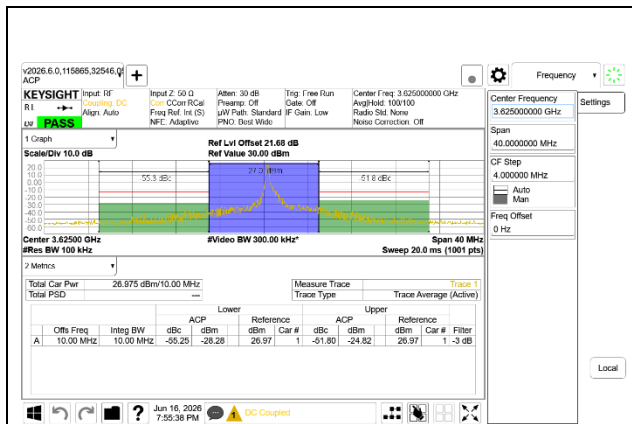
LTE B48 5MHz QPSK Middle Channel RB1-24 (3622.5MHz)



LTE B48 5MHz QPSK Low Channel RB25-0



LTE B48 5MHz QPSK Middle Channel RB25-0 (3622.5MHz)



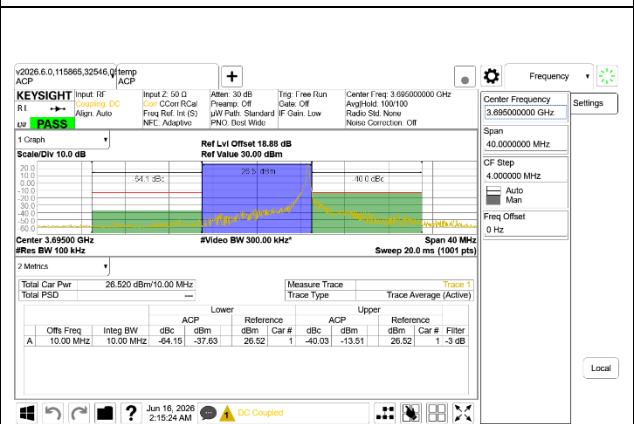
LTE B48 5MHz QPSK Middle Channel RB1-0 (3627.5MHz)



LTE B48 5MHz QPSK High Channel RB1-0



LTE B48 5MHz QPSK Middle Channel RB1-24 (3627.5MHz)



LTE B48 5MHz QPSK High Channel RB1-24



LTE B48 5MHz QPSK Middle Channel RB25-0 (3627.5MHz)



LTE B48 5MHz QPSK High Channel RB25-0