TEST REPORT

Report Number: 15496249-E34V2

Applicant	:	APPLE, INC 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	:	A3257
Brand	:	APPLE
FCC ID	:	BCG-E8950A
EUT Description	:	SMARTPHONE
Test Standard(s)	:	FCC 47 CFR PART 2, PART 96

Date Of Issue:
2025-08-13

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

ACCREDITED
CERT #0751.05

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	2025-08-01	Initial Review	--
V2	2025-08-13	Updated Section 6, 8, 9	Eric Ting

UL VERIFICATION SERVICES INC.
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 319-4000 FAX: (510) 661-0888

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UL VERIFICATION SERVICES INC.
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 319-4000 FAX: (510) 661-0888

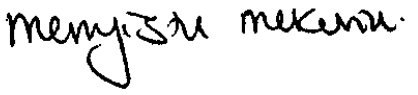
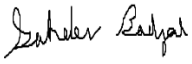
1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	APPLE, INC 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	A3257
Brand	APPLE
FCC ID	BCG-E8950A
EUT Description	SMARTPHONE
Serial Number	RADIATED: HM7J7JQX6J, LFJJGD2VPV, GMHVQR27VP CONDUCTED: HVHHH5000AY000122J, HVHHH50002D0000YE7 HVHHD20009U0000YE7
Sample Receipt Date	2025-02-28
Date Tested	2025-03-31 to 2025-07-25
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 Laboratory Engineer UL Verification Services Inc.	Eric Ting Senior Test Engineer UL Verification Services Inc.	Sahdev Badyal Laboratory Engineer UL Verification Services Inc.

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2. SUMMARY OF TEST RESULTS

This report contains data provided by the customer which can impact 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 (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	

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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			

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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
Time Domain Measurements Using SA	3.39 %
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 cellular GSM, GPRS, EGPRS, WCDMA, LTE, 5GNR1, 5GNR2, IEEE 802.11a/b/g/n/ac/ax/be, Bluetooth (BT), Ultra-Wideband (UWB), Global Positioning System (GPS), Near-Field Communication (NFC), Narrow-Band (NB) UNII, 802.15.4, 802.15.4ab-Narrow Band (NB), Wireless Power Transfer (WPT) 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.

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

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 peak EIRP output powers as follows:

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LTE BAND 48 SISO (LOW)

Part 96	
EIRP Limit (W)/ 10MHz	0.20
Antenna Gain (dBi) (ANT8)	-1.70

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	24.20	22.50	0.178	4.479	4479	4M48G7W
	16QAM			23.12	21.42	0.139	4.495	4495	4M50D7W
10.0	QPSK	3555.0	3695.0	24.20	22.50	0.178	8.927	8927	8M93G7W
	16QAM			23.15	21.45	0.140	8.998	8998	9M00D7W
15.0	QPSK	3557.5	3692.5	24.20	22.50	0.178	13.429	13429	13M4G7W
	16QAM			23.11	21.41	0.138	13.367	13367	13M4D7W
20.0	QPSK	3560.0	3690.0	24.20	22.50	0.178	17.944	17944	17M9G7W
	16QAM			23.20	21.50	0.141	17.792	17792	17M8D7W

LTE BAND 48 SISO (MID)

Part 96	
EIRP Limit (W)/ 10MHz	0.20
Antenna Gain (dBi) (ANT7)	-3.00

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
5.0	QPSK	3552.5	3697.5	25.50	22.50	0.178	4.479	4479	4M48G7W
	16QAM			24.37	21.37	0.137	4.495	4495	4M50D7W
10.0	QPSK	3555.0	3695.0	25.50	22.50	0.178	8.927	8927	8M93G7W
	16QAM			24.50	21.50	0.141	8.998	8998	9M00D7W
15.0	QPSK	3557.5	3692.5	25.50	22.50	0.178	13.429	13429	13M4G7W
	16QAM			24.38	21.38	0.137	13.367	13367	13M4D7W
20.0	QPSK	3560.0	3690.0	25.50	22.50	0.178	17.944	17944	17M9G7W
	16QAM			24.42	21.42	0.139	17.792	17792	17M8D7W

LTE BAND 48 SISO (HIGH)

Part 96	
EIRP Limit (W)/ 10MHz	0.20
Antenna Gain (dBi) (ANT9)	-2.10

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	24.50	22.40	0.174	4.479	4479	4M48G7W
	16QAM			23.39	21.29	0.135	4.495	4495	4M50D7W
10.0	QPSK	3555.0	3695.0	24.50	22.40	0.174	8.927	8927	8M93G7W
	16QAM			23.44	21.34	0.136	8.998	8998	9M00D7W
15.0	QPSK	3557.5	3692.5	24.50	22.40	0.174	13.429	13429	13M4G7W
	16QAM			23.41	21.31	0.135	13.367	13367	13M4D7W
20.0	QPSK	3560.0	3690.0	24.50	22.40	0.174	17.944	17944	17M9G7W
	16QAM			23.34	21.24	0.133	17.792	17792	17M8D7W

5G NR n48 SISO (LOW)

Part 96	
EIRP Limit (W) /10MHz	0.20
Antenna Gain (dBi) (ANT8)	-1.70

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	24.20	22.50	0.178	8.642	8642	8M64G7W
	QPSK			24.15	22.45	0.176	8.632	8632	8M63G7W
	16QAM			23.15	21.45	0.140	8.614	8614	8M61D7W
15.0	BPSK	3557.5	3692.5	24.20	22.50	0.178	12.898	12898	12M9G7W
	QPSK			24.18	22.48	0.177	12.894	12894	12M9G7W
	16QAM			23.15	21.45	0.140	12.893	12893	12M9D7W
20.0	BPSK	3560.0	3690.0	24.20	22.50	0.178	17.923	17923	17M9G7W
	QPSK			24.19	22.49	0.177	17.887	17887	17M9G7W
	16QAM			23.03	21.33	0.136	17.936	17936	17M9D7W
30.0	BPSK	3565.0	3685.0	24.20	22.50	0.178	26.850	26850	26M9G7W
	QPSK			24.19	22.49	0.177	26.835	26835	26M8G7W
	16QAM			23.11	21.41	0.138	26.875	26875	26M9D7W
40.0	BPSK	3570.0	3680.0	24.20	22.50	0.178	35.887	35887	35M9G7W
	QPSK			24.19	22.49	0.177	35.751	35751	35M8G7W
	16QAM			23.01	21.31	0.135	35.819	35819	35M8D7W

5G NR n48 SISO (MID)

Part 96	
EIRP Limit (W) /10MHz	0.20
Antenna Gain (dBi) (ANT7)	-3.00

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	25.50	22.50	0.178	8.642	8642	8M64G7W
	QPSK			25.49	22.49	0.177	8.632	8632	8M63G7W
	16QAM			24.30	21.30	0.135	8.614	8614	8M61D7W
15.0	BPSK	3557.5	3692.5	25.50	22.50	0.178	12.898	12898	12M9G7W
	QPSK			25.48	22.48	0.177	12.894	12894	12M9G7W
	16QAM			24.33	21.33	0.136	12.893	12893	12M9D7W
20.0	BPSK	3560.0	3690.0	25.50	22.50	0.178	17.923	17923	17M9G7W
	QPSK			25.49	22.49	0.177	17.887	17887	17M9G7W
	16QAM			24.40	21.40	0.138	17.936	17936	17M9D7W
30.0	BPSK	3565.0	3685.0	25.50	22.50	0.178	26.850	26850	26M9G7W
	QPSK			25.48	22.48	0.177	26.835	26835	26M8G7W
	16QAM			24.33	21.33	0.136	26.875	26875	26M9D7W
40.0	BPSK	3570.0	3680.0	25.50	22.50	0.178	35.887	35887	35M9G7W
	QPSK			25.47	22.47	0.177	35.751	35751	35M8G7W
	16QAM			24.40	21.40	0.138	35.819	35819	35M8D7W

5G NR n48 SISO (HIGH)

Part 96	
EIRP Limit (W) /10MHz	0.20
Antenna Gain (dBi) (ANT9)	-2.10

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	22.40	0.174	8.642	8642	8M64G7W
	QPSK			24.49	22.39	0.173	8.632	8632	8M63G7W
	16QAM			23.33	21.23	0.133	8.614	8614	8M61D7W
15.0	BPSK	3557.5	3692.5	24.50	22.40	0.174	12.898	12898	12M9G7W
	QPSK			24.49	22.39	0.173	12.894	12894	12M9G7W
	16QAM			23.49	21.39	0.138	12.893	12893	12M9D7W
20.0	BPSK	3560.0	3690.0	24.50	22.40	0.174	17.923	17923	17M9G7W
	QPSK			24.49	22.39	0.173	17.887	17887	17M9G7W
	16QAM			23.36	21.26	0.134	17.936	17936	17M9D7W
30.0	BPSK	3565.0	3685.0	24.50	22.40	0.174	26.850	26850	26M9G7W
	QPSK			24.49	22.39	0.173	26.835	26835	26M8G7W
	16QAM			23.35	21.25	0.133	26.875	26875	26M9D7W
40.0	BPSK	3570.0	3680.0	24.50	22.40	0.174	35.887	35887	35M9G7W
	QPSK			24.49	22.39	0.173	35.751	35751	35M8G7W
	16QAM			23.44	21.34	0.136	35.819	35819	35M8D7W

LTE ULCA BAND 48B

Part 96	
EIRP Limit (W)/ 10MHz	0.20
Antenna Gain (dBi) (ANT8)	-1.70

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+10	QPSK	3555.0	3695.0	24.20	22.50	0.178	19.183	19183	19M2G7W
	16QAM			23.14	21.44	0.139	19.275	19275	19M3D7W

LTE ULCA BAND 48C

Part 96	
EIRP Limit (W)/ 10MHz	0.20
Antenna Gain (dBi) (ANT9)	-2.10

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	24.50	22.40	0.174	23.263	23263	23M3G7W
	16QAM			23.96	21.86	0.153	23.326	23326	23M3D7W
20+5	QPSK	3560.0	3696.7	24.50	22.40	0.174	23.284	23284	23M3G7W
	16QAM			23.91	21.81	0.152	23.225	23225	23M2D7W
10+20	QPSK	3555.5	3690.0	24.50	22.40	0.174	27.973	27973	28M0G7W
	16QAM			24.30	22.20	0.166	27.958	27958	28M0D7W
20+10	QPSK	3560.0	3694.5	24.50	22.40	0.174	27.943	27943	27M9G7W
	16QAM			24.43	22.33	0.171	28.134	28134	28M1D7W
15+20	QPSK	3557.8	3690.0	24.50	22.40	0.174	32.833	32833	32M8G7W
	16QAM			24.16	22.06	0.161	32.854	32854	32M9D7W
20+15	QPSK	3560.0	3692.2	24.50	22.40	0.174	32.791	32791	32M8G7W
	16QAM			24.06	21.96	0.157	32.869	32869	32M9D7W
20+20	QPSK	3560.0	3690.0	24.50	22.40	0.174	37.668	37668	37M7G7W
	16QAM			24.15	22.05	0.160	37.746	37746	37M7D7W

5G NR n48 MIMO

Part 96	
EIRP Limit (W)/ 10MHz	0.20
Antenna Gain (dBi) (Ant 9+7)	-4.00

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	QPSK	3555.0	3695.0	26.00	22.00	0.158	8.632	8632	8M63G7W
	16QAM			25.52	21.52	0.142	8.614	8614	8M61D7W
15.0	QPSK	3557.5	3692.5	26.00	22.00	0.158	12.894	12894	12M9G7W
	16QAM			25.72	21.72	0.149	12.893	12893	12M9D7W
20.0	QPSK	3560.0	3690.0	26.00	22.00	0.158	17.887	17887	17M9G7W
	16QAM			25.45	21.45	0.140	17.936	17936	17M9D7W
30.0	QPSK	3565.0	3685.0	26.00	22.00	0.158	26.835	26835	26M8G7W
	16QAM			25.43	21.43	0.139	26.875	26875	26M9D7W
40.0	QPSK	3570.0	3680.0	26.00	22.00	0.158	35.751	35751	35M8G7W
	16QAM			25.39	21.39	0.138	35.819	35819	35M8D7W

6.3. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was version 0.08.00.

6.4. MAXIMUM ANTENNA GAIN AND MAXIMUM ALLOWED OUTPUT POWER

The IFA 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)			
		ANT4	ANT7	ANT8	ANT9	ANT4	ANT7	ANT8	ANT9	ANT4	ANT7	ANT8	ANT9
LTE Band 48 (Low)	3550 – 3700	-6.10	-3.70	-1.70	-2.90	26.00	25.50	24.20	24.50	19.90	21.80	**22.50**	21.60
LTE Band 48 (Mid)		-7.20	-3.00	-2.60	-2.10	26.00	25.50	24.20	24.50	18.80	**22.50**	21.60	22.40
LTE Band 48 (High)		-6.30	-3.40	-2.30	-2.10	26.00	25.50	24.20	24.50	19.70	22.10	21.90	**22.40**
5G NR n48 (Low)		-6.10	-3.70	-1.70	-2.90	26.00	25.50	24.20	24.50	19.90	21.80	**22.50**	21.60
5G NR n48 (Mid)		-7.20	-3.00	-2.60	-2.10	26.00	25.50	24.20	24.50	18.80	**22.50**	21.60	22.40
5G NR n48 (High)		-6.30	-3.40	-2.30	-2.10	26.00	25.50	24.20	24.50	19.70	22.10	21.90	**22.40**
LTE ULCA Band 48C, 48B (Low)		-6.10	-3.70	-1.70	-2.90	25.00	25.00	24.20	24.50	18.90	21.30	**22.50**	21.60
LTE ULCA Band 48C, 48B (Mid)		-7.20	-3.00	-2.60	-2.10	25.00	25.00	24.20	24.50	17.80	22.00	21.60	**22.40**
LTE ULCA Band 48C, 48B (High)		-6.30	-3.40	-2.30	-2.10	25.00	25.00	24.20	24.50	18.70	21.60	21.90	**22.40**

MIMO MODE

Bands	Frequency Range (MHz)	Antenna	Maximum Allowed Conducted Power Per Antenna (dBm)		Max Allowed Combined Conducted Output Power (dBm)	Gain (dBi)	EIRP (dBm)
5G NR n48	3550 – 3700	ANT 9+8	23	23	26.0	-4.30	21.71
		ANT 9+4	23	23	26.0	-4.90	21.11
		ANT 9+7	23	23	26.0	-4.00	**22.01**
		ANT 4+8	23	23	26.0	-5.10	20.91
		ANT 4+7	23	23	26.0	-5.80	20.21
		ANT 7+8	23	23	26.0	-5.20	20.81

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 CP-OFDM waveforms 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.

LTE and 5G NR Bands	Worst case Antenna Port
LTE BAND 48, FR1 5G NR 48, LTE ULCA BAND 48	Ant 4
FR1 5G NR 48 MIMO	Ant 9+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**	**ANT4**	**ANT7**	**ANT9+8**	**ANT9+4**	**ANT9+7**	**ANT4+8**	**ANT4+7**	**ANT7+8**
3300 – 3980 MHz	Z	Y	X	X	Y	Y	Y	Y	X	X

Radiated spurious emissions were investigated from 9kHz to 30MHz, 30MHz-1GHz and above 18GHz. 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 2.4GHz/5GHz 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

Refer to Appendix A for description of test 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	85723	2026-02-28
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	169936	2026-02-28
Antenna, Horn 1-18GHz	ETS Lindgren	3117	200897	2026-04-30
RF Filter Box, 1-18GHz, 12 Port	UL-FR1	Frankenstein	217255	2026-01-31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	223460	2026-02-28
RF Filter Box, 1-18GHz, 17 Port	UL-FR1	RATS 2	236726	2025-10-31
Antenna, Horn 1-18GHz	ETS Lindgren	3117	80403	2026-08-31
Antenna, Broadband Hybrid, 30MHz to 3GHz	Sunol Sciences Corp.	JB3	171863	2026-11-30
Amplifier 9 KHz - 1 GHz	SONOMA INSTRUMENT	310N	224490	2026-05-06
Antenna, Passive Loop 30Hz - 1MHz	ELECTRO-METRICS	EM-6871	170013	2025-07-31
Antenna, Passive Loop 100KHz - 30MHz	ELECTRO-METRICS	EM-6872	170015	2025-07-31
PXA Signal Analyzer	Keysight Technologies Inc	N9030B	262735	2026-03-30
PXA Signal Analyzer	Keysight Technologies Inc	N9030B	231912	2026-04-30
Antenna, Horn 18 to 26.5GHz	A.R.A.	MWH-1826/B	172353	2025-08-31
Link File, RF Amplifier Assembly, 18-26.5GHz, 60dB Gain	AMPLICAL	AMP18G26.5-60	220194	2026-04-29
Antenna, Horn 26.5-40GHz	A.R.A	MWH-2640/B	81105	2025-08-31
Link File, RF Amplifier Assembly, 26.5-40GHz, 65dB Gain	Amplical	AMP26G40-65	220193	2026-04-30
PXA Signal Analyzer	Keysight Technologies Inc	N9030B	259079	2026-02-28
PXA Signal Analyzer	Keysight Technologies Inc	N9030B	262734	2026-04-30
Wideband Communication Call Box	Rohde & Schwarz	CMW500	230298	2026-02-28
Wideband Communication Call Box	Rohde & Schwarz	CMW500	85943	2026-02-28
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	221008	2026-04-30
Conducted Switch Box	N/A	CSB	262354	2026-04-30
Filter, BRF 3400-3800MHz, 18GHz max	Micro-Tronics	BRM50711	217364	2025-09-30
Filter, BRF 2305-2315	Micro-Tronics	BRC20553	224186	2026-06-29
Directional Coupler	KRYTAR	152610	254457	2025-10-31
Directional Coupler	KRYTAR	101040010K	254458	2025-10-30
Power Meter, P-series single channel	Keysight Technologies Inc	N1911A	90718	2026-03-31
Power Sensor, P - series, 50MHz to 18GHz, Wideband	Keysight Technologies Inc	N1921A	257704	2026-03-31
Chamber, Environmental	Cincinnati Sub Zero	ZPHS-8-3.5-SCT/WC	89097	2025-10-31
UL AUTOMATION SOFTWARE				
Conducted Software	UL	CLT	Ver.2024.3.20	
Conducted Software	UL	Power Measurement	Ver.2023.08.14	
Conducted Software	UL	Antenna Port	Ver.2022.8.16	
Conducted Software	UL	Station Tool	Ver.3.0 & 4.8 & 5.3 & 6.0 & 6.1 & 7.0	
Radiated test software	UL	UL RF	Ver 9.5, May 1, 2023	

8. RF OUTPUT POWER VERIFICATION

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.

UL VERIFICATION SERVICES INC.
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 319-4000 FAX: (510) 661-0888

8.1. LTE BAND 48 SISO

Test Engineer ID:	28567	Test Date:	2025-03-21

OUTPUT POWER FOR LTE BAND 48 (5.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 9			ANT 8			ANT 4			ANT 7		
				55265	55990	56715	55260	55990	56715	55265	55990	56715	55260	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	24.41	24.43	24.46	24.14	24.07	23.99	25.94	25.90	**26.00**	**25.50**	25.49	25.45
		1	12	**24.50**	**24.50**	**24.50**	**24.20**	**24.20**	**24.20**	25.95	**26.00**	25.98	25.49	**25.50**	**25.50**
		1	24	24.40	24.40	24.37	24.16	24.05	24.13	**25.96**	25.90	25.96	25.41	25.43	25.40
		12	0	24.26	24.26	24.27	24.02	23.90	23.89	25.76	25.74	25.81	25.29	25.32	25.25
		12	6	24.32	24.29	24.31	24.08	24.03	24.01	25.79	25.81	25.85	25.33	25.29	25.29
		12	11	24.26	24.25	24.27	24.00	23.97	23.97	25.79	25.78	25.83	25.28	25.29	25.24
		25	0	24.24	24.21	24.22	23.99	23.86	23.93	25.73	25.73	25.80	25.27	25.27	25.24
	16QAM	1	0	23.22	23.20	23.24	22.99	22.87	22.95	24.67	24.77	**25.00**	**24.38**	**24.37**	24.35
		1	12	**23.48**	**23.38**	**23.39**	**23.12**	**23.13**	**23.11**	**24.79**	**24.83**	24.81	24.25	24.32	**24.48**
		1	24	23.20	23.28	23.34	23.05	22.89	23.01	24.72	24.78	24.74	24.27	24.35	24.31
		12	0	23.11	23.10	23.09	22.76	22.89	22.78	24.53	24.48	24.77	24.18	24.24	24.16
		12	6	23.24	23.02	23.08	22.96	22.84	22.97	24.61	24.63	24.83	24.31	24.15	24.26
		12	11	23.21	23.03	23.22	22.82	22.73	22.83	24.61	24.71	24.59	24.23	24.24	24.20
		25	0	22.97	22.99	23.20	22.90	22.66	22.68	24.69	24.57	24.77	24.23	24.20	24.15
	64QAM	1	0	22.03	22.00	21.99	21.76	21.84	21.87	23.66	23.65	**23.82**	**23.24**	**23.34**	23.35
		1	12	**22.25**	**22.21**	**22.29**	21.90	**22.06**	**22.01**	**23.71**	**23.79**	23.60	23.09	23.07	**23.47**
		1	24	22.16	22.10	22.17	**22.04**	21.86	21.98	23.59	23.68	23.62	23.23	23.27	23.23
		12	0	22.01	21.88	21.86	21.62	21.88	21.70	23.41	23.33	23.77	23.06	23.11	23.11
		12	6	22.00	21.83	21.91	21.80	21.82	21.73	23.39	23.41	23.59	23.06	22.92	23.17
		12	11	22.06	21.84	22.18	21.82	21.71	21.81	23.57	23.71	23.52	23.07	23.18	22.98
		25	0	21.71	21.94	22.15	21.81	21.50	21.50	23.47	23.52	23.74	23.18	23.00	23.07
	256QAM	1	0	20.80	20.88	20.95	20.65	20.77	20.68	**22.58**	22.65	22.64	22.06	22.10	22.16
		1	12	**21.08**	**21.09**	21.09	**20.90**	20.80	**20.85**	22.54	**22.76**	22.36	21.91	21.99	**22.24**
		1	24	20.89	20.87	21.08	20.83	20.68	20.75	22.42	22.53	22.58	**22.15**	22.11	22.11
		12	0	20.93	20.88	20.66	20.59	**20.83**	20.44	22.20	22.10	**22.65**	21.83	21.93	21.88
		12	6	20.76	20.71	20.83	20.59	20.72	20.56	22.38	22.34	22.38	22.05	21.66	22.15
		12	11	21.05	20.76	20.96	20.69	20.48	20.58	22.41	22.55	22.26	21.97	**22.14**	21.85
		25	0	20.44	20.90	**21.14**	20.54	20.49	20.33	22.28	22.30	22.49	22.03	21.86	21.95

OUTPUT POWER FOR LTE BAND 48 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 9			ANT 8			ANT 4			ANT 7		
				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	24.47	24.44	24.45	24.15	24.15	24.13	25.87	25.84	25.85	**25.50**	**25.50**	25.46
		1	24	**24.50**	24.49	**24.50**	**24.20**	**24.20**	**24.20**	25.88	25.86	**26.00**	25.49	25.48	**25.50**
		1	49	24.41	**24.50**	24.39	24.17	24.13	24.17	**26.00**	**25.89**	25.91	25.45	25.49	25.47
		25	0	24.30	24.33	24.26	23.98	23.95	24.10	25.70	25.71	25.75	25.32	25.32	25.23
		25	12	24.35	24.34	24.33	24.01	23.96	24.10	25.74	25.75	24.33	25.37	25.31	25.29
		25	24	24.34	24.30	24.26	23.96	24.04	24.07	25.70	25.75	25.79	25.33	25.30	25.27
		50	0	24.31	24.31	24.20	23.96	23.96	24.07	25.71	25.72	25.72	25.32	25.30	25.19
	16QAM	1	0	23.27	23.33	**23.44**	23.11	23.01	22.97	24.67	24.71	24.85	24.40	**24.50**	24.28
		1	24	**23.50**	**23.44**	23.32	23.12	22.95	**23.06**	24.82	**24.83**	**24.94**	**24.46**	24.34	**24.47**
		1	49	23.35	23.23	23.32	**23.15**	**23.02**	22.95	**24.98**	24.70	24.72	24.33	24.29	24.27
		25	0	23.11	23.19	23.07	22.92	22.94	22.98	24.70	24.45	24.69	24.19	24.31	23.97
		25	12	23.12	23.24	23.32	22.74	22.92	23.00	24.66	24.73	23.27	24.33	24.20	24.02
		25	24	23.15	23.08	23.20	22.81	22.82	22.81	24.49	24.67	24.55	24.24	24.16	24.09
		50	0	23.20	23.30	22.97	22.79	22.96	22.83	24.50	24.61	24.62	24.07	24.10	24.15
	64QAM	1	0	22.27	22.23	**22.43**	21.99	**21.98**	21.87	23.66	23.50	23.72	**23.35**	**23.33**	23.03
		1	24	22.25	**22.35**	22.16	22.05	21.70	**21.95**	23.65	23.63	**23.78**	23.29	23.24	**23.42**
		1	49	**22.30**	22.01	22.29	**22.10**	21.95	21.78	**23.72**	23.58	23.60	23.12	23.16	23.11
		25	0	22.09	21.98	21.84	21.76	21.87	21.71	23.45	23.21	23.48	23.15	23.07	22.93
		25	12	21.88	22.24	22.18	21.73	21.67	21.83	23.54	23.61	22.02	23.13	23.07	22.84
		25	24	22.15	21.86	22.19	21.63	21.70	21.54	23.47	**23.65**	23.46	22.99	22.89	22.95
		50	0	21.97	22.12	21.94	21.52	21.78	21.69	23.39	23.54	23.58	22.81	22.83	22.90
	256QAM	1	0	21.18	21.21	**21.28**	20.82	**20.76**	20.67	22.54	22.41	**22.67**	**22.16**	22.07	21.86
		1	24	21.19	**21.27**	21.10	20.93	20.49	**20.78**	22.40	22.51	22.65	22.04	**22.07**	**22.40**
		1	49	**21.25**	20.98	21.12	**21.06**	20.75	20.64	22.50	22.40	22.35	21.96	21.92	21.93
		25	0	20.88	20.74	20.63	20.70	20.66	20.44	22.40	22.15	22.32	22.08	22.02	21.68
		25	12	20.61	21.22	21.03	20.57	20.44	20.68	**22.54**	22.35	20.98	22.10	21.82	21.81
		25	24	21.03	20.69	21.06	20.56	20.55	20.37	22.36	**22.63**	22.26	21.85	21.85	21.73
		50	0	20.92	21.07	20.67	20.41	20.60	20.46	22.39	22.29	22.38	21.54	21.64	21.83

OUTPUT POWER FOR LTE BAND 48 (15.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 9			ANT 8			ANT 4			ANT 7		
				55315	55940	56665	55315	55940	56665	55315	55940	56665	55315	55940	56665
				3557.5	3620.0	3692.5	3557.5	3620.0	3692.5	3557.5	3620.0	3692.5	3557.5	3620.0	3692.5
15.0	QPSK	1	0	24.44	24.48	24.41	24.10	24.14	24.16	22.80	22.73	22.53	22.30	22.31	22.23
		1	37	**24.50**	**24.50**	**24.50**	24.15	24.17	**24.20**	**26.00**	**26.00**	**26.00**	**25.50**	**25.50**	**25.50**
		1	74	24.45	24.45	24.41	**24.20**	**24.20**	24.14	22.60	22.86	22.89	22.33	22.29	22.22
		36	0	24.37	24.40	24.27	23.95	24.03	23.97	25.93	25.82	25.70	25.39	25.37	25.29
		36	16	24.34	24.42	24.29	24.06	24.03	24.04	25.89	25.89	25.81	25.41	25.38	25.29
		36	35	24.35	24.42	24.26	24.04	24.09	24.03	25.85	25.94	25.97	25.42	25.38	25.23
		75	0	24.32	24.36	24.21	24.00	24.01	24.01	23.83	23.84	23.71	23.35	23.29	23.22
	16QAM	1	0	23.35	**23.45**	23.34	22.93	23.04	22.94	21.64	21.49	21.52	21.14	21.08	21.21
		1	37	**23.43**	23.27	23.40	**23.11**	23.03	**23.13**	24.79	**24.89**	24.86	**24.34**	24.25	**24.48**
		1	74	23.23	23.42	**23.41**	22.97	**23.13**	23.05	21.44	21.61	21.65	21.07	21.04	21.08
		36	0	23.17	23.20	23.14	22.72	22.85	22.73	24.67	24.82	24.62	24.32	24.17	24.27
		36	16	23.16	23.27	23.13	23.06	22.83	22.86	**24.84**	24.79	24.79	24.23	24.14	24.19
		36	35	23.22	23.29	23.07	22.95	22.92	22.98	24.71	24.74	**24.92**	24.28	**24.38**	24.01
		75	0	23.08	23.27	23.21	22.83	22.98	23.00	22.66	22.75	22.49	22.18	22.21	22.16
	64QAM	1	0	22.31	**22.39**	**22.34**	21.75	21.82	21.78	20.51	20.28	20.26	20.09	20.93	20.95
		1	37	**22.33**	22.23	22.19	**22.01**	21.91	21.86	23.74	23.67	23.66	23.14	23.03	**23.42**
		1	74	22.22	22.29	22.20	21.85	**21.97**	**21.97**	20.20	20.38	20.64	20.97	20.95	20.87
		36	0	21.95	22.18	21.94	21.46	21.77	21.56	23.51	**23.74**	23.43	23.19	22.96	23.10
		36	16	22.03	22.08	22.00	21.79	21.61	21.74	**23.83**	23.57	23.55	23.15	23.07	22.93
		36	35	21.99	22.20	21.99	21.86	21.78	21.80	23.46	23.71	**23.78**	**23.26**	**23.29**	22.75
		75	0	21.99	22.05	21.96	21.62	21.88	21.95	21.53	21.71	21.32	21.17	20.94	21.00
	256QAM	1	0	21.14	**21.34**	**21.14**	20.60	20.71	20.59	20.33	20.05	20.25	20.01	20.89	20.79
		1	37	**21.33**	21.06	21.12	**20.99**	20.73	20.70	22.58	22.54	**22.63**	22.09	21.91	**22.25**
		1	74	21.05	21.14	21.04	20.59	**20.82**	20.76	20.19	20.12	20.49	20.92	20.80	20.78
		36	0	20.72	21.06	20.89	20.32	20.65	20.56	22.35	22.62	22.38	21.93	21.96	22.05
		36	16	20.84	20.99	21.00	20.59	20.48	20.73	**22.79**	22.50	22.32	21.92	21.98	21.75
		36	35	20.89	20.97	20.96	20.71	20.76	20.58	22.31	**22.64**	22.58	**22.25**	**22.14**	21.71
		75	0	20.77	20.89	20.95	20.39	20.69	**20.81**	20.30	20.60	20.28	20.90	20.83	20.91

OUTPUT POWER FOR LTE BAND 48 (20.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 9			ANT 8			ANT 4			ANT 7		
				55340	55940	56640	55340	55940	56640	55340	55940	56640	55340	55940	56640
				3560	3620.0	3690	3560	3620.0	3690	3560	3620.0	3690	3560	3620.0	3690
20.0	QPSK	1	0	24.45	24.43	**24.50**	24.16	24.06	23.84	22.89	22.62	22.41	22.21	22.25	22.34
		1	49	**24.50**	**24.50**	24.49	24.19	**24.20**	23.94	**26.00**	**26.00**	**26.00**	**25.50**	**25.50**	**25.50**
		1	99	24.49	24.47	24.44	**24.20**	23.93	**24.20**	22.58	22.88	22.91	22.25	22.25	22.21
		50	0	24.35	24.25	24.39	24.00	24.00	23.63	25.95	25.74	25.68	25.33	25.29	25.41
		50	24	24.40	24.35	24.39	24.11	24.00	23.78	25.89	25.91	25.88	25.36	25.38	25.38
		50	49	24.37	24.32	24.34	24.09	23.98	23.88	25.79	25.94	26.00	25.34	25.39	25.34
		100	0	24.34	24.32	24.34	24.07	23.93	23.79	22.84	22.77	22.79	22.31	22.35	22.35
	16QAM	1	0	23.27	23.28	23.25	22.91	22.97	22.84	21.86	21.59	21.33	21.04	21.25	21.23
		1	49	23.29	**23.48**	23.24	23.09	**23.03**	22.94	**24.95**	**24.93**	**24.99**	**24.36**	**24.42**	**24.31**
		1	99	**23.47**	23.43	23.20	**23.20**	22.87	**23.02**	21.46	21.66	21.79	21.03	21.14	21.19
		50	0	23.10	23.04	23.25	22.85	22.87	22.51	24.95	24.59	24.65	24.29	24.24	24.25
		50	24	23.35	23.21	23.30	23.10	22.98	22.63	24.77	24.66	24.75	24.29	24.38	24.25
		50	49	23.16	23.10	**23.34**	22.95	22.77	22.75	24.67	24.70	24.76	24.15	24.35	24.24
		100	0	23.24	23.16	23.25	22.96	22.84	22.54	21.72	21.71	21.61	21.07	21.09	21.09
	64QAM	1	0	22.16	22.08	22.03	21.84	21.77	21.64	20.76	20.36	20.22	19.90	19.99	19.96
		1	49	22.22	**22.47**	22.12	21.84	**21.99**	21.81	23.75	**23.72**	**23.97**	**23.35**	23.16	**23.21**
		1	99	**22.39**	22.32	22.03	**21.95**	21.65	**21.82**	20.27	20.57	20.59	20.92	20.03	20.95
		50	0	21.94	21.91	21.99	21.65	21.76	21.43	**23.76**	23.56	23.55	23.19	23.09	23.01
		50	24	22.34	22.11	**22.28**	21.84	21.92	21.43	23.68	23.53	23.63	23.04	23.26	23.08
		50	49	21.90	22.00	22.18	21.88	21.61	21.49	23.44	23.48	23.76	22.96	**23.33**	23.18
		100	0	22.03	22.03	22.02	21.94	21.69	21.46	20.65	20.70	20.47	20.03	20.84	20.97
	256QAM	1	0	20.97	21.00	20.97	20.82	20.51	20.56	20.49	20.22	20.22	20.88	20.82	20.79
		1	49	21.14	**21.23**	21.09	20.70	**20.83**	20.54	**22.60**	**22.60**	**22.88**	**22.25**	21.90	**22.18**
		1	99	**21.22**	**21.23**	21.01	20.94	20.41	**20.79**	21.22	21.30	21.53	20.79	20.00	20.88
		50	0	20.71	20.80	20.79	20.42	20.52	20.18	22.54	22.37	22.55	21.95	22.09	21.92
		50	24	21.13	20.98	**21.20**	20.70	20.68	20.37	22.59	22.36	22.46	22.02	**22.23**	21.90
		50	49	20.68	20.90	20.95	20.72	20.58	20.27	22.29	22.26	22.63	21.94	22.07	21.92
		100	0	20.92	20.76	20.91	**20.94**	20.58	20.27	21.53	21.62	21.46	20.83	20.75	20.71

8.2. 5G NR n48 SISO

Test Engineer ID:	27342	Test Date:	2025-03-06

OUTPUT POWER FOR 5G NR n48 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 9			ANT 8			ANT 4			ANT 7		
				637000	641666	646333	637000	641666	646333	637000	641666	646333	637000	641666	646333
				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	BPSK	1	0	24.36	24.37	24.44	23.41	23.67	23.82	25.15	25.84	25.69	25.22	25.33	25.21
		1	1	**24.50**	**24.50**	**24.50**	**24.20**	24.06	24.00	25.45	**26.00**	25.88	**25.50**	**25.50**	25.44
		1	22	24.47	24.40	24.37	24.19	23.91	**24.20**	25.52	25.76	**26.00**	25.45	25.40	**25.50**
		1	23	24.28	24.29	24.19	23.53	23.99	24.12	25.19	25.56	25.76	25.32	25.24	25.34
		12	6	24.42	24.43	24.36	24.12	**24.20**	24.00	**26.00**	25.86	25.87	25.39	25.40	25.45
		24	0	24.32	24.27	24.37	23.70	24.16	23.87	25.62	25.60	25.68	25.18	25.18	25.19
	QPSK	1	0	24.35	24.35	24.43	23.39	23.58	23.77	25.09	25.78	25.63	25.17	25.27	25.16
		1	1	**24.49**	**24.49**	**24.49**	24.13	24.00	23.99	25.42	**25.99**	25.87	25.49	**25.49**	25.42
		1	22	24.45	24.39	24.36	24.12	23.83	**24.19**	25.48	25.74	**25.98**	**25.49**	25.39	**25.49**
		1	23	24.27	24.27	24.18	23.49	23.84	24.06	25.13	25.50	25.70	25.26	25.18	25.28
		12	6	24.41	24.41	24.35	**24.15**	**24.09**	23.99	**25.95**	25.84	25.85	25.38	25.39	25.48
		24	0	24.31	24.26	24.34	23.68	24.02	23.82	25.51	25.55	25.63	25.13	25.13	25.13
	16QAM	1	0	**23.25**	23.15	23.31	22.23	22.57	22.63	23.86	24.72	24.47	24.09	24.01	24.15
		1	1	23.22	23.35	23.25	22.97	22.99	22.97	24.31	**24.81**	**24.83**	**24.40**	**24.30**	24.29
		1	22	23.22	**23.35**	23.12	23.07	22.65	23.00	24.29	24.66	24.80	24.35	24.18	**24.44**
		1	23	23.06	23.12	23.02	22.33	22.57	**23.05**	24.06	24.43	24.48	24.24	23.94	24.02
		12	6	23.16	23.24	**23.33**	**23.15**	**23.09**	22.89	**24.84**	24.61	24.72	24.17	24.17	24.21
		24	0	23.11	23.03	23.17	22.66	22.96	22.72	24.38	24.45	24.49	24.09	24.12	23.96
	64QAM	1	0	22.06	21.93	**22.29**	21.14	21.43	21.61	22.75	23.58	23.20	23.06	22.98	23.11
		1	1	**22.17**	**22.35**	22.12	21.81	21.84	21.80	23.22	**23.79**	23.60	**23.24**	23.06	23.13
		1	22	21.95	22.19	21.91	21.90	21.46	**22.00**	23.26	23.50	23.57	23.20	23.00	**23.30**
		1	23	21.82	22.02	22.02	21.17	21.33	21.83	22.81	23.17	23.23	23.21	22.86	22.99
		12	6	21.97	21.98	22.21	**22.04**	**21.95**	21.85	**23.62**	23.50	**23.62**	23.08	22.97	23.10
		24	0	22.00	21.81	21.90	21.65	21.76	21.46	23.18	23.18	23.49	22.93	**23.10**	22.85
	256QAM	1	0	**21.05**	20.83	**21.02**	20.02	20.37	20.56	21.75	22.39	22.05	21.91	21.94	21.96
		1	1	20.97	**21.31**	20.98	20.66	20.67	20.62	22.06	**22.71**	22.41	**22.20**	**22.03**	22.04
		1	22	20.83	21.02	20.89	20.66	20.32	**20.96**	22.11	22.46	**22.47**	21.94	22.00	**22.17**
		1	23	20.78	21.01	20.83	20.01	20.22	20.56	21.66	21.92	21.96	22.18	21.60	21.83
		12	6	20.88	20.75	20.97	**20.88**	**20.94**	20.70	**22.52**	22.31	22.38	22.08	21.74	21.93
		24	0	20.92	20.58	20.68	20.45	20.56	20.22	22.07	22.03	22.38	21.93	21.85	21.63

OUTPUT POWER FOR 5G NR n48 (15.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 9			ANT 8			ANT 4			ANT 7		
				637166	641333	646166	637166	641333	646166	637166	641333	646166	637166	641333	646166
				3557.5	3620.0	3692.5	3557.5	3620.0	3692.5	3557.5	3620.0	3692.5	3557.5	3620.0	3692.5
15.0	BPSK	1	0	24.40	24.29	24.32	24.04	24.01	23.87	25.89	**26.00**	25.75	25.33	25.22	25.15
		1	1	**24.50**	24.38	24.41	**24.20**	**24.20**	23.98	**26.00**	**26.00**	25.46	25.44	**25.50**	25.34
		1	36	24.41	24.43	24.43	24.16	23.95	**24.20**	25.95	25.73	**25.99**	**25.50**	25.32	**25.50**
		1	37	24.33	24.27	24.33	24.10	23.90	24.15	25.85	25.58	25.97	25.32	25.19	25.29
		18	9	24.48	**24.50**	**24.50**	24.14	24.14	24.08	25.93	25.99	25.32	25.44	25.46	25.39
		36	0	22.00	24.28	22.00	22.00	23.88	22.00	22.00	25.60	22.00	22.00	25.17	22.00
	QPSK	1	0	24.39	24.28	24.31	23.98	23.96	23.81	25.83	25.93	25.70	25.27	25.18	25.09
		1	1	**24.48**	24.37	24.40	**24.18**	**24.19**	23.97	**25.99**	**25.99**	25.33	25.43	**25.48**	25.33
		1	36	24.40	24.41	24.41	24.15	23.94	**24.19**	25.94	25.72	**25.92**	**25.48**	25.31	**25.48**
		1	37	24.31	24.26	24.32	24.04	23.84	24.08	25.79	25.53	25.89	25.26	25.12	25.23
		18	9	24.46	**24.49**	**24.49**	24.12	24.13	24.06	25.92	25.97	25.22	25.43	25.44	25.38
		36	0	22.00	24.26	22.00	22.00	23.83	22.00	22.00	25.55	22.00	22.00	25.12	22.00
	16QAM	1	0	23.18	23.28	23.19	22.74	22.87	22.63	24.61	24.83	24.65	24.21	24.07	23.83
		1	1	**23.38**	23.18	23.35	22.92	23.02	22.75	24.85	24.73	24.12	24.25	**24.33**	24.19
		1	36	23.15	**23.38**	23.26	**23.15**	22.76	22.93	**24.93**	24.54	24.68	24.23	24.18	**24.44**
		1	37	23.28	23.09	23.28	22.96	22.73	**22.98**	24.67	24.43	**24.70**	24.04	23.90	24.22
		18	9	23.31	23.28	**23.49**	23.08	**23.11**	22.88	24.82	**24.96**	24.07	**24.38**	24.22	24.38
		36	0	22.00	23.05	22.00	22.00	22.57	22.00	22.00	24.43	22.00	22.00	24.05	22.00
	64QAM	1	0	22.18	22.10	22.12	21.58	21.63	21.37	23.47	23.64	23.60	22.96	22.92	22.72
		1	1	**22.29**	22.03	22.08	21.84	21.83	21.75	**23.68**	23.69	23.12	23.14	**23.29**	23.02
		1	36	21.89	**22.21**	22.19	21.88	21.75	21.70	23.67	23.35	23.59	23.05	22.92	23.29
		1	37	22.27	21.90	22.03	21.70	21.48	21.88	23.54	23.35	**23.67**	22.97	22.63	22.96
		18	9	22.10	22.04	**22.23**	21.91	**21.94**	21.85	23.62	**23.87**	22.98	**23.21**	23.03	**23.36**
		36	0	21.98	21.91	22.00	**21.99**	21.37	**21.98**	22.00	23.39	21.98	21.97	22.88	21.98
	256QAM	1	0	20.97	**21.06**	20.95	20.40	20.60	20.34	22.24	22.47	22.40	21.80	21.88	21.48
		1	1	21.09	21.01	20.93	20.60	20.73	20.58	22.53	22.65	22.05	22.09	**22.02**	21.97
		1	36	20.71	21.00	21.16	20.64	20.65	20.55	**22.63**	22.31	**22.58**	21.92	21.79	22.11
		1	37	21.16	20.72	20.79	20.45	20.40	20.62	22.50	22.19	22.47	21.71	21.59	21.77
		18	9	20.91	20.79	20.96	20.76	**20.91**	20.60	22.58	**22.67**	21.89	**22.20**	21.86	**22.24**
		36	0	**21.95**	20.71	**21.98**	**21.93**	20.17	**21.96**	21.91	22.16	21.93	21.93	21.73	21.99

OUTPUT POWER FOR 5G NR n48 (20.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 9			ANT 8			ANT 4			ANT 7		
				637333	641333	646000	637333	641333	646000	637333	641333	646000	637333	641333	646000
				3560.0	3620.0	3690.0	3560.0	3620.0	3690.0	3560.0	3620.0	3690.0	3560.0	3620.0	3690.0
20.0	BPSK	1	0	24.35	24.28	24.36	24.02	24.01	23.95	25.99	25.86	25.85	25.32	25.34	25.18
		1	1	**24.50**	24.36	**24.50**	24.17	**24.20**	**24.20**	25.38	25.36	25.15	25.49	**25.50**	25.34
		1	49	24.42	24.37	24.43	**24.20**	23.78	23.46	**26.00**	**26.00**	25.76	25.41	25.20	**25.50**
		1	50	24.27	24.28	24.21	24.09	23.53	23.22	25.93	25.65	**26.00**	25.31	25.01	25.33
		25	12	24.45	24.38	24.47	24.09	24.04	23.74	25.35	24.95	25.29	**25.50**	25.40	25.37
		50	0	20.96	**24.50**	20.96	21.00	24.00	20.92	20.99	25.81	20.92	20.95	25.31	20.96
	QPSK	1	0	24.34	24.27	24.34	23.96	23.95	23.89	**25.93**	25.79	25.80	25.26	25.28	25.11
		1	1	**24.49**	24.35	**24.49**	24.16	**24.18**	**24.18**	25.26	25.26	25.06	25.48	**25.49**	25.33
		1	49	24.40	24.36	24.42	**24.19**	23.77	23.44	25.92	**25.91**	25.69	25.40	25.19	**25.48**
		1	50	24.25	24.26	24.20	24.03	23.48	23.17	25.85	25.58	**25.92**	25.24	24.95	25.27
		25	12	24.43	24.36	24.45	24.08	24.02	23.72	25.22	24.83	25.18	**25.49**	25.38	25.36
		50	0	20.95	**24.48**	20.95	21.00	23.94	20.97	20.92	25.74	20.94	20.99	25.25	20.99
	16QAM	1	0	23.29	23.23	23.23	22.89	22.85	22.86	**24.92**	24.60	24.61	24.03	24.13	24.08
		1	1	23.23	23.12	23.35	**23.03**	**22.97**	**23.12**	24.02	24.25	23.97	**24.48**	**24.40**	24.19
		1	49	23.31	23.18	23.31	22.96	22.75	22.25	24.69	**24.90**	24.60	24.16	24.01	24.32
		1	50	23.17	23.16	23.18	22.86	22.32	22.15	24.70	24.53	**24.82**	24.20	23.91	24.04
		25	12	**23.39**	23.13	**23.36**	22.85	22.80	22.48	23.98	23.69	23.95	24.30	24.11	**24.35**
		50	0	20.96	**23.32**	20.99	21.00	22.79	20.94	21.00	24.52	20.93	20.94	24.09	21.00
	64QAM	1	0	22.14	22.05	22.18	21.62	21.65	21.72	**23.87**	23.36	23.48	22.92	22.95	22.86
		1	1	22.03	21.89	22.25	21.87	**21.93**	**21.90**	22.99	23.23	22.96	**23.41**	**23.15**	22.95
		1	49	22.15	21.98	**22.31**	**21.87**	21.70	21.19	23.62	**23.69**	23.48	22.92	22.97	23.11
		1	50	21.91	**22.09**	21.95	21.74	21.11	20.90	23.50	23.38	**23.65**	22.97	22.68	22.80
		25	12	**22.28**	21.91	22.24	21.60	21.68	21.35	22.91	22.59	22.84	23.13	22.87	**23.20**
		50	0	20.96	22.06	20.98	21.00	21.74	20.97	21.00	23.26	20.98	20.97	22.94	20.95
	256QAM	1	0	**21.14**	20.97	**21.15**	20.53	20.48	20.49	**22.75**	22.27	22.23	21.91	21.95	21.79
		1	1	20.96	20.66	21.14	20.62	**20.76**	20.88	21.73	22.15	21.83	**22.25**	**21.97**	21.78
		1	49	21.02	20.94	21.12	20.77	20.58	20.13	22.52	**22.53**	22.30	21.86	21.74	21.85
		1	50	20.64	**21.06**	20.75	20.71	19.98	19.69	22.25	22.20	**22.38**	21.86	21.50	21.58
		25	12	21.03	20.85	21.15	20.45	20.65	20.28	21.74	21.53	21.80	21.92	21.72	**22.00**
		50	0	20.98	20.95	20.97	**20.97**	20.73	**21.00**	20.99	22.26	20.96	20.99	21.78	20.99

OUTPUT POWER FOR 5G NR n48 (30.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 9			ANT 8			ANT 4			ANT 7		
				637666	641666	645666	637666	641666	645666	637666	641666	645666	637666	641666	645666
				3565.0	3625.0	3685.0	3565.0	3625.0	3685.0	3565.0	3625.0	3685.0	3565.0	3625.0	3685.0
30.0	BPSK	1	0	24.43	24.06	24.19	24.05	23.97	23.26	25.68	25.54	25.42	25.39	25.22	25.36
		1	1	**24.50**	24.27	24.29	**24.20**	**24.20**	23.33	25.41	25.34	25.24	**25.50**	**25.50**	**25.50**
		1	76	24.40	**24.50**	**24.50**	23.46	23.86	**24.20**	**26.00**	**26.00**	**25.78**	25.39	25.21	25.42
		1	77	24.24	24.35	24.44	23.31	23.72	24.03	25.89	25.48	25.64	25.23	25.07	25.27
		36	18	24.29	24.19	24.26	23.61	24.17	23.41	25.28	24.81	25.10	25.26	25.29	25.29
		75	0	19.00	24.20	19.00	19.00	23.95	19.00	19.00	25.66	19.00	19.00	25.09	19.00
	QPSK	1	0	24.42	24.05	24.17	24.00	23.93	23.20	25.63	25.48	25.37	25.33	25.17	25.30
		1	1	**24.48**	24.25	24.27	**24.19**	**24.19**	23.32	25.27	25.22	25.11	**25.48**	**25.48**	**25.48**
		1	76	24.38	**24.49**	**24.49**	23.45	23.84	**24.19**	**25.92**	**25.89**	**25.70**	25.38	25.20	25.41
		1	77	24.23	24.33	24.42	23.26	23.66	23.98	25.81	25.41	25.56	25.16	25.02	25.22
		36	18	24.28	24.18	24.25	23.60	24.15	23.40	25.16	24.70	24.96	25.25	25.27	25.27
		75	0	19.00	24.19	19.00	19.00	23.89	19.00	18.98	25.58	18.97	19.00	25.05	19.00
	16QAM	1	0	23.24	22.88	22.93	22.78	22.79	22.16	24.61	24.41	24.17	24.21	23.94	24.08
		1	1	**23.32**	23.14	23.08	**23.11**	**23.05**	22.19	24.16	24.07	23.86	**24.43**	**24.33**	**24.44**
		1	76	23.16	**23.26**	23.24	22.37	22.66	**23.07**	24.76	**24.65**	**24.64**	24.11	24.14	24.21
		1	77	23.21	23.22	**23.35**	22.20	22.41	22.79	**24.77**	24.32	24.47	23.95	23.96	24.09
		36	18	23.28	23.00	23.18	22.47	22.93	22.37	23.95	23.47	23.92	24.22	24.04	24.25
		75	0	18.99	23.12	18.99	18.98	22.70	18.97	19.00	24.46	18.98	18.96	23.80	19.00
	64QAM	1	0	22.03	21.76	21.72	21.76	21.73	21.15	23.44	23.14	22.94	23.06	22.68	22.82
		1	1	**22.24**	21.98	21.85	**22.03**	**21.90**	21.11	23.16	22.89	22.85	**23.37**	**23.26**	**23.31**
		1	76	22.16	**22.22**	21.98	21.19	21.52	**22.03**	**23.73**	**23.59**	**23.45**	23.00	23.11	23.12
		1	77	21.97	22.14	**22.21**	20.94	21.16	21.55	23.54	23.15	23.23	22.76	22.75	22.84
		36	18	22.15	21.86	22.12	21.47	21.77	21.14	22.79	22.29	22.72	23.15	22.89	23.05
		75	0	18.96	21.95	18.99	19.00	21.50	19.00	18.95	23.21	18.96	18.98	22.60	18.94
	256QAM	1	0	20.83	20.49	20.45	20.51	20.51	20.02	22.24	21.90	21.74	21.99	21.64	21.55
		1	1	**21.22**	20.71	20.75	**20.92**	**20.80**	20.05	22.15	21.89	21.72	**22.27**	**22.13**	**22.26**
		1	76	21.03	**20.97**	20.71	19.94	20.34	**20.95**	**22.62**	**22.41**	**22.27**	21.73	22.00	22.06
		1	77	20.89	20.92	**21.10**	19.90	20.08	20.49	22.50	22.12	22.04	21.51	21.60	21.74
		36	18	21.12	20.86	21.00	20.40	20.58	19.95	21.72	21.25	21.68	21.92	21.85	21.83
		75	0	18.98	20.91	19.00	18.95	20.49	18.97	18.97	22.14	18.98	18.96	21.53	18.97

OUTPUT POWER FOR 5G NR n48 (40.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)											
				ANT 9			ANT 8			ANT 4			ANT 7		
				638000	641333	645333	638000	641333	645333	638000	641333	645333	638000	641333	645333
				3570.0	3620.0	3680.0	3570.0	3620.0	3680.0	3570.0	3620.0	3680.0	3570.0	3620.0	3680.0
40.0	BPSK	1	0	24.42	24.17	24.39	23.93	23.80	23.11	25.98	25.96	25.75	25.17	25.18	25.34
		1	1	24.44	24.24	24.46	**24.20**	23.89	23.45	25.16	25.49	25.43	25.36	25.44	**25.50**
		1	104	**24.50**	**24.50**	**24.50**	24.08	23.92	**24.20**	25.85	**26.00**	**25.98**	25.47	25.37	25.25
		1	105	24.39	24.42	24.45	23.96	23.68	24.00	**26.00**	25.72	25.71	**25.50**	25.16	25.10
		50	25	24.35	24.25	24.43	23.75	**24.20**	23.42	25.41	25.17	25.19	25.49	25.48	25.20
		100	0	18.97	24.29	19.00	18.97	24.11	18.99	19.00	25.95	19.00	19.00	**25.50**	18.93
	QPSK	1	0	24.40	24.15	24.37	23.89	23.74	23.09	**25.92**	25.91	25.70	25.11	25.14	25.29
		1	1	24.43	24.22	24.44	**24.19**	23.88	23.44	25.03	25.35	25.30	25.34	25.43	**25.48**
		1	104	**24.49**	**24.48**	**24.49**	24.07	23.89	**24.17**	25.79	**25.92**	**25.93**	25.46	25.34	25.24
		1	105	24.38	24.40	24.43	23.89	23.62	23.95	25.92	25.66	25.61	25.44	25.09	25.05
		50	25	24.34	24.24	24.42	23.74	**24.19**	23.39	25.27	25.06	25.05	**25.48**	**25.47**	25.19
		100	0	18.96	24.28	18.92	19.00	24.05	18.97	19.00	25.88	18.97	18.95	25.44	18.96
	16QAM	1	0	**23.40**	22.96	23.35	22.76	22.61	21.92	**24.82**	24.73	24.54	23.91	24.03	24.10
		1	1	23.27	22.98	**23.44**	22.94	22.87	22.30	23.83	24.17	24.19	24.15	**24.40**	**24.32**
		1	104	23.26	**23.35**	23.43	**23.01**	22.84	**22.94**	24.65	**24.83**	**24.68**	24.40	24.27	24.11
		1	105	23.13	23.33	23.22	22.80	22.51	22.72	24.65	24.54	24.43	24.38	23.83	23.88
		50	25	23.16	23.04	23.17	22.56	**23.02**	22.29	24.07	23.90	23.83	**24.42**	24.21	24.15
		100	0	18.99	23.15	18.95	18.99	22.79	18.99	18.98	24.66	18.94	18.93	24.26	18.98
	64QAM	1	0	**22.17**	21.92	22.27	21.61	21.60	20.80	23.64	23.47	23.35	22.67	22.84	22.88
		1	1	22.16	21.72	22.22	21.76	21.64	21.13	22.83	23.03	23.11	23.13	**23.29**	**23.22**
		1	104	22.06	**22.35**	**22.38**	**21.94**	21.83	**21.86**	23.53	**23.82**	**23.55**	23.13	23.24	23.08
		1	105	22.10	22.27	21.95	21.59	21.46	21.48	**23.65**	23.32	23.43	23.27	22.64	22.62
		50	25	22.14	21.79	22.11	21.32	**21.96**	21.06	22.96	22.77	22.82	**23.30**	23.11	23.10
		100	0	18.95	21.96	18.95	18.99	21.59	19.00	18.99	23.49	18.95	19.00	23.17	19.00
	256QAM	1	0	**21.14**	20.89	21.19	20.54	20.59	19.70	**22.55**	22.35	22.32	21.60	21.65	21.73
		1	1	21.08	20.68	**21.22**	**20.76**	20.44	19.95	21.75	21.85	21.99	21.96	**22.25**	**22.09**
		1	104	20.82	21.09	21.14	20.72	20.77	**20.73**	22.31	**22.67**	**22.48**	21.89	22.23	21.96
		1	105	21.03	**21.18**	20.79	20.39	20.32	20.40	22.42	22.31	22.43	22.06	21.37	21.41
		50	25	21.10	20.58	20.94	20.19	**20.87**	19.90	21.75	21.52	21.77	**22.14**	22.01	21.96
		100	0	19.00	20.79	18.97	19.00	20.58	19.00	18.97	22.32	19.00	19.00	21.92	18.96

8.3. LTE ULCA BAND 48B

Test Engineer ID:	32894	Test Date:	2025-03-25

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

Bandwidth	PCC Frequency (MHz)	SCC1 Frequency (MHz)	PCC RB Size	PCC RB Offset	SCC1 RB Size	SCC1 RB Offset	Conducted Average (dBm)															
							ANT 9				ANT 8				ANT 4				ANT 7			
							QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
10MHz/ 10MHz	3555.0	3564.9	1	49	1	0	**24.50**	23.59	**23.56**	**21.54**	24.20	23.02	22.93	20.94	**25.00**	24.49	22.41	20.35	**25.00**	**23.75**	21.65	19.60
			1	0	1	49	15.56	15.51	15.38	15.60	15.20	15.05	14.97	15.00	14.75	14.50	14.35	14.41	13.78	13.66	13.67	13.74
			50	0	50	0	24.48	23.41	23.08	21.43	**24.20**	23.14	22.95	20.95	23.75	22.45	**22.56**	20.32	22.79	21.62	21.67	19.72
	3620.1	3630.0	1	49	1	0	**24.50**	23.40	23.04	21.30	24.20	23.12	22.82	21.14	**25.00**	**24.58**	22.43	**20.60**	24.99	23.73	21.67	19.53
			1	0	1	49	15.56	15.46	15.48	15.44	15.20	15.04	15.09	15.04	14.77	14.51	14.50	14.51	13.79	13.70	13.76	13.63
			50	0	50	0	24.46	23.48	23.36	21.39	**24.20**	23.08	22.96	20.90	23.80	22.58	22.38	20.55	22.77	21.73	21.70	19.68
	3685.1	3695.0	1	49	1	0	**24.50**	23.53	23.37	21.40	24.20	23.09	22.94	**21.15**	**25.00**	24.49	22.42	20.50	24.97	23.69	**21.77**	**19.73**
			1	0	1	49	15.60	15.52	15.51	15.47	15.19	15.14	14.99	14.94	14.79	14.53	14.57	14.51	13.77	13.66	13.73	13.67
			50	0	50	0	24.49	**23.60**	23.48	21.45	24.19	**23.20**	**22.99**	21.09	23.77	22.57	22.55	20.57	22.76	21.80	21.59	19.62

8.4. LTE ULCA BAND 48C

Test Engineer ID:	32894	Test Date:	2025-03-20

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

Bandwidth	PCC Frequency (MHz)	SCC1 Frequency (MHz)	PCC RB Size	PCC RB Offset	SCC1 RB Size	SCC1 RB Offset	Conducted Average (dBm)															
							ANT 9				ANT 8				ANT 4				ANT 7			
							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	20.50	20.55	20.48	20.44	20.50	20.58	20.56	20.50	19.70	19.73	19.64	19.64	20.00	20.08	19.95	20.01
			25	0	100	0	14.12	14.08	14.09	14.08	14.06	14.07	14.06	14.09	13.19	13.19	13.16	13.19	10.96	10.94	10.97	10.93
	3615.8	3627.5	1	24	1	0	**24.50**	**23.96**	**22.92**	20.93	**24.20**	**23.98**	**23.00**	20.97	**25.00**	**23.26**	**22.24**	20.19	**25.00**	**23.51**	**22.49**	**20.48**
			25	0	100	0	22.02	22.04	22.06	**21.06**	21.92	21.98	22.01	**20.99**	21.24	21.28	21.31	**20.31**	18.90	18.92	18.96	17.95
	3678.3	3690.0	1	24	1	0	20.50	20.53	20.51	20.45	20.50	20.51	20.56	20.57	19.70	19.78	19.75	19.67	20.00	20.06	19.95	19.94
			25	0	100	0	14.05	14.04	14.03	14.07	14.26	14.24	14.25	14.27	13.23	13.27	13.22	13.25	10.94	10.91	10.89	10.89

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

Bandwidth	PCC Frequency (MHz)	SCC1 Frequency (MHz)	PCC RB Size	PCC RB Offset	SCC1 RB Size	SCC1 RB Offset	Conducted Average (dBm)															
							ANT 9				ANT 8				ANT 4				ANT 7			
							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	20.50	20.52	20.46	20.58	20.50	20.44	20.47	20.46	19.70	19.78	19.67	19.74	20.00	20.09	20.08	20.11
			100	0	25	0	13.53	13.52	13.50	13.53	13.50	13.48	13.49	13.50	12.72	12.71	12.71	12.72	11.92	11.92	11.91	11.90
	3622.5	3634.2	1	99	1	0	**24.50**	**23.91**	**22.94**	20.99	**24.20**	**23.29**	**22.29**	20.36	**25.00**	**23.21**	**22.17**	**20.23**	**25.00**	**23.27**	**22.25**	**20.22**
			100	0	25	0	21.98	21.98	22.05	**21.04**	21.44	21.49	21.53	20.51	21.14	21.18	21.19	20.19	20.04	20.07	20.09	19.08
	3685.0	3696.7	1	99	1	0	20.50	20.48	20.46	20.49	20.50	20.45	20.49	**20.53**	19.70	19.73	19.70	19.76	20.00	20.12	20.08	20.10
			100	0	25	0	13.61	13.61	13.59	13.59	13.52	13.47	13.48	13.50	12.76	12.78	12.76	12.79	11.95	11.94	11.92	11.95

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

Bandwidth	PCC Frequency (MHz)	SCC1 Frequency (MHz)	PCC RB Size	PCC RB Offset	SCC1 RB Size	SCC1 RB Offset	Conducted Average (dBm)															
							ANT 9				ANT 8				ANT 4				ANT 7			
							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	20.00	20.00	19.97	19.97	20.00	20.00	19.96	20.09	19.20	19.26	19.25	19.29	19.50	19.39	19.48	19.48
			50	0	100	0	15.08	15.09	15.08	15.11	14.97	14.98	14.99	15.01	14.27	14.31	14.31	14.31	11.84	11.85	11.86	11.88
	3615.6	3630.0	1	49	1	0	**24.50**	**24.30**	**23.01**	21.02	**24.20**	**24.07**	**23.00**	21.04	**25.00**	**23.62**	**22.07**	20.09	**25.00**	**23.85**	**22.41**	**20.37**
			50	0	100	0	21.69	21.66	21.67	**21.18**	21.53	21.56	21.60	**21.11**	20.72	20.71	20.73	**20.23**	18.27	18.27	18.28	17.78
	3675.6	3690.0	1	49	1	0	20.00	20.05	20.06	20.04	20.00	19.93	19.96	19.94	19.20	19.26	19.18	19.21	19.50	19.45	19.53	19.54
			50	0	100	0	15.09	15.12	15.12	15.13	15.20	15.19	15.22	15.22	14.32	14.28	14.28	14.30	11.89	11.90	11.91	11.90

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

Bandwidth	PCC Frequency (MHz)	SCC1 Frequency (MHz)	PCC RB Size	PCC RB Offset	SCC1 RB Size	SCC1 RB Offset	Conducted Average (dBm)															
							ANT 9				ANT 8				ANT 4				ANT 7			
							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	20.00	19.90	19.95	20.03	20.00	19.79	19.78	19.92	19.20	19.28	19.17	19.28	19.50	19.57	19.49	19.51
			100	0	50	0	14.99	14.99	14.99	15.01	14.83	14.84	14.85	14.87	14.31	14.32	14.33	14.33	12.34	12.35	12.35	12.38
	3620.1	3634.5	1	99	1	0	**24.50**	**24.43**	**22.99**	**21.08**	**24.20**	**24.21**	**22.73**	20.80	**25.00**	**23.73**	**22.16**	20.22	**25.00**	**23.85**	**22.40**	**20.37**
			100	0	50	0	21.55	21.54	21.57	**21.08**	21.38	21.42	21.48	**20.97**	20.71	20.72	20.74	**20.25**	18.72	18.75	18.76	18.27
	3680.1	3694.5	1	99	1	0	20.00	19.91	19.89	19.99	20.00	19.97	19.99	20.07	19.20	19.28	19.21	19.29	19.50	19.44	19.50	19.54
			100	0	50	0	15.06	15.07	15.06	15.09	15.05	15.06	15.11	15.09	14.29	14.28	14.29	14.32	12.37	12.40	12.41	12.41

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

Bandwidth	PCC Frequency (MHz)	SCC1 Frequency (MHz)	PCC RB Size	PCC RB Offset	SCC1 RB Size	SCC1 RB Offset	Conducted Average (dBm)															
							ANT 9				ANT 8				ANT 4				ANT 7			
							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	20.00	20.10	20.08	20.02	20.00	20.00	20.04	20.06	19.20	19.27	19.17	19.26	19.50	19.65	19.61	19.67
			75	0	100	0	15.09	15.11	15.09	15.12	14.93	14.93	14.96	14.98	14.30	14.32	14.31	14.34	12.14	12.15	12.15	12.16
	3615.3	3632.4	1	74	1	0	**24.50**	**24.16**	**23.14**	21.09	**24.20**	**24.08**	**23.13**	21.11	**25.00**	**24.36**	**22.30**	20.37	**25.00**	**24.61**	**22.63**	**20.60**
			75	0	100	0	21.73	21.75	21.74	**21.26**	21.70	21.76	21.78	**21.30**	20.93	20.95	20.95	**20.46**	18.61	18.65	18.69	18.13
	3672.9	3690.0	1	74	1	0	20.00	20.09	20.07	20.01	20.00	20.01	19.95	19.96	19.20	19.37	19.27	19.30	19.50	19.36	19.45	19.43
			75	0	100	0	15.12	15.11	15.10	15.16	15.26	15.25	15.27	15.27	14.34	14.36	14.33	14.35	12.13	11.98	11.98	11.98

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

Bandwidth	PCC Frequency (MHz)	SCC1 Frequency (MHz)	PCC RB Size	PCC RB Offset	SCC1 RB Size	SCC1 RB Offset	Conducted Average (dBm)															
							ANT 9				ANT 8				ANT 4				ANT 7			
							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	20.00	20.00	20.02	20.08	20.00	20.09	20.07	20.12	19.20	19.40	19.23	19.33	19.50	19.59	19.61	19.70
			100	0	75	0	15.04	15.06	15.06	15.09	15.05	15.05	15.05	15.08	14.33	14.28	14.29	14.29	12.18	12.19	12.19	12.21
	3617.6	3634.7	1	99	1	0	**24.50**	**24.06**	**23.14**	21.20	**24.20**	**24.05**	**23.10**	21.11	**25.00**	**24.37**	**22.20**	20.23	**25.00**	**24.69**	**22.63**	**20.69**
			100	0	75	0	21.73	21.71	21.74	**21.23**	21.79	21.82	21.84	**21.34**	20.76	20.80	20.81	**20.31**	18.70	18.68	18.72	18.25
	3675.1	3692.2	1	99	1	0	20.00	20.00	19.98	20.02	20.00	20.01	19.97	20.06	19.20	19.35	19.28	19.34	19.50	19.72	19.66	19.68
			100	0	75	0	15.13	15.14	15.13	15.18	15.20	15.19	15.23	15.26	14.38	14.38	14.41	14.43	12.20	12.23	12.22	12.25

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

Bandwidth	PCC Frequency (MHz)	SCC1 Frequency (MHz)	PCC RB Size	PCC RB Offset	SCC1 RB Size	SCC1 RB Offset	Conducted Average (dBm)													
							ANT 9				ANT 8				ANT 4				ANT 7			
							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	21.50	21.61	21.55	21.14	21.50	21.66	21.67	21.20	20.70	20.98	20.84	20.45	21.00	21.31	21.34	**20.77**
			1	0	1	99	8.08	8.03	8.07	8.07	8.01	7.95	7.99	8.10	7.47	7.57	7.43	7.52	7.99	8.01	8.12	7.92
			100	0	100	0	15.06	15.07	15.06	15.08	15.05	15.07	15.08	15.09	14.43	14.41	14.42	14.41	22.22	14.92	14.96	14.95
	3615.1	3634.9	1	99	1	0	**24.50**	**24.15**	**23.12**	21.17	**24.20**	**24.00**	**23.15**	21.23	**25.00**	**24.40**	**22.37**	20.37	**25.00**	**24.89**	**22.76**	20.62
			1	0	1	99	14.55	14.51	14.52	14.59	14.69	14.53	14.66	14.74	13.87	13.90	13.79	13.90	14.20	14.00	14.21	14.14
			100	0	100	0	21.72	21.73	21.71	**21.21**	21.77	21.80	21.83	**21.32**	20.91	20.95	20.98	**20.46**	21.35	21.18	22.36	17.45
	3670.2	3690.0	1	99	1	0	21.50	21.62	21.60	21.16	21.50	21.61	21.67	21.21	20.70	20.95	20.82	20.39	21.00	8.16	21.27	20.75
			1	0	1	99	8.40	8.35	8.35	8.45	8.73	8.69	8.78	8.81	7.45	7.58	7.45	7.54	7.84	21.17	7.99	7.97
			100	0	100	0	15.21	15.23	15.22	15.26	15.45	15.47	15.48	15.49	14.37	14.38	14.42	14.43	14.62	15.02	14.89	15.06

8.5. 5G NR n48 MIMO

Test Engineer ID:	27342	Test Date:	2025-03-15

OUTPUT POWER FOR 5G NR n48 (10.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)								
				ANT 9			ANT 7			ANT 9+7		
				637000	641666	646333	637000	641666	646333	637000	641666	646333
				3555.0	3625.0	3695.0	3555.0	3625.0	3695.0	3555.0	3625.0	3695.0
10.0	QPSK	1	0	21.34	21.46	21.49	21.33	21.29	20.30	24.35	24.39	23.94
		1	1	**22.99**	**22.99**	**22.99**	22.93	**22.99**	22.63	25.97	**26.00**	25.82
		1	22	22.93	22.97	22.85	**22.99**	22.92	**22.99**	25.97	25.95	25.93
		1	23	21.39	21.48	21.35	21.38	21.19	21.42	24.40	24.35	24.39
		12	6	21.40	21.47	21.47	21.44	21.38	21.20	24.43	24.44	24.35
		24	0	21.38	21.44	21.45	21.42	21.35	21.18	24.41	24.41	24.33
	16QAM	1	0	21.49	21.49	21.37	21.49	21.19	20.70	24.50	24.35	24.06
		1	1	22.51	**22.54**	22.39	**22.52**	22.42	22.05	**25.52**	25.49	25.24
		1	22	22.51	22.46	22.23	22.43	22.35	22.13	25.48	25.42	25.19
		1	23	21.38	21.39	21.36	21.37	21.15	21.49	24.38	24.28	24.43
		12	6	21.49	21.49	21.49	21.49	21.36	21.49	24.50	24.44	24.50
		24	0	21.47	21.46	21.47	21.47	21.33	21.47	24.48	24.41	24.48
	64QAM	1	0	**21.03**	20.96	20.79	20.83	20.63	**20.93**	**23.94**	23.81	23.87
		1	1	20.95	20.92	20.79	20.90	20.64	20.38	23.94	23.79	23.60
		1	22	20.93	20.79	20.80	20.89	20.64	20.69	23.92	23.72	23.75
		1	23	20.91	20.85	20.72	20.90	20.61	20.64	23.91	23.74	23.69
		12	6	19.97	20.87	20.91	20.00	20.71	20.70	23.00	23.80	23.82
		24	0	19.95	20.84	20.89	19.98	20.68	20.68	22.98	23.77	23.80
	256QAM	1	0	17.05	17.99	17.85	16.98	**17.72**	17.70	20.02	**20.87**	20.79
		1	1	17.02	**18.00**	17.82	16.93	17.54	17.04	19.98	20.78	20.46
		1	22	17.00	17.71	17.63	16.91	17.52	16.33	19.96	20.63	20.04
		1	23	16.89	17.89	17.88	16.99	17.45	17.14	19.95	20.69	20.54
		12	6	16.94	17.82	17.84	16.97	17.70	16.43	19.96	20.77	20.20
		24	0	16.92	17.79	17.82	16.95	17.67	16.41	19.94	**20.74**	20.18

OUTPUT POWER FOR 5G NR n48 (15.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)								
				ANT 9			ANT 7			ANT 9+7		
				637166	641333	646166	637166	641333	646166	637166	641333	646166
				3557.5	3620.0	3692.5	3557.5	3620.0	3692.5	3557.5	3620.0	3692.5
15.0	QPSK	1	0	21.49	21.41	21.42	21.47	20.36	21.44	24.49	23.93	24.44
		1	1	22.96	22.98	**22.99**	**22.99**	22.20	22.96	25.99	25.62	25.99
		1	36	**22.99**	**22.99**	22.83	22.77	**22.99**	**22.99**	25.89	**26.00**	25.92
		1	37	21.46	21.40	21.45	21.36	20.34	21.49	24.42	23.91	24.48
		19	9	21.48	21.49	21.49	21.41	21.16	21.49	24.46	24.34	24.50
		38	0	21.46	21.46	21.47	21.39	21.13	21.47	24.44	24.31	24.48
	16QAM	1	0	21.45	21.49	21.48	21.49	21.43	21.38	24.48	24.47	24.44
		1	1	22.29	22.52	22.29	22.39	22.16	22.58	25.35	25.35	25.45
		1	36	22.42	**22.55**	22.23	22.13	**22.86**	22.40	25.29	**25.72**	25.32
		1	37	21.38	21.46	21.49	21.33	21.49	21.28	24.37	24.49	24.40
		19	9	21.49	21.19	21.46	21.49	21.49	21.42	24.50	24.35	24.45
		38	0	21.47	21.16	21.44	21.47	21.46	21.40	24.48	24.32	24.43
	64QAM	1	0	20.89	20.79	**21.03**	20.90	20.73	20.77	23.91	23.77	23.91
		1	1	20.80	20.71	20.90	20.69	20.91	20.77	23.75	23.82	23.85
		1	36	20.76	20.62	20.74	20.54	20.76	20.69	23.66	23.70	23.73
		1	37	20.85	20.71	21.00	20.86	20.62	20.88	23.87	23.68	**23.95**
		19	9	20.90	20.67	20.98	20.89	**20.92**	20.82	23.91	23.80	23.91
		38	0	20.88	20.64	20.96	20.87	20.89	20.80	23.89	23.77	23.89
	256QAM	1	0	17.81	17.67	17.89	17.78	17.55	**17.95**	20.80	20.62	**20.93**
		1	1	17.67	17.77	17.82	17.55	17.71	17.74	20.62	20.75	20.79
		1	36	17.75	17.71	17.88	17.63	17.13	17.78	20.70	20.44	20.84
		1	37	17.76	17.55	17.88	17.61	17.11	17.74	20.70	20.35	20.82
		19	9	17.86	17.64	**17.91**	17.83	17.62	17.72	20.85	20.64	20.83
		38	0	17.84	17.61	17.89	17.81	17.59	17.70	20.83	20.61	20.81

OUTPUT POWER FOR 5G NR n48 (20.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)								
				ANT 9			ANT 7			ANT 9+7		
				637333	641333	646000	637333	641333	646000	637333	641333	646000
				3560.0	3620.0	3690.0	3560.0	3620.0	3690.0	3560.0	3620.0	3690.0
20.0	QPSK	1	0	21.49	21.41	21.39	21.05	21.38	21.21	24.29	24.41	24.31
		1	1	**22.99**	**22.99**	**22.99**	**22.99**	**22.99**	**22.99**	**26.00**	**26.00**	**26.00**
		1	49	22.82	22.92	22.89	22.87	22.99	22.98	25.86	25.96	25.95
		1	50	21.38	21.37	21.24	20.92	21.49	21.19	24.17	24.44	24.23
		25	12	21.49	21.49	21.49	21.49	21.49	21.49	24.50	24.50	24.50
		51	0	21.47	21.46	21.47	21.47	21.46	21.47	24.48	24.47	24.48
	16QAM	1	0	21.46	21.44	21.49	20.98	20.61	21.49	24.24	24.06	24.50
		1	1	22.17	**22.59**	22.45	22.32	21.93	**22.44**	25.26	25.28	**25.45**
		1	49	22.18	22.38	22.23	22.19	21.29	22.37	25.19	24.88	25.31
		1	50	21.32	21.49	21.26	21.49	20.32	21.44	24.42	23.95	24.37
		25	12	21.40	21.42	21.38	20.82	21.45	21.19	24.13	24.45	24.29
		51	0	21.38	21.39	21.36	20.80	21.42	21.17	24.11	24.42	24.27
	64QAM	1	0	20.96	21.01	20.94	20.46	21.15	20.94	23.73	**24.09**	23.95
		1	1	20.76	20.97	20.74	20.82	21.00	20.81	23.80	23.99	23.79
		1	49	20.64	**21.02**	20.68	20.59	20.85	20.68	23.63	23.95	23.69
		1	50	21.01	20.88	20.85	20.18	**21.26**	20.64	23.62	24.09	23.76
		25	12	21.02	20.96	20.89	20.34	20.66	20.88	23.70	23.83	23.90
		51	0	21.00	20.93	20.87	20.32	20.63	20.86	23.68	23.80	23.88
	256QAM	1	0	17.99	17.93	17.85	17.66	17.76	17.85	20.84	20.86	20.86
		1	1	17.72	**18.04**	17.94	17.73	17.49	17.60	20.73	20.79	20.79
		1	49	17.73	17.89	17.54	17.45	16.64	17.70	20.60	20.32	20.63
		1	50	17.79	17.69	17.79	17.12	**18.03**	17.85	20.47	20.88	20.83
		25	12	17.85	17.95	17.93	17.34	17.94	17.87	20.62	**20.95**	20.91
		51	0	17.83	17.92	17.91	17.32	17.91	17.85	20.60	20.92	20.89

OUTPUT POWER FOR 5G NR n48 (30.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)								
				ANT 9			ANT 7			ANT 9+7		
				637666	641666	645666	637666	641666	645666	637666	641666	645666
				3565.0	3625.0	3685.0	3565.0	3625.0	3685.0	3565.0	3625.0	3685.0
30.0	QPSK	1	0	21.32	21.22	21.36	21.33	21.26	21.24	24.34	24.25	24.31
		1	1	**22.99**	22.84	22.77	**22.99**	**22.99**	22.70	**26.00**	25.93	25.75
		1	76	22.92	**22.99**	**22.99**	22.95	22.64	**22.99**	25.94	25.83	**26.00**
		1	77	21.20	21.49	21.41	21.40	20.59	21.49	24.32	24.07	24.46
		39	19	21.49	21.49	21.49	21.39	20.65	21.46	24.45	24.10	24.49
		78	0	21.47	21.46	21.47	21.37	20.62	21.44	24.43	24.07	24.47
	16QAM	1	0	21.49	21.10	21.25	21.49	21.37	21.30	24.50	24.25	24.29
		1	1	22.34	22.00	22.23	22.02	22.47	22.02	25.19	25.25	25.13
		1	76	**22.41**	22.16	22.08	22.24	**22.66**	22.26	25.34	**25.43**	25.18
		1	77	21.06	21.49	21.49	21.37	21.49	21.27	24.23	24.50	24.39
		39	19	21.42	21.48	21.48	21.49	21.49	21.49	24.47	24.49	24.50
		78	0	21.40	21.45	21.46	21.47	21.46	21.47	24.45	24.46	24.48
	64QAM	1	0	**21.04**	20.91	20.76	21.00	20.74	20.80	24.03	23.83	23.79
		1	1	20.89	20.42	20.31	20.61	20.78	20.48	23.76	23.61	23.41
		1	76	20.80	20.64	20.86	20.63	21.04	20.68	23.73	23.85	23.78
		1	77	20.54	21.00	20.89	20.90	**21.15**	20.93	23.73	**24.09**	23.92
		39	19	20.99	20.96	21.01	20.73	20.97	20.44	23.87	23.97	23.74
		78	0	20.97	20.93	20.99	20.71	20.94	20.42	23.85	23.94	23.72
	256QAM	1	0	17.76	17.52	**18.06**	17.89	17.68	17.34	20.84	20.61	20.72
		1	1	17.87	17.18	17.37	17.42	**18.18**	17.46	20.66	20.72	20.42
		1	76	17.95	17.66	17.75	17.50	17.97	17.24	20.74	20.83	20.51
		1	77	17.59	17.78	17.88	17.76	18.02	17.48	20.69	20.91	20.70
		39	19	17.97	17.89	17.97	17.79	18.11	17.49	20.89	**21.01**	20.75
		78	0	17.95	17.86	17.95	17.77	18.08	17.47	20.87	20.98	20.73

OUTPUT POWER FOR 5G NR n48 (40.0 MHz)

Bandwidth (MHz)	Modulation	RB Allocation	RB Offset	Conducted Average (dBm)								
				ANT 9			ANT 7			ANT 9+7		
				638000	641333	645333	638000	641333	645333	638000	641333	645333
				3570.0	3620.0	3680.0	3570.0	3620.0	3680.0	3570.0	3620.0	3680.0
40.0	QPSK	1	0	21.49	21.49	20.91	20.74	21.23	21.37	24.14	24.37	24.15
		1	1	22.75	22.87	22.55	22.38	**22.99**	22.57	25.58	25.94	25.57
		1	104	**22.99**	**22.99**	**22.99**	**22.99**	22.96	**22.99**	**26.00**	25.98	**26.00**
		1	105	21.10	21.40	21.05	21.45	21.36	21.32	24.29	24.39	24.19
		53	26	21.49	21.49	21.49	21.49	21.49	21.49	24.50	24.50	24.50
		106	0	21.47	21.46	21.47	21.47	21.46	21.47	24.48	24.47	24.48
	16QAM	1	0	21.15	21.34	20.96	21.49	21.04	21.31	24.33	24.20	24.15
		1	1	22.15	22.21	22.07	22.09	**22.34**	22.17	25.13	25.28	25.13
		1	104	**22.57**	22.27	21.94	22.17	22.25	22.32	**25.39**	25.27	25.14
		1	105	21.37	21.43	21.49	21.43	21.49	21.49	24.41	24.47	24.50
		53	26	21.37	21.45	21.40	21.43	21.39	21.40	24.41	24.43	24.41
		106	0	21.35	21.42	21.38	21.41	21.36	21.38	24.39	24.40	24.39
	64QAM	1	0	20.58	21.03	20.60	20.95	20.55	20.83	23.78	23.81	23.72
		1	1	20.70	20.72	20.64	20.51	20.57	20.54	23.61	23.66	23.60
		1	104	20.93	21.14	20.65	20.71	20.96	20.76	23.83	24.06	23.72
		1	105	20.85	**21.22**	20.94	**21.02**	20.98	21.00	23.94	**24.11**	23.98
		53	26	20.90	20.93	20.91	20.89	20.92	20.89	23.90	23.94	23.91
		106	0	20.88	20.90	20.89	20.87	20.89	20.87	23.88	23.91	23.89
	256QAM	1	0	17.82	17.60	17.53	17.86	17.63	17.79	20.85	20.63	20.67
		1	1	17.41	17.31	17.27	17.42	17.66	17.57	20.42	20.50	20.44
		1	104	17.84	17.72	17.43	17.58	17.77	17.40	20.72	20.75	20.42
		1	105	17.75	17.90	17.70	17.75	**17.98**	16.39	20.76	**20.95**	20.10
		53	26	17.83	**17.90**	17.89	17.93	17.91	16.15	20.89	20.92	20.11
		106	0	17.81	17.87	17.87	17.91	17.88	16.13	20.87	20.89	20.09

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.

UL VERIFICATION SERVICES INC.
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 319-4000 FAX: (510) 661-0888

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	4.479	5.36
	5MHz, 16QAM			4.495	5.09
	10MHz, QPSK	50/0		8.927	9.73
	10MHz, 16QAM			8.998	9.71
	15MHz, QPSK	75/0	3620.0	13.429	14.13
	15MHz, 16QAM			13.367	14.25
	20MHz, QPSK	100/0		17.944	19.49
	20MHz, 16QAM			17.792	19.03
	20MHz, QPSK	1/0		0.279	0.50

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	9.62
	10MHz, QPSK			8.632	9.63
	10MHz, 16QAM			8.614	9.53
	15MHz, BPSK	36/0	3620.0	12.898	14.26
	15MHz, QPSK			12.894	13.96
	15MHz, 16QAM			12.893	14.24
	20MHz, BPSK	50/0		17.923	19.02
	20MHz, QPSK			17.887	19.27
	20MHz, 16QAM			17.936	19.10
	30MHz, BPSK	75/0	3625.0	26.850	28.62
	30MHz, QPSK			26.835	28.52
	30MHz, 16QAM			26.875	28.26
	40MHz, BPSK	100/0	3620.0	35.887	37.41
	40MHz, QPSK			35.751	37.75
	40MHz, 16QAM			35.819	37.74
	40MHz, BPSK	1/0		0.494	0.91

LTE ULCA BAND 48B SISO

Band	Mode	RB Allocation/RB Offset	f (MHz)	99% BW (MHz)	- 26dB BW (MHz)
LTE ULCA BAND 48B	10MHz + 10MHz BAND QPSK	50/0 + 50/0	3625	19.183	21.01
	10MHz + 10MHz BAND 16QAM			19.275	20.82

LTE ULCA BAND 48C SISO

Band	Mode	RB Allocation/RB Offset	f (MHz)	99% BW (MHz)	- 26dB BW (MHz)
LTE ULCA BAND 48C	5MHz + 20MHz BAND QPSK	25/0 + 100/0	3625	23.263	25.07
	5MHz + 20MHz BAND 16QAM			23.326	25.81
	20MHz + 5MHz BAND QPSK	100/0 + 25/0		23.284	25.05
	20MHz + 5MHz BAND 16QAM			23.225	25.04
	10MHz + 20MHz BAND QPSK	50/0 + 100/0		27.973	30.06
	10MHz + 20MHz BAND 16QAM			27.958	31.94
	20MHz + 10MHz BAND QPSK	100/0 + 50/0		27.943	31.37
	20MHz + 10MHz BAND 16QAM			28.134	29.83
	15MHz + 20MHz BAND QPSK	75/0 + 100/0		32.833	35.22
	15MHz + 20MHz BAND 16QAM			32.854	37.42
	20MHz + 15MHz BAND QPSK	100/0 + 75/0		32.791	35.62
	20MHz + 15MHz BAND 16QAM			32.869	36.05
	20MHz + 20MHz BAND QPSK	100/0 + 100/0		37.668	39.89
	20MHz + 20MHz BAND 16QAM			37.746	40.36

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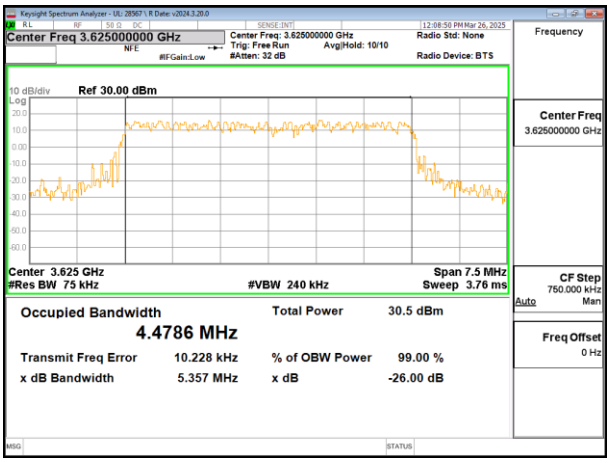
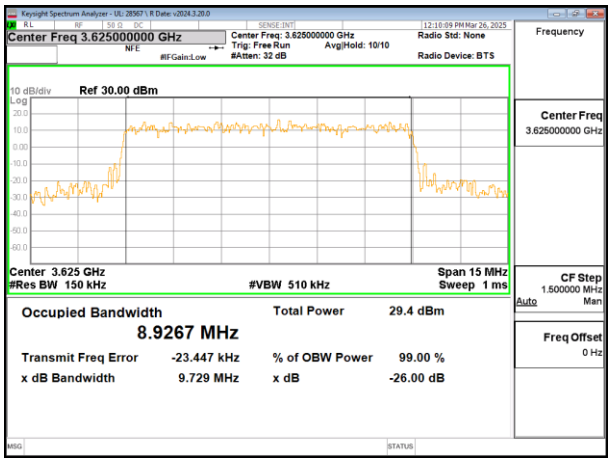
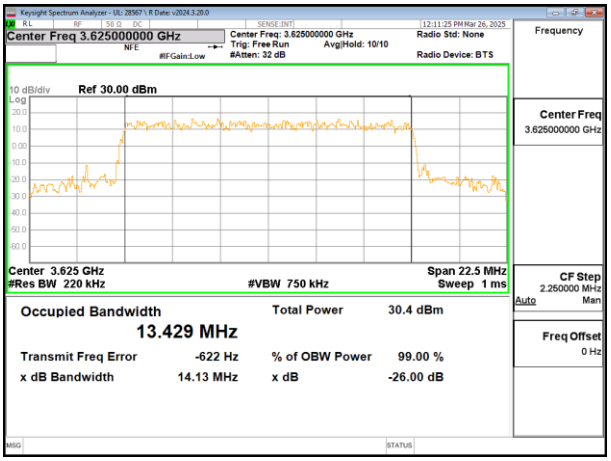
9.1.1. LTE BAND 48 SISO



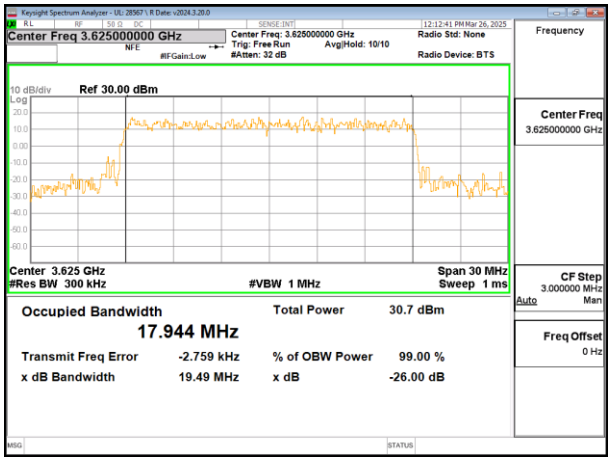
LTE B48 5MHz QPSK Middle Channel RB25-0



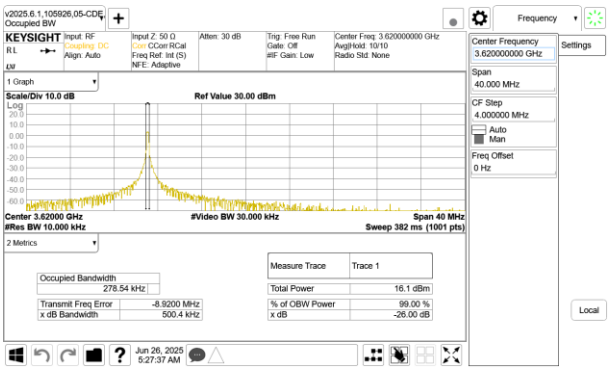
LTE B48 10MHz QPSK Middle Channel RB50-0



LTE B48 15MHz QPSK Middle Channel RB75-0



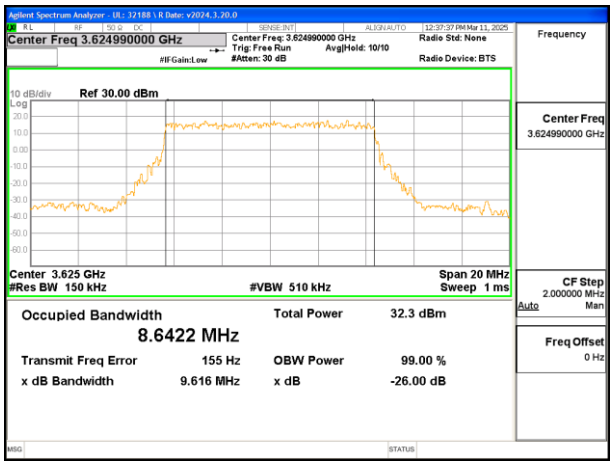
LTE B48 20MHz QPSK Middle Channel RB100-0



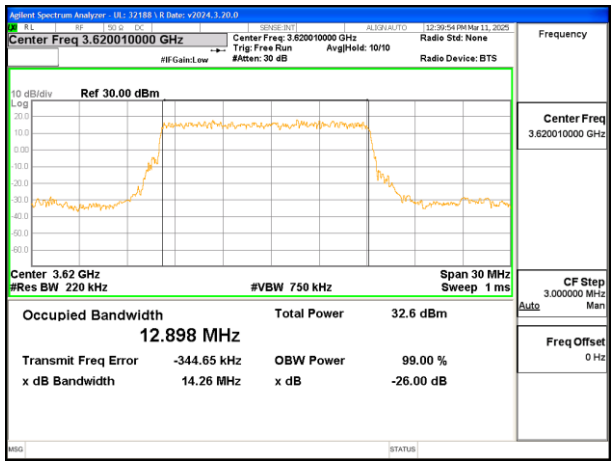
LTE B48 20MHz QPSK Middle Channel RB1-0

Intentionally Blank

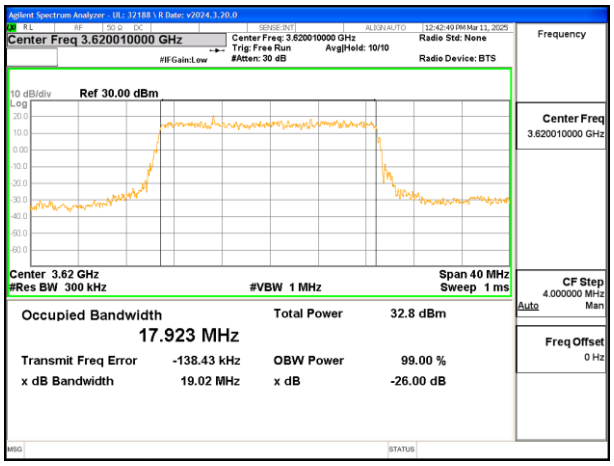
9.1.2. 5G NR n48 SISO



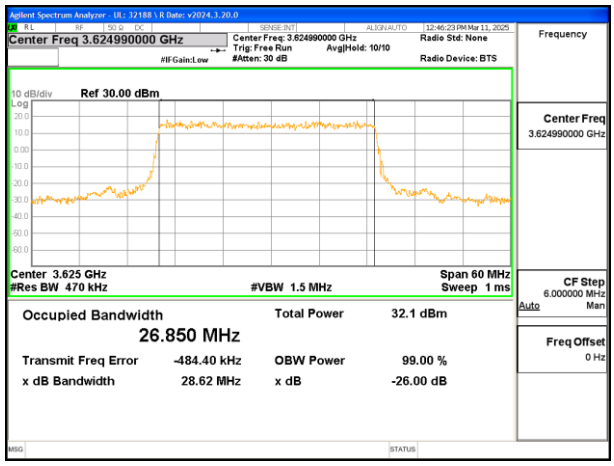
5G NR n48 10MHz BPSK Middle Channel RB24-0



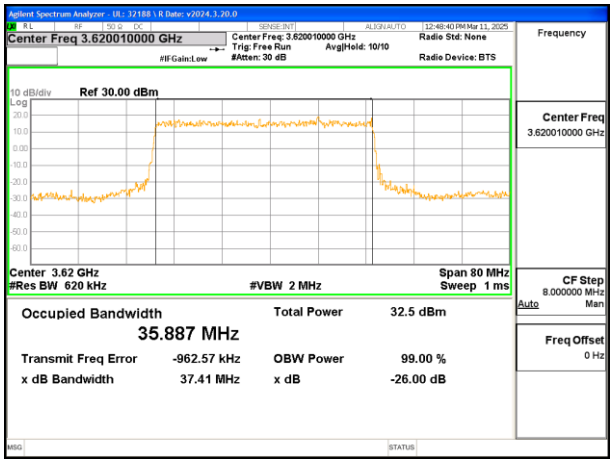
5G NR n48 15MHz BPSK Middle Channel RB36-0



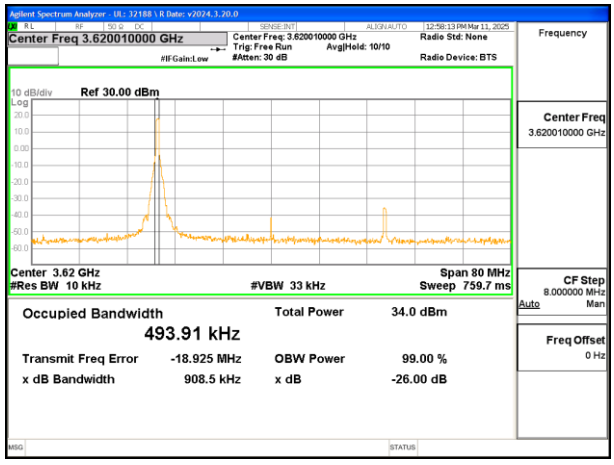
5G NR n48 20MHz BPSK Middle Channel RB50-0



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

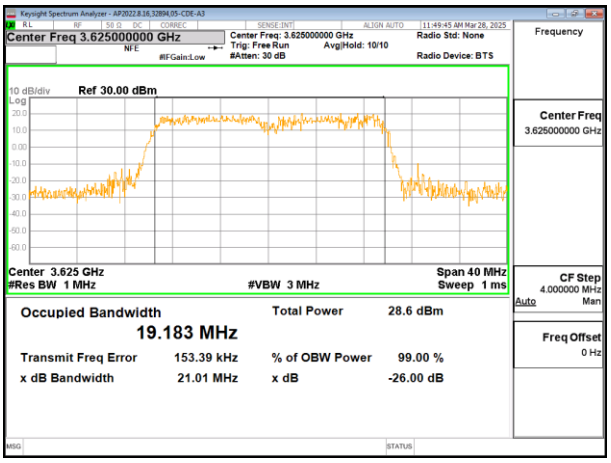


5G NR n48 40MHz BPSK Middle Channel RB100-0



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

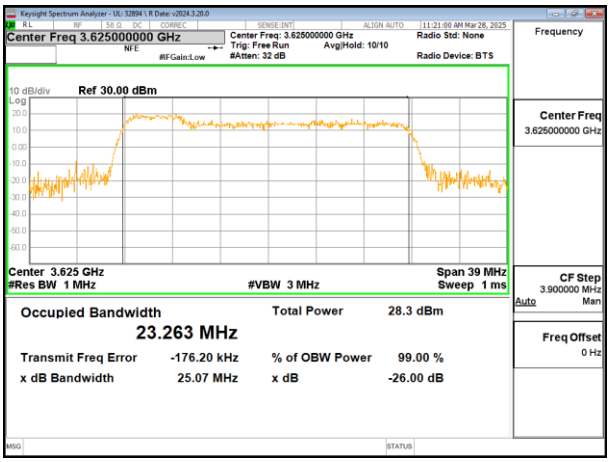
9.1.3. LTE ULCA BAND 48B SISO



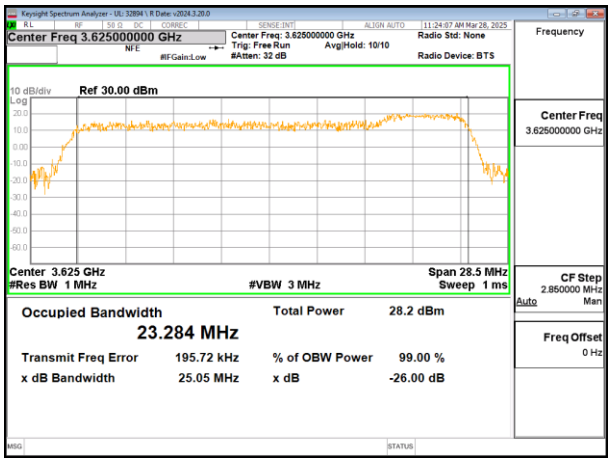
LTE ULCA B48B 10MHz + 10MHz QPSK RB50-0 + RB50-0

Intentionally Blank

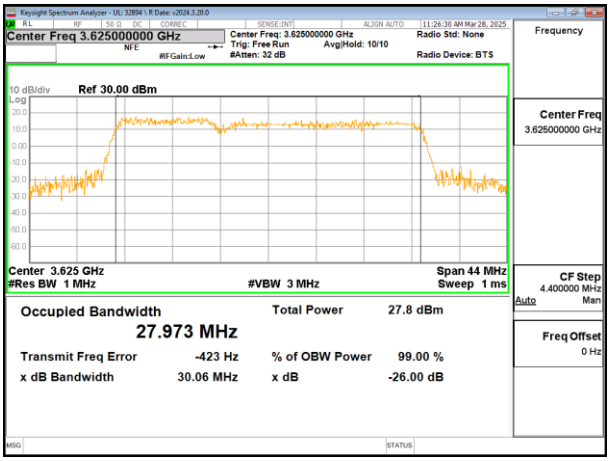
9.1.4. LTE ULCA BAND 48C SISO



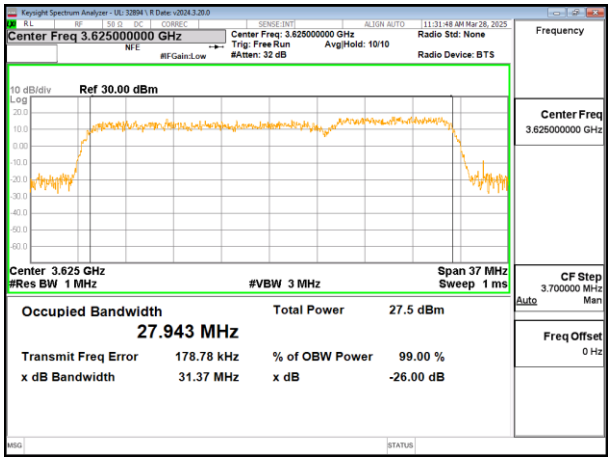
LTE ULCA B48C 5MHz + 20MHz QPSK RB25-0 + RB100-0



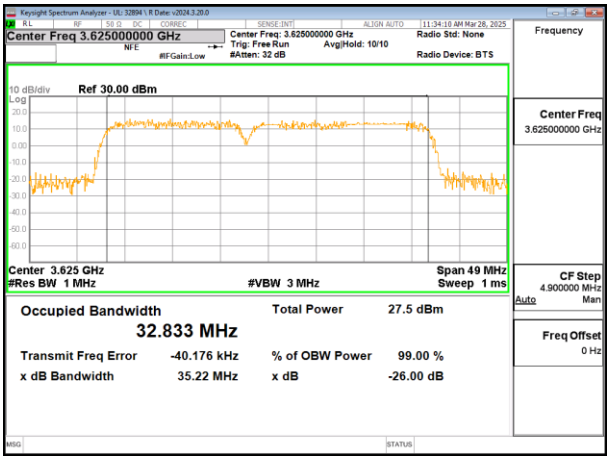
LTE ULCA B48C 20MHz + 5MHz QPSK RB100-0 + RB25-0



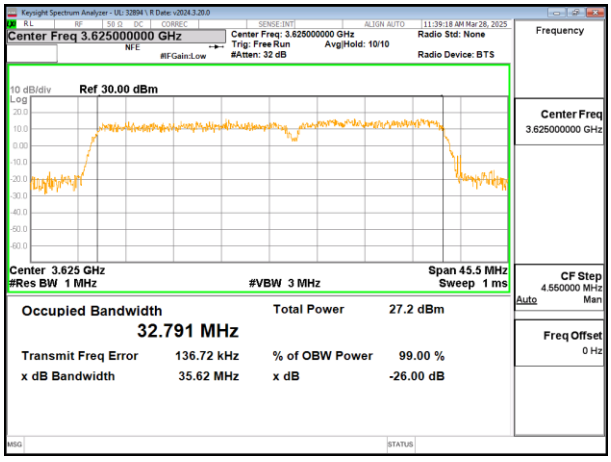
LTE ULCA B48C 10MHz + 20MHz QPSK RB50-0 + RB100-0



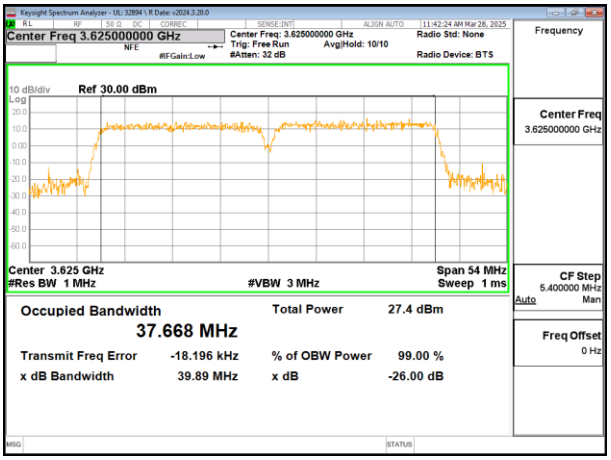
LTE ULCA B48C 20MHz + 10MHz QPSK RB100-0 + RB50-0



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



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

 LTE ULCA B48C 20MHz + 20MHz QPSK RB100-0 + RB100-0	Intentionally Blank

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 −40dBm/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.

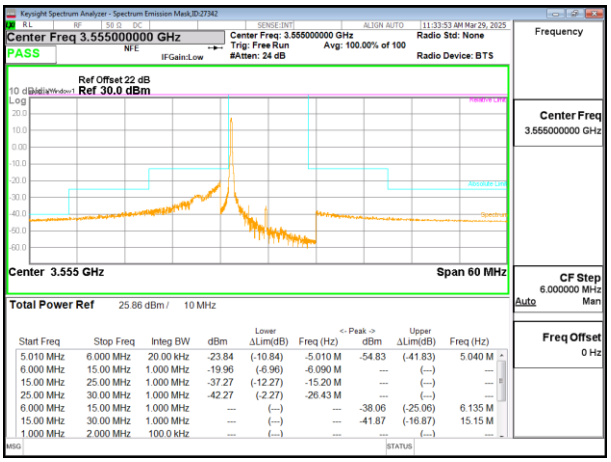
(iii) Compliance with emission limits shall be demonstrated using either average (RMS)-detected or peak-detected power measurement techniques.

(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 −40dBm/MHz.

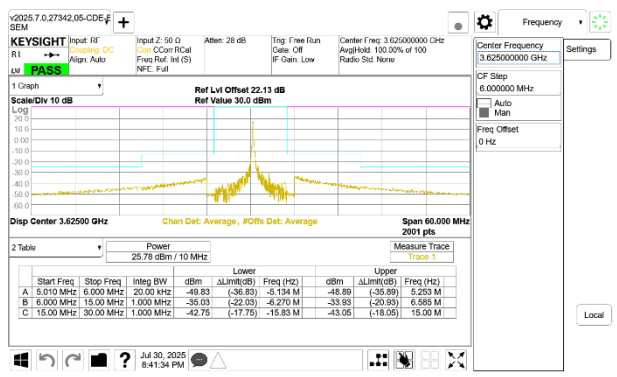
For MIMO modes are made using the measure and sum the spectra method E3)a)ii) / E)2)a) from KDB 662911 D01. The measurements for each antenna are stored in separate traces (i.e. trace 1 and trace 2). The spectrum analyzer’s math function is used to perform a linear sum of powers of the two traces and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

RESULTS

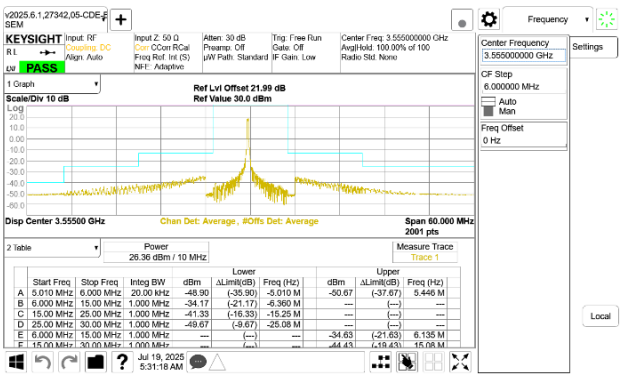
9.2.1. LTE BAND 48 SISO EMISSION MASK



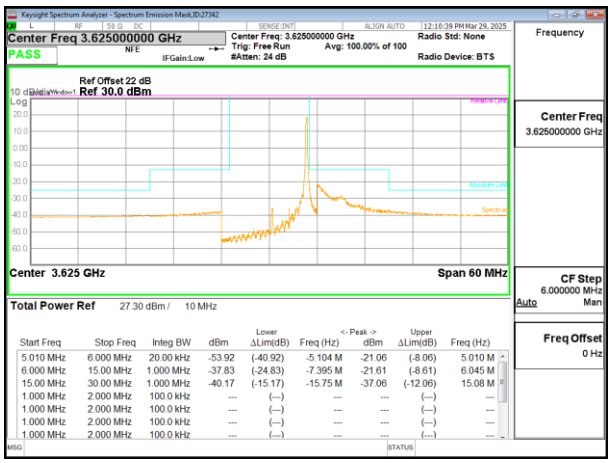
LTE B48 5MHz QPSK Low Channel RB1-0



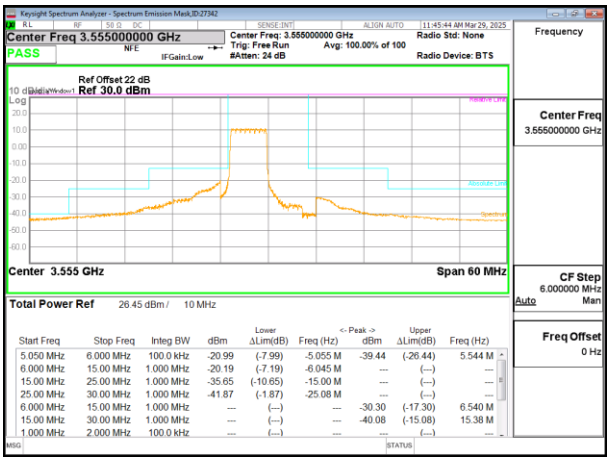
LTE B48 5MHz QPSK Middle Channel RB1-0 (3627.5MHz)



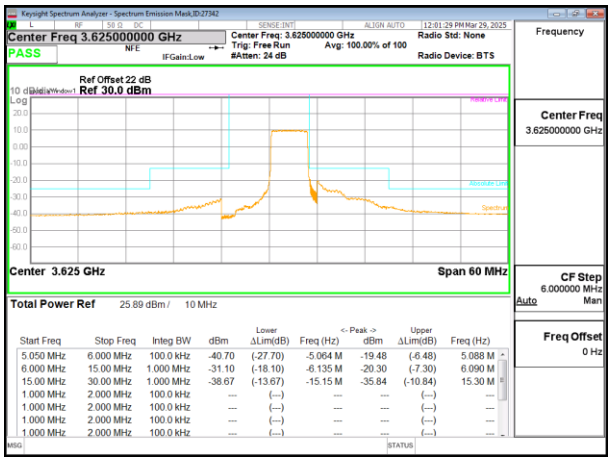
LTE B48 5MHz QPSK Low Channel RB1-24



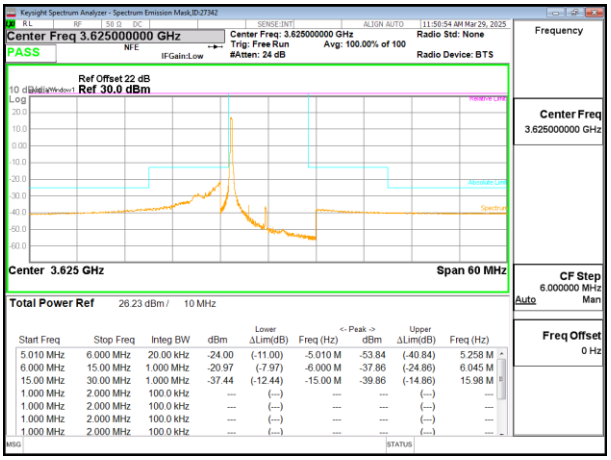
LTE B48 5MHz QPSK Middle Channel RB1-24 (3627.5MHz)



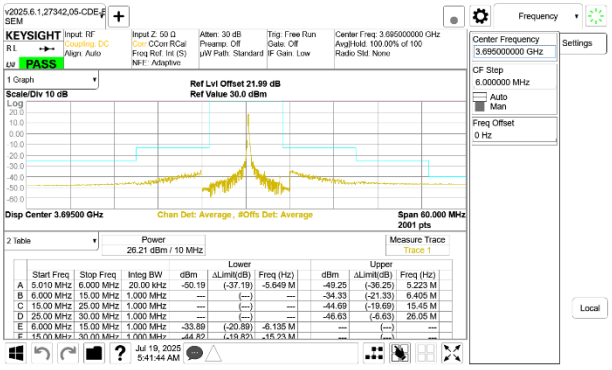
LTE B48 5MHz QPSK Low Channel RB25-0



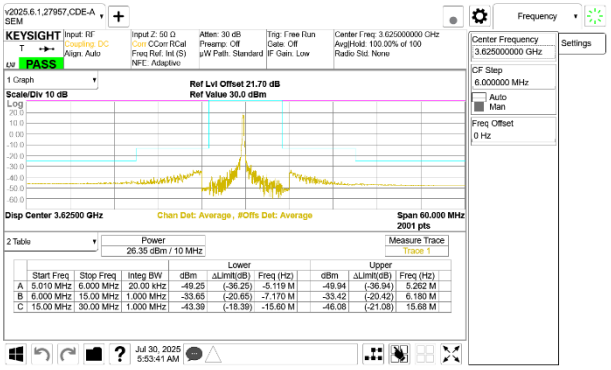
LTE B48 5MHz QPSK Middle Channel RB25-0 (3627.5MHz)



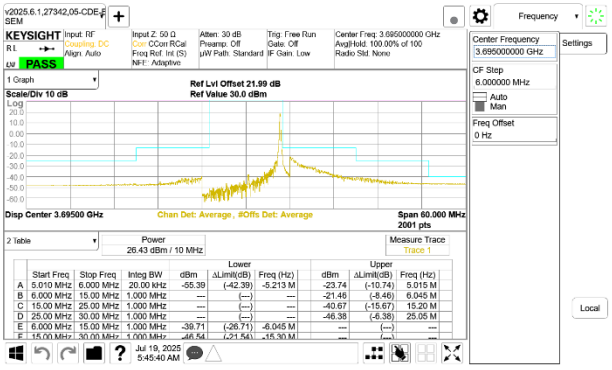
LTE B48 5MHz QPSK Middle Channel RB1-0 (3622.5MHz)



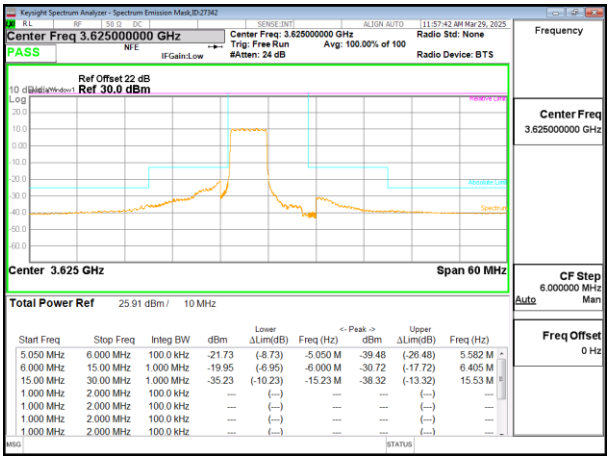
LTE B48 5MHz QPSK High Channel RB1-0



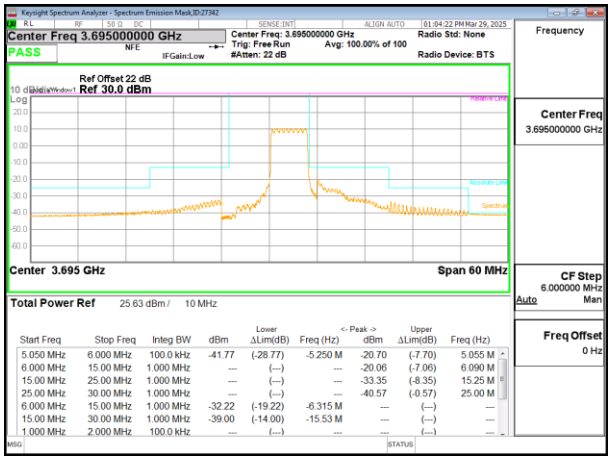
LTE B48 5MHz QPSK Middle Channel RB1-24 (3622.5MHz)



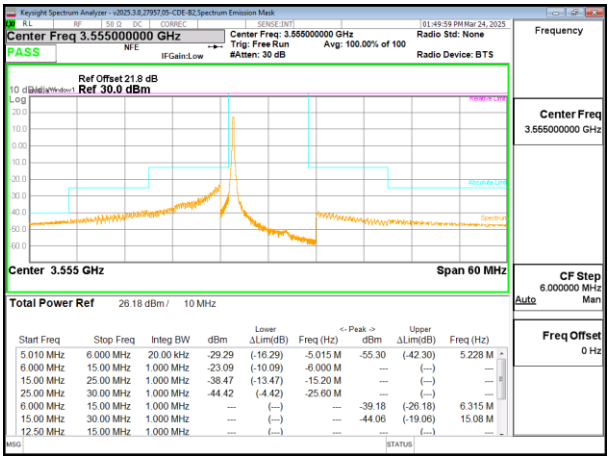
LTE B48 5MHz QPSK High Channel RB1-24



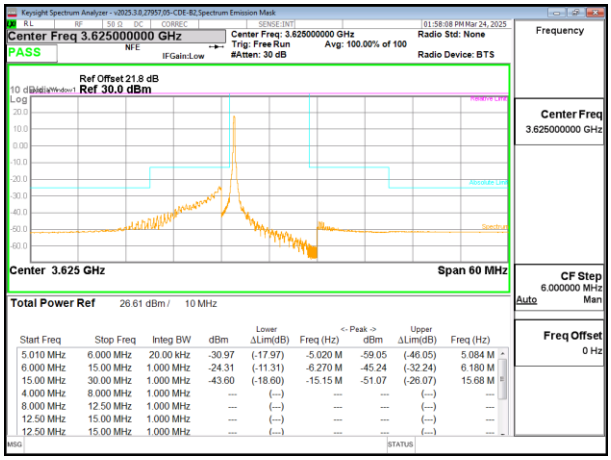
LTE B48 5MHz QPSK Middle Channel RB25-0 (3622.5MHz)



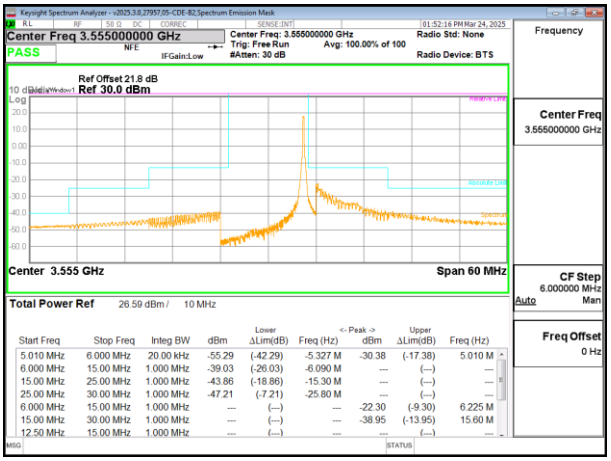
LTE B48 5MHz QPSK High Channel RB25-0



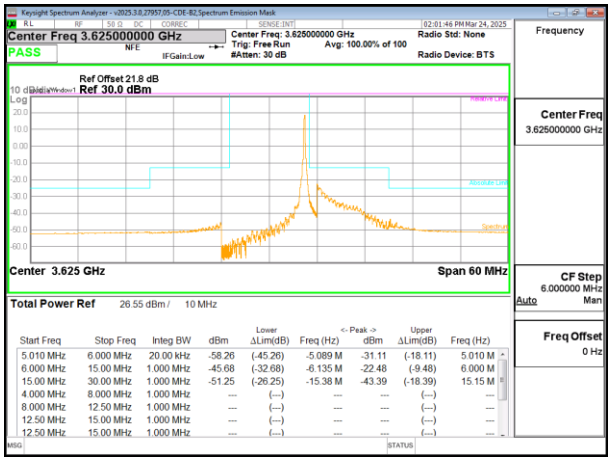
LTE B48 10MHz QPSK Low Channel RB1-0



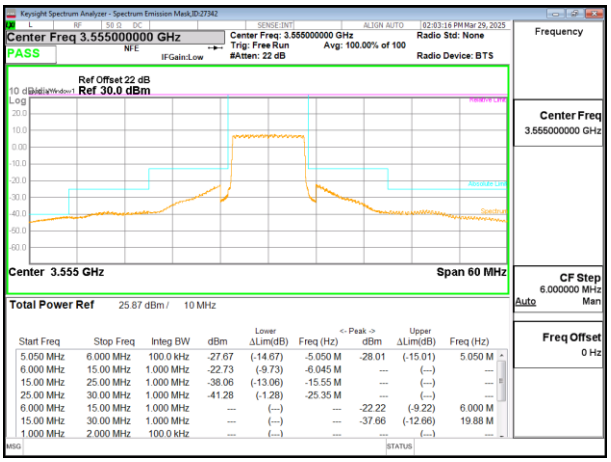
LTE B48 10MHz QPSK Middle Channel RB1-0



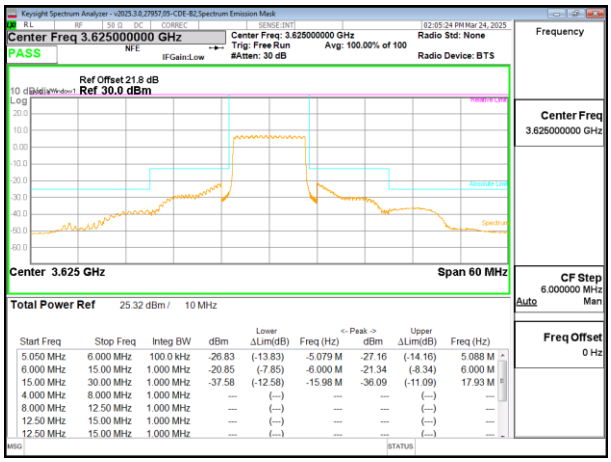
LTE B48 10MHz QPSK Low Channel RB1-49



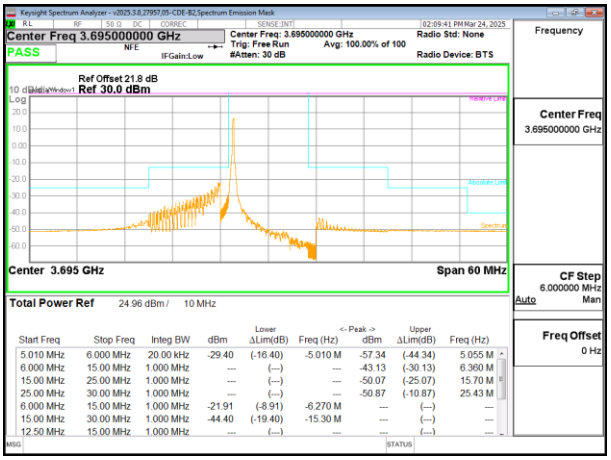
LTE B48 10MHz QPSK Middle Channel RB1-49



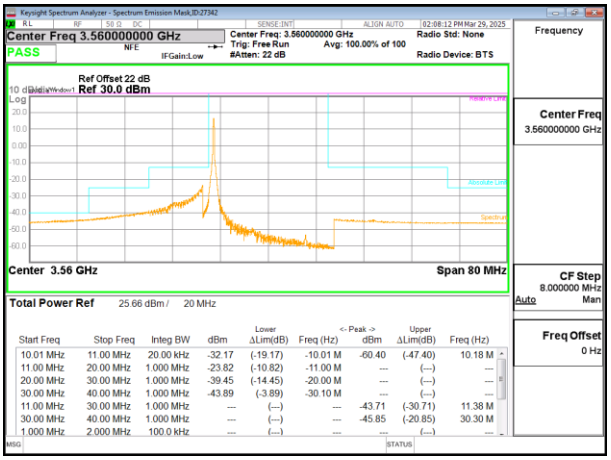
LTE B48 10MHz QPSK Low Channel RB50-0



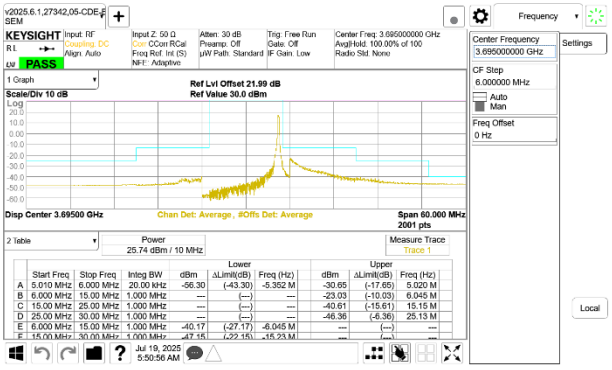
LTE B48 10MHz QPSK Middle Channel RB50-0



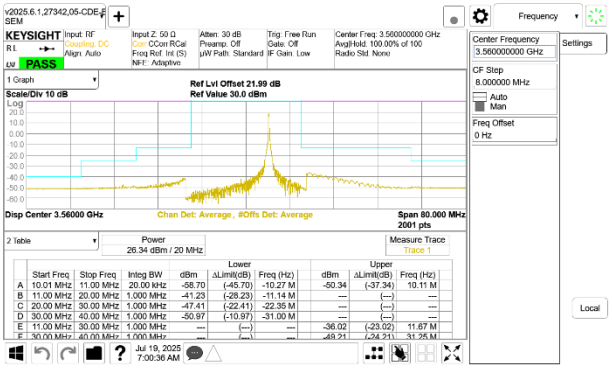
LTE B48 10MHz QPSK High Channel RB1-0



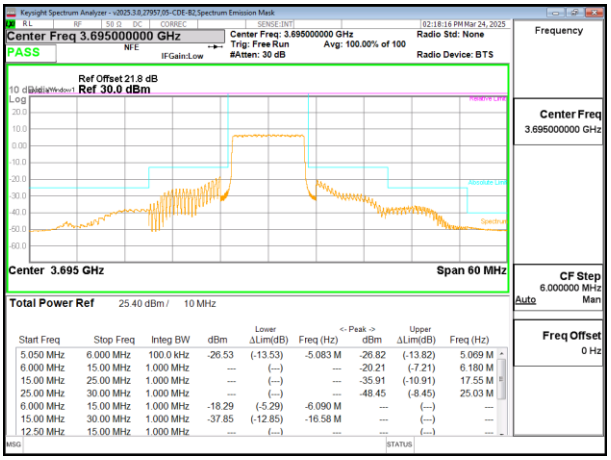
LTE B48 15MHz QPSK Low Channel RB1-0



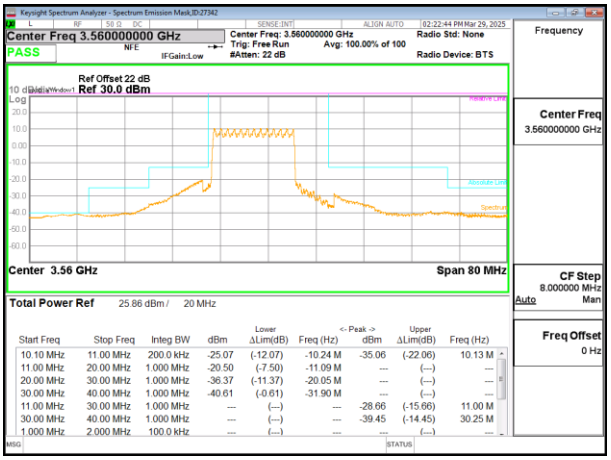
LTE B48 10MHz QPSK High Channel RB1-49



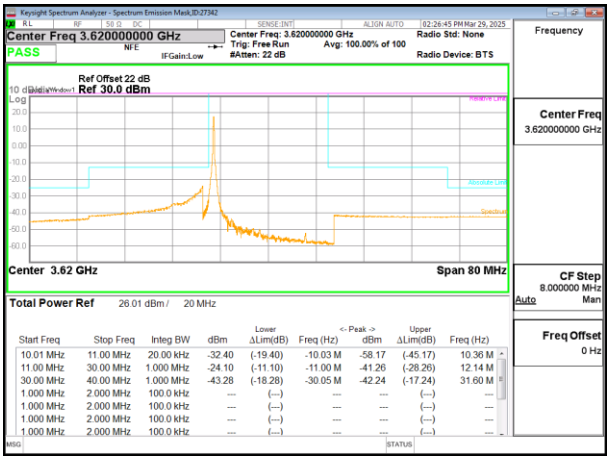
LTE B48 15MHz QPSK Low Channel RB1-74



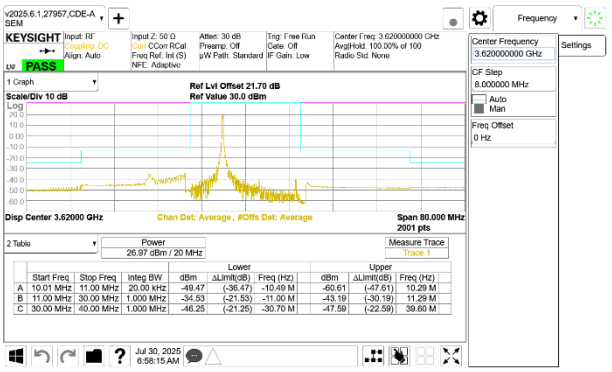
LTE B48 10MHz QPSK High Channel RB50-0



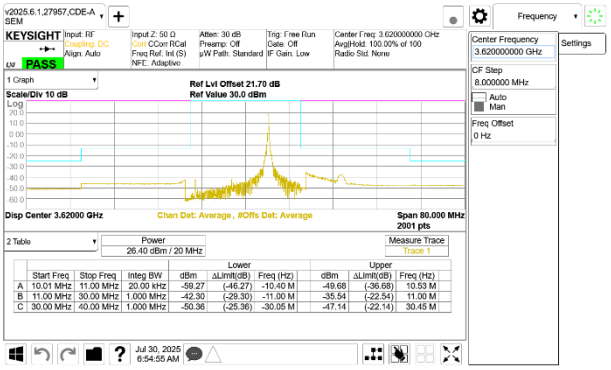
LTE B48 15MHz QPSK Low Channel RB75-0



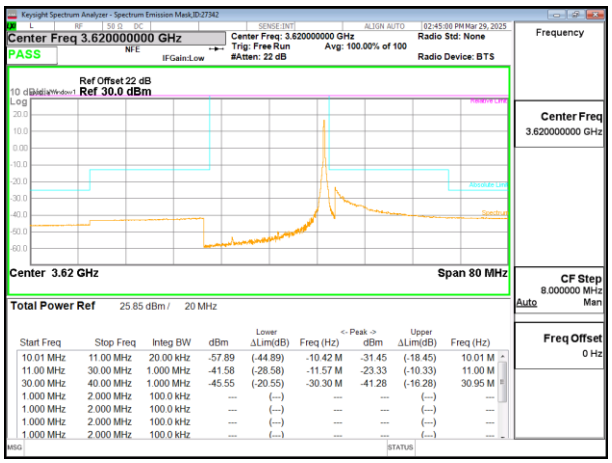
LTE B48 15MHz QPSK Middle Channel RB1-0 (3617.5MHz)



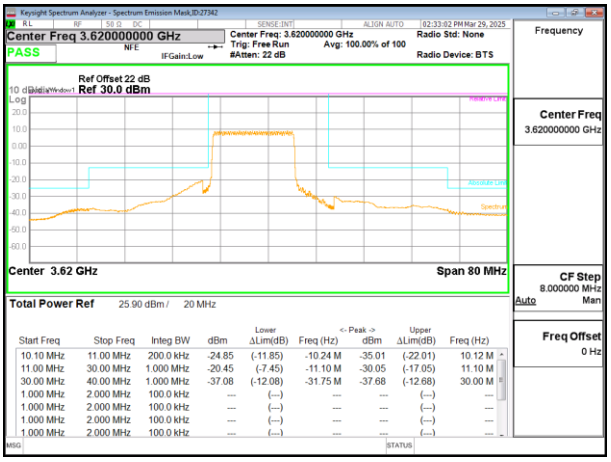
LTE B48 15MHz QPSK Middle Channel RB1-0 (3622.5MHz)



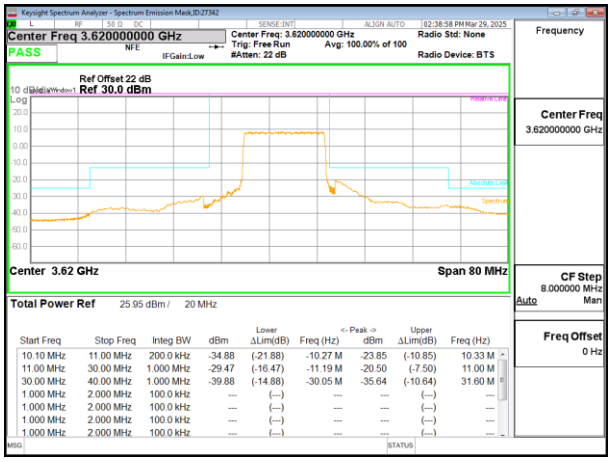
LTE B48 15MHz QPSK Middle Channel RB1-74 (3617.5MHz)



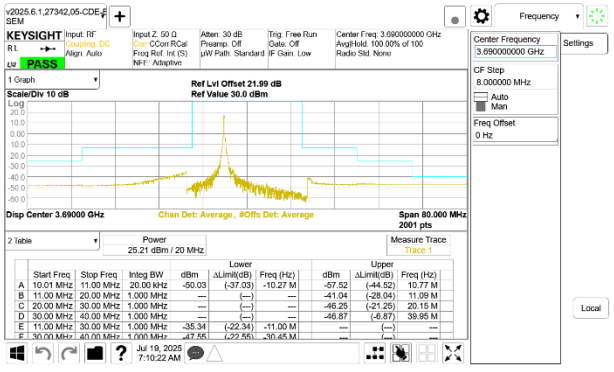
LTE B48 15MHz QPSK Middle Channel RB1-0 (3622.5MHz)



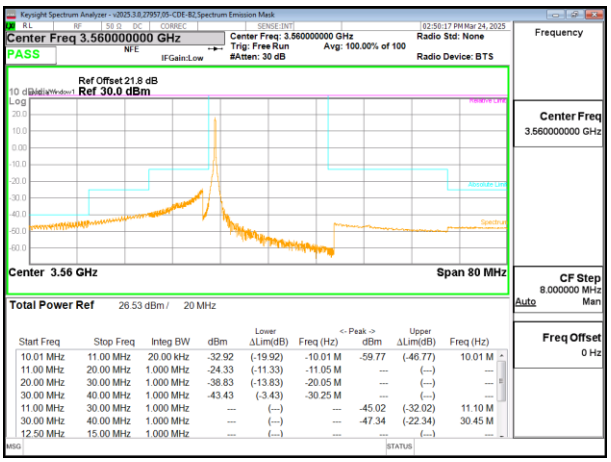
LTE B48 15MHz QPSK Middle Channel RB75-0 (3617.5MHz)



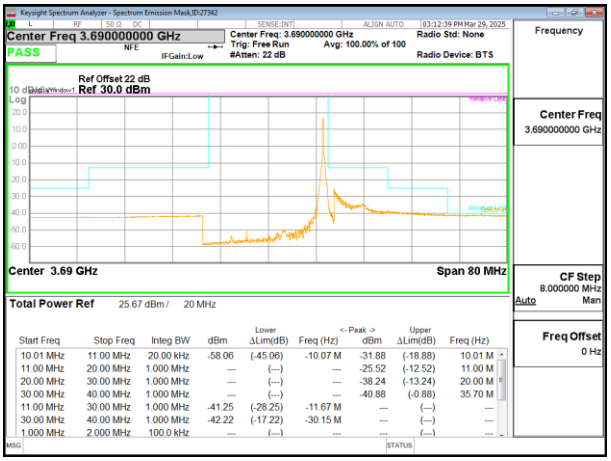
LTE B48 15MHz QPSK Middle Channel RB75-0 (3622.5MHz)



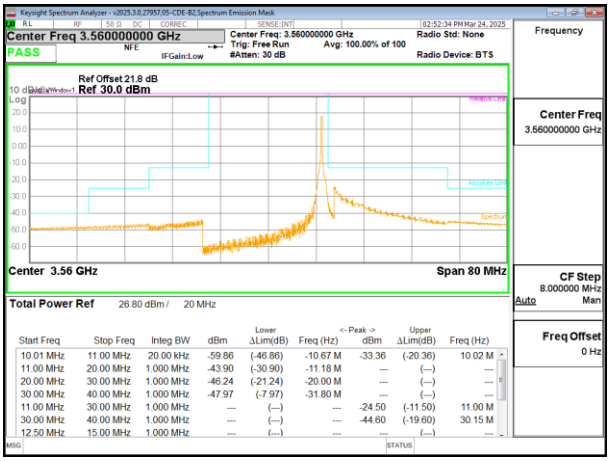
LTE B48 15MHz QPSK High Channel RB1-0



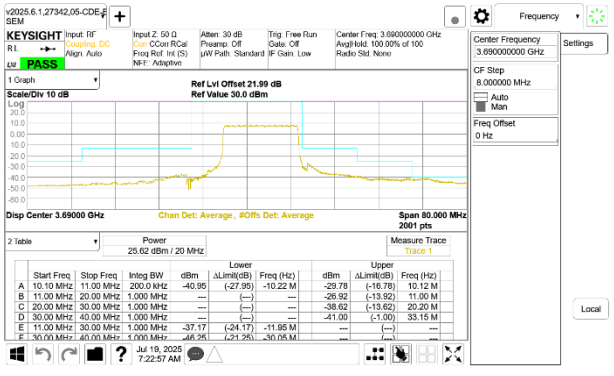
LTE B48 20MHz QPSK Low Channel RB1-0



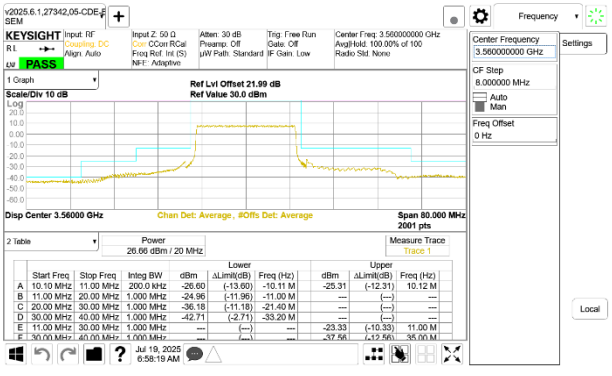
LTE B48 15MHz QPSK High Channel RB1-74



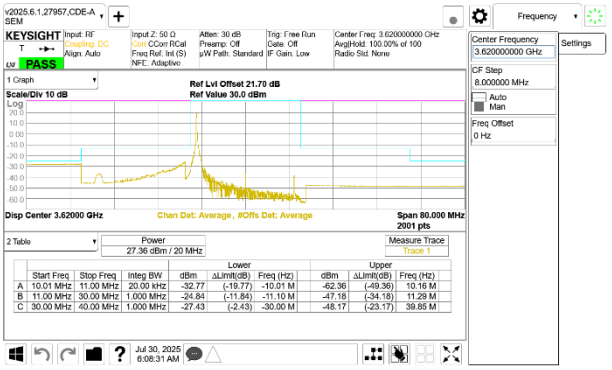
LTE B48 20MHz QPSK Low Channel RB1-99



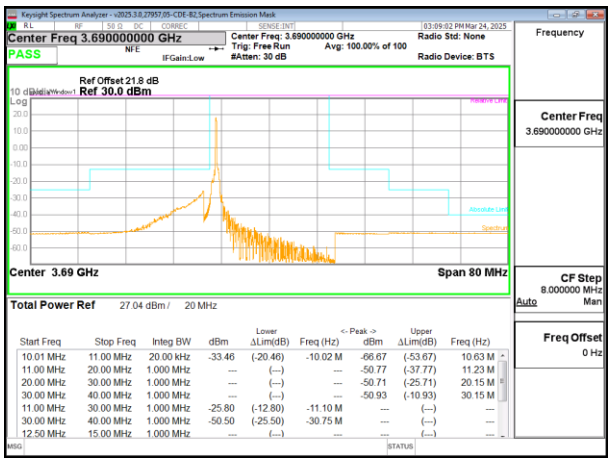
LTE B48 15MHz QPSK High Channel RB75-0



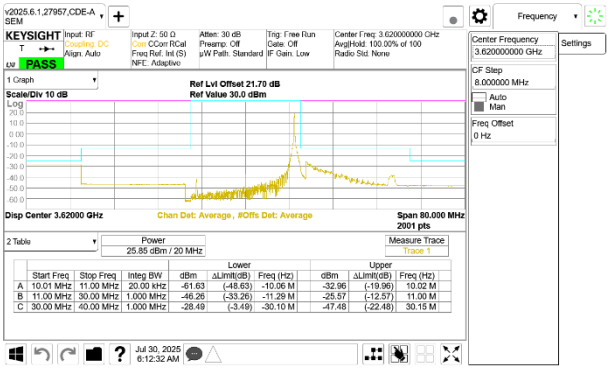
LTE B48 20MHz QPSK Low Channel RB100-0



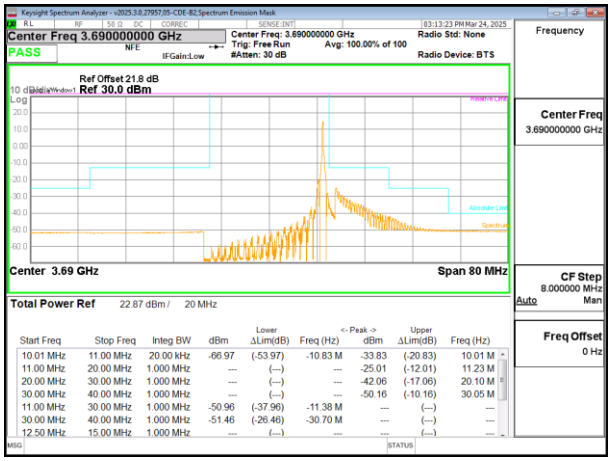
LTE B48 20MHz QPSK Middle Channel RB1-0



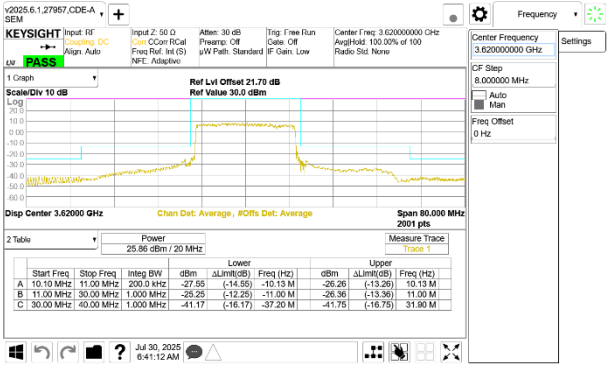
LTE B48 20MHz QPSK High Channel RB1-0



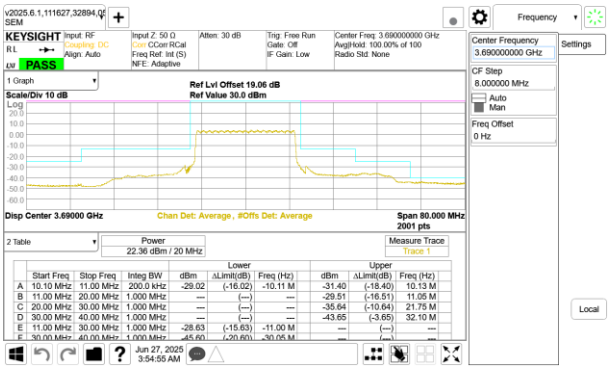
LTE B48 20MHz QPSK Middle Channel RB1-99



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)