

Element Materials Technology

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PART 96 MEASUREMENT REPORT

Applicant Name:

Apple Inc. One Apple Park Way Cupertino, CA 95014 United States

Date of Testing:

10/1/2023-4/4/2024 **Test Report Issue Date:** 4/4/2024 **Test Site/Location:** Element Materials Technology **Test Report Serial No.:** 1C2311270070-13.BCG

FCC ID: Applicant Name:

BCGA2926

Apple Inc.

Application Type: Model: EUT Type: FCC Classification: FCC Rule Part: Test Procedure(s): Certification A2926, A3007 Tablet Device Citizens Band End User Devices (CBE) 96 ANSI C63.26-2015, ANSI/TIA-603-E-2016, KDB 971168 D01 v03r01, KDB 940660 D01 v03, WINNF-TS-0122 v1.0.2

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

An Out

RJ Ortanez Executive Vice President

Prepared by: WKR0000006184

Reviewed by: WKR000005805



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						El	RP	En la clau
Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	OBW [MHz]	PAR at 0.1% [dB]	Max. Power	Max. Power	Emission Designator
			Kange [whz]		[ub]	[W]	[dBm]	Designator
		QPSK	3552.5 - 3697.5	4.5218	4.97	0.178	22.50	4M52G7W
	5 MHz	16QAM	3552.5 - 3697.5	4.5317	6.36	0.142	21.52	4M53D7W
		64QAM	3552.5 - 3697.5	4.5136	7.01	0.113	20.52	4M51D7W
		256QAM	3552.5 - 3697.5	4.5101	6.97	0.058	17.61	4M51D7W
		QPSK	3555.0 - 3695.0	9.0265	5.14	0.178	22.50	9M03G7W
	10 MHz	16QAM	3555.0 - 3695.0	9.0281	6.36	0.141	21.48	9M03D7W
		64QAM	3555.0 - 3695.0	9.0401	6.95	0.113	20.53	9M04D7W
LTE Band 48		256QAM QPSK	3555.0 - 3695.0	9.0294	6.93 5.30	0.058	17.61	9M03D7W
		16QAM	3557.5 - 3692.5 3557.5 - 3692.5	13.5000 13.4930	5.39 6.46	0.178	22.50	13M5G7W 13M5D7W
	15 MHz	64QAM	3557.5 - 3692.5	13.4930	7.20	0.142	21.53 20.54	13M5D7W
		256QAM	3557.5 - 3692.5	13.4890	7.02	0.058	17.64	13M5D7W
		QPSK	3560.0 - 3690.0	18.0190	5.33	0.177	22.49	18M0G7W
		16QAM	3560.0 - 3690.0	18.0150	6.53	0.142	21.53	18M0D7W
	20 MHz	64QAM	3560.0 - 3690.0	18.0220	7.37	0.112	20.49	18M0D7W
		256QAM	3560.0 - 3690.0	17.9420	7.13	0.058	17.62	17M9D7W
		QPSK	3562.5 - 3687.5	23.3260	-	0.178	22.50	23M3G7W
		16QAM	3562.5 - 3687.5	23.2660	-	0.113	20.54	23M3D7W
	20 + 5 MHz	64QAM	3562.5 - 3687.5	23.2690	-	0.077	18.88	23M3D7W
		256QAM	3562.5 - 3687.5	23.2990	-	0.044	16.45	23M3D7W
		QPSK	3565.0 - 3685.0	28.1580	-	0.178	22.50	28M2G7W
	20 + 10 MHz	16QAM	3565.0 - 3685.0	27.9920	-	0.102	20.08	28M0D7W
	20 + 10 MHZ	64QAM	3565.0 - 3685.0	27.7720	-	0.080	19.04	27M8D7W
LTE ULCA		256QAM	3565.0 - 3685.0	28.1020	-	0.044	16.44	28M1D7W
Band 48	20 + 15 MHz	QPSK	3567.5 - 3682.5	32.7790	-	0.178	22.50	32M8G7W
		16QAM	3567.5 - 3682.5	32.9580	-	0.110	20.42	33M0D7W
		64QAM	3567.5 - 3682.5	32.7820	-	0.085	19.29	32M8D7W
		256QAM	3567.5 - 3682.5	32.7500	-	0.040	16.03	32M8D7W
		QPSK	3570.0 - 3680.0	37.7280	-	0.175	22.44	37M7G7W
	20 + 20 MHz	16QAM	3570.0 - 3680.0	37.6910	-	0.098	19.92	37M7D7W
	20 / 20 ////2	64QAM	3570.0 - 3680.0	37.5870	-	0.086	19.37	37M6D7W
		256QAM	3570.0 - 3680.0	37.6600	-	0.039	15.92	37M7D7W
		π/2 BPSK	3555.0 - 3695.0	8.5996	4.13	0.178	22.50	8M60G7W
		QPSK 160AM	3555.0 - 3695.0	8.9461	5.48	0.178	22.50	8M95G7W
	10 MHz	16QAM 64QAM	3555.0 - 3695.0 3555.0 - 3695.0	8.9916 8.9781	6.09 6.60	0.142	21.53 20.54	8M99D7W 8M98D7W
		256QAM	3555.0 - 3695.0	8.9225	6.68	0.058	17.64	8M92D7W
		π/2 BPSK	3557.5 - 3692.5	12.8830	3.88	0.178	22.50	12M9G7W
		QPSK	3557.5 - 3692.5	12.9580	5.24	0.178	22.50	13M0G7W
	15 MHz	16QAM	3557.5 - 3692.5	12.9310	6.10	0.140	21.47	12M9D7W
		64QAM	3557.5 - 3692.5	12.8970	6.55	0.113	20.54	12M9D7W
		256QAM	3557.5 - 3692.5	12.9120	6.51	0.058	17.62	12M9D7W
		π/2 BPSK	3560.0 - 3690.0	17.8840	3.82	0.178	22.50	17M9G7W
		QPSK	3560.0 - 3690.0	18.2190	5.25	0.177	22.47	18M2G7W
NR Band n48	20 MHz	16QAM	3560.0 - 3690.0	18.2710	6.12	0.142	21.52	18M3D7W
		64QAM	3560.0 - 3690.0	18.1790	6.32	0.112	20.50	18M2D7W
		256QAM π/2 BPSK	3560.0 - 3690.0 3565.0 - 3685.0	18.2370 26.8900	6.59 4.17	0.058	17.65 22.50	18M2D7W 26M9G7W
		QPSK	3565.0 - 3685.0	27.9460	5.15	0.178	22.50	27M9G7W
	30 MHz	16QAM	3565.0 - 3685.0	27.8980	6.05	0.142	21.51	27M9D7W
		64QAM	3565.0 - 3685.0	27.9350	6.35	0.113	20.52	27M9D7W
		256QAM	3565.0 - 3685.0	27.8430	6.39	0.058	17.62	27M8D7W
		π/2 BPSK	3570.0 - 3680.0	35.8370	4.05	0.178	22.50	35M8G7W
		QPSK	3570.0 - 3680.0	37.9420	5.03	0.178	22.50	37M9G7W
	40 MHz	16QAM	3570.0 - 3680.0	38.1290	6.07	0.142	21.52	38M1D7W
		64QAM	3570.0 - 3680.0	38.0090	6.34	0.113	20.52	38M0D7W
		256QAM	3570.0 - 3680.0	37.8250	6.33	0.058	17.61	37M8D7W

EUT Overview

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1.0 INTRODUCTION

1.1 Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission.

1.2 Element Materials Technology Test Location

These measurement tests were conducted at the Element Materials Technology facility located at 18855 Adams Court, Morgan Hill, CA 95037. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014 and KDB 414788 D01 v01r01.

1.3 Test Facility / Accreditations

Measurements were performed at Element Materials Technology located in Morgan Hill, CA 95037, U.S.A.

- Element Materials Technology Washington DC LLC is a CBRS Alliance (OnGo) Approved Test Lab
- Element Materials Technology Washington DC LLC is a WInnForum Approved Test Lab
- Element Materials Technology is an ISO 17025-2017 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.02 for Specific Absorption Rate (SAR), Hearing Aid Compatibility (HAC) testing, where applicable, and Electromagnetic Compatibility (EMC) testing for FCC and Innovation, Science, and Economic Development Canada rules.
- Element Washington DC LLC TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC 17065-2012 by A2LA (Certificate number 2041.03) in all scopes of FCC Rules and ISED Standards (RSS).
- Element Materials Technology facility is a registered (22831) test laboratory with the site description on file with ISED.
- Element Washington DC LLC is a Recognized U.S. Certification Assessment Body (CAB # US0110) for ISED Canada as designated by NIST under the U.S. and Canada Mutal Recognition Agreements (MRAs).

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2.0 **PRODUCT INFORMATION**

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Apple Table Device FCC ID:BCGA2926**. The test data contained in this report pertains only to the emissions due to the EUT's LTE Band 48 and NR FR1 n48 operation in the CBRS band. Per FCC Part 96, this device is evaluated under Citizens Band End User Devices (CBE).

Test Device Serial No.: H440XJV4X5, W2G6PFDHG7, P7TX0QQKCQ, DLXH190002M000063A

2.2 Device Capabilities

This device contains the following capabilities:

850/1700/1900 WCDMA/HSPA, Multi-band LTE, 5G NR (FR1), 802.11b/g/n/ax WLAN, 802.11a/n/ac/ax UNII, 802.11a/ax WIFI 6E, 802.15.4, Bluetooth (1x, EDR, LE1M, LE2M, HDR4, HDR8), NB UNII (1x, HDR4, HDR8), WPT, 802.15.4

This device supports BT Beamforming

Measurements for LTE-Band48 and ULCA CA_48C were performed with NS27 for LTE and NS10 for ULCA for all antennas.

This device supports simultaneous transmission operations, which allows for multiple transmitters to transmit simultaneously on the same antenna. The table below shows all configurations possible.

		Wifi 2GHz	Bluetooth	Thread	Wifi 5GHz	Wifi 6GHz	NB UNII	LTE/F	R1 NR
Antenna	Simultaneous Tx Config	802.11 b/g/n/ax	BDR, EDR, HDR4/8, LE1/2M	802.15.4	802.11 a/n/ac/ax	802.11 a/ax	BDR, HDR4/8	MB/HB	UHB
2a	Config 1	X	\checkmark	X	\checkmark	X	X	X	X
2a	Config 2	X	\checkmark	X	X	\checkmark	X	X	X
2a	Config 3	\checkmark	X	X	X	X	\checkmark	X	X
2a	Config 4	X	X	\checkmark	\checkmark	X	X	X	X
2a	Config 5	X	X	\checkmark	X	\checkmark	X	X	X
4a	Config 6	X	\checkmark	X	√	X	X	X	X
4a	Config 7	X	\checkmark	X	X	\checkmark	X	X	X
4a	Config 8	\checkmark	X	X	X	X	\checkmark	X	X
4a	Config 9	X	X	\checkmark	\checkmark	X	X	X	X
4a	Config 10	X	X	✓	X	√	X	X	X

Table 2-1. Simultaneous Transmission Configurations

 \checkmark = Support; * = Not Support

Note:

All the above simultaneous transmission configurations have been tested and the worst case configuration was found to be Config 1 and reported in RF Bluetooth and RF UNII reports.

Specific 2.4GHz Wi-Fi antenna that can only transmit simultaneously with 2.4GHz Bluetooth antenna is listed in the SAR test report. For BT (2.4GHz) in connected mode and Wi-Fi (2.4GHz) - Wi-Fi max power will not exceed minimum of (13.5dBm, SAR max cap, Reg max cap) power. For BT (2.4GHz) in disconnected mode and Wi-Fi (2.4GHz) - BT will be using iPA only and Wi-Fi max power will not exceed minimum of (SAR max cap, Reg max cap) power. Bluetooth can simultaneously transmit with IEEE 802.11a/n/ac/ax 5/6 GHz on separate antenna.

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2.3 Antenna Description

Band	Antenna Gain [dBi]				
	Antenna 3	Antenna 1	Antenna 4b	Antenna 2b	
LTE Band 48 NR Band n48	0.40	0.20	-0.10	-1.90	

The following antenna gains provided by the manufacturer were used for testing.

Table 2-2. Highest Antenna Gain

2.4 Test Support Equipment

7	NR FR1 n48 Access Point	Model:	AV1901	S/N:	F0887410B2FA
6	LTE B48 Access Point	Model:	AV1500	S/N:	E2C86B00EBE0
5	DC Power Supply	Model:	KPS3010D	S/N:	N/A
4	Apple Pencil	Model:	A2538	S/N:	KJ26TCFXJW
	wy ne naupter	modeli	112505	3/11.	
•	w/ AC Adapter	Model:	A2305	S/N:	C4H95160004PF4F4V
3	USB-C Cable	Model:	A246C	S/N:	DWH80115BK826GV19
-				-,	
2	Apple USB-C Cable	Model:	Spartan	S/N:	GXK1336018XKTR024
	w/AC/DC Adapter	Wodel.	A2100	5/14.	C411042703210F101000A0
_	w/AC/DC Adapter	Model:	A2166	S/N:	C4H042705ZNPM0WA6
1	Apple MacBook Pro	Model:	A2141	S/N:	C02H604EQ05D

 Table 2-3. Test Support Equipment

2.5 Test Configuration

The EUT was tested per the guidance of ANSI C63.26 2015, TIA-603-E-2016 and KDB 971168 D01 v03r01. See Section 7.0 of this test report for a description of the radiated and antenna port conducted emissions tests.

For emissions from 1GHz – 18GHz, low, mid, and high channels were tested with highest power and worst case configuration. The emissions below 1GHz and above 18GHz were tested with the highest transmitting power and the worst case channel.

The EUT was manipulated through three orthogonal planes of X-orientation (flatbed), Y-orientation (landscape), and Z-orientation (portrait) during the testing. Only the worst case emissions were reported in this test report.

2.6 Software and Firmware

The test was conducted with firmware version 21E8197 installed on the EUT.

2.7 EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added, and no modifications were made during testing.

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3.0 DESCRIPTION OF TESTS

3.1 Measurement Procedure

The measurement procedures described in the document titled "American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services" (ANSI C63.26-2015, TIA-603-E-2016) and "Procedures for Compliance Measurement of the Fundamental Emission Power of Licensed Wideband (> 1 MHz) Digital Transmission Systems" (KDB 971168 D01 v03r01) were used in the measurement of the EUT.

Deviation from Measurement Procedure......None

3.2 Radiated Spurious Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. The test site inside the chamber is a 6m x 5.2m elliptical, obstruction-free area in accordance with Figure 5.7 of Clause 5 in ANSI C63.4-2014. Absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections for measurements above 1GHz. For measurements below 1GHz, the absorbers are removed. A raised turntable is used for radiated measurement. The turn table is a continuously rotatable, remote-controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm tall test table made of Styrodur is placed on top of the turn table. A Styrodur pedestal is placed on top of the test table to bring the total table height to 1.5m.

The equipment under test was transmitting while connected to its integral antenna and is placed on a turntable 3 meters from the receive antenna. The receive antenna height is adjusted between 1 and 4 meter height, the turntable is rotated through 360 degrees, and the EUT is manipulated through all orthogonal planes representative of its typical use to achieve the highest reading on the receive spectrum analyzer.

For radiated spurious emissions measurements and calculations, conversion method is used per the formulas in KDB 971168 Section 5.8.4. Field Strength (EIRP) is calculated using the following formulas:

E[dBµV/m] = Measured amplitude level[dBm] + 107 + Cable Loss[dB] + Antenna Factor[dB/m]

And

 $EIRP_{[dBm]} = E_{[dB\mu V/m]} + 20logD - 104.8$; where D is the measurement distance in meters.

All radiated measurements are performed in a chamber that meets the site requirements per ANSI C63.4-2014.

Per KDB 414788 D01 v01r01, radiated emission test sites other than open-field test sites (e.g., shielded anechoic chambers), may be employed for emission measurements below 30MHz if characterized so that the measurements correspond to those obtained at an open-field test site. To determine test site equivalency, a reference sample transmitting at 149kHz was measured on an open field test site (asphalt with no ground plane) and then measured in the 3m semi-anechoic chamber. A calibrated 60cm loop antenna was used while the reference device was rotated through the X, Y and Z axis in order to capture the worst case level. A maximum deviation of 2.77dB at 149kHz was measured when comparing the 3 meter semi-anechoic chamber to the open field site.

Radiated spurious emission levels are investigated with the receive antenna horizontally and vertically polarized per ANSI C63.26-2015 and TIA-603-E-2016.

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4.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.23-2012. All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95% level of confidence. The measurement uncertainty shown below meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Contribution	Expanded Uncertainty (±dB)
Conducted Bench Top Measurements	2.07
Radiated Disturbance (<30MHz)	4.12
Radiated Disturbance (30MHz-1GHz)	4.85
Radiated Disturbance (1-18GHz)	5.08
Radiated Disturbance (>18GHz)	4.59

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5.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST). Measurements antennas used during testing were calibrated in accordance to the requirements of ANSI C63.5-2017.

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent Technologies	N9030A	3Hz-44GHz PXA Signal Analyzer	6/21/2023	Annual	6/21/2024	MY49430244
ESPEC	SU-241	Tabletop Temperature Chamber	11/17/2023	Annual	11/17/2024	92009574
ETS-Lindgren	3117	Double Ridged Guide Antenna (1-18 GHz)	3/30/2023	Annual	3/30/2024	00218555
Keysight Technology	N9040B	UXA Signal Analyzer	11/5/2023	Annual	11/5/2024	MY57213068
Rohde & Schwarz	TS-PR18	Pre-Amplifier (1GHz - 18GHz)	8/31/2023	Annual	8/31/2024	100052
Rohde & Schwarz	FSV40	Signal Analyzer (10Hz-40GHz)	5/11/2023	Annual	5/11/2024	101619
Rohde & Schwarz	ESW44	EMI Test Receiver	6/6/2023	Annual	6/6/2024	101668
Rohde & Schwarz	TS-PR8	Pre-Amplifier (30MHz - 8GHz)	6/22/2023	Annual	6/22/2024	102356
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	11/30/2023	Annual	11/30/2024	161616
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	12/27/2023	Annual	12/27/2024	164715
Rohde & Schwarz	TS-PR1840	Pre-Amplifier (18GHz - 40GHz)	6/2/2023	Annual	6/2/2024	100050
Rohde & Schwarz	HFH2-Z2	Loop Antenna	5/1/2023	Annual	5/1/2024	100519
Rohde & Schwarz	FSW43	Signal Analyzer (2Hz-43.5GHz)	7/13/2023	Annual	7/13/2024	101261
Schwarzbeck	VULB 9162	Bilog Antenna (30MHz - 6GHz)	4/17/2023	Annual	4/17/2024	00304

Table 5-1. Test Equipment

Notes:

1. For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.

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6.0 SAMPLE CALCULATIONS

Emission Designator

π/2 BPSK / QPSK Modulation

Emission Designator = 8M62G7W LTE BW = 8.62 MHz G = Phase Modulation

7 = Quantized/Digital Info

W = Combination of Any

QAM Modulation

Emission Designator = 8M45D7W

LTE BW = 8.45 MHz D = Amplitude/Angle Modulated 7 = Quantized/Digital Info W = Combination of Any

Spurious Radiated Emission

Example: Spurious emission at 3700.40 MHz

The receive spectrum analyzer reading at 3 meters with the EUT on the turntable was -81.0 dBm. The gain of the substituted antenna is 8.1 dBi. The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of -81.0 dBm on the spectrum analyzer. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 3700.40 MHz. So 6.1 dB is added to the signal generator reading of -30.9 dBm yielding -24.80 dBm. The fundamental EIRP was 25.50 dBm so this harmonic was 25.50 dBm -(-24.80) = 50.3 dBc.

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7.0 TEST RESULTS

7.1 Summary

Company Name:	Apple Inc.
FCC ID:	BCGA2926
FCC Classification:	Citizens Band End User Devices (CBE)
Mode(s):	NR/LTE/ULCA

Test Condition	Test Description	FCC Part Section(s)	Test Limit	Test Result	Reference
	Occupied Bandwidth	2.1049	N/A	N/A	Section 7.2
Emissions Transmitter C Power Peak-Average Frequency St End User Dev Requirements	Conducted Band Edge / Spurious Emissions	2.1051, 96.41(e)(ii)	-13 dBm/MHz at frequencies within 0-B MHz of channel edge (where B is the bandwidth of the assigned channel) -25 dBm/MHz at frequencies greater than B MHz above and below channel edge -40 dBm/MHz at frequencies below 3530 MHz and above 3720 MHz	PASS	Sections 7.3, 7.4
	Transmitter Conducted Output Power	2.1046	N/A	N/A	See RF Exposure Report
	Peak-Average Ratio	e Ratio 96.41(g) < 13 dB			Section 7.5
	Frequency Stability	2.1055	Fundamental emissions stay within authorized frequency block	PASS	Section 7.8
	End User Device Additional 96.47 Requirements (CBSD Protocol)		End User Devices may operate only if they can positively receive and decode an authorization signal transmitted by a CBSD, including the frequencies and power limits for their operation. An End User Device must discontinue operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD.	PASS	Section 7.9
	Equivalent Isotropic Radiated Power (EIRP)	96.41(b)	23 dBm/10MHz	PASS	Section 7.6
RADIATED	Radiated Spurious Emissions	2.1053, 96.41(e)	-40 dBm/MHz	PASS	Section 7.7

Table 7-1. Summary of Test Results

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Notes:

- 1. All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
- 2. The analyzer plots were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables, directional couplers, and attenuators used as part of the system to maintain a link between the call box and the EUT at all frequencies of interest.
- 3. All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.
- 4. All conducted emissions measurements are performed with automated test software to capture the corresponding plots necessary to show compliance. The measurement software utilized was Element Materials Technology EMC Software Tool 1.1.

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7.2 Occupied Bandwidth §2.1049

Test Overview

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. All modes of operation were investigated and the worst case configuration results are reported in this section. All ports were tested and only the worst case data were reported.

Test Procedure Used

KDB 971168 D01 v03r01 - Section 4.2

Test Settings

- 1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth and the 26dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
- 2. RBW = 1 5% of the expected OBW
- 3. VBW \geq 3 x RBW
- 4. Detector = Peak
- 5. Trace mode = max hold
- 6. Sweep = auto couple
- 7. The trace was allowed to stabilize
- 8. If necessary, steps 2 7 were repeated after changing the RBW such that it would be within
 - 1-5% of the 99% occupied bandwidth observed in Step 7

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

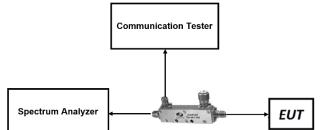


Figure 7-1. Test Instrument & Measurement Setup

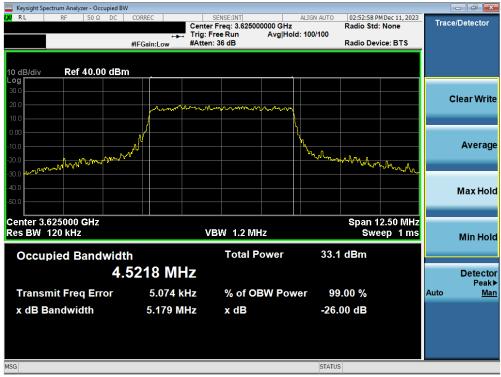
Test Notes

None.

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LTE Band 48



Plot 7-1. Occupied Bandwidth Plot (LTE Band 48 - 5MHz QPSK - Full RB Configuration)



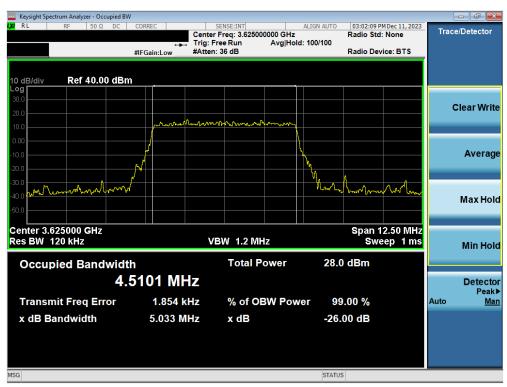
Plot 7-2. Occupied Bandwidth Plot (LTE Band 48 - 5MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2926	element	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
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Eviloper - Occupied BW								
LX RL RF 50 Ω DC	CORREC	SENSE:INT				1Dec 11, 2023	Trac	e/Detector
Center Freq: 3.625000000 GHz Radio Std: None						Hac	erbelector	
		rig: Free Run Atten: 36 dB	Avg Hold:		adio Devi	an BTS		
	#IFGain:Low #/	Kiten. 36 ub		R.	auto Devi	Ce. BT3		
10 dB/div Ref 40.00 dBm								
Log								
30.0								
20.0							(Clear Write
	mon	monten	mm					
10.0			i i					
0.00			\ <u>`</u>					
-10.0	_/ [_]			7				Average
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-20.0 Jay Jan Mar Mar Mar - 30.0	f			- Mar Way	AM m	mymm		
-30.0				· ·	- · · U	1 Uprovin		
-40.0								M
								Max Hold
-50.0								
Center 3.625000 GHz					Dman dí			
			1			2.50 MHz		
Res BW 120 kHz		VBW 1.2 MH	ΊΖ		Swe	ep 1 ms		Min Hold
		T-4-LD		30.9 d	D			
Occupied Bandwidth		Total P	ower	30.9 a	BM			
4 5	136 MHz							Detector
	100 10112							Peak►
Transmit Freq Error	705 Hz	% of O	BW Powe	er 99.0	0 %		Auto	Man
x dB Bandwidth	5.116 MHz	x dB		-26.00	dB			
	0.110 1012	X UD		-20.00	ab			
MSG				STATUS				

Plot 7-3. Occupied Bandwidth Plot (LTE Band 48 - 5MHz 64-QAM - Full RB Configuration)



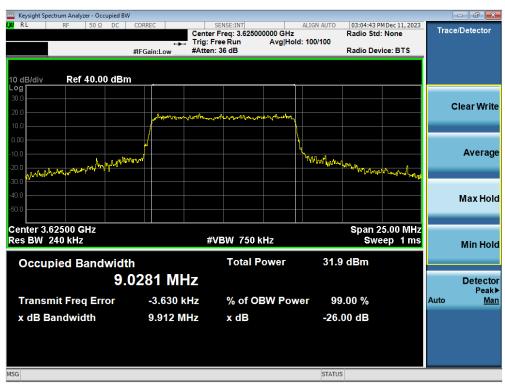
Plot 7-4. Occupied Bandwidth Plot (LTE Band 48 - 5MHz 256-QAM - Full RB Configuration)

FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
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Keysight Spectrum Analyzer - Occupied BW	1					
LXI RL RF 50Ω DC				PM Dec 11, 2023	Trace	/Detector
		Freq: 3.625000000 GHz	Radio Std	: None	Hace	Delector
		ree Run Avg Hold : 36 dB	: 100/100 Radio Dev	dee: BTS		
	#IFGain:Low #Atten	. 30 00	Raulo Dev	Ace. B13		
10 dB/div Ref 40.00 dBm	n in the second s					
Log						
30.0						
20.0					С	lear Write
	June barren and march march	maker and provide and and				
10.0						
0.00		R				
-10.0	ní					Average
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-20.0	Ψ .		Marker Charles and a second and a second and a second seco	montone		
-30.0				· · · · · · · · · · · · · · · · · · ·		
-40.0						
						Max Hold
-50.0						
			0			
Center 3.62500 GHz	20			25.00 MHz		
Res BW 240 kHz	#	VBW 750 kHz	SWO	eep 1 ms		Min Hold
		T-(-) D	00.0.10			
Occupied Bandwidt	h	Total Power	32.3 dBm			
Q	0265 MHz					Detector
						Peak ►
Transmit Freq Error	-4.992 kHz	% of OBW Powe	er 99.00 %		Auto	Man
			51 55.00 /6		/ 1415	man
x dB Bandwidth	9.877 MHz	x dB	-26.00 dB			
MSG			STATUS			

Plot 7-5. Occupied Bandwidth Plot (LTE Band 48 - 10MHz QPSK - Full RB Configuration)



Plot 7-6. Occupied Bandwidth Plot (LTE Band 48 - 10MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
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Keysight Spectrum Analyzer - Oce	cupied BW					- # X
LX/ RL RF 50 Ω	DC CORREC	SENSE:INT	ALIGN AUTO	03:06:29 PM Dec 11, 202	3 Trace	e/Detector
		Center Freq: 3.62500		Radio Std: None	Hace	Delector
		Trig: Free Run #Atten: 36 dB	Avg Hold: 100/100	Radio Device: BTS		
	#IFGain:Low	#Atten: 36 db		Radio Device: B13	-	
10 dB/div Ref 40.0	0 dBm					
Log						
30.0						
20.0					C	Clear Write
	mont	Magananala	a harrow a			
10.0						
0.00			<u> </u>			
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-10.0			hyper the second			Average
-20.0	իստություն		- Multing the	M Continuents a		
-10.0 -20.0 -30.0 40400000000000000000000000000000000				M manner marine	8 .	
-40.0						
-40.0						Max Hold
-50.0						
Center 3.62500 GHz				Span 25.00 MH		
Res BW 240 kHz		#VBW 750 k	Hz	Sweep 1 m	s	Min Hold
						minnona
Occupied Band	width	Total P	ower 31.5	5 dBm		
		i				
	9.0401 MH	Z				Detector
						Peak▶
Transmit Freq Err	ror 11.300 kl	HZ % of OE	3W Power 99	9.00 %	Auto	<u>Man</u>
x dB Bandwidth	10.07 MI	Hz xdB	-26	00 dB		
	10.07 10		-20.			
MSG			STATUS	S		

Plot 7-7. Occupied Bandwidth Plot (LTE Band 48 - 10MHz 64-QAM - Full RB Configuration)



Plot 7-8. Occupied Bandwidth Plot (LTE Band 48 - 10MHz 256-QAM - Full RB Configuration)

FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
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Keysight Spectrum Anal	alyzer - Occ	upied BW										
LXIRL RF	50 Ω	DC COF	RREC		ENSE:INT		Α	LIGN AUTO		M Dec 11, 2023	Troo	e/Detector
					req: 3.62500				Radio Std	None	Hau	elbelector
			· · · ·	Trig: Fre #Atten:		Avg Hol	a:	100/100	Radio Dev	ion BTS		
		#IF(Gain:Low	#Atten:	30 ab				Radio Dev	ICE: BIS		
10 dB/div Re	f 40.00) dBm										
Log	1 10100						Т				_	
30.0												
20.0												Clear Write
			phinner	al-wirld with the states	where the second se	mouleur						
10.0							t+					
0.00			<i>,</i>				1					
-10.0			ľ				1					Average
		www.unit					ľ	when the				Average
-20.0	marylas	avia							Laking	A. A. H.		
-30.0										A Marken Mark		
-40.0												
												Max Hold
-50.0												
Center 3.62500										7.50 MHz		
Res BW 360 kH	Z			#V	BW 1.1 M	Hz			Swe	ep 1ms		Min Hold
Occupied I	Band	width			Total P	ower		33.3	dBm			
		12 5	00 MI									Detector
		13.5										Detector
Transmit Era		0.F	-2.621		% of O			- 00	.00 %		Auto	Peak▶ Man
Transmit Fre	ed Eur	01	-2.021	NHZ	% OT U	SW POV	ve	99	.00 %		Auto	wan
x dB Bandwi	idth		14.81 N	١Hz	x dB			-26.0	00 dB			
MSG								STATUS				
MSG								STATUS				

Plot 7-9. Occupied Bandwidth Plot (LTE Band 48 - 15MHz QPSK - Full RB Configuration)



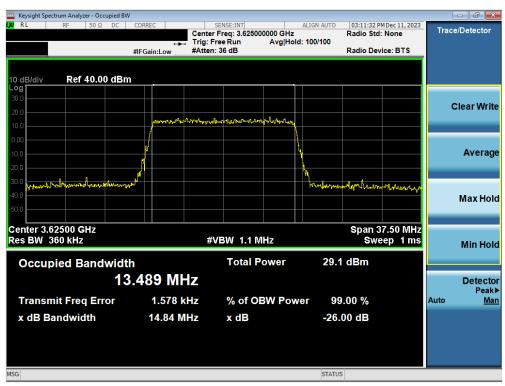
Plot 7-10. Occupied Bandwidth Plot (LTE Band 48 - 15MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
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Keysight Spectrum Analyzer - Occupied BW								
X RL RF 50Ω DC	CORREC	SENSE:INT		ALIGN AUTO		MDec 11, 2023	Trac	e/Detector
		Center Freq: 3.62500 Trig: Free Run	Avg Hold:	100/100	Radio Std	None		
		#Atten: 36 dB	/ angli loid.		Radio Dev	ice: BTS		
10 dB/div Ref 40.00 dBm Log	<u> </u>							
30.0								
								Clear Write
20.0	monum	warth Manager Manager	hopping					
10.0								
0.00	— A———							
-10.0	V							Average
				1 				J
-20.0 -30.0 Arrown N. M. M. M. M.	Auk.			hallow	14 WWWW	hould be a los		
-30.0 Pythi - H - P						- A MARKAN		
-40.0								Max Hold
-50.0								
Center 3.62500 GHz						7.50 MHz		
Res BW 360 kHz		#VBW 1.1 M	Hz		Swe	ep 1 ms		Min Hold
Occupied Bandwidt	h	Total P	ower	31.3	dBm			
13	.487 MHz	,						Detector
								Peak►
Transmit Freq Error	-23.625 kH	z % of OE	3W Powe	er 99	.00 %		Auto	Man
x dB Bandwidth	14.89 MH	z xdB		-26 (00 dB			
x dB Banawidan	14.00 1111			-2010				
MSG				STATUS				

Plot 7-11. Occupied Bandwidth Plot (LTE Band 48 - 15MHz 64-QAM - Full RB Configuration)



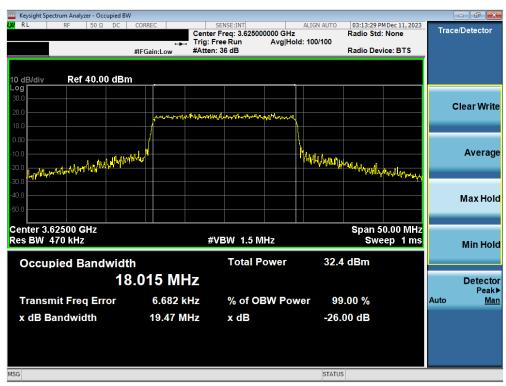
Plot 7-12. Occupied Bandwidth Plot (LTE Band 48 - 15MHz 256-QAM - Full RB Configuration)

FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
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Keysight Spectrum Analyzer - Occupi	ied BW						- 6 💌
LX/ RL RF 50Ω [DC CORREC	SENSE:INT	ALIGN AUTO	03:12:58 PM [Trac	e/Detector
		er Freq: 3.625000000 GHz		Radio Std: N	lone	Hac	Delector
		Free Run Avg Ho en: 36 dB	old: 100/100	Radio Devic	e BTS		
	#IFGain:Low #Atte	an. 00 ub			e. DT3		
10 dB/div Ref 40.00 d	dBm						
Log							
30.0							
20.0	techner atter a tak	water the water of the prover all				C	Clear Write
10.0	A DAY STORY OF A DAY AND A DAY AND A	والمعادية والمنافعة					
0.00							
-10.0							Average
-20.0	with a fred the		White makers				
Lath Jur Mulan 100 m			"What was a second	Whr bornhow	Marchel		
-30.0							
-40.0							Max Hold
-50.0							Muxilolu
30.0							
Center 3.62500 GHz				Span 50	00 MHz		
Res BW 470 kHz		#VBW 1.5 MHz			p 1 ms		
				CARGO	p i me		Min Hold
Occupied Bandw	vidth	Total Power	33.5	lBm			
Occupied Bandw			00.0				
	18.019 MHz						Detector
							Peak▶
Transmit Freq Error	r 5.765 kHz	% of OBW Po	wer 99.0	00 %		Auto	<u>Man</u>
x dB Bandwidth	19.37 MHz	x dB	26.0				
X dB Bandwidth	19.37 MHZ	X dB	-26.0	Jab			
MSG			STATUS				

Plot 7-13. Occupied Bandwidth Plot (LTE Band 48 - 20MHz QPSK - Full RB Configuration)



Plot 7-14. Occupied Bandwidth Plot (LTE Band 48 - 20MHz 16-QAM - Full RB Configuration)

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Keysight Spectrum Analyzer - Occupied	d BW						- F X
LX/ RL RF 50Ω DO		SENSE:INT	ALIGN AUTO		M Dec 11, 2023	Trac	e/Detector
		nter Freq: 3.625000000 G		Radio Std	None	Hac	e/Delector
		ig: Free Run Avg tten: 36 dB	Hold: 100/100	Radio Dev	ion BTS		
	#IFGain:Low #A	men. 30 ub		Raulo Dev	ICE. DTS		
10 dB/div Ref 40.00 dl	Bm						
Log							
30.0							
20.0						(Clear Write
	Maryanarararara	amound and for the low many	m.				
10.0							
0.00			— <u> </u>				
-10.0			1				Average
	Jul Martin		- WWW				y .
-10.0 -20.0 -30.0	4000 ···		I A PROV	har a prosent	America La		
-30.0					A THE R A LANDAR		
-40.0							Max Hold
-50.0							
-50.0							
Center 3.62500 GHz				Chon 5	0.00 MHz		
Res BW 470 kHz		#VBW 1.5 MHz			ep 1 ms		
Kes BW 470 KH2				SWC	ep mis		Min Hold
	-141-	Total Power		dBm			
Occupied Bandwi	ath	Total Powel	32.4	t a Dini			
-	18.022 MHz						Detector
							Peak▶
Transmit Freq Error	-20.964 kHz	% of OBW P	ower 99	.00 %		Auto	Man
x dB Bandwidth	19.76 MHz	x dB	-26	00 dB			
	13.70 WHZ	A UD	-20.	UU UB			
				-			
MSG			STATUS	5			

Plot 7-15. Occupied Bandwidth Plot (LTE Band 48 - 20MHz 64-QAM - Full RB Configuration)



Plot 7-16. Occupied Bandwidth Plot (LTE Band 48 - 20MHz 256-QAM - Full RB Configuration)

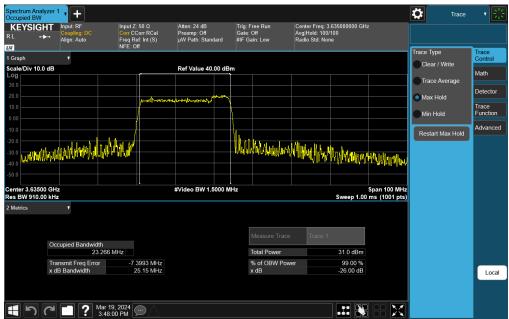
FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
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ULCA LTE Band 48

Spectrum Analyz Occupied BW	ter 1 🔹 🕂					*	Trace 🔻 🕌
	Coupling: DC	Input Ζ: 50 Ω Corr CCorr RCal Freq Ref: Int (S) NFE: Off	Atten: 24 dB Preamp: Off µW Path: Standard	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.635000000 GHz Avg Hold: 100/100 Radio Std: None		
1 Graph	•	'				Trace Type Clear / V	Control
Scale/Div 10.0 c	iB	f	Ref Value 40.00 dB	m			Math
30.0						Trace Av	verage Detector
20.0		munder	www.damperson			 Max Hol 	ld Trace
0.00						Min Hold	
-10.0						Restart M	Advanced
-20.0		hhu ar		Hall Marked	liter to the later of the second		
-30.0 WWWW	hand the first of the state of the	the state of the s		· Martin Landa - C. 20000	Hully My My Man Manuary	phar application	
-40.0							
Center 3.63500	CH-		#Video BW 1.5000 M			an 100 MHz	
Res BW 910.00			#VIGEO BVV 1.5000 W	112	Sweep 1.00 m		
2 Metrics	•						
	Occupied Bandwidth			Measure Trace	e Trace 1		
	23.326	MHz		Total Power	31.6 dBm		
	Transmit Freq Error x dB Bandwidth	-7.4347 MHz 25.03 MHz		% of OBW Pov x dB	ver 99.00 % -26.00 dB		
		20,00 11112			20.00 dB		Local
1 50	Mar 1 ? Mar 1 3:47:	9, 2024 :06 PM				$+ \times$	

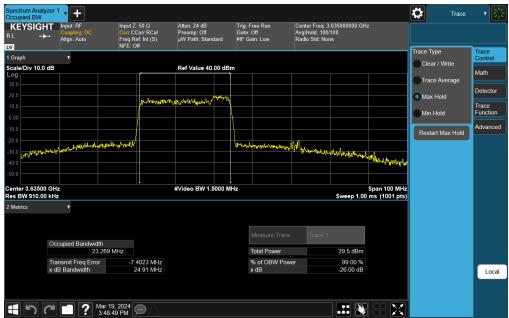
Plot 7-17. Occupied Bandwidth Plot (ULCA LTE Band 48 - 20+5MHz QPSK - Full RB Configuration)



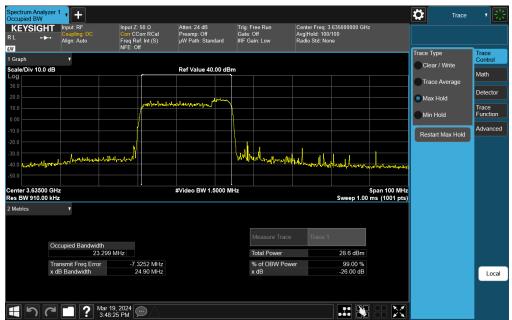
Plot 7-18. Occupied Bandwidth Plot (ULCA LTE Band 48 - 20+5MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2926	element	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
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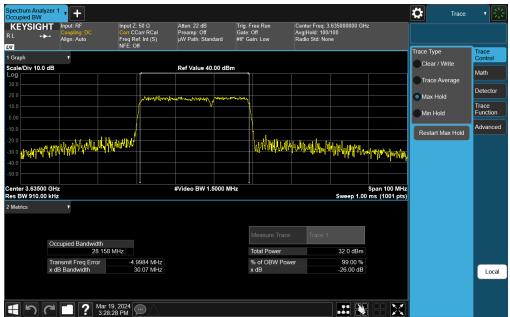
Plot 7-19. Occupied Bandwidth Plot (ULCA LTE Band 48 - 20+5MHz 64-QAM - Full RB Configuration)



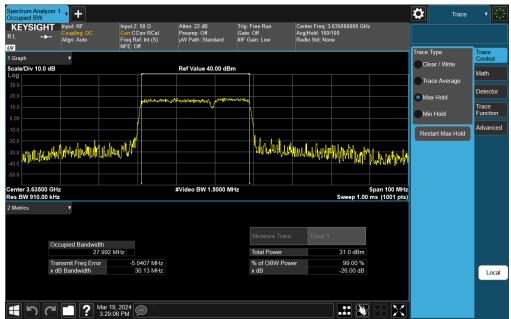
Plot 7-20. Occupied Bandwidth Plot (ULCA LTE Band 48 - 20+5MHz 256-QAM - Full RB Configuration)

FCC ID: BCGA2926	elemer	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
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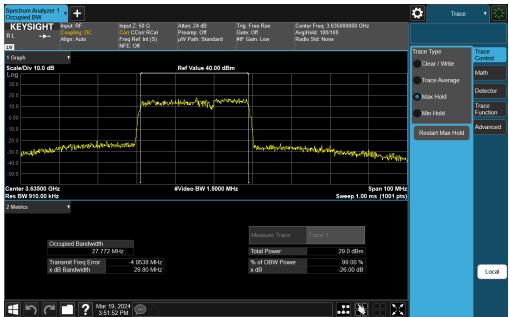
Plot 7-21. Occupied Bandwidth Plot (ULCA LTE Band 48 - 20+10MHz QPSK - Full RB Configuration)



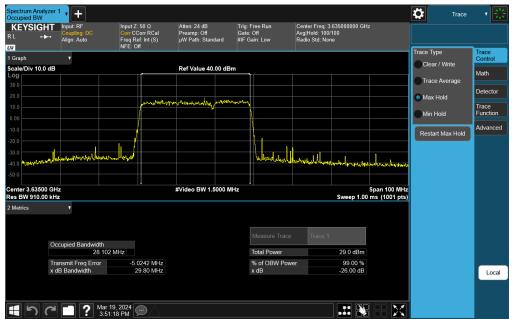
Plot 7-22. Occupied Bandwidth Plot (ULCA LTE Band 48 - 20+10MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 24 of 222
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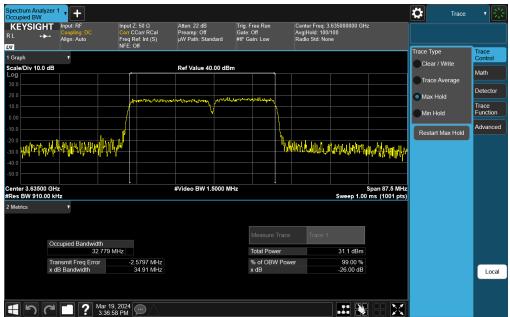
Plot 7-23. Occupied Bandwidth Plot (ULCA LTE Band 48 - 20+10MHz 64-QAM - Full RB Configuration)



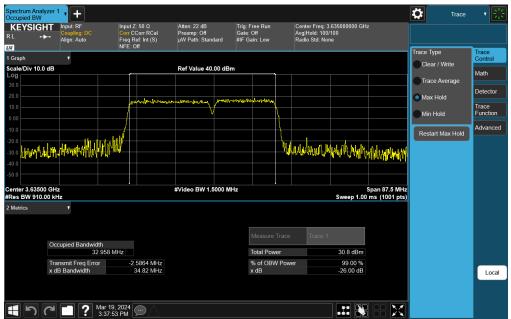
Plot 7-24. Occupied Bandwidth Plot (ULCA LTE Band 48 - 20+10MHz 256-QAM - Full RB Configuration)

FCC ID: BCGA2926	element	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 25 of 222
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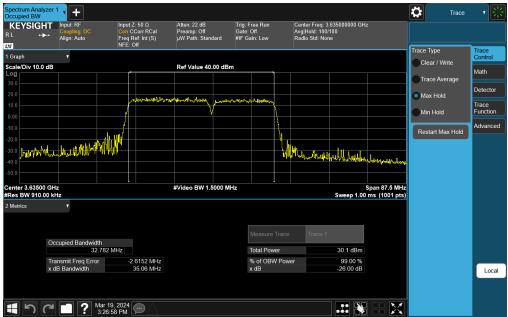
Plot 7-25. Occupied Bandwidth Plot (ULCA LTE Band 48 - 20+15MHz QPSK - Full RB Configuration)



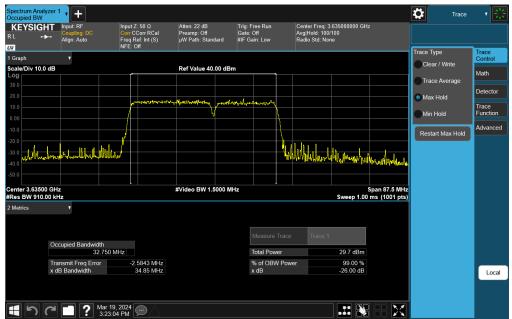
Plot 7-26. Occupied Bandwidth Plot (ULCA LTE Band 48 - 20+15MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2926	elemer	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 26 of 222
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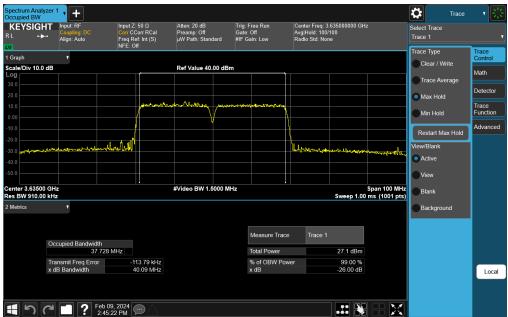
Plot 7-27. Occupied Bandwidth Plot (ULCA LTE Band 48 - 20+15MHz 64-QAM - Full RB Configuration)



Plot 7-28. Occupied Bandwidth Plot (ULCA LTE Band 48 - 20+15MHz 256-QAM - Full RB Configuration)

FCC ID: BCGA2926	elemer	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Baga 27 of 222
1C2311270070-13.BCG	10/1/2023-4/4/2024	Tablet Device	Page 27 of 222
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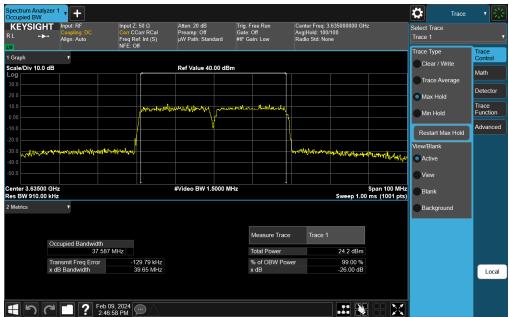
Plot 7-29. Occupied Bandwidth Plot (ULCA LTE Band 48 - 20+20MHz QPSK - Full RB Configuration)



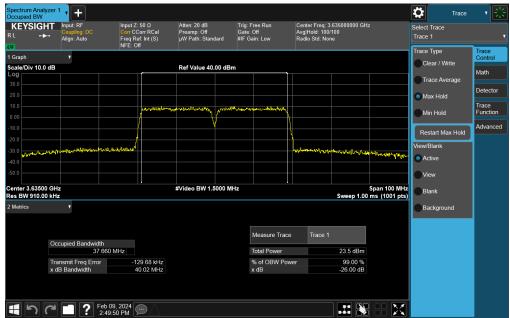
Plot 7-30. Occupied Bandwidth Plot (ULCA LTE Band 48 - 20+20MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 29 of 222
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Plot 7-31. Occupied Bandwidth Plot (ULCA LTE Band 48 - 20+20MHz 64-QAM - Full RB Configuration)



Plot 7-32. Occupied Bandwidth Plot (ULCA LTE Band 48 - 20+20MHz 256-QAM - Full RB Configuration)

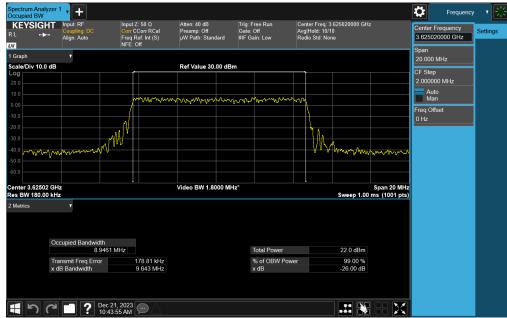
FCC ID: BCGA2926	elemer	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 20 of 222
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NR Band n48

Spectrum Occupied	Analyzer BW	¹ • +						Frequer	ncy 🔻 😤
KEYS	SIGHT	Input: RF Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr RCal Freq Ref: Int (S) NFE: Off	Atten: 40 dB Preamp: Off μW Path: Standard	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.625020000 GH Avg Hold: 10/10 Radio Std: None	łz	Center Frequency 3.625020000 GHz	Settings
1 Graph		T						Span 20.000 MHz	
Scale/Div Log	/ 10.0 dB			Ref Value 30.00 dBn	n 	1		CF Step	
20.0								2.000000 MHz	-
10.0			mmm	www.www.	mmmmm	1		Man	
-10.0								Freq Offset	
-20.0								0 Hz	
-30.0			h[]						
	www	Mar Mar Mar a	¥			A Murrow	howwww		
-50.0									
Center 3. Res BW 1				Video BW 1.8000 MH	z*	Sweep 1.0	Span 20 MHz ms (1001 pts)		
2 Metrics		•							
	Oc	cupied Bandwidth 8.5996 1	MHz		Total Power	24.4 dBm			
		ansmit Freq Error	-15.753 kHz		% of OBW Powe				
	xc	B Bandwidth	9.176 MHz		x dB	-26.00 dB			
•	って	Dec 2' 11:28	I, 2023 56 AM						

Plot 7-33. Occupied Bandwidth Plot (NR Band n48 - 10MHz DFT-s-OFDM π/2 BPSK - Full RB Configuration)



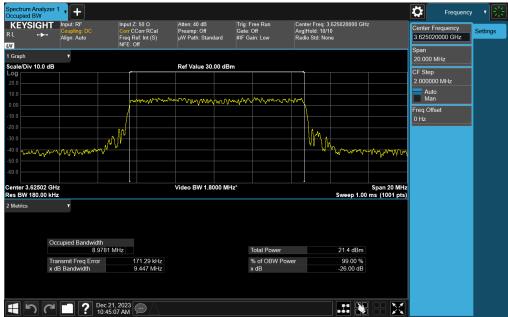
Plot 7-34. Occupied Bandwidth Plot (NR Band n48 - 10MHz CP-OFDM QPSK - Full RB Configuration)

FCC ID: BCGA2926	elemer	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Barra 20 of 222
1C2311270070-13.BCG	10/1/2023-4/4/2024	Tablet Device	Page 30 of 222
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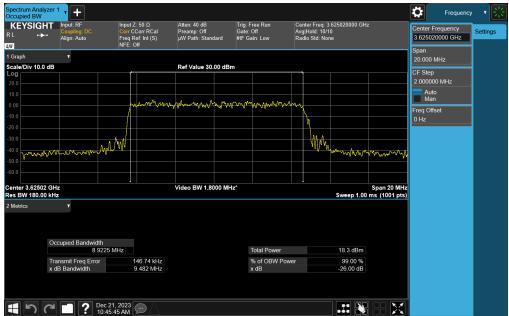
Plot 7-35. Occupied Bandwidth Plot (NR Band n48 - 10MHz CP-OFDM 16-QAM - Full RB Configuration)



Plot 7-36. Occupied Bandwidth Plot (NR Band n48 - 10MHz CP-OFDM 64-QAM - Full RB Configuration)

FCC ID: BCGA2926	elemer	element PART 96 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Daga 21 of 222
1C2311270070-13.BCG	10/1/2023-4/4/2024	Tablet Device	Page 31 of 222
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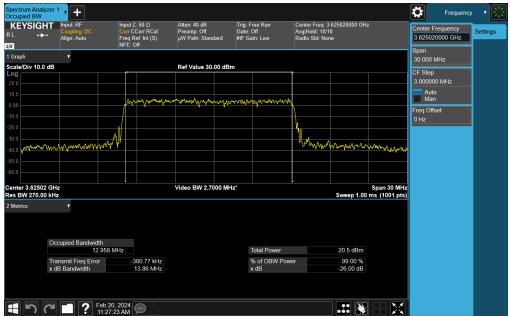
Plot 7-37. Occupied Bandwidth Plot (NR Band n48 - 10MHz CP-OFDM 256-QAM - Full RB Configuration)



Plot 7-38. Occupied Bandwidth Plot (NR Band n48 - 15MHz DFT-s-OFDM π/2 BPSK - Full RB Configuration)

FCC ID: BCGA2926	elemer	element PART 96 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Dage 22 of 222
1C2311270070-13.BCG	10/1/2023-4/4/2024	Tablet Device	Page 32 of 222
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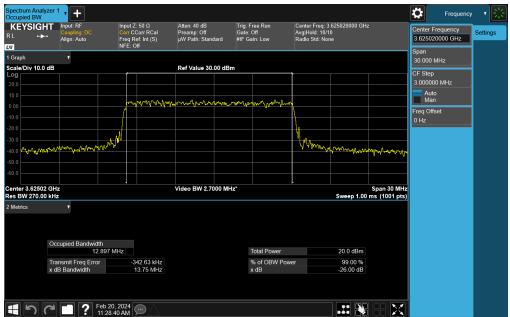
Plot 7-39. Occupied Bandwidth Plot (NR Band n48 - 15MHz CP-OFDM QPSK - Full RB Configuration)



Plot 7-40. Occupied Bandwidth Plot (NR Band n48 - 15MHz CP-OFDM 16-QAM - Full RB Configuration)

FCC ID: BCGA2926	elemer	element PART 96 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 22 of 222
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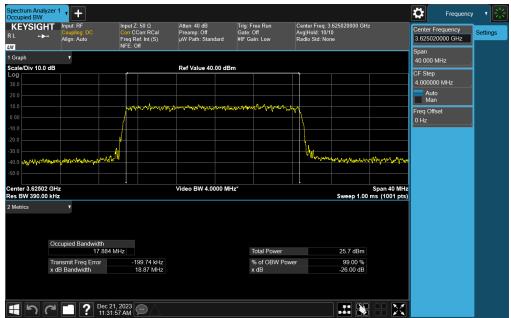
Plot 7-41. Occupied Bandwidth Plot (NR Band n48 - 15MHz CP-OFDM 64-QAM - Full RB Configuration)



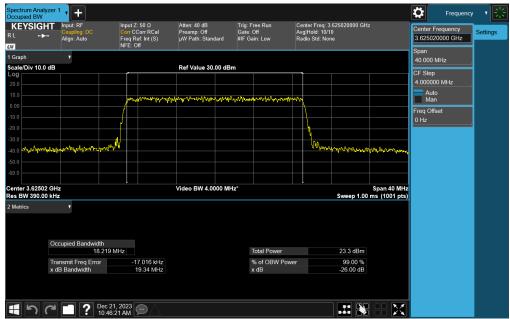
Plot 7-42. Occupied Bandwidth Plot (NR Band n48 - 15MHz CP-OFDM 256-QAM - Full RB Configuration)

FCC ID: BCGA2926	elemen	element Part 96 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Daga 24 of 222
1C2311270070-13.BCG	10/1/2023-4/4/2024	Tablet Device	Page 34 of 222
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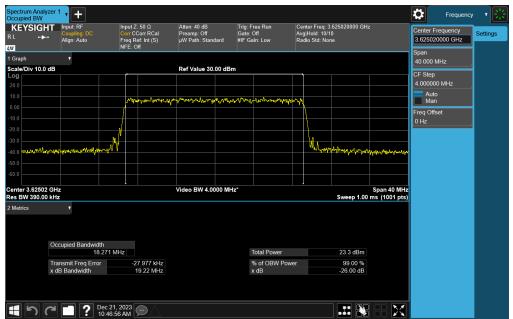
Plot 7-43. Occupied Bandwidth Plot (NR Band n48 - 20MHz DFT-s-OFDM π/2 BPSK - Full RB Configuration)



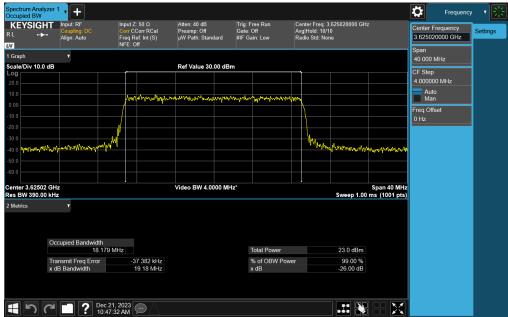
Plot 7-44. Occupied Bandwidth Plot (NR Band n48 - 20MHz CP-OFDM QPSK - Full RB Configuration)

FCC ID: BCGA2926	elemer	element PART 96 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Dage 25 of 222
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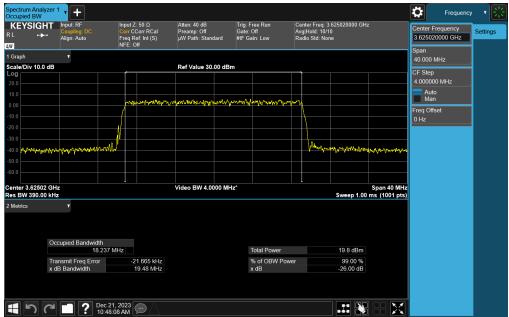
Plot 7-45. Occupied Bandwidth Plot (NR Band n48 - 20MHz CP-OFDM 16-QAM - Full RB Configuration)



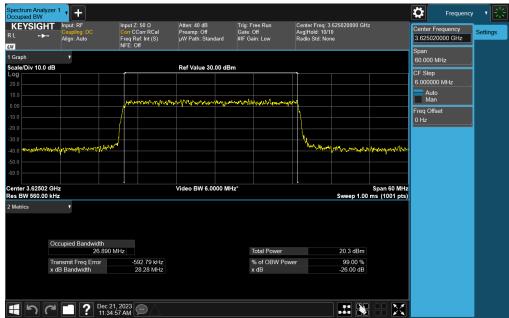
Plot 7-46. Occupied Bandwidth Plot (NR Band n48 - 20MHz CP-OFDM 64-QAM - Full RB Configuration)

FCC ID: BCGA2926	elemer		
Test Report S/N:	Test Dates:	EUT Type:	Dega 26 of 222
1C2311270070-13.BCG	10/1/2023-4/4/2024	Tablet Device	Page 36 of 222
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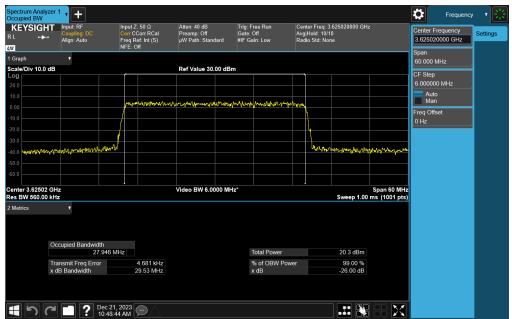
Plot 7-47. Occupied Bandwidth Plot (NR Band n48 - 20MHz CP-OFDM 256-QAM - Full RB Configuration)



Plot 7-48. Occupied Bandwidth Plot (NR Band n48 - 30MHz DFT-s-OFDM π/2 BPSK - Full RB Configuration)

FCC ID: BCGA2926	elemer	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 27 of 222
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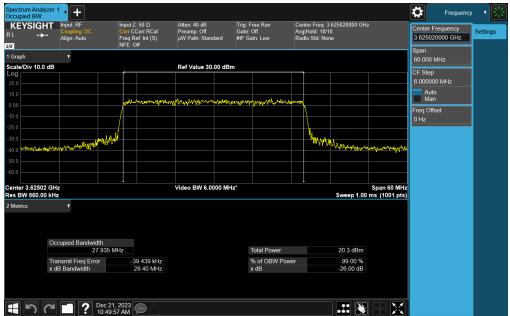
Plot 7-49. Occupied Bandwidth Plot (NR Band n48 - 30MHz CP-OFDM QPSK - Full RB Configuration)



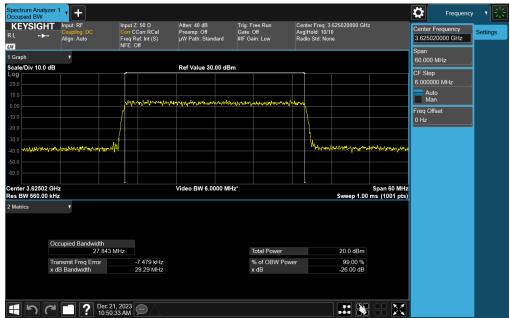
Plot 7-50. Occupied Bandwidth Plot (NR Band n48 - 30MHz CP-OFDM 16-QAM - Full RB Configuration)

FCC ID: BCGA2926	elemer	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 28 of 222
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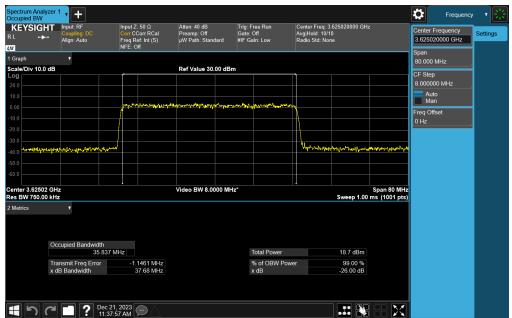
Plot 7-51. Occupied Bandwidth Plot (NR Band n48 - 30MHz CP-OFDM 64-QAM - Full RB Configuration)



Plot 7-52. Occupied Bandwidth Plot (NR Band n48 - 30MHz CP-OFDM 256-QAM - Full RB Configuration)

FCC ID: BCGA2926	elemer	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
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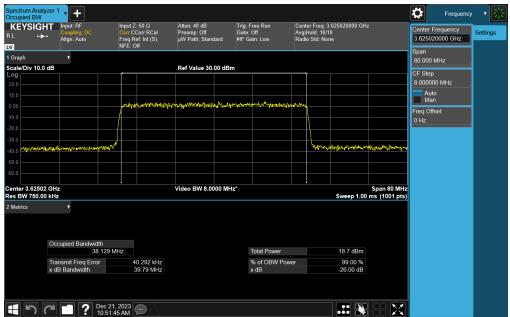
Plot 7-53. Occupied Bandwidth Plot (NR Band n48 - 40MHz DFT-s-OFDM π/2 BPSK - Full RB Configuration)



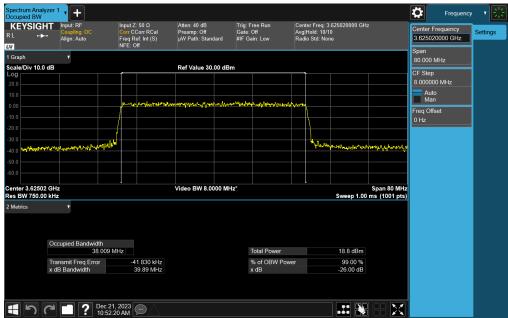
Plot 7-54. Occupied Bandwidth Plot (NR Band n48 - 40MHz CP-OFDM QPSK - Full RB Configuration)

FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 40 of 222
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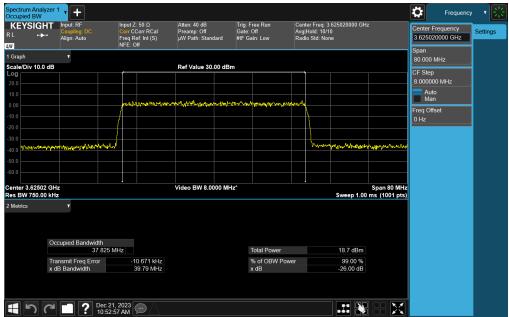
Plot 7-55. Occupied Bandwidth Plot (NR Band n48 - 40MHz CP-OFDM 16-QAM - Full RB Configuration)



Plot 7-56. Occupied Bandwidth Plot (NR Band n48 - 40MHz CP-OFDM 64-QAM - Full RB Configuration)

FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 41 of 222
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Plot 7-57. Occupied Bandwidth Plot (NR Band n48 - 40MHz CP-OFDM 256-QAM - Full RB Configuration)

FCC ID: BCGA2926	element	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
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7.3 Spurious and Harmonic Emissions at Antenna Terminal §2.1051 §96.41(e)

Test Overview

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section. All ports were tested and only the worst case data were reported.

The conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/Mhz.

Test Procedure Used

KDB 971168 D01 v03r01 - Section 6.0

Test Settings

- 1. Start frequency was set to 30MHz and stop frequency was set to at least 10 * the fundamental frequency (separated into at least two plots per channel)
- 2. Detector = RMS
- 3. Trace mode = Average
- 4. Sweep time = auto couple
- 5. The trace was allowed to stabilize
- 6. Please see test notes below for RBW and VBW settings

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

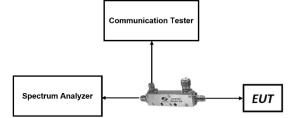


Figure 7-2. Test Instrument & Measurement Setup

FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 43 of 222
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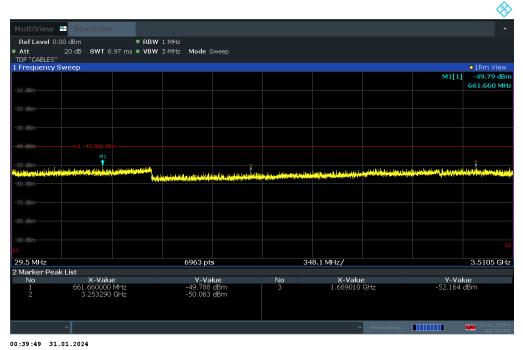
Test Notes

- 1. Compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater for frequencies less than 1 GHz and 1 MHz or greater for frequencies greater than 1 GHz. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. 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 emission are attenuated at least 26 dB below the transmitter power.
- Uplink carrier aggregation conducted spurious emissions measurements were evaluated for the two contiguous channels using various combinations of RB size, RB offset, modulation, and channel bandwidth. The worst case (highest) powers were found while operating with QPSK modulation with both carriers set to transmit using 1RB.
- 3. Uplink carrier aggregation inter-band emission was investigated and found to not be the worst case.
- 4. For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

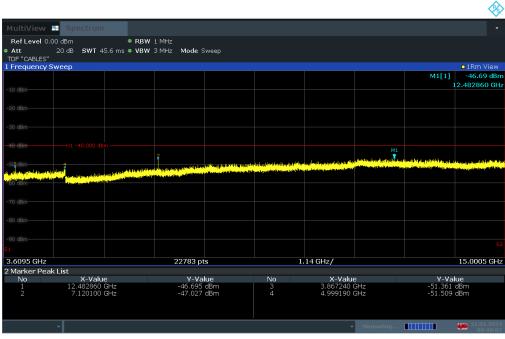
FCC ID: BCGA2926	element	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 44 of 222
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LTE Band 48







00:40:07 31.01.2024



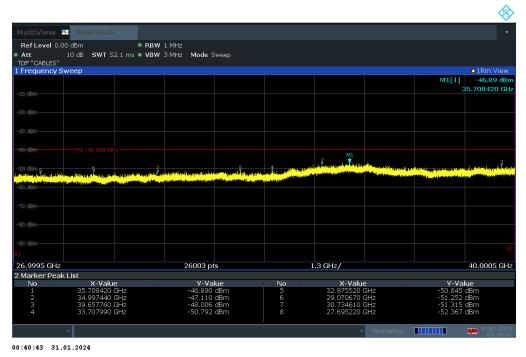
FCC ID: BCGA2926	element	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 45 of 222
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MultiView	Spectrum				· · · ·
Ref Level 0.0		BW 1 MHz			
Att	10 dB SWT 48.1 ms • V				
TDF "CABLES" Frequency S					•1Rm View
rrequency s	weep				M1[1] -51.09 dBr
					26.265280 GH
					201200200 011
-40-dBm					
-50 dBm					M1
	المراجع			animalation and instantian a bat mana	and the second difference of a state of the second state of the se
and a second second second	in the second days in a second division of the second days in a second division of the second days in a second	la a title line, and an a land a stand of the stand provided of a stand of the stand of the stand of the stand Concept of the stand of	And the second s		A STATE OF A
and a set of the second second second					
-70 dBm					
-80 dBm					
-90 dBm					
		24002 - 5-		1.2 GHz/	27 0005 011
14.9995 GHz 2 Marker Peak	. 1 (24003 pts		1.2 GHZ/	27.0005 GH:
No No	X-Value	Y-Value	No	X-Value	Y-Value
1	26.265280 GHz	-51.091 dBm	4	17.763630 GHz	-53,986 dBm
	22.954420 GHz	-53.221 dBm -53.567 dBm	5	17.129160 GHz	-54.783 dBm
	21.237490 GHz	-53.567 dBM	6	16.301200 GHz	-55.086 dBm
					J 31.01.202
					J 00:40:2

00:40:25 31.01.2024

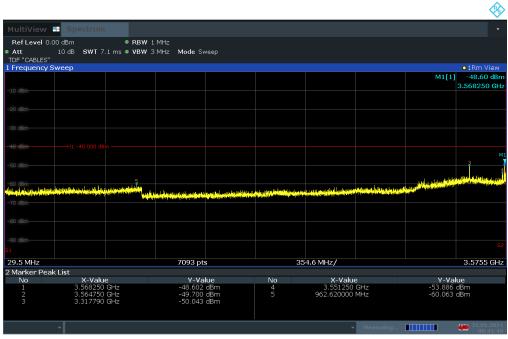




Plot 7-61. Conducted Spurious Plot (LTE Band 48 - 20MHz QPSK - Low Channel)

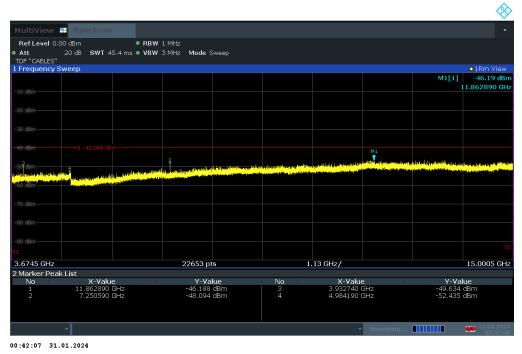
FCC ID: BCGA2926	element	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
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00:41:49 31.01.2024





Plot 7-63. Conducted Spurious Plot (LTE Band 48 - 20MHz QPSK - Mid Channel)

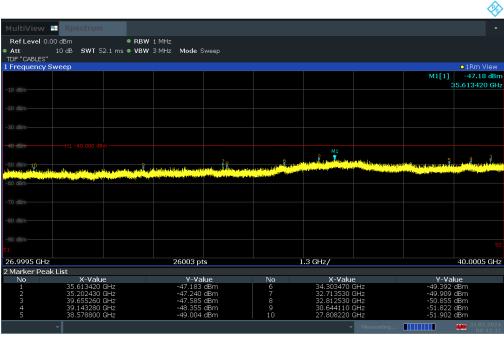
FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 47 of 222
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Att 10.8 SWT 48.1 ms * VBW 3 MHz Mode Sweep D*"CABLES" ************************************	MultiView	Spectrum								•
Dp: "CABLES" 0 1Rm View Prequency Sweep M1[1] -50.89 dBm 0 dBm 26.344280 GHz 0 dBm 41.40.000 dBm 1 2 40.31.90 dBm 41.20.4000 dBm 1 2 40.341.90 dBm 41.20.4000 dBm 1 2 40.341.90 dBm 51.04.031.90 dBm 51.40.331.90 dBm 1 2 40.341.90 dBm 51.04.031.90 dBm -55.784.dBm 1 2 40.341.90 dBm 51.780.720 dBm -55.784.dBm<	Ref Level 0.0	00 dBm	● RBW	1 MHz						
Frequency Sweep • I Rm View 0 dsm M1[1] -50.89 dsm 0 dsm -10 -10 -10 0 dsm -10 -10 -10 -10 0 dsm -10 -10 -10 -10 -10 0 dsm -11 -10 -10 -10 -10 -10 0 dsm -11 -10.000 dsm -10 -10 -10 -10 -10 0 dsm -11 -10.000 dsm -10 <td< td=""><td>Att TDE "CABLES"</td><td>10 dB SWT 4</td><td>8.1 ms 🔍 VBW</td><td>3 MHz Mode</td><td>Sweep</td><td></td><td></td><td></td><td></td><td></td></td<>	Att TDE "CABLES"	10 dB SWT 4	8.1 ms 🔍 VBW	3 MHz Mode	Sweep					
0 880 26.344280 GHz 0 880 1		Sweep								o1Rm View
0 d8m									M1[1]	-50.89 dBm
0 480- 1 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>:</td> <td>26.344280 GHz</td>									:	26.344280 GHz
0 dbm H1 -40.000 cm H1 0 dbm H1 H1 H1 H1 0 dbm H1 H1 H1 H1 H1 <tr< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<>										
0 dbm H1 -40.000 cm H1 0 dbm H1 H1 H1 H1 0 dbm H1 H1 H1 H1 H1 <tr< td=""><td>-20 dBm</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<>	-20 dBm									
0 dbm H1 -40.000 dbm H1 0 dbm H1 -40.000 dbm H1 0 dbm H1 + 40.000 dbm H1 0 dbm H1 + 40.000 dbm H1 + 40.000 dbm 0 dbm H1 + 40.000 dbm H1 + 40.000 dbm 0 dbm H1 + 40.000 dbm H1 + 40.000 dbm 0 dbm H1 + 40.000 dbm H1 + 40.000 dbm 0 dbm H1 + 40.000 dbm H1 + 40.000 dbm 0 dbm H1 + 40.000 dbm H1 + 40.000 dbm 0 dbm H1 + 40.000 dbm H1 + 40.000 dbm 0 dbm H1 + 40.000 dbm H1 + 40.000 dbm 0 dbm H1 + 40.000 dbm H1 + 40.000 dbm 0 dbm H1 + 40.000 dbm H1 + 40.000 dbm 0 dbm H1 + 40.000 dbm H1 + 40.000 dbm 0 dbm H1 + 40.000 dbm H1 + 40.000 dbm 0 dbm H1 + 40.000 dbm H1 + 40.000 dbm 0 dbm H1 + 40.000 dbm H1 + 40.000 dbm H1 + 40.000 dbm 0 dbm H1 + 40.000 dbm H1 + 40.000 dbm H1 + 40.000 dbm 0 dbm H1 + 40.000 dbm H1 + 40.000 dbm H1 + 40.000 dbm 0 dbm H1 +										
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No X-Value No X-Value Y-Value 1 26.344280 GHz -53.784 dBm 4 19.737550 GHz -54.535 dBm 3 17.745640 GHz -54.376 dBm 6 15.780720 GHz -55.784 dBm	-60 dBm		distant in the second se	Contract is a subscreen subscreen subscreen subscreen subscreen subscreen subscreen subscreen subscreen subscre	والمرجع فالتحمد والمفصلات فمرجع المرجعات	an a	al (de y aleministre anne an airthichte _{ann} an a	الالا فالمطارحة عرير عريا فكالا تنبير والانطاطات	description 1.	
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No X-Value Y-Value Y-V										
No X-Value Y-Value Y-V										
No X-Value Y-Value No X-Value Y-Value 1 26.34/280 GHz -50.888 dBm 4 19.737550 GHz -54.535 dBm 2 21.731970 GHz -53.784 dBm 5 16.403190 GHz -54.789 dBm 3 17.745640 GHz -54.376 dBm 6 15.780720 GHz -55.784 dBm										
No X-Value Y-Value No X-Value Y-Value 1 26.34/280 GHz -50.888 dBm 4 19.737550 GHz -54.535 dBm 2 21.731970 GHz -53.784 dBm 5 16.403190 GHz -54.789 dBm 3 17.745640 GHz -54.376 dBm 6 15.780720 GHz -55.784 dBm										
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No X-Value V-Value No X-Value Y-Value 1 26.34280 GHz -50.888 dBm 4 19.737550 GHz -54.458 dBm 2 21.731970 GHz -53.784 dBm 5 16.403190 GHz -54.789 dBm 3 17.745640 GHz -54.376 dBm 6 15.780720 GHz -55.784 dBm	14.9995 GHz			24003 p	ts	1	.2 GHz/			27.0005 GHz
1 26,344280 GHz -50,888 dBm 4 19.737550 GHz -54,535 dBm 2 21,731970 GHz -53,784 dBm 5 16,403190 GHz -54,789 dBm 3 17.745640 GHz -54,376 dBm 6 15.780720 GHz -55,784 dBm										
2 21.731970 GHz -53.784 dBm 5 16.403190 GHz -54.789 dBm 3 17.745640 GHz -54.376 dBm 6 15.780720 GHz -55.784 dBm									Y-Va	lue
3 17.745640 GHz -54.376 dBm 6 15.780720 GHz -55.784 dBm									-54,535 -54,789	dBm
▼ Measuring										
▼ Measuring										
• Measuring • • • • • • • • • • • • • • • • • •						I				31.01.2024
		Ť						Measuring		00:42:24

00:42:25 31.01.2024



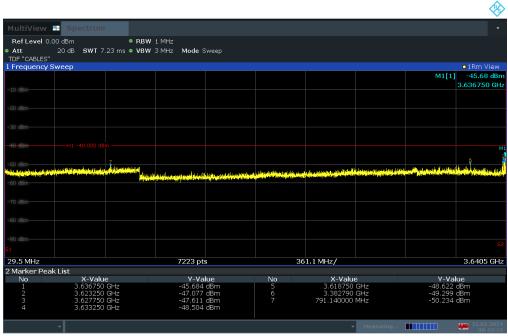


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Plot 7-65. Conducted Spurious Plot (LTE Band 48 - 20MHz QPSK - Mid Channel)

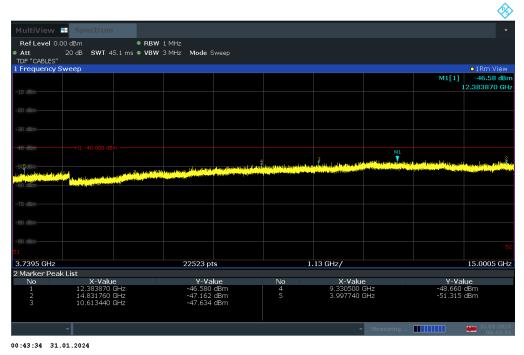
FCC ID: BCGA2926	element	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 49 of 222
1C2311270070-13.BCG	10/1/2023-4/4/2024	Tablet Device	Page 48 of 222
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Plot 7-67. Conducted Spurious Plot (LTE Band 48 - 20MHz QPSK - High Channel)

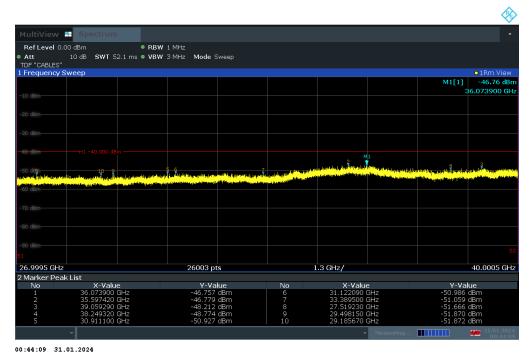
FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 40 of 202
1C2311270070-13.BCG	10/1/2023-4/4/2024	Tablet Device	Page 49 of 222
	<u>.</u>		V2.2 09/07/2023



	E Spectrum							-
Ref Level 0.	.00 dBm	• RBW 1 MH	z					
Att TDF "CABLES"	10 dB SWT 48.1 r							
1 Frequency :								•1Rm View
							M1[1]	-51.47 dB
								6.076290 GF
								01070250 01
40 dBm								
								M1
	7			المريقة البلايية أوليهم ومراقا وأقرا	inteliumetricate desidence de			ساهي إيمانية القادر وارديابة
	and a state of the	Personal Property of the Prope	<mark>اسانغېرىد واللىزال دىرەل مەرسىخ</mark>	and the second plant is a bell former of	Pateria Inc. All str. (Mala) and a	an a	and the state of the strength of the state o	and the second designed as a second designed of the second designed
61 dBm	a har a start and a start of the second of	State of the second	NAMES OF TAXABLE PARTY OF TAXABLE PARTY.			المتناطقه ويروي والالفادي والد		
-80 dBm								
	2		24003 pts		1.2 GHz/			27.0005 GH
-90 dBm 11 14.9995 GHz 2 Marker Pea			24003 pts		1.2 GHz/			27.0005 GF
1 14.9995 GHz			24003 pts Y-Value	No	X-Value		Y-Val	ue
1 14.9995 GHz Marker Pea No 1	ak List X-Value 26.076290 GHz		Y-Value -51.471 dBm	5	X-Value 20.477520 Gl		-54,263	ue dBm
14.9995 GHz 2 Marker Pea No 1 2	ak List X-Value 26.076290 GHz 22.966920 GHz		Y-Value -51.471 dBm -53.639 dBm	5	X-Value 20.477520 Gi 18.387110 Gi	Ηz	-54.263 -54.703	ue dBm dBm
1 14.9995 GHz ! Marker Pea No 1 2 3	ak List X-Value 26.076290 GHz 22.966920 GHz 21.268490 GHz		Y-Value -51.471 dBm -53.639 dBm -53.740 dBm	5 6 7	X-Value 20.477520 G 18.387110 G 16.296200 G	Hz Hz	-54.263 -54.703 -54.794	ue dBm dBm dBm
1 14.9995 GHz ! Marker Pea No 1 2	ak List X-Value 26.076290 GHz 22.966920 GHz		Y-Value -51.471 dBm -53.639 dBm	5	X-Value 20.477520 Gi 18.387110 Gi	Hz Hz	-54.263 -54.703	ue dBm dBm dBm
14.9995 GHz 2 Marker Pea No 1 2 3	ak List X-Value 26.076290 GHz 22.966920 GHz 21.268490 GHz		Y-Value -51.471 dBm -53.639 dBm -53.740 dBm	5 6 7	X-Value 20.477520 G 18.387110 G 16.296200 G	Hz Hz Hz	-54.263 -54.703 -54.794	ue dBm dBm dBm

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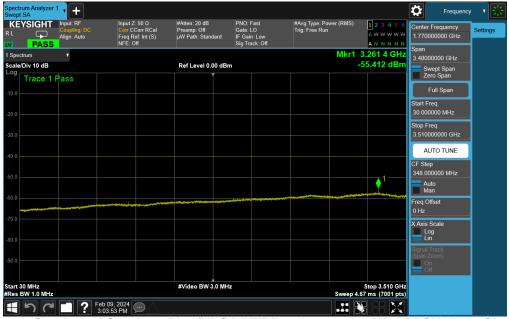


Plot 7-69. Conducted Spurious Plot (LTE Band 48 - 20MHz QPSK - High Channel)

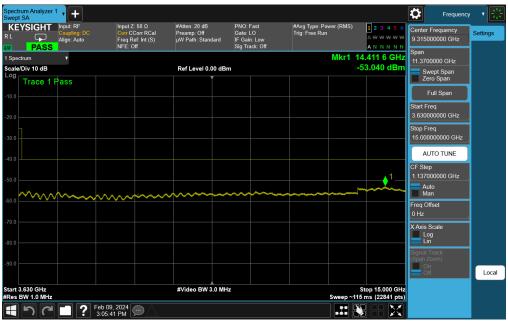
FCC ID: BCGA2926	element	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 50 of 222
1C2311270070-13.BCG	10/1/2023-4/4/2024	Tablet Device	Fage 50 01 222
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ULCA LTE Band 48



Plot 7-70. Conducted Spurious Plot (ULCA LTE Band 48 - 20+20MHz QPSK - Low Channel)



Plot 7-71. Conducted Spurious Plot (ULCA LTE Band 48 - 20+20MHz QPSK - Low Channel)

FCC ID: BCGA2926	elemer	DT PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Baga 51 of 222
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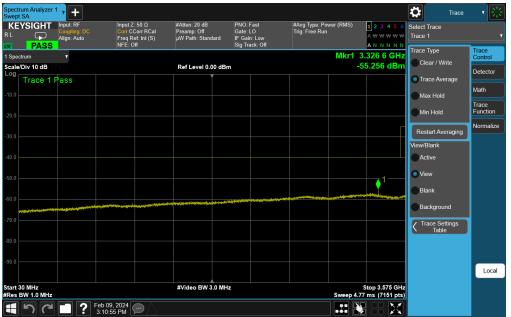
Plot 7-72. Conducted Spurious Plot (ULCA LTE Band 48 - 20+20MHz QPSK - Low Channel)



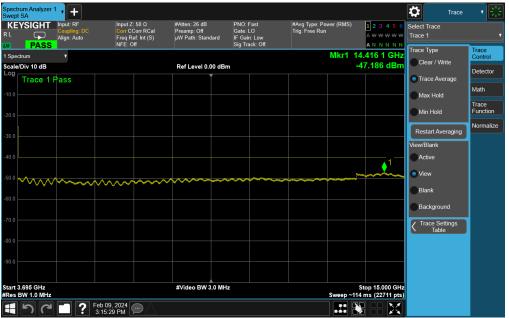
Plot 7-73. Conducted Spurious Plot (ULCA LTE Band 48 - 20+20MHz QPSK - Low Channel)

FCC ID: BCGA2926	elemer	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 52 of 222
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Plot 7-74. Conducted Spurious Plot (ULCA LTE Band 48 - 20+20MHz QPSK - Mid Channel)



Plot 7-75. Conducted Spurious Plot (ULCA LTE Band 48 - 20+20MHz QPSK - Mid Channel)

FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 52 of 222
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Plot 7-76. Conducted Spurious Plot (ULCA LTE Band 48 - 20+20MHz QPSK - Mid Channel)



Plot 7-77. Conducted Spurious Plot (ULCA LTE Band 48 - 20+20MHz QPSK - Mid Channel)

FCC ID: BCGA2926	elemer	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 54 of 222
1C2311270070-13.BCG	10/1/2023-4/4/2024	Tablet Device	Page 54 of 222
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Plot 7-78. Conducted Spurious Plot (ULCA LTE Band 48 - 20+20MHz QPSK - High Channel)



Plot 7-79. Conducted Spurious Plot (ULCA LTE Band 48 - 20+20MHz QPSK - High Channel)

FCC ID: BCGA2926	elemer	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga EE of 222
1C2311270070-13.BCG	10/1/2023-4/4/2024	Tablet Device	Page 55 of 222
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Plot 7-80. Conducted Spurious Plot (ULCA LTE Band 48 - 20+20MHz QPSK - High Channel)



Plot 7-81. Conducted Spurious Plot (ULCA LTE Band 48 - 20+20MHz QPSK - High Channel)

FCC ID: BCGA2926	elemer	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 56 of 222
1C2311270070-13.BCG	10/1/2023-4/4/2024	Tablet Device	Page 56 of 222
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NR Band n48



Plot 7-82. Conducted Spurious Plot (NR Band n48 - 40MHz DFT-s-OFDM QPSK - Low Channel)



Plot 7-83. Conducted Spurious Plot (NR Band n48 - 40MHz DFT-s-OFDM QPSK - Low Channel)

FCC ID: BCGA2926	element	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 57 of 222
1C2311270070-13.BCG	10/1/2023-4/4/2024	Tablet Device	Page 57 of 222
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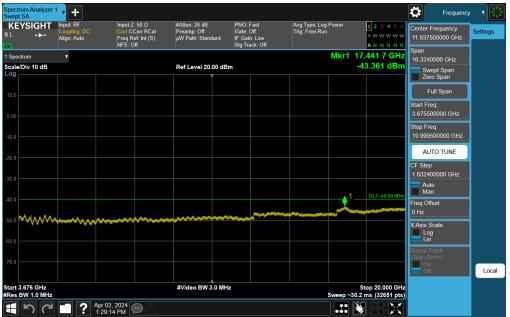
Plot 7-84. Conducted Spurious Plot (NR Band n48 - 40MHz DFT-s-OFDM QPSK - Low Channel)

Spectrum Analyzer Swept SA							Frequenc	v - Y 🖹
	Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr RCal Freq Ref: Int (S) NFE: Off	#Atten: 26 dB Preamp: Off μW Path: Standard	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	Avg Type: Log-Power Trig: Free Run	1 2 3 4 5 6 A W W W W A N N N N N	Center Frequency 1.802500000 GHz	Settings
Spectrum					Mkr	1 3.225 1 GHz	Span 3.54400000 GHz	
cale/Div 10 dB og			Ref Level 20.00 dE	3m		-50.934 dBm	Swept Span	
og			Ĭ				Zero Span	
							Full Span	
							Start Freq	1
							30.500000 MHz	
							Stop Freq	
							3.574500000 GHz	
0.0							AUTO TUNE	
							CF Step	1
							354.400000 MHz	
						DL1 -40.00 dBm	Auto Man	
						DL1-40.00 dBM	Freq Offset	1
60.0						1	0 Hz	
							X Axis Scale	1
0.0							Log Lin	
							Signal Track	1
							(Span Zoom) On	
							Off	Local
tart 30.5 MHz			#Video BW 3.0 MH	łz		Stop 3.575 GHz		
Res BW 1.0 MHz		20,0004				o 4.73 ms (7091 pts)		
5 6	Apr 1:2	02, 2024						

Plot 7-85. Conducted Spurious Plot (NR Band n48 - 40MHz DFT-s-OFDM QPSK - Mid Channel)

FCC ID: BCGA2926	elemer	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 58 of 222
1C2311270070-13.BCG	10/1/2023-4/4/2024	Tablet Device	Page 58 of 222
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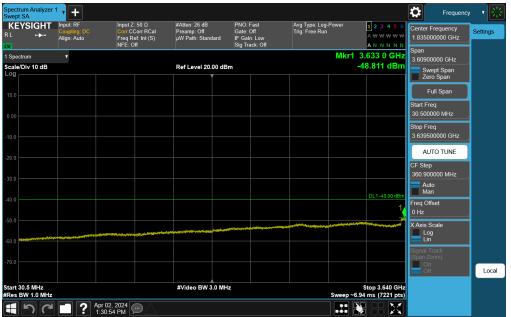
Plot 7-86. Conducted Spurious Plot (NR Band n48 - 40MHz DFT-s-OFDM QPSK - Mid Channel)



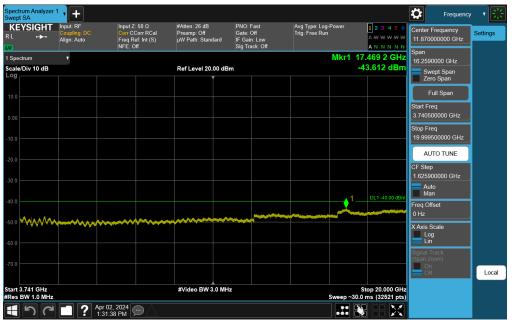
Plot 7-87. Conducted Spurious Plot (NR Band n48 - 40MHz DFT-s-OFDM QPSK - Mid Channel)

FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 50 of 222
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Plot 7-88. Conducted Spurious Plot (NR Band n48 - 40MHz DFT-s-OFDM QPSK - High Channel)



Plot 7-89. Conducted Spurious Plot (NR Band n48 - 40MHz DFT-s-OFDM QPSK - High Channel)

FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Baga 60 of 222
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Plot 7-90. Conducted Spurious Plot (NR Band n48 - 40MHz DFT-s-OFDM QPSK - High Channel)

FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 61 of 222
1C2311270070-13.BCG	10/1/2023-4/4/2024	Tablet Device	Fage 01 01 222
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7.4 Band Edge Emissions at Antenna Terminal §2.1051 §96.41(e)(ii)

Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation and all ports were investigated and the worst case configuration results are reported in this section.

The conducted power of any emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0 to B MHz (where B is the bandwidth in MHz 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 MHz below the lower CBSD-assigned channel edge. At all frequencies greater than B MHz above the upper CBSD assigned channel edge and less than B MHz below the lower CBSD-assigned channel edge, the conducted power of any end user device emission shall not exceed -25 dBm/MHz. The conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

Test Procedure Used

KDB 971168 D01 v03r01 - Section 6.0

Test Settings

- 1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
- 2. Span was set large enough so as to capture all out of band emissions near the band edge
- 3. RBW > 1% of the emission bandwidth
- 4. VBW \geq 3 x RBW
- 5. Detector = RMS
- 6. Number of sweep points $\geq 2 \times \text{Span/RBW}$
- 7. Trace mode = trace average
- 8. Sweep time = auto couple
- 9. The trace was allowed to stabilize

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

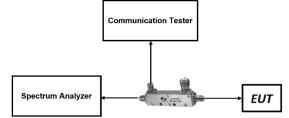


Figure 7-3. Test Instrument & Measurement Setup

Test Notes

None

FCC ID: BCGA2926	element	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 62 of 222
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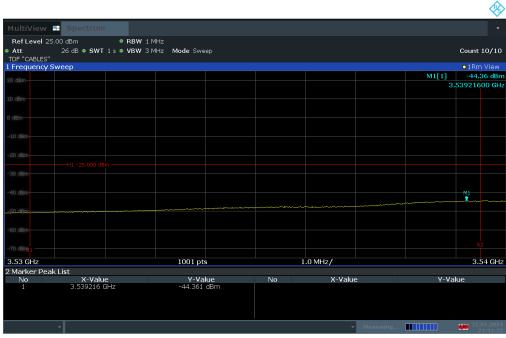


LTE Band 48

IultiView	Spectrum					•
Ref Level 25	5.00 dBm • RBN	N 1 MHz				
Att DF "CABLES"	26 dB • SWT is • VBV	N 3 MHz Mode Sweep				Count 10/10
Frequency S	Sweep					●1Rm View
) dBm					M1[:	
						3.5294210 G
0 dBm						
49 GHz		1001 pts		4.0 MHz/		3.53 G
Marker Peal No	k List X-Value	Y-Value	No	X-Value	V	Value
1	x-value 3.529421 GHz	-51.030 dBm			Y-	valde
	-			→ M	easuring	22.01.20

21:31:02 22.01.2024





21:31:26 22.01.2024



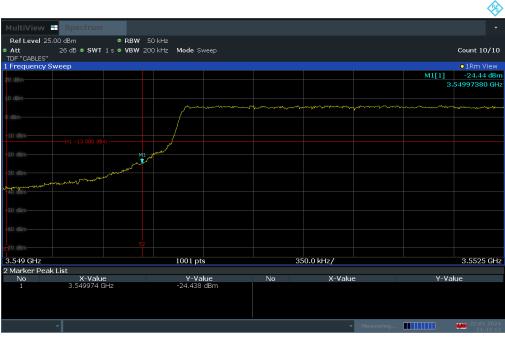
FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 63 of 222
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					(*)
MultiView	Spectrum				+
Ref Level 25.0 Att TDF "CABLES"	00 dBm • RBW 1 26 dB • SWT 1 s • VBW 3				Count 10/10
1 Frequency Sv	veep				o1Rm View
20 dBm				M1[1]	-25.91 dBm
20 0011				3	.54850100 GHz
10 dBm					
0 dBm					
-10 dBm-					
-20 dBm-					M1
-30 dBm				and and and and and and	hurnet
-40 dBm-					
-50 dBm-					
-60 dBm-					
-70 dBm <mark>S1</mark>					
3.54 GHz	1	1001 pts	900.0 kHz/		3.549 GHz
2 Marker Peak					
No	X-Value	Y-Value	No X-Valu		
1	3.548501 GHz	-25.911 dBm	2 3.546919	GHz -30.592	asm
	*			Measuring	22.01.2024 21:31:48

21:31:49 22.01.2024



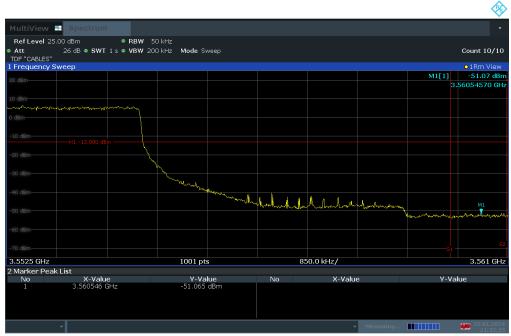


21:32:12 22.01.2024

Plot 7-94. Channel Edge Plot (LTE Band 48 - 5MHz QPSK - Low Channel)

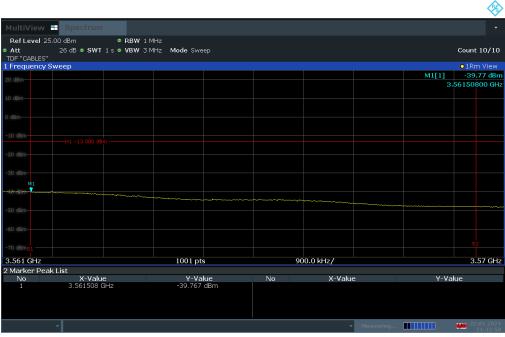
FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 64 of 222
1C2311270070-13.BCG	10/1/2023-4/4/2024	Tablet Device	Page 64 of 222
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21:32:35 22.01.2024





21:32:59 22.01.2024



FCC ID: BCGA2926	element	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 65 of 222
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MultiView	Spectrum				•
Ref Level 25		1 MHz			
Att TDF "CABLES"	26 dB • SWT 1 s • VBW				Count 10/10
1 Frequency S	weep				•1Rm View
20 dBm					M1[1] -48.53 dBr
					3.570820 GF
40 dBm					
SQ_dBm					
3.57 GHz		1001 pts		15.0 MHz/	3.72 G⊢
2 Marker Peak					
No	X-Value 3.570820 GHz	Y-Value -48.528 dBm	No	X-Value	Y-Value
	3.370620 GHZ	-46.528 aBM			
				- Measurin	g 22.01.202
				Measurin	21:33:2

21:33:22 22.01.2024





21:33:45 22.01.2024

Plot 7-98. Channel Edge Plot (LTE Band 48 - 5MHz QPSK - Low Channel)

FCC ID: BCGA2926	elemen	PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
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	•		V2.2 09/07/2023