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PART 22/24/27 MEASUREMENT REPORT

Applicant Name:

Microsoft Corporation
One Microsoft Way
Redmond, WA 98052
United States

Date of Testing:

05/07/2025 - 06/04/2025

Test Report Issue Date:

06/23/2025

Test Site/Location:

Element Lab., Columbia, MD, USA

Test Report Serial No.:

1M2504010035-02.C3K

FCC ID:

C3K2119

APPLICANT:

Microsoft Corporation

Application Type:

Class II Permissive Change, Module Host Integration

EUT Type:

Modular Approval - Host Integration (Portable Computing Device)

FCC Classification:

PCS Licensed Transmitter (PCB)

FCC Rule Part:

22, 24, 27

Test Procedure(s):

ANSI C63.26-2015

Permissive Change(s):

Please see change document

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.

RJ Ortanez
Executive Vice President



FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 1 of 42

TABLE OF CONTENTS

1.0	INTRODUCTION.....	3
1.1	Scope	3
1.2	Element Test Location	3
1.3	Test Facility / Accreditations	3
2.0	PRODUCT INFORMATION	4
2.1	Equipment Description.....	4
2.2	Device Capabilities	4
2.3	Test Configuration	4
2.4	Software and Firmware.....	4
2.5	EMI Suppression Device(s)/Modifications	4
3.0	DESCRIPTION OF TESTS	5
3.1	Evaluation Procedure	5
3.2	Radiated Power and Radiated Spurious Emissions.....	5
4.0	MEASUREMENT UNCERTAINTY	6
5.0	TEST EQUIPMENT CALIBRATION DATA	7
6.0	TEST RESULTS	8
6.1	Summary	8
6.2	Transmitter Conducted Output Power (ERP/EIRP).....	9
6.3	Radiated Spurious Emissions Measurements.....	17
7.0	CONCLUSION	42

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 2 of 42

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 and the Innovation, Science and Economic Development Canada.

1.2 Element Test Location

Measurements were conducted at the Element laboratory(ies) indicated in Section 1.3 below. All measurement facilities are 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 lab located in Columbia, MD 21046, U.S.A. ("MD")

- Element Washington DC LLC is an ISO 17025-2017 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.01 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 Washington DC LLC facility is a registered (2451B) 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 Mutual Recognition Agreements (MRAs).

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 3 of 42

2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is a **Microsoft Corporation Module FCC ID: C3K2119** installed in Portable Computing Device Model: 2119. This same device also includes a WiFi integrated module certified under FCC ID: C3K00002102A. The test data contained in this report pertains to the emissions due to the simultaneous transmission of the host devices cellular and WiFi transmitters.

Test Device Serial No.: 34936, 348Y8, 3496J, 3496H

2.2 Device Capabilities

This device contains the following capabilities:

Bluetooth (1x, EDR, LE), 802.11b/g/n/ac/ax/be WLAN, 802.11a/n/ac/ax/be UNII (5GHz and GHz), 850/1700/1900 WCDMA/HSPA, Multi-band LTE, Multi-band 5G NR (FR1)

2.3 Test Configuration

The EUT was tested per the guidance of ANSI C63.26-2015. See Section 6.0 of this test report for a description of the radiated emissions tests.

Both the cellular and WiFi modules were set to transmit at their maximum output power levels as specified in the original Grants of Authorization. Multiple combinations of 5G+4G bands and 2.4/5/6GHz band were tested for this spurious emissions evaluation. All emissions are evaluated to the less stringent requirements between Part 15 operation for the WiFi transmitter and Parts 22, 24, and 27 for the cellular transmitter.

2.4 Software and Firmware

Testing was performed on device(s) using software/firmware version 241216-XXX-2a26fdf-00427-0 (licensed) and 3.1.0.1407 (unlicensed) installed on the EUT.

2.5 EMI Suppression Device(s)/Modifications

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

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 4 of 42

3.0 DESCRIPTION OF TESTS

3.1 Evaluation Procedure

The measurement procedures described in the “American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services” (ANSI C63.26-2015) were used in the measurement of the EUT.

Deviation from Measurement Procedure.....None

3.2 Radiated Power and 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 power measurements, substitution method is used per the guidance of ANSI C63.26-2015. For emissions below 1GHz, a half-wave dipole is substituted in place of the EUT. For emissions above 1GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer level previously recorded from the spurious emission from the EUT. The power of the emission is calculated using the following formula:

$$P_d [\text{dBm}] = P_g [\text{dBm}] - \text{cable loss} [\text{dB}] + \text{antenna gain} [\text{dBd/dBi}];$$

where P_d is the dipole equivalent power, P_g is the generator output into the substitution antenna, and the antenna gain is the gain of the substitute antenna used relative to either a half-wave dipole (dBd) or an isotropic source (dBi). The substitute level is equal to $P_g [\text{dBm}] - \text{cable loss} [\text{dB}]$.

For radiated spurious emissions measurements, the field strength conversion method is used per the formulas in Section 5.2.7 of ANSI C63.26-2015. Field Strength (EIRP) is calculated using the following formulas:

$$E_{[\text{dB}\mu\text{V/m}]} = \text{Measured amplitude level}_{[\text{dBm}]} + 107 + \text{Cable Loss}_{[\text{dB}]} + \text{Antenna Factor}_{[\text{dB/m}]}$$

And

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

All radiated measurements are performed in a chamber that meets the site requirements per ANSI C63.4-2014. Additionally, radiated emissions below 30MHz are also validated on an Open Area Test Site to assert correlation with the chamber measurements per the requirements of KDB 414788 D01 v01r01.

Radiated power and radiated spurious emission levels are investigated with the receive antenna horizontally and vertically polarized per ANSI C63.26-2015.

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 5 of 42

4.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014. 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 (\pm dB)
Conducted Bench Top Measurements	1.13
Radiated Disturbance (<1GHz)	4.98
Radiated Disturbance (>1GHz)	5.07
Radiated Disturbance (>18GHz)	5.09

Table 4-1. Measurement Uncertainty Budget – MD

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 6 of 42

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
-	AP1	EMC Cable and Switch System	2/25/2025	Annual	2/25/2026	AP1
-	ETS	EMC Cable and Switch System	12/11/2024	Annual	12/11/2025	ETS
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	3/14/2025	Annual	3/14/2026	6262044715
Anritsu	MA24408A	8GHz Microwave Peak Power Sensor	10/2/2024	Annual	10/2/2025	11676
ETS Lindgren	3117	1-18GHz DRG Horn (Medium)	6/4/2025	Biennial	6/7/2027	125518
Rohde & Schwarz	ESU26	EMI Test Receiver (26.5GHz)	10/16/2024	Annual	10/16/2025	100342
Rohde & Schwarz	ESU40	EMI Test Receiver (40GHz)	10/16/2024	Annual	10/16/2025	100348
Sunol	JB5	Bi-Log Antenna (30M-5GHz)	9/11/2024	Biennial	9/11/2026	A051107
Micro-Tronics	BRM50713-G020R	Notch filter for B4/66	2/25/2024	Biennial	2/25/2026	B4_66
Micro-Tronics	BRM50714-G014	Notch filter for B2/25	2/25/2024	Biennial	2/25/2026	B2_25
Micro-Tronics	BRM50706-G036	Notch filter for B5/26,8	2/25/2024	Biennial	2/25/2026	B5_26_8
Micro-Tronics	BRM50709-G023	Notch filter for B38/41, 7	2/25/2024	Biennial	2/25/2026	B38_41_7

Table 5-1. Test Equipment Calibration Table

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 7 of 42

6.0 TEST RESULTS

6.1 Summary

Company Name: Microsoft Corporation
 FCC ID: C3K2119
 FCC Classification: PCS Licensed Transmitter (PCB)
 Mode(s): WLAN, UNII, LTE, NR

Test Condition	Test Description	FCC Part Section(s)	Test Limit	Test Result	Reference
RADIATED	Effective Radiated Power / Equivalent Isotropic Radiated Power (LTE Band 5; NR Band n5)	22.913(a)(5)	< 7 Watts max. ERP	PASS	Section 6.2
	Equivalent Isotropic Radiated Power (LTE Band 25; NR Band n2)	24.232(c)	< 2 Watts max. EIRP	PASS	Section 6.2
	Effective Radiated Power (LTE Band 12, 71; NR Band n71)	27.50(c)(10)	≤ 3 Watts max. ERP	PASS	Section 6.2
	Equivalent Isotropic Radiated Power (LTE Band 66; NR Band n66)	27.50(d)(4)	≤ 1 Watt max. EIRP	PASS	Section 6.2
	Equivalent Isotropic Radiated Power (LTE Band 7, 41; NR Band n7, n41)	27.50(h)(2)	≤ 2 Watts max. EIRP	PASS	Section 6.2
	Equivalent Isotropic Radiated Power (NR Band n77)	27.50(j)(3), 27.50(k)(3)	≤ 1 Watt EIRP	PASS	Section 6.2
	Radiated Spurious Emissions (LTE Band 5; NR Band n5)	2.1053, 22.917(a)	> 43 + 10 log ₁₀ (P[Watts]) for all out-of-band emissions	PASS	Section 6.3
	Radiated Spurious Emissions (LTE Band 25; NR Band n2)	2.1053, 24.238(a)	≥ 43 + 10 log (P[Watts]) dB of attenuation below transmitter power	PASS	Section 6.3
	Radiated Spurious Emissions (LTE Band 12, 71; NR Band n71)	2.1053, 27.53(g)	≥ 43 + 10 log (P[Watts]) dB of attenuation below transmitter power	PASS	Section 6.3
	Radiated Spurious Emissions (LTE Band 66; NR Band n66)	2.1053, 27.53(h)(1)	≥ 43 + 10 log (P[Watts]) dB of attenuation below transmitter power	PASS	Section 6.3
	Radiated Spurious Emissions (LTE Band 7, 41; NR Band n7, n41)	2.1053, 27.53(m)	Undesirable emissions must meet the limits detailed in 27.53(m)	PASS	Section 6.3
	Radiated Spurious Emissions (NR Band n77)	2.1053, 27.53(l), 27.53(n)	≤ -13 dBm / MHz	PASS	Section 6.3

Table 6-1. Summary of Test Results

Notes:

The conducted powers were spot-checked to ensure that they are still operating as specified in the original Grant of Authorization for this module. The antenna gains used with this device are applied to the maximum conducted powers from the original filing to ensure ERP/EIRP compliance per the relevant requirements under Parts 22, 24, 27, 90, and 96.

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 8 of 42

6.2 Transmitter Conducted Output Power (ERP/EIRP) and Radiated Power (EIRP)

Transmitter Conducted Output Power (ERP/EIRP) Test Overview

All 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.

Test Procedure Used

ANSI C63.26-2015 – Section 5.2

Test Settings

1. Detector = RMS
2. Trace mode = trace average for continuous emissions, max hold for pulse emissions
3. Sweep time = auto couple
4. The trace was allowed to stabilize
5. 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.

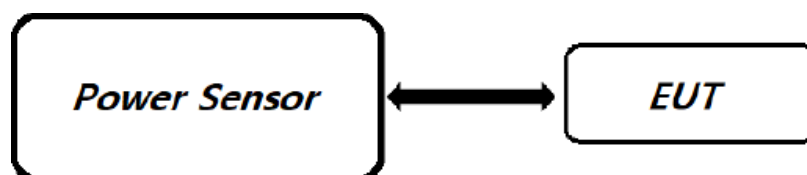


Figure 6-1. Test Instrument & Measurement Setup

Test Notes

1. Conducted power measurements were evaluated using various combinations of RB size, RB offset, modulation, and channel bandwidth. Channel bandwidth data is shown in the tables below based only on the channel bandwidths that were supported in this device.
2. Conducted power was found to reduce for the higher order QAM modulations when compared to 16QAM. Due to this trend, only the worst-case QAM (16QAM) powers are included in this section.

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 9 of 42



Radiated Power (EIRP) Test Overview

Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI C63.26-2015 with the EUT transmitting into an integral antenna. Measurements are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

ANSI C63.26-2015 – Section 5.2.4.4

Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation. For signals with burst transmission, the signal analyzer's "time domain power" measurement capability is used
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW $\geq 3 \times$ RBW
4. Span = 1.5 times the OBW
5. No. of sweep points $\geq 2 \times$ span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto". Trigger is set to enable triggering only on full power bursts with the sweep time set less than or equal to the transmission burst duration.
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation. For signals with burst transmission, the "gating" function was enabled to ensure that measurements are performed during times in which the transmitter is operating at its maximum power.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize.

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 10 of 42

Test Setup

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

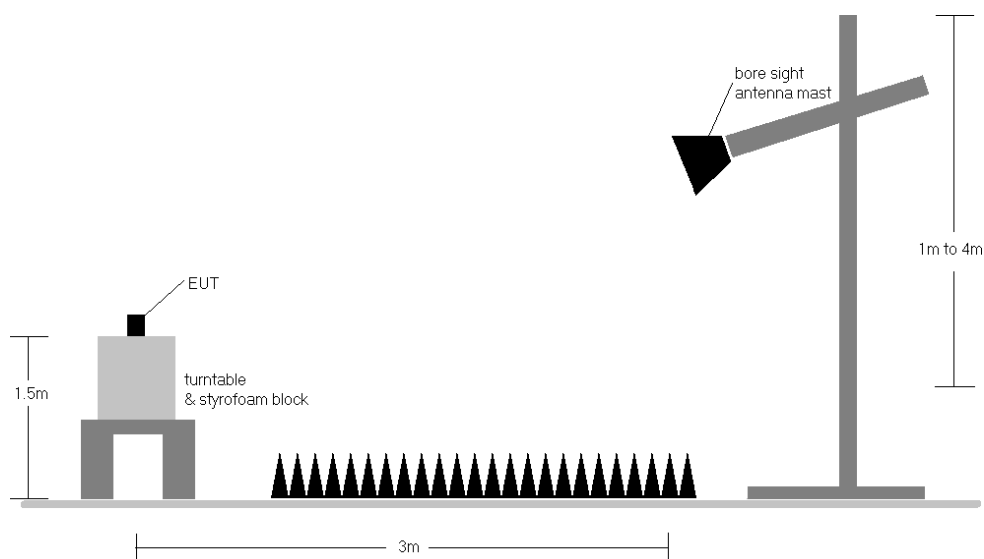


Figure 6-2. Radiated Test Setup >1GHz

Test Notes

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst-case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.
- 3) 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: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 11 of 42

Band	Frequency Range [MHz]	Conducted Power [dBm]	Ant Gain [dBi]	EIRP [dBm]	EIRP [Watts]	ERP [dBm]	ERP [Watts]	EIRP Limit [dBm]	Margin [dB]	ERP Limit [dBm]	Margin [dB]
LTE Band 71 (Ant 5)	663 - 698	23.61	-1.32	22.29	0.169	20.14	0.103	-	-	44.77	-24.63
LTE Band 12 (Ant 5)	699 - 716	24.05	-0.70	23.35	0.216	21.20	0.132	-	-	44.77	-23.57
LTE Band 13 (Ant 5)	777 - 787	24.15	-1.80	22.35	0.172	20.20	0.105	-	-	44.77	-24.57
LTE Band 14 (Ant 5)	788 - 798	24.10	-2.20	21.90	0.155	19.75	0.094	-	-	44.77	-25.02
LTE Band 26/5 (Ant 5)	814 - 849	23.96	-0.21	23.75	0.237	21.60	0.145	-	-	38.45	-16.85
LTE Band 66/4	1710 - 1780	24.66	2.80	27.46	0.557	25.31	0.340	30.00	-2.54	-	-
LTE Band 25/2	1850 - 1915	24.50	1.20	25.70	0.372	23.55	0.226	33.00	-7.30	-	-
LTE Band 41 (PC2) ANT 6	2496 - 2690	25.96	3.10	29.06	0.805	26.91	0.491	33.01	-3.95	-	-
5G NR n71 (Ant 5)	663 - 698	23.61	-1.32	22.29	0.169	20.14	0.103	-	-	44.77	-24.63
5G NR n12 (Ant 5)	699 - 716	24.11	-0.70	23.41	0.219	21.26	0.134	-	-	44.77	-23.51
5G NR n14 (Ant 5)	788 - 798	23.96	-2.20	21.76	0.150	19.61	0.091	-	-	44.77	-25.16
5G NR n5 (Ant 5)	824 - 849	24.13	-0.21	23.92	0.247	21.77	0.150	-	-	38.45	-16.68
5G NR n66	1710 - 1780	24.39	2.80	27.19	0.524	25.04	0.319	30.00	-2.81	-	-
5G NR n25	1850 - 1915	24.80	1.20	26.00	0.398	23.85	0.243	33.00	-7.00	-	-
5G NR n41 (Ant 1)	2496 - 2690	26.41	5.10	31.51	1.416	29.36	0.863	33.01	-1.50	-	-
5G NR n77_C (Ant 6)	3700 - 3980	25.84	3.26	29.10	0.813	26.95	0.495	33.01	-3.91	-	-

Table 6-2. Transmitter Conducted Output Power/ Equivalent Isotropic Radiated Power

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
10	QPSK	2310.0	H	130	49	3.66	50 / 0	19.98	23.64	0.231	23.98	-0.34
	16-QAM	2310.0	H	130	49	3.66	50 / 0	19.48	23.14	0.206	23.98	-0.84
5 MHz	QPSK	2307.5	H	130	49	3.66	0 / 25	19.83	23.49	0.223	23.98	-0.49
	QPSK	2310.0	H	130	49	3.66	1 / 12	19.94	23.60	0.229	23.98	-0.38
	QPSK	2312.5	H	130	49	3.67	1 / 0	19.79	23.45	0.221	23.98	-0.53
	16-QAM	2310.0	H	130	49	3.66	1 / 12	19.38	23.04	0.201	23.98	-0.94
10 MHz	Opposite Pol.	2310.0	V	352	9	3.66	50 / 0	18.10	21.76	0.150	23.98	-2.22

Table 6-3. EIRP Data (LTE Band 30) – Ant1

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
10 MHz	$\pi/2$ BPSK	2310.0	H	130	48	3.66	1 / 26	20.18	23.84	0.242	23.98	-0.14
	QPSK	2310.0	H	130	48	3.66	1 / 50	20.05	23.71	0.235	23.98	-0.27
	16-QAM	2310.0	H	130	48	3.66	1 / 26	19.90	23.56	0.227	23.98	-0.42
5 MHz	$\pi/2$ BPSK	2307.5	H	130	48	3.66	1 / 26	20.27	23.93	0.247	23.98	-0.05
	$\pi/2$ BPSK	2310.0	H	130	48	3.66	1 / 26	20.19	23.85	0.243	23.98	-0.13
	$\pi/2$ BPSK	2312.5	H	130	48	3.67	1 / 26	20.31	23.97	0.250	23.98	-0.01
	QPSK	2307.5	H	130	48	3.66	1 / 26	20.14	23.79	0.240	23.98	-0.19
	QPSK	2310.0	H	130	48	3.66	1 / 26	19.98	23.64	0.231	23.98	-0.34
	QPSK	2312.5	H	130	48	3.67	1 / 26	20.13	23.80	0.240	23.98	-0.18
	16-QAM	2307.5	H	130	48	3.66	1 / 26	20.29	23.95	0.248	23.98	-0.03
	QPSK (CP-OFDM)	2310.0	H	130	49	3.66	1 / 26	20.03	23.69	0.234	23.98	-0.29
10 MHz	Opposite Pol.	2310.0	V	352	11	3.57	1 / 1	18.05	21.62	0.145	23.98	-2.36

Table 6-4. EIRP Data (NR Band n30) – Ant1

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 12 of 42

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	11/2 BPSK	2546.01	H	189	171	4.19	1 / 136	21.95	26.14	0.411	33.01	-6.87
	11/2 BPSK	2592.99	H	176	163	4.00	1 / 136	24.29	28.29	0.674	33.01	-4.72
	11/2 BPSK	2640.00	H	108	164	4.31	1 / 1	23.45	27.76	0.597	33.01	-5.25
	QPSK	2546.01	H	189	171	4.19	1 / 136	21.69	25.88	0.387	33.01	-7.13
	QPSK	2592.99	H	176	163	4.00	1 / 136	24.12	28.12	0.648	33.01	-4.89
	QPSK	2640.00	H	108	164	4.31	1 / 1	22.87	27.18	0.523	33.01	-5.83
90 MHz	16-QAM	2546.01	H	189	171	4.19	1 / 1	22.78	26.97	0.498	33.01	-6.04
	11/2 BPSK	2541.00	H	189	171	4.19	1/122	22.04	26.23	0.420	33.01	-6.78
	11/2 BPSK	2592.99	H	176	163	4.00	1/243	24.25	28.25	0.668	33.01	-4.76
	11/2 BPSK	2644.98	H	108	164	4.36	1/122	23.52	27.87	0.613	33.01	-5.14
	QPSK	2541.00	H	189	171	4.19	1/122	21.69	25.88	0.387	33.01	-7.13
	QPSK	2592.99	H	176	163	4.00	1/243	24.14	28.14	0.651	33.01	-4.87
80 MHz	QPSK	2644.98	H	108	164	4.36	1/122	22.81	27.16	0.520	33.01	-5.85
	16-QAM	2541.00	H	189	171	4.19	1/122	23.07	27.26	0.532	33.01	-5.75
	11/2 BPSK	2536.02	H	189	171	4.19	1/108	22.30	26.49	0.446	33.01	-6.52
	11/2 BPSK	2592.99	H	176	163	4.00	1/215	24.24	28.24	0.667	33.01	-4.77
	11/2 BPSK	2649.99	H	108	164	4.40	1/108	23.65	28.05	0.639	33.01	-4.96
	QPSK	2536.02	H	189	171	4.19	1/108	21.82	26.01	0.399	33.01	-7.00
70 MHz	QPSK	2592.99	H	176	163	4.00	1/215	24.15	28.15	0.653	33.01	-4.86
	QPSK	2649.99	H	108	164	4.40	1/108	22.95	27.35	0.544	33.01	-5.66
	16-QAM	2536.02	H	189	171	4.19	1/108	22.91	27.10	0.513	33.01	-5.91
	11/2 BPSK	2531.01	H	189	171	4.18	1/94	22.23	26.41	0.438	33.01	-6.60
	11/2 BPSK	2592.99	H	176	163	4.00	1/187	24.18	28.18	0.658	33.01	-4.83
	11/2 BPSK	2655.00	H	108	164	4.42	1/94	23.49	27.90	0.617	33.01	-5.11
60 MHz	QPSK	2531.01	H	189	171	4.18	1/94	21.78	25.96	0.395	33.01	-7.05
	QPSK	2592.99	H	176	163	4.00	1/187	24.20	28.20	0.661	33.01	-4.81
	QPSK	2655.00	H	108	164	4.42	1/94	22.81	27.22	0.528	33.01	-5.79
	16-QAM	2531.01	H	189	171	4.18	1/94	22.92	27.10	0.513	33.01	-5.91
	11/2 BPSK	2526.00	H	189	171	4.18	1/81	22.35	26.53	0.450	33.01	-6.48
	11/2 BPSK	2592.99	H	176	163	4.00	1/160	24.30	28.30	0.676	33.01	-4.71
50 MHz	11/2 BPSK	2659.98	H	108	164	4.43	1/81	23.64	28.07	0.642	33.01	-4.94
	QPSK	2526.00	H	189	171	4.18	1/81	21.89	26.07	0.405	33.01	-6.94
	QPSK	2592.99	H	176	163	4.00	1/160	24.20	28.20	0.661	33.01	-4.81
	QPSK	2659.98	H	108	164	4.43	1/81	22.96	27.39	0.549	33.01	-5.62
	16-QAM	2526.00	H	189	171	4.18	1/81	23.21	27.39	0.548	33.01	-5.62
	11/2 BPSK	2521.02	H	189	171	4.18	1/66	22.27	26.45	0.442	33.01	-6.56
40 MHz	11/2 BPSK	2592.99	H	176	163	4.00	1/131	24.32	28.32	0.679	33.01	-4.69
	11/2 BPSK	2664.99	H	108	164	4.45	1/66	23.56	28.01	0.633	33.01	-5.00
	QPSK	2521.02	H	189	171	4.18	1/66	21.94	26.12	0.409	33.01	-6.89
	QPSK	2592.99	H	176	163	4.00	1/131	24.15	28.15	0.653	33.01	-4.86
	QPSK	2664.99	H	108	164	4.45	1/66	22.96	27.41	0.551	33.01	-5.60
	16-QAM	2521.02	H	189	171	4.18	1/66	23.08	27.26	0.532	33.01	-5.75
30 MHz	11/2 BPSK	2516.01	H	189	171	4.18	1/53	22.48	26.66	0.464	33.01	-6.35
	11/2 BPSK	2592.99	H	176	163	4.00	1/104	24.30	28.30	0.676	33.01	-4.71
	11/2 BPSK	2670.00	H	108	164	4.47	1/53	23.63	28.09	0.645	33.01	-4.92
	QPSK	2516.01	H	189	171	4.18	1/53	21.94	26.12	0.409	33.01	-6.89
	QPSK	2592.99	H	176	163	4.00	1/104	24.31	28.31	0.677	33.01	-4.70
	QPSK	2670.00	H	108	164	4.47	1/53	23.10	27.56	0.571	33.01	-5.45
20 MHz	16-QAM	2516.01	H	189	171	4.18	1/53	23.24	27.42	0.552	33.01	-5.59
	11/2 BPSK	2511.00	H	189	171	4.18	1/39	22.46	26.63	0.460	33.01	-6.38
	11/2 BPSK	2592.99	H	176	163	4.00	1/76	24.30	28.30	0.676	33.01	-4.71
	11/2 BPSK	2674.98	H	108	164	4.48	1/39	23.55	28.03	0.636	33.01	-4.98
	QPSK	2511.00	H	189	171	4.18	1/39	22.01	26.18	0.415	33.01	-6.83
	QPSK	2592.99	H	176	163	4.00	1/76	24.23	28.23	0.665	33.01	-4.78
15 MHz	QPSK	2674.98	H	108	164	4.48	1/39	22.85	27.33	0.541	33.01	-5.68
	16-QAM	2511.00	H	189	171	4.18	1/39	23.13	27.30	0.537	33.01	-5.71
	11/2 BPSK	2506.02	H	189	171	4.17	1/25	22.41	26.58	0.455	33.01	-6.43
	11/2 BPSK	2592.99	H	176	163	4.00	1/49	24.30	28.30	0.676	33.01	-4.71
	11/2 BPSK	2679.99	H	108	164	4.50	1/25	23.46	27.96	0.626	33.01	-5.05
	QPSK	2506.02	H	189	171	4.17	1/25	22.03	26.20	0.417	33.01	-6.81
10 MHz	QPSK	2592.99	H	176	163	4.00	1/49	24.12	28.12	0.648	33.01	-4.89
	QPSK	2679.99	H	108	164	4.50	1/25	22.86	27.36	0.545	33.01	-5.65
	16-QAM	2506.02	H	189	171	4.17	1/25	23.40	27.57	0.572	33.01	-5.44
	11/2 BPSK	2503.50	H	189	171	4.17	1/19	22.43	26.60	0.457	33.01	-6.41
	11/2 BPSK	2592.99	H	176	163	4.00	1/36	24.17	28.17	0.656	33.01	-4.84
	11/2 BPSK	2682.48	H	108	164	4.51	1/19	23.34	27.85	0.610	33.01	-5.16
100 MHz	QPSK	2503.50	H	189	171	4.17	1/19	22.09	26.26	0.423	33.01	-6.75
	QPSK	2592.99	H	176	163	4.00	1/36	24.15	28.15	0.653	33.01	-4.86
	QPSK	2682.48	H	108	164	4.51	1/19	22.71	27.22	0.528	33.01	-5.79
	16-QAM	2503.50	H	189	171	4.17	1/19	23.11	27.28	0.535	33.01	-5.73
	11/2 BPSK	2501.01	H	189	171	4.17	1/12	22.33	26.50	0.447	33.01	-6.51
	11/2 BPSK	2592.99	H	176	163	4.00	1/22	24.12	28.12	0.648	33.01	-4.89
100 MHz	11/2 BPSK	2685.00	H	108	164	4.52	1/12	23.11	27.63	0.580	33.01	-5.38
	QPSK	2501.01	H	189	171	4.17	1/12	22.06	26.23	0.420	33.01	-6.78
	QPSK	2592.99	H	176	163	4.00	1/22	24.06	28.06	0.640	33.01	-4.95
	QPSK	2685.00	H	108	164	4.52	1/12	22.48	27.00	0.502	33.01	-6.01
100 MHz	16-QAM	2501.01	H	189	171	4.17	1/12	22.78	26.95	0.496	33.01	-6.06
	QPSK (CP-OFDM)	2592.99	H	115	165	4.19	1/136	22.99	27.18	0.523	33.01	-5.83
100 MHz	QPSK (Opposite Pol.)	2592.99	V	224	342	4.19	1/136	23.19	27.38	0.547	33.01	-5.63

Table 6-5. EIRP Data (UL-MIMO n41 PC1.5) – Ant1&6

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 13 of 42

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 M	$\pi/2$ BPSK	3500.01	H	133	170	6.46	1 / 204	19.61	26.07	0.405	30.00	-3.93
	QPSK	3500.01	H	133	170	6.46	1 / 204	19.58	26.04	0.402	30.00	-3.96
	16-QAM	3500.01	H	133	170	6.46	1 / 204	18.21	24.67	0.293	30.00	-5.33
100 MHz	QPSK (CP-OFDM)	3500.0	H	130	170	6.46	1/271	18.50	24.96	0.314	30.00	-5.04
	QPSK (Opposite Pol.)	3500.0	V	120	268	6.48	1/271	16.01	22.49	0.177	30.00	-7.51

Table 6-6. EIRP Data (NR Band n77 SRS_DoD Band) – Ant 4

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	$\pi/2$ BPSK	3750.00	H	112	163	7.01	1 / 204	20.86	27.87	0.613	30.00	-2.13
	$\pi/2$ BPSK	3840.00	H	118	162	7.15	1 / 204	21.84	28.99	0.793	30.00	-1.01
	$\pi/2$ BPSK	3930.00	H	115	161	7.39	1 / 68	21.68	29.07	0.807	30.00	-0.93
	QPSK	3750.00	H	112	163	7.01	1 / 204	20.84	27.85	0.610	30.00	-2.15
	QPSK	3840.00	H	118	162	7.15	1 / 204	21.76	28.91	0.779	30.00	-1.09
	QPSK	3930.00	H	115	161	7.39	1 / 136	21.46	28.85	0.768	30.00	-1.15
	16-QAM	3750.00	H	112	163	7.01	1 / 204	19.79	26.80	0.479	30.00	-3.20
100 MHz	QPSK (CP-OFDM)	3840.0	H	120	162	7.39	1/1	20.60	27.99	0.630	30.00	-2.01
	QPSK (Opposite Pol.)	3840.0	V	276	166	7.39	1/1	21.17	28.56	0.718	30.00	-1.44

Table 6-7. EIRP Data (NR Band n77 SRS_C-Band) – Ant 4

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 14 of 42

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 M	$\pi/2$ BPSK	3500.01	H	175	160	6.46	1 / 271	20.44	26.90	0.490	30.00	-3.10
	QPSK	3500.01	H	175	160	6.46	1 / 271	20.21	26.67	0.465	30.00	-3.33
	16-QAM	3500.01	H	175	160	6.46	1 / 271	19.17	25.63	0.366	30.00	-4.37
90 MHz	$\pi/2$ BPSK	3495.00	H	175	160	6.46	1/243	20.42	26.87	0.487	30.00	-3.13
	$\pi/2$ BPSK	3500.01	H	175	160	6.46	1/122	20.51	26.97	0.498	30.00	-3.03
	$\pi/2$ BPSK	3504.99	H	175	160	6.47	1/243	20.41	26.87	0.487	30.00	-3.13
	QPSK	3495.00	H	175	160	6.46	1/243	20.27	26.72	0.470	30.00	-3.28
	QPSK	3500.01	H	175	160	6.46	1/122	20.26	26.72	0.470	30.00	-3.28
	QPSK	3504.99	H	175	160	6.47	1/243	20.23	26.69	0.467	30.00	-3.31
	16-QAM	3495.00	H	175	160	6.46	1/243	19.25	25.70	0.372	30.00	-4.30
	16-QAM	3500.01	H	175	160	6.46	1/122	19.25	25.70	0.372	30.00	-4.30
80 MHz	$\pi/2$ BPSK	3490.02	H	175	160	6.45	1/215	20.39	26.84	0.484	30.00	-3.16
	$\pi/2$ BPSK	3500.01	H	175	160	6.46	1/1	20.36	26.82	0.481	30.00	-3.18
	$\pi/2$ BPSK	3510.00	H	175	160	6.47	1/1	20.31	26.78	0.477	30.00	-3.22
	QPSK	3490.02	H	175	160	6.45	1/215	20.27	26.72	0.470	30.00	-3.28
	QPSK	3500.01	H	175	160	6.46	1/1	20.23	26.69	0.467	30.00	-3.31
	QPSK	3510.00	H	175	160	6.47	1/1	20.24	26.71	0.469	30.00	-3.29
	16-QAM	3510.00	H	175	160	6.47	1/1	19.15	25.62	0.365	30.00	-4.38
	16-QAM	3500.01	H	175	160	6.46	1/1	19.15	25.62	0.365	30.00	-4.38
70 MHz	$\pi/2$ BPSK	3485.01	H	175	160	6.45	1/94	20.44	26.88	0.488	30.00	-3.12
	$\pi/2$ BPSK	3500.01	H	175	160	6.46	1/1	20.45	26.91	0.491	30.00	-3.09
	$\pi/2$ BPSK	3514.98	H	175	160	6.47	1/1	20.46	26.93	0.494	30.00	-3.07
	QPSK	3485.01	H	175	160	6.45	1/94	20.26	26.70	0.468	30.00	-3.30
	QPSK	3500.01	H	175	160	6.46	1/1	20.31	26.77	0.476	30.00	-3.23
	QPSK	3514.98	H	175	160	6.47	1/1	20.23	26.70	0.468	30.00	-3.30
	16-QAM	3500.01	H	175	160	6.46	1/1	19.16	25.62	0.365	30.00	-4.38
	16-QAM	3480.00	H	175	160	6.44	1/1	20.69	27.13	0.517	30.00	-2.87
60 MHz	$\pi/2$ BPSK	3500.01	H	175	160	6.46	1/81	20.46	26.92	0.493	30.00	-3.08
	$\pi/2$ BPSK	3519.99	H	175	160	6.48	1/81	20.66	27.13	0.517	30.00	-2.87
	QPSK	3480.00	H	175	160	6.44	1/1	20.49	26.93	0.494	30.00	-3.07
	QPSK	3500.01	H	175	160	6.46	1/81	20.39	26.85	0.485	30.00	-3.15
	QPSK	3519.99	H	175	160	6.48	1/81	20.50	26.97	0.498	30.00	-3.03
	16-QAM	3500.01	H	175	160	6.46	1/81	19.34	25.80	0.381	30.00	-4.20
	16-QAM	3475.02	H	175	160	6.43	1/1	20.68	27.11	0.515	30.00	-2.89
	16-QAM	3500.01	H	175	160	6.46	1/1	20.62	27.08	0.511	30.00	-2.92
50 MHz	$\pi/2$ BPSK	3525.00	H	175	160	6.48	1/1	20.51	26.98	0.499	30.00	-3.02
	QPSK	3475.02	H	175	160	6.43	1/1	20.48	26.91	0.491	30.00	-3.09
	QPSK	3500.01	H	175	160	6.46	1/1	20.37	26.83	0.482	30.00	-3.17
	QPSK	3525.00	H	175	160	6.48	1/1	20.39	26.86	0.486	30.00	-3.14
	16-QAM	3525.00	H	175	160	6.48	1/1	19.20	25.67	0.369	30.00	-4.33
	16-QAM	3470.01	H	175	160	6.43	1/53	20.89	27.31	0.539	30.00	-2.69
	$\pi/2$ BPSK	3500.01	H	175	160	6.46	1/104	20.84	27.30	0.538	30.00	-2.70
	$\pi/2$ BPSK	3529.98	H	175	160	6.48	1/1	20.81	27.29	0.536	30.00	-2.71
40 MHz	QPSK	3470.01	H	175	160	6.43	1/53	20.74	27.16	0.521	30.00	-2.84
	QPSK	3500.01	H	175	160	6.46	1/104	20.70	27.16	0.521	30.00	-2.84
	QPSK	3529.98	H	175	160	6.48	1/1	20.64	27.12	0.516	30.00	-2.88
	16-QAM	3470.01	H	175	160	6.43	1/53	19.47	25.89	0.389	30.00	-4.11
	$\pi/2$ BPSK	3465.00	H	175	160	6.42	1/1	20.95	27.37	0.546	30.00	-2.63
	$\pi/2$ BPSK	3500.01	H	175	160	6.46	1/1	20.77	27.23	0.529	30.00	-2.77
	$\pi/2$ BPSK	3534.99	H	175	160	6.48	1/1	20.84	27.32	0.540	30.00	-2.68
	QPSK	3465.00	H	175	160	6.42	1/1	20.68	27.10	0.513	30.00	-2.90
30 MHz	QPSK	3500.01	H	175	160	6.46	1/1	20.61	27.07	0.510	30.00	-2.93
	QPSK	3534.99	H	175	160	6.48	1/1	20.60	27.08	0.511	30.00	-2.92
	16-QAM	3465.00	H	175	160	6.42	1/1	19.54	25.96	0.395	30.00	-4.04
	16-QAM	3500.01	H	175	160	6.46	1/1	19.70	26.16	0.413	30.00	-3.84
	$\pi/2$ BPSK	3460.02	H	175	160	6.42	1/49	20.93	27.34	0.543	30.00	-2.66
	$\pi/2$ BPSK	3500.01	H	175	160	6.46	1/1	20.85	27.31	0.539	30.00	-2.69
	$\pi/2$ BPSK	3540.00	H	175	160	6.49	1/49	20.68	27.16	0.521	30.00	-2.84
	QPSK	3460.02	H	175	160	6.42	1/49	20.78	27.19	0.524	30.00	-2.81
20 MHz	QPSK	3500.01	H	175	160	6.46	1/1	20.62	27.08	0.511	30.00	-2.92
	QPSK	3540.00	H	175	160	6.49	1/49	20.59	27.07	0.510	30.00	-2.93
	16-QAM	3460.02	H	175	160	6.42	1/49	19.67	26.08	0.406	30.00	-3.92
	$\pi/2$ BPSK	3457.50	H	175	160	6.41	1/36	20.94	27.35	0.544	30.00	-2.65
	$\pi/2$ BPSK	3500.01	H	175	160	6.46	1/1	20.84	27.30	0.538	30.00	-2.70
	$\pi/2$ BPSK	3542.49	H	175	160	6.49	1/19	20.77	27.25	0.531	30.00	-2.75
	QPSK	3457.50	H	175	160	6.41	1/36	20.73	27.14	0.518	30.00	-2.86
	QPSK	3500.01	H	175	160	6.46	1/1	20.64	27.10	0.513	30.00	-2.90
15 MHz	QPSK	3542.49	H	175	160	6.49	1/19	20.63	27.11	0.515	30.00	-2.89
	16-QAM	3542.49	H	175	160	6.49	1/19	19.43	25.91	0.390	30.00	-4.09
	$\pi/2$ BPSK	3455.01	H	175	160	6.41	1/12	20.69	27.09	0.512	30.00	-2.91
	$\pi/2$ BPSK	3500.01	H	175	160	6.46	1/1	20.57	27.03	0.505	30.00	-2.97
	$\pi/2$ BPSK	3544.98	H	175	160	6.49	1/12	20.62	27.10	0.513	30.00	-2.90
	QPSK	3455.01	H	175	160	6.41	1/12	20.55	26.95	0.496	30.00	-3.05
	QPSK	3500.01	H	175	160	6.46	1/1	20.34	26.80	0.479	30.00	-3.20
	QPSK	3544.98	H	175	160	6.49	1/12	20.45	26.93	0.494	30.00	-3.07
10 MHz	16-QAM	3455.01	H	175	160	6.41	1/12	19.37	25.77	0.378	30.00	-4.23
	QPSK (CP-OFDM)	3500.0	H	118	160	6.46	1 / 136	17.48	23.94	0.248	30.00	-6.06
	QPSK (Opposite Pol.)	3500.0	V	322	176	6.48	1 / 136	19.38	25.86	0.385	30.00	-4.14

Table 6-8. EIRP Data (UL-MIMO n77 PC1.5_DoD Band) – Ant6&7

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 15 of 42

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	11/2 BPSK	3750.00	H	133	157	7.01	1 / 1	18.76	25.77	0.378	30.00	-4.23
	11/2 BPSK	3840.00	H	113	155	7.15	1 / 1	19.23	26.38	0.435	30.00	-3.62
	11/2 BPSK	3930.00	H	126	157	7.39	1 / 1	19.62	27.01	0.502	30.00	-2.99
	QPSK	3750.00	H	133	157	7.01	1 / 1	18.52	25.53	0.358	30.00	-4.47
	QPSK	3840.00	H	113	155	7.15	1 / 1	17.57	24.72	0.297	30.00	-5.28
	QPSK	3930.00	H	126	157	7.39	1 / 1	19.05	26.44	0.441	30.00	-3.56
90 MHz	16-QAM	3930.00	H	126	157	7.39	1 / 1	18.67	26.06	0.404	30.00	-3.94
	11/2 BPSK	3745.02	H	133	157	7.00	1/122	18.71	25.71	0.373	30.00	-4.29
	11/2 BPSK	3840.00	H	113	155	7.15	1/243	19.26	26.41	0.438	30.00	-3.59
	11/2 BPSK	3934.98	H	126	157	7.40	1/243	19.31	26.71	0.469	30.00	-3.29
	QPSK	3745.02	H	133	157	7.00	1/122	18.56	25.56	0.360	30.00	-4.44
	QPSK	3840.00	H	113	155	7.15	1/243	17.39	24.54	0.285	30.00	-5.46
80 MHz	QPSK	3934.98	H	126	157	7.40	1/243	19.09	26.49	0.446	30.00	-3.51
	16-QAM	3934.98	H	126	157	7.40	1/243	18.77	26.17	0.414	30.00	-3.83
	11/2 BPSK	3740.01	H	133	157	6.99	1/1	18.78	25.76	0.377	30.00	-4.24
	11/2 BPSK	3840.00	H	113	155	7.15	1/215	19.28	26.43	0.440	30.00	-3.57
	11/2 BPSK	3939.99	H	126	157	7.41	1/108	19.39	26.80	0.479	30.00	-3.20
	QPSK	3740.01	H	133	157	6.99	1/1	18.63	25.61	0.364	30.00	-4.39
70 MHz	QPSK	3840.00	H	113	155	7.15	1/215	17.45	24.60	0.289	30.00	-5.40
	QPSK	3939.99	H	126	157	7.41	1/108	19.03	26.44	0.441	30.00	-3.56
	16-QAM	3840.00	H	113	155	7.15	1/215	19.10	26.25	0.422	30.00	-3.75
	11/2 BPSK	3735.00	H	133	157	6.97	1/94	18.71	25.68	0.370	30.00	-4.32
	11/2 BPSK	3840.00	H	113	155	7.15	1/1	19.34	26.49	0.446	30.00	-3.51
	11/2 BPSK	3945.00	H	126	157	7.42	1/94	19.29	26.71	0.469	30.00	-3.29
60 MHz	QPSK	3735.00	H	133	157	6.97	1/94	18.69	25.66	0.369	30.00	-4.34
	QPSK	3840.00	H	113	155	7.15	1/1	17.56	24.71	0.296	30.00	-5.29
	QPSK	3945.00	H	126	157	7.42	1/94	19.00	26.42	0.439	30.00	-3.58
	16-QAM	3840.00	H	113	155	7.15	1/1	19.06	26.21	0.418	30.00	-3.79
	11/2 BPSK	3730.02	H	133	157	6.96	1/1	18.91	25.86	0.386	30.00	-4.14
	11/2 BPSK	3840.00	H	113	155	7.15	1/81	19.31	26.46	0.443	30.00	-3.54
50 MHz	11/2 BPSK	3949.98	H	126	157	7.43	1/160	19.35	26.77	0.475	30.00	-3.23
	QPSK	3730.02	H	133	157	6.96	1/1	18.84	25.79	0.380	30.00	-4.21
	QPSK	3840.00	H	113	155	7.15	1/81	17.58	24.73	0.297	30.00	-5.27
	QPSK	3949.98	H	126	157	7.43	1/160	19.14	26.56	0.453	30.00	-3.44
	16-QAM	3840.00	H	113	155	7.15	1/81	18.97	26.12	0.409	30.00	-3.88
	11/2 BPSK	3725.01	H	133	157	6.94	1/66	19.06	26.00	0.399	30.00	-4.00
40 MHz	11/2 BPSK	3840.00	H	113	155	7.15	1/1	19.39	26.54	0.451	30.00	-3.46
	11/2 BPSK	3954.99	H	126	157	7.43	1/131	19.64	27.07	0.509	30.00	-2.93
	QPSK	3725.01	H	133	157	6.94	1/66	18.89	25.83	0.383	30.00	-4.17
	QPSK	3840.00	H	113	155	7.15	1/1	17.58	24.73	0.297	30.00	-5.27
	QPSK	3954.99	H	126	157	7.43	1/131	19.32	26.75	0.473	30.00	-3.25
	16-QAM	3954.99	H	126	157	7.43	1/131	19.16	26.59	0.456	30.00	-3.41
30 MHz	11/2 BPSK	3720.00	H	133	157	6.93	1/1	19.34	26.26	0.423	30.00	-3.74
	11/2 BPSK	3840.00	H	113	155	7.15	1/1	19.80	26.95	0.496	30.00	-3.05
	11/2 BPSK	3960.00	H	126	157	7.44	1/104	19.93	27.37	0.546	30.00	-2.63
	QPSK	3720.00	H	133	157	6.93	1/1	19.15	26.07	0.405	30.00	-3.93
	QPSK	3840.00	H	113	155	7.15	1/1	17.92	25.07	0.322	30.00	-4.93
	QPSK	3960.00	H	126	157	7.44	1/104	19.59	27.03	0.505	30.00	-2.97
20 MHz	16-QAM	3960.00	H	126	157	7.44	1/104	19.20	26.64	0.461	30.00	-3.36
	11/2 BPSK	3715.02	H	133	157	6.91	1/1	19.10	26.01	0.399	30.00	-3.99
	11/2 BPSK	3840.00	H	113	155	7.15	1/1	19.55	26.70	0.468	30.00	-3.30
	11/2 BPSK	3964.98	H	126	157	7.45	1/76	19.79	27.24	0.530	30.00	-2.76
	QPSK	3715.02	H	133	157	6.91	1/1	19.07	25.98	0.397	30.00	-4.02
	QPSK	3840.00	H	113	155	7.15	1/1	17.85	25.00	0.316	30.00	-5.00
15 MHz	QPSK	3964.98	H	126	157	7.45	1/76	19.51	26.96	0.497	30.00	-3.04
	16-QAM	3964.98	H	126	157	7.45	1/76	19.05	26.50	0.447	30.00	-3.50
	11/2 BPSK	3710.01	H	133	157	6.90	1/1	19.25	26.15	0.413	30.00	-3.85
	11/2 BPSK	3840.00	H	113	155	7.15	1/49	19.48	26.63	0.461	30.00	-3.37
	11/2 BPSK	3969.99	H	126	157	7.46	1/49	19.90	27.36	0.545	30.00	-2.64
	QPSK	3710.01	H	133	157	6.90	1/1	19.11	26.01	0.399	30.00	-3.99
10 MHz	QPSK	3840.00	H	113	155	7.15	1/49	17.74	24.89	0.309	30.00	-5.11
	QPSK	3969.99	H	126	157	7.46	1/49	19.56	27.02	0.504	30.00	-2.98
	16-QAM	3969.99	H	126	157	7.46	1/49	19.31	26.77	0.475	30.00	-3.23
	11/2 BPSK	3707.52	H	133	157	6.89	1/1	19.20	26.09	0.407	30.00	-3.91
	11/2 BPSK	3840.00	H	113	155	7.15	1/19	19.63	26.78	0.477	30.00	-3.22
	11/2 BPSK	3972.48	H	126	157	7.46	1/36	19.79	27.25	0.531	30.00	-2.75
5 MHz	QPSK	3707.52	H	133	157	6.89	1/1	19.14	26.03	0.401	30.00	-3.97
	QPSK	3840.00	H	113	155	7.15	1/19	17.84	24.99	0.316	30.00	-5.01
	QPSK	3972.48	H	126	157	7.46	1/36	19.43	26.89	0.489	30.00	-3.11
	16-QAM	3972.48	H	126	157	7.46	1/36	18.93	26.39	0.436	30.00	-3.61
	11/2 BPSK	3705.00	H	133	157	6.89	1/12	19.00	25.88	0.388	30.00	-4.12
	11/2 BPSK	3840.00	H	113	155	7.15	1/12	19.42	26.57	0.454	30.00	-3.43
100 MHz	11/2 BPSK	3975.00	H	126	157	7.47	1/22	19.62	27.09	0.512	30.00	-2.91
	QPSK	3705.00	H	133	157	6.89	1/12	18.93	25.81	0.381	30.00	-4.19
	QPSK	3840.00	H	113	155	7.15	1/12	17.63	24.78	0.301	30.00	-5.22
	QPSK	3975.00	H	126	157	7.47	1/22	19.29	26.76	0.474	30.00	-3.24
	16-QAM	3705.00	H	133	157	6.89	1/12	19.63	26.51	0.448	30.00	-3.49
	QPSK (CP-OFDM)	3840.0	H	133	157	7.15	1/136	18.35	25.50	0.355	30.00	-4.50
	QPSK (Opposite Pol.)	3840.0	V	308	215	7.13	1/136	17.05	24.18	0.262	30.00	-5.82

Table 6-9. EIRP Data (UL-MIMO n77 PC1.5_C-Band) – Ant6&1

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 16 of 42

6.3 Radiated Spurious Emissions Measurements

Test Overview

Radiated spurious emissions measurements are performed using the field strength conversion method described in ANSI C63.26-2015 with the EUT transmitting into an external antenna. Measurements on signals operating below 1GHz are performed using hybrid (biconical/log) antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

ANSI C63.26-2015 – Section 5.5.4

Test Settings

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW $\geq 3 \times$ RBW
3. Span = 1.5 times the OBW
4. No. of sweep points $\geq 2 \times$ span / RBW
5. Detector = RMS
6. Trace mode = Average (Max Hold for pulsed emissions)
7. The trace was allowed to stabilize

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 17 of 42

Test Setup

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

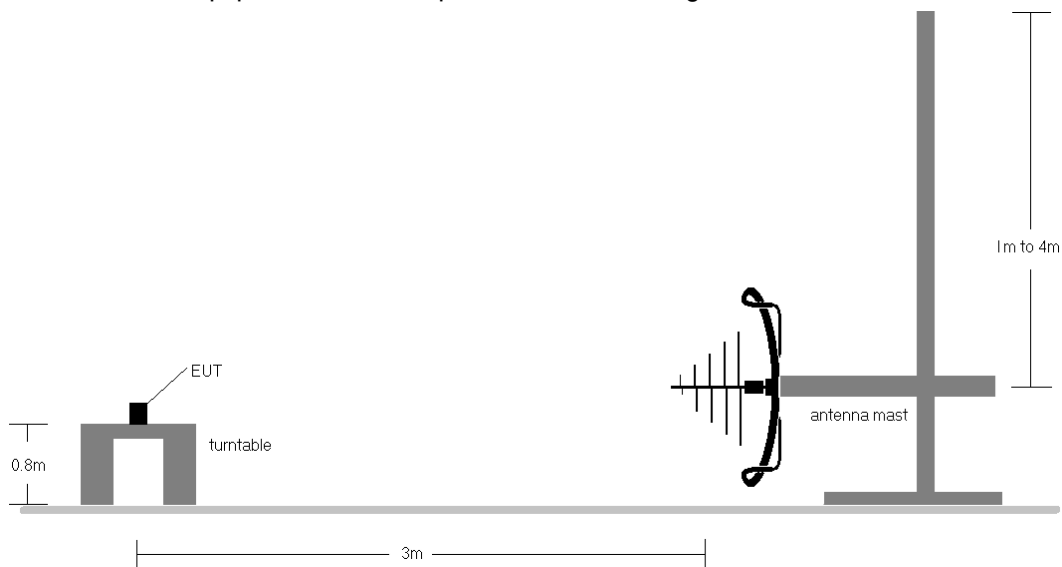


Figure 6-3. Test Instrument & Measurement Setup < 1GHz

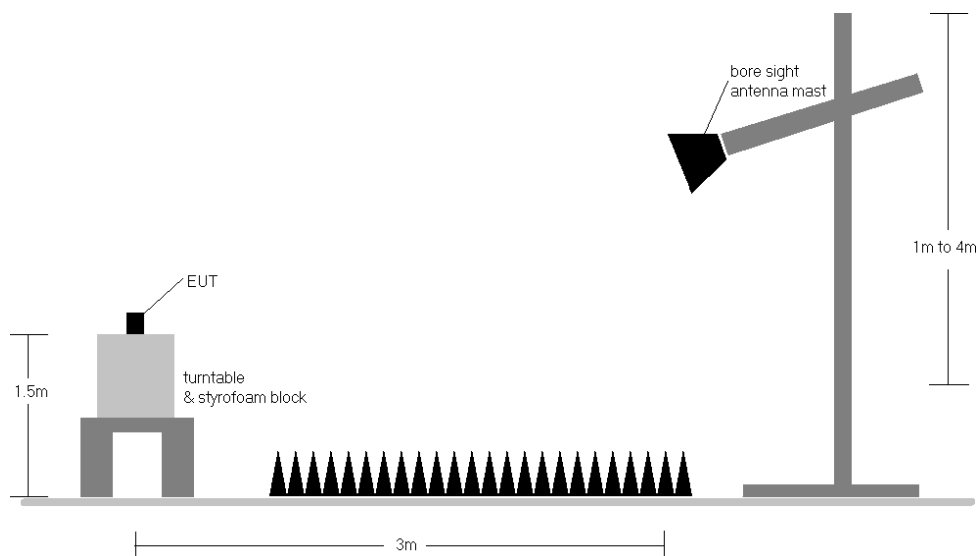


Figure 6-4. Test Instrument & Measurement Setup > 1GHz

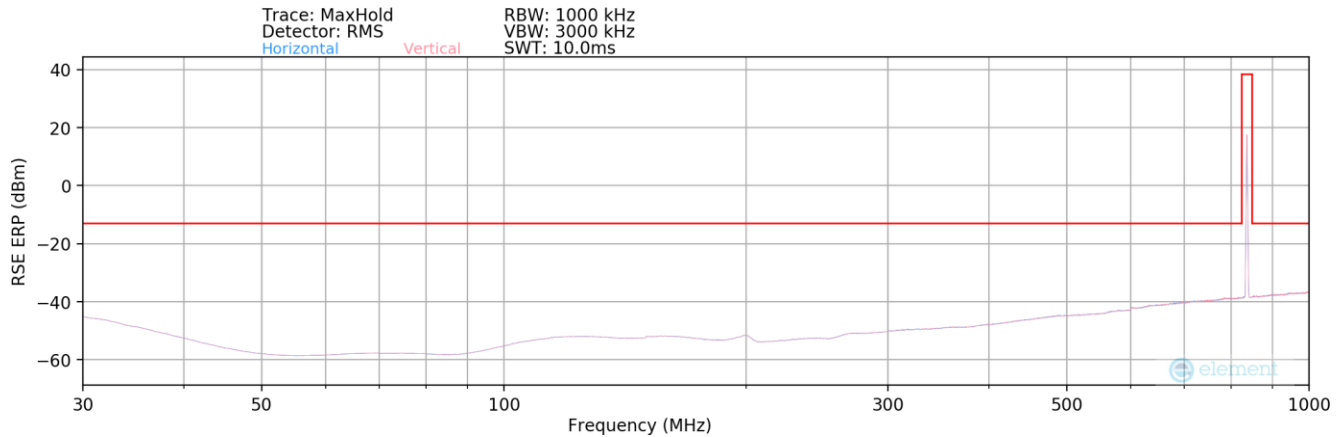
FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 18 of 42

Test Notes

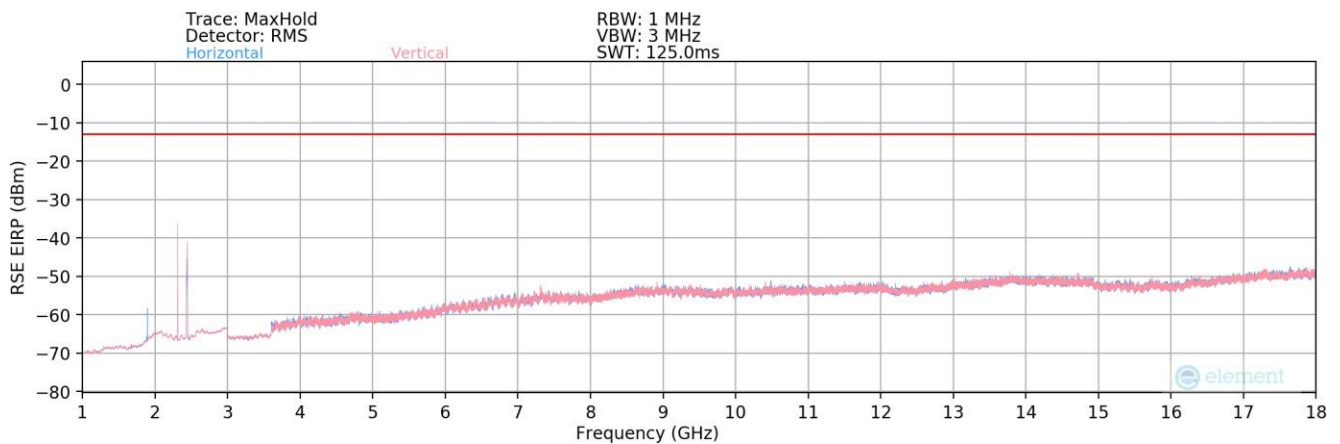
- 1) Field strengths are calculated using the Measurement quantity conversions in ANSI C63.26-2015 Section 5.2.7:
 - a) $E(\text{dB}\mu\text{V/m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
 - b) $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V/m}) + 20\log D - 104.8$; where D is the measurement distance in meters.
- 2) This unit was tested while powered by an AC power source.
- 3) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 4) Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
- 5) The "-" shown in the following RSE tables are used to denote a noise floor measurement.
- 6) 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.
- 7) Spurious emissions shown in this section are measured while operating in EN-DC mode with Sub 6GHz NR carrier as well as an LTE carrier (anchor). Spurious emissions from the NR carrier device, is subject to the rules under which the NR carrier operates. Spurious emissions caused by the LTE carrier must meet the requirements of the rules under which the LTE carrier operates.

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 19 of 42

EN-DC NR n5 + B30 + 2.4GHz 802.11be MIMO Ch 6



Plot 6-1. Radiated Spurious Plot Below 1GHz



Plot 6-2. Radiated Spurious Plot Above 1GHz

Test Notes

Per Plot 6-2, emission at 2437 MHz is not considered as this is the 2.4 GHz Ch 6 Fundamental.

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 20 of 42

Bandwidth (MHz):	20 (NR) +10 (LTE) + 20 (WiFi)
Frequency (MHz):	836.5+2310+2437
RB / Offset:	1/53 (NR) + 1/25 (LTE)
Mode:	Non-Stand Alone
Anchor Band:	n5+B30+2.4GHz Ch.6

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
498.00	V	-	-	-90.90	25.86	41.96	-55.45	-13.00	-42.45

Table 6-10. Radiated Spurious Data - Below 1GHz

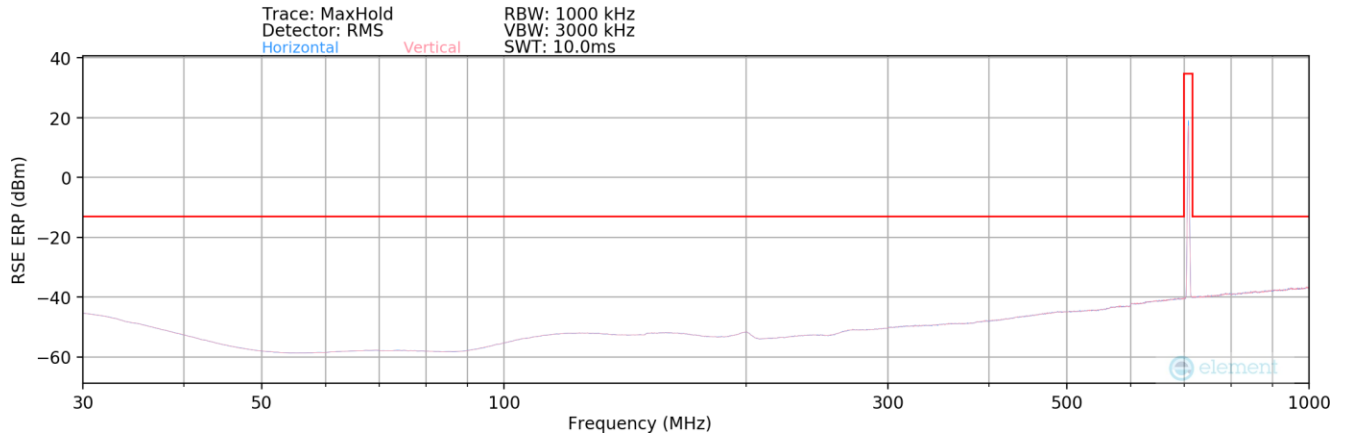
Bandwidth (MHz):	20 (NR) +10 (LTE) + 20 (WiFi)
Frequency (MHz):	836.5+2310+2437
RB / Offset:	1/53 (NR) + 1/25 (LTE)
Mode:	Non-Stand Alone
Anchor Band:	n5+B30+2.4GHz Ch.6

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1894.00	H	240	116	-62.27	-3.96	40.77	-54.49	-13.00	-41.49
6930.00	V	-	-	-78.91	8.37	36.46	-58.79	-13.00	-45.79
7184.00	V	-	-	-79.23	8.87	36.64	-58.62	-13.00	-45.62
8147.50	V	-	-	-80.22	9.74	36.52	-58.74	-13.00	-45.74

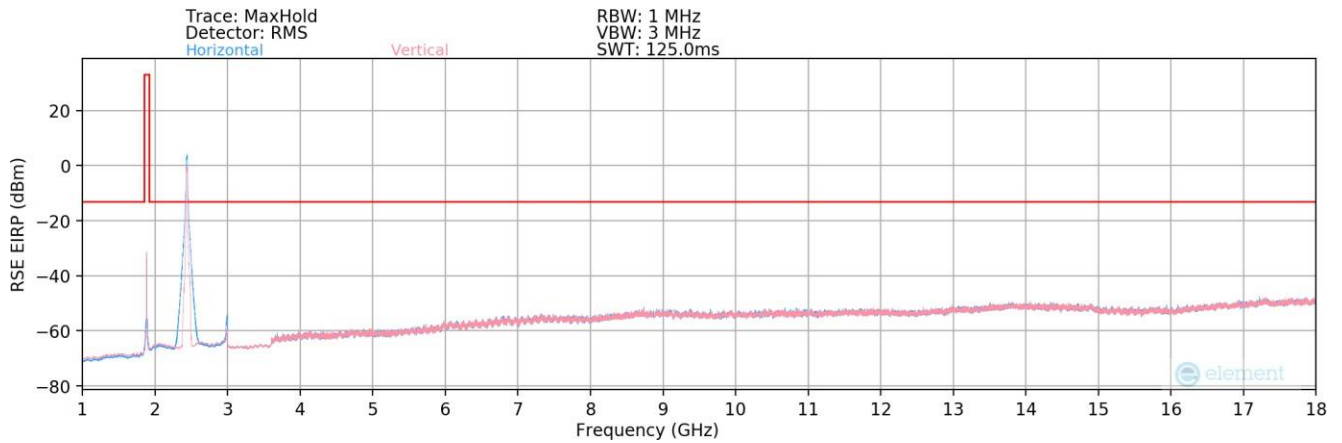
Table 6-11. Radiated Spurious Data - Above 1GHz

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 21 of 42

EN-DC NR n25 + B12 + 2.4GHz 802.11be MIMO Ch 6



Plot 6-3. Radiated Spurious Plot Below 1GHz



Plot 6-4. Radiated Spurious Plot Above 1GHz

Test Notes

Per Plot 6-2, emission at 2437 MHz is not considered as this is the 2.4 GHz Ch 6 Fundamental.

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 22 of 42

Bandwidth (MHz):	40+10+20
Frequency (MHz):	1882.5+707.5+2437
RB / Offset:	1 / 108 +1 / 25
Mode:	Non-Stand Alone
Anchor Band:	n25/2+B12+2.4GHz Ch.6

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
546.00	H	-	-	-91.06	26.40	42.34	-55.07	-13.00	-42.07

Table 6-12. Radiated Spurious Data - Below 1GHz

Bandwidth (MHz):	40 (NR) +10 (LTE) +20 (WiFi)
Frequency (MHz):	1882.5+707.5+2437
RB / Offset:	1 / 108 (NR) +1 / 25 (LTE)
Mode:	Non-Stand Alone
Anchor Band:	n25/2+B12+2.4GHz Ch.6

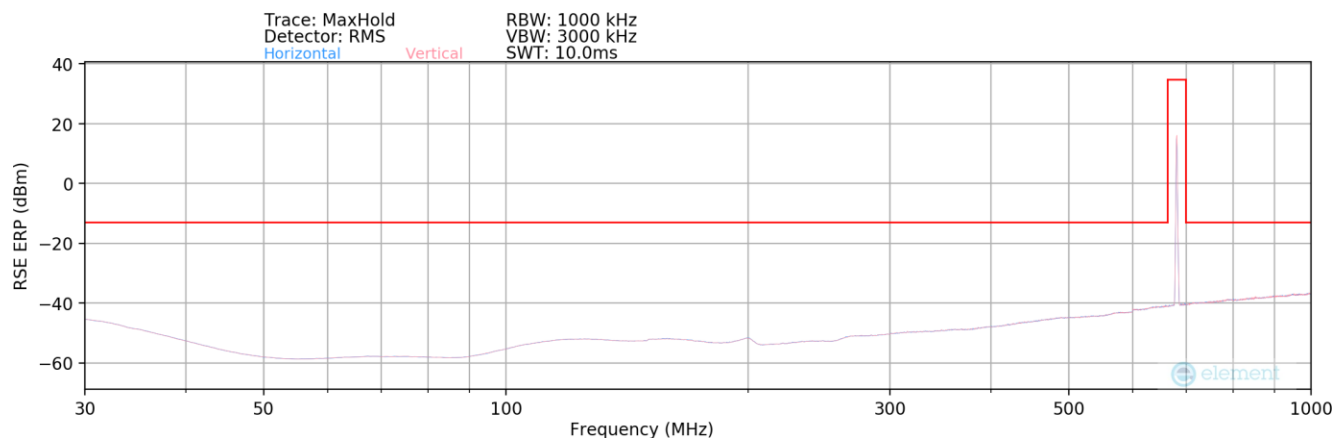
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3001.00	H	400	236	-75.99	-0.18	30.83	-64.43	-13.00	-51.43
5647.50	H	-	-	-78.83	4.53	32.70	-62.56	-13.00	-49.56
7464.00	H	-	-	-79.32	9.06	36.74	-58.52	-13.00	-45.52
9346.50	H	-	-	-80.83	12.10	38.27	-56.98	-13.00	-43.98

Table 6-13. Radiated Spurious Data - Above 1GHz

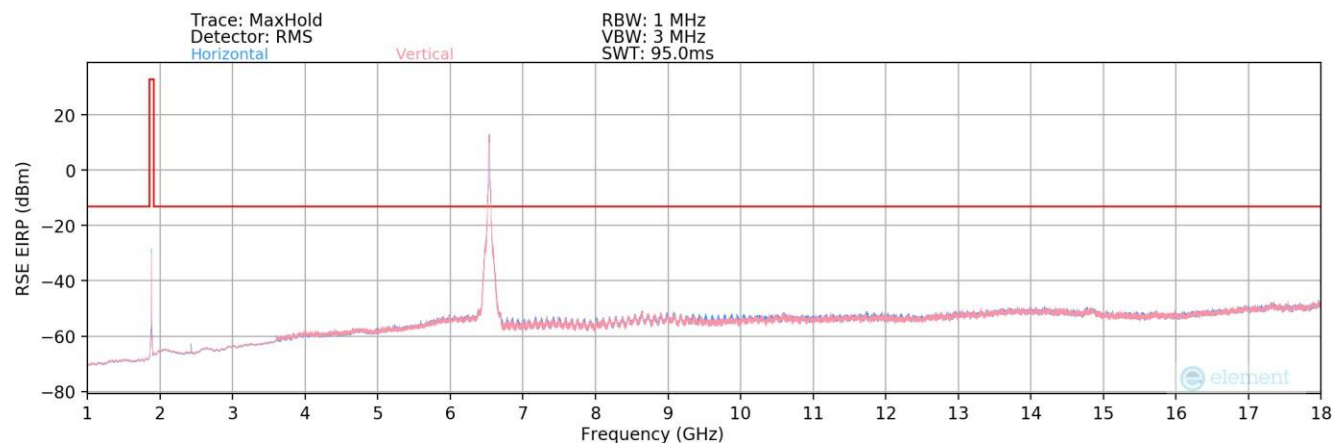
C

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 23 of 42

EN-DC NR n71 + B2 + 6GHz 802.11be SP MIMO Ch 117



Plot 6-5. Radiated Spurious Plot Below 1GHz



Plot 6-6. Radiated Spurious Plot Above 1GHz

Test Notes

Per Plot 6-6, emission at 6535MHz is not considered, this is the 6GHz Ch 117 Fundamental.

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 24 of 42

Bandwidth (MHz):	20 (NR) +20 (LTE) +20 (WiFi)
Frequency (MHz):	680.5+1880+6535
RB / Offset:	1/53+1/50
Mode:	Non-Standalone
Band:	n71+B2+6GHz Ch.117

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
323.00	V	-	-	-91.45	21.60	37.15	-60.26	-13.00	-47.26

Table 6-14. Radiated Spurious Data - Below 1GHz

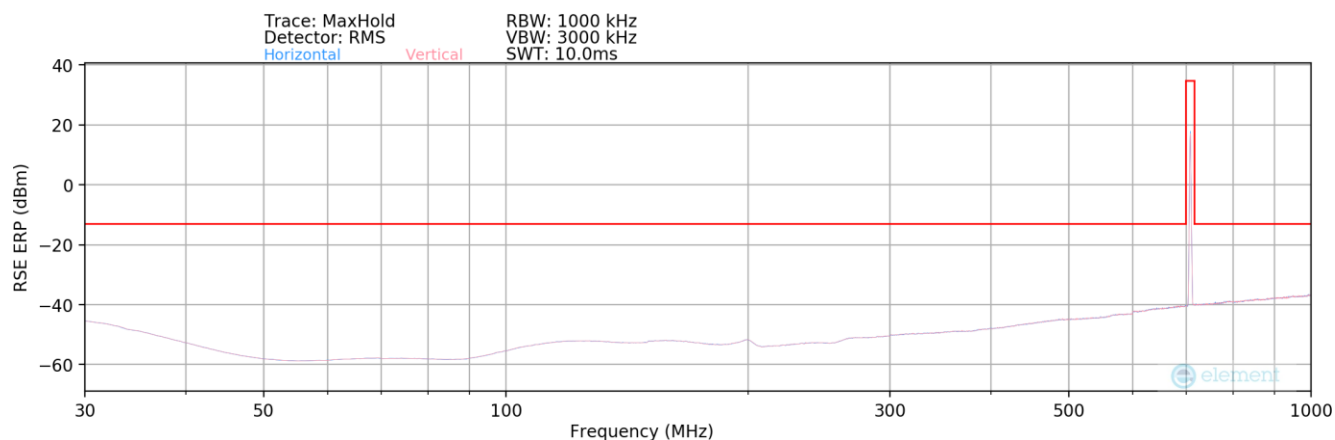
Bandwidth (MHz):	20 (NR) +20 (LTE) +20 (WiFi)
Frequency (MHz):	680.5+1880+6535
RB / Offset:	1/53+1/50
Mode:	Non-Standalone
Anchor Band:	n71+B2+6GHz Ch.117

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
10385.00	V	-	-	-81.06	13.32	39.26	-56.00	-13.00	-43.00
11870.50	V	-	-	-81.46	14.35	39.89	-55.37	-13.00	-42.37
12228.00	V	-	-	-81.89	14.07	39.18	-56.08	-13.00	-43.08

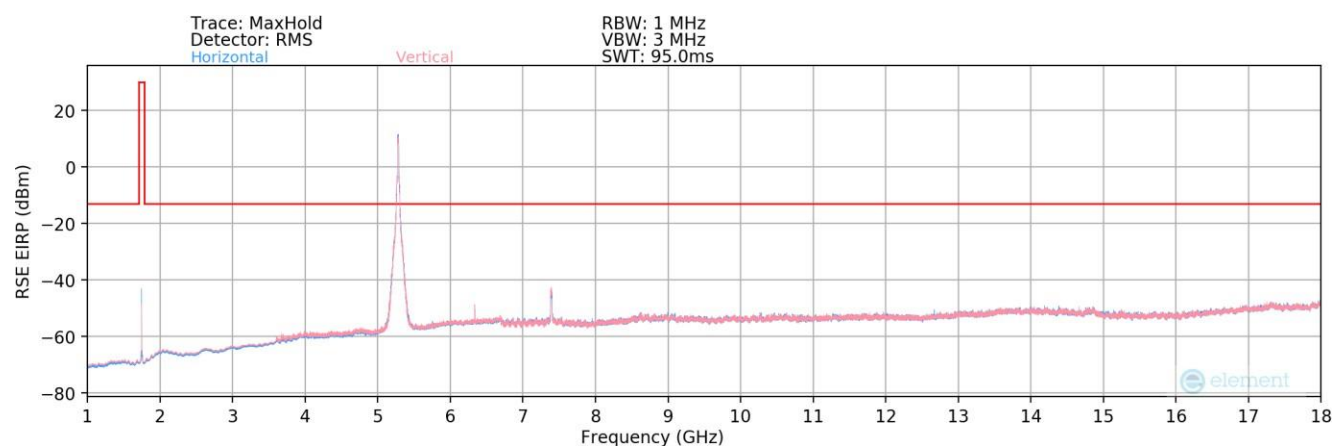
Table 6-15. Radiated Spurious Data - Above 1GHz

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 25 of 42

EN-DC NR n12 + B66 + 5GHz 802.11be MIMO Ch 56



Plot 6-7. Radiated Spurious Plot Below 1GHz



Plot 6-8. Radiated Spurious Plot Above 1GHz

Test Notes

Per Plot 6-8, emission at 5280 MHz is not considered, this is the 5GHz Ch 56 Fundamental.

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 26 of 42

Mode:	15 (NR) +20 (LTE) +20 (WiFi)
Channel:	707.5+1745+5280
Frequency (MHz):	1 / 39 (NR) +1 / 50 (LTE)
Detector / Trace Mode:	Non-Stand Alone
RBW / VBW:	n12+B66/4+5GHz Ch.56

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
285.00	V	-	-	-91.44	20.87	36.43	-60.98	-13.00	-47.98

Table 6-16. Radiated Spurious Data - Below 1GHz

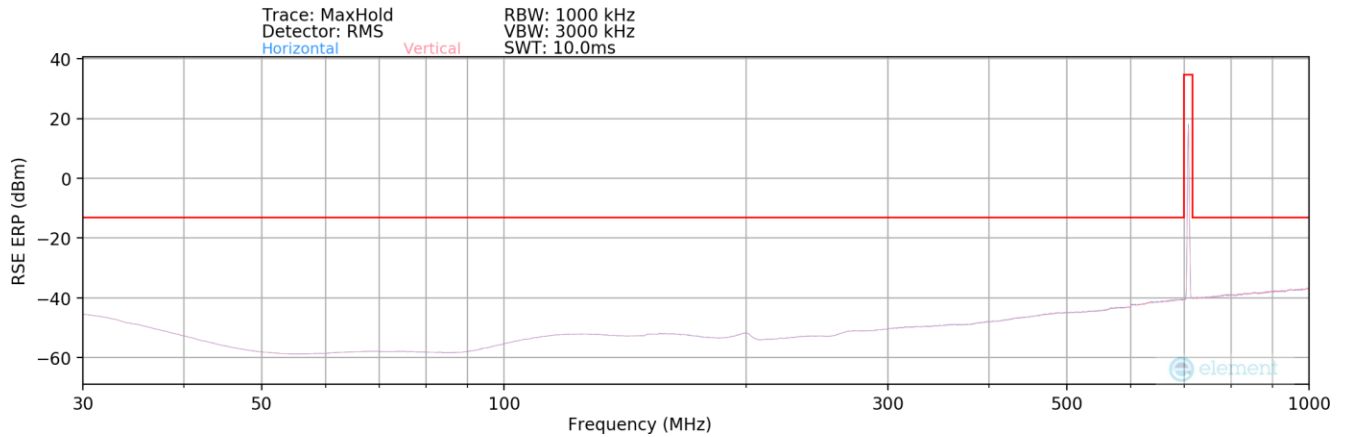
Bandwidth (MHz):	15 (NR) +20 (LTE) +20 (WiFi)
Frequency (MHz):	707.5+1745+5280
RB / Offset:	1 / 39 (NR) +1 / 50 (LTE)
Mode:	Non-Stand Alone
Anchor Band:	n12+B66/4+5GHz Ch.56

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
6336.50	V	248	6	-66.20	6.75	47.55	-47.71	-13.00	-34.71
7392.00	V	256	352	-65.00	9.90	51.90	-43.35	-13.00	-30.35
8767.50	V	-	-	-79.75	11.07	38.32	-56.94	-13.00	-43.94
10185.00	V	-	-	-81.25	12.78	38.53	-56.72	-13.00	-43.72
12635.00	V	-	-	-81.89	13.58	38.69	-56.57	-13.00	-43.57

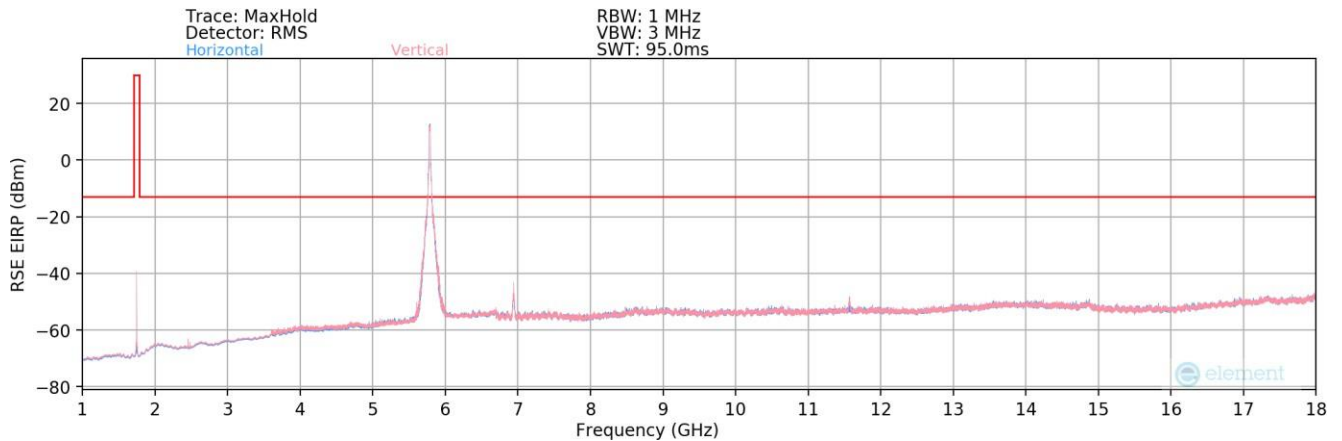
Table 6-17. Radiated Spurious Data - Above 1GHz

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 27 of 42

EN-DC NR n66 + B12 + 5GHz 802.11be Ch 157



Plot 6-9. Radiated Spurious Plot Below 1GHz



Plot 6-10. Radiated Spurious Plot Above 1GHz

Test Notes

Per Plot 6-8, emission at 5785 MHz is not considered, this is the 5GHz Ch 157 Fundamental.

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 28 of 42

Mode:	40 (NR) +10 (LTE) +20 (WiFi)
Channel:	1745+707.5+5785
Frequency (MHz):	1 / 108 (NR) +1 / 25 (LTE)
Detector / Trace Mode:	Non-Stand Alone
RBW / VBW:	n66+B12+5GHz Ch.157

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
47.50	V	-	-	-92.18	15.64	30.46	-66.95	-13.00	-53.95

Table 6-18. Radiated Spurious Data - Below 1GHz

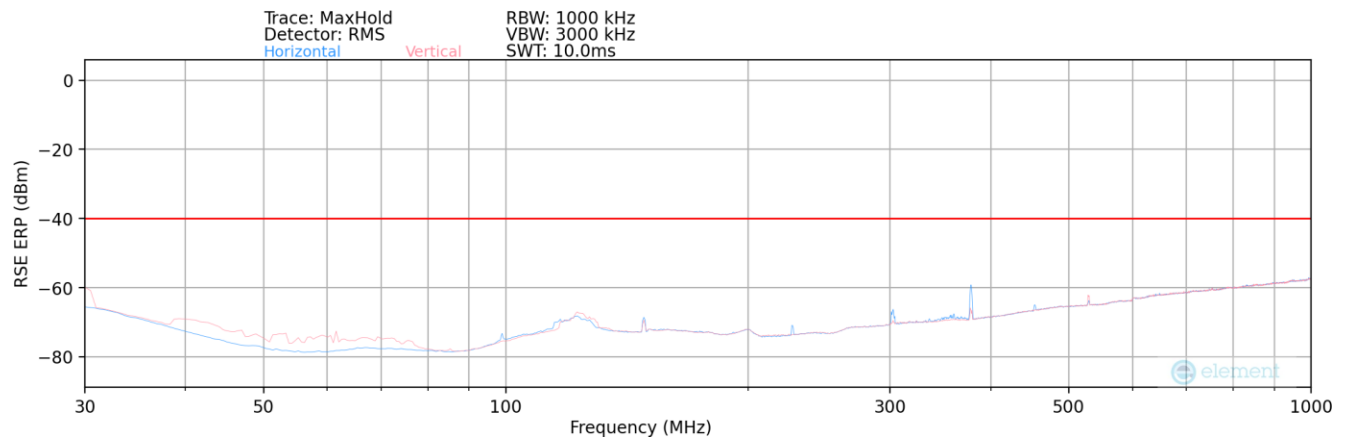
Bandwidth (MHz):	40 (NR) +10 (LTE) +20 (WiFi)
Frequency (MHz):	1745+707.5+5785
RB / Offset:	1 / 108 (NR) +1 / 25 (LTE)
Mode:	Non-Stand Alone
Anchor Band:	n66+B12+5GHz Ch.157

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
6942.00	V	238	358	-64.67	13.72	56.05	-39.21	-13.00	-26.21
11570.00	V	135	120	-74.56	18.74	51.18	-44.08	-13.00	-31.08
12020.00	V	-	-	-81.54	18.82	44.28	-50.98	-13.00	-37.98
14005.00	V	-	-	-81.93	23.37	48.44	-46.82	-13.00	-33.82
15087.50	V	-	-	-82.19	21.54	46.35	-48.91	-13.00	-35.91

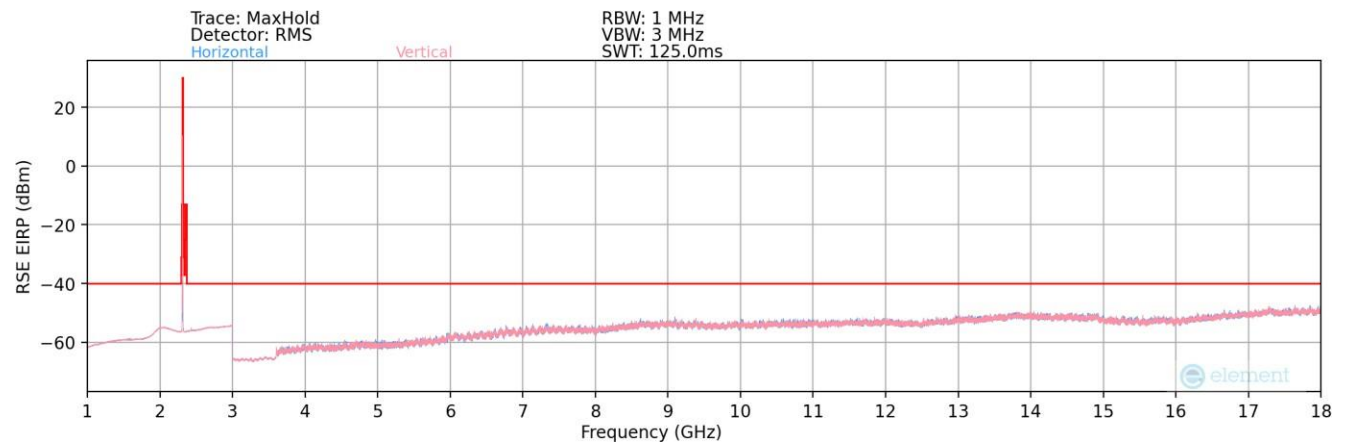
Table 6-19. Radiated Spurious Data - Above 1GHz

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 29 of 42

LTE Band 30



Plot 6-11. Radiated Spurious Plot Below 1GHz



Plot 6-12. Radiated Spurious Plot Above 1GHz

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 30 of 42

Bandwidth (MHz):	10
Frequency (MHz):	2310.0
RB / Offset:	1 / 25

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
124.13	H	-	-	-92.01	20.52	35.51	-61.90	-40.00	-21.90
303.20	H	129	277	-91.44	21.23	36.79	-60.62	-40.00	-20.62
378.23	H	232	231	-90.56	22.74	39.18	-58.23	-40.00	-18.23

Table 6-20. Radiated Spurious Data - Below 1GHz

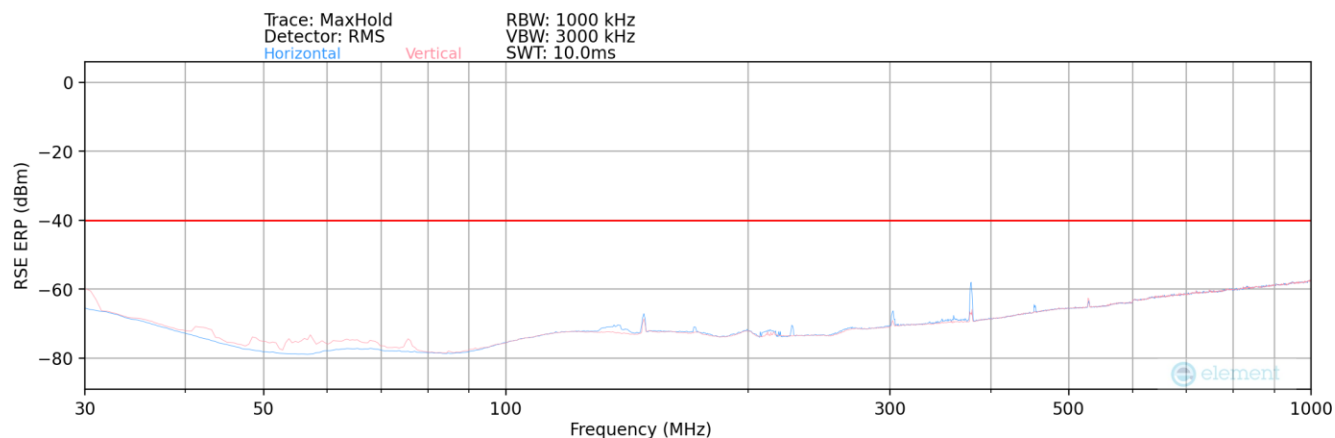
Bandwidth (MHz):	10
Frequency (MHz):	2310.0
RB / Offset:	1 / 25

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
4620.00	H	-	-	-78.85	2.76	30.91	-64.34	-40.00	-24.34
6930.00	H	-	-	-80.35	8.37	35.02	-60.23	-40.00	-20.23
9240.00	H	-	-	-80.75	11.10	37.35	-57.91	-40.00	-17.91

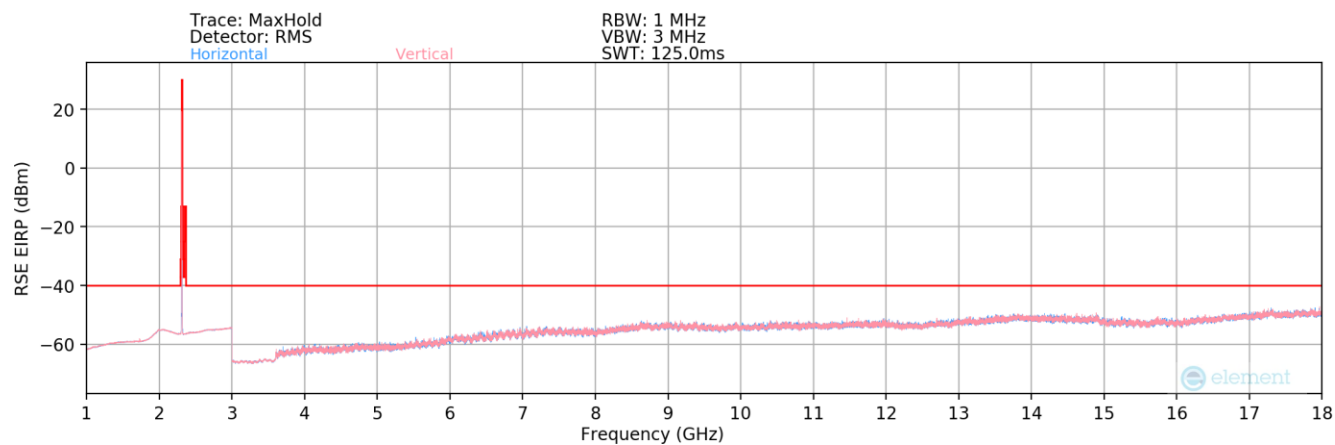
Table 6-21. Radiated Spurious Data - Above 1GHz

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 31 of 42

NR Band n30



Plot 6-13. Radiated Spurious Plot Below 1GHz



Plot 6-14. Radiated Spurious Plot Above 1GHz

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 32 of 42

Bandwidth (MHz):	10
Frequency (MHz):	2310.0
RB / Offset:	1 / 25

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
169.07	H	-	-	-92.31	19.39	34.08	-63.32	-40.00	-23.32
377.82	H	250	256	-90.75	22.74	38.99	-58.42	-40.00	-18.42

Table 6-22. Radiated Spurious Data - Below 1GHz

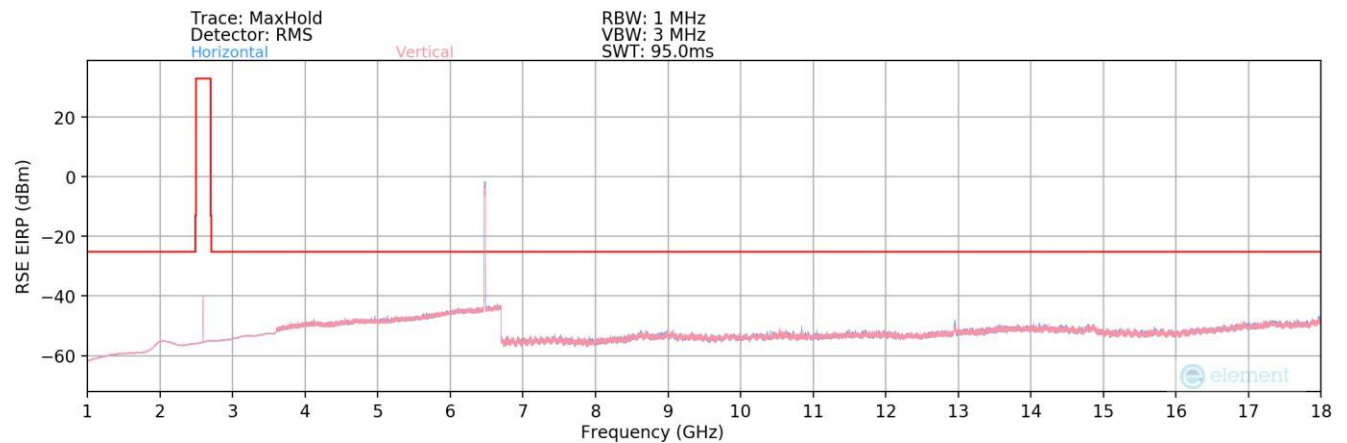
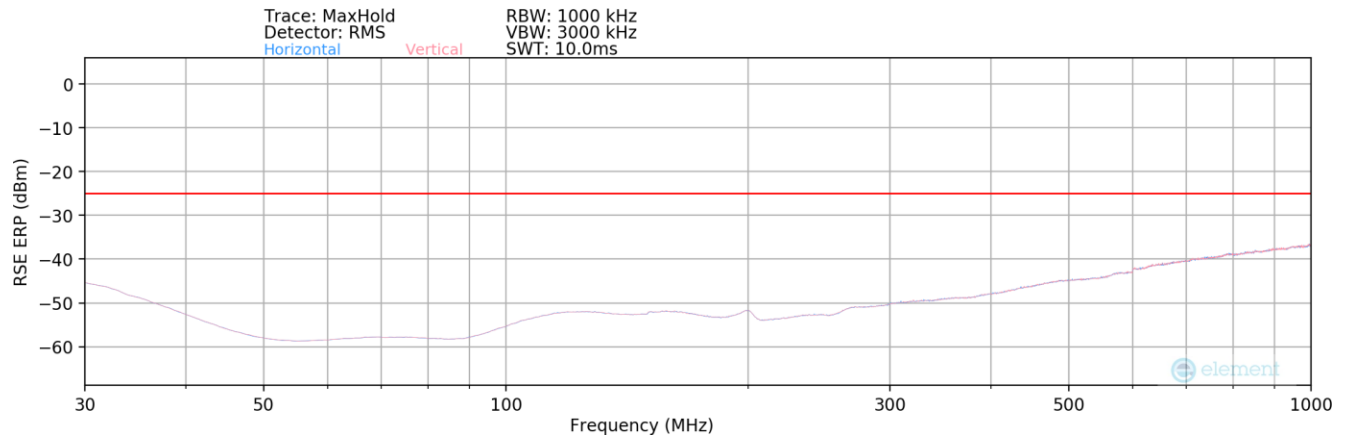
Bandwidth (MHz):	10
Frequency (MHz):	2310.0
RB / Offset:	1 / 26

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
4620.00	H	396	324	-78.78	2.76	30.98	-64.27	-40.00	-24.27
6930.00	V	268	329	-77.88	8.37	37.49	-57.76	-40.00	-17.76
9240.00	H	-	-	-80.78	11.10	37.32	-57.94	-40.00	-17.94
11550.00	H	-	-	-81.95	13.21	38.26	-57.00	-40.00	-17.00
13860.00	H	-	-	-82.83	16.48	40.65	-54.60	-40.00	-14.60

Table 6-23. Radiated Spurious Data - Above 1GHz

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 33 of 42

UL-MIMO n41 + 6 GHz 802.11be MIMO Ch 105



Test Notes

Per Plot 6-16, emission at 6475 MHz is not considered, this is the 6GHz Ch 105 Fundamental.

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 34 of 42

Bandwidth (MHz):	100 (NR) +20 (WiFi)
Frequency (MHz):	2593+6475
RB / Offset:	1/136
Mode:	Non- Standalone
Anchor Band:	UL-MIMO n41 & 6GHz LPI U6 (Ch.105) MIMO be mode

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
126.00	H	-	-	-86.19	20.52	41.33	-56.08	-25.00	-31.08

Table 6-24. Radiated Spurious Data - Below 1GHz

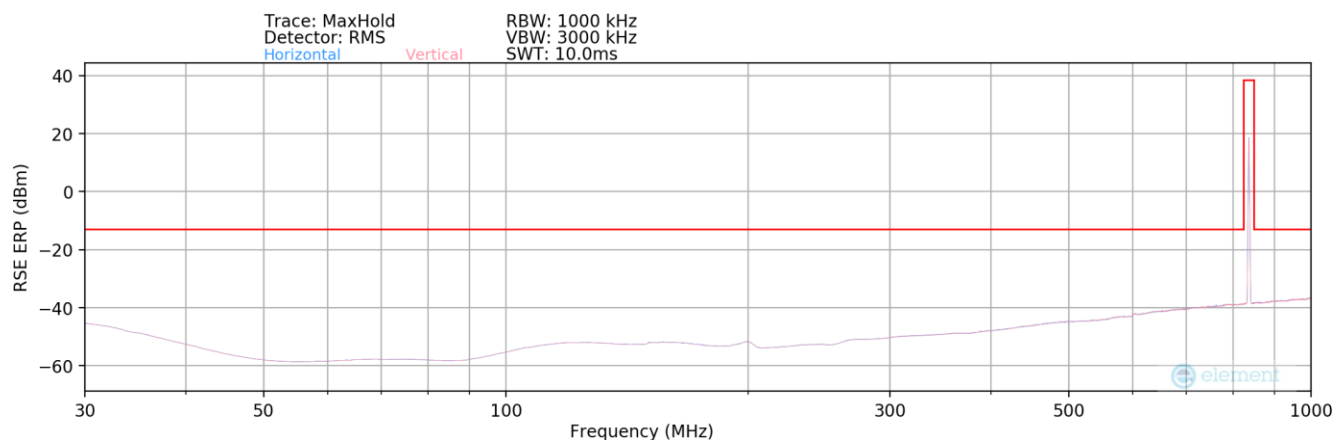
Bandwidth (MHz):	100 (NR) +20 (WiFi)
Frequency (MHz):	2593+6475
RB / Offset:	1/136
Mode:	Non- Standalone
Anchor Band:	UL-MIMO n41 & 6GHz LPI U6 (Ch.105) MIMO be mode

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
10456.00	H	-	-	-78.82	11.97	40.15	-55.11	-25.00	-30.11
12950.00	H	268	189	-72.19	14.11	48.92	-46.34	-25.00	-21.34
14239.00	H	-	-	-79.37	15.38	43.01	-52.25	-25.00	-27.25
15543.00	H	-	-	-79.56	13.49	40.93	-54.33	-25.00	-29.33
16832.00	H	-	-	-79.64	15.86	43.22	-52.04	-25.00	-27.04

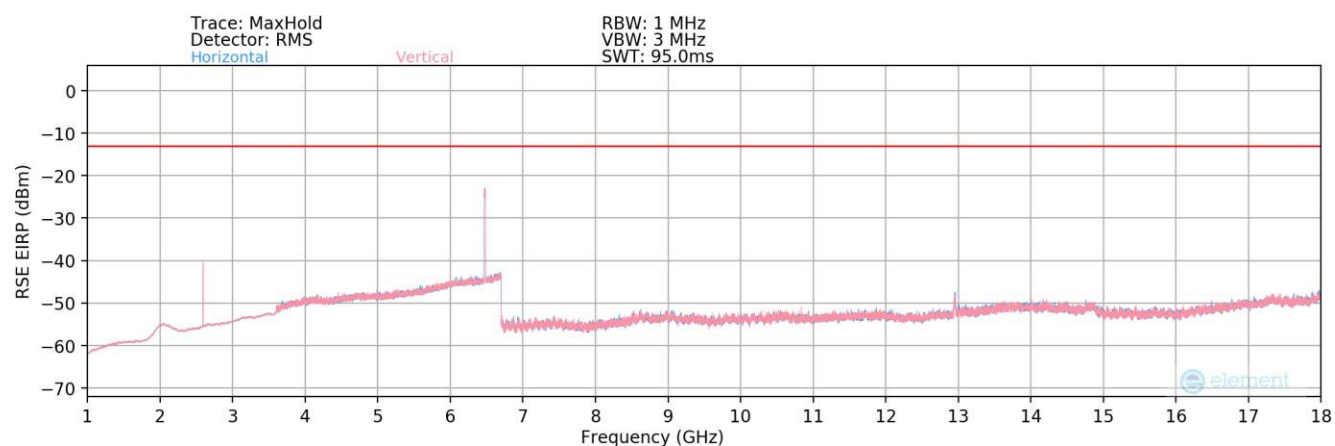
Table 6-25. Radiated Spurious Data - Above 1GHz

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 35 of 42

EN-DC NR n41 + B26 + 6 GHz 802.11be Ch 105



Plot 6-17. Radiated Spurious Plot Below 1GHz



Plot 6-18. Radiated Spurious Plot Above 1GHz

Test Notes

Per Plot 6-18, emission at 6475 MHz is not considered, this is the 6GHz Ch 105 Fundamental.

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 36 of 42

Bandwidth (MHz):	100 (NR) + 10 (LTE) +20 (WiFi)
Frequency (MHz):	2593+836.5+6475
RB / Offset:	1 / 136+1/50
Mode:	Non- Standalone
Anchor Band:	n41+B26+6GHz U6 LPI MIMO be mode (Ch.105)

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
167.00	H	-	-	-91.80	19.58	34.78	-62.62	-13.00	-49.62

Table 6-26. Radiated Spurious Data - Below 1GHz

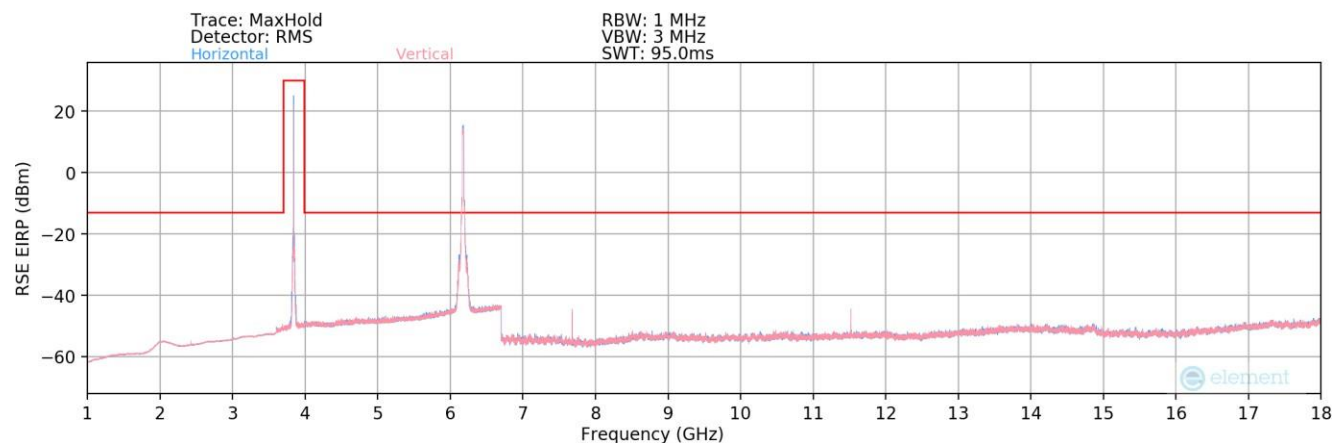
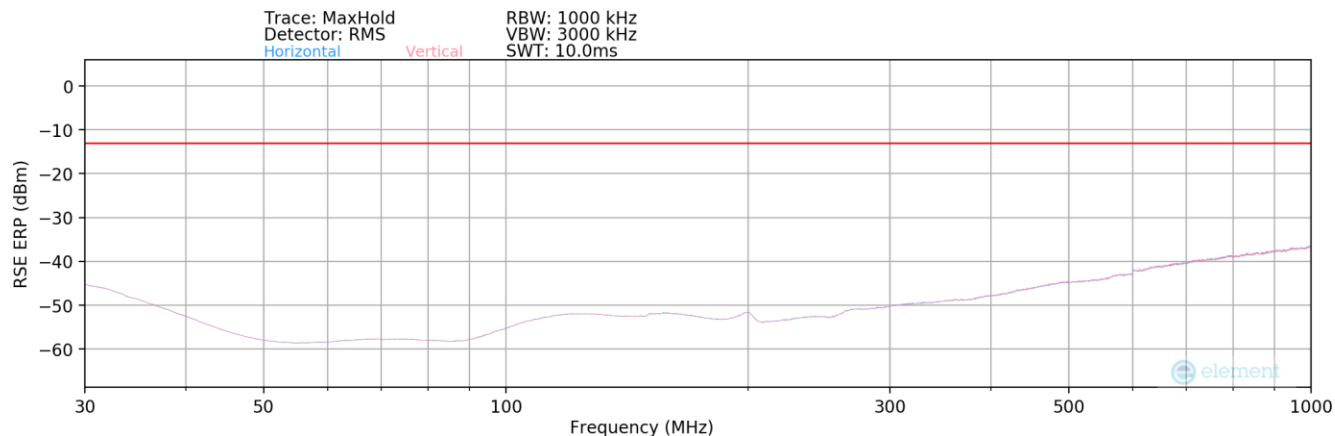
Bandwidth (MHz):	100 (NR) + 10 (LTE) +20 (WiFi)
Frequency (MHz):	2593+836.5+6475
RB / Offset:	1 / 136+1/50
Mode:	Non- Standalone
Anchor Band:	n41+B26+6GHz U6 LPI MIMO be mode (Ch.105)

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
8984.50	H	-	-	-80.31	12.50	39.19	-56.06	-13.00	-43.06
12950.00	H	188	340	-76.07	14.11	45.04	-50.22	-13.00	-37.22
14087.00	H	-	-	-81.93	15.81	40.88	-54.38	-13.00	-41.38
15528.00	H	-	-	-81.20	13.39	39.19	-56.07	-13.00	-43.07
16311.00	H	-	-	-81.42	15.09	40.67	-54.59	-13.00	-41.59

Table 6-27. Radiated Spurious Data - Above 1GHz

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 37 of 42

UL-MIMO n77 + 6 GHz 802.11be SP MIMO Ch 45



Test Notes

Per Plot 6-20, emission at 6175 MHz is not considered, this is the 6 GHz Ch 45 Fundamental.

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 38 of 42

Bandwidth (MHz):	100 (NR) + 20(LTE) 20 (WiFi)
Frequency (MHz):	3840+6175
RB / Offset:	1/136
Mode:	Non-Stand Alone
Anchor Band:	UL-MIMO n77+6GHz U5 SP MIMO be mode (Ch.45)

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
675.00	V	-	-	-85.51	28.58	50.07	-47.34	-13.00	-34.34

Table 6-28. Radiated Spurious Data - Below 1GHz

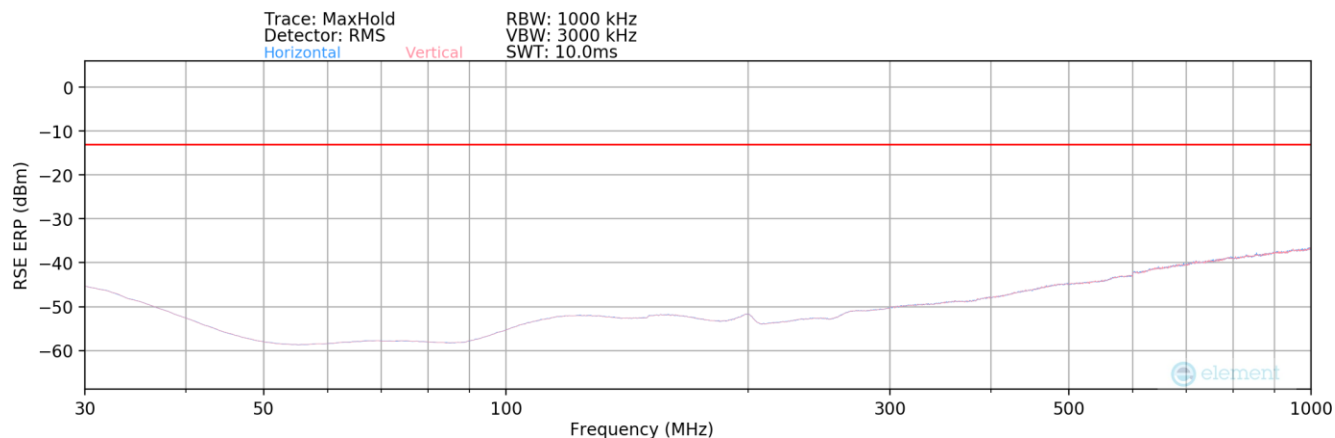
Bandwidth (MHz):	100 (NR) + 20(LTE) 20 (WiFi)
Frequency (MHz):	3840+6175
RB / Offset:	1/136
Mode:	Non-Stand Alone
Anchor Band:	UL-MIMO n77+6GHz U5 SP MIMO be mode (Ch.45)

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
7680.00	V	157	183	-74.25	8.96	41.71	-53.55	-13.00	-40.55
11520.00	V	167	323	-71.54	13.06	48.52	-46.73	-13.00	-33.73
13855.00	V	-	-	-80.13	15.76	42.63	-52.63	-13.00	-39.63
14530.00	V	-	-	-80.25	15.18	41.93	-62.87	-13.00	-49.87
15515.00	V	-	-	-79.48	13.29	40.81	-63.99	-13.00	-50.99

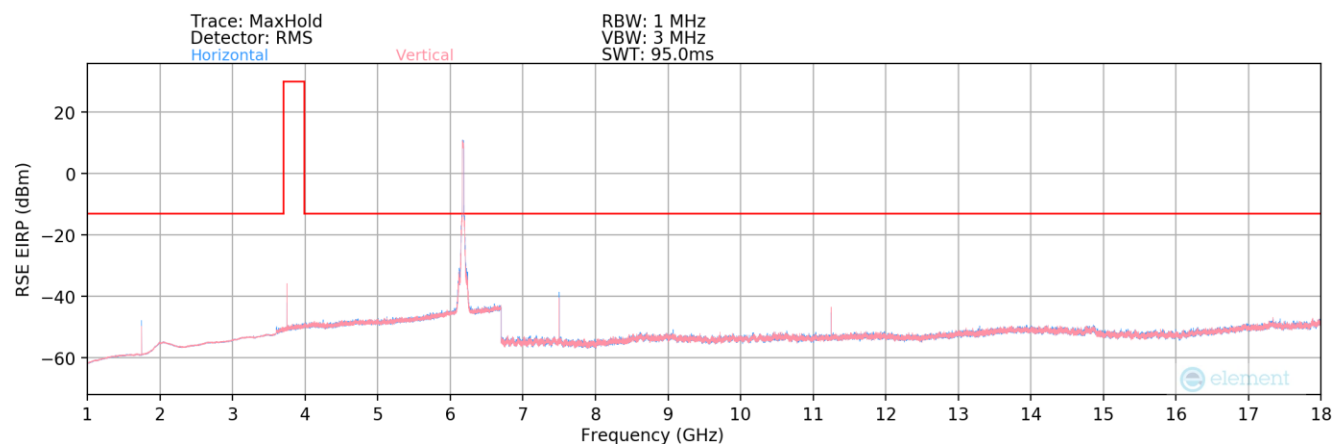
Table 6-29. Radiated Spurious Data - Above 1GHz

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 39 of 42

EN-DC NR n77 + B66 + 6 GHz 802.11be SP MIMO Ch 45



Plot 6-21. Radiated Spurious Plot Below 1GHz



Plot 6-22. Radiated Spurious Plot Above 1GHz

Test Notes

Per Plot 6-22, emission at 6175 MHz is not considered, this is the 6 GHz Ch 45 Fundamental.

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 40 of 42

Bandwidth (MHz):	100 (NR) + 20(LTE) 20 (WiFi)
Frequency (MHz):	3750+1745+6175
RB / Offset:	1/136+1/50
Mode:	Non-Stand Alone
Anchor Band:	n77+B66+6GHz U5 SP MIMO be mode (Ch.45)

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
125.00	H	-	-	-91.97	20.52	35.55	-61.86	-13.00	-48.86

Table 6-30. Radiated Spurious Data - Below 1GHz

Bandwidth (MHz):	100 (NR) + 20(LTE) 20 (WiFi)
Frequency (MHz):	3750+1745+6175
RB / Offset:	1/136+1/50
Mode:	Non-Stand Alone
Anchor Band:	n77+B66+6GHz U5 SP MIMO be mode (Ch.45)

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
7500.00	H	299	201	-56.95	9.84	59.89	-35.37	-13.00	-22.37
11250.00	V	142	200	-65.39	12.56	54.17	-41.09	-13.00	-28.09
13255.00	H	-	-	-81.72	14.47	39.75	-55.51	-13.00	-42.51
14060.00	H	-	-	-82.01	15.70	40.69	-64.11	-13.00	-51.11
15160.00	H	-	-	-81.44	14.10	39.66	-65.14	-13.00	-52.14

Table 6-31. Radiated Spurious Data - Above 1GHz

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 41 of 42

7.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Microsoft Corporation (WiFi module FCC ID: C3K00002102A and cellular module FCC ID: C3K2119) integrated into the host laptop (Model: 2119)** complies with the simultaneous transmission requirements of §2.947(f), Part 15, and Parts 22, 24, 27, and 90 of the FCC rules.

FCC ID: C3K2119	PART 22, 24, 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2504010035-02.C3K	Test Dates: 05/07/2025 - 06/04/2025	EUT Type: Modular Approval - Host Integration (Portable Computing Device)	Page 42 of 42