

**ELEMENT WASHINGTON DC LLC**

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<http://www.element.com>**MEASUREMENT REPORT****FCC Part 15.247 / ISD RSS-247 Bluetooth (Low Energy)****Applicant Name:**

Samsung Electronics Co., Ltd.

129, Samsung-ro,

Yeongtong-gu, Suwon-si

Gyeonggi-do, 16677, Korea

Date of Testing:

05/13/2025 - 07/01/2025

Test Report Issue Date:

07/08/2025

Test Site/Location:

Element Lab., Columbia, MD, USA

Test Report Serial No.:

1M2505130048-02.A3L

FCC ID:**A3LSMX930****IC:****649E-SMX930****APPLICANT:****Samsung Electronics Co., Ltd.****Application Type:**

Certification

Model/HVIN:

SM-X930

EUT Type:

Portable Tablet

Max. RF Output Power:

35.645mW (15.52 dBm) Peak Conducted

Frequency Range:

2402 – 2480MHz

FCC Classification:

Digital Transmission System (DTS)

FCC Rule Part(s):

Part 15 Subpart C (15.247)

ISED Specification(s):

RSS-247 Issue 3

Test Procedure(s):

ANSI C63.10:2020

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 ANSI C63.10:2020. 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



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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 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.

- 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).

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung Portable Tablet FCC ID: A3LSMX930, IC: 649E-SMX930**. The data found in this test report was taken with the EUT operating in Bluetooth low energy mode. While in low energy mode, the Bluetooth transmitter hops pseudo-randomly between 40 channels, three of which are “advertising channels”. When the transmitter is hopping only between the three advertising channels, the EUT does not fall under the category of a “hopper” as defined in 15.247(a)(iii) which states that a “frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels.” As operation on only the advertising channels does not qualify the EUT as a hopper, the EUT is certified as a DTS device in this mode. The data found in this report is representative of the device when it transmits on its advertising channels. Typical Bluetooth operation is covered under the DSS report found with this application.

Test Device Serial No.: 08W8P, 08WMW, 08W4T, 08WPT, 031MF, 033AD

2.2 Device Capabilities

This device contains the following capabilities:

802.11 b/g/n/ac/ax/be WLAN, 802.11 a/n/ac/ax/be UNII (5 and 6GHz), BT (1x, EDR, LE), Digitizer

Ch.	Frequency (MHz)
0	2402
:	:
19	2440
:	:
39	2480

Table 2-1. Frequency / Channel Operations

2.3 Antenna Description

The following antenna was used for the testing.

Frequency [GHz]	Antenna-1 Gain (dBi)	Antenna-2 Gain (dBi)
2.4	-9.35	-4.70

Table 2-2. Antenna Peak Gain

Note: This device is capable of operating in hopping and non-hopping mode. The EUT can hop between 79 different channels in the 2400 – 2483.5MHz band.

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2.4 Test Configuration

The EUT was tested per the guidance of ANSI C63.10:2020. ANSI C63.10:2020 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing. See Sections 3.2 for AC line conducted emissions test setups, 3.3 for radiated emissions test setups, and 7.2, 7.3, 7.4, 7.5, and 7.6 for antenna port conducted emissions test setups.

The emissions below 1GHz and above 18GHz were tested with the highest transmitting power channel and the worst case configuration.

For AC line conducted and radiated test below 1GHz, following configuration were investigated and EUT powered by AC/DC was the worst case.

- EUT powered by AC/DC adaptor via USB cable with wire charger
- EUT powered by host PC via USB cable with wire charger

2.5 Software and Firmware

The test was conducted with software/firmware version X930XXU0AYF2 installed on the EUT.

2.6 EMI Suppression Device(s)/Modifications

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

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3.0 DESCRIPTION OF TESTS

3.1 Evaluation Procedure

The measurement procedures described in the American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices (ANSI C63.10:2020) and the guidance provided in KDB 558074 D01 v05r02 were used in the measurement of the EUT.

Deviation from measurement procedure.....None

3.2 AC Line Conducted Emissions

The line-conducted facility is located inside a 10'x16'x9' shielded enclosure. The shielded enclosure is manufactured by ETS Lindgren RF Enclosures. The line-conducted facility is located inside a 7m x 3.66m x 2.7m shielded enclosure. The shielded enclosure is manufactured by AP Americas. The shielding effectiveness of the shielded room is in accordance with MIL-Std-285 or NSA 65-5. A 1m x 1.5m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, 50Ω/50μH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. The external power line filter is an ETS Lindgren Model LPRX-4X30 (100dB Attenuation, 14kHz-18GHz) and the two EMI/RFI filters are ETS Lindgren Model LRW-2030-S1 (100dB Minimum Insertion Loss, 14kHz – 10GHz). These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. If the EUT is a DC-powered device, power will be derived from the source power supply it normally will be powered from and this supply line(s) will be connected to the second LISN. All interconnecting cables more than 1 meter were shortened to a 1 meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference groundplane. Power cables for support equipment were routed down to the second LISN while ensuring that those cables were not draped over the second LISN.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the spectrum analyzer and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The spectrum was scanned from 150kHz to 30MHz with a spectrum analyzer. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 10kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Once the worst case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions is used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.

Line conducted emissions test results are shown in Section 7.9. The EMI Receiver mode of the Agilent MXE was used to perform AC line conducted emissions testing.

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3.3 Radiated 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. An 80cm tall test table made of Styrodur is placed on top of the turn table. For measurements above 1GHz, an additional Styrodur pedestal is placed on top of the test table to bring the total table height to 1.5m.

For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30MHz up to the upper frequency shown in 15.33 depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up was placed on top of the 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, mode of operation, turntable azimuth, and receive antenna height was noted for each frequency found.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, whichever produced the worst-case emissions.

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.

3.4 Environmental Conditions

The temperature is controlled within range of 15°C to 35°C. The relative humidity is controlled within range of 10% to 75%. The atmospheric pressure is monitored within the range 86-106kPa (860-1060mbar).

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4.0 ANTENNA REQUIREMENTS

Excerpt from §15.203 of the FCC Rules/Regulations:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section."

- The antenna(s) of the EUT are **permanently attached**.
- There are no provisions for connection to an external antenna.

Conclusion:

The EUT complies with the requirement of §15.203.

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5.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10:2020. 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
Line Conducted Disturbance	3.09
Radiated Disturbance (<1GHz)	4.98
Radiated Disturbance (>1GHz)	5.07
Radiated Disturbance (>18GHz)	5.09

Table 5-1. Measurement Uncertainty Budget

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6.0 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
-	WL25-1	Conducted Cable Set (25GHz)	2/25/2025	Annual	2/25/2026	WL25-1
-	WL25-2	Conducted Cable Set (25GHz)	2/25/2025	Annual	2/25/2026	WL25-2
-	MD 1M 18-40	EMC Cable and Switch System	2/25/2025	Annual	2/25/2026	MD 1M 18-40
-	AP2-001	EMC Cable and Switch System	2/25/2025	Annual	2/25/2026	AP2-001
-	AP2-002	EMC Cable and Switch System	2/25/2025	Annual	2/25/2026	AP2-002
-	ETS-001	EMC Cable and Switch System	2/25/2025	Annual	2/25/2026	ETS-001
-	ETS-002	EMC Cable and Switch System	2/25/2025	Annual	2/25/2026	ETS-002
Agilent	N9038A	MXE EMI Receiver	9/16/2024	Annual	9/16/2025	MY51210133
Agilent	N9020A	MXA Signal Analyzer	5/7/2025	Annual	5/7/2026	US46470561
Agilent	N9030A	PXA Signal Analyzer (44GHz)	10/16/2024	Annual	10/16/2025	MY49430494
EMCO	3115	Horn Antenna (1-18GHz)	9/6/2024	Biennial	9/6/2025	9704-5182
EMCO	3116	Horn Antenna (18-40GHz)	7/5/2023	Biennial	7/5/2025	9203-2178
Pasternack	NMLC-2	Line Conducted Emissions Cable	3/25/2025	Annual	3/25/2026	NMLC-2
Rohde & Schwarz	FSW26	Spectrum Analyzer (26.5GHz)	3/8/2024	Annual	3/8/2025	103187
Rohde & Schwarz	ESU26	EMI Test Receiver (26.5GHz)	10/16/2024	Annual	10/16/2025	100342
Rohde & Schwarz	ESU40	EMI Test Receiver (40GHz)	11/25/2024	Annual	11/25/2025	100348
Rohde & Schwarz	ESW44	EMI Test Receiver (44GHz)	4/5/2024	Annual	4/5/2025	101716
Sunol	JB6	Bi-Log Antenna (20M-6GHz)	3/24/2025	Biennial	3/25/2027	A082816
Sunol	JB5	Bi-Log Antenna (20M-5GHz)	9/11/2024	Biennial	9/11/2026	A051107

Table 6-1. Test Equipment Calibration Table

Note:

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.

Component	Serial Number
MegaPhase Cable TM26-S1S1-36	18160103 003
Pasternack 6dB Attenuator PE7005-6	N/A

Table 6-2. WL25-1 Conducted Cable Set Components

Component	Serial Number
MiniCircuits Cable CBL-2FT-SMSM+	77743
MCL 6dB Attenuator BW-S6W2+	1314

Table 6-3. WL25-2 Conducted Cable Set Components

Component	Serial Number
MegaPhase Cable TM40K1K1-36	18160102 001
MCL 10dB Attenuator BW-K10 2W44+	1902

Table 6-4. WL40-1 Conducted Cable Set Components

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Component	Serial Number
Pasternak Cable RG214/U	111815
Sucoflex Cable 106A	246420-001
Rohde & Schwarz SF Unit	102134

Table 6-5. ETS-001 EMC Cable and Switch System Components

Component	Serial Number
MiniCircuits Cable CBL-0.5M-SMNM+	47261
Micro-Coax Utiflex Cable UFB311A-Q-3346-50U50U MFR 64639	231978-001
Micro-Coax Utiflex Cable UFB311A-1-0629-50U50U MFR 64639	231986-002
MegaPhase Cable NC29-N1N1-324	19046401 001
MegaPhase Flex Cable 10511-1	15044701-006
Micro-Coas Utiflex Cable UFB311A-Q-3446-50U50U MFR 64639	231978-002
Micro-Coas Utiflex Cable UFB311A-1-0629-50U50U MFR 64639	231986-001
Micro-Coas Utiflex Cable UFB142A-0-0659-50U50U MFR 64639	232069-001
Rohde & Schwarz SF Unit	102138

Table 6-6. AP2-001 EMC Cable and Switch System Components

Component	Serial Number
MegaPhase Cable TM40-K1K1-30	20233002-004
UTIPLEX Cable	64639 232063-001
Rohde & Schwarz Pre-amp RS-PR1840 18G-40G	9037.7670.02

Table 6-7. MD 1M 18-40 EMC Cable and Switch System Components

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7.0 TEST RESULTS

7.1 Summary

Company Name: Samsung Electronics Co., Ltd.
 FCC ID: A3LSMX930
 IC: 649E-SMX930
 FCC Classification: Digital Transmission System (DTS)
 Number of Channels: 40

FCC Part Section(s)	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.247(a)(2)	RSS-247 [5.2]	6dB Bandwidth	> 500kHz	CONDUCTED	PASS	Section 7.2
15.247(b)(3)	RSS-247 [5.4(4)]	Transmitter Output Power	< 1 Watt		PASS	Sections 7.3
15.247(e)	RSS-247 [5.2]	Transmitter Power Spectral Density	< 8dBm / 3kHz Band		PASS	Section 7.4
15.247(d)	RSS-247 [5.5]	Band Edge / Out-of-Band Emissions	≥ 20dBc		PASS	Sections 7.5, 7.6
15.205 15.209	RSS-Gen [8.9]	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in 15.209 (RSS-Gen [8.9])	RADIATED	PASS	Sections 7.7, 7.8
15.207	RSS-Gen [8.8]	AC Conducted Emissions 150kHz – 30MHz	< FCC 15.207 limits (RSS-Gen[8.8])	LINE CONDUCTED	PASS	Section 7.9

Table 7-1. Summary of Test Results

Notes:

1. All modes of operation were investigated. The test results shown in the following sections represent the worst case emissions.
2. The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer 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 and attenuators.
4. For conducted spurious emissions, automated test software was used to measure emissions and capture the corresponding plots necessary to show compliance. The measurement software utilized is ELEMENT “Bluetooth LE Automation,” Version 3.6.
5. For radiated band edge, automated test software was used to measure emissions and capture the corresponding plots necessary to show compliance. The measurement software utilized is ELEMENT “Chamber Automation,” Version 1.3.1.

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7.2 6dB Bandwidth Measurement – Bluetooth (LE)

§15.247(a.2); RSS-247 [5.2]

Test Overview and Limit

The bandwidth at 6dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the transmitter antenna terminal of the EUT while the EUT is operating at maximum power and at the appropriate frequencies. All modes of operation were investigated and the worst case configuration results are reported in this section.

The minimum permissible 6dB bandwidth is 500 kHz.

Test Procedure Used

ANSI C63.10:2020 – Section 11.8.2 Option 2

Test Settings

1. The signal analyzers' automatic bandwidth measurement capability of the spectrum analyzer was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to $X = 6$. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 100kHz
3. VBW $\geq 3 \times$ RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize

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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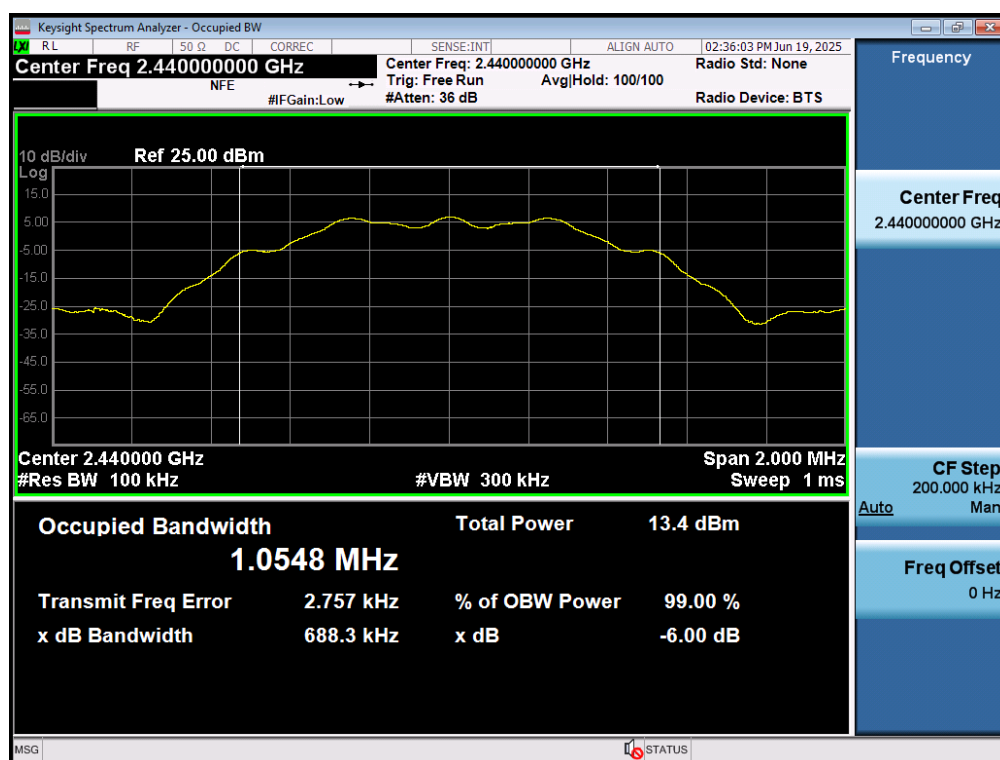
Frequency [MHz]	Data Rate	Channel No.	Bluetooth Mode	Measured Bandwidth [kHz]	Minimum Bandwidth [kHz]	Pass / Fail
2402	125 kbps	0	LE	685.1	500	Pass
2440	125 kbps	19	LE	688.3	500	Pass
2480	125 kbps	39	LE	688.7	500	Pass
2402	500 kbps	0	LE	666.3	500	Pass
2440	500 kbps	19	LE	666.1	500	Pass
2480	500 kbps	39	LE	664.0	500	Pass
2402	1 Mbps	0	LE	658.3	500	Pass
2440	1 Mbps	19	LE	713.4	500	Pass
2480	1 Mbps	39	LE	718.0	500	Pass
2402	2 Mbps	0	LE	1174.6	500	Pass
2440	2 Mbps	19	LE	1170.3	500	Pass
2480	2 Mbps	39	LE	1229.4	500	Pass

Table 7-2. Conducted Bandwidth Measurements – ANT1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 14 of 89

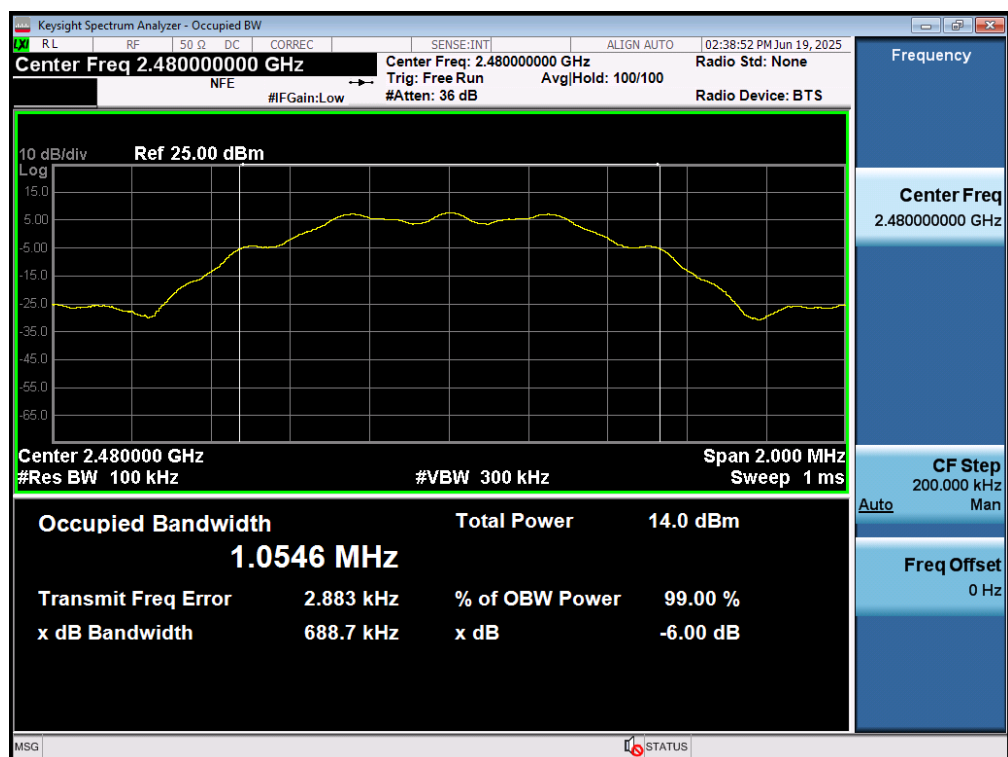


Plot 7-1. 6dB Bandwidth Plot (Bluetooth (LE), 125kbps – Ch. 0) – Ant 1

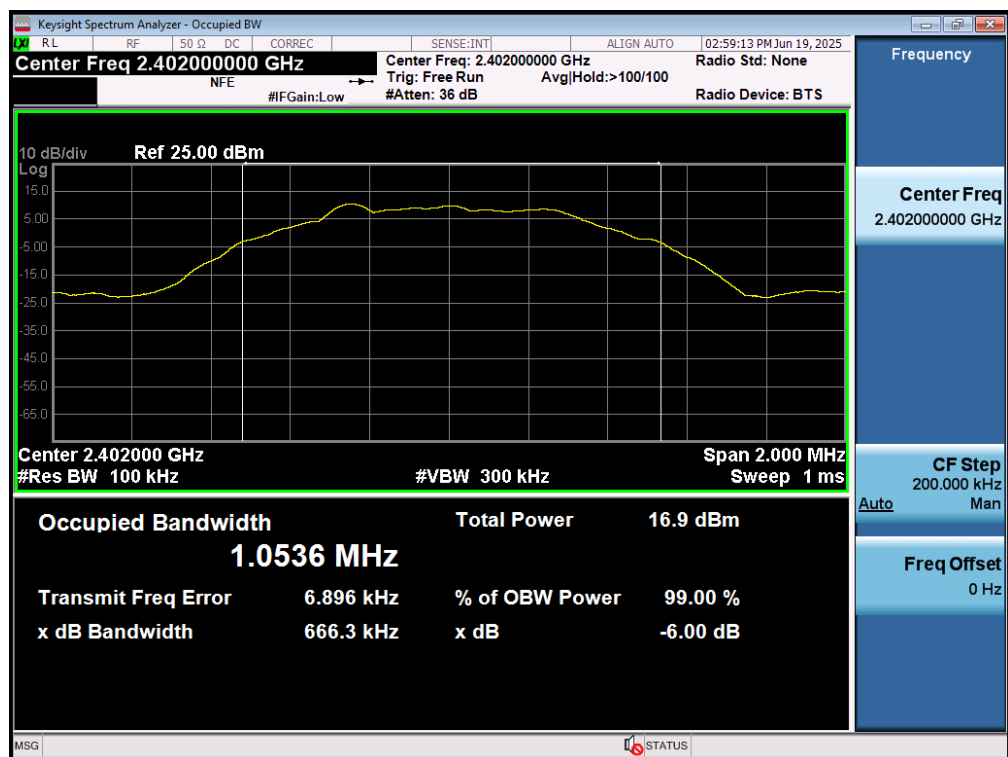


Plot 7-2. 6dB Bandwidth Plot (Bluetooth (LE), 125kbps – Ch. 19) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 15 of 89



Plot 7-3. 6dB Bandwidth Plot (Bluetooth (LE), 125kbps – Ch. 39) – Ant 1



Plot 7-4. 6dB Bandwidth Plot (Bluetooth (LE), 500kbps – Ch. 0) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 16 of 89

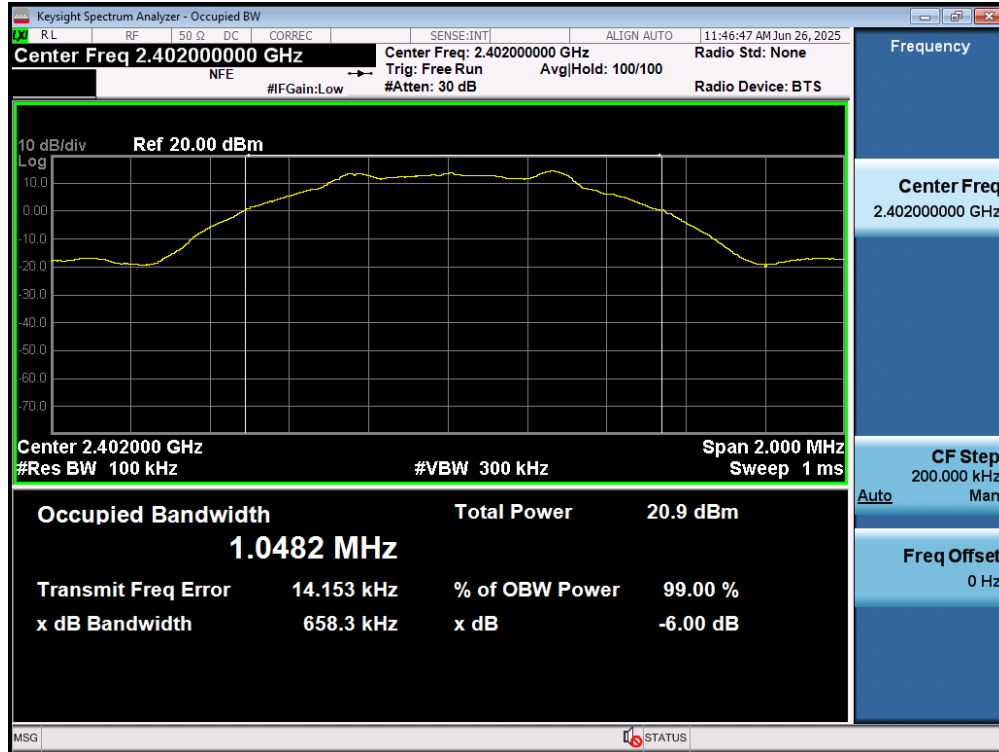


Plot 7-5. 6dB Bandwidth Plot (Bluetooth (LE), 500kbps – Ch. 19) – Ant 1

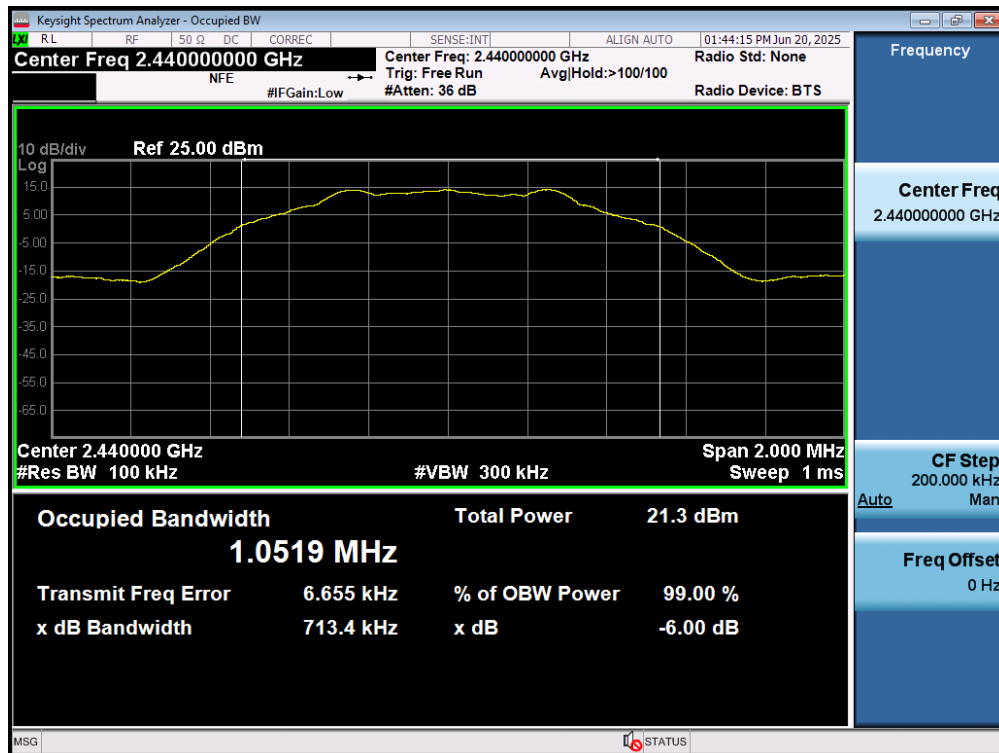


Plot 7-6. 6dB Bandwidth Plot (Bluetooth (LE), 500kbps – Ch. 39) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 17 of 89



Plot 7-7. 6dB Bandwidth Plot (Bluetooth (LE), 1Mbps – Ch. 0) – Ant 1

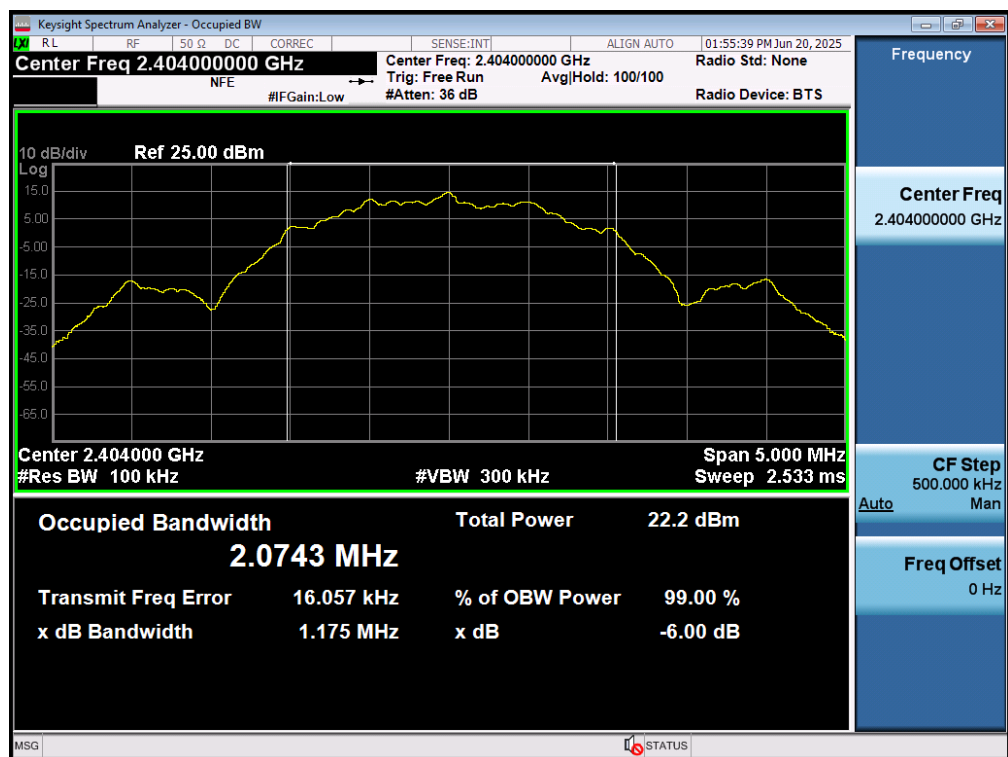


Plot 7-8. 6dB Bandwidth Plot (Bluetooth (LE), 1Mbps – Ch. 19) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 18 of 89

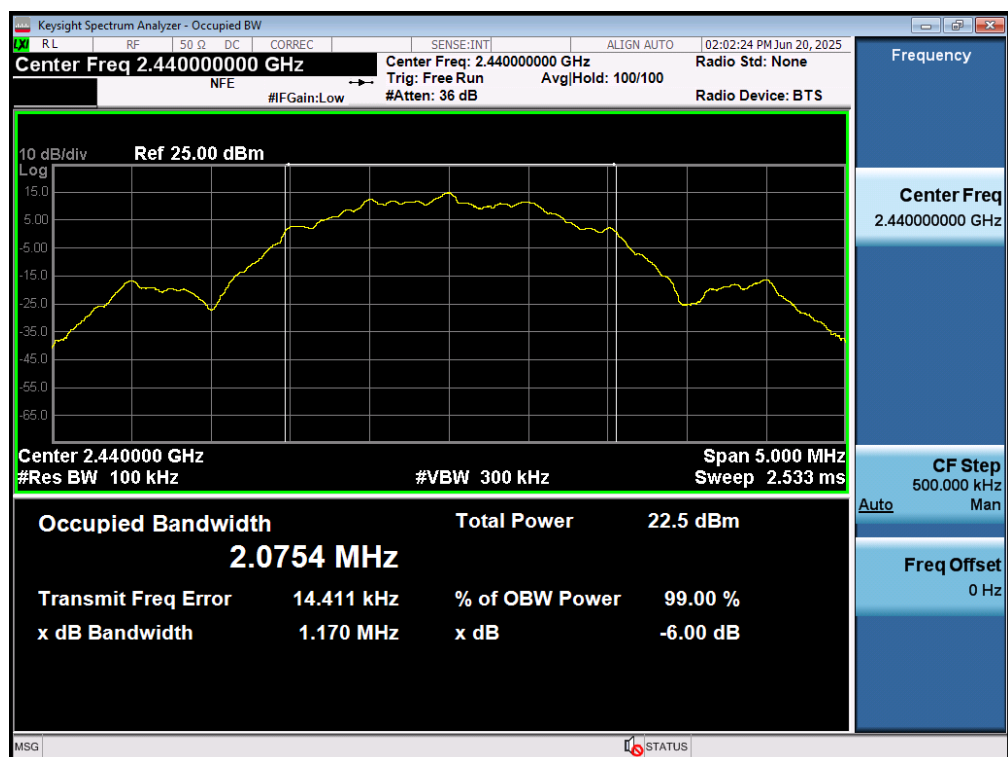


Plot 7-9. 6dB Bandwidth Plot (Bluetooth (LE), 1Mbps – Ch. 39) – Ant 1

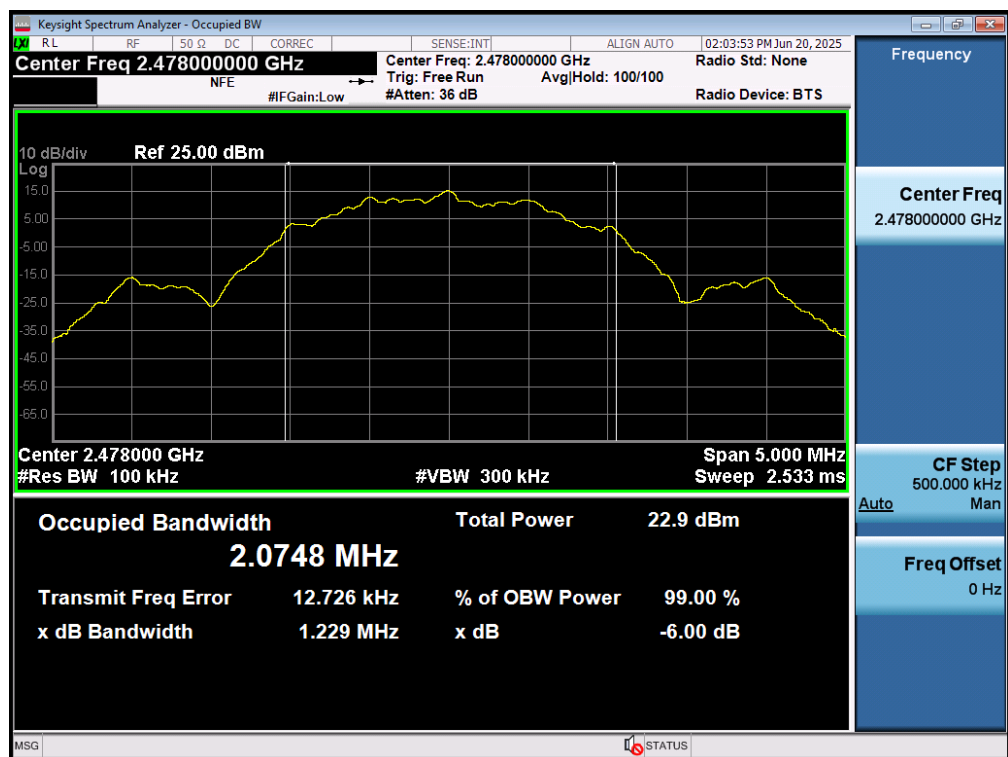


Plot 7-10. 6dB Bandwidth Plot (Bluetooth (LE), 2Mbps – Ch. 0) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 19 of 89



Plot 7-11. 6dB Bandwidth Plot (Bluetooth (LE), 2Mbps – Ch. 19) – Ant 1



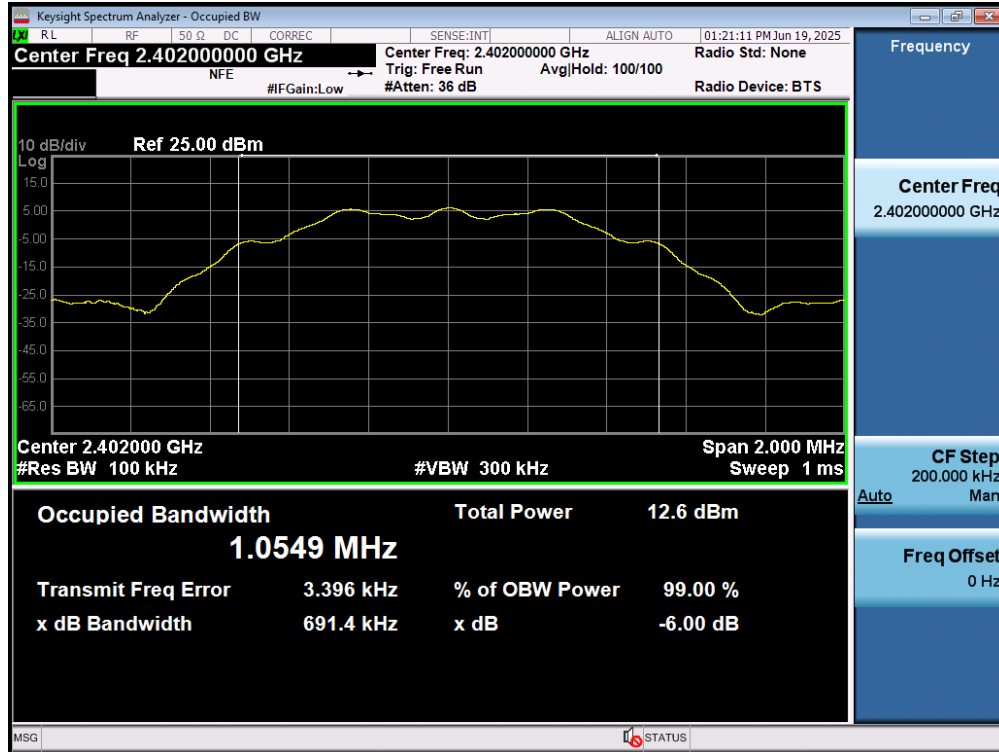
Plot 7-12. 6dB Bandwidth Plot (Bluetooth (LE), 2Mbps – Ch. 39) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 20 of 89

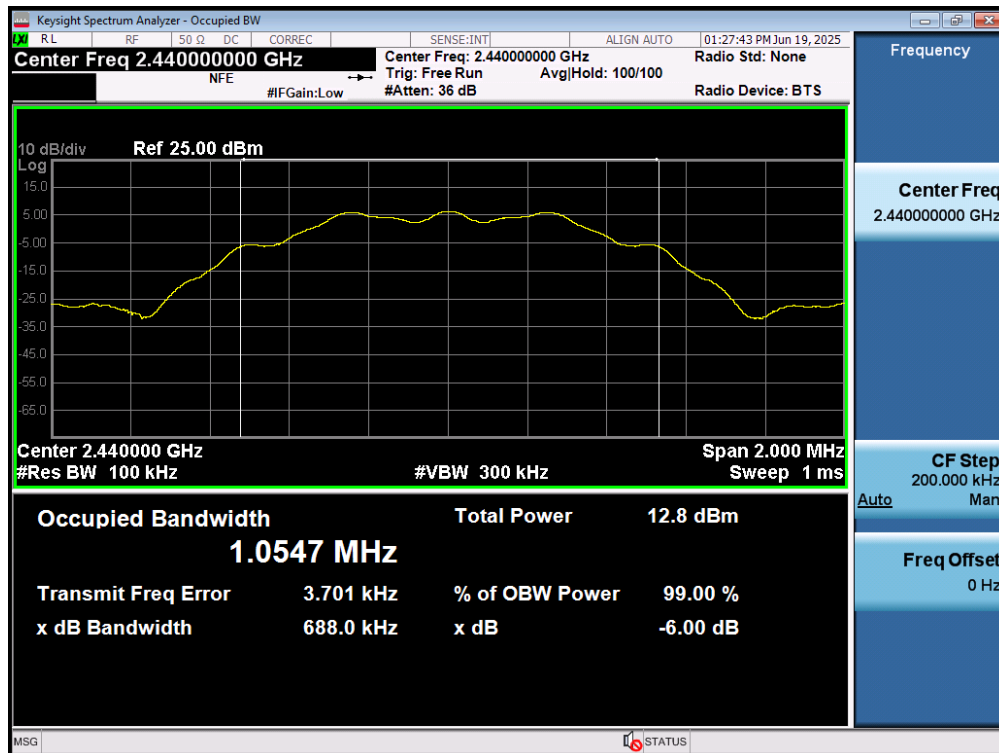
Frequency [MHz]	Data Rate	Channel No.	Bluetooth Mode	Measured Bandwidth [kHz]	Minimum Bandwidth [kHz]	Pass / Fail
2402	125 kbps	0	LE	691.4	500	Pass
2440	125 kbps	19	LE	688.0	500	Pass
2480	125 kbps	39	LE	688.1	500	Pass
2402	500 kbps	0	LE	663.9	500	Pass
2440	500 kbps	19	LE	663.2	500	Pass
2480	500 kbps	39	LE	663.2	500	Pass
2402	1 Mbps	0	LE	715.6	500	Pass
2440	1 Mbps	19	LE	711.2	500	Pass
2480	1 Mbps	39	LE	717.6	500	Pass
2402	2 Mbps	0	LE	1182.0	500	Pass
2440	2 Mbps	19	LE	1177.0	500	Pass
2480	2 Mbps	39	LE	1170.0	500	Pass

Table 7-3. Conducted Bandwidth Measurements – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 21 of 89

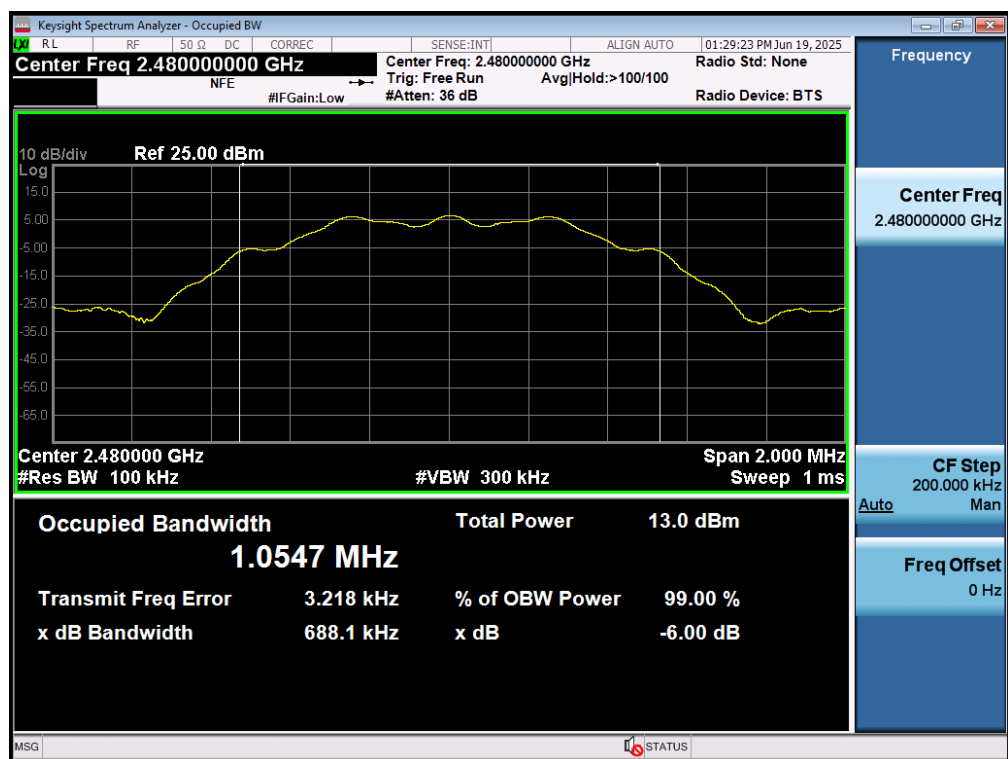


Plot 7-13. 6dB Bandwidth Plot (Bluetooth (LE), 125kbps – Ch. 0) – Ant 2



Plot 7-14. 6dB Bandwidth Plot (Bluetooth (LE), 125kbps – Ch. 19) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 22 of 89

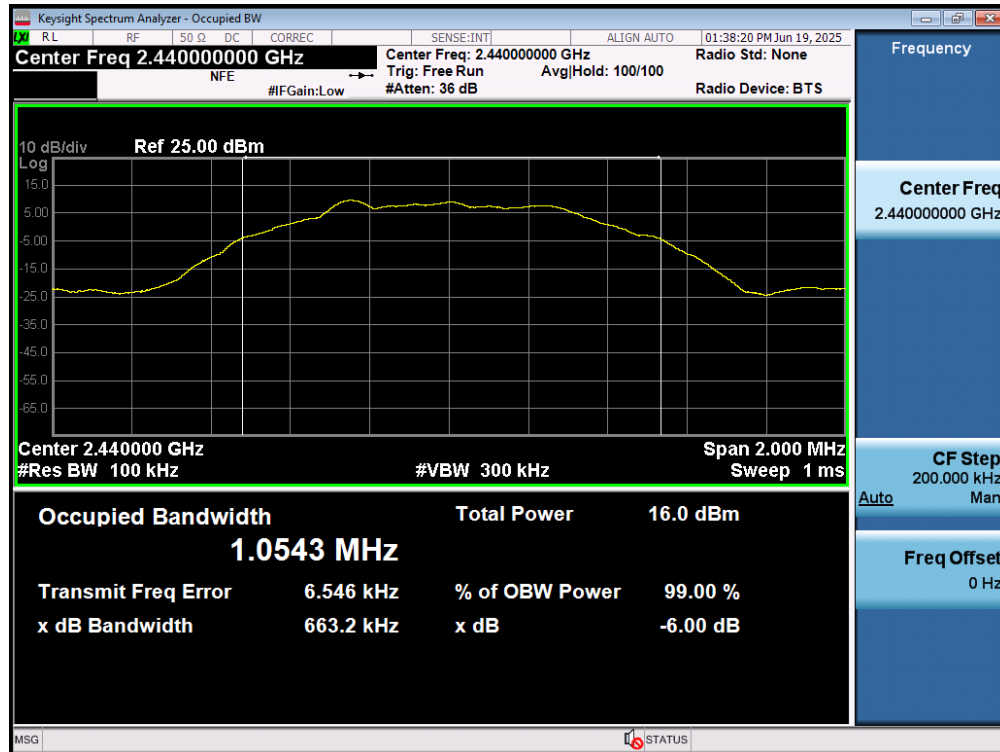


Plot 7-15. 6dB Bandwidth Plot (Bluetooth (LE), 125kbps – Ch. 39) – Ant 2

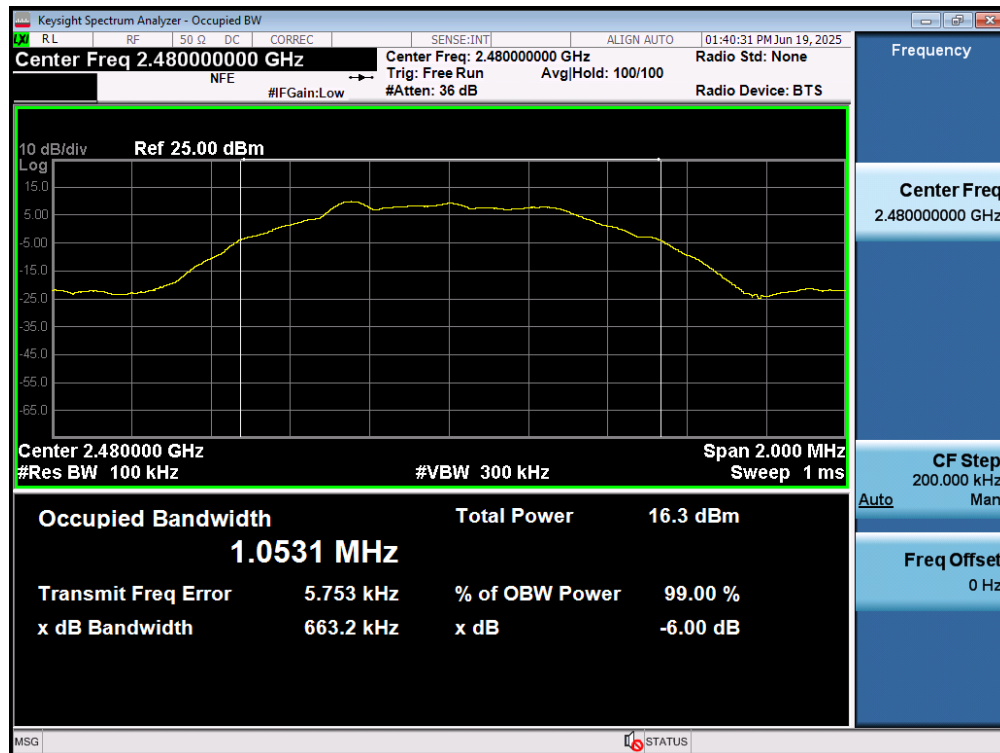


Plot 7-16. 6dB Bandwidth Plot (Bluetooth (LE), 500kbps – Ch. 0) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 23 of 89

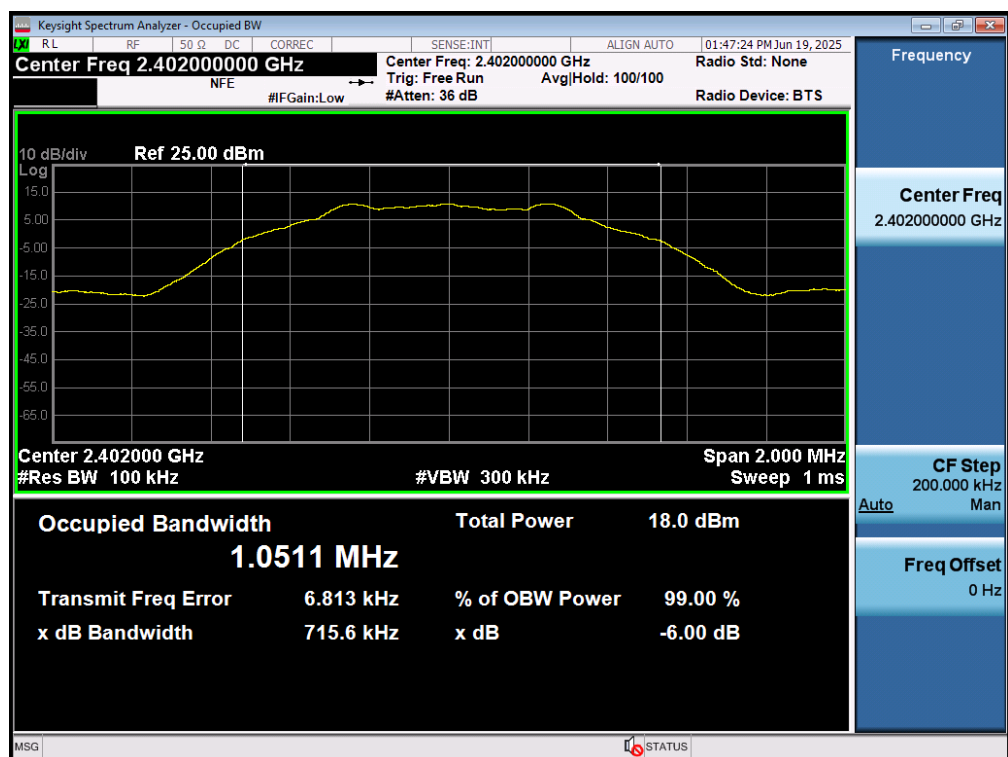


Plot 7-17. 6dB Bandwidth Plot (Bluetooth (LE), 500kbps – Ch. 19) – Ant 2

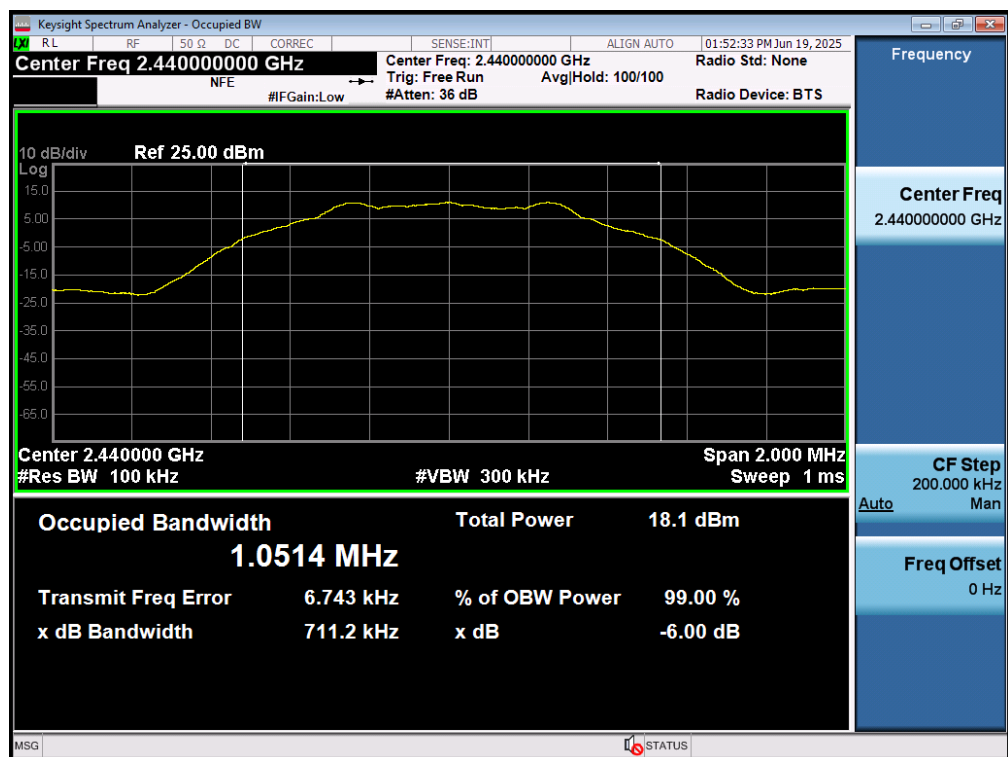


Plot 7-18. 6dB Bandwidth Plot (Bluetooth (LE), 500kbps – Ch. 39) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 24 of 89



Plot 7-19. 6dB Bandwidth Plot (Bluetooth (LE), 1Mbps – Ch. 0) – Ant 2

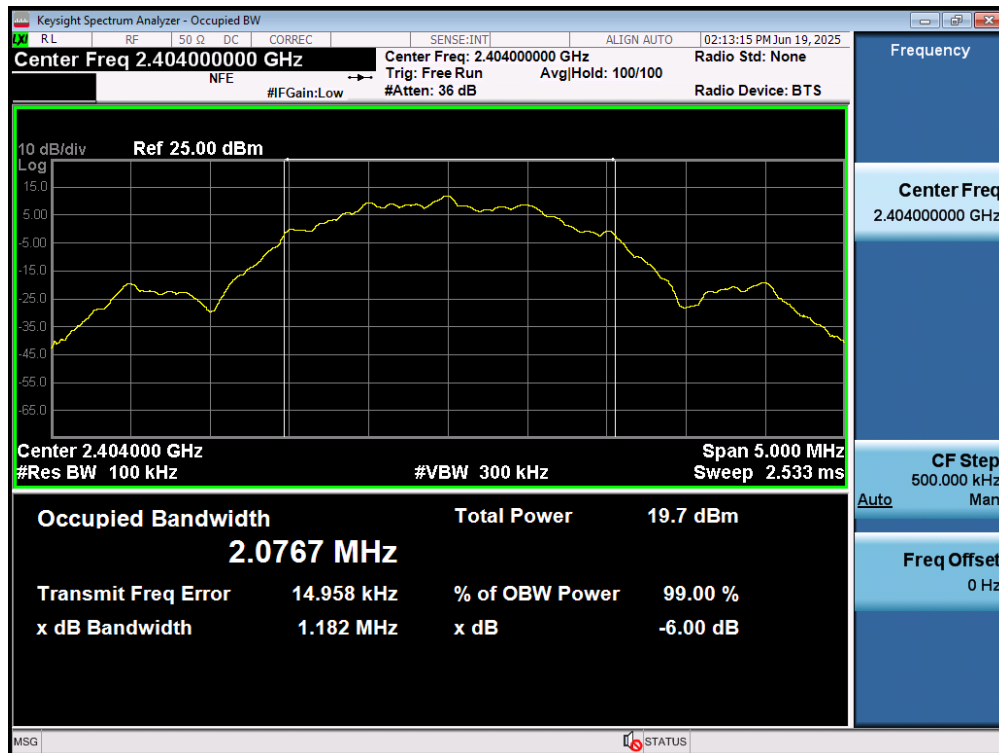


Plot 7-20. 6dB Bandwidth Plot (Bluetooth (LE), 1Mbps – Ch. 19) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 25 of 89

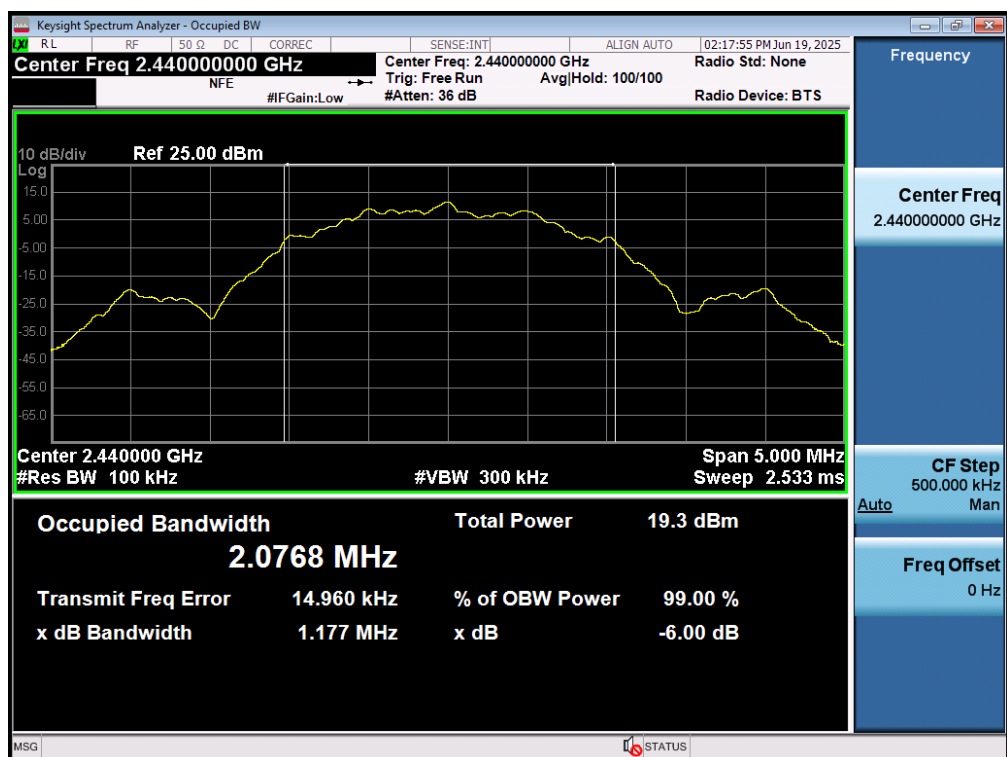


Plot 7-21. 6dB Bandwidth Plot (Bluetooth (LE), 1Mbps – Ch. 39) – Ant 2

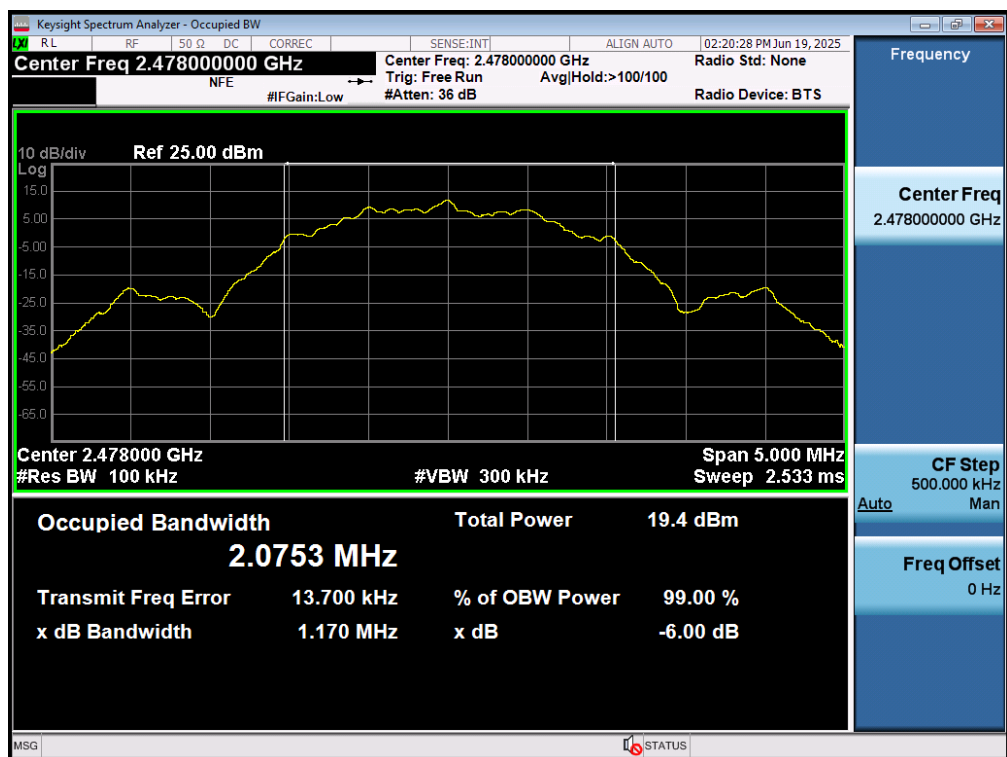


Plot 7-22. 6dB Bandwidth Plot (Bluetooth (LE), 2Mbps – Ch. 0) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 26 of 89



Plot 7-23. 6dB Bandwidth Plot (Bluetooth (LE), 2Mbps – Ch. 19) – Ant 2



Plot 7-24. 6dB Bandwidth Plot (Bluetooth (LE), 2Mbps – Ch. 39) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 27 of 89

7.3 Output Power Measurement – Bluetooth (LE)

§15.247(b.3); RSS-247 [5.4(4)]

Test Overview and Limits

The transmitter antenna terminal of the EUT is connected to the input of a spectrum analyzer. Measurements are made while the EUT is operating at maximum power and at the appropriate frequencies.

The maximum permissible conducted output power is 1 Watt.

Test Procedure Used

ANSI C63.10:2020 – Section 11.9.1.1

Test Settings

1. RBW = 3MHz
2. VBW = 50MHz
3. Span $\geq 3 \times$ RBW
4. Sweep = auto couple
5. Detector = Peak
6. Trace mode = max hold
7. The trace was allowed to stabilize

Test Setup

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



Figure 7-2. Test Instrument & Measurement Setup

Test Notes

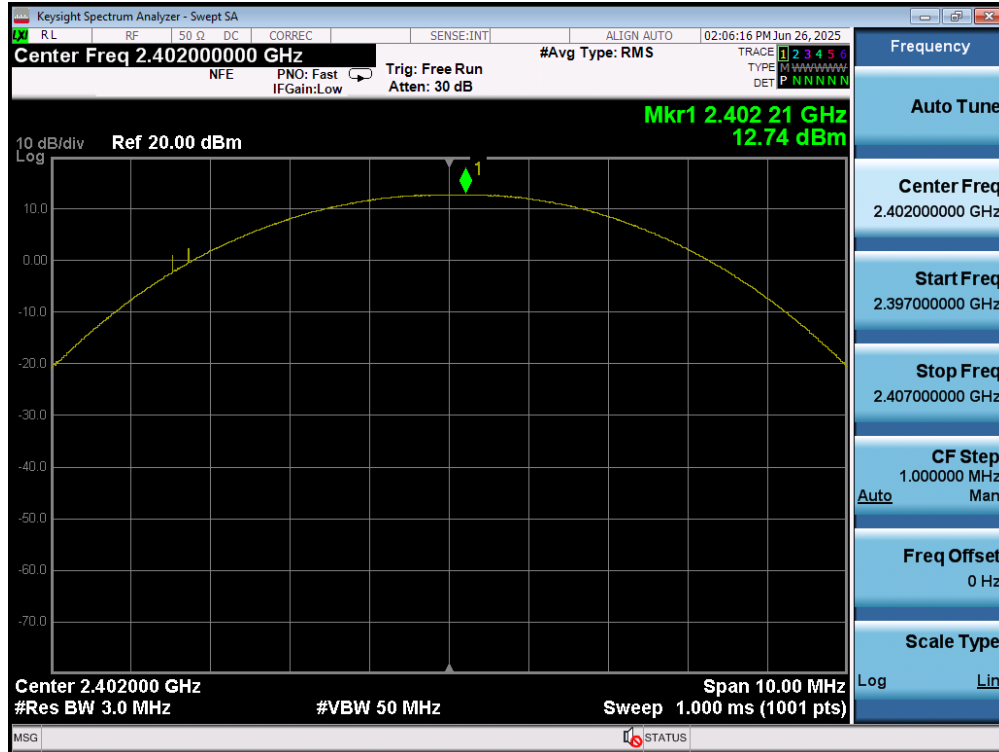
None

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 28 of 89

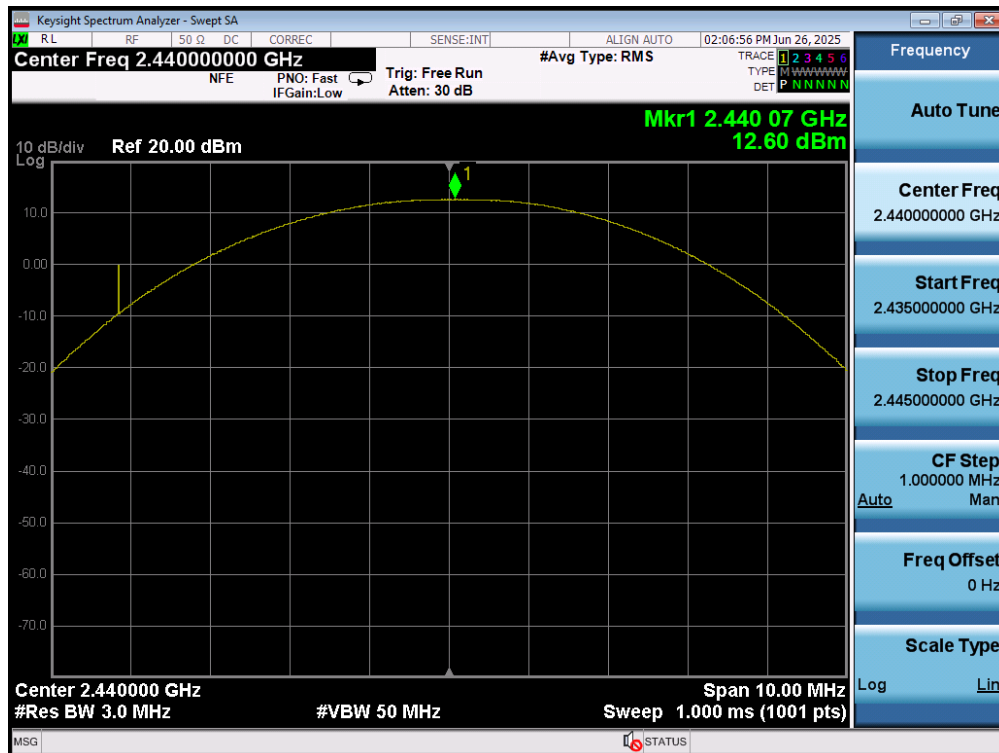
Frequency [MHz]	Data Rate [Mbps]	Channel No.	Bluetooth Mode	Peak Conducted Power	
				[dBm]	[mW]
2402	125 kbps	0	LE	12.74	18.780
2440	125 kbps	19	LE	12.60	18.184
2480	125 kbps	39	LE	12.88	19.404
2402	500 kbps	0	LE	12.82	19.129
2440	500 kbps	19	LE	12.77	18.928
2480	500 kbps	39	LE	12.86	19.337
2402	1 Mbps	0	LE	14.46	27.925
2440	1 Mbps	19	LE	14.44	27.791
2480	1 Mbps	39	LE	14.49	28.125
2404	2 Mbps	0	LE	15.14	32.621
2440	2 Mbps	19	LE	15.49	35.432
2478	2 Mbps	36	LE	15.52	35.645

Table 7-4. Conducted Output Power Measurements (Bluetooth (LE)) – ANT1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 29 of 89

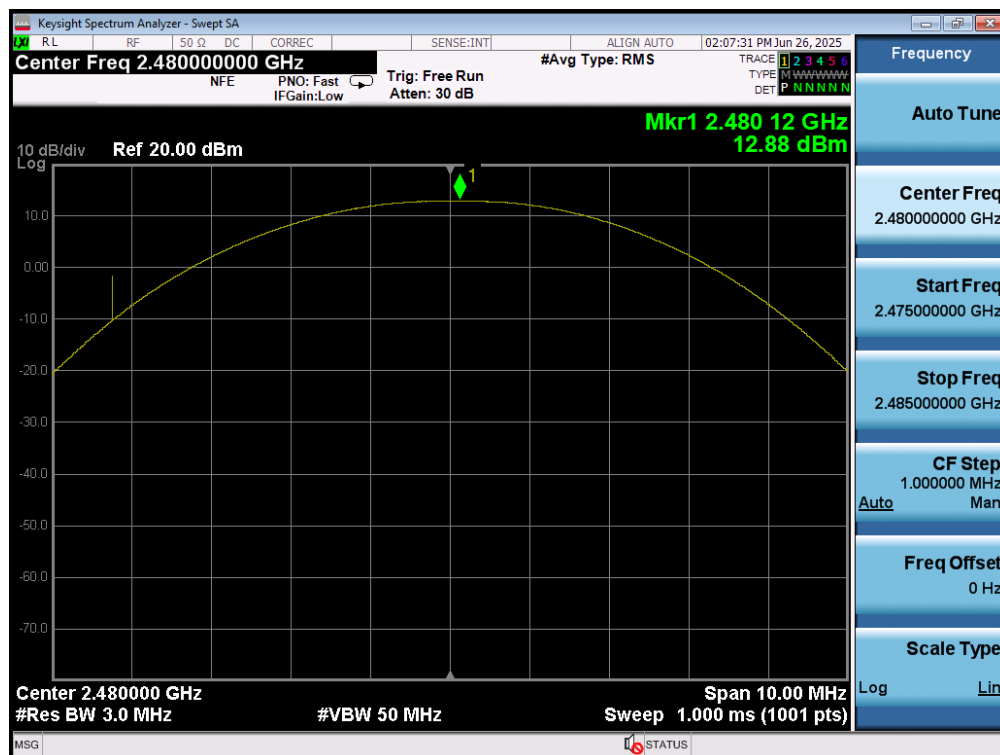


Plot 7-25. Peak Power Plot (Bluetooth (LE), 125kbps – Ch. 0) – Ant 1

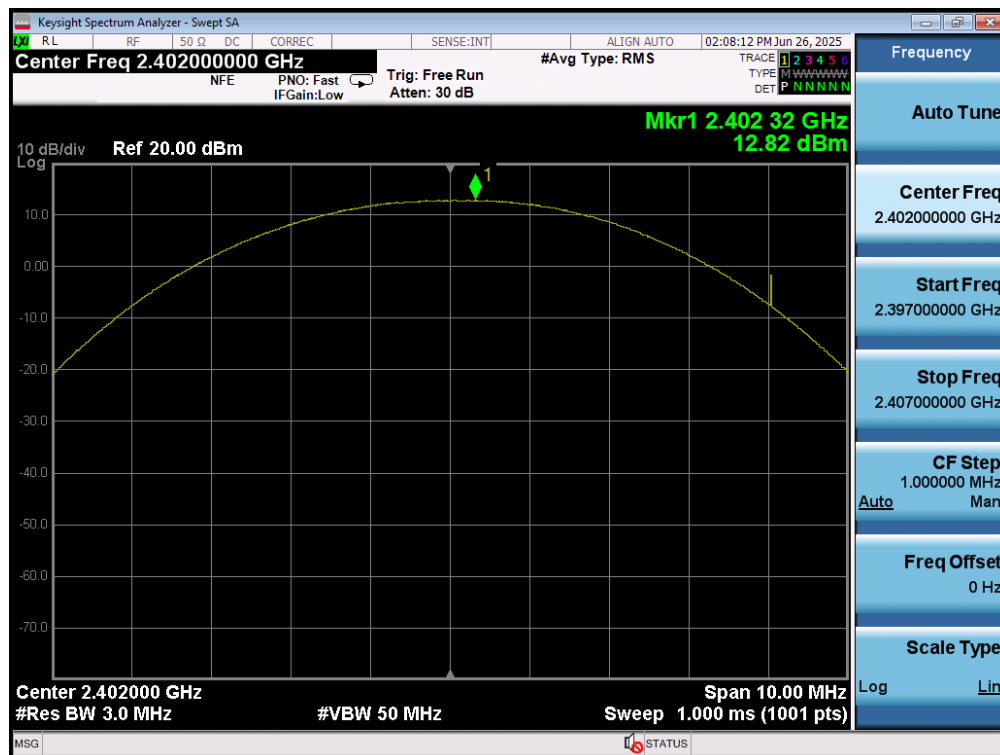


Plot 7-26. Peak Power Plot (Bluetooth (LE), 125kbps – Ch. 19) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 30 of 89

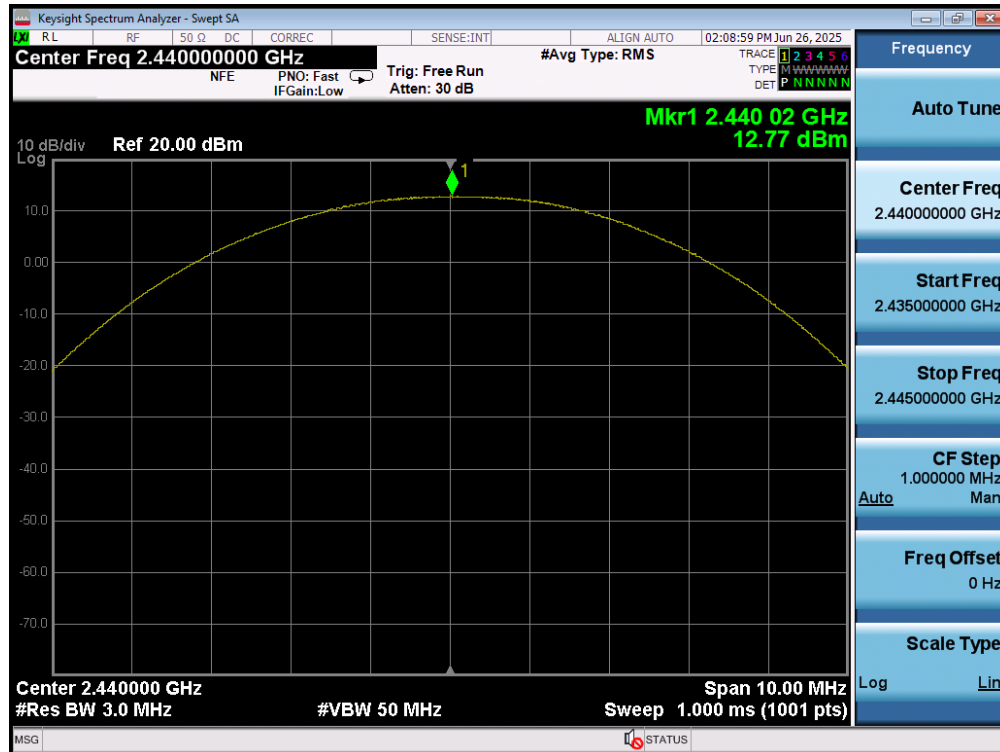


Plot 7-27. Peak Power Plot (Bluetooth (LE), 125kbps – Ch. 39) – Ant 1

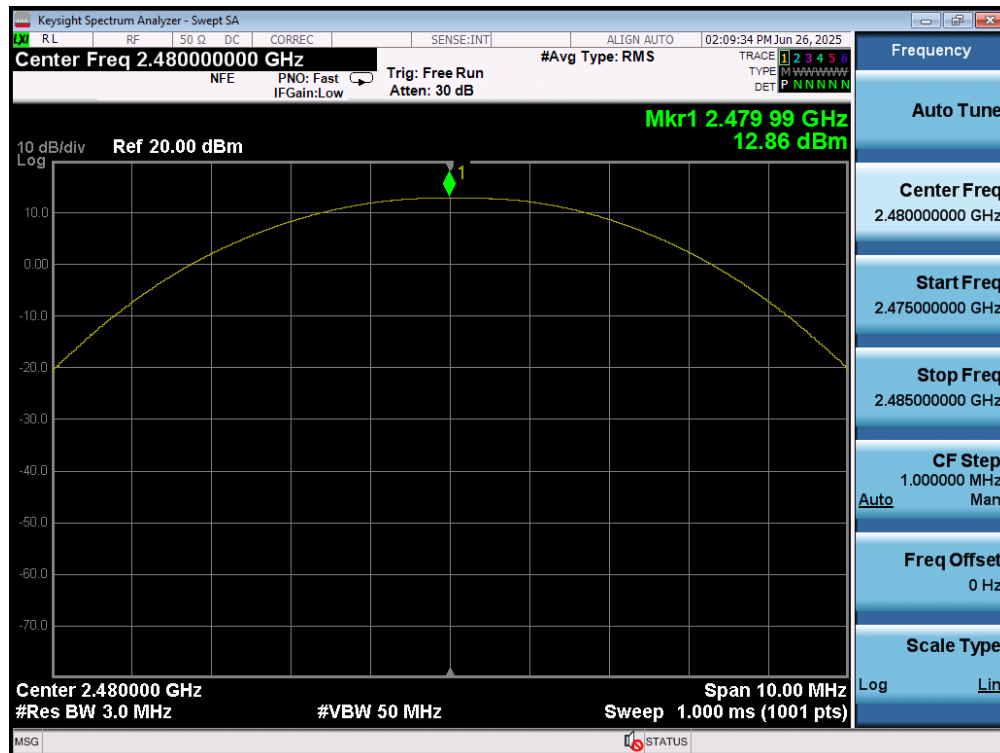


Plot 7-28. Peak Power Plot (Bluetooth (LE), 500kbps – Ch. 0) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 31 of 89

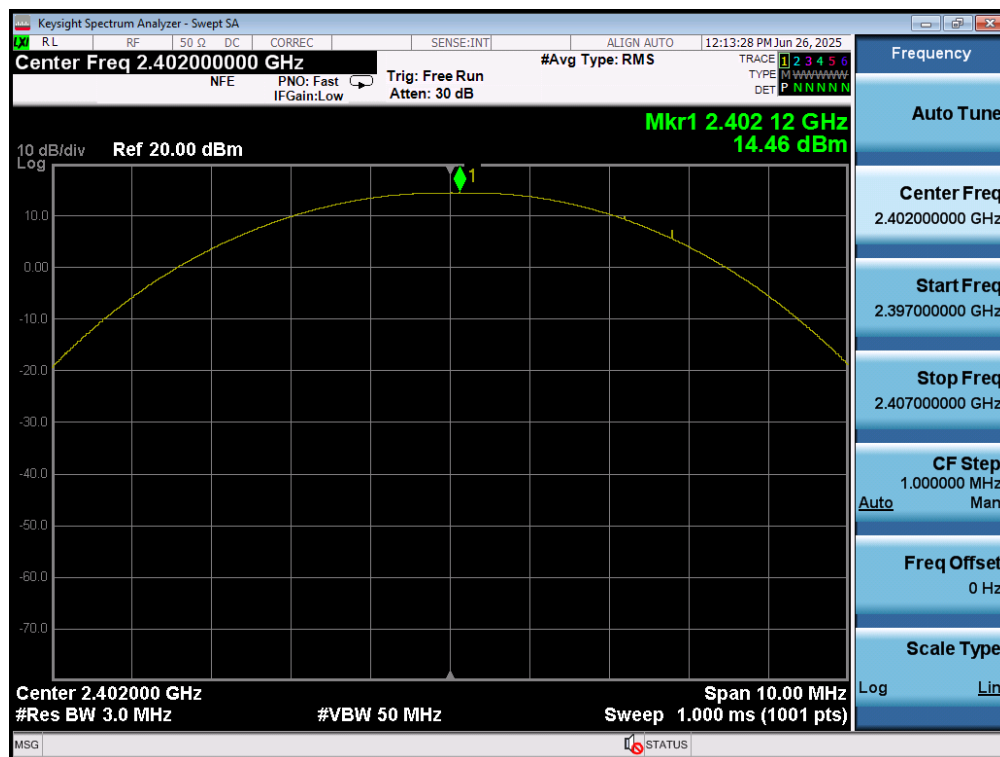


Plot 7-29. Peak Power Plot (Bluetooth (LE), 500kbps – Ch. 19) – Ant 1

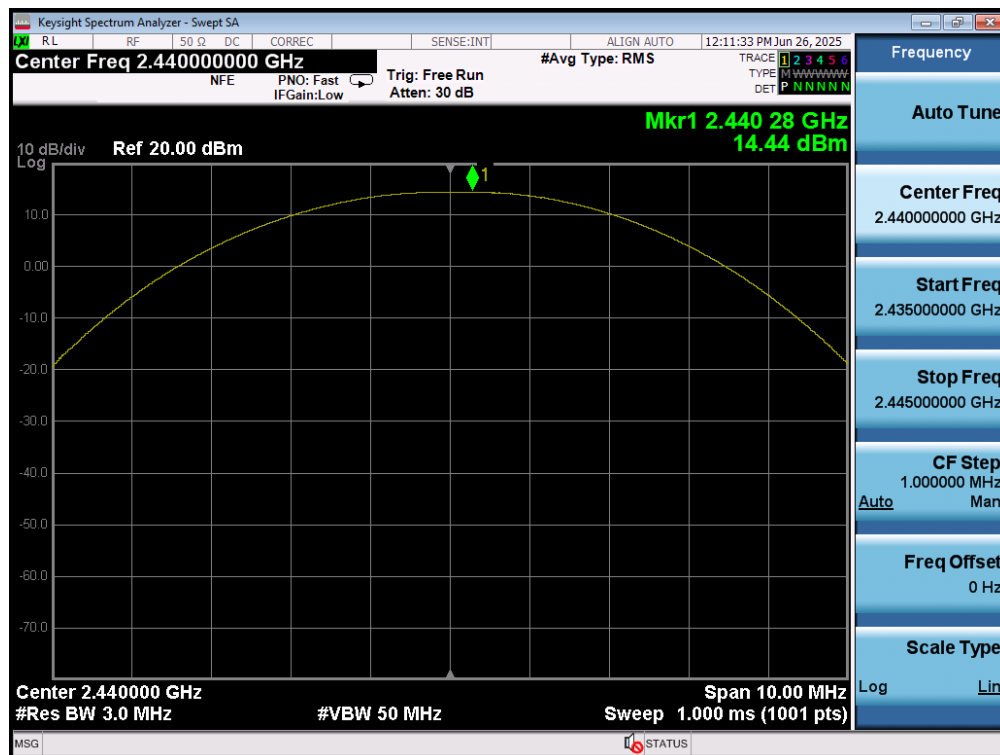


Plot 7-30. Peak Power Plot (Bluetooth (LE), 500kbps – Ch. 39) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 32 of 89

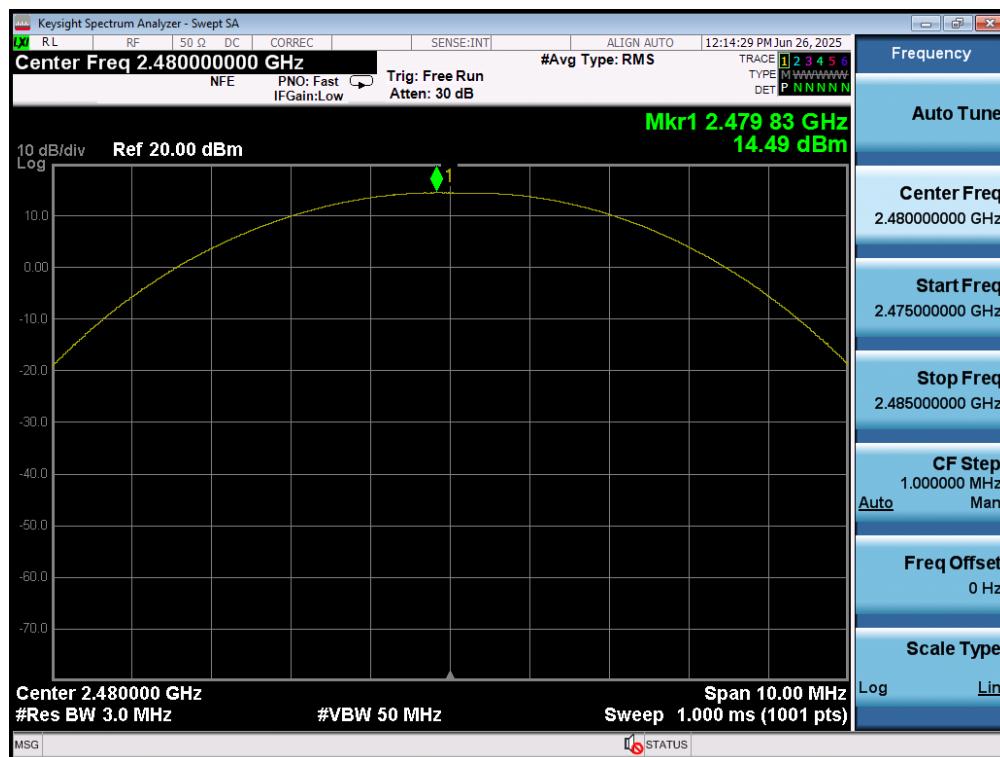


Plot 7-31. Peak Power Plot (Bluetooth (LE), 1Mbps – Ch. 0) – Ant 1

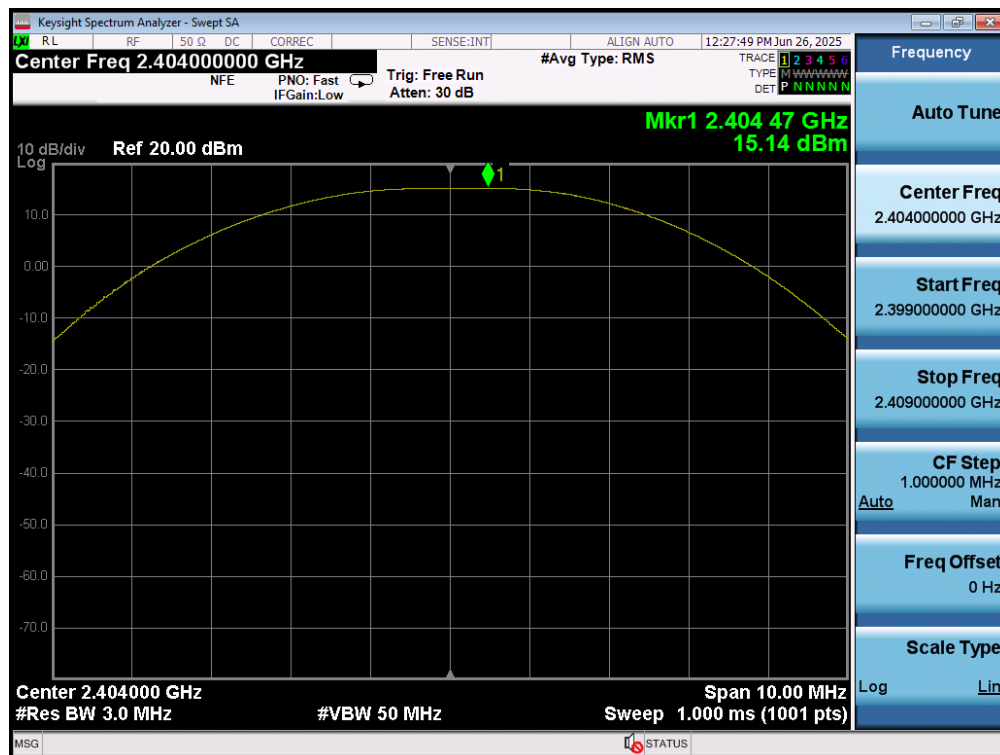


Plot 7-32. Peak Power Plot (Bluetooth (LE), 1Mbps – Ch. 19) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 33 of 89

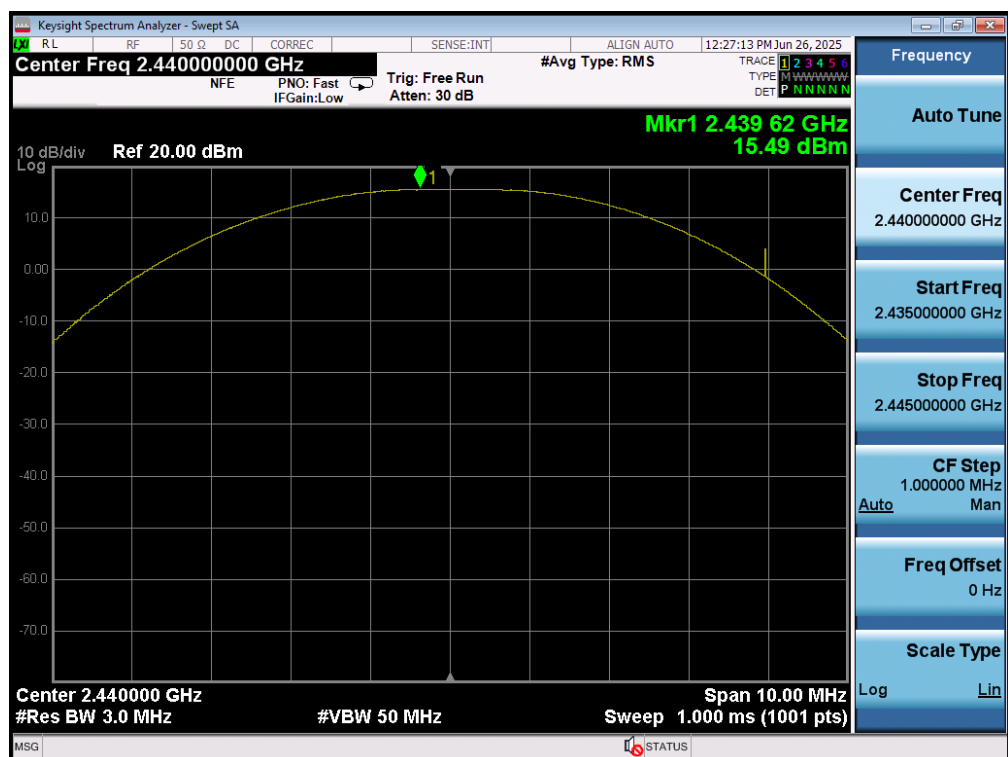


Plot 7-33. Peak Power Plot (Bluetooth (LE), 1Mbps – Ch. 39) – Ant 1

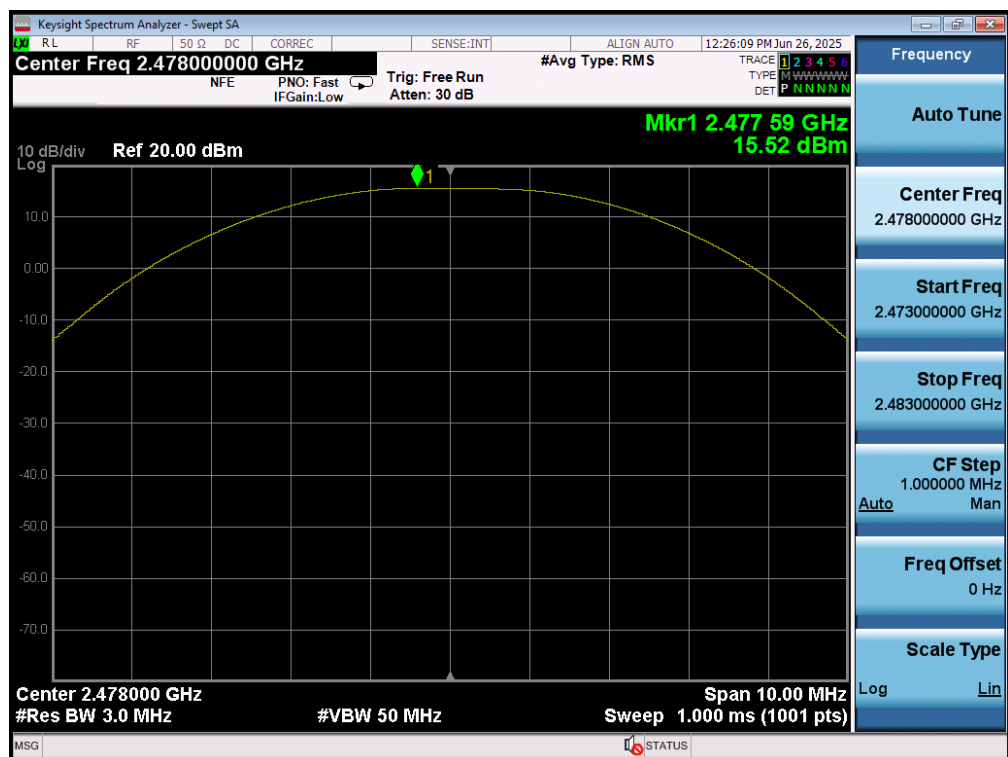


Plot 7-34. Peak Power Plot (Bluetooth (LE), 2Mbps – Ch. 0) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 34 of 89



Plot 7-35. Peak Power Plot (Bluetooth (LE), 2Mbps – Ch. 19) – Ant 1



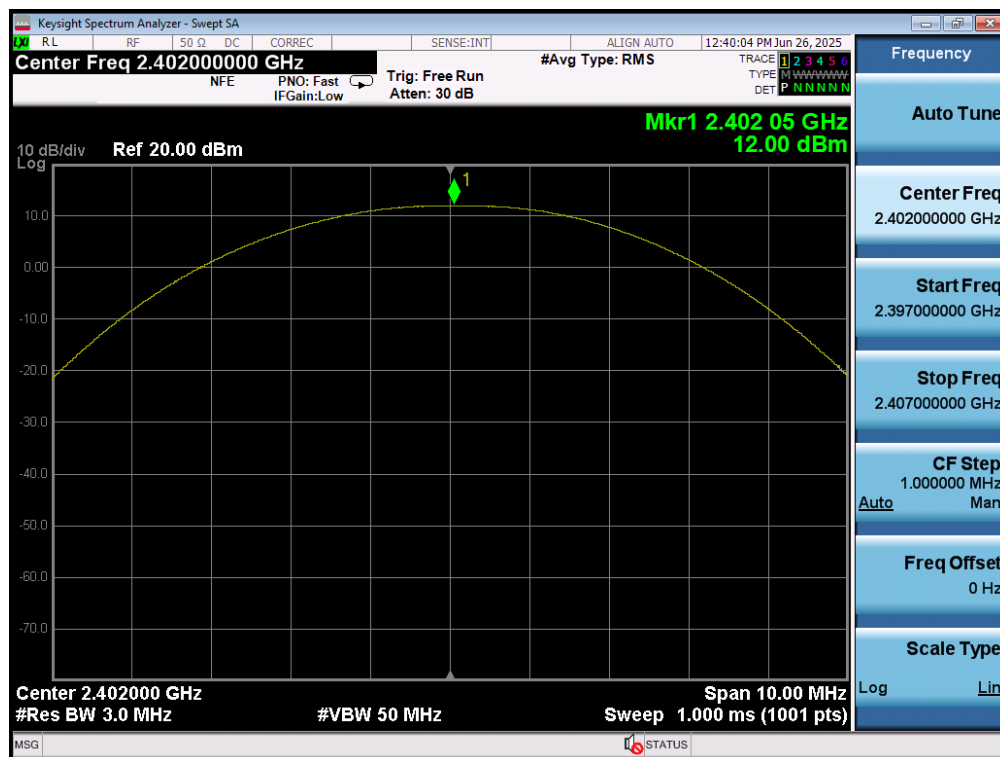
Plot 7-36. Peak Power Plot (Bluetooth (LE), 2Mbps – Ch. 36) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 35 of 89

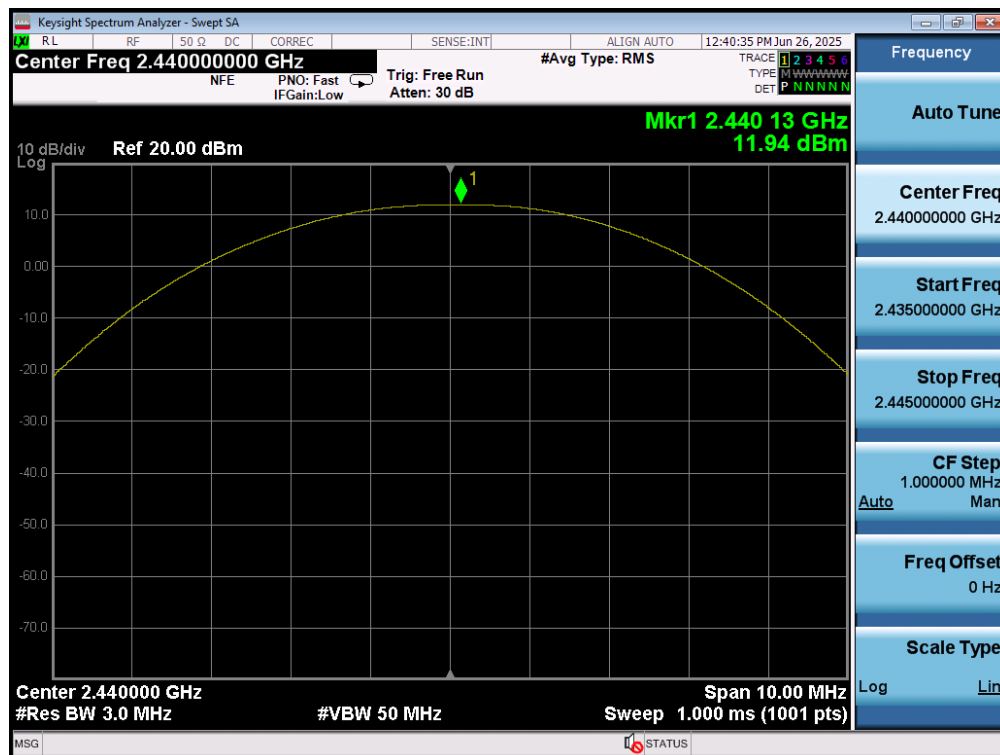
Frequency [MHz]	Data Rate [Mbps]	Channel No.	Bluetooth Mode	Peak Conducted Power	
				[dBm]	[mW]
2402	125 kbps	0	LE	12.00	15.834
2440	125 kbps	19	LE	11.94	15.646
2480	125 kbps	39	LE	12.26	16.838
2402	500 kbps	0	LE	11.94	15.621
2440	500 kbps	19	LE	12.00	15.834
2480	500 kbps	39	LE	12.27	16.866
2402	1 Mbps	0	LE	14.01	25.194
2440	1 Mbps	19	LE	13.99	25.055
2480	1 Mbps	39	LE	14.25	26.613
2404	2 Mbps	0	LE	15.19	33.067
2440	2 Mbps	19	LE	14.75	29.861
2478	2 Mbps	36	LE	14.94	31.196

Table 7-5. Conducted Output Power Measurements (Bluetooth (LE)) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 36 of 89

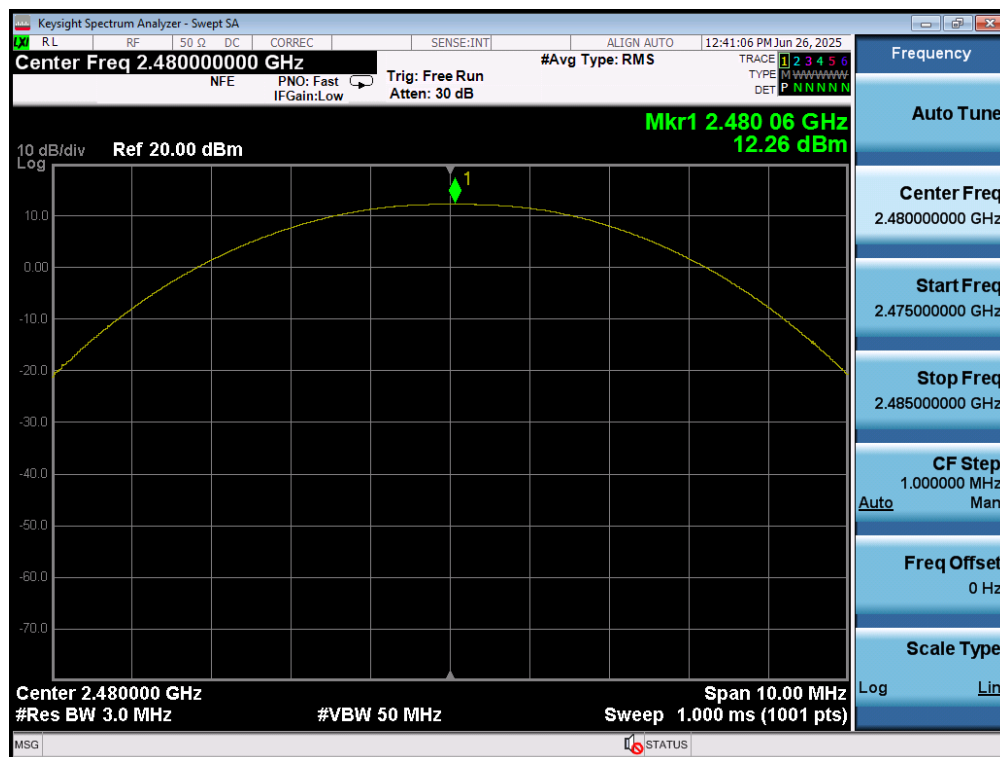


Plot 7-37. Peak Power Plot (Bluetooth (LE), 125kbps – Ch. 0) – Ant 2

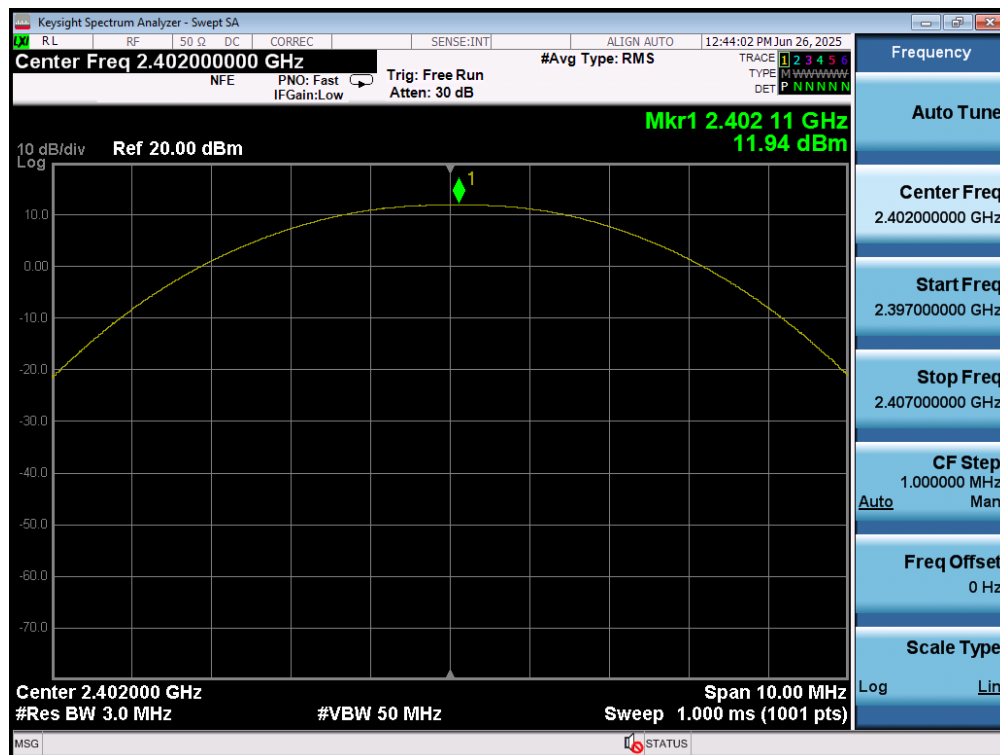


Plot 7-38. Peak Power Plot (Bluetooth (LE), 125kbps – Ch. 19) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 37 of 89

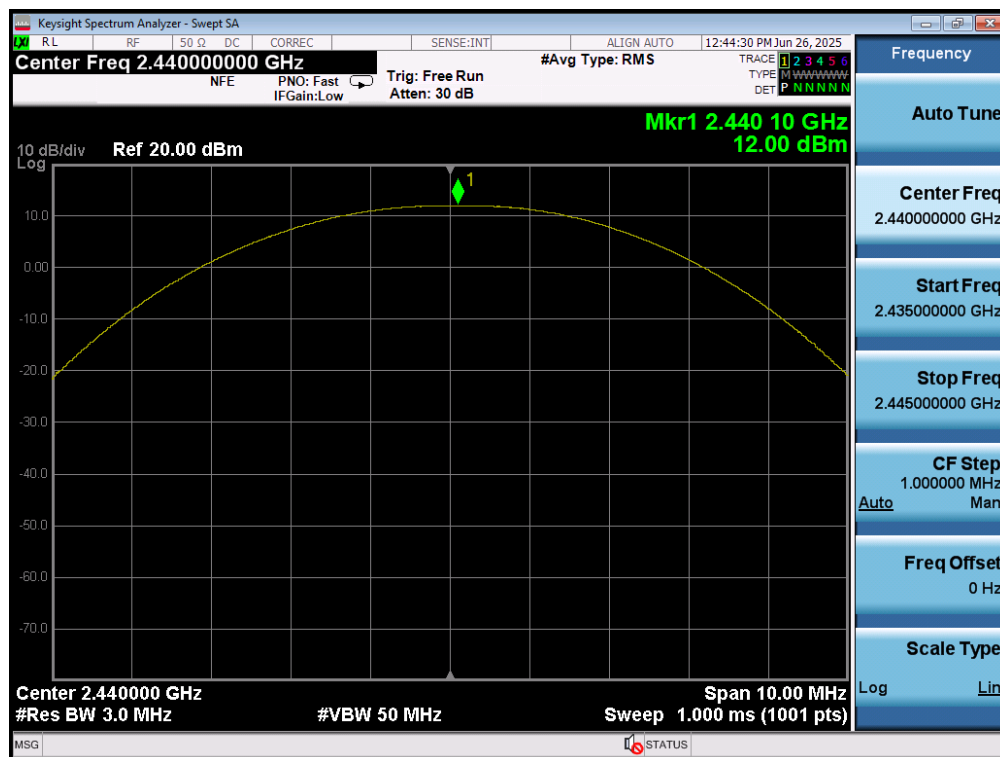


Plot 7-39. Peak Power Plot (Bluetooth (LE), 125kbps – Ch. 39) – Ant 2

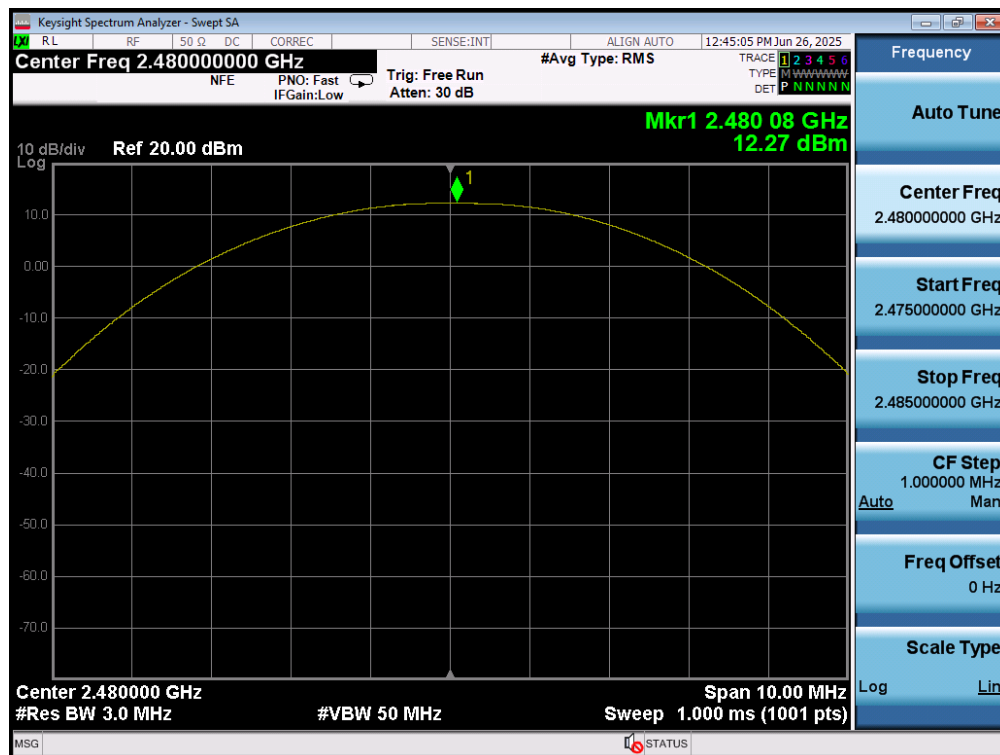


Plot 7-40. Peak Power Plot (Bluetooth (LE), 500kbps – Ch. 0) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 38 of 89

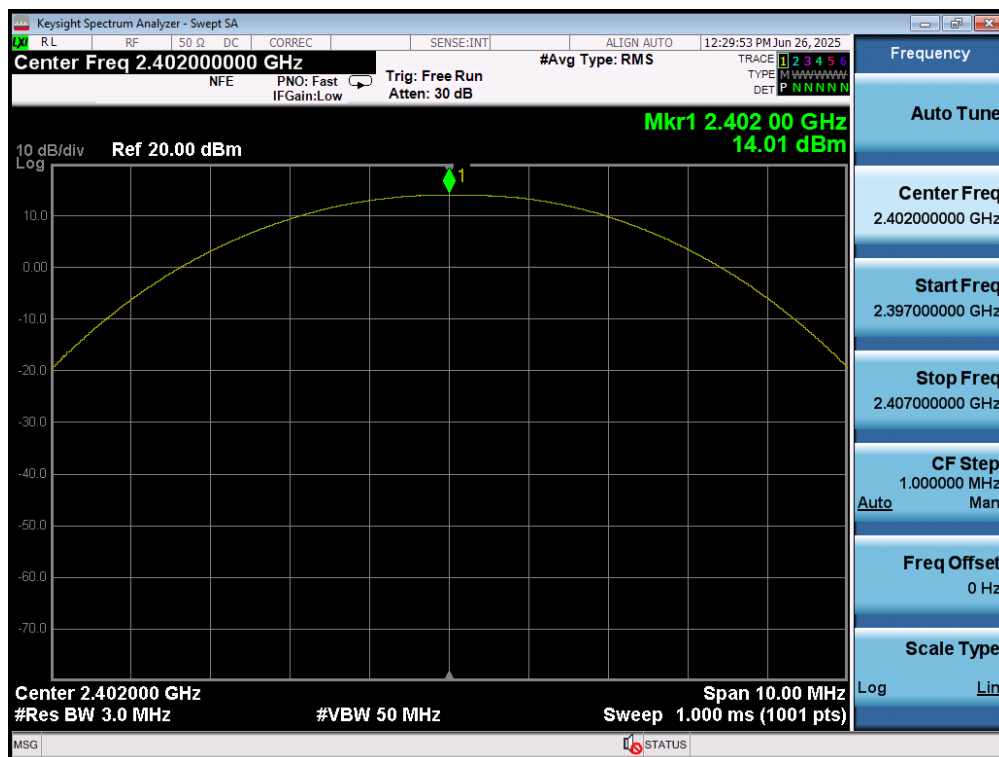


Plot 7-41. Peak Power Plot (Bluetooth (LE), 500kbps – Ch. 19) – Ant 2

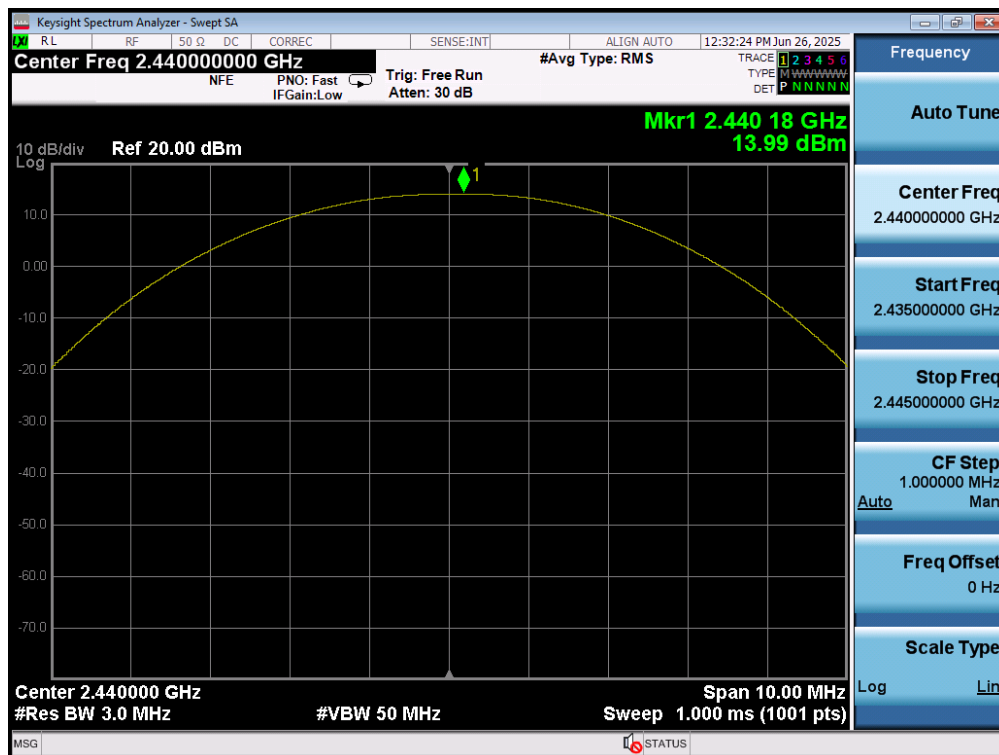


Plot 7-42. Peak Power Plot (Bluetooth (LE), 500kbps – Ch. 39) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 39 of 89

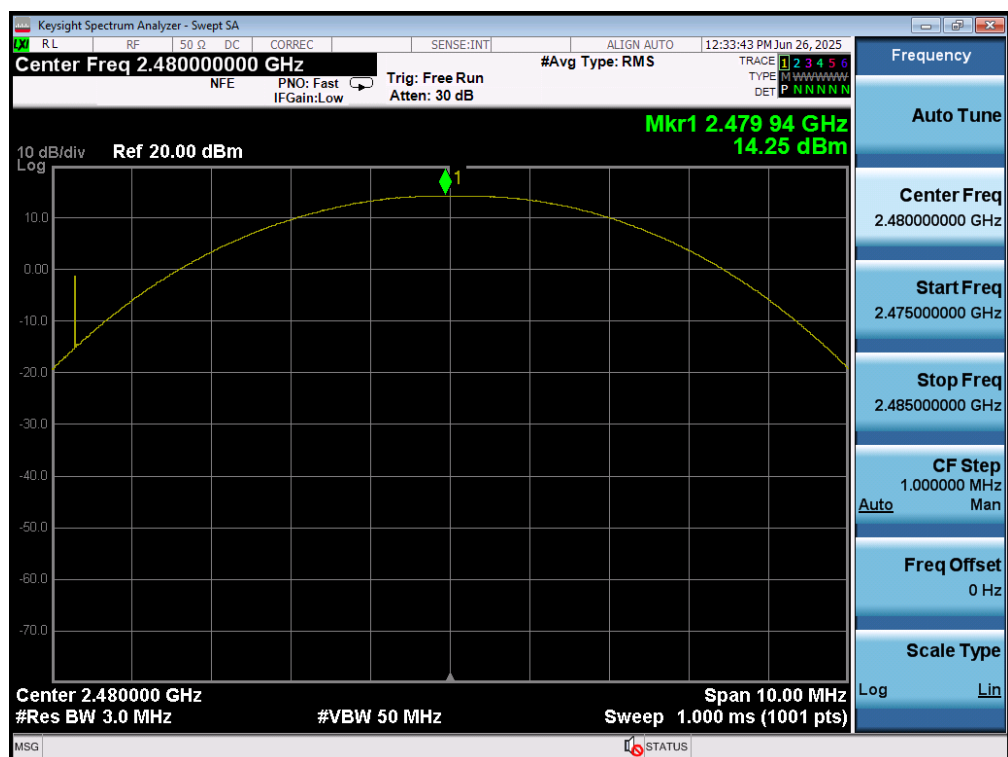


Plot 7-43. Peak Power Plot (Bluetooth (LE), 1Mbps – Ch. 0) – Ant 2

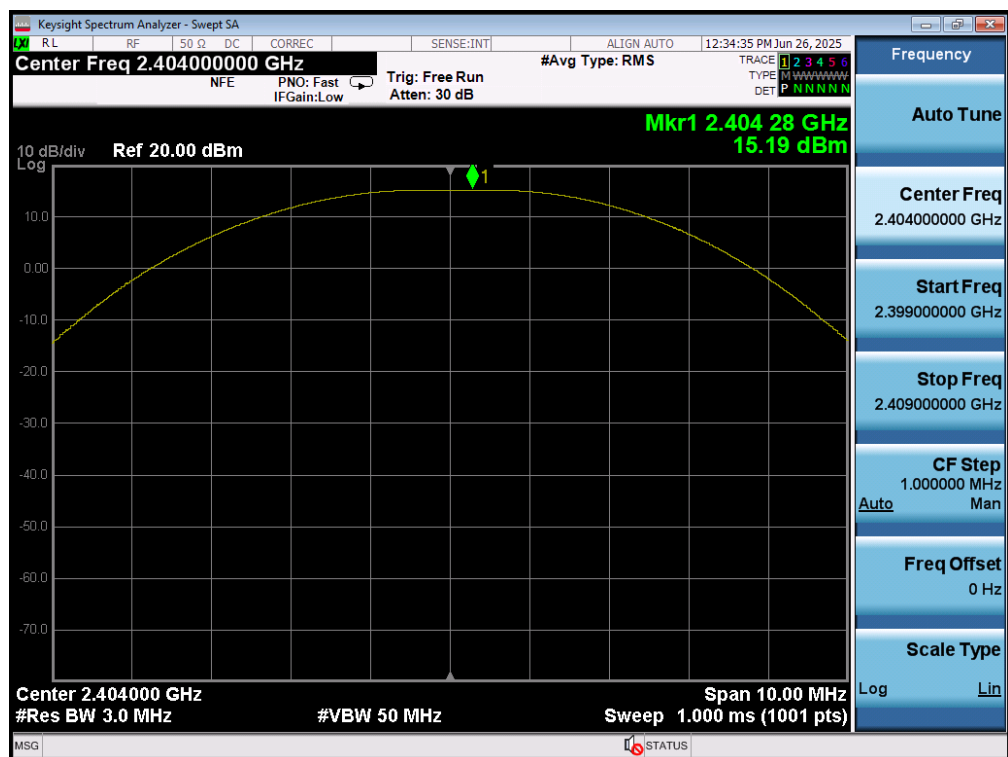


Plot 7-44. Peak Power Plot (Bluetooth (LE), 1Mbps – Ch. 19) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 40 of 89

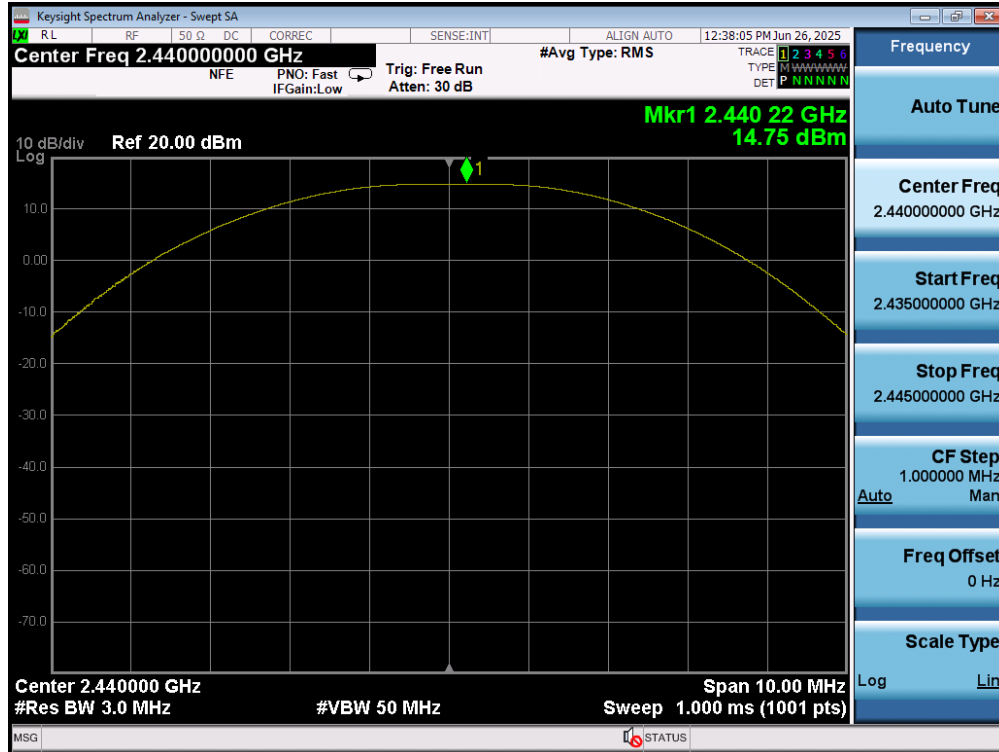


Plot 7-45. Peak Power Plot (Bluetooth (LE), 1Mbps – Ch. 39) – Ant 2

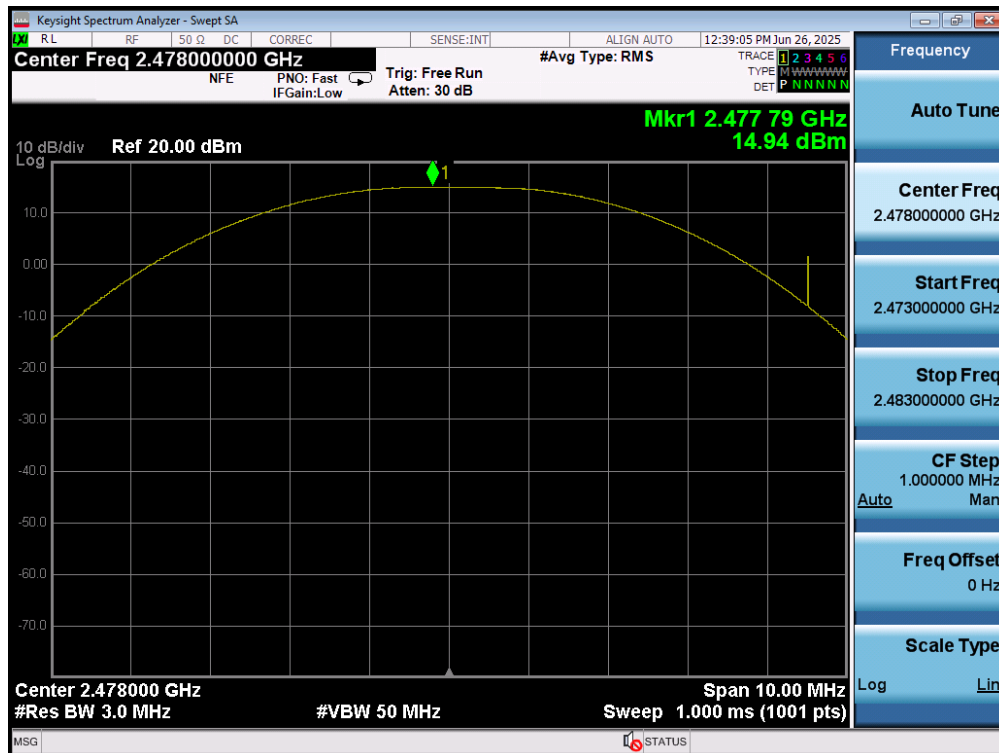


Plot 7-46. Peak Power Plot (Bluetooth (LE), 2Mbps – Ch. 0) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 41 of 89



Plot 7-47. Peak Power Plot (Bluetooth (LE), 2Mbps – Ch. 19) – Ant 2



Plot 7-48. Peak Power Plot (Bluetooth (LE), 2Mbps – Ch. 36) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 42 of 89

7.4 Power Spectral Density – Bluetooth (LE)

§15.247(e); RSS-247 [5.2]

Test Overview and Limit

The peak power density is measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at maximum power and at the appropriate frequencies.

The maximum permissible power spectral density is 8 dBm in any 3 kHz band.

Test Procedure Used

ANSI C63.10:2020 – Section 11.10.2 Method PKPSD

Test Settings

1. Analyzer was set to the center frequency of the DTS channel under investigation
2. Span = 1.5 times the DTS channel bandwidth
3. RBW = 3kHz
4. VBW = 1MHz
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. 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

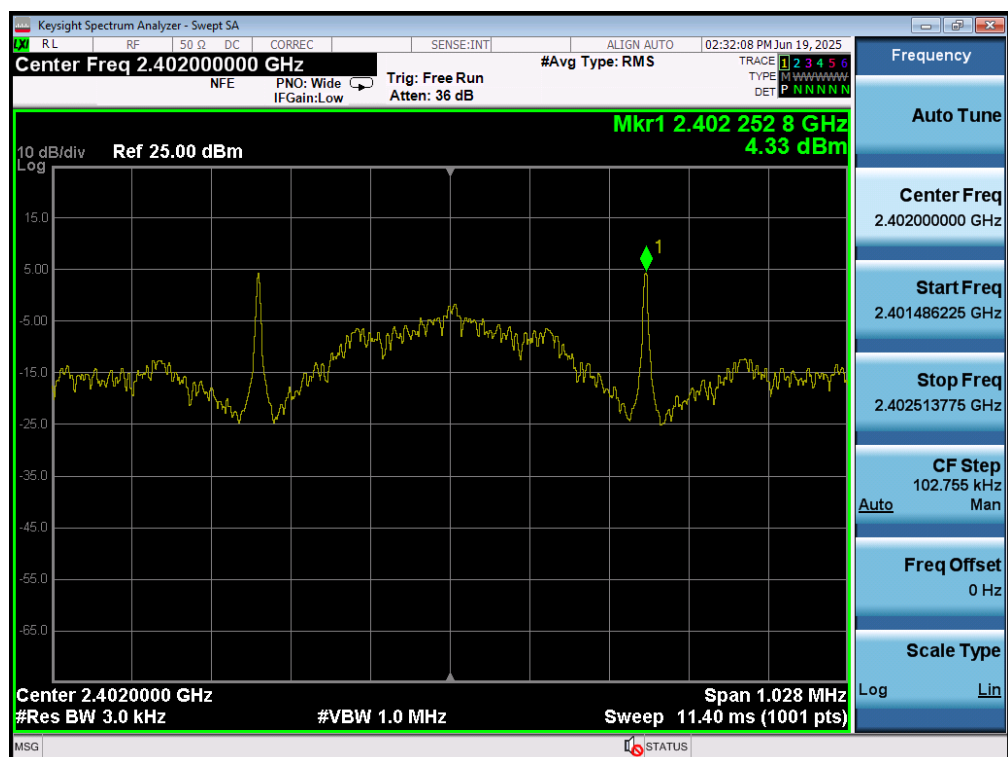
None

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 43 of 89

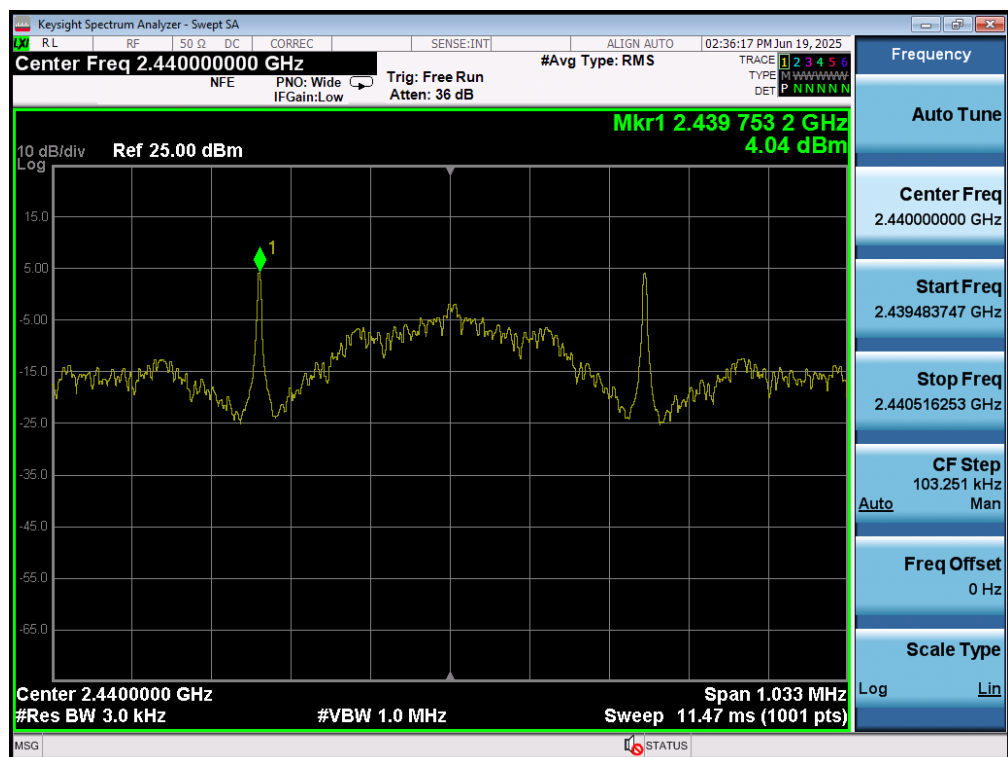
Frequency [MHz]	Data Rate [Mbps]	Channel No.	Bluetooth Mode	Measured Power Spectral Density [dBm]	Maximum Permissible Power Density [dBm / 3kHz]	Margin [dB]
2402	125 kbps	0	LE	4.33	8.0	-3.67
2440	125 kbps	19	LE	4.04	8.0	-3.96
2480	125 kbps	39	LE	4.52	8.0	-3.48
2402	500 kbps	0	LE	3.98	8.0	-4.02
2440	500 kbps	19	LE	3.90	8.0	-4.10
2480	500 kbps	39	LE	4.52	8.0	-3.48
2402	1 Mbps	0	LE	-2.28	8.0	-10.28
2440	1 Mbps	19	LE	-0.42	8.0	-8.42
2480	1 Mbps	39	LE	-0.18	8.0	-8.18
2402	2 Mbps	0	LE	-2.03	8.0	-10.03
2440	2 Mbps	19	LE	-1.60	8.0	-9.60
2480	2 Mbps	39	LE	-1.28	8.0	-9.28

Table 7-6. Conducted Power Density Measurements – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 44 of 89

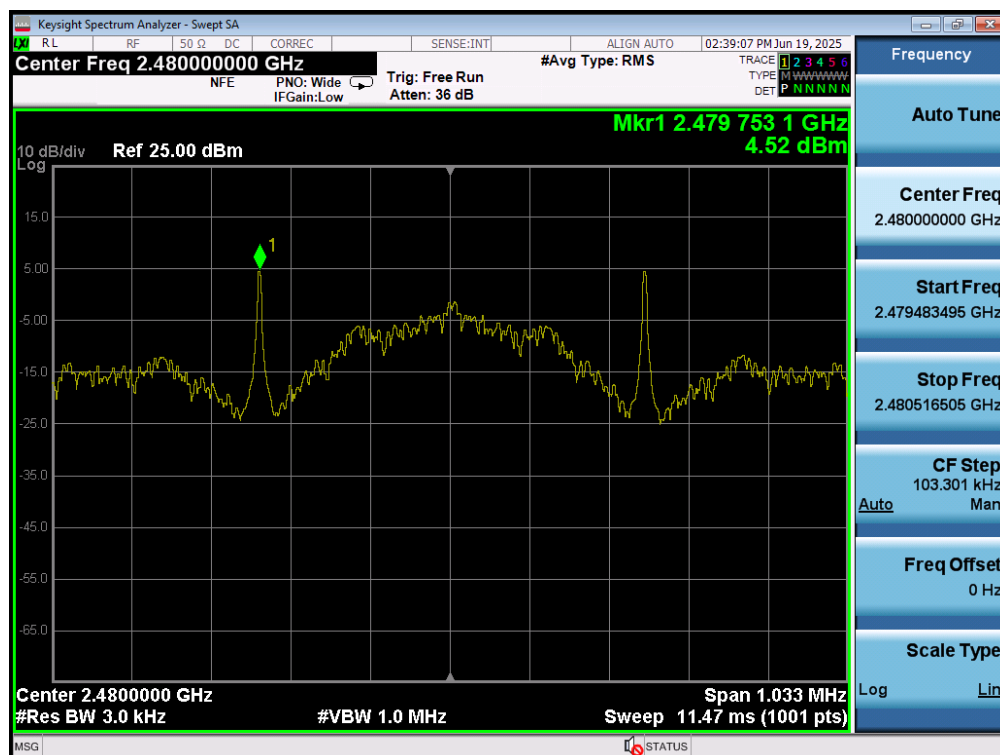


Plot 7-49. Power Spectral Density Plot (Bluetooth (LE), 125kbps – Ch. 0) – Ant 1

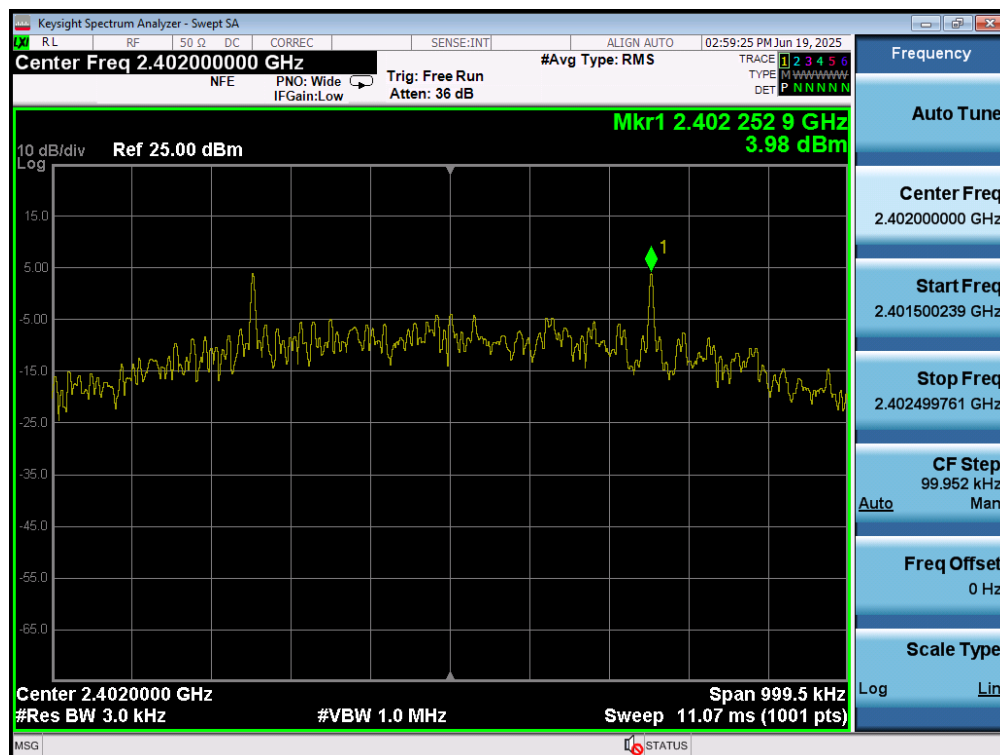


Plot 7-50. Power Spectral Density Plot (Bluetooth (LE), 125kbps – Ch. 19) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 45 of 89

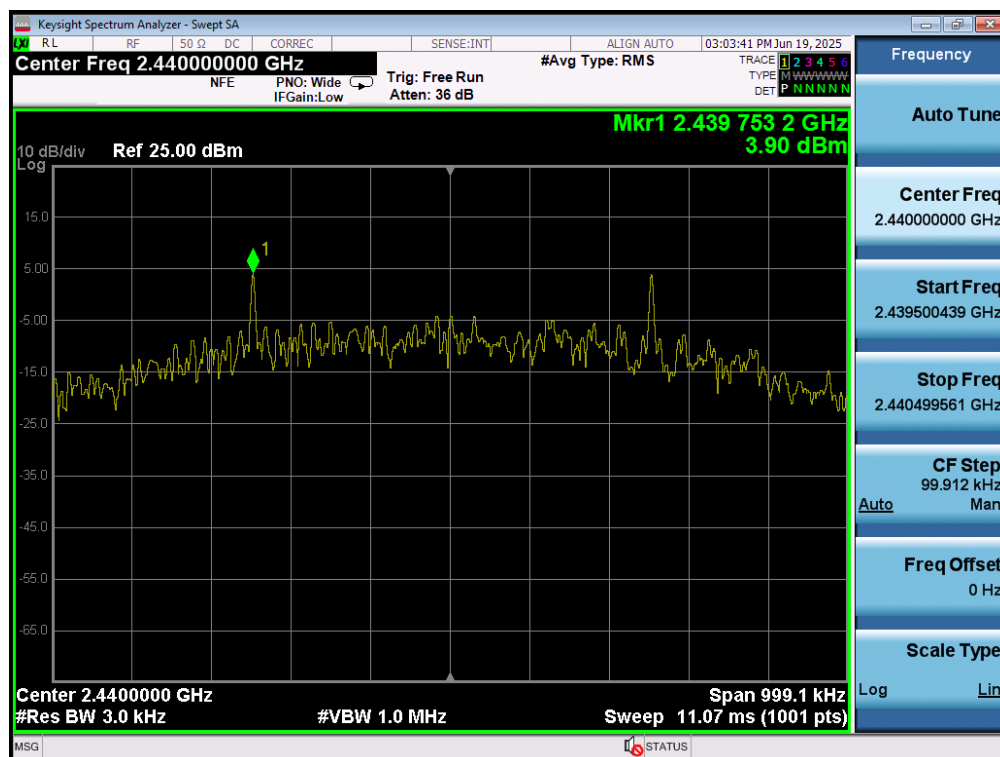


Plot 7-51. Power Spectral Density Plot (Bluetooth (LE), 125kbps – Ch. 39) – Ant 1

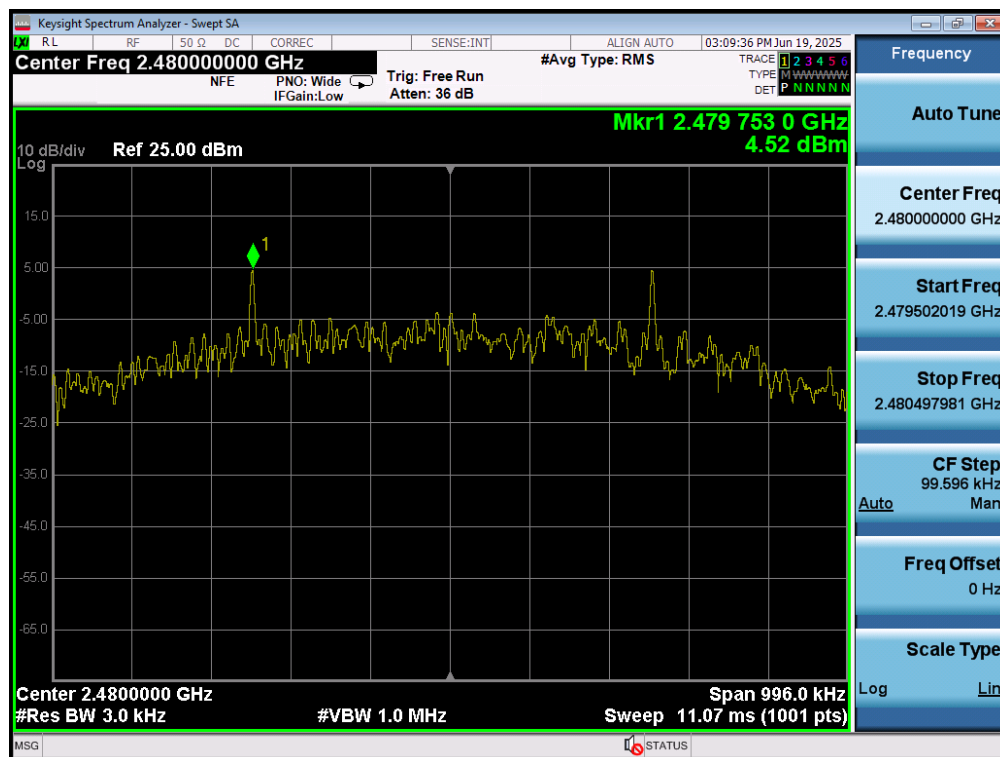


Plot 7-52. Power Spectral Density Plot (Bluetooth (LE), 500kbps – Ch. 0) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02-A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 46 of 89

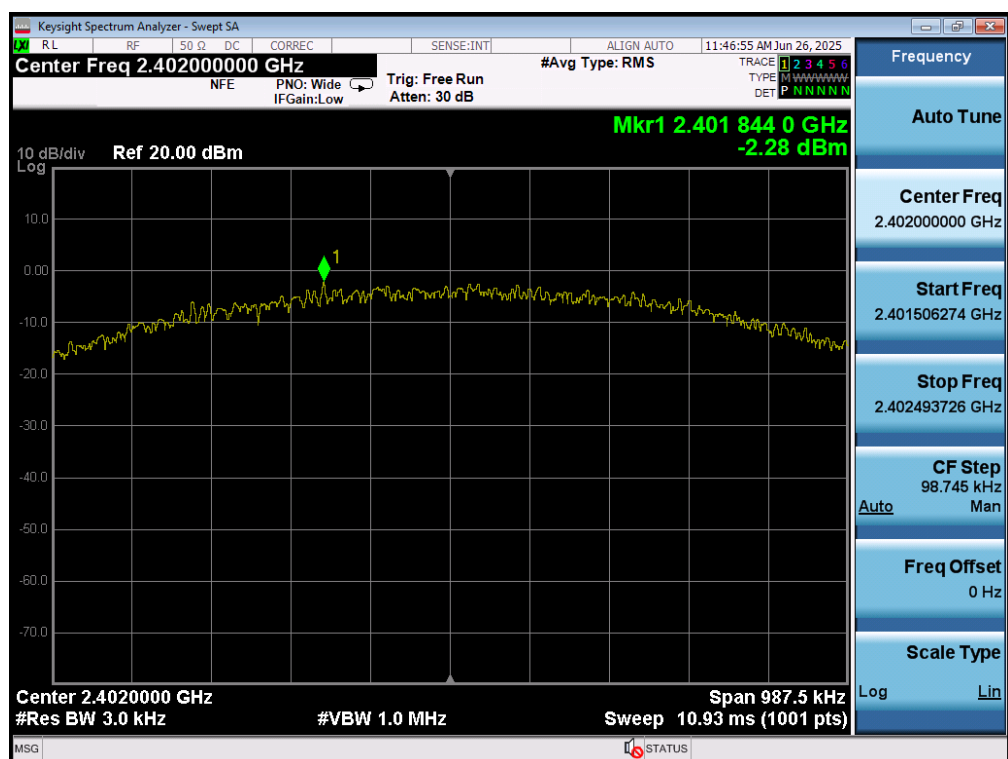


Plot 7-53. Power Spectral Density Plot (Bluetooth (LE), 500kbps – Ch. 19) – Ant 1

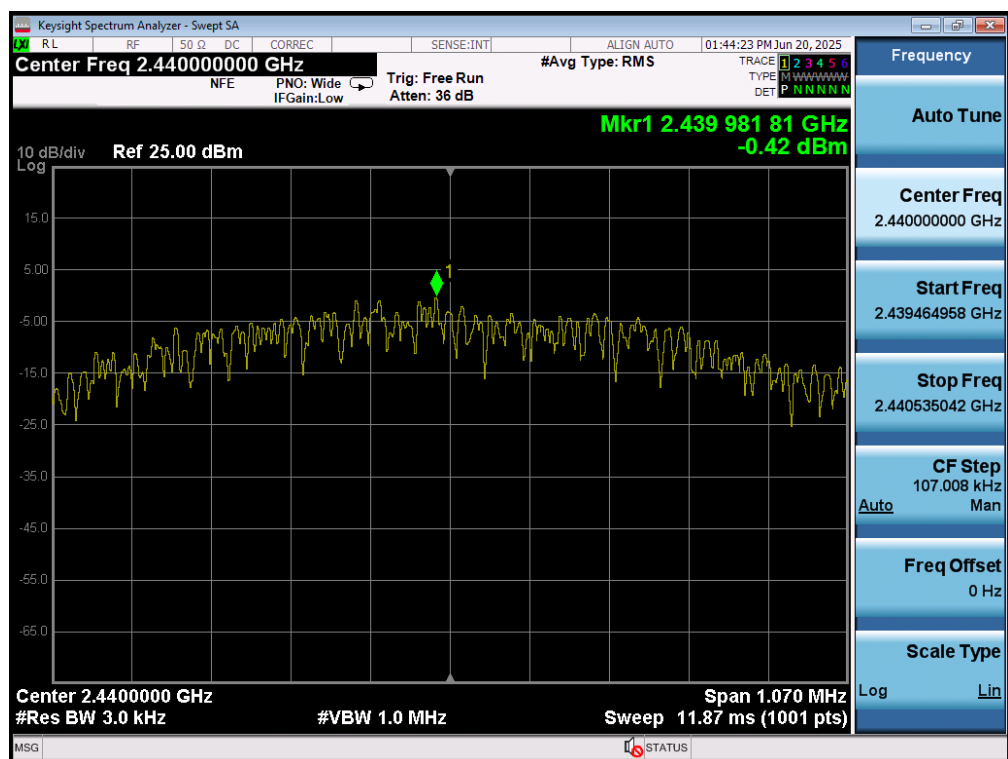


Plot 7-54. Power Spectral Density Plot (Bluetooth (LE), 500kbps – Ch. 39) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 47 of 89

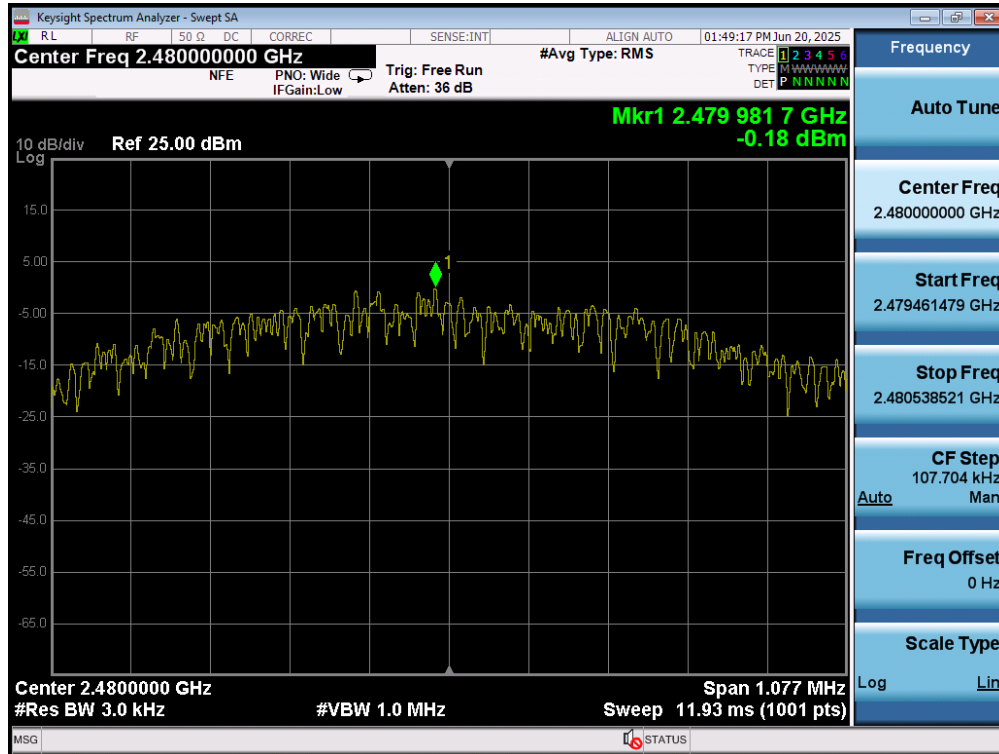


Plot 7-55. Power Spectral Density Plot (Bluetooth (LE), 1Mbps – Ch. 0) – Ant 1

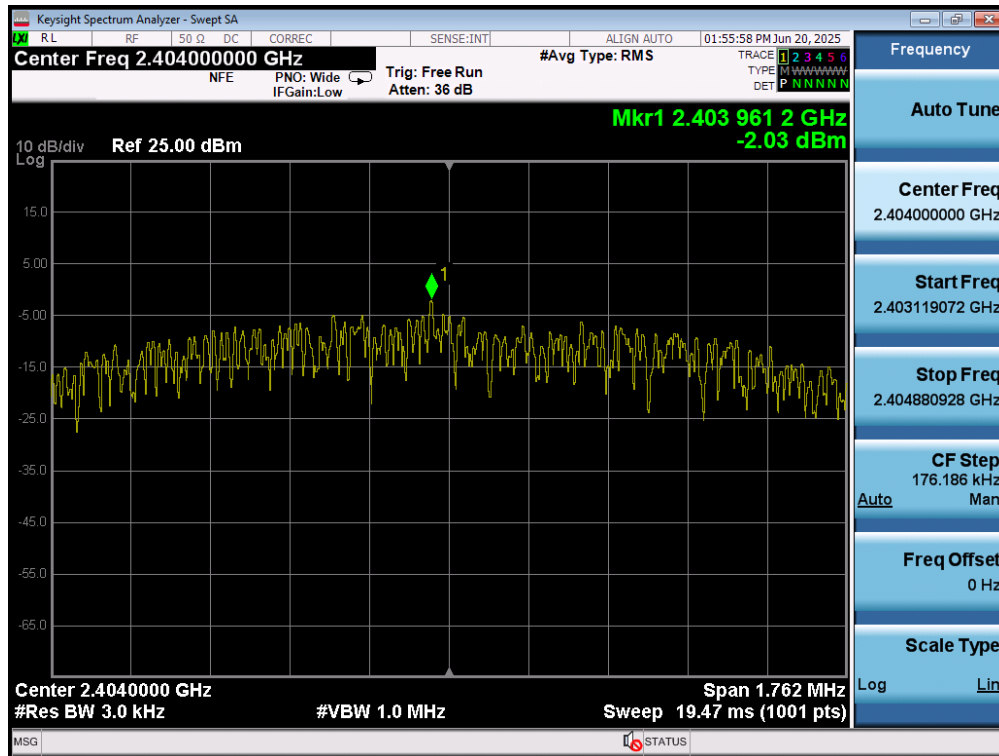


Plot 7-56. Power Spectral Density Plot (Bluetooth (LE), 1Mbps – Ch. 19) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 48 of 89

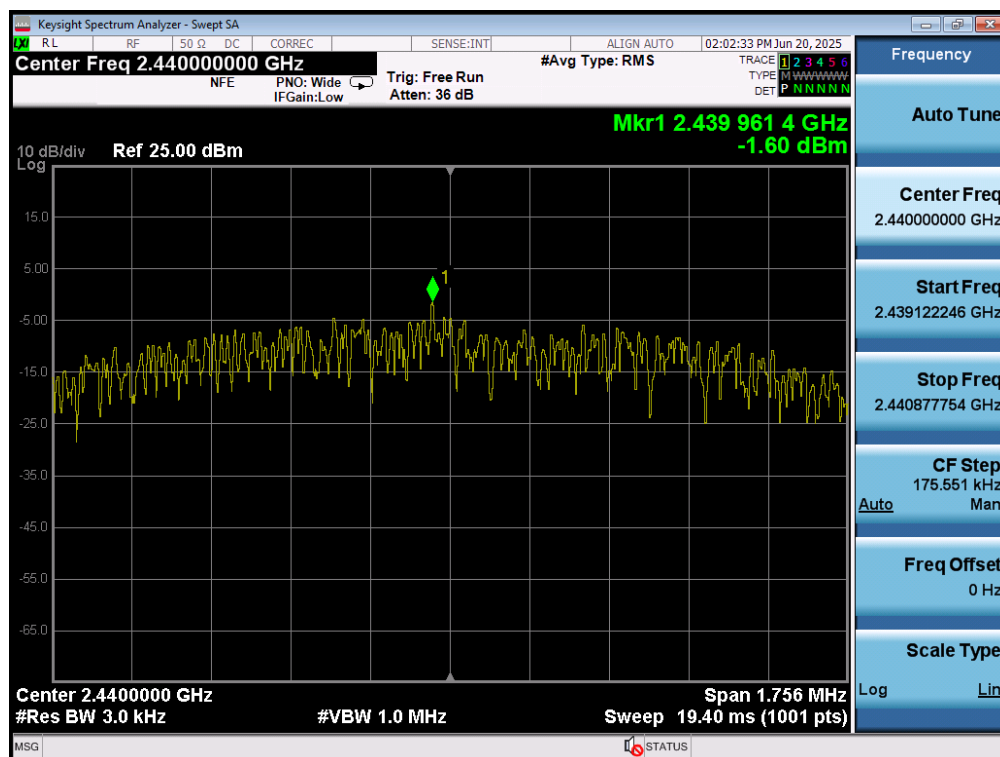


Plot 7-57. Power Spectral Density Plot (Bluetooth (LE), 1Mbps – Ch. 39) – Ant 1

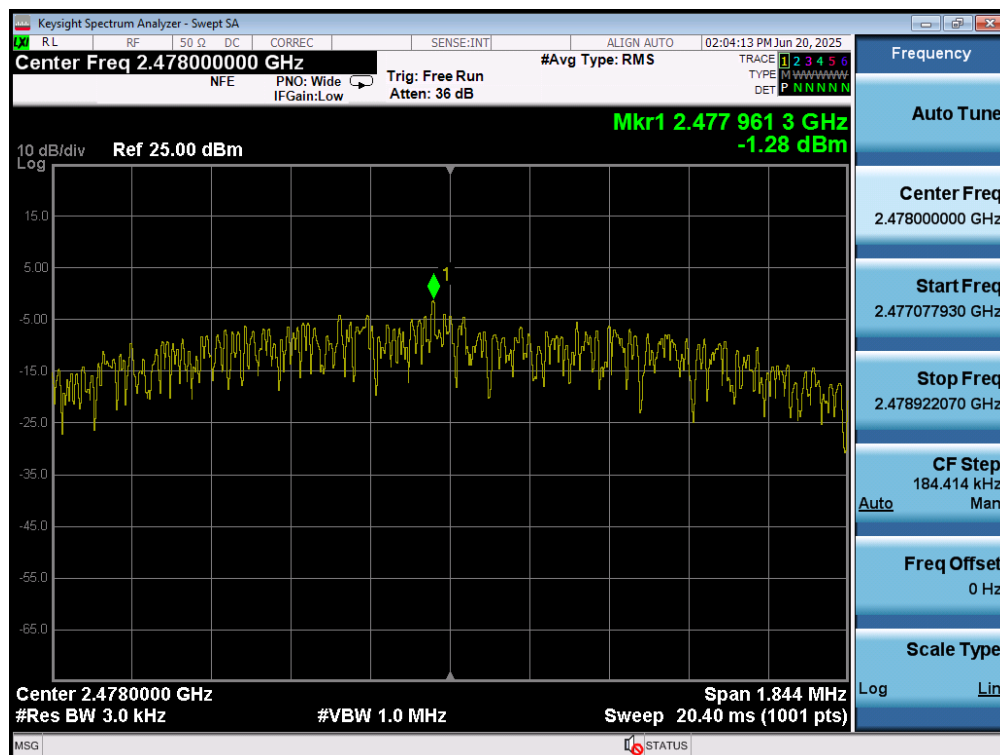


Plot 7-58. Power Spectral Density Plot (Bluetooth (LE), 2Mbps – Ch. 0) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 49 of 89



Plot 7-59. Power Spectral Density Plot (Bluetooth (LE), 2Mbps – Ch. 19) – Ant 1



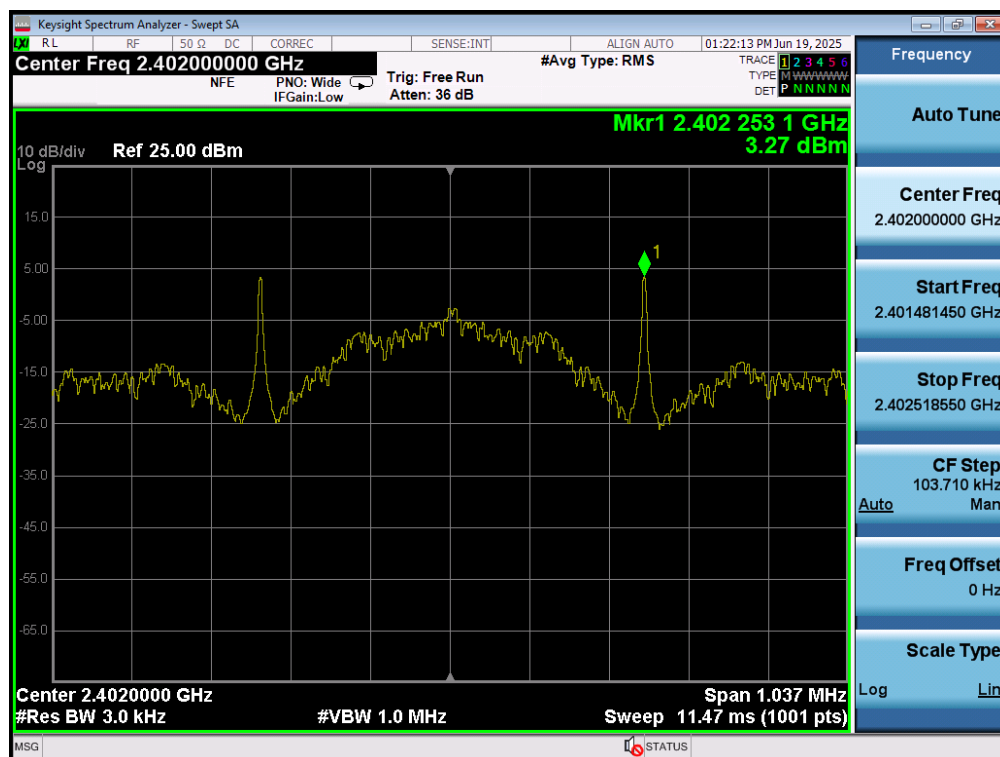
Plot 7-60. Power Spectral Density Plot (Bluetooth (LE), 2Mbps – Ch. 39) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 50 of 89

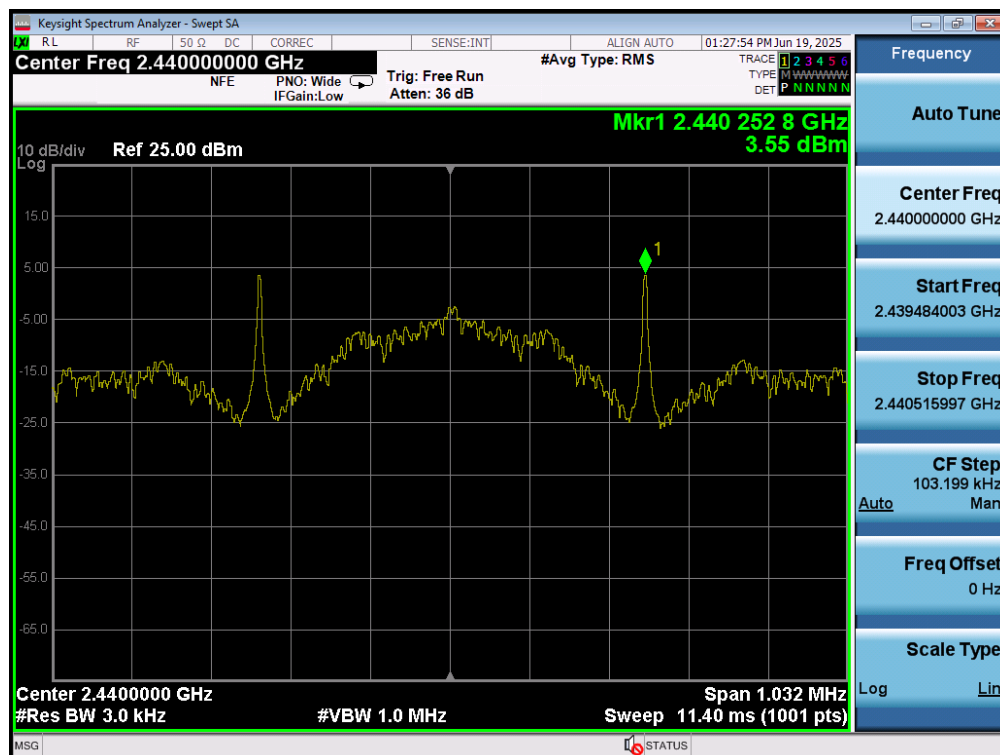
Frequency [MHz]	Data Rate [Mbps]	Channel No.	Bluetooth Mode	Measured Power Spectral Density [dBm]	Maximum Permissible Power Density [dBm / 3kHz]	Margin [dB]
2402	125 kbps	0	LE	3.27	8.0	-4.73
2440	125 kbps	19	LE	3.55	8.0	-4.45
2480	125 kbps	39	LE	3.77	8.0	-4.23
2402	500 kbps	0	LE	3.09	8.0	-4.91
2440	500 kbps	19	LE	3.27	8.0	-4.73
2480	500 kbps	39	LE	3.59	8.0	-4.41
2402	1 Mbps	0	LE	-3.59	8.0	-11.59
2440	1 Mbps	19	LE	-3.53	8.0	-11.53
2480	1 Mbps	39	LE	-3.34	8.0	-11.34
2402	2 Mbps	0	LE	-4.62	8.0	-12.62
2440	2 Mbps	19	LE	-4.95	8.0	-12.95
2480	2 Mbps	39	LE	-4.79	8.0	-12.79

Table 7-7. Conducted Power Density Measurements – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 51 of 89

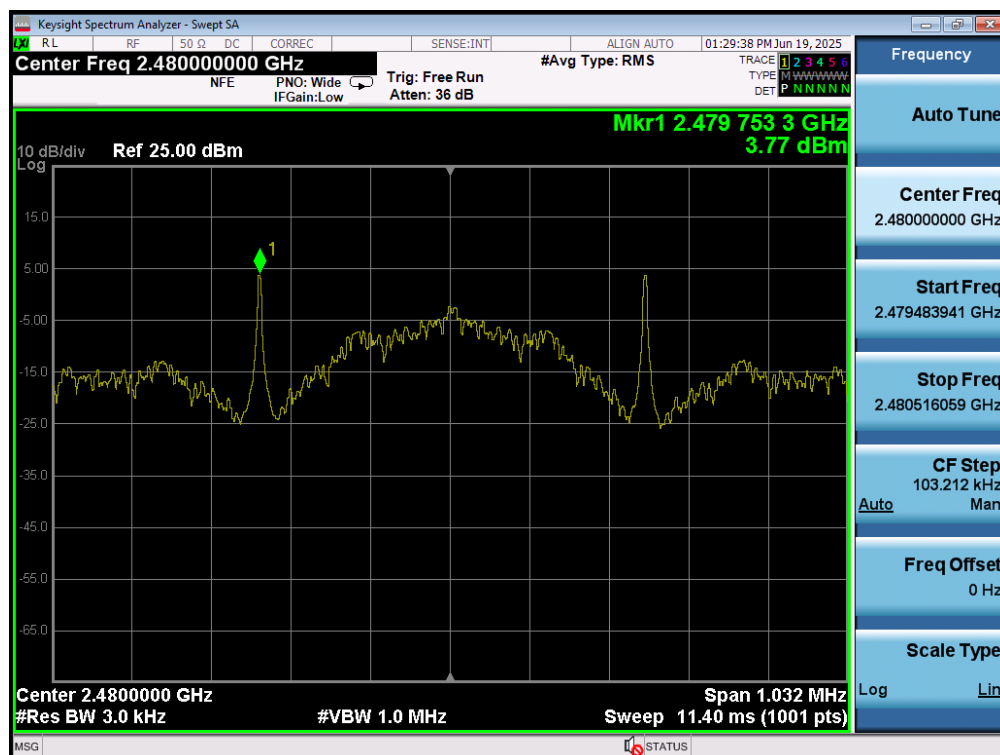


Plot 7-61. Power Spectral Density Plot (Bluetooth (LE), 125kbps – Ch. 0) – Ant 2

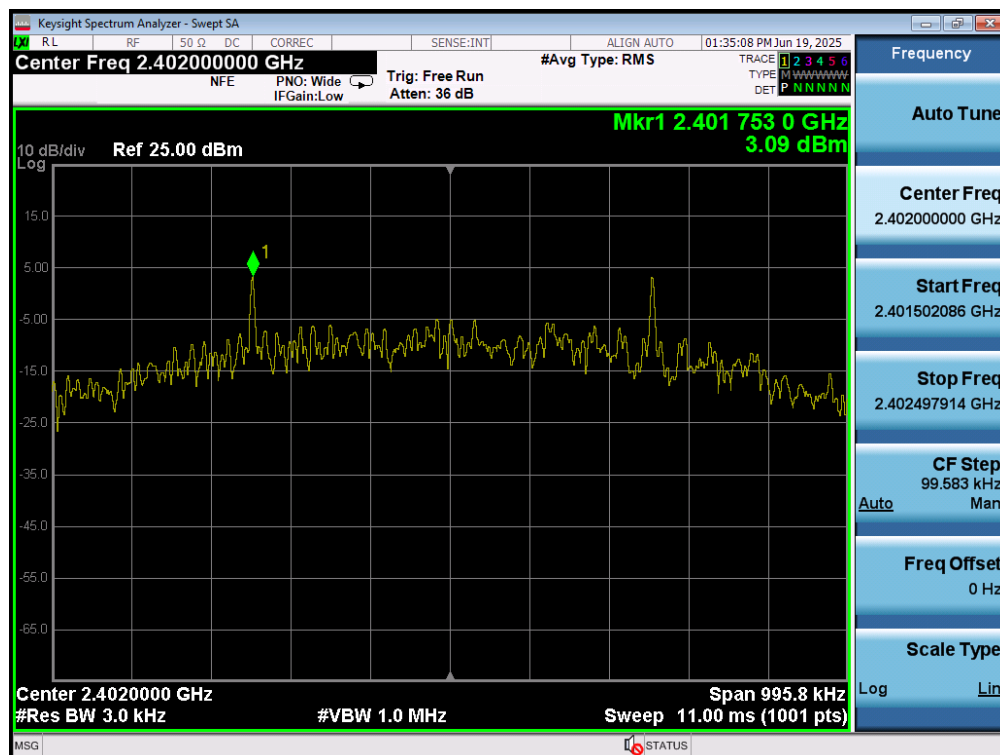


Plot 7-62. Power Spectral Density Plot (Bluetooth (LE), 125kbps – Ch. 19) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 52 of 89

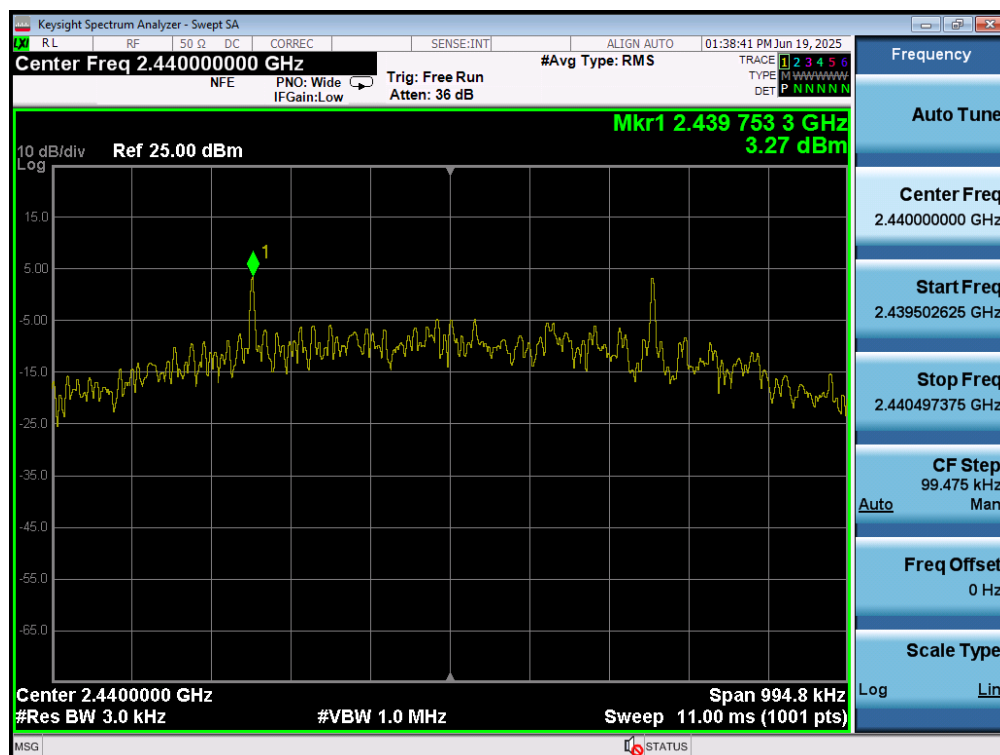


Plot 7-63. Power Spectral Density Plot (Bluetooth (LE), 125kbps – Ch. 39) – Ant 2

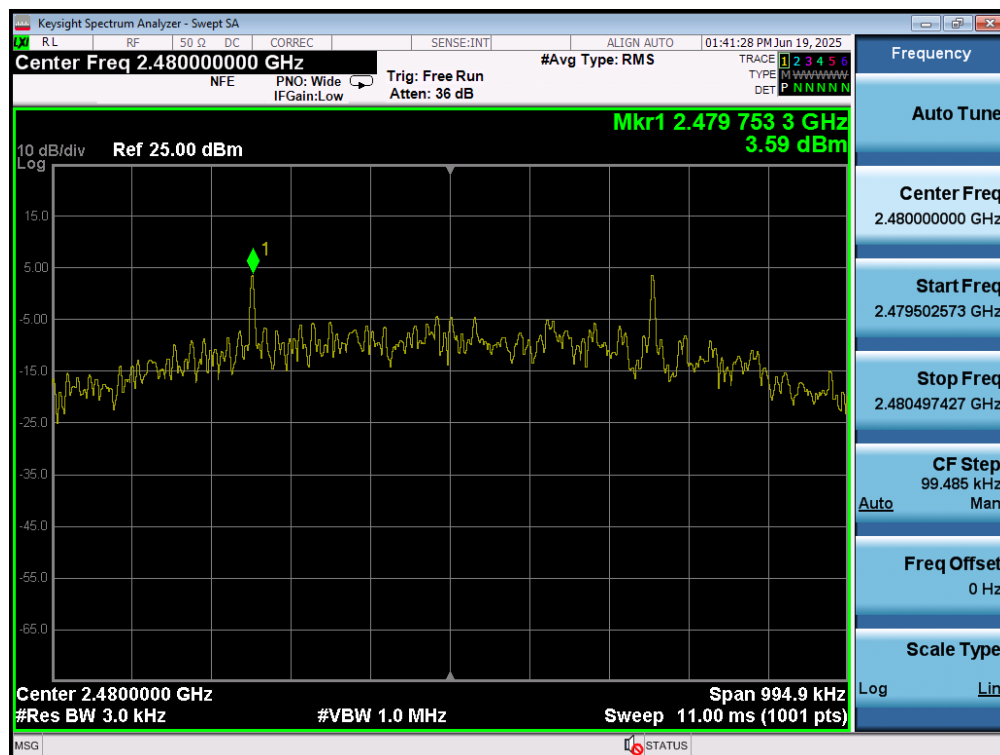


Plot 7-64. Power Spectral Density Plot (Bluetooth (LE), 500kbps – Ch. 0) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 53 of 89

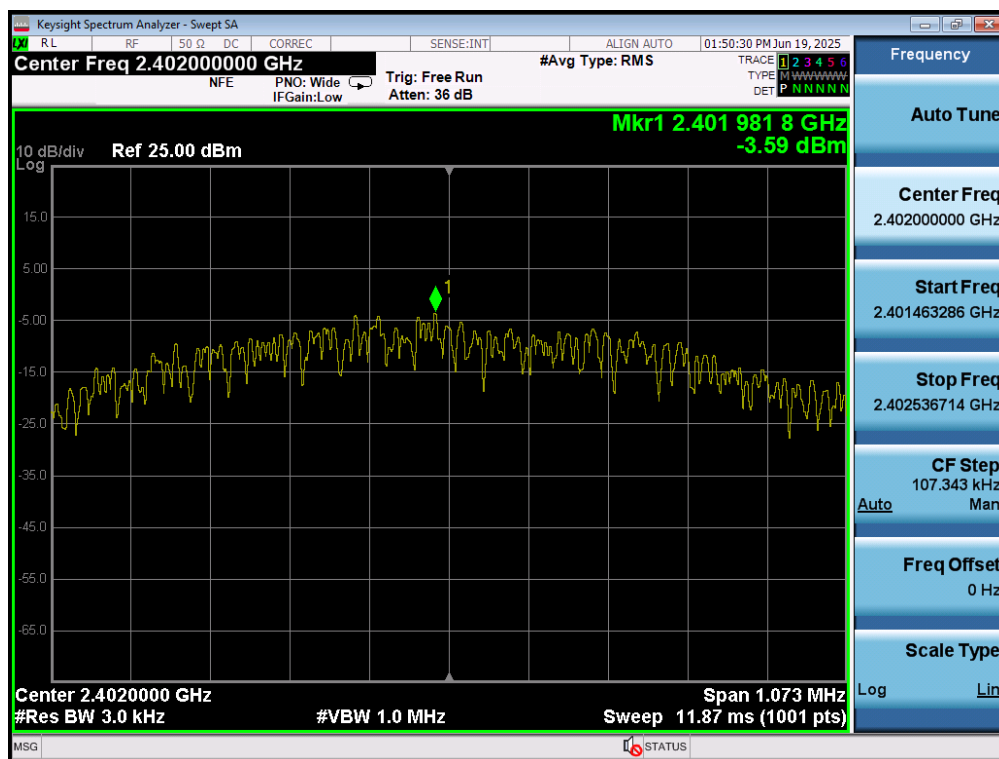


Plot 7-65. Power Spectral Density Plot (Bluetooth (LE), 500kbps – Ch. 19) – Ant 2

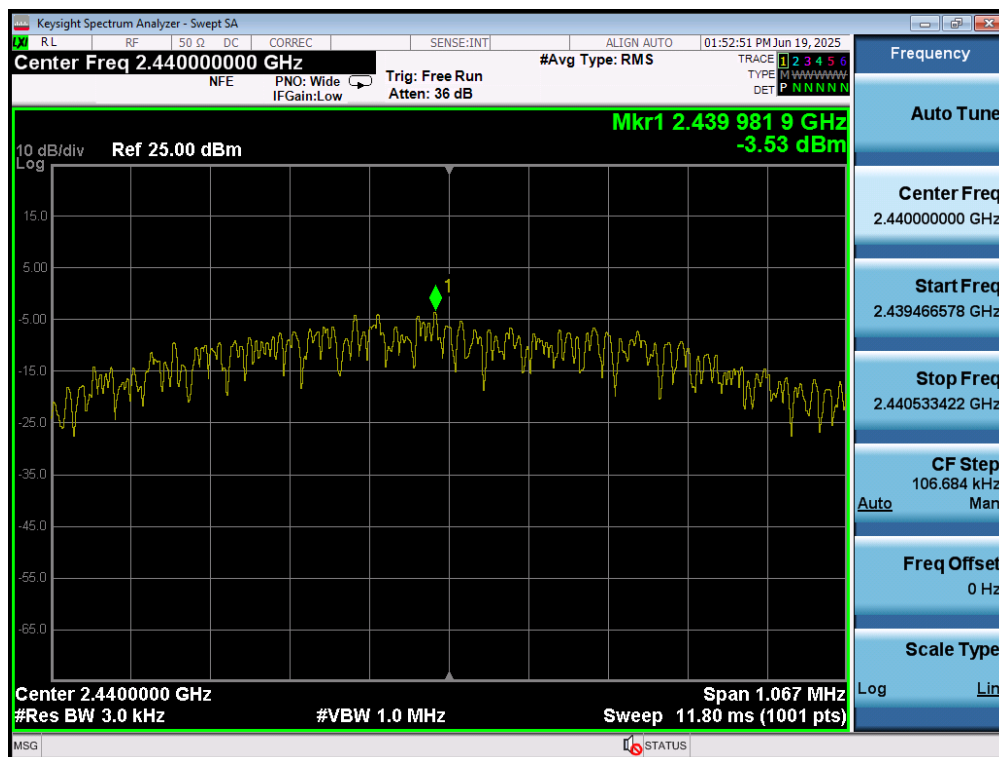


Plot 7-66. Power Spectral Density Plot (Bluetooth (LE), 500kbps – Ch. 39) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 54 of 89

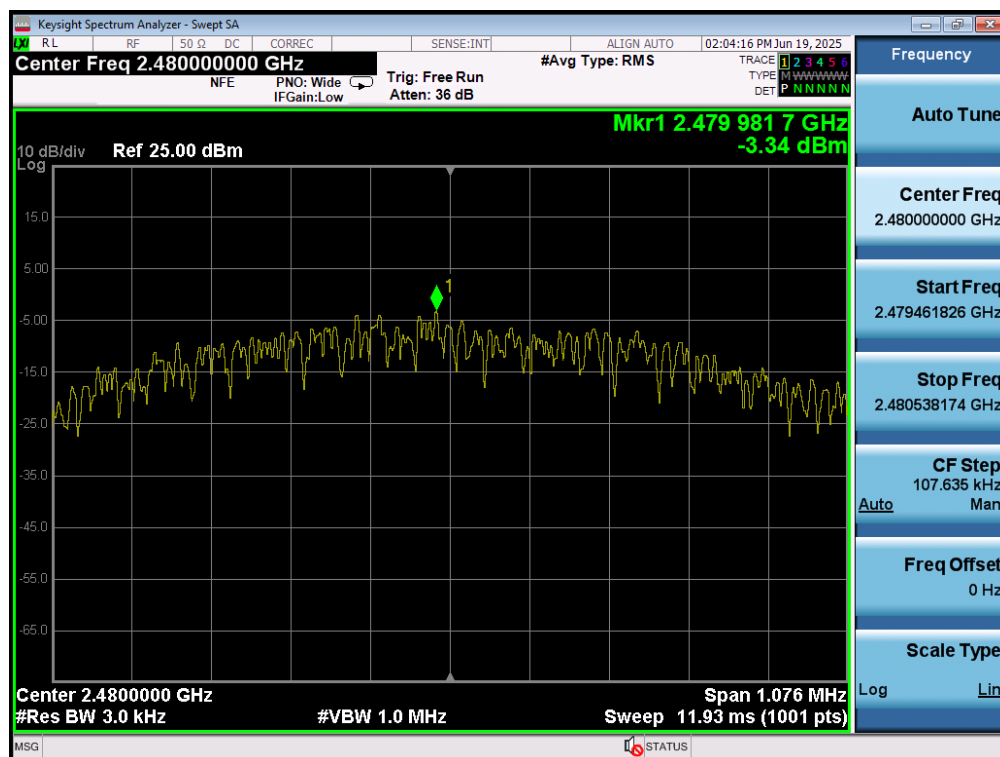


Plot 7-67. Power Spectral Density Plot (Bluetooth (LE), 1Mbps – Ch. 0) – Ant 2

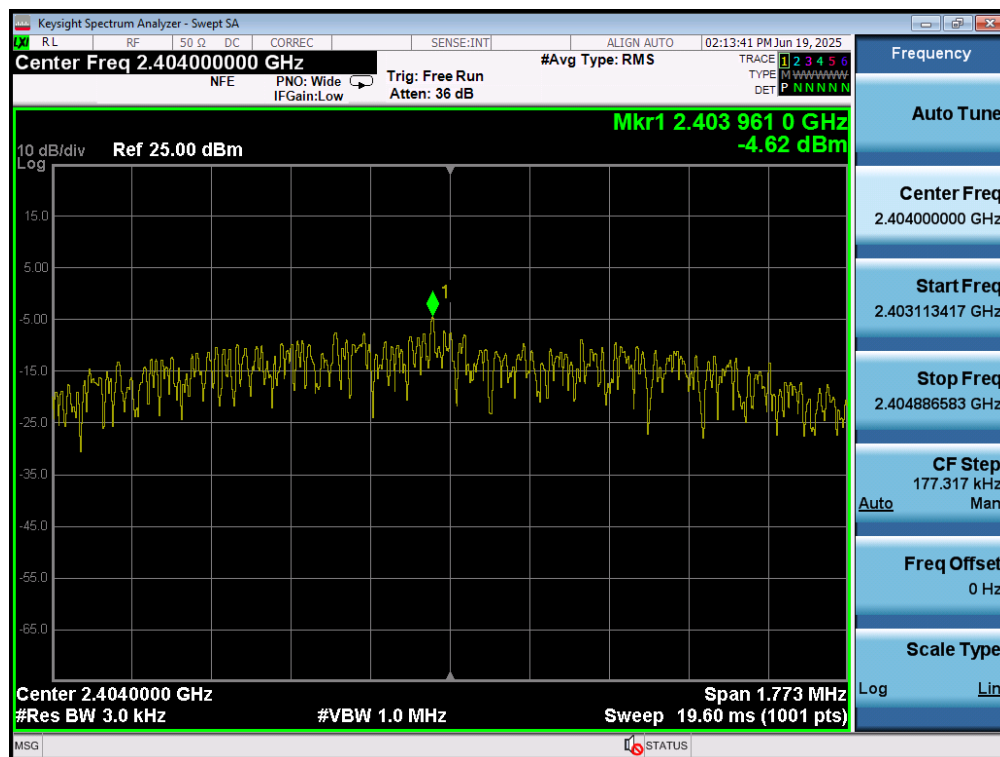


Plot 7-68. Power Spectral Density Plot (Bluetooth (LE), 1Mbps – Ch. 19) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 55 of 89

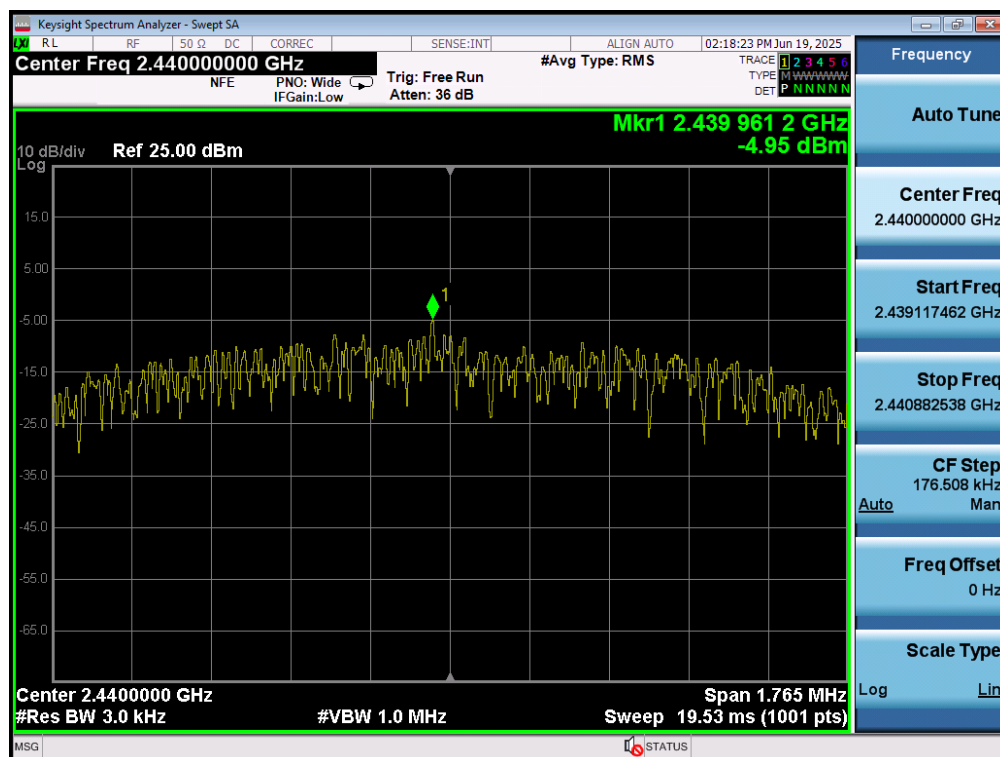


Plot 7-69. Power Spectral Density Plot (Bluetooth (LE), 1Mbps – Ch. 39) – Ant 2

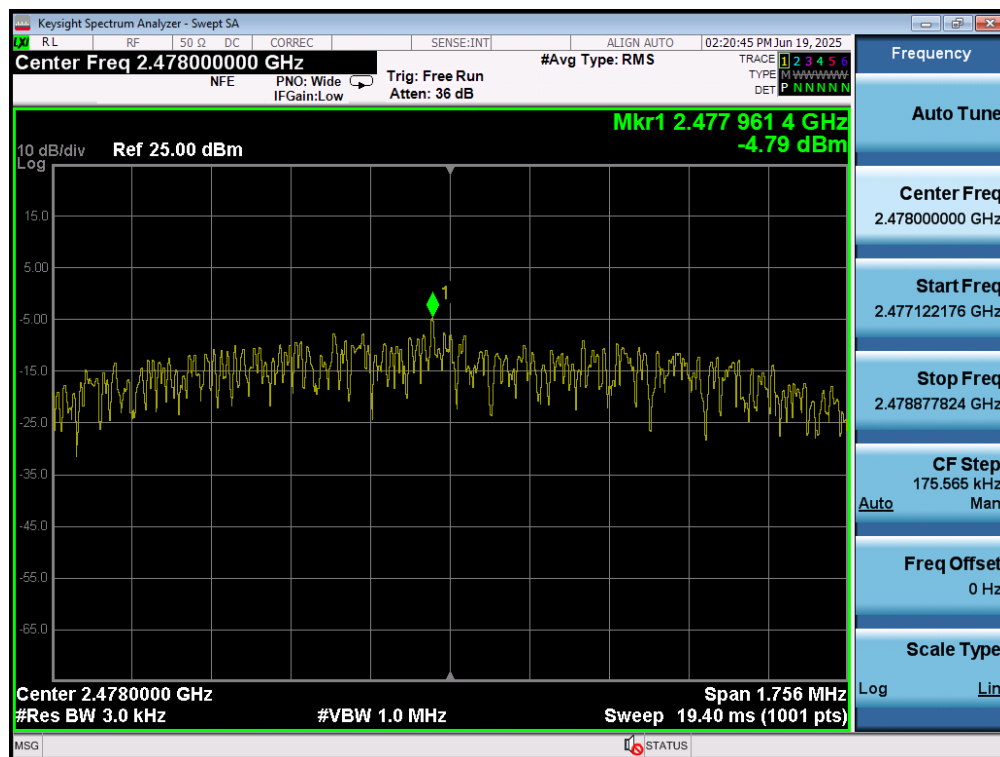


Plot 7-70. Power Spectral Density Plot (Bluetooth (LE), 2Mbps – Ch. 0) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 56 of 89



Plot 7-71. Power Spectral Density Plot (Bluetooth (LE), 2Mbps – Ch. 19) – Ant 2



Plot 7-72. Power Spectral Density Plot (Bluetooth (LE), 2Mbps – Ch. 39) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02-A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 57 of 89

7.5 Conducted Emissions at the Band Edge

§15.247(d); RSS-247 [5.5]

Test Overview and Limit

For the following out of band conducted spurious emissions plots at the band edge, the EUT was set to transmit at maximum power with the largest packet size available. These settings produced the worst-case emissions.

The limit for out-of-band spurious emissions at the band edge is 20dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100kHz bandwidth.

Test Procedure Used

ANSI C63.10:2020 – Section 11.11.3

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 = 100kHz
4. VBW = 300kHz
5. Detector = Peak
6. Number of sweep points $\geq 2 \times \text{Span/RBW}$
7. Trace mode = max hold
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 7-4. Test Instrument & Measurement Setup

Test Notes

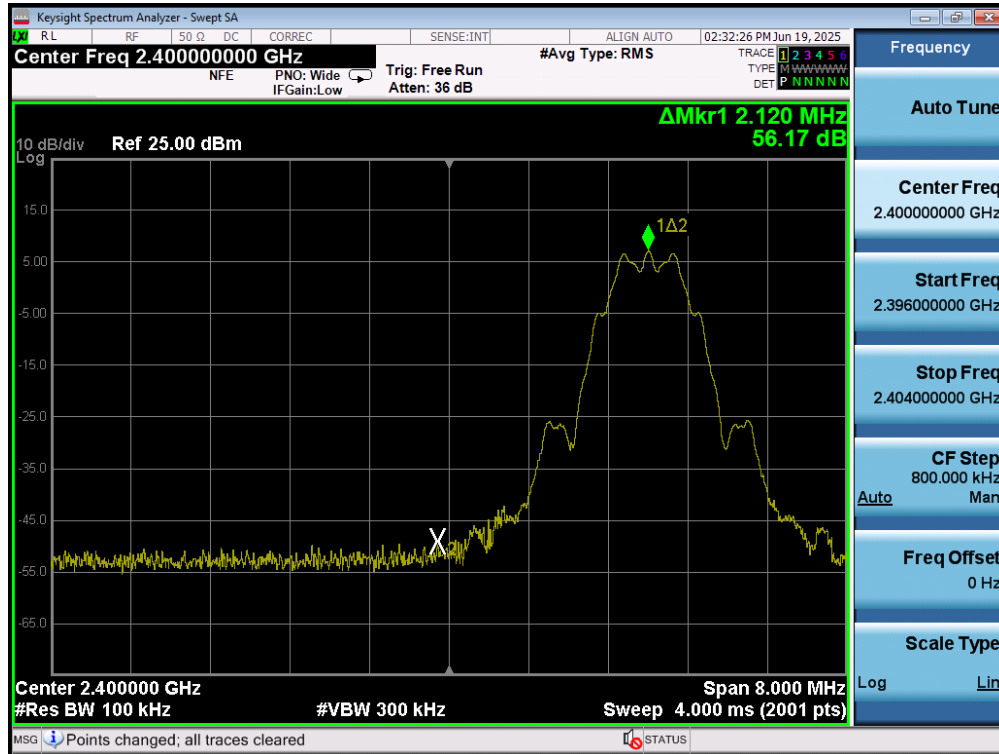
None

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 58 of 89

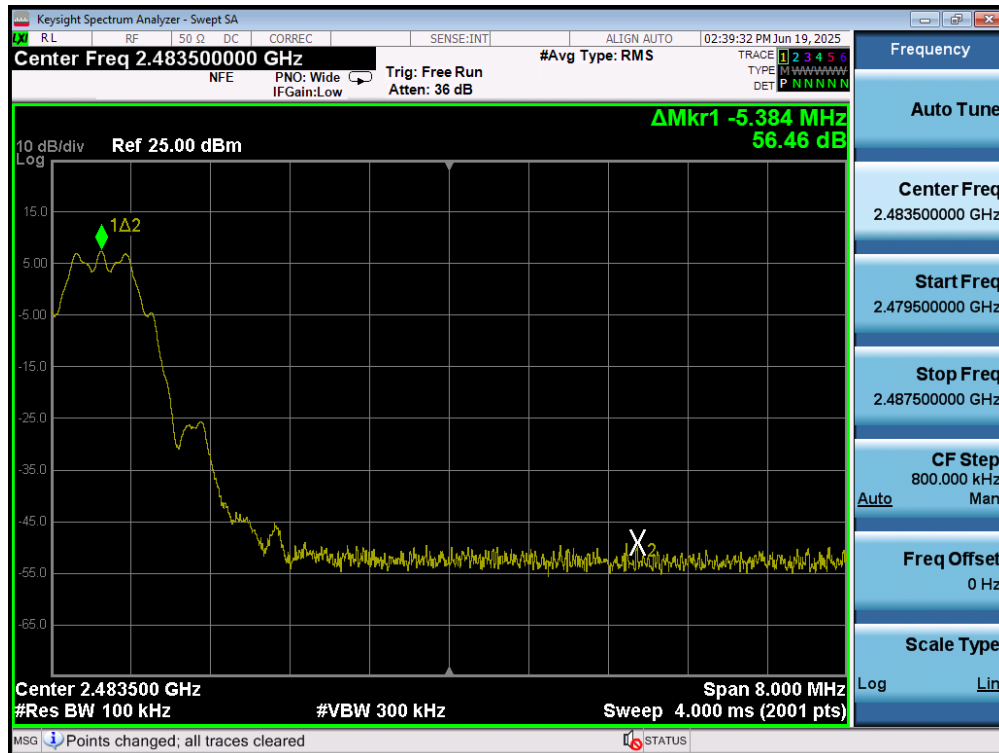
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V11.3 5/14/2025

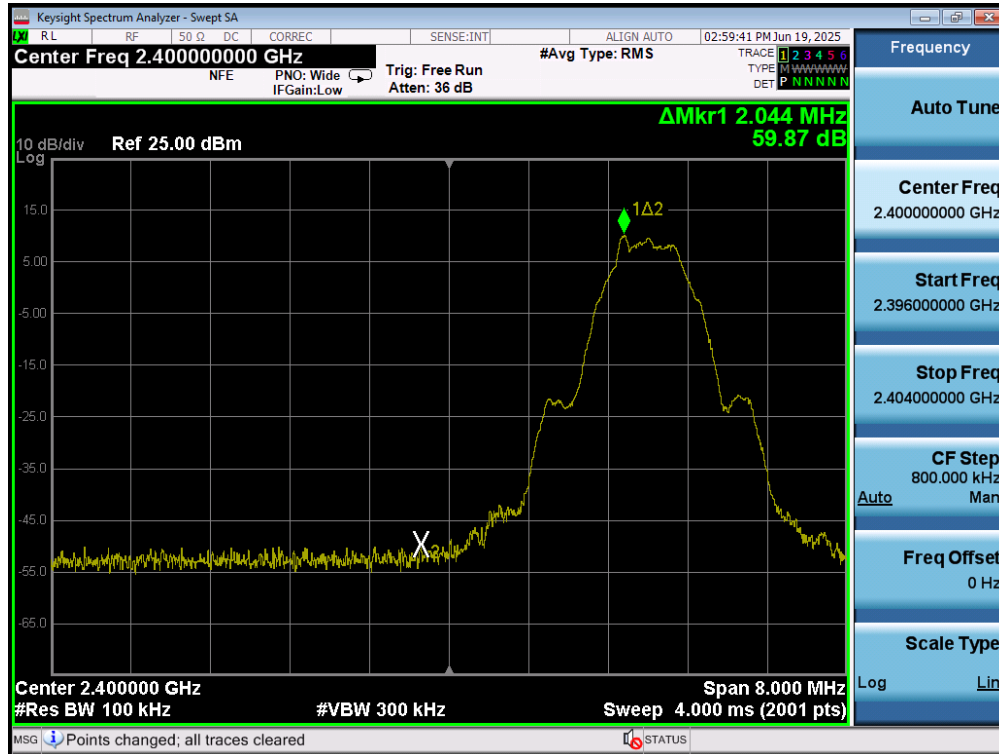


Plot 7-73. Band Edge Plot (Bluetooth (LE), 125kbps – Ch. 0) – Ant 1

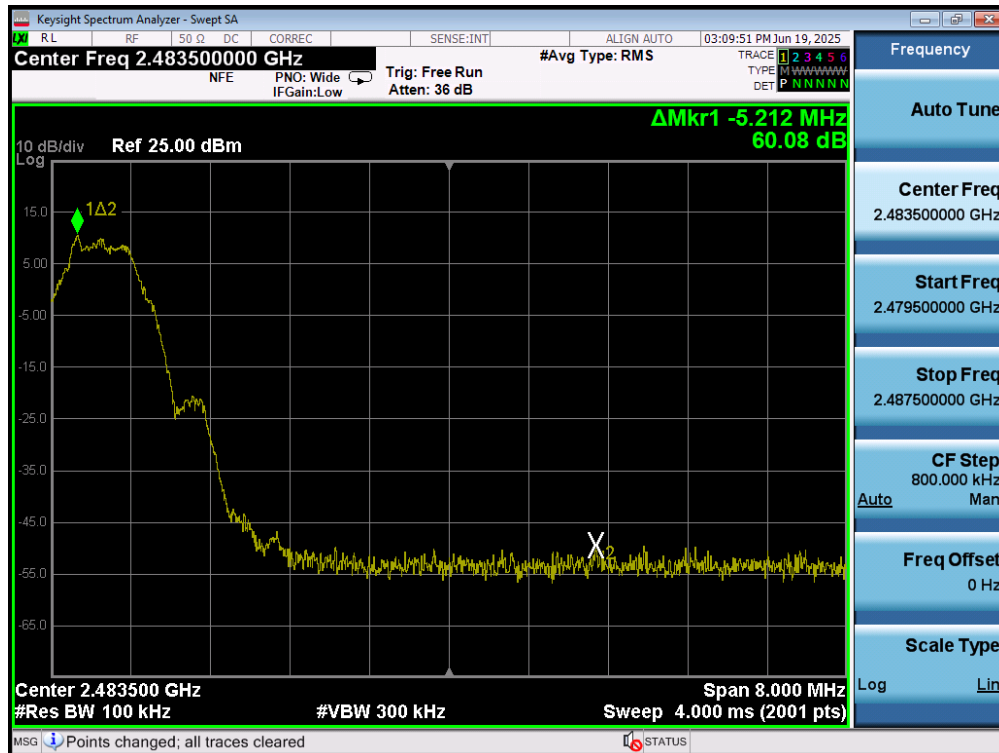


Plot 7-74. Band Edge Plot (Bluetooth (LE), 125kbps – Ch. 39) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 59 of 89

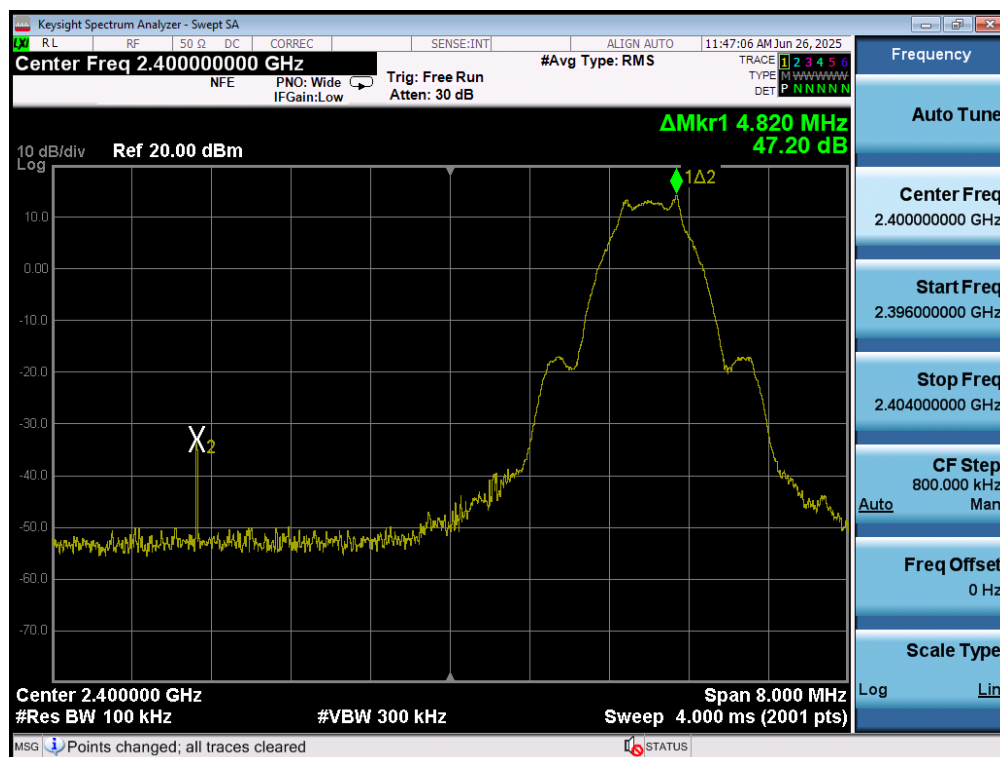


Plot 7-75. Band Edge Plot (Bluetooth (LE), 500kbps – Ch. 0) – Ant 1

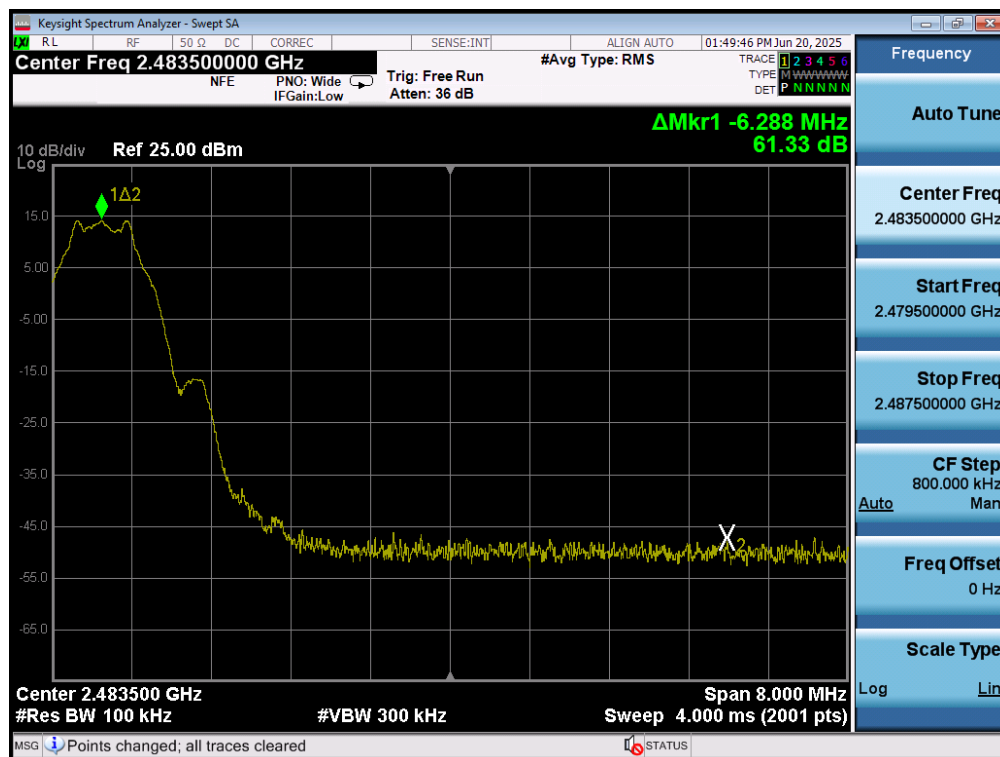


Plot 7-76. Band Edge Plot (Bluetooth (LE), 500kbps – Ch. 39) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 60 of 89



Plot 7-77. Band Edge Plot (Bluetooth (LE), 1Mbps – Ch. 0) – Ant 1

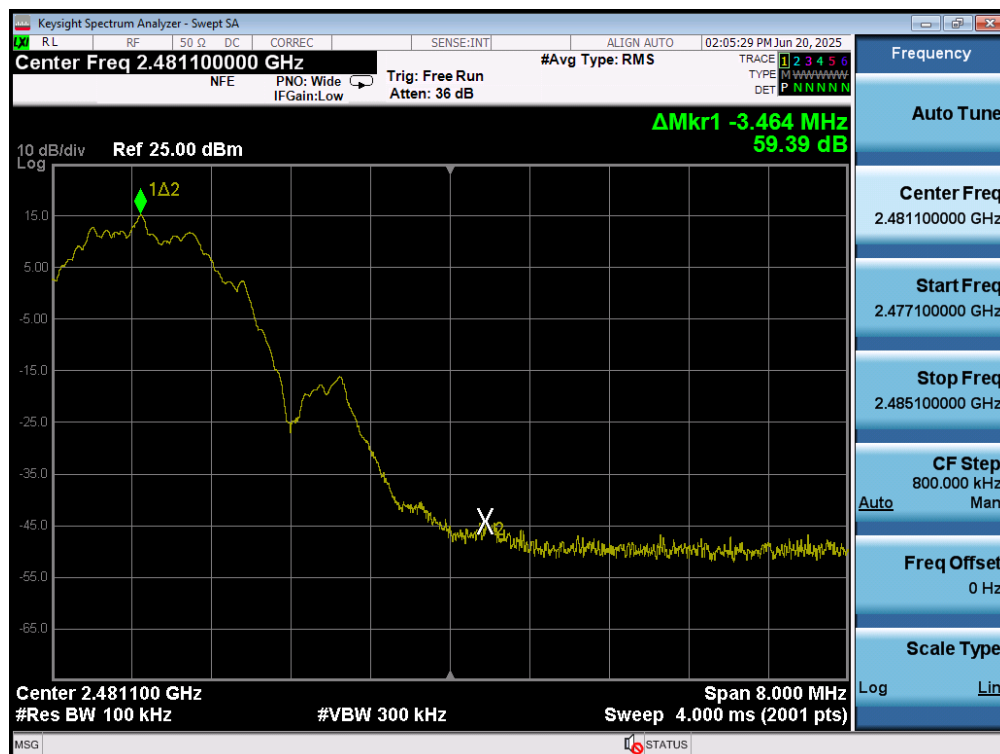


Plot 7-78. Band Edge Plot (Bluetooth (LE), 1Mbps – Ch. 39) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 61 of 89

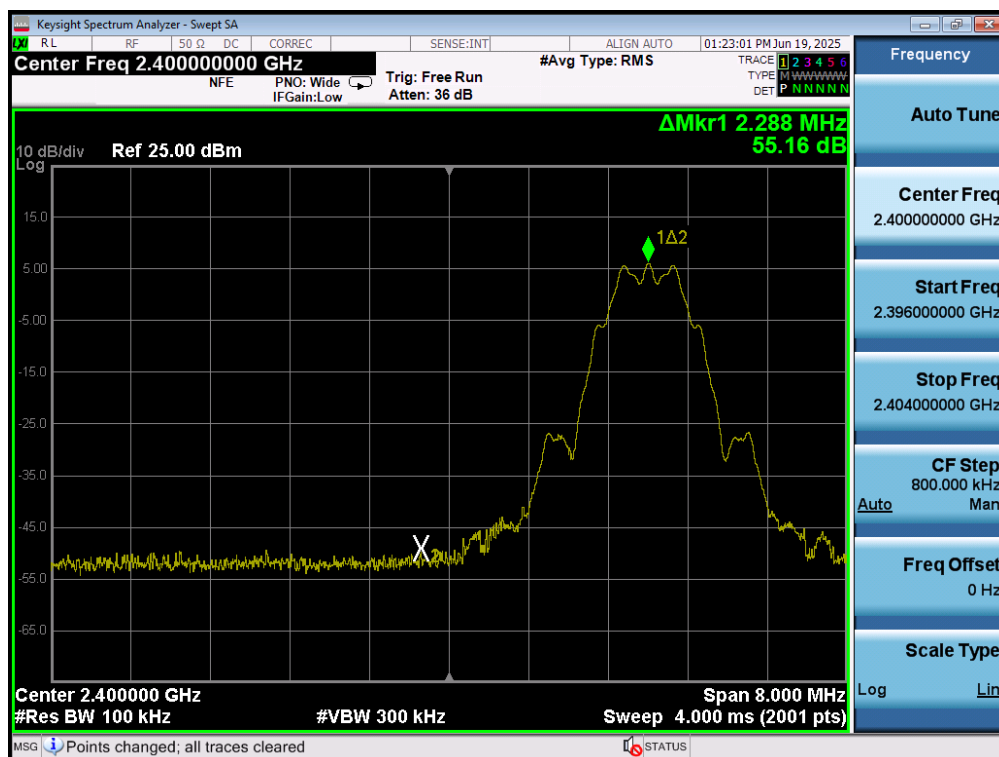


Plot 7-79. Band Edge Plot (Bluetooth (LE), 2Mbps – Ch. 0) – Ant 1



Plot 7-80. Band Edge Plot (Bluetooth (LE), 2Mbps – Ch. 39) – Ant 1

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 62 of 89

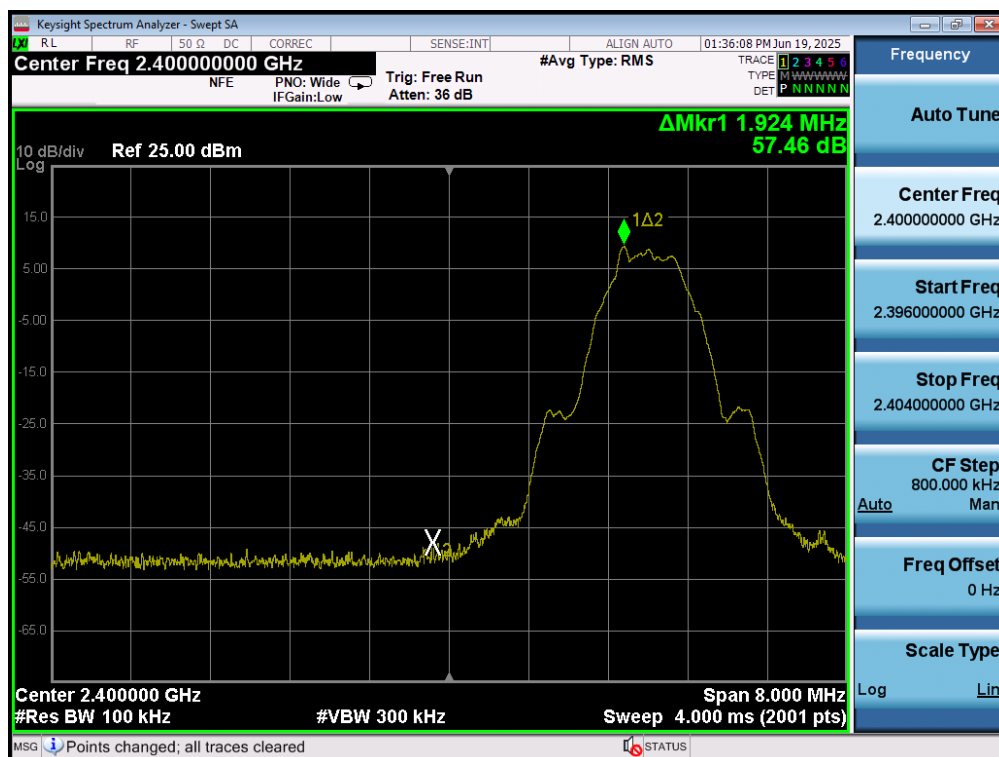


Plot 7-81. Band Edge Plot (Bluetooth (LE), 125kbps – Ch. 0) – Ant 2

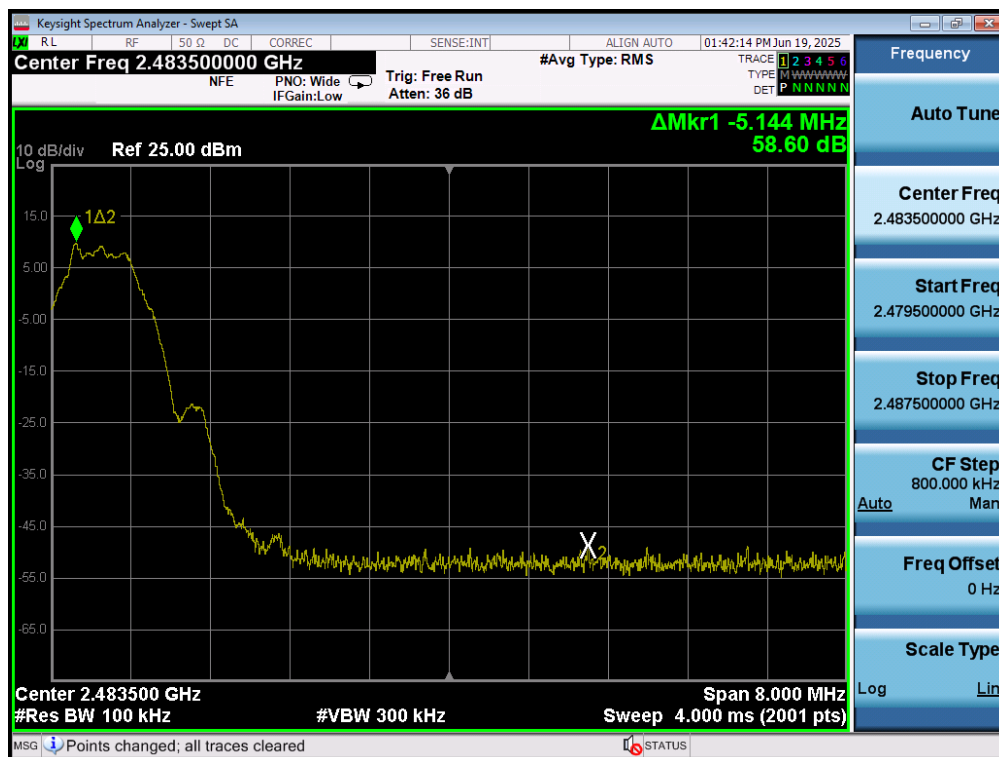


Plot 7-82. Band Edge Plot (Bluetooth (LE), 125kbps – Ch. 39) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 63 of 89

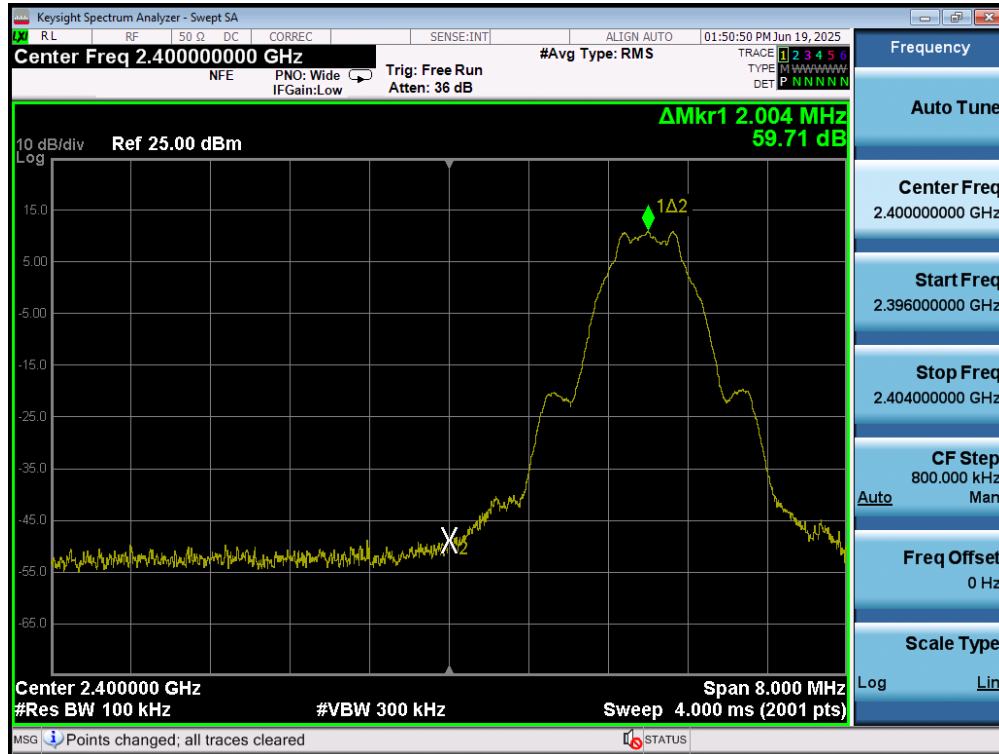


Plot 7-83. Band Edge Plot (Bluetooth (LE), 500kbps – Ch. 0) – Ant 2

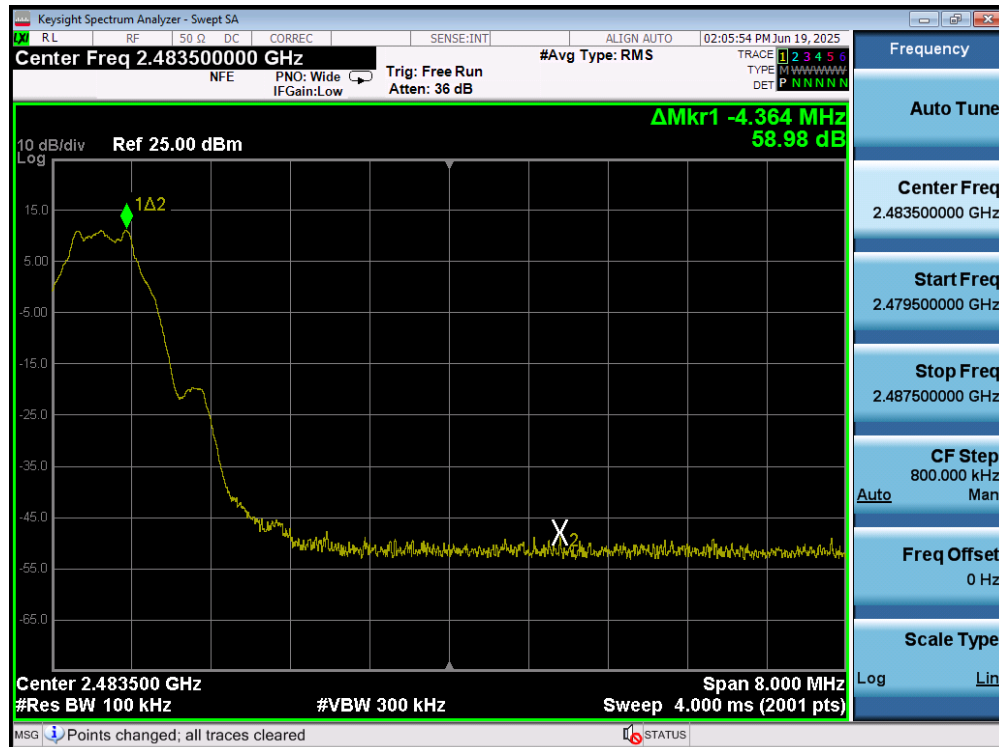


Plot 7-84. Band Edge Plot (Bluetooth (LE), 500kbps – Ch. 39) – Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2505130048-02.A3L	Test Dates: 05/13/2025 - 07/01/2025	EUT Type: Portable Tablet	Page 64 of 89



Plot 7-85. Band Edge Plot (Bluetooth (LE), 1Mbps – Ch. 0) – Ant 2

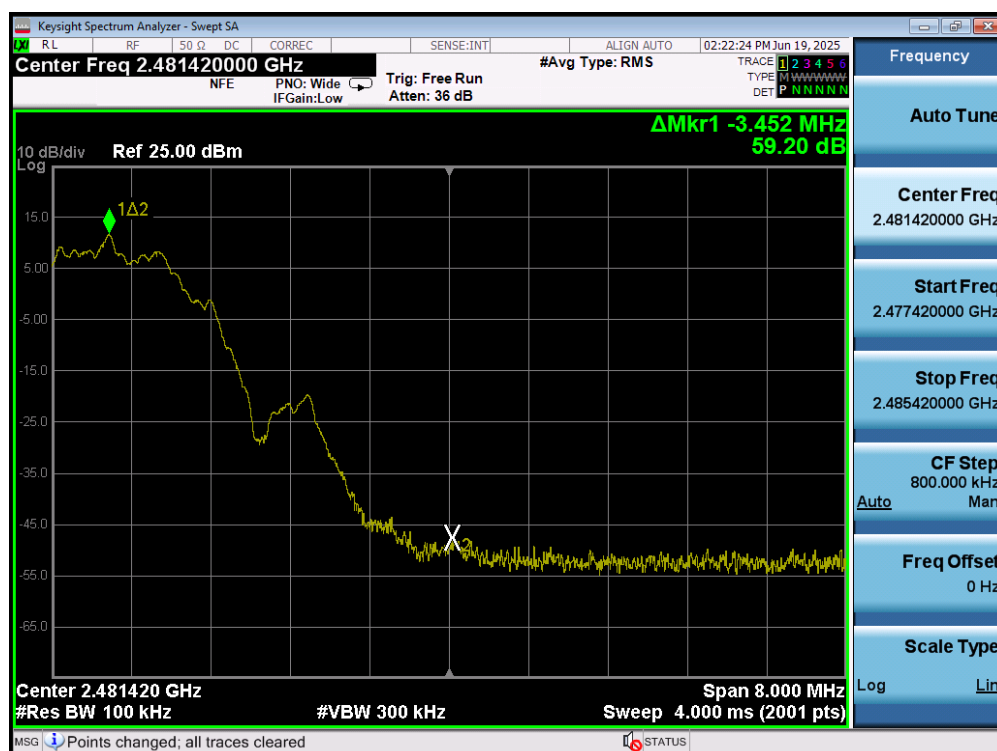


Plot 7-86. Band Edge Plot (Bluetooth (LE), 1Mbps – Ch. 39) – Ant 2

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Plot 7-87. Band Edge Plot (Bluetooth (LE), 2Mbps – Ch. 0) – Ant 2



Plot 7-88. Band Edge Plot (Bluetooth (LE), 2Mbps – Ch. 39) – Ant 2

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7.6 Conducted Spurious Emissions

§15.247(d); RSS-247 [5.5]

Test Overview and Limit

For the following out of band conducted spurious emissions plots, the EUT was set to transmit at maximum power with the largest packet size available. The worst case spurious emissions were found in this configuration.

The limit for out-of-band spurious emissions at the band edge is 20dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100kHz bandwidth per the procedure in Section 8.5 of KDB 558074 D01 v05r02 and Section 11.11.3 of ANSI C63.10:2020.

Test Procedure Used

ANSI C63.10:2020 – Section 11.11.3

Test Settings

1. Start frequency was set to 30MHz and stop frequency was set to 25GHz (separated into two plots per channel)
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = Peak
5. Trace mode = max hold
6. Sweep time = auto couple
7. The trace was allowed to stabilize

Test Setup

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



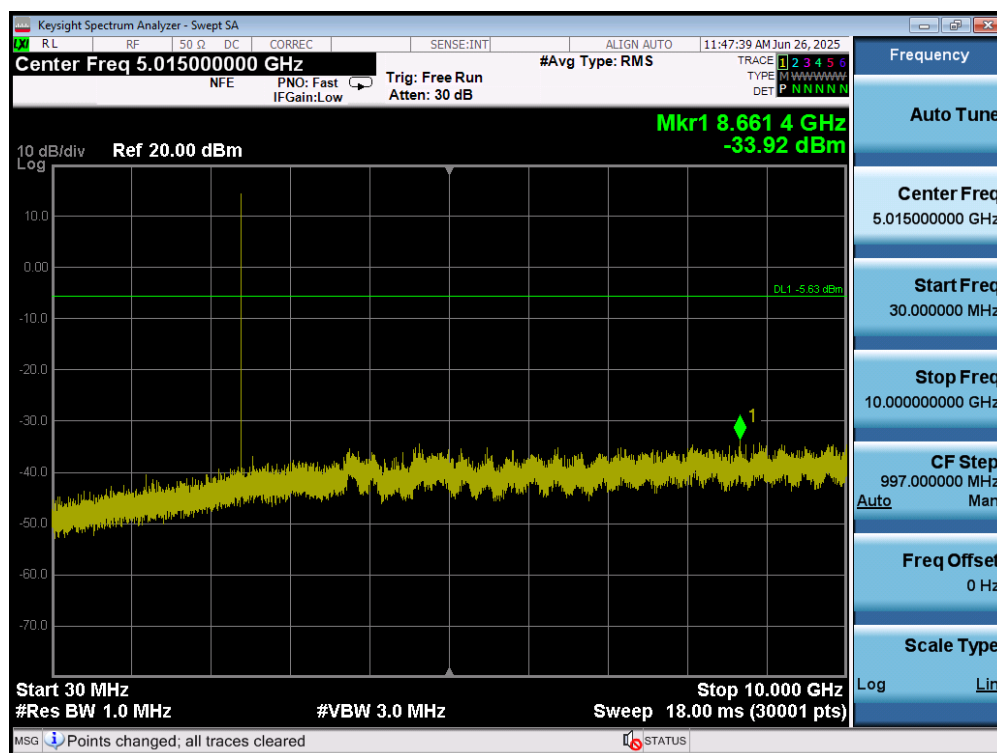
Figure 7-5. Test Instrument & Measurement Setup

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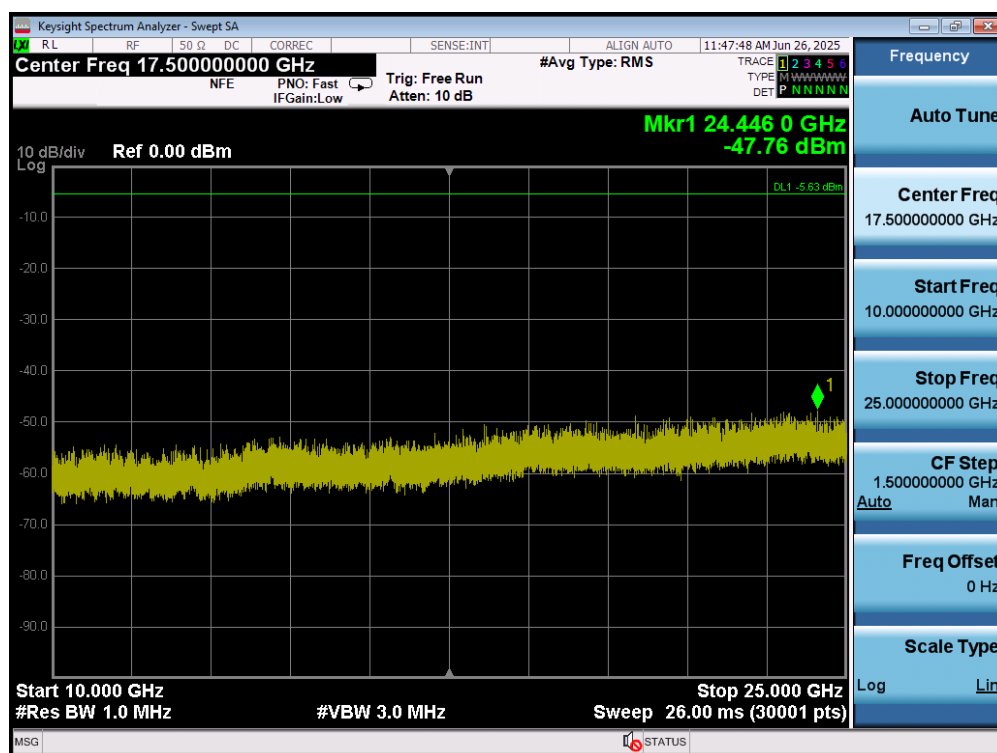
Test Notes

1. RBW was set to 1MHz rather than 100kHz in order to increase the measurement speed.
2. The display line shown in the following plots denotes the limit at 20dB below the fundamental emission level measured in a 100kHz bandwidth. However, since the traces in the following plots are measured with a 1MHz RBW, the display line may not necessarily appear to be 20dB below the level of the fundamental in a 1MHz bandwidth.
3. For plots showing conducted spurious emissions near the limit, the frequencies were investigated with a reduced RBW to ensure that no emissions were present.

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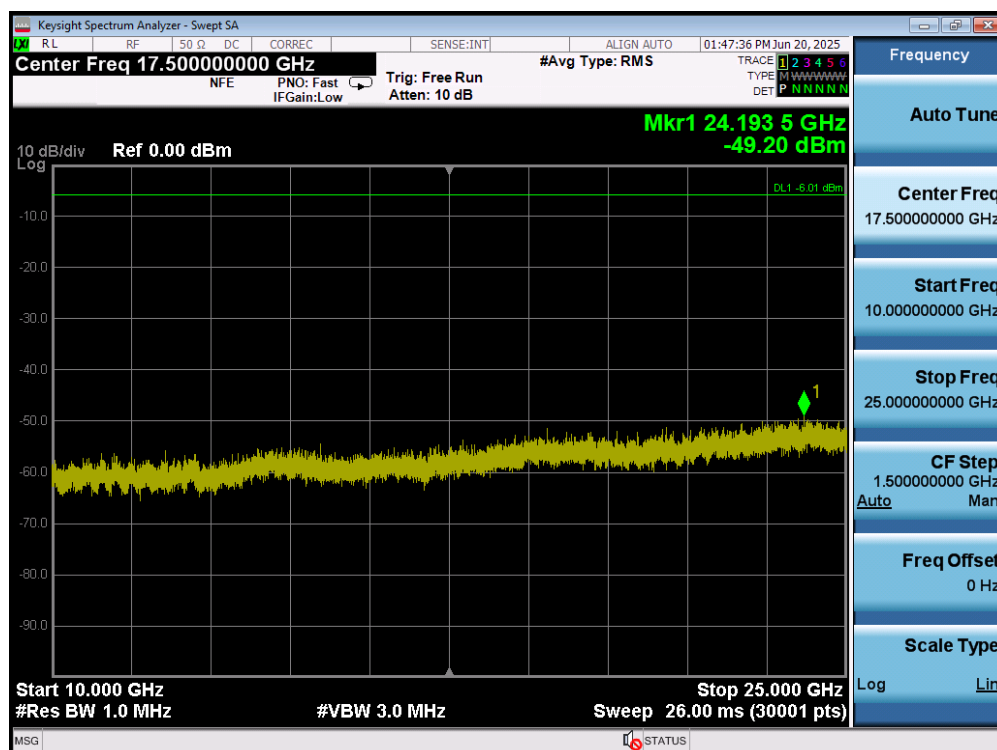
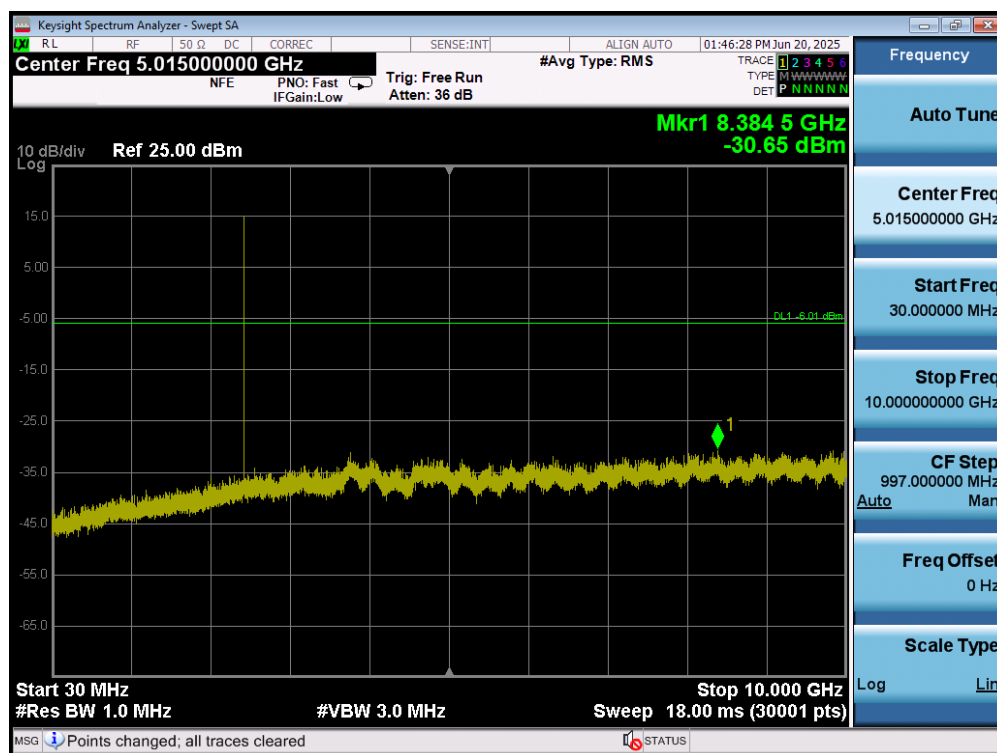


Plot 7-89. Conducted Spurious Plot (Bluetooth (LE), 1Mbps - Ch. 0) - Ant 1

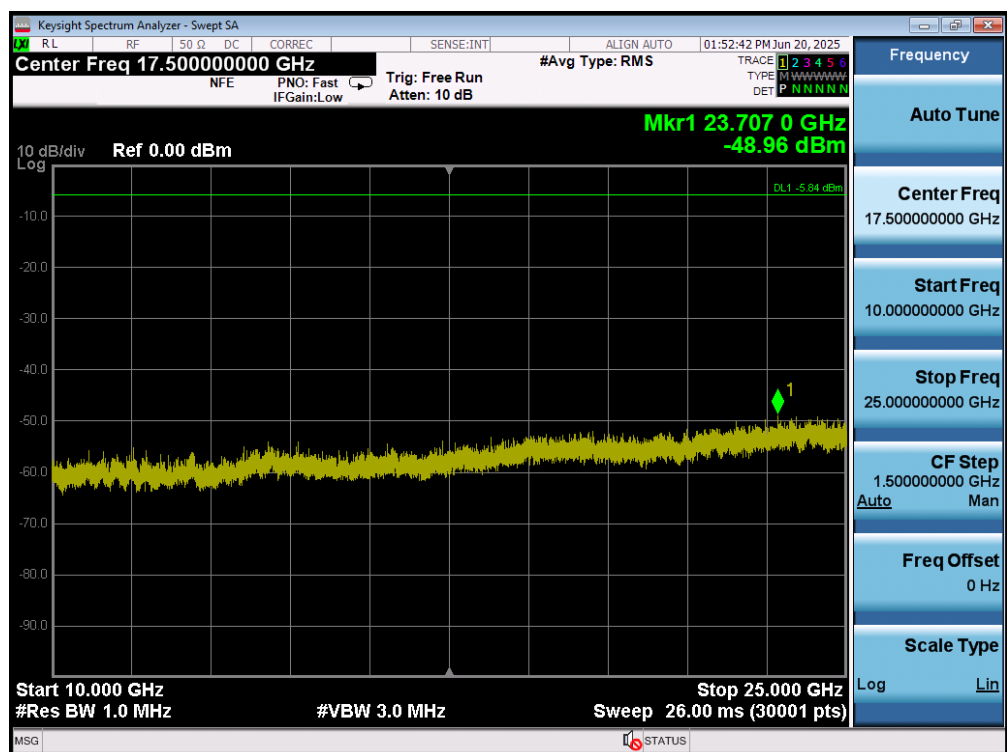
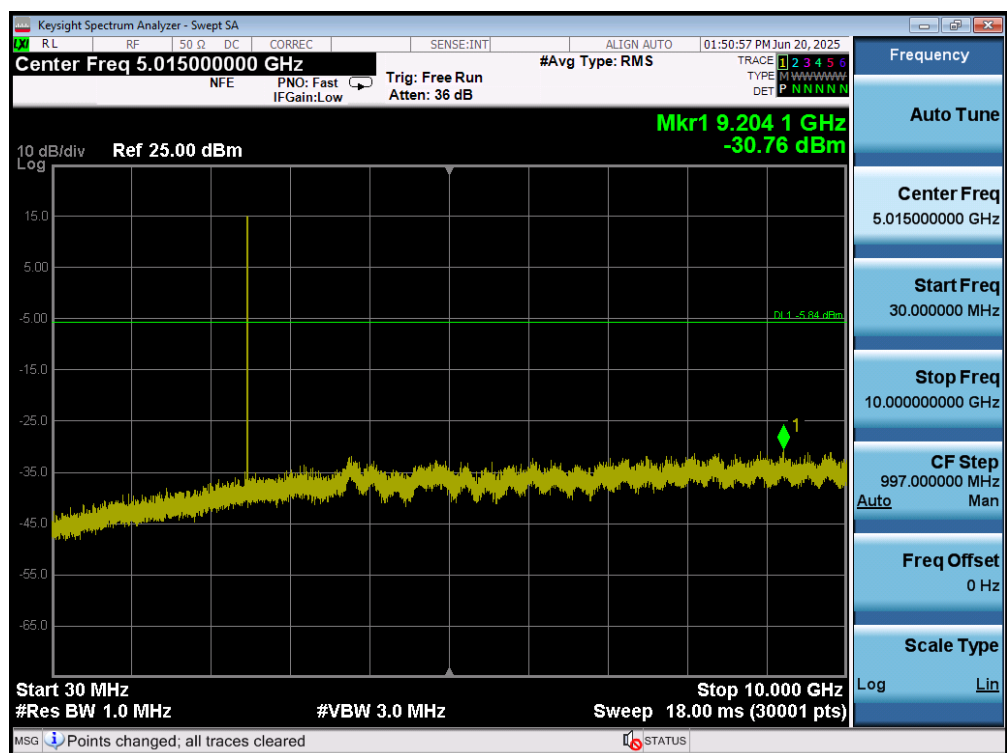


Plot 7-90. Conducted Spurious Plot (Bluetooth (LE), 1Mbps - Ch. 0) - Ant 1

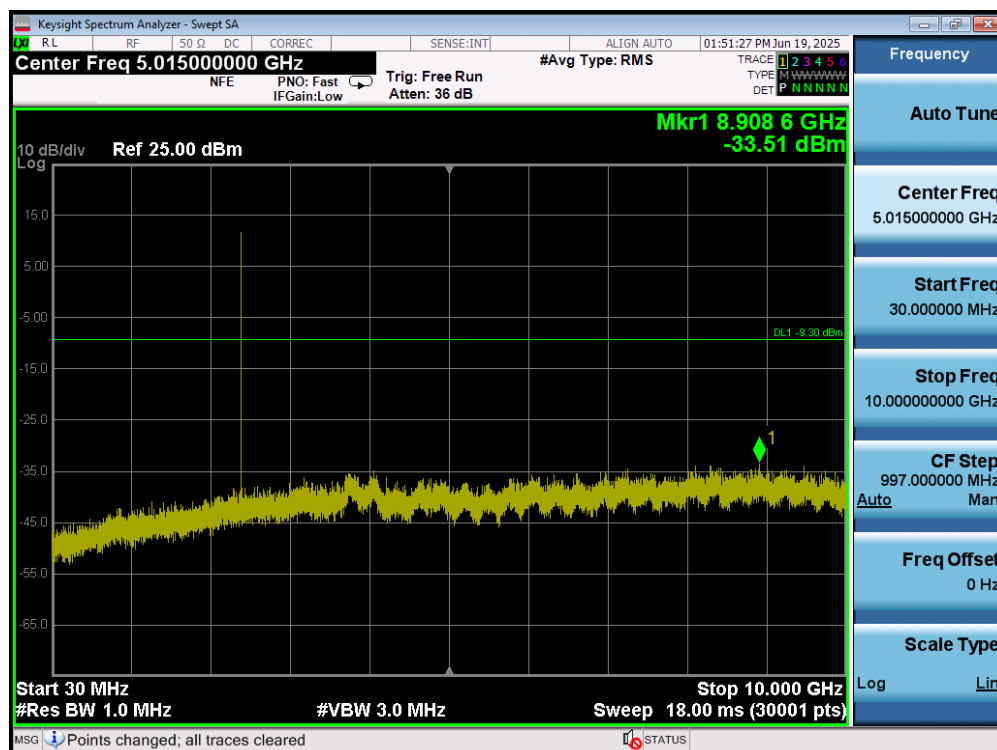
FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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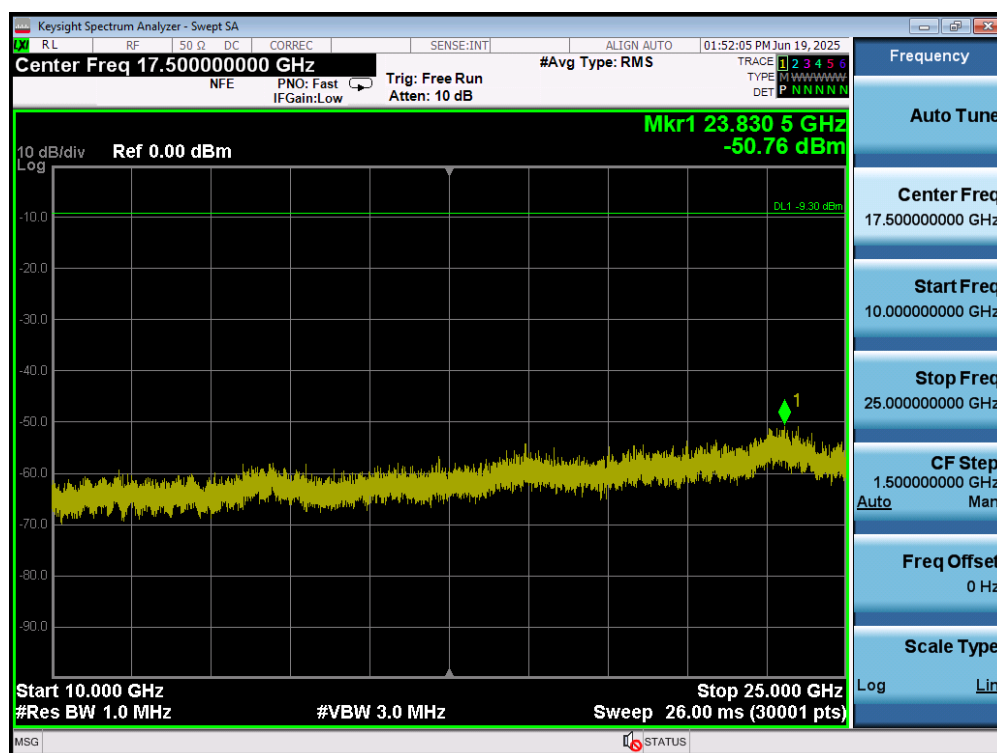
FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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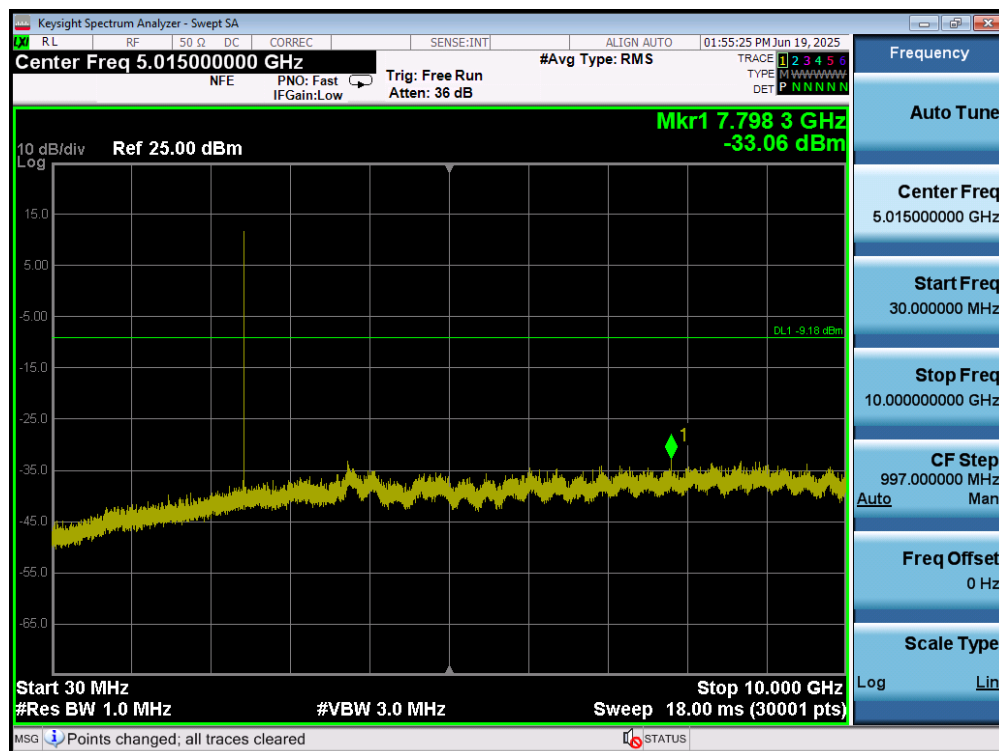


Plot 7-95. Conducted Spurious Plot (Bluetooth (LE), 1Mbps - Ch. 0) - Ant 2

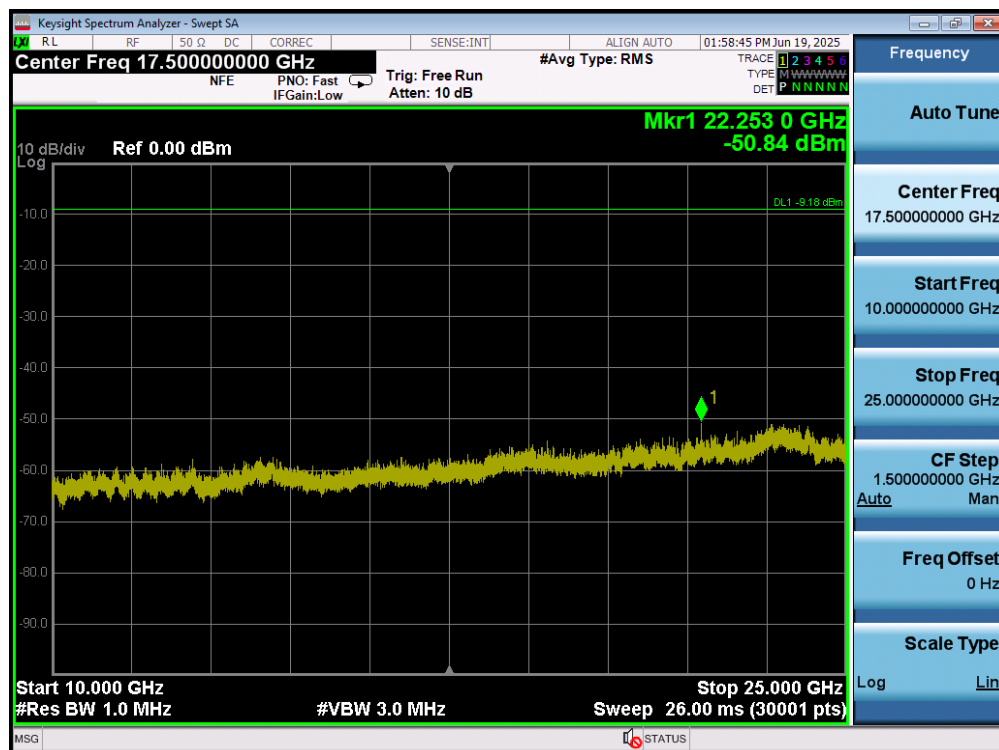


Plot 7-96. Conducted Spurious Plot (Bluetooth (LE), 1Mbps - Ch. 0) - Ant 2

FCC ID: A3LSMX930 IC: 649E-SMX930	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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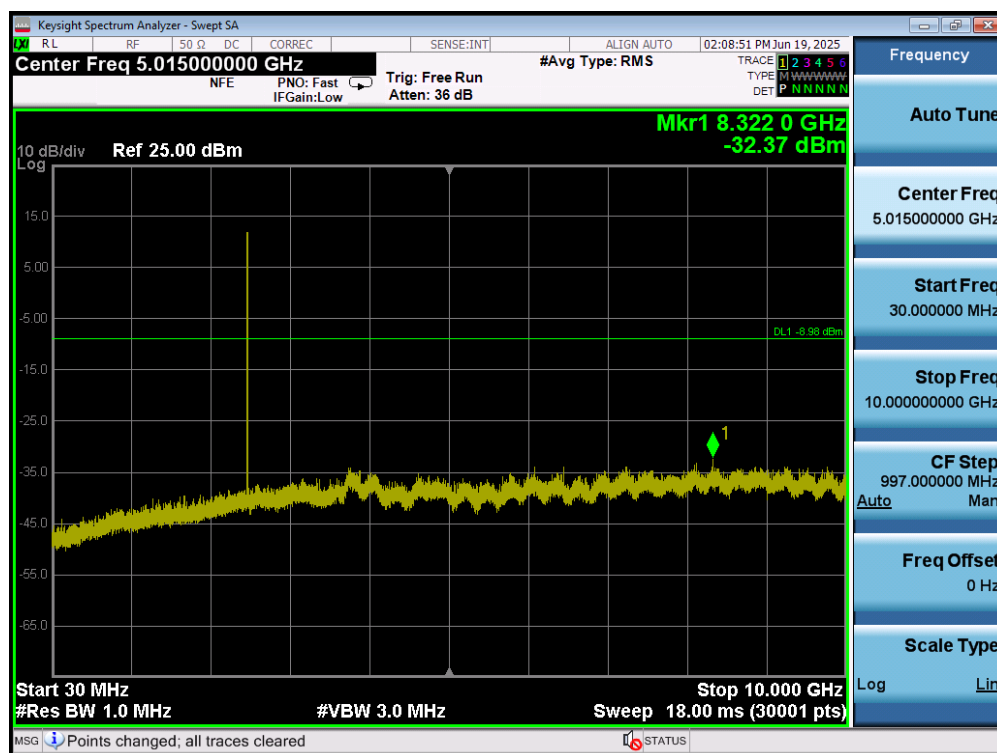


Plot 7-97. Conducted Spurious Plot (Bluetooth (LE), 1Mbps – Ch. 19) – Ant 2

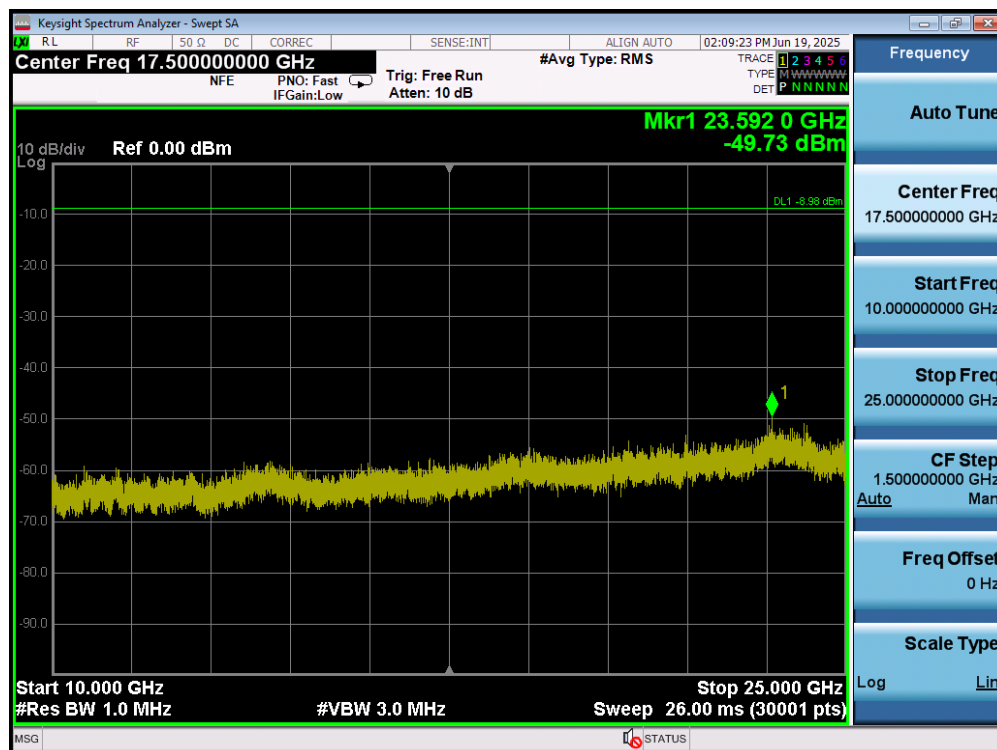


Plot 7-98. Conducted Spurious Plot (Bluetooth (LE), 1Mbps – Ch. 19) – Ant 2

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Plot 7-99. Conducted Spurious Plot (Bluetooth (LE), 1Mbps - Ch. 39) - Ant 2



Plot 7-100. Conducted Spurious Plot (Bluetooth (LE), 1Mbps - Ch. 39) - Ant 2

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7.7 Radiated Spurious Emission Measurements

§15.205 §15.209 §15.247(d); RSS-Gen [8.9]

Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at maximum power and at the appropriate frequencies. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 6 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-8 per Section 15.209 and RSS-Gen (8.9).

Frequency	Field Strength [μV/m]	Measured Distance [Meters]
0.009 – 0.490 MHz	2400/F (kHz)	300
0.490 – 1.705 MHz	24000/F (kHz)	30
1.705 – 30.00 MHz	30	30
30.00 – 88.00 MHz	100	3
88.00 – 216.0 MHz	150	3
216.0 – 960.0 MHz	200	3
Above 960.0 MHz	500	3

Table 7-8. Radiated Limits

Test Procedures Used

ANSI C63.10:2020 – Section 6.6.4.3

Test Settings

Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3kHz > 1/T
4. Averaging type was set to RMS to ensure that video filtering was applied in the power domain
5. Detector = peak
6. Sweep time = auto
7. Trace mode = max hold
8. Trace was allowed to run for at least 50 times (1/duty cycle) traces

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