



FCC PART 15 CERTIFICATION TEST REPORT

for the

GEN 7 FLEX

FCC ID: 2AHN8-BG7F

WLL REPORT# 18929-01 REV 0

Prepared for:

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Testing Certificate AT-1448



FCC Part 15 Certification Test Report

for the

Blackbox Biometrics, Inc.

Gen 7 Flex

FCC ID: 2AHN8-BG7F

October 29, 2024

WLL Report# 18929-01 Rev 0

Prepared by:

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Reviewed by:

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Abstract

This report has been prepared on behalf of Blackbox Biometrics, Inc. to support the attached Application for Equipment Authorization. The test report and application are submitted for a Digital Transmission System (DTS) transmitter under Part 15.247 of the FCC Rules and Regulations (current at the time of testing). This certification test report documents the test configuration and test results for the Blackbox Biometrics, Inc., Gen 7 Flex. The information provided in this report is only applicable to device herein documented as the EUT.

Radiated testing was performed in the Free-space Anechoic Chamber Test-site (FACT) 3m chamber of Washington Laboratories, Ltd., located at: 4840 Winchester Boulevard, Suite #5., Frederick, MD 21703. Site description and site attenuation data have been placed on file with the FCC's Sampling and Measurements Branch at the FCC laboratory in Columbia, MD. Washington Laboratories, Ltd. has been accepted by the FCC and approved by ANAB under Certificate AT-1448 as an independent FCC test laboratory. The ISED Canada number for Washington Laboratories is 3035A.

The Blackbox Biometrics, Inc., Gen 7 Flex complies with the requirements for a Digital Transmission System (DTS) hybrid transmitter device under FCC Part 15.247.

Revision History	Description of Change	Date
Rev 0	Initial Release	October 29, 2024



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1 Introduction

1.1 Compliance Statement

The Blackbox Biometrics, Inc., Gen 7 Flex complies with the requirements for a Digital Transmission System (DTS) hybrid transmitter device under FCC Part 15.247.

1.2 Test Scope

Tests for radiated and conducted (at antenna terminal) emissions were performed. All measurements were performed in accordance with ANSI C63.10-2020 “ANSI Procedures for Compliance Testing of Unlicensed Wireless Devices”. The measurement equipment conforms to ANSI C63.2 “Specifications for Electromagnetic Noise and Field Strength Instrumentation”. The modules were tested “stand alone” as required for modular testing and approval.

1.3 Contract Information

Customer:	Blackbox Biometrics, Inc.
Purchase Order Number:	1436
Quotation Number:	74844

1.4 Test and Support Personnel

Washington Laboratories, LTD	Ryan Mascaro and Randon McIlwain
Customer Representative	Luke Mullins

1.5 Test Location

All measurements herein were performed at Washington Laboratories, Ltd. test center in Frederick, MD. Site description and site attenuation data have been placed on file with the FCC's Sampling and Measurements Branch at the FCC laboratory in Columbia, MD. The ISED Canada number for Washington Laboratories, Ltd. is 3035A. Washington Laboratories, Ltd. has been accepted by the FCC and approved by ANAB under Testing Certificate AT-1448 as an independent FCC test laboratory.



2 Equipment Under Test

2.1 EUT Identification

Table 1: Device Summary

Applicant:	Blackbox Biometrics, Inc
FCC ID:	2AHN8-BG7F
Model:	Gen 7 Flex
FCC Rule Parts:	§ 15.247
Frequency Range:	2402 to 2480 MHz
Peak Output Power:	-4.40 dBm (0.0004 Watts)
Antenna Type:	(Antenova) SMD-PCB mounted; Peak Gain: 0.8 dBi
FCC Emission Designator:	716KG1D
6dB Occupied Bandwidth:	715.8 kHz (worst-case)
Protocol:	Bluetooth Low Energy (BLE)
Keying:	Automatic
Type of Information:	Digital
Number of Channels:	40
Interface Cables:	None during use
Power Source & Voltage:	3.6VDC from (2) AA batteries
Worst-Case TX Spurious Emission:	-51.04 dBm @ 4.959GHz (conducted) ((see Figure 21))
HW Version:	<i>not declared by applicant</i>
SW Version:	<i>not declared by applicant</i>
Testing Dates:	10/1/2024, 10/8/2024, & 10/9/2024

2.2 EUT Description

The EUT is a blast gauge sensor system used to sense, record, and store overpressure and acceleration data associated with blast events. The EUT will automatically wakeup and record Blast and Impulse Noise exposures while being worn. The EUT communicates with our mobile app via Bluetooth, supporting bi-directional communication between the gauge and the app.



2.3 Test Configuration and Algorithm

The EUT evaluated for radiated emissions. Testing of the AC powerline is not required, as the device is battery powered only. For some of the preliminary and post-testing setups, the EUT was coupled to the support laptop, via a USB cable. This is not a typical configuration, as the laptop will never be coupled to the EUT while the device is installed in the field. For this report, the support laptop did not enter the test-site during testing. The EUT was programmed into a test mode, to dwell on the low, center, and high channels. The EUT sample was not capable of hopping or sweeping the band. Therefore, no testing was performed in a hopping enabled mode. The EUT was arranged on the test site to produce the worst-case emissions. Only the worst-case emissions are provided throughout this report.

The EUT was comprised of the following equipment, provided on the following page. All Modules, PCBs, etc. listed were considered as part of the EUT, as tested.

Table 2: System Configuration List

EUT	Description	Part Number	Serial Number	Rev. #
Gen 7 Flex	Conducted, Low	--	--	--
Gen 7 Flex	Conducted, Center	--	--	--
Gen 7 Flex	Conducted, High	--	--	--
Gen 7 Flex	Radiated, Low	--	--	--
Gen 7 Flex	Radiated, Center	--	--	--
Gen 7 Flex	Radiated, High	--	--	--
Gen 7 Flex	Production, SAF	--	--	--



Table 3: Support Equipment

Name / Description	Manufacturer	Model Number	Calibration Data
Tablet (for pairing)	--	--	--
Laptop (for log files)	--	--	--
Shielded USB Cable	--	--	--
AA batteries	--	--	--

Table 4: Cable Configuration

Ref. ID	EUT Port Name	Cable Description	Qty.	Length (m)	Shielded	Termination Port ID
1	USB	USB	1	< 3	Yes	Laptop



3 Test Results

The table below shows the results of testing for compliance with a Digital Transmission System in accordance with FCC Part 15.247 and RSS-247 Issue 3. Full test results are shown in subsequent subsections.

Table 5: Testing and Results Summary

Digital Transmission System			
FCC Rule Part	IC Rule Part	Description	Result
15.247(a)(2)	RSS-247 [5.2 (a)]	Occupied Channel Bandwidth	Pass
15.247 (b)(3)	RSS-247 [5.4 (d)]	Transmit Output Power	Pass
15.247 (e)	RSS-247 [5.2 (b)]	Power Spectral Density	Pass
15.247 (d)	RSS-247 [5.5]	Out-of-Band Emissions (Band Edge @ 20dB below)	Pass
15.205 15.209	RSS-Gen [8.9/8.10]	General Field Strength Limits (Restricted Bands & RE Limits)	Pass
15.207	RSS-Gen [8.8]	AC Conducted Emissions	N/A

3.1 Deviations to the Test Standard

There were no deviations to the requirements of the standard(s).



3.2 Occupied Bandwidth, Digital Transmission System

For a DTS operating in the 2.4GHz band, FCC Rule Part 15.247(a)(2) and RSS-247, 5.2(a) require the minimum 6dB bandwidth be at least 500 kHz.

The transmitter occupied bandwidth was measured conducted at the antenna port, by coupling the output of the EUT transmitter to the input of a spectrum analyzer. The measurement level was corrected for any cable and attenuator losses.

3.2.1 Measurement Method

This test was performed in accordance with Clause 11.8.2, Option 2, of ANSI C63.10-2020.

3.2.2 Test Data

The EUT test data is provided below.

The EUT was configured to transmit a modulated signal, with channel hopping disabled.

Table 6: Occupied Bandwidth Results

Frequency	6dB Bandwidth	Result
Low Channel, 2402 MHz	718.6 kHz	Pass
Center Channel, 2440 MHz	715.8 kHz	Pass
High Channel, 2480 MHz	740.7 kHz	Pass



Figure 1: Occupied Bandwidth, Low Channel

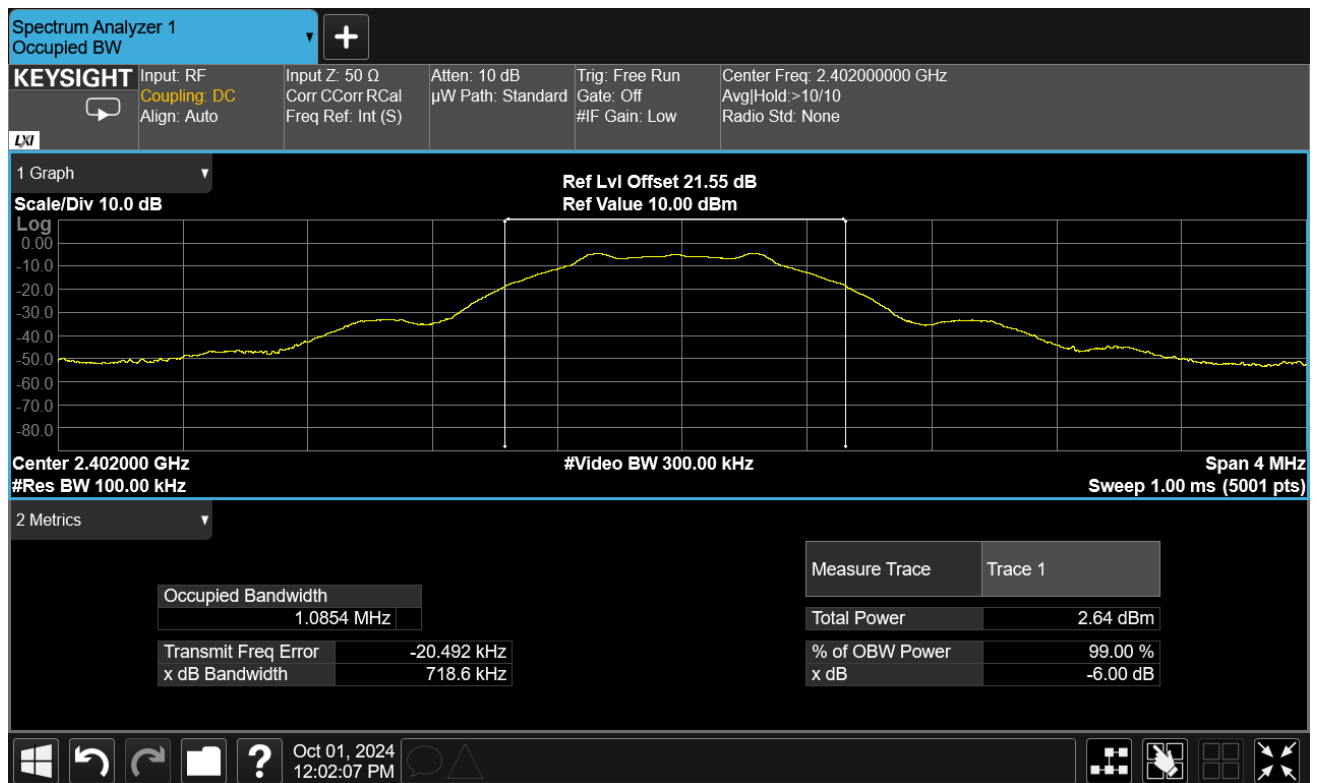




Figure 2: Occupied Bandwidth, Center Channel

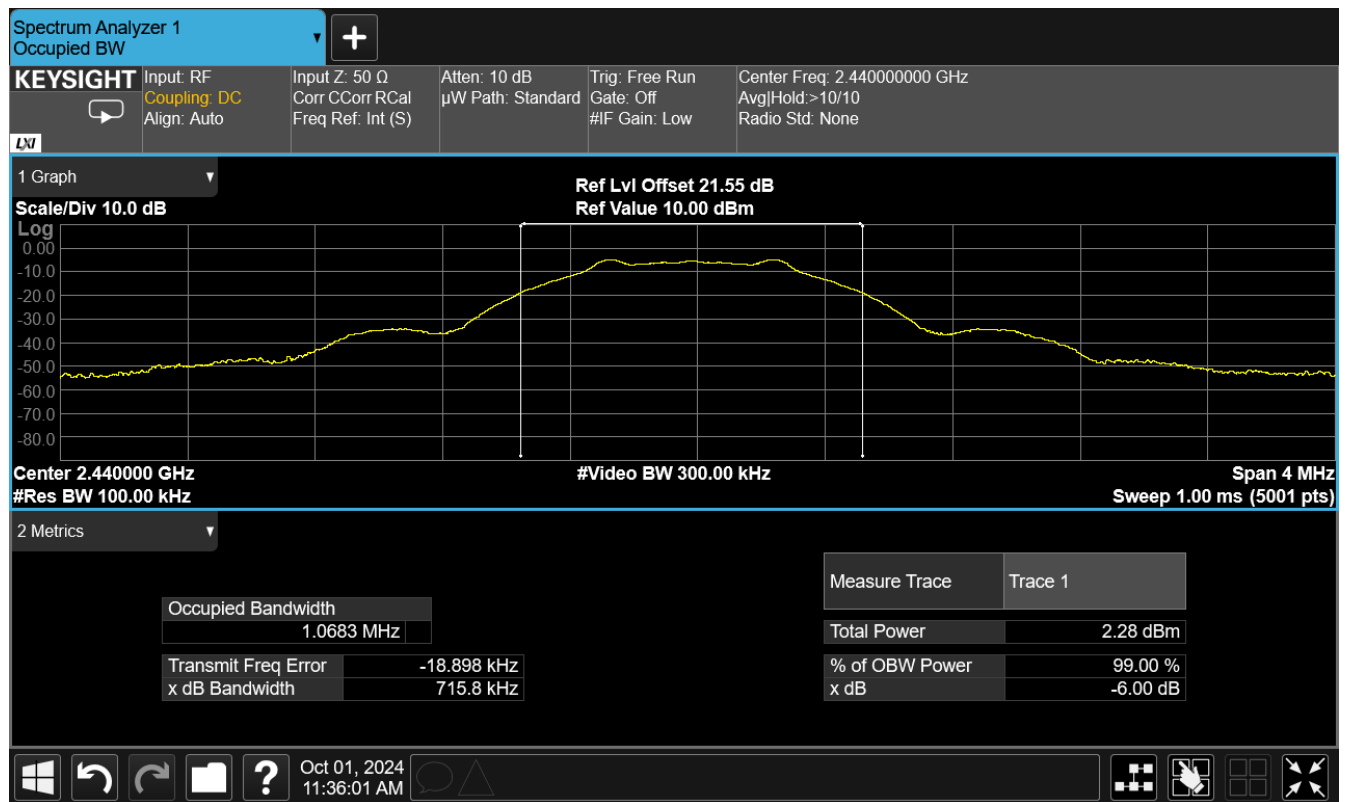
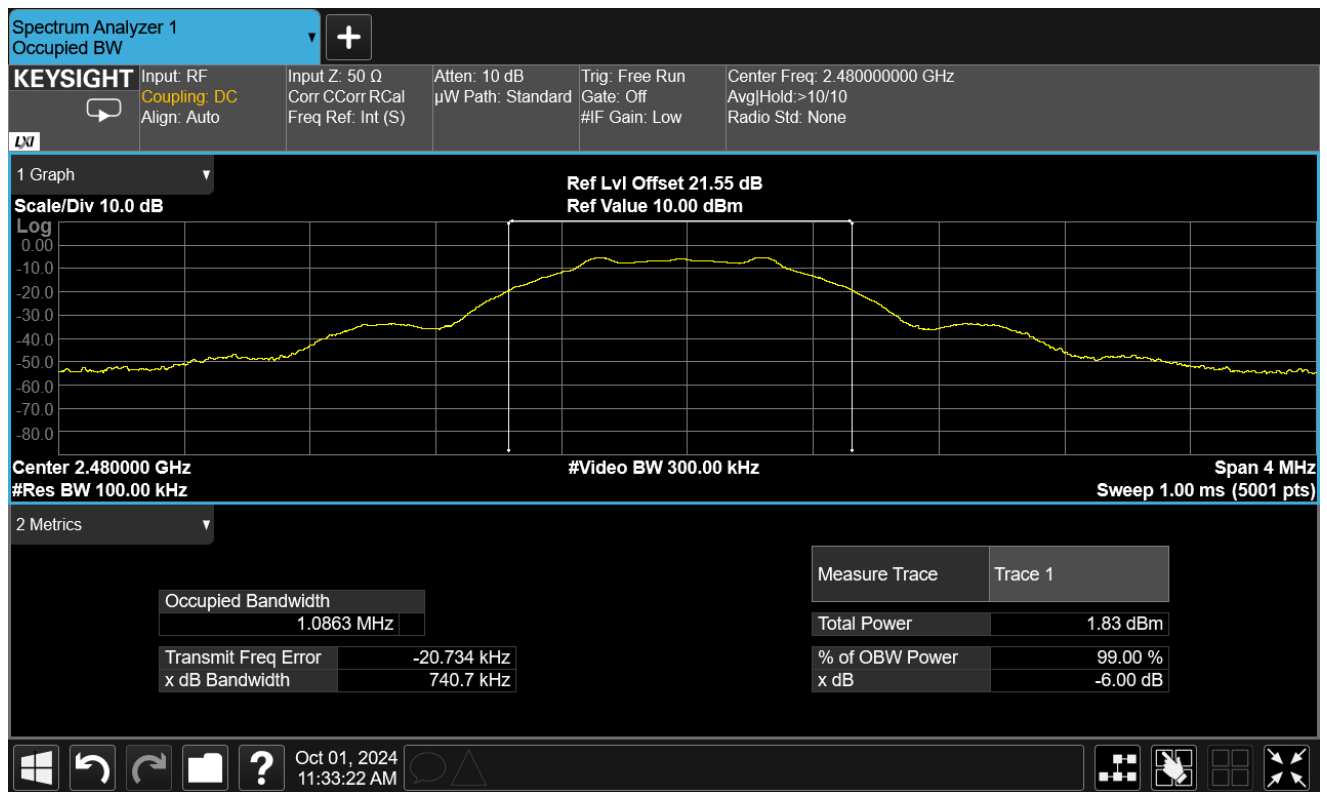




Figure 3: Occupied Bandwidth, High Channel





3.3 Conducted Peak Output Power

For a DTS operating in the 2.4GHz band, FCC Rule Part 15.247(b)(3) and RSS-247, 5.4(d) require that the maximum peak conducted output power shall not exceed 30 dBm, or 1W. Additionally, the EIRP shall not exceed 36 dBm, or 4W.

The transmitter power was measured conducted at the antenna port, by coupling the output of the EUT transmitter to the input of a spectrum analyzer. The measurement level was corrected for any cable and attenuator losses.

3.3.1 Measurement Method

This test was performed in accordance with Clause 11.9.1.1 of ANSI C63.10-2020.

3.3.2 Test Data

The EUT test data is provided below.

The EUT was configured to transmit a modulated signal, with channel hopping disabled.

The EUT employs a PCB, SMD antenna with a peak gain of 0.8 dBi.

Table 7: Conducted Output Power Results

Frequency	Conducted Power (dBm)	EIRP (dBm)	Result
Low Channel, 2402 MHz	-4.40	-3.60	Pass
Center Channel, 2440 MHz	-4.66	-3.86	Pass
High Channel, 2480 MHz	-5.09	-4.29	Pass



Figure 4: Peak Output Power, Low Channel

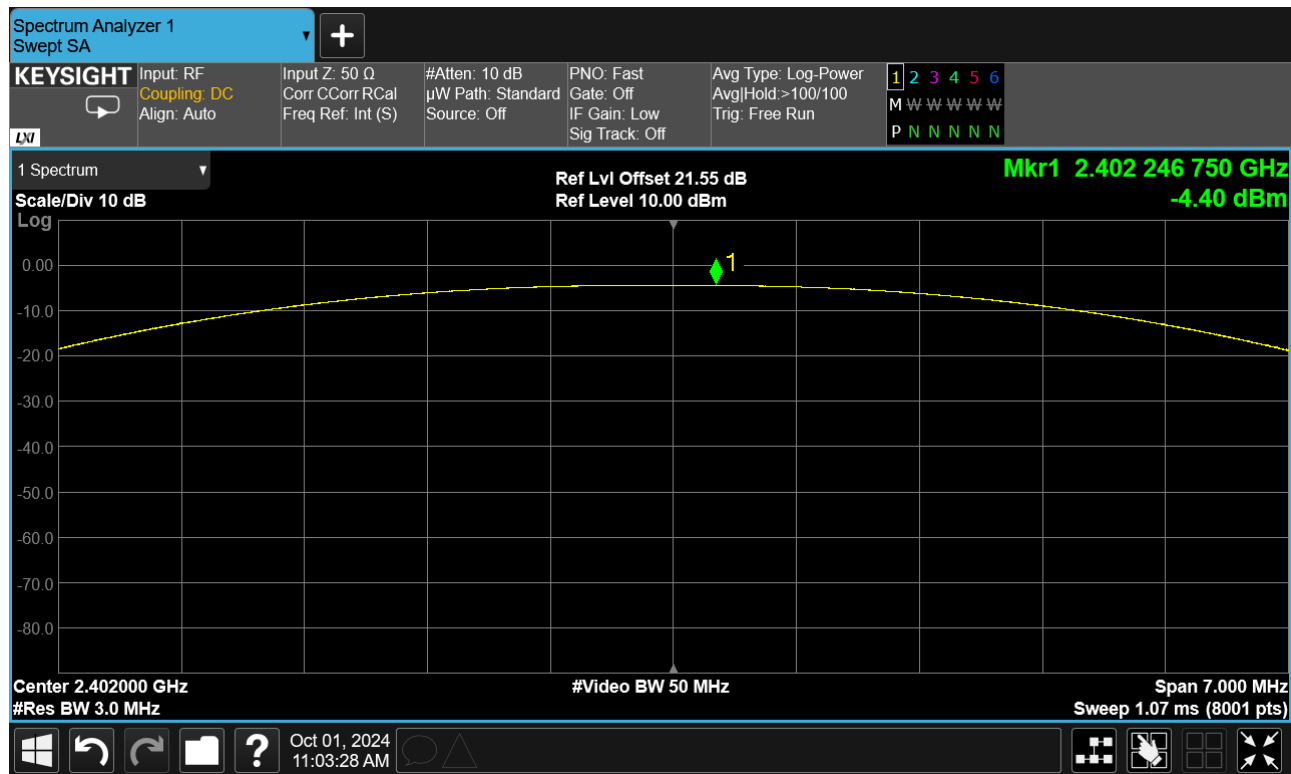




Figure 5: Peak Output Power, Center Channel

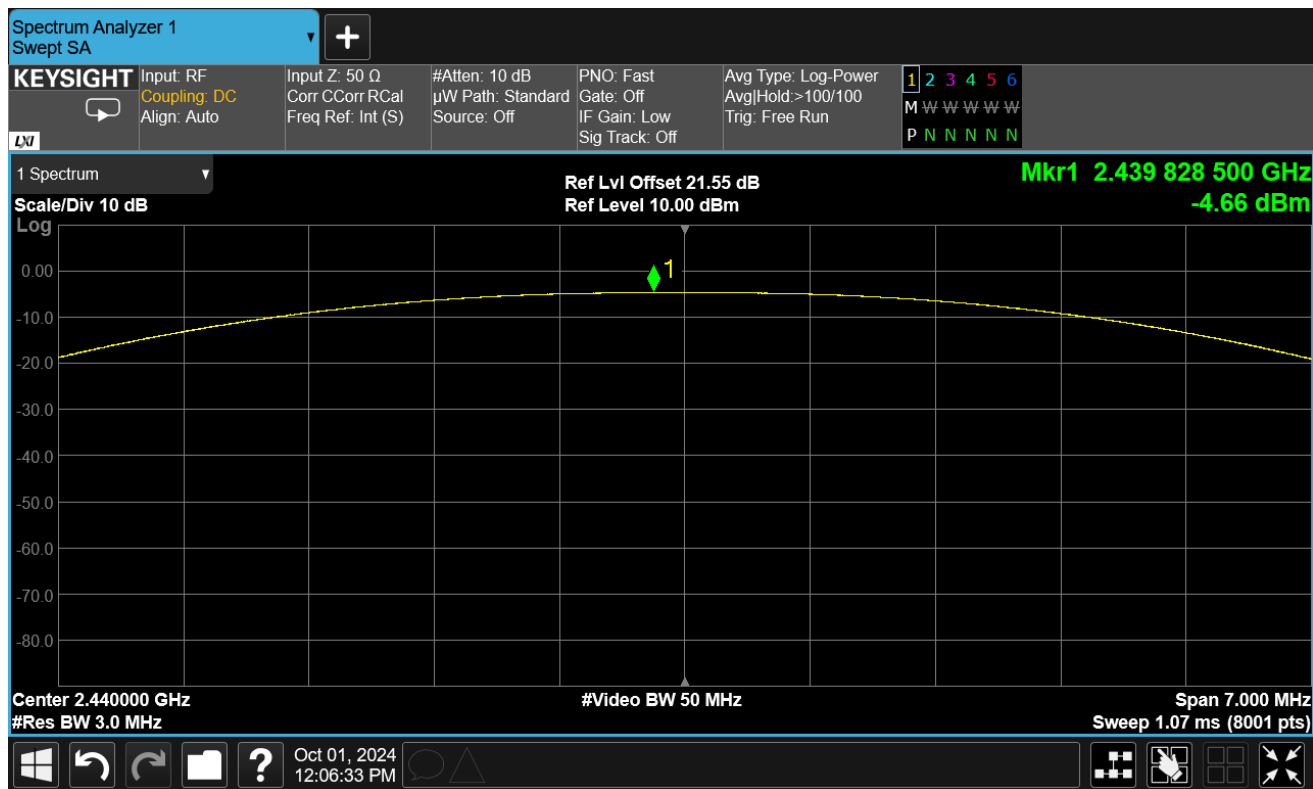
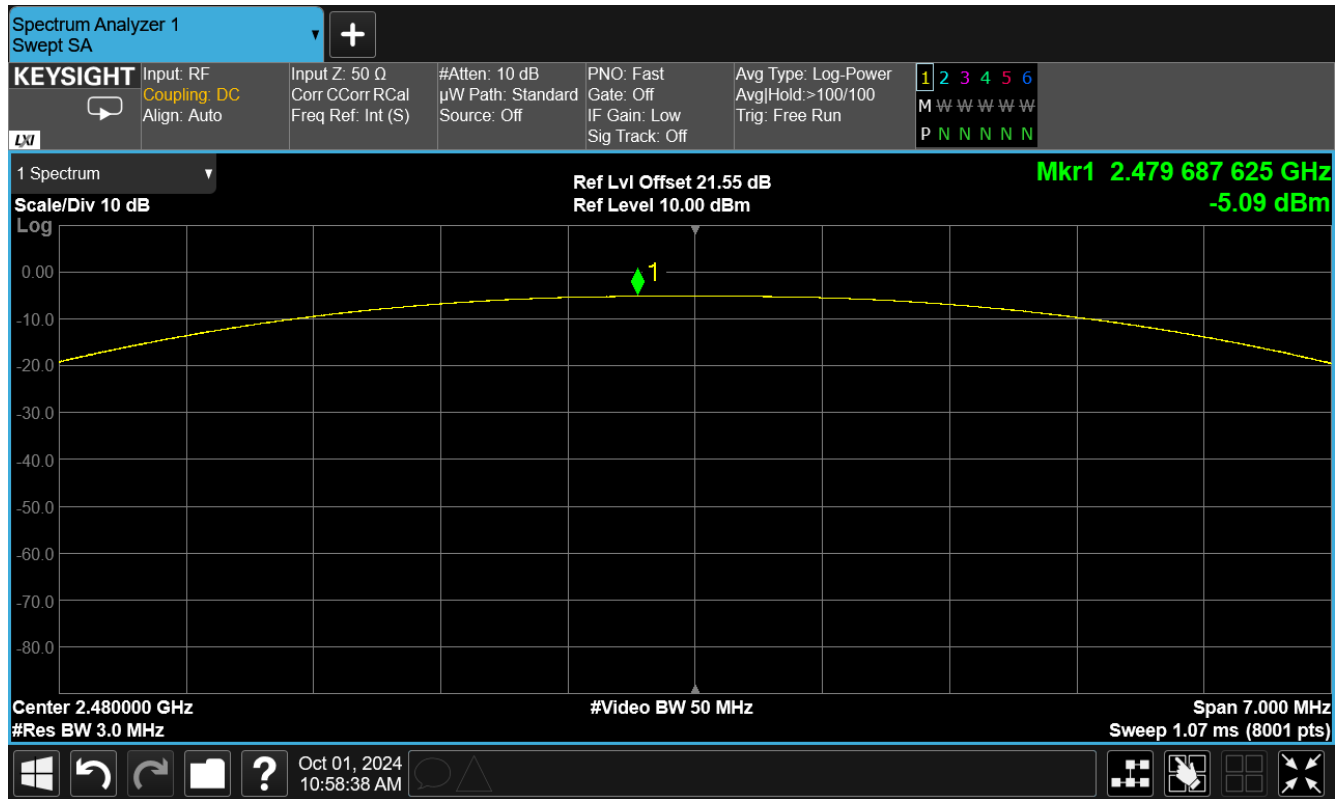




Figure 6: Peak Output Power, High Channel





3.4 Power Spectral Density

For a DTS operating in the 2.4GHz band, FCC Rule Part 15.247(e) and RSS-247, 5.2(b) require that the maximum peak power spectral density shall not exceed 8 dBm in any 3 kHz band.

The transmitter peak power spectral density was measured conducted at the antenna port, by coupling the output of the EUT transmitter to the input of a spectrum analyzer. The measurement level was corrected for any cable and attenuator losses.

3.4.1 Measurement Method

This test was performed in accordance with Clause 11.10.2 of ANSI C63.10-2020.

3.4.2 Test Data

The EUT test data is provided below.

The EUT was configured to transmit a modulated signal, with channel hopping disabled.

Table 8: Power Spectral Density

Frequency	PSD (dBm/100kHz)	Limit (dBm/3kHz)	Result
Low Channel, 2402 MHz	-4.48	8.0	Pass
Center Channel, 2440 MHz	-4.77	8.0	Pass
High Channel, 2480 MHz	-5.28	8.0	Pass



Figure 7: Power Spectral Density, Low Channel

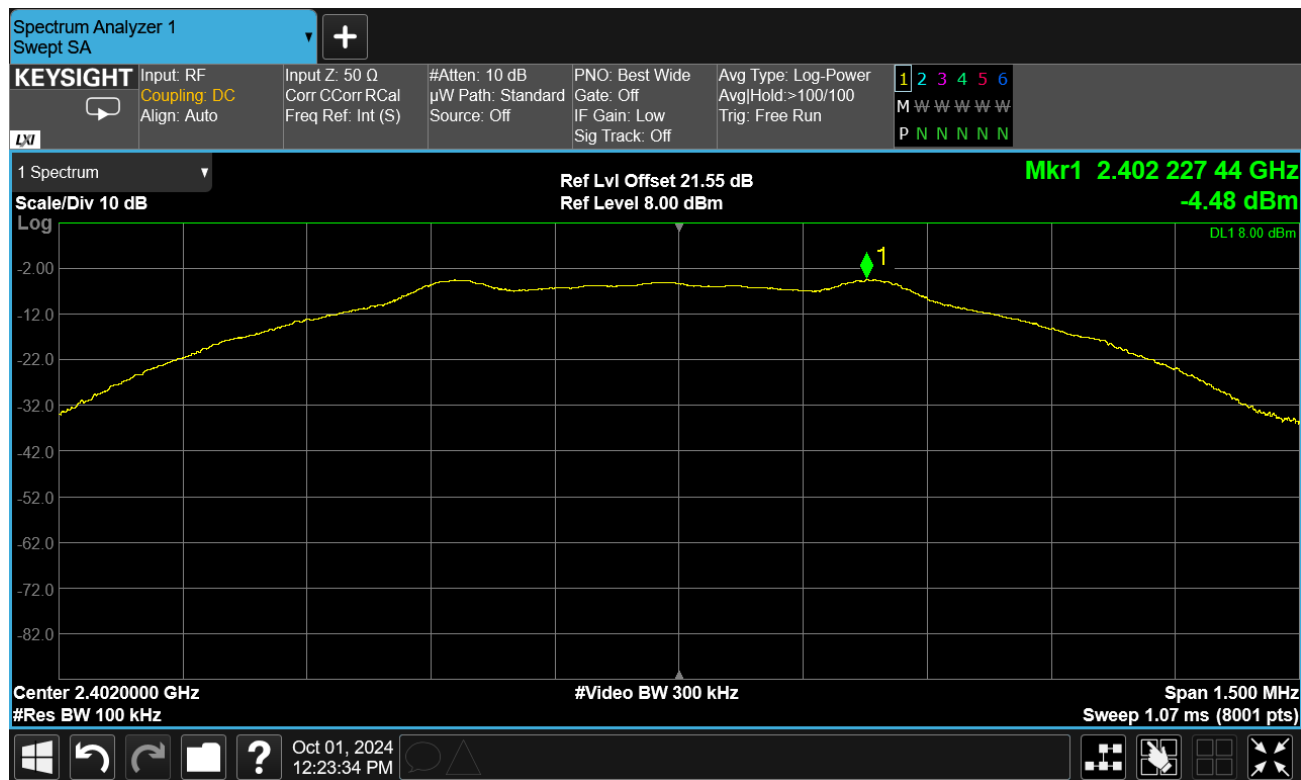




Figure 8: Power Spectral Density, Center Channel

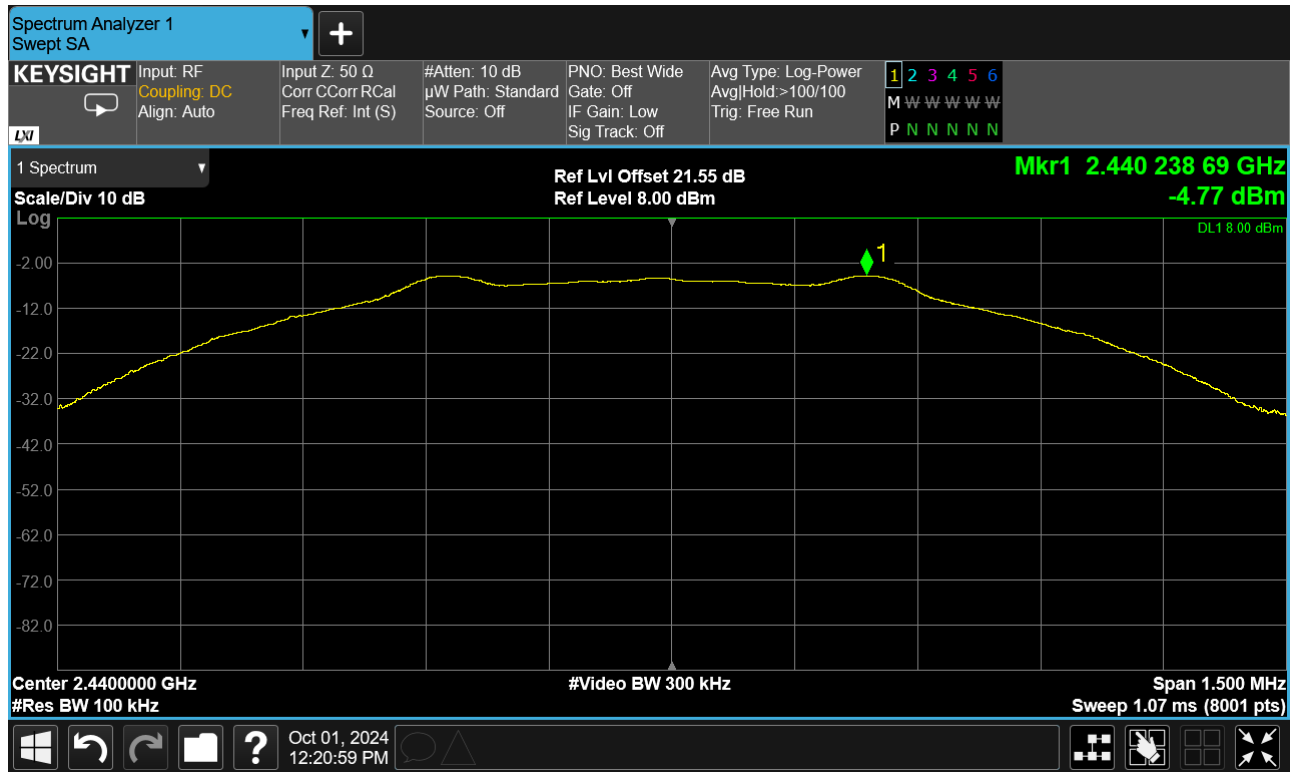
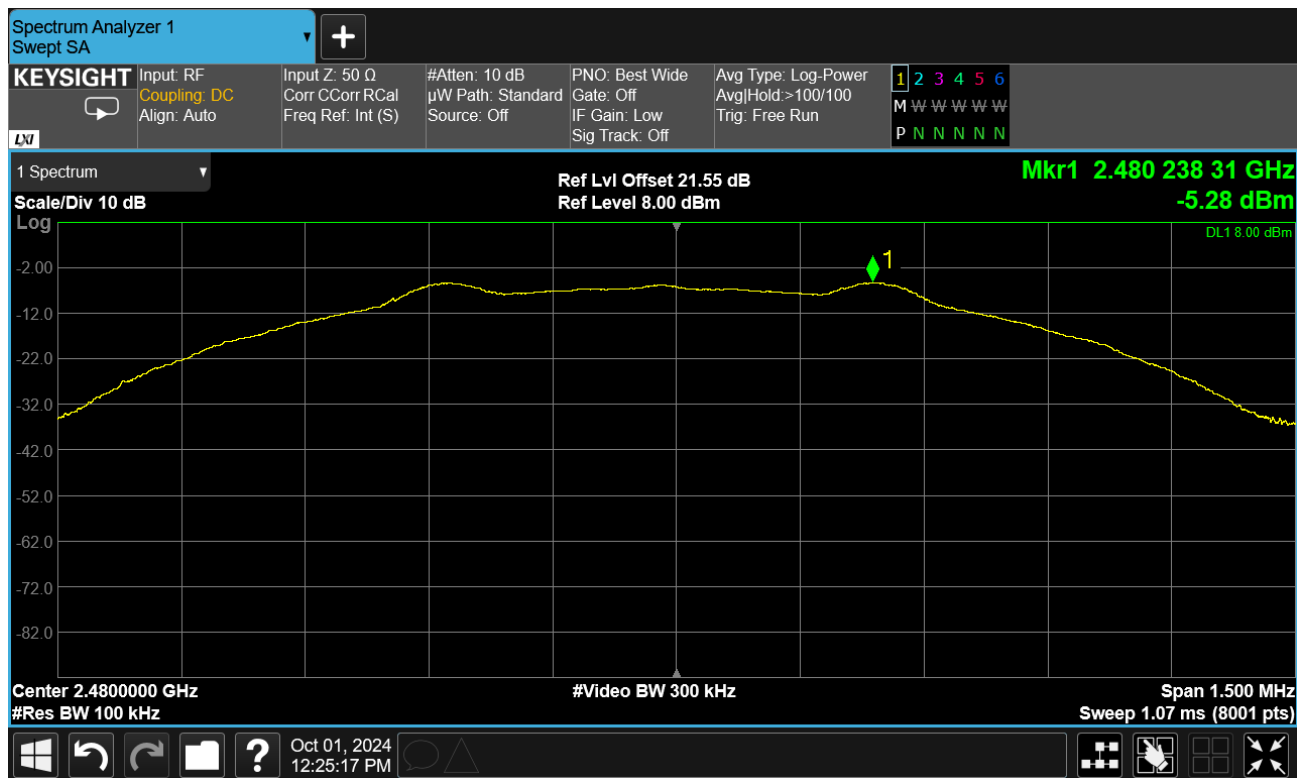




Figure 9: Power Spectral Density, High Channel





3.5 Conducted Band-edge Testing

This section provides close-up band-edge plots of the low and high channel, with respect to the nearest authorized band-edge.

For a DTS operating in the 2.4GHz band, FCC Rule Part 15.247(d) and RSS-247, 5.5 require that in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the unwanted radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

Band-edge measurements were made conducted at the antenna port, by coupling the output of the EUT transmitter to the input of a spectrum analyzer. The measurement level was corrected for any cable and attenuator losses.

3.5.1 Measurement Method

This test was performed in accordance with Clause 6.10 through Clause 6.10.4 of ANSI C63.10-2020.

3.5.2 Test Data

The EUT test data is provided below.

The EUT was configured to transmit a modulated signal, with channel hopping disabled.



Figure 10: Low Channel Band-Edge

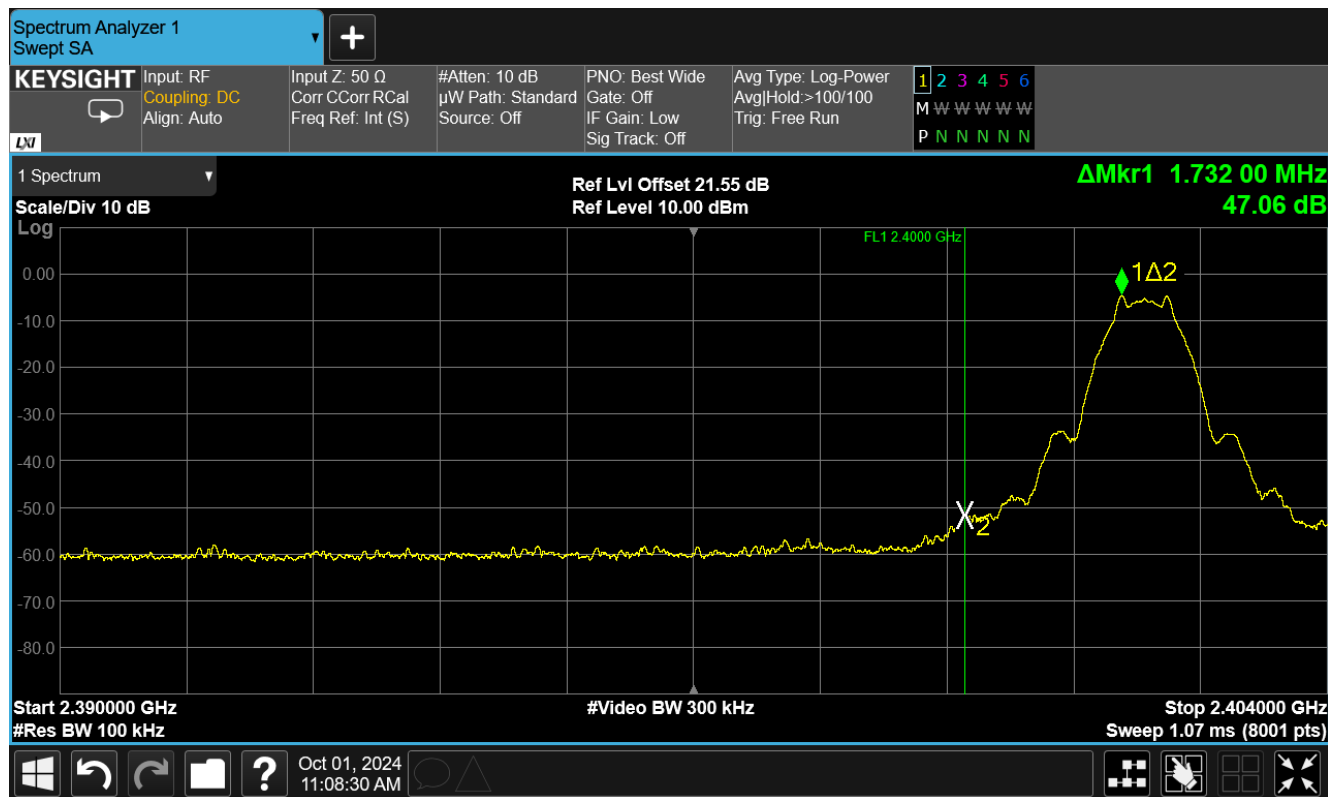
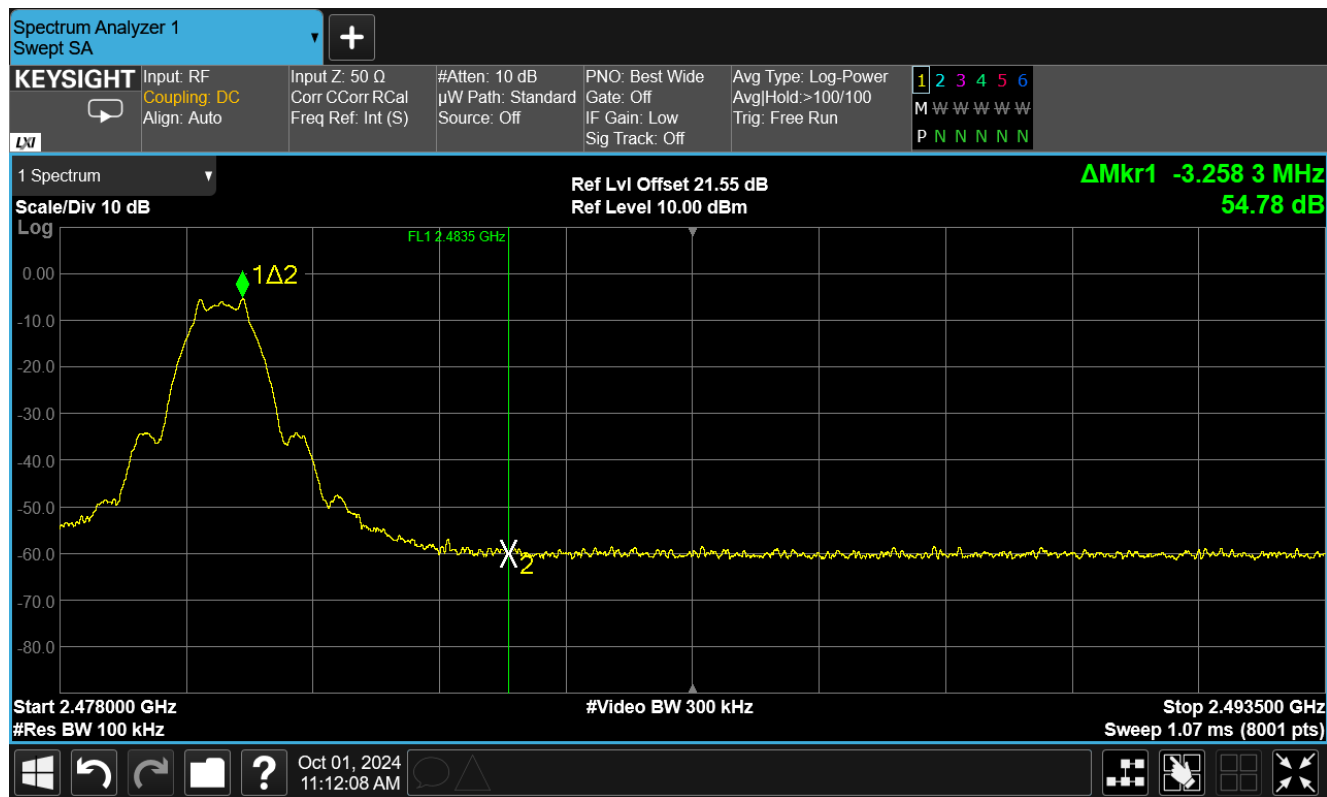




Figure 11: High Channel Band-Edge





3.6 Conducted Unwanted Spurious Emissions

For a DTS operating in the 2.4GHz band, FCC Rule Part 15.247(d) and RSS-247, 5.5 require that in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the unwanted radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

The transmitter unwanted spurious emissions were evaluated and measured conducted at the antenna port, by coupling the output of the EUT transmitter to the input of a spectrum analyzer. The measurement level was corrected for any cable and attenuator losses.

3.6.1 Measurement Method

This test was performed in accordance with Clause 11.11 of ANSI C63.10-2020.

3.6.2 Test Data

The EUT test data for the low, center, and high channels are provided below.

The EUT test data is provided below.

The EUT was configured to transmit a modulated signal, with channel hopping disabled.



Figure 12: Low Channel Conducted Spurious Plot 1

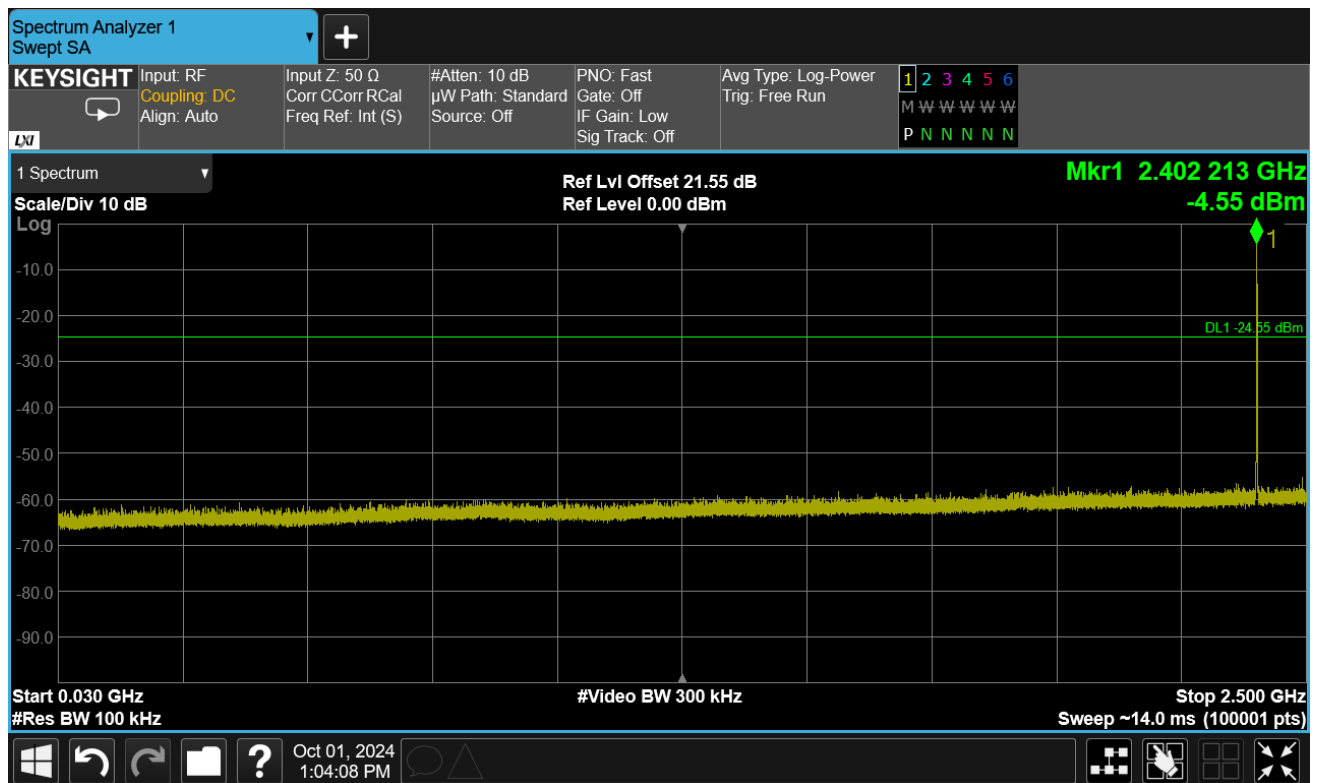




Figure 13: Low Channel Conducted Spurious Plot 2

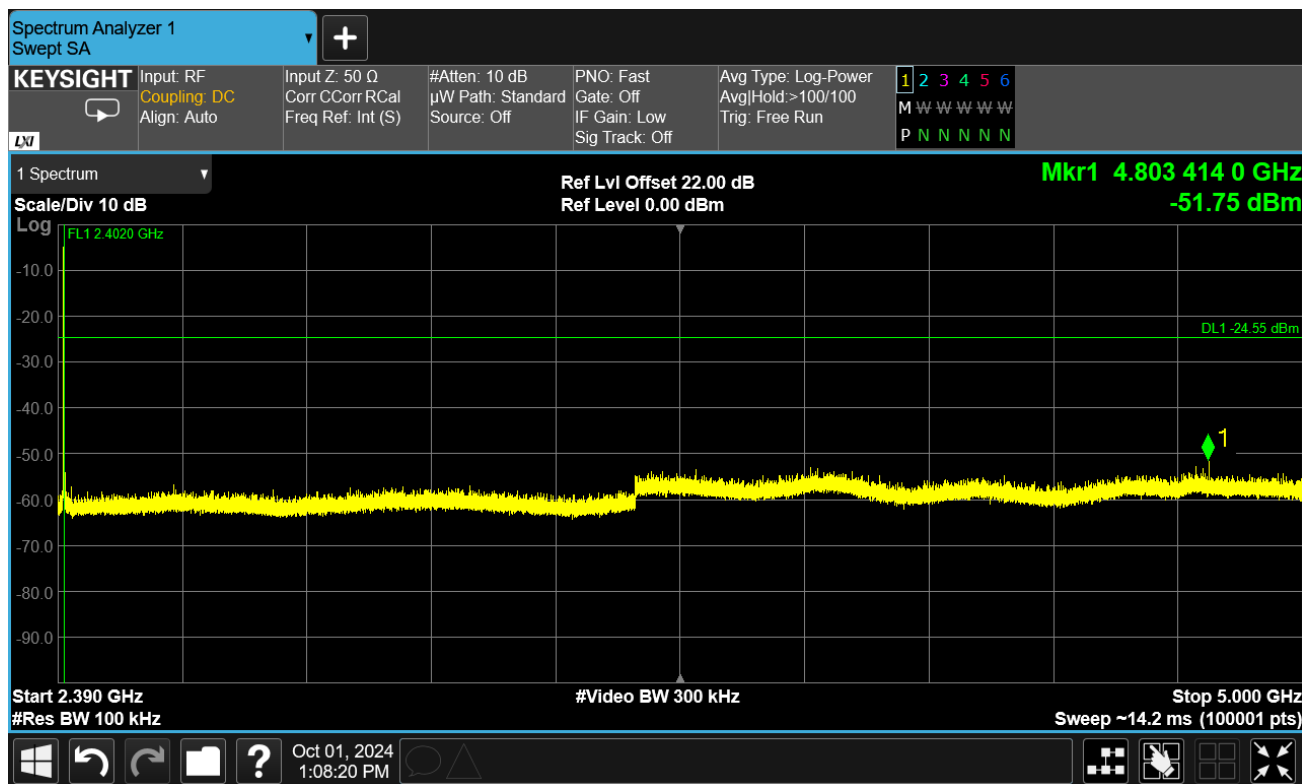




Figure 14: Low Channel Conducted Spurious Plot 3

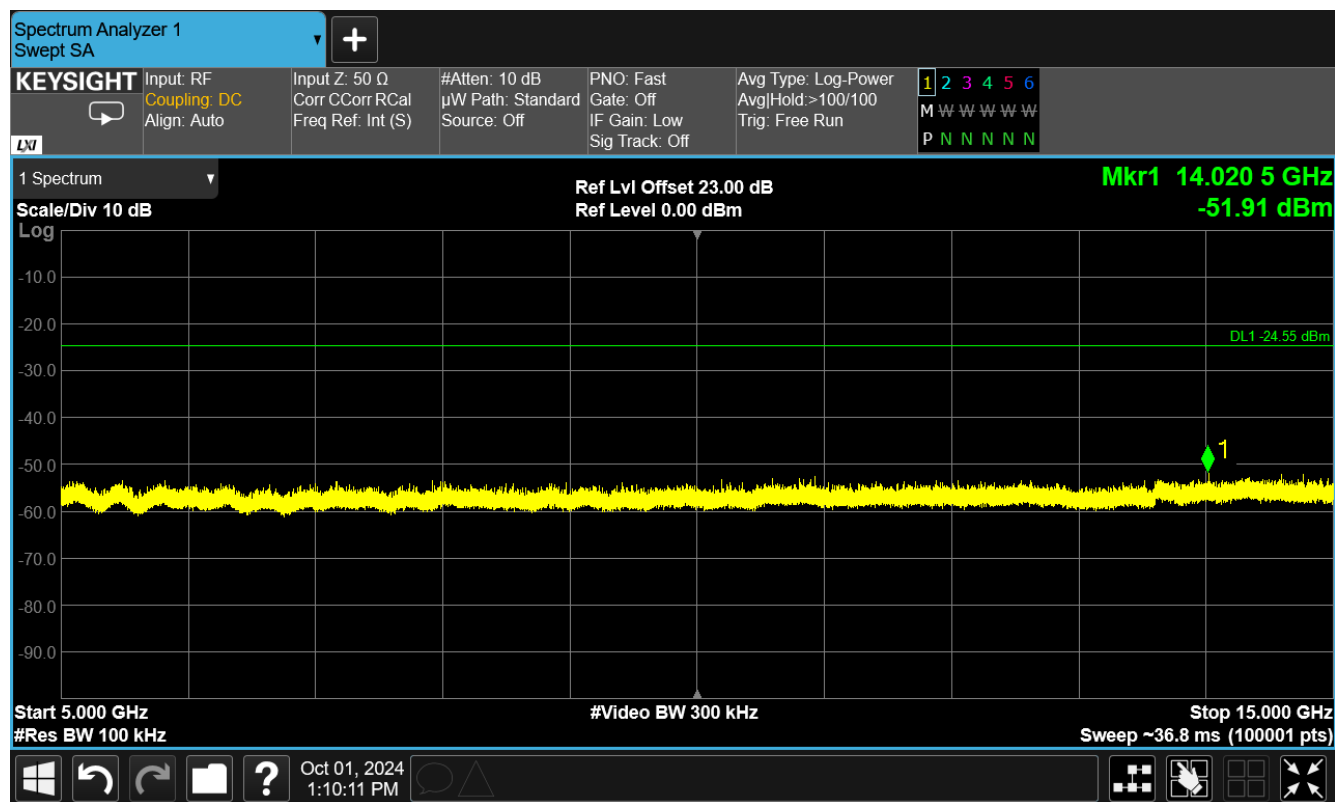




Figure 15: Low Channel Conducted Spurious Plot 4

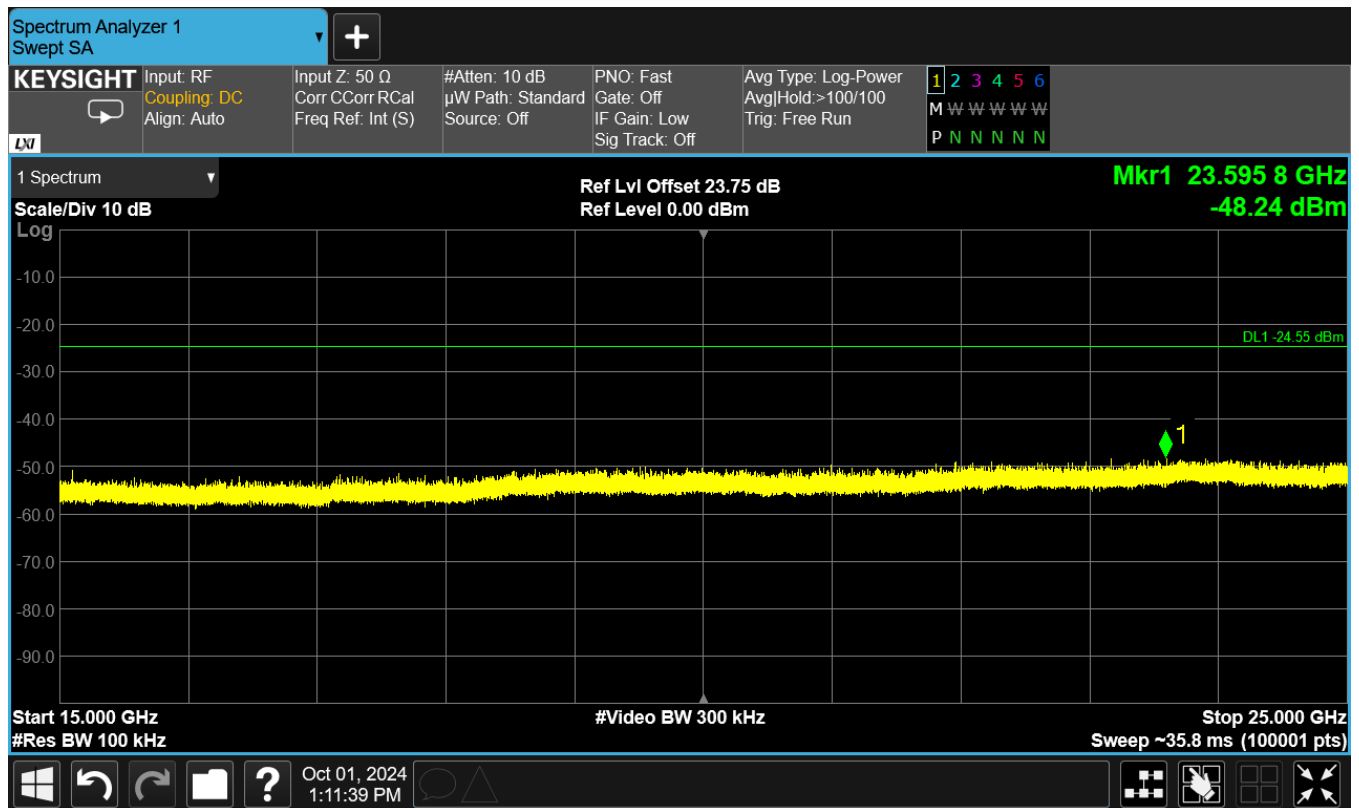




Figure 16: Center Channel Conducted Spurious Plot 1

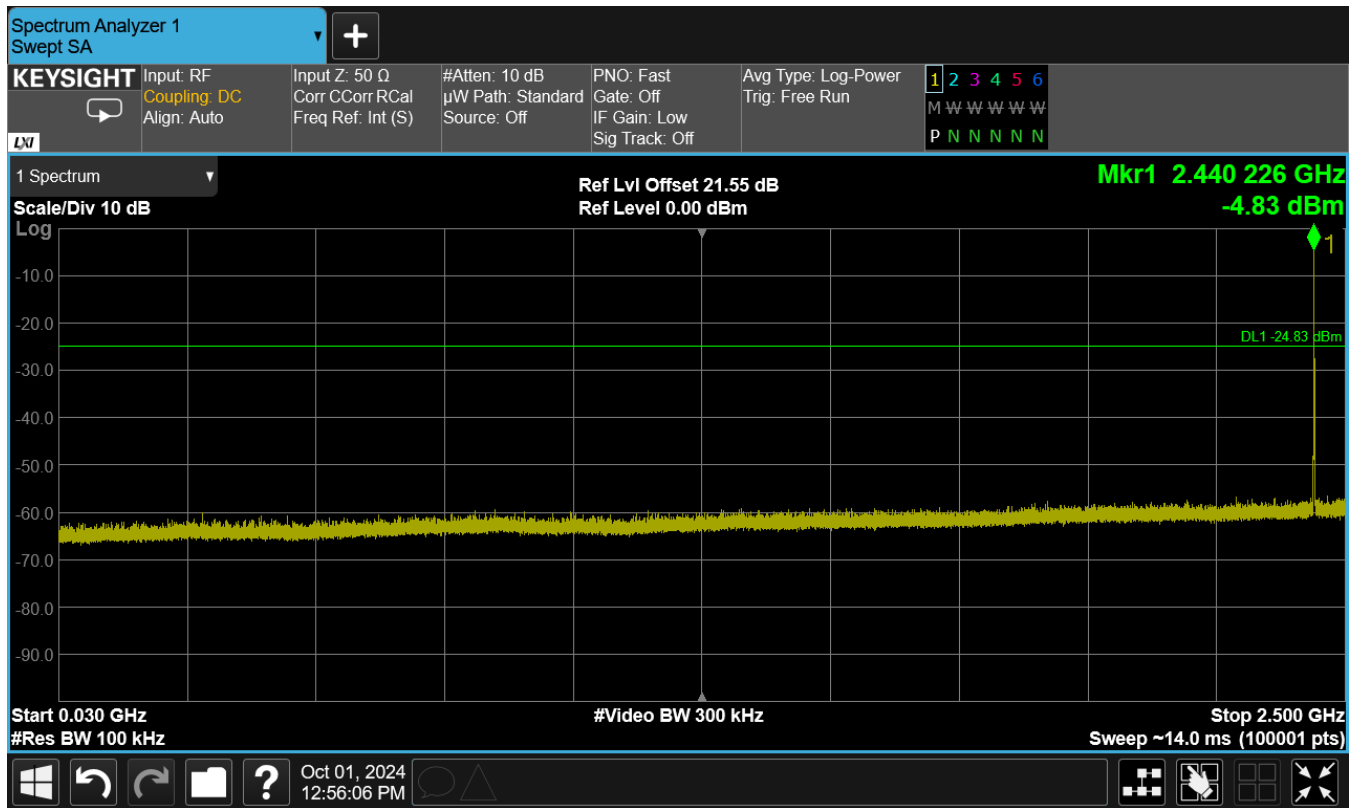




Figure 17: Center Channel Conducted Spurious Plot 2

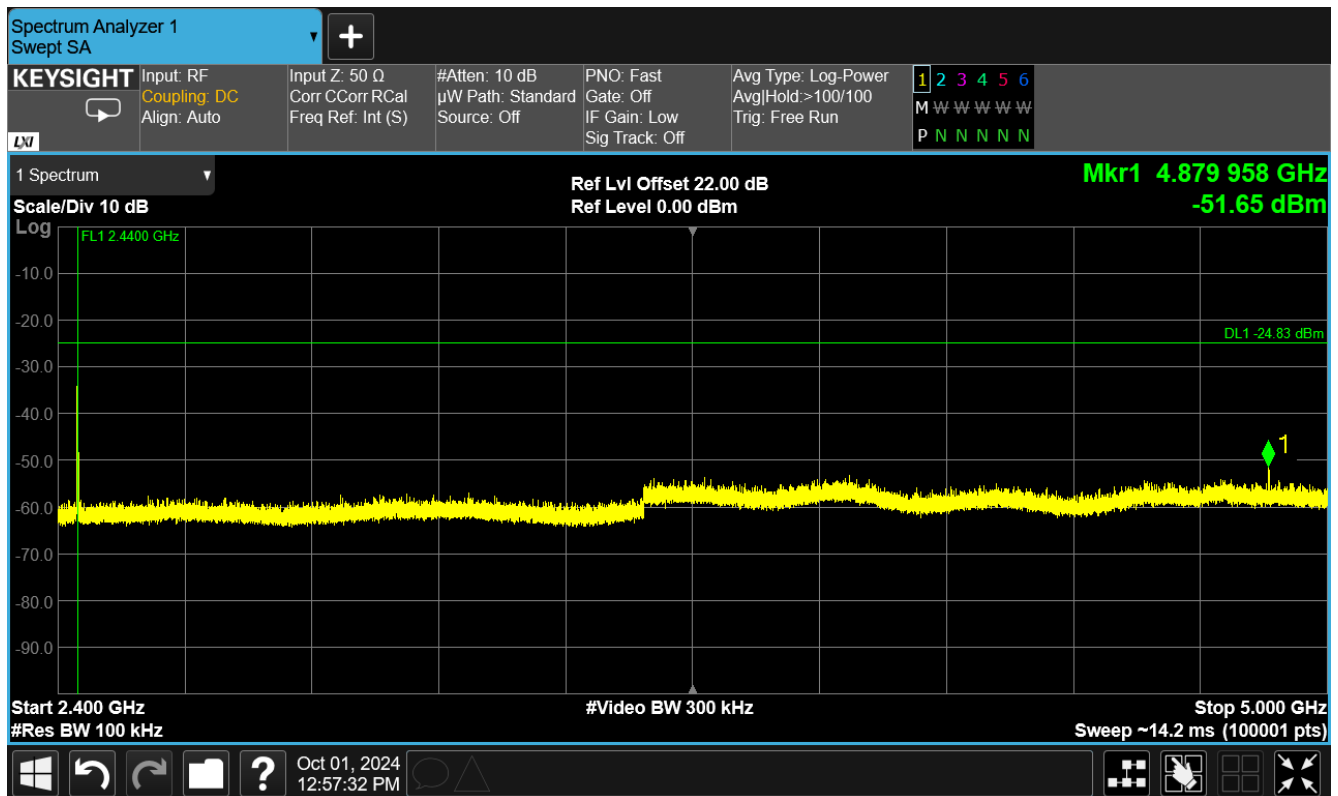




Figure 18: Center Channel Conducted Spurious Plot 3

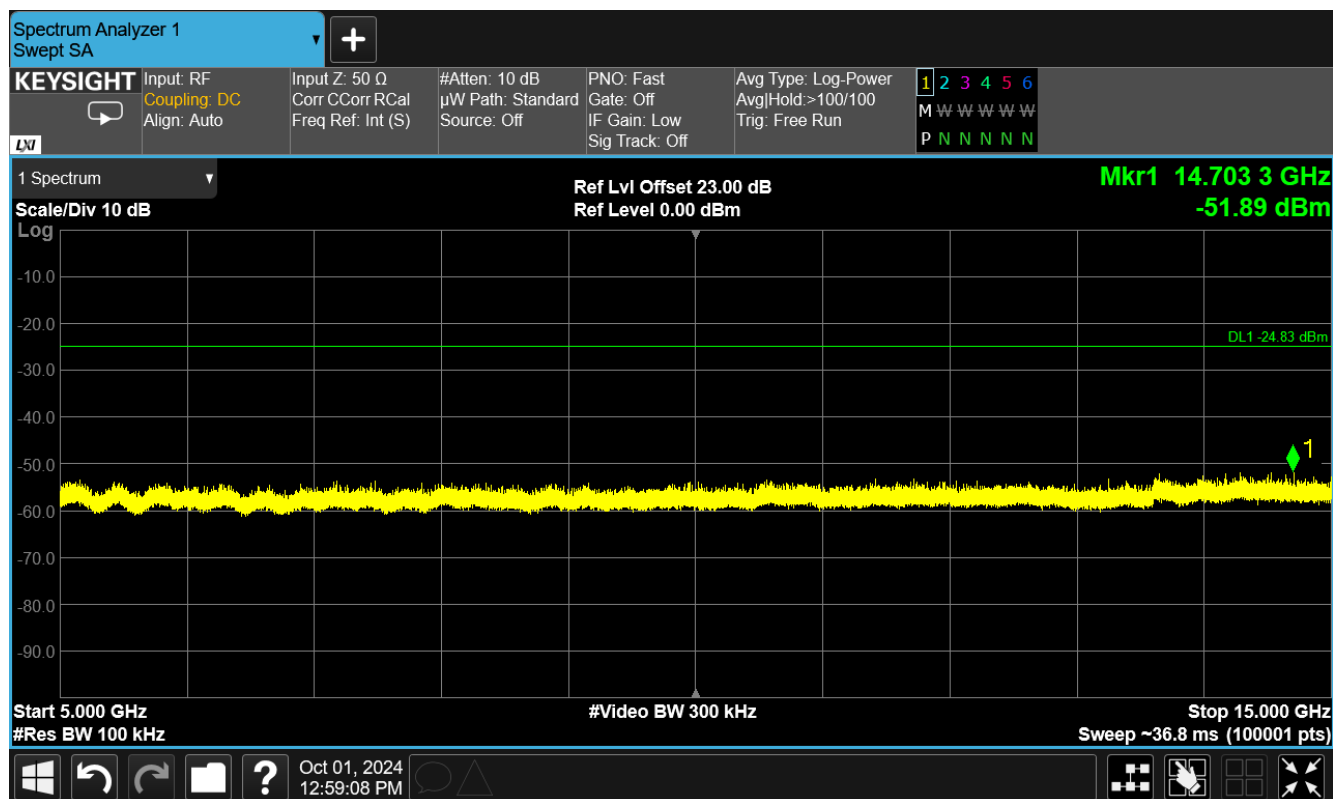




Figure 19: Center Channel Conducted Spurious Plot 4

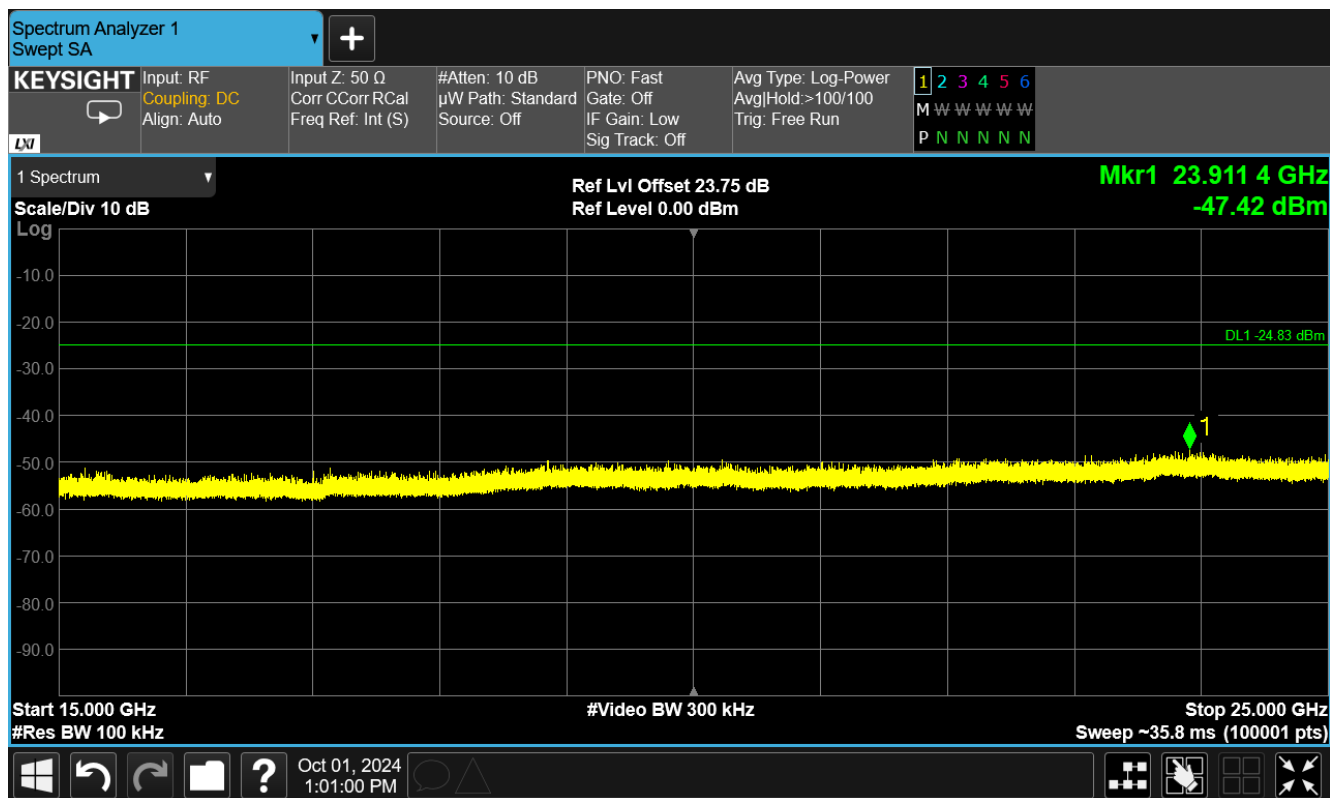




Figure 20: High Channel Conducted Spurious Plot 1

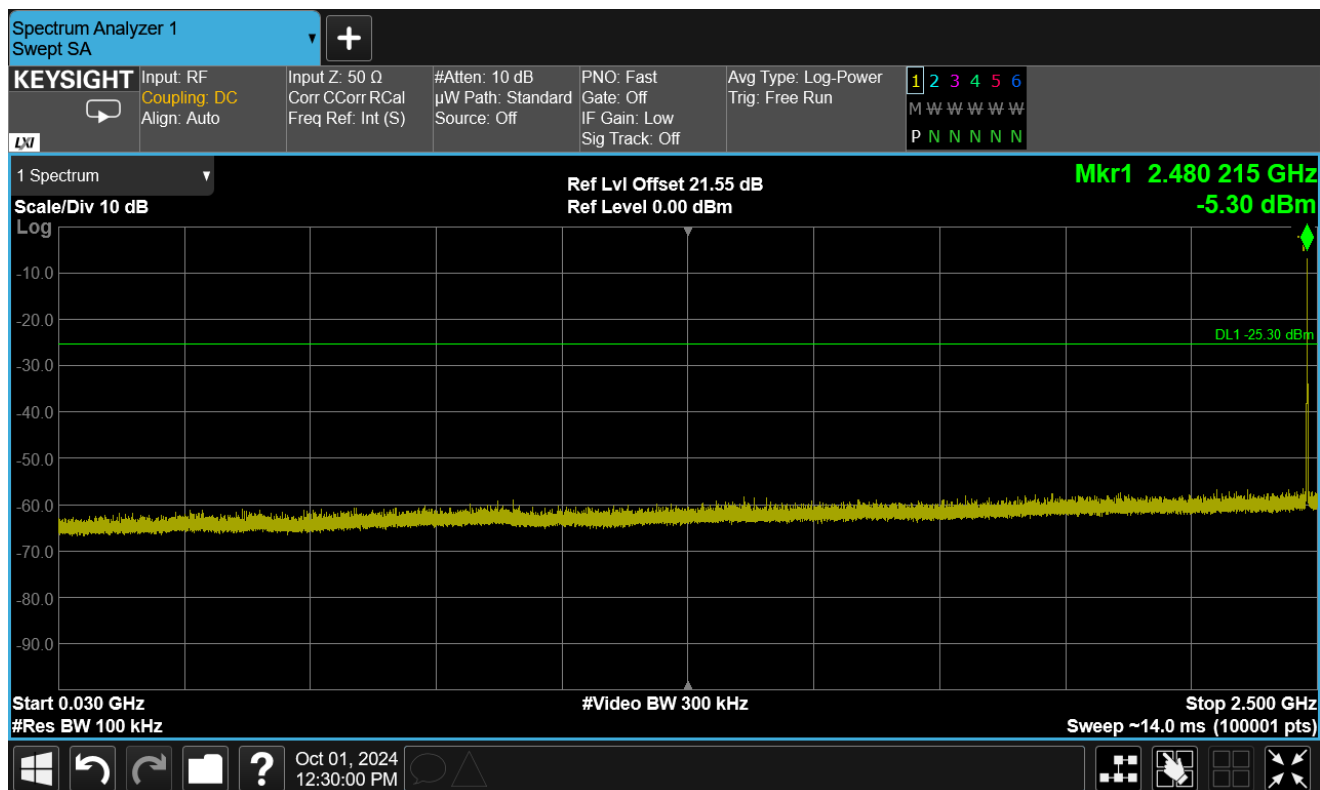




Figure 21: High Channel Conducted Spurious Plot 2

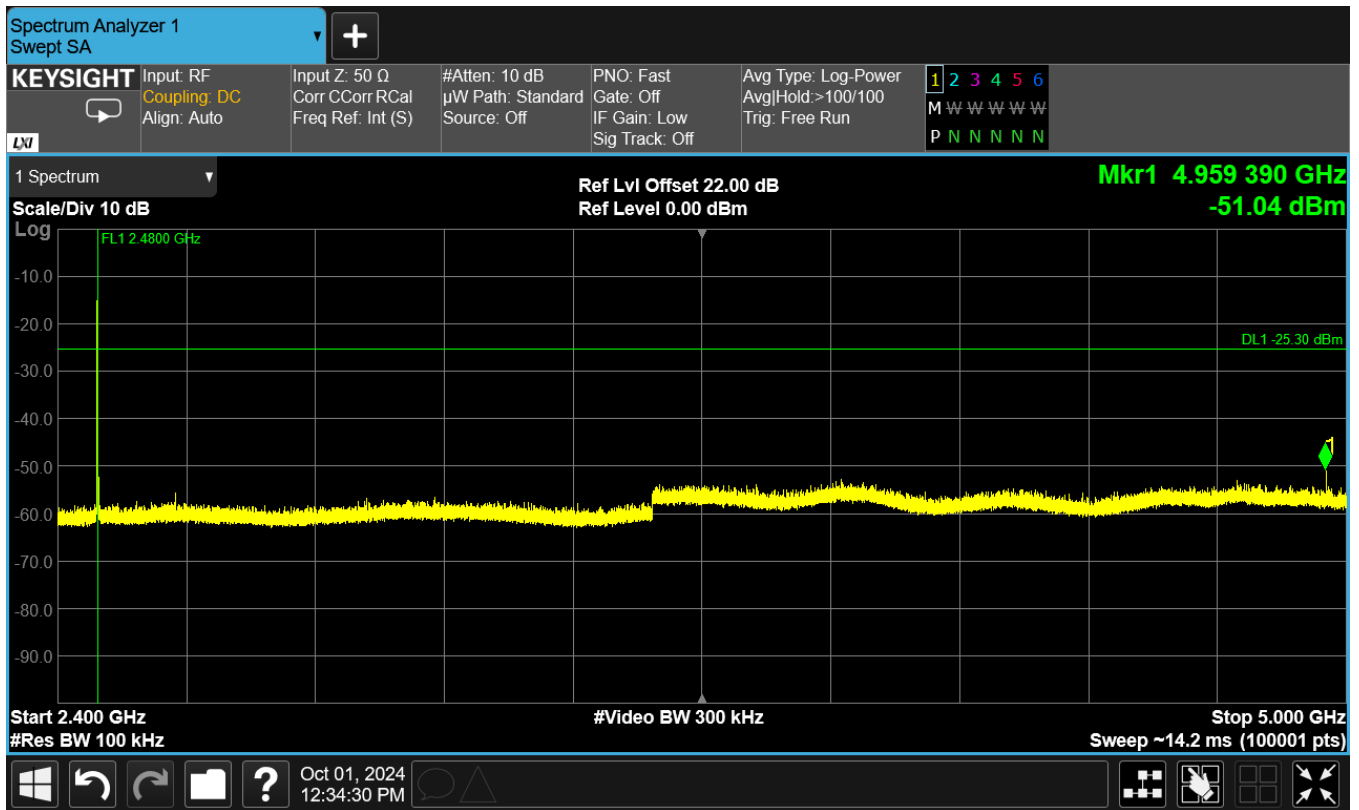




Figure 22: High Channel Conducted Spurious Plot 3

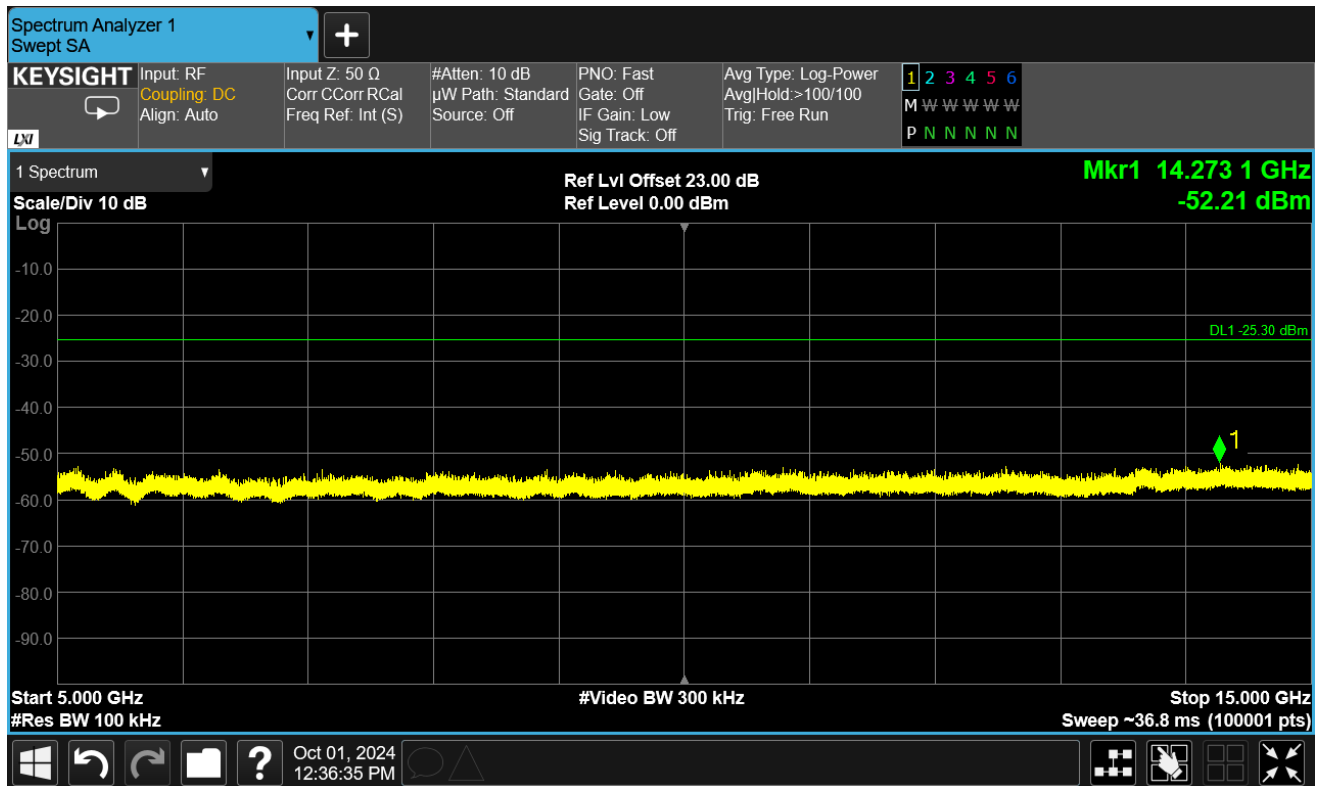
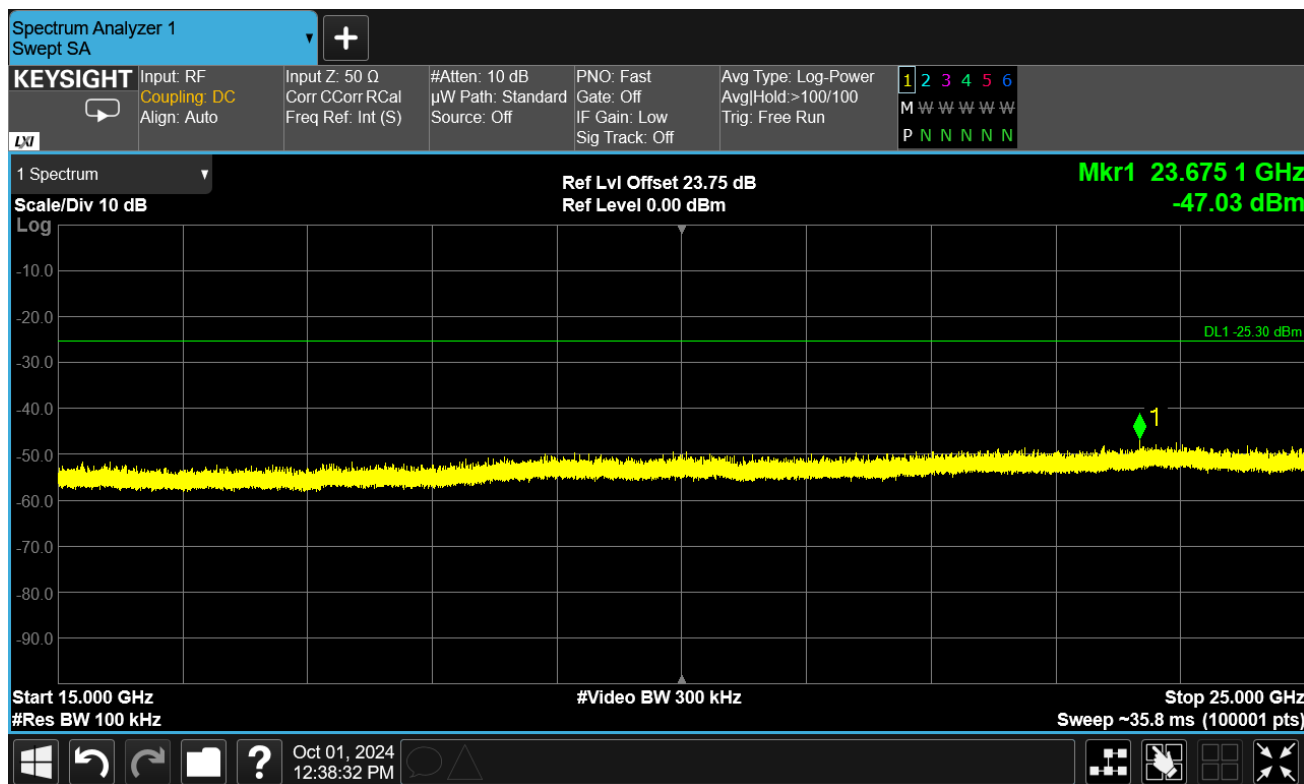




Figure 23: High Channel Conducted Spurious Plot 4





3.7 Radiated Emissions

3.7.1 Requirements

Compliance Standard: FCC Part 15.247, 15.209, 15.205

Radiated Emissions, Compliance Limits		
Frequency Range	Limit (distance)	
	Class A (10 meter)	Class B (3 meter)
30 – 88 MHz	90 μ V/m	100 μ V/m
88 – 216 MHz	150 μ V/m	150 μ V/m
216 – 960 MHz	210 μ V/m	200 μ V/m
> 960 MHz	300 μ V/m	500 μ V/m

3.7.2 Test Procedure

The requirements of FCC Part 15 and ICES-003 call for the EUT to be placed on an 80 cm high 1 X 1.5 meters non-conductive motorized turntable for radiated testing on a 3-meter open air test site.

The emissions from the EUT were measured continuously at every azimuth by rotating the turntable. Bi-conical and log periodic broadband antennas were mounted on an antenna mast to determine the height of maximum emissions. The height of the antenna was varied between 1 and 4 meters. The output of the antenna was connected to the input of the spectrum analyzer and the emissions in the frequency range of 30 MHz to 25 GHz were measured. Both the horizontal and vertical field components were measured.

The output from the antenna was connected, via a preamplifier, to the input of the spectrum analyzer. The detector function was set to quasi-peak or peak, as appropriate. Above 1GHz average measurement are recorded. The measurement bandwidth of the spectrum analyzer system was set to at least 120 kHz, with all post-detector filtering no less than 10 times the measurement bandwidth. Frequencies above 1GHz were performed using a measurement bandwidth of 1 MHz with a video bandwidth setting of 10 Hz for the average measurement.

3.7.3 Test Results Summary

The EUT complies with the Radiated Emissions requirements of this section.

All measurements after 3GHz are ambient.



3.7.4 Radiated Data Reduction and Reporting

To convert the raw spectrum analyzer radiated data into a form that can be compared with the FCC limits, it is necessary to account for various calibration factors that are supplied with the antennas and other measurement accessories. These factors are included into the antenna factor (AF) column of the table and in the cable factor (CF) column of the table. The AF (in dB/m) and the CF (in dB) is algebraically added to the raw Spectrum Analyzer Voltage in dB μ V to obtain the Radiated Electric Field in dB μ V/m. This logarithm amplitude is converted to a linear amplitude, then compared to the FCC limit.

Example:

Spectrum Analyzer Voltage: VdB μ V

Antenna Correction Factor: AFdB/m

Cable Correction Factor: CFdB

Pre-Amplifier Gain (if applicable): GdB

Electric Field: EdB μ V/m = V dB μ V + AFdB/m + CFdB - GdB

To convert to linear units of measure: EdB μ V/m/20 Inv log

3.7.5 Test Data

The EUT is fully compliant, and the test data is provided on the pages below.

There are no EUT emissions detected in the range of 3GHz to 25GHz.

A complete investigation of the radiated fundamental field strength was performed. The EUT was evaluated in three orthogonal axes (x, y, z). The EUT position the produced the highest radiated power was maintained during all testing.

The EUT was configured to transmit a modulated signal as follows:

- a) for testing of 30 MHz to 1 GHz, the EUT was set to a transmitter enabled mode, the BLE transceiver was set to dwell on the high channel.
- b) for testing of 1 GHz to 25 GHz, the EUT was set to a transmitter enabled mode, the BLE transceiver was set to dwell on the low, center, and high channels.

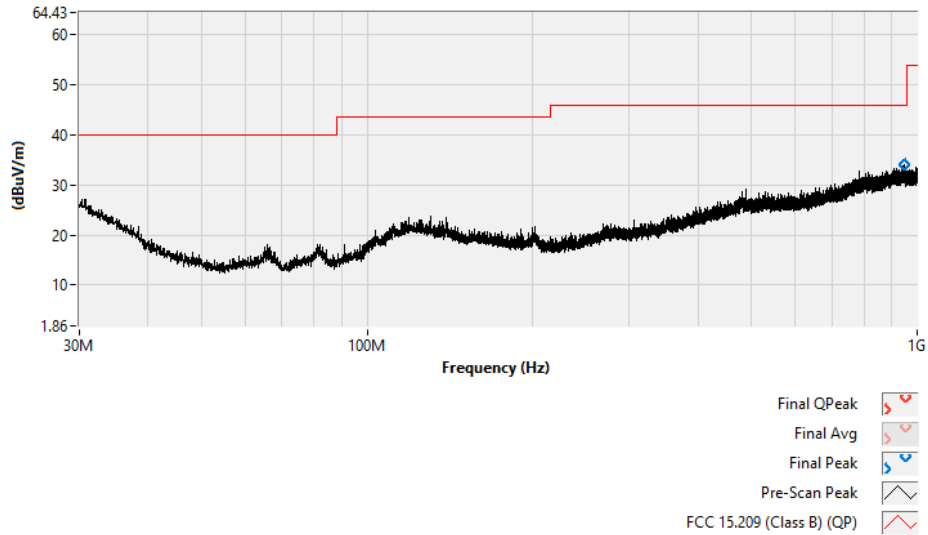
The following page provides the 30MHz-1GHz test data. Please accept this data to cover the digital portion under the provisions of 15.109(a).



Table 9: Radiated Emissions Test Data < 1GHz

Frequency (MHz)	Detector	Corr. Meas (dBuV/m)	QP Limit (dBuV/m)	Delta (dB)	Turn Table (deg)	Antenna (cm)
917.684M	Peak	35.012	46	-11.01	20	Horiz, 100
945.643M	Peak	33.973	46	-12.05	34	Vert, 100

Pre-scan and Final Data (Vertical)



Pre-scan and Final Data (Horizontal)

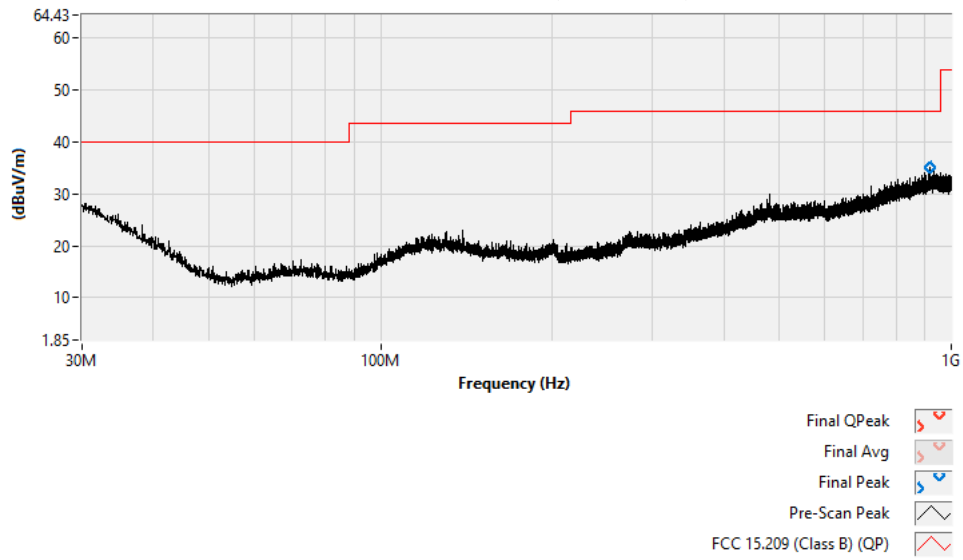
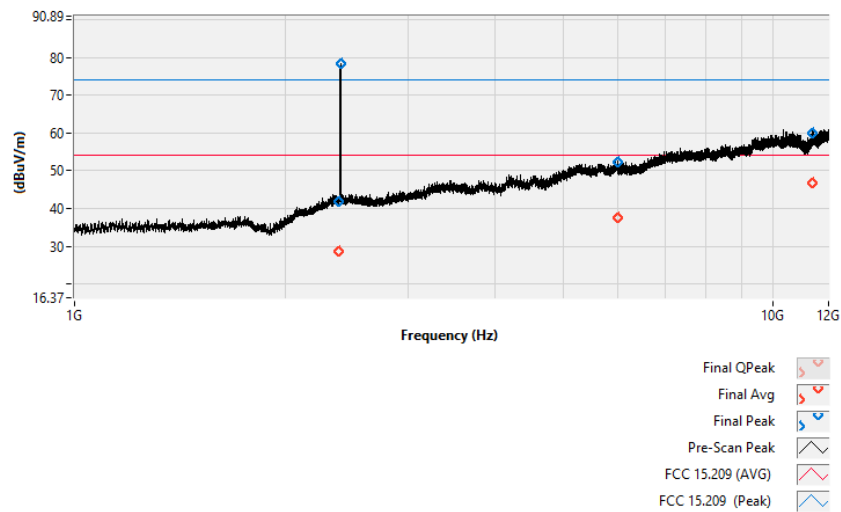




Table 10: Radiated Emissions Test Data, Low Channel

Frequency (GHz)	Detector	Corr. Meas (dBuV/m)	Limit (dBuV/m)	Delta (dB)	Turn Table (deg)	Antenna (cm)
2.390	Peak	43.214	74	-30.786	20	Horiz, 150
	Avg	28.785	54	-25.215	34	Vert, 155
2.402	Peak	78.44	--	--	34	Vert, 155
5.983	Peak	52.205	74	-21.795	34	Vert, 155
	Avg	37.476	54	-16.524	20	Horiz, 150
11.393	Peak	59.962	74	-14.038	34	Vert, 155
	Avg	46.798	54	-7.202	34	Vert, 155

Pre-scan and Final Data (Vertical)



Pre-scan and Final Data (Horizontal)

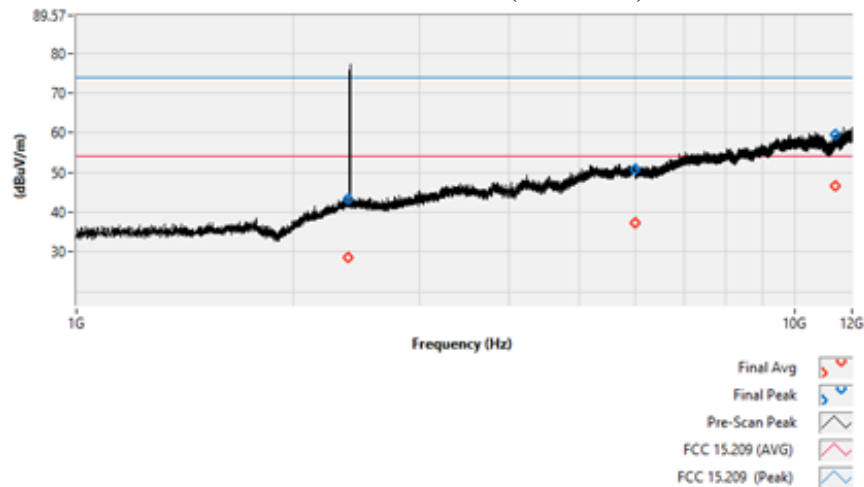
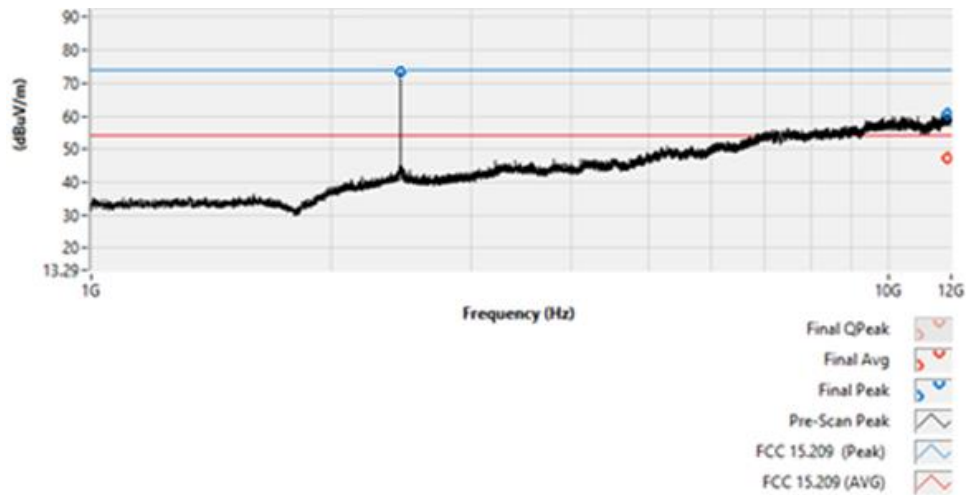




Table 11: Radiated Emissions Test Data, Center Channel

Frequency (GHz)	Detector	Corr. Meas (dBuV/m)	Limit (dBuV/m)	Delta (dB)	Turn Table (deg)	Antenna (cm)
2.44	Peak	72.91	--	--	0	Vert, 160
11.4	Peak	59.962	74	-14.038	34	Vert, 155
	Avg	46.798	54	-7.202	34	Vert, 155

Pre-scan and Final Data (Vertical)



Pre-scan and Final Data (Horizontal)

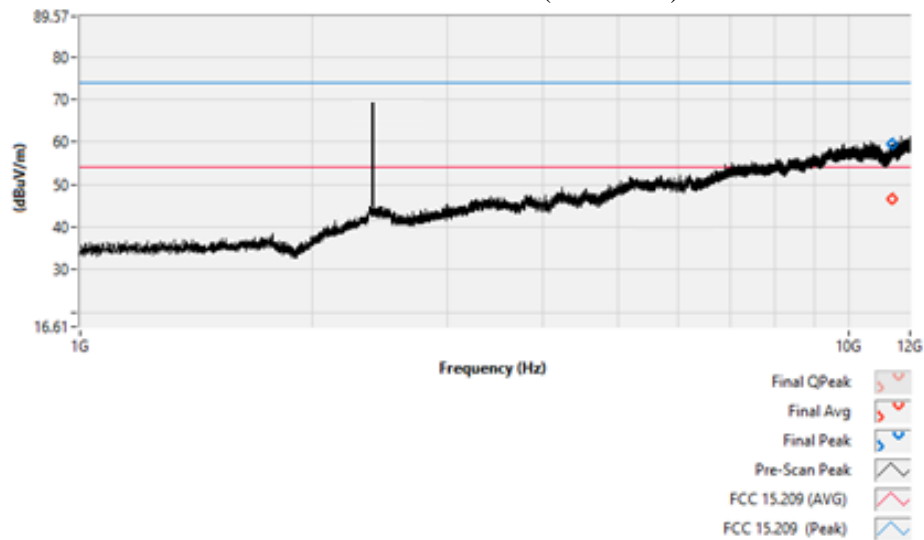
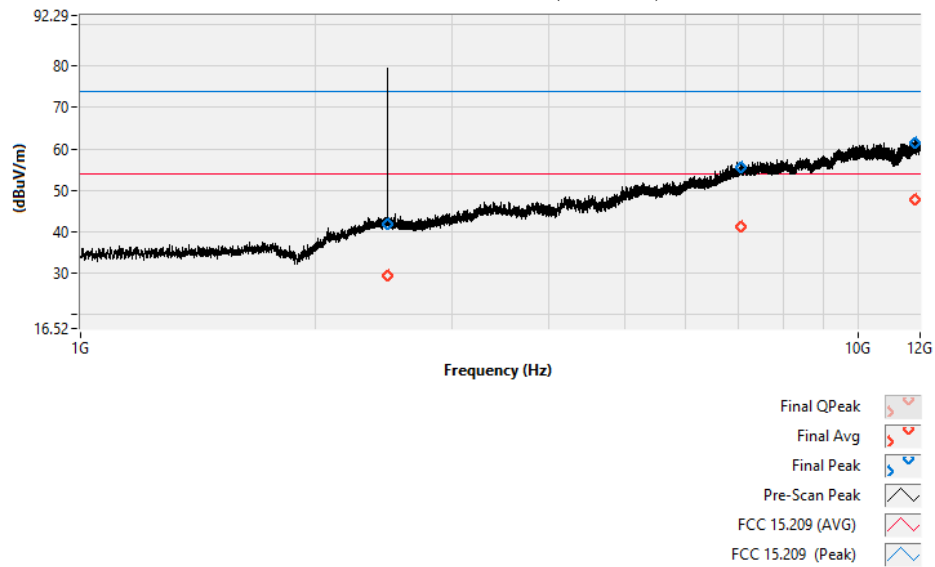




Table 12: Radiated Emissions Test Data, High Channel

Frequency (GHz)	Detector	Corr. Meas (dBuV/m)	Limit (dBuV/m)	Delta (dB)	Turn Table (deg)	Antenna (cm)
2.480	Peak	79.782	--	--	20	Horiz, 150
2.4835	Peak	43.746	74	-30.254	20	Horiz, 150
	Avg	29.151	54	-24.849	34	Vert, 155
7.069	Peak	55.593	74	-18.407	34	Vert, 155
	Avg	41.281	54	-12.719	34	Vert, 155

Pre-scan and Final Data (Vertical)



Pre-scan and Final Data (Horizontal)

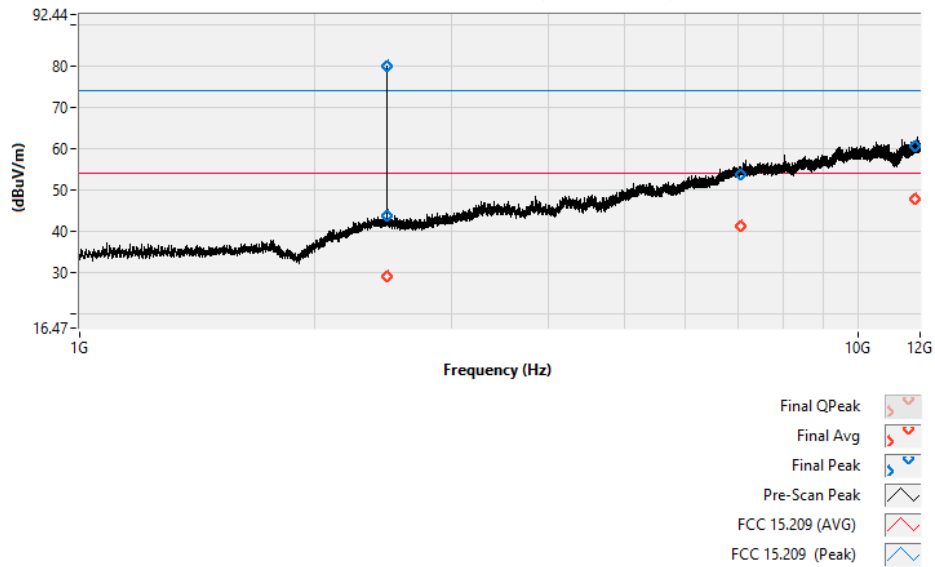
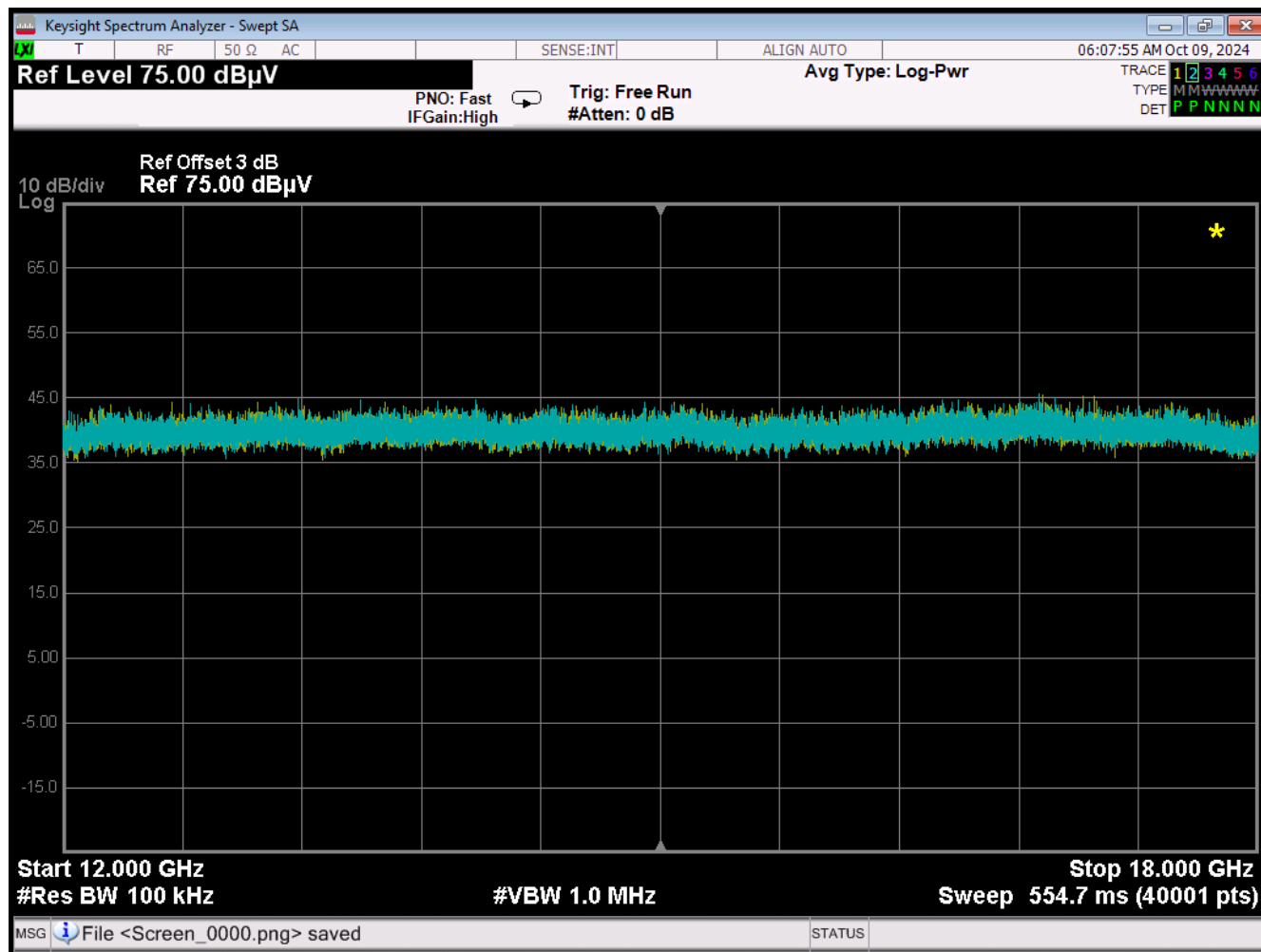




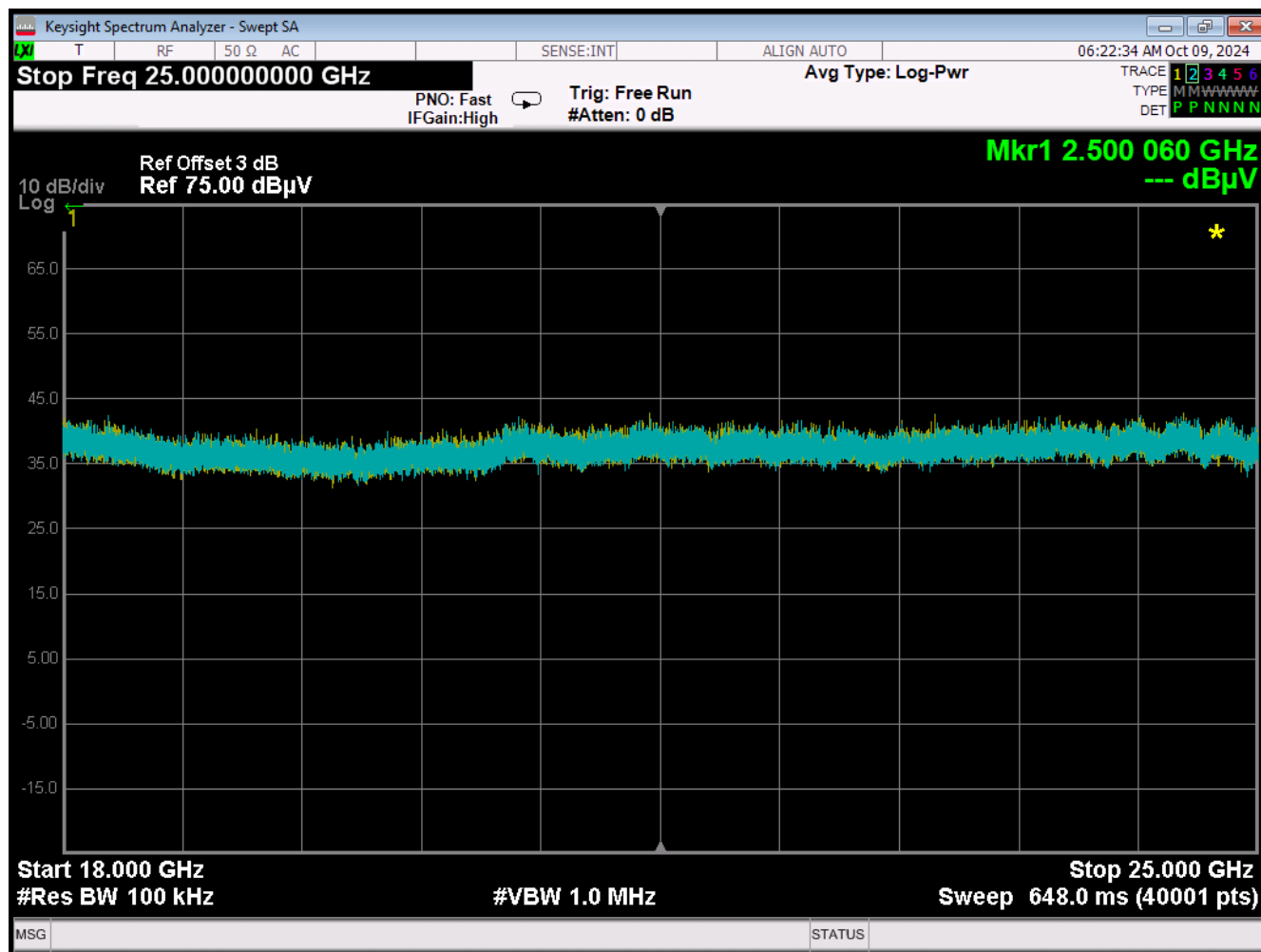
Figure 24: Radiated Emissions Investigation, High Channel (12GHz to 18GHz)



EUT emissions are not detected in this frequency range.



Figure 25: Radiated Emissions Investigation, High Channel (18GHz to 25GHz)



EUT emissions are not detected in this frequency range.



4 Test Equipment

The table below provides a list of the test equipment used for measurements along with the calibration information.

Table 13: Test Equipment List

Test Name: Radiated Emissions		Test Date(s): 10/8/2024 & 10/9/2024	
Asset #	Manufacturer/Model	Description	Cal. Due
00942	AGILENT, MXA	SPECTRUM ANALYZER	12/19/2024
00644	SUNOL SCIENCES CORP.	ANTENNA, LOGPERIOD	11/7/2024
00004	ARA, DRG-118/A	ANTENNA, HORN	6/7/2027
00066	AGILENT	RF PRE-AMPLIFIER	8/21/2025
00065	ELECTRO-METRICS	RF PRE-AMPLIFIER	8/23/2025
00806	MINI-CIRCUITS, 3061	HF COAX CABLE, SMA	12/26/2024
00825	CABLE ASSOCIATES	SMA, COAXIAL CABLE	6/14/2025
00731	NARDA 4779-3	2W, 3DB ATTENUATOR	6/20/2025
00977	JUNKOSHA, USA MX-322	6M COAXIAL CABLE, SMA/N	12/26/2024

Test Name: Conducted RF Emissions		Test Date: 10/1/2024	
Asset #	Manufacturer/Model	Description	Cal. Due
00993	KEYSIGHT N9020B	MXA SIGNAL ANALYZER	11/6/2025
00885	UTIFLEX UFA2108	HF COXIAL CABLE	6/25/2025
00992	KEYSIGHT N5173B	EXG SIGNAL GENERATOR	11/27/2024
N/A	WEINSCHL, 3.5MM	3dB ATTENUATOR	Cal. Before Use



5 Measurements

5.1.1 References

ANSI C63.2 (Jan-2016) Specifications for Electromagnetic Noise and Field Strength Instrumentation

ANSI C63.4 (Jan-2014) American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

ANSI C63.10 (Sep-2020) American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

5.2 Measurement Uncertainty

All results reported herein relate only to the equipment tested. The basis for uncertainty calculation uses ANSI/NCSS Z540-2-1997 (R2002) with a type B evaluation of the standard uncertainty. Elements contributing to the standard uncertainty are combined using the method described in Equation 1. to arrive at the total standard uncertainty. The standard uncertainty is multiplied by the coverage factor to determine the expanded uncertainty which is generally accepted for use in commercial, industrial, and regulatory applications and when health and safety are concerned (see Equation 2). A coverage factor was selected to yield a 95% confidence in the uncertainty estimation.

Equation 1: Standard Uncertainty

$$u_c = \pm \sqrt{\frac{a^2}{div_a^2} + \frac{b^2}{div_b^2} + \frac{c^2}{div_c^2} + \dots}$$

where,

uc	= standard uncertainty
a, b, c,..	= individual uncertainty elements
Diva, b, c	= the individual uncertainty element divisor based on the probability distribution
Divisor	= 1.732 for rectangular distribution
Divisor	= 2 for normal distribution
Divisor	= 1.414 for trapezoid distribution



Equation 2: Expanded Uncertainty

$$U = ku_c$$

where,

- U = expanded uncertainty
- k = coverage factor
- k ≤ 2 for 95% coverage (ANSI/NCSL Z540-2 Annex G)
- uc = standard uncertainty

The measurement uncertainty complies with the maximum allowed uncertainty from CISPR 16-4-2. Measurement uncertainty is not used to adjust the measurements to determine compliance. The expanded uncertainty values for the various scopes in the WLL accreditation are provided in the table below.

Table 14: Expanded Uncertainty List

Scope	Standard(s)	Expanded Uncertainty
Conducted Emissions	CISPR11, CISPR22, CISPR32, CISPR14, FCC Part 15	± 2.63 dB
Radiated Emissions	CISPR11, CISPR22, CISPR32, CISPR14, FCC Part 15	± 4.55 dB

5.3 Environmental Conditions

Environmental Conditions During All Measurements

Ambient Temperature:	17.2 °C
Relative Humidity:	49 %