UNIFIED COMPLIANCE LABORATORY

427 West 12800 South
Draper, UT 84020

Test Report

Certification

FCC ID	SWX-UAW
ISED ID	6545A-UAW
Equipment Under Test	U-AirWire
Test Report Serial Number	TR10699_02
Date of Test(s)	5 November; 12, 18 December 2025; 2, 5, 15, 20 January 2026
Report Issue Date	4 February 2026

Test Specification	Applicant
47 CFR FCC Part 15, Subpart E RSS-248, Issue 3 (October 2024)	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.

NVLAP TESTING ilac-MRA

NVLAP LAB CODE 600241-0

Certification of Engineering Report

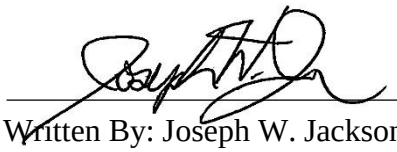
This report has been prepared by Unified Compliance Laboratory (UCL) to document compliance of the device described below with the requirement of Federal Communication Commissions (FCC) Part 15, Subpart E and RSS 248, Issue 3 (October 2024). This report may be reproduced in full. Partial reproduction of this report may only be made with the written consent of the laboratory. The results in this report apply only to the sample tested with the specifications provided by the manufacturer.

Applicant	Ubiquiti Inc.
Manufacturer	Ubiquiti Inc.
Brand Name	UBIQUITI
Model Number	U-AirWire
FCC ID	SWX-UAW
ISED ID	6545A-UAW

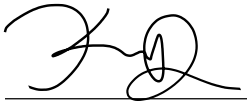
On this 4th day of February 2026, I individually and for Unified Compliance Laboratory certify that the statements made in this engineering report are true, complete and correct to the best of my knowledge and are made in good faith. Unified Compliance laboratory is not responsible for incorrect information provided by the manufacturer.

Although NVLAP has accredited the Unified Compliance Laboratory testing facilities, this report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. federal government.

Unified Compliance Laboratory



Written By: Joseph W. Jackson



Reviewed By: Kimberly DeBole

Revision History		
Revision	**Description**	**Date**
01	Original Report Release	4 February 2026
02	Amended Standard Reference in Section 3.3.1	19 February 2026

Table of Contents

1 Client Information

1.1 Applicant

Company	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.
Contact Name	Alex Macon
Title	Compliance

1.2 Manufacturer

Company	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.
Contact Name	Alex Macon
Title	Compliance

2 Equipment Under Test (EUT)

2.1 Identification of EUT

Brand Name	UBIQUITI
Model Number	U-AirWire
Serial Number	25E
Dimensions (cm)	11.7 x 11.7 x 4.3

2.2 Description of EUT

The U-AirWire is a wireless USB adapter which supports WiFi 7. The U-AirWire transmits in the 2.4 GHz, 5 GHz and 6 GHz WiFi frequency bands. The U-AirWire has a rotatable directional 2x2 mountable antenna for optimal wireless performance. The U-AirWire also has a Bluetooth transmitter for system management. The U-AirWire has one main UCB-C port for data and power, which powers the U-AirWire, and a second USB-C auxiliary power port.

This device does not support channel puncturing.

For CDD transmission, directional gain is calculated as follows.

Array Gain = 10 log(NANT/NSS) dB
NANT = number of transmit antennas and NSS = number of spatial streams. NSS = 1 considered worst case. For power measurements on IEEE 802.11 devices, Array Gain = 0 dB for NANT ≤ 4;

For PSD measurements when Nss=1: Array Gain = 10 log(NANT/NSS) dB + Antenna Gain (dBi). Or 3.01 0dB + 11 dBi = 14.01 dBi.

This report covers the circuitry of the device subject to FCC Part 15, Subpart E. The circuitry of the device subject to FCC Part 15 Subpart B was found to be compliant and is covered under a separate Unified Compliance Laboratory test report.

The table below show the channels used within the different modulation bandwidths.

Band	Modulation Bandwidth	Frequency (MHz)	Maximum Power Setting
UNII-8	be (EHT20)	6895, 6915, 6935, 6955, 6975, 6995,	TP5
		7015, 7035, 7055, 7075, 7095, 7115	TP6
	be (EHT40)	6925, 6945, 6965, 6985, 7005, 7025, 7045, 7065, 7085	TP9
	be (EHT80)	6945	TP11
		7025	TP12

	be (EHT160)	6985	TP14
	be (EHT320)	6905	TP16

2.3 EUT and Support Equipment

The EUT and support equipment used during the test are listed below.

Brand Name Model Number Serial Number	Description	Name of Interface Ports / Interface Cables
BN: UBIQUITI MN: U-AirWire SN: 25E	Wireless WiFi USB Adapter	See Section 2.4
BN: UBIQUITI MN: GP-M015-QC SN: N/A	USB-C Power Supply	USB-C/1 Meter
BN: Dell MN: XPS 13 SN: N/A	Laptop Personal Computer (For Testing Only)	USB-C/2 meters (Note 2)

Notes: (1) EUT

(2) Interface port connected to EUT (See Section 2.4)

The support equipment listed above was not modified in order to achieve compliance with this standard.

2.4 Interface Ports on EUT

Name of Ports	No. of Ports Fitted to EUT	Cable Description/Length
USB-C Data/Power	1	USB-C/1 Meter
USB-C Auxiliary/Power	1	USB-C/2 Meters

2.5 Operating Environment

Power Supply	120 Vac to USB-C Power
AC Mains Frequency	60 Hz
Temperature	21.3 - 22.9 °C
Humidity	22.8 - 30.6 %
Barometric Pressure	1013 mBar

2.6 Operating Modes

The U-AirWire was tested using test software in order to enable to constant transmission. The measurements within this report are corrected to reference a 100% duty cycle. All emission modes of 802.11be were investigated. All measurements are reported with the worst-case mode (802.11be maximum conducted output power and maximum power spectral density) unless otherwise stated.

2.7 EUT Exercise Software

EUT firmware version 1.0 was used to operate the transmitter using a constant transmit mode.

2.8 Block Diagram of Test Configuration

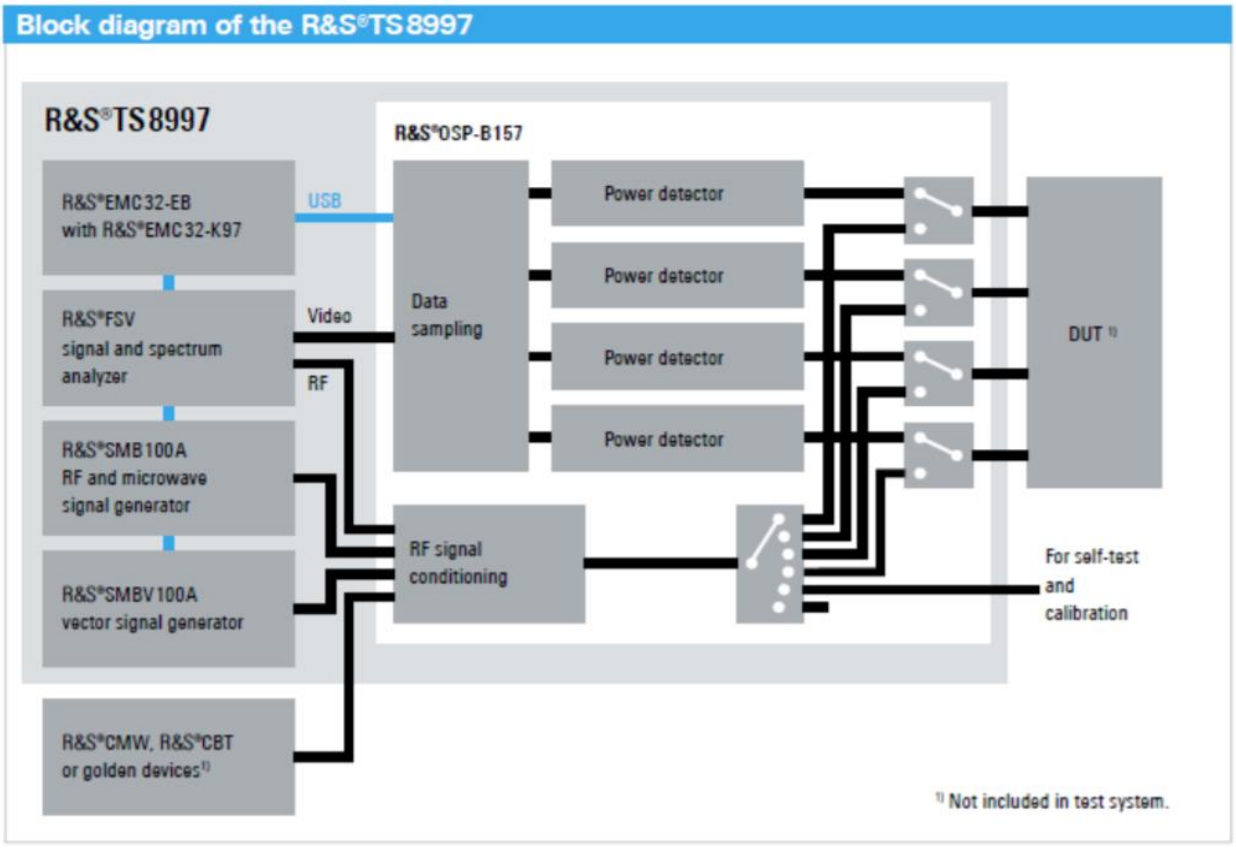


Diagram 1: Test Configuration Block Diagram

2.9 Modification Incorporated/Special Accessories on EUT

There were no modifications made to the EUT during testing to comply with the specification.

2.10 Deviation, Opinions Additional Information or Interpretations from Test Standard

There were no deviations, opinions, additional information or interpretations from the test specification.

3 Test Specification, Method and Procedures

3.1 Test Specification

Title	47 CFR FCC Part 15, Subpart E, Section 15.407 Limits and methods of measurement of radio interference characteristics of Unlicensed National Information Infrastructure Devices
Purpose of Test	The tests were performed to demonstrate initial compliance

3.2 Methods & Procedures

3.2.1 47 CFR FCC Part 15 Section 15.407

See test standard for details.

3.3 FCC Part 15, Subpart E

3.3.1 Summary of Tests

FCC Section	ISED Section	Environmental Phenomena	Frequency Range (MHZ)	Result
15.203	N/A	Antenna requirements	Structural Requirement	Compliant
15.207	RSS-Gen	Conducted Disturbance at Mains Port	0.15 to 30	Compliant
15.407(a)	RSS-248 §4.4	Bandwidth Requirement	6875 to 7115	Compliant
15.407(a)	RSS-248 §4.5	Peak Output Power[1]	6875 to 7115	Compliant
15.407(b)	RSS-248 §4.6	Antenna Conducted Spurious Emissions[1]	0.009 to 40000	N/A Note[2]
15.209	RSS-248 §4.6	Radiated Spurious Emissions	0.009 to 40000	Compliant
15.407(a)	RSS-248 §4.5	Peak Power Spectral Density[1]	6875 to 7115	Compliant
15.407(d)	RSS-248 §4.7	Contention Based Protocol	6875 to 7115	Compliant

The testing was performed according to the procedures in ANSI C63.10-2020/Cor 1-2021, KDB 789033, KDB 987594 and 47 CFR Part 15. Where applicable, KDB 662911 was followed to sum required measurements.

Note [1]: Various RU modes were considered for RF Power, PSD, and Spurious Emissions, and the "single client" RU mode is the worst case - the results herein are "single client" RU mode.
Note [2]: Radiated Spurious was performed per 15.209 with the antenna unterminated.

3.4 Results

In the configuration tested, the EUT complied with the requirements of the specification.

3.5 Test Location

Testing was performed at the Unified Compliance Laboratory 3-Meter and 10-Meter chambers located at 427 West 12800 South, Draper, UT 84020. Unified Compliance Laboratory is accredited by National Voluntary Laboratory Accreditation Program (NVLAP); NVLAP Code 600241-0 which is effective until 30 June 2026. This site has also been registered with Innovations, Science and Economic Development (ISED) department as was accepted under Appendix B, Phase 1 procedures of the APEC Tel MRA for Canadian recognition. ISED No.: 25346, effective until 30 June 2026.

Unified Compliance Laboratory has been assigned Registration Number 376708 by the FCC, MRA Designation Number US5037 and Conformity Assessment Number US0223 by ISED.

4 Test Equipment

4.1 Conducted Emissions at Mains Ports

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
EMI Receiver	AFJ	FFT3010	UCL-2500	11/18/2025	11/18/2026
LISN	AFJ	LS16C/10	UCL-2512	8/12/2025	8/12/2026
ISN	Teseq	ISN T800	UCL-2971	3/31/2025	3/31/2026
AC Power Source	Laplace Instruments	AC1000A	UCL-2857	N/A	N/A
Test Software	UCL	Revision 1	UCL-3107	N/A	N/A

Table 1: List of equipment used for Conducted Emissions Testing at Mains Port

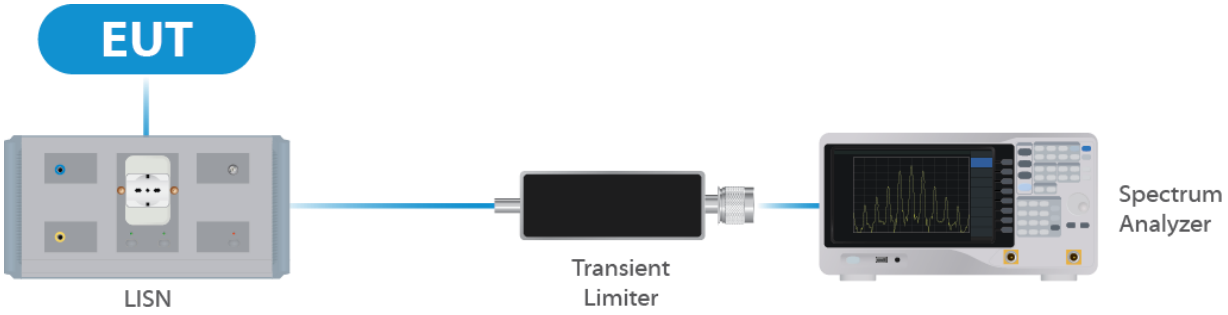


Figure 1: Conducted Emissions Test

4.2 Direct Connect at the Antenna Port Tests

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
Spectrum Analyzer	R&S	FSV40	UCL-2861	1/16/2025	4/16/2026
Signal Generator	R&S	SMB100A	UCL-2864	N/A	N/A
Vector Signal Generator	R&S	SMBV100A	UCL-2873	N/A	N/A
Switch Extension	R&S	OSP-B157WX	UCL-2867	4/28/2025	4/16/2026
Switch Extension	R&S	OSP-150W	UCL-2870	4/28/2025	4/16/2026
Test Software	R&S	EMC32	UCL-9442	--	--

Table 2: List of equipment used for Direct Connect at the Antenna Port

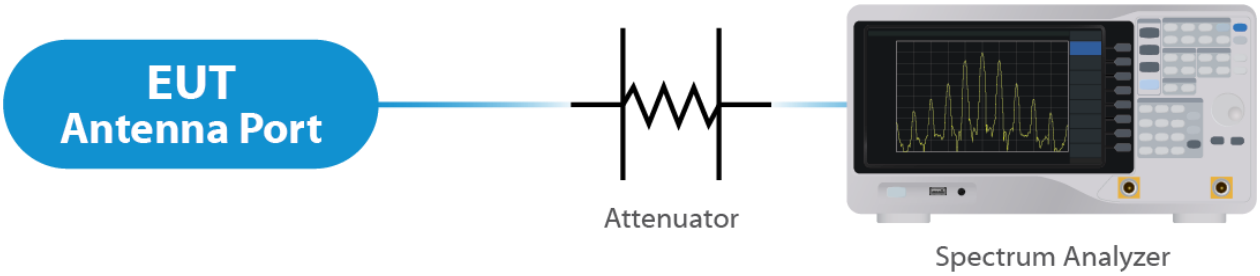


Figure 2: Direct Connect at the Antenna Port Test

4.3 Radiated Emissions

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
EMI Receiver	Keysight	N9038A	UCL-2778	12/18/2025	12/18/2026
Pre-Amplifier 9 kHz – 1 GHz	Sonoma Instruments	310N	UCL-2889	7/22/2025	7/22/2026
Broadband Antenna	ETS-Lindgren	3142E	UCL-9782	2/6/2025	2/6/2026
Double Ridge Horn Antenna	Scwarzbeck	BBHA 9120D	UCL-3065	4/2/2025	4/2/2027
Log Periodic	Scwarzbeck	STLP 9129	UCL-3068	2/11/2025	2/4/2027
10 - 40 GHz Horn Antenna	ETS-Lindgren	3116C	UCL-7209	6/6/2024	6/6/2026
1 – 18 GHz Amplifier	Com-Power	PAM 118A	UCL-3833	7/22/2025	7/22/2026
Test Software	Nexio	BatEMC	UCL-5253 & UCL-5249	N/A	N/A

Table 3: List of equipment used for Radiated Emissions

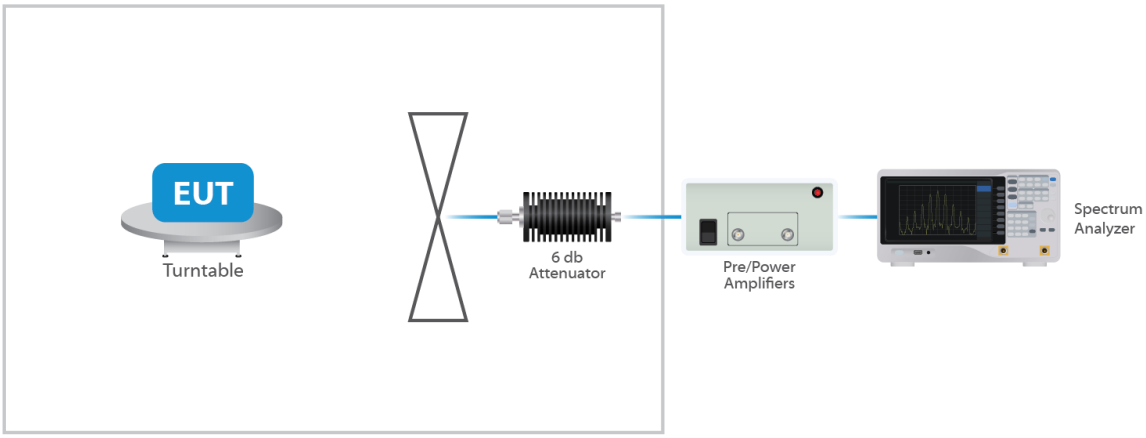


Figure 3: Radiated Emissions Test

4.4 Contention Base Protocol Tests

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
Spectrum Analyzer	Keysight	N9010B EXA	UCL-7069	5/20/2025	5/20/2026
Signal Generator	Keysight	MXG-B	UCL-6291	6/28/2024	6/22/2026
MIMO Test Set	Keysight	X8750A	UCL-7372	9/24/2024	10/07/2025

Table 4: List of equipment used for Direct Connect at the Antenna Port

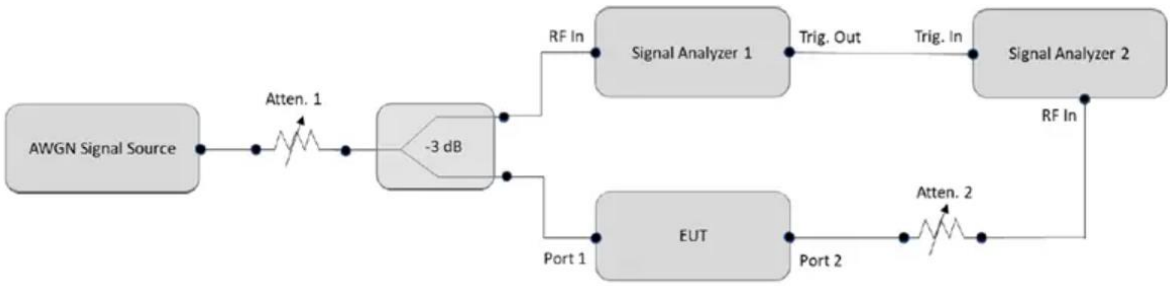


Figure 1. CBP conducted test setup diagram. Source: KDB 987594 D02 V01r01

Figure 4: Contention Base Protocol Test

4.5 Equipment Calibration

All applicable equipment is calibrated using either an independent calibration laboratory or Unified Compliance Laboratory personnel at intervals defined in ANSI C63.4:2014 following outlined calibration procedures. All measurement instrumentation is traceable to the National Institute of Standards and Technology (NIST). Supporting documentation relative to traceability is on file and is available for examination upon request.

4.6 Measurement Uncertainty

Test	Uncertainty (± dB)	Confidence (%)
Conducted Emissions	1.44	95
Radiated Emissions (9 kHz to 30 MHz)	2.50	95
Radiated Emissions (30 MHz to 1 GHz)	4.38	95
Radiated Emissions (1 GHz to 18 GHz)	4.37	95
Radiated Emissions (18 GHz to 40 GHz)	3.93	95
Direct Connect Tests	**K Factor**	**Value**
Emissions Bandwidth	2	2.0%
Output Power	2	1.0 dB
Peak Power Spectral Density	2	1.3 dB
Band Edge	2	0.8 dB
Transmitter Spurious Emissions	2	1.8 dB

5 Test Results

5.1 §15.203 Antenna Requirements

The EUT uses an integral internal patch antenna. Per the manufacturer, the Maximum gain of the antenna per chain is 11 dBi. This is an 802.11 device and utilizes CDD as described in KDB 662911 D01. The antenna is not user replaceable.

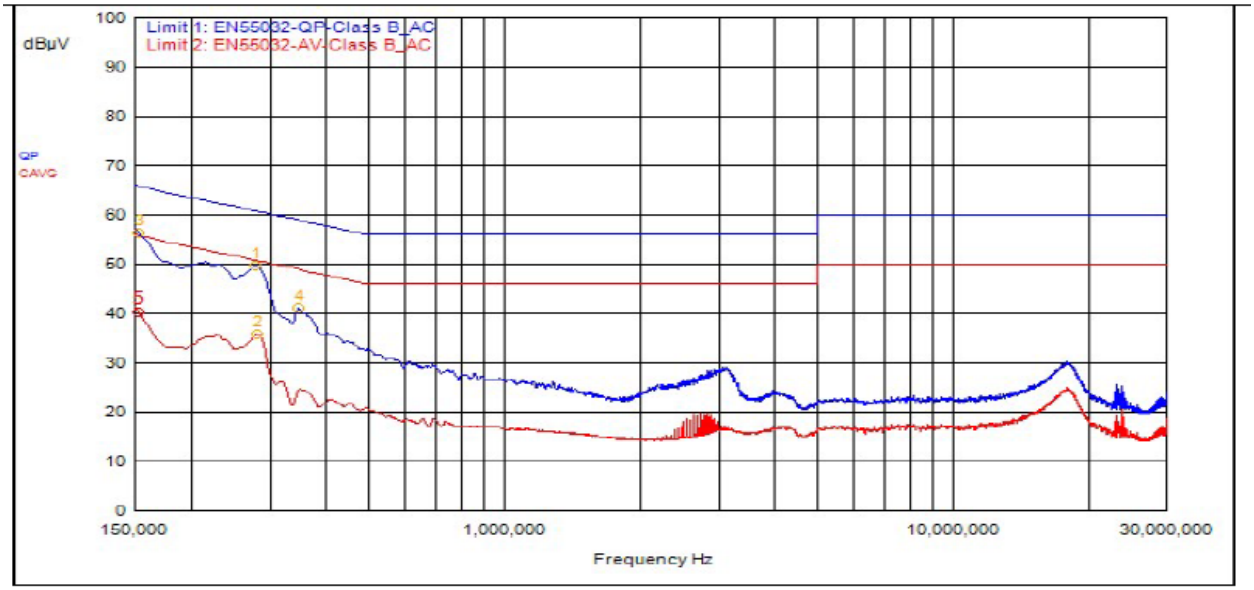
See Section 2.2 for directional gain calculation.

Results

The EUT complied with the specification

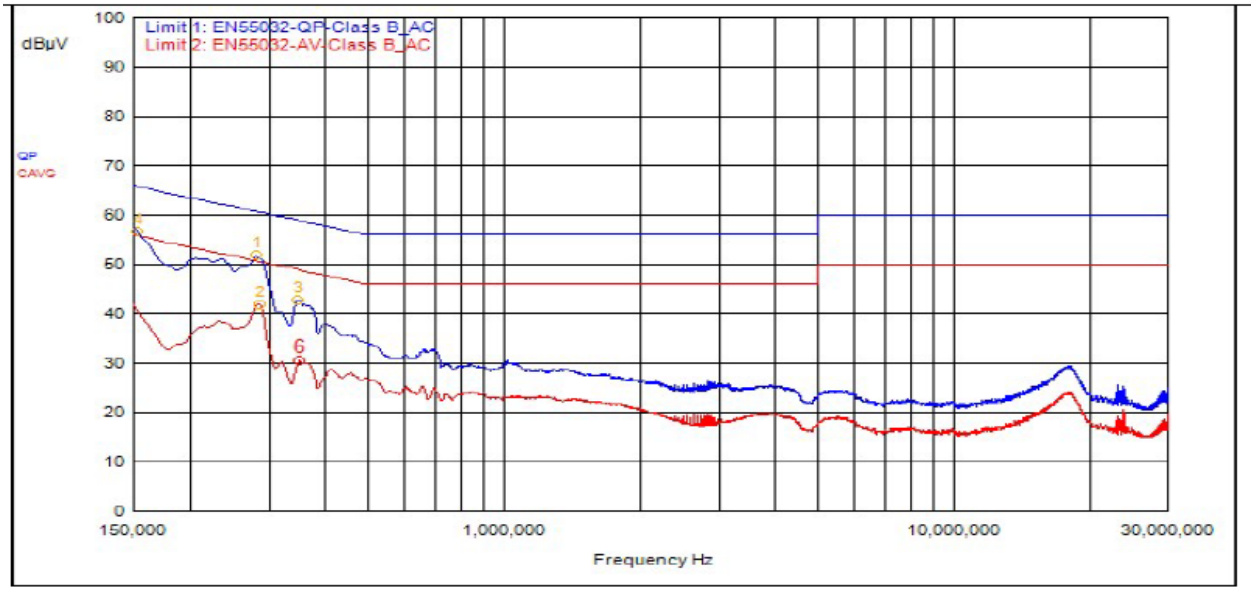
5.2 §15.207 Conducted Emissions at Mains Ports Data

5.2.1 Line



ID	Frequency	Probe	Cable	Atten.	Detector	Meter Read	Meas Level	Limit 1	Limit 1 Dist.	Limit 2	Limit 2 Dist.	P/F
MU	MHz	dB	dB	dB	Type	dBµV	dBµV	dBµV	dB	dBµV	dB	P/F
3	153,000kHz	9.49			QPeak	46.94	56.43	65.84	-9.41			
1	279,000kHz	9.48			QPeak	40.23	49.71	60.85	-11.13			
4	348,000kHz	9.48			QPeak	31.52	41.00	59.01	-18.01			
2	282,000kHz	9.48			C_AVG	26.42	35.90			50.76	-14.86	
5	153,000kHz	9.49			C_AVG	30.72	40.21			55.84	-15.63	

5.2.2 Neutral



ID	Frequency	Probe	Cable	Atten.	Detector	Meter Read	Meas Level	Limit 1	Limit 1 Dist.	Limit 2	Limit 2 Dist.	P/F
MU	MHz	dB	dB	dB	Type	dBµV	dBµV	dBµV	dB	dBµV	dB	P/F
1	282,000kHz	9.63			QPeak	42.18	51.81	60.76	-8.95			
4	153,000kHz	9.62			QPeak	47.18	56.80	65.84	-9.04			
3	348,000kHz	9.63			QPeak	33.03	42.66	59.01	-16.35			
2	285,000kHz	9.63			C_AVG	32.19	41.82			50.67	-8.85	
5	150,000kHz	9.62			C_AVG	32.45	42.07			56.00	-13.93	
6	351,000kHz	9.63			C_AVG	20.86	30.49			48.94	-18.45	

Result

The EUT complied with the specification limit.

5.3 §15.407(a) 26 dB Emissions Bandwidth

All chains were measured under the guidance of KDB 789033 Section II.C. and KDB 662911 D01. Please see associated annex for details on instrument settings.

Nominal BW (MHz)	Frequency (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
20	6895	19.2	23.3
20	7015	19.2	23.4
20	7115	19.2	23.8
40	6925	38.3	44.5
40	7005	38.3	44.5
40	7085	38.3	45.5
80	6945	78.0	86.0
80	7025	78.5	87.0
160	6985	159.0	168.0
320	6905	317.5	345.0

Result

All chains were tested and the highest bandwidth per chain is reported above. For the 320 MHz emissions bandwidth the 99% bandwidth was used. Please see Annex for all bandwidth measurements.

5.4 §15.407(a)(3) Maximum Average Output Power

All chains were measured and summed under the guidance of KDB 789033 Section II. E.2. and KDB 662911 D01. Please see associated annex for details on instrument settings.

See Section 2.2 for directional gain calculation.

The maximum average RF conducted output power measured for this device was 18.23 dBm or 66.53 mW. The limit is 30 dBm EIRP, or 1 Watt EIRP. The antenna has a gain of 11 dBi.

Nss>1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Total Summed Output Power* (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dBm)
EHT20	6895	Mcs0_Nss2	5	6.57	11	17.57	30	-12.43
EHT20	7015	Mcs0_Nss2	6	7.58	11	18.58	30	-11.42
EHT20	7115	Mcs0_Nss2	6	7.38	11	18.38	30	-11.62
EHT40	6925	Mcs0_Nss2	9	10.46	11	21.46	30	-8.54
EHT40	7005	Mcs0_Nss2	9	10.69	11	21.69	30	-8.31
EHT40	7085	Mcs0_Nss2	9	10.33	11	21.33	30	-8.67
EHT80	6945	Mcs0_Nss2	11	12.66	11	23.66	30	-6.34
EHT80	7025	Mcs0_Nss2	12	13.68	11	24.68	30	-5.32
EHT160	6985	Mcs0_Nss2	14	15.82	11	26.82	30	-3.18
EHT320	6905	Mcs0_Nss2	16	18.23	11	29.23	30	-0.77

Nss=1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Total Summed Output Power* (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dBm)
EHT20	6895	Mcs0_Nss1	2	4.38	11	15.38	30	-14.62
EHT20	7015	Mcs0_Nss1	2	3.86	11	14.86	30	-15.14
EHT20	7115	Mcs0_Nss1	2	3.80	11	14.80	30	-15.20
EHT40	6925	Mcs0_Nss1	6	7.34	11	18.34	30	-11.66
EHT40	7005	Mcs0_Nss1	6	7.50	11	18.50	30	-11.50
EHT40	7085	Mcs0_Nss1	6	7.47	11	18.47	30	-11.53
EHT80	6945	Mcs0_Nss1	8	9.46	11	20.46	30	-9.54
EHT80	7025	Mcs0_Nss1	9	10.46	11	21.46	30	-8.54
EHT160	6985	Mcs0_Nss1	11	12.81	11	23.81	30	-6.19
EHT320	6905	Mcs0_Nss1	13	15.19	11	26.19	30	-3.81

Result

In the configuration tested, the maximum average RF outpower was less than 1 watt EIRP; therefore, the EUT compiled with the requirements of the specification (see spectrum analyzer plots in attached Annex).

* Gated EIRP shown in the Annex is the conducted measurement.

5.5 §15.407(b)(7) Spurious Emissions

5.5.1 Radiated Spurious Emissions in the Restricted Bands of § 15.205

The EUT uses various power settings based on the channel in use. In order to reduce test time, the radiated spurious emissions at the lowest, middle, and highest channel were measured at the maximum power of TP26.

Correction Factor = Antenna Factor (dBi) + Cable Loss (dB) - Pre-Amplifier Gain (dB), and is added to the Receiver reading.

Result

All emissions in the restricted bands of § 15.205 met the limits specified in § 15.209; therefore, the EUT complies with the specification. See Annex for Conducted Band edge plots.

QuasiPeak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin	Azimuth (°)	Height	Pol.	Correction (dB)
62.86 MHz	27.17	30.0	-2.83	277	3.22	Vertical	-14.01
148.26 MHz	12.23	30.0	-17.77	229	2.93	Vertical	-17.34
149.42 MHz	24.98	30.0	-5.02	261	1.02	Vertical	-17.34
156.84 MHz	23.68	30.0	-6.32	351	1.02	Vertical	-17.02
179.27 MHz	23.58	30.0	-6.42	21	1.11	Vertical	-15.92
63.05 MHz	20.57	30.0	-9.43	22	4	Horizontal	-14.07
149.12 MHz	25.73	30.0	-4.27	346	3.46	Horizontal	-17.34
156.18 MHz	25.07	30.0	-4.93	335	3.95	Horizontal	-17.02

Table 5: Radiated Emissions 30 – 1000 MHz

Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
13.79 GHz	55.69	74.0	-18.31	148	2.291	Vertical	13.59
No significant emissions were observed in the horizontal orientation of the antenna.							

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
13.79 GHz	42.72	54.0	-11.28	148	2.291	Vertical	13.59
No significant emissions were observed in the horizontal orientation of the antenna.							

Table 6: Radiated Emissions 1 – 17 GHz at the Lowest Frequency

Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
14.03 GHz	53.78	74.0	-20.22	174	2.87	Vertical	13.98
14.60 GHz	55.91	74.0	-18.09	56	2.041	Horizontal	16.25

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
14.03 GHz	35.25	54.0	-18.75	174	2.87	Vertical	13.98
14.60 GHz	37.11	54.0	-16.89	56	2.041	Horizontal	16.25

Table 7: Radiated Emissions 1 – 17 GHz at the Middle Frequency

Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
14.68 GHz	55.16	74.0	-18.84	44	4	Vertical	16.05
16.22 GHz	54.14	74.0	-19.86	81	3.164	Vertical	15.82
14.68 GHz	54.76	74.0	-19.24	102	3.729	Horizontal	16.05

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
14.68 GHz	36.86	54.0	-17.14	44	4	Vertical	16.05
16.22 GHz	36.25	54.0	-17.75	81	3.164	Vertical	15.82
14.68 GHz	36.92	54.0	-17.08	102	3.729	Horizontal	16.05

Table 8: Radiated Emissions 1 – 17 GHz at the Highest Frequency

Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
20.69 GHz	57.74	74.0	-16.26	66	Vertical	0.65
27.60 GHz	63.44	74.0	-10.56	8	Vertical	3.58
34.47 GHz	60.77	74.0	-13.23	66	Vertical	3.86
36.57 GHz	57.49	74.0	-16.51	87	Vertical	6.72
39.50 GHz	59.51	74.0	-14.49	188	Vertical	6.98
20.72 GHz	53.15	74.0	-20.85	20	Horizontal	0.93
27.58 GHz	63.48	74.0	-10.52	2	Horizontal	3.33
34.48 GHz	54.83	74.0	-19.17	15	Horizontal	3.84
35.54 GHz	56.42	74.0	-17.58	209	Horizontal	5.91
39.40 GHz	58.07	74.0	-15.93	162	Horizontal	6.43

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
20.69 GHz	44.02	54.0	-9.98	66	Vertical	0.65
27.60 GHz	47.74	54.0	-6.26	8	Vertical	3.58
34.47 GHz	46.87	54.0	-7.13	66	Vertical	3.86
36.57 GHz	40.78	54.0	-13.22	87	Vertical	6.72
39.50 GHz	43.96	54.0	-10.04	188	Vertical	6.98
20.72 GHz	42.54	54.0	-11.46	20	Horizontal	0.93
27.58 GHz	49.31	54.0	-4.69	2	Horizontal	3.33
34.48 GHz	39.97	54.0	-14.03	15	Horizontal	3.84
35.54 GHz	40.21	54.0	-13.79	209	Horizontal	5.91
39.40 GHz	42.41	54.0	-11.59	162	Horizontal	6.43

Table 9: Radiated Emissions 17 – 40 GHz at the Lowest Frequency (worse case)

5.6 §15.407(a) Maximum Power Spectral Density

All chains were measured and summed under the guidance of KDB 789033 Section II. F. and KDB 662911 D01. Please see associated annex for details on instrument settings.

The maximum average power spectral density conducted from the intentional radiator of the antenna shall not be greater than 5 dBm EIRP in any 1 MHz band during any time interval of continuous transmission.

See Section 2.2 for directional gain calculation.

Results of this testing are summarized.

Nss>1

Modulation (BW)	Freq. (MHz)	Data Rate	TP Setting	Total Sum PSD EIRP (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dBm)
EHT20	6895	Mcs0_Nss2	5	-6.98	11	-6	-0.98
EHT20	7015	Mcs0_Nss2	6	-6.37	11	-6	-0.37
EHT20	7115	Mcs0_Nss2	6	-6.20	11	-6	-0.2
EHT40	6925	Mcs0_Nss2	9	-6.32	11	-6	-0.32
EHT40	7005	Mcs0_Nss2	9	-6.79	11	-6	-0.79
EHT40	7085	Mcs0_Nss2	9	-6.49	11	-6	-0.49
EHT80	6945	Mcs0_Nss2	11	-6.94	11	-6	-0.94
EHT80	7025	Mcs0_Nss2	12	-6.36	11	-6	-0.36
EHT160	6985	Mcs0_Nss2	14	-6.61	11	-6	-0.61
EHT320	6905	Mcs0_Nss2	16	-6.96	11	-6	-0.96

Nss=1

Modulation (BW)	Freq. (MHz)	Data Rate	TP Setting	Total Sum PSD EIRP (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dBm)
EHT20	6895	Mcs0_Nss1	2	-9.17	11	-9.01	-0.16
EHT20	7015	Mcs0_Nss1	2	-10.39	11	-9.01	-1.38
EHT20	7115	Mcs0_Nss1	2	-9.93	11	-9.01	-0.92
EHT40	6925	Mcs0_Nss1	6	-9.34	11	-9.01	-0.33
EHT40	7005	Mcs0_Nss1	6	-9.72	11	-9.01	-0.71
EHT40	7085	Mcs0_Nss1	6	-9.39	11	-9.01	-0.38
EHT80	6945	Mcs0_Nss1	8	-10.02	11	-9.01	-1.01
EHT80	7025	Mcs0_Nss1	9	-9.79	11	-9.01	-0.78
EHT160	6985	Mcs0_Nss1	11	-9.52	11	-9.01	-0.51
EHT320	6905	Mcs0_Nss1	13	-9.92	11	-9.01	-0.91

Result

The maximum average power spectral density was less than the limit of 5 dBm EIRP (adjusted limit of -6 dBm); therefore, the EUT complies with the specification.

5.7 §15.407(d) Contention Based Protocol

This product was tested and found to be compliant with the requirements of Contention-based Protocol as specified in FCC Part 15.407 and KDB 987594 D02.

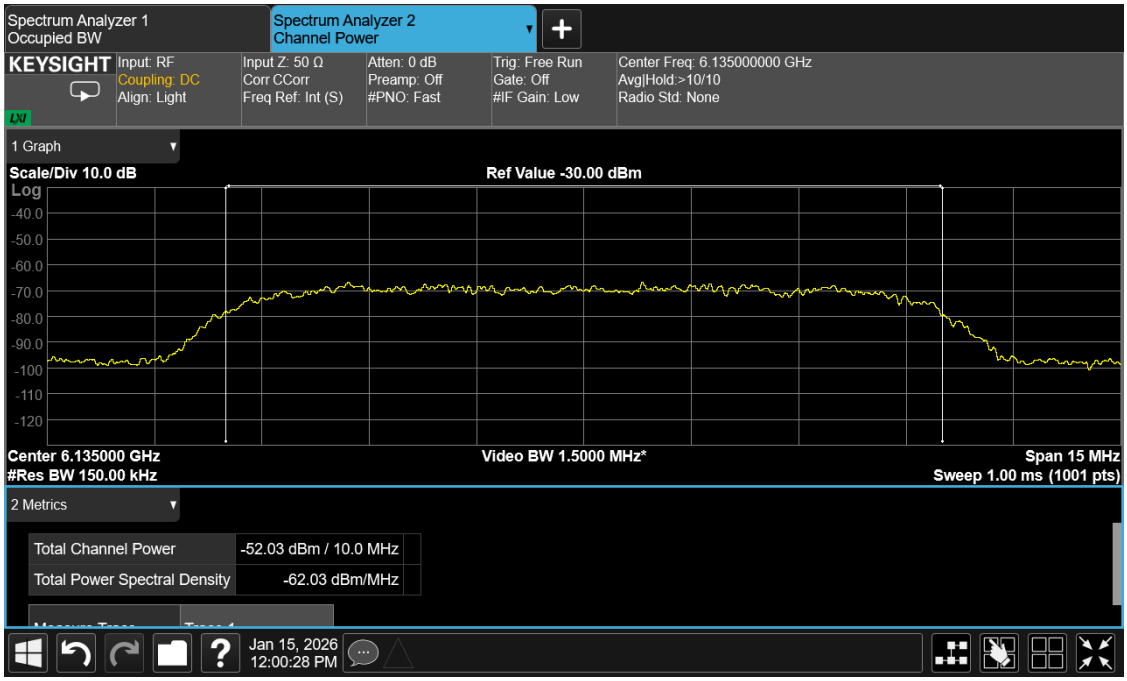
Initially the test setup was connected directly to the signal source with all splitters (splitters terminated with a 50-ohm loads on unused ports) and cables in place to verify the AWGN signal is 10MHz wide at a signal level of less than or equal to -62dBm and for conducted measurements the threshold was adjusted for an antenna gain of 11 dBi. A threshold of -62+G(dBi) - 1 = -52 was used for to account for uncertainty. The level at the signal generator required to achieve the required signal level at the DUT was recorded for use during testing.

The DUT was connected as shown in figure 4 above and set to transmit at a constant duty cycle at each frequency and bandwidth noted in the table below and verified to be communicating with the companion device as intended.

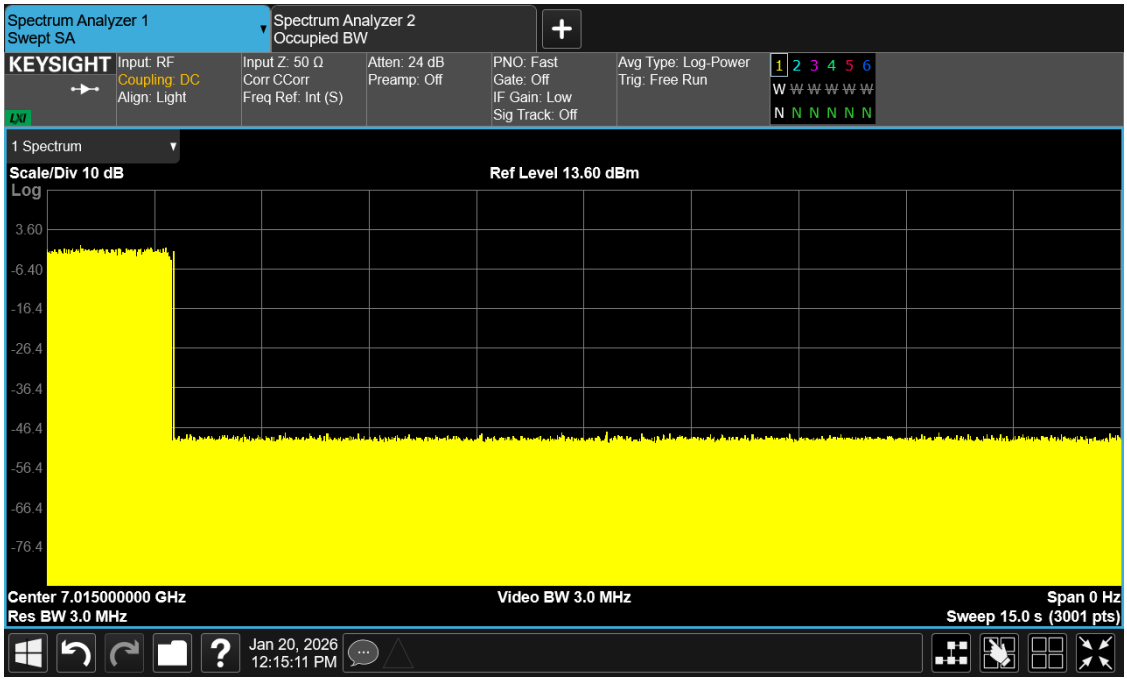
Starting at the levels established above, the AWGN signal was introduced to the DUT and increased to determine a threshold level at where the DUT will terminate with at least a 90% detection rate. The level at the DUT, which the 90% detection rate was achieved was recorded as the “Sensitivity Level” below.

Any measurement below the sensitivity level will result in the Tx minimal and any further measurement below the sensitivity level will result in Tx on.

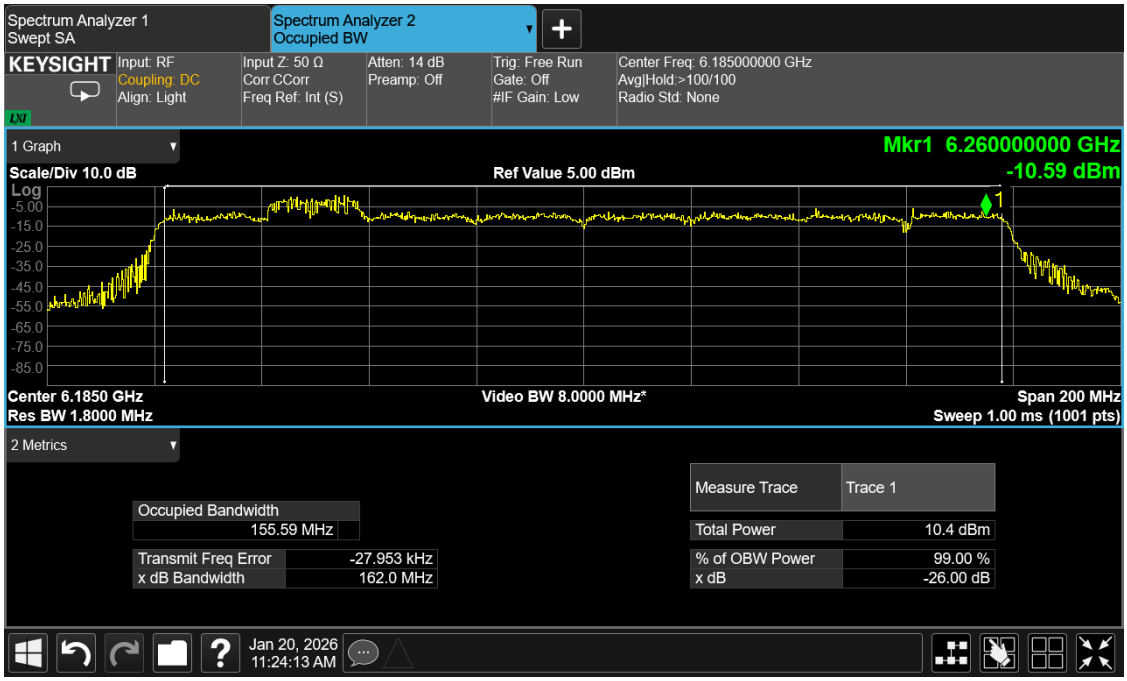
Testing shall be repeated at each applicable channel and bandwidth as noted in Table 1 of KDB 987594 D02.



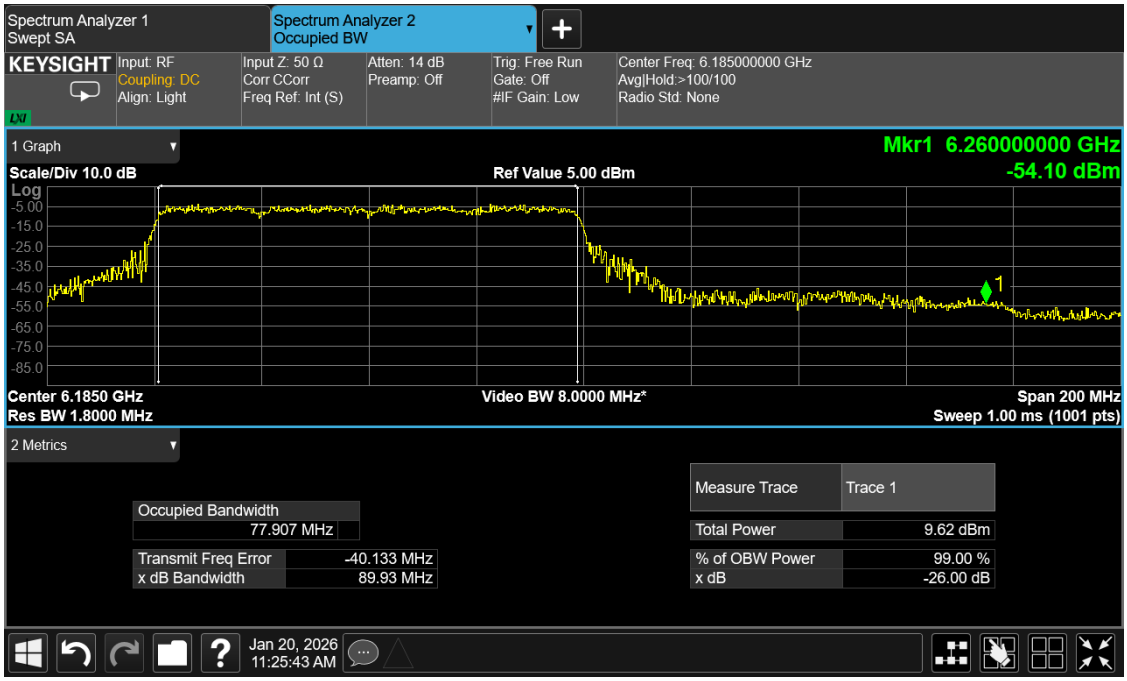
Plot 1: AWGN Signal BW/Power Details



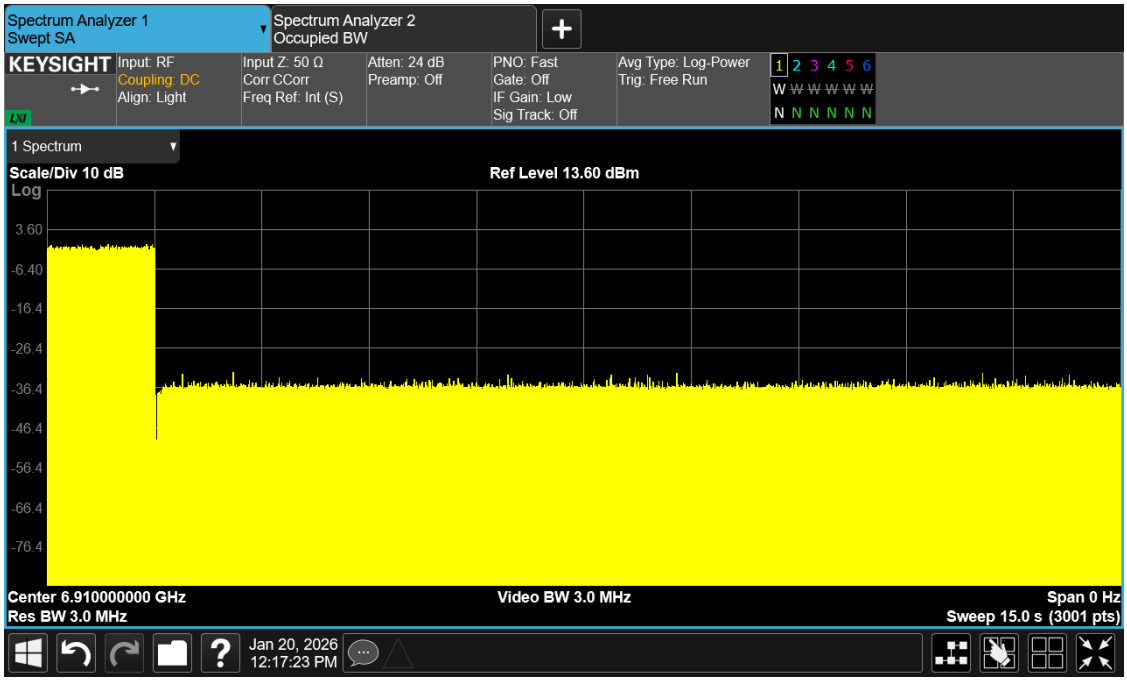
Plot 2: AWGN Signal Detection 20MHz



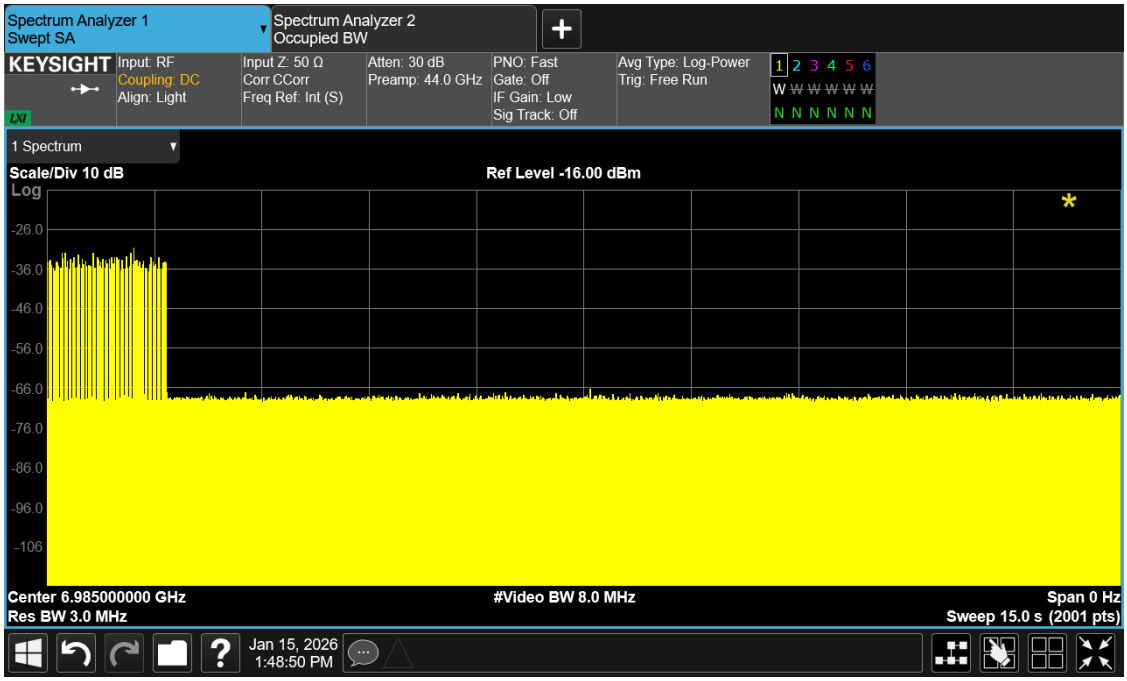
Plot 3: EUT 160MHz Bandwidth



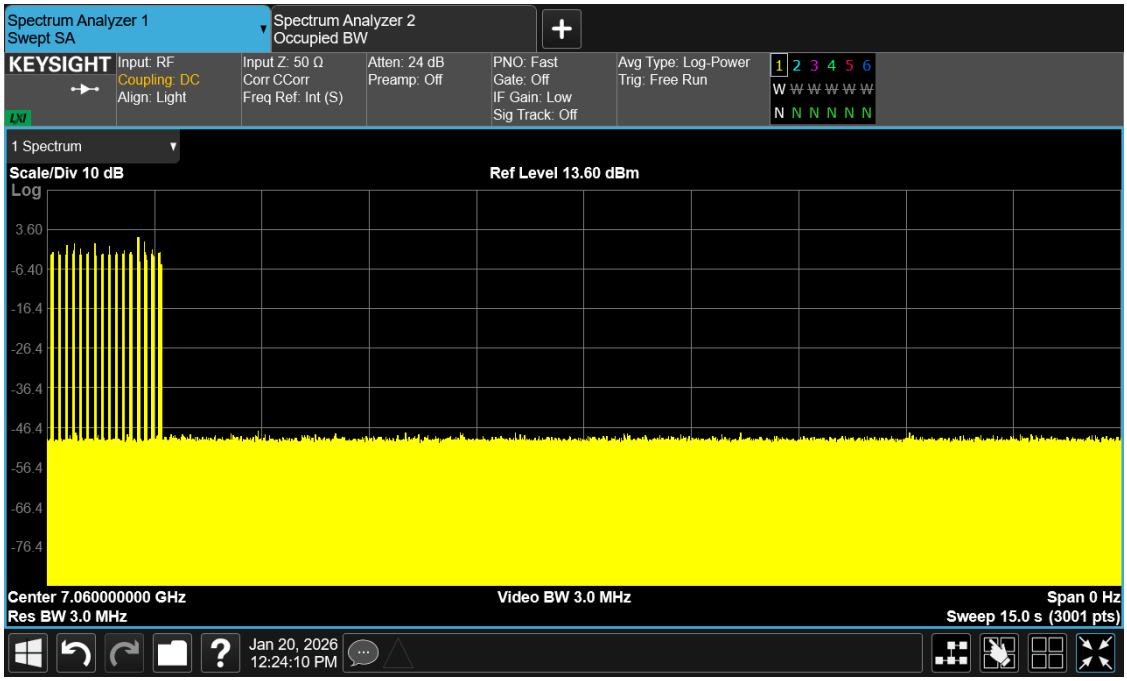
Plot 4: EUT 160MHz Bandwidth Reduction



Plot 5: AWGN Signal Detection 160MHz



Plot 6: AWGN Signal Detection 160MHz



Plot 7: AWGN Signal Detection 160MHz

Contention Based Protocol 987594 D02 U-NNI 6 GHz EMC Measurement

Band	BW_{EUT} (MHz)	F_{c1}	F_{c2}	AWGN Power (dBm)	Adjusted Power (dBm)	Limit (dBm)	Margin (dB)	Detection >90%
UNII-5 5.925 - 6.425GHz	20	6135	6135	-42	-53.082	-52	-1.082	Pass
	160	6185	6110	-42	-53.082	-52	-1.082	Pass
			6185	-53	-64.082	-52	-12.082	Pass
			6260	-42	-53.082	-52	-1.082	Pass
	320	6265	6110	-48	-59.082	-52	-7.082	Pass
			6265	-55	-66.082	-52	-14.082	Pass
			6410	-53	-64.082	-52	-12.082	Pass
UNII-6 6.425 - 6.525GHz	20	6455	6455	-49	-60.082	-52	-8.082	Pass
	160	6505	6430	-51	-62.082	-52	-10.082	Pass
			6505	-51	-62.082	-52	-10.082	Pass
			6580	-53	-64.082	-52	-12.082	Pass
UN1I-7 6.525 - 6.875GHz	20	6695	6695	-55	-66.082	-52	-14.082	Pass
	160	6665	6595	-55	-66.082	-52	-14.082	Pass
			6665	-48	-59.082	-52	-7.082	Pass
			6740	-41	-52.082	-52	-0.082	Pass
	320	6745	6590	-48	-59.082	-52	-7.082	Pass
			6745	-45	-56.082	-52	-4.082	Pass
			6890	-45	-56.082	-52	-4.082	Pass
UNII-8 6.875 - 7.125GHz	20	7015	7015	-55	-66.082	-52	-14.082	Pass
	160	6985	6910	-53	-64.082	-52	-12.082	Pass
			6985	-53	-64.082	-52	-12.082	Pass
			7060	-53	-64.082	-52	-12.082	Pass

Min. Antenna Gain (dBi)	11
Max Threshold Level (TL)	-52

Ports	Path Loss (dBm)
FJ3,FJ4	-11.082

AWGN Clock
23

Table 10: Trial Table

CBP Path Loss is – 11.082 dB

Detection Level = Injected AWGN Power (dBm) – Antenna Gain (dbi) + Path Loss (dB)

Result

The EUT complies with the specification.

-- End of Test Report –