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	TR10694_02
Date of Tests	30 December 2025; 2-5 January 2026
Report Issue Date	3 February 2026

Test Specification	Applicant
47 CFR FCC Part 15, Subpart E RSS-247, Issue 4 (July 2025)	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

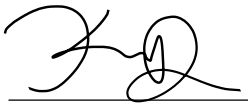
This report has been prepared by Unified Compliance Laboratory (UCL) to document compliance of the device described below with the requirement of Federal Communication Commissions (FCC) Part 15, Subpart E. This report may be reproduced in full. Partial reproduction of this report may only be made with 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

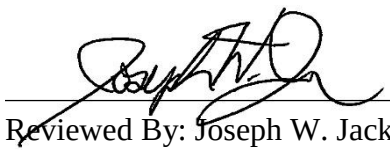
On this 3rd day of February 2026, I individually and for Unified Compliance Laboratory certify that the statements made in this engineering report are true, complete and correct to the best of my knowledge and are made in good faith. Unified Compliance laboratory is not responsible for incorrect information 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: Kimberly DeBole



Reviewed By: Joseph W. Jackson

Revision History		
Revision	**Description**	**Date**
01	Original Report Release	3 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 dB + 11 dBi = 14.01 dBi.

The U-AirWire uses Transmit Power (TP) Control protocol and is included in the power tables of Section 5.4.

Band	Modulation Bandwidth	Frequency (MHz)
UNII-2A	20 MHz	5260, 5280, 5300, 5320
	40 MHz	5270, 5290, 5310
	80 MHz	5290
	160 MHz	5250
UNII-2C	20 MHz	5500, 5600*, 5710
	40 MHz	5510, 5590, 5710
	80 MHz	5530, 5610*, 5690
	160 MHz	5570
* Frequency not applicable in Canada		

Table 1: UNII-2A and UNII-2C Channel Settings

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.

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 - 23.2 °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

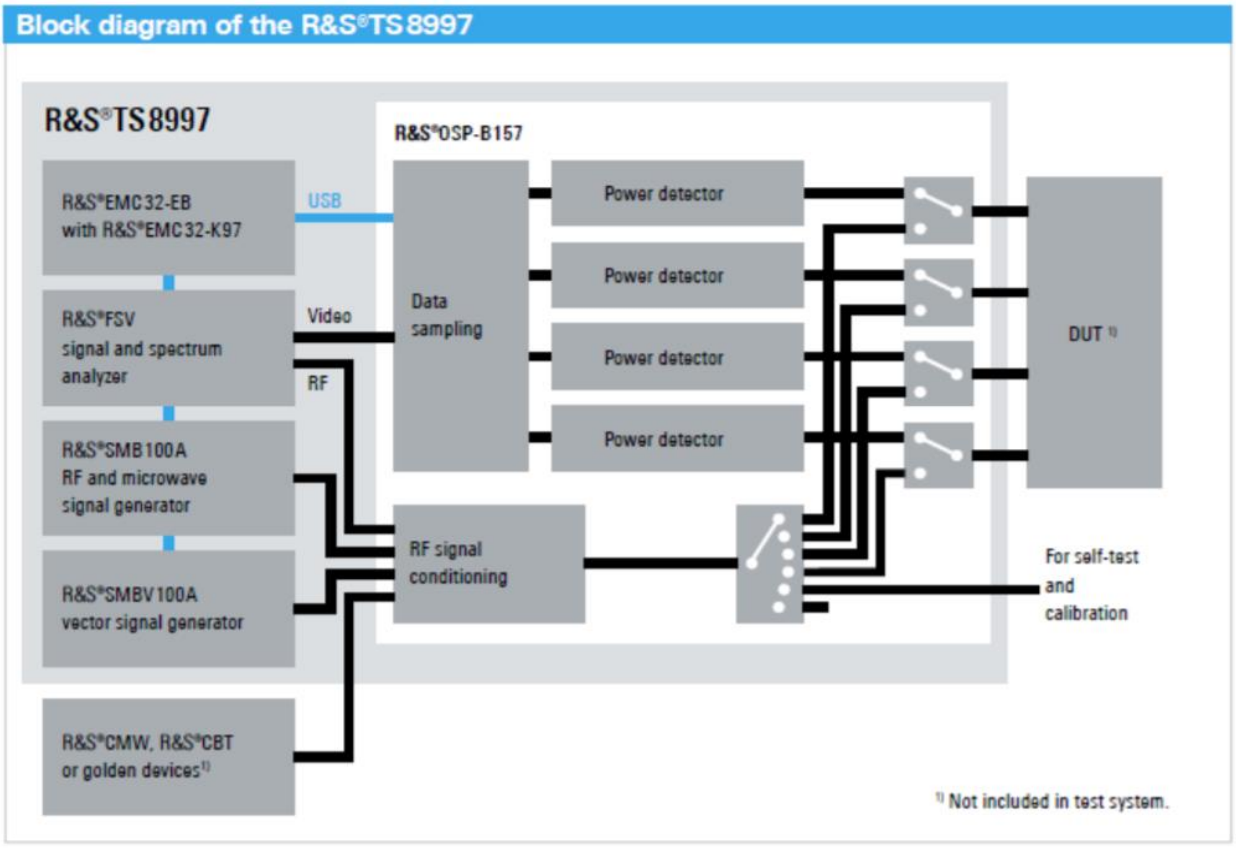


Diagram 1: Test Configuration Block Diagram

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-247 §6.2.2	Bandwidth Requirement	5260 to 5720	Compliant
15.407(a)	RSS-247 §6.2.2, §6.2.3	Peak Output Power	5260 to 5720	Compliant
15.407(b)	RSS-247 §6.2.2, §6.2.3	Antenna Conducted Spurious Emissions	0.009 to 40000	N/A Note[1]
15.209	RSS-247 §6.2.2, §6.2.3	Radiated Spurious Emissions	0.009 to 40000	Compliant
15.407(a)	RSS-247 §6.2.2, §6.2.3	Peak Power Spectral Density	5260 to 5720	Compliant
15.407(h)	RSS-247 §6.3	DFS Requirements	5260 to 5720	Compliant

The testing was performed according to the procedures in ANSI C63.10-2020/Cor 1-2021, KDB 558074 and 47 CFR Part 15. Where applicable, KDB 662911 was followed to sum required measurements.
Note [1]: 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	AFJ	AFJ FFT3010	UCL-3107	N/A	N/A

Table 2: List of equipment used for Conducted Emissions Testing at Mains Port

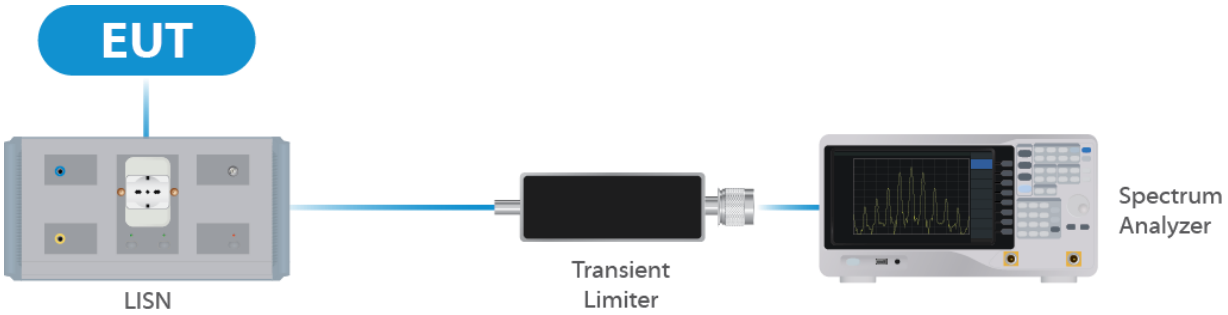


Figure 1: Conducted Emissions Test

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

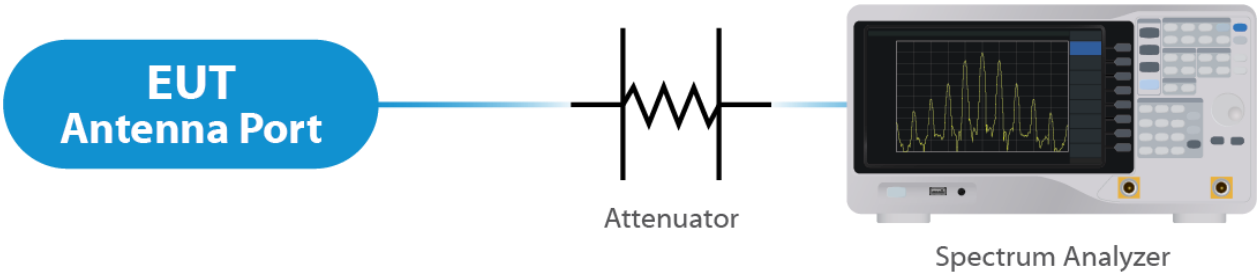


Figure 2: Direct Connect at the Antenna Port Test

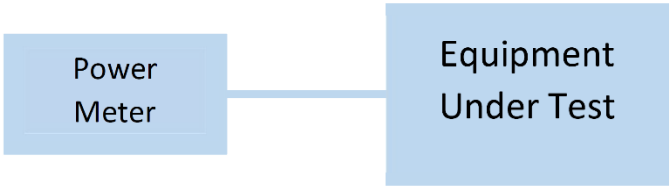


Figure 3: Output Power Measurement

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 4: List of equipment used for Radiated Emissions

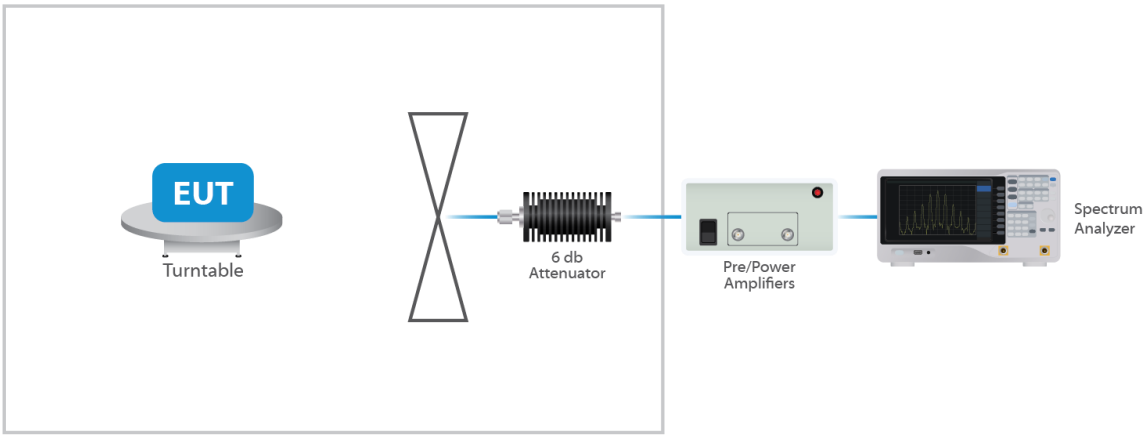


Figure 4: Radiated Emissions Test

4.4 DFS Testing

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
Vector Signal Generator	R&S	SMBV100A	UCL-2873	N/A	N/A
Spectrum Analyzer	Keysight	N9010B	UCL-7069	5/20/2025	5/20/2026

4.4.1 Client Test Set Up

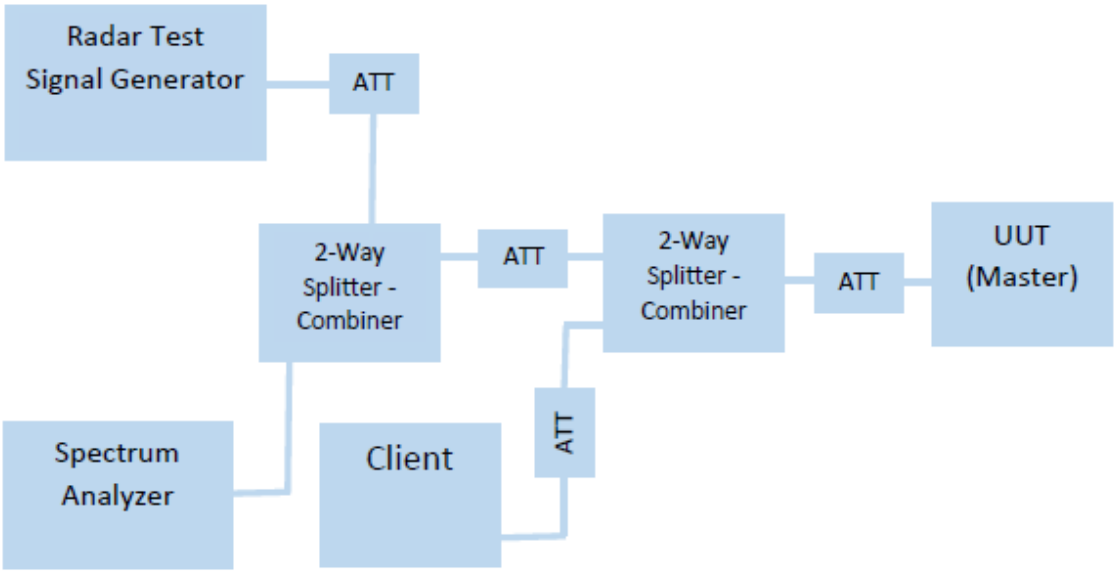


Figure 5: DFS Test Set Up – Client

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 a mounted 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.

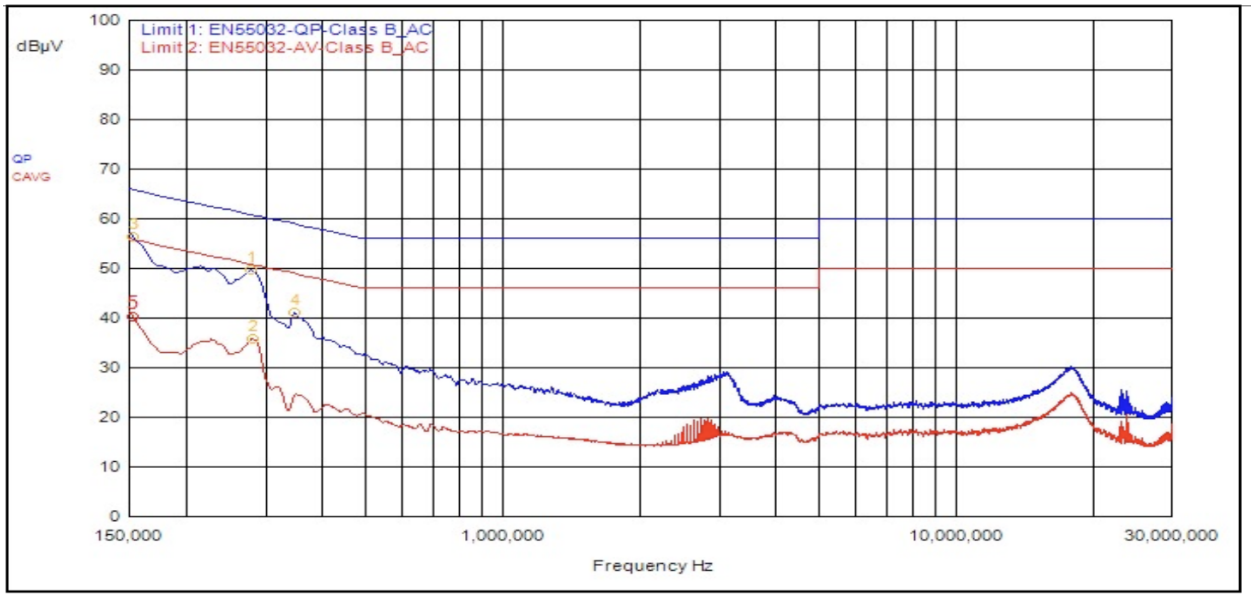
See Section 2.2 for directional gain calculation.

Results

The EUT complied with the specification

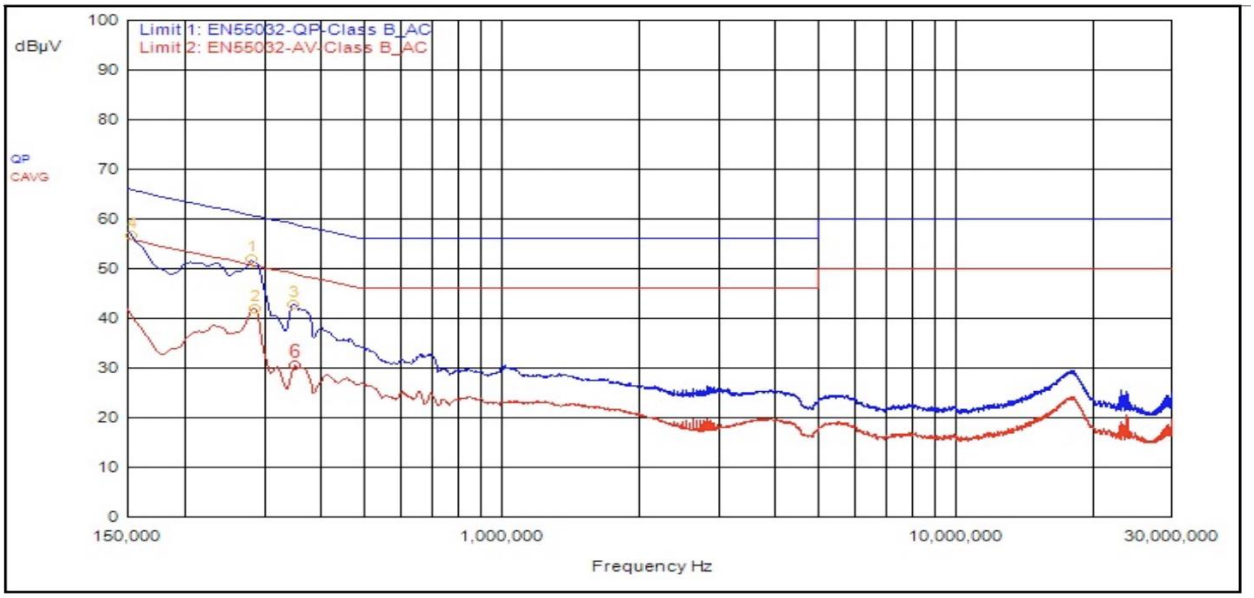
5.2 §15.207 Conducted Emissions at Mains Ports Data

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.

5.3.1 UNII-2A

Bandwidth	Frequency (MHz)	99% Bandwidth (MHz)	Emissions 26 dB Bandwidth (MHz)
OFDM20	5260	16.93	22.65
OFDM20	5280	16.93	22.95
OFDM20	5320	16.93	22.65
EHT20	5260	19.17	22.35
EHT20	5280	19.18	22.80
EHT20	5320	19.18	22.80
EHT40	5270	38.25	44.25
EHT40	5310	38.00	44.75
EHT80	5290	78.50	88.50
EHT160	5250	157.00	176.00

5.3.2 UNII-2C

Bandwidth	Frequency (MHz)	99% Bandwidth (MHz)	Emissions 26 dB Bandwidth (MHz)
OFDM20	5500	17.22	22.65
OFDM20	5600	17.23	23.10
OFDM20	5720	16.93	22.65
EHT20	5500	19.33	23.25
EHT20	5600	19.17	23.40
EHT20	5720	19.18	22.65
EHT40	5510	38.50	43.50
EHT40	5590	38.50	44.75
EHT40	5710	38.50	44.75
EHT80	5530	79.00	86.50
EHT80	5610	79.00	88.00
EHT80	5690	79.00	87.00
EHT160	5570	157.75	175.00
EHT240	5610	237.00	320.00

Result

All chains were tested and the highest bandwidth per chain is reported above. Please see Annex for all bandwidth measurements.

5.4 §15.407(a)(2) 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 18.91 dBm or 77.8 mW. The limit is 24 dBm or 250 mW when using antennas with 6 dBi or less gain. The antenna has a maximum gain of 11 dBi.

5.4.1 UNII-2A

Nss>1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Total Summed Output Power* (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dBm)
OFDM 20	5260	Mcs0_Nss2	16	17.77	11	28.77	30	-1.23
OFDM 20	5280	Mcs0_Nss2	16	17.82	11	28.82	30	-1.18
OFDM 20	5320	Mcs0_Nss2	16	18.10	11	29.10	30	-0.90
EHT 20	5260	Mcs0_Nss2	17	18.85	11	29.85	30	-0.90
EHT 20	5280	Mcs0_Nss2	17	18.91	11	29.91	30	-0.09
EHT 20	5320	Mcs0_Nss2	16	18.26	11	29.26	30	-0.74
EHT 40	5270	Mcs0_Nss2	17	18.67	11	29.67	30	-0.33
EHT 40	5310	Mcs0_Nss2	17	18.91	11	29.91	30	-0.09
EHT 80	5290	Mcs0_Nss2	17	18.70	11	29.70	30	-0.30
EHT 160	5250	Mcs0_Nss2	17	18.75	11	29.75	30	-0.25

Nss=1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Total Summed Output Power* (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dBm)
OFDM 20	5260	Mcs0_Nss1	8	9.77	11	20.77	30	-9.23
OFDM 20	5280	Mcs0_Nss1	8	9.82	11	20.82	30	-9.18
OFDM 20	5320	Mcs0_Nss1	8	10.10	11	21.10	30	-8.90
EHT 20	5260	Mcs0_Nss1	9	10.85	11	21.85	30	-8.15
EHT 20	5280	Mcs0_Nss1	9	10.91	11	21.91	30	-8.09
EHT 20	5320	Mcs0_Nss1	9	11.26	11	22.26	30	-7.74
EHT 40	5270	Mcs0_Nss1	12	13.67	11	24.67	30	-5.33
EHT 40	5310	Mcs0_Nss1	12	13.91	11	24.91	30	-5.09
EHT 80	5290	Mcs0_Nss1	15	16.70	11	27.70	30	-2.30
EHT 160	5250	Mcs0_Nss1	17	18.75	11	29.75	30	-0.25

5.4.2 UNII-2C

Nss>1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Total Summed Output Power* (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dBm)
OFDM 20	5500	Mcs0_Nss2	17	18.11	11	29.11	30	-0.89
OFDM 20	5600	Mcs0_Nss2	15	17.19	11	28.19	30	-1.81
OFDM 20	5720	Mcs0_Nss2	16	17.52	11	28.52	30	-1.48
EHT 20	5500	Mcs0_Nss2	17	17.04	11	28.04	30	-1.96
EHT 20	5600	Mcs0_Nss2	16	18.28	11	29.28	30	-0.72
EHT 20	5720	Mcs0_Nss2	17	18.60	11	29.60	30	-0.40
EHT 40	5510	Mcs0_Nss2	17	18.03	11	29.03	30	-0.97
EHT 40	5590	Mcs0_Nss2	16	18.14	11	29.14	30	-0.86
EHT 40	5710	Mcs0_Nss2	18	18.81	11	29.81	30	-0.19
EHT 80	5530	Mcs0_Nss2	17	18.41	11	29.41	30	-0.59
EHT 80	5610	Mcs0_Nss2	17	18.71	11	29.71	30	-0.29
EHT 80	5690	Mcs0_Nss2	18	18.69	11	29.69	30	-0.31
EHT 160	5570	Mcs0_Nss2	17	18.68	11	29.68	30	-0.32
EHT 240	5610	Mcs0_Nss2	15	15.90	11	26.90	30	-0.10

Nss=1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Total Summed Output Power* (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dBm)
OFDM 20	5500	Mcs0_Nss1	9	10.11	11	21.11	30	-8.89
OFDM 20	5600	Mcs0_Nss1	7	9.19	11	20.19	30	-9.81
OFDM 20	5720	Mcs0_Nss1	8	9.52	11	20.52	30	-9.48
EHT 20	5500	Mcs0_Nss1	9	9.04	11	20.04	30	-9.96
EHT 20	5600	Mcs0_Nss1	8	10.28	11	21.28	30	-8.72
EHT 20	5720	Mcs0_Nss1	9	10.60	11	21.60	30	-8.40
EHT 40	5510	Mcs0_Nss1	12	13.03	11	24.03	30	-5.97
EHT 40	5590	Mcs0_Nss1	11	13.14	11	24.14	30	-5.86
EHT 40	5710	Mcs0_Nss1	13	13.81	11	24.81	30	-5.19
EHT 80	5530	Mcs0_Nss1	14	15.41	11	26.41	30	-3.59
EHT 80	5610	Mcs0_Nss1	14	15.71	11	26.71	30	-3.29
EHT 80	5690	Mcs0_Nss1	16	16.69	11	27.69	30	-2.31
EHT 160	5570	Mcs0_Nss1	17	18.68	11	29.68	30	-0.32
EHT 240	5610	Mcs0_Nss1	15	15.90	11	26.90	30	-0.10

Result

In the configuration tested, the maximum average RF output power was less than 0.250 watt; therefore, the EUT complied with the requirements of the specification.

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

5.5 §15.407(b) Spurious Emissions

5.5.1 Radiated Spurious Emissions in the Restricted Bands of § 15.205

The frequency range from the lowest frequency generated or used in the device to the tenth harmonic of the highest fundamental emissions was investigated to measure any radiated emissions in the restricted bands. For frequencies above 18.0 GHz. The emissions in the restricted bans must meet the limits specified in § 15.209. Conducted measurement results are included in the Annex. Radiated data with the EUT transmitting into a load is included below. All emissions between the required frequencies were investigated, the following plots represent the worst case. The "fail" is the transmitted signal exceeding the spurious limit.

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

5.5.2 UNII-2A

Frequency	SR #	Level (dBµV/m)	Limit (dBµV/m)	Margin	Azimuth (°)	Height	Pol.	Correction (dB)
62.855 MHz	QP	27.167	30	-2.833	277	3.22	Vertical	-14.008
148.26 MHz	QP	12.233	30	-17.767	229	2.93	Vertical	-17.343
149.42 MHz	QP	24.983	30	-5.017	261	1.02	Vertical	-17.339
156.84 MHz	QP	23.679	30	-6.321	351	1.02	Vertical	-17.018
179.27 MHz	QP	23.584	30	-6.416	21	1.11	Vertical	-15.915
63.051 MHz	QP	20.574	30	-9.426	22	4	Horizontal	-14.072
149.12 MHz	QP	25.729	30	-4.271	346	3.46	Horizontal	-17.34
156.18 MHz	QP	25.068	30	-4.932	335	3.95	Horizontal	-17.02

Graph 1: Radiated Emissions within 30MHz - 1GHz

Frequency	SR #	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
10.5596597 GHz	Peak	53.024	74	-20.976	10	4	Vertical	12.411
15.8508737 GHz	Peak	59.356	74	-14.644	61	2.613	Vertical	13.728
10.5596597 GHz	AVG	34.379	54	-19.621	10	4	Vertical	12.411
15.8508737 GHz	AVG	42.626	54	-11.374	61	2.613	Vertical	13.728
10.5482211 GHz	Peak	52.949	74	-21.051	133	3.438	Horizontal	12.386
15.8335007 GHz	Peak	62.295	74	-11.705	158	1.703	Horizontal	13.588
10.5482211 GHz	AVG	36.281	54	-17.719	133	3.438	Horizontal	12.386
15.8335007 GHz	AVG	47.139	54	-6.861	158	1.703	Horizontal	13.588

Graph 2: 1 GHz – 16 GHz

Frequency	SR #	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
16.8959967 GHz	Peak	54.004	74	-19.996	347	Vertical	1.797
21.1345607 GHz	Peak	57.437	74	-16.563	330	Vertical	1.853

Frequency	SR #	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
23.8202374 GHz	Peak	53.304	74	-20.696	90	Vertical	1.548
16.8959967 GHz	AVG	44.327	54	-9.673	347	Vertical	1.797
21.1345607 GHz	AVG	41.693	54	-12.307	330	Vertical	1.853
23.8202374 GHz	AVG	41.877	54	-12.123	90	Vertical	1.548
21.1044414 GHz	Peak	53.179	74	-20.821	49	Horizontal	1.817
21.1044414 GHz	AVG	39.265	54	-14.735	49	Horizontal	1.817

Graph 3: 16 GHz – 40 GHz

5.5.3 UNII-2C

Frequency	SR #	Level (dBµV/m)	Limit (dBµV/m)	Margin	Azimuth (°)	Height	Pol.	Correction (dB)
62.855 MHz	QP	27.167	30	-2.833	277	3.22	Vertical	-14.008
148.26 MHz	QP	12.233	30	-17.767	229	2.93	Vertical	-17.343
149.42 MHz	QP	24.983	30	-5.017	261	1.02	Vertical	-17.339
156.84 MHz	QP	23.679	30	-6.321	351	1.02	Vertical	-17.018
179.27 MHz	QP	23.584	30	-6.416	21	1.11	Vertical	-15.915
63.051 MHz	QP	20.574	30	-9.426	22	4	Horizontal	-14.072
149.12 MHz	QP	25.729	30	-4.271	346	3.46	Horizontal	-17.34
156.18 MHz	QP	25.068	30	-4.932	335	3.95	Horizontal	-17.02

Graph 4: Radiated Emissions within 30MHz - 1GHz

Frequency	SR #	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
11.2032375 GHz	Peak	54.12	74	-19.88	174	3.434	Vertical	12.192
16.796285 GHz	Peak	56.319	74	-17.681	123	2.281	Vertical	16.974
11.2032375 GHz	AVG	37.819	54	-16.181	174	3.434	Vertical	12.192
16.796285 GHz	AVG	38.393	54	-15.607	123	2.281	Vertical	16.974
11.2064783 GHz	Peak	51.886	74	-22.114	136	2.049	Horizontal	12.2
16.7997449 GHz	Peak	56.679	74	-17.321	30	4	Horizontal	16.976
11.2064783 GHz	AVG	35.535	54	-18.465	136	2.049	Horizontal	12.2
16.7997449 GHz	AVG	38.197	54	-15.803	30	4	Horizontal	16.976

Graph 5: 1 GHz – 16 GHz

Frequency	SR #	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
16.4933652 GHz	Peak	64.339	74	-9.661	359	Vertical	2.921
17.5999008 GHz	Peak	55.043	74	-18.957	146	Vertical	1.264
22.0003878 GHz	Peak	51.997	74	-22.003	342	Vertical	1.125

Frequency	SR #	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
23.8197958 GHz	Peak	53.255	74	-20.745	90	Vertical	1.545
16.4933652 GHz	AVG	47.753	54	-6.247	359	Vertical	2.921
17.5999008 GHz	AVG	45.585	54	-8.415	146	Vertical	1.264
22.0003878 GHz	AVG	37.944	54	-16.056	342	Vertical	1.125
23.8197958 GHz	AVG	42.601	54	-11.399	90	Vertical	1.545
16.4961797 GHz	Peak	66.044	74	-7.956	20	Horizontal	2.946
22.000095 GHz	Peak	52.253	74	-21.747	162	Horizontal	1.125
16.4961797 GHz	AVG	49.533	54	-4.467	20	Horizontal	2.946
22.000095 GHz	AVG	38.61	54	-15.39	162	Horizontal	1.125

Graph 6: 16 GHz – 40 GHz

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 11 dBm in any 1 MHz band during any time interval of continuous transmission. Results of this testing are summarized. With a 6 dBi antenna, the conducted limit for power spectral density is 11 dBm.

See Section 2.2 for directional gain calculation.

Results of this testing are summarized.

5.6.1 UNII-2A

Nss>1

Modulation (BW)	Freq. (MHz)	Data Rate	TP Setting	Total Sum PSD EIRP (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dBm)
OFDM 20	5260	Mcs0_Nss2	16	5.26	11	6	-0.74
OFDM 20	5280	Mcs0_Nss2	16	5.08	11	6	-0.92
OFDM 20	5320	Mcs0_Nss2	16	5.37	11	6	-0.63
EHT 20	5260	Mcs0_Nss2	17	5.66	11	6	-0.54
EHT 20	5280	Mcs0_Nss2	17	5.67	11	6	-0.33
EHT 20	5320	Mcs0_Nss2	16	4.97	11	6	-1.03
EHT 40	5270	Mcs0_Nss2	17	2.51	11	6	-3.49
EHT 40	5310	Mcs0_Nss2	17	2.75	11	6	-3.25
EHT 80	5290	Mcs0_Nss2	17	-0.34	11	6	-6.34
EHT 160	5250	Mcs0_Nss2	17	-2.94	11	6	-8.94

Nss=1

Modulation (BW)	Freq. (MHz)	Data Rate	TP Setting	Total Sum PSD EIRP (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dBm)
OFDM 20	5260	Mcs0_Nss1	8	-2.74	11	6	-8.74
OFDM 20	5280	Mcs0_Nss1	8	-2.92	11	6	-8.92
OFDM 20	5320	Mcs0_Nss1	8	-2.63	11	6	-8.63
EHT 20	5260	Mcs0_Nss1	9	-2.34	11	6	-8.34
EHT 20	5280	Mcs0_Nss1	9	-2.33	11	6	-8.33
EHT 20	5320	Mcs0_Nss1	9	-2.03	11	6	-8.03
EHT 40	5270	Mcs0_Nss1	12	-2.49	11	6	-8.49
EHT 40	5310	Mcs0_Nss1	12	-2.25	11	6	-8.25
EHT 80	5290	Mcs0_Nss1	15	-2.34	11	6	-8.34
EHT 160	5250	Mcs0_Nss1	17	-2.94	11	6	-8.94

5.6.2 UNII-2C

Nss>1

Modulation (BW)	Freq. (MHz)	Data Rate	TP Setting	Total Sum PSD EIRP (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dBm)
OFDM 20	5500	Mcs0_Nss2	17	5.66	11	6	-0.34
OFDM 20	5600	Mcs0_Nss2	15	5.06	11	6	-0.94
OFDM 20	5720	Mcs0_Nss2	16	5.20	11	6	-0.80
EHT 20	5500	Mcs0_Nss2	17	5.23	11	6	-0.77
EHT 20	5600	Mcs0_Nss2	16	5.59	11	6	-0.41
EHT 20	5720	Mcs0_Nss2	17	5.76	11	6	-0.24
EHT 40	5510	Mcs0_Nss2	17	2.24	11	6	-3.76
EHT 40	5590	Mcs0_Nss2	16	2.32	11	6	-3.68
EHT 40	5710	Mcs0_Nss2	18	2.74	11	6	-3.26
EHT 80	5530	Mcs0_Nss2	17	-0.01	11	6	-6.01
EHT 80	5610	Mcs0_Nss2	17	0.01	11	6	-5.99
EHT 80	5690	Mcs0_Nss2	18	-0.30	11	6	-6.30
EHT 160	5570	Mcs0_Nss2	17	-2.56	11	6	-8.56
EHT 240	5610	Mcs0_Nss2	15	-7.32	11	6	-13.32

Nss=1

Modulation (BW)	Freq. (MHz)	Data Rate	TP Setting	Total Sum PSD EIRP (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dBm)
OFDM 20	5500	Mcs0_Nss1	9	-2.34	11	6	-8.34
OFDM 20	5600	Mcs0_Nss1	7	-2.94	11	6	-8.94
OFDM 20	5720	Mcs0_Nss1	8	-2.80	11	6	-8.80
EHT 20	5500	Mcs0_Nss1	9	-2.77	11	6	-8.77
EHT 20	5600	Mcs0_Nss1	8	-2.41	11	6	-8.41
EHT 20	5720	Mcs0_Nss1	9	-2.24	11	6	-8.24
EHT 40	5510	Mcs0_Nss1	12	-2.76	11	6	-8.76
EHT 40	5590	Mcs0_Nss1	11	-2.68	11	6	-8.68
EHT 40	5710	Mcs0_Nss1	13	-2.26	11	6	-8.26
EHT 80	5530	Mcs0_Nss1	14	-3.01	11	6	-9.01
EHT 80	5610	Mcs0_Nss1	14	-2.99	11	6	-8.99
EHT 80	5690	Mcs0_Nss1	16	-2.30	11	6	-8.30
EHT 160	5570	Mcs0_Nss1	17	-2.56	11	6	-8.56
EHT 240	5610	Mcs0_Nss1	15	-7.32	11	6	-13.32

Result

The maximum average power spectral density was less than the limit of 11 dBm; therefore, the EUT complies with the specification.

5.7 DFS Requirement

This product is a client without radar detection. The outcome of the required DFS tests is located in this section. DFS testing was performed following the test procedures as outlined in KDB 905462.

The product passes all required DFS tests for a client without radar detection.

Information	Status
Possible Antenna/s	Integral 11 dBi
Antenna used for test	Integral 11 dBi
Operating mode	Client
If Client	SWX-U7PRO
Port used for testing	FJ1 and FJ2
EIRP range	> 200 milliwatts
Impedance of port	50 ohms
Channel loading technique	Data transfer was enacted to achieve a minimum channel loading of approximately 17%
Antenna measurement technique	See note 1
Detection threshold level	-53 dBm

Requirement	Operational Mode		
	Master	Client Without Radar Detection	Client With Radar Detection
Non-Occupancy Period	Yes	Not Required	Yes
DFS Detection Threshold	Yes	Not Required	Yes
Channel Availability Check Time	Yes	Not Required	Not Required
U-NII Detection Bandwidth	Yes	Not Required	Yes

Requirement	Operational Mode	
	Master or Client Client Without Radar Detection	Client Without Radar Detection
DFS Detection Threshold	Yes	Not Required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not Required

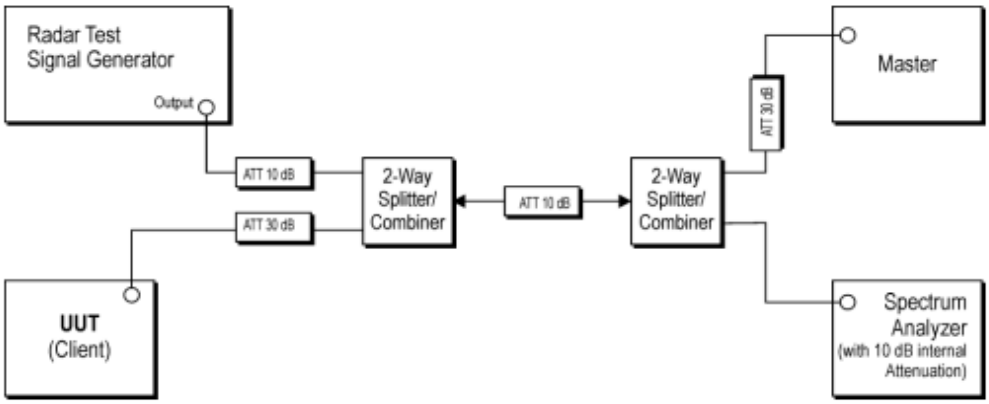


Figure 6: DFS injection at Master conducted setup

Parameter	**Value**
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.
Note 1: *Channel Move Time* and the *Channel Closing Transmission Time* should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst. **Note 2:** The *Channel Closing Transmission Time* is comprised of 200 milliseconds starting at the beginning of the *Channel Move Time* plus any additional intermittent control signals required to facilitate a *Channel* move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions. **Note 3:** During the *U-NII Detection Bandwidth* detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.	

Table 5: DFS Timing requirements

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. **Note 2:** Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. **Note3:** EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	

Table 6: DFS Detection Threshold

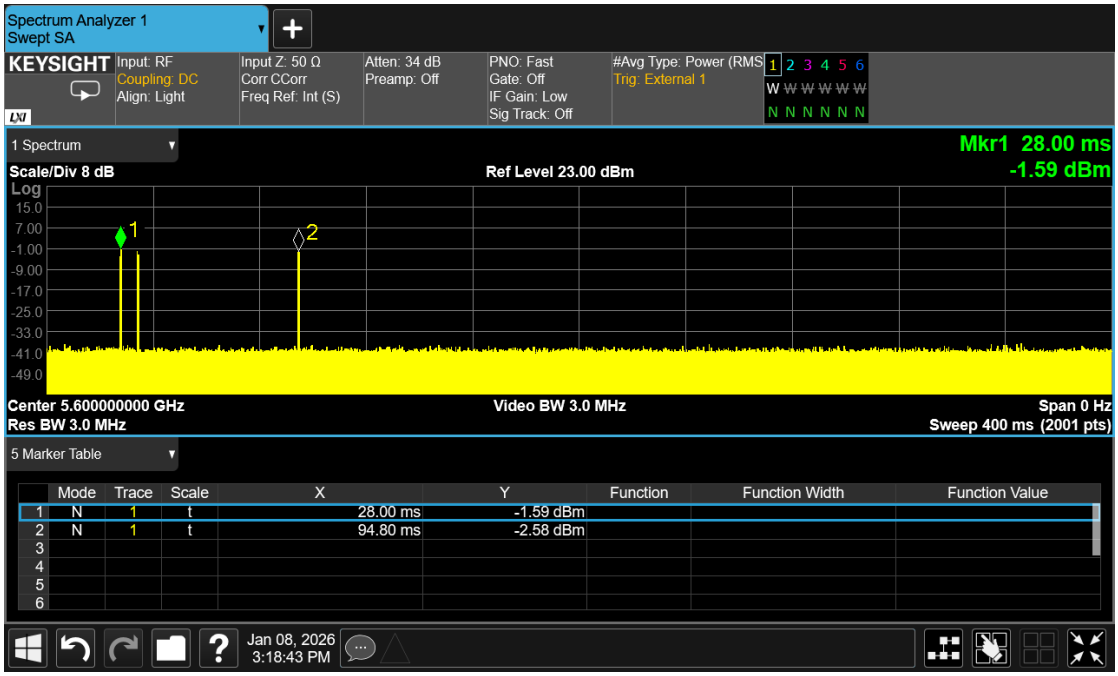
Radar Type	Pulse Width (µsec)	PRI (µsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot10^6}{\text{PRI}_{\mu\text{sec}}}\right)\right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 µsec, with a minimum increment of 1 µsec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.					

Table 7: Short Pulse Radar Types

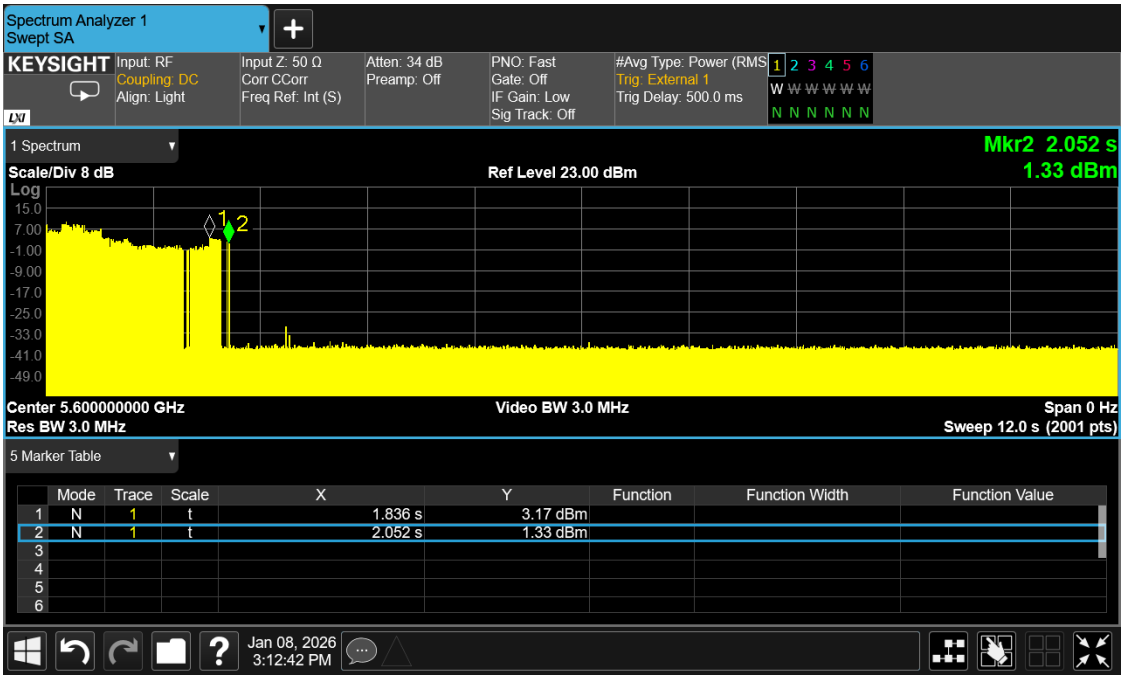
5.7.1 In-service Monitoring

Channel Move Time	10 seconds
Channel Closing Transmission Time	200 ms + aggregate of 60 ms over remaining 10 second period
Non-occupancy period	Minimum 30 minutes

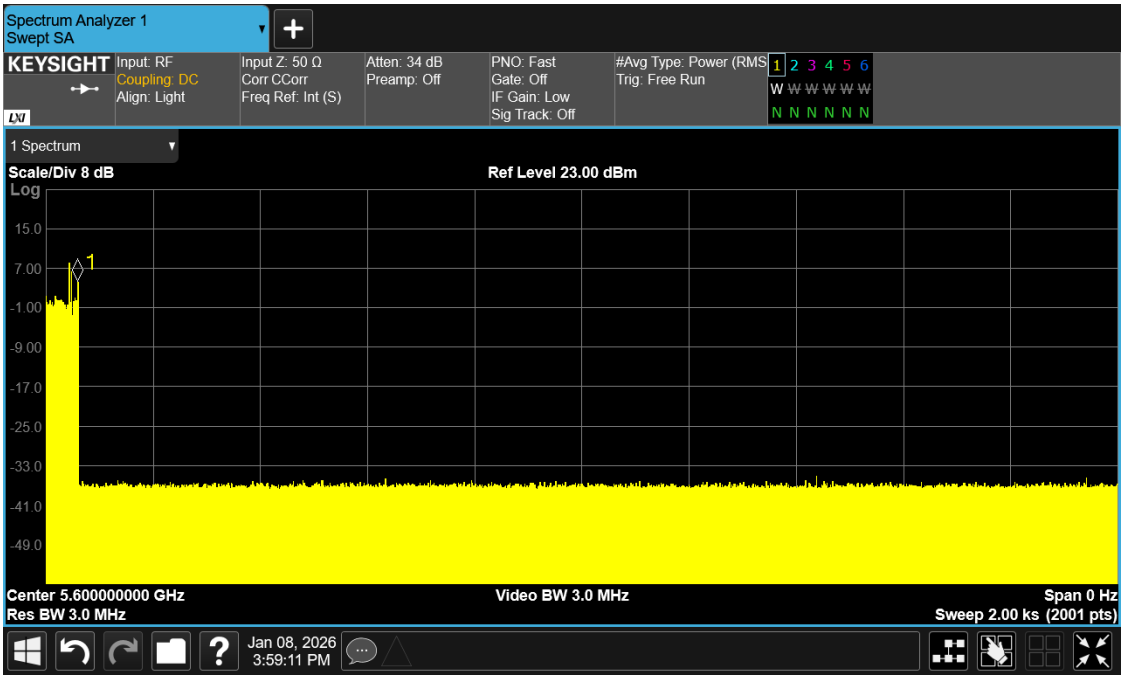
Verified during in-service monitoring: channel closing transmission time and channel move time. The transmissions were observed at the end of the radar burst on the operating channel for a duration of greater than 10 seconds. The transmissions were measured and recorded during the observation time. This was compared to the channel move time and channel closing time limits.
One 12 second plot is reported for the short pulse radar type 0. A 60 ms plot is also provided to verify closing time for the aggregate transmission time starting from 200 ms after the end of the radar signal to the completion of the channel move.
During the 30 minutes observation time, the EUT did not make any transmissions on a channel after a radar signal was detected.
Please see plots below.
A spectrum analyzer is used as a monitor to verify that the EUT has vacated the channel within the channel closing transmission time and channel move time, and does not transmit on a channel during the non-occupancy period after the detection and channel move.



Plot 1: Channel Close (400 ms)



Plot 2: Channel Move



Plot 3: Non-Occupancy

-- End of Test Report --