



427 West 12800 South
Draper, UT 84020

Test Report Certification

FCC ID	SWX-UFWIFI6
ISED ID	6545A-UFWIFI6
Equipment Under Test	UF-WiFi6
Test Report Serial Number	TR6538_02
Date of Tests	29-30 September; 1, 6, 11 October 2021
Report Issue Date	15 October 2021

Test Specification	Applicant
47 CFR FCC Part 15, Subpart E	Ubiquiti Inc. 685 Third Avenue New York, NY 10019 U.S.A.



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.

Applicant	Ubiquiti Inc.
Manufacturer	Ubiquiti Inc.
Brand Name	UFiber
Model Number	UF-WiFi6
FCC ID	SWX-UFWIFI6
ISED ID	6545-UFWIFI6

On this 13th day of October 2021, 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.

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 Rodriguez



Reviewed By: Richard L. Winter

Revision History		
Revision	Description	Date
01	Original Report Release	15 October 2021
02	Amended Sections 5.1 and 5.6	18 October 2021

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1 Client Information

1.1 Applicant

Company	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.
Contact Name	Mark Feil
Title	Compliance Manager

1.2 Manufacturer

Company	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.
Contact Name	Mark Feil
Title	Compliance Manager

2 Equipment Under Test (EUT)

2.1 Identification of EUT

Brand Name	UFiber
Model Number	UF-WiFi6
Serial Number	N/A
Dimensions (cm)	14.08 x 14.15 x 3.17

2.2 Description of EUT

The UF-WiFi6 GPON CPE is a point-to-multipoint WiFi 6 device that provides 2.4 Gbps downstream rate and 1.2 Gbps upstream rate. The UF-WiFi6 has 4 GbE RJ45 LAN ports and 1 GPON WAN port for connection the local fiber line. The UF-WiFi6 has a 2.4 GHz (2x2) WiFi transmitter and a 5 GHz (2x2) WiFi transmitter. The UF-WiFi6 can be powered from a USB-C power adapter or a 24V PoE power adapter.

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

Band	WiFi Mode	Modulation Bandwidth	Modulation Type	Frequency (MHz)
UNII-3	a	20 MHz	OFDM	5745, 5775, 5825
	n	20 MHz	HT	5745, 5775, 5825
	n	40 MHz	HT	5755, 5775, 5795
	ac	20 MHz	VHT	5745, 5775, 5825
	ac	40 MHz	VHT	5755, 5775, 5795
	ac	80 MHz	VHT	5775
	ax	20 MHz	HE	5745, 5775, 5825
	ax	40 MHz	HE	5755, 5775, 5795
	ax	80 MHz	HE	5775

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: UFiber MN: UF-WiFi6 SN: N/A	Point-to-Point / Point-to-Multi-Point Transceiver	PoE – Shielded RJ-45 Input (4 meters) See Section 2.4 (Note 2)
BN: Ubiquiti In. MN: POE-24V-5X-HD SN: N/A	PoE Power supply	See Section 2.4
BN: Ubiquiti In. MN: GP-MO15-QC SN: N/A	USB-C Power Adapter	See Section 2.4
BN: Dell MN: XPS SN: N/A	Laptop Computer	Ethernet Non-Shielded Cat 5e to PoE PSU

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
GPON WAN Port	1	APC/APC Cable
RJ45 Gigabit LAN Port	4	Shielded Cat 5e cable
PSU USB-C DC Jack	1	3 Conductor Cable to Power Adapter (24V, 0.5A)

2.5 Operating Environment

Power Supply	120/240 VAC
AC Mains Frequency	50/60 Hz
Temperature	20.7-22.5°C
Humidity	27.76-43.11%
Barometric Pressure	1001.36 mBar

2.6 Operating Modes

The UF-WiFi6 was tested using test software in order to enable a constant transmission. The measurements within this report are corrected to reference a 100% duty cycle. All emission modes of 802.11 a/n/ac/ax were investigated. All measurements are reported with the worst-case mode (802.11ax) 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

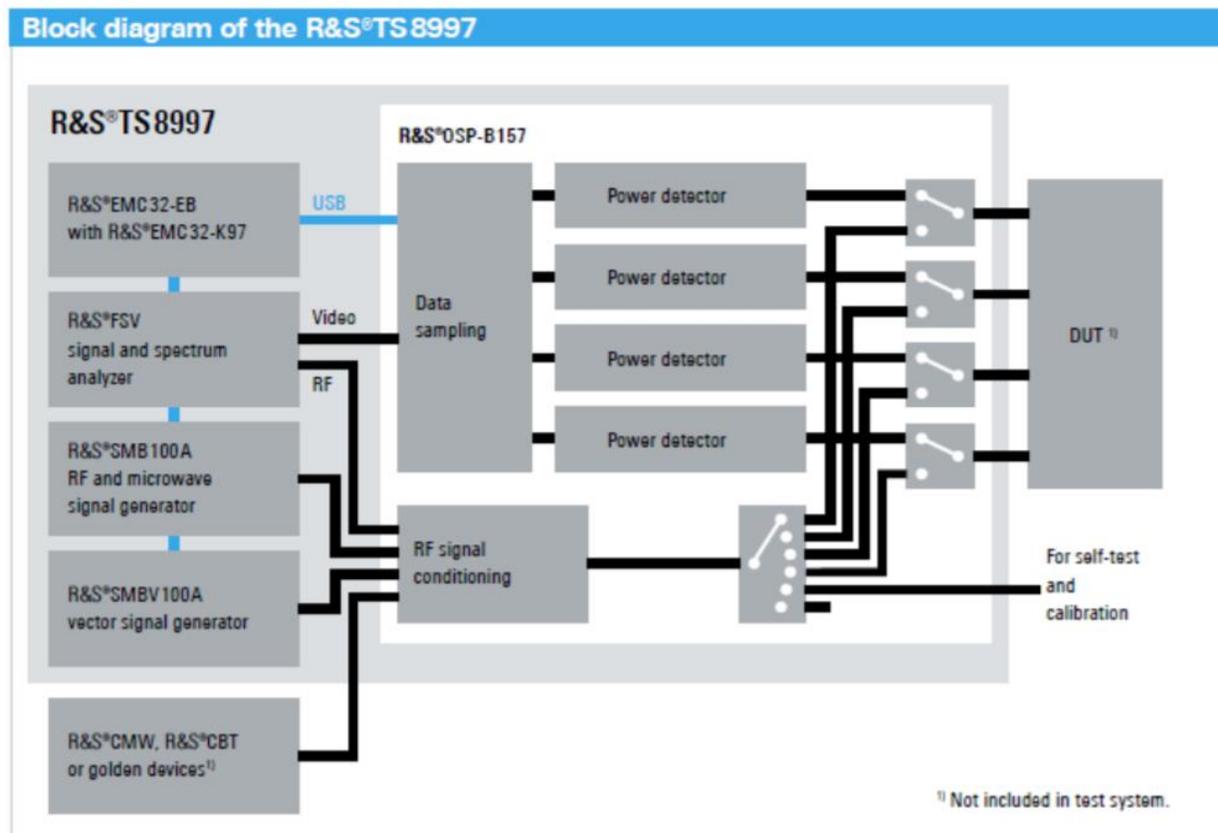


Diagram 1: Test Configuration Block Diagram

2.9 Modification Incorporated/Special Accessories on EUT

The following modifications were made to the EUT by the Client during testing to comply with the specification. This report is not complete without an accompanying signed attestation, that the product will have all the documented modification incorporated into the product when manufactured and place on the market.

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
15.407(a)	N/A	Antenna requirements	Structural Requirement	Compliant
15.407(b)	RSS-Gen	Conducted Disturbance at Mains Port	0.15 to 30	Compliant
15.407(c)	RSS-247 §6.2.2, §6.2.3	Bandwidth Requirement	5745 to 5825	Compliant
15.407(e)	RSS-247 §6.2.2, §6.2.3	Peak Output Power	5745 to 5825	Compliant
15.407(f)	RSS-247 §6.2.2, §6.2.3	Antenna Conducted Spurious Emissions	0.009 to 40000	N/A
15.407(g)	RSS-247 §6.2.2, §6.2.3	Radiated Spurious Emissions	0.009 to 40000	Compliant
15.407(h)	RSS-247 §6.2.2, §6.2.3	Peak Power Spectral Density	5745 to 5825	Compliant

The testing was performed according to the procedures in ANSI C63.10-2013, KDB 789033 and 47 CFR Part 15. Where applicable, KDB 662911 was followed to sum required measurements.

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 chamber 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 2022. 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 2022. Unified Compliance Laboratory has been assigned 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	9/18/2020	3/17/2022
LISN	AFJ	LS16C/10	UCL-2512	5/26/2020	5/26/2022
Cat6 ISN	Teseq	ISN T8-Cat6	UCL-2971	5/18/2020	5/18/2022
ISN	Teseq	ISN T800	UCL-2974	6/4/2021	6/4/2022
LISN	Com-Power	LIN-120C	UCL-2612	5/19/2021	5/19/2022
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

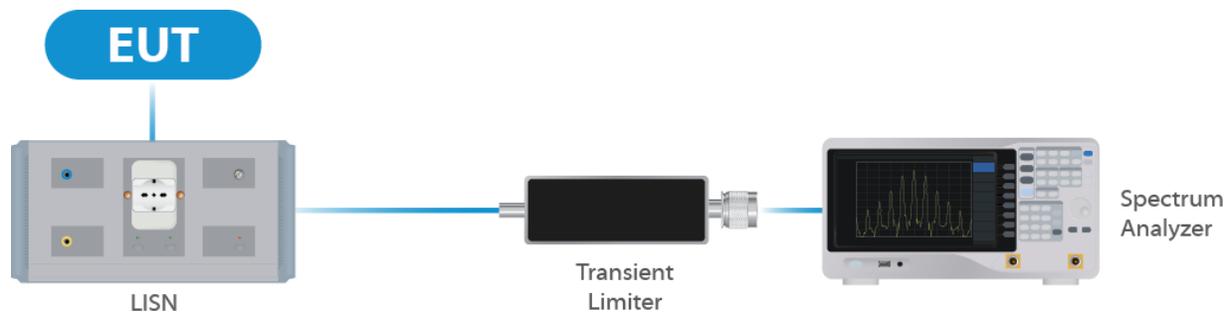


Figure 1: Conducted Emissions Test

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	8/24/2020	10/23/2021
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	9/8/2020	10/24/2021
Switch Extension	R&S	OSP-150W	UCL-2870	3/3/2021	3/3/2022

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

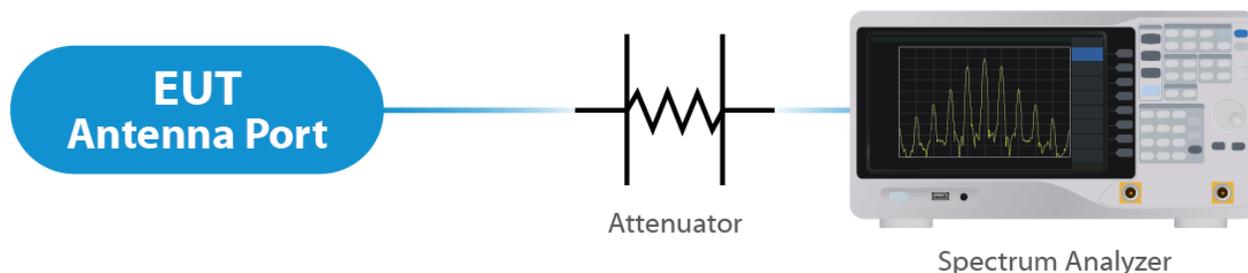


Figure 2: Direct Connect at the Antenna Port Test



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	6/21/2021	6/21/2022
Pre-Amplifier 9 kHz – 1 GHz	Sonoma Instruments	310N	UCL-2889	10/07/2020	10/07/2022
Broadband Antenna	Scwarzbeck	VULB 9163	UCL-3062	8/28/2020	8/27/2022
Broadband Antenna	Scwarzbeck	VULB 9163	UCL-3071	5/19/2020	5/19/2022
Double Ridge Horn Antenna	Scwarzbeck	BBHA 9120D	UCL-3065	7/8/2021	7/8/2022
Log Periodic	Scwarzbeck	STLP 9129	UCL-3068	11/16/2020	11/16/2021
15 - 40 GHz Horn Antenna	Scwarzbeck	BBHA 9170	UCL-2487	5/21/2020	5/21/2022
1 – 18 GHz Amplifier	Com-Power	PAM 118A	UCL-3833	10/07/2021	10/07/2022
Test Software	UCL	Revision 1	UCL-3108	N/A	N/A

Table 3: List of equipment used for Radiated Emissions

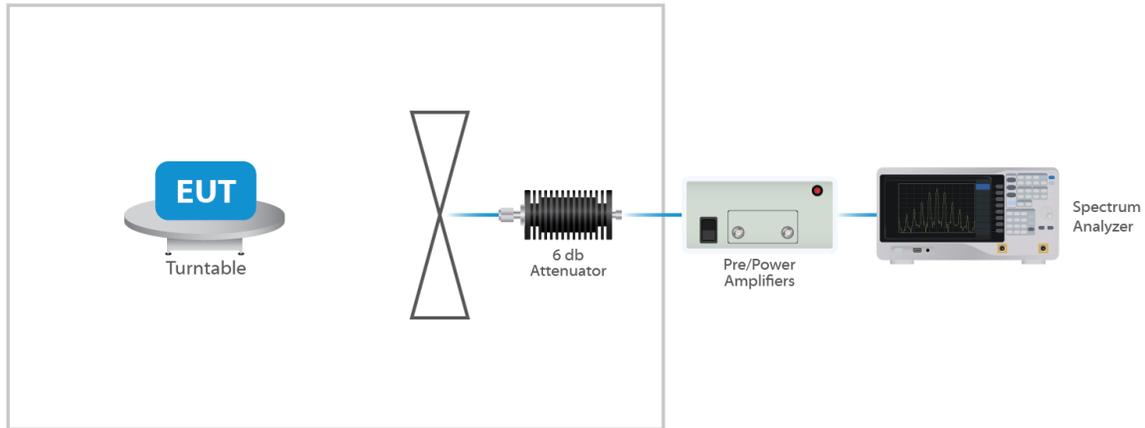


Figure 4: Radiated Emissions Test

4.4 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.

4.5 Measurement Uncertainty

Test	Uncertainty (\pm 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 folding antenna structure. The maximum gain of the antenna per chain is 2.6 dBi. This is an 802.11 device and utilizes CDD as described in KDB 662911 D01. The antenna is not user replaceable.

For power measurements on IEEE 802.11 devices, Array Gain = 0 dB for NANT \leq 4;

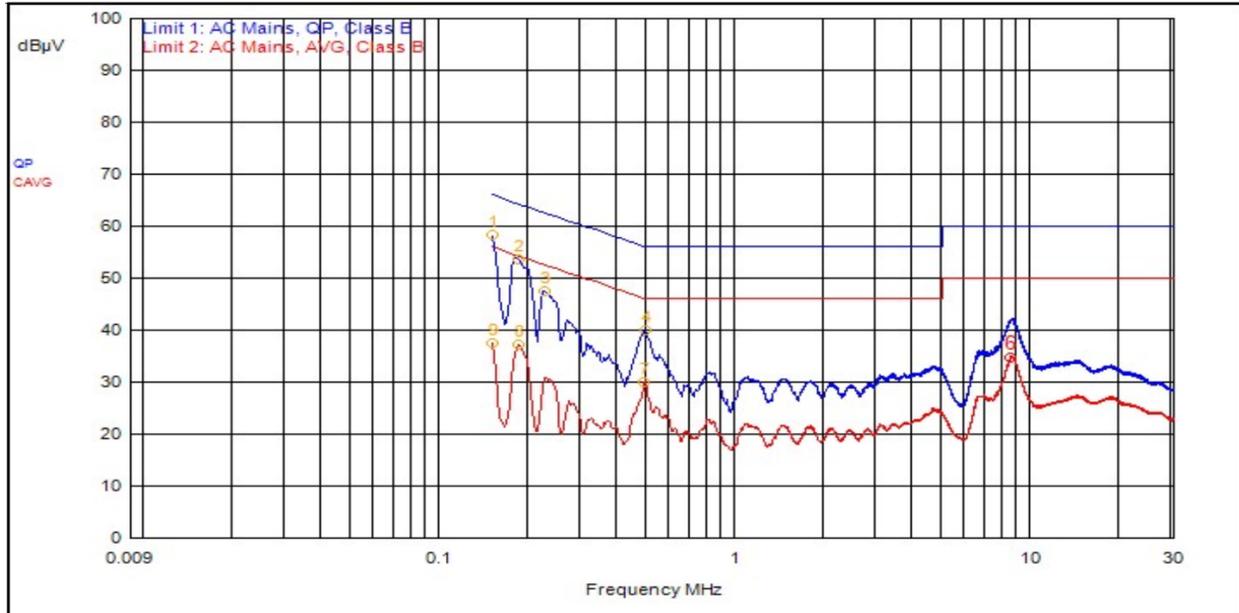
For PSD measurements when Nss=1: Array Gain = $10 \log(\text{NANT}/\text{NSS})$ dB = 3.01dB

Results

The EUT complied with the specification

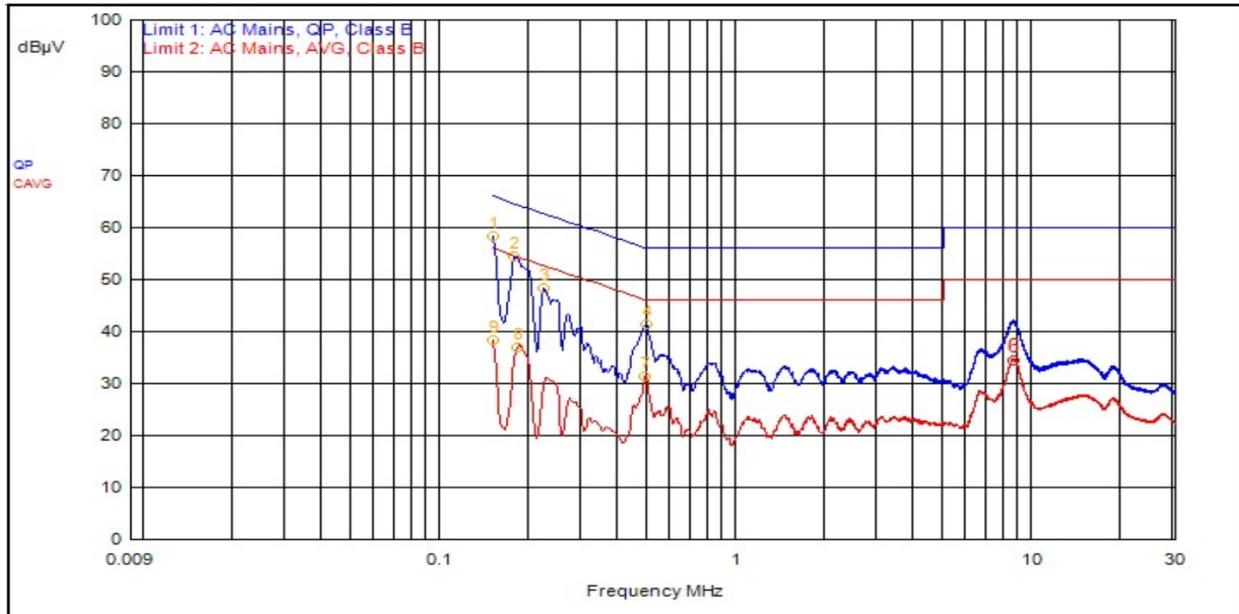
5.2 Conducted Emissions at Mains Ports Data

5.2.1 Line



ID	Frequency	Probe	Cable	Atten.	Detector	Meter Read	Meas Level	Limit 1	Limit 1 Dist.	Limit 2	Limit 2 Dist.
1	150,000kHz	12.4	0.0		QPeak	45.8	58.2	66.0	-7.8		
2	183,000kHz	12.4	0.0		QPeak	41.4	53.7	64.3	-10.6		
3	225,000kHz	12.4	0.0		QPeak	35.2	47.6	62.6	-15.0		
4	492,000kHz	12.4	0.0		QPeak	27.6	40.0	56.1	-16.1		
6	8.439MHz	12.3	0.2		C_AVG	22.2	34.8			50.0	-15.2
7	486,000kHz	12.4	0.0		C_AVG	17.5	30.0			46.2	-16.3
8	183,000kHz	12.4	0.0		C_AVG	24.9	37.3			54.3	-17.1
9	150,000kHz	12.4	0.0		C_AVG	25.2	37.6			56.0	-18.4

5.2.2 Neutral



ID	Frequency	Probe	Cable	Atten.	Detector	Meter Read	Meas Level	Limit 1	Limit 1 Dist.	Limit 2	Limit 2 Dist.
1	150,000kHz	12.4	0.0		QPeak	45.9	58.3	66.0	-7.7		
2	177,000kHz	12.4	0.0		QPeak	42.0	54.4	64.6	-10.2		
3	222,000kHz	12.4	0.0		QPeak	35.9	48.3	62.7	-14.4		
4	492,000kHz	12.4	0.0		QPeak	29.0	41.4	56.1	-14.7		
6	8.583MHz	12.3	0.2		C_AVG	21.8	34.4			50.0	-15.6
7	486,000kHz	12.4	0.0		C_AVG	18.9	31.4			46.2	-14.9
8	180,000kHz	12.4	0.0		C_AVG	24.6	37.0			54.5	-17.5
9	150,000kHz	12.4	0.0		C_AVG	25.9	38.2			56.0	-17.8

Result

The EUT complied with the specification limit.

5.3 §15.403(i) 26 dB Emissions Bandwidth

All chains were measured under the guidance of KDB 789033 Section II.C. and KDB 66291 D01. Please see associated annex for details on instrument settings.

Nominal BW (MHz)	Frequency (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
a20	5745	31.80	51.50
a20	5775	32.00	55.50
a20	5825	32.10	53.70
ac20	5745	32.10	55.00
ac20	5775	33.00	55.50
ac20	5825	33.20	56.10
ac40	5755	43.50	80.72
ac40	5775	56.75	84.77
ac40	5795	57.50	93.02
ac80	5775	75.50	124.50
ax20	5745	32.80	58.70
ax20	5775	33.60	60.20
ax40	5725	33.50	57.90
ax40	5755	38.50	76.97
ax40	5775	42.50	74.57
ax40	5795	51.00	80.87
ax80	5775	77.50	106.00
n20	5745	32.20	55.80
n20	5775	32.90	57.10
n20	5825	33.40	56.10
n40	5755	49.75	79.52
n40	5775	55.25	86.87
n40	5795	61.00	95.57

Result

All chains were tested and the highest bandwidth per chain is reported above.

The 26 dB bandwidths are reported for information purposes. Please see Annex for all bandwidth measurements.

5.4 §15.403(a)(3) Maximum Average Output Power

All chains were measured and summed under the guidance of KDB 789033 Section II. E.2. and KDB 66291 D01. Please see associated annex for details on instrument settings.

The maximum average RF conducted output power measured for this device was 27.16 dBm or 520 mW. The limit is 30 dBm, or 1 Watt when using antennas with 6 dBi or less gain. The antenna has a gain of 2.6 dBi.

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power	Measured EIRP	Measured PSD
OFDM 20	5745	Mcs0	25	28.23	30.83	10.97
OFDM 20	5775	Mcs0	25	28.13	30.73	10.88
OFDM 20	5825	Mcs0	25	28.14	30.74	10.63
HT 20	5745	Mcs0	25	28.18	30.78	10.85
HT 20	5775	Mcs0	25	28.03	30.63	10.92
HT 20	5825	Mcs0	25	28.05	30.65	10.37
HT 40	5755	Mcs0	22.5	26.41	29.01	6.82
HT 40	5775	Mcs0	23	26.88	29.48	7.40
HT 40	5795	Mcs0	23.5	27.39	29.99	7.58
VHT 20	5745	Mcs0	25	28.22	30.82	10.91
VHT 20	5775	Mcs0	25	28.03	30.63	10.75
VHT 20	5825	Mcs0	25	28.07	30.67	10.47
VHT 40	5755	Mcs0	22	26.06	28.66	6.71
VHT 40	5775	Mcs0	23	26.95	29.55	7.57
VHT 40	5795	Mcs0	23	27.09	26.69	7.64
VHT 80	5775	Mcs0	21	24.37	26.97	1.62
HE 20	5745	Mcs0	24.5	27.86	30.46	9.97
HE 20	5775	Mcs0	25.	28.05	30.65	10.14
HE 20	5825	Mcs0	24.5	27.69	30.29	9.52
HE 40	5755	Mcs0	21.5	25.60	28.20	5.82
HE 40	5775	Mcs0	22	26.01	28.61	6.27
HE 40	5795	Mcs0	22.5	26.58	29.18	6.78
HE 80	5775	Mcs0	21	24.61	27.21	1.84

Result

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

5.5 §15.407(b)(7) Spurious Emissions

5.5.1 Conducted Spurious Emissions

The frequency ranges from the lowest frequency generated or used in the device to the tenth harmonic of the highest fundamental frequency was investigated to measure any antenna-conducted emissions. The graphs show the measurement data from spurious emissions noted across the frequency range when transmitting at the lowest frequency, middle frequency and upper frequency. Shown within the annex are plots with the EUT turned to the upper and lower channels with the antenna gain of 2.6 dBi accounted for. These demonstrate compliance with the provisions of this section at the band edges.

All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Result

Conducted spurious emissions were attenuated below the limit; therefore, the EUT complies with the specification.

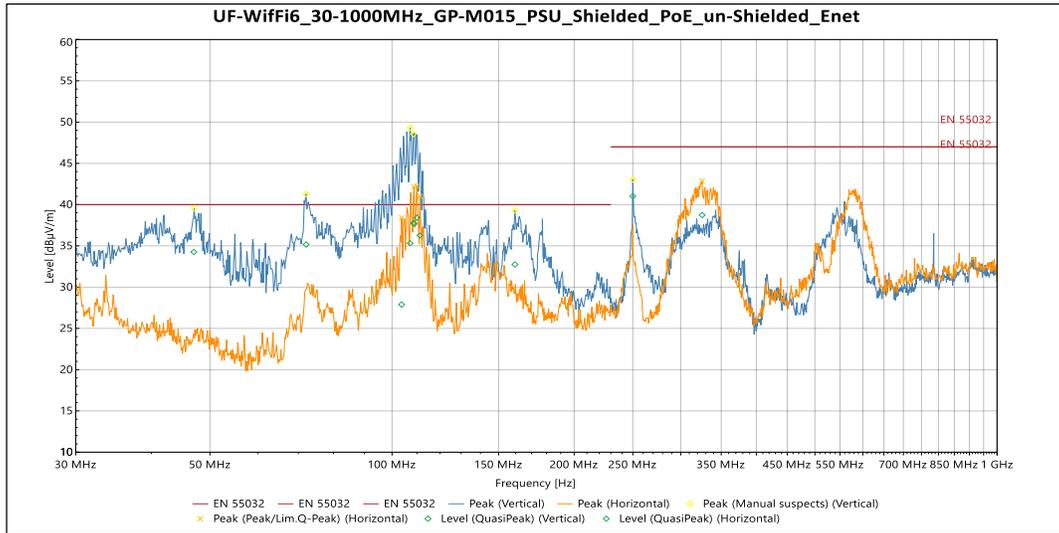
5.5.2 Radiated Spurious Emissions in the Restricted Bands of § 15.205

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 TP25.

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

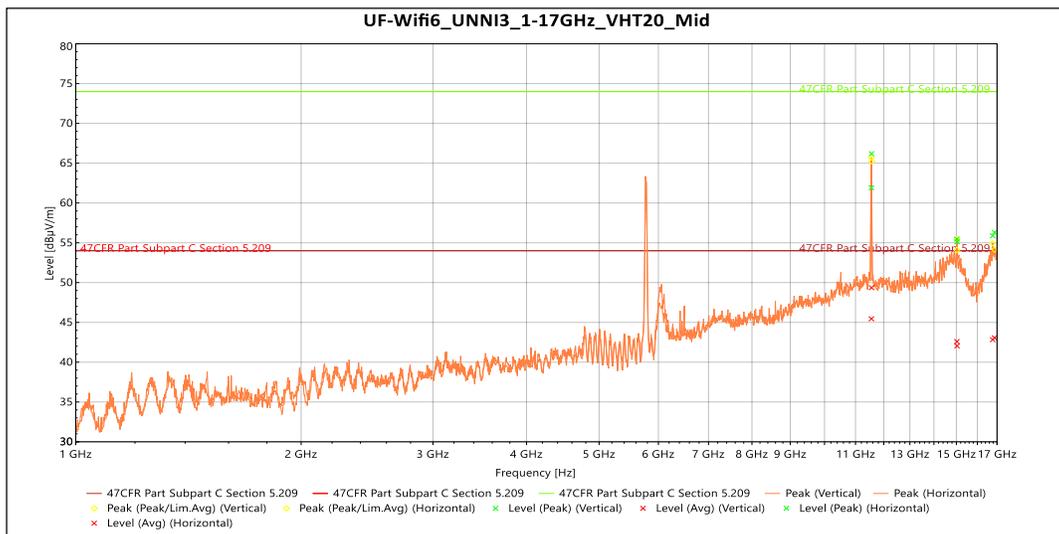
Result

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.

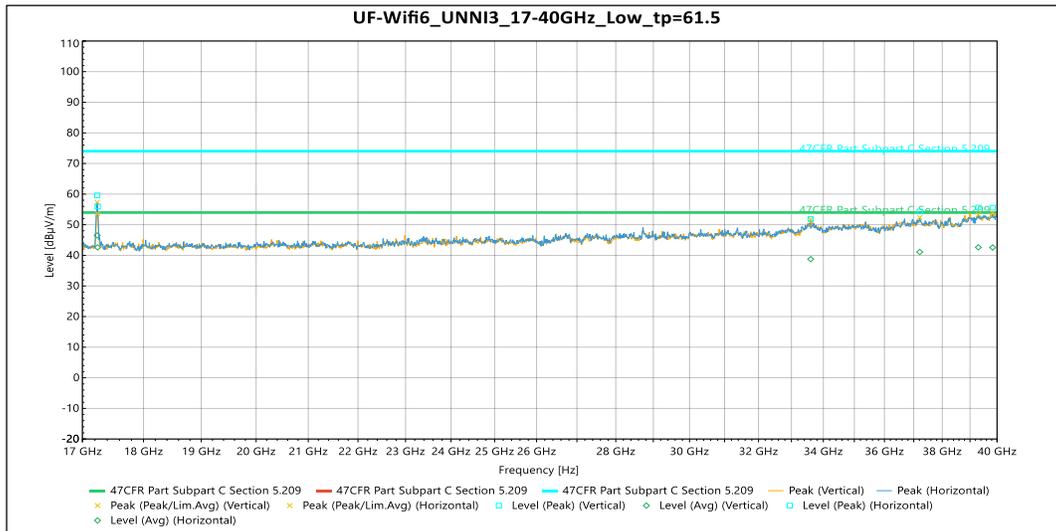


Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin	Azimuth (°)	Height	Pol.	Meas. Time	RBW	Meas.Time	Correction (dB)
47.031 MHz	34.265	40	-5.735	187	1.136	Vertical	15	120000	0.001	-6.262
72.117 MHz	35.17	40	-4.83	150	2.034	Vertical	15	120000	0.001	-12.408
107.1 MHz	35.333	40	-4.667	306	1.134	Vertical	15	120000	0.001	-8.768
108.53 MHz	37.782	40	-2.218	85	2.038	Vertical	15	120000	0.001	-8.915
159.61 MHz	32.744	40	-7.256	260	1.315	Vertical	15	120000	0.001	-11.98
249.97 MHz	41.011	47	-5.989	298	1.136	Vertical	15	120000	0.001	-7.395
103.69 MHz	27.888	40	-12.112	106	3.304	Horizontal	15	120000	0.001	-8.315
108.82 MHz	37.669	40	-2.331	178	2.782	Horizontal	15	120000	0.001	-8.98
109.94 MHz	38.424	40	-1.576	180	2.779	Horizontal	15	120000	0.001	-9.2
111.15 MHz	36.256	40	-3.744	183	2.742	Horizontal	15	120000	0.001	-9.313
325.46 MHz	38.726	47	-8.274	205	1	Horizontal	15	120000	0.001	-5.885

Table 4: Radiated Emissions on 30-100MHz



Frequency	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. Time (s)	RBW	Meas.Time	Correction (dB)
11.557 GHz	66.204	74	-7.796	28	1.5	Vertical	5	1000000	0	5.869
15.032 GHz	55.123	74	-18.877	47	3.157	Vertical	5	1000000	0	10.009
16.772 GHz	55.894	74	-18.106	238	1.5	Vertical	5	1000000	0	11.559
11.557 GHz	49.363	54	-4.637	28	1.5	Vertical	5	1000000	0	5.869
15.032 GHz	42.043	54	-11.957	47	3.157	Vertical	5	1000000	0	10.009
16.772 GHz	42.834	54	-11.166	238	1.5	Vertical	5	1000000	0	11.559
11.551 GHz	61.922	74	-12.078	125	3.793	Horizontal	5	1000000	0	5.862
15.024 GHz	55.456	74	-18.544	4	2.321	Horizontal	5	1000000	0	10.357
16.869 GHz	56.309	74	-17.691	129	2.15	Horizontal	5	1000000	0	11.967
11.551 GHz	45.445	54	-8.555	125	3.793	Horizontal	5	1000000	0	5.862
15.024 GHz	42.591	54	-11.409	4	2.321	Horizontal	5	1000000	0	10.357
16.869 GHz	43.057	54	-10.943	129	2.15	Horizontal	5	1000000	0	11.967

Table 5: Radiated Emissions 1-17GHz (Mid Frequency: Worst-Case)


Frequency	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Pol.	Meas. Time (s)	RBW	Meas.Time	Correction (dB)
17.245 GHz	55.959	74	-18.041	204	Vertical	5	1000000	0	-5.651
33.6 GHz	51.91	74	-22.09	346	Vertical	5	1000000	0	1
39.835 GHz	55.567	74	-18.433	154	Vertical	5	1000000	0	3.573
17.245 GHz	42.609	54	-11.391	204	Vertical	5	1000000	0	-5.651
33.6 GHz	38.748	54	-15.252	346	Vertical	5	1000000	0	1
39.835 GHz	42.549	54	-11.451	154	Vertical	5	1000000	0	3.573
17.237 GHz	59.594	74	-14.406	233	Horizontal	5	1000000	0	-5.617
37.208 GHz	54.329	74	-19.671	34	Horizontal	5	1000000	0	1.382
39.306 GHz	55.59	74	-18.41	310	Horizontal	5	1000000	0	3.334
17.237 GHz	46.516	54	-7.484	233	Horizontal	5	1000000	0	-5.617
37.208 GHz	41.086	54	-12.914	34	Horizontal	5	1000000	0	1.382
39.306 GHz	42.624	54	-11.376	310	Horizontal	5	1000000	0	3.334

Table 6: Radiated Emissions 17-40GHz (Low Frequency: Worst 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 66291 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 30 dBm in any 500 kHz band during any time interval of continuous transmission. As per KDB 662911, When the EUT is using spatial-multiplexing in HE modes, there is not additional array gain to accommodate. When the EUT uses Nss=1 data rates, the antenna gain is 2.6 dBi + Array gain of 3.01 dB which is a total of 5.61 dBi.

Results of this testing are summarized.

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power	Measured EIRP	Measured PSD
OFDM 20	5745	Mcs0	25	28.23	30.83	10.97
OFDM 20	5775	Mcs0	25	28.13	30.73	10.88
OFDM 20	5825	Mcs0	25	28.14	30.74	10.63
HT 20	5745	Mcs0	25	28.18	30.78	10.85
HT 20	5775	Mcs0	25	28.03	30.63	10.92
HT 20	5825	Mcs0	25	28.05	30.65	10.37
HT 40	5755	Mcs0	22.5	26.41	29.01	6.82
HT 40	5775	Mcs0	23	26.88	29.48	7.40
HT 40	5795	Mcs0	23.5	27.39	29.99	7.58
VHT 20	5745	Mcs0	25	28.22	30.82	10.91
VHT 20	5775	Mcs0	25	28.03	30.63	10.75
VHT 20	5825	Mcs0	25	28.07	30.67	10.47
VHT 40	5755	Mcs0	22	26.06	28.66	6.71
VHT 40	5775	Mcs0	23	26.95	29.55	7.57
VHT 40	5795	Mcs0	23	27.09	26.69	7.64
VHT 80	5775	Mcs0	21	24.37	26.97	1.62
HE 20	5745	Mcs0	24.5	27.86	30.46	9.97
HE 20	5775	Mcs0	25.	28.05	30.65	10.14
HE 20	5825	Mcs0	24.5	27.69	30.29	9.52
HE 40	5755	Mcs0	21.5	25.60	28.20	5.82
HE 40	5775	Mcs0	22	26.01	28.61	6.27
HE 40	5795	Mcs0	22.5	26.58	29.18	6.78
HE 80	5775	Mcs0	21	24.61	27.21	1.84

Result

The maximum summed average power spectral density was less than the limit of 30 dBm; therefore, the EUT complies with the specification.

-- End of Test Report --