



427 West 12800 South
Draper, UT 84020

Test Report Certification

FCC ID	SWX-U7LR
ISED ID	6545A-U7LR
Equipment Under Test	U7-LR
Test Report Serial Number	TR9916_01
Date of Test(s)	7, 10 February; 12, 31 March 2025
Report Issue Date	11 April 2025

Test Specification	Applicant
47 CFR FCC Part 15, Subpart E	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.



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	U7-LR
FCC ID	SWX-U7LR
ISED ID	6545A-U7LR

On this 11th day of April 2025, 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: Richard L. Winter

Revision History		
Revision	Description	Date
01	Original Report Release	11 April 2025

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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	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	U7-LR
Serial Number	FE0CCB4
Dimensions (cm)	17.6 x 17.6 x 4.3

2.2 Description of EUT

The U7-LR is a WiFi 6 access point that represents the next generation of competitively priced, prosumer wireless technology for home and enterprise users. The U7-LR provides high aggregate throughput speeds. The U7-LR transmit in the 2.4 GHz and 5 GHz frequency bands and uses integrated internal antennas. The U7-LR is power from a 802.3at PoE power adapter.

For CDD transmission, direction gain is calculated as follows.

Array Gain = $10 \log(\text{NANT}/\text{NSS})$ 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 $\text{NANT} \leq 4$;

For PSD measurements when $\text{Nss}=1$: Array Gain = $10 \log(\text{NANT}/\text{NSS})$ dB + Antenna Gain (dBi). Or 4.77 dB + 6 dBi = 10.77 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	WiFi Mode	Modulation Bandwidth	Modulation Type	Frequency (MHz)
UNII-3	a	20 MHz	OFDM	5745, 5775, 5825
	ax	20 MHz	HE	5745, 5775, 5825
	ax	40 MHz	HE	5755, 5775, 5795
	ax	80 MHz	HE	5775

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: U7-LR SN: FE0CCB4	WiFi Access Point	See Section 2.4
BN: UBIQUITI MN: U-POE-at SN: N/A	PoE Power Adapter	Unshielded Cat 5e cable/1 meters
BN: Dell MN: XPS 13 SN: N/A	Laptop Personal Computer	Unshielded Cat 5e cable/1 meters

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
AC Mains	1	3 conductor power cord/80 cm
POE (POE Injector)	1	Unshielded Cat 5e cable/8 meters
LAN (POE Injector)	1	Unshielded Cat 5e cable/1 meters

2.5 Operating Environment

Power Supply	120 Volts ac Mains to 48 Volts PoE
AC Mains Frequency	60 Hz
Temperature	21.1 – 23.4 °C
Humidity	22.5 – 27.7 %
Barometric Pressure	1018 mBar

2.6 Operating Modes

The U7-LR 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/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

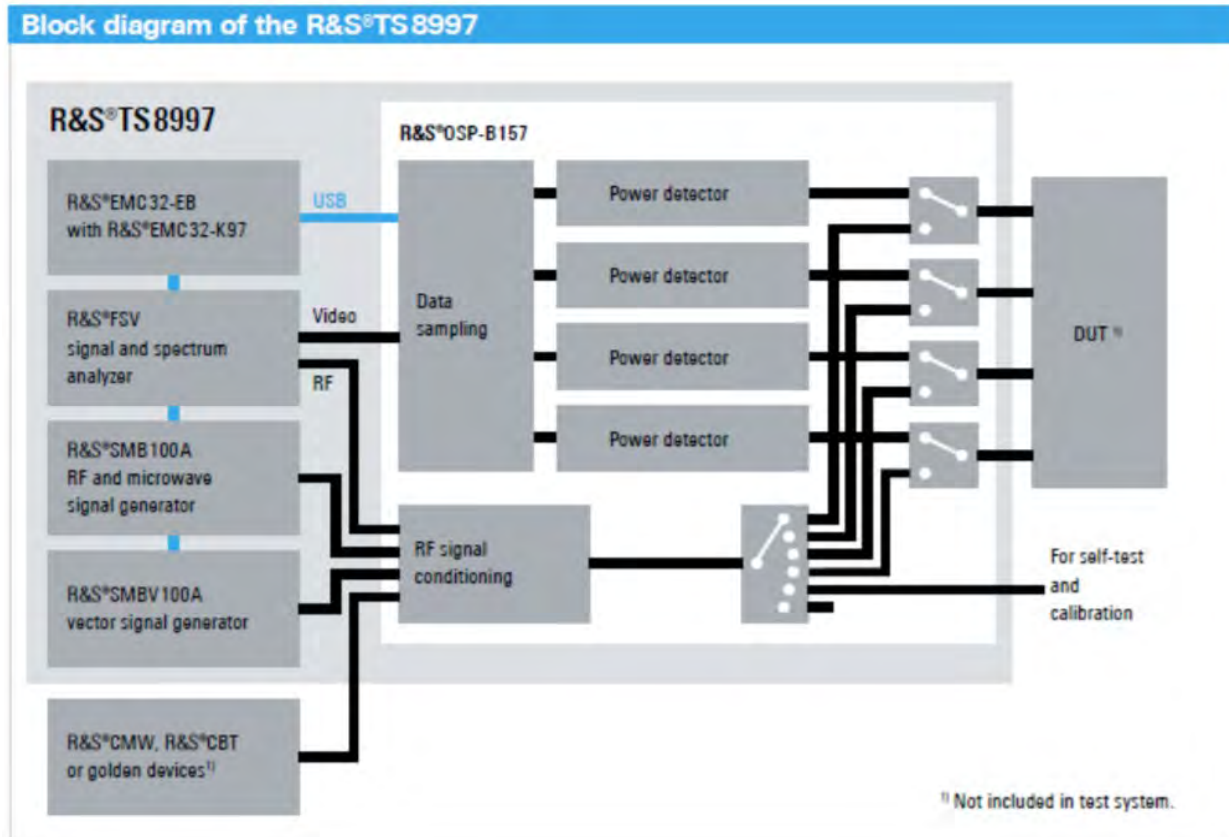


Diagram 1: Test Configuration Block Diagram

2.9 Modification Incorporated/Special Accessories on EUT

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	5725 to 5850	Compliant
15.407(a)	RSS-247 §6.2.2, §6.2.3	Peak Output Power	5725 to 5850	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	5725 to 5850	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. 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 2025. 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 2025.

Unified Compliance Laboratory has been assigned Designation Number US5037 by the FCC 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	8/27/2024	8/27/2025
LISN	AFJ	LS16C/10	UCL-2512	7/08/2024	7/08/2025
ISN	Teseq	ISN T800	UCL-2974	7/09/2024	7/09/2025
AC Power Source	Laplace Instruments	AC1000A	UCL-2857	N/A	N/A
Test Software	AFJ	AFJ FFT3010	UCL-3107	N/A	N/A

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

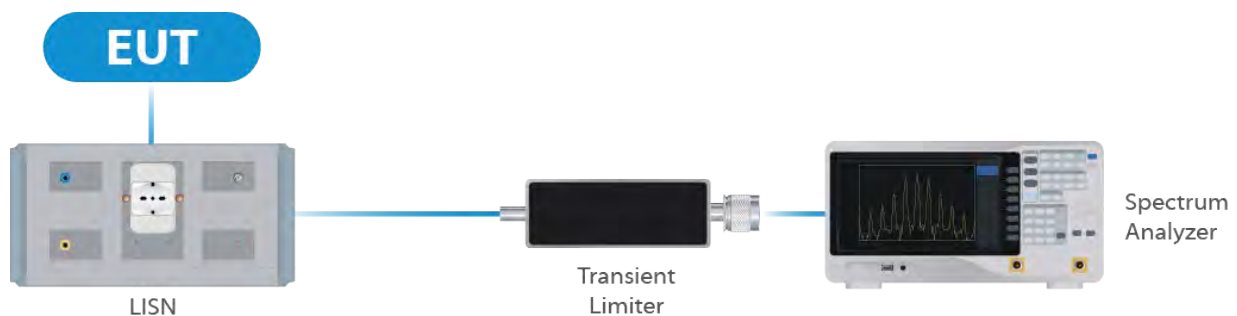


Figure 1: Conducted Emissions Test

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	1/16/2026
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	4/12/2024	4/19/2025
Switch Extension	R&S	OSP-150W	UCL-2870	4/12/2024	4/19/2025
Test Software	R&S	EMC32	UCL-9442	-	-

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

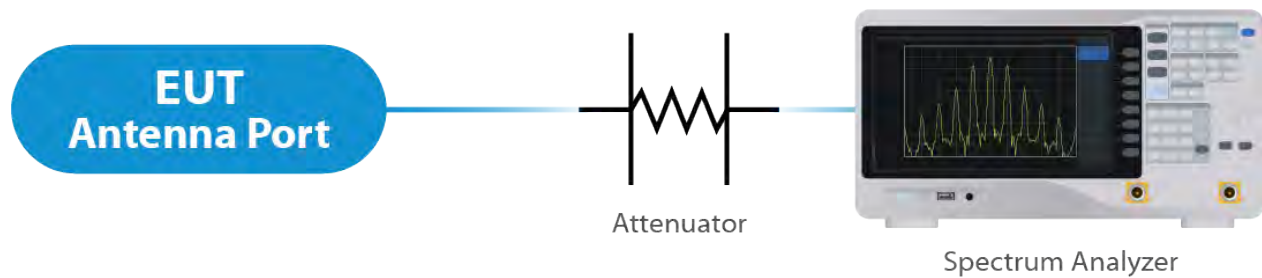


Figure 2: Direct Connect at the Antenna Port Test



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	12/27/2024	12/27/2025
Pre-Amplifier 9 kHz – 1 GHz	Sonoma Instruments	310N	UCL-2889	1/19/2024	1/19/2026
Broadband Antenna	Scwarzbeck	VULB 9163	UCL-3062	2/22/2023	3/22/2025
Double Ridge Horn Antenna	Scwarzbeck	BBHA 9120D	UCL-3065	3/10/2023	3/10/2025
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	7/2/2024	7/2/2025
Test Software	Nexio	BatEMC	UCL-5253 & UCL-5249	N/A	N/A

Table 3: List of equipment used for Radiated Emissions

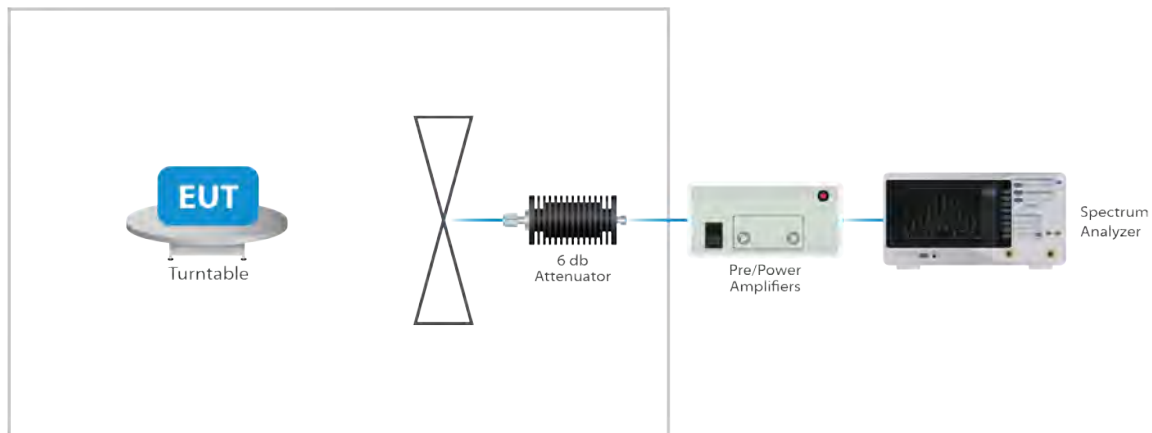


Figure 4: Radiated Emissions Test

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 internal antenna. Per the manufacturer, the Maximum gain of the antenna per chain is 6 dBi. This is an 802.11 device and utilizes CDD as described in KDB 662911 D01. The antenna is not user replaceable.

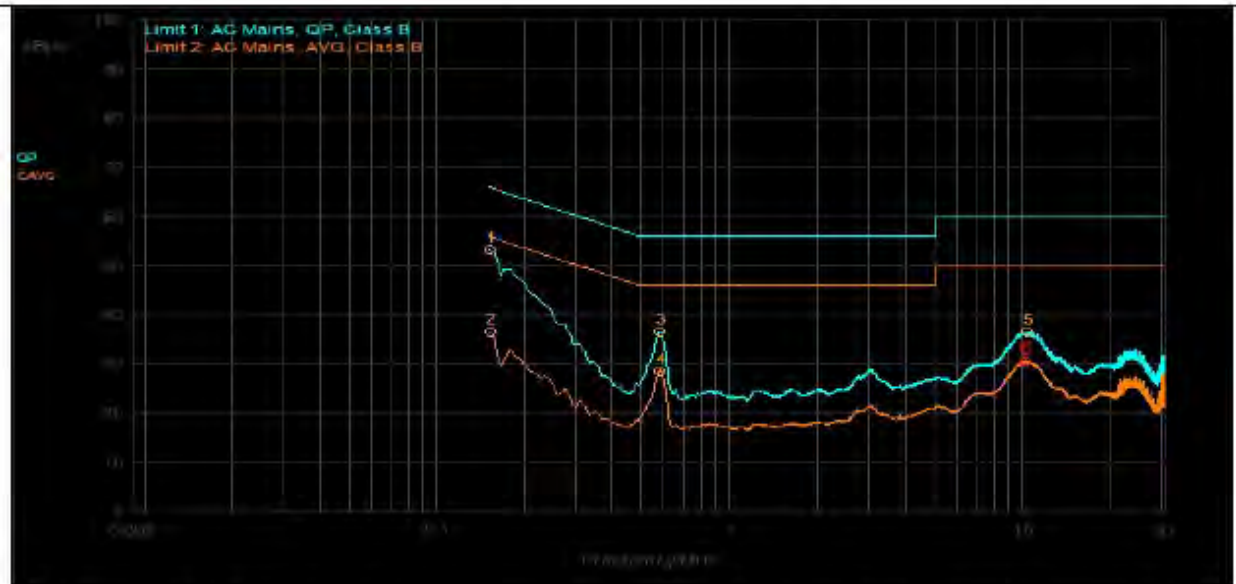
See Section 2.2 for directional gain calculation.

Results

The EUT complied with the specification

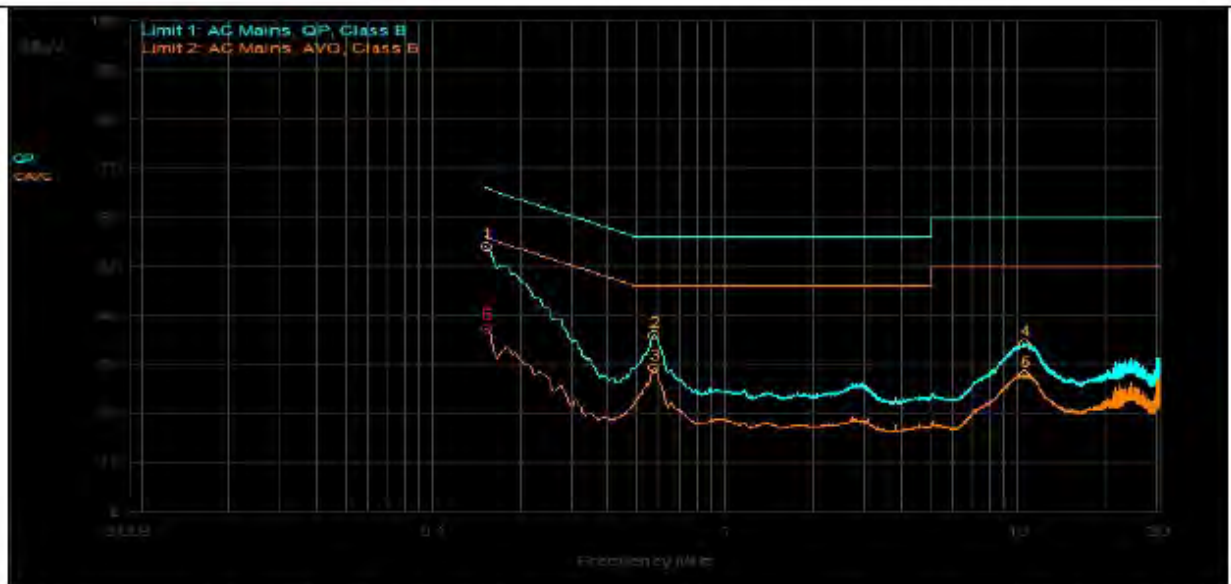
5.2 Conducted Emissions at Mains Ports Data

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
1	150,000kHz	12.41	0.00		QPeak	40.91	53.32	66.00	-12.68			
3	573,000kHz	12.36	0.00		QPeak	24.40	36.76	56.00	-19.24			
5	10.185	12.23	0.00		QPeak	24.47	36.70	60.00	-23.30			
2	150,000kHz	12.41	0.00		C_AVG	24.34	36.75			56.00	-19.25	
4	573,000kHz	12.36	0.00		C_AVG	16.34	28.70			46.00	-17.30	
6	10.068	12.22	0.00		C_AVG	18.41	30.63			50.00	-19.37	

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	150,000kHz	12.38	0.00		QPeak	41.75	54.13	66.00	-11.87			
2	561,000kHz	12.37	0.00		QPeak	23.65	36.02	56.00	-19.98			
4	10.266	12.19	0.00		QPeak	22.26	34.45	60.00	-25.55			
3	564,000kHz	12.37	0.00		C_AVG	16.98	29.35			46.00	-16.65	
5	10.257	12.19	0.00		C_AVG	15.76	27.95			50.00	-22.05	
6	150,000kHz	12.38	0.00		C_AVG	25.22	37.60			56.00	-18.40	

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)
OFDM 20	5745	16.7	28.5
OFDM 20	5775	34.3	65.0
OFDM 20	5825	35.3	71.5
HE 20	5745	29.8	51.5
HE 20	5775	34.5	71.0
HE 20	5825	33.0	57.5
HE 40	5755	38.0	63.5
HE 40	5775	53.0	83.5
HE 40	5795	49.0	79.0
HE 80	5775	77.5	114.0

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)(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 29.62 dBm or 916.22 mW. The limit is 30 dBm, or 1 Watt when using antennas with 6 dBi or less gain. The antenna has a gain of 6 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)
OFDM 20	5745	Mcs0_Nss3	20	24.89	6	30.89	36	-5.11
OFDM 20	5775	Mcs0_Nss3	25.5	29.52	6	35.52	36	-0.48
OFDM 20	5825	Mcs0_Nss3	24.5	28.75	6	34.75	36	-1.25
HE 20	5745	Mcs0_Nss3	23.5	27.56	6	33.56	36	-2.44
HE 20	5775	Mcs0_Nss3	25.5	29.62	6	35.62	36	-0.38
HE 20	5825	Mcs0_Nss3	24	28.41	6	34.41	36	-1.59
HE 40	5755	Mcs0_Nss3	20.5	25.56	6	31.56	36	-4.44
HE 40	5775	Mcs0_Nss3	22.5	27.54	6	33.54	36	-2.46
HE 40	5795	Mcs0_Nss3	22	27.03	6	33.03	36	-2.97
HE 80	5775	Mcs0_Nss3	20.5	24.77	6	30.77	36	-5.23

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	5745	Mcs0_Nss1	20	24.89	6	30.89	36	-5.11
OFDM 20	5775	Mcs0_Nss1	25.5	29.52	6	35.52	36	-0.48
OFDM 20	5825	Mcs0_Nss1	24.5	28.75	6	34.75	36	-1.25
HE 20	5745	Mcs0_Nss1	23.5	27.56	6	33.56	36	-2.44
HE 20	5775	Mcs0_Nss1	25.5	29.62	6	35.62	36	-0.38
HE 20	5825	Mcs0_Nss1	24	28.41	6	34.41	36	-1.59
HE 40	5755	Mcs0_Nss1	20.5	25.56	6	31.56	36	-4.44
HE 40	5775	Mcs0_Nss1	22.5	27.54	6	33.54	36	-2.46

HE 40	5795	Mcs0_Nss1	22	27.03	6	33.03	36	-2.97
HE 80	5775	Mcs0_Nss1	20.5	24.77	6	30.77	36	-5.23

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).

* 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 TP31.

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

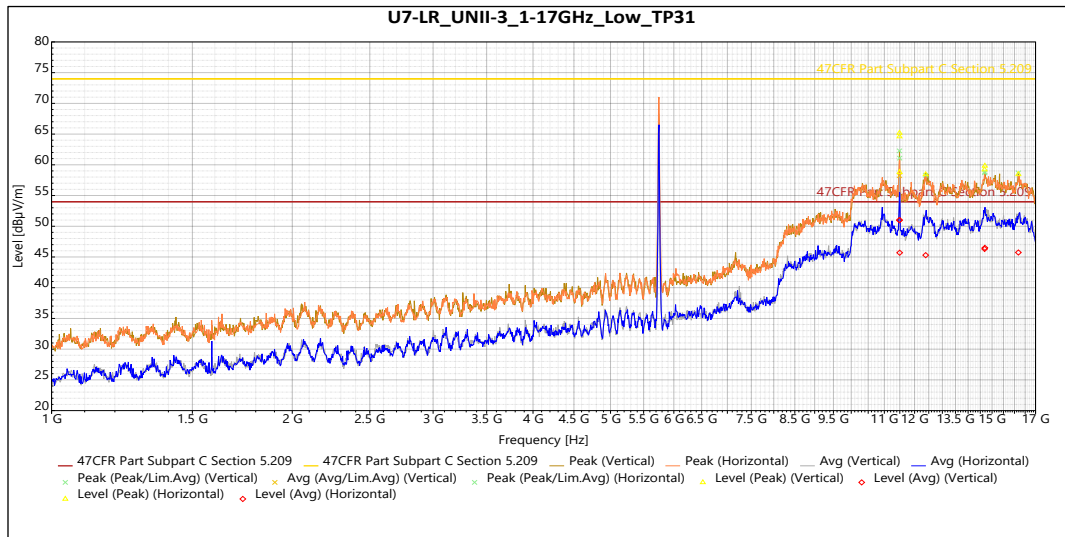
Result

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)
35.26 MHz	34.55	40	-5.45	258	1.2	Vertical	-14.58
42.34 MHz	36.66	40	-3.34	268	1.2	Vertical	-18.41
707.94 MHz	25.82	47	-21.18	242	1	Vertical	-2.89
891.10 MHz	43.02	47	-3.98	105	3.51	Vertical	-1.73
914.98 MHz	25.26	47	-21.74	80	4	Vertical	-0.53
958.26 MHz	23.93	47	-23.07	146	1.49	Vertical	-0.29
152.24 MHz	33.84	40	-6.17	311	1.49	Horizontal	-16.48

Table 4: Radiated Emissions 30 – 1000 MHz



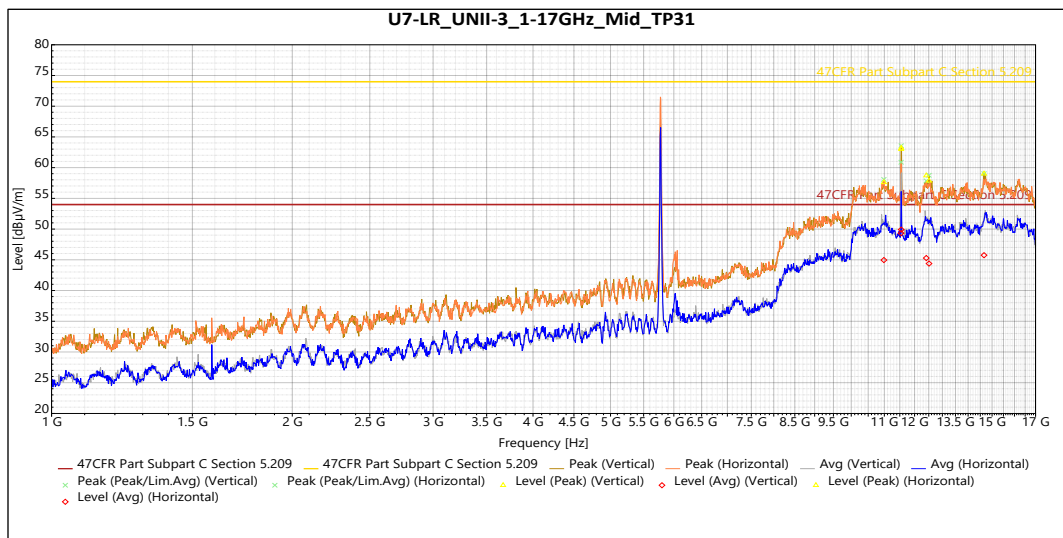
Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
11.49 GHz	65.19	74.0	-8.81	269	1.714	Vertical	11.04
11.49 GHz	64.60	74.0	-9.40	269	1.714	Vertical	11.04
14.69 GHz	59.83	74.0	-14.17	43	1.714	Vertical	15.06
16.18 GHz	58.45	74.0	-15.55	105	1.714	Vertical	14.65
11.50 GHz	58.80	74.0	-15.20	210	1.714	Horizontal	11.07
12.39 GHz	58.44	74.0	-15.56	70	1.714	Horizontal	13.80
14.68 GHz	59.23	74.0	-14.77	352	4	Horizontal	14.87

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
11.49 GHz	51.00	54.0	-3.00	269	1.714	Vertical	11.04
11.49 GHz	51.00	54.0	-3.00	269	1.714	Vertical	11.04
14.69 GHz	46.48	54.0	-7.52	43	1.714	Vertical	15.06
16.18 GHz	45.73	54.0	-8.27	105	1.714	Vertical	14.65
11.50 GHz	45.69	54.0	-8.31	210	1.714	Horizontal	11.07
12.39 GHz	45.30	54.0	-8.70	70	1.714	Horizontal	13.80
14.68 GHz	46.31	54.0	-7.69	352	4	Horizontal	14.87

Table 5: Radiated Emissions 1 – 17 GHz at the Lowest Frequency



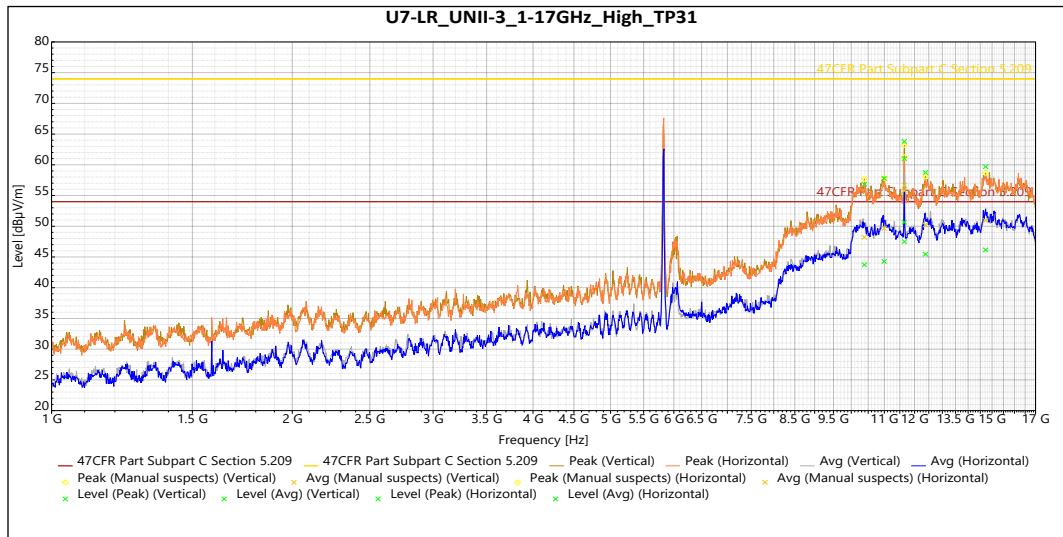
Peak

Frequency	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
11.55 GHz	63.20	74.0	-10.80	276	2.866	Vertical	11.00
12.51 GHz	57.87	74.0	-16.13	15	3.728	Vertical	13.26
14.66 GHz	59.01	74.0	-14.99	228	3.728	Vertical	14.42
10.99 GHz	57.61	74.0	-16.39	43	1.5	Horizontal	12.80
11.54 GHz	63.03	74.0	-10.97	301	1.5	Horizontal	11.02
12.41 GHz	58.71	74.0	-15.29	114	1.714	Horizontal	13.65

Avg

Frequency	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
11.55 GHz	49.92	54.0	-4.08	276	2.866	Vertical	11.00
12.51 GHz	44.39	54.0	-9.61	15	3.728	Vertical	13.26
14.66 GHz	45.76	54.0	-8.24	228	3.728	Vertical	14.42
10.99 GHz	44.97	54.0	-9.03	43	1.5	Horizontal	12.80
11.54 GHz	49.34	54.0	-4.66	301	1.5	Horizontal	11.02
12.41 GHz	45.29	54.0	-8.71	114	1.714	Horizontal	13.65

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



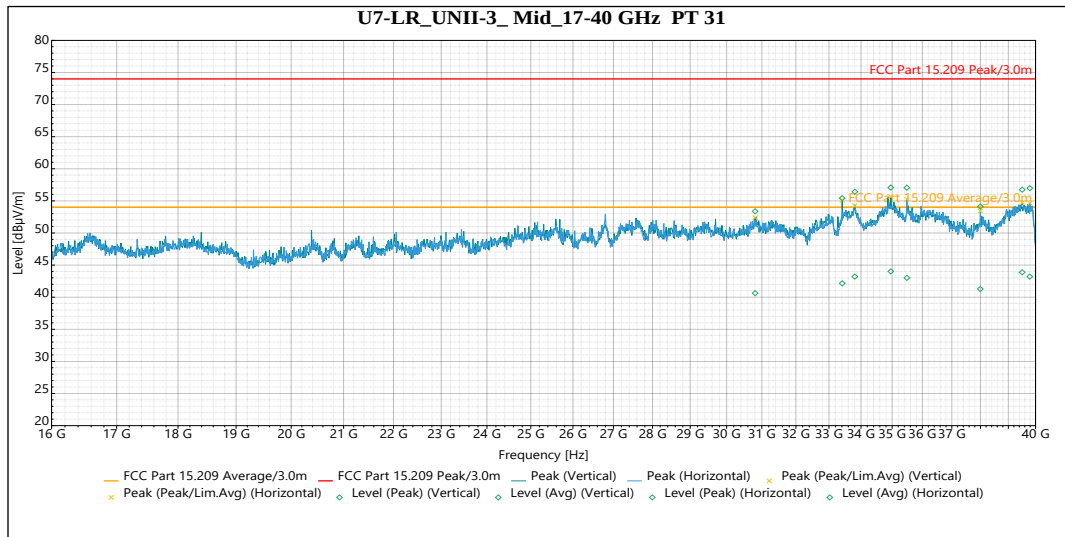
Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
11.66 GHz	61.01	74.0	-12.99	262	1.709	Vertical	10.70
12.38 GHz	58.76	74.0	-15.24	168	1.718	Vertical	13.91
14.72 GHz	59.69	74.0	-14.31	98	3.445	Vertical	14.84
10.39 GHz	56.83	74.0	-17.17	12	1.714	Horizontal	11.64
11.00 GHz	57.77	74.0	-16.23	214	1.714	Horizontal	12.75
11.65 GHz	63.82	74.0	-10.18	291	2.292	Horizontal	10.70

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
11.66 GHz	47.51	54.0	-6.49	262	1.709	Vertical	10.70
12.38 GHz	45.46	54.0	-8.54	168	1.718	Vertical	13.91
14.72 GHz	46.16	54.0	-7.84	98	3.445	Vertical	14.84
10.39 GHz	43.74	54.0	-10.26	12	1.714	Horizontal	11.64
11.00 GHz	44.28	54.0	-9.72	214	1.714	Horizontal	12.75
11.65 GHz	50.65	54.0	-3.35	291	2.292	Horizontal	10.70

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



Peak

Frequency	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
30.81 GHz	53.37	74.0	-20.63	260	Vertical	1.04
33.41 GHz	55.43	74.0	-18.57	217	Vertical	3.03
34.96 GHz	57.09	74.0	-16.91	302	Vertical	5.06
39.79 GHz	56.99	74.0	-17.01	61	Vertical	2.71
33.81 GHz	56.42	74.0	-17.58	239	Horizontal	4.09
35.48 GHz	57.06	74.0	-16.94	237	Horizontal	3.87
38.00 GHz	54.13	74.0	-19.87	71	Horizontal	2.55
39.51 GHz	56.74	74.0	-17.26	27	Horizontal	3.46

Avg

Frequency	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
30.81 GHz	40.63	54.0	-13.37	260	Vertical	1.04
33.41 GHz	42.16	54.0	-11.84	217	Vertical	3.03
34.96 GHz	44.02	54.0	-9.98	302	Vertical	5.06
39.79 GHz	43.21	54.0	-10.79	61	Vertical	2.71
33.81 GHz	43.22	54.0	-10.78	239	Horizontal	4.09
35.48 GHz	43.01	54.0	-10.99	237	Horizontal	3.87
38.00 GHz	41.28	54.0	-12.72	71	Horizontal	2.55
39.51 GHz	43.89	54.0	-10.11	27	Horizontal	3.46

Table 8: Radiated Emissions 17 – 40 GHz at the Middle 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 30 dBm in any 500 kHz 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)
OFDM 20	5745	Mcs0_Nss3	20	9.91	6	30	-22.09
OFDM 20	5775	Mcs0_Nss3	25.5	14.29	6	30	-15.71
OFDM 20	5825	Mcs0_Nss3	24.5	13.16	6	30	-16.84
HE 20	5745	Mcs0_Nss3	23.5	11.65	6	30	-18.35
HE 20	5775	Mcs0_Nss3	25.5	11.91	6	30	-18.09
HE 20	5825	Mcs0_Nss3	24	11.98	6	30	-18.02
HE 40	5755	Mcs0_Nss3	20.5	8.03	6	30	-21.97
HE 40	5775	Mcs0_Nss3	22.5	10.19	6	30	-19.81
HE 40	5795	Mcs0_Nss3	22	9.48	6	30	-20.52
HE 80	5775	Mcs0_Nss3	20.5	3.81	6	30	-26.19

Nss=1

Modulation (BW)	Freq. (MHz)	Data Rate	TP Setting	Total Sum PSD EIRP (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dBm)
OFDM 20	5745	Mcs0_Nss1	20	9.91	6	25.23	-15.32
OFDM 20	5775	Mcs0_Nss1	25.5	14.29	6	25.23	-10.94
OFDM 20	5825	Mcs0_Nss1	24.5	13.16	6	25.23	-12.07
HE 20	5745	Mcs0_Nss1	23.5	11.65	6	25.23	-13.58
HE 20	5775	Mcs0_Nss1	25.5	11.91	6	25.23	-13.32
HE 20	5825	Mcs0_Nss1	24	11.98	6	25.23	-13.25
HE 40	5755	Mcs0_Nss1	20.5	8.03	6	25.23	-17.20
HE 40	5775	Mcs0_Nss1	22.5	10.19	6	25.23	-15.04

HE 40	5795	Mcs0_Nss1	22	9.48	6	25.23	-15.75
HE 80	5775	Mcs0_Nss1	20.5	3.81	6	25.23	-21.42

Result

The maximum summed average power spectral density was less than the limit of 30 dBm (adjusted limit of 25.23 dBm for Nss1); therefore, the EUT complies with the specification.

-- End of Test Report --