



427 West 12800 South
Draper, UT 84020

Test Report Certification

FCC ID	SWX-U7PROO
ISED ID	6545A-U7PROO
Equipment Under Test	U7-Pro-Outdoor
Test Report Serial Number	TR9588_06
Date of Test(s)	23 September; 1 - 4 October 2024, 22 - 27 November 2024; 12 - 14 February; 4 - 7 March 2025, 11-16 April 2025
Report Issue Date	16 April 2025

Test Specification	Applicant
47 CFR FCC Part 15, Subpart E	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 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 with the specifications provided by the manufacturer.

Applicant	Ubiquiti Inc.
Manufacturer	Ubiquiti Inc.
Brand Name	UBIQUITI
Model Number	U7-Pro-Outdoor
FCC ID	SWX-U7PROO
ISED ID	6545A-U7PROO

On this 16th 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: Clay Allred



Reviewed By: Richard L. Winter

Revision History		
Revision	Description	Date
01	Original Report Release	5 December 2024
02	Amended Test Report Number on Title Page and Table on Page 2	2 January 2025
03	Removed Sections 4.4 and 5.5.1 Amended Sections 2.2, 3.3.1, 5.1, 5.3, 5.4, 5.6 Added Section 5.7	14 January 2025
04	Amended Section 5.1 and 5.4	4 March 2025
05	Amended 30 Degree Elevation Gain and Power Tables in Section 5.4 and PSD Data in Section 5.6	7 March 2025
06	Added more detail to Radiated spurious tests in section 5.5.	16 April 2025

Table of Contents

1	Client Information.....	5
1.1	Applicant.....	5
1.2	Manufacturer.....	5
2	Equipment Under Test (EUT).....	6
2.1	Identification of EUT.....	6
2.2	Description of EUT.....	6
2.3	EUT and Support Equipment.....	7
2.4	Interface Ports on EUT.....	7
2.5	Operating Environment.....	7
2.6	Operating Modes.....	8
2.7	EUT Exercise Software.....	8
2.8	Block Diagram of Test Configuration.....	8
2.9	Modification Incorporated/Special Accessories on EUT.....	9
2.10	Deviation, Opinions Additional Information or Interpretations from Test Standard.....	9
3	Test Specification, Method and Procedures.....	10
3.1	Test Specification.....	10
3.2	Methods & Procedures.....	10
3.3	FCC Part 15, Subpart E.....	10
3.4	Results.....	10
3.5	Test Location.....	11
4	Test Equipment.....	12
4.1	Conducted Emissions at Mains Ports.....	12
4.2	Direct Connect at the Antenna Port Tests.....	12
4.3	Radiated Emissions.....	13
4.4	Equipment Calibration.....	14
4.5	Measurement Uncertainty.....	14
5	Test Results.....	15
5.1	§15.203 Antenna Requirements.....	15
5.2	Conducted Emissions at Mains Ports Data.....	16
5.3	§15.407(a) 26 dB Emissions Bandwidth.....	18
5.4	§15.407(a) Output Power.....	19
5.5	§15.209 Spurious Emissions.....	23
5.6	§15.407(a) Maximum Power Spectral Density.....	26
5.7	OFDMA RU Check.....	28

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-Pro-Outdoor
Serial Number	942A6F407A26
Dimensions (cm)	17.0 x 20.8 x 12.18

2.2 Description of EUT

The U7-Pro-Outdoor is a WiFi7 access point with 2.4 GHz, 5GHz and 6GHz 2x2 radios. It has external SMA antenna connectors supporting 2.4/5GHz and internal antennas supporting 2.4/5/6GHz. The U7-Pro-Outdoor has an aggregate throughput rate of 9.3 Gbps and is powered by a 2.5Gbe PoE 802.3at through a single RJ45 port.

This device does not support channel puncturing.

For CDD transmissions, directional 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 3.01 dB + 10 dBi = 13.01 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-7	ax (HE20)	6535, 6555, 6575, 6595, 6615, 6635, 6655, 6675	TP17
		6695, 6715, 6735, 6755, 6775, 6795, 6815, 6835, 6855	TP19
		6875	TP16
	ax (HE40)	6525, 6565, 6605, 6645	TP17

		6685, 6725, 6765, 6805, 6845	TP19
		6885	TP17
	ax (HE80)	6545, 6625,	TP17
		6705, 6785, 6865	TP18
		6865	TP16
	ax (HE160)	6505, 6665	TP18
		6825	TP17
	Ax (HE320)	6585	TP18

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-Pro-Outdoor (Note 1) SN: 05BF1C	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 - 26 °C

Humidity	17 - 29 %
Barometric Pressure	1013 mBar

2.6 Operating Modes

The U7-Pro-Outdoor was connected to a personal computer laptop and tested using test software in order to enable to constant duty cycle greater or equal to 98% of the WiFi transceiver. All emission modes of 802.11 b/g/n/ax were investigated. All measurements are reported with the worst-case mode (802.11ax) unless otherwise.

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

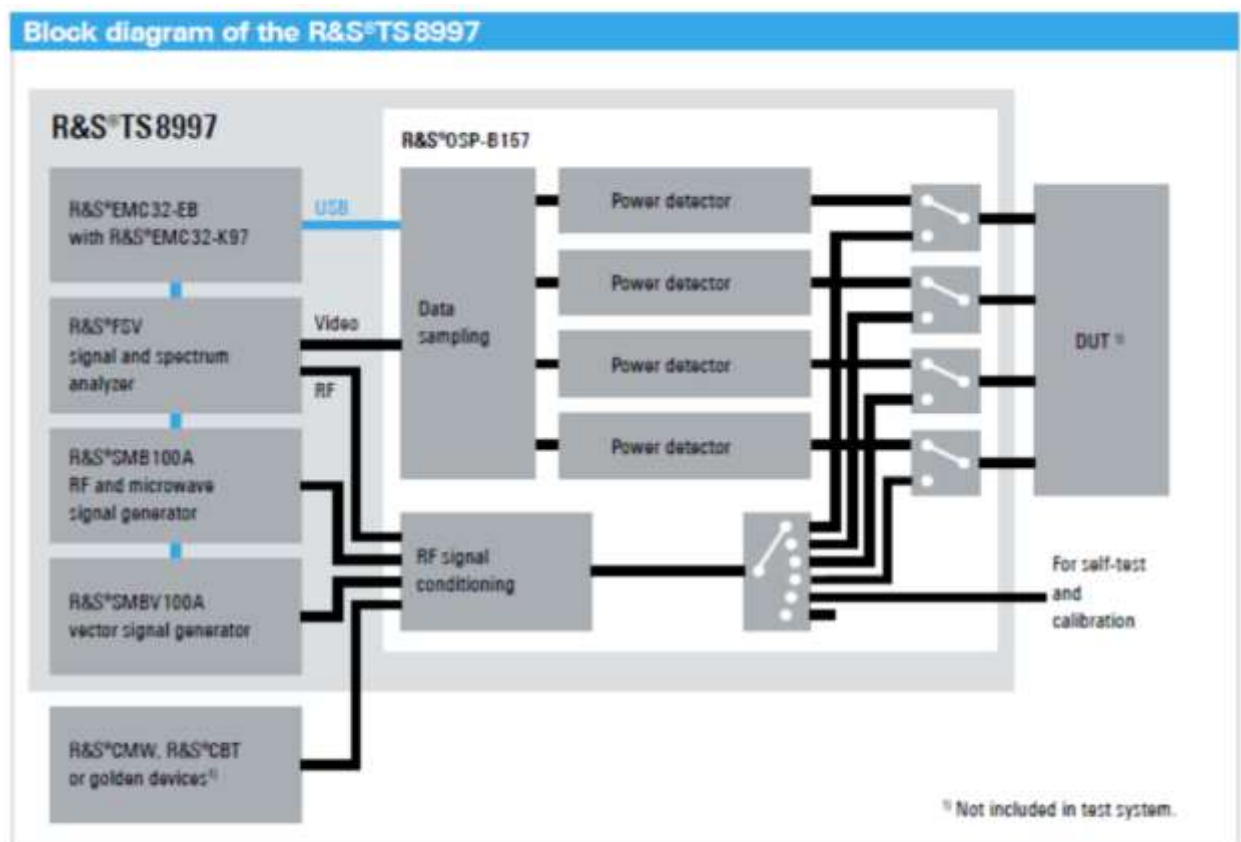


Diagram 1: Test Configuration Block Diagram

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, §6.2.3	Bandwidth Requirement	6535 to 6875	Compliant
15.407(a)	RSS-247 §6.2.2, §6.2.3	Peak Output Power ¹	6535 to 6875	Compliant
15.407(b)	RSS-247 §6.2.2, §6.2.3	Antenna Conducted Spurious Emissions ¹	0.009 to 40000	N/A Note ²
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 ¹	6535 to 6875	Compliant
The testing was performed according to the procedures in ANSI C63.10-2013, 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 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-6754	1/23/2024	2/26/2025
LISN	AFJ	LS16C/10	UCL-2512	7/08/2024	7/08/2025
ISN	Teseq	ISN T800	UCL-2974	7/09/2024	7/09/2025
LISN	AFJ	LS16C\10	UCL-6749	1/29/2024	1/29/2025
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

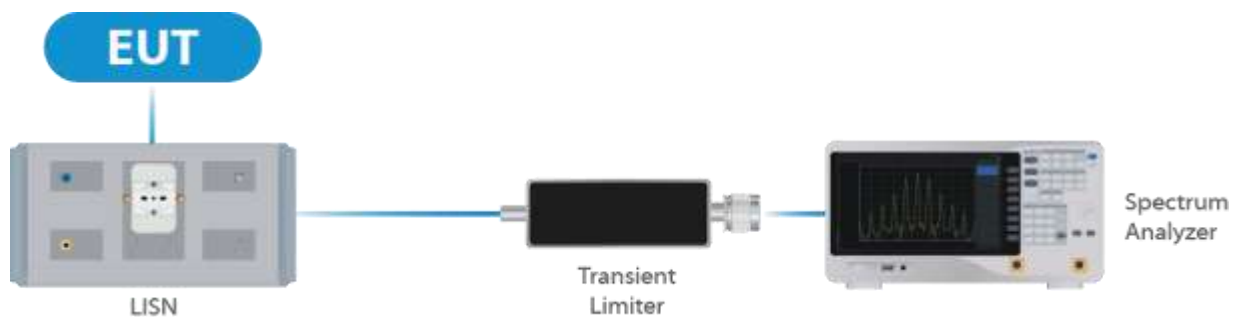


Figure 1: Conducted Emissions Test

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	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

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

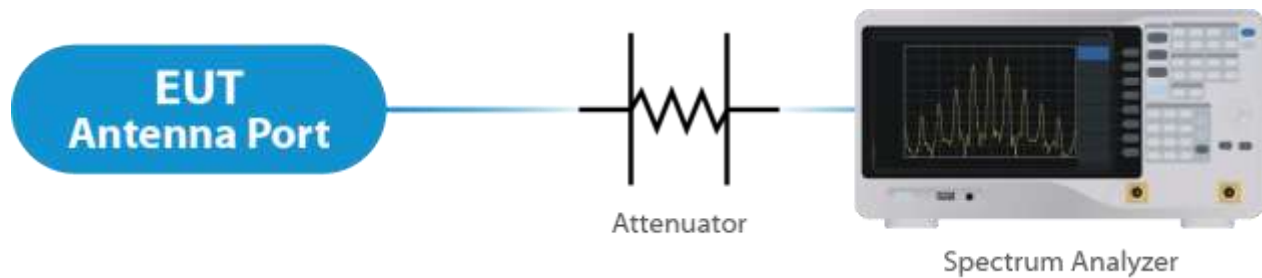


Figure 2: Direct Connect at the Antenna Port Test

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	1/25/2024	1/29/2025
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	2/22/2025
Broadband Antenna	Scwarzbeck	VULB 9163	UCL-3071	1/11/2023	1/11/2025
Double Ridge Horn Antenna	Scwarzbeck	BBHA 9120D	UCL-3065	3/10/2023	3/10/2025
Log Periodic	Scwarzbeck	STLP 9129	UCL-3068	1/27/2023	1/27/2025
15 - 40 GHz Horn Antenna	Scwarzbeck	BBHA 9170	UCL-2487	3/10/2023	3/10/2025
1 – 18 GHz Amplifier	Com-Power	PAM 118A	UCL-3833	7/2/2024	7/2/2025
Test Software	UCL	Revision 1	UCL-3108	N/A	N/A

Table 3: List of equipment used for Radiated Emissions

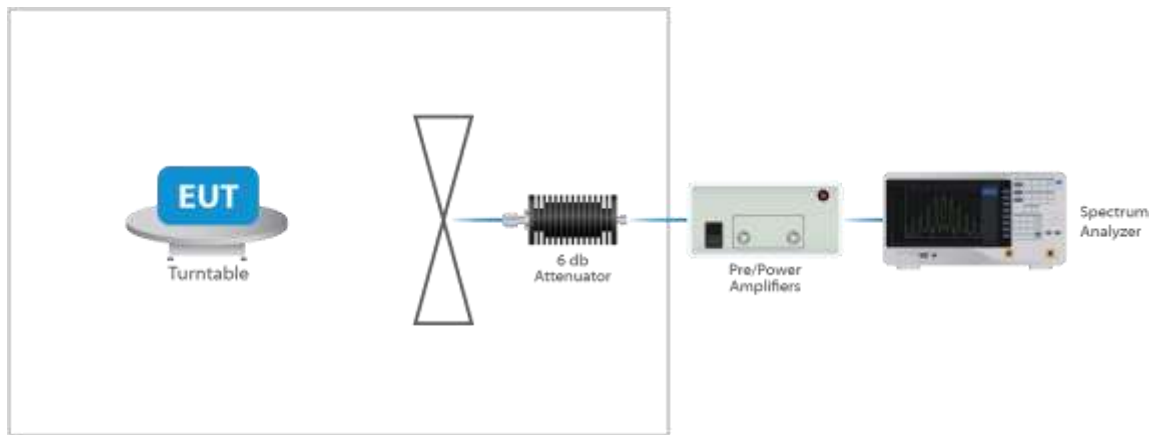


Figure 3: Radiated Emissions Test

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

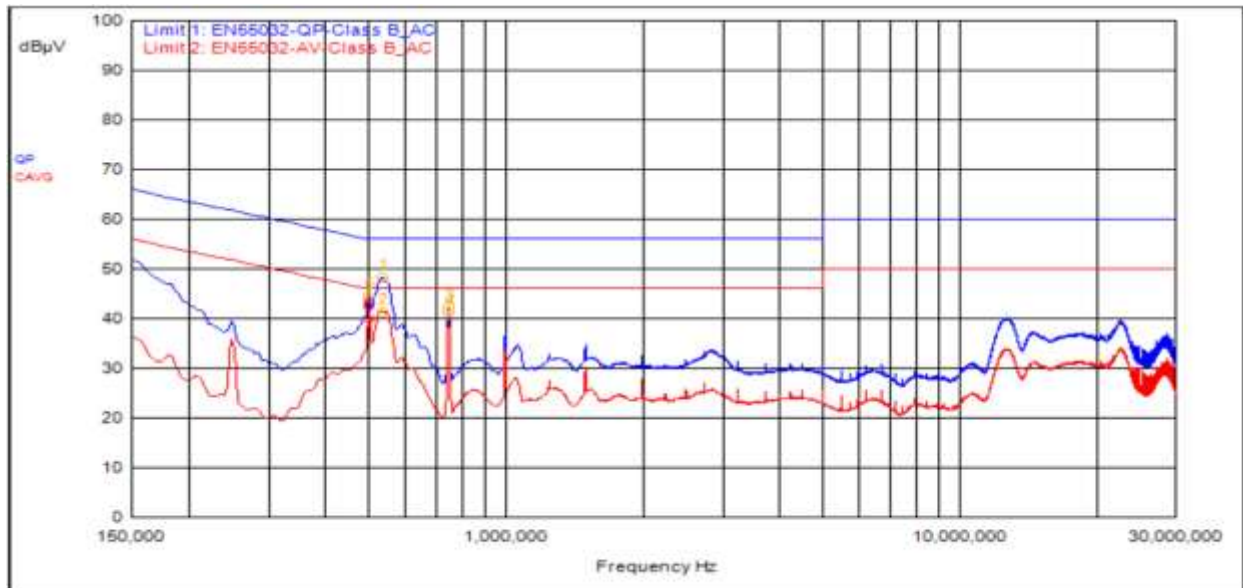
The U7-Pro-Outdoor in the 6 GHz band uses an internal antenna. Per the manufacturer, the maximum gain of the internal antenna per chain is 10 dBi. This is an 802.11 device and utilizes CDD as described in KDB 662911 D01. The internal antenna is not user replaceable.

Results

The EUT complied with the specification

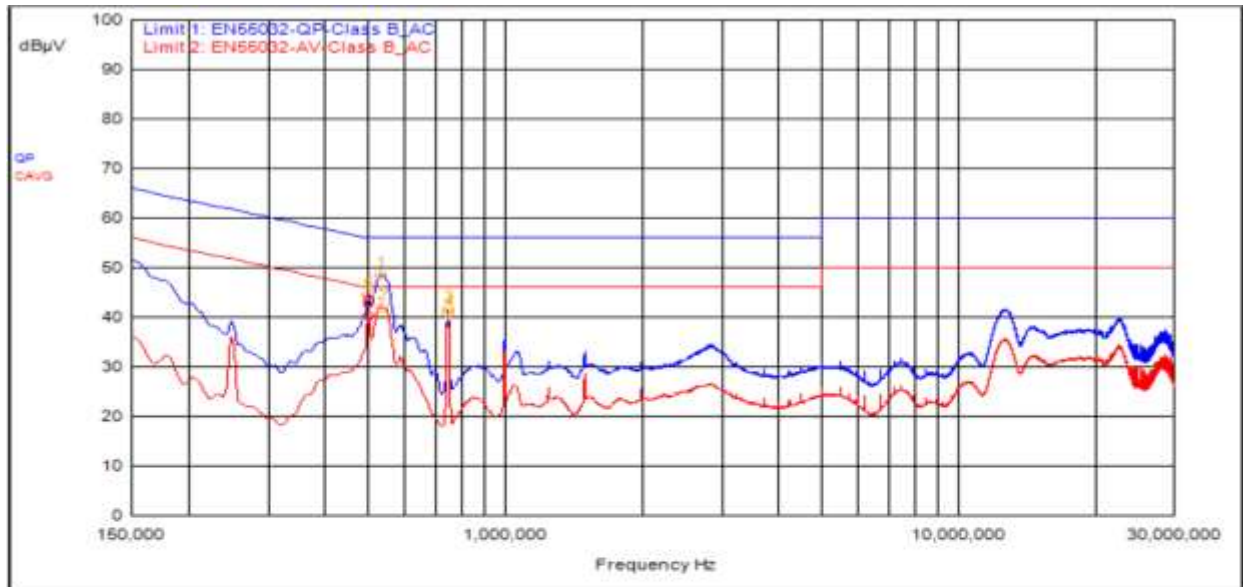
5.2 Conducted Emissions at Mains Ports Data

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	534,000kHz	9.49			QPeak	38.71	48.20	56.00	-7.80			
5	498,000kHz	9.49			QPeak	34.90	44.39	56.03	-11.64			
3	750,000kHz	9.51			QPeak	32.59	42.10	56.00	-13.90			
2	537,000kHz	9.49			C_AVG	31.89	41.38			46.00	-4.62	
4	747,000kHz	9.51			C_AVG	31.66	41.17			46.00	-4.83	
6	498,000kHz	9.49			C_AVG	30.59	40.08			46.03	-5.96	

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	531,000kHz	9.62			QPeak	38.97	48.59	56.00	-7.41			
5	498,000kHz	9.64			QPeak	34.93	44.57	56.03	-11.46			
3	750,000kHz	9.52			QPeak	32.25	41.77	56.00	-14.23			
2	534,000kHz	9.62			C_AVG	32.45	42.07			46.00	-3.93	
4	747,000kHz	9.52			C_AVG	31.36	40.88			46.00	-5.12	
6	498,000kHz	9.64			C_AVG	30.75	40.39			46.03	-5.64	

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)
EHT 20	6535	19.3	23.1
EHT 20	6695	21.0	44.0
EHT 20	6875	19.5	22.9
EHT 40	6525	38.5	44.3
EHT 40	6685	42.5	84.1
EHT 40	6885	39.0	46.0
EHT 80	6545	79.0	88.0
EHT 80	6705	88.0	191.7
EHT 80	6865	80.0	123.5
EHT 160	6505	159.3	176.0
EHT 160	6665	160.8	284.7
EHT 160	6825	159.3	249.0
EHT 320	6585	317.5	345.0

Result

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

NOTE: For 320 MHz emissions bandwidth the 99% Emissions Bandwidth was used to show compliance.

5.4 §15.407(a) 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 of this report for the directional gain calculation.

The maximum average RF conducted output power measured for this device was 19.93 dBm or 98.40 mW. The limit is 36 dBm EIRP, or 4 Watt EIRP. The antenna has a gain of 10 dBi.

NSS>1

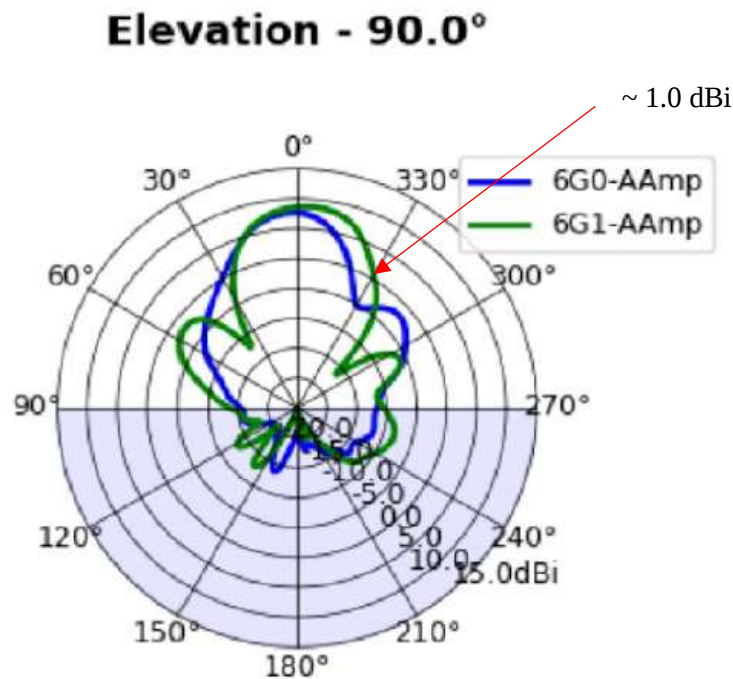
Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Chain 1 Meas.	Chain 2 Meas.	Total Summed Output Power*	EIRP	Ant. Gain
EHT 20	6535	Mcs0_Nss2	17	16.46	16.98	19.74	29.74	10
EHT 20	6695	Mcs0_Nss2	19	16.44	16.62	19.54	29.54	10
EHT 20	6875	Mcs0_Nss2	16	15.19	16.61	18.97	28.97	10
EHT 40	6525	Mcs0_Nss2	17	16.32	16.29	19.32	29.32	10
EHT 40	6685	Mcs0_Nss2	19	16.71	16.89	19.81	29.81	10
EHT 40	6885	Mcs0_Nss2	17	15.65	17.37	19.61	29.61	10
EHT 80	6545	Mcs0_Nss2	17	15.69	16.78	19.28	29.28	10
EHT 80	6705	Mcs0_Nss2	18	16.01	15.87	18.95	28.95	10
EHT 80	6865	Mcs0_Nss2	16	15.32	16.42	18.92	28.92	10
EHT 160	6505	Mcs0_Nss2	18	16.63	17.15	19.90	29.90	10
EHT 160	6665	Mcs0_Nss2	18	16.02	17.03	19.56	29.56	10
EHT 160	6825	Mcs0_Nss2	17	17.02	16.82	19.93	29.93	10
EHT 320	6585	Mcs0_Nss2	18	16.22	16.73	19.49	29.49	10

NSS-1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Chain 1 Meas.	Chain 2 Meas.	Total Summed Output Power*	EIRP	Ant. Gain
EHT 20	6535	Mcs0_Nss1	17	16.46	16.98	19.74	29.74	10
EHT 20	6695	Mcs0_Nss1	19	16.44	16.62	19.54	29.54	10
EHT 20	6875	Mcs0_Nss1	16	15.19	16.61	18.97	28.97	10
EHT 40	6525	Mcs0_Nss1	17	16.32	16.29	19.32	29.32	10
EHT 40	6685	Mcs0_Nss1	19	16.71	16.89	19.81	29.81	10
EHT 40	6885	Mcs0_Nss1	17	15.65	17.37	19.61	29.61	10
EHT 80	6545	Mcs0_Nss1	17	15.69	16.78	19.28	29.28	10
EHT 80	6705	Mcs0_Nss1	18	16.01	15.87	18.95	28.95	10
EHT 80	6865	Mcs0_Nss1	16	15.32	16.42	18.92	28.92	10
EHT 160	6505	Mcs0_Nss1	18	16.63	17.15	19.90	29.90	10
EHT 160	6665	Mcs0_Nss1	18	16.02	17.03	19.56	29.56	10
EHT 160	6825	Mcs0_Nss1	17	17.02	16.82	19.93	29.93	10
EHT 320	6585	Mcs0_Nss1	18	16.22	16.73	19.49	29.49	10

30 Degree from Horizon

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Chain 1 Meas.	Chain 2 Meas.	Total Summed Output Power*	EIRP	Ant. Gain
EHT 20	6535	Mcs0_Nss2	17	16.46	16.98	19.74	20.74	1.0
EHT 20	6695	Mcs0_Nss2	19	16.44	16.62	19.54	20.54	1.0
EHT 20	6875	Mcs0_Nss2	16	15.19	16.61	18.97	19.97	1.0
EHT 40	6525	Mcs0_Nss2	17	16.32	16.29	19.32	20.32	1.0
EHT 40	6685	Mcs0_Nss2	19	16.71	16.89	19.81	20.81	1.0
EHT 40	6885	Mcs0_Nss2	17	15.65	17.37	19.61	20.61	1.0
EHT 80	6545	Mcs0_Nss2	17	15.69	16.78	19.28	20.28	1.0
EHT 80	6705	Mcs0_Nss2	18	16.01	15.87	18.95	19.95	1.0
EHT 80	6865	Mcs0_Nss2	16	15.32	16.42	18.92	19.92	1.0
EHT 160	6505	Mcs0_Nss2	18	16.63	17.15	19.90	20.90	1.0
EHT 160	6665	Mcs0_Nss2	18	16.02	17.03	19.56	20.56	1.0
EHT 160	6825	Mcs0_Nss2	17	17.02	16.82	19.93	20.93	1.0
EHT 320	6585	Mcs0_Nss2	18	16.22	16.73	19.49	20.49	1.0



Plot 1: Elevation Plot Greater Than 30-Degrees From Horizon 10 dBi Antenna

Result

In the configuration tested, the maximum average RF output power was less than 4 watt EIRP; therefore, the EUT complied with the requirements of the specification (see spectrum analyzer plots in attached Annex). The EIRP above 30 degree elevation is below 21 dBm.

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

5.5 §15.209 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.

DUT Test Parameters.

Channel		Mode	TP Setting	BW*
Low	5955 MHz	be (EHT)	31 (Max)	20 MHz
Mid	6195 MHz	be (EHT)	31 (Max)	20 MHz
High	6415 MHz	be (EHT)	31 (Max)	20 MHz

*Additional testing at all other BW's (40, 80, 160 and 320 MHz) was performed to ensure 20MHz was worst case BW.

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

Results

Test Mode – EHT20, MCS0, TX99, CDD in 2X MIMO

Frequency	Det.	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
10.9053389 GHz	PK	57.907	74	-16.093	182	1.5	Vertical	1 MHz	11.757
13.8391984 GHz	PK	60.193	74	-13.807	240	1.714	Vertical	1 MHz	13.924
16.8950347 GHz	PK	59.188	74	-14.812	298	1.714	Vertical	1 MHz	14.665
10.9053389 GHz	AV	44.913	54	-9.087	182	1.5	Vertical	1 MHz	11.757
13.8391984 GHz	AV	46.825	54	-7.175	240	1.714	Vertical	1 MHz	13.924
16.8950347 GHz	AV	45.915	54	-8.085	298	1.714	Vertical	1 MHz	14.665
10.9437543 GHz	PK	58.517	74	-15.483	266	1.709	Horizontal	1 MHz	12.023
14.6589178 GHz	PK	60.666	74	-13.334	294	1.713	Horizontal	1 MHz	14.921
16.9899595 GHz	PK	59.55	74	-14.45	262	1.714	Horizontal	1 MHz	15.277
10.9437543 GHz	AV	44.746	54	-9.254	266	1.709	Horizontal	1 MHz	12.023
14.6589178 GHz	AV	47.487	54	-6.513	294	1.713	Horizontal	1 MHz	14.921
16.9899595 GHz	AV	46.574	54	-7.426	262	1.714	Horizontal	1 MHz	15.277

Table 4: 1-17GHz (Low Channel – 6535MHz)

Test Mode – EHT20, MCS0, TX99, CDD in 2X MIMO

Frequency	Det.	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
10.9233334 GHz	PK	57.894	74	-16.106	188	1.713	Vertical	1 MHz	12.097
14.9205082 GHz	PK	60.243	74	-13.757	99	1.714	Vertical	1 MHz	14.42
16.9838184 GHz	PK	59.21	74	-14.79	149	1.718	Vertical	1 MHz	15.232
10.9233334 GHz	AV	44.541	54	-9.459	188	1.713	Vertical	1 MHz	12.097
14.9205082 GHz	AV	46.483	54	-7.517	99	1.714	Vertical	1 MHz	14.42
16.9838184 GHz	AV	46.188	54	-7.812	149	1.718	Vertical	1 MHz	15.232
10.9357267 GHz	PK	57.926	74	-16.074	339	1.713	Horizontal	1 MHz	12.122
13.9452872 GHz	PK	59.301	74	-14.699	182	1.714	Horizontal	1 MHz	13.889
16.9977825 GHz	PK	59.179	74	-14.821	143	1.713	Horizontal	1 MHz	15.335
10.9357267 GHz	AV	44.541	54	-9.459	339	1.713	Horizontal	1 MHz	12.122
13.9452872 GHz	AV	46.569	54	-7.431	182	1.714	Horizontal	1 MHz	13.889
16.9977825 GHz	AV	46.307	54	-7.693	143	1.713	Horizontal	1 MHz	15.335

Table 5: 1-17GHz (Mid Channel – 6695MHz)

Test Mode – EHT20, MCS0, TX99, CDD in 2X MIMO

Frequency	Det.	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
10.9390351 GHz	AV	44.824	54	-9.176	339	1.5	Vertical	1 MHz	12.081
14.6396692 GHz	AV	47.115	54	-6.885	37	1.713	Vertical	1 MHz	14.86
16.9508199 GHz	AV	45.556	54	-8.444	65	1.714	Vertical	1 MHz	14.99
10.9390351 GHz	PK	57.75	74	-16.25	339	1.5	Vertical	1 MHz	12.081
14.6396692 GHz	PK	60.522	74	-13.478	37	1.713	Vertical	1 MHz	14.86
16.9508199 GHz	PK	58.998	74	-15.002	65	1.714	Vertical	1 MHz	14.99
11.2549197 GHz	PK	56.522	74	-17.478	134	3.724	Horizontal	1 MHz	10.433
14.674314 GHz	PK	60.215	74	-13.785	221	3.728	Horizontal	1 MHz	14.972
16.9969311 GHz	PK	59.296	74	-14.704	26	3.729	Horizontal	1 MHz	15.329
11.2549197 GHz	AV	43.415	54	-10.585	134	3.724	Horizontal	1 MHz	10.433
14.674314 GHz	AV	47.291	54	-6.709	221	3.728	Horizontal	1 MHz	14.972
16.9969311 GHz	AV	46.148	54	-7.852	26	3.729	Horizontal	1 MHz	15.329

Table 6: 1-17GHz (High Channel – 6875MHz)
Test Mode – EHT20, MCS0, TX99, CDD in 2X MIMO

Frequency	Det.	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
34.9751221 GHz	PK	56.187	74	-17.813	279	1.5	Vertical	1 MHz	5.088
35.743401 GHz	PK	54.735	74	-19.265	340	1.5	Vertical	1 MHz	3.77
34.9751221 GHz	AV	42.804	54	-11.196	279	1.5	Vertical	1 MHz	5.088
35.743401 GHz	AV	41.645	54	-12.355	340	1.5	Vertical	1 MHz	3.77
26.1381406 GHz	PK	66.934	74	-7.066	87	1.5	Horizontal	1 MHz	8.946
39.4801 GHz	PK	63.299	74	-10.701	80	1.5	Horizontal	1 MHz	11.695
26.1381406 GHz	AV	53.273	54	-0.727	87	1.5	Horizontal	1 MHz	8.946
39.4801 GHz	AV	50.501	54	-3.499	80	1.5	Horizontal	1 MHz	11.695

Table 7: 17-40GHz (Low Channel – 6535MHz)
Test Mode – EHT20, MCS0, TX99, CDD in 2X MIMO

Frequency	Det.	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
34.9775759 GHz	PK	55.587	74	-18.413	76	1.5	Vertical	1 MHz	5.092
35.732595 GHz	PK	54.568	74	-19.432	137	1.5	Vertical	1 MHz	3.773
34.9775759 GHz	AV	42.812	54	-11.188	76	1.5	Vertical	1 MHz	5.092
35.732595 GHz	AV	41.699	54	-12.301	137	1.5	Vertical	1 MHz	3.773
32.678723 GHz	PK	68.025	74	-5.975	94	1.5	Horizontal	1 MHz	3.232
39.2035305 GHz	PK	65.876	74	-8.124	36	1.5	Horizontal	1 MHz	2.535
32.678723 GHz	AV	52.73	54	-1.27	94	1.5	Horizontal	1 MHz	3.232
39.2035305 GHz	AV	52.686	54	-1.314	36	1.5	Horizontal	1 MHz	2.535

Table 8: 17-40GHz (Mid Channel – 6695MHz)
Test Mode – EHT20, MCS0, TX99, CDD in 2X MIMO

Frequency	Det.	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
27.4963233 GHz	PK	56.563	74	-17.437	81	1.5	Vertical	1 MHz	1.011
34.3686936 GHz	PK	59.748	74	-14.252	49	1.5	Vertical	1 MHz	2.463
27.4963233 GHz	AV	43.198	54	-10.802	81	1.5	Vertical	1 MHz	1.011
34.3686936 GHz	AV	45.039	54	-8.961	49	1.5	Vertical	1 MHz	2.463
20.61972 GHz	PK	66.009	74	-7.991	83	1.5	Horizontal	1 MHz	-1.595
34.3656414 GHz	PK	67.651	74	-6.349	62	1.5	Horizontal	1 MHz	5.134
20.61972 GHz	AV	52.889	54	-1.111	83	1.5	Horizontal	1 MHz	-1.595
34.3656414 GHz	AV	53.105	54	-0.895	62	1.5	Horizontal	1 MHz	3.232

Table 9: 17-40GHz (High Channel – 6875MHz)

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.

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. The Aggregate PSD column is the aggregate of all chains. 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 23 dBm EIRP in any 1 MHz band during any time interval of continuous transmission. Results of this testing are summarized.

See Section 2.2 of this report for the directional gain calculation.

NSS>1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Aggregate PSD	Ant Gain	Total Summed EIRP	Limit	Margin
EHT 20	6535	Mcs0_Nss2	17	-4.02	10	5.98	23	-17.02
EHT 20	6695	Mcs0_Nss2	19	-3.64	10	6.36	23	-16.64
EHT 20	6875	Mcs0_Nss2	16	-4.73	10	5.27	23	-17.73
EHT 40	6525	Mcs0_Nss2	17	-7.24	10	2.76	23	-20.24
EHT 40	6685	Mcs0_Nss2	19	-6.40	10	3.60	23	-19.40
EHT 40	6885	Mcs0_Nss2	17	-7.10	10	2.90	23	-20.10
EHT 80	6545	Mcs0_Nss2	17	-10.15	10	-0.15	23	-23.15
EHT 80	6705	Mcs0_Nss2	18	-10.10	10	-0.10	23	-23.10
EHT 80	6865	Mcs0_Nss2	16	-10.77	10	-0.77	23	-23.07
EHT 160	6505	Mcs0_Nss2	18	-12.66	10	-2.66	23	-25.66
EHT 160	6665	Mcs0_Nss2	18	-12.30	10	-2.30	23	-25.30
EHT 160	6825	Mcs0_Nss2	17	-12.38	10	-2.38	23	-25.38
EHT 320	6585	Mcs0_Nss2	18	-15.41	10	-5.41	23	-28.41

NSS-1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Aggregate PSD	Ant Gain	Total Summed EIRP	Limit	Margin
EHT 20	6535	Mcs0_Nss1	17	-4.02	13.01	8.99	23	-14.01
EHT 20	6695	Mcs0_Nss1	19	-3.64	13.01	9.37	23	-13.63
EHT 20	6875	Mcs0_Nss1	16	-4.73	13.01	8.28	23	-14.72
EHT 40	6525	Mcs0_Nss1	17	-7.24	13.01	5.77	23	-17.23
EHT 40	6685	Mcs0_Nss1	19	-6.40	13.01	6.61	23	-16.39
EHT 40	6885	Mcs0_Nss1	17	-7.10	13.01	5.91	23	-17.09
EHT 80	6545	Mcs0_Nss1	17	-10.15	13.01	2.86	23	-20.14
EHT 80	6705	Mcs0_Nss1	18	-10.10	13.01	2.91	23	-20.09
EHT 80	6865	Mcs0_Nss1	16	-10.77	13.01	2.24	23	-20.76
EHT 160	6505	Mcs0_Nss1	18	-12.66	13.01	0.35	23	-22.65
EHT 160	6665	Mcs0_Nss1	18	-12.30	13.01	0.71	23	-22.29
EHT 160	6825	Mcs0_Nss1	17	-12.38	13.01	0.63	23	-22.37
EHT 320	6585	Mcs0_Nss1	18	-15.41	13.01	-2.40	23	-25.40

Result

The maximum average power spectral density was less than the limit of 23 dBm EIRP (adjusted gain is for Nss1 mode, see section 2.2); therefore, the EUT complies with the specification.

5.7 OFDMA RU Check

If EUT supports OFDMA multiple partial Resource Unit (RU) configurations were verified and the worst case mode was tested.

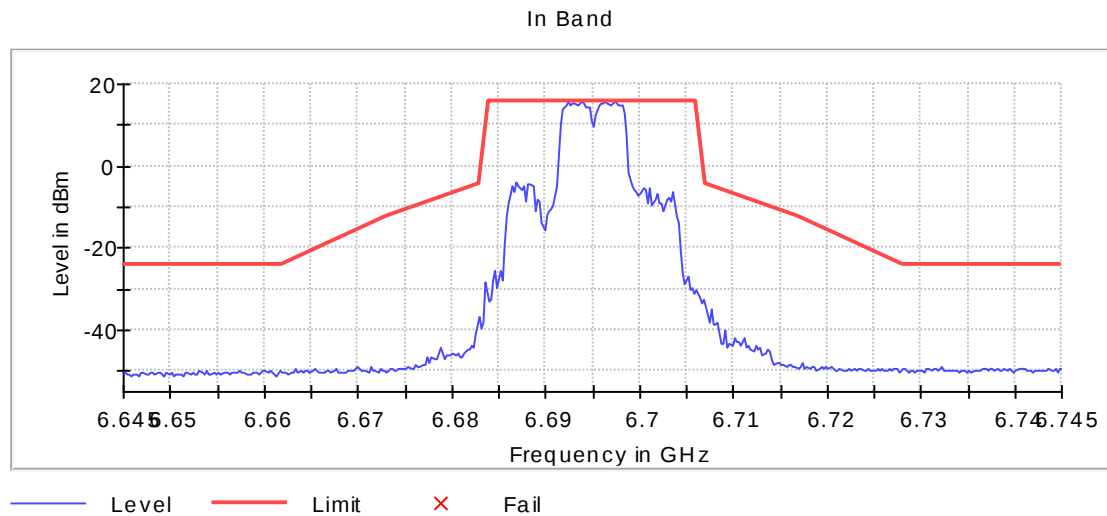


Figure 4: 6695 20MHz RU Vérification - Center

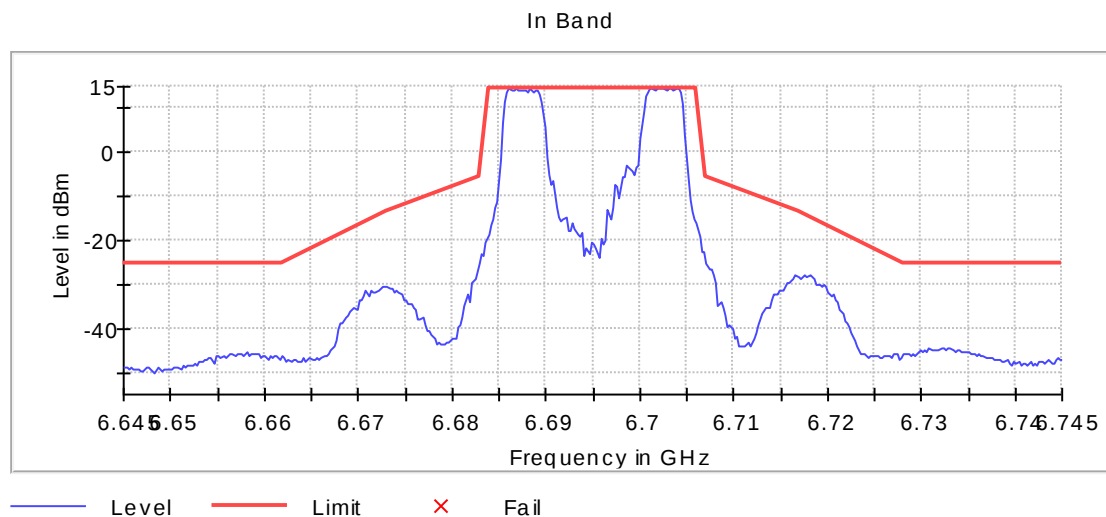


Figure 5: 6695 20MHz RU Vérification - Edge

Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	6.64500 GHz	6.64500 GHz
Stop Frequency	6.74500 GHz	6.74500 GHz
Span	100.000 MHz	100.000 MHz
RBW	500.000 kHz	~ 500.000 kHz
VBW	2.000 MHz	>= 1.500 MHz
SweepPoints	400	~ 400
SweepTime	1.000 ms	AUTO
Reference Level	10.000 dBm	AUTO
Attenuation	20.000 dB	0.000 dB
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Average Power	Average Power
SweepType	Sweep	Sweep
Preamp	off	off

Table 10: 6695 20MHz RU Vérification

In Band

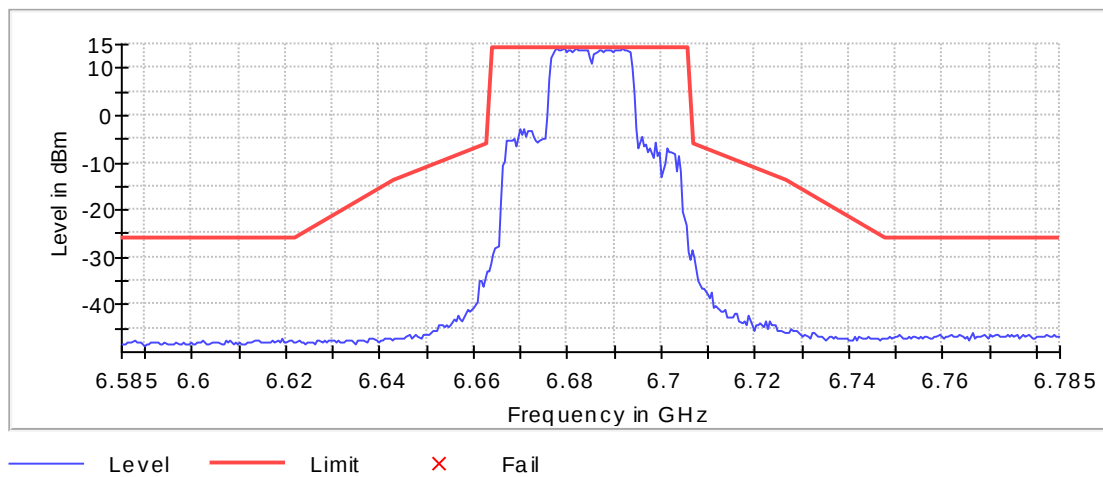
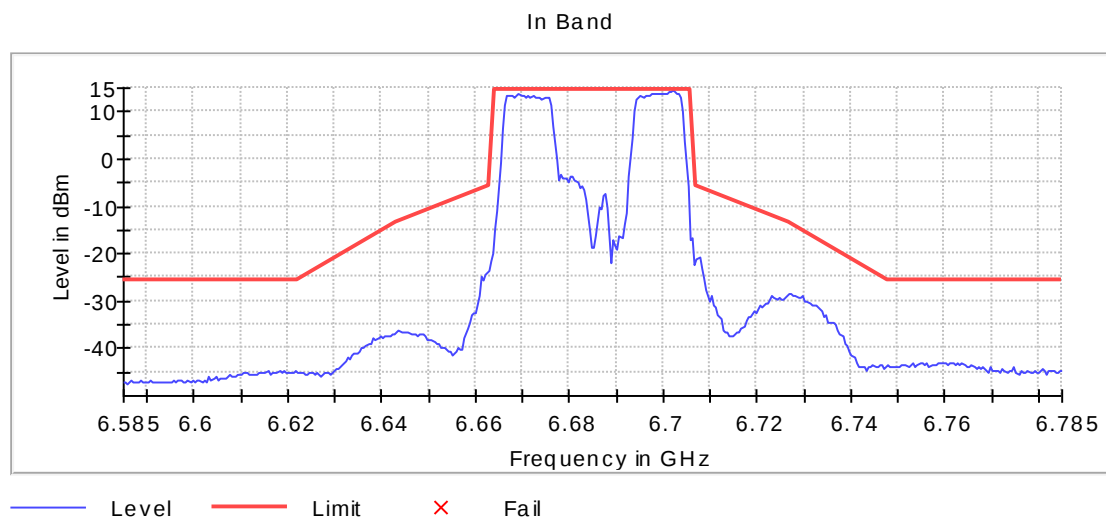


Figure 6: 6685 40MHz RU Vérification - Center



**Figure 7: 6685 40MHz RU Vérification - Edge
Measurement 1**

Setting	Instrument Value	Target Value
Start Frequency	6.58500 GHz	6.58500 GHz
Stop Frequency	6.78500 GHz	6.78500 GHz
Span	200.000 MHz	200.000 MHz
RBW	1.000 MHz	~ 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	400	~ 400
Sweeptime	1.000 ms	AUTO
Reference Level	10.000 dBm	AUTO
Attenuation	20.000 dB	0.000 dB
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Average Power	Average Power
SweepType	Sweep	Sweep
Preamp	off	off

Table 11: 6685 40MHz RU Vérification

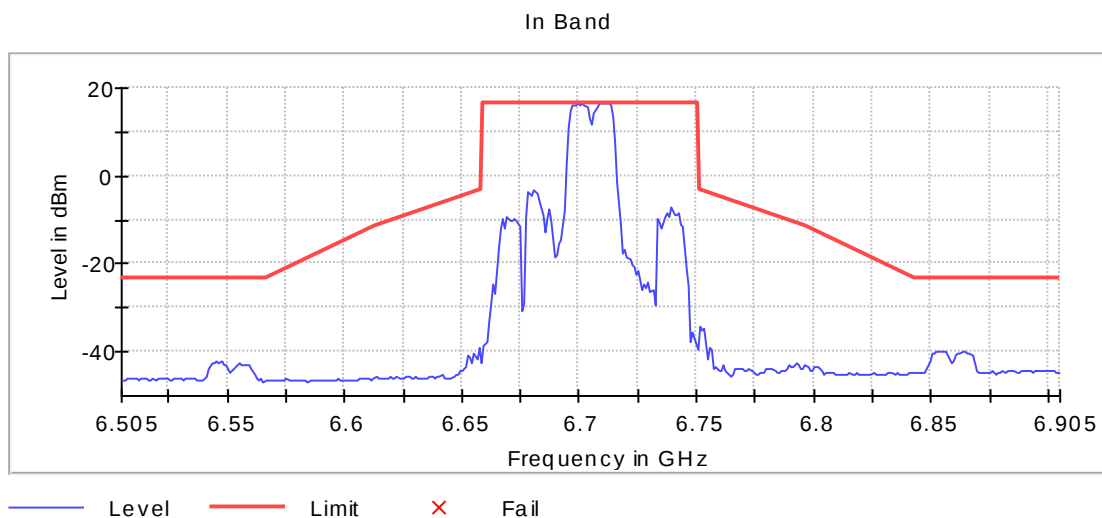


Figure 8: 6705 80MHz RU Vérification - Center

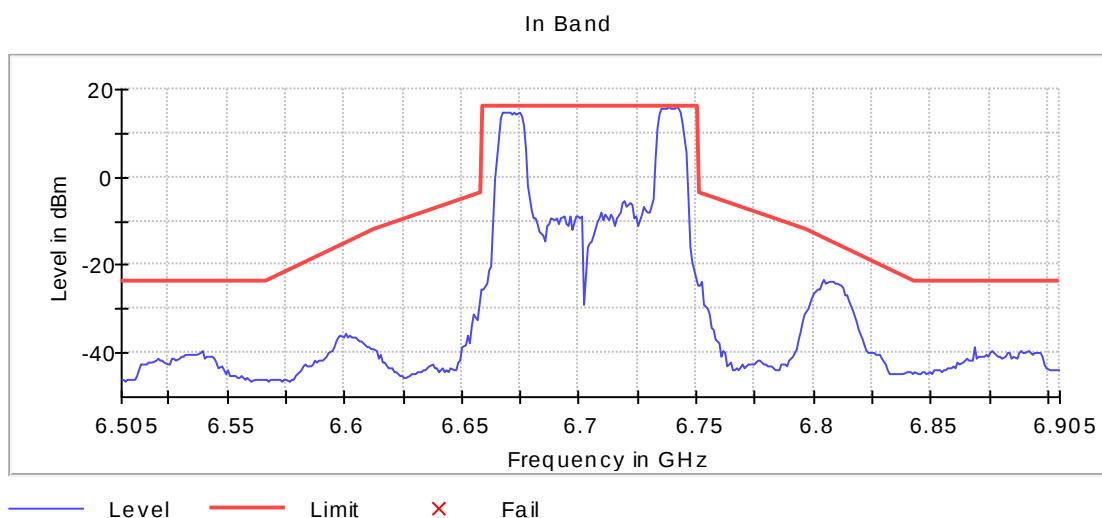


Figure 9: 6705 80MHz RU Vérification - Edge

Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	6.50500 GHz	6.50500 GHz
Stop Frequency	6.90500 GHz	6.90500 GHz
Span	400.000 MHz	400.000 MHz
RBW	2.000 MHz	~ 2.000 MHz
VBW	10.000 MHz	>= 6.000 MHz
SweepPoints	400	~ 400
SweepTime	1.000 ms	AUTO
Reference Level	10.000 dBm	AUTO
Attenuation	20.000 dB	0.000 dB
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Average Power	Average Power
SweepType	Sweep	Sweep
Preamp	off	off

Table 12: 6705 80MHz RU Vérification

In Band

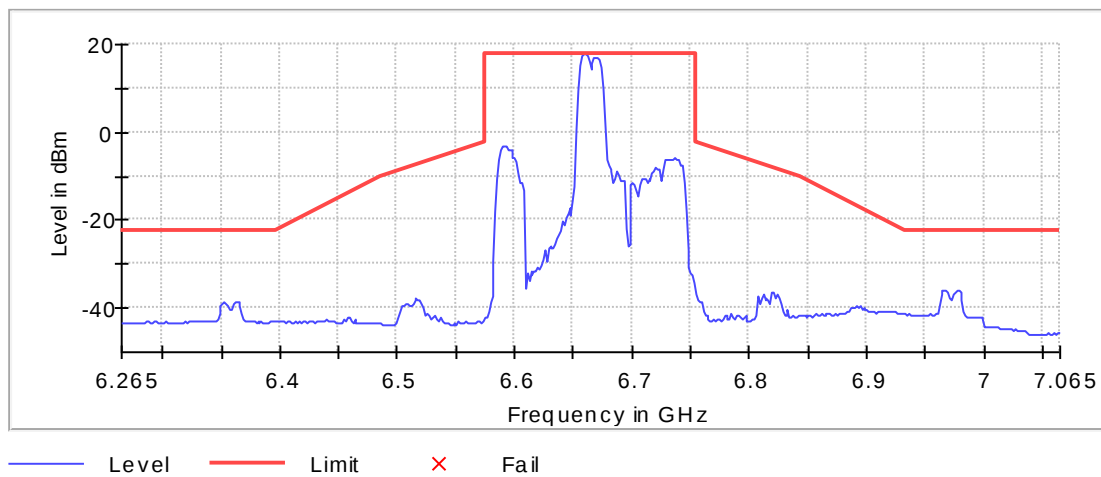
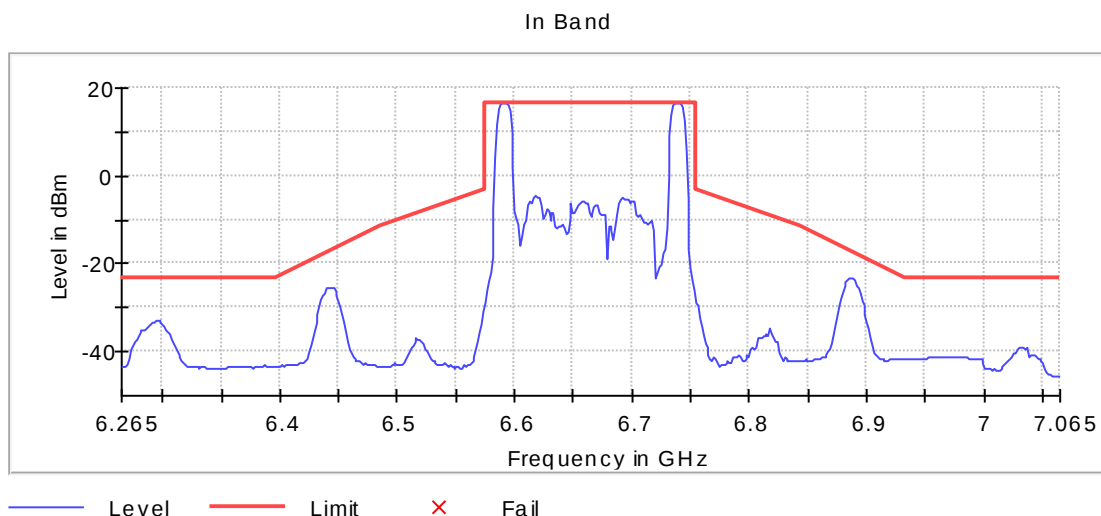


Figure 10: 6665 160MHz RU Vérification - Center



**Figure 11: 6665 160MHz RU Vérification - Edge
Measurement 1**

Setting	Instrument Value	Target Value
Start Frequency	6.26500 GHz	6.26500 GHz
Stop Frequency	7.06500 GHz	7.06500 GHz
Span	800.000 MHz	800.000 MHz
RBW	3.000 MHz	~ 3.000 MHz
VBW	10.000 MHz	>= 9.000 MHz
SweepPoints	533	~ 533
Sweptime	4.000 ms	AUTO
Reference Level	10.000 dBm	AUTO
Attenuation	20.000 dB	0.000 dB
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Average Power	Average Power
Sweeptype	Sweep	Sweep
Preamp	off	off

Table 13: 6665 160MHz RU Vérification

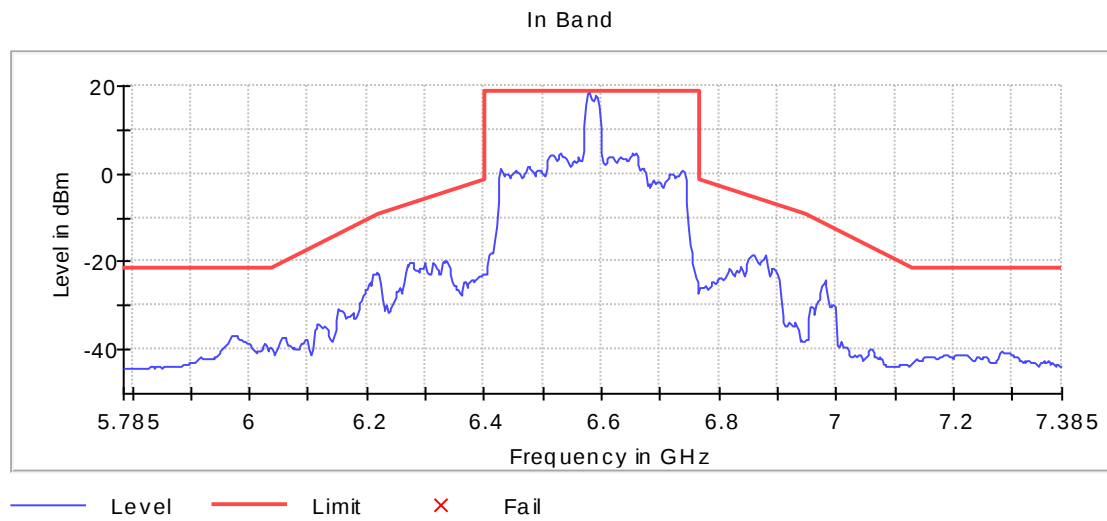


Figure 12: 6585 320MHz RU Vérification - Center

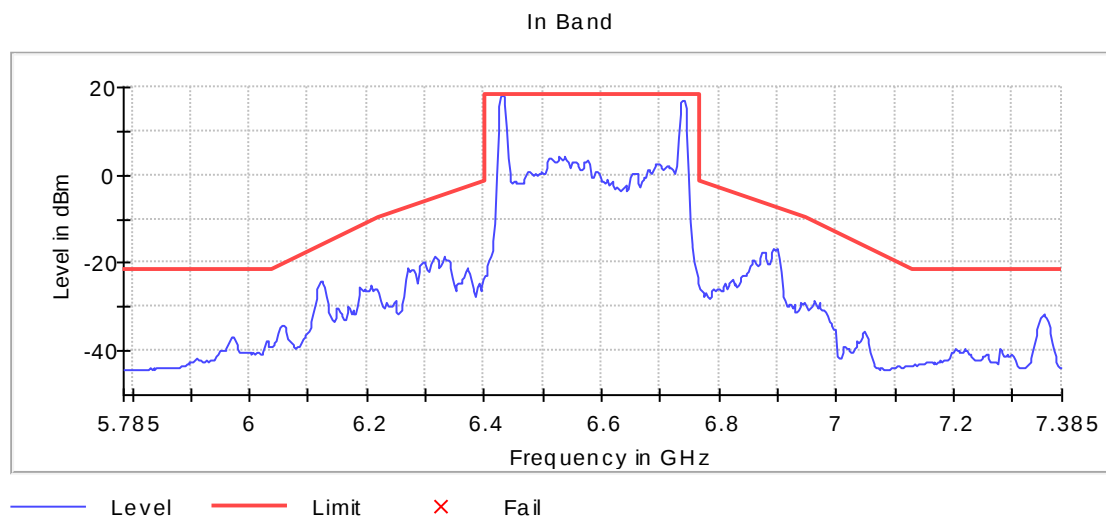


Figure 13: 6585 320MHz RU Vérification - Edge

Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	5.78500 GHz	5.78500 GHz
Stop Frequency	7.38500 GHz	7.38500 GHz
Span	1.600 GHz	1.600 GHz
RBW	5.000 MHz	~ 5.000 MHz
VBW	20.000 MHz	>= 15.000 MHz
SweepPoints	640	~ 640
SweepTime	6.400 ms	AUTO
Reference Level	10.000 dBm	AUTO
Attenuation	20.000 dB	0.000 dB
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Average Power	Average Power
SweepType	Sweep	Sweep
Preamp	off	off

Table 14: 6585 320MHz RU Vérification

-- End of Test Report --