



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	TR9587_05
Date of Test(s)	23 September; 1 - 4 October 2024, 22 - 27 November 2024; 11 - 14 February; 4 - 6 March 2025, 11-12 April 2025
Report Issue Date	17 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

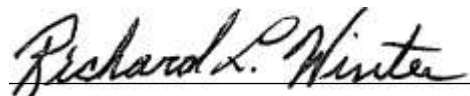
On this 17th day of April 2025, I individually and for Unified Compliance Laboratory certify that the statements made in this engineering report are true, complete, and correct to the best of my knowledge and are made in good faith. Unified Compliance laboratory is not responsible for incorrect information 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	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 February 2025
03	Amended Section 5.1 and 5.4	4 March 2025
04	Amended 30 Degree Elevation Gain and Power Tables in Section 5.4 and PSD Data in Section 5.6	6 March 2025
05	Added more detail to Radiated spurious tests in section 5.5.	17 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.....	8
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-5	ax (HE20)	5955, 5975, 5995, 6015, 6035, 6055, 6075, 6095, 6115, 6135, 6155, 6175,	TP19
		6195, 6215, 6235, 6255, 6275, 6295, 6315, 6335, 6355, 6375, 6395,	TP18
		6415	TP19

	ax (HE40)	5965, 6005, 6045, 6085, 6125, 6165, 6205, 6245, 6285,	TP18
		6325, 6365, 6405	
	ax (HE80)	5985, 6065, 6145, 6225, 6305, 6385	TP18
	ax (HE160)	6025, 6185	TP18
		6325	TP17
	Ax (HE320)	6265	TP17

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
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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 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

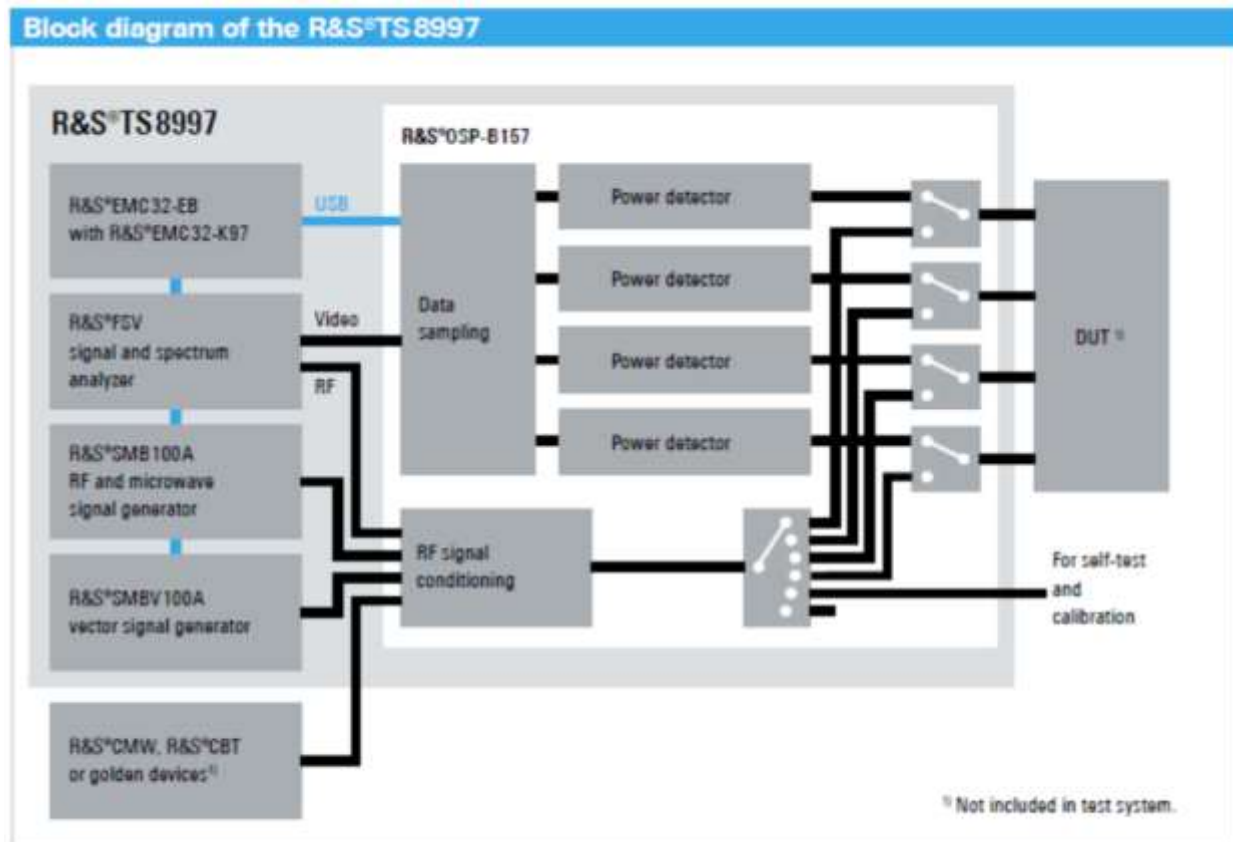


Diagram 1: Test Configuration Block Diagram

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	5955 to 6415	Compliant
15.407(a)	RSS-247 §6.2.2, §6.2.3	Peak Output Power ¹	5955 to 6415	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	5955 to 6415	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	AFJ	AFJ FFT3010	UCL-3107	N/A	N/A

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

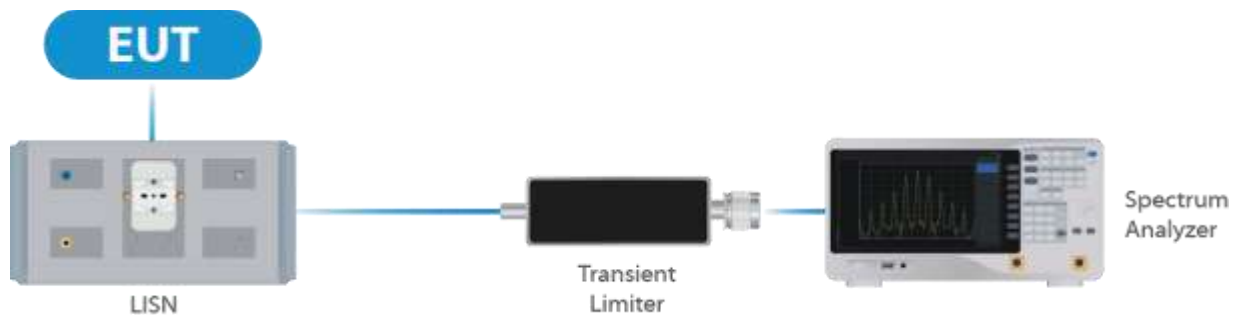


Figure 1: Conducted Emissions Test

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

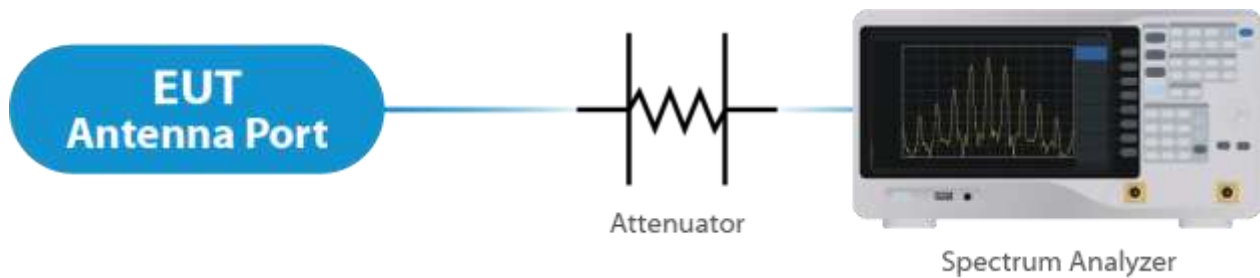


Figure 2: Direct Connect at the Antenna Port Test

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	Nexio	BatEMC	UCL-5253 & UCL-5249	N/A	N/A

Table 3: List of equipment used for Radiated Emissions

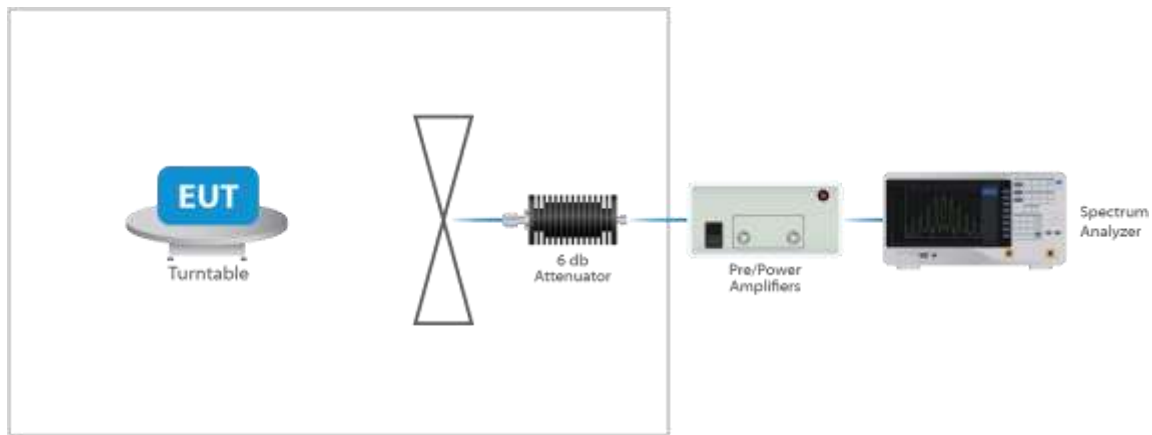


Figure 3: Radiated Emissions Test

4.4 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

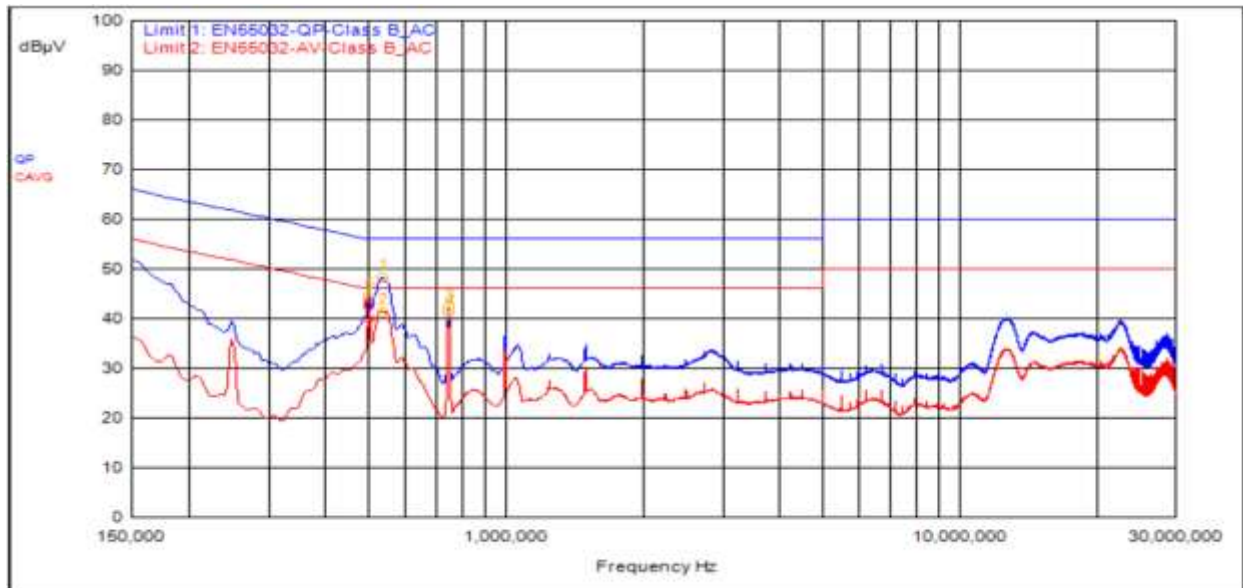
The U7-Pro-Outdoor in the 6 GHz band uses an internal antenna. Per the manufacturer, the maximum gain of the internal antenna per chain is 10 dBi. This is an 802.11 device and utilizes CDD as described in KDB 662911 D01. The internal antenna is not user replaceable.

Results

The EUT complied with the specification

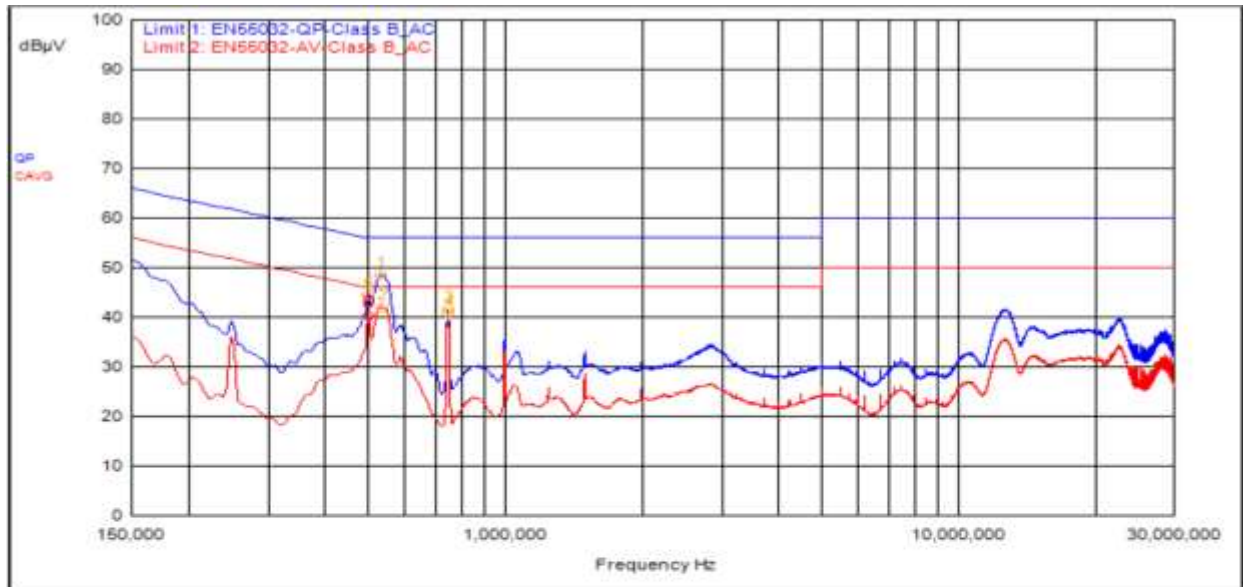
5.2 Conducted Emissions at Mains Ports Data

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)
20	5955	21.0	41.3
20	6195	19.3	22.9
20	6415	19.5	22.9
40	5965	39.0	64.0
40	6205	38.5	41.1
40	6405	39.0	44.9
80	5985	78.0	90.5
80	6225	79.0	88.5
80	6385	79.0	89.5
160	6025	159.0	173.0
160	6185	159.3	175.0
160	6325	157.8	170.0
320	6265	317.5	336.0

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 19.68 dBm or 92.90 mW. The limit is 36 dBm EIRP, or 4 watt EIRP. The antenna has a gain of 10 dBi.

NSS>1

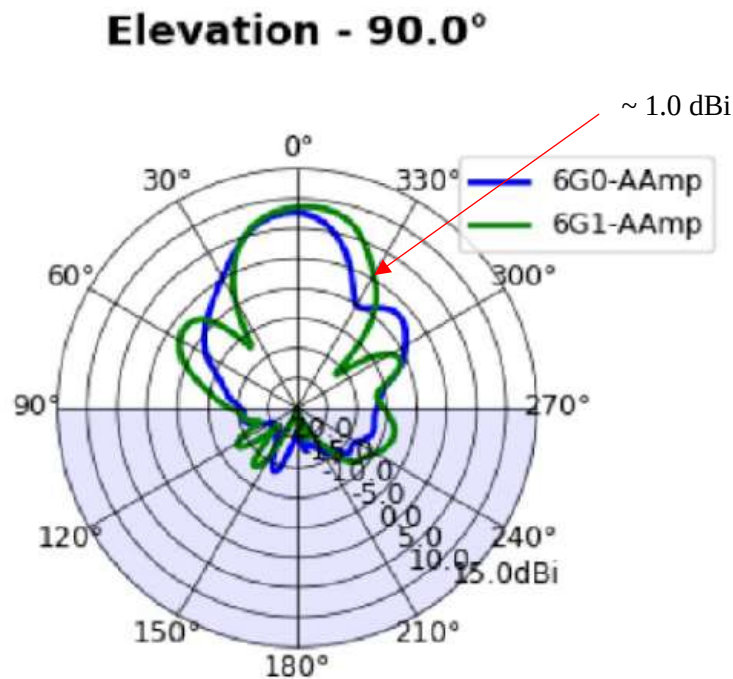
Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Chain 1 Measured	Chain 2 Measured	Total Summed Output Power*	EIRP	Antenna Gain
EHT20	5955	Mcs0_Nss2	19	16.24	15.89	19.08	29.08	10
EHT20	6195	Mcs0_Nss2	18	16.69	15.55	19.17	29.17	10
EHT20	6415	Mcs0_Nss2	19	16.27	17.03	19.68	29.68	10
EHT40	5965	Mcs0_Nss2	18	16.46	16.04	19.26	29.26	10
EHT40	6205	Mcs0_Nss2	18	16.72	15.40	19.12	29.12	10
EHT40	6405	Mcs0_Nss2	18	15.44	16.51	19.02	29.02	10
EHT80	5985	Mcs0_Nss2	18	16.29	16.33	19.32	29.32	10
EHT80	6225	Mcs0_Nss2	18	17.20	15.62	19.50	29.50	10
EHT80	6385	Mcs0_Nss2	18	15.61	17.03	19.39	29.39	10
EHT160	6025	Mcs0_Nss2	18	16.82	16.02	19.45	29.45	10
EHT160	6185	Mcs0_Nss2	18	16.79	16.39	19.61	29.61	10
EHT160	6325	Mcs0_Nss2	17	16.83	15.96	19.43	29.43	10
EHT 320	6265	Mcs0_Nss2	17	16.35	16.18	19.27	29.27	10

NSS-1 Mode

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Chain 1 Measured	Chain 2 Measured	Total Summed Output Power*	EIRP	Antenna Gain
EHT20	5955	Mcs0_Nss1	19	16.24	15.89	19.08	29.08	10
EHT20	6195	Mcs0_Nss1	18	16.69	15.55	19.17	29.17	10
EHT20	6415	Mcs0_Nss1	19	16.27	17.03	19.68	29.68	10
EHT40	5965	Mcs0_Nss1	18	16.46	16.04	19.26	29.26	10
EHT40	6205	Mcs0_Nss1	18	16.72	15.40	19.12	29.12	10
EHT40	6405	Mcs0_Nss1	18	15.44	16.51	19.02	29.02	10
EHT80	5985	Mcs0_Nss1	18	16.29	16.33	19.32	29.32	10
EHT80	6225	Mcs0_Nss1	18	17.20	15.62	19.50	29.50	10
EHT80	6385	Mcs0_Nss1	18	15.61	17.03	19.39	29.39	10
EHT160	6025	Mcs0_Nss1	18	16.82	16.02	19.45	29.45	10
EHT160	6185	Mcs0_Nss1	18	16.79	16.39	19.61	29.61	10
EHT160	6325	Mcs0_Nss1	17	16.83	15.96	19.43	29.43	10
EHT 320	6265	Mcs0_Nss1	17	16.35	16.18	19.27	29.27	10

30 Degree from Horizon

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Chain 1 Measured	Chain 2 Measured	Total Summed Output Power*	EIRP	Antenna Gain
EHT20	5955	Mcs0_Nss2	19	16.24	15.89	19.08	20.08	1.0
EHT20	6195	Mcs0_Nss2	18	16.69	15.55	19.17	20.17	1.0
EHT20	6415	Mcs0_Nss2	19	16.27	17.03	19.68	20.68	1.0
EHT40	5965	Mcs0_Nss2	18	16.46	16.04	19.26	20.26	1.0
EHT40	6205	Mcs0_Nss2	18	16.72	15.40	19.12	20.12	1.0
EHT40	6405	Mcs0_Nss2	18	15.44	16.51	19.02	20.02	1.0
EHT80	5985	Mcs0_Nss2	18	16.29	16.33	19.32	20.32	1.0
EHT80	6225	Mcs0_Nss2	18	17.20	15.62	19.50	20.50	1.0
EHT80	6385	Mcs0_Nss2	18	15.61	17.03	19.39	20.39	1.0
EHT160	6025	Mcs0_Nss2	18	16.82	16.02	19.45	20.45	1.0
EHT160	6185	Mcs0_Nss2	18	16.79	16.39	19.61	20.61	1.0
EHT160	6325	Mcs0_Nss2	17	16.83	15.96	19.43	20.43	1.0
EHT 320	6265	Mcs0_Nss2	17	16.35	16.18	19.27	20.27	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)
11.9098875 GHz	PK	57.704	74	-16.296	1	1.7	Vertical	1 MHz	10.847
14.7711422 GHz	PK	60.605	74	-13.395	91	1.703	Vertical	1 MHz	14.766
16.9400076 GHz	PK	60.074	74	-13.926	76	2.279	Vertical	1 MHz	14.911
11.9098875 GHz	AV	45.039	54	-8.961	1	1.7	Vertical	1 MHz	10.847
14.7711422 GHz	AV	47.519	54	-6.481	91	1.703	Vertical	1 MHz	14.766
16.9400076 GHz	AV	46.196	54	-7.804	76	2.279	Vertical	1 MHz	14.911
11.9127089 GHz	PK	59.061	74	-14.939	359	3.74	Horizontal	1 MHz	10.843
14.2131255 GHz	PK	60.017	74	-13.983	313	1.5	Horizontal	1 MHz	14.33
16.8891299 GHz	PK	59.012	74	-14.988	4	1.702	Horizontal	1 MHz	14.64
11.9127089 GHz	AV	46.151	54	-7.849	359	3.74	Horizontal	1 MHz	10.843
14.2131255 GHz	AV	47.044	54	-6.956	313	1.5	Horizontal	1 MHz	14.33
16.8891299 GHz	AV	45.908	54	-8.092	4	1.702	Horizontal	1 MHz	14.64

Table 4: 1-17GHz (Low Channel – 5955MHz)

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)
10.9834942 GHz	PK	58.251	74	-15.749	254	1.704	Vertical	1 MHz	11.55
13.9064285 GHz	PK	60.625	74	-13.375	172	1.5	Vertical	1 MHz	13.866
16.8974363 GHz	PK	58.664	74	-15.336	243	2.281	Vertical	1 MHz	14.674
10.9834942 GHz	AV	44.239	54	-9.761	254	1.704	Vertical	1 MHz	11.55
13.9064285 GHz	AV	46.906	54	-7.094	172	1.5	Vertical	1 MHz	13.866
16.8974363 GHz	AV	45.786	54	-8.214	243	2.281	Vertical	1 MHz	14.674
10.9155977 GHz	PK	57.884	74	-16.116	342	3.176	Horizontal	1 MHz	11.95
14.9996835 GHz	PK	59.989	74	-14.011	349	1.5	Horizontal	1 MHz	14.386
16.9740971 GHz	PK	59.727	74	-14.273	178	2.279	Horizontal	1 MHz	15.16
10.9155977 GHz	AV	44.777	54	-9.223	342	3.176	Horizontal	1 MHz	11.95
14.9996835 GHz	AV	46.955	54	-7.045	349	1.5	Horizontal	1 MHz	14.386
16.9740971 GHz	AV	46.254	54	-7.746	178	2.279	Horizontal	1 MHz	15.16

Table 5: 1-17GHz (Mid Channel – 6195MHz)

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)
11.4630543 GHz	PK	57.247	74	-16.753	226	1.705	Vertical	1 MHz	11.016
14.2107009 GHz	PK	60.476	74	-13.524	287	2.323	Vertical	1 MHz	14.335
11.4630543 GHz	AV	44.085	54	-9.915	226	1.705	Vertical	1 MHz	11.016
14.2107009 GHz	AV	46.987	54	-7.013	287	2.323	Vertical	1 MHz	14.335
10.9884509 GHz	PK	57.043	74	-16.957	12	1.704	Horizontal	1 MHz	11.493
13.8204669 GHz	PK	59.403	74	-14.597	116	1.702	Horizontal	1 MHz	13.915
10.9884509 GHz	AV	44.113	54	-9.887	12	1.704	Horizontal	1 MHz	11.493
13.8204669 GHz	AV	46.391	54	-7.609	116	1.702	Horizontal	1 MHz	13.915

Table 6: 1-17GHz (High Channel – 6415MHz)
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)
17.8610393 GHz	PK	53.236	74	-20.764	296	1.5	Vertical	1 MHz	-0.897
33.4644736 GHz	PK	54.521	74	-19.479	169	1.5	Vertical	1 MHz	3.232
39.6124968 GHz	PK	54.607	74	-19.393	292	1.5	Vertical	1 MHz	2.535
17.8610393 GHz	AV	39.741	54	-14.259	296	1.5	Vertical	1 MHz	-0.897
33.4644736 GHz	AV	41.553	54	-12.447	169	1.5	Vertical	1 MHz	3.232
39.6124968 GHz	AV	41.29	54	-12.71	292	1.5	Vertical	1 MHz	2.535
17.8610393 GHz	PK	53.236	74	-20.764	296	1.5	Vertical	1 MHz	-0.897
33.4644736 GHz	PK	54.521	74	-19.479	169	1.5	Vertical	1 MHz	3.232
17.8764925 GHz	PK	62.142	74	-11.858	80	1.5	Horizontal	1 MHz	-0.897
33.9307256 GHz	PK	53.98	74	-20.02	18	1.5	Horizontal	1 MHz	3.232
17.8764925 GHz	AV	46.923	54	-7.077	80	1.5	Horizontal	1 MHz	-0.897
33.9307256 GHz	AV	41.059	54	-12.941	18	1.5	Horizontal	1 MHz	3.232

Table 7: 17-40GHz (Low Channel – 5955MHz)
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)
18.5709695 GHz	PK	57.528	74	-16.472	24	1.5	Vertical	1 MHz	-1.069
34.9982853 GHz	PK	56.096	74	-17.904	355	1.5	Vertical	1 MHz	5.134
18.5709695 GHz	AV	41.888	54	-12.112	24	1.5	Vertical	1 MHz	-1.069
34.9982853 GHz	AV	42.776	54	-11.224	355	1.5	Vertical	1 MHz	5.134
18.5796461 GHz	PK	63.646	74	-10.354	48	1.5	Horizontal	1 MHz	-0.897
24.7798181 GHz	PK	60.311	74	-13.689	94	1.5	Horizontal	1 MHz	1.675
18.5796461 GHz	AV	48.557	54	-5.443	48	1.5	Horizontal	1 MHz	-0.897
24.7798181 GHz	AV	50.617	54	-3.383	94	1.5	Horizontal	1 MHz	1.675

Table 8: 17-40GHz (Mid Channel – 6195MHz)
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)
19.2401083 GHz	PK	61.066	74	-12.934	81	1.5	Vertical	1 MHz	-1.595
25.6747198 GHz	PK	54.668	74	-19.332	342	1.5	Vertical	1 MHz	1.675
19.2401083 GHz	AV	47.143	54	-6.857	81	1.5	Vertical	1 MHz	-1.595
25.6747198 GHz	AV	41.312	54	-12.688	342	1.5	Vertical	1 MHz	1.675
19.2409795 GHz	PK	60.717	74	-13.283	34	1.5	Horizontal	1 MHz	-1.595
25.6530076 GHz	PK	62.178	74	-11.822	73	1.5	Horizontal	1 MHz	1.675
19.2409795 GHz	AV	46.274	54	-7.726	34	1.5	Horizontal	1 MHz	-1.595
25.6530076 GHz	AV	47.876	54	-6.124	73	1.5	Horizontal	1 MHz	1.675

Table 9: 17-40GHz (High Channel – 6415MHz)

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.

Results of this testing are summarized.

NSS>1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Aggregate PSD	Ant Gain	Total Summed EIRP	Limit	Margin
EHT20	5955	Mcs0_Nss2	19	-2.72	10	7.28	23	-15.72
EHT20	6195	Mcs0_Nss2	18	-3.93	10	6.07	23	-16.93
EHT20	6415	Mcs0_Nss2	19	-3.85	10	6.15	23	-16.85
EHT40	5965	Mcs0_Nss2	18	-5.85	10	4.15	23	-18.85
EHT40	6205	Mcs0_Nss2	18	-7.26	10	2.74	23	-20.26
EHT40	6405	Mcs0_Nss2	18	-7.68	10	2.32	23	-20.68
EHT80	5985	Mcs0_Nss2	18	-8.58	10	1.42	23	-21.58
EHT80	6225	Mcs0_Nss2	18	-10.05	10	-0.05	23	-23.05
EHT80	6385	Mcs0_Nss2	18	-10.02	10	-0.02	23	-23.02
EHT160	6025	Mcs0_Nss2	18	-11.06	10	-1.06	23	-24.06
EHT160	6185	Mcs0_Nss2	18	-12.36	10	-2.36	23	-25.36
EHT160	6325	Mcs0_Nss2	17	-13.13	10	-3.13	23	-26.13
EHT 320	6265	Mcs0_Nss2	17	-15.88	10	-5.88	23	-28.88

NSS-1 Mode

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Aggregate PSD	Ant Gain	Total Summed EIRP	Limit	Margin
EHT20	5955	Mcs0_Nss1	19	-2.72	13.01	10.29	23	-12.71
EHT20	6195	Mcs0_Nss1	18	-3.93	13.01	9.08	23	-13.92
EHT20	6415	Mcs0_Nss1	19	-3.85	13.01	9.16	23	-13.84
EHT40	5965	Mcs0_Nss1	18	-5.85	13.01	7.16	23	-15.84
EHT40	6205	Mcs0_Nss1	18	-7.26	13.01	5.75	23	-17.25
EHT40	6405	Mcs0_Nss1	18	-7.68	13.01	5.33	23	-17.67
EHT80	5985	Mcs0_Nss1	18	-8.58	13.01	4.43	23	-18.57
EHT80	6225	Mcs0_Nss1	18	-10.05	13.01	2.96	23	-20.04
EHT80	6385	Mcs0_Nss1	18	-10.02	13.01	2.99	23	-20.01
EHT160	6025	Mcs0_Nss1	18	-11.06	13.01	1.95	23	-21.05
EHT160	6185	Mcs0_Nss1	18	-12.36	13.01	0.65	23	-22.35
EHT160	6325	Mcs0_Nss1	17	-13.13	13.01	-0.12	23	-23.12
EHT 320	6265	Mcs0_Nss1	17	-15.88	13.01	-2.87	23	-25.87

Result

The maximum average power spectral density was less than the limit of 23 dBm EIRP (adjusted gain is for Nss1, 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.

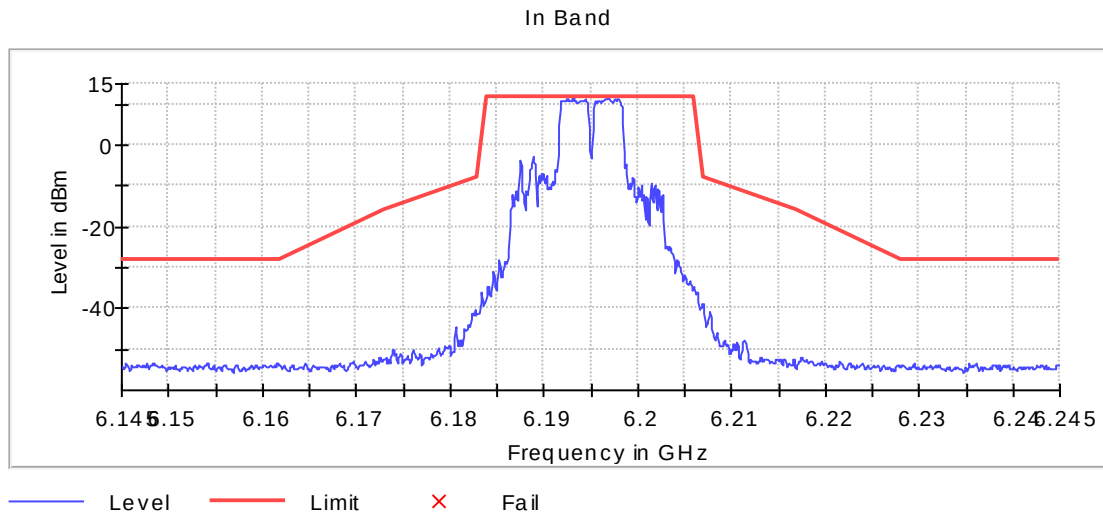


Figure 4: 6195 20MHz RU Vérification - Center

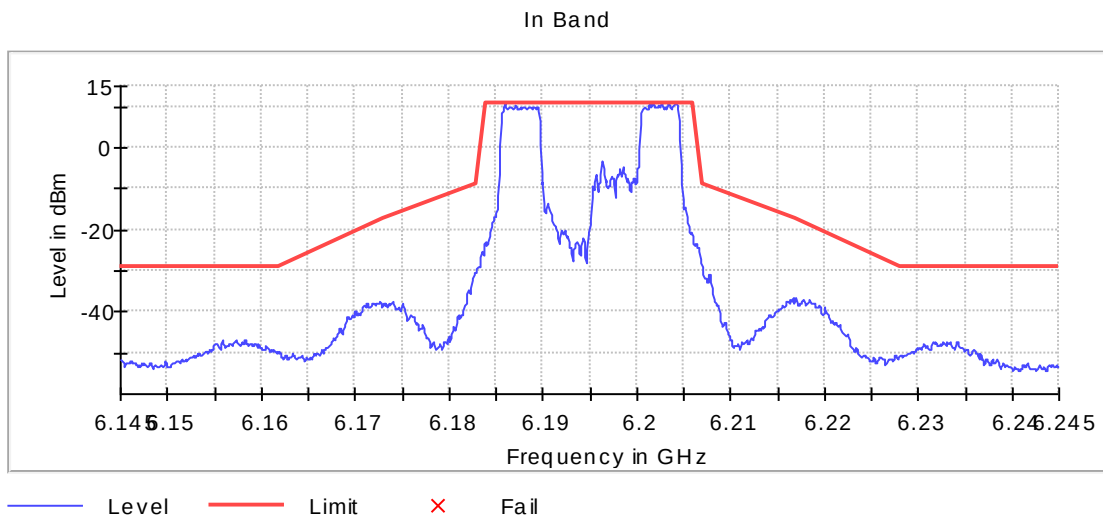


Figure 5: 6195 20MHz RU Vérification - Edge

Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	6.14500 GHz	6.14500 GHz
Stop Frequency	6.24500 GHz	6.24500 GHz
Span	100.000 MHz	100.000 MHz
RBW	200.000 kHz	~ 200.000 kHz
VBW	1.000 MHz	>= 600.000 kHz
SweepPoints	1000	~ 1000
SweepTime	1.050 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	20.000 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: 6195 20MHz RU Vérification

In Band

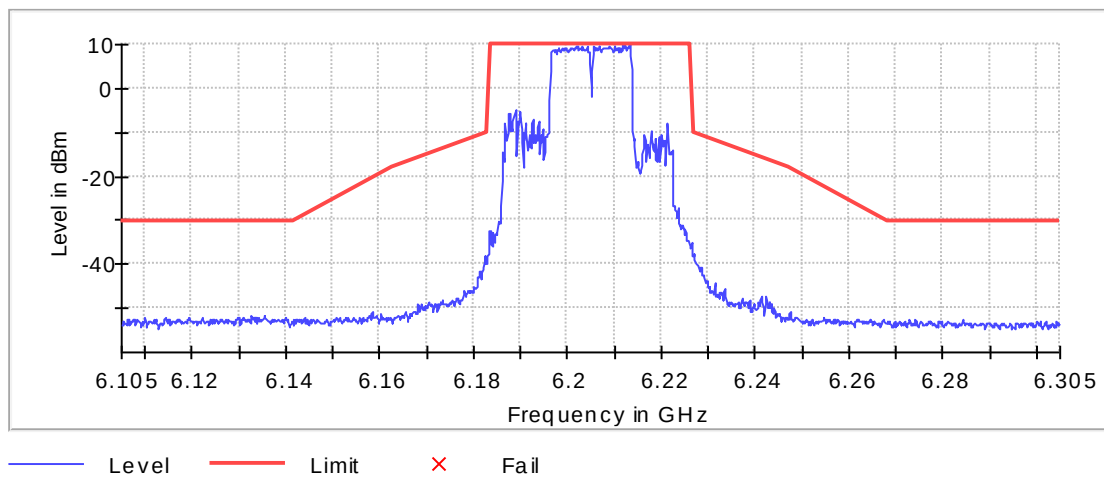


Figure 6: 6205 40MHz RU Vérification - Center

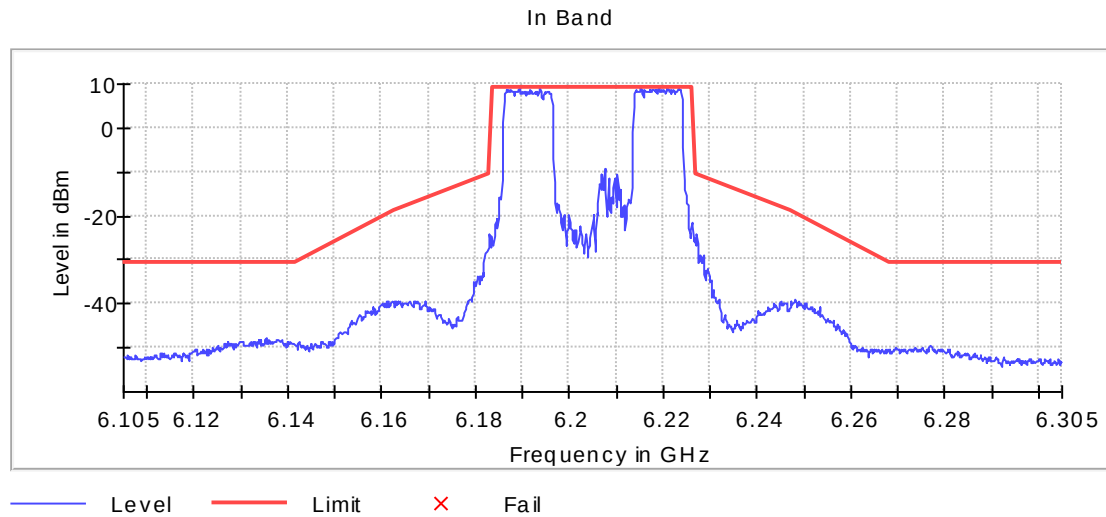


**Figure 7: 6205 40MHz RU Vérification - Edge
Measurement 1**

Setting	Instrument Value	Target Value
Start Frequency	6.10500 GHz	6.10500 GHz
Stop Frequency	6.30500 GHz	6.30500 GHz
Span	200.000 MHz	200.000 MHz
RBW	300.000 kHz	~ 300.000 kHz
VBW	1.000 MHz	>= 900.000 kHz
SweepPoints	1333	~ 1333
Sweeptime	1.340 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	20.000 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: 6205 40MHz RU Vérification

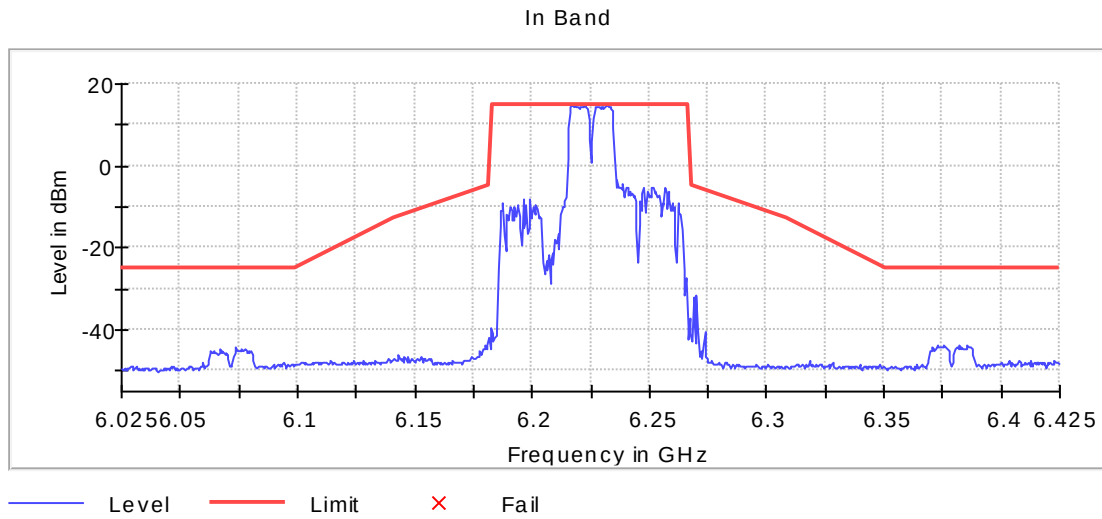


Figure 8: 6225 80MHz RU Vérification - Center

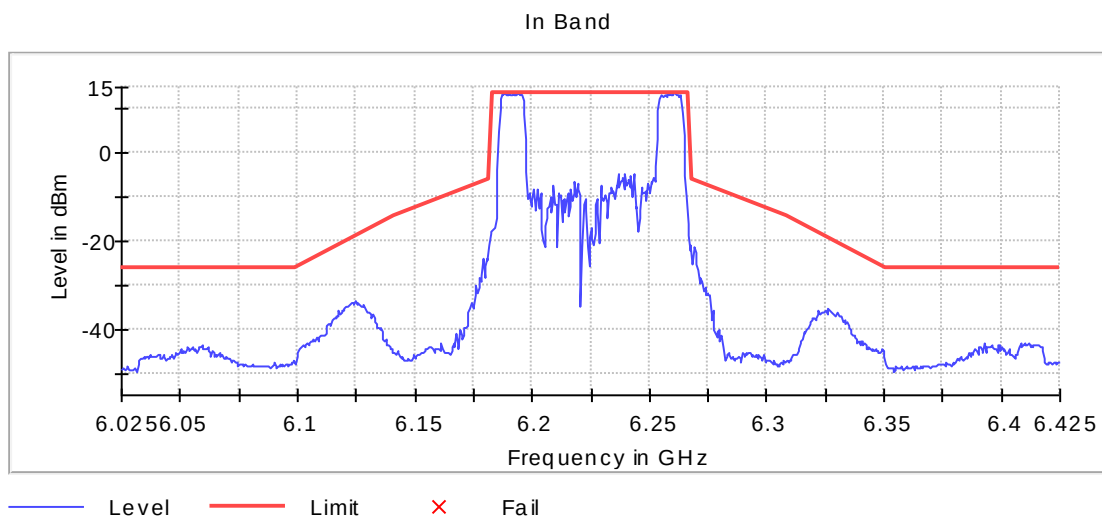


Figure 9: 6225 80MHz RU Vérification – Edge

Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	6.02500 GHz	6.02500 GHz
Stop Frequency	6.42500 GHz	6.42500 GHz
Span	400.000 MHz	400.000 MHz
RBW	1.000 MHz	~ 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	800	~ 800
SweepTime	1.000 ms	AUTO
Reference Level	10.000 dBm	0.000 dBm
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: 6225 80MHz RU Vérification

In Band

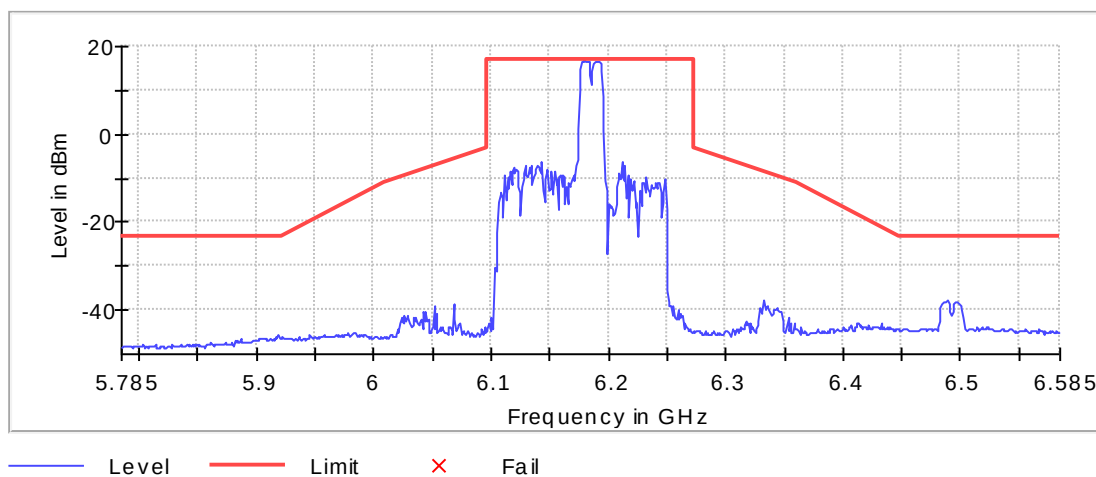


Figure 10: 6185 160MHz RU Vérification - Center

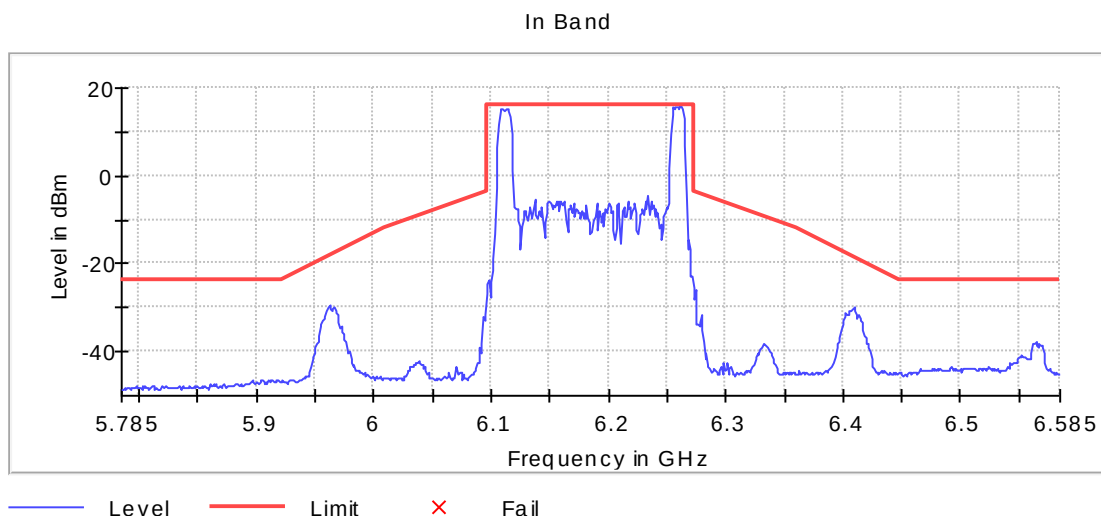


**Figure 11: 6185 160MHz RU Vérification - Edge
Measurement 1**

Setting	Instrument Value	Target Value
Start Frequency	5.78500 GHz	5.78500 GHz
Stop Frequency	6.58500 GHz	6.58500 GHz
Span	800.000 MHz	800.000 MHz
RBW	2.000 MHz	~ 2.000 MHz
VBW	10.000 MHz	>= 6.000 MHz
SweepPoints	800	~ 800
Sweeptime	1.000 ms	AUTO
Reference Level	10.000 dBm	0.000 dBm
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: 6185 160MHz RU Vérification

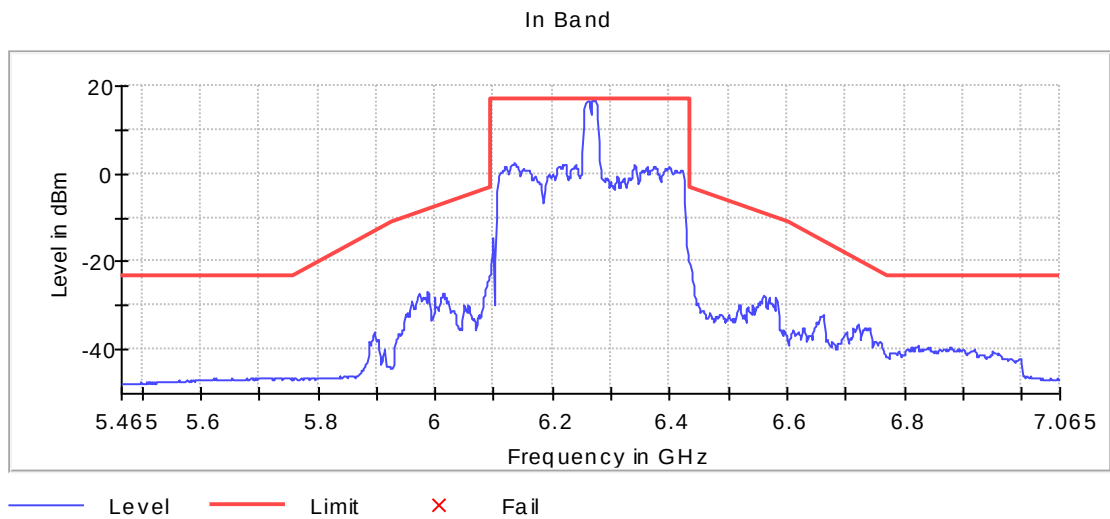


Figure 12: 6265 320MHz RU Vérification - Center

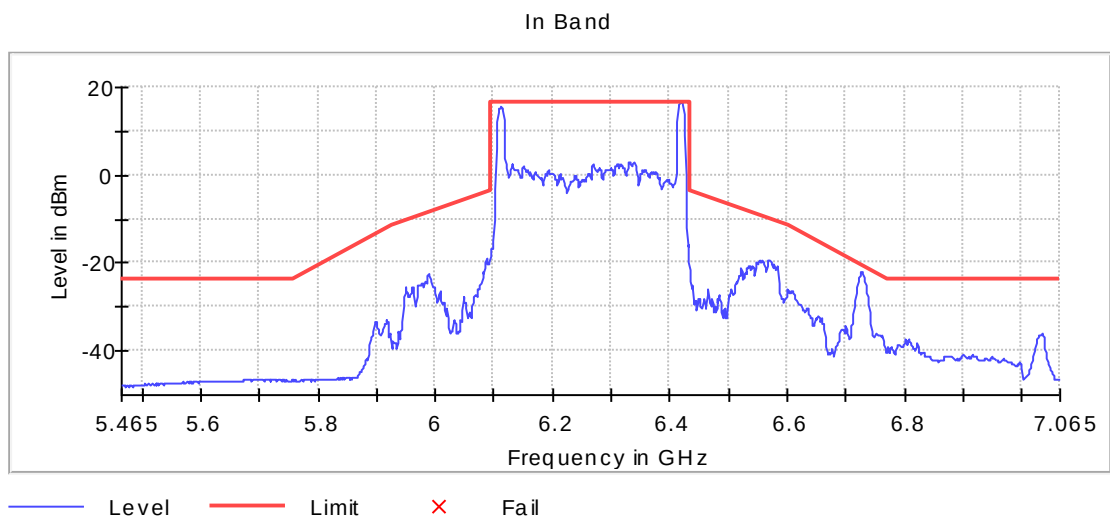


Figure 13: 6265 320MHz RU Vérification - Edge

Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	5.46500 GHz	5.46500 GHz
Stop Frequency	7.06500 GHz	7.06500 GHz
Span	1.600 GHz	1.600 GHz
RBW	3.000 MHz	~ 3.000 MHz
VBW	10.000 MHz	>= 9.000 MHz
SweepPoints	1067	~ 1067
SweepTime	6.400 ms	AUTO
Reference Level	10.000 dBm	0.000 dBm
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: 320MHz RU Vérification

-- End of Test Report --