UNIFIED COMPLIANCE LABORATORY

427 West 12800 South
Draper, UT 84020

Test Report

Certification

FCC ID	SWX-U7PROXS
IC ID	6545A-U7PROXS
Equipment Under Test	U7-Pro-XGS
Test Report Serial Number	TR9745_02
Date of Test(s)	19 – 20 December 2024; 15, 20, 30 January 2025
Report Issue Date	4 February 2025

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

NVLAP TESTING ilac-MRA

NVLAP LAB CODE 600241-0

Certification of Engineering Report

This report has been prepared by Unified Compliance Laboratory (UCL) to document compliance of the device described below with the requirement of Federal Communication Commissions (FCC) Part 15, Subpart C. 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.

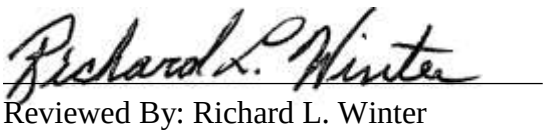
Applicant	Ubiquiti Inc.
Manufacturer	Ubiquiti Inc.
Brand Name	UBIQUITI
Model Number	U7-Pro-XGS
FCC ID	SWX-U7PROXS
IC ID	6545A-U7PROXS

On this 4th day of February 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	4 February 2025
02	Amend FCC ID on Title Page	17 February 2025

Table of Contents

1 Client Information

1.1 Applicant

Company	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.
Contact Name	Alex Macon
Title	Compliance

1.2 Manufacturer

Company	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.
Contact Name	Alex Macon
Title	Compliance

2 Equipment Under Test (EUT)

2.1 Identification of EUT

Brand Name	UBIQUITI
Model Number	U7-Pro-XGS
Serial Number	DA65B3
Dimensions (cm)	21.5 x 21.5 x 3.3

2.2 Description of EUT

The U7-Pro-XGS is a WiFi7 access point with 2.4 GHz, 6 GHz 2x2 and 5 GHz 4x4 transmitters. The U7-Pro-XGS has an aggregate throughput rate of 15.1 Gbps. The U7-Pro-XGS is powered by an 802.3at PoE power adapter.

This report covers the circuitry of the device subject to FCC Part 15, Subpart C. The circuitry of the device subject to FCC Part 15 Subpart B was found to be compliant and is covered under a separate Unified Compliance Laboratory test report.

2.3 EUT and Support Equipment

The EUT and support equipment used during the test are listed below.

Brand Name **Model Number** **Serial Number**	**Description**	**Name of Interface Ports / Interface Cables**
BN: UBIQUITI MN: U7-Pro-XGS (Note 1) SN: DA65B3	Wireless Access Point	See Section 2.4
BN: UBIQUITI MN: U-POE-at SN: N/A	PoE Injector	PoE Output / Shielded Cat 5E/ unshielded Cat 5E to AE
BN: Dell MN: XPS 13 SN: N/A	Laptop Personal Computer	LAN Port / Un-shielded Cat 5e cable (Note 2)

Notes: (1) EUT
(2) Interface port connected to EUT (See Section 2.4)

The support equipment listed above was not modified in order to achieve compliance with this standard.

2.4 Interface Ports on EUT

Name of Ports	No. of Ports Fitted to EUT	Cable Description/Length
PoE Input	1	7m Shielded Cat 5E

PoE Output (PoE Injector)	1	7m Shielded Cat 5E to U7-Pro-XGS PoE Input
LAN (PoE Injector)	1	unshielded Cat 5E to Laptop PC
AC (PoE Injector)	1	3 Conductor power cord to AC mains/80cm

2.5 Operating Environment

Power Supply	120 Volts AC to 48 Volts PoE
AC Mains Frequency	60 Hz
Temperature	21.4 – 23.8 °C
Humidity	23.1 – 29.4 %
Barometric Pressure	1021 mBar

2.6 Operating Modes

The U7-Pro-XGS 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

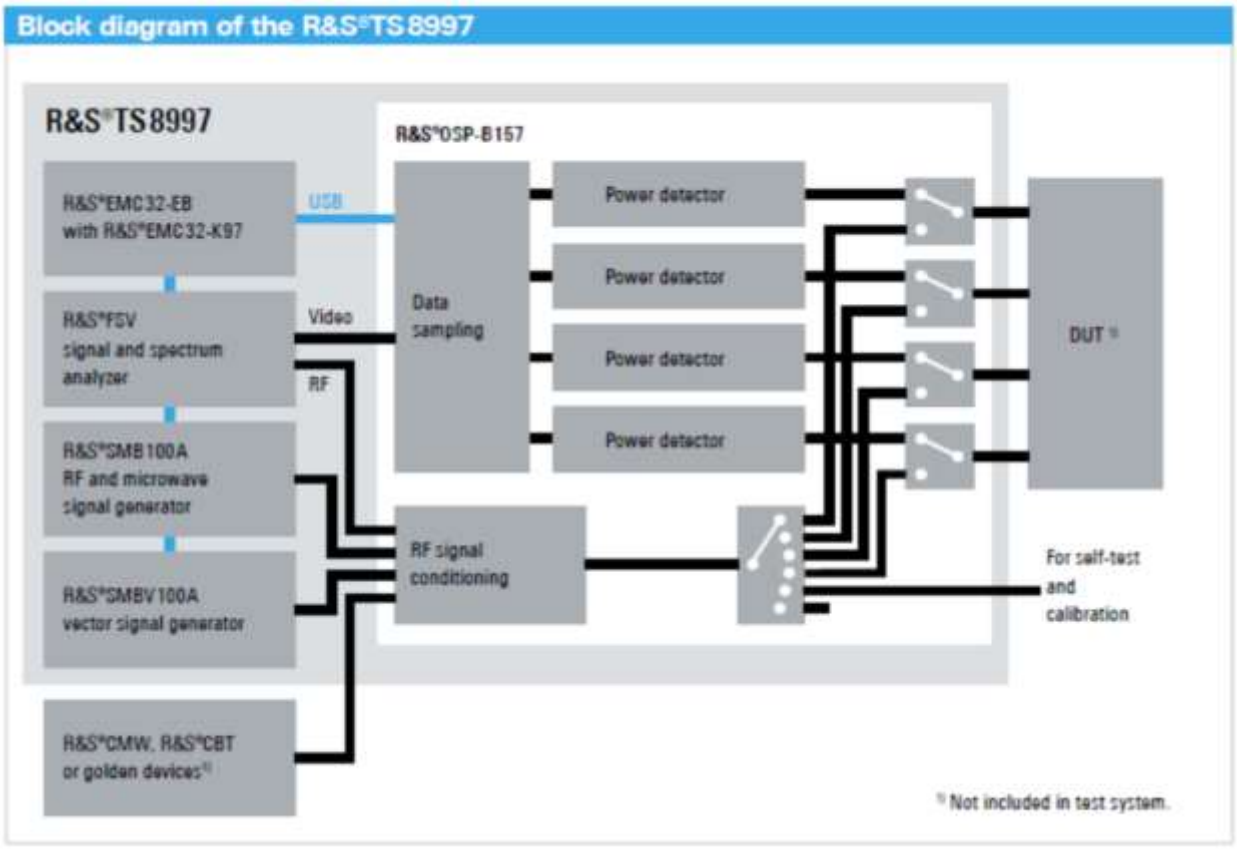


Diagram 1: Test Configuration Block Diagram

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 C 15.203, 15.207 and 15.247 Limits and methods of measurement of radio interference characteristics of radio frequency 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 15.203

See test standard for details.

3.2.2 47 CFR FCC Part 15 Section 15.207

See test standard for details.

3.2.3 47 CFR FCC Part 15 Section 15.247

See test standard for details.

3.3 FCC Part 15, Subpart C

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
15.247(a)	RSS-247 § 5.2	Bandwidth Requirement	2412 to 2462	Compliant
15.247(b)	RSS-247 § 5.4	Peak Output Power	2412 to 2462	Compliant
15.247(d)	RSS-247 § 5.4	Antenna Conducted Spurious Emissions	0.009 to 26000	N/A
15.247(d)	RSS-247 § 5.4	Radiated Spurious Emissions	0.009 to 26000	Compliant
15.247(e)	RSS-247 § 5.2	Peak Power Spectral Density	2412 to 2462	Compliant
The testing was performed according to the procedures in ANSI C63.10-2013, KDB 558074 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 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 and 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

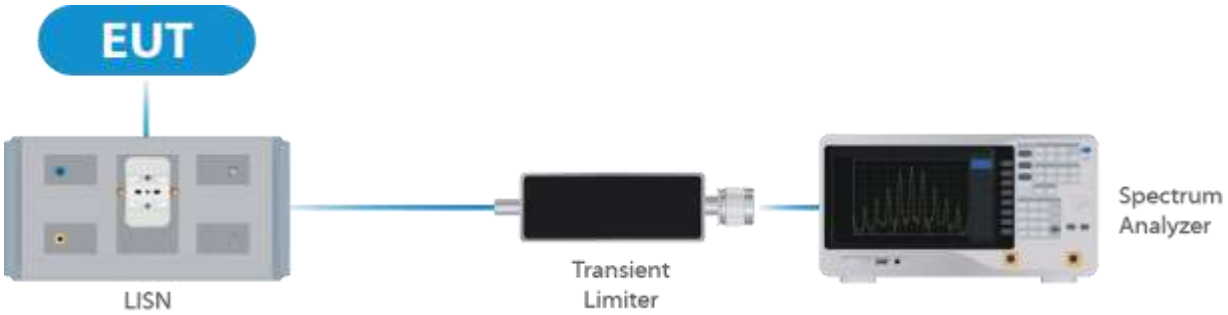


Figure 1: Conducted Emissions Test

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

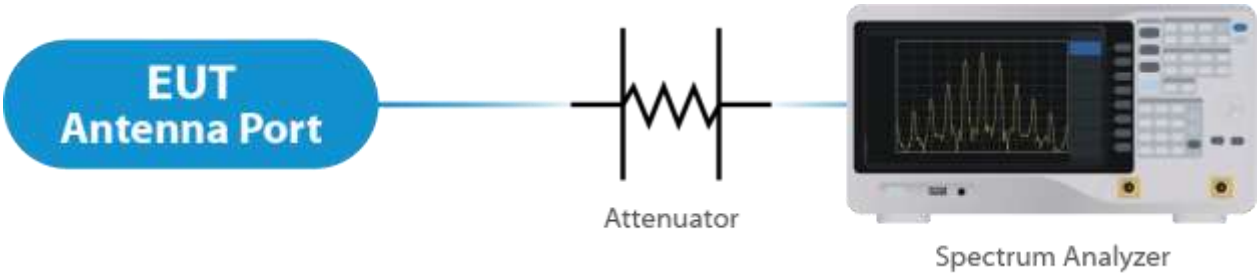


Figure 2: Direct Connect at the Antenna Port Test

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	2/22/2025
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	1/19/2024	1/19/2026
Test Software	Nexio	BatEMC	UCL-5253 & UCL-5249	N/A	N/A

Table 3: List of equipment used for Radiated Emissions

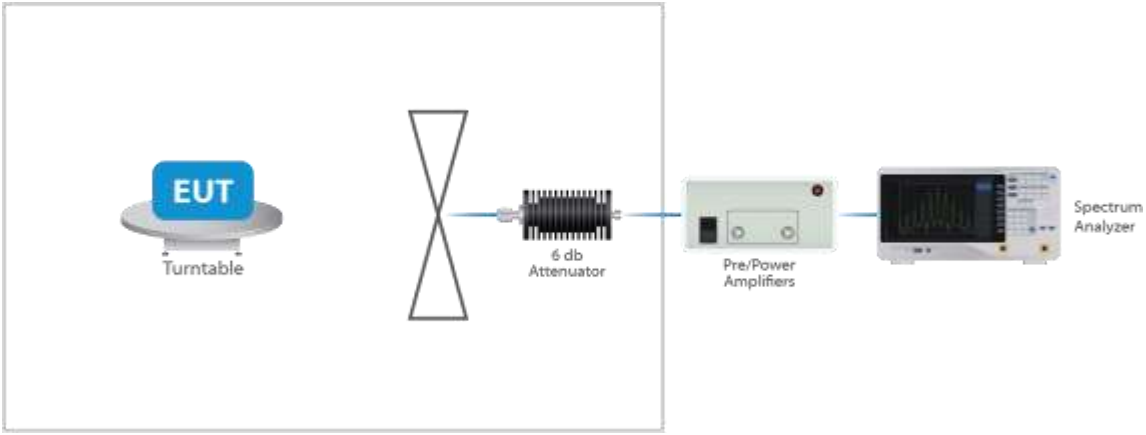


Figure 3: Radiated Emissions Test

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 (± 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 internal integrated antenna. Per the manufacturer, the Maximum gain of the antenna per chain is 4 dBi. This is an 802.11 device and utilizes CDD as described in KDB 662911 D01. The antenna is not user replaceable. For CDD transmissions, directional gain is calculated as follows.

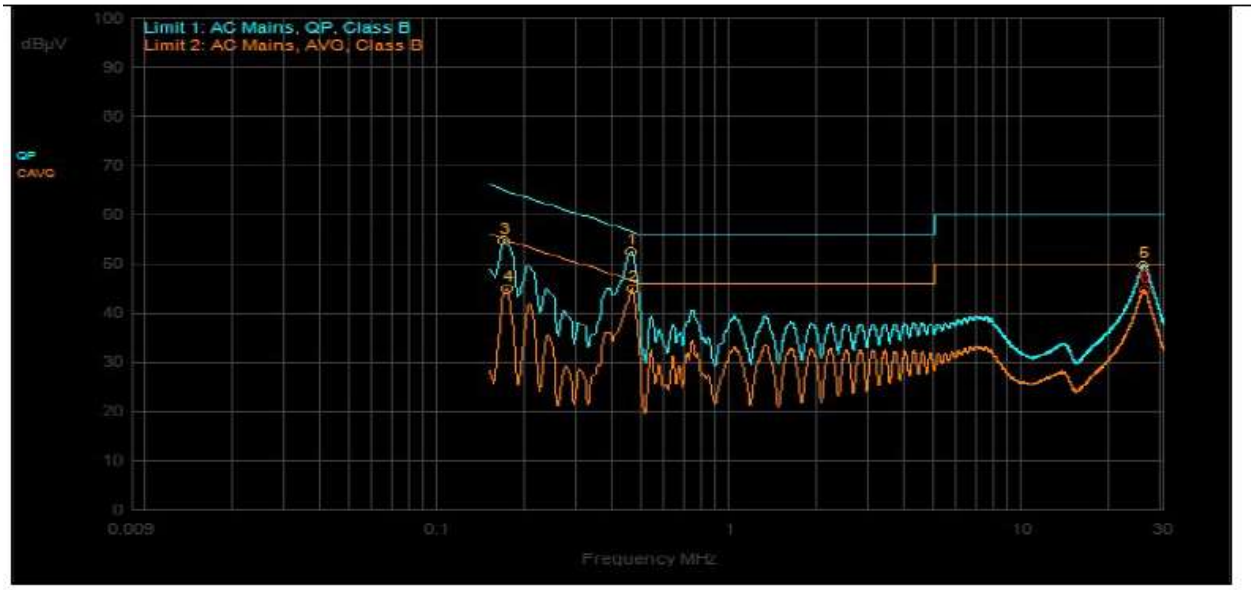
Array Gain = 10 log(NANT/NSS) dB
NANT = number of transmit antennas and
NSS = number of spatial streams. NSS = 1 considered worst case.

For power measurements on IEEE 802.11 devices, Array Gain = 0 dB for NANT ≤ 4;
For PSD measurements when Nss=1: Array Gain = 10 log(NANT/NSS) dB + Antenna Gain (dBi). Or 3.01 dB + 4 dBi = 7.01 dBi.

Results

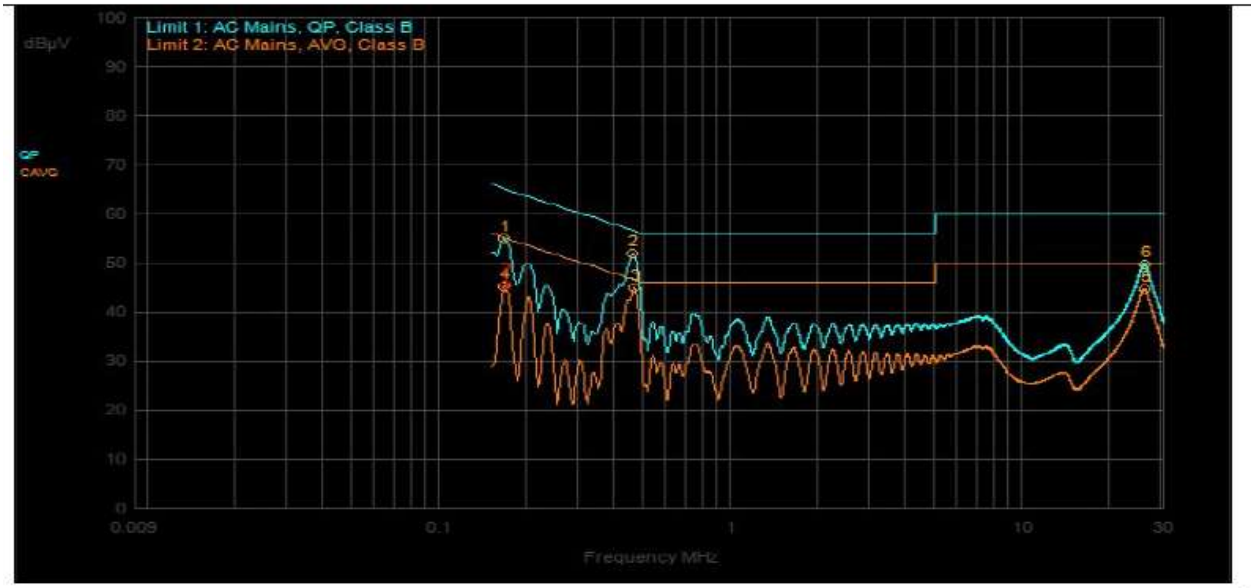
The EUT complied with the specification

5.2 Conducted Emissions at Mains Ports Data



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	456,000kHz	9.84	0.00		QPeak	42.67	52.51	56.77	-4.26			
5	25.671	10.21	0.27		QPeak	39.29	49.77	60.00	-10.23			
3	168,000kHz	10.41	0.00		QPeak	44.25	54.66	65.06	-10.40			
2	459,000kHz	9.84	0.00		C_AVG	35.24	45.08			46.71	-1.63	
4	171,000kHz	10.38	0.00		C_AVG	34.54	44.92			54.91	-9.99	
6	25.782	10.21	0.27		C_AVG	34.20	44.68			50.00	-5.32	

Graph 1: Conducted Emissions Plot - 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
2	456,000kHz	9.84	0.00		QPeak	42.22	52.06	56.77	-4.70			
6	25.899	10.33	0.27		QPeak	39.15	49.75	60.00	-10.25			
1	165,000kHz	10.43	0.00		QPeak	44.49	54.92	65.21	-10.29			
3	462,000kHz	9.83	0.00		C_AVG	35.13	44.96			46.66	-1.70	
4	165,000kHz	10.43	0.00		C_AVG	34.91	45.34			55.21	-9.86	
5	25.797	10.32	0.27		C_AVG	34.18	44.77			50.00	-5.23	
7	168,000kHz	10.41	0.00		C_AVG	35.05	45.46			55.06	-9.60	

Graph 2: Conducted Emissions Plot – Line 1

Result

The EUT complied with the specification limit.

5.3 §15.247(a)(2) Emissions Bandwidth

All chains were measured under the guidance of KDB 558074 Section 8.2. and KDB 662911 D01. Please see associated annex for details on instrument settings.

Mode	Frequency (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth (MHz)
b	2412	13.3	7.4
	2437	13.5	8.4
	2462	13.3	7.0
g	2412	17.3	16.6
	2437	18.5	16.5
	2462	17.3	16.6
n 20	2412	18.8	17.7
	2437	19.5	17.7
	2462	19.0	17.9
n 40	2422	37.5	36.4
	2437	37.5	36.5
	2452	37.5	36.5
ax 20	2412	19.3	19.2
	2437	19.3	19.2
	2462	19.3	19.2
ax 40	2422	38.5	38.1
	2437	38.5	38.1
	2452	39.0	38.2

Result

All chains were tested and the highest bandwidth per chain is reported above.
In the configuration tested, the 6 dB bandwidth was greater than 500 kHz; therefore, the EUT complied with the requirements of the specification (see spectrum analyzer plot within the Annex).

5.4 §15.247(b)(3) Maximum Average Output Power

All chains were measured and summed under the guidance of KDB 558074 Section 8.3.2.3. and KDB 662911 D01. Please see associated annex for details on instrument settings.

The maximum average RF conducted output power measured for this device was 29.14 dBm or 820.35 mW. The limit is 30 dBm or 1 Watt when using antennas with 6 dBi or less gain. The antenna has a gain of 4 dBi.

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power *	Measured EIRP
b 20	2412	Mcs0	25	26.98	30.98
	2417	Mcs0	25	26.96	30.96
	2422	Mcs0	26	28.88	32.88
	2427	Mcs0	26	28.96	32.96
	2432	Mcs0	26	29.07	33.07
	2437	Mcs0	26	29.14	33.14
	2442	Mcs0	26	29.11	33.11
	2447	Mcs0	26	29.10	33.10
	2452	Mcs0	25	27.14	31.14
	2457	Mcs0	25	27.13	31.13
	2462	Mcs0	25	26.95	30.95
g 20	2412	Mcs0	21	22.70	26.70
	2417	Mcs0	22	23.85	27.85
	2422	Mcs0	23	24.72	28.72
	2427	Mcs0	24	25.60	29.60
	2432	Mcs0	25	23.36	30.36
	2437	Mcs0	26	27.42	31.42
	2442	Mcs0	26	27.47	31.47
	2447	Mcs0	23	24.68	28.68
	2452	Mcs0	22	23.72	27.72
	2457	Mcs0	21	22.70	26.70
	2462	Mcs0	20	21.59	25.59
n 20	2412	Mcs0	22	23.69	27.69
	2417	Mcs0	23	24.51	28.51
	2422	Mcs0	23	24.55	28.55
	2427	Mcs0	24	25.48	29.48
	2432	Mcs0	26	27.30	31.30

	2437	Mcs0	26	27.24	31.24
	2442	Mcs0	25	26.25	30.25
	2447	Mcs0	25	26.26	30.26
	2452	Mcs0	23	24.29	28.29
	2457	Mcs0	21	22.36	26.36
	2462	Mcs0	20	21.17	25.17
n 40	2422	Mcs0	20	21.50	25.50
	2437	Mcs0	20	21.60	25.60
	2452	Mcs0	18	19.54	23.54
ax 20	2412	Mcs0	21	22.59	26.59
	2417	Mcs0	22	23.58	27.58
	2422	Mcs0	22	23.50	27.50
	2427	Mcs0	24	25.32	29.32
	2432	Mcs0	26	27.22	31.22
	2437	Mcs0	25	26.18	30.18
	2442	Mcs0	26	27.24	31.24
	2447	Mcs0	24	25.36	29.36
	2452	Mcs0	22	23.42	27.42
	2457	Mcs0	21	22.43	26.43
	2462	Mcs0	20	21.43	25.43
ax 40	2422	Mcs0	20	21.54	25.54
	2437	Mcs0	20	21.57	25.57
	2452	Mcs0	19	19.50	23.50

Result

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

* Gated EIRP shown in the Annex is the conducted measurement

5.5 §15.247(d) Spurious Emissions

5.5.1 Conducted Spurious Emissions

The frequency range 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 table show the measurement data from spurious emissions noted across the frequency range when transmitting at the lowest frequency, middle frequency and upper frequency. Shown below are plot(s) with the EUT tuned to the upper and lower channels. These demonstrate compliance with the provisions of this section at the band edges.
The emissions must be attenuated 30 dB below the highest power spectral density level measured within the authorized band as measured with a 100 kHz RBW.

Result

Conducted spurious emissions were attenuated 30 dB or more below the fundamental; therefore, the EUT complies with the specification.

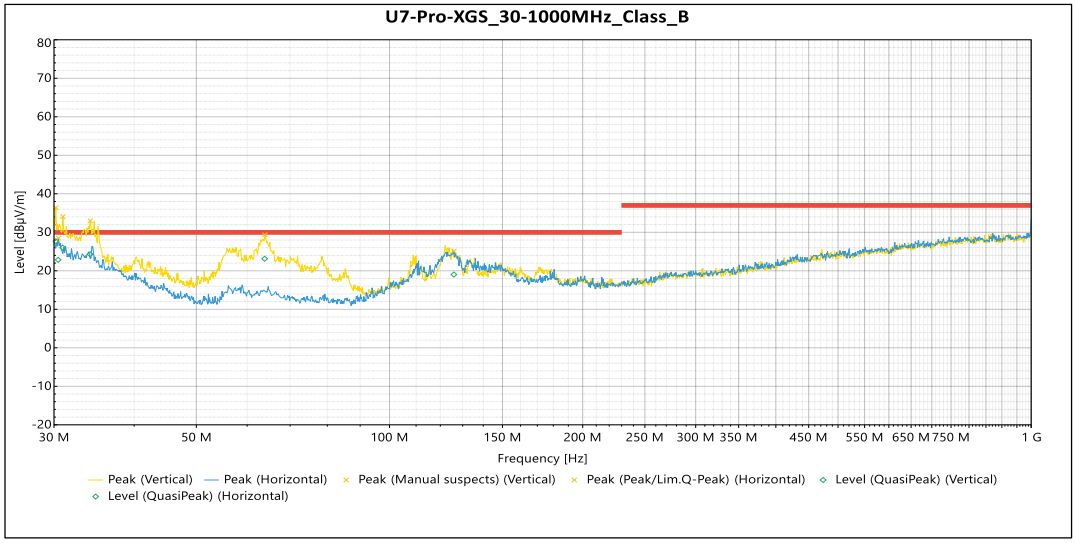
5.5.2 Radiated Spurious Emissions in the Restricted Bands of §15.205

The frequency range from the lowest frequency generated or used in the device to the tenth harmonic of the highest fundamental emissions was investigated to measure any radiated emissions in the restricted bands. The following tables show measurements of any emissions that fell into the restricted bands of §15.205. The tables show the worst-case emissions measured from the EUT. For frequencies above 18.0 GHz, a measurement distance of 1 meter was used. The noise floor was a minimum of 6 dB below the limits. The emissions in the restricted bans must meet the limits specified in §15.209. Tabular data for each of the spurious emissions is shown below for each of the units. Plots of the band edges are also shown.

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

Result

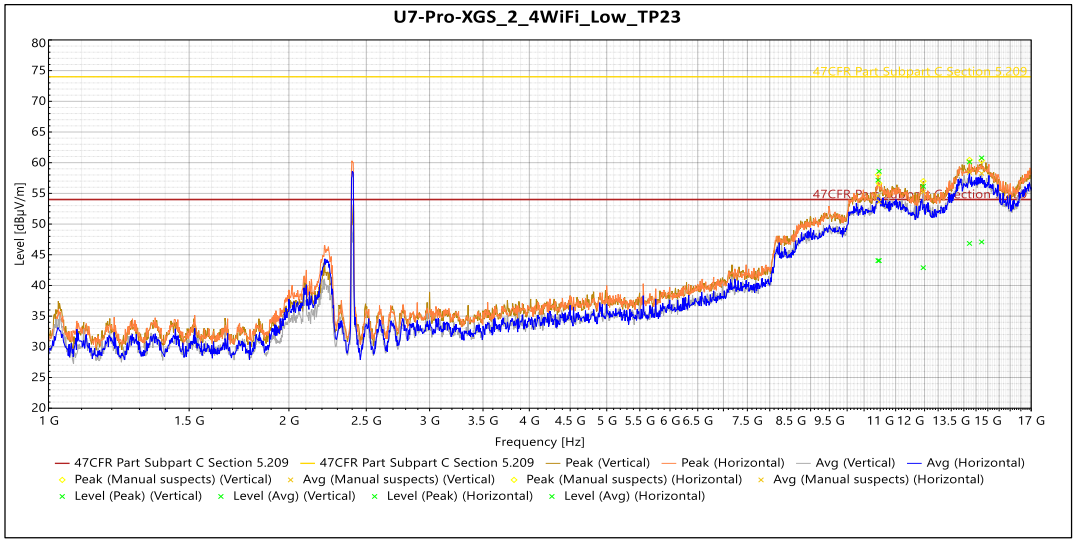
All emissions in the restricted bands of §15.205 met the limits specified in §15.209; therefore, the EUT complies with the specification.



QuasiPeak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin	Azimuth (°)	Height	Pol.	Correction (dB)
30.21 MHz	27.67	30	-2.33	263	1.58	Vertical	-3.67
30.95 MHz	26.01	30	-3.99	276	1.05	Vertical	-4.26
34.15 MHz	24.29	30	-5.71	166	2.23	Vertical	-5.96
63.90 MHz	23.12	30	-6.88	60	2.04	Vertical	-16.06
30.45 MHz	22.84	30	-7.16	320	1.99	Horizontal	-3.86
125.97 MHz	19.02	30	-10.98	176	3.95	Horizontal	-9.94

Table 4: Radiated Emissions 30 – 1000 MHz



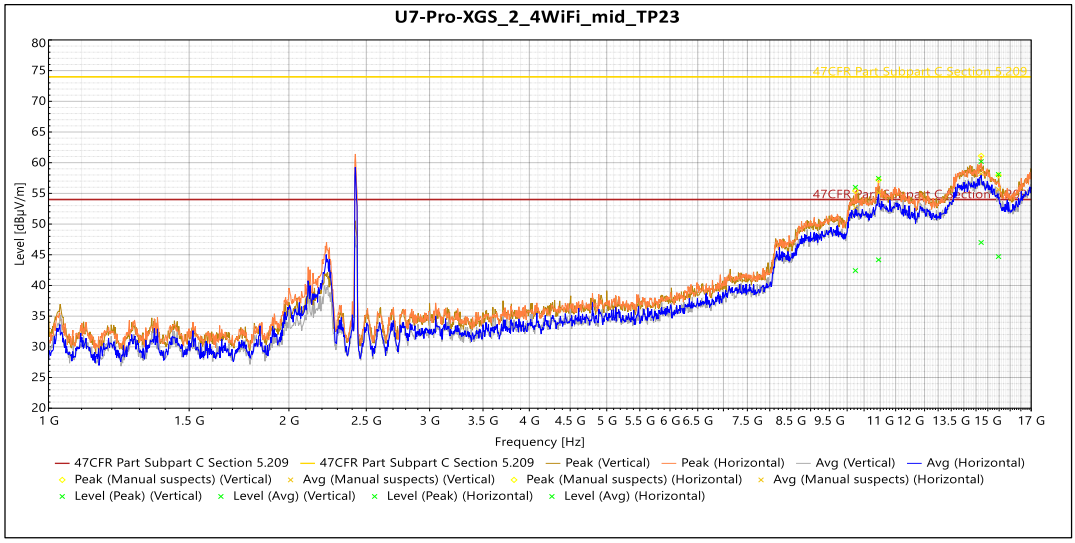
Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
10.97 GHz	58.60	74.0	-15.40	100	1.632	Vertical	11.77
12.45 GHz	56.14	74.0	-17.86	83	4	Vertical	10.94
14.74 GHz	60.78	74.0	-13.22	230	1.5	Vertical	14.89
10.93 GHz	57.16	74.0	-16.84	171	1.628	Horizontal	10.16
14.23 GHz	60.12	74.0	-13.88	105	3.644	Horizontal	14.30

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
10.97 GHz	44.04	54.0	-9.96	100	1.632	Vertical	11.77
12.45 GHz	42.89	54.0	-11.11	83	4	Vertical	10.94
14.74 GHz	47.08	54.0	-6.92	230	1.5	Vertical	14.89
10.93 GHz	44.04	54.0	-9.96	171	1.628	Horizontal	10.16
14.23 GHz	46.85	54.0	-7.15	105	3.644	Horizontal	14.30

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



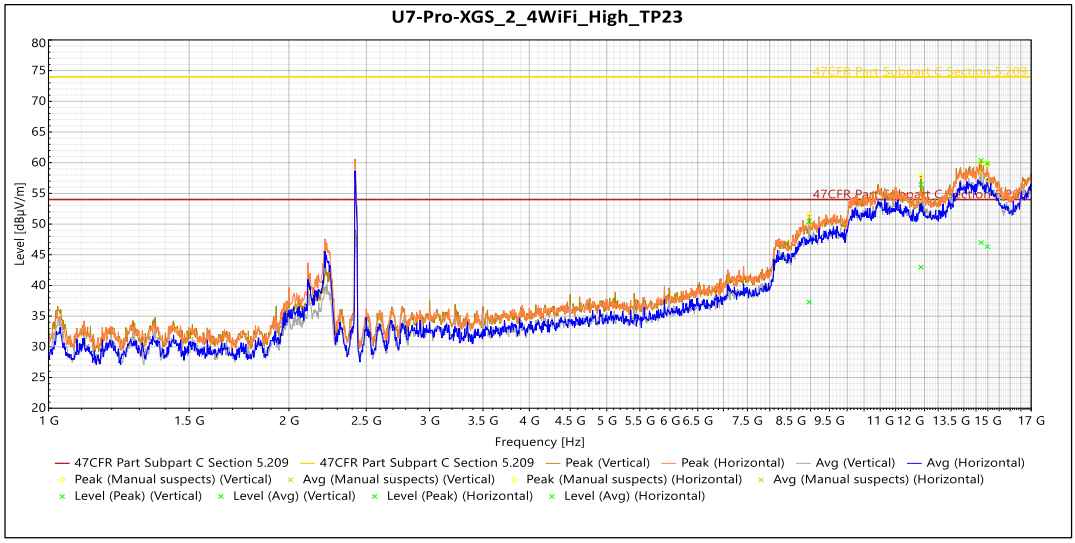
Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
15.47 GHz	58.09	74.0	-15.91	200	3.645	Vertical	12.67
10.24 GHz	56.00	74.0	-18.00	305	3.318	Horizontal	9.76
10.95 GHz	57.44	74.0	-16.56	288	3.812	Horizontal	11.96
14.72 GHz	60.19	74.0	-13.81	124	3.808	Horizontal	14.96

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
15.47 GHz	44.70	54.0	-9.30	200	3.645	Vertical	12.67
10.24 GHz	42.43	54.0	-11.57	305	3.318	Horizontal	9.76
10.95 GHz	44.17	54.0	-9.83	288	3.812	Horizontal	11.96
14.72 GHz	47.00	54.0	-7.00	124	3.808	Horizontal	14.96

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



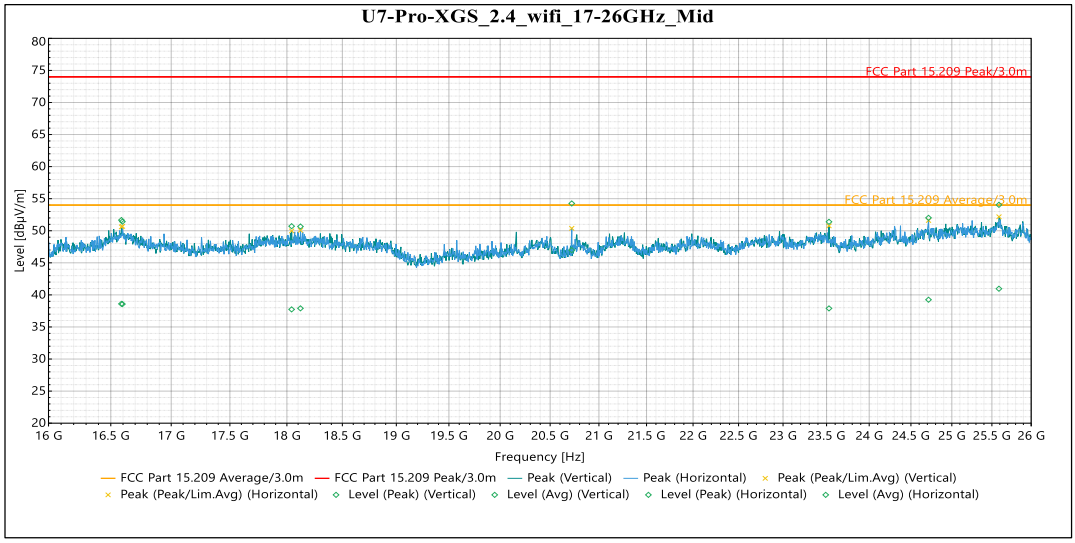
Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
8.97 GHz	50.43	74.0	-23.57	80	1.627	Vertical	4.61
12.38 GHz	56.43	74.0	-17.57	355	1.631	Vertical	11.66
14.72 GHz	60.36	74.0	-13.64	102	2.639	Vertical	14.97
14.98 GHz	59.88	74.0	-14.12	45	1.63	Horizontal	14.52

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
8.97 GHz	37.31	54.0	-16.69	80	1.627	Vertical	4.61
12.38 GHz	42.97	54.0	-11.03	355	1.631	Vertical	11.66
14.72 GHz	46.97	54.0	-7.03	102	2.639	Vertical	14.97
14.98 GHz	46.34	54.0	-7.66	45	1.63	Horizontal	14.52

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



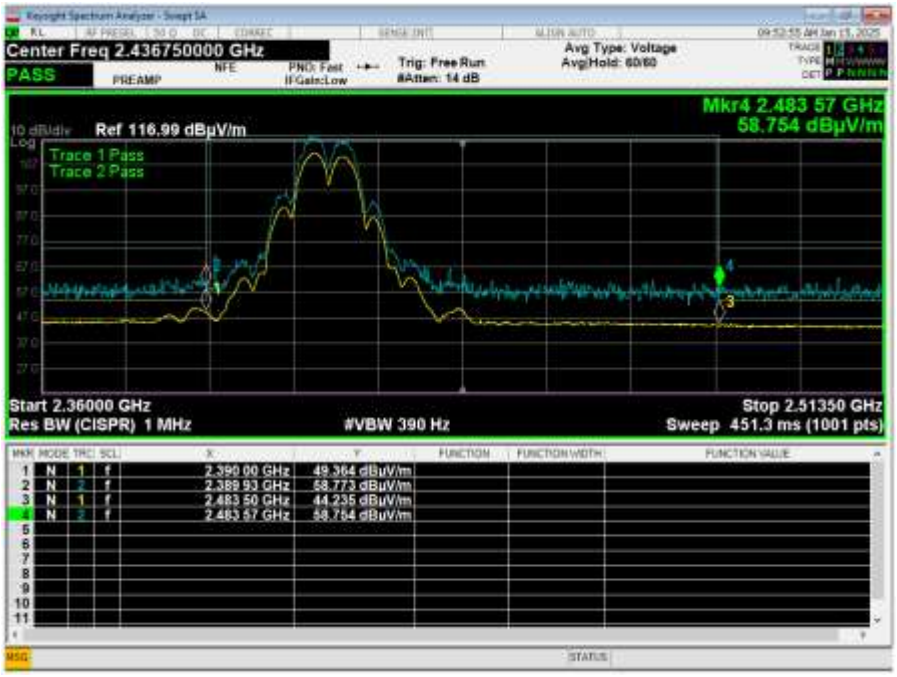
Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
16.59 GHz	51.66	74.0	-22.34	300	Vertical	0.59
18.04 GHz	50.71	74.0	-23.29	3	Vertical	-1.03
23.53 GHz	51.39	74.0	-22.61	11	Vertical	0.07
25.59 GHz	54.04	74.0	-19.96	281	Vertical	2.76
16.60 GHz	51.43	74.0	-22.57	125	Horizontal	0.62
18.12 GHz	50.66	74.0	-23.34	228	Horizontal	-0.88
20.72 GHz	54.26	74.0	-19.74	243	Horizontal	-0.91
24.71 GHz	52.01	74.0	-21.99	329	Horizontal	1.43

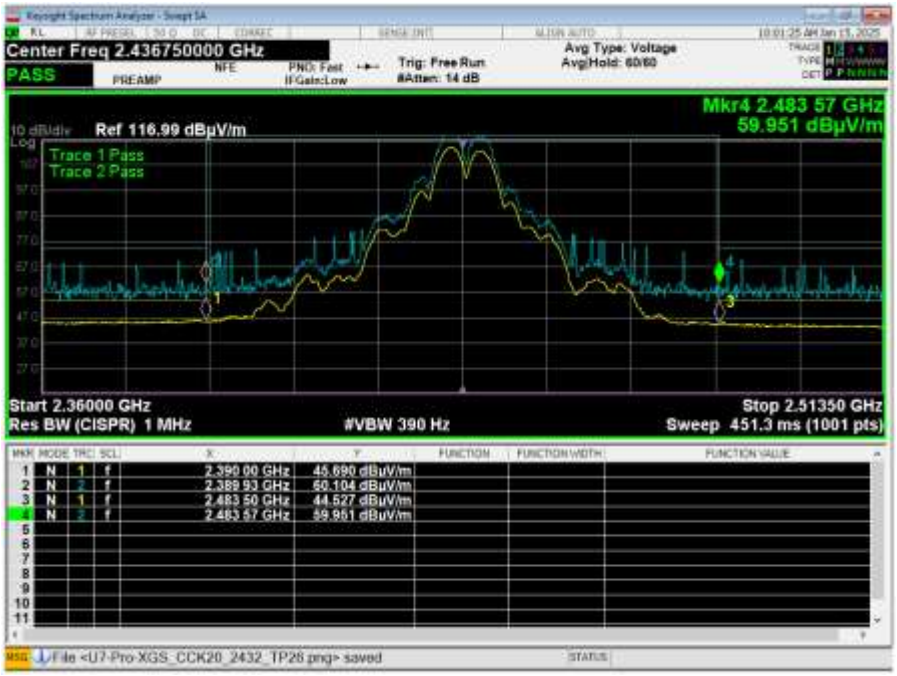
Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
16.59 GHz	38.60	54.0	-15.40	300	Vertical	0.59
18.04 GHz	37.74	54.0	-16.26	3	Vertical	-1.03
23.53 GHz	37.90	54.0	-16.10	11	Vertical	0.07
25.59 GHz	40.96	54.0	-12.04	281	Vertical	2.76
16.60 GHz	38.57	54.0	-15.43	125	Horizontal	0.62
18.12 GHz	37.91	54.0	-16.09	228	Horizontal	-0.88
20.72 GHz	46.98	54.0	-7.02	243	Horizontal	-0.91
24.71 GHz	39.25	54.0	-14.75	329	Horizontal	1.43

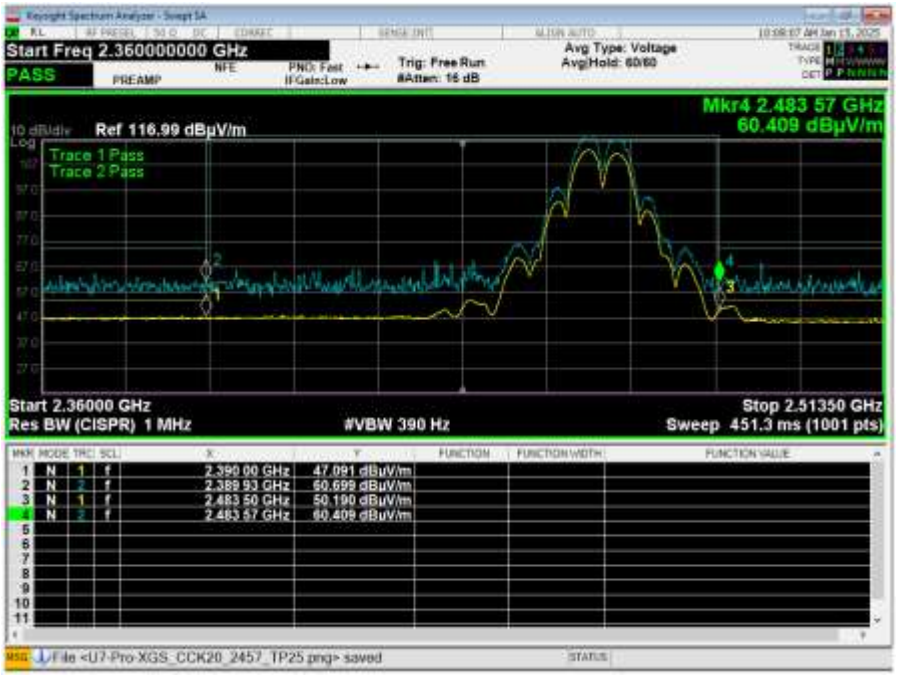
Table 8: Radiated Emissions 17 – 40 GHz at the Middle Frequency (worse case)



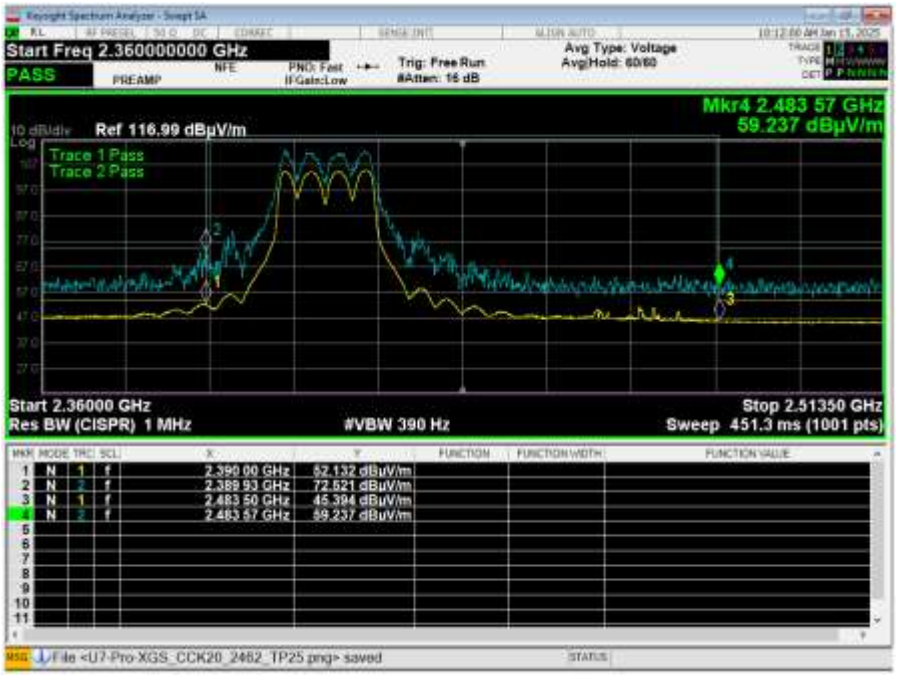
Graph 3: Lower Band Edge Plot – 2412 MHz – b Mode



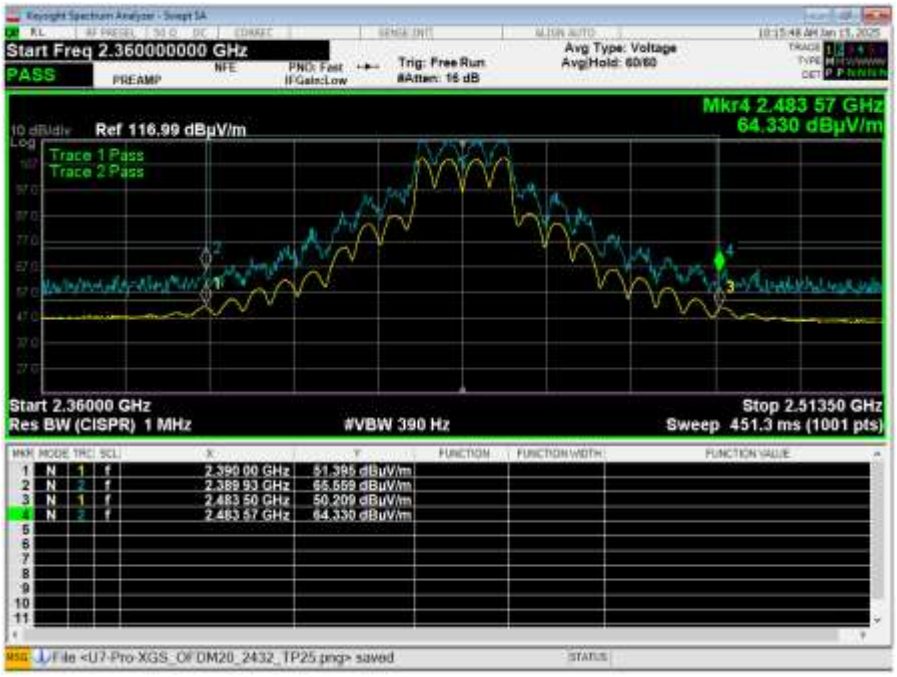
Graph 4: Middle Band Edge Plot – 2437 – b Mode



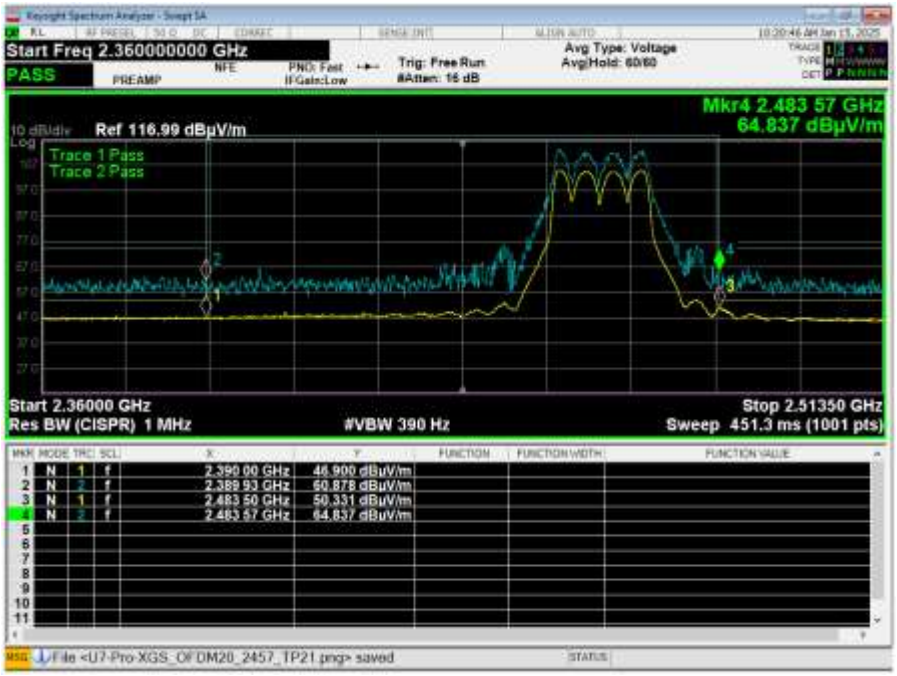
Graph 5: Upper Band Edge Plot – 2462 – b Mode



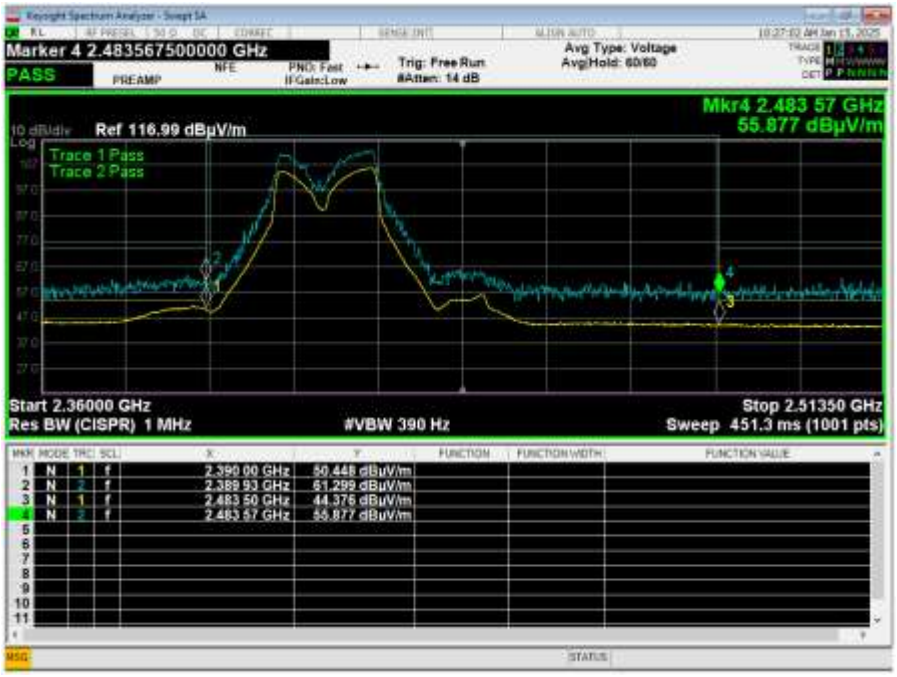
Graph 6: Lower Band Edge Plot – 2412 MHz – g Mode



Graph 7: Middle Band Edge Plot – 2437 – g Mode

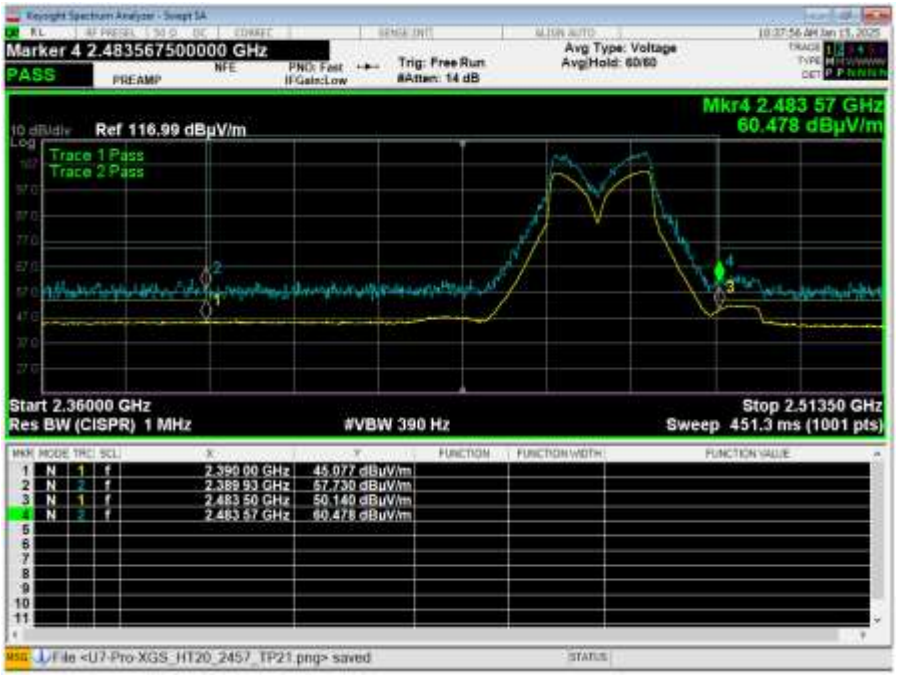


Graph 8: Upper Band Edge Plot – 2462 – g Mode

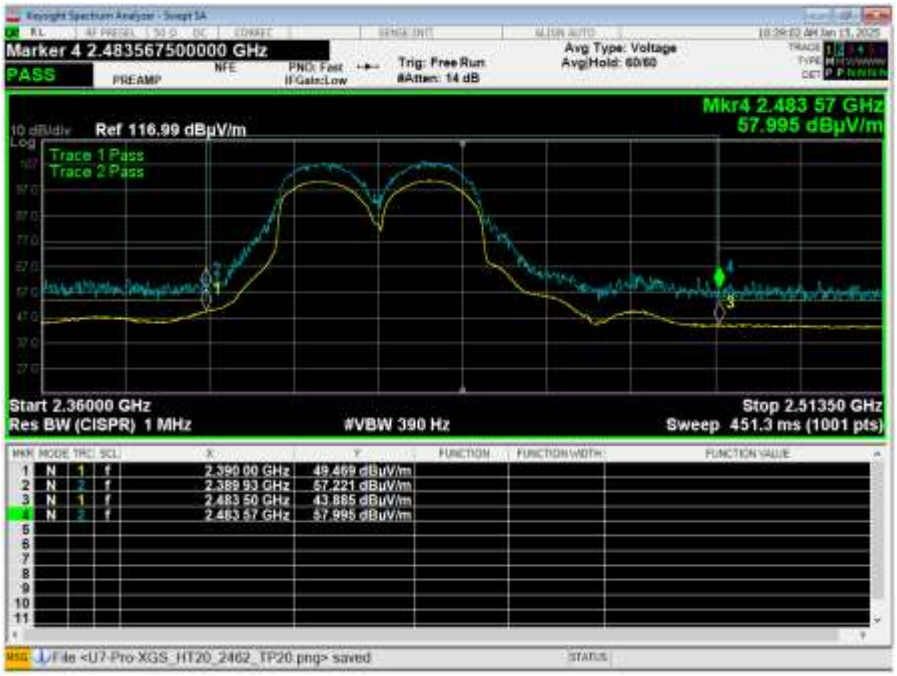


Graph 9: Lower Band Edge Plot – 2412 MHz – n20 Mode

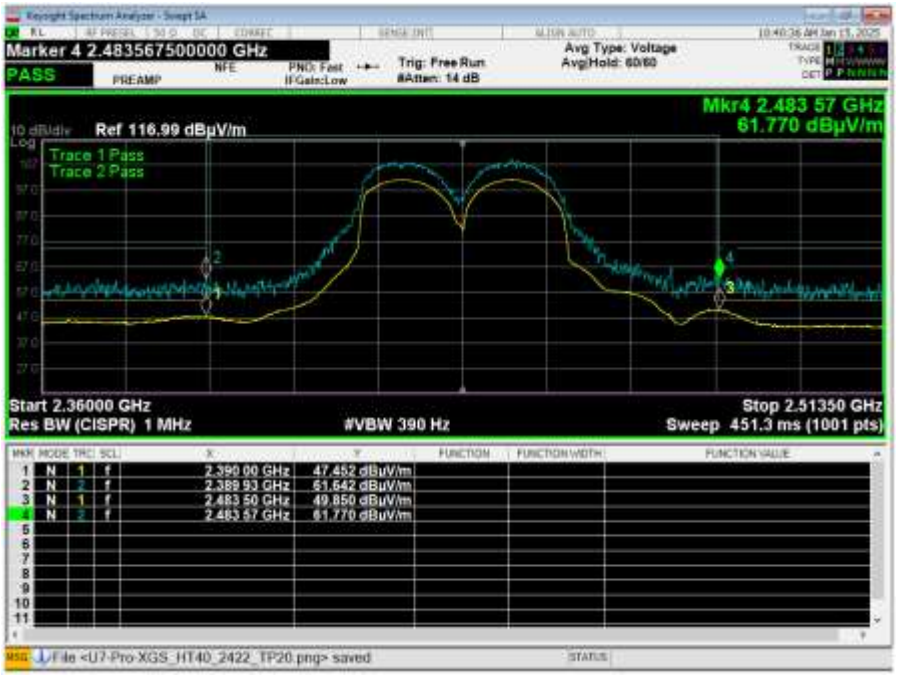
Graph 10: Middle Band Edge Plot – 2437 – n20 Mode



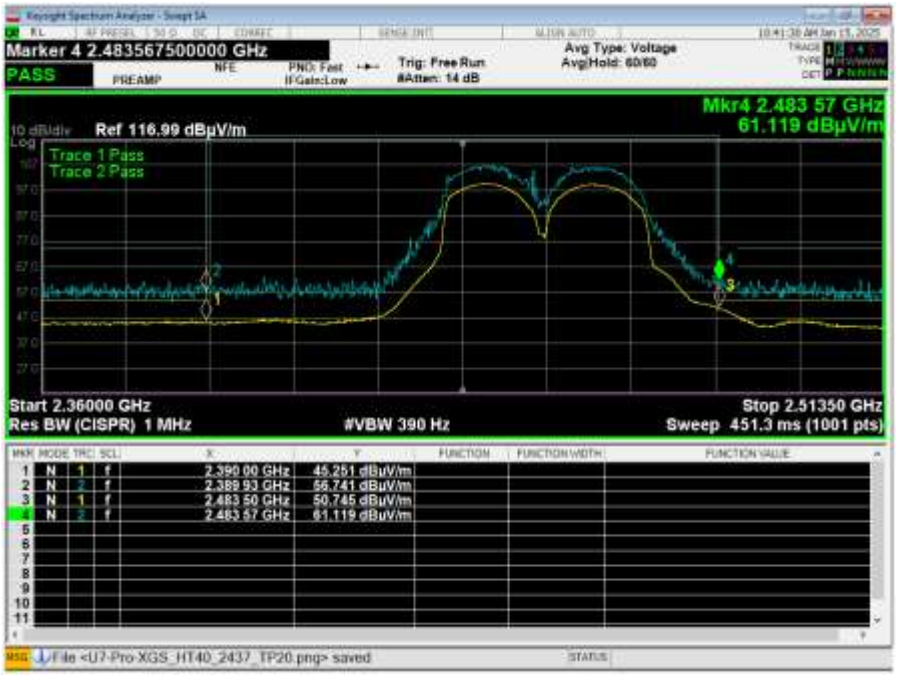
Graph 11: Upper Band Edge Plot – 2462 – n20 Mode



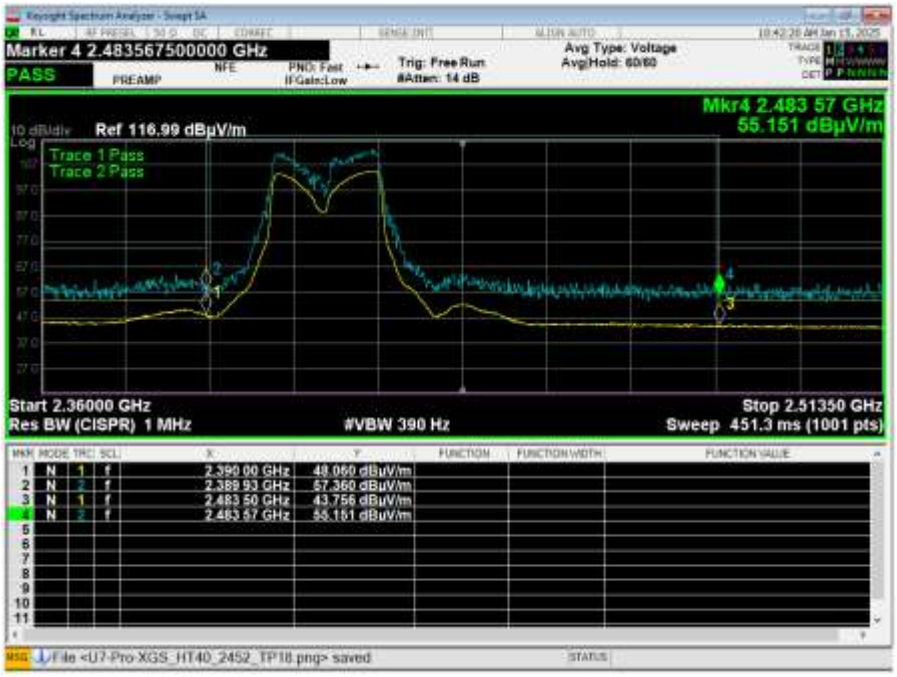
Graph 12: Lower Band Edge Plot – 2422 MHz – n40 Mode



Graph 13: Middle Band Edge Plot – 2437 – n40 Mode

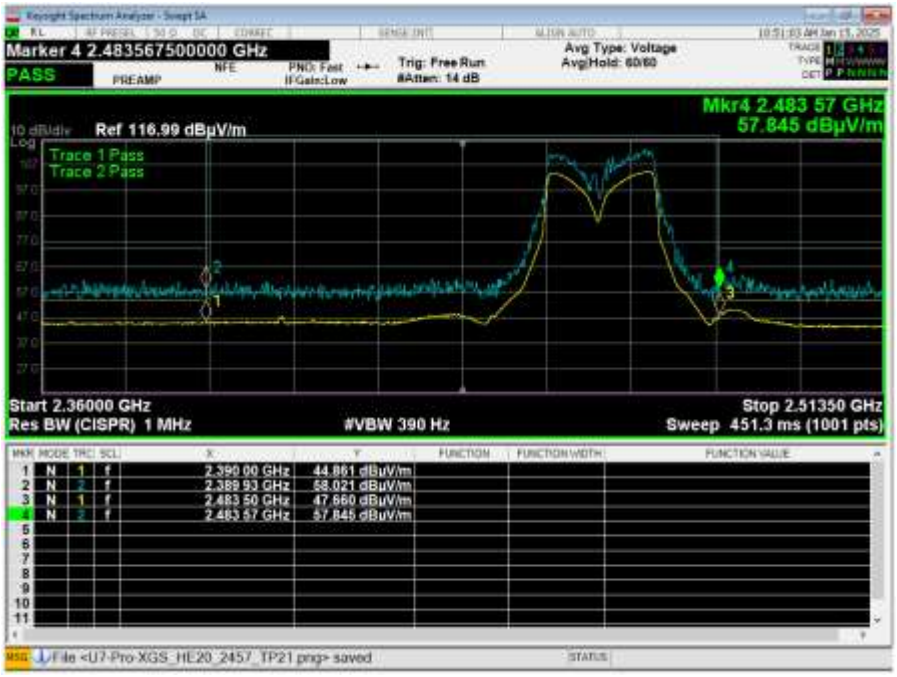


Graph 14: Upper Band Edge Plot – 2452 – n40 Mode

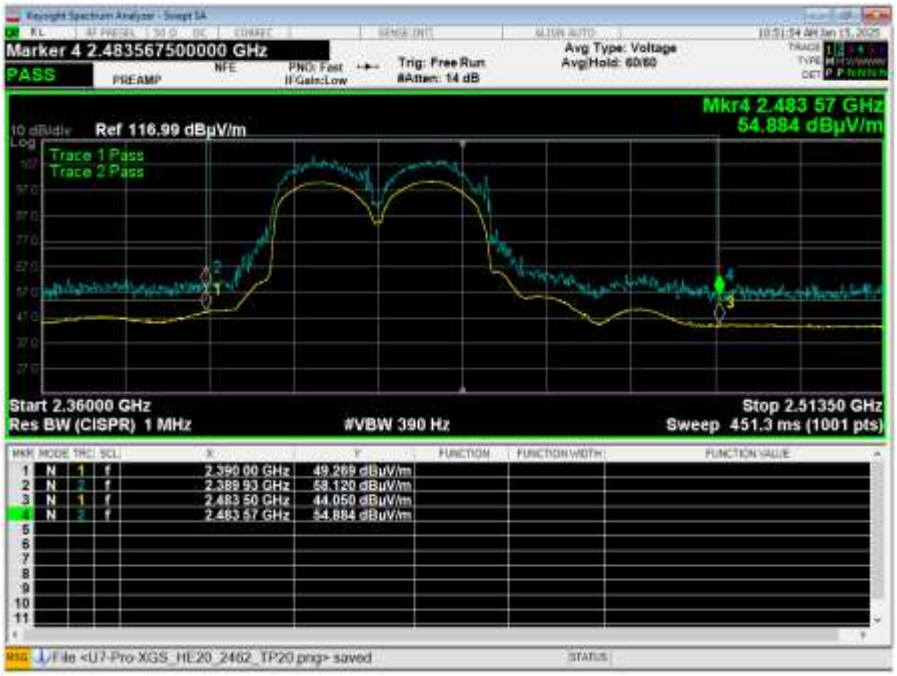


Graph 15: Lower Band Edge Plot – 2412 MHz – ax20 Mode

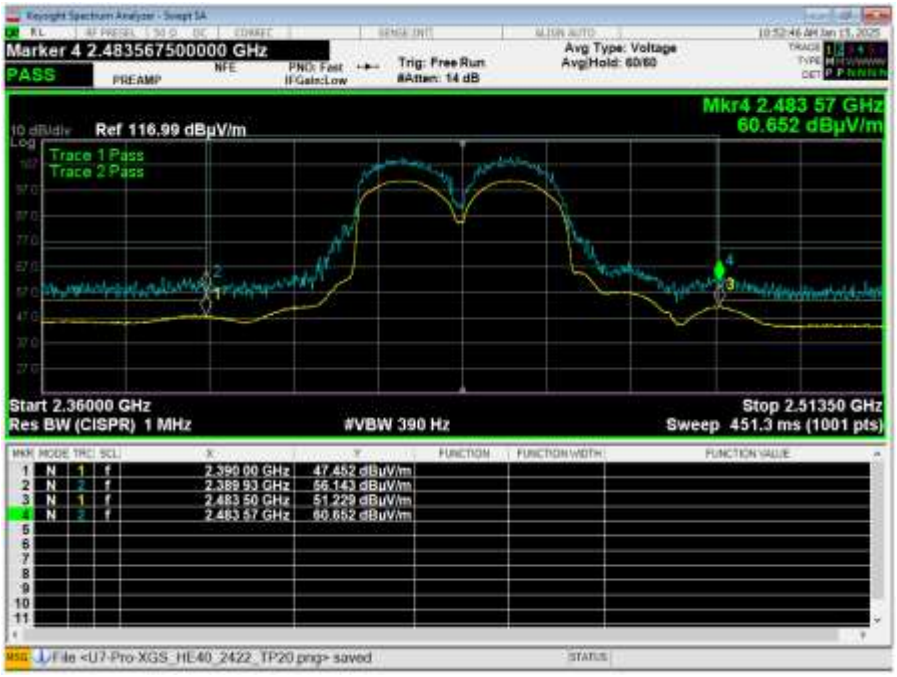
Graph 16: Middle Band Edge Plot – 2437 – ax20 Mode



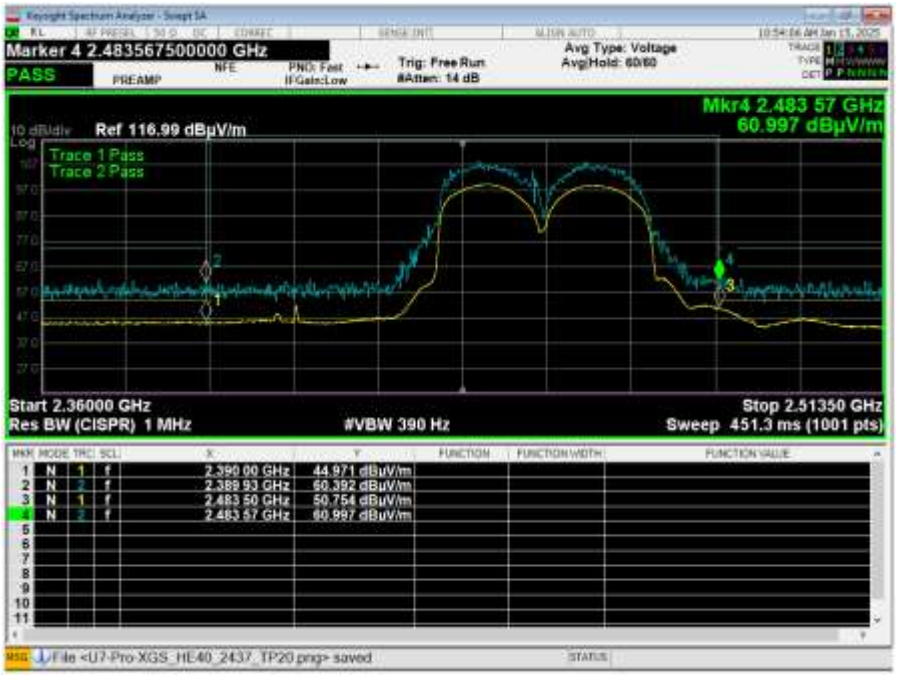
Graph 17: Upper Band Edge Plot – 2462 – ax20 Mode



Graph 18: Lower Band Edge Plot – 2422 MHz – ax40 Mode



Graph 19: Middle Band Edge Plot – 2437 – ax40 Mode



Graph 20: Upper Band Edge Plot – 2452 – ax40 Mode

5.6 §15.247(e) Maximum Average Power Spectral Density

All chains were measured and summed under the guidance of KDB 558074 Section 8.4. 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 8 dBm in any 3 kHz band during any time interval of continuous transmission. The antenna gain is 4 dBi + Array gain of 3.01 dB which is a total of 7.01 dBi.

Mode	Frequency (MHz)	Measurement (dBm)	Criteria (dBm)
b	2412	1.95	8.0
	2437	4.16	8.0
	2462	2.00	8.0
g	2412	-9.07	8.0
	2437	-4.15	8.0
	2462	-10.11	8.0
n 20	2412	-11.40	8.0
	2437	-4.53	8.0
	2462	-13.83	8.0
n 40	2422	-16.66	8.0
	2437	-16.40	8.0
	2452	-18.15	8.0
ax 20	2412	-12.83	8.0
	2437	-8.97	8.0
	2462	-13.71	8.0
ax 40	2422	-16.56	8.0
	2437	-16.42	8.0
	2452	-17.71	8.0

Result

The maximum average power spectral density was less than the limit of 8 dBm; therefore, the EUT complies with the specification.

-- End of Test Report --