UNIFIED COMPLIANCE LABORATORY

427 West 12800 South
Draper, UT 84020

Test Report

Certification

FCC ID	SWX-UDBP
ISED ID	6545A-UDBP
Equipment Under Test	UDB-Pro
Test Report Serial Number	TR8980_02
Date of Test(s)	14 – 15 February; 28 March; 1 – 2 and 25 April 2024
Report Issue Date	29 April 2024

Test Specification	Applicant
47 CFR FCC Part 15, Subpart E	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

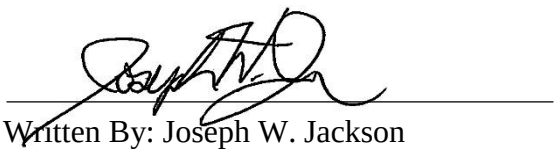
This report has been prepared by Unified Compliance Laboratory (UCL) to document compliance of the device described below with the requirement of Federal Communication Commissions (FCC) Part 15, Subpart E. This report may be reproduced in full. Partial reproduction of this report may only be made with the written consent of the laboratory. The results in this report apply only to the sample tested.

Applicant	Ubiquiti Inc.
Manufacturer	Ubiquiti Inc.
Brand Name	UBIQUITI
Model Number	UDB-Pro
FCC ID	SWX-UDBP
ISED ID	6545A-UDBP

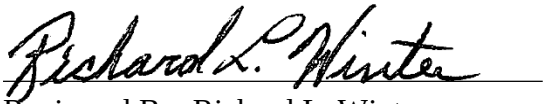
On this 29th day of April 2024, I individually and for Unified Compliance Laboratory certify that the statements made in this engineering report are true, complete and correct to the best of my knowledge and are made in good faith.

Although NVLAP has accredited the Unified Compliance Laboratory testing facilities, this report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. federal government.

Unified Compliance Laboratory



Written By: Joseph W. Jackson



Reviewed By: Richard L. Winter

Revision History		
Revision	**Description**	**Date**
01	Original Report Release	29 April 2024
02	Amended Sections 2.2, 5.3, 5.4, and 5.6 to Removed 80 MHz Bandwidth Reference	30 September 2024

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	UDB-Pro
Serial Number	316
Dimensions (cm)	19.0 x 19.0 x 6.4

2.2 Description of EUT

The UDB-Pro is a 5 GHz wireless point-to-point bridge for long-range applications. The UDB-Pro is designed for long-range camera back-haul or data-streaming. The UDB-Pro is managed by the UniFi Network application. The UDB-Pro has an Ethernet port for power and data transfer and has a pass-through PoE port. The UDB-Pro is powered by an 802.3at PoE power adapter. The UDB-Pro is designed for outdoor use.

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

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

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

2.3 EUT and Support Equipment

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

Brand Name Model Number Serial Number	Description	Name of Interface Ports / Interface Cables
BN: UBIQUITI MN: UDB-Pro (Note 1) SN: 316	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	Laptop Personal Computer	Unshielded Cat 5e cable/1 meters

SN: N/A		
BN: Dell MN: Latitude 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	20.9 – 22.4 °C
Humidity	21.6 – 26.9 %
Barometric Pressure	1016 mBar

2.6 Operating Modes

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

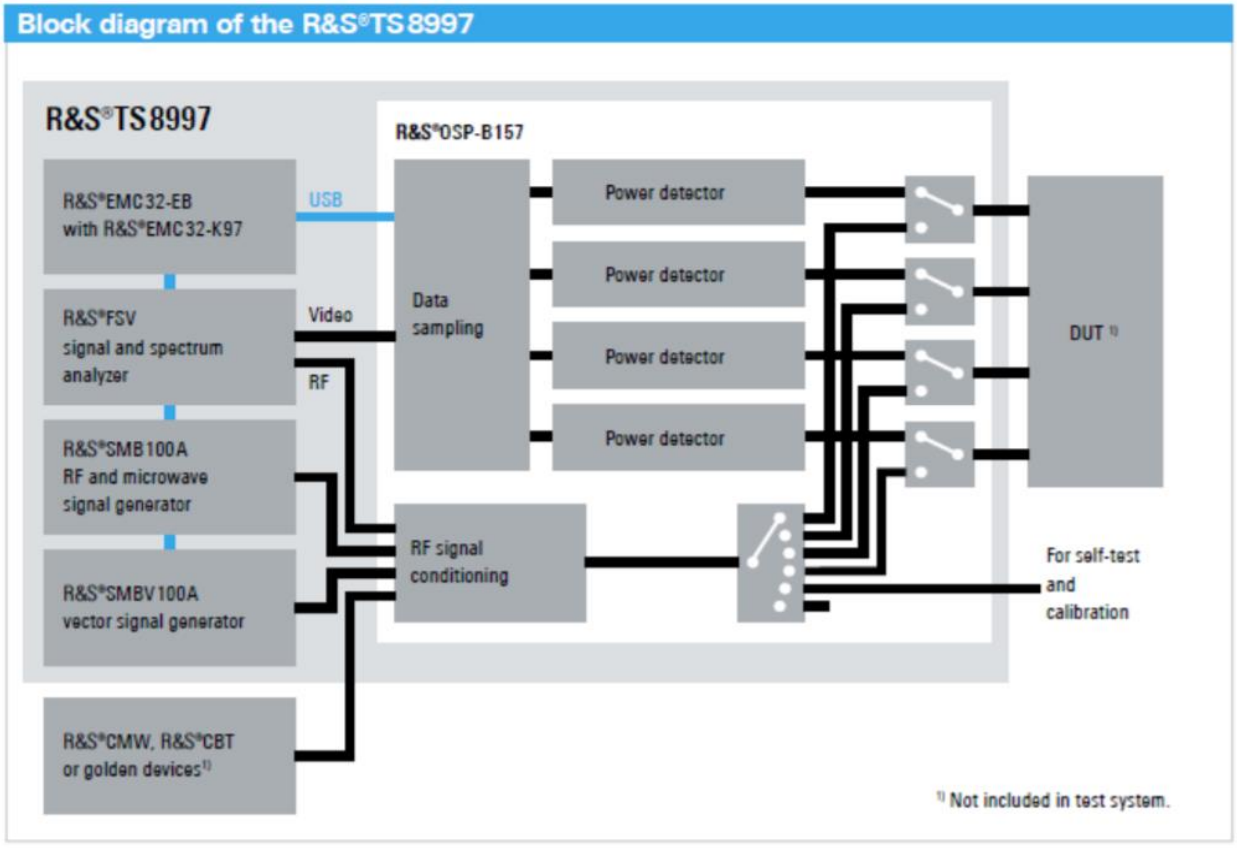


Diagram 1: Test Configuration Block Diagram

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
15.407(a)	N/A	Antenna requirements	Structural Requirement	Compliant
15.407(b)	RSS-Gen	Conducted Disturbance at Mains Port	0.15 to 30	Compliant
15.407(c)	RSS-247 §6.2.2, §6.2.3	Bandwidth Requirement	5725 to 5850	Compliant
15.407(e)	RSS-247 §6.2.2, §6.2.3	Peak Output Power	5725 to 5850	Compliant
15.407(f)	RSS-247 §6.2.2, §6.2.3	Antenna Conducted Spurious Emissions	0.009 to 40000	N/A
15.407(g)	RSS-247 §6.2.2, §6.2.3	Radiated Spurious Emissions	0.009 to 40000	Compliant
15.407(h)	RSS-247 §6.2.2, §6.2.3	Peak Power Spectral Density	5725 to 5850	Compliant
The testing was performed according to the procedures in ANSI C63.10-2013, KDB 789033 and 47 CFR Part 15. Where applicable, KDB 662911 was followed to sum required measurements.				

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 2024. 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 2024.

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	7/13/2023	7/13/2024
LISN	AFJ	LS16C/10	UCL-2512	5/26/2023	5/26/2024
ISN	Teseq	ISN T800	UCL-2974	6/27/2023	6/27/2024
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

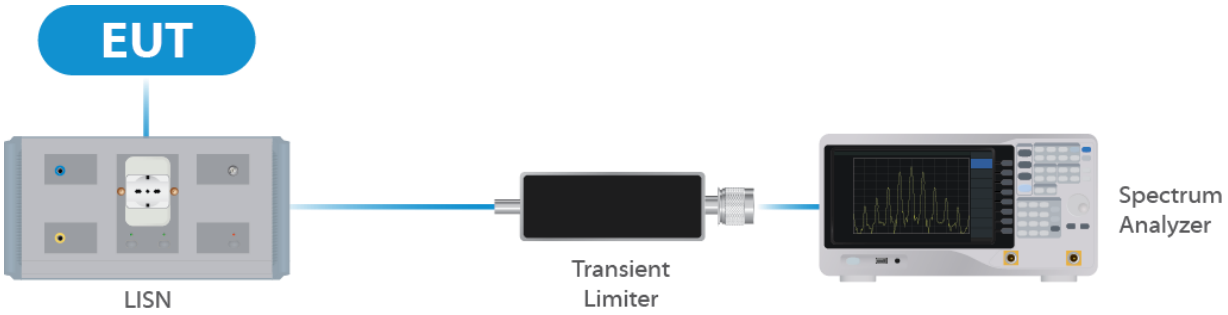


Figure 1: Conducted Emissions Test

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	11/27/2023	11/27/2024
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

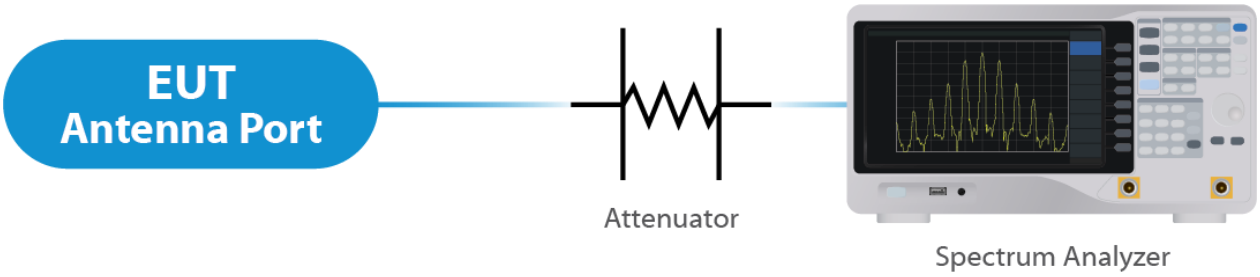


Figure 2: Direct Connect at the Antenna Port Test

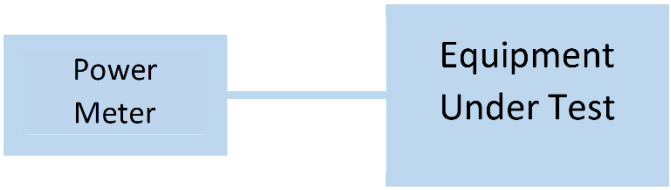


Figure 3: Output Power Measurement

4.3 Radiated Emissions

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
EMI Receiver	Keysight	N9038A	UCL-2778	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	9/22/2022	9/22/2024
Log Periodic	Scwarzbeck	STLP 9129	UCL-3068	1/27/2023	1/27/2025
15 - 40 GHz Horn Antenna	Scwarzbeck	BBHA 9170	UCL-2487	6/09/2022	6/09/2024
1 – 18 GHz Amplifier	Com-Power	PAM 118A	UCL-3833	1/19/2024	1/19/2026
Test Software	UCL	Revision 1	UCL-3108	N/A	N/A

Table 3: List of equipment used for Radiated Emissions

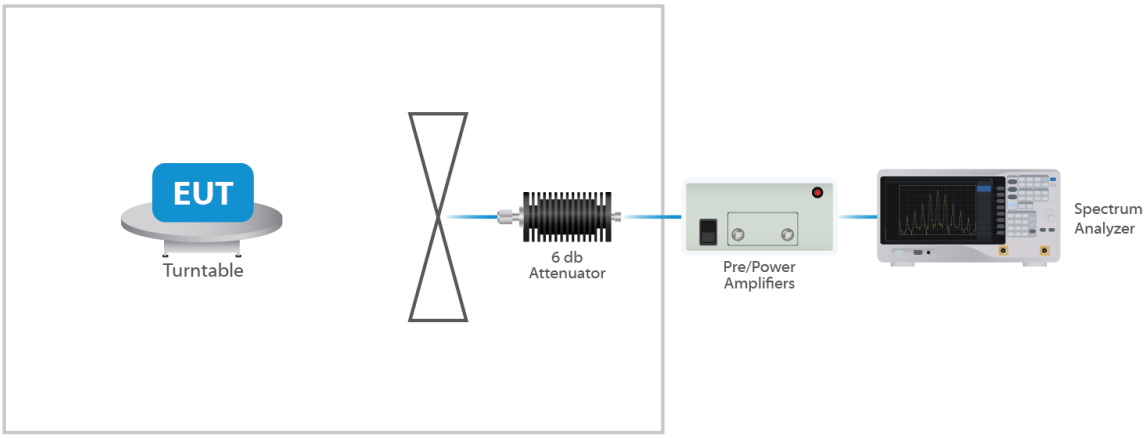


Figure 4: Radiated Emissions Test

4.4 Equipment Calibration

All applicable equipment is calibrated using either an independent calibration laboratory or Unified Compliance Laboratory personnel at intervals defined in ANSI C63.4:2014 following outlined calibration procedures. All measurement instrumentation is traceable to the National Institute of Standards and Technology (NIST). Supporting documentation relative to traceability is on file and is available for examination upon request.

4.5 Measurement Uncertainty

Test	Uncertainty (± 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 integrated internal antenna. Per the manufacturer, the Maximum gain of the antenna per chain is 19 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;

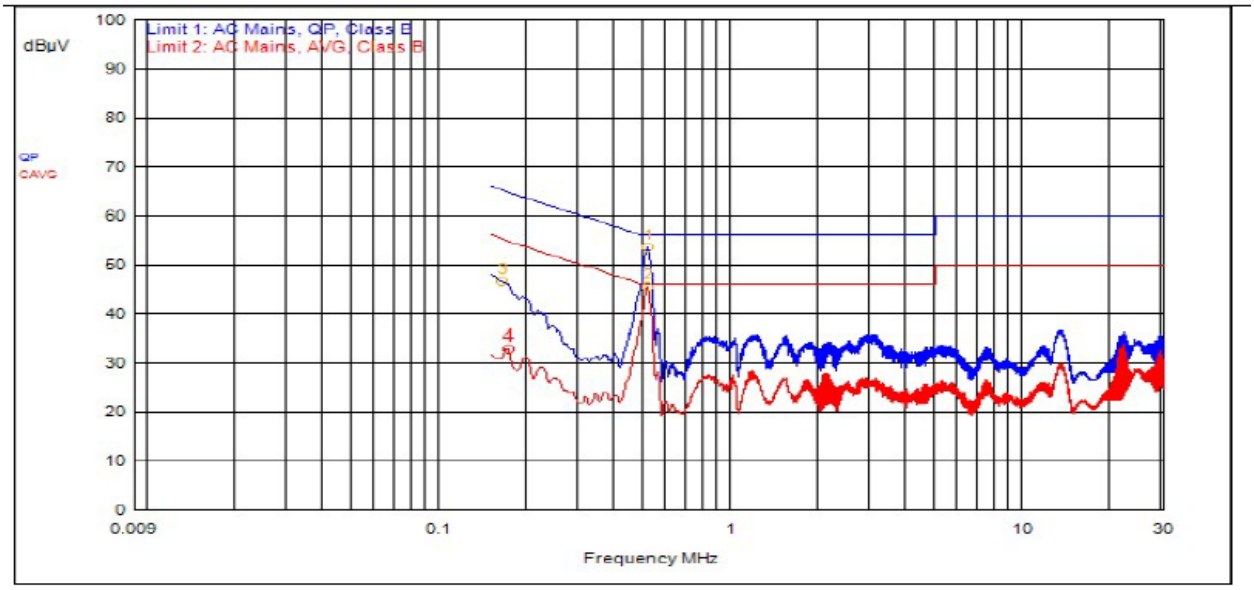
For PSD measurements when Nss=1: Array Gain = 10 log(NANT/NSS) dB + Antenna Gain (dBi). Or 3.01 dB + 19.0 dBi = 22.01 dBi.

Results

The EUT complied with the specification

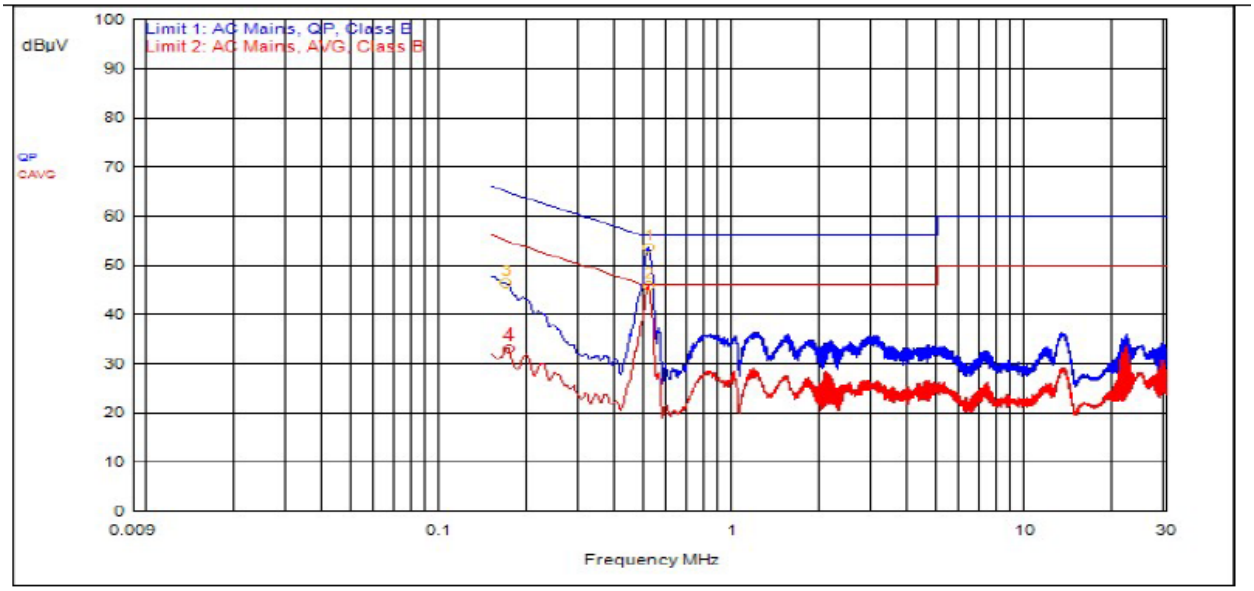
5.2 Conducted Emissions at Mains Ports Data

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	513,000kHz	12.42	0.00		QPeak	41.14	53.56	56.00	-2.44			
3	162,000kHz	12.36	0.00		QPeak	34.24	46.60	65.36	-18.76			
2	510,000kHz	12.43	0.00		C_AVG	33.22	45.65			46.00	-0.35	
4	171,000kHz	12.35	0.00		C_AVG	20.29	32.64			54.91	-22.27	

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	513,000kHz	12.43	0.00		QPeak	41.19	53.62	56.00	-2.38			
3	168,000kHz	12.40	0.00		QPeak	33.95	46.35	65.06	-18.71			
2	513,000kHz	12.43	0.00		C_AVG	33.27	45.70			46.00	-0.30	
4	171,000kHz	12.40	0.00		C_AVG	20.74	33.14			54.91	-21.77	

Result

The EUT complied with the specification limit.

5.3 §15.403(i) 26 dB Emissions Bandwidth

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

Nominal BW (MHz)	Frequency (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
20	5745	17.3	21.3
20	5775	17.3	20.6
20	5825	17.0	21.1
20	5745	18.0	21.2
20	5775	18.5	21.4
20	5825	18.3	21.5
40	5755	36.8	42.2
40	5775	36.3	41.6
40	5795	36.3	41.3

Result

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

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

5.4 §15.407(a)(3) Maximum Average Output Power

All chains were measured and summed under the guidance of KDB 789033 Section II. E.2. and KDB 66291 D01. Please see associated annex for details on instrument settings.
The maximum average RF conducted output power measured for this device was 13.09 dBm or 20.37 mW. The limit is 30 dBm, or 1 Watt when using antennas with 6 dBi or less gain. The antenna has a gain of 19 dBi. The adjusted limit with the antenna gain of 19 dBi is 17 dBm or 50.12 mW.

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power *	Measured EIRP	Measured PSD
OFDM 20	5745	Mcs0	8	12.60	31.60	-1.77
OFDM 20	5775	Mcs0	8	12.79	31.79	-1.34
OFDM 20	5825	Mcs0	7	11.96	30.96	-2.52
VHT 20	5745	Mcs0	9	12.55	31.55	-2.13
VHT 20	5775	Mcs0	8	12.71	31.71	-1.76
VHT 20	5825	Mcs0	7	11.99	30.99	-2.95
VHT 40	5755	Mcs0	9	13.09	32.09	-4.53
VHT 40	5775	Mcs0	8	12.25	31.25	-5.19
VHT 40	5795	Mcs0	8	12.48	31.48	-4.83

Result

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

* Gated EIRP shown in the Annex is the conducted measurement

5.5 §15.407(b)(7) Spurious Emissions

5.5.1 Conducted Spurious Emissions

The frequency ranges from the lowest frequency generated or used in the device to the tenth harmonic of the highest fundamental frequency was investigated to measure any antenna-conducted emissions. The graphs show the measurement data from spurious emissions noted across the frequency range when transmitting at the lowest frequency, middle frequency and upper frequency. Shown within the annex are plots with the EUT turned to the upper and lower channels with the antenna gain of 19 dBi accounted for. These demonstrate compliance with the provisions of this section at the band edges.

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

Result

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

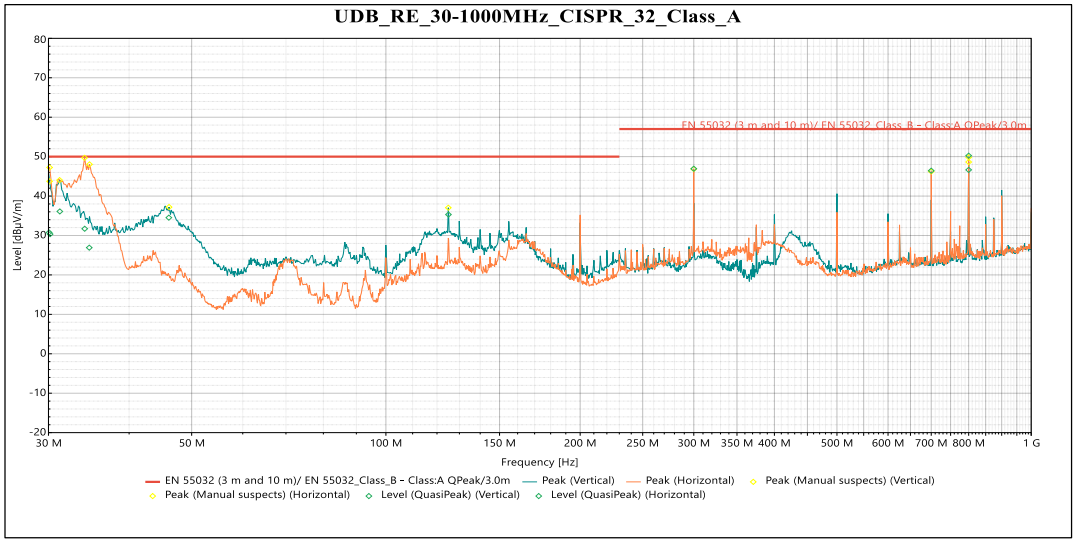
5.5.2 Radiated Spurious Emissions in the Restricted Bands of § 15.205

The EUT uses various power settings based on the channel in use. In order to reduce test time, the radiated spurious emissions at the lowest, middle, and highest channel were measured at the maximum power of TP22.

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

Result

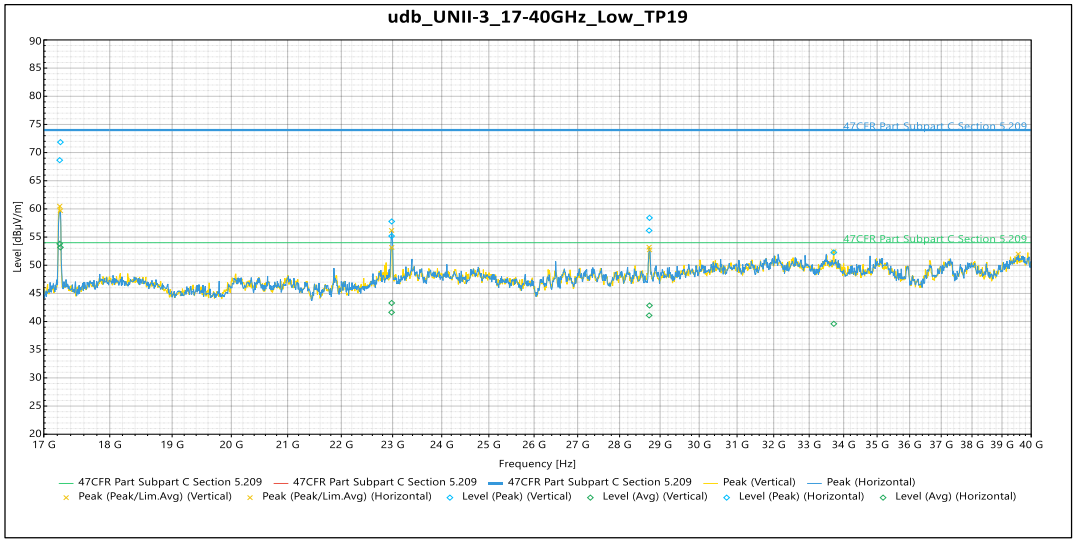
All emissions in the restricted bands of § 15.205 met the limits specified in § 15.209; therefore, the EUT complies with the specification. See Annex for Conducted Band edge plots.



QuasiPeak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin	Azimuth (°)	Height	Pol.	Correction (dB)
30.17 MHz	30.336	50	-19.664	206	1	Vertical	-7.794
31.24 MHz	36.103	50	-13.897	122	2.233	Vertical	-8.487
46.09 MHz	34.515	50	-15.485	350	1.319	Vertical	-18.705
125.01 MHz	35.311	50	-14.689	18	1	Vertical	-14.349
799.98 MHz	50.244	57	-6.756	229	1.319	Vertical	-4.946
30.06 MHz	30.767	50	-19.233	241	1.681	Horizontal	-7.714
34.14 MHz	31.707	50	-18.293	45	2.41	Horizontal	-10.063
34.70 MHz	26.913	50	-23.087	186	3.139	Horizontal	-10.387
299.99 MHz	46.931	57	-10.069	224	1	Horizontal	-13.969
699.99MHz	46.428	57	-10.572	200	1.142	Horizontal	-6.672
799.99 MHz	46.644	57	-10.356	262	1.142	Horizontal	-4.946

Table 4: Radiated Emissions 30 – 1000 MHz



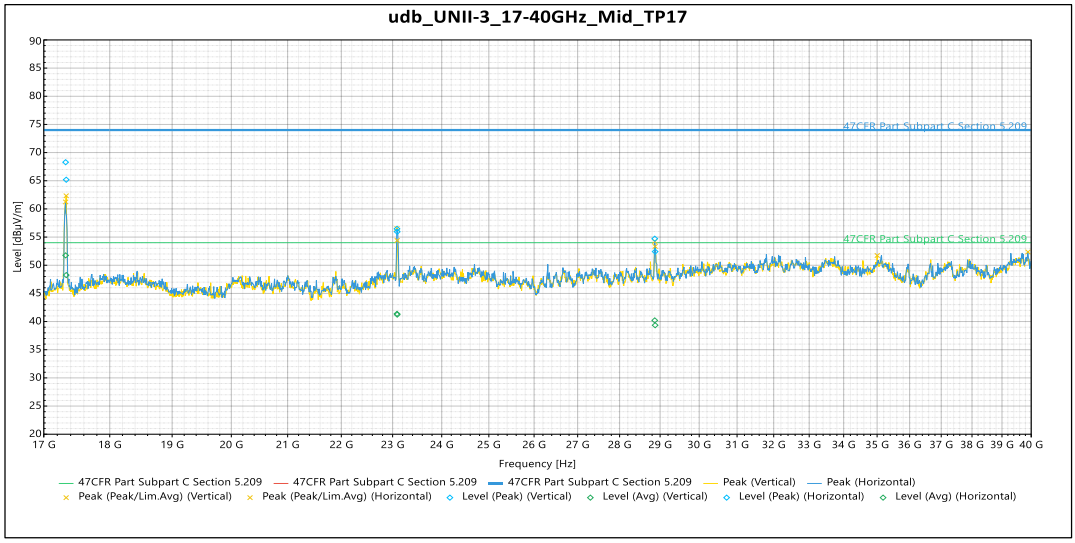
Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
17.236 GHz	68.65	74	-5.35	25	Vertical	-0.669
22.982 GHz	57.77	74	-16.23	81	Vertical	-0.245
28.735 GHz	58.413	74	-15.587	23	Vertical	0.563
33.711 GHz	52.276	74	-21.724	43	Vertical	1.682
17.247 GHz	71.854	74	-2.146	70	Horizontal	-0.842
22.98 GHz	55.182	74	-18.818	357	Horizontal	-0.276
28.726 GHz	56.162	74	-17.838	339	Horizontal	0.511

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
17.236 GHz	53.81	54	-0.19	25	Vertical	-0.669
22.982 GHz	43.298	54	-10.702	81	Vertical	-0.245
28.735 GHz	42.855	54	-11.145	23	Vertical	0.563
33.711 GHz	39.603	54	-14.397	43	Vertical	1.682
17.247 GHz	53.173	54	-0.827	70	Horizontal	-0.842
22.98 GHz	41.633	54	-12.367	357	Horizontal	-0.276
28.726 GHz	41.09	54	-12.91	339	Horizontal	0.511

Table 5: Radiated Emissions 1 – 17 GHz on the Lowest Frequency 5745 MHz



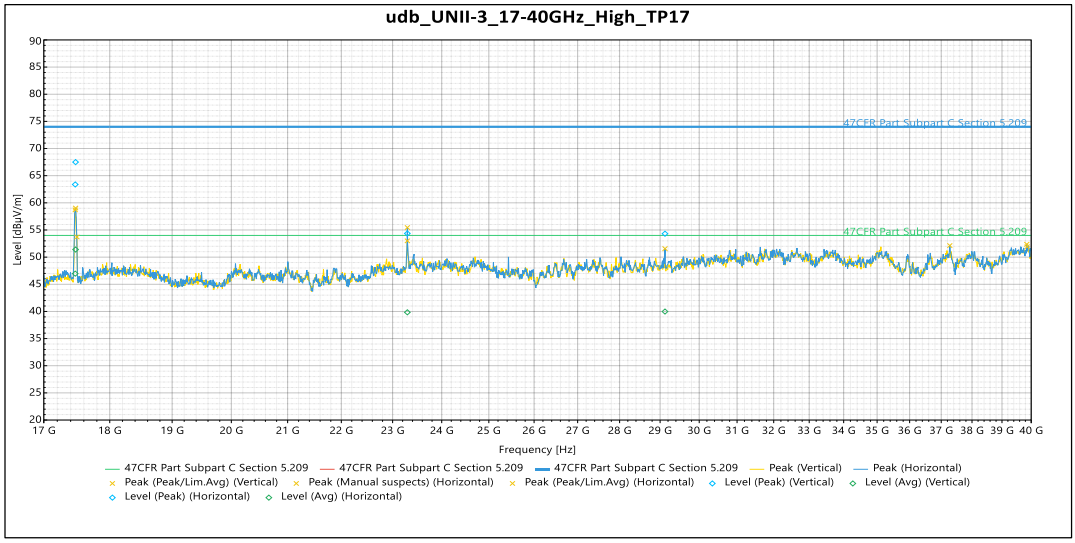
Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
17.334 GHz	65.178	74	-8.822	27	Vertical	-0.832
23.092 GHz	55.944	74	-18.056	81	Vertical	-0.592
28.876 GHz	52.417	74	-21.583	21	Vertical	0.154
17.325 GHz	68.292	74	-5.708	70	Horizontal	-0.836
23.088 GHz	56.46	74	-17.54	81	Horizontal	-0.555
28.866 GHz	54.711	74	-19.289	331	Horizontal	-0.063

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
17.334 GHz	48.251	54	-5.749	27	Vertical	-0.832
23.092 GHz	41.235	54	-12.765	81	Vertical	-0.592
28.876 GHz	39.346	54	-14.654	21	Vertical	0.154
17.325 GHz	51.748	54	-2.252	70	Horizontal	-0.836
23.088 GHz	41.371	54	-12.629	81	Horizontal	-0.555
28.866 GHz	40.21	54	-13.79	331	Horizontal	-0.063

Table 6: Transmitting on the Middle Frequency 5775 MHz



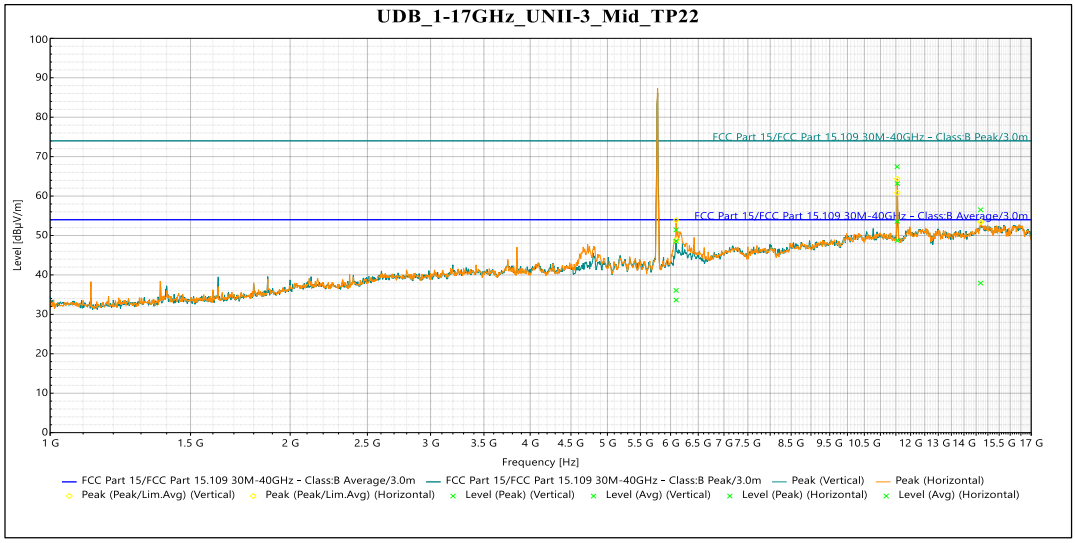
Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
17.47 GHz	63.377	74	-10.623	21	Vertical	-1.668
17.475 GHz	67.502	74	-6.498	81	Horizontal	-1.657
23.296 GHz	54.358	74	-19.642	70	Horizontal	-0.19
29.123 GHz	54.307	74	-19.693	331	Horizontal	-0.229

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
17.47 GHz	46.962	54	-7.038	21	Vertical	-1.668
17.475 GHz	51.396	54	-2.604	81	Horizontal	-1.657
23.296 GHz	39.836	54	-14.164	70	Horizontal	-0.19
29.123 GHz	39.976	54	-14.024	331	Horizontal	-0.229

Table 7: Transmitting on the Highest Frequency 5825 MHz



Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
6.0972 GHz	48.547	74	-25.453	135	2.405	Vertical	7.393
11.549 GHz	63.161	74	-10.839	5	2.709	Vertical	14.669
14.689 GHz	56.522	74	-17.478	125	2.531	Vertical	17.323
6.0969 GHz	51.427	74	-22.573	117	2.755	Horizontal	7.392
11.544 GHz	67.441	74	-6.559	60	1.88	Horizontal	14.663

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
6.0972 GHz	33.634	54	-20.366	135	2.405	Vertical	7.393
11.549 GHz	48.724	54	-5.276	5	2.709	Vertical	14.669
14.689 GHz	37.931	54	-16.069	125	2.531	Vertical	17.323
6.0969 GHz	36.056	54	-17.944	117	2.755	Horizontal	7.392
11.544 GHz	53.586	54	-0.414	60	1.88	Horizontal	14.663

Table 8: Radiated Emissions 17 – 40 GHz on the Middle Frequency 5775 MHz (worse case)

5.6 §15.407(a) Maximum Power Spectral Density

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

The maximum average power spectral density conducted from the intentional radiator of the antenna shall not be greater than 30 dBm in any 500 kHz band during any time interval of continuous transmission. Results of this testing are summarized.
As per KDB 662911, When the EUT is using spatial-multiplexing in HE modes, there is not additional array gain to accommodate. When the EUT uses Nss=1 data rates, the antenna gain is 19 dBi + Array gain of 3.01 dB which is a total of 22.01 dBi

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power	Measured EIRP	Measured PSD
OFDM 20	5745	Mcs0	8	12.60	31.60	-1.77
OFDM 20	5775	Mcs0	8	12.79	31.79	-1.34
OFDM 20	5825	Mcs0	7	11.96	30.96	-2.52
VHT 20	5745	Mcs0	9	12.55	31.55	-2.13
VHT 20	5775	Mcs0	8	12.71	31.71	-1.76
VHT 20	5825	Mcs0	7	11.99	30.99	-2.95
VHT 40	5755	Mcs0	9	13.09	32.09	-4.53
VHT 40	5775	Mcs0	8	12.25	31.25	-5.19
VHT 40	5795	Mcs0	8	12.48	31.48	-4.83

Result

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

-- End of Test Report --