



427 West 12800 South
Draper, UT 84020

Test Report Certification

FCC ID	SWX-WAVEAPR
Equipment Under Test	Wave-AP
Test Report Serial Number	TR6987_03
Date of Test(s)	11, 14, 28 February and 1, 10, 16 March 2022
Report Issue Date	7 June 2022

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.

Applicant	Ubiquiti Inc.
Manufacturer	Ubiquiti Inc.
Brand Name	airFiber
Model Number	Wave-AP
FCC ID	SWX-WAVEAPR

On this 7th day of June 2022, 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	24 March 2022
02	Added Elevation Plot in Section 5.4	3 June 2022
03	Added Elevation Gain adjustment information	7 June 2022

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1 Client Information

1.1 Applicant

Company	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.
Contact Name	Mark Feil
Title	Compliance Manager

1.2 Manufacturer

Company	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.
Contact Name	Mark Feil
Title	Compliance Manager

2 Equipment Under Test (EUT)

2.1 Identification of EUT

Brand Name	airFiber
Model Number	Wave-AP
Serial Number	245A4C2F9610
Dimensions (cm)	21.2 x 20.5 x 17.0

2.2 Description of EUT

The Wave-AP is a fixed point-to-point or point-to-multiple point transceiver operating in the 57 GHz to 71 GHz range. The Wave-AP provides 2.5+ Gbps throughput and supports up to 15 client devices. The Wave-AP has a 5150 MHz to 5875 MHz (802.11ax) back-up radio. A Bluetooth LE transceiver is included for device management. The Wave-AP is an outdoor device and has an Ethernet port is used for transfer and to provide power using an Ubiquiti U-POE-at Power Supply.

Band	WiFi Mode	Modulation Bandwidth	Modulation Type	Frequency (MHz)
UNII-1	ax	20 MHz	HE	5165, 5175, 5185, 5200, 5210, 5220, 5230, 5240
	ax	40 MHz	HE	5175, 5185, 5200, 5215, 5230
	ax	80 MHz	HE	5195, 5200, 5205, 5210

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: Wave-AP (Note 1) SN: 245A4C2F9610	Wireless Access Point	See Section 2.4
BN: Ubiquiti Inc. MN: U-POE-at SN: N/A	PoE Injector Power Supply	Shielded or Un-shielded Cat 5e cable (Note 2)
BN: Dell MN: XPS 13 SN: N/A	Laptop Personal Computer	Shielded or 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
Ethernet/PoE	1	Shielded or Un-shielded Cat 5e cable

2.5 Operating Environment

Power Supply	120 Volts ac to 48 Volt PoE Power
AC Mains Frequency	60 Hz
Temperature	21.9 – 22.2 °C
Humidity	16.6 – 23.5 %
Barometric Pressure	1021 mBar

2.6 Operating Modes

The Wave-AP 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 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 3.0.6 was used to operate the transmitter using a constant transmit mode.

2.8 Block Diagram of Test Configuration

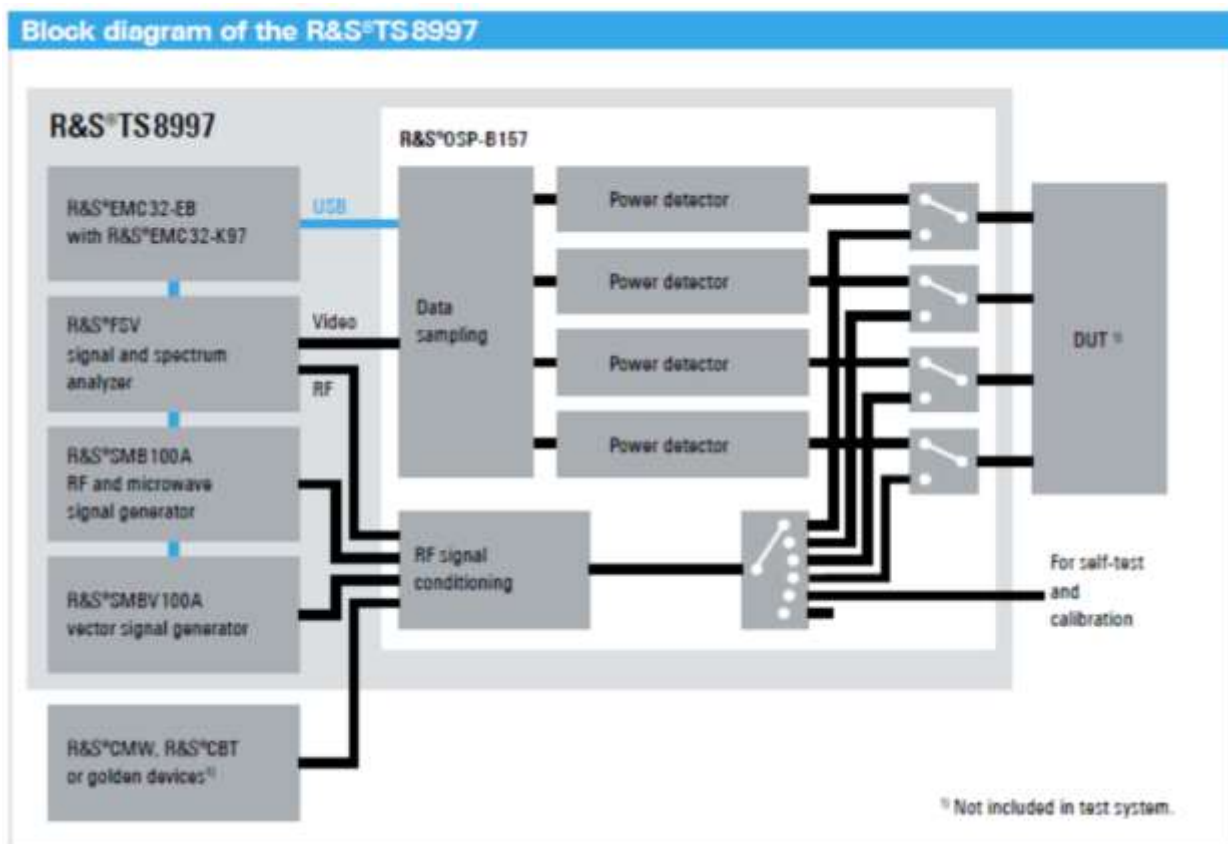


Diagram 1: Test Configuration Block Diagram

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	5180 to 5210	Compliant
15.407(e)	RSS-247 §6.2.2, §6.2.3	Peak Output Power	5180 to 5210	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	5180 to 5210	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 2022. 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 2022. Unified Compliance Laboratory has been assigned 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	12/8/2021	12/8/2022
LISN	AFJ	LS16C/10	UCL-6749	12/6/2021	12/6/2023
Cat6 ISN	Teseq	ISN T8-Cat6	UCL-2971	1/30/2022	1/30/2023
ISN	Teseq	ISN T800	UCL-2974	6/4/2021	6/4/2022
LISN	Com-Power	LIN-120C	UCL-2612	1/6/2022	1/6/2023
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

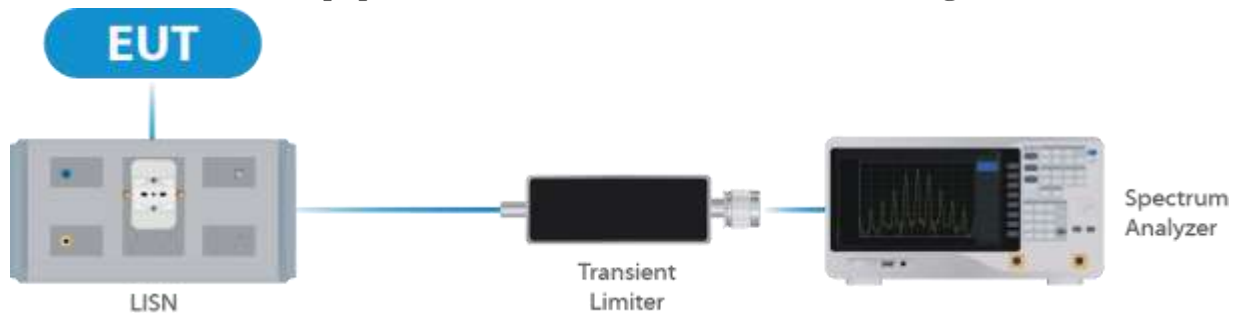


Figure 1: Conducted Emissions Test

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	1/03/2022	1/03/2023
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	1/03/2022	1/03/2023
Switch Extension	R&S	OSP-150W	UCL-2870	1/03/2022	1/03/2023

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

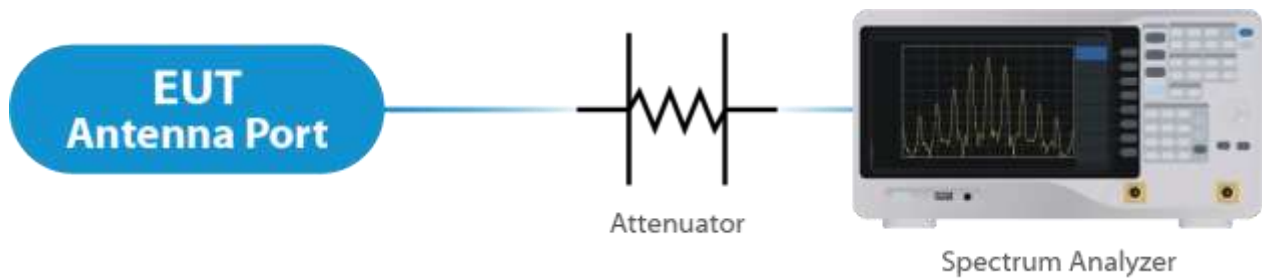


Figure 2: Direct Connect at the Antenna Port Test



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	6/21/2021	6/21/2022
Pre-Amplifier 9 kHz – 1 GHz	Sonoma Instruments	310N	UCL-2889	10/7/2021	10/7/2022
Broadband Antenna	Scwarzbeck	VULB 9163	UCL-3062	8/28/2020	8/27/2022
Broadband Antenna	Scwarzbeck	VULB 9163	UCL-3071	5/19/2020	5/19/2022
Double Ridge Horn Antenna	Scwarzbeck	BBHA 9120D	UCL-3065	7/8/2021	7/8/2022
Log Periodic	Scwarzbeck	STLP 9129	UCL-3068	11/16/2020	11/16/2022
15 - 40 GHz Horn Antenna	Scwarzbeck	BBHA 9170	UCL-2487	5/21/2020	5/21/2022
1 – 18 GHz Amplifier	Com-Power	PAM 118A	UCL-3833	10/7/2021	10/7/2022
Test Software	UCL	Revision 1	UCL-3108	N/A	N/A

Table 3: List of equipment used for Radiated Emissions

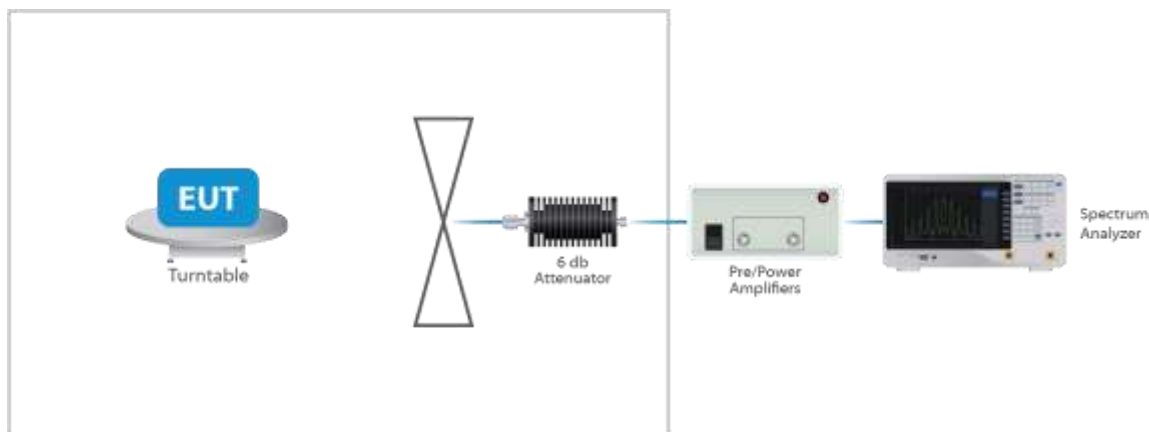


Figure 4: Radiated Emissions Test

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 (\pm dB)	Confidence (%)
Conducted Emissions	1.44	95
Radiated Emissions (9 kHz to 30 MHz)	2.50	95
Radiated Emissions (30 MHz to 1 GHz)	4.38	95
Radiated Emissions (1 GHz to 18 GHz)	4.37	95
Radiated Emissions (18 GHz to 40 GHz)	3.93	95
Direct Connect Tests	K Factor	Value
Emissions Bandwidth	2	2.0%
Output Power	2	1.0 dB
Peak Power Spectral Density	2	1.3 dB
Band Edge	2	0.8 dB
Transmitter Spurious Emissions	2	1.8 dB

5 Test Results

5.1 §15.203 Antenna Requirements

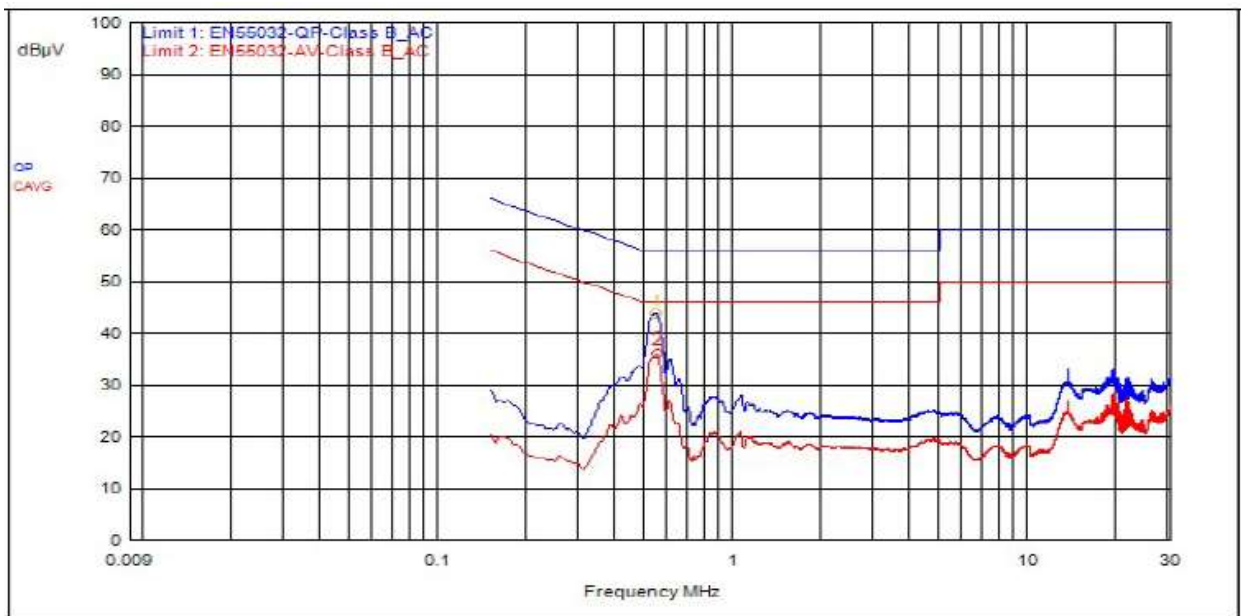
The EUT uses an integral disk antenna structure. The maximum gain of the antenna is 12 dBi. This is an 802.11 device and utilizes CDD as described in KDB 662911 D01. The antenna is not user replaceable.

Results

The EUT complied with the specification

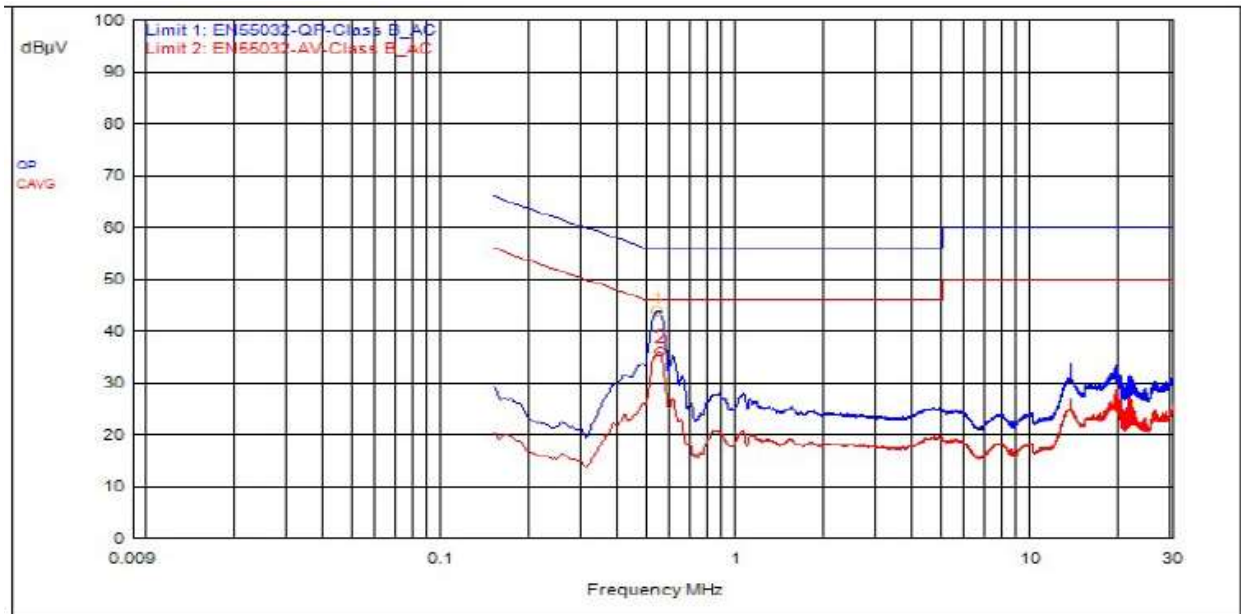
5.2 Conducted Emissions at Mains Ports Data

5.2.1 Line



ID	Frequency	Probe	Cable	Atten.	Detector	Meter Read	Meas Level	Limit 1	Limit 1 Dist.	Limit 2	Limit 2 Dist.
1	543,000kHz	9.5	0.1		QPeak	34.2	43.9	56.0	-12.1		
2	546,000kHz	9.5	0.1		C_AVG	26.3	36.0			46.0	-10.0

5.2.2 Neutral



ID	Frequency	Probe	Cable	Atten.	Detector	Meter Read	Meas Level	Limit 1	Limit 1 Dist.	Limit 2	Limit 2 Dist.
1	537,000kHz	9.5	0.1		QPeak	34.2	43.9	56.0	-12.1		
2	546,000kHz	9.5	0.1		C_AVG	26.5	36.2			46.0	-9.8

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)	Emissions 26 dB Bandwidth (MHz)
20	5165	19.1	21.4
20	5200	19.1	21.3
20	5240	19.5	34.7
40	5175	37.8	40.2
40	5200	37.8	40.4
40	5230	37.8	40.1
80	5195	77.0	82.5
80	5200	77.5	82.5
80	5210	77.0	83.0

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)(2) 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.

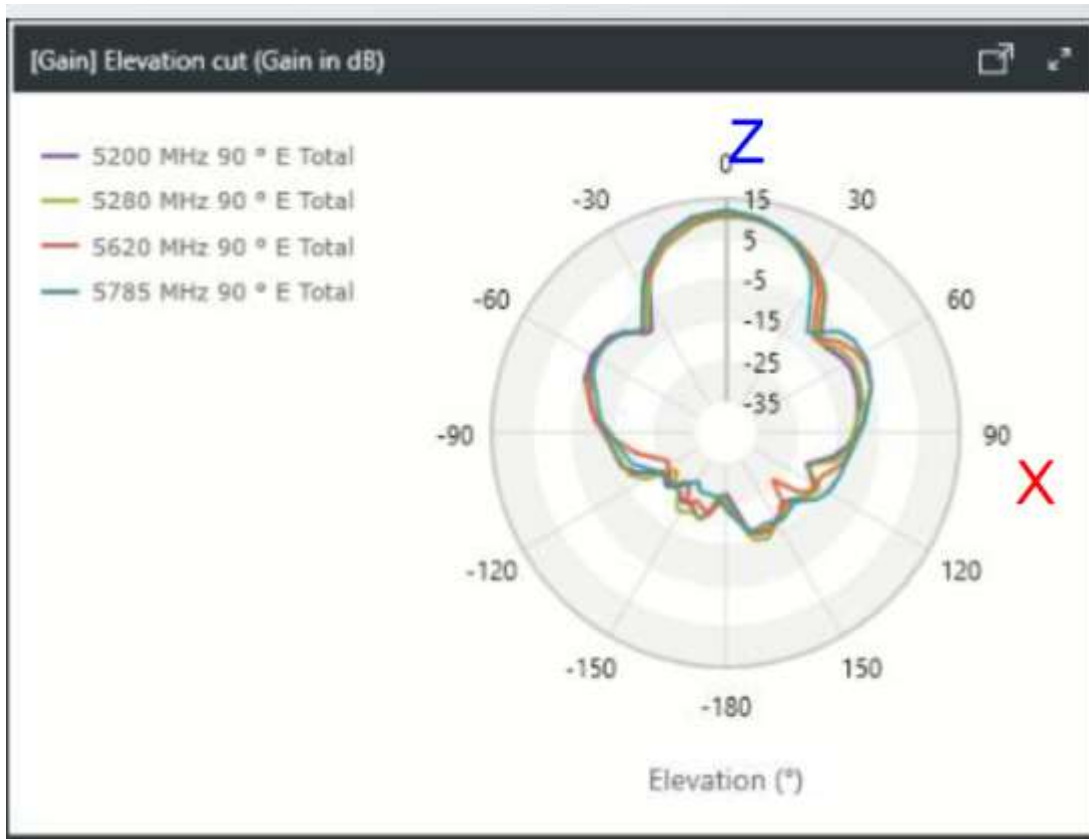
The maximum average RF conducted output power measured for this device was 16.0 dBm or 39.8 mW. The limit is 30 dBm, or 1 Watt when using an antenna with 23 dBi (Fixed point to point) or less gain. The antenna has a gain of 12 dBi.

The maximum average RF conducted output power was additionally calculated for the radiation pattern between 30° and 90° based on the highest conducted output power. The calculated value shall be below 125 mW (21 dBm) per KDB 789033 Do2 Section H at an elevation angle higher than 30°.

Mod. / BW	Freq. (MHz)	Data Rate	TP Lvl	Output Power (dBm)	Meas. PSD (dBm)	Max Ant. Gain 30-90° (dBi) ¹	MAX EIRP @ 30-90° (dBm)	Limit 30-90° (dBm)	Ant. Ptrn Delta (dB)
HE 20	5165	Mcs0	17	9.8	-5.4	4.9	14.7	21.0	-6.3
HE 20	5200	Mcs0	28	16.0	0.7	4.9	20.9	21.0	-0.1
HE 20	5240	Mcs0	28	15.8	0.5	4.9	20.7	21.0	-0.3
HE 40	5175	Mcs0	23	12.8	-5.2	4.9	17.7	21.0	-3.3
HE 40	5200	Mcs0	28	15.9	-2.2	4.9	20.8	21.0	-0.2
HE 40	5230	Mcs0	28	15.9	-2.2	4.9	20.8	21.0	-0.2
HE 80	5195	Mcs0	22	12.5	-8.5	4.9	17.4	21.0	-3.6
HE 80	5200	Mcs0	25	14.3	-6.7	4.9	19.2	21.0	-1.8
HE 80	5210	Mcs0	25	14.2	-6.9	4.9	19.1	21.0	-1.9

Result

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



Plot 1: Antenna Elevation Plot

5.5 §15.407(b) 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 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 below are plots with the EUT turned to the upper and lower channels with the antenna gain of 12 dBi accounted for. These demonstrate compliance with the provisions of this section at the band edges.

The emissions must remain below -27 dBm EIRP.

Result

Conducted spurious emissions were below -27 dBm; therefore, the EUT complies with the specification.

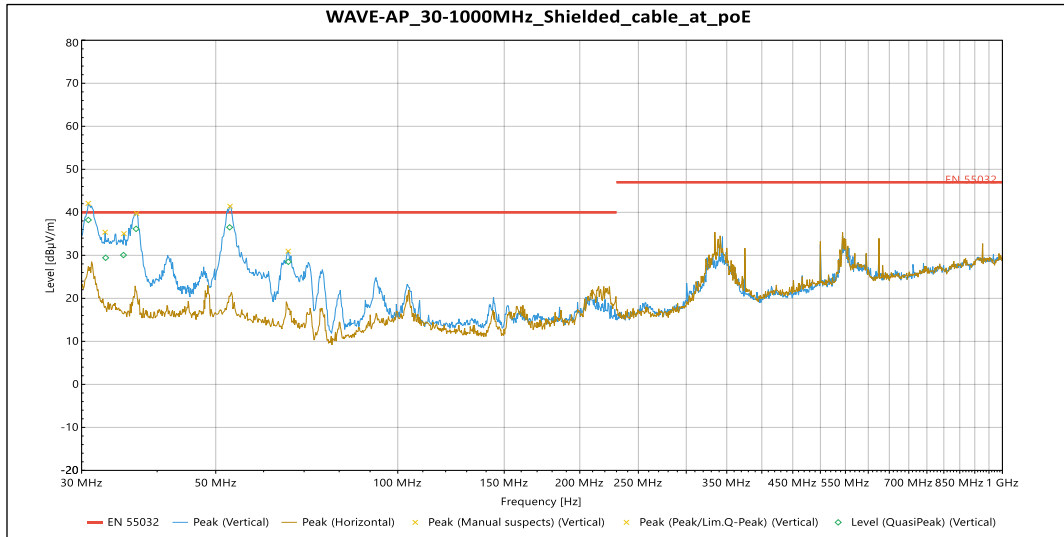
5.5.2 Radiated Spurious Emissions in the Restricted Bands of § 15.205

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 TP51, as this setting was found to be worst case for spurious emissions. Power was subsequently reduced during in-band and band edge testing. The band edge at the restricted band ending at 5150 MHz was measured using radiated measurement or conducted at the antenna port methods. [For radiated] All emissions modes were tested, and the worst-case measurement are shown below. For frequencies above 1 GHz, a measurement of 3 meters was used. For frequencies below 1 GHz, a measurement distance of 10 meters was used.

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

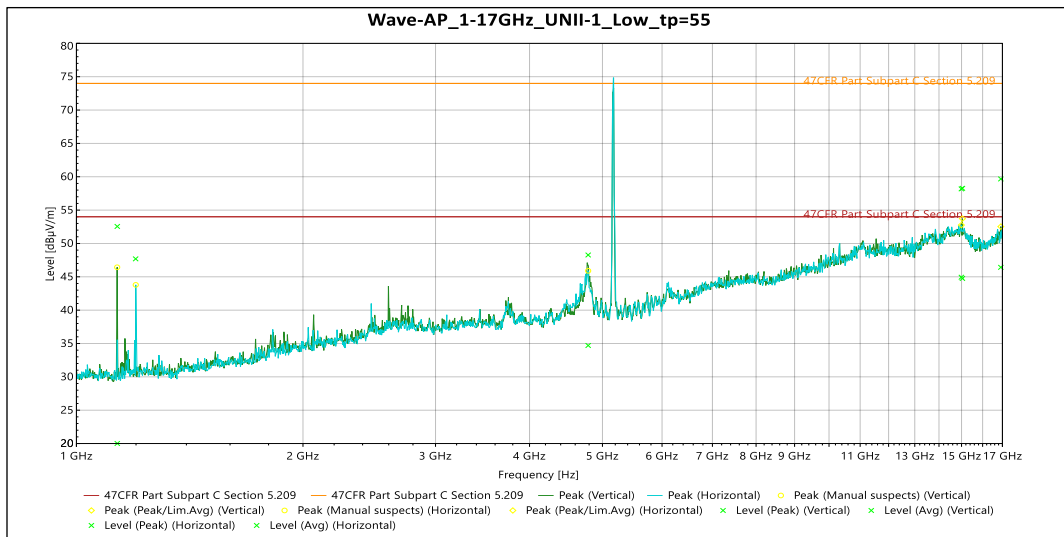
Result

All emissions in the restricted bands of § 15.205 met the limits specified in § 15.209; therefore, the EUT complies with the specification. All emissions met the limits specified in § 15.407(b). Representative band edge plots are included in this report.


QuasiPeak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin	Azimuth (°)	Height	Pol.	Correction (dB)
30.785 MHz	38.216	40	-1.784	204	1.089	Vertical	-11.711
32.877 MHz	29.429	40	-10.571	130	0.998	Vertical	-11.597
35.187 MHz	30.057	40	-9.943	154	1.664	Vertical	-11.444
36.916 MHz	36.154	40	-3.846	159	2.607	Vertical	-11.571
52.727 MHz	36.513	40	-3.487	3	3.441	Vertical	-11.811
65.913 MHz	28.496	40	-11.504	220	3.797	Vertical	-15.457

No significant emissions were observed in the Horizontal orientation of the antenna

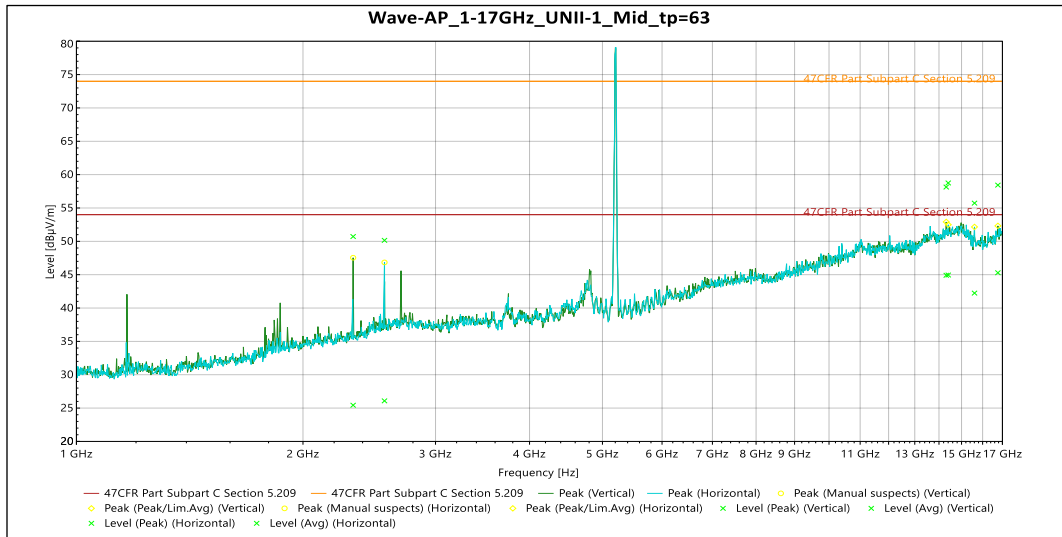
Table 4: Radiated Emissions 30 – 1000 MHz

Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
1.1331 GHz	52.553	74	-21.447	186	2.574	Vertical	-10.691
15.041 GHz	58.265	74	-15.735	205	4	Vertical	15.897
16.918 GHz	59.666	74	-14.334	340	3.277	Vertical	18.543
1.1986 GHz	47.688	74	-26.312	146	2.402	Horizontal	-10.447
4.7861 GHz	48.27	74	-25.73	16	1.991	Horizontal	1.179

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
14.993 GHz	58.179	74	-15.821	269	3.433	Horizontal	16.035

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
1.1331 GHz	20.013	54	-33.987	186	2.574	Vertical	-10.691
15.041 GHz	44.749	54	-9.251	205	4	Vertical	15.897
16.918 GHz	46.425	54	-7.575	340	3.277	Vertical	18.543
1.1986 GHz	19.938	54	-34.062	146	2.402	Horizontal	-10.447
4.7861 GHz	34.7	54	-19.3	16	1.991	Horizontal	1.179
14.993 GHz	44.941	54	-9.059	269	3.433	Horizontal	16.035

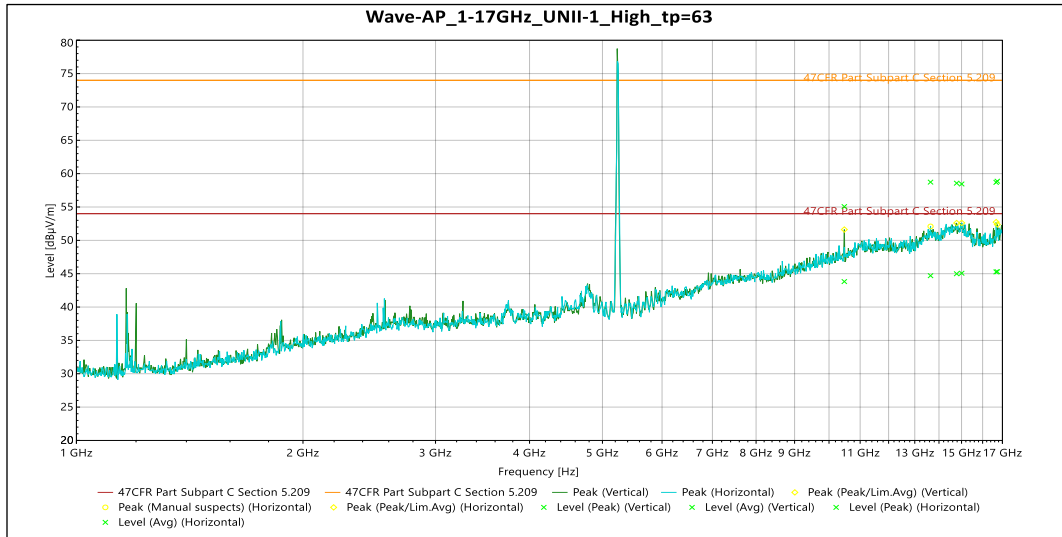
Table 5: Transmitting on the Lowest Frequency 5165 MHz 1 – 17 GHz

Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
2.3317 GHz	50.725	74	-23.275	45	2.925	Vertical	-5.804
14.314 GHz	58.137	74	-15.863	358	3.453	Vertical	15.972
16.766 GHz	58.43	74	-15.57	356	3.808	Vertical	17.411
2.5665 GHz	50.151	74	-23.849	11	3.806	Horizontal	-5.04
14.403 GHz	58.754	74	-15.246	190	3.62	Horizontal	15.966
15.608 GHz	55.73	74	-18.27	132	3.447	Horizontal	13.634

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
2.3317 GHz	25.426	54	-28.574	45	2.925	Vertical	-5.804
14.314 GHz	44.911	54	-9.089	358	3.453	Vertical	15.972
16.766 GHz	45.291	54	-8.709	356	3.808	Vertical	17.411
2.5665 GHz	26.078	54	-27.922	11	3.806	Horizontal	-5.04
14.403 GHz	44.945	54	-9.055	190	3.62	Horizontal	15.966
15.608 GHz	42.242	54	-11.758	132	3.447	Horizontal	13.634

Table 6: Transmitting on the Middle Frequency 5200 MHz 1 – 17 GHz

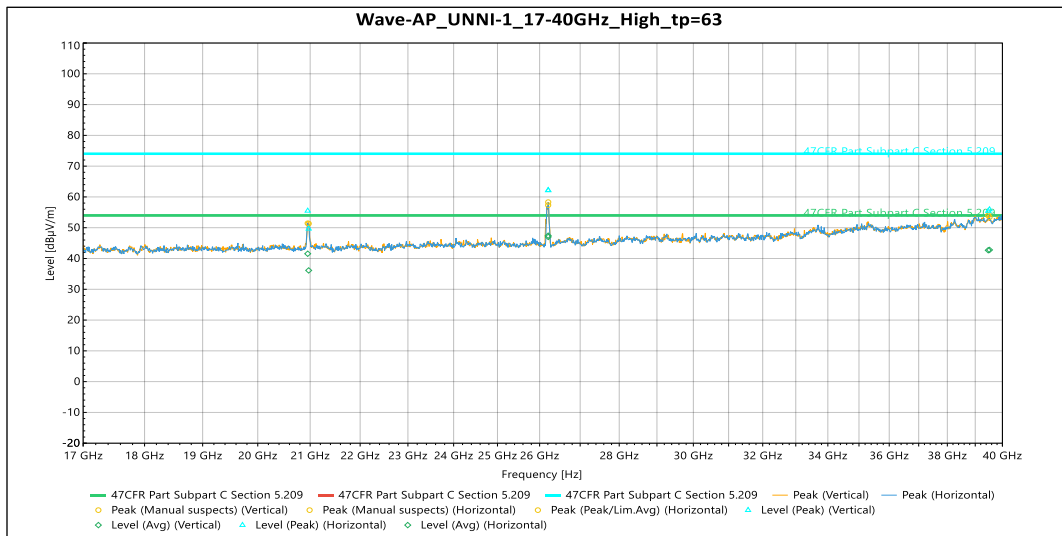

Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
10.48 GHz	55.06	74	-18.94	9	3.791	Vertical	12.236
14.778 GHz	58.569	74	-15.431	201	3.281	Vertical	15.93
16.735 GHz	58.868	74	-15.132	139	2.049	Vertical	17.24
13.643 GHz	58.73	74	-15.27	349	2.224	Horizontal	15.593
15.007 GHz	58.448	74	-15.552	96	2.537	Horizontal	16.095
16.677 GHz	58.691	74	-15.309	243	1.636	Horizontal	17.076

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
10.48 GHz	43.816	54	-10.184	9	3.791	Vertical	12.236
14.778 GHz	44.985	54	-9.015	201	3.281	Vertical	15.93
16.735 GHz	45.301	54	-8.699	139	2.049	Vertical	17.24
13.643 GHz	44.701	54	-9.299	349	2.224	Horizontal	15.593
15.007 GHz	45.068	54	-8.932	96	2.537	Horizontal	16.095
16.677 GHz	45.27	54	-8.73	243	1.636	Horizontal	17.076

Table 7: Transmitting on the Highest Frequency 5240 MHz 1 – 17 GHz

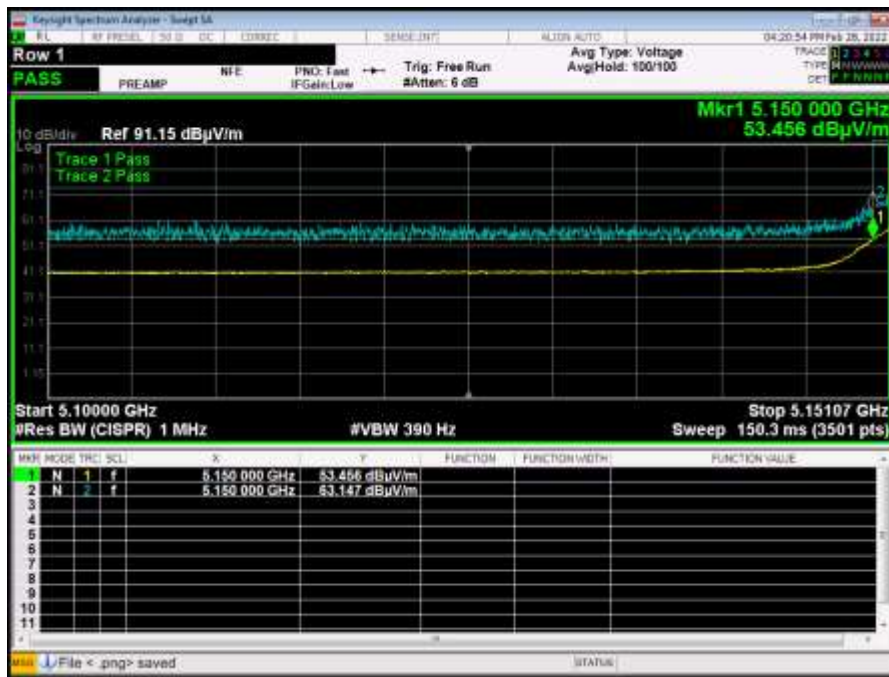

Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
20.971 GHz	49.664	74	-24.336	259	Vertical	-5.555
26.208 GHz	62.162	74	-11.838	47	Vertical	-5.582
39.475 GHz	55.442	74	-18.558	343	Vertical	3.479
20.952 GHz	55.489	74	-18.511	20	Horizontal	-5.534
26.209 GHz	62.16	74	-11.84	51	Horizontal	-5.575
39.522 GHz	55.927	74	-18.073	182	Horizontal	3.406

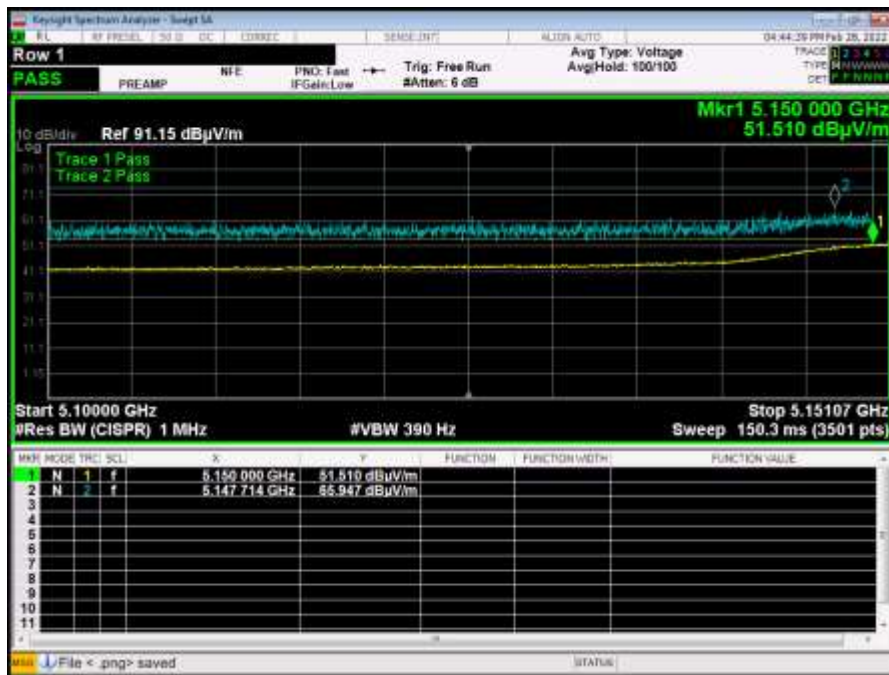
Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
20.971 GHz	36.132	54	-17.868	259	Vertical	-5.555
26.208 GHz	47.422	54	-6.578	47	Vertical	-5.582
39.475 GHz	42.681	54	-11.319	343	Vertical	3.479
20.952 GHz	41.55	54	-12.45	20	Horizontal	-5.534
26.209 GHz	47.008	54	-6.992	51	Horizontal	-5.575
39.522 GHz	42.782	54	-11.218	182	Horizontal	3.406

Table 8: Transmitting on the Highest Frequency 5240 MHz 17 – 40 GHz (worse case)



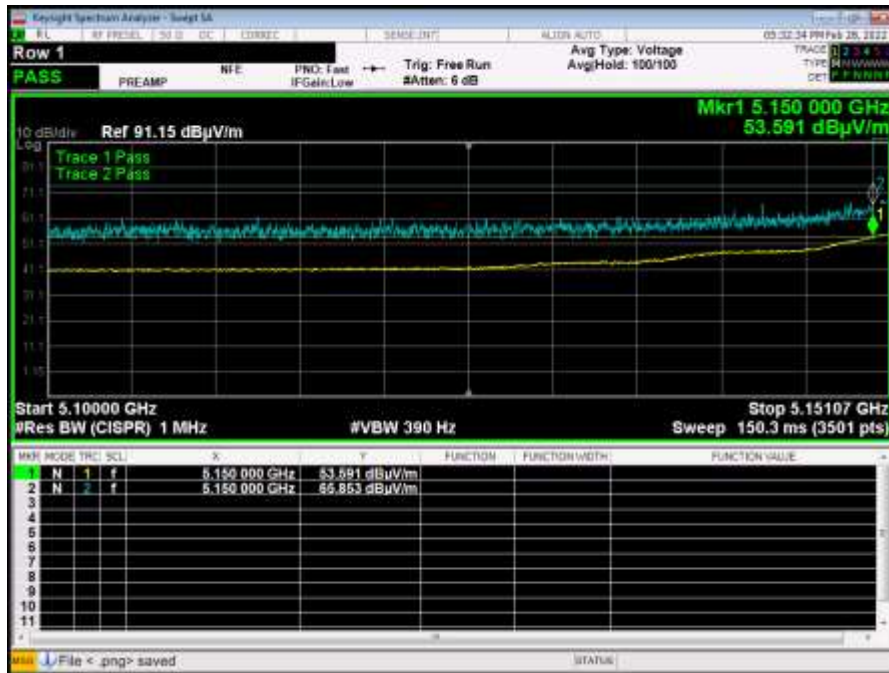
Plot 2: Bandedge HE 20 5165 MHz



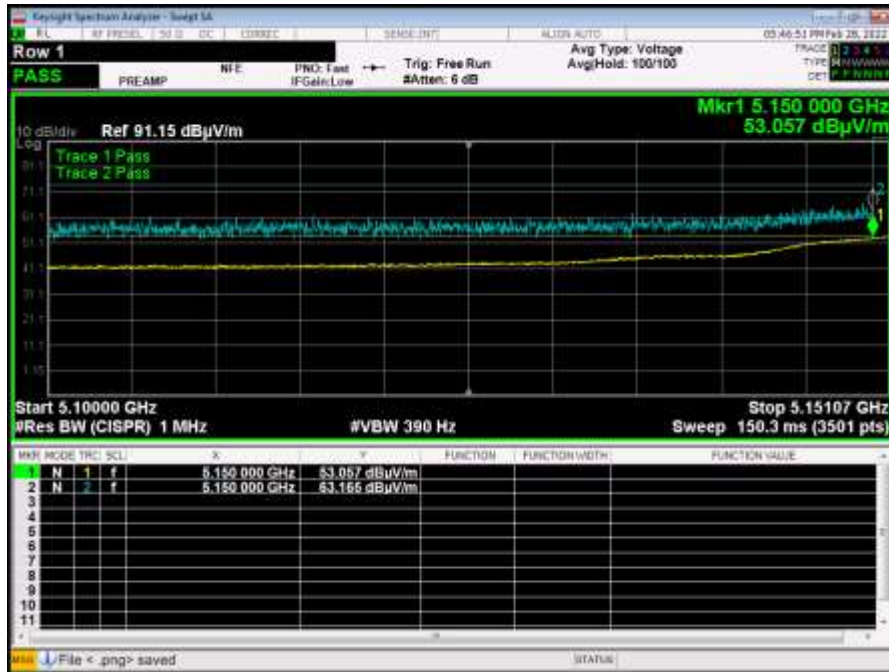
Plot 3: Bandedge HE 20 5200



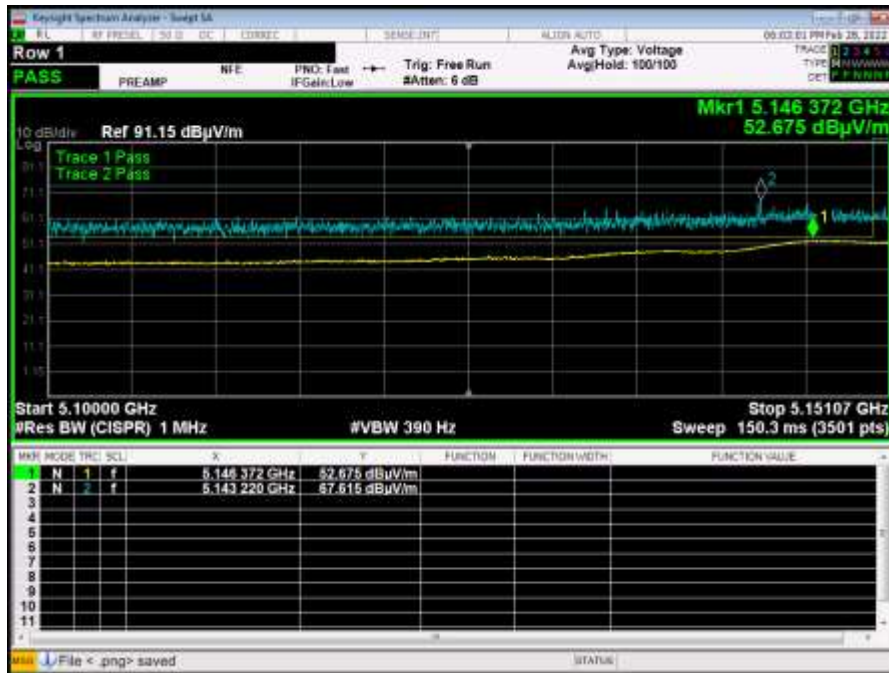
Plot 4: Bandedge HE 20 5240



Plot 5: Bandedge HE 40 5175 MHz



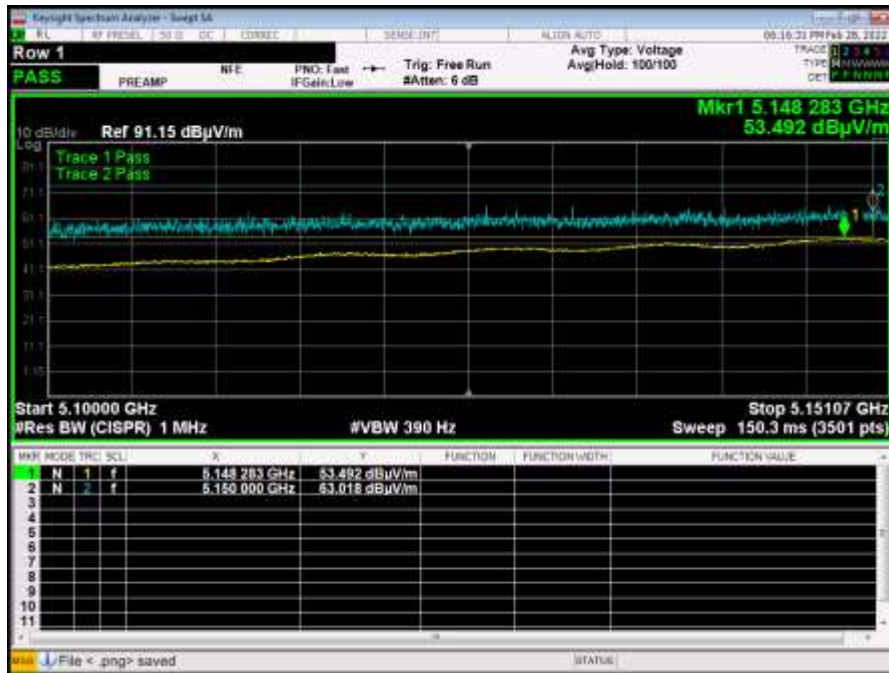
Plot 6: Bandedge HE 40 5200



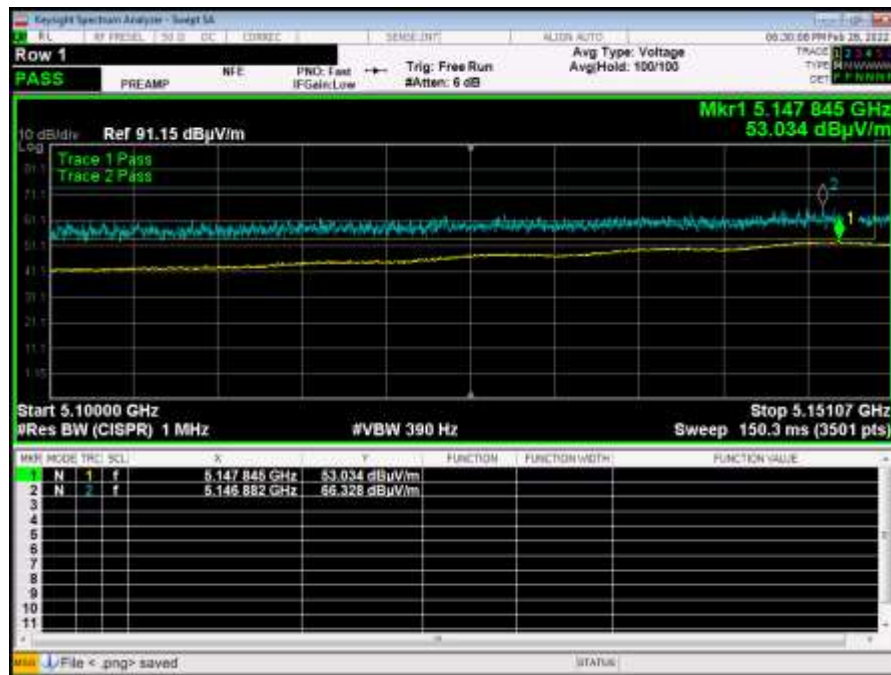
Plot 7: Bandedge HE 40 5230



Plot 8: Bandedge HE 80 5195 MHz



Plot 9: Bandedge HE 80 5200



Plot 10: Bandedge HE 80 5210

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 17 dBm in any 1 MHz band during any time interval of continuous transmission.

As per KDB 662911, when the EUT is using spatial-multiplexing in HT to HE modes, there is not additional array gain to accommodate.

Results of this testing are summarized.

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Measured PSD
HE 20	5165	Mcs0	17	-5.36
HE 20	5200	Mcs0	43	8.27
HE 20	5240	Mcs0	51	11.81
HE 40	5175	Mcs0	23	-5.15
HE 40	5200	Mcs0	33	0.47
HE 40	5230	Mcs0	42	4.85
HE 80	5195	Mcs0	22	-8.47
HE 80	5200	Mcs0	25	-6.69
HE 80	5210	Mcs0	25	-6.86

Result

The maximum summed average power spectral density was less than the limit of 17dBm; therefore, the EUT complies with the specification.

-- End of Test Report --