



Test report No.: 2380907R-RFUSV03S-A

TEST REPORT

Product Name	Set Back Box with Wi-Fi6E, BT & PoE
Trademark	ADB, Charter
Model and /or type reference	ADB-2682WF
FCC ID	2BBO4-ADB-SG23004A
Applicant's name / address	ADB SA Route de Lausanne 319, CH-1293 Bellevue, Switzerland
Manufacturer's name	ADB SA
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart E ANSI C63.4: 2014, ANSI C63.10: 2013 KDB Publication 789033
Verdict Summary	IN COMPLIANCE
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Tested By (Senior Engineer / Ivan Chuang)	Ivan Chuang
Approved By (Senior Engineer / Alan Chen)	Alan Chen
Date of Receipt	2023/08/30
Date of Issue	2023/11/10
Report Version	V1.0

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Appendix 1: EUT Test Photographs

Appendix 2: Product Photos-Please refer to the file: 2380907R-Product Photos

Competences and Guarantees

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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General conditions

1. The test results relate only to the samples tested.
2. The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.
3. This report must not be used to claim product endorsement by TAF or any agency of the government.
4. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.
5. Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Revision History

Report No.	Version	Description	Issued Date
2380907R-RFUSV03S-A	V1.0	Initial issue of report.	2023/11/10

1. General Information

1.1. EUT Description

Product Name	Set Back Box with Wi-Fi6E, BT & PoE
Trademark	ADB, Charter
Model and /or type reference	ADB-2682WF
FCC ID	2BBO4-ADB-SG23004A
EUT Rated Voltage	AC 100-240 V, 50-60 Hz
EUT Test Voltage	AC 120 V/60 Hz
Frequency Range	802.11a/n/ac/ax-20 MHz: 5180-5320 MHz, 5500-5720 MHz, 5745-5825 MHz 802.11n/ac/ax-40 MHz: 5190-5310 MHz, 5510-5710 MHz, 5755-5795 MHz 802.11ac/ax-80 MHz: 5210-5290 MHz, 5530-5690 MHz, 5775 MHz 802.11ac/ax-160 MHz: 5250 MHz, 5570 MHz
Number of Channels	802.11a/n/ac/ax-20 MHz: 25CH 802.11n/ac/ax-40 MHz: 12CH 802.11ac/ax-80 MHz: 6CH 802.11ac/ax-160 MHz: 2CH
Data Rate	802.11a: 6-54Mbps 802.11n: up to 300Mbps 802.11ac: up to 1733.3Mbps 802.11ax: up to 2402Mbps
Type of Modulation	802.11a/n/ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
Channel Control	Auto
HDMI Cable	Shielded, 1m
PSU_1	MFR: Mass Power, M/N: S042-1A120300VU Input: AC 100-240V~, 50/60Hz, 1.0A Output: 12.0V=3.0A, 36.0W Cable out: Non-shielded, 1.5m
PSU_2	MFR: Atech OEM, M/N: A3603PU-120030 Input: AC 100-240V~50-60Hz, 1.0A Output: 12.0V=3.0A, 36.0W Cable out: Non-shielded, 1.5m
For any other product variant refer to compliance ID	
SW Compliance ID	M.U.01.01_0001

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	HONGBO	49031-01103-HB (Main)	PCB	2.61 dBi for 5150~5250 MHz 2.29 dBi for 5250~5350 MHz 3.49 dBi for 5470~5725 MHz 3.49 dBi for 5725~5850 MHz
		49031-01104-HB (Aux)	PCB	2.05 dBi for 5150~5250 MHz 2.02 dBi for 5250~5350 MHz 2.86 dBi for 5470~5725 MHz 2.86 dBi for 5725~5850 MHz

Note:

1. The antenna of EUT is conforming to FCC 15.203.
2. The antenna gain as by the manufacturer provided.
3. Each antenna has been evaluated and only the worst case (higher gain antenna) is presented in the report.

For power CDD Directional gain
2.61 dBi for 5150-5250 MHz
2.29 dBi for 5250-5350 MHz
3.49 dBi for 5470-5725 MHz
3.49 dBi for 5725-5850 MHz

For CDD mode:
5150MHz-5250MHz: Directional gain = 2.61 dBi
5250MHz-5350MHz: Directional gain = 2.29 dBi
5470MHz-5725MHz: Directional gain = 3.49 dBi
5725MHz-5850MHz: Directional gain = 3.49 dBi
(Directional gain = GANT MAX + Array Gain, Array Gain = 0 dB for $N_{ANT} \leq 4$)

For Power Density Directional gain
5150MHz-5250MHz: Directional gain = 5.34 dBi
5250MHz-5350MHz: Directional gain = 5.17 dBi
5470MHz-5725MHz: Directional gain = 6.19 dBi
5725MHz-5850MHz: Directional gain = 6.19 dBi
Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}]$ dBi

802.11a/n/ac/ax-20 MHz Center Working Frequency of Each Channel:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	40	5200	44	5220	48	5240
52	5260	56	5280	60	5300	64	5320
100	5500	104	5520	108	5540	112	5560
116	5580	120	5600	124	5620	128	5640
132	5660	136	5680	140	5700	144	5720
149	5745	153	5765	157	5785	161	5805
165	5825	--	--	--	--	--	--

802.11n/ac/ax-40 MHz Center Working Frequency of Each Channel:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230	54	5270	62	5310
102	5510	110	5550	118	5590	126	5630
134	5670	142	5710	151	5755	159	5795

802.11ac/ax-80 MHz Center Working Frequency of Each Channel:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
42	5210	58	5290	106	5530	122	5610
138	5690	155	5775	--	--	--	--

802.11ac/ax-160 MHz Center Working Frequency of Each Channel:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	--	--	--	--
50	5250	114	5570	--	--	--	--

Note:

1. This device is a Set Back Box with Wi-Fi6E, BT & PoE with built-in WLAN and Bluetooth transceiver, this report for 5GHz WLAN.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11a is 6Mbps, 802.11ax is MCS0)
4. The modulation and bandwidth are similar for 802.11n mode and 802.11ac mode and 802.11ax mode, therefore investigated worst case (802.11ax) to representative mode.
5. The spectrum plot against conducted item only shows the worst case.
6. DEKRA has evaluated each test mode. Only the worst case is shown in the report.
7. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance of transmitter with Part 15 Subpart E for Unlicensed National Information Infrastructure devices.

Test Mode	Mode 1	Transmit (802.11a) Transmit (802.11ax-20 MHz) Transmit (802.11ax-40 MHz) Transmit (802.11ax-80 MHz) Transmit (802.11ax-160 MHz)
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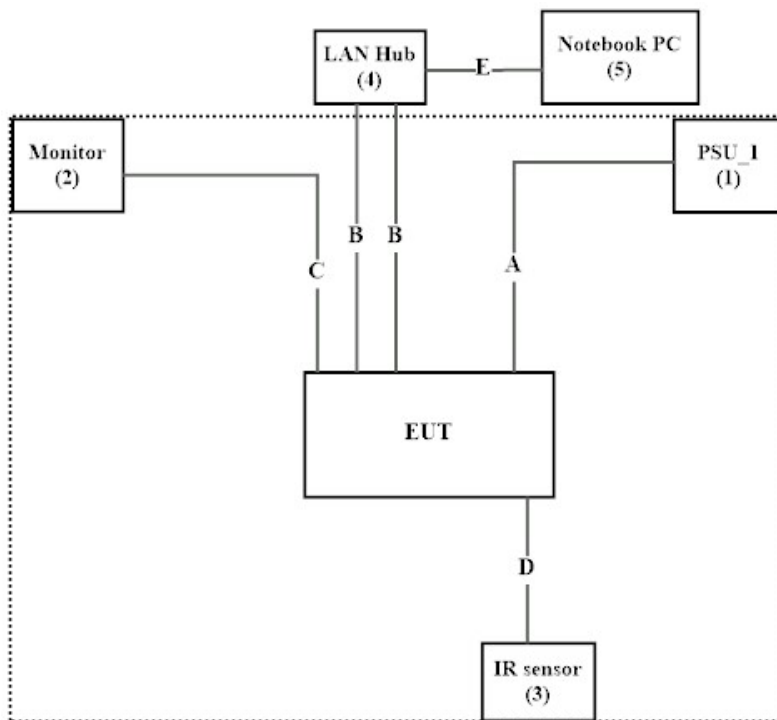
1.2. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product	Manufacturer	Model No.	Serial No.	Power Cord
1 PSU_1	Mass Power	S042-1A120300VU	N/A	N/A
2 Monitor	DELL	S2817Qt	CN-0GD45P-74445-6CR-002M-A01	Non-shielded, 1.8m
3 IR sensor	N/A	N/A	N/A	N/A
4 LAN Hub	TP-LINK	TL-SG108	2161597000480	Non-shielded, 1.5m
5 Notebook PC	ASUS	P5430U	G8NXCV07J11032C	N/A

Cable Type	Cable Description
A Power Cable	Non-shielded, 1.5m
B LAN Cable	Non-shielded, 2m, two PCS.
C HDMI Cable	Shielded, 1m
D IR Cable	Non-shielded, 0.9m
E LAN Cable	Non-shielded, 2m

1.3. Configuration of tested System



1.4. EUT Exercise Software

1	Setup the EUT as shown in Section 1.3.
2	Execute software “QRCT version 4.00203.0” on the Notebook PC.
3	Configure the test mode, the test channel, and the data rate.
4	Press “OK” to start the continuous transmit.
5	Verify that the EUT works properly.

1.5. Test Facility

Ambient conditions in the laboratory:

Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	10~40 °C	25.7 °C
	Humidity (%RH)	10~90 %	58.0 %
Radiated Emission	Temperature (°C)	10~40 °C	25.3 °C
	Humidity (%RH)	10~90 %	64.3 %
Conductive	Temperature (°C)	10~40 °C	22.0 °C
	Humidity (%RH)	10~90 %	55.0 %

USA	FCC Registration Number: TW0033
Canada	CAB Identifier Number: TW3023 / Company Number: 26930

Site Description	Accredited by TAF
	Accredited Number: 3023

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
	Linkou Laboratory
Address	No.5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan, R.O.C
Performed Location	No. 26, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan, R.O.C.
Phone Number	+886-3-275-7255
Fax Number	+886-3-327-8031

1.6. List of Test Equipment

For Conduction Measurements / HY-SR01

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	EMI Test Receiver	R&S	ESR7	101601	2023/06/20	2024/06/19
V	Two-Line V-Network	R&S	ENV216	101306	2023/03/16	2024/03/15
V	Two-Line V-Network	R&S	ENV216	101307	2023/08/17	2024/08/16
V	Coaxial Cable	SUHNER	RG400 BNC	RF001	2023/01/10	2024/01/09

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with "V" are used to measure the final test results.
3. Test Software Version: e3 230303 dekra V9.

For Conducted Measurements / HY-SR02

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	Spectrum Analyzer	R&S	FSV30	103466	2022/12/22	2023/12/21
V	Spectrum Analyzer	KEYSIGHT	N9010A	MY53470892	2022/11/07	2023/11/06
V	Peak Power Analyzer	KEYSIGHT	8990B	MY51000539	2023/05/15	2024/05/14
V	Wideband Power Sensor	KEYSIGHT	N1923A	MY59240002	2023/05/18	2024/05/18
V	Wideband Power Sensor	KEYSIGHT	N1923A	MY59240003	2023/05/18	2024/05/17

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with "V" are used to measure the final test results.
3. Test Software Version: RF Conducted Test Tools R3 V3.0.0.14.

For Radiated Measurements / HY-CB03

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	Loop Antenna	AMETEK	HLA6121	49611	2023/02/21	2024/02/20
V	Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-0675	2023/08/09	2025/08/08
V	Horn Antenna	Com-Power	AH-840	101101	2021/11/30	2023/11/29
V	Horn Antenna	RF SPIN	DRH18-E	210507A18ES	2023/05/11	2024/05/10
V	Pre-Amplifier	SGH	SGH0301-9	20211007-11	2023/01/10	2024/01/09
V	Pre-Amplifier	SGH	PRAMP118	20200701	2023/01/10	2024/01/09
V	Pre-Amplifier	EMCI	EMC05820SE	980310	2023/01/10	2024/01/09
V	Pre-Amplifier	EMCI	EMC184045SE	980369	2023/01/10	2024/01/09
	Coaxial Cable	EMCI	EMC102-KM-KM-600	1160314		
	Coaxial Cable	EMCI	EMC102-KM-KM-7000	170242		
	Filter	MICRO TRONICS	BRM50702	G269	2023/01/05	2024/01/04
V	Filter	MICRO TRONICS	BRM50716	G196	2023/01/05	2024/01/04
	WIFI 6E Filter	MVE	MFN-5850/5895/S1	A80006N	2023/01/05	2024/01/04
	WIFI 6E Filter	MVE	MFN-5925/6425/S1	A80007N	2023/01/05	2024/01/04
	WIFI 6E Filter	MVE	MFN-6425/6525/S1	A80008N	2023/01/05	2024/01/04
	WIFI 6E Filter	MVE	MFN-6525/6875/S1	A80009N	2023/01/05	2024/01/04
	WIFI 6E Filter	MVE	MFN-6875/7125/S1	A80010N	2023/01/05	2024/01/04
V	EMI Test Receiver	R&S	ESR3	102793	2022/12/05	2023/12/04
V	Spectrum Analyzer	R&S	FSV3044	101113	2023/02/04	2024/02/03
V	Coaxial Cable	SGH	SGH18	2021005-1	2023/01/10	2024/01/09
	Coaxial Cable	SGH	SGH18	202108-4		
	Coaxial Cable	SGH	HA800	GD20110223-1		
	Coaxial Cable	SGH	HA800	GD20110222-3		

Note:

1. Bi-Log Antenna and Horn Antenna(AH-840) is calibrated every two years, the other equipments are calibrated every one year.
2. The test instruments marked with "V" are used to measure the final test results.
3. Test Software Version: e3 230303 dekra V9.

1.7. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document.

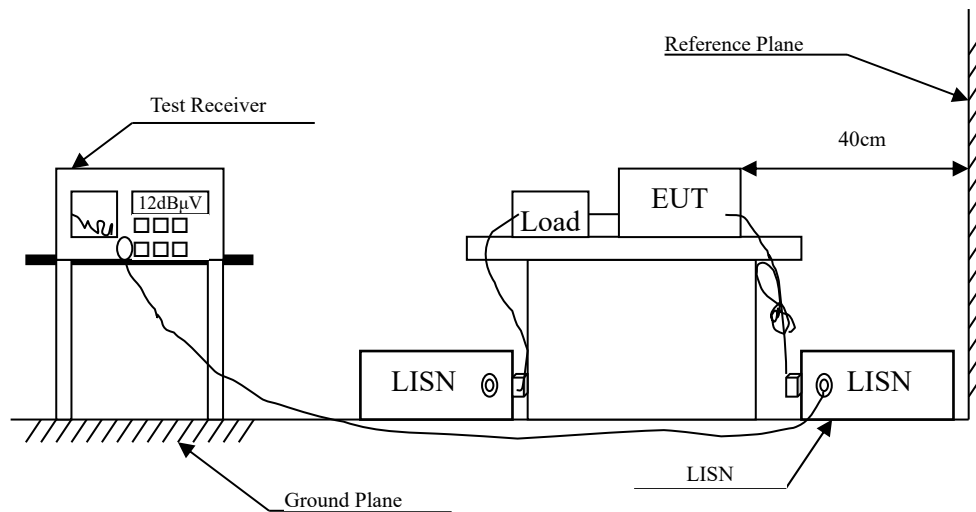
The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test item	Uncertainty
Conducted Emission	± 3.50 dB
Maximum conducted output power	Spectrum Analyzer: ± 2.14 dB Power Meter: ± 1.05 dB
Peak Power Spectral Density	± 2.14 dB
Radiated Emission	9 kHz~30 MHz: ± 3.88 dB 30 MHz~1 GHz: ± 4.42 dB 1 GHz~18 GHz: ± 4.28 dB 18 GHz~40 GHz: ± 3.90 dB
Band Edge	9 kHz~30 MHz: ± 3.88 dB 30 MHz~1 GHz: ± 4.42 dB 1 GHz~18 GHz: ± 4.28 dB 18 GHz~40 GHz: ± 3.90 dB
Occupied Bandwidth	± 1580.61 Hz
Duty Cycle	± 0.53 %

2. Conducted Emission

2.1. Test Setup



2.2. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBμV) Limit		
Frequency MHz	Limits	
	QP	AV
0.15 - 0.50	66-56	56-46
0.50 - 5.0	56	46
5.0 - 30	60	50

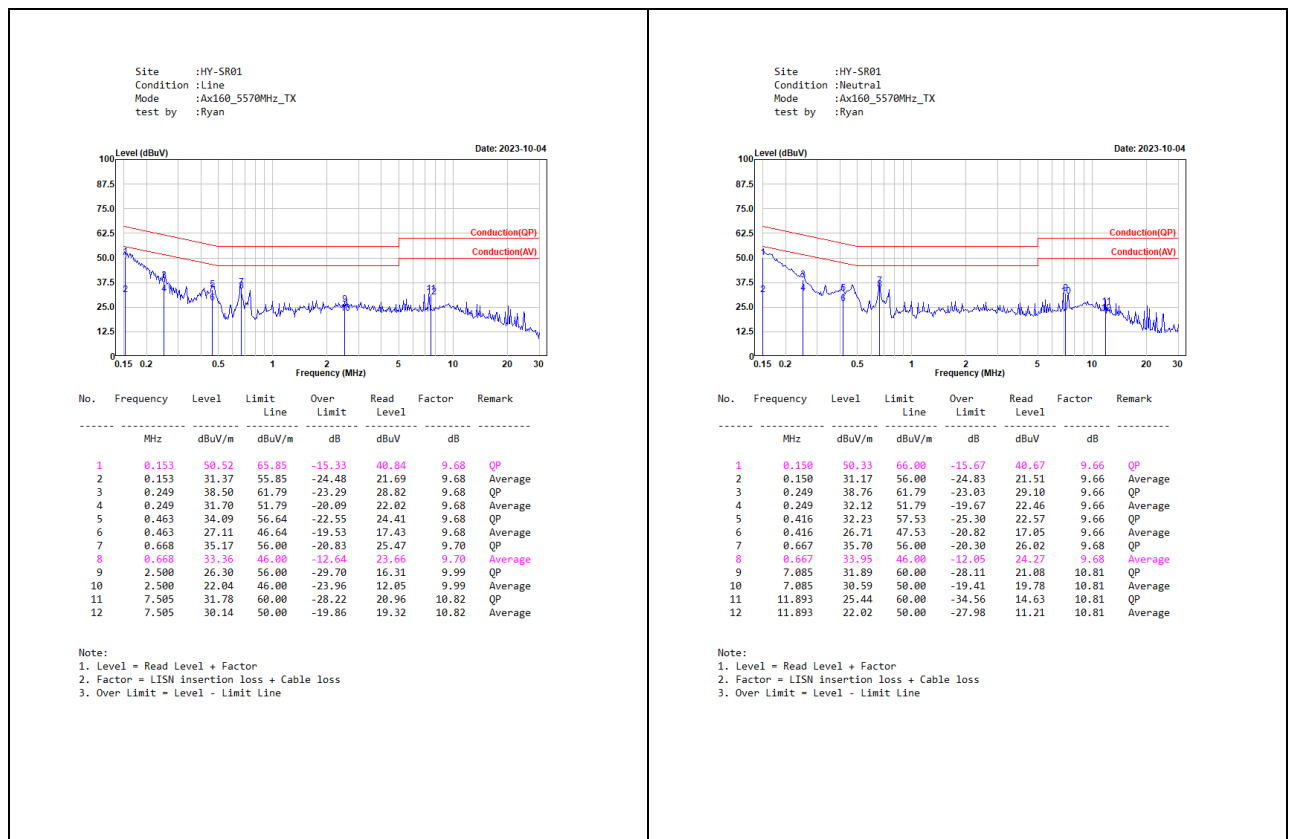
Remarks: In the above table, the tighter limit applies at the band edges.

2.3. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.) Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4:2014 on conducted measurement.

Conducted emissions were investigated over the frequency range from 0.15 MHz to 30 MHz using a receiver bandwidth of 9 kHz.

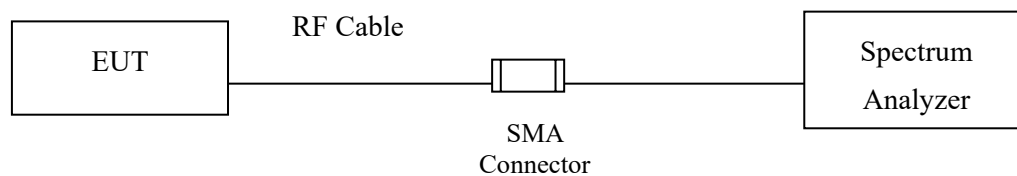
2.4. Test Result of Conducted Emission



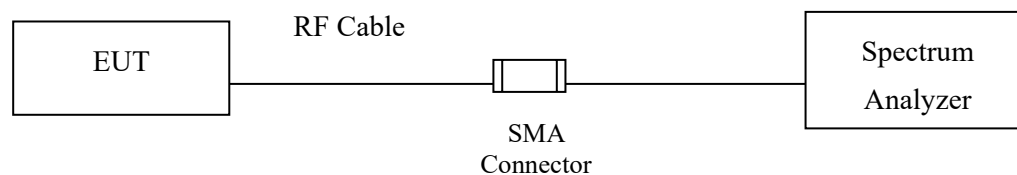
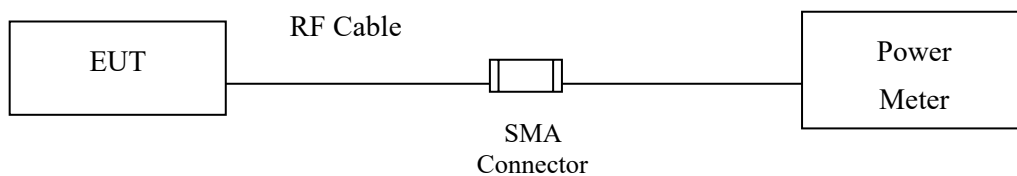
3. Maximum conducted output power

3.1. Test Setup

26dB Occupied Bandwidth



Conduction Power Measurement



3.2. Limits

For the band 5.15-5.25 GHz,

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple colocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point UNII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

The maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For CDD mode:

5150MHz-5250MHz: Directional gain = 2.61 dBi, Limit= 24 dBm

5250MHz-5350MHz: Directional gain = 2.29 dBi, Limit= 24 dBm

5470MHz-5725MHz: Directional gain = 3.49 dBi, Limit= 24 dBm

5725MHz-5850MHz: Directional gain = 3.49 dBi, Limit= 30 dBm

(Directional gain = $G_{ANT\ MAX} + \text{Array Gain}$, Array Gain = 0 dB for $N_{ANT} \leq 4$)

3.3. Test Procedure

As an alternative to FCC KDB-789033, the EUT maximum conducted output power was measured with an average power meter employing a video bandwidth greater the 6dB BW of the emission under test. Maximum conducted output power was read directly from the meter across all data rates, and across three channels within each sub-band. Special care was used to make sure that the EUT was transmitting in continuous mode. This method exceeds the limitations of FCC KDB-789033, and provides more accurate measurements.

802.11a/n/ac/ax ($BW \leq 160\text{MHz}$) Maximum conducted output power using KDB 789033 section E)3)b) Method PM-G (Measurement using a gated RF average power meter)

Note: the power meter have a video bandwidth that is greater than or equal to the measurement bandwidth. (KEYSIGHT / 8990B video bandwidth: 160MHz)

802.11n/ac/ax ($BW \geq 160\text{MHz}$) Maximum conducted output power using KDB 789033 section E)2)b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep).

When transmitted signals consist of two or more non-contiguous spectrum segments (e.g., 80+80 MHz mode) or when a single spectrum segment of a transmission crosses the boundary between two adjacent U-NII bands, KDB 644545 D03 section D) procedure is used for measurements.

3.4. Test Result of Maximum conducted output power

Product : Set Back Box with Wi-Fi6E, BT & PoE
 Test Item : Maximum conducted output power
 Test Mode : Transmit (802.11a)
 Test Date : 2023/09/15

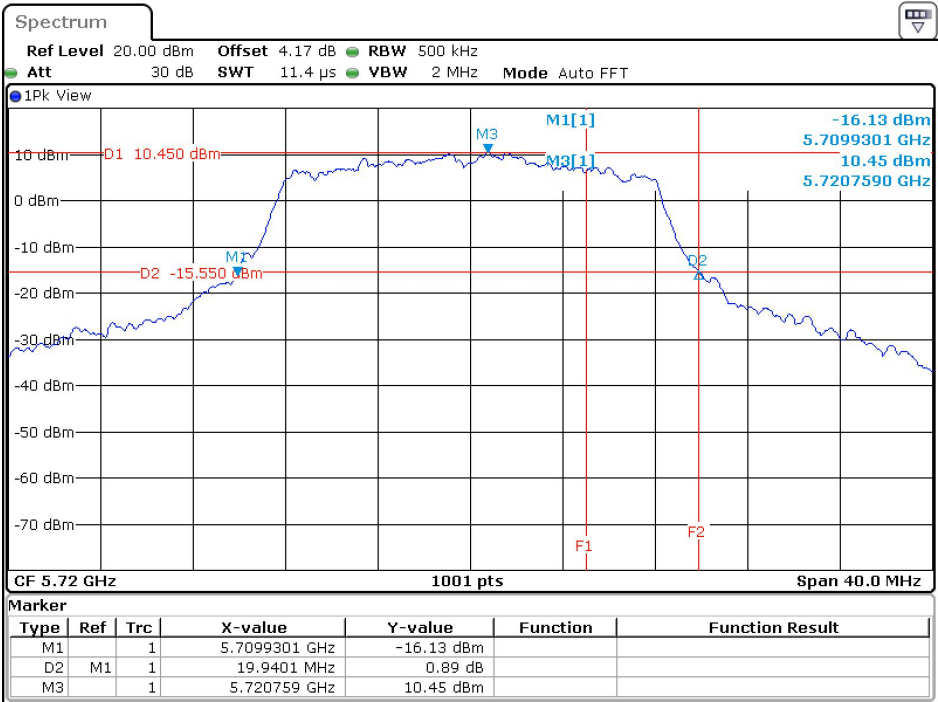
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Duty factor (dB)	Output Power (dBm)	Output Power Limit		Result
							(dBm)	dBm+10log(BW)	
36	5180	--	16.31	16.25	--	19.29	24	--	Pass
44	5220	--	16.22	16.36	--	19.30	24	--	Pass
48	5240	--	16.21	16.37	--	19.30	24	--	Pass
52	5260	19.62	16.12	16.29	--	19.22	24	23.93	Pass
60	5300	19.62	16.36	16.45	--	19.42	24	23.93	Pass
64	5320	19.54	16.57	16.52	--	19.56	24	23.91	Pass
100	5500	19.02	16.42	16.46	--	19.45	24	23.79	Pass
116	5580	19.70	16.07	16.13	--	19.11	24	23.94	Pass
140	5700	19.82	16.42	16.37	--	19.41	24	23.97	Pass
144(U-NII-2C)	5720	14.71	15.82	15.76	2.26	21.06	24	22.68	Pass
144(U-NII-3)	5720	--	8.17	7.90	2.26	13.31	30	--	Pass
149	5745	--	16.41	16.44	--	19.44	30	--	Pass
157	5785	--	16.17	16.22	--	19.21	30	--	Pass
165	5825	--	16.04	16.06	--	19.06	30	--	Pass

Note:

1. Output Power (dBm) = 10log (Chain A Power (mW)+Chain B Power (mW)) +Duty factor.
2. 26dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

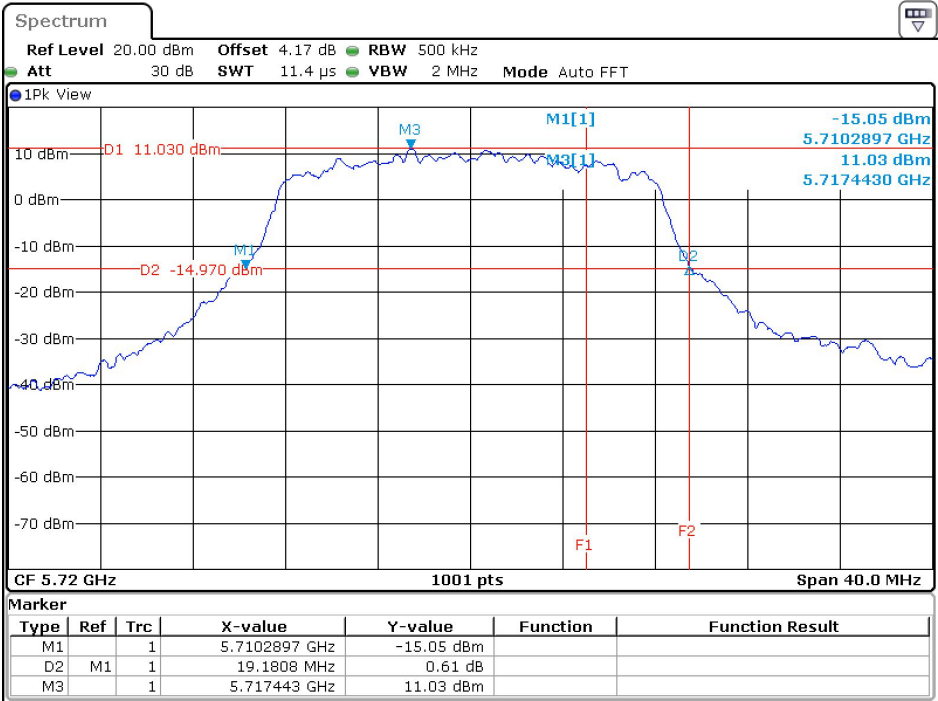
26dB Occupied Bandwidth:

Channel 144 (Chain A)



Date: 15.SEP.2023 20:28:33

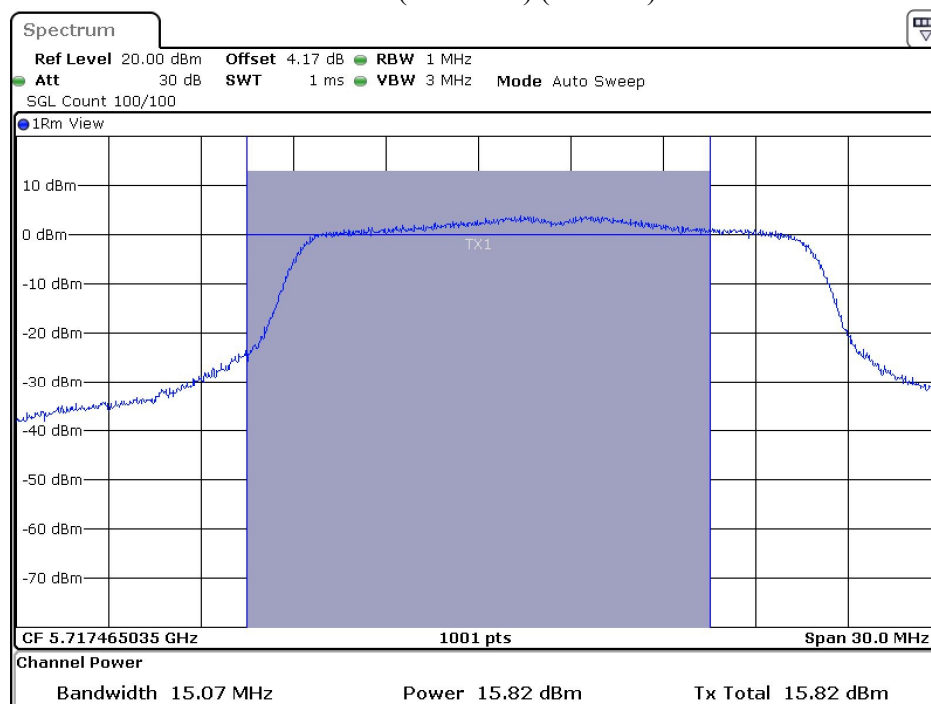
Channel 144 (Chain B)



Date: 15.SEP.2023 20:27:28

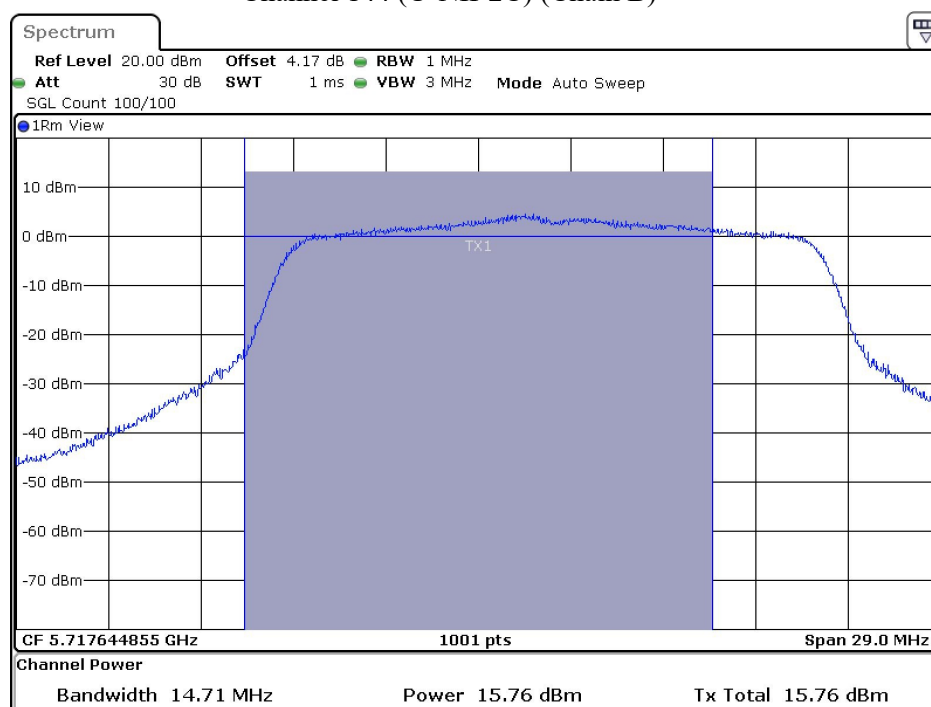
Maximum conducted output power:

Channel 144 (U-NII-2C) (Chain A)



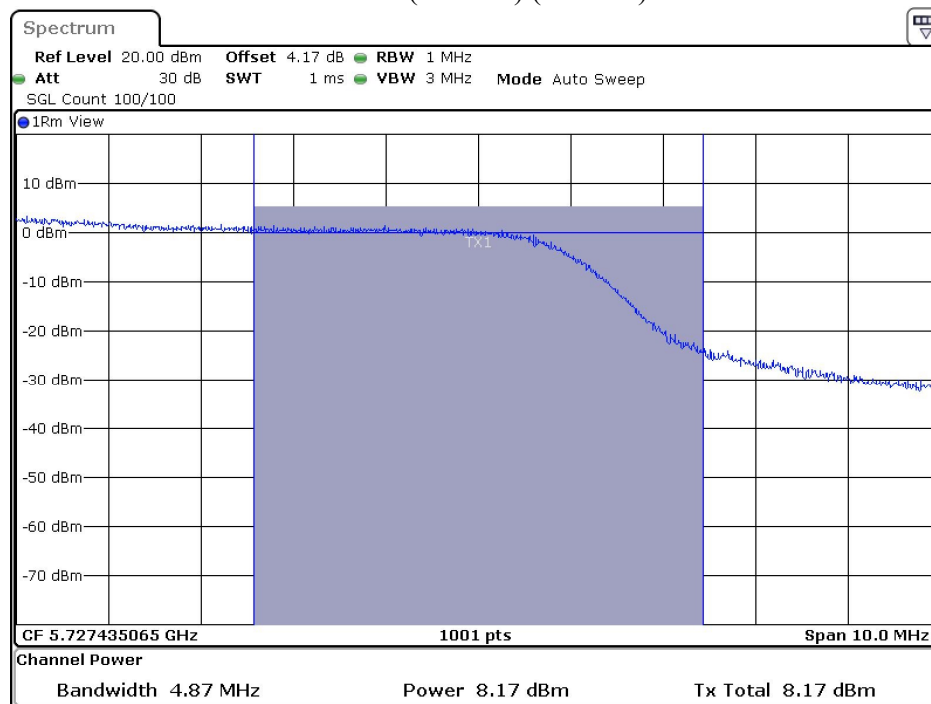
Date: 15.SEP.2023 20:29:06

Channel 144 (U-NII-2C) (Chain B)



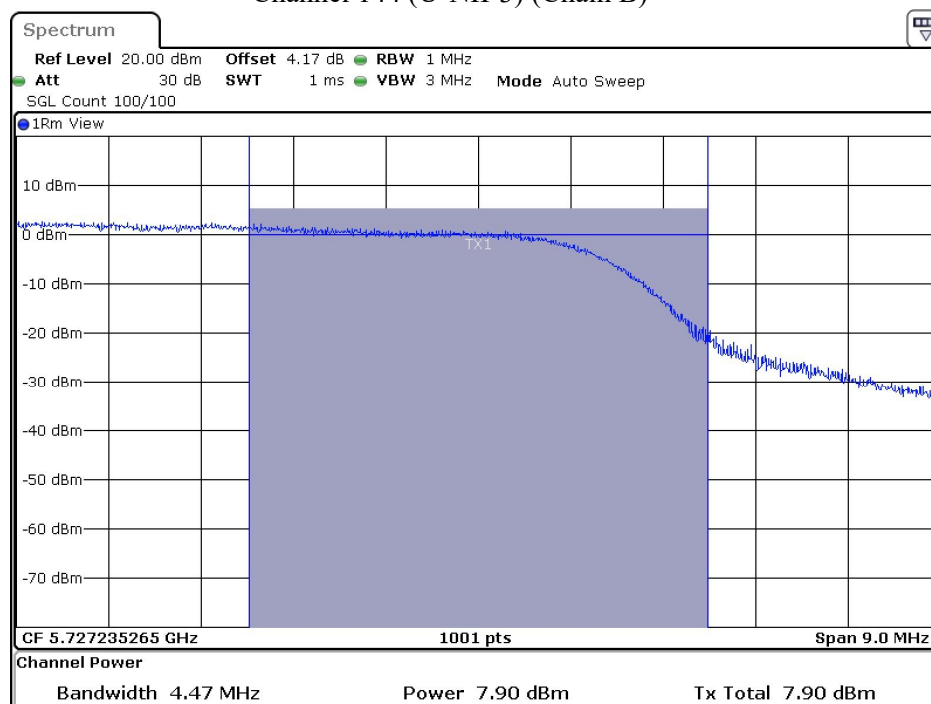
Date: 15.SEP.2023 20:28:01

Maximum conducted output power:
Channel 144 (U-NII-3) (Chain A)



Date: 15.SEP.2023 20:29:08

Channel 144 (U-NII-3) (Chain B)



Date: 15.SEP.2023 20:28:04

Product : Set Back Box with Wi-Fi6E, BT & PoE
 Test Item : Maximum conducted output power
 Test Mode : Transmit (802.11ax-20 MHz)
 Test Date : 2023/09/15

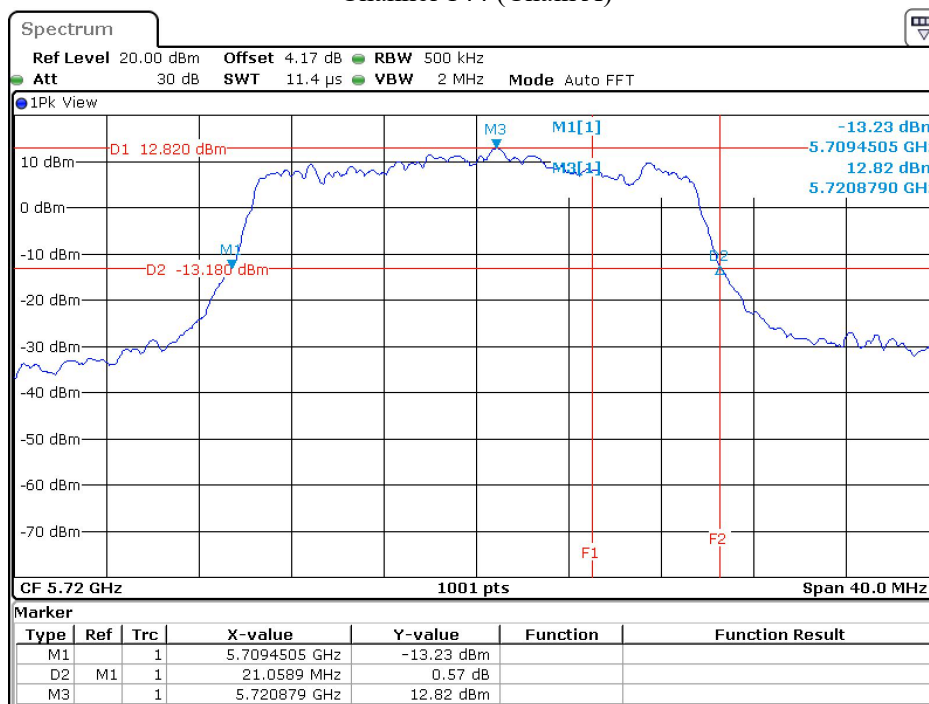
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Duty factor (dB)	Output Power (dBm)	Output Power Limit		Result
							(dBm)	dBm+10log(BW)	
36	5180	--	16.25	16.27	--	19.27	24	--	Pass
44	5220	--	16.04	16.21	--	19.14	24	--	Pass
48	5240	--	16.12	16.45	--	19.30	24	--	Pass
52	5260	21.34	16.05	16.22	--	19.15	24	24.29	Pass
60	5300	21.22	16.25	16.47	--	19.37	24	24.27	Pass
64	5320	21.02	16.51	16.56	--	19.55	24	24.23	Pass
100	5500	21.38	16.44	16.51	--	19.49	24	24.30	Pass
116	5580	21.22	16.01	16.12	--	19.08	24	24.27	Pass
140	5700	21.10	15.31	15.55	--	18.44	24	24.24	Pass
144(U-NII-2C)	5720	15.55	15.61	15.60	0.71	19.33	24	22.92	Pass
144(U-NII-3)	5720	--	8.67	9.01	0.71	12.56	30	--	Pass
149	5745	--	16.43	16.55	--	19.50	30	--	Pass
157	5785	--	16.15	16.29	--	19.23	30	--	Pass
165	5825	--	15.94	16.07	--	19.02	30	--	Pass

Note:

1. Output Power (dBm) = 10log (Chain A Power (mW)+Chain B Power (mW)) +Duty factor.
2. 26dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

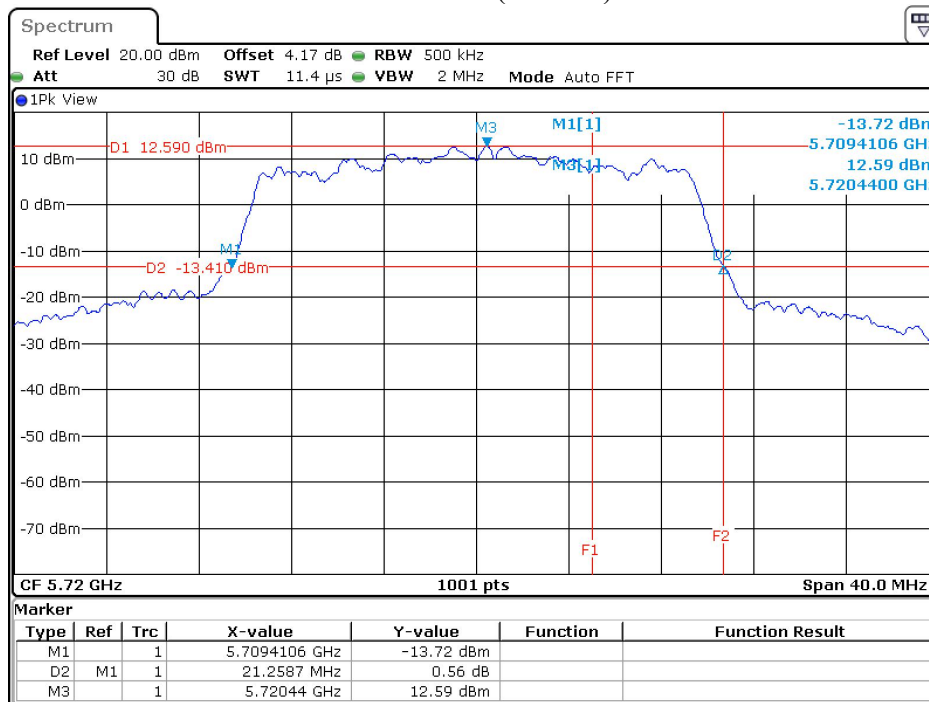
26dB Occupied Bandwidth:

Channel 144 (Chain A)



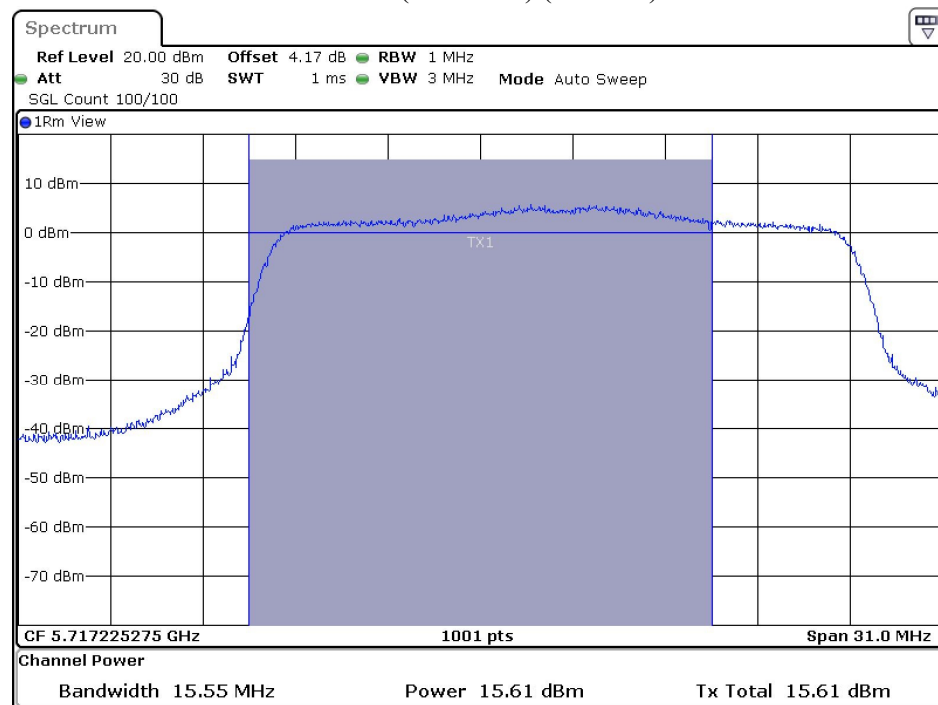
Date: 15.SEP.2023 22:21:21

Channel 144 (Chain B)



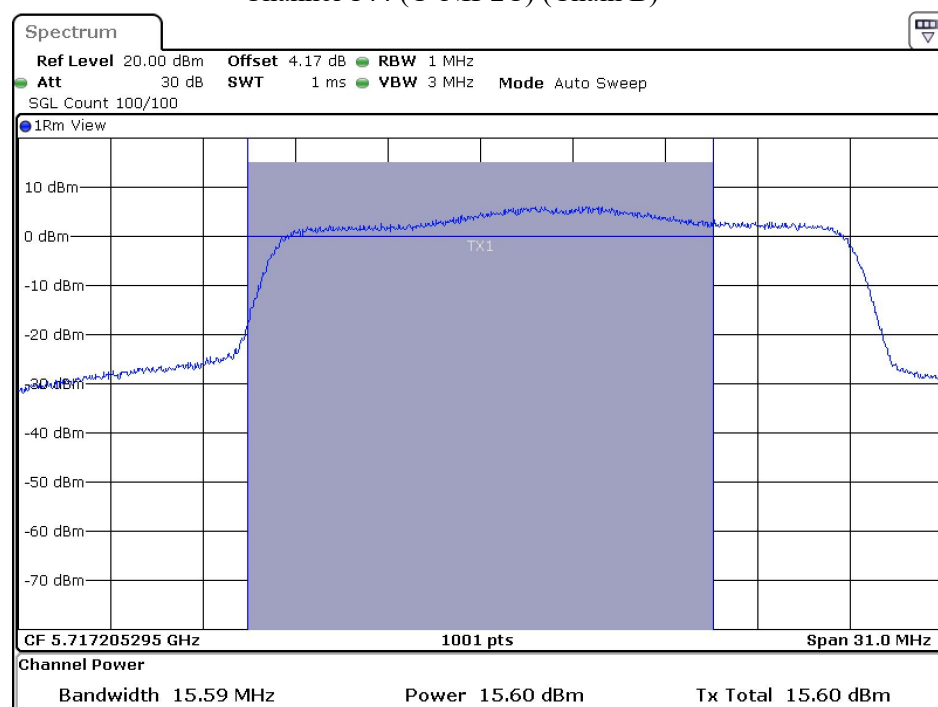
Date: 15.SEP.2023 22:22:23

Maximum conducted output power:
Channel 144 (U-NII-2C) (Chain A)



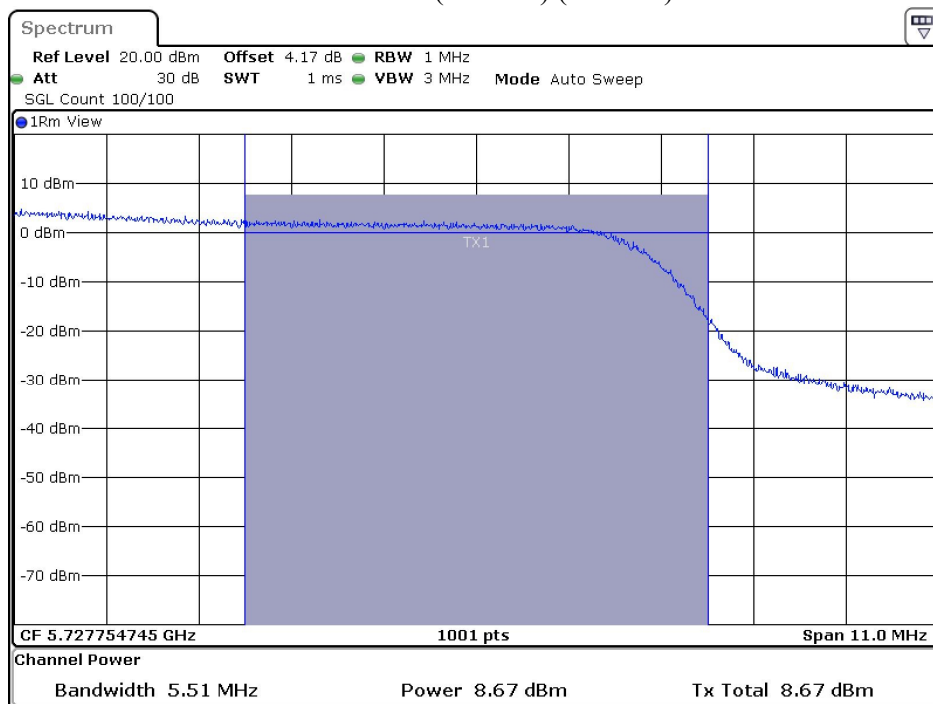
Date: 15.SEP.2023 22:21:53

Channel 144 (U-NII-2C) (Chain B)



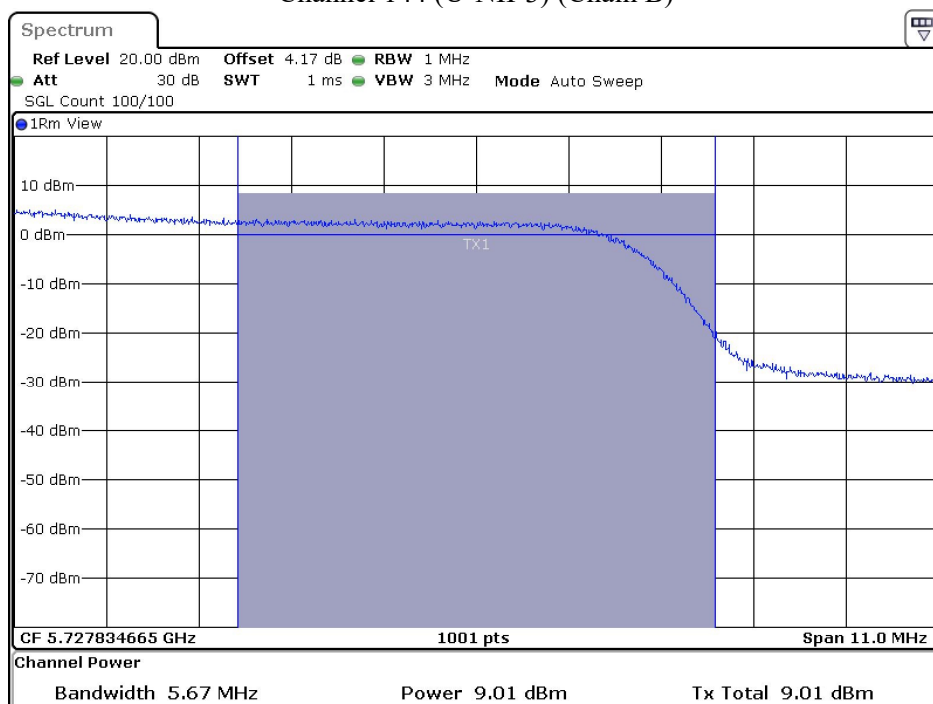
Date: 15.SEP.2023 22:22:55

Maximum conducted output power:
Channel 144 (U-NII-3) (Chain A)



Date: 15.SEP.2023 22:21:56

Channel 144 (U-NII-3) (Chain B)



Date: 15.SEP.2023 22:22:58

Product : Set Back Box with Wi-Fi6E, BT & PoE
 Test Item : Maximum conducted output power
 Test Mode : Transmit (802.11ax-40 MHz)
 Test Date : 2023/09/15

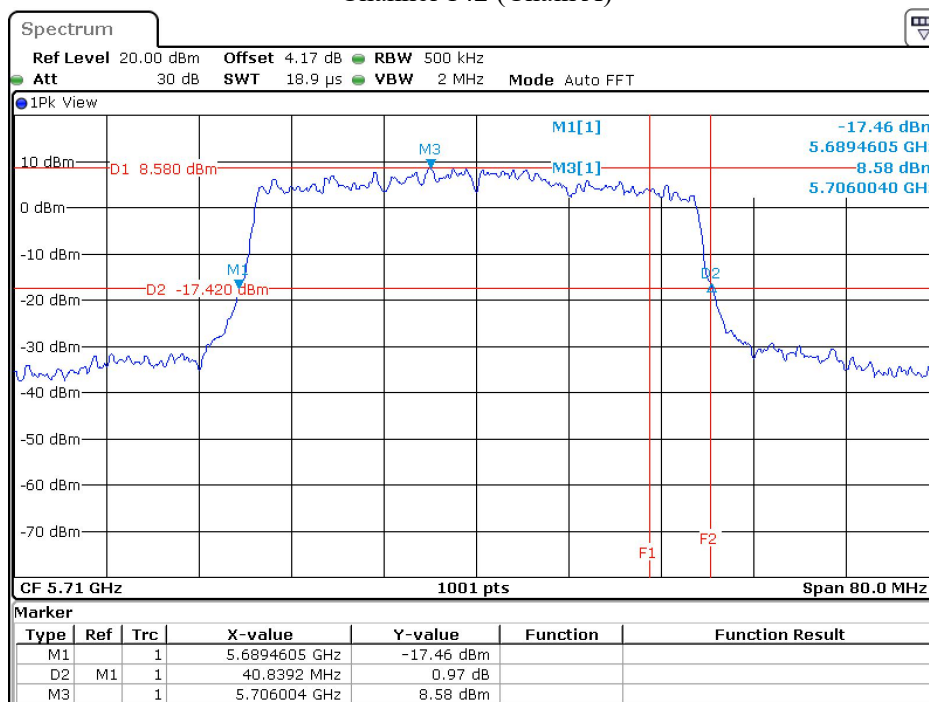
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Duty factor (dB)	Output Power (dBm)	Output Power Limit		Result
							(dBm)	dBm+10log(BW)	
38	5190	--	16.12	16.19	--	19.17	24	--	Pass
46	5230	--	16.02	16.41	--	19.23	24	--	Pass
54	5270	40.28	16.26	16.31	--	19.30	24	27.05	Pass
62	5310	39.88	15.83	15.93	--	18.89	24	27.01	Pass
102	5510	40.20	15.88	15.97	--	18.94	24	27.04	Pass
110	5550	39.88	16.26	16.18	--	19.23	24	27.01	Pass
134	5670	40.36	16.72	16.55	--	19.65	24	27.06	Pass
142(U-NII-2C)	5710	35.22	15.98	15.87	0.51	19.45	24	26.47	Pass
142(U-NII-3)	5710	4.82	3.97	5.24	0.51	8.17	30	17.83	Pass
151	5755	--	16.12	16.06	--	19.10	30	--	Pass
159	5795	--	16.11	16.06	--	19.10	30	--	Pass

Note:

1. Output Power (dBm) = 10log (Chain A Power (mW)+Chain B Power (mW)) +Duty factor.
2. 26dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

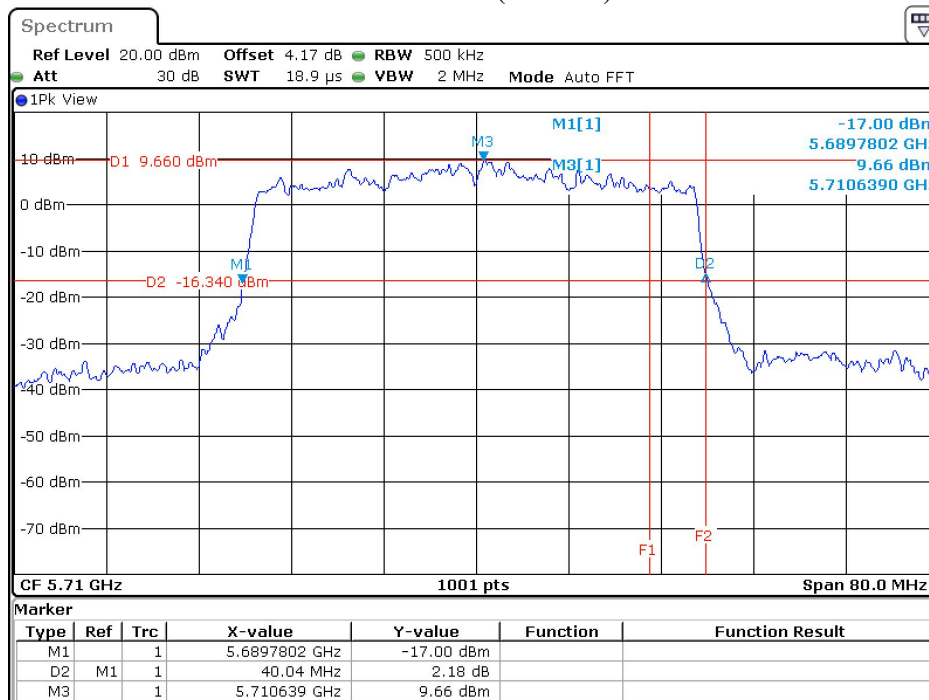
26dB Occupied Bandwidth:

Channel 142 (Chain A)



Date: 15.SEP.2023 22:46:34

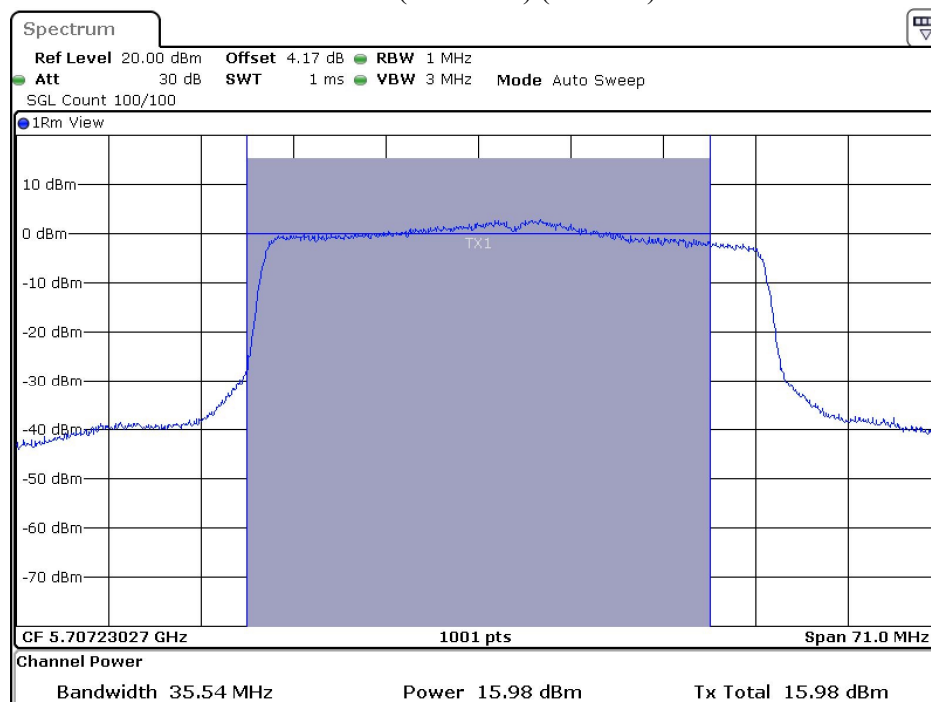
Channel 142 (Chain B)



Date: 15.SEP.2023 22:45:22

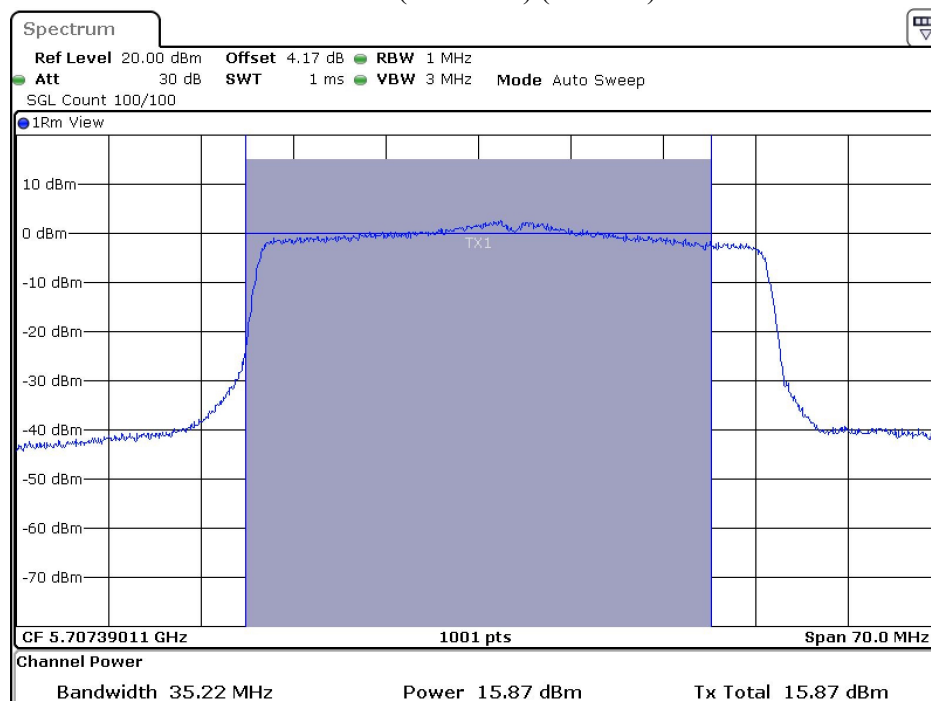
Maximum conducted output power:

Channel 142 (U-NII-2C) (Chain A)



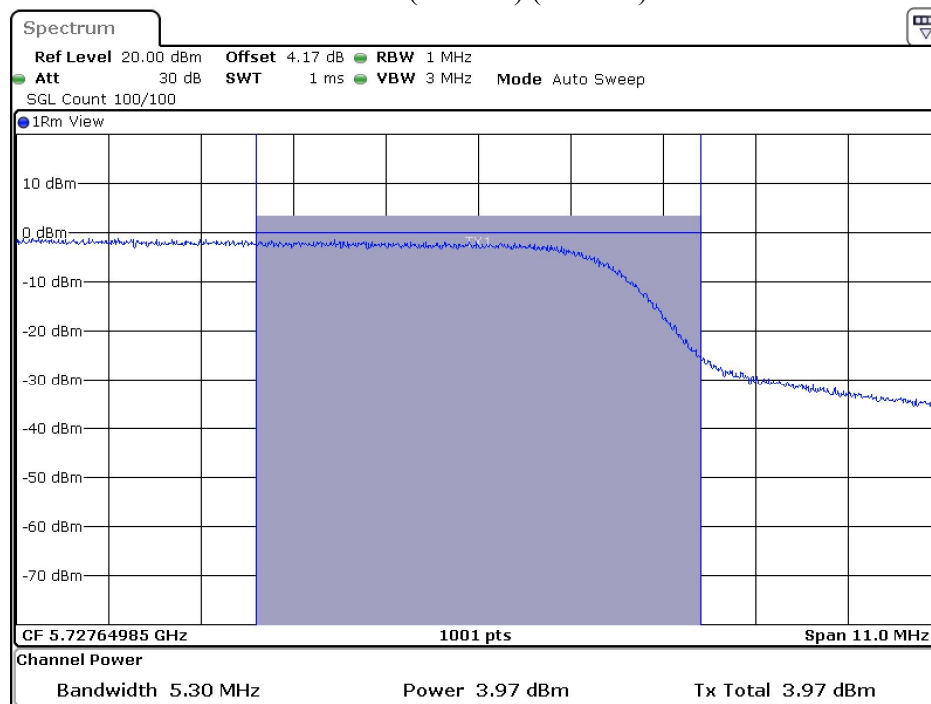
Date: 15.SEP.2023 22:47:06

Channel 142 (U-NII-2C) (Chain B)



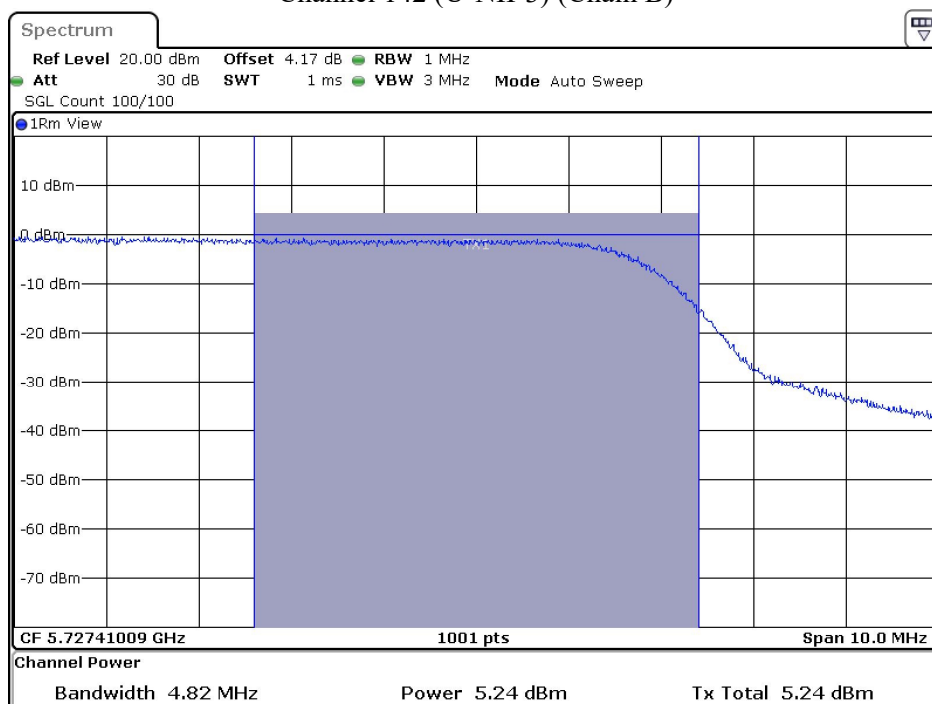
Date: 15.SEP.2023 22:45:54

Maximum conducted output power:
Channel 142 (U-NII-3) (Chain A)



Date: 15.SEP.2023 22:47:09

Channel 142 (U-NII-3) (Chain B)



Date: 15.SEP.2023 22:45:57

Product : Set Back Box with Wi-Fi6E, BT & PoE
 Test Item : Maximum conducted output power
 Test Mode : Transmit (802.11ax-80 MHz)
 Test Date : 2023/09/15

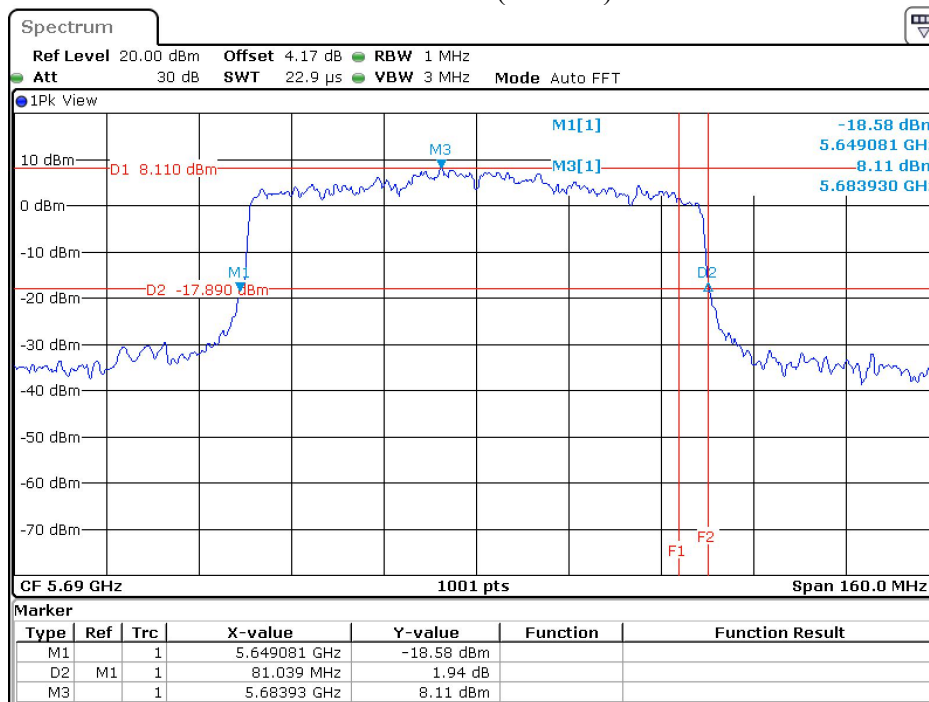
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Duty factor (dB)	Output Power (dBm)	Output Power Limit		Result
							(dBm)	dBm+10log(BW)	
42	5210	--	14.06	14.17	--	17.13	24	--	Pass
58	5290	80.24	15.11	15.27	--	18.20	24	30.04	Pass
106	5530	80.40	15.17	15.34	--	18.27	24	30.05	Pass
122	5610	80.88	15.52	15.64	--	18.59	24	30.08	Pass
138(U-NII-2C)	5690	75.92	15.75	15.76	0.60	19.37	24	29.80	Pass
138(U-NII-3)	5690	--	-0.13	1.51	0.60	4.38	30	--	Pass
155	5775	--	15.25	15.41	--	18.34	30	--	Pass

Note:

1. Output Power (dBm) = 10log (Chain A Power (mW)+Chain B Power (mW)) +Duty factor.
2. 26dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

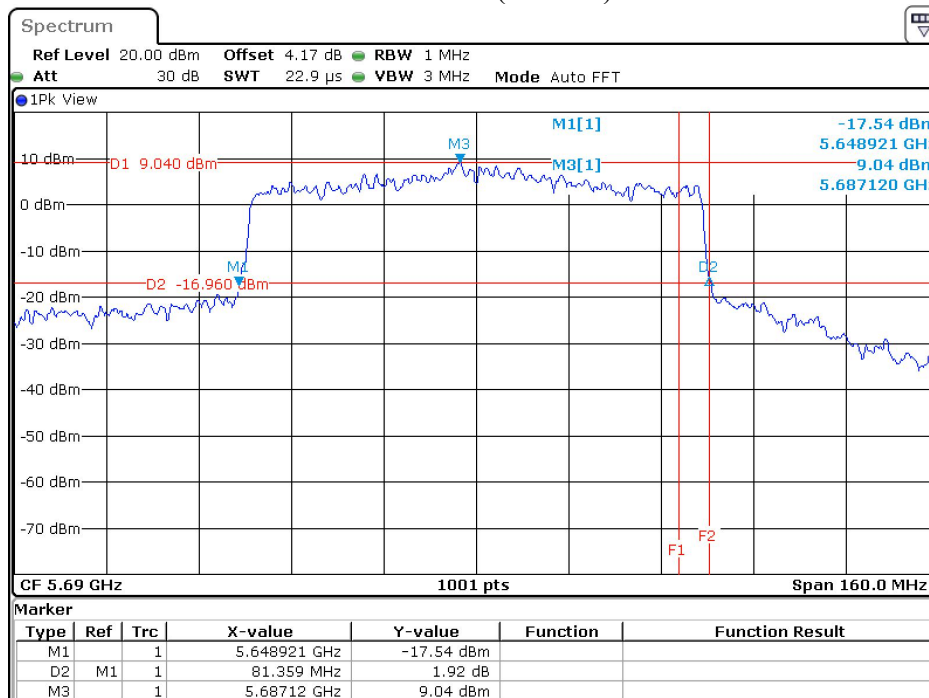
26dB Occupied Bandwidth:

Channel 138 (Chain A)



Date: 15.SEP.2023 23:01:12

Channel 138 (Chain B)



Date: 15.SEP.2023 23:02:18