

TEST REPORT

TAS COMPLIANCE

EUT Description	Convertible PC
Brand Name	ASUS
Model Name	UP5302Z
FCC ID	MSQAX211D2
Date of Test Start/End	2022-05-06 / 2022-05-09
Features	IEEE802.11a/b/g/n/ac/ax

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Test Report identification	220420-02.TR01
Revision Control	Rev. 01 This test report replaces any previous versions of this test report (See Section 1)

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2. Document Revision History

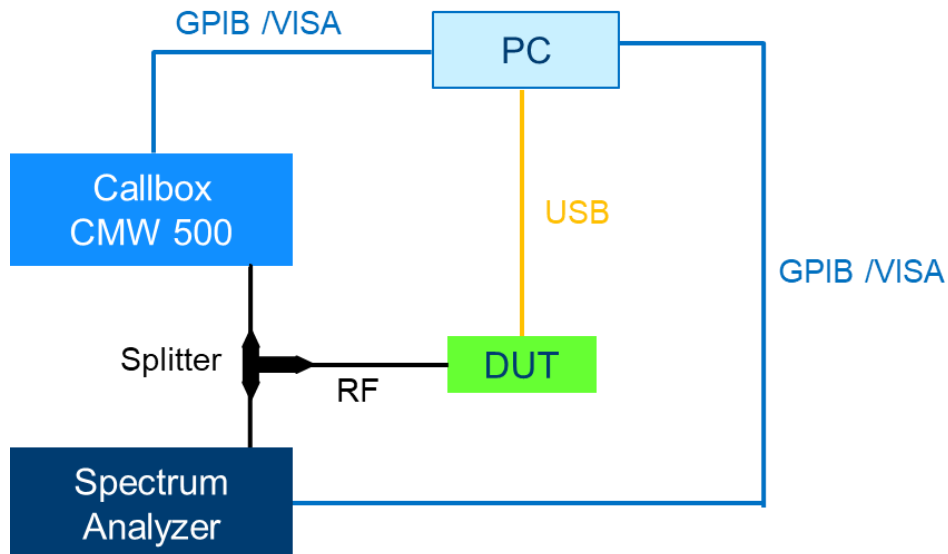
Revision #	Date	Modified by	Revision Details
Rev.00	2022-05-12	Tanguy MATHIEU	First Issue
Rev.01	2022-05-17	Tanguy MATHIEU	- Feature updated with 11a mode - SAR Tune up Power updated with SAR Power in Bios Table

3. Test Setup

The conducted power measurement test setup is described in the following and illustrated in Figure A.1.

- The DUT which AX211 WiFi module is installed inside convertible PC from ASUS model UP5302Z.
- A control PC is used to configure the Call Box as an access point to manage the uplink and downlink data traffic.
- Uplink signal power is measured with the Spectrum Analyzer and record by the PC with a maximum time resolution of 0.3333 msec.
- Uplink signal from the module is fed through a 3 dB Power Splitter, which delivers an equal amount of signal to the Spectrum Analyzer and the Call Box. The Splitter has high isolation between the Spectrum Analyzer and the Call Box.

Figure.1 – Validation using conducted power measurement test setup.



4. Test Sample

Sample	ID #	Description	Model	Serial #	Note
#1	220420-02.S03	Convertible PC	UP5302Z	N1NTCX00243404A	-

5. Test Equipment List

Equipment and accessories used for the conducted power measurement test setup are listed below. The Test Platform (DUT), test setup and associated equipment are shown in A.1.3.

ID#	Device	Type/Model	Serial #	Manufacturer	Cal. Date	Cal. Due Date
025-005	Communication Tester	CMW500	161493	Rohde & Schwarz	N/A	N/A
131-000	Spectrum Analyzer	FSV40	101425	Rohde & Schwarz	2021-01-06	2023-31-05
452	Setup Cable	-	-	-	Attenuation and loss verified before use	

6. Test Results

6.1. SAR Power in Bios Table as per SAR assessment

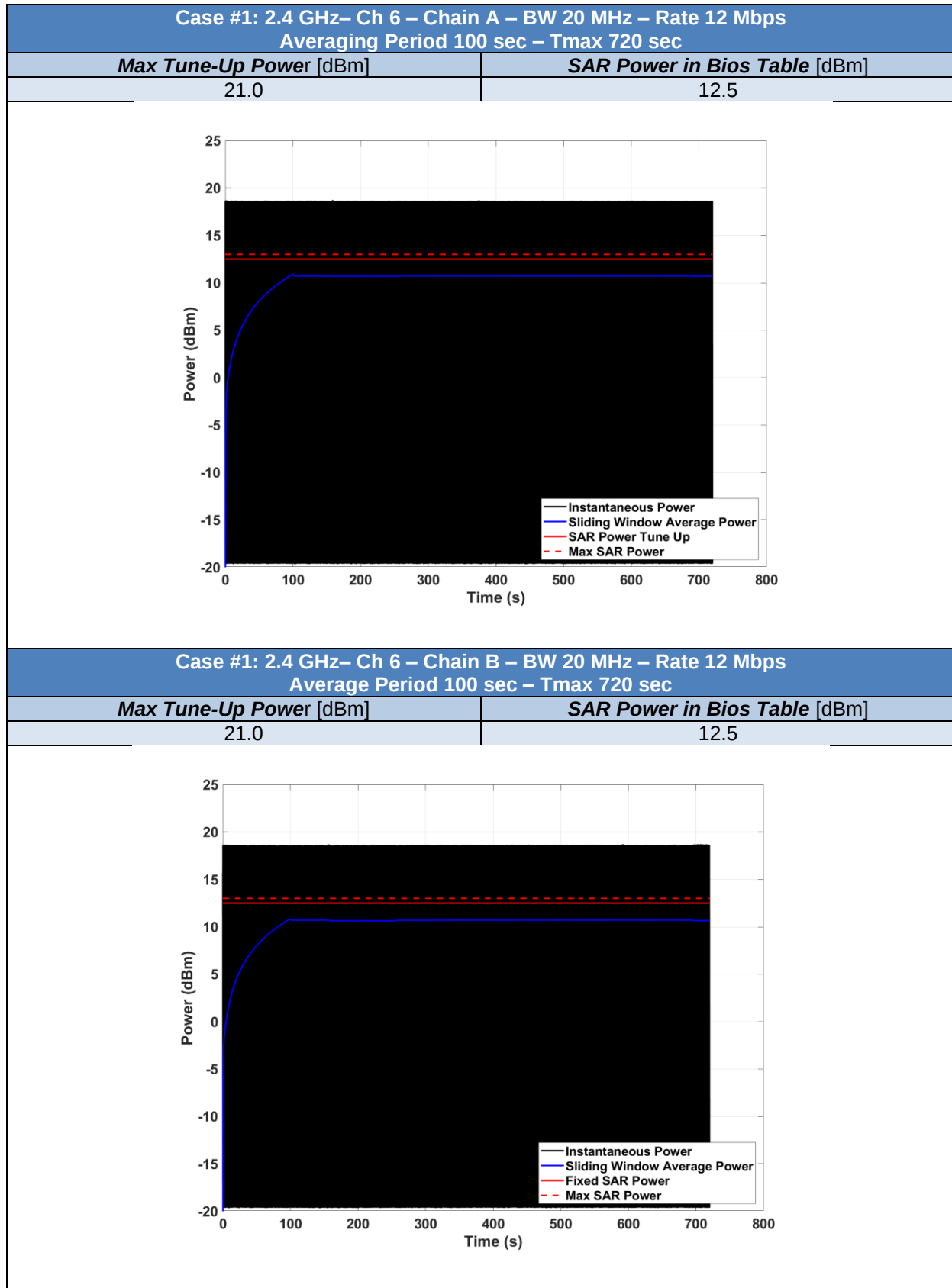
Chain A		Chain B	
IEEE 802.11g CH6	IEEE 802.11a CH120	IEEE 802.11g CH6	IEEE 802.11a CH120
12.5	10.0	12.5	10.0

6.2. TAS Validation for 2.4 GHz Band on Channel 6

Table B1 – Test Cases for 2.4 GHz Channel 6

Test Case #	Channel	Chain	Channel Bandwidth	Measurement Averaging Period	Measurement Time Resolution	Max Tune-Up Power [dBm]	SAR Power in Bios Table [dBm]
1	6	A	20 MHz	100 sec	0.3333 msec	21.0	12.5
2		B	20 MHz	100 sec	0.3333 msec	21.0	12.5

Results of test cases in Table B1 are shown in the following plots.

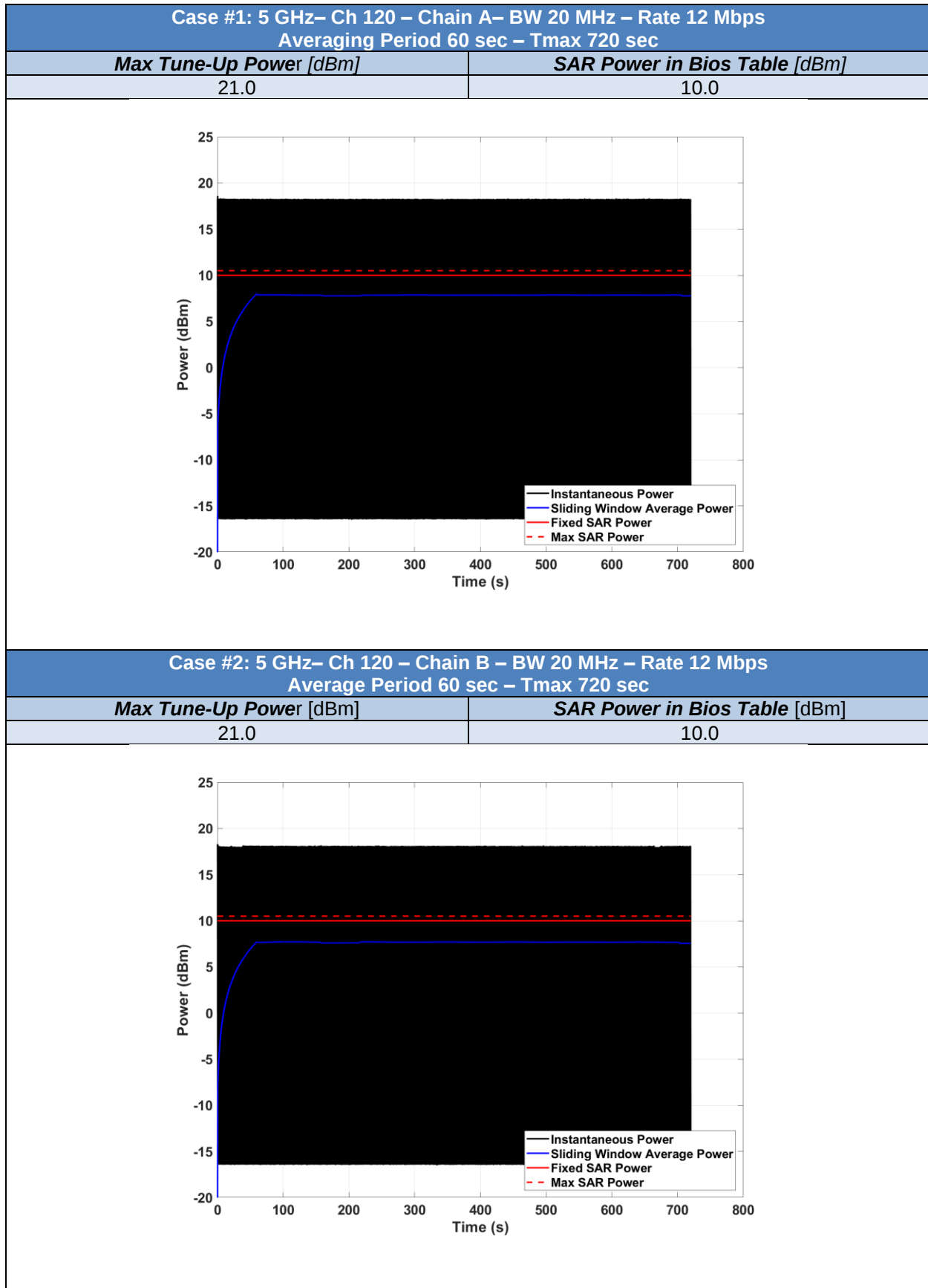


6.3. TAS Validation for 5 GHz Band on Channel 120

Table B2 – Test Cases for 5 GHz Channel 120

Test Case #	Channel	Chain	Channel Bandwidth	Measurement Averaging Period	Measurement Time Resolution	Max Tune-Up Power [dBm]	SAR Power in Bios Table [dBm]
1	120	A	20 MHz	60 sec	0.3333 msec	21.0	10.0
2		B	20 MHz	60 sec	0.3333 msec	21.0	10.0

Results of test cases in Table B2 are shown in the following plots.



7. Conclusion

The TAS Intel Algorithm functionality of AX211 WiFi Module Integrated inside ASUS UP5302Z is tested. All test cases are compliant with SAR limit.