

TEST REPORT

COMPLIANCE TEST REPORT

EUT Description	Wireless Module installed in Convertible PC
Brand Name	Intel®
Model Name	AX211NGW
FCC	PD9AX211NG
Date of Test Start/End	2024-11-19 / 2024-11-20
Features	2x2 Wi-Fi - Bluetooth® (see section 5)

Applicant	Intel Corporation SAS
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Test Report identification	240816-05.TR03
Revision Control	Rev. 00 This test report revision replaces any previous test report revision (see section 8)

The test results relate only to the samples tested.

Reference to accreditation shall be used only by full reproduction of test report

Reviewed by

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(Test Engineer)

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1. Standards, reference documents and applicable test methods

FCC	1. RF Exposure Policies and Procedures: TCB Workshop – April 2021
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2. General conditions, competences and guarantees

- ✓ Tests performed under FCC standards identified in section 1 are covered by A2LA accreditation.
- ✓ Intel Corporation SAS Wireless RF Lab (Intel WRF Lab) is an ISO/IEC 17025:2017 laboratory accredited by the American Association for Laboratory Accreditation (A2LA) with the certificate number 3478.01.
- ✓ Intel WRF Lab only provides testing services and is committed to providing reliable, unbiased test results and interpretations.
- ✓ Intel WRF Lab 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.
- ✓ Intel WRF Lab has developed calibration and proficiency programs for its measurement equipment to ensure correlated and reliable results to its customers.
- ✓ This report is only referred to the item that has undergone the test.
- ✓ This report does not imply an approval of the product by the Certification Bodies or competent Authorities.

3. Environmental Conditions

- ✓ At the site where the measurements were performed the following limits were not exceeded during the tests:

Temperature	Min: 20.26 °C Max: 20.97 °C Avg: 20.65 °C
Humidity	Min: 27.84 % Max: 51.37 % Avg: 38.35 %

4. Test Sample

Sample	ID #	Description	Model	Serial #	Note
#1	240816-05.S06	Wireless Module Installed in Convertible PC	TPN-W166	ABC43901Y0	-



5. EUT Features

The herein information is provided by the customer.
Intel WRF Lab declines any responsibility for the accuracy of the stated customer provided information, especially if it has any impact on the correctness of test results presented in this report.

Brand Name	Intel®	
Model Name	AX211NGW	
Software Version	ANT.01908.23.70.0	
Driver Version	23.80.1.3	
Prototype / Production	Production	
Host Identification	TPN-W166	
Supported Radios	802.11b/g/n/ax/be	2.4GHz (2400.0 – 2483.5 MHz)
	802.11a/n/ac/ax/be	5.2GHz (5150.0 – 5250.0 MHz)
		5.3GHz (5250.0 – 5350.0 MHz)
		5.6GHz (5470.0 – 5725.0 MHz)
		5.8GHz (5725.0 – 5850.0 MHz)
		5.9GHz (5850.0 – 5895.0 MHz)
	802.11ax/be	6.0GHz (5925.0 – 7125.0 MHz)
	Bluetooth	2.4GHz (2400.0 – 2483.5 MHz)

6. Remarks and comments

- 1. The test report is a validation of the FCC TAS algorithm

7. Document Revision History

Revision #	Date	Modified by	Revision Details
Rev.00	2024-11-22	Robin LUCIANI	First Issue

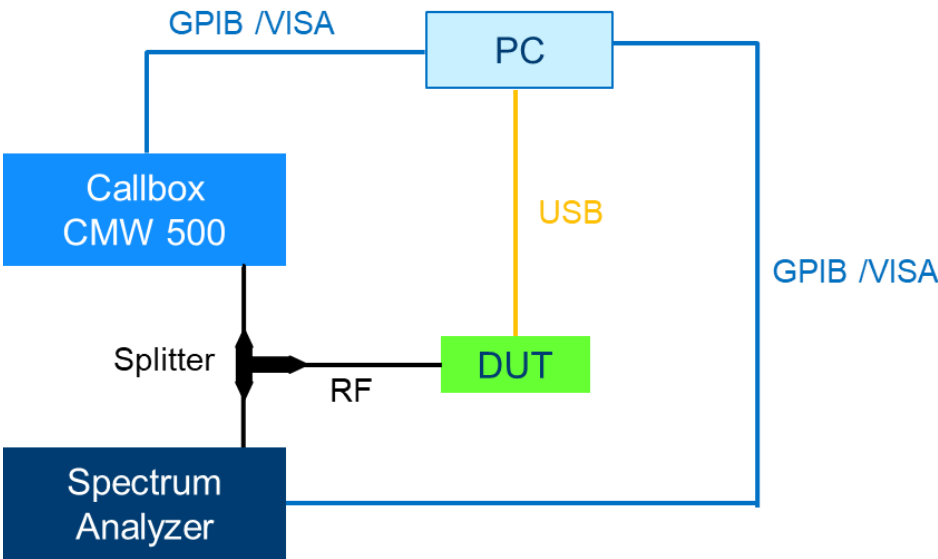
Annex A. Test & System description

A.1 Test Setup

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

- The DUT which AX211NGW WiFi module is installed inside Convertible PC from Dell model TPN-W166
- 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 recorded 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.



A.2 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
271-000	Spectrum Analyzer	FSL6	102143	Rohde & Schwarz	2024-05-21	2026-05-21
455-001	RF Cable	-	-	-	2024-02-16	2025-02-16
455-002	RF Cable	-	-	-	2024-02-16	2025-02-16
455-003	RF Splitter	-	-	-	2024-02-16	2025-02-16

A.3 Measurement Uncertainty Evaluation

The system uncertainty evaluation is shown in the table below with a coverage factor of $k = 2$ to indicate a 95% level of confidence:

Measurement type	Uncertainty	Unit
Conducted Power	± 1.03	dB

Annex B. Test Results

The herein test results were performed by:

Test case measurement	Test Personnel
Test case	R. LUCIANI

B.1 SAR Tune-Up Power as per SAR assessment

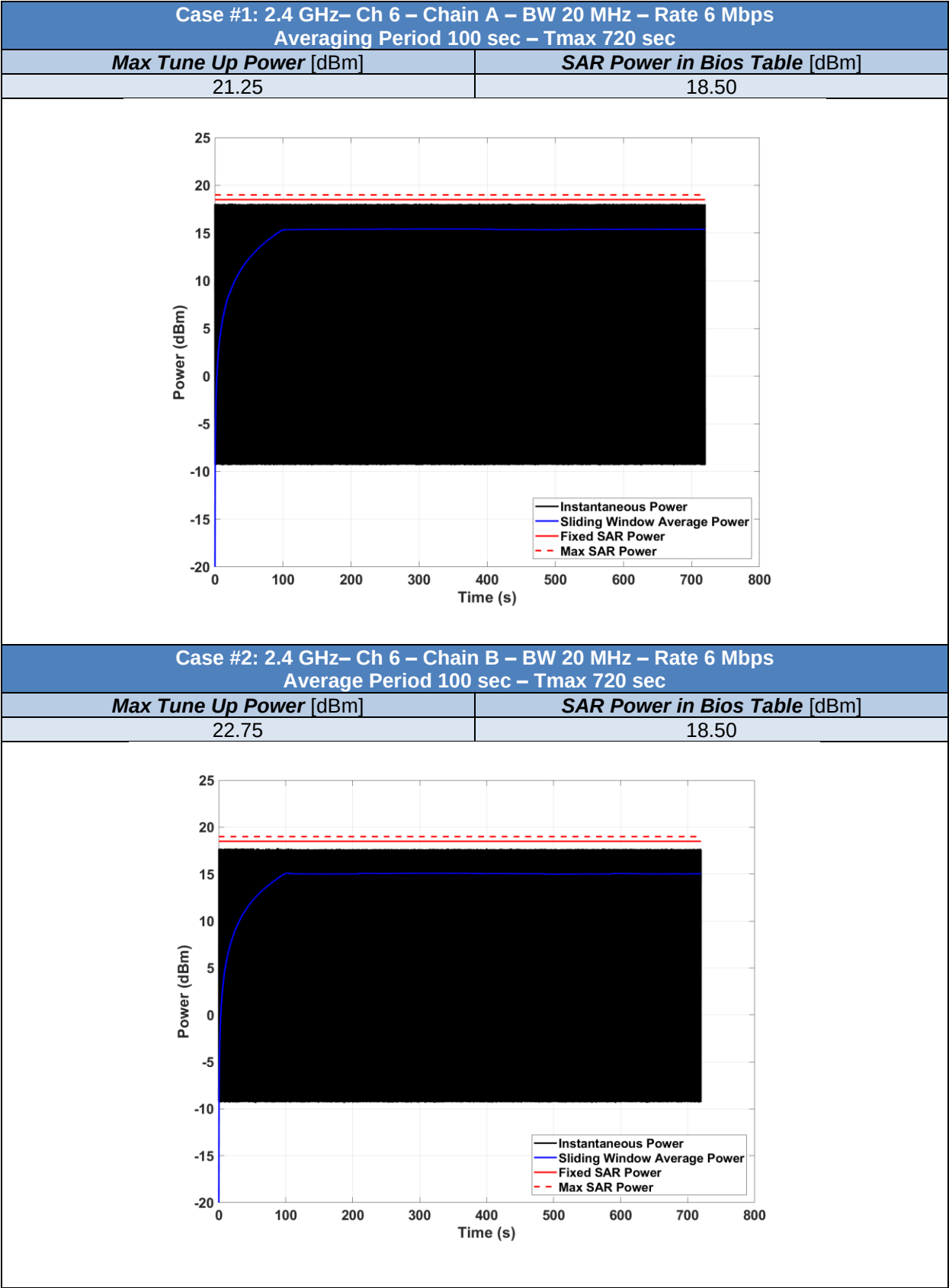
Chain A(1)		Chain B(2)	
IEEE 802.11g CH6	IEEE 802.11a CH120	IEEE 802.11g CH6	IEEE 802.11a CH120
18.50	16.50	18.50	16.50

B.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	21.25	18.50
2	6	B	20 MHz	100 sec	0.3333 msec	22.75	18.50

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

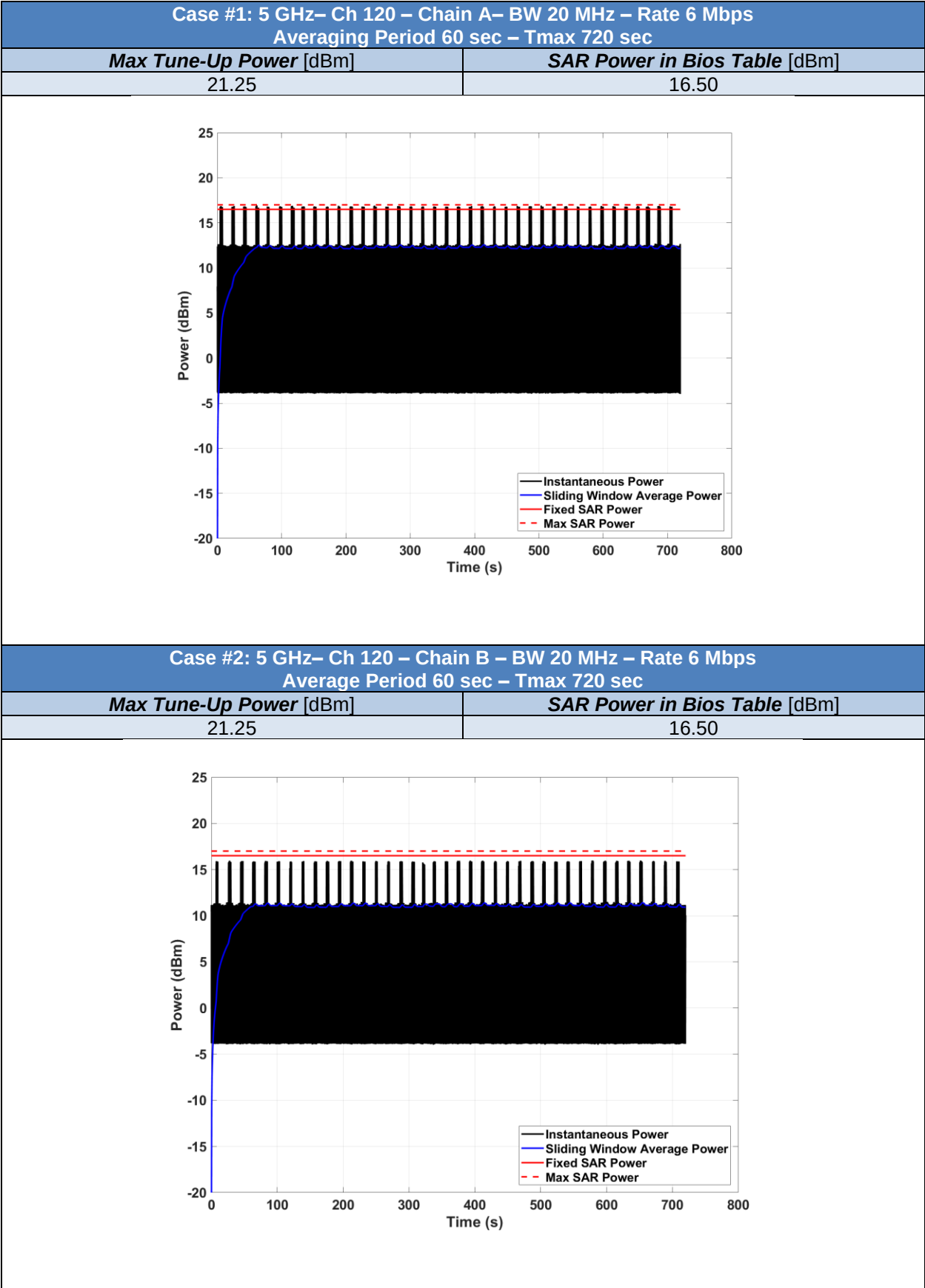


B.3 TAS Validation for 5 GHz Band on Channel 120

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	21.25	16.50
2	120	B	20 MHz	60 sec	0.3333 msec	21.25	16.50

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



End of the report

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