

# TEST REPORT

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## COMPLIANCE TEST REPORT

EUT Description	Wireless module installed in Notebook PC
Brand Name	Intel®
Model Name	BE201D2W
FCC ID	PD9BE201D2
Date of Test Start/End	2025-01-08/ 2025-01-09
Features	2x2 Wi-Fi - Bluetooth® (see section 5)

Applicant	Intel Corporation SAS
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Test Report identification	240923-01.TR03
Revision Control	Rev. 01 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	Avg: 20.84 °C Min: 20.61 °C Max: 21.17 °C
Humidity	Avg: 41.64 % Min: 32.38 % Max: 54.04 %

### 4. Test Sample

Sample	ID #	Description	Model	Serial #	Note
#1	240923-01.S04	Notebook PC	Thinkpad X9-15 Gen 1	PF-581Q6A	-

### 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	BE201D2W		
Prototype / Production	Production		
Host Identification	Notebook PC		
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

- The test report is a validation of the FCC TAS algorithm
- The RF connector of Chain B was not accessible due to platform design. The TAS testing on the host has been conducted only in Chain A.  
 The test reduction is valid because the TAS is fully contained within the module. Aside from allowing a host device to select accessible parameters, the TAS operates independently of the host product. As detailed in the TAS modular validation report, the TAS algorithm validation has been conducted for a range of accessible and derived operating parameters. Therefore, additional validations are unnecessary for host products using a subset of these parameters that have already been validated at the modular level.  
 In summary: The modular validation covers all possible parameters at the host level, making the test reduction appropriate for this specific case.

### 7. Document Revision History

Revision #	Date	Modified by	Revision Details
Rev.00	2025-01-17	Malika Faria	First Issue
Rev.01	2025-01-20	Estelle GILLES	Section 6 updated upon TCB request

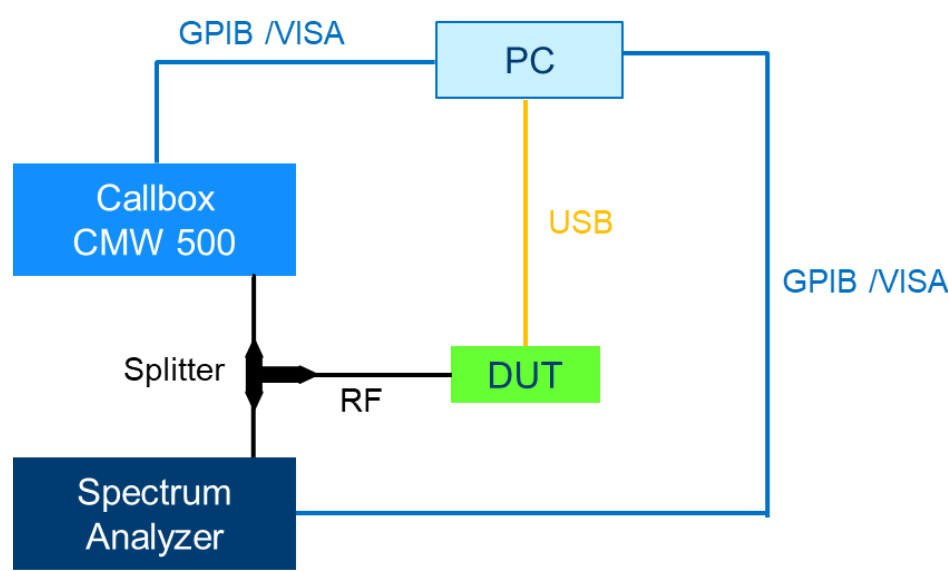
# Annex A. Test & System description

## A.1 Test Setup

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

- The DUT which BE201D2W WiFi module is installed inside Notebook PC from Lenovo model Thinkpad X9-15 Gen 1.
- 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	$\pm 1.03$	dB

# Annex B. Test Results

The herein test results were performed by:

Test case measurement	Test Personnel
TAS Validation	Malika Faria

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

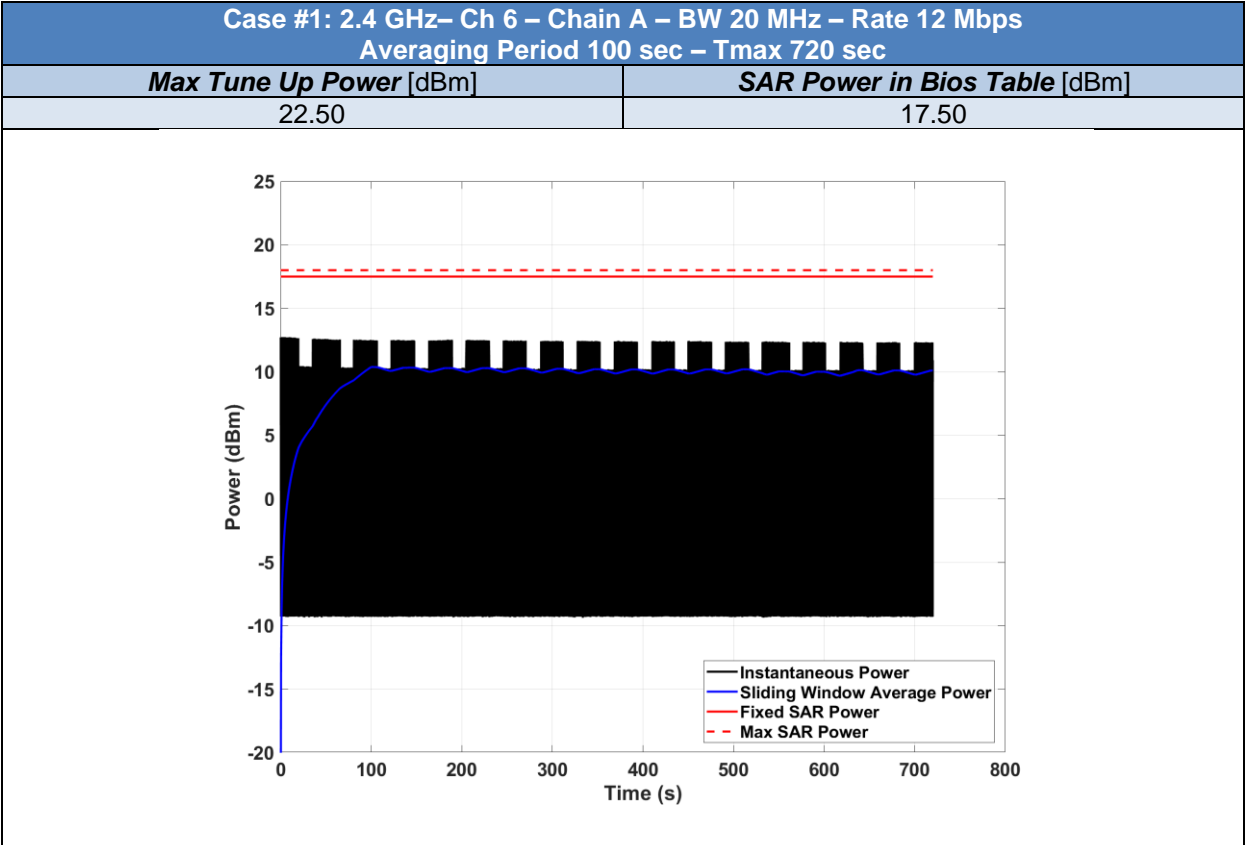
Chain A(1)	
IEEE 802.11g CH6	IEEE 802.11a CH120
17.50	18.00

## 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	22.50	17.50

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



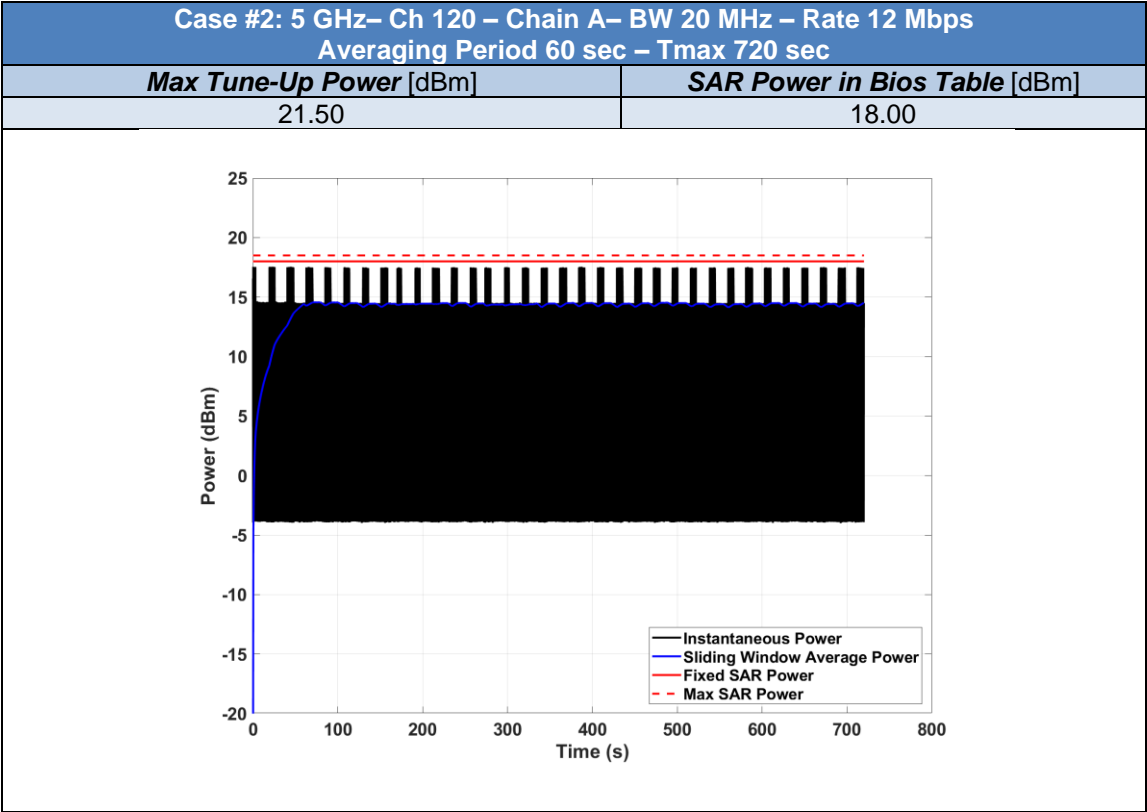


### B.3 TAS Validation for 5 GHz Band on Channel 120

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]
2	120	A	20 MHz	60 sec	0.3333 msec	21.50	18.00

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



### **End of the report**

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