

TEST REPORT

COMPLIANCE TEST REPORT

EUT Description	Notebook
Brand Name	Dell
Model Name	P171G
FCC ID	PD9AX411NG
Date of Test Start/End	2022-11-02 / 2022-11-03
Features	IEEE802.11a/b/g/n/ac/ax

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Test Report identification	221013-07.TR01
Revision Control	Rev. 00 This test report replaces any previous versions of this test report (see Section 1)

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2. Document Revision History

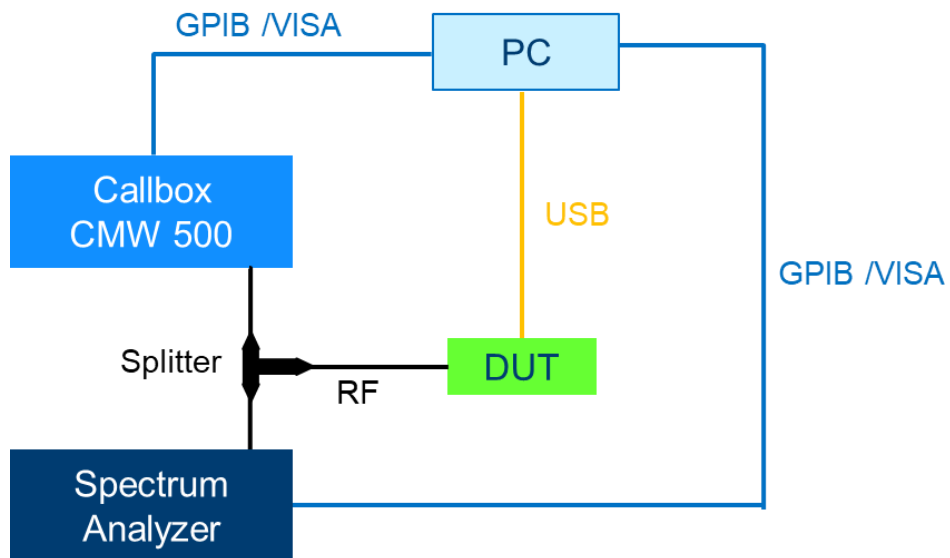
Revision #	Date	Modified by	Revision Details
Rev.00	2022-11-07	Robin LUCIANI	First Issue

3. Test Setup

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

- The DUT which is a AX411 WiFi module is installed inside a Notebook from Dell model P171G.
- 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	220906-08.S01	Notebook	P171G	2022080921462	-

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
266-000	Spectrum Analyzer	FSV40	103307	Rohde & Schwarz	2022-04-26	2024-04-26
455-001	RF Cable	-	-	Pasternack	2022-09-23	2023-09-23
455-002	RF Cable	-	-	-	2022-09-23	2023-09-23
455-003	RF Splitter	-	-	Pasternack	2022-09-23	2023-09-23

6. Test Results

6.1. SAR Tune-Up Power as per SAR assessment

Chain A		Chain B	
IEEE 802.11g CH6	IEEE 802.11a CH120	IEEE 802.11g CH6	IEEE 802.11a CH120
16.00	13.00	16.00	13.00

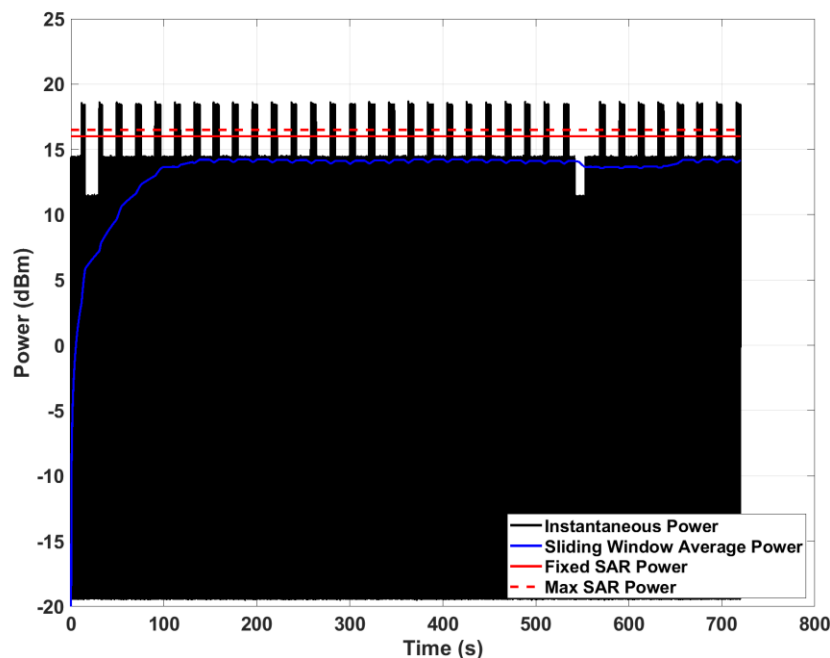
6.2. TAS Validation for 2.4 GHz Band on Channel 6

Table B1 – Test Cases for 2.4 GHz Channel 6

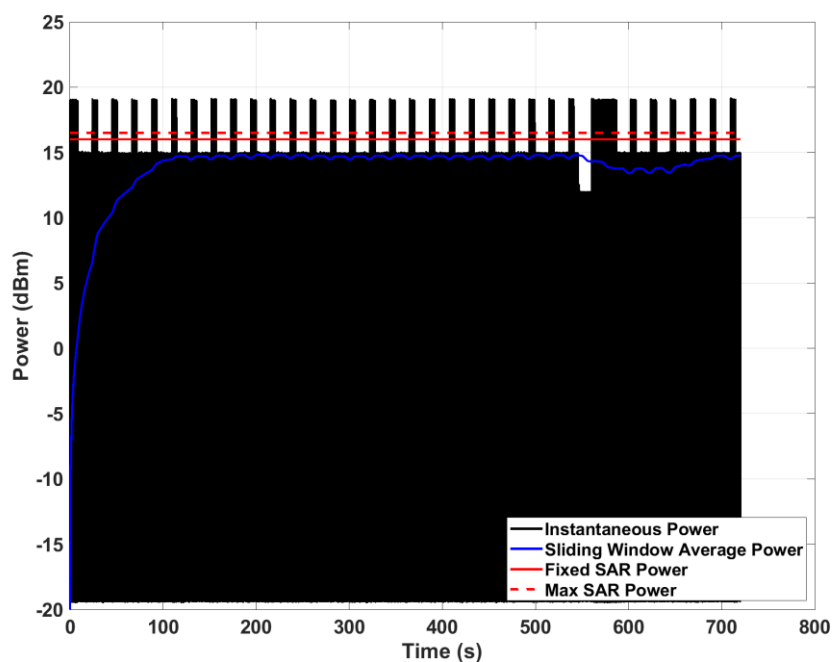
Test Case #	Channel	Chain	Channel Bandwidth	Measurement Averaging Period	Measurement Time Resolution	Max Tune-Up Power [dBm]	SAR Power in Bios Table [dBm]
1	6	A	20 MHz	100 sec	0.3333 msec	20.00	16.00
2	6	B	20 MHz	100 sec	0.3333 msec	20.00	16.00

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

Case #1: 2.4 GHz– Ch 6 – Chain A – BW 20 MHz – Rate 12 Mbps Averaging Period 100 sec – Tmax 720 sec	
<i>Max Tune Up Power</i> [dBm]	<i>SAR Power in Bios Table</i> [dBm]
20.00	16.00



Case #1: 2.4 GHz– Ch 6 – Chain B – BW 20 MHz – Rate 12 Mbps Average Period 100 sec – Tmax 720 sec	
<i>Max Tune Up Power</i> [dBm]	<i>SAR Power in Bios Table</i> [dBm]
20.00	16.00



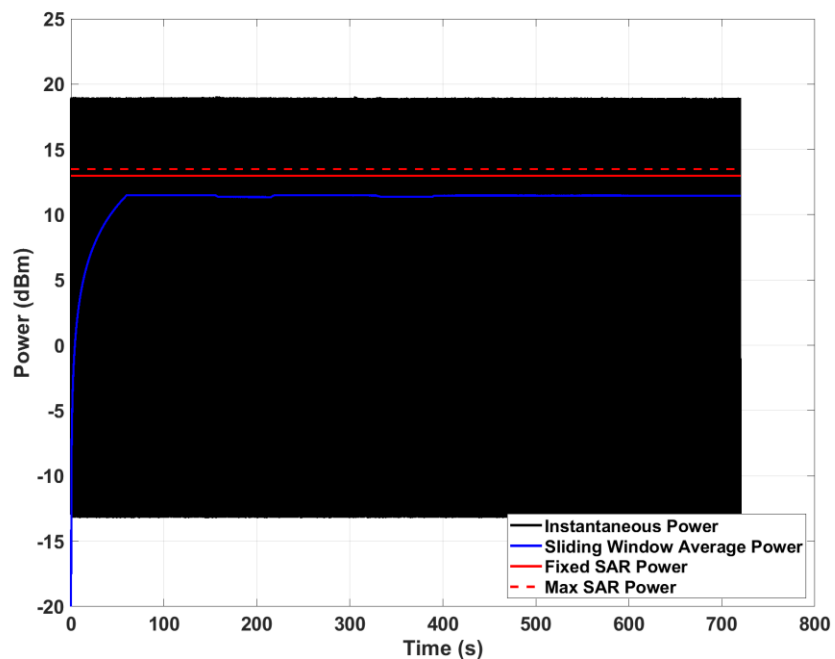
6.3. TAS Validation for 5 GHz Band on Channel 120

Table B2 – Test Cases for 5 GHz Channel 120

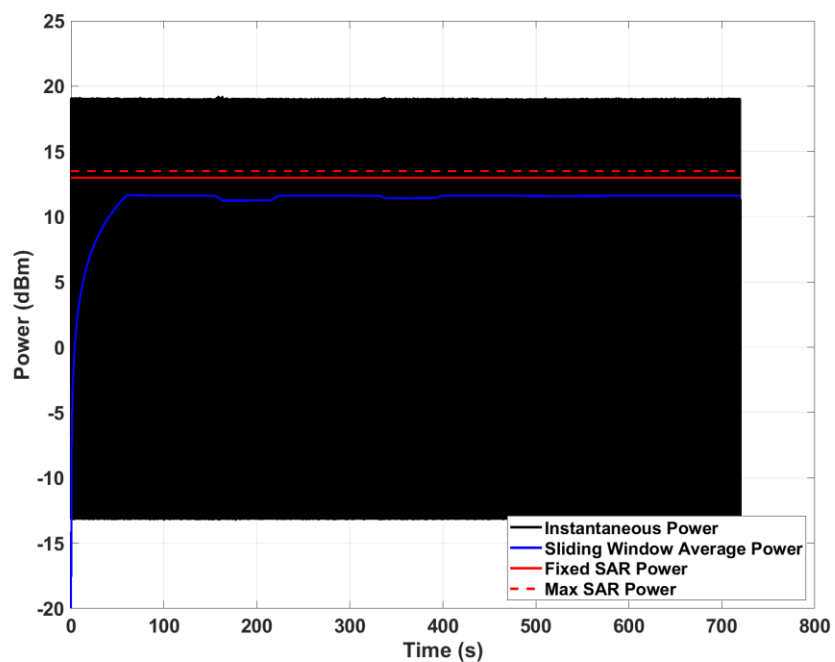
Test Case #	Channel	Chain	Channel Bandwidth	Measurement Averaging Period	Measurement Time Resolution	Max Tune-Up Power [dBm]	SAR Power in Bios Table [dBm]
1	120	A	20 MHz	60 sec	0.3333 msec	20.00	13.00
2	120	B	20 MHz	60 sec	0.3333 msec	20.00	13.00

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

Case #1: 5 GHz– Ch 120 – Chain A– BW 20 MHz – Rate 12 Mbps Averaging Period 60 sec – Tmax 720 sec	
<i>Max Tune-Up Power</i> [dBm]	<i>SAR Power in Bios Table</i> [dBm]
20.00	13.00



Case #2: 5 GHz– Ch 120 – Chain B – BW 20 MHz – Rate 12 Mbps Average Period 60 sec – Tmax 720 sec	
<i>Max Tune-Up Power</i> [dBm]	<i>SAR Power in Bios Table</i> [dBm]
20.00	13.00



End of the report

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