

TEST REPORT

COMPLIANCE TEST REPORT

EUT Description	Wireless Module Installed in Notebook PC
Brand Name	Dell
Model Name	P176G
FCC ID	PD9AX211D2
Date of Test Start/End	2022-12-22 / 2022-12-22
Features	IEEE802.11a/b/g/n/ac/ax

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Test Report identification	221026-04.TR04
Revision Control	Rev. 01 This test report replaces any previous versions of this test report (see Section 1)

Reviewed by _____

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1. Document Revision History

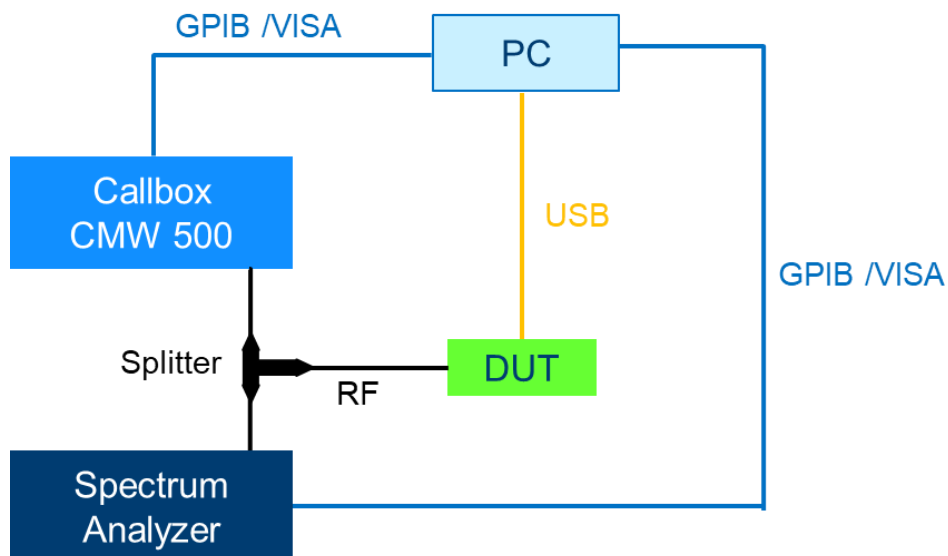
Revision #	Date	Modified by	Revision Details
Rev.00	2022-12-28	Robin LUCIANI	First Issue
Rev.01	2023-03-21	Robin LUCIANI	Addition of a note regarding SAR Tune-Up Power in part 5.1

2. Test Setup

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

- The DUT which is a AX211 WiFi module is installed inside a Notebook PC from Dell model P176G.
- 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.



3. Test Sample

Sample	ID #	Description	Model	Serial #	Note
#1	221026-04.S03	Wireless Module Installed in Notebook PC	P176G	7491566500015	-

4. 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	2023-03-23
455-002	RF Cable	-	-	-	2022-09-23	2023-03-23
455-003	RF Splitter	-	-	Pasternack	2022-09-23	2023-03-23

5. Test Results

5.1. SAR Tune-Up Power as per SAR assessment

Client initially provided the following Tune-Up Powers that were used for TAS testing. For SAR report 221026-04.TR01 TX Power is 15.00 dBm / Chain A and Chain B for 2.4GHz and TX Power is 12.50dBm / Chain B for 5GHz. However, those discrepancies do not impact TAS compliance tests verdict.

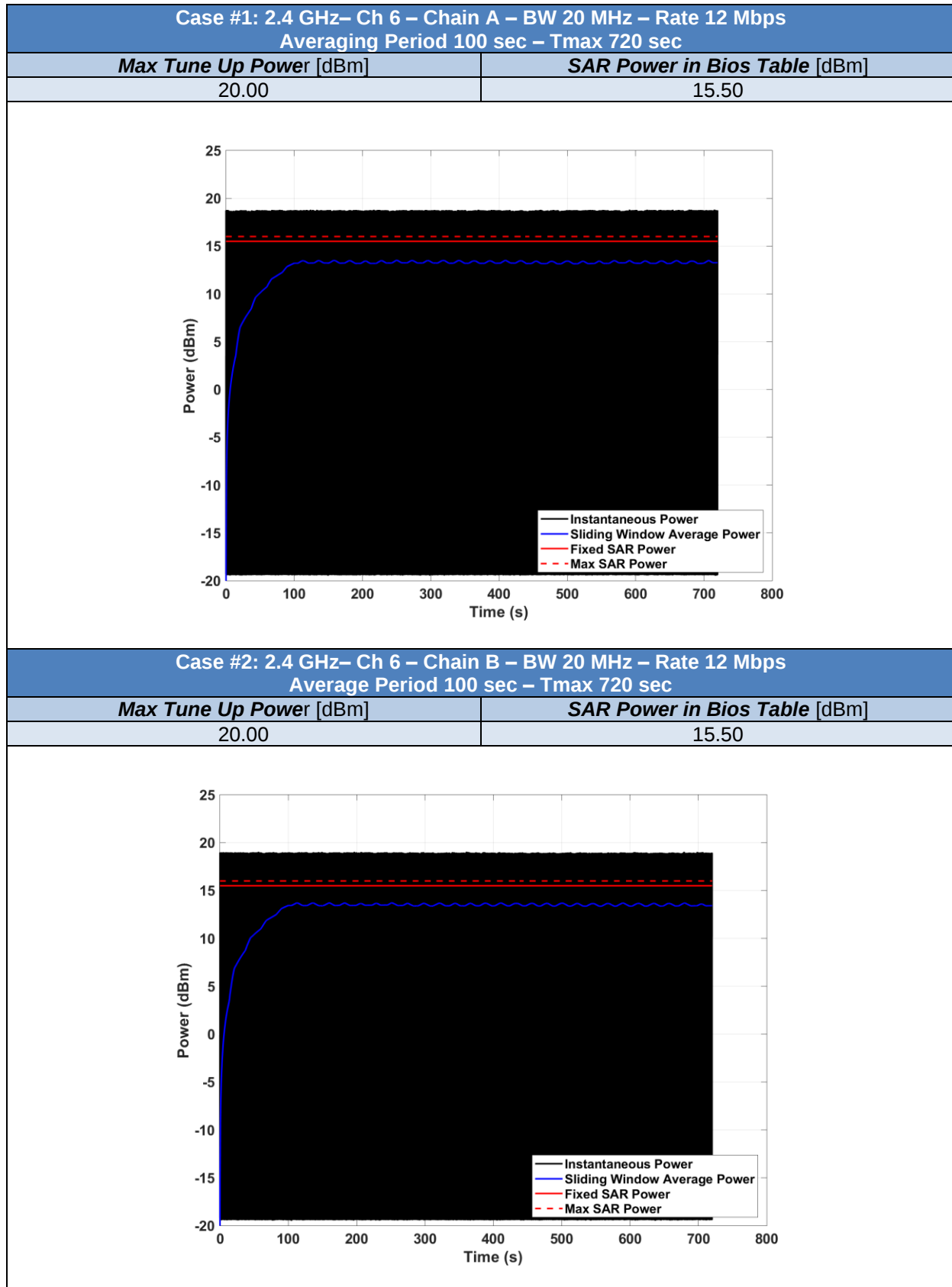
Chain A		Chain B	
IEEE 802.11g CH6	IEEE 802.11a CH120	IEEE 802.11g CH6	IEEE 802.11a CH120
15.50	13.50	15.50	13.50

5.2. 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	15.50
2	6	B	20 MHz	100 sec	0.3333 msec	20.00	15.50

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

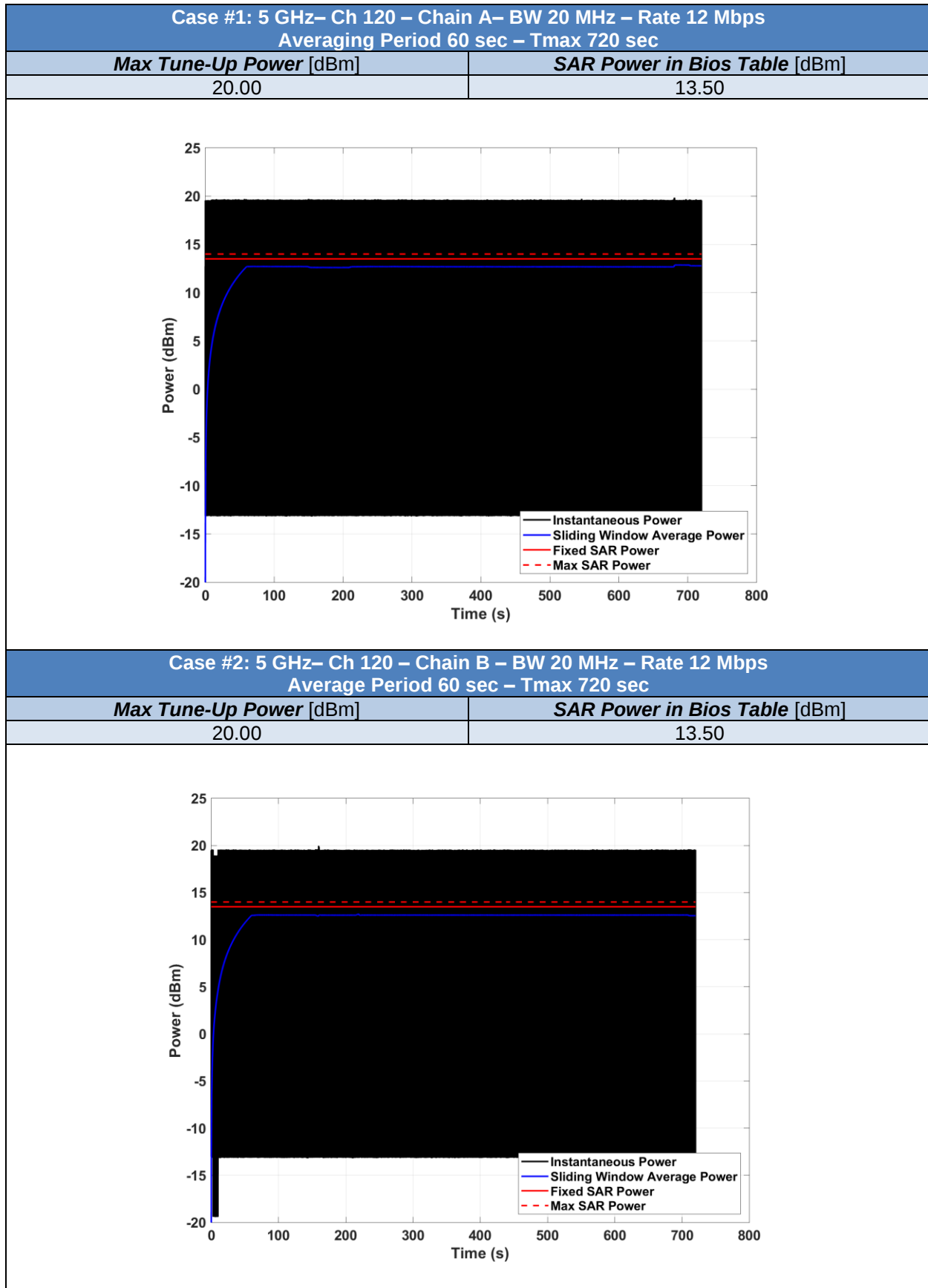


5.3. TAS Validation for 5 GHz Band on Channel 120

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	13.50
2	120	B	20 MHz	60 sec	0.3333 msec	20.00	13.50

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



End of the report

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