

TEST REPORT

COMPLIANCE TEST REPORT

EUT Description	Wireless Module Installed in Notebook PC
Brand Name	HP
Model Name	TPN-C164
FCC ID	PD9AX211NG
Date of Test Start/End	2023-03-08/2023-03-09
Features	IEEE802.11a/b/g/n/ac/ax

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Test Report identification	221220-01.TR04
Revision Control	Rev. 00 This test report replaces any previous versions of this test report (see Section 1)

Reviewed by

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1. Document Revision History

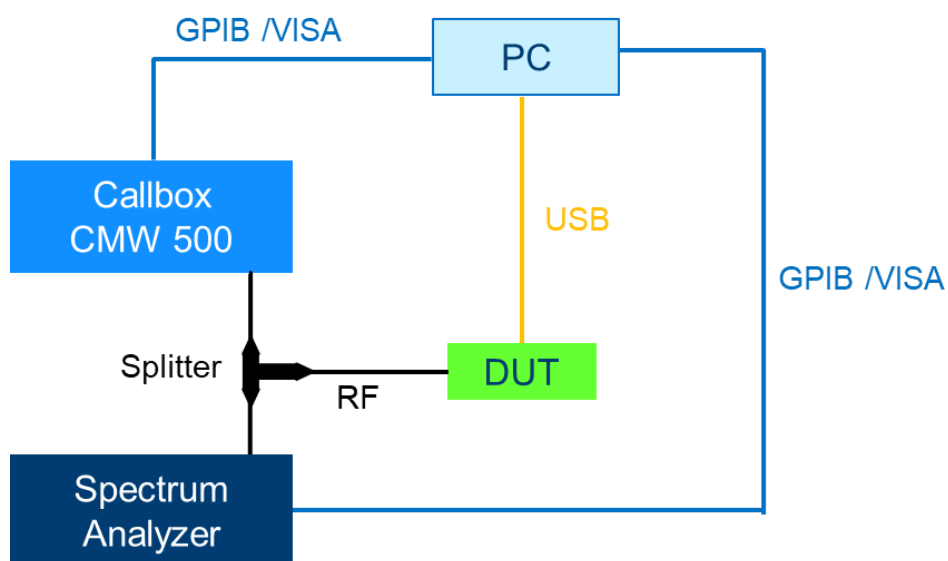
Revision #	Date	Modified by	Revision Details
Rev.00	2023-03-09	Robin LUCIANI	First Issue

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 HP model TPN-C164.
- 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	221220-01.S06	Wireless Module Installed in Notebook PC	TPN-C164	JPR7001701	-

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
271-000	Spectrum Analyzer	FSL6	102143	Rohde & Schwarz	2022-04-25	2024-04-25
455-001	RF Cable	-	-	Pasternack	2023-02-23	2023-08-23
455-002	RF Cable	-	-	-	2023-02-23	2023-08-23
455-003	RF Splitter	-	-	Pasternack	2023-02-23	2023-08-23

5. Test Results

5.1. SAR Tune-Up Power as per SAR assessment

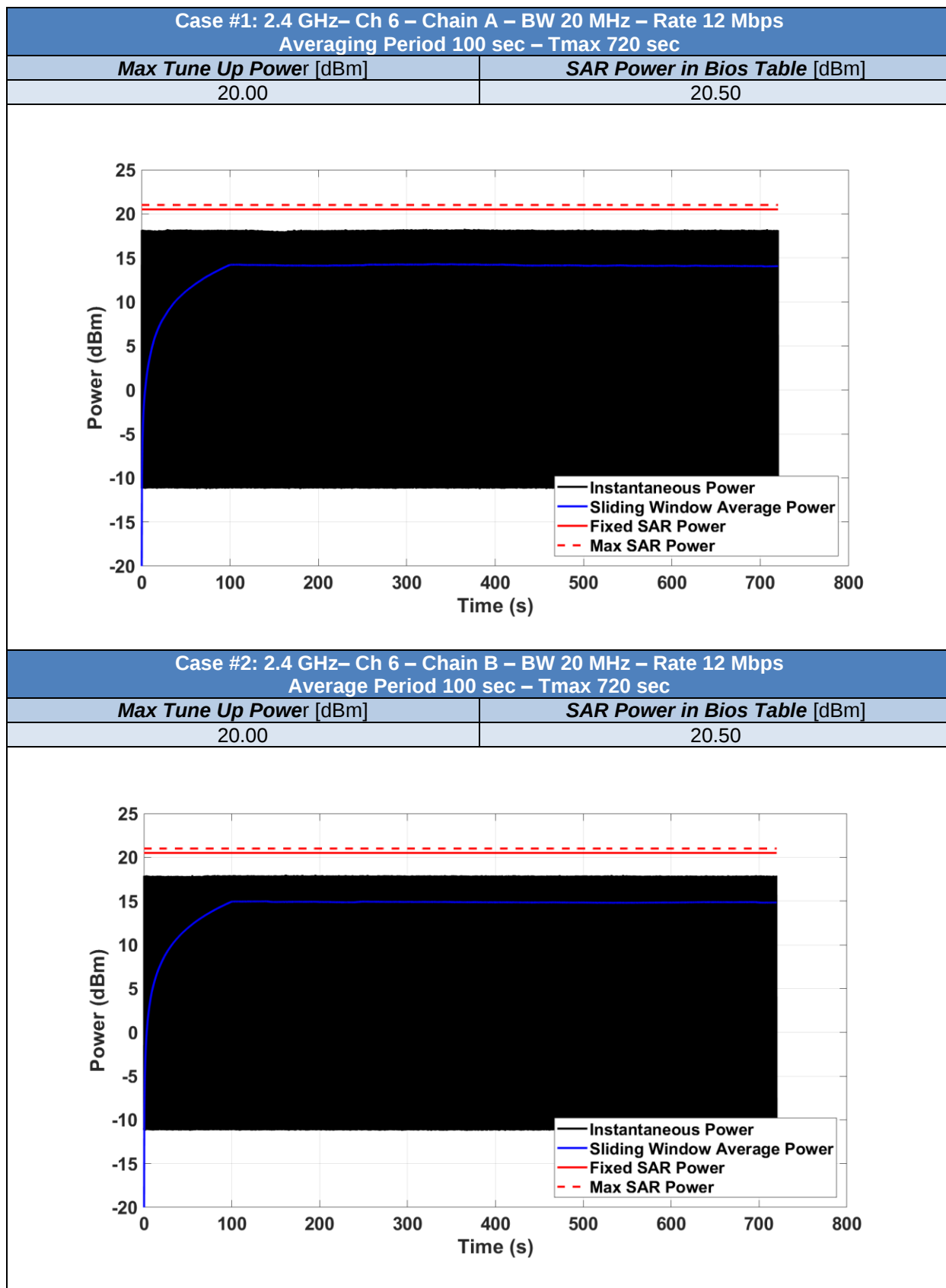
Chain A		Chain B	
IEEE 802.11g CH6	IEEE 802.11a CH120	IEEE 802.11g CH6	IEEE 802.11a CH120
20.50	18.50	20.50	18.00

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	20.50
2	6	B	20 MHz	100 sec	0.3333 msec	20.00	20.50

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

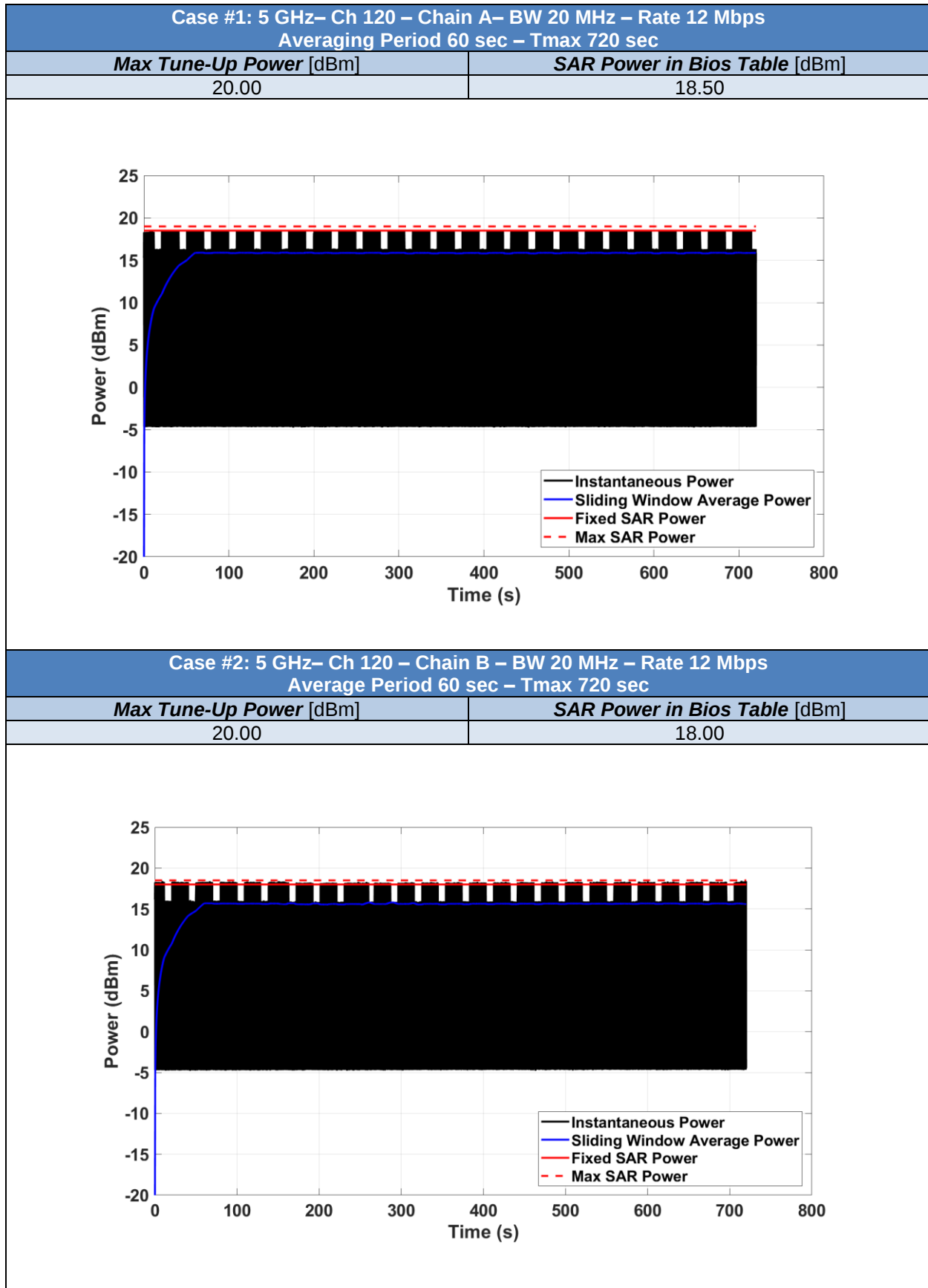


5.3. TAS Validation for 5 GHz Band on Channel 120

Table B2 – Test Cases for 5 GHz Channel 120

<i>Test Case #</i>	<i>Channel</i>	<i>Chain</i>	<i>Channel Bandwidth</i>	<i>Measurement Averaging Period</i>	<i>Measurement Time Resolution</i>	<i>Max Tune-Up Power [dBm]</i>	<i>SAR Power in Bios Table [dBm]</i>
1	120	A	20 MHz	60 sec	0.3333 msec	20.00	18.50
2	120	B	20 MHz	60 sec	0.3333 msec	20.00	18.00

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



End of the report

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