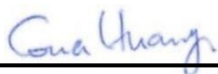


TAS Verification Report

FCC ID : C3K2128
Equipment : Portable Computing Device
Brand Name : Microsoft
Model Name : 2103
Applicant : Microsoft Corporation
One Microsoft Way Redmond, WA 98052-6399, U.S.A
Manufacturer : Microsoft Corporation
One Microsoft Way Redmond, WA 98052-6399, U.S.A
Standard : FCC 47 CFR Part 2 (2.1093)

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full.



Approved by: Cona Huang / Deputy Manager

Sporton International Inc. Wensan Laboratory

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan



Table of Contents

1. Test Setup	4
2. Test Information	4
3. Test Equipment	5
4. Test Result.....	5
4.1 TAS Validation for 2.4 GHz Band on Channel 6	5
4.2 TAS Validation for 5 GHz Band on Channel 120	7

History of this test report

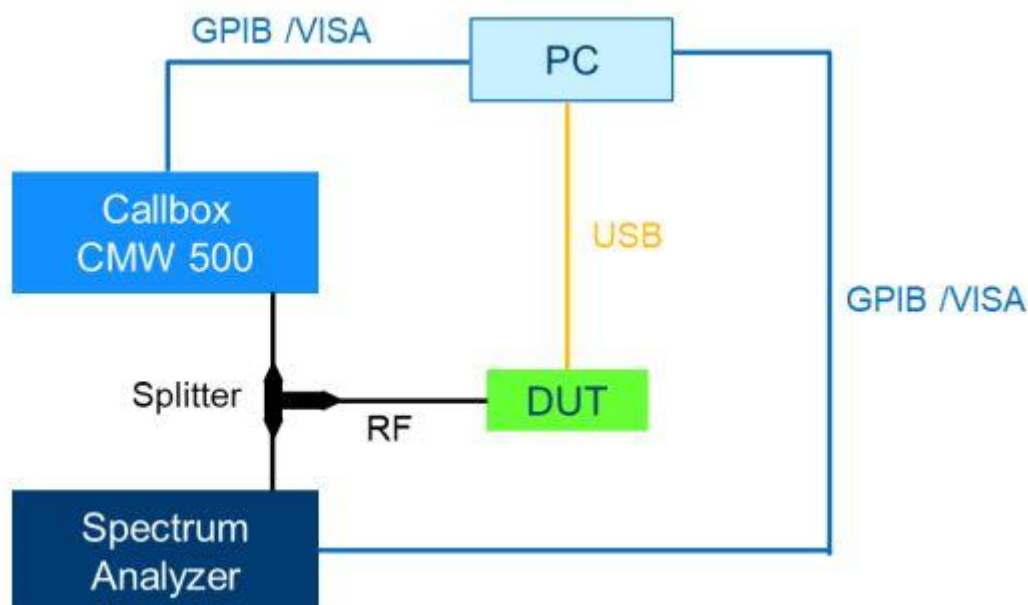
Report No.	Version	Description	Issued Date
FA490942B	01	Initial issue of report	Dec. 12, 2024

1. Test Setup

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

- The DUT which BE201D2W WiFi module is installed inside portable computing device from Microsoft model 2103
- 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 ms
- 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.
- Since WIFI6E SAR/PD was measured at the maximum output power and same as fixed SAR power level, therefore, no need to TAS behavior and validation to meet and demonstrate RF exposure compliance

Figure.1 – Validation using conducted power measurement test setup.



2. Test Information

Laboratory Name	Sporton International Inc.
Start Date	2024/11/05
End Date	2024/11/05
Temperature (°C)	23.9
Humidity [%]	51.2
Test Operator	Bunny

3. Test Equipment

Equipment and accessories used for the conducted power measurement test setup are listed below.

ID#	Device	Type/Model	Serial #	Manufacturer	Cal. Date	Cal. Due Date
1	Wideband Radio Communication Tester	CMW500	115793	ROHDE&SCHWARZ	2023/11/20	2024/11/19
2	Spectrum Analyzer	FSV3044	101103	ROHDE&SCHWARZ	2024/01/31	2025/01/30

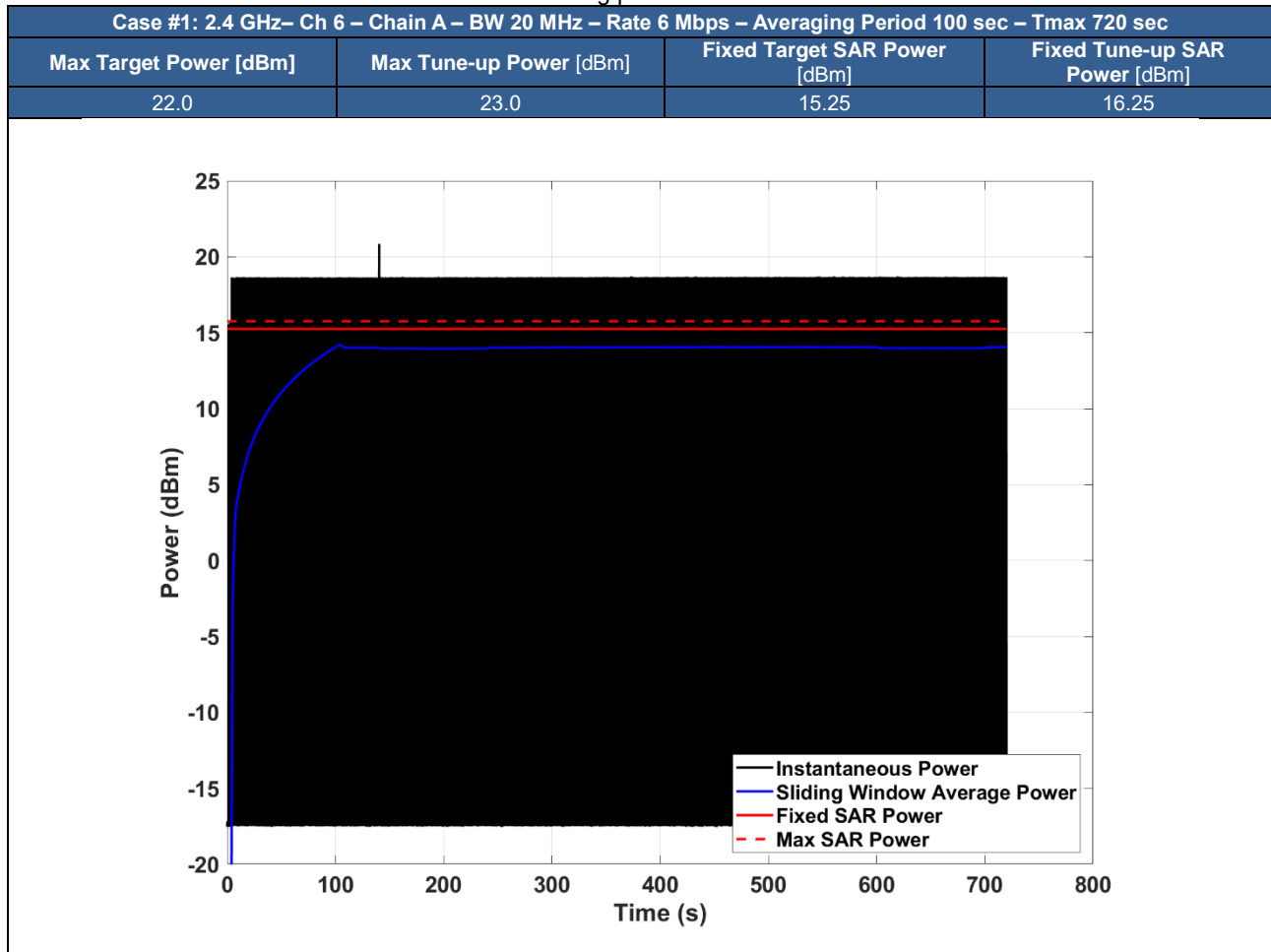
4. Test Result

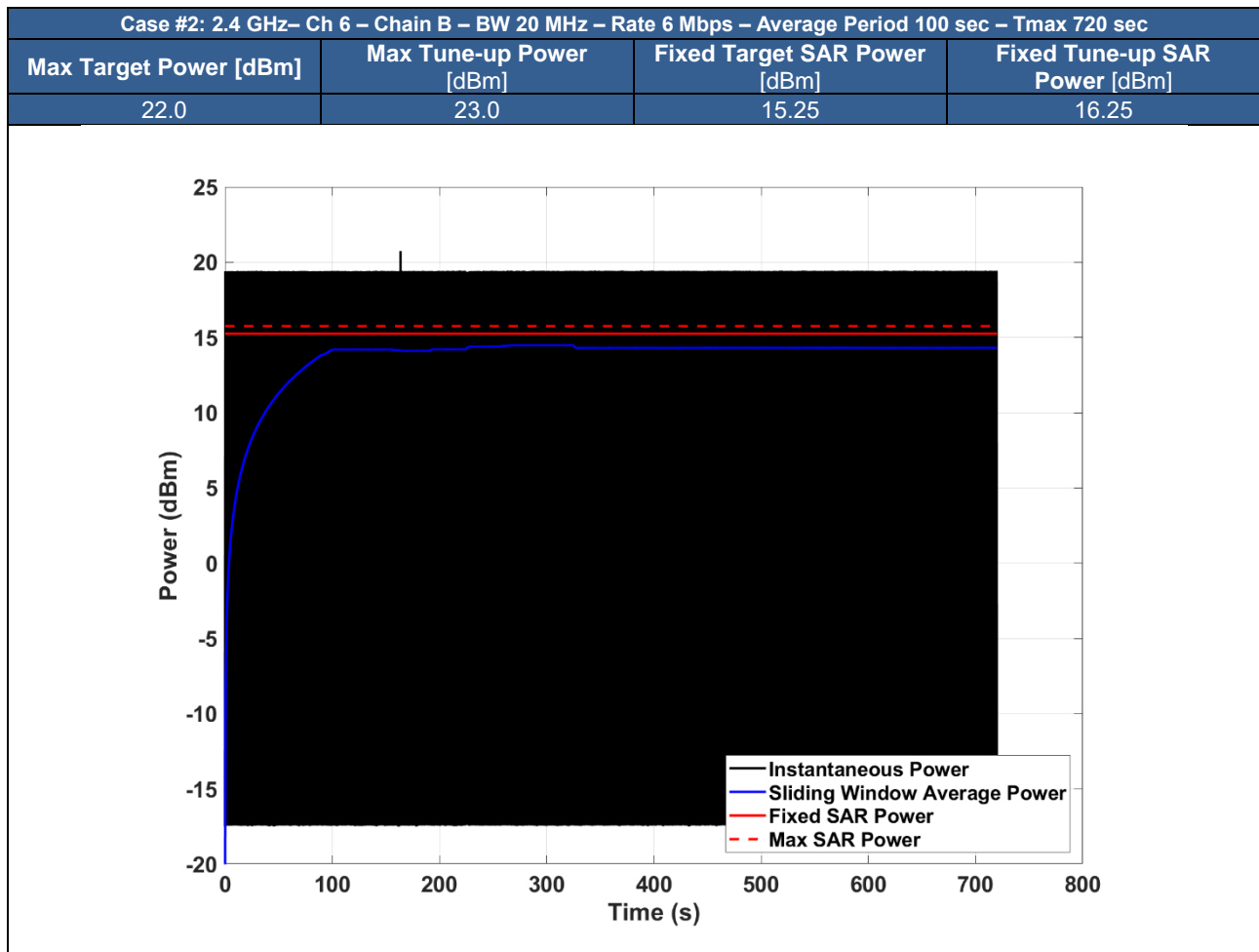
4.1 TAS Validation for 2.4 GHz Band on Channel 6

Table 1 – Test Cases for 2.4 GHz Channel 6

Test Case #	Channel	Chain	Channel Bandwidth	Measurement Averaging Period	Measurement Time Resolution	Max Target Power [dBm]	Max Tune-up Power [dBm]	Fixed Target SAR Power [dBm]	Tune-up SAR Power [dBm]
1	6	A	20 MHz	100 sec	0.3333	22.0	23.0	15.25	16.25
2		B	20 MHz	100 sec	0.3333	22.0	23.0	15.25	16.25

Results of test cases in Table 1 are shown in the following plots.





4.2 TAS Validation for 5 GHz Band on Channel 120

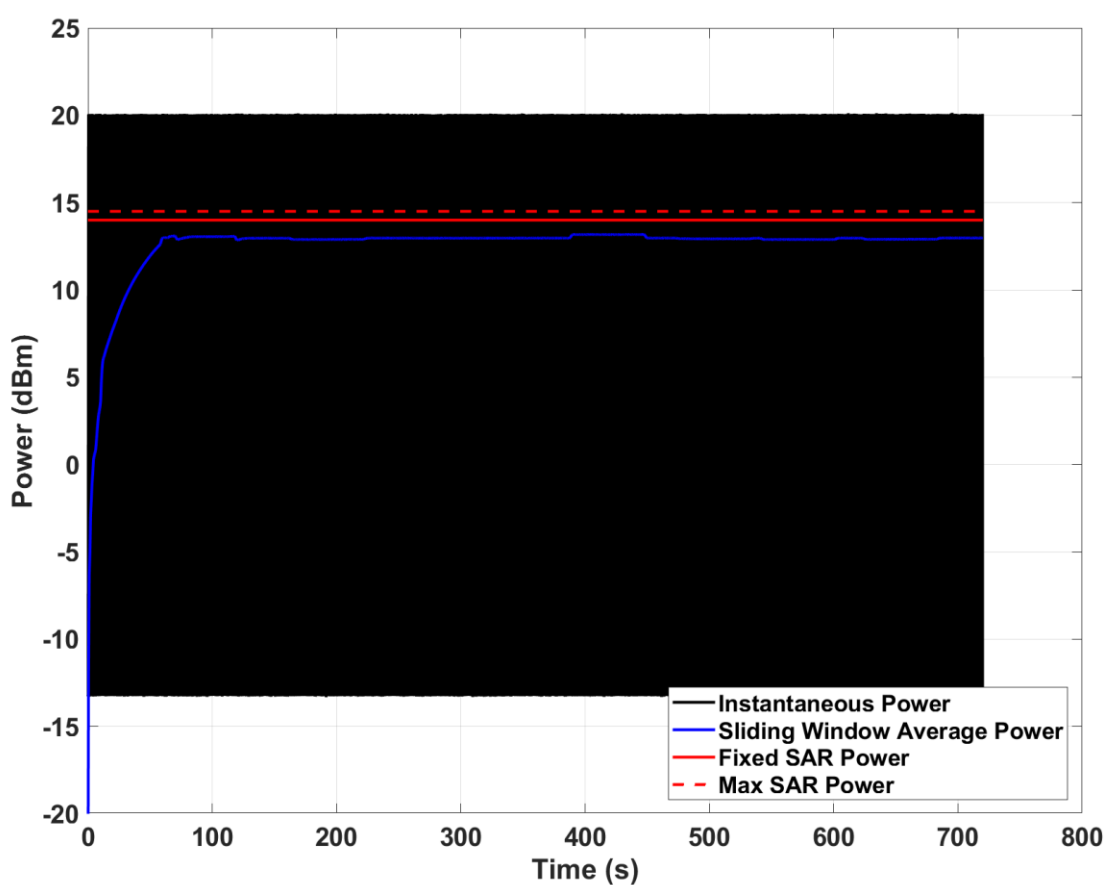
Table 2 – Test Cases for 5 GHz Channel 120

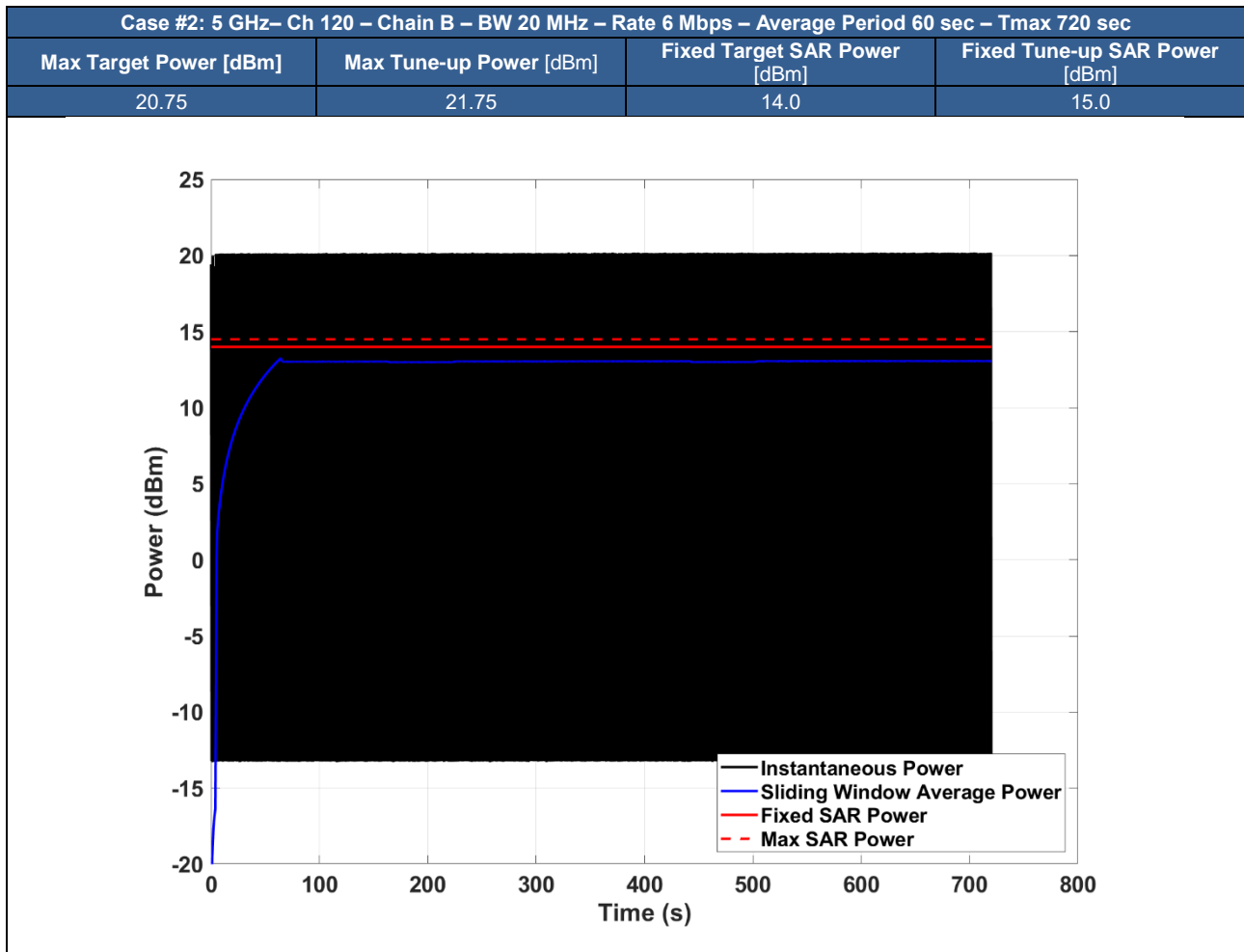
Test Case #	Channel	Chain	Channel Bandwidth	Measurement Averaging Period	Measurement Time Resolution	Max Target Power [dBm]	Max Tune-up Power [dBm]	Fixed Target SAR Power [dBm]	Tune-up SAR Power [dBm]
1	120	A	20 MHz	60 sec	0.3333	20.75	21.75	14.0	15.0
2		B	20 MHz	60 sec	0.3333	20.75	21.75	14.0	15.0

Results of test cases in Table 2 are shown in the following plots.

Case #1: 5 GHz– Ch 120– Chain A– BW 20 MHz – Rate 6 Mbps – Averaging Period 60 sec – Tmax 720 sec

Max Target Power [dBm]	Max Tune-up Power [dBm]	Fixed Target SAR Power [dBm]	Fixed Tune-up SAR Power [dBm]
20.75	21.75	14.0	15.0





Conclusion

The TAS Intel Algorithm functionality of BE201D2W WIFI Module Integrated inside Microsoft portable computing device is test cases are compliant with SAR limit