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# RF EXPOSURE REPORT





**FCC Applicant:** Wacom Co., Ltd.

2-510-1 Toyonodai, Kazo-shi, Saitama, 349-1148, Japan

**Product Name:** Active Pen

HP **Brand Name:** 

Model No.: HSN-W004P

**Report Number:** ES/2022/10006-01

**FCC ID** HV4-HSNW004P

May. 12, 2022 Issue Date:

Date of EUT Received: Jan. 12, 2022

Approved By

# We hereby certify that:

The above equipment was evaluate by SGS Taiwan Ltd. The evaluation in this report is in compliance with FCC Rule Part §2.1093.

The results of this report relate only to the sample identified in this report.

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Revision History								
Report Number	Revision	Description	Issue Date	Revised By	Remark			
ES/2022/10006-01	00	Update product name	May. 12, 2022	Ruby Ou				

### Note:

- 1. The remark "\*" indicates modification of the report upon requests from certification body.
- 2 Measurement results in the original test report ES/2022/10006 are fully leveraged in this test report.

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# **DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)**

### **Product Description**

Product Name:	Active Pen
Brand Name:	HP
Model No.:	HSN-W004P
Power Supply:	2Vdc

#### 1.2 **Reference Test Report**

Test Lab:	SGS Taiwan Ltd. Central RF Lab				
Report Number:	E2/2022/10045				

#### 1.3 **Antenna Information:**

#### 1.3.1 **BLE**

Antenna Type	Antenna Part No.	Freq. (MHz)	Peak Antenna Gain (dBi)
Chip	H2U34C1H1B0100	2.4GHz	2.10

Note: Antenna information is provided by the applicant.

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## RF EXPOSURE EVALUATION FOR PORTABLE CONDITIONS

#### 2.1 **SAR-based Exemption**

SAR-based thresholds are derived based on frequency, power, and separation distance of the RF source. The formula defines the thresholds in general for either available maximum time-averaged power or maximum time-averaged ERP, whichever is greater.

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold Pth (mW).

$$P_{\rm th} \, ({\rm mW}) = ERP_{\rm 20 \, cm} \, ({\rm mW}) = \begin{cases} 2040f & 0.3 \, {\rm GHz} \le f < 1.5 \, {\rm GHz} \\ \\ 3060 & 1.5 \, {\rm GHz} \le f \le 6 \, {\rm GHz} \end{cases} \tag{B.1}$$

$$P_{\text{th (mW)}} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \le 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \le 40 \text{ cm} \end{cases}$$
(B. 2)

where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\,\mathrm{cm}}\sqrt{f}}\right)$$

and f is in GHz, d is the separation distance (cm), and ERP20cm is per Formula (B.1).

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#### 2.2 **Measurement Result:**

Frequency Band (MHz)	Max. power (dBm)	Max. power (mW)	Peak gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	ERP (W)	d (cm)	f (GHz)	х	Pth (mW)
2480	-0.06	0.986	2.1	2.04	-0.11	0.975	0.001	0.5	2.480	1.905	2.715

Both the maximum time-averaged power and effective radiated power (ERP) are less than the threshold Pth (mW), so the device can be excluded from SAR measurement.

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