



RF EXPOSURE REPORT



Applicant: Darfon Electronics Corp.
167, Shanying Road, Gueishan, Taoyuan 33341, Taiwan,
R.O.C

Manufacturer: HP Inc.
1501 Page Mill Road, Palo Alto, CA 94304, USA

Product Name: Wireless Numpad

Brand Name: HP

Model No.: TPA-D004K

Model Difference: N/A

Report Number: TESA2308000475ES

FCC ID O62-TPAD004K

Date of EUT Received: Aug. 11, 2023

Issue Date: January 3, 2024

Approved By

John Yeh

We hereby certify that:

The above equipment was evaluated 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
TESA2308000475ES	00	Original	Dec. 1, 2023	Candice Li	
TESA2308000475ES	01	Modify Section 1.2, 1.4, 2.2	Dec. 21, 2023	Candice Li	*
TESA2308000475ES	02	Modify Section 1.3, 1.4, 2.2	Dec. 29, 2023	Candice Li	*
TESA2308000475ES	03	Modify Section 1.4.1	Jan. 3, 2024	Candice Li	*

Note:

- 1、The remark "*" indicates modification of the report upon requests from certification body.
- 2、Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

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1 DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

1.1 Product Description

Product Name:	Wireless Numpad
Brand Name:	HP
Model No.:	TPA-D004K
Model Difference:	N/A
Hardware Version:	N/A
Firmware Version:	N/A
EUT Series No.:	9CH3010001
Power Supply:	3Vdc from Lithium Cell Battery*2

1.2 Reference Test Report

Test Lab:	SGS Taiwan Ltd. Central RF Lab
Report Number:	TERF2308002002E2, TERF2308002003E2

1.3 Antenna Information:

The antenna information is provided by the applicant.

1.3.1 BT / SRD 2.4GHz

Supplier	Antenna Part No.	Freq. (MHz)	Peak Antenna Gain (dBi)
Unictron	AA055U	2.4GHz	1.80

1.4 Rated Power

1.4.1 Bluetooth / SRD 2.4GHz

Mode	Freq. Range (MHz)	Modulation Technology	Max Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)
BLE	2402	GFSK	-0.61	1.80	1.19
2.4G	2447	GFSK	-21.95	1.80	-20.15

Note: EIRP[dBm] = E[dBuV/m] - 95.2, for d = 3 m for E-field

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2 RF EXPOSURE EVALUATION FOR PORTABLE CONDITIONS

2.1 FCC Standard Applicable:

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

2.1.1 As per KDB 447498 D01 4.3.1,

Step a: For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g Head \& Body SAR and} \leq 7.5 \text{ for 10-g extremity Hand SAR, where}$

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- The values 3.0 and 7.5 are referred to as numeric thresholds in **step b)** below

Step b: For 100 MHz to 6 GHz and test separation distances > 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following (also illustrated in Appendix B):

- 1) $\{[\text{Power allowed at numeric threshold for 50 mm in step a}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)]\} \text{ mW, for 100 MHz to 1500 MHz}$
- 2) $\{[\text{Power allowed at numeric threshold for 50 mm in step a}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10]\} \text{ mW, for} > 1500 \text{ MHz and} \leq 6 \text{ GHz}$

Step c: For frequencies below 100 MHz, the following may be considered for SAR test exclusion (also illustrated in Appendix C):

- 1) For test separation distances > 50 mm and < 200 mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by $[1 + \log(100/f(\text{MHz}))]$
- 2) For test separation distances ≤ 50 mm, the power threshold determined by the equation in c) 1) for 50 mm and 100 MHz is multiplied by $\frac{1}{2}$
- 3) SAR measurement procedures are not established below 100 MHz

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2.2 Measurement Result:

BLE

Step a:

This is a portable device and the max. output power including tune-up tolerance is 0.869 (mW), lower than the threshold given and derived as formula given above, where

$$=0.869(\text{mW})/5(\text{mm})^*\sqrt{2.402(\text{GHz})} = 0.269 < 3.0$$

Frequency (MHz)	Max. output power including tune-up tolerance(dBm)	Max. output power including tune-up tolerance(mW)	Distance (mm)	Result	≤ 3.0 for 1-g SAR
2402	-0.61	0.869	5	0.269	TRUE

SRD 2.4G

Step a:

This is a portable device and the max. output power including tune-up tolerance is 0.006 (mW), lower than the threshold given and derived as formula given above, where

$$=0.006(\text{mW})/5(\text{mm})^*\sqrt{2.447(\text{GHz})} = 0.002 < 3.0$$

Frequency (MHz)	Max. output power including tune-up tolerance(dBm)	Max. output power including tune-up tolerance(mW)	Distance (mm)	Result	≤ 3.0 for 1-g SAR
2447	-21.95	0.006	5	0.002	TRUE

As the result of calculation result indicates, the RF exposure generating from given transmitter (transmitter employed digital modulation) can be excluded from SAR measurement, and is deemed compliant with RF exposure as per FCC.

~ End of Report ~

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