



Test report No. : 4790323504A-US-R2-V0
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Issued date : 2022/3/22
FCC ID : RLY21GM01

Maximum Permissible Exposure Report

Product : ALPHA Wireless Gaming Mouse
Model Name : ALPHAWL-BKCWW
FCC ID : RLY21GM01
Test Regulation : 47 CFR FCC Part 2.1093
Received Date : 2022/2/24
Test Date : 2022/3/1 ~ 2022/3/15
Issued Date : 2022/3/22
Applicant : ADATA Technology Co., Ltd.
2F., No.258, Lian Cheng Rd., Chung Ho Dist., New Taipei
City 235, Taiwan (R.O.C.)
Issued By : Underwriters Laboratories Taiwan Co., Ltd.
Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd.,
Zhudong Township, Hsinchu County, Taiwan



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1. Attestation of Test Results

APPLICANT: ADATA Technology Co., Ltd.
 2F., No.258, Lian Cheng Rd., Chung Ho Dist., New Taipei City 235,
 Taiwan (R.O.C.)

EUT DESCRIPTION: ALPHA Wireless Gaming Mouse

BRAND: XPG

MODEL: ALPHAWL-BKCWW

SAMPLE STAGE: Engineering Verification Test sample

APPLICABLE STANDARDS	
STANDARD	Test Results
47 CFR FCC PART 2.1093	PASS

Underwriters Laboratories Taiwan Co., Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by Underwriters Laboratories Taiwan Co., Ltd. based on interpretations and/or observations of test results. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Underwriters Laboratories Taiwan Co., Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Underwriters Laboratories Taiwan Co., Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Prepared By:

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 Project Handler

Date : 2022/3/22

Approved and Authorized By:

Kent Liu
 Senior Project Engineer

Date : 2022/3/22

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2. Test Methodology and Reference Procedures

The tests documented in this report were performed in accordance with KDB 447498 D01 General RF Exposure Guidance v06.

3. Facilities and Accreditation

Test Location	Underwriters Laboratories Taiwan Co., Ltd.
Address	Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan
Accreditation Certificate	Underwriters Laboratories Taiwan Co., Ltd. is accredited by TAF, Laboratory Code 3398.

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4. Equipment Under Test

4.1. Description of EUT

Product Name	ALPHA Wireless Gaming Mouse	
Brand Name	XPG	
Model Name	ALPHAWL-BKCWW	
Operating Frequency	Bluetooth LE	2402MHz ~ 2480MHz
	SRD	2403MHz ~ 2475MHz
Modulation	Bluetooth LE	GFSK
	SRD	GFSK
Number of Channel	Bluetooth LE	40
	SRD	5
Normal Voltage	5Vdc from USB 3.7Vdc from Battery	
Sample ID	Bluetooth LE	Conducted Test: 4707998 Radiated Test: 4737136
	SRD	Conducted Test: 4707996 Radiated Test: 4707995

Note:

1. The EUT contains following accessory devices:

Product	Brand	Model	Description
USB Cable	PENGJI	41-200-0538-100S	Length: 1.8m

2. The EUT could be supplied with rechargeable battery as the following table:

Brand Name	Model	Description
Hang Zhou Future Power Technology Co., Ltd	FT603048P	3.7Vdc, 900mAh

3. The above EUT information is declared by manufacturer and for more detailed features description, please refer the manufacturer's or user's manual.

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4.2. Description of Available Antennas

Ant. No.	Transmitter Circuit	Brand Name	Model Name	Ant. Type	Maximum Gain (dBi)
1	Chain (0)	WoodStone	2.4GHZ ANTENNA	PCB	-0.42

Note: The above antenna information was provided from customer and for more detailed features description, please refer the manufacturer's specification or user's manual.

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5. Requirement

Following FCC KDB 447498 D01 “General SAR test exclusion guidance”

The corresponding SAR Exclusion Threshold condition, listed below:

- 1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] $\cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
 - f(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 test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

- 2) At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following:
 - a) [Threshold at 50 mm in step 1) + (test separation distance - 50mm) \cdot (f(MHz)/150)] mW, at 100MHz to 1500 MHz
 - b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) \cdot 10] mW at > 1500 MHz and ≤ 6 GHz

- 3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion.
 - a) The threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by $[1 + \log(100/f(\text{MHz}))]$ for test separation distances > 50 mm and < 200 mm.
 - b) The threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by $\frac{1}{2}$ for test separation distances ≤ 50 mm.
 - c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

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6. Radio Frequency SAR Test Exclusion Thresholds

Operating Mode	Evaluation Frequency	Max. Average power	Antenna Gain	Min. test separation distance	SAR test exclusion calculation value	10-g SAR test exclusion thresholds	Result
	(MHz)	(mW)	(dBi)	(mm)			
Bluetooth LE	2480	4.276	-0.42	5	1.347	7.5	PASS
SRD	2475	6.998	-0.42	5	2.202	7.5	PASS

Note:

1. Calculate SAR test exclusion thresholds from section 5.1 formulas.

Conclusion:

Since Source-base time average power is below SAR test exclusion power thresholds, the SAR evaluation is not required.

END OF REPORT

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