

RF Exposure Report

Report No.: SABDKG-WTW-P21030577

FCC ID: JNZMR0091

Test Model: MR0091

Received Date: Mar. 16, 2021

Test Date: Mar. 26, 2021

Issued Date: Apr. 21, 2021

Applicant: LOGITECH FAR EAST LTD.

Address: 7700 Gateway Boulevard Newark California United States

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Hsin Chu Laboratory

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**FCC Registration /
Designation Number:** 723255 / TW2022

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Release Control Record

Issue No.	Description	Date Issued
SABDKG-WTW-P21030577	Original release.	Apr. 21, 2021

1 Certificate of Conformity

Product: Wireless Mouse

Brand: Logitech

Test Model: MR0091

Sample Status: Engineering sample

Applicant: LOGITECH FAR EAST LTD.

Test Date: Mar. 26, 2021

Standards: FCC Part 2 (Section 2.1093)
IEEE C95.1-1992

References Test Guidance: KDB 447498 D01 General RF Exposure Guidance v06

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by :  , **Date:** Apr. 21, 2021
Claire Kuan / Specialist

Approved by :  , **Date:** Apr. 21, 2021
Clark Lin / Technical Manager

2 Evaluation Result

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:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$$

$$\leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$
 - $f(\text{GHz})$ 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 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.

3 SAR Test Exclusion Thresholds

BT-LE Avg. Power Table

BT-LE 1M

BT-LE function			
Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	4.875	6.88
19	2440	4.519	6.55
39	2480	4.083	6.11
Logi bolt function			
Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	4.732	6.75
19	2440	4.385	6.42
39	2480	4.018	6.04

For BT-LE SAR Test Exclusion Thresholds

Frequency (MHz)	Max Avg. Power (dBm)	Max Avg. Power (mW)	Min. test separation distance (mm)	SAR test exclusion calculation value ^(NOTE 1)	10-g SAR test exclusion thresholds	Result
2402 ~ 2480	6.88	4.875	5	1.535	7.5	Pass

Note: 1. Calculate SAR test exclusion thresholds from condition "1" formulas.

BT-LE 2M

BT-LE function			
Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2404	4.853	6.86
19	2440	4.498	6.53
38	2478	4.093	6.12
Logi bolt function			
Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	4.71	6.73
19	2440	4.375	6.41
39	2480	3.999	6.02

For BT-LE SAR Test Exclusion Thresholds

Frequency (MHz)	Max Avg. Power (dBm)	Max Avg. Power (mW)	Min. test separation distance (mm)	SAR test exclusion calculation value ^(NOTE 1)	10-g SAR test exclusion thresholds	Result
2404 ~ 2478	6.86	4.853	5	1.528	7.5	Pass

Note: 1. Calculate SAR test exclusion thresholds from condition "1" formulas.

4 Conclusion

Since average power is below SAR test exclusion power thresholds, the SAR evaluation is not required.

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