

RF Exposure Report

Report No.: MFBDKG-WTW-P22060007

FCC ID: JNZYR0087

Test Model: YR0087

Received Date: 2022/5/21

Test Date: 2022/6/28

Issued Date: 2022/7/19

Applicant: LOGITECH FAR EAST LTD.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
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**FCC Registration /
Designation Number:** 723255 / TW2022



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Release Control Record

Issue No.	Description	Date Issued
MFBDKG-WTW-P22060007	Original release.	2022/7/19

1 Certificate of Conformity

Product: Wireless Keyboard

Brand: Logitech

Test Model: YR0087

Sample Status: Engineering sample

Applicant: LOGITECH FAR EAST LTD.

Test Date: 2022/6/28

FCC Rule Part: FCC Part 2 (Section 2.1093)

Standards: 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 : Vivian Huang , **Date:** 2022/7/19
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Approved by : May Chen , **Date:** 2022/7/19
May Chen / 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:
$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min. test separation distance, mm}} \right] \cdot [\sqrt{f(\text{GHz})}]$$
$$\leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$
 - $f(\text{GHz})$ 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			
Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	5.483	7.39
19	2440	5.521	7.42
39	2480	5.458	7.37
logi bolt -1M			
Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	5.47	7.38
19	2440	5.495	7.40
39	2480	5.445	7.36

BT-LE 2M			
Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2404	5.495	7.40
19	2440	5.521	7.42
38	2478	5.47	7.38
logi bolt -2M			
Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2404	5.47	7.38
19	2440	5.495	7.40
38	2478	5.458	7.37

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)	1-g SAR test exclusion thresholds	Result
2402 ~ 2480	7.42	5.521	5	1.739	3	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.

The device of BT-LE and logi bolt function cannot transmit simultaneously.

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