

RF Exposure Report

Report No.: SA190103E06

FCC ID: JNZS00174

Test Model: S00174

Received Date: Jan. 03, 2018

Test Date: Mar. 14, 2019

Issued Date: Mar. 26, 2019

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

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Release Control Record

| Issue No. | Description | Date Issued |
|-------------|-------------------|---------------|
| SA190103E06 | Original release. | Mar. 26, 2019 |

1 Certificate of Conformity

Product: Bluetooth Speaker

Brand: ULTIMATE EARS

Test Model: S00174

Sample Status: ENGINEERING SAMPLE

Applicant: LOGITECH FAR EAST LTD.

Test Date: Mar. 14, 2019


Standards: FCC Part 2 (Section 2.1093)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

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 :




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Date:

Mar. 26, 2019

Approved by :



May Chen / Manager

Date:

Mar. 26, 2019

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:
$$\frac{[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]}{\leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}}$$
 - $f(\text{GHz})$ 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) · (f(MHz)/150)] mW, at 100MHz to 1500 MHz
 - b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 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-EDR Avg. Power Table

| Channel | Frequency (MHz) | GFSK | | 8DPSK | |
|---------|-----------------|-----------------|------------------|-----------------|------------------|
| | | Avg. Power (mW) | Avg. Power (dBm) | Avg. Power (mW) | Avg. Power (dBm) |
| 0 | 2402 | 3.251 | 5.12 | 3.243 | 5.11 |
| 39 | 2441 | 3.289 | 5.17 | 3.319 | 5.21 |
| 78 | 2480 | 3.296 | 5.18 | 3.327 | 5.22 |

For BT-EDR 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 | 5.22 | 3.327 | 5 | 1.048 | 3 | Pass |

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

BT-LE Avg. Power Table

| Channel | Frequency (MHz) | Avg. Power | |
|---------|-----------------|------------|-------|
| | | (mW) | (dBm) |
| 0 | 2402 | 3.908 | 5.92 |
| 19 | 2440 | 3.954 | 5.97 |
| 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) | 1-g SAR test exclusion thresholds | Result |
|-----------------|----------------------|---------------------|------------------------------------|--|-----------------------------------|--------|
| 2402 ~ 2480 | 6.02 | 3.999 | 5 | 1.26 | 3 | Pass |

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

4 Conclusion

The device of BT-EDR and BT-LE modulation type can't transmit simultaneously. Since Source-base time average power is below SAR test exclusion power thresholds, the SAR evaluation is not required.

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