

## RF Exposure Report

**Report No.:** SA150713D13

**FCC ID:** C3K1738

**Test Model:** 1738

**Received Date:** Jun. 28, 2015

**Test Date:** Jun. 28 ~ Jul. 13, 2015

**Issued Date:** Jul. 17, 2015

**Applicant:** MICROSOFT CORPORATION

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

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(R.O.C.)



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### Release Control Record

| Issue No.   | Description       | Date Issued   |
|-------------|-------------------|---------------|
| SA150713D13 | Original release. | Jul. 17, 2015 |

## 1 Certificate of Conformity

**Product:** Wireless keyboard

**Brand:** Microsoft®

**Test Model:** 1738

**Sample Status:** Engineering sample

**Applicant:** MICROSOFT CORPORATION

**Test Date:** Jun. 28 ~ Jul. 13, 2015

**Standards:** FCC Part 2 (Section 2.1093)

KDB 447498 D03

IEEE C95.1

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: Jul. 17, 2015  
( Celia Chen / Senior Specialist )

**Approved by :**  , Date: Jul. 17, 2015  
( Rex Lai / Assistant 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  $\leq 50$  mm are determined by:  
$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$$
$$\leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$
  - Ø  $f(\text{GHz})$  is the RF channel transmit frequency in GHz.
  - Ø Power and distance are rounded to the nearest mW and mm before calculation.
  - Ø The result is rounded to one decimal place for comparison. The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  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)  $[\text{Threshold at } 50 \text{ mm in step 1}) + (\text{test separation distance} - 50\text{mm}) \cdot (f(\text{MHz})/150)] \text{ mW}$ , at 100MHz to 1500 MHz
  - b)  $[\text{Threshold at } 50 \text{ mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot 10] \text{ mW}$  at  $> 1500$  MHz and  $\leq 6$  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  $\leq 50$  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

Maximum measured transmitter power:

| Frequency (GHz) | Max. Power (mW) | Min. test separation distance (mm) | SAR test exclusion calculation value <sup>(NOTE 2)</sup> | 1-g SAR test exclusion thresholds | Result |
|-----------------|-----------------|------------------------------------|--|-----------------------------------|--------|
| 2.403 ~ 2.480   | 1.219           | 5                                  | 0.378  | 3                                 | Pass   |

**NOTE:** 1. The antenna type is PCB antenna with 1.39dBi gain.  
2. Calculate SAR test exclusion thresholds from condition "1" formulas.

### 4 Conclusion

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

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