



# RF EXPOSURE REPORT

**REPORT NO.:** SA130718D08

**MODEL NO.:** 1598

**FCC ID:** C3K1598

**RECEIVED:** Jul. 18, 2013

**TESTED:** Jul. 22, 2013

**ISSUED:** Jul. 30, 2013

**APPLICANT:** MICROSOFT CORPORATION

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

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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA130718D08	Original release.	Jul. 30, 2013



# 1. CERTIFICATION

**PRODUCT:** Wireless Adapter  
**MODEL NO.:** 1598  
**BRAND:** Microsoft®  
**APPLICANT:** MICROSOFT CORPORATION  
**TESTED:** Jul. 22, 2013  
**TEST SAMPLE:** ENGINEERING SAMPLE  
**STANDARDS:** **FCC Part 2 (Section 2.1093)**  
**FCC OET Bulletin 65, Supplement C (01-01)**  
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.

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( Jessica Cheng / Specialist )

**APPROVED BY :**           *Ken Liu*           , **DATE:**           Jul. 30, 2013            
( Ken Liu / Senior 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:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, 16 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) [Threshold at 50 mm in step 1) + (test separation distance - 50mm) · (  $f(\text{MHz})/150$ )] 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  $\leq 6$  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
2.402 ~ 2.480	0.5	5	0.155	3	Pass

**NOTE:** 1. The antenna type is Loop antenna with -1.35dBi 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.