



RF EXPOSURE REPORT

Report Number : 16U22953-E8V1

Applicant : Microsoft
1 Microsoft Way
Redmond, WA 98052, USA

Model : 1537

FCC ID : C3K1537

EUT Description : WIRELESS INPUT DEVICE

Test Standard(s) : FCC Part 1 Subpart I
FCC Part 2 Subpart J

Date of Issue:

Thursday, April 28, 2016

Prepared by:

UL Verification Services Inc.
47173 Benicia Street
Fremont, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888



NVLAP LAB CODE 200065-0

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V1	4/28/2016	Initial Issue	----

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: MICROSOFT
1 MICROSOFT WAY
REDMOND, WA, 98052, USA

EUT DESCRIPTION: WIRELESS INPUT DEVICE

MODEL: 1537

SERIAL NUMBER: N/A

DATE TESTED: N/A

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47 CFR § 2.1093 Published RF exposure KDB procedures	Exempt from SAR testing

UL Verification Services Inc. calculated the RF Exposure of the above equipment in accordance with the requirements set forth in the above standards, using test results reported in the test report documents referenced below and/or documentation furnished by the applicant. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations of these calculations. The results show that the equipment is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For
UL Verification Services Inc. By:



FRANCISCO DE ANDA
PROJECT MANAGER
UL Verification Services Inc.

2. TEST METHODOLOGY

All calculations were made in accordance with FCC OET Bulletin 65 Edition 97-01 and IC Safety Code 6.

Data from the original MPE reports (13U14963A, UNII-1 and 13U14963-6, UNII-2/2C) and data for the new rules in UNII-3 band report (16U22953-E1V4) was used to verify the maximum power as declared by manufacturer.

3. REFERENCES

Measurements for the new rules in UNII-3 band requirements were made as documented in test report UL Verification Services Inc. Document 16U22953-E1V4 for operation in the 5.8 GHz band.

Maximum declared output power and antenna gain is provided by the applicant.

4. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://ts.nist.gov/standards/scopes/2000650.htm>.

5. STANDALONE SAR TEST EXCLUSION CONSIDERATIONS

5.1. FCC

SAR test exclusion in accordance with KDB 447498.

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:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [f(\text{GHz})] \leq 3.0$, for 1-g SAR and ≤ 7.5 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.

Original Filing data;

Antenna	Tx	Frequency (MHz)	Avg Output power		Separation distances (mm)	Calculated Threshold
			dBm	mW		
WLAN Main	2.4WiFi	2412	9.00	8	5	2.5
WLAN Main	5.2WiFi	5240	8.00	6	5	2.7
WLAN Main	5.8WiFi	5825	6.00	4	5	1.9

New data for UNII-3 band(5.8GHz);

Antenna	Tx	Frequency (MHz)	Avg Output power		Separation distances (mm)	Calculated Threshold
			dBm	mW		
WLAN Main	5.8WiFi	5745	6.00	4	5	1.9

Conclusion:

Data from the original MPE reports (13U14963A, UNII-1 and 13U14963-6, UNII-2/2C) and data for the new rules in UNII-3 band report (16U22953-E1V4) was used to verify the maximum power.

The computed value is < 3 ; therefore, EUT qualifies for Standalone SAR test exclusion.

END OF REPORT