



**FCC Part 1 Subpart I  
FCC Part 2 Subpart J**

**RF EXPOSURE REPORT**

**FOR**

**WIRELESS EARPHONES**

**MODEL NUMBER: A1747**

**FCC ID: BCG-A1747**

**REPORT NUMBER: 16U23787-E8V2**

**ISSUE DATE: AUGUST 25, 2016**

*Prepared for*  
**APPLE, INC.**  
**1 INFINITE LOOP**  
**CUPERTINO, CA 95014, U.S.A.**

*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	08/24/2016	Initial Issue	Chin Pang
V2	08/24/2016	Address TCB's Questions	Chin Pang

---

## TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS.....	4
2. TEST METHODOLOGY .....	5
3. REFERENCES .....	5
4. FACILITIES AND ACCREDITATION.....	5
5. STANDALONE SAR TEST EXCLUSION CONSIDERATIONS.....	6
5.1. FCC .....	6

# 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** APPLE, INC.  
1 INFINITE LOOP  
CUPERTINO, CA 95014, U.S.A.

**EUT DESCRIPTION:** WIRELESS EARPHONES

**MODEL:** A1747

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 1 SUBPART I & PART 2 SUBPART J KDB447498	Pass

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:

Prepared By:



CHIN PANG  
SENIOR ENGINEER  
UL VERIFICATION SERVICES INC.

JOE VANG  
EMC ENGINEER  
UL VERIFICATION SERVICES INC.

## 2. TEST METHODOLOGY

All calculations were made in accordance with FCC OET Bulletin 65 Edition 97-01, KDB 447498.

## 3. REFERENCES

All measurements were made as documented in test report UL Verification Services Inc. UL Verification Services Inc. Document 16U23787-E4V1, 16U23787-E5V1 for operation in the 2.4 GHz band.

Output power, Duty cycle and Antenna gain data are excerpted from the applicable test reports.

## 4. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47266 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  $\leq 50$  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, 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  $\leq 50$  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.

SAR Exclusion Calculations Table for Portable Devices (separation distance  $< 20\text{cm}$ )

Antenna	Tx	Frequency (MHz)	Max target power		Separation distances (mm)	Calculated Threshold
			dBm	mW		
BLE Main	BLE	2480	8.50	7.00	5	2.2
BT Main	BT	2480	8.50	7.00	5	2.2

Conclusion:

The computed value is  $< 3$ ; therefore, Bluetooth and BLE qualify for Standalone SAR test exclusion.

**END OF REPORT**