



FCC RF EXPOSURE REPORT

For

SoundBar

MODEL NUMBER: HW-N300

FCC ID: A3LHWN300

REPORT NUMBER: 4788419653.4-6

ISSUE DATE: April 18, 2018

Prepared for

**Samsung Electronics Co Ltd.
19 Chapin Rd., Building Pine Brook New Jersey United States 07058**

Prepared by

**UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch
Room 101, Building 10, Innovation Technology Park,
Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China
Tel: +86 769 33817100
Fax: +86 769 33244054
Website: www.ul.com**



Revision History

Rev.	Issue Date	Revisions	Revised By
--	4/18/2018	Initial Issue	



TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	4
2. TEST METHODOLOGY	5
3. FACILITIES AND ACCREDITATION	5
4. REQUIREMENT	6



1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: SAMSUNG ELECTRONICS CO. LTD.
Address: #129 Samsung-Ro, Yeongtong-Gu Suwon-Si, Gyeonggi-Do
16677 Korea

Manufacturer Information

Company Name: SAMSUNG ELECTRONICS CO. LTD.
Address: #129 Samsung-Ro, Yeongtong-Gu Suwon-Si, Gyeonggi-Do
16677 Korea

EUT Description

EUT Name: SoundBar
Model: HW-N300
Brand Name: SAMSUNG
Sample Status: Normal
Sample ID: 1533406
Sample Received Date: April 09, 2018
Date of Tested: April 10, 2018 ~ April 17, 2018

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47CFR§2.1091	Complies

Tested By:

Denny Huang
Engineer Project Associate

Checked By:

Shawn Wen
Laboratory Leader

Approved By:

Stephen Guo
Laboratory Manager



2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	A2LA (Certificate No.: 4102.01) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA. IAS (Lab Code: TL-702) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has demonstrated compliance with ISO/IEC Standard 17025:2005, General requirements for the competence of testing and calibration laboratories FCC (FCC Designation No.: CN1187) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules IC(Company No.: 21320) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320. VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B , the VCCI registration No. is C-20012 and T-20011
---------------------------	--

Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.



4. REQUIREMENT

LIMIT AND CALCULATION METHOD

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

RF EXPOSURE LIMIT

Frequency Range (MHz)	E-field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (Minutes)
0.3 -- 1.34	614	1.63	(100)*	30
1.34 -- 30	824/f	2.19/f	(180/f ²)*	30
30 -- 300	27.5	0.073	0.2	30
300 -- 1500	--	--	f/1500	30
1500 -- 100,000	--	--	1.0	30

CALCULATION METHOD

$$S = PG / 4\pi R^2$$

Where:

S=power density

P=power input to antenna

G=power gain of the antenna in the direction of interest relative to an isotropic radiator

R=distance to the center of radiation of the antenna



CALCULATED RESULTS

BT Mode					
Frequency	Output Power	Output Power	Power Density	Limit	Test Result
MHz	dBm	mW	mW/cm ²	mW/cm ²	--
2402~2480	9	5.012	0.003	1	Pass

Note: 1. Antenna Gain=2.0dBi (Numeric 1.58), $\pi=3.14$.
2. The Power comes from turn up power which declared by customer.
3. The minimum separation distance of the device is greater than 20 cm.
4. Calculate by WORST-CASE mode.

END OF REPORT

Page 7 of 7