

RF Exposure Report

Report No.: SA140729D01A-2

FCC ID: WLQOMNISB1PLUSTX

Test Model: Omni SB1 Plus Soundbar

Received Date: Dec. 10, 2015

Test Date: Dec. 14 ~ 21, 2015

Issued Date: Dec. 22, 2015

Applicant: Polk Audio

Address: 5601 Metro Drive Baltimore Maryland 21215 United States

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

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)



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Release Control Record

Issue No.	Description	Date Issued
SA140729D01A-2	Original release.	Dec. 22, 2015

1 Certificate of Conformity

Product: Soundbar

Brand:



Test Model: Omni SB1 Plus Soundbar

Sample Status: Engineering sample

Applicant: Polk Audio

Test Date: Dec. 14 ~ 21, 2015

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D03

KDB 447498 D01

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 :



Annie Chang / Senior Specialist

Date:

Dec. 22, 2015

Approved by :



Rex Lai / Assistant Manager

Date:

Dec. 22, 2015

2 RF Exposure

2.1 Limits For Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

2.2 MPE Calculation Formula

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user.

So, this device is classified as **Mobile Device**.

3 Calculation Result Of Maximum Conducted Power

Function	Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
Audio WIFI	2403.5~2477.3	5.54	1.82	20	0.0011	1
WLAN	2412 ~ 2462	22.45	2.43	20	0.0612	1
	5180 ~ 5240	13.42	2.04	20	0.0070	1
	5260 ~ 5320	13.09	2.04	20	0.0065	1
	5500 ~ 5700	13.04	2.04	20	0.0064	1
	5745 ~ 5825	13.18	2.04	20	0.0066	1

CONCLUSION:

Both of the modules can transmit simultaneously, the formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

1. Audio WIFI + WLAN = $0.0011 / 1 + 0.0612 / 1 = 0.0623$

FREQUENCY BAND (MHz)	MAX POWER (dBm)			TOTAL POWER (dBm)	POWER LIMIT (dBm)
	Audio WIFI	WIFI (5.0G)	WIFI (2.4G)		
2400 ~ 2483.5	5.54	-	22.45	22.54	30
5180 ~ 5240	-	13.42	-	13.42	24
5260 ~ 5320	-	13.09	-	13.09	24
5500 ~ 5700	-	13.04	-	13.04	24
5745 ~ 5825	-	13.18	-	13.18	30

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