RF Exposure Report

Report No.: SA150921D01

FCC ID: R48V3UP

Test Model: V3USP15

Series Model: V3US15

Received Date: Sep. 21, 2015

Test Date: Sep. 22 ~ Nov. 20, 2015

Issued Date: Nov. 24, 2015

Applicant: Meiloon Industrial Co., Ltd.

Address: No. 99, Xingfu Road, Taoyuan Dist., Taoyuan City 330, Taiwan.

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
SA150921D01	Original release.	Nov. 24, 2015

1 Certificate of Conformity

Product:	network audio receiver
Brand:	WREN
Test Model:	V3USP15
Series Model:	V3US15
Sample Status:	Engineering sample
Applicant:	Meiloon Industrial Co., Ltd.
Test Date:	Sep. 22 ~ Nov. 20, 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 : Jessica Cheng , **Date:** Nov. 24, 2015

Jessica Cheng / Senior Specialist

Approved by : Rex. Lai , **Date:** Nov. 24, 2015

Rex Lai / Assistant Manager

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/cm^2

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)
(Bluetooth EDR)	2402-2480	2.60	-4.40	20	0.0001	1
WLAN (2.4G)	2412-2462	22.45	2.79	20	0.0665	1
WLAN (5.0G)	5180-5240	13.42	6.62	20	0.0201	1
	5260-5320	13.09	6.62	20	0.0186	1
	5500-5700	13.04	6.62	20	0.0184	1
	5745-5825	13.18	6.62	20	0.0190	1

Conclusion:

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

BLUETOOTH + WLAN = **0.0001** + **0.0665 =0.0666**

Therefore the maximum calculation of this situation is 0.0666, which is less than the "1" limit.

FREQUENCY BAND (MHz)	MAX POWER (dBm)			TOTAL POWER (dBm)	POWER LIMIT (dBm)
	WIFI (2.4G)	WIFI (5.0G)	Bluetooth EDR		
2400	22.45	-	2.60	22.49	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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