

RF Exposure Report

Report No.: SA150107C25A

FCC ID: AUH-7500-M2

Test Model: WiP7500

Received Date: Oct. 08, 2015

Test Date: Oct. 21 ~ Nov. 11, 2015

Issued Date: Nov. 16, 2015

Applicant: Wi3 Inc

Address: P.O. Box 1123 Pittsford, NY 14534

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

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Release Control Record

Issue No.	Description	Date Issued
SA150107C25A	Original release	Nov. 16, 2015

1 Certificate of Conformity

Product: Adapter, coax bridge
Test Model: WiP7500
Sample Status: Engineering sample
Applicant: Wi3 Inc
Test Date: Oct. 21 ~ Nov. 11, 2015
Standards: FCC Part 2 (Section 2.1091)
KDB 447498 D03
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 :


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Date:

Nov. 16, 2015

Approved by :



Ken Liu / Senior Manager

Date:

Nov. 16, 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

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 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

CDD Mode

Frequency Band (MHz)	Mode	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412-2462	802.11b	24.97	2.73	20	0.117	1
	802.11g	27.52	2.73	20	0.211	1
	802.11n (HT20)	29.67	5.74	20	0.691	1
	802.11n (HT40)	27.21	5.74	20	0.392	1
5180-5240	802.11a	18.06	3.50	20	0.028	1
	802.11n (HT20)	17.31	6.51	20	0.048	1
	802.11n (HT40)	19.96	6.51	20	0.088	1
	802.11ac (VHT80)	16.35	6.51	20	0.038	1
5745-5825	802.11a	18.19	3.50	20	0.029	1
	802.11n (HT20)	19.22	6.51	20	0.074	1
	802.11n (HT40)	20.26	6.51	20	0.095	1
	802.11ac (VHT80)	16.31	6.51	20	0.038	1

Beamforming Mode

Frequency Band (MHz)	Mode	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412-2462	802.11n (HT20)	29.18	5.74	20	0.618	1
	802.11n (HT40)	27.05	5.74	20	0.378	1
5180-5240	802.11n (HT20)	16.07	6.51	20	0.036	1
	802.11n (HT40)	18.72	6.51	20	0.066	1
	802.11ac (VHT80)	13.29	6.51	20	0.019	1
5745-5825	802.11n (HT20)	19.22	6.51	20	0.074	1
	802.11n (HT40)	20.26	6.51	20	0.095	1
	802.11ac (VHT80)	16.09	6.51	20	0.036	1

Note:

2412-2462MHz: Directional gain = 2.73dBi + 10log(2) = 5.74dBi.

5GHz band: Directional gain = 3.5dBi + 10log(2) = 6.51dBi

Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4GHz + WLAN 5GHz = 0.691 + 0.095 = 0.786

Therefore all the maximum calculations of above situations are less than the "1" limit.

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