

RF Exposure Report

Report No.: SA180129E01

FCC ID: HEDSSW2AC2600

Test Model: SS-W2-AC2600

Received Date: Jan. 29, 2018

Test Date: Feb. 07, 2018

Issued Date: Feb. 26, 2018

Applicant: Accton Technology Corporation

Address: No.1, Creation Rd. III, Science-based Industrial Park, Hsinchu, Taiwan, R.O.C.

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

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.

Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.

**FCC Registration /
Designation Number:** 723255 / TW2022

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Release Control Record

Issue No.	Description	Date Issued
SA180129E01	Original release.	Feb. 26, 2018

1 Certificate of Conformity

Product: SunSpot Wave 2

Brand: IgniteNet

Test Model: SS-W2-AC2600

Sample Status: ENGINEERING SAMPLE

Applicant: Accton Technology Corporation

Test Date: Feb. 07, 2018

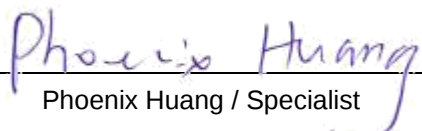
Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

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 :


Phoenix Huang / Specialist

Date:

Feb. 26, 2018

Approved by :


May Chen / Manager

Date:

Feb. 26, 2018

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				
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

f = Frequency in MHz ; *Plane-wave equivalent power density

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 45cm away from the body of the user. So, this device is classified as **Mobile Device**. This device must needs installed by professional service personnel.

2.4 Antenna Gain

Antenna No.	Brand	Model No.	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type
1	NA	NA	5.7	2.4~2.4835	PCB	i-pex
			7.9	5.15~5.25		
			7.7	5.25~5.35		
			6	5.47~5.725		
			5.9	5.725~5.85		
2	NA	NA	6.5	2.4~2.4835	PCB	i-pex
			8	5.15~5.25		
			8	5.25~5.35		
			7.7	5.47~5.725		
			7.8	5.725~5.85		
3	NA	NA	5.8	2.4~2.4835	PCB	i-pex
			7.8	5.15~5.25		
			8	5.25~5.35		
			5.7	5.47~5.725		
			7.1	5.725~5.85		
4	NA	NA	5	2.4~2.4835	PCB	i-pex
			6.7	5.15~5.25		
			6.5	5.25~5.35		
			5.5	5.47~5.725		
			7.4	5.725~5.85		

2.5 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412-2462	661.408	11.79	45	0.39249	1
5180-5240	319.264	13.64	45	0.29008	1
5745-5825	649.931	13.1	45	0.52147	1

NOTE:

2.4GHz: The directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20} + 10^{\text{Chain2}/20} + 10^{\text{Chain3}/20})^2 / 4] = 11.79\text{dBi}$

5GHz:

UNII-1: The directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20} + 10^{\text{Chain2}/20} + 10^{\text{Chain3}/20})^2 / 4] = 13.64\text{dBi}$

UNII-3: The directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20} + 10^{\text{Chain2}/20} + 10^{\text{Chain3}/20})^2 / 4] = 13.1\text{dBi}$

Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

$\text{WLAN 2.4GHz} + \text{WLAN 5GHz (UNII-3)} = 0.39249 / 1 + 0.52147 / 1 = 0.91396$

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

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