

RF Exposure Report

Report No.: SA161013E06

FCC ID: HED-SSAC1900

Test Model: SS-AC1900

Received Date: Oct. 13, 2016

Test Date: Nov. 16, 2016

Issued Date: Dec. 05, 2016

Applicant: Accton Technology Corporation

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

Issue No.	Description	Date Issued
SA161013E06	Original release.	Dec. 05, 2016

1 Certificate of Conformity

Product: SunSpot AC1900 Dual Band Enterprise AP

Brand: IgniteNet

Test Model: SS-AC1900

Sample Status: ENGINEERING SAMPLE

Applicant: Accton Technology Corporation

Test Date: Nov. 16, 2016

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.

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Approved by : May Chen , **Date:** Dec. 05, 2016
May Chen / 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/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 39cm away from the body of the user.

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

2.4 Antenna Gain

2.4GHz Band					
Ant. No.	Transmitter Circuit	Antenna Gain (dBi) <Including cable loss>	Frequency range (GHz)	Antenna Type	Connector Type
1	Chain (0)	4.71	2.4~2.4835	PIFA	i-pex
2	Chain (1)	4.67	2.4~2.4835	PIFA	i-pex
3	Chain (2)	3.68	2.4~2.4835	PIFA	i-pex
4	Chain (3)	5.53	2.4~2.4835	PIFA	i-pex
5GHz Band					
Ant. No.	Transmitter Circuit	Antenna Gain (dBi) <Including cable loss>	Frequency range (GHz)	Antenna Type	Connector Type
1	Chain (0)	6.85	5.15~5.85	PIFA	i-pex
2	Chain (1)	5.24	5.15~5.85	PIFA	i-pex
3	Chain (2)	5.44	5.15~5.85	PIFA	i-pex
4	Chain (3)	7.93	5.15~5.85	PIFA	i-pex

Note: For TX configuration mode will fix transmission on Chain (1), Chain (2) and Chain (3)

2.5 Calculation Result Of Maximum Conducted Power

Frequency (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412-2462	990.783	9.43	39	0.45461	1
5180-5240	560.003	11.06	39	0.37398	1
5745-5825	637.218	11.06	39	0.42555	1

NOTE:

2.4GHz: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2 / 3] = 9.43\text{dBi}$

5GHz: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2 / 3] = 11.06\text{dBi}$

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 = $0.45461 / 1 + 0.42555 / 1 = 0.88016$

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

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