

RF EXPOSURE REPORT

REPORT NO.: SA120618C25T
MODEL NO.: SS-300-AT-C-55E
FCC ID: U2M-CAP4200AG
RECEIVED: Oct. 15, 2013
TESTED: Oct. 21 ~ Nov. 22, 2013
ISSUED: Nov. 28, 2013

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA120618C25T	Original release	Nov. 28, 2013

1. CERTIFICATION

PRODUCT: Wireless 802.11abgn Access Point
MODEL NO.: SS-300-AT-C-55E
BRAND: AirTight Networks, Inc.
APPLICANT: Senao Networks, Inc.
TESTED: Oct. 21 ~ Nov. 22, 2013
TEST SAMPLE: ENGINEERING SAMPLE
STANDARDS: **FCC Part 2 (Section 2.1091)**
FCC OET Bulletin 65, Supplement C (01-01)
IEEE C95.1

The above equipment (model: SS-300-AT-C-55E) 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 :  , **DATE** : Nov. 28, 2013

Maggie Wu / Specialist

APPROVED BY :  , **DATE** : Nov. 28, 2013

Ken Liu / Senior 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

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

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**.

2.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FREQUENCY BAND (MHz)	MODULATION MODE	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412-2462	802.11b	21.41	3	20	0.055	1
	802.11g	25.77	3	20	0.150	1
	802.11n (20MHz)	27.48	3	20	0.222	1
	802.11n (40MHz)	24.61	3	20	0.115	1
5180-5240	802.11a	13.72	3	20	0.009	1
	802.11n (20MHz)	14.60	3	20	0.011	1
	802.11n (40MHz)	16.68	3	20	0.018	1
5260-5320	802.11a	21.10	3	20	0.051	1
	802.11n (20MHz)	21.19	3	20	0.052	1
	802.11n (40MHz)	21.97	3	20	0.062	1
5500-5700	802.11a	20.96	3	20	0.050	1
	802.11n (20MHz)	20.90	3	20	0.049	1
	802.11n (40MHz)	21.99	3	20	0.063	1
5745-5825	802.11a	27.35	3	20	0.216	1
	802.11n (20MHz)	26.98	3	20	0.198	1
	802.11n (40MHz)	26.83	3	20	0.191	1

CONCLUSION:

Both of the WLAN 2.4G & 5.0G 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. WLAN 2.4G + WLAN 5.0G(5180-5240MHz) = 0.222 + 0.018 = 0.240
2. WLAN 2.4G + WLAN 5.0G(5260-5320MHz) = 0.222 + 0.062 = 0.284
3. WLAN 2.4G + WLAN 5.0G(5500-5700MHz) = 0.222 + 0.063 = 0.285
4. WLAN 2.4G + WLAN 5.0G(5745-5825MHz) = 0.222 + 0.216 = 0.438

Therefore, the maximum calculation of this situation is 0.438, which is less than the "1" limit.

*The CPD of WLAN 2.4G & 5.0G was the worst according the original report.