

RF EXPOSURE REPORT

REPORT NO.: SA110826C07E

MODEL NO.: APL24-08F

FCC ID: QWU-08F

RECEIVED: Aug. 26, 2011

TESTED: Oct. 05, 2011

ISSUED: Feb. 22, 2012

APPLICANT: SonicWALL, Inc.

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USA

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

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA110826C07E	Original release	Feb. 22, 2012

1. CERTIFICATION

PRODUCT: Wireless 802.11 abgn Device
BRAND NAME: SonicWALL
MODEL NO.: APL24-08F
TEST SAMPLE: ENGINEERING SAMPLE
APPLICANT: SonicWALL, Inc.
TESTED: Oct. 05, 2011
STANDARDS: FCC Part 2 (Section 2.1091)
FCC OET Bulletin 65, Supplement C (01-01)
IEEE C95.1

The above equipment (Model: APL24-08F) 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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(Claire Kuan, Specialist)

APPROVED BY : May Chen , **DATE:** Feb. 22, 2012
(May Chen, Deputy Manager)

2. RF EXPOSURE LIMIT

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

3. 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

4. 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**.

5. ANTENNA GAIN

The antennas used in this EUT are listed as below table:

Transmitter Circuit	ANTENNA TYPE	ANTENNA CONNECTOR	GAIN (dBi)	
			2.4GHz BAND	5.0GHz BAND
Chain 0	Dipole	RTNC	2.5	2.5
Chain 1	Dipole	RSMA	3.0	3.0
Chain 2	Dipole	RTNC	2.5	2.5

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

802.11a:

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5260 ~ 5320 5500 ~ 5580 5660 ~ 5700	98.4	7.4	20	0.108	1.00

Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2 / 3]$
 Effective Legacy Gain (dBi) = 7.4

802.11n(20MHz):

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5260 ~ 5320 5500 ~ 5580 5660 ~ 5700	138.8	3	20	0.055	1.00

802.11n(40MHz):

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5270 ~ 5310 5510 ~ 5550 5670	243.3	3	20	0.097	1.00

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