RF EXPOSURE REPORT

REPORT NO.: SA991224C08

MODEL NO.: APL23-081

FCC ID: QWU-081

ACCORDING: FCC Guidelines for Human Exposure
IEEE C95.1

APPLICANT: SonicWALL, Inc.

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

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TEST LOCATION: No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
Original release	N/A	Jan. 26, 2011

1. 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

2. MPE CALCULATION FORMULA

Pd = (Pout*G) / (4*pi*r2)

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

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**.

4. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

MODULATION MODE	FREQUENCY BAND (MHz)	MAX CONDUCTED POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
802.11b	2412-2462	22.6	6	20	0.144	1
802.11g	2412-2462	25.8	6	20	0.301	1
802.11n (20MHz)	2412-2462	25.8	3	20	0.151	1
802.11n (40MHz)	2422-2452	24.1	3	20	0.102	1
802.11a	5180-5240	15.4	7	20	0.035	1
802.11n (20MHz)	5180-5240	15.5	4.0	20	0.018	1
802.11n (40MHz)	5180-5240	16.4	4.0	20	0.022	1
802.11a	5745-5825	23.3	7	20	0.212	1
802.11n (20MHz)	5745-5825	24.3	4.0	20	0.135	1
802.11n (40MHz)	5745-5825	23.7	4.0	20	0.117	1

NOTE:
(802.11 b/g): Directional gain =3dBi+10log(2)=6dBi
(802.11 a): Directional gain =4dBi+10log(2)=7dBi