



RF EXPOSURE REPORT

REPORT NO.: SA990419C04A

MODEL NO.: APL21-06E

FCC ID: QWU-06E

ACCORDING: FCC Guidelines for Human Exposure
IEEE C95.1

APPLICANT: Sonicwall, Inc.

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ISSUED BY: Bureau Veritas Consumer Products Services
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A D T

RELEASE CONTROL RECORD

| ISSUE NO. | REASON FOR CHANGE | DATE ISSUED |
|------------------|-------------------|---------------|
| Original release | NA | Feb. 16, 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

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

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

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) |
|-----------------|----------------------|---------------------------|--------------------|---------------|-------------------------------------|-----------------------------|
| 802.11a | 5260-5320 | 18.9 | 8.77 | 20 | 0.116 | 1 |
| 802.11n (20MHz) | 5260-5320 | 18.9 | 4 | 20 | 0.039 | 1 |
| 802.11n (40MHz) | 5260-5320 | 20.6 | 4 | 20 | 0.058 | 1 |
| 802.11a | 5500-5700 | 20.8 | 8.77 | 20 | 0.180 | 1 |
| 802.11n (20MHz) | 5500-5700 | 20.8 | 4 | 20 | 0.061 | 1 |
| 802.11n (40MHz) | 5500-5700 | 20.3 | 4 | 20 | 0.053 | 1 |

NOTE:

(802.11 a): Directional gain = 4dBi + 10log(3) = 8.77dBi