



Excellence in Compliance Testing

Certification Exhibit

**FCC ID: SNA-CFR2
IC: 9458-CFR2**

**FCC Rule Part: 15.247
IC Radio Standards Specification: RSS-210**

ACS Report Number: 11-0003.W06.45.A

**Manufacturer: Woodstream Corporation
Model: 5144R**

RF Exposure

General Information:

Applicant: Woodstream Corporation
 ACS Project: 11-0003.W06.45.A
 Device Category: Mobile / Portable
 Environment: General Population/Uncontrolled Exposure
 Operating Configuration: PC Peripheral / Handheld

Technical Information:

Antenna Type: Skywave dipole antenna part number 81-3000-A
 Antenna Gain: 3dBi
 Maximum Transmitter Conducted Power: 19.43dBm, 87.70mW
 Maximum System EIRP: 22.43dBm, 174.98mW

RF Exposure Compliance Justification:

For portable applications model 5144R operates in a handheld configuration only. There are no provisions or accessories for body-worn applications. Per KDB 447 498 D01 V04 4(c)(iii), hand SAR is required for hand-held and hand-operated devices with output power > 1000*[f(GHz)]^(-0.5)mW that are designed with the hand operating closer than 5 cm from the antenna during normal use.

Model 5144R is exempt from SAR based on the output power (higher of conducted or EIRP) being < 1000*[f(GHz)]^(-0.5)mW. SAR threshold and maximum equipment EIRP calculations are provided below. MPE calculations are also provided for satisfying mobile RF exposure conditions.

SAR Threshold = 1000*[2.4417]^(-0.5)mW = 639.96mW
 Maximum Equipment EIRP = 174.98mW

MPE Calculation

The Power Density (mW/cm²) is calculated as follows:

$$S = \frac{PG}{4\pi R^2}$$

Where:

- S = power density (in appropriate units, e.g. mW/cm²)
- P = power input to the antenna (in appropriate units, e.g., mW)
- G = power gain of the antenna in the direction of interest relative to an isotropic radiator
- R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

MPE Calculator for Mobile Equipment Limits for General Population/Uncontrolled Exposure*							
Transmit Frequency (MHz)	Radio Power (dBm)	Power Density Limit (mW/Cm2)	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm^2)
2441.7	19.43	1.00	87.70	3	1.995	20	0.035

Installation Guidelines

The installation manual should contain text similar to the following advising how to install the equipment to maintain compliance with the FCC RF exposure requirements:

RF Exposure

In accordance with FCC requirements of human exposure to radio frequency fields, the radiating element shall be installed such that a minimum separation distance of 20 centimeters will be maintained.

Conclusion

This device complies with the MPE requirements by providing adequate separation between the device, any radiating structure and the general population.