



Canada

Exhibit: RF Exposure – FCC

FCC ID: 2AP8V-SMK900

Report File #: 7169004639A-000

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| Client | Smartrek Technologies Inc |  Canada |
| Product | Wireless module, RFM-95 | |
| Standard(s) | FCC Part 15 Subpart 15.247:2016 FCC KDB 447498:2015 | |

RF Exposure – FCC

The device is a fixed device intended to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure and the body of the user or nearby persons. The EUT contains a 902 – 928 MHz FHSS transmitter.

General SAR test exclusion guidance:

As per FCC KDB 447498 Section 4.3.1 b), the SAR Test Exclusion Threshold for 100MHz to 6 GHz at test separation distances > 50 mm is determined by:

- 1) {[Power allowed at *numeric threshold* for 50 mm]} + [(test separation distance – 50 mm) $(f_{(MHz)}/150)]} \text{ mW, for 100 MHz to 1500 MHz}$
- 2) {[Power allowed at *numeric threshold* for 50 mm]} + [(test separation distance – 50 mm)*10] $\text{mW, for } > 1500 \text{ MHz and } \leq 6 \text{ GHz}$

Where:

Power allowed at *numeric threshold* for 50 mm (for 1-g SAR) is given by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] [\sqrt{f_{(GHz)}}] \leq 3.0$$

$$(\text{max power of channel, including tune-up tolerance, mW}) \leq [3.0 / \sqrt{f_{(GHz)}}] * [\text{min. test separation distance, mm}]$$

$f_{(GHz)}$ is the RF channel transmit frequency in GHz

SAR Calculations: 902 – 928 MHz FHSS transmitter

Power allowed at *numeric threshold* for 50 mm:

$$(\text{max power of channel, including tune-up tolerance, mW}) \leq [3.0 / \sqrt{0.928 \text{ GHz}}] * [50 \text{ mm}]$$

$$(\text{max power of channel, including tune-up tolerance, mW}) \leq 155.7 \text{ mW}$$

Therefore, SAR Exclusion for 200 mm test distance is:

$$\{[\text{Power allowed at } \textit{numeric threshold} \text{ for 50 mm}]} + [(\text{test separation distance} - 50 \text{ mm}) \text{ } (f_{(MHz)}/150)]\} \text{ mW, for 100 MHz to 1500 MHz}$$

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$$\begin{aligned}
 &= [155.7 \text{ mW}] + [(200 \text{ mm} - 50 \text{ mm}) * (902.8 \text{ MHz}/150)] \\
 &= 1058 \text{ mW}
 \end{aligned}$$

The EUT meets the SAR Exclusion Threshold. Peak conducted power of FHSS transmitter was measured to be 18.1dBm, with the antenna gain of 3dB, the EIRP will be 128.8mW which is below the 1058mW threshold.