

1.0 Maximum Permissible Exposure Evaluation (Supplements the test report.)

The results of power measurement and intended use/proximity are compared against the requirements for safety of RF exposure.

1.2 Criteria

Section Reference	Date
KDB 447498 D01 Mobile Portable RF Exposure v05r01 // RSS-102 Issue 4 March 2010	2014-04-17

1.3 Procedure

Using measurement of peak power and intended application, determine the permissible exposure level or whether additional exposure tests (SAR) are indicated. Justify conclusion for selected exposure area and separation distance.

1.4 Power to Exposure Calculation

This device is affixed to typically a door or window to monitor as part of an intrusion detection system and is powered by a single 3 V coin style battery. A separation distance of 20 cm was selected. Exposure limit is then determined for the transmitter frequency of 2440 MHz.

Power is determined from the measured field strength at 3 meters and antenna gain applied to determine EIRP.

Source duty cycle factor for exposure is not evaluated as the total peak power is below 1 mW. The factor is then assumed to be zero dB.

POWER CALCULATION

Measured Field Strength dB μ V/m*	At Distance	Source Duty Cycle Factor dB	Calculated Average Field Strength dB μ V/m	Calculated EIRP mW
91.6	3 m	0	91.6	0.434

*This is the peak measurement.

1.5 SAR Exemption Calculation – 3.0 Criteria

Calculation (max power including tune up tolerance = 0.434 mW):

$$\begin{aligned} & [(0.434\text{mW})/(5 \text{ mm})] \cdot [\sqrt{2.44(\text{GHz})}] \leq 3.0 \\ & 0.14 \leq 3.0 \end{aligned}$$

Therefore, the device meets the FCC SAR exemption requirements.
