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

The measured power is considered for the intended use of the device and resulting RF exposure to the user.

1.2 Criteria

Section Reference	Date
447498 D01 General RF Exposure Guidance v06 // RSS-102 Issue 5	29 Dec 2017

1.3 Procedure

Using measurement of peak power and considering the intended application, determine the permissible exposure level, applicability of exclusion, or whether additional exposure tests (SAR) are indicated. When applicable justify conclusion for selected exposure level and separation distance.

1.4 Power to Exposure Calculation

Power is determined by radiated field measurement. SAR exemption method was applied for 5 mm spacing assuming possibility of the detector being activated while being held/installed. General public/uncontrolled exposure assumed.

Table 1.4.1 Power Calculation for Exposure, 2.4 GHz Radio (Highest frequency 0.916 GHz)

Measured Radiated Power dB μ V/m @ 10m	Calculated Peak EIRP dBm	Source Duty Cycle Factor dB	Antenna Gain dBi	Calculated EIRP dBm	EIRP In Linear Terms mW
77.2	-7.6	-47.3	0*	-54.9	0.003

*Effect of antenna gain included in the field strength measurement.

1.5 SAR Exemption Calculation – FCC

Applicable requirement: KDB 447498 Clause 4.3.1 Section 1

Calculation (max power including tune up tolerance = 0.003 mW):

$$[(0.003 \text{ mW})/(5 \text{ mm})] \cdot [\sqrt{0.916 \text{ (GHz)}}] = 0.0006$$

$$0.0006 \leq 3.0$$

Therefore, the device meets the applicable FCC SAR exemption requirements.

Signed:

A handwritten signature in black ink, appearing to read "Eric Lifsey".

Eric Lifsey
