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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	9 Apr 2019

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

For 2.4 GHz radio power is determined by radiated field measurement. SAR exemption method was applied for 5 mm spacing. Direct contact with antenna is prevented by the plastic enclosure and additional space assured by the battery thickness.

Table 1.4.1 Power Calculation for Exposure, 2.4 GHz Radio (Highest frequency 2.481 GHz)

Measured EIRP Radiated Power mW	Restated as EIRP dBm	Source Duty Cycle Factor dB	Antenna Gain dBi	Calculated Average EIRP dBm	EIRP In Linear Terms mW
0.59	-2.3	-32.5	0.0*	-34.8	0.00033

*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 = 0.00033 mW):

$$[(0.00033 \text{ mW})/(5 \text{ mm})] \cdot [\sqrt{2.481 \text{ (GHz)}}] = 0.0001$$

$$0.0001 \leq 3.0$$

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

1.6 SAR Exemption Calculation – IC

This device meets the clause **2.5 Exemption Limits for Routine Evaluation – SAR Evaluation** criteria in RSS-102 Clause 2.5.1, Table 1, frequency row 2450 MHz. This is based on the output power of 0.59 mW (0.00033 mW averaged) being less than 4 mW at the smallest exposure distance given of ≤ 5 mm in Table 1.

Signed:

A handwritten signature in black ink, appearing to read "Eric Lifsey". The signature is written in a cursive style with a large, looping initial "E".

Eric Lifsey
