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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	18 Jan 2018

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 as the antenna is within the device and the device is operated hand-held. Assuming uncontrolled public exposure.

Table 1.4.1 Power Calculation for Exposure, 2.4 GHz Radio (Highest frequency 2.480 GHz)

Measured Radiated Power mW	Calculated Peak EIRP dBm	Source Duty Cycle Factor dB	Antenna Gain dBi	Calculated EIRP dBm	EIRP In Linear Terms mW
6.6	8.2	-4.1	0*	4.1	2.6

*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 = 2.6 mW):

$[(2.6\ \text{mW})/(5\ \text{mm})] \cdot [\sqrt{2.480\ (\text{GHz})}] = 0.8$

$0.8 \leq 3.0$

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, for frequency row 2450 MHz. This is based on the output power of 2.6 mW being less than 4 mW at the smallest exposure distance given of ≤5 mm in Table 1.

Signed:

Eric Lifsey

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