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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 5, Notice 2013 DRS0911	9 Feb 2016

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 Exemption Calculation

Typically, the distance in most applications of this module are a few cm in carried equipment or in fixed installations where 1 cm would apply. The exposure distance selected for this calculation as 1 cm or 10 mm.

Table 1.4.1 Power Calculation for Exposure, Highest frequency 459.200 MHz)					
Conducted Peak Power mW	Calculated EIRP Peak Power dBm	Source Duty Cycle Factor dB	Maximum Antenna Gain dBi	Calculated EIRP dBm	EIRP In Linear Terms mW
11.04	10.43	0	0	10.43	11.04

1.5 FCC, SAR Exemption – Appendix A Criteria

Calculation (max power including tune up tolerance = 11.04 mW):

$$[(11.04 \text{ mW})/(10 \text{ mm})] \cdot [\sqrt{0.4592(\text{GHz})}] = 0.8$$

$$0.8 \leq 3.0$$

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

1.6 IC, SAR Exemption – Clause 2.5.1 Criteria

Table 1: SAR evaluation – Exemption limits for routine evaluation based on frequency and separation distance^{4,5}

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of ≤ 5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
≤ 300	71 mW	101 mW	132 mW	162 mW	193 mW
450	52 mW	70 mW	88 mW	106 mW	123 mW
835	17 mW	30 mW	42 mW	55 mW	67 mW

Interpolated exemption limit for 10 mm and 459.200 MHz (between 450 and 835 MHz entries): 68.9 mW

This device meets the SAR Evaluation Exemption criteria in RSS-102 Clause 2.5.1, Table 1, based on interpolated limit determined above.

Signed:



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