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	25 Aug 2015

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

This device is hand-held. The exposure distance is from the outer surface of the plastic cover to the nearest point on the antenna, being the formed loading coil. This is estimated to be 5 mm which fits the worse-case distance in the exemption tables.

Table 1.4.1 Power Calculation for Exposure, 457.525 MHz (Highest frequency 458.025 MHz)

Calculated EIRP 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
0.23	-6.4	0	0	-6.4	0.23

1.5 FCC, SAR Exemption – Appendix A Criteria

KDB 447498 D01Appendix A is copied below for reference.

Appendix A

SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 50 mm

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table.

MHz	5	10	15	20	25	mm
150	39	77	116	155	194	SAR Test Exclusion Threshold (mW)
300	27	55	82	110	137	
450	22	45	67	89	112	
835	16	33	49	66	82	
900	16	32	47	63	79	
1500	12	24	37	49	61	
1900	11	22	33	44	54	
2450	10	19	29	38	48	
3600	8	16	24	32	40	
5200	7	13	20	26	33	
5400	6	13	19	26	32	
5800	6	12	19	25	31	

Per the table above, forgoing interpolation and taking nearest worse-case row, the exemption limit for power at distance ≤5 mm and 835 MHz is 16 mW.

Therefore, the device meets the FCC SAR exemption requirements.

1.6 IC, SAR Exemption – Clause 2.5.1 Criteria

Table of Clause 2.5.1 is copied below for reference.

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
1900	7 mW	10 mW	18 mW	34 mW	60 mW
2450	4 mW	7 mW	15 mW	30 mW	52 mW
3500	2 mW	6 mW	16 mW	32 mW	55 mW
5800	1 mW	6 mW	15 mW	27 mW	41 mW

Per the table above, forgoing interpolation and taking nearest worse-case row, the exemption limit for power at distance ≤5 mm and 835 MHz is 17 mW.

The EUT therefore meets the IC criteria for exemption from SAR testing.

Signed:

Eric Lifsey

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