

2.1093 Radiofrequency radiation exposure evaluation: portable devices.

Standard Applicable

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to §1.1310 and §2.1093 RF exposure evaluation.

KDB 447498 D01 General RF Exposure Guidance v06 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. The equation and threshold in 4.3.1 must be applied to determine SAR test exclusion.

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	

Measured Conducted Power:

BLE:

Frequency (MHz)	Output Power (dBm)	Output Power (mW)	
Low	6.54	4.51	
Mid	6.28	4.24	
High	6.23	4.20	

Tune-up power: +/- 1.0 dB

Antenna Gain: embed print antenna, 0 +/- 0.5dBi

Result:

The max RF power value belows KDB 447498 D01 General RF Exposure Guidance v06 Appendix A SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 50 mm at 2450MHz 10mw requirement. Therefore, SAR evaluation is not required.

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