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Appendix I- RF Exposure statement

Exposure Requirements – FCC KDB # 447498 D01 and RSS-102 Issue 5

FCC KDB # 447498 D01 V06 - Mobile and Portable Device RF Exposure and Procedures and Equipment, Appendix A shows that the SAR Text Exclusion Threshold for a device with a separation distances of 70 mm at 2450 MHz is 296 mW.

MHz	5	10	15	20	25	mm
150	39	77	116	155	194	
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	SAR Test Exclusion
1900	11	22	33	44	54	Threshold (mW)
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	
MHz	20					
MINZ	30	35	40	45	50	mm
150	232	271	310	45 349	50 387	mm
						mm
150	232	271	310	349	387	mm
150 300	232 164	271 192	310 219	349 246	387 274	mm
150 300 450	232 164 134	271 192 157	310 219 179	349 246 201	387 274 224	
150 300 450 835	232 164 134 98	271 192 157 115	310 219 179 131	349 246 201 148	387 274 224 164	SAR Test
150 300 450 835 900	232 164 134 98 95	271 192 157 115 111	310 219 179 131 126	349 246 201 148 142	387 274 224 164 158	SAR Test Exclusion
150 300 450 835 900 1500	232 164 134 98 95 73	271 192 157 115 111 86	310 219 179 131 126 98	349 246 201 148 142 110	387 274 224 164 158 122	SAR Test
150 300 450 835 900 1500 1900	232 164 134 98 95 73 65	271 192 157 115 111 86 76	310 219 179 131 126 98 87	349 246 201 148 142 110 98	387 274 224 164 158 122 109	SAR Test Exclusion
150 300 450 835 900 1500 1900 2450	232 164 134 98 95 73 65 57	271 192 157 115 111 86 76 67	310 219 179 131 126 98 87 77	349 246 201 148 142 110 98 86	387 274 224 164 158 122 109 96	SAR Test Exclusion
150 300 450 835 900 1500 1900 2450 3600	232 164 134 98 95 73 65 57 47	271 192 157 115 111 86 76 67 55	310 219 179 131 126 98 87 77 63	349 246 201 148 142 110 98 86 71	387 274 224 164 158 122 109 96 79	SAR Test Exclusion

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MHz	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	mm
100	474	481	487	494	501	507	514	521	527	534	541	547	554	561	567	
150	387	397	407	417	427	437	447	457	467	477	487	497	507	517	527	
300	274	294	314	334	354	374	394	414	434	454	474	494	514	534	554	
450	224	254	284	314	344	374	404	434	464	494	524	554	584	614	644	
835	164	220	275	331	387	442	498	554	609	665	721	776	832	888	943	
900	158	218	278	338	398	458	518	578	638	698	758	818	878	938	998	
1500	122	222	322	422	522	622	722	822	922	1022	1122	1222	1322	1422	1522	mW
1900	109	209	309	409	509	609	709	809	909	1009	1109	1209	1309	1409	1509	
2450	96	196	296	396	496	596	696	796	896	996	1096	1196	1296	1396	1496	
3600	79	179	279	379	479	579	679	779	879	979	1079	1179	1279	1379	1479	
5200	66	166	266	366	466	566	666	766	866	966	1066	1166	1266	1366	1466	

RSS-102 section 2.5.1 Exemption Limits for Routine Evaluation, Table 1 shows the SAR evaluation for a device with a separation distance of 45 mm at 2450 MHz is 235 mW.

	Table 1: SAR evaluation — Exemption limits for routine evaluation based on frequency and separation distance 4.5								
	Exemption Limits (mW)								
Frequency (MHz)	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				

	Exemption Limits (mW)									
Frequency (MHz)	At separation distance of 30 mm	At separation distance of 35 mm	At separation distance of 40 mm	At separation distance of 45 mm	At separation distance of ≥50 mm					
≤300	223 mW	254 mW	284 mW	315 mW	345 mW					
450	141 mW	159 mW	177 mW	195 mW	213 mW					
835	80 mW	92 mW	105 mW	117 mW	130 mW					
1900	99 mW	153 mW	225 mW	316 mW	431 mW					
2450	83 mW	123 mW	173 mW	235 mW	309 mW					
3500	86 mW	124 mW	170 mW	225 mW	290 mW					
5800	56 mW	71 mW	85 mW	97 mW	106 mW					

Calculated EIRP

The maximum measured transmitter power is the following:

Conducted Output Power Pout [dBm]	Conducted Output Power Pout [mW]	Maximum Antenna Gain [dBi]	Pout EIRP [mW]
21.33	135.83	2	215.28



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Note:

Per the equation in section 1.3.1 of FCC Document # 412172 D01 Determining ERP and EIRP v01;

EIRP = $p_t x g_t$

where:

pt = transmitter output power in watts

g_t = Numeric gain of transmitting antenna (unitless)

Evaluation for FCC

The maximum EIRP peak power output of the EUT is: 215.28 mW. The EUT is well below the 296mW power level with the distances of 70mm.

Evaluation for IC

The maximum EIRP peak power output of the EUT is: 215.28 mW. The EUT is well below the 235mW power level with the distances of 45mm.

Conclusion

SAR data is not required for either FCC or IC.