## **RF EXPOSURE TEST**

## 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	
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	30	35	40	45	50	mm
150	232	271	310	349	387	
			0.20	349	30/	
300	164	192	219	246	274	
300 450						
	164	192	219	246	274	
450	164 134	192 157	219 179	246 201	274 224	0.1P.T.
450 835	164 134 98	192 157 115	219 179 131	246 201 148	274 224 164	SAR Test
450 835 900	164 134 98 95	192 157 115 111	219 179 131 126	246 201 148 142	274 224 164 158	Exclusion
450 835 900 1500	164 134 98 95 73	192 157 115 111 86	219 179 131 126 98	246 201 148 142 110	274 224 164 158 122	
450 835 900 1500 1900	164 134 98 95 73 65	192 157 115 111 86 76	219 179 131 126 98 87	246 201 148 142 110 98	274 224 164 158 122 109	Exclusion
450 835 900 1500 1900 2450	164 134 98 95 73 65 57 47 39	192 157 115 111 86 76 67 55 46	219 179 131 126 98 87 77 63 53	246 201 148 142 110 98 86 71 59	274 224 164 158 122 109 96 79 66	Exclusion
450 835 900 1500 1900 2450 3600	164 134 98 95 73 65 57 47	192 157 115 111 86 76 67 55	219 179 131 126 98 87 77 63	246 201 148 142 110 98 86 71	274 224 164 158 122 109 96 79	Exclusion

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$\leq$ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] •
$[\sqrt{f_{(GHz)}}] \le 3.0 \text{ for } 1\text{-g SAR and} \le 7.5 \text{ for } 10\text{-g extremity SAR,}_{16} \text{ where}$
$\square$ f <sub>(GHz)</sub> is the RF channel transmit frequency in GHz
☐ Power and distance are rounded to the nearest mW and mm before calculation 17
☐ The result is rounded to one decimal place for comparison
The test exclusions are applicable only when the minimum test separation distance is $\leq 50$ mm and for

transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation

distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

## Bluetooth

frequency range	Maximum Peak Conducted Output Power (dBm)	Maximum Conducted Output Power (mW)
2402	-0.89	0.81470
2440	-2.10	0.62
2480	-1.61	0.69

The max.output power is -0.89dBm=0.81470mW, Frequency is 2.402GHz So  $(0.8147/5)^*$   $\sqrt{2.402=0.253} \lesssim 3.0$ 

The max.output power is -2.10dBm=0.62mW, Frequency is 2.44GHz So  $(0.62/5)^*$   $\sqrt{2.44}=0.193 \leqslant 3.0$ 

The max.output power is -1.61dBm=0.69mW, Frequency is 2.480GHz So (0.69/5)\*  $\sqrt{2.48}$ =0.217  $\lesssim 3.0$ 

Conclusion: No SAR is required.