## **RF EXPOSURE TEST**

## SAR Test Exclusion Thresholds for 100 MHz -6 GHz and $\leq 50$ mm

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

5	10	15	20	25	mm
39	77	116	155	194	
27	55	82	110	137	
22	45	67	89	112	
16	33	49	66	82	
16	32	47	63	79	
12	24	37	49	61	SAR Test Exclusion
11	22	33	44	54	Threshold (mW)
10	19	29	38	48	(
8	16	24	32	40	
7	13	20	26	33	
6	13	19	26	32	
6	12	19	25	31	
30	35	40	45	50	mm
232	271	310	349	387	
164	192	219	246	274	
164 134	192 157		246 201		
		219		274	
134	157	219 179	201	274 224	CAP To
134 98	157 115	219 179 131	201 148	274 224 164	SAR Test
134 98 95	157 115 111	219 179 131 126	201 148 142	274 224 164 158	Exclusion
98 95 73	157 115 111 86	219 179 131 126 98	201 148 142 110	274 224 164 158 122	
134 98 95 73 65	157 115 111 86 76	219 179 131 126 98 87	201 148 142 110 98	274 224 164 158 122 109	Exclusion
134 98 95 73 65 57	157 115 111 86 76 67	219 179 131 126 98 87 77	201 148 142 110 98 86	274 224 164 158 122 109 96	Exclusion
134 98 95 73 65 57 47	157 115 111 86 76 67 55	219 179 131 126 98 87 77 63	201 148 142 110 98 86 71	274 224 164 158 122 109 96 79	Exclusion
	39 27 22 16 16 12 11 10 8 7 6 6	39     77       27     55       22     45       16     33       16     32       12     24       11     22       10     19       8     16       7     13       6     13       6     12       30     35	39     77     116       27     55     82       22     45     67       16     33     49       16     32     47       12     24     37       11     22     33       10     19     29       8     16     24       7     13     20       6     13     19       6     12     19       30     35     40	39     77     116     155       27     55     82     110       22     45     67     89       16     33     49     66       16     32     47     63       12     24     37     49       11     22     33     44       10     19     29     38       8     16     24     32       7     13     20     26       6     13     19     26       6     12     19     25       30     35     40     45	39     77     116     155     194       27     55     82     110     137       22     45     67     89     112       16     33     49     66     82       16     32     47     63     79       12     24     37     49     61       11     22     33     44     54       10     19     29     38     48       8     16     24     32     40       7     13     20     26     33       6     13     19     26     32       6     12     19     25     31       30     35     40     45     50

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq$  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)] •
[ $\sqrt{f_{\text{(GHz)}}}$ ] $\leq$ 3.0 for 1-g SAR and $\leq$ 7.5 for 10-g extremity SAR,16 where
$\square$ f <sub>(GHz)</sub> is the RF channel transmit frequency in GHz
$\square$ Power and distance are rounded to the nearest mW and mm before calculation 17
$\square$ The result is rounded to one decimal place for comparison
The test exclusions are applicable only when the minimum <i>test separation distance</i> is $\leq 50$ mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum <i>test separation</i>

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

Maximum measured transmitter power.

## GFSK

frequency range	Maximum Peak Conducted Output Power (dBm)	Maximum Conducted Output Power (mW)
2402	-5.187	0.30
2441	-3.308	0.47
2480	-4.234	0.38

The max.output power is 0.30mW, Frequency is 2.402GHz

So (0.30/5)\* √2.402=0.093≤ 3.0

Note:  $\sqrt{2.402} = 1.55$ 

The max.output power is 0.47mW, Frequency is 2.441GHz

So (0.47/5)\* √2.441=0.14664≤ 3.0

Note:  $\sqrt{2.441} = 1.56$ 

The max.output power is 0.38mW, Frequency is 2.48GHz

So  $(0.38/5)^* \sqrt{2.48} = 0.11932 \le 3.0$ 

Note:  $\sqrt{2.48} = 1.57$ 

Conclusion: No SAR is required.