RF EXPOSURE EVALUATION METHOD

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.

MHz	5	10	15	20	25	mm		
150	39	77	116	155	194			
300	27	55	82	110	137	SAR Test Exclusion		
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	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			

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:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] • [$\sqrt{f(GHz)}$] \leq 3.0 for 1-g SAR and \leq 7.5 for 10-g extremity SAR,where f(GHz) is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation. The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 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.

Maximum measured transmitter power.

BT5.0+EDR The Worst Case

Mode	2402-2480MHz		
Detector	PEAK		
GFSK	3±1dBm		
π/4-DQPSK	3±1dBm		

Remark: The worst case gain of the antenna is 0dBi.

0dBi logarithmic terms convert to numeric result is nearly 1.0

Mode	frequency (GHz)	Maximum Peak Conducted Output Power (dBm)	Tune up Power(dBm)	Tune up Power (mW)	Result	Limit
GFSK	2.441	3.6	4	2. 512	0.784	3
π/4-DQPSK	2.402	3.7	4	2.512	0.779	3

Threshold at which no SAR required is 0.784 \leq 3.0 for 1-g SAR, Separation distance is 5mm.