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				
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 Threshold (mW)			
1900	11	22	33	44	54				
2450	10	19	29	38	48	(III (III (V))			
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 \leq 50 mmand 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 LEThe Worst Case**

Mode	2402-2480MHz
Detector	PEAK
2402MHz	-6±1dBm
2440MHz	-6±1dBm
2480MHz	-6±1dBm

Remark: The worst case gain of the antenna is 4dBi.

4dBi logarithmic terms convert to numeric result is nearly 2.51

frequency (GHz)	Maximum Peak Conducted Output Power (dBm)	Tune up Power (dBm)	Tune up Power (mW)	Result	Limit
2.402	-5.62	-5	0.316227766	0.0980	3
2.44	-6.26	-5	0.316227766	0.0988	3
2.48	-6.91	-5	0.316227766	0.0996	3

Threshold at which no SAR required is $0.0996 \le 3.0$ for 1-g SAR, Separation distance is 5mm.