



RF EXPOSURE EVALUATION METHOD

FCC ID : 2AA5C-FAR001

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.

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:

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

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.

1Mbps			
Test Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)
CH00	2402	-2.790	0.53
CH39	2441	-2.760	0.53
CH78	2480	-2.915	0.51
2Mbps			
CH00	2402	-3.956	0.40
CH39	2441	-3.995	0.40
CH78	2480	-4.146	0.38
3Mbps			
CH00	2402	-3.824	0.41
CH39	2441	-3.739	0.42
CH78	2480	-3.944	0.40

Remark: The best case gain of the antenna is 1.0dBi.

1.0dBi logarithmic terms convert to numeric result is nearly 1.26

1Mbps LOW CH

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] = 0.53/5 \cdot \sqrt{2.402} = 0.16 \leq 3.0$

1Mbps MID CH

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] = 0.51/5 \cdot \sqrt{2.441} = 0.17 \leq 3.0$

1Mbps High CH

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] = 0.53/5 \cdot \sqrt{2.480} = 0.16 \leq 3.0$

2Mbps LOW CH

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] = 0.4/5 \cdot \sqrt{2.402} = 0.12 \leq 3.0$

2Mbps MID CH

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] = 0.4/5 \cdot \sqrt{2.441} = 0.12 \leq 3.0$

2Mbps High CH

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] = 0.38/5 \cdot \sqrt{2.480} = 0.12 \leq 3.0$

3Mbps LOW CH

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] = 0.41/5 \cdot \sqrt{2.402} = 0.13 \leq 3.0$

3Mbps MID CH

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] = 0.42/5 \cdot \sqrt{2.441} = 0.13 \leq 3.0$

3Mbps High CH

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] = 0.4/5 \cdot \sqrt{2.480} = 0.13 \leq 3.0$

Threshold at which no SAR required is 10mw and ≤ 3.0 for 1-g SAR, Separation distance is 5mm.

Conclusion: No SAR is required.